C911 / C931 / C941 / C942

Maintenance Manual

100518F

Copyright Information

Disclaimer

PREFACE

This manual provides an overview of method for maintaining the C911/ C931/ C941/ C942/ ES9411/ ES9431/ ES9541/ ES9542/ Pro9541WT series.

This manual is intended for maintenance staff. For more information about how to operate the C911/ C931/ C941/ C942/ ES9411/ ES9431/ ES9541/ ES9542/ Pro9541WT series, please refer to User 's manual.

Note! • Manual may be revised and updated at any time without notice.
- Unexpected mistakes may exist in the manual.
  OKI will not assume any responsibility whatsoever for damage to the equipmentrepaired/adjusted/changed by the user etc with this manual.
- The parts used for this printer may be damaged when handling inappropriately. We strongly recommend maintaining this apparatus by our registration maintenance staff.
- Please operate the apparatus after removing static electricity.

⚠**Warning**	
	Risk of explosion if battery is replaced by an incorrect method. Dispose of the used battery in accordance with local regulations.

Index

1. CONFIGURATION

1.1 System configuration

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

Table 1-1 shows the PCB list of C911/C931/C941/C942/ES9411/ES9431/ES9541/ES9542/Pro9541WT.
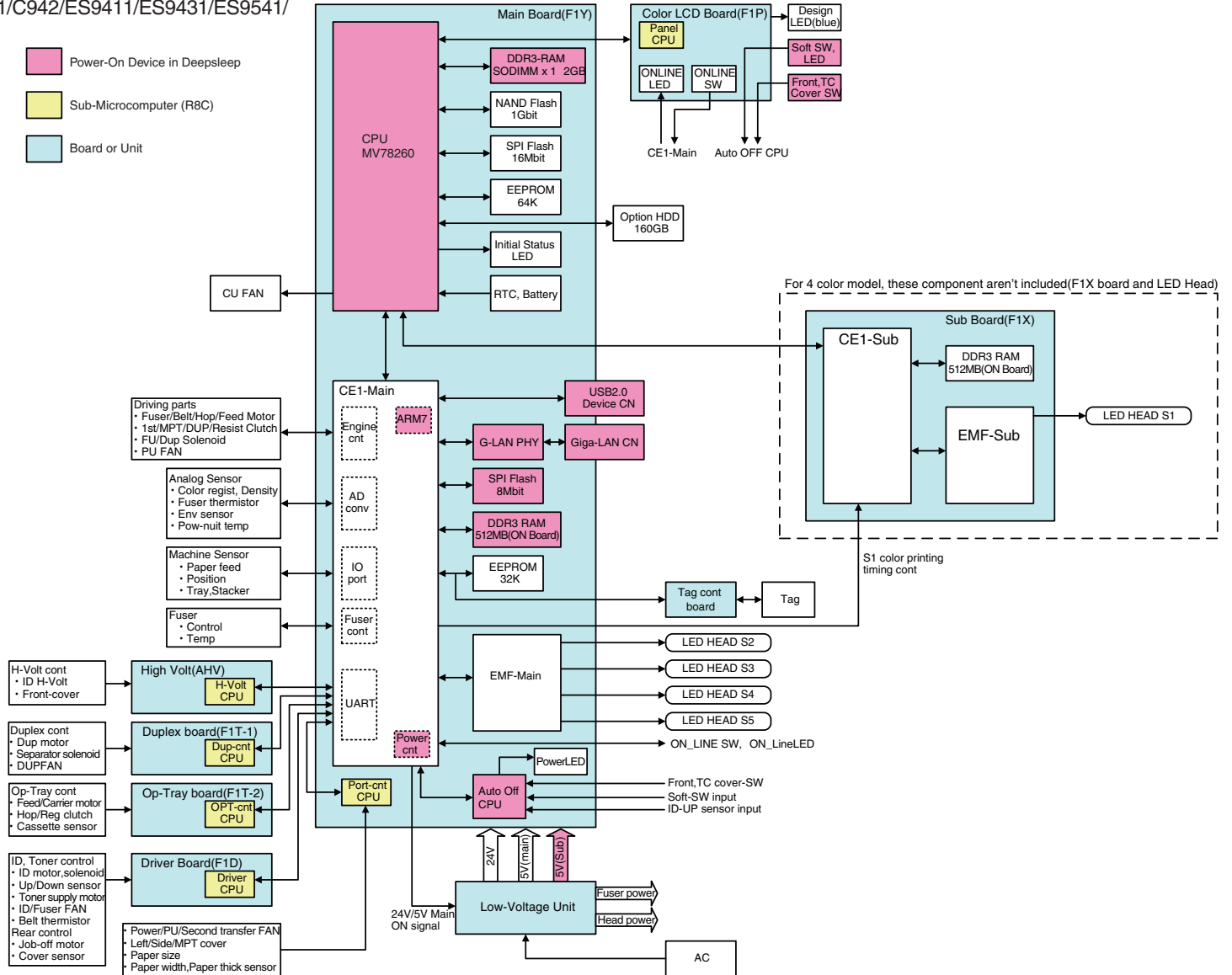
Figure 1-1

Table 1-1 PCB list of C911/C931/C941/C942/ES9411/ES9431/ES9541/ES9542/Pro9541WT

No	Name	Purpose	Remarks
1	F1Y	Printer controller (PU/CU)	For five-color models
2	F1Y-2	Printer controller (PU/CU)	For four-color models
3	F1X	Spot color control	Used for five-color models only.
4	F1D	Driver relay	For five-color models
	F1D-2	Driver relay	For four-color models
	F1D-3	Driver relay	For C942/ES9542 only
5	F1T-1	Duplex unit control	
6	F1T-2	Optional tray units control	
7	F1P or F1A	Control panel control	
8	F1E	External LED	
9	F1G	Tag terminal	
10	F1H	Head power relay	
11	F1K	Cassette sensor relay	Common to the main unit and option trays
12	F1L	EJ-Rail unit relay	
13	F1N	Toner-low sensor, Waste-toner-full sensor	
14	F1S	MPT relay	
15	F1W	Soft switch	
16	AHV-1	High-voltage power supply	For five-color models
	AHV-2	High-voltage power supply	For four-color models
17	PWR unit-ACDC Switch	Low-voltage power supply	
18	AHR	High-voltage relay	
19	F1B	Belt thermistor relay	Consisted in the belt unit
20	MFH	Environmental sensor	

Memo Each Station is correspond with each color units according to the model. Chack following table and figure with target model.

Models	Station				
	S1	S2	S3	S4	S5
C911/C931/ES9411/ES9431	-	Y	M	C	K
C941/ES9541	White/Clear	Y	M	C	K
C942/ES9542	Y	M	C	K	White
Pro9541WT	White	Y	M	C	K
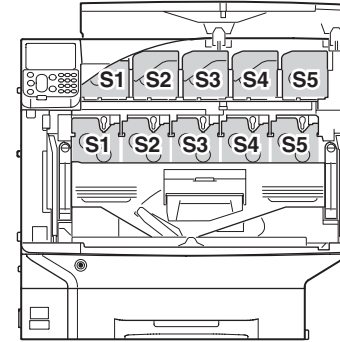
1.2 Printer configuration

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.
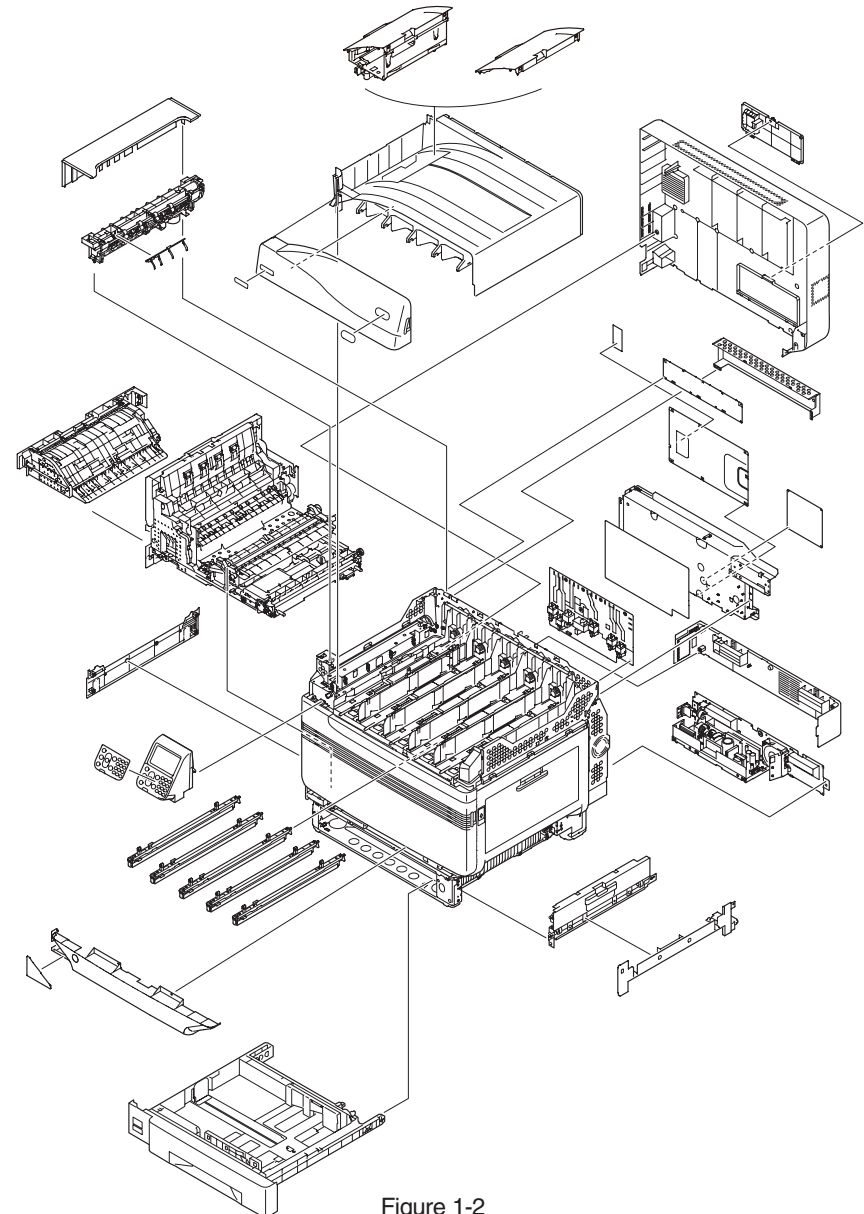
Figure 1-2

1.3 Composition of optional items

The following optional items are available for the apparatus.

(1) Optional Tray Unit
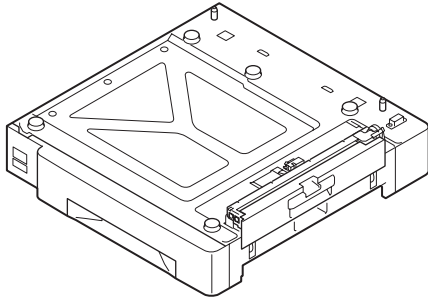
(2) Optional Tray Unit with Casters
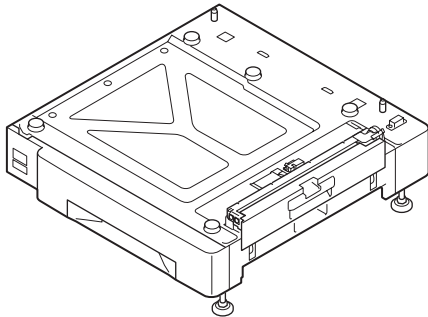
(3) High-capacity Optional Tray Unit (three-layer of optional trays integrated unit with Casters)
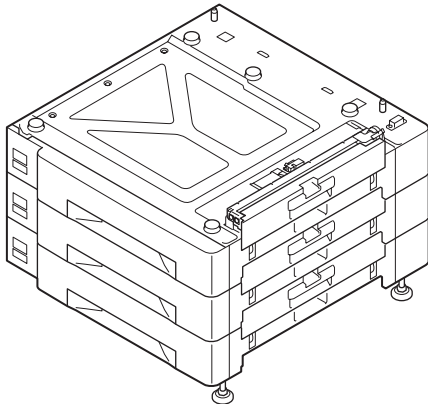
(4) Internal hard disk
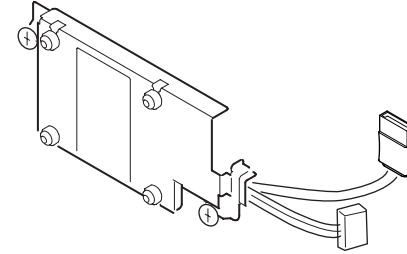
(5) Spot-color kit (5-Color models only)
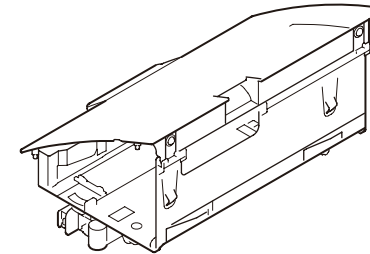
(6) Banner Tray
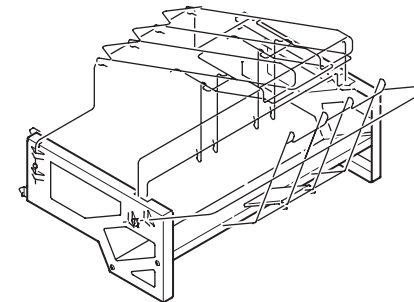
1.4 Specifications

Classification	Item	Specification		
		C911dn/C931dn/ ES9411dn/ ES9431dn	C941dn/ ES9541dn/ Pro9541WT	C942dn/ ES9542
Dimension	Width	699mm		
	Depth	625mm(665mm/Operator panel including dimension)		
	Height	640mm		
	Weight	Approx. 96.5kg	Approx. 105.0kg	
Printing width	Printing width	Max. 328mm		
Print speed	Engine speed	50PPM(A4 LEF) (community color and mono printing)		
Print start	First print time	8 sec. (community color and mono printing) (A4 LEF)		
	Warm-up time	From power on: 50 seconds From power on (with Calibrations): 110 seconds or less From power save mode: 35 seconds		
Resolution	LED head	1200dpi		
	Maximum input resolution	1200 × 1200dpi		
	Output resolution	True 1200 × 1200 dpi True 600 × 600 dpi 1200 × 600 dpi 4 bit		
	Gradation	1,200 dpi, two gradations		
	Toner save mode	Toner consumption saving by to decrease for printing density		
CPU	Core	ARM processor		
	Clock	1GHz(C911/ ES9411)/ 1.2GHz(C931)	1.2GHz	
RAM	Resident	2GB		
ROM	Program + font	128MB		

Classification	Item	Specification		
		C911dn/C931dn/ ES9411dn/ ES9431dn	C941dn/ ES9541dn/ Pro9541WT	C942dn/ ES9542
Power consumption	Power input	ODA, ODB : 120V AC +/-10% OEL, ODA230, AOS, Korea, China : 230V AC +/-10%		
	Off mode	【100 ～ 127V】 ≦ 0.4W 【220 ～ 240V】 ≦ 0.5W		
	Sleep mode	4.0W or less (Factory default)		
	Power save mode	【100 ～ 127V】 ≦ 30W w/o option 【220 ～ 240V】 ≦ 34W w/o option		
	Idle	40W (average)		
	Normal operation	1100W (average) (Varies depending on usage environment)		
	Peak	1600W		
Operating environment (temperature)	Operating	10°C to 32°C, 17°C to 27°C (temperature with assurance of the quality for full-color printing)		
	Non-operating	0°C to 43°C, power off		
	Storage (one year max.)	-10°C to 43°C, with drums and toner cartridges		
	Transportation (one month max.)	-29°C to 50°C, with drums but no toner cartridges		
	Transportation (one month max.)	-29°C to 50°C, with drums and toner cartridges		
Operating environment (humidity)	Operating	20% to 80%, 50% to 70% (humidity for full-color print quality guaranteed) Maximum wet-bulb temperature: 25°C		
	Non-operating	10% to 90%, maximum wet-bulb temperature: 26.8°C, power-off		
	Storage	10% to 90%, maximum wet-bulb temperature: 35°C		
	transportation	10% to 90%, maximum wet-bulb temperature: 40°C		

Classification	Item	Specification		
		C911dn/C931dn/ ES9411dn/ ES9431dn	C941dn/ ES9541dn/ Pro9541WT	C942dn/ ES9542
Life	Printer life	1,500,000pages (A4 LEF), five years		
	Monthly Duty Cycle (M=L/12, A=L/12/5)	Max.300,000 pages/month Average 25,000 pages/month		
	MTBF (2.3% duty)	6,000H (reference)		
	MPBF	140,000 pages		
	MTTR	Within 20 minutes		
	Toner life (based on ISO/IEC 19798) (The spot color white/ clear is according to A4 size with 5% area coverage.)	Toner provided with the product: 10,000 pages (C/M/Y/K/ White*[1]/ Clear*[1]) 24,000 pages (C/M/Y/K) 38,000 pages (C/M/Y/K)	10,000 pages (C/M/Y/K/W) 38,000 pages (C/M/K), 24,000 pages(Y) 38,000 page(K), 24,000 page(C/ M/Y)	
		Standard: 10,000 pages (White*[1]/ Clear*[1]) High capacity: 20,000 pages (Clear*[1]), 15,000 pages (White*[3]), 24,000 pages (C/M/Y/K) Ultra High Capacity: 38,000 pages (C/M/Y*[4]/K)		
	Image drum life	40,000 pages (3 pages/job, C/M/Y/K) 20,000 pages (3 pages/job, White*[2]/Clear*[1]) 20,000 pages (1 page/ job, C/M/Y/K) 10,000 pages (1 page/job, White*[2]/Clear*[1]) 76,000 pages (when printed continuously, C/M/Y/K) 38,000 pages (when printed continuously, White*[2]/ Clear*[1]) Counter : automatic reset		
	Transfer belt life	150,000 pages (A4 LEF, 3 pages/job) counter : automatic reset		
	Fuser unit life	150,000 pages (A4 LEF) counter : automatic reset		

Classification	Item	Specification		
		C911dn/C931dn/ ES9411dn/ ES9431dn	C941dn/ ES9541dn/ Pro9541WT	C942dn/ ES9542
Operation noise	Operating	57 dBA (ISO 7779 Front) (without any optional unit)		
	Standby	32 dBA (ISO 7779 Front) In one minute after printing (Factory default)		
	Sleep mode	Background level		
Paper handling	Tray capacity (1st tray)	Universal cassette: 580 sheets ($64g/m^2$)		
	Tray capacity (2nd/ 3rd/4th/5th tray)	Universal cassette: 580 sheets ($64g/m^2$)		
	Tray capacity (Multi purpose tray (MPT))	310 sheets ($64g/m^2$) (Total thick is 31mm or less)		
	Paper ejection	620 sheets ($64g/m^2$) to the face down tray, 300 sheets ($64g/m^2$) to the face-up tray		
	Duplex	Standard		
Paper size		A3 nobi, A3Wide(SRA3), B6, Tabloid extra, A4Wide(SRA4)[SEF/LEF], A3, A4 [SEF/LEF], A5 [SEF/LEF*], A6*, B4, B5 [SEF/LEF], Letter [SEF/ LEF], Legal (13in, 13.5in,14in), Tabloid, Executive 16K(184×260mm, 196×270mm, 197mm×273mm [SEF/ LEF]), 8K(260×368mm, 270×390mm, 273×394mm) Statement****, Envelope(Com-6 3/4, Com-9, Monarch, Com-10, A2 Envelope, A6 Envelope, A7 Envelope, DL, C5, C4)**, Postcard*, Double postcard, Custom***, Japanese envelope (Choukei 3, Choukei 4, Choukei 40, Youkei 0, Youkei 4, Kakugata 2, Kakugata 3, Youkei 2 (C6), Kakugata 8)**, Index card**, Banner, B6 half**. *: Spot-color over print is unavailable for A6, A5LEF, postcard, envelope, index card and B6 half. **: Envelope, index card and B6 half can be used in MPT and face-up stacker. ***: As for Custom, available size is different depending on a tray. ****: statement , envelope, index card and B6 half can be used in Multi purpose tray only.		

Classification	Item	Specification C911dn/C931dn/ ES9411dn/ ES9431dn	C941dn/ ES9541dn/ Pro9541WT	C942dn/ ES9542
Minimum paper size	Tray 1	99 × 147mm		
	Tray 2, 3, 4, and 5 (Optional Tray)			
	Multi purpose tray	64 × 89mm		
Media weight	Tray 1	$52g/m^2$ to $320g/m^2$		
	Tray 2, Tray 3, Tray 4, Tray5 (Optional Tray)			
	Multi purpose tray	$52g/m^2$ to $360g/m^2$		
Operator panel	LCD	Graphic panel with 480 × 272 dots With display of paper size		
	LED (Color)	5 LEDs (green × 2, dark amber × 2, Blue × 1)		
	Button	20 buttons • Numeric-key pad • Power Save button (green) • Operational buttons (7 buttons: ON LINE (green), CANCEL ,OK , ▲ , ▼ , BACK , HELP(Dark amber))		
Status switch/ sensor	Paper End	Provided		
	Paper low	Provided		
	Toner low	Provided (Y, M, C, K)	Provided (Y, M, C, K, White (W), Clear (CL))	Provided (Y, M, C, K, White (W))
	Top/front open	Provided		
	Fuser temperature	Provided		
	Paper size	Provided (Auto detection)		
	Stacker full	Provided		
Communi- cation interface	Standard (on-board)	•USB2.0 (High-speed USB is supported) •Ethernet (1000BASE-T/100BASE-T/10BASE-T)		
Page description language	Standard	PCL6(PCLXL3.0) / PCL5c / XPS / Direct PDF Printing(PDF1.7) / PostScript3 / IBM PPR III XL / EPSON FX		
	Emulation switch	Automatic		

Classification	Item	Specification C911dn/C931dn/ ES9411dn/ ES9431dn	C941dn/ ES9541dn/ Pro9541WT	C942dn/ ES9542
Font	Bit-map font	Provided		
	Scalable font	Provided		
	Barcode	Provided		
	OCR-A/B	Provided		
Option (removable)	HDD kit Installable by users	160GB		
	Tray configuration	Tray 2/ Tray 3/ Tray 4/ Tray5		
	Cassette	Universal (580 sheets, $64g/m^2$)		
	Banner Tray	Provided		
	Tray with chasters	Provided		
	Spot color kit	NA	Spot color kit (White (W), Clear (CL))	NA
Shipping setting	(by each to shipping area)	PCL + PS model (1200dpi LED Head model with all of PDLs)		
Other	USB-IF logo	Provided		
	Windows logo	Provided		
	Operation with UPS or inverter	Proper operation by use of a UPS (uninterruptible power supply) and an inverter is not guaranteed. Do not use a UPS and an inverter.		

*[1]:For only C941
*[2]:For C941 and C942
*[3]:For only C942
*[4]:Except C942/ES9542

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

Product equivalent to UBB - 4R - D14C - 4D(LF)SN

Connector pin arrangement
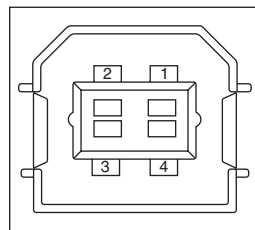
• Cable side: B-plug (male)

(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 Supply (+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

Notwork protocol

TCP/IP: Network layer

ARP, IP, ICMP, IPv6, 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, Windows Rally (WSD Print, LLTD)

NBT: SMB, NetBIOS over TCP

Ether Talk: ELAP, AARP, DDP, AEP, NBP, ZIP, RTMP, ATP, PAP

IEEE802.1X: EAP-TLS, PEAP

* This apparatus installs Oki Data Network Stack Version 1.0 acquiring IPv6 Ready Logo Phase-2 (IPv6 Core Protocols).

1.5.2.2 Connector and cable of network interface

(1) Connector

1000BASE-T / 100 BASE-TX / 10 BASE-T (automatically switched, not usable simultaneously)

Connector pins arrangement
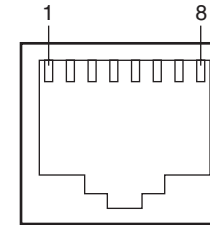
(2) Cable

Non-shield twisted-pair cable with RJ-45 connector (Category 5e equivalent or more recommended)

1.5.2.3 Network interface signals

Pin No.	Signal name	Function
1	TRD+(0)	Transmitting and receiving Data 0 (+)
2	TRD-(0)	Transmitting and receiving Data 0 (-)
3	TRD+(1)	Transmitting and receiving Data 1 (+)
4	TRD+(2)	Transmitting and receiving Data 2 (+)
5	TRD-(2)	Transmitting and receiving Data 2 (-)
6	TRD-(1)	Transmitting and receiving Data 1 (-)
7	TRD+(3)	Transmitting and receiving Data 3 (+)
8	TRD-(3)	Transmitting and receiving Data 3 (-)

2. DESCRIPTION OF OPERATION

2.1 Electrophotographic process mechanism

(1) Electrophotographic process

The electrophotographic process is explained briefly below:

1. Charging

   A voltage is applied to the Charging roller to electrically charge the surface of the OPC drum.

2. Exposure

   The LED head exposures light onto the charged OPC drum in accordance with the image data. The electric charge of the exposed part of the OPC drum surface decreases depending on the light, thus forming the electrostatic latent image on the OPC drum surface.

3. Development

   Charged toner are adsorbed to the electrostatic latent image of the OPC drum by electrostatic power, and forms toner images on the OPC drum surface.

4. Transfer

   The intermediate transfer belt is arranged in contact with the OPC drum surface. And the electric charges are charged to the belt by the first transfer roller that is arranged at inside of the intermediate transfer belt. Therefore, the toner image is transferred to the intermediate transfer belt. Then, the toner image is transferred to the paper by the second transfer roller.

5. Drum cleaning

   The drum cleaning blade removes toner remaining on the OPC drum after the transfer.

6. Belt cleaning

   The belt cleaning blade removes toner remaining on the belt.

7. Fusing

   Heat and pressure are applied to the toner image on the paper for fusing.

(2) Charging

The voltage is applied to the charging roller, which is arranged in contact with the OPC drum surface, to charge the OPC drum surface.

Charging roller

Power supply unit
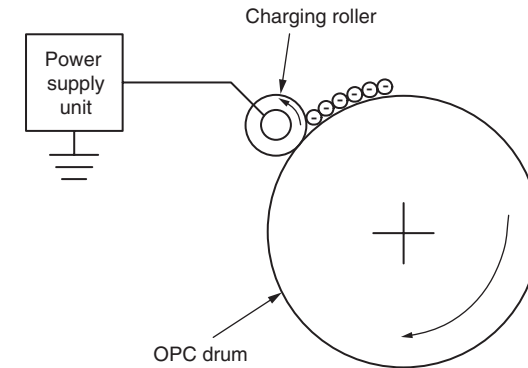
OPC drum

(3) Exposure

The light emitted from the LED head is exposured onto the charged surface of the OPC drum. The charge of the exposed part of the OPC drum decreases depending on the light, forming the electrostatic latent image on the OPC drum surface.

LED head

Charging roller

Power supply unit

OPC drum
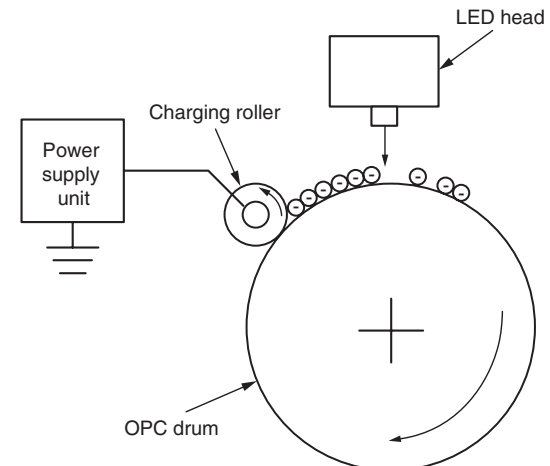
(4) Development

Charged toner are adsorbed to the electrostatic latent image on the drum surface, thereby the electrostatic latent image is converted to the toner image.

1. The sponge roller supplies the toner to the development roller.

Power supply unit

Sponge roller

Development roller
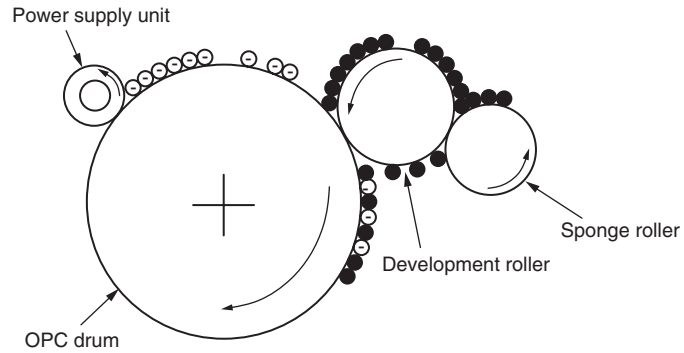
OPC drum

2. The electrostatic latent image at surface of the OPC drum is formed a visible image by the toner.

(5) Transfer

The intermediate transfer belt is arranged in contact with the OPC drum surface. And the electric charges are charged to the belt by the first transfer roller that is arranged at inside of the intermediate transfer belt. Therefore, the toner image is transferred to the intermediate transfer belt. Then, the toner image is transferred to the paper by the second transfer roller.

OPC drum

intermediate transfer belt

First transfer roller

Power supply unit
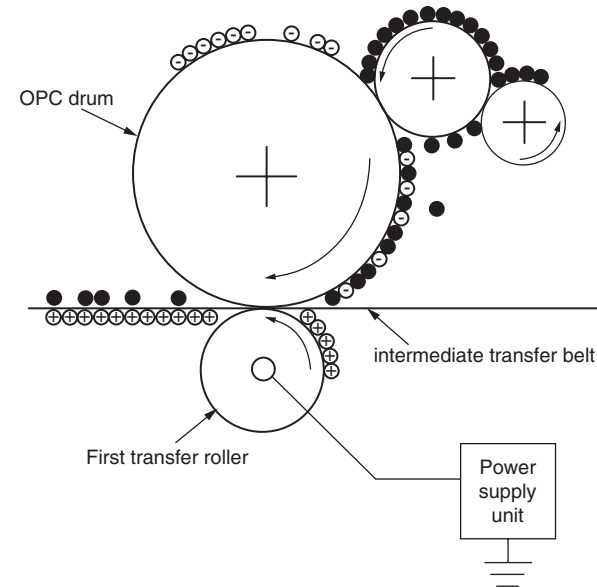
(6) Fusing

The toner image transferred on the paper is fused to the paper by heat and pressure when the paper passes through between the portion of the fuser belt (mainly comprised with the fuser roller, the pat and the fuser belt) and the pressure roller in the fuser unit.

The fuser belt unit is heated by internal heater Assy. with specified wattage (e.g. 1200W in 230V environment). The fusing temperature is determined by the value of the temperature that is the measurement of the thermistor. The thermistor is arranged as it is contacted with the inside of the fuser belt.

There is also a thermostat for safety purposes. When the heater temperature rises above a specific temperature, the thermostat opens and shuts down the power supplied to the heater. The pressure roller is pressed against the fuser belt by press springs those arranged both sides of the pressure roller.
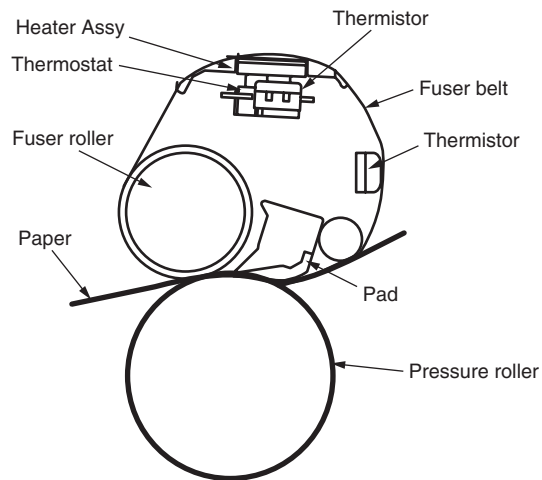
(7) Drum cleaning

Unfixed toner remaining on the OPC drum is removed by the drum cleaning blade and collected into the waste toner area of the toner cartridge.

(8) Belt cleaning

Toner remaining on the intermediate transfer belt is scraped off by the belt cleaning blade and collected into the waste toner box of the transfer belt unit.
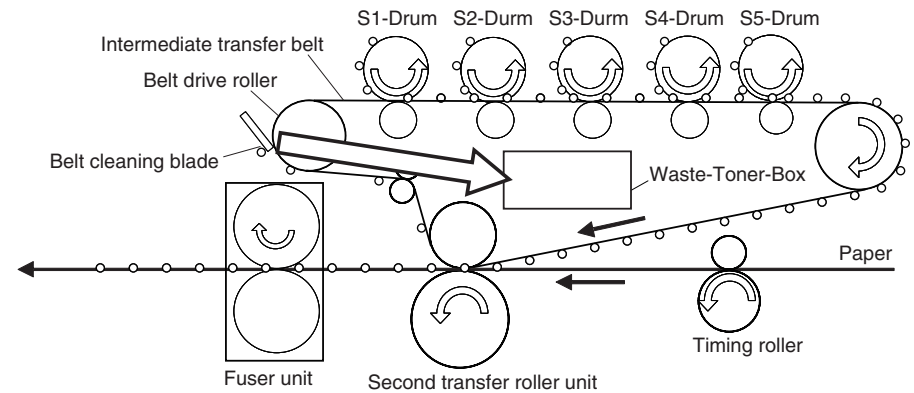
(9) Intermediate transfer roller cleaning

Toner remaining on the intermediate transfer roller is return to transfer belt by electric field cleaning, and clean by belt cleaning structure.

2.2 Printing process

The paper fed from Tray 1 or Tray 2, 3, 4 or 5 is fed by the paper feed roller, registration 1 roller, registration 2 roller and timing roller. When the paper is fed from the MPT, it is fed by the MPT paper feed roller and the registration 2 roller.

Next, the paper fed to the TR2 roller is nipped by the TR2 BU roller arranged in the intermediate transfer belt and TR2 roller.

Then, an unfused toner image which has been formed on the belt of the intermediate transfer belt is transferred on the transported paper.

The unfused toner image is formed onto the belt sequentially through the each color electrophotographic process as SP-Color(White or Clear toner (only 5-color model)), Y, M, C and K.

Thereafter, the toner image is fused to the paper under heat and pressure as the paper passed through the fuser unit.

After the toner image has been fused to the paper, the paper is ejected to a face-up stacker or to a face-down stacker (which is depended on the preselected outputting method).

The above refers to the one-sided (Simplex) printing operation of the printer. Below, its operation in bose-sided (Duplex) printing be explained.

When Duplex printing is set, the paper that has passed through the fuser unit following first one-sided (to back-side) printing is transported into the Duplex unit by the separation of the Duplex separator. After the paper is entered the paper reverse transportation path, the paper is transported from there to the inside of the Duplex unit by the reversal motion of the DUP reverse roller. Then, the paper which passed through the Duplex unit by the DUP 1, 2, 3, and DUP REG roller that is fed from the paper feed route of the Duplex. After the paper is eventually transoprted to the same route that comes from the trays. From here on, for to other one-side (front-side) printing, the same operation as that of one-sided print of paper fed from the tray takes place.

When printing with 2 Pass, the paper is transported into the Duplex unit as in the Duplex printing after the base printing. After the paper is entered the paper reverse transportation path, the paper is transported to the 2 Pass transport path by the 2 Pass separator without the reversal motion. After the paper is eventually transoprted to the route as same as in the Duplex printing inside the Duplex unit. From here on, for to other one-side (front-side) printing, the same operation as that of one-sided print of paper fed from the tray takes place.
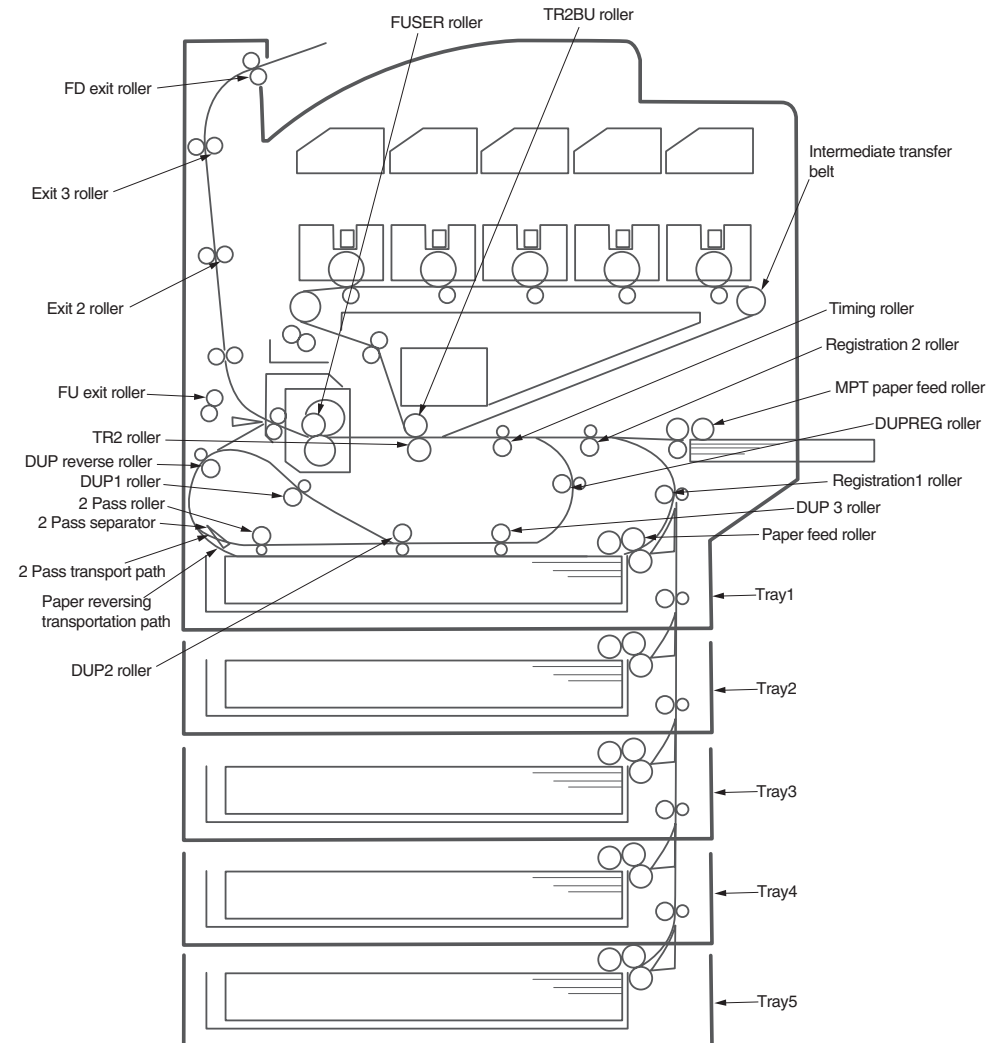
(1) Paper feed from 1st Tray

1. As illustrated in Figure 2-1, when the hopping clutch is ON, the hopping motor is driven (to clockwise), transporting the paper until the IN 1 sensor comes ON. (When the hopping clutch is ON, the paper feed roller is driven.)

2. After causing the IN 1 sensor to come ON, the paper is further transported over a certain distance to finally against the registration roller L. (This corrects skew of the paper.)

3. As shown in Figure 2-2, the hopping clutch and registration clutch are turned ON, the paper feed roller, and registration 1 roller drive to transport the paper. (Driving the paper feed roller is an operation to give the pushing for the paper transfer.)

4. The hopping clutch is turned off before the end of the paper reaches the paper feed roller and the operation to give a pushing for the paper transportation completes. (With the registration clutch ON, the paper is subsequently transported by the registration roller 1.)

<Paper Feed>
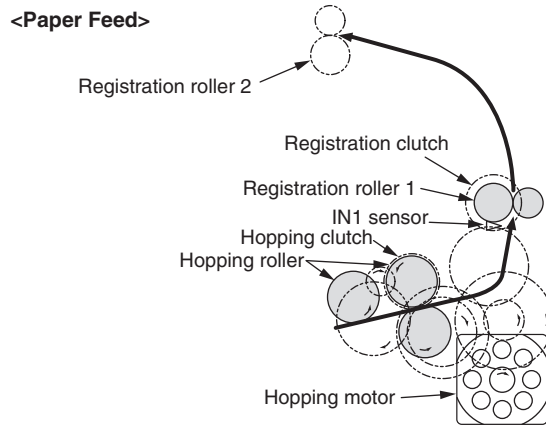
Figure 2-1

<Transportation by Registration>
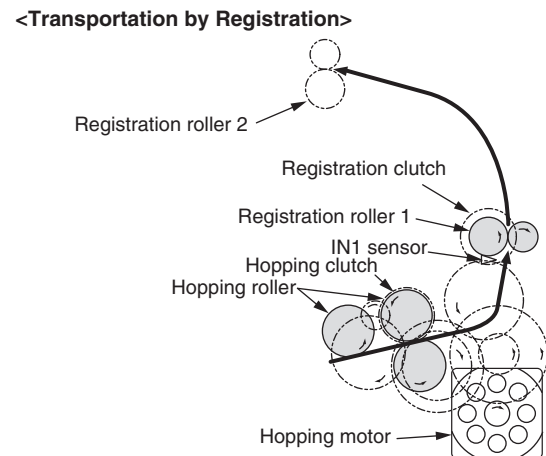
Figure 2-2

(2) Paper feed from MPT

1. When the MPT clutch is ON, the hopping motor is driven (to counterclockwise), transporting the paper until the IN 2 sensor comes ON. (When the hopping motor rotates to conunterclockwise and the MPT clutch is ON, the paper Front roller is driven.)

2. After causing the IN 2 sensor to come ON, the paper is further transported over a certain distance to finally against the registration roller U. (This corrects skew of the paper.)

3. After the hopping motor is stopped, the hopping motor is driven (to crockwise) and the registration roller U transports the paper. (After some second from the registration roller U driven, the MPT clutch is OFF).

(3) Intermediate transfer belt

1. When the intermediate transfer belt motor drives in the direction of the arrow, the intermediate transfer belt is rotated. The intermediate transfer belt unit is consisted of one first transfer roller arranged immediately underneath each color drum, with the tranfer belt inserted in between them.

As the specified voltage is applied to the transfer belt and transfer roller, toner image on the drums of each color is transferred on the intermediate transfer belt.
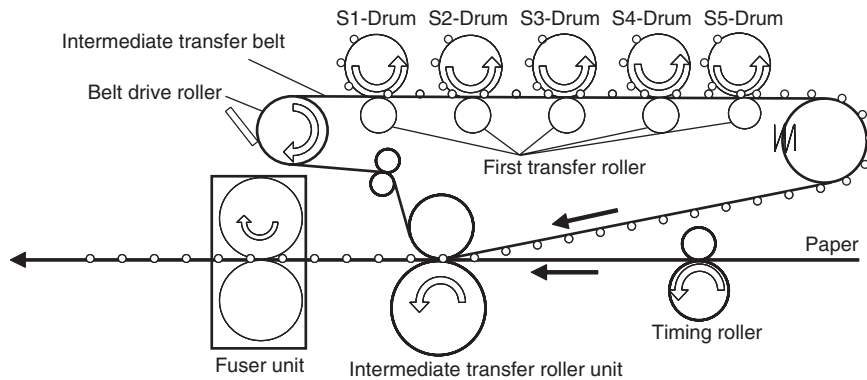
(4) Intermediate transfer roller unit

1. The toner image transferred to the intermediate transfer belt is transferred on paper by the second transfer roller unit. The second transfer roller position is adjused by the second transfer roller shift structure from thickness of the paper with the insert and ejection angle of the paper.
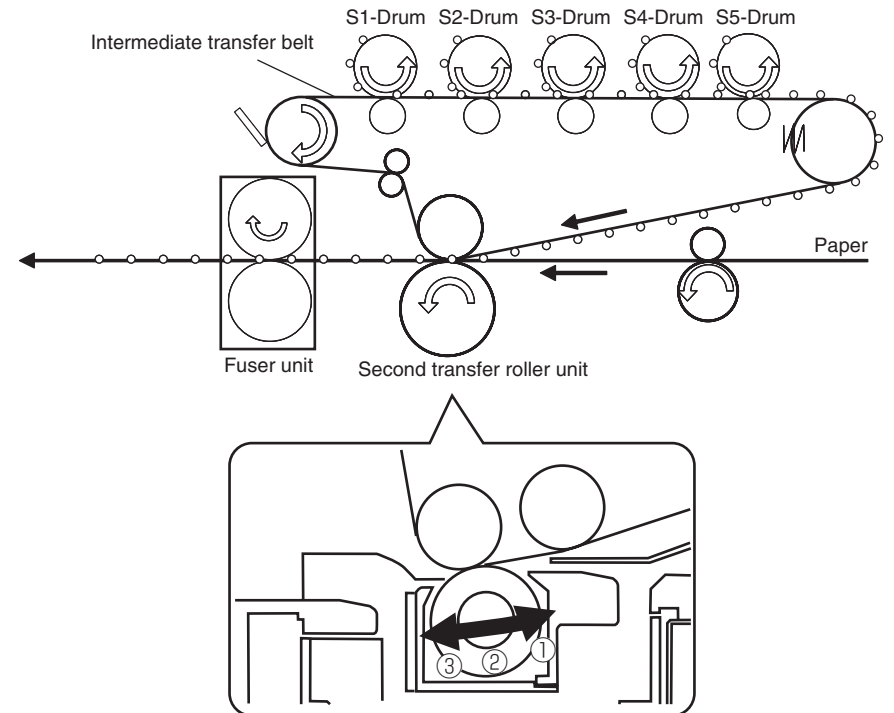
① Home position (release)
② Plain paper position
③ Thick paper position

(5) 2 Pass printing (function to automatically print on the same side of a sheet twice. (only 5-color model / Except C942/ES9542)

Change over between the 2 Pass route and reverse route by the separator.

In the case of the print-job specified 2 Pass, the paper is transported to the horizontal transport route without reverse in the Duplex unit.

2 Pass separator
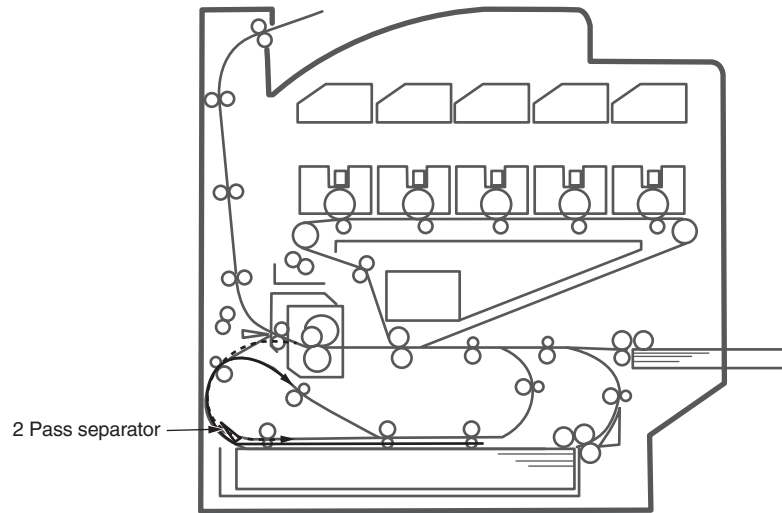
——— Duplex reverse route

------ 2 Pass route

(6) Up-Down Operation of ID unit

Up-Down operation of each of the ID units is performed by clock wise the motor.

When move the Up/Down solenoid, come out the latch of the trigger gear and rotate the trigger gear by detent spring. Rotate trigger gear and double gear until mesh with each other. Trigger gear drive the dual gear. Dual gear drive the drive gear, and rotate lift up drive shaft. Afterward the cam gear of lift up rotate through idle gear. ID unit Up-Down by cam surface and cam follower surface.

Cam Gear   Photo sensor

Cam follower surface

Drive shaft

Photo sensor polar

UP	percolation (L level)
Down	shade (H level)

Trigger Gear

Dual Gear

Detent spring

Cog lack portion

Double Gear

Up/Down solenoid
For trigger

ID motor Gear
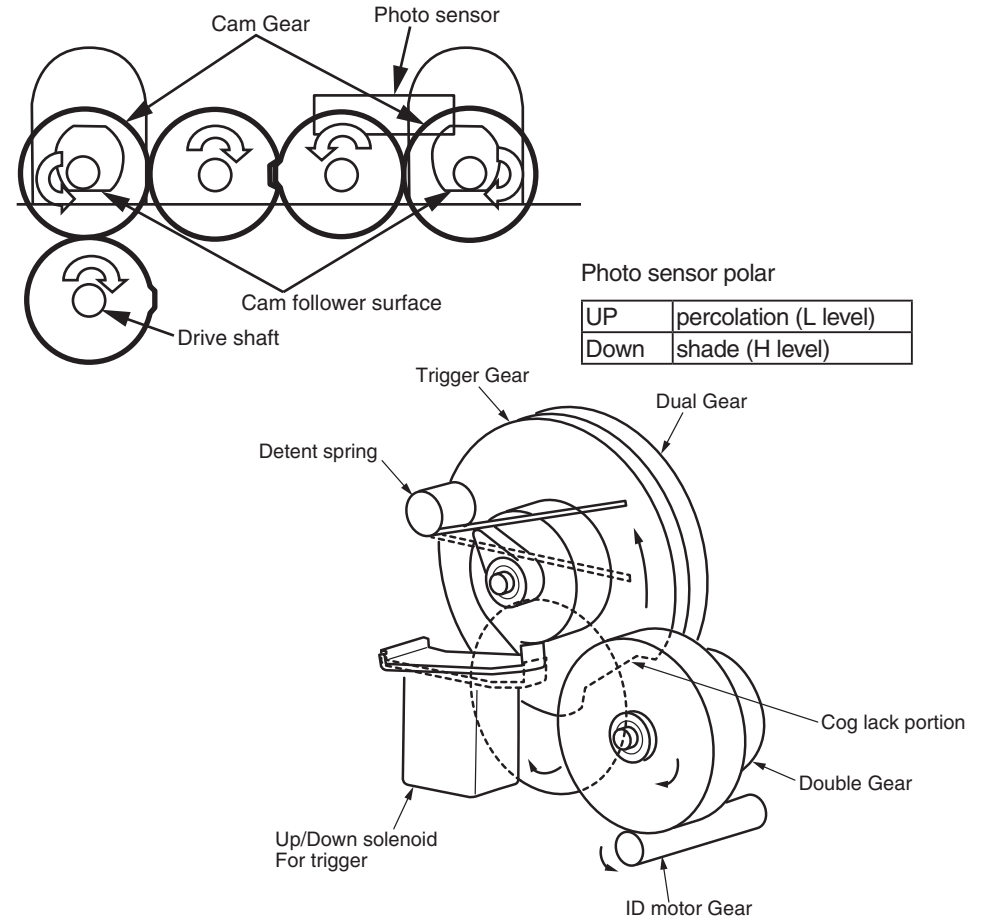
(7) Fuser unit and paper ejection

1. As illustrated in Figure 2-8, the fuser unit and the eject roller are driven by the DC motor. As the fuser motor drives (counterclockwise), the Fuser roller rotates. And then, the fuser belt rotates. This roller fuses toner images by heat and pressure.

2. With the decurler mechanism, the paper is corrected toward up curl to decrease curl of the paper.

3. At the same time, the eject rollers rotate and eject printouts.
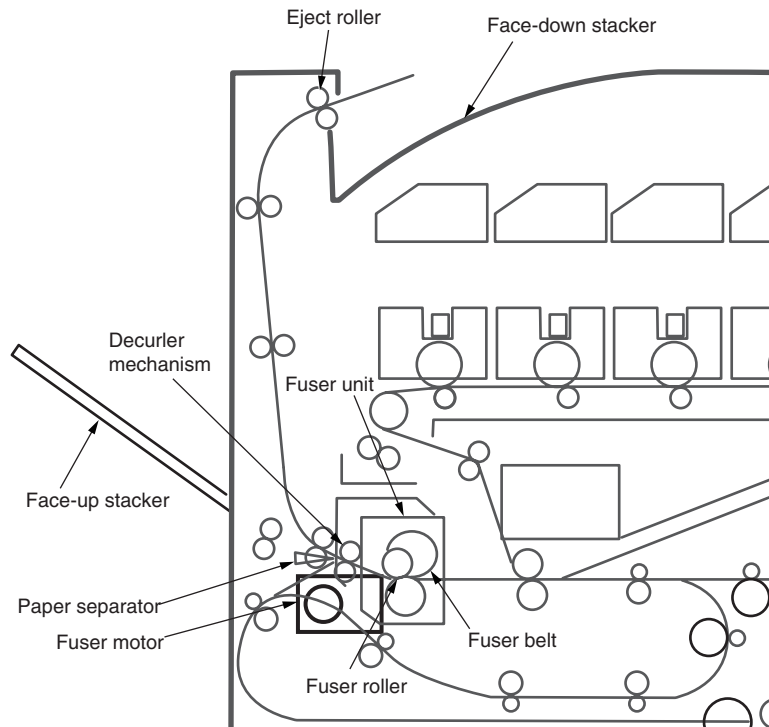
Figure 2-8

(8) JobOff Parts Structure and Operation

As illustrated in Figure 2-9, the position of paper ejected to face-down stucker is moved by moving JobOff set-Assy per printing-job.

JobOffset-Assy moving direction
JobOff driving motor rotate clock wise :The JobOff is moved to the left of this figure
JobOff driving motor rotate counterclockwise : The JobOff is moved to the right of this figure(Home side)
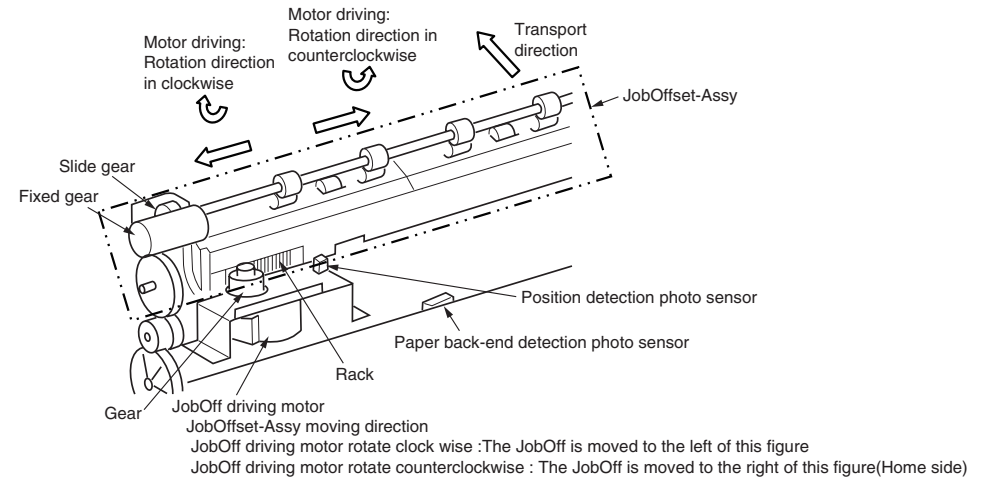
Figure 2-9

(9) Cover-opening motion of the color registration sensor and the density sensor

1. In the color registration sensor and the density sensor as illustrated in Figure 2-10, the cam rotates with the reverse rotation of the feed motor, causing the shutter of the color registration sensor and the density sensor to open.

2. When the cam rotates and returns to the home position, the spring pushes the shutter, causing the shutter of the color registration sensor and the density sensor to close.
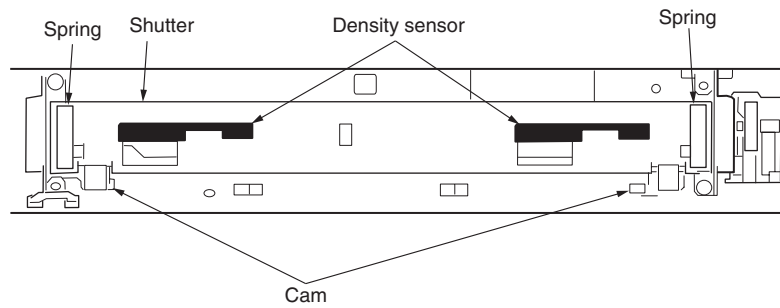
Figure 2-10

Outline of color registration correction

The color registration is corrected by reading registration patterns that are printed on the belt with the color registration sensors located inside the sensor shutter under the belt unit. These sensors are used to detect and to regist with the color registration patterns.

Automatic start timing of color registration

    <Full Adjust>

- Power-on / closing the front cover at the replacement of consumables(*1, (*2.

    *1: the consumable is ID or Belt-Unit.

    *2: It is not related statuses of consumables are new or not.

    <Fine Only>

- When the AC switch was performed ON
- Closing the front cover
- When printing 400 pages or more from the previous execution
- When starting to print after leaving for six hours or more

A registration error may be issued due to an inadequate toner amount of the registration pattern printed, a sensor being soiled with toner, failure of opening / closing of the shutter, or for other reasons. However, even if an error is issued, it is not indicated on the operator panel when auto correction.

Therefore, implemented color registration correction will have to be performed color registration from printer adjust menu or in the self-diagnostic mode (section 5.3.2.6) to check the error indication.

Error checking methods and countermeasure

The color registration test function among the other self-diagnostic functions is applied to check errors. (Section 5.3.2.6)

Countermeasure for each errors

- DYNAMICRANGE (L or R)

  Check 1: If the above indication appears, check the connected state of the sensor cable.

    If the connected state is found abnormal, restore it to the normal state.

  Check 2: Check whether the sensor surface is soiled with toner, paper dust or any other foreign matter.

    If it is found soiled, wipe it clean.

  Check 3: Check whether the sensor shutter opens and closes normally from to use by the MOTOR & CLUTCH TEST of the self-diagnostic function. If the shutter operates imperfectly, replace the shutter unit.

If no problem was found by the checks 1 through 3, there is a problem with the circuit.

Replace each of the sensor PCBs, the PU board (F1Y PCB) and the connection cable one by one and check that no error will occur again.

- (S1, S2, S3, S4 or S5) LEFT, (S1, S2, S3, S4 or S5) RIGHT, (S1, S2, S3, S4 or S5) HORIZONTAL

  Check 4: If the above indication appears, check whether the toner is running short, based on an NG-issuing color.

    Replace the toner cartridge as needed.

Outline of density correction

The printing density is corrected by reading the correction pattern that is printed on the belt with the density sensor located inside the sensor shutter under the belt unit.

Automatic start timing of density correction:

- When the consumables are replaced(*1, (*2

  *1: the consumable is ID or Belt-Unit.

  *2: It is not related statuses of consumables are new or not.

- When the environment is drastically changed from the time when the power was turned on last time.

- When the environment is drastically changed from the time when printing operation was performed last time after leaved the apparatus for more than 6 hours.

- When Image Drum counter reaches a specified drum count.

- When the setting of the auto density correction mode is changed from [Off to On].

- When the status is cleared from 'Toner Low' or 'Toner Empty' by the toner supplied into the ID.

- When the setting for user adjusting menu('Color Density') is changed.

A correction error may be issued due to an inadequate toner amount of the correction pattern printed, a sensor soiled with toner, failure opening / closing of the shutter, or for other reasons. However, even if an error is issued, it is not indicated on the operator panel. Therefore, implemented density correction will have to be performed in the self-diagnostic mode (section 5.3.2.7) to check the error indication.

Error checking methods and countermeasure

The density correction test function among the other self-diagnostic functions is applied to check errors. (Section 5.3.2.7)

Countermeasure for each errors

- CALIBRATION ERR, DENS SENSOR ERR

  Check 1: If the above indication appears, check the connected state of the sensor cable.

  If the connected state is found abnormal, restore it to the normal state.

  Check 2: Check whether the sensor surface is soiled with toner, paper dust or any other foreign matter.

  If it is found soiled, wipe it clean.

  If no problem was found by the checks 1 and 2, there is a problem with the circuit.

  Replace each of the density sensor, the PU board (F1Y PCB) and the connection cable one by one and check that no error will occur again.

- DENS SHUTTER ERR

  Check 3: Check whether the sensor shutter opens and closes normally, by the MOTOR & CLUTCH TEST of the self-diagnostic function. If the shutter operates imperfectly, replace the shutter unit.

- DENS ID ERR

  Check 4: Take out the Image Drum units and check them whether the drum surface has any abnormal fogging of toner.

  Replace the LED head (out-of-focus), or replace said ID units with said abnormality.

Process of the toner sensor detection

Toner LOW is detected by the toner sensor (optical sensor) arranged in the printer. The douser is mounted inside the ID and rotates in synchronization with toner agitation.

Detection may not take arrange normally, and a toner sensor error may be issued, if the douser or toner sensor is soiled with toner, or if the ID unit and toner sensor do not set exactly corresponding to each other in their positions.

Principle of the counter for toner

After image data is developed to binary data that the printer can print, the LSI counts the data as a number of printing dots. The amount of toner consumed is calculated from that count value, and the remaining amount of toner is thus indicated. In contrast, the toner LOW detection (the display of the remaining amount on LCD) by the toner sensor is implemented when the toner amount remaining inside the ID unit physically decreases to below a certain level.

Principles of counters for Image Drum, Belt Unit, and Fuser Unit

ID counter: One count represents the value that results from dividing the amount of rotation of the drum by three when three A4-size sheets (in Long Edge Feed) are printed in continuous printing.

Belt counter: One count represents the value that results from dividing the amount of rotation of the belt by three when three A4-size sheets (in Long Edge Feed) are printed in continuous printing.

Fuser counter: 1. One count is registered when the printing paper is shorter than 297mm (same as A4 longedge size)

2. Two count is registered when the printing paper is shorter than A3-nobi. In the case of the printing paper's length as between from A4-Long_Edge to A3-nobi, the count is registered by to calculate with proportionally.

3. In the case of the Banner sheet that is longer than A3-nobi (max. 1200mm), the count is registered by calculating proportionally in increments of 375mm. (Refer the following table)

As for Fuser unit, the counter value is increased by the following table for one sheet of each papers.

Paper Size	Paper Lenghth	Counter Value
	90	1
A4(LEF)	210	1
A4(SEF)	294	1
	330	1.23
Legal13"	330	1.23
Legal14"	356	1.39
B4	364	1.44
A3	420	1.79
tabloid	431	1.86
A3nobi	453	2
	600	2.39
	660	2.55
	660	2.55
	900	3.19
	990	3.43
	990	3.43
Banner	1203	4
	1320	4.31

Counter specifications

	Total page count	MPT page count	Tray 1 page count	Tray 2 page count	Tray 3 page count	Tray 4 page count	Tray 5 page count	Color page count	Monochrome page count
Description	Total number of prints	Number of print media hopped from MPT	Number of print media hopped from Tray 1	Number of print media hopped from Tray 2	Number of print media hopped from Tray 3	Number of print media hopped from Tray 4	Number of print media hopped from Tray 5	Total number of color prints	Total number of monochrome prints
Count method: A4-basis or size independence	Count up after passing the IN3 sensor	Count up if MPF (MPT) hopping is finished successfully	Count up if Tray 1 hopping is finished successfully	Count up if Tray 2 hopping is finished successfully	Count up if Tray 3 hopping is finished successfully	Count up if Tray 4 hopping is finished successfully	Count up if Tray 5 hopping is finished successfully	The number of print media passing the fuser in color mode is counted up when each job is finished. (*1) The value is counted on an A4/Letter basis. Refer to A4/Letter conversion table (on the next page).	The number of print media passing the fuser in monochrome mode is counted up when each job is finished. (*1) Printing speed for color mode may be applied to monochrome mode. The value is counted on an A4/Letter basis. Refer to A4/Letter conversion table (on the next page).
Operation when paper has jammed	Printed pages of each tray are not counted when a paper feed (hopping) jam occurs. Total number of prints is not counted when a paper feed (hopping) jam or a feed jam (code 380) occurs. Printed pages are counted when any jam except the said jams occurs.							Printed pages are not counted if paper jams before passing the fuser. They are counted if prints jam after passing the fuser.	
Operation for Duplex	Front/back count (+2)	Only front count (+1)						The count increases by two. If a color page and a monochrome page exist in a pair of two pages, the color page count increases by one and the monochrome page count increases by one. If color pages exist in a pair of two pages, the color page count increases by two. If monochrome pages exist in a pair of two pages, the monochrome page count increases by two.	
Reset condition	None							None	
Value storage destination	PU	PU	PU	PU	PU	PU	PU	CU	CU
Menu / MenuMap output	○	○	○	○	○	○	○	○	○
Engine MenuMap output	○	○ (*2)	○ (*2)	○ (*2)	○ (*2)	○ (*2)	○ (*2)	-	-

*1 The count is updated every four pages or at the completion of the printing job, but the count is not updated if the power is turned off when printing any page of page 1 to 3 of a printing job having more than four pages.

*2 Number of sheets of paper fed from each tray is described only in the Engine EEPROM Dump Print (Dump display only).

Counter specifications (Spot color only)

	Spot color 1	Spot color 2
Definition	Total number of prints in combination of spot color and other colors	Total number of prints using spot color only
Count method: A4-basis or size independence	The number of print media is counted up when each job is finished. The value is counted on an A4/Letter basis. Refer to A4 / Letter conversion table (on the next page).	
Dealing when paper has jammed	If paper jams occur before passing the fuser is recovery. Therefore the printed pages are not counted.The printed pages are counted if paper jams occur after passing the fuser.	
Dealing for Duplex printing	The count is increased by two. In the case of the printing of both-side are used the Spot color 1 or the Spot color 2 in Duplex printing, the printing number for each categories is increased by two. On the other hand, in the case of the printing of one-side is used the Spot color 1 or the Spot color 2 in Duplex printing, the printing number for each categories is increased by one. After all, in the case of the each pages is printed by different Spot color number in Duplex printing, the printing number in the target category is increased by one.	
Reset condition	None	
Value storage destination	CU	CU
Menu/MenuMap output	○	○
EngineMenuMap output	-	-

A4/Letter conversion table

Each count should increase, in relation to every sheet of paper, by the values in the table below.

Paper size	Simplex	Duplex
LETTER	1	2
EXECUTIVE	1	2
LEGAL14/13.5/13	1	2
TABLOID EXTRA	2	4
TABLOID	2	4
A3NOBI	2	4
A3	2	4
A4/A4LEF/A4SEF	1	2
A5/A5LEF/A5SEF	1	2
A6	1	2
B4	2	4
B5	1	2
JIS B6	1	2
COM-10	1	-
COM-9	1	-
COM-6 3/4	1	-
A2 Envelope	1	-
A6 Envelope	1	-
A7 Envelope	1	-
DL	1	-
C5	1	-
C4	1	-
HAGAKI	1	2
OUFUKUHAGAKI	1	2
Nagagata #3 (ENVELOPE1)	1	-
Nagagata #4 (ENVELOPE2)	1	-
Yougata #4 (ENVELOPE3)	1	-

Paper size	Simplex	Duplex
Kakugata #2 (ENVELOPE5)	2	-
Kakugata #3 (ENVELOPE6)	1	-
Kakugata #8 (ENVELOPE7)	1	-
Yougata #0 (ENVELOPE8)	1	-
Nagagata #40	1	-
Yougata #2 (C6)	1	-
CUSTOM(to 210mm)	1	2
CUSTOM (from 211mm to 899mm)	2	4 (from 211mm to 483mm)
CUSTOM (over 900mm)	4	-
INDEXCARD	1	-
Statement	1	-
8K (260 x 368 / 270 x 390 / 273 x 394)	2	4
16K (184 x 260/ 195 x 270/ 197 x 273 [ROC])	1	2
B6 Half	1	-
Monarch	1	2
A3Wide (SRA3)	2	4
A4Wide (SRA4)	1	2

2.3 Low-voltage Power Supply

2.3.1 Operation
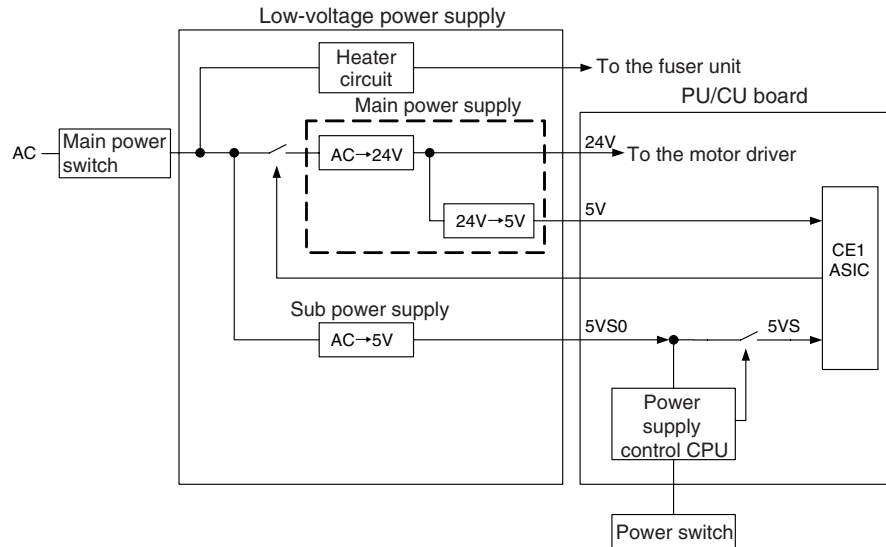
The low-voltage power supply has two kinds of power supply, which is main power supply (5V, 24V) and sub power supply (5VS0).

The main power supply (24V, 5V) is turned on and off by CE1 ASIC of the PU/CU board.

The sub-power supply (5VS0) is turned on when plugging the AC cable into the socket and turning on the Main power switch.

Therefore, the maintenance operations should be performed after turning off the Main power switch, unplugging the AC cable and checking the LED on the PU/CU board lighted off.

Turning ON and OFF of 5VS to the main CPU is performed by the Power supply control CPU.

2.3.2 Power-supply Voltage in Each Mode

The output voltage value of the low-voltage power supply is different in each operation mode as shown in the following table.

When measuring the output voltage value of the low-voltage power supply, the judgment of validity should be performed based on the following table.

Operation mode	Output voltage value of the low-voltage power supply			Power-supply voltage value in the PU/CU board
	24V line	5V line	5VS0 line	5VS line
In operation, and Standby	24V	5V	5V	5V
Power save	24V	5V	5V	5V
Sleep	OFF	OFF	5V	5V
OFF	OFF	OFF	5V	OFF

2.3.3 Thermistor for Temperature Alarm

The low-voltage power supply mounts the thermistor for temperature alarm.

When the temperature of the low-voltage power supply is abnormal, Service Call SC SC166-01, 02, 03 is displayed.

For details and handling methods of each service call, refer to 'Service Call Error List' in the section 4 Troubleshooting Procedure.

2.4 Cover Opening and Closing Detection Switch

The front cover opening/closing detection switch, the exit left cover opening/closing detection switch, and the toner cover opening/closing detection switch of this apparatus are effective when the AC cable is plugged into the socket and the Main power switch is turned ON, regardless of the Power switch-on or off.

■ Front cover opening/closing detection

The status of all Image Drums are up is detected by opening the front cover.

In the case of opening and closing for the front cover during the operation, standby, or power save mode, the apparatus performs color registration correction.

In the case of opening and closing for the front cover during the sleep mode or power switch-off, the apparatus performs color registration correction when recovering from the sleep mode or the power switch is turned ON.

The following is displayed by opening the front cover during the sleep mode.

"Front cover is opened.
    Refer to the Help."

■ Exit unit opening/closing detection

The removal of the fuser unit is detected by opening the exit unit.

When opening and closing the exit unit during the operation, standby, or power save mode, the apparatus performs release check of the fuser unit.

When opening and closing the exit unit during the sleep mode, or power switch-off, the apparatus performs the release check of the fuser unit when recovering from the sleep mode or the power switch is turned ON.

The following is displayed by opening the exit left cover during the sleep mode.

"Exit unit is removed
    Refer to the Help."

■ Toner change cover opening/closing detection

The status of the toner change cover is open is detected.

When opening and closing the toner change cover during the sleep mode, or power switch-off, the apparatus performs the check of the toner cartridge replacement when recovering from the sleep mode or the power switch is turned ON.

The following is displayed by opening the toner change cover during the sleep mode.

"Toner change cover is opened.
    Refer to the Help."

2.5 Initialization processing

Description

· The state of initialization is indicated by LED (Power Supply LED, initialization LED 1, 2, 3).
· The Power Supply LED is blinking in first step. In the case of the Power Supply is abnormaly, the LED is blinking at high speed.
· The initialization is start with turning on the Main Power Supply by turning on the Power Supply Switch in state of turning on of the Main Power Supply Switch.

Table of the lighting pattern of the LED in initialization

Step	Timing of the LED lighting	LED1	LED2	LED3	Motion of Circuit
0	Power ON	■	■	■	Starting of the supplying the power
1	Completion of the initialization for CPU	□	□	□	Reading the boot program from SPI(IC6)
2	Completion of RAM check for boot	■	□	□	Expansion of the boot program after RAM check for booting.
3	Completion of the recognition for NAND-Flash	□	■	□	Recognition processing of NAND-Flash（IC702）
4	Completion of the Main CE1	■	■	□	Recognition processing of CE1(MAIN）
5	Completion of the Sub CE1	□	□	■	Recognition processing of CE1(SUB)
6	Completion of loading the PU-FW	■	□	■	The Engine control program is read from NAND-Flash(IC702) and expanded to memory.
7	Completion of loading the CU-FW	□	■	■	The CU control program is read from NAND-Flash(IC702) and expanded to memory.
8	In the DeepIdle	■	■	■	

「■ lights-out/ □ lighting」

Control at error

	LED1	LED2	LED3
Boot RAM check NG	■	△	△
CU-FW loading NG	△	■	■

「△ blinking/ ■ lights-out」

Pattern of the LED lighting of the Power Supply

in normal: blinking at 0.5 second intervals
in error: to repeat the high speed blinking and lighting at 1 second

When problem occur

Power Supply LED

Initialization LED1, 2, 3
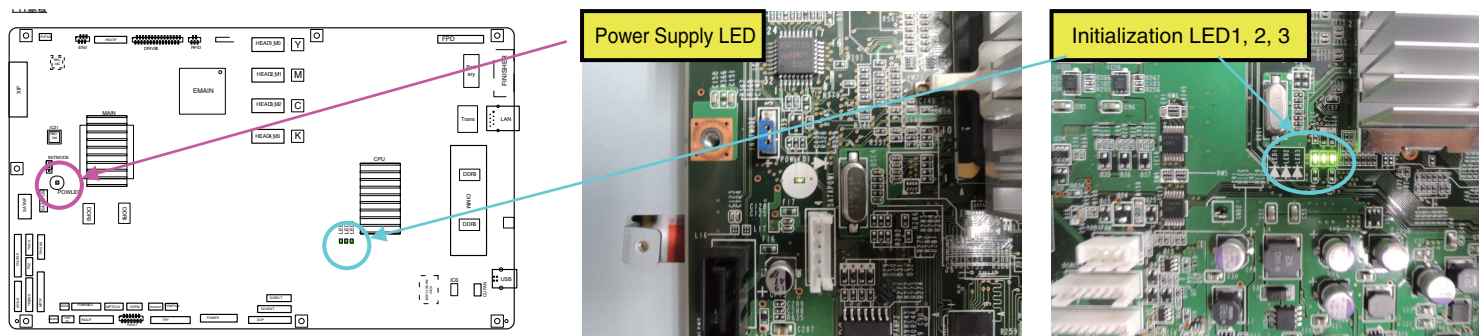
It's possible Memory error, in case extinction the LED 1,2,3 or blink the LED2,3 when power switch turn on. Change the Memory DIMM and check retrieve.
In case LED1,2,3 stop at Step1 to 6, trouble occur the board. Change the Main board.

3. INSTALLATION

3.1 Cautions, and do's and don'ts

⚠Warning

- Do not place the printer in any high-temperature location or a near heat source.
- Do not place the printer in a location where chemical reaction may occur (laboratory and such a place).
- Do not place the printer in the proximity of inflammable solvents, such as alcohol and paint thinner.
- Do not place the printer within reach of children.
- Do not place the printer on an unstable surface (e.g., on any rickety bench or on a slanting place).
- Do not place the printer in a location with moisture, heavy dust or in direct sun.
- Do not place the printer in an environment with sea wind or corrosive gas.
- Do not place 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 cause to an electric shock, fire or injury.
- Do not connect any AC cable, printer cable 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 cause to an electric shock, fire or injury.
- Do not place a glass filled with water or such something on the printer.
  Such action could cause 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.
  Fire could break out.

⚠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 place the printer in a location where its vent hole is blocked.
- Do not place the printer directly on a shag carpet or rug.
- Do not place 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.
- Place the printer away from a strong magnetic field or noise source.
- Place the printer away from a monitor or TV.
- When moving the printer, hold the carrying lever and carrying handles.
- This printer, which weighs approximately 117 kg, should be lifted by four 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 cause to injury.
- Do not expose the image drum cartridge to direct sunshine and strong light (about 1500 lux). And do not expose it to room light for more than 5 minutes.

When the precautionary notes concerning the setting and operation are explained, the customer should be referred to the precautionary notes given in the user's manual. Especially, give thorough explanation on the AC Cable.

3.2 Installation instructions

- Check to make sure that the apparatus is free from damage, dirt or other irregularities in its appearance.
- Ensure that none of the accessories to the apparatus 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**	There is a risk of injury.	⚠
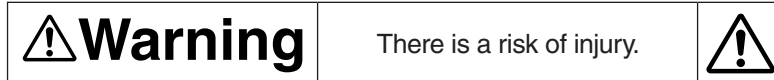
The apparatus weighs approx. 117 kg, so it should be lifted by four or more people.
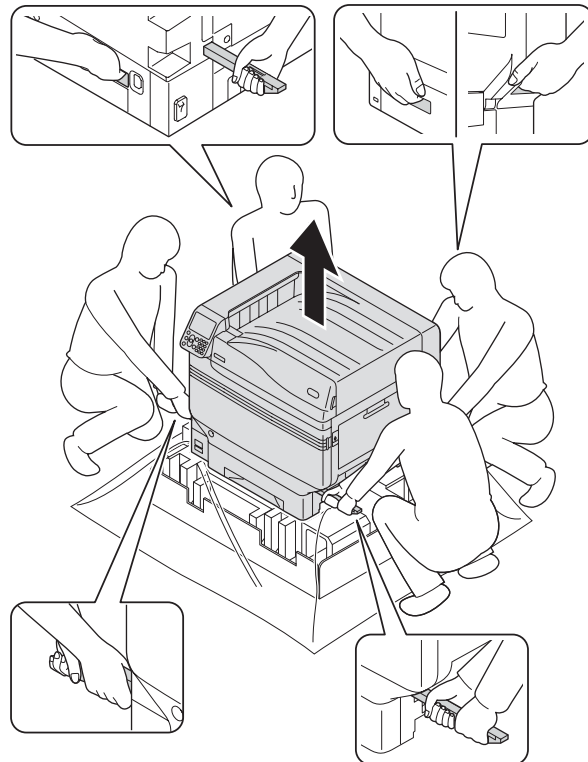
- Install the apparatus and options by referring to the instruction of the user's manual.

3.3 Cautions for mounting Optional Tray Unit

Gently lift the main unit by four or more people, and align the holes on the base to the 2 protrusions on the Optional Tray Unit. Gently place the main unit on the Optional Tray Unit.
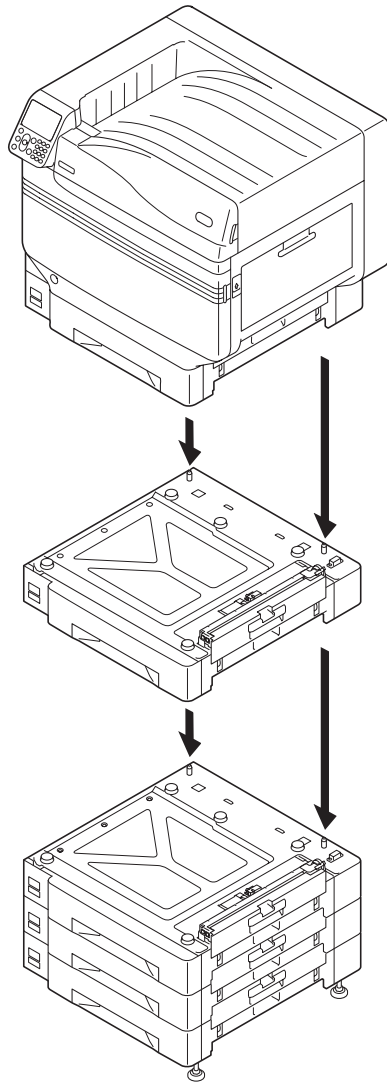
For the Optional Tray Unit and large-capacity Optional Tray Unit with casters, adjust the caster locks (2 pieces) and feet (2 pieces).

(1) Push down the lock levers on the casters (2 pieces) at the front of the apparatus to lock the casters.
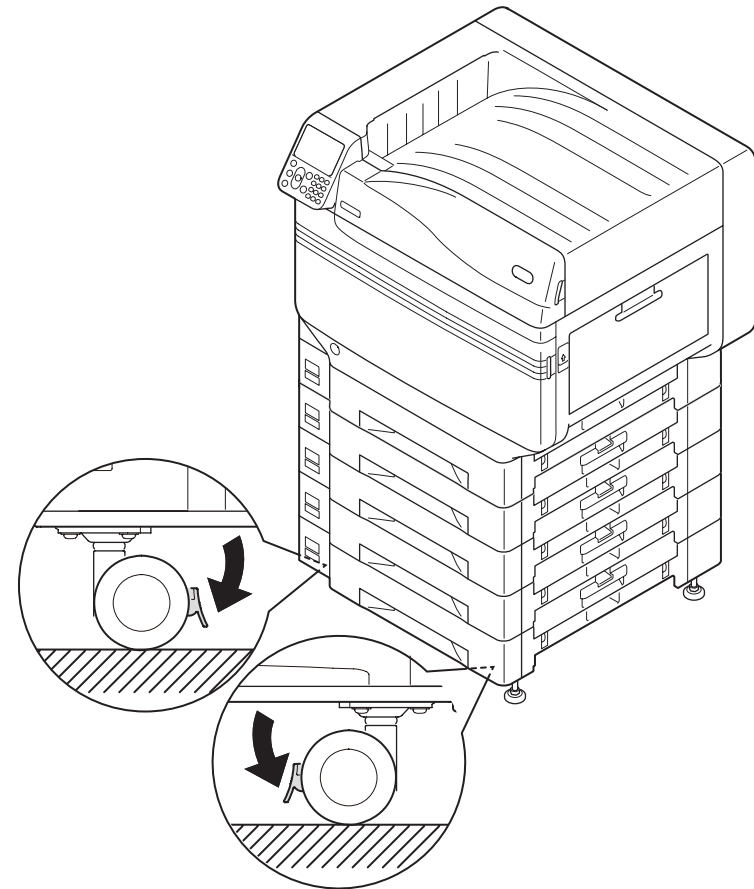
(2) Loosen the nuts (upper-side) at the top of the feets (2 pieces) on the right of the apparatus.
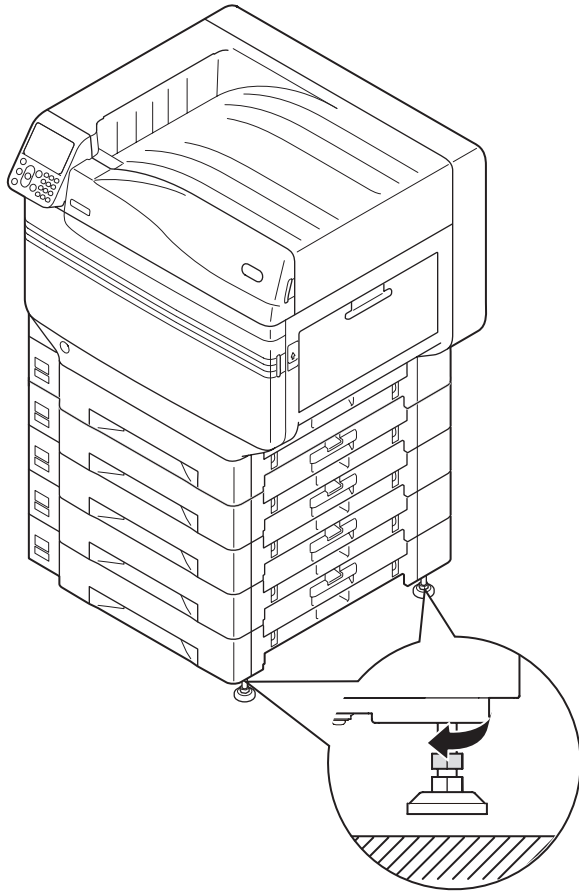
(3) Rotate the nuts and bolts at the bottom of each foot to lower the feet.
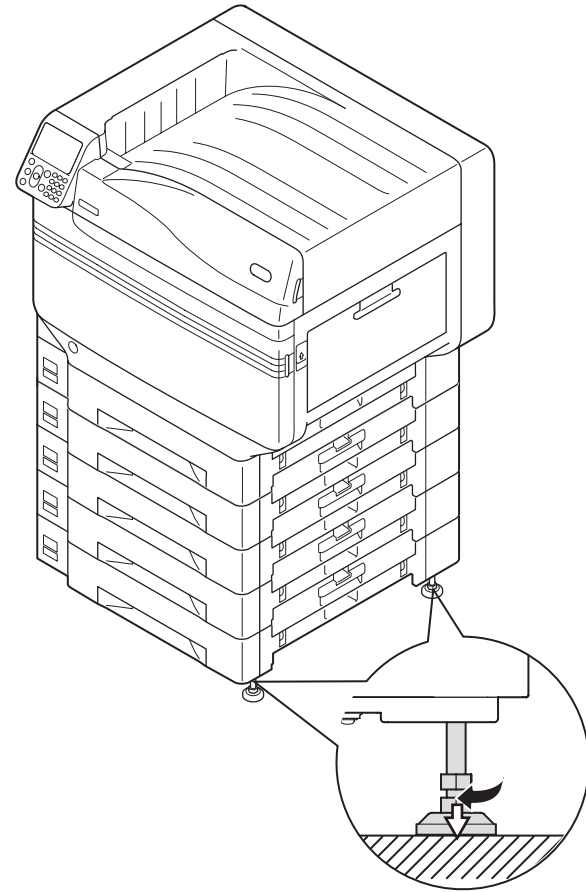
(4) When each foot has reached the ground, tighten the upper-side nuts at the top to secure the tray unit.
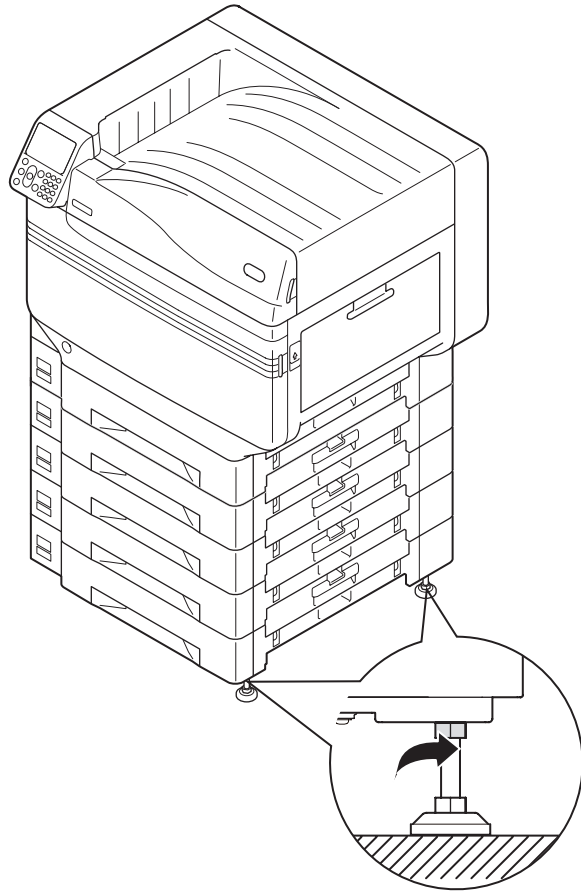
3.4 Cautions for Banner Tray

Stacker
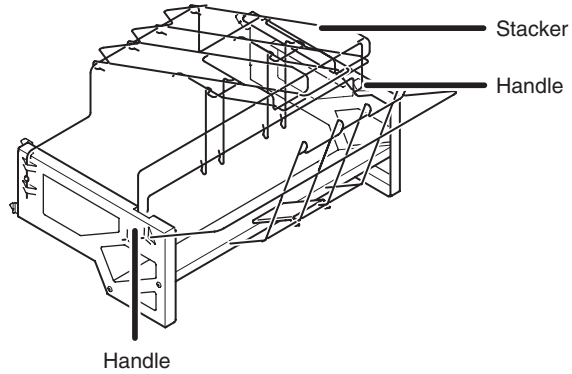
Handle

Handle

(1) Remove clips from the Banner Tray.
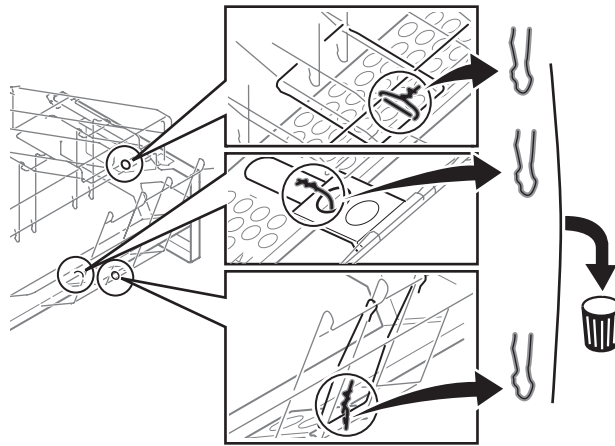
(2) Turn off the printer.

(3) Open the toner replacement cover and the front cover.
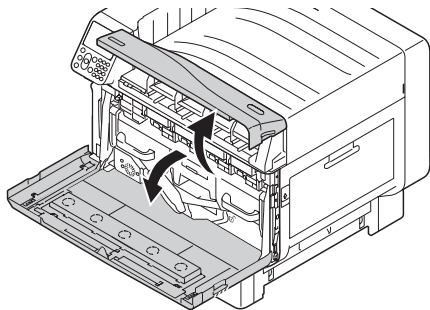
(4) Attach the Banner tray onto the multi-purpose tray.

1.Hold the handle of Banner tray.

2.Latch on the left and right protrusions at the top of Banner tray to the hooks on both sides of the multi-purpose tray.
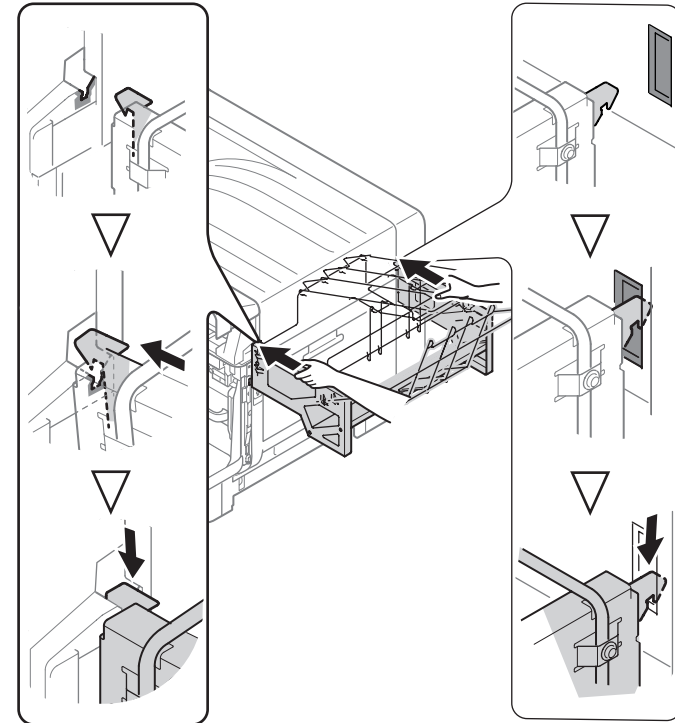
3.Insert the protrusions of Banner tray into the insertion points on both sides of the multi-purpose tray.
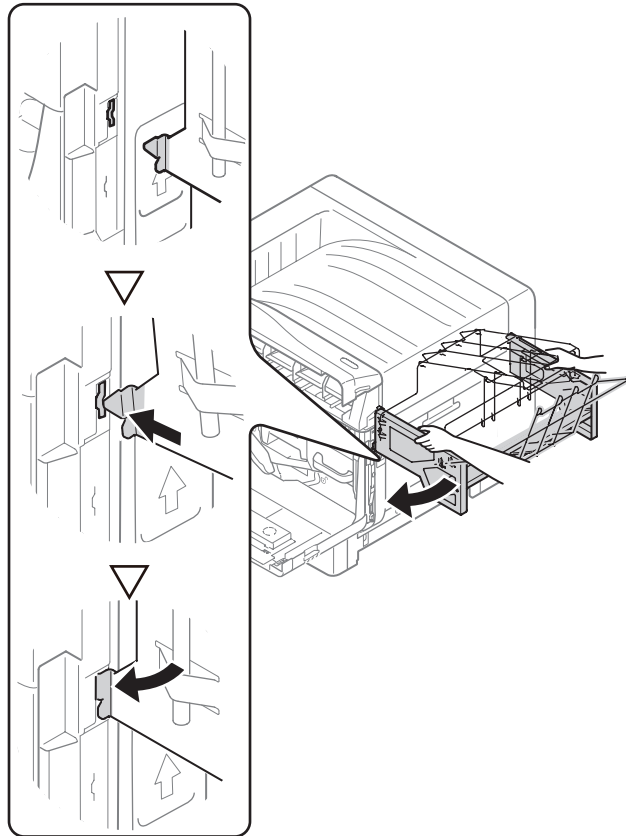
(5) Check that the Banner tray is secured in place.
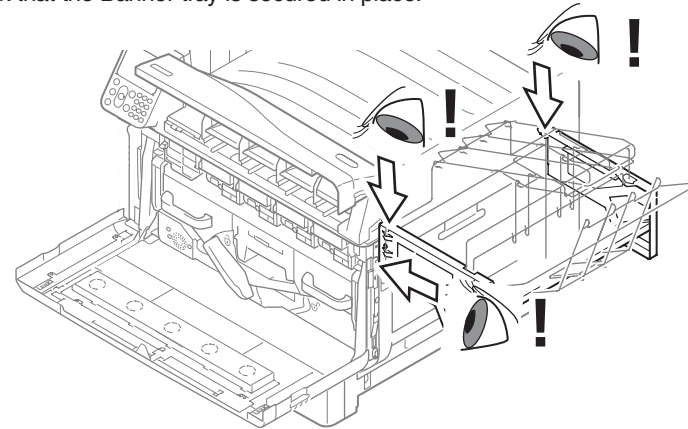
(6) Close the toner replacement cover and the front cover.
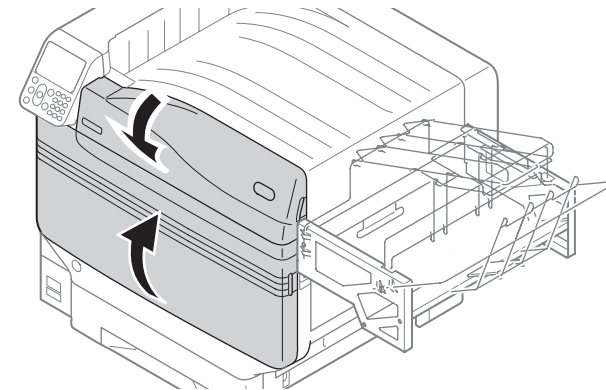
(7) Hold the Banner tray by the stacker handle and lift it towards the printer side.
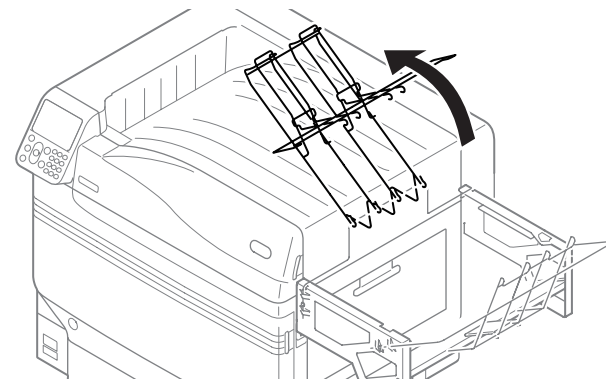
(8) Open the paper supporter and the auxiliary supporter of the multi-purpose tray.
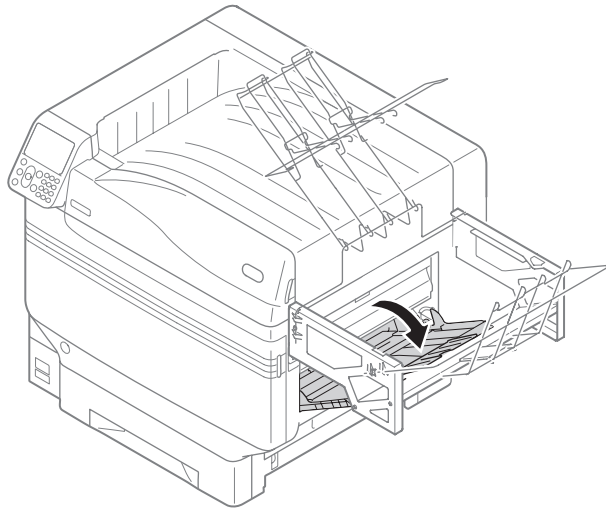
(9) Lower the stacker towards the Banner tray side.
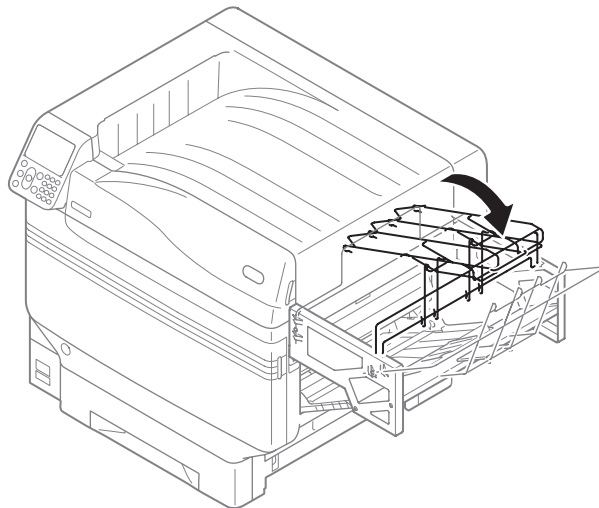
≪ **In the case of the printing paper length is less than 900mm** ≫

· In the case of the printing paper length is less than 900mm, the stacker's position of the banner tray could be shorten.

1. Open the Stacker Cover of the banner tray.
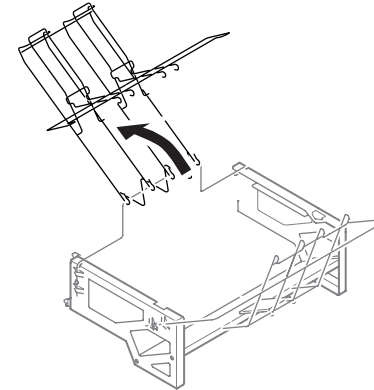
2. Pull and rotate to unlock the lock plate.
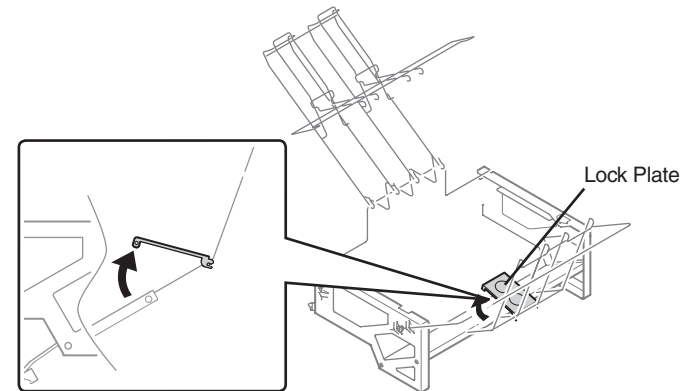
Lock Plate

3. Move the lock plate to short position with the Stacker of the banner tray.

Short Position

Lock Plate

Normal Position
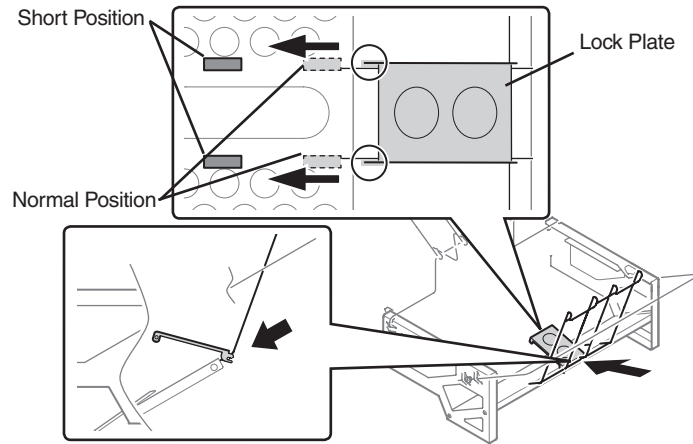
4. Push and insort to lock the lock plate.
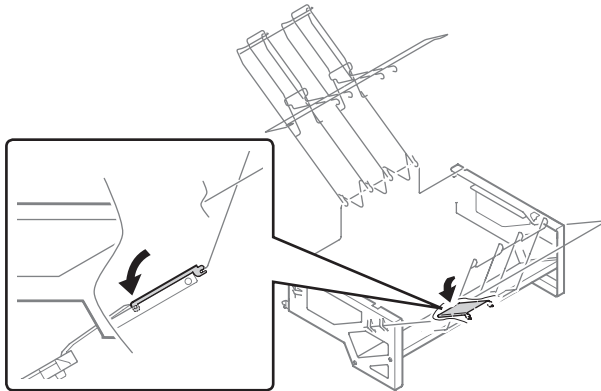
5. Remove two screws that is holding the supporter arranged to left and right side of the banner tray.
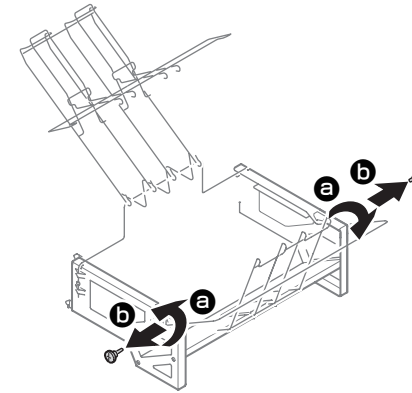
6. Move to the supporter to short position by matching positions of the screw hole of the supporter and the ∇ mark printed to the plate of the banner tray.

supporter

∇ mark

screw hole
(Normal Position)

screw hole
(Short Position)

supporter
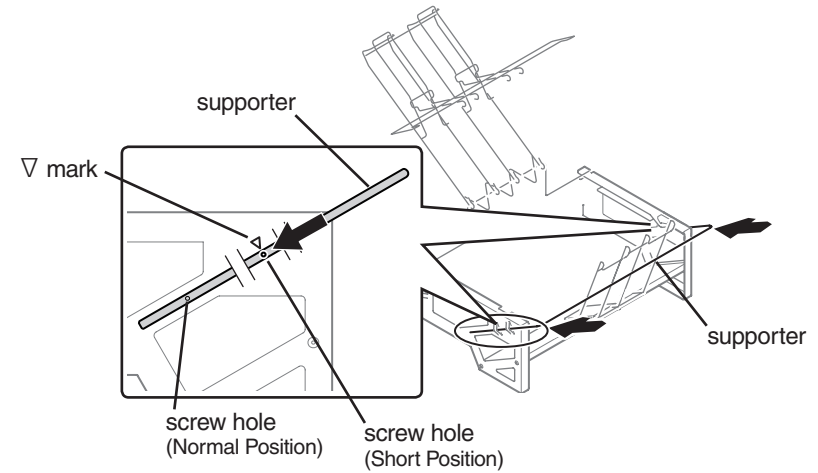
7. Lock the screws.
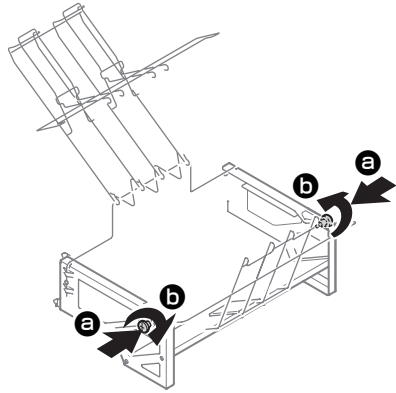
8. Rotate the holder and close the stacker of the banner tray.

holder
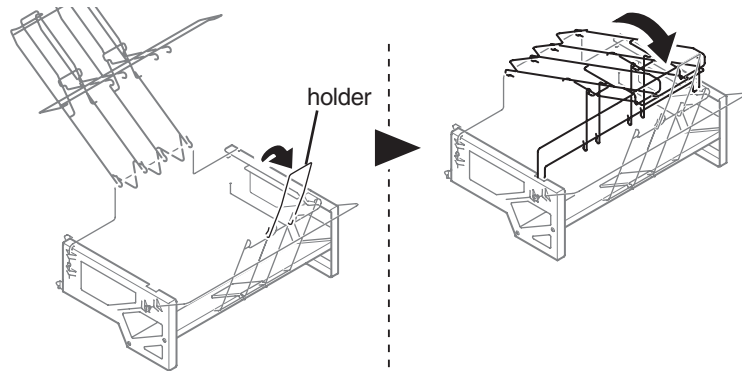
≪ **When remove** ≫

· Check that there are no paper in the Banner tray.

1. Open the toner replacement cover and the front cover of the printer.

2. Lift the Banner tray by the handle, and pull out the protrusions from insertion points.
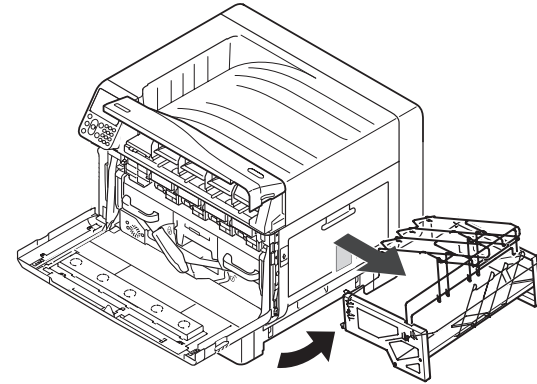
3.5 Cautions for Packing

If packing the printer, close the toner change cover completely following procedure.

Note! ・Be sure to unplug the AC cable.

・Packing when transport only.

(1) Power off the Printer.
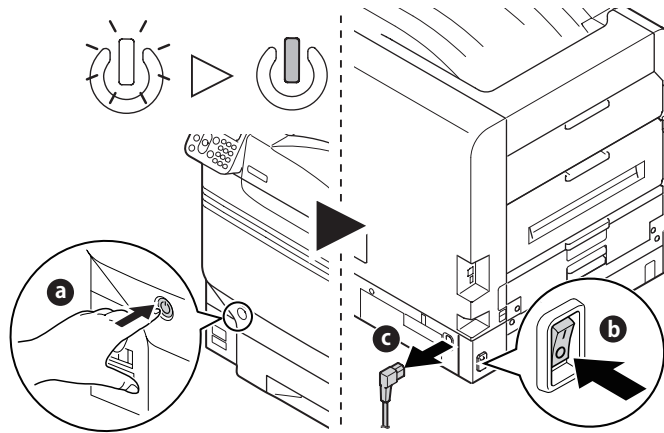
(2) Remove the all toner cartridge.
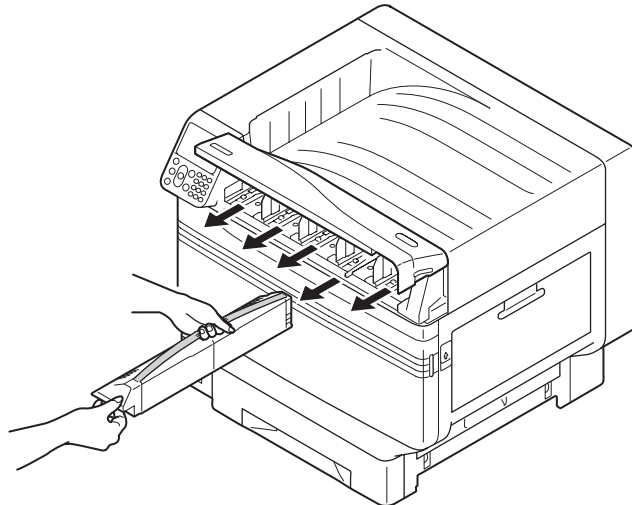
(3) Check all toner cartridge detect lever.
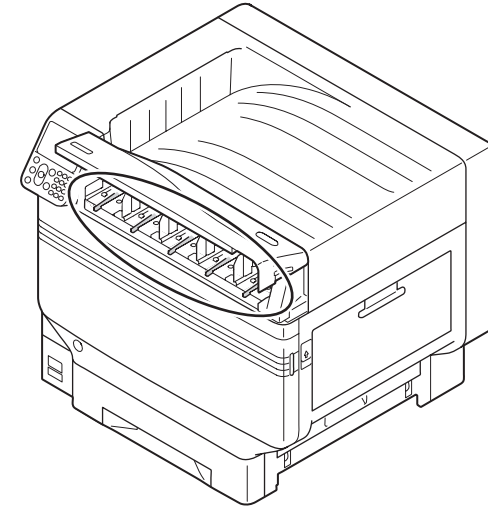
(4) Lift up toner cartridge detect lever.
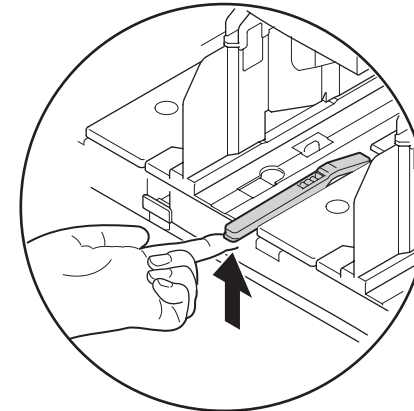
(5) Fasten toner cartridge detect lever by adhesive tape.
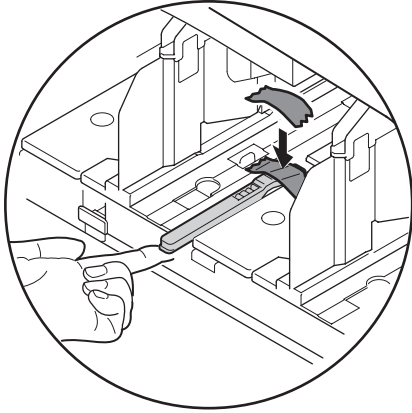
(6) Fasten all toner cartridge detect lever as above procedure(4) to (5).
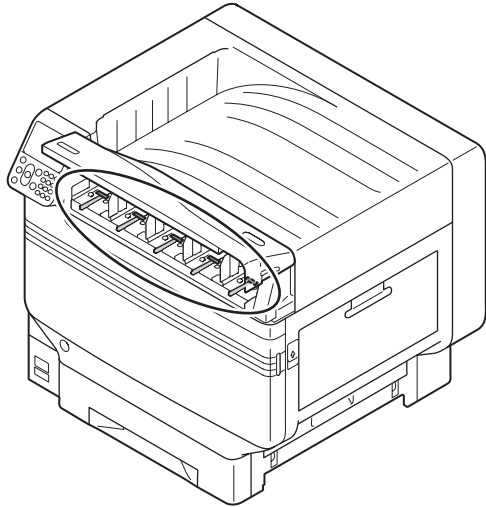
(7) Check the toner change cover close completely.
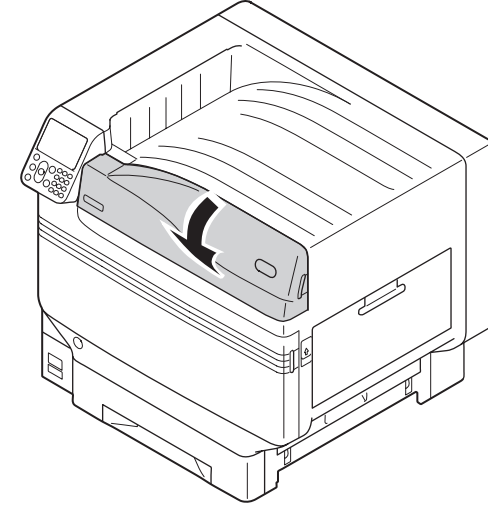
Note! ・Peel the adhesive tape from the printer when use the printer.

