

Color Printer

**d-Color MF3000
PF-P08**

SERVICE MANUAL

Code Y112690-5

PUBLICATION ISSUED BY:

Olivetti S.p.A.

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Italy

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SAFETY AND IMPORTANT WARNING ITEMS

Read carefully the safety and important warning items described below to understand them before doing service work.

IMPORTANT NOTICE

Because of possible hazards to an inexperienced person servicing this product as well as the risk of damage to the product, Olivetti (hereafter called the Olivetti) strongly recommends that all servicing be performed only by Olivetti-trained service technicians.




Changes may have been made to this product to improve its performance after this Service Manual was printed. Accordingly, Olivetti does not warrant, either explicitly or implicitly, that the information contained in this service manual is complete and accurate.

The user of this service manual must assume all risks of personal injury and/or damage to the product while servicing the product for which this service manual is intended.




Therefore, this service manual must be carefully read before doing service work both in the course of technical training and even after that, for performing maintenance and control of the product properly.

Keep this service manual also for future service.













DESCRIPTION ITEMS FOR DANGER, WARNING AND CAUTION

In this Service Manual, each of three expressions “ DANGER”, “ WARNING”, and “ CAUTION” is defined as follows together with a symbol mark to be used in a limited meaning.

When servicing the product, the relevant works (disassembling, reassembling, adjustment, repair, maintenance, etc.) need to be conducted with utmost care.

-  **DANGER:** Action having a high possibility of suffering death or serious injury
-  **WARNING:** Action having a possibility of suffering death or serious injury
-  **CAUTION:** Action having a possibility of suffering a slight wound, medium trouble, and property damage

Symbols used for safety and important warning items are defined as follows:

 :Precaution when servicing the product.	 General precaution	 Electric hazard	 High temperature
 :Prohibition when servicing the product.	 General prohibition	 Do not touch with wet hand	 Do not disassemble
 :Direction when servicing the product.	 General instruction	 Unplug	 Ground/Earth

SAFETY WARNINGS

[1] MODIFICATIONS NOT AUTHORIZED BY OLIVETTI

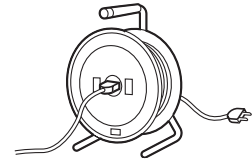
Olivetti brand products are renowned for their high reliability. This reliability is achieved through high-quality design and a solid service network.

Product design is a highly complicated and delicate process where numerous mechanical, physical, and electrical aspects have to be taken into consideration, with the aim of arriving at proper tolerances and safety factors. For this reason, unauthorized modifications involve a high risk of degradation in performance and safety. Such modifications are therefore strictly prohibited. The points listed below are not exhaustive, but they illustrate the reasoning behind this policy.

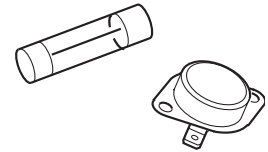
Prohibited Actions

DANGER

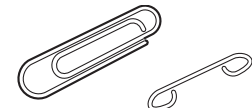
- Using any cables or power cord not specified by Olivetti.



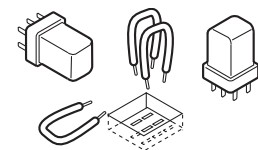
- Using any fuse or thermostat not specified by Olivetti. Safety will not be assured, leading to a risk of fire and injury.



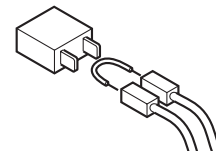
- Disabling fuse functions or bridging fuse terminals with wire, metal clips, solder or similar object.



- Disabling relay functions (such as wedging paper between relay contacts).



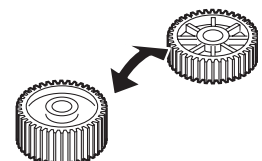
- Disabling safety functions (interlocks, safety circuits, etc.). Safety will not be assured, leading to a risk of fire and injury.



- Making any modification to the product unless instructed by Olivetti.



- Using parts not specified by Olivetti.



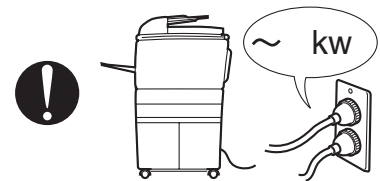
[2] POWER PLUG SELECTION

In some countries or areas, the power plug provided with the product may not fit wall outlet used in the area. In that case, it is obligation of customer engineer (hereafter called the CE) to attach appropriate power plug or power cord set in order to connect the product to the supply.

Power Cord Set or Power Plug

WARNING

- Use power supply cord set which meets the following criteria:
 - provided with a plug having configuration intended for the connection to wall outlet appropriate for the product's rated voltage and current, and
 - the plug has pin/terminal(s) for grounding, and
 - provided with three-conductor cable having enough current capacity, and
 - the cord set meets regulatory requirements for the area.
 Use of inadequate cord set leads to fire or electric shock.



- Attach power plug which meets the following criteria:
 - having configuration intended for the connection to wall outlet appropriate for the product's rated voltage and current, and
 - the plug has pin/terminal(s) for grounding, and
 - meets regulatory requirements for the area.
 Use of inadequate cord set leads to the product connecting to inadequate power supply (voltage, current capacity, grounding), and may result in fire or electric shock.



- Conductors in the power cable must be connected to terminals of the plug according to the following order:
 - Black or Brown:L (line)
 - White or Light Blue:N (neutral)
 - Green/Yellow:PE (earth)
 Wrong connection may cancel safeguards within the product, and results in fire or electric shock.



[3] CHECKPOINTS WHEN PERFORMING ON-SITE SERVICE

Olivetti brand products are extensively tested before shipping, to ensure that all applicable safety standards are met, in order to protect the customer and customer engineer (hereafter called the CE) from the risk of injury. However, in daily use, any electrical equipment may be subject to parts wear and eventual failure. In order to maintain safety and reliability, the CE must perform regular safety checks.

1. Power Supply

Connection to Power Supply

WARNING

- Check that mains voltage is as specified.
Connection to wrong voltage supply may result in fire or electric shock.



- Connect power plug directly into wall outlet having same configuration as the plug.

Use of an adapter leads to the product connecting to inadequate power supply (voltage, current capacity, grounding), and may result in fire or electric shock.

If proper wall outlet is not available, advice the customer to contact qualified electrician for the installation.



- Plug the power cord into the dedicated wall outlet with a capacity greater than the maximum power consumption.
If excessive current flows in the wall outlet, fire may result.



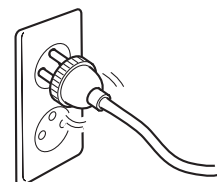
- If two or more power cords can be plugged into the wall outlet, the total load must not exceed the rating of the wall outlet.

If excessive current flows in the wall outlet, fire may result.

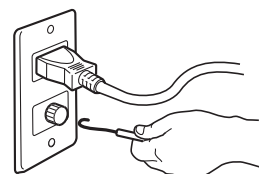


- Make sure the power cord is plugged in the wall outlet securely.

Contact problems may lead to increased resistance, overheating, and the risk of fire.



- Check whether the product is grounded properly.
If current leakage occurs in an ungrounded product, you may suffer electric shock while operating the product.
Connect power plug to grounded wall outlet.



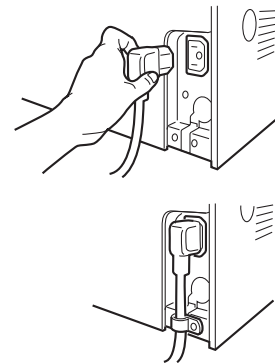
Power Plug and Cord

WARNING

- When using the power cord set (inlet type) that came with this product, make sure the connector is securely inserted in the inlet of the product.

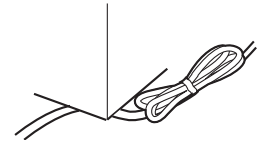
When securing measure is provided, secure the cord with the fixture properly.

If the power cord (inlet type) is not connected to the product securely, a contact problem may lead to increased resistance, overheating, and risk of fire.



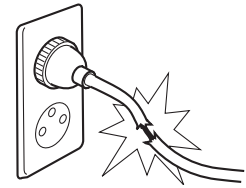
- Check whether the power cord is not stepped on or pinched by a table and so on.

Overheating may occur there, leading to a risk of fire.



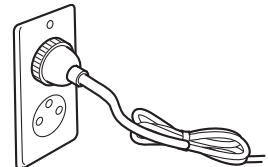
- Check whether the power cord is damaged. Check whether the sheath is damaged.

If the power plug, cord, or sheath is damaged, replace with a new power cord (with plug and connector on each end) specified by Olivetti. Using the damaged power cord may result in fire or electric shock.



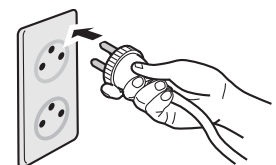
- Do not bundle or tie the power cord.

Overheating may occur there, leading to a risk of fire.



- Check whether dust is collected around the power plug and wall outlet.

Using the power plug and wall outlet without removing dust may result in fire.



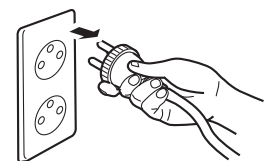
- Do not insert the power plug into the wall outlet with a wet hand.

The risk of electric shock exists.



- When unplugging the power cord, grasp the plug, not the cable.

The cable may be broken, leading to a risk of fire and electric shock.

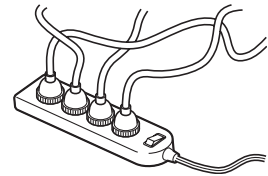


Wiring

WARNING

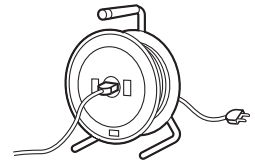
- Never use multi-plug adapters to plug multiple power cords in the same outlet.

If used, the risk of fire exists.



- When an extension cord is required, use a specified one. Current that can flow in the extension cord is limited, so using a too long extension cord may result in fire.

Do not use an extension cable reel with the cable taken up. Fire may result.



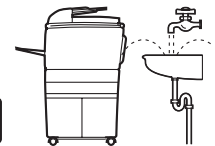
2. Installation Requirements

Prohibited Installation Places

WARNING

- Do not place the product near flammable materials or volatile materials that may catch fire.

A risk of fire exists.



- Do not place the product in a place exposed to water such as rain.

A risk of fire and electric shock exists.

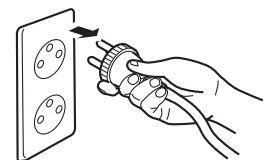


When not Using the Product for a long time

WARNING

- When the product is not used over an extended period of time (holidays, etc.), switch it off and unplug the power cord.

Dust collected around the power plug and outlet may cause fire.



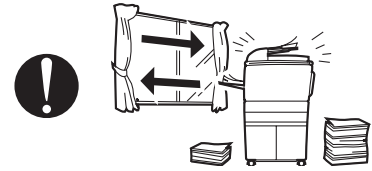
Ventilation

! CAUTION

- The product generates ozone gas during operation, but it will not be harmful to the human body.

If a bad smell of ozone is present in the following cases, ventilate the room.

- When the product is used in a poorly ventilated room
- When taking a lot of copies
- When using multiple products at the same time



Stability

! CAUTION

- Be sure to lock the caster stoppers.

In the case of an earthquake and so on, the product may slide, leading to a injury.

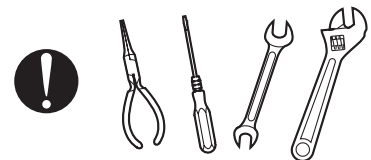


Inspection before Servicing

! CAUTION

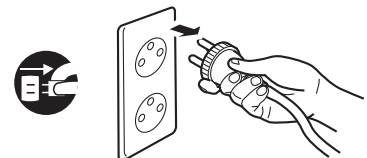
- Before conducting an inspection, read all relevant documentation (service manual, technical notices, etc.) and proceed with the inspection following the prescribed procedure in safety clothes, using only the prescribed tools. Do not make any adjustment not described in the documentation.

If the prescribed procedure or tool is not used, the product may break and a risk of injury or fire exists.

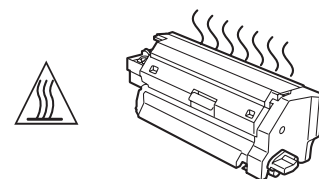


- Before conducting an inspection, be sure to disconnect the power plugs from the product and options.

When the power plug is inserted in the wall outlet, some units are still powered even if the POWER switch is turned OFF. A risk of electric shock exists.



- The area around the fixing unit is hot. You may get burnt.



Inspection before Servicing

CAUTION

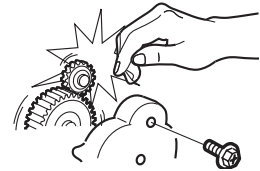
- Do not leave the machine unattended during transportation, installation, and inspection of the machine. If it is to be unavoidably left unattended, face protrusions toward the wall or take other necessary risk reducing action.
The user may stumble over a protrusion of the machine or be caught by a cable, falling to the floor or being injured.



Work Performed with the Product Powered On

WARNING

- Take every care when making adjustments or performing an operation check with the product powered.
If you make adjustments or perform an operation check with the external cover detached, you may touch live or high-voltage parts or you may be caught in moving gears or the timing belt, leading to a risk of injury.
- Take every care when servicing with the external cover detached.
High-voltage exists around the drum unit. A risk of electric shock exists.
- If it is absolutely necessary to service the machine with the door open or external covers removed, always be attentive to the motion of the internal parts.
A normally protected part may cause unexpected hazards.



Safety Checkpoints

WARNING

- Check the exterior and frame for edges, burrs, and other damage.
The user or CE may be injured.
- Whenever mounting an option on the machine, be attentive to the motion of the fellow worker of the joint work.
The fellow worker may be injured with his or her finger or hand pinched between the machine and the option.



Safety Checkpoints

WARNING

- When mounting an option on the machine, be careful about the clearance between the machine and the option. You may be injured with your finger or hand pinched between the machine and the option.



- When removing a part that secures a motor, gear, or other moving part, disassembling a unit, or reinstalling any of such parts and units, be careful about moving parts and use care not to drop any part or unit. During the service procedure, give sufficient support for any heavy unit. You may be injured by a falling part or unit.



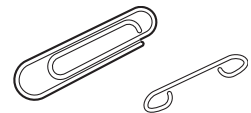
- Check the external covers and frame for possible sharp edges, burrs, and damage. They can be a cause of injury during use or servicing.



- When accessing a hard-to-view or narrow spot, be careful about sharp edges and burrs of the frame and parts. They may injure your hands or fingers.



- Do not allow any metal parts such as clips, staples, and screws to fall into the product. They can short internal circuits and cause electric shock or fire.



