OKI
PRINTING SOLUTIONS

B721 / B731 / MPS5501b

Maintenance Manual

070813A

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http://www.okiprintingsolutions.com

PREFACE

This manual explains maintenance methods for B721/B731/ES7131/MPS5501b.

The manual has been prepared for use by the maintenance personnel. For operating methods of B721/B731/ES7131/MPS5501b, refer to the corresponding user's manual.

Note!

- The contents of this manual are subject to changes without prior notice.
- Despite that exhaustive efforts were made in preparing the manual to make it accurate, it still may contain errors. Oki Data will not hold itself liable for any damage that results or is claimed to have resulted from repair, adjustment, or modification of the printer conducted by the user using this manual.
- The parts employed in the printer are so delicate that they may be damaged if not treated properly. Oki Data Corporation highly recommends that the maintenance of the printer is undertaken by ODC's registered maintenance personnel.
- Work after eliminating static electricity.

CONTENTS

1. Configuration

1.1 System configuration

Figure 1-1 represents the system configuration of the printer.

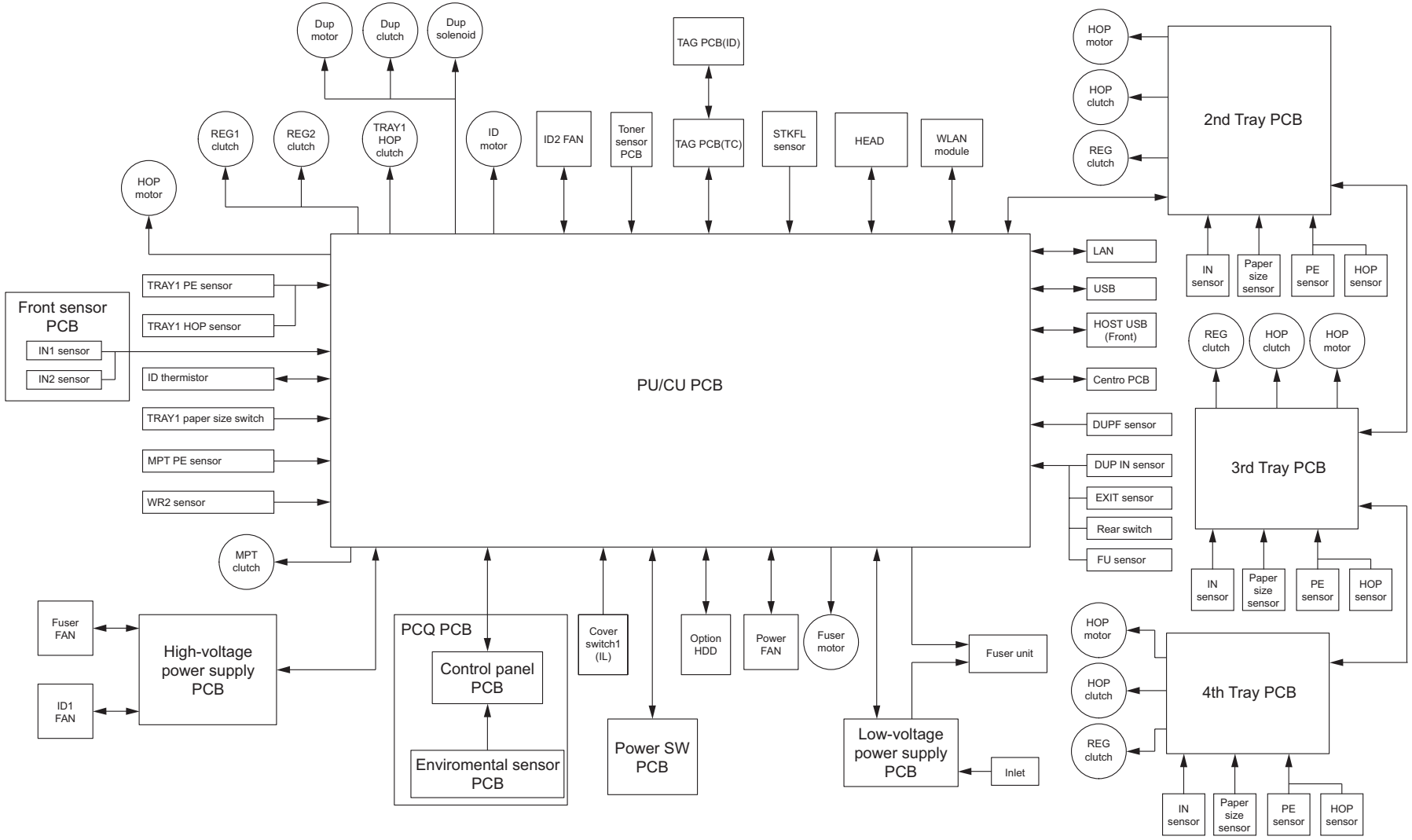


Figure 1-1

1.2 Printer configuration

The internal part of the printer is composed of the following sections:

- Electrophotographic processing section
- Paper paths
- Controller (a combination PU/CU board)
- Operator panel
- Power supplies (high-voltage power supply/low-voltage power supply)

Figure 1-2 represents the configuration of the printer.

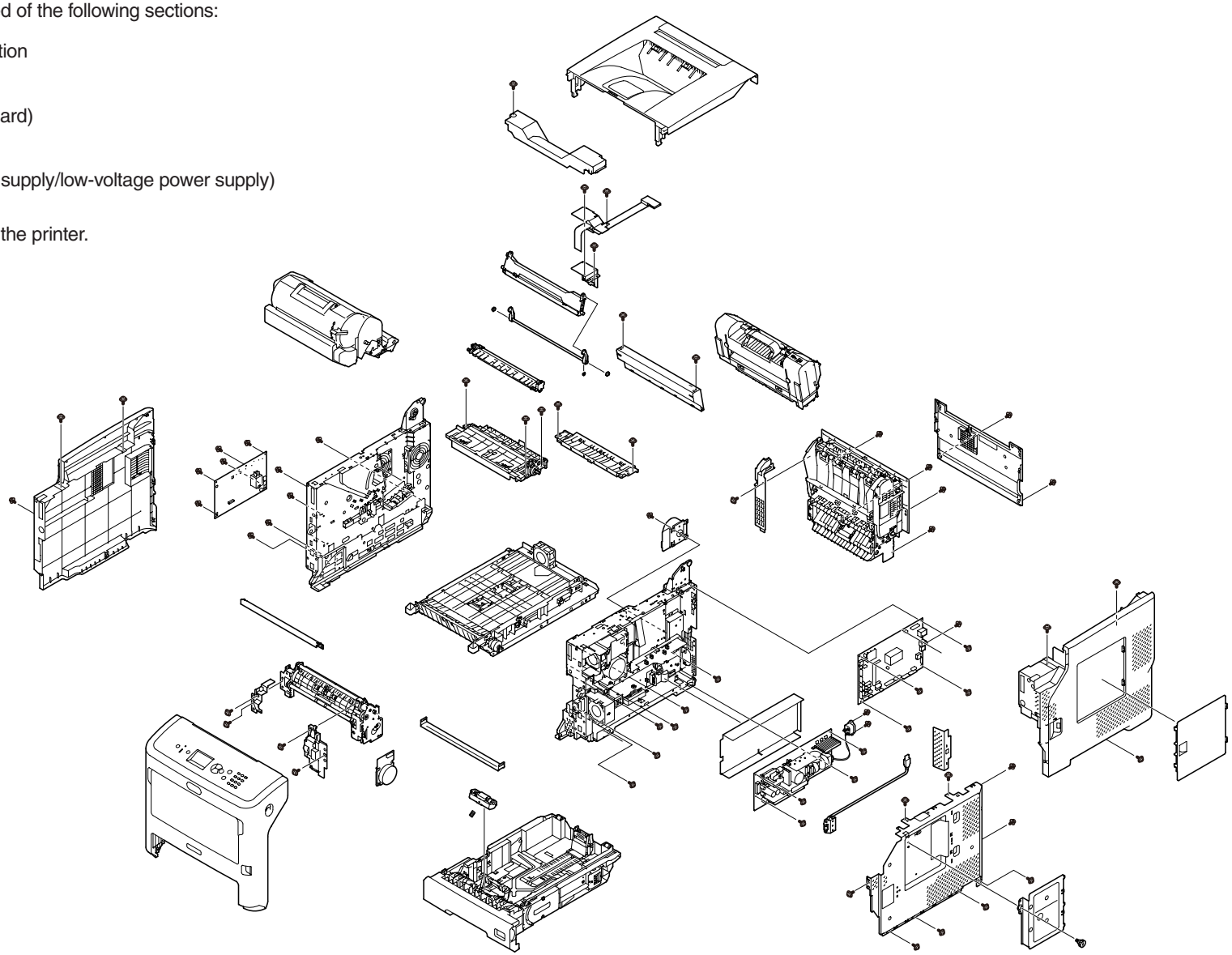
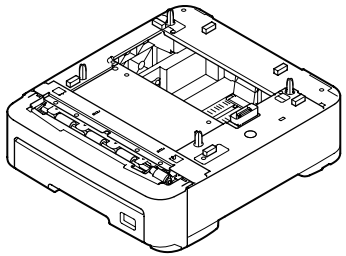


Figure 1-2

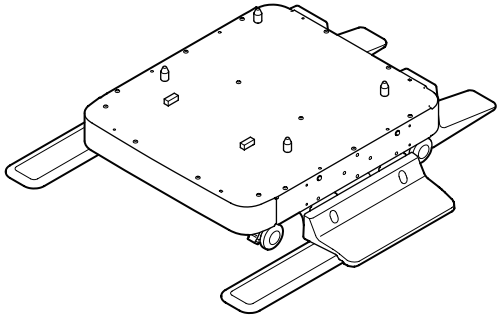
1.3 Composition of optional items

The following optional items are available for B721/B731/ES7131/MPS5501b:

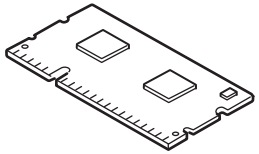
(1) Additional tray unit (tray 2/3/4)



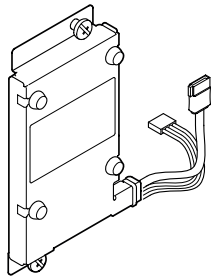
(2) Printer Stand



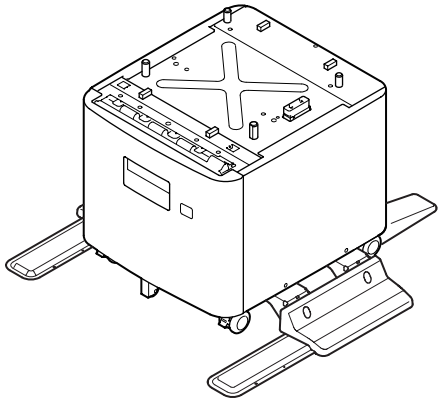
(3) Additional RAM (512 MB)



(4) 160 GB hard disk



(5) LCF



1.4 Specifications

Classifi-cation	Item	Specification(s)	
		B721	B731/ES7131/MPS5501b
Dimension	Width	435 mm	
	Depth	498 mm	
	Height	410 mm	
	Weight	Approx. 27kg	
Line length	Line length	A4 / Letter	
Engine speed (A4/LT)	Simplex	47 / 49 ppm	52 / 55 ppm
	Warm-up time	From power on: 25 seconds (at room temperature 25°C, rated voltage) From power save mode: 19 seconds (at room temperature 25°C, rated voltage)	
	Low-noise mode	Unavailable	
Resolution	LED head	1200dpi	
	Maximum input resolution	1,200 × 1,200 dpi	
	Output resolution	1,200 × 1,200 dpi 600 × 600 dpi	
	Toner save mode	Toner saving by decreasing brightness	
CPU	Core	PPC464FP	
RAM	Resident	256 MB (768 MB max.)	
ROM	Program + font	64 MB	

Classifi-cation	Item	Specification(s)	
		B721	B731/ES7131/MPS5501b
Power consump-tion	Power input	110 - 127 VAC (Range 99 - 140 VAC) 220 - 240 VAC (Range 198 - 264 VAC)	
	Off mode	Less than 0.4 W (120 V model) Less than 0.45 W (230 V model)	
	Sleep mode	1.5 W (no Wireless LAN Model) 3.9 W (Wireless LAN Model)	
	Power save mode	20 W (120 V model full option) 22 W (230 V model full option)	
	Idle	95 W	
	Typical operation	800 W	850 W
	Peak	1,400 W	
Operating environ-ment (tempera-ture)	Operating	10°C to 32°C	
	Non-operating	0°C to 43°C, power off	
Operating environ-ment (humidity)	Operating	20% to 80%, maximum wet-bulb temperature: 25°C	
	Non-operating	10% to 90%, maximum wet-bulb temperature: 26.8°C, power-off	

Classifi-cation	Item		Specification(s)	
			B721	B731/ES7131/MPS5501b
Service life	Printer life		1,200,000 pages or 5 years	
	Print duty		Max. 280,000 pages/ month	Max. 280,000 pages/ month
	Toner life ISO/ IEC 19752	Starter	10,000pages (B721/B731)	
		Consumable	18,000pages/25,000pages (B721/B731) 36,000pages(B731)	
	Toner life 5%	Starter	36,000pages (ES7131/MPS5501b)	
		Consumable	36,000pages (ES7131/MPS5501b)	
	Image drum life	Simplex	100,000 pages (when printed continuously) 72,000 pages (3 pages/job) 40,000 pages (1 page/job)	
		Duplex	80,000 pages (when printed continuously) 58,000 pages (3 pages/job) 32,000 pages (1 page/job)	
	Transfer roller life		200,000 pages	
	Fuser unit life		200,000 pages	
Paper handling	Tray capacity (1st tray)		530 sheets of 80 g/m^2	
	Tray capacity (MP tray)		100 sheets of 80 g/m^2	
	Tray capacity (2nd/3rd/4th tray (option))		530 sheets of 80 g/m^2	
	Paper ejection		100 sheets (80g/m^2) to the face-up stacker, 500 sheets (80g/m^2) to the face down stacker	

Classifi-cation	Item	Specification(s)	
		B721	B731/ES7131/MPS5501b
Paper size	1st tary	Legal 13/13.5/14, letter, executive, statement, A4, A5, B5, custom size, 16K (197 x 273 mm, 195 x 270 mm, 184 x 260 mm), envelope (Com-9, Com-10)	
	MP tray	Legal 13/13.5/14, letter, executive, statement, A4, A5, A6, B5, B6, C5, C6, DL, Monarch, index card (3 x 5 inch), custom size, 16K (197 x 273 mm, 195 x 270 mm, 184 x 260 mm), photo size (4 x 6 inch/5 x 7 inch), banner up to 52 inch	
	2nd/3rd/4th tray (option)	Legal 13/13.5/14, letter, executive, statement, A4, A5, B5, custom size, 16K (197 x 273 mm, 195 x 270 mm, 184 x 260 mm), envelope (Com-10)	
	Duplex	Legal 13/13.5/14, letter, executive, statement, A4, B5, 16K (197 x 273 mm, 195 x 270 mm, 184 x 260 mm), custom size (148 - 216 mm (W) x 210 - 356 mm (L))	
	Custom size	1st tray, 2nd/3rd/4th tray (option): 148 - 216 mm (W), 210 - 356 mm (L) (5.8 - 8.5 inches (W), 8.3 - 14.0 inches (L)) MP Tray: 76.2 - 216 mm (W), 127 - 1321 mm (L) (3.0 - 8.5 inches (W), 5 -52 inches (L))	
Minimum paper size	1st/2nd/3rd/4th tray	148 × 210 mm /A5	
	MPT	3 x 5 inch /index card	
	Duplex	148 × 210 mm	
Media weight	1st/2nd/3rd/4th tray	64 g/m^2 to 220 g/m^2	
	MPT	64 g/m^2 to 253 g/m^2	
	Duplex	64 g/m^2 to 220 g/m^2	

Classifi-cation	Item	Specification(s)	
		B721	B731/ES7131/MPS5501b
Operator panel	LCD	Graphic panel with 128 × 64 dots, no display of paper size	
	LED (color)	3 LEDs (green × 2, amber × 1)	
	Button	20 buttons • Ten-key pad • Power Save button (green) • Operational buttons (7 buttons: ON LINE/CANCEL/ENTER/▲/▼/◀/HELP)	
Status switch/ sensor	Paper empty	Yes	
	Paper low	No	
	MPT paper end	Yes	
	Toner low	Yes	
	Cover open	Yes	
	Fuser temperature	Yes	
	Paper size detect (1st/2nd/3rd/4th tray)	Yes (A5/B5/Executive/Leter/A4/Legal/COM10)	
	Paper size detect (MP tray)	No	
	Stacker full	Yes (Face-down)	
	Paper thickness detect	No	
	Continuouse roll paper sag detection	No	
Communi-cation interface		• High-speed USB • Ethernet • Host USB • Wireless LAN (Wireless Model only) • Centronics interface (Parallel installed Model only)	

Classifi-cation	Item	Specification(s)	
		B721	B731/ES7131/MPS5501b
Emulation	Standard	PCL5e/PCL XL/PS3 emulation/ PDF emulation/XPS/SIDM	
	Emulation switch	Automatic	
Font	PCL Roman (Bitmap)	Line Printer/OCR-A	
	PCL Roman (Scalable)	87 fonts	
	PCL Heisei (Scalable)	No	
	PS Roman (Scalable)	136 fonts	
	PS Heisei (Scalable)	No	
	Barcode computational	UPC-A, UPC-E, EAN/JAN-8, EAN/JAN-13, Interleaved 2of5, Code39, Code128, EAN/UCC-128, CODABAR, ZIP+4 POSTNET, PDF417, 2D QR Barcode	
Option (re-movable)	RAM	512MB DIMM	
	Hard disk	160 GB	
	Tray configuration	2nd/3rd/4th/LCF	
	Cassette	Universal (530 sheets, 80g/m^2)	
	Base on casters	Yes	
Other	USB-IF logo	Yes	
	Windows logo	Yes	
	Operation with UPS or inverter	Operations on UPS (uninterruptible power supply) are not guaranteed. Do not use UPS.	

1.5 Interface specifications

1.5.1 USB interface specifications

1.5.1.1 USB interface overview

(1) Basic specifications

USB (Hi-Speed USB supported)

(2) Transmission mode

Full speed (Max. 12 Mbps ± 0.25%)

High speed (Max. 480 Mbps ± 0.05%)

(3) Power control

Self-powered device

1.5.1.2 USB interface connectors and cables

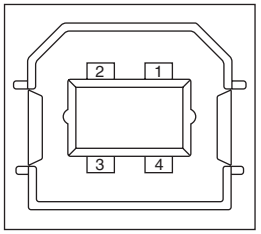
(1) Connector

• Printer side: B-receptacle (female)

Upstream port

UBB-4R-D14C-4D(LF)SN (JST Mfg. Co.,Ltd) or equivalent

Connector pin arrangement



• Cable side: B-plug (male)

(2) Cables

Length: USB 2.0 cables no more than five meters long (two meters or less recommended)

(Shielded USB 2.0 cables shall be used.)

1.5.1.3 USB interface signals

	Signal name	Function
1	Vbus	Power (+5V)
2	D-	For data transfer
3	D+	For data transfer
4	GND	Signal ground
Shell	Shield	

1.5.2 Network interface specifications

1.5.2.1 Network interface overview

Basic specifications

TCP/IP spec. Network layer

ARP, IPv4, IPv6, ICMP, ICMPv6, IPSec

Transport layer

TCP, UDP

Application layer

LPR, Port9100, FTP, HTTP, HTTPS, IPP, SNMPv1/v3, TELNET, DHCP/BOOTP, DNS, DDNS, WINS, UPnP, Bonjour, SNTP, SMTP, ODNSP, Windows Rally (WSD Print, PnP-X, LLTD)

NBT: NetBIOS over TCP

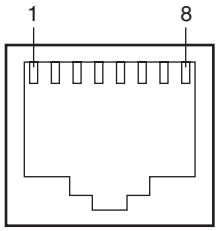
IEEE 802.1X: EAP-TLS, PEAP

1.5.2.2 Network interface connector and cable

(1) Connector

1000BASE-T/100BASE-TX/10BASE-T

(Auto switch, cannot be used simultaneously)



Connector pins arrangement

(2) Cable

Non-shield twisted-pair cable with RJ-45 connector

(Category 5e is recommended)

1.5.2.3 Network interface signals

(1) 10/100Base-T

Pin No.	Signal name	Direction	Function
1	TXD+	FROM PRINTER	Transmission data +
2	TXD-	FROM PRINTER	Transmission data -
3	RXD+	TO PRINTER	Receive data +
4	–	–	Not use
5	–	–	Not use
6	RXD-	TO PRINTER	Receive data -
7	–	–	Not use
8	–	–	Not use

(2) 1000Base-T

Pin No.	Signal name	Direction	Function
1	TRD+(0)	bi-direction	Data0+ transmission and reception
2	TRD-(0)	↑	Data0-transmission and reception
3	TRD+(1)	↑	Data1+ transmission and reception
4	TRD+(2)	↑	Data2+ transmission and reception
5	TRD-(2)	↑	Data2-transmission and reception
6	TRD-(1)	↑	Data1- transmission and reception
7	TRD+(3)	↑	Data3+ transmission and reception
8	TRD-(3)	↑	Data3-transmission and reception

1.5.3 USB host interface specifications

1.5.3.1 USB host interface overview

(1) Basic Specification

USB

(2) Transmission Mode

Hi Speed (480 Mbps ± 0.05 % max.)

(3) Supply Power

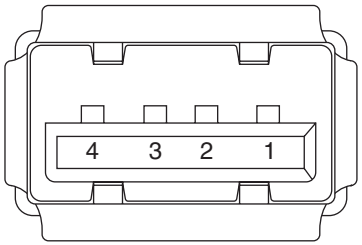
Max. 500 mA

(4) Connection devices

USB memory

1.5.3.2 USB host interface connector

USB A plug connector



Connector pin arrangement

1.5.3.3 USB host interface signals

	Name of Signal	Function
1	Vbus	Power Supply (+5V)(red)
2	D -	Data transmission (white)
3	D +	Data transmission (green)
4	GND	Single ground (black)
Shell	Shield	

1.5.4 Wireless LAN interface specifications (Wireless Model only)

1.5.4.1 Wireless LAN interface overview

(1) Specification

IEEE802.11 b/g/n (2.4GHz)

(2) Power connector

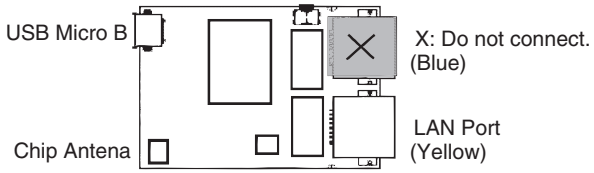
USB Micro B

(3) Power supply voltage

5 V

(4) Printer side interface

IEEE802.3u 10/100BASE (LAN port)



Note! This product cannot connect to a wired LAN and wireless LAN at the same time.

1.5.5 Parallel interface specifications (Parallel installed Model only)

1.5.5.1 Parallel interface overview

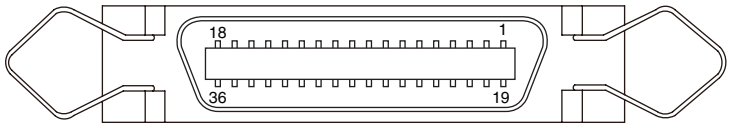
Item	Details
Supported modes	Compatible mode, nibble mode, ECP mode
Data bit length	Compatible mode: 8 bit, Nibble mode: 4 bit, ECP mode: 9 bit

1.5.5.2 Parallel interface connector and cable

(1) Connector

Printer: 36-pole connector (female)

Product equivalent to RS6-36SKAAB4L00 (FU-YAO Tec. Co.,ltd.)



Connector pin arrangement

Cable: 36-pole connector (male)

(2) Cable

Use a cable of 1.8 m or less.

(Use a shielded twisted-pair cable for noise prevention.)

1.5.5.3 Parallel interface signals

Pin No.	Signal name	Signal direction	Compatible	Nibble	ECP
1	$\overline{\text{DATA STROBE}}$	→ PR	nStrobe	HostClk	HostClk
2-9	DATA BIT - n	→ PR	Data 1 (LSB) - 8 (MSB)		
10	$\overline{\text{ACKNOWLEDGE}}$	← PR	nAck	PtrClk	PeriphClk
11	BUSY	← PR	Busy	PtrBusy	PeriphAck
12	PAPER END	← PR	Perror	AckDataReq	nAckReverse
13	SELECT	← PR	Select	Xflag	Xflag
14	$\overline{\text{AUTO FEED}}$	→ PR	nAutoFd	HostBusy	HostAck
15	-	-	-		
16	0V	-	Logic Gnd		
17	CHASSIS GROUND	-	Chassis Gnd		
18	+5V	← PR	Peripheral Logic High		
19	0V	-	Signal Ground (nStrobe)		
20-27	0V	-	Signal Ground (Data 1-8)		
28	0V	-	Signal Ground (Perror,Select,nAck)		
29	0V	-	Signal Ground (Busy,nFault)		
30	0V	-	Signal Ground (nAutoFd,nSelectIn,nInit)		
31	$\overline{\text{INPUT PRIME}}$	→ PR	nInit	nInit	nReverse-Request
32	$\overline{\text{FAULT}}$	← PR	nFault	nDataAvail	nPeriph-Request
33	0V	-	-		
34	-	-	-		
35	Hi Level	← PR	Pulled up to +5V through 3.3Kohm		
36	$\overline{\text{SEL-IN}}$	→ PR	nSelectIn	1284 Active	1284 Active

1.5.5.4 Parallel interface levels

Low level: 0.0V to +0.8V

High level: +2.4V to +5.0V

2. Installation

2.1 Cautions, and do's and don'ts

⚠Warning

- Do not install the printer in any high-temperature location or a near heat source.
- Do not install the printer in a location where chemical reaction may occur (laboratory and the like).
- Do not install the printer in the proximity of inflammable solvents, such as alcohol and paint thinner.
- Do not install the printer within reach of children.
- Do not install the printer on an unstable surface (e.g., on a rickety bench or on a slanting place).
- Do not install the printer in a location with moisture or heavy dust, or in direct sun.
- Do not install the printer in an environment with sea wind or corrosive gas.
- Do not install the printer in a location with heavy vibration.
- In the event that the printer is inadvertently dropped or its cover is damaged, remove the power plug from the power outlet and contact the customer information center.
  Such mishap could lead to an electric shock, fire or injury.
- Do not connect any power cord, printer cable or grounding wire in any other manner than the way specified in the manual. Failure to observe the above could result in fire.
- Do not stick in an object into the vent hole.
  Such action could lead to an electric shock, fire or injury.
- Do not place a glass filled with water or the like on the printer.
  Such action could lead to an electric shock or fire.
- When the printer cover is opened, be careful not to touch the fuser unit.
  It may cause burns.
- Do not throw the toner cartridges or the image drum cartridges into fire.
  Dust explosion could cause burns.
- Do not use a highly combustible spray near the printer.
  It may cause a fire because the printer contains parts that get extremely hot.
- In the event that the cover becomes unusually hot, emits smoke, bad smell, or abnormal noise, remove the power plug from the power outlet and contact the customer information center.
  It may lead a fire.

⚠Warning

- If water or any other liquid enters the inside of the printer, remove the power plug from the power outlet and contact Customer Center.
  Fire could break out.
- If someone drops foreign objects such as a clip in the printer, remove the power plug from the outlet and take out the foreign objects.
  It may cause an electric shock, fire, or injury.
- Do not operate or disassemble the printer in any other manner than the way specified in the manual.
  Failure to observe this warning could result in an electric shock, fire or injury.

⚠Caution

Do not install the printer in a location where its vent hole is blocked.

- Do not install the printer directly on a shag carpet or rug.
- Do not install the printer in a sealed room or other location with poor ventilation or permeability.
- Make sure to ventilate sufficiently when continuously using the printer in a small room for a long time.
- Install the printer away from a strong magnetic field or noise source.
- Install the printer away from a monitor or TV.
- To move the printer, hold both sides of the printer.
- This printer, which weighs approximately 27 kg, should be lifted by two or more people.
- While the printer power is on or the printer is printing, do not come close to the paper exit. Such action could lead to injury.

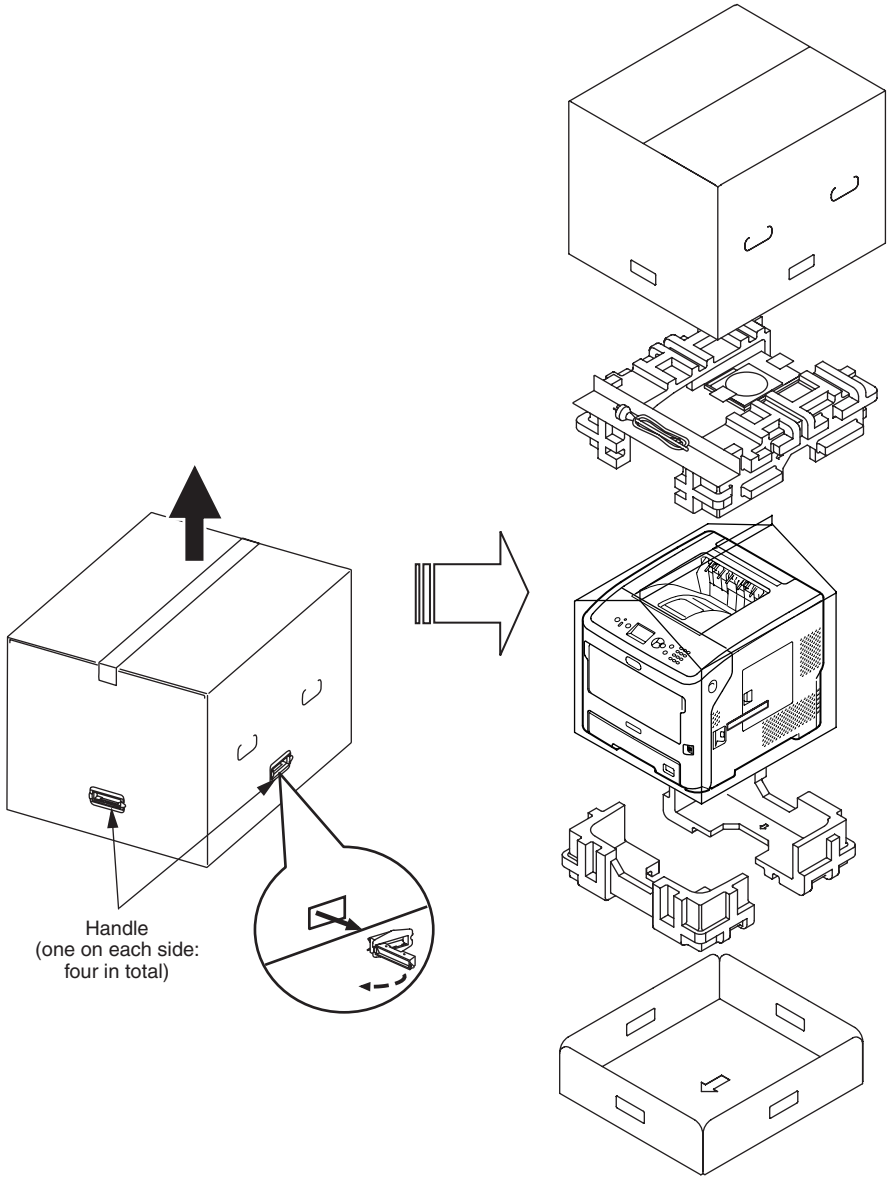
When the precautionary notes concerning the installation and operation are explained, the user should be referred to the precautionary notes given in the user's manual. Especially, give thorough explanation on the power cord and the grounding wire.

2.2 Unpacking procedure

⚠Warning	Personal injuries may occur.	⚠

Since the printer weights approximately 27 kg, it should be lifted by two or more people.

- Remove the four handles from the sides of the box, as illustrated below, and lift the corrugated fiberboard box.



2.3 Printer installation instructions

- Install the printer in a location where the following temperature and humidity are met:

  Ambient temperature: 10 - 32°C

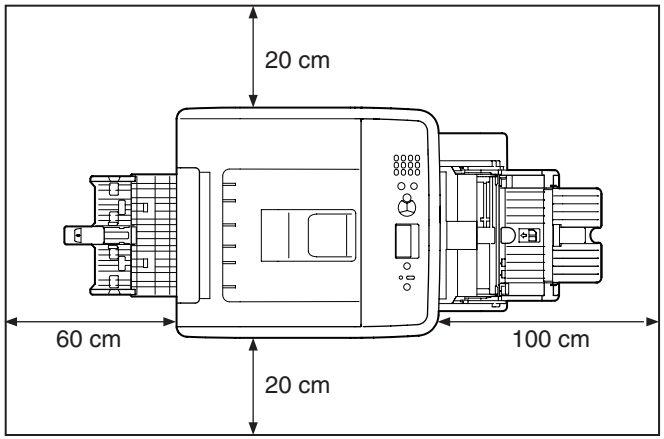
  Ambient humidity: 20 - 80 % RH (relative humidity)

  Maximum wet-bulb temperature: 25°C
- Exercise caution to avoid dew condensation.
- If the printer is installed in a location with ambient relative humidity below 30%, use a humidifier or antistatic mat.

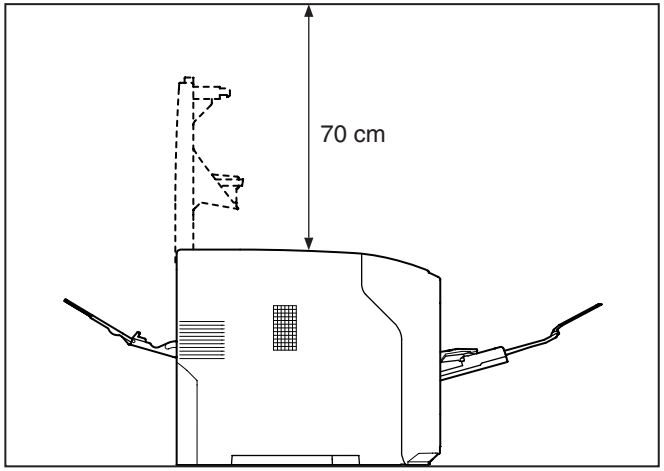
Installation space

- Place the printer on a flat desk large enough to accommodate its footings.
- Provide enough spaces around the printer.

Plan view



Side view



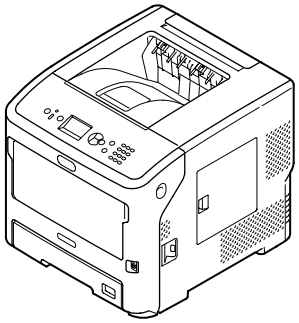
2.4 List of components and accessories

- Check to make sure that the components are free from damage, dirt or other irregularities in their appearance.
- Ensure that none of the accessories to the components is missing and that they are free from breakage or other flaw.
- If any irregularity is discovered, contact the user management section for instructions.

⚠Warning	Personal injury may occur.	⚠

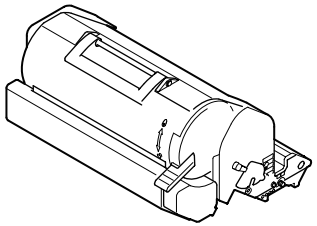
Since the printer weights approximately 27 kg, it should be lifted by two or more people.

☐ Printer (main unit)



☐ Print cartridge

Note! • The starter toner cartridges are installed in the image drums.
The image drums are installed in the printer at the time of shipping.
• The print cartridge for the ES7131/MPS5501b is divided into an image drum and a toner cartridge.



☐ Printer software DVD-ROM

☐ AC cable

Note! No printer cable is supplied with the printer.

2.5 Assembly procedure

2.5.1 Assembly of the printer main unit

Unpacking

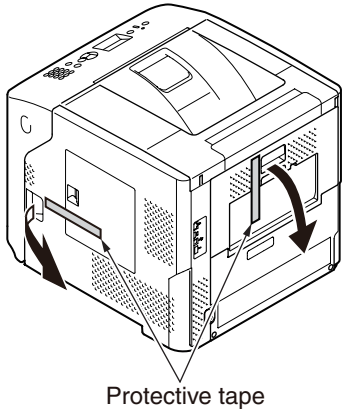
⚠Warning	Personal injury may occur.	⚠

Since the printer weights approximately 27 kg, it should be lifted by two or more people.

Note! • Be sure to use the consumables or maintenance units provided with this printer at first. Otherwise, the life of the consumables or maintenance units may not be displayed correctly, or you may not be able to use them later.
- The print cartridge (the green tube) is very delicate. Handle it carefully.
- Do not expose the print cartridge to direct sunlight or very bright interior light (approximately more than 1500 lux). Even under the normal interior light, do not leave it for more than 5 minutes.
- Packaging and cushioning material are needed if transporting the printer. Do not throw them away.

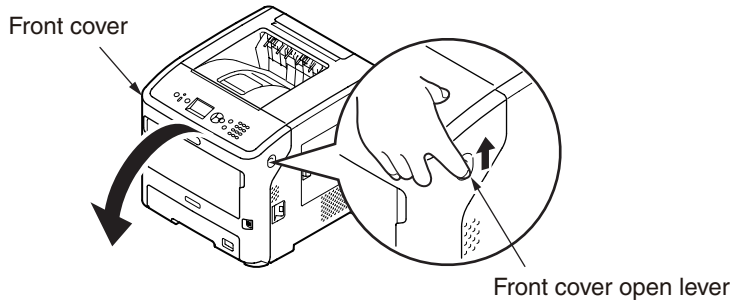
(1) Remove your printer from the box and remove all cushioning materials and the plastic bag from your printer.

(2) Remove the two strips of protective tape on the right side and at the back of your printer.

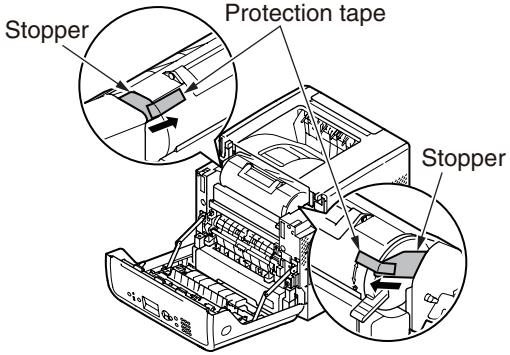


(3) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.

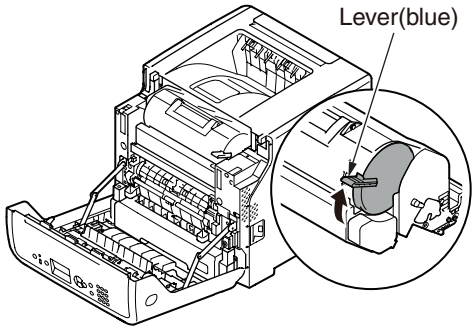
Note! Open the front cover gently. If you open it rapidly, the MP Tray may open.



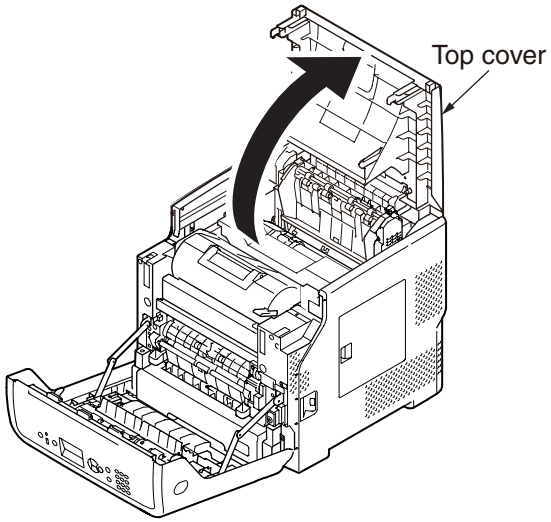
(4) For the ES7131/MPS5501b, remove the protective tape and orange stopper.



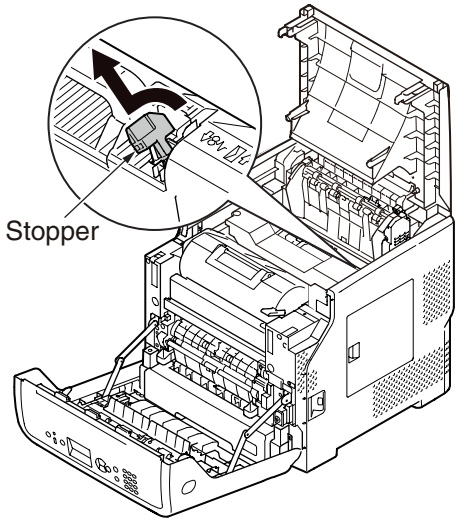
(5) Turn the blue lever of the print cartridge fully in the direction of the arrow.



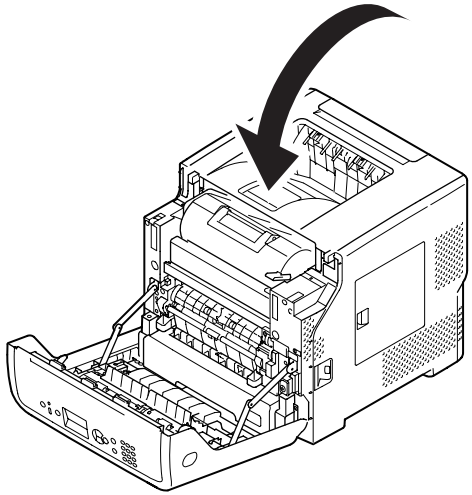
(6) Open the top cover.



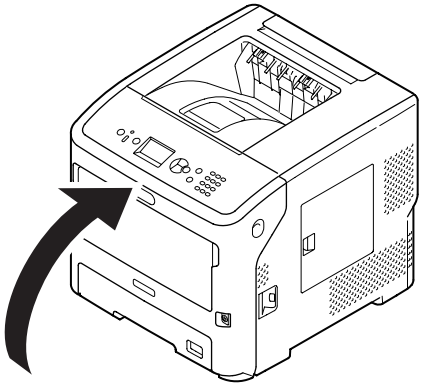
(7) Pull out the orange stopper from the fuser unit.



(8) Close the top cover.



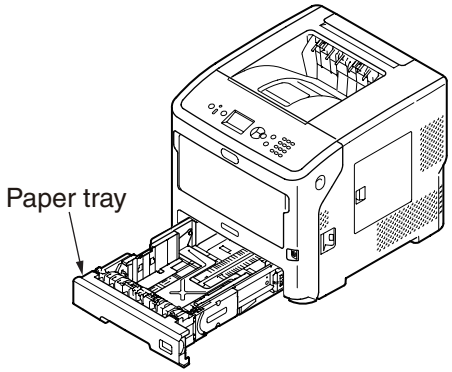
(9) Close the front cover.



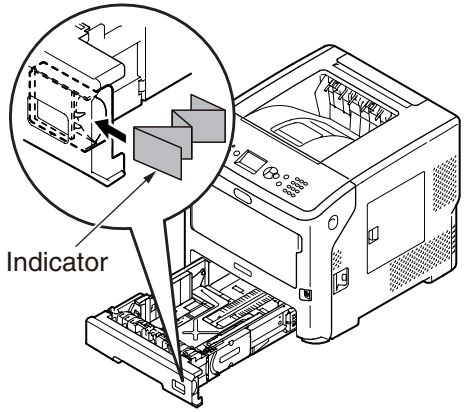
Set the paper into Trays 1/2/3/4.

Note! This procedure images use tray 1 as an example, but the same procedure applies to trays 2/3/4.

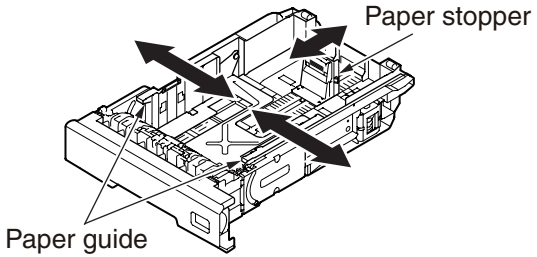
(1) Pull out the paper tray.



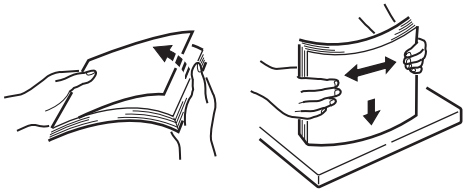
(2) Display the size of the paper to be loaded on the indicator then insert the indicator.



(3) Slide the paper guide and paper stopper to the size of paper to be loaded.

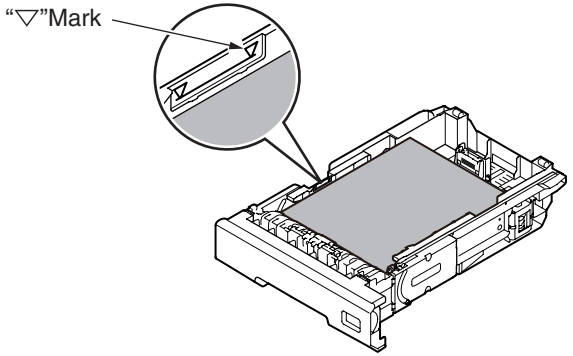


(4) Flex paper back and forth, and then fan it. Straighten the edges of the paper stack on a level surface.



(5) Load paper with the print side face down and press it from above.

Note! Do not load paper exceeding the "▽" mark of the paper guide.



(6) Return the paper tray to the printer.

Note! If you load paper whose size cannot be selected with the paper size indicator options, set the paper size on the operator panel.

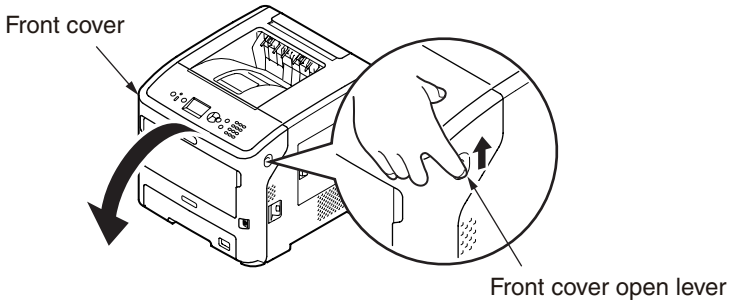
Set the paper in MP tray.

Note! • Do not load paper of different sizes, types, or weights at the same time.
• When adding paper, remove the paper on the MP Tray and straighten the edges of both stacks of paper, and then load them again.
• Do not put anything other than paper for printing in the MP Tray.

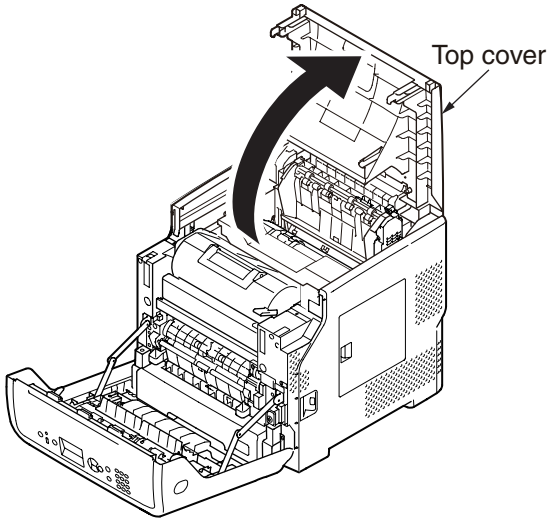
Preparation before setting envelopes in the MP Tray.

Before setting envelopes in the MP Tray, perform the following procedure.

(1) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.



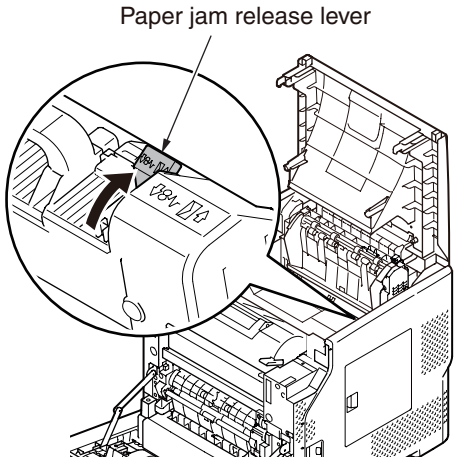
(2) Open the top cover.



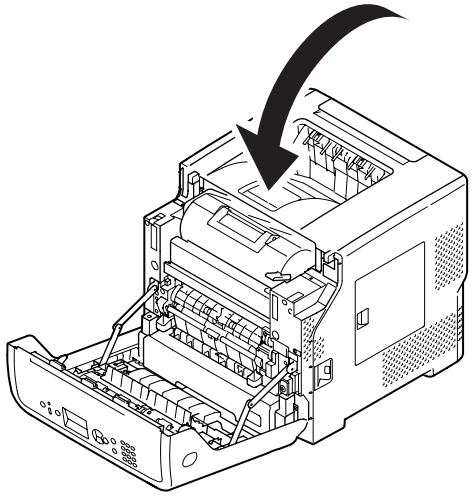
(3) Tilt the paper jam release lever of the fuser unit back to the envelope position.

⚠Caution	Possible to get burned.	

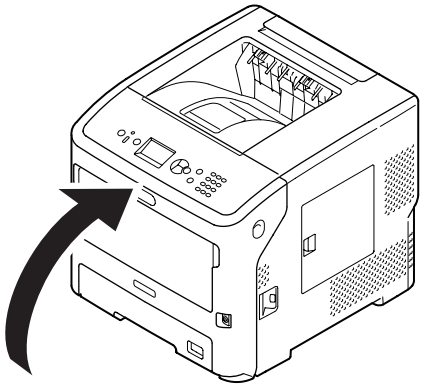
Do not touch the fuser unit. It is hot.



(4) Close the top cover.



(5) Close the front cover.

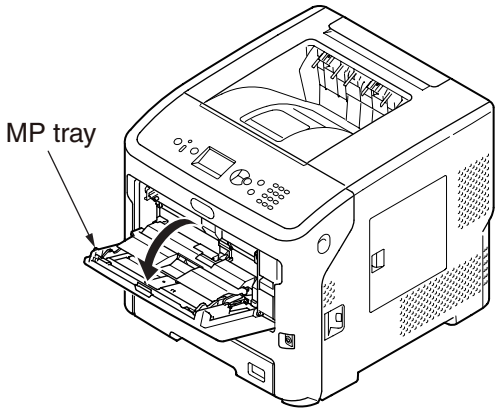


Note! When loading envelopes in the MP Tray, load them face up with the orientation noted below.

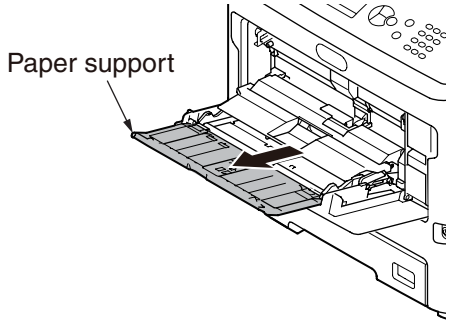
- C5, C6, DL, Com-9, Com-10 and Monarch are loaded with the flap folded, with the orientation shown in the figure below.

Setting the paper

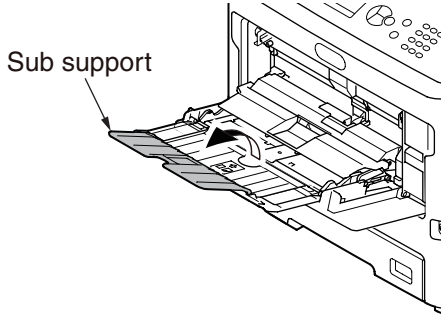
(1) Open the MP Tray forward by inserting your fingers into the front recesses.



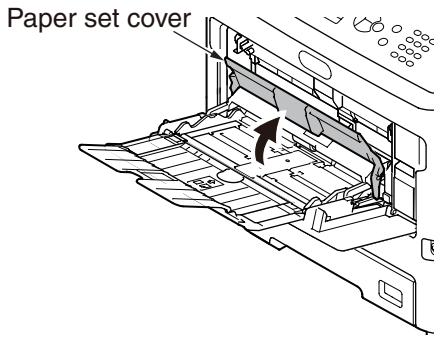
(2) Pull out the paper support by holding the center part of it.



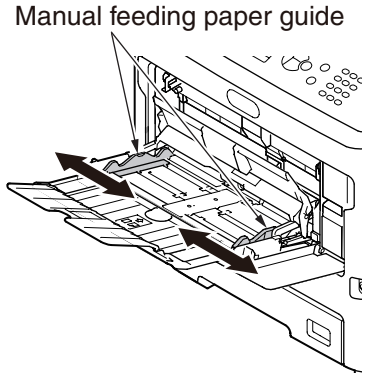
(3) Unfold the sub support.



(4) Open the paper set cover.

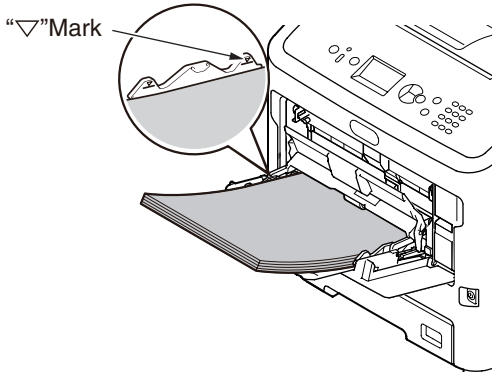


(5) Adjust the manual feeding paper guide to the width of paper to be loaded.

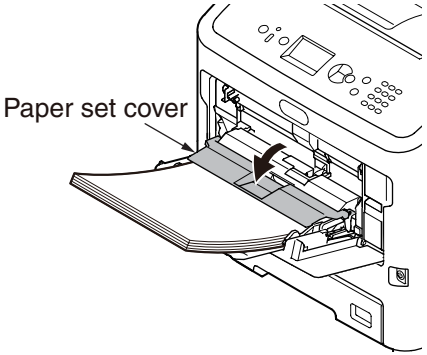


(6) Insert the paper with the print side face up.

Note! Do not load paper exceeding the "▽" mark of the paper guide.



(7) Close the paper set cover.



2.5.2 Connection of the AC cable

Power supply conditions

- Observe the following conditions:
  Current: 110 - 127 VAC (Range 99 - 140 VAC)
  220 - 240 VAC (Range 198 - 264 VAC)
  Frequency: 50/60 Hz ± 2%
- If the power supply is unstable, use a voltage regulator.
- The maximum power consumption of this printer is 1400 W. Ensure that the power supply is sufficient to operate this printer.
- We do not guarantee operation where an uninterruptible power system (UPS) or inverter is used. Do not use an uninterruptible power system (UPS) or inverter.

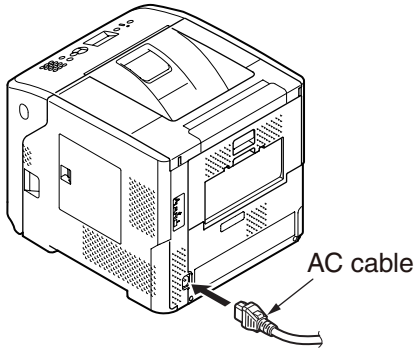
⚠Warning There is a risk of getting an electric shock and/or causing fire.

- Be sure to turn off the power supply switch when attaching or removing the AC cable.
- Be sure to plug in and unplug the AC cable while holding on to the power supply plug.
- Insert the AC cable plug completely into the wall socket securely.
- Do not touch the power cable, or printer, if your hands are wet.
- Install a power cable in the place which is not stepped on, and do not place a thing on a power cable.
- Do not use the cable tied in a bundle.
- Please do not use the damaged power cable.
- Do not use multi-outlet adapters.
- Do not connect this printer and other electric products to the same wall socket. If it is connected simultaneously with an air conditioner, copier, shredder, etc., the printer may malfunction by the electric noise. When you connect with the same wall socket unavoidably, please use a commercial noise filter or a commercial noise cut transformer.
- Use the power cable supplied to the printer and plug it directly into a wall socket. Do not use the power cable for other product for the printer.
- Do not use an extension cable. When you use it unavoidably, use the thing more than rated 15 A.
- Use of an extended code may not operate a printer normally by AC voltage descent.
- During printing, do not shut off a power supply or do not pull out a power supply plug.
- When you use it neither for consecutive holidays nor a travel for a long time, pull out a power cable.
- Do not use the supplied power cable to the other products.

About the connections of the power cable and grounding wire, the user should be given thorough explanation on the basis of the user's manual.

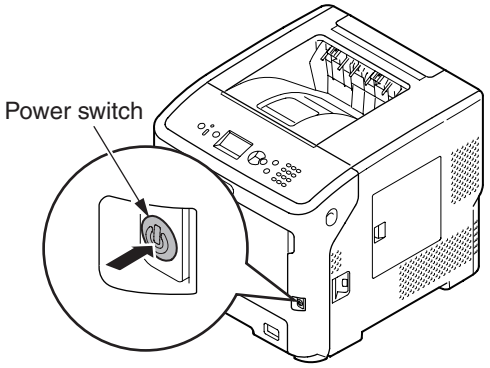
Turning on the power

(1) Plug the AC cable into the AC power socket of your printer.



(2) Plug the AC cable into the electric socket.

(3) Hold down the power switch for about 1 second to turn on the power.

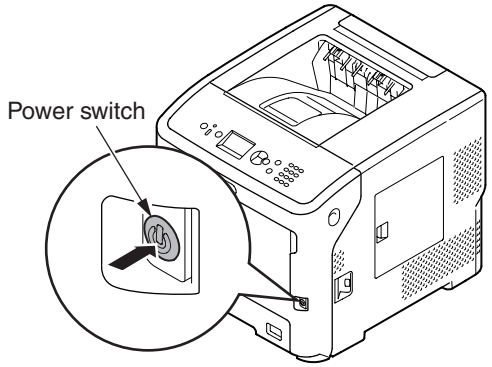


The Power switch LED indicator lights up when the printer turns on. The message "Ready To Print" is displayed in the operator panel once printer is ready.

Turning off the power

(1) Hold down the power switch for about 1 second.

The message “Shutting down/Please wait. Printer will turn off automatically.” appears in the operator panel, and the power switch indicator blinks every 1 second. Then the printer turns off automatically and the power switch indicator goes out.



Note! • It may take about 5 minutes for the printer to shut itself off. Wait until it turns off.
• Holding down the power switch for more than 5 seconds turns off printer forcibly. Only perform this procedure when a problem occurs.

When the Printer is Not Used for a Long Time

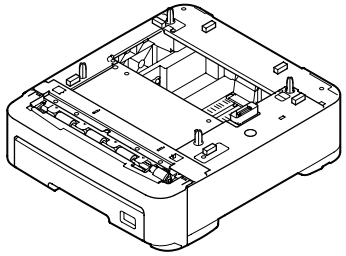
When the printer is not used for a long time due to consecutive holidays or when on vacation, or when changing or attaching parts in repair or maintenance, unplug the AC cable.

Note! The printer will not be functionally impaired even if left unplugged for a long time (more than 4 weeks).

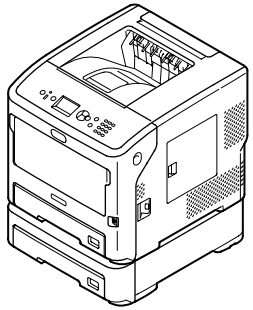
2.5.3 Installation and recognition confirmation of options

(1) Installation of an Additional Tray Unit

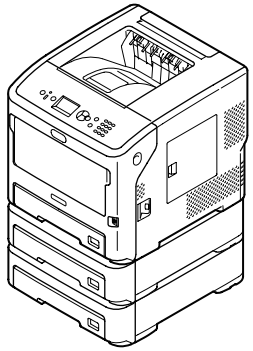
An additional tray unit is intended for increasing the amount of paper that can be loaded in the printer, and three additional tray units can be installed to the printer. An additional tray holds 530 sheets of 70 kg paper, allowing the printer to print up to 2,220 sheets continuously when used with a standard paper cassette and a multi-purpose tray together.



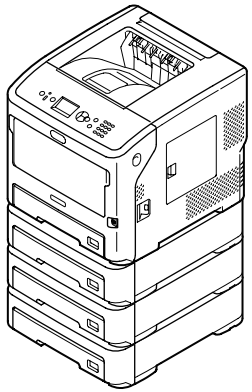
- Printer and one additional tray unit



- Printer and two additional tray units

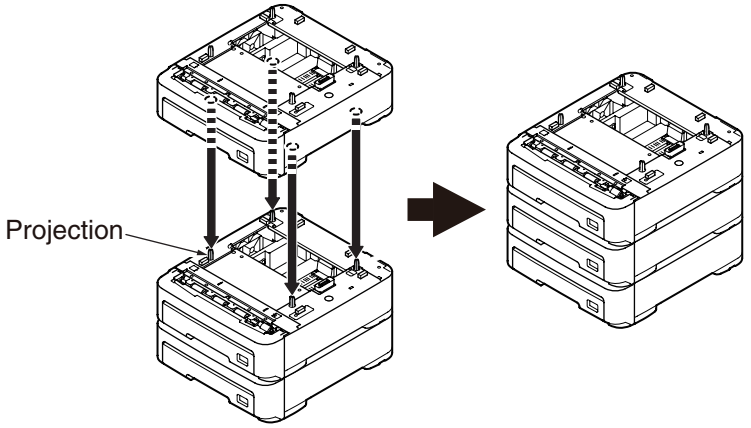


- Printer and three additional tray units



1. Turn off your printer, then unplug all the cables from the printer.

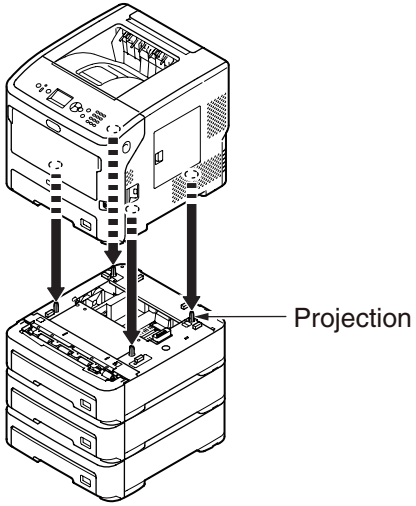
   Turn off the printer by following the steps described under “Turning off the power” in section 3.5.2.
2. Stack the additional trays, inserting the projections of the lower additional tray into the holes on the bottom of the upper additional tray one by one.



3. Gently place the printer on the additional trays, inserting the projections of the additional tray into the holes on the bottom of the printer.

⚠Warning	Personal injury may occur.	⚠

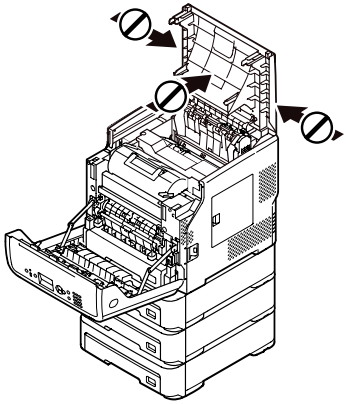
Since the printer weights approximately 27 kg, it should be lifted by two or more people.



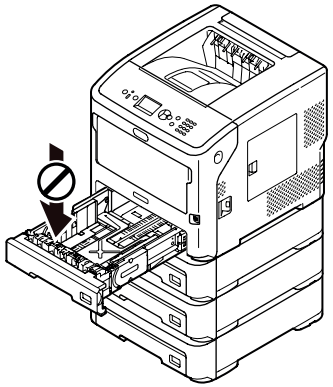
⚠Warning	Personal injury may occur.	⚠

For prevention of overturning of the printer during transport or maintenance, be sure not to do the following:

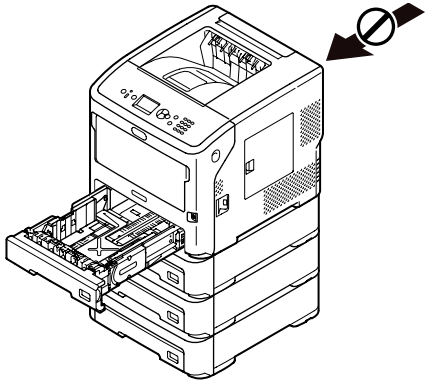
- Never push the top cover of the printer while it is open.



- Never push down the cassette while it is open.



- Never push the printer from behind it while the cassette is open.



4. Plug the AC cable and removed cables into your printer, and then turn on the power switch.

Note! If [SERVICE CALL 182: ERROR 183: ERROR 184: ERROR] appears, remove the installed tray unit and reinstall it to the printer.

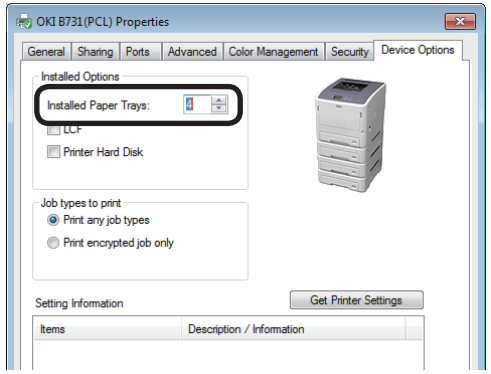
5. Set the number of trays in the printer driver.

   Setting should be made in the printer driver to have the printer recognize every added tray.

   If the printer driver hasn't been set up, set up the printer driver by referring to the relevant user's manual (Setup) and then perform the following setup.

Note! Administrator privileges on the computer are required.

Settings for Windows PCL printer driver



❶ Click [Start] and select [Devices and Printers].

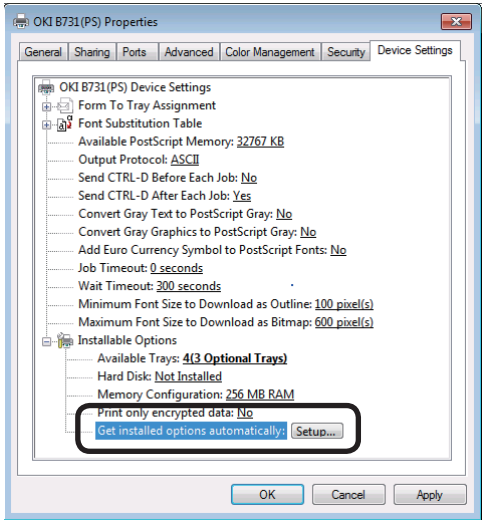
❷ Right-click the printer icon then select [Printer Properties]. (If you have installed multiple printer drivers, select [Printer Properties] then [printer name (PCL)].)

❸ Select the [Device Options] tab.

❹ For the network connection, select [Get Printer Settings]. For USB connection, enter the number of trays except the multipurpose tray in [Installed Paper Trays].

❺ Click [OK].

Settings for Windows PS printer driver



❶ Click [Start] and select [Devices and Printers].

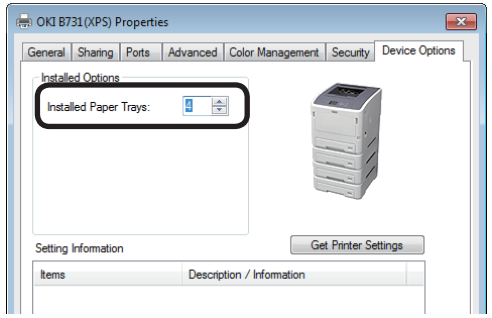
❷ Right-click the [printer name (PS)] icon then select [Printer Properties]. (If you have installed multiple printer drivers, select [Printer Properties] then [printer name (PS)].)

❸ Select the [Device Options] tab.

❹ For network connection, Select [Get installed options automatically] in [Installable Options] and click [Setup]. For USB connection, select an appropriate value in [Available Trays] of [Installable Options].

❺ Click [OK].

Settings for Windows XPS printer driver



❶ Click [Start] and select [Devices and Printers].

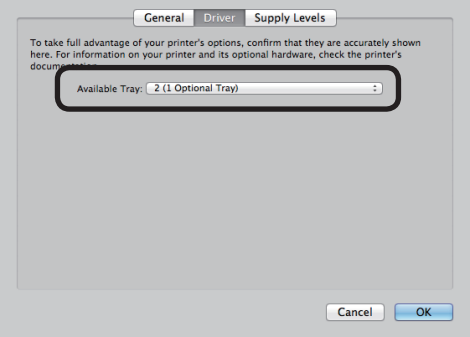
❷ Right-click the printer icon then select [Printer Properties]. (If you have installed multiple printer drivers, select [Printer Properties] then [printer name (XPS)].)

❸ Select the [Device Options] tab.

❹ For the network connection, select [Get Printer Settings]. For USB connection, enter the number of trays except the multipurpose tray in [Installed Paper Trays].

❺ Click [OK].

Settings for Mac OS X PS printer driver (Mac OS X 10.5 to 10.8)



❶ Select [System Preference] from the Apple Menu.

❷ Click [Print & Fax].

❸ Select a printer and click [Options & Supplies].

❹ Select the [Driver] tab.

❺ Select an appropriate value in [Available Trays] and click [OK].

Settings for Mac OS X PS printer driver (Mac OS X 10.4.11)

❶ Select [Utilities] from [GO] menu and double click [Printer Setup Utility].

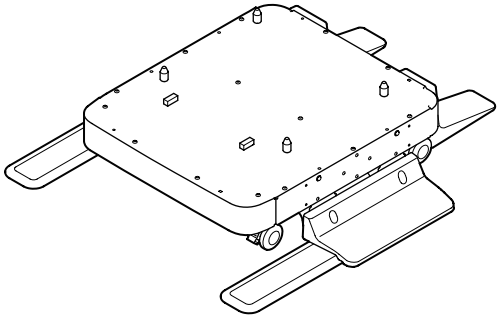
❷ Select the printer to click [Show Info].

❸ Select [Installable Options] from the pop-up menu under the printer name.

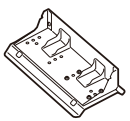
❹ Select an appropriate value in [Available Trays], and then, click [Apply Changes].

❺ Close the Printer Information.

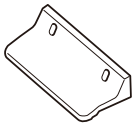
(2) Installation of a printer stand



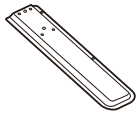
Attaching a set of anti-tip feet



Anti-tip Foot Side (2)



Anti-tip Foot Cover (2)



Anti-tip Foot (2)

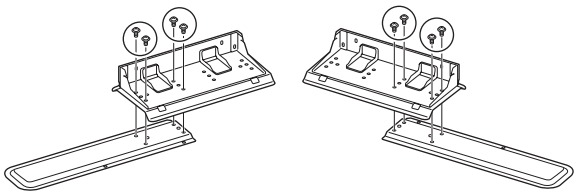
Anti-tip Foot Rear (2)

Anti-tip Foot Cover (2)

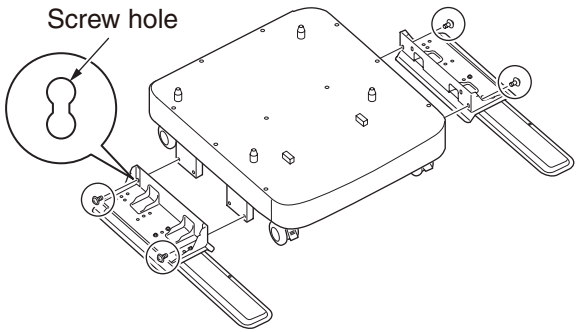
Screws (22)

1. Attach the anti-tip feet (both sides and front) with four screws.

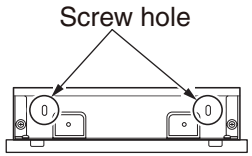
Note! Attachment directions are different for the left side and the right side.