4. TROUBLESHOOTING PROCEDURE

4.1 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.

4.2 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.

4.3 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.

4.4 Preparation for troubleshooting

(1) Display on the operation panel

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

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

4.5 Troubleshooting methods

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

Trouble occurs

```
The troubles that        Perform                 Perform close
are indicated by    →    troubleshooting by   →  troubleshooting by using
LCD messages             referring to the "LCD   the Troubleshooting Flow.
                         message list." (Refer   (Refer to section 4.5.2.)
                         to section 4.5.1.)

Abnormal printed                                 Perform close
images (and the                                  troubleshooting by using
troubles that are                        →       Troubleshooting Flow.
not indicated by                                 (Refer to section 4.5.3.)
LCD messages)
```

4.5.1 LCD message list

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 4-1-1, 4-1-2, 4-1-3, 4-1-4 and 4-1-5.

Table 4-1-1 Operator alarm

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Firmware Update Error Please retry If network doesn't work, please try firmware update over USB	Varies	Varies	Indicates that firmware update has failed. In this case, firmware update needs to be executed again, so the printer must be online.	Error (ONLINE) 302
Close Cover %COVER% Please see HELP for details	Off	Blink	Indicates that the cover is open. Error 311: Front cover Error 589: Tray 1 Side Cover Error 312: Tray 2 Side Cover Error 313: Tray 3 Side Cover Error 314: Tray 4 Side Cover Error 315: Tray 5 Side Cover Error 588: Eject Cover Error 585: MP Tray Cover	Error 311 589 312 313 314 315 588 585

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Check Fuser Unit Please see HELP for details	Off	Blink	Indicates that the fuser is not installed correctly.	Error 320
Check Paper in %TRAY% Paper Thick Error Please see HELP for details	Off	Blink	Indicates detection of an abnormality by the Media Weight Detection sensor. Any paper remaining in the printer will be automatically ejected at recovery. 　Error 323: A sensor output value measured with no paper was out of spec. 　Error 324: A sensor output value exceeded the upper limit. 　Error 325: In a tray set for medium light paper, paper thicker than medium light paper by the designated allowance is detected. 　Error 326: In a tray set for medium heavy paper, paper thinner than medium heavy paper by the designated allowance is detected. (Displayed in Shipping/Factory Mode.)	Error 323 324 325 326
Download Chip Data Density Calibration Chip Error	Off	Blink	Density Adjustment's calibration chip correction error. Omission of factory default setting. To prevent setting mistake. Displayed only in Factory Mode.	Error 327
Check Belt Unit Please see HELP for details	Off	Blink	Indicates that the belt unit is not installed correctly.	Error 330
Check Waste Toner Box Please see HELP for details	Off	Blink	This error indicates that the waster toner box is missing, and printing stops.	Error 331

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Install Exit Unit Please see HELP for details	Off	Blink	Indicates that the exit unit comes off. 　Error 333: Exit Unit Missing	Error 333
Install Transfer Roller Unit Re-set the transfer roller unit Please see HELP for details	Off	Blink	Indicated that the second transfer roller comes off. 　Error 334: TR2 Unit Missing	Error 334
Check Image Drum %COLOR% Please see HELP for details	Off	Blink	Indicates that the image drum is not installed correctly. 　Error 3400: Yellow 　Error 3401: Magenta 　Error 3402: Cyan 　Error 3403: Black 　Error 3404: White 　Error 3405: Clear	Error 3400 3401 3402 3403 3404 3405
Check Fuser Unit Please see HELP for details	Off	Blink	Indicates that an error occurred with the release position sensor of the fuser. The printer recovers from this error if the release position sensor can read out the data in a retry after the cover is closed. If the printer still cannot recover from this error, replacement of the fuser is required. UNITERR #2:Fuser Release Sensor Error	Error 348
Install %COLOR% New Image Drum Image Drum Life Please see HELP for details	Off	Blink	Alerts (alarms) the end of the image drum life. Opening & closing the cover changes this status to the warning status. 　Error 3500: Yellow 　Error 3501: Magenta 　Error 3502: Cyan 　Error 3503: Black 　Error 3504: White 　Error 3505: Clear	Error 3500 3501 3502 3503 3504 3505

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Install New Fuser Unit Fuser Unit Life Please see HELP for details	Off	Blink	Alerts the end of the fuser life. This error is displayed based on the counter to indicate that the fuser has reached its life, and printing will stop. Opening & closing the cover changes this status to the warning status.	Error 354
Install New Belt Unit Belt Unit Life Please see HELP for details	Off	Blink	Alerts the end of the transfer belt life. This error is displayed based on the counter to indicate that the belt has reached its life, and printing will stop. Opening & closing the cover changes this status to the warning status.	Error 355
Install New Waste Toner Box Waste Toner Full Please see HELP for details	Off	Blink	This error indicates that the waster toner box has filled up, and printing stops. Opening & closing the cover changes this status to the warning status.	Error 357
Install Duplex Unit Please see HELP for details	Off	Blink	The duplex unit is removed. When this error is detected, printing stops.	Error 360

Check Duplex Unit
 	
Paper Jam
 	
Please see HELP for details
	Off	Blink	Indicates that a paper jam has occurred nearby the duplex unit.
			    Error 370: Duplex Reversal
			    Error 371: Duplex Input (Duplex Transport)
			    Error 373: Duplex Multifeed (Duplex Remain Jam)
				Error 370 371 373

Check the lower side of Duplex Unit Paper Jam Please see HELP for details	Off	Blink	Indicates detection of a paper jam in the multi-pass print path. Error 375: Multi Path JAM	Error 375
Open Right Side Cover Paper Jam Please see HELP for details	Off	Blink	Indicates that a paper jam has occurred in the paper path. Error 380: Feed	Error 380

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Check Exit Unit Paper Jam Please see HELP for details	Off	Blink	Indicates that a paper jam has occurred in the paper path. Error 381: Transport	Error 381

Check Exit Unit
 	
Paper Jam
 	
Please see HELP for details
	Off	Blink	Indicates that a paper jam has occurred in the paper path.
			    Error 382: Exit
			    Error 383: Duplex Entry
			    Error 389: Printing Page Lost
				Error 382 383 389

Open Left Side Cover Paper Jam Please see HELP for details	Off	Blink	Indicates that a paper jam has occurred in the paper path. (Indicates detection of a paper jam between the fuser unit and the Face Down stacker.) Error 384: Eject Side Cover	Error 384
Open Right Side Cover Paper Jam Please see HELP for details	Off	Blink	Indicates that a paper jam occurred during paper feed from MP Tray. Error 390: MP Tray	Error 390

Open %TRAY% Side Cover
 	
Paper Jam
 	
Please see HELP for details
	Off	Blink	Indicates that a paper jam occurred during paper feed from the tray.
			    Error 391: Tray 1
			    Error 392: Tray 2
			    Error 393: Tray 3
			    Error 394: Tray 4
			    Error 395: Tray 5
				Error 391 392 393 394 395

Check Paper in %TRAY% Paper Size Error Please see HELP for details	Off	Blink	Alerts that paper of nonconforming size has been fed from the tray. Check paper in the tray, or check if multiple sheets of paper have been fed at a time. After the cover is opened & closed, the printer performs recovery printing and continues operation.	Error 400

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Check Paper in %TRAY% Paper Multi Feed Please see HELP for details	Off	Blink	Alerts that too long paper has been fed from the tray. Check if multiple sheets of paper have been fed at a time. After the cover is opened & closed, the printer performs recovery printing and continues operation.	Error 401
Install Toner %COLOR% Please see HELP for details	Off	Blink	Indicates that the printer has run out of toner. When the cover is opened & closed, it changes to the warning status of Priority 219. If the print job data is cleared (cancelled), it changes to the warning status of 219.5. 　　Error 4100: Yellow 　　Error 4101: Magenta 　　Error 4102: Cyan 　　Error 4103: Black (in C942/ES9542) 　　Error 4104 : White 　　Error 4105 : Clear	Error 4100 4101 4102 4103 4104 4105
Install Toner %COLOR% Please see HELP for details	Off	Blink	Indicates that the printer has run out of toner. When the cover is opened & closed, it changes to the warning status of Priority 219. As for K, different from Y/M/C/W/CL, a warning is not issued by deletion (cancellation) of the print data in C941/C931/C911/ES9541/ES9431/ES9411. 　　Error 4103: Black	Error 4103

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Install Toner Or Press OK Button %COLOR% Please see HELP for details	Off	Blink	Indicates that a toner empty error occurred after power on. Opening & closing the cover does not change this status to a warning status. Pressing the OK button changes this to the warning status of Priority 219. 5. 　　Error 4100: Yellow 　　Error 4101: Magenta 　　Error 4102: Cyan 　　Error 4103: Black (in C942/ES9542) 　　Error 4104: White 　　Error 4105: Clear This status is provided for Y/M/C/W/CL. And this status is provided for K in C942/ES9542.	Error 4100 4101 4102 4103 4104 4105
Press OK Button for Restoration Memory Overflow	Off	Blink	Indicates the memory overflowed due to any of the following reasons. Processing can continue by pressing the OK button. Install an add-on RAM or reduce the amount of data. The cause is occurrence of any of the following: • A single page contains too much print data. • There is too much macro data. • There is too much Dll data. • It overflows after compression of frame buffer.	Error 420
Install Paper Cassette %TRAY% Please see HELP for details	Off	Blink	Indicates that paper cannot be fed because the cassette of the tray specified for printing is removed. 　　Error 430: Tray 1 　　Error 431: Tray 2 　　Error 432: Tray 3 　　Error 433: Tray 4 　　Error 434: Tray 5	Error 430 431 432 433 434

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
The data was deleted because a duplex printing error occurred Check the paper and paper settings, then print again. To turn off the display, press OK Please see HELP for details	Off	Blink	Indicates that duplex printing is requested to the paper not supporting duplex printing; therefore, the print data has been deleted and the printing has been cancelled.	Error 455
The data will be deleted due to an overprint feature error Check the paper and paper settings, then print again. To turn off the display, press OK Please see HELP for details	Off	Blink	Indicates that spot color overprint is requested to the paper not supporting spot color overprint; therefore, the print data has been deleted and the printing has been cancelled.	Error 456
The data will be deleted due to an overprint feature error Mount the duplex printing unit and print again. To turn off the display, press OK Please see HELP for details	Off	Blink	Indicates that spot color overprint is requested with no duplex (spot color overprint) unit installed; therefore, the print data has been deleted and the printing has been cancelled. The status of non-installation of a duplex unit indicates that the printer is turned on without installation of a duplex unit so that the printer recognizes no duplex unit; not indicate that a duplex unit was installed, recognized and then removed.	Error 458

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
A spot color printing error has occurred. Data will be erased. Check the paper and paper settings, then print again. To turn off the display, press OK. Please see Help for details	Off	Blink	Indicates that a print request was issued for which custom media or spot color cannot be used; therefore, the print data has been deleted and the printing has been cancelled. (Impossibility of spot color printing is the same as impossibility of custom media printing.)	Error 459

Change %MEDIA_SIZE%%MEDIA_TYPE% in MPTray
 	
Press OK Button
 	
Please see HELP for details
	Off	Blink	Indicates that either the paper size set to the tray or the paper size/media type of paper does not agree with the print data. Prompts the user to load proper paper in the tray. (It takes time until the statue is cleared after insertion of the tray and rise of the lever.)
			   Error 460: MP Tray
			
			The unit of paper size in the Custom mode follows the unit for display (menu setting) specified for MP Tray unless otherwise specified by the driver.
			If specified by the driver, paper size is displayed in the unit specified by the driver.
			Paper size display in the Custom mode: "<Width> x <Length> <unit>"
			 ex : 210 x 297 mm
			     8.5 x 11.0 inch
			
			The user needs to press the OK button after replacement of the paper.
			If Media_Size covers both portrait and landscape, %MEDIA_SIZE% additionally shows an icon indicating the paper orientation after the paper size.
				Error 460

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Please change %TRAY% paper. Ensure %MEDIA_SIZE%, %MEDIA_TYPE% is installed. If printing fails, cancel and re-adjust tray settings. Pressing OK will print using current paper tray settings. Please see HELP for details	Off	Blink	Indicates that either the paper size set to the tray or the paper size/media type of paper does not agree with the print data. Prompts the user to load proper paper in the tray. (It takes time until the statue is cleared after insertion of the tray and rise of the lever.) 　Error 461: Tray 1 　Error 462: Tray 2 　Error 462: Tray 3 　Error 464: Tray 4 　Error 465: Tray 5 The unit of paper size in the Custom mode follows the unit for display (menu setting) specified for MP Tray unless otherwise specified by the driver. If specified by the driver, paper size is displayed in the unit specified by the driver. Paper size display in the Custom mode: "<Width> x <Length> <unit>" 　ex : 210 x 297 mm 　　　8.5 x 11.0 inch When the user presses the OK button, the printer ignores the error only for this job and performs printing. If Media_Size covers both portrait and landscape, %MEDIA_SIZE% additionally shows an icon indicating the paper orientation after the paper size. If the paper size of the tray matches with the print data when the tray is set, the printer automatically prints out the job.	Error 461 462 463 464 465
Remove Paper %STACKER% Please see HELP for details	Off	Blink	The stacker of the printer unit is filled with printed paper. 　Error 480 : Face Down Stacker 　Error 484 : Face Up Stacker	Error 480 484

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Install %MEDIA_SIZE% in MPTray Please see HELP for details	Off	Blink	Indicates that a print request has been issued to the MP tray that has run out of paper. When the timeout (3 seconds), which is set to PU firmware, has expired after paper loading by the user, the multipurpose tray moves up, and paper feed resumes. Also, when the user presses the OK button before the timeout, paper feed resumes. 　Error 490: MP Tray The unit of paper size in the Custom mode follows the unit for display specified by the menu unless otherwise specified by the driver. If specified by the driver, paper size is displayed in the unit specified by the driver. This error occurs when the MP tray is at the home position and the "PE SNS2" sensor cannot detect paper.	Error 490
Install %MEDIA_SIZE% in %TRAY% Please see HELP for details	Off	Blink	Indicates that a print request is issued to the tray that has run out of paper. Prompts the user to refill it with paper. 　Error 491: Tray 1 　Error 492: Tray 2 　Error 493: Tray 3 　Error 494: Tray 4 　Error 495: Tray 5 The unit of paper size in the Custom mode follows the unit for display specified by the menu unless otherwise specified by the driver. The paper size displaying form of the custom mode is the same as above. If Media_Size covers both portrait and landscape, %MEDIA_SIZE% additionally shows an icon indicating the paper orientation after the paper size.	Error 491 492 493 494 495

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Receiving Data Timeout Press OK Button for Restoration Please see HELP for details	Varies	Blink	This error appears when a stream timeout occurs during data reception through Port9100, LPR, FTP, IPP, WSD, or Email. NetworkTwain and WSD Scan are not covered.	Error (ONLINE) 519
Reset Tray %TRAY% Please see HELP for details	Off	Blink	A print request has been issued to the tray where Tray Lift Up Error occurred. A lift up retry will be made when the tray is removed and put back in. Error 520: Tray 1 Error 521: Tray 2 Error 522: Tray 3 Error 523: Tray 4 Error 524: Tray 5	Error 520 521 522 523 524
Remove Excess Paper and Reset Tray %TRAY% Please see HELP for details	Off	Blink	A print request has been issued to the tray that has been detected to have too much paper or its cassette setting condition is imperfect. Correct the paper loading condition and reset the cassette to recover from the error. Error 530: Tray 1 Error 531: Tray 2 Error 532: Tray 3 Error 533: Tray 4 Error 534: Tray 5	Error 530 531 532 533 534
Image Drum Sensor Error Please check %COLOR% image drum and reset. Please see HELP for details	Off	Blink	Indicates detection of an abnormality by the toner sensor. This status message is available in the Shipping Mode. If the same abnormality is detected in the Factory Mode, this error is displayed as Service call 163. Error 5400: Yellow Error 5401: Magenta Error 5402: Cyan Error 5403: Black Error 5404: White Error 5405: Clear	Error 5400 5401 5402 5403 5404 5405

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Check Image Drum and Toner Cartridge %COLOR% Please see HELP for details	Off	Blink	Indicates that no toner is supplied (addition of toner cannot be detected). The possible cause of this error is that the toner shutter didn't open at installation of the toner cartridge or the image drum. Error 5440: Yellow (in C941/ES9541) Error 5441: Magenta Error 5442: Cyan Error 5443: Black Error 5444: White (in C942/ES9542)	Error 5440 5441 5442 5443 5444
Check Spot Color Duct Please see HELP for details	Off	Blink	Indicates that no toner is supplied (addition of toner cannot be detected). The possible cause of this error is that the toner shutter didn't open at installation of the toner cartridge, image drum or spot color duct (in C941/ES9541).	Error 5444 5445
Check Toner Duct Please see HELP for details	Off	Blink	Indicates that no toner is supplied (addition of toner cannot be detected). The possible cause of this error is that the toner shutter didn't open at installation of the toner cartridge, image drum or toner duct (in C942/ES9542).	Error 5440
Non Genuine Toner %COLOR% Please see HELP for details	Offs	Blink	Indicates detection of a toner cartridge not suitable for this printer. Replace it with a toner cartridge suitable for this printer to recover from the error. Error 5500: Yellow Error 5501: Magenta Error 5502: Cyan Error 5503: Black Error 5504: White Error 5505: Clear Opening & closing the cover makes the engine check for detection, and if the toner cartridge has not been replaced, the status changes to Warning allowing printing of another 20 pages.	Error 5500 5501 5502 5503 5504 5505

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Incompatible Toner %COLOR% Please see HELP for details	Off	Blink	Indicates detection of a toner cartridge not suitable for this printer. Replace it with a toner cartridge suitable for this printer to recover from the error. 　Error 5540: Yellow 　Error 5541: Magenta 　Error 5542: Cyan 　Error 5543: Black 　Error 5544: White 　Error 5545: Clear	Error 5540 5541 5542 5543 5544 5545
Install %COLOR% New Image Drum Image Drum Life Please see HELP for details	Off	Blink	Alerts (alarms) the end of the image drum life. This message remains displayed until the image drum is replaced. 　Error 5600: Yellow 　Error 5601: Magenta 　Error 5602: Cyan 　Error 5603: Black 　Error 5604: White 　Error 5605: Clear	Error 5600 5601 5602 5603 5604 5605
Install %COLOR% New Image Drum Image Drum Life To Exceed the Life, Press OK Button Please see HELP for details	Off	Blink	It is the time to replace the image drum. 　Error 5640: Yellow 　Error 5641: Magenta 　Error 5642: Cyan 　Error 5643: Black 　Error 5644: White 　Error 5645: Clear By pressing the OK button, the life can be prolonged temporarily, but the print quality is not guaranteed.	Error 5640 5641 5642 5643 5644 5645
Open Stacker Face Up Stacker Please see HELP for details	Off	Blink	Indicates that it is instructed to output prints to the face-up stacker when it is closed.	Error 580
Close Cover %COVER% Please see HELP for details	Off	Blink	Indicates that the cover is open. 　Error 311: Front cover 　Error 589: Tray 1 Side Cover 　Error 312: Tray 2 Side Cover 　Error 313: Tray 3 Side Cover 　Error 314: Tray 4 Side Cover 　Error 315: Tray 5 Side Cover 　Error 588: Eject Cover 　Error 585: MP Tray Cover	Error 311 589 312 313 314 315 588 585

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
The toner replacement cover is open Please see HELP for details	Off	Blink	Indicates that the cover is open. Error 586: Toner cover	Error 586
Close Cover %COVER% Please see HELP for details	Off	Blink	Indicates that the cover is open. 　Error 311: Front cover 　Error 589: Tray 1 Side Cover 　Error 312: Tray 2 Side Cover 　Error 313: Tray 3 Side Cover 　Error 314: Tray 4 Side Cover 　Error 315: Tray 5 Side Cover 　Error 588: Eject Cover 　Error 585: MP Tray Cover	Error 311 589 312 313 314 315 588 585
Toner Not Installed %COLOR% Please see HELP for details	Off	Blink	Indicates that a toner cartridge is not installed. 　Error 6100: Yellow 　Error 6101: Magenta 　Error 6102: Cyan 　Error 6103: Black 　Error 6104: White 　Error 6105: Clear Opening & closing the cover makes the engine check for detection, and if the toner cartridge has not been replaced, the status changes to Warning allowing printing of another 20 pages.	Error 6100 6101 6102 6103 6104 6105
Incompatible Toner %COLOR% Please see HELP for details	Off	Blink	Indicates detection of a toner cartridge not suitable for this printer. Replace it with a toner cartridge suitable for this printer to recover from the error. 　Error 6140: Yellow 　Error 6141: Magenta 　Error 6142: Cyan 　Error 6143: Black 　Error 6144: White 　Error 6145: Clear	Error 6140 6141 6142 6143 6144 6145

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Incompatible Toner %COLOR% Please see HELP for details	Off	Blink	Indicates detection of a toner cartridge not suitable for this printer. Replace it with a toner cartridge suitable for this printer to recover from the error. Error 6200: Yellow Error 6201: Magenta Error 6202: Cyan Error 6203: Black Error 6204: White Error 6205: Clear	Error 6200 6201 6202 6203 6204 6205
Incompatible Toner %COLOR% Please see HELP for details	Off	Blink	The detected toner cartridge is not optimal. Invalid Toner Detected Error 6240: Yellow Error 6241: Magenta Error 6242: Cyan Error 6243: Black Error 6244: White Error 6245: Clear	Error 6240 6241 6242 6243 6244 6245
Open %TRAY% Side Cover Paper Remain Please see HELP for details	Off	Blink	Indicates due to occurrence of a paper jam, the successively fed paper remains in the printer. Error 631: Tray1 Side Cover Error 632: Tray2 Side Cover Error 633: Tray3 Side Cover Error 634: Tray4 Side Cover Error 635: Tray5 Side Cover	Error 631 632 633 634 635
Open Right Side Cover Paper Remain Please see HELP for details	Off	Blink	Indicates due to occurrence of a paper jam, the successively fed paper remains in the printer. Error 637: J0: Paper Feed Path	Error 637
Check Exit Unit Paper Remain Please see HELP for details	Off	Blink	Indicates due to occurrence of a paper jam, the successively fed paper remains in the printer. Error 638: J1: Paper Transport Path Error 639: J2: Paper Exit Path	Error 638 639
Check Duplex Unit Paper Remain Please see HELP for details	Off	Blink	Indicates due to occurrence of a paper jam, the successively fed paper remains in the printer. Error 640: J4: Duplex Entry Path Error 641: J5: Duplex Reversal Path Error 642: J3: Duplex Transport Path	Error 640 641 642

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Check the lower side of Duplex Unit Paper Remain Please see HELP for details	Off	Blink	Indicates detection of paper remaining in the multi-pass print path. Error 650: Multi Path Jam	Error 650
Check Face Down Stacker Paper Remain Please see HELP for details	Off	Blink	Indicates detection of paper remaining between the fuser unit and the Face Down stacker. Error 651: Paper Face Down	Error 651
Change %MEDIA_ SIZE% %MEDIA_TYPE% in MPTray Press OK Button Please see HELP for details	Off	Blink	Indicates disagreement between the media type set to the tray and the print data. Prompts the user to load proper paper in the tray. (It takes time until the statue is cleared after insertion of the tray and rise of the lever.) Error 660: MP Tray The unit of paper size in the Custom mode follows the unit for display (menu setting) specified for MP Tray unless otherwise specified by the driver. If specified by the driver, paper size is displayed in the unit specified by the driver. Paper size display in the Custom mode: "<Width> x <Length> <unit>" ex : 210 x 297 mm 8.5 x 11.0 inch The user needs to press the OK button after replacement of the paper. If Media_Size covers both portrait and landscape, %MEDIA_SIZE% additionally shows an icon indicating the paper orientation after the paper size.	Error 660

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Change %MEDIA_SIZE% %MEDIA_TYPE% in %TRAY% Press OK Button Please see HELP for details	Off	Blink	Indicates disagreement between the media type set to the tray and the print data. Prompts the user to load proper paper in the tray. (It takes time until the statue is cleared after the tray is closed and the lever lifted.) 　　　Error 661: Tray 1 　　　Error 662: Tray 2 　　　Error 663: Tray 3 　　　Error 664: Tray 4 　　　Error 665: Tray 5 The unit of paper size in the Custom mode follows the unit for display (menu setting) specified for MP Tray unless otherwise specified by the driver. If specified by the driver, paper size is displayed in the unit specified by the driver. Paper size display in the Custom mode: "<Width> x <Length> <unit>" 　ex : 210 x 297 mm 　　　　8.5 x 11.0 inch When the user presses the OK button, the printer ignores the error only for this job and performs printing. If Media_Size covers both portrait and landscape, %MEDIA_SIZE% additionally shows an icon indicating the paper orientation after the paper size.	Error 661 662 663 664 665
Spot Color Duct has not been installed Please install the Spot Color Duct Please see HELP for details	Off	Blink	Indicates that no spot color duct is installed in C941/ES9541.	Error 676
Toner Duct has not been installed Please install the Toner Duct Please see HELP for details	Off	Blink	Indicates that no toner duct is installed in C942/ES9542.	Error 676

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Spot Color settings changes. Shut down and restart to enable new settings.	Off	Blink	This status message is displayed when the spot color setting is changed.	Error 677
Spot Color has been replaced Check Spot Color menu settings. Current setting is %MENUCOLOR%. Press OK Button	Off	Blink	When the color informed by PU is unknown, CU prompts to check the menu setting.	Error 678
Spot Color has been replaced Press OK to change the Spot Color settings in the menu to %COLOR% and restart the system. If you do not want to change settings, return Spot Color toner, image drum and Spot Color duct settings to %MENUCOLOR%.	Off	Blink	If the color informed by PU doesn't match the menu setting, CU prompts for approval to change the menu setting.	Error 679
Install %COLOR% New Image Drum Printing disabled due to low threshold of Image Drum life Please see HELP for details	Off	Blink	The extended service life of the image drum has expired. 　　　Error 6800: Yellow 　　　Error 6801: Magenta 　　　Error 6802: Cyan 　　　Error 6803: Black 　　　Error 6804: White 　　　Error 6805: Clear	Error 6800 6801 6802 6803 6804 6805

LCD Status Message (□ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Non Genuine Image Drum %COLOR% Please see HELP for details	Off	Blink	Indicates detection of an image drum not suitable for this printer. Error 6840: Yellow Error 6841: Magenta Error 6842: Cyan Error 6843: Black Error 6844: White Error 6845: Clear	Error 6840 6841 6842 6843 6844 6845
Non Genuine Belt Unit Please see HELP for details	Off	Blink	Indicates detection of a belt unit not suitable for this printer.	Error 6881
Incompatible Belt Unit Please see HELP for details	Off	Blink	Indicates detection of a belt unit not suitable for this printer.	Error 6882
Incompatible Belt Unit Please see HELP for details	Off	Blink	Indicates detection of a belt unit not suitable for this printer.	Error 6883
Incompatible Belt Unit Please see HELP for details	Off	Blink	Indicates detection of a belt unit not suitable for this printer.	Error 6884
Incompatible Belt Unit Please see HELP for details	Off	Blink	The detected belt unit is not optimal. Invalid Belt Detected	Error 6885
Incompatible Belt Unit Please see HELP for details	Off	Blink	The detected belt unit is not optimal. Incompatible Belt Detected	Error 6886

LCD Status Message (□ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Belt Unit Not Installed Please see HELP for details	Off	Blink	Indicates that belt unit installation could not be recognized.	Error 689
Incompatible Image Drum %COLOR% Please see HELP for details	Off	Blink	Indicates detection of an image drum not suitable for this printer. Error 6900: Yellow Error 6901: Magenta Error 6902: Cyan Error 6903: Black Error 6904: White Error 6905: Clear	Error 6900 6901 6902 6903 6904 6905
Image Drum Not Installed %COLOR% Please see HELP for details	Off	Blink	Indicates that the image drum installation could not be recognized. Error 6940: Yellow Error 6941: Magenta Error 6942: Cyan Error 6943: Black Error 6944: White Error 6945: Clear	Error 6940 6941 6942 6943 6944 6945
Non Genuine Fuser Unit Please see HELP for details	Off	Blink	Indicates detection of a fuser unit not suitable for this printer.	Error 6981
Incompatible Fuser Unit Please see HELP for details	Off	Blink	Indicates detection of a fuser unit not suitable for this printer.	Error 6982
Incompatible Fuser Unit Please see HELP for details	Off	Blink	Indicates detection of a fuser unit not suitable for this printer.	Error 6983
Incompatible Fuser Unit Please see HELP for details	Off	Blink	Indicates detection of a fuser unit not suitable for this printer.	Error 6984

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Incompatible Fuser Unit Please see HELP for details	Off	Blink	The detected fuser unit is not optimal. Invalid Fuser Detected	Error 6985
Incompatible Fuser Unit Please see HELP for details	Off	Blink	The detected fuser unit is not optimal. Incompatible Fuser Detected	Error 6986
Incompatible Fuser Unit Please see HELP for details	Off	Blink	Detection of a fuser unit of different voltage. Fuser Unit Mismatch	Error 6987
Fuser Unit Not Installed Please see HELP for details	Off	Blink	Indicates that fuser unit installation could not be recognized.	Error 699
Incompatible Image Drum %COLOR% Please see HELP for details	Off	Blink	Indicates detection of an image drum not suitable for this printer. Error 7000: Yellow Error 7001: Magenta Error 7002: Cyan Error 7003: Black Error 7004: White Error 7005: Clear	Error 7000 7001 7002 7003 7004 7005
Incompatible Image Drum %COLOR% Please see HELP for details	Off	Blink	Indicates detection of an image drum not suitable for this printer. Error 7040: Yellow Error 7041: Magenta Error 7042: Cyan Error 7043: Black Error 7044: White Error 7045: Clear	Error 7040 7041 7042 7043 7044 7045
Caution, unknown Consumable detected Go to User Manual "Trouble Shooting" to restore operation	Off	Blink	Indicates installation of a consumable not authorized by ODC.	Error 709

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Incompatible Image Drum %COLOR% Please see HELP for details	Off	Blink	The detected image drum is not optimal. Invalid Image Drum Detected Error 7100: Yellow Error 7101: Magenta Error 7102: Cyan Error 7103: Black Error 7104: White Error 7105: Clear	Error 7100 7101 7102 7103 7104 7105
Incompatible Toner %COLOR% Please see HELP for details	Off	Blink	The detected toner cartridge is not optimal. Incompatible Toner Detected Error 7140: Yellow Error 7141: Magenta Error 7142: Cyan Error 7143: Black Error 7144: White Error 7145: Clear	Error 7140 7141 7142 7143 7144 7145
Incompatible Image Drum %COLOR% Please see HELP for details	Off	Blink	The detected image drum is not optimal. Incompatible Image Drum Detected Error 7200: Yellow Error 7201: Magenta Error 7202: Cyan Error 7203: Black Error 7204: White Error 7205: Clear	Error 7200 7201 7202 7203 7204 7205
Install %MEDIA_SIZE% in MPTray Press OK Button	On	Off	Indicates that a print request by manual paper feed was issued. Prompts the user to manually feed the paper indicated by %MEDIA_SIZE%. The unit of paper size in the Custom mode follows the unit for display (menu setting) specified for MP Tray unless otherwise specified by the driver. If specified by the driver, paper size is displayed in the unit specified by the driver. Paper size display in the Custom mode: "<Width> x <Length> <unit>" ex : 210 x 297 mm 8.5 x 11.0 inch If Media_Size covers both portrait and landscape, %MEDIA_SIZE% additionally shows an icon indicating the paper orientation after the paper size.	Error (ONLINE)

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Check Data Message Data Write Error <%CODE%>	Varies	Varies	Indicates that writing of the message data for updating has failed. %CODE% is a decimal value (single digit) indicating cause of the writing failure. =1 FAIL Cause of the failure is unknown. =2 DATA_ERROR Hash check error during data read/write. FLASH error. =3 OVERFLOW Download failure because the FLASH capacity became full during writing or reading the language file. =4 MEMORY FULL Failed to secure memory space. =5 UNSUPPORTED_DATA Download of the data that is not supported by the printer.	Error (ONLINE)
Install Toner For Maximum Performance Always Use %COMPANY_NAME% Original	–	–	Only when ENABLE is set for the pertinent printer setting, this error message is displayed following the toner empty error status message (Priority 334 or 334.5). The printer setting should be made by PJL (OKIORIGINALCONSUMABLEDISPLAY=ON/OFF).	–
Wait a Moment Rebooting <%CODE%> It may take some time to complete this process.	Off	On	Indicates that the controller unit is being rebooted. %CODE% is a decimal value (one digit) indicating the cause of the reboot. =0....Reboot that is resulted from a cause other than the below. =1....Reboot by the PJL command =2....Reboot caused by the menu change =3....Reboot based on quit operator of PostScript Language =4....Reboot caused by the network utilities (including web)	Error
Shutting down Please wait. Printer will turn off automatically It may take some time to complete this process.	Off	Off	Indicates that the printer is shutting down. The shut-down process is started by holing down the power switch for four or more seconds after the completion of the printer initialization process.	Error

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Error code
Turn off power Shutdown completed	Off	Off	Indicates that the printer has completed the shut-down process. (The LCD backlight shuts off.) * This status is displayed for a split second at the instant preceding automatic power shutoff. It is so brief that the display can hardly be seen.	Error
Power Off and Wait for a while 126:Condensing Error	Off	Blink	Dew condensation error (This error is handled in the same way as the service call error though displayed differently.)	Fatal 126
Service Call nnn:Error	Off	Blink	Indicates that a fatal error has occurred. For more information, see "Service Call Error List" * "Status Code" and "USTATUS Message" can be acquired by MIB.	Fatal <nnn>
Service Call nnn:Error*	Off	Blink	Indicates that a fatal error has occurred. For more information, see "Service Call Error List" "*" indicates the detailed error cause. * "Status Code" and "USTATUS Message" can be acquired by MIB.	Fatal 70 73 75 203 204 096 231 128 166 168 169
Power Off/On nnn:Error PC:nnnnnnnn LR:nnnnnnnn FR:nnnnnnnn	Varies	Varies	Indicates a fatal error has occurred. for more information, see "Service Call Error List" "nnnnnnnn" indicates the detailed error cause.	Fatal 002 ~ 011 F0C F0D FFE FFF
Power Off/On 209:Download Error	Off	Blink	Downloading Media Table to PU has failed. (Related to Custom Media Type) * "Status Code" and "USTATUS Message" can be acquired by MIB.	Fatal 209

Table 4-1-2 Service Call Error List

Panel display	Cause	Check details	Result	Solution
Service Call 001:Error	Machine Check Exception hardware problem was detected (PCB failure or insufficient power capacity). (PDL only) When CE1 was not detected, SC001 occurs.			Replace the printer control PCB.
Power Off/On 002:Error 003:Error 005:Error	CPU unexpected exception	Does this error message reappear?	Yes	Power OFF/ON. Replace the printer control PCB.
Power Off/On 012:Error	A watchdog timeout occurred due to no system timer interrupt for unknown reasons.	Does this error message reappear?	Yes	Power OFF/ON. Replace the printer control PCB.
Service Call 020:Error	The CU FW in Nand FLASH has not been detected, or a check SUM error has occurred.	Does this error message reappear?	Yes	Power OFF/ON. Replace the printer control PCB.
Service Call 024:Error	CU Font ROM Hash Error	Does this error message reappear?	Yes	Power OFF/ON. Replace the printer control PCB.
Service Call 030:Error	CU RAM Check Error	Does this error message reappear?	Yes	Power OFF/ON. Replace the printer control PCB.
Service Call 040:Error	CU EEPROM Error	Does this error message reappear?	Yes	Power OFF/ON. Replace the printer control PCB.

Panel display	Cause	Check details	Result	Solution
Service Call 042:Error 043:Error 045:Error	Flash File System Error	Failed to access to the Flash ROM that is mounted directly on the CU PCB.		Format the Flash forcibly. (This requires caution as it erases NIC-F/W. The NIC-F/W must be written with the maintenance utility after formatting.) If the error remains, replace the printer control PCB.
Service Call 051:Error	CU Fan Error Abnormal condition of the CPU cooling fan on the CU PCB	Is the CPU Fan connected properly? Does it recover from the error by replacing the fan?	No Yes No	Connect it properly. Replace the fan. Replace the printer control PCB.
Power Off/On 052:Error	DMA Abort Error was detected with Image Processor.	Does this error message reappear?	Yes	Power OFF/ON. Replace the printer control PCB.
Service Call 067:Error	A communication error was detected during communication with the Sleep Mode interface monitoring program.			If power cycling does not solve the problem, maintenance by a service engineer is required.
Service Call 069:Error	Malfunction of the NIC chip was detected.	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
Power Off/On 070:Error	Detection of abnormal condition of the PostScript firmware	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
Power Off/On 072:Error	I/F error between PU and CU	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
Power Off/On 073:Error xxxxxxxx	Detection of abnormal condition during image data expansion	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.

Panel display	Cause	Check details	Result	Solution
Power Off/On 074:Error xxxxxxxx 075:Error xxxxxxxx	Detection of abnormal condition during image data expansion	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
Power Off/On 077:Error xx	Detected of abnormal condition during image data expansion	Does this recur?	Yes	Power OFF/ON. Replace the printer control PCB
Service Call 081:Error		Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
Service Call 104:Error	The engine EEPROM implementation check at power on showed no problem, but after that a read/write error was detected.	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
Service Call 106:Error	Abnormal engine control logic	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
Service Call 108:Error	01: Detection of a watchdog timer error	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
	02: Detection of an undefined interruption	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
	03: Runaway of the CPU on the PU due to noise etc.	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
	04: Runaway of the Port CPU due to noise etc.	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
	05: Failure of access to the Dcon circuit of the printer control PCB	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.

Panel display	Cause	Check details	Result	Solution
Service Call 108:Error	09: Detection of an error in clock adjustment to the duplex unit	Does this error message reappear after power restoration?	Yes	Replace the unit concerned.
		Does this error message reappear after power restoration?	Yes	Replace the printer control PCB.
	0B: Detection of an error in clock adjustment to Tray 2	Does this error message reappear after power restoration?	Yes	Replace the unit concerned.
		Does this error message reappear after power restoration?	Yes	Replace the printer control PCB.
	0C: Detection of an error in clock adjustment to Tray 3	Does this error message reappear after power restoration?	Yes	Replace the unit concerned.
		Does this error message reappear after power restoration?	Yes	Replace the printer control PCB.
	0D: Detection of an error in clock adjustment to Tray 4	Does this error message reappear after power restoration?	Yes	Replace the unit concerned.
		Does this error message reappear after power restoration?	Yes	Replace the printer control PCB.
	0E: Detection of an error in clock adjustment to Tray 5	Does this error message reappear after power restoration?	Yes	Replace the unit concerned.
		Does this error message reappear after power restoration?	Yes	Replace the printer control PCB.
	0F: Communication failure with the spot color PCB	Does this error recur?	Yes	Power OFF/ON. Replace the spot color PCB.
		Does this error recur?	Yes	Replace the printer control PCB.
	10: Runaway of the Driver CPU due to noise etc.	Does this error recur?	Yes	Power OFF/ON. Replace the driver relay PCB.
		Does this error recur?	Yes	Replace the printer control PCB.

Panel display	Cause	Check details	Result	Solution
Service Call 111:Error	A duplex unit for another model was detected.	Is a duplex unit provided for this model installed?	Yes	Install a correct duplex unit.
Service Call 112:Error	A 2nd Tray for another model was detected.	Is a 2nd Tray provided for this model installed?	Yes	Install a correct 2nd Tray.
Service Call 113:Error	A 3rd Tray for another model was detected.	Is a 3rd Tray provided for this model installed?	Yes	Install a correct 3rd Tray.
Service Call 114:Error	A 4th Tray for another model was detected.	Is a 4th Tray provided for this model installed?	Yes	Install a correct 4th Tray.
Service Call 115:Error	A 5th Tray for another model was detected.	Is a 5th Tray provided for this model installed?	Yes	Install a correct 5th Tray.
Service Call 121:Error	High voltage power supply interface error	Is the fuse on the printer control PCB blown?	Yes	Replace the printer control PCB (then check the following).
		Is the cable connecting the printer control PCB to the high voltage power supply unit connected properly?	No	Re-connect it properly.
			Yes	Check for defective contact points of the high voltage system.
		Is there any defective contact point?	No	Replace the high voltage power supply unit.
Service Call 123:Error	Abnormal environment humidity or unconnected humidity sensor	Does this error recur?	Yes	Power OFF/ON. Replace the environmental sensor board and the FFC.
		Does this error recur?	Yes	Replace the printer control PCB.
Service Call 124:Error	Abnormal environment humidity	Does this error recur?	Yes	Power OFF/ON. Replace the environmental sensor board and the FFC.
		Does this error recur?	Yes	Replace the printer control PCB.

Panel display	Cause	Check details	Result	Solution
Service Call 125:Error	Multi-purpose Tray Home Error	Does the motor un in the motor testing of the PU self-diagnostic mode.	Yes	Check the sensor cable for a break or short, and the connector semi-locking relay PCB and the printer control PCB for abnormal condition.
			No	Check the hopping motor and the gear train for abnormal condition.
Power Off and Wait for a while 126:Condensing Error	Dew condensation in the printer was detected.	This error tends to occur after a printer is carried in from the outsides. Leave the printer for 2 hours to half a day at room temperature, and turn on the power.		After leaving the printer at room temperature, turn on the power again.
		Does this error recur?	Yes	Replace the environmental sensor board and the FFC.
		Does this error recur?	Yes	Replace the printer control PCB.

Panel display	Cause	Check details	Result	Solution
Service Call 128:Error	01: Fuser Exhaust Fan 1 02: Low Voltage Fan 03: PU Fan 05: Station 1 ID Intake Fan 09: Second Transfer Adsorption Fan 0A: Fuser Intake Fan 0B: Station 2 ID Intake Fan 0C: Duplex Fan 0D: Fuser Exhaust Fun 2 0E: Station 3 ID Intake Fan 0F: Station 4 ID Intake Fan 10: Station 5 ID Intake Fan	Is the cable to respective fans connected properly? Does this error recur?	No Yes No	Re-connect the fan properly. Replace the fan motor. Replace the applicable PCB. 01: Driver relay PCB 02: Printer control PCB 03: Printer control PCB 05: Driver relay PCB 09: Rail unit relay PCB 0A: Driver relay PCB 0B: Driver relay PCB 0C: Duplex unit PCB 0D: Driver relay PCB 0E: Driver relay PCB 0F: Driver relay PCB 10: Driver relay PCB
Service Call 134:Error	LED head detection error (01=K, 02=C, 03=M, 04=Y, 05=W/CL)	Is the fuse blown? 134-05: Spot color PCB 134-01 to 04: Printer control PCB Does this error recur? Does this error recur?	Yes No Yes Yes	Replace the PCB. Correct the FFC connection condition between the LED head and the PCB. Correct the FFC connection condition. Replace the LED head unit. Replace either applicable PCB. 134-01 to 04: Printer control PCB 134-05: Spot color PCB

Panel display	Cause	Check details	Result	Solution
Service Call 135:Error	01: Tray1 Lift-up Motor Error 02: Tray2 Lift-up Motor Error 03: Tray3 Lift-up Motor Error 04: Tray4 Lift-up Motor Error 05: Tray5 Lift-up Motor Error	Remove the paper cassette. Does the motor run in motor testing?	Yes No	Replace the paper cassette. Do the following check on motors and PCBs.
		Is the fuse on the PCB blown?	Yes	Replace the PCB.
		Is the motor resistant value abnormal, or is the motor wire disconnected or shorted?	Yes No	Replace the motor. Replace the PCB. 01: Printer control PCB 02 to 05: Option tray PCB
	07: Belt Motor Lock Error	Remove the belt unit. Does the motor run in motor testing? Is there any abnormality with the mechanism, such as a blown motor fuse, a disconnected or shorted motor wire, and a broken gear?	Yes No Yes No	Replace the belt. Do the following check on motors and PCBs. Replace the motor, cable, and belt motor driving mechanism. Replace the printer control PCB.

Panel display	Cause	Check details	Result	Solution
Service Call 135:Error	09:Fuser Motor Lock Error	Remove the fuser. Does the motor run in motor testing?	Yes	Replace the fuser.
			No	Do the following check on motors and PCBs.
		Is there any abnormality with the mechanism, such as a blown motor fuse, a disconnected or shorted motor wire, and a broken gear?	Yes	Replace the motor, cable, fuser motor driving mechanism.
			No	Replace the printer control PCB.
	11:Station1 ID Motor Lock Error 12:Station2 ID Motor Lock Error 13:Station3 ID Motor Lock Error 14:Station4 ID Motor Lock Error 15:Station5 ID Motor Lock Error	Remove the ID unit. Does the motor run in motor testing?	Yes	Replace the ID unit.
			No	Do the following check on motors and PCBs.
		Is the motor fuse blown?	Yes	Replace the motor.
		Is the motor wire broken or shorted?	Yes	Replace the cable.
			No	Replace the driver relay PCB.
		Does the error recur?	Yes	Replace the ID motor driving mechanism.
Service Call 143:Error	Image drum Up/Down position detection error (01=K, 02=C, 03=M, 04=Y, 05=W/CL)	Reinstall the ID unit and the belt unit and then power off/on. Does the error recur?	Yes	Inspect the following.
		Detach the ID unit. Remove the rear cover and inspect the initial movement. Is there any abnormality with up/down movement?	No	Replace the ID unit.
			Yes	Inspect the driver replay PCB, ID up/down sensor, ID motor driving mechanism.

Panel display	Cause	Check details	Result	Solution
Service Call 147:Error	Toner supply motor error (01=K, 02=C, 03=M, 04=Y, 05=W/CL)	Remove the toner cartridge. Does the motor run in motor testing?	Yes	Replace the toner cartridge.
			No	Do the following check on motors and PCBs.
		Is the motor resistant value abnormal, the motor wire disconnected or shorted?	Yes	Replace the motor.
			No	Replace the driver relay PCB.
		Does the error recur?	Yes	Replace the toner supply mechanism.
Service Call 163:Error	Toner sensor detection error (01=K, 02=C, 03=M, 04=Y, 05 =W/CL) This error does not occur with the factory default settings.	Is the stopper (orange) removed?	No	Remove the stopper.
		Is the ID unit prism soiled?	Yes	Clean it.
			No	Replace the ID unit.
		Does this error recur?	Yes	Replace the driver relay PCB.
		Does this error recur?	Yes	Replace the toner low sensor board and the cable.
Service Call 166:Error	An abnormality was detected with the power supply temperature thermistor. 01: The power supply thermistor is detected as shorted. 02: The power supply thermistor is detected as open. 03: The power supply thermistor indicates high temperature error. 04 : The power supply thermistor indicates low temperature error.	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.

Panel display	Cause	Check details	Result	Solution
Service Call 167:Error	Thermistor slope error	Is the error message displayed? Does this error recur?	Yes Yes	Restore the power. After leaving the printer for 30 minutes, turn on the power again.
Service Call 168:Error	01: thermistor is detected as shorted 02: thermistor is detected as open 03: thermistor indicates high temperature error 04: thermistor indicates low temperature error	Is the error message displayed? Does this error recur?	Yes Yes	Restore the power. After leaving the printer for 30 minutes, turn on the power again. When the power is restored for the 168-03 error, the display changes to Service Call 994: Error.
Service Call 169:Error	01: thermistor is detected as shorted 02: thermistor is detected as open 03: thermistor indicates high temperature error 04: thermistor indicates low temperature error	Is the error message displayed? Does this error recur?	Yes Yes	Restore the power. After leaving the printer for 30 minutes, turn on the power again.
Service Call 170:Error 171:Error	Short circuit (170) or open circuit (171) of the fuser thermistor was detected.	Does this error recur?	Yes	Restore the power. Replace the fuser unit.
Service Call 172:Error 173:Error	An abnormal (172: high or 173: low) temperature of the fuser thermistor was detected.	Does this error recur?	Yes	Restore the power. Replace the fuser unit. When the power is restored, the display may change to Service Call 994: Error in some cases.

Panel display	Cause	Check details	Result	Solution
Service Call 181:Error 182:Error 183:Error 184:Error 185:Error	Option unit I/F error (181 = Duplex Unit, 182, 183, 184, 185 = Optional Tray)	Does this error recur?	Yes	Restore the power. Check to make sure the contact points of the connector and replace the optional unit.
Service Call 188:Error	01: Error in communication with Port CPU	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
	02: Error in communication with Driver CPU	Does this error recur?	Yes	Replace the Driver PCB.
Power Off/On 190:Error	System memory overflow	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
Power Off/On 203:Error 204:Error	CU program error (not occur in normal operation)	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
Power Off/On 207:Error 208:Error	CU program error (not occur in normal operation)	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
Power Off/On 213:Error 214:Error	CU program error (not occur in normal operation)	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
Service Call 230:Error	Tag Reader Missing	Does this error recur? Does this error recur?	Yes Yes	Power OFF/ON. Replace the tag reader/writer PCB and the FFC. Replace the printer control PCB.
Service Call 231:Error	01: PU-Tag Reader Interface Error 02: Tag Reader circuit abnormality 03: Tag Interface Error	Does this error recur? Does this error recur?	Yes Yes	Power OFF/ON. Replace the tag reader/writer PCB and the FFC. Replace the printer control PCB.

Panel display	Cause	Check details	Result	Solution
Service Call 241:Error ~ 245:Error	Engine Program Memory Error 241: DUPLEX Flash memory error 242: Option Tray2 243: Option Tray3 244: Option Tray4 245: Option Tray5	Does this error recur?	Yes	Power OFF/ON. 241: Replace the DUPLEX PCB. 242-5: Replace the option tray PCB.
Service Call 247:Error	Engine PORT CPU Program Memory Error	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
Service Call 249:Error	Engine DRIVER CPU Program Memory Error	Does this error recur?	Yes	Power OFF/ON. Replace the driver relay PCB.
Power Off/On 250:Error	Secure File Erasing Error	An encrypted file erasing error was detected. Did the user accept to execute HDD ERASE?		ADMIN MENU HDD ERASE informing the user of the necessity to execute Disk ERASE to delete the encrypted file and restore the HDD defaults.
Service Call 251:Error	Secure Disk Erasing Error	An error was detected during Disk ERASE. Does this error message reappear?	Yes	Power OFF/ON. Replace the HDD.
Service Call 254:Error	An unexpected error occurred during initialization of the Security mode. Error cause information is displayed after the error code number.	Does this error message reappear?	Yes	Power OFF/ON. Regenerate an encryption key. If it doesn't solve the problem, replace the CU PCB.
Service Call 257:Error	An unexpected error occurred during initialization of the HDD. Error cause information is displayed after the error code number.	Does this error message reappear?	Yes	Power OFF/ON. Format the HDD again. If it does not solve the problem, replace the HDD.

Panel display	Cause	Check details	Result	Solution
Power Off/On 901:Error 902:Error	Short circuit (901) or open circuit (902) with the belt thermistor was detected.	Check the belt thermistor wiring. (Is there any abnormal condition with the belt unit, contact substrate which is the tag terminal PCB of the printer unit, or the cable)?	Yes	Replace the part or the belt unit.
			No	Replace the driver relay PCB.
Power Off/On 903:Error 904:Error	The belt thermistor detected abnormal temperature. 903:too high 904:too low	Check the belt thermistor wiring. (Is there any abnormal condition with the belt unit, contact substrate which is the tag terminal PCB of the printer unit, or the cable)?	Yes	Replace the part or the belt unit.
			No	Replace the driver relay PCB.
Service Call 993:Error	An error was detected with the paper thickness sensor power cable.	Does this error recur?	Yes	Power OFF/ON. Replace the paper thickness sensor and the cable.
		Does this error recur?	Yes	Replace the printer control PCB.
Service Call 994:Error	A fuser where a high temperature error was detected is installed.	Does this error recur?	Yes	Power OFF/ON. Replace the fuser unit.
Power Off/On F0C:Error	CU program error	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.
Power Off/On FFF:Error	CU program error	Does this error recur?	Yes	Power OFF/ON. Replace the printer control PCB.

Note) Service call errors, 171: Error, 166-02: Error, 168-02: Error, 169-02: Error, 0169-04: Error and 902: Error 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.

Table 4-1-3 Initializing

Panel display	Online indicator	Inspection lamp	Details
Initializing	Off	Off	It is displayed until the system display language is determined immediately after the power is turned on.
Initializing	Off	Off	Indicates the controller side is initializing.
EEPROM Reset	Off	Off	Indicates that the EEPROM of the controller side is being reset. The conditions for resetting the EEPROM are as follows: • Change of CU ROM (when disagreement of the CU F/W version is detected) • Change of destinations • Forced initialization of the EEPROM (Factory Maintenance menu) • OEM setting by PJL commands
RAM Check nnn%	Off	Off	Indicates that RAM is being checked. Percentage of the checked portion against the total capacity is shown in the second line.
Wait a Moment Network Initializing	Off	Off	The network is in initialization.
Checking File System	Off	Off	Indicates that the HDD file system is being checked. The checking process for the file system can be started from [Others Setup] - [Storage Common Setup] - [Check File System] of Admin Setup.
Erasing Disk nnn%	Off	Off	Indicates that the hard disk is being erased. The erasure process for the hard disk can be started from [Others Setup] - [HDD Setup] - [Erase HDD] of Admin Setup. nnn The percentage of erased space

Panel display	Online indicator	Inspection lamp	Details
Checking Sectors nnn%	Off	Off	Indicates that HDD sectors are being checked. The sector check process can be started from [Others Setup] - [Storage Common Setup] - [Check All Sectors] of Admin Setup. nnn The percentage of checked portions
PU Flash Error	Off	Off	Indicates that the PU firmware has not started up successfully. The status changes to Priority 251 (*** Flash Error) when initialization is completed. This error can occur in a user environment. If this error occurs, maintenance by a maintenance engineer is required (as in the case of S/C).

Table 4-1-4 Normal

LCD Status Message (□ represents a blank line.)	Online indicator	Inspection lamp	Details
Ready To Print	On	Off	Indicates that the printer is in the online state.
Offline	Off	Off	Indicates that the printer is in the offline state. * The ONLINE LED stays out during offline.
File Accessing	Varies	Varies	Indicates that a file system (HDD/FLASH) is being accessed.
Data Arrive	Varies	Varies	Indicates that data is being received, and processing has not started yet. This message is displayed mainly during processing of PJL without text print data or during job spooling.
Processing	Blink	Varies	Indicates that data is being received or output.
Data Present	Varies	Varies	Indicates that unprinted data remains in the buffer. The printer is waiting for data to follow.
Printing (%TRAY%)	Varies	Varies	Indicates that the printer is printing. %TRAY% Tray 1 Tray 2 Tray 3 Tray 4 Tray 5
Print Demo Page	Varies	Varies	Indicates that the printer is printing demo page.
Print Font	Varies	Varies	Indicates that the printer is printing the list of fonts.
Print Network Config	Varies	Varies	Indicates that the printer is printing the network configuration.
Print Configuration	Varies	Varies	Indicates that the printer is printing menu map.
Print File List	Varies	Varies	Indicates that the printer is printing a list of files (except hidden files) that are stored in a file system (FLASH/HDD).
Print Error Log	Varies	Varies	Indicates that error logs are being printed.
Print User Media List	Varies	Varies	Indicates that the printer is printing a user media list.
□ □ Collate Copy iii/jjj	Varies	Varies	Indicates that the printer is printing collated sets of copies. iii indicates the number of copy being printed, and jjj indicates the total number of printed copies to make. When the total number of copies is 1, the normal message "PRINTING" is displayed.

LCD Status Message (□ represents a blank line.)	Online indicator	Inspection lamp	Details
□ □ Copy kkk/lll	Varies	Varies	Indicates that the printer is performing copy printing. kkk indicates the number of copy being printed, and lll indicates the total number of printed copies to make. When the total number of copies is 1, the normal message "PRINTING" is displayed.
Preparing Cancel	Blink	Varies	Indicates cancellation is being prepared.
Verifying Job	Blink	Varies	Indicates that the integrity (corruption or tempering) of print data for encrypted authentication is being verified.
Cancelling Job	Blink	Varies	Indicates that job cancellation has been instructed, and data is being ignored until job completion.
Cancelling Job	Blink	Varies	This message is displayed if a paper jam occurs when Jam Recovery is OFF. Job cancellation has been instructed, and data is being ignored until job completion.
Cancelling Job	Blink	Varies	Indicates that a job is being cancelled due to no print permission. (Related to JobAccount) 1. When receiving a job sent from a user who is not authorized to print. 2. When receiving a color job sent from a user who is not authorized to color print.
Cancelling Job	Blink	Varies	Indicates that a job is being cancelled because the log storage area of the printer has been used up, and also "Cancel job" is specified as an operation at the time of Log Full. (Related to JobAccount)
□ 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. Note that this message "Adjusting Temp." ends with a period "."
□ 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 a drum, or the printer is in a wait state to cope with heat at the time of switching to narrow paper to wide paper.

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details

☐
Power Save
	Varies	Varies	Lights out at the same time when the printer enters the sleep/off mode and lights up when exits the sleep/off mode.
			Basically, it lights out at the same time when the printer enters the power save mode and lights up when the printer exits the power save mode. However, there are some exceptions as follows:
			It lights up even in power saving when the printer is operated or any cover of the printer is opened (*2).
			It lights up in response to a button operation or opening of a cover of the printer, stays on until the expiration of a timeout (*3), and then stays lit dimly.
			Even when the status changes to power save immediately after a button operation, it stays on until the expiration of the lights-out timeout from the last button operation or release of the button.
			It stays on from LCD initialization at power-on to switching to online.
			
			*1 Off: When the operation panel itself is not energized
			   On: Illuminating at the brightness set for Panel Brightness During Operating
			   Dim: Illuminating at the brightness set for Panel Brightness While Power Save
			*2 The following is the cases falling on exceptions: while a cover is left opened, another cover is opened and closed, or the printer enters the power save mode.
			*3 It is the time set in [Panel Setup] - [Panel Backlight Timer] of Admin Setup.

Invalid Operation	Varies	Varies	This message pops up with a press or successive presses of the power save button when the printer is unable to enter the power save mode, and in three seconds, it returns to the previous display.
☐ Sleep Mode	Varies	Varies	Indicates that the printer has entered the sleep mode. Actually, the printer enters the sleep mode immediately after this message appears; therefore, it is hard to read this message.
☐ Color Adjusting	Varies	Varies	Indicates that automatic color adjustment is being executed.

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details
☐ Density Adjusting	Varies	Varies	Indicates that automatic density correction is being executed. The status code 10988 corresponds to the density read-out, and 10994 corresponds to the density correction.
☐ ☐ Density Adjust has not completed. Please execute "Adjust Density" for printing correctly	Varies	Varies	Indicates that the density adjustment to the new density setting has not completed because density adjustment was not executed after the density setting change or density adjustment was cancelled midway.
☐ Transfer Roller Cleaning	Varies	Varies	Indicates that transfer roller cleaning is in progress. This status is displayed only when transfer roller cleaning is executed manually; not displayed when it starts automatically during initialization.
☐ Media Weight Detecting	Varies	Varies	Indicates media weight is being detected.
Flash Download	Varies	Varies	Indicates that the PU firmware program data is being downloaded. Since downloading of the PU firmware is not disclosed to users, the status does not occur in a user environment.
Please wait Executing Maintenance	Varies	Blink	Maintenance is being carried out. Panel operation is not available in this status. (This message is displayed during MPS function-related maintenance, but objects are not limited to MPS.)
☐ %C%: %INFO%	Varies	Varies	Indicates detection of a new consumable (toner). This status message appears at detecting a new consumable (toner), and disappears automatically in 3 seconds. %INFO% indicates a message retrieved from a consumable tag. %C% indicates the initial letter of a toner color name.
Wait a Moment Network Initializing	Varies	Varies	Indicates that the network is in initialization.
Wait a Moment Message Data Processing	Varies	Varies	Indicates that message data to be updated is being processed.

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details
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.

Table 4-1-5 Warning

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure

☐
 	
%TRAY% Near End
	Varies	Varies	Indicates that paper in the selected tray (specified for "Paper Feed" in menus) is running out.
			While the printer is idling ("Ready to print"), the LCD shows the status of the feed tray selected in menus. When printing is started, it shows the status of the tray that feeds paper. While printing, it shows the status of the tray that is feeding paper.
			%TRAY% represents one of the following:
			    Tray1
			    Tray2
			    Tray3
			    Tray4
			    Tray5	

☐ For Maximum Performance Always Use %COMPANY_ NAME% Original	–	–	This message appears following the toner low/toner empty warning (Priority 202, 219, 219.5) message when the printer setting is ENABLE to display this message.	

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure

☐
%COLOR% Toner Low
	Varies	On (Blink) Off	Indicates that amount of toner is low. When the MENU button > [Menus] > [System Adjust] > [Low Toner] is set to [Stop], the inspection LED blinks, and the printer goes into offline. When the OK button is pressed, or when a specific error is cleared, the printer exits the offline mode and continues printing until TONER EMPTY is detected. A specific error is one of errors from Priority 300 to 380. If a TONER LOW error has occurred when the power is turned on and also the MENU button > [Menus] > [System Adjust] > [Low Toner] is set to [Stop], the inspection LED blinks, a beep sounds, and the printer goes into offline at the timing when initialization is completed. By pressing the OK button, the printing can continue until TONER EMPTY is detected. When [Admin Setup] > [Panel Setup] > [Near Life LED] is set to [Disable], the inspection LED stays out. %COLOR%
			    Yellow
			    Magenta
			    Cyan
			    Black
			    White
			    Clear
				–

☐
Non OEM %COLOR% Toner Detected
	Varies	On	Indicates detection of a toner cartridge not suitable for this printer. %COLOR%
			    Yellow
			    Magenta
			    Cyan
			    Black
			    White
			    Clear
				Prompts the user to use an optimal toner cartridge.

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure

☐
Incompatible %COLOR% Toner
	Varies	On	Indicates detection of a toner cartridge not suitable for this printer. %COLOR%
			    Yellow
			    Magenta
			    Cyan
			    Black
			    White
			    Clear
				Prompts the user to use an optimal toner cartridge.

☐
Non Genuine %COLOR% Toner
	Varies	On	Indicates detection of a toner cartridge not suitable for this printer. %COLOR%
			    Yellow
			    Magenta
			    Cyan
			    Black
			    White
			    Clear
				Prompts the user to use an optimal toner cartridge.

☐
%COLOR% Image Drum Sensor Error
	Varies	On	Something is wrong with the toner sensor. %COLOR%
			    Yellow
			    Magenta
			    Cyan
			    Black
			    White
			    Clear
			
			This warning message is displayed only in the Shipping mode. Alternatively an error from 5400 to 5405 may appear depending on the PU detection conditions. In the Factory mode, a service call from 163-01 to 163-05 appears instead.
				If the image drum is fixed with a stopper, remove it. Lightly wipe the image drum sensor lens surface with a dry soft tissue.

☐ Non Paper Sense Error	Varies	On	The sensor output value at paper out is out of spec. (zero point correction error). When this error occurs, execute printing by setting Media Weight to Medium.	–
☐ Paper Sense Error	Varies	On	The sensor output value difference is out of spec. (thickness beyond the detection limit). When this error occurs, execute printing by setting Media Weight to Medium.	–

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure
☐ Error Postscript	Blink	Varies	Indicates that PostScript interpreter has detected an error due to the following reasons. Once this error occurs, the received data is ignored until the job ends. When the job is completely received, this is automatically cleared. The trigger of this error is detection of either of the following: - The job has a grammatical error. - The page is complicated, and VM was used up.	–
☐ PDL Error Occurred	Blink	Varies	This is the status to recognize the analytical error that occurred in PDL processing.	–
☐ PDF Contains Unsupported Features	Blink	Varies	This is a warning message displayed when a PDF file is using a feature not supported by the PDF converter loaded on the printer. The function for detecting unsupported features comes in at several levels, and this warning is displayed when the level is Middle or Low. The detection levels are specified by the PS operator. The default setting on the standard model is High, so this warning is actually not displayed; when an unsupported feature is detected, it results in a PS error. The message is displayed from the point when an unsupported feature is detected until the job is completed, with no need of user intervention.	–
☐ PS Memory Overflow	Blink	Varies	The PostScript interpreter detected insufficient memory for processing the job.	–

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure

☐
 	
%COLOR% Image Drum Near Life
	Varies	On (Off)	Indicates that the image drum is near the end of its life. Printing can continue until the image drum reaches the end of its life. When [Admin Setup] > [Panel Setup] > [Near Life LED] is set to [Disable], the inspection LED stays out.
			%COLOR%
			   Yellow
			   Magenta
			   Cyan
			   Black
			   White
			   Clear
				–

☐ Fuser Unit Near Life	Varies	On (Off)	Indicates that the fuser is near the end of its life. When [Admin Setup] > [Panel Setup] > [Near Life LED] is set to [Disable], the inspection LED stays out.	–
☐ Belt Unit Near Life	Varies	On (Off)	Indicates that the transfer belt is near the end of its life. Because this is just a warning, printing is not stopped. When [Admin Setup] > [Panel Setup] > [Near Life LED] is set to [Disable], the inspection LED stays out.	–
☐ Waste Toner Near Full	Varies	On	Notifies the waste toner box is near full. When [Admin Setup] > [Panel Setup] > [Near Life LED] is set to [Disable], the inspection LED stays out.	–
☐ Non OEM Fuser Unit Detected	Varies	On	Indicates detection of a fuser unit that is not optimal.	Prompts the user to use an optimal fuser unit.
☐ Incompatible Fuser Unit	Varies	On	Indicates detection of a fuser unit that is not optimal.	Prompts the user to use an optimal fuser unit.
☐ Non Genuine Fuser Unit	Varies	On	Indicates detection of a fuser unit that is not optimal.	Prompts the user to use an optimal fuser unit.

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure
☐ Fuser Mount Signal Warning	Varies	On	Indicates detection of an abnormal fuser mount signal. This warning is cleared when a normal signal is detected at a signal check by opening and closing the cover. * There is no problem in continuously using the printer with this message; however, if the message remains after a reset, ask the user to call the customer service center.	–
☐ Change Fuser Unit	Varies	On	Indicates that the fuser has reached the end of its life (warning). This status message is displayed when the cover is opened & closed or the power is restored after a fuser life error occurs.	Replace with a new fuser unit.
☐ Non OEM Belt Unit Detected	Varies	On	Indicates detection of a belt unit that is not optimal.	Prompts the user to use an optimal belt unit.
☐ Incompatible Belt Unit	Varies	On	Indicates detection of a belt unit that is not optimal.	Prompts the user to use an optimal belt unit.
☐ Non Genuine Belt Unit	Varies	On	Indicates detection of a belt unit that is not optimal.	Prompts the user to use an optimal belt unit.
☐ Change Belt Unit	Varies	On	Indicates that the transfer belt has reached the end of its life (warning). This status message is displayed when the cover is opened & closed or the power is restored after a transfer belt life error occurs.	Replace with a new belt unit.
☐ Change Waste Toner Box	Varies	On	When the cover is opened and closed after the waste toner full status notification, indicates that there is no free space in the waste toner box. This is just a warning, and printing does not stop.	Replace with a new waster toner box.

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure

☐
 	
%COLOR% Toner Empty
	Varies	On	Indicates that toner has run out.
			This status message (warning) is displayed when the cover is opened & closed or the power is restored after a toner empty error occurs.
			%COLOR%
			  Yellow
			  Magenta
			  Cyan
			  Black
			  White
			  Clear
				Replace with a new toner cartridge.

☐
 	
%COLOR% Toner Empty
	Varies	On	Indicates that toner has run out.
			This message is displayed when no print data exists with no toner.
			
			When any of CMY toner empty error occurs, incoming monochrome data or monochrome & spot color data is printed. If incoming data is color data, Empty Error of Priority 334 occurs, and the data cannot be printed.
			
			When white or clear toner empty error occurs, incoming monochrome data or color data is printed.
			
			If incoming data is spot color data, Empty Error of Priority 334 occurs, and the data cannot be printed.
			
			In fact, a K toner empty error does not occur. When K toner has run out, Empty Error of Priority 334 occurs even when there is no print data.
			
			%COLOR%
			  Yellow
			  Magenta
			  Cyan
			  White
			  Clear
				Replace with a new toner cartridge.

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure

☐
 	
%COLOR% Toner Not Installed
	Varies	On	Indicates that a toner cartridge is not installed.
			%COLOR%
			   Yellow
			   Magenta
			   Cyan
			   Black
			   White
			   Clear
				Install a toner cartridge. Remember that the toner cartridge supplied with the product cannot be used if the toner cartridge of other supply is used.

☐
 	
Non OEM %COLOR% Image Drum Detected
	Varies	On	Indicates detection of an image drum not suitable for this printer.
			%COLOR%
			   Yellow
			   Magenta
			   Cyan
			   Black
			   White
			   Clear
				Prompts the user to use an optimum image drum.

☐
 	
Incompatible %COLOR% Image Drum
	Varies	On	Indicates detection of an image drum not suitable for this printer.
			%COLOR%
			   Yellow
			   Magenta
			   Cyan
			   Black
			   White
			   Clear
				Prompts the user to use an optimum image drum.

☐
 	
Non Genuine %COLOR% Image Drum
	Varies	On	Indicates detection of an image drum not suitable for this printer.
			%COLOR%
			   Yellow
			   Magenta
			   Cyan
			   Black
			   White
			   Clear
				Prompts the user to use an optimum image drum.

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure

☐
 	
%COLOR% Image Drum Life
	Varies	On	Indicates that the image drum has reached the end of its life.
			This status message (warning) is displayed when the printer is recovered from an Image Drum Life end error temporarily by opening & closing the cover.
			%COLOR%
			   Yellow
			   Magenta
			   Cyan
			   Black
			   White
			   Clear
				Replace with an image drum of indicated color.

☐
 	
%COLOR% Image Drum Life, %PAGES% Pages Left
	Varies	On	The image drum already reached the end of its life and is in a life-prolonging period temporarily.
			Although another %PAGES% pages can be printed, but it is requested to replace the image drum immediately.
			%COLOR%
			   Yellow
			   Magenta
			   Cyan
			   Black
			   White
			   Clear
			
			%PAGES%
			   1 to 500
			(The upper limit is subject to change without notice in the future.)
				Replace with an image drum of indicated color.

☐
 	
%COLOR% Image Drum Life, Print Quality Not Guaranteed
	Varies	On	The image drum already reached the end of its life and is in the second life-prolonging period temporarily.
			Print quality is not guaranteed.
			%COLOR%
			   Yellow
			   Magenta
			   Cyan
			   Black
			   White
			   Clear
				Replace with an image drum of indicated color.

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure
☐ Belt Reflex Error	Varies	On	Belt Reflex Check Error. In the Shipping Mode, the PU firmware does not notify the CU firmware of this status; therefore, this error does not occur in a user environment.	
☐ Job Offset Home Error	Varies	On	Job offset home position sensor error. The job offset function becomes disabled, however, printing can continue.	
☐ %TRAY% Empty	Varies	On	Indicates that the tray runs out of paper. It is handled as a warning until the tray that ran out paper is specified for printing. %TRAY% 　Tray 1 　Tray 2 　Tray 3 　Tray 4 　Tray 5	Load paper in the indicated tray.
☐ %TRAY% Lift Up Error	Varies	On	Indicates that a lift-up error has occurred with the tray. As a result, the status of that tray is regarded as "Paper Empty," and printing from that tray becomes unavailable. 　Tray 1 　Tray 2 　Tray 3 　Tray 4 　Tray 5	Remove and reset the cassette of the indicated tray.
☐ %TRAY% Overfilled	Varies	On	Indicates that there is too much paper in the tray. This is just a warning, and printing does not stop. 　Tray 1 　Tray 2 　Tray 3 　Tray 4 　Tray 5	Remove sheets of paper to the mark on the paper guide.

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure
☐ File System is Full	Varies	On	Indicates that the file system built on the storage device (HDD/FLASH) runs out of free space. Because this is a temporary warning, it remains displayed until the end of the job and then disappears.	Explain the user that no remedial measure is required.
☐ File System is Write Protected	Varies	On	Indicates that an attempt to write data into a read-only file of the file system built on the storage device (HDD/ FLASH) was made. Because this is a temporary warning, it remains displayed until the end of the job and then disappears.	Explain the user that no remedial measure is required.
☐ File Erasing	Varies	On	Indicates that a confidential file is being erased.	–
☐ Deleting Encrypted Job	Varies	On	Indicates that deletion of an encrypted authentication print job and storage of a deletion request for job saving file are being processed.	–
☐ Erased Data Full	Varies	On	Indicates that a confidential file waiting to be erased is full.	–
☐ *** Flash Error	Varies	Varies	PU flush error (An error occurred during rewrite of the PU firmware or writing of LED head information etc. into the PU flush has failed.) %PUFLASH% 　PU 　Tray2 　Tray3 　Tray4 　Tray5 　Duplex 　Sub CPU1 　Sub CPU2 　IM	–
☐ Accounting Log Buffer is near full	Varies	Varies	Indicates that the job account log buffer is almost full.	–

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure
☐ Accounting Log Buffer Full(Delete old logs)	Varies	Varies	Notifies users that the job account log buffer is full (related to JobAccount). This status is displayed under the conditions when the job account log flash memory in the printer runs out of space and also "Operation at Log Full" of the job accounting server software is set to "Delete old logs." If the printer is continuously operated under these conditions, the old job account logs in the buffer will be deleted until the near full status is cleared. To preserve the old job account logs in the buffer, the job account logs in the printer must be got from the job accounting server software. The other way is changing the setting of "Operation at Log Full" to "Do not acquire the log" in the job accounting server software.	–
☐ USB Hub Unsupported Please detach it	Varies	Varies	Indicates that a USB Hub not supported by this printer is connected. This message remains displayed until the USB Hub not supported by this printer is removed.	Remove the USB Hub.
☐ Unsupported USB Device Detected Please detach it	Varies	Varies	Indicates that a USB device not supported by this printer is connected. This message remains displayed until the USB device not supported by this printer is removed.	Remove the USB device.
☐ Collate Fail: Too Many Pages Press OK Button	Varies	Varies	Indicates that the MOPY data caused a memory overflow. This message remains displayed until the OK button is pressed.	Reduce the number of pages that are going to be printed at a time.

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure
☐ Multi-purpose tray has not been configured properly, verify multi-purpose tray settings. Multiple copies printed. Press OK Button	Varies	On	When Rotatesort Print is specified under the conditions that no optional tray is installed and also MPTray Usage setting is something other than "Normal Tray," Collate Copy is applied instead. This status remains displayed until the OK button is pressed.	–
☐ Hard disk is not installed. Multiple copies printed. Press OK Button	Varies	On	Although Rotatesort Print is specified, Collate Copy is applied instead when no HDD is installed. This status remains displayed until the OK button is pressed.	–
☐ Color Restricted. Mono Printed Press OK Button	Varies	On	Notifies the user that the job has been printed in monochrome because color printing is not allowed. (Related to JobAccount) This message remains displayed until the OK button is pressed.	–
☐ Color Restricted. Job Rejected Press OK Button	Varies	On	Notifies the user that the job has been cancelled because color printing is not allowed. (Related to JobAccount) This message remains displayed until the OK button is pressed.	–

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure
☐ Print Restricted. Job Rejected Press OK Button	Varies	On	Notifies the user that the job has been cancelled because printing is not allowed. (Related to JobAccount) This message remains displayed until the OK 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 OK Button	Varies	On	Notifies the user that the job has been cancelled because the log buffer is full. (Related to JobAccount) This message remains displayed until the OK button is pressed.	Execute [Acquire immediately] on the server PC with the print job accounting.

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure
☐ E-mail receiving has been cancelled Press OK Button	Varies	On	Indicates that E-mail receiving has been canceled. It has the following possibilities. - The format of E-mail that has received is illegal or not supported. - The attached file is illegal or not supported. - The attached file that has received is too large, for example, file size exceeds 8MB. - network connection has disconnected.	Check the following possibilities. - The format of E-mail that has received is illegal or not supported. - The attached file is illegal or not supported. - The attached file that has received is too large, for example, file size exceeds 8MB. - network connection has disconnected.

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure
☐ File System Operation failed \<nnn> Press OK Button	Varies	On	Indicates that a file system error, other than any of the above-described file system related status errors, has occurred. Processing that does not use the file system is operable. %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 LABL =17... INVALID PARAMETER =18... NO CONTIG SPACE =19... CANTCHANGE 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 OK Button	Varies	Varies	Indicates that an integrity check in authentication printing found data corruption of the job, so the job has been deleted.	Press the OK button.
☐ Invalid Data Press OK Button	Varies	Varies	Invalid data was received. This message urges users to press the OK button and clear the warning message. This is displayed when unsupported PDL command is received or a spool command is received without HDD.	Press the OK button.

LCD Status Message (☐ represents a blank line.)	Online indicator	Inspection lamp	Details	Remedial measure
☐ Accounting Log Writing Error Press OK Button	Varies	Varies	Indicates that writing of a job account log has failed due to a disk access error during writing of the log (related to logging). This status remains displayed until the OK button is pressed.	Press the OK button.
☐ IPv4 Address is conflicted Change IPv4 Address	Varies	Varies	Indicates that the IPv4 address is the identical with that of another device.	Change the IPv4 address.

4.5.2 Preparation for troubleshooting

> *Note!* When replacing the PU/CU PCB, 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 5.4.1 Notes on PU/CU board replacement.)

4.5.2 (1) LCD display error

> **Memo** For connector names, see beside the connectors on each PCB where connector names are silkscreen printed.

(1-1) LCD does not display anything.

Check item	Check work	Actions to be taken at NG
(1-1-1) Check the fuse.		
Printer control PCB (PU/CU PCB) fuse	Check if F22 or F23 has blown out.	Replace the PU/CU PCB.
(1-1-2) Check the system connection		
Connection between the low voltage power supply unit and the PU/CU PCB	Check if the cable from the low voltage power supply to the POWER connector of the PU/CU PCB is normally connected. Check if the connector is connected only in the half-way, and check if the connector is inserted in slanted angle.	Re-connect the cable normally.
Cable assembly connecting the low voltage power supply unit and the PU/CU PCB	Check if the cable is half-open circuit. Check if the sheath of the cable has peeled off. Check if the cable assembly is defective such as internal wires are disconnected.	Replace with a normal cable.
Connection between the PU/CU PCB and the control panel PCB	Check if the cable is normally connected to the FPD connector of the PU/CU PCB. Check if the cable is normally connected to the MAIN connector of the control panel PCB. Check if the connector is connected in the halfway only, and check if the connector is inserted in a slanted angle.	Re-connect the cable normally.
FFC connecting the PU/CU PCB and the control panel PCB	Check if the cable has open circuit with VOM. Visually check the sheath of the cable for peeling.	Replace with a normal cable.
Connection between the control panel PCB and the LCD	Check if the FCP is normally connected to the LCD connector of the control panel PCB.	Replace the control panel unit.

Check item	Check work	Actions to be taken at NG
(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 PCB	Check for 5V power supply at pin-8, -10 and -21 of the POWER connector of the PU/CU PCB.	Replace the low voltage power supply unit.
5V power that is supplied to the PU/CU PCB	Check for 5V power supply at pin-19 of the POWER connector of the PU/CU PCB.	Replace the low voltage power supply unit.
Power that is supplied to the control panel PCB	Check for 3.3V power supply at pin-21 of the MAIN connector of the control panel PCB. Also check for 5V at pin-25 of the MAIN connector.	Replace the PU/CU PCB.
(1-1-4) Check that power supply circuit has no short-circuit.		
5V power and 24V power that are supplied to the PU/CU PCB.	Check the POWER connector of the PU/CU PCB for a short-circuit. The following voltage must appear respectively. 24V: pin-13, -14, and -16 5V: pin-8, -10 and -21 5VS: pin-19 0V: pin-9, -11, -12, -15, -18, -20, and -22 If any voltage does not appear and short-circuit is detected, locate the source of the short-circuit by disconnecting the cables from the PU/CU PCB 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		
Normal running of the CU firmware	Check LED 1, 2 and 3 beside the CPU. LED 1: On LED 2 and 3: Off	Replace the PU/CU PCB.

(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 Check" or "Initializing."	Replace the PU/CU PCB. If the problem remains unsolved after replacement of DIMM or removal of HDD, replace the PU/CU PCB.

4.5.2.(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 PCB	Check the power supply voltages at the POWER connector of the PU/CU PCB. 24V: pin-13, -14, and -16 5V: pin-8, -10 and -21 5VS: pin-19 0V: pin-9, -11, -12, -15, -18, -20, and -22	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 in turn: low voltage power supply unit, PU/CU PCB, control panel PCB, power SW board, and the cable between respective PCBs When blinking, replace one of the following in turn: low voltage power supply unit, PU/CU PCB, and the cable between the low voltage power supply unit and the PU/CU PCB.

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 PCB.
(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. To use a new part for a try, be sure to use New Parts Keep Mode of the System Maintenance menu.

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. To use a new part for a try, be sure to use New Parts Keep Mode of the System Maintenance menu.
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 top of the fuser unit.	Replace the fuser unit.
(2-4-2) Check the optional parts *Note!*		
HDD	Install the optional part (HDD) 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 option (HDD) and check if the trouble symptom changes or not.

4.5.2.(3) Jam

(3-1) Error code numbers and locations of paper jams

When paper jams in the printer, or when paper remains in the printer even after removal of jammed paper, a message notifying a paper jam appears on the LCD screen of the operation panel, and the inspection lamp blinks.

Press the **HELP** button for a remedy while the message "See help for details" is displayed, and follow the guidance to troubleshoot.

The following table lists the help messages. Check the displayed message and remove the jammed paper according to the procedure described in the reference.

Help Button

ATTENTION Lamp

Error code	Message on the display screen	Sensor name(s)
631	Check the paper fed to the printer Open Tray 1 Side Cover Please see Help for details.	Tray1 IN1
632	Check the paper fed to the printer Open Tray 2 Side Cover Please see Help for details.	Tray2 IN1
633	Check the paper fed to the printer Open Tray 3 Side Cover Please see Help for details.	Tray3 IN1
634	Check the paper fed to the printer Open Tray 4 Side Cover Please see Help for details.	Tray4 IN1

Error code	Message on the display screen	Sensor name(s)
635	Check the paper fed to the printer Open Tray 5 Side Cover Please see Help for details.	Tray5 IN1
637	Check the paper fed to the printer Open Right Side Cover Please see Help for details.	IN2
638	There is a paper inside the output unit Remove Paper Please see Help for details.	IN3
639	There is a paper inside the output unit Remove Paper Please see Help for details.	EXIT 1, EXIT 2
640	Paper remains in the vicinity of Duplex Unit Remove Paper Please see Help for details.	DUPLEX IN
641	Paper remains in the vicinity of Duplex Unit Remove Paper Please see Help for details.	DUPLEX Rear
642	Paper remains in the vicinity of Duplex Unit Remove Paper Please see Help for details.	DUPLEX Front
650	Check the lower side of Duplex Unit Remove Paper Please see Help for details.	DUPLEX Bottom
651	Check Face Down Stacker Remove Paper Please see Help for details.	—
370	A paper jam has occurred in the vicinity of the Duplex unit Remove Paper Please see Help for details.	DUPLEX Bottom, DUPLEX Rear
371	A paper jam has occurred in the vicinity of the Duplex unit Remove Paper Please see Help for details.	DUPLEX Rear, DUPLEX Front
373	A paper jam has occurred in the vicinity of the Duplex unit Remove Paper Please see Help for details.	DUPLEX Bottom

Error code	Message on the display screen	Sensor name(s)
375	Check the lower side of Duplex Unit Remove Paper Please see Help for details.	DUPLEX Front
380	Paper jam has occurred Open Right Side Cover Please see Help for details.	IN2, IN3
381	There is a paper jam in the output unit Remove Paper Please see Help for details.	IN3, EXIT1
382	There is a paper jam in the vicinity of the fuser unit. Remove Paper Please see Help for details.	EXIT1, EXIT2, Sag, Fuser motor lock signal
383	There is a paper jam in the vicinity of the fuser unit. Remove Paper Please see Help for details.	DUPLEX IN
384	Paper jam has occurred Open Left Side Cover Please see Help for details.	EXIT3
390	Paper jam has occurred Open Right Side Cover Please see Help for details.	IN2
391	Paper jam has occurred Open TRAY 1 Side Cover Please see Help for details.	IN1
392	Paper jam has occurred Open TRAY 2 Side Cover Please see Help for details.	Tray2 IN1
393	Paper jam has occurred Open TRAY] 3 Side Cover Please see Help for details.	Tray3 IN1
394	Paper jam has occurred Open TRAY 4 Side Cover Please see Help for details.	Tray4 IN1
395	Paper jam has occurred Open TRAY 5 Side Cover Please see Help for details.	Tray5 IN1

Outline drawing of jam locations

FD Stacker Full sensor
EXIT3 sensor
Sag sensor
EXIT2 sensor
EXIT1 sensor
FU Stacker Full sensor
DUPLEX IN sensor
DUPLEX Bottom sensor
DUPLEX Rear sensor

IN3 sensor
Paper thickness sensor
IN2 sensor
MPT Paper end sensor
MPT Last sheet detection sensor
Tray1 IN1 sensor
DUPLEX Front sensor
Tray1 paper end sensor
Tray1 paper near end sensor
Tray2 IN1 sensor
Tray2 paper end sensor
Tray2 paper near end sensor
Tray3 IN1 sensor
Tray3 paper end sensor
Tray3 paper near end sensor
Tray4 IN1 sensor
Tray4 paper end sensor
Tray4 paper near end sensor
Tray5 IN1 sensor
Tray5 paper end sensor
Tray5 paper near end sensor

■ **Error Code: 380, 390, 637**

(1) If paper is set in the MP tray, remove it and close the tray.
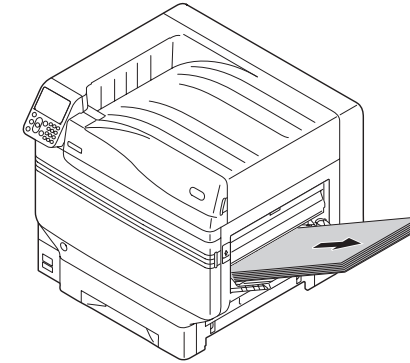

(2) Lift the Opener and open the right side cover.

Opener
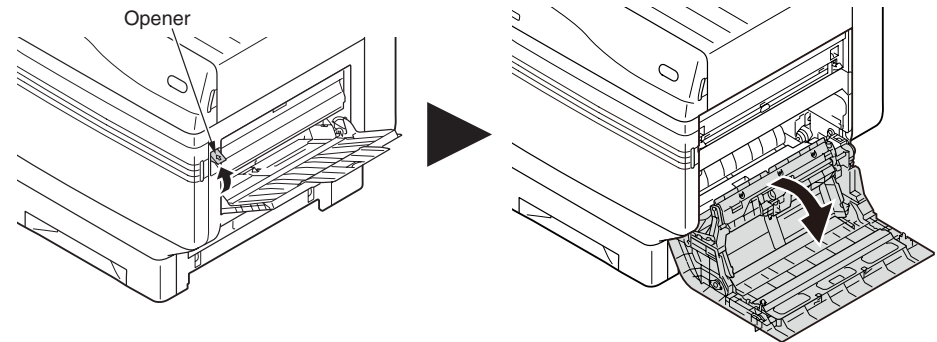
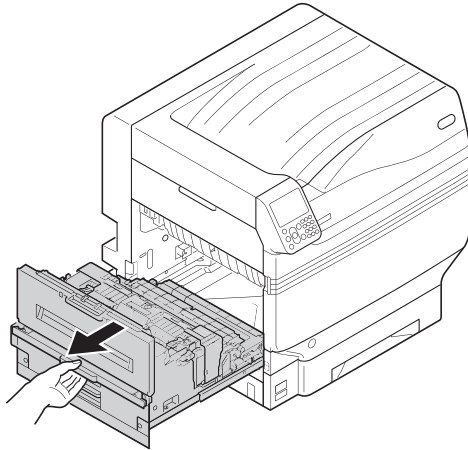(3) Slowly remove the remaining paper.
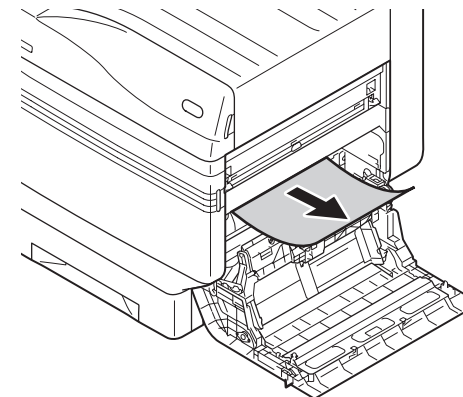
(4) Close the right side cover.
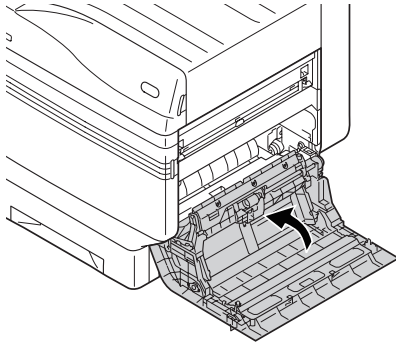
(5) Open the MP tray.
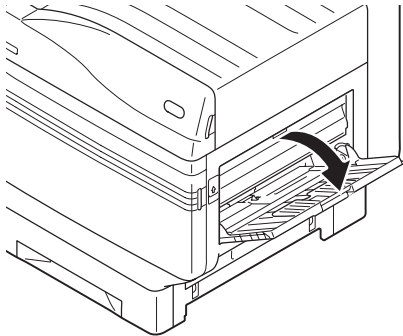
(6) Place the removed paper with the print side up and adjust the paper guide with the paper.
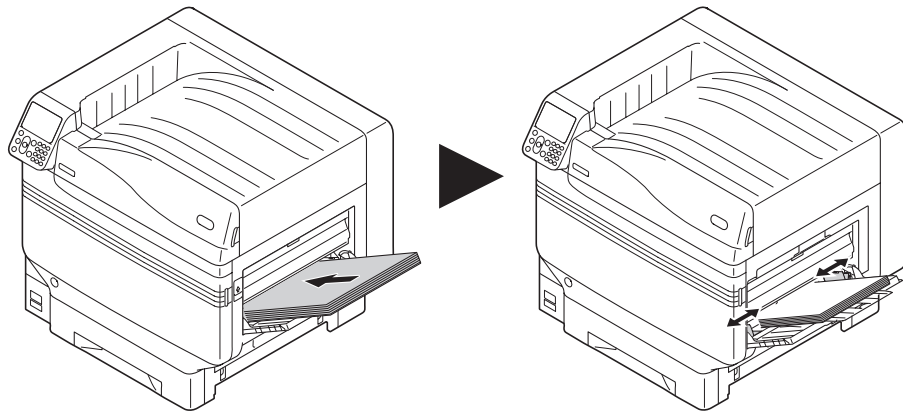

■ **Error Code: 381, 638, 639**

Note! As the temperature of the fuser unit is high, carefully do the following. Be sure to hold the handle to lift. When it is hot, wait until it cools down and start the work.

(1) Lift the opener of the output unit and pull out the output unit.
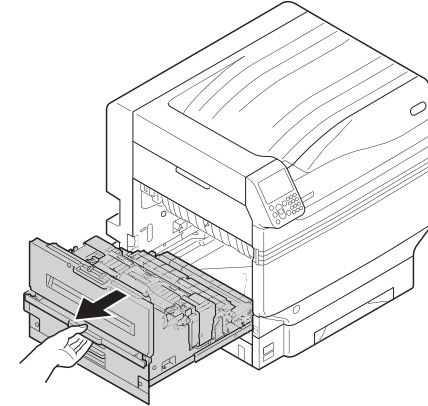
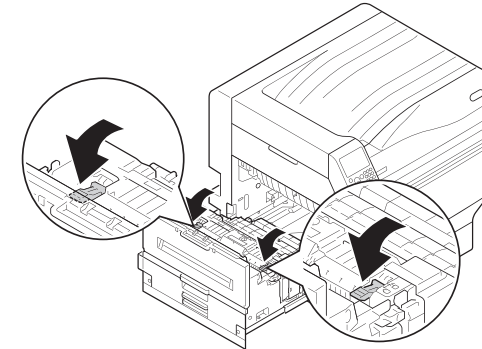(2) Check inside of the printer and slowly remove the remaining paper.
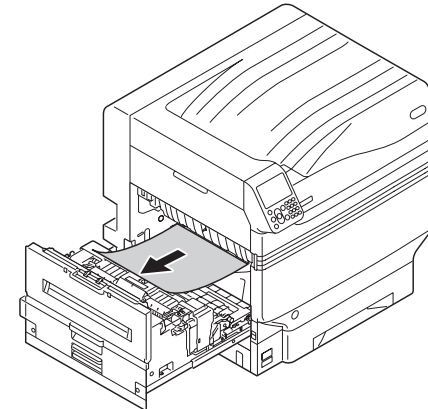
(3) If there is remaining paper in the fuser unit, pull up the fuser unit's jam release levers (blue).
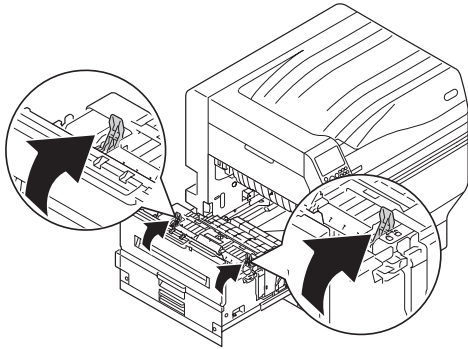
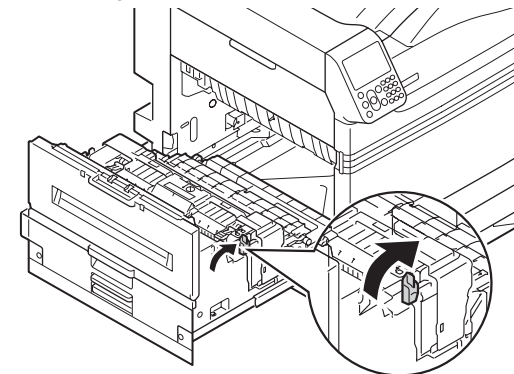

(4) Ensure to slowly pull the remaining paper in the opposite direction from the paper feeding direction.
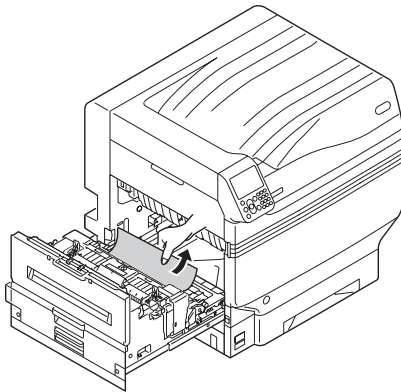
(5) Push down the fuser unit's jam release levers (blue).
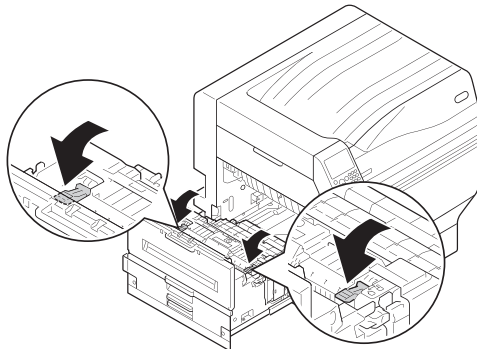
(6) If there is no remaining paper in the fuser unit, pull up the fuser unit's lock lever (blue).
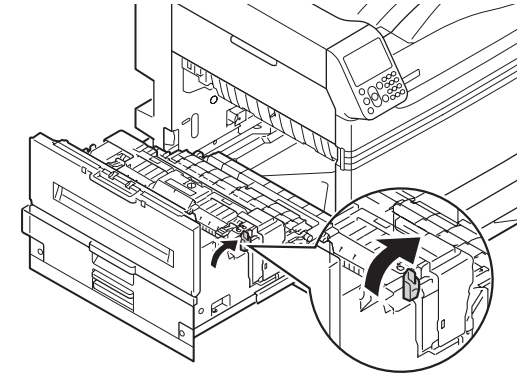
(7) Hold the fuser unit's handle with both hands and remove the unit onto a flat surface.
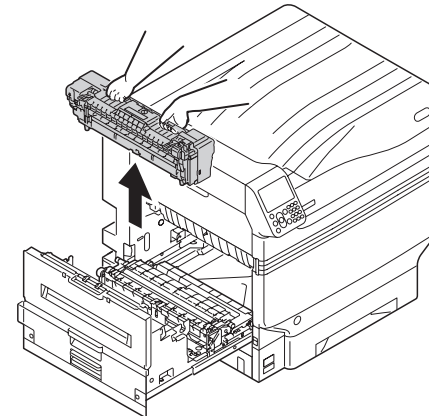
(8) Remove the remaining paper.

(9) If paper winds around the Decurl unit, remove the decurl unit and pull out the remainning paper.

Note! Pay attention to don't drop into the printer when remove the screws.

Decurl unit

(10) Set to the output unit and attach the screw.

    Note! Pay attention to don't drop into the printer when attach the screws.

(11) Hold the fuser unit's handle with both hands and set to the output unit.

(12) Push down the fuser unit's lock lever (blue).
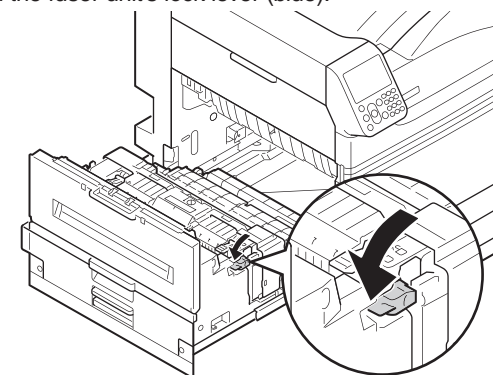
(13) If paper is set in the MP tray, remove it and close the tray.
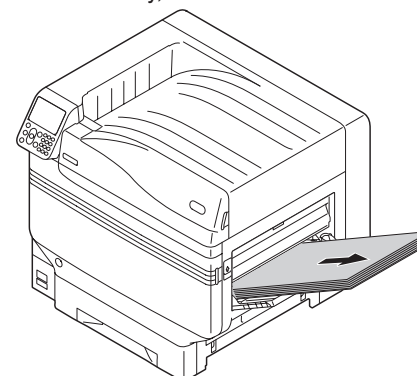
(14) Lift the Opener and open the right side cover.

Opener
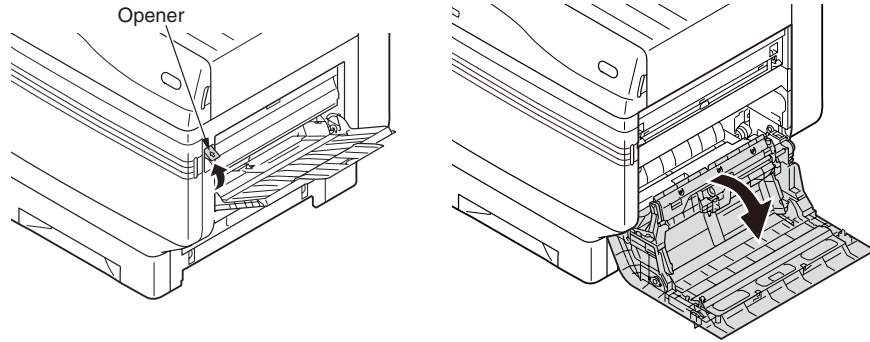
(15) Slowly remove the remaining paper.
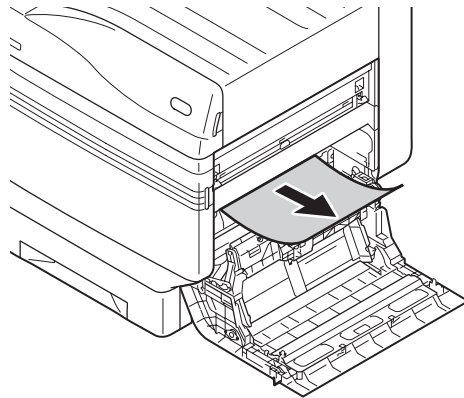
(16) Close the right side cover.
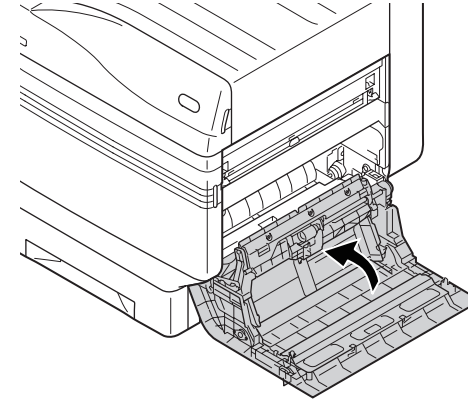
(17) Put the output unit back into the printer.
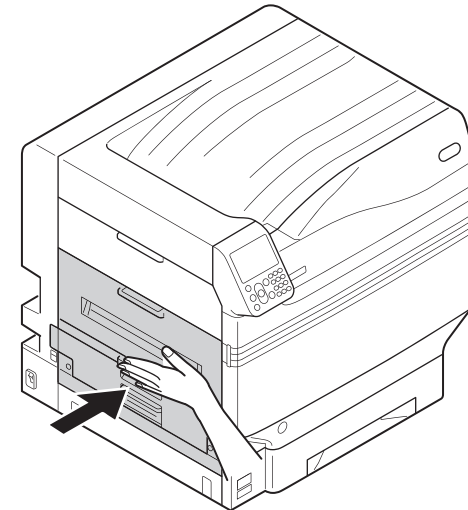
■ **Error Code: 382, 383, 389**

> *Note!* As the temperature of the fuser unit is high, carefully do the following. Be sure to hold the handle to lift. When it is hot, wait until it cools down and start the work.

(1) Pull out the output unit. If the jammed paper cannot be seen, put the output unit back into the printer, and go to "Removing paper from the duplex unit."

(2) If there is remaining paper in the fuser unit, pull up the fuser unit's jam release levers (blue).
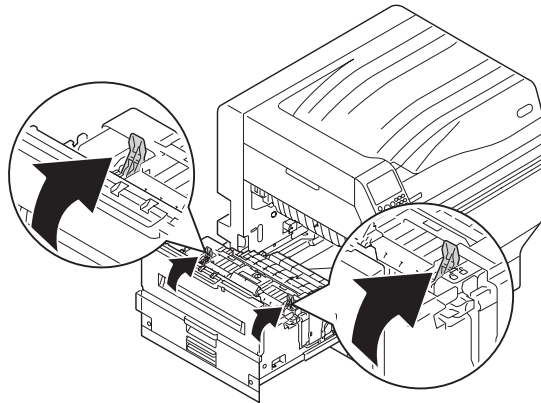
(3) Ensure to slowly pull the remaining paper in the opposite direction from the paper feeding direction.
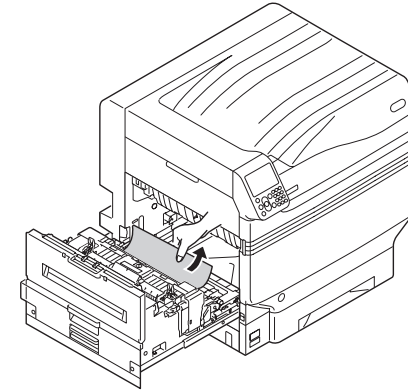
(4) Push down the fuser unit's jam release levers (blue).

(5) If there is no remaining paper in the fuser unit, pull up the fuser unit's lock lever (blue).

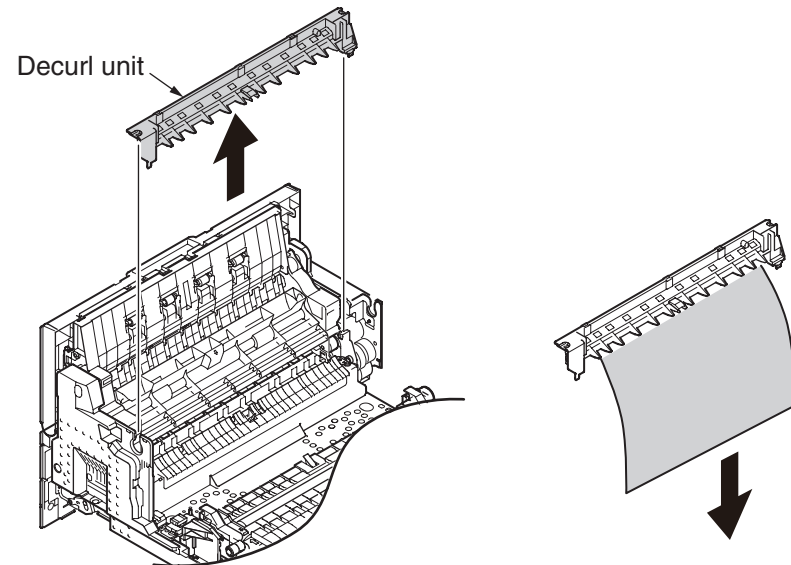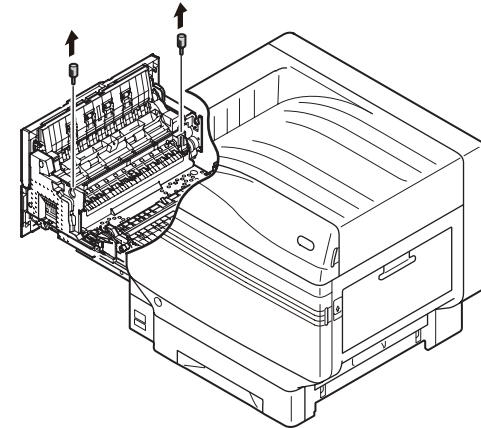(6) Hold the fuser unit's handle with both hands and remove the unit onto a flat surface.
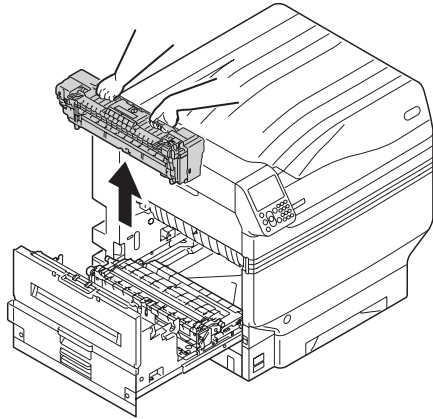
(7) Pull up the fuser unit's jam release levers (blue) and be sure to slowly pull out the remaining paper in the opposite direction from the paper feeding direction.
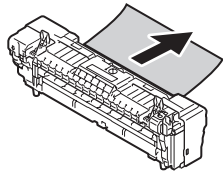
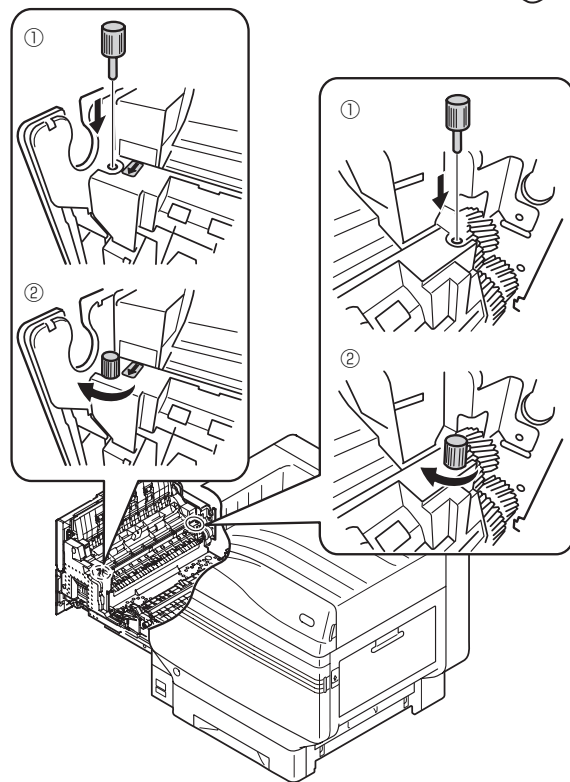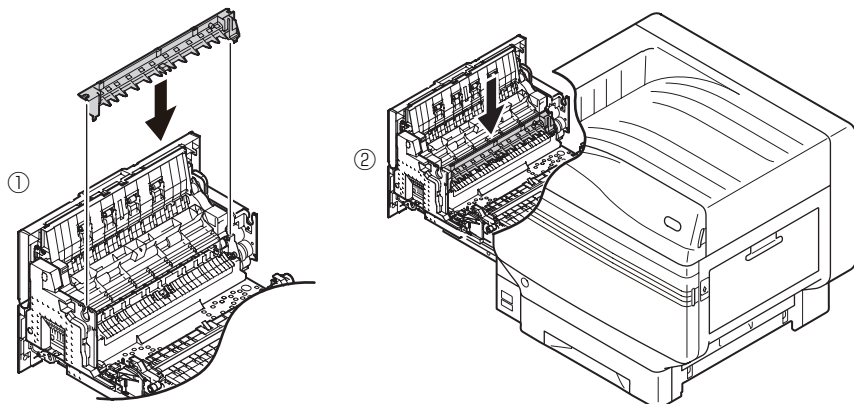(8) If paper winds around the Decurl unit, remove the decurl unit and pull out the remainning paper.

Note! Pay attention to don't drop into the printer when remove the screws.
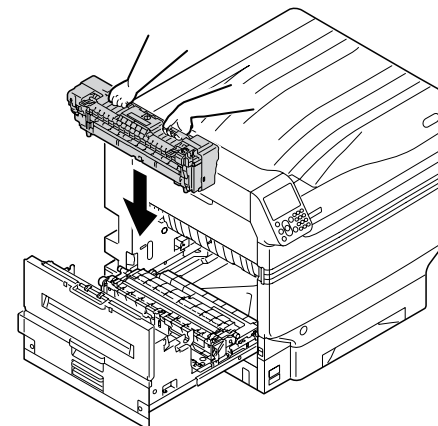

Decurl unit
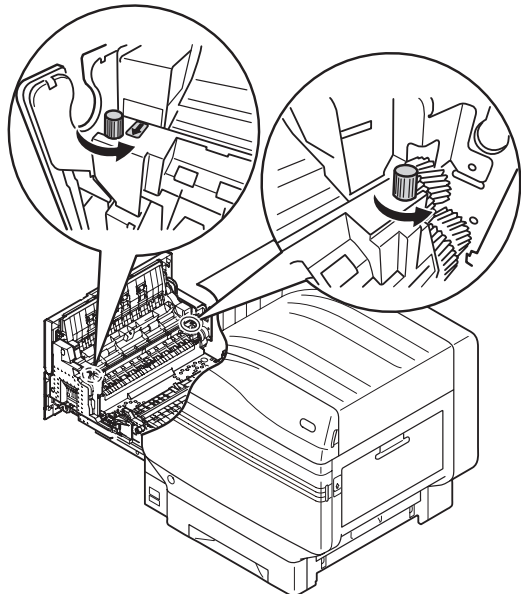
(9) Set to the output unit and attach the screw.