- Check wiring for squeezing and any other damage. Current can leak, leading to a risk of electric shock or fire.



- Carefully remove all toner remnants and dust from electrical parts and electrode units such as a charging corona unit. Current can leak, leading to a risk of product trouble or fire.



- Check high-voltage cables and sheaths for any damage. Current can leak, leading to a risk of electric shock or fire.



- Check electrode units such as a charging corona unit for deterioration and sign of leakage. Current can leak, leading to a risk of trouble or fire.

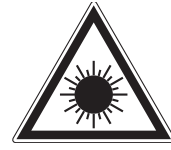


Safety Checkpoints

WARNING

- Before disassembling or adjusting the write unit (P/H unit) incorporating a laser, make sure that the power cord has been disconnected.

The laser light can enter your eye, leading to a risk of loss of eyesight.



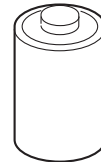
- Do not remove the cover of the write unit. Do not supply power with the write unit shifted from the specified mounting position.

The laser light can enter your eye, leading to a risk of loss of eyesight.



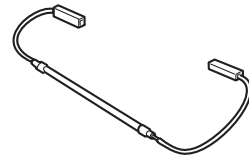
- When replacing a lithium battery, replace it with a new lithium battery specified in the Parts Guide Manual. Dispose of the used lithium battery using the method specified by local authority.

Improper replacement can cause explosion.



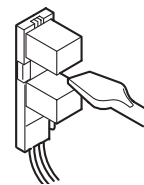
- After replacing a part to which AC voltage is applied (e.g., optical lamp and fixing lamp), be sure to check the installation state.

A risk of fire exists.



- Check the interlock switch and actuator for loosening and check whether the interlock functions properly.

If the interlock does not function, you may receive an electric shock or be injured when you insert your hand in the product (e.g., for clearing paper jam).



- Make sure the wiring cannot come into contact with sharp edges, burrs, or other pointed parts.

Current can leak, leading to a risk of electric shock or fire.



- Make sure that all screws, components, wiring, connectors, etc. that were removed for safety check and maintenance have been reinstalled in the original location. (Pay special attention to forgotten connectors, pinched cables, forgotten screws, etc.)

A risk of product trouble, electric shock, and fire exists.



Handling of Consumables

WARNING

- Toner and developer are not harmful substances, but care must be taken not to breathe excessive amounts or let the substances come into contact with eyes, etc. It may be stimulative.

If the substances get in the eye, rinse with plenty of water immediately. When symptoms are noticeable, consult a physician.



- Never throw the used cartridge and toner into fire.
You may be burned due to dust explosion.

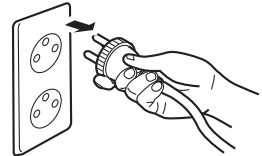


Handling of Service Materials

CAUTION

- Unplug the power cord from the wall outlet.

Drum cleaner (isopropyl alcohol) and roller cleaner (acetone-based) are highly flammable and must be handled with care. A risk of fire exists.



- Do not replace the cover or turn the product ON before any solvent remnants on the cleaned parts have fully evaporated.

A risk of fire exists.



- Use only a small amount of cleaner at a time and take care not to spill any liquid. If this happens, immediately wipe it off.

A risk of fire exists.



- When using any solvent, ventilate the room well.
Breathing large quantities of organic solvents can lead to discomfort.



[4] LASER SAFETY

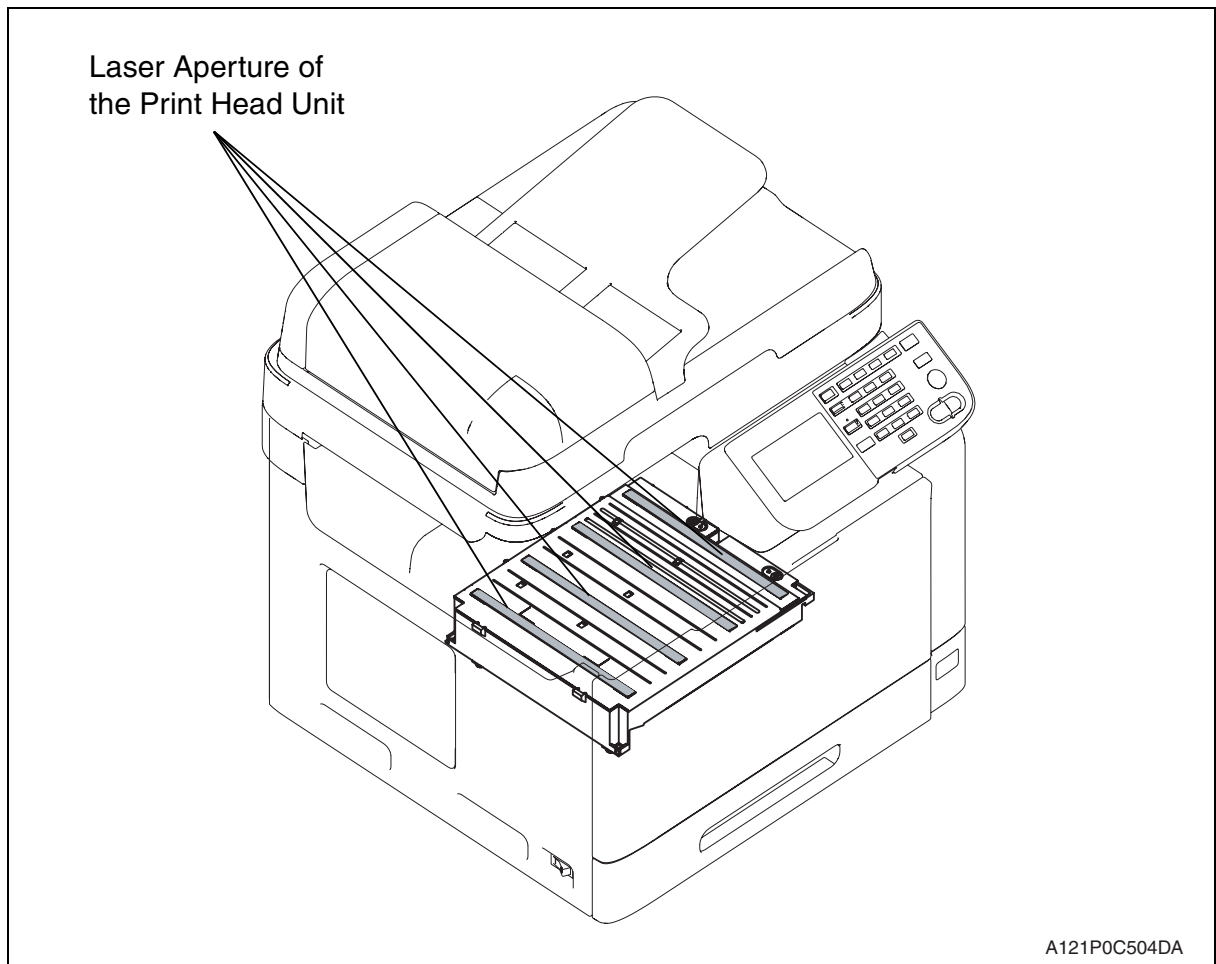
- This is a digital machine certified as a Class 1 laser product. There is no possibility of danger from a laser, provided the machine is serviced according to the instruction in this manual.

4.1 Internal Laser Radiation

semiconductor laser	
Maximum power of the laser diode	15 mW
Maximum average radiation power (*)	11.2 μ W
Wavelength	770 - 800 nm

*at laser aperture of the Print Head Unit

- This product employs a Class 3B laser diode that emits an invisible laser beam. The laser diode and the scanning polygon mirror are incorporated in the print head unit.
- The print head unit is **NOT A FIELD SERVICEABLE ITEM**. Therefore, the print head unit should not be opened under any circumstances.



**U.S.A., Canada
(CDRH Regulation)**

- This machine is certified as a Class 1 Laser product under Radiation Performance Standard according to the Food, Drug and Cosmetic Act of 1990. Compliance is mandatory for Laser products marketed in the United States and is reported to the Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration of the U.S. Department of Health and Human Services (DHHS). This means that the device does not produce hazardous laser radiation.
- The label shown on page S-16 indicates compliance with the CDRH regulations and must be attached to laser products marketed in the United States.

CAUTION

- **Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.**

semiconductor laser	
Maximum power of the laser diode	15 mW
Wavelength	770 - 800 nm

All Areas

CAUTION

- **Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.**

semiconductor laser	
Maximum power of the laser diode	15 mW
Wavelength	770 - 800 nm

Denmark

ADVARSEL

- **Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling. Klasse 1 laser produkt der opfylder IEC60825-1 sikkerheds kravene.**

halvlederlaser	
Laserdiodens højeste styrke	15 mW
bølgelængden	770 - 800 nm

Finland, Sweden

LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT
VAROITUS!

- Laitteen käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle laser-säteilylle.

puolijohdelaser	
Laserdiodin suurin teho	15 mW
aallonpituus	770 - 800 nm

VARNING!

- Om apparaten används på annat sätt än i denna bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

halvledarlasert	
Den maximala effekten för laserdioden	15 mW
våglängden	770 - 800 nm

VARO!

- Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle laser-säteilylle. Älä katso säteeseen.

VARNING!

- Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

Norway

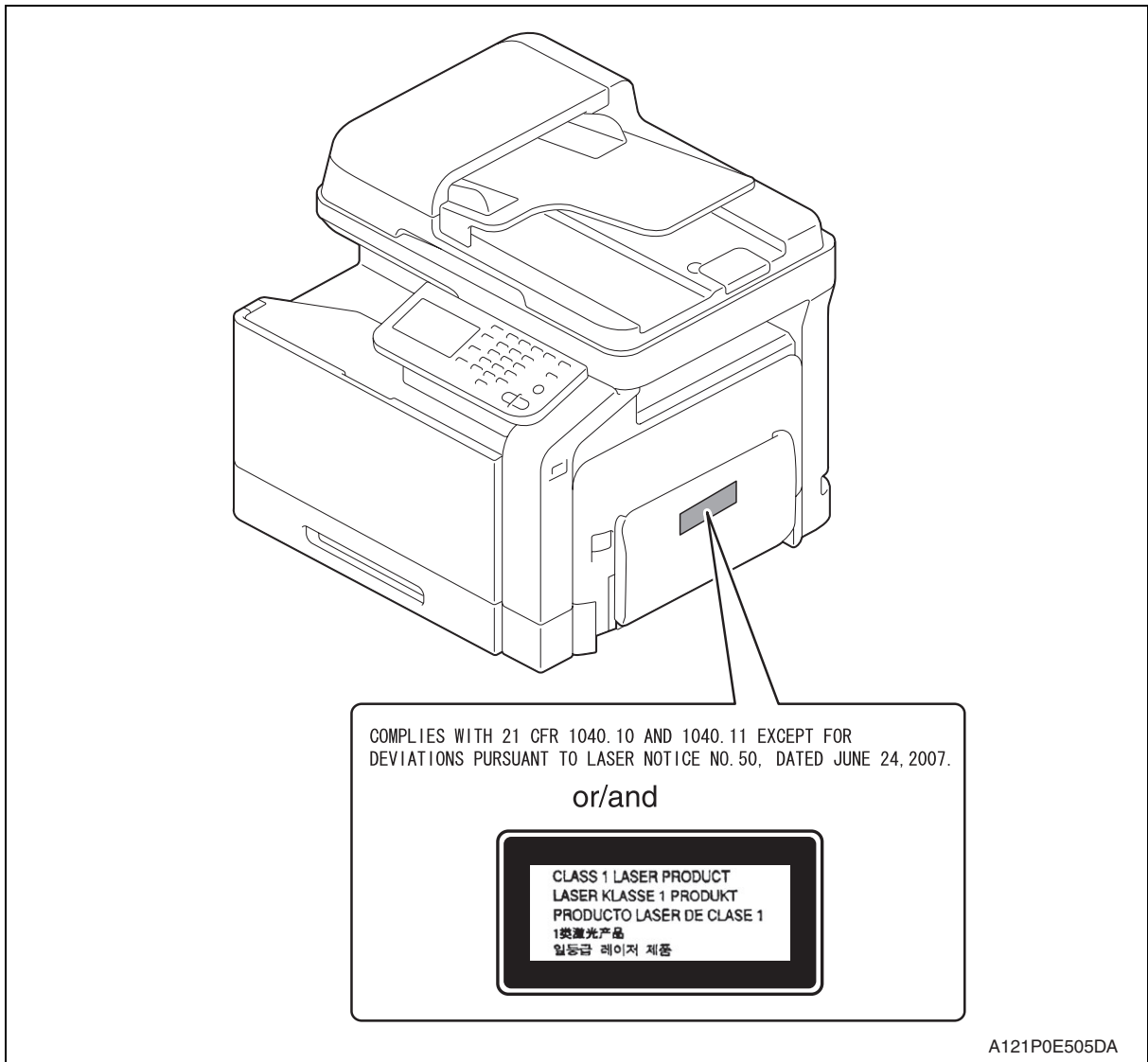
ADVERSEL

- Dersom apparatet brukes på annen måte enn spesifisert i denne bruksanvisning, kan brukeren utsettes for usynlig laserstrålning, som overskrider grensen for laser klass 1.