2. Put the bottoms of the anti-tip feet (both sides) on the floor, align the sides to the cabinet and tighten them with the two screws each.



Note! • Do not tighten the upper screw holes.

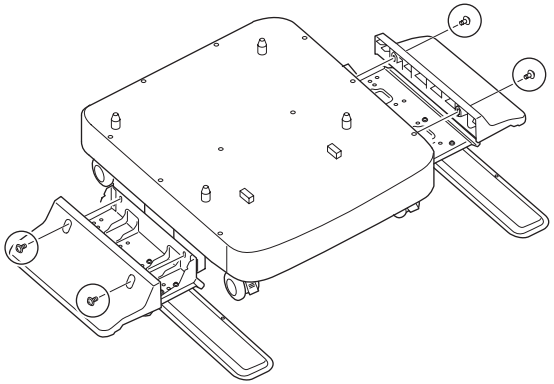


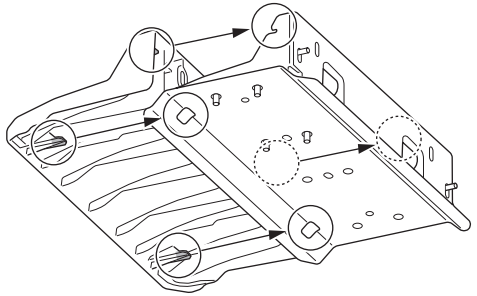
- When you tighten the bottom screws, attach the anti-tip foot to the locatoin where a screw does not incline.

* You can attach the screws to Case1 and Case2. As the screw inclines when you tighten the screw in Case3, lift the anti-tip foot and attach the screw to Case2.

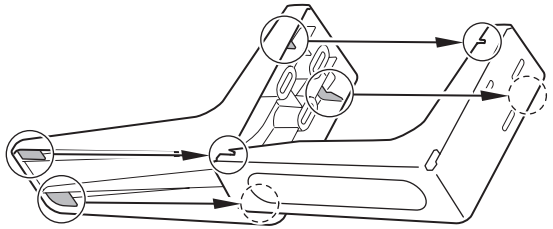
Case 1	Case 2	Case 3
		
OK	OK	NG

3. Tighten the anti-tip foot covers (both sides) and anti-tip feet with two screws each.

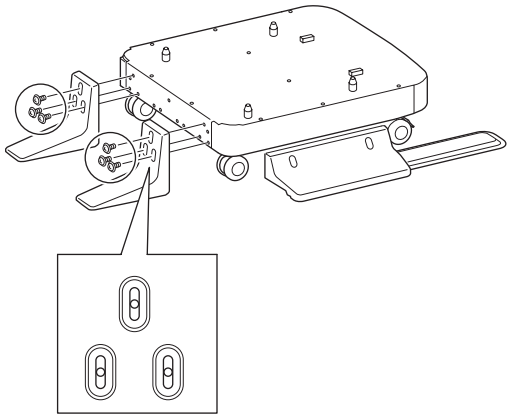




4. Align the anti-tip foot cover (rear) to the rear side of the anti-tip foot.



5. Put the bottoms of the anti-tip feet on the floor and tighten them with three screws.



Attach the screw in the middle of the oval cutout and tighten the screw.

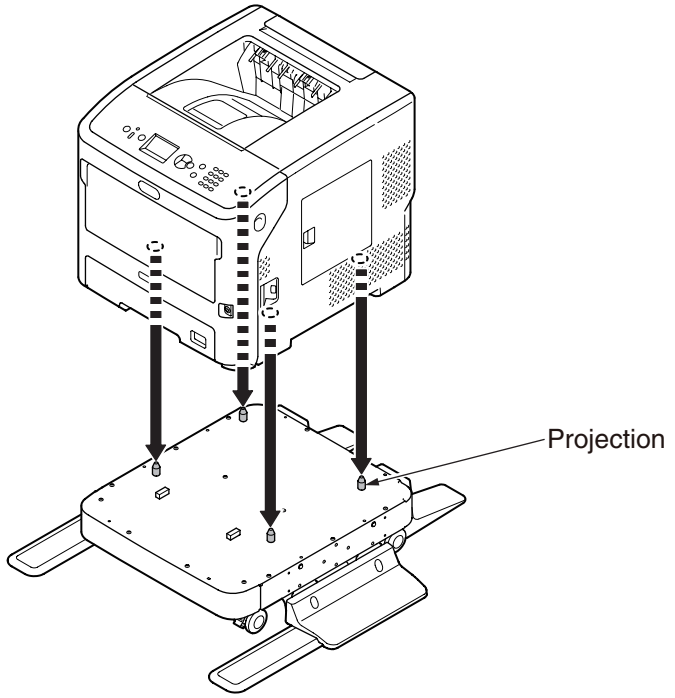
Attaching a printer stand to the printer

⚠Warning	Personal injury may occur.	⚠

Since the printer weights approximately 27 kg, it should be lifted by two or more people.

1. Turn off your printer, then unplug all the cables from the printer.

   Turn off the printer by following the steps described under “Turning off the power” in section 3.5.2.
2. Gently place the printer on the printer stand, inserting the projections of the printer stand into the holes on the bottom of the printer.

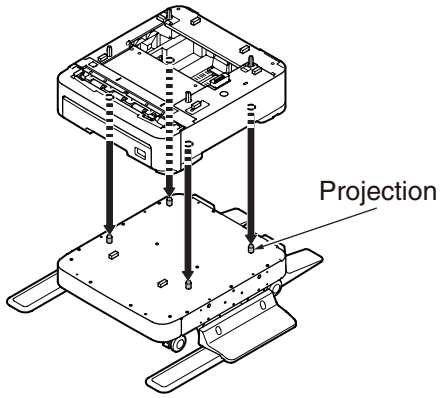


3. Plug the AC cable and removed cables into your printer, and then turn on the power switch.

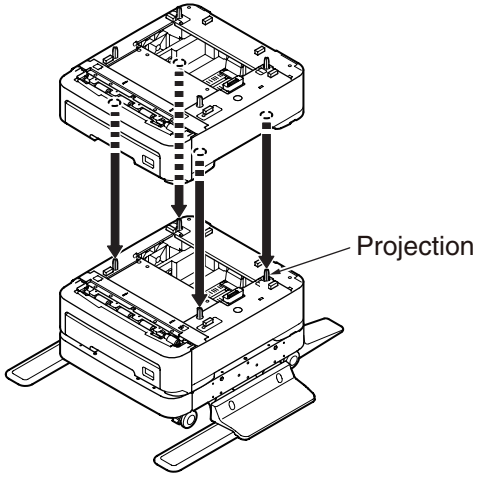
Attaching a printer stand to an additional tray (trays 2/3/4)

Stack the additional trays one by one on the printer stand then place the printer on them.

1. Gently place the additional tray on the printer stand, inserting the four projections of the printer stand into the holes on the bottom of the additional tray.



2. To add more additional trays, gently place them on the additional tray, inserting the projections of the lower additional tray into the holes on the bottom of the upper additional tray one by one.



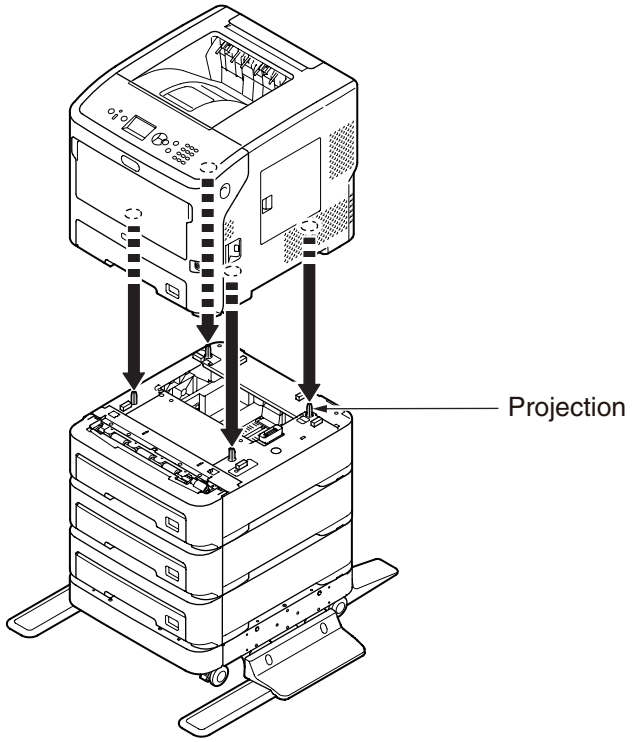
3. Turn off your printer, then unplug all the cables from the printer.

   Turn off the printer by following the steps described under “Turning off the power” in section 3.5.2.

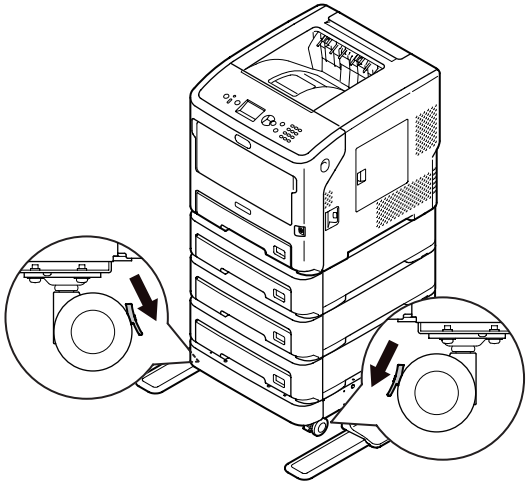
4. Gently place the printer on the additional trays, inserting the projections of the additional tray into the holes on the bottom of the printer.

⚠Warning	Personal injury may occur.	⚠

Since the printer weights approximately 27 kg, it should be lifted by two or more people.



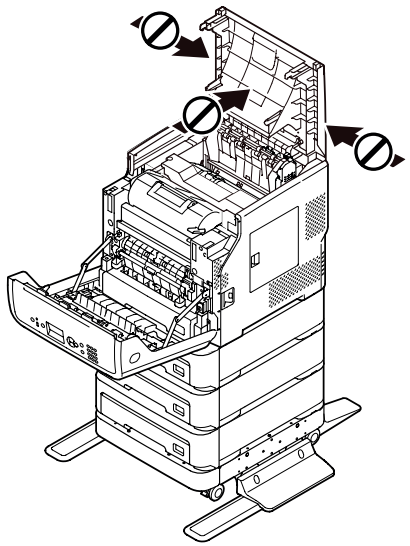
5. Lock the two casters on the front side of the additional trays, by pushing down their lock levers.



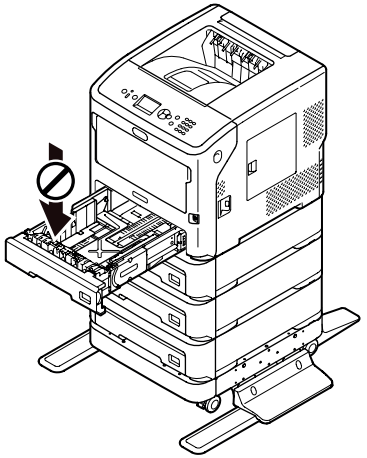
⚠Warning	Personal injury may occur.	⚠

For prevention of overturning of the printer during transport or maintenance, be sure not to do the following:

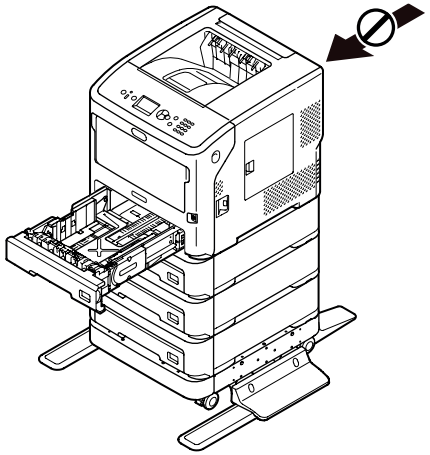
- Never push the top cover of the printer while it is open.



- Never push down the cassette while it is open.

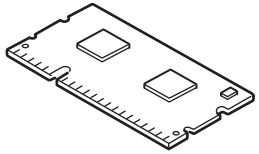


- Never push the printer from behind it while the cassette is open.



(3) Installation of an additional RAM

Install additional RAM to increase the memory capacity of your printer in cases such as if memory overflow or the collate print errors occur. Your printer supports 512 MB RAM.



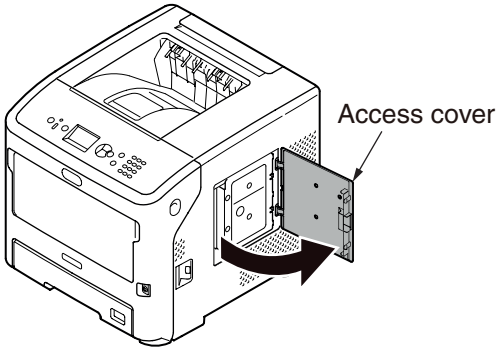
Additional RAM

Note! • Use only genuine Oki Data products. The performance cannot be guaranteed when other products are used.
- The static electricity may cause damage to the parts. Discharge the static electricity in your body by touching grounded metallic parts, etc. before work.
- Components may be damaged by static electricity. Make sure to remove the static electricity charged on human body by touching metals by hand before works.

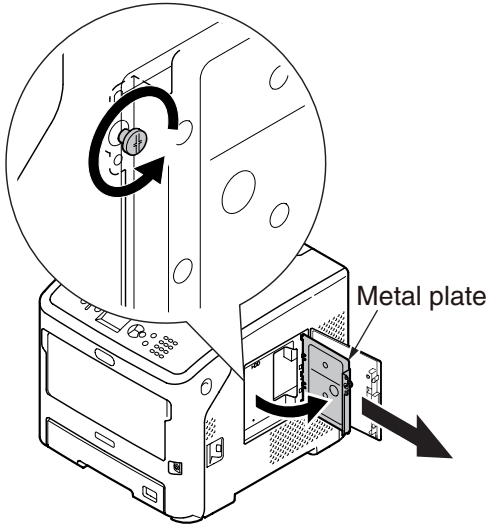
Memo For banner printing, installing additional memory is recommended.

1. Turn off your printer, then unplug all the cables from the printer.

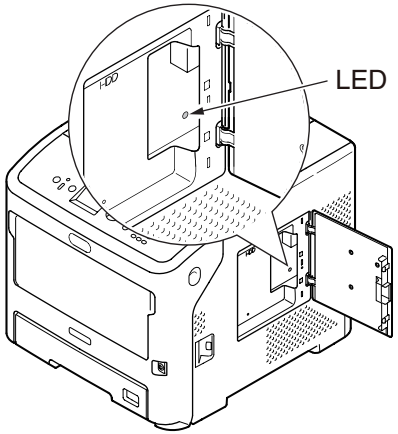
   Turn off the printer by following the steps described under “Turning off the power” in section 3.5.2.
2. Open the access cover on the right side of the printer.



3. Loosen the screw to remove the metal plate.

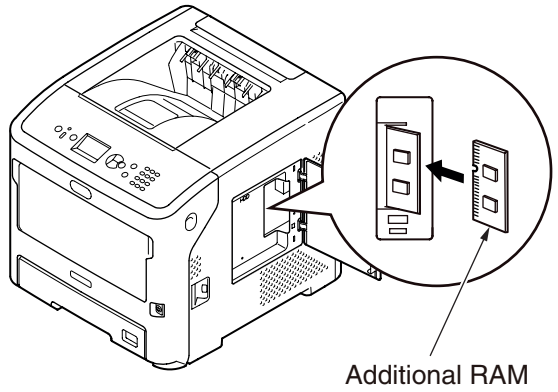


4. Make sure the LED indicated by the arrow is unlit. If it is lit, wait until it turns off.

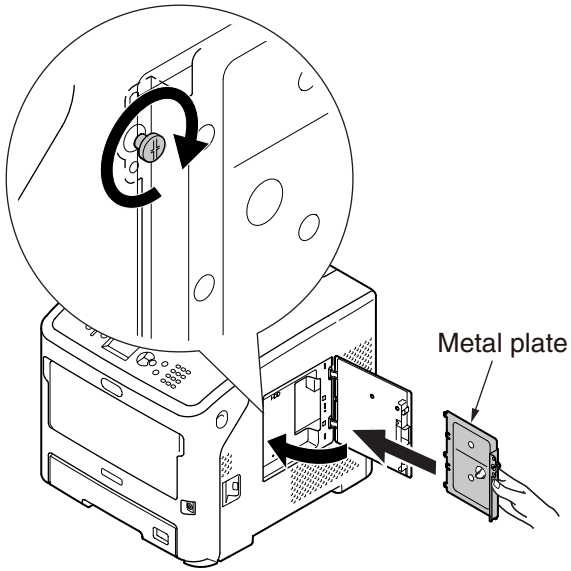


5. Insert the additional RAM into the slot and fix it by pushing it toward the printer.

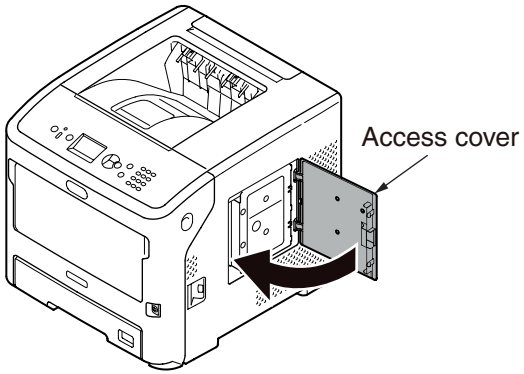
Note! Be careful of the orientation of the additional RAM. The additional RAM has small dents on its connector, which are to be fitted with a connector of a slot.



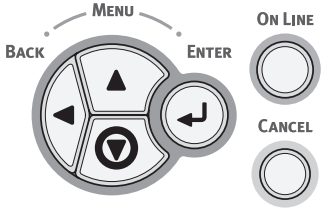
6. Insert the right side of the metal plate into the printer, close it, then secure it by tightening the screw.



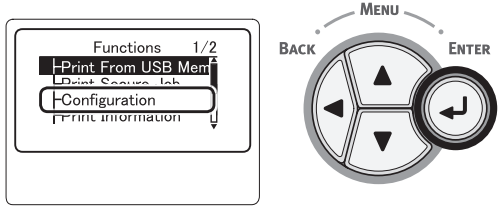
7. Close the access cover.



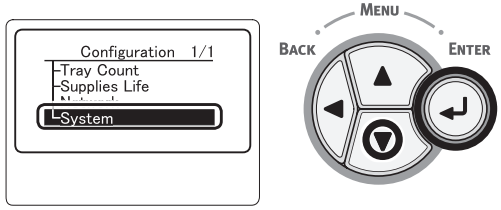
8. Plug the AC cable and removed cables into your printer, and then turn on the power switch.
9. Set up with the operator panel.



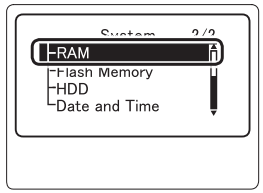
❶ Press the scroll button ▼ on the operator panel.

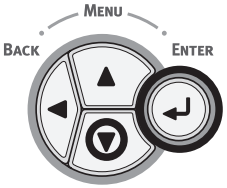


❷ Check that [Configuration] is selected then press the <ENTER> button.

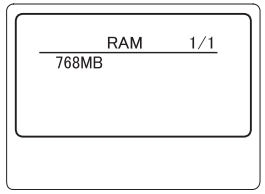


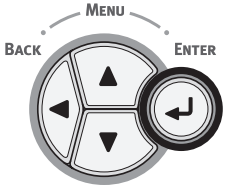
❸ Press the scroll button ▼ several times to select [System] then press the <ENTER> button.





❹ Press the scroll button ▼ several times to select [RAM] then press the <ENTER> button.

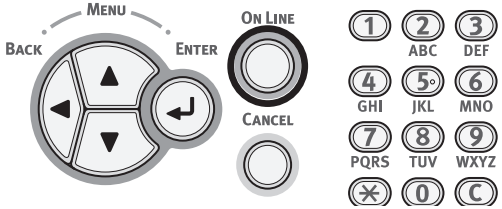




❺ Check that the value of [RAM] has increased.

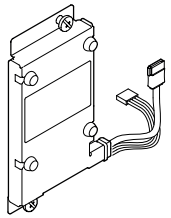
For memory expanded to 512 MB, it is [768 MB].

Note! If the value of [RAM] has not increased, turn off your printer and unplug the AC cable and all the cables, and then reinstall the additional RAM.



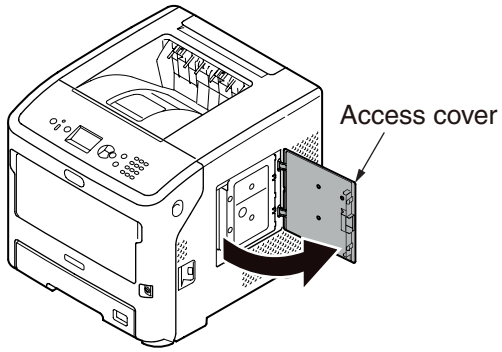
❻ Press the <ON LINE> button.

(4) Installation of a Hard Disk

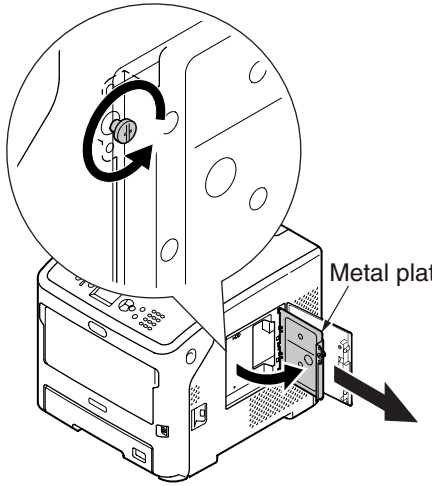


1. Turn off your printer, then unplug all the cables from the printer.

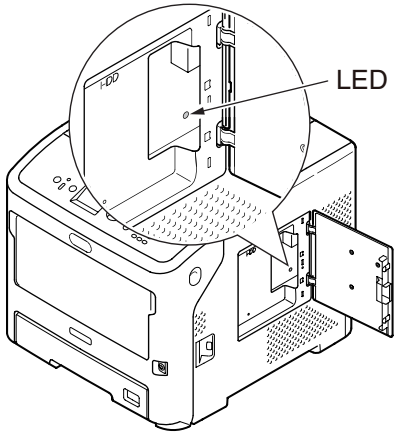
   Turn off the printer by following the steps described under “Turning off the power” in section 3.5.2.
2. Open the access cover on the right side of the printer.



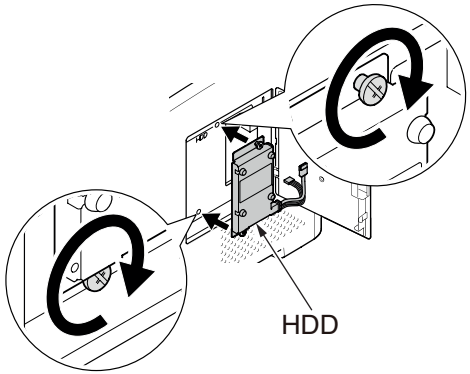
3. Loosen the screw to remove the metal plate.



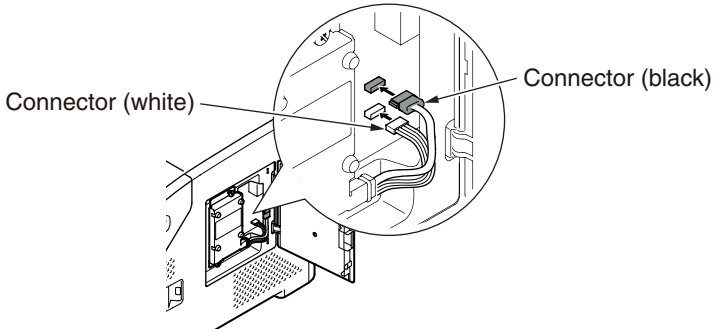
4. Make sure the LED indicated by the arrow is unlit. If it is lit, wait until it turns off.



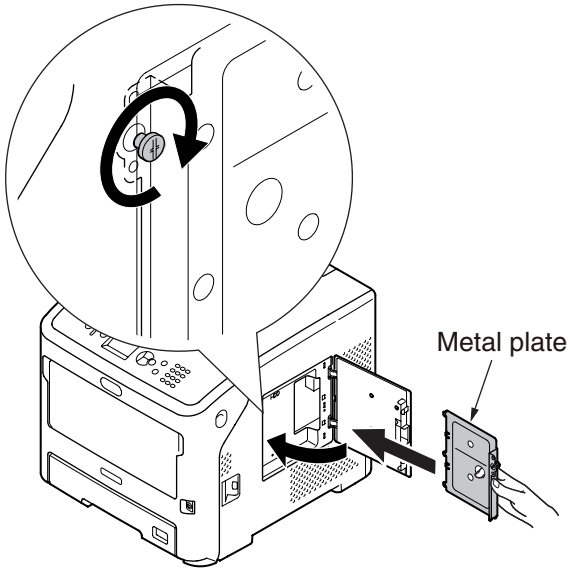
5. Attach a hard disk, and fasten two screws to secure it.



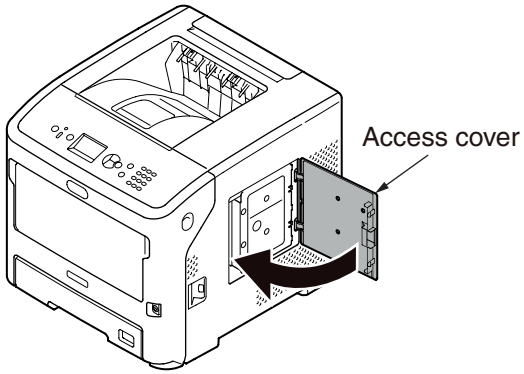
6. Plug the white connector of the hard disk first into the printer then plug the other connector into the printer.



7. Insert the right side of the metal plate into the printer, close it, then secure it by tightening the screw.

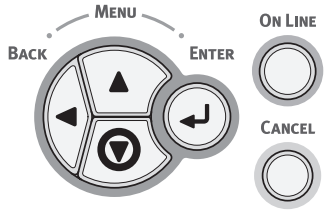


8. Close the access cover.

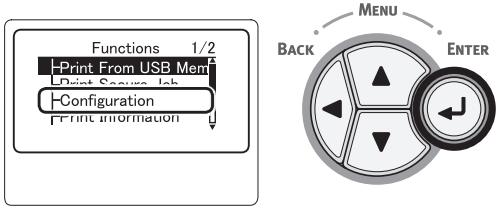


9. Plug the AC cable and removed cables into your printer, and then turn on the power switch.

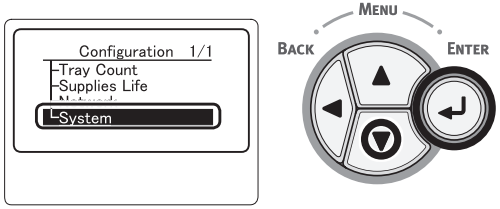
10. Set up with the operator panel.



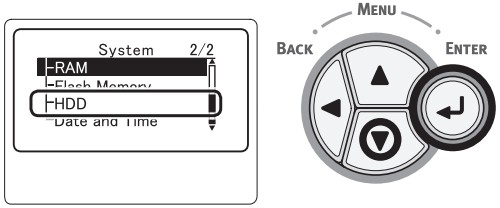
❶ Press the scroll button ▼ on the operator panel.



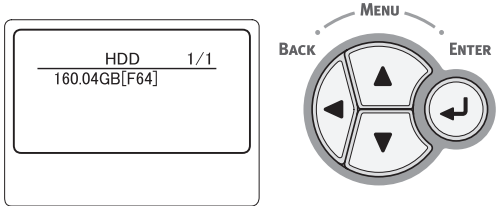
❷ Check that [Configuration] is selected then press the <ENTER> button.



❸ Press the scroll button ▼ several times to select [System] then press the <ENTER> button.

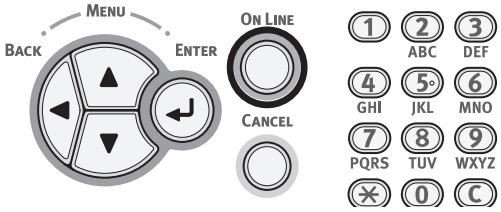


❹ Press the scroll button ▼ several times to select [HDD] then press the <ENTER> button.



❺ Check that the value of [HDD].

Note! If [uninstalled] is displayed, turn off your printer and unplug the AC cable and all the cables, and then reinstall the hard disk.

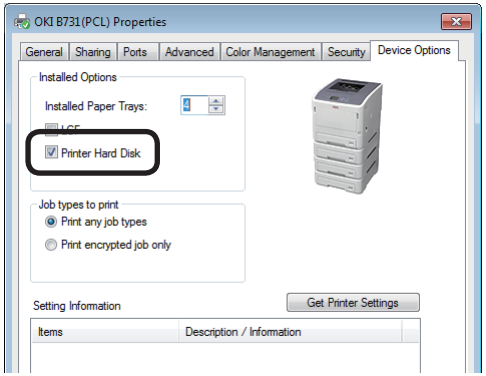


❻ Press the <ON LINE> button.

11. Set up [Hard Disk] in the printer driver.

Note!
- Administrator privileges on the computer are required.
- The Hard Disk cannot be used with a Windows XPS driver and Mac PS driver.

Setting for Windows PCL Printer Driver



❶ Click [Start] and select [Devices and Printers].

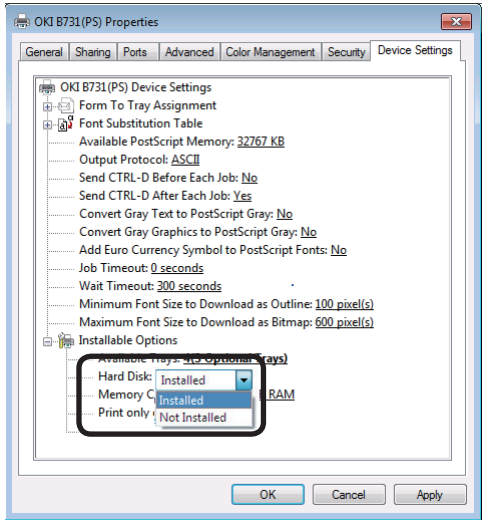
❷ Right-click the printer icon then select [Printer Properties]. (If you have installed multiple printer drivers, select [Printer Properties] then [printer name (PCL)].)

❸ Select the [Device Options] tab.

❹ For the network connection, select [Get Printer Settings]. For USB connection, check the checkbox of [Printer Hard Disk].

❺ Click [OK].

Settings for Windows PS printer driver



❶ Click [Start] and select [Devices and Printers].

❷ Right-click the [printer name (PS)] icon then select [Printer Properties]. (If you have installed multiple printer drivers, select [Printer Properties] then [printer name (PS)].)

❸ Select the [Device Options] tab.

❹ For network connection, Select [Get Printer Settings] in [Installable Options] and click [Setup]. For USB connection, set the [Hard Disk] of [Installable Options] to [Installed].

❺ Click [OK].

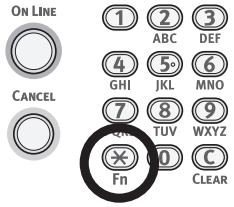
2.6 Printing of the configuration report

Check that you can print with the printer. Check the detailed settings and status of your printer by printing the contents of the settings (Menu Map).

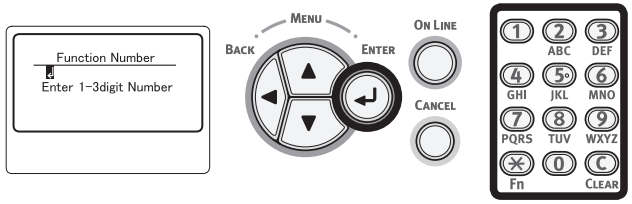
Note! When the printer is in power saving mode, press the <POWER SAVE> button to restore from the mode.

(1) Set A4 paper in tray.

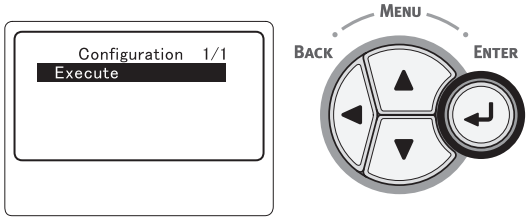
(2) Press the <Fn> key on the operator panel.



(3) Enter “100” using the ten-key pad, then press the <ENTER> button.



(4) Press the <ENTER> button as [Execute] is selected.



After finishing a print of printer settings, check that the added options are properly indicated. Setup for printing from a printer completes if the options have been properly added.

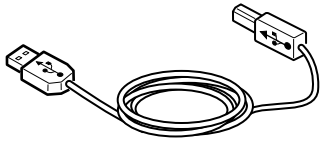
2.7 Connection methods

<USB connection>

Note! Refer to the user's manual for operating environment.

1. Prepare a USB cable.

Note!
- No USB cable is supplied with this printer. Procure a USB cable with the USB2.0 specifications separately.
- To use Hi-Speed mode of USB2.0, a USB cable with the Hi-Speed specifications is required.
- A USB 2.0 cable to be used must be no more than five meters long. A USB cable of two meters or less is recommended.



2. Turn off the printer and the computer.

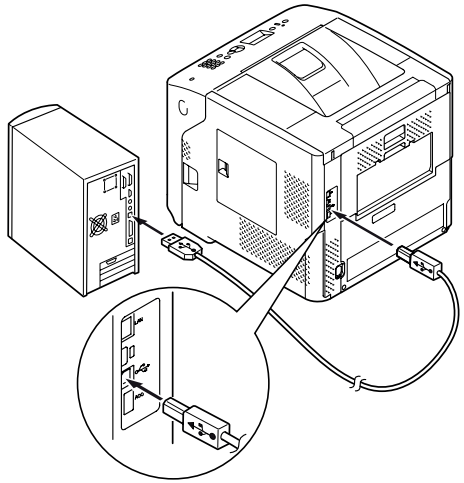
Memo Although a USB cable can be plugged in or unplugged with the computer and the printer switched on, for secure installation of the USB driver and the printer driver to be performed subsequently, the printer should be turned off.

3. Connect the USB cable.

(1) Plug one end of the USB cable into the USB interface connection of the printer.

(2) Plug the other end of the USB cable into the USB interface connection of the computer.

Note! Be careful not to plug the USB cable into the network interface connection. It may cause a malfunction.



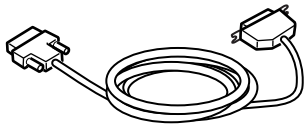
Memo For the setup procedure of the printer driver, see the user's manual.

<Parallel connection> (Models with the parallel interface connection only)

Note! Refer to the user's manual for operating environment.

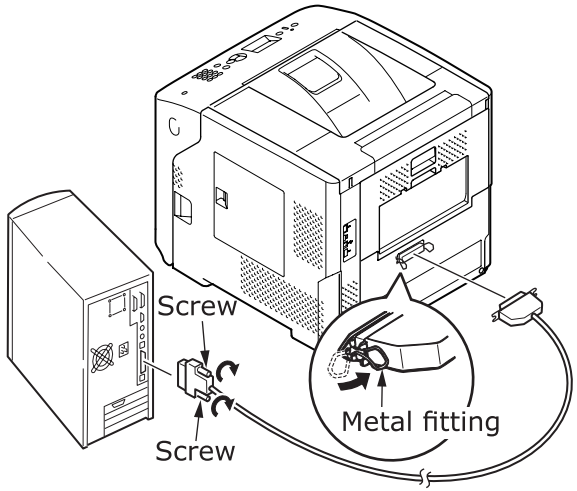
1. Prepare a parallel cable.

   Note! A parallel cable is not supplied with the printer. Procure one separately.



2. Turn off the printer and the computer.

3. Connect the parallel cable.
   (1) Plug one end of the parallel cable into the parallel interface connection of the printer.
   (2) Plug the other end of the parallel cable into the parallel interface connection of the computer



Memo For the setup procedure of the printer driver, see the user's manual.

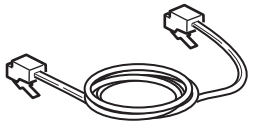
<Ethernet cable connection>

Note! Refer to the user's manual for operating environment.

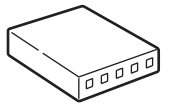
1. Prepare an Ethernet cable and a hub.

   Note! An Ethernet cable and a hub are not supplied with this printer. Prepare an Ethernet cable (category 5e, twisted pair, straight) and a hub separately.

<Ethernet cable>

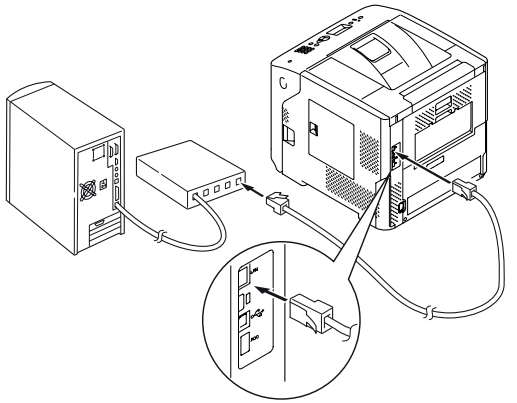


<Hub>



2. Turn off the printer and the computer.

3. Connect the computer to the printer.
   (1) Plug one end of the Ethernet cable into the network interface connection of the printer.
   (2) Plug the other end of the Ethernet cable into the hub.



Memo • If there is DHCP server on the network to which this printer is to be connected, the IP address will be automatically obtained on the printer each time it is turned on. If the IP address of this printer is changed, perform the network setting again. With OKI LPR utility, the network setting will be automatically performed if the IP address of this printer is changed. For details, refer to "User's Manual (Advanced)."
• For the setup procedure of the printer driver, see the user's manual.

<Wireless LAN connection> (Wireless Model only)

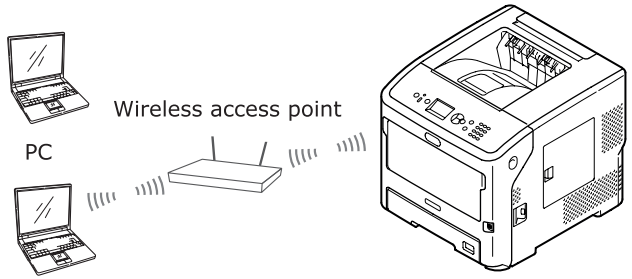
Note! Refer to the user's manual for operating environment.

1. Check the Wireless LAN environment.

   Check whether the access point of the wireless LAN supports WPS or not by referring to the instruction manual for the access point of the Wireless LAN.

   - If it supports WPS: The printer is automatically connected.
   - If it does not support WPS: The setting data for the wireless LAN must be entered on the printer manually.

   Note!
   - This product supports infrastructure mode. Ad-hoc mode is not supported. Be sure to prepare the access point.
   - This printer supports Wireless LAN Standard IEEE 802.1b/g/n. It does not support IEEE 802.11a. The access point must operate with the Wireless LAN Standard supported by this printer.
   - This product cannot connect to a wired LAN and wireless LAN at the same time. To connect to the wireless LAN, remove the network cable from this product.



2. Check that the access point of the wireless LAN is turned on and is operating normally.

3. Place the printer near the access point of the wireless LAN.

   For the accessible distance between the printer and the access point of the wireless LAN, refer to the operation manual for the access point of the wireless LAN.

4. Turn on the printer.

5. If the access point of the wireless LAN checked in step 1 supports WPS, the printer is automatically connected. Go to "WPS-PBC".

   If it does not support WPS, you must enter the setting data for the wireless LAN on the printer manually. Go to "Configuring manually".

Terminology

- SSID

  An ID used to identify the connection destination network. Wireless communications can be used by setting this product with the SSID of the connection destination wireless access point.

- Security Settings

  When using a wireless LAN, security settings can be configured to prevent the transmitted information from being intercepted or illegal access to the network. The security settings need to be configures to the same settings as the wireless access point.

- WPS

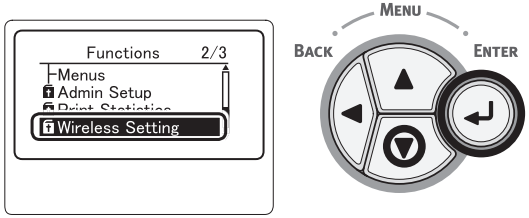
  A wireless LAN setting method provided by Wi-Fi Alliance, a wireless LAN industry group. There are two available methods, a push button method and PIN code method, and in the push button method the wireless LAN settings can easily be configured simply by pressing a [WPS] button on the wireless access point. In the PIN code method, the wireless LAN settings can easily be configured by registering the 8-digit number assigned to this product to the wireless access point.

- Infrastructure mode

  This mode communicates through the wireless access point. This product does not support the ad-hoc mode in which communication is performed directly with the computer.

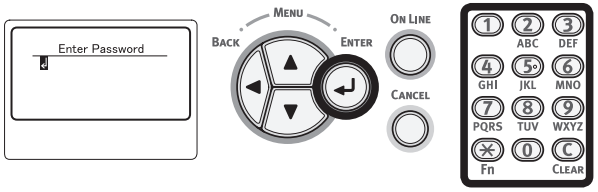
WPS-PBC

(1) Press the scroll button ▼ to select [Wireless Setting] and then press the <ENTER> button.

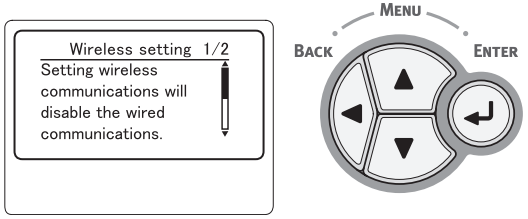


(2) Enter the administrator password using the ten-key pad, then press the <ENTER> button.

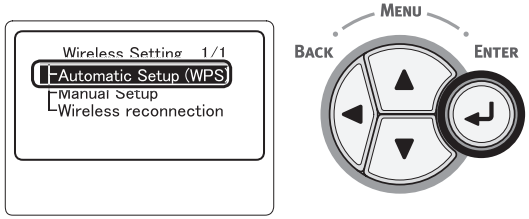
The factory default password is “aaaaaa”. Press the <ENTER> button whenever inputting one character.



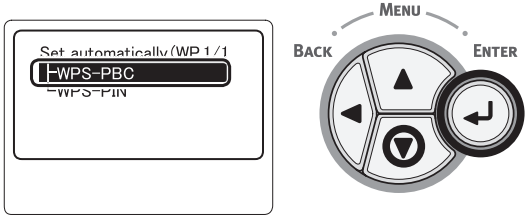
(3) When the display shown below appears, read it carefully. Press the <ENTER> button or wait until the display changes.



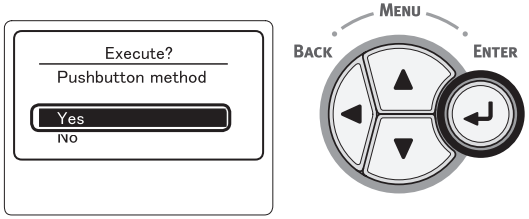
(4) Check that [Automatic Setup (WPS)] is selected and then press the <ENTER> button.



(5) Check that [WPS-PBC] is selected and then press the <ENTER> button.

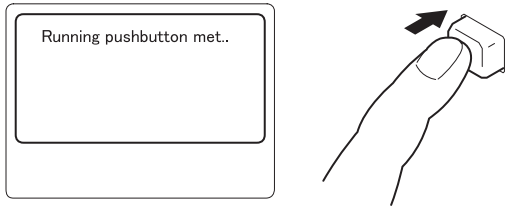


(6) Select [Yes] and then press the <ENTER> button.



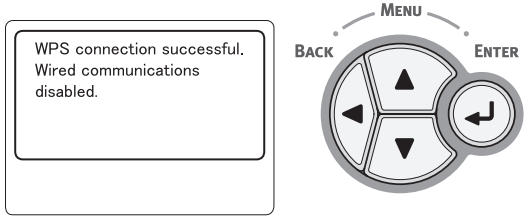
Memo If [No] is selected, the screen returns to that from step 5.

(7) When [Running pushbutton method…] is displayed, press and hold the push button on the access point of the Wireless LAN for several seconds then release it.



Note!

- [Running pushbutton method…] is displayed for about two minutes. Press and hold the push button on the access point of the Wireless LAN while it is displayed.
- For the position of the push button on the access point of the Wireless LAN and how long it should be held pressed, refer to the operation manual for the access point of the Wireless LAN.
- While [Running pushbutton method…] is displayed, the printer cannot be operated.
- When [WPS Connection successful is displayed, this equipment is connected to the wireless LAN.

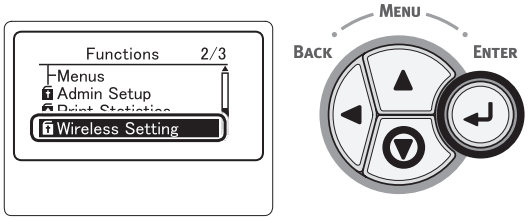


Memo • If [Timeout] is displayed, it is possible that the access point of the connection destination could not be found within the time limit. Redo from step 6.

• If [Overlap] is displayed, WPS-push button is being executed on 2 or more access points. Please wait for a short time and then retry.

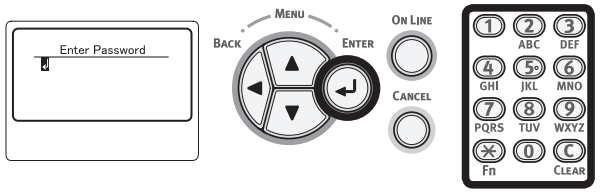
WPS-PIN

(1) Press the scroll button ▼ to select [Wireless Setting] and then press the <ENTER> button.

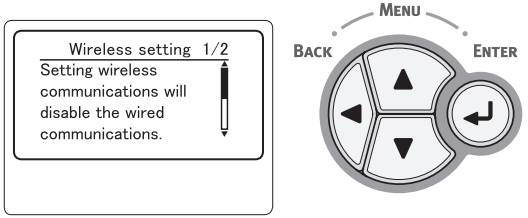


(2) Enter the administrator password using the ten-key pad, then press the <ENTER> button.

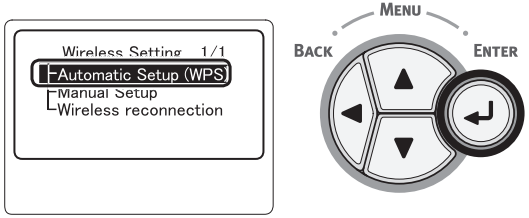
The factory default password is “aaaaaa”. Press the <ENTER> button whenever inputting one character.



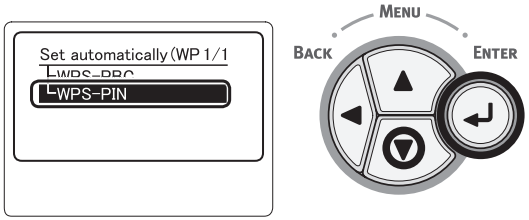
(3) When the display shown below appears, read it carefully. Press the <ENTER> button or wait until the display changes.



(4) Check that [Automatic Setup (WPS)] is selected and then press the <ENTER> button.



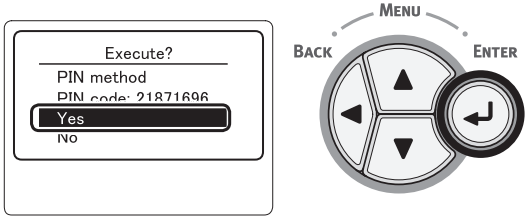
(5) Press the scroll button ▼ to select [WPS-PIN] and then press the <ENTER> button.



(6) Set the 8-character PIN code displayed on the display screen on the access point and start WPS-PIN.

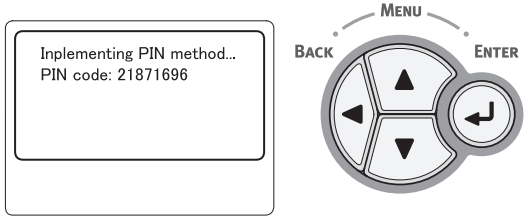
Note! • After pressing the button, immediately perform step 7.
• The PIN code input method and WPS-PIN starting method differ depending on the access point. For details, refer to the instruction manual for the access point.

(7) Select [Yes] and then press the <ENTER> button.

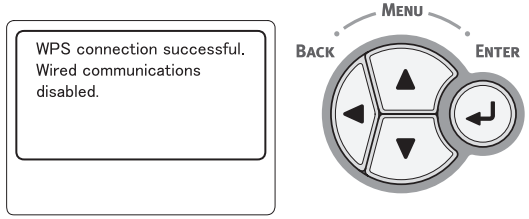


Memo If [No] is selected, the screen returns to that from step 5. Each time the confirmation screen is displayed, the PIN code is automatically generated and changed.

(8) [Implementing PIN method…] is displayed on the screen.



Note! • Panel operations cannot be performed during WPS execution.
• When [Connection successful] is displayed, this equipment is connected to the wireless LAN.



Memo If [Timeout] is displayed, it is possible that the access point of the connection destination could not be found within the time limit. After entering the PIN code from this equipment into the access point and starting WPS-PIN, select [Yes] in step 7 again within 2 minutes.

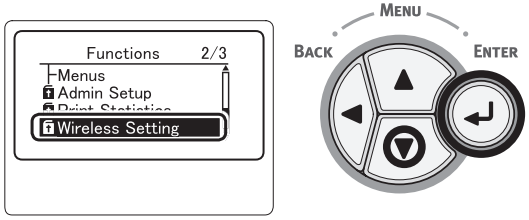
Configuring manually

(1) Check and write down the SSID, encryption scheme, and cryptography key.

You can check the SSID, encryption scheme, and cryptography key in the instruction manual for the access point of the Wireless LAN.

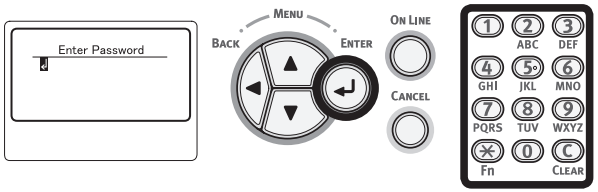
Note! • It is necessary to set the same SSID, encryption scheme, and cryptography key for the access point of the Wireless LAN on the printer.
• The SSID, encryption scheme, and cryptography key are essential for the Wireless LAN connection. Be sure to check them.

(2) Press the scroll button ▼ to select [Wireless Setting] and then press the <ENTER> button.

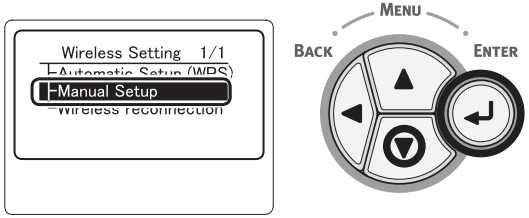


(3) Enter the administrator password using the ten-key pad, then press the <ENTER> button.

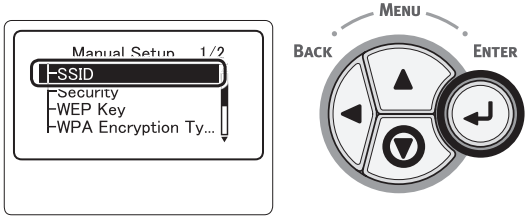
The factory default password is “aaaaaa”. Press the <ENTER> button whenever inputting one character.



(4) Press the scroll button ▼ to select [Manual Setup] and then press the <ENTER> button.



(5) Press the scroll button ▼ to select [SSID] and then press the <ENTER> button.



Memo When the <ENTER> button is pressed, the screen switches to the security settings screen in step 3 without switching to the screen in step 4. If the SSID is not set, a warning screen is displayed.

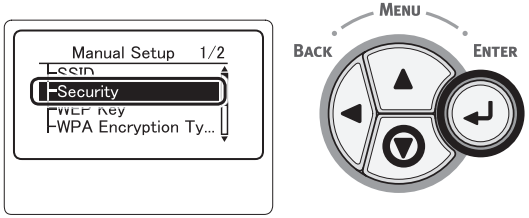
(6) Enter the SSID checked in step 1, using the ten-key pad.

Memo Symbols such as “_ (underscore)” are entered using the * key.

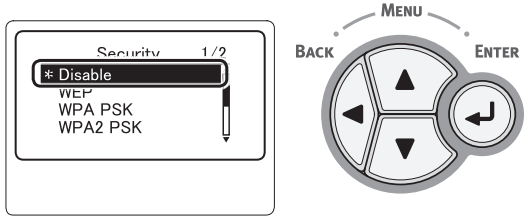
Note! Characters are case sensitive. Enter them correctly.

(7) Once you have finished entering the characters, press the <ENTER> button.

(8) Press the scroll button ▼ to select [Security] and then press the <ENTER> button.



(9) Select the security type checked in step 1.



Memo • The default is [Disable].
• IDepending on the model of access point mixed WPAPSK/WPA2-PSK may be supported. In this case, select the WPA2-PSK.

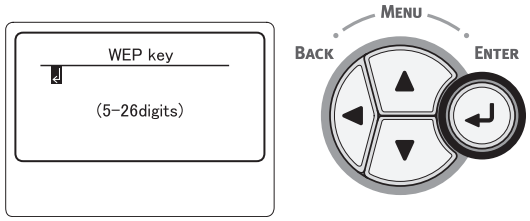
If WEP is selected, go to "(10-1) When WEP is selected:".

If WPA-PSK or WPA2-PSK is selected, go to "(10-2) When WPA-PSK or WPA2-PSK is selected:".

Memo Security settings (WPA-EAP/WPA2-EAP) using an authentication server are also supported, but this can only be set from the Web. For details, refer to User's Manual (Advanced). Depending on the security setting selected in step 7, execute the settings from either (1) or (2) below. If [Disable] is selected, proceed to step 11. (For security reasons, we do not recommend setting [Disable].)

(10-1) When WEP is selected:

a) Press the <ENTER> button on the WEP Key input screen.



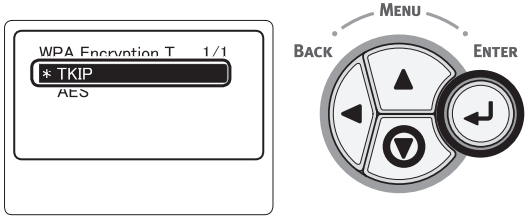
Note! There is not setting for the WEP Key index. The WEP Key index communications with the access point as 1.

b) Enter the same Key as the WEP Key set for the access point that you want to connect to.

Memo After entering the Key, the key is displayed as "*" symbols for security reasons.

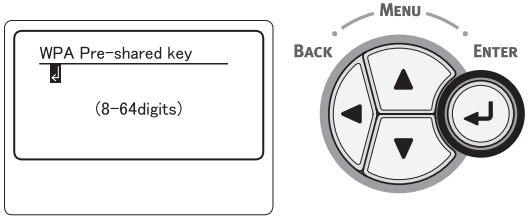
(10-2) When WPA-PSK or WPA2-PSK is selected:

a) Press the <ENTER> button to select WPA Encryption Type and then press the <ENTER> button.



Memo • The default is [TKIP].
• If the encryption scheme for the access point of the Wireless LAN is WPA-PSK, select THIP. If it is WPA2- PSK, select AES.

b) Press the <ENTER> button on WPA Preshared key input screen.



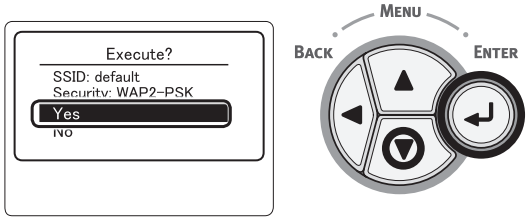
Note! Characters are case sensitive. Enter them correctly.

c) Enter the same Key as the Pre-shared Key set for the access point that you want to connect to.

Memo After entering the Key, the key is displayed as "*" symbols for security reasons.

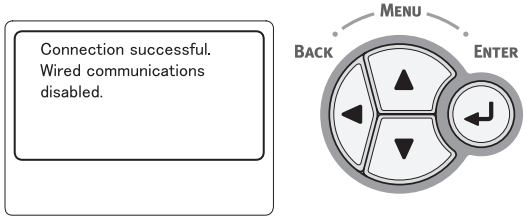
(11) In the confirmation screen, check the entered SSID and selected security settings.

If there are no problems, press the scroll button ▼ to select [Yes] and then press the <ENTER> button.



(12) [Searching for connection] is displayed on the screen.

When [Connection successful] is displayed, this equipment is connected to the wireless LAN.



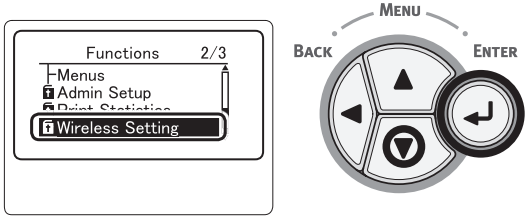
Memo If [Timeout] is displayed, the connection destination access point may not have been found within the specified time. Check that SSID, security settings, and Key settings, and retry.

Reconnect to the wireless LAN

When the wireless is enabled, restart the wireless function. If a problem has occurred in the access point communication or performance, the wireless function can be restarted.

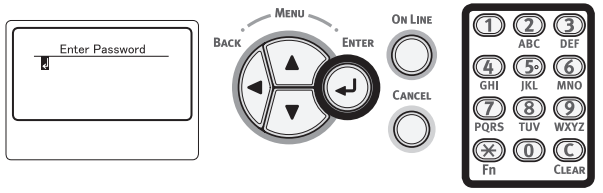
(If the wired is enabled, the wireless function is enabled with the configured wireless settings.)

(1) Press the scroll button ▼ to select [Wireless Setting] and then press the <ENTER> button.

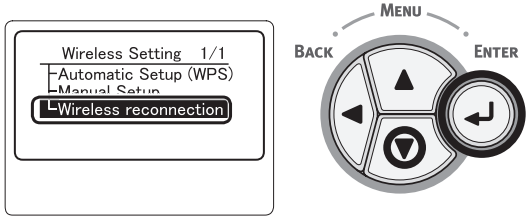


(2) Enter the administrator password using the ten-key pad, then press the <ENTER> button.

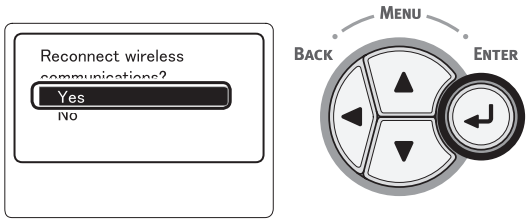
The factory default password is “aaaaaa”. Press the <ENTER> button whenever inputting one character.



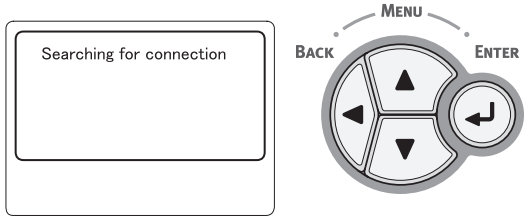
(3) Press the scroll button ▼ to select [Wireless reconnection] and then press the <ENTER> button.



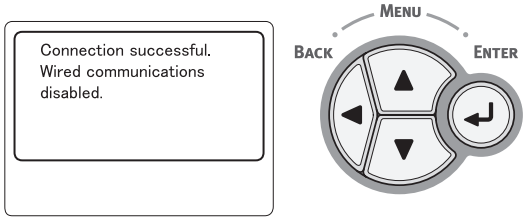
(4) Select [Yes] and then press the <ENTER> button.



(5) When [Yes] is selected in step 4, [Searching for connection] is displayed on the screen.



After this, [Connection successful] is displayed, and the wireless LAN can be used on this equipment.



Memo • If [Timeout] is displayed, the connection destination access point may not have been found within the specified time. The SSID, security settings, and Key need to be configured to match the access point settings.

• Check each of the settings. For details on each of the setting items, refer to “List of Setup Menu” in the User’s Manual (Advanced).

2.8 Checking of paper used by the user

Load the media used by the user in the printer, make media weight/media type settings, execute configuration/demo printing, and check the printout to make sure that no toner flakes off.

Type	Paper weight	Settings on the control panel		Setting*2 for [Media weight] of the printer driver
		Media weight (paper thickness)	Media type (paper type)*1	
Plain paper*3	64 g/m^2	Light	Plain	Light
	65 to 74g/m^2	Medium Light		Medium Light
	75 to 87g/m^2	Medium		Medium
	88 to 104g/m^2	Medium Heavy		Medium Heavy
	105 to 120g/m^2	Heavy		Heavy
	121 to 163g/m^2	Ultra heavy 1		Ultra heavy 1
	164 to 220g/m^2	Ultra heavy 2		Ultra heavy 2
	221 to 253g/m^2	Ultra heavy 3		Ultra heavy 3
Envelope*4	-	-	-	-
Label	0.1 to under 0.17 mm	Heavy	Labels	Label 1
	0.17 to 0.2 mm	Ultra heavy 1		Label 2

*1: The factory default for the media type is [Plain Paper].

*2: Media weight and type can be set on the operator panel and in the printer driver. The settings in the printer driver take priority. Data is printed out in accordance with the setting on the operator panel when [Auto selection] is selected in [Feed tray] or [Printer setting] is selected in [Media weight].

*3: The weight of the paper supported for duplex print is 64-220g/m^2.

*4: It is not necessary to set media weight and type for postcards and envelopes.

Memo Print speed decelerates when [Heavy], [Ultra heavy 1], [Ultra heavy 2], or [Ultra heavy 3] of media weight or any value other than plain paper setting value of media type is set.

3. Component replacement

In this chapter, the procedures for replacement of parts and assemblies and units are described.

The replacement procedure is described by removal of the parts. Please install the new parts with following the replacement procedure in reverse order.

The parts (such as ①, ②)shown in this manual are different from the parts used in the Disassembly for Maintenance figure (4548700TL) and RSPL (45487001TR).

3.1 Precautions on component replacement

(1) Disconnect the AC cable and the interface cable before replacing the parts.

(a) Disconnect the AC cable according to the following procedure.

① Turn off the printer, then the LED indicator goes out.

② Disconnect the AC plug from the AC power source outlet.

③ Disconnect the AC cable and the interface cable from the printer.

⚠Warning	Risk of Electric Shock	⚡

There is a risk of electric shock during replacement of the low voltage power supply.

Use insulating gloves or avoid direct contact with any conducting part of the power supply, and caution should be exercised during replacement.

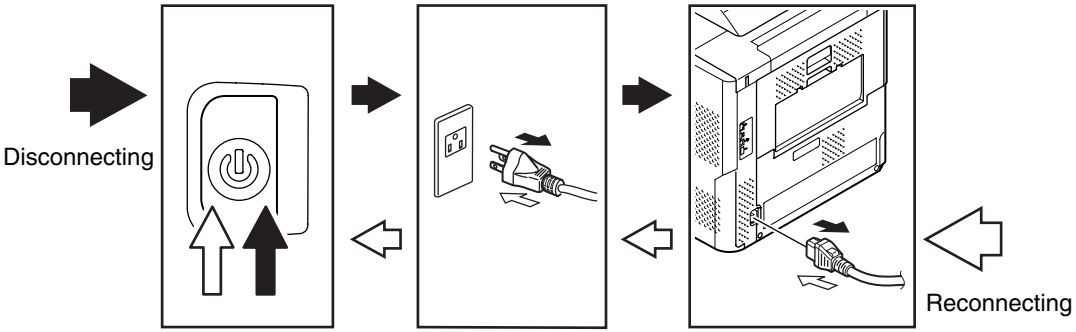
The capacitor may take one minute to complete discharge after the AC cable is unplugged. Also, there is a possibility that the capacitor doesn't discharge because of a breakage of the PCB, etc., so remember the possibility of electric shock to avoid electric shock.

(b) Reconnect the printer according to the following procedure.

① Connect the AC cable and the interface cable to the printer.

② Connect the AC plug to the AC power source outlet.

③ Turn on the printer, then the LED indicator goes on.



(2) Do not disassemble it if the printer works normally.

(3) Disassemble it as required. Do not remove the part that is not shown in the replacement procedure.

(4) Please use the specified maintenance tool.

(5) Disassemble it according to the proper procedure. It may cause damage to the parts if disassemble it without following the proper procedure.

(6) As the small parts such as the screws are lost easily, please fix them to the original position temporarily.

(7) Do not use gloves that may cause static electricity easily when handling IC and the circuit board such as microprocessor, ROM, and RAM.

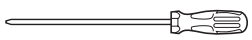
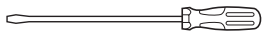
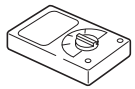
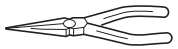
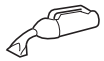
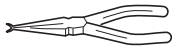
(8) Do not put the PCB on the device and the floor directly.

(9) Do not work for a long time with the printer with the top cover open, and an image drum unit installed in it.

[Maintenance tool]

The required tools for replacing the PCB and the unit are shown in Table 4-1-1.

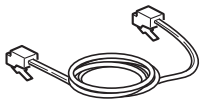
Table 4-1-1 Maintenance tools

No.	Maintenance tools		Amount	Purpose	Note
1		No. 2-200 ⊕ Magnetic driver	1	3 - 5mm Screw	
2		No. 3-100 Driver	1		
3		No. 5-200 Driver	1		
4		Digital multimeter	1		
5		Combination pliers	1		
6		Handy cleaner (the type corresponds to the toner)	1		Refer to the following note.
7		E Ring pliers	1	For E ring detaching	

Note! Use the specified cleaner corresponding to the toner. It may cause a fire when using a general-purpose cleaner.

The required tools for using the maintenance utility are shown in Table 4-1-2.

Table 4-1-2 required tools

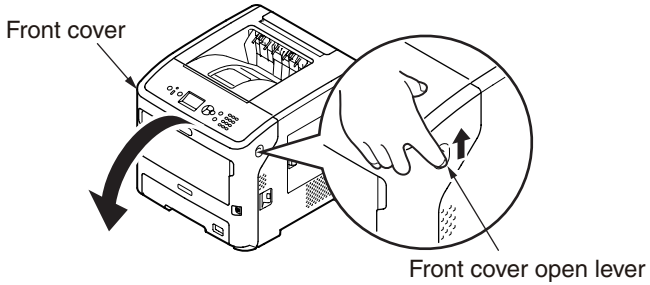
No.	Maintenance tools		Amount	Purpose	Note
1		Notebook computer [Please install the maintenance utility.]	1		Refer to the chapter 5.2 for the maintenance utility.
2		USB cable	1		
3		Ethernet cable (Cross cable)	1		

3.2 Method of component replacement

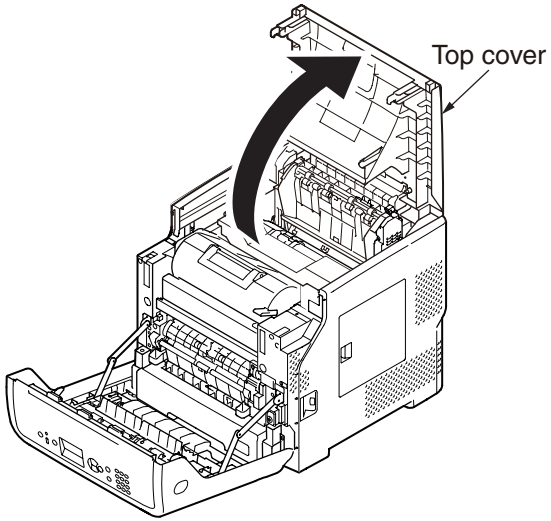
This section describes the procedure for replacing the parts and assemblies shown in the disassembly diagram.

3.2.1 Transfer roller

(1) Open the front cover while pulling the front cover open lever.

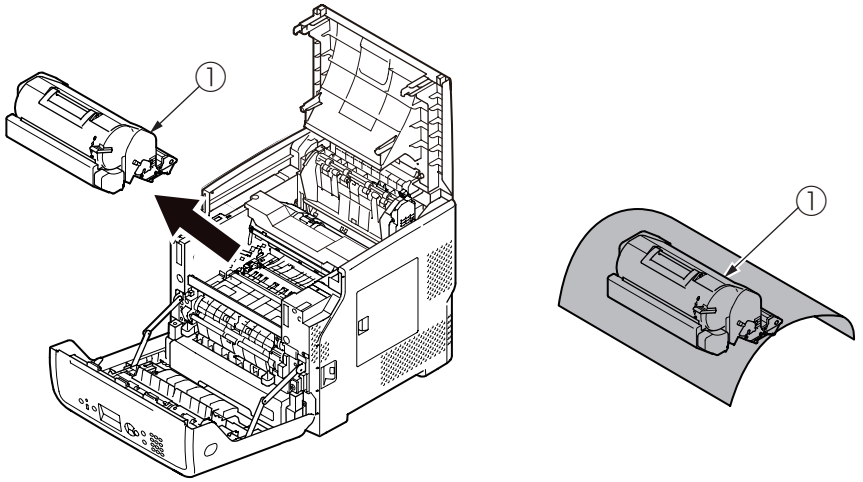


(2) Open the top cover.



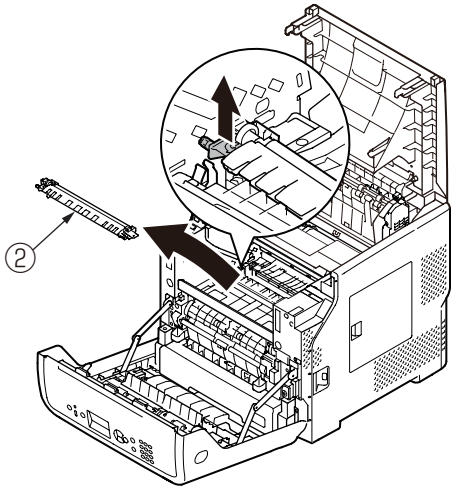
(3) Remove the ID unit ① .

Note! Cover the removed ID unit with paper so that it will not be exposed to light.



(4) Remove the transfer roller ② by lifting up its left side.