Note! Pay attention to don't drop into the printer when attach the screws.
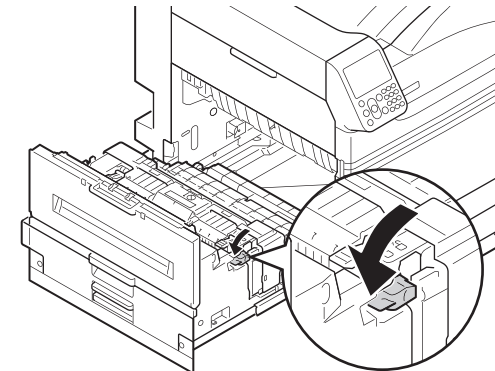

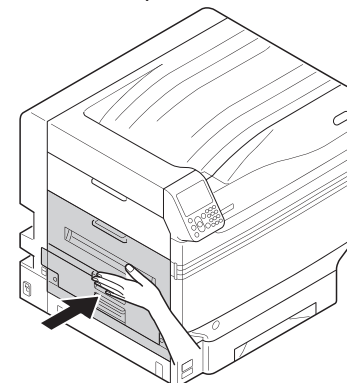(10) Hold the fuser unit's handle with both hands and set to the output unit.

Note ! Check the inside of the printer for remaining paper and then set the fuser unit.

(11) Push down the fuser unit's lock lever (blue).

(12) Put the output unit back into the printer.
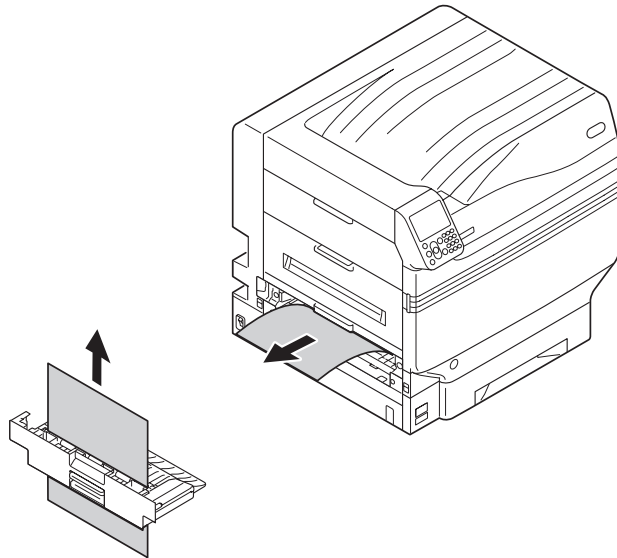
■ **Removing paper from the duplex unit**

(1) Pull out the duplex unit.
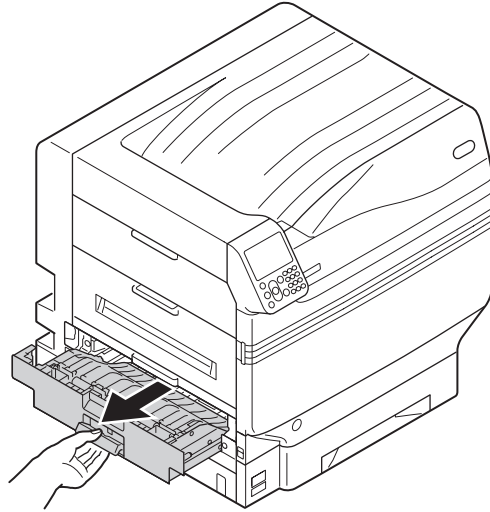
(2) Remove the remaining paper.

(3) Put the duplex unit back into the printer.

■ **Error Code: 391, 392, 393, 394, 395, 631, 632, 633, 634, 635**

Example: In the case of Tray 1

(1) Open the tray side cover indicated by the error code.
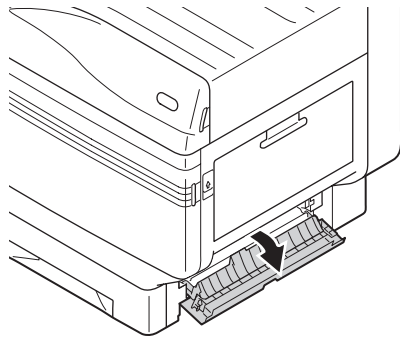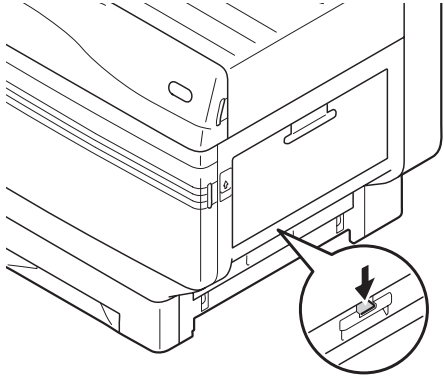
(2) Remove the remaining paper.
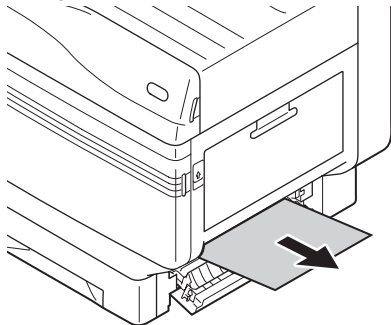
(3) Close Tray 1 side cover.
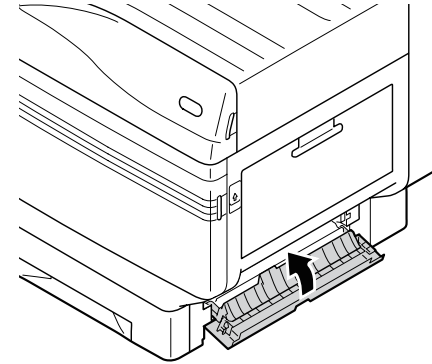
■ **Error Code: 370, 371, 373, 640, 641, 642**

(1) Pull out the duplex unit, and detach it by slightly lifting with both hands. If jammed paper cannot be seen in the printer or duplex unit, put the duplex unit back into the printer and go to step (4).
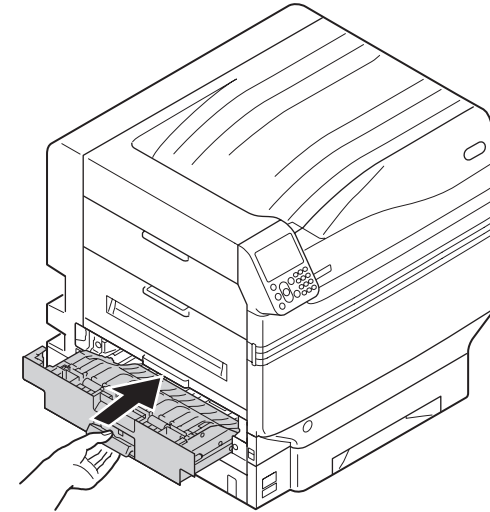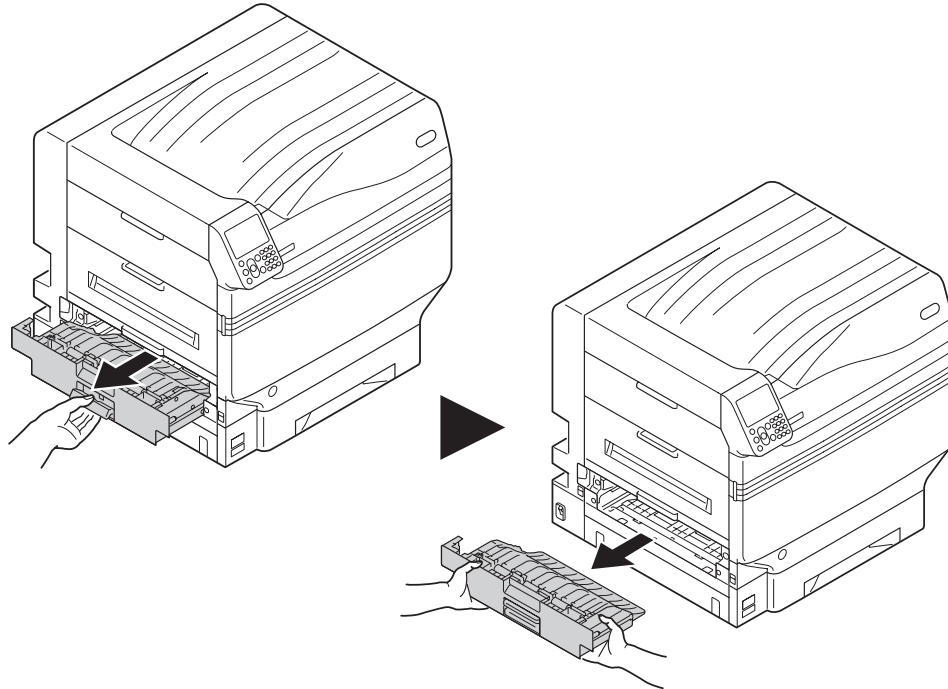

(2) Remove the remaining paper.
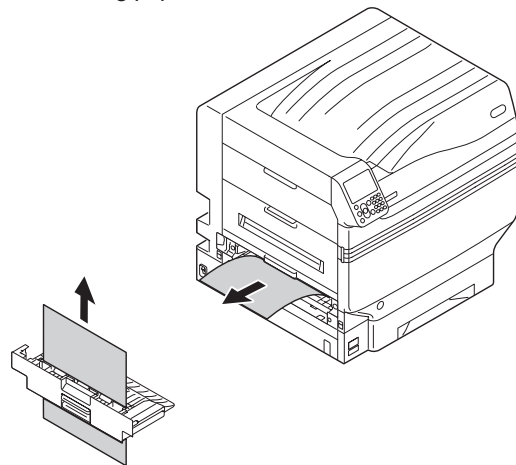
(3) Put the duplex unit back into the printer.
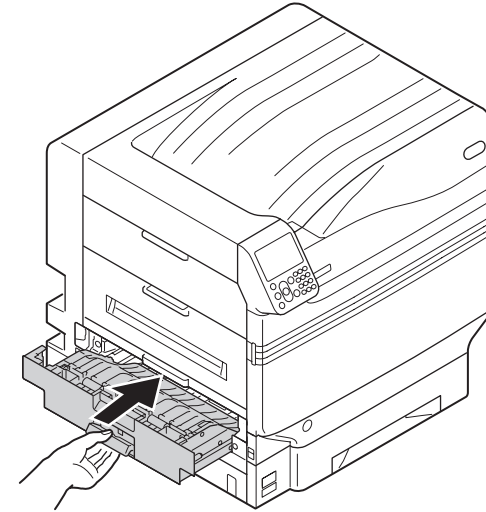
(4) Pull out the output unit.
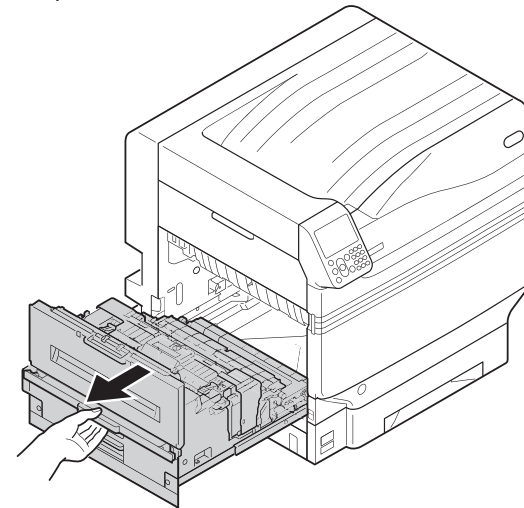
(5)   Check inside of the printer and slowly remove the remaining paper.
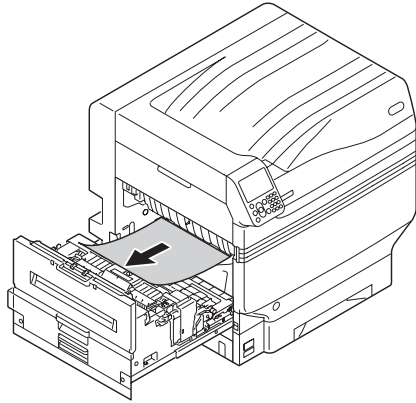
(6)   If the tip of the remaining paper is not visible, pull up the fuser unit's lock lever (blue).
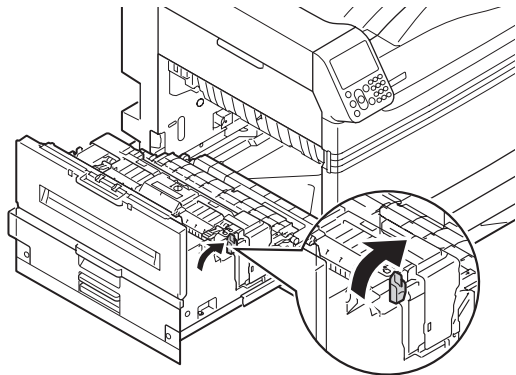
(7)   Hold the fuser unit's handle with both hands and remove the unit onto a flat surface.
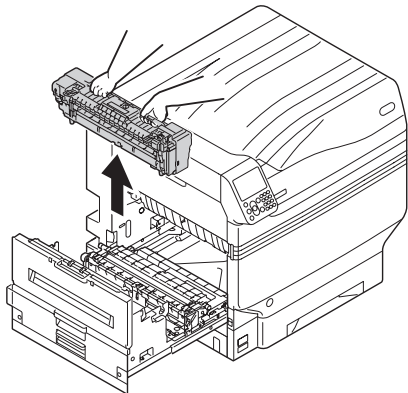
(8)   Hold the knob, pull up the transfer roller unit, lift the paper guide, and remove the remaining paper.
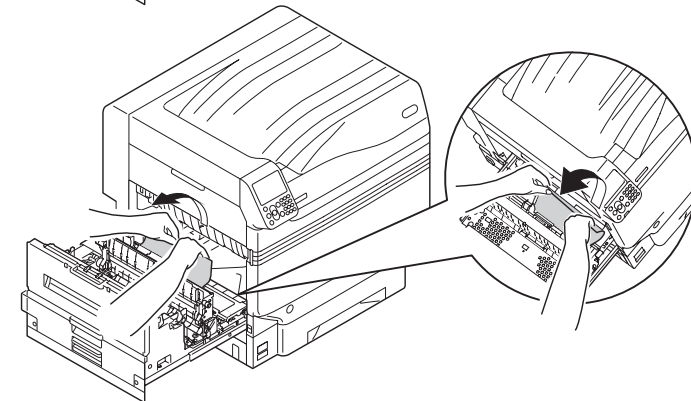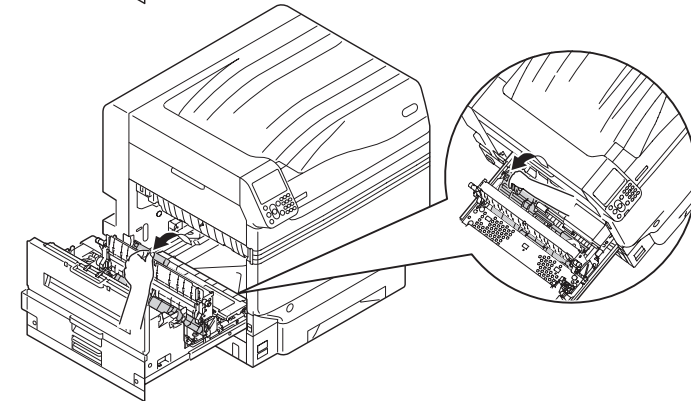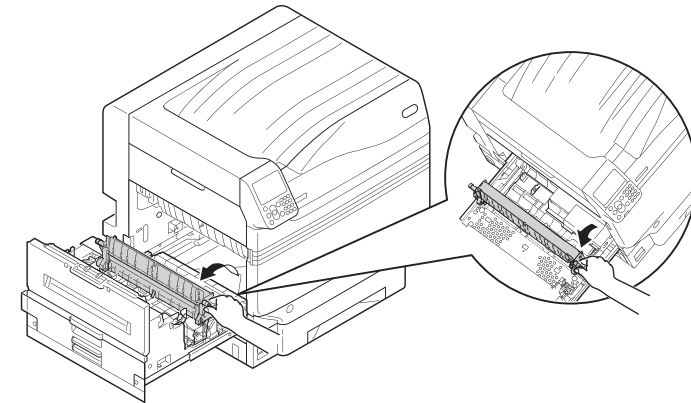
(9) Hold the knob and push down the transfer roller unit.
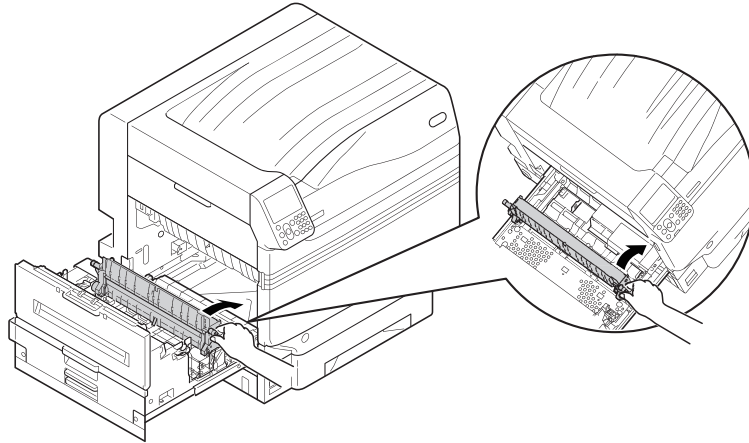
(10) If paper winds around the Decurl unit, remove the decurl unit and pull out the remainning paper.

Note! Pay attention to don't drop into the printer when remove the screws.

Decurl unit
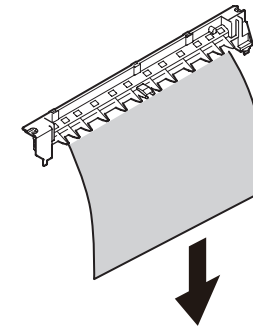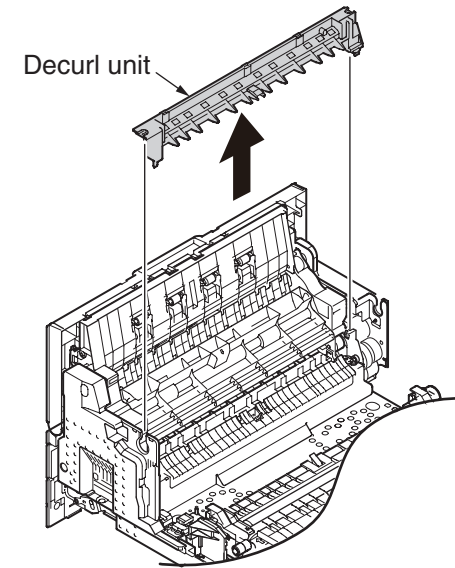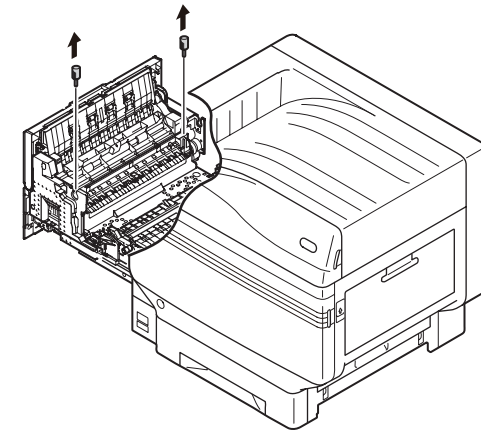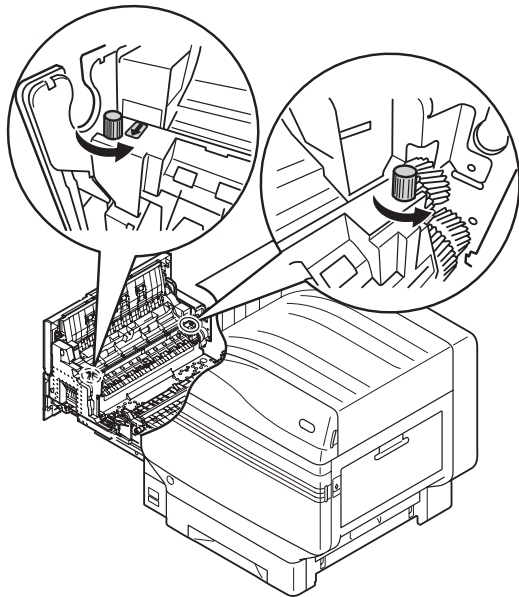
(11) Set to the output unit and attach the screw.

    Note! Pay attention to don't drop into the printer when attach the screws.
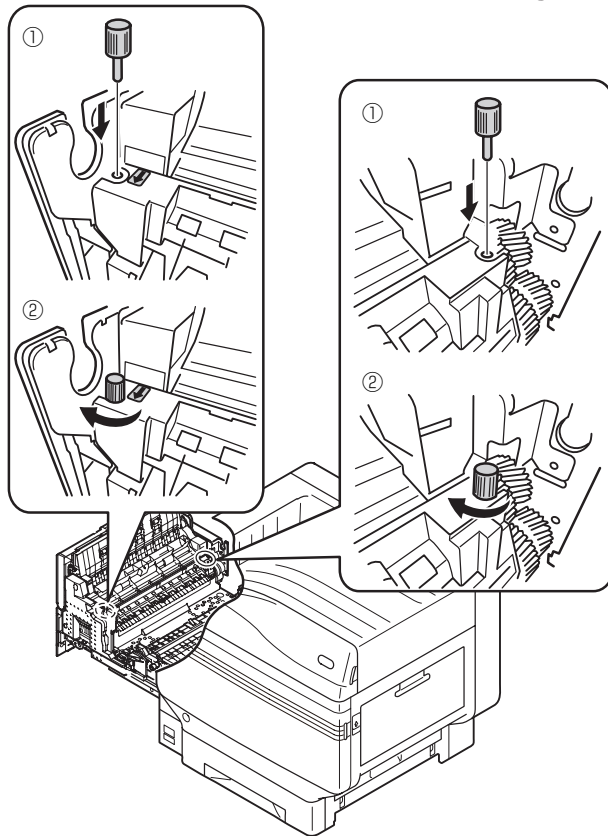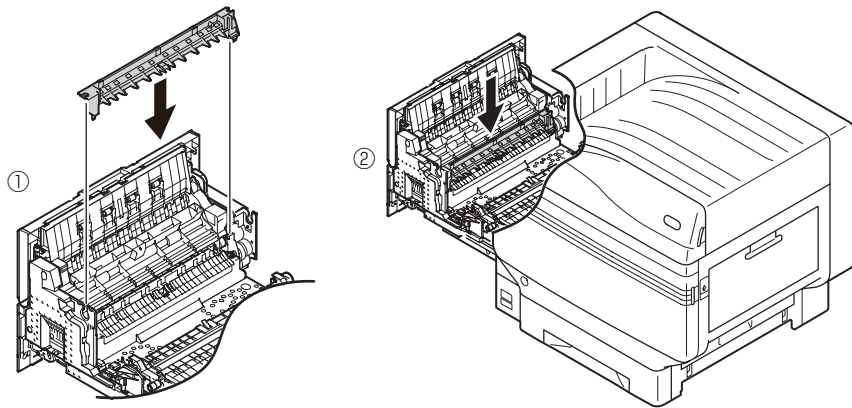
(12) Hold the fuser unit's handle with both hands and set to the output unit.
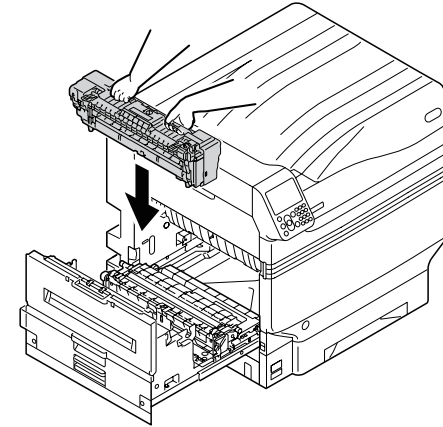
Note ! Check the inside of the printer for remaining paper and then set the fuser unit.

(13) Push down the fuser unit's lock lever (blue).
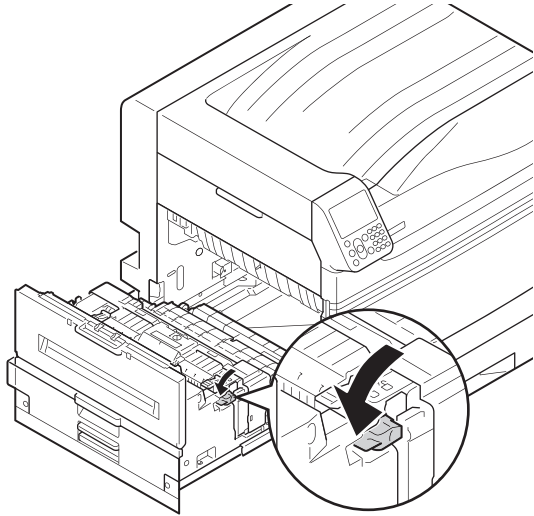
(14) Put the output unit back into the printer.
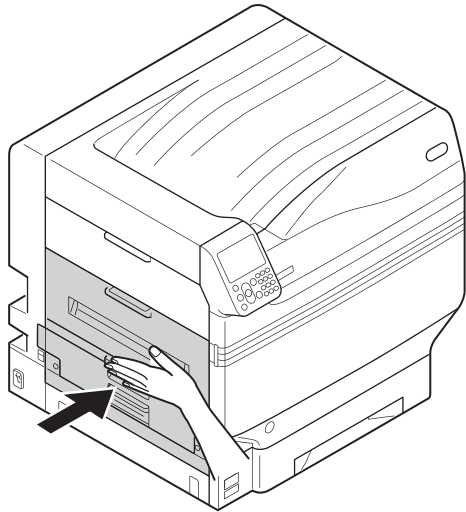
■ **Error Code: 375, 650**

(1)   Pull out the duplex unit and detach by slightly lifting it.
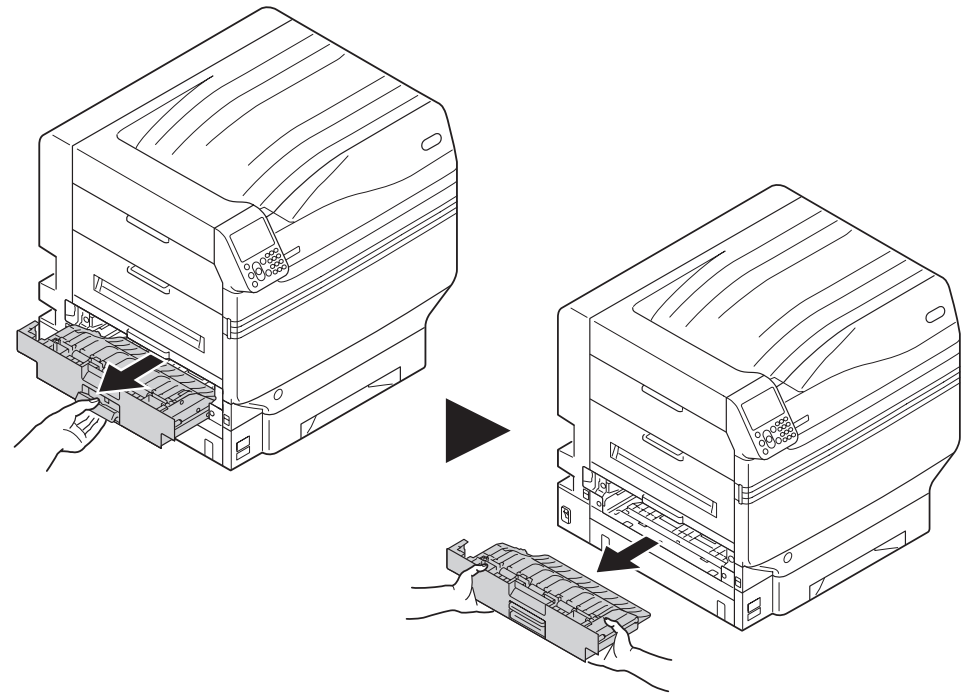
(2)   Remove the remaining paper from the printer.
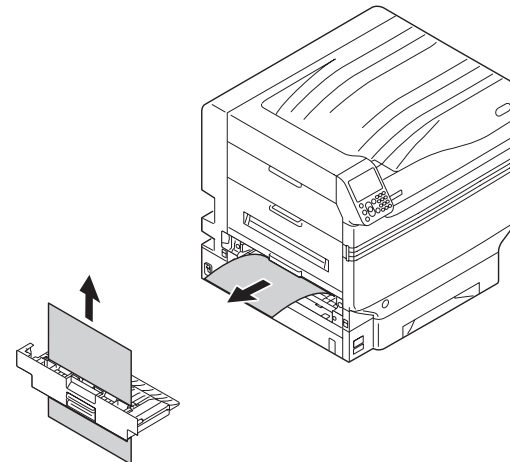
(3) Put the duplex unit back into the printer.
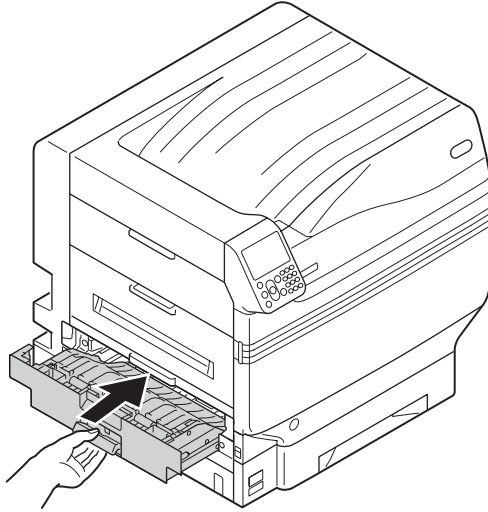
If no paper remains in visible locations in the printer, follow the procedure below.

(4) Pull out the output unit and remove the remaining paper.
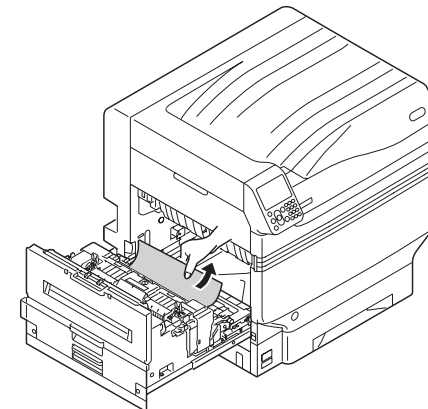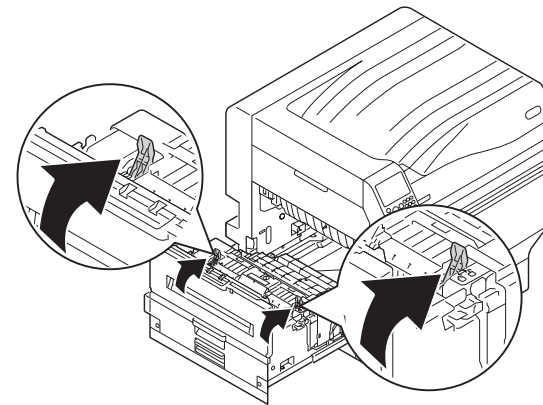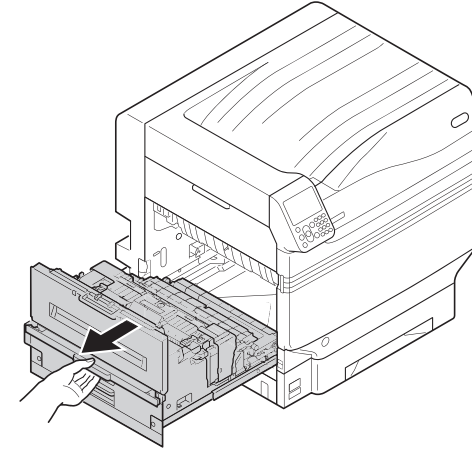
(5) If the tip of the remaining paper is not visible, pull up the fuser unit's lock lever (blue).
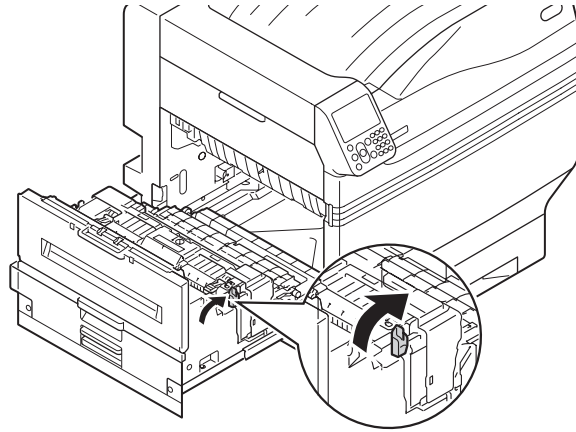
(6) Hold the fuser unit's handle with both hands and remove the unit onto a flat surface.
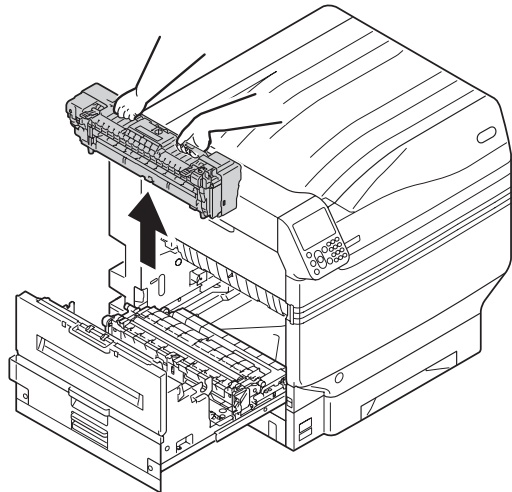
(7) Hold the knob, pull up the transfer roller unit, lift the paper guide, and remove the remaining paper.
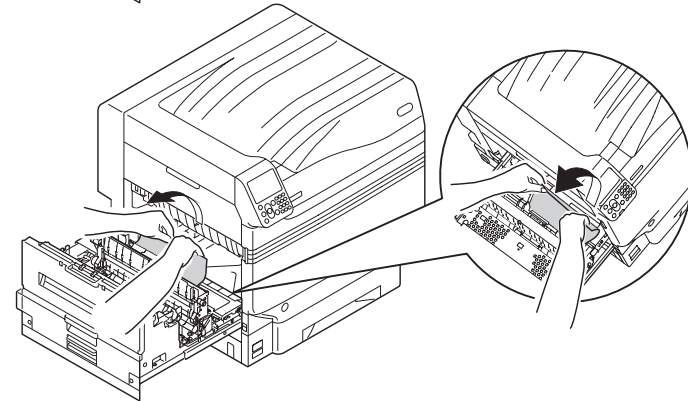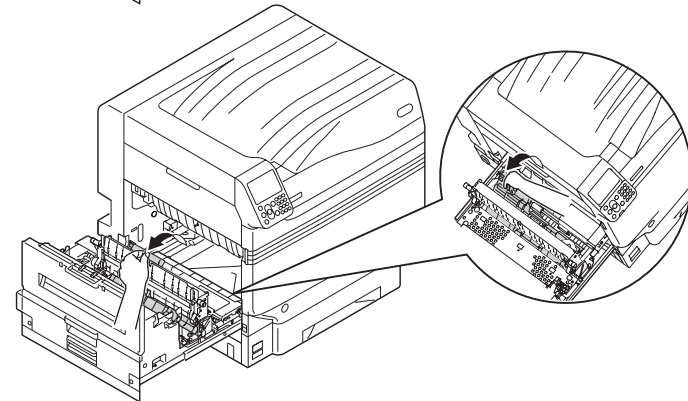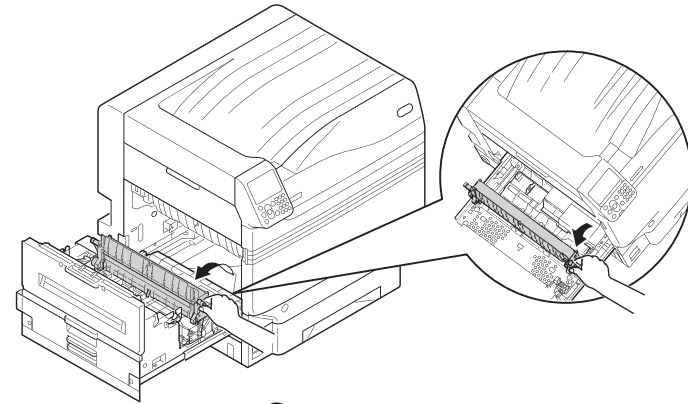
(8) Hold the knob and push down the transfer roller unit.
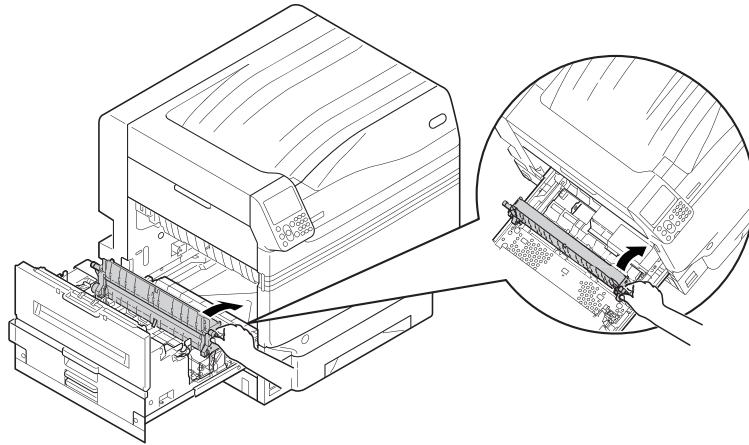
(9) If paper winds around the Decurl unit, remove the decurl unit and pull out the remainning paper.

   Note! Pay attention to don't drop into the printer when remove the screws.

Decurl unit
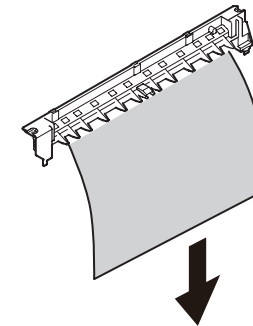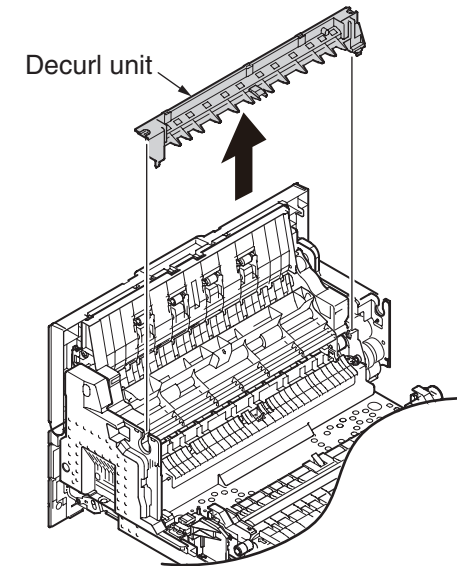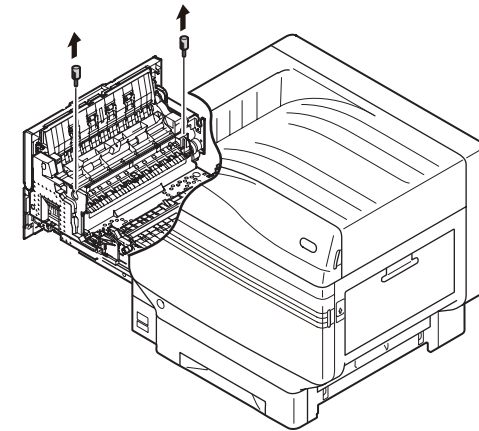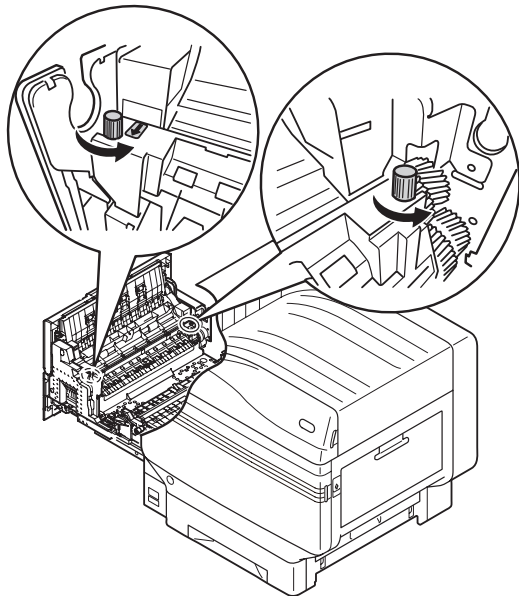
(10) Set to the output unit and attach the screw.

    Note! Pay attention to don't drop into the printer when attach the screws.
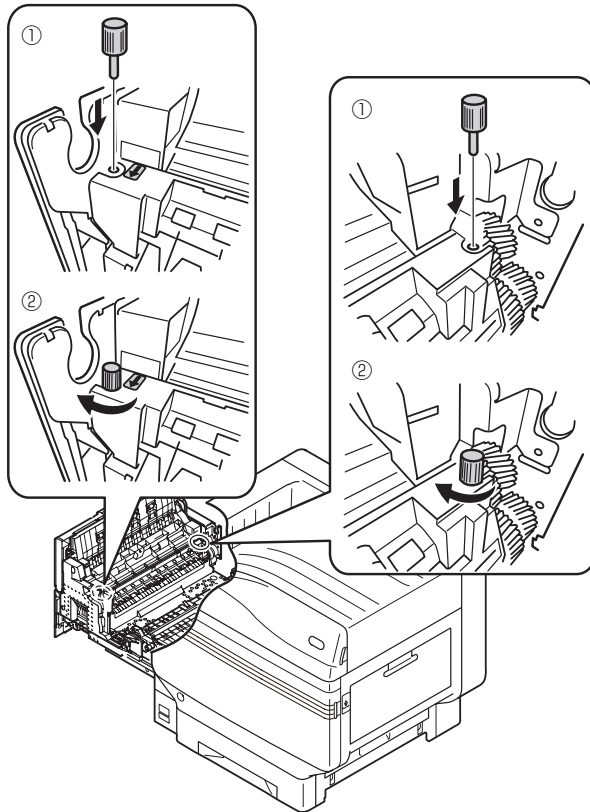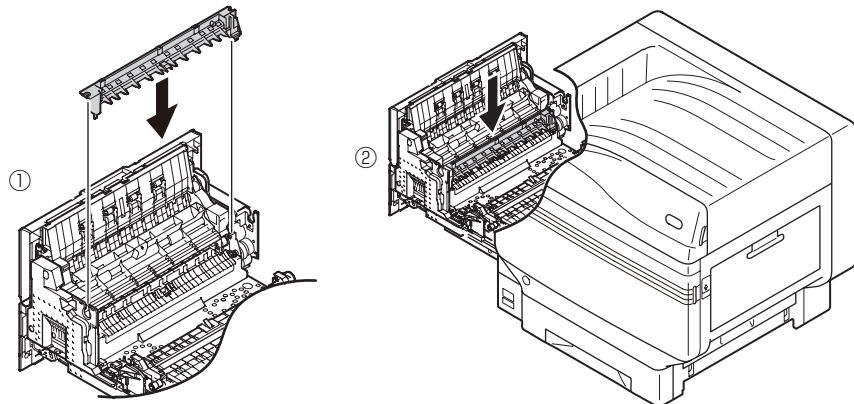
(11) Hold the fuser unit's handle with both hands and set to the output unit.
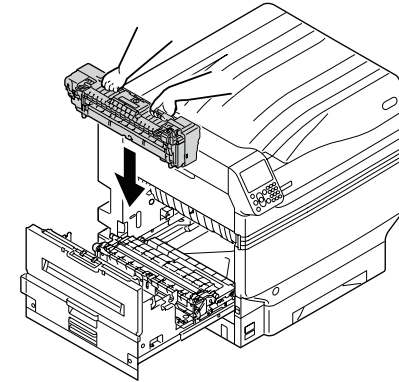
Note！Check the inside of the printer for remaining paper and then set the fuser unit.

(12) Push down the fuser unit's lock lever (blue).
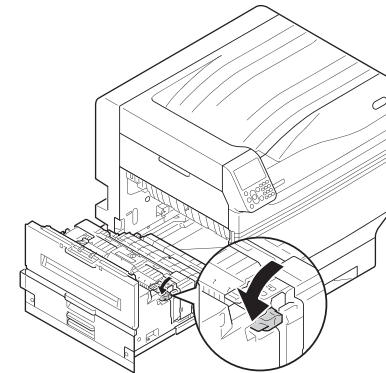
(13) Put the output unit back into the printer.
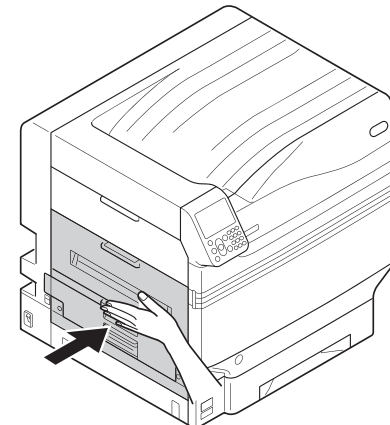
■ Error Code: 384, 651

(1) Open the left side cover.
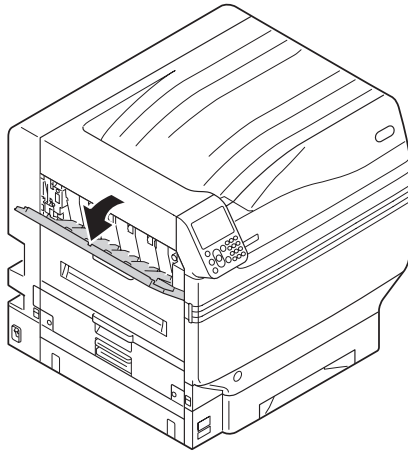
(2) Slowly remove the remaining paper.
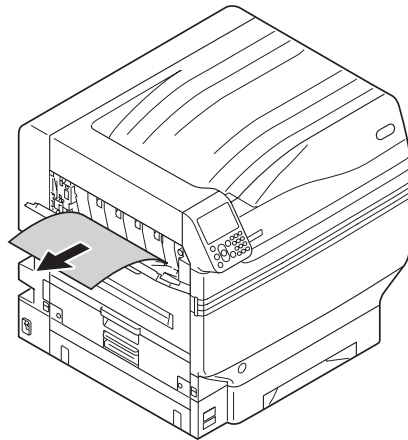
(3) Close the left side cover.

4.5.2.(4) Paper feed jam (Error 391: 1st Tray).

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

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 1st tray unit	Open the side cover of the 1st tray unit to check for jammed paper in the paper running path.	Remove the jammed paper.
(4-1-2) Check condition of the mechanical parts		
Check the sensor lever of the 1st tray paper entrance sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace with a normal 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 the PU/CU PCB, cassette sensor relay board, or connection cable.
Check the power voltages supplied to the cassette sensor relay board.	Check whether the signal level at pin-2 of TRYSNS of the PU/CU PCB changes depending on the presence of paper.	Replace the connection cable.

(4-2)　　Jam occurs immediately after the paper feed is started. (1st tray)

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 1st tray 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 lever of the 1st tray paper entrance sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace with a normal sensor lever.
Check the feed roller, pickup roller and the retard roller 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 of the tray.
(4-2-3)　Motor operation check		
Hopping motor	Confirm that the hopping motor works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the PU/CU PCB or hopping motor.
Hopping motor driver	Remove the HOPM connector of the PU/CU PCB and check the following at the connector side. 1 MΩ or more between pin-1/-2/-3/-4 and FG	Replace the PU/CU PCB.

Check item	Check work	Actions to be taken at NG
(4-2-4)　Check the system connection		
Hopping motor drive cable	Check the connection condition of the cable. Visually 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. Also check that cables are assembled without any abnormality.	Normalize the connection condition. Replace with a normal cable.
Hopping motor drive cable	Check that any cable is not pinched during assembling of the printer. Remove the HOPM connector of the PU/CU PCB and check the following at the cable side. Short circuit between pin-1/-2/-3/-4 and FG	Replace the cable and normalize the assembled condition.
Hopping motor	Remove the HOPM connector of the PU/CU PCB and check that a resistance of 10Ω or less can be measured between pin-1 and pin-2 and pin-3 and pin-4 respectively at the cable side.	Replace the hopping motor.
(4-2-5)　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 Tray 1 side cover so that the rollers can be seen to check.	Replace the PU/CU PCB, or either paper feed clutch or registration clutch.
(4-2-6)　Check the system connection		
Clutch cable for paper feed	Check the connection condition of the cable. Visually 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. Also check that cables are assembled without any abnormality.	Normalize the connection condition. Replace with a normal cable.
Cable for paper feed clutch	Check that any cable is not pinched during assembling of the printer. Remove the HOPCL connector of the PU/CU PCB and check the following at the cable side. Short circuit between pin-1 – FG Remove the HOPCL connector of the PU/CU PCB and check that approx. 240Ω can be measured between pin-1 and pin-2.	Replace the clutch and assembly it again correctly.

4.5.2.(5) Feed jam (Error 380)

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

Check item	Check work	Actions to be taken at NG
(5-1-1) Check condition of the paper running path		
Paper running path in the vicinity of the right side cover	Open the right side cover to check for jammed paper in the paper running path.	Remove the jammed paper.
(5-1-2) Check condition of the mechanical parts		
Check the sensor lever of the paper entrance sensor 2.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace with a normal 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 Maintenance Menu SWITCH SCAN function.	Replace the PU/CU PCB or connection cable.

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

Check item	Check work	Actions to be taken at NG
(5-2-1) Check condition of the paper running path		
Paper running path near the right side cover	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(5-2-2) Check condition of the mechanical parts		
Check the sensor lever of the paper entrance sensor 2 and the paper entrance sensor 3.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace with a normal sensor lever.
(5-2-3) Motor operation check		
Hopping motor	Confirm that the hopping motor works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the PU/CU PCB or hopping motor.
Hopping motor driver	Remove the HOPM connector of the PU/CU PCB and check the following at the connector side. 1 MΩ or more between pin-1/-2/-3/-4 and FG.	Replace the PU/CU PCB.

Check item	Check work	Actions to be taken at NG
(5-2-4)　Check the system connection		
Hopping motor drive cable	Check the connection condition of the cable. Visually 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. Also check that cables are assembled without any abnormality.	Normalize the connection condition. Replace with a normal cable.
Hopping motor drive cable	Check that any cable is not pinched during assembling of the printer. Remove the HOPM connector of the PU/CU PCB and check the following at the cable side. Short circuit between pin-1/-2/-3/-4 and FG	Replace the cable and normalize the assembled condition.
Hopping motor	Remove the HOPM connector of the PU/CU PCB and check that a resistance of 10Ω or less can be measured between pin-1 and pin-2 and pin-3 and pin-4 respectively at the cable side.	Replace the hopping motor.

4.5.2.(6)　Paper feed jam (Error 390: MP Tray)

(6-1)　　Jam occurs immediately after paper feed is started. (Multipurpose tray)

Check item	Check work	Actions to be taken at NG
(6-1-1)　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.
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.
(6-1-2)　Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 2	Check if shape and movement of the sensor levers have any abnormality or not.	Replace with a normal sensor lever.
Right side cover	Confirm that the locks in the right and left of the right side cover are locked normally.	Replace the Right side 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.

Check item	Check work	Actions to be taken at NG
(6-1-3) Motor operation check		
Hopping motor	Confirm that the hopping motor works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the PU/CU PCB or hopping motor.
Hopping motor driver	Confirm that the hopping motor works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the PU/CU PCB.
MPT clutch	Remove the HOPM connector of the PU/CU PCB and check the following at the connector side. 1 MΩ or more between pin-1/-2/-3/-4 and FG.	
(6-1-4) Check the system connection		
Hopping motor drive cable	Check the connection condition of the cable. Visually 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. Also check that cables are assembled without any abnormality.	Normalize the connection condition. Replace with a normal cable.
Hopping motor drive cable	Check that any cable is not pinched during assembling of the printer. Remove the HOPM connector of the PU/CU PCB and check the following at the cable side. Short circuit between pin-1/-2/-3/-4 and FG	Replace the cable and normalize the assembled condition.
Hopping motor	Remove the HOPM connector of the PU/CU PCB and check that a resistance of 10Ω or less can be measured between pin-1 and pin-2 and pin-3 and pin-4 respectively at the cable side.	Replace the hopping motor.

4.5.2.(7)   Paper running jam (Error 381)

(7-1)   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 running path.		
Paper running path between the registration roller 2 and the fuser	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 entrance sensor 3.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace with a normal 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 PCB or connection cable.

(7-2)   Jam occurs immediately 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		
Paper running path between the registration roller 2 and the fuser	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(7-2-2) Check condition of the mechanical parts		
Check the sensor lever of the paper entrance sensor 3 and EXIT1/EXIT2/ EXIT3 sensors.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace with a normal sensor lever.
(7-2-3) Motor operation check		
Feed motor driver and belt motor driver	Confirm that the hopping motor, belt motor and fuser 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 PCB, the faulty motor of either feed motor or belt motor, or the belt unit.
Feed motor, REG2 Clutch	Remove the FDMRG2CL connector of the PU/CU PCB and check the following at the connector side. Several MΩ between pin-1 – FG Several MΩ between pin-2 – FG Several MΩ between pin-3 – FG Several MΩ between pin-4 – FG	Replace the PU/ CU PCB.

Check item	Check work	Actions to be taken at NG
(7-2-4) Check the system connection		
Feed motor drive cable, belt motor drive cable, fuser motor drive cable	Check the connection condition of the cables. PU/CU PCB FDMRG2CL connector, DCBELT connector, DCHEAT connector Visually check if each connector is connected in the halfway only or not, is inserted in a slanted angle or not. Also check that cables are assembled without any abnormality.	Normalize the connection condition. Replace with a normal cable.
Feed motor drive cable, belt motor drive cable, registration clutch 2 driver cable	Check that any cable is not pinched during assembling of the printer. Remove the FDMRG2CL connector of the PU/CU PCB and check the following at the cable side. Short circuit between pin-1 – FG Short circuit between pin-2 – FG Short circuit between pin-3 – FG Short circuit between pin-4 – FG Short circuit between pin-5 – FG Remove the DCBELT connector and check the following at the cable side. Short circuit between pin-1/-2/-3/-4/-5/-6/ and FG Short circuit between pin-2 – FG	Replace with a normal cable and normalizes the assembled condition.
Feed motor, registration2 clutch	Remove the respective connectors from the PCB, and confirm that the following resistance exists between the corresponding pins, at the cable side. PU/CU PCB FDMRG2CL connector Between pin-1 and pin-2: Approx. 3.4Ω Between pin-3 and pin-4: Approx. 3.4Ω PU/CU PCB Between pin-5 and pin-6: Approx. 240Ω	Replace the feed motor or belt motor.

(7-3)   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		
Feed motor driver, belt motor driver and fuser motor	Confirm that the hopping motor, belt motor and fuser 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 PCB, the faulty motor of either hopping motor or belt motor, or the belt unit.
Feed motor, belt motor	Remove the FDMRG2CL connector of the PU/CU PCB and check the following at the connector side. Several MΩ between pin-1 – FG Several MΩ between pin-2 – FG Several MΩ between pin-3 – FG Several MΩ between pin-4 – FG Several MΩ between pin-5 – FG	Replace the PU/CU PCB.

(7-4)   Jam occurs immediately after paper has reached the fuser.

Check item	Check work	Actions to be taken at NG
(7-4-1) 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 PCB, fuser motor, fuser unit, and/or fuser driver gear train (oneway gear).
(7-4-2) Temperature control while fuser belt running		
Detected temperatures of the fuser	Check temperatures detected at the fuser belt 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 PCB.
(7-4-3) 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 the printer.

4.5.2.(8) Paper unloading jam (Error 382)

(8-1) Paper unloading 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 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.
Decurl Assy	Check if paper winds around the Decurl unit.	Remove the winds paper.
(8-1-2) Check condition of the mechanical parts		
Check the sensor lever of EXIT1/ EXIT2/EXIT3 and slack sensors.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace with a normal sensor lever.
(8-1-3) 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 PCB, EXIT sensor, its cable or its connection cable.

(8-2) Paper unloading jam occurs after a paper is taken into printer.

Check item	Check work	Actions to be taken at NG
(8-2-1) 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 Separator	Confirm that the Duplex Separator works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the Duplex Separator or the Duplex solenoid
Output unit left cover	Check that the output unit left cover is installed properly so that it doesn't hamper smooth movement of paper in the paper running path.	Remove the output unit left cover 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.
EJ-rail unit	Check that the EJ-rail unit is installed properly.	Remove the EJ-rail unit and re-install it.
Decurl Assy	Check if paper winds around the Decurl unit.	Remove the winds paper.
(8-2-2) Check condition of the mechanical parts		
Sensor lever of the EXIT1 sensor	Check if shape and movement of the sensor levers have any abnormality or not.	Replace with a normal sensor lever.
(8-2-3) 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 PCB, fuser motor, or fuser unit.

Check item	Check work	Actions to be taken at NG
(8-2-4) Check the system connection		
Fuser motor drive cable	Check the connection condition of the cables. Visually check the PU/CU PCB DCHEAT connector for half-way connection, slanted angle insertion, and abnormal cord assembly. Also check the connector connected with the fuser motor in the same manner.	Normalize the connection condition. Replace with a normal cable.

(8-3) Paper unloading jam occurs in the middle of paper running path.

Check item	Check work	Actions to be taken at NG
(8-3-1) 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 PCB, fuser motor, or fuser unit.

4.5.2.(9) Duplex printing jam (Errors 370, 371, 372, 373 and 383)

(9-1) Duplex printing jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(9-1-1) 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 Duplex PCB, faulty sensor, or connection cable.

(9-2) Duplex printing jam occurs during taking in the paper into Duplex unit.

Check item	Check work	Actions to be taken at NG
(9-2-1) Solenoid operation check		
Duplex separator solenoid (Paper unloading/ DUP paper taking in switching gate located immediately after the fuser unit)	Visually check movement of the gate by using the Motor & Clutch Test of the self-diagnostic mode. Check whether movement is unsmooth or not, and whether the amount of open/close is abnormal or not.	Replace the Duplex separator solenoid (on the printer unit).
(9-2-2) Sensor lever operation check		
Dup-IN sensor lever	Remove the duplex unit. Touch the Dup-IN sensor lever on the printer side to check if its movement is unsmooth or not.	Replace the Dup-IN sensor lever
Dup-Bottom sensor lever	Remove the duplex unit and check the movement of the sensor lever.	Replace the sensor lever.
DUP-IN sensor Dup-Bottom 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 Duplex PCB, faulty sensor, or connection cable.

Check item	Check work	Actions to be taken at NG
(9-2-3)　　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.
Decurl Assy	Check if paper winds around the Decurl unit.	Remove the winds paper.

(9-3)　　Duplex printing jam occurs during transporting paper inside the Duplex unit.

Check item	Check work	Actions to be taken at NG
(9-3-1)　　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.
Dup-R sensor lever	Remove the Duplex unit and check movement of the Dup-R sensor lever.	Replace the Dup-R sensor lever.
(9-3-2)　　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 Duplex PCB, faulty sensor, or connection cable.

(9-4)　　Paper is not supplied from the Duplex unit to the timing roller.

Check item	Check work	Actions to be taken at NG
(9-4-1)　　Clutch operation check		
Duplex hopping clutch	Confirm that the Duplex hopping clutch works normally by using the Motor & Clutch Test of the self-diagnostic mode.Confirm it by listening to the sound.	Replace the Duplex PCB or clutch.

4.5.2.(10) Paper size error (Errors 400 and 401)

(10-1)　　Jam occurs when paper end is located near the IN1 sensor.

Check item	Check work	Actions to be taken at NG
(10-1-1) Check paper feed condition		
Multifeed of paper	Open the right side cover and check if multi-feed of paper 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 with a normal sensor lever.

4.5.2.(11) ID unit Up / Down error
(Service calls 143-01: K, -02: C, -03: M, -04: Y, -05: W/CL)

(11-1)   Error occurs during the Up movement of the ID unit

Check item	Check work	Actions to be taken at NG
(11-1-1) Installation status of consumables		
ID unit and belt unit	Check if the ID unit and the belt unit are properly installed (fitted) in the printer.	Install the units properly in the printer.
(11-1-2) Check mechanical parts.		
ID unit and ID up/ down mechanism	Remove the rear cover and inspect the initial movement and check the up/down motion of the ID unit for any abnormality. Check for a difference with and without the ID unit.	If the ID unit is the cause of the error, replace the ID unit. If the ID unit is not the cause of the error, replace the ID motor driver system.
(11-1-3) Check the electric parts.		
ID up/down sensor	Check the motion of the ID up/down sensor by the Switch Scan Test.	Replace faulty parts.
Wiring condition of the motor and the solenoid	Check to make sure that there is no problems with cables such as a break.	
Driver relay PCB	Replace the driver relay PCB and check for recurrence of the same error.	
Printer control PCB	Replace the printer control PCB and check for recurrence of the same error.	

4.5.2.(12) Fuser unit error (Errors 167 to 173)

(12-1)   Error occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(12-1-1) Thermistor is faulty Note)		
Center 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. To use a new fuser unit for a try, be sure to use New Parts Keep Mode of the System Maintenance menu.
Condition of the fuser unit connector	Check that the ends of connector at the fuser unit side and the printer side are free from contamination or a break.	Fix the defect or replace.

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

(12-2) Error occurs approx. 1 minute after the power is turned on.

Check item	Check work	Actions to be taken at NG
(12-2-1) 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 is not open. (Normally, the following resistance values are measured.) Between pin-1 and pin-2: several tens ohms Between pin-1 and pin-4: several ohms Between pin-2 and pin-4: several tens of ohms (Refer to section 9.1 Resistance value (fuser unit).)	Replace the fuser unit. To use a new fuser unit for a try, be sure to use New Parts Keep Mode of the System Maintenance menu.
(12-2-2) AC power input for the fuser		
AC power voltage from the low voltage power supply	Disconnect the AC cable from the printer and check that the voltage of the AC cable connector is within 100V±10%, which is the rated voltage Check that the AC cable is not routed far from the socket and not connected to a multi-outlet adopter.	Correct the connection line. If the connection has no problem, 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 of the printer control PCB, between pin-5 and pin-3.	Replace the printer control PCB.

4.5.2.(13) Motor fan error (Service calls 128-01 to 128-10 and 051)

(13-1) 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
(13-1-1) Electric parts		
Wiring condition of the fan causing an error	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.
Controller PCB fan with an error	Check the fuses on the following PCB according to the service call codes. SC128 01: Driver relay PCB (F6) 02: Printer control PCB (F10) 03: Printer control PCB (F12) 05: Driver relay PCB (F5) 09: Rail unit relay PCB (F502) 0A: Driver relay PCB (F6) 0B: Driver relay PCB (F5) 0C: Duplex unit PCB (F501) 0D: Driver relay PCB (F6) 0E: Driver relay PCB (F5) 0F: Driver relay PCB (F5) 10: Driver relay PCB (F5) SC051: Printer control PCB (F12)	Replace the faulty parts.

4.5.2.(14) Print speed is slow. (Performance is low.)

(14-1)　Print speed decreases.

Check item	Check work	Actions to be taken at NG
(14-1-1)　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.
Adjust the media weight sensor	Readjust the media weight sensor when auto is set for media weight.	Adjust the media weight sensor. (Section 5.3.2.8)
(14-1-2)　Narrow width paper speed setting		
Narrow paper speed setting and Paper width	Check if the narrow paper speed is setting 「Slow」 (Default) and paper width is 216mm or less.	·Hopping the paper Long edge feed. ·Setting the narrow paper speed is 「Normal」
(14-1-3)　High-humidity control setting		
High-humidity control setting	Check if the High-humidity control is setting 「Mode1」 or 「Mode2」.	Setting 「Off」 (Default)
(14-1-4)　Print Mode setting		
Print Mode setting and Power supply voltage	Check if the Print Mode is setting 「Slow」 (Default) and Power supply voltage is decrease.	·Check the connection of power supply ·Setting the Print Mode is 「Normal」
(14-1-5)　Spot color setting		
Spot color toner	Check if the spot color toner is using Clear toner.	Print speed is down when using clear toner.

4.5.2.(15) Duplex unit cannot be recognized.

(15-1)　Duplex unit cannot be recognized.

Check item	Check work	Actions to be taken at NG
(15-1-1)　Duplex PCB		
Duplex PCB Fuse	Measure the resistance of Duplex PCB F502 fuse.	Check the PU/CU PCB connection cable. If the cable is normal, replace the Duplex PCB.
PU/CU PCB Fuse	Measure the resistance of PU/CU PCB F1 fuse.	Check the Option Tray PCB connection cable. If the cable is normal, replace the PU/CU PCB.
(15-1-2)　Check the system connection		
Check the system connection from the PU/CU PCB to the Duplex PCB.	Check that the cable between the PU/CU PCB DUP connector to the Duplex PCB is normally connected.	Correct the connections.
Square connector connecting the Duplex 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 Duplex unit to the printer.	Is the terminals of the square connector damaged?	Replace the connector.

4.5.2.(16) Option tray unit cannot be recognized.

(16-1)　Option tray unit cannot be recognized.

Check item	Check work	Actions to be taken at NG
(16-1-1)　Option tray PCB		
Option tray PCB Fuse	Measure the resistance of Option tray PCB F502 fuse.	Check the PU/CU PCB or Option tray PCB connection cable. If the cable is normal, replace the Option tray PCB.
PU/CU PCB Fuse	Measure the resistance of PU/CU PCB F1 fuse.	Check the Option tray PCB connection cable. If the cable is normal, replace the PU/CU PCB.
(16-1-2)　Check the system connection		
Check the system connection from the PU/CU PCB to the option tray PCB.	Check that the cable between the PU/CU PCB TRY connector to the option tray PCB 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.

4.5.2.(17) LED head cannot be recognized. (Service Calls 134-01 to 134-05)

(17-1)　Errors 131 to 134 (LED HEAD Missing)

Check item	Check work	Actions to be taken at NG
(17-1-1)　Electric parts		
Fuses of the control PCB	Check the following fuses according to the indicated service call codes. 01 to 04: Printer control PCB (F25) 05: Spot color PCB (F2)	Replace the faulty parts.
LED head wiring condition	Check the connection of FCC to the LED head and the PCB.	Reconnect the FFC.
LED head unit	Check the LED head unit when the above work does not solve the problem.	Replace the LED head.

4.5.2.(18) Toner sensor error (Errors 5400 to 5405)

(18-1) Error caused by the consumable items.

Check item	Check work	Actions to be taken at NG
(18-1-1) Installation conditions of consumables		
ID unit	Is the stopper (orange) removed?	Remove the stopper.
	Check if the ID unit is properly installed (fitted) in the printer.	Install the units properly in the printer.
(18-1-2) Sensor's optical system		
ID unit	Check if the prism is smudged.	Wipe the prism. Replace the ID unit.
Toner sensor behavior	Check the motion of the toner sensor by the Switch Scan Test. Put a white sheet of paper or the like over the sensor.	Wipe the emitting and receiving surfaces of the sensor. Replace the toner sensor.
(18-1-3) Electric parts		
Driver relay PCB	Replace the driver relay PCB and check for recurrence of the same error.	Replace the faulty parts.
Wiring condition of cables	Check to make sure that there is no problems with cables such as a break.	

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 the printer. There is a window inside the 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 PCB and the toner sensor board (TSA).
- Perform the operation check again. If the situation has not bee improved and remains unchanged, replace the PU/CU PCB or the toner sensor board (TSA).

(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.

2. If the ID unit works normally, the display on the control panel will toggle between "H" <-> "L" in synchronism with movement of the silver reflector plate that is located on the side of the ID.

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)
- Replace the TC of different color and the ID unit as a pair.

  If a satisfactory operation is attained by using the a pair of TC of different color and the ID unit, replace the TC or replace the ID unit.

(18-2)   Error caused by the defective mechanism

Check item	Check work	Actions to be taken at NG
(18-2-1) 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. To use a new ID unit for a try, be sure to use New Parts Keep Mode of the System Maintenance menu.
(18-2-2) 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 PCB or the ID motor.

4.5.2.(19) Humidity sensor error (Service call 123)

(19-1)   Humidity sensor error

Check item	Check work	Actions to be taken at NG
(19-1-1) Check the system connection		
Connection between the printer control PCB and the environmental sensor board	Check if the FFC is connected to the ENV connector of the printer engine control PCB properly. Check if the FFC is connected to the environment sensor board properly. Check the connectors for half-way connection or angled connection.	Re-connect the cable normally.
FFC connecting the PU/CU PCB and the environment sensor board	Check for open-circuit with VOM. Visually check that the sheath for peeling.	Replace with a normal FFC.

Check item	Check work	Actions to be taken at NG
(19-1-2) 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 the printer for around one hour at the new environmental temperature to make it get used to it and then turn on the power. Touch the metal plate inside the printer to feel temperature rise of the printer unit with hands. After confirming that the printer temperature has risen close to the room temperature, turn on the power.

4.5.2.(20) Wiring diagram
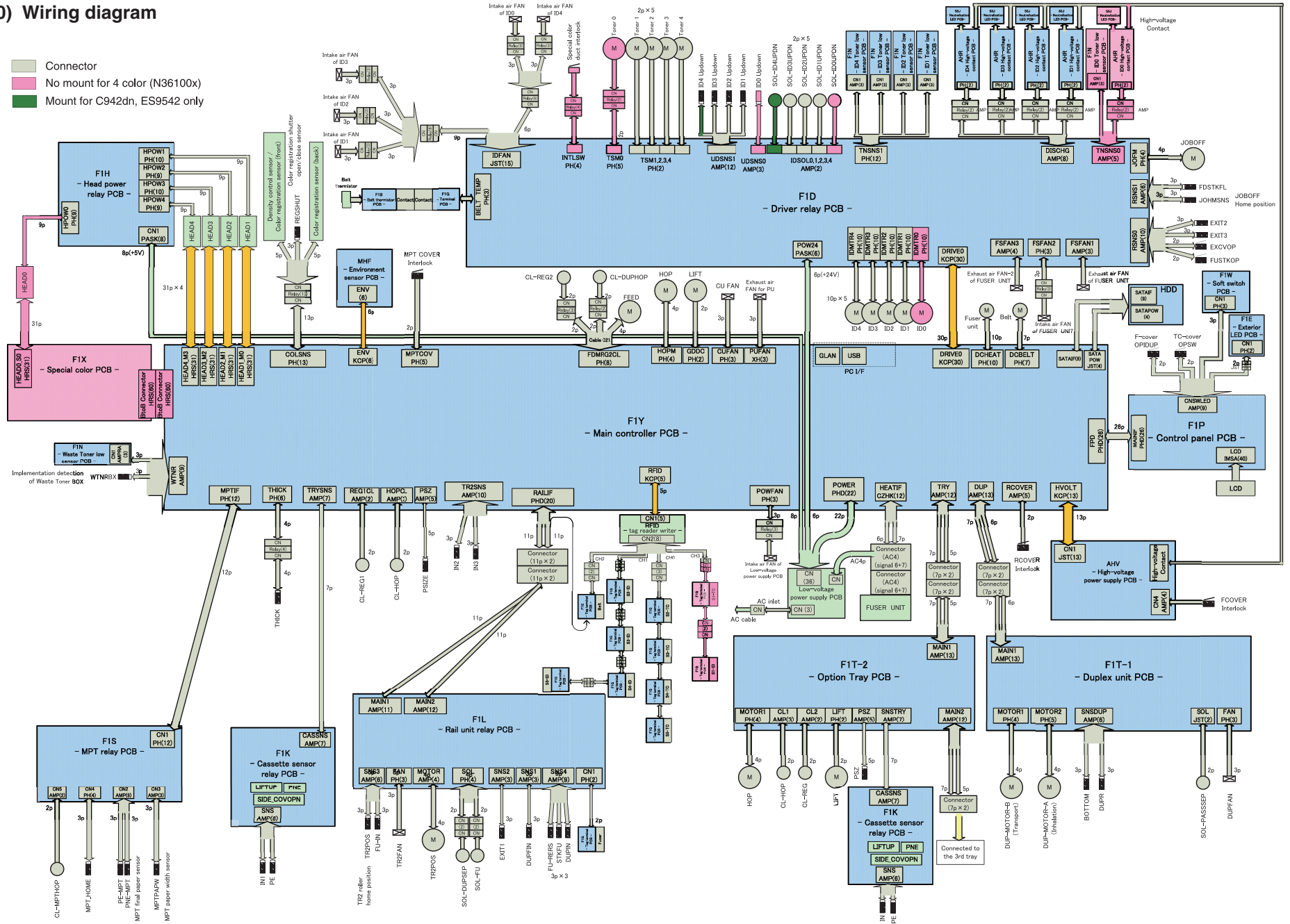
4.5.3 Troubleshooting the abnormal images

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

Paper feed direction

G Banding/streaking in vertical direction

H Causing of Slipping and Wearing on the printing image

I White dot of streaking in horizontal direction

J White dot on the printing

K Stain of around Solid printing

130mm

130mm

Paper feed direction

L Glossy banding/streaking in 130mm cycle vertical direction

Figure 4-2

4.5.3.(1)　Color has faded-out and blurred entirely. (Refer to Figure 4-2 A)

(1-1)　Color are faded-out and blurred.

(1-1-1)　Toner

Check item	Check work	Actions to be taken at NG
Remaining amount of toner	Check if the message "Prepare toner replacement." or "Replace the toner." appears or not.	Replace toner cartridge with new one.

(1-1-2)　LED head

Check item	Check work	Actions to be taken at NG
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

Check item	Check work	Actions to be taken at NG
Media type	Check to see that the print media which is used for printing is not a specially thick media	Use the normal paper.
Media condition	Check to see that the print media which is humid	Use the paper which keeping rightly.

(1-1-4)　High voltage terminal

Check item	Check work	Actions to be taken at NG
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 4-3.)	IReplace the ID unit or correct the high voltage terminal. To use a new ID unit for a try, be sure to use New Parts Keep Mode of the System Maintenance menu.

(1-1-5)　ID unit installation condition

Check item	Check work	Actions to be taken at NG
ID unit DOWN position (Defective transfer)	Open and close the Front Cover to confirm the ID unit any abnormal mechanical load does not exist, and the ID unit can be moved down to the DOWN position normally.	Check the ID Up/Down mechanics for any abnormality. If repair is found impossible, replace the equipment.

(1-1-6)　Print adjustment

Check item	Check work	Actions to be taken at NG
Paper Black Setting or Paper Color Setting Trans. Black Setting or Trans. Color Setting	Check if plural color is faded-out. Check the faded-out occurred one-side only or differ with both sides, when both-sides printing. Check the setting value of [Print Adjust] > [Paper Black Setting] or [Paper Color Setting]. Check the setting value of [Print Adjust] > [Trans. Black Setting] or [Trans. Color Setting] Changeless the faded-out, if change the setting value, then return to former value and adjust [Print Adjust] > [Transfer setting]	Increase the setting value of [Print Adjust] > [Paper Black Setting] or [Paper Color Setting]. Increase the setting value of [Print Adjust] > [Trans. Black Setting] or [Trans. Color Setting] If appear white dot, when increase the value, adjust best value.
Transfer setting	Check if specific color is faded-out. Check the faded-out occurred same at both sides, when both-sides printing. If cyan is faded-out, check the setting value of [Print Adjust] > [Transfer setting] [Cyan Transfer Setting]. If other color is faded-out, check the each color setting. Changeless the faded-out, if change the setting value, then return to former value and adjust [Print Adjust] > [Paper Black Setting] or [Paper Color Setting].	If cyan is faded-out, increase the setting value of [Print Adjust] > [Transfer setting] [Cyan Transfer Setting]. If other color is faded-out, increase the each color setting.

4.5.3.(2) Stain on white print. (Refer to Figure 4-2 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. To use a new ID unit for a try, be sure to use New Parts Keep Mode of the System Maintenance menu.
Leakage of toner	Does toner leak out from either ID unit or from toner cartridge?	Replace the ID unit or toner cartridge. To use a new ID unit for a try, be sure to use New Parts Keep Mode of the System Maintenance menu.
(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. To use a new fuser unit for a try, be sure to use New Parts Keep Mode of the System Maintenance menu.

Check item	Check work	Actions to be taken at NG
(2-1-3) Intermediate transfer roller		
Stain of intermediate transfer roller	Check the stain of the paper and intermediate transfer roller is conformity.	Practice the Transfer cleaning of Maintenance Menu

(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 4-3.)	Replace the ID unit or correct the high voltage terminal. To use a new ID unit for a try, be sure to use New Parts Keep Mode of the System Maintenance menu.

(2-3) Stain on white print (Paper top and bottom stain)

Check item	Check work	Actions to be taken at NG
(2-3-1) Intermediate transfer roller unit and Paper feeding route		
Stain of intermediate transfer roller or paper feeding route	Check the stain of intermediate transfer roller or paper feeding route.	Wipe the intermediate transfer roller or paper feeding route

4.5.3.(3)   White print (Refer to Figure 4-2 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. · Check the handle ID with back-lash.	Replace the ID unit. To use a new ID unit for a try, be sure to use New Parts Keep Mode of the System Maintenance menu.
Fuse on the Head power relay PCB	Measure resistance.	Replace the Head power relay PCB.
(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 4-3.)	Replace the ID unit or correct the high voltage terminal. To use a new ID unit for a try, be sure to use New Parts Keep Mode of the System Maintenance menu.

4.5.3.(4)   Black banding/black streaking in vertical direction

(4-1)   Thin vertical line (with color) (Refer to Figure 4-2 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. To use a new ID unit for a try, be sure to use New Parts Keep Mode of the System Maintenance menu.

(4-2)   Thin vertical line (without color) (Refer to Figure 4-2 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.

(4-3)   The vertical line that is less than 8mm width in the range of 6mm from the center in paper feed direction when use the surface coated paper

Check item	Check work	Actions to be taken at NG
(4-3-1) Type of the use media		
Media type	Check that the media use surface coated paper?	Attach the Plate-thickness-release (Maintenace parts). The attachment procedure refers to 6.2.55.

4.5.3.(5) Periodic abnormalities (Refer to Figure 4-2 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 125 mm.	Replace the ID unit
Developing roller	Check that the cycle is 51.7 mm.	Replace the ID unit
Toner feed roller	Check that the cycle is 45.9 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 152.7mm.	Replace the fuser unit
Fuser lower roller	Check that the cycle is 125.7mm.	Replace the fuser unit
Transfer Belt	Check that the cycle is 1211mm.	Clean the transfer belt (1)Impregnate a BEMCOT with primary or highest quality ethanol. (2)Wipe the Belt unit not caused damage. (3)Wipe evenly by new BEMCOT.
Transfer Belt drive roller	Check that the cycle is 104.9mm that likes needle-formed of the stapler.	Replace the transfer belt
		To use a new consumable for a try, be sure to use New Parts Keep Mode of the System Maintenance menu.

4.5.3.(6) Significant color misregistration

(6-1)   Color misregistration occurs.

Check item	Check work	Actions to be taken at NG
(6-1-1) Result of color registration error correction		
Color registration error correction time (If a printer is normal, it is approx. 40 seconds.)	Use the self-diagnostic mode and execute the REG ADJUST TEST. Check the result. Error is issued but is not displayed on the auto color registration at ON LINE display. When carry out the color registration correction of the printer adjust menu by manual operation at ON LINE, display at the time of the color registraton correction failure.	Replace the sensor that causes the error. Clean the sensor to remove stain. Replace the shutter. Replace the PU/CU PCB.
(6-1-2) 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.
(6-1-3) Color registration error detection sensor		
Sensor is dirty	Is toner or paper dust attached to the sensor?	Clean the sensor to remove stain
(6-1-4) Color registration error detection sensor shutter		
Shutter operation is faulty	Check the shutter operation by the self-diagnostic mode	Replace the shutter or tune the mechanism

(6-2)   Thought REG ADJUST TEST of engine maintenance function results ok, color misregistration occurs.

Check item	Check work	Actions to be taken at NG
(6-2-1) Paper feed system		
Paper feed system of the paper running path	Check if any obstacle exists in the paper feeding path, that hampers smooth paper run.	Remove the obstacle

4.5.3.(7) Solid black printing.

(7-1)   Solid black printing over the whole page

Check item	Check work	Actions to be taken at NG
(7-1-1) 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 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 rear 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.	Replace the ID unit or replace the high voltage board or correct the high voltage terminal.
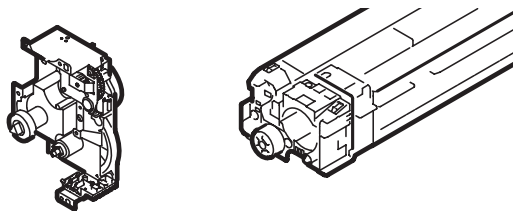
Figure 4-3

4.5.3.(8) Banding/streaking in vertical direction.

(8-1)   Banding/streaking in vertical direction (Refer to Figure 4-2 G)

Check item	Check work	Actions to be taken at NG
(8-1-1) Banding/streaking in vertical direction		
Banding/streaking in vertical direction		

(8-2)   Causing of Slipping and Wearing on the printing image(Refer to Figure 4-2 H)

Check item	Check work	Actions to be taken at NG
(8-2-1) Banding/streaking in vertical direction		
Causing of Slipping and Wearing on the printing image		

The paper transporting speed by the fuser unit is adjusted automatically under the condition that the following table and the printing page number is equal or over than 5.

And, In the case of printing with equal or over than 5 pages for this adjustment, more appropriate this adjustment is implemented by to use these papers that be printed usually by the customer in the customer's printing environment and condition.

Table: The condition of the automatically performing for the transporting speed adjustment

Category of Setting	Condition
Paper Size	The case of Legal14(355.6mm) paper printing page number is equal or over than 5. Examples of the paper size which execute the transporting speed adjustment :B4,A3,A3 wide,A3 nobi,Legal14,Tabloid,Tabloid extra,8K,"13x8" etc *The transporting speed adjustment is not execute when printing paper length is 355.6mm or less.
Media Type	Plain-Paper,Letter Head,BOUND,Recycled Paper,Cardboard,Rough
Media Weight	Light,Medium Light,Medium,Medium Heavy,Heavy (Basis weight:64 ～ 128g/m²) *The transporting speed adjustment is not execute when Media Weight is setting Ultra Light or Ultra Heavy1 ～ 5.

4.5.3.(9) White dot on printing.

(9-1) White dot of streaking in horizontal direction (Refer to Figure 4-2 I)

Check item	Check work	Actions to be taken at NG
(9-1-1) Print adjustment		
Transfer setting	If appear white dot at cyan, check the value of ［Print Adjust］ > ［Transfer Setting］> ［Cyan Setting］. If appear white dot at other color, check the each color setting.	If appear white dot at cyan, decrease the setting value of ［Print Adjust］ > ［Transfer setting］［Cyan Transfer Setting］. If appear white dot at other color, decrease the each color setting.

(9-2) White dot on the printing (Refer to Figure 4-2 J)

Check item	Check work	Actions to be taken at NG
(9-2-1) Print Media		
Media condition	Check to see that the print media which is dry.	Use the paper which keeping rightly.
(9-2-2) Print adjustment		
［Paper Black Setting］ or ［Paper Color Setting］	Check the setting value of ［Print Adjust］ > ［Paper Black Setting］ or ［Paper Color Setting］.	Decrease the setting value of ［Print Adjust］ > ［Paper Black Setting］ or ［Paper Color Setting］. If faded-out when decrease, setting the best value.

4.5.3.(10) Stain of around Solid printing.

(10-1) Stain of around Solid printing. (Refer to Figure 4-2 K)

Check item	Check work	Actions to be taken at NG
(10-1-1) Print Media		
Media condition	Check to see that the print media which is dry.	Use the paper which keeping rightly.
(10-1-2) Print Media type setting		
Media type	Check the print media is recycled paper or not.	Setting the Media type is ［recycled paper］
(10-1-3) Print Media type setting		
［Paper Black Setting］ or ［Paper Color Setting］	Check the setting value of ［Print Adjust］ > ［Paper Black Setting］ or ［Paper Color Setting］.	Increase the setting value of ［Print Adjust］ > ［Paper Black Setting］ or ［Paper Color Setting］. If appear white dot when increase, setting the best value.

4.5.3.(11) Glossy banding/streaking in 130mm cycle vertical direction.

(11-1) Glossy banding/streaking in 130mm cycle vertical direction. (Refer to Figure 4-2 L)

Check item	Check work	Actions to be taken at NG
(11-1-1) Print Media type setting		
Media type	Check to see that the print media type, thickness and setting of paper exit pass.	Open the Faceup stacker and paper exit pass select the Faceup stacker

4.5.3.(12) The thick horizonal line is printed.

(12-1)   The thick horizonal line is printed.

Check item	Check work	Actions to be taken at NG
(12-1-1) Media Weight Setting		
The state details	in the case of the monochrome printed result from 2nd sheets printed any horizontal line.	Set the appropriate value of [Media Weight] by the OP Panel. Or set the value of [Media Weight] more heavily than current. If it is already set [Ultra Heavy1] to [Ultra Heavy3] and the printing be made better print, set [Color Mode] in [Admin Setup]-[Print Setup]-[Mono-Print Mode] by the OP Panel. If the printing is not used the Clear Toner or White Toner, set [Ultra Heavy1] to [Ultra Heavy5] and the Custom media setting is default, set to [HQFORUH1] to [HQFORUH5] applied with the media weight of the printing media by the [Media Type] of the OP Panel. However, its setting causes slow for the printing speed.

Check item	Check work	Actions to be taken at NG
The state details	In the case of the heavy weight paper was printed and the line were printed at the about 80mm position from the paper lower end.	Set the [Media Weight] to [Ultra Heavy1] to [Ultra Heavy5] and set to 0 the [Heavy Media Adjust]. If the printing be made better print, set it [-5] to [+15].
The state details	In the case of the heavy weight paper was printed and the line were printed at the about 20mm position from the paper lower end.	Setting of the [Media Weight] to [Ultra Heavy4] or [Ultra Heavy5] and set to ON the [Calibration]-[Heavy Media Mode] causes to improve possibly.
The state details	In the case of the more heavier weight paper was printed and the line were printed at the about 80 to 90mm position from the paper top end.	Set the [Media Weight] to [Ultra Heavy5] and set 1 to 10 the [Calibration] - [Ultra Heavy Media Mode] causes to improve possibly.

4.5.4 Network troubleshooting

(1) Printing/communication is not available.

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.	
(3) Check contents of the network information.		
Confirm the IP address, subnet mask and gateway address.	Confirm the IP address, subnet mask and gateway address that are printed on the network information. If the IP address in use was manually set, check that the IPv4 address doesn't coincide with that of another device. If the IP address in use was automatically assigned, check that the IPv4 address has not been changed.	Set the IP address, subnet 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, subnet 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.

Check item	Check work	Actions to be taken at NG
(6) Check the following from an OS standard port		
Confirm the WINDOWS standard port.	Set the WINDOWS standard port and check if printing can be performed or not.	Set the WINDOWS standard port correctly.
(7) Check protocols.		
Check the protocols used for printing.	When NBT is used for printing, check if the sleep mode is disabled or not.	Disable the sleep mode.
	When EtherTalk is used for printing, check if the sleep mode is disabled or not.	Disable the sleep mode.
	When WSD Print is used for printing, check if the sleep mode is disabled or not.	Disable the sleep mode.
(8) Check the printer driver.		
Check the printer driver.	Check that printing is available by using the printer driver.	Delete the printer driver and install a printer driver again.
(9) Check for communication from another computer.		
Check for communication from another computer.	Confirm that another computer also cannot communicate with the printer.	If another computer can normally communicate with the printer, disable the security software of the computer in question and then try to communication.

(2) Print speed is slow.

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.	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 link status.		
Print out the network information to check the link status.	Check the speed of the printer and the hub and also the communication mode.	When "Hub Link Setting" is not set to "Auto" and also the hub setting that matches the baud rate and communication mode to those of the printer is "Auto-negotiation," set Duplex to "Half."

(3) Web page is displayed partially.

Check item	Check work	Actions to be taken at NG
(1) Check the settings.		
Check the browser settings.	Check that the web browser security is not set to high.	When the web browser security is set to high, click [Tools] - [Internet Options] - [Security] - [Trusted sites] - [Sites] and add the URLs of this printer server. Alternative, click [Tools] - [Internet Options] - [Security] - [Internet] - [Custom level] and click Enable for Active Scripting.

4.6 Fuse check

If any of the following errors occurs, check the corresponding fuse on the PU/CU control PCB or high voltage power supply board.

(Refer to Table 4-6.)

Table 4-6 Fuse error

Fuse Name		Error Description	Insert Point	Resistance
Printer controller PCB	F1	Not recognition Option	Option Tray : 5V	1 Ω or less
	F2	Not displayed operator panel, Not start of initialization	CPU arround : 5V	
	F3	DUPLEXFAN Error	DUPLEX :24V	
	F4	Not recognition of DUPLEX	DUPLEX : 5V	
	F5	Feed JAM	Option Tray : 24V	
	F6	Shout down(LED of Power Supply switch blink)	engine : 5V	
	F7	TR2 position error or TR2 FAN error	Rail unit : 24V	
	F8	TR2 position error or	Rail unit : 5V	
	F9	BELT motor lock erroe	BELT motor	
	F10	Front cover open	High voltage power supply : 24V,Low voltage FAN	
	F11	MPT cover open or FEEDJAM	FEED motor, Lift up motor	
	F12	SC128	FAN, Clutch	
	F13	Shout down	Supply 5V when sleep mode	
	F14	FUSER motor lock error	FUSER, BELT motor	
	F15	SC121 High voltage interface error	High voltage power supply : 5V	
	F16	FEEDJAM	IN sensor, Color registration sensor	
	F17	Not recognition HDD	SATA power	
	F18	SC188-02	FUSER thermistor/ Driver relay	
	F19	SC231-01	TAGR/W PCB	
	F20	-	Not install	
	F21	-	Not install	
	F22	Not displayed operator panel, Not start of initialization	OPE : 3.3V	

Fuse Name		Error Description	Insert Point	Resistance
Printer controller PCB	F23	Not displayed operator panel, Not start of initialization	OPE,PT Paper width,Environmental sensor	1 Ω or less
	F24	EXIT cover open	Driver relay PCB	
	F25	SC134	LED head : 3.3V	
Driver relay PCB	F1	Up/Down error	Toner low, ID Up/Down	
	F2	ID motor lock error	ID motor	
	F31	SC147	Toner supply Motor C,K	
	F32	SC147	Toner supply Motor Y,M	
	F33	Spot color duct open	Toner supply Motor Spot	
	F4	Spectrum	Discharging light	
	F5	SC128	IDFAN	
	F6	SC128	Fuser FAN	
	F7	JOBOFF Home position error	EXIT sensor, Joboff sensor	
Control Panel PCB	F1	Not displayed operator panel	LCD power	
Dulex Unit PCB	F501	SC128 DUPLEXFAN error	24V, Actuater, FAN	
	F502	Not recognition DUPLEX	5V, DUPLEX mycom	
Option Tray PCB	F501	Option Tray hopping JAM	24V, Actuater	
	F502	Not recognition Option Tray	5V, Option mycom	
Head relay PCB	F501	Spot color, Yellow, Magenta not printing	Spot color, Yellow, Magenta LED head : 5V	
	F502	Cyan, Black not printing	Cyan, Black LED head : 5V	
Spot color PCB	F1	SC134	Spot color LED head : 3.3V	
High voltage power supply PCB	F501	Front cover open	Front cover SW and High voltage trance power supply	
Low voltage power supply PCB	F001	Shout down	Main power	
	F002	Shout down	Main power	

Oki Data CONFIDENTIAL

Second side fuse interrelation
N36100A etc
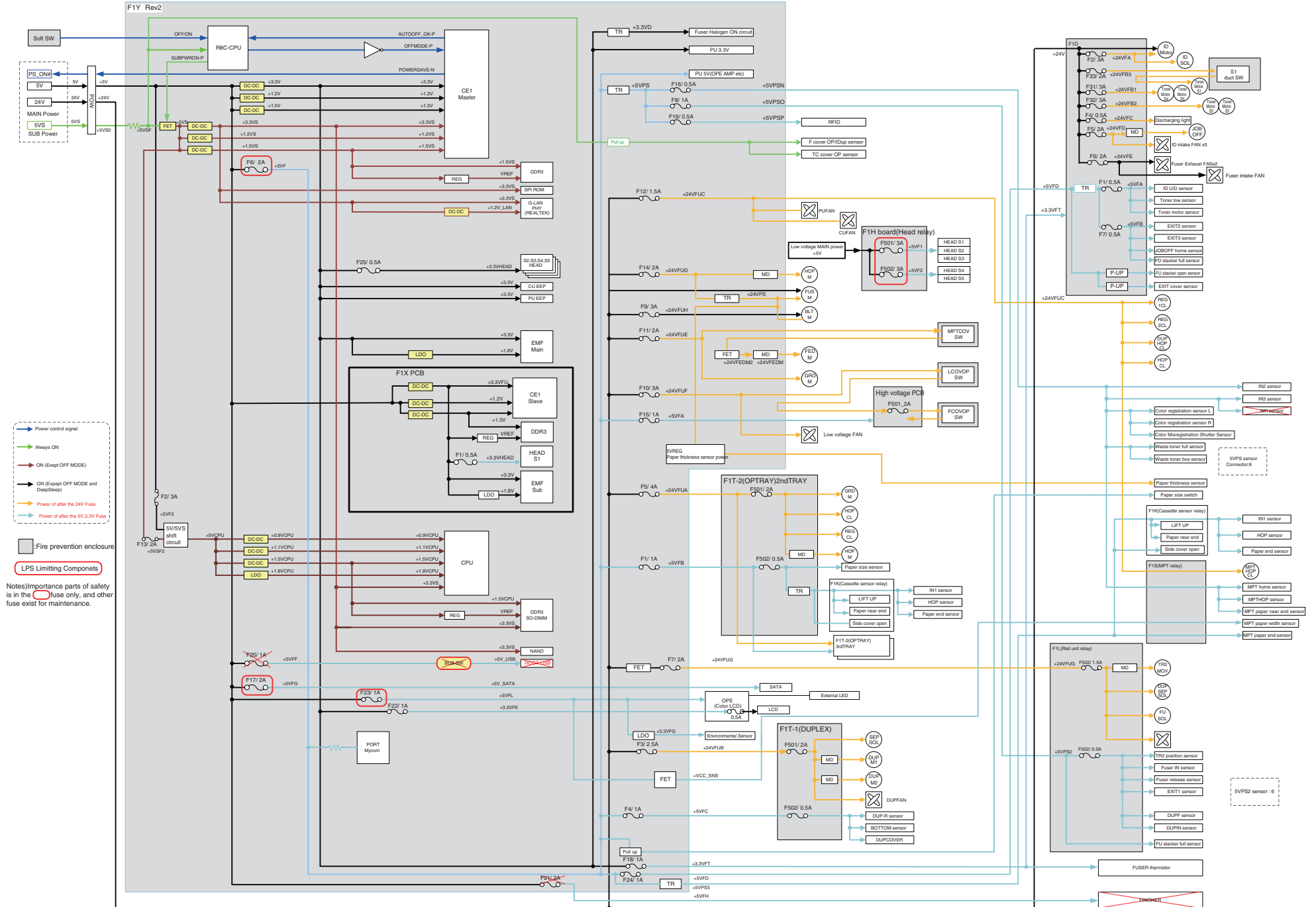
Printer control PCB - Fuse location
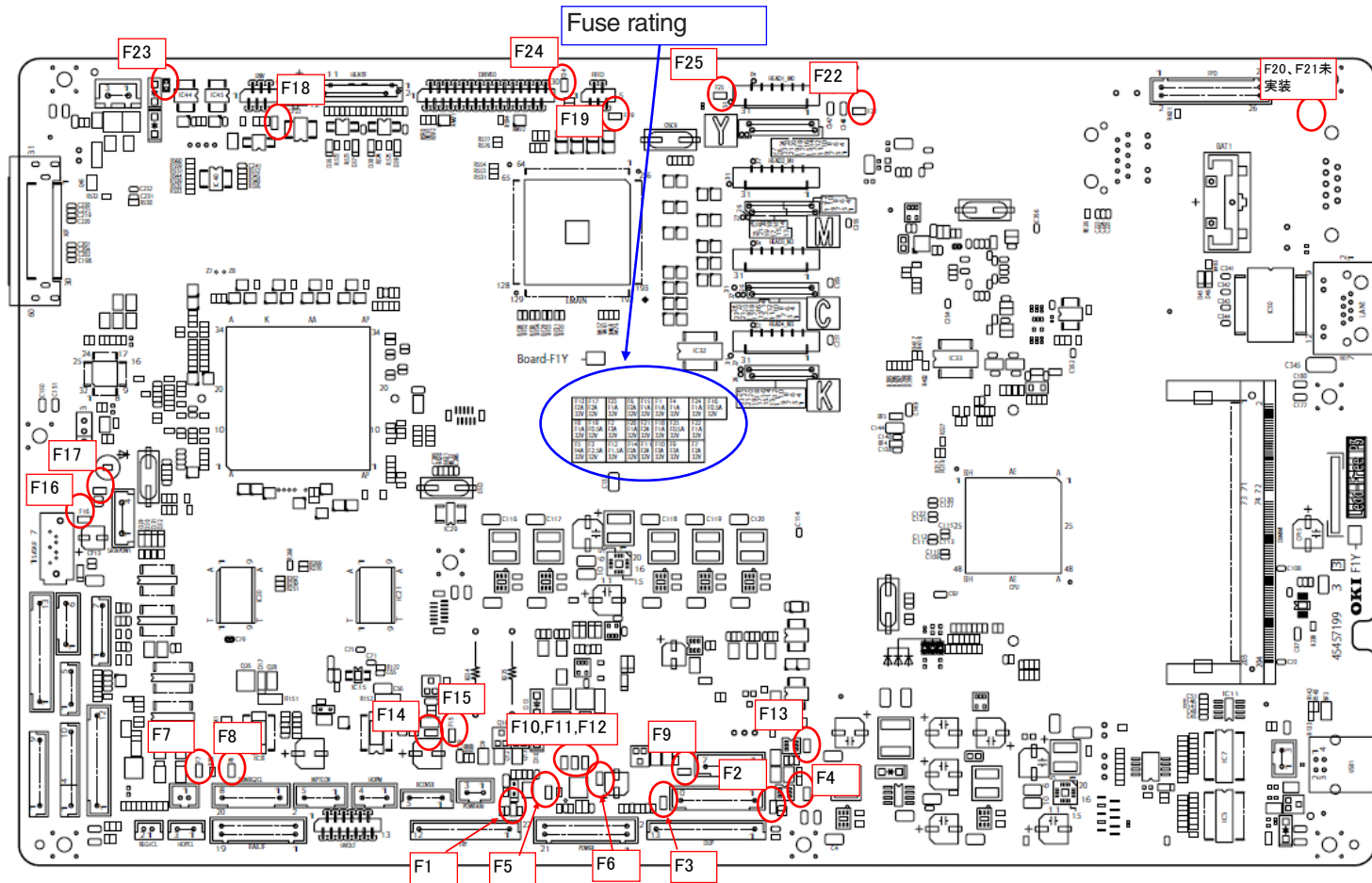
Component side

Driver relay PCB - Fuse location

Component side

F5
F33
F4
F2
F1、F7
F32
F33
F6
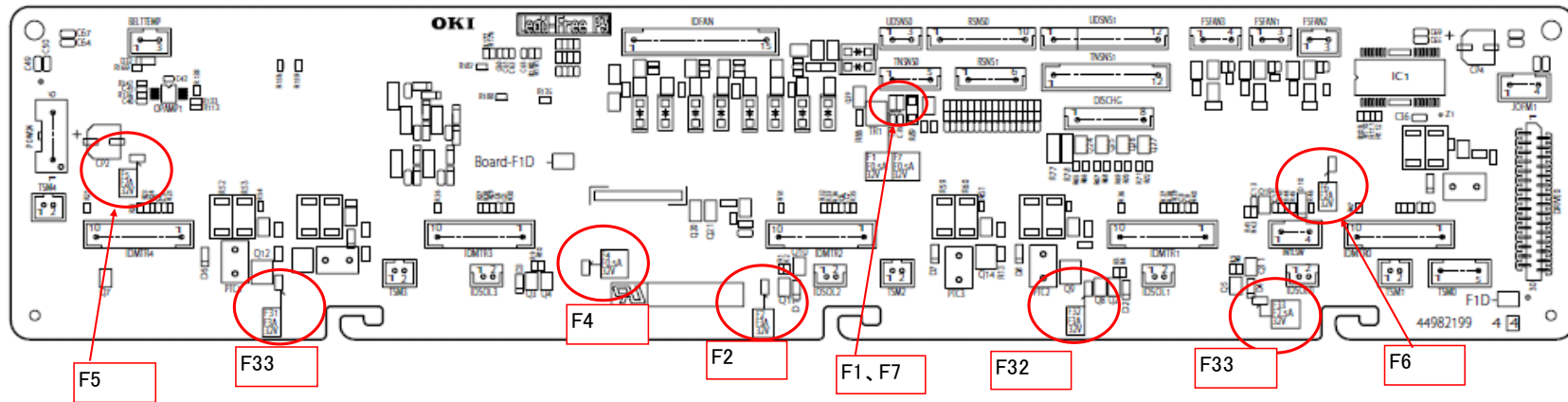
Control panel PCB - Fuse location

F1
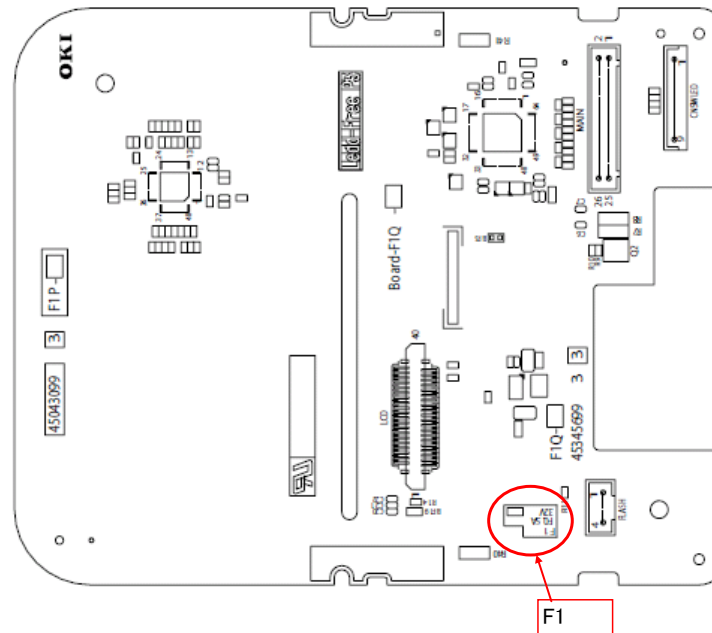
Duplex unit PCB/Option tray PCB - Fuse location

F501   F502
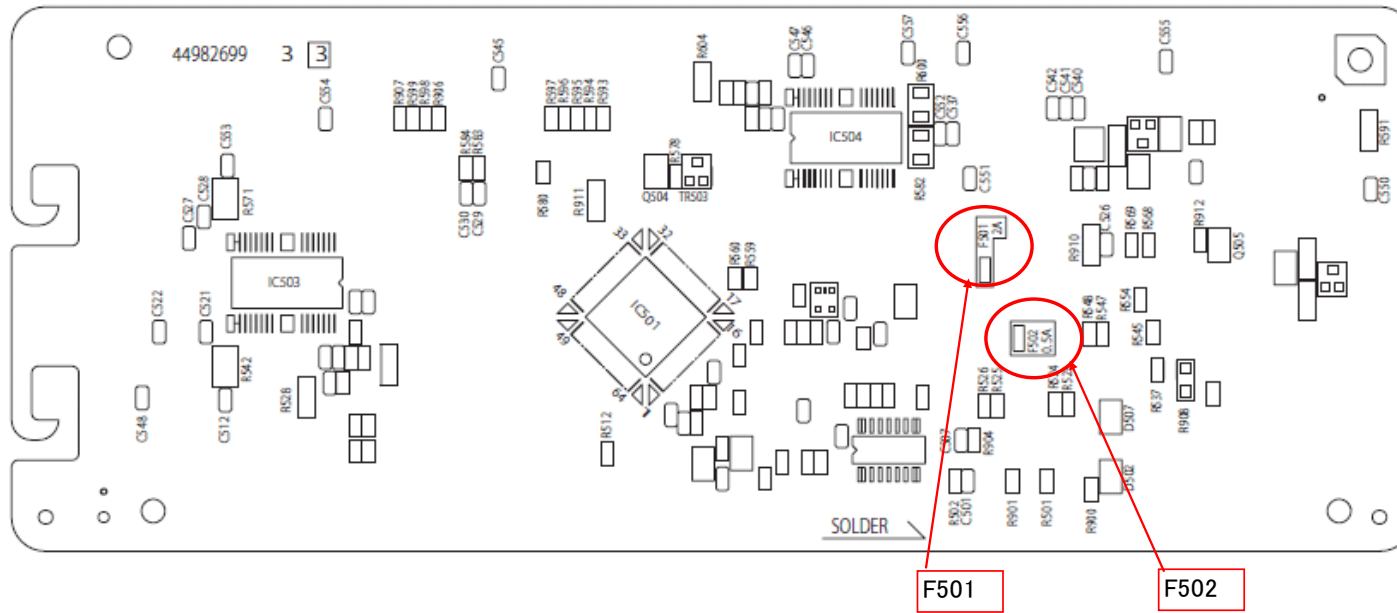
Print head relay PCB - Fuse location

F501

F502
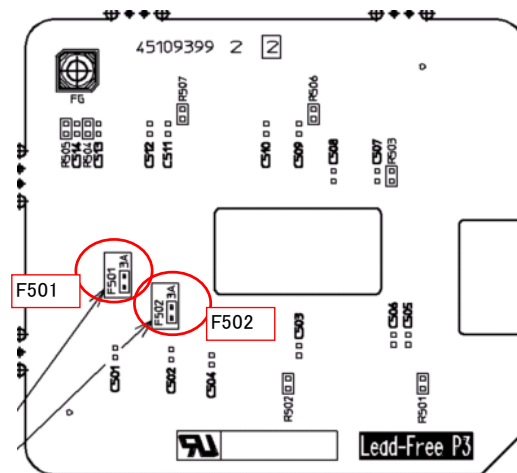
Spot color PCB - Fuse location
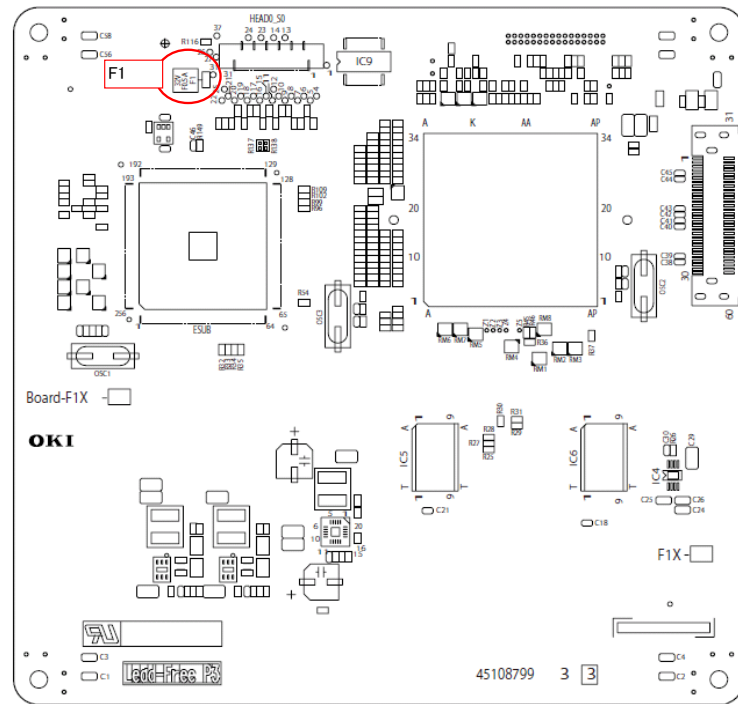
High-voltage power supply PCB - Fuse location
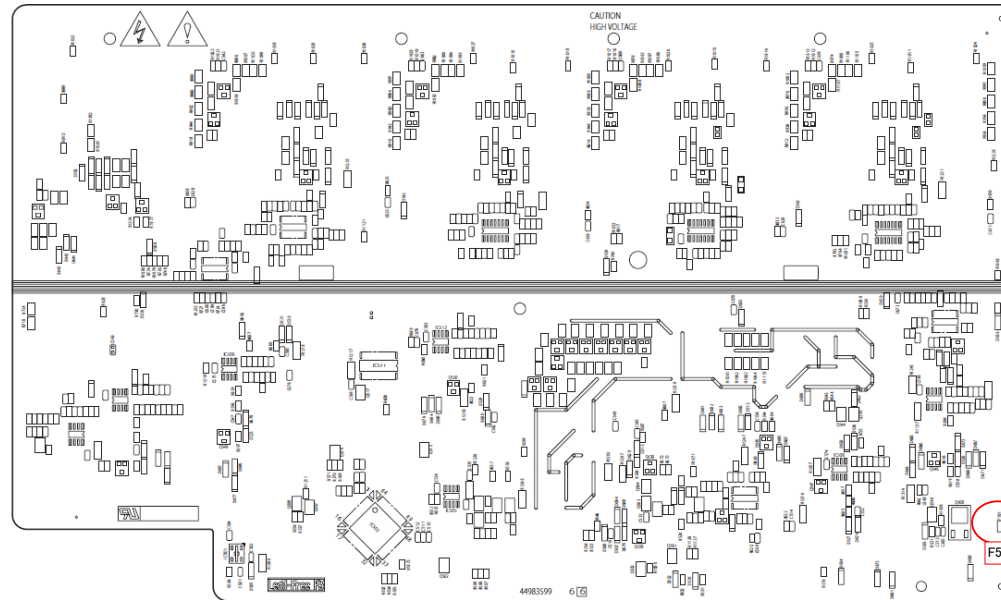
Low-voltage power supply PCB - Fuse location
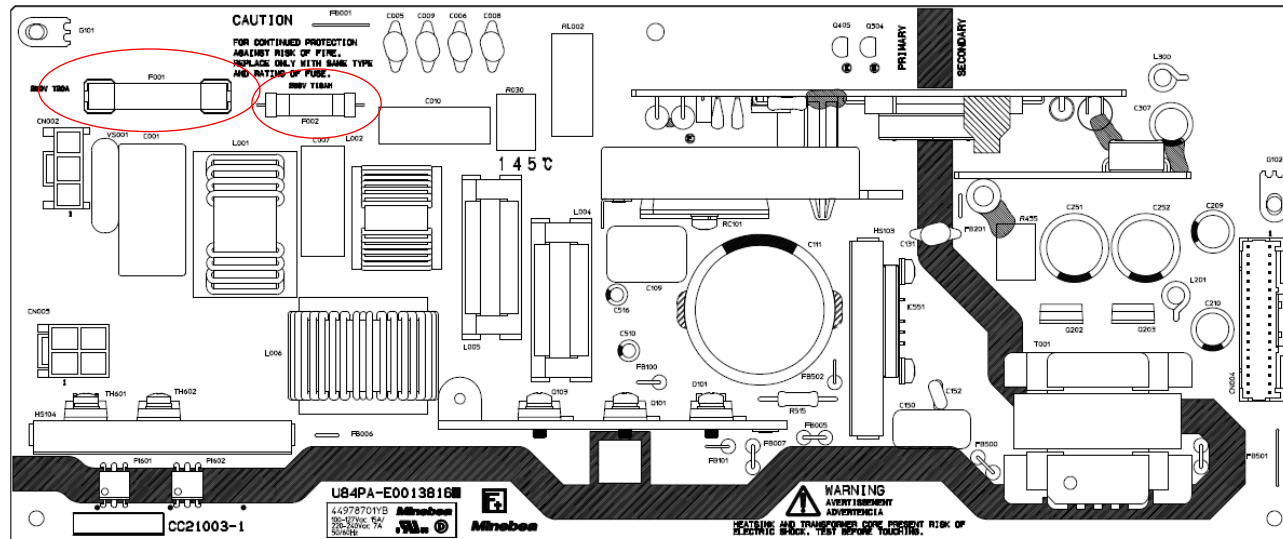
4.7 Paper cassette switches and paper size correlation table

(1) Source tray

Switch Part No. 2052000P4000

Model No: HS12-001

Size	Bit No.			
TRAY1 ～ 5	1	2	3	4
No Cassette	H	H	H	H
A3 nobi,18"	H	H	L	L
17"(Tabloid)	L	H	L	L
A3	L	H	H	L
B4	H	H	H	L
Legal 14/13.5	H	L	H	L
Legal 13	H	L	H	H
A4 (SEF)	L	L	L	H
Letter (SEF)	L	L	L	L
Executive	L	L	H	L
B5 (SEF)	L	L	H	H
Letter (LEF)	L	H	L	H
A4 (LEF)	H	H	L	H
A5	H	L	L	H
B5 (LEF)	L	H	H	H
A6	H	L	L	L
SW push : L				

5. MAINTENANCE MENUS

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

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

5.1 System maintenance menu (for maintenance personnel)

This menu is activated when the power is turned with the **BACK**, **OK** and **ON LINE** buttons held down in the standby mode of the device, and then the window to enter the password is displayed.