halvleder laser	
Maksimal effekt till laserdiode	15 mW
bølgelengde	770 - 800 nm

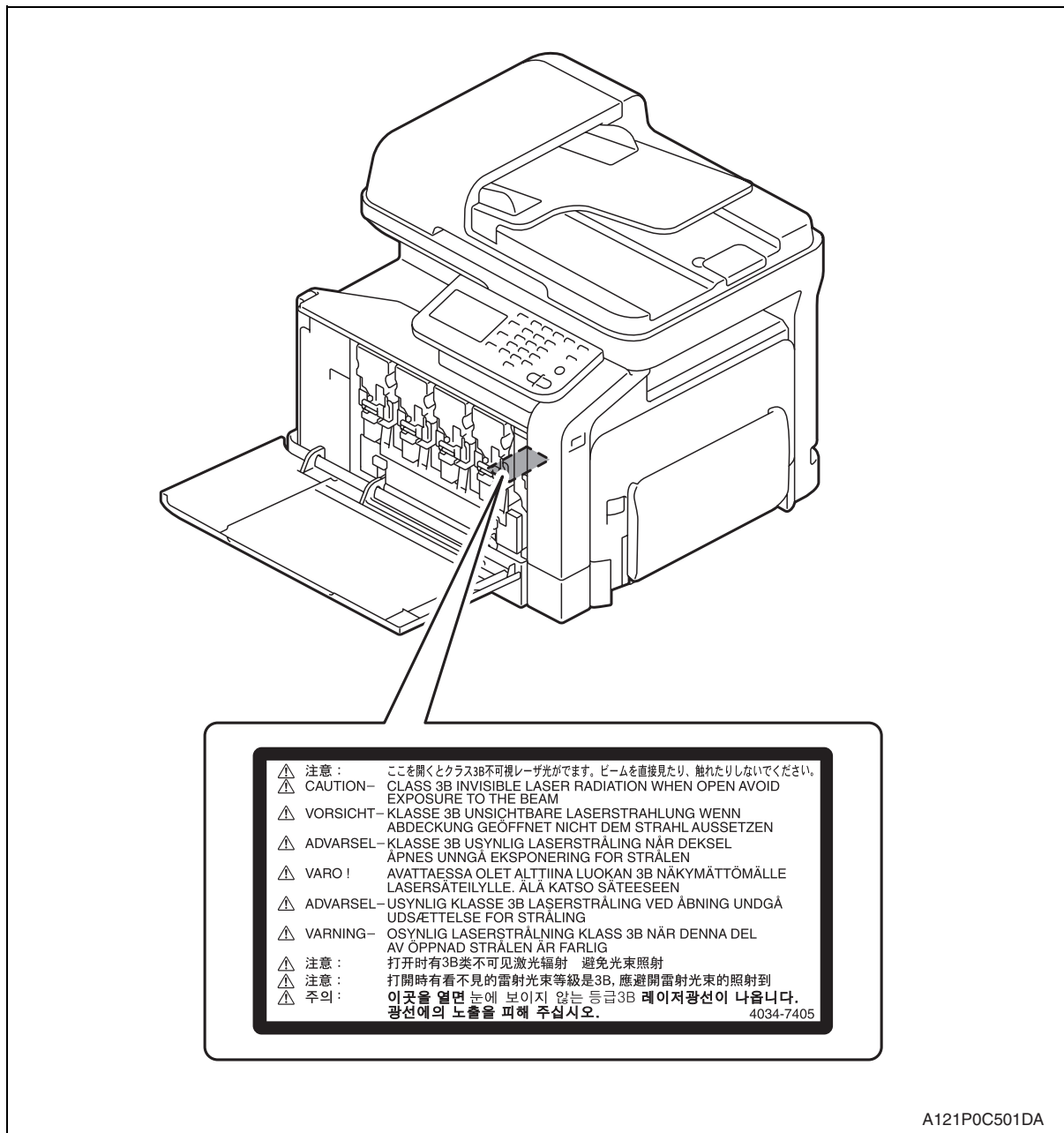
4.2 Laser Safety Label

- A laser safety label is attached to the inside of the machine as shown below.



4.3 Laser Caution Label

- A laser caution label is attached to the outside of the machine as shown below.

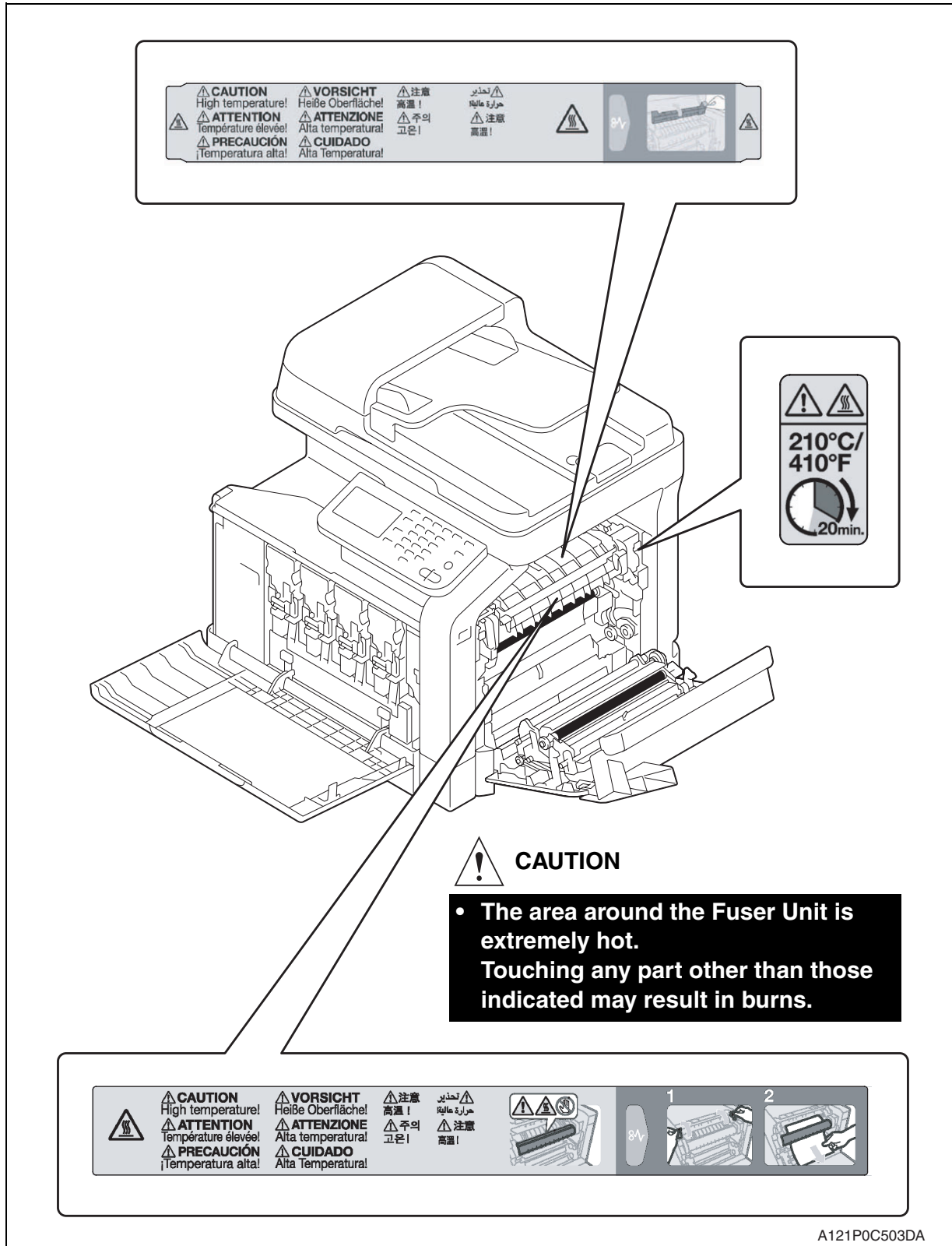


4.4 PRECAUTIONS FOR HANDLING THE LASER EQUIPMENT

- When laser protective goggles are to be used, select ones with a lens conforming to the above specifications.
- When a disassembly job needs to be performed in the laser beam path, such as when working around the printerhead and PC Drum, be sure first to turn the printer OFF.
- If the job requires that the printer be left ON, take off your watch and ring and wear laser protective goggles.
- A highly reflective tool can be dangerous if it is brought into the laser beam path. Use utmost care when handling tools on the user's premises.

INDICATION OF WARNING ON THE MACHINE

Caution labels shown below are attached in some areas on/in the machine.
When accessing these areas for maintenance, repair, or adjustment, special care should be taken to avoid burns and electric shock.



A121P0C503DA



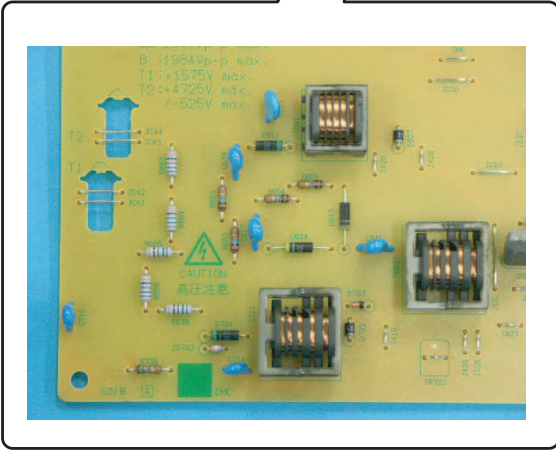
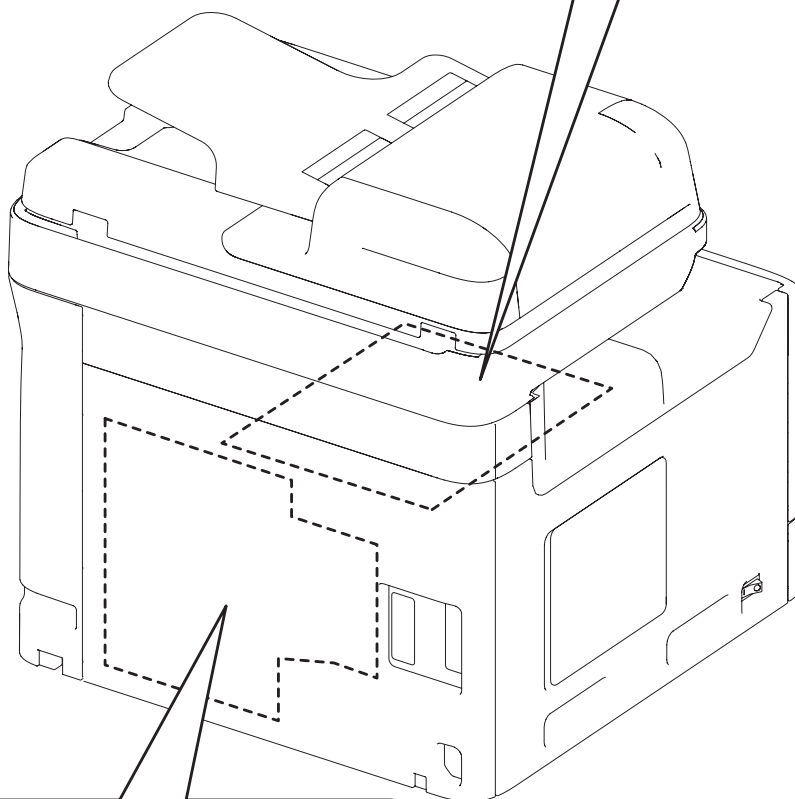
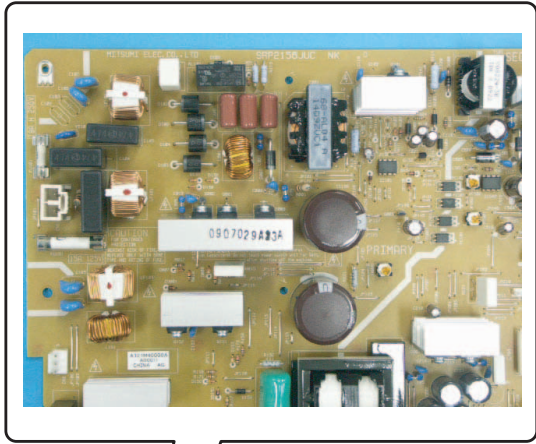
High voltage

- This area generates high voltage. Be careful not to touch here when the power is turned ON to avoid getting an electric shock.



Electric hazard

- To avoid electrical shock, after turning OFF the power switch, do not touch the DC power supply for 9 minutes.



High voltage

- This area generates high voltage. Be careful not to touch here when the power is turned ON to avoid getting an electric shock.

A121P0C506DA

⚠ WARNING	⚠ AVVISO	⚠ 警告	
⚠ WARNUNG	⚠ AVISO	⚠ 경고	
⚠ ATENCIÓN	⚠ ATTENTION	⚠ انتذار	

⚠ WARNING

- Do not burn used Imaging Unit.
Toner expelled from the fire is dangerous.

	⚠ WARNING	⚠ AVVISO	⚠ 警告	
⚠ WARNUNG	⚠ AVISO	⚠ 경고		
⚠ ATENCIÓN	⚠ ATTENTION	⚠ انتذار		

⚠ WARNING

- Do not burn used Waste Toner Bottle.
Toner expelled from the fire is dangerous.

⚠ WARNING	
⚠ WARNUNG	
⚠ ATENCIÓN	
⚠ AVVISO	⚠ 警告
⚠ AVISO	⚠ 경고
⚠ ATTENTION	⚠ انتذار

⚠ WARNING

- Do not burn used Toner Cartridges.
Toner expelled from the fire is dangerous.

A0VDP0C504DA

⚠ CAUTION:

- You may be burned or injured if you touch any area that you are advised by any caution label to keep yourself away from. Do not remove caution labels. And also, when the caution label is peeled off or soiled and cannot be seen clearly, replace it with a new caution label.

MEASURES TO TAKE IN CASE OF AN ACCIDENT

1. If an accident has occurred, the distributor who has been notified first must immediately take emergency measures to provide relief to affected persons and to prevent further damage.
2. If a report of a serious accident has been received from a customer, an on-site evaluation must be carried out quickly and Olivetti must be notified.
3. To determine the cause of the accident, conditions and materials must be recorded through direct on-site checks, in accordance with instructions issued by Olivetti.
4. For reports and measures concerning serious accidents, follow the regulations specified by every distributor.

Composition of the service manual

This service manual consists of Theory of Operation section and Field Service section to explain the main machine and its corresponding options.

Theory of Operation section gives, as information for the CE to get a full understanding of the product, a rough outline of the object and role of each function, the relationship between the electrical system and the mechanical system, and the timing of operation of each part.

Field Service section gives, as information required by the CE at the site (or at the customer's premise), a rough outline of the service schedule and its details, maintenance steps, the object and role of each adjustment, error codes and supplementary information.

The basic configuration of each section is as follows. However some options may not be applied to the following configuration.

<Theory of Operation section>

OUTLINE:	Explanation of system configuration, product specifications, unit configuration, and paper path
COMPOSITION/OPERATION:	Explanation of configuration of each unit, operating system, and control system

<Field service section>

OUTLINE:	Explanation of system configuration, and product specifications
MAINTENANCE:	Explanation of service schedule, maintenance steps, service tools, removal/reinstallation methods of major parts, and firmware version up method etc.
ADJUSTMENT/SETTING:	Explanation of utility mode, service mode, and mechanical adjustment etc.
TROUBLESHOOTING:	Explanation of lists of jam codes and error codes, and their countermeasures etc.
APPENDIX:	Parts layout drawings, connector layout drawings, timing chart, overall layout drawing are attached.

Notation of the service manual

A. Product name

In this manual, each of the products is described as follows:

- | | |
|-------------------------------|------------------------------|
| (1) d-Color MF3000 | Main body |
| (2) Microsoft Windows NT 4.0: | Windows NT 4.0 or Windows NT |
| Microsoft Windows 2000: | Windows 2000 |
| Microsoft Windows XP: | Windows XP |
| Microsoft Windows Vista: | Windows Vista |
| Microsoft Windows 7: | Windows 7 |
- When the description is made in combination of the OS's mentioned above:
- Windows NT 4.0/2000
Windows NT/2000/XP/Vista/7

B. Brand name

The company names and product names mentioned in this manual are the brand name or the registered trademark of each company.