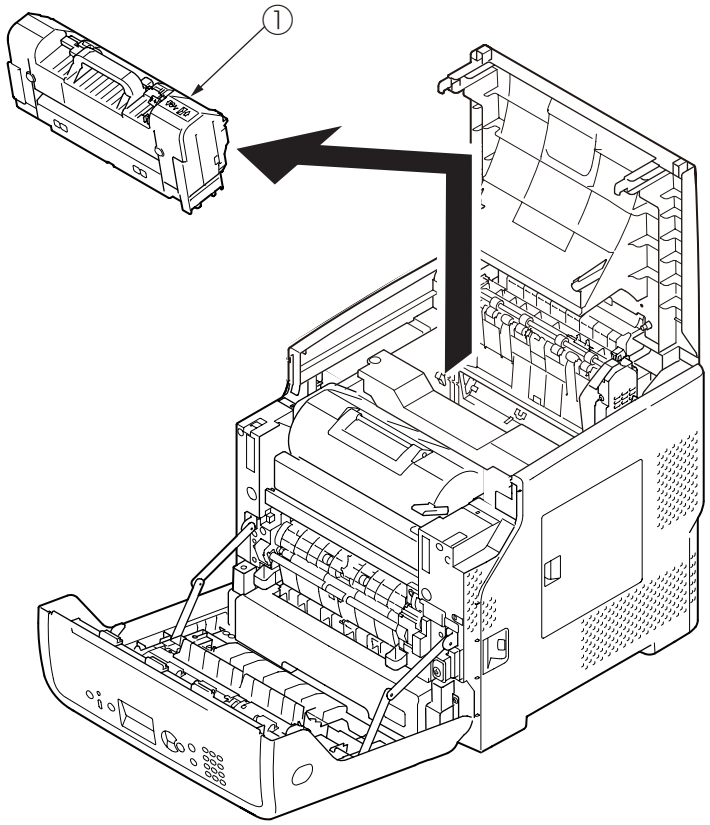
Note! Operating carefully, not to touch transfer roller ② surface.



3.2.2 Fuser unit

(1) Open the front cover and the top cover. (Refer to 3.2.1)

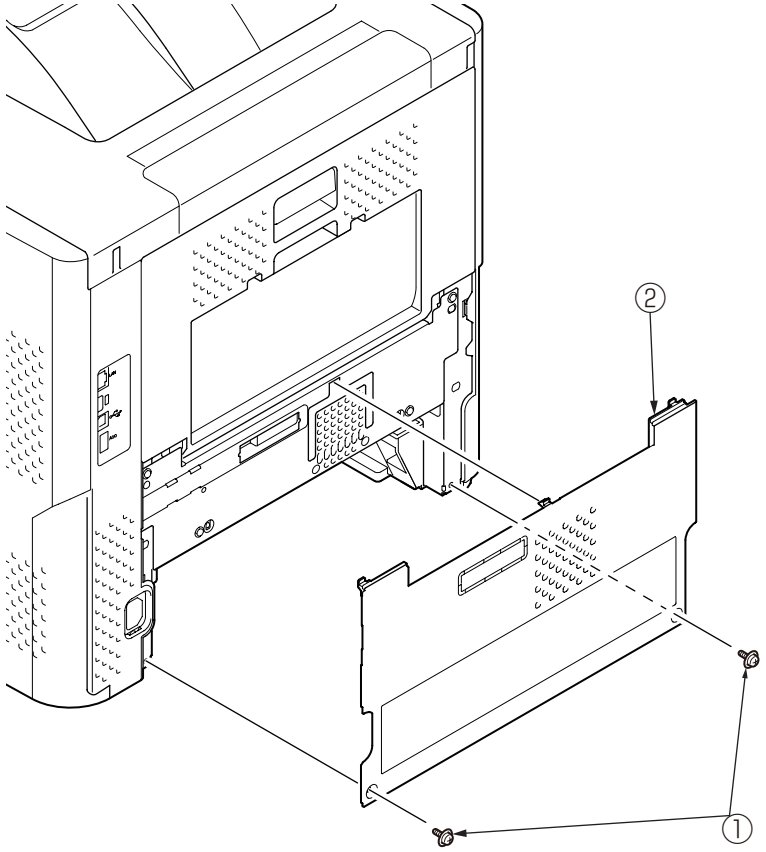
(2) Remove the fuser unit ① .



3.2.3 Cover-Rear-Blind

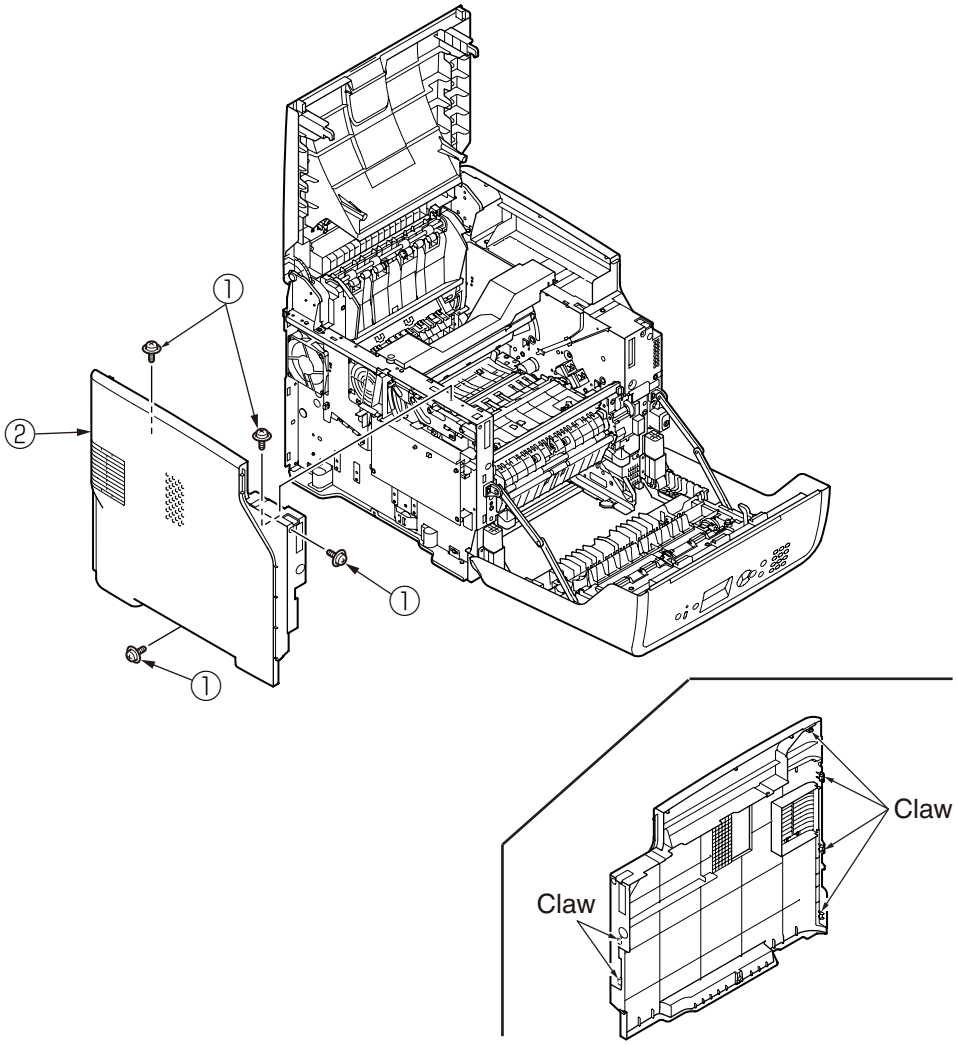
(1) Remove the two screws (silver) ① .

(2) Remove the Cover-Rear-Blind ② .



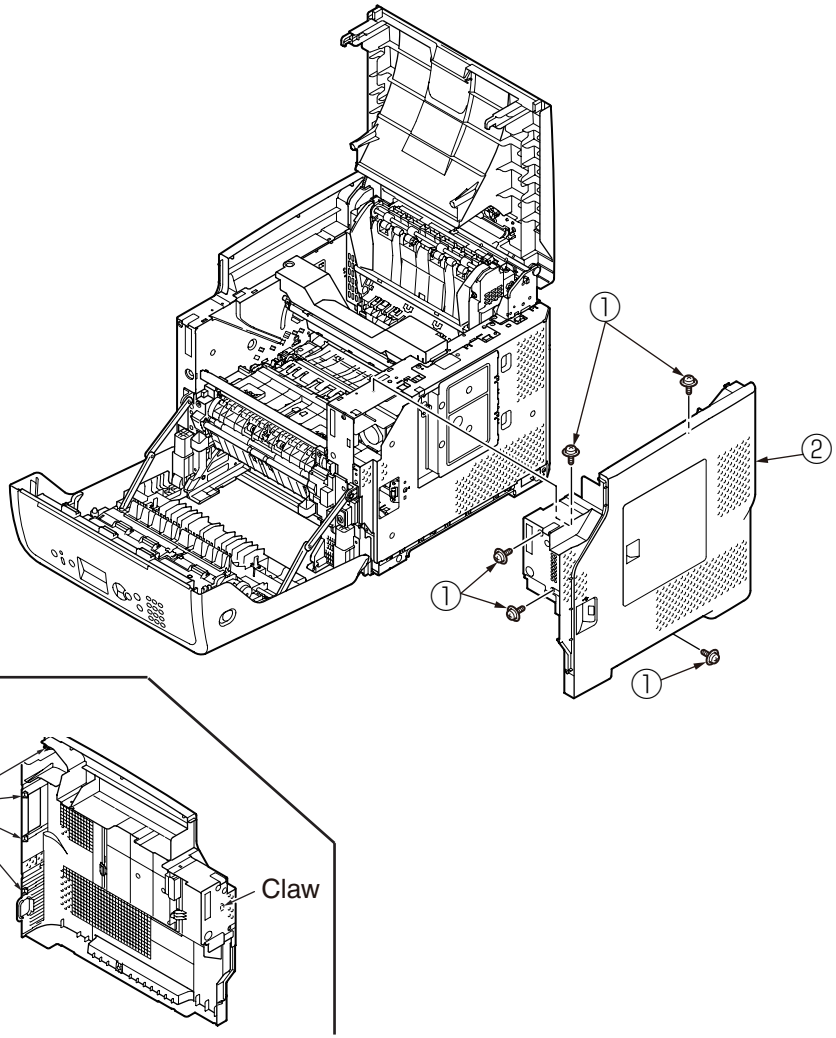
3.2.4 Cover-Side-L

(1) Remove the ID unit. (Refer to 3.2.1)
(2) Remove the fuser unit. (Refer to 3.2.2)
(3) Remove the Cover-Rear-Blind. (Refer to 3.2.3)
(4) Remove the four screws (silver) ① .
(5) Disengage the six claws, and remove the Cover-Side-L ② .



3.2.5 Cover-Side-R

(1) Remove the ID unit. (Refer to 3.2.1)
(2) Remove the fuser unit. (Refer to 3.2.2)
(3) Remove the Cover-Rear-Blind. (Refer to 3.2.3)
(4) Remove the five screws (silver) ① .
(5) Disengage the five claws, and remove the Cover-Side-R ② .



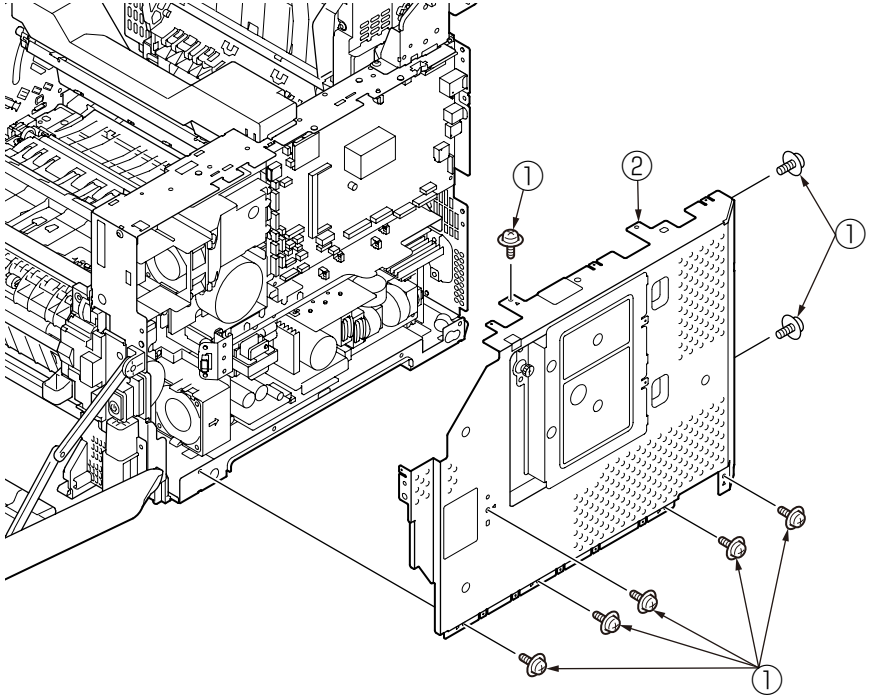
3.2.6 PU/CU-Board

3.2.6.1 PU/CU-Board

(1) Remove the Cover-Rear-Blind. (Refer to 3.2.3)

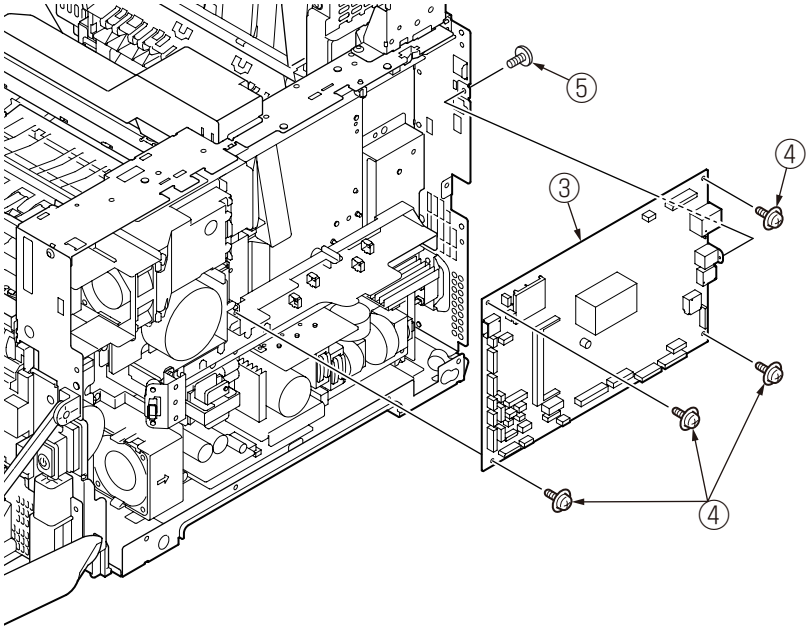
(2) Remove the Cover-Side-R. (Refer to 3.2.5)

(3) Remove the eight screws (silver) ① , and remove the Plate-Shield ② .



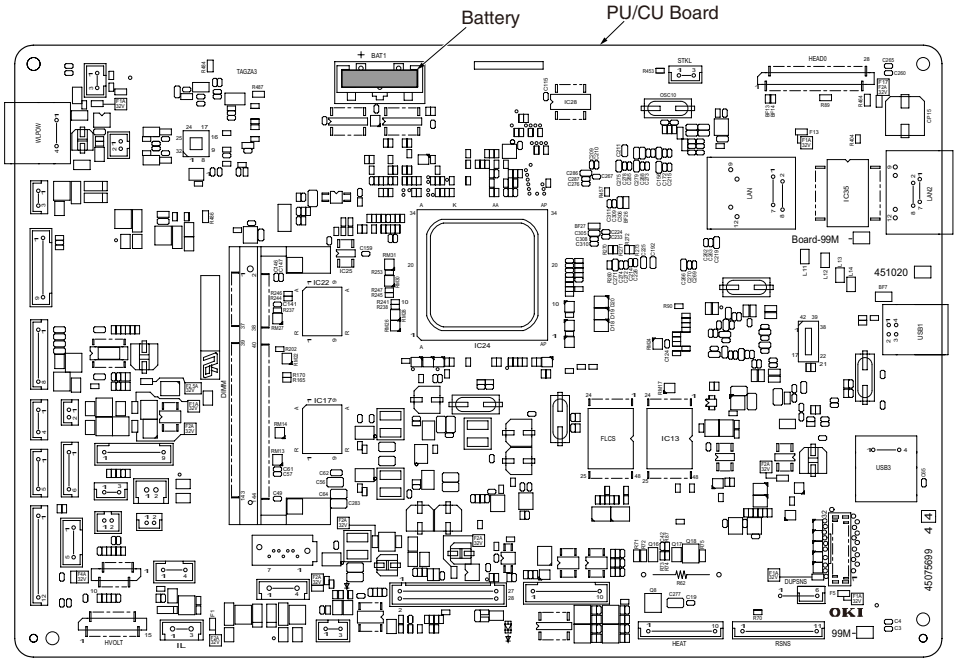
(4) Disconnect all cables from PU/CU-Board ③ .

(5) Remove the four screws (silver) ④ and the screw (silver) ⑤ , and remove the PU/CU-Board ③ .



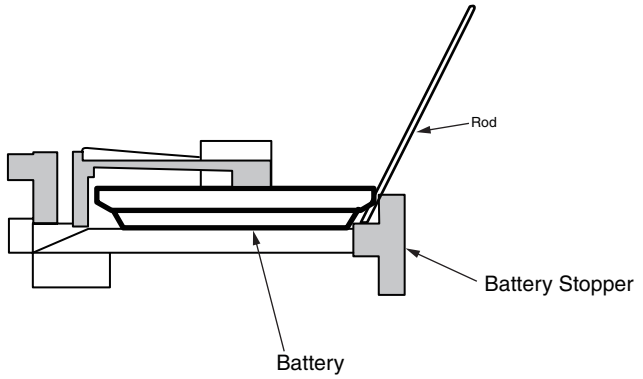
3.2.6.2 How to remove Battery (PU/CU-Board)

(1) The position of the battery is shown in the below picture.

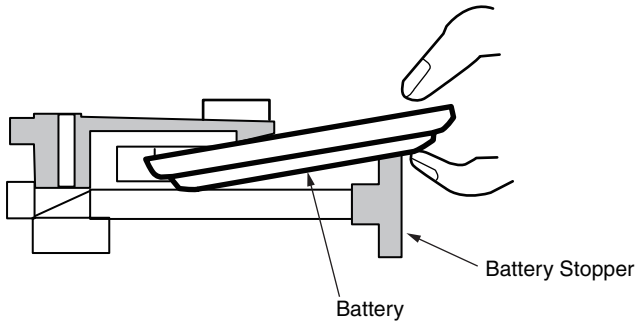


(2) How to remove the battery.

Insert finger, a needle or a rod in the gap between the battery and the its holder.



Raise the battery up so that it is put on the battery stopper, and remove it.



3.2.7 Power supply unit

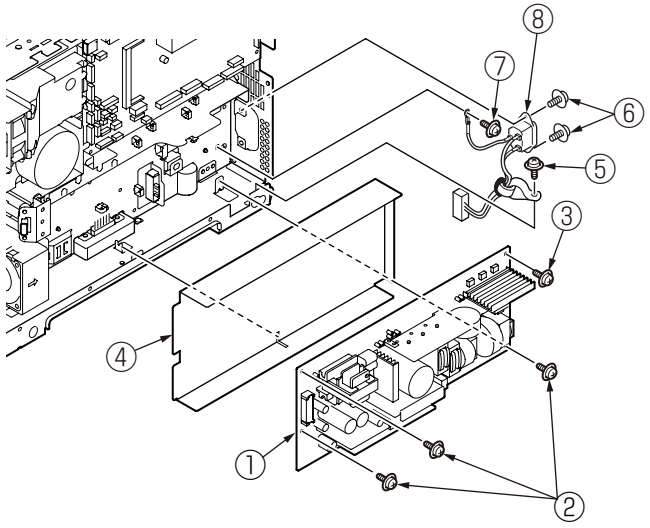
⚠Warning	Risk of Electric Shock	⚠

There is a risk of electric shock during replacement of the low voltage power supply.

Use insulating gloves or avoid direct contact with any conducting part of the power supply, and caution should be exercised during replacement.

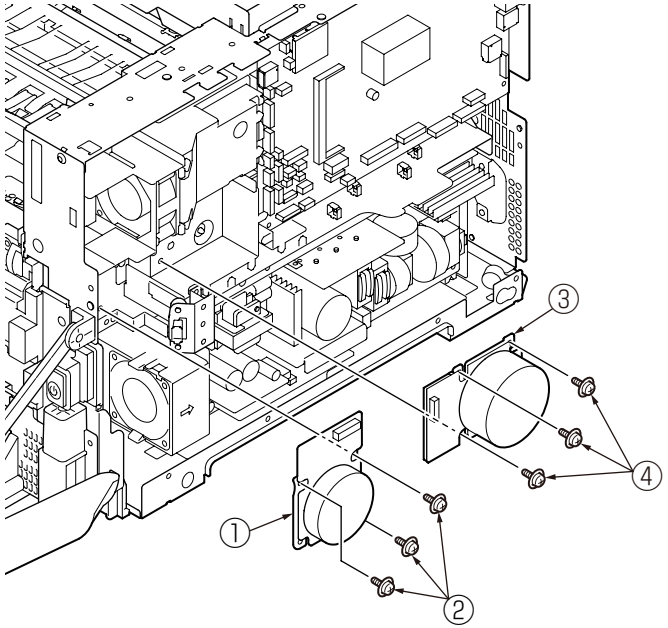
The capacitor may take one minute to complete discharge after the AC cable is unplugged. Also, there is a possibility that the capacitor doesn't discharge because of a breakage of the PCB, etc., so remember the possibility of electric shock to avoid electric shock.

(1) Remove the Cover-Rear-Blind. (Refer to 3.2.3)
(2) Remove the Cover-Side-R. (Refer to 3.2.5)
(3) Remove the Plate-Shield. (Refer to 3.2.6)
(4) Disconnect all cables from power supply unit ①.
(5) Remove the three screws (silver) ② and the screw (black) ③.
(6) Remove the power supply unit ① and the Sheet-Insulation-LV ④.
(7) Remove the screw (silver) ⑤, the two screws (silver,8mm) ⑥ and the screw (silver,M4,8mm) ⑦, and remove the AC inlet ⑧.



3.2.8 DC motor (hop) / DC motor (ID)

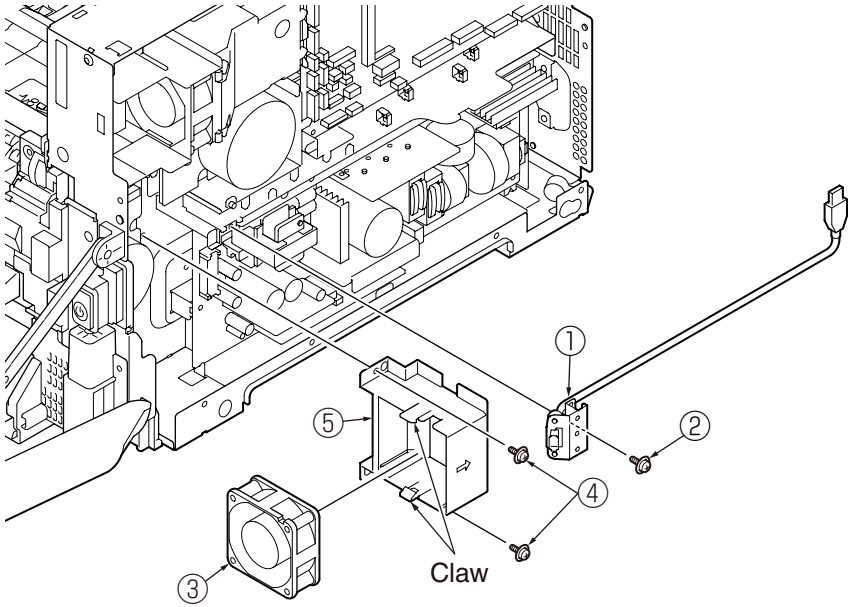
(1) Remove the Cover-Rear-Blind. (Refer to 3.2.3)
(2) Remove the Cover-Side-R. (Refer to 3.2.5)
(3) Remove the Plate-Shield. (Refer to 3.2.6)
(4) Disconnect the cable from the DC motor (hop) ①.
(5) Remove the three screws(sliver) ②, remove the DC motor (hop) ①.
(6) Disconnect the cable from the DC motor (ID) ③.
(7) Remove the three screws(sliver) ④, remove the DC motor (ID) ③.



3.2.9 Motor FAN (PSU)

(1) Remove the Cover-Rear-Blind. (Refer to 3.2.3)
(2) Remove the Cover-Side-R. (Refer to 3.2.5)
(3) Remove the Plate-Shield. (Refer to 3.2.6)
(4) Disconnect the cable of the USB connector ① from the PU/CU-Board.
(5) Remove the screw (black) ② , and remove the USB connector ① .
(6) Disconnect the cable of Motor FAN (PSU) ③ from the PU/CU-Board.
(7) Remove the two screws (silver) ④ , and remove the Guide-Power-FAN ⑤ .
(8) Disengage the two claws and remove the Motor FAN (PSU) ③ .

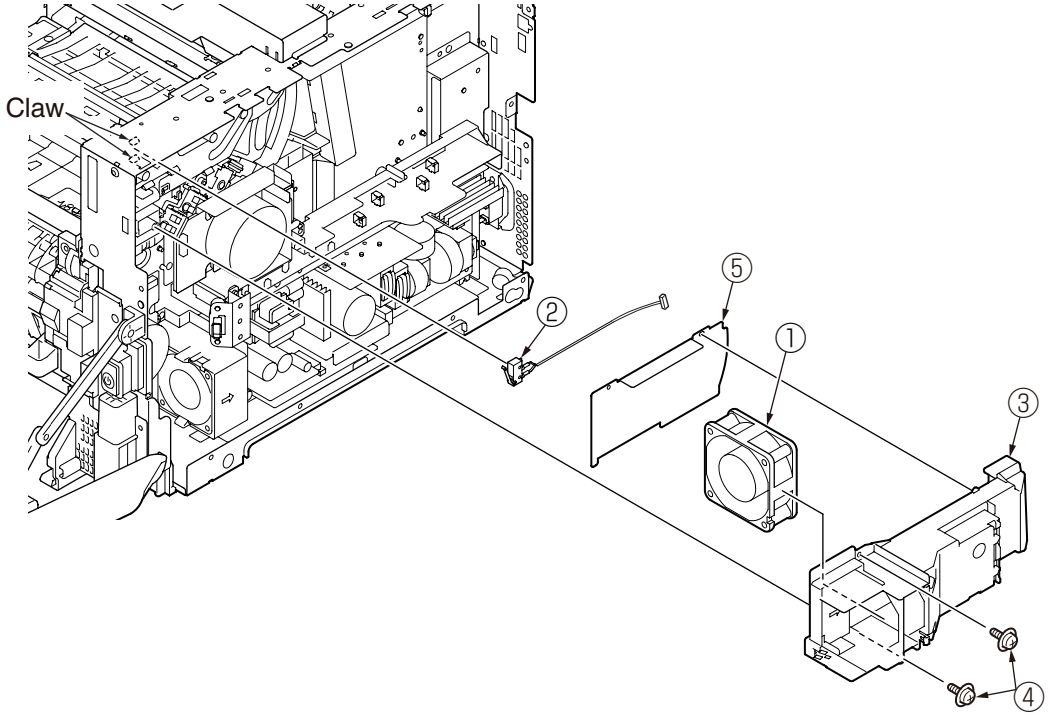
Note! Be careful to install the Motor-FAN (PSU) ③ in the proper direction.



3.2.10 Motor FAN (ID) / Micro switch

(1) Remove the Cover-Rear-Blind. (Refer to 3.2.3)
(2) Remove the Cover-Side-R. (Refer to 3.2.5)
(3) Remove the PU/CU-Board. (Refer to 3.2.6)
(4) Remove the calbes of the Motor FAN (ID) ① , the microswitch ② , the toner sensor and the TAG contact from the Guide-ID-FAN ③ .
(5) Remove the two screws (black) ④ , and remove the Guide-ID-FAN ③ and the Sheet-Guide-FAN ⑤ .
(6) Remove the Motor FAN (ID) ① .
(7) Disengage the two claws, and remove the micro switch ② .

Note! Be careful to install the Motor-FAN (ID) ① in the proper direction.



3.2.11 HV-Board / Motor-FAN

(1) Remove the Cover-Rear-Blind. (Refer to 3.2.3)

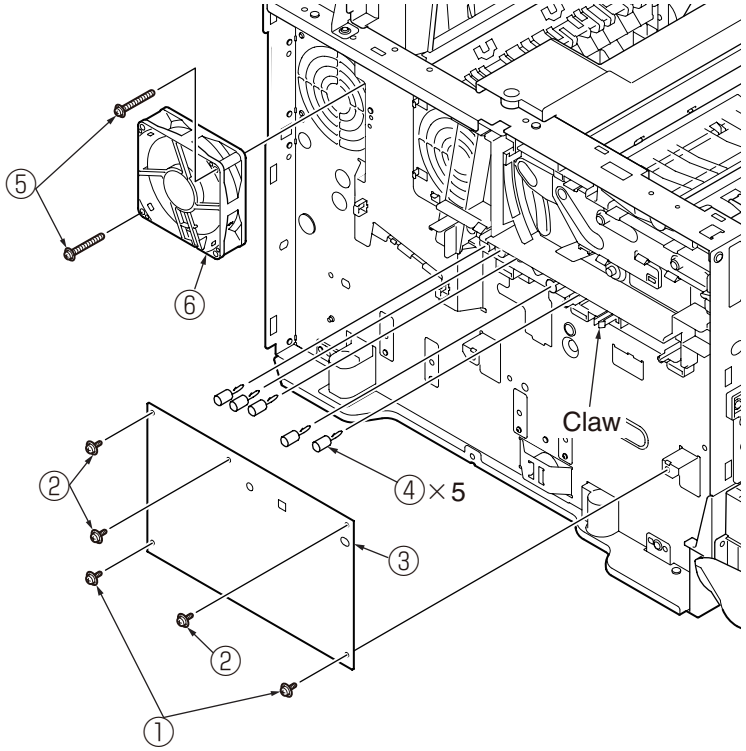
(2) Remove the Cover-Side-L. (Refer to 3.2.4)

(3) Remove the three screws (silver) ① and the two screws (black) ② , disengage the claw, and remove HV-Board ③. Be careful not to lose the Spring-Contact ④.

(4) Disconnect all cables from the HV-Board ③ .

(5) Remove the two screws (silver/28mm) ⑤ , and remove the Motor-FAN ⑥ .

Note! 1. Be careful to install the Motor-FAN ⑥ in the proper direction.

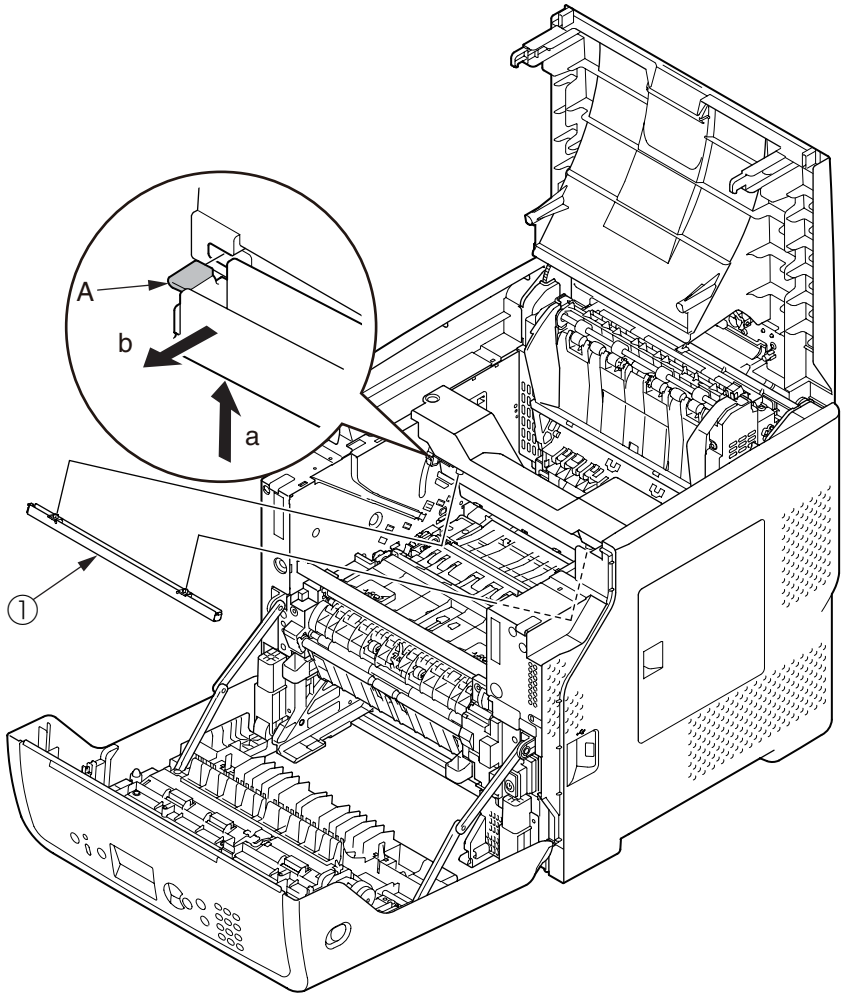


3.2.12 LED Assy

(1) Remove the ID unit. (Refer to 3.2.1)

(2) While pushing the LED Assy ① in the direction of the arrow (a), unhook the part A by pulling it in the direction of the arrow (b).

(3) Remove the LED Assy ① , and disconnect the FFC cable from it.



3.2.13 Plate-Assy-Duct

(1) Remove the Cover-Rear-Blind. (Refer to 3.2.3)

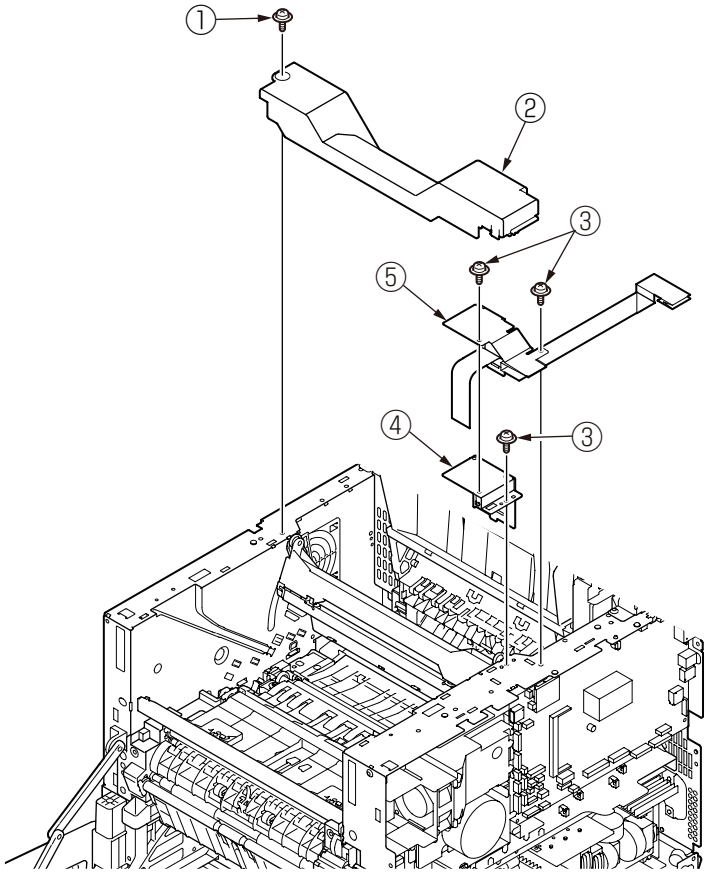
(2) Remove the Cover–Side-R. (Refer to 3.2.5)

(3) Remove the Plate-Shield. (Refer to 3.2.6)

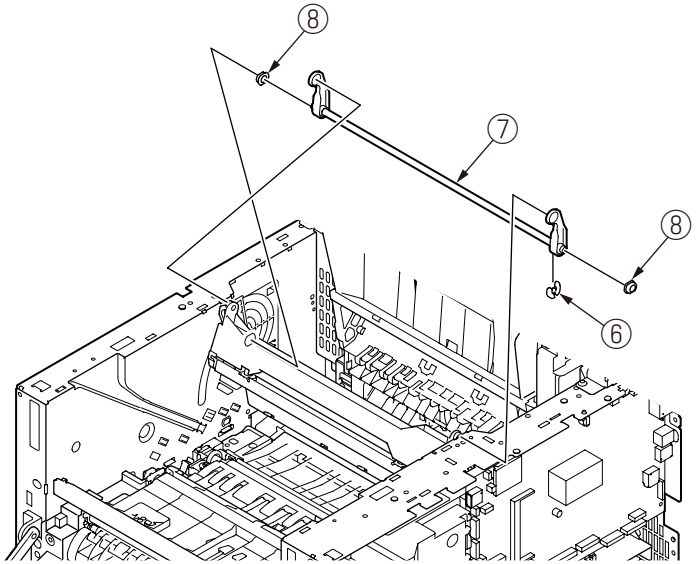
(4) Disconnect the FFC cable of the LED head.

(5) Remove the screw (silver) ①, and remove the Cover-Head ②.

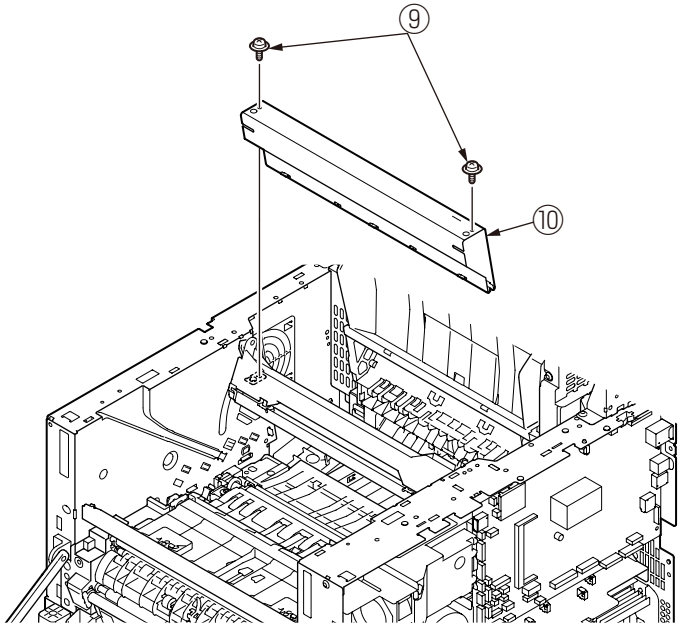
(6) Remove the three screws (silver) ③, and remove the Plate-Cable-Guide ④ and the FFC cable ⑤.



(7) Remove the retainer-4 ⑥, and remove the Shaft-Link-Head ⑦ and the two Bearing-Metal ⑧.



(8) Remove the two screws (silver) ⑨, and remove the Plate-Assy-Duct ⑩.



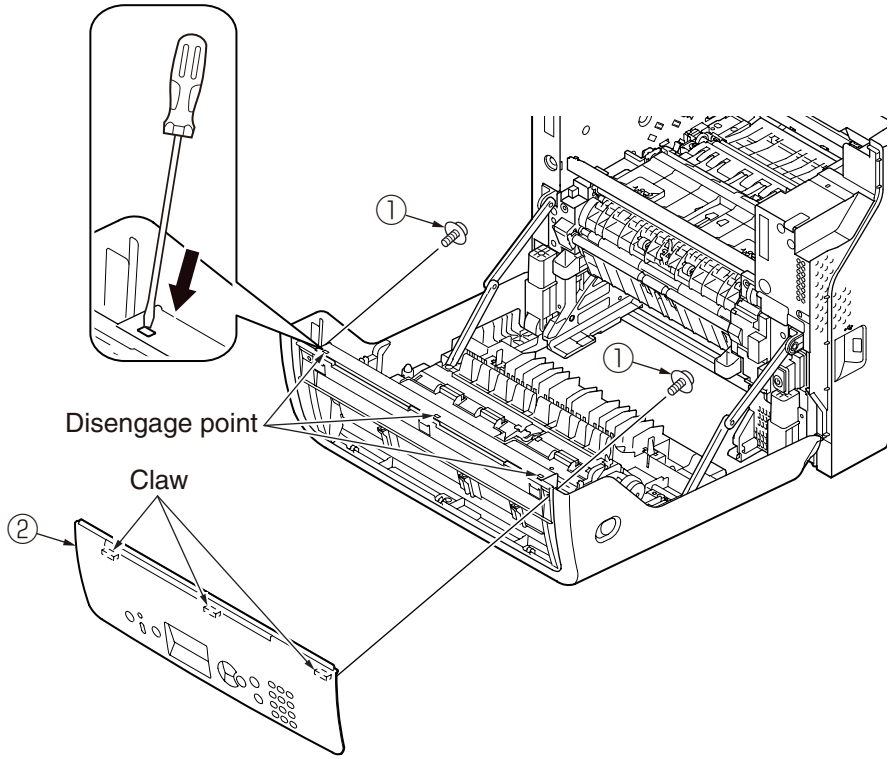
3.2.14 Frame-Assy-OP-Panel

(1) Open the front cover. (Refer to 3.2.1)

(2) Remove two screws (black) ① .

(3) Disengage the three claws at the disenge points by a mini minus screwdriver, and remove the Frame-Assy-OP-Panel ② .

(4) Disconnect all cables from the Frame-Assy-OP-Panel ② .



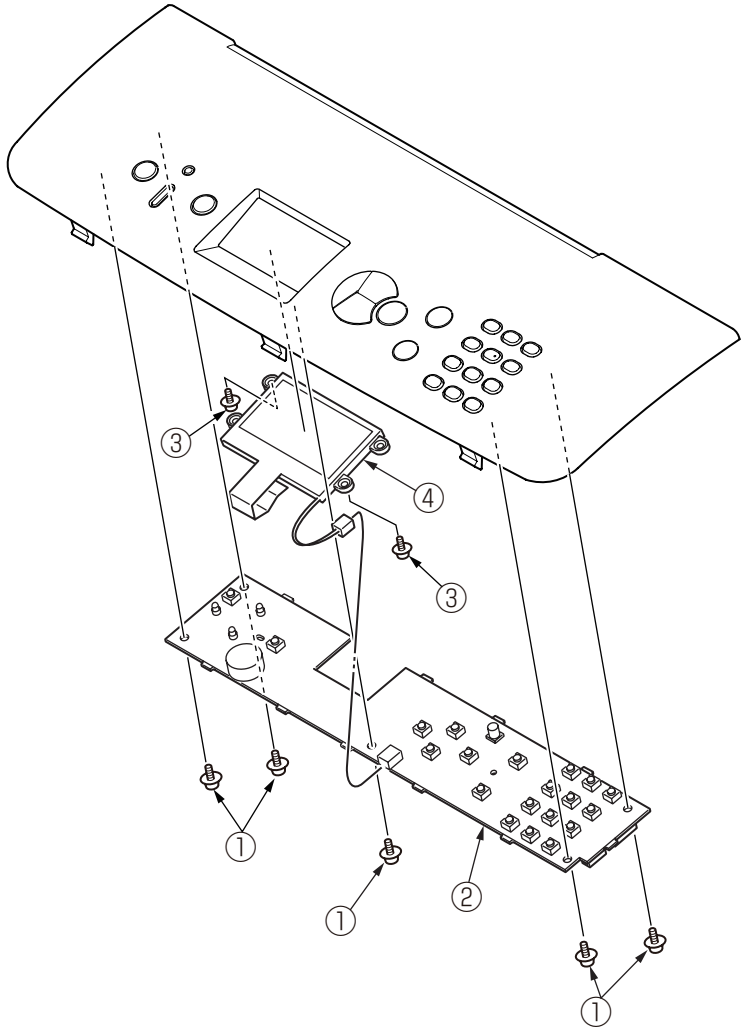
3.2.15 LCD panel

(1) Separate the Frame-Assy-OP-Panel. (Refer to 3.2.14)

(2) Remove the five screws (black) ① , and remove the board ② .

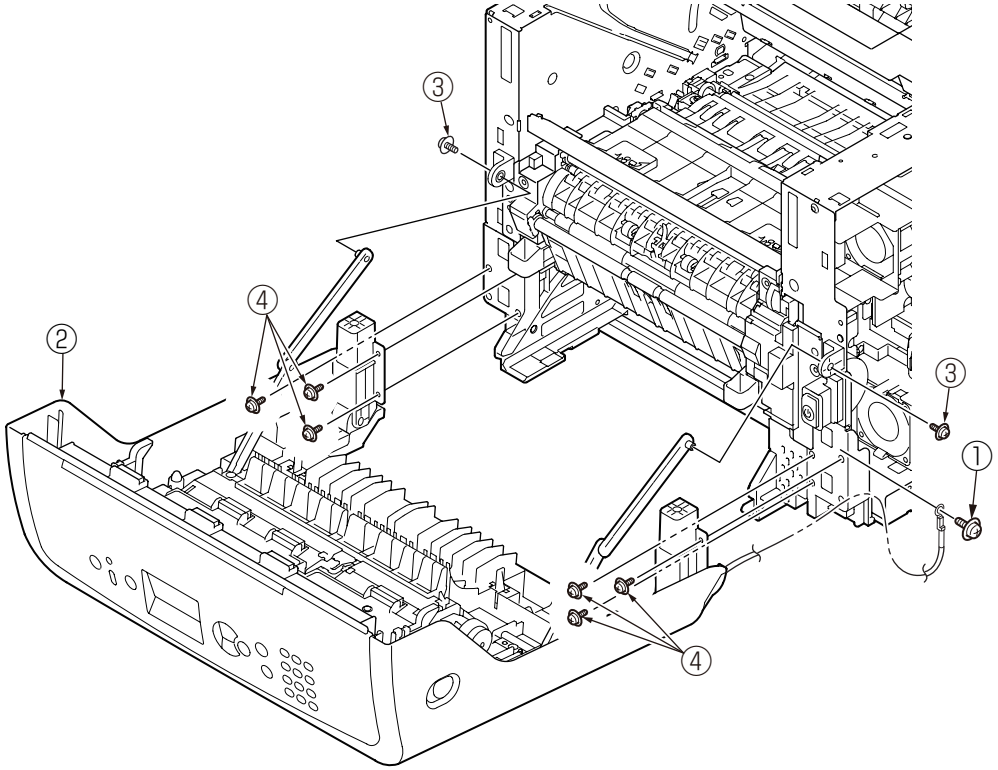
(3) Disconnect all cables from board ② .

(4) Remove the two screws (black) ③ , and remove the LCD panel ④ .



3.2.16 Cover-Assy-Front

(1) Remove the Cover-Rear-Blind. (Refer to 3.2.3)
(2) Remove the Cover–Side-R. (Refer to 3.2.5)
(3) Remove the PU/CU-Board. (Refer to 3.2.6)
(4) Remove the power supply unit. (Refer to 3.2.7)
(5) Remove the screw (silver) ①, and remove the FG cable of the Cover-Assy-Front ②.
(6) Remove the two screws (black) ③.
(7) Remove the six screws (silver/8mm) ④, and remove the Cover-Assy-Front ②.



3.2.17 Feeder-Assy-Regist / Clutch

(1) Remove the Cover-Rear-Blind. (Refer to 3.2.3)

(2) Remove the Cover-Side-L and the Cover–Side-R. (Refer to 3.2.4 / 3.2.5)

(3) Remove the USB connector. (Refer to 3.2.9)

(4) Remove the power supply unit. (Refer to 3.2.7)

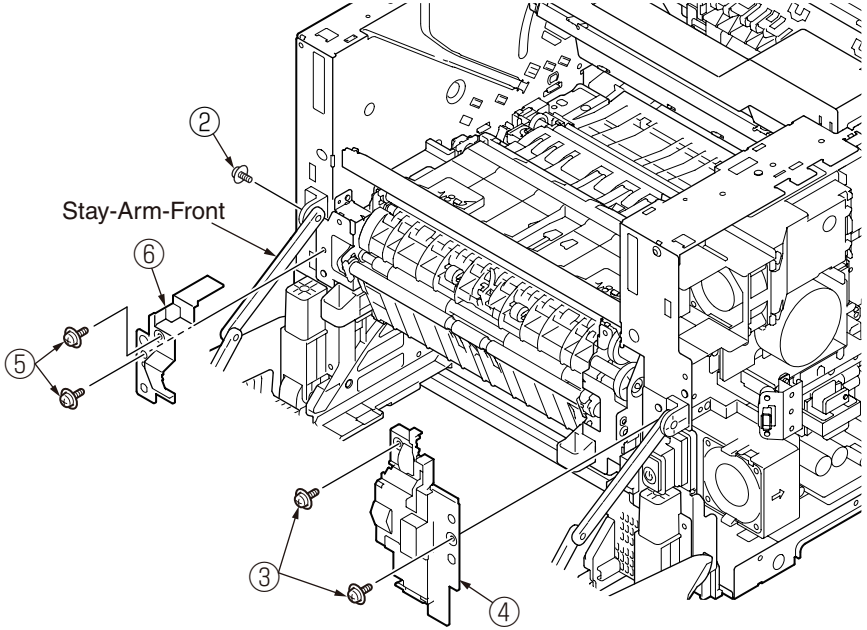
(5) Remove the DC motor (hop). (Refer to 3.2.8)

(6) Disconnect all cables of the Feeder-Assy-Regist ① from the PU/CU-Board.

(7) Remove the screw (black) ②, and disengage the Stay-Arm-Front from the Plate-Assy-Side(L).

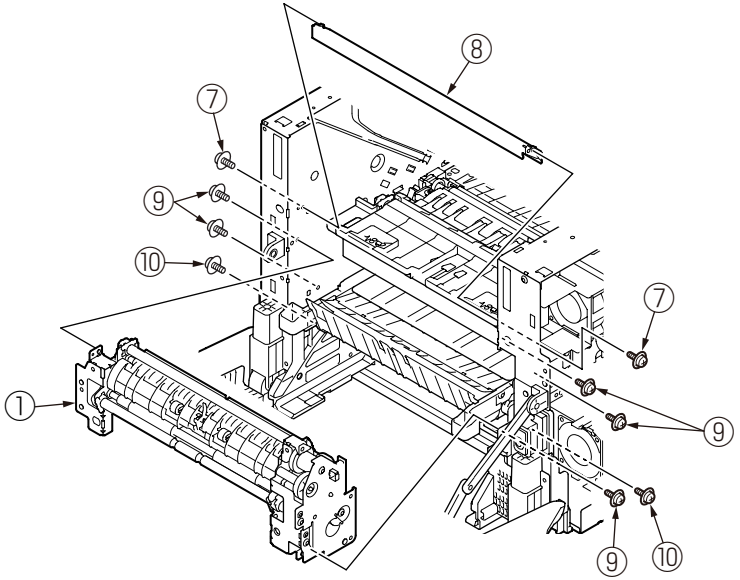
(8) Remove the two screws (silver) ③, and remove the Cover-Front-Side-R ④.

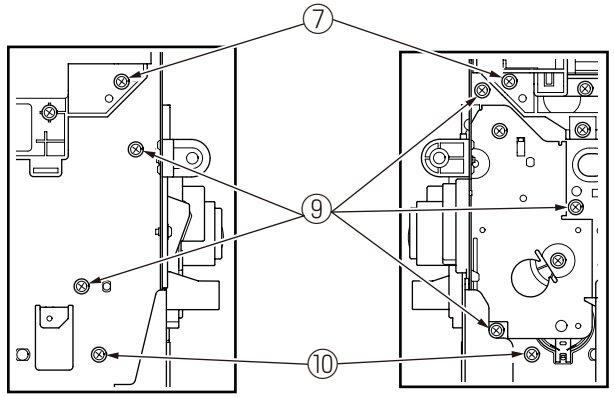
(9) Remove the two screws (silver) ⑤, and remove the Cover-Front-Side-L ⑥.



(10) Remove the two screws (silver/8mm) ⑦, and remove the Plate-Front ⑧.

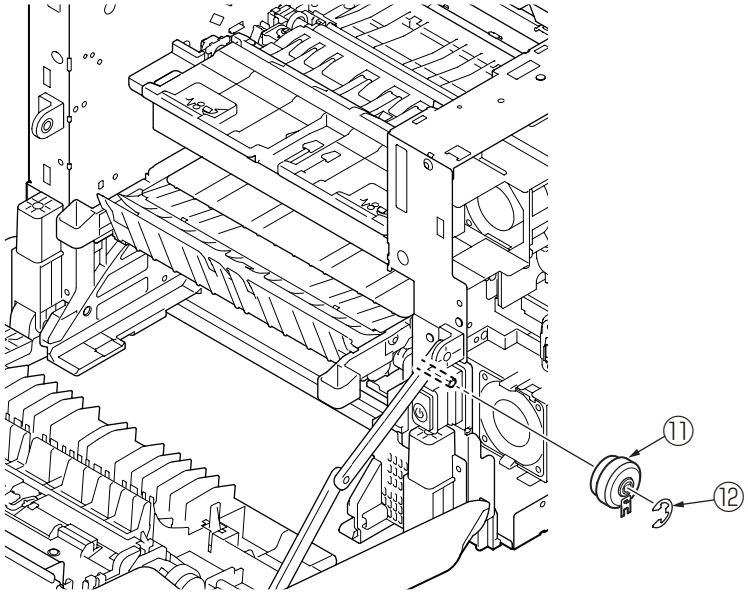
(11) Remove the five screws (silver) ⑨ and the two screws (silver) ⑩, and remove the Feeder-Assy-Regist ①.





(12) Disconnect the cable of the clutch ⑪ from the PU/CU-Board.

(13) Remove the e-ring ⑫ , and remove the clutch ⑪ .



3.2.18 TR-Assy-Front

(1) Remove the transfer roller. (Refer to 3.2.1)

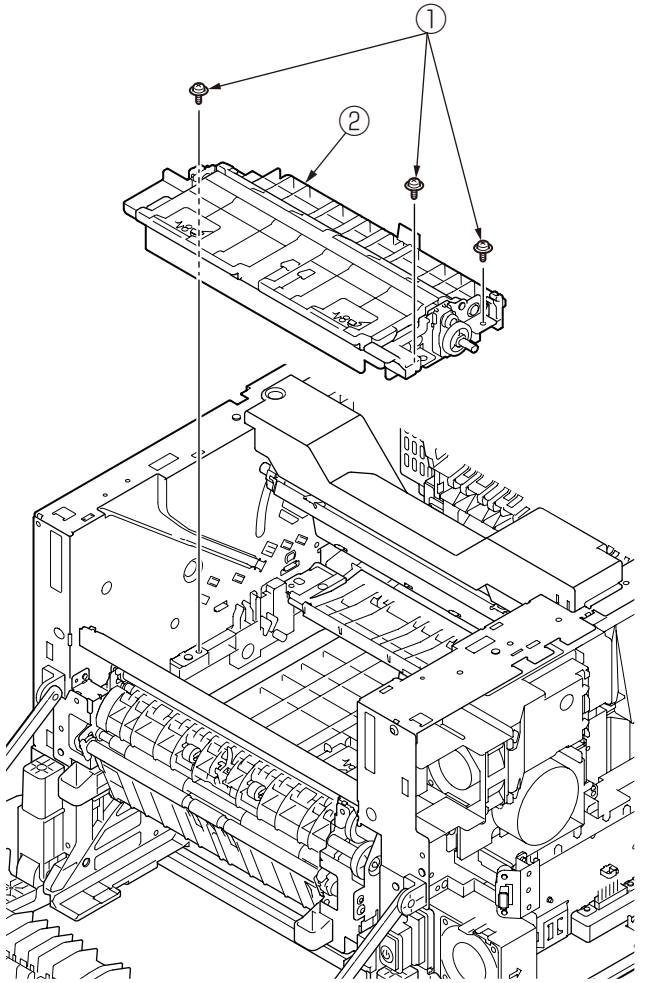
(2) Remove the Cover-Rear-Blind. (Refer to 3.2.3)

(3) Remove the Cover–Side-R. (Refer to 3.2.5)

(4) Remove the power supply unit. (Refer to 3.2.7)

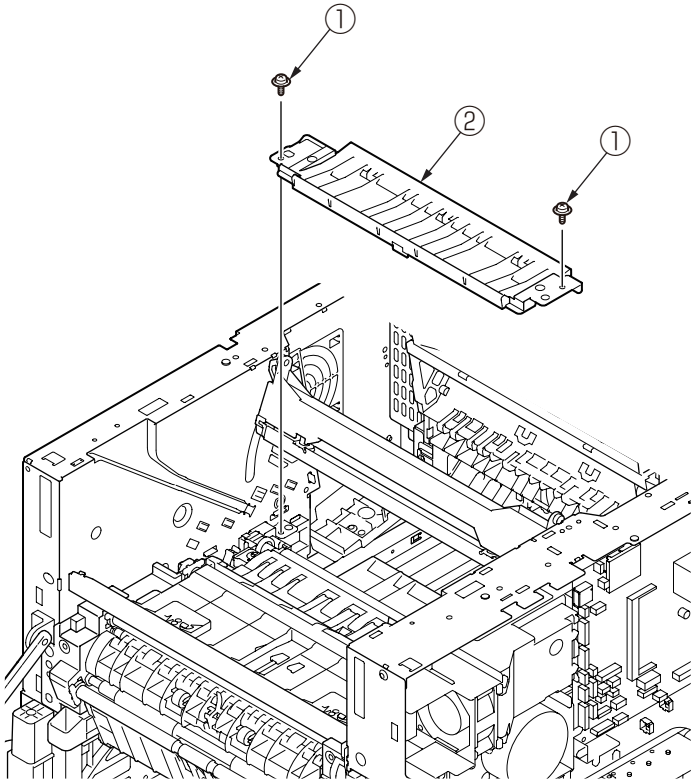
(5) Disconnect all cable of TR-Assy-Front ② from the PU/CU-Board.

(6) Remove the three screws (silver) ① , and remove the TR-Assy-Front ② .



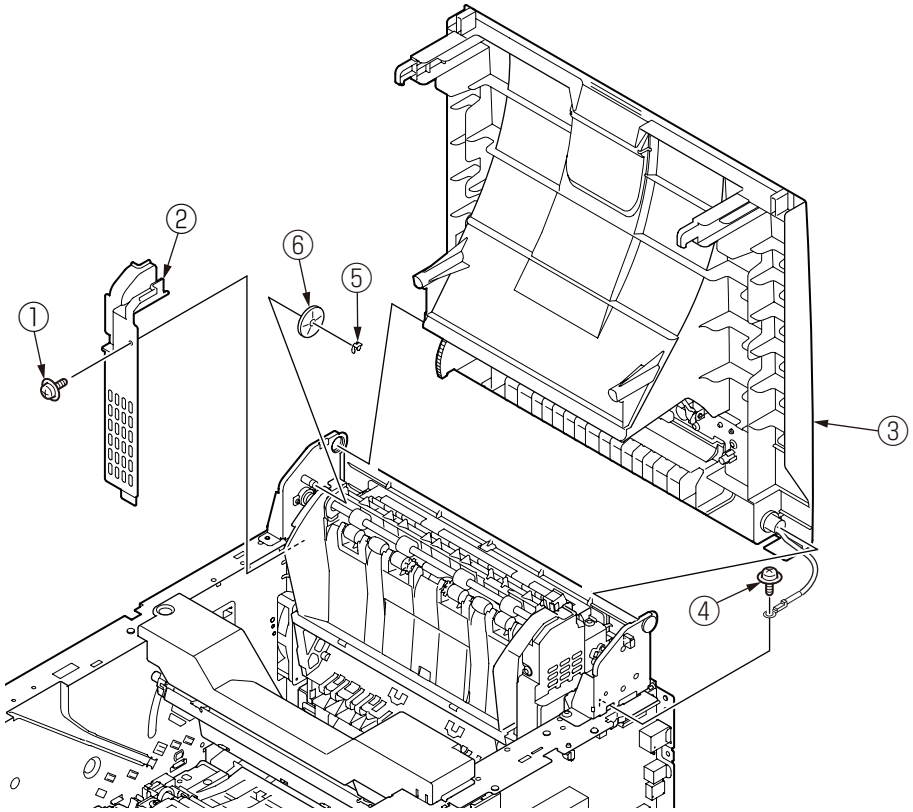
3.2.19 TR-Assy-Rear

(1) Remove the Cover-Rear-Blind. (Refer to 3.2.3)
(2) Remove the Cover–Side-R. (Refer to 3.2.5)
(3) Remove the Plate-Assy-Duct. (Refer to the 3.2.13)
(4) Remove the two screws (silver) ① , and remove the TR-Assy-Rear ② .



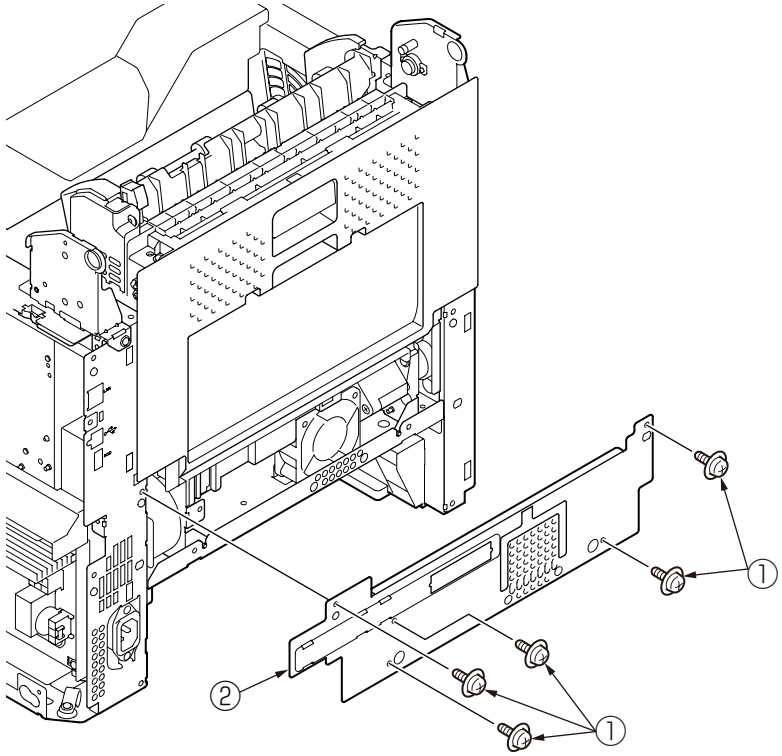
3.2.20 Cover-Assy-Stacker

(1) Remove the Cover-Rear-Blind. (Refer to 3.2.3)
(2) Remove the Cover-Side-L and the Cover–Side-R. (Refer to 3.2.4 / 3.2.5)
(3) Remove the Plate-Shield. (Refer to 3.2.6)
(4) Remove the screw (silver) ① , and remove the Cover-Damper ② .
(5) Disconnect the cable of Cover-Assy-Stacker ③ from the PU/CU-Board.
(6) Remove the screw (silver) ④ , and remove the FG cable of the Cover-Assy-Stacker ③ .
(7) Remove the retainer-4 ⑤ , and remove the Gear-Reduction ⑥ .
(8) Remove the Cover-Assy-Stacker ③ .

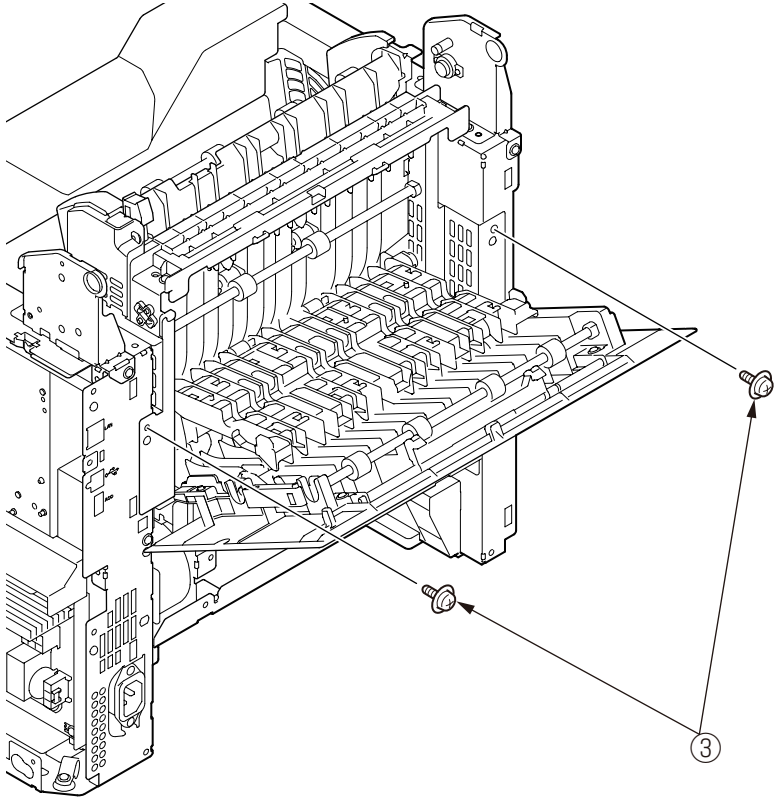


3.2.21 Eject-Assy

(1) Remove the Cover-Rear-Blind. (Refer to 3.2.3)
(2) Remove the Cover-Side-L and the Cover–Side-R. (Refer to 3.2.4 / 3.2.5)
(3) Remove the PU/CU-Board. (Refer to 3.2.6)
(4) Remove the Cover-Assy-Stacker. (Refer to 3.2.20)
(5) Remove the five screws (silver) ① , and remove the Plate-Centro ② .

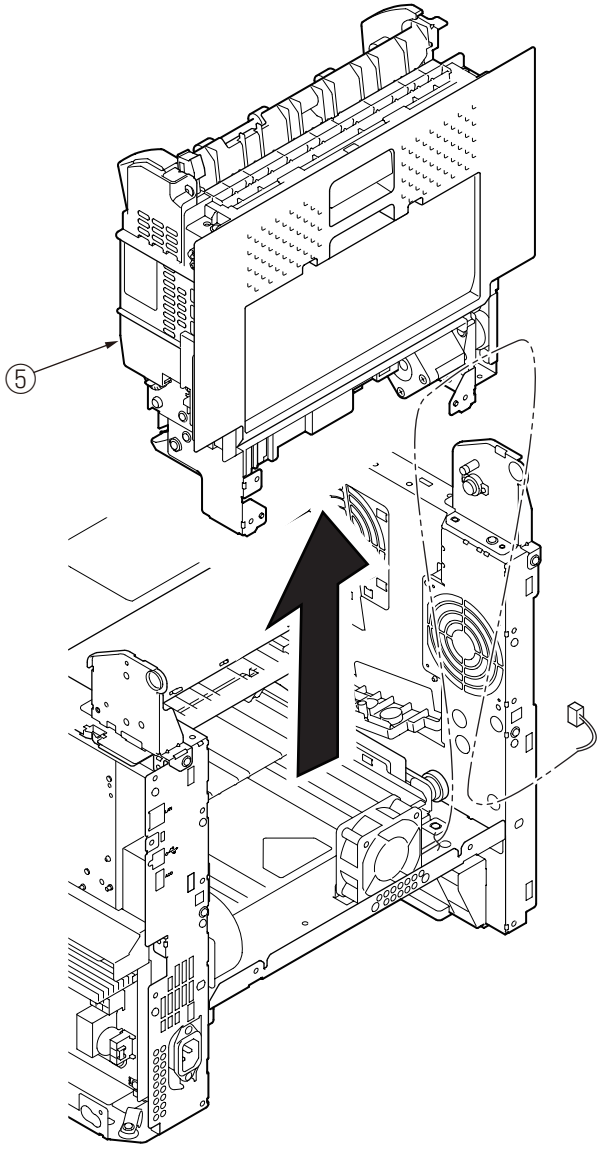


(6) Open the rear cover, and remove the two screws (silver) ③ .



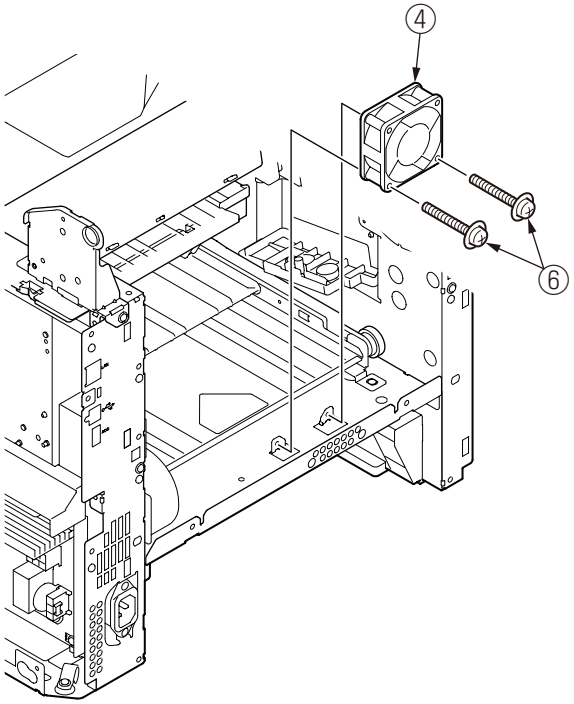
(7) Remove the cable of the Motor FAN ④ from the Eject-Assy ⑤ .

(8) Close the rear cover, and remove the Eject-Assy ⑤ .



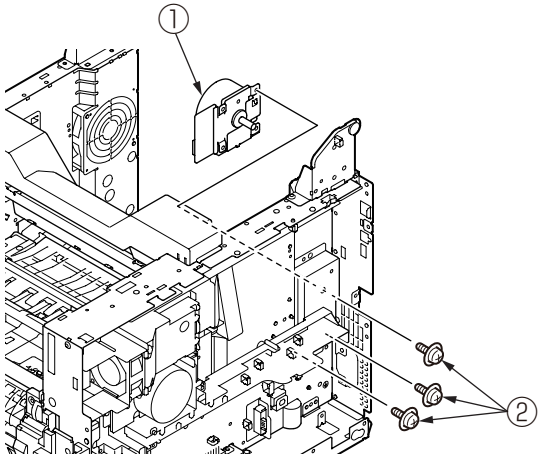
(9) Remove the two screws (silver/28mm) ⑥ , and remove the Motro FAN ④ .

Note! Be careful to install the Motor-FAN ④ in the proper direction.

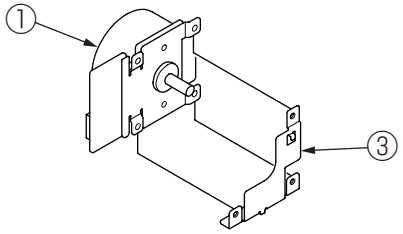


3.2.22 DC motor (fuser)

(1) Remove the Cover-Rear-Blind. (Refer to 3.2.3)
(2) Remove the Cover–Side-R. (Refer to 3.2.5)
(3) Remove the power supply unit. (Refer to 3.2.7)
(4) Remove the Cover-Assy-Stacker. (Refer to 3.2.20)
(5) Remove the Eject-Assy. (Refer to 3.2.21)
(6) Disconnect the cable from the DC motor (fuser) ①.
(7) Remove the three screws (silver) ②, and remove the DC motor (fuser) ①.