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

Note! This menu is not disclosed to the end users.

Table 5-1 Maintenance menu display table

Category	Item	Value	Default	Function	Valid
				*System Maintenance is displayed in English only.	
System Maintenance	Enter Password	************	000000	Enters a password to enter the system maintenance menu. The default is "000000". The number of digits for the password is 6 to 12 digits of figures and small-case alphabets.	
System Maintenance	Save Syslog	Execute	-	Stores a network communication log (syslog) in a Non-volatile memory.	ET
	Print Syslog	Execute	-	Prints a network communication log (syslog).	ET
	Condition Log size	20 50 100 500	*	Sets the number of errors when an error log is returned as a CSV format in HTTP. Returns error logs from the latest error of the number to the number set in this menu. The default is 20. The maximum is still 500 even when HDD is installed.	ET
	New Parts Keep Mode	Execute	-	Places the printer online, a command being issued from the CU to PU, when the [OK] button is pressed. With the printer on, a consumable of the printer can be replaced with a new one, and then the printer can be checked for proper operation (where, not breaking the new one's fuse, the printer does not count consumption as the life of the consumable replaced with the one). Turning off the printer ends the check mode, and then turning it on disables the mode.	ET
	Engine Status	Execute	-	Prints engine information.	ET
	Engine Diag Mode		-	Enters the self diagnosis mode of the engine.	ET
	Change Password	>> NEXT >>		Displays the menu to change a password.	
Change Password	New Password	************	-	Sets a new password to enter the System Maintenance menu. Six to twelve alphanumeric characters can be entered as the password.	ET
	Verify Password	************	-	Prompts a user to verify and enter again the new password that is set by user in 'New Password' for to enter the 'System Maintenance menu'. Six to twelve alphanumeric characters can be entered as the password.	ET

ET: Reflected at the time of menu setting.

5.2 Maintenance Utility

The adjustments described in table 5-2 should be executed on using Maintenance Utility.

Details on the utility are as follows:

    (1) Maintenance Utility operation manuals:

        42678801FU01 Version 30.11 or higher(Japanese)

        42678801FU02 Version 30.11 or higher(English)

    (2) Maintenance Utility program:

Applicable operating system	File name	Parts number
Win Vista/7/8/10 (Japanese / English)	MuWin.zip	42678801FW01 Version 1.50.0 or higher

Table 5-2 Maintenance Utility Adjustment Items

	Item	Adjustment	Section in Maintenance Utility Operation manual	Operation from operation panel (section in this maintenance manual)
1	Board Replace-ment	Copies the data from the EEPROM on part of the PU board, and copies the EEPROM setting value on part of the CU board. Purpose: To copy the data stored in the EEPROM on the PU/CU board when the PU/CU board needs to be replaced with another one for maintenance.	Section 2.4.1.1.9	Unavailable
2	Serial Number Information Setting	Rewrites the serial number recorded on part of the PU, and Selects the printer serial number recorded on part of the CU, output mode, and rewrites the printer serial number. Purpose: To configure a maintenance replacement board to which the data on part of the PU board cannot be copied (becouse of the interface error and e.t.c.).	Section 2.4.1.1.10.3	Unavailable

	Item	Adjustment	Section in Maintenance Utility Operation manual	Operation from operation panel (section in this maintenance manual)
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 part of the PU cannot be copied (becouse of the interface error and e.t.c.). The maintenance board is set to the Factory mode usually by default setting. So, by using this function, this setting should be set to the Shipping mode.	Section 2.4.1.1.10.4	Section 5.3.2.12
4	Board items setting information	Checks serial number information and the Factory / Shipping mode.	Section 2.4.1.1.7	Unavailable
5	MAC address setting	Sets the MAC address	Section 2.4.2.2.5	Unavailable
6	Counter-mainte-nance function	Copies the counter value of each consumable: Drum counter (Y, M, C, K, spot color) Fuser counter Belt counter Toner counter (Y, M, C, K, spot color) Purpose: To copy the counter value of each consumable in the printer to use in another printer.	Section 2.4.1.2.14	Unavailable
7	Network Log Save function	Stores Network log files.	Section 2.4.2.2.14	Unavailable
8	Send to file	Transmits a specified file.	Section 2.4.1.2.13	Unavailable

	Item	Adjustment	Section in Maintenance Utility Operation manual	Operation from operation panel (section in this maintenance manual)
9	PU Log File Save function	Stores PU log flies.	Section 2.4.2.2.16	Unavailable
10	Counter/ Toner information	Checks the current consumable counter values.	Section 2.4.1.3.1	Section 5.3.2.10
11	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).
12	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).
13	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).
14	Test print	Executes the local print function and sends a specified file. Purpose: To check the performance of the printer on a stand-alone basis and send a download file.	Section 2.4.1.4.1	Section 5.3.2.5
15	Save local print data	Saves information printed in local print (settings, error logs, engine information) as a CSV format and takes the information.	Section 2.4.1.4.2	Unavailable
16	Switch scan test	Executes the switch scan test. Purpose: To check of performance for each sensor	Section 2.4.1.5.1	Section 5.3.2.3
17	Motor and Clutch Tests	Executes the motor clutch test. Purpose: To check of performance for each item, such as a motor or clutch.	Section 2.4.1.5.2	Section 5.3.2.4
18	Color registration adjustment function	Executes the color registration adjustment test.	Section 2.4.1.5.3	Section 5.3.2.6
19	Density adjustment test	Executes the density adjustment test.	Section 2.4.1.5.4	Section 5.3.2.7

	Item	Adjustment	Section in Maintenance Utility Operation manual	Operation from operation panel (section in this maintenance manual)
20	Counter	Checks the consumable, continuous consumable and waste toner counter values.	Section 2.4.1.5.6	Section 5.3.2.10
21	Local Parameters Setting/ Information	Switches between the Factory and Shipping modes.	Section 2.4.1.5.7	Section 6.3.2.12
22	Engine Parameters Setting	Makes an engine parameter setting.	Section 2.4.1.5.8	Section 5.3.2.2
23	Translate Parameters Setting	Makes a print media transfer parameter setting.	Section 2.4.1.5.9	Unavailable
24	PU diagnosis log save function	Stores self-diagnosis log files of printer paper running system.	Section 2.4.1.5.10	Unavailable
25	Adjustment of media weight sensor	Adjusts the media weight sensor.		Section 5.3.2.8
26	Automatic Density Adjustment Control Parameters	Sets control values associated with printer's automatic density adjustment.	Section 2.4.1.5.5	Unavailable

5.3 User maintenance menu functions

5.3.1 Maintenance menu (for end-users)

Some general menu categories are equivalent to the maintenance menus (but are different form system maintenance menus).

The items available in this menus are as follows:

░░░ Default setting in shade area

Item		Settings	Functions
System Adjust	Power Save Time	1 minute 2 minutes 3 minutes 4 minutes 5 minutes 10 minutes 15 minutes 30 minutes 60 minutes	Sets the time to move to the power save mode.
	Sleep Time	1 minute 2 minutes 3 minutes 4 minutes 5 minutes 10 minutes 15 minutes 30 minutes 60 minutes	Sets the time to move to the sleep mode from the power save mode.
	Auto Power Off Time	1 hour 2 hours 3 hours 4 hours 8 hours 12 hours 18 hours 24 hours	Sets the time to move the off mode from the start of the standby mode.
	Clearable Warning	ONLINE Job	Sets the timing for clearable warnings to disappear.
	Auto Continue	On Off	Sets whether to recover the printer automatically upon a memory overflow or tray request.

Item		Settings	Functions
System Adjust	Manual Timeout	Off 30 seconds 60 seconds	Sets the time to wait for feeding paper for printing a job at manual feeding. The job is cancelled when the paper is not loaded within the time.
	Wait Timeout	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 the time period between stopping job data reception and forced printing of a job. When a PostScript job, the job is not printed, being cancelled.
	Low Toner	Continue Stop	Sets the manner of printer when a state that the printer is low on toner is detected. 'Continue' allows the printer to continue of printing with remaining online. 'Stop' makes the printer to offline.
	Jam Recovery	On Off	Sets whether to perform recovery printing when a paper jam occurs. Off cancels a job including the page being printed when the jam occurs.
	Error Report	On Off	Prints an error report when an internal error occurs. This option is available only for PostScript, PCL XL and XPS.
	Hex Dump	Execute	Prints out data received in hexadecimal format.

Item			Settings	Functions
Print Adjust	MPTray	X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from MP Tray, Adjusts the position of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification.
		Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from MP Tray, Adjusts the position of a whole printing image (in 0.25-mm increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification.
		Duplex X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from MP Tray, During the front-side printing of duplex printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Duplex unit should be installed.
		Duplex Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from MP Tray, During the front-side printing of duplex printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Duplex unit should be installed.

Item			Settings	Functions
Print Adjust	MPTray	Overprint X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from MP Tray, During the second printing of spot-color over printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - C941 and Duplex unit should be installed.
		Overprint Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from MP Tray, During the second printing of spot-color over printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - C941 and Duplex unit should be installed.
		Y Scaling	0.00% +0.05% to +0.50% -0.25% to -0.05%	For the paper fed from MPTray Telescopic the print image in the direction paper runs, that is vertically (at 0.05% unit).
	Tray1	X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray1, Adjusts the position of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification.

Item			Settings	Functions
Print Adjust	Tray1	Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 1, Adjusts the position of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification.
		Duplex X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 1, During the front-side printing of duplex printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Duplex unit should be installed.
		Duplex Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 1, During the front-side printing of duplex printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Duplex unit should be installed.
		Overprint X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 1, During the second printing of spot-color over printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - C941 and Duplex unit should be installed.

Item			Settings	Functions
Print Adjust	Tray1	Overprint Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 1, During the second printing of spot-color over printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - C941 and Duplex unit should be installed.
		Y Scaling	0.00% +0.05% to +0.50% -0.25% to -0.05%	For the paper fed from Tray1 Telescopic the print image in the direction paper runs, that is vertically (at 0.05% unit).
	Tray2	X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 2, Adjusts the position of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Tray 2 should be installed.
		Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 2, Adjusts the position of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Tray 2 should be installed.

Item			Settings	Functions
Print Adjust	Tray2	Duplex X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 2, During the front-side printing of duplex printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Tray 2 and Duplex unit should be installed.
		Duplex Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 2, During the front-side printing of duplex printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Tray 2 and Duplex unit should be installed.
		Overprint X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 2, During the second printing of spot-color over printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - C941 and Tray 2 and Duplex unit should be installed.

Item			Settings	Functions
Print Adjust	Tray2	Overprint Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 2, During the second printing of spot-color over printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - C941 and Tray 2 and Duplex unit should be installed.
		Y Scaling	0.00% +0.05% to +0.50% -0.25% to -0.05%	For the paper fed from Tray2 Telescopic the print image in the direction paper runs, that is vertically (at 0.05% unit). [Display Conditions] - installation of Tray 2.
	Tray3	X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 3, Adjusts the position of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Tray 3 should be installed.
		Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 3, Adjusts the position of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Tray 3 should be installed.

Item			Settings	Functions
Print Adjust	Tray3	Duplex X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 3, During the front-side printing of duplex printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Tray 3 and Duplex unit should be installed.
		Duplex Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 3, During the front-side printing of duplex printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Tray 3 and Duplex unit should be installed.
		Overprint X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 3, During the second printing of spot-color over printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - C941 and Tray 3 and Duplex unit should be installed.
		Overprint Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 3, During the second printing of spot-color over printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - C941 and Tray 3 and Duplex unit should be installed.

Item			Settings	Functions
Print Adjust	Tray3	Y Scaling	0.00% +0.05% to +0.50% -0.25% to -0.05%	For the paper fed from Tray3 Telescopic the print image in the direction paper runs, that is vertically (at 0.05% unit). [Display Conditions] - installation of Tray 3.
	Tray4	X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 4, Adjusts the position of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Tray 4 should be installed.
		Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 4, Adjusts the position of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Tray 4 should be installed.
		Duplex X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 4, During the front-side printing of duplex printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Tray 4 and Duplex unit should be installed.

Item			Settings	Functions
Print Adjust	Tray4	Duplex Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 4, During the front-side printing of duplex printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Tray 4 and Duplex unit should be installed.
		Overprint X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 4, During the second printing of spot-color over printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - C941 and Tray 4 and Duplex unit should be installed.
		Overprint Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 4, During the second printing of spot-color over printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - C941 and Tray 4 and Duplex unit should be installed.
		Y Scaling	0.00% +0.05% to +0.50% -0.25% to -0.05%	For the paper fed from Tray4 Telescopic the print image in the direction paper runs, that is vertically (at 0.05% unit). [Display Conditions] - installation of Tray 4.

Item			Settings	Functions
Print Adjust	Tray5	X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 5, Adjusts the position of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Tray 5 should be installed.
		Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 5, Adjusts the position of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Tray 5 should be installed.
		Duplex X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 5, During the front-side printing of duplex printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Tray 5 and Duplex unit should be installed.
		Duplex Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 5, During the front-side printing of duplex printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - Tray 5 and Duplex unit should be installed.

Item			Settings	Functions
Print Adjust	Tray5	Overprint X Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 5, During the second printing of spot-color over printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) perpendicular to the direction of paper movement (i.e. horizontally). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - C941 and Tray 5 and Duplex unit should be installed.
		Overprint Y Adjust	0.00 millimeter +0.25 millimeter to +2.00 millimeter -2.00 millimeter to -0.25 millimeter	To the paper fed from Tray 5, During the second printing of spot-color over printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-millimeter increments) parallel to the direction of paper movement (i.e. vertically). Print image exceeding the printable area is clipped by this specification. [Display Conditions] - C941 and Tray 5 and Duplex unit should be installed.
		Y Scaling	0.00% +0.05% to +0.50% -0.25% to -0.05%	For the paper fed from Tray5 Telescopic the print image in the direction paper runs, that is vertically (at 0.05% unit). [Display Conditions] - installation of Tray 5.
	Paper Black Setting		0 +1 +2 -2 -1	Performs micro adjustment when visible faded black print, or specks or streaks occur more frequently on print results of plain/BLACK printing.
	Paper Color Setting		0 +1 +2 -2 -1	Performs micro adjustment when visible faded black print, or specks or streaks occur more frequently on print results of plain/COLOR printing.

Item			Settings	Functions
Print Adjust	Trans. Black Setting		0 +1 +2 +3 -3 -2 -1	Performs micro adjustment when visible faded black print, or specks or streaks occur more frequently on print results of OHP transparency/ BLACK printing.
	Trans. Color Setting		0 +1 +2 +3 -3 -2 -1	Performs micro adjustment when visible faded black print, or specks or streaks occur more frequently on print results of OHP transparency/ COLOR printing.
	SMR Setting	Cyan	0 +1 +2 +3 -6 -5 -4 -3 -2 -1	To correct variations in print results caused by temperature/humility conditions and difference in print density/frequency. Change the setting of cyan when print quality is uneven.
		Magenta	0 +1 +2 +3 -6 -5 -4 -3 -2 -1	To correct variations in print results caused by temperature/humility conditions and difference in print density/frequency. Change the setting of magenta when print quality is uneven.
		Yellow	0 +1 +2 +3 -6 -5 -4 -3 -2 -1	To correct variations in print results caused by temperature/humility conditions and difference in print density/frequency. Change the setting of yellow when print quality is uneven.

Item			Settings	Functions
Print Adjust	SMR Setting	Black	0 +1 +2 +3 -6 -5 -4 -3 -2 -1	To correct variations in print results caused by temperature/humility conditions and difference in print density/frequency. Change the setting of black when print quality is uneven.
		White	0 +1 +2 +3 -6 -5 -4 -3 -2 -1	To correct variations in print results caused by temperature/humility conditions and difference in print density/frequency. Change the setting of white when print quality is uneven. [Conditions for display] .Five color printer and the spot color is white.
		Clear	0 +1 +2 +3 -6 -5 -4 -3 -2 -1	To correct variations in print results caused by temperature/humility conditions and difference in print density/frequency. Change the setting of clear when print quality is uneven. [Conditions for display] .Five color printer and the spot color is clear.
	BG Setting	Cyan	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 of cyan when background is dark.
		Magenta	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 of magenta when background is dark.

Item			Settings	Functions
Print Adjust	BG Setting	Yellow	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 of yellow when background is dark.
		Black	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 of black when background is dark.
		White	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 of white when background is dark. [Conditions for display] .Five color printer and the spot color is white.
		Clear	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 of clear when background is dark. [Conditions for display] .Five color printer and the spot color is clear.
	Drum Cleaning		On Off	Sets whether to perform, for reduced white line jitter, image drum idling before printing. Caution is required since ID life duration is reduced because of idling.
	Transfer Roller Cleaning		Execute	In order to prevent the occurrence of dirt on the backside due to the dirty second transfer roller, cleans the second transfer roller.
	High Humid Mode		Mode 1 Mode 2 Off	Sets ON/ OFF of the curl reduction mode.

Item		Settings	Functions
Print Adjust	Moisture Control	On Off	Specifies ENABLE/ DISABLE of the dew condensation control. When ENABLE is specified, it may take time to print the first page.
	Narrow Paper Speed	Normal Normal2 Slow	Sets the print speed for narrow paper. Normal: the print speed is not changed when printing on narrow paper. Slow: The print speed is changed when printing on narrow paper.
	Print Mode	Normal Slow	Sets ENABLE/ DISABLE of printing with making a wider image space in continuous printing. Normal: Prints with a certain image space (paper space) in continuous printing. Slow: Enables the control to print making a wider image space (paper space) in continuous printing
	Transfer Setting	Cyan Transfer Setting	0 +1 +2 +3 -3 -2 -1	Lower a setting when a stand out white dot at cyan, green and blue printing. Raise a setting when a stand out dark dot or line at cyan printing.
		Megenta Transfer Setting	0 +1 +2 +3 -3 -2 -1	Lower a setting when a stand out white dot at magenta and red printing. Raise a setting when a stand out dark dot or line at magenta printing.
		Yellow Transfer Setting	0 +1 +2 +3 -3 -2 -1	Lower a setting when a stand out white dot at yellow printing. Raise a setting when a stand out dark dot or line at yellow printing.

Item			Settings	Functions
Print Adjust	Transfer Setting	Black Transfer Setting	0 +1 +2 +3 -3 -2 -1	Lower a setting when a stand out white dot at black printing. Raise a setting when a stand out dark dot or line at black printing.
		White Transfer Setting	0 +1 +2 +3 -3 -2 -1	Lower a setting when a stand out white dot at white printing. [Conditions for display] When five color model and "Admin Setup"-"Color Setup"-"Spot Color" is "White".
		Clear Transfer Setting	0 +1 +2 +3 -3 -2 -1	Lower a setting when a stand out white dot at clear printing. [Conditions for display] When five color model and "Admin Setup"-"Color Setup"-"Spot Color" is "Clear".
	DV Roller Cleaning		On Off	Setting of the waste toner quantity to decrease of the unevenly for the quality of printing. On: To prioritize the printing quality Off: To save toner
Admin Setup	Enter Password		************	Enters a password to start the administrator menu. The default is "aaaaaa". The number of digits for the password is 6 to 12 digits of figures and small-case alphabets.
	Network Setup			
	Print Setup			
	PS Setup			
	PCL Setup			
	XPS Setup			
	IBM PPR Setup			
	EPSON FX Setup			
	Color Setup			

Item			Settings	Functions
Admin Setup	Panel Setup	Near Life Status	Enable Disable	Sets the display control of LCD when a Near-Life warning for drum, fuser, and belt occurs. When enabled, displays the near- life warning. When disabled, do not display the near-life warning. (Nor outputted on Attention LED/ PJL/ MIB / Web) The status where the device is temporarily recovered by opening and closing the cover after life duration error occurs (Life warning) is not included.
		Near Life LED	Enable Disable	Sets the LED lighting control when a near-life warning of toner, drum, fuser, belt and waste toner box occurs. When enabled, Attention LED lights*. When disabled, Attention LED lights out. The status where the device is temporarily recovered by opening and closing the cover after life duration error occurs (Life warning) is not included. *For a drum, fuser, belt, and waste toner box, it is applied only when "Panel Setup"- "Near Life Status" is "Enable". For a toner, it is applied regardless of the setting of "Panel Setup" – "Near Life Status".
		Idle Display	Toner Gauge Paper Size	Selects information displayed on the standby screen. When paper size is selected, paper size in each tray is displayed. Toner gauge is the default.
		Panel Brightness During Operating	5 to 31	Adjusts the brightness of the operation panel LCD (backlight brightness). The brightness set in this setting is applied during the panel operation.
		Panel Brightness While Power Save	0 1 to 5 to 31	Adjusts the brightness of the operation panel LCD (backlight brightness). The brightness set in this setting is applied after a lapse of the time set by the panel backlight timer from the last operation.

Item			Settings	Functions
Admin Setup	Panel Setup	Panel Backlight Timer	10 to 30 to 300	Adjusts time (second) to apply the panel brightness while power save from the last operation.
		Front Lamp	Mode 1 Mode 2 Off	Sets whether to operate the lamp in the front side of the device.
	Time Setup	Date Format	yyyy/mm/dd mm/dd/yyyy dd/mm/yyyy	Sets a date display format. * The default value varies depending on the destination. ODA:mm/dd/yyyy , OEL:dd/mm/yyyy
		Time Zone	-12:00 -11:45 -11:30 -11:15 -11:00 to -1:00 -0:45 -0:30 -0:15 0:00 +0:15 +0:30 +0:45 +1:00 to +12:15 +12:30 +12:45 +13:00	Sets a time zone (Difference from GMT). (Sets in increments of 15 min. in the range of -12:00 to +13:00.)
		Daylight Saving	On Off	Sets the summer time to On/Off. When setting to On, set the current time forward one hour. When setting to Off, set the current time back one hour.

Item			Settings	Functions
Admin Setup	Time Setup	Time Setting	01/01/2000 00:00 to 01/01/2009 00 :00 to 12/31/2091 23 :59 01/01/2000 00 :00 to 01/01/2009 00 :00 to 31/12/2091 23 :59	Sets the time. Date is displayed by the format according to the "Date Format". ODA: 01/01/2000 00 :00 to 01/01/2009 00 :00 to 12/31/2091 23 :59 OEL: 01/01/2000 00 :00 to 01/01/2009 00 :00 to 31/12/2091 23 :59
	Power Setup	Power Save	Enable Disable	Sets Enable/ Disable of the power save mode.
		Sleep	Enable Disable	Sets Enable/ Disable of the sleep mode.
		Auto Power Off	Enable Auto Config Disable	Sets the action of the Auto power-off. [Disable] cancels going to the off mode with time. In [Auto Config], the printer does not move to the off mode when the LAN cable is connected. However, it moves to the off mode when the USB cable or Centronnics parallel interface is connected. In [Enable], the printer moves to the off mode even when the LAN cable is connected. *Default for ODA model is "Disable".
	Others Setup	RAM Setup Receive Buffer Size	Auto 0.5 megabyte 1 megabyte 2 megabyte 4 megabyte 8 megabyte 16 megabyte 32 megabyte	Sets receive buffer size.

Item				Settings	Functions
Admin Setup	Others Setup	RAM Setup	Resource Save	Auto Off 0.5 megabyte 1 megabyte 2 megabyte 4 megabyte 8 megabyte 16 megabyte 32 megabyte	Sets resource saving area size.
		Flash Memory Setup	Initialize	Execute	Initializes FLASH memory. [Conditions for display] "Admin Setup"-"Others Setup"-"Storage Common Setup"-"Enable Initialization" is "Yes".
			Resize PS Area	nn% [n.n megabyte]	Changes the proportion of PS area in the FLASH memory. [Conditions for display] "Admin Setup"-"Others Setup"-"Storage Common Setup"-"Enable Initialization" is "Yes".
		HDD Setup	Initialize	Execute	The printer deletes data stored in HDD. HDD is initialized to the factory default. [Conditions for display] - When HDD is installed - "Boot Menu"-"HDD Setup"-"Enable HDD" is "Yes" - "Admin Setup"-"Others Setup"-"Storage Common Setup"-"Enable Initialization" is "Yes".
			Resize Partition	PCL nn%	20%	Sets a partition size.
				Common mm%	50%	
				PS ll%	30%	
				<Application>		

Item				Settings	Functions
Admin Setup	Others Setup	HDD Setup	Format Partition	PCL Common PS	Formats a specified partition. [Conditions for display] - When HDD is installed - "Boot Menu"-"HDD Setup"-"Enable HDD" is "Yes" - "Admin Setup"-"Others Setup"-"Storage Common Setup"-"Enable Initialization" is "Yes".
			Erase HDD	Execute	This item is displayed only when HDD is installed. [Conditions for display] - When HDD is installed - "Boot Menu"-"HDD Setup"-"Enable HDD" is "Yes" - "Admin Setup"-"Others Setup"-"Storage Common Setup"-"Enable Initialization" is "Yes".
		Storage Common Setup	Check File System	Execute	Resolves the discrepancy between the actual (free) space of the file system and displayed free space and recovers the management data (FAT) information. [Conditions for display] - When HDD is installed - "Boot Menu"-"HDD Setup"-"Enable HDD" is "Yes"
			Check All Sectors	Execute	Recovers the sector inofmration failure of HDD and the above file system discrepancy. [Conditions for display] - When HDD is installed - "Boot Menu"-"HDD Setup"-"Enable HDD" is "Yes"
			Enable initialization	No Yes	Prevent the setting change in accordance with the initialization of BlockDevice (HDD, FLASH).
		Security Setup	Job Limitation	Off Encrypted Job	Job limitation mode control [Conditions for display] - HDD is installed and "Boot Menu"-"HDD Setup"-"Enable HDD" is "Yes".

Item				Settings	Functions
Admin Setup	Others Setup	Security Setup	Make Secure HDD	Execute	Enables the encryption function of data stored in HDD. Generates a cipher key and sets the encryption function (security mode) information to ON. In addition, initializes HDD. [Conditions for display] - HDD is installed, the encryption function is disabled and [Storage Common Setup]-[Enable Initialization] is Yes, and "Boot Menu"-"HDD Setup"-"Enable HDD" is "Yes".
			Make Normal HDD	Execute	Disables the encryption function of data stored in HDD. Deletes the cipher key and sets the encryption function (security mode) information to OFF. In addition, initializes HDD. [Conditions for display] - HDD is installed, the encryption function is enabled and [Storage Common Setup]-[Enable Initialization] is Yes, and "Boot Menu"-"HDD Setup"-"Enable HDD" is "Yes".
			Reset Cipher Key	Execute	Reproduces a cipher key used for the encrypted HDD. By doting this processed, data stored in HDD cannot be recovered. [Conditions for display] HDD is installed, the encryption function is enabled and [Storage Common Setup]-[Enable Initialization] is Yes, and "Boot Menu"-"HDD Setup"-"Enable HDD" is "Yes".

		Language setup	Language Initialize	Execute	Initializes the message file installed in FLASH.
					Pressing the "OK" button shows the following confirmation message.
					  Are You Sure?
					  Yes
					  No
					If No is selected, the screen is returned to the previous menu. If Yes is selected, the device exits the menu and starts delete processing after reboot.

Item				Settings	Functions
Admin Setup	Others Setup	Job Cancel Setup	Cancel Key Behavior	Short Long Off	Sets an operation when pressing the job cancel button. Short: Executes canceling a job by pressing bhte button (2sec. or less) Long: Executes canceling ajob by holding the button (2 sec. to 5 sec.) Off: Ignores pressing the job cancel button. That is, Job Cancel by pressing the job cancel button is disabled.
			Inquiry Display	On Off	Sets whether to display the inquiry screen at the execution of Job Cancel. On: Displays the inquiry screen. Off: Executes the job cancel without displaying the inquiry screen.
			Focus Position	Yes No	Sets which option on the screen for inquiry of job cancel, Yes or No is focused. On: "Yes" is focused. Off: "No" is focused.
			Display Timeout	60 to 180 to 300	Sets the display timeout value for the inquiry screen for job cancel. When timeout is performed, the cancel operation is disabled and printing is performed.
	Settings	Reset Settings		Execute	Resets CU EEPROM, restoring user menu settings to their defaults.
		Save Settings		Execute	Saves current menu settings.
		Restore Settings		Execute	Changes to a saved menu setting. [Display conditions] It is displayed when "Save Settings" is executed and the menu setting is saved.
	Change Password	New Password		************	Sets a new password to enter Administrator Menu and [Boot Menu]. The number of digits for the password is 6 to 12 digits of figures and small-case alphabets.
		Verify Password		************	Enters the new password set in [New Password] again to enter Administrator Menu and [Boot Menu]. The number of digits for the password is 6 to 12 digits of figures and small-case alphabets.

5.3.2 Self-diagnostic mode

Image Drums, and, these motors and sensors concerned with each image drum are named to [Station] in this section (non-used color name). These Stations set 1 to 5 in one by one in order from upstream-side to downstream-side of at transportation direction of the intermediate transfer belt.

In this section, these are used '[Station1] to [Station5]' or '[S1] to [S5]' as following figure.

For the 4-color model, [Station1] arrenged at most upstream-side in above direction is not used. Therefore, the 4-color model is constituted by from [Station2] to [Station5].
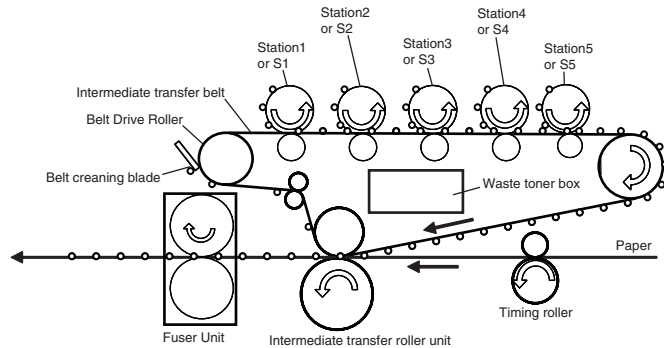
5.3.2.1 Operation panel

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

This section describes LEVEL 0 and LEVEL 1.

Self-diagnostic mode layout (Overall)

(1) Menu option display switching

The level in a shaded area $\boxed{\text{XXXXX}}$ can be displayed only from another one. Use the **MENU**∧ or **MENU**∨ button to display the menu option shown in a non-shaded area $\boxed{\text{XXXXX}}$.

LEVEL0

(1) Menu option display switching

Hold down the **BACK** or **ON LINE** button or momentarily press the **MENU**△ or **MENU**▽ button to display the option shown in a shaded area ▨XXXX▨ .

Press the **MENU**△ or **MENU**▽ button to display the menu option shown in a non-shaded area ▭XXXX▭ .

BACK

LEVEL0 Engine status display
Engine status display
Heater temperature
Environmental information
Belt/ low voltage thermistor temperature, temperature wait time
MPT paper width detection value
Media weight detection value

ON LINE

Error code
Error code display, etc.

MENU▽

Each voltage display category during printing
First transfer (TR1) output voltage(1)*1
First transfer (TR1) current measurement value (1)*1
First transfer (TR1) current measurement value (2)*
First transfer (TR1) voltage control value*1
Second transfer (TR2) output voltage
Second transfer (TR2) current measurement value
Second transfer (TR2) voltage control value(1)
Second transfer (TR2) voltage control value(2)
Second transfer (TR2) voltage control value(3)
Charge (CH) voltage *1
Development (DB) voltage *1
Supply (SB) voltage*1
Environmental level
Supply (SB) voltage (After)*1
Supply (SB) voltage (Before)*1
Current monitor value
Anti crown roller output current/ Input voltage information

MENU△

Toner sensor monitor
Station 1 to 4 Toner sensor status monitor display
Station 5 Toner sensor status monitor display

MENU▽ / **MENU**△

Toner pulse count monitor
Station 1, 2 Number of toner FULL/ LOW-pulse detections
Station 3, 4 Number of toner FULL/ LOW-pulse detections
Station 5 Number of toner FULL/ LOW-pulse detections

MENU▽ / **MENU**△

Consumable tag noise test monitor
Display of the number of noise detections and number of BF line error detections
Display of the number of noise detections and number of TC line error detections
Display of the number of noise detections and number of ID line error detections
Display of the number of noise detections and number of spot color line error detections

MENU▽ / **MENU**△

Motor control evaluating functions
Hopping Motor Constant-Speed Timer Value/ Environmental Temperature
Fusing Motor Constant-Speed Timer Value/ Fusing Target Temperature
ID Motor Constant-Speed Timer Value
BELT Motor Constant-Speed Timer Value

MENU▽
MENU△

*1 The station No. displayed by pressing **CANCEL** is changed by rotation.

LEVEL1

(1) Menu option display switching

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

Use **OK** to display the option shown in a non-shaded area (XXXXX), and use the **MENU**△ or **MENU**∨ button to select the option. The menu goes back to the top by pressing **BACK**.

Press **OK** to execute a test, and **BACK** to end the test.

[MENU∨]

[MENU∧]

DIAGNOSITC MODE XX. XX. XX ○ -MODE

[MENU∨]

[MENU∧]

Menu flowchart. Boxes with [MENU∧] / [MENU∨] transitions between the following columns:

SWITCH SCAN
IN1 IN2 IN3 FIN
EX1 EX2 EX3
STFD_FU
T1 PE_PNE_LIFT
MPT PE_PNE_LIFT
PU DUPSNS F
DUPSNS I_R_F_B
T1 CASETTE SIZE
CVO SI_FR_TC
CVO EX_DUP_FU_MPT
LATCH FR_EX_TC
ID UP/DOWN
TONER SENS
HT THERMISTER
HUM_TEMP_LVPS_BELT
DEN L_K_COL/R_K_COL
THICK MPT_PW
T1LIFT
F-RL JOFF EXO REGS
BF TAG
TC TAG
ID TAG
SP TAG
DISTNR FULL_SPRL_BOX
TR2POS S0-DUCT
T2 PE_PNE_CVO
T2 LF_FED
T2 CASETTE SIZE
T3 PE_PNE_CVO
T3 LF_FED
T3 CASETTE SIZE
T4 PE_PNE_CVO
T4 LF_FED
T4 CASETTE SIZE
T5 PE_PNE_CVO
T5 LF_FED
T5 CASETTE SIZE

MOTOR CLUTCH TEST
S1-ID MOTOR
S2-ID MOTOR
S3-ID MOTOR
S4-ID MOTOR
S5-ID MOTOR
BELT MOTOR
FUSER MOTOR
FUSER MTR REV
FUSER RLS
JOB OFFSET
T1 LIFT UP MOTOR
T1 HOPPING MOTOR
REGIST MOTOR
FEED MOTOR
MPT LIFT UP MOTOR
MPT MOTOR
TONER SUPPLY S1
TONER SUPPLY S2
TONER SUPPLY S3
TONER SUPPLY S4
TONER SUPPLY S5
ID UP/DOWN S1
ID UP/DOWN S2
ID UP/DOWN S3
ID UP/DOWN S4
ID UP/DOWN S5
ID UP/DOWN S-ALL
TR2 POS ADJUST
FACEDOWN SOLENOID
REGIST SHUTTER
LV FAN
FUSER FAN1
FUSER FAN2
FUSER FAN3
S1/5 FAN
S2/3/4 FAN
ID MOTOR FAN
TR2 FAN
T2 LIFT_UP MOTOR
T2 HOPPING MOTOR
T2 FEED CLUTCH

(continued box)
T3 LIFT_UP MOTOR
T3 HOPPING MOTOR
T3 FEED CLUTCH
T4 LIFT_UP MOTOR
T4 HOPPING MOTOR
T4 FEED CLUTCH
T5 LIFT_UP MOTOR
T5 HOPPING MOTOR
T5 FEED CLUTCH
DUPLEX SOLENOID
2PASS SOLENOID
DUPLEX ENTRY MOTOR
DUPLEX FEED MOTOR
2PASS FEED MOTOR
DUPLEX REG CLUTCH
DUPLEX FAN

Note:
The motor keeps running if holding down the **ENTER** button for two sec. to determine the choice. If the operation is canceled, press **CANCEL**.

TEST PRINT
PRINT EXECUTE
TEST PATTERN
TEST CASSETTE*1
PAGE
STATION
MEDIA
OUTPUT BIN
DUPLEX*1
JOB OFFSET

*1: TRAY2, TRAY3, TRAY4 and DUPLEX are displayed only when installed.

REG ADJUST TEST
REG ADJ EXECUTE
REG ADJ RESULT
WRT POS ADJ EXE
WRT POS ADJ RSLT

DENS ADJUST TEST
DENS ADJ EXECUTE
DENS ADJ PAR-SET
DENS ADJ RESULT
AUTO CALIBRATION

MEDIA WT ADJUST PA
EDIT THICKNESS DATA
WEIGHT SCAN
ADJ EXEC
WEIGHT SCAN ADJ RSLT

PAPER WIDTH SNS ADJ
WIDTH ADJ PAR-SET
WIDTH SNS ADJ EXE
WIDTH SNS ADJ RSLT

CONSUMABLE STATUS
S1-ID UNIT
S2-ID UNIT
S3-ID UNIT
S4-ID UNIT
S5-ID UNIT
S1-ID USED
S2-ID USED
S3-ID USED
S4-ID USED
S5-ID USED
FUSER UNIT
FUSER USED
TR BELT UNIT
TR BELT USED
S1-TONER (FULL)
S2-TONER (FULL)
S3-TONER (FULL)
S4-TONER (FULL)
S5-TONER (FULL)
S1 OVER RIDE CNT
S2 OVER RIDE CNT
S3 OVER RIDE CNT
S4 OVER RIDE CNT
S5 OVER RIDE CNT

PRINTER STATUS
S1-IMPRESSIONS
S2-IMPRESSIONS
S3-IMPRESSIONS
S4-IMPRESSIONS
S5-IMPRESSIONS
TOTAL SHEET CNT

FACTORY MODE SET
FACTORY MODE SET

SENSOR SETTING
TONER SENSOR
DISPOSAL TNR SNS
BELT UNIT CHECK
ID UNIT CHECK
REG ADJUST ERROR
DRUM OVER LIFE
WR POINT REV

Note:
[ENTER]button held down (3seconds) when parameter is decided.

LED HEAD DATA
S1
S2
S3
S4
S5

DRUM MANUAL CLEANING
DRUM MANUAL CLEANING

FUSER
CLEAR

ERROR CODE
ERROR CODE P1
ERROR CODE P2
ERROR CODE P3

5.3.2.2   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	Color registration adjustment test	REG ADJUST TEST	Judges the color registration adjustment mechanism as pass or fail.	No.20
5	Density adjustment test	DENS ADJ TEST	Judges the density adjustment mechanism as pass or fail.	No.21
6	Media weight sensor adjustment	MEDIA WT ADJUST PA	Executes the adjustment of the media weight sensor sensitivity.	No.28
7	Paper width sensor adjustment	PAPER WIDTH SNS ADJ	Executes the adjustment of the paper width sensor sensitivity.	Unavailable
8	Consumable counter display	CONSUMABLE STATUS	Displays the usage of consumables.	No.23
9	Consumable life counter display	PRINTER STATUS	Displays the life counter of consumables.	No.23
10	Factory/Shipping mode switching	FACTORY MODE SET	Switches between Factory and Shipping modes	No.3, No.24
11	Engine parameter setting	SENSOR SETTING	Sets whether to enable or disable error detection performed by each sensor.	No.25
12	Display of LED head serial number	LED HEAD DATA	Displays the serial number of LED head data.	Unavailable
13	Execution of Drum cleaning mode	DRUM MANUAL CLEANING	Executes manual cleaning of a drum surface	Unavailable
14	Information of fuser setting	FUSER	This item is not used.	Unavailable
15	Display of error code	ERROR CODE	Displays the error code	Unavailable

5.3.2.2.1 Entering self-diagnostic mode (level 1)

Note! Entering the System Maintenance mode requires a password. Refer to table 5-1 for description on it.

1. Press the **BACK**, **OK** and **ON LINE** in combination after "Ready" is displayed to enter the System Maintenance mode.

2. Press the **MENU△** or **MENU∨** button to select "Engine Diag Mode". Then press the **OK** button to display "DIAGNOSTIC MODE".

```
DIAGNOSTIC MODE

XX.XX.XX   ○-MODE
```
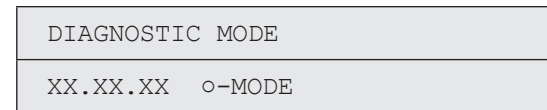
3. XX.XX.XX of "DIAGNOSTIC MODE XX.XX.XX" displayed on the LCD display identifies the PU firmware version. The FACTORY WORKING MODE setting is displayed in the right portion of the lower row. The setting is normally S-MODE, which identifies Shipping.

4. Press the **MENU△** or **MENU∨** button to go to each self-diagnostic step (press the **MENU△** or **MENU∨** button to display the next or preceding menu option).

5.3.2.2.2 Exiting self-diagnostic mode

1. Press the **BACK** button when "DIAGNOSTIC MODE" is displayed.

5.3.2.3 Switch scan test

The switch scan test is used for checking IN 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 **OK** button.

```
SWITCH SCAN

```
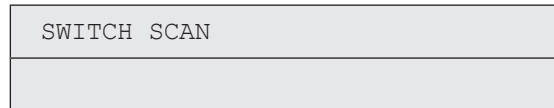
2. Press the **MENU∧** or **MENU∨** button until an option shown in table 5-3 for the unit to test appears on the lower display (the **MENU∧** button displays the next option and the **MENU∨** button displays the preceding option).

3. Press the **OK** button. The switch scan test starts, the unit's name and current status being displayed

```
IN1 IN2 IN3  FIN

1=H 2=L 3=H 4=L
```
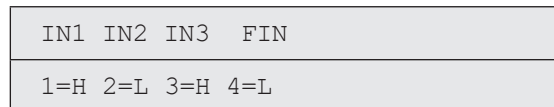
Operate the unit (figure 5-1/5-2). Display information on applicable LCD display (the information displayed vary depending on the sensor.Refer to table 5-3.)

4. Press the **CANCEL** button to return to the state in step2.

5. Repeat steps 2 through 4 when necessary.

6. Press the **BACK** button to end the test (the state in step 1 is restored.)
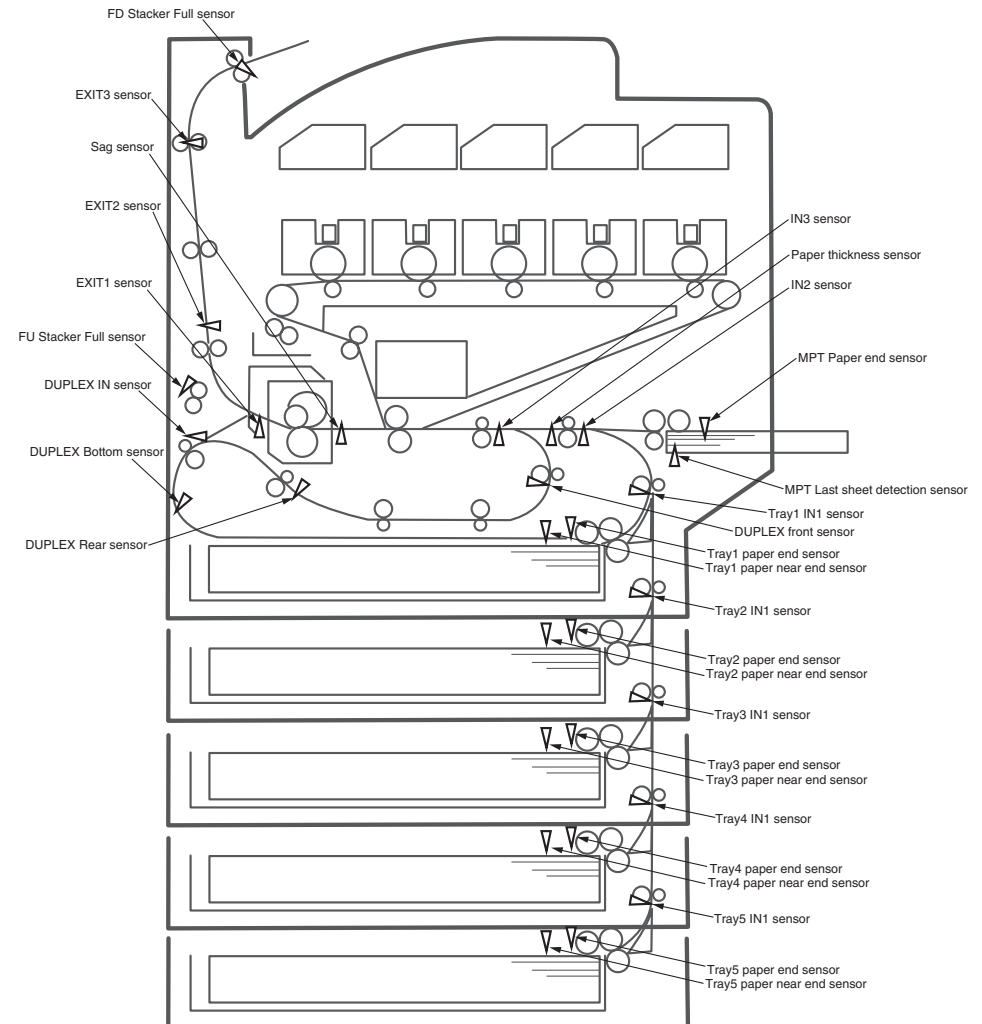
Figure 5-1-1 Switch sensor locations (Paper sensor)
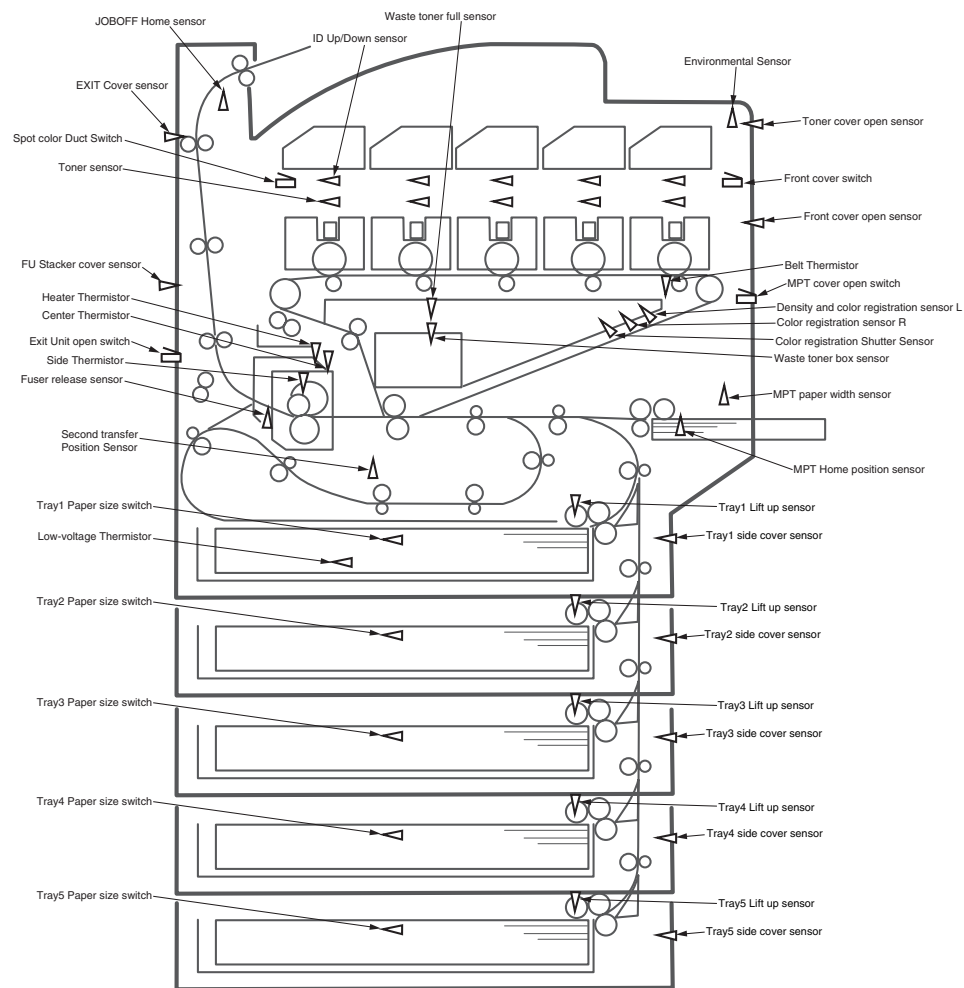
Figure 5-1-2 Switch sensor locations (Other sensors)

Table 5-3 SWITCH SCAN Detail

Upper display	1 Detail	1 Lower display	2 Detail	2 Lower display	3 Detail	3 Lower display	4 Detail	4 Lower display	5 Detail	5 Lower display
IN1 IN2 IN3 WR FIN	IN1 sensor	H: No paper exists. L: Paper exists.	IN2 sensor	H: No paper exists. L: Paper exists.	IN3 sensor	H: No paper exists. L: Paper exists.			Sag sensor	H: Paper exists. L: No paper exists.
EX1 EX2 EX3 STFD_FU	Exit 1 sensor	H: No paper exists. L: Paper exists.	Exit2 sensor	H: No paper exists. L: Paper exists.	Exit3 sensor	H: No paper exists. L: Paper exists.	FD Stack Full Sensor	H: No paper exists. L: Paper exists.	FU Stack Full sensor	H: No paper exists. L: Paper exists.
T1 PE_PNE_ LIFT	Tray 1 Paper-end sensor	H: Paper exists. L: No Paper exists.	Tray 1 Paper-near end sensor	H: Paper exists. L: No paper exists.			Tray 1 Lift up Sensor	H: Down L: Up		
MPT PE_ PNE_LIFT	MPT Paper end sensor	H: No paper exists. L: Paper exists.	MPT Last sheet detection sensor*	H: Blocked L: Transparent			MPT Home position sensor	H: Up L: Down		
PU DUPSNS F	DUPLEX front sensor (Detect the main unit)	H: Paper exists. L: No paper exists.								
DUPSNS I_R_ F_B	DUPLEX IN sensor	H: Paper exists. L: No paper exists.	DUPLEX rear sensor	H: Paper exists. L: No paper exists.	DUPLEX front sensor (Detects DUP side)	H: Paper exists. L: No paper exists.	DUPLEX bottom sensor	H: Paper exists. L: No paper exists.		
T1 CASETTE SIZE	Tray 1 Paper size1 switch	Port Level H, L	Tray 1 Paper size2 switch	Port Level H, L	Tray 1 Paper size3 switch	Port Level H, L	Tray 1 Paper size4 switch	Port Level H, L		
CVO SI_FR_ TC	Tray 1 side cover sensor	H: Close L: Open	Front cover Open sensor	H: Open L: Close	Toner Cover Open sensor	H: Open L: Close				
CVO EX_FU_ MPT	EXIT Cover sensor	H: Close L: Open	FU stacker Cover sensor	H: Close L: Open	MPT Cover Open switch	H: Open L: Close				
LATCH FR_ EX_TC	Front-cover Open (Hold)	H: Not Opened L: Opened	Exit unit open switch(Hold)	H: Not Opened L: Opened	Toner Cover Open Sensor (Hold)	H: Not Opened L: Opened				
ID UP/DOWN	Station 1 ID Up Down	H: Down L: UP	Station 2 ID Up Down	H: Down L: UP	Station 3 ID Up Down	H: Down L: UP	Station 4 ID Up Down	H: Down L: UP	Station 5 ID Up Down *3	H: Down L: UP
TONER SENS	Station 1 Remaining toner amount	H: Blocked L: Transparent	Station 2 Remaining toner amount	H: Blocked L: Transparent	Station 3 Remaining toner amount	H: Blocked L: Transparent	Station 4 Remaining toner amount	H: Blocked L: Transparent	Station 5 Remaining toner amount	H: Blocked L: Transparent
HT THERMISTER	Center thermistor	AD value: **H			Side Thermistor	AD value: **H	Heater Thermistor	AD value: **H		
HUM_TEMP_ LVPS_ BELT	Environmental Sensor (Humidity)	AD value: **H	Environmental Sensor (Temperature)	AD value: **H	Low-voltage Thermistor	AD value: **H	BELT Thermistor	AD value: **H		
DEN L_K_ COL/R_K_ COL	Density and color registration sensor L (Black)	AD value: **H	Density and color registration sensor L (Color)	AD value: **H	Density and color registration sensor R (Black)	AD value: **H	Density and color registration sensor R (Color)	AD value: **H		
THICK MPT_ PW T1LIFT	Media Weight Sensor	AD value: **H	MPT Paper width Sensor	AD value: **H	Tray1 Lift-Up Motor Current	AD value: **H				
F-RL JOFF EXO REGS	Fuser unit Release Sensor	H: ON L: OFF	JOBOFF Home sensor	H: Home L: Off Set	Exit Unit open switch	H: Without unit L: With unit	Color Misregistration Shutter Sensor	H: Close L: Open		

| Upper display | 1 | | 2 | | 3 | | 4 | | 5 | |
	Detail	Lower display	Detail	Lower display	Detail	Lower display	Detail	Lower display	Detail	Lower display
BF TAG [*2]	1st TAG UID of the belt / fuser line	UID: ***H	2nd TAG UID of the belt / fuser line	UID: ***H						
TC TAG [*2]	1st TAG UID of TC line	UID: ***H	2nd TAG UID of TC line	UID: ***H	3rd TAG UID of TC line	UID: ***H	4th TAG UID of TC line	UID: ***H		
ID TAG [*2]	1st TAG UID of ID line	UID: ***H	2nd TAG UID of ID line	UID: ***H	3rd TAG UID of ID line	UID: ***H	4th TAG UID of ID line	UID: ***H		
SP TAG [*2]	1st TAG UID of Spot color Line	UID: ***H	2nd TAG UID of Spot color Line	UID: ***H						
DISTNR FULL_BOX	Waste Toner Full Sensor	H: Full L: Empty	Waste Toner box sensor	H: Exist L: No Exist.						
TR2POS S0-DUCT	Second transfer Position Sensor	H: Home L: Other than Home	Spot color Duct Switch	H: Without unit L: With unit						
T2 PE_PNE_CVO	Tray 2 Paper End Sensor	H: Paper exists. L: No paper exists.	Tray 2 Paper Near End Sensor	H: Paper exists. L: No paper exists.	Tray 2 Side Cover Sensor	H: Close L: Open				
T2 LF_FED			Tray 2 Lift-up Sensor	H: Down L: Up	Tray 2 IN Sensor	H: No paper exists. L: Paper exists.				
T2 CASETTE SIZE	Tray 2 Paper Size1 Switch	Port Level H, L	Tray 2 Paper Size2 Switch	Port Level H, L	Tray 2 Paper Size3 Switch	Port Level H, L	Tray 2 Paper Size4 Switch	Port Level H, L		
T3 PE_PNE_CVO	Tray 3 Paper End Sensor	H: Paper exists. L: No paper exists.	Tray 3 Paper Near End Sensor	H: Paper exists. L: No paper exists.	Tray 3 Side Cover Sensor	H: Close L: Open				
T3 LF_FED			Tray 3 Lift-up Sensor	H: Down L: Up	Tray 3 IN Sensor	H: No paper exists. L: Paper exists.				
T3 CASETTE SIZE	Tray 3 Paper Size1 Switch	Port Level H, L	Tray 3 Paper Size2 Switch	Port Level H, L	Tray 3 Paper Size3 Switch	Port Level H, L	Tray 3 Paper Size4 Switch	Port Level H, L		
T4 PE_PNE_CVO	Tray 4 Paper End Sensor	H: Paper exists. L: No paper exists.	Tray 4 Paper Near End Sensor	H: Paper exists. L: No paper exists.	Tray 4 Side Cover Sensor	H:Close L:Open				
T4 LF_FED			Tray 4 Lift-up Sensor	H: Down L: Up	Tray 4 IN Sensor	H: No paper exists. L: Paper exists.				
T4 CASETTE SIZE	Tray 4 Paper Size1 Switch	Port Level H, L	Tray 4 Paper Size2 Switch	Port Level H, L	Tray 4 Paper Size3 Switch	Port Level H, L	Tray 4 Paper Size4 Switch	Port Level H, L		
T5 PE_PNE_CVO	Tray 5 Paper End Sensor	H: Paper exists. L: No paper exists.	Tray 5 Paper Near End Sensor	H: Paper exists. L: No paper exists.	Tray 5 Side Cover Sensor	H:Close L:Open				
T5 LF_FED			Tray 5 Lift-up Sensor	H: Down L: Up	Tray 5 IN Sensor	H: No paper exists. L: Paper exists.				
T5 CASETTE SIZE	Tray 5 Paper Size1 Switch	Port Level H, L	Tray 5 Paper Size2 Switch	Port Level H, L	Tray 5 Paper Size3 Switch	Port Level H, L	Tray 5 Paper Size4 Switch	Port Level H, L		

Lower display shows asterisk (*) when function on upper display is unavailable.

*1 Rotation is detected by repeating H and L.

*2 N is displayed when no tag is installed.

*3 Only C942

Table 5-4 Tray 1 to 5 CASETTE SIZE Paper Size Sensor Response

TRAY	Lower display				PX753
	1	2	3	4	
T1 CASETTE SIZE	H	H	H	H	No Cassette
T2 CASETTE SIZE	H	H	L	L	A3n
T3 CASETTE SIZE	L	H	L	L	Tabloid
T4 CASETTE SIZE	L	H	H	L	A3
T5 CASETTE SIZE	H	H	H	L	B4
	H	L	H	L	Legal14/13.5
	H	L	H	H	Legal13
	L	L	L	H	A4
	L	L	L	L	Letter
	L	L	H	L	Executive
	L	L	H	H	B5
	L	H	L	H	Letter LEF
	H	H	L	H	A4 LEF
	H	L	L	H	A5
	L	H	H	H	B5 LEF
	H	L	L	L	A6

5.3.2.4 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 OK button.

2. Press the **MENU**∧ or **MENU**∨ button until an option shown in table 5-5 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

S1-ID MOTOR
```

3. Press the **OK** 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 5-2).

Note! The state in step 2 is restored after the unit is driven for 10 seconds. The unit is driven again by pressing an appropriate button.

- The motor keeps running if holding down not the **OK** button but the **ON LINE** button. to determine the motor.
- 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).

  * "ID UP/DOWN" and FUSER RLS" , "TR2 POS ADJUST"continue until the **CANCEL** button is pressed.

4. Press the **CANCEL** button. The state in step 2 is restored. (The display of the corresponding unit is maintained.)

5. Repeat steps 2 through 4 when necessary.

6. Press the **BACK** button to end the test (the state in step 1 is restored).
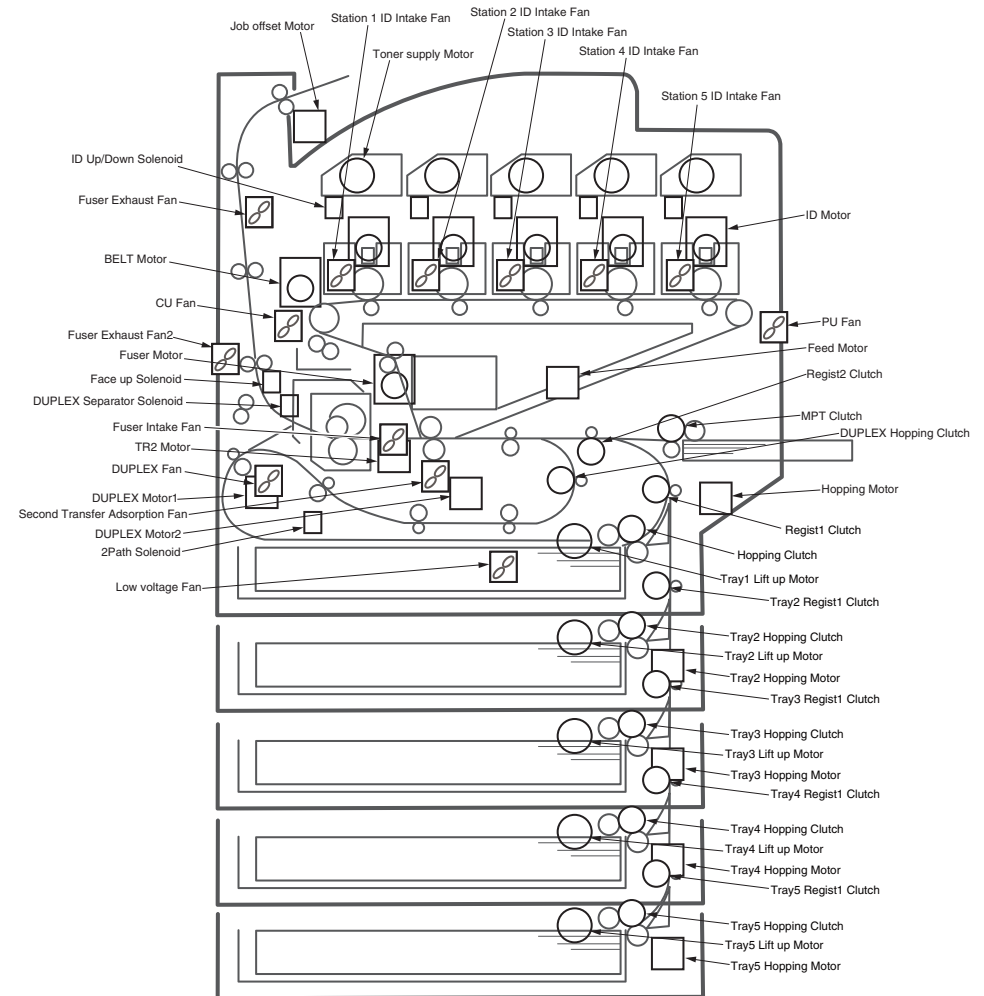
Figure 5-2

Table5-5

Panel Display	Driven Unit	Conditions for Driving Limitation
S1-ID MOTOR	Station 1 ID motor, Low-voltage Fan, PU Fan, ID exhaust Fan, ID intake Fan, Fan before fuser, Duplex Fan	Spot-color duct cover is closed. All IDs (S1/S2/S2/S4/S5) are removed.(Note1)
S2-ID MOTOR	Station 2 ID motor, Low-voltage Fan, PU Fan, ID exhaust Fan, ID intake Fan, Fan before fuser, Duplex Fan	All IDs (S1/S2/S2/S4/S5) are removed.
S3-ID MOTOR	Station 3 ID motor, Low-voltage Fan, PU Fan, ID exhaust Fan, ID intake Fan, Fan before fuser, Duplex Fan	All IDs (S1/S2/S2/S4/S5) are removed.
S4-ID MOTOR	Station 4 ID motor, Low-voltage Fan, PU Fan, ID exhaust Fan, ID intake Fan, Fan before fuser, Duplex Fan	All IDs (S1/S2/S2/S4/S5) are removed.
S5-ID MOTOR	Station 5 ID motor, Low-voltage Fan, PU Fan, ID exhaust Fan, ID intake Fan, Fan before fuser, Duplex Fan	All IDs (S1/S2/S2/S4/S5) are removed.
BELT MOTOR	Belt motor, Low-voltage Fan, PU Fan, ID exhaust Fan, ID intake Fan, Fan before fuser, Duplex Fan	All IDs (S1/S2/S2/S4/S5) are removed.
FUSER MOTOR	Fuser motor (Normal rotation)	-
FUSER MTR REV	Fuser motor (Reverse rotation)	-
FUSER RLS	Fuser motor (Normal and reverse rotation)	Fuser unit is installed and rail unit is closed.
JOB OFFSET	Job offset	
T1 LIFT UP MOTOR	Tray 1 Lift-up Motor	The tray is removed.
T1 HOPPING MOTOR	Hopping motor Tray1 hopping clutch	The tray is removed.
REGIST MOTOR	Hopping motor Regist clutch 1	Rail unit is closed.
FEED MOTOR	Feed motor Regist clutch 2	MPT cover and Rail Unit is closed.
MPT LIFT UP MOTOR	Hopping motor (Reverse rotation)	Rail unit is closed.
MPT MOTOR	Hopping motor MPT clutch	Rail Unit is closed.
TONER SUPPLY S1	Station 1 Toner supply motor	Spot-color duct cover is closed.(Note1)
TONER SUPPLY S2	Station 2 Toner supply motor	
TONER SUPPLY S3	Station 3 Toner supply motor	

Panel Display	Driven Unit	Conditions for Driving Limitation
TONER SUPPLY S4	Station 4 Toner supply motor	
TONER SUPPLY S5	Station 5 Toner supply motor	
ID UP/DOWN S1	Station1 ID motor Belt motor Station 1 Up/ Down Solenoid	Do not use ID UP/DOWN S1 to S4. Allow use only ID UP/DOWN ALL for to ID UP/DOWN test.
ID UP/DOWN S2	Station2 ID motor Belt motor Station 2 Up/ Down Solenoid	
ID UP/DOWN S3	Station3 ID motor Belt motor Station 3 Up/ Down Solenoid	
ID UP/DOWN S4	Station 4 ID motor Belt motor Station 4 Up/ Down Solenoid	
ID UP/DOWN S5 *[1]	Station 5 ID motor Belt motor Station 5 Up/ Down Solenoid	SIDE/FRONT/EXIT/MPT/ LEFT/TONER cover are closed
ID UP/DOWN ALL	Station 1 to 5 ID motor Belt motor Station 1 to 5 Up/ Down Solenoid	SIDE/FRONT/EXIT/MPT/ LEFT/TONER cover are closed. It does not work when error occurs.
TR2 POS ADJUST	TR2 position motor	Rail unit is closed.
FACEDOWN SOLENOID	Face-up Solenoid	Rail unit is closed.
REGIST SHUTTER	Feed motor (Reverse rotation)	MPT cover and Rail Unit are closed.
LV FAN	Low-voltage fan	
FUSER FAN1	Fuser exhaust fan	
FUSER FAN2	Fuser intake fan	
FUSER FAN3	Fuser exhaust fan 2	
S1/5 FAN	Station 1/5 ID Intake fan	
S2/3/4 FAN	Station 2/3/4 ID Intake fan	
ID MOTOR FAN	PU Fan	
TR2 FAN	Second transfer adsorption fan	Rail unit is closed.

Panel Display	Driven Unit	Conditions for Driving Limitation
T2 LIFT_UP MOTOR	Tray 2 lift-up motor	The tray is removed.
T2 HOPPING MOTOR	Tray 2 hopping motor Tray 2 hopping clutch	The tray is removed.
T2 FEED CLUTCH	Tray 2 hopping motor Tray 2 regist clutch	
T3 LIFT_UP MOTOR	Tray 3 lift-up motor	The tray is removed.
T3 HOPPING MOTOR	Tray 3 hopping motor Tray 3 hopping clutch	The tray is removed.
T3 FEED CLUTCH	Tray 3 hopping motor Tray 3 regist clutch	
T4 LIFT_UP MOTOR	Tray 4 lift-up motor	The tray is removed.
T4 HOPPING MOTOR	Tray 4 hopping motor Tray 4 hopping clutch	The tray is removed.
T4 FEED CLUTCH	Tray 4 hopping motor Tray 4 regist clutch	
T5 LIFT_UP MOTOR	Tray 5 lift-up motor	The tray is removed.
T5 HOPPING MOTOR	Tray 5 hopping motor Tray 5 hopping clutch	The tray is removed.
T5 FEED CLUTCH	Tray 5 hopping motor Tray 5 regist clutch	
DUPLEX SOLENOID	Duplex separator solenoid	Rail unit is closed.
2PASS SOLENOID	2-Pass solenoid	Duplex unit is installed and rail unit is closed.
DUPLEX ENTRY MOTOR	DUPLEX motor 1	Duplex unit is installed and rail unit is closed.
DUPLEX FEED MOTOR	DUPLEX motor 1 (Reverse rotation) DUPLEX motor 2	Duplex unit is installed and rail unit is closed.
2PASS FEED MOTOR	DUPLEX motor 1 DUPLEX motor 2 2-Pass solenoid	Duplex unit is installed and rail unit is closed.
DUPLEX REG CLUTCH	Feed motor DUPLEX hopping clutch	Rail unit is closed.
DUPLEX FAN	DUPLEX FAN	Duplex unit is installed and rail unit is closed.

*1: Only C942

(Note1) Display "FAILD" when four color model.

Note! ① Display while ID UP/DOWN is in progress

```
MOTOR & CLUTCH TEST

ID UP/DOWN ***
```

***: Identifies the number of times

② Display when the REGIST SHUTTER ON LINE button is pressed

```
MOTOR & CLUTCH TEST

SHT **********
```

**********: Identifies the number of times

③ Display while FUSER RLS is in progress

```
MOTOR & CLUTCH TEST

RLS *******
```

*******: Identifies the number of times

④ Display while TR2 POS ADJ is in progress

```
MOTOR & CLUTCH TEST

TR2 POS ADJ ***
```

***: Identifies the number of times

⑤ Display while JOB OFFSET ON LINE button is pressed.

```
MOTOR & CLUTCH TEST

JOB OFFSET *******
```

*******: Identifies the number of times

5.3.2.5 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 Chapter 7.

1. Enter the self-diagnostic mode (level 1) and, until TEST PRINT appears on the upper display, press the **MENU**∧ or **MENU**∨ button. Then press the OK button. (The **MENU**∧ button displays the next test option and the **MENU**∨ button displays the preceding test option)

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. Then press the ENTER button. (The **MENU**∧ button displays the next option and the **MENU**∨ button displays the preceding option) (Go to step 4 when set to its default, the option does not need to be set).

```
TEST PRINT

TEST PATTERN
```

3. Keep pressing the **MENU**∧, **MENU**∨ key, and press the **OK** button 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
```

4. By pressing **OK** button under the condition where "PRINT EXECUTE" is displayed in the lower line of the display after making a setting, the test print is executed based on the value set in the step 2 to 3.

```
TEST PRINT

PRINT EXECUTE
```

Pressing the **CANCEL** button stops the test print.

If an error is detected at the start of the test print or when executing the test print, the error is displayed on the panel and the test print is canceled.

Display	Settings	Default	Function
PRINT EXECUTE	-	-	Starts printing with the press of the OK button Ends printing with the press of the CANCEL button.
TEST PATTERN	0 ～ 15	0	0: Prints a blank page. 1 to 7: pattern printing (See the table 5-6) 8 to 15: Print 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. Not displayed when the tray 5 is not installed.
	TRAY2		
	TRAY3		
	TRAY4		
	TRAY5		
	MPT		
PAGE	0000	0000	Sets the number of test copies printed
STATION	S1	OFF	Sets a station to be used OFF: Not used ON: Used Even if setting of "the spot color print" is "invalidity" in the case of at 5 colors machine, it is not printed.
	S2	ON	
	S3	ON	
	S4	ON	
	S5	ON	
MEDIA	MEDIA TYPE	PLAIN PAPER	Changes the setting of a TRAY selected in TEST CASSETTE. See the table 5-7. If CUSTOM SIZE is not selected in MEDIA SIZE, CUSTOM LEN, and CUSTOM WIDTH are not displayed. If CU printing is performed form the corresponding tray before executing the test print, the default is a value specified by CU.
	MEDIA WEIGHT	MEDIUM LIGHT	
	MEDIA SIZE	A4(LEF)	
	CUSTOM LEN	0210	
	CUSTOM WIDTH	0297	
	MEDIA CHECK	ENABLE	Sets ENABLE/ DISABLE of the paper size check.
OUTPUT BIN	FACE DOWN	FACE DOWN	Selects the output bin. FACE DOWN/ FACE UP
	FACE UP		

Display	Settings	Default	Function
DUPLEX	3 PAGES STACK	OFF	Sets the selection of the number of stacked sheets for duplex print. 3 PAGES STACK: Performs duplex print with 3 pages stacked OFF: Performs simplex printing. 1 PAGES STACK: Performs duplex print with 1 page stacked. 2PASS: Performs 2PASS printing If DUPLEX is not installed, DUPLEX is not displayed.
	OFF		
	1 PAGE STACK		
	2PASS		
JOB OFFSET	OFF	OFF	Specifies ON/OFF of the JOB OFFSET.
	ON		

Notes! PAGE setting:

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

STATION setting:

When pressing the **OK** button while "STATION" is displayed in the upper line and "SELECT" is displayed lower line of the display, the following message is displayed and the device enters the print setting mode of each station. ON and OFF are changed over by using **MENU∧** or **MENU∨** button. The selection of the station is performed by the **ON LINE** button or **CANCEL** button and a blinking part is a station currently selected. Pressing the **BACK** button ends the station setting mode.

```
S1:OFF S2:ON  S3:ON

S4:ON  S5:ON
```

CUSTOM size setting:

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

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

Table 5-6 Test Print Pattern

Pattern No.	Output pattern
0	None (Blank paper)
1	2by2
2	4by4
3	Horizontal
4	Slant
5	Vertical
6	Vertical band
7	Full (Solid)

Table 5-7 MEDIA Setting Item

Table 5-7-1 MEDIA TYPE

Category	Setting value	
MEDIA TYPE	PLAIN PAPER	USERTYPE6
	TRANSPARENCY	USERTYPE7
	LABEL	USERTYPE8
	GLOSSY	USERTYPE8
	LETTERHEAD	USERTYPE10
	LABELS	USERTYPE11
	BOUND	USERTYPE12
	RECYCLED	USERTYPE13
	CARDSTOCK	USERTYPE14
	ROUGH	USERTYPE15
	USERTYPE1	USERTYPE16
	USERTYPE2	USERTYPE17
	USERTYPE3	USERTYPE18
	USERTYPE4	USERTYPE18
	USERTYPE5	USERTYPE20

Table 5-7-2 MEDIA WEIGHT

Category	Setting value
MEDIA WEIGHT	ULTRA LIGHT
	LIGHT
	MEDIUM LIGHT
	MEDIUM
	MEDIUM HEAVY
	HEAVY
	ULTRA HEAVY1
	ULTRA HEAVY2
	ULTRA HEAVY3
	ULTRA HEAVY4
	ULTRA HEAVY5
	AUTO

Table 5-7-3 MEDIA SIZE

Category	Setting value		
MEDIA SIZE	CUSTOM SIZE	POST CARD	YOUGATA2 (LEF)
	A3 PLUS	RETURN POSTCARD	YOUGATA4 (LEF)
	A3 WIDE	EXECUTIVE	KAKUGATA2 (SEF)
	A3	LEGAL13	KAKUGATA3 (LEF)
	A4 WIDE (LEF)	LEGAL13.5	KAKUGATA8 (LEF)
	A4 WIDE (SEF)	LEGAL14	INDEX CARD (3x5)
	A4 (LEF)	COM-6 3/4	16K(184x260) SEF
	A4 (SEF)	COM-9 (LEF)	16K(195x270) SEF
	A5 (LEF)	COM-10 (LEF)	16K(197x273) SEF
	A5 (SEF)	A2 Envelope	16K(184x260) LEF
	A6 (SEF)	A6 Envelope	16K(195x270) LEF
	B4	A7 Envelope	16K(197x273) LEF
	B5 (LEF)	MONARCH (LEF)	8K(260x368)mm
	B5 (SEF)	DL (LEF)	8K(270x390)mm
	B6 (SEF)	C5 (LEF)	8K(273x394)mm
	B6-HALF (SEF)	C4 (LEF)	STATEMENT
	TABLOID EXTRA	NAGAGATA3 (LEF)	
	TABLOID	NAGAGATA4 (LEF)	
	LETTER (LEF)	NAGAGATA40 (LEF)	
	LETTER (SEF)	YOUGATA0 (LEF)	

Print Patterns (Cannot be used for print quality check.)

Patterns 0 and 8 to 15 ... Prints blank sheet.

Pattern 1
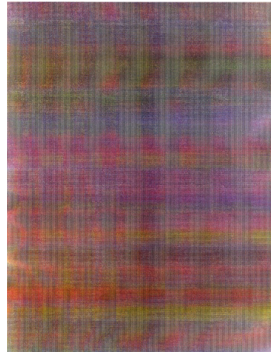
Pattern 2

Pattern 3
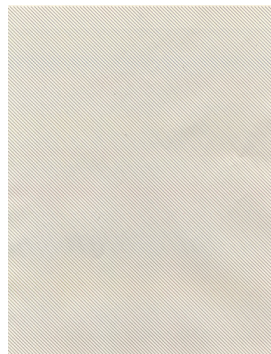
Pattern 4
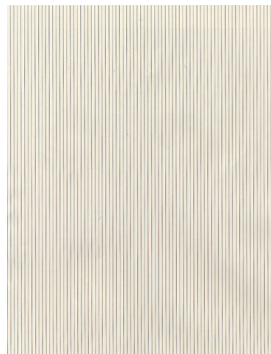
Pattern 5
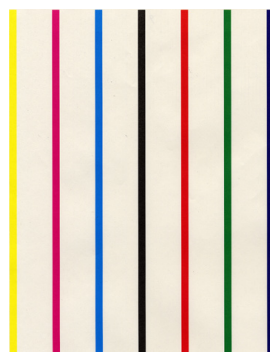
Pattern 6

Pattern 7

Note! - Printing 100% of solid black print (pattern 7) contained in the test printing functions causes an offset.
To prevent this, the colors to print concurrently to produce Pattern 7 solid print copies must be limited to two or less by making the STATION setting.
- These samples are printed by four colors (CMYK). If spot color is used, the spot color is printed on the top, which varies the color.

- The following message appears when a test pattern is printed.

```
P=***
```
```
W=***
```

P: Number of test-print pages (Unit: sheets)
W: Belt temperature wait time (Unit: seconds)

- The displays are switched to the following by pressing the **MENU**△ or **MENU**∨ button.

```
U=***[###]  H=XXX
```
```
L=***[###]  S=XXX
```

U: *** = Center thermistor target temperature [Unit: ˚C]
   [###] = Center thermistor current temperature [Unit: ˚C]
H: XXX= Heater thermistor current temperature [Unit: ˚C]
L : *** = Lower thermistor target temperature [Unit: ˚C] (Not used)
   [###] = Lower thermistor target temperature [Unit: ˚C] (Not used)
S: XXX= Site thermistor current temperature [Unit: ˚C]

```
T=***
```
```
H=***%
```

T: A measured environment temperature [Unit: ˚C]
H: A measured environment humidity [Unit: %]

```
S1TR=*.**  S2TR=*.**
```
```
S3TR=*.**  S4TR=*.**
```

S1TR: Station1 Transfer low-voltage setting value] Unit: KV]
S2TR: Station2 Transfer low-voltage setting value] Unit: KV]
S3TR: Station3 Transfer low-voltage setting value] Unit: KV]
S4TR: Station4 Transfer low-voltage setting value] Unit: KV]

```
S5TR=*.**
```

S5TR: Station5 Transfer low-voltage setting value] Unit: KV]

```
S1R=*.** S2R=*.**

S3R=*.** S4R=*.**
```

S1R: Station1 Transfer current value [Unit: uA]
S2R: Station2 Transfer current value [Unit: uA]
S3R: Station3 Transfer current value [Unit: uA]
S4R: Station4 Transfer current value [Unit: uA]

```
S5R=*.**
```

S5R: Station5 Transfer current value [Unit: uA]

```
ETMP=***UTMP=***

REG=****EXT=***
```

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].

REG: A hopping motor constant-speed timer value (a set input/output value) [Unit: HEX].

EXT: A fuser motor constant-speed timer value (a set input/output value) [Unit: HEX].

```
ID=**** BLT=****

LVTH=xxx(***)
```

ID: ID motor constant-speed timer value (I/O set value) [Unit: HEX]
BLT: Belt motor constant-speed timer value (I/O set value) [Unit: HEX]
LVTH: [xxx] = Low-voltage power temperature [Unit: ˚C]
       (***) = Low-voltage power thermistor scanning AD value [Unit: HEX]

```
BELT=xxxx(***)
```

BELT: xxxx = Belt temperature [Unit: ˚C]
       (***) = Belt thermistor scanning AD value [Unit: HEX]

```
THICK=***um

MPT W=***mm
```

THICK --- Media Weight detection value [Unit: μm]
MPT W --- MPT Paper width detection value [Unit: mm]

<<Temperature and Humidity Sensor and Thermistor Range that can be displayed>>

Name	Range that can be displayed		Unit
	Min	Max	
Environmental humidity	0	99	%
Environmental temperature	0	60	˚C
Low-voltage power thermistor	0	140	˚C
Fuser unit center thermistor	0	300	˚C
Fuser unit heater thermistor	0	300	˚C
Fuser unit Lower thermistor	0	300	˚C
Fuser unit side thermistor	0	300	˚C
Belt thermistor	-20	120	˚C

5.3.2.6 Color registration adjustment test

The color registration adjustment test is used for adjusting color registration or investigating the cause(s) of color misregistration.

Chapter 2 about description on color registration adjustment should be followed for recovery from an error caused by the test.

1. Enter the self-diagnostic-mode(Level1) and, until the following message appears, press the **MENU**△ or **MENU**∨ button.

```
REG ADJUST TEST

```

2. Press the **OK** button. The following message appears. Press the **MENU**△ or **MENU**∨ button until the intended option appears.

```
REG ADJUST TEST
REG ADJ EXECUTE
```

3. Press the **OK** button. The option displayed on the panel is performed:

   <When the REG ADJ EXECUTE is performed>

   ① Color registration adjustment test is performed, the lower line of the display starts blinking.

   ② When the test ends, the upper line of the display shows the result of the test (OK or an error name), the lower line of the display shows '****RESULT'.

```
OK
REG ADJ RESULT
```

   Pressing the **MENU**△ button displays the next test result.
   Pressing the **MENU**∨ button displays the preceding test result.
   Press the **BACK** button to return to step 2 (REG ADJ RESULT).

   Remark: The following message appears while the device is initialized or issues an alarm or when the cover is open.

```
NG
REG ADJ RESULT
```

③ Pressing the **CANCEL** button during the test cancels the test (turning on the ONLINE lamp), restoring the state of step 2.

<REG ADJ RESULT is performed>
   Same button operation as of REG ADJ EXECUTE in (2)

<WRT POS ADJ EXE is performed>
① Write start position adjustment is executed and the lower line of the display starts blinking.
② When the test ends, the upper line of the display shows the result of the test (OK or an error name), the lower display shows '****RESULT'.

```
OK
WRT POS ADJ RSLT
```

Pressing the **MENU**△ button displays the next test result.
Pressing the **MENU**∨ button displays the preceding test result.
Press the **BACK** button to return to step 2 (WRT POS ADJ RSLT).

Remark: The following message appears while the device is initialized or issues an alarm or when the cover is open.

```
NG
WRT POS ADJ RSLT
```

③ Pressing the **CANCEL** button during the test cancels the test (turning on the ONLINE lamp), restoring the state of step 2.

<WRT POS ADJ RSLT is performed>
   Same button operation as of WRT POS ADJ EXE in (2)

4. Repeat steps 2 and 3 when necessary.

5. Press the **BACK** button to end the test (the state is restored to the step 1).

Color registration correction test items

Display		Detail
REG ADJ EXECUTE	Executes color registration adjustment.	OK: Stores the adjustment value to EEPROM.
		NG: Displays an error and updates RESULT only.
REG ADJ RESULT	Displays the result of 'REG ADJ EXECUTE'.	For displayed items, refer to "REG ADJUST RESULT display item".
WRT POS ADJ EXE	Executes the adjustment of the writing starting position.	OK: Stores the adjustment value to EEPROM.
		NG: Displays an error and updates RESULT only.
WRT POS ADJ RSLT	Displays the result of 'WRT POS ADJ EXE'.	For displayed items, refer to "WRT POS ADJ RSLT display item".

Panel display at the completion of color registration correction test

Upper line of the display	Lower line of the display	Detail
OK / ERROR NAME	REG ADJ RESULT/ WRT POS ADJ RSLT	Displays only "OK" in the upper line of the display when no error occurs. Displays an error name when an error occurs. Displays "**** RESULT" corresponding to the test executed in the lower line of the display

Color registration correction test errors

Displayed error name	Contents
SECTION OVER	Non-detection error of pattern edge in the write start position correction
Zsens OVER	Detects an abnormal correction value in the write start position correction.
S1-SR RANGE(R)	Detects an abnormal color-registration correction value in the right position of S1 vertical-scanning coarse adjustment
S1-SR RANGE(L)	Detects an abnormal color-registration correction value in the left position of S1 vertical-scanning coarse adjustment
S2-SR RANGE(R)	Detects an abnormal color-registration correction value in the right position of S2 vertical-scanning coarse adjustment
S2-SR RANGE(L)	Detects an abnormal color-registration correction value in the left position of S2 vertical-scanning coarse adjustment
S3-SR RANGE(R)	Detects an abnormal color-registration correction value in the right position of S3 vertical-scanning coarse adjustment
S3-SR RANGE(L)	Detects an abnormal color-registration correction value in the left position of S3 vertical-scanning coarse adjustment
S4-SR RANGE(R)	Detects an abnormal color-registration correction value in the right position of S4 vertical-scanning coarse adjustment (Except C942)
S4-SR RANGE(L)	Detects an abnormal color-registration correction value in the left position of S4 vertical-scanning coarse adjustment (Except C942)

Displayed error name	Contents
S5-SR RANGE(R)	Detects an abnormal color-registration correction value in the right position of S5 vertical-scanning coarse adjustment (Only C942)
S5-SR RANGE(L)	Detects an abnormal color-registration correction value in the left position of S5 vertical-scanning coarse adjustment (Only C942)
S1-SF RANGE(R)	Detects an abnormal color-registration correction value in the right position of S1 vertical-scanning fine adjustment
S1-SF RANGE(L)	Detects an abnormal color-registration correction value in the left position of S1 vertical-scanning fine adjustment
S2-SF RANGE(R)	Detects an abnormal color-registration correction value in the right position of S2 vertical-scanning fine adjustment
S2-SF RANGE(L)	Detects an abnormal color-registration correction value in the left position of S2 vertical-scanning fine adjustment
S3-SF RANGE(R)	Detects an abnormal color-registration correction value in the right position of S3 vertical-scanning fine adjustment
S3-SF RANGE(L)	Detects an abnormal color-registration correction value in the left position of S3 vertical-scanning fine adjustment
S4-SF RANGE(R)	Detects an abnormal color-registration correction value in the right position of S4 vertical-scanning fine adjustment (Except C942)
S4-SF RANGE(L)	Detects an abnormal color-registration correction value in the left position of S4 vertical-scanning fine adjustment (Except C942)
S5-SF RANGE(R)	Detects an abnormal color-registration correction value in the right position of S5 vertical-scanning fine adjustment (Only C942)
S5-SF RANGE(L)	Detects an abnormal color-registration correction value in the left position of S5 vertical-scanning fine adjustment (Only C942)
S1-MR RANGE	Detects an abnormal color-registration correction value in S1 main-scanning coarse adjustment
S2-MR RANGE	Detects an abnormal color-registration correction value in S2 main-scanning coarse adjustment
S3-MR RANGE	Detects an abnormal color-registration correction value in S3 main-scanning coarse adjustment
S4-MR RANGE	Detects an abnormal color-registration correction value in S4 main-scanning coarse adjustment (Except C942)
S5-MR RANGE	Detects an abnormal color-registration correction value in S5 main-scanning coarse adjustment (Only C942)
S1-MF RANGE	Detects an abnormal color-registration correction value in S1 main-scanning fine adjustment
S2-MF RANGE	Detects an abnormal color-registration correction value in S2 main-scanning fine adjustment
S3-MF RANGE	Detects an abnormal color-registration correction value in S3 main-scanning fine adjustment
S4-MF RANGE	Detects an abnormal color-registration correction value in S4 main-scanning fine adjustment (Except C942)

Displayed error name	Contents
S5-MF RANGE	Detects an abnormal color-registration correction value in S5 main-scanning fine adjustment (Only C942)
S1-FINE(R)	Detects an abnormal color-registration correction value in the right position of S1 vertical-scanning fine adjustment
S1-FINE(L)	Detects an abnormal color-registration correction value in the left position of S1 vertical-scanning fine adjustment
S2-FINE(R)	Detects an abnormal color-registration correction value in the right position of S2 vertical-scanning fine adjustment
S2-FINE(L)	Detects an abnormal color-registration correction value in the left position of S2 vertical-scanning fine adjustment
S3-FINE(R)	Detects an abnormal color-registration correction value in the right position of S3 vertical-scanning fine adjustment
S3-FINE(L)	Detects an abnormal color-registration correction value in the left position of S3 vertical-scanning fine adjustment
S4-FINE(R)	Detects an abnormal color-registration correction value in the right position of S4 vertical-scanning fine adjustment (Except C942)
S4-FINE(L)	Detects an abnormal color-registration correction value in the left position of S4 vertical-scanning fine adjustment (Except C942)
S5-FINE(R)	Detects an abnormal color-registration correction value in the right position of S5 vertical-scanning fine adjustment (Only C942)
S5-FINE(L)	Detects an abnormal color-registration correction value in the left position of S5 vertical-scanning fine adjustment (Only C942)
S1-FINE(H)	Detects an abnormal color-registration correction value in S1 main-scanning fine adjustment
S2-FINE(H)	Detects an abnormal color-registration correction value in S2 main-scanning fine adjustment
S3-FINE(H)	Detects an abnormal color-registration correction value in S3 main-scanning fine adjustment
S4-FINE(H)	Detects an abnormal color-registration correction value in S4 main-scanning fine adjustment (Except C942)
S5-FINE(H)	Detects an abnormal color-registration correction value in S5 main-scanning fine adjustment (Only C942)
S1-DYNAMICRANGE(R)	Insufficient dynamic range of right sensor output of S1
S1-DYNAMICRANGE(L)	Insufficient dynamic range of left sensor output of S1
S2-DYNAMICRANGE(R)	Insufficient dynamic range of right sensor output of S2
S2-DYNAMICRANGE(L)	Insufficient dynamic range of left sensor output of S2
S3-DYNAMICRANGE(R)	Insufficient dynamic range of right sensor output of S3
S3-DYNAMICRANGE(L)	Insufficient dynamic range of left sensor output of S3
S4-DYNAMICRANGE(R)	Insufficient dynamic range of right sensor output of S4 (Except C942)
S4-DYNAMICRANGE(L)	Insufficient dynamic range of left sensor output of S4 (Except C942)

Displayed error name	Contents
S5-DYNAMICRANGE(R)	Insufficient dynamic range of right sensor output of S5 (Only C942)
S5-DYNAMICRANGE(L)	Insufficient dynamic range of left sensor output of S5 (Only C942)
S1-RANGE(R)	Detects an abnormal color-registration correction value in the right position of S1 vertical-scanning adjustment
S1-RANGE(L)	Detects an abnormal color-registration correction value in the left position of S1 vertical-scanning adjustment
S2-RANGE(R)	Detects an abnormal color-registration correction value in the right position of S2 vertical-scanning adjustment
S2-RANGE(L)	Detects an abnormal color-registration correction value in the left position of S2 vertical-scanning adjustment
S3-RANGE(R)	Detects an abnormal color-registration correction value in the right position of S3 vertical-scanning adjustment
S3-RANGE(L)	Detects an abnormal color-registration correction value in the left position of S3 vertical-scanning adjustment
S4-RANGE(R)	Detects an abnormal color-registration correction value in the right position of S4 vertical-scanning adjustment (Except C942)
S4-RANGE(L)	Detects an abnormal color-registration correction value in the left position of S4 vertical-scanning adjustment (Except C942)
S5-RANGE(R)	Detects an abnormal color-registration correction value in the right position of S5 vertical-scanning adjustment (Only C942)
S5-RANGE(L)	Detects an abnormal color-registration correction value in the left position of S5 vertical-scanning adjustment (Only C942)
S1-RANGE(H)	Detects an abnormal color-registration correction value in S1 main-scanning adjustment
S2-RANGE(H)	Detects an abnormal color-registration correction value in S2 main-scanning adjustment
S3-RANGE(H)	Detects an abnormal color-registration correction value in S3 main-scanning adjustment
S4-RANGE(H)	Detects an abnormal color-registration correction value in S4 main-scanning adjustment (Except C942)
S5-RANGE(H)	Detects an abnormal color-registration correction value in S5 main-scanning adjustment (Only C942)

Display Items of REG ADJUST RESULT

Upper line of the display	Lower line of the display	Details	Memory
D-RANGE(L) S1,S2,S3,S4	***H,***H,***H,***H	Left-side dynamic range measurement result [HEX] S1, S2, S3, S4 in order of the left (Except C942)	SRAM
D-RANGE(L) S1,S2,S3,S5	***H,***H,***H,***H	Left-side dynamic range measurement result [HEX] S1,S2,S3,S5 in order of the left (Only C942)	SRAM
D-RANGE(R) S1,S2,S3,S4	***H,***H,***H,***H	Right-side dynamic range measurement result [HEX] S1, S2, S3, S4 in order of the left (Except C942)	SRAM
D-RANGE(R) S1,S2,S3,S5	***H,***H,***H,***H	Right-side dynamic range measurement result [HEX] S1,S2,S3,S5 in order of the left (Only C942)	SRAM
CRSE ADJ S1 L,R,X	***, ***, ***	S1 LED coarse adjustment value [DEC：1/1200º]	SRAM
CRSE ADJ S2 L,R,X	***, ***, ***	S2 LED coarse adjustment value [DEC：1/1200º]	SRAM
CRSE ADJ S3 L,R,X	***, ***, ***	S3 LED coarse adjustment value [DEC：1/1200º]	SRAM
CRSE ADJ S4 L,R,X	***, ***, ***	S4 LED coarse adjustment value [DEC：1/1200º] (Except C942)	SRAM
CRSE ADJ S5 L,R,X	***, ***, ***	S5 LED coarse adjustment value [DEC：1/1200º] (Only C942)	SRAM
FINE ADJ S1 L,R,X	***, ***, ***	S1 LED fine adjustment value [DEC：1/1200º]	SRAM
FINE ADJ S2 L,R,X	***, ***, ***	S2 LED fine adjustment value [DEC：1/1200º]	SRAM
FINE ADJ S3 L,R,X	***, ***, ***	S3 LED fine adjustment value [DEC：1/1200º]	SRAM
FINE ADJ S4 L,R,X	***, ***, ***	S4 LED fine adjustment value [DEC：1/1200º] (Except C942)	SRAM
FINE ADJ S5 L,R,X	***, ***, ***	S5 LED fine adjustment value [DEC：1/1200º] (Only C942)	SRAM
REG ADJ S1 L,R,X	***, ***, ***	S1 LED adjustment value [DEC：1/1200º]	EEPROM
REG ADJ S2 L,R,X	***, ***, ***	S2 LED adjustment value [DEC：1/1200º]	EEPROM
REG ADJ S3 L,R,X	***, ***, ***	S3 LED adjustment value [DEC：1/1200º]	EEPROM
REG ADJ S4 L,R,X	***, ***, ***	S4 LED adjustment value [DEC：1/1200º] (Except C942)	EEPROM
REG ADJ S5 L,R,X	***, ***, ***	S5 LED adjustment value [DEC：1/1200º] (Only C942)	EEPROM
CRSE ADJ S1 [Y-L]	***, ***, ***	Pattern detection value in the left position of S1 LED vertical-scanning coarse adjustment	SRAM

Upper line of the display	Lower line of the display	Details	Memory
CRSE ADJ S1 [Y-R]	***, ***, ***	Pattern detection value in the right position of S1 LED vertical-scanning coarse adjustment	SRAM
CRSE ADJ S1 [X]	***, ***, ***	Pattern detection value of S1 LED main-scanning coarse adjustment	SRAM
CRSE ADJ S2 [Y-L]	***, ***, ***	Pattern detection value in the left position of S2 LED vertical-scanning coarse adjustment	SRAM
CRSE ADJ S2 [Y-R]	***, ***, ***	Pattern detection value in the right position of S2 LED vertical-scanning coarse adjustment	SRAM
CRSE ADJ S2 [X]	***, ***, ***	Pattern detection value of S2 LED main-scanning coarse adjustment	SRAM
CRSE ADJ S3 [Y-L]	***, ***, ***	Pattern detection value in the left position of S3 LED vertical-scanning coarse adjustment	SRAM
CRSE ADJ S3 [Y-R]	***, ***, ***	Pattern detection value in the right position of S3 LED vertical-scanning coarse adjustment	SRAM
CRSE ADJ S3 [X]	***, ***, ***	Pattern detection value of S3 LED main-scanning coarse adjustment	SRAM
CRSE ADJ S4 [Y-L]	***, ***, ***	Pattern detection value in the left position of S4 LED vertical-scanning coarse adjustment (Except C942)	SRAM
CRSE ADJ S4 [Y-R]	***, ***, ***	Pattern detection value in the right position of S4 LED vertical-scanning coarse adjustment (Except C942)	SRAM
CRSE ADJ S4 [X]	***, ***, ***	Pattern detection value of S4 LED main-scanning coarse adjustment (Except C942)	SRAM
CRSE ADJ S5 [Y-L]	***, ***, ***	Pattern detection value in the left position of S5 LED vertical-scanning coarse adjustment (Only C942)	SRAM
CRSE ADJ S5 [Y-R]	***, ***, ***	Pattern detection value in the right position of S5 LED vertical-scanning coarse adjustment (Only C942)	SRAM
CRSE ADJ S5 [X]	***, ***, ***	Pattern detection value of S5 LED main-scanning coarse adjustment (Only C942)	SRAM
FINE ADJ S1 [Y-L]	***, ***, ***	Pattern detection value in the left position of S1 LED vertical-scanning fine adjustment	SRAM
FINE ADJ S1 [Y-L]	***, ***		

Upper line of the display	Lower line of the display	Details	Memory
FINE ADJ S1 [Y-R]	***, ***, ***	Pattern detection value in the right position of S1 LED vertical-scanning fine adjustment	SRAM
FINE ADJ S1 [Y-R]	***, ***		
FINE ADJ S1 [X-L]	***, ***	Pattern detection value in the left position of S1 LED main-scanning fine adjustment	SRAM
FINE ADJ S1 [X-R]	***, ***	Pattern detection value in the right position of S1 LED main-scanning fine adjustment	SRAM
FINE ADJ S2 [Y-L]	***, ***, ***	Pattern detection value in the left position of S2 LED vertical-scanning fine adjustment	SRAM
FINE ADJ S2 [Y-L]	***, ***		
FINE ADJ S2 [Y-R]	***, ***, ***	Pattern detection value in the right position of S2 LED vertical-scanning fine adjustment	SRAM
FINE ADJ S2 [Y-R]	***, ***		
FINE ADJ S2 [X-L]	***, ***	Pattern detection value in the left position of S2 LED main-scanning fine adjustment	SRAM
FINE ADJ S2 [X-R]	***, ***	Pattern detection value in the right position of S2 LED main-scanning fine adjustment	SRAM
FINE ADJ S3 [Y-L]	***, ***, ***	Pattern detection value in the left position of S3 LED vertical-scanning fine adjustment	SRAM
FINE ADJ S3 [Y-L]	***, ***		
FINE ADJ S3 [Y-R]	***, ***, ***	Pattern detection value in the right position of S3 LED vertical-scanning fine adjustment	SRAM
FINE ADJ S3 [Y-R]	***, ***		
FINE ADJ S3 [X-L]	***, ***	Pattern detection value in the left position of S3 LED main-scanning fine adjustment	SRAM
FINE ADJ S3 [X-R]	***, ***	Pattern detection value in the right position of S3 LED main-scanning fine adjustment	SRAM
FINE ADJ S4 [Y-L]	***, ***, ***	Pattern detection value in the left position of S4 LED vertical-scanning fine adjustment (Except C942)	SRAM
FINE ADJ S4 [Y-L]	***, ***	(Except C942)	

Upper line of the display	Lower line of the display	Details	Memory
FINE ADJ S4 [Y-R]	***, ***, ***	Pattern detection value in the right position of S4 LED vertical-scanning fine adjustment (Except C942)	SRAM
FINE ADJ S4 [Y-R]	***, ***	(Except C942)	
FINE ADJ S4 [X-L]	***, ***	Pattern detection value in the left position of S4 LED main-scanning fine adjustment (Except C942)	SRAM
FINE ADJ S4 [X-R]	***, ***	Pattern detection value in the right position of S4 LED main-scanning fine adjustment (Except C942)	SRAM
FINE ADJ S5 [Y-L]	***, ***, ***	Pattern detection value in the left position of S5 LED vertical-scanning fine adjustment (Only C942)	SRAM
FINE ADJ S5 [Y-L]	***, ***	(Only C942)	
FINE ADJ S5 [Y-R]	***, ***, ***	Pattern detection value in the right position of S5 LED vertical-scanning fine adjustment (Only C942)	SRAM
FINE ADJ S5 [Y-R]	***, ***	(Only C942)	
FINE ADJ S5 [X-L]	***, ***	Pattern detection value in the left position of S5 LED main-scanning fine adjustment (Only C942)	SRAM
FINE ADJ S5 [X-R]	***, ***	Pattern detection value in the right position of S5LED main-scanning fine adjustment (Only C942)	SRAM

- Results will be stored as described in memory filed.
- The contents in SRAM are deleted when the test starts, and values detected at the normal competition or until the apparatus stops due to errors are written.
- The contents in EEPROM are updated only at the normal competition of the test.

WRT POS ADJ EXE ERROR Contents

Displayed error name	Contents
L* SECTION OVER	Cannot detect the write start position correction pattern. *: Detection section (1 to 5)
Zsens OVER	Over the correction value limit.

Display Items of WRT POS ADJ RSLT

Upper line of the display	Lower line of the display	Details	Memory
Vb =*** Vk =***	Vth=***	Vb: Belt reflection output AD value, Vk: Pattern reflection output AD value	SRAM
		Vth: AD value of the threshold for the judgment of the presence or absence of the pattern	SRAM
L1 LN=****AD=***	L2 LN=****AD=***	L1LN: SectionL1 Detection Line, AD: Section L1 Detection AD value	SRAM
		L2LN: Section L2 detection Line, AD: Section L2 detection AD value	SRAM
L3 LN=****AD=***	L4 LN=****AD=***	L3LN: SectionL3 Detection Line, AD: Section L3 Detection AD value	SRAM
		L4LN: Section L4 detection Line, AD: Section L4 detection AD value	SRAM
L5 LN=****AD=***	Zsns=****	L5LN: SectionL5 Detection Line, AD: Section L5 Detection AD value	SRAM
		Zsns: Misregistration amount of the write start position	EEPROM
BL 1=**** 2=****	3=**** 4=****	BL1: Misregistration amount of Block No.1, 2: Misregistration amount of Block No.2	SRAM
		BL3: Misregistration amount of Block No.3, 4: Misregistration amount of Block No.4	SRAM

- Results will be stored as described in memory filed.
- The contents in SRAM are deleted when the test starts, and values detected at the normal competition or until the apparatus stops due to errors are written.

5.3.2.7 Density adjustment test

The density adjustment test is used for performing a density adjustment function test and displaying the result of it to judge whether the density adjustment mechanism is proper.

Chapter 2 "Overview on density adjustment" should be followed for recovery from an error.

1. Enter the self-diagnostic-mode(Level1) and, until the following message appears, press the **MENU**∧ or **MENU**∨ button.

```
DENS ADJ TEST

```

2. Press the **OK** button. The following message appears. Press the **MENU**∧ or **MENU**∨ button until the intended option appears.

```
DENS ADJ TEST
DENS ADJ EXECUTE
```

3. Press the **OK** button. The test of an option displayed on the panel is performed:

   <When DENS ADJ EXECUTE is performed>

   ① Density adjustment test is executed, and the lower line of the display starts blinking)

   ② When the test ends, the upper line of the display shows the result of the test (OK or an error name), the lower line of the display shows '****RESULT'.

```
OK
DENS ADJ RESULT
```

   Pressing the **MENU**∧ button displays the next test result.

   Pressing the **MENU**∨ button displays the preceding test result.

   Press the **BACK** button to return to step 2 ("DANS ADJ RESULT").

   ③ Pressing the **CANCEL** button during the test cancels the test, restoring the state of step 2 ("DENS ADJ RESULT").

   <When DENS ADJ RESULT is executed>

   Same as the operation of the ②button in the excuting of the 'DENS ADJ EXECUTE '.

<When DENS ADJ PAR-SET is executed>

Displays the setting of Parameter for Density adjustment

<When AUTO CALIBRATION is executed>

① The auto setting for the density sensor correction value is executed, and the lower line of the display starts blinking.

② When the test ends, the upper line of the display shows the result of the test (OK or an error name), the lower line of the display shows '****RESULT'.

OK
DENS ADJ RESULT

Pressing the **MENU**∧ button displays the next test result.

Pressing the **MENU**∨ button displays the preceding test result.

Press the **BACK** button to return to step 2.

③ Pressing the **CANCEL** button during the test cancels the test, restoring the state of step 2.

Note! The special jig should be used for this test execution.

Remark: The following message appears while the printer is initialized, the printer displays some alarms or whose cover is opened.

NG
DENS ADJ RESULT

4. Repeat the step 3 when necessary.

5. Press the **BACK** button to end the test (the state returns to the step 1).

Density adjustment test items

SUB MENU	Details
DENS ADJ EXECUTE	Executes density adjustment.
DENS ADJ PAR-SET	Sets a control value for auto density adjustment. *Note)* Must not use.
DENS ADJ RESULT	Displays the result of density adjustment.
AUTO CALIBRATION	Automatically sets a density sensor sensitivity correction value. *Note)* Must not use.

Display at the completion of density adjustment test

Upper line of the display	Lower line of the display	Details
OK / ERROR NAME	DEN ADJ RESULT	Displays only "OK" in the upper line of the display when no error occurs. Displays an error name when errors occur.(Refer to the errors of the density adjustment test.) Displays "**** RESULT" corresponding to a test executed in the lower line of the display.

Errors of the density adjustment test

Displayed error name	Contents
COLOR SENSOR ERROR	Detects an abnormal sensor output during the continuous density detection. COLOR
BLACK SENSOR ERROR	Detects an abnormal sensor output during the continuous density detection. BLACK
COL CALIBRATION ERR	Abnormal end of the calibration of a sensor COLOR
BLK CALIBRATION ERR	Abnormal end of the calibration of a sensor BLACK
SHUTTER ERROR 1	Detects an abnormality when opening and closing the shutter during the continuous density detection.
SHUTTER ERROR 2	Detects an abnormality when opening and closing the shutter during the continuous density detection.
STATION 1 ID ERROR1	Detects the out of focus of the LED head or dirt due to ID failure.
STATION 2 ID ERROR1	Detects the out of focus of the LED head or dirt due to ID failure.
STATION 3 ID ERROR1	Detects the out of focus of the LED head or dirt due to ID failure.
STATION 4 ID ERROR1	Detects the out of focus of the LED head or dirt due to ID failure.
STATION 5 ID ERROR1	Detects the out of focus of the LED head or dirt due to ID failure.
STATION 1 ID ERROR2	Detects the out of focus of the LED head or dirt due to ID failure.
STATION 2 ID ERROR2	Detects the out of focus of the LED head or dirt due to ID failure.
STATION 3 ID ERROR2	Detects the out of focus of the LED head or dirt due to ID failure.

Displayed error name	Contents
STATION 4 ID ERROR2	Detects the out of focus of the LED head or dirt due to ID failure.
STATION 5 ID ERROR2	Detects the out of focus of the LED head or dirt due to ID failure.

Display Items of DENS ADJ RESULT

Upper line of the display	Lower line of the display	Details	Memory
LEV0 V/D OUT COL	V1=***HV1DA=***H	V1=***H: Color density sensor output when the LED current of the density sensor is 0[A]. [HEX] V1DA=***: DA setting value of the LED current of the density sensor at the color density detection determined by the color calibration of the density sensor. [HEX]	SRAM
LEV0 V/D OUT COL	AD=***H	Detected AD value at the completion of the calibration	SRAM
LEV0 V/D OUT BLK	V2=***HV2DA=***H	V2=***H: Black density sensor output when the LED current of the density sensor is 0[A]. [HEX] V1DA=***: DA setting value of the LED current of the density sensor at the black density detection determined by the black calibration of the density sensor. [HEX]	SRAM
LEV0 V/D OUT BLK	AD=***H	Detected AD value at the completion of the calibration	SRAM
LEV0 V/D OUT W	V3=***HV3DA=***H	V3=***H: Detected voltage value when the LED current of YMC density sensor is 0[A]. [HEX] V3DA=***: DAC setting value at YMC multiple points [HEX]	
LEV0 V/D OUT W	AD=***H	Detected AD value at the completion of the calibration	SRAM
L_DUTY DENS-S1	V01=***HS01=***H V02=***HS02=***H V03=***HS03=***H V04=***HS04=***H V05=***HS05=***H V06=***HS06=***H	01-03:First processing for averaging density 04-06: Second processing for averaging density V0X: Density sense value [HEX] S0X: Density detection value [HEX]	SRAM

Upper line of the display	Lower line of the display	Details	Memory
L_DUTY DENS-S2	V01=***HS01=***H V02=***HS02=***H V03=***HS03=***H V04=***HS04=***H V05=***HS05=***H V06=***HS06=***H	01-03:First processing for averaging density 04-06: Second processing for averaging density V0X: Density sense value [HEX] S0X: Density detection value [HEX]	SRAM
L_DUTY DENS-S3	V01=***HS01=***H V02=***HS02=***H V03=***HS03=***H V04=***HS04=***H V05=***HS05=***H V06=***HS06=***H	01-03:First processing for averaging density 04-06: Second processing for averaging density V0X: Density sense value [HEX] S0X: Density detection value [HEX]	SRAM
L_DUTY DENS-S4	V01=***HS01=***H V02=***HS02=***H V03=***HS03=***H V04=***HS04=***H V05=***HS05=***H V06=***HS06=***H	01-03:First processing for averaging density 04-06: Second processing for averaging density V0X: Density sense value [HEX] S0X: Density detection value [HEX]	SRAM
L_DUTY DENS-S5	V01=***HS01=***H V02=***HS02=***H V03=***HS03=***H V04=***HS04=***H V05=***HS05=***H V06=***HS06=***H	01-03:First processing for averaging density 04-06: Second processing for averaging density V0X: Density sense value [HEX] S0X: Density detection value [HEX]	SRAM
DELTA-S1 01=****	02=**** 03=****	01:Light adjustment value [DEC] 02: DB adjustment value (First)[DEC]	SRAM
DELTA-S2 01=****	02=**** 03=****	01:Light adjustment value [DEC] 02: DB adjustment value (First)[DEC]	SRAM
DELTA-S3 01=****	02=**** 03=****	01:Light adjustment value [DEC] 02: DB adjustment value (First)[DEC]	SRAM
DELTA-S4 01=****	02=**** 03=****	01:Light adjustment value [DEC] 02: DB adjustment value (First)[DEC]	SRAM
DELTA-S5 01=****	02=**** 03=****	01:Light adjustment value [DEC] 02: DB adjustment value (First)[DEC]	SRAM
DENSS1100%=***H DENS-S1 85%=***H DENS-S1 50%=***H DENS-S1 30%=***H DENS-S1 15%=***H	OD= **.****	Result of S1 detections at multiple points	SRAM

Upper line of the display	Lower line of the display	Details	Memory
DENSS2100%=*** H	OD= **.****	Result of S2 detections at multiple points	SRAM
DENS-S2 85%=***H			
DENS-S2 70%=***H			
DENS-S2 50%=***H			
DENS-S2 30%=***H			
DENS-S2 15%=***H			
DENSS3100%=*** H	OD= **.****	Result of S3 detections at multiple points	SRAM
DENS-S3 85%=***H			
DENS-S3 70%=***H			
DENS-S3 50%=***H			
DENS-S3 30%=***H			
DENS-S3 15%=***H			
DENSS4100%=***H	OD= **.****	Result of S4 detections at multiple points	SRAM
DENS-S4 85%=***H			
DENS-S4 70%=***H			
DENS-S4 50%=***H			
DENS-S4 30%=***H			
DENS-S4 15%=***H			
DENSS5100%=***H	OD= **.****	Result of S5 detections at multiple points	SRAM
DENS-S5 85%=***H			
DENS-S5 70%=***H			
DENS-S5 50%=***H			
DENS-S5 30%=***H			
DENS-S5 15%=***H			
BEFORE STD=***H	DET=***H ADJ=**H	Standard value before sensitivity adjustment, measured value, adjustment value	SRAM
AFTER STD=***H	DET=***H	Standard value after sensitivity adjustment, measured value,	SRAM
V1 1:**** 2:****	3:**** 4:**** 5:****	Detected AD value at the auto B,.G adjustment	SRAM
V2 1:**** 2:****	3:**** 4:**** 5:****	Detected AD value at the auto B,.G adjustment	SRAM
V3 1:**** 2:****	3:**** 4:**** 5:****	Detected AD value at the auto B,.G adjustment	SRAM
V4 1:**** 2:****	3:**** 4:**** 5:****	Detected AD value at the auto B,.G adjustment	SRAM
V5 1:**** 2:****	3:**** 4:**** 5:****	Detected AD value at the auto B,.G adjustment	SRAM

Upper line of the display	Lower line of the display	Details	Memory
1: ****V -***V	D.P +***V -**V	Upper left: Standard CH voltage Upper right: DB voltage at BG adjustment Lower left: CH offset voltage when dirt is detected Lower right: CH shift value	SRAM
2: ****V -***V	D.P +***V -**V	Upper left: Standard CH voltage Upper right: DB voltage at BG adjustment Lower left: CH offset voltage when dirt is detected Lower right: CH shift value	SRAM
3: ****V -***V	D.P +***V -**V	Upper left: Standard CH voltage Upper right: DB voltage at BG adjustment Lower left: CH offset voltage when dirt is detected Lower right: CH shift value	SRAM
4: ****V -***V	D.P +***V -**V	Upper left: Standard CH voltage Upper right: DB voltage at BG adjustment Lower left: CH offset voltage when dirt is detected Lower right: CH shift value	SRAM
5: ****V -***V	D.P +***V -**V	Upper left: Standard CH voltage Upper right: DB voltage at BG adjustment Lower left: CH offset voltage when dirt is detected Lower right: CH shift value	SRAM
BG. SB HOSEI	1:+***V 2:+***V 3:+***V 4:+***V 5:+***V	SB adjustment voltage by the auto B.G adjustment	SRAM
BG. CH HOSEI	1:+***V 2:+***V 3:+***V 4:+***V 5:+***V	CH adjustment voltage by the auto B.G adjustment	SRAM

- Results will be stored as described in memory filed.
- The contents in SRAM are deleted when the test starts, and values detected at the normal competition or until the apparatus stops due to errors are written.