C. Feeding direction

- When the long side of the paper is parallel with the feeding direction, it is called short edge feeding. The feeding direction which is perpendicular to the short edge feeding is called the long edge feeding.
- Short edge feeding will be identified with [S (abbreviation for Short edge feeding)] on the paper size. No specific notation is added for the long edge feeding.
When the size has only the short edge feeding with no long edge feeding, [S] will not be added to the paper size.

<Sample notation>

Paper size	Feeding direction	Notation
A4	Long edge feeding	A4
	Short edge feeding	A4S
A3	Short edge feeding	A3

Color Printer

d-Color MF3000

SERVICE MANUAL

Code Y112690-5

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


Revision history

After publication of this service manual, the parts and mechanism may be subject to change for improvement of their performance.

Therefore, the descriptions given in this service manual may not coincide with the actual machine.

When any change has been made to the descriptions in the service manual, a revised version will be issued with a revision mark added as required.

Revision mark:

- To indicate clearly a section revised,  is shown at the left margin of the revised section.
The number inside  represents the number of times the revision has been made.
- To indicate clearly a page that contains the revision,  is shown near the page number of the corresponding page.
The number inside  represents the number of times the revision has been made.

NOTE

Revision marks shown in a page are restricted only to the latest ones with the old ones deleted.

- When a page revised in Ver. 2.0 has been changed in Ver. 3.0:
The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0:
The revision marks for Ver. 2.0 are left as they are.

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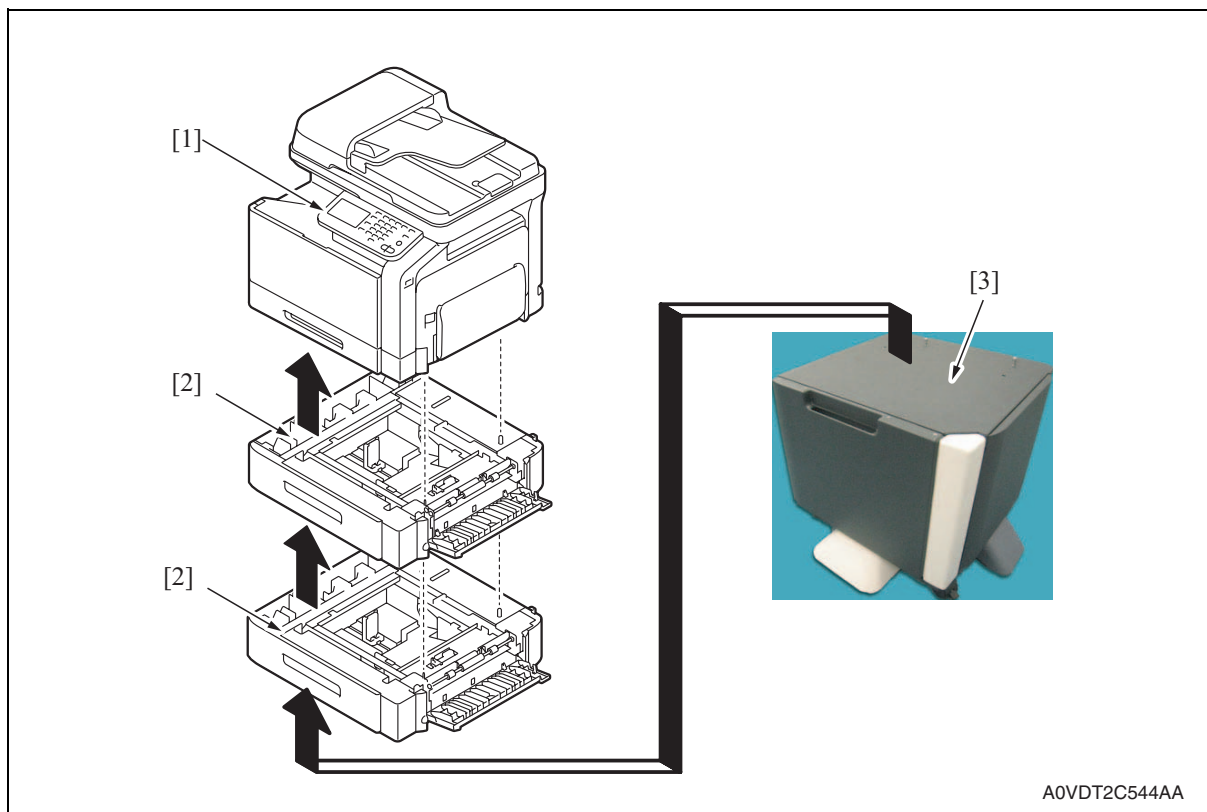
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OUTLINE

1. SYSTEM CONFIGURATION



[1] d-Color MF3000


[2] PF-P08 (Lower feeder unit)

[3] DK-P01 (Desk)*


*: To be locally procured for North America/Europe.

2. PRODUCT SPECIFICATIONS

A. Type

Type	Desktop tandem full-color A4 laser beam printer
Printing system	Semiconductor laser and electrostatic image transfer to plain paper
Exposure system	4 laser diode and 1 polygon mirror
PC drum type	OPC (organic photo conductor)
Photoconductor cleaning	Blade cleaning system
Scan resolution	600 x 1200, 600 x 600 dpi, 600 x 300 dpi
Print resolution	600 x 600 dpi
 Paper feeding system	Tray1: Small roller separation system with torque limiter Tray2: Small roller separation system with torque limiter
Developing system	Single-element developing system
Charging system	Charge roller system
Image transfer system	Intermediate transfer belt system
Paper separating system	Curvature separation + charge-neutralizing system
Fusing system	Belt fusing
Paper exit system	Face down (Output tray capacity: 250 sheets (A4S/LetterS))

B. Functions

Warm-up time	Power on to ready: average 45 seconds or less (Power on to ready, at ambient temperature of 23 °C/73.4 °F and rated source voltage)
Process speed	185 mm/sec. (plain paper) 92.5 mm/sec. (thick paper1/2, envelope, post card, label)
First-page output time	12.9 second or less (A4S/LetterS, plain paper)
 Copy speed	Simplex Monochrome/Full color: 30.0 page per minutes for A4 (plain paper) 31.6 page per minutes for Letter (plain paper) 15.0 page per minutes for A4 (thick paper1/2) 15.2 page per minutes for Letter (thick paper1/2) Duplex (double-sided) Monochrome/Full color: 30.0 sheet per minutes for A4 (plain paper) 31.6 sheet per minutes for Letter (plain paper)

C. Media

Type		Paper source (maximum tray capacity)	
		Tray 1	Tray 2
Media type	Plain paper (60 to 90 g/m ² ; 16 to 24 lb)	100 sheets	250 sheets
	Thick 1 (91 to 150 g/m ²)	20 sheets	20 sheets
	Thick 2 (151 to 210 g/m ²)		
	Label		
	Letterhead		
	Glossy 1 (100 to 128 g/m ²)		
	Glossy 2 (129 to 158 g/m ²)		
	Postcard	10 sheets	-
Envelope			
Media dimensions	Width	92 to 216 mm* (3.6 to 8.5 inch)	92 to 216 mm (3.6 to 8.5 inch)
	Length	148 to 356 mm* (5.8 to 14.0 inch)	148 to 356 mm (5.8 to 14.0 inch)

*: If the width set 210 mm to 216 mm, the max. length is to 279.6 mm.

D. Maintenance

Machine durability	400,000 prints or 5 years, whichever comes first
--------------------	--

E. Machine specifications

Power requirements	Voltage:	AC 100V, 120 V, 220 to 240 V
	Frequency:	50 to 60 Hz
Max power consumption	1,200 W or less (100 V, 120 V) 1,100 W or less (110 V) 1,300 W or less (127 V, 220-240 V)	
Dimensions	530 (W) x 508 (D) x 550 (H) mm 20.87 (W) x 20.00 (D) x 21.65 (H) inch	
Weight	34.6 kg (76.28 lb) or less without consumables 39.0 kg (85.98 lb) or less with consumables	
Operating noise	During standby : 39 dB (A) or less During printing : 55.0 dB (A) or less During copying : 57.0 dB (A) or less	

F. Operating environment

Temperature	10 °C to 30 °C / 50 °F to 86 °F (with a fluctuation of 10 °C / 18 °F or less per hour)
Humidity	15% to 85% (with a fluctuation of 10% or less per hour)

G. Print functions

Type	Built-in printer controller
RAM	1.5 GB
HDD	120 GB (shared with the main body)
Interface	USB 2.0 (High Speed) compliant, 10Base-T/100Base-TX/1000Base-T Ethernet
Print speed	30 pages/min. (A4S, 1-sided print, plain paper) 31.6 pages/min. (LetterS, 1-sided print, plain paper) 15 pages/min. (A4S, 1-sided print, thick paper) 15.8 pages/min. (LetterS, 1-sided print, thick paper)
Printer language	PostScript3 (3016) PCL 5 e/c, PCL 6 (XL3.0) XPS (Version1.0) PDF Direct Printing (Version 1.7) JPEG/TIFF/XPS Direct Print
Print resolution	600 x 600 dpi
Printer fonts	PCL, PostScript3
Supported computer	Windows Server 2003 / Server 2008 Server 2003 x64 Edition / Server 2008 x64 Edition Netware 4 / 5 / 6 Windows 2000 (ServicePack4) / XP (ServicePack2 or later) / Vista (ServicePack1) / XP x64 Edition / Vista x64 Edition Macintosh OS X (10.2.8 / 10.3.9 / 10.4 / 10.5) Linux SUSE Linux Enterprise Desktop 10 (CUPS Ver. 1.1.23) Red Hat Enterprise Linux 5 Desktop (CUPS Ver. 1.2.4)
Printer driver	PCL6 Windows 2000 / XP / Server 2003 / Vista / Server 2008 printer driver Windows XP / Server 2003 / Vista / Server 2008 x64 Edition printer driver Windows 2000 / XP / Server 2003 / Vista / Server 2008 printer driver for monochrome printing Windows XP / Server 2003 / Vista / Server 2008 x64 Edition printer driver for mono- chrome printing Windows 2000 / XP / Server 2003 / Vista / Server 2008 Universal Driver Windows XP / Server 2003 / Vista / Server 2008 x64 Edition Universal Driver PostScript Level3 Windows 2000 / XP / Server 2003 / Vista / Server 2008 printer driver Windows XP / Server 2003 / Vista / Server 2008 x64 Edition printer driver Windows 2000 / XP / Server 2003 / Vista / Server 2008 Universal Driver Windows XP / Server 2003 / Vista / Server 2008 x64 Edition Universal Driver Macintosh OS X (10.2.8 / 10.3.9 / 10.4 / 10.5) printer driver Macintosh OS X (10.2.8 / 10.3.9 / 10.4 / 10.5) monochrome printing Linux printer driver (PPD for CUPS) XPS Windows Vista / Server 2008 XPS FULL driver Raster Windows 2000 / XP / Server 2003 / Vista / Server 2008 PC FAX driver Windows XP / Server 2003 / Vista / Server 2008 x64 Edition PC FAX driver

NOTE

- These specifications are subject to change without notice.

H. Fax specifications

Applicable lines	PSTN, PBX	
Protocol	Group 3 (compliant to ITU-T T.30) <ul style="list-style-type: none"> • Olivetti non-standard protocol: No • Group 4: No 	
Communication resolution	Standard (203 dpi x 98 dpi)	
	Fine (203 dpi x 196 dpi)	
	Super fine (406 dpi x 391dpi)	
Compatibility	ECM/Super G3	
Communication speed	2.4 to 33.6 kbps	
Fax transmission speed	3 seconds/page (at A4, V.34, 33.6kbps, JBIG) <ul style="list-style-type: none"> • Resolution: standard mode • Olivetti standard original 	
Coding method	MH, MR, MMR and JBIG	
Modulation method	V.27 ter, V.29, V.17 and V.34	
Fax memory	256 MB	
Max. scanning size	ADF: 216 x 1000 mm Original glass: Legal	
Max. recording size	Legal The fax message is printed according to the setting of Print Separate Fax Pages, if an original longer than the paper loaded in the machine is received.	
Scanning speed	30 sheets/minute (A4) 15 sheets/minute (A4) with resolution in the super fine mode	
Functions	Abbreviated dial	Max. 2000 stations to be registered
	Program dial	Max. 400 numbers to be registered
	Key pad dial	38 digits maximum (during off-hook dial mode) 60 digits maximum (during on-hook dial mode)
	Group dial	Max. 100 numbers to be registered. Up to 500 abbreviated dial numbers can be registered for each group.
	Manual redial	Possible to select from five latest histories.
	Automatic redial	<ul style="list-style-type: none"> • Automatically redial when remote stations are busy or return no responses or transmission errors occur at the memory transmission. Note that, this is not performed at a manual (off-hook) transmission. • Possible to receive during redial waiting. • Another call is possible.
	Pulse/tone switching	Capable of switching from pulse to tone by using the [*] key on the [Key pad] or [Tone] key on LCD.
	PBX mode setting	<ul style="list-style-type: none"> • Possible to turn ON or OFF the PBX connection and to register the external access code. • There is the automatic removal function of external access code to registered abbreviated remote station No. Nothing is automatic addition function.
	Off-hook	Manual start is possible with the "Off-Hook" button on the LCD screen.

Functions	Call progress detection	<ul style="list-style-type: none"> • DC loop (Depends on country spec) • Dial tone (Depends on country spec) • Busy tone (Depends on country spec)
	Dialing system	To be selected from among PB, 10 pps, and 20 pps
	Line monitoring sound	<p>ON (A-B): Monitoring sound is sounded for communication phase between A and B.</p> <p>ON (All): Monitoring sound is sounded for communication phase between A and E.</p> <p>OFF: Monitoring sound is not sounded.</p>
	Off-Hook alarm	Notifies the user if the external telephone is off-hook at the end of fax communication.

NOTE

- **These specifications are subject to change without notice.**

MAINTENANCE

3. PERIODICAL MAINTENANCE ITEM

3.1 Periodical replacement parts list (CRU)

- To ensure that the machine produces good prints and to extend its service life, it is recommended that the maintenance jobs described in this schedule be carried out as instructed.
- The replacing time is to be determined by the total counter value.
- Maintenance conditions are based on A4S or letterS,1-side print.