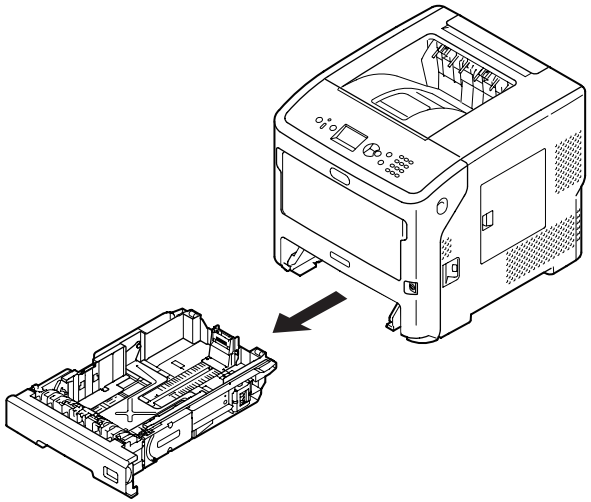


(8) Separate the DC motor (fuser) ① and the Plate-Motor-FU ③.

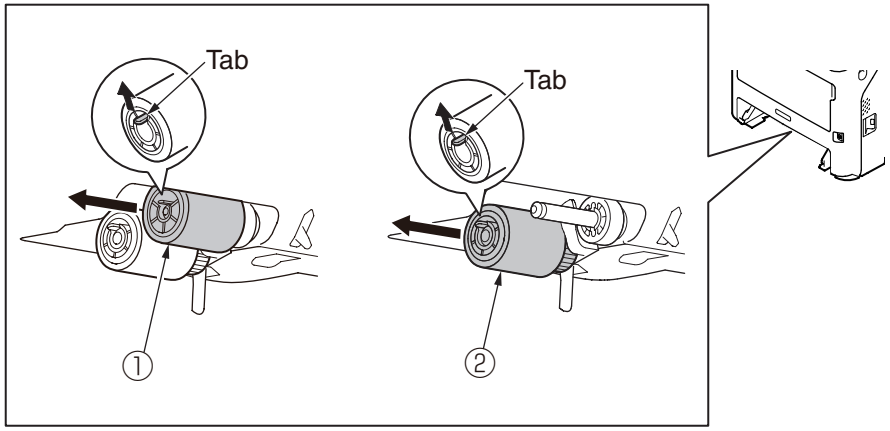


3.2.23 Paper feed rollers

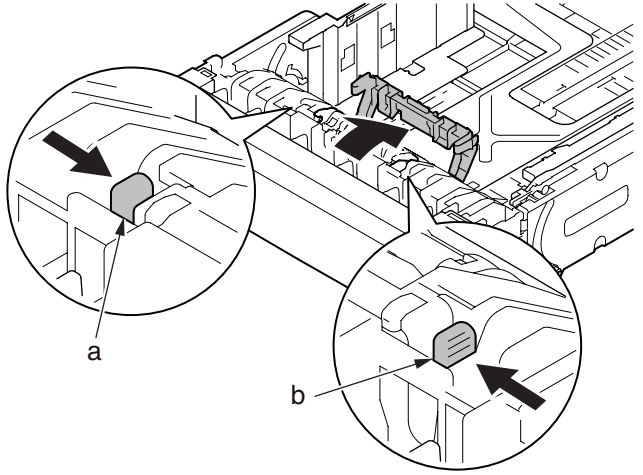
(1) Remove the cassette.



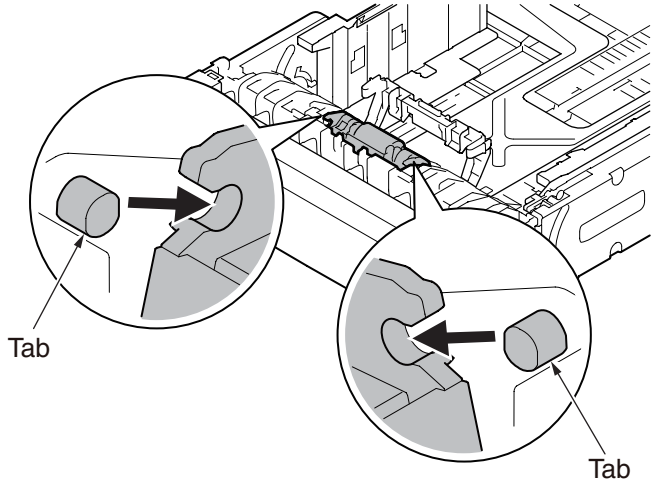
(2) Remove the two paper feed rollers ① (without gear) and ② (with gear) while pushin each tab outward.



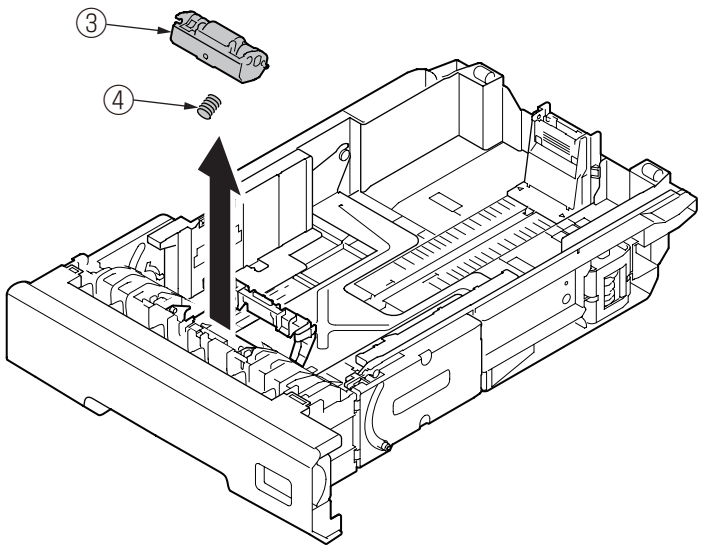
(3) Open the cover while pushing the two tabs (a and b) inward.



(4) Disengage the two tabs by pushing the both ends of the Frame-Assy-Retard ③ in the direction of the arrow.



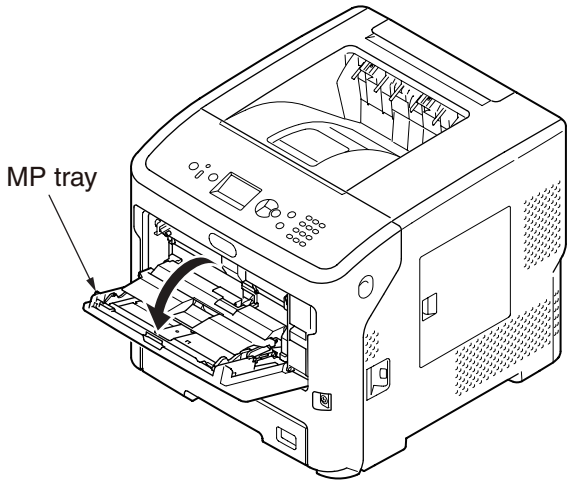
(3) Remove the Frame-Assy-Retard ③ and the spring ④ .



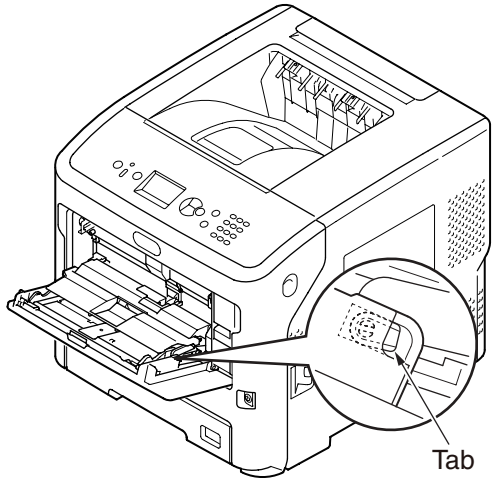
Note! After setting the two paper feed rollers ① and ② , check that they do not come off.

3.2.24 Paper feed rollers (MP tray)

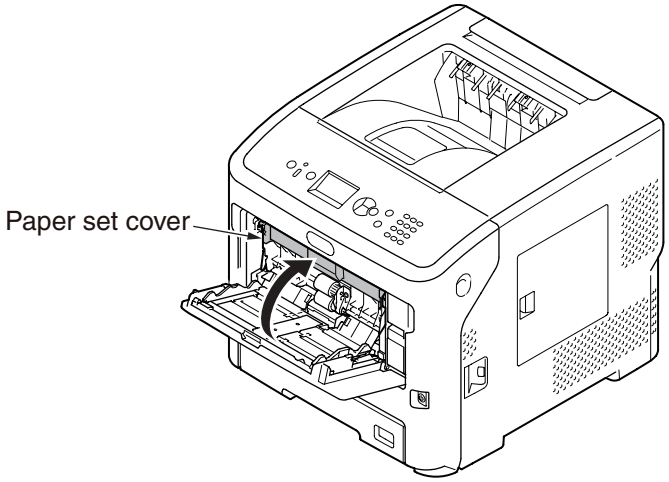
(1) Open the MP tray forward by inserting your fingers into the front reccesses.



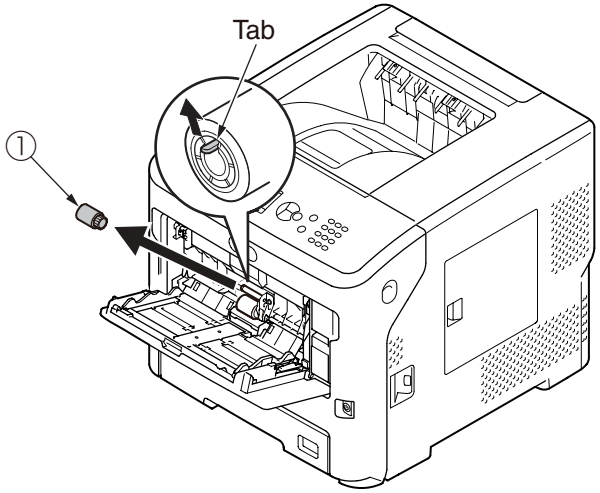
(2) Release the tab of the paper feed roller cover by pressing the right arm inward while lifting up the MP tray lightly, and release the tab on the left side in the same manner.



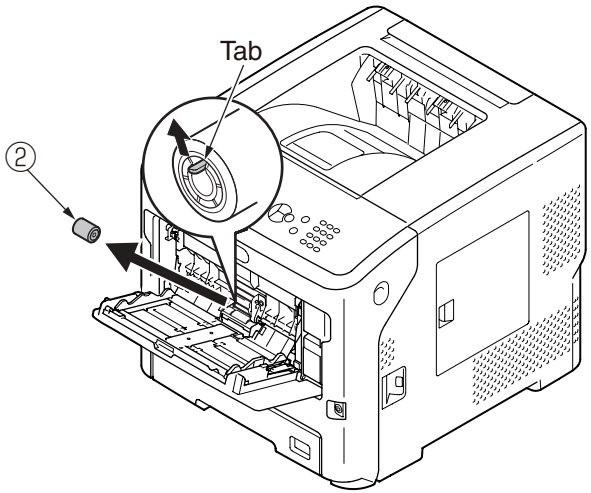
(3) Open the paper set cover.



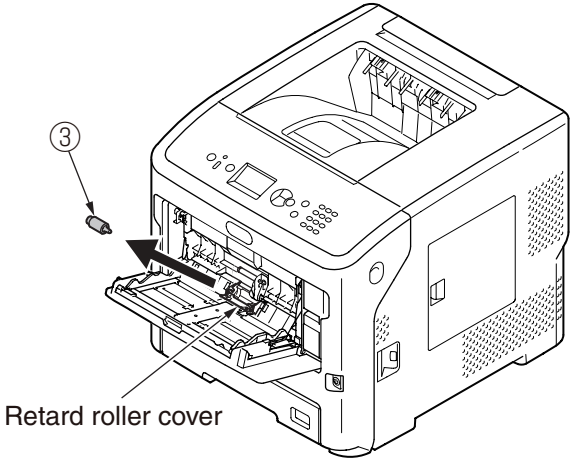
(4) Remove the MPT paper feed roller (with gear) ① while pushing the tab outward.



(5) Remove the MPT paper feed roller (without gear) ② while pushing the tab outward.



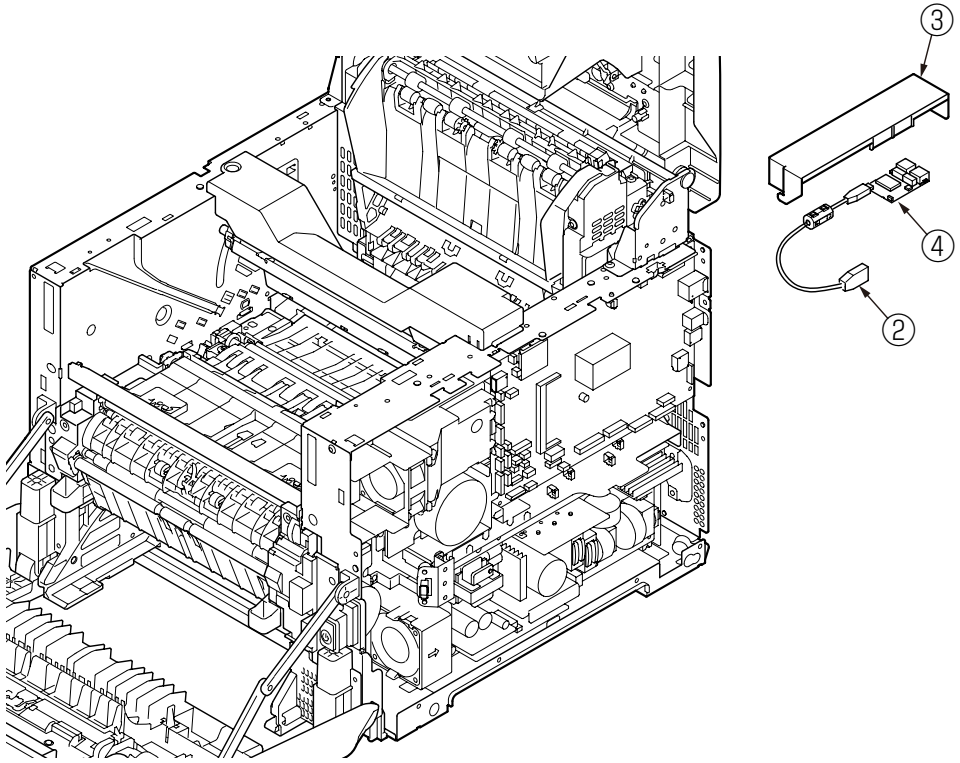
(6) Open the retard roller cover while pushing the center part of the MP tray, and remove the retard roller ③.



Note! After setting the two paper feed rollers ① and ②, check that they do not come off.

3.2.25 W-LAN Board (for Wireless model only)

(1) Remove the Plate-Sheild.(Refer to 3.2.6)



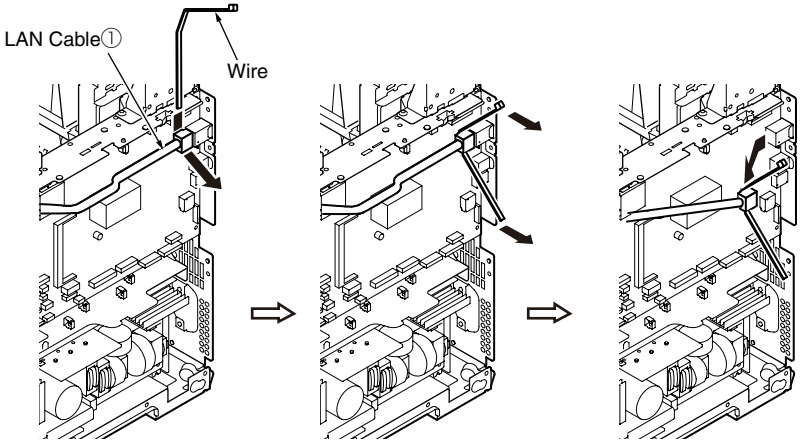
(2) Disconnect the LAN-Cable ① and the USB-Cable ② .

(3) Remove the Cover ③ and W-LAN Board ④ .

(4) Remove the W-LAN Board ④ from Cover ③ .

[Memo] Refer to remove the LAN-Cable ①

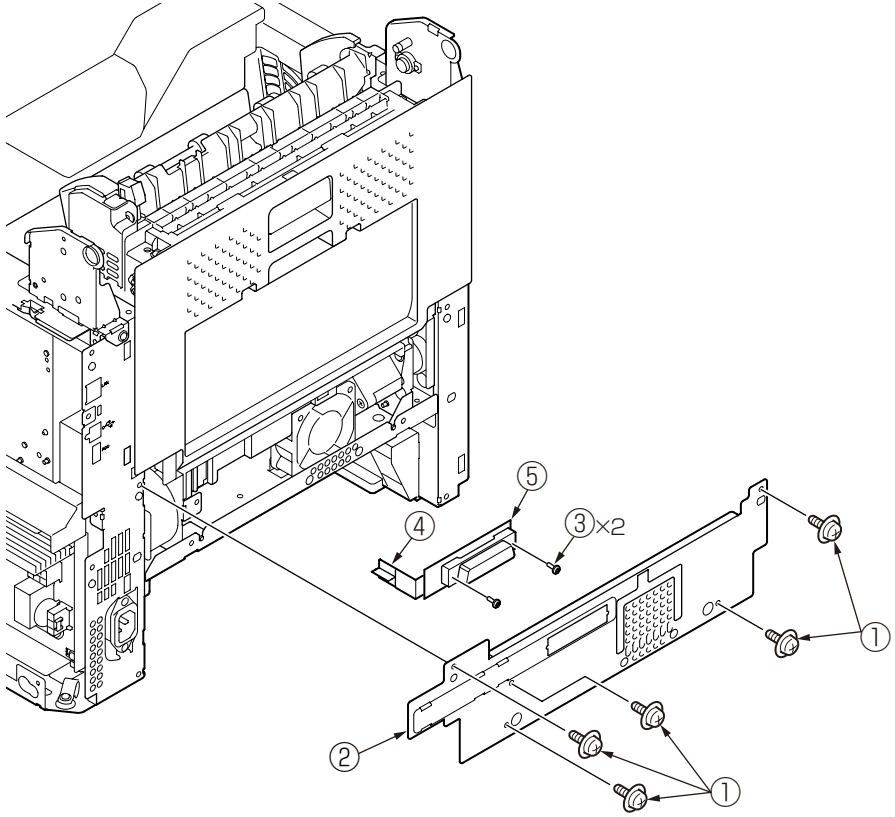
1. A wire should be put through to between the stopper of the LAN-Cable's Connector and the Board 99M.
(For example, the wire is the banding band, the aging (not useable) flat cabel or etc.)
2. Both ends of the wire should be pull to the right side of the Mainbody.
3. Check that the stopper released, and pull the LAN-Cable from the LAN Interface Connector on the Board 99M.



3.2.26 Centro Board (for Centro model only)

(1) Remove the five screws (silver) ①, and remove the Plate-Centro ②.(Refer to 3.2.21)

(2) Remove the two screws (silver) ③, and disconnect the FFC Cable ④ and remove the Centro Board ⑤.



3.3 Portions Lubricated

Portions lubricated are shown in this section. The other portions must not be lubricated. Lubrication is not required during assembly or disassembly, except that the lubricant specified must be applied to portions from which lubricant was wiped.

Lubrication work

(1) Lubricant names and their abbreviations

EM-30LP:MOLYKOTE EM-30LP

HP-300: MOLYKOTE HP-300

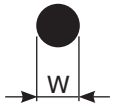
EM-D110: MOLYKOTE EM-D110

HANARL:HANARL SF-133

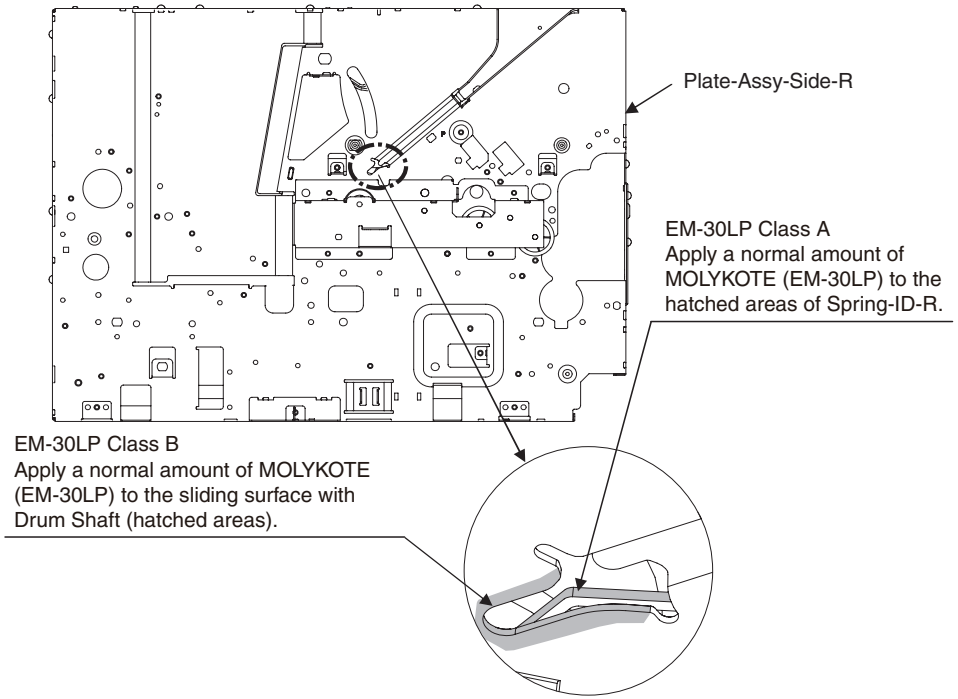
Tetra: Tetra C-9310 or C-5005

(2) Standard of amount of grease

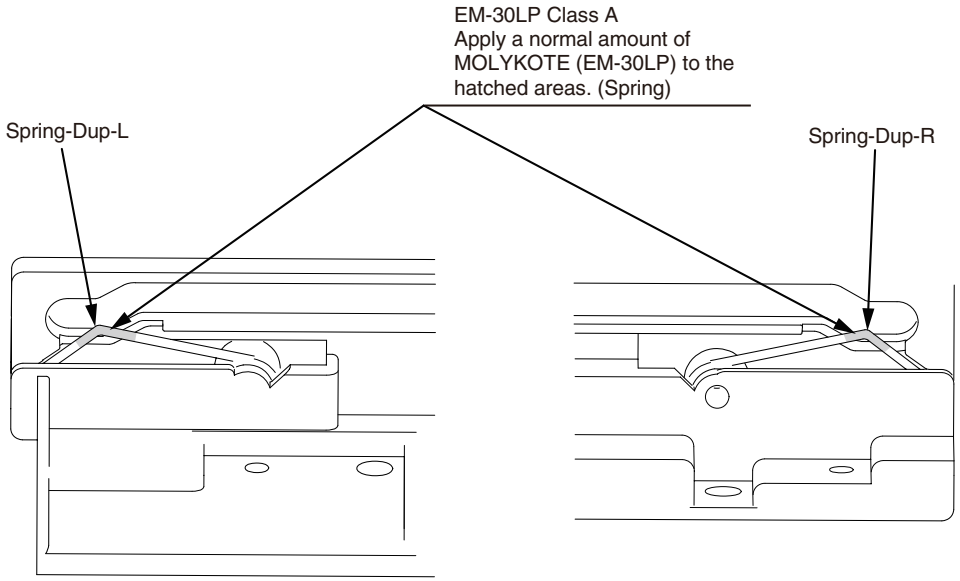
Class	S	A	B	C	D	E	F
Amount of grease (cc)	0.0005	0.003	0.005	0.01	0.03	0.05	0.1
W(mm)	1.24	2.25	2.67	3.37	4.86	5.76	7.26
Sample							



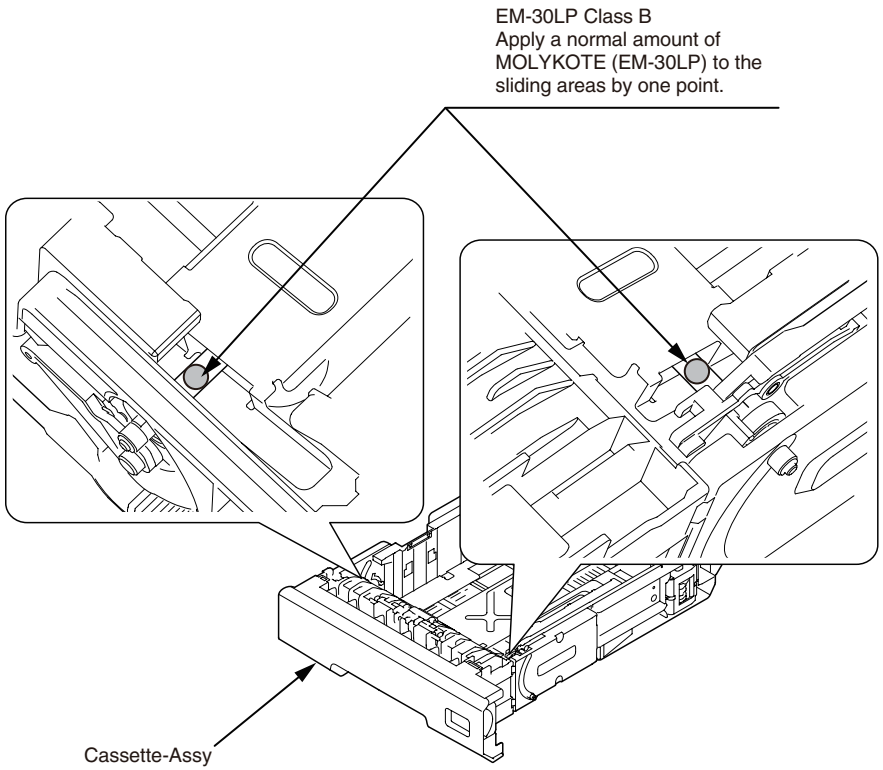
① Plate-Assy-Side-R



② Plate-Assy-Base



③ Cassette-Assy



4. Maintenance menus

The Printer can be adjusted by using Maintenance Utility, or button operation on its operator panel.

On the panel, maintenance menus are provided in addition to general menus. Select the menu intended for each adjustment purpose.

4.1 System maintenance menu (For maintenance personnel)

This menu is activated when the back ◀ and <ENTER> and <ON LINE> buttons are held down for 5 seconds while the printer is ready to print.

The menu is displayed in English irrespective of the destination of the product.

Note! Since this menu is changed depending on the destination or for other reason, it is not disclosed to the end users.

Table 4-1 Maintenance menu display table

Category	Item (1st Line)	Value (2nd Line)	DF	Functions
System Maintenance	Enter Password	****** ******	000 000	Enters a password to enter the system maintenance menu. The default is “000000”. From 6 to 12 digits of number or Roman character can be enter
	Save Syslog	Execute	-	Save network communication log(syslog) to flash rom.
	Print Syslog	Execute	-	Print the saved network communication log(syslog).
	Engine Diag Mode	Execute	-	It will be ONLINE by pressing ENTER key which issues the command from CU to PU. Check for the operation while changing the factories supplies during keeping the power ON. A new fuse will not cut and the count-operation will not be included in the old value). The check mode will finish and invalid if turing the power ON.
	Engine Diag Mode		-	Enters self-diagnosis mode of the engine.
	Change Password		-	Displays menus to change a password.
		New Password	****** ******	-	Sets a new password to enter "System Maintenance" menu From 6 to 12 digits of number or Roman character can be enter.
		Verify Password	****** ******	-	Makes User input the new password to enter "System Maintenance" menu which is set by "New Password" for confirmation. From 6 to 12 digits of number or Roman character can be enter.

4.2 Maintenance Utility

The adjustments described in table 4-2 should be made by using Maintenance Utility. Details on the utility are as follows:

(1) Maintenance Utility operation manuals:

42678801FU01 Version 30.6 or higher (Japanese)

42678801FU02 Version 30.6 or higher (English)

(2) Maintenance Utility program:

Applicable operating system	File name	Part number
Win2000/XP/Vista/7 (Japanese/English)	MuWin.zip	42678801FW01 Version 1.42.0 or higher

Table 4-2 Maintenance Utility Adjustment Items

	Item	Adjustment	Section in Maintenance Utility Operation manual	Operation from operator panel (section in this maintenance manual)
1	Board Replace-ment	Copies the information from the EEPROM on the PU/CU board, and copies the EEPROM setting value on PU/CU board. Purpose: To copy the information stored on the EEPROM on the PU/CU board when the PU/CU board needs to be replaced with another one due to maintenance.	Section 2.4.1.1.9	Unavailable
2	Serial Number Information Setting	Rewrites the serial number recorded on the PU, and Selects the printer serial number recorded on the CU, output mode, and rewrites the device serial number. Purpose: To configure a maintenance replacement board to which the information on the PU/CU board cannot be copied (due to an interface error).	Section 2.4.1.1.10.3	Unavailable
3	Factory/ Shipping Mode	Switches between Factory and Shipping modes. Purpose: To configure a maintenance replacement PU/CU board to which the information on the EEPROM on the PU/CU board cannot be copied (due to an interface error). The maintenance board is set to the Factory mode usually by default and, by using this function, must be set to the Shipping mode.	Section 2.4.1.1.10.4	Section 6.3.2.10
4	Board items setting information	Checks serial number information and the Factory/Shipping mode.	Section 2.4.1.1.7	Unavailable
5	Network Software	Updates the NIC software.	Section 2.4.2.2.17	Unavailable
6	Mac address setting	Sets the Mac address	Section 2.4.2.2.5	Unavailable
7	Counter mainte-nance function	Copies the counter value of each consumable: Drum counter Fuser counter Belt counter Toner counter Purpose: To copy the counter value of each consumable in the printer to use in another printer.	Section 2.4.1.2.1	Unavailable
8	Brand/PnP information	Sets or checks the (CU) destination, device identification and USB identification.	Section 2.4.1.2.9	Section 6.4.3
9	Network Log Save function	Stores Network log files.	Section 2.4.2.2.14	Unavailable

	Item	Adjustment	Section in Maintenance Utility Operation manual	Operation from operator panel (section in this maintenance manual)
10	Send to file	Transmits a specified file.	Section 2.4.1.2.13	Unavailable
11	PU Log File Save function	Stores PU log flies.	Section 2.4.2.2.16	Unavailable
12	Counter/ Toner information	Checks the current consumable counter values.	Section 2.4.1.3.1	Section 6.3.2.8
13	Menu setting values	Displays the menu settings set on the printer (CU).	Section 2.4.1.3.2	Print a configuration report (Menu Map) (refer to User's Manual).
14	Printer information	Checks the Mac address and each firmware version.	Section 2.4.1.3.3	Print a configuration report (Menu Map) (refer to User's Manual).
15	Memory information	Checks the information on the CPU and memory installed on the printer (CU).	Section 2.4.1.3.4	Print a configuration report (Menu Map) (refer to User's Manual).
16	Test print	Executes the local print function and sends a specified file. Purpose: To check the printer on a stand-alone basis and send a download file.	Section 2.4.1.4.1	Perform local printing (refer to System Specification
17	Save local print data	Stores files of local print data	Section 2.4.1.4.2	Unavailable
18	Switch scan test	Executes the switch scan test. Purpose: To check each sensor for proper operation.	Section 2.4.1.5.1	Section 6.3.2.3
19	Motor and Clutch Tests	Executes the motor clutch test. Purpose: To check each item, such as a motor or clutch, for proper operation.	Section 2.4.1.5.2	Section 6.3.2.4
20	Color registration adjustment function	Executes the color registration adjustment test.	Section 2.4.1.5.3	Section 6.3.2.6
21	Density adjustment test	Executes the density adjustment test.	Section 2.4.1.5.4	Section 6.3.2.7
22	Automatic Density Adjustment Control Parame-ters Setting (DENSITY ADJUST PAR-SET)	Sets the auto density setting control parameter.	Never use this option.	Section 6.3.2.7
23	Counter	Checks the consumable, continuous consumable and waste toner counter values.	Section 2.4.1.5.6	Section 6.3.2.8
24	Local Parame-ters Setting/ Information	Switches between the Factory and Shipping modes and checks the status of the fuse.	Section 2.4.1.5.7	Section 6.3.2.10
25	Engine Parame-ters Setting	Makes an engine parameter setting.	Section 2.4.1.5.8	Section 6.3.2.11
26	Translate Parame-ters Setting	Makes a print media transfer parameter setting.	Section 2.4.1.5.9	Section 6.3.2.11
27	PU diagnosis log save function	Stores self-diagnosis log files of printer paper running system.	Section 2.4.1.5.10	Unavailable

Note! Do not operate or set options marked with 'Never use this option', or a malfunction is potentially caused.

4.3 User maintenance menu functions

4.3.1 Maintenance menu (for end-users)

Some general menu categories on the operator panel of the printer serve as maintenance menus (but are not system maintenance menus).

The options available in the menus are as follows:

Default setting in shade area

Item			Settings	Functions
Menus	System Adjust	Power Save Time	1 minute 2 minutes 3 minutes 4 minutes 5 minutes 10 minutes 15 minutes 30 minutes 60 minutes	Sets time to wait for moving to Power Save mode. Moves to Power Save mode even during an error.
		Sleep Time	1 minute 2 minutes 3 minutes 4 minutes 5 minutes 10 minutes 15 minutes 30 minutes 60 minutes	Sets the time to switch from Power Save mode to Sleep mode. The start point is the moment when the printer goes into PowerSave. The printer will not enter sleep mode at the following conditions. • Parallel is enabled. • Network is working on 1000Base-T Full/ Half speed. • Error occurs.
		Auto Power Off Time	1 hour 2 hours 3 hours 4 hours 8 hours 12 hours 18 hours 24 hours	Set the time to switch from Idle state to Off mode.
		Clearable Warning	Online Job	Sets display deletion timing of clearable warnings. PS: JOB only
		Auto Continue	On Off	Sets whether a printer is automatically recovered or not when memory overflow/ tray request occurs. (Wait time for recovery: 15 sec)
		Manual Timeout	Off 30 seconds 60 seconds	Sets time to wait for paper to be fed in manual feed. If paper is not fed within this period of time, the job is canceled.
		Timeout Injob	Off 5 seconds 10 seconds 20 seconds 30 seconds 40 seconds 50 seconds 60 seconds 90 seconds 120 seconds 150 seconds 180 seconds 210 seconds 240 seconds 270 seconds 300 seconds	Sets time between stopping reception of job data and performing force printing. Does not perform printing and cancels that job instead in the case of PS.
		Timeout Local	0 seconds 5 seconds ~ 40 seconds ~ 290 seconds 295 seconds 300 seconds	Time of open of each port after end of job(The network is excluded.) Time of the port open indicates the time that open the current port which receiving the current job and so other port be able to receive data. It increase /decreases in the step of 5

Item			Settings	Functions
Menus	System Adjust	Timeout Network	0 seconds 5 seconds ~ 90 seconds ~ 290 seconds 295 seconds 300 seconds	Time of open of Network port after end of job Time of the port open indicates the time that open the current port which receiving the current job and so other port be able to receive data. It increase /decreases in the step of 5 [Conditions for display] A NIC FW is installed.
		Low Toner	Continue Stop	Sets printer operation when Toner Low is detected. In CONTINUE, the printer can continue printing while remaining ON-LINE. In STOP, it becomes OFF-LINE. [Conditions for display] The consumable is SEPARATION mode or COMBINATION mode will be decided by a PU Factory PJL command. This menu item is only displayed in the SEPARATION mode.
		Jam Recovery	On Off	Sets whether JAM RECOVERY printing is performed or not when Jam occurs. When it is set to OFF, a job that includes the page to which Jam has occurred will be cancelled.
		Error Report	On Off	Sets whether an error report is printed or not when an internal error occurs. Valid only for PS and PCL XL.
		Hex Dump	Execute	Prints out data received from the host PC in the hexadecimal Dump. Turning off the power supply switch restores Normal Mode from HEX Dump Mode.

Item					Settings	Functions
Menus	Print Adjust	Print Position Adjust	MPtray, Tray1, Tray2, Tray3, Tray4	X Adjust	0.00 mm +0.25 mm to +2.00 mm -2.00 mm to -0.25 mm	Adjusts the position of a whole print image in the direction that is perpendicular to the direction paper runs, that is horizontally (at 0.25 mm pitch).
				Y Adjust	0.00 mm +0.25 mm to +2.00 mm -2.00 mm to -0.25 mm	Adjust the position of a whole print image in the direction paper runs, that is vertically (at 0.25mm pitch).
				Duplex print X Adjust	0.00 mm +0.25 mm to +2.00 mm -2.00 mm to -0.25 mm	At the time of back page printing of Duplex, adjusts the position of the whole print image in the direction that is perpendicular to the direction paper runs, that is horizontally (at 0.25mm pitch).
				Duplex print Y Adjust	0.00 mm +0.25 mm to +2.00 mm -2.00 mm to -0.25 mm	At the time of back page printing of Duplex, adjusts the position of a whole print image in the direction paper runs, that is vertically (at 0.25mm pitch).
		Paper Black Setting			0 +1 +2 +3 -3 -2 -1	Use it for fine adjustment of the significant dust attachment on the surface and when thin spot has the sighificant impact on the standard/BLACK printing or other cases occur. The decrement is necessary if the scattered or snow-white like printing is the result in the high density-printing area. The increment is necessary if the thin printing is found.
		Trans. Black Setting			0 +1 +2 +3 -3 -2 -1	Use it for fine adjustment of the significant dust attachment on the surface and when thin spot has the significant impact on OHP/BLACK printing. The decrement is necessary if the scattered or snow-white like printing is the result in the high density-printing area. The increment is necessary if the thin printing is found.

Item				Settings	Functions
Menus	Print Adjust	Darkness		0 +1 +2 -2 -1	Sets print darkness.
		SMR Setting		0 +1 +2 +3 -3 -2 -1	To correct variations in print results caused by temperature/humility conditions and difference in print density/frequency. Change the setting when print quality is uneven.
		BG Setting		0 +1 +2 +3 -3 -2 -1	To correct variations in print results caused by temperature/humility conditions and difference in print density/frequency. Change the setting when background is dark.
		Drum Cleaning		On Off	Sets whether to rotate the drum in idle prior to printing in order to reduce horizontal white lines. Be warned that this will shorten the ID life as much as this rotation.
		High Humid Mode		On Off	Sets On or Off for the curl reduction mode.
		Quiet Mode		On Off	Sets Off/On of the quiet printing mode.
Admin Setup		Enter Password		**********	Enters a password to enter Admin Setup menu. The default value is "aaaaaa." From 6 to 12 digits of numbers or Roman character to input.
		Network setup	TCP/IP	Enable Disable	Sets Enable/Disable of TCP/IP Protocol.

Item			Settings	Functions
Admin Setup	Network setup	IP Version	IP v4 IP v4+v6 IP v6	Set up the IP version. There is only IPv4 and IPv4+v6 as normal value. From this stage, If IPv6 only is set from UI, for example Telnet, "IPv6" appears as the value of IP VERSION on the operation panel. "IPv6" will disapears from the value if "IP v4","IP v4+v6" is selected. [Conditions for display] "TCP/IP"should be ENABLE
		NetBIOS over TCP	Enable Disable	Sets Enable/Disable of NetBIOS over TCP Protocol. [Condition for display] "Enable" is selected for "TCP/IP" and also "IP Version" is not IP v6.
		IP Address Set	Auto Manual	Sets the IP address setting method. [Conditions for display] "Enable" is selected in "TCP/IP."
		IPv4 Address	xxx.xxx.xxx.xxx	Sets the IP address. [Condition for display] "Enable" is selected for "TCP/IP" and also "IP Version" is not IP v6.
		Subnet Mask	xxx.xxx.xxx.xxx	Sets the subnet mask. [Conditions for display] "Enable" is selected in "TCP/IP."
		Gateway Address	xxx.xxx.xxx.xxx	Sets the Gateway (default router) address. 0.0.0.0 means that there is no router. [Conditions for display] "Enable" is selected in "TCP/IP."
		Web	Enable Disable	Sets Enable/Disable of Web. [Conditions for display] "Enable" is selected in "TCP/IP."
		Telnet	Enable Disable	Sets Enable/Disable of Telnet. [Conditions for display] "Enable" is selected in "TCP/IP."

Item			Settings	Functions
Admin Setup	Network setup	FTP	Enable Disable	Sets Enable/Disable of FTP. [Conditions for display] "Enable" is selected in "TCP/IP."
		IPSec	Enable Disable	Displayed only when Enable is selected for TCP/IP and allows a change only to Disable. (It is because many settings besides this setting are required to enable IPSec. Therefore, it is allowed to be cleared only for restoration.)
		SNMP	Enable Disable	Sets SNMP of FTP. [Conditions for display] "Enable" is selected in "TCP/IP".
		Network Scale	Normal Small	When Normal is selected, it can work effectively even when it is connected to HUB that has a spanning tree feature. However, printer start up time gets longer when computers are connected with two or three small LANs. When Small is selected, computers can cover from two or three small LANs to a large LAN, but it may not work effectively when it is connected to HUB with a spanning tree feature.
		Gigabit Network	Enable Disable	Sets Enable/Disable of Gigabit network. When this is Enabled, and the network is working on 1000Base-T Full/Half, the printer will not enter sleep mode.
		Hub Link Setting	Auto Negotiate 100Base-TX Full 100Base-TX Half 10Base-T Full 10Base-T Half	Sets a method to link with HUB.

Item			Settings	Functions
Admin Setup	Network setup	TCP ACK	Type1 Type2	Sets a type of TCP Acknowledgment. When Type1 is set, the printer replies to every packet. When Type2 is set, the printer replies to plural packets in a mass. When printing comes to take time by the setting of the hub, choosing Type2 may improve the matter. Usually, setting Type1 hasn't any problem. [Conditions for display] "Enable" is selected in "TCP/IP."
		Factory Defaults?	Execute	Specifies whether to initialize the network menu or not.
	Parallel Setup	Parallel	Enable Disable	Sets Enable/Disable of Centro I/F. When this is Enabled, the printer will not enter sleep mode.
		Bi-Direction	Enable Disable	Sets Enable/Disable of bi-directional Centro.
		ECP	Enable Disable	Sets Enable/Disable of ECP mode.
		Ack Width	Narrow Medium Wide	Sets ACK width for compatible reception. NARROW = 0.5µs MEDIUM = 1.0µs WIDE = 3.0µs
		Ack/Busy Timing	Ack in Busy Ack while Busy	Sets the order to output the BUSY signal and the ACK signal for compatible reception. ACK IN BUSY: BUSY=LOW-> The end of ACK pulse ACK WHILE BUSY: BUSY=LOW -> The center of ACK pulse
		I-Prime	3 microseconds 50 microseconds Disable	Sets time to enable/disable the I-PRIME signal. 3 MICRO SEC: Enabled with the 3µs nInit signal. 50 MICRO SEC: Enabled with the 50µs nInit signal. When I-Prime is received when enabled, only Centro driver is initialized.

Item			Settings	Functions
Admin Setup	Parallel Setup	Offline Receive	Enable Disable	Sets Enable/Disable of a function that keeps receive-possible state without changing an I/F signal even though an alarm occurs. When this is set to Enable, I/F keeps receive-possible state even while the printer is moving to Off-line because you press operating panel switch. I/F sends the BUSY signal only when the reception buffer is full or service call occurs.
	USB Setup	USB	Enable Disable	Sets able/disable of USB I/F.
		Speed	Enable Disable	Sets of the max. USB I/F transfer speed.
		Soft Reset	Enable Disable	Sets Enable/Disable of Soft Reset command.
		Serial Number	Enable Disable	Specifies Enable/Disable of a USB serial number. A USB serial number is used to identify a USB device to which a PC is connected.
		Offline Receive	Enable Disable	Sets Enable/Disable of a function that keeps receive-possible state without changing I/F signal even though an alarm occurs. When this is set to Enable, I/F keeps receive-possible state even while the printer is moving to Off-line because you press operating panel switch. I/F sends the BUSY signal only when the reception buffer is full or service call occurs.
		USB Memory Interface	Enable Disable	Sets able/disable of USB memory I/F.
	Admin Appli			See "Embedded JavaVM User's Guide" (an applicable specification) for details on Java Application.
	JavaVM Setup			See "Embedded JavaVM User's Guide" (an applicable specification) for details on Java Application.

Item			Settings	Functions
Admin Setup	Print Setup	Personality	Auto PCL XPS IBM PPR EPSON FX PostScript	Selects a printer language.
		Copies	1 ~ 999	Sets the number of copies. This setting is disabled for Local Print except for Demo Page
		Duplex	On Off	Specifies Duplex Print.
		Binding	Long Edge Short Edge	Specifies Binding in Duplex Printing. [Conditions for display] "On" is selected in "Duplex" menu above.
		Media Check	Enable Disable	Sets whether the printer checks the matching of paper size of the print data and that of the tray. Only standard sizes are subject to be checked.
		A4/Letter Override	No Yes	(1)When the paper size of a job has been set to A4 and A4 has not been set in a printer, if there is Letter paper in it, this job will be printed by Letter paper without paper requesting. (2)When the paper size of a job has been set to Letter and Letter has not been set in a printer, if there is A4 paper in it, this job will be printed by A4 paper without paper requesting. [Conditions for display] "Off" is selected in "Edge to Edge".
		Edge to Edge	On Off	The printing area will be extended. When On is set, print margin will be changed to 2mm in PCL/PS printing. When Off is set, print margin will be as usual setting and specs. [Conditions for display] "No" is selected in "A4/Letter Override".
		Resolution	600dpi 1200dpi	Sets the resolution.

Item			Settings	Functions
Admin Setup	Print Setup	Toner Save	Off Low High	Set the toner save level. Off: Invalidate toner save. Low: use toner by 75%. High: use toner by 50%.
		Default Orientation	Portrait Landscape	Specifies print orientation. It is invalid for PS. (it is valid only for PCL/ IBMPPR/ EPSONFX)
		Form Length	5lines ~ 60lines *L ~ 64lines *A ~ 128lines	Sets the number of lines that can be printed on a page. (Only for PCL)Invalid in PS. Default values listed to the left are for Letter/A4. In practice, however, they change according to the size of paper loaded in the tray.
		Edit Size	Cassette Size A4 A5 A6 B5 B6 Legal14 Legal13.5 Legal13 Letter Executive 16K(184x260mm) 16K(195x270mm) 16K(197x273mm) Statement Custom Com-9 Envelope Com-10 Envelope Monarch Envelope DL Envelope C5 Envelope C6 Envelope Index Card	Sets the size of an area to draw when the host PC does not specify the size by the paper edit size designating command. (Only for PCL)Invalid in PS.

Item			Settings	Functions
Admin Setup	Print Setup	X Dimension	3inch ~ 8.3inch *A ~ 8.5inch *L 76millimeter ~ 210millimeter *A ~ 216millimeter *L	Specifies paper width of Custom paper as a default value. Sets a paper in a direction perpendicular to paper run direction Default values listed to the left are for Letter/A4.
		Y Dimension	5inch ~ 11.0inch *L ~ 11.7inch *A ~ 52.0inch 127millimeter ~ 279millimeter *L ~ 297millimeter *A ~ 1321millimeter	Specifies paper length of Custom paper as a default value. Sets a paper in the same direction to paper run direction. Default values listed to the left are for Letter/A4.
	PS Setup	Network Protocol	ASCII RAW	Specifies PS communication protocol mode of data from NIC. (In RAW mode, Ctrl-T is invalid.) [Conditions for display] A NIC FW is installed.
		Parallel Protocol	ASCII RAW	Specifies PS communication protocol mode of data from Centro. (In RAW mode, Ctrl-T is invalid.)

Item			Settings	Functions
Admin Setup	PS Setup	USB Protocol	ASCII RAW	Specifies PS communication protocol mode of data from USB. (In RAW mode, Ctrl-T is invalid.)
		PDF Paper Size	Current Tray Size Size in PDF file Scaling Size	Paper size Select of PDF Direct Print Current Tray Size : It selects the current tray, and it lets fit paper size of the tray. Size in PDF file : It refers to the paper size in a PDF file and does an automatic tray selection. Scaling Size : It refers to the paper size in a PDF file and does an automatic tray selection. If the paper with the same size with PDF file, print on it. If ther is not, request paper on current tray, and scaling print.
		PDF Scaling Size	1% ~ 99%	Specifies scaling size by percent when PDF Paper Size is set to Scaling Size. [Conditions for display] This menu only is displayed when PDF Paper Size is set to Scaling Size.
	PCL Setup	Font Source	Resident Downloaded	Specifies the location of PCL default font. Downloaded: Displayed when soft font is downloaded to RAM as permanent designation.
		Font Number	0 S1	Sets the PCL font number. The valid range of this variable changes depending on the FONT SOURCE setting at the time. If the default font is set for FONT SOURCE, the number starts at 0. If it is not, the number starts at 1. The maximum value is equal to the number of fonts installed in FONT SOURCE. S1 is displayed only when soft font is downloaded with permanent designation.
		Font Pitch	0.44CPI ~ 10.00CPI ~ 99.99CPI	Width of the PCL default font. The unit is character/inch (Default font is fixed-pitch, scalable font.) The value of pitch is displayed down to the second decimal place (in the unit of 0.01 CPI). Displayed only when the font selected in Font No. is fixed-spacing, scalable font.

Item			Settings	Functions
Admin Setup	PCL Setup	Font Height	4.00 point ~ 12.00 point ~ 999.75 point	Height of the PCL default font. The value is displayed down to the second decimal place (in the unit of 0.25 POINT.) Displayed only when the font selected in Font No. is proportional-spacing, scalable font.
		Symbol Set	PC-8 PC-8 Dan/Nor PC-8 Grk PC-8 TK PC-775 PC-850 PC-851 Grk PC-852 PC-855 PC-857 TK PC-858 PC-862 Heb PC-864 L/A PC-866 PC-866 Ukr PC-869 PC-1004 Pi Font Plska Mazvia PS Math PS Text Roman-8 Roman-9 Roman Ext Serbo Croat1 Serbo Croat2 Spanish Ukrainian VN Int'l VN Math VN US Win 3.0 Win 3.1 Arb Win 3.1 L/G Win 3.1 Blt Win 3.1 Cyr Win 3.1 Grk	Sets a symbol set of PCL. Modifies a symbol set to the default symbol set of the font when the selected font of FONT No. can not use the selected symbol set.

Item			Settings	Functions
Admin Setup	PCL Setup	Symbol Set	Win 3.1 Heb Win 3.1 L1 Win 3.1 L2 Win 3.1 L5 Wingdings Dingbats MS Symbol OCR-A OCR-B OCRB Subset2 HP ZIP USPSFIM USPSSTP USPSZIP Arabic-8 Bulgarian CWI Hung DeskTop German Greek-437 Greek-437 Cy Greek-737 Greek-8 Greek-928 Hebrew NC Hebrew OC Hebrew-7 Hebrew-8 IBM-437 IBM-850 IBM-860 IBM-863 IBM-865 ISO Dutch ISO L1 ISO L2 ISO L4 ISO L5 ISO L6 ISO L9 ISO Swedish1 ISO Swedish2 ISO Swedish3 ISO-2 IRV	

Item			Settings	Functions
Admin Setup	PCL Setup	Symbol Set	ISO-4 UK ISO-6 ASC ISO-10 S/F ISO-11 Swe ISO-14 JASC ISO-15 Ita ISO-16 Por ISO-17 Spa ISO-21 Ger ISO-25 Fre ISO-57 Chi ISO-60 Nor ISO-61 Nor ISO-69 Fre ISO-84 Por ISO-85 Spa ISO-Cyr ISO-Grk ISO-Hebrew Kamenicky Legal Math-8 MC Text MS Publish PC Ext D/N PC Ext US PC Set1 PC Set2 D/N PC Set2 US	
		A4 Print Width	78 column 80 column	Sets in PCL the number of characters for A4 paper Auto LF. This is for 10-CPI characters when Auto CR/LF Mode is set to OFF. This menu is enabled only when A4 paper is selected in the menu that sets the print width of A4 paper in portrait orientation.
		White Page Skip	On Off	Sets whether to eject or not a page without any data to print (blank page) upon reception of FF command (OCH) in PCL Mode. OFF: Ejecting.

Item				Settings	Functions
Admin Setup	PCL Setup	CR Function		CR CR+LF	Sets performance when CR code is received in PCL. CR: Carriage Return CR+LF: Carriage Return and Line Feed
		LF Function		LF LF+CR	Sets performance when LF code is received in PCL. LF: Line Feed LF+CR: Line Feed and Carriage Return
		Print Margin		Normal 1/5 inch 1/6 inch 1/12.5 inch	Sets a non-printable area of paper. The width of the area along the right and left sides of paper (left and right of paper laid out according to paper orientation) paper outside the printable area NORMAL: PCL emulation compatible, approximately 1/4~1/4.3INCH (depending on paper) is outside the printable area. The option "1/12.5 inch" only be displayed when Edge to Edge function was enabled.
		Pen Width Adjust		On Off	When the minimum width is specified in PCL, if you draw a 1-dot line, it sometimes looks broken. With PEN WIDTH Adjust set to ON, when the minimum width is specified, the line width will be emphasized so as to look wider than a 1-dot line.
		Tray ID#	MP Tray	1 ~ 4 ~ 59	Sets the # to specify the MPTray for the paper feed destination command (ESC&l#H) in PCL5e emulation.
			Tray1	1 ~ 59	Sets the # to specify Tray 1 for the paper feed destination command (ESC&l#H) in PCL5e emulation.
			Tray2	1 ~ 5 ~ 59	Sets the # to specify Tray 2 for the paper feed destination command (ESC&l#H) in PCL5e emulation. Displayed only if the Tray 2 is installed.

Item				Settings	Functions
Admin Setup	PCL Setup	Tray ID#	Tray3	1 ~ 20 ~ 59	Sets the # to specify Tray 3 for the paper feed destination command (ESC&l#H) in PCL5e emulation. Displayed only if the Tray 3 is installed.
			Tray4	1 ~ 21 ~ 59	Sets the # to specify Tray 4 for the paper feed destination command (ESC&l#H) in PCL5e emulation. Displayed only if the Tray 4 is installed.
	XPS Setup	Digital-Signature		Print Invalid Sign PrintOnlyValidSign Off	Sets up the DigitalSignature function. Print Invalid Sign: If a document has been tampered, the printer prints a normal print report and a temper error report. Print Only Valid Sign: If a document has been tampered, the printer prints only a tamper error report. Off: No signatures are verified.
		Discard-Control		Auto Each Page Off	Sets up the DiscardControl function. Auto: Frees resources as necessary. EachPage: Frees resources page by page according to markups. Off: Disables the DiscardControl function.
		MC Mode		On Off	Sets up the MarkupComaptibility function. On: Uses the MarkupComaptibility function. Off: Not use the MarkupComaptibility function.
		Unzip Mode		Auto Speed Print	Specifies the unzip method for XPS flies. Auto: Automatically switches modes depending on files. Speed: Prioritizes print speed and doesn't use the partial Unzip function. Print: Prioritizes print processing and uses the partial Unzip function.
		White Page Skip		On Off	Sets whether or not to eject pages that contain no print data (blank pages) using XPS. When Off is selected, blank pages are ejected, if any.

Item			Settings	Functions
Admin Setup	IBM PPR Setup	Character Pitch	10 CPI 12 CPI 17 CPI 20 CPI Proportional	Specifies character pitch in IBM PPR emulation.
		Font Condense	12CPI to 20CPI 12CPI to 12CPI	Specifies 12CPI pitch for Condense Mode.
		Character Set	SET-2 SET-1	Sets a character set.
		Symbol Set	IBM-437 IBM-850 IBM-860 IBM-863 IBM-865 PC Set1 PC Ext US PC Ext D/N PC Set2 US PC Set2 D/N Roman-8 ISO L1 PC-8 PC-8 Dan/Nor PC-850 Legal ISO-2 IRV ISO-4 UK ISO-6 ASC ISO-10 S/F ISO-11 Swe ISO-14 JASC ISO-15 Ita ISO-16 Por ISO-17 Spa ISO-21 Ger ISO-25 Fre ISO-57 Chi ISO-60 Nor ISO-61 Nor ISO-69 Fre ISO-84 Por ISO-85 Spa	Sets a symbol set.

Item			Settings	Functions
Admin Setup	IBM PPR Setup	Symbol Set	German Spanish ISO Dutch Roman Ext ISO Swedish1 ISO Swedish2 ISO Swedish3 VN Math VN Int'l VN US PS Math PS Text Math-8 Pi Font MS Publish Win 3.0 DeskTop Win 3.1 L1 MC Text PC-852 Win 3.1 L5 Win 3.1 L2 CWI Hung PC-857 TK ISO L2 ISO L5 PC-8 TK Kamenicky Hebrew NC Hebrew OC Plska Mazvia ISO L6 Win 3.1 Heb Win 3.1 Cyr PC-866 Win 3.1 Grk PC-869 PC-855 Greek-437 Greek-437 Cy Greek-737 Greek-928 Serbo Croat2 Ukrainian	

Item			Settings	Functions
Admin Setup	IBM PPR Setup	Symbol Set	Bulgarian PC-1004 Win 3.1 Blt PC-775 Serbo Croat1 PC-858 Roman-9 ISO L9 Greek-8 Win 3.1 L/G PC-851 Grk PC-8 Grk Hebrew-7 ISO-Hebrew Hebrew-8 PC-862 Heb ISO-Cyr ISO-Grk PC-866 Ukr ISO L4	
		Letter O Style	Enable Disable	Specifies the style that replaces ϕ (9B) and ¥ (9D) with ϕ (ou) and Φ (zero)
		Zero Character	Normal Slashed	Specifies the style of 0(zero). SLASHED: SLASH ZERO
		Line Pitch	6 LPI 8 LPI	Sets line space.
		White Page Skip	On Off	Sets ejecting or not ejecting a blank sheet. Available only when simplex is set.
		CR Function	CR CR+LF	Sets performance when CR code is received.
		LF Function	LF LF+CR	Sets performance when LF code is received.
		Line Length	80 column 136 column	Specifies the number of characters per line.
		Form Length	11 inch *L 11.7 inch *A 12 inch	Specifies the length of paper.
		TOF Position	0.0inch 0.1inch ~ 1.0inch	Sets the position from the top edge of paper.

Item			Settings	Functions
Admin Setup	IBM PPR Setup	Left Margin	0.0inch 0.1inch ~ 1.0inch	Sets the amount to shift the horizontal print start position to the right.
		Fit to Letter	Enable *L Disable *A	Sets the printing mode that can fit print data, equivalent to 11 inches (66 lines), in the LETTER-size printable area.
		Text Height	Same Diff	Sets height of a character. SAME: Regardless of CPI, same height DIFF: According to CPI, character heights vary.[Existing model compatible]
	EPSON FX Setup	Character Pitch	10 CPI 12 CPI 17 CPI 20 CPI Proportional	Specifies character pitch.
		Character Set	SET-2 SET-1	Specifies a character set.
		Symbol Set	IBM-437 IBM-850 IBM-860 IBM-863 IBM-865 PC Set1 PC Ext US PC Ext D/N PC Set2 US PC Set2 D/N Roman-8 ISO L1 PC-8 PC-8 Dan/Nor PC-850 Legal ISO-2 IRV ISO-4 UK ISO-6 ASC ISO-10 S/F ISO-11 Swe ISO-14 JASC ISO-15 Ita ISO-16 Por	Specifies a symbol set.

Item			Settings	Functions
Admin Setup	EPSON FX Setup	Symbol Set	ISO-17 Spa ISO-21 Ger ISO-25 Fre ISO-57 Chi ISO-60 Nor ISO-61 Nor ISO-69 Fre ISO-84 Por ISO-85 Spa German Spanish ISO Dutch Roman Ext ISO Swedish1 ISO Swedish2 ISO Swedish3 VN Math VN Int'l VN US PS Math PS Text Math-8 Pi Font MS Publish Win 3.0 DeskTop Win 3.1 L1 MC Text PC-852 Win 3.1 L5 Win 3.1 L2 CWI Hung PC-857 TK ISO L2 ISO L5 PC-8 TK Kamenicky Hebrew NC Hebrew OC Plska Mazvia ISO L6 Win 3.1 Heb Win 3.1 Cyr PC-866	

Item			Settings	Functions
Admin Setup	EPSON FX Setup	Symbol Set	Win 3.1 Grk PC-869 PC-855 Greek-437 Greek-437 Cy Greek-737 Greek-928 Serbo Croat2 Ukrainian Bulgarian PC-1004 Win 3.1 Blt PC-775 Serbo Croat1 PC-858 Roman-9 ISO L9 Greek-8 Win 3.1 L/G PC-851 Grk PC-8 Grk Hebrew-7 ISO-Hebrew Hebrew-8 PC-862 Heb ISO-Cyr ISO-Grk PC-866 Ukr ISO L4	
		Letter O Style	Enable Disable	Specifies the style that replaces ϕ (9B) and ¥ (9D) with ϕ (ou) and Φ (zero)
		Zero Character	Normal Slashed	Specifies the style of 0(zero). SLASHED: SLASH ZERO
		Line Pitch	6 LPI 8 LPI	Sets line space.
		White Page Skip	On Off	Sets ejecting or not ejecting a blank sheet. Available only when simplex is set.
		CR Function	CR CR+LF	Sets performance when CR code is received.
		Line Length	80 column 136 column	Specifies the number of characters per line.

Item			Settings	Functions
Admin Setup	EPSON FX Setup	Form Length	11 inch *L 11.7 inch *A 12 inch	Specifies the length of paper.
		TOF Position	0.0inch 0.1inch ~ 1.0inch	Sets the position from the top edge of paper.
		Left Margin	0.0inch 0.1inch ~ 1.0inch	Sets the amount to shift the horizontal print start position to the right.
		Fit to Letter	Enable *L Disable *A	Sets the printing mode that can fit print data, equivalent to 11 inches (66 lines), in the LETTER-size printable area.
		Text Height	Same Diff	Sets height of a character. SAME: Regardless of CPI, same height DIFF: According to CPI, character heights vary.[Existing model compatible]
	Panel Setup	Near Life Status	Enable Disable	Sets up LED display control for the occurrence of a near life warning of a drum, fuser, or belt.
		Near Life LED	Enable Disable	Sets up LED Lighting control for the occurrence of a near life warning of a toner, drum, fuser, or belt.
		Idle Display	Toner Gauge Paper Size	Specify display information in idle Display. Paper Size: Display paper size of each tray. Toner Gauge: Display toner gauge.
		Panel Contrast	-10 ~ 0 ~ +10	Tuning the LCD contrast level of the operator panel.
		Invalid Operation Volume	Off Low High	Set the buzzer volume when invalid operation.
		Error Volume	Off Low High	Set the buzzer volume when error occurred.

Item			Settings	Functions
Admin Setup	Time Setup	Date Format	yyyy/mm/dd mm/dd/yyyy *L dd/mm/yyyy *A	Set the format of date.
		Time Zone	-12:00 -11:45 -11:30 -11:15 -11:00 ~ -1:00 -0:45 -0:30 -0:15 +0:00 +0:15 +0:30 +0:45 +1:00 ~ +12:15 +12:30 +12:45 +13:00	Set the time zone(the difference to GMC). It could be a time between -12:00 to +13:00, in 15-minute increments.
		Daylight Saving	On Off	Set the Day light saving. When it is on, the time goes 1 hour forward. When it is off, the time goes back.
		Time Setting	2000/01/01 00 :00 ~ 2091/12/31 23 :59 01/01/2000 00 :00 *L ~ 12/31/2091 23 :59 01/01/2000 00 :00 *A ~ 31/12/2091 23 :59	Set the current time. Date is displayed according to the Date Format.

Item				Settings	Functions
Admin Setup	Power Setup		Power Save	Enable Disable	Sets Enable/Disable of Power Save Mode.
			Sleep	Enable Disable	Sets Enable/Disable of Sleep Mode.
			Auto Power Off	Enable Auto Config Disable	Set the behavior of Auto Power Off. Disable: Invalidate to go Off mode by time. Auto Config: The printer does not go to Off mode when LAN cable is connected, goes to Off mode when USB or Centro cable is connected. Enable: The printer goes to Off mode even if LAN cable is connected.
	Others Setup	RAM Setup	Receive Buffer Size	Auto 0.5 megabyte 1 megabyte 2 megabyte 4 megabyte 8 megabyte 16 megabyte 32 megabyte	Sets the size of receive buffer
			Resource Save	Auto Off 0.5 megabyte 1 megabyte 2 megabyte 4 megabyte 8 megabyte 16 megabyte 32 megabyte	Sets the size of resource saving area. This Menu is valid when PCL and other PDL emulations except PCL are enabled.
		Flash Memory Setup	Initialize	Execute	Initializes Resident FLASH.
		HDD Setup	Initialize	Execute	This category is displayed only if a an HDD is installed. The data stored in the HDD needs to be deleted.The re-initialization of the partition is not to be executed.

Item					Settings	Functions
Admin Setup	Others Setup	HDD Setup	Resize Partition	PCL nn%	nn%	Specifies the size of partition. Specifies a size by ratio to the whole HDD in % (1% unit) . nn,mm,ll: 1 - 98 and nn+mm+ll=100 (Default values are nn=20, mm=50, ll=30.)
				Common mm%	mm%	
				PS ll%	ll%	
				<Apply>		
			Format Partition		PCL Common PS	Formats a specified partition.
			Erase HDD		Execute	This item appears only when HDD is installed. It features of the deletion of all the data stored in the HDD not to be recovered them. It aimes at the complete deletion of printing and individual data left in the HDD by disposal of the printer and clear data at return. The printer restart after changing set-up after menu.
		Storage Common Setup		Check File System	Execute	Resolves mismatch between actual memory and displayed memory available in a file system and performs administration data (FAT information) recovery. Performs these by file system. Its takes several tens of seconds to complete the job of this function. HDD: Performs recovery only for an HDD.
				Check All Sectors	Execute	Performs recovery of a defective HDD sector information and a file system mismatch mentioned above. The objective device is only an HDD and it takes 30 to 40 minutes to completed this function for an HDD of 10GB.
				Enable Initializat-ion	No Yes	Prevents a setting change accompanying initialization of BlockDeveice(HDD,FLASH).
		Security Setup		Job Limitation	Off Encrypted Job	Job limitation mode control. Jobs other than specified ones (Currently, only encrypted authentication print can be specified.) are rejected.

Item				Settings	Functions
Admin Setup	Others Setup	Security Setup	Make Secure HDD	Execute	Enables the encryption function for data stored in HDD. Generates a cipher key and makes the encryption function (security mode) information available. In addition, formats HDD.
			Make Normal HDD	Execute	Disables the encryption function for data stored in HDD. Deletes the cipher key and makes the encryption function (security mode) information not available. In addition, formats HDD.
			Reset Cipher Key	Execute	Resets a cipher key to be used in an encrypted hard disk. When this processing is done, all of data stored in the HDD cannot be restored.
		Language Setup	Language Initialize	Execute	Initialize the message file loaded in FLASH.
		Job Cancel Setup	Cancel Key Behavior	Short Long Off	Specify the behavior when Cancel button is pressed in printing. Short: Cancel the current job by pressing Cancel button below 2 seconds. Long: Cancel the current job by pressing Cancel button in 2 - 5 seconds. Off: Ingore the press of Cancel button. The printing can not be cancelled by pressing cancel button.
			Inquiry Display	On Off	Specify whether the Job Cancel selection request will be displayed. On: Display when Job Cancelling. Off: Do not displasy.
			Focus Position	Yes No	Specify the default selection of Job Cancel request.
			Display Timeout	60 ~ 180 ~ 300	Specify the timeout of Job Cancel selection request. When the time passed, the printing will be continued as Job Cancel = No.

Item			Settings	Functions
Admin Setup	Settings	Reset Settings	Execute	Resets a part of user menu to the factory default.
		Save Settings	Execute	Saves menus currently set. With this function, the menus with which operation was last performed are saved, and overwrites with them menus that were previously saved.
		Restore Settings	Execute	Changes to the menu setting saved. [Conditions for display] The menu settings are saved.
	Change Password	New Password	**********	Sets a new password to enter "Admin Setup" menu From 6 to 12 digits of number or Roman character can be enter.
		Verify Password	**********	Makes User input the new password to enter "Admin Setup" menu which is set by "New Password" for confirmation. From 6 to 12 digits of number or Roman character can be enter.

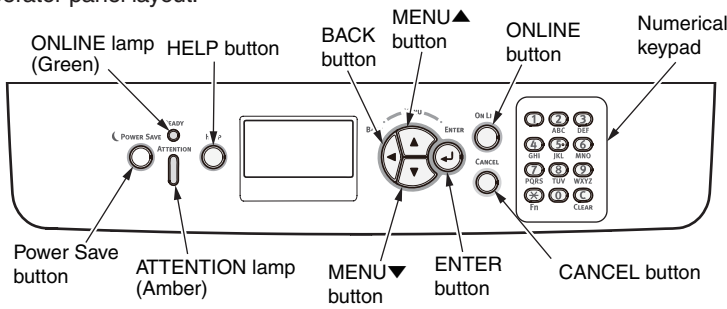
*L: The default value for destinations that accept Letter as default.
*A: The default value for destinations that accept A4 as default.

4.3.2 Self-diagnostic mode

This section describes LEVEL 0 and LEVEL 1.

4.3.2.1 Operator panel

The following description on operating the self-diagnostic is provided, premised on the following operator panel layout:

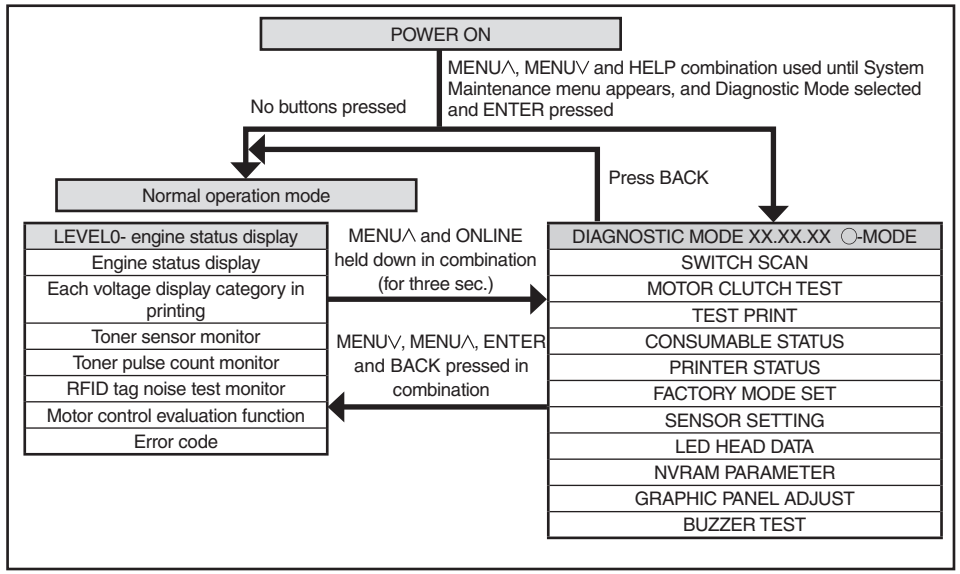


Self-diagnostic mode layout (Overall)

(1) Menu option display switching

The level in a shaded area XXXXX can be displayed only from another one.