5.3.2.8 Adjustment of Media Thickness Sensor

This self diagnosis is used for adjusting the media Thickness sensor.

Notes! Check the Zero point output of Media Thickness Sensor in advance.
① Display the Paper thickness sensor output with 5.3.2.3 Switch Scan test.
   Remove all papers at paper feed route as of now.
② Check paper thickness sensor output is 260h to 300h or not.
③ If out of range, carry out a Zero point adjustment of Media Thickness Sensor.

For the adjustment, four sheets of a media whose Thickness(It is more desirable for measure by micrometer) has been specified in advance are required. (Three sheets are required for the adjustment and one sheet is required for the check after the adjustment.)

Media to be used and setting values

No.	Type	Media Thickness setting value (Default)	Number of sheets (Default)	Remarks
1	Media for sensitivity correction	6EH (110 μm)	3	
2	Media for checking	6EH (110 μm)	1	

The thickness of typify is refer to the following table.

Paper thickness change by lot and environment so that recommend to measure by micrometer.

Media name	OKI data excellent white	OKI data excellent white (Thick)	Data Copy	HAMMERMILL 24lb	Mondi Color Copy 100	3M CG3600 (OHP)
size	A4	A4	A4	LT	A4	A4
Thickness (μm)	90	115	105	104	104	104

In order to execute this adjustment (MEDIA WT ADJUST PA), stack the above media in order in advance (No.1 and No.2 in order from the above four sheets in total) and then set the media on MPT.

1. Enter the self-diagnostic-mode(Level1) and, until the following message appears, press the **MENU**△ or **MENU**∨ button.

MEDIA WT ADJUST PA

2. Press the **OK** button. The following message appears. Press the **MENU**△ or **MENU**∨ button until the intended option appears.

MEDIA WT ADJUST PA
EDIT THICKNESS DATA

3. Press the **OK** button. The test of the option displayed on the panel is performed.

   <EDIT THICKNESS DATA is executed>

   ① When the above step 3 is performed, the following message appears. Press the **MENU**△ or **MENU**∨ button until the intended option appears.

SAMPLE PAGE

   ② By pressing the OK button while an item you wish to set is displayed, the option can be set. Enter a value you wanted to set with the following SW operation.

SAMPLE PAGE
P=*

   Pressing the **MENU**△ button displays the next test result.

   Pressing the **MENU**∨ button displays the preceding test result.

   ③ Press the **BACK** button to return to the ① .

   ④ Repeat the steps ① to ③ as necessary.

<WEIGHT SCAN ADJ EXEC is performed>

① The sensitivity adjustment of the media weight detection sensor starts and the lower line of the display starts blinking.

② When the sensitivity adjustment is completes, the upper line of the display shows the result of the test (OK or an error name), the lower line of the display shows '****RESULT'.

```
OK

WEIGHT SCAN ADJ RSLT
```

Remark: The following message appears while the printer is initialized or issues an alarm or when the cover is open.

```
NG

WEIGHT SCAN ADJ RSLT
```

Pressing the **MENU**∧ button displays the next test result.

Pressing the **MENU**∨ button displays the preceding test result.

Press the **BACK** button to return to step 2 (WEIGHT SCAN ADJ RSLT).

③ Pressing the **CANCEL** button during the test cancels the test, restoring the state of step 2.

<WEIGHT SCAN ADJ RSLT is performed>

Same button operation as of WEIGHT SCAN ADJ EXEC.

4. Repeat steps 2 and 3 as necessary.

5. Press the **BACK** button to end the test (the state is restored to the step1).

MEDIA WT ADJUST PA Selection Items

SUB MENU	Details	Handling of results
EDIT THICKNESS DATA	Number of sheets fed, media weight setting	For displayed items, refer to the table「EDIT THICKNESS DATA Selection Items」.
WEIGHT SCAN ADJ EXEC	Execution of media weight detection mechanical adjustment	OK: Writes an adjustment value in EEPROM. NG: Displays errors and updates RESULT only.
WEIGHT SCAN ADJ RSLT	Refer to the result of media weight detection mechanical adjustment.	For displayed items, refer to the table 「WEIGHT SCAN ADJ RESULT」.

EDIT THICKNESS DATA Selection Items

Upper line of the display	Lower line of the display	Details	Memory
S A M P L E PAGE	P=*	P: measurement page count. P value can be set from 1 to 9 by a cursor. Default: 3 **(Note2)**	SRAM
THICKNESS : P=1	T = * * * u m OFFSET=***	T: Setting weight of the first sheet [μ m] OFFSET: Weight adjustment [H] T value can be set from 46H to 10EH with a cursor. (1LSB → 1 μm) **(Note 2)**	SRAM
THICKNESS : P=2	T = * * * u m OFFSET=***	T: Setting weight of the second sheet [μ m] OFFSET: Weight adjustment [H] T value can be set from 46H to 10EH with a cursor. (1LSB → 1 μm) **(Note 1) (Note 2)**	SRAM
THICKNESS : P=3	T = * * * u m OFFSET=***	T: Setting weight of the third sheet [μ m] OFFSET: Weight adjustment [H] T value can be set from 46H to 10EH with a cursor. (1LSB → 1 μm) **(Note 1) (Note 2)**	SRAM
THICKNESS : P=4	T = * * * u m OFFSET=***	T: Setting weight of the fourth sheet [μ m] OFFSET: Weight adjustment [H] T value can be set from 46H to 10EH with a cursor. (1LSB → 1 μm) **(Note 1) (Note 2)**	SRAM
THICKNESS : P=5	T = * * * u m OFFSET=***	T: Setting weight of the fifth sheet [μ m] OFFSET: Weight adjustment [H] T value can be set from 46H to 10EH with a cursor. (1LSB → 1 μm) **(Note 1) (Note 2)**	SRAM
THICKNESS : P=6	T = * * * u m OFFSET=***	T: Setting weight of the sixth sheet [μ m] OFFSET: Weight adjustment [H] T value can be set from 46H to 10EH with a cursor. (1LSB → 1 μm) **(Note 1) (Note 2)**	SRAM
THICKNESS : P=7	T = * * * u m OFFSET=***	T: Setting weight of the seventh sheet [μ m] OFFSET: Weight adjustment [H] T value can be set from 46H to 10EH with a cursor. (1LSB → 1 μm) **(Note 1) (Note 2)**	SRAM
THICKNESS : P=8	T = * * * u m OFFSET=***	T: Setting weight of the eighth sheet [μ m] OFFSET: Weight adjustment [H] T value can be set from 46H to 10EH with a cursor. (1LSB → 1 μm) **(Note 1) (Note 2)**	SRAM
THICKNESS : P=9	T = * * * u m OFFSET=***	T: Setting weight of the ninth sheet [μ m] OFFSET: Weight adjustment [H] T value can be set from 46H to 10EH with a cursor. (1LSB → 1 μm) **(Note 1) (Note 2)**	SRAM
THICKNESS : P=CHK	T = * * * u m OFFSET=***	T: Setting weight of the check sheet [μ m] OFFSET: Weight adjustment [H] T value can be set from 46H to 10EH with a cursor. (1LSB → 1 μm) **(Note 2)**	SRAM

* Set items are effective for this test mode only. (Not written in EEPROM)

(Note 1) Up to the number of sheets set by "SAMPLE PAGE" of "EDIT THICKNESS DATA" can be displayed and set.

(Note 2) When the upper line of the panel shows "SAMPLE PAGE", "THICKNESS:P=*", Pressing the **MENU**∧ button displays the next test result. Pressing the **MENU**∨ button displays the preceding test result.

Panel display at the end of the test

Upper line of the display	Lower line of the display	Details
OK / ERROR NAME	WEIGHT SCAN ADJ RSLT	Displays only "OK" in the upper line of the display when no error occurs. Displays an error name when an error occurs. Displays "**** RESULT" corresponding to the test executed in the lower line of the display

Errors of media weight detection mechanical adjustment

Displayed error name	Contents
NON-P AD ERROR:P=*	*AD value when * n th sheet does not exist is out of the specified range Displays P=CHK when the media for checking.
THICKNESS ERR :P=*	The media weight value of *n th sheet is out of the specified range Displays P=CHK when the media for checking .
SLANT ERROR :P=*	The slant of *n th sheet is out of the specified range.
SNS AD ERROR :P=*	The difference of output at the presence or absence of *n th sheet is out of the specified range.
SNSOR ERROR	Failure in sensor

WEIGHT SCAN ADJ RESULT

Upper line of the display	Lower line of the display	Details	Memory
PAPER THICKNESS:P=1	SET=***um OUT=***um	In the first sheet SET: Setting weight [μ m] OUT: Weight [μ m]when detected by the standard sensitivity (1.4μ m)	SRAM
PAPER THICKNESS:P=2	SET=***um OUT=***um	In the second sheet SET: Setting weight [μ m] OUT: Weight [μ m]when detected by the standard sensitivity (1.4μ m) *(Note 1)*	SRAM
PAPER THICKNESS:P=3	SET=***um OUT=***um	In the third sheet SET: Setting weight [μ m] OUT: Weight [μ m]when detected by the standard sensitivity (1.4μ m) *(Note 1)*	SRAM

Upper line of the display	Lower line of the display	Details	Memory
PAPER THICKNESS:P=4	SET=***um OUT=***um	In the fourth sheet SET: Setting weight [μ m] OUT: Weight [μ m]when detected by the standard sensitivity (1.4μ m) *(Note 1)*	SRAM
PAPER THICKNESS:P=5	SET=***um OUT=***um	In the fifth sheet SET: Setting weight [μ m] OUT: Weight [μ m]when detected by the standard sensitivity (1.4μ m) *(Note 1)*	SRAM
PAPER THICKNESS:P=6	SET=***um OUT=***um	In the sixth sheet SET: Setting weight [μ m] OUT: Weight [μ m]when detected by the standard sensitivity (1.4μ m) *(Note 1)*	SRAM
PAPER THICKNESS:P=7	SET=***um OUT=***um	In the seventh sheet SET: Setting weight [μ m] OUT: Weight [μ m]when detected by the standard sensitivity (1.4μ m) *(Note 1)*	SRAM
PAPER THICKNESS:P=8	SET=***um OUT=***um	In the eighth sheet SET: Setting weight [μ m] OUT: Weight [μ m]when detected by the standard sensitivity (1.4μ m) *(Note 1)*	SRAM
PAPER THICKNESS:P=9	SET=***um OUT=***um	In the ninth sheet SET: Setting weight [μ m] OUT: Weight [μ m]when detected by the standard sensitivity (1.4μ m) *(Note 1)*	SRAM
CALCULATED SNS: P=1	S N S _ VALUE=*.**	SNS_VALUE: Value calculated by the sensitivity at the first sheet [mV/μm]	SRAM
CALCULATED SNS: P=2	S N S _ VALUE=*.**	SNS_VALUE: Value calculated by the sensitivity at the second sheet [mV/μm] *(Note 1)*	SRAM
CALCULATED SNS: P=3	S N S _ VALUE=*.**	SNS_VALUE: Value calculated by the sensitivity at the third sheet [mV/μm] *(Note 1)*	SRAM
CALCULATED SNS: P=4	S N S _ VALUE=*.**	SNS_VALUE: Value calculated by the sensitivity at the fourth sheet [mV/μm] *(Note 1)*	SRAM
CALCULATED SNS: P=5	S N S _ VALUE=*.**	SNS_VALUE: Value calculated by the sensitivity at the fifth sheet [mV/μm] *(Note 1)*	SRAM
CALCULATED SNS: P=6	S N S _ VALUE=*.**	SNS_VALUE: Value calculated by the sensitivity at the sixth sheet [mV/μm] *(Note 1)*	SRAM
CALCULATED SNS: P=7	S N S _ VALUE=*.**	SNS_VALUE: Value calculated by the sensitivity at the seventh sheet [mV/μm] *(Note 1)*	SRAM

Upper line of the display	Lower line of the display	Details	Memory
CALCULATED SNS: P=8	S N S _ VALUE=*.**	SNS_VALUE: Value calculated by the sensitivity at the eighth sheet [mV/μm] *(Note 1)*	SRAM
CALCULATED SNS: P=9	S N S _ VALUE=*.**	SNS_VALUE: Value calculated by the sensitivity at the ninth sheet [mV/μm] *(Note 1)*	SRAM
CHKPAPER THICKNESS	T = * * * u m AVE=*.**	T:Detected value of the media for CHECK [μm] AVE: Average of the calculation value of the sensor sensitivity [mV/μm]	SRAM
SENSITIVITY VALUE	*.**	Value after sensitivity adjustment [mV/μm]	EEPROM
N - P A P E R SAMPLE:P=1	M A X A D = * * * H V=*.***	In the first sheet Change of MIN/MAX display with a cursor AD: AD value at the absence of the media [Hex] V: Voltage at the absence of the media [V] *(Note 2)*	SRAM
PAPER SAMPLE :P=1	MAX AD = * * * H V=*.***	In the first sheet Change of MIN/MAX display with a cursor AD: AD value at the absence of the media [Hex] V: Voltage at the absence of the media [V] *(Note 2)*	SRAM
N-PAPER SAMPLE:P=2	MAX AD = * * * H V=*.***	In the second sheet Change of MIN/MAX display with a cursor AD: AD value at the absence of the media [Hex] V: Voltage at the absence of the media [V] *(Note 1) (Note 2)*	SRAM
PAPER SAMPLE :P=2	MAX AD = * * * H V=*.***	In the second sheet Change of MIN/MAX display with a cursor AD: AD value at the presence of the media [Hex] V: Voltage at the presence of the media [V] *(Note 1) (Note 2)*	SRAM
N-PAPER SAMPLE:P=3	MAX AD = * * * H V=*.***	In the third sheet Change of MIN/MAX display with a cursor AD: AD value at the absence of the media [Hex] V: Voltage at the absence of the media [V] *(Note 1) (Note 2)*	SRAM
PAPER SAMPLE :P=3	MAX AD = * * * H V=*.***	In the third sheet Change of MIN/MAX display with a cursor AD: AD value at the presence of the media [Hex] V: Voltage at the presence of the media [V] *(Note 1) (Note 2)*	SRAM

Upper line of the display	Lower line of the display	Details	Memory
N-PAPER SAMPLE:P=4	MAX AD = * * * H V=*.***	In the fourth sheet Change of MIN/MAX display with a cursor AD: AD value at the absence of the media [Hex] V: Voltage at the absence of the media [V] *(Note 1) (Note 2)*	SRAM
PAPER SAMPLE :P=4	MAX AD = * * * H V=*.***	In the fourth sheet Change of MIN/MAX display with a cursor AD: AD value at the presence of the media [Hex] V: Voltage at the presence of the media [V] *(Note 1) (Note 2)*	SRAM
N-PAPER SAMPLE:P=5	MAX AD = * * * H V=*.***	In the fifth sheet Change of MIN/MAX display with a cursor AD: AD value at the absence of the media [Hex] V: Voltage at the absence of the media [V] *(Note 1) (Note 2)*	SRAM
PAPER SAMPLE :P=5	MAX AD = * * * H V=*.***	In the fifth sheet Change of MIN/MAX display with a cursor AD: AD value at the presence of the media [Hex] V: Voltage at the presence of the media [V] *(Note 1) (Note 2)*	SRAM
N-PAPER SAMPLE:P=6	MAX AD = * * * H V=*.***	In the sixth sheet Change of MIN/MAX display with a cursor AD: AD value at the absence of the media [Hex] V: Voltage at the absence of the media [V] *(Note 1) (Note 2)*	SRAM
PAPER SAMPLE :P=6	MAX AD = * * * H V=*.***	In the sixth sheet Change of MIN/MAX display with a cursor AD: AD value at the presence of the media [Hex] V: Voltage at the presence of the media [V] *(Note 1) (Note 2)*	SRAM
N-PAPER SAMPLE:P=7	MAX AD = * * * H V=*.***	In the seventh sheet Change of MIN/MAX display with a cursor AD: AD value at the absence of the media [Hex] V: Voltage at the absence of the media [V] *(Note 1) (Note 2)*	SRAM
PAPER SAMPLE :P=7	MAX AD = * * * H V=*.***	In the seventh sheet Change of MIN/MAX display with a cursor AD: AD value at the presence of the media [Hex] V: Voltage at the presence of the media [V] *(Note 1) (Note 2)*	SRAM

Upper line of the display	Lower line of the display	Details	Memory
N-PAPER SAMPLE:P=8	MAX AD = * * * H V=*.***	In the eighth sheet Change of MIN/MAX display with a cursor AD: AD value at the absence of the media [Hex] V: Voltage at the absence of the media [V] *(Note 1) (Note 2)*	SRAM
PAPER SAMPLE :P=8	MAX AD = * * * H V=*.***	In the eighth sheet Change of MIN/MAX display with a cursor AD: AD value at the presence of the media [Hex] V: Voltage at the presence of the media [V] *(Note 1) (Note 2)*	SRAM
N-PAPER SAMPLE:P=9	MAX AD = * * * H V=*.***	In the ninth sheet Change of MIN/MAX display with a cursor AD: AD value at the absence of the media [Hex] V: Voltage at the absence of the media [V] *(Note 1) (Note 2)*	SRAM
PAPER SAMPLE :P=9	MAX AD = * * * H V=*.***	In the ninth sheet Change of MIN/MAX display with a cursor AD: AD value at the presence of the media [Hex] V: Voltage at the presence of the media [V] *(Note 1) (Note 2)*	SRAM
N-PAPER SAMPLE:P=CHK	MAX AD = * * * H V=*.***	In the media for check Change of MIN/MAX display with a cursor AD: AD value at the absence of the media [Hex] V: Voltage at the absence of the media [V] *(Note 2)*	SRAM
PAPER SAMPLE :P=CHK	MAX A D = * * * H V=*.***	In the media for check Change of MIN/MAX display with a cursor AD: AD value at the presence of the media [Hex] V: Voltage at the presence of the media [V] *(Note 2)*	SRAM

- Results will be stored as described in memory filed.
- The contents in SRAM are deleted when the test starts, and values detected at the normal competition or until the apparatus stops due to errors are written.
- The contents in EEPROM are updated only at the normal competition of the test.

(Note 1) Up to the number of sheets set by "SAMPLE PAGE" of "EDIT THICKNESS DATA" can be displayed and set.

(Note 2) When the upper line of the panel shows "N-PAPER SAMPLE:P=*", "PAPER SAMPLE:P=*", Pressing the **MENU**∧ button displays the next test result. Pressing the **MENU**∨ button displays the preceding test result.

≪ **Zero point adjustment of Media Thickness Sensor** ≫

1.Enter the Adjustment menu

1-1.Enter PU menu

Press the 「MENU+」, 「MENU-」, 「OK」, 「BACK」button together more than 5 sec and stop the press when appear the following display.

```
DIAGNOSTIC MODE

xx.xx.xx S-MODE
```
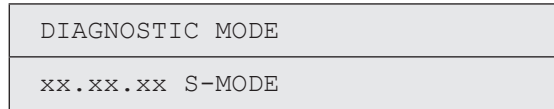
xx.xx.xx is different to PU version

Notes! Operate the following procedure, if unshown the character.

1-2.Enter Switch scan mode
Press 「MENU+」button until following display.

```
SWITCH    SCAN


```

Press 「OK」button when displayed.

```
IN1 IN2 IN3 WR FIN


```
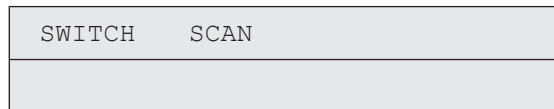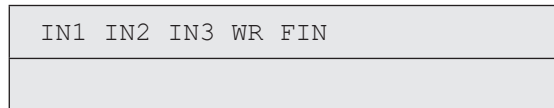
1-3.Enter Media Thickness detect mode
Press 「MENU+」button until following display.(14 times)

```
THICK MPT_PW T1LIFT


```

Press 「OK」button when displayed.

```
THICK MPT_PW T1LIFT

×××, ○○○ ,000
```
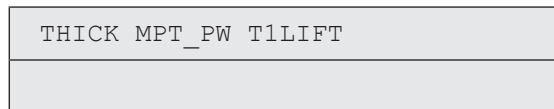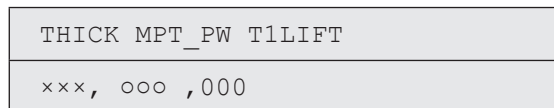
xxx portion is value of Media Thickness Sensor

2.Adjustment of Media Thickness Sensor
2-1.Adjustment portion

Work a Micro Driver into the hole of plate.
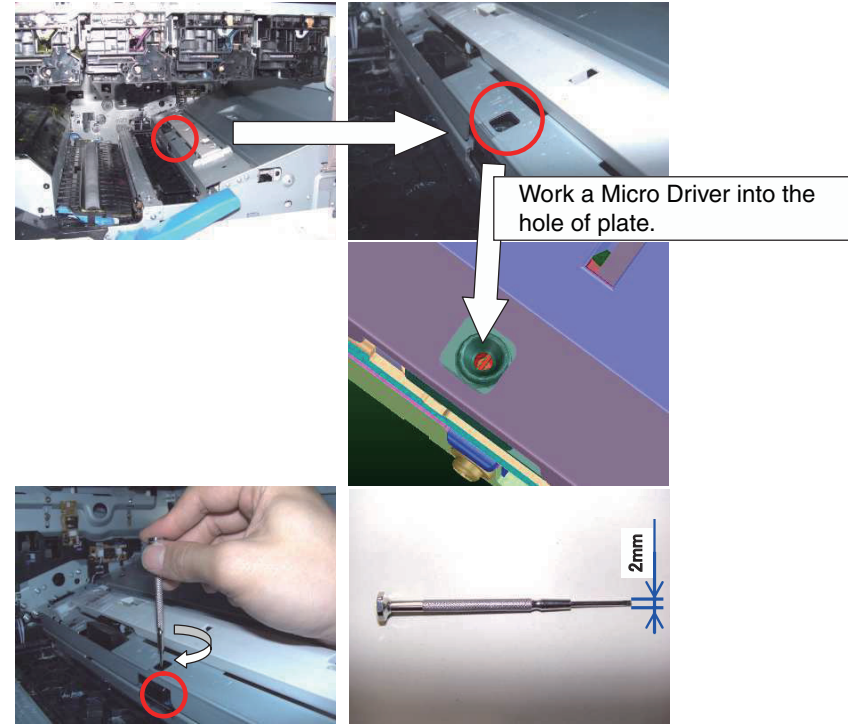
2-2.Adjustment method
Rotate Micro Driver right and adjust xxx value of section 1-3 is following range.
260(Min) to 300(Max) (Hex number)

If the value below 260(Hex), rotate Micro Driver right. Display 000 and afterward 3FF.
Notes! Driver rotate right only. Driver must not rotate left.
Decrease the value when driver rotate right.

5.3.2.9 Adjustment of Paper Width Sensor

This function is used to adjust the detection value of the MPT paper width sensor and display the implementation results (adjustment value). For adjustment, the media width should be a determined width.

The width of the following (a) and (b) is detected and the sensitivity adjustment is performed.

(a) Specified-width paper

(b) Status where the MPT paper guide is set to the narrowest position.

Media to be used and setting values

No.	Type	Paper width setting value (Default)	Remarks
1	Thick paper of A4-LEF-width or 10 sheets of excellent white paper	297.0mm	Change the setting by[WIDTH ADJ PAR-SET] when use the except A4-LEF width

1. Enter the self-diagnostic-mode(Level1) and, until the following message appears, press the MENU ∧ or MENU ∨ button.

PAPER WIDTH SNS ADJ

2. When pressing the OK button, the following message appears. Press the MENU ∧ or MENU ∨ button until the intended option appears on the lower line (See Table 5-8-1) and then, press the OK button.

PAPER WIDTH SNS ADJ
WIDTH ADJ PAR-SET

≪ When WIDTH SNS ADJ EXE (paper width sensor sensitivity adjustment) is performed ≫

(1) After pressing the MENU ∧ or MENU ∨ button until the following is displayed in the above step 2, press the OK button.

PAPER WIDTH SNS ADJ
WIDTH SNS ADJ EXE

(2) After the message to load the adjustment media is displayed, load the adjustment media on MPT and adjust the paper guide. At this time, make sure to move the guide from the outside to the inside. After adjusting the guide, press the OK button to start measuring.

WIDTH SNS ADJ EXE
SET ADJUST PAPER

The lower line of the display blinks until the OK button is pressed.

(3) After the measurement, the lower line of the display stops blinking and then, '*' is displayed on the screen.

WIDTH SNS ADJ EXE
SET ADJUST PAPER *

(4) The following message appears after a lapse of one second from the step (3), and remove the adjustment media from MPT and set the paper guide to the narrowest position. At this time, the guide should be moved from the outside to the inside. After setting, press the OK button to start measuring.

WIDTH SNS ADJ EXE
SET GUIDE MINIMUM

The lower line of the display blinks until the OK button is pressed.

(5) After the measurement, the lower line of the display stops blinking and then, '*' is displayed on the screen.

WIDTH SNS ADJ EXE
SET GUIDE MINIMUM *

(6) When the sensitivity adjustment ends, the upper line of the display shows the result of the test (OK or an error name), the lower line of the display shows "WIDTH SNS ADJ RSLT". (Refer to the Table 5-8-3)

OK
WIDTH SNS ADJ RSLT

Remarks: For adjustment errors, the following message is displayed. (Refer to the table 5-8-4)

***** ERR
WIDTH SNS ADJ RSLT

Pressing the MENU ∧ or MENU ∨ button displays the next test result. (See the table 5-8-5)

Pressing the BACK button returns to the display of "WIDTH SNS ADJ RSLT".

(7) Pressing the CANCEL button during the test cancels the test, restoring the state of step 2

≪ When WIDTH SNS ADJ RSLT (Reference to the results of paper width sensor sensitivity adjustment) is performed ≫

(1) After pressing the MENU ∧ or MENU ∨ button until the following is displayed in the above step 2, press the OK button.

| PAPER WIDTH SNS ADJ |
| WIDTH SNS ADJ RSLT |

Same operation as in (6) of the above "WIDTH SNS ADJ EXE"

≪ When WIDTH ADJ PAR-SET (paper width setting of adjustment media) is performed ≫

This is used when sensitivity adjustment is performed using media other than A4-LEF.

(2) After pressing the MENU ∧ or MENU ∨ button until the following is displayed in the above step 2, press the OK button.

| PAPER WIDTH SNS ADJ |
| WIDTH ADJ PAR-SET |

(3) Pressing the OK button under the following condition enters the entry mode, and then, enter a desired value.

(For how to enter, refer to the Table 5-8-2)

| ADJUST PAPER WIDTH |
| **** (W=***.*mm) |

(4) Press the BACK button to return to the (1).

(5) Repeat the steps (1) to (3) as necessary.

4. Repeat the step 2, as necessary.

5. Press the BACK button to end the test. (restoring the state of the step 1)

Table 5-8-1 PAPER WIDTH SNS ADJ Selection Items

SUB MENU	Details	Handling of results
WIDTH ADJ PAR-SET	Sets the paper width of the adjustment media. * The default is A4-LEF.	For displayed items, refer to the table 5-8-2
WIDTH SNS ADJ EXE	Executes the paper-width sensor sensitivity adjustment.	OK: Writes the adjustment value in EEPROM. NG: Displays an error and updates RESULT only.
WIDTH SNS ADJ RSLT	Refers to the result of the paper-width sensor sensitivity adjustment.	For displayed items, refer to the Table 5-8-5

Table 5-8-2 WIDTH ADJ PAR-SET Selection Items

Upper line of the display	Lower line of the display	Details	Memory
WIDTH ADJ PAR-SET	**** (W=***.*mm)	Sets the width of adjustment media. Settable range: 64.0mm to 336.2mm Default: 297.0mm (A4-LEF) (Note1) W: Width of adjustment media	SRAM

* Set items are effective for this test mode only. (Not written in EEPROM)

(Note1) When pressing numerical keys [0]-[9], a number is entered in a blinking digit.

When pressing the MENU ∧ button, a blinking digit is incremented.

When pressing the MENU ∨ button, a blinking digit is decremented.

Every time pressing the CANCEL button, a blinking digit of the setting value moves to the right.

Every time pressing the ONLINE button, a blinking digit of the setting value moves to the left.

Table 5-8-3 Panel display when paper sensor sensitivity adjustment (WIDTH SNS ADJ EXE) ends

Upper line of the display	Lower line of the display Details	Details
OK / ERROR NAME	WIDTH SNS ADJ RSLT	Upper line: "OK" is displayed for the normal end. When an error occurs, an error name is displayed. (Refer to the Table 5-8-4) Lower line: "WIDTH SNS ADJ RSLT" is displayed (Refer to the Table 5-8-5)

Table 5-8-4 Errors of paper width sensitivity adjustment

Displayed error name	Contents
ADJ PAPER WIDTH ERR	The result of paper width detection for correction media is out of the specified range. The paper width of correction media detected by the normal sensitivity (without adjustment) is not within the specified paper width, ±16.0mm.
GUIDE MINI WIDTH ERR	The detection result at the narrowest position of the paper guide is out of the specified range. The paper width of the paper guide detected by the normal sensitivity (without adjustment) is not within the narrowest size, 64.0±16.0mm.
ADJUST VALUE ERROR	A calculated slant adjustment or offset adjustment value is out of the specified range. Slant adjustment : No within ±0.02 Offset adjustment value: Not within ±16.0.

Table 5-8-5 PAPER WIDTH ADJ RSLT

Upper line of the display	Lower line of the display	Details	Memory
ADJUST PAPER WIDTH	AD=***H W=***.*mm	Paper width detection result of adjustment media AD: Sensor scanning AD value [Hex] of adjustment media width W: Value converted from a sensor reading AD value as the mm unit.	SRAM
GUIDE MINIMUM WIDTH	AD=***H W=***.*mm	Detection result of the narrowest position AD: Sensor scanning AD value [Hex] at the narrowest position W: Value converted from a sensor reading AD value as the mm unit.	SRAM
SLANT ADJUST VALUE	*.****	Calculated slant adjustment value.When an error occurs, 0.0000 is displayed.	EEPROM
OFFSET ADJUST VALUE	***.*	Calculated offset adjustment value. When an error occurs, 00.0000 is displayed.	EEPROM

• Results will be stored as described in memory filed.

• The contents in SRAM are deleted when the test starts, and values detected at the normal competition or until the apparatus stops due to errors are written.

• The contents in EEPROM are updated only at the normal competition of the test.

5.3.2.10 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 **OK** button.

2. Pressing the **MENU△** or **MENU▽** button displays the usage of each consumable (Pressing the **ON LINE** or **CANCEL** button is disabled).

3. Press the **BACK** button to end the test. (The state is restored to the step 1).

Upper line of the display	Lower line of the display	Format	Unit	Details
S1-ID UNIT	******** IMAGES	DEC	Images	Each displays the number of turns performed by each image drum unit from the first-time installation of it until present, (*1)
S2-ID UNIT	******** IMAGES	DEC	Images	
S3-ID UNIT	******** IMAGES	DEC	Images	
S4-ID UNIT	******** IMAGES	DEC	Images	
S5-ID UNIT	******** IMAGES	DEC	Images	
S1-ID USED	******** %	DEC	%	Displays the usage of ID of each color.
S2-ID USED	******** %	DEC	%	
S3-ID USED	******** %	DEC	%	
S4-ID USED	******** %	DEC	%	
S5-ID USED	******** %	DEC	%	
FUSER UNIT	******** PRINTS	DEC	Prints	Displays the number of prints made from the first-time installation of a fuser unit until present *2
FUSER USED	******** %	DEC	%	Displays the usage of the fuser unit.
TR BELT UNIT	******** IMAGES	DEC	Images	Displays the number of prints made to date from the first-time installation of a belt unit until present *3
TR BELT USED	******** %	DEC	%	Displays the usage of the belt unit.

Upper line of the display	Lower line of the display	Format	Unit	Details
S1-TONER (FULL)	******** %	DEC	%	Displays the usage of toners of each color.
S2-TONER (FULL)	******** %	DEC	%	
S3-TONER (FULL)	******** %	DEC	%	
S4-TONER (FULL)	******** %	DEC	%	
S5-TONER (FULL)	******** %	DEC	%	
S1 OVER RIDE CNT	******** TIMES	DEC	Times	Displays the extension life counter value of toner cartridges of each color
S2 OVER RIDE CNT	******** TIMES	DEC	Times	
S3 OVER RIDE CNT	******** TIMES	DEC	Times	
S4 OVER RIDE CNT	******** TIMES	DEC	Times	
S5 OVER RIDE CNT	******** TIMES	DEC	Times	

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

*2 A4 vertically long (297mm) is regarded as one count. A3 nobi is regarded as two counts as with the conventional models, and the middle length between A4 vertically long to A3 nobi are calculated in proportion. For any sheet exceeds A3 nobi length, a setting so as not to separate from the conventional count for the long paper (up to 1200mm) should be made and then, a calculation should be performed in proportion.

*3 One third of the number of belt turns in A4 (A4 portrait) three-pages-per-job printing is regarded as one count.

5.3.2.11 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. Then press the OK button. (The **MENU**∧ button displays the next test option and the **MENU**∨ button displays the preceding test option)

2. Pressing the **MENU**∧ or **MENU**∨ button displays the number of printed number in order.
   (Pressing the **ON LINE** or **CANCEL** button is invalid.)

3. Press the **BACK** button to end the test. (The state is restored to the step 1).

Display of consumable continuous counter

Upper line of the display	Lower line of the display	Format	Unit	Details
S1-IMPRESSIONS	******** PRINTS	DEC	Prints	Displays the number of printed sheets of each color (*1)
S2-IMPRESSIONS	******** PRINTS	DEC	Prints	
S3-IMPRESSIONS	******** PRINTS	DEC	Prints	
S4-IMPRESSIONS	******** PRINTS	DEC	Prints	
S5-IMPRESSIONS	******** PRINTS	DEC	Prints	
TOTAL SHEET CNT	******** PRINTS	DEC	Prints	Displays the total number of printed sheets (*1)

*1 Two counts apply to the duplex printing.

5.3.2.12 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 **OK** button. The following message appears. Press the **MENU**∧ or **MENU**∨ button until the option intended (refer to the table shown below) appears

```
FACTORY MODE

SHIPPING MODE        *
```

3. A setting for the option can be selected by pressing the **OK** button while the intended option is displayed.

4. Press the **OK** button while the intended setting value is on the display. Then, the setting value is stored in the EEPROM.

5. Press the **BACK** button to end the test. (The state is restored to the step 1)

FACTORY MODE Setting Items

Upper line of the display	Lower line of the display	Function
FACTORY MODE	FACTORY MODE	Sets the Factory mode.
	SHIPPING MODE	Cancels the Factory mode to enable the shipping mode function.

5.3.2.13 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 research. 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 (Level1) mode and, until the following message appears, press the **MENU**∧ or **MENU**∨ button.

```
SENSOR SETTING

```

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

```
TONER SENSOR

ENABLE            *
```
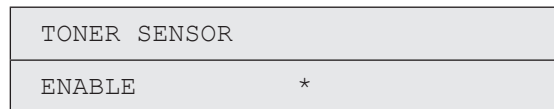
3. The setting on the lower display can be selected by pressing the **OK** button.

   The **MENU**∧ button displays the next setting and the **MENU**∨ button displays the preceding setting.

4. Press the **OK** button while the desired setting is on the display. The setting is stored in the EEPROM. The state is restored to the step 2.

5. Repeat steps 2 through 4 when necessary.

6. Press the **BACK** button to end the setting (except where not in the step 4) (the state is restored to the step 1).

SENSOR SETTING Items

LCD	Setting value	Operation of the setting value	Details
REG ADJUST ERROR	ENABLE	Stops	Enables or disables the display of errors in the auto color mis-registration correction control
	DISABLE	Does not stop	
WR POINT REV	00H ～ FFH	A correction value.	Adds a correction value for the default writing point.

Default is in hatched area.

5.3.2.14 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
Then press the **OK** button. (The **MENU**∧ button displays the next test option and the **MENU**∨ button displays the preceding test option).

2. Pressing the **MENU**∧ or **MENU**∨ button displays each of the S1/S2/S3/S4/S5 LED head data serial numbers in order.

3. Press the **BACK** button to end the test. (The state is restored to the step 1).

```
** ** ** ** ****

xxxxxxxxxxxxx
```
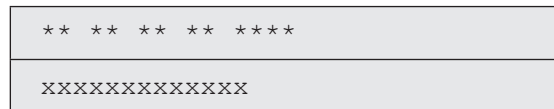
** ** ** ** ****   : A revision number
① ② ③ ④ ⑤

xxxxxxxxxxxxx   : A serial number
⑤

  ① : Station position (S1 / S2 / S3 / S4 / S5)
  ② : Head type data
  ③ : Light amount data
  ④ : Length data
  ⑤ : Head serial No.

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

5.3.2.15 Drum Manual Cleaning

This function is used for cleaning drums by wiping with alcohol when drum filming occurs. This function allows a drum to rotate by 1/5 cycle. By cleaning the drum exposure part under the ID by rotating in order, the filming of the entire drum can be deleted. After wiping with alcohol, operate to the next step after make sure of drying.

1. Enter the self-diagnostic mode and, until DRUM MANUAL CLEANING appears, press the **MENU**∧ or **MENU**∨ button. Then press the OK button. (The **MENU**∧ button displays the next test option and the **MENU**∨ button displays the preceding test option).

```
DRUM MANUAL CLEANING

```

2. Press the **OK** button to display the following message. By pressing the **OK** button under this condition, the rotation of 1/5 cycle is executed.

```
DRUM MANUAL CLEANING

EXECUTE
```
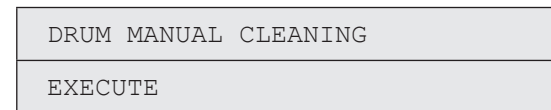
3. The display of the number of executions on the lower line of the display (* part) is incremented after the operation. Then, open the front cover to remove the ID and clean from the exposure side of the drum.

```
DRUM MANUAL CLEANING

EXECUTE */5
```

  * : Number of executed operations
  5 : Number of drum rotations (5 times at one cycle)

4. Return the ID and close the front cover. Repeat the step 2 and 3 until the number of drum rotation becomes 5/5, and then cleaning of the entire drum ends.

5. Press the **BACK** button to end the test. (The state is restored to the step 1.)

Note! During the selection of "Drum Manual Cleaning", the initial operation is not performed even by opening and closing the cover. The initial operation is automatically performed after exiting this menu.

5.3.2.16 Error code display

The Error code display is used for display the error code of the error occurred, and distinction the factor of the error.

1. Enter the self-diagnostic mode and, until "ERROR CODE" appears, press the **MENU**∧ or **MENU**∨ button.

```
ERROR CODE

```

2. Press the **OK** button to display the following message.

```
ERROR CODE Px

GEN=XX DET=XX LST=XX
```
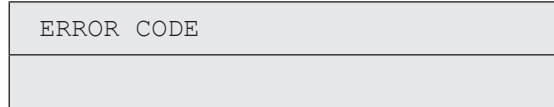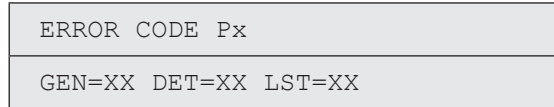
Px : Page, x=1 ～ 3 Save the last error and befor two errors.

Change the page by pressing **MENU**∧ or **MENU**∨ button.

GEN : General error code

DET : Detail error code

LST : Lost error

XX(HEX) : Error code

3. Press the **OK** button to end the function. (Back to the section1)

Additionally, this error code display can be referred from the printed error log (refer to 5.3.3) at 'Printing on stand-alone basis', too.

As for the 16 digits numbers in the right side of the printed error log, The 1st and 2nd digits are 'GEN', the 3rd and 4th are 'DET' and the 5th and 6th digits are 'LST'.

| GEN | DET | LST |

ERROR LOG　　　　　　　　　　　　　　02/19/2013 11:21
　　　　　　　　　　　　　　　　　　　　　C941

Time	Counter	Error No.	Error	
02/19/2013 11:15	25714	400	Size Error	33 01 18 17 19 02 01 00
02/19/2013 10:27	25714	401	Paper Multi Feed	33 02 19 16 19 02 05 00
02/19/2013 10:27	25714	391	Paper Jam	14 01 19 16 19 02 05 00
02/19/2013 10:04	25364	331	Waste Toner Box Missing	00 00 18 17 19 01 00 00
02/19/2013 09:11	25358	380	Paper Jam	30 02 19 16 1C 02 05 00

Detail of C941dn/C931dn/C911dn JAM

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX) GEN	DET	LST	INF	According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error Motion	Method
370	JAM DUPLEX REVERSAL	Sensor check in initializing · Auto exit / Duplex reversal error in printing	DUP	3B	01	-	-	DUP-IN	Printing	After detected DUP-IN sensor ON, it could not detect the sensor OFF though detected the transporting distance which the paper size plus the jam margin.	Paper jam at the intake section. Defect of the DUP-IN sensor.	Immediate stop	Open and close the cover
			DUP	3B	02	-	-	DUP-IN, DUP-R	Printing	After reverse motion starting, DUP-R sensor could not detect the sensor ON though detected the transporting distance which between the reverse roller and the DUP-R sensor ON plus the jam margin.	Paper jam at the Reverse section. Defect of the DUP-IN and the DUP-R sensor.	Immediate stop	Open and close the cover
			DUP	3B	03	-	-	DUP-IN, DUP-B	Printing	After detected DUP-IN sensor ON, DUP-B sensor could not detect the sensor ON though detected the transporting distance which the paper transporting plus the jam margin.	Paper jam at the Reverse section. Defect of the DUP-IN and the DUP-B sensor.	Immediate stop	Open and close the cover
			DUP	3B	83	-	-	DUP-B	Auto exiting	The DUP-B sensor detected ON in the starting the auto exiting.	Paper jam at the Reverse section. Defect of the DUP-B sensor.	Immediate stop	Open and close the cover
			DUP	3B	84	-	-	DUP-IN	Auto exiting	The DUP-IN sensor detected ON in the starting the auto exiting.	Paper jam at the Reverse section. Defect of the DUP-IN sensor.	Immediate stop	Open and close the cover
371	JAM DUPLEX INPUT	Sensor check in initializing · Auto exiting / Duplex input error in printing	DUP	3C	01	-	-	DUP-R	Printing	After detected DUP-R sensor ON, DUP-R sensor could not detect the sensor OFF though detected the transporting distance which the paper size plus the jam margin.	Paper jam at inside of the Duplex. Defect of the DUP-R sensor.	Immediate stop	Open and close the cover
			DUP	3C	02	-	-	DUP-R, DUP-F	Printing	· After detected DUP-R sensor ON, DUP-F sensor could not detect the sensor ON though detected the transporting distance which between the DUP-R sensor ON and the DUP-F sensor ON plus the jam margin. · After the paper reached 2PASS roller, DUP-F sensor could not de-tect the sensor ON though detected the transporting distance which between the 2PASS roller and the DUP-F sensor ON plus the jam margin in 2PASS printing.	Paper jam in the transporting path of the Duplex. Defect of the DUP-R and the DUP-F sensor.	Immediate stop	Open and close the cover

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
371	JAM DUPLEX INPUT	Sensor check in initializing · Auto exiting / Duplex input error in printing	DUP	3C	83	-	-	DUP-R, DUP-F	Auto exiting	The DUP-F sensor could not detect the sensor ON though detected the transporting distance which between the DUP-R sensor ON and the DUP-F sensor ON plus the jam margin in the auto exiting.	Paper jam in the transporting path of the Duplex. Defect of the DUP-R and the DUP-F sensor.	Immediate stop	Open and close the cover
			DUP	3C	84	-	-	DUP-F	Auto exiting	The DUP-F sensor could not detect the sensor OFF though detected the time which 'the maximum paper length' subtract 'the distance of between the DUP-F sensor ON and the timing roller ON plus the prescribed' plus 'the jam margin' in the auto exiting.	Paper jam in the transporting path of the Duplex. Defect of the DUP-F sensor.	Immediate stop	Open and close the cover
			DUP	3C	86	-	-	DUP-F	Starting the Initializing	The DUP-F sensor detected ON in the initializing of the impossibility auto exiting.	Paper jam in the transporting path of the Duplex. Defect of the DUP-F sensor.	Immediate stop	Open and close the cover
		Duplex control error	PU	3C	4F	-	-	-	-	Duplex control error (detected unsupported inside jam code)	Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
		Time out of the initializing dealing	PU	3C	50	-	-	-	Initializing	After the jam clear sent, the Duplex status has not changed to 'initial 2', 'initial 3' or 'jam state' in initializing immediate jam dealing.	Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
			PU	3C	51	-	-	-	Initializing	After the jam clear sent, the Duplex status has not changed to 'initial 2' or 'jam state' in initializing immediate jam dealing.	Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
			PU	3C	52	-	-	-	Auto exiting	After the jam clear sent, the Duplex status has not changed to 'initial 2' , 'initial 3' or 'jam state' in initializing auto exiting dealing.	Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
			PU	3C	53	-	-	-	Auto exiting	After the initializing auto exiting sent, the Duplex status has not changed to 'initial 2' or 'jam state' in initializing auto exiting dealing.	Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
			PU	3C	54	-	-	-	Initializing	After the mechanism initializing sent, the Duplex status has not changed to 'not initializing (Ready)' or 'jam state' in initializing.	Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
		Duplex paper feed state error	PU	3C	59	-	-	-	Printing	The state of the Duplex did not change to possible the hopping.	Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover

CU error code	PU error display	Error detail	Detected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
371	JAM DUPLEX INPUT	Duplex paper feed state error	PU	3C	5A	-	-	-	Printing	The state of the Duplex did not change to progress of the hopping.	Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
			PU	3C	5B	-	-	-	Printing	The state of the Duplex did not change to finish of the hopping.	Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
		Time out in the auto exiting	PU	3C	5C	-	-	Dup-F(PU)	Auto exiting	The DUP-F sensor of the PU-side could not detect the sensor ON though detected the time which between the middle waiting position of the Duplex and the time of the size plus the jam margin.	Defect of the DUP-F sensor of the PU-side. Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
			PU	3C	5D	-	-	-	Auto exiting	The state did not change to finish of the hopping though the Duplex detected the paper inside paper in the auto exiting.	Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
			PU	3C	5E	-	-	-	Auto exiting	The Duplex status has not changed to 'initial 3' or 'jam state' after the paper exiting in the auto exiting.	Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
373	JAM DUPLEX OVERLAP	Sensor check in paper auto exiting / Sensor check in printing	DUP	3D	01	-	-	DUP-B	DUP-B ON	· After detected DUP-R sensor ON, DUP-B sensor could not detect the sensor ON though detected the transporting distance which between the DUP-R sensor ON and the DUP-R sensor ON plus the jam margin. · After detected DUP-IN sensor OFF, DUP-B sensor could not detect the sensor OFF though detected the transporting distance which between the DUP-IN sensor OFF and the DUP-R sensor ON plus the jam margin in 2PASS printing.	The multi feeding occurred and these papers separated. Defect of the DUP-B sensor.	Immediate stop	Open and close the cover
380	JAM FEED * This error is the detecting of the abnormal transporting in the paper feeder.	Initializing sensor check	PU	30	02	-	-	IN2	IN2	The IN2 was ON in the turning ON or in the 'Open and close the cover'.	The paper remains at IN2 part. Defect of the IN2 sensor.	Immediate stop	Open and close the cover
		Transporting check of the regist section.	PU	30	04	-	-	IN1, IN2	IN1, IN2	The IN2 sensor could not detect the sensor ON though detected the distance which between the 1st regist roller and the IN2 ON position plus the prescribed, after the regist was started at the printing from the Tray1.	The transporting path jam. Defect of the IN1 or the IN2 sensor. IN2 OFF was not detected because the paper gap is too narrow.	Stop after exited	Open and close the cover

CU error code	PU error display	Error detail	De- tected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
380	JAM FEED	Transporting check of the regist section.	PU	30	05	-	-	IN2, IN3	IN2, IN3	The IN3 sensor ON from the IN2 sensor ON could not detect though detected the distance which between the IN2 ON and the IN3 ON position plus the prescribed.	The transporting path jam. Defect of the IN2 or the IN3 sensor. IN3 OFF was not detected because the paper gap is too narrow.	Stop after exited	Open and close the cover
		Transporting check of the regist section.	PU	30	06	-	-	IN2	IN2	The IN2 was already OFF in retrying the transporting of the paper waiting position in the feeding from MTP	Defect of the IN2 sensor. The trans- porting path jam.	Stop after exited	Open and close the cover
		Print waiting time out error	PU	30	08	-	-	-	Printing	PRINT command was not receaved after the prescribed time passed from the IMGACK notice.	CU/PU Communication error	Immediate stop	Open and close the cover
		Transporting check of the regist section.	PU	30	0B	0B	-	IN2	IN2	The IN2 sensor could not detect the sensor ON though detected the distance which between the 1st regist roller and the IN2 ON position plus the prescribed, and the state of the sensor port was opened after the regist was started at the printing from the Tray.	Defect of the IN2 sensor. The trans- porting path is abnormal. IN2 OFF was not detected because the paper gap is too narrow.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	30	10	-	-	IN3	IN3	The motor should be re-accelerated in its reducing speed for to make the image. The paper is not to make image in the motor speed reducing, by the controller of the reducing / re-acceler- ating for the paper / the top end of the image.	The paper was slipped in feeding and transporting. Defect of the IN3 sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	30	11	-	-	IN3	IN3	The IN3 was ON by the paper earlier than expected.	Defect of the IN3 sensor. Uncontrol- lable error (the logical inconsistency).	Immediate stop	Open and close the cover
		Sensor check in printing	PU	30	12	-	-	IN3	IN3	The paper is too late in the IN3 ON.	The paper was slipped in feeding and transporting. Defect of the IN3 sensor. Uncontrollable error (the logi- cal inconsistency).	Immediate stop	Open and close the cover
		Sensor check in printing	PU	30	13	-	-	IN3	IN3	The transferring image already went through the 2nd transfer roller in the IN3 ON.	Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
381	JAM TRANS-PORT * This error is the detect-ing of the abnormal transporting in the paper feeder.	Initializing sen-sor check	PU	31	01	-	-	IN3	IN3	The IN3 was ON in the turning ON or in the 'Open and close the cover'.	The paper remains at IN3 part. Defect of the IN3 sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	31	03	-	-	DUP-F, IN3	DUP-F, IN3	The IN3 sensor could not detect the sensor ON from the Duplex re-feeding waiting position though detected the distance which between the Duplex re-feeding waiting position and the IN3 ON position plus the prescribed.	Duplex re-feeding JAM. Defect of the DUP-F or the IN3 sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	31	05	-	-	IN3, EXIT1	IN3, EXIT1	After the IN3 ON, the EXIT could not detect the sensor ON though detected the distance within which the IN3 ON and the EXIT1 ON plus the prescribed.	Exiting section JAM. Defect of the IN3 or the EXIT1 sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	31	06	-	-	EXIT1	before EXIT1ON	The EXIT1 sensor check in before the prescribed distance from the paper reaching could not detect the edge of OFF to ON.	EXIT1 sensor OFF was not detected because the paper gap is too narrow. Defect of the EXIT1 sensor.	Immediate stop	Open and close the cover
		Initializing paper exiting check	PU	31	07	-	-	EXIT1	EXIT1	The EXIT1 did not detect ON under the controlling of the auto exiting in the turning ON or in the 'Open and close the cover'.	Exiting section JAM. Defect of the EXIT1 sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	31	08	-	-	IN1, IN2	IN1, IN2	[Tray1, OptionTray] The IN2 could not detect the sensor OFF though detected the distance within which the IN1 OFF and the IN2 OFF plus the prescribed.	Tray transporting path JAM. Defect of the IN1 or the IN2 sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	31	09	-	-	IN2, IN3	IN2, IN3	[Tray1, OptionTray, Mpt] The IN3 could not detect the sensor OFF though detected the distance within which the IN2 OFF and the IN3 OFF plus the prescribed.	Tray transporting path JAM. Defect of the IN2 or the IN3 sensor.	Immediate stop	Open and close the cover
		Initializing paper exiting check	PU	31	0C	-	-	IN3	IN3	The EXIT3 could not detect ON in the auto exiting by the turning ON or in the 'Open and close the cover'.	Transporting section JAM. Defect of the IN3 sensor.	Immediate stop	Open and close the cover
		Initializing paper exiting check	PU	31	0D	-	-	IN3	IN3	The IN3 could not detect OFF after ON in the auto exiting by the turning ON or in the 'Open and close the cover'.	Transporting section JAM. Defect of the IN3 sensor.	Immediate stop	Open and close the cover
		Initializing paper exiting check	PU	31	0E	-	-	IN3, DUP-F	IN3, DUP-F	The Duplex could not exit in the auto exiting control by the turning ON or in the 'Open and close the cover'.	Defect of the IN3 or the DUP-F sen-sor.	Immediate stop	Open and close the cover

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX) GEN	DET	LST	INF	According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error Motion	Method
381	JAM TRANS-PORT	Initializing paper exiting check	PU	31	0F	-	-	IN3	Auto exiting	This error is the Duplex could not exit in the auto exiting controlling by the turning ON or in the 'Open and close the cover'.	Defect of the IN3 sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	31	10	-	-	IN3	IN3	The motor should be re-accelerated in its reducing speed for to make the image in IN3 ON. The paper is not to make image in the motor speed reducing, by the controller of the reducing / re-acceler-ating for the paper / the top end of the image.	The paper was slipped in feeding and transporting. Defect of the IN3 sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	31	11	-	-	IN3	IN3	The IN3 was ON by the paper earlier than expected.	Defect of the IN3 sensor., Uncontrol-lable error (the logical inconsistency).	Immediate stop	Open and close the cover
		Sensor check in printing	PU	31	12	-	-	IN3	IN3	The paper is too late in the IN3 ON, so can not adjust with the image.	The paper was slipped in feeding and transporting. Defect of the IN3 sensor. Uncontrollable error (the logi-cal inconsistency).	Immediate stop	Open and close the cover
		Sensor check in printing	PU	31	13	-	-	IN3	IN3	The transferring image already went through the 2nd transfer roller in the IN3 ON.	Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
		Sensor check in printing	PU	31	23	-	-	IN3	IN3	The paper is too late in the IN3 ON, so can not adjust with the image.	Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
		Sensor check in printing	PU	31	24	-	-	IN3	IN3	The paper is too late in the IN3 ON, so can not adjust with the image.	Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
		Sensor check in printing	PU	31	25	-	-	IN3	IN3	The paper is too late in the IN3 ON, so can not adjust with the image.	Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
		Sensor check in printing	PU	31	26	-	-	IN3	IN3	The paper is too late in the IN3 ON, so can not adjust with the image.	Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
381	JAM TRANS-PORT	BELT Motor Lock error JAM	PU	51	01	-	-	BELT motor Lock Signal	In the motor constant speed of transporting for printing. * In the case of the paper lies between IN3 sensor ON and EXIT1OFF * state is 135-07 in this notices	The prescribed time LOCK OFF detected in the motor constant speed.	The abnormal of the motor constant speed by the over load in the paper transporting.	Immediate stop	Power OFF
				51	11	-	-	BELT motor Lock Signal	In the motor constant speed of the auto exiting in the Initial-izing * state is 135-07 in this notices except in the auto exiting.	The prescribed time LOCK OFF detected in the motor constant speed.	The abnormal of the motor constant speed by the over load in the paper transporting.	Immediate stop	Power OFF
382	JAM EXIT * This error is the detect-ing of the abnormal transporting in the exiting section.	Initializing sensor check	PU	32	01	-	-	EXIT1	EXIT1	The EXIT1 has detected ON by the turning ON or in the 'Open and close the cover'.	The paper remains at EXIT1 part. Defect of the EXIT1 sensor.	Immediate stop	Open and close the cover
		Initializing sensor check	PU	32	02	-	-	EXIT2	EXIT2	The EXIT2 has detected ON by the turning ON or in the 'Open and close the cover'.	The paper remains at EXIT2 part. Defect of the EXIT2 sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	32	03	-	-	EXIT1, EXIT2	EXIT2	The EXIT2 ON from EXIT1 ON could not detect the sensor ON though de-tected the distance within which the EXIT1 ON and the EXIT2 ON plus the prescribed.	The Exiting section JAM. Defect of the EXIT1 or the EXIT2 sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	32	04	-	-	IN2, EXIT1	EXIT1ON → EXIT1OFF	The EXIT1 OFF detected before the IN2 sensor OFF.	The Exiting section JAM. Defect of the IN2 or the EXIT1 sen-sor.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	32	05	-	-	Tray：IN1, IN2, EXIT1 MPT：IN2, IN3, EXIT1	EXIT1ON → EXIT1OFF	The detected paper length of the IN1 sensor / IN2 sensor (the IN2 sensor / IN3 sensor for MPT) is shorter than the detected paper length of the EXIT1 plus prescribed length.	The Exiting section JAM. Tray: Defect of the IN1, IN2 or the EXIT1 sensor. MPT: Defect of the IN2, IN3 or the EXIT1 sensor.	Immediate stop	Open and close the cover

CU error code	PU error display	Error detail	Detected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
382	JAM EXIT	Sensor check in printing	PU	32	06	-	-	Tray：IN1, IN2, EXIT1 MPT：IN2, IN3, EXIT1	EXIT1ON → EXIT1OFF	The detected paper length of the IN1 sensor / IN2 sensor (the IN2 sensor / IN3 sensor for MPT) is longer than the detected paper length of the EXIT1 plus prescribed length.	The Exiting section JAM. Tray: Defect of the IN1, IN2 or the EXIT1 sensor. MPT: Defect of the IN2, IN3 or the EXIT1 sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	32	07	-	-	Tray：IN1, IN2, EXIT2 MPT：IN2, IN3, EXIT2	EXIT2	The detected paper length of the IN1 sensor / IN2 sensor (the IN2 sensor / IN3 sensor for MPT) is longer than the detected paper length of the EXIT2 plus prescribed length.	The Exiting section JAM. Tray: Defect of the IN1, IN2 or the EXIT2 sensor. MPT: Defect of the IN2, IN3 or the EXIT2 sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	32	08	-	-	Tray：IN1, IN2, EXIT1 MPT：IN2, IN3, EXIT1	EXIT1	The detected paper length of the IN1 sensor / IN2 sensor (the IN2 sensor / IN3 sensor for MPT) is longer than the detected paper length of the EXIT1 plus prescribed length. (In the case of the Feed Motor is stopping)	The Exiting section JAM. Tray: Defect of the IN1, IN2 or the EXIT1 sensor. MPT: Defect of the IN2, IN3 or the EXIT1 sensor.	Immediate stop	Open and close the cover
		Initializing sensor check	PU	32	09	-	-	F-IN	F-IN	The F-IN sensor has detected ON by the turning ON or in the 'Open and close the cover'.	The paper remains at the Fuser part. Defect of the F-IN sensor.	Immediate stop	Open and close the cover
		Initializing sensor check	PU	32	0A	-	-	EXIT1	EXIT1	The edge of the EXIT1 sensor OFF to ON could not detect by the turning ON or in the auto exiting by the 'Open and close the cover'.	The Exiting section JAM. Defect of the EXIT1 sensor.	Immediate stop	Open and close the cover
		Initializing sensor check	PU	32	0B	-	-	EXIT, EXIT2	EXIT, EXIT2	The edge of the EXIT2 sensor ON could not detect by the turning ON or in the auto exiting by the 'Open and close the cover'.	The Exiting section JAM. Defect of the EXIT1 or EXIT2 sensor.	Immediate stop	Open and close the cover
		Initializing sensor check	PU	32	0C	-	-	EXIT1	EXIT1	The edge of the EXIT1 sensor OFF could not detect by the turning ON or in the auto exiting by the 'Open and close the cover'.	The Exiting section JAM. Defect of the EXIT1 sensor.	Immediate stop	Open and close the cover
		Initializing sensor check	PU	32	0D	-	-	EXIT2	EXIT2	The edge of the EXIT2 sensor OFF could not detect by the turning ON or in the auto exiting by the 'Open and close the cover'.	The Exiting section JAM. Defect of the EXIT2 sensor.	Immediate stop	Open and close the cover
		Initializing sensor check	PU	32	0E	-	-	EXIT1	EXIT1	The EXIT1 sensor detects ON in the performing of the WU and ID UP / Down and in the initializing by the 'Open and close the cover'.	The Exiting section JAM. Defect of the EXIT1 sensor.	Immediate stop	Open and close the cover

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
382	JAM EXIT	Initializing sensor check	PU	32	0F	-	-	F-IN	F-IN	The F-IN sensor detects ON in the performing of the WU and ID UP / Down and in the initializing by the 'Open and close the cover'.	The Fuser section JAM. Defect of the F-IN sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	32	13	-	-	IN2, EXIT2	EXIT2	The EXIT2 OFF detected before the IN2 sensor OFF.	The Exiting section JAM. Defect of the EXIT1 or EXIT2 sensor	Immediate stop	Open and close the cover
		Sensor check in printing	PU	32	14	-	-	Tray : IN1, IN2, EXIT2 MPT : IN2, IN3, EXIT2	EXIT2	The detected paper length of the IN1 sensor / IN2 sensor (the IN2 sensor / IN3 sensor for MPT) is shorter than the detected paper length of the EXIT2 plus prescribed length.	The Exiting section JAM. Tray: Defect of the IN1, IN2 or the EXIT2 sensor. MPT: Defect of the IN2, IN3 or the EXIT2 sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	32	15	-	-	Tray : IN1, IN2, EXIT2 MPT : IN2, IN3, EXIT2	EXIT2	The detected paper length of the IN1 sensor / IN2 sensor (the IN2 sensor / IN3 sensor for MPT) is longer than the detected paper length of the EXIT2 plus prescribed length. (In the case of the Feed Motor is stopping)	The Exiting section JAM. Tray: Defect of the IN1, IN2 or the EXIT2 sensor. MPT: Defect of the IN2, IN3 or the EXIT2 sensor.	Immediate stop	Open and close the cover
		FUSER Motor Lock Error	PU	54	01	1F	-	FUSER Motor Lock Signal	In the motor constant speed of transporting for printing. * In the case of the paper lies between IN3 sensor ON and EXIT1OFF * state is 135-09 in this notices	The prescribed time LOCK OFF detected in the motor constant speed.	The abnormal of the motor constant speed by the over load in the paper transporting.	Immediate stop	Open and close the cover
				54	11	1F	-	FUSER Motor Lock Signal	In the motor constant speed of the auto exiting in the Initial-izing * state is 135-09 in this notices except in the auto exiting.	The prescribed time LOCK OFF detected in the motor constant speed.	The abnormal of the motor constant speed by the over load in the paper transporting.	Immediate stop	Open and close the cover

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
383	JAM DUPLEX ENTRY	Duplex Intake Error	DUP	3A	01	-	-	TR2 Signal, DUP-IN	Printing	After the TR2 signal detected ON, the DUP-IN sensor could not detect the sensor ON though detected the distance within which the 2nd transfer roller (the plain paper position) and the DUP-IN sensor ON plus the pre-scribed.	Paper jam at the intake section of the Dupxel. Error of the TR2 signal. Defect of the DUP-IN sensor. The mechanism is abnormal.	Immediate stop	Open and close the cover
			DUP	3A	02	-	-	TR2 Signal, DUP-B	Printing	In the Duplex printing, the next paper feeding motion is started with the paper is holden by the reverse roller.	TR2 signal error. Defect of the DUP-B sensor. The mechanism is abnor-mal. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
384	JAM EXIT2	Initializing sensor check	PU	66	12	-	-	EXIT3	EXIT3	The EXIT3 sensor detected ON after the initializing finished.	The Exiting section JAM. Defect of the EXIT3 sensor.		
390	MPT HOP-PING ER-ROR	Sensor check in printing	PU	13	01	-	-	IN2	Hopping	The IN2 sensor could not detect the sensor ON though detected the distance within which the IN2 ON po-sition from the paper feeding waiting position plus the Jam margin.	Paper feed Jam. Defect of the IN2 sensor. The rotating direction miss of the hopping roller (the wiring mis-take)	Stop after exited	Open and close the cover
		Sensor check in printing	PU	13	03	-	-	IN2	Finish the hopping	In the printing from the MPT, the IN2 sensor detected OFF after the butt-ing.	Defect of the IN2 sensor. Sag of the paper.	Stop after exited	Open and close the cover
		Sensor check in printing	PU	13	04	-	-	IN2	Hopping	In the printing from the MPT, the IN2 sensor detected already ON in the 1st paper feeding starting.	Defect of the IN2 sensor.	Stop after exited	Open and close the cover
391	TRAY1 HOPPING ERROR	Initializing sensor check	PU	14	20	-	-	IN1	IN1	The IN1 sensor ON detected by the turning ON or the 'Open and close the cover'.	The paper remains at IN1 part. Defect of the IN1 sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	PU	14	01	-	-	IN1	Hopping	The IN1 sensor could not detect the sensor ON though detected the distance within which the IN1 ON po-sition from the paper feeding waiting position plus the Jam margin.	Paper feed Jam. The rotating direc-tion missing of the hopping roller (the wiring mistake). Defect of the IN1 sensor.	Stop after exited	Open and close the cover
		Sensor check in printing	PU	14	03	-	-	IN1	Starting of the regist	In the printing from the Tray1, the IN1 sensor detected OFF after the butt-ing.	Defect of the IN1 sensor. Sag of the paper.	Stop after exited	Open and close the cover
		Sensor check in printing	PU	14	04	-	-	IN1	Hopping	In the printing from the 1st Tray feed-ing, the IN1 sensor detected already ON in the 1st paper feeding starting.	Defect of the IN1 sensor.	Stop after exited	Open and close the cover

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
392	TRAY2 HOPPING ERROR	Sensor check in printing	T2	15	01	-	-	Tray2-IN	Tray2-IN	The Tray2 is started the feeding, and the Tray2-IN sensor could not detect the sensor ON though detected the distance within which between the feeding starting position and the Tray2-IN sensor plus the Jam margin.	Paper feed Jam. Paper setting mistake. Defect of the Tray2-IN sensor. The mechanism is abnormal.	Stop after exited	Open and close the cover
		Paper Feed Tray IN sensor error	T2	15	07	-	-	Tray2-IN	Printing	The Tray2-IN sensor kept detected ON as long as the specified time.	Defect of the Tray2-IN sensor. Communication error.	Immediate stop	Open and close the cover
		Paper Feed Tray IN sensor error	T2	15	08	-	-	Tray2-IN	Printing	The transporting control event of the Tray2 did not occur in the paper feeding the Tray3 or the lower trays.	Defect of the Tray2-IN sensor. Communication error.	Immediate stop	Open and close the cover
		Sensor check in printing	T2	15	09	-	-	Tray2-IN	Printing	The Tray2-IN sensor could not detect the sensor OFF by the previous paper though detected the transporting distance*2 within which between the Paper top edge and Tray2-IN sensor in the paper feeding.	Defect of the Tray2-IN sensor. Communication error.	Immediate stop	Open and close the cover
		Sensor check in printing	T2	15	0B	-	-	Tray2-IN	Printing	In the paper feeding starting, the Tray2-IN sensor detected ON.	Defect of the Tray2-IN sensor. Communication error. The mechanism is abnormal.	Immediate stop	Open and close the cover
		Hopping time out	PU	15	50	-	-	-	Printing	· PU can not send the hopping command. (The command that must be sent the hopping command before had not be sent finish all yet.) · The state of Tray2 dose not change to without or finished hopping.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		Hopping time out	PU	15	51	-	-	-	Printing	The hopping state of the Tray2 dose not change to hopping, finished, error, or NG.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		Hopping time out	PU	15	52	-	-	-	Printing	The hopping state of the Tray2 dose not change to finished, error, or NG.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		Hopping time out	PU	15	55	-	-	-	Printing	The hopping NG notice sent from Tray2 dose not exist the occasion for it.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		Initializing sensor check	PU	15	57	-	-	Tray2-IN	Printing	The Tray2-IN sensor ON detected by the turning ON or the 'Open and close the cover'. (mainly the turn on timing)	The paper remains at Tray2 feeder part. Defect of the Tray2-IN sensor. Communication error.	Immediate stop	Open and close the cover

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
392	TRAY2 HOPPING ERROR	Initializing sensor check	PU	15	58	-	-	Tray2-IN	Printing	The Tray2-IN sensor ON detected by the turning ON or the 'Open and close the cover'. (mainly the cover open / close timing)	The paper remains at Tray2 feeder part. Defect of the Tray2-IN sensor. Communication error.	Immediate stop	Open and close the cover
		Transporting time out	PU	15	59	-	-	TxD	Printing	The TxD signal dose not change to ON in feeding from Tray2.	The TxD signal error between Tray2 and PU. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		between T2 Transporting roller and Regist roller	PU	15	5A	-	-	IN1, TxD	Printing	The Paper Jam occurred between Tray2 transporting roller and the regist roller. (The IN1 sensor could not detect the sensor ON though detected the transporting distance within which between the Tray2 transporting roller and IN1 sensor plus the prescribed)	Tray paper path JAM. Defect of the IN2 sensor. The mechanism is abnormal. The Tray2-TxD signal error.	Stop after exited	Open and close the cover
		Detecting the transporting error in the end of transporting	T2 to T5	15	5F	-	-	-	Printing	The transporting error detected in the end of transporting for Option Tray.	Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
		Transporting time out detecting NG	PU	15	60	-	-	-	Printing	The transporting time out detecting is not occur but the Jam notice was received from the lower tray.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		OPT IN sensor OFF error	PU	15	62	-	-	Tray2-IN	Printing	The Tray2-IN sensor has not changed to OFF in the continuous printing form lower than the Tray2. (1)	Defect of the Tray2-IN sensor. Communication error.	Stop after exited	Open and close the cover
		OPT IN sensor OFF error	PU	15	63	-	-	Tray2-IN	Printing	The Tray2-IN sensor has not changed to OFF in the continuous printing form lower than the Tray2. (2)	Defect of the Tray2-IN sensor. Communication error.	Stop after exited	Open and close the cover
		OPT IN sensor OFF error	PU	15	64	-	-	Tray2-IN	Printing	The Tray2-IN sensor has not changed to OFF in the continuous printing form lower than the Tray2. (3)	Defect of the Tray2-IN sensor. Communication error.	Stop after exited	Open and close the cover
		Sensor error in end of hopping	PU	15	A0	-	-	IN1	Printing	The IN1 sensor is OFF in the paper feeding waiting position of the Option Tray.	Communication error. Defect of the IN1 sensor.	Stop after exited	Open and close the cover
393	TRAY3 HOPPING ERROR	Sensor check in printing	T3	16	01	-	-	Tray3-IN	Tray3-IN	The Tray3 is started the feeding, and the Tray3-IN sensor could not detect the sensor ON though detected the distance within which between the feeding starting position and the Tray2-IN sensor plus the Jam margin.	Paper feed Jam. Paper setting mistake. Defect of the Tray3-IN sensor. The mechanism is abnormal.	Stop after exited	Open and close the cover
		Paper Feed Tray IN sensor error	T3	16	07	-	-	Tray3-IN	Printing	The Tray3-IN sensor kept detected ON as long as the specified time.	Communication error. Defect of the Tray3-IN sensor.	Immediate stop	Open and close the cover

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
393	TRAY3 HOPPING ERROR	Paper Feed Tray IN sensor error	T3	16	08	-	-	Tray3-IN	Printing	The transporting control event of the Tray3 did not occur in the paper feeding the Tray4 or the lower trays.	Communication error. Defect of the Tray3-IN sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	T3	16	09	-	-	Tray3-IN	Printing	The Tray3-IN sensor could not detect the sensor OFF by the previous paper though detected the transporting distance*2 within which between the Paper top edge and the Tray3-IN sensor in the paper feeding.	Defect of the Tray3-IN sensor. Communication error.	Immediate stop	Open and close the cover
		Sensor check in printing	T3	16	0B	-	-	Tray3-IN	Printing	In the paper feeding starting, the Tray3-IN sensor detected ON.	Defect of the Tray3-IN sensor. Communication error. The mechanism.	Immediate stop	Open and close the cover
		Hopping time out	PU	16	50	-	-	-	Printing	· PU can not send the hopping command. (The command that must be sent the hopping command before had not be sent finish all yet.) · The state of Tray3 dose not change to without or finished hopping 2.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		Hopping time out	PU	16	51	-	-	-	Printing	The hopping state of the Tray3 dose not change to hopping, finished, error, or NG.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		Hopping time out	PU	16	52	-	-	-	Printing	The hopping state of the Tray3 dose not change to finished, error, or NG.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		Hopping time out	PU	16	55	-	-	-	Printing	The hopping NG notice sent from Tray3 dose not exist the occasion for it.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		Initializing sensor check	PU	16	57	-	-	Tray3-IN	Printing	The Tray3-IN sensor ON detected by the turning ON or the 'Open and close the cover'. (mainly the turn on timing)	The paper remains. Defect of the Tray3-IN sensor. Communication error.	Stop after exited	Open and close the cover
		Initializing sensor check	PU	16	58	-	-	Tray3-IN	Printing	The Tray3-IN sensor ON detected by the turning ON or the 'Open and close the cover'. (mainly the cover open / close timing)	The paper remains. Defect of the Tray3-IN sensor. Communication error.	Immediate stop	Open and close the cover
		Transporting time out	PU	16	59	-	-	TxD	Printing	The TxD signal dose not change to ON in feeding from Tray3.	The TxD signal error between Tray2 and PU. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
393	TRAY3 HOPPING ERROR	Jam between T2 Transporting roller and Regist roller	PU	16	5A	-	-	IN1, TxD	Printing	The Paper Jam occurred between Tray2 transporting roller and the regist roller in the feeding from the Tray 3. (The IN1 sensor could not detect the sensor ON though detected the transporting distance within which between the Tray2 transporting roller and IN1 sensor plus the prescribed)	Tray paper path JAM. Defect of the IN1 sensor. The mechanism is abnormal. The Tray2-TxD signal error.	Stop after exited	Open and close the cover
		Jam between T3 transporting rollor and T2 Transporting rollor	T2	16	5B	-	-	Tray2-IN, TxD	Printing	The Paper Jam occurred between Tray3 transporting roller and the Tray2 transporting roller. (The Tray2-IN sensor could not detect the sensor ON though detected the transporting distance within which between the Tray3 transporting roller and Tray2-IN sensor plus the prescribed)	Tray paper path JAM. Defect of the Tray2-IN sensor. The mechanism is abnormal. The Tray3-TxD signal error.	Stop after exited	Open and close the cover
		Transporting time out detecting NG	PU	16	60	-	-	-	Printing	The transporting time out detecting is not occur but the Jam notice was received from the lower tray.	Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
		OPT IN sensor OFF error	PU	16	62	-	-	Tray3-IN	Printing	The Tray3-IN sensor has not changed to OFF in the continuous printing form lower than the Tray3. (1)	Defect of the Tray2-IN sensor. Communication error.	Stop after exited	Open and close the cover
		OPT IN sensor OFF error	PU	16	63	-	-	Tray3-IN	Printing	The Tray3-IN sensor has not changed to OFF in the continuous printing form lower than the Tray3. (2)	Defect of the Tray2-IN sensor. Communication error.	Stop after exited	Open and close the cover
		OPT IN sensor OFF error	PU	16	64	-	-	Tray3-IN	Printing	The Tray3-IN sensor has not changed to OFF in the continuous printing form lower than the Tray3. (3)	Defect of the Tray2-IN sensor. Communication error.	Stop after exited	Open and close the cover
		Sensor error in end of hopping	PU	16	A0	-	-	IN1	Printing	The IN1 sensor is OFF in the paper feeding waiting position of the Option Tray.	Communication error. Defect of the IN1 sensor.	Stop after exited	Open and close the cover
394	TRAY4 HOPPING ERROR	Sensor check in printing	T4	17	01	-	-	Tray4-IN	Tray4-IN	The Tray4 is started the feeding, and the Tray4-IN sensor could not detect the sensor ON though detected the distance within which between the feeding starting position and the Tray4-IN sensor plus the Jam margin.	Paper feed Jam. Paper setting mistake. Defect of the Tray4-IN sensor. The mechanism is abnormal.	Stop after exited	Open and close the cover
		Paper Feed Tray IN sensor error	T4	17	07	-	-	Tray4-IN	Printing	The Tray4-IN sensor kept detected ON as long as the specified time in feeding from Tray4.	Defect of the Tray4-IN sensor. Communication error.	Immediate stop	Open and close the cover
		Paper Feed Tray IN sensor error	T4	17	08	-	-	Tray4-IN	Printing	The transporting control event of the Tray4 did not occur in the paper feeding the Tray5 or the lower trays.	Defect of the Tray4-IN sensor. Communication error.	Immediate stop	Open and close the cover

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
394	TRAY4 HOPPING ERROR	Sensor check in printing	T4	17	09	-	-	Tray4-IN	Printing	The Tray4-IN sensor could not detect the sensor OFF by the previous paper though detected the transporting distance*2 within which between the Paper top edge and the IN sensor in the paper feeding.	Defect of the Tray4-IN sensor. Communication error.	Immediate stop	Open and close the cover
		Sensor check in printing	T4	17	0B	-	-	Tray4-IN	Printing	In the paper feeding starting, the Tray4-IN sensor detected ON.	Defect of the Tray4-IN sensor. Communication error. The mechanism is abnormal.	Immediate stop	Open and close the cover
		Hopping time out	PU	17	50	-	-	-	Printing	· PU can not send the hopping command. (The command that must be sent the hopping command before had not be sent finish all yet.) · The state of Tray4 dose not change to without or finished hopping 2.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		Hopping time out	PU	17	51	-	-	-	Printing	The hopping state of the Tray4 dose not change to hopping, finished, error, or NG.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		Hopping time out	PU	17	52	-	-	-	Printing	The hopping state of the Tray4 dose not change to finished, error, or NG.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		Hopping time out	PU	17	55	-	-	-	Printing	The hopping NG notice sent from Tray4 dose not exist the occasion for it.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		Initializing sensor check	PU	17	57	-	-	Tray4-IN	Printing	The Tray4-IN sensor ON detected by the turning ON or the 'Open and close the cover'. (mainly the turn on timing)	The paper remains. Defect of the Tray4-IN sensor. Communication error.	Stop after exited	Open and close the cover
		Initializing sensor check	PU	17	58	-	-	Tray4-IN	Printing	The Tray4-IN sensor ON detected by the turning ON or the 'Open and close the cover'. (mainly the cover open / close timing)	The paper remains. Defect of the Tray4-IN sensor. Communication error.	Immediate stop	Open and close the cover
		Transporting time out	PU	17	59	-	-	TxD	Printing	The TxD signal dose not change to ON in feeding from Tray2 in feeding from the Tray4.	The TxD signal error between Tray2 and PU. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
		Jam between T2 Transporting roller and Regist roller	PU	17	5A	-	-	IN1, TxD	Printing	The Paper Jam occurred between Tray2 transporting roller and the regist roller. (The IN1 sensor could not detect the sensor ON though detected the transporting distance within which between the Tray2 transporting roller and IN1 sensor plus the prescribed)	Tray paper path JAM. Defect of the IN1 sensor. The mechanism is abnormal. The Tray2-TxD signal error.	Stop after exited	Open and close the cover

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
394	TRAY4 HOPPING ERROR	Jam between T3 Transport-ing roller and T2 Transporting roller	T2	17	5B	-	-	Tray2-IN, TxD	Printing	The Paper Jam occurred between Tray3 transporting roller and the Tray2 transporting roller. (The Tray2-IN sensor could not detect the sensor ON though detected the transporting distance within which between the Tray3 transporting roller and Tray2-IN sensor plus the prescribed)	Tray paper path JAM. Defect of the IN1 sensor. The mechanism is ab-normal. The Tray3-TxD signal error.	Stop after exited	Open and close the cover
		Jam between T4 Transport-ing roller and T3 Transporting roller	T3	17	5C	-	-	Tray3-IN, TxD	Printing	The Paper Jam occurred between Tray4 transporting roller and the Tray3 transporting roller. (The Tray3-IN sensor could not detect the sensor ON though detected the transporting distance within which between the Tray4 transporting roller and Tray3-IN sensor plus the prescribed)	Tray paper path JAM. Defect of the Tray3-IN sensor. The mechanism is abnormal. The Tray4-TxD signal er-ror.	Stop after exited	Open and close the cover
		Transporting time out detect-ing NG	PU	17	60	-	-	-	Printing	The transporting time out detecting is not occur but the Jam notice was received from the lower tray.	Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
		OPT IN sensor OFF error	PU	17	62	-	-	Tray4-IN	Printing	The Tray4-IN sensor has not changed to OFF in the continuous printing form lower than the Tray4. (1)	Defect of the Tray4-IN sensor. Com-munication error.	Stop after exited	Open and close the cover
		OPT IN sensor OFF error	PU	17	63	-	-	Tray4-IN	Printing	The Tray4-IN sensor has not changed to OFF in the continuous printing form lower than the Tray4. (2)	Defect of the Tray4-IN sensor. Com-munication error.	Stop after exited	Open and close the cover
		OPT IN sensor OFF error	PU	17	64	-	-	Tray4-IN	Printing	The Tray4-IN sensor has not changed to OFF in the continuous printing form lower than the Tray4. (3)	Defect of the Tray4-IN sensor. Com-munication error.	Stop after exited	Open and close the cover
		Sensor error in end of hopping	PU	17	A0	-	-	IN1	Printing	The IN1 sensor is OFF in the paper feeding waiting position of the Option Tray.	Communication error. Defect of the IN1 sensor.	Stop after exited	Open and close the cover
395	TRAY5 HOPPING ERROR	Sensor check in printing	T5	18	01	-	-	Tray5-IN	Tray5-IN	The Tray5 is started the feeding, and the Tray5-IN sensor could not detect the sensor ON though detected the distance within which between the feeding starting position and the Tray5-IN sensor plus the Jam margin.	Paper feed Jam. Paper setting mis-take. Defect of the Tray5-IN sensor. The mechanism is abnormal.	Stop after exited	Open and close the cover
		Paper Feed Tray IN sensor error	T5	18	07	-	-	Tray5-IN	Printing	The Tray5-IN sensor kept detected ON as long as the specified time in feeding from Tray5.	Defect of the Tray5-IN sensor. Com-munication error.	Immediate stop	Open and close the cover

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
395	TRAY5 HOPPING ERROR	Sensor check in printing	T5	18	09	-	-	Tray5-IN	Printing	The Tray5-IN sensor could not detect the sensor OFF by the previous paper though detected the transport-ing distance*2 within which between the Paper top edge and the Tray5-IN sensor in the paper feeding.	Defect of the Tray5-IN sensor. Com-munication error.	Immediate stop	Open and close the cover
		Sensor check in printing	T5	18	0B	-	-	Tray5-IN	Printing	In the paper feeding starting, the Tray5-IN sensor detected ON.	Defect of the Tray5-IN sensor. Com-munication error. The mechanism is abnormal.	Immediate stop	Open and close the cover
		Hopping time out	PU	18	50	-	-	-	Printing	· PU can not send the hopping com-mand. (The command that must be sent the hopping command before had not be sent finish all yet.) · The state of Tray5 dose not change to without or finished hopping 2.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		Hopping time out	PU	18	51	-	-	-	Printing	The hopping state of the Tray5 dose not change to hopping, finished, er-ror, or NG.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		Hopping time out	PU	18	52	-	-	-	Printing	The hopping state of the Tray5 dose not change to finished, error, or NG.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		Hopping time out	PU	18	55	-	-	-	Printing	The hopping NG notice sent from Tray5 dose not exist the occasion for it.	Communication error. Uncontrollable error (the logical inconsistency).	Stop after exited	Open and close the cover
		Initializing sen-sor check	PU	18	57	-	-	Tray5-IN	Printing	The Tray5-IN sensor ON detected by the turning ON or the 'Open and close the cover'. (mainly the turn on timing)	The paper remains. Defect of the Tray5-IN sensor. Communication er-ror.	Stop after exited	Open and close the cover
		Initializing sen-sor check	PU	18	58	-	-	Tray5-IN	Printing	The Tray5-IN sensor ON detected by the turning ON or the 'Open and close the cover'. (mainly the cover open / close timing)	The paper remains. Defect of the Tray5-IN sensor. Communication er-ror.	Immediate stop	Open and close the cover
		Transporting time out	PU	18	59	-	-	TxD	Printing	The TxD signal dose not change to ON in feeding from Tray2 in feeding from the Tray5.	The TxD signal error between Tray2 and PU. Uncontrollable error (the logical inconsistency). Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
		Jam between T2 Transporting roller and Reg-ist roller	PU	18	5A	-	-	IN1, TxD	Printing	The Paper Jam occurred between Tray2 transporting roller and the regist roller. (The IN1 sensor could not de-tect the sensor ON though detected the transporting distance within which between the Tray2 transporting roller and IN1 sensor plus the prescribed)	Tray paper path JAM. Defect of the IN1 sensor. The mechanism is ab-normal. The Tray2-TxD signal error.	Stop after exited	Open and close the cover

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
395	TRAY5 HOPPING ERROR	Jam between T3 Transport-ing roller and T2 Transporting roller	T2	18	5B	-	-	Tray2-IN, TxD	Printing	The Paper Jam occurred between Tray3 transporting roller and the Tray2 transporting roller. (The Tray2-IN sen-sor could not detect the sensor ON though detected the transporting dis-tance within which between the Tray3 transporting roller and Tray2 trans-porting roller plus the prescribed.)	Tray paper path JAM. Defect of the Tray2-IN sensor. The mechanism is abnormal. The Tray3-TxD signal er-ror.	Stop after exited	Open and close the cover
		Jam between T4 Transport-ing roller and T3 Transporting roller	T3	18	5C	-	-	Tray3-IN, TxD	Printing	The Paper Jam occurred between Tray3 transporting roller and the Tray2 transporting roller. (The Tray2-IN sen-sor could not detect the sensor ON though detected the transporting dis-tance within which between the Tray3 transporting roller and Tray2 trans-porting roller plus the prescribed.)	Tray paper path JAM. Defect of the Tray3-IN sensor. The mechanism is abnormal. The Tray4-TxD signal er-ror.	Stop after exited	Open and close the cover
		Jam between T5 Transport-ing roller and T4 Transporting roller	T4	18	5D	-	-	Tray4-IN, TxD	Printing	The Paper Jam occurred between Tray5 transporting roller and the Tray4 transporting roller. (The Tray4-IN sen-sor could not detect the sensor ON though detected the transporting dis-tance within which between the Tray5 transporting roller and Tray4 trans-porting roller plus the prescribed.)	Tray paper path JAM. Defect of the Tray4-IN sensor. The mechanism is abnormal. The Tray5-TxD signal er-ror.	Stop after exited	Open and close the cover
		Transporting time out detect-ing NG	PU	18	60	-	-	-	Printing	The transporting time out detecting is not occur but the Jam notice was received from the lower tray.	Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover
		OPT IN sensor OFF error	PU	18	62	-	-	Tray5-IN	Printing	The Tray5-IN sensor has not changed to OFF in the continuous printing form lower than the Tray5. (1)	Defect of the Tray5-IN sensor. Com-munication error.	Stop after exited	Open and close the cover
		OPT IN sensor OFF error	PU	18	63	-	-	Tray5-IN	Printing	The Tray5-IN sensor has not changed to OFF in the continuous printing form lower than the Tray5. (2)	Defect of the Tray5-IN sensor. Com-munication error.	Stop after exited	Open and close the cover
		OPT IN sensor OFF error	PU	18	64	-	-	Tray5-IN	Printing	The Tray5-IN sensor has not changed to OFF in the continuous printing form lower than the Tray5. (3)	Defect of the Tray5-IN sensor. Com-munication error.	Stop after exited	Open and close the cover
		Sensor error in end of hopping	PU	18	A0	-	-	IN1	Printing	The IN1 sensor is OFF in the paper feeding waiting position of the Option Tray.	Communication error. Defect of the IN1 sensor.	Stop after exited	Open and close the cover

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX)				According sensor / signals	Finding part	Error condition	Presumed error factor	Motion and clearing method for the error	
				GEN	DET	LST	INF					Motion	Method
400	PAPER SIZE ERROR	Paper size error	PU	33	01	-	-	Tray : IN2 / IN1 MPT : IN3/ IN2 Dup : IN3/ DupF	Tray : IN2ON to IN1 OFF MPT : IN3ON to IN2 OFF Dup : IN3ON to DupFOFF	The detected paper size is shorter than the prescribed length.	Different of the paper size. Defect of the sensor as following. · In the case of the feeding from Tray 1 to 5: Defect of the IN1 or the N2. · In the case of the feeding from MPT: Defect of the IN2 or the N3. · In the case of the feeding from Duplex: Defect of the IN3.	Stop after exited	Open and close the cover
			PU	33	03	-	-	Tray : IN2, IN1 MPT : IN3, IN2	Tray : IN1 MPT : IN2 (The project-ing of the paper on each trays causes.)	The detecting starting sensor chang-es OFF previously.	The lower sensor detects OFF by the multi feed, the 1st regist separating or the sag of the paper. Or the lever fault of the motion to return. · In the case of the feeding from Tray 1 to 5: Defect of the IN1 or the N2. · In the case of the feeding from MPT: Defect of the IN2 or the N3.	Stop after exited	Open and close the cover
			PU	33	04	-	-	Tray : IN2, IN1 MPT : IN3, IN2 Dup : IN3, DupF	Tray : IN2ON to IN1 OFF MPT : IN3ON to IN2 OFF Dup : IN3ON to DupFOFF	The paper size is over than the maxi-mum paper length is supported by the PU.	The paper length is too long so that it is over than supported range. Defect of the sensor as following. · In the case of the feeding from Tray 1 to 5: Defect of the IN1 or the N2 sensor. · In the case of the feeding from MPT: Defect of the IN2 or the N3 sensor. · In the case of the feeding from Duplex: Defect of the Dup-F or the IN3 sensor.	Immediate stop	Open and close the cover
			T2	34	02	-	-	Tray2-IN	T2 finish butt-ing to Tray2-IN OFF	The detected paper size is shorter than the prescribed length.	Different of the paper size. Defect of the Tray2-IN sensor.	Stop after exited	Open and close the cover
			T3	35	02	-	-	Tray3-IN	T3 finish butt-ing to Tray3-IN OFF	The detected paper size is shorter than the prescribed length.	Different of the paper size. Defect of the Tray3-IN sensor.	Stop after exited	Open and close the cover
			T4	36	02	-	-	Tray4-IN	T4 finish butt-ing to Tray4-IN OFF	The detected paper size is shorter than the prescribed length.	Different of the paper size. Defect of the Tray4-IN sensor.	Stop after exited	Open and close the cover
			T5	37	02	-	-	Tray5-IN	T5 finish butt-ing to Tray5-IN OFF	The detected paper size is shorter than the prescribed length.	Different of the paper size. Defect of the Tray5-IN sensor.	Stop after exited	Open and close the cover

CU error code	PU error display	Error detail	De-tected Unit	Error Code (HEX) GEN	DET	LST	INF	According sensor / signals	Finding part	Error condition	Presumed error factor	Motion	Method
401	PAPER SIZE ERROR& PAPER PILE OUT OF TRAY	multi feed error (only tray feeding)	PU	33	02	-	-	Tray feeding : IN2, IN1 MPT : IN3, IN2 Dup : IN3, DupF	Tray : IN2ON to IN1 OFF MPT : IN3ON to IN2 OFF Dup : IN3ON to DupFOFF	The detected paper size is longer than the prescribed length.	The multi feeding. Different of the paper size. Defect of the sensor as following. · In the case of the feeding from Tray 1 to 5: Defect of the IN1 or the N2 sensor. · In the case of the feeding from MPT: Defect of the IN2 or the N3 sensor. · In the case of the feeding from Duplex: Defect of the Dup-F or the IN3 sensor.	Stop after exited	Open and close the cover
			T2	34	01	-	-	Tray2-IN	T2 finish butting to Tray2-IN OFF	The detected paper size is longer than the prescribed length.	The multi feeding. Different of the paper size. Defect of the Tray2-IN sensor.	Stop after exited	Open and close the cover
			T3	35	01	-	-	Tray3-IN	T3 finish butting to Tray3-IN OFF	The detected paper size is longer than the prescribed length.	The multi feeding. Different of the paper size. Defect of the Tray3-IN sensor.	Stop after exited	Open and close the cover
			T4	36	01	-	-	Tray4-IN	T4 finish butting to Tray4-IN OFF	The detected paper size is longer than the prescribed length.	The multi feeding. Different of the paper size. Defect of the Tray4-IN sensor.	Stop after exited	Open and close the cover
			T5	37	01	-	-	Tray5-IN	T5 finish butting to Tray5-IN OFF	The detected paper size is longer than the prescribed length.	The multi feeding. Different of the paper size. Defect of the Tray5-IN sensor.	Stop after exited	Open and close the cover
650	JAM MULTIPATH	Sensor check in printing	DUP	56	01	-	-	DUP-B, DUP-R	DUP-B ON to DUP-R ON	The DUP-F sensor could not detect the sensor ON though detected the transporting distance which the transporting plus the jam margin after the DUP-B sensor ON in 2PASS printing.	Paper Jam in the Duplex transporting path. Defect of the DUP-B sensor. Defect of the DUP-F sensor.	Immediate stop	Open and close the cover
		Sensor check in printing	DUP	56	50	-	-	Dup-F(PU)	-	The DUP-F sensor could not detect the sensor ON though detected the transporting distance which the size plus the jam margin from starting the transporting from the 2PASS waiting position.	Defect of the Dup-F sensor of the PU side. Communication error. Uncontrollable error (the logical inconsistency).	Immediate stop	Open and close the cover

5.3.3 Printing on stand-alone basis

This printer can print the following printing on a stand-alone-basis.

Settings	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.
PS font list	Prints a PS fonts list.
PCL font list	Prints a PCL emulation fonts list.
Print statistic results	Prints a statistic usage result.
Error log	Prints an error log.
Color profiles list	Prints a color profiles list.
User media list	Prints user media list information.
Test Print-1	Prints the pattern for analysis related to print quality.
Test Print-2	Prints the pattern for analysis related to CYMK print quality.
Test Print-3	Prints the pattern for check the reduction of paper when 2 pass printing.
Test Print-4	Prints the pattern for analysis related to spot color (white and clear) print quality.

Printing Procedure:
① Confirm that the message stating the printer is ready to print is displayed, and press the **MENU**∨ button to display FUNCTION.
② Press the **MENU**∨ button to select [Printer Information], and press the **OK** button.
③ Press the **MENU**∨ button to select the item to print, and press the **OK** button.
④ Press the **OK** button to print the item.

5.3.4 Button-pressed functions at power-on

Each button function when the printer is turned on is as follows. With the following buttons, the upper line of LCD shows "RAM CHECK" which becomes effective by holding down the buttons until the progress % is 60%.

(1) **OK** button
Start the Boot menu.

5.4 Setup after part replacement

The following describes the adjustments necessary after part replacement:

Replaced part	Adjustment
LED head	Not necessary.
Drum cartridge (yellow, magenta, cyan, black,spot color)	Not necessary.
Fuser unit	Not necessary.
Belt unit	Not necessary.
PU/CU board	Copying information stored in EEPROM, which requires utility software.
MPT-Unit	Paper Width Sensor Adjustment (5.3.2.9)

5.4.1 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 40 (EEPROM Error) is not displayed):

   (1) Using the board replacement function of Maintenance Utility (Maintenance Utility operation manual, section 2.4.1.1.9 about Board replacement functionality), 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 about Board replacement functionality), 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 about Board replacement functionality), 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** button and **MENU**∨ button and **OK** button in combination until display the "Status Mode".
   ii. When the printer operates properly, the operation 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 40 (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) Serial number information setting (applicable Maintenance Utility operation manual, section 2.4.1.1.10.3 about PU board setup)

   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 digits that indicate a production place, two digits that indicate a month and year, six digit that indicate a manufacture number (sequence number) and two digit that indicate a 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.

   CU serial number should not be entered.

- The PU serial number is ten digits from the SAP serial number. The rest two digits 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 digits, i.e. ten digits preceded by a single-byte zero (0) (note a read PU serial number is ten characters).

  As shown in the following serial number label example, the ten digits are the printer's the SAP serial number excluding the revision number.

  Enter 11-digits number which consists of adding 0
  (single-byte) before 10-digits number.
  (Enter "0AE01234567")

  A E 0 1 2 3 4 5 6 7 8 9 → Revision number

  A   B Made in   C
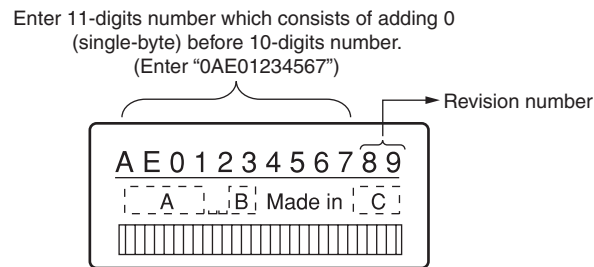
  Serial number label image

- 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.

(2) Switching to Shipping mode

(Maintenance Utility Operation Manual Section 2.4.1.1.10.4)

When the PU/CU control 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 total number of printed sheets, and Waste toner box. 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) Waste toner box is cleared, and differences between the counts and consumed lives of the consumables are cleared.

Option	Description	Count description
Number of printed sheets:Multi purpose tray Number of printed sheets:Tray1 Number of printed sheets:Tray2 Number of printed sheets:Tray3 Number of printed sheets:Tray4 Number of printed sheets:Tray5	Total number of printed sheets of each Tray	The total number of printed sheets of each Tray from the beginning of use of the printer
Total number of printed sheets	A printer life count.	The total number of printed sheets from the beginning of use of the printer *3
Waste toner box	Remaining life of waste toner box	Diaplay the remaining life of waste toner box
Prints Black Prints Yellow Prints Magenta Prints Cyan Prints Spot color	The total number of printed sheets in each color	The total number of printed sheets in each color from the beginning of use of the printer *3

*1 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.)

*2 One third of the number of belt turns in A4 (A4 portrait) three-pages-per-job printing is regarded as one count.

*3 Tow counts apply to duplex print.

5.5 Manual density adjustment setting

This printer 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 **OK** button when Calibration appears.

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

(3) Press the **OK** button.

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

5.6 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 as (aaaaaa).

Option			Settings	Function
Boot Menu	Enter Password		************	Enters a password to display Boot Menu. The default is "aaaaaa". The password is six to twelve digits of lowercase alphanumeric characters Same password as admin menu.
	Network Factory Defaults		Execute	Specifies whether to initialize the network menu.
	HDD Setup	Enable HDD	No Yes	When HDD is damaged and cannot be activated, if setting to NO, the device can be activated by regarding HDD as non-installation, regardless of the presence or absence of HDD. If setting to NO, even when HDD is normal, it is regarded as non installation, therefore, the access to HDD is "FAIL". [Display conditions] HDD is installed.
	Storage Common Setup	Check File System	Execute	Resolves a mismatch between the actual (available) and displayed available space of the file system and restores management data (FAT information). Executes to each file system. [Display conditions] - HDD is installed. - "Boot Menu"-"HDD Setup"-"Enable HDD" is Yes.
		Check All Sectors	Execute	Restores improper HDD sector information and corrects a mismatch between the actual and displayed available space of the file system. [Display conditions] - HDD is installed. - "Boot Menu"-"HDD Setup"-"Enable HDD" is Yes.
	Menu Lockout		On Off	Sets ON/ OFF of the menu lockout function. ON: Menus other than the authentication print/ encrypted authentication print are invisible. OFF: Menu Lockout function does not work.
	Panel Lockout		Mode1 Mode2 Off	Sets ON/ OFF of the panel lockout function. Mode1: All keys other than **ON LINE**, **OK**, **CANCEL**, **POWER SAVE** and **HELP** are disabled. Mode2: All keys other than **ON LINE** and **OK** are disabled. Off: Panel Lockout function does not work.

6. REPLACEMENT OF PARTS

This chapter describes the procedures of the field replacement of parts, assemblies and units. The procedures are to detach them. Reverse the procedures to attach them.

The reference part numbers used in this manual (such as ① and ②) do not identical to the part numbers in the maintenance disassembly configuration diagram 45530601TL and the RSPL 45530603TR.

6.1 Notes on replacement of parts

(1) Prior to replacing a part, unplug the AC cable and the interface cable.

(a) Be sure to use the following procedure to unplug the AC cable:

① Press and hold the power switch for approximately 1sec. to turn off the power supply switch.

② Check that the operation panel is completely turned off, and then turn off the main power supply switch.

③ Pull out the AC plug of the AC cable from the AC power source.

④ Unplug the AC cable and the other cables.

⚠**Warning**	Electric shock hazard.	⚡
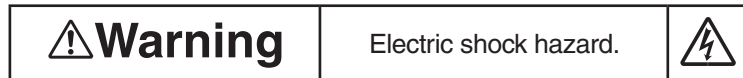
Be sure to unplug the AC cable as some circuits keep working while the AC cable is connected even after the power is turned off.

When replacing the low-voltage power supply, due to potential electric shock, wear insulated gloves or be careful not to touch the conductors or terminals of the power supply directly.

After the AC cable is unplugged, the capacitor may take about one minute to discharge completely, or could not discharge due to PCB breakdown. Use caution about electric shock.

(b) Be sure to use the following procedure to reconnect the printer:

① Connect the AC cable and the other cables to the printer.

② Connect the AC plug of the AC cable to the AC power source.

③ Turn on the main power supply switch.

④ Press and hold the power switch for approximately 1sec. to turn on the power supply.
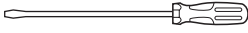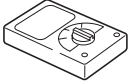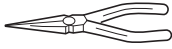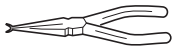
(2) Do not disassembly the printer so long as it operates properly.

(3) Minimize disassembly. Do not detach the parts not shown in the part replacement procedure.

(4) Use the replacement tools specified.

(5) Deal disassembly in the order instructed, or part damage may occur.

(6) Removed small parts, such as screws or collars, should be temporary assembled in their original positions.

(7) Do not use static-prone gloves when handling integrated circuits (ICs) or circuit boards, including microprocessors, and ROM and RAM chips.

(8) Do not put printed-circuit boards (PCBs) directly on the printer or a floor.

(9) Do not operate with keeping the situation as opening the priter's front cover that is arranged the Image Drum in inside.

Remove

Install
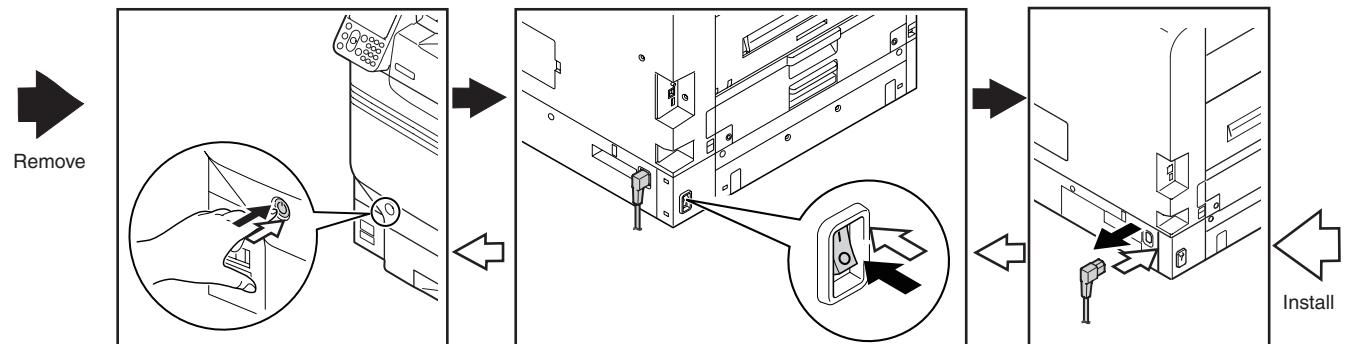
Maintenance Tools:

Table 6-1-1 shows the tools necessary to replace printed-circuit boards and units in this priter.
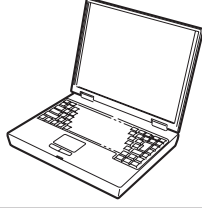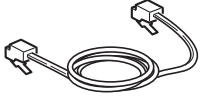
Table 6-1-1: Maintenance Tools

No.	Maintenance Tool		Quantity	Use	Remarks
1		No. 2-200 screwdriver with magnetic tip	1	3- to 5-mm screws	
2		Screwdriver No. 3-100	1		
3		Screwdriver No. 5-200	1		
4		Digital multimeter	1		
5		Pliers	1		
6		Handy vacuum cleaner (toner vacuum)	1		Refer to the following note.
7		E-ring pliers	1	E-shaped ring removal	
8		- Micro-Driver 2.0mm	1	Paper Thickness for Adjustment	
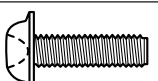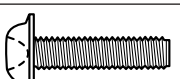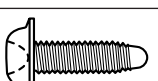
Note! Use a toner vacuum. Using a general-purpose vacuum may cause the toner to catch fire.

Table 6-1-2 shows the tools necessary to use Maintenance Utility software.

Table 6-1-2: Maintenance Tools

No.	Maintenance Tool		Quantity	Use	Remarks
1		Notebook personal computer (with Maintenance Utility software installed)	1		See section 5.2 for Maintenance Utility.
2		USB cable	1		
3		Ethernet cable (crossover cable)	1		

Screws in use:

Shape	Designation	Use
	Screw (silver)(6mm)	For Metal Plate
	Screw (silver)(8mm)	For Metal Plate
	Screw (Black)(6mm) The screw pitch is wide	For tree resin
	Screw (Black)(8mm) The screw pitch is wide	For tree resin
	Round-head screw (black)(6mm) The screw pitch is narrow	For Metal Plate *Don't mistake for tree resin

6.2 Part replacement procedure

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

6.2.1 Toner Cartridge

(1) Open the Toner change cover.
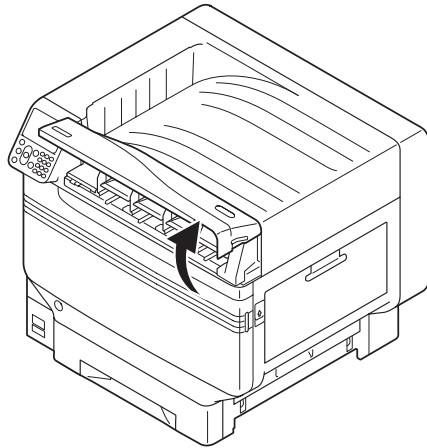
(2) Remove the Toner Cartridge.
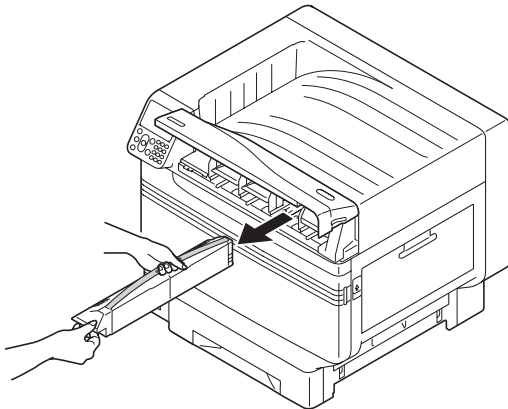
6.2.2 Image Drum

(1) Open the front cover.
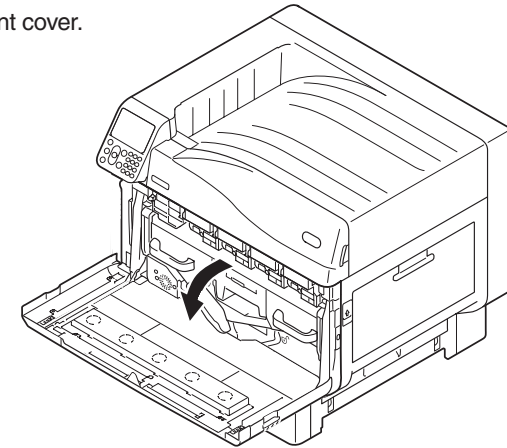
(2) Gently lift the handle (blue) upwards, and remove the photoreceptor from the lower side taking care that your hand does not touch the drum on the lower side (green cylindrical section).
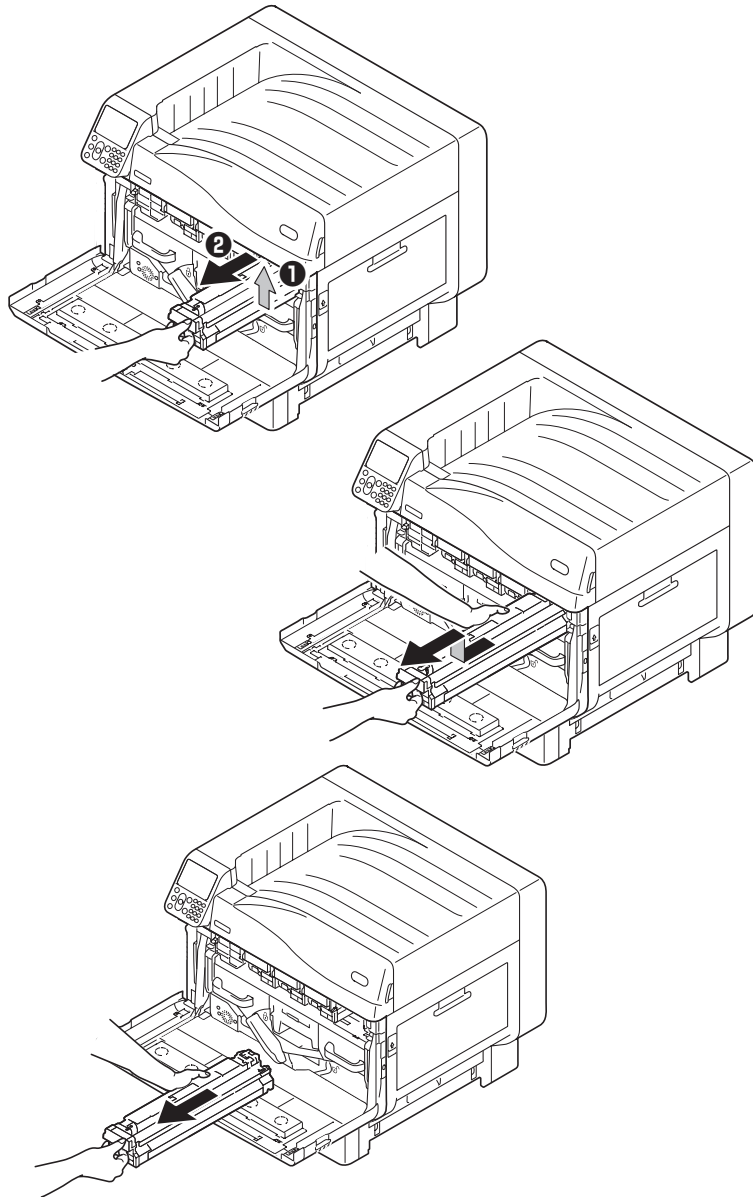
Note! ・Ensure not to touch or damage the drum.