Class	Part to be replaced	Number of prints	Description	Ref. page
Processing section	Imaging unit (C,M,Y,K)	30,000 (Continuous printing) 20,000 (2P/J) *1		P.11
	Standard in-box toner cartridge (C,M,Y,K)	6,000 (Continuous printing)		P.8
	High-capacity toner cartridge (C,M,Y,K)	6,000 (Continuous printing)		
Image transfer section	Waste toner bottle (WB-P03)	36,000 (monochrome) (Continuous printing)		P.14
		9,000 (full color) (Continuous printing)		
	Transfer roller (TF-P04)	100,000 (2P/J) *1		P.15
	Transfer belt unit (TF-P05)	100,000 (2P/J) *1		P.16
Fusing section	Fuser unit (FU-P02)	100,000 (2P/J) *1		P.20

*1: 2 pages/job

3.2 Periodical replacement parts list (FRU)

3.2.1 Main body

Class	Maintenance parts	Quantity	Parts No.	Actual durable cycle	Description	Ref. page
Tray1 (Manual feed tray)	Tray1 feed roller	1	AVGR12759T	300,000		P.22
Tray2	Tray2 feed roller	1	AVGR12759T	300,000		P.24

3.2.2 Option

Class	Maintenance parts	Quantity	Parts No.	Actual durable cycle	Description	Ref. page
Tray3/4 (Lower feeder unit)	Feed roller	1	AVGR14010Q	300,000		*1

*1: For details, see the optional lower feeder unit (PF-P08) service manual.

3.3 Concept of parts life

- See Section 22 “d-Color MF3000 Concept of parts life” for details.

4. PERIODICAL MAINTENANCE PROCEDURE

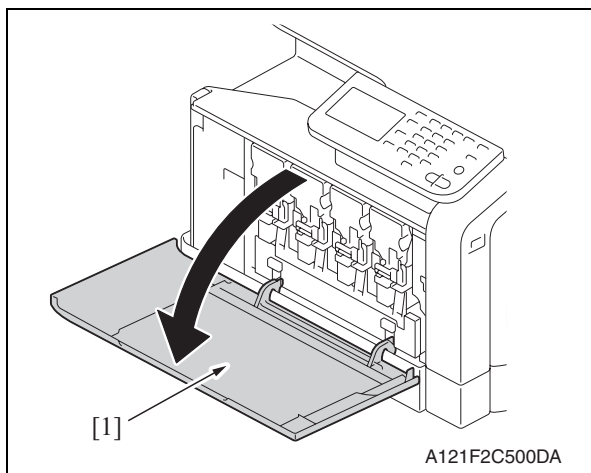
4.1 Processing section

4.1.1 Replacing the toner cartridge (C, M, Y, K)

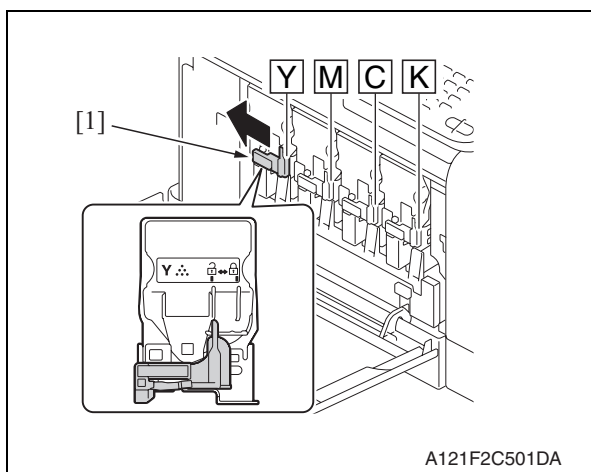
A. Periodically replaced parts/cycle

- Standard-in box toner cartridge (C, M, Y, K): Every 6,000 counts
- High-capacity toner cartridge (C, M, Y, K): Every 6,000 counts

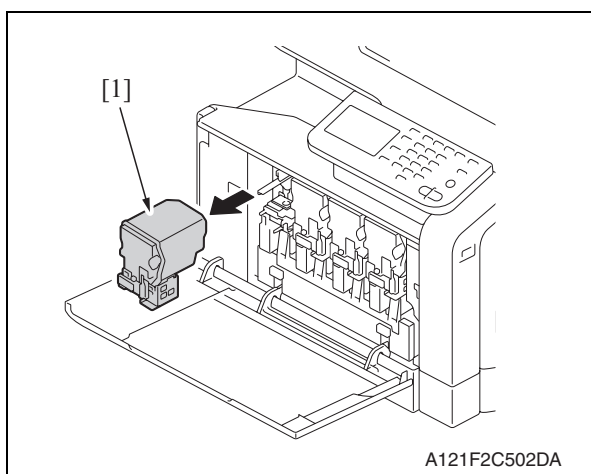
B. Removal procedure



1. Open the front cover [1].

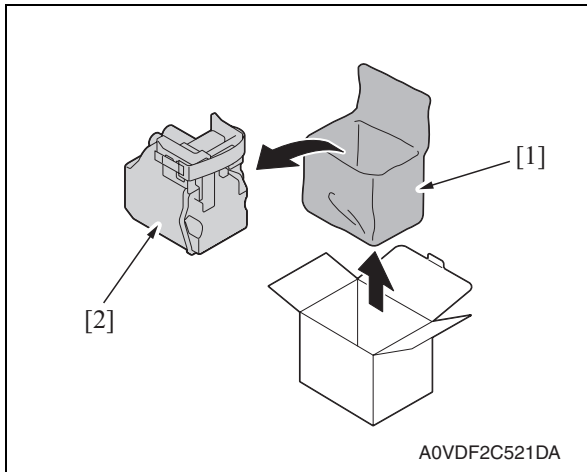


2. Slide the lock lever [1] to the left.

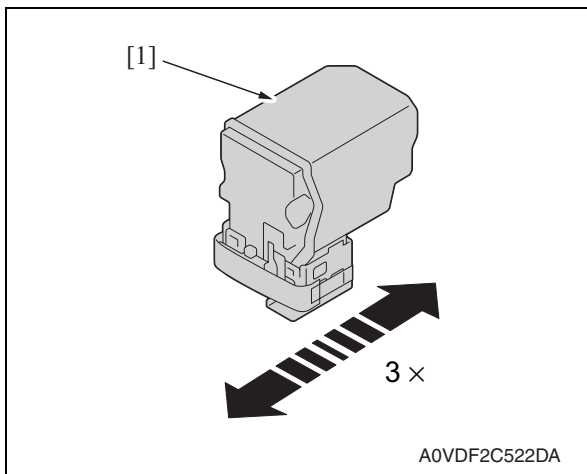


3. Grab the handle of the toner cartridge [1] to be replaced, and then pull out the toner cartridge [1].

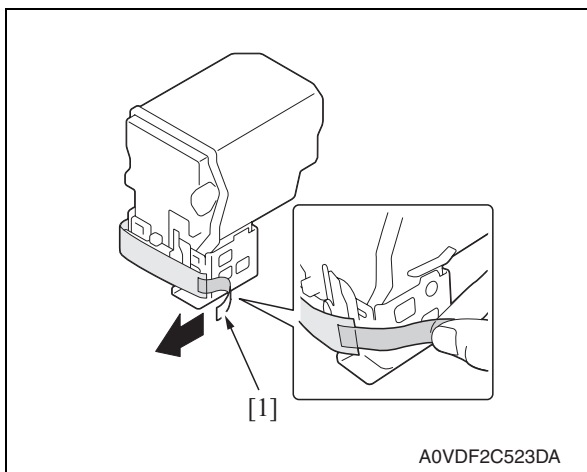
C. Reinstallation procedure



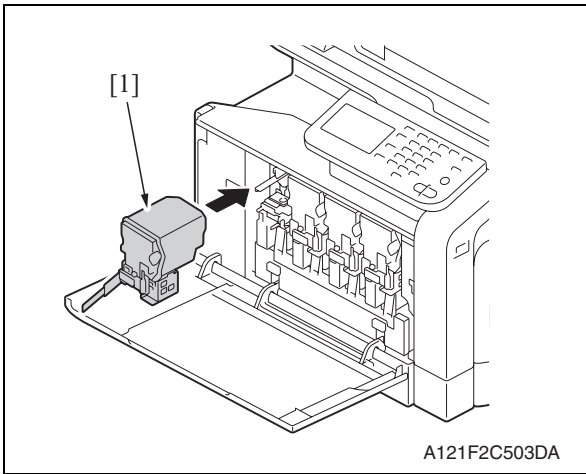
1. Take the toner cartridge [2] out of its plastic bag [1].



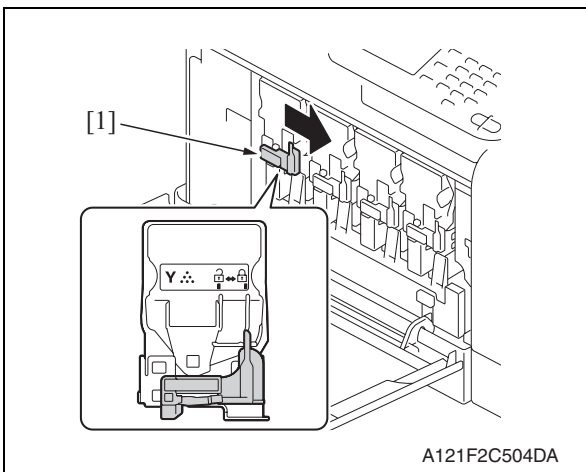
2. Gently shake the toner cartridge [1] three times to agitate the toner.



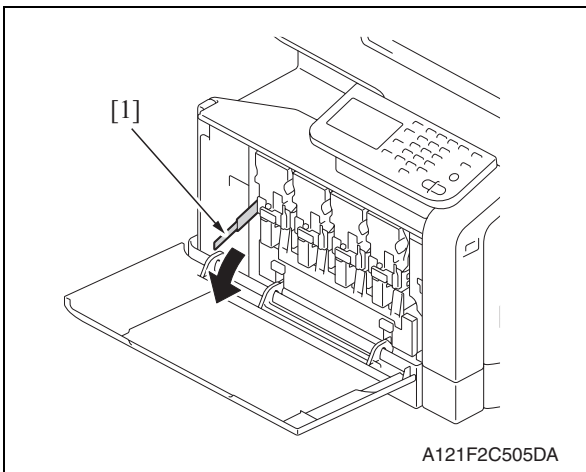
3. Peel off the protective film tape [1] from the right side of the toner cartridge.



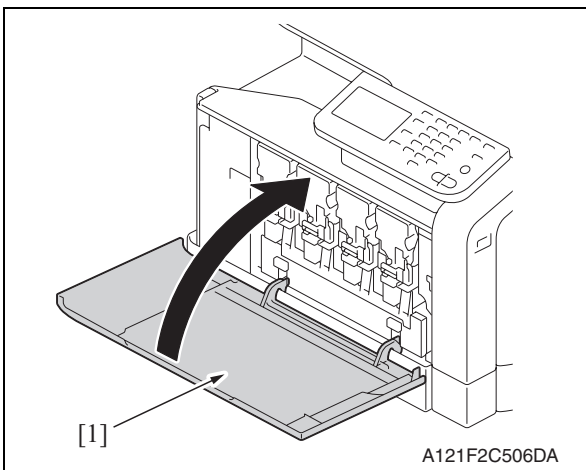
4. Insert the toner cartridge [1] into the machine.



5. Slide the lock lever [1] to the right to lock the toner cartridge.



6. Remove the protective film [1].



7. Close the front cover [1].

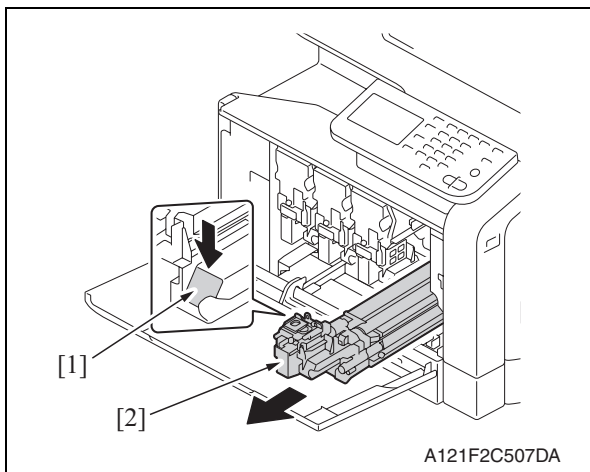
4.1.2 Replacing the imaging unit (C, M, Y, K)

A. Periodically replaced parts/cycle

- Imaging unit (C, M, Y, K): Every 30,000 counts

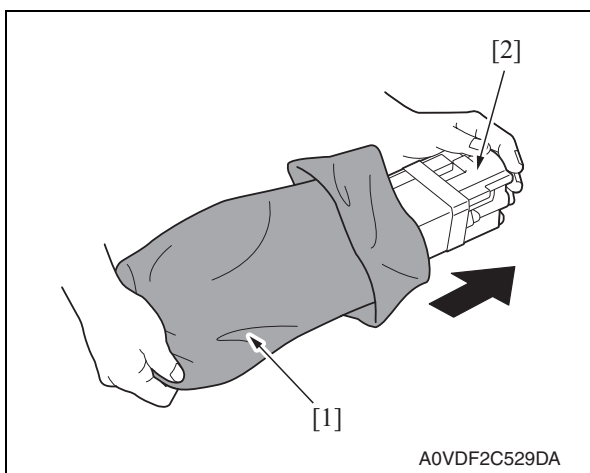
B. Removal procedure

1. Remove the toner cartridge.
[See P.8](#)
2. Remove the waste toner bottle.
[See P.14](#)

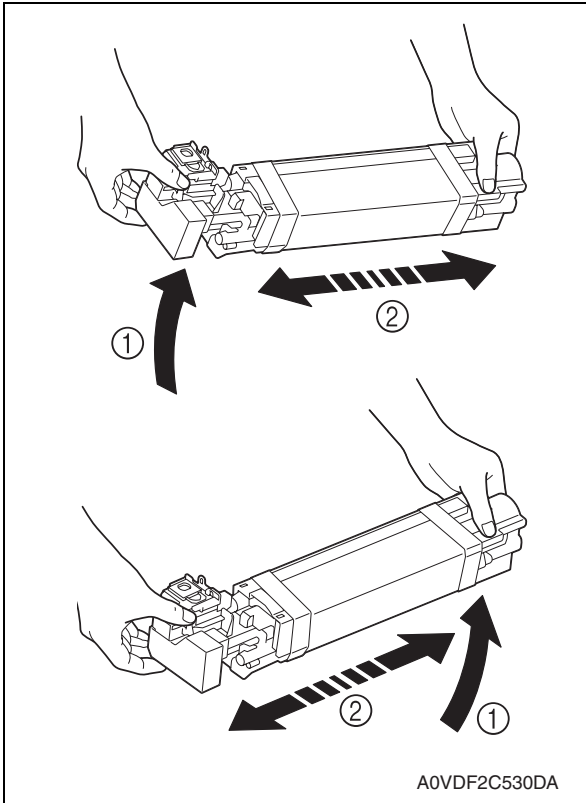


3. Press down the “Push” marked place [1].
4. Pull the imaging unit [2] out.

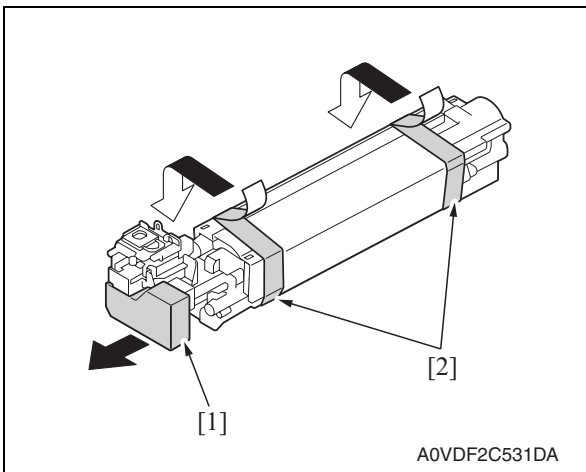
C. Reinstallation procedure



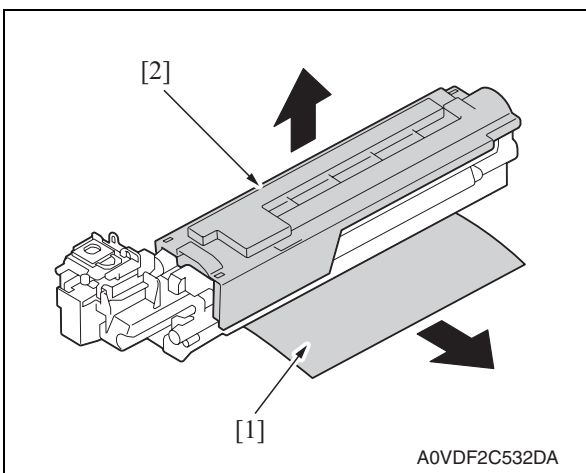
1. Take the imaging unit [2] out of the plastic bag [1].