Use the MENU∧ or MENU∨ button to display the menu option shown in a non-shaded area XXXXX .

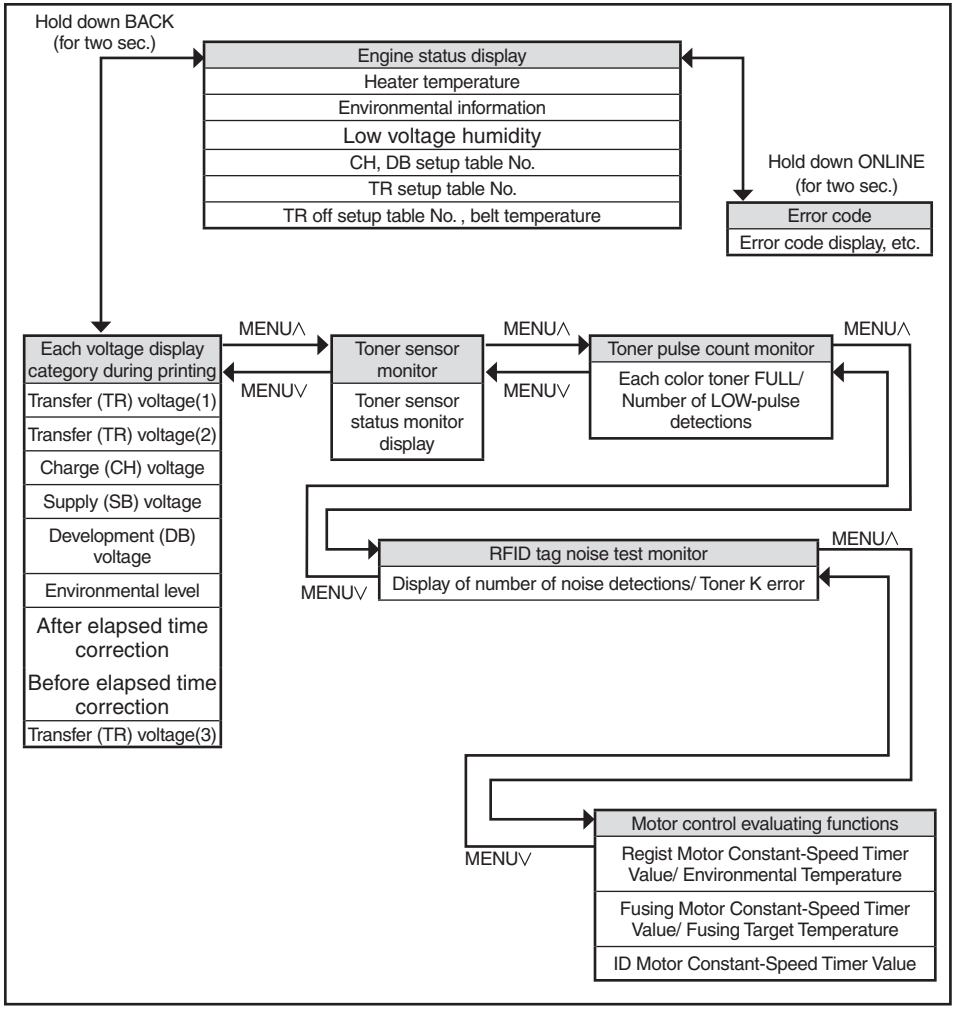


LEVEL0

(1) Menu option display switching

Hold down the BACK or ONLINE button or momentarily press the MENU∧ or MENU∨ button to display the option shown in a shaded area XXXX .

Use the MENU∧ or MENU∨ button to display the menu option shown in a non-shaded area XXXX .



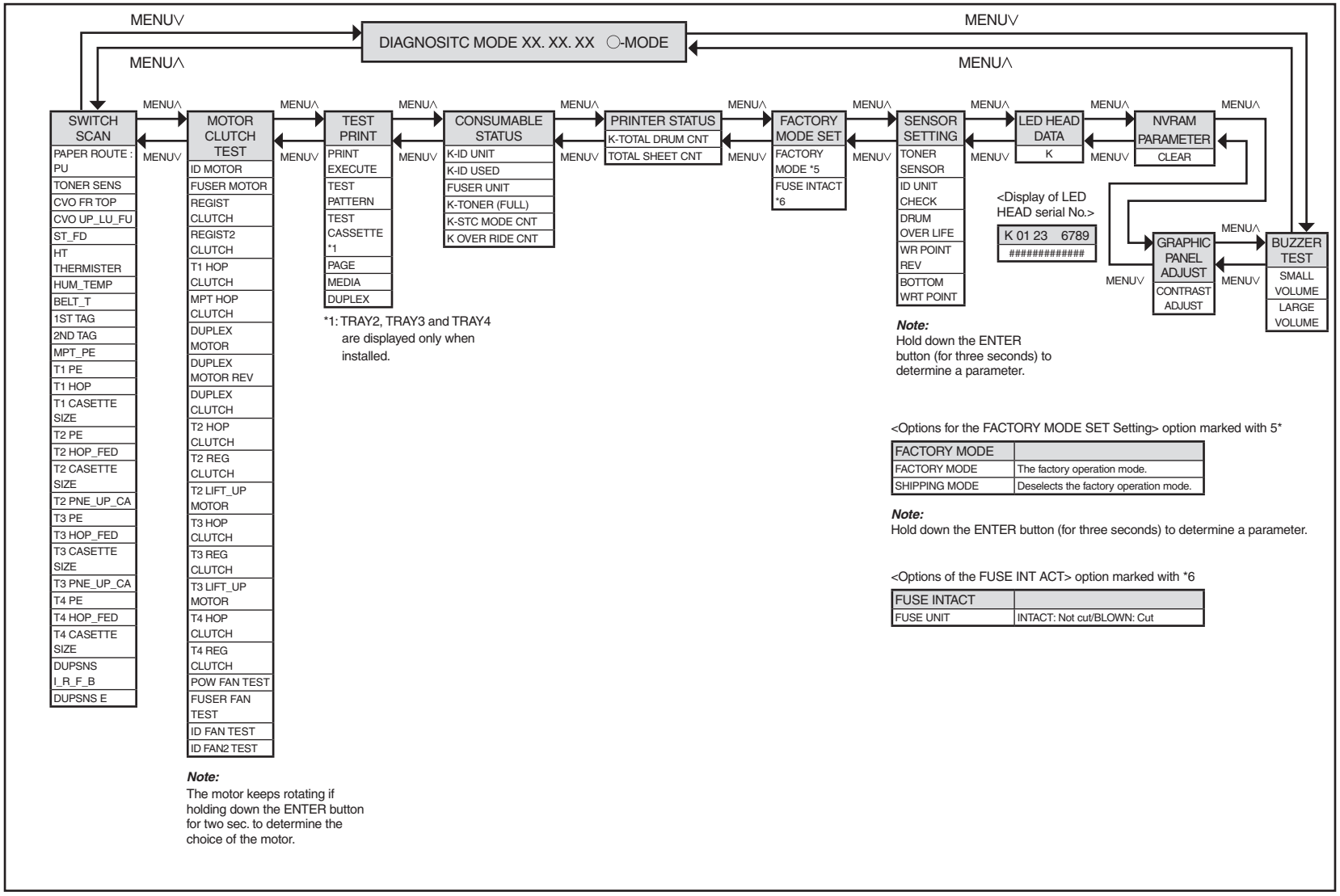
LEVEL1

(1) Menu option display switching

Use the MENU∧ or MENU∨ button to select the option shown in a shaded area (XXXXX), and press ENTER to execute the option.

Use ENTER or BACK to display the option shown in a non-shaded area (XXXXX), and use the MENU∧ or MENU∨ button to select the option.

Press ENTER to execute a test, and BACK to end the test.



4.3.2.2 Normal self-diagnostic mode (Level 1)

The normal self-diagnostic mode menus are as follows:

	Option	Self-diagnosis Menu	Adjustment	Maintenance Utility
1	Switch scan test	SWITCH SCAN	Checks input sensor and switch	No.18
2	Motor clutch test	MOTOR&CLTCH TEST	Tests the operation of a motor or clutch.	No.19
3	Test printing	TEST PRINT	Prints a test pattern stored in the PU.	Unavailable
4	Consumable counter display	CONSUMABLE STATUS	Displays the usage of a consumable.	No.23
5	Consumable life counter display	PRINTER STATUS	Displays the life counter of a consumable.	No.23
6	Factory/Shipping mode switching	FACTORY MODE SET	Switches between Factory and Shipping modes	No.3, No.24
7	Fuse status display		Displays the status of a fuse.	No.24
8	Engine parameter setting	SENSOR SETTING	Sets whether to enable or disable error detection performed by each sensor.	No.25
9	Display of LED head serial number	LED HEAD DATA	Displays the serial number of LED head data.	Unavailable
10	NVRAM parameter setting	NVRAM PARAMETER	Must not be used.	Unavailable
11	Contrast adjustment	GRAPHIC PANEL ADJUST	Adjusts the contrast on the panel.	Unavailable
12	Buzzer test	BUZZER TEST	Buzzer sound test	Unavailable

4.3.2.2.1 Entering self-diagnostic mode (level 1)

Note! Entering the System Maintenance mode of C811/C822/C831dn/C841dn requires a password. Refer to table 4-1 for description on it.

1. Turn on the printer while using the MENU∧, MENU∨ button and HELP button combination to enter the System Maintenance mode.
2. Press the MENU∧ or MENU∨ button more than one time to display “Diagnostic Mode”. Then press the ENTER button to display “DIAGNOSTIC MODE”.

DIAGNOSTIC MODE
XX.XX.XX FACTORY/SHIPPING

3. XX.XX.XX on the LCD display identifies the PU firmware version. The FACTORY WORKING MODE setting is displayed in the right portion of the lower row. The setting is normally S-MODE, which identifies Shipping.
4. Press the MENU∧ and MENU∨ button to go to each self-diagnostic step (press the MENU∧ or MENU∨ button to display the next or preceding menu option).

4.3.2.2.2 Exiting self-diagnostic mode

1. Turn of the printer and, after ten seconds, turn it on.

4.3.2.3 Switch scan test

The switch scan test is used for checking entrance sensors and switches.

1. Enter the self-diagnostic mode (level 1) and, until SWITCH SCAN appears on the upper display, press the MENU∧ or MENU∨ button (the MENU∧ button displays the next test option and the MENU∨ button displays the preceding test option). Then press the ENTER button.

SWITCH SCAN

2. Press the MENU∧ or MENU∨ button until an option shown in table 4-3 for the unit to test appears on the lower display (the MENU∧ button displays the next option and the MENU∨ button displays the preceding option).
3. Press the ENTER button. The switch scan test starts, the unit's name and current status being displayed

PAPER ROUTE:PU
1=H 2=L 3=H 4=L

   Operate the unit (figure 4-1). Display information on applicable LCD display (the information displayed vary depending on the sensor.
4. Press the CANCEL button. The state in step 2 is restored.
5. Repeat steps 2 through 4 when necessary.
6. Press the BACK button to end the test (the state in step 1 is restored.

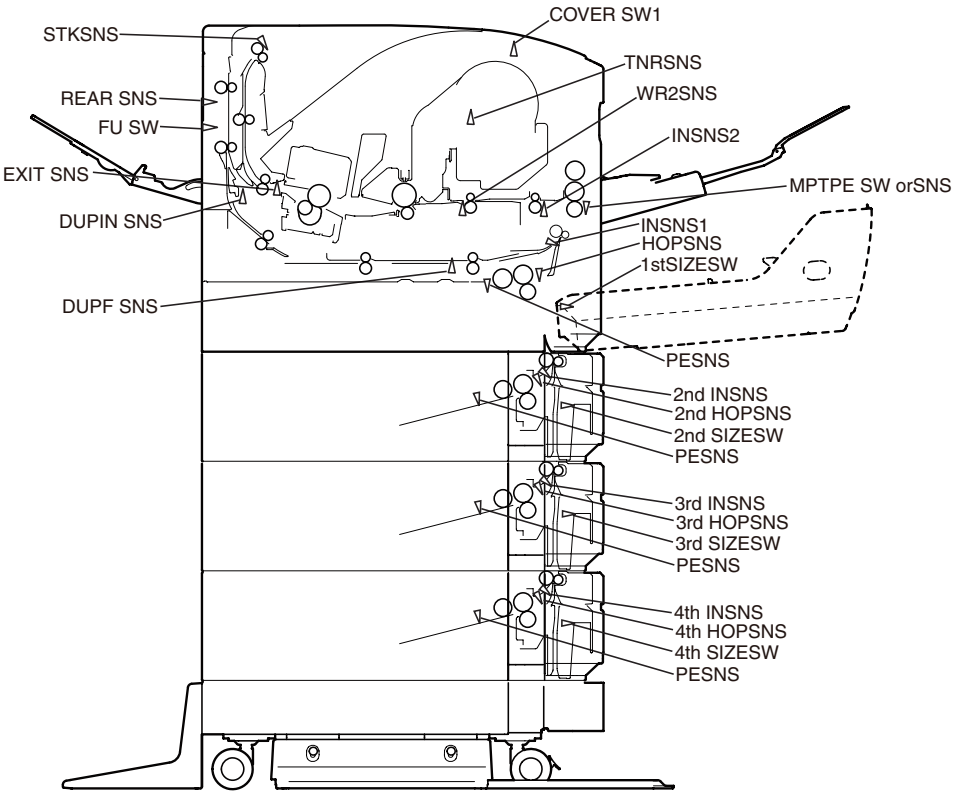


Figure 4-1 Switch sensor locations

Table 4-3 SWITCH SCAN Detail

<Item having no function> Asterisk mark (*) is displayed in the lower row of display area.

*1: “N” is displayed when unpopulated the TAG.

2: "Sensor read value" is displayed when LCF is installed. "" is displayed when LCF is uninstalled.

Display area, upper row	1		2		3		4	
	Details	Display area, lower row	Details	Display area, lower row	Details	Display area, lower row	Details	Display area, lower row
PAPER ROUTE : PU	Entrance sensor 1	H: No paper L: Paper exists	Entrance sensor 2	H: No paper L: Paper exists	Write sensor	H: No paper L: Paper exists	Exit sensor	H: No paper L: Paper exists
TONER SENS	Toner sensor K	H: Light is interrupted L: Reflected						
CVO UP_LU_FU	Front Cover Open switch	H: low L: Full	Rear Cover Open switch	H: Close L: Open	Face up Cover Open switch	H: Open L: Close		
ST_FD	Stacker full sensor	H: Full L: low						
HT THERMISTER	Fuser thermistor, center sensor	AD value: ***H			Side thermistor	AD value: ***H	Heater frame thermistor	AD value: ***H
HUM_TEMP	Humidity sensor	AD value: ***H	Temperature sensor	AD value: ***H				
BELT_T	Inside Temperature sensor	AD value: ***H						
1ST TAG *1	1st TAG-K UID	UID: ***H						
2ND TAG *1	2nd TAG-K UID	UID: ***H						
MPT PE	MPT paper end sensor	H: No paper L: Paper exists						
T1 PE	Tray 1 paper end sensor	H: No paper L: Paper exists						
T1 HOP	Tray 1 Hopping Sns	H: No paper L: Paper exists						
T1 CASETTE SIZE	Size setting switch 1	Port level H, L	Size setting switch 2	Port level H, L	Size setting switch 3	Port level H, L	Size setting switch 4	Port level H, L
T2 PE	Tray 2 paper end sensor	H: No paper L: Paper exists						
T2 HOP_FED	2nd-Hopping Sns	H: No paper L: Paper exists			Tray 2 feed sensor	H: No paper L: Paper exists		
T2 CASETTE SIZE	Size setting switch 1	Port level H, L	Size setting switch 2	Port level H, L	Size setting switch 3	Port level H, L	Size setting switch 4	Port level H, L
T2 PNE_UP_CA *2	Tray 2 paper near end sensor	H: Paper near end L: Paper exists	Paper upper sensor	H: Paper exists L: No paper	Tray 2 cassette detect sensor	H: Cassette Open L: Cassette Close		
T3 PE	Tray 3 paper end sensor	H: No paper L: Paper exists						
T3 HOP_FED	3rd-Hopping Sns	H: No paper L: Paper exists			Tray 3 feed sensor	H: No paper L: Paper exists		
T3 CASETTE SIZE	Size setting switch 1	Port level H, L	Size setting switch 2	Port level H, L	Size setting switch 3	Port level H, L	Size setting switch 4	Port level H, L
T3 PNE_UP_CA *2	Tray 3 paper near end sensor	H: Paper near end L: Paper exists	Paper upper sensor	H: Paper exists L: No paper	Tray 3 cassette detect sensor	H: Cassette Open L: Cassette Close		
T4 PE	Tray 4 paper end sensor	H: No paper L: Paper exists						
T4 HOP_FED	4th-Hopping Sns	H: No paper L: Paper exists			Tray 4 feed sensor	H: No paper L: Paper exists		
T4 CASETTE SIZE	Size setting switch 1	Port level H, L	Size setting switch 2	Port level H, L	Size setting switch 3	Port level H, L	Size setting switch 4	Port level H, L
DUPSNS I_R_F_B	Duplex (2-sided printing) entrance sensor	H: Paper exists L: No paper			Duplex (2-sided printing) front sensor	H: Paper exists L: No paper		
DUPSNS E	Duplex (2-sided printing) unit sensor	H: Unit installed L: Unit uninstalled						

4.3.2.4 Motor and clutch test

The motor and clutch test is used for testing motors and clutches.

1. Enter the self-diagnostic mode (level 1) and, until MOTOR & CLUTCH TEST appears on the upper display, press the MENU∧ or MENU∨ button (the MENU∧ button displays the next test option and the MENU∨ button displays the preceding test option). Then press the ENTER button.
2. Press the MENU∧ or MENU∨ button until an option shown in table 4-4 for the unit to test appears on the lower display (the MENU∧ button displays the next option and the MENU∨ button displays the preceding option).

MOTOR & CLUTCH TEST
ID MOTOR

3. Press the ENTER button. The motor and clutch test starts, the unit's the name and current status starting to blink, and the unit being driven for ten seconds (refer to figure 4-2).

Note! The state in step 2 is restored after the unit is driven so. The unit is driven again by pressing an appropriate button.

- By usual printing driving, the clutch solenoid repeatedly is turned on and off (its motor is driven together with the solenoid when the solenoid cannot be driven solely for its mechanical structure). * Image drum up-and-down movement continues until the CANCEL button is pressed.
- The clutch solenoid is kept driven by holding down the ENTER button (two seconds) for a motor to be accepted.

4. Press the CANCEL button. The state in step 2 is restored.
5. Repeat steps 2 through 4 when necessary.
6. Press the BACK button to end the test (the state in step 1 is restored).

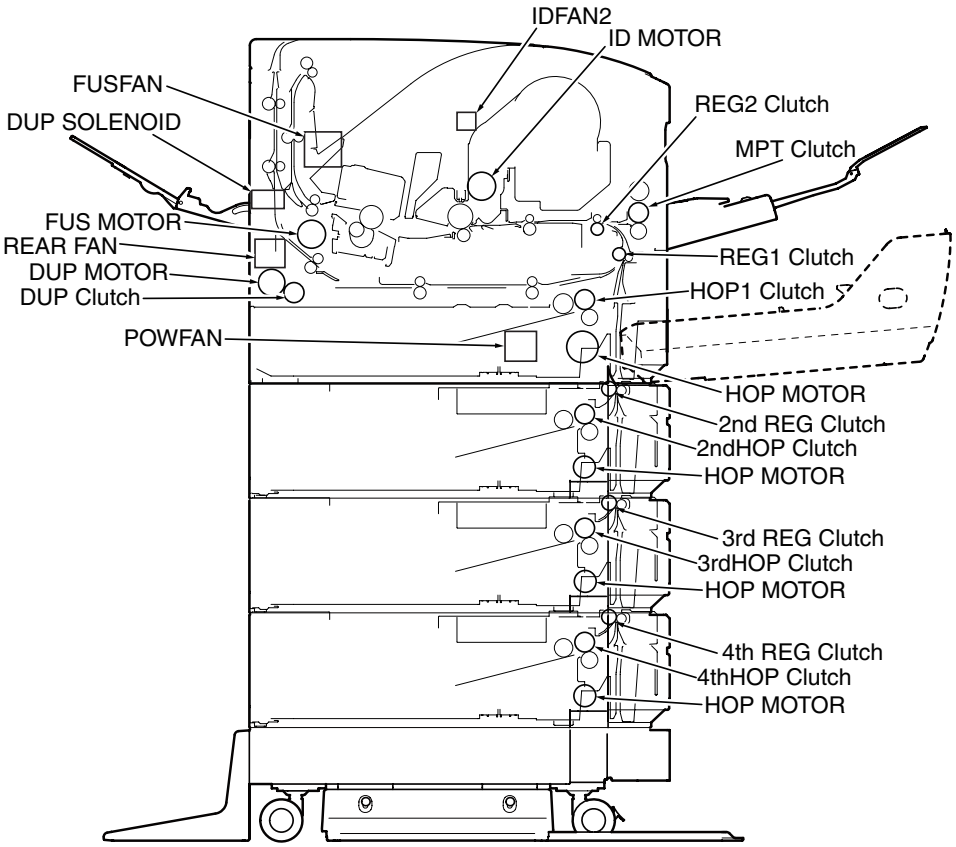


Figure 4-2

Table 4-4

Panel display	Driven unit	Condition
ID MOTOR	ID MOTOR ID Fan1 ID Fan2 POW FAN	ID is removed
FUSER MOTOR	Fuser Motor	-
REGIST CLUTCH	Hopping Motor Regist1 Clutch	-
REGIST2 CLUTCH	Hopping Motor Regist2 Clutch	-
T1 HOP CLUTCH	Hopping Motor Tray1 Hopping Clutch	-
MPT HOP CLUTCH	Hopping Motor MPT Clutch	-
DUPLEX MOTOR	Duplex Motor	Duplex unit is installed
DUPLEX MOTORREV	Duplex Motor	Duplex unit is installed
DUPLEX CLUTCH	Duplex Motor Duplex Clutch	Duplex unit is installed
T2 HOP CLUTCH	Tray2 Hopping Motor Tray2 Hopping Clutch	Tray2 is installed
T2 REG CLUTCH	Tray2 Hopping Motor Tray2 Regist Clutch	Tray2 is installed
T2 LIFT_UP MOTOR	Tray2(LCF) Lift up Motor	LCF is installed for Tray2
T3 HOP CLUTCH	Tray3 Hopping Motor Tray3 Hopping Clutch	Tray3 is installed
T3 REG CLUTCH	Tray3 Hopping Motor Tray3 Regist Clutch	Tray3 is installed
T3 LIFT_UP MOTOR	Tray3(LCF) Lift up Motor	LCF is installed for Tray3
T4 HOP CLUTCH	Tray4 Hopping Motor Tray4 Hopping Clutch	Tray4 is installed
T4 REG CLUTCH	Tray4 Hopping Motor Tray4 Regist Clutch	Tray4 is installed
POW FAN TEST	Low Volt Fan	-
FUSER FAN TEST	Fuser FAN	-
ID FAN TEST	ID Fan	-
ID FAN2 TEST	ID Fan2	-

4.3.2.5 Test print

The test printing is used for printing test patterns stored in the PU. Other patterns are stored in the controller.

This test print cannot be used to check the print quality.

Diagnosis for the abnormal print image should be performed in accordance with section 8.

1. Enter the self-diagnostic mode (level 1) and, until TEST PRINT appears on the upper display, press the MENU∧ or MENU∨ button (the MENU∧ button displays the next test option and the MENU∨ button displays the preceding test option). Then press the ENTER button.
2. A setting option used only in test printing appears on the lower display. Press the MENU∧ or MENU∨ button until the option to select appears (the MENU∧ button displays the next option and the MENU∨ button displays the preceding option). Then press the ENTER button. (Go to step 5 when set to its default, the option does not need to be set).
3. Keep pressing the MENU∧, MENU∨ key, and press the ENTER key at the menu item set by step 2. Then, the setting item is displayed in the upper row of display area, and the setting value is displayed in the lower row of display area. Pressing the MENU∧ button displays the next setting and pressing the MENU∨ button displays the preceding setting (the setting last displayed takes effect. By pressing the BACK button, the setting is accepted, step 2 being restored. Repeat step 3 when necessary.

TEST PATTERN
1

Display	Settings	Default	Function
PRINT EXECUTE	-	-	Starts printing with the press of the ENTER button, and ends printing with the press of the CANCEL button.
TEST PATTERN	0	0	0 to 15: Prints a blank page.
TEST CASSETTE	TRAY1	TRAY1	Select the paper feed source. Not displayed when the tray 2 is not installed. Not displayed when the tray 3 is not installed. Not displayed when the tray 4 is not installed.
	TRAY2		
	TRAY3		
	TRAY4		
	MPT		
PAGE	0000	0000	Sets the number of test copies printed
MEDIA	MEDIA TYPE	PLAIN PAPER	Changes the setting of a TRAY selected in TEST CASSETTE. If CUSTOM SIZE is not selected in MEDIA SIZE, CUSTOM LEN, and CUSTOM WIDTH are not displayed.
	MEDIA WEIGHT	MEDIUM LIGHT	
	MEDIA SIZE	Letter	
	CUSTOM LEN	210	
	CUSTOM WIDTH	297	
	MEDIA CHECK	ENABLE	Sets ENABLE/ DISABLE of the paper size check.
DUPLEX	2 PAGES STACK	2 PAGES STACK	Prints duplex two pages stack layout printing. 2 PAGES STACK: Disables duplex printing OFF: Performs simplex printing. 1 PAGES STACK: Prints duplex one page stack layout printing. If DUPLEX is not installed, DUPLEX is not displayed.
	OFF		
	1 PAGE STACK		

Notes! PAGE setting:

By pressing [0] to [9] on the numerical keypad, a number is inputted in the blinking line.

The input position is shifted with the ONLINE button or CANCEL button. This setting is incremented by pressing the ONLINE button, and decremented by pressing the MENU∨ button. Note the setting 0000 endlessly prints pages.

CUSTOM size setting:

By pressing [0] to [9] on the numerical keypad, a number is inputted in the blinking line.

The input position is shifted with the ONLINE button or CANCEL button. This setting is incremented by pressing the ONLINE button, and decremented by pressing the MENU∨ button.

* If a display value exceeds the settable range, the setting value is unavailable.

MEDIA Setting Options

MEDIA TYPE

Category	Setting value		
MEDIA TYPE	PLAIN PAPER	LABELS	USERTYPE1
	TRANSPARENCY	BOUND	USERTYPE2
	LABEL	RECYCLED	USERTYPE3
		CARDSTOCK	USERTYPE4
	LETTERHEAD	ROUGH	USERTYPE5

MEDIA WHIGHT

Category	Setting value	
MEDIA WEIGHT	LIGHT	HEAVY
	MEDIUM LIGHT	ULTRA HEAVY1
	MEDIUM	ULTRA HEAVY2
	MEDIUM HEAVY	ULTRA HEAVY3

MEDIA SIZE

Category	Setting value		
MEDIA SIZE	CUSTOM SIZE	LEGAL13	C6
	A4	LEGAL13.5	C5
	A5	LEGAL14	INDEX CARD(3 × 5)
	A6	MONARCH ENVELOPE	16K(184 × 260)mm
	B5	COM-9 ENVELOPE	16K(195 × 270)mm
	LETTER	COM-10 ENVELOPE	16K(197 × 273)mm
	EXECUTIVE	DL	STATEMENT

4. When the ENTER key is depressed With PRINT EXECUTE on the lower display after the operation in step 2, test printing with the setting value set in the steps 2 to 3 is executed.

   The test printing is cancelled by pressing the CANCEL button.

   When the printer detects any errers in alarm shown in initiating or running the test printing, it stops the printing and displays the errer on the operation panel.

- The displays are switched to the following by pressing the MENU∧ ,MENU∨ button when test pattern is printed.

P=***

P: Number of test-print pages (Unit: sheets)

T=*** U=***[###]
H=***%

T: = Environment temperature [Unit: ˚C]

U: *** = Upper thermistor current temperature [Unit: ˚C]

[###] = Print execution target temperature [Unit: ˚C]

H: = Environment humidity [Unit: ˚%]

KTR=*.**

KTR: BLACK transfer voltages value [Unit: KV]

KR=*.**

KR: BLACK transfer roller resistance value [Unit: uA]

ETMP=***UTMP=***

ETMP: A parameter for correction of constant hopping motor speed (an environmental temperature) [Unit: DEC].

UTMP: A parameter for correction of constant fuser motor speed (a target fusing temperature) [Unit: DEC].

DB:k**

DB: ID number of developping voltages setting table [Unit: HEX]

TR1:k**
TR2:k**

TR1: ID number of transfer voltages parameter VTR1 table [Unit: HEX]

TR2: ID number of transfer voltages parameter VTR2 table [Unit: HEX]

TROFF:**
BELT xxx(***)

TROFF: ID number of transfer OFF voltages setting table [Unit: HEX]

BELT: Inner temperature [Unit: ˚C]

(***) is inner temperature thermistor AD value [Unit: HEX]

4.3.2.6 Consumable counter display

The consumable counter display is used for viewing the usage of consumables.

1. Enter the self-diagnostic mode and, until CONSUMABLE STATUS appears, press the MENU∧ or MENU∨ button (the MENU∧ button displays the next test option and the MENU∨ button displays the preceding test option). Then press the ENTER button.
2. Pressing the MENU∧ or MENU∨ button displays the usage of each consumable (pressing the ONLINE or CANCEL button is disabled).
3. Press the BACK button to end the option (the state in step 1 is restored).

Upper Display	Lower Display	Format	Unit	Detail
K-ID UNIT	******** IMAGES	DEC	Images	Displays the number of turns performed by image drum unit from the first-time installation of it until present, *1
K-ID USED	******** %	DEC	%	Displays the usage of ID.
FUSER UNIT	******** PRINTS	DEC	Prints	Displays the number of prints made from the first-time installation of a fuser unit until present *2
K-TONER (FULL)	******** %	DEC	%	Displays the usage of toner.
K-STC MODE CNT	******** *8192	DEC	DOT	Displays of the printing dot count numbers of toner.
K OVER RIDE CNT	******** TIMES	DEC	Times	Displays the extension life counter value of a toner cartridge.

*1 One third of the number of drum turns inA4 (A4 portrait) three-pages-per-job printing is regarded as one count.

*2 Based on the paper length of Legal 13, if the sheet is the legal 13 length or less, it is regarded as one count, and if the sheet length exceeds the Legal 13 length, the number of counts is determined by how many times as large is the Legal 13 length as that of the sheet. (the decimal is rounded out.)

4.3.2.7 Print counter display

The print counter display is used for viewing print counter values.

1. Enter the self-diagnostic mode and, until PRINTER STATUS appears, press the MENU∧ or MENU∨ button (the MENU∧ button displays the next test option and the MENU∨ button displays the preceding test option). Then press the ENTER button.
2. Pressing the MENU∧ or MENU∨ button displays each count printed (pressing the ONLINE or CANCEL button is disabled).
3. Press the BACK button to end the option (the state in step 1 is restored).

Upper Display	Lower Display	Format	Unit	Function
K-TOTAL DRUM CNT	******** IMAGES	DEC	Images	Displays the total number of rotation.
TOTAL SHEET CNT	******** PRINTS	DEC	Prints	Displays the total number of images printed.(*1)

*1 Tow counts apply to duplex print.

4.3.2.8 Factory-Shipping mode switching

The Factory-Shipping mode switching is used for switching from the Factory to Shipping mode.

1. Enter the self-diagnostic mode and, until the following message appears, press the MENU∧ or MENU∨ button.

FACTORY MODE SET

2. Press the ENTER button. The following message appears. Press the MENU∧ or MENU∨ button until the option to set (refer to the table shown below) appears

FACTORY MODE
SHIPPING MODE *

3. A setting for the option can be selected by pressing the ENTER button with the option on the display.
4. Hold down the ENTER button (for three seconds) with the setting on the display. The setting is stored in the EEPROM. The state in step 2 is restored.
5. Repeat steps 2 through 4 when necessary.
6. Press the BACK button to end the option (the state in step 1 is restored).

Option	Settings	Function
FACTORY MODE	FACTORY MODE	Establishes the Factory mode (a fuse-cut disabling mode).
	SHIPPING MODE	Deselects the Factory mode to enable the fuse-cut function.
FUSE INTACT ***Note:*** ****** is either INTACT or BLOWN.	FUSE UNIT XXXXXX	Displays the fuse status of the fuser.

4.3.2.9 Self-diagnostic function setting

The self-diagnostic function setting is used for enabling or disabling the error detection by sensors. The detection can be enabled or disabled temporarily for troubleshooting. Allowing for setting engine operation options for which expert knowledge is required to be handled. This self-diagnostic should be used carefully. Be sure to restore the default settings of used options of the self-diagnostic.

1. Enter the self-diagnostic mode and, until the following message appears, press the MENU∧ or MENU∨ button.

SENSOR SETTING

2. Press the ENTER button. The following message appears. Press the MENU∧ or MENU∨ button until the option to set (refer to the table shown below) appears.

TONER SENSOR
ENABLE *

3. The setting on the lower display can be selected by pressing the ENTER button. The MENU∧ button displays the next setting and the MENU∨ button displays the preceding setting.
4. Hold down the ENTER button (for three seconds) with the desired setting on the display. The setting is stored in the EEPROM. The state in step 2 is restored.
5. Repeat steps 2 through 4 when necessary.
6. Press the BACK button to end setting the option (except where not in step 4) (the state in step 1 is restored).

Option	Set Settings	Setting Operation	Function
TONER SENSOR	ENABLE	Enables detection.	Enables or disables toner sensor operation.
	DISABLE	Disables detection.	
ID UNIT CHECK	ENABLE	Enable checking.	Enables or disables image drum installation checking.
	DISABLE	Disables checking.	
DRUM OVER LIFE	STOP	Does not extend life.	Sets whether to enable or disable extending image drum life at the end of the life.
	CONTINUANCE	Extends life	
WR POINT REV TBL=**H± *.***mm	00H~FFH	A correction value.	Adds a correction value for the default writing point.
BOTTOM WRT POINT TBL=**H± *.***mm	00H~FFH	A tear-off position value.	Sets a tear-off length from the bottom edge of paper.

Default is in hatched area.

4.3.2.10 LED head serial number display

The LED head serial number display is used for viewing whether downloaded data about LED heads agrees with the serial numbers marked on the LED heads.

1. Enter the self-diagnostic mode and, until LED HEAD DATA appears, press the MENU∧ or MENU∨ button (the MENU∧ button displays the next test option and the MENU∨ button displays the preceding test option). Then press the ENTER button.
2. Pressing the MENU∧ or MENU∨ button displays each of the K, Y, M and C LED head data serial numbers.
3. Press the BACK button to end the option (the state in step 1 is restored).

K ** ** ****
xxxxxxxxxxxxx

** ** **** : A revision number
① ② ③

xxxxxxxxxxxxx : A serial number
③

① : Head type data
② : Light amount data
③ : Head serial No.

Note! If the serial number of the LED head data is not ASCII code (0x3X/0x4X/0x5X), it is indicated by ' . '.

4.3.2.11 Contrast adjustment

This contrast adjustment is used for the adjustment of the panel contrast.

1. Enter the self-diagnostic mode (Level 1) and, until the following message appears, press the MENU∧ or MENU∨ button.

GRAPHIC PANEL ADJUST

2. Pressing the ENTER button displays the adjustment item in the upper display, and the current setting value in the lower display.

   Hold down the MENU∧ or MENU∨ button until the value you want to set is displayed.

   CONTRAST … MENU∧ : The setting value is incremented.
   MENU∨ : The setting value is decremented.

CONTRAST ADJUST
1CH

3. Repeat step 2 when necessary.
4. Press the BACK button to end this function (the state in step 1 is restored).

Contrast and lightness adjustment (GRAPHIC PANEL ADJUST)

Display	Setting	Default	Function
CONTRAST ADJUST	0 - 3FH	1CH	Setting of contrast

* Options set are effective in this test mode. (the options are not written in EEPROM)

In addition, when returning to the normal operation mode, the contrast setting of the CU side is applied.

4.3.2.12 BUZZER TEST

The BUZZER TEST function is used for the buzzer test.

1. Enter the self-diagnostic mode (Level 1) and, until the following message appears, press the MENU∧ or MENU∨ button.

BUZZER TEST

2. Pressing the ENTER button displays the following message.
   Hold down the MENU∧ or MENU∨ button until the target option is displayed.

BUZZER TEST
SMALL VOLUME

3. By pressing the ENTER button, the buzzer test starts and the lower display starts to blink.
   * Usually, it stops in 1 second after pressing the Enter button.
   * The status is returned to Step 2 after the buzzer for one second, and the buzzer starts again by pressing the ENTER button again.
4. Pressing the CANCEL button stops the buzzer.
5. Repeat steps 2 through 4 when necessary.
6. Press the BACK button to end the buzzer test (the state in step 1 is restored).

BUSSER TEST

Display	Function
SMALL VOLUME	Buzzer volume is small.
LARGE VOLUME	Buzzer volume is large.

4.3.3 Printing on stand-alone basis

B721/B731/ES7131/MPS5501b can perform the following printing on a stand-alone-basis.

Configuration	Prints information, including printer menu settings, program versions and control block configuration.
Network	Prints network-related information, including a MAC address and IP address.
Demo Page	Prints demo pages.
File List	Prints a list of files stored in a file system.
PostScript Font List	Prints a PostScript fonts list.
PCL Font List	Prints a PCL emulation fonts list.
IBM PPR Font List	Prints a IBM PPR fonts list.
EPSON FX Font List	Prints a EPSON FX fonts list.
Print statistic results	Prints a statistic usage result. * The result is displayed when Print Statistics Menu-User Report is set to Enable.
Error Log	Prints an error log.

Printing Procedure:

① Verify that the message stating the printer is ready to print is showing on the operator panel, and press the MENU∨ button to display FUNCTION

② Press the MENU∨ button to select the option to print printer information. Press the ENTER button.

③ Press the MENU∨ button to select the item to print. Press the ENTER button.

④ Press the ENTER button to print the item (the button must be pressed twice to print a demo page).

4.3.4 Functions of buttons when/after power-on

After the printer is turned on, buttons on the operator panel of B721/B731/ES7131/ MPS5501b function are described below.

(1) BACK, ENTER and ONLINE buttons for 5 seconds

Start the System Maintenance menu.

(2) BACK, ENTER and CANCEL buttons for 5 seconds

Start the Factory Maintenance menu.

When the printer is turning on, buttons on the operator panel of B721/B731/ES7131/ MPS5501b function are described below.

(3) BACK, MENU∨ and ENTER buttons

Ignoring all warnings and errors, start the printer, always placing it to an online mode.

(4) ENTER button

Start the Boot menu.

4.4 Setup after part replacement

The following describes the adjustments necessary after part replacement:

Replaced part	Adjustment
LED head	Not necessary.
Drum cartridge	Not necessary.
Fuser unit	Not necessary.
Belt unit	Not necessary.
PU/ CU board	Copying information stored in EEPROM, which requires utility software.

4.4.1 Notes on PU/ CU board replacement

1. When the EEPROM on a board to be removed can be accessed (when SERVICE CALL 104 (Engine EEPROM Error), or 040 (EEPROM Error) is not displayed):
   (1) Using the board replacement function of Maintenance Utility (Maintenance Utility operation manual, section 2.4.1.1.9), take out the information of the EEPROM on PU and Information of the EEPROM settings on CU from the board to be removed, and temporarily store it onto an HDD of the computer.
   (2) Using the board replacement function of Maintenance Utility (Maintenance Utility operation manual, section 2.4.1.1.9), copy the information of the EEPROM on PU stored in HDD of the computer and the information of EEPROM settings on CU onto the EEPROM of a board to be newly installed.
   (3) Even when either information of EEPROM on PU or information of the EEPROM settings on CU is taken out, using the board replacement function of Maintenance Utility (Maintenance Utility operation manual, section 2.4.1.1.9), copy either information of EEPROM on PU or information of the EEPROM settings on CU which can be stored in the HDD of the computer onto EEPROM of a board to be newly installed.

   Information that cannot be taken out is separately set up in the same function.

   When the information of EEPROM on PU cannot be taken out, make a setting of the serial number on PU (Maintenance utility operation manual, section 2.4.1.1.9.5) and a setting of switching to the Shipping mode (Maintenance utility operation manual, section 2.4.1.1.9.6) on the setup screen.

   When the information of EEPROM settings on CU cannot be taken out, make a setting of the information about a serial number on CU (Maintenance utility operation manual, section 2.4.1.1.9.4) on the setup screen.

Note! When taking out or writing information from/into EEPROM by using Maintenance Utility, use the procedure shown below to place the printer to the Forced ONLINE mode before accessing the EEPROM. An error message is displayed even in the forced ONLINE mode when the printer has an error.

i. When turning on the printer, press and hold down the [Back] and [Menu ▼] and [Enter] button in combinatoin until “STATUS MODE” appears on the operator panel.

ii. When the printer operates properly, the operator panel shows “Ready To Print”. However, when the printer has an error, it indicates an error, but the printer is internally online, being ready to communicate.

2. When the EEPROM on a board to be removed cannot be accessed:

   When SERVICE CALL 104 (Engine EEPROM Error), or 040 (EEPROM Error) is displayed, or data cannot be read from the EEPROM, after replacing the board to a new one, follow the following procedure to perform operation by using Maintenance Utility:

   (1) To setting necessary setting as the table below.

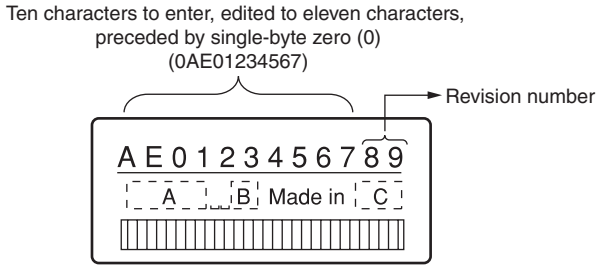
Model	Use for	item of necessary to change the setting
B721	ODA	none
	OEL/AOS	none
B731	ODA	none
	OEL	none
	AOS	Wireless LAN setting
ES7131	OEL	none
	AOS	Wireless LAN setting
MPS5501b	ODA	none
	ODB	paper size and unit

·When change the board for B731 AOS/ES7131 AOS,to change the wireless LAN setting should be valid to invalid.The setting method is following to Maintenance Utility Manual.

·When change the board for MPS5501b ODB,to change the paper size and unit should be Letter,inch → A4,Millimeter.The setting method is following to Maintenance Utility Manual.

(2) Serial number information setting (applicable Maintenance Utility operation manual, section 2.4.1.1.10.3)

A SAP serial number is assigned to the printer. The number is placed at the top of the serial number label of the printer, consisting of total twelve characters -- two characters that indicates a production place, two characters that indicates



a month and year, six characters that indicates a manufacture number (sequence number) and two characters that indicates revision number.

- For the printer serial number, “PU serial number” should be selected, and for the output mode, “Display the serial number only” should be selected.
- The PU serial number is ten characters from the SAP serial number. The rest two characters are the revision number.
- The PU serial number is set in the PU serial number setting window described in section 2.4.1.1.10.3 of the Maintenance Utility operation manual in the section 2.4.1.1.10 about Board setup functionality.
- To assign a PU serial number to the printer, in the PU serial number setting window, enter eleven characters, i.e. ten characters preceded by a singlebyte zero (0) (note a read PU serial number is ten characters). As shown in the following serial number label example, the ten characters are the printer’s the SAP serial number excluding the revision number.

Serial number label example

- The PU serial number is shown at Printer Serial Number in the header of the printer’s configuration report (a Menu Map) output from the printer. After the PU serial number is changed, it can be checked by printing the report from the printer.

(3) Switching to Shipping mode (applicable Maintenance Utility operation manual, section 2.4.1.1.10.4)

When the PU/CU board is replaced with a new one, the printer is placed in the Factory mode. Switch the printer to the Shipping mode.

- To switch, use the Factory/Shipping mode window described in section 2.4.1.1.10.4 Factory/ Shipping Mode in the section 2.4.1.1.10 about board setup functionality of the Maintenance Utility operation manual.

Note! Replacing the EEPROM (the PU control board) with a new one clears life information about consumables, including the toner and image drum. Note that, until the consumables are replaced, this makes differences between their displayed consumed and consumed lives. Such life information cleared is as shown below. Upon replacement of the consumables, the information (counts) except the total number of printed sheets are cleared, and differences between the counts and consumed lives of the consumables are cleared.

Item	Description	Count description
Fuser unit	Fuser unit life count.	A value converted on an A4/ Letter page basis from the number of pages printed to date after installation of a new fuser unit.
Image drum black	Imgage drum life count	A value converted on an A4/ Letter page basis from the number of pages printed to date after installation of a Print Cartridge or a new image drum.
Total number of printed sheets	Printer life count.	The total number of sheets fed.*1
Print black	Number of pages printed with an image	The number of pages printed after installation of a Print Cartridge or a new image drum.*1

*1 Two counts apply to duplex print.

4.5 Manual density adjustment setting

C811/C822/C831/C841 is shipped with the auto density adjustment mode enabled. When the mode is disabled by a user, the printer may print density out of adjustment while being used. Manually perform density adjustment setting when the printer prints an improper density.

Note! The setting must be performed with the printer in a static state. Do not perform it while the printer warms up.

(1) Press the MENU∧ or MENU∨ button more than one time. Press the ENTER button when Calibration appears.

(2) Press the MENU∧ or MENU∨ button to select Adjust Density Execute. Press the ENTER button.

(3) Press the ENTER button.

Auto density adjustment starts, the operator panel display providing a message stating that density is being adjusted.

4.6 Boot Menu List

To display Boot Menu, turn on the printer while holding down the [ENTER] button.

Memo Displaying Boot Menu requires entry of a password. The password defaults to six a (aaaaaa).

Category	Item	Settings	Function
	Enter Password	**********	Enter a password to enter Boot menu. The default value is "aaaaaa" From 6 to 12 digits of numbers or Roman character to input.
HDD Setup	Enable HDD	No Yes	Even if a machine is inoperable at installation because an HDD has been damaged, you can make the machine operable by setting to No to deal with that no HDD is attached regardless of existence of an HDD. While No is set, access to an HDD results in FAIL because the HDD is regarded as not attached even if the HDD is normal. After the setting change and exit from the menu, the printer restarts. [Conditions for display] HDD implementation
Storage Common Setup	Check File System	Execute	Resolves mismatch between actual memory and displayed memory available in a file system and performs administration data (FAT information) recovery. Performs these by file system. Its takes several tens of seconds to complete the job of this function. HDD: Performs recovery only for an HDD. The following message appears after pressing the Enter switch. Are You Sure? Yes No If No is selected, the display will be back to the former menu. If Yes is selected, this function initiates. [Condition for display] HDD insertion("Yes" is selected in "Boot Menu"-"HDD Setup"-"Enable HDD.")
	Check All Sectors	Execute	Performs recovery of a defective HDD sector information and a file system mismatch mentioned above. The objective device is only an HDD and it takes 30 to 40 minutes to completed this function for an HDD of 10GB. The following message appears after pressing the Enter switch. Are You Sure? Yes No If No is selected, the display will be back to the former menu. If Yes is selected, this function initiates. [Condition for display] HDD insertion("Yes" is selected in "Boot Menu"-"HDD Setup"-"Enable HDD.")

Category	Item	Settings	Function
Menu Lockout		On Off	Set On/Off of Menu Lockout function On: Menus exept for "Print Secure Job" become invisible. Off: This function doesn't work.
Panel Lockout		Mode1 Mode2 Off	Set On/Off of Menu Lockout function. Mode1: All keys except for Online, Cancel, Power Save, and Help, aren't have any reaction. Mode2: All keys except for Online aren't have any reaction. Off: This function doesn't work. * When Mode1/2 is set, USB Memory Interface will be Disable automatically. And when panel lockout is turned off, the USB Memory Interface is still Disable.

5. Cleaning

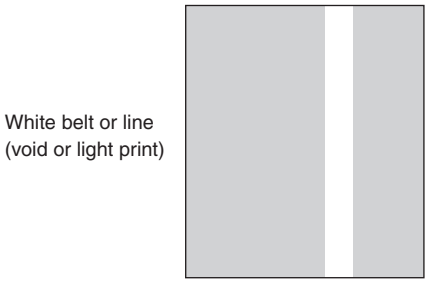
5.1 Cleaning

The inside and outside of the printer must be cleaned with a dry cleaning cloth and a handy vacuum cleaner when necessary.

Note! Do not directly touch the image drum terminals, LED lens array and the LED head connectors.

5.2 LED lens array cleaning

The LED lens array must be cleaned when a vertical white belt or line (void or light print) occurs on the printed side.



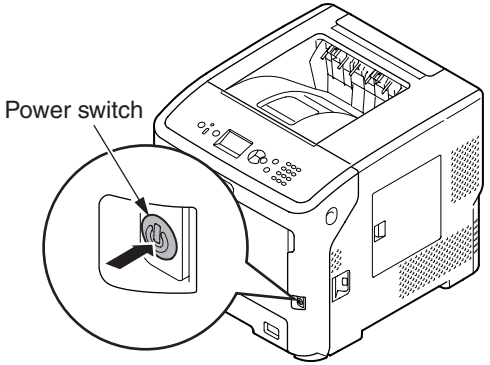
LED head cleaning

When a white line or blurred text is printed, perform the following steps shown below.

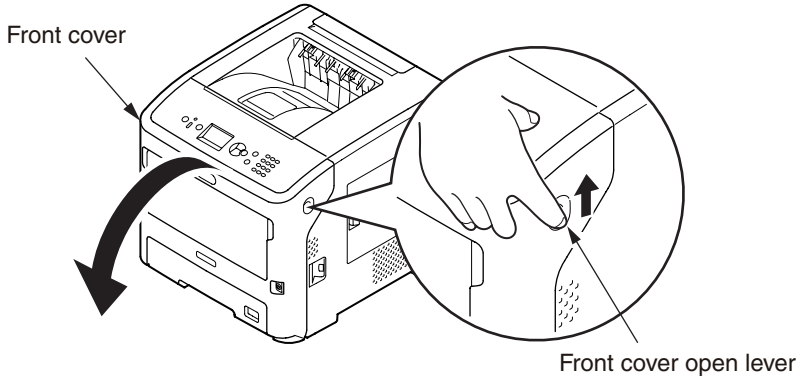
(1) Press the power switch for about one second.

The message “Shutting down/Please wait. Printer will turn off automatically.” appears in the operator panel, and the power switch indicator blinks every 1 second. Then the printer turns off automatically and the power switch indicator goes out.

Disconnect the AC power cable, the Ethernet cable, and the USB cable.



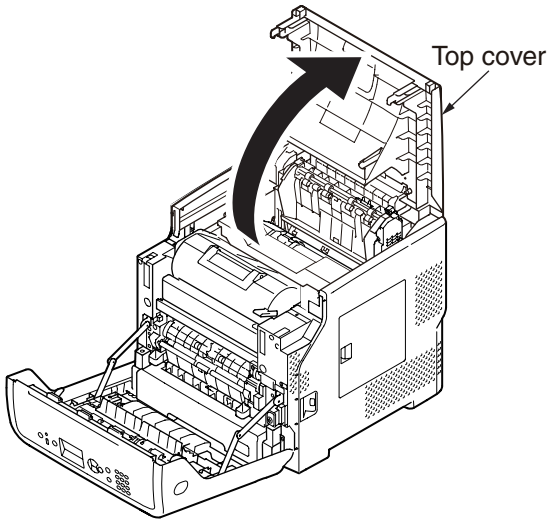
(2) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.



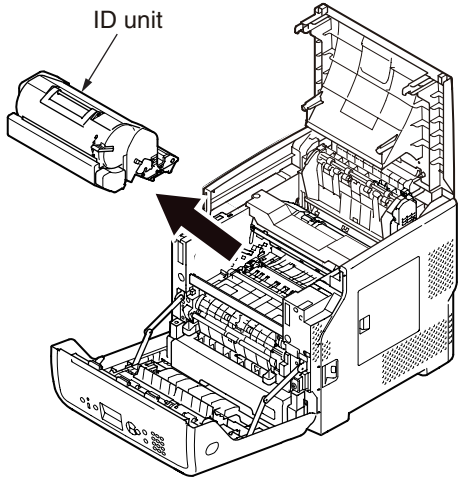
(3) Open the top cover.

⚠Caution	Possible to get burned.	

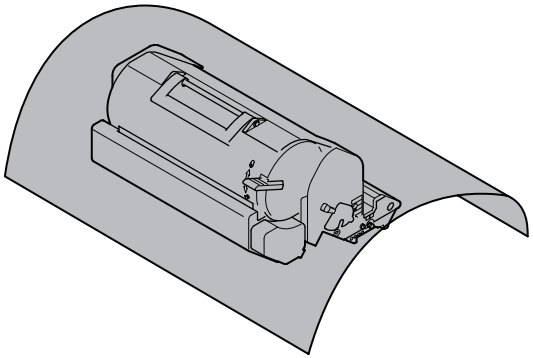
Do not touch the fuser unit. It is hot.



(4) Remove the ID unit and place it on a flat surface.

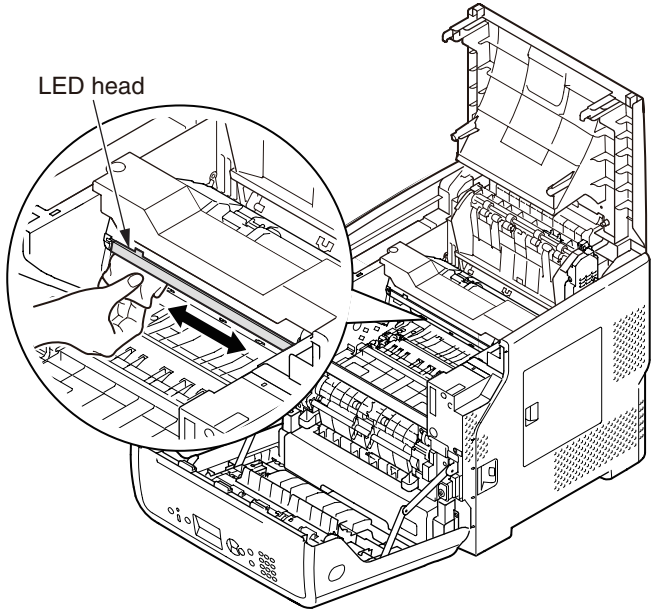


(5) Cover the removed ID unit with paper so that it will not be exposed to light.

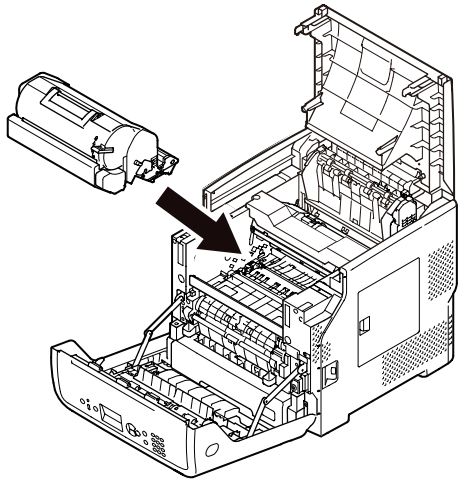


(6) Lightly wipe the lenses of the LED heads with soft tissue paper.

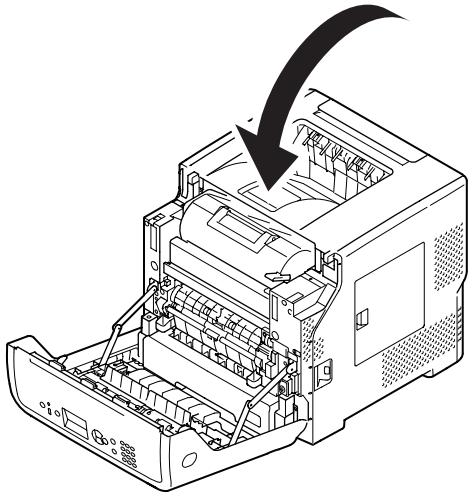
Note! Do not use the solvents such as methyl alcohol or thinner for cleaning the LED head lens because they can damage the LED head.



(7) Set ID unit in the printer.

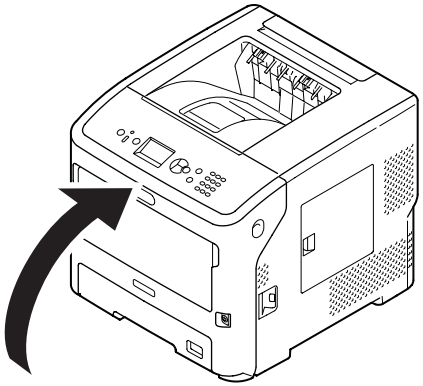


(8) Close the top cover.



(9) Close the front cover.

Note! The front cover cannot be closed if the top cover is not closed securely.



5.3 Paper feed roller cleaning

If paper jams occur frequently, clean the paper feed rollers.

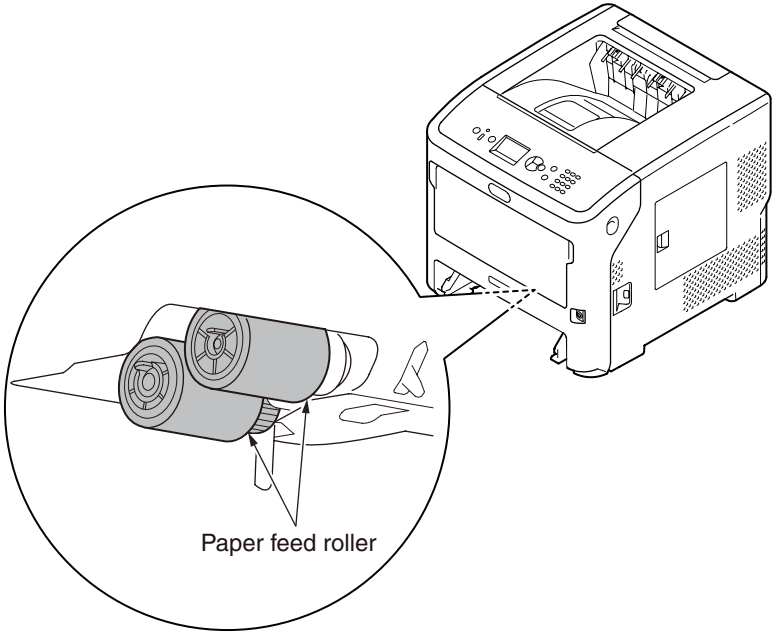
Note! Use a soft cloth to clean the paper feed rollers so as not to damage their surfaces.

For Trays 1/2/3/4

Note! This procedure images use tray 1 as an example, but the same procedure applies to trays 2/3/4.

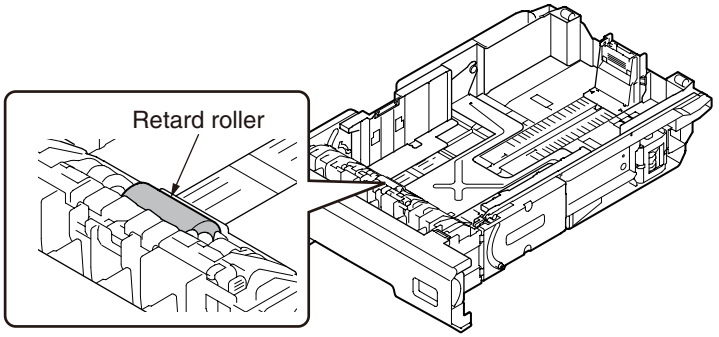
(1) Pull out the paper tray.

(2) Wipe the two paper feed rollers inside the printer with a wet cloth that has been wrung out well.



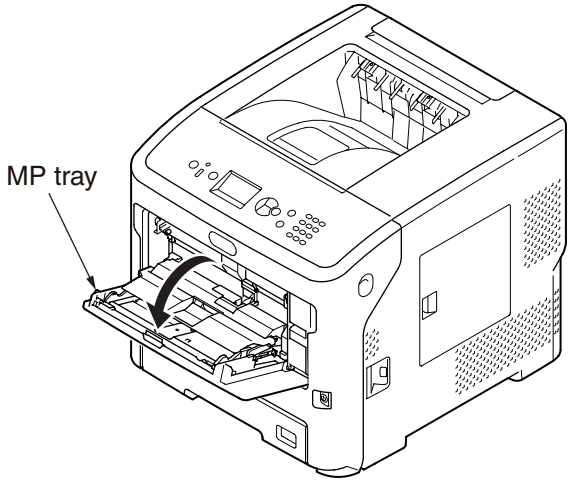
(3) Wipe the retard roller on the tray with a wet cloth that has been wrung out well.

(4) Return the paper tray to the printer.

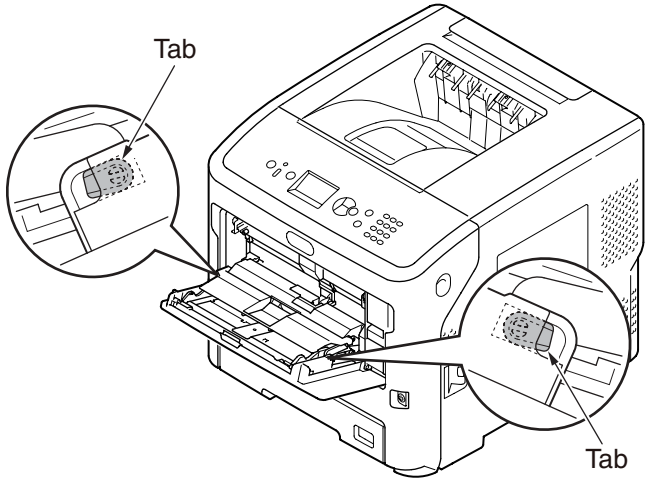


For MP Tray

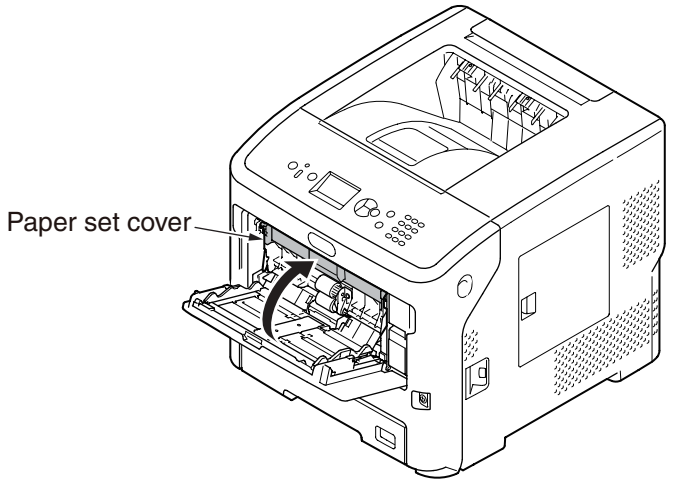
(1) Open the MP Tray forward by inserting your fingers into the front recesses.



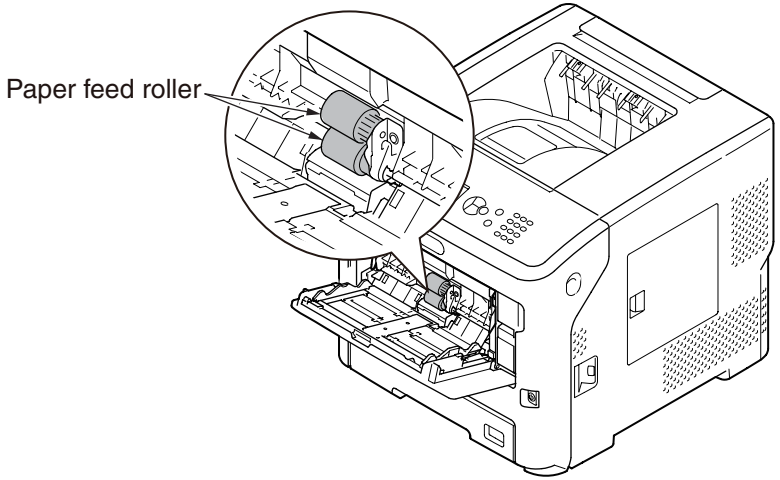
(2) Release the tab of the paper feed roller cover by pressing the right arm inward while lifting up the MP Tray lightly, and release the tab on the left side in the same mannaer.



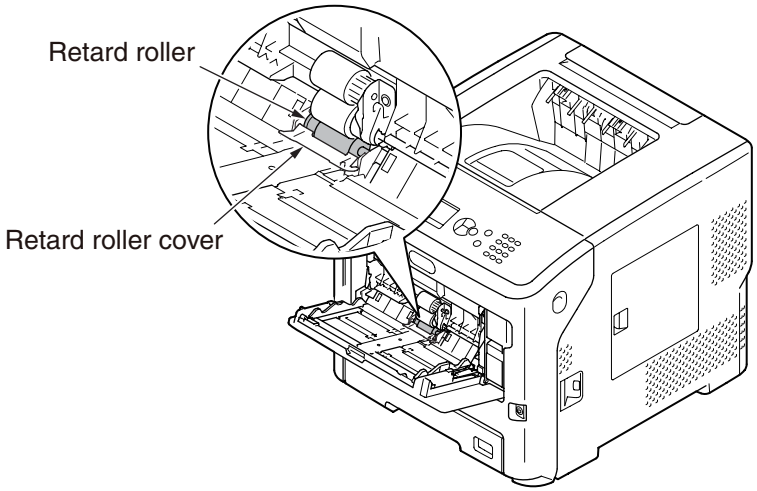
(3) Open the paper set cover.



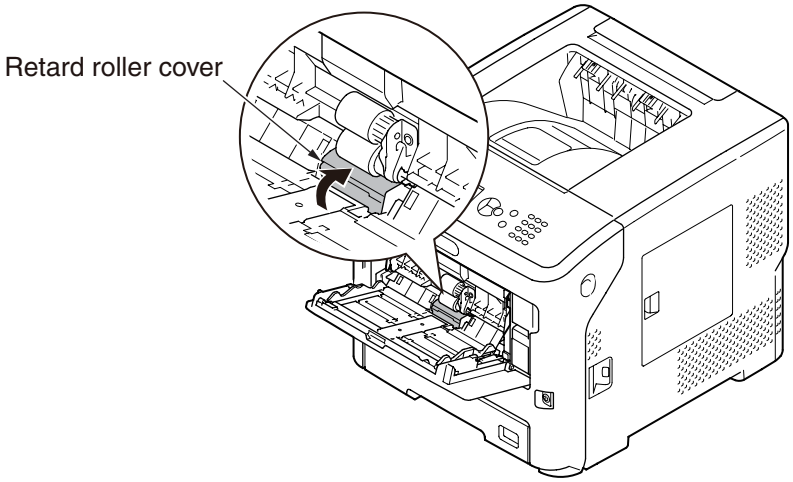
(4) Wipe the two paper feed rollers with a wet cloth that has been wrung out well.



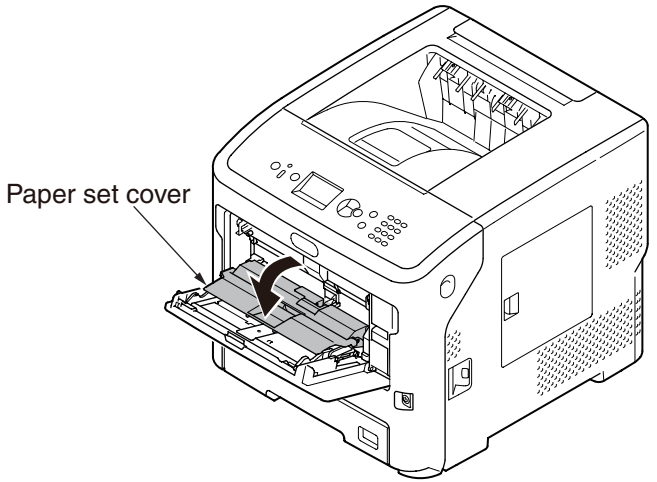
(5) Open the retard roller cover forward while pressing the center part of the MP Tray. Wipe the retard roller with a wet cloth that has been wrung out well.



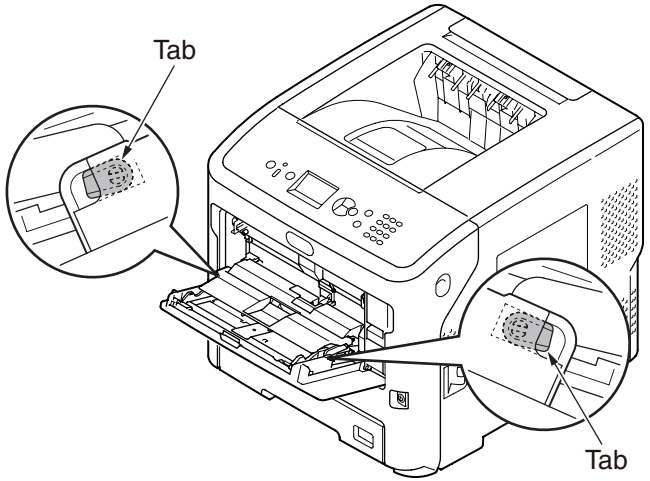
(6) Close the retard roller cover.



(7) Lower the paper set cover.



(8) Hook one tab of the paper feed roller cover by pressing the right arm inward while lifting up the MP Tray lightly, and hook the tab on the left side in the same procedure.



(9) Close the MP Tray.

6. Troubleshooting procedure

6.1 Important notes to start the repair work

(1) Read the basic check/inspection points described in User's Manual.

(2) Get information from customers in detail as much as possible about problem occurrence conditions.

(3) Carry out checking under the conditions that are similar to those at occurrence of the problem.

6.2 Matters to be checked before taking corrective actions against abnormalities

(1) The operation environment of the printer is appropriate.

(2) Consumable items (toner cartridges and image drums) have been replaced properly.

(3) Print media (paper) has no problem. Refer to paper specifications in User's Manual.

(4) The image drums are installed correctly.

6.3 Precautions when taking corrective actions against abnormalities

(1) Do not touch the OPC drum surface with your hand and do not allow any foreign materials to touch it.

(2) Do not expose the OPC drum to the direct sunlight.

(3) The fuser unit is extremely hot. Do not touch.

(4) Do not expose image drums to any light for 5 minutes or longer at room temperature.