・Do not expose the image drum cartridge to direct sunshine and strong light (about 1500 lux). And do not expose it to room light for more than 5 minutes.
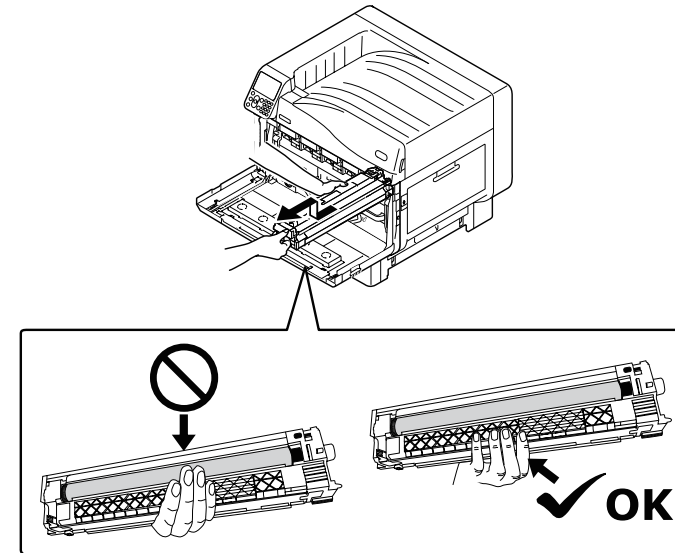
6.2.3 Belt Unit

Note! The Belt Unit with a transfer roller for the spot color printing that is attached into the Belt Unit of the 5 colors machine is not attached into the 4 colors machine in the factory shipping.

Belt unit
（attached in factory shipping*)

Transfer roller for the S1 color
4 colors machine: <u>none</u>
5 colors machine: <u>attached</u>

*: <u>The Belt Unit for the supply or maintenance can be used to the both of for the 4 colors machine and the 5 colors machine.</u>

The S1 transfer roller for 5 colors machine

Common transfer rollers for the 4 colors and 5 colors machine

Belt driving roller

Intermedia transfer belt
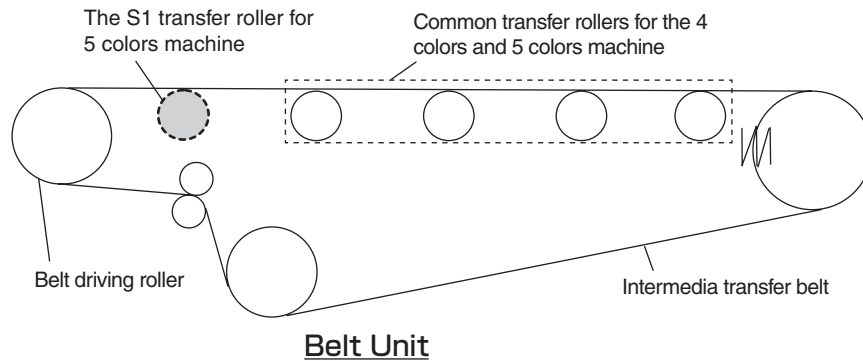
<u>Belt Unit</u>

Note! In the case of the Belt Unit's serial number is older than 'E0', it cannot be used to C942 and ES9542.
The Belt Unit whose serial number is newer than 'F0' be able to be used to C942 and ES9542.

Revision

AL01234567A0

Made in
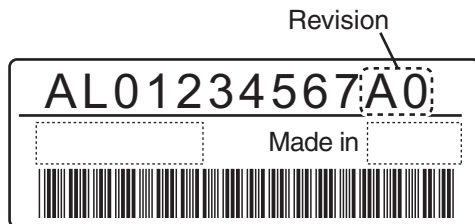
(1) Open the Front cover.
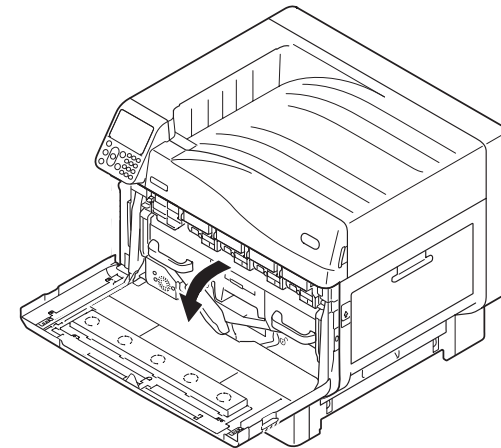
(2) Remove the waste toner box from the printer.
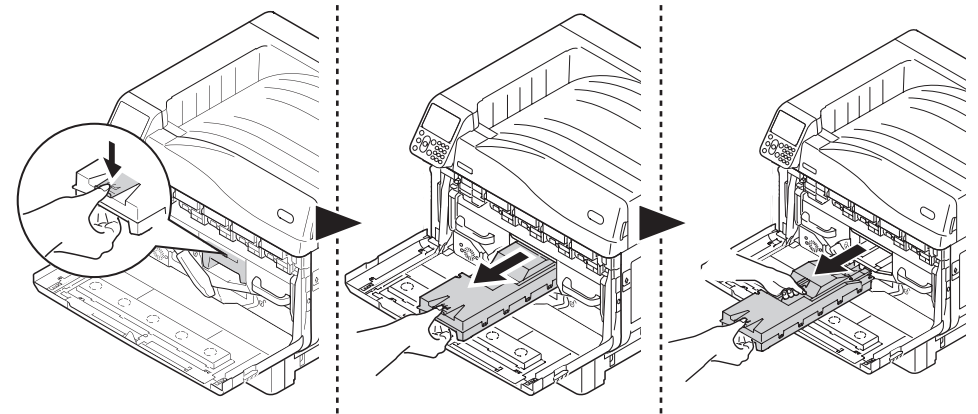
(3) Rotate the center lever (blue) to the right.
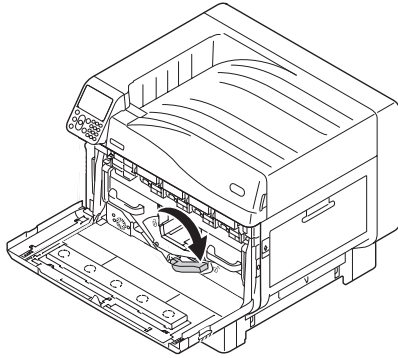
(4) Rotate the belt unit lock lever knobs (blue / two pieces at left and right) to the left, and pull these lock levers to front-side.
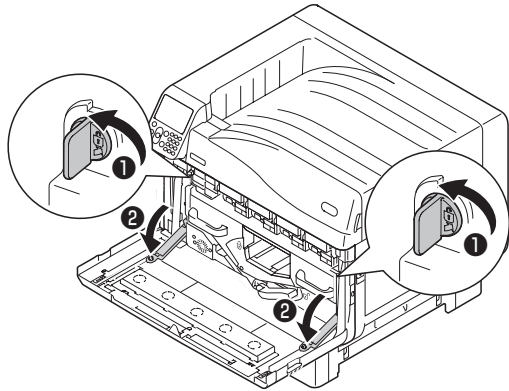
(5) Hold the handle and pull out the belt unit, hold the label part (blue) at left and right side of it and remove it.
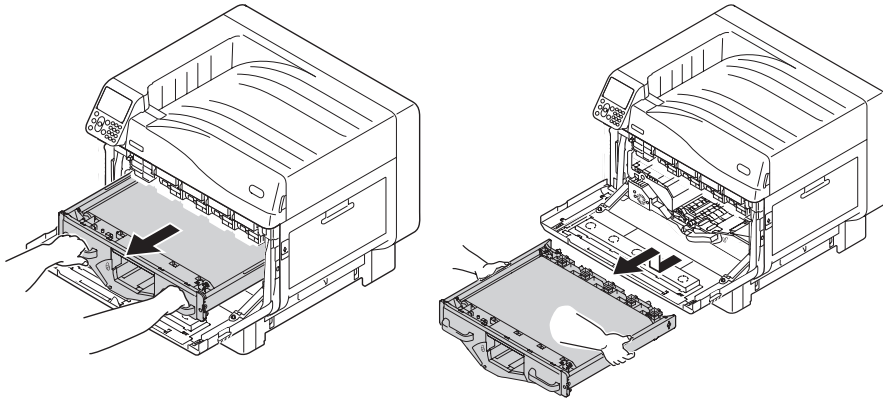
Note! Should not be put the belt unit that have you removed in a vertical direction.
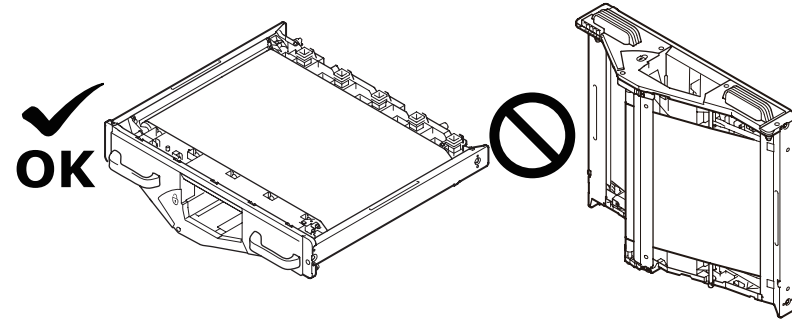
Note! Ensure not to touch or damage the Belt surface.
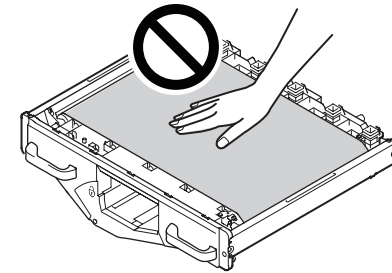
6.2.4 Transfer roller unit

(1) Pull out the EJ-Rail unit.
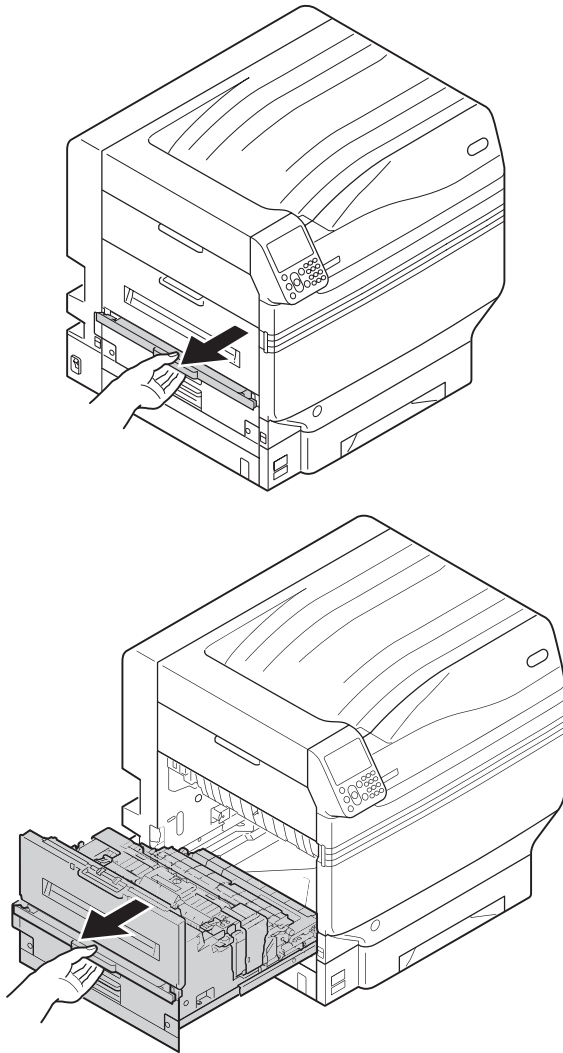
(2) Pull up both tips of the transfer roller unit's lock levers (blue).
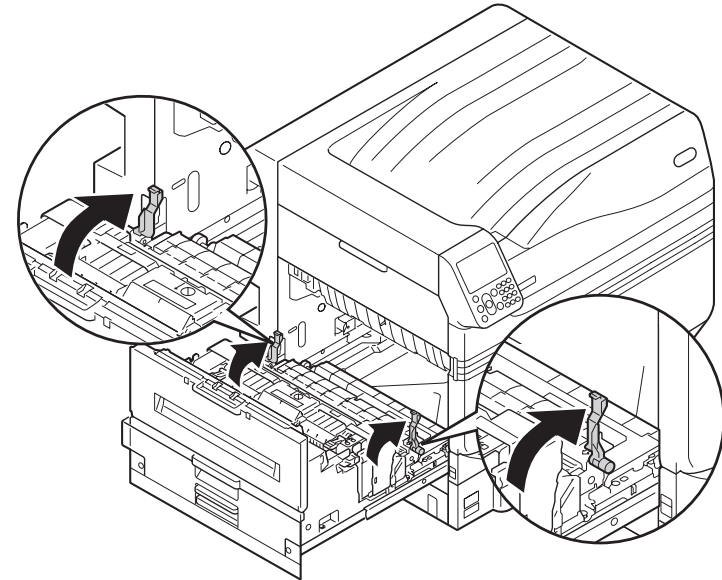
(3) Hold the transfer roller unit's label parts (blue) and remove it.
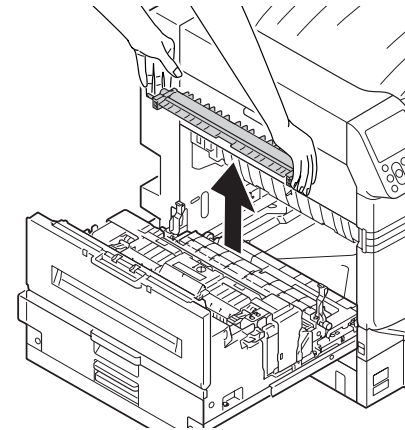
6.2.5 Fuser unit

(1) Pull out the EJ-Rail unit.
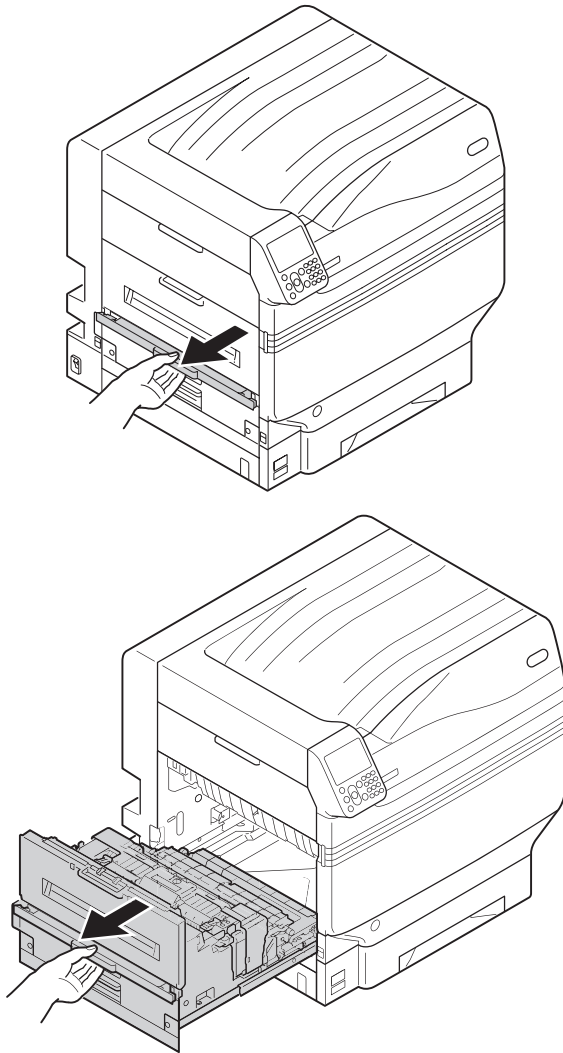
(2) Pull up the fuser unit's lock lever (blue).
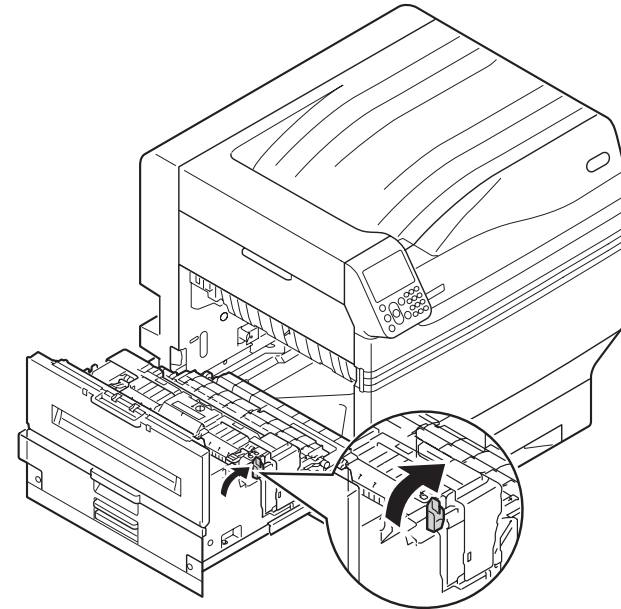
(3) Hold the fuser unit's handle with both hands and remove it.
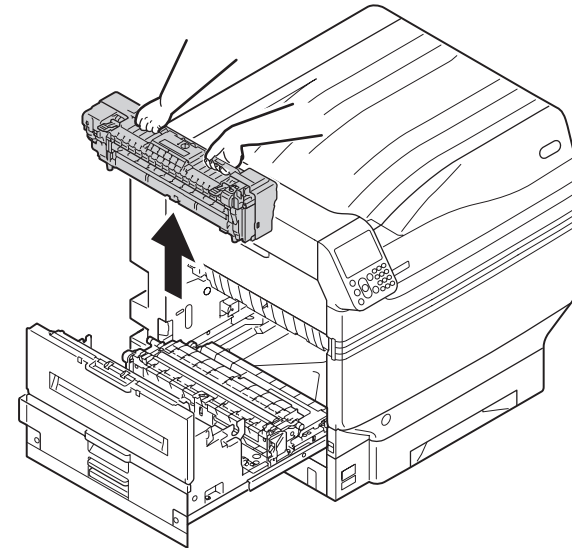
6.2.6 Waste toner box

(1) Open the front cover.
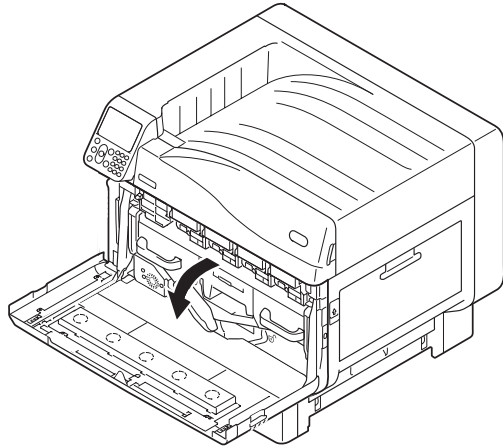
(2) Remove the waste toner box from the printer.
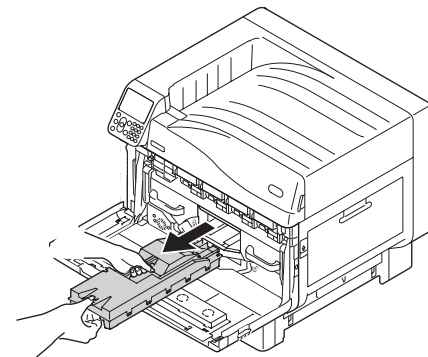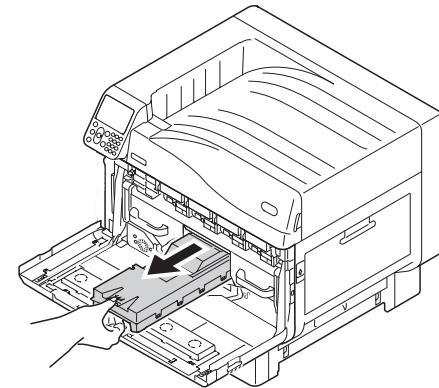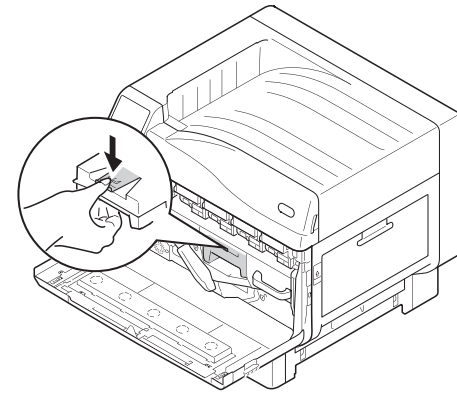
6.2.7 LED Head

(1) Detach the Image Drum and Belt Unit.(Refer to section 6.2.2 and 6.2.3)

(2) Remove the Cover-Assy-Front.(Refer to section 6.2.18)

(3) Put up these left and right remainded hinges, and put down the LED Head ① .

(4) Unlock the connector of back side.

Note! Unlock the connector when disconnect and connect. If not, break the FFC terminal.

Lock Lever break away easy, carefully when remove.
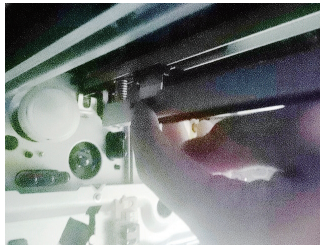
Lock (Lever : down)   Unlock(Lever : Up)

(5) Warp the claw of front side and remove the front side of LED Head ① .

(5)-1

(5)-2

(5)-3
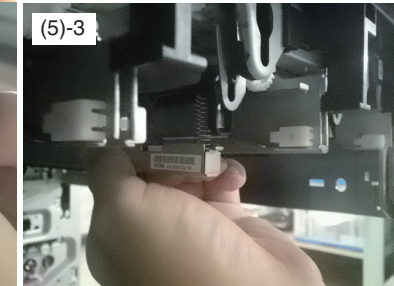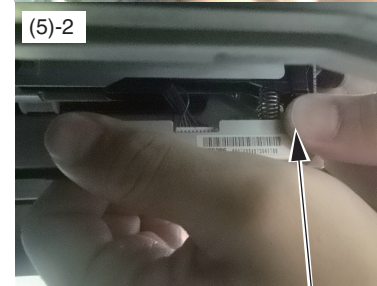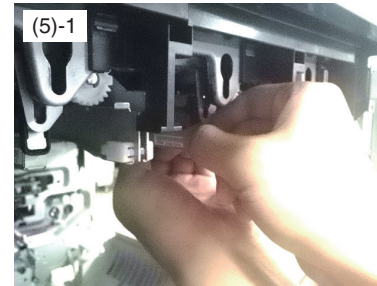
Warp

(6) Detach the claw of front side and disconnect the FFC to remove LED Head ① .

(6)-1

Claw of connector

(6)-2
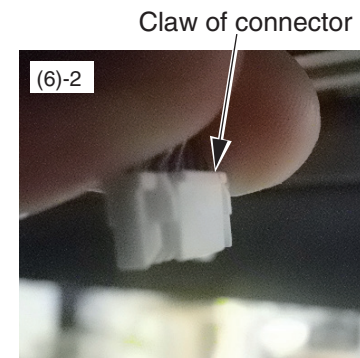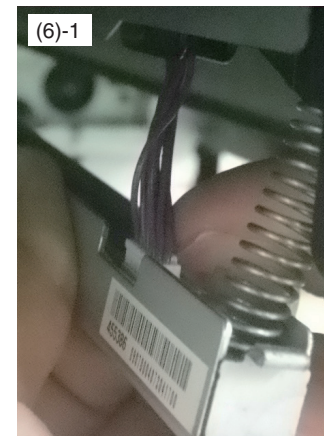
Note! The FFC is fragile, therefore carefully to remove.
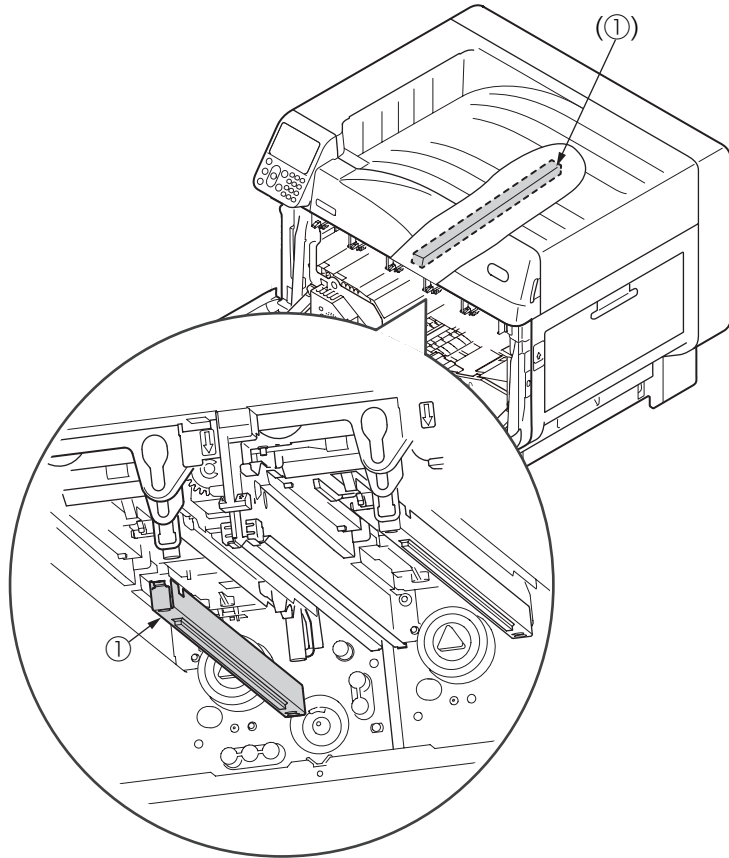
[Assembling process]

(1) Pull out the Head Cable to the left of LED head.
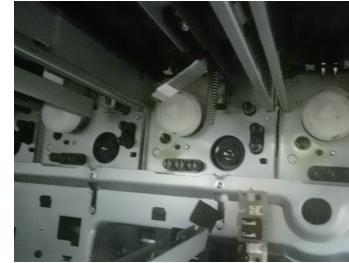
(2) Hitch the calw of back, and warp the holder by LED head, and hitch the claw of front side.

Back side

Front side
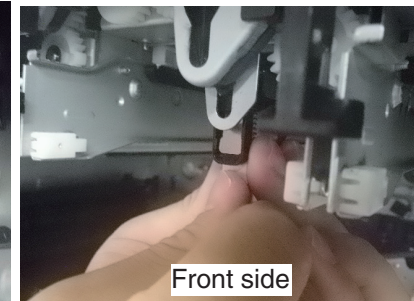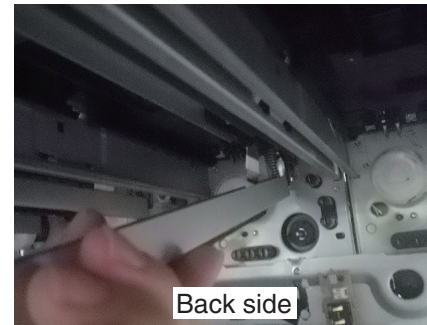
(3) Connect the back side connector and lock the lever. And connect the front connector.

(4) Push up 2 points(front and rear sides) of the LED Head and check the LED Head moving smoothly in the holder.

<<Fuse check of the Main PCB(Board-F1X, Board-F1Y)>>
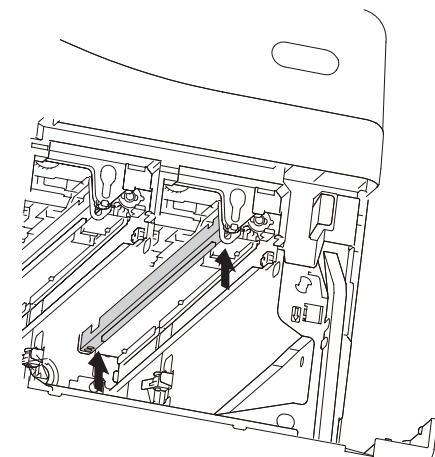
Power on after the check below.

W,CL : F1 is conduction state on Board-F1X.

    : F1 and FG are not conduction states on Board-F1X.

Y,M,C,K : F25 is conduction state on Board-F1Y.

    : F25 and FG are not conduction states on Board-F1Y.
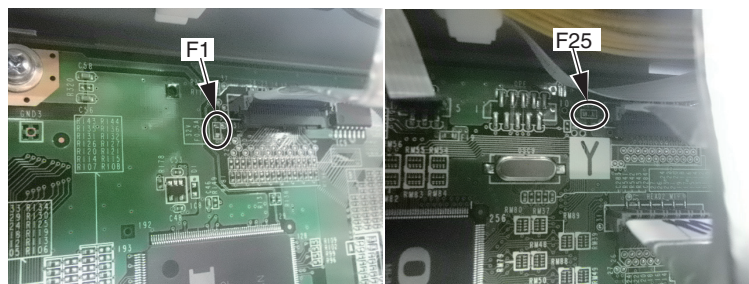
6.2.8 Cassette-Assy / Guide-Assy-Tail / Label-Tray / Indicator-Paper-Size

(1) Remove the Cassette-Assy ① .

(2) Remove the Guide-Assy-Tail ② .

(3) Remove the Label-Tray ③ .

(4) Remove the Indicator-Paper-Size ④ .
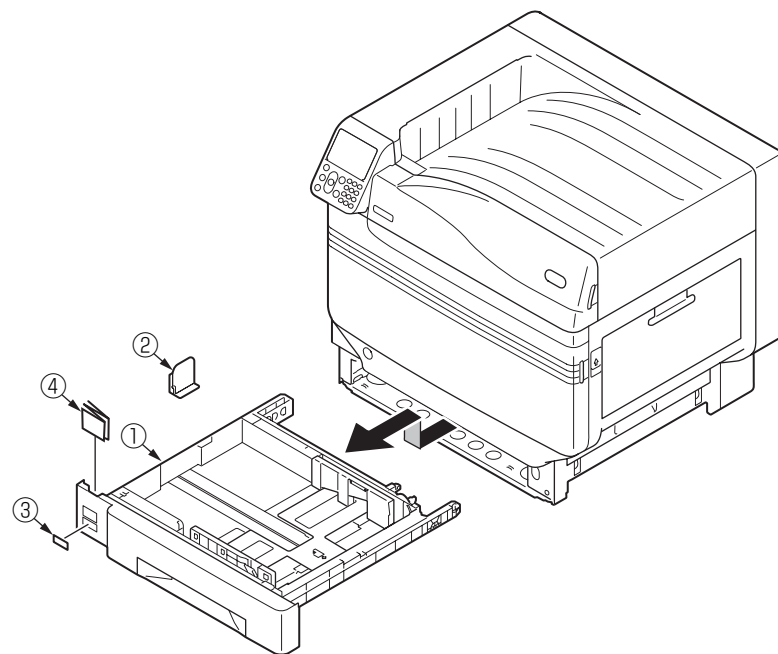
6.2.9 Cover-Assy-TC

(1) Open the Cover-Assy-TC and detach the Toner cartridge. (Refer to section 6.2.1)

(2) Remove the four screws (black)(8mm) ① and remove the Cover-Assy-TC ② .
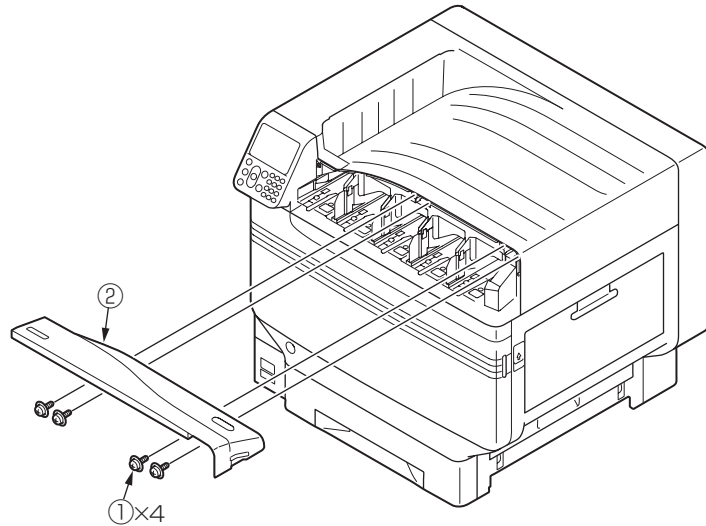
6.2.10 Cover-Assy-OP-Panel

(1) Open the Cover-Assy-TC and front cover. (Refer to section 6.2.1)

(2) Remove the screw (black)(8mm) ① and Round-head screw (black)(6mm) ② and disconnect the cable and remove Cover-Assy-OP-Panel ③ .
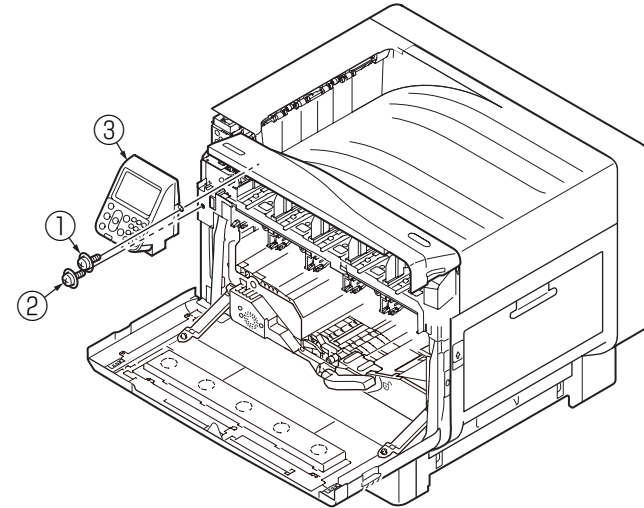
6.2.11 Lever-Stacker-Full

(1) Remove the Cover-Assy-OP-Panel.(Refer to section 6.2.10)

(2) Remove the screw ① and remove the HDD cover ② .

(2) Remove the eight screws (silver) (6mm) ③ to detach the Cover-Rear ④ .

(3) Remove two claws and the Cover-Top-A ⑤ .

(4) Remove the Lever-Stacker-Full ⑥ .
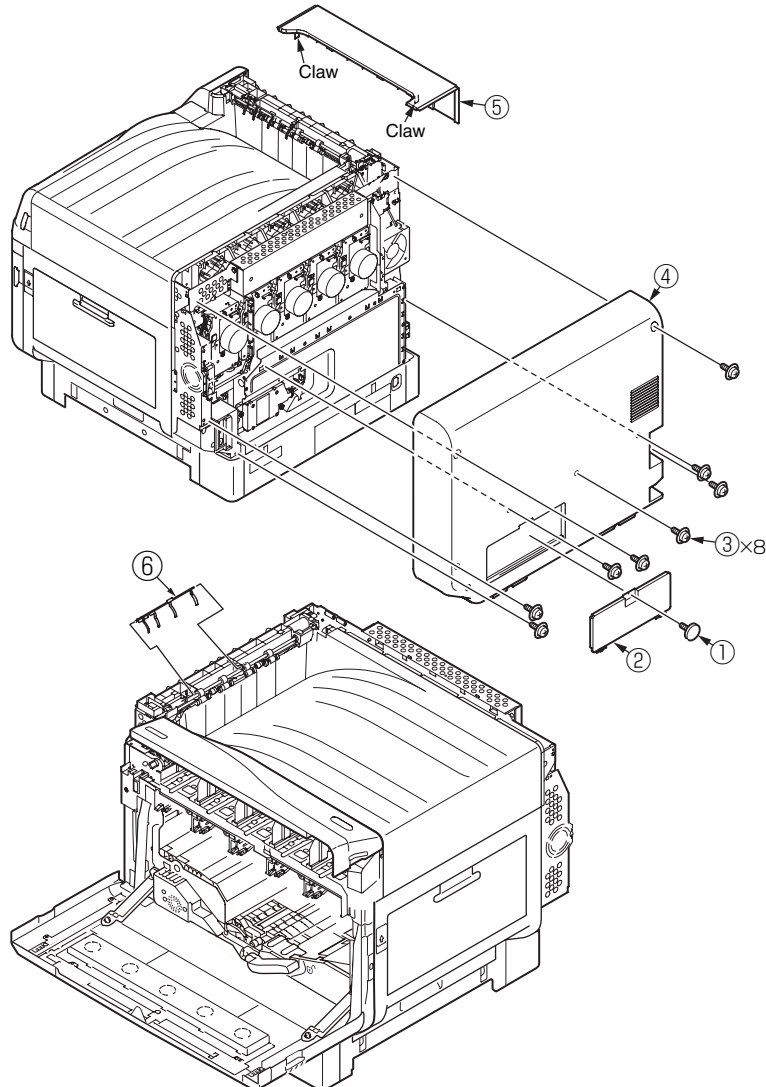
6.2.12 Eject-Assy-Joboff/Motor-Joboff

(1) Remove the Lever-Stacker-Full. (Refer to section 6.2.11)

(2) Remove the photo sensor and disconnect the cable.

(3) Remove the two screws (silver)(8mm) ① and screw (silver)(6mm) ② and remove the Eject-Assy-Joboff ③ .

(4) Remove the two screws (silver)(6mm) ④ , two cables and remove the Motor-Assy-Joboff ⑤ .

(5) Remove the two screws (silver)(6mm) ⑥ and remove the Motor-Joboff ⑦ .
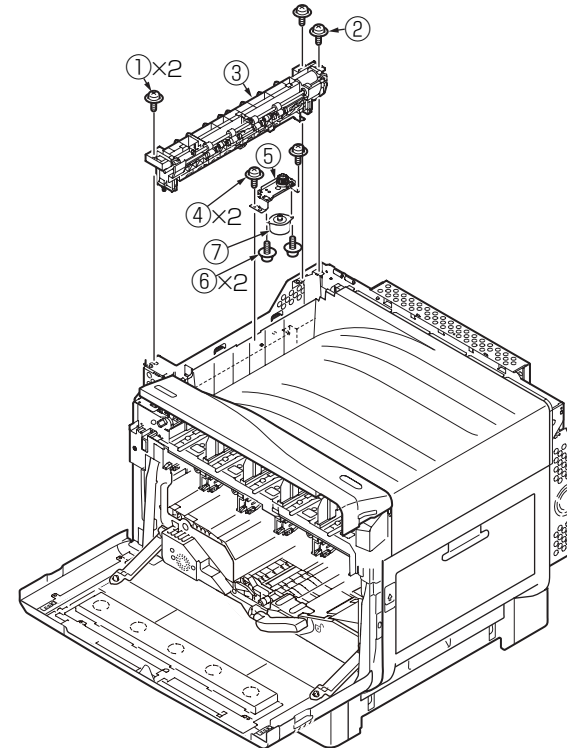
6.2.13 Guide-Assy-Eject-M

(1) Open and remove the Cover-Assy-Jam-Clear ① .

(2) Remove the Cover-Rear.(Refer to section 6.2.11)

(3) Remove the Plate-Sheild-F1D.(Refer to section 6.2.20)

(4) Remove the Motor-FAN-Assy.(Refer to section 6.2.24)

(5) Remove the cable from F1D board.

(6) Remove the six screws (silver)(8mm) ② and remove the Guide-Assy-Eject-M ③ .
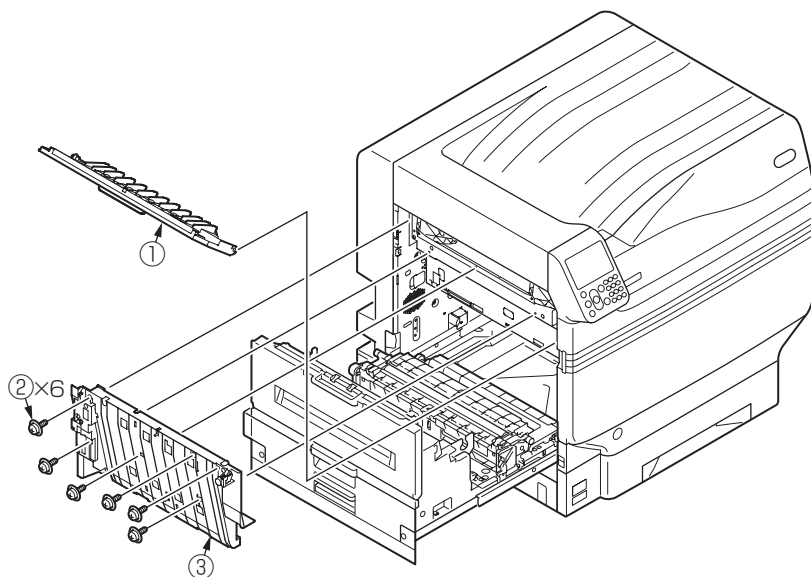
6.2.14 Sheet-OP-Panel/Plate-Logo/Plate-Name

(1) Remove the Sheet-OP-Panel ① .

(2) Remove the Plate-Name ② .

(3) Remove the Plate-Logo ③ .
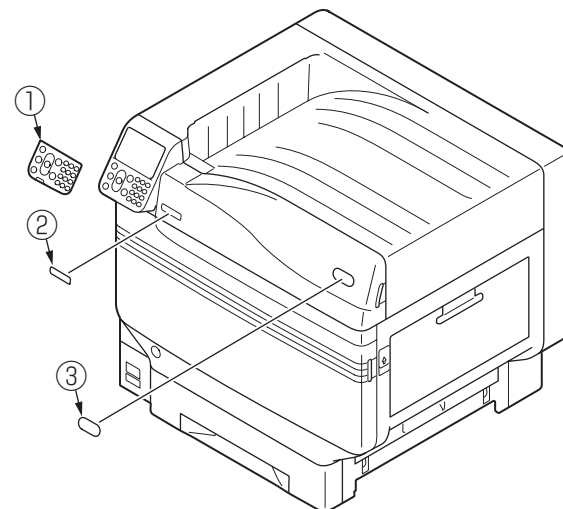
6.2.15 Cover-Assy-Top-B

(1) Remove the Toner cartridge and Image Drum. (Refer to section 6.2.1,6.2.2)

(2) Remove the Eject-Assy-Joboff. (Refer to section 6.2.12)

(3) Remove the spot color duct.(for 5-color model only)

(4) Remove the three screws(silver)(6mm) ① and remove the Cover-Assy-Top-B ② .

Spot color duct

①×3

②
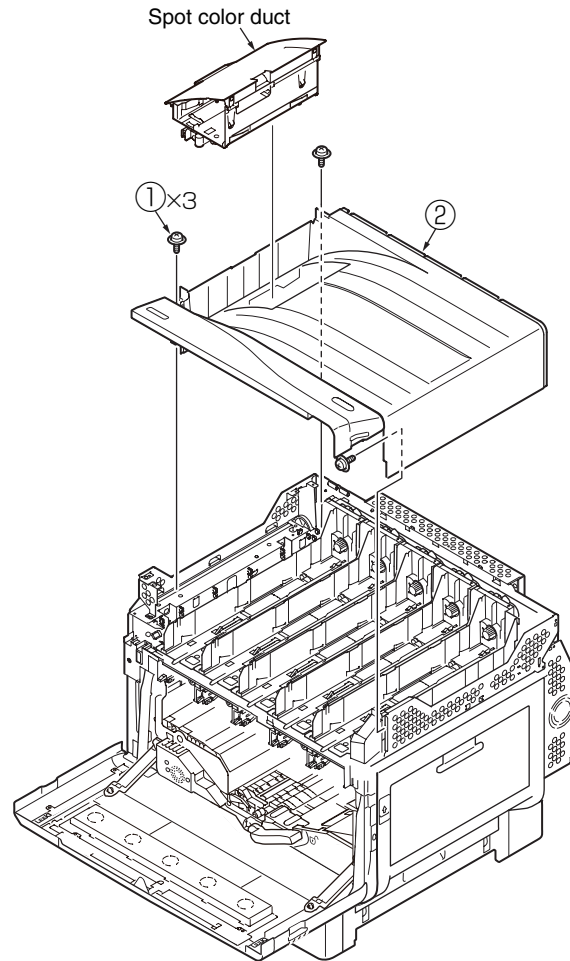
6.2.16 Duplex-Unit

Note! The Duplex-Unit with a 2-pass roller for the 2-pass printing that is attached into the Duplex-Unit of the 5 colors machine is not attached into the 4 colors machine in the factory shipping.

2-pass roller

Duplex-Unit
（attached in factory shipping*)

4 colors machine: <u>none</u>

5 colors machine: <u>attached</u>

*: <u>The Duplex-Unit for the maintenance can be used to the both of for the 4 colors machine and 5 colors machine.</u>

2pass-roller
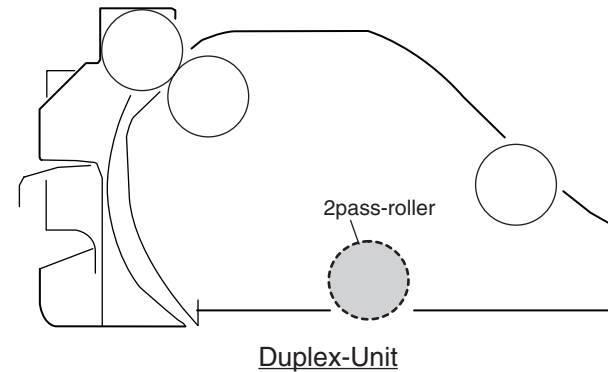
<u>Duplex-Unit</u>

(1) Pull out the Duplex-Unit ① and lift upwards, and remove it.

①
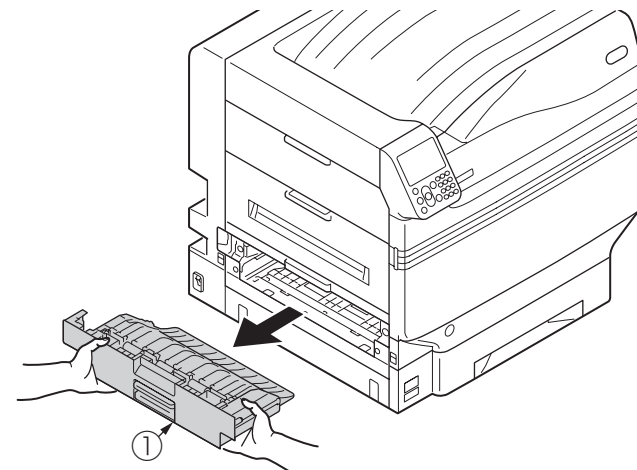
6.2.17 Duplex-Board(Board-FIT-1)

(Duplex unit control PCB)

(1) Remove the Duplex-Unit. (Refer to section 6.2.16)

(2) Remove the screw(black)(8mm) ① and three screws(silver)(6mm) ② and remove the Cover-Dup-Top ③ from the Duplex-Unit.

(3) Remove the screw(black)(8mm) ④ and remove the Board-FIT-1 ⑤ .

(4) Remove the two Screw-Shoulder(silver)(15.4mm) ⑥ and connector ⑦ and spring ⑧ .
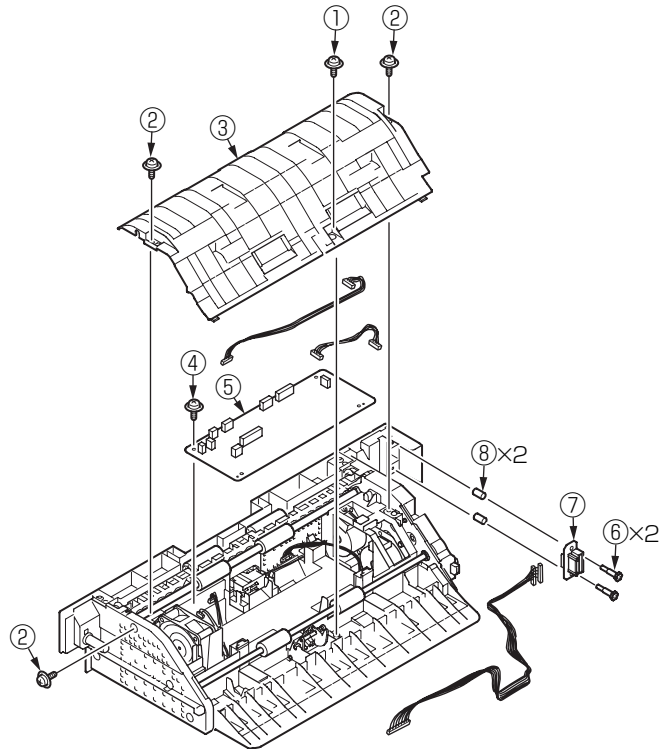
6.2.18 Cover-Assy-Front

(1) Open the Cover-Assy-Front ① .

(2) Remove the screw(silver)(6mm) ② and remove the Cover-In-B ③ .

(3) Disconnect the three connectors.

(4) Remove the six screws(black)(8mm) ④ and remove the Cover-Assy-Front ① .

(5) Remove two magnets ⑤ .
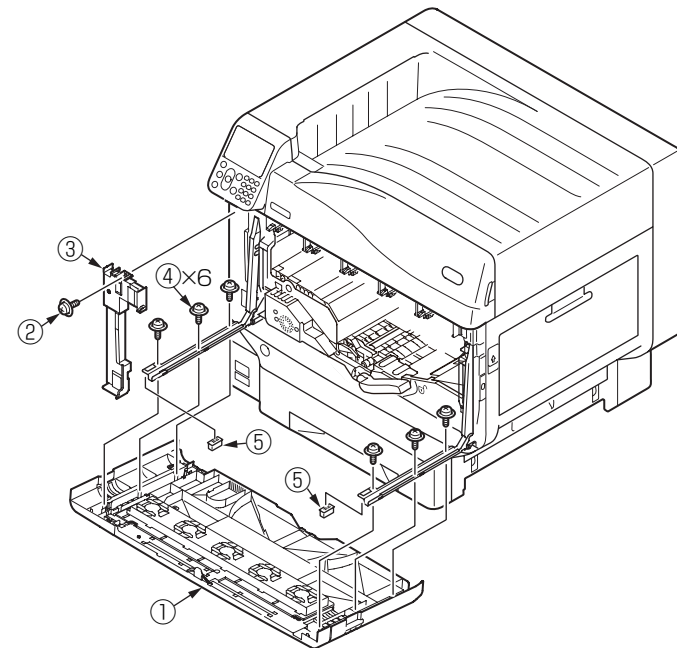
6.2.19 Filter-Front / Motor-FAN / Board-F1E(External LED PCB)

(1) Remove the Cover-Assy-Front.(Refer to section 6.2.18)

(2) Remove the two screws(black)(8mm) ① and remove the Cover-cable ② .

(3) Remove the six screws(black)(8mm) ③ and remove the Duct-Assy ④ .

(4) Remove the Filter-Front ⑤ .

(5) Remove the Motor-FAN ⑥ .

(6) Remove the Cover-Lends ⑦ and remove the Board-F1E ⑧ .
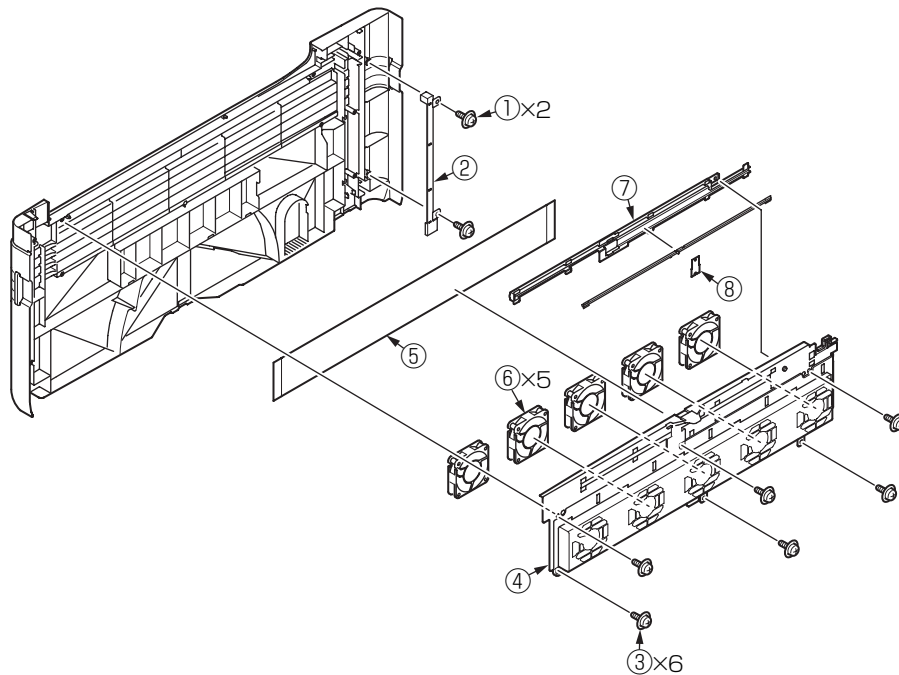
6.2.20 Board-F1D(Driver relay PCB) / Board-F1Y(PU/CU PCB) / Board-F1X(Spot color PCB) / Board-Memory / FAN

(1) Remove the Cover-Rear.(Refer to section 6.2.11)

(2) Lossen the eight screws(silver)(6mm) ① and slide the Plate-Cover-MainPCB ② for MPT side and remove it.

(3) Remove the three screws(silver)(6mm) ③ and remove the Plate-Shield-F1D ④ .

(4) Remove the three screws(silver)(6mm) ⑤ and remove the Plate-Cover-FFC ⑥ .

(5) Disconnect the all cables from board.

(6) Remove the four screws(silver)(6mm) ⑦ and remove the Board-F1X ⑧ .
(for 5 colors machine only)

(7) Remove the nine screws(silver)(6mm) ⑨ and remove the Board-F1Y ⑩ .

(8) Remove the two screws(silver)(6mm) ⑪ and remove the Board-F1D ⑫ .

(9) Remove the Board-Memory ⑬ from the Board-F1Y ⑩ .

(10) Remove the two screws(silver)(20mm) ⑭ and remove the FAN ⑮ .
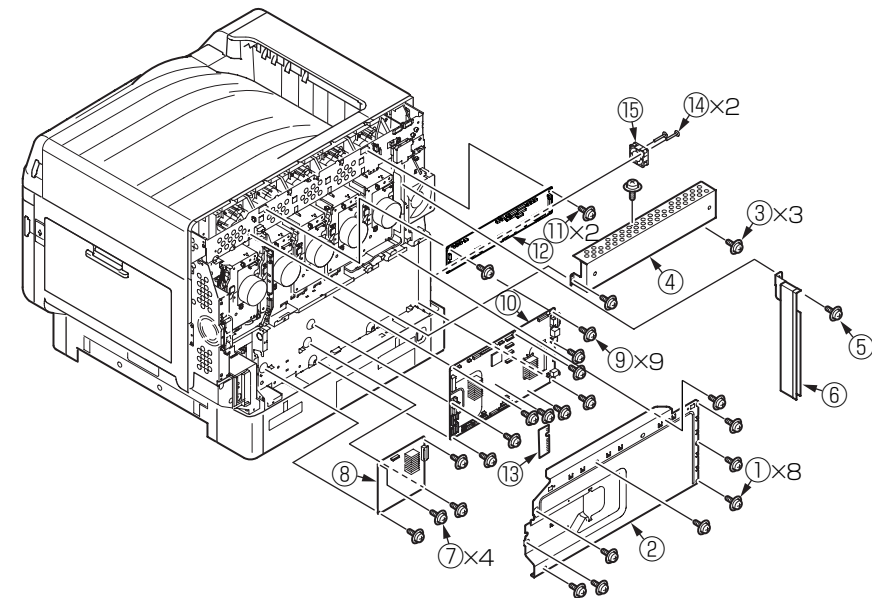
6.2.21 Board-AHV(High-voltage power supply PCB)

(1) Remove the Board-F1Y and Board-F1X.(Refer to section 6.2.20)

(2) Remove the Guide-Cable-POWDRV ① .

(3) Remove the five screws(silver)(6mm) ② and remove the Plate-Box-MainPCB ③ .

(4) Remove the Sheet-Insulation-HV ④ .

(5) Remove the six screws(silver)(6mm) ⑤ and remove the Board-AHV ⑥ .
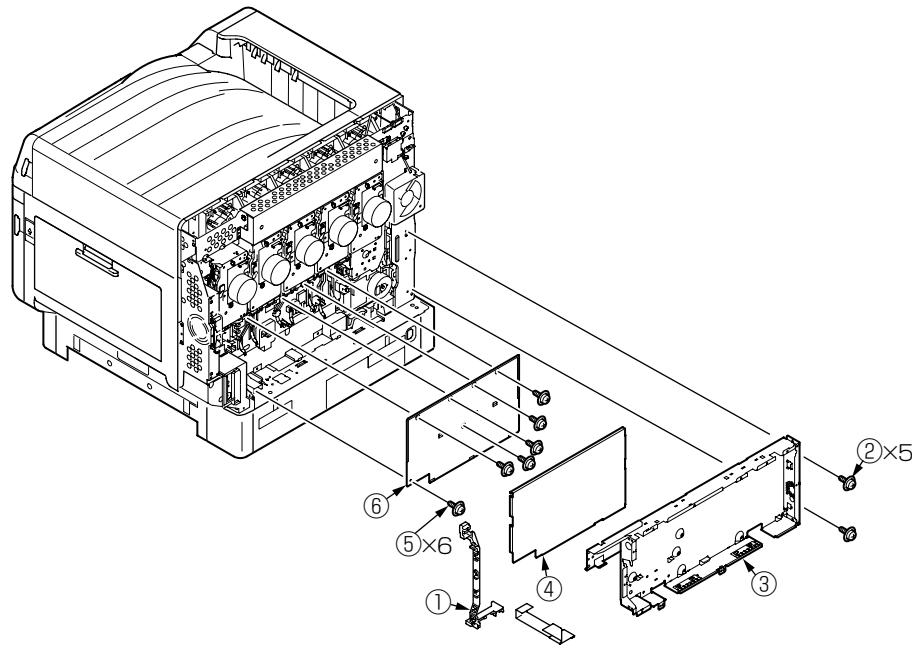
6.2.22 Motor-Assy-ID

(1) Remove the Plate-Cover-MainPCB and Plate-Shield-F1D.(Refer to section 6.2.20)

(2) Remove the screw(silver)(6mm) ① and Guide-Cable-FFC ② .

(3) Remove the twenty screws(silver)(6mm) ③ and remove the Motor-Assy-ID ④ .

(4) Remove the five screws(silver)(6mm) ⑤ and remove the Motor-Assy-ID(K) ⑥ .

(5) Remove the two screws(silver)(30mm) ⑦ and remove the FAN ⑧ .
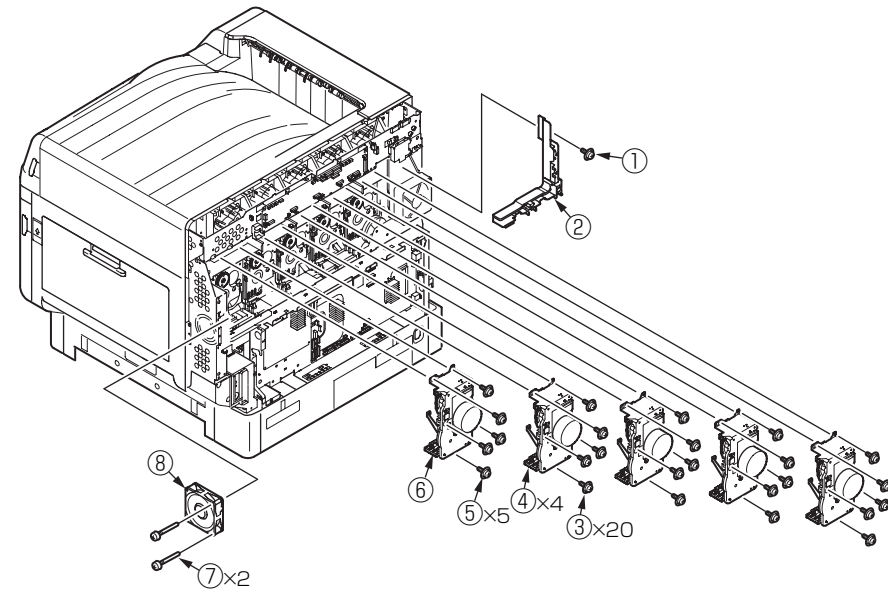
Note! **for C942 / ES9542 only**

For C942 / ES9542 (1pass-model), the Motor-Assy-ID(K) ⑥ is not used. That position is assembled the Motor-Assy-ID ④ as same as other color's Motor-Assy-ID.

6.2.23 Board-AHR(High-voltage relay PCB)

(1) Remove the Motor-Assy-ID.(Refer to section 6.2.22)

(2) Remove the ten screws(silver)(6mm) ① and remove the Board-AHR ② .
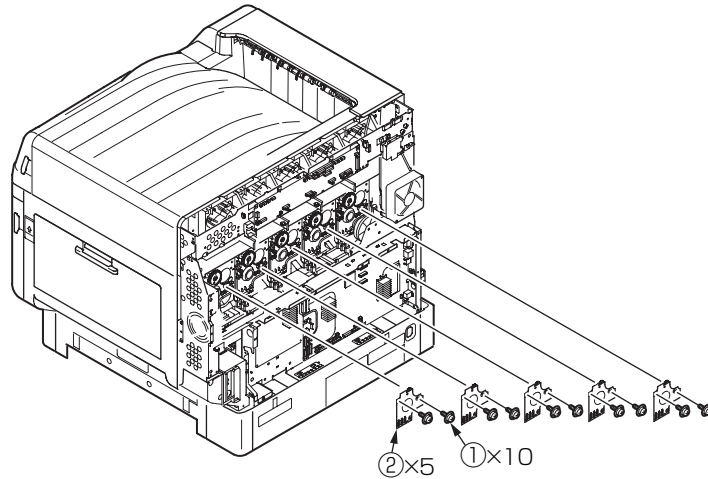
6.2.24 Board-TAGRW/FFC-Cable/Motor-FAN

(1) Remove the Plate-Box-MainPCB.(Refer to section 6.2.21)

(2) Remove the Guide-Cable-FFC.(Refer to section 6.2.22)

(3) Remove the screw(silver)(6mm) ① and remove the TAGRW-Assy ② , ③ .

(4) Remove the two screws(silver)(6mm) ④ and remove the Board-RFID ③ from the Plate-Shield-TAGRW ② .

(5) Remove the Motor-FAN-Assy ⑤ and remove the Motor-FAN ⑥ .

(6) Remove the four screws(silver)(6mm) ⑦ and remove the Plate-Assy-Pillar-B ⑧ .

(7) Remove the Motor-FAN ⑨ .
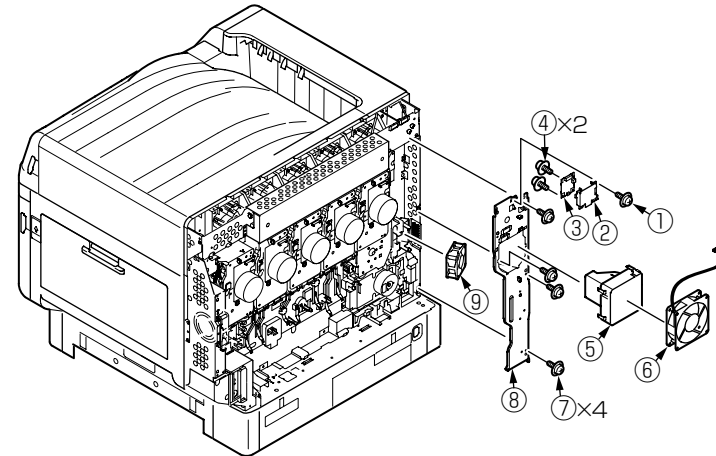
6.2.25 Low-Voltage-Power-Unit/Low-Voltage-FAN/ Geard-Motor

(1) Remove the Plate-Cover-MainPCB.(Refer to section 6.2.20)

(2) Remove the three screws(silver)(8mm) ① and remove the Cover-Rear-Bottom ② .

(3) Remove the twelve screws(silver)(6mm) ③ and remove the Board-Power-Assy ④ .

(4) Remove the six Round-head screw(black)(6mm) ⑤ and two screws(silver)(8mm) ⑥ and remove the AC-Inlet ⑦ and Low-Voltage-Power-Unit ⑧ .

(5) Remove the two screws(silver)(30mm) ⑨ and remove the FAN ⑩ .

(6) Remove the two screws(silver)(6mm) ⑪ and remove the FAN ⑫ .

⚠**Warning**	Risk of Electric Shock	⚡
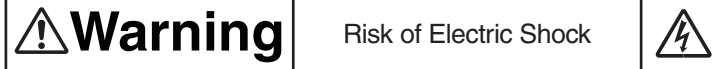
There is a risk of electric shock during replacement of the low voltage power supply.

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.
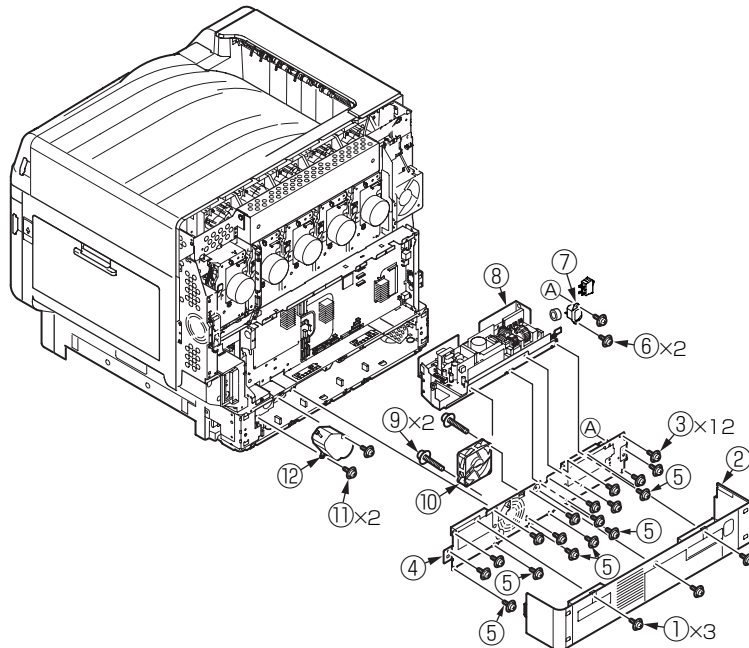
6.2.26 Paper size sensor

(1) Remove the Cassette-Assy.(Refer to section 6.2.8)

(2) Remove the Board-Power-Assy.(Refer to section 6.2.25)

(3) Disconnect the connector.

(4) Remove the two claws and remove the Holder-PS-Switch ① .

(5) Remove the paper size sensor ② .
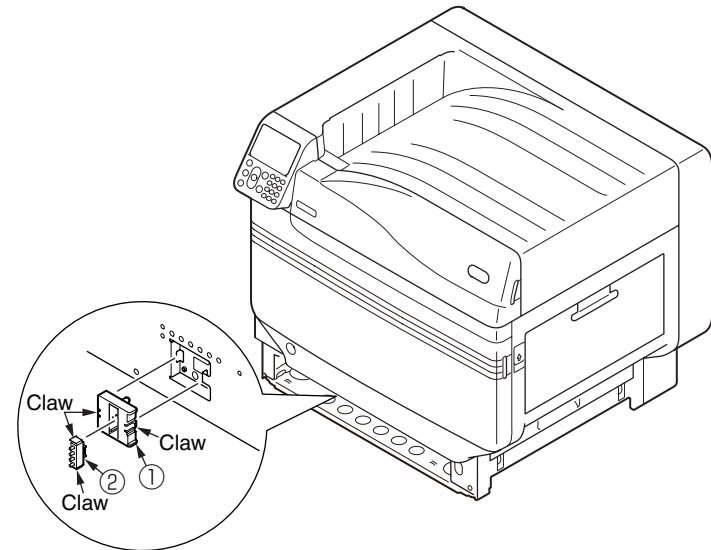
6.2.27 Belt-Drive-Assy/Fuser-Drive-Assy/Belt-Mini-Pitch

(1) Remove the Motor-Assy-ID.(Refer to section 6.2.22)

(2) Remove the Motor-FAN.(Refer to section 6.2.24)

(3) Remove the four screws(silver)(6mm) ① and remove the Contact-ID-Assy ② .

(4) Remove the five screws(silver)(6mm) ③ and remove the Contact-TR-Assy ④ .

(5) Remove the two screws(silver)(6mm) ⑤ and remove the Cover-Cable-FU ⑥ .

(6) Remove the four Round-head screws(black)(6mm) ⑦ and remove the Fuser-Drive-Assy ⑧ .

(7) Remove the screw(silver)(6mm) ⑨ and remove the Gear-Assy-WT ⑩ .

(8) Remove the three screws(silver)(6mm) ⑪ and remove the Belt-Drive-Assy ⑫ and Belt-Mini-Pitch ⑬ .
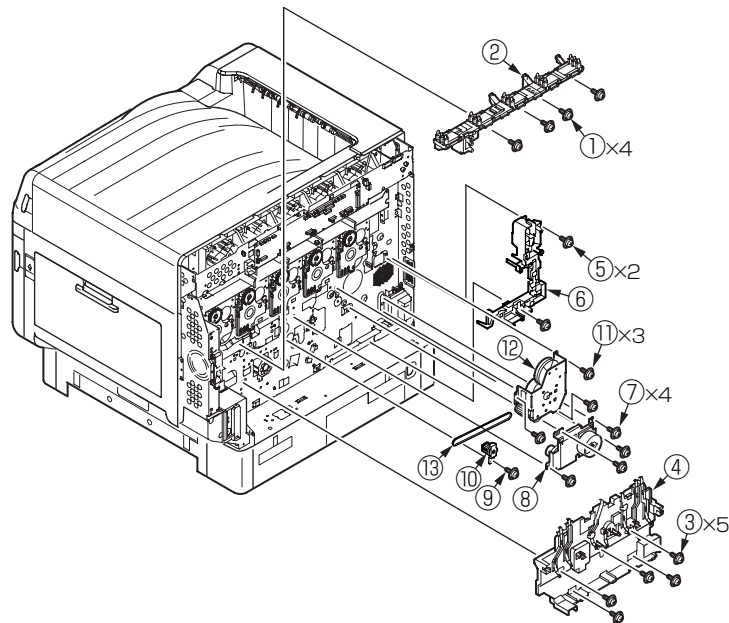
6.2.28 MPT-Unit

(1) Open the MPT.

(2) Open the Cover-Front.

(3) Remove the Cover-Rear.(Refer to section 6.2.11)

(4) Remove the screw(silver)(6mm) ① and remove the Cover-Rear-Handle ② .

(5) Remove the Cover-In-C ③ and Cover-Harness ④ .

(6) Remove the screw(black)(8mm) ⑤ and remove the Cover-Board ⑥ and cable.

(7) Remove the four screws(silver)(6mm) ⑦ and remove the MPT-Unit ⑧ .
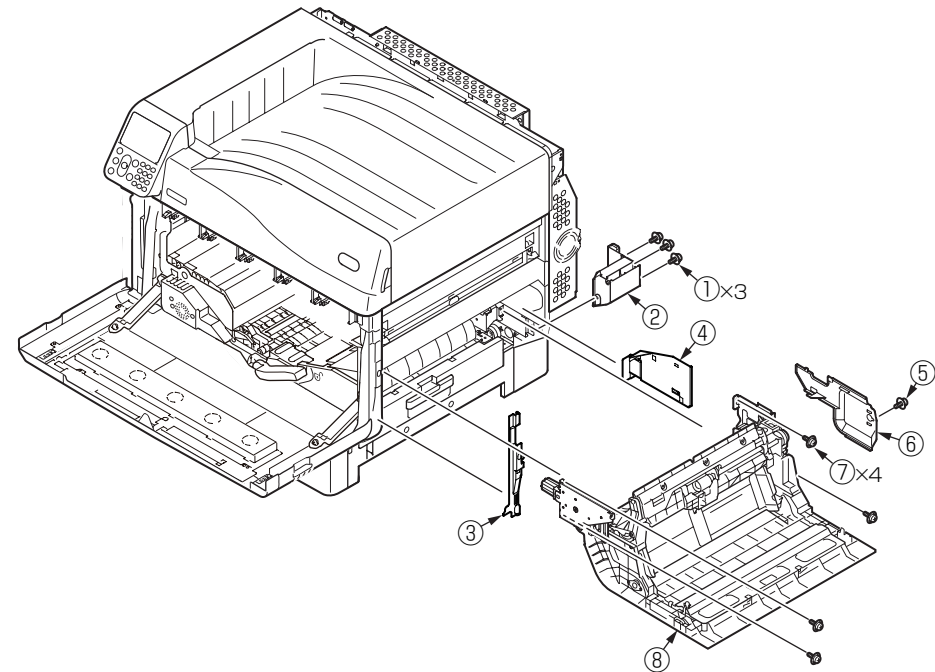
Note! ・Adjust the Paper Width Sensor in accordance with '5.3.2.9 Paper Width Sensor Adjustment after the MPT-Unit ⑧ replaced.

6.2.29 Hopper-Assy/Board-F1S(MPT relay PCB)

(1) Remove the MPT-Unit.(Refer to section 6.2.28)

(2) Remove the four screws(black)(8mm) ① and remove the two Boss-Hopper ② .

(3) Remove the Hopper-Assy ③ .

(4) Remove the two screws(black)(8mm) ④ and remove the Boad-F1S ⑤ .
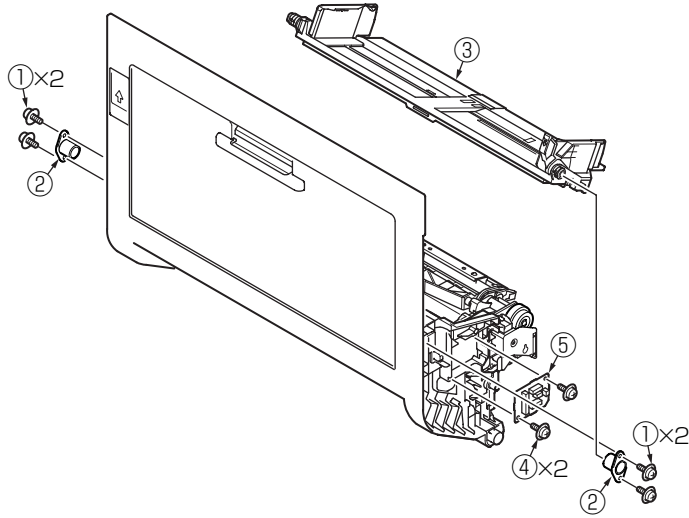
Note! ・Adjust the Paper Width Sensor in accordance with '5.3.2.9 Paper Width Sensor Adjustment after the Hopping-Assy ③ detached.

6.2.30 Clutch(Feeder-Assy)

(1) Remove the MPT-Unit.(Refer to section 6.2.28)

(2) Remove the two screws(silver)(6mm) ① and remove the Holder-Gear-OW ② .

(3) Remove the two gear ③ , ④ .

(4) Remove the E-type ring ⑤ and remove the Clutch ⑥ .
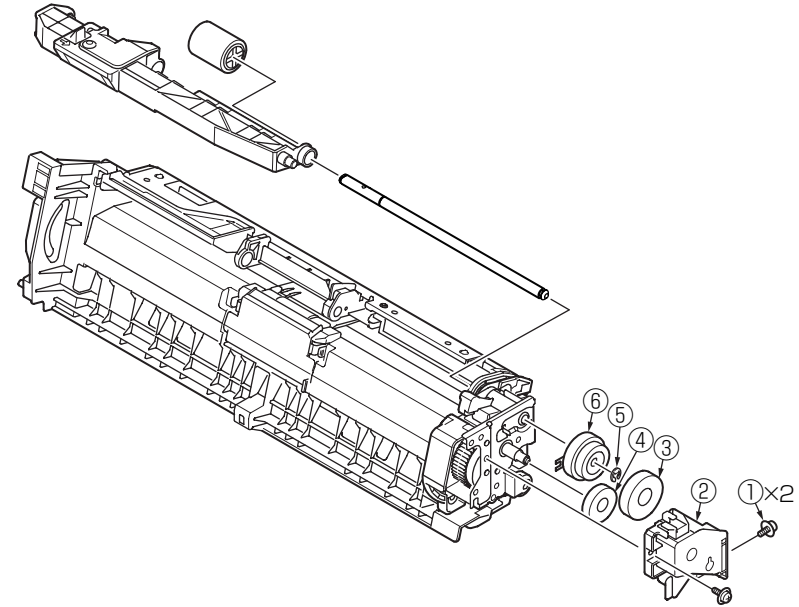
6.2.31 Frame-Assy-TC/Frame-Assy-TC-R

(1) Remove the Cover-Assy-Top-B.(Refer to section 6.2.15)

(2) Remove the Plate-Shield-F1D.(Refer to section 6.2.20.)

(3) Disconnect four cables and spot color kit connector.
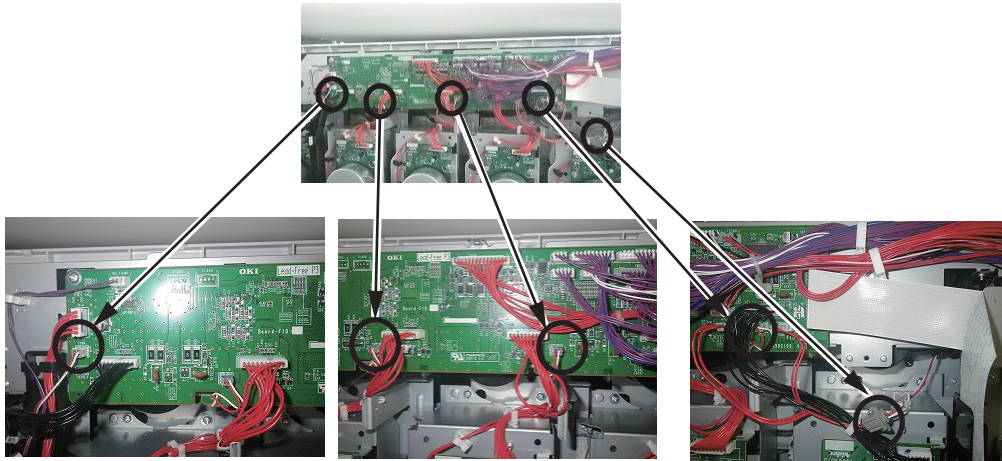
(4) Remove the two screws(silver)(6mm) ① and remove the Frame-Assy-TC-R ② .(for five color model)

(5) Remove the two screws(silver)(6mm) ③ and remove the Frame-Assy-TC-F ④ .(for five color model)

(6) Remove the twenty screws(silver)(6mm) ⑤ and remove the Frame-Assy-TC ⑥ in YMCK order.

Note! : Remove the five screws for one frame
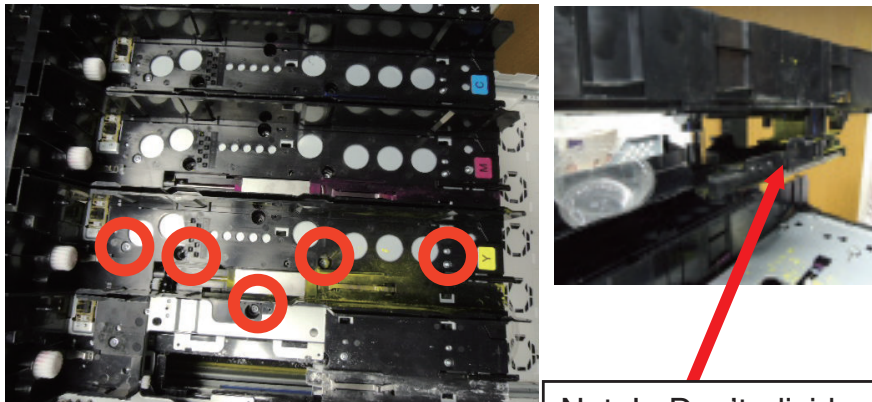
Note! : Don't divide
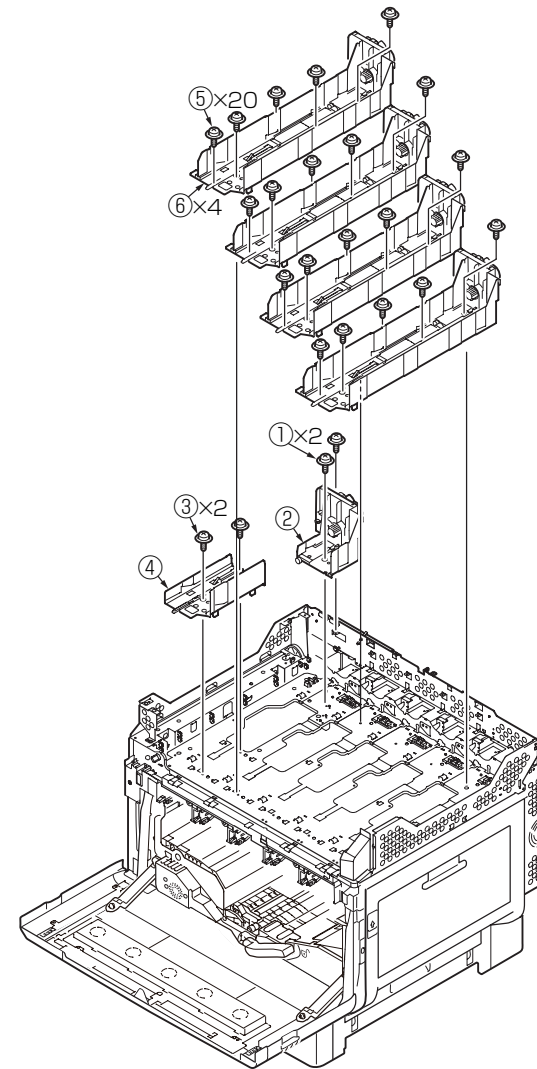
≫ **Attention of assembling** ≫

Attach the Lock out of TC, when assembling Frame-Assy-TC/Frame-Assy-TC-R.

Example. Case Cyan

44396801 Lockout
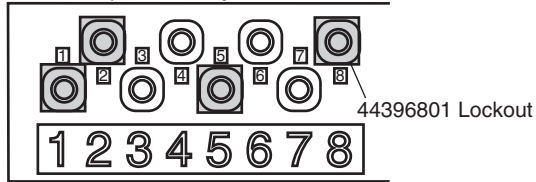
1 2 3 4 5 6 7 8

[C911/C931/C941/ES9411/ES9431/ES9541]

| Color | Location of Lock out | | | | | | | | Note |
	1	2	3	4	5	6	7	8	Station position
Y	○	○	×	×	○	○	×	×	ST2
M	○	○	×	×	○	×	○	×	ST3
C	○	○	×	×	○	×	×	○	ST4
K	○	○	×	×	×	○	○	×	ST5
W	○	○	×	×	×	○	×	○	ST1
CL	○	○	×	×	×	×	○	○	ST1

[Intec]

| Color | Location of Lock out | | | | | | | | Note |
	1	2	3	4	5	6	7	8	Station position
Y	○	×	○	×	○	○	×	×	ST2
M	○	×	○	×	○	×	○	×	ST3
C	○	×	○	×	○	×	×	○	ST4
K	○	×	○	×	×	○	○	×	ST5
W	○	×	○	×	×	○	×	○	ST1
CL	○	×	○	×	×	×	○	○	ST1

[C942/ES9542]

| Color | Location of Lock out | | | | | | | | Note |
	1	2	3	4	5	6	7	8	Station position
Y[1]	○	○	×	×	○	○	×	×	ST1[1]
Y[2]	○	×	×	×	○	○	×	×	ST1[2]
M	○	○	×	×	○	×	○	×	ST2
C	○	○	×	×	○	×	×	○	ST3
K	○	○	×	×	×	○	○	×	ST4
W	○	×	×	×	×	○	○	○	ST5

[1]: except for ODA
[2]: apply for only ODA

[C941-M]

| Color | Location of Lock out | | | | | | | | Note |
	1	2	3	4	5	6	7	8	Station position
Y	○	○	×	×	○	○	×	×	ST2
M	○	○	×	×	○	×	○	×	ST3
C	○	○	×	×	○	×	×	○	ST4
K	○	○	×	×	×	○	○	×	ST5
K-2	○	×	×	×	○	○	○	×	ST1

[Pro9541WT]

| Color | Location of Lock out | | | | | | | | Note |
	1	2	3	4	5	6	7	8	Station position
Y	○	×	×	×	×	○	○	○	ST2
M	○	×	×	○	○	×	○	×	ST3
C	○	×	×	○	○	×	×	○	ST4
K	○	×	×	○	×	○	○	×	ST5
W	○	○	×	×	×	○	×	○	ST1

6.2.32 Plate-Fix-Pivot

(1) Remove the Frame-Assy-TC-F and Frame-Assy-TC.(Refer to section 6.2.31)

(2) Remove the Plate-Fix-Pivot ① .

    (for 5 colors machine : ten, for 4 colors machine : eight)

①×10
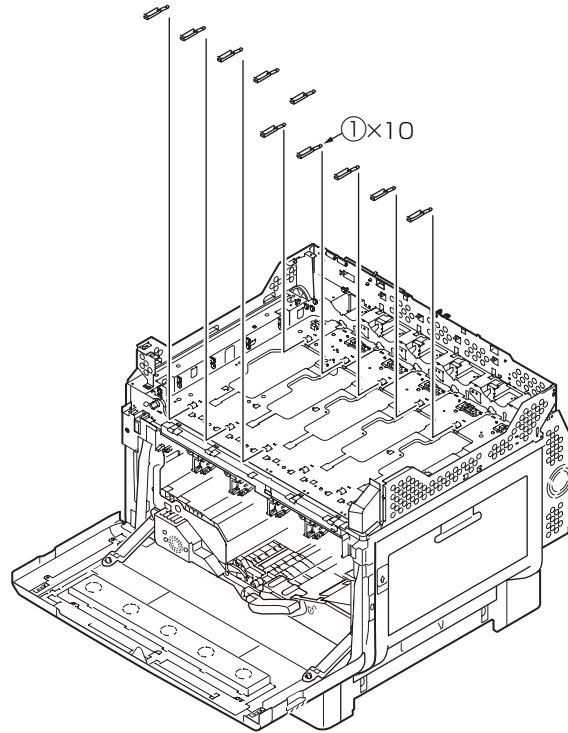
≪ **Attention of assembling** ≫

Refer to following picture, when assembling Plate-Fix-Pivot.
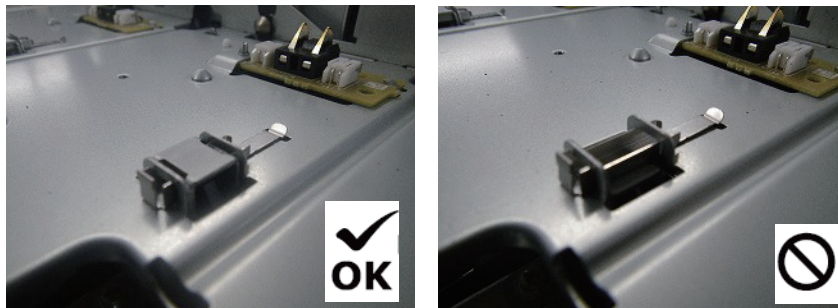
6.2.33 Board-F1H(Print head power relay PCB) / Board-MFH(Environmental sensor PCB) / Board-F1G(Tag terminal PCB) / Board-F1N(Toner-low sensor PCB)

(1) Remove the Frame-Assy-TC and Frame-Assy-TC-R.(Refer to section 6.2.31)

(2) Remove the screw(silver)(6mm) ① and remove the Board-MFH ② .

(3) Remove the four screws(silver)(6mm) ③ and screw(silver)(8mm) ④ and remove the Plate-Assy-Top ⑤ .

(4) Remove the screw(black)(8mm) ⑥ and remove the Board-F1G ⑦ .

    (for 5 colors machine : five, for 4 colors machine : four)

(5) Remove the screw(black)(8mm) ⑧ and remove the Board-F1H ⑨ .

(6) Leave two latch and remove the Board-F1N ⑩ .

③×4

④

⑦×5

⑤

⑧

⑥×5

⑨

⑩×5

①

②

Station5

Station4

Station3

Station2

Station1

for 5 colors machine only

LED Head cable
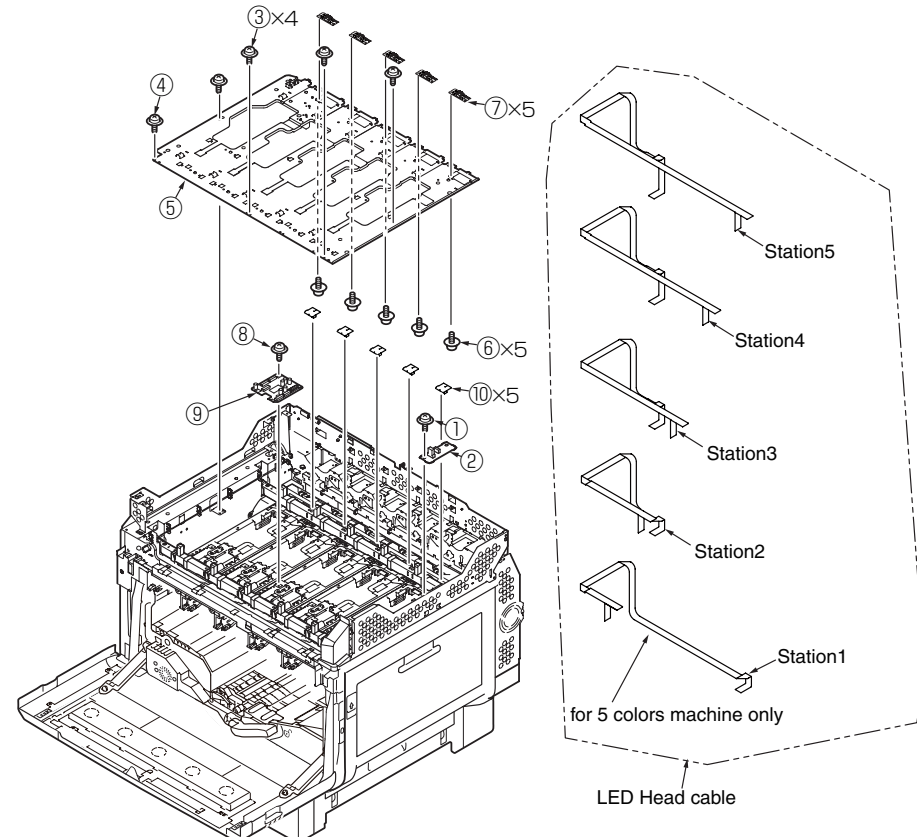
≫ Notes for the Lock out for Image Drams at the main body side ≫

The location of the Lock out for Image Drams are described.

453371xx: Piece-Lockout-R
453370xx: Piece-Lockout-L
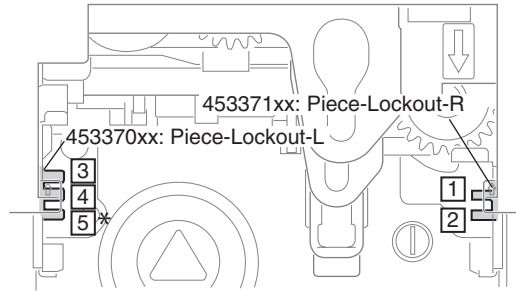
[C911/C931/C941/ES9411/ES9431/ES9541]

Color	Parts No. of Lock out		Convex position of Lock out					Note
	453370XX	453371XX	1	2	3	4	5	Station position
Y	01	-	×	×	○	○	○	ST2
M	02	01	○	○	×	×	○	ST3
C	03	01	○	○	×	○	×	ST4
K	04	01	○	○	○	×	×	ST5
W	05	02	×	○	×	○	○	ST1
CL	05	02	×	○	×	○	○	ST1

[Intec]

Color	Parts No. of Lock out		Convex position of Lock out					Note
	453370XX	453371XX	1	2	3	4	5	Station position
Y	02	01	○	○	×	×	○	ST2
M	03	01	○	○	×	○	×	ST3
C	04	01	○	○	○	×	×	ST4
K	05	02	×	○	×	○	○	ST5
W	01	-	×	×	○	○	○	ST1
CL	01	-	×	×	○	○	○	ST1

[C942/ES9542]

Color	Parts No. of Lock out		Convex position of Lock out					Note
	453370XX	453371XX	1	2	3	4	5	Station position
Y	01	-	×	×	○	○	○	ST1
M	02	01	○	○	×	×	○	ST2
C	03	01	○	○	×	○	×	ST3
K	04	01	○	○	○	×	×	ST4
W/CL	05	02	×	○	○	×	○	ST5*

* Only C942/ES9542: Assemble the 45453001:Piece-Lockout to ST5.

[C941-M]

Color	Parts No. of Lock out		Convex position of Lock out					Note
	453370XX	453371XX	1	2	3	4	5	Station position
Y	01	-	×	×	○	○	○	ST2
M	02	01	○	○	×	×	○	ST3
C	03	01	○	○	×	○	×	ST4
K	04	01	○	○	○	×	×	ST5
K-2	05	02	×	○	×	○	○	ST1

[Pro9541WT]

Color	Parts No. of Lock out		Convex position of Lock out					Note
	453370XX	453371XX	1	2	3	4	5	Station position
Y	07	03	○	×	○	○	×	ST2
M	02	01	○	○	×	×	○	ST3
C	03	01	○	○	×	○	×	ST4
K	04	01	○	○	○	×	×	ST5
W	05	02	×	○	×	○	○	ST1

≪ **Attention at the time of the LED head cable assembling** ≫

Bend the cable at the time of the LED head cable assembling as follows.

Station No.	Dimension
Station1	
Station2	
Station3	
Station4	
Station5	

6.2.34 Motor-Assy-Geard

(1) Remove the Frame-Assy-TC and Frame-Assy-TC-R.(Refer to section 6.2.31)

(2) Remove the two screws(black)(8mm) ① and remove the Geard-Motor ② .

(3) Remove the two screws(black)(8mm) ③ and remove the Geard-Motor ④ .
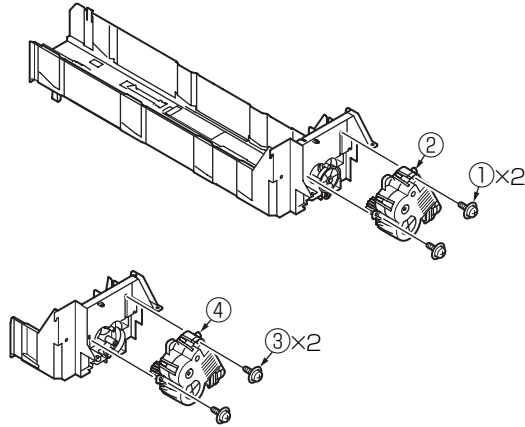
6.2.35 EJ-Rail-Unit

(1) Pull out the EJ-Rail-Unit ① .

(2) Remove the four E-type ring ② and remove the EJ-Rail-Unit ① .
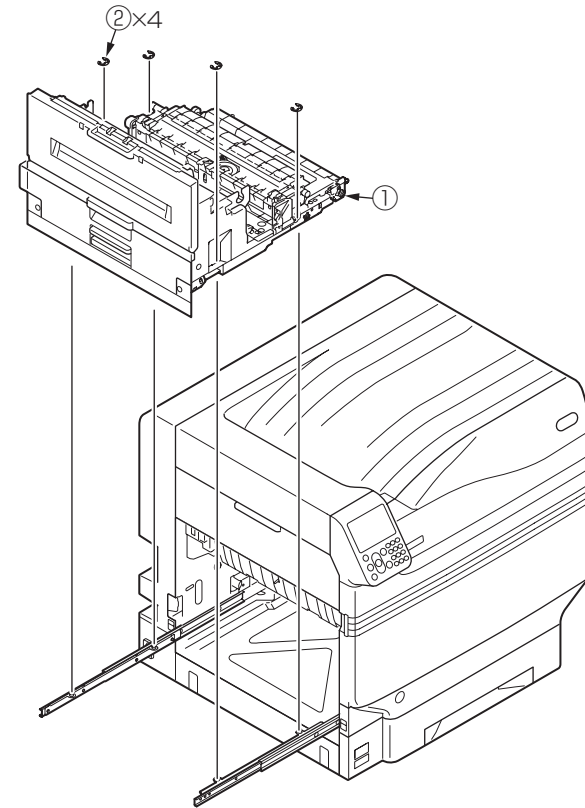
6.2.36 Guide-Assy-Eject-Lower-SP / Frame-Assy-TR2 / Decurl-Assy

(1) Remove the EJ-Rail-Unit.(Refer to section 6.2.35)

(2) Remove the three screws(silver)(6mm) ① and remove the Cover-LSD-F ② .

(3) Remove the Round-head screw(black)(6mm) ③ and screw(silver)(6mm) ④ and remove the Cover-LSD-R ⑤ .

(4) Remove the two screws ⑥ and remove the Decrul-Assy ⑦ .

(5) Remove the four cables and four screws(black)(8mm) ⑧ and remove the Guide-Assy-Eject-Lower ⑨ .

(6) Remove three screws(black)(6mm) ⑩ to remove Guide-Paper ⑪ , and pull out the Lever-SNS ⑫ with Spring ⑬ .
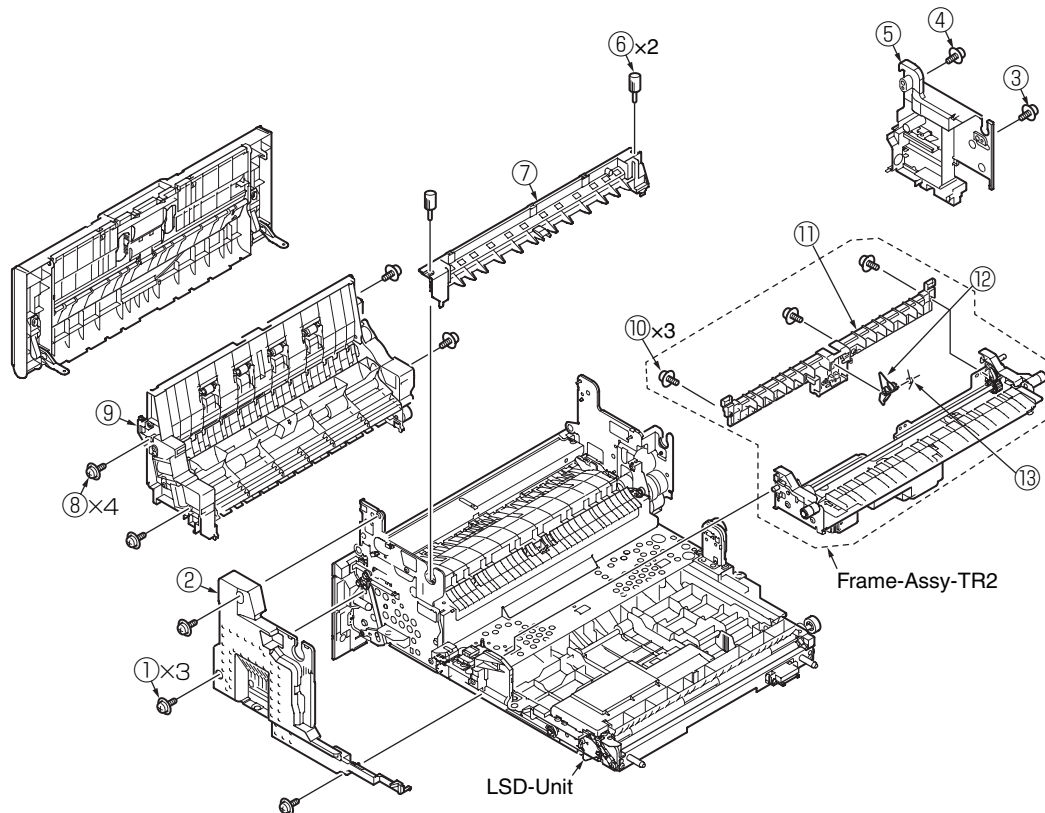
≪ **Attention of assembling** ≫

Attach the Lock out of Fuser, when assembling LSD-Unit.
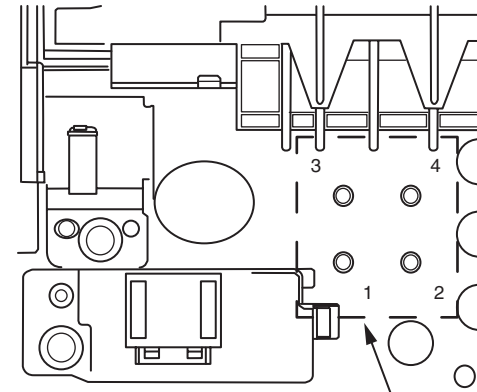
Inserted location of 44905601 Post-Lock-Fuser

Voltage	Lock out convex location			
	1	2	3	4
100V/120V	○	×	×	×
230V	×	○	×	×

Frame-Assy-TR2

LSD-Unit

6.2.37 Gear-Assy-Oneway-Z33/Gear-Assy-Oneway-Z33-R/Board-F1L(Rail unit relay PCB)

(1) Remove the LSD-Unit.(Refer to section 6.2.36)

(2) Remove the Cover-PCB-LSD ① .

(3) Disconnect all cables from the board and remove the screw(silver)(6mm) ② and remove the Board-F1L ③ .

(4) Remove the two screws(silver)(6mm) ④ and remove the Bracket-Gear-FU ⑤ and remove Gear-Oneway-Z33 ⑥ and Gear-Oneway-Z33-R ⑦ .
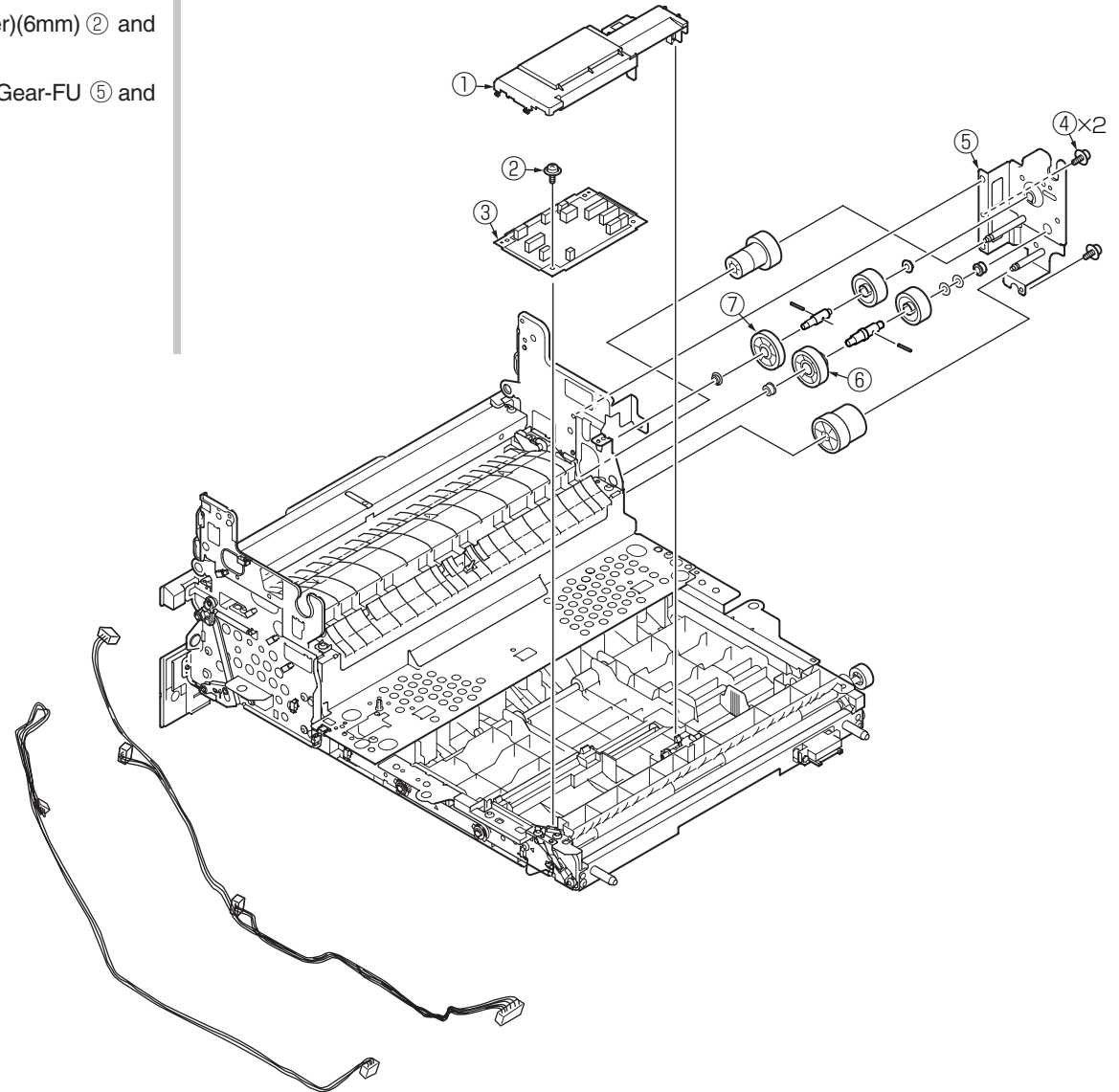
6.2.38 Slide-Rail-Assy

(1) Remove the EJ-Rail-Unit.(Refer to section 6.2.35)

(2) Remove the three screws(silver)(6mm) ① and remove the Rail-Assy-R ② .

(3) Remove the three screws(silver)(6mm) ③ and remove the Rail-Assy-L ④ .

(4) Remove the six screws(silver M4) ⑤ and remove the Rail ⑥ .
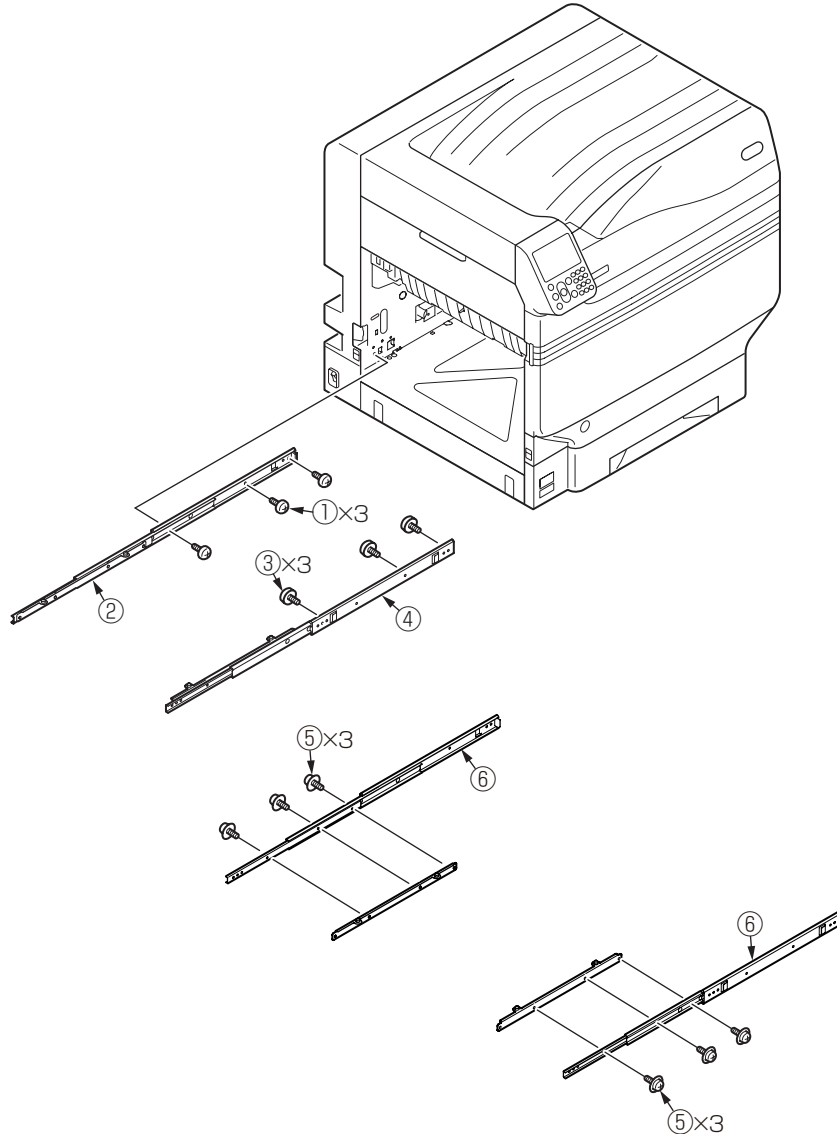
6.2.39 Roller-Assy-Regist-2/Roller-Assy-Synchro/ Regist-Sensor-Assy_753

(1) Remove the Cover-Top.(Refer to section 6.2.15)

(2) Remove the MFP-Unit.(Refer to section 6.2.28)

(3) Remove the Cover-In-F ① .

(4) Remove the two screws(silver)(6mm) ② and remove the Guide-Paper-Regist-In ③ .

(5) Remove the four Round-head screws(black)(6mm) ④ and remove the Plate-Rail-Belt ⑤ .

(6) Remove the two screws(silver)(6mm) ⑥ and remove the Cover-In-E ⑦ .

(7) Disconnect connectors.

(8) Remove the three screws(silver)(6mm) ⑧ and remove the Regist-Sensor-Assy ⑨ .

(9) Remove the three screws(silver)(6mm) ⑩ and remove the Roller-Assy-Regist-2 ⑪ .