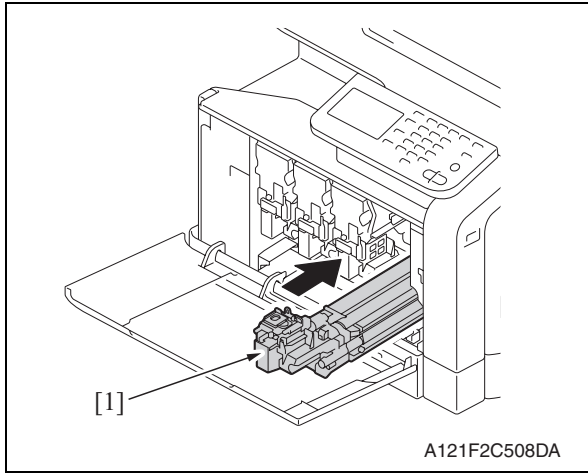
2. Hold the imaging unit with both hands, and then shake it twice as shown in the illustration.



3. Remove the protective cover [1] from the imaging unit.
4. Remove all packing tape [2] from the imaging unit.



5. Remove the paper [1] from the imaging unit.
6. Remove the protective cover [2] from the imaging unit.



7. Slide the imaging unit [1] in.

- 8. Install the waste toner bottle.
[See P.14](#)
- 9. Install the toner cartridge.
[See P.8](#)
- 10. Close the front cover.

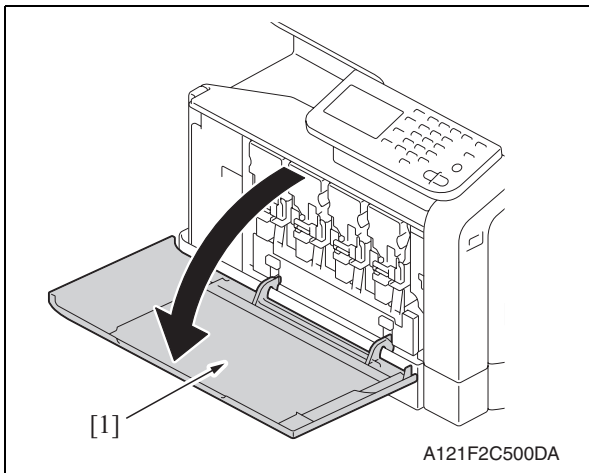
4.2 Transfer section

4.2.1 Replacing the waste toner bottle

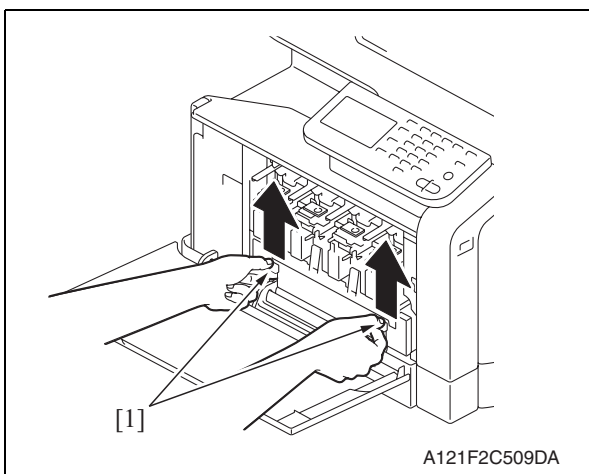
A. Periodically replaced parts/cycle

- Waste toner bottle: Every 36,000 counts (monochrome) / 9,000 counts (full color)

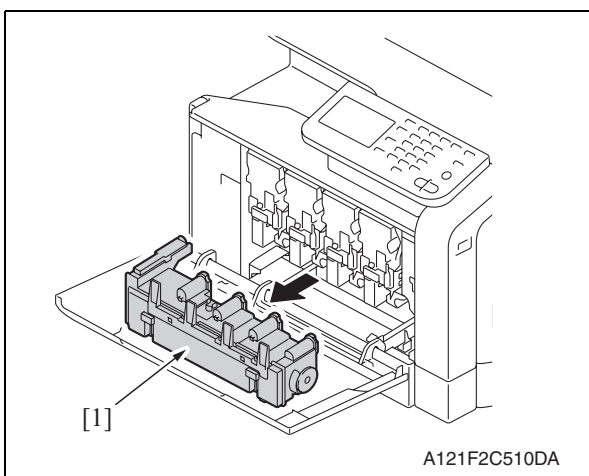
B. Removal procedure



1. Open the front cover [1].



2. Raise the left and right handles [1] to unlock the waste toner bottle.



3. Grab the left and right handles [1], remove the waste toner bottle [2].

4. To reinstall, reverse the order of removal.

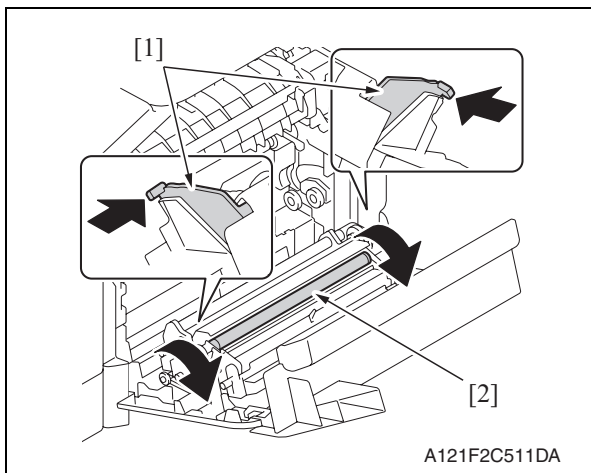
4.2.2 Replacing the transfer roller unit

A. Periodically replaced parts/cycle

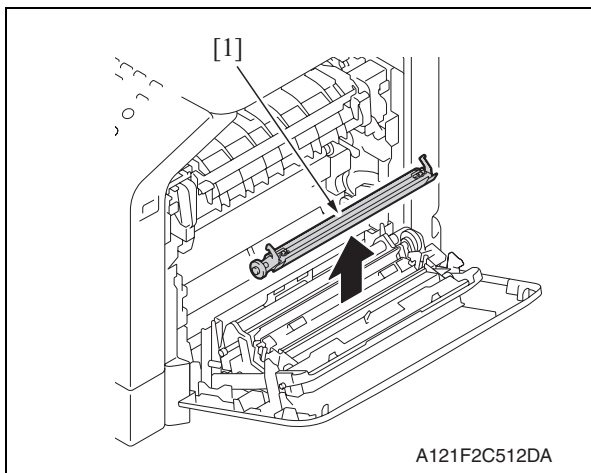
- Transfer roller unit: Every 100,000 counts

B. Removal procedure

1. Open the right door.



2. Push two levers [1] inside to unlock the transfer roller.
3. Rotate the transfer roller unit [2] in the direction of the arrow.



4. Remove the transfer roller unit [1].

5. To reinstall, reverse the order of removal.

6. From the Menu, select [Service Mode] → [Supplies] → [Consumables Replace] → [Transfer Roller Unit] and execute this function to reset the transfer roller counter value.
7. From the Menu, select [Admin Setting] → [Printer Setting] → [Quality Settings] → [Gradation Adjust] → [AIDC Process] and execute this function.

4.2.3 Replacing the transfer belt unit

A. Periodically replaced parts/cycle

- Transfer belt unit: Every 100,000 counts

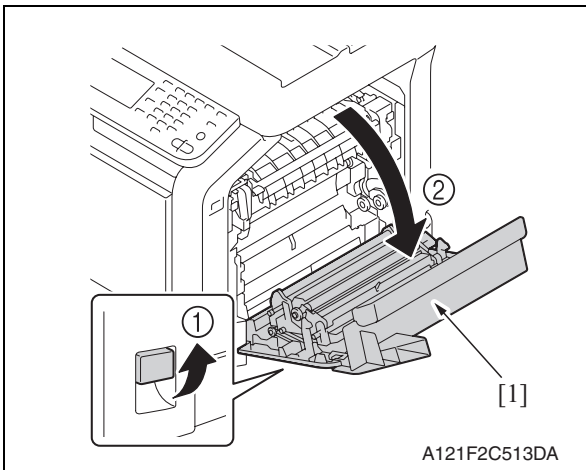
B. Replacing procedure

NOTE

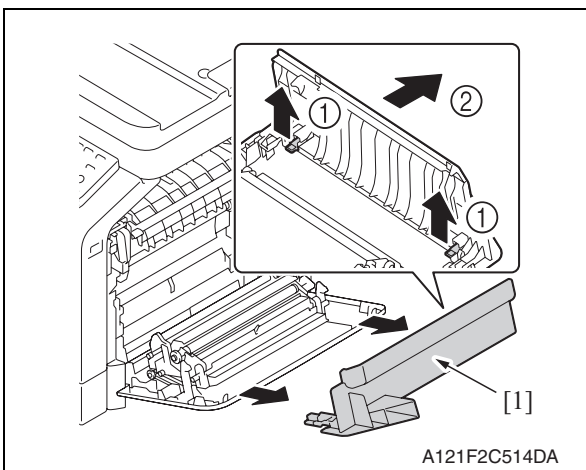
Before replacing the transfer belt unit, be sure to perform the following items so that the machine does not start to print jobs before the counter value of the transfer belt unit is reset.

- Make sure that the machine does not have print jobs and fax reception data waiting to print.
- Be sure to disconnect the USB cable, (the network cable, and the fax cable) from the machine.

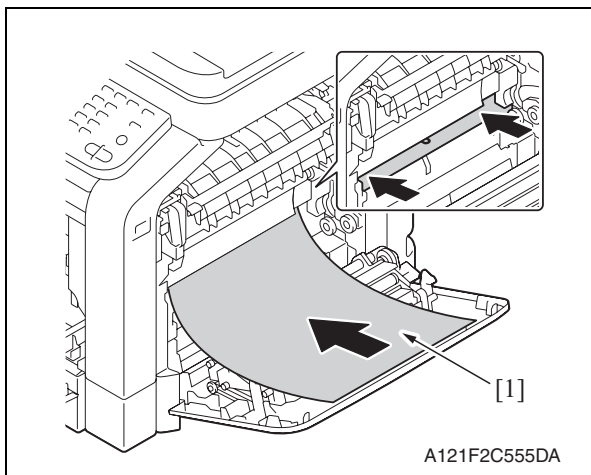
1. Turn OFF the power switch.
2. Remove the toner cartridge (C,M,Y,K).
[See P.8](#)
3. Remove the waste toner bottle.
[See P.14](#)
4. Remove the imaging unit (C,M,Y,K).
[See P.11](#)



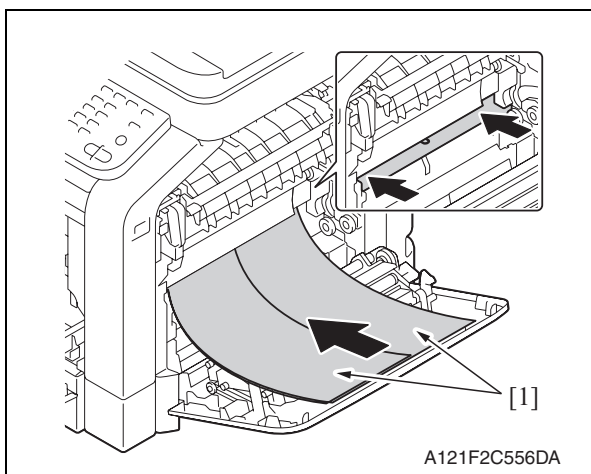
5. Open the right door [1].