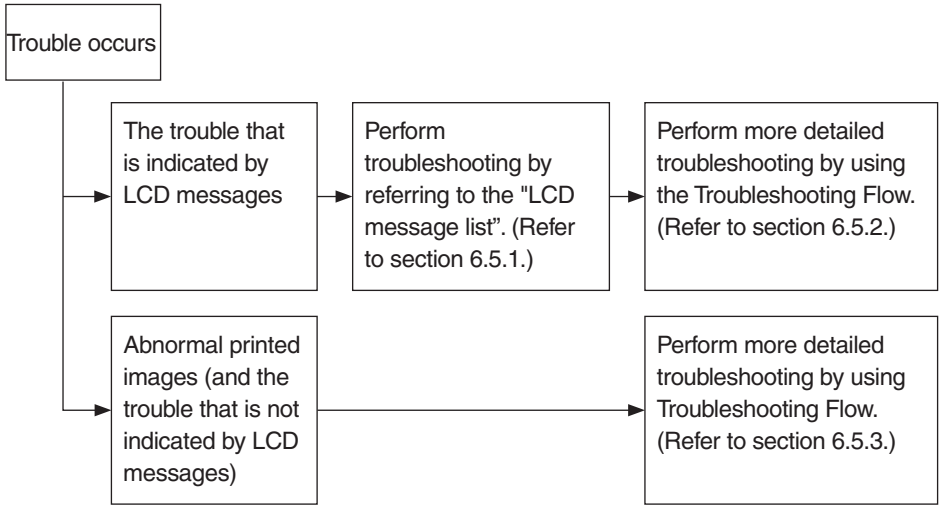
6.4 Preparation for troubleshooting

(1) Error status of this printer is displayed on the LCD (Liquid crystal display) screen of the operator panel.

Take appropriate troubleshooting actions by following the message displayed on the LCD screen.

6.5 Troubleshooting methods

When a trouble occurs with this printer, perform troubleshooting by following the steps described below.



6.5.1 LCD message list

Initializing

Panel display	READY indicator	ATTEN-TION indicator	Beep	Details
Initializing	Off	Off	–	It displays, while not having determined the system display language immediately after turning on a power supply.
Initializing	Off	Off	–	The controller side is initializing.
EEPROM Reset	Off	Off	–	Indicates that EEPROM of the controller side is being reset. The condition that EEPROM is reset includes the followings. • Changes of CU ROM (when disagreement of CU F/W version is detected) • Changes of destination channel • Compulsive initialization of EEPROM (System maintenance menu) • OEM set of PJL command
RAM Check nnn%	Off	Off	–	RAM checking. The rate of checked capacity to the total capacity is displayed on the 2nd line.
Wait a Moment Network Initializing	Off	Off	–	The network is in initializing.
Checking File System	Off	Off	–	Displays that HDD file system is being checked. Process Check of File System is valid to start from "Storage Common Setup"-"Check File System" of Boot Menu or Admin Setup.

Panel display	READY indicator	ATTEN-TION indicator	Beep	Details
Checking Sectors nnn%	Off	Off	–	Displays that a sector of HDD is being checked. Check process of the sector is valid to start from "Storage Common Setup"-"Check All Sectors" of Boot Menu or Admin Setup. nnn Percentage of checked capacity
PU Flash Error	Off	Off	–	It is shown that the PU firmware could not be started normally. This status may occur also in a user environment. When it occurs, the maintenance by a maintenance member is required.
Communication Error	Off	Off	–	Displays that communication to PU firmware failed within the initializing phase. This status may not occur in a user environment. When it occurs, the maintenance by a maintenance member is required.

Normal

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details
Ready To Print	On	Off	–	Shows on-line status.
Offline	Off	Off	–	Shows off-line status. * Ready LED in off-line is always assumed to be Off.
File Accessing	Varies	Varies	–	The status showing FILE SYSTEM (HDD/ FLASH) is being accessed.
Data Arrive	Varies	Varies	–	Data receiving, process not started yet. Displayed mainly during PJL process without text print data or during job spooling.
Processing	Blink	Varies	–	Data receiving or output processing
Data Present	Varies	Varies	–	Un-printed data remains in Buffer. Waiting for data to follow.
Printing (%TRAY%)	Varies	Varies	–	A printer is printing. ***%TRAY%*** Tray1 Tray2 Tray3 Tray4 MPTray Tray2(LCF) *When LCF is installed at tray2's position. Tray3(LCF) *When LCF is installed at tray3's position.
Print Demo Page	Varies	Varies	–	Printing Demo Pages
Printer Font	Varies	Varies	–	Printing Font Lists
Print Network Config	Varies	Varies	–	It is shown that a network setup is printing.
Print Configuration	Varies	Varies	–	Printing Menu Maps
Printer File List	Varies	Varies	–	Printing File Lists
Print Error Log	Varies	Varies	–	Printing Error Logs
□ □ Collate Copy iii/jjj	Varies	Varies	–	Collate printing. ***iii***: The number of copy in printing. ***jjj***: the total number of printing. When the total number of printing is 1, it is a normal printing display.

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details
□ □ Copy kkk/lll	Varies	Varies	–	Copy printing. ***kkk***: The number of pages in printing. ***lll***: The total number of printing. When the number of copy is 1, it is a normal printing display.
Verifying Job	Blink	Varies	–	Indicates that the integrity of print data for encrypted authentication is being verified (for corruption and tampering).
Cancelling Job	Blink	Varies	–	Indicates that job cancellation has been instructed and data is being ignored until the job completion.
Cancelling Job	Blink	Varies	–	Indicates if JAM occurs when Jam Recover is OFF, that job cancellation has been instructed and data is being ignored until the job completion.
Cancelling Job	Blink	Varies	–	Indicates a job being cancelled due to no print permit. (Related to JobAccount) (A job received from a user who is denied printing.)
Cancelling Job	Blink	Varies	–	Indicates that a job is being cancelled because the printer area where the logs are stored has been used up and also "Cancel job" is specified as an operation at the time of Log Full. (Related to JobAccount)
Cancelling ...	Blink	Varies	–	Canceling reading the data from USB memory because an error has occurred.
□ Calibrating	Varies	Varies	–	Indicates the period of reading from or writing to the memory tags in toner cartridge/image drum unit.
□ Adjusting Temp.	Varies	Varies	–	Shows cooling down status. It is cautious of a period "," following "Adjusting Temp".
□ Adjusting Temp	Varies	Varies	–	Indicates that the printer is warming up.
□ Optimizing Temp	Varies	Varies	–	Indicates that printing has been suspended for a while due to high temperature of the drum, or the printer is in a wait state to cope with heat at the time of switching narrow paper to wide paper.

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details
□ Power Save	Varies	Varies	–	A printer is in power save mode. Displayed in a combination of other message in the first line. LCD back light extincts in the energy saving mode and blinks after that modebrightens after exiting that mode. If the power is on during the energy saving mode, it lights up and extincts after 30 seconds. However, the energy saming mode remains. Also, it lights up in the priority 365 in shut down process. From the power-saving mode, when the time going to SleEPmode is passed, printer enters Sleep Mode.
Invalid Operation	Varies	Varies	On	With the printer unable to switch to the Power Save mode, pops up with a press or successive presses of the power save button, and three seconds after that, disappears, the display being restored.
□ Sleep Mode	Varies	Varies	–	Indicates the printer goes into the Sleep Mode. The printer goes into the mode immediately after this message appears, and in fact the message is hard to read.
Flash Download	Varies	Varies	–	Downloading PU F/W (This is not user-level error) This function is secret to users. Therefore, this status does not occur in a user environment.
Please wait Executing Maintenance	Varies	Blink	–	Indicates that the printer is executing the remote maintenance mode. During this mode, users have no permission to operate the printer.
□ □ Getting file list ...	Varies	Varies	–	When USB memory is installed, printer starts to get file list from USB memory. This status will be displayed until getting file list finished.

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details
□ %INFO%	Varies	Varies	–	Indicates that the new consumable (toner). This status should be appeared at detecting the new consumable (toner), and be disappeared automatically after 3 seconds. ***%INFO%*** is contained in the consumable tag.
Wait a Moment Network Initializing	Varies	Varies	–	This appears when the NIC initialization is occurred, as the setting was changed.
Wait a Moment Message Data Processing	Varies	Varies	–	Indicates that message data to be updated is being processed.
Wait a Moment Message Data Writing	Varies	Varies	–	Indicates that message data to be updated is being written.
Power Off/On Message Data Received OK	Varies	Varies	–	Indicates that message data to be updated has been written successfully.

Warning

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ Printer Life	Varies	Off	–	The life of printer go to the end. When print page count reached 1200000 and pjl command OKIPRINTERLIFESUPPORT is set to ON, this status will be raised.	–
□ Toner Low	Varies	On (Blink) (Off)	– (On)	Toner amount is low. Displayed in a combination of other message in the first line. In case of MENU "Menus"-"System Adjust"-"Low Toner"=Stop , ATTENTION LED blinks and the printer shifts to OFF Line. When an ONLINE switch is pushed, or when arbitrary errors occur and the error is canceled, an off-line state is canceled, and printing is continued until it is set to Toner Empty. "TONER LOW" status occurs when the power is on, the LED of ATTENTION in a case of MENU "Menus"-"System Adjust"-"Low Toner"=Stop is blinked and go back to the off line after the initializing process. It is possible to operate untill "TONER EMPTY" by pressing "ONLINE switch". Moreover, when set as Admin Setup "Panel Setup"-"Near Life LED"=Disable, Attention LED is switched off.	–

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ Print Cartridge Near Life	Varies	On (Blink) (Off)	– (On)	Print Cartridge amount is low. Displayed in a combination of other message in the first line. Printing is continued until it is set to Print Cartridge Empty. Moreover, when set as Admin Setup "Panel Setup"-"Near Life LED"=Disable, Attention LED is switched off.	–
□ Non OEM Toner Detected	Varies	On	–	It shows the toner cartridge of authorized 3rd party. (Tag Licensed to 3rd party)	Urge the user to use proper toner cartridge.
□ Non OEM Print Cartridge Detected	Varies	On	–	It shows the Print Cartridge of authorized 3rd party. (Tag Licensed to 3rd party)	Urge the user to use proper Print Cartridge.
□ Incompatible Toner	Varies	On	–	The Region ID of toner cartridge is not proper to the distribution channel.	Urge the user to use proper toner cartridge.
□ Incompatible Print Cartridge	Varies	On	–	The Region ID of Print Cartridge is not proper to the distribution channel.	Urge the user to use proper Print Cartridge.
□ Non Genuine Toner	Varies	On	–	The chip of Tag is not compatible.	Urge the user to use proper toner cartridge.
□ Non Genuine Print Cartridge	Varies	On	–	The chip of Tag on Print Cartridge is not compatible.	Urge the user to use proper Print Cartridge.
□ Toner Sensor Error	Varies	On	–	Something is wrong with the toner sensor.	–

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ Error Postscript	Blink	Varies	–	Interpreter detects an error due to the following reason. Receive data after this is ignored until the job completion. When the job is completely received, this is automatically cleared. - The job has a grammatical error. - The page is complicated, and VM was used up.	–
□ Image Drum Near Life	Varies	On (Off)	–	The life of the drum (warning). Displayed in a combination of other message in the first line. The printer stops at the point when it reaches the drum life (Shifts to error, OFF-LINE.) Moreover, when set as Admin Setup "Panel Setup"-"NearLifeLED" = "Disable", Attention LED is switched off.	–
□ Print Cartridge Near Life	Varies	On (Off)	–	The life of the Print Cartridge (warning). Displayed in a combination of other message in the first line. The printer stops at the point when it reaches the drum life (Shifts to error, OFF-LINE.) Moreover, when set as Admin Setup "Panel Setup"-"NearLifeLED" = "Disable", Attention LED is switched off.	–
□ Fuser Unit Near Life	Varies	On (Off)	–	Notifies the fuser unit is near its life. Moreover, when set as Admin Setup "Panel Setup"-"NearLifeLED" = "Disable", Attention LED is switched off.	–

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ Change Fuser Unit	Varies	On	–	Notifies the life of the fuser unit (warning). Displayed in a combination of other message in the first line. Warning only (No Life error). This appears when the cover was opened and closed just after the fuser life error occurred.	Replace the fuser with a new fuser.
□ Toner Empty	Varies	On	–	Notifies toner is empty. This status message (warning) is displayed when opening/closing a cover or turning power on again after the toner empty error occurs.	Replace the toner cartridge with a new toner cartridge.
□ Toner Not Installed	Varies	On	–	Notifies the toner cartridge is not installed.	Install the toner cartridge. Remember that the toner cartridge supplied with the product cannot be used if the toner cartridge of other supply is used.
□ Print Cartridge Not Installed	Varies	On	–	Notifies the Print Cartridge is not installed.	Install the Print Cartridge. Remember that the Print Cartridge supplied with the product cannot be used if the toner cartridge of other supply is used.

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ Non OEM Image Drum Detected	Varies	On	–	It shows the image drum of authorized 3rd party. (Tag Licensed to 3rd party)	Urge the user to use proper image drums.
□ Non OEM Print Cartridge Detected	Varies	On	–	It shows the Print Cartridge (drum) of authorized 3rd party. (Tag Licensed to 3rd party)	Urge the user to use proper Print Cartridge.
□ Incompatible Image Drum Detected	Varies	On	–	The Region ID of image drum is not proper to the distribution channel.	Urge the user to use proper image drums.
□ Incompatible Print Cartridge	Varies	On	–	The Region ID of Print Cartridge (drum) is not proper to the distribution channel.	Urge the user to use proper Print Cartridge.
□ Non Genuine Image Drum	Varies	On	–	The chip of Tag is not compatible.	Urge the user to use proper image drums.
□ Non Genuine Print Cartridge	Varies	On	–	The chip of Tag is not compatible.	Urge the user to use proper Print Cartridge.
□ Image Drum Life	Varies	On	–	Notifies the life of the drum. This is a warning only. This appears when the cover was opened and closed just after the drum life error occurred.	Replace the image drum with a new image drum.
□ Print Cartridge Life	Varies	On	–	Notifies the life of the Print Cartridge(drum). This is a warning only. This appears when the cover was opened and closed just after the drum life error occurred.	Replace the Print Cartridge with a new Print Cartridge.

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ Image Drum Life, %PAGES% Pages Left	Varies	On	–	Notifies the prolonged period of the Print Cartridge life, after reached its limitation, by the operator's requirement. ***%PAGES%*** 1~100	Replace the image drum with a new image drum.
□ Print Cartridge Life, %PAGES% Pages Left	Varies	On	–	Notifies the prolonged period of the Print Cartridge life, after reached its limitation, by the operator's requirement. ***%PAGES%*** 1~100	Replace the Print Cartridge with a new Print Cartridge.
□ Image Drum Life, Print Quality Not Guaranteed	Varies	On	–	Notifies the last prolonged period of the image drum life. This appears after the hidden operation was done at the life limitation.	Replace the image drum with a new image drum.
□ Print Cartridge Life, Print Quality Not Guaranteed	Varies	On	–	Notifies the last prolonged period of the Print Cartridge life. This appears after the hidden operation was done at the life limitation.	Replace the Print Cartridge with a new Print Cartridge.
□ %TRAY% Empty	Varies	On	–	The tray is empty. Treated as Warning until printing to the empty tray is designated. ***%TRAY%*** Tray1 Tray2 Tray3 Tray4 MPTray Tray2(LCF) *When LCF is installed at tray2's position. Tray3(LCF) *When LCF is installed at tray3's position.	Load paper in the indicated tray.

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ %TRAY% Lift Up Error	Varies	On	–	Lift Up Error has occurred to Tray. That tray is treated "Paper Empty" as a result, and printing from that tray becomes disabled. ***%TRAY%*** Tray2(LCF) *When LCF is installed at tray2's position. Tray3(LCF) *When LCF is installed at tray3's position.	Remove the tray and put it back in the printer.
□ %TRAY% Overfilled	Varies	On	–	Displays that there is too much paper in Tray. This is a warning; thus, printing will not stop. ***%TRAY%*** Tray2(LCF) *When LCF is installed at tray2's position. Tray3(LCF) *When LCF is installed at tray3's position.	Remove excess paper from the tray.
□ File System is Full	Varies	On	–	Disk-full is occurring. Because this is a temporary warning, it remains until the end of the job and disappears.	Explain the user that no remedial measure is required.
□ File System is Write Protected	Varies	On	–	An attempt to write in a read-only file was done. Because this is a temporary warning, it remains until the end of the job and disappears.	Explain the user that no remedial measure is required.
□ File Erasing	Varies	On	–	Indicates that a secret file is being erased.	–
□ Deleting Encrypted Job	Varies	On	–	It indicares the deletion of encrypted authentication print job and saving of deletion request of file.	–
□ Erased Data Full	Varies	On	–	Indicates that a secret file waiting to be erased is full.	–

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ %PUFLASH% Flash Error	Varies	Varies	–	PU flush error (Error occurs during the alteration of PU firm ware or it failed in the alteration in PU flush of such as LED Head information.) ***%PUFLASH%*** PU Tray2 Tray3 Tray4	
□ Accounting Log Buffer is near full	Varies	Varies	–	It indicates the Job Accounting log buffer is near full.	
□ Accounting Log Buffer Full(Delete old logs)	Varies	Varies	–	The function isn't accepted because log buffer is full. (Related to JobAccount). This message is displayed, if the log buffer is full and "Operation at Log Full" in Job Accounting Server Software is set to "Delete old logs". The new jobs will be able to execute after the following operations. 1. The log in the unit must be got by Job Accounting Server Software. 2. The setting of "Operation at Log Full" must be changed to "Does not acquire logs".	
□ USB Hub Unsupported Please detach it	Varies	Varies	–	Indicates that the USB hub is connected, which is not supported by the printer. This status should be displayed until unconnection of that USB hub.	Remove the USB Hub.
□ Unsupported USB Device Detected Please detach it	Varies	Varies	–	Indicates that the USB device is connected, which is not supported by the printer. This status should be displayed until unconnection of that USB device.	Remove the USB device.

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ Collate Fail: Too Many Pages Press ONLINE Button	Varies	Varies	–	Memory overflow was occurred in the collate copy. Stays displayed until the ONLINE button is pressed.	Reduce the number of pages that are going to be printed at a time.
□ Print Restricted. Job Rejected Press ONLINE Button	Varies	On	–	Notifies users that jobs have been cancelled because they are not permitted for printing. (Related to JobAccount). Stays displayed until the ONLINE button is pressed.	• Set the user ID of the job account in the printer driver. • If the user ID has been set in the driver, check the user ID and its setting with the job account administ-rator.
□ Log Buffer is Full. Job Rejected Press ONLINE Button	Varies	On	–	Notifies users that jobs have been cancelled because the log buffer is full. (Related to JobAccount.) Stays displayed until the ONLINE button is pressed.	Execute [Acquire immediate-ly] on the server PC with the print job accounting.

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ File System Operation Error <nnn> Press ONLINE Button	Varies	On	–	A disk error is occurred, which is other than the file system fill or the disk write protected. Operation that does not involve a disk is available. nnn: An identifier to Error type (For details, see the overview chapter.) ***%FS_ERR%*** = 0 … GENERAL ERROR = 1 … VOLUME NOT AVAILABLE = 3 … FILE NOT FOUND = 4 … NO FREE FILE DESCRIPTORS = 5 … INVALID NUMBER OF BYTES = 6 … FILE ALREADY EXISTS = 7 … ILLEGAL NAME = 8 … CANT DEL ROOT = 9 … NOT FILE = 10 … NOT DIRECTORY = 11 … NOT SAME VOLUME = 12 … READ ONLY = 13 … ROOT DIR FULL = 14 … DIR NOT EMPTY = 15 … BAD DISK = 16 … NO LABEL = 17 … INVALID PARAMETER = 18 … NO CONTIG SPACE = 19 … CANT CHANGE ROOT = 20 … FD OBSOLETE = 21 … DELETED = 22 … NO BLOCK DEVICE = 23 … BAD SEEK = 24 … INTERNAL ERROR = 25 … WRITE ONLY	Replace the HDD.
□ Invalid Secure Data Press ONLINE Button	Varies	Varies	–	Indicates that a job has been deleted because corruption of data has been detected by the integrity verification in authentication printing.	Press the ON LINE button.

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ Invalid Data Press ONLINE Button	Varies	Varies	–	Invalid data was received. Press the On-line switch and eliminate the warning. Displayed when unsupported PDL command is received or a spool command is received without HDD.	Press the ON LINE button.
□ Accounting Log Writing Error Press ONLINE Button	Varies	Varies	–	The Job Accounting log is not registered correctly because of thr disc access error is occurred during accounting log writing into HDD (Related to Logging). This message is displayed until Online key pressed.	
□ Error PDF Press ONLINE Button	Varies	Varies	–	An error in the content of PDF file.	
□ Invalid Password Press ONLINE Button	Varies	Varies	–	The password of the encrypted PDF is different with the one inputed. The file will not be printed.	
□ Password required to print Press ONLINE Button	Varies	Varies	–	The PDF is limited not be printed by a password. The owner password is required.	
□ PDF Cache Write Error Press ONLINE Button	Varies	Varies	–	An error occurred when writing PDF cache. If there is not a HDD installed, add an optional RAM or HDD. If there is a HDD installed, increase available space on HDD.	

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ Decode error occurred Press ONLINE Button	Varies	Varies	–	Decode error has occurred in a PDF file.	
□ Can not read the file Press ONLINE Button	Varies	Varies	–	Cannot read the file from USB Memory while printing from USB Memory. The USB Memory may be pulled out, or damaged, or file can not open.	

When the printer detects an unrecoverable error, the following service call error is displayed on the LCD.

Service call
nnn: error

Note! nnn indicates an error code.

When a service call error is displayed, the error code and the associated error information are displayed in the lines under that on the LCD screen at the same time.

Be sure to take note of this error information (numerals indicating address and so on) and inform it to the related departments because the information is used for trouble analysis and solution. Meaning of error codes and remedial measures are shown in Tables 6-1-1 and 6-1-2.

Table 6-1-1 Operator alarm

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Install Paper MPTray %MEDIA_SIZE% Press ONLINE Button	On	Off	–	Manual paper feed is required. Manually insert the paper shown by %MEDIA_SIZE%. The unit of paper size in Custom: The unit specified for MPTray (menu setting) is used if no unit is specified by the driver. When the driver specifies a unit, the unit is used for display. Paper size displays in Custom mode: "<width>x<length> <unit>" ex.) 210x297 mm 8.5x11.0 inch	Error (ONLINE)

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Change Paper in %TRAY% %MEDIA_SIZE% %MEDIA_TYPE% Press ONLINE Button Please see HELP for details	Off	Blink	On	The media type in the tray and the print data do not match. Load proper paper in the tray (It takes a while until the status disappears after you have closed the tray and the lever lifted.) (***%TRAY%***:TrayName, ***%MEDIA_SIZE%***:PaperName, ***%MEDIA_TYPE%***:MediaTypeName) Error 661 : Tray1 Error 662 : Tray2 Error 663 : Tray3 Error 664 : Tray4 Error 662 : Tray2(LCF) *When LCF is installed at tray2's position. Error 663 : Tray3(LCF) *When LCF is installed at tray3's position. Paper size displays in Custom mode: "<width>x<length> <unit>" ex.) 210x297 mm 8.5x11.0 inch The unit of paper size in Custom: The unit specified for MPTray (menu setting) is used if no unit is specified by the driver. When the driver specifies a unit, the unit is used for display. As a user pressed ONLINE key, the printer could ignore this error at the just printing job.	Error 661 662 663 664

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Change Paper in MPTray %MEDIA_SIZE% %MEDIA_TYPE% Press ONLINE Button Please see HELP for details	Off	Blink	On	The media type in the tray and the print data do not match. Load proper paper in the tray (It takes a while until the status disappears after you have closed the tray and the lever lifted.) (***%MEDIA_SIZE%***:PaperName, ***%MEDIA_TYPE%***:MediaTypeName) Error 660 : MPTray Paper size displays in Custom mode: "<width>x<length> <unit>" ex.) 210x297 mm 8.5x11.0 inch The unit of paper size in Custom: The unit specified for MPTray (menu setting) is used if no unit is specified by the driver. When the driver specifies a unit, the unit is used for display. A user needs to press ONLINE key after changing the paper.	Error 660
Change Paper in %TRAY% %MEDIA_SIZE% %MEDIA_TYPE% Please see HELP for details	Off	Blink	On	The size of paper or media type in the tray does not match the print data. Load paper in tray. (It takes a while until the status disappears after you have closed the tray and the lever lifted.) Error 461 : Tray1 Error 462 : Tray2 Error 463 : Tray3 Error 464 : Tray4 Error 462 : Tray2(LCF) *When LCF is installed at tray2's position. Error 463 : Tray3(LCF) *When LCF is installed at tray3's position The paper size displaying form of the custom mode is the same as above. Paper size displays in Custom mode: "<width>x<length> <unit>" ex.) 210x297 mm 8.5x11.0 inch As a user pressed ONLINE key, the printer could ignore this error at the just printing job. If Media_Size has both portrait and landscape, %MEDIA_SIZE% displays icon which indicate paper orientation after Paper Size.	Error 461 462 463 464

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Change Paper in MPTray %MEDIA_SIZE% %MEDIA_TYPE% Press ONLINE Button Please see HELP for details	Off	Blink	On	The size of paper or media type in the tray does not match the print data. Load paper in tray (It takes a while until the status disappears after you have closed the tray and the lever lifted.) Error 460 : MPTray The paper size displaying form of the custom mode is the same as above. Paper size displays in Custom mode: "<width>x<length> <unit>" ex.) 210x297 mm 8.5x11.0 inch A user needs to press ONLINE key after changing the paper.	Error 460
Install Paper MPTray %MEDIA_SIZE% Press ONLINE Button Please see HELP for details	Off	Blink	On	IPrinting request is issued to an empty MPTray. If it goes through a definite period of time (PU firmware holds time(3 sec)) after a user places paper, a printer will lift up the multipurpose tray, and will perform re-feeding. If a user pushes the ONLINE button before timeout, the printer perform also re-feeding. Error 490 : MPTray In this state, Leisus I/F : corresponding bits of both LFTERR and LFTERR2 should be '0'. Programmer's note: When the ONLINE button was pressed, the controller (CU) should send MPTPECLR command to the engine (PU). The engine would clear this state after receiving that command. This error is occurred, when the MPTray is in the home position and the sensor "PE SNS2" cannot detect papers.	Error 490

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Remove Paper Face Down Stacker Please see HELP for details	Off	Blink	On	The printed paper is overfilled on the paper stacker of the printer unit. Error 480 : Face Down Stacker	Error 480
Press ONLINE Button for Restoration Memory Overflow Please see HELP for details	Off	Blink	On	Memory capacity overflows due to the following reason. Press ON-LINE switch so that it continues. Install expansion RAM or decrease the data amount. - Too much print data in a page. - Too much Macro data. - Too much DLL data. - After frame buffer compression, over flow occurred.	Error 420
Press ONLINE Button for Restoration Memory Overflow Please see HELP for details	Off	Blink	On	Memory capacity overflows due to the following reason when printing from USB memory. Press ON-LINE switch so that it continues. Install expansion RAM or decrease the data amount. - Too much print data in a page. - Too much Macro data. - Too much DLL data. - After frame buffer compression, over flow occurred.	Error 420
Wireless startup failed Press ONLINE Button Please see HELP for details	Off	Blink	On	An error occurred at the communication with wireless bridge. For example, response timeout, etc. This status only for wireless LAN printer.	Error 517

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
This wireless firmware version does not operate on this device Press ONLINE Button Please see HELP for details	Off	Blink	On	The major version is not the same with wireless bridge. This status only for wireless LAN printer.	Error 504
Wireless settings are incomplete Press ONLINE Button Please see HELP for details	Off	Blink	On	Wireless LAN can not startup. Some setting need to be re-configured. This status only for wireless LAN printer.	Error 505
Not connected to wireless access point Press ONLINE Button Please see HELP for details	Off	Blink	On	Can not setup communication with an Access Point(there is not an usable AP). This status only for wireless LAN printer.	Error 506 (ONLINE)

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Check Data Message Data Write Error <%CODE%>	Varies	Varies	On	Indicates that writing of message data to be uploaded has been failed. ***%CODE%*** is a decimal value (one digit) and represents the cause of failure in writing. = 1 … FAIL: Other errors. = 2 … DATA_ERROR: Hash check error in data reading/writing, or abnormal FLASH = 3 … OVERFLOW: Downloading failure due to FLASH memory full at starting or during writing in a language file = 4 … MEMORYFULL: Memory reservation failure = 5 … UNSUPPORTED_DATA: Downloading data unsupported on the printer	Error (ONLINE)
Firmware Update Error Please try again If network doesn't work, please try firmware update over USB	Varies	Varies	On	FW Update was failed. When this error occured, the FW Update needs to be executed again, and the printer needs to keep On-Line.	Error (ONLINE)
Face Up Stacker Open Duplex Not Available Please see HELP for details	Off	Blink	On	It is occurred when duplex printing pages are added at the face up stacker cover opened.	Error 581

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Install Paper %TRAY% %MEDIA_SIZE% Please see HELP for details	Off	Blink	On	Printing request is issued to an empty tray. Load paper. (It takes a while until the status disappears after you have closed the tray and the lever lifted.) Error 491 : Tray1 Error 492 : Tray2 Error 493 : Tray3 Error 494 : Tray4 Error 492 : Tray2(LCF) *When LCF is installed at tray2's position. Error 493 : Tray3(LCF) *When LCF is installed at tray3's position. The paper size displaying form of the custom mode is the same as above.	Error 491 492 493 494
Install Paper Cassette %TRAY% Please see HELP for details	Off	Blink	On	Indicates removal of the paper cassette of Tray 1 that is a paper path in attempting to print from Tray 2, 3, 4, or LCF. Error 440 : Tray1 Error 441 : Tray2 Error 442 : Tray3	Error 440 441 442
Reset Tray %TRAY% Please see HELP for details	Off	Blink	On	Print request was made to Tray, to which Tray Lift Up Error has occurred. Lift Up Retry will take place when the tray is removed and put back in. ***%TRAY%*** Error 521 : Tray2(LCF) *When LCF is installed at tray2's position. Error 522 : Tray3(LCF) *When LCF is installed at tray3's position.	Error 521 522
Remove Excess Paper %TRAY% Please see HELP for details	Off	Blink	On	Print request was made to Tray, which has been detected to have too much paper. This status will be cleared when excess paper is removed from that tray and the tray is put back in. ***%TRAY%*** Error 531 : Tray2(LCF) *When LCF is installed at tray2's position. Error 532 : Tray3(LCF) *When LCF is installed at tray3's position.	Error 531 532
Install Paper Cassette %TRAY% Please see HELP for details	Off	Blink	On	Indicates that paper feed is unavailable in attempting to print from Tray 1 due to removal of the paper cassette of Tray 1. (Occurs only when Tray 2 has been installed.) ***%TRAY%*** Error 430 : Tray1 Error 431 : Tray2 Error 432 : Tray3 Error 433 : Tray4 Error 431 : Tray2(LCF) *When LCF is installed at tray2's position. Error 432 : Tray3(LCF) *When LCF is installed at tray3's position.	Error 430 431 432 433
Install Toner For Maximum Performance Always Use %COMPANY_ NAME% Original	–	–	–	This should be appeared after the toner empty error messages when OKIORIGINALCONSUMABLEDISPLAY is ON to display this.	–
Install New Image Drum For Maximum Performance Always Use %COMPANY_ NAME% Original	–	–	–	This should be appeared after the drum life error messages when OKIORIGINALCONSUMABLEDISPLAY is ON to display this.	–

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Install New Print Cartridge For Maximum Performance Always Use %COMPANY_ NAME% Original	–	–	–	This should be appeared after the print cartridge life error messages when OKIORIGINALCONSUMABLEDISPLAY is ON to display this.	–
Install Toner Please see HELP for details	Off	Blink	On	Toner ends. Error 413 : Black Toner empty warning status takes effect at Cover Open/Close. When you did elimination of (cancelling) print data, it can not turn into warning (only for K).	Error 413
Install New Print Cartridge Print Cartridge Life To Exceed the Life, Press Online Button Please see HELP for details	Off	Blink	On	Print Cartridge ends. Error 413 : Black The operator can prolong the life temporarily by pressing the Online button.	Error 413
Incompatible Toner Please see HELP for details	Off	Blink	On	The signature ID of toner cartridge is not proper to the distribution channel, but the group of signature ID is proper (OKI regional mismatch). As probable missing to measure the amount of toner, the printer notifies error status and stop printing. Error 557 : Black	Error 557
Incompatible Print Cartridge Please see HELP for details	Off	Blink	On	The signature ID of Print Cartridge is not proper to the distribution channel, but the group of signature ID is proper (OKI regional mismatch). As probable missing to measure the amount of toner, the printer notifies error status and stop printing. Error 557 : Black	Error 557
Incompatible Toner Please see HELP for details	Off	Blink	On	The signature ID of toner cartridge is not proper to the distribution channel, and the group of signature ID is not proper (OEM channel mismatch). Error 617 : Black	Error 617
Incompatible Print Cartridge Please see HELP for details	Off	Blink	On	The signature ID of Print Cartridge is not proper to the distribution channel, and the group of signature ID is not proper (OEM channel mismatch). Error 617 : Black	Error 617
Incompatible Toner Please see HELP for details	Off	Blink	On	The signature ID of toner cartridge is not proper to the distribution channel, and the group of signature ID is protected (OEM mismatch). Error 623 : Black	Error 623
Incompatible Print Cartridge Please see HELP for details	Off	Blink	On	The signature ID of Print Cartridge is not proper to the distribution channel, and the group of signature ID is protected (OEM mismatch). Error 623 : Black	Error 623
Non Genuine Toner Please see HELP for details	Off	Blink	On	The signature ID of toner cartridge can not be recognized (Unauthorized third party). As probable missing to measure the amount of toner, the printer notifies error status and stop printing. Error 553 : Black The engine is confirmed again by cover open/close. And, when the toner cartridges have not been exchanged, it shifts to Warning. And, it is possible to print up to 20.	Error 553

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Non Genuine Print Cartridge Please see HELP for details	Off	Blink	On	The signature ID of Print Cartridge can not be recognized (Unauthorized third party). As probable missing to measure the amount of toner, the printer notifies error status and stop printing. Error 553 : Black The engine is confirmed again by cover open/close. And, when the toner cartridges have not been exchanged, it shifts to Warning. And, it is possible to print up to 20.	Error 553
Toner Not Installed Please see HELP for details	Off	Blink	On	The toner cartridge is not installed. Error 613 : Black The engine is confirmed again by cover open/close. And, when the toner cartridges have not been exchanged, it shifts to Warning. And, it is possible to print up to 20.	Error 613
Print Cartridge Not Installed Please see HELP for details	Off	Blink	On	The Print Cartridge is not installed. Error 613 : Black The engine is confirmed again by cover open/close. And, when the toner cartridges have not been exchanged, it shifts to Warning. And, it is possible to print up to 20.	Error 613
Incompatible Image Drum Please see HELP for details	Off	Blink	On	The image drum unit is not proper to the distribution channel (OKI channel mismatch). Error 693 : Black	Error 693
Incompatible Print Cartridge Please see HELP for details	Off	Blink	On	The Print Cartridge(image drum uni) t is not proper to the distribution channel (OKI channel mismatch). Error 693 : Black	Error 693

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Incompatible Image Drum Please see HELP for details	Off	Blink	On	The image drum unit is not proper to the distribution channel (OEM channel mismatch). Error 703 : Black	Error 703
Incompatible Print Cartridge Please see HELP for details	Off	Blink	On	The Print Cartridge(image drum unit) is not proper to the distribution channel (OEM channel mismatch). Error 703 : Black	Error 703
Incompatible Image Drum Please see HELP for details	Off	Blink	On	The image drum unit is not proper to the distribution channel, and the group ID is protected (OEM mismatch). Error 707 : Black	Error 707
Incompatible Print Cartridge Please see HELP for details	Off	Blink	On	The Print Cartridge(image drum unit) is not proper to the distribution channel, and the group ID is protected (OEM mismatch). Error 707 : Black	Error 707
Non Genuine Image Drum Please see HELP for details	Off	Blink	On	The image drum unit can not be recognized (Unauthorized third party). Error 687 : Black	Error 687

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Non Genuine Print Cartridge Please see HELP for details	Off	Blink	On	The Print Cartridge(image drum unit) can not be recognized (Unauthorized third party). Error 687 : Black	Error 687
Image Drum Not Installed Please see HELP for details	Off	Blink	On	The image drum unit can not be detected by the signature control system. Error 697 : Black	Error 697
Print Cartridge Not Installed Please see HELP for details	Off	Blink	On	The Print Cartridge(image drum unit) can not be detected by the signature control system. Error 697 : Black	Error 697
Caution, unknown Consumable detected Go to User Manual "Trouble Shooting" to restore operation	Off	Blink	On	Unknown Consumable detected. Use a special startup(Press Cancel when power on) to start the printer to on-line, but a history will be recorded.	Error 709
Open Cassette Paper Remain %TRAY% Please see HELP for details	Off	Blink	On	Additional paper is detected when a paper jam has occurred. Error 632 : Tray2 Cassette Error 633 : Tray3 Cassette Error 634 : Tray4 Cassette Error 632 : Tray2(LCF) Cassette *When LCF is installed at tray2's position. Error 633 : Tray3(LCF) Cassette *When LCF is installed at tray2's position.	Error 632 633 634

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Open Cover Paper Remain Front Cover Please see HELP for details	Off	Blink	On	Additional paper is detected when a paper jam has occurred. Error 637 : J0: Paper Feed Path	Error 637
Open Cover Paper Remain Top Cover Please see HELP for details	Off	Blink	On	Additional paper is detected when a paper jam has occurred. Error 638 : J1: Paper Transport Path	Error 638
Open Cover Paper Remain Top Cover Please see HELP for details	Off	Blink	On	Additional paper is detected when a paper jam has occurred. Error 639 : J2: Paper Exit Path Error 640 : J4: Duplex Entry Path	Error 639 640
Check Duplex Unit Paper Remain Please see HELP for details	Off	Blink	On	Additional paper is detected when a paper jam has occurred. Error 641 : J5: Duplex Reversal Path Error 642 : J3: Duplex Transport Path	Error 641 642
Toner Sensor Error Please see HELP for details	Off	Blink	On	Something is wrong with the toner sensor. This status is indicated in Shipping Mode only. If the same error is detected in FACTORY Mode, it is indicated as service call of 163. Error 543 : Black	Error 543
Print Cartridge Sensor Error Please see HELP for details	Off	Blink	On	Something is wrong with the toner sensor. This status is indicated in Shipping Mode only. If the same error is detected in FACTORY Mode, it is indicated as service call of 163. Error 543 : Black	Error 543

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Check Paper Paper Multi Feed %TRAY% Please see HELP for details	Off	Blink	On	Warns that inappropriate long paper has been fed from the tray. Check whether Multi-feed has happened. Recovery Print takes place at Cover Open/Close, allowing the operation to continue. ***%TRAY%*** Tray1 Tray2 Tray3 Tray4 MPTray Tray2(LCF) *When LCF is installed at tray2's position. Tray3(LCF) *When LCF is installed at tray3's position.	Error 401
Check Paper Paper Size Error %TRAY% Please see HELP for details	Off	Blink	On	Inappropriate size paper was fed from a tray. Check the paper in the tray or check for Multiple-feed. Open and close the cover to perform recovery printing, and continue. ***%TRAY%*** Tray1 Tray2 Tray3 Tray4 MPTray Tray2(LCF) *When LCF is installed at tray2's position. Tray3(LCF) *When LCF is installed at tray3's position.	Error 400
Open Cover Paper Jam Front Cover Please see HELP for details	Off	Blink	On	IPaper jam occurred during paper feeding from tray. Error 390 : MP Tray	Error 390

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Open Cassette Paper Jam %TRAY% Please see HELP for details	Off	Blink	On	Paper jam occurred during paper feeding from tray. Error 391 : Tray1 Error 392 : Tray2 Error 393 : Tray3 Error 394 : Tray4 Error 392 : Tray2(LCF) *When LCF is installed at tray2's position. Error 393 : Tray3(LCF) *When LCF is installed at tray2's position.	Error 391 392 393 394
Open Cover Paper Jam Front Cover Please see HELP for details	Off	Blink	On	Jam has occurred in paper path. Error 380 : Feed	Error 380
Open Cover Paper Jam Top Cover Please see HELP for details	Off	Blink	On	Jam has occurred in paper path. Error 381 : Transport	Error 381
Open Cover Paper Jam Top Cover Please see HELP for details	Off	Blink	On	Jam has occurred in paper path. Error 382 : Exit Error 383 : Duplex Entry Error 385 : Fuser Unit	Error 382 383 385
Open Front Cover Face Up Stacker Error Please see HELP for details	Off	Blink	On	Indicates stop printing because the face up stacker was operated while printing, and to have assumed the error.	Error 409
Check Duplex Unit Paper Jam Please see HELP for details	Off	Blink	On	Jam has occurred nearby DUPLEX unit. Error 371 : Duplex Input	Error 371

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Open Cover Paper Jam Front Cover Please see HELP for details	Off	Blink	On	Jam has occurred nearby DUPLEX unit. Error 372 : Misfeed from Duplex	Error 372
Install New Image Drum Image Drum Life Please see HELP for details	Off	Blink	On	The toner empty error is occurred after the image drum reached its life. Error 563 : Black This is displayed until a user exchanges the image drum.	Error 563
Install New Print Cartridge Print Cartridge Life Please see HELP for details	Off	Blink	On	The toner empty error is occurred after the image drum reached its life. Error 563 : Black This is displayed until a user exchanges the image drum.	Error 563
Install New Image Drum Image Drum Life To Exceed the Life, Press Online Button Please see HELP for details	Off	Blink	On	Notifies the life of the drum. The operator can prolong the life temporarily by pressing the Online button. Error 567 : Black	Error 567
Install New Print Cartridge Print Cartridge Life To Exceed the Life, Press Online Button Please see HELP for details	Off	Blink	On	Notifies the life of the Print Cartridge(drum). The operator can prolong the life temporarily by pressing the Online button. Error 567 : Black	Error 567

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Install New Image Drum Printing disabled due to low threshold of Image Drum life Please see HELP for details	Off	Blink	On	Notifies the life of the drum absolutely. This status is appeared after the end of the prolonged period. Error 683 : Black	Error 683
Install New Print Cartridge Printing disabled due to low threshold of Print Cartridge life Please see HELP for details	Off	Blink	On	Notifies the life of the Print Cartridge absolutely. This status is appeared after the end of the prolonged period. Error 683 : Black	Error 683
Install New Fuser Unit Fuser Unit Life Please see HELP for details	Off	Blink	On	Notifies the fuser has reached its life. This is the error displayed based on the counter to indicate that the fuser has reached its life, and printing will stop. Warning status takes effect at Cover Open/Close.	Error 354
Check Toner Cartridge Improper Lock Lever Position Please see HELP for details	Off	Blink	On	Indicates that no toner is supplied to (is detected in) the printer. This error is possibly caused by installing the toner cartridge with being unlocked with its lock lever, or its protective tape not removed. Error 547 : Black	Error 547

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Check Print Cartridge Improper Lock Lever Position Please see HELP for details	Off	Blink	On	Shows that the toner cartridge lever has not been locked. Indicates that no toner is supplied to (is detected in) the printer. This error is possibly caused by installing the Print Cartridge with being unlocked with its lock lever, or its protective tape not removed. Error 547 : Black	Error 547
Check Image Drum Please see HELP for details	Off	Blink	On	The image drum is not correctly installed. Error 343 : Black	Error 343
Check Print Cartridge Please see HELP for details	Off	Blink	On	The image drum is not correctly installed. Error 343 : Black	Error 343
Check Fuser Unit Please see HELP for details	Off	Blink	On	The fuser unit is not correctly installed.	Error 320
Close Cover %COVER% Please see HELP for details	Off	Blink	On	The cover is open. Error 310 : Top Cover Error 311 : Front Cover Error 587: Rear Cover	Error 310 311 587

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Wait a Moment Rebooting <n>	Off	On	–	Rebooting of the controller unit. %CODE% is a decimal value (one digit) and represents the reason to reboot. = 0 … Reboot due to a reason other than the followings. = 1 … Reboot due to PJLCommand. = 2 … Reboot in accordance with a menu change. = 3 … Reboot due to quit operator of PostScript Language. = 4 … reboot by Network Utility (including Web).	Error
Shutting down Please wait. Printer will turn off automatically.	Off	Off	–	It is shown that a printer is shutting down. Shutdown processing is started with which press power button after the completion of initialization processing of a printer.	Error
Turn off power Shutdown completed	Off	Off	–	It is shown that the printer completed shutdown processing. (The backlight of LCD puts out the light)	Error
Power Off and Wait for a while 126:Condensing Error	Off	Blink	On	A dew is formed. (Fatal Error is not available in national language.)	Fatal 126
Power Off/On nnn:Error	Off	Blink	On	A fatal error occurred. For details refer to Table 8-1-2 “Service Call Error List.”	Fatal <nnn>
Power Off/On nnn:Error *	Off	Blink	On	A fatal error occurred. '*' specifies the detailed error cause. For details refer to Table 8-1-2 “Service Call Error List.”	Fatal 070 072 073 075 203 204

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Service Call nnn:Error *	Off	Blink	On	A fatal error occurred. '*' specifies the detailed error cause. For details refer to Table 8-1-2 “Service Call Error List.”	Fatal 128 166 168 169 231
Power Off/On nnn:Error PC:nnnnnnnn LR:nnnnnnnn FR:nnnnnnnn	Off	Blink	On	A fatal error occurred. For details refer to Table 8-1-2 “Service Call Error List.” 'nnnnnnnn' specifies the detailed error cause.	Fatal 002~011 F0C F0D FFE FFF
Power Off/On 209:Download Error	Off	Blink	On	Downloading Media Table to PU has failed. (Related to CustomMediaType.)	Fatal 209

Table 6-1-2 Service Call Error List

Panel display	Cause	Check details	Result	Solution
Service Call 001: Error	Machine Check Exception Hardware fault detected.(Board defectiveness or Shortage of power supply volume)			Replace the PU/ CU board.
Power Off/On 002: Error to 007: Error PC: nnnnnnnn LR: nnnnnnnn FR: nnnnnnnn	CPU unexpected exception	Does error display reappear?	Yes	Power Off/On. Replace the PU/ CU board.
Power Off/On 009: Error PC: nnnnnnnn LR: nnnnnnnn FR: nnnnnnnn	CPU unexpected exception	Does error display reappear?	Yes	Power Off/On. Replace the PU/ CU board.
Power Off/On 010: Error PC: nnnnnnnn LR: nnnnnnnn FR: nnnnnnnn	CPU unexpected exception	Does error display reappear?	Yes	Power Off/On. Replace the PU/ CU board.
Power Off/On 011: Error PC: nnnnnnnn LR: nnnnnnnn FR: nnnnnnnn	CPU unexpected exception	Does error display reappear?	Yes	Power Off/On. Replace the PU/ CU board.
Service Call 030: Error	CU RAM Check Error	Does this error message reappear?	Yes	Power Off/On. Replace the PU/ CU board.
Service Call 031: Error	CU Optional RAM Check Error	Is RAM DIMM set properly? Is error recovered by replacing RAM DIMM?	No Yes No	Reset RAM DIMM Replace program RAM DIMM. Replace the PU/ CU board.
Service Call 040: Error	CU EEPROM Error	Does error display reappear?	Yes	Power Off/On. Replace the PU/ CU board.

Panel display	Cause	Check details	Result	Solution
Service Call 042: Error, 043: Error, 045: Error	Flash File System Error	Failed access to Flash set directly on PU/CU board.		Run forced initialization of Flash.(Note that NIC- F/W and Mac address is deleted.After the initialization,it is need to download NIC-F/W and / or Mac address by Maintenance utility.)Press"+","-","CAN-CEL"to turn power ON . Replace the PU/CU board if symptom does not change.
Service Call 049: Error	LED head type (resolution) error	LED Head type was mismatched with CU and Engine.		1) Replace the PU/CU board with the one for the proper head. 2) Replace with a head of proper resolution.
Service Call 051: Error	CU Fan Error Abnormal CPU cooling fan on PU/CU board.	Is CU Fan connector set properly? Is error recovered by replacing fan?	No Yes No	Connect Properly. Replace fan. Replace the PU/CU board.
Power Off/On 052: Error	DMA Abort Error detected in Image processor.	Does error reoccur?	Yes	Power Off/On. Replace the PU/CU board.
Service Call 067: Error	SleepMode Interface Monitor I/F error with CU F/W.	Does error reoccur?	Yes	Power Off/On. Replace the PU/CU board.

Panel display	Cause	Check details	Result	Solution
Service Call 069: Error	The NIC device had not worked correctly.	Does error reoccur?	Yes	Power Off/On Replace the PU/CU board.
Power Off/On 070: Error	PSE firmware fault was detected.	Does error reoccur?	Yes	Power Off/On. Replace the PU/CU board.
Power Off/On 072: Error	Engine I/F error between PU-CU.	Does error reoccur?	Yes	Power Off/On. Replace the PU/CU board.
Power Off/On 073: Error	Video Error; Fault detected when image data was extended.	Does error reoccur?	Yes	Power Off/On. Replace the PU/CU board.
Power Off/On 075: Error	Video Error; Fault detected when image data was extended.	Does error reoccur?	Yes	Power Off/On. Replace the PU/CU board.
Power Off/On 077: Error	The video decompress fault was detected on the image data expansion.	Does error reoccur?	Yes	Replace the PU/CU board
Service Call 081: Error	The CU initializer detected an error in the backuped data.	Does error reoccur?	Yes	Power Off/On. Replace the PU/CU board.
Service Call 104: Error	Engine EEPROM setting check was OK when power ON. Then detect read/write error.	Does error reoccur?	Yes	Power Off/On. Replace the PU/CU board.
Service Call 106: Error	Abnormal engine control logic.	Does error reoccur?	Yes	Power Off/On. Replace the PU/CU board.
Service Call 112: Error	Detected illegal 2nd Tray.	Is a 2nd Tray provided for this model installed?	No	Install a correct 2nd Tray.
Service Call 113: Error	Detected illegal 3rd Tray.	Is a 3rd Tray provided for this model installed?	No	Install a correct 3rd Tray.
Service Call 114: Error	Detected illegal 4th Tray.	Is a 4th Tray provided for this model installed?	No	Install a correct 4th Tray.

Panel display	Cause	Check details	Result	Solution
Service Call 121: Error	High-voltage power supply I/F error.	Is cable between PU board and high-voltage power unit connected properly? Is there no improperly connections?	No Yes No	Connect properly. Check improper connections for high-voltage. Replace the hige-voltage power supply.
Service Call 122: Error	Low-voltage power supply FAN error. Low-voltage power supply temperature error.	Is the FAN (bottom right of the front) of the low voltage power supply block working? Is the FAN connector connected correctly?	No Yes No Yes	Check connections for connector of the FAN. Replace the low-voltage power supply. Replace the FAN. Replace the low-voltage power supply.
Service Call 123: Error	Abnormal environment humidty /Not connected humidity sensor.	Does error reoccur?	Yes	Power Off/On. Replace the control panel board (PCQ board).
Service Call 124: Error	Abnormal environment temperature.	Does error reoccur?	Yes	Power Off/On. Replace the control panel board (PCQ board).
Power Off/On 126: Error	Condensation in the printer was detected.	Condensation iss likely to occur in printers carried from the outside. Turn on the printer again after it is exposed to room temperature for two hours to half a day. Does the error reoccur?	Yes	After leaving the printer at room temperature, turn on the power again. Replace the control panel board (PCQ board).
Service Call 127: Error	Error detected at the fuser unit cooling FAN.	Is the FAN connector connected properly? Does error reoccur?	No Yes Yes	Connect properly again. Replace the FAN motor. Replace the PU/CU board.

Panel display	Cause	Check details	Result	Solution
Service Call 128: Error	Error detected at the engine FAN motors. 05: Fuser side FAN 08: REAR FAN 0B: ID FAN 2	Is the FAN connector connected properly? Does error reoccur?	No Yes Yes	Connect properly again. Replace the FAN motor. Replace the PU/CU board.
Service Call 134: Error	LED head fault detected. (134=K)	Is LED head properly set? Does error reoccur?	No Yes Yes	Set properly for LED head unit. Turn power ON agein. Replace LED head unit
Service Call 155: Error	Fuser unit fuse cannot be disconnected.	Is fuser unit set properly? Does error reoccur?	No Yes Yes	After cleaning for fuser connector, reset. Turn power ON again. Replace the PU/CU board.
Service call 163: Error	Error detected by toner sensor. (163=K) This error does not occur with the factory default settings.	Is toner cartridge setting? Is toner lock lever setting? Does error reoccur?	No No Yes	Set toner cartridge. Turn a lock lever of toner to a fixed position. Replace toner sensor or assembly.

Panel display	Cause	Check details	Result	Solution
Service Call 166: Error	An abnormality was detected with the power supply temperature thermistor. 01: Short 02: Open 03: High temp. 04: Low temp.	01, 02: Does error reoccur?	 Yes	Power Off/On. Replace the low voltage power supply unit.
		Does error reoccur?	Yes	Replace the PU/CU board.
		Does error reoccur?	Yes	Replace the cable between the low voltage power supply unit and the PU/CU board.
		03:		Remove anything obstructing the ventilation slots if any and restore the power.
		Does error reoccur?	Yes	Replace the low voltage power supply unit.
		Does error reoccur?	Yes	Replace the PU/CU board.
		Does error reoccur?	Yes	Replace the cable between the low voltage power supply unit and the PU/CU board.
		04:		Raise the room temperature and restore the power.
		Does error reoccur?	Yes	Replace the low voltage power supply unit.
		Does error reoccur?	Yes	Replace the PU/CU board.
		Does error reoccur?	Yes	Replace the cable between the low voltage power supply unit and the PU/CU board.

Panel display	Cause	Check details	Result	Solution
Service Call 167: Error	ThermistorSlope Error	Is the error message displayed? Does error reoccur?	Yes Yes	Power Off/On. After leaving the printer for 30 minutes, turn on the printer again.
Service Call 168: Error	Compensation Thermistor Error 01: Short 02: Open 03: High temp. 04: Low temp.	Is the error message displayed? Does error reoccur?	Yes Yes	Power Off/On. After leaving the printer for 30 minutes, turn on the printer again.
Service Call 169: Error	Upper Side Thermistor Error 01: Short 02: Open 03: High temp. 04: Low temp.	Is the error message displayed? Does error reoccur?	Yes Yes	Power Off/On. After leaving the printer for 30 minutes, turn on the printer again.
Service Call 170: Error, 171: Error	Short circuit in fuser thermistor or open detected.	Does error reoccur?	Yes	Power Off/On. Replace the fuser unit.
Service Call 172: Error, 173: Error	Abnormal temperature detected by fuser thermistor (high-temp or low temp.)	Does error reoccur?	Yes	Power Off/On. Replace the fuser unit.
Service Call 182: Error to 184: Error	Option unit I/F error 182=Tray2 183=Tray3 184=Tray4	Does error reoccur?	Yes	Power Off/On. After checking connention parts of connector,replace option unit.
Power Off/On 190: Error	System Memory Overflow.	Does error reoccur?	Yes	Power Off/On. Add option RAM DIMM.
Service call 200: Error to 202: Error	PU Firmware download Error. (These problems are not occurred in the usual operating.)	Error occured while writing over the PU firmware.		Turn the printer OFF/ON, and retry to download the PU firmware again.

Panel display	Cause	Check details	Result	Solution
Power Off/On 203: Error, 204: Error	An error was detected of the CU program. (These problems are not occurred in the usual operating.)	Reinstall the PU/CU board. Is the error message displayed again?		After turn power OFF, check connections between CU board and PU board. Then turn power ON again.
Power Off/On 207: Error, 208: Error	An error was detected of the CU program. (These problems are not occurred in the usual operating.)	Reinstall the PU/CU board. Is the error message displayed again?		After turn power OFF, check connections between CU board and PU board. Then turn power ON again.
Power Off/On 209: Download Error	Media Table download Error. (This problem is not occurred in the usual operating.)	Downloading Media Table to PU has failure. (Related to Custom Media Type)		Turn the printer OFF/ON, and retry to download again.
Power Off/On 213: Error, 214: Error	An error was detected of the CU program. (These problems are not occurred in the usual operating.)	Error occurred while printing		After turn power OFF, check connections between CU board and PU board. Then turn power ON again.

Panel display	Cause	Check details	Result	Solution
Service Call 231: Error	Tag Interface Error 05: K reader (TC/ID) - Tag interface connection error 11: K reader (TC/ID) - Tag interface connection error	05, 11: Does error reoccur? Does error reoccur after the power restoration? Is the Tag cable connected properly? Does error reoccur after the power restoration?	 Yes Yes No Yes	 Replace the toner cartridge, ID or Print Cartridge. Check the Tag cable. Connect the cable properly. Replace the PU/CU board.
Power Off/On 250: Error	Secure File Erasing Error	Did the user accept to execute Erase HDD?		Inform the user that it is necessary to execute Disk ERASE to restore the HDD defaults in order to delete the encrypted file.
Service Call 251: Error	Secure Disk Erasing Error	Error occurred during Disk ERASE. Does error reoccur?	 Yes	Power Off/On. Replace the HDD.

Panel display	Cause	Check details	Result	Solution
Service Call 254: Error	An unexcepted error occurred during initializing the security mode. Error cause information was displayed after an error number.	Does error reoccur?	Yes	Power Off/On. Regenerate an encryption key. If it doesn't solve the problem, replace the PU/CU board or encrypted HDD.
Service Call 257: Error	An unexcepted error occurred during initializing HDD. HDD Error cause information was displayed after an error number.	Does error reoccur?	Yes	Power Off/On. Format the HDD again. If it does not solve the problem, replace the HDD.
Power Off/On 901: Error, 902: Error	Short or open in Internal thermistor detected.	Is internal thermistor cable setting proper? Does error reoccur?	No Yes Yes	Connect cable set properly again. Turn power ON again. Replace the internal thermistor.
Power Off/On 903: Error, 904: Error	Abnormal temperature detected by Internal thermistor (high-temp or low temp.)	Is internal thermistor cable setting proper? Does error reoccur?	No Yes Yes	Connect cable set properly again. Turn power ON again. Replace the internal thermistor and leave aside for 30 minutes. Then turn power ON again.
Power Off/On 911: Error, 912: Error	The Geared Motor Error at the Optional Tray. 911:Tray2 912 Tray3	Is the indicated tray installed properly? Does error reoccur?	No Yes Yes	Install the optional tray properly. Turn power ON again. Replace the Geared Motor of indicated tray.

Panel display	Cause	Check details	Result	Solution
Power Off/On 918: Error	An error was detected with the Duplex Fan Motor.	Does error reoccur? Does error reoccur after power restoration?	Yes Yes	Power Off/On. Check if the FAN is connected properly. Replace the FAN.
Power Off/On 923: Error	An error was detected with the image drum motor by overload.	Does error reoccur after power restoration? Does error reoccur after power restoration?	Yes Yes	Check if the image drum is installed properly. Replace the image drum unit. Replace the ID motor.
Power Off/On 928: Error	An error was detected the Fuser Motor rotation by overload.	Does error reoccur after power restoration? Does error reoccur after power restoration?	Yes Yes	Check if the fuser is installed properly. Replace the fuser. Replace the fuser motor.
Power Off/On 933: Error	Tray2 CPU Clock Frequency Error	Does error reoccur after power restoration? Does error reoccur after power restoration?	Yes Yes	Replace the unit. Replace the PU/CU board.
Power Off/On 934: Error	Tray3 CPU Clock Frequency Error	Does error reoccur after power restoration? Does error reoccur after power restoration?	Yes Yes	Replace the unit. Replace the PU/CU board.
Power Off/On 935: Error	Tray4 CPU Clock Frequency Error	Does error reoccur after power restoration? Does error reoccur after power restoration?	Yes Yes	Replace the unit. Replace the PU/CU board.
Power Off/On 941: Error	A watch dog timer error was detected.	Does error reoccur?	Yes	Power Off/On. Replace the PU/CU board.
Power Off/On 942: Error	An undefined interruption was detected.	Does error reoccur?	Yes	Power Off/On. Replace the PU/CU board.

Panel display	Cause	Check details	Result	Solution
Power Off/On 943: Error	PU CPU ran away out of control due to noise etc.	Does error reoccur?	Yes	Power Off/On. Replace the PU/CU board.
Power Off/On 944: Error	An error was detected with accessing the Dcon circuit.	Does error reoccur?	Yes	Power Off/On. Replace the PU/CU board.
Power Off/On 945: Error	SDRAM access at power on failed.	Does error reoccur?	Yes	Power Off/On. Replace the PU/CU board.
Power Off/On 947: Error	EMF Missing Error	Does error reoccur?	Yes	Power Off/On. Replace the PU/CU board.
Power Off/On 948: Error	Detect hopping motor rotate error	Error occurred when hopping motor error detected		Power Off/On.
Service Call 982: Error	Unsupport Tray Error	Are many trays beyond the specification installed?	Yes	Use trays as many as specified.
Service Call 984: Error	Black Tag Version Mismatch	Does error reoccur?	Yes	Power Off/On. Replace the toner cartridge, the image drum or Print Cartridge.
Service Call 999: Error	The PU/CU firmware has a problem with its compatibility.			
Power off/on F0C: Error PC:nnnnnnnn LR:nnnnnnnn FR:nnnnnnnn	An error was detected of the CU program.	Does error reoccur?	Yes	After turn power OFF, check connections between CU board and PU board. Then turn power ON again. Replace the PU/CU board.
Power off/on FFF: Error PC:nnnnnnnn LR:nnnnnnnn FR:nnnnnnnn	An error was detected of the CU program.	Does error reoccur?	Yes	After turn power OFF, check connections between CU board and PU board. Then turn power ON again. Replace the PU/CU board.

Note) Service call errors, Error: 169, Error: 171, Error: 172, Error: 173, Error: 903 and Error: 904, can occur when the printer temperature is under 0°C; therefore, if the printer temperature is low, turn on the printer after the printer temperature has risen enough.

6.5.2 Preparation for troubleshooting

Note! When replacing the PU/CU board, load the EEPROM chip contents of the old board first, and copy them to the new board upon completion of the replacement. (Refer to section 4.4.1 Precautions when replacing the engine control board.)

6.5.2 (1) LCD display error

Memo For the numbers from ① to ㉝ after the name of the respective connectors, refer to section 6.5.2 (18) “Wiring diagram”.

(1-1) LCD does not display anything.

Check item	Check work	Actions to be taken at NG
(1-1-1) Check the fuse.		
Fuse of the PU/CU board	Check if F3 or F5 has blown out.	Replace the PU/CU board.
(1-1-2) Check the system connection		
Connection between the low voltage power supply unit and the PU/CU board	Check if the cable from the low voltage power supply to the POWER connector ⑪ of the PU/CU board is normally connected or not. Check if the connector is connected only in the half-way or not, and check if the connector is inserted in slanted angle or not.	Re-connect the cable normally.
Cable assembly connecting the low voltage power supply unit and the PU/CU board	Check if the cable is half-open circuit. Check if sheath of the cable has not peeled off or not. Check if the cable assembly is defective such as internal wires are disconnected or not.	Replace the cable with the normal cable.
Connection between the PU/CU board and the control panel board	Check if the 10-conductor FFC is connected to the OPE connector ⑲ of the PU/CU board normally or not. Check if the 10-conductor FFC is connected to the OPE connector ㉑ of the control panel board normally or not. Check if the connector is connected in the halfway only or not, and check if the connector is inserted in a slanted angle or not.	Re-connect the cable normally.
FFC connecting the PU/CU board and the control panel board	Check if the cable has open circuit or not with VOM. Check if sheath of the cable has not peeled off or not by visual inspection.	Replace the FFC with the normal FFC.
(1-1-3) Check the peripherals of the power supplies		
AC power that is supplied to the printer	Check the supplied voltage of the AC power source.	Supply the AC power.
5V power that is supplied to the PU/CU board	Check for 5V power supply at pin-1, -3 and -4 of the POWER connector ⑪ of the PU/CU board.	Replace the low voltage power supply unit.
3.3V power that is supplied to the PU/CU board	Check for 3.3V power supply at pin-22 of the POWER connector ⑪ of the of the PU/CU board.	Replace the low voltage power supply unit.
3.3V power that is supplied to the control panel board	Check for 3.3V power supply at pin-4 of the OPE connector ㉑ of the control panel board.	Replace the PU/CU board.
(1-1-4) Check that power supply circuit has no short-circuit.		
5V power and 24V power that are supplied to the PU/CU board.	Check that power supply circuit has no short-circuit at the POWER connector ⑪ of the PU/CU board. The follow voltage must appear respectively. pin-11, -13, -14, -15, -16: 24V pin-1, -2, -3, -4: 5V pin-5, -6, -7, -8, -9: 0VL pin-17, -18, -19, -20, -21: 0VP pin-10: 5Vs If any voltage does not appear and short-circuit is detected, locate the source of the short-circuit as follows: Disconnect the cables that are connected to the PU/CU board one cable after another until location of the short-circuit is found out.	Replace the part causing short-circuit.
(1-1-5) LSI operation check		
I/F signal supplied from the PU/CU board to the control panel board.	Check if signals are output to the OPE connector ⑲ of the PU/CU board. Pin-5: Send data (Sending data from the PU/CU board)	Replace the PU/CU board.
I/F signal supplied from the PU/CU board to the control panel board.	Check if signals are output to the OPE connector ⑲ of the PU/CU board. Pin-7: Send data (Sending data from the PU/CU board) If it is normal, signals are output always.	Replace the control panel board.

(1-2) Error message related to the control panel

Check item		Check work	Actions to be taken at NG
(1-2-1) Error message			
	Error message	Check the error contents by referring to the Error Message List.	Follow the instruction.

(1-3) “RAM checking” or “Initializing” remains displayed.

Check item		Check work	Actions to be taken at NG
(1-3-1) Control panel displays freezes.			
	Control panel display	The control panel keeps displaying “RAM checking” or “Initializing.”	Replace the PU/CU board. If the problem remains unsolved after an optional RAM or SD memory card is removed, replace the PU/CU board.

6.5.2.(2) Abnormal operations of the printer after the power is turned on

(2-1) Any operation does not start at all.

Check item		Check work	Actions to be taken at NG
(2-1-1) Check the peripherals of the power supplies			
	AC power that is supplied to the printer	Check the supplied voltage of the AC power source.	Supply the AC power.
	5V power and 24V power that are supplied to the PU/CU board	Check the power supply voltages at the POWER connector ⑪ of the PU/CU board. pin-11, -13, -14, -15, -16: 24V pin-1, -2, -3, -4: 5V pin-5, -6, -7, -8, -9: 0VL pin-17, -18, -19, -20, -21: 0VP pin-10: 5Vs	Replace the low voltage power supply unit.
(2-1-2) Power switch LED check			
	Power switch LED	Check if the LED light stays off.	Replace one of the following: low voltage power supply unit, PU/CU board, power SW board, the cable between the low voltage power supply unit and the PU/CU board, the cable between PU/CU board or the power SW board. When blinking: Replace one of the following: low voltage power supply unit, PU/CU board, power SW board, or the cable between the low voltage power supply unit and the PU/CU board board.

Check item	Check work	Actions to be taken at NG
(2-1-3) Check the system connection		
Connection condition of the control panel	Check contents of (1-1). The printer will not start operation until the control panel is detected and its operation is started.	Follow the contents of (1-1).

(2-2) Abnormal sound is heard.

Check item	Check work	Actions to be taken at NG
(2-2-1) Check loss of synchronization of motor (Driver error)		
Condition of the motor cable	Check for normal wiring conditions of the respective motors. Perform the visual check and measure resistance at open circuit with VOM as follows. Remove the motor cable at the board end. Measure resistance between the respective pins of the removed cable and FG with VOM.	Replace the motor cable. Re-connect the cable for normal conditions.
Operating conditions of the respective motors	Check if operations of the respective motors are normal or not by using the self-diagnostic mode. Check if any load exists or not. "Buzzer" sound when an error occurs.	Replace the PU/CU board.
(2-2-2) Check loss of synchronization of motor (Abnormal load of the consumable item)		
Operating conditions of the respective motors	Check if operations of the respective motors are normal or not by using the self-diagnostic mode. Check if any load exists or not. "Buzzer" sound when an error occurs.	Replace the corresponding consumable item. If any attempt of using new part as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

Check item	Check work	Actions to be taken at NG
(2-2-3) Check the jumping phenomena of gear tooth. (Abnormal load of the consumable item)		
Operating conditions of the respective motors	Check if operations of the respective motors are normal or not by using the self-diagnostic mode. Check if any load exists or not. "Buzz buzz" sound is generated when an error occurs.	Replace the corresponding consumable item. If any attempt of using new part as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
Installation condition of each consumable item	Check by visual inspection if the respective consumable items are installed in their normal positions in which gears of the consumable items engage accurately or not.	Replace an appropriate mechanical part as required, or adjust or repair
(2-2-4) Check the wiring conditions of cables		
Wiring conditions of the cables in the vicinity of the respective cooling fans	Check if the cable contacts with the fan blade because wiring conditions of the cables near fan is poor or not. "Clap, clap" sound is generated when an error occurs.	Correct the wiring conditions of the cable.

(2-3) Bad odors are generated.

Check item	Check work	Actions to be taken at NG
(2-3-1) Locating the exact position of generating bad odor		
Fuser unit	Remove the fuser unit and check the odor.	Implement section (2-3-2).
Low voltage power supply unit	Remove the low voltage power supply unit and check the odor.	Replace the low voltage power supply unit
(2-3-2) Check conditions of the fuser unit		
Life count of fuser unit	Check the life count of the fuser unit by using the self-diagnostic mode.	The fuser close to the new fuser unit smells some odors.
Check that no foreign material exists in fuser unit.	Check that no foreign materials such as paper are stuck inside of the fuser unit.	Remove the foreign material.

(2-4) Rise-up time is slow.

Check item	Check work	Actions to be taken at NG
(2-4-1) Check the fuser unit		
Heater	Confirm the voltage specification on the label on the rear of the fuser unit.	Replace the fuser unit.
(2-4-2) Check the optional parts ***Note!***		
Add-on memory	Install the optional parts (add-on memory) again and re-check the operations.	Replace the optional part.
SD memory casd	Install the optional part (SD memory card) again and recheck the operations.	Replace the optional part.

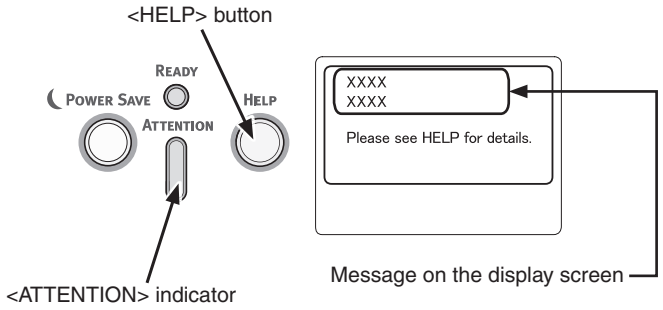
Note! If any troubles such as printer does not start up normally occurs, remove the CU options (RAM, SD memory card) and check if the trouble symptom changes or not.