(10) Remove the two screws(silver)(6mm) ⑫ and remove the Roller-Assy-Synchro ⑬ .
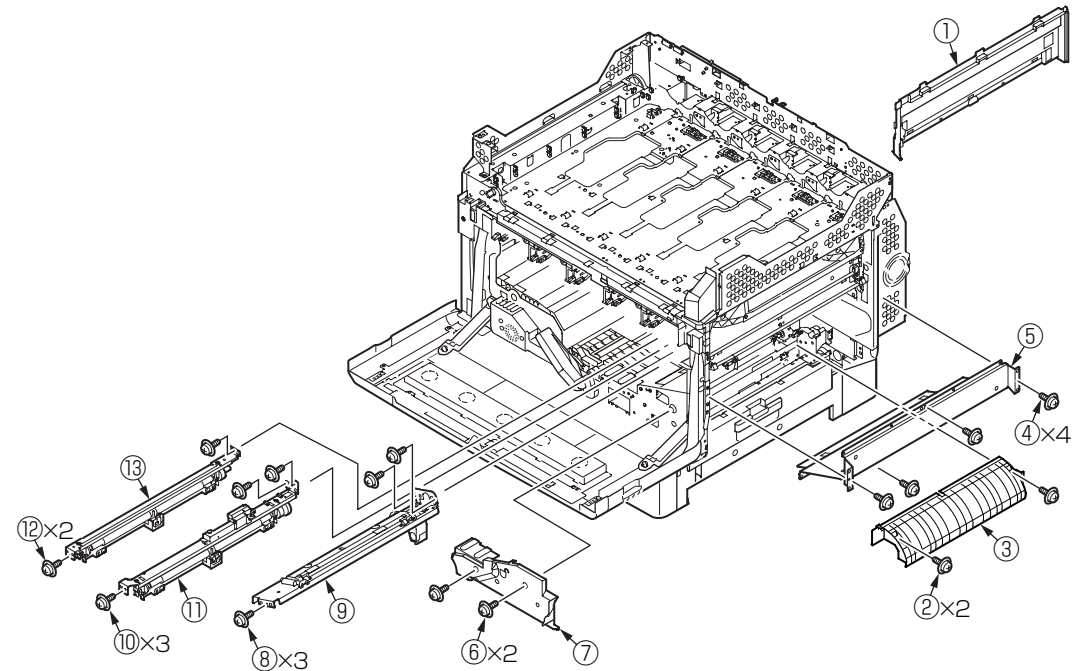
6.2.40 Waste toner full sensor Board-F1N(Toner Low sensor PCB)

(1) Remove the Roller-Assy-Regist-2/Roller-Assy-Synchro/Regist-Sensor-Assy_753. (Refer to section 6.2.39)

(2) Remove the screw(black)(8mm) ① and remove the Guide-Paper ② .

(3) Remove the screw(silver)(6mm) ③ and remove the Board-F1G ④ .

(4) Open the Cover-Assy-Front.

(5) Remove the screw(silver)(6mm) ⑤ and remove the Holder-WTSNS ⑥ .

(6) Remove the Board-F1N ⑦ .
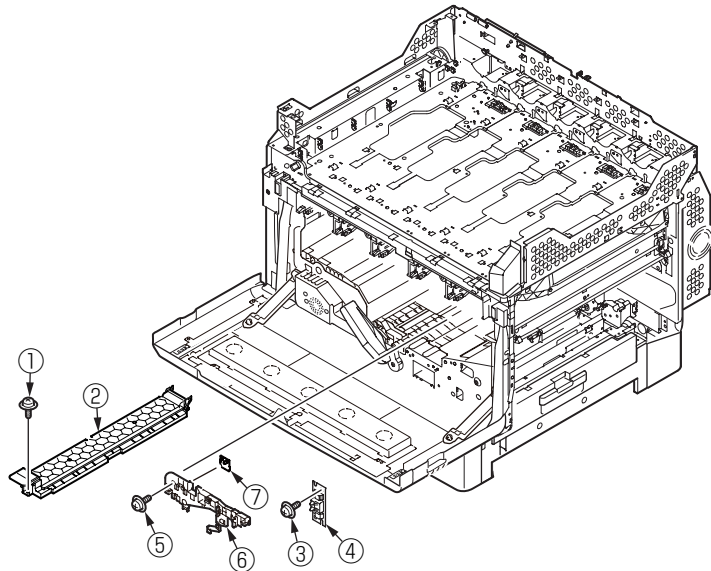
6.2.41 Motor-Assy-Regist

(1) Remove the Roller-Assy-Regist-2/Roller-Assy-Synchro/Regist-Sensor-Assy_753. (Refer to section 6.2.39)

(2) Remove the four screws(silver)(6mm) ① and remove the Motor-Assy-Regist ② .
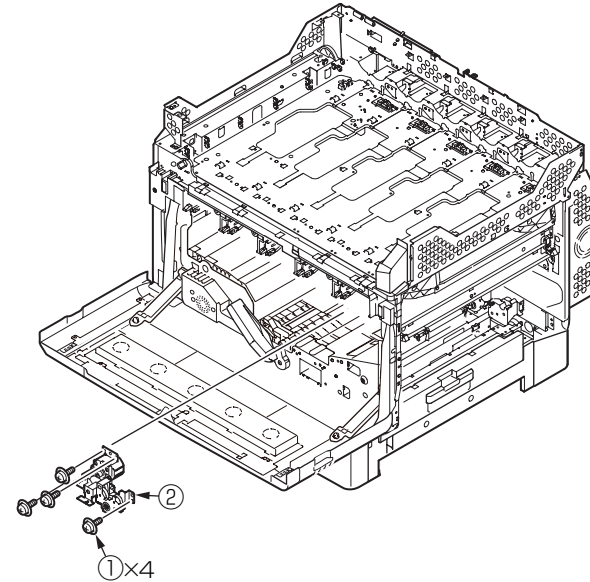
6.2.42 Connector-Assy-Fuser

(1) Remove the Guide-Assy-Eject.(Refer to section 6.2.13)

(2) Remove the two Round-head screws(black)(6mm) ① and remove the Frame-Duct-CL ② .

(3) Remove the ten Round-head screws(black)(6mm) and remove the Plate-Side-LB ③ .

(4) Remove the two Round-head screws(black)(6mm) ④ and two washer ⑤ and remove the Connector-Assy-Fuser ⑥ .
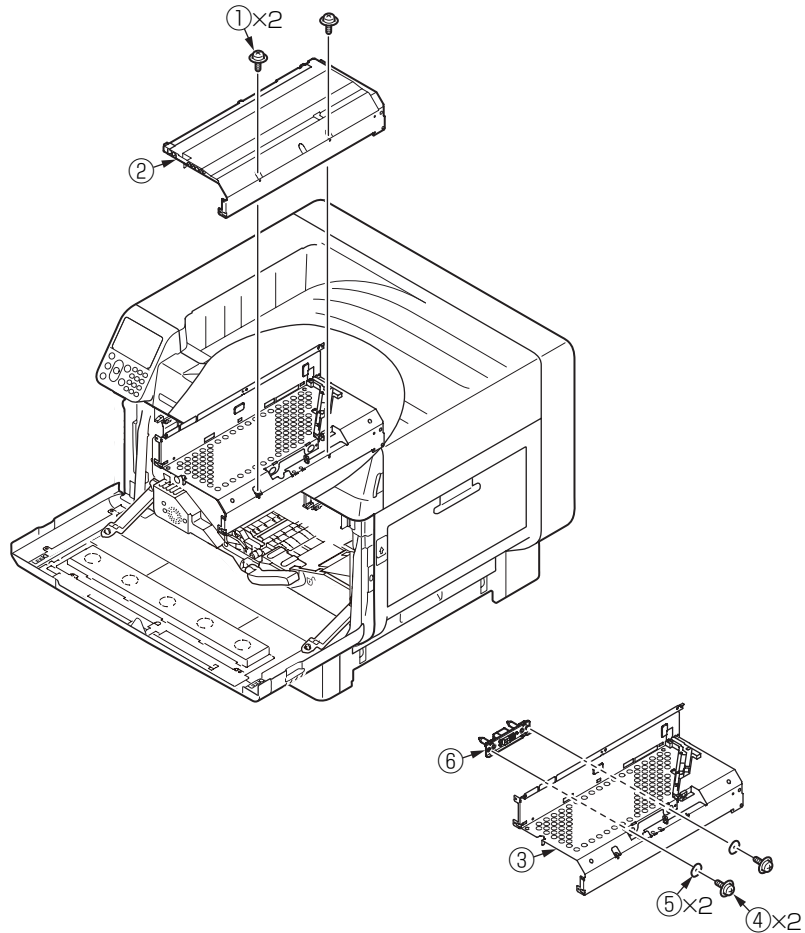
6.2.43 Hopping-Unit

(1) Remove the MPT-Unit.(Refer to section 6.2.28)

(2) Remove the two screws(silver)(6mm) ① and remove the Cover-Side-R ② .

(3) Remove the two screws(silver)(6mm)③and remove the Cover-Guide-Tray-Assy ④ .

(4) Remove the four screws(silver)(6mm) ⑤ and four Round-head screw(black)(6mm) ⑥ and remove the Hopping-Unit ⑦ .
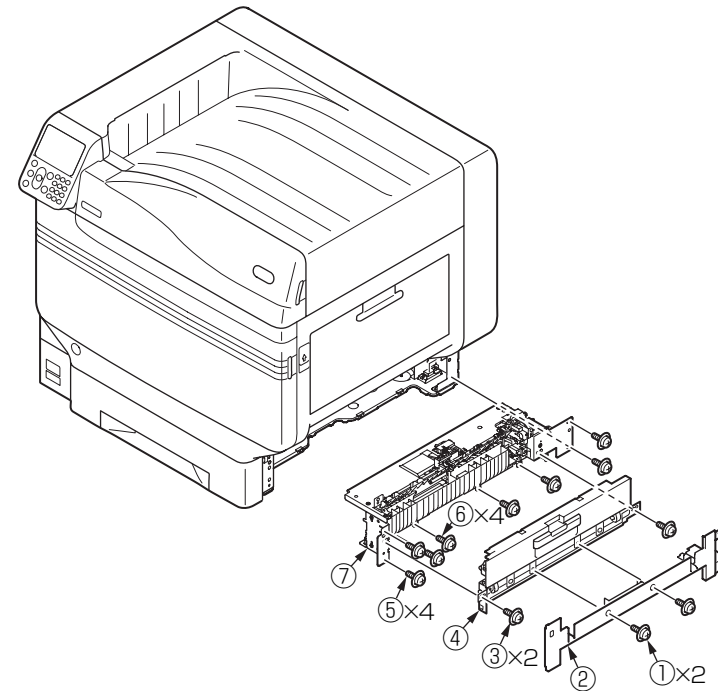
6.2.44 Roller-Assy-Regist-T

(1) Remove the Hopping-Unit.(Refer to section 6.2.43)

(2) Remove the two screws(silver)(6mm) ① and remove the Roller-Assy-Regist-T ② .
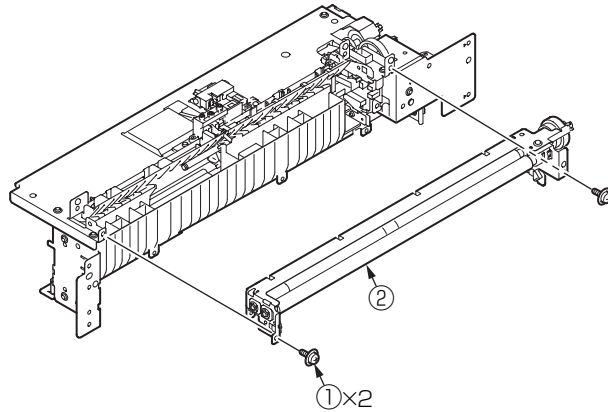
6.2.45 Board-F1K(Cassette sensor relay PCB)

(1) Remove the Roller-Assy-Regist-T.(Refer to section 6.2.44)

(2) Remove the five screws(silver)(6mm) ① and remove the Hopping-Assy ② .

(3) Remove the two screws(silver)(6mm) ③ and remove the Drive-Assy ④ .

(4) Remove the screw(silver)(6mm) ⑤ and remove the Board-F1K ⑥ .
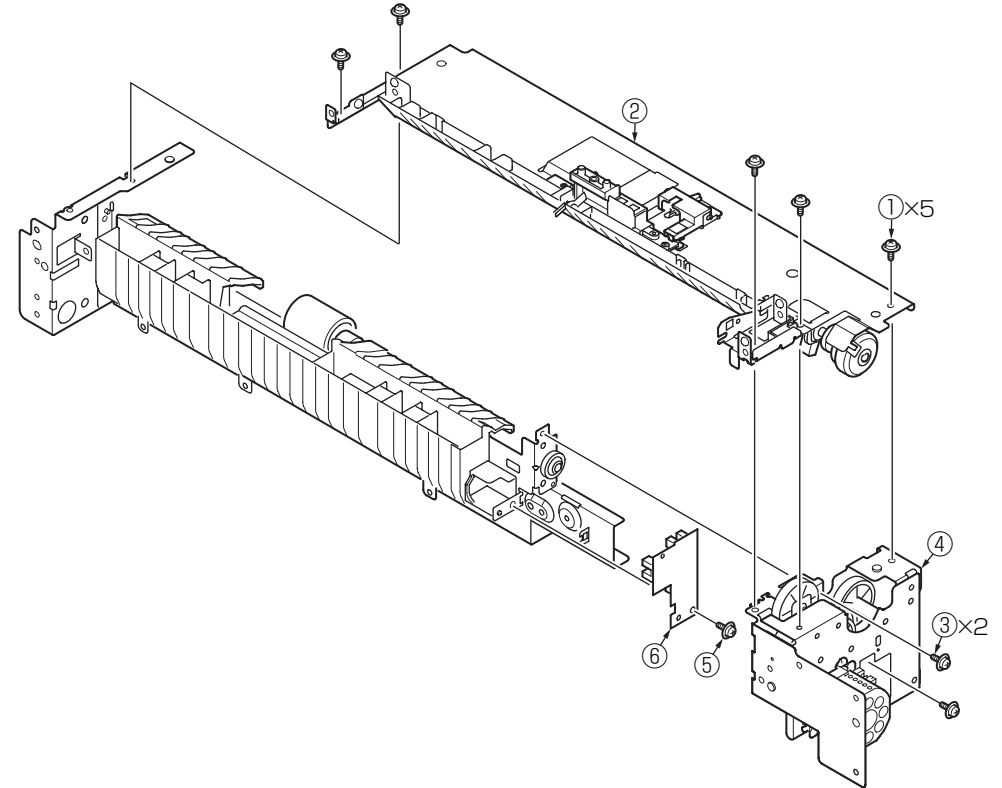
6.2.46 Board-F1W(Soft switch PCB)

(1) Remove the Cassette-Assy and Cover-Assy-Front.(Refer to section 6.2.8,6.2.18)

(2) Remove the five Round-head screws(black)(6mm) ① and remove the Cover-Middle ② .

(3) Remove the two screws(silver)(6mm) ③ and remove the Soft-SW-Assy ④ .
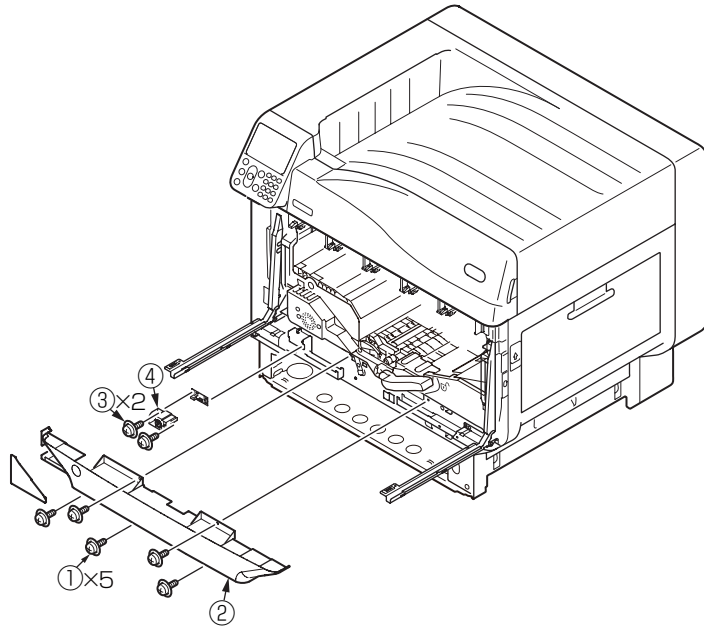
6.2.47 Sensor-Assy-Front/Motor-FAN

(1) Open the Cover-Front.

(2) Remove the four claws and remove the Cover-In-A ① .

(3) Remove the screw(silver)(6mm) ② and remove the Sensor-Assy-Front ③ .

(4) Remove the two Round-head screws(black)(6mm) ④ and remove the Cover-In-D ⑤ .

(5) Remove the two screws(silver)(30mm) ⑥ and remove the Motor-FAN ⑦ .
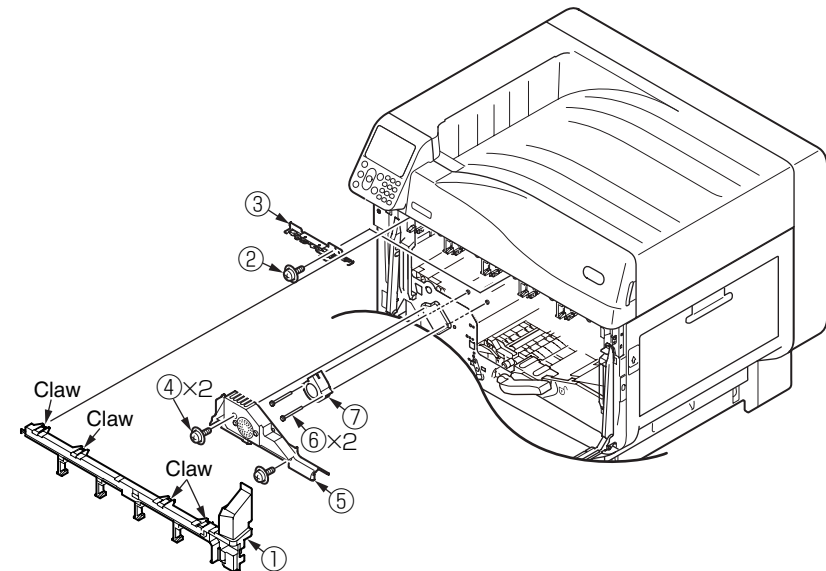
6.2.48 Holder-Head-F/Holder-Head-R

(1) Remove the LED Head and Plate-Assy-Top.(Refer to section 6.2.7,6.2.33)

(2) Remove the four screws(silver)(6mm) ① and remove the two springs ② .

(3) Remove the Holder-Head-F ③ /Holder-Head-R ④ and remove the Plate-FG-Head-F ⑤ /Plate-FG-Head-R ⑥ .
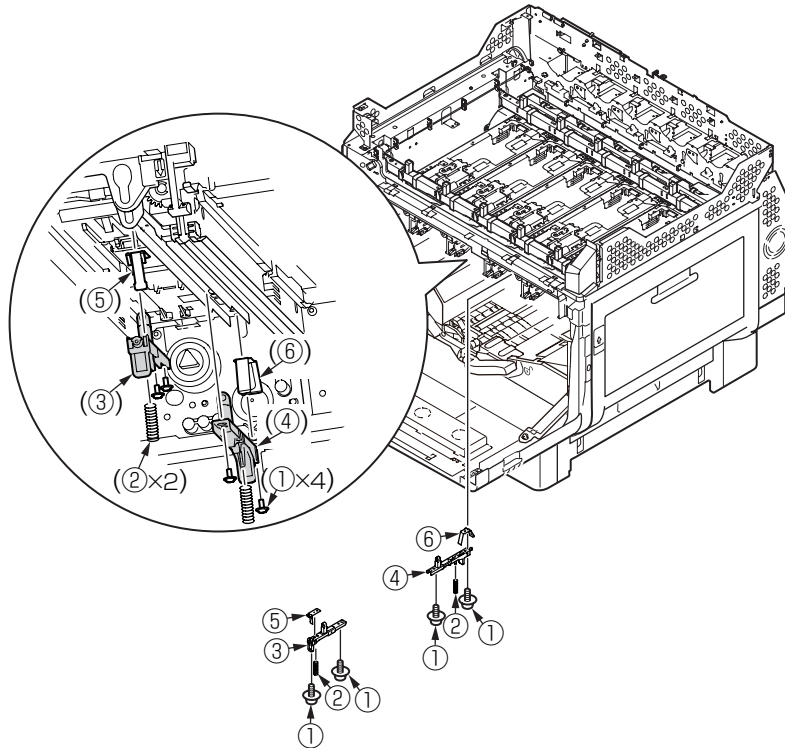
6.2.49 Paper Feed Roller

(1) Press and hold the power switch for approximately 1sec. to switch off the power supply.
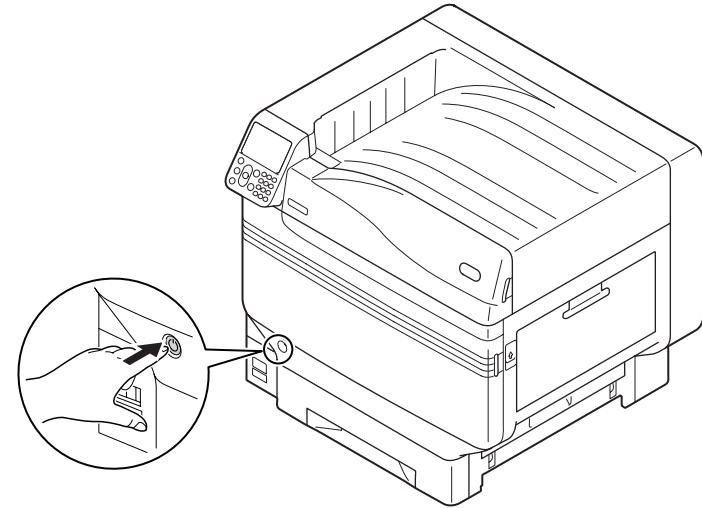
(2) Check that the operation panel is completely turned off, and then switch off the main power supply.
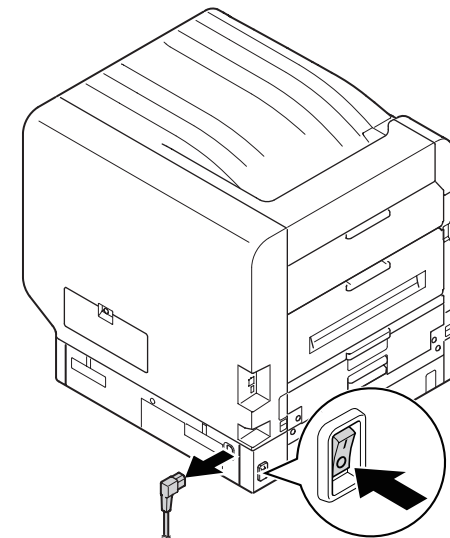
(3) Pull out Tray 1.
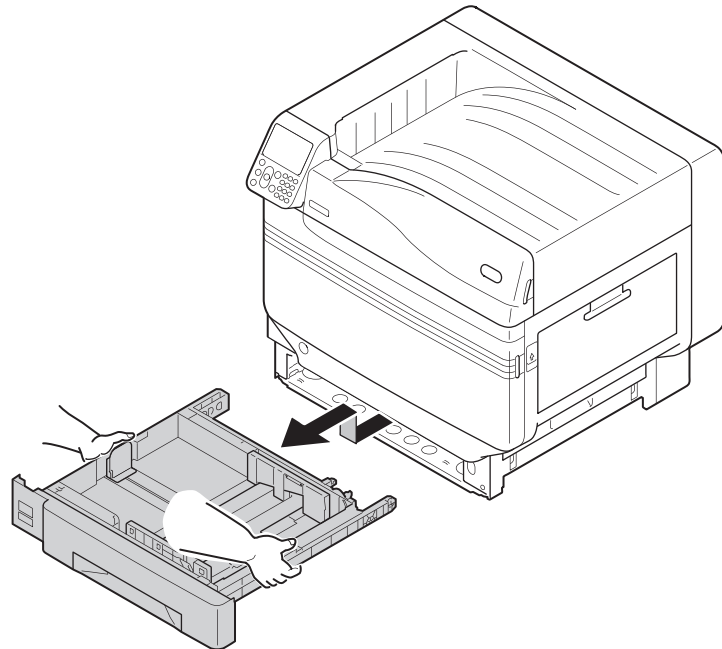
(4) While expanding the claws of feed roller in outside direction, remove them from the axial.
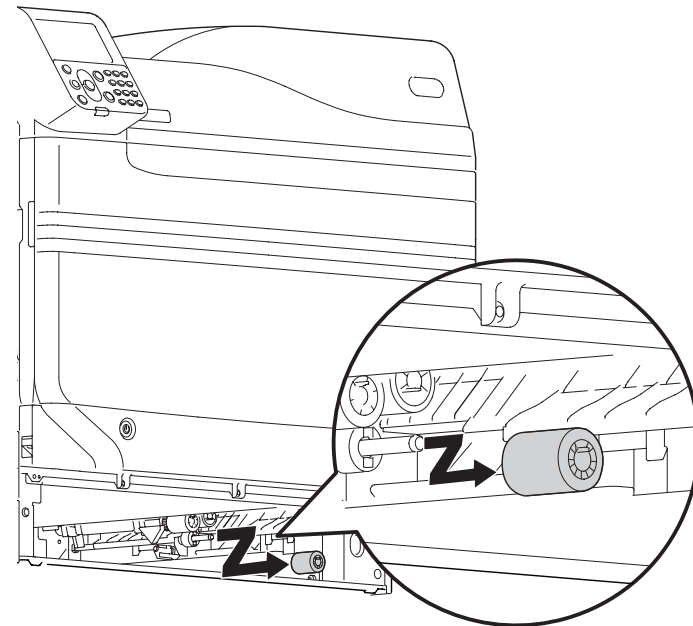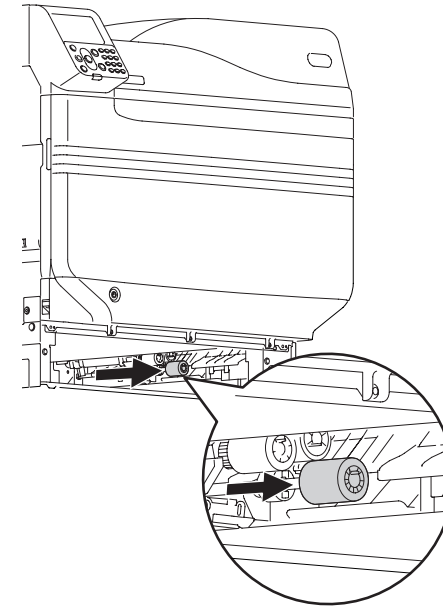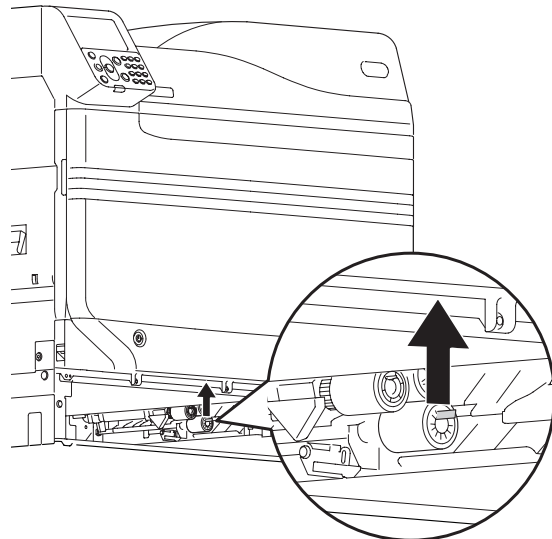
(5) Similarly, remove the remaining two paper feed rollers.
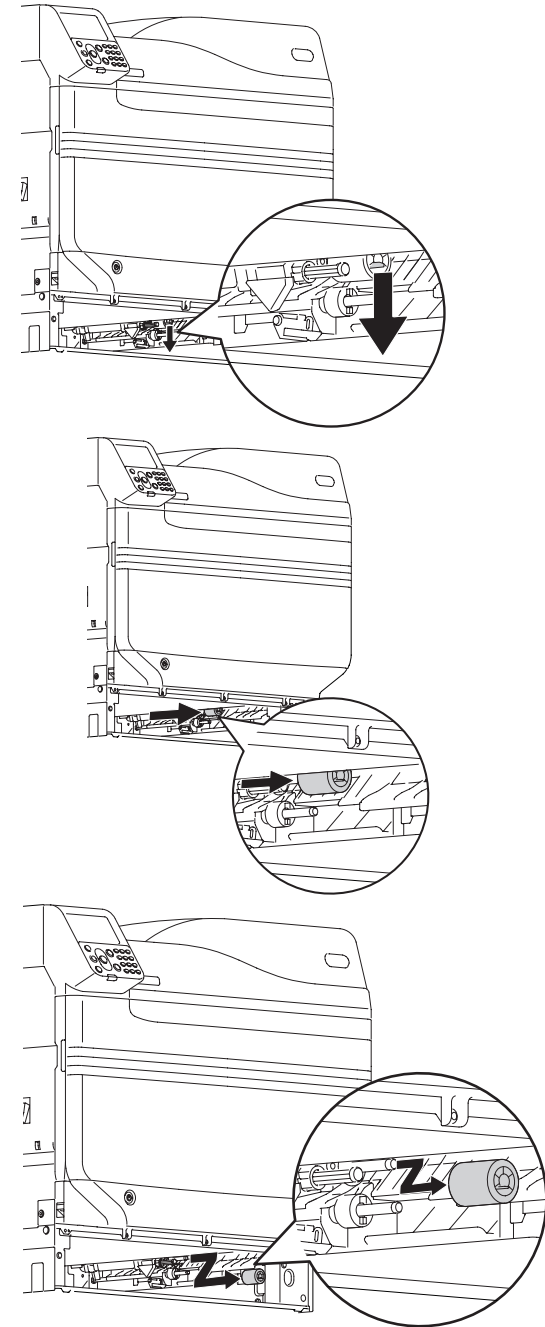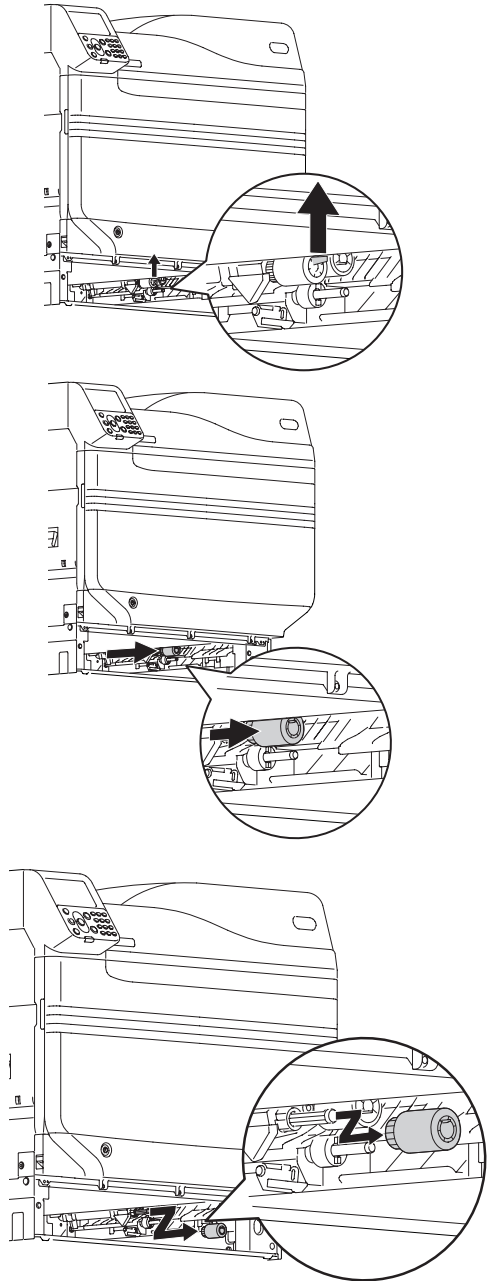
6.2.50 Frame Assy.-TCL

[1: Disassemble]

Note! ・ prevent scatter of toner.

(1) Put Frame Assy.-TCL as this directionrame.

Frame Assy.-TCL

Side-B

Side-A
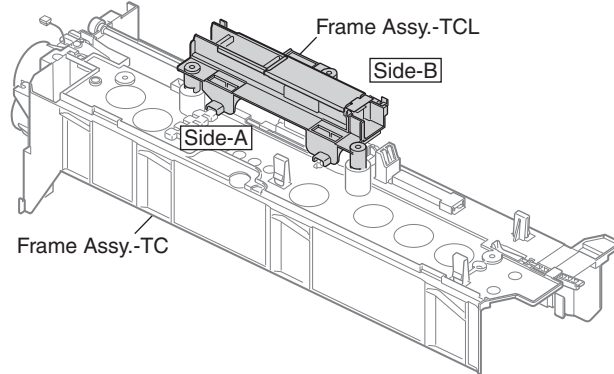
Frame Assy.-TC

(2) Remove Spring-Duct-TN from Plate-Shutter-ID, and Remove Plate-Shutter-ID from Frame Assy.-TCL.

Spring-Duct-TN

Plate-Shutter-ID
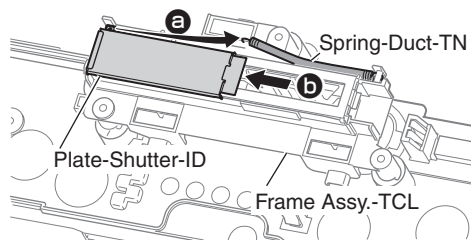
Frame Assy.-TCL

(3) Unlatch by flathead screwdriver as below and remove Frame Assy.-TCL from Frame Assy.-TC.

ⓐ Warp the latch.

ⓑ Remove Frame Assy.-TCL as arrow direction.

Front-side

section Z

Sponge

latch

section Z

flathead screwdriver

latch

Motor-side

Side-A

Side-B

Z-Z section

Side-A

Side-B

Side-A

Side-B

Note! Avoid damage of sponge.

After removed the FrameAssy.-TCL
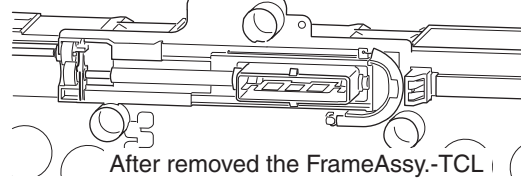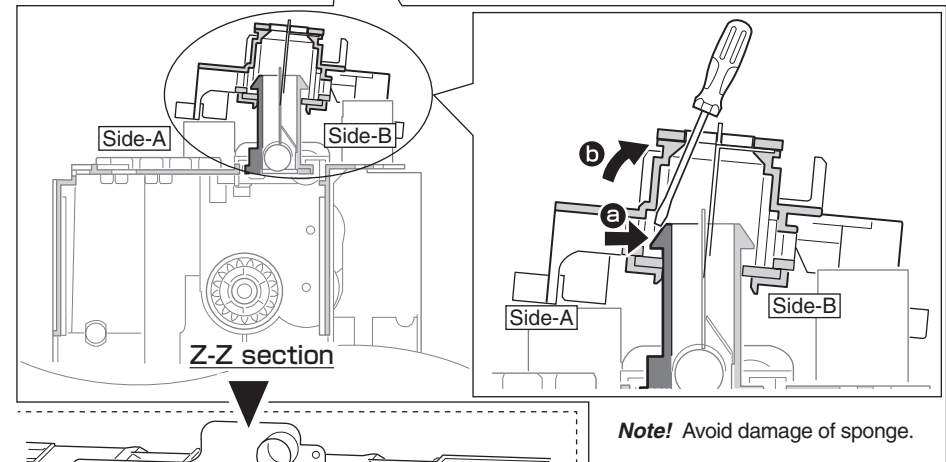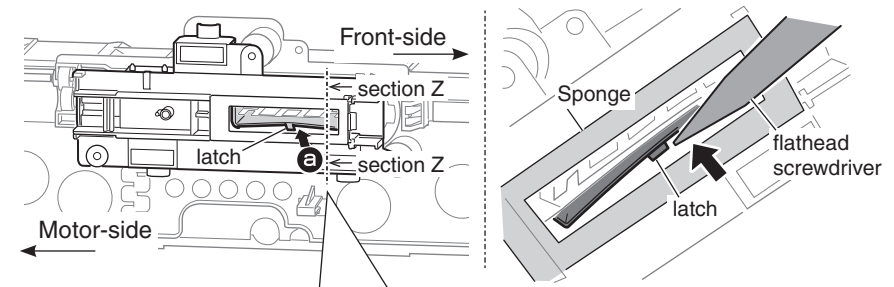
[2: Assemble]

(1) Remove Spring-Duct-TN from Plate-Shutter-ID on the new Frame Assy.-TCL(Maintenance) and remove Plate-Shutter-ID from the Frame Assy.-TCL(Maintenance).
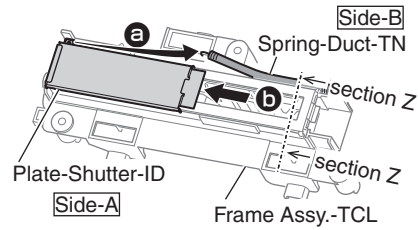
(2) Remove two screws (black) to remove a Geard-Motor and two gears.

Note! Do not touch the grease on Gears.
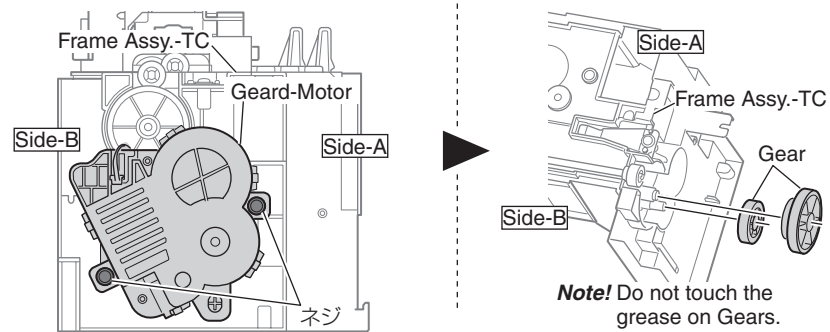
(3) Set the Film-B to center of the Supply port with rotating the Gear on the Frame Assy.-TCL by hand.
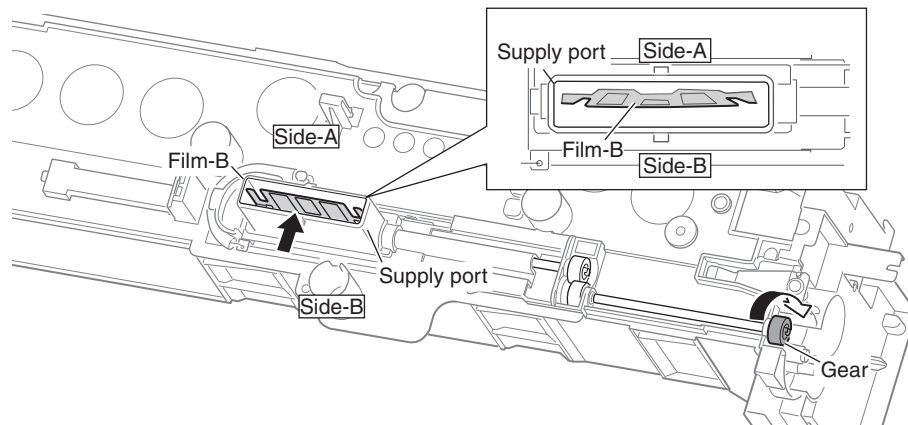
(4) Set Frame Assy.-TCL(Maintenance) to Frame Assy.

Note! ・Note the Film position in assembling.

Z-Z section
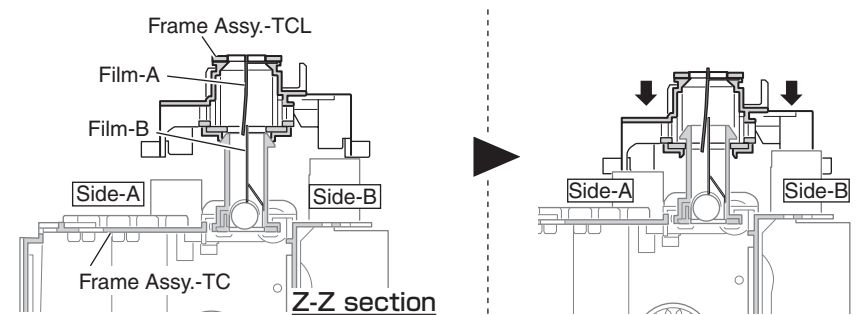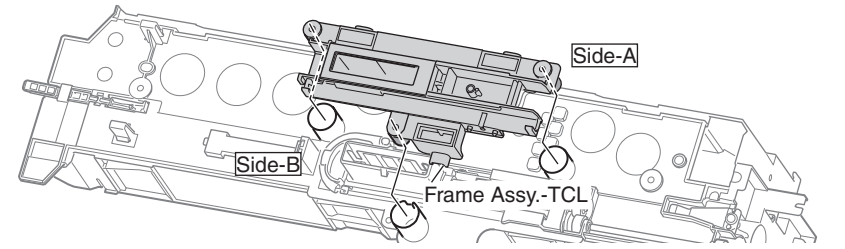
Note!

・1. Check the position of the assembled Film is correct or not.

<e.g.>

✔ **OK** : The position of the Film-A is inside of the Supply port and it is set to side of Side-A than the Film-B.

🚫1: The position of the Film-A is outside of the Supply port.

🚫2: The position of the Film-A is set to side of the Side-B than the Film-B.
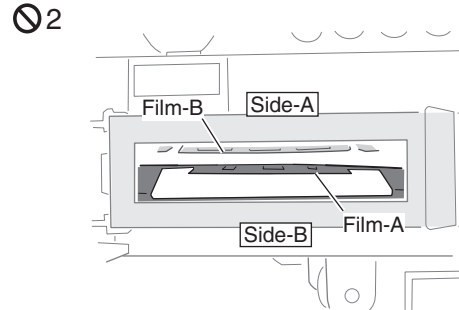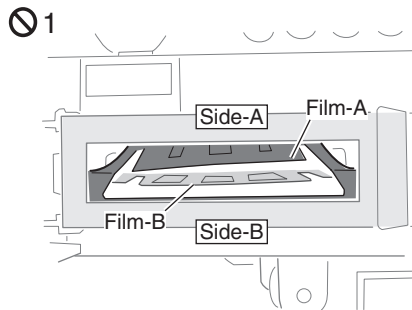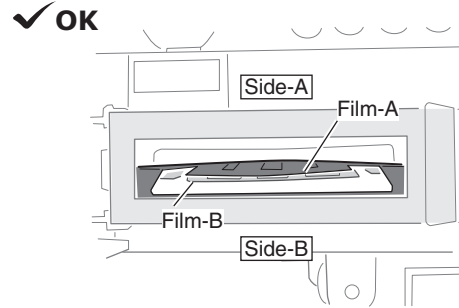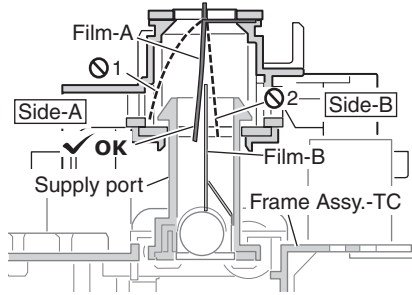
・2. Check the action of the Film by rotating the Gear on Frame Assy.-TC to arrow.
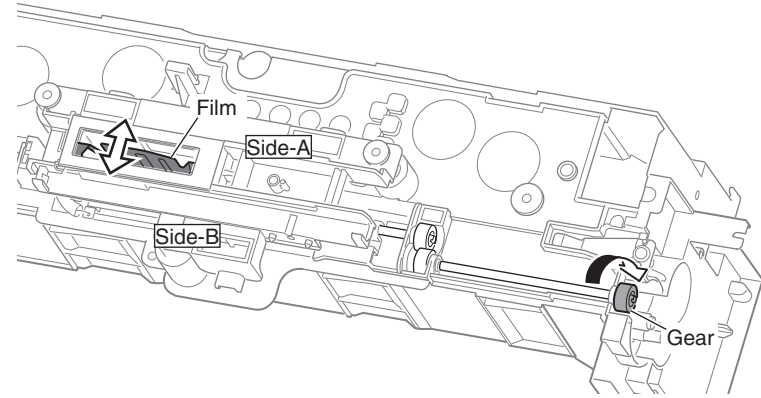
If you set the film to wrong position, disassemble the Frame Assy.-TCL with to go back to [1:Disassemble]- (3) and assemble it, again.

Note for damaging to the sponge by latches in assembling.
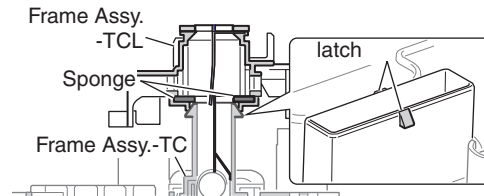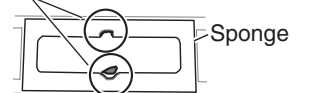
(5) After confirm film cation is correct, assemble removed parts in reverse order at (1) and (2) .
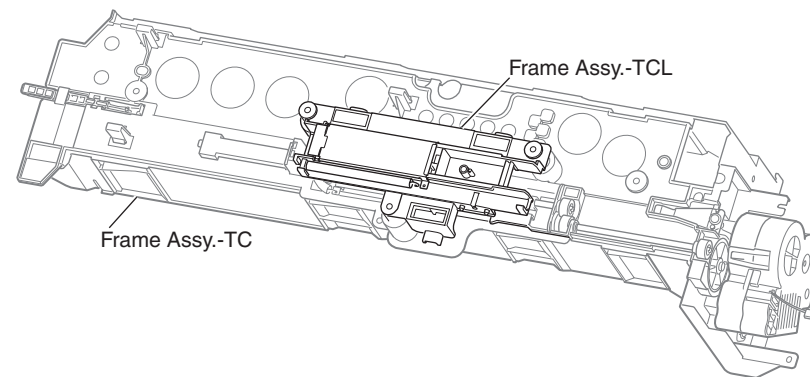
6.2.51 Skew adjusting mechanism

The Skew adjusting mechanism is added to apparatus those serial number is over than Rev. E0 of the main apparatus and Rev.B0 of the Option Tray / HCF / Caster-Tray.

Refer to following procedure of the replacing for the additional mentenance parts of the skew adjusting mechanism to the apparatus those serial number is lower than Rev.D0 of the main apparatus and Rev.A0 of the Option Tray / HCF / Caster-Tray.

(Refer to '6.4 Skew adjustment'.)

Refer the following table for the propriety of the skew adjustment for the combination of the revision and the maintenance parts of the apparatus main body, option tray, HCF, and Caster-tray.

Apparatus	Before Rev.D0 + unsupported maintenance parts	Before Rev.D0 + supported maintenance parts	After Rev.E0 + supported maintennce parts	After Rev.E0 + unsupported maintennce parts
1. MPT Paper Path	45228601_Roller-Assy-Regist-2 Skew adjustment impossible	45228602_Roller-Assy-Regist-2 46555001_Kit-Cam-Adjust Skew adjustment possible	45228602_Roller-Assy-Regist-2 46555001_Kit-Cam-Adjust Skew adjustment possible	45228601_Roller-Assy-Regist-2 Skew adjustment impossible
2. Tray Paper Path	45173501_Hopping-Unit Skew adjustment possible	45173503_Hopping-Unit Skew adjustment possible	45173503_Hopping-Unit Skew adjustment possible	45173501_Hopping-Unit Skew adjustment impossible
3. Duplex Printing Path	without the maintenance parts	45228501_Guide-Paper-Dup2 46555001_Kit-Cam-Adjust Skew adjustment possible	45228501_Guide-Paper-Dup2 46555001_Kit-Cam-Adjust Skew adjustment possible	without the maintenance parts

Option/ HCF/ Caster-Tray	Rev.A0 + unsupported maintenance parts	Rev.A0 + supported maintenance parts	After Rev.B0 + supported maintenance parts	After Rev.B0 + unsupported maintenance parts
2. Tray Paper Path	45173502_Hopping-Unit-Opt Skew adjustment impossible	45173504_Hopping-Unit-Opt 45173505_Hopping-Unit-Opt-500(*1) 45173506_Hopping-Unit-Caster-600(*2) Skew adjustment possible	45173504_Hopping-Unit-Opt 45173505_Hopping-Unit-Opt-500(*1) 45173506_Hopping-Unit-Caster-600(*2) Skew adjustment possible	45173502_Hopping-Unit-Opt Skew adjustment impossible

*The unsupported maintenance parts number is deleted from the RSPL, already.

*No.1 to 3 can been replaced, individually.

*1 : 45173505_Hopping-Unit-Opt-500 is only used to Walgreens. The setting of the retard roller tension is x1.5, and the Torque limitter is set to 500gf · cm. The top tray and the middle tray of the HCF is used them.

*2 : 45173506_Hopping-Unit-Caster-600 is only used to Walgreens. The setting of the retard roller tension is x1.5, and the Torque limitter is set to 600gf · cm. The bottom tray of the HCF is used it.

Part replacement procedure
① MPT Paper feed path

Refer to '6.2.39 Roller-Assy-Regist2/Roller-Assy-Synchro/Regist-Sensor-Assy_753' for to replace procedure. Further, for the initial position of the cam, match positions of the notch of the plate and the arrow of the cam.

Cam
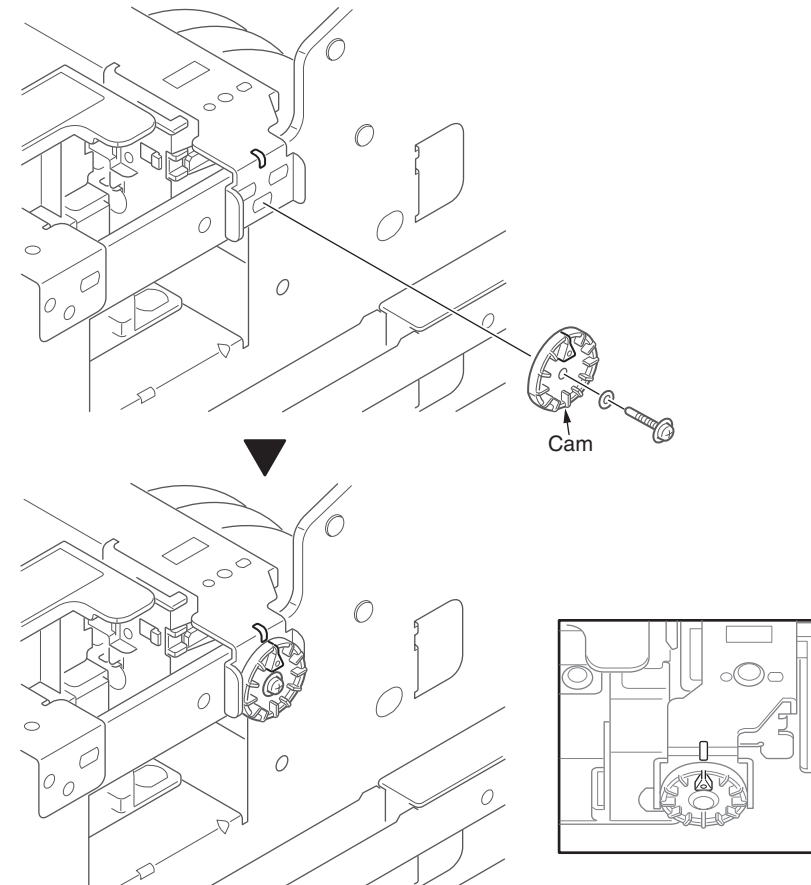
② **Tray Paper feed path**

Refer to '6.2.43 Hopping-Unit' for to replace procedure. Further, for the initial position of the cam, match positions of the notch of the plate and the arrow of the cam.
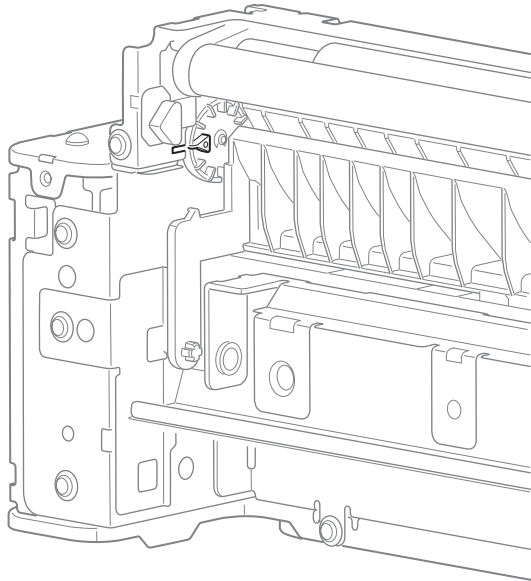
*Do not replace only 45177801_Roller-Assy-Regist-T. Already, 45177801_Roller-Assy-Regist-T is deleted from RSPL.

③ **Duplex Paper feed path**

(1) Remove the Cover-In-E, Regist-Sensor-Assy, Roller-Assy-Regist-2, Roller-Assy-Synchro. (Refer to section 6.2.39)

(2) Remove the screw (black)(8mm) ① and remove the Guide-Paper ② .

(3) Remove the screw (silver)(6mm) ③ and the screw (silver)(14mm) ④ remove the Guide-Assy-Dup-Feed ⑤ .
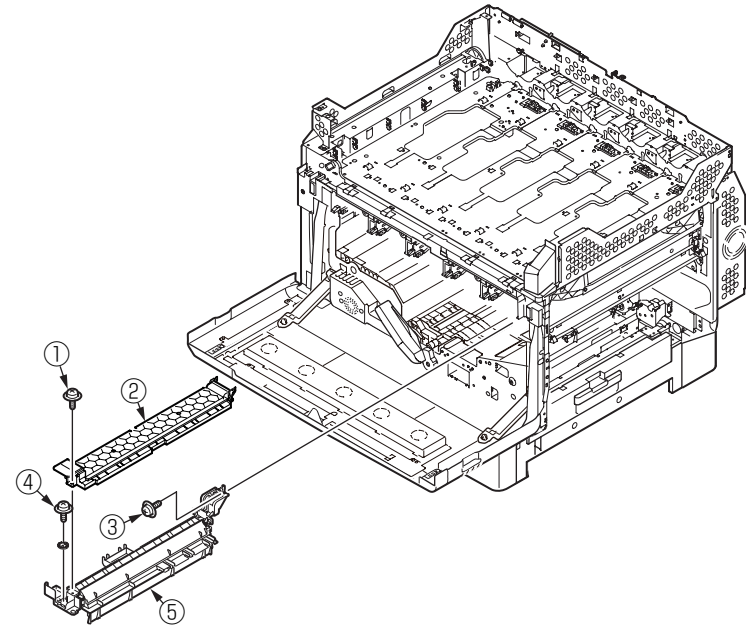
(4) Remove the two screws (black)(8mm) ⑥ and remove the Guide-Paper-Dup-2 ⑦ .
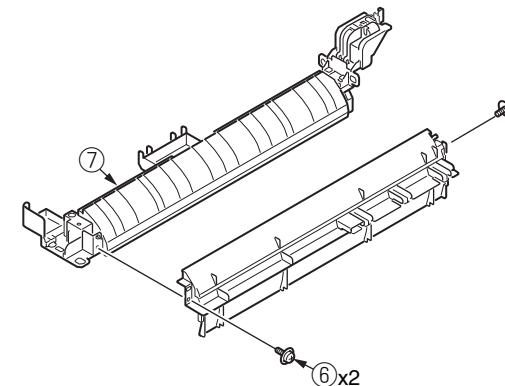
Further, for the initial position of the cam, match positions of the lib of the Guide-Paper-Dup2 and the arrow of the cam.
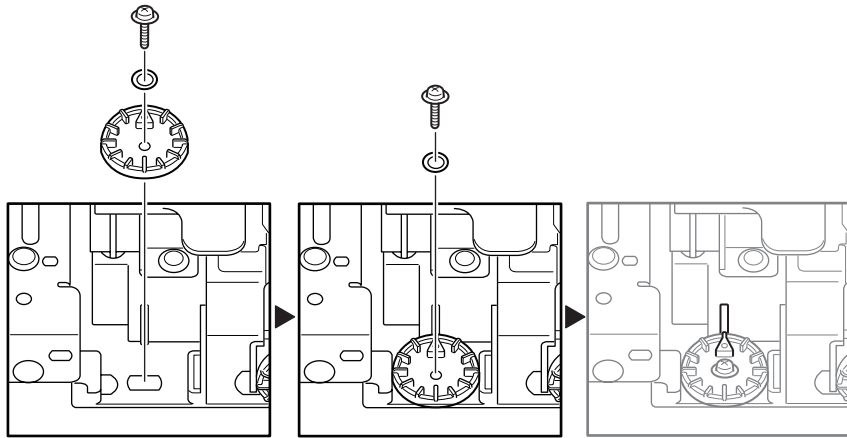
6.2.52 Lever-Torsion-Assy

(1) Remove Tray1.

(2) Unlatch the claw to detach the Lever-Torsion-Assy.
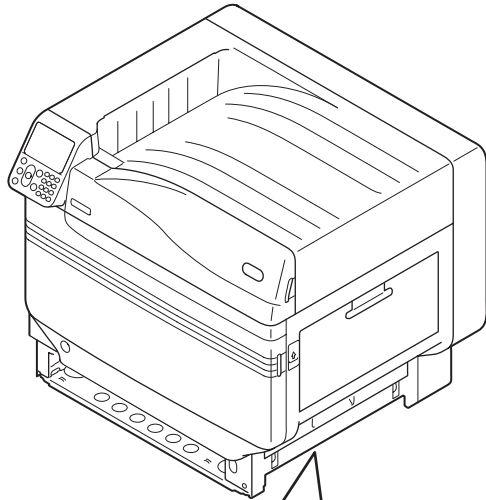
Bend and remove this latch for to detach the Lever-Torsion-Assy.
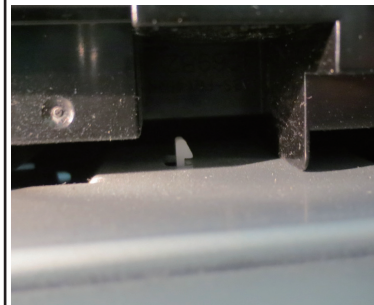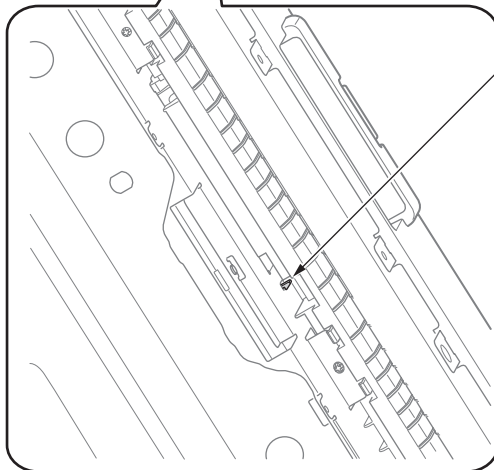
Lever-Torsion-Assy

Spring-Retard

Refer to the following table for the variation of the Lever-Torsion-Assy by uses.

Parts No.	Parts Name	Marking of the Spring-Retard	Uses	note
45175401	Lever-Torsion-Assy	None	HCF except Walgreens	Standard pressing force
45175402	Lever-Torsion-Assy-1.5	Black	HCF for Wlgreens	One and a half times as many as the Standard pressing force

6.2.53 Spring-Pinch

(1) Remove the EJ-Rail-Unit. (Refer to 6.2.35).

(2) Remove the Spring-Pinch ① and ② .

View A

View A

Cross section B
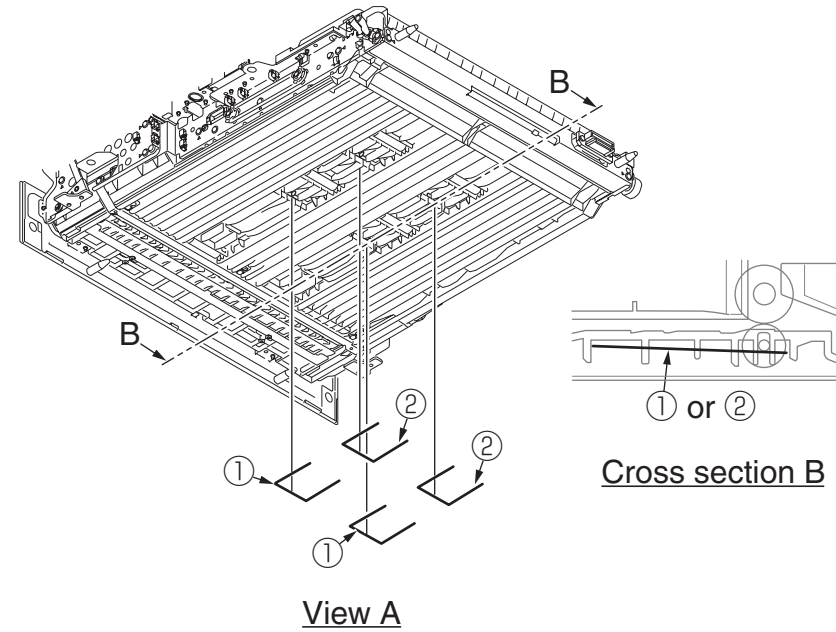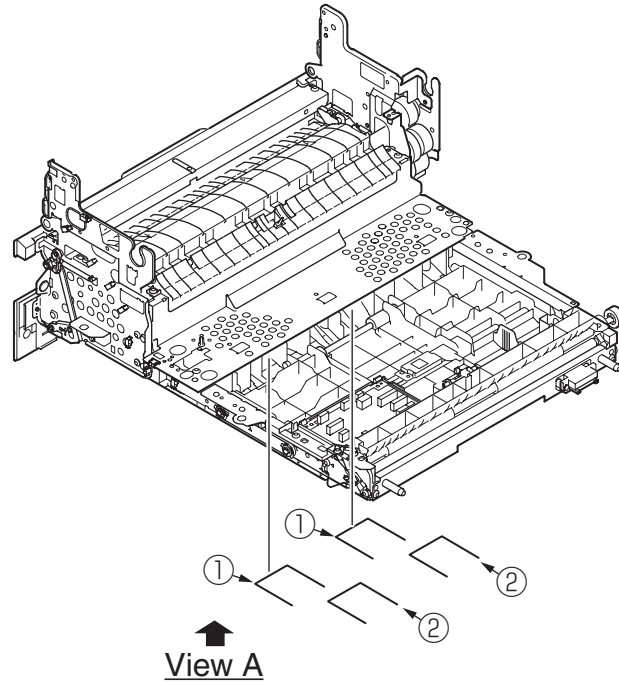
Refer to the following table for the variation of the Spring-Pinch by uses.

Parts No.	Parts Name	Marking of the Spring-Pinch	Uses	Notes
43355201	Spring-Pinch	None	For All of ① and ② positions except for the lower column.	Standard pressing force
43355202	Spring-Pinch-1.5	Black	For Walgreens of ② positions.	One and a half times as many as the Standard pressing force

6.2.54 Torque-Limiter

(1) Pull out Tray 1.
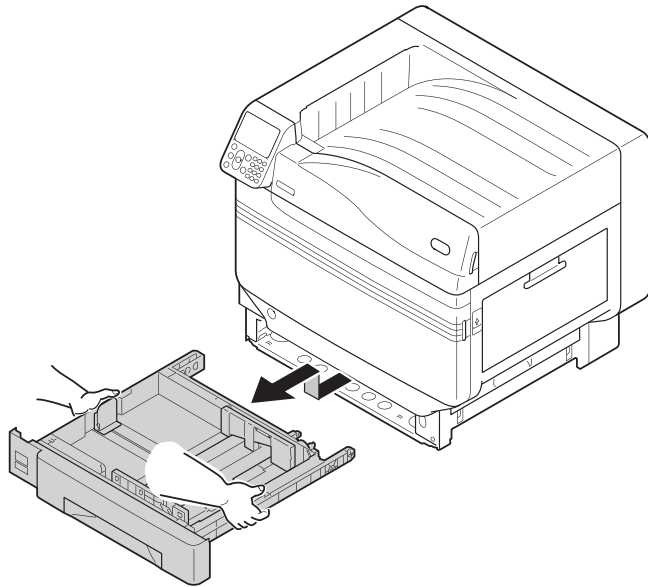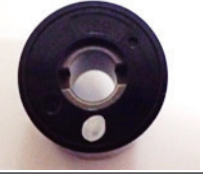
(2) While expanding the claws of feed roller in outside direction, remove them from the axial.
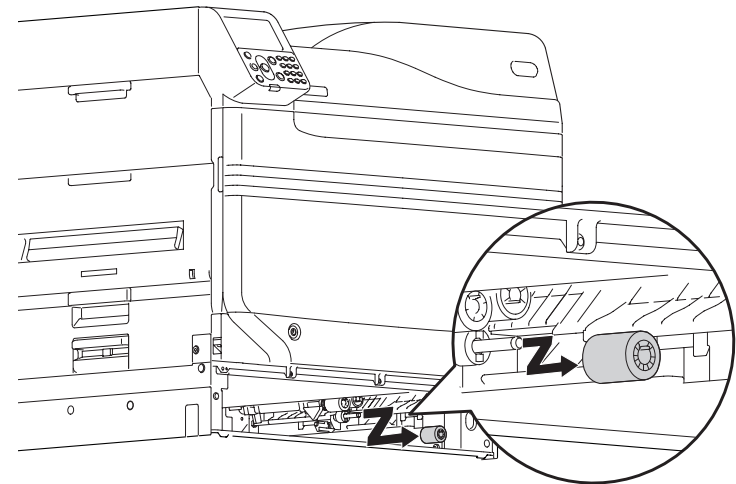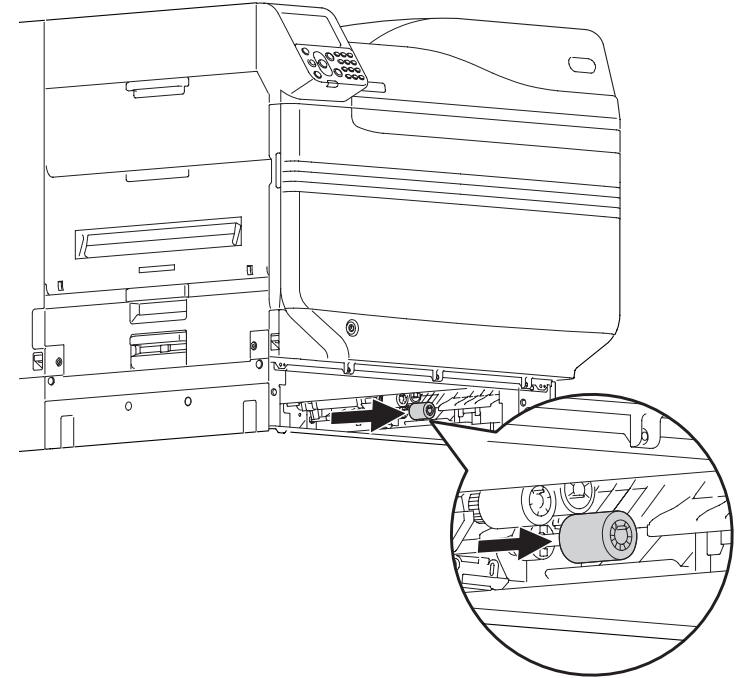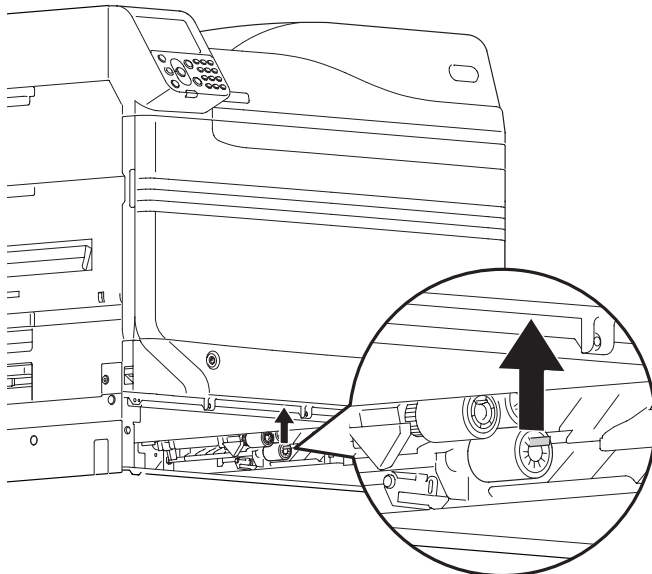
(3) Remove the Torqu-Limiter.
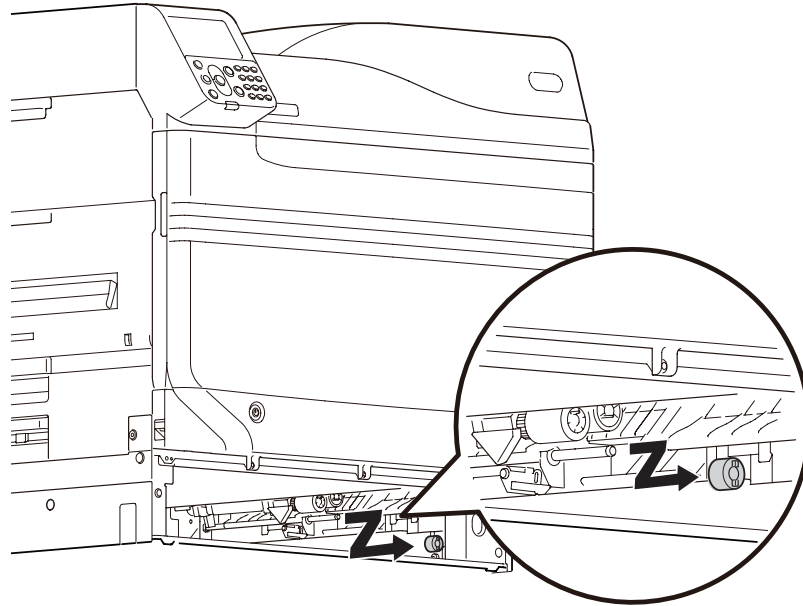
Refer to the following table for the variation of the Torque-Limiter by uses.

Parts No.	Parts Name	Marking of the Torque-Limiter	Uses	note
42988601	Torque-Limiter-OTLV	without Marking	HCF to All except for Walgreens	400gf・cm
43437501	Limiter-Torque-500	One marking of the white	The top and middle trays of HCF for Walgreens	500gf・cm
46623701	Torque-Limiter-OTLV-600	Two markings of the white	The bottom tray of HCF for Wlgreens	600gf・cm

6.2.55 Plate-thickness-release attachment procedure

In the case of vertical line is printed when use the surface coated paper etc, it may be improved by attach the Plate-thickness-release.

*After attach the Plate-thickness-release, do not use the "Media Weight" setting by "Auto". The "Media Weight" setting by manual operation.

Parts No. : 47264901

Parts name : Plate-thickness-release
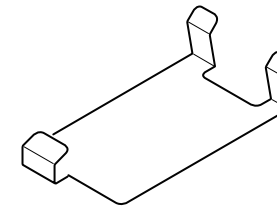
(1) Pull out Belt unit. (Refer to 6.2.3).
(2) Raise the Guide-Assy ① .
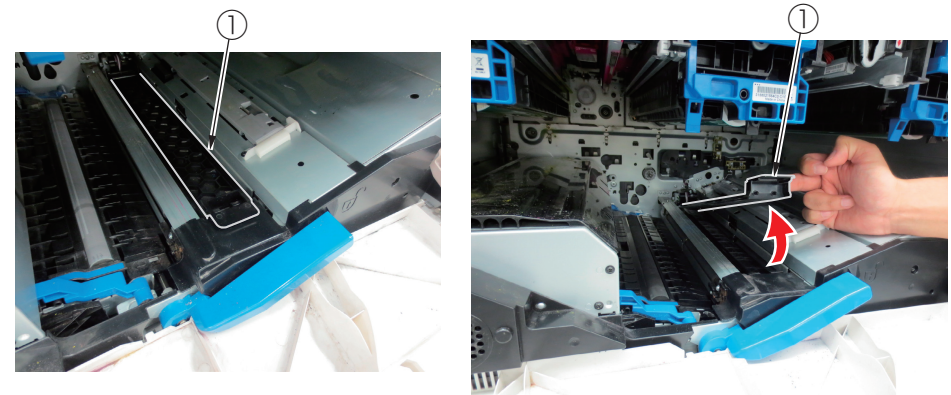
(3) Attach the Plate-thickness-release ② .

Hook the tip of the Plate-thickness-release ② to the hole of the plate and push to the arrow direction.
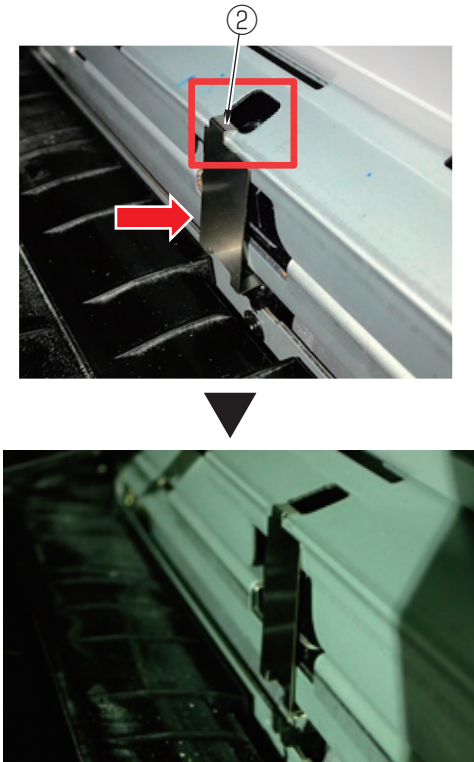
(4) To put Guide-Assy ① back into its original place.

ⓐ Down the Guide-Assy arrow direction, and ⓑ pull arrow direction.
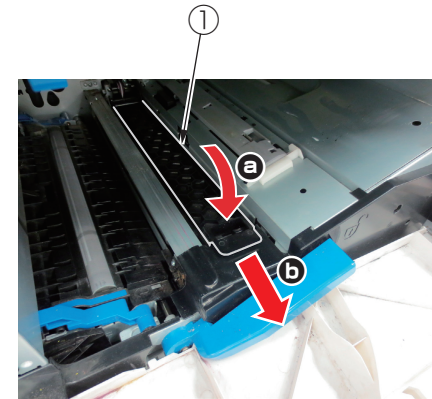
6.3 Portions Lubricated

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

FL: FLOIL GE334C

HARVES: HARVES MDF-1207(Without special mention, immerse the parts in HARVES and dry the parts)

(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	.	●	●	●	●	●	●
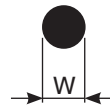
① 45239501PA Motor-Assy-Joboff

Apply a HARVES
to the all over the gear

Gear-Z50-Z20
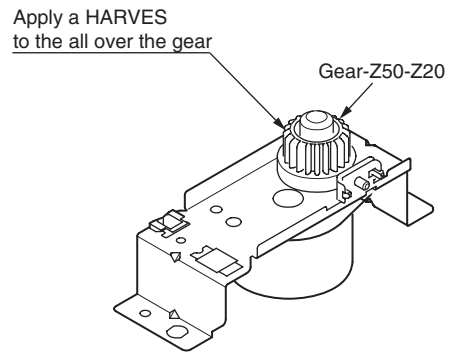
② 45173601PA Retard Assy

Class C
Apply a normal amount of MOLYKOTE
to the gear teeth and Shaft

Grease prohibition
at the post.

Gear-Red-A

Gear-Red-B

Gear-Idle-Assy-OW

Class C
Apply a normal
amount of MOLYKOTE
to the gear teeth
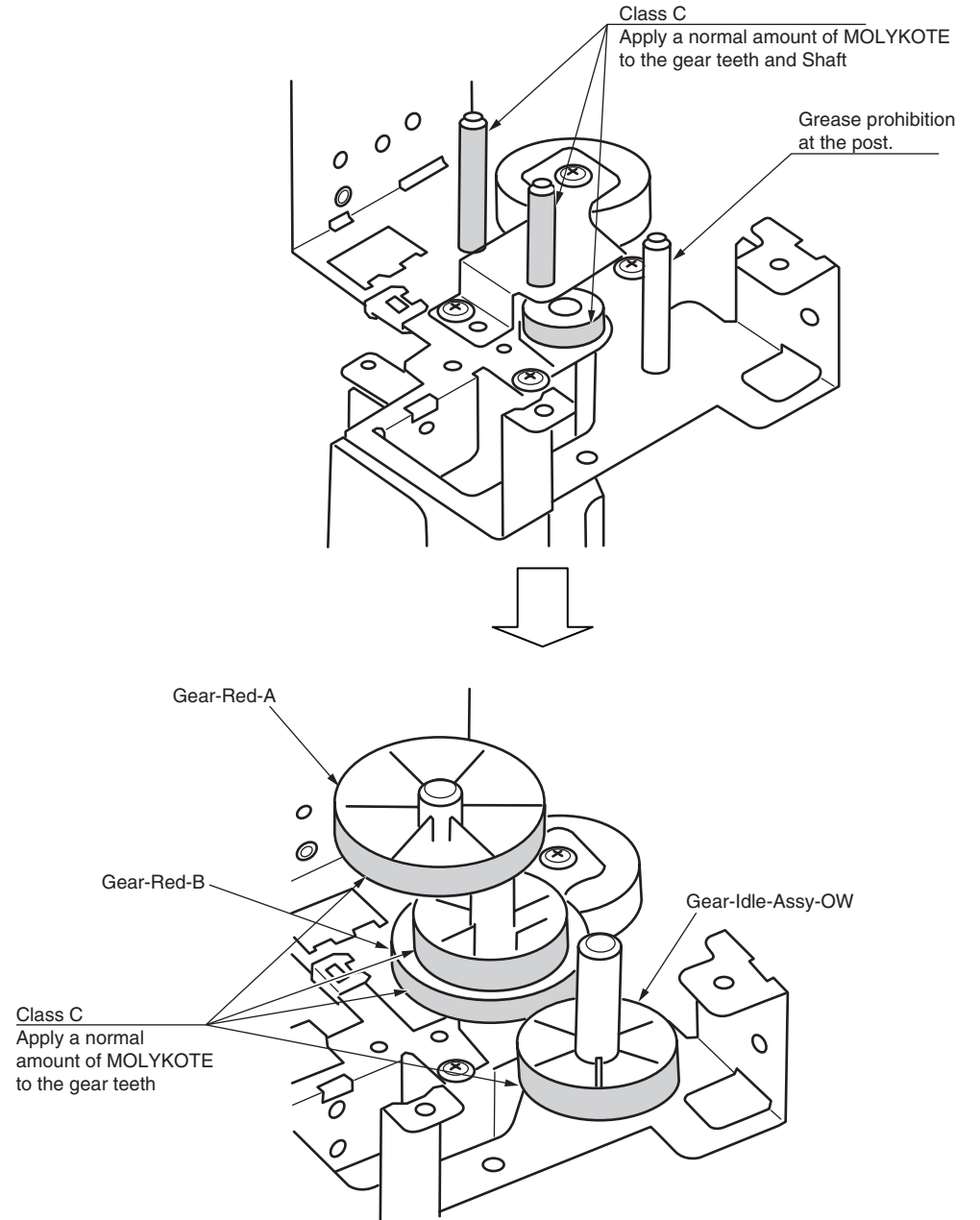
③ 45175001PA Plate-Assy-Retard

Gear-Feed_Z20

Class C
Apply a normal amount of MOLYKOTE
to the all over the gear teeth
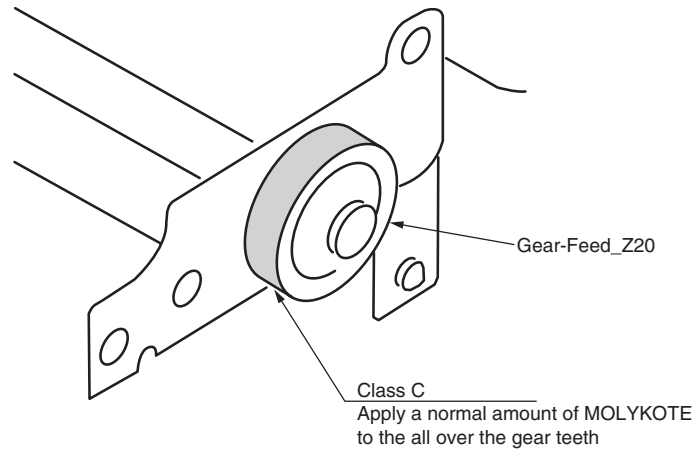
④ 45529101PA Plate-Assy-Motor-B

Plate-Motor-B-Caulk

Gear-Idle-Reg_Z41

Class C
Apply a normal amount of MOLYKOTE
to the gear teeth and Shaft
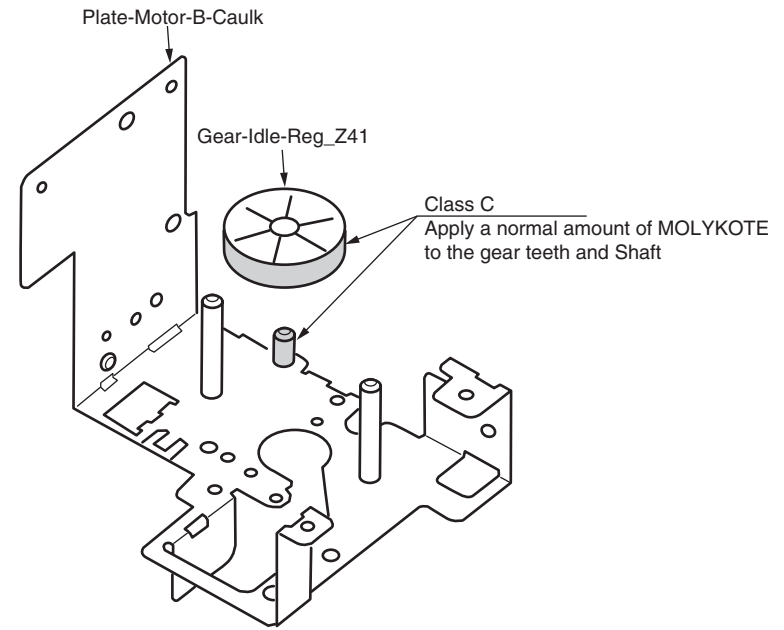
⑤ 45176101PA Hopping-Assy

Gear-Feed_Z20

Class C
Apply a normal amount
of MOLYKOTE to the
all over the gear teeth
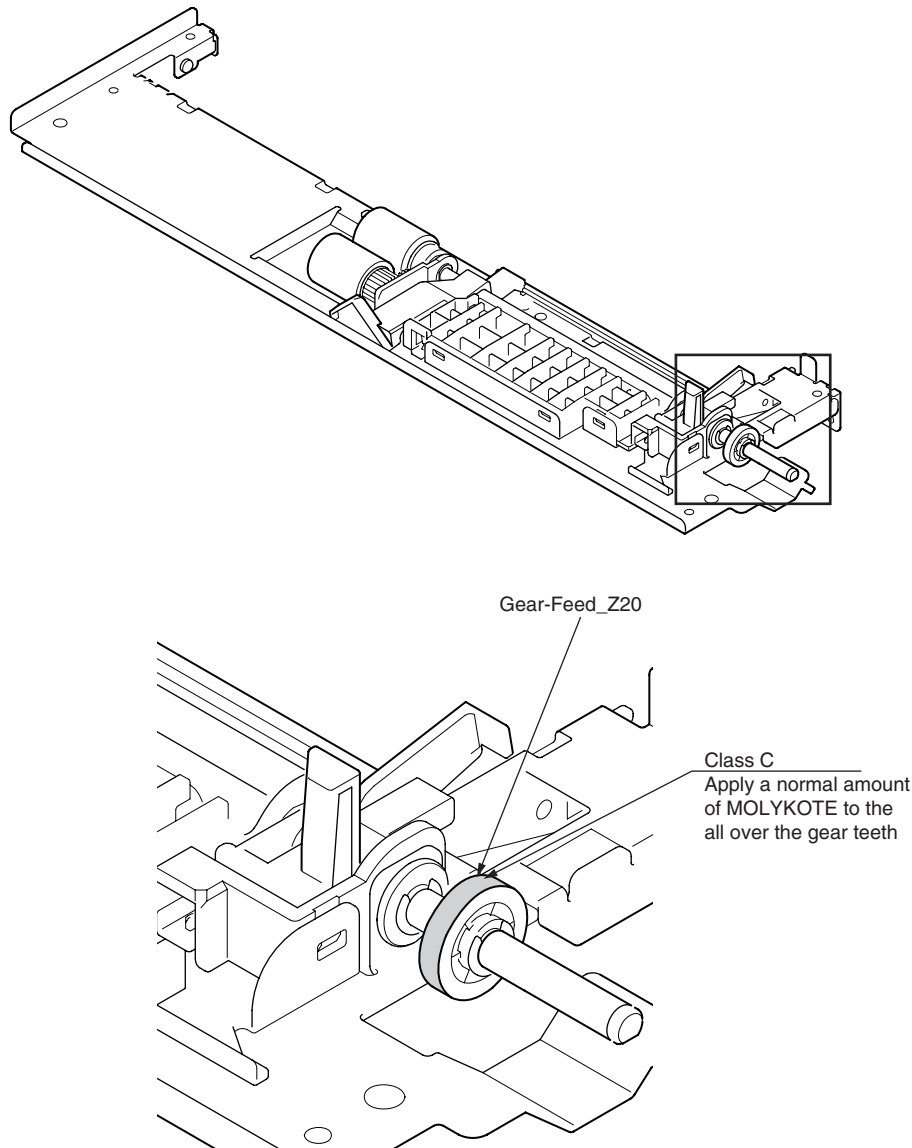
⑥ 45177901PA Roller-Regist-Sub Assy-T

Gear-Regist:Immerse in HARVES

Roller-Regist-1

Class C
Apply a normal amount
of MOLYKOTE to the inside
of the E-ring groove

Class C
Apply a normal amount
of MOLYKOTE to the inside
of the E-ring groove

Don't apply a MOLYKOTE this area

Gear-PRB:Immerse in HARVES

Roller-Pressure

Class C
Apply a normal amount of MOLYKOTE
to the inside of the E-ring groove

Class C
Apply a normal amount
of MOLYKOTE to the inside
of the E-ring groove

⑦ -1 45180501PA Case-Cassette-Assy

Plate-LU-Caulking

Class C
Apply a normal amount
of MOLYKOTE(EM30LP)
to the all over the shaft

Coupling-LiftUP

⑦ -2 45180501PA Case-Cassette-Assy

Class B
Apply a normal amount of MOLYKOTE
In the state the Gear-Lift-Up is stayed at the top,
put the grease to the tooth of it on the portion of
engaging with the Gear-idle, and rotate one revolution of it.

Gear-Lift-Up

Gear-Idle

Class B
Apply a normal amount of MOLYKOTE
In the state the Gear-Lift-Up is stayed at the bottom,
put the grease to the range of turning the tooth
of Gear-Coupling.

⑧ 45187301PA Plate-Assy.-Front
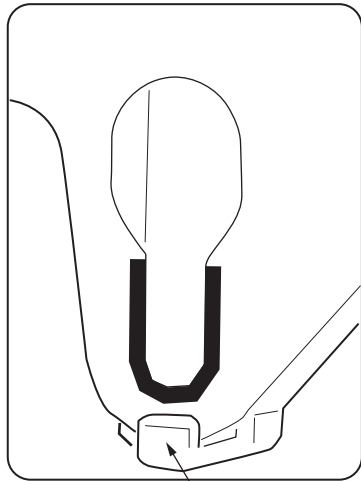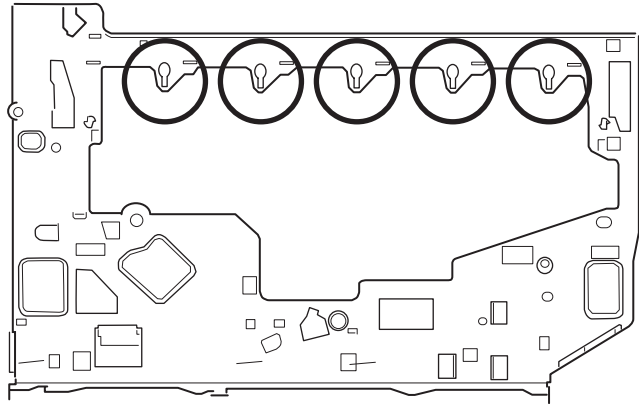
Class A
Apply a small amount of MOLYKOTE

⑨ -1 45189701PA Belt-Drive-Assy

BRACKET-BELT-CAULKING
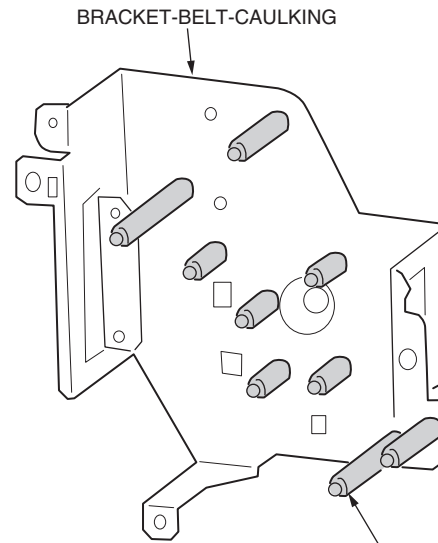
Class C
Apply a small amount
of MOLYKOTE
to the all shaft
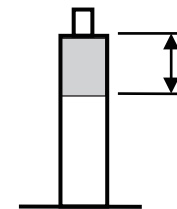
Apply a MOLYKOTE from tip to 1/3 area of shafts

⑨ -2 45189701PA Belt-Drive-Assy

Gearse prohibition at the coupling portion

Gear-Idle-Belt

Class F
Apply a large amount of MOLYKOTE to the all over the gear

Gear-Idle-TN

Class F
Apply a large amount of MOLYKOTE to the all over the gear

Gearse prohibition at this portion

Gear-Reduct-TN

Gear-Pully

Class F
Apply a large amount of MOLYKOTE to the all over the gear

Apply a MOLYKOTE to gear surface
Class:D

⑩ 45192101PA Fuser-Drive-Assy

Class C
Apply a normal amount of MOLYKOTE(EM30LP) to the all over the shaft

PLATE-MOTOR-FU-Caulking

GEAR-RED-Z56/16

GEAR-RED-Z66/27

GEAR-MOTOR-FU

Class C
Apply a normal amount of MOLYKOTE(EM30LP) to the all over the gear

Class E
Apply a normal amount of MOLYKOTE(EM30LP) to the all over the gear

⑪ 45194301PA MPT-Gear-Assy

Class C
Apply a normal amount of MOLYKOTE
to the all over the gear and shaft

⑫ -1 45192901PA Motor-Assy-Regist

Class C
Apply a normal amount
of MOLYKOTE(EM30LP)
to the all over the shaft

Plate-Gear-Caulking

Class C
Apply a normal amount
of MOLYKOTE(EM30LP)
to the all over the shaft

Bracket-Motor-Caulking

⑫ -2 45192901PA Motor-Assy-Regist

Class C
Apply a normal amount
of MOLYKOTE(EM30LP)
to the all over the shaft and gear

Gearse
prohibition at
the this position

Bracket-Motor-Caulking

Bracket-Motor-Caulking

Class C
Apply a normal amount
of MOLYKOTE(EM30LP)
to the all over the gear

⑬ 45199101PA PLATE-ASSY-SIDE-RA

Plate-Assy-Side-RA
Apply a HARVES to the
hole and R portion. (by brush)

⑭ 45171801PA Motor-Assy-Geard

Motor-DC(Geard)-Cab

Gearse prohibition at the shaft of motor

Gear-Worm-TS

Class F
Apply a large amount of MOLYKOTE to all over the gear

Gear-Red-C_Z5620

Gear-Wheel-TS_Z2819

Class C
Apply a normal amount of MOLYKOTE(EM30LP) to three or four theeth of the gear

MOLYKOTE Apply this direction

Coupling-Gear-TS

Gear-Wheel-TS_Z2819

Class C
Apply a normal amount of MOLYKOTE(EM30LP) to all over the gear and shaft

⑮ 45206601PA Motor-Assy-ID

Gear-B

Grease prohibition at the shaft/bore of the gear

Class C
Apply a normal amount of MOLYKOTE (EM-30LP) to the gear and shaft

Gear-B

⑯ 45207501PA Gear-Assy-DV

Grease prohibition
at the coupling

Class C
Apply a normal amount
of MOLYKOTE
(EM-30LP) to the Ball

Class A
Apply MOLYKOTE (EM-30LP) to portions of the shaft
those are faced to the bearing and inside of
the groove for E-ring.

Class F
Apply a large amount of MOLYKOTE
(EM-30LP) to the Gear-DV

⑰ 45209301PA Shaft-Assy-Drum

Class F
Apply a large amount of MOLYKOTE
(EM-30LP) to the Gear-OPC

⑱ 45221401PA Feeder-Assy

Boss-Coupling-HM

Class C
Apply a normal amount of
MOLYKOTE (EM-30LP) to the
D-cut of the Post

Plate-Base-MPT-Caulking

Apply a HARVES

Apply a HARVES

Grease prohibition

Grease prohibition

Clutch

Shaft

Gear-Idle-Z2

Apply a HARVES

Apply a HARVES

shaft   Gear-Assy-Oneway

⑲ 45228601PA Roller-Assy-Regist-2

Gear-CL-Z28

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the all over the gear

⑳ 45228701PA Roller-Regist-Subassy-R2

㉑ 45230601PA Roller-Assy-Synchro

Roller-Regist-2

Gear-Regist:Immerse in HARVES

Don't apply a MOLYKOTE this area

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the inside of the E-ring groove

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the inside of the E-ring groove

Roller-Pressure

Gear-PRB:Immerse in HARVES

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the inside of the E-ring groove

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the inside of the E-ring groove

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the all over the gear and shaft

Gear-Feed-Z28

㉒ 45230701PA Roller-Regist-Subassy-S

Don't apply a MOLYKOTE this area

Roller-Regist-2

Gear-Regist:Immerse in HARVES

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the inside of the E-ring groove

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the inside of the E-ring groove

Roller-Pressure

Gear-PRB:Immerse in HARVES

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the inside of the E-ring groove

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the inside of the E-ring groove

㉓ 45231901PA Regist-Sensor-Assy

Apply a HARVES to Gear-Eject-Lower

Class E
Apply a normal amount of MOLYKOTE
(EM-30LP) to the all over the gear

Apply a HARVES to Gear-Eject-Lower

Gear-Idle-Z30R

Gear-Idle-Z26

HARVES prohibition:
Oneway gear/
same axial gear/shaft

Plate-Gear-OW-Caulking

㉔ -1 45233601PA Guide-Assy-Eject-M_753-C1

㉔ -2 45233601PA Guide-Assy-Eject-M_753-C1

Bush

Plate-Eject-ML

Class C
Apply a normal amount of MOLYKOTE
(EM-30LP) to the bush

Bush

Class C
Apply a normal amount of MOLYKOTE
(EM-30LP) to the gear and shaft

Gear-Idle-Z41-SH

BUSH-ROLLER

Plate-Eject-MR-Caulking

BUSH-ROLLER

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the all over the gear

Gear-Eject-Z17-Duct

Gear-Eject-Z17-Duct

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the all over the gear

㉕ -1 452862xxPA EJ-Rail-Unit

㉕ -2 452862xxPA EJ-Rail-Unit

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
2places

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
2places

Apply a HARVES to the slider link

㉖-1 452910xxPA LSD-Unit

㉖-2 452910xxPA LSD-Unit

Class F
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the all over the gear

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the all over the shaft

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the all over the bush

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the all over the gear

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the bush(2 places)

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the gear

Class F
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the gear

Class C
Apply a normal amount
of MOLYKOTE(HP300)
(2 places)

㉗-1 452917xxPA Frame-Assy-LSD

Bearing-Regist

Bush

Class C
Apply a normal amount of MOLYKOTE
(EM-30LP) to the bush(2 places)

Gear-Puressure

Gear-Regist

Class C
Apply a normal amount of
MOLYKOTE(EM-30LP) to
the gear(2 places)

㉗-2 452917xxPA Frame-Assy-LSD

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP) to the gear

Gear-D-Z15

Bush

Bearing-Regist

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP) to the bush

㉗ -3 452917xxPA Frame-Assy-LSD
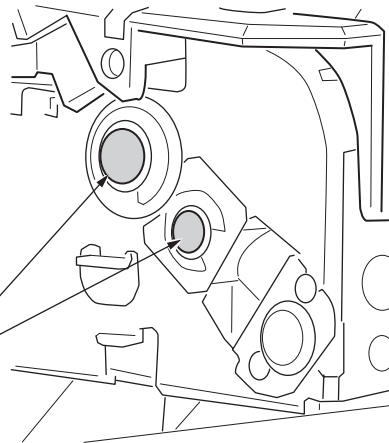
㉘ 45246501PA Decurl-Assy

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)

Roller-Sponge-Decurl

Gear-Z17-Decurl

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
(2 places)
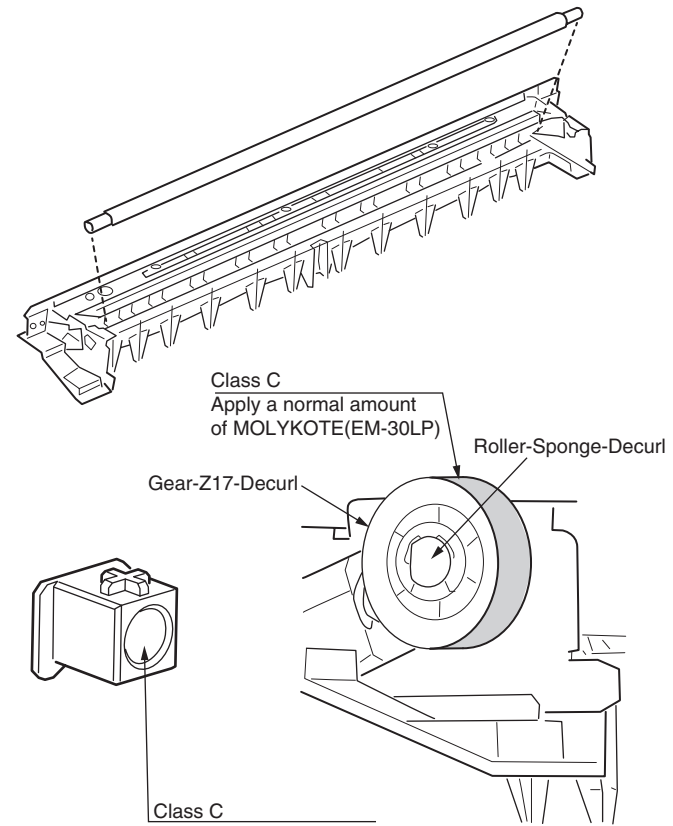
Class C
Apply a normal amount
of MOLYKOTE(EM-30LP) to inside of the Bearing.
Apply from opposite side of flange.
(2 places)

㉙ -1 45241101PA Frame-Assy.-TR2

Gear-Idle-TR2

Shaft-Assy.-TR2

Apply a HARVES

Apply a HARVES

Gear-Idle-TR2

Apply a HARVES

Cam-Drive-TR2

Cam-Drive-TR2

Plate-Side-TR2-R-Caulking

Plate-Side-TR2-R-Caulking

㉙ -2 45241101PA Frame-Assy.-TR2

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the shaft

Worm-TR2

Class E
Apply a large amount
of MOLYKOTE(EM-30LP)
to the gear

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the gear

㉙-3 45241101PA Frame-Assy.-TR2

EM-30L Class E
Apply a large amount of MOLYKOTE
(EM-30LP) to the gear

㉚-1 45235201PA Guide-Assy-Eject-Lower

Shaft-Eject-Roller(Lower) x2

Class C
Apply a normal amount of FLOIL(GE-334C)
to the inside of bush

Class C
Apply a normal amount of FLOIL(GE-334C)
to the inside of bush

Gear-Eject-Z17-Duct x2

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the gear

㉚ -2 45235201PA Guide-Assy-Eject-Lower

㉛ 45238101PA JobOff-Assy

Class C
Apply a normal amount
of MOLYKOTE(EM-30LP)
to the gear and shaft

Gear-Eject-Z17-SH x 2

Gear-Idle-Z41-SH x 2

Class C
Apply a normal amount of MOLYKOTE
(EM-30LP) to the gear and shaft
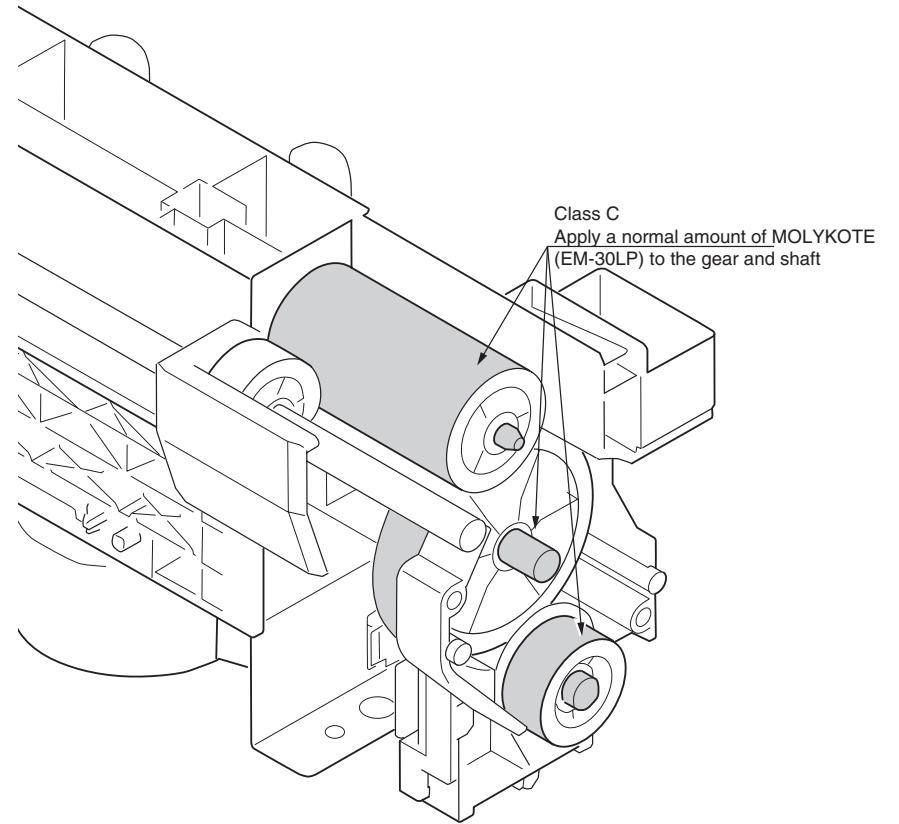
㉜ 45240001PA Roller-Assy-Offset

Bush

Apply a HARVES

Apply a HARVES

Callar-Stacker

Class C
Apply a normal amount of MOLYKOTE
(EM-30LP) to the gear

Gear-Drive_Z20

35mm

35mm

Class D
Apply a normal amount of FLOIL(GE-334C)
35mm from the end of shaft

Class D
Apply a normal amount of FLOIL(GE-334C)
35mm from the end of shaft

Apply a HARVES to hatched portion (by brush)
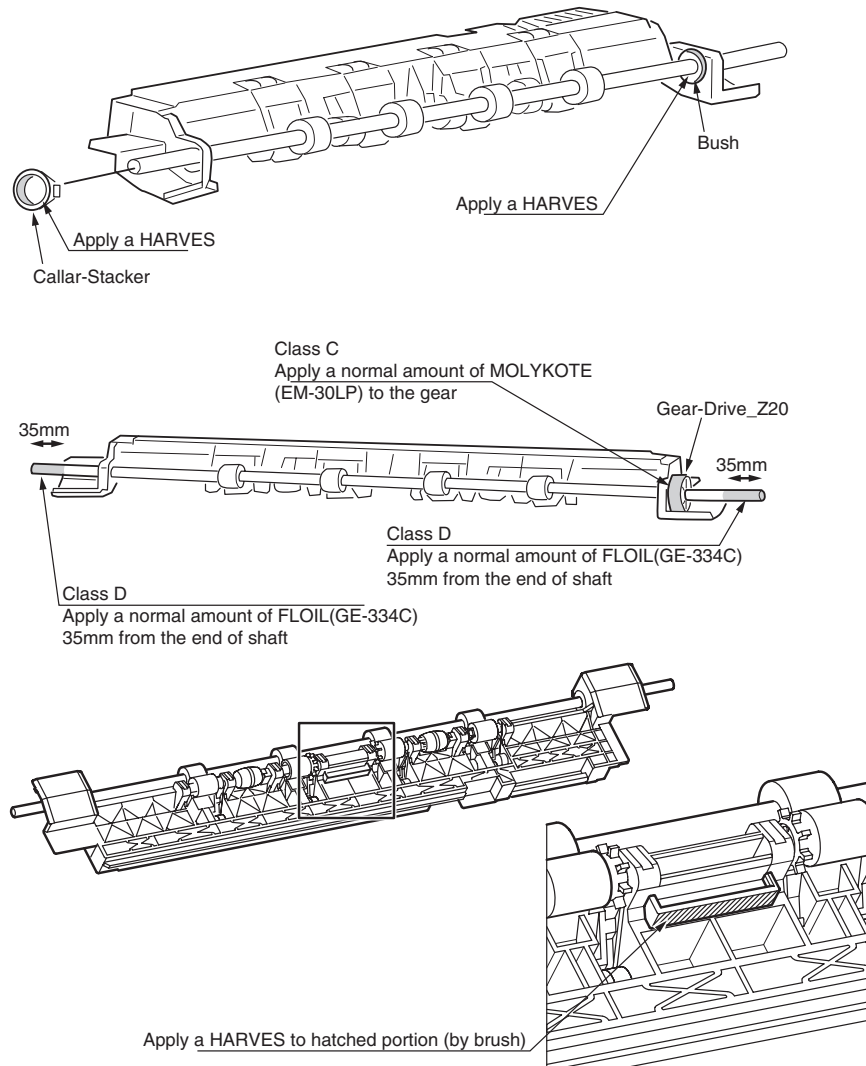
㉝ 45264701PA Box-Assy-Waste

GEAR-SPIRAL
Apply a HARVES
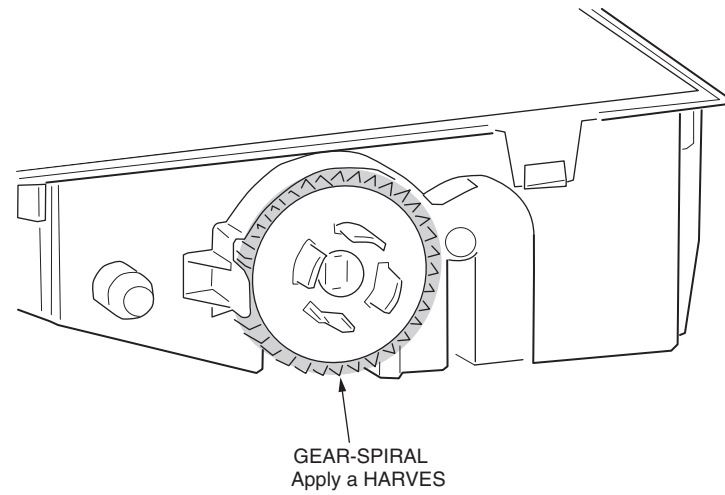
㉞ 451705XX Plate-Base-Assy

(Same as Option-Tray/LCF/Caster-Tray)
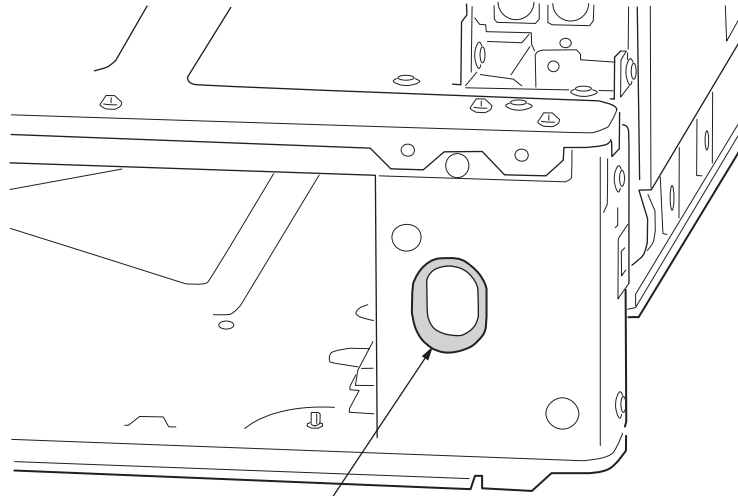
Apply a HARVES to inside
of the hole and R portion
(by brush)

㉟ 45182601 Cover Assy-TC(2 sets)

Frame-Hinge-TC

Shaft-Hinge

Bracket-Hinge-TC
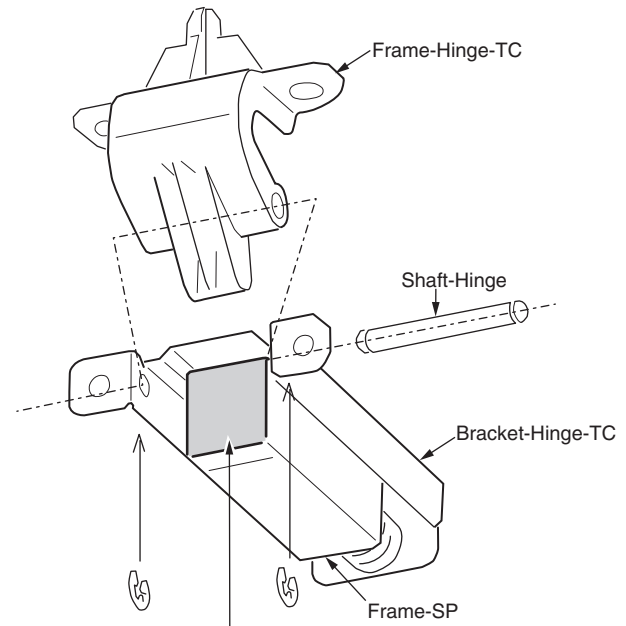
Frame-SP

Class C
Apply a normal amount of
MOLYKOTE (EM-D110) to this portion (Frame-SP)

6.4 Skew Adjustment procedures

Maintenance Tools:

No.	Maintenance Tools		Remarks
1		No.2-200 screwdriver with magnetic tip	3- to 5- mm screws
2		Print pattern	The red frame illustration represents a printed image. Use any print image that can make skew obvious, such as a one with a page frame.

6.4.1 Overview

Skew feeding in a tray paper feed route, the MTP paper feed route and the duplex printing route can be corrected.

(The following methods apply to Rev. E0 printer units and Rev. B0 Opt/LCF/Caster-Tray.)

If images are printed at a large angle due to skew feeding within the specification, correct skew by following the adjustment procedures described below.

Skew adjustment mechanisms (i.e. adjustment cams, hereafter referred to as "cams") are provided at (1), (2) and (3) in the photos below.

Adjust skew by turning the cam.

Refer the 6.2.51 for the propriety of the skew adjustment for the combination of the revision and the maintenance parts of the apparatus main body, option tray, HCF, and Caster-tray.

6.4.2 Order of Adjustments

Make adjustments in the following order by using the cam in each route.

(1) MPT paper feed route

(2) Tray paper feed route (For LCF, from top to bottom)

(3) Duplex printing route (2-pass printing covered)

Notes on cams

A 30° turn of a cam produces a difference of about 0.3mm (In case of A4 LEF) in the print start position from the edge of the paper between R and L.