6. Remove the top part [1] of the right door.

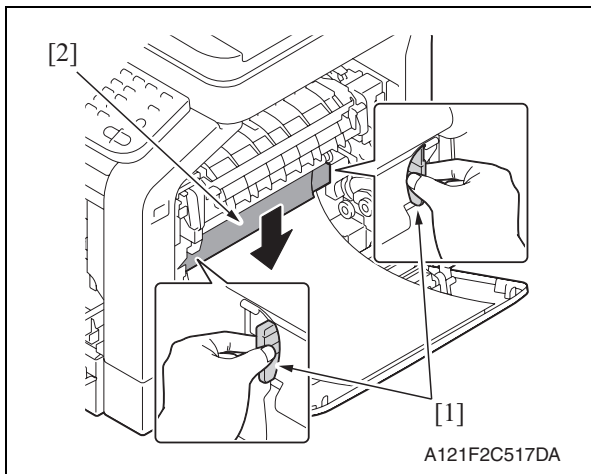


7. Completely insert the protective sheet [1] supplied with the transfer belt unit in the direction of the arrow.

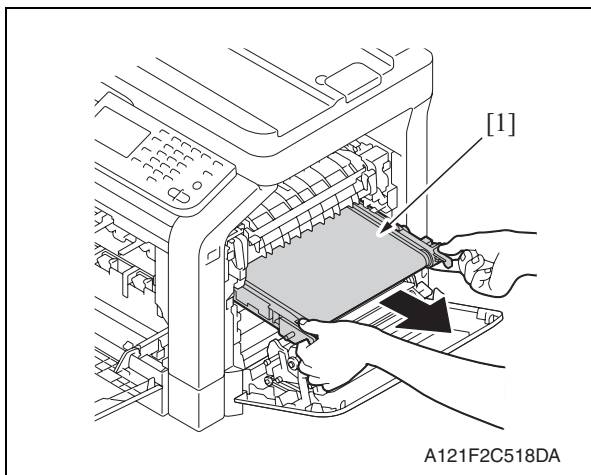


NOTE

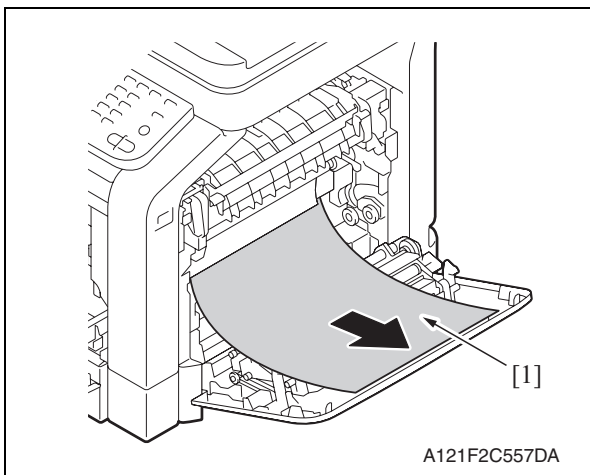
- If the protective sheet is not supplied, use two sheets of A4 or Letter paper as shown in the illustration.



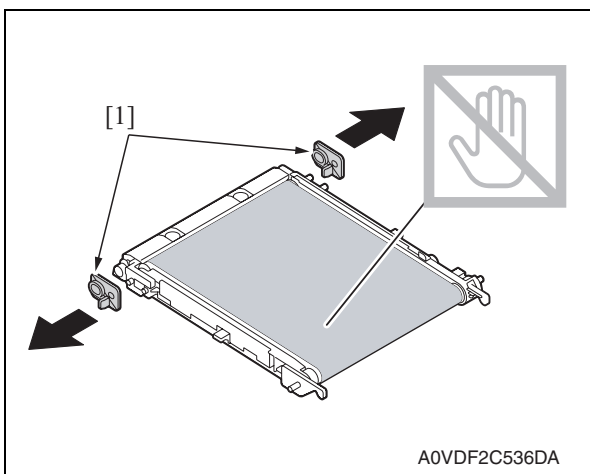
8. Hold the both handles [1] and lower the guide [2].



9. Hold the handles, and then carefully pull out the transfer belt unit [1].



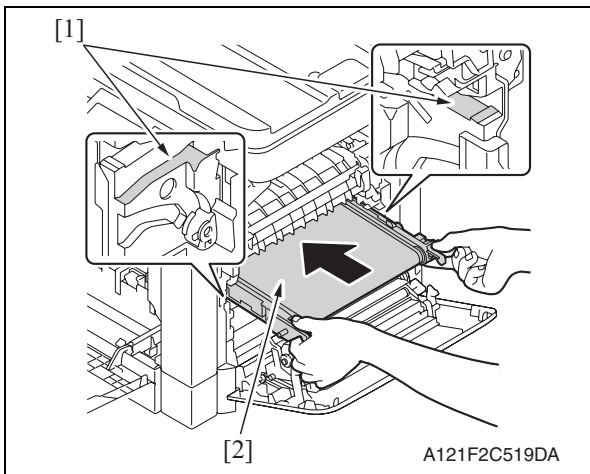
10. Pull the protective sheet [1] out.



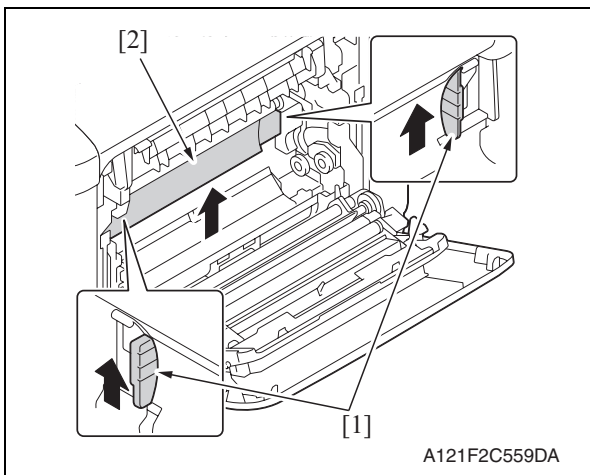
11. Remove the protective cover [1] from the new transfer belt unit.

NOTE

- Be careful not to touch the surface of the belt.



12. Insert the transfer belt unit [2] along the rail [1].



13. Hold the both handles [1] and raise the guide [2].

14. To reinstall, reverse the order of removal.
15. Turn ON the power switch.

NOTE

- **Make sure that the USB cable, (the network cable, and the fax cable) are not connected to the machine.**

16. From the Menu, select [Service Mode] → [Supplies] → [Consumables Replace] → [Transfer Belt Unit] and execute this function to reset the transfer belt unit counter value.
17. From the Menu, select [Admin Setting] → [Printer Setting] → [Quality Settings] → [Gradation Adjust] → [AIDC Process] and execute this function.
18. Connect the USB cable, (the network cable, and the fax cable) to the machine.

4.3 Fusing section

4.3.1 Replacing the fuser unit

⚠ CAUTION



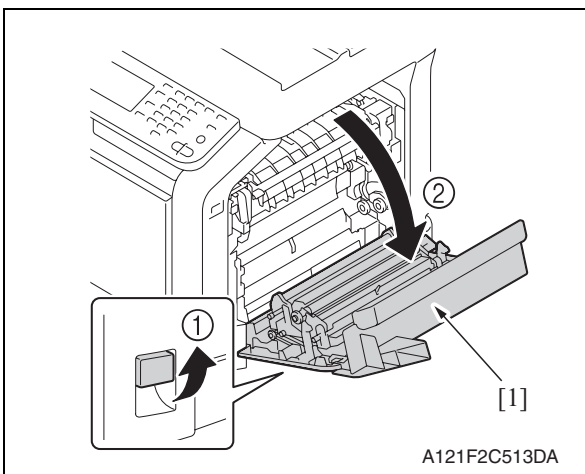
- The temperature gets high in the vicinity of the fuser unit. You may get burned when you come into contact with the area. Before replacement operations, make sure that more than 20 minutes have elapsed since the main and sub power switches were turned off.

A. Periodically replacing parts/cycle

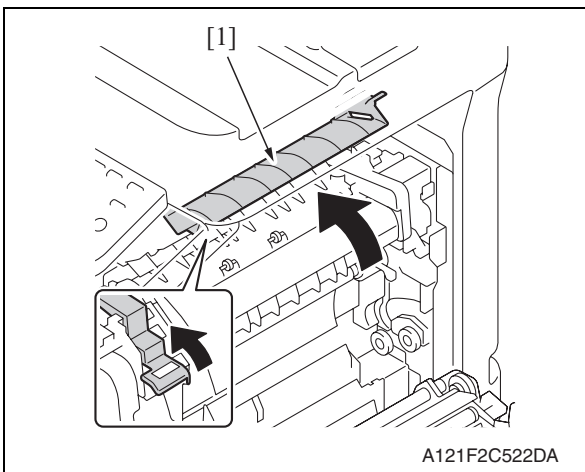
- Fuser unit: Every 100,000 counts (2P/J)

B. Procedure

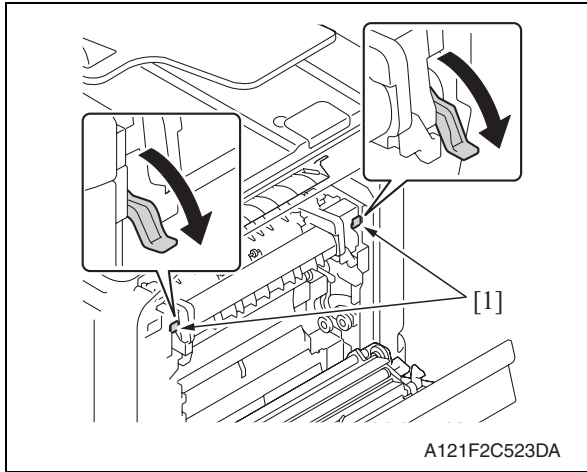
1. Turn OFF the power switch, unplug the power cord from the power outlet, and let the machine to stand idle for about 20 min.



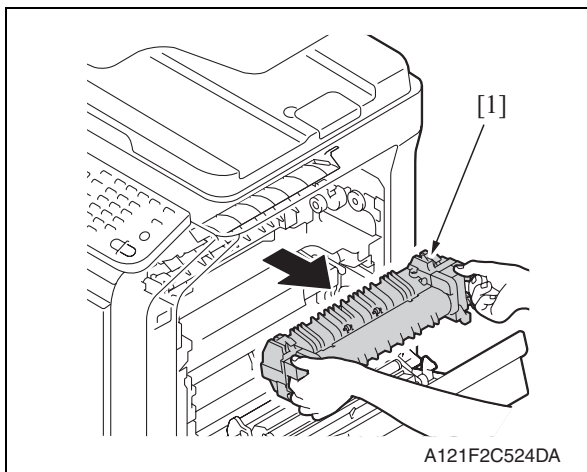
2. Open the right door [1].



3. Open the fuser unit cover [1].



4. Pull down two levers [1].



5. Remove the fuser unit [1].

6. Install the new fuser unit.

7. From the Menu, select [Service Mode] → [Supplies] → [Consumables Replace] → [Fusing Unit] and execute this function to reset the fuser unit counter value.

4.4 Feed section

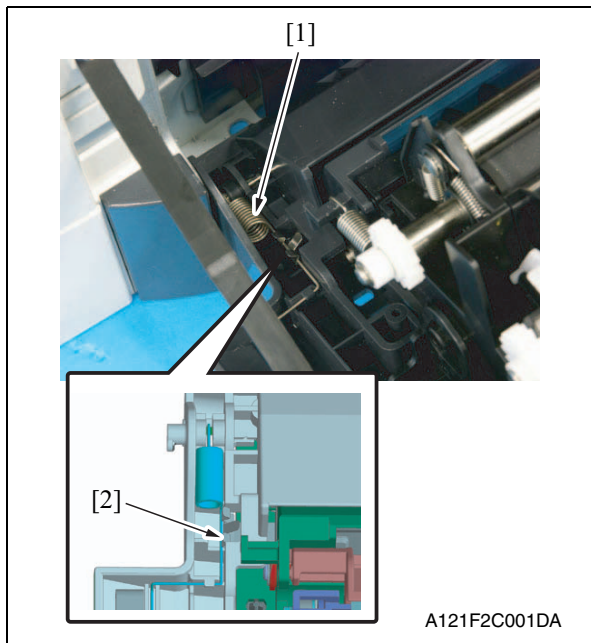
4.4.1 Replacing the tray1 feed roller

A. Periodically replaced parts/cycle

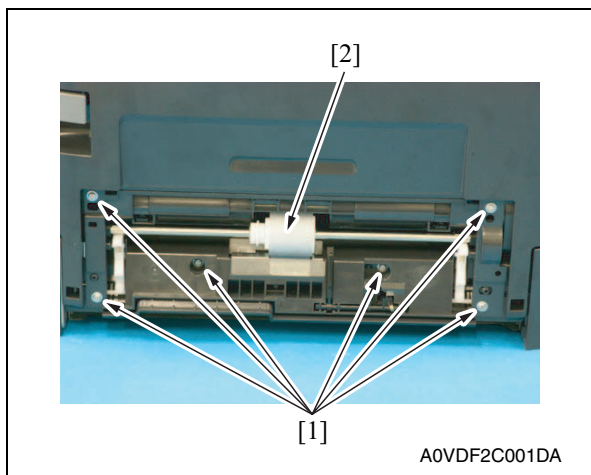
- Tray1 feed roller: Every 300,000 counts

B. Procedure

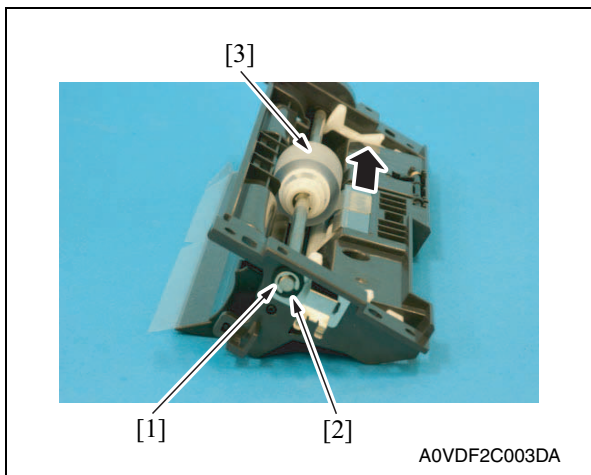
1. Remove the tray1.
[See P.54](#)
2. Open the right door.



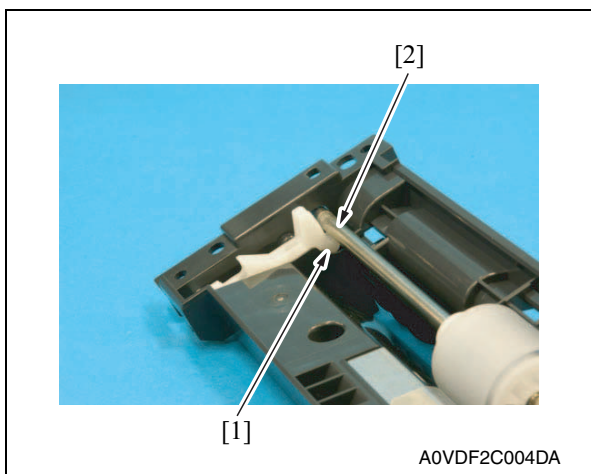
3. Detach the spring [1] from the hook [2] in order to unlock the plate.