(3) Error code numbers and locations of paper jams

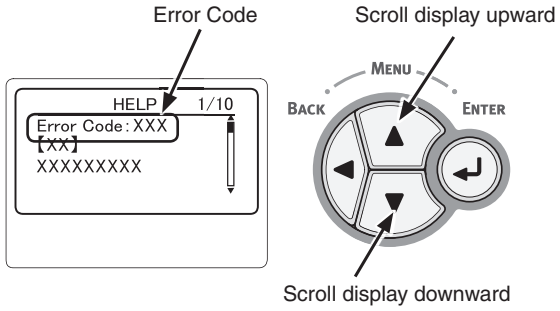
When paper jams occur or paper remains in the printer, “Paper Jam”, or “Paper Remain” is displayed on the operation panel.

By pressing the Help button, a method to remove the paper is displayed, so remove the paper in the printer according to the remedy displayed.

In addition, refer to paper removal methods described on the reference pages given in the table on the right.

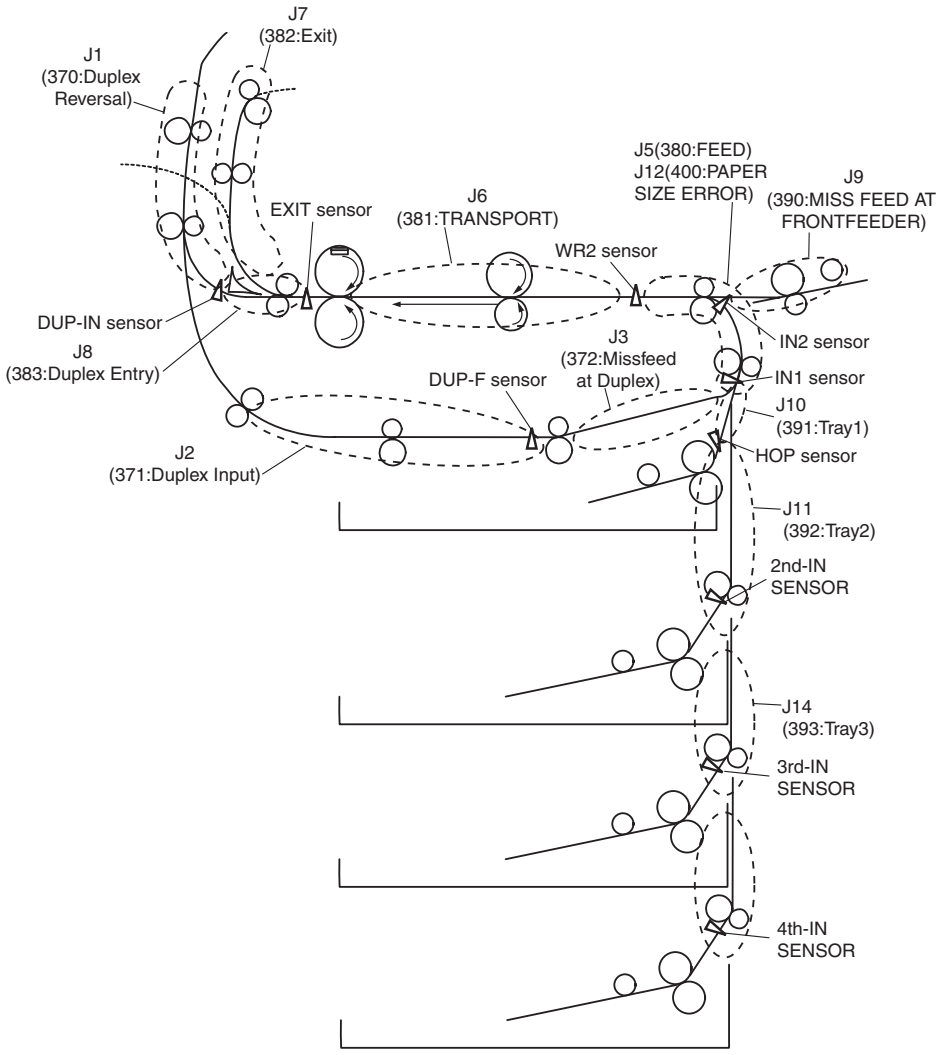


Display Screen when the <HELP> button is pressed



Message on the display screen	Error code(s)	Reference page
Open Cassette Paper Jam %Tray%	391, 392, 393, 394	page 6-37
Open Cassette Paper Remain %Tray%	631, 632, 633, 634	
Open Cover Paper Jam Front Cover	372	page 6-38
Open Cover Paper Jam Front Cover	380	page 6-40
Check Paper Paper Multi Feed %Tray%	401	
Open Cover Paper Jam Front Cover	390	page 6-41
Open Cover Paper Remain Front Cover	637	
Open Cover Paper Jam Top Cover	381	page 6-42
Open Cover Paper Remain Top Cover	638	
Open Cover Paper Jam Top Cover	382, 383, 385	page 6-44
Open Cover Paper Remain Top Cover	639, 640	
Check Duplex Unit Paper Jam	370, 371, 373	page 6-46
Check Duplex Unit Paper Remain	641, 642	

Outline drawing of jam locations

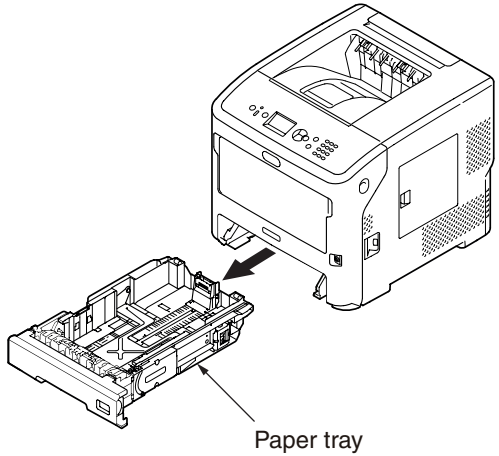


391, 392, 393, 394 Open Cassette Paper Jam %Tray%	634, 632, 633, 634 Open Cassette Paper Remain %Tray%

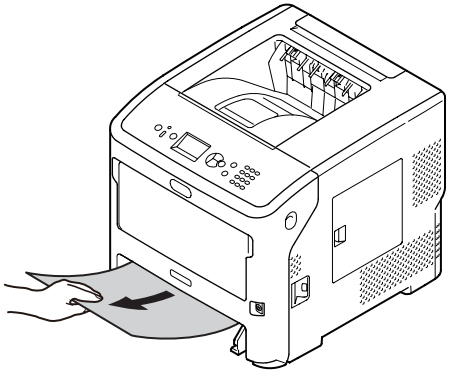
Remedy when the above messages are displayed

Tray1 is applied here as an example.

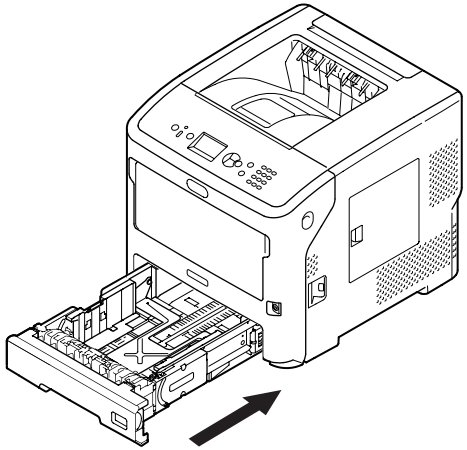
(1) Pull the indicated paper tray out from the printer.



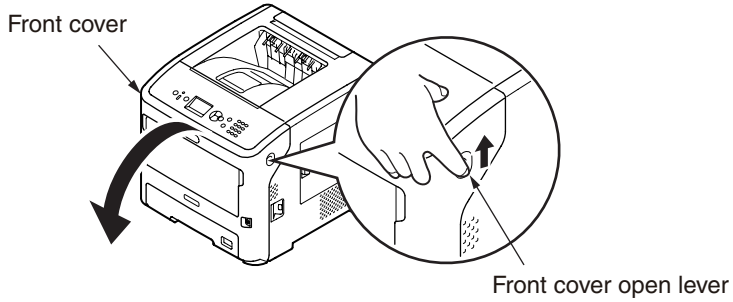
(2) Remove the jammed paper.



(3) Place the paper tray back into the printer.



(4) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.



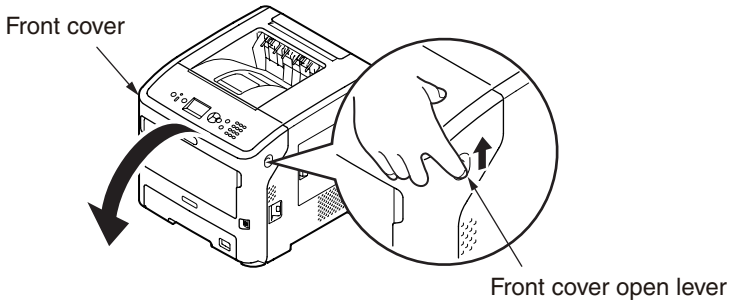
(5) Close the front cover.

Memo Keep it in mind that the error message is not cleared unless the front cover is opened and closed following removal of the jammed paper.

372
Open Cover
Paper Jam
Front Cover

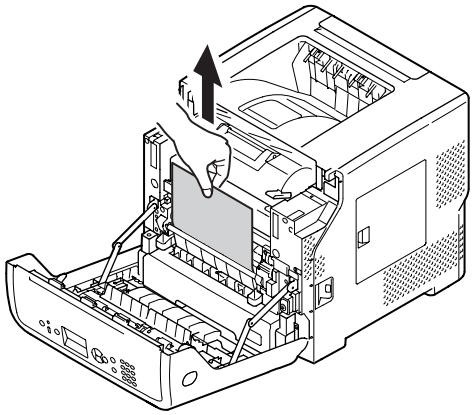
Remedy when the above messages are displayed

(1) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.



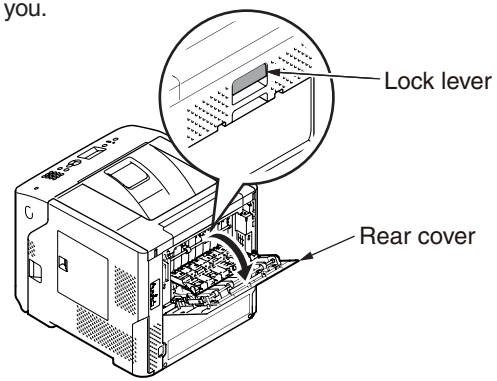
(2) Remove the jammed paper gently.

① If an edge of jammed paper can be seen

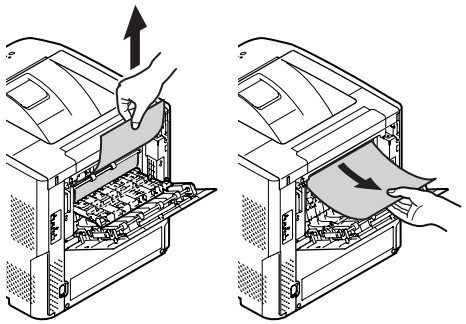


② If you cannot find the jammed paper

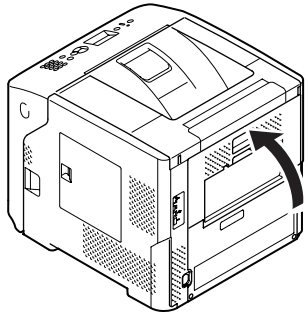
1. Open the rear cover by pulling the lock lever on the back side of the printer toward you.



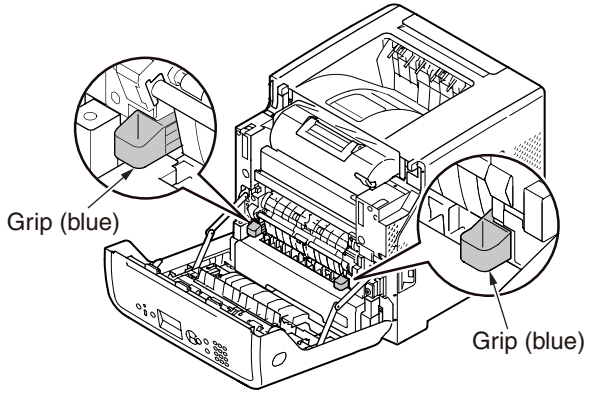
2. Check for jammed paper inside the printer. If jammed paper remains, remove it.

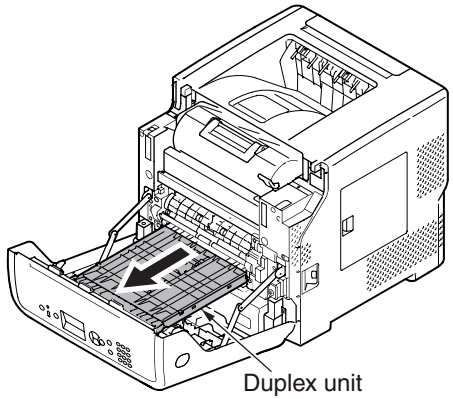


3. Close the rear cover.

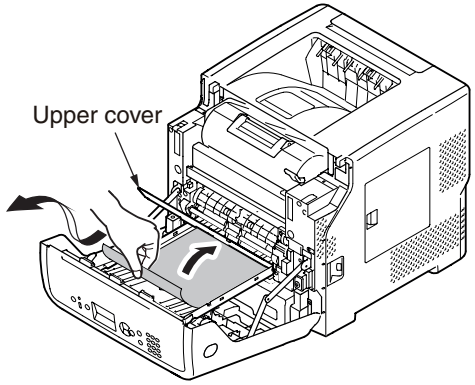


5. Pull out the duplex unit by holding the grips on its both sides.

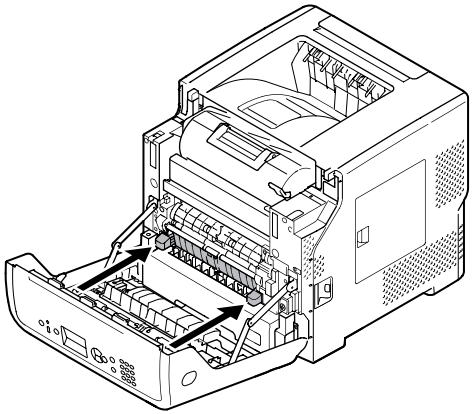




6. Open the upper cover of the duplex unit and check for jammed paper in the duplex unit. If jammed paper remains, pull it out. Then, close the upper cover.



5. Return the duplex unit to the printer.

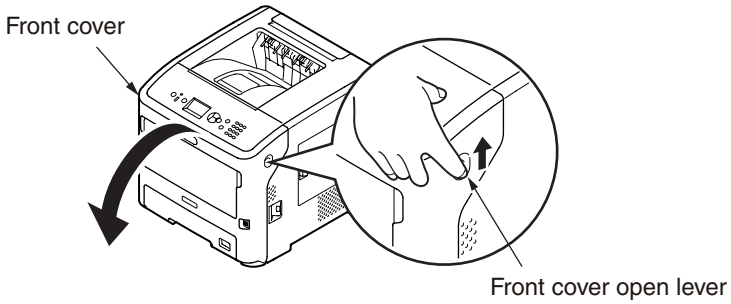


(3) Close the front cover.

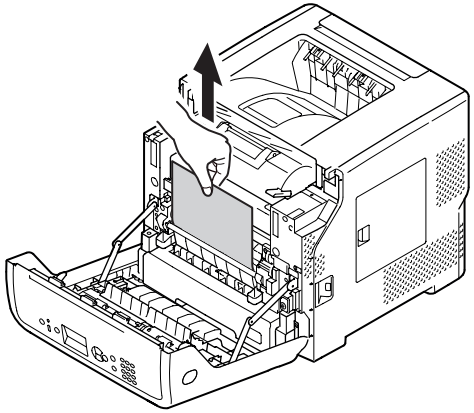
380 Open Cover Paper Jam Front Cover	401 Check Paper Paper Multi Feed %Tray%

Remedy when the above messages are displayed

(1) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.



(2) Remove the jammed paper gently.

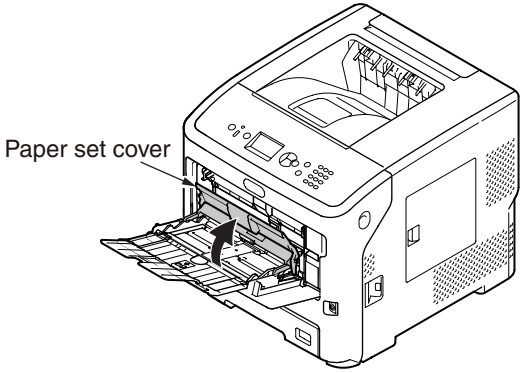


(3) Close the front cover.

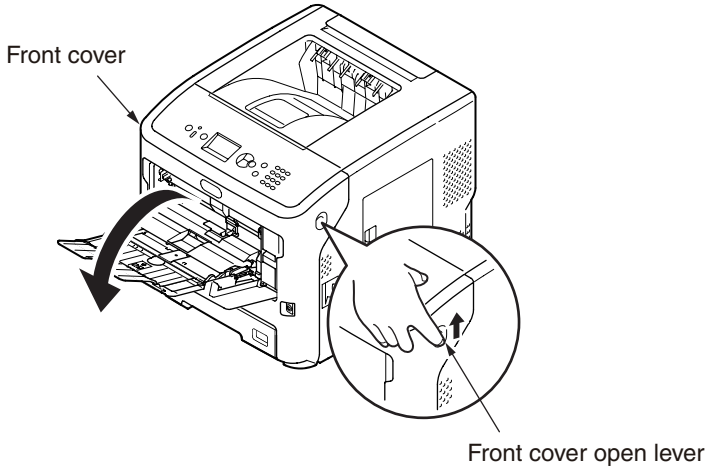
390 Open Cover Paper Jam Front Cover	637 Open Cover Paper Remain Front Cover

Remedy when the above messages are displayed

(1) If there is any paper on the MP Tray, open the paper set cover and take it out.

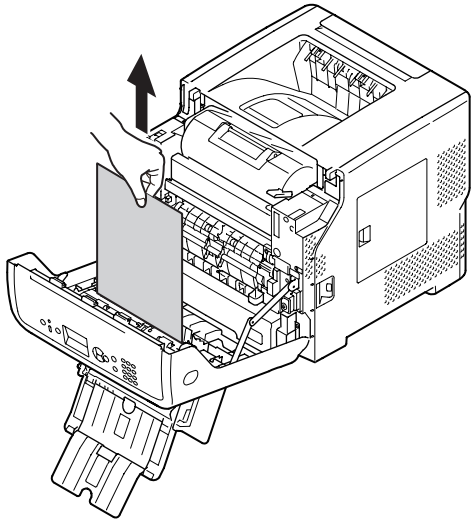


(2) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.

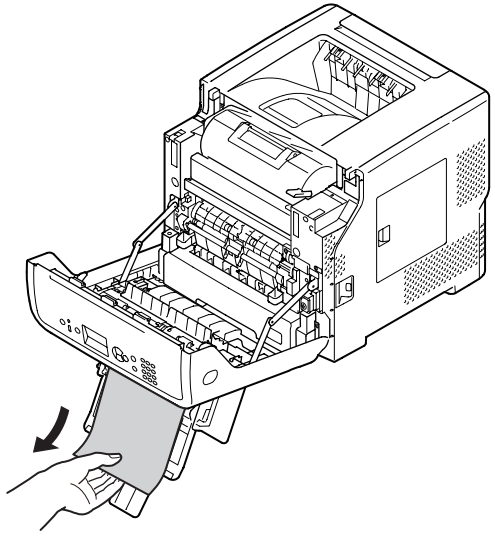


(3) Remove the jammed paper gently.

① If an edge of jammed paper can be seen



② If you cannot find the jammed paper

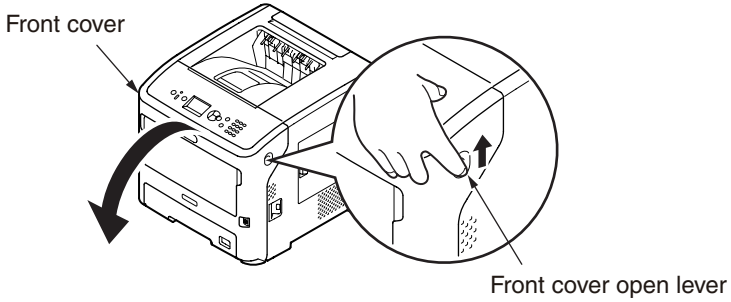


(3) Close the front cover.

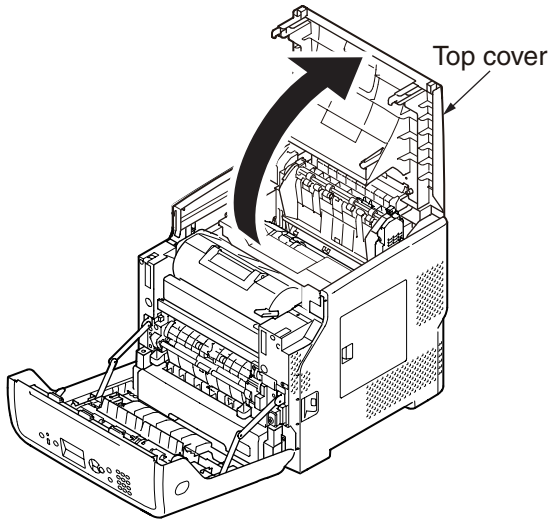
381 Open Cover Paper Jam Top Cover	368 Open Cover Paper Remain Top Cover

Remedy when the above messages are displayed

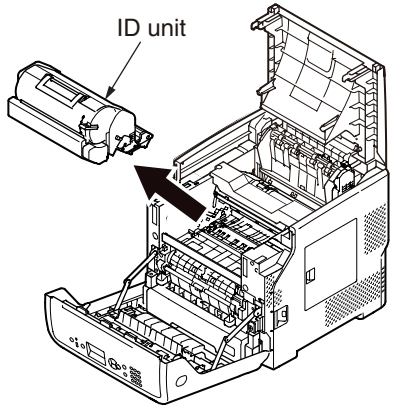
(1) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.



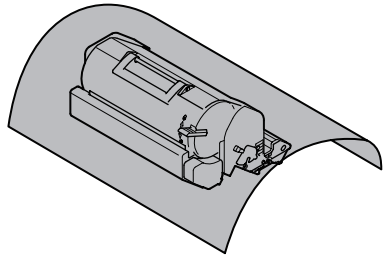
(2) Open the top cover.



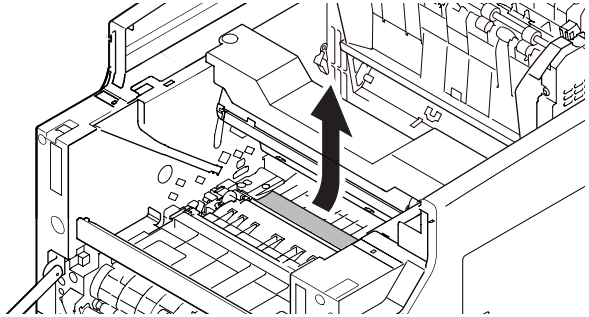
(3) Remove ID unit and place it on new paper etc. on a flat surface.



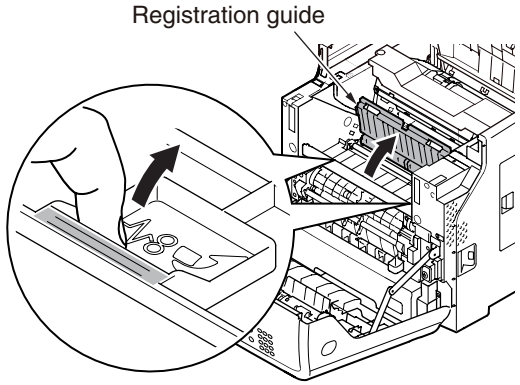
(4) Cover the removed ID unit with paper so that it will not exposed to light.



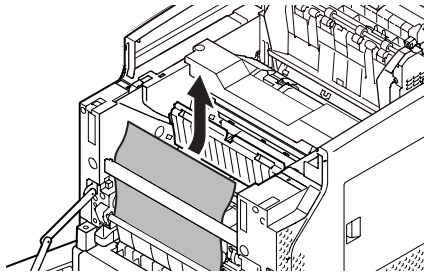
(5) Pull out the jammed paper gently toward the inside of the printer (in the direction of the arrow) if an edge of jammed paper can be seen on the back side of the registration guide.



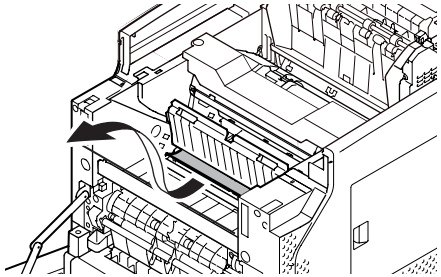
(6) Open the registration guide in the direction of the arrow.



(7) Pull out the jammed paper gently in the direction of the arrow if an edge of jammed paper can be seen on the front side.

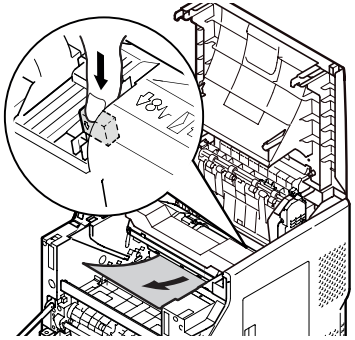


(8) Pull out the jammed paper gently in the direction of the arrow if an edge of jammed paper can be seen on the back side.

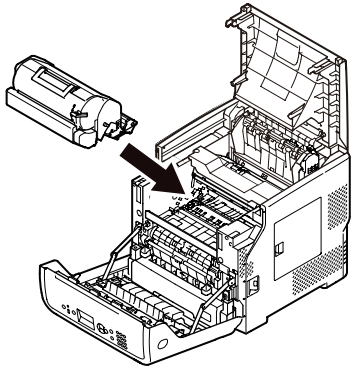


(9) Pull out the jammed paper gently while tilting the release levers (6) on the fuser unit forward if an edge of jammed paper cannot be seen.

If an edge of jammed paper still remains inside the unit, pull out the jammed paper gently toward the inside of the printer.



(10) Return the ID unit into the printer carefully.



(11) Close the top cover.

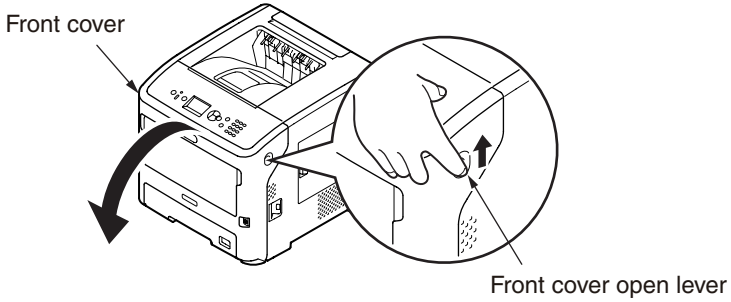
(12) Close the front cover.

Note! Cannot close the front cover securely if the top cover is not closed.

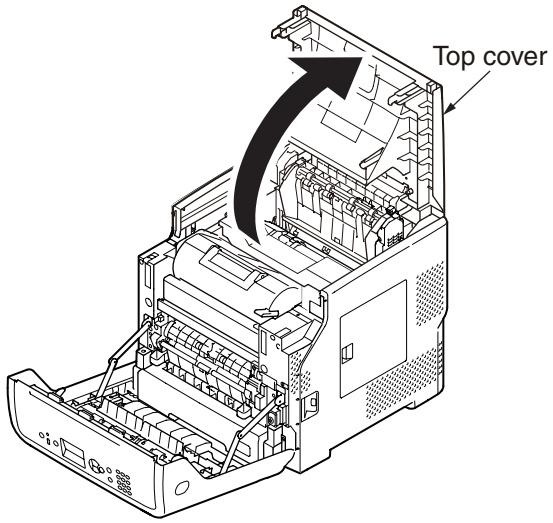
382, 383, 385 Open Cover Paper Jam Top Cover	639, 640 Open Cover Paper Remain Top Cover

Remedy when the above messages are displayed

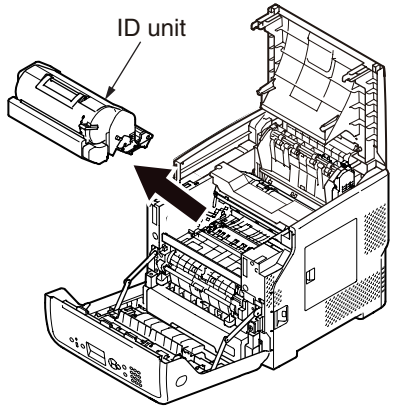
(1) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.



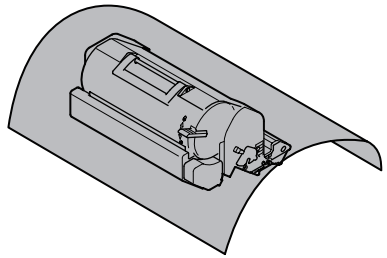
(2) Open the top cover.



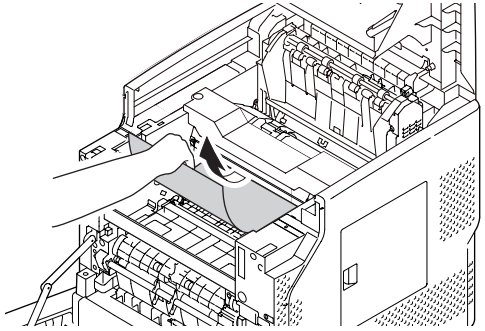
(3) Remove ID unit and place it on new paper etc. on a flat surface.



(4) Cover the removed ID unit with paper so that it will not exposed to light.



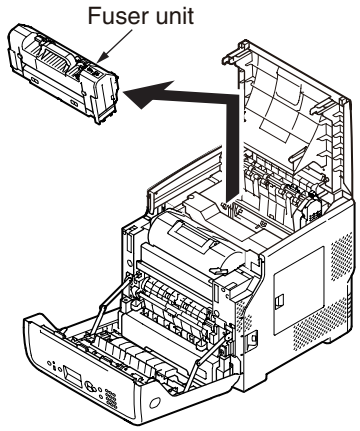
(5) Remove the jammed paper remaining inside of the unit.



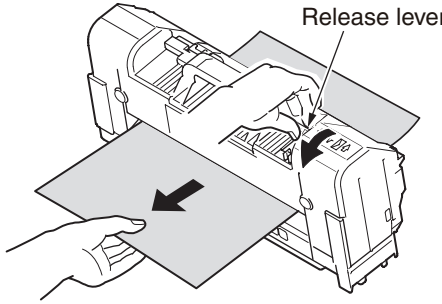
(6) Hold the fuser unit handle and lift the fuser unit out of the printer.

⚠Caution	Possible to get burned.	

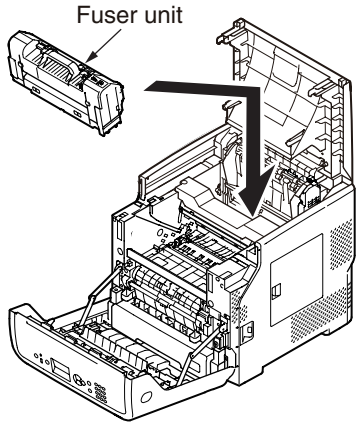
Do not touch the fuser unit. It is hot.



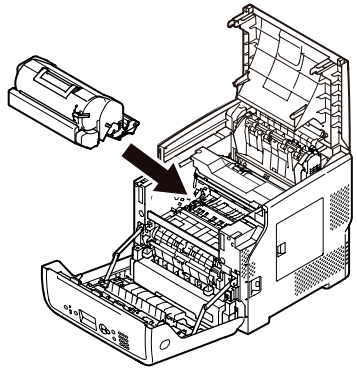
(7) Tilt the release lever on the fuser unit forward, and be sure to pull out the jammed paper forward gently.



(8) Hold the fuser unit handle and return the fuser unit into its original position.



(9) Return the ID unit into the printer carefully.



(10) Close the top cover.

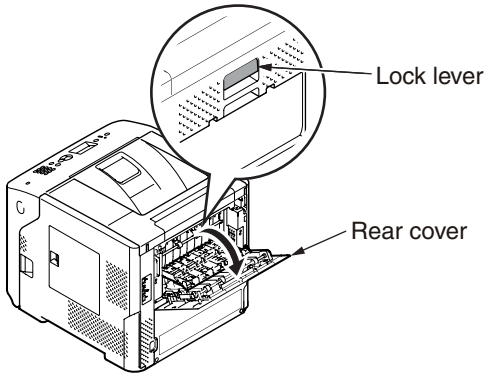
(11) Close the front cover.

Note! Cannot close the front cover securely if the top cover is not closed.

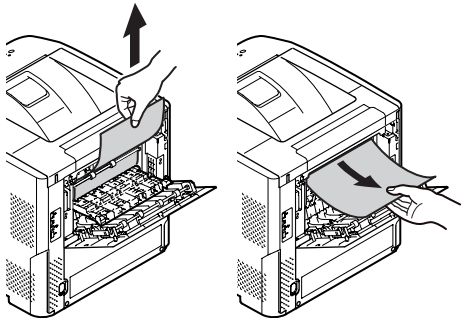
370, 371, 373 Check Duplex Unit Paper Jam	641, 642 Check Duplex Unit Paper Remain

Remedy when the above messages are displayed

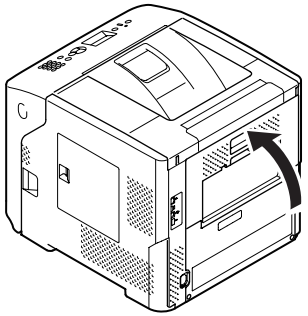
(1) Open the rear cover by pulling the lock lever on the back side of the printer toward you.



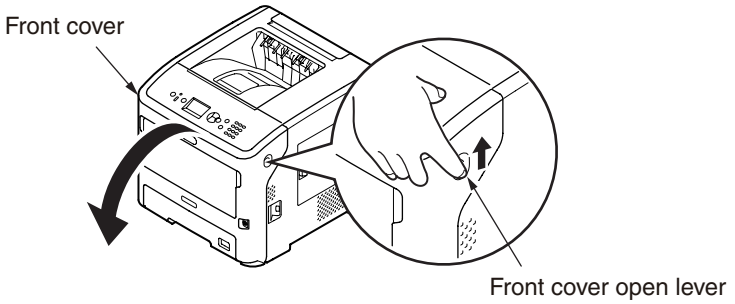
(2) Check for jammed paper inside the printer. If jammed paper remains, remove it.



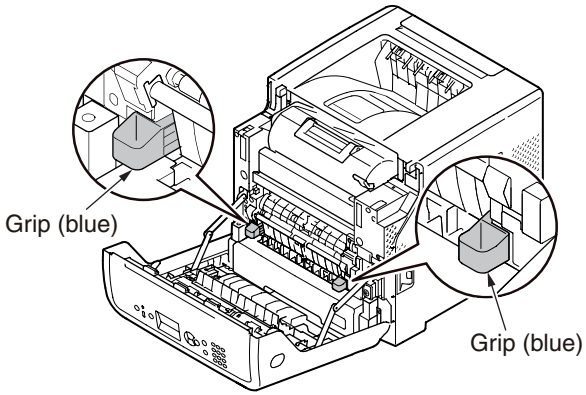
(3) Close the rear cover.

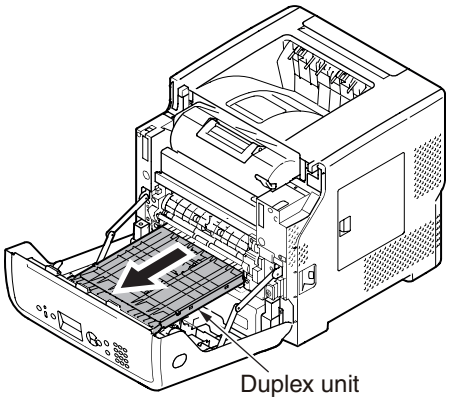


(4) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.

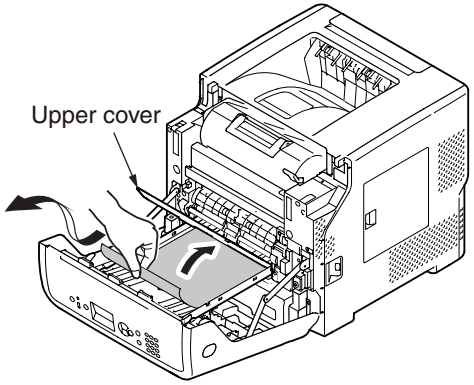


(5) Pull out the duplex unit by holding the grips on its both sides.

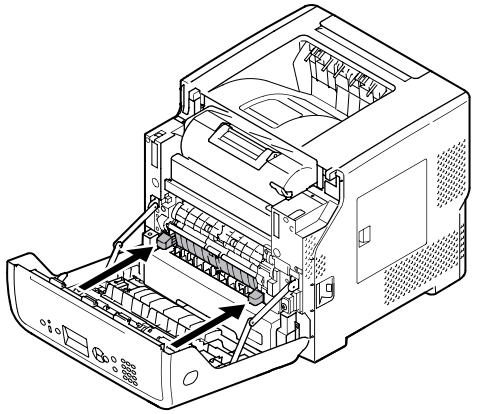




(6) Open the upper cover of the duplex unit and check for jammed paper in the duplex unit. If jammed paper remains, pull it out. Then, close the upper cover.



(7) Return the duplex unit to the printer.



(8) Close the front cover.

6.5.2.(3) Paper feed jam (Error 391: 1st Tray).

(3-1) Jam occurs immediately after the power is turned on. (1st tray)

Check item	Check work	Actions to be taken at NG
(3-1-1) Check condition of the paper running path		
Paper running path of the front unit	Open the front cover check if paper is not jammed in the paper running path.	Remove the jammed paper.
(3-1-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 1 and the paper entrance sensor 2.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(3-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the Maintenance Menu SWITCH SCAN function.	Replace either the PU/CU board or the front sensor board (HSC-2 PCB) or connection cable.
Check output signal level of the paper entrance sensor 1 and that of the paper entrance sensor 2.	Check for the following signals at the FSNS connector ⑱ of the PU/CU board. Pin-4: Paper entrance sensor 1 Pin-3: Paper entrance sensor 2 Confirm that the above signal levels change when the sensor lever is operated.	Replace the front sensor board (HSC-2 PCB)
Check the power voltages supplied to the front sensor board (HSC-2 PCB)	Check the 5V power at the FSNS connector ㉕ of the front sensor board (HSC-2 PCB). Pin-1: 5V power supply Pin-5: 0VL	Replace the connection cable.

(3-2) Jam occurs immediately after the paper feed is started. (1st tray)

Check item	Check work	Actions to be taken at NG
(3-2-1) Check condition of the paper running path		
Paper running path of the front unit	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(3-2-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 1 and the paper entrance sensor 2.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor with the good sensor lever.
Check the feed roller, pickup roller and the retard roller assembly of the tray.	Check if any foreign materials such as paper dust on the surface of the feed roller or of the pickup roller or not.	Remove the foreign material.
	Check if the feed roller or the pickup roller has worn out or not.	Replace the feed roller, the pickup roller and the retard roller assembly of the tray.
(3-2-3) Motor operation check		
Paper feed motor	Confirm that the paper feed motor works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the PU/CU board or the paper feed motor.

Check item	Check work	Actions to be taken at NG
(3-2-4) Check the system connection		
Paper feed motor drive cable	Check the connection condition of the cable. Check if the connector is connected in the half-way only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Replace the cable with the good cable that normalizes the connection condition.
(3-2-5) Clutch operation check		
Paper feed clutch, registration clutch	Check to make sure that the paper feed clutch or registration clutch works normally by using the Motor & Clutch Test of the self-diagnostic mode. Open the front cover so that the rollers can be seen to check.	Replace the PU/CU board, or replace the paper feed solenoid.
(3-2-6) Check the system connection		
Clutch cable for paper feed	Check the connection condition of the cable. Check if the connector is connected in the half-way only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Replace the cable with the good cable that normalizes the connection condition.
Cable for paper feed clutch	Check that any cable is not pinched during assembling of the printer. Remove the HOPCLT connector ② of the PU/CU board and check the following at the cable side. Short circuit between pin-1 – FG Remove the HOPCLT connector ② of the PU/CU board and check that approx. 240Ω can be measured between pin-1 and pin-2.	Replace the clutch and assembly it again correctly.

6.5.2.(4) Feed jam (Error 380)

(4-1) Jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(4-1-1) Check condition of the paper running path		
Paper running path of the front unit	Open the front cover check if paper is not jammed in the paper running path.	Remove the jammed paper.
(4-1-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 1, that of the paper entrance sensor 2 and that of the WR2 sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor with the good sensor lever.
(4-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the Maintenance Menu SWITCH SCAN function.	Replace either the PU/CU board or the front sensor board (HSC-2 PCB) or connection cable.
Check the output signal levels of the paper entrance sensor 1, that of the paper entrance sensor 2 and that of the WR2 sensor.	Check for the following signals at the FSNS connector ⑱ of the PU/CU board. Pin-4: Paper entrance sensor 1 Pin-3: Paper entrance sensor 2 WR2SNS connector Pin-2:WR2 sensor Confirm that the above signal levels change when the sensor lever is operated.	Replace the front sensor board (HSC-2 PCB)
Check the power voltages supplied to the front sensor board (HSC-2 PCB)	Check the 5V power at the FSNS connector ㉕ of the front sensor board (HSC-2 PCB). Pin-1: 5V power supply Pin-5: 0VL	Replace the connection cable.

(4-2) Jam occurs immediately after the paper feed is started.

Check item	Check work	Actions to be taken at NG
(4-2-1) Check condition of the paper running path		
Paper running path of the front unit	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(4-2-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 1, that of the paper entrance sensor 2 and that of the WR2 sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor with the good sensor lever.
(4-2-3) Motor operation check		
Paper feed motor	Confirm that the paper feed motor works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the PU/CU board, or replace the paper feed motor.
(4-2-4) Check the system connection		
Paper feed motor drive cable	Check the connection condition of the cable. Check if the connector is connected in the half-way only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Replace the cable with the good cable that normalizes the connection condition.

6.5.2.(5) Paper feed jam (Error 390: MP Tray)

(5-1) Jam occurs immediately after the power is turned on. (Multipurpose tray)

Check item	Check work	Actions to be taken at NG
(5-1-1) Check condition of the paper running path		
Paper running path of the multipurpose tray	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(5-1-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 2 and the WR2 sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor with the good sensor lever.
(5-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode.	Replace either the PU/CU board or the front sensor board (HSC-2 PCB) or connection cable.
Check the sensor output signal level of the paper entrance sensor 2 and the WR sensor.	Check for the following signals at the FSNS connector ⑱ of the PU/CU board. Pin-3: Paper entrance sensor 2 WR2SNS connector Pin-2: WR2 sensor Confirm that the above signal levels change when the sensor lever is operated.	Replace the front sensor board (HSC-2 PCB)
Check the power voltages supplied to the front sensor board (HSC-2 PCB)	Check the 5V power at the FSNS connector ㉕ of the front sensor board (HSC-2 PCB). Pin-1: 5V power supply Pin-5: 0VL	Replace the connection cable.

(5-2) Jam occurs immediately after paper feed is started. (Multipurpose tray)

Check item	Check work	Actions to be taken at NG
(5-2-1) Check condition of the paper running path		
Paper running path of the multipurpose tray	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
Sheet Receive of the multipurpose tray	Confirm that the Sheet Receive has moved up normally. Confirm that the support spindle and spring of the Sheet Receive have been installed in the specified positions normally.	Correct installation of the above parts so that the Sheet Receive moves up to the specified position normally.
(5-2-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 2 and the WR2 sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor with the good sensor lever.
Front cover	Confirm that the locks in the right and left of the front cover are locked normally.	Replace the font cover assembly
Check the feed roller, the pickup roller, and the retard roller.	Check if any foreign materials such as paper dust on the surface of the feed roller or of the pickup roller or not.	Remove the foreign material.
	Check if the feed roller has worn out or not.	Replace the feed roller.
(5-2-3) Motor operation check		
Paper feed motor	Confirm that the paper feed motor works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the PU/CU board, or replace the paper feed motor.
MPT clutch	Carry out Motor & Clutch Test to check if the MPT clutch works normally.	

Check item	Check work	Actions to be taken at NG
(5-2-4) Check the system connection		
Paper feed motor drive cable	Check the connection condition of the cable. Check if the connector is connected in the half-way only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Replace the cable with the good cable that normalizes the connection condition.

6.5.2.(6) Paper running jam (Error 381)

(6-1) Jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(6-1-1) Check condition of the running path.		
Paper running path of the front unit	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(6-1-2) Check condition of the mechanical parts		
Check the sensor lever of the WR2 sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(6-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode.	Replace either the PU/CU board or the WR2 sensor or connection cable.
Check the sensor lever of the WR2 sensor.	Check for the following signals at the WR2SNS connector ⑱ of the PU/CU board. Pin-2: WR2 sensor Confirm that the above signal levels change when the sensor lever is operated.	Replace the WR2 sensor
Check the power voltages supplied to the WR2 sensor	Check the 5V power at the WR2SNS connector of the WR2 sensor . Pin-1: 5V power supply Pin-3: 0VL	Replace the connection cable.

(6-2) Jam occurs immediately after a paper is taken into printer.

Check item	Check work	Actions to be taken at NG
(6-2-1) Check condition of the paper running path		
Paper running path on the belt.	Remove the ID unit and check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(6-2-2) Check condition of the mechanical parts		
Check the sensor lever of the WR sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(6-2-3) Motor operation check		
ID motor	Confirm that the paper feed motor and ID motor work normally by using the Motor & Clutch Test of the self-diagnostic mode. Check if any load exists or not.	Replace the PU/CU board, or replace ID motor, or replace the ID unit . If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

Check item	Check work	Actions to be taken at NG
(6-2-4) Check the system connection		
Paper feed motor drive cable, ID motor drive cable, fuser motor drive cable	Check the connection condition of the cables. PU/CU board DCHOP connector, DCID connector ③, DCHEAT connector ④, HOPCLT connector. Check if the connector is connected in the halfway only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Normalize the connection condition. Replace the cable with the normal cable.
Hopping clutch drive cable	Remove the HOPCLT connector ② of the PU/CU board and check the following at the cable side. Short circuit between pin-1 – FG Short circuit between pin-2 – FG	Replace the cable with the good cable that normalizes the connection condition.
Hopping clutch	PU/CU board HOPCLT connector ② Between pin-1 - pin-2: Approx. 240Ω	Replace the hopping clutch

(6-3) Jam occurs in the middle of paper running path.

Check item	Check work	Actions to be taken at NG
(6-3-1) Motor operation check		
ID motor	Confirm that the paper feed motor and ID motor work normally by using the Motor & Clutch Test of the self-diagnostic mode. Check if any load exists or not.	Replace the PU/CU board, or replace ID motor, or replace the ID unit . If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

(6-4) Jam occurs immediately after paper has reached the fuser.

Check item	Check work	Actions to be taken at NG
(6-4-1) Motor operation check		
Fuser motor	Confirm that the fuser motor works normally by using the Motor & Clutch Test of the self-diagnostic mode. Check if any load exists or not.	Replace the PU/CU board. Replace the fuser motor. Replace the fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(6-4-2) Temperature control		
Detected temperatures of the fuser	Check temperatures detected at the fuser in the self-diagnostic mode. Has abnormally low (lower than the room temperature) or high (250°C) temperature been detected?	Replace the fuser unit or PU/CU board. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the system maintenance menu FUSE KEEP MODE.
(6-4-3) Check the installation condition of fuser unit		
Fuser unit	Check that the fuser unit is installed normally. (Is it pushed in down to the bottom-most point?)	Install the fuser unit correctly in a printer.

6.5.2.(7) Paper unloading jam (Error 382)

(7-1) Paper unloading jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(7-1-1) Check condition of the paper running path		
Paper running path of the paper unloading unit	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(7-1-2) Check condition of the mechanical parts		
Check the sensor lever of the paper exit sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(7-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode.	Replace the PU/CU board or EXIT sensor or its cable or its connection cable.
Check the output signal level of the EXIT sensor.	Check for the following signals at the RSNS of the PU/CU board. Pin-2: EXIT sensor Confirm that the above signal levels change when the sensor lever is operated.	Replace the EXIT sensor.
Check the power voltages supplied to the EXIT sensor.	Check the 5V power voltage at the Relay cable ㉙ of the EXIT SNS. Pin-1: 5V power supply Pin-3: 0VL	Replace the connection cable.
(7-1-4) Check the system connection		
Signal cable for relay cable, EXIT sensor cable	Check that FFC is normally inserted at the RSNS ⑨ of the PU/CU board . Check that the relay board and the EXIT sensor are normally connected.	Normalize the connection condition.
Signal cable for relay board, EXIT sensor cable	Confirm that the cables are not pinched, sheathes are not peeled off, and they are assembled normally.	Replace the connecting cable and normalize the assembled condition.

(7-2) Paper unloading jam occurs after a paper is taken into printer.

Check item	Check work	Actions to be taken at NG
(7-2-1) Check condition of the paper running path		
Face Up Stacker Cover	Confirm that it is either fully opened or fully closed	Eliminate any in-between condition of the cover between the fully open position and fully closed position.
Duplex pull-in gate	Confirm that the Duplex pull-in gate works normally by using the Motor & Clutch Test of the self-diagnostic mode. Is it set to the paper unloading side normally?	Replace the Duplex pull-in gate or the Duplex solenoid
Rear panel	Check that the installation condition of the rear panel hampers smooth movement of a paper in the paper running path, or not.	Remove the rear panel and re-install it.
Paper running path of unloading unit	Check that any mechanical load does not exist that hampers the smooth movement of paper in the paper running path of the paper unloading unit, by the visual inspection. Check if the paper unloading motor becomes difficult to rotate or not.	Correct the portion that becomes mechanical load.
(7-2-2) Check condition of the mechanical parts		
Sensor lever of the paper exit sensor	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(7-2-3) Motor operation check		
Fuser motor	Confirm that the fuser motor works normally by using the Motor & Clutch Test of the self-diagnostic mode. Check if any load exists or not.	Replace the PU/CU board or fuser motor or fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

Check item	Check work	Actions to be taken at NG
(7-2-4) Check the system connection		
Fuser motor drive cable	Check the connection condition of the cables. Visually check the PU/CU board DCHEAT connector ④ for half-way connection, slanted angle insertion, and abnormal cord assembly. Also check the connector connected with the fuser motor in the same manner.	Replace the cable with the good cable that normalizes the connection condition.

(7-3) Paper unloading jam occurs in the middle of paper running path.

Check item	Check work	Actions to be taken at NG
(7-3-1) Motor operation check		
Fuser motor	Confirm that the fuser motor works normally by using the Motor & Clutch Test of the self-diagnostic mode. Check if any load exists or not.	Replace the PU/CU board or fuser motor or fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

6.5.2.(8) Two-sided printing jam (Errors 370, 371, 372, 373 and 383)

(8-1) Two-sided printing jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(8-1-1) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode. For all sensors except the Dup-IN sensor, check the detection condition of the respective sensor in the two status: One is the status in which paper remains inside the Duplex unit. The other is the status in which paper is removed from the Duplex unit.	Replace the PU/CU board or the defective sensor or connection cable.

(8-2) Two-sided printing jam occurs during taking in the paper into Duplex unit.

Check item	Check work	Actions to be taken at NG
(8-2-1) Solenoid operation check		
Duplex clutch	Confirm that the duplex clutch works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the PU/CU board or clutch.
Separator solenoid (Paper unloading/ DUP paper taking in switching gate located immediately after the fuser unit)	Check visually movement of the gate by using the Motor & Clutch Test of the self-diagnostic mode. Check if movement is unsmooth or not, if amount of open/close is abnormal or not.	Replace the separator solenoid.
(8-2-2) Sensor lever operation check		
Dup-IN sensor lever	Remove the duplex unit. Touch the Dup-IN sensor lever to check if its movement is unsmooth or not.	Replace the Dup-IN sensor lever
DUP-IN sensor	Check the sensitivity of each sensor in the two conditions: one is the status in which paper remains in the duplex unit, and the other is the status in which no paper remains in the duplex unit. Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode.	Replace the PU/CU board or replace the defective sensor or connection cable.

Check item	Check work	Actions to be taken at NG
(8-2-3) Check condition of the paper running path		
Paper inverting transport path	Check that any foreign materials such as paper chip or blue do not exist that hampers the smooth movement of paper in the paper inverting transport path.	Remove the foreign material.

(8-3) Two-sided printing jam occurs during transporting paper inside the Duplex unit.

Check item	Check work	Actions to be taken at NG
(8-3-1) Sensor lever operation check		
Dup-F sensor lever	Remove the Duplex unit and check movement of the Dup-F sensor lever.	Replace the Dup-F sensor lever.
(8-3-2) Sensor check		
Check the detection condition of the sensor signal	Check the sensitivity of each sensor in the two conditions: one is the status in which paper remains in the duplex unit, and the other is the status in which no paper remains in the duplex unit. Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode.	Replace the PU/CU board or replace the defective sensor or connection cable.

(8-4) Paper is not supplied from the Duplex unit to the regist roller.

Check item	Check work	Actions to be taken at NG
(8-4-1) Clutch operation check		
Duplex clutch	Confirm that the Duplex clutch works normally by using the Motor & Clutch Test of the self-diagnostic mode.Confirm it by listening to the sound.	Replace the PU/CU board or clutch.

6.5.2.(9) Paper size error (Errors 400 and 401)

(9-1) Jam occurs when paper end is located near the IN1 sensor.

Check item	Check work	Actions to be taken at NG
(9-1-1) Check paper feed condition		
Multifeed of papers	Open the front cover and check if multifeed of papers occurs or not.	If multi-feed occurs again after the jammed paper is removed, replace the retard roller of the tray in use.
Paper size	Does the paper size specified for print match the paper size of paper stuck in the tray.	Change the specified paper size or size of paper inside the tray.
Paper entrance sensor 1, paper entrance sensor 2	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.

6.5.2.(10) Fuser unit error (Errors 167 to 177)

(10-1) Error occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(10-1-1) Thermistor is defective Note)		
Upper thermistor, lower thermistor, side thermistor, heater thermistor	Check the respective thermistors if they are shorted or opened internally. Check the resistance value at the connector pins in the bottom of the fuser unit. (Refer to section 9.1 Resistance value (fuser unit).)	Replace the fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
Installed condition of fuser unit.	Check if the fuser nit is pressed in until the connector in the bottom of the fuser unit is surely connected.	Re-set the fuser unit.

Note! Service calls 171: Error and 175: Error can occur when the printer temperature is below 0˚C. Turn on the power again after the printer temperature has increased.

(10-2) Error occurs approx. 1 minute after the power is turned on.

Check item	Check work	Actions to be taken at NG
(10-2-1) Temperature increase of fuser unit		
Thermostat, heater	Heater of the fuser unit is controlled of its temperature. Check if the fuser unit gets hot or not by touching it with hands. If the fuser unit temperature does not increase and remains cold, check that the resistance between pin-1 and pin-4 and between pin-3 and pin-2 is about 1 to 3Ω, between pin-2 and pin-4 is about 4 to 7Ω respectively. (Refer to section 9.1 Resistance value (fuser unit).)	Replace the fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(10-2-2) Temperature increase of fuser unit		
Installation position of the Lower thermistor	The Lower thermister must be installed while contacting with the fuser unit. Check if the lower thermister is installed in the far position from the specified position or not causing detection of the lower temperature than the actual temperature of fuser unit.	Replace the fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

Check item	Check work	Actions to be taken at NG
(10-2-3) AC power input for the fuse		
AC power voltage from the low voltage power supply	Check if the AC voltage for heater is normally supplied or not. Power supply CN03 connector ㉜, between pin-1 and pin-4, and between pin-2 and pin-3.	Replace the low voltage power supply.
Heater ON signal that is output from PU to the low voltage power supply	Check that the heater ON signal goes active at the warming up timing, or not. "L" active while ON. Power connector ⑪ of the PU/CU board, between pin-24 and pin-26.	Replace the PU/CU board.

6.5.2.(11) Motor fan error (Errors 122, 127, 128, 918)

(11-1) The low voltage power supply fan does not rotate immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(11-1-1) Cable connection condition and wiring condition		
Cable connection condition and wiring condition of the low voltage power supply fan and those of the fuser fan	Check if the connectors are connected normally or not. Check if extra length of the cables does not touch the fan blade or not.	Correct the connection condition of the connectors. Correct the cable wiring route. Replace the fan.

(11-2) Rear fan does not rotate during the Duplex printing.

Check item	Check work	Actions to be taken at NG
(11-1-2) Cable connection condition and wiring condition		
Cable connection condition and wiring condition of the Duplex fan	Check if the connectors are connected normally or not. Check if extra length of the cables does not touch the fan blade or not.	Correct the connection condition of the connectors. Correct the cable wiring route. Replace the fan.
24V power supplied to the fan	Check if the fuse F1 of the PU/CU board has blown out or not.	Replace the PU/CU board.

(11-3) All fans of the printer do not rotate.

Check item	Check work	Actions to be taken at NG
(11-3-1) 24V power supply		
PU/CU board fuses F1, F503	Check if the fuses F1 is not open-circuit or not.	Replace the PU/CU board.
24V power that is supplied to the PU/CU board.	Check the power supply voltages at the POWER connector ⑪ of the PU/CU board. The follow voltage must appear respectively. Pins-17, -18, -19, -20, -21: 0VP Pins-11, -13, -14, -15, -16: 24V	Replace the low voltage power supply.

6.5.2.(12) Print speed is slow. (Performance is low.)

(12-1) Print speed decreases.

Check item	Check work	Actions to be taken at NG
(12-1-2) Media Weight setting		
Media Weight that is specified for the print	Check if the wrong Media Weight has been specified or not.	Correct the Media Weight.

6.5.2.(13) Option Unit cannot be recognized.

(13-1) Option try unit cannot be recognized.

Check item	Check work	Actions to be taken at NG
(13-2-1) Option try board		
Option try unit	Check if the option try unit specification is being used or not.	Replace the option tray unit.
(13-1-2) Check the system connection		
Check the system connection from the PU/CU board to the option tray board (GOH-12 PCB).	Check that the cable between the PU/CU board option connector ⑮ to the option tray board is normally connected.	Correct the connections.
Square connector connecting the option tray unit to the printer.	Check if any foreign material exists in the connecting portion of the square connector.	Remove the foreign material.
Square connector connecting the option tray unit to the printer.	Is the terminals of the square connector damaged?	Replace the connector.
(13-2-3) Check the control signals.		
Check the control signal that is output from the PU/CU board to the option tray board (GOH-12 PCB).	Check the control signal that is output from the PU board option connector ⑮. Pin-8: OPTCNT2 (PU → 2nd) Pin-9: TXD (PU → 2nd) Pin-10: RXD (2nd → PU)	Pin-9: Replace the PU/CU board. Pin-10: Replace the option tray board.

6.5.2.(14) LED head cannot be recognized. (Errors 134)

(14-1) Errors 134 (LED HEAD Missing)

Check item	Check work	Actions to be taken at NG
(14-1-1) Check the system connection		
Connecting condition at the PU/CU board connector and at the head connector.	Check the connecting condition of the FFC by the visual inspection.	Correct the connection to the normal connecting condition.
Head FFC	Remove the head FFC from the printer. Check if any open-circuit or peeling-off of sheath has occurred or not throughout the cable.	Replace the head FFC or the PU/CU board.
Conduction of the fuse on the PU/CU board.	Check that 5V is measured at the ends of the capacitors CP15 and also check if the fuse F17 or F13 is open-circuited.	Replace the PU/CU board.

6.5.2.(15) Toner cartridge cannot be recognized. (Errors 543)

(15-1) Error caused by the consumable items.

Check item	Check work	Actions to be taken at NG
(15-1-1) Consumable items installation condition		
ID unit and toner cartridge	Check that the ID unit is installed in the normal position. Check that the lock lever of the toner cartridge is locked.	Correct the installation to the normal installation condition.

(15-2) Error caused by the toner sensor

Check item	Check work	Actions to be taken at NG
(15-2-1) Toner sensor condition		
Toner sensor	Is the receptor of the toner sensor stained?	Wipe off the stain from the toner sensor.
Toner sensor	Confirm that the toner sensor works normally by using the SWITCH SCAN function of the self-diagnostic mode. Place a white paper in front of the toner sensor, and check if the SCAN state changes or not.	Replace the toner sensor board or the FFC between the toner sensor board and the PU/CU board.

Note! Toner sensor operation check method using the SWITCH SCAN function of the self-diagnostic mode.

(1) How to check operation of the toner sensor at the printer side.

1. Status change of the toner sensor can be checked from the control panel using the self-diagnostic mode. First, switch the display to the control panel display. For the method of switching the display to the control panel display, refer to section 6.3.2.3 Switch Scan Test
2. Remove the ID unit and the toner cartridge (TC) from a printer. There is a window inside a printer opposing the ID side when viewed from the front of a printer. The toner sensor is located inside the window.
3. Place a white paper 3 mm away from the sensor window. The white paper should be placed in the manner of opposing the toner sensor.
4. When light is reflected by a white paper so that incident light falls on the toner sensor, the control panel display shows "L". When the paper is moved so that any light is not reflected by the paper so that the incident light does not reach the toner sensor, "H" is displayed on the control panel.
5. If the control panel display toggles between "H" <-> "L" as a paper is flipped in front of the toner sensor, it indicates that the toner sensor and the related system of the printer are working normally.

Action to be taken at NG

- Clean surface of the toner sensor to remove the stains due to residual toner and paper dust.
- Check the connection condition of the FFC cable between the PU/CU board and the toner sensor board (97T).
- Perform the operation check again. If the situation has not bee improved and remains unchanged, replace the PU/CU board or the toner sensor board (97T).

(2) How to check operation of the toner sensor at the toner cartridge (TC) side

1. To the position where the toner sensor is confirmed to be operating normally in the printer itself by the above paragraph (1), install the TC and the ID unit to check operations by observing display on the control panel.

Action to be taken at NG

- Check operation condition of the respective ID motors by using the Motor & Clutch Test of the self-diagnostic mode.
- Clean surface of the silver reflector plate on the side of ID to remove stains. (Stain due to toner or paper dust)

(15-3) Error caused by the defective mechanism

Check item	Check work	Actions to be taken at NG
(15-3-1) Mechanical load applied to the ID unit		
ID unit	Check if a heavy mechanical load is being applied to the ID unit due to breakage of the waster toner belt, or not.	Replace the ID unit. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(15-3-2) Motor operating condition		
ID motor	Confirm that the respective ID motors work normally or not by using the Motor & Clutch Test of the self-diagnostic mode. Check if any extra load exists or not.	Replace the PU/CU board or the ID motor.

6.5.2.(16) Fuse cut error (Errors 155)

(16-1) Fuse cut error

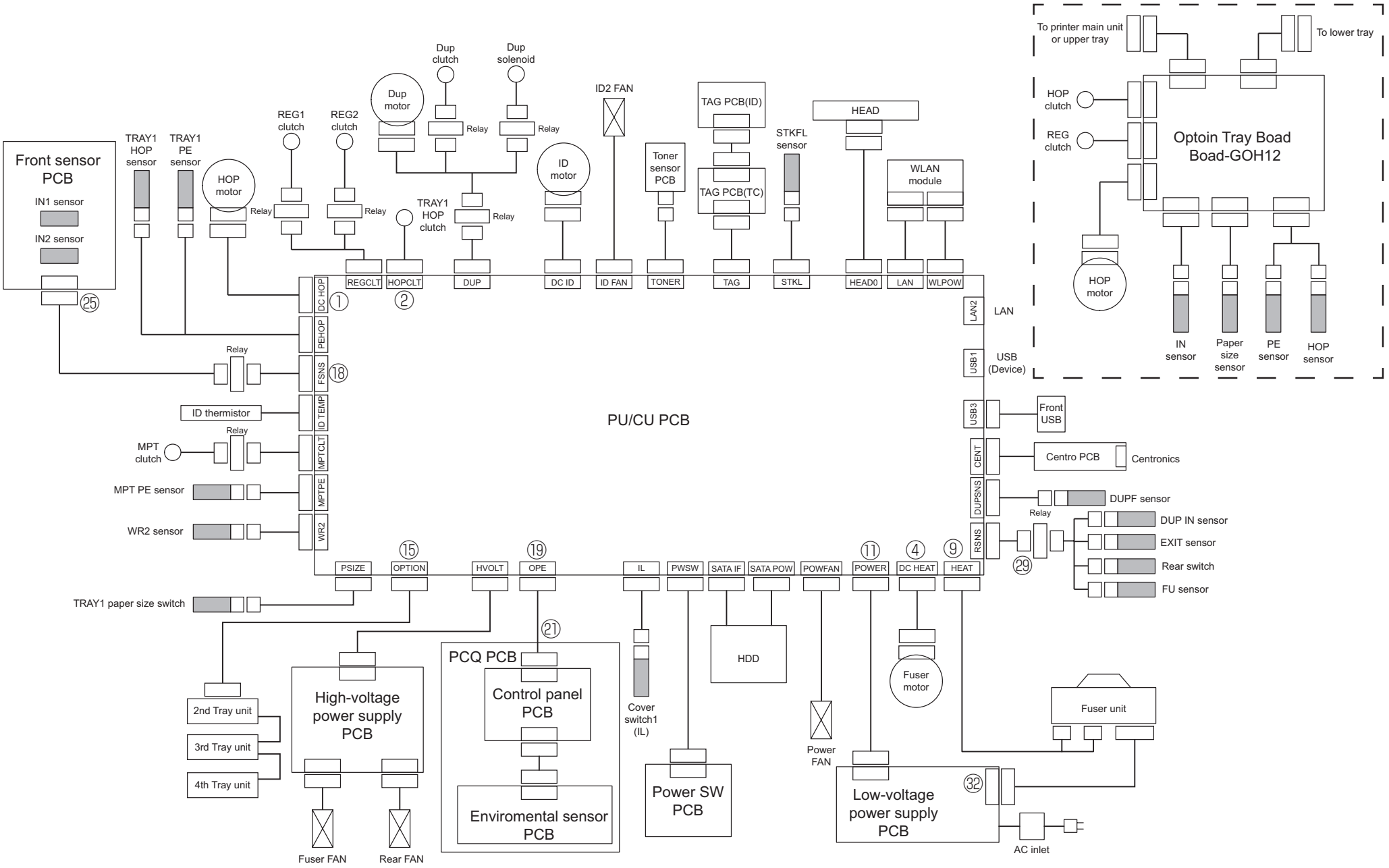
Check item	Check work	Actions to be taken at NG
(16-1-1) Check the system connection		
Cable connecting the PU/CU board	Check if the HEAT connector ⑨ of the PU/CU board is connected halfway, or inserted at an angle. Check if cable has open-circuit or its sheath is peeled off.	Connect the cable normally. Alternately, replace the cable.
(16-1-2) Fuse cut circuit		
PU/CU board	Upon completion of the system connection check, turn off the power once and back on. The check if the error occurs or not.	Replace the PU/CU board.

6.5.2.(17) Humidity sensor error (Error 123)

(17-1) Humidity sensor error

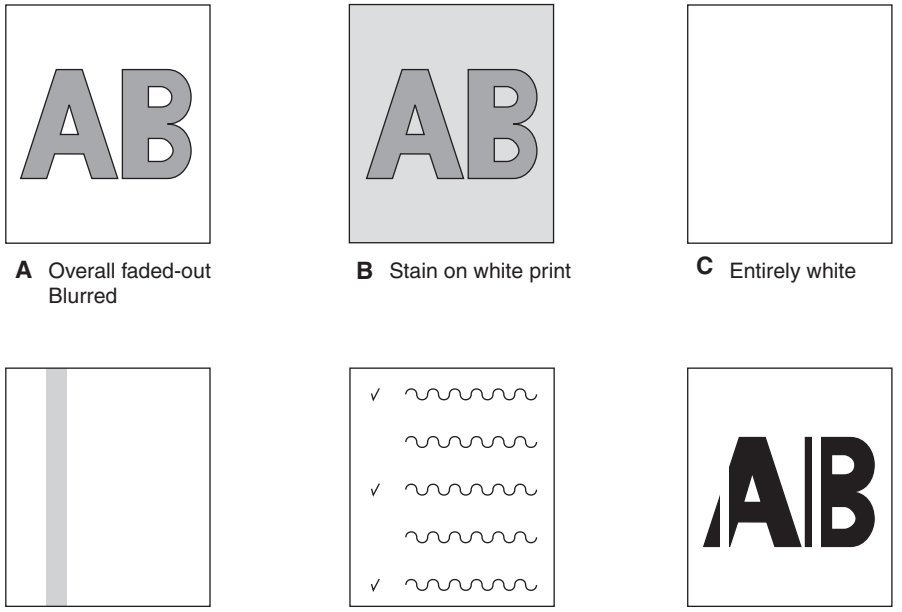
Check item	Check work	Actions to be taken at NG
(17-1-1) Check the system connection		
Connection between the PU/CU board and the control panel board	Check if the 10-conductor FFC is connected to the OPE connector ⑲ of the PU/CU board properly. Check if the 10-conductor FFC is connected to the CN501 connector ㉒ of the control panel board properly. Check the connectors for half-way connection or angled connection.	Re-connect the cable normally.
FFC connecting the PU/CU board and the control panel board	Check for open-circuit with VOM. Visually check that the sheath for peeling.	Replace the FFC with a normal FFC.
FFC connecting the PU/CU board and the environment sensor board	Check for open-circuit with VOM. Visually check that the sheath for peeling.	Replace the FFC with a normal FFC.
(17-1-2) Environment condition		
Sharp change of environment condition	Is the environment condition changed sharply from a low temperature environment to a high environment condition within a short time? (Example is such a case that a printer is moved from storage condition of a cold area in winter to an office environment.)	Leave a printer for around one hour in the new environment to get used to the new environment. After that, turn on the power again. Before turn on the power, touch the metal panel of the controller panel and the metal plate inside a printer to feel temperature increase inside a printer with human hands. After confirmation that the printer temperature has increased close to the room temperature, turn on the power again.

6.5.2.(18) Wiring diagram



6.5.3 Troubleshooting the abnormal images

Note! To replace a PU/CU board, data of the EEPROM chip on the old PU/CU board must be read beforehand copied to the new board after replacement.



A Overall faded-out Blurred

B Stain on white print

C Entirely white

D Black banding/ black streaking in vertical direction

E Cyclic abnormality

F White banding/ white streaking in vertical direction

Figure 6-2

6.5.3.(1) Color has faded-out and blurred entirely. (Refer to Figure 6-2 A.)

(1-1) Color are faded-out and blurred.