The maximum adjustment (about 0.9mm) is obtained when a cam is turned 90° in the right or left direction. If a cam is turned beyond 90°, the adjustment decreases.
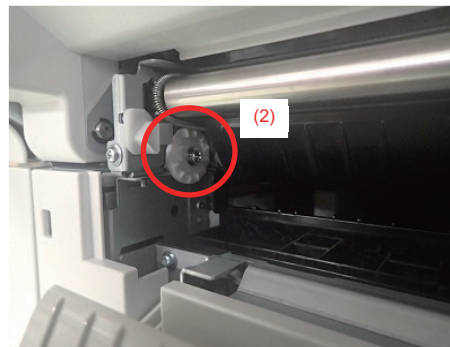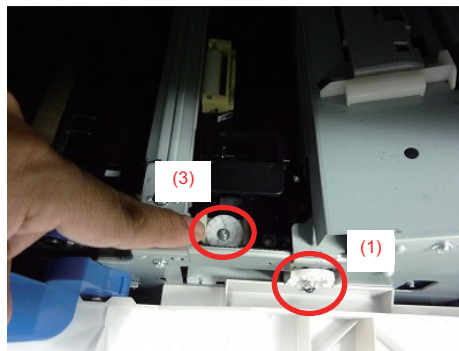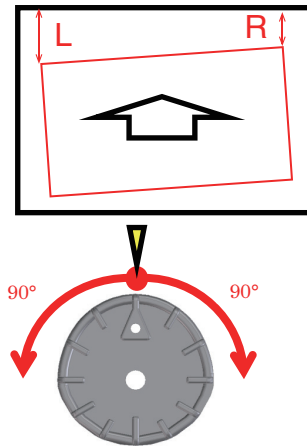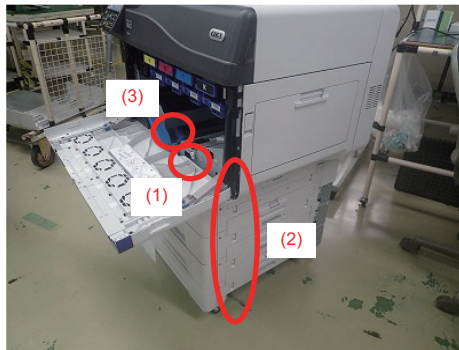
6.4.3 Adjustment Procedures

6.4.3.1 MPT paper feed route

(1) Output 3 prints from MPT and check the skew direction.

   (The red frame illustration represents a printed image. Use any print image that can make skew obvious, such as a one with a page frame.)

(2) Open the front cover, remove the belt unit, remove two screws and detach the inner cover.

(3) Loosen the cam fixing screw. (Do NOT need to remove it.)

(4) Turn the cam to adjust the angle of the registration roller assembly.

   Check to make sure that the arrow on the cam is at the 12 o'clock position.

   When the margin L is greater than the margin R, turn the cam clockwise. (A)

   When the margin R is greater than the margin L, turn the cam counter-clockwise. (B)

   Attention! If the arrow is at the 6 o'clock position, the above adjustments work in reverse.

(5) Tighten the cam fixing screw.

(6) Output prints again to check for skew.

(7) Repeat (3) through (6) until skew is corrected.

(8) After skew is corrected, attach the inner cover.

   (If the duplex printing route needs adjustments, leave the inner cover detached and make adjustments for the duplex printing route.)

1

Remove two screws and detach inner cover

Inner cover

2

Cam

3

Loosen cam fixing screw
(Do NOT need to remove)

4

Turn cam to adjust angle and tighten cam fixing screw to fix

5

Idea of adjustment

Turning cam in yellow arrow's direction (left picture) adjusts angle so that paper skew is corrected as illustrated on the right.
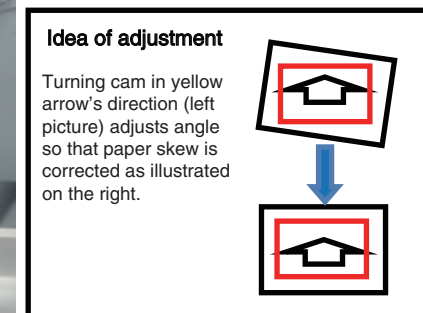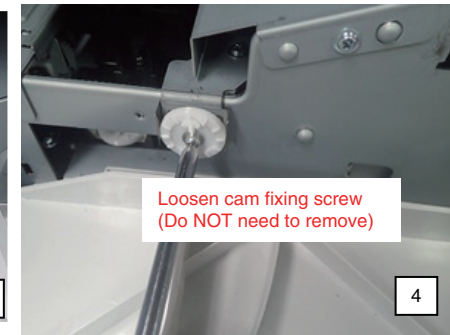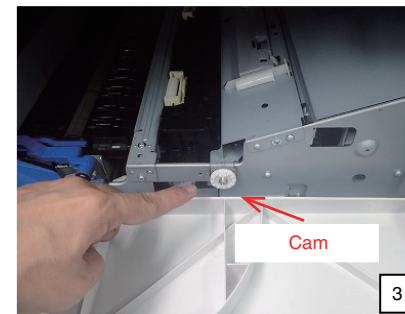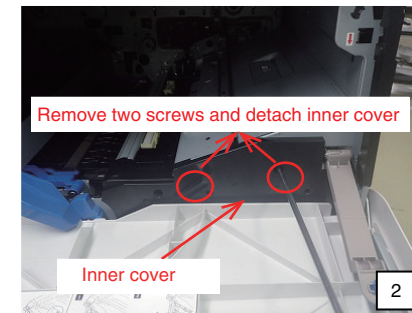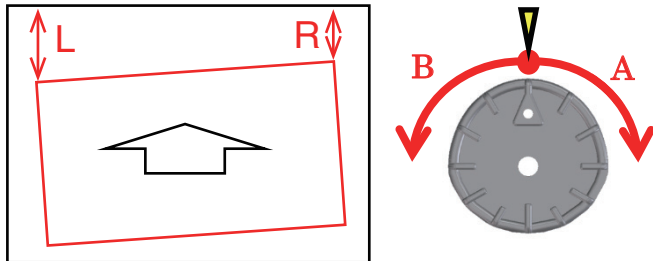
6.4.3.2 Tray paper feed route

(1) Output 3 prints from a tray and check the skew direction.

(The red frame illustration represents a printed image. Use any print image that can make skew obvious, such as a one with a page frame.)

(2) Open the side cover on the right side of the printer unit.

(3) Loosen the two screws indicated in the photos.

(Do NOT need to remove them.)

(4) Turn the cam to adjust the angle of the registration roller assembly.

Check to make sure that the arrow on the cam is at the 9 o'clock position.

(If the arrow points downward, turn the cam clockwise until it contacts the metal plate.

It is not abnormal if the arrow points downward.)

When the margin L is greater than the margin R, turn the cam counter-clockwise. (B)

When the margin R is greater than the margin L, turn the cam clockwise. (A)

Attention! If the arrow is at the 3 o'clock position, the above adjustments work in reverse.

(5) Tighten the two screws.

(6) Output prints again to check for skew.

(7) Repeat (4) through (6) until skew is corrected.

Open cover — 1

Cam — 2

Loosen two screws (Do NOT need to remove) — 3

— 4

Turn cam to adjust angle and tighten two screws to fix — 5

Idea of adjustment

Turning cam in yellow arrow's direction (left picture) adjusts angle so that paper skew is corrected as illustrated on the right.
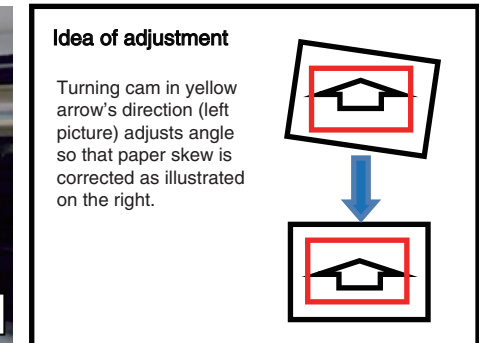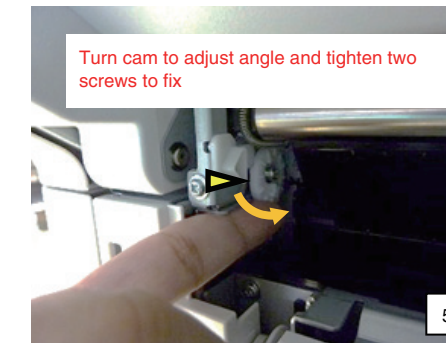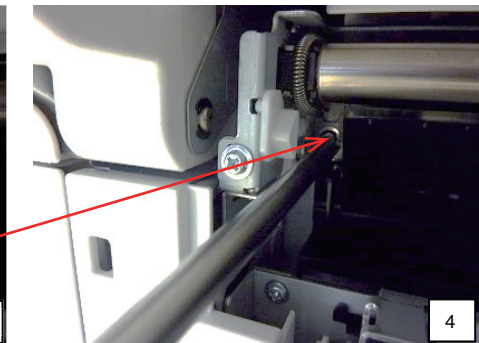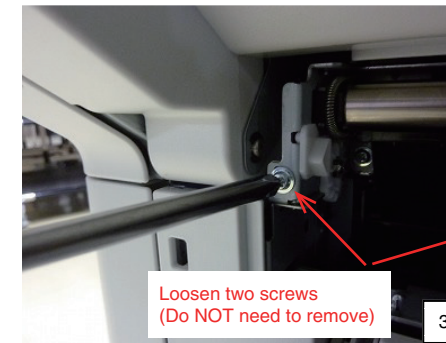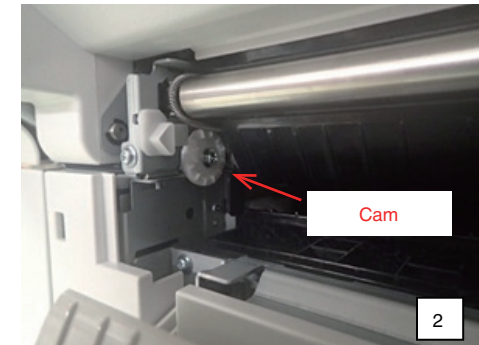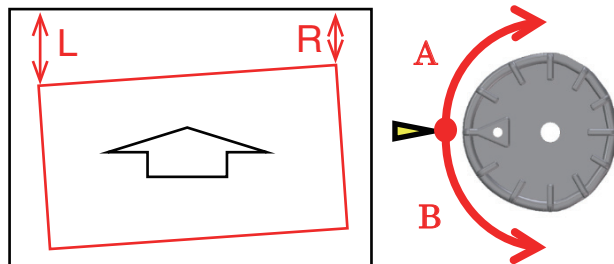
6.4.3.3 Duplex printing route (2-pass printing covered)

(1) Output 3 2-sided prints from a tray that needs adjustments.

(Use any print image that can make skew obvious, such as a one with a page frame.)

(2) Check the skew direction of the second side of each print.

(The red frame illustration represents a printed image.)

(3) Open the front cover, remove the belt unit, remove two screws and detach the inner cover.

(4) Loosen the cam fixing screw. (Do NOT need to remove it.)

(5) Turn the cam to adjust the angle of side guides in the paper path.

Check to make sure that the arrow on the cam is at the 12 o'clock position.

When the margin of L is greater than that of R, turn the cam clockwise. (A)

When the margin of R is greater than that of L, turn the cam counter-clockwise. (B)

Attention! If the arrow is at the 6 o'clock position, the above adjustments work in reverse.

(6) Tighten the cam fixing screw.

(7) Output prints again to check for skew.

(8) Repeat (4) through (7) until skew is corrected.

(9) After skew is corrected, attach the inner cover.

Detach inner cover (see "3.1 MPT paper feed route")

Cam

Loosen cam fixing screw (Do NOT need to remove)

Turn cam to adjust angle and tighten cam fixing screw to fix

Idea of adjustment

Turning cam in yellow arrow's direction (above picture) adjusts angle so that paper skew is corrected as illustrated on the right.
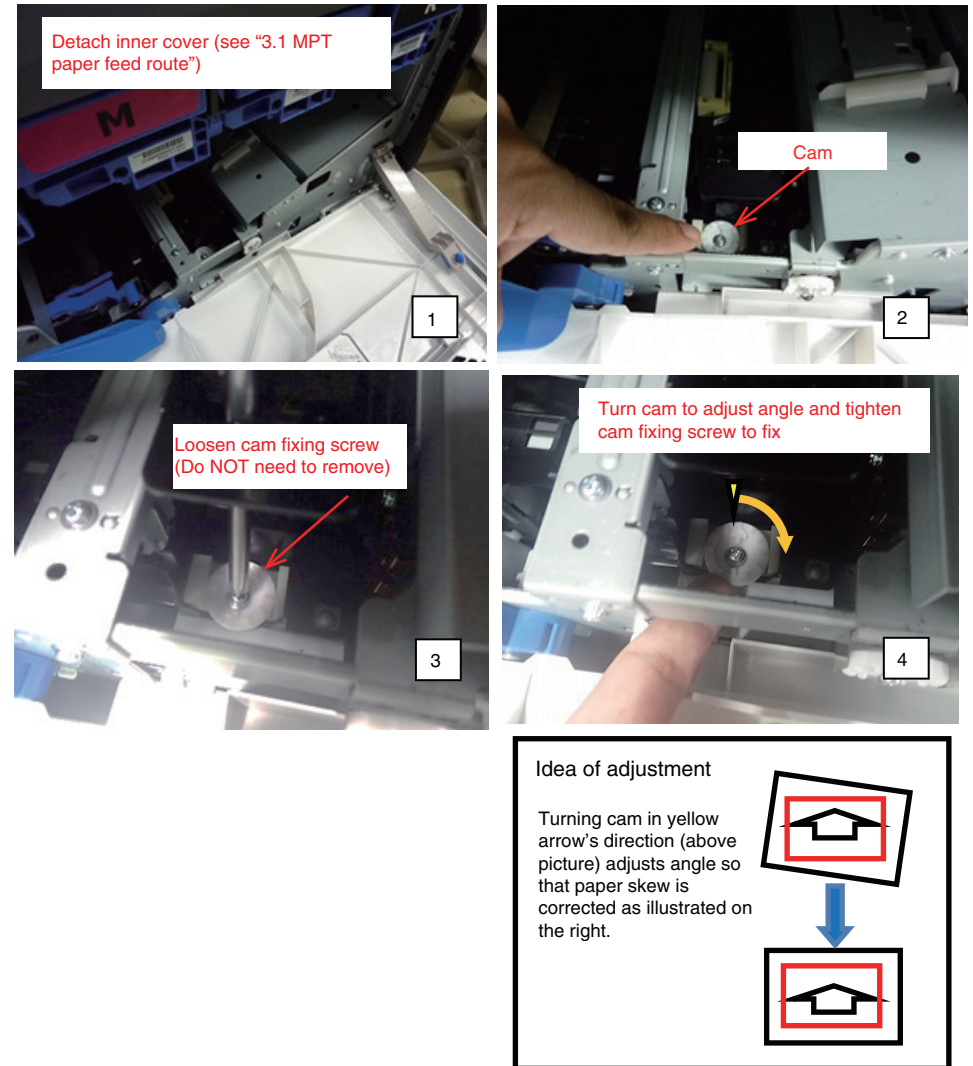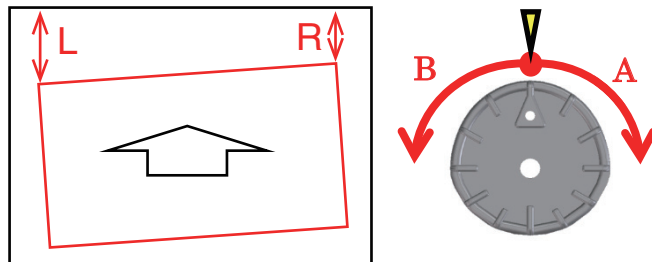
7. PERIODIC MAINTENANCE

7.1 Cleaning

Clean the inside and outside of the printer with a waste cloth and a handy vacuum cleaner when necessary.

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

7.2 Cleaning the LED lens array

Clean the LED lens array when a vertical (same as the paper transportation direction) white belt or line (falling out as white or dilute printing) on prints.

White belt or line
(void or light print)
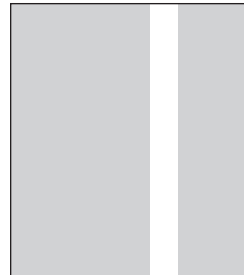
Cleaning the LED head

Clean the LED head when a printed output contains a faded image, a white line or blurred letters.

(1) Press and hold the power switch for approximately 1 sec. to turn off the power supply.
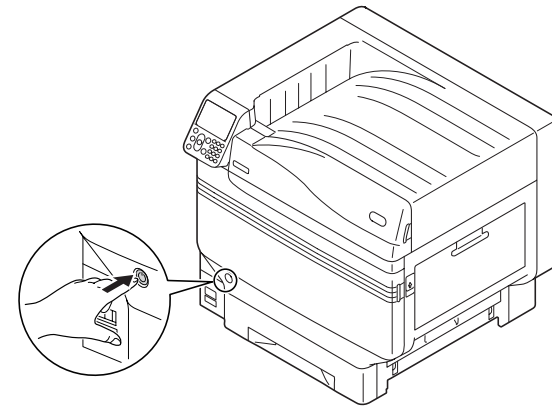
(2) Turn off the main power supply.
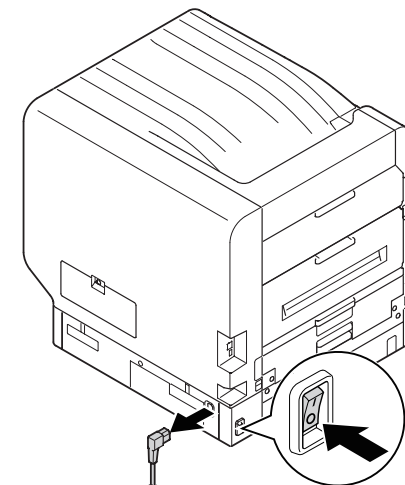
(3) Open the front cover.
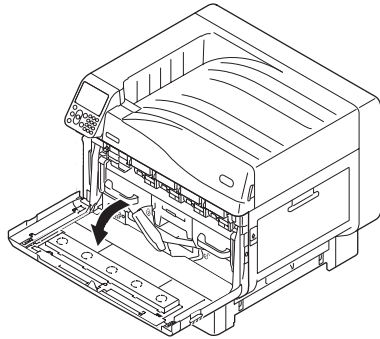
(4) Gently lift the handle (blue) upwards, and remove the photoreceptor from the lower side taking care that your hand does not touch the drum on the lower side (green cylindrical section).
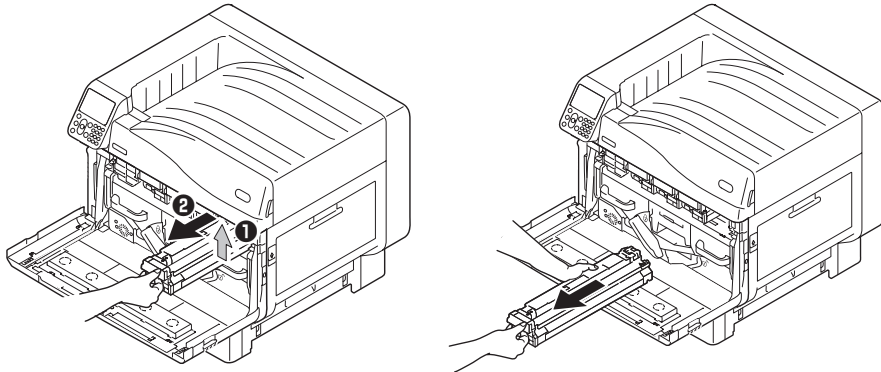
Note! · Be careful not to touch or damage the drum.
· Do not leave the Image Drum in direct sunlight, intense light or over 5 min. in room light.
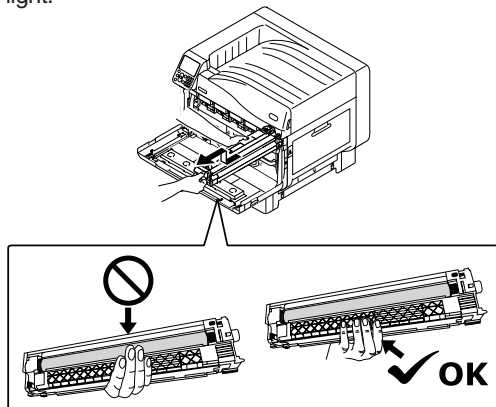
(5) Remove the waste toner box from the printer.
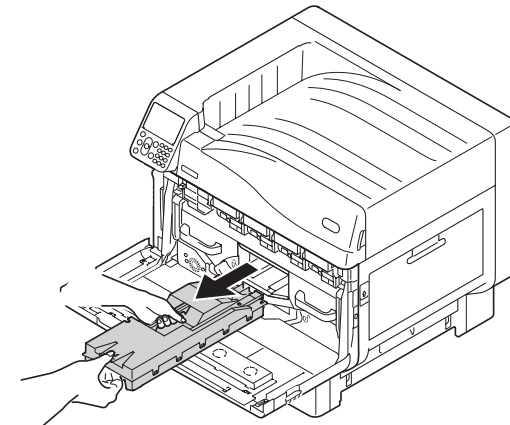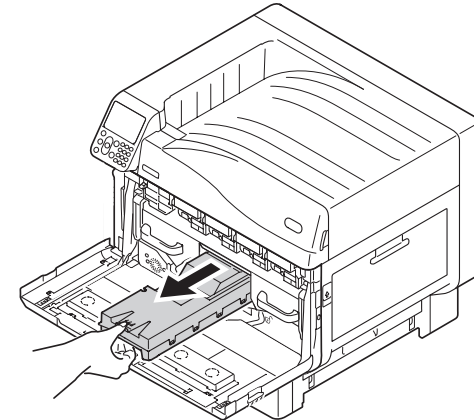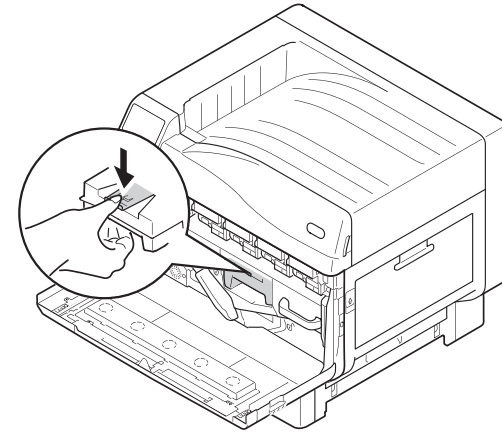
(6) Push the center lever (blue) to the right.
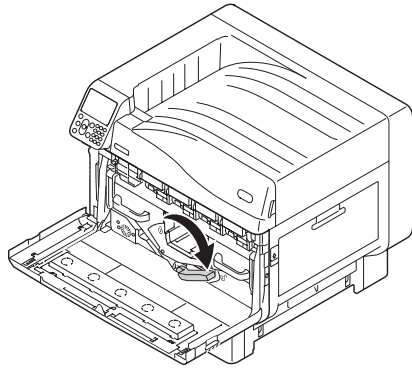
(7) Rotate the belt unit left/right lock lever knobs (blue) to the left, and pull the lock lever to front-side.
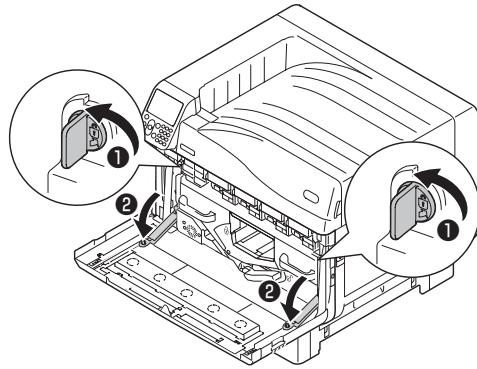
(8) Hold the handle and pull out the belt unit, hold the right and left labeled parts (blue) and remove the belt unit.
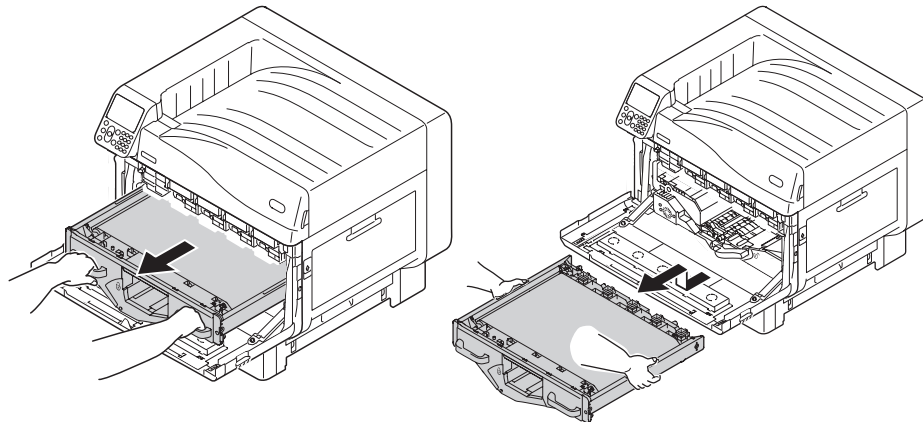
Note! • Carefully remove the belt unit so that waste toner does not spill.
      • Never place the removed belt units upright.
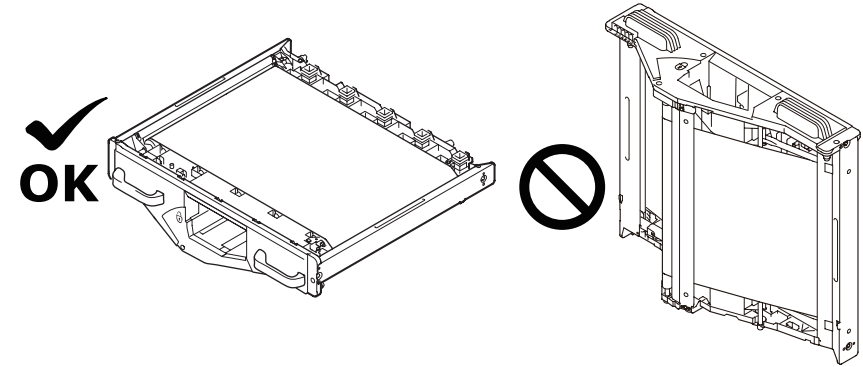
Note! Ensure not to touch or damage the Belt surface.
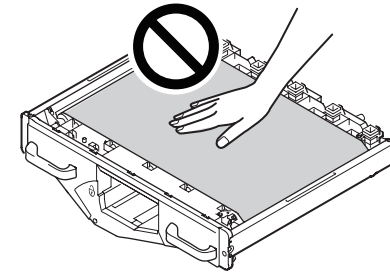
(9) Gently wipe the surface of the LED head with soft tissue paper or cloth.
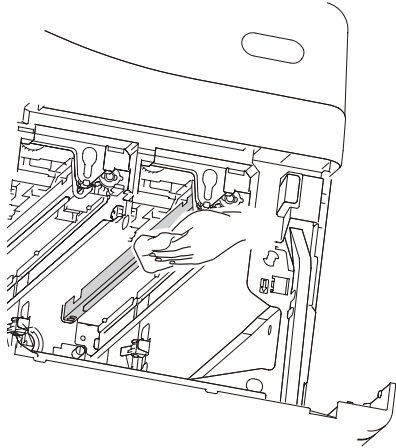
(10) Set the belt unit to the printer, and push it in firmly.
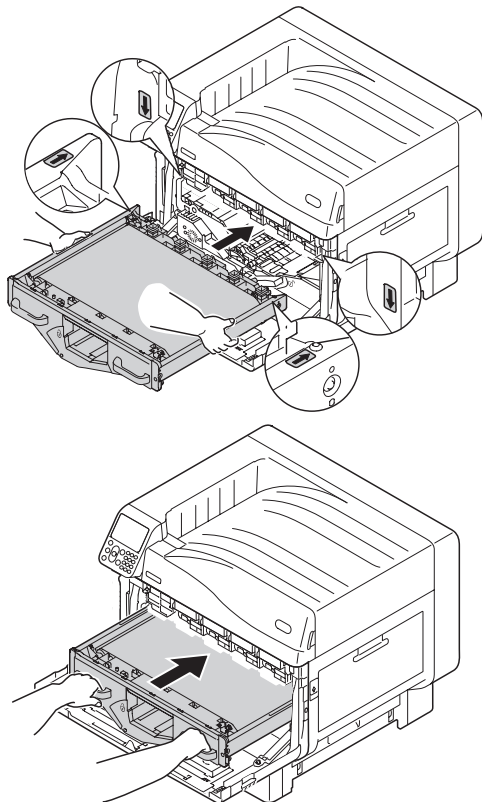
Note! Ensure not to touch or damage the Belt surface.
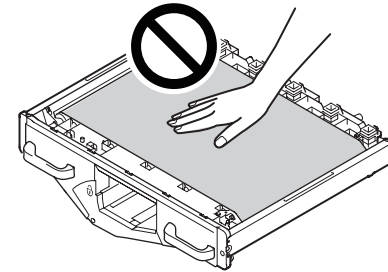
(11) Raise the belt unit left/right lock lever, rotate the lock lever knob (blue) to the right to lock.
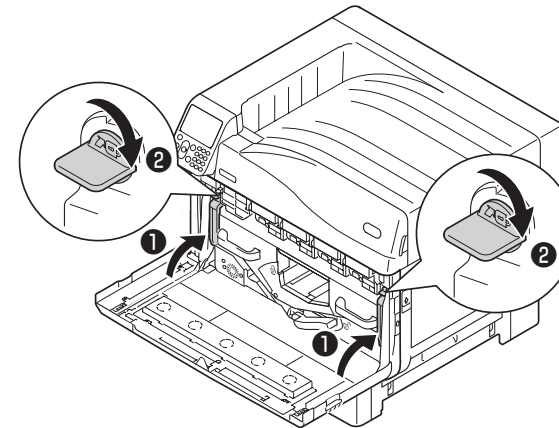
(12) Return the center lever (blue) to the left.
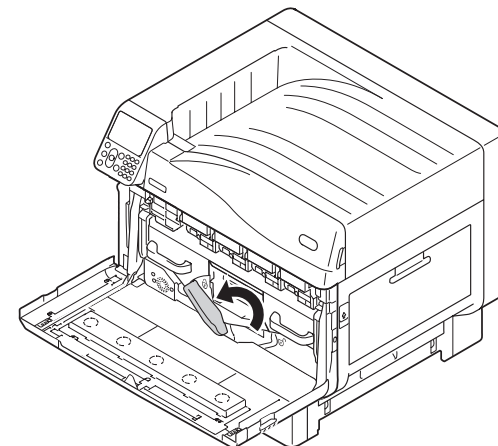
(13) Set the waste toner box into the printer.
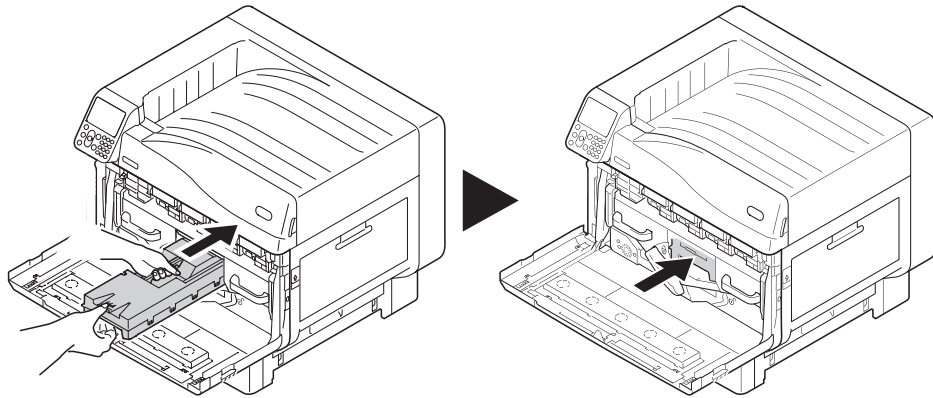
(14) Align the arrow label (red) on the image drum with the one on the printer, slowly insert in the slot taking care that your hand does not touch the photoreceptor (green) below, and firmly push it inside.
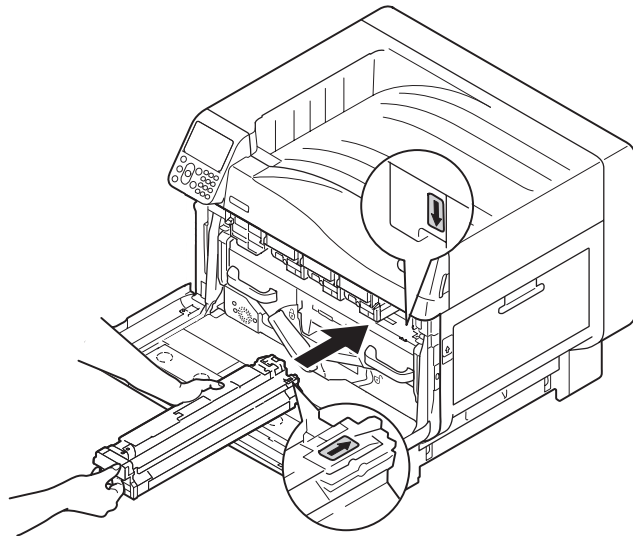
Note! Be careful not to touch or damage the drum.
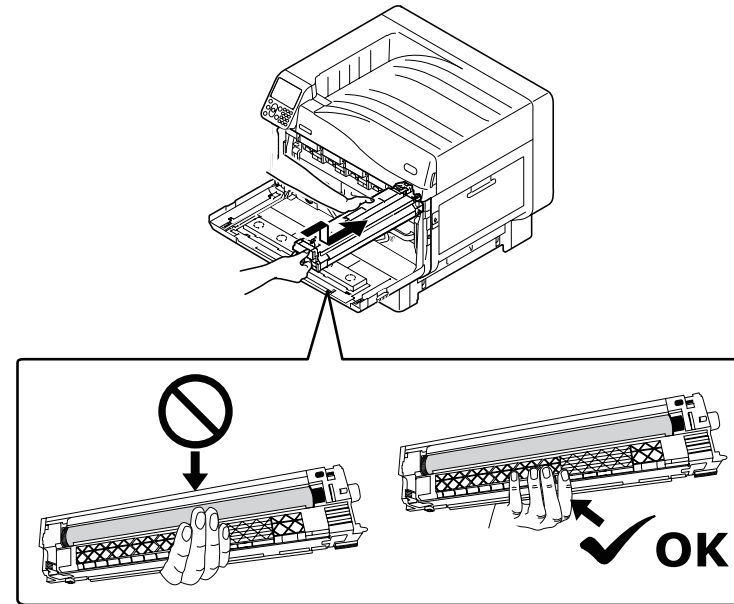
(15) Similarly, install all image drums.

(16) Close the front cover.
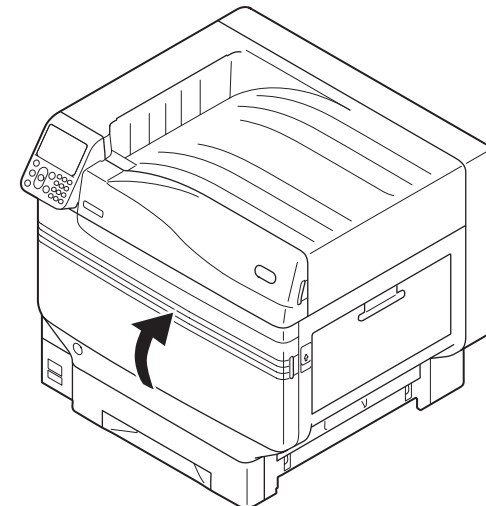
7.3 Cleaning feed rollers

When a paper jam occurs frequently, clean the feed rollers.

> *Note!* Use a soft cloth for cleaning so as not to damage the roller surface.

Cleaning feed rollers of Tray 1 to Tray 5

Example) When cleaning the feed rollers of Tray 1

 (1) Take off your wristwatch, bracelet, etc.

 (2) Press and hold the power switch for approximately 1 sec. to turn off the power supply.
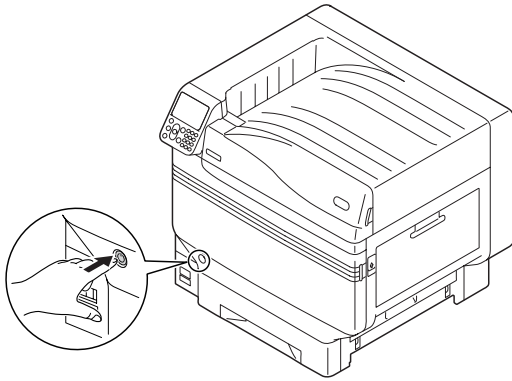
 (3) Turn off the main power supply.
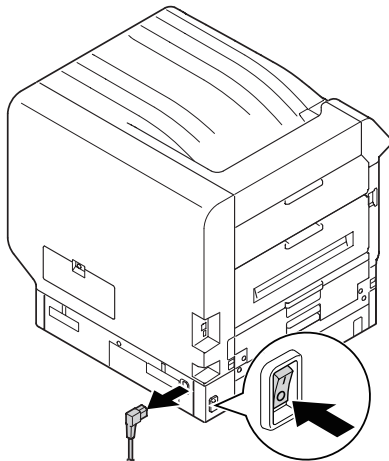
 (4) Pull out the casette of the Tray 1.
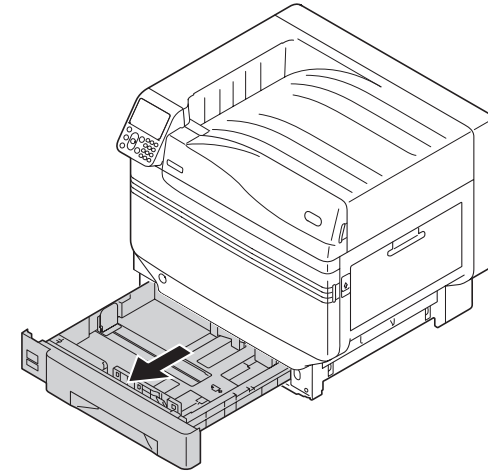
 (5) Wipe off the dirt on feed rollers (3 places) with the moist soft cloth.

  • When it is difficult to wipe because cannot see it as direct-viewing from the casette-side, open the side cover and see these rollers in directly to clean from the side cover side.
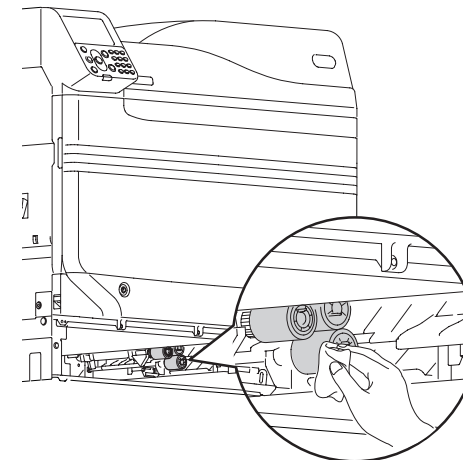
(6) Install the casette to Tray 1.
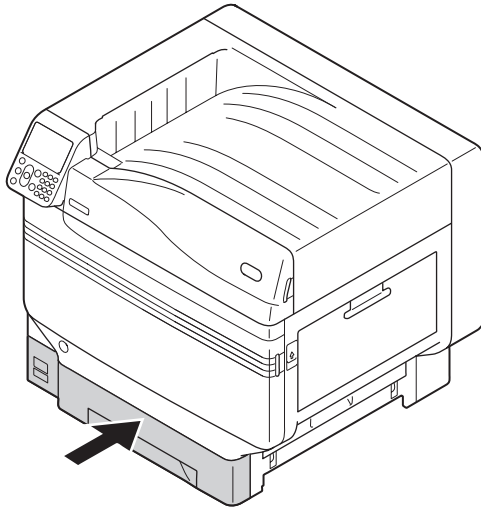
(7) Turn on the main power supply, and press the power switch to boot the printer.

7.4 Cleaning feed rollers of the Multi-purpose Tray
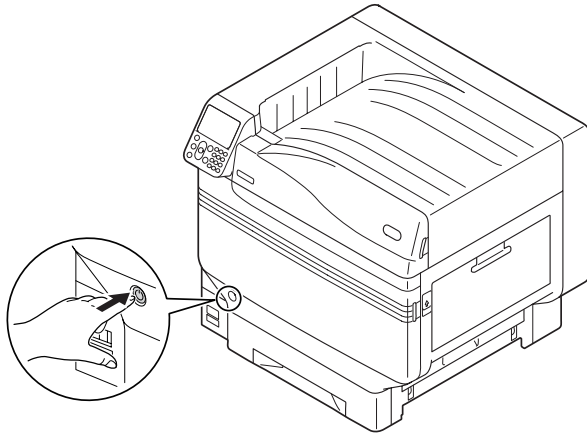
(1) Press and hold the power switch for approximately 1 sec. to turn off the power supply.
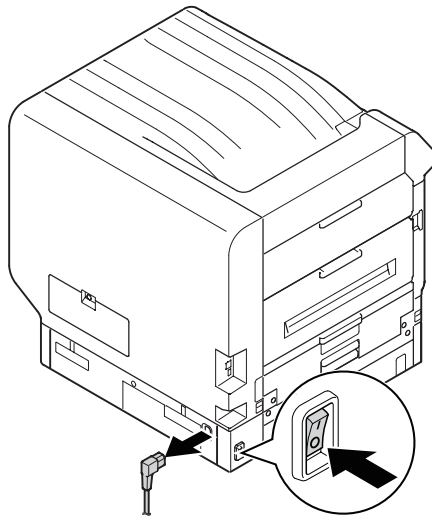
(3) Pull up the opener and open the right side cover.

(2) Turn off the main power supply.
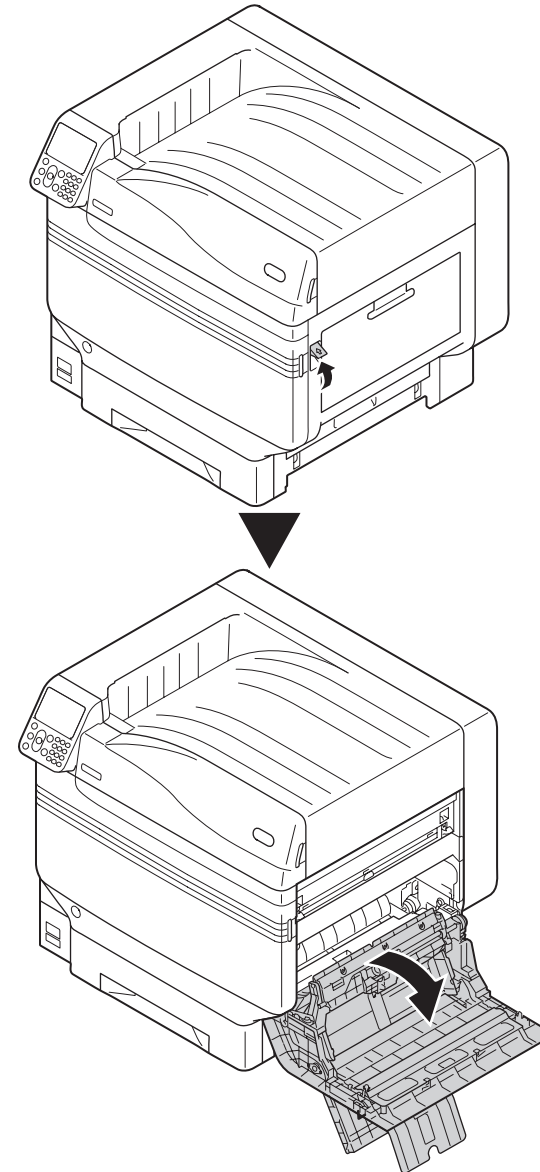
(4) While pressing the claw of the feed roller ① outward, remove it from the shaft.
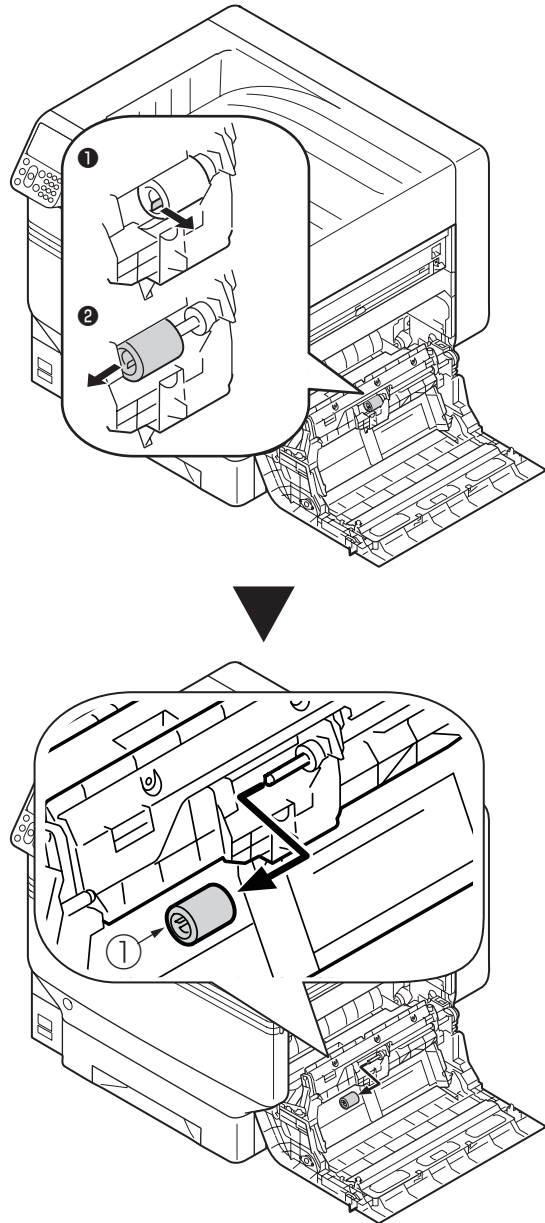
(5) Lift Section A.
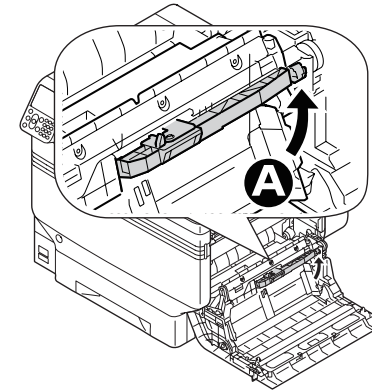
(6) Wipe off the dirt on feed rollers (2 places) and on the separator with the moist soft cloth.
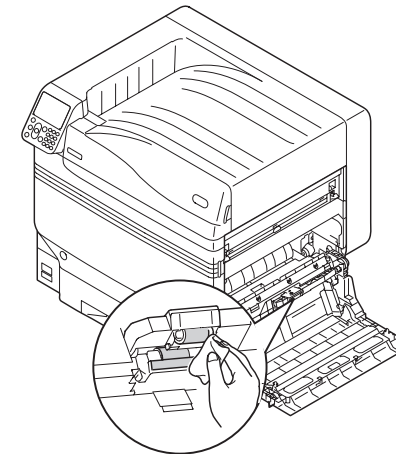
(7) Wipe off the dirt on the feed roller ① .
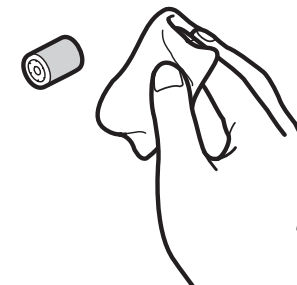
(8) Fit the feed roller ① on the shaft and push it all the way to the end while rotating it.
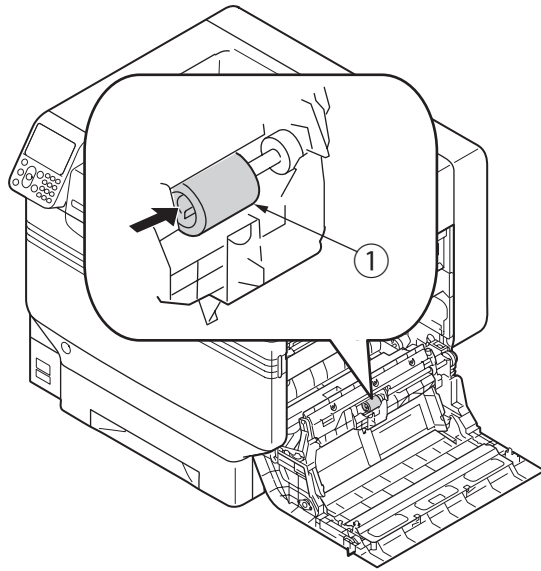
(9) Close the right side cover.
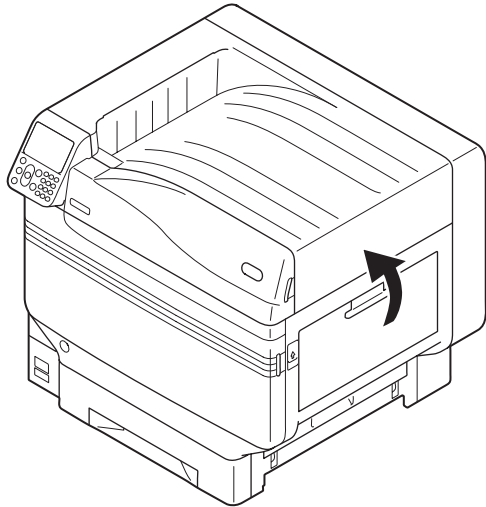
(10) Turn on the main power supply, and press the power switch to boot the printer.

7.5 Cleaning Belt Unit

When a dirty by grease etc, clean the Belt Unit.

(1) Remove the Belt unit refer to the section 7.2.

Note! • Carefully remove the belt unit so that waste toner does not spill.

• Never place the removed belt units upright.

(2) Impregnate a BEMCOT with primary or highest quality ethanol.

Wipe the Belt unit not caused damage.

Wipe evenly by new BEMCOT.

(3) Attach the Belt unit refer to the section 7.2.

7.6 Cleaning Pinch rollers

(1) Clean the pinch rollers with a soft cloth or tissue when any foreign materials adhered on the pinch rollers. If the foreign materials are harden, clean easily after printing.
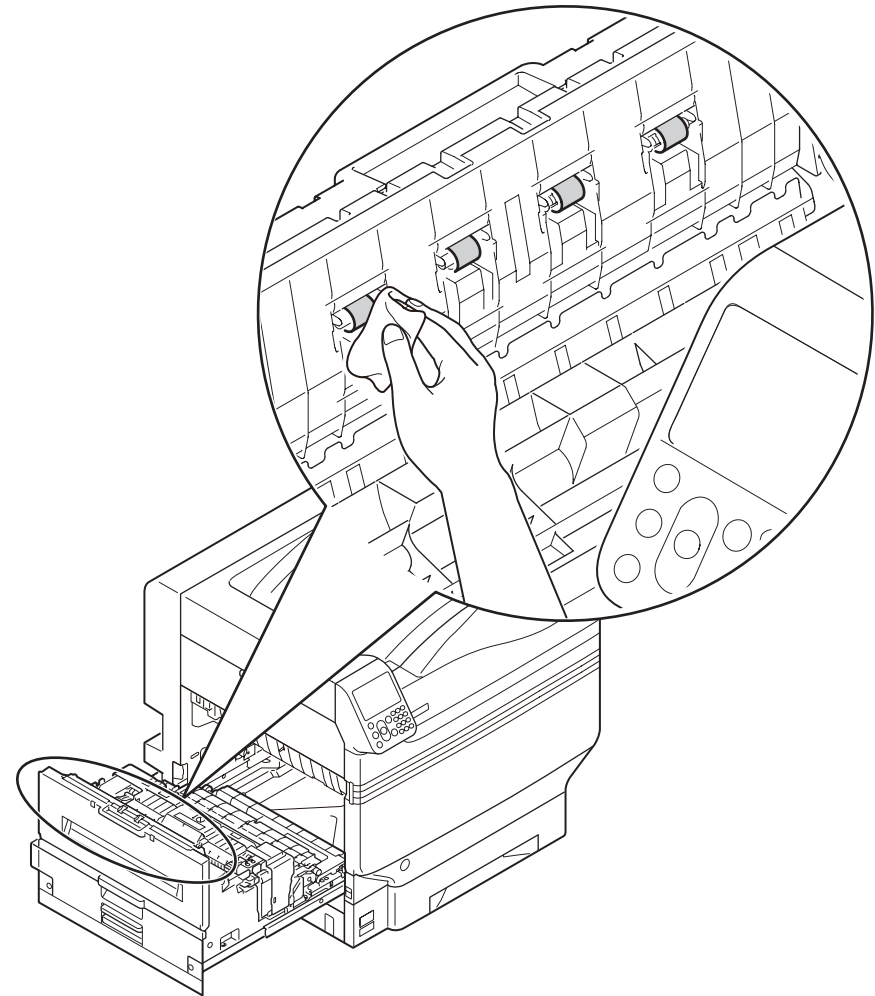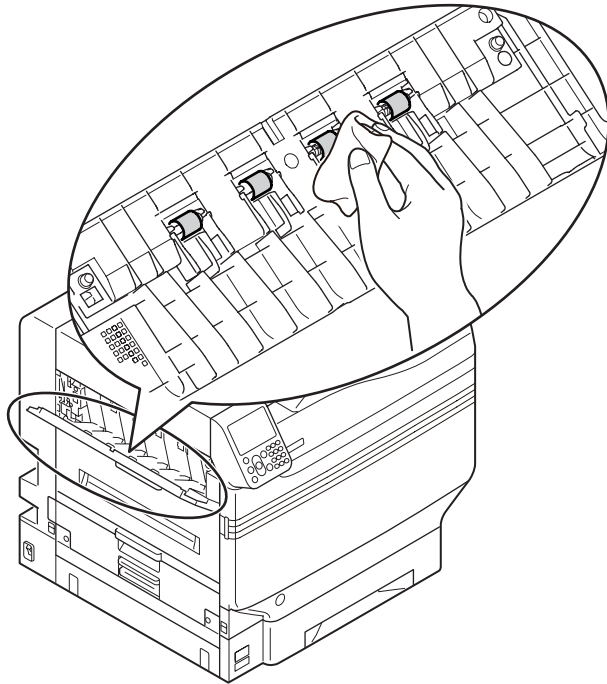
7.7 Cleaning Transfer roller unit and paper feeding route

When a dirty the top or bottom of output paper, clean the Transfer unit and paper feeding route. To clean regularly, prevent the dirt.

> *Note!* • Be careful not to touch or damage the transfer roller.
> • Don't use water, neutral detergent, or methanol, because damage to transfer roller.

(1) Press and hold the power switch for approximately 1 sec. to turn off the power supply.
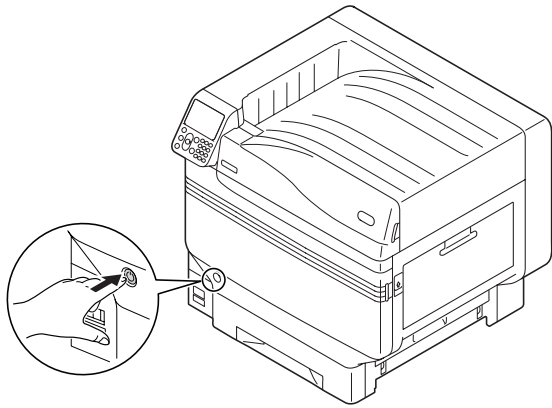
(2) Turn off the main power supply.
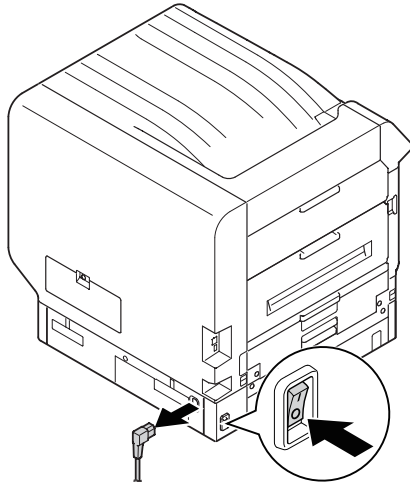
(3) Lift the opener of the output unit and pull out the output unit.
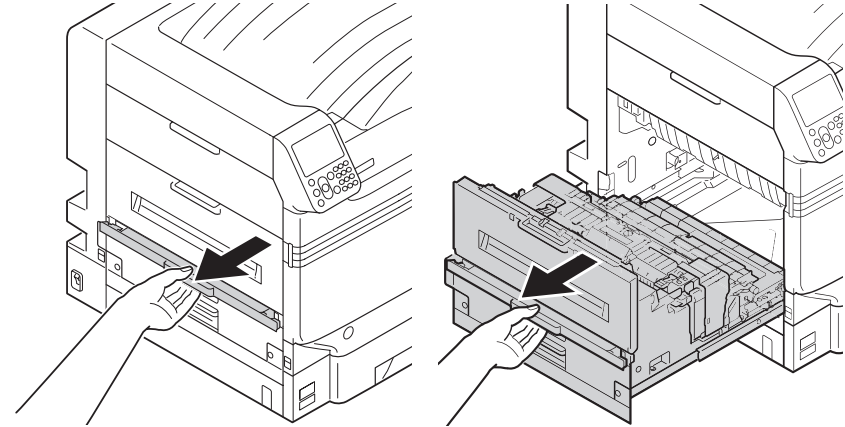
(4) Pull up the fuser unit's jam release levers (blue).
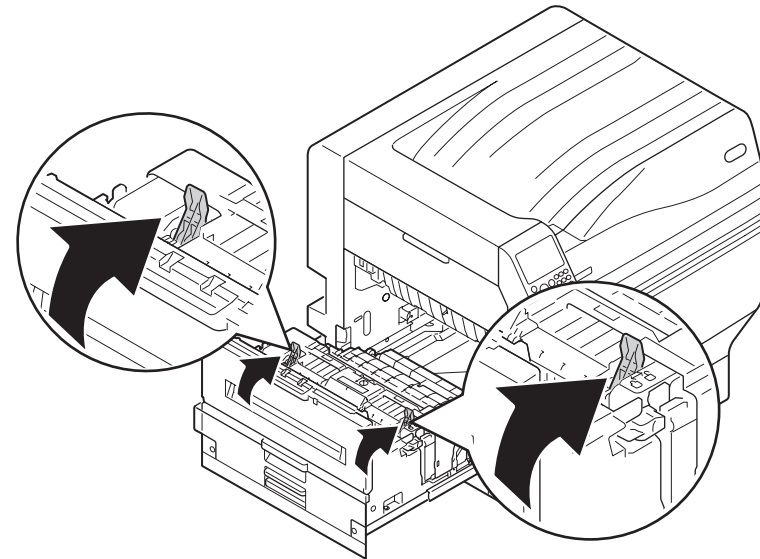
(5) Hold the fuser unit's handle with both hands and remove the unit onto a flat surface.
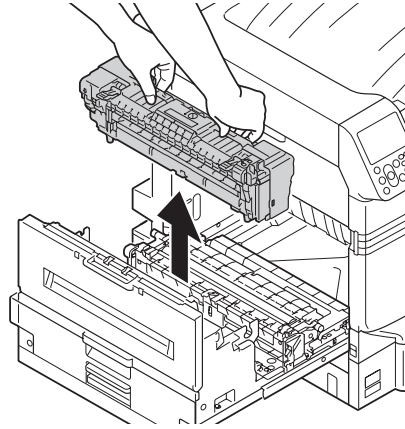
(6) Pull up both tips of the transfer roller unit's lock levers (blue).
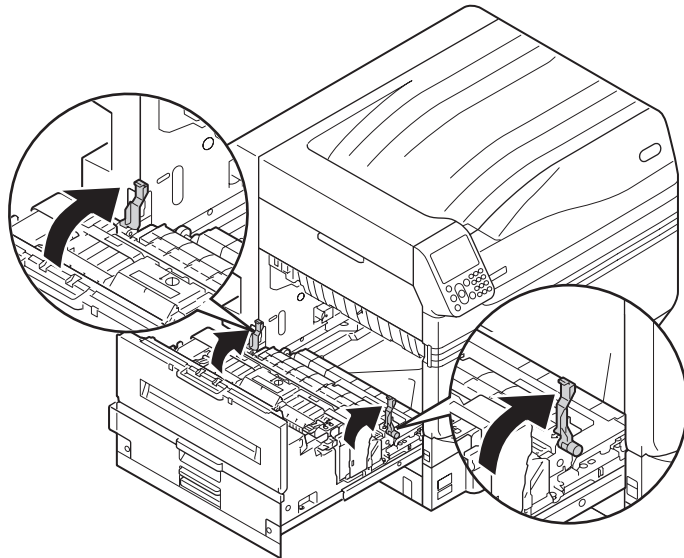
(7) Hold the transfer roller unit's label parts (blue) and remove it.
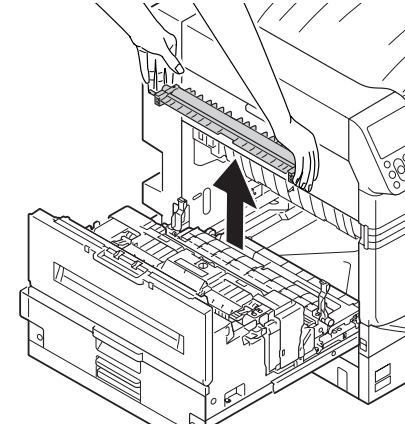
(8) Wipe off the dirt on feeding route with the soft tissue.
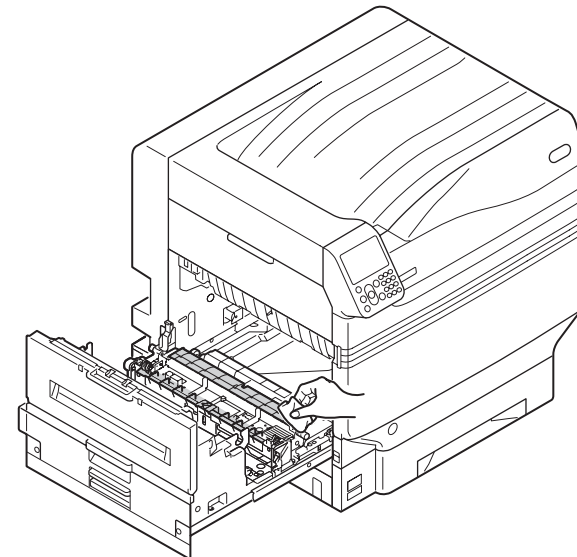
(9) Wipe off the dirt on transfer roller unit with the soft tissue.

Note! • Be careful not to touch or damage the transfer roller.
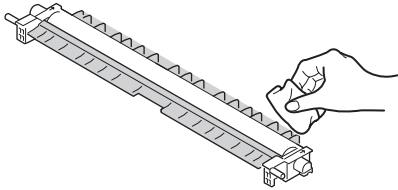
(10) Set the transfer roller unit to the output unit.
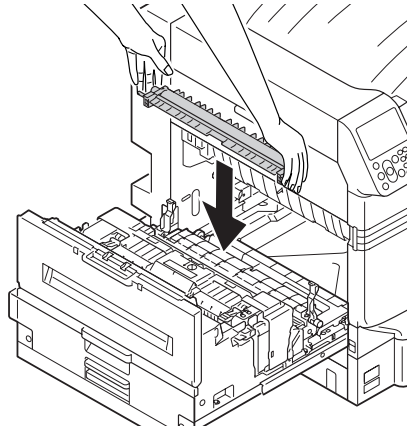
Note! • Be careful not to touch or damage the transfer roller.

(11) Push down the transfer roller unit's lock lever (blue).
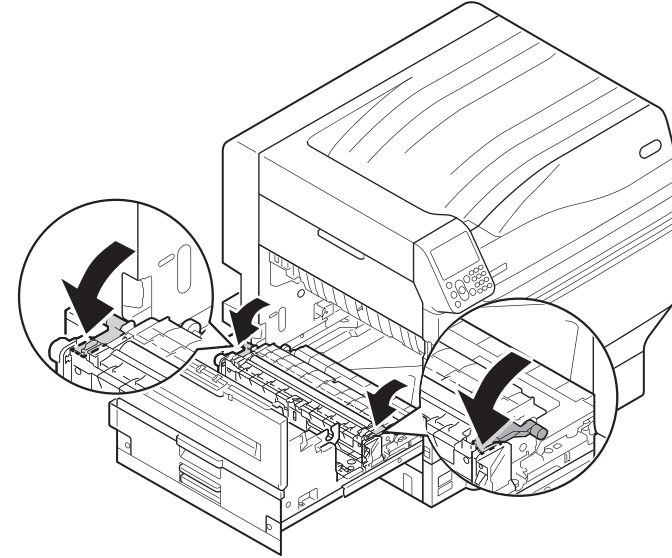
(12) Hold the fuser unit's handle with both hands and set to the output unit.
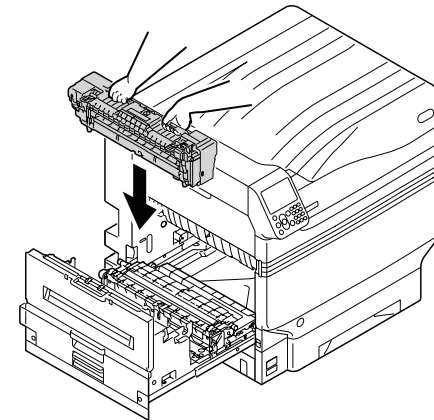
(13) Push down the fuser unit's lock lever (blue).
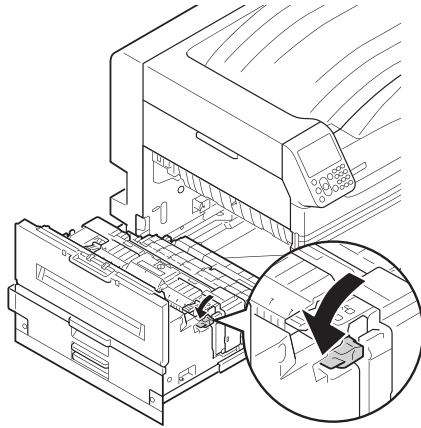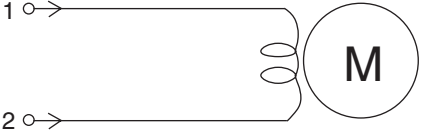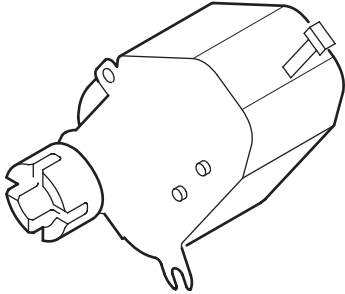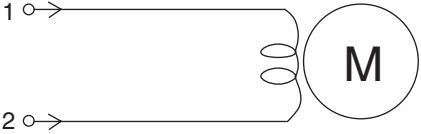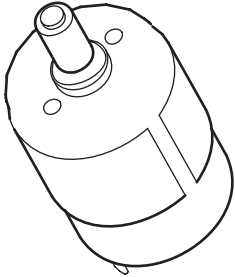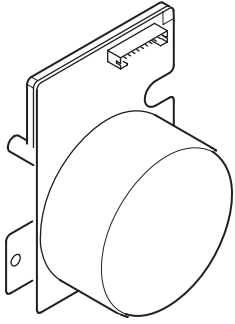
(14) Put the output unit back into the printer.
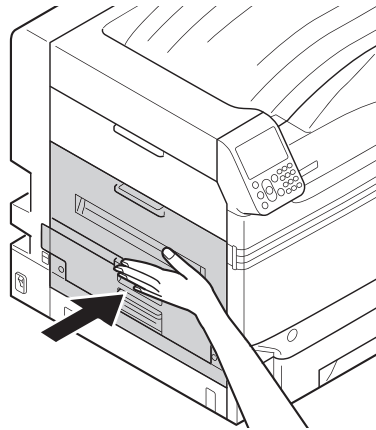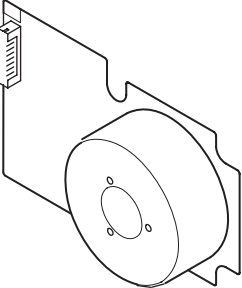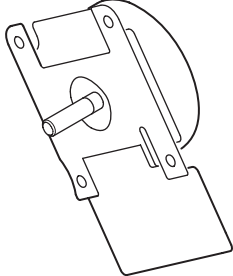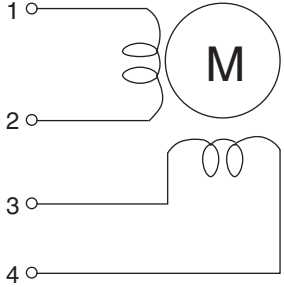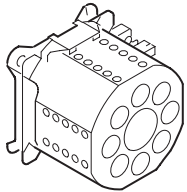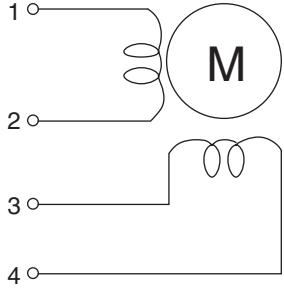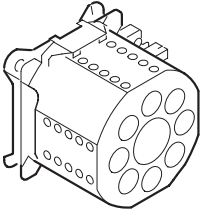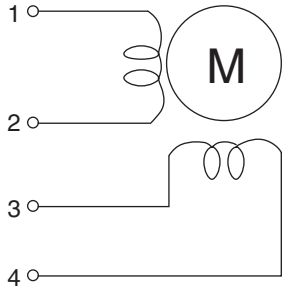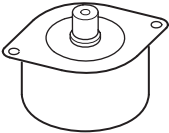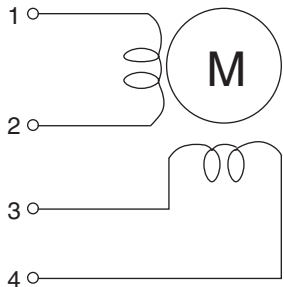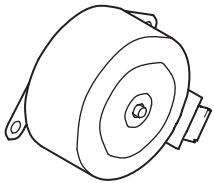
8. CONNECTION DIAGRAMS
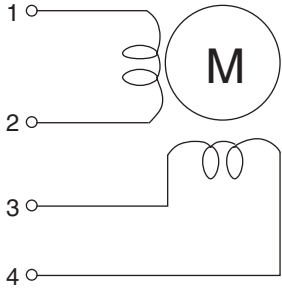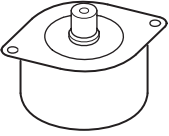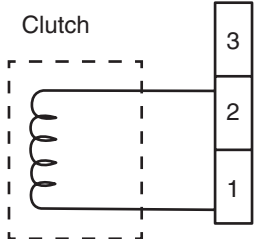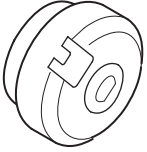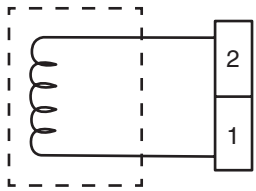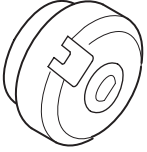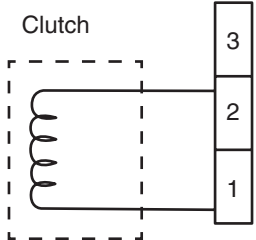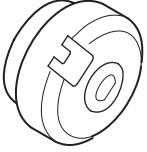
8.1 Resistance value check
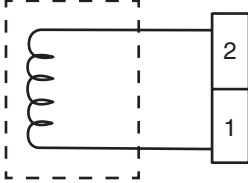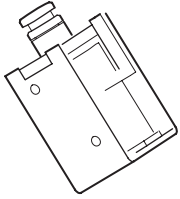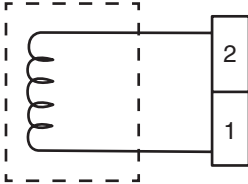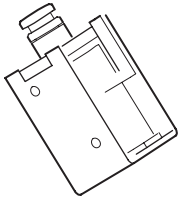
Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Tray lift-up motor (also used by option trays)	1 ⊶ / 2 ⊶ M		Between pin-1 and pin-2: Several decades Ω
Toner supply motor	1 ⊶ / 2 ⊶ M		Between pin-1 and pin-2: Several decades Ω
ID motor	Fuses IP1 and IP3		Across both ends of each fuse: 1 Ω or less

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Fuser motor	Fuses IP1 and IP2		Across both ends of each fuse: 1 Ω or less
Belt motor	Fuse F1		Across both ends of the fuse: 1 Ω or less
Hopping motor (also used to option trays)			Between pin-1 and pin-2: Several Ω Between pin-3 and pin-4: Several Ω

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Feed motor			Between pin-1 and pin-2: Several Ω Between pin-3 and pin-4: Several Ω
Job offset motor			Between pin-1 and pin-2: Several Ω Between pin-3 and pin-4: Several Ω
2nd transfer roller shift motor			Between pin-1 and pin-2: Several Ω Between pin-3 and pin-4: Several Ω

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
DUPLEX motor 1			Between pin-1 and pin-2: Several Ω Between pin-3 and pin-4: Several Ω
Hopping clutch (also used by option trays)			Between pin-1 and pin-2: Approx. 240 Ω
Registration 1 clutch (also used by option trays)			Between pin-1 and pin-2: Approx. 240 Ω
Registration 2 clutch			Between pin-1 and pin-2: Approx. 240 Ω

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
MPT clutch	Clutch		Between pin-1 and pin-2: Approx. 240 Ω
DUPLEX hopping clutch	Clutch		Between pin-1 and pin-2: Approx. 240 Ω
DUPLEX separator solenoid	Solenoid		Between pin-1 and pin-2: Several decades Ω
Face-up solenoid	Solenoid		Between pin-1 and pin-2: Several decades Ω

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
2-pass solenoid	Solenoid 2 1		Between pin-1 and pin-2: Several decades Ω
ID up/down solenoid	Solenoid 2 1		Between pin-1 and pin-2: Several decades Ω

Fuser unit	See Fig. 8.1.	See Fig. 8.1.	Heater (normal temperature)
			    Between pin-1 and pin-2: Several decades Ω
			    Between pin-1 and pin-4: Several Ω
			    Between pin-2 and pin-4: Several decades Ω
			
			Thermistor (normal temperature)
			    Heat thermistor: Several $M\Omega$
			    Center thermistor: Several hundred $k\Omega$
			    Side thermistor: Several hundred $k\Omega$
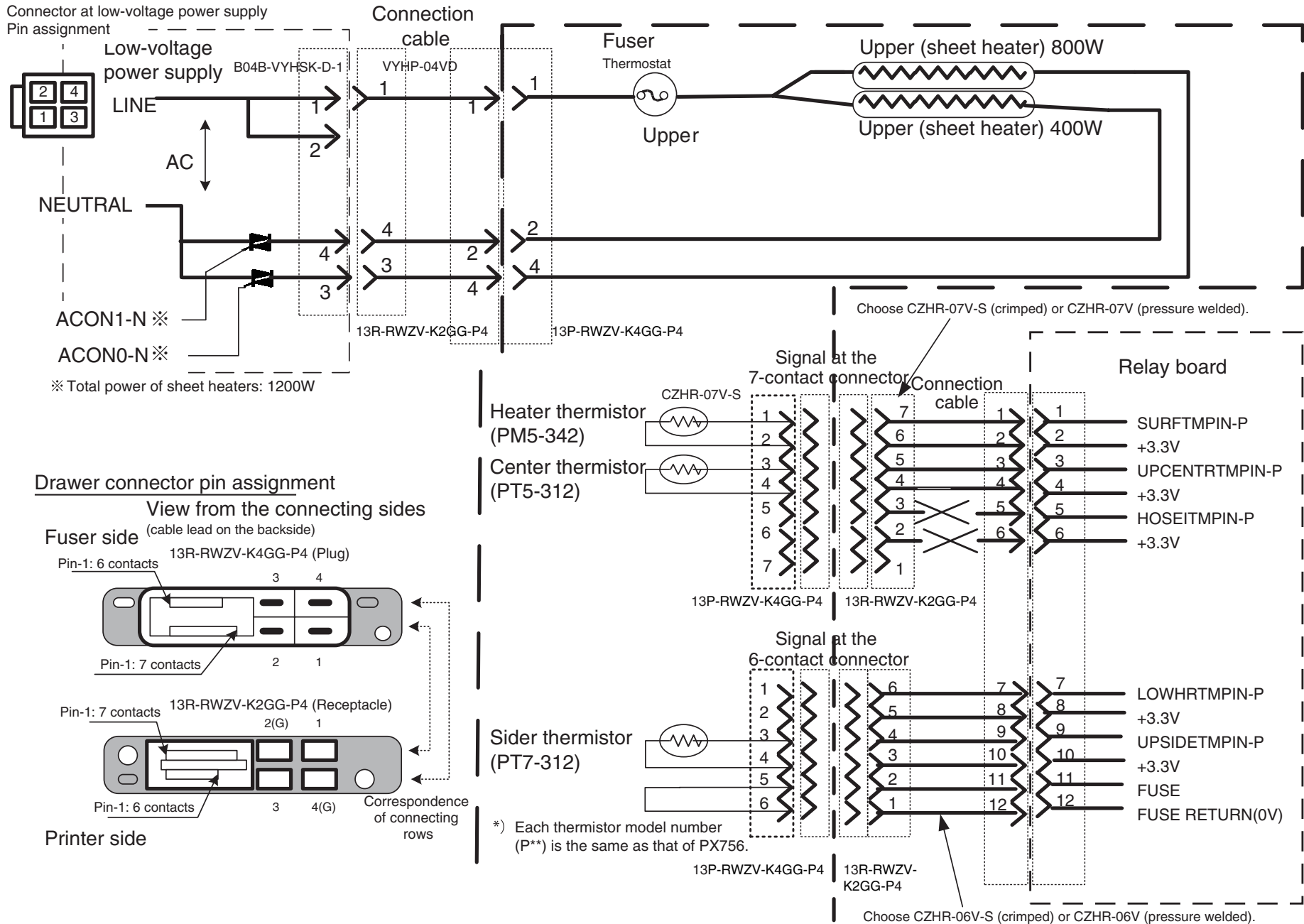
Fig 8.1

8.2 Parts location

(1) Print engine controller PCB(PU/CU PCB) (for 5-color models)

Component side
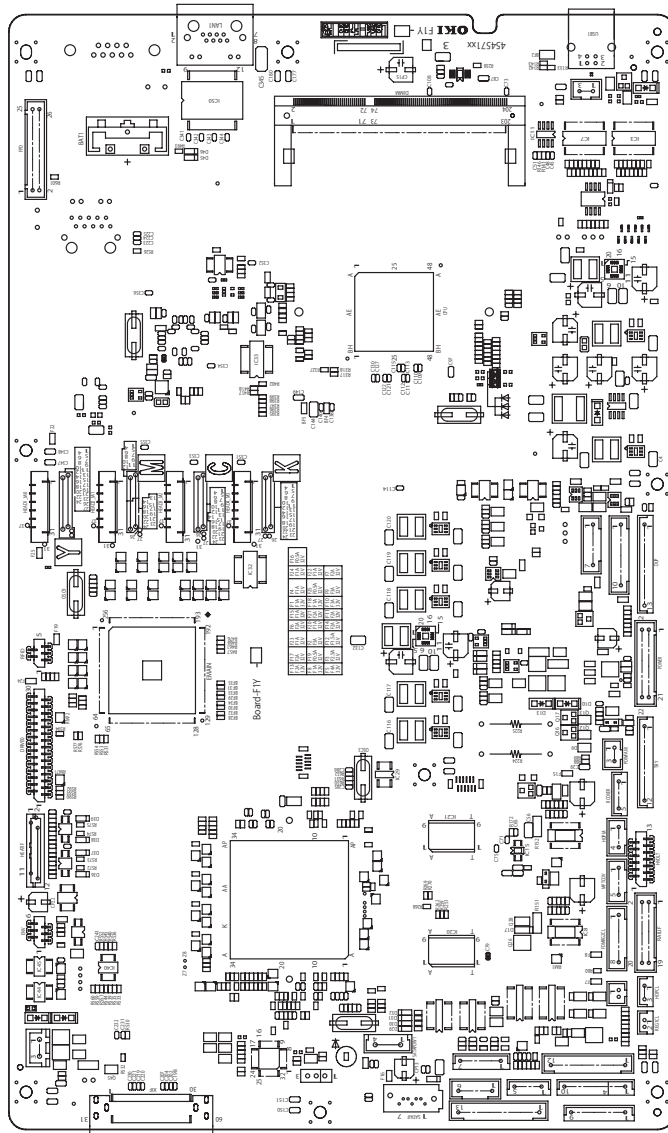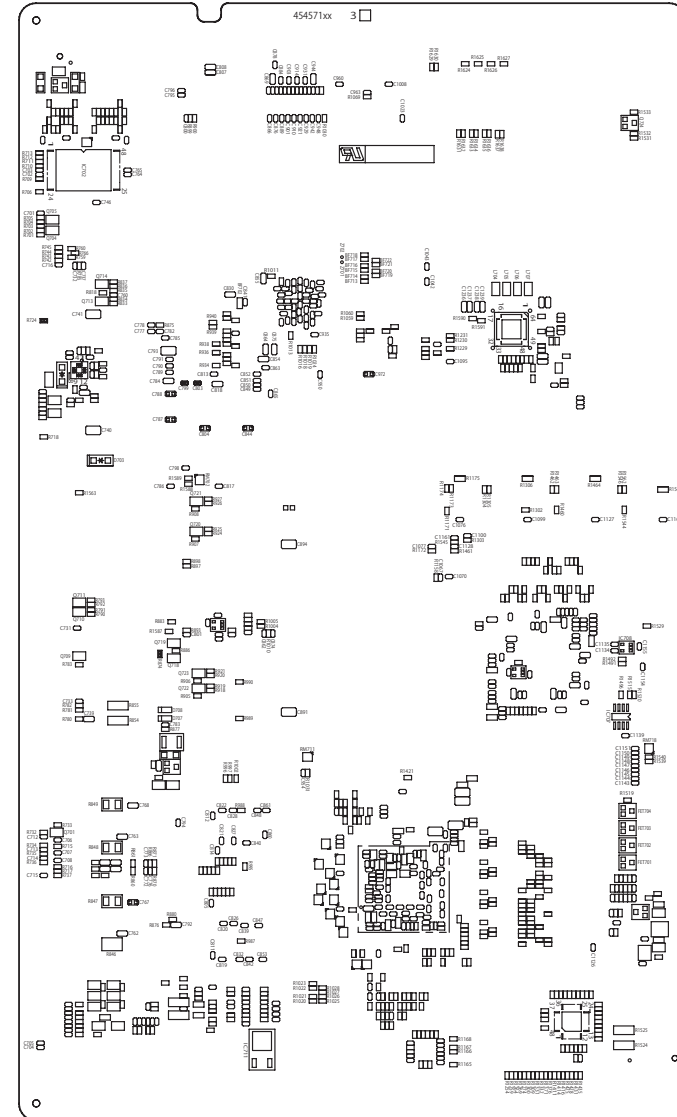
Soldering side

(2) Print engine controller PCB(PU/CU PCB) (for 4-color models)

Component side
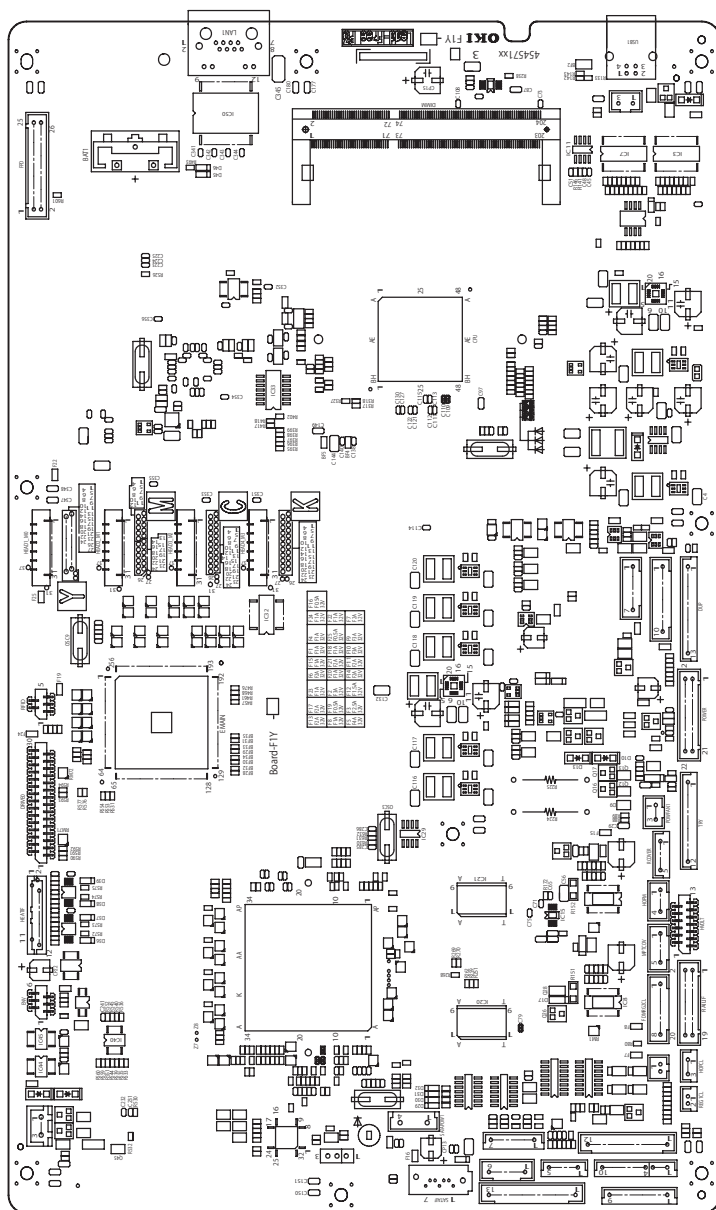
Soldering side

(3) Spot color PCB

Component side

Soldering side

OKI

Board-F1X

F1X

451087xx   3

451087xx   3

(4) Driver relay PCB

Component side

Soldering side

(5) Duplex unit PCB
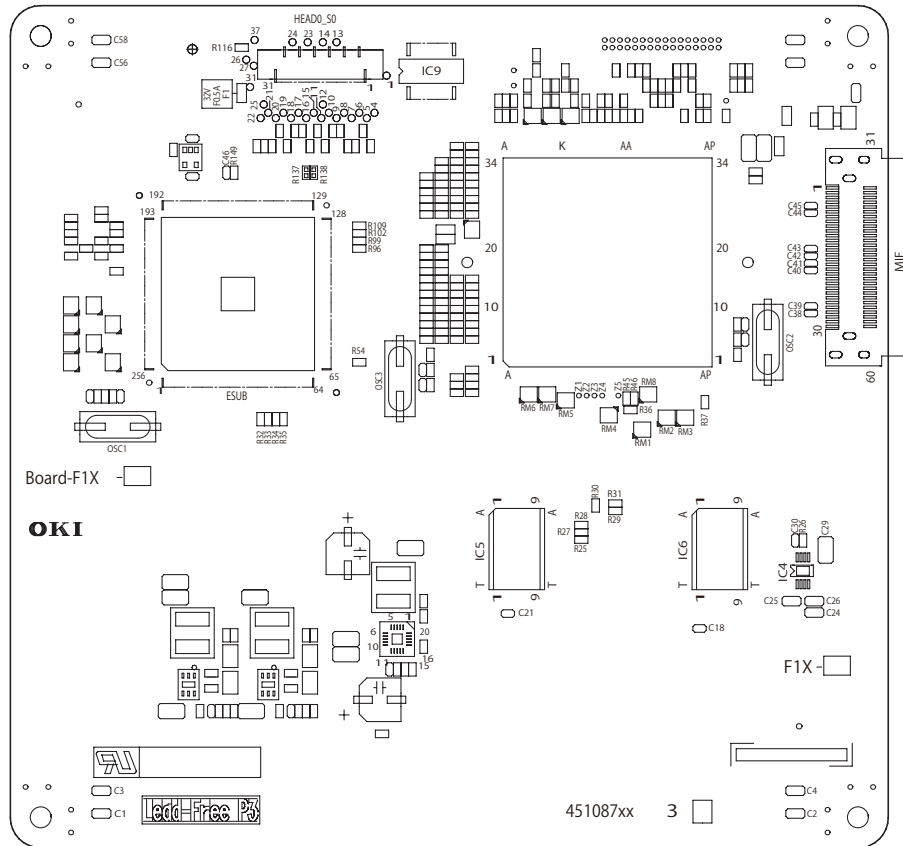
Component side
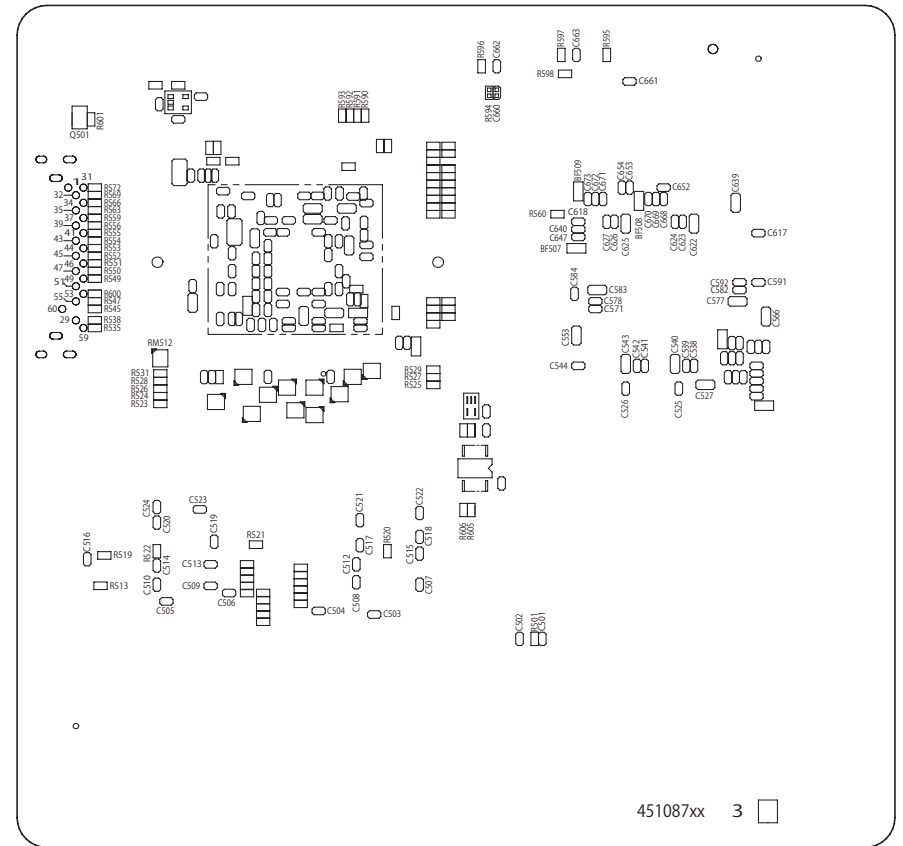
Soldering side

(6) Option tray PCB

Component side
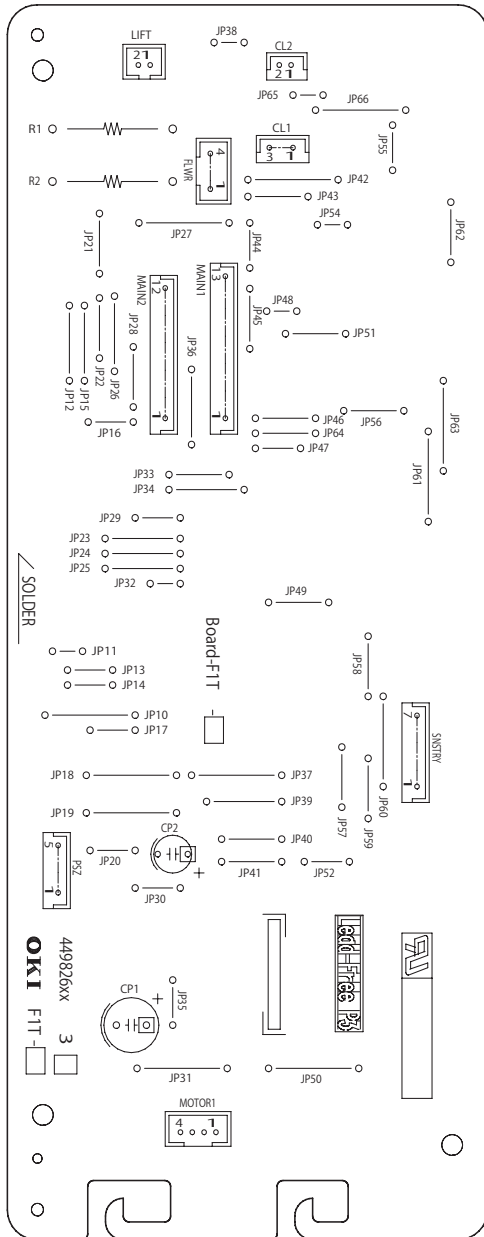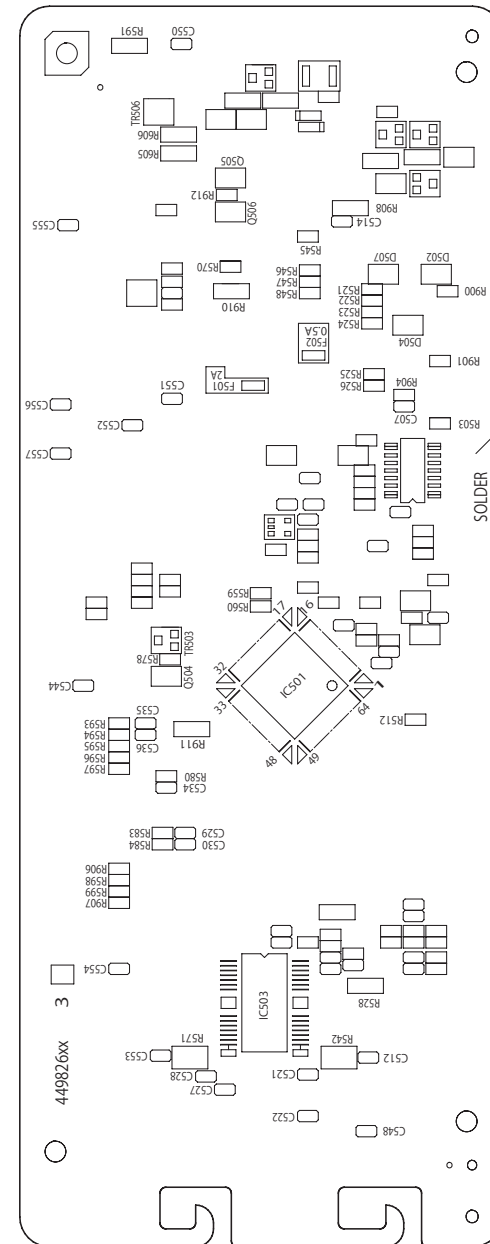
Soldering side

(7) Control panel PCB

Component side
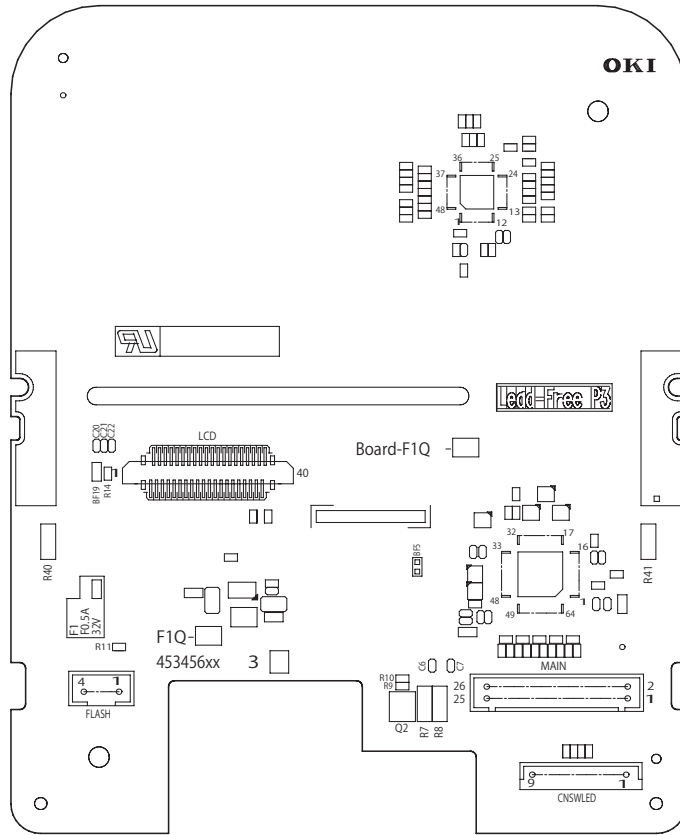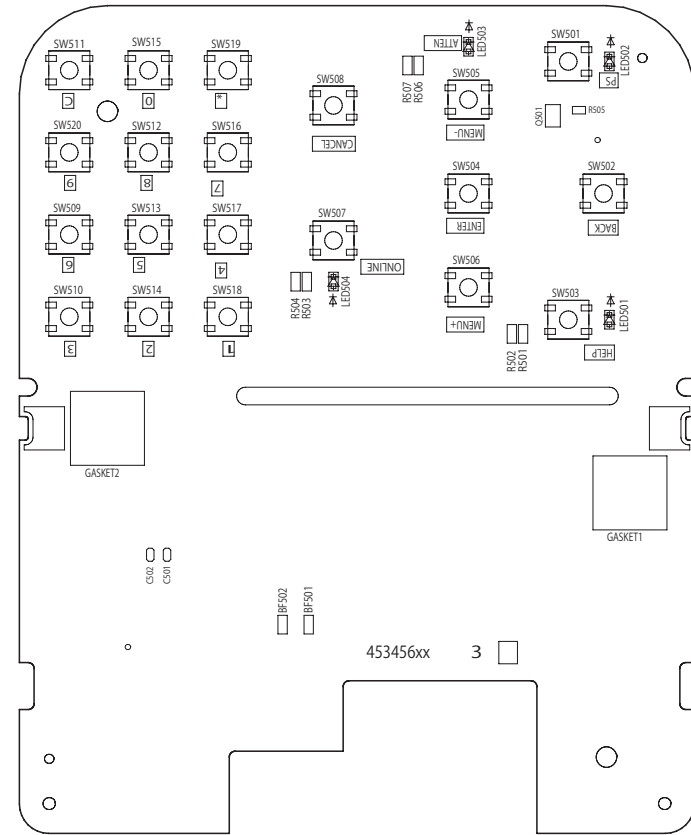
Soldering side
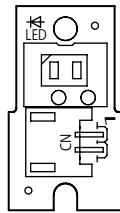
(8) External LED PCB
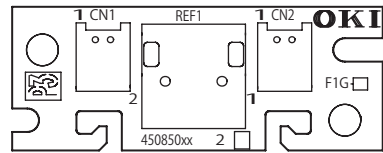
(10) Print head power relay PCB

(9) Tag terminal PCB
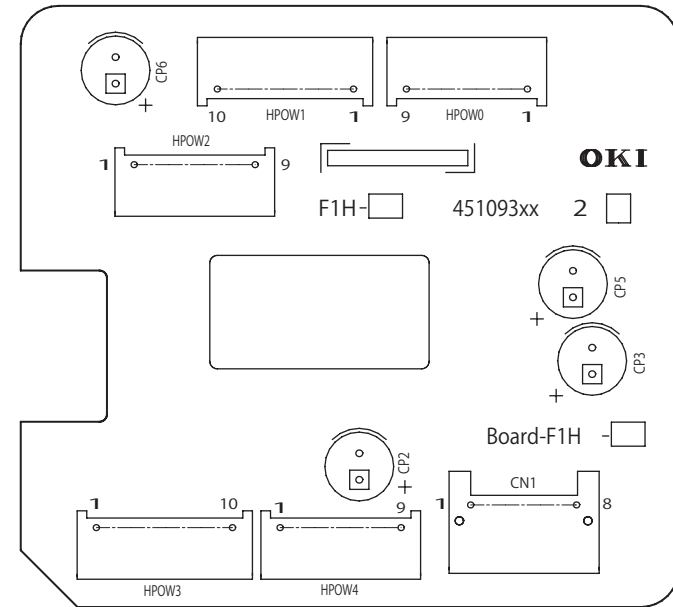
(11) Cassette sensor relay PCB
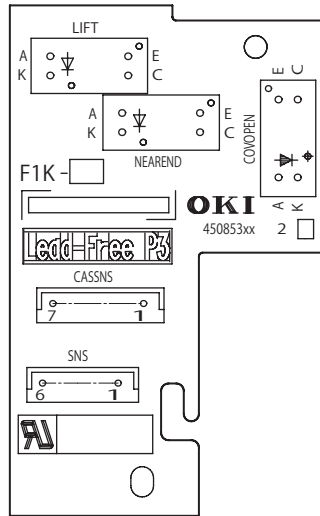
(12) Rail unit relay PCB
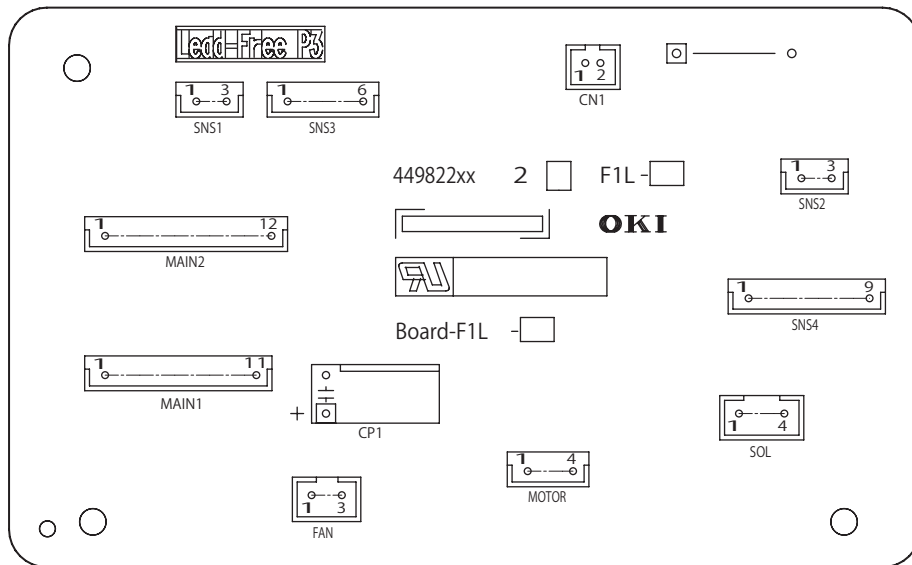
(13) Toner-low sensor PCB
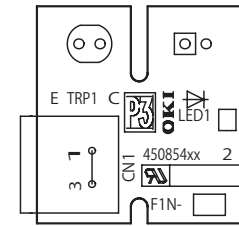
(14) MPT relay PCB
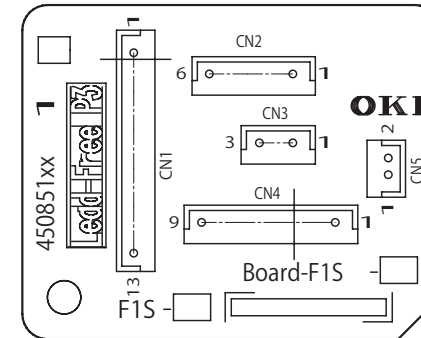
(15) Soft switch PCB
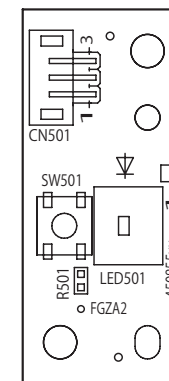
(16) High-voltage power supply PCB
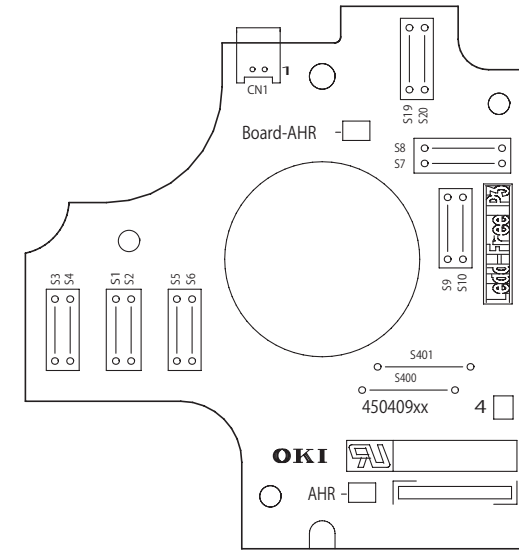
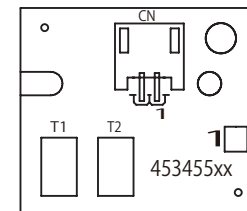Component side
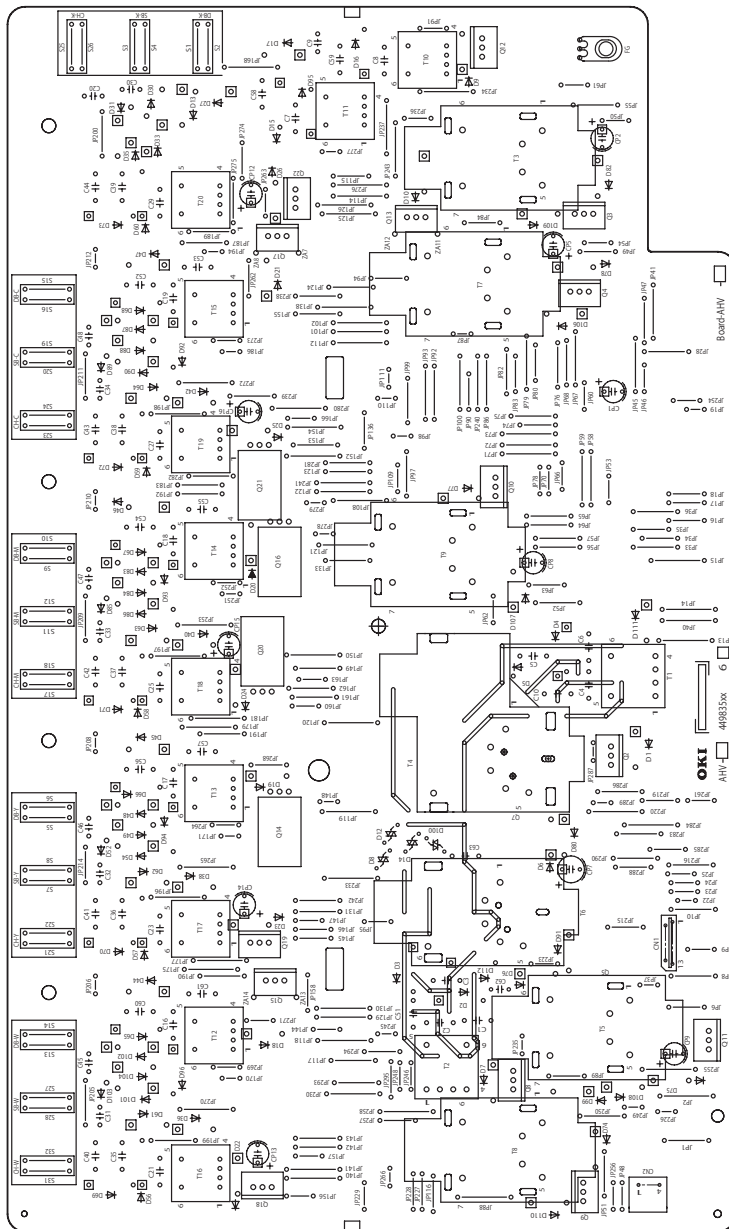
Soldering side
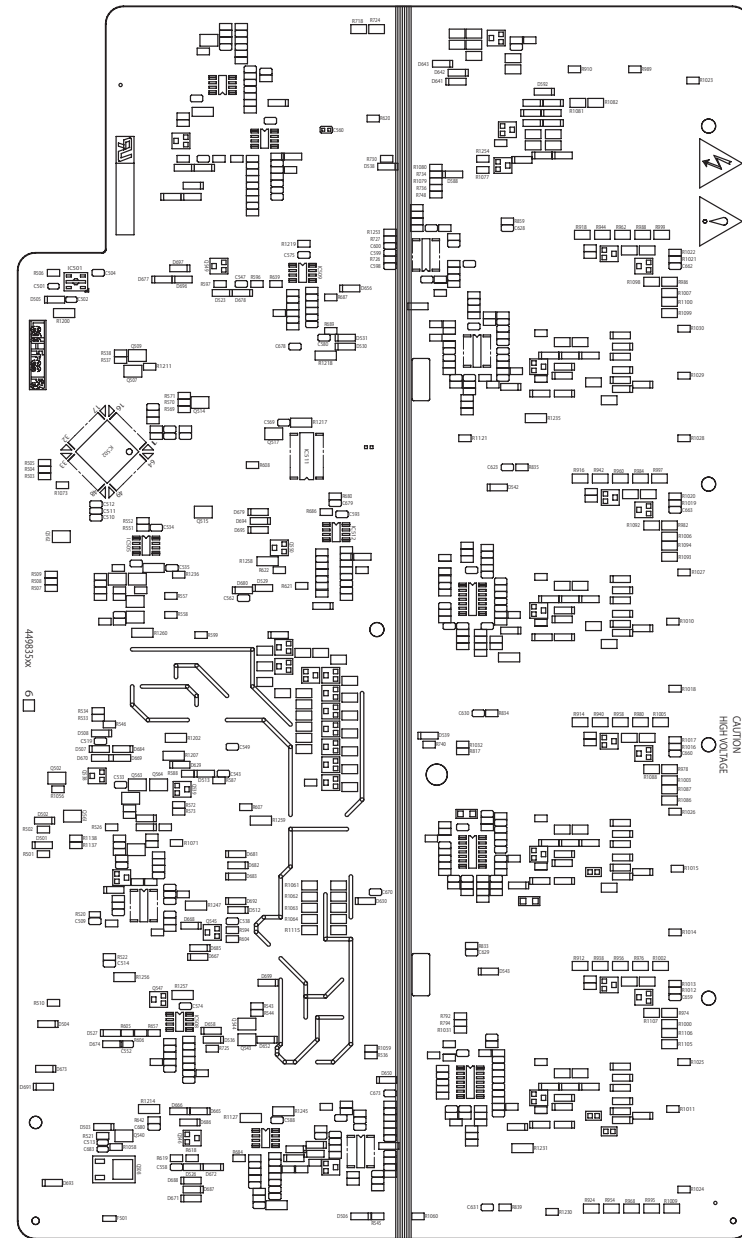
(17) Low-voltage power supply PCB
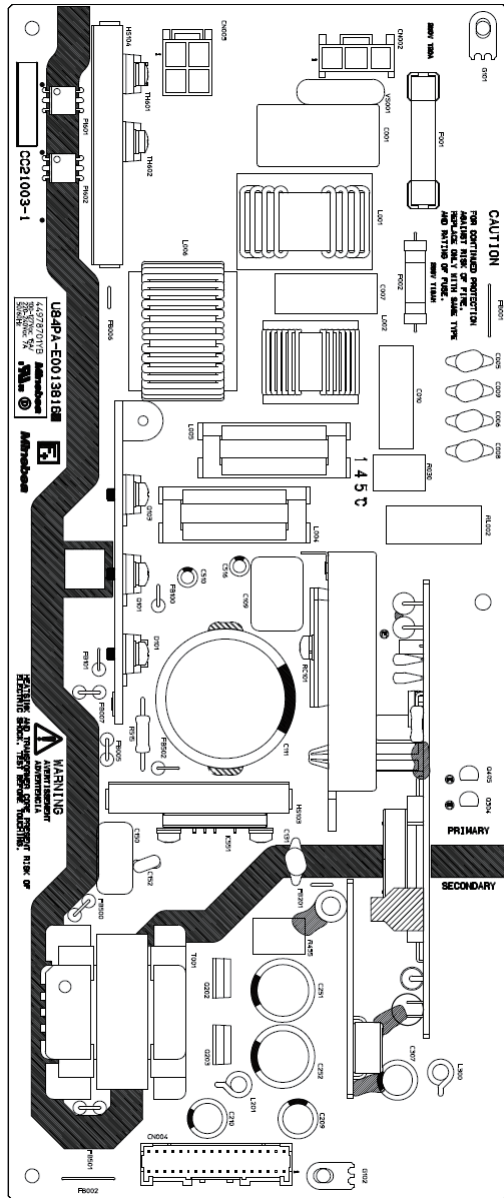
(18) High-voltage relay PCB

(19) Belt thermistor PCB

(20) Environmental sensor PCB