Check item	Check work	Actions to be taken at NG
(1-1-1) Toner		
Remaining amount of toner	Check if the message "Prepare toner replacement." or "Replace the toner." appears or not.	Replace toner cartridge with new one.
Tape attached to the toner cartridge opening slot	Check to see that the tape attached to the toner cartridge opening slot has been peeled off.	Move the toner cartridge lever to CLOSE position and remove tape from opening slot.
(1-1-2) LED head		
Lens of the LED head	Check if surface of the lens of the LED head is stained or not by toner and paper dust.	Clean the lens with soft tissue paper.
Mounting condition of LED head	Check that the LED head is mounted on the LED head holder correctly. Check that the right and left tension springs are normally installed.	Correct for normal condition.
(1-1-3) Print media		
Media type	Check to see that the print media which is used for printing is not a specially thick media	Use the normal paper.
(1-1-4) High voltage terminal		
ID unit terminal	ICheck that the high voltage terminal of the ID unit is contacting with the Contact Assembly normally by visual inspection. (Refer to Figure 6-3.)	IReplace the ID unit or correct the high voltage terminal. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(1-1-5) ID unit installation condition		
ID unit DOWN position (Defective transfer)	Move the ID unit in and out with hand to confirm that any abnormal mechanical load does not exist, and the ID unit can be moved down to the DOWN position normally. If a piece of paper is inserted in between drum and belt, if top end of the paper can enter easily, it is NG (No Good).	Check the U-shaped groove of the side plate for any abnormality. If repair is found impossible, replace the equipment.

6.5.3.(2) Stain on white print. (Refer to Figure 6-2 B.)

(2-1) Stain on white print (Partial stain)

Check item	Check work	Actions to be taken at NG
(2-1-1) ID unit		
Exposure of drum to light	Is the drum left in a circumstance in which drum surface is exposed to direct light for a long time?	Replace the ID unit. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
Leakage of toner	Does toner leak out from either ID unit or from toner cartridge?	Replace the ID unit or toner cartridge. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(2-1-2) Fuser unit		
Offset toner of the fuser unit	Check if the offset toner of the previous printing is left adhered on the fuser unit or not, by visual inspection.	Repeat blind printing using unwanted media until offset toner is created on print media. Alternately replace the fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

(2-2) Stain on white print (overall stain)

Check item	Check work	Actions to be taken at NG
(2-2-1) Print media		
Type of print media	Check to see that the print media which is used for printing is not a specially thin media.	Use the normal paper.
(2-2-2) High voltage terminal		
ID unit terminal	Check that the high voltage terminal of the ID unit is contacting with the Contact Assembly normally by visual inspection. (Refer to Figure 6-3.)	Replace the ID unit or correct the high voltage terminal. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

6.5.3.(3) White print (Refer to Figure 6-2 C.)

(3-1) White print over entire page

Check item	Check work	Actions to be taken at NG
(3-1-1) Toner condition		
Remaining amount of toner	Confirm that sufficient amount of toner remains inside the ID unit.	Replace the toner cartridge.
(3-1-2) Exposure condition to light		
LED head	Confirm that the LED head is positioned in the normal position where the LED head opposes again the drum when the cover is closed. Check that no obstacle exists in front of the LED head, that hampers light emission from the illuminating surface of the LED head.	Correct the installation condition of the LED head.
Connecting condition of the LED head	Check that the LED head is normally connected.	Replace the LED head.
Drum shaft	Check that the drum shaft keeps contacting with the right and left side plates normally.	Replace the ID unit. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
F15, F16, fuse on the PU/CU board	Measure resistance of F15, F16. 1Ω or less: Normal Higher than 1Ω: NG	Replace the PU/CU board
(3-1-3) High voltage terminal		
ID unit terminal	Check that the high voltage terminal of the ID unit is contacting with the Contact Assembly normally by visual inspection. (Refer to Figure 6-3.)	Replace the ID unit or correct the high voltage terminal. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

6.5.3.(4) Black banding/black streaking in vertical direction

(4-1) Thin vertical line (with color) (Refer to Figure 6-2 D.)

Check item	Check work	Actions to be taken at NG
(4-1-1) ID unit condition		
Filming of the ID unit	Is print attempted without toner?	Replace toner cartridge with new one. If replacement does not solve the problem, replace the ID unit. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

(4-2) Thin vertical line (without color) (Refer to Figure 6-2 F.)

Check item	Check work	Actions to be taken at NG
(4-2-1) LED head condition		
LED head	Is any foreign material attached on the light emitting surface of the cell fox lens of the LED head?	Remove the foreign material.
(4-2-2) Condition of paper running path		
Paper running path	Check that any burr that may scatter the un-fused toner on the paper running path does not exist.	Remove the burr.

6.5.3.(5) Periodic abnormalities (Refer to Figure 6-2 E.)

(5-1) Periodic abnormality occurs in vertical direction

Check item	Check work	Actions to be taken at NG
(5-1-1) Cycle		
Image drum	Check that the cycle is 94.3 mm.	Replace the ID unit
Developing roller	Check that the cycle is 39.7 mm.	Replace the ID unit
Toner feed roller	Check that the cycle is 66.6 mm or 72.8 mm.	Replace the ID unit
Charge roller	Check that the cycle is 37.7 mm.	Replace the ID unit
Fuser belt	Check that the cycle is 94.3 mm.	Replace the fuser unit.
Heat roller	Check that the cycle is 90.3 mm.	Replace the fuser unit.
Transfer roller	Check that the cycle is 51.5 mm.	Replace the Transfer Roller.
		If any attempt of using new consumable item as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

6.5.3.(6) Solid black printing.

(6-1) Solid black printing over the whole page

Check item	Check work	Actions to be taken at NG
(6-1-1) High voltage contacting condition		
CH terminal	Check that the terminal coming from the printer body contacts with the high voltage terminal that is located on the left side of the ID unit when viewed from the top by visual inspection.	Replace the terminal of printer side.
CH terminal	Check that the high voltage terminal keeps the normal contacting condition on the high voltage board. Open the left cover and remove the high voltage board. Then, check that the terminal is not installed in the abnormal installation condition.	Correct the installation condition of the terminal to the normal condition.
ID unit terminal	Check that the high voltage terminal of the ID unit is contacting with the Contact Assembly normally by visual inspection. (Refer to Figure 6-3.)	Replace the ID unit or replace the high voltage board or correct the high voltage terminal. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(6-1-2) High voltage output condition		
CH output	If high voltage probe is available as a maintenance tool, open the left cover, and check the CH output with the high voltage probe from the soldering side of the high voltage board. (The high voltage probe is not an ordinary maintenance tool.)	Replace the high voltage board.

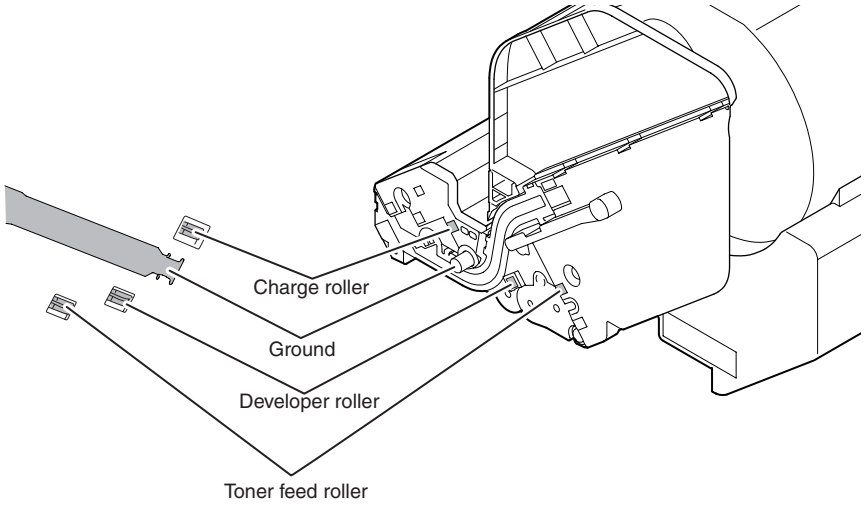
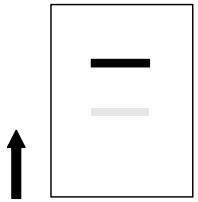
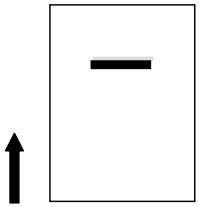
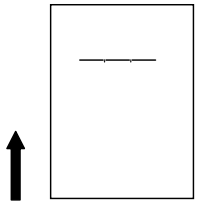
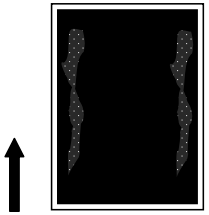
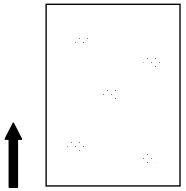
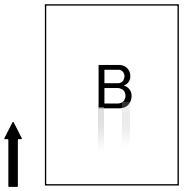
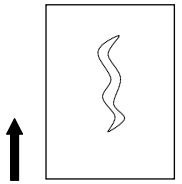
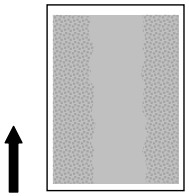
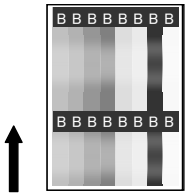


Figure 6-3

6.5.4 Image Quality Issues

symptom	Cause	Remedy
Offset Ghost(Positive Ghost)  Paper feeding direction	If the interval of image is about 90 mm,the paper is unsuitable.	Use supported paper.
	The paper is too dry.	Use paper stored in proper temperature and humidity conditions.
	Low humidity condition.	Press the ▼ button and select [menus] > [Print Adjust], and then select "ON" for [Quiet Mode].
Smear around solid black image  Paper feeding direction	If smear around solid black image, transfer bias is low.	Press the ▼ button and select [menus] > [Print Adjust], and then change to "+3" the value for [Paper Black setting].
	The paper is too dry. The paper is high impedance.	Use supported paper.
Broken line  Paper feeding direction		Press the ▼ button and select [menus] > [Tray Configuration] > the paper try configuration you are using, and then select "heavy" or more value for [Media Weight].
	The paper is rough.	Use supported paper. Front and back of paper inside out
Faded print image (GAZURE)  Paper feeding direction	If the faded print image on both side of 100% solid black image,	Press the ▼ button and select [menus] > [Tray Configuration] > the paper try configuration you are using, and then select "heavy" or more value for [Media Weight].
	The paper smoothness is high.	Use lower smoothness paper.

symptom	Cause	Remedy
Some dots in white area  Paper feeding direction	After added new toner When print in the high temperature(HH,HL) When print at the low speed	Press the ▼ button and select [menus] > [Print Adjust], and then change the value(+2 or +3) for [BG Setting].
Ghost  Paper feeding direction	vertical long solid line	Press the ▼ button and select [menus] > [Print Adjust], and then change the value(+2 or +3) for [SMR Setting].
Wrinkle  Paper feeding direction	The paper is too moist. The paper is too thin.	Set envelope mode of fuser Press the ▼ button and select [menus] > [Tray Configuration], and then select "Ultra heavy 1" for [Media Weight].
Graininess  Paper feeding direction	When half tone density is high.	Press the ▼ button and select [menus] > [Print Adjust], and then change the value(+2 or +3) for [BG Setting].
Faded print at low density half tone image  Paper feeding direction	When half tone density is low When print in the low temperature(LL)	Press the ▼ button and select [menus] > [Print Adjust], and then change the value(+1 or +2) for [Darkness].

6.5.5 Network troubleshooting

(1) Print cannot be activated from Utilities

Check item	Check work	Actions to be taken at NG
(1) Check the LINK lamp		
Check if the LINK lamp (green) is illuminating or not.	Check if the HUB and a printer are connected normally. (Check that the network cable is connected normally.)	Re-connect the network cable normally.
	Confirm that the straight network cable is being used.	Replace the cable with the straight cable.
	Make an attempt to change connection of the network cable to other port of a HUB.	Try to change the HUB.
(2) Check the network information		
Check if the network information can be printed normally or not.	Operate the panel (Print Printer Information → Network → Print) and print out the network information.	Re-write the NIC-F/W by using Utilities.
(3) Check contents of the network information.		
Confirm the IP address, SUB net mask and gateway address.	Confirm the IP address, SUB net mask and gateway address that are printed on the network information.	Set the IP address, SUB net mask and gateway address normally.
(4) Check if communication is possible or not through network		
Confirm if the Ping command can be sent or not from a PC to a printer.	Confirm if correct reply is returned from a printer to a PC when the PC sends the Ping to a printer.	Set the IP address, SUB net mask and gateway address normally.
(5) Check the Utilities.		
Check setting of the OKI LPR Utilities.	Check the setting items of the OKI LPR Utilities.	Set the OKI LPR Utilities setting items correctly.
(6) Check the following from an OS standard port		
Confirm the standard LPR port of the WINDOWS standard (NT, 2000, XP).	Set the standard LPR port of the WINDOWS standard (NT, 2000, XP), and confirm if printing can be performed or not.	Set the standard LPR port of the WINDOWS standard (NT, 2000, XP) correctly.

6.5.5.1 Connection error occurs with the Web browser

If the printer setting page cannot be displayed by the web browser "https://<printer IP address>", check the followings.

Establish connection by "https://<printer IP address>.

1) If the printer setting page is displayed, the followings are probable.
   Take an appropriate measure by referring to the following items.
   * Certificate is not created yet. (Or failed to create certificate.)
     → Refer to section "6.5.5.1.1 Is the certificate created?".
   * Certificate has been created but the SSL/TLS setting is turned off.
     → Refer to section "6.5.5.1.2 Is the SSL/TLS setting set to [ON]?".

2) If the printer setting page is not displayed, the followings are probable.
   * Version number of the browser is old.
     → Refer to section "6.5.5.1.3 Check version number of the Web browser".
   * Encryption strength has been set to Strong.
     → Refer to section "6.5.5.1.4 Check encryption strength of a printer".
   * The key exchange system of a printer is not supported by the browser. (Compatibility problem)
     → Refer to section "6.5.5.1.5 Check the key exchange type of the certificate".

6.5.5.1.1 Is the certificate created?

Log-on in as the administrator, and select "Admin Setup"→"Network Setup"→"Security"→"SSL/TLS".

If the following screen is displayed, certificate of the printer is not created yet. (The same screen is displayed when failed to create certificate.)

Solution: Create certificate by referring to the User's Manual (Advanced edition).

Before creating certificate (default state)

6.5.5.1.2 Is the SSL/TLS setting set to [ON]?

Log-on in as the administrator, and select "Admin Setup"→"Network Setup"→"Security"→"SSL/TLS".

If the following screen is displayed, certificate has already been created, but the SSL/TLS setting is turned [OFF].

Solution : Set the SSL/TLS setting to [ON].

6.5.5.1.3 Check version number of the Web browser

Check version number of the Web browser in use.

How to check version number.

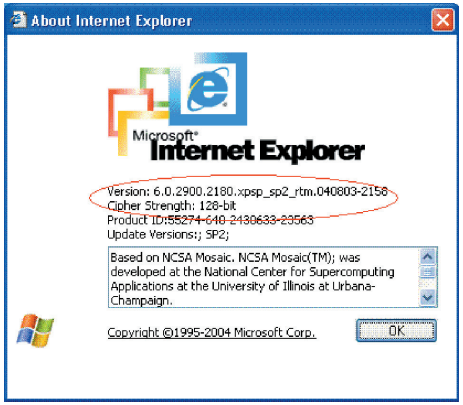
For Internet Explorer

Launch the browser and select "HELP" → "Version information".

Recommended version is Internet Explorer 5.5 and higher.

Solution : Install the newest web browser. Alternately, install the high encryption pack.

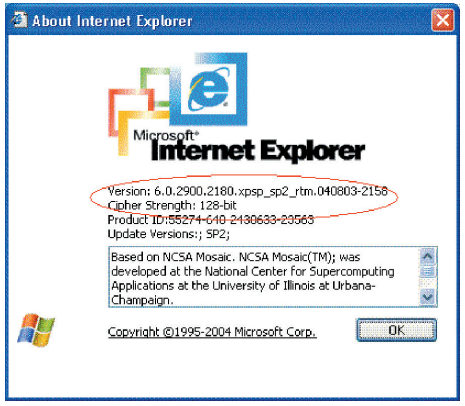
If any version that is older than the recommended version is used, communication can become possible sometimes when the encryption strength is set to "Weak". If the encryption strength is set to "Weak", security level lowers. To change the encryption strength, refer to section "6.5.4.1.4 Confirm encryption strength of a printer".



6.5.5.1.4 Confirm encryption strength of a printer

Version display of the browser that is confirmed by section "6.5.5.1.3 Check version number of the Web browser" has description on encryption strength of the browser. The browser in which the encryption strength is not set to 128 bits, the browser cannot establish communication with the printer in which the encryption strength is not set to "Standard".

Either, upgrade the browser until it supports 128 bits (high encryption) or set the printer encryption strength to "Weak".



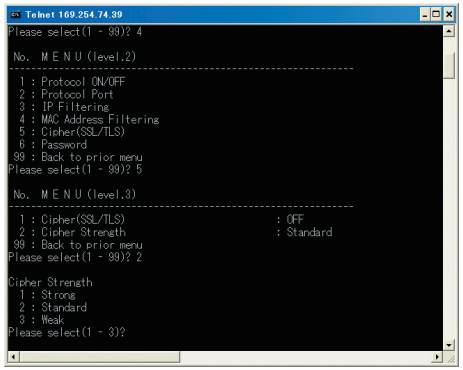
Solution: Set the encryption strength to "Weak".

How to change encryption strength with Telnet

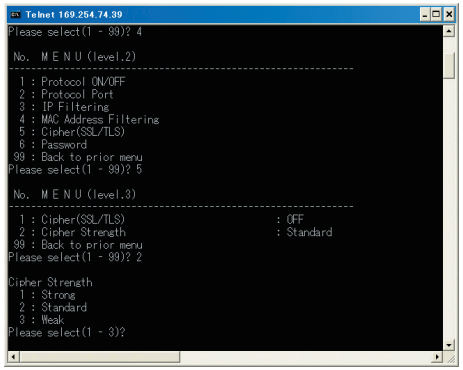
Note! Telnet cannot be used if it remains in the default setting. To change the encryption strength, Telnet must be set to Enable.

Select the command prompt (DOS prompt) and enter "Telnet <printer IP address>", and press Return.

Establish connected using administrator user name and password



Select the menus in this order: [4: Security Config] → [5: Cipher (SSL/TLS)] → [2: Cipher Strength]. Then, change the cipher strength as desired (1: Strong, 2: Standard, 3: Weak).



6.5.5.2 Print operation is not possible

If print operation is not possible by using the encrypted IPP printer, check the followings.

Establish connection by "https://<printer IP address>.

1) If the printer setting page is displayed, the followings are probable.
   Take an appropriate measure by referring to the following items.
   * Certificate is not created yet. (Or failed to create certificate.)
     → Refer to section "6.5.5.1.1 Is the certificate created?".
   * Certificate has been created but the SSL/TLS setting is turned off.
     → Refer to section "6.5.5.1.2 Is the SSL/TLS setting set to [ON]?".

2) If the printer setting page is not displayed, the followings are probable.
   Take an appropriate measure by referring to the following items.
   * Version number of the browser is old.
     → Refer to section "6.5.5.1.3 Check version number of the Web browser".
   * Encryption strength has been set to Strong.
     → Refer to section "6.5.5.1.4 Check encryption strength of a printer".
   * The key exchange system of a printer is not supported by the browser. (Compatibility problem)
   * The OS does not support the IPP (encrypted) printing.
     → Refer to section "6.5.5.2.1 Check OS (Operating System)".
   * IPP (encrypted) printer is not created yet.
     → Refer to section "6.5.5.2.2 Is the Printer created?".
   * IPP setup of the Printer is not Enabled.
     → Refer to section "6.5.5.2.3 Is the IPP setting set to Enabled?".

6.5.5.2.1 Check OS (Operating System)

The IPP print (encryption) function is supported by Windows 2000, Windows XP, Windows 2003 Server and Windows Vista only.

It is not supported by other operating systems.

6.5.5.2.2 Is the Printer created?

Printer may not be created normally.

To use the IPP print (encryption) function, the Printer must have been created by setting port to URL" HYPERLINK "https://<" https://< printer IP address>/ipp" when creating the Printer.

For more details of Printer creation method, refer to the User's Manual (Advanced edition).

6.5.5.2.3 Is the IPP setup Enabled?

The IPP setup may not be set to Enable.

As the default setting of printer, IPP has been set to Disable.

To use the IPP print (encryption) function, the IPP setup must have been set to Enable.

For the method of changing the IPP setup, refer to the User's Manual (Advanced edition).

6.5.5.3 Cannot create Certificate

When Certificate cannot be created, the following causes are probable. Take an appropriate measure by referring to the following items.

* Required input items are not fully entered
  → Refer to section "6.5.5.3.1 Required input items are not fully entered".
* The printer is printing.
  → Refer to section "6.5.5.3.2 The printer is printing".

6.5.5.3.1 Required input items are not fully entered

Unless all of the required input items are fully entered, Certificate cannot be created.

When creating Certificate, entry into the items of Common Name, Organization, Locality, State/Province, Country/Region is the must item. (Entry into Organizational Unit can be omitted.)

Solution : Enter the appropriate value into all of the required input items, and execute creation of Certificate.

For more details of the input items, refer to the User's Manual (Advanced edition).

6.5.5.3.2 The printer is printing.

Certificate cannot be created while printing is in progress. (Print operation has priority.)

Solution : Create Certificate when all other operations are complete.

During creation of self-sign certification, during creation of CSR for Certificate of certifying authority, and during installation of Certificate, the printer must not perform any other operations (such as printing) until the operation is complete (creation of self-sign certification is complete, creation of CSR is complete, and installation of Certificate is complete).

6.5.5.4 Installation of Certificate is not possible

When installation of Certificate fails, the following causes are probable.

Take an appropriate measure by referring to the following items.

* User has changed the IP address of a printer to other IP address than the "IP address during creation of CSR".
  → Refer to section "6.5.5.4.1 IP address of the printer has been changed".
* "Network card is initialized" while user is applying issuance of certification to certifying authority (i.e., in the state of Waiting for Installation of Certificate).
  → Refer to section "6.5.5.4.2 "Network card is initialized".
* "Deletion of CSR" was executed while user is applying issuance of certification to certifying authority (i.e., in the state of Waiting for Installation of Certificate).
  → Refer to section "6.5.5.4.3 "Deletion of CSR" is executed.
* Intermediate Certificate is installed.
  → Refer to section "6.5.5.4.4 "Installation of intermediate Certificate" is desired.

6.5.5.4.1 User has changed the IP address of a printer

If IP address of a printer is changed to other IP address than the "IP address during creation of CSR", error is issued and installation of Certificate become impossible.

If the changed setup is only the "IP address of printer", error will not be issued if the IP address is returned to the original address.

Solution : Return the IP address of printer back to the "IP address during creation of CSR", and then install Certificate.

Note! Do not change any setup of printer while creation of Certificate of certifying authority is in progress (during the period starting from creation of CSR up until installation of Certificate). If changed, the already issued Certificates become invalid necessitating re-setup starting from the very beginning. If printer setup is changed after Certificate is obtained, the "Security warning" is displayed on the web browser.
If IP address of printer is changed, the Certificate becomes invalid. In the case of Certificate of certifying authority requiring some charge for issuance, another charge may be required for creating Certificate once again. For details, contact certifying authority.)

6.5.5.4.2 "Network card is initialized"

If network card is initialized (to default setup) while creation of Certificate of certifying authority is in progress (during the period starting from creation of CSR up until installation of Certificate), the setup information of the Certificate is deleted. If information is deleted once, the information cannot be recovered by any means. (Even when the same information as before is entered, the same Certificate cannot be created.)

Solution : Repeat all the steps from the very beginning. (Certificate under application is already invalid.)

6.5.5.4.3 "CSR is deleted"

If CSR is deleted (if Certificate is deleted) while creation of Certificate of certifying authority is in progress (during the period starting from creation of CSR up until installation of Certificate), the setup information of the Certificate is deleted. If information is deleted once, the information cannot be recovered by any means. (Even when the same information as before is entered, the same Certificate cannot be created.)

Solution : Repeat all the steps from the very beginning. (Certificate under application is already invalid.)

6.5.5.4.4 Installation of intermediate Certificate is desired

Some certification authorities use the procedure of installing the SSL server Certificate (printer Certificate) and the intermediate Certificate into printer as the same time.

However, printer of this model supports installation of only a single Certificate, intermediate Certificate cannot be installed in printer. Be sure to install the SSL server Certificate in printer.

When installation of intermediate Certificate is required, install the intermediate Certificate not in printer, but in client PC (browser).

For the method of installing the intermediate Certificate in client PC (browser), refer to the following.

Installing the intermediate Certificate (or CA certificate) in client PC (browser).

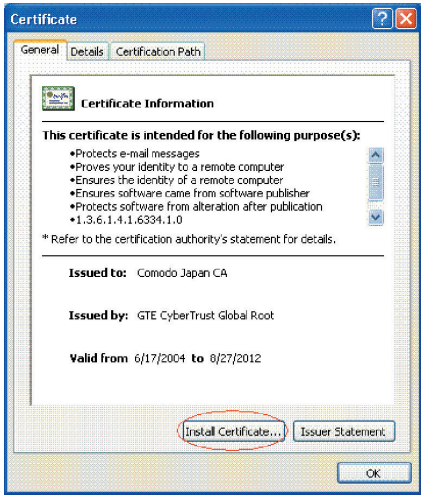
[Procedure]

1. Double-click the intermediate Certificate (or CA certificate) that is issued by certifying authority, on a client PC to display the intermediate Certificate (or CA certificate).

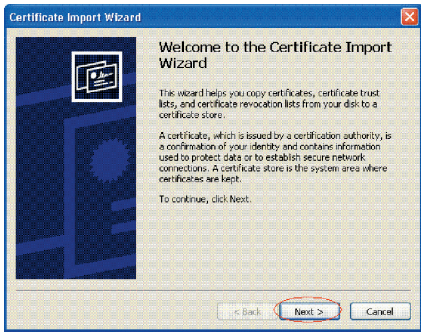
   ex.) For an example, the intermediate Certificate of Comodo has the text (PEM) format: ComodoJapanCA.Crt, and the binary format: ComodoJapanCA.cer. Either one of these formats can be opened. (Same result can be obtained.)

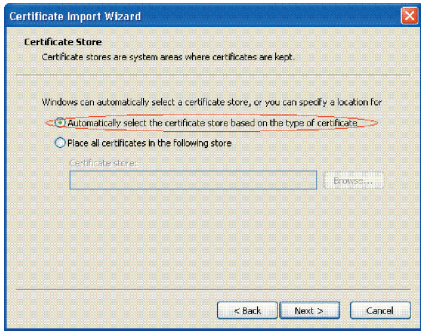
   Open either ComodoJapanCA.crt or ComodoJapanCA.cer.

2. Press the "General" tab of the displayed Certificate information, and press "Install Certificate" button.



3. The "Certificate Import Wizard" is displayed. Install Certificate in accordance with the displayed procedure. Select "Automatically select the certificate store based on the types of certificate". Then, the Certificate will be installed automatically.





6.5.5.5 Other questions

Other probable questionnaires are described below.

6.5.5.5.1 Time required for creation of Certificate

It takes several ten seconds for creation of Certificate.

6.5.5.5.2 Communication time when the encryption function is enabled

A time longer than the ordinary communication time is required for communication when the encryption function is used.

6.5.5.5.3 Can encrypted printing be performed by any printer other than IPP?

Answer : Any printer other than IPP cannot encrypt printing.
Only the IPP printing can encrypt printing.

6.5.5.5.4 What will happen if SSL/TLS is turned OFF after Certificate has been created (or installed)?

Answer : Certificate will be kept saved as it is.
If SSL/TLS is turned ON again, the Certificate becomes usable.

6.5.5.5.5 Want to change the port number

Answer : The port number during the SSL/TLS communication is fixed to 443.
It cannot be changed.

6.5.5.5.6 The error message "The security certificate was issued by a company you have not chosen to trust. View the certificate to determine whether you want to trust the certifying authority" is displayed.

If this error is indicated, it means that the certificate which is installed in a printer is self-sign certificate.

In the case of self-sign certificate, error (security warning) will not be displayed if the self-sign certificate of printer is installed in the client PC.

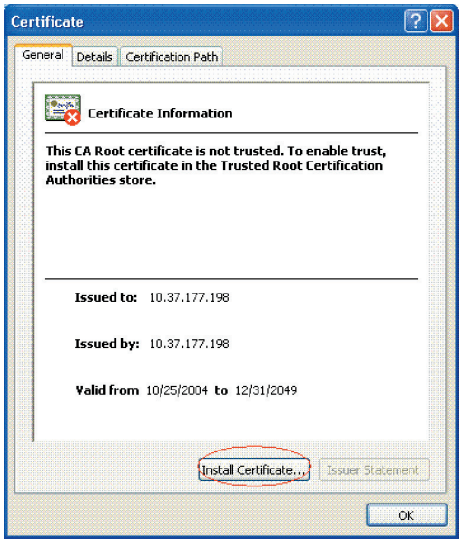
In the case of certificate of certifying authority, error (security warning) will not be displayed if the CA certificate of certifying authority is installed in the client PC.

Solution : Install certificate in the client PC (browser).

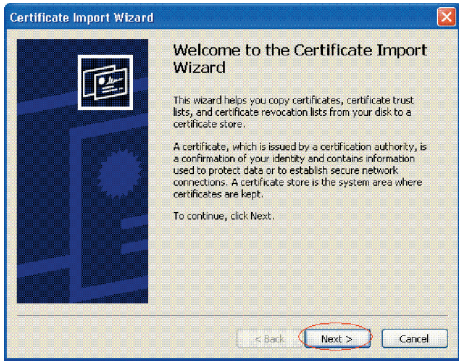
[Procedure]

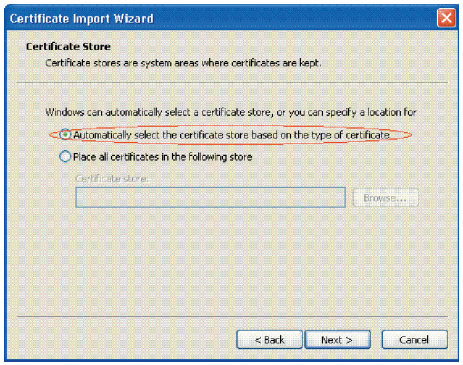
1. Click the "View Certificate" button on the error (security warning) screen.
2. Press the "General" tab of the displayed Certificate information, and press "Install Certificate" button.

3. The "Certificate Import Wizard" is displayed. Install Certificate in accordance with the displayed procedure. Select "Automatically select the certificate store based on the types of certificate". Then, the Certificate will be installed automatically.



6.5.5.5.7 The error message "Name of security certificate is invalid or does not match the site name" is displayed.





It means that the IP address of printer is different from the IP address that is described on certificate, or from the IP address when the certificate is created.

Solution : Return the IP address of printer back to the address when self-sign certificate is created, or to the address when CSR is created.

6.5.5.6 Restrictions when using Internet Explore 7

Several restrictions are imposed when using Internet Explore 7. This is because security restriction became more severe in IE7.

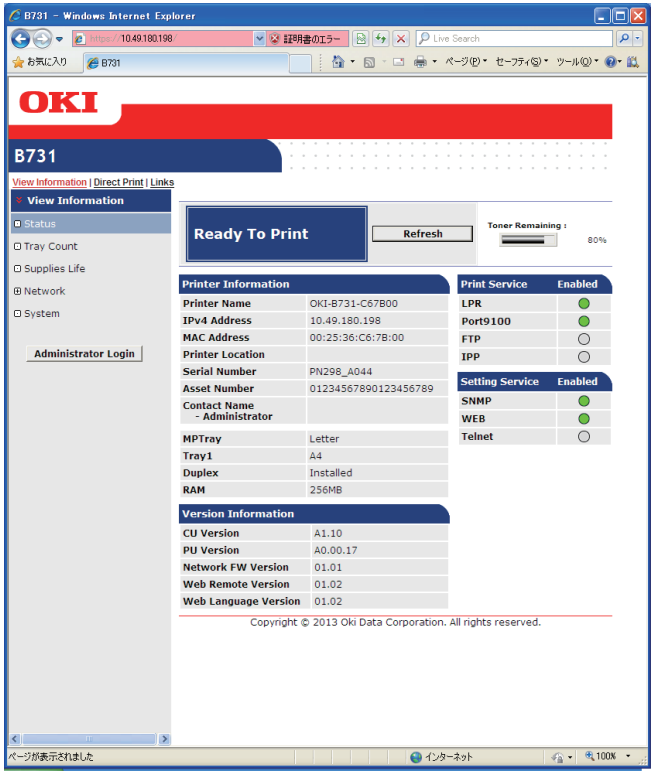
6.5.5.6.1 Warning indication when SSL is made valid by self-sign certificate

When SSL is made valid by self-sign certificate, the following picture is obtained when web page is accessed, and page will not be displayed.

Web display when SSL is made valid by self-sign certificate

Solution : When "Continue browsing this site (not recommended)" is clicked on the warning screen, the web page will be displayed.

However, it has no effect on the web page function. It can be used for browsing or to change setting of printer setup.



Web page display when "Continue browsing this site (not recommended)" is clicked.

6.5.6 Wireless Troubleshooting

(1) Cannot print through Wireless Network.

Confirmation Items	Confirmation Tasks	Action at NG
(1) Check Network Connection setting.		
Check Network Connection is Wireless not Wired.	Print out the network information. Check Network Connection setting is Wireless.	Set Wireless setting by Manual Setup or Auto Setup (WPS) to connect to wireless access point. Network Connection setting switches from Wired to Wireless.
(2) Check the connection to the wireless LAN access point.		
Check that the wireless LAN setting is right and the device is connecting to the wireless LAN access point.	Check the panel of the device, and Check whether the status (“Not connected to wireless access point.”) has occurred.	*1
	Check the panel of the device, and Check whether the status (“Wireless settings are incomplete.”) has occurred.	The settings of SSID, the security setting, the encryption key, and the certificate, etc. are insufficient. Please set all necessary settings.
(3) Check whether it is possible to communicate by way of wireless LAN.		
Check whether it is possible to communicate via wireless LAN.	Please refer to Network Troubleshooting for Checkation Tasks and Action at NG. Moreover, when wireless security is set to "WEP", the connection to wireless LAN access point might not be able to be communicated though does. Set it to the security setting of wireless LAN access point additionally again.	

*1 : Check once again whether the SSID, security setting, and an encrypting key of the wireless LAN access point are same as the settings of this device. When any one of settings is different, the device cannot be connected to the wireless LAN access point.
Check that a WEP key index of the wireless LAN access point is 1 when the security settings of the wireless LAN access point are WEP. When a WEP key index of the wireless LAN access point is not 1, it can not communicate with this device.
When a time-out error is displayed after automatic setting (WPS-PBC/PIN) execution, the connection setting with the wireless LAN access point is not completed in time.
Start WPS of the wireless LAN access point as soon as you start WPS of this device. (It is no problem that you start WPS of the wireless LAN access point first.)
When an overlap error is displayed after automatic setting (WPS-PBC) execution, there is a device carrying out WPS in others. Carry out WPS again after a while.

6.6 Paper cassette switches and paper size correlation table

(1) Source tray

Switch Part No. 2052000P4000

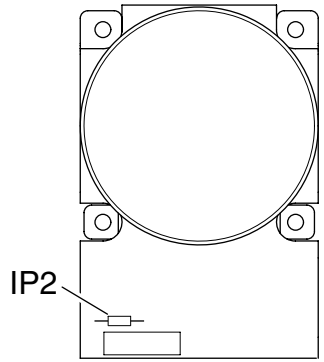
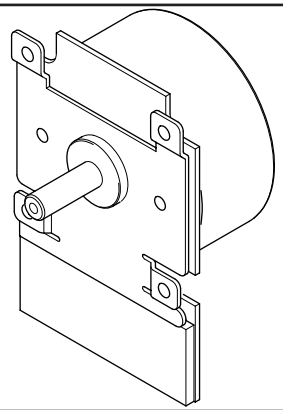
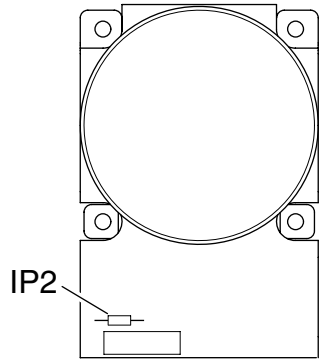
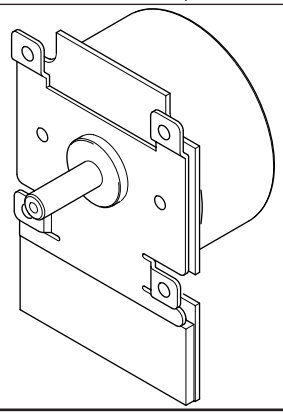
Model No: HS12-001

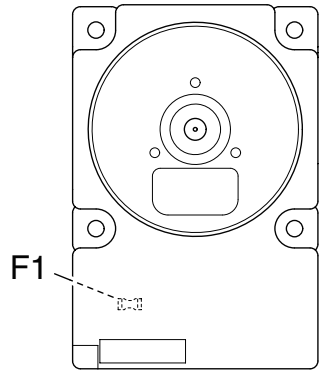
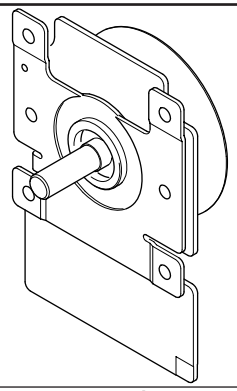
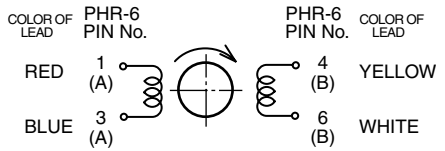
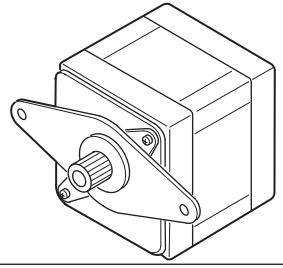
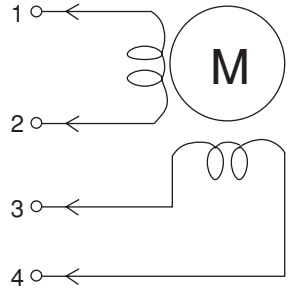
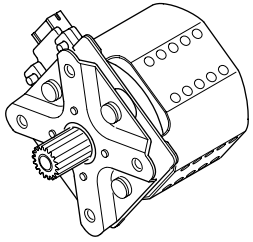
Bit Number				Switch Indication Size
1	2	3	4	TRAY1 ～ TRAY4
H	H	H	H	No cassette
H	H	H	L	Legal13" ～ Legal14"
H	H	L	L	A4
H	L	L	L	Letter
H	L	L	H	Executive
H	H	L	H	B5
H	L	H	L	COM10
H	L	H	H	A5
Press of SW: L				

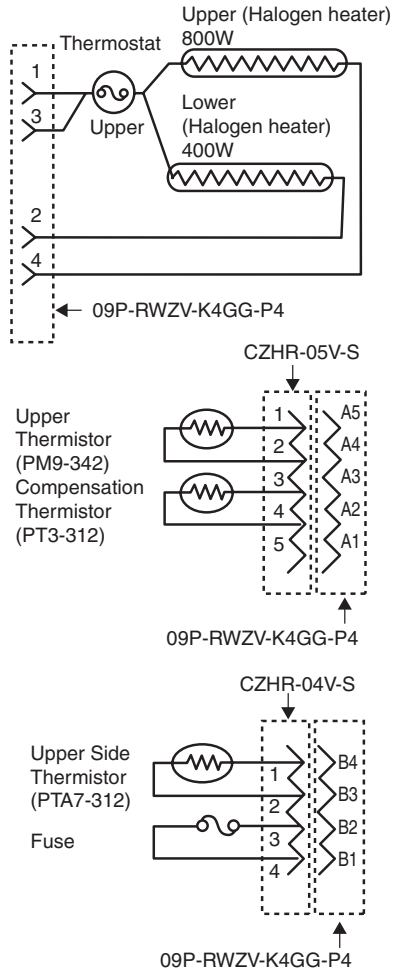
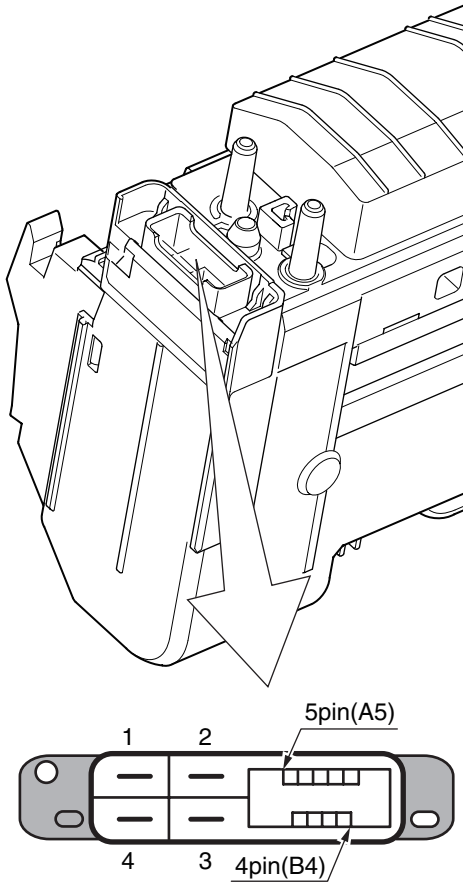
- When “Legal” is selected, three options, “Legal 13”, “Legal 13.5” and “Legal 14” are selectable.

7. Connection diagrams

7.1 Resistance value check

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
ID motor			Across both ends of IP2: 1Ω or less
Fuser unit motor			Across both ends of IP2: 1Ω or less

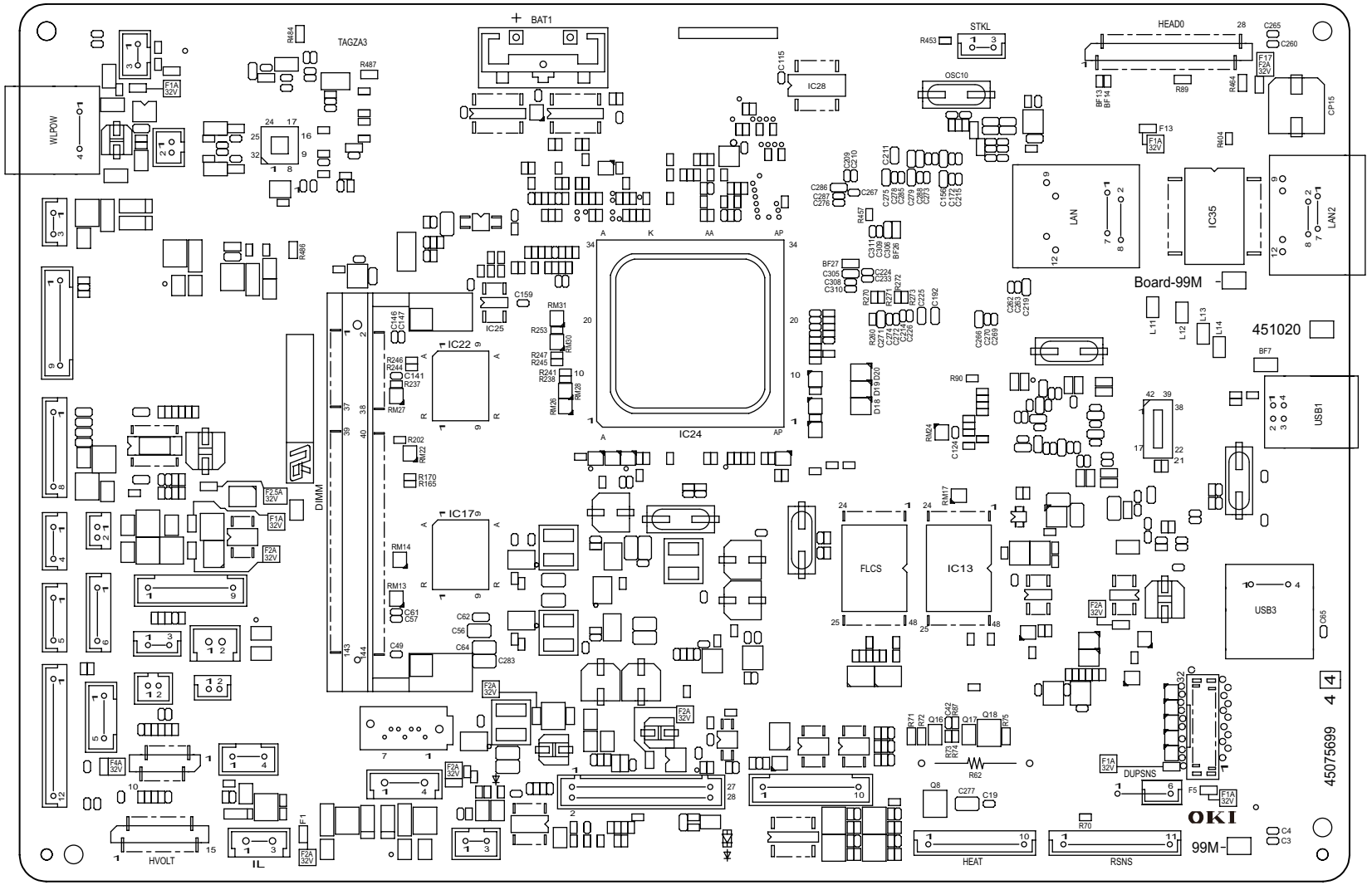
Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Feed motor			Across both ends of F1: 1Ω or less
Duplex motor			Between pin-1 and pin-3: 3.2Ω Between pin-4 and pin-6: 3.2Ω
2nd / 3rd / 4th tray feed motor			Between pin-1 and pin-2: 2.8Ω Between pin-3 and pin-4: 2.8Ω

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Fuser unit			Between pins -A5 and -A4: Approx. 80.58kΩ to 5338kΩ (0 to 93°C) Between pins -A3 and -A2: Approx. 104.5kΩ to 806.5kΩ (0 to 43°C) Between pins -B4 and -B3: Approx. 104.5kΩ to 806.5kΩ (0 to 43°C) Between pins -B2 and -B1: Open

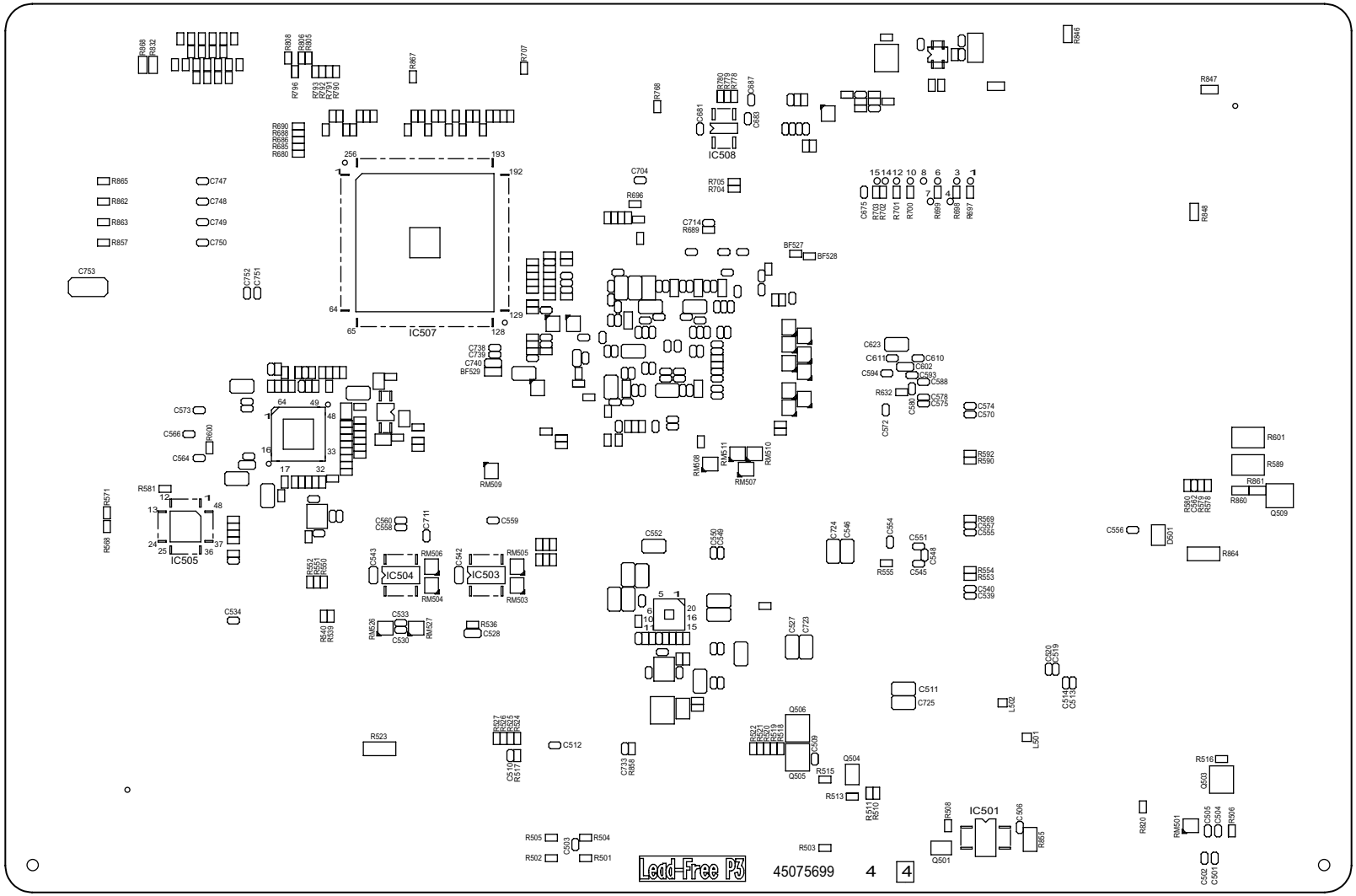
7.2 Parts location

(1) Print Controll PCB (PU/CU PCB)

Componet side

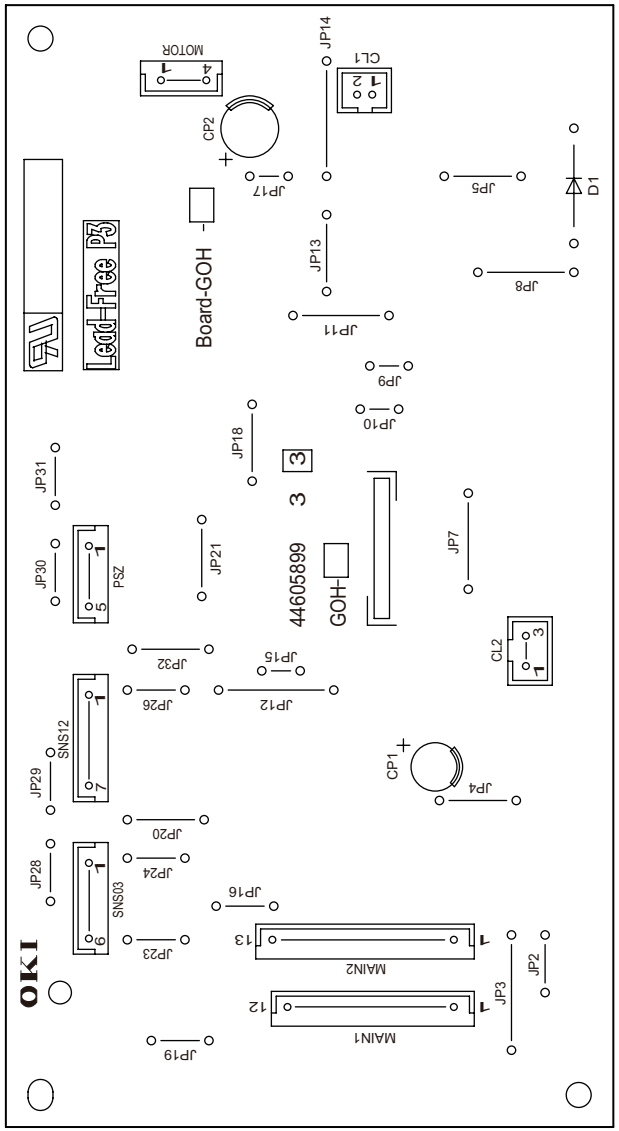


Soldering side

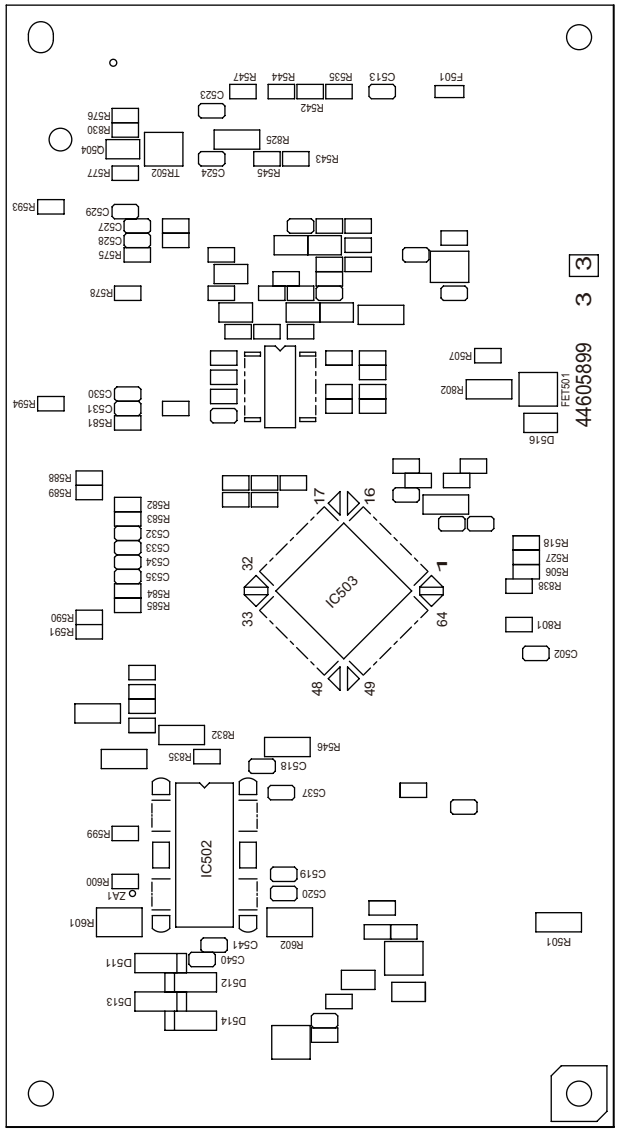


(2) Second Tray Control PCB

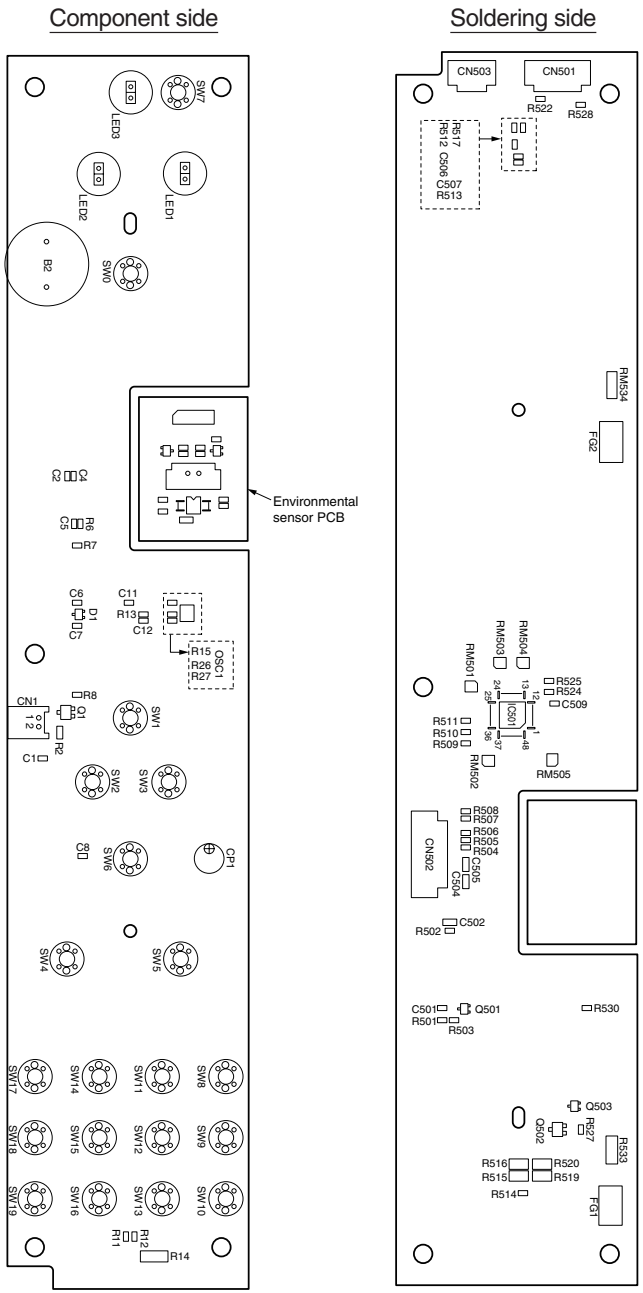
Componet side



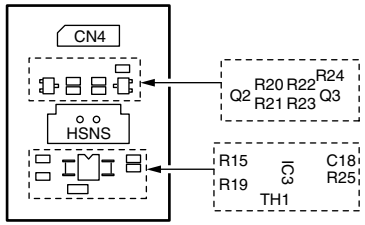
Soldering side



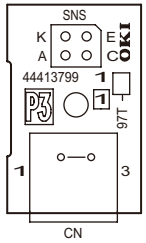
(3) Control panel PCB (PCQ PCB)



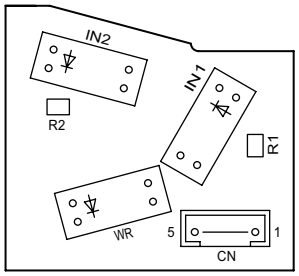
(4) Environmental sensor PCB (enlargement)



(5) Toner sensor PCB

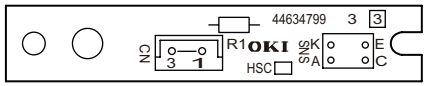


(6) Front sensor PCB

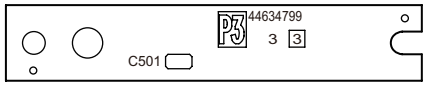


(7) Hopping sensor PCB

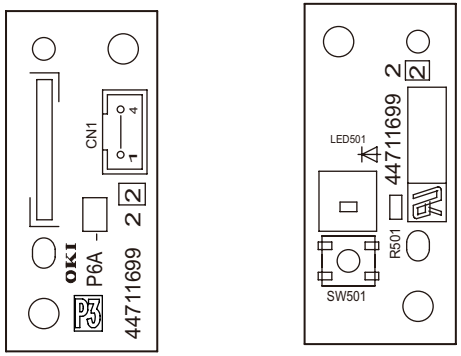
Componet side



Soldering side

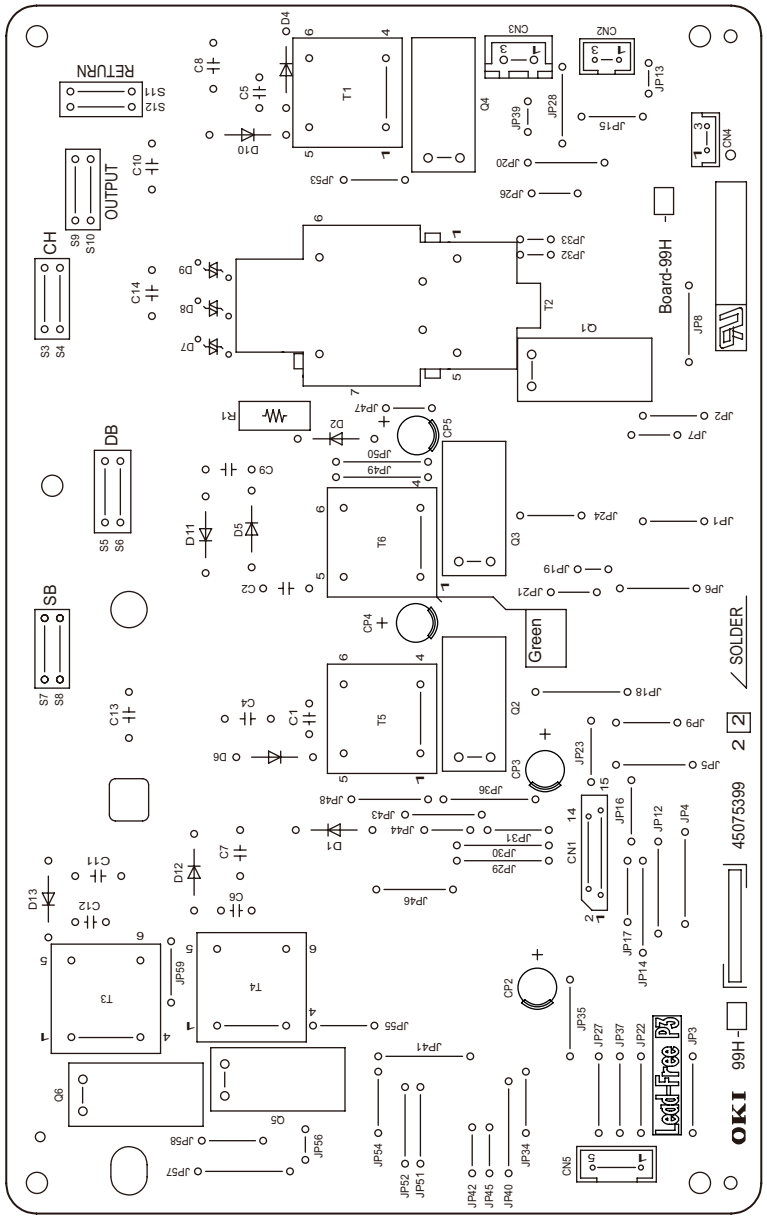


(8) Switch PCB

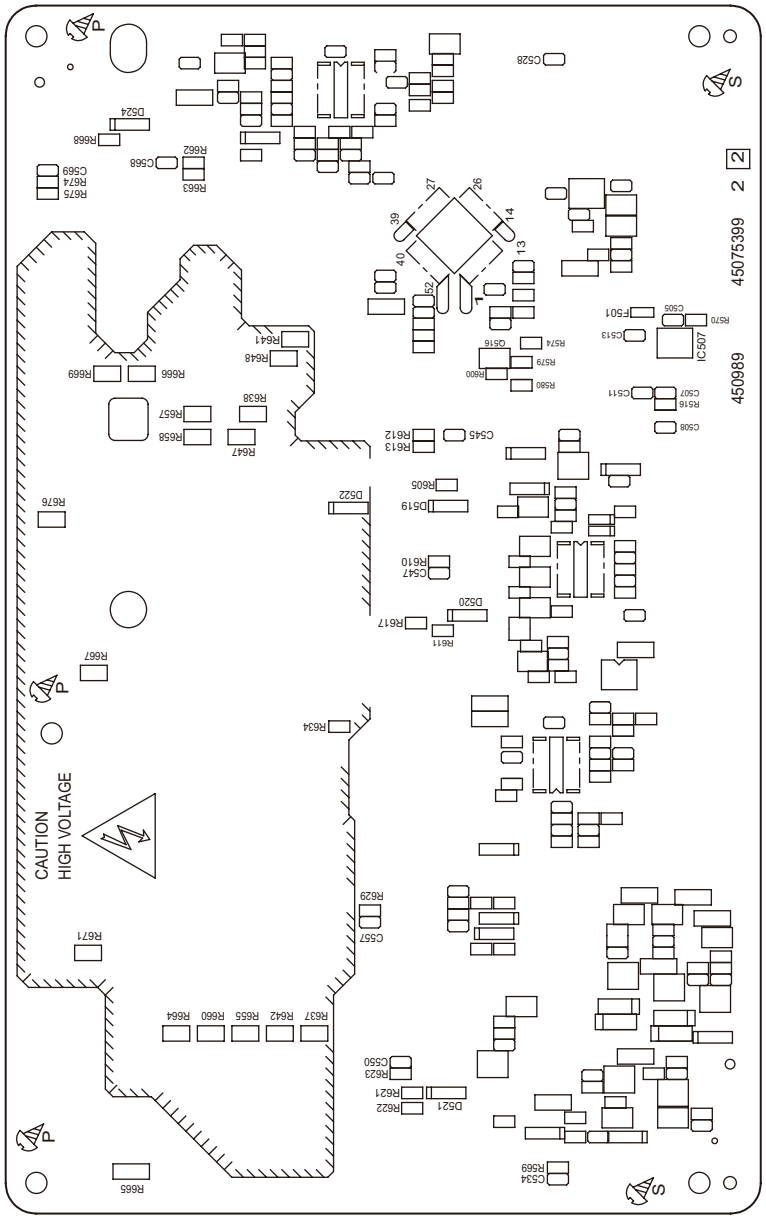


(9) High-Voltage Poser Supply PCB

Componet side

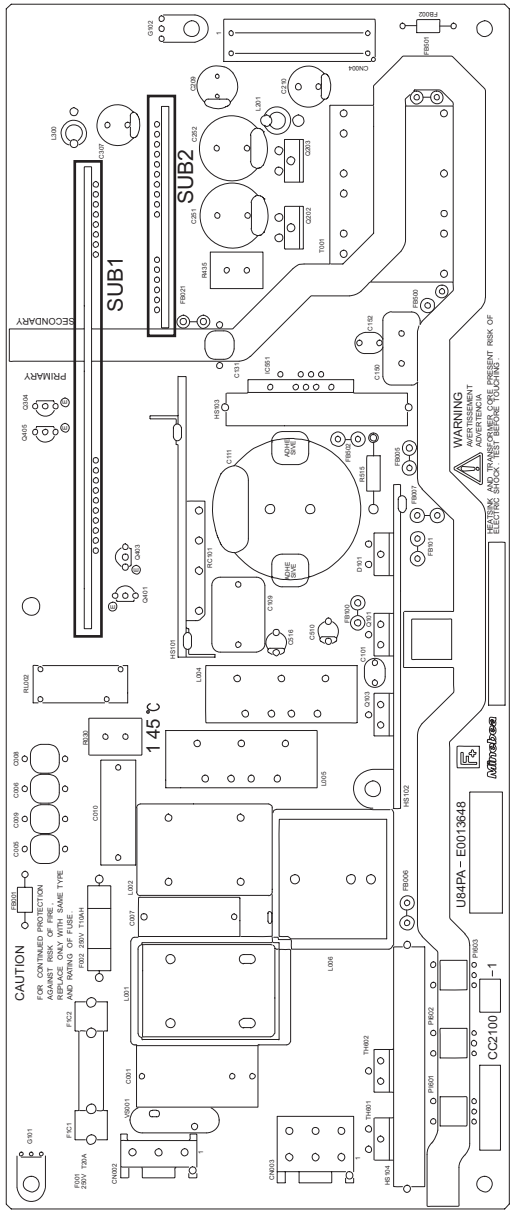


Soldering side

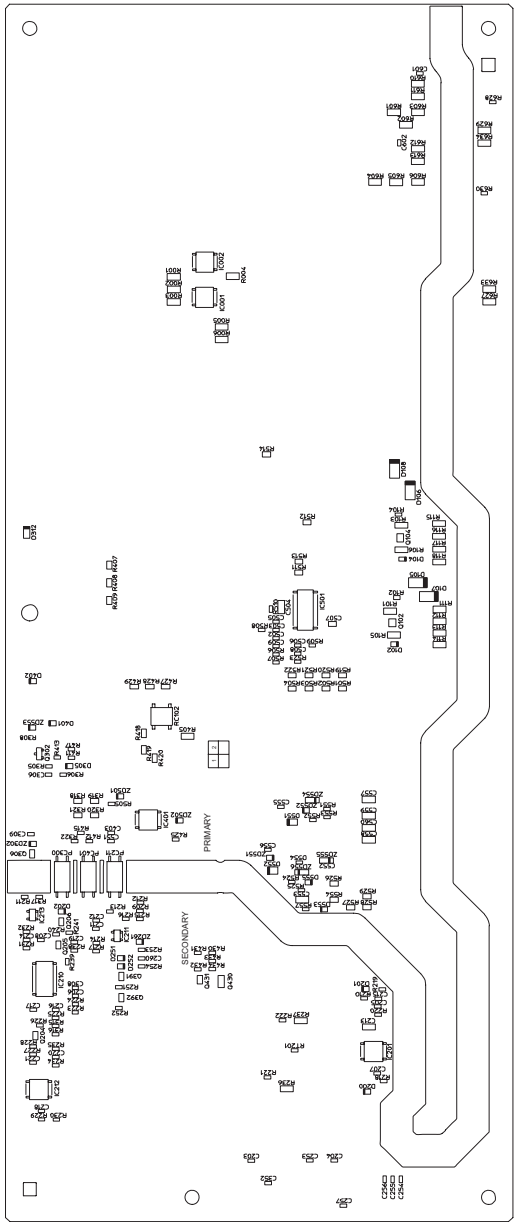


(10) Low-Voltage Poser Supply PCB

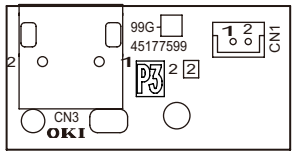
Componet side



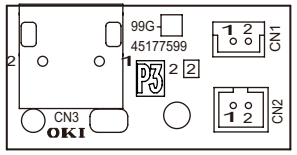
Soldering side



(11) ID TAG PCB



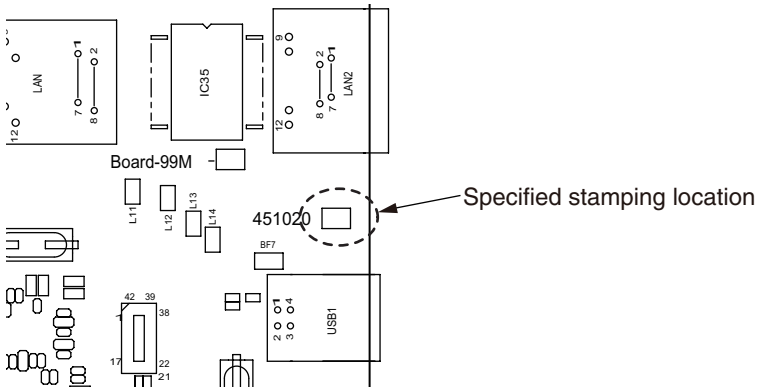
(12) TC TAG PCB



7.3 F/W version number

7.3.1 Maintenance board indication stamp

In accordance with the following list, a specified part number is stamped on the maintenance board indication field on PU/CU board.



Series No.	Stamp No. (Maintenance Board Series No.)	Board 99M(YU) Series No.	Use for
1	451020 [01]	99M-1 (45075601)	B721 ODA
2	451020 [02]	99M-1 (45075601)	B721 OEL/AOS
3	451020 [03]	99M-1 (45075601)	B731 ODA
4	451020 [04]	99M-1 (45075601)	B731 OEL/AOS
5	451020 [05]	99M-1 (45075601)	ES7131 OEL/AOS
6	451020 [06]	99M-1 (45075601)	MPS 5501b ODA/ODB