4. Remove six screws [1], and remove the tray1 feed roller assy [2].

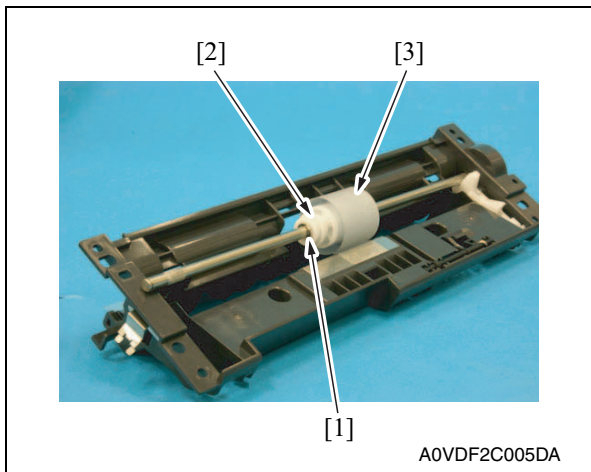


5. Remove the E-ring [1] and the bearing [2], and move the tray 1 feed roller assy [3] in the direction of the arrow.

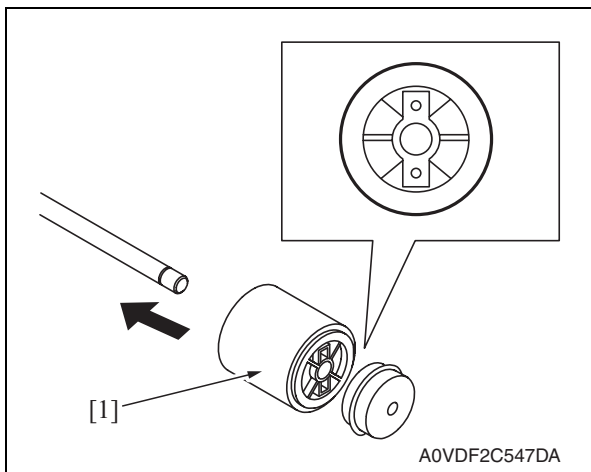


NOTE

- When reinstalling the tray 1 feed roller assy, the stopper [1] must be located under the shaft [2] as shown in the illustration.



6. Remove the E-ring [1] and mechanism clutch [2], and remove the tray1 feed roller [3].



7. To reinstall, reverse the order of removal.

NOTE

- When reinstalling the feed roller [1], make sure that it is mounted in the direction shown in the illustration on the left.

4.4.2 Replacing the tray2 feed roller

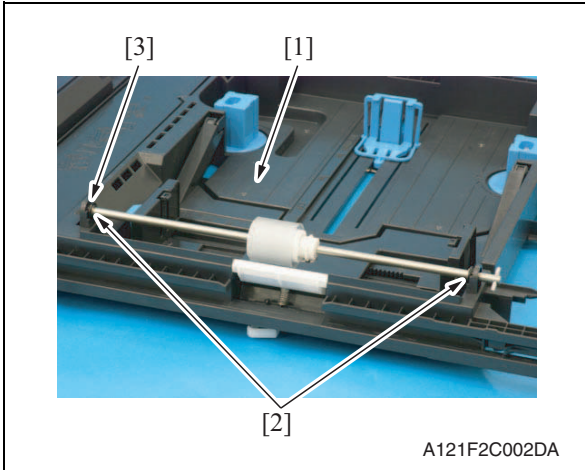
A. Periodically replaced parts/cycle

- Tray2 feed roller: Every 300,000 counts

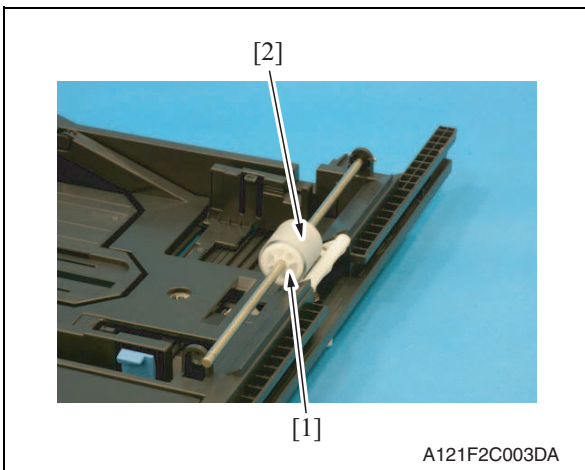
B. Procedure

1. Remove the tray2.

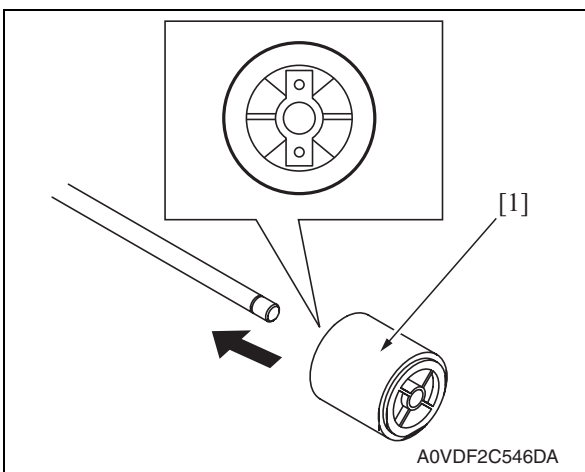
See P.55



2. Lock the media lift metal plate [1].
3. Remove two E-rings [2] and the bearing [3].



4. Remove the C-ring [1], and remove the tray2 feed roller [2].



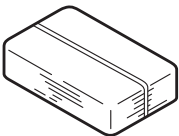

5. To reinstall, reverse the order of removal.

NOTE

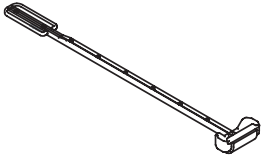
- When reinstalling the feed roller [1], make sure that it is mounted in the direction shown in the illustration on the left.

5. SERVICE TOOL

5.1 Service material list

Tool name	Shape	Material No.	Remarks
Cleaning pad	 A02EF2C526DA	000V-18-1	10pcs/1pack
Isopropyl alcohol	 A00KF2C506DA	000V-19-0	

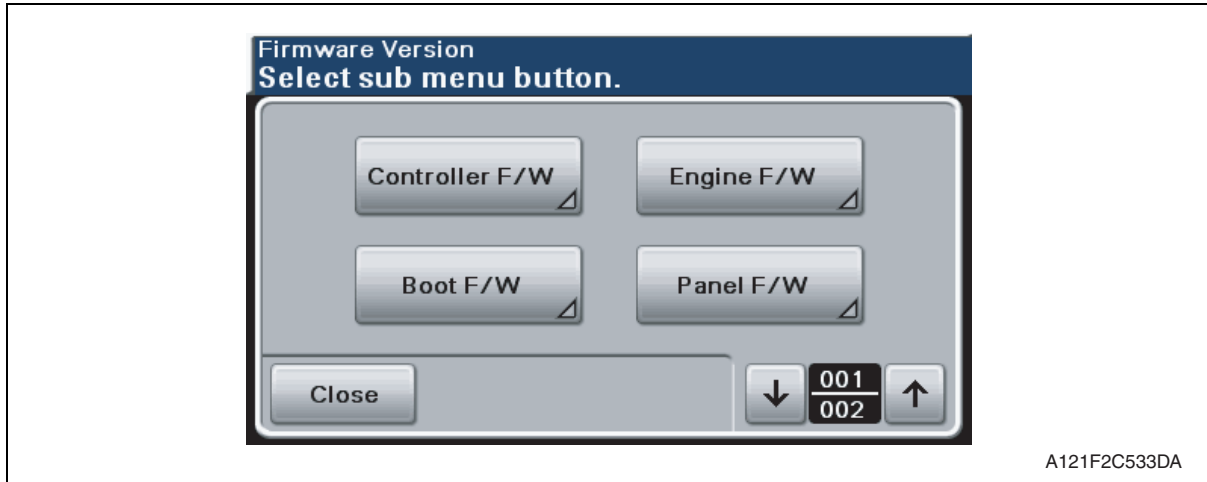
5.2 CE tool list

Tool name	Shape	Quantity	Parts No.
Laser lens cleaning tool	 A0VDF2C553DA	1	no code

6. FIRMWARE REWRITING

6.1 Checking the current firmware version

1. Display [Service Mode].
2. Display [Firmware Version].
3. Select the firmware to be updated and check the current version.



6.2 Firmware upgrading procedure by USB memory device

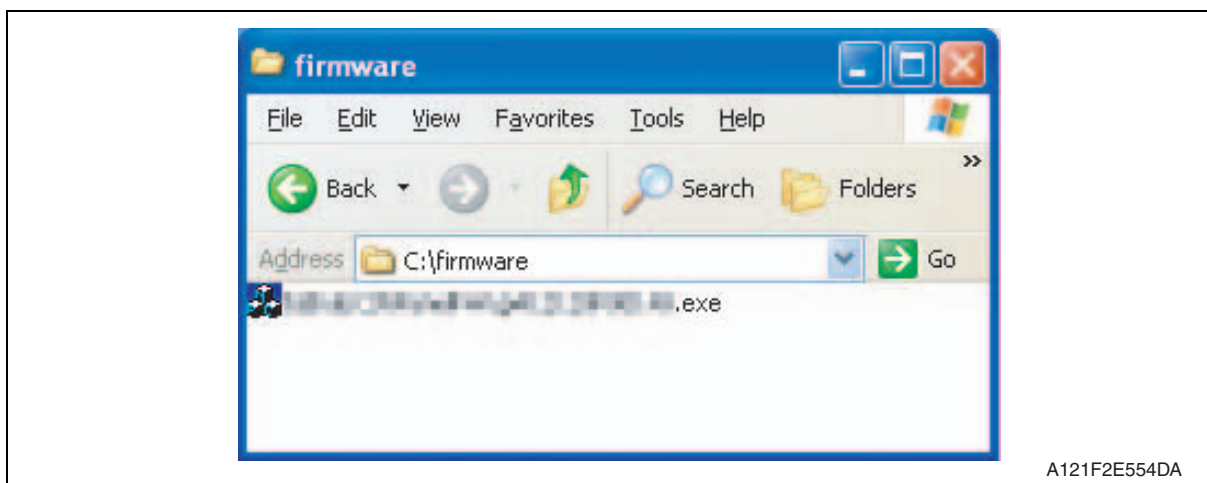
6.2.1 Preparations for firmware upgrading

A. System requirements

- PC equipped with a USB port
- USB memory device

B. Saving the firmware data into the USB memory device

1. Save the firmware data in appropriate space in the PC.
2. Connect the USB memory device to the PC.
3. Create a "firmware" folder immediately under the drive of the USB memory device.
4. Copy the firmware data (*.exe) in the firmware folder created in step 3.

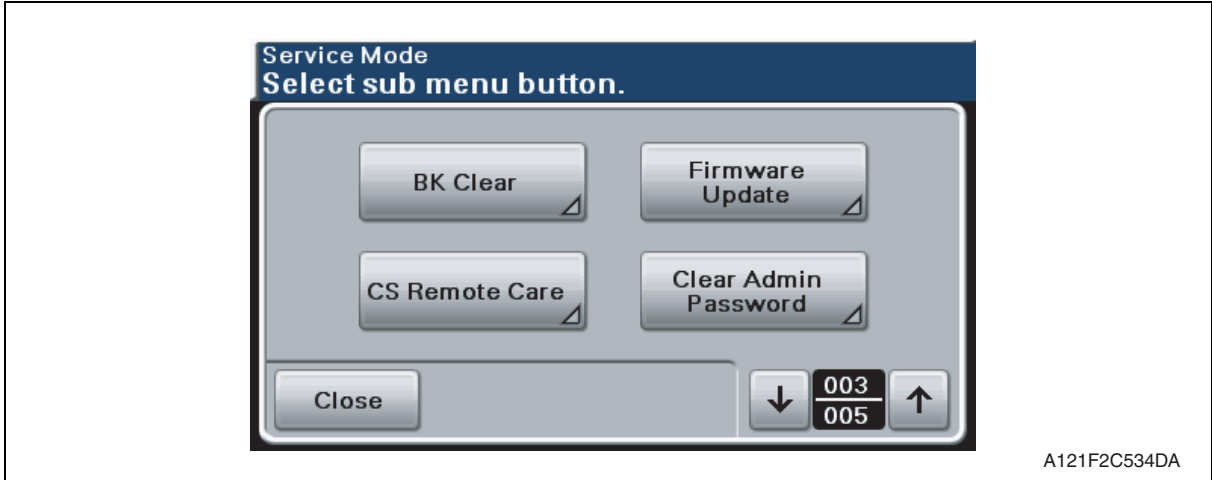


NOTE

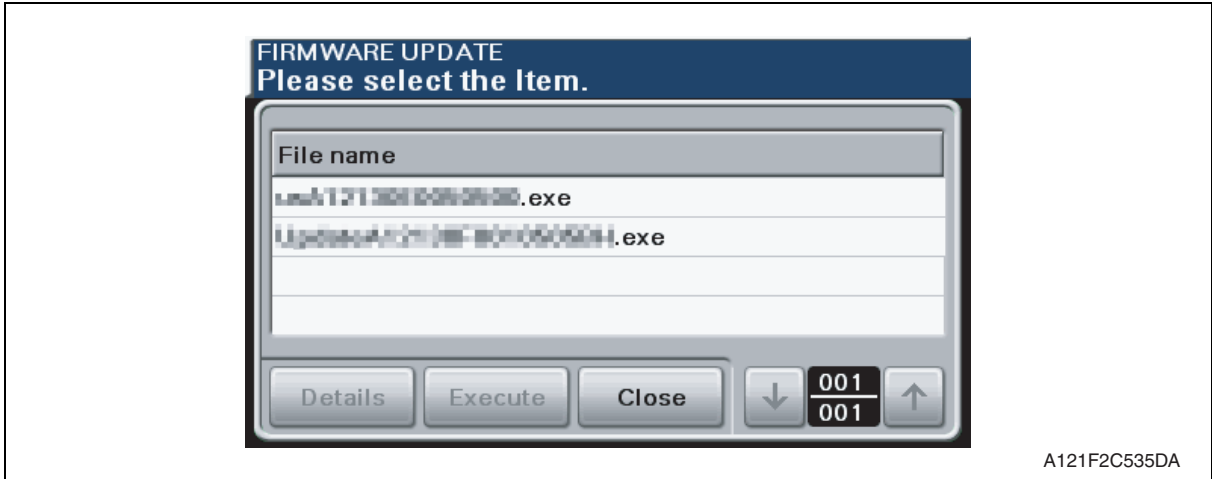
- Be sure to save the firmware data in "drive:/firmware/**/*.exe."
- The printer can display up to 20 files of firmware data during upgrading.

C. How to write firmware data

1. Turn the power switch ON.
2. Connect the USB memory device to the printer.
3. Display [Service Mode].
4. Press [Firmware Update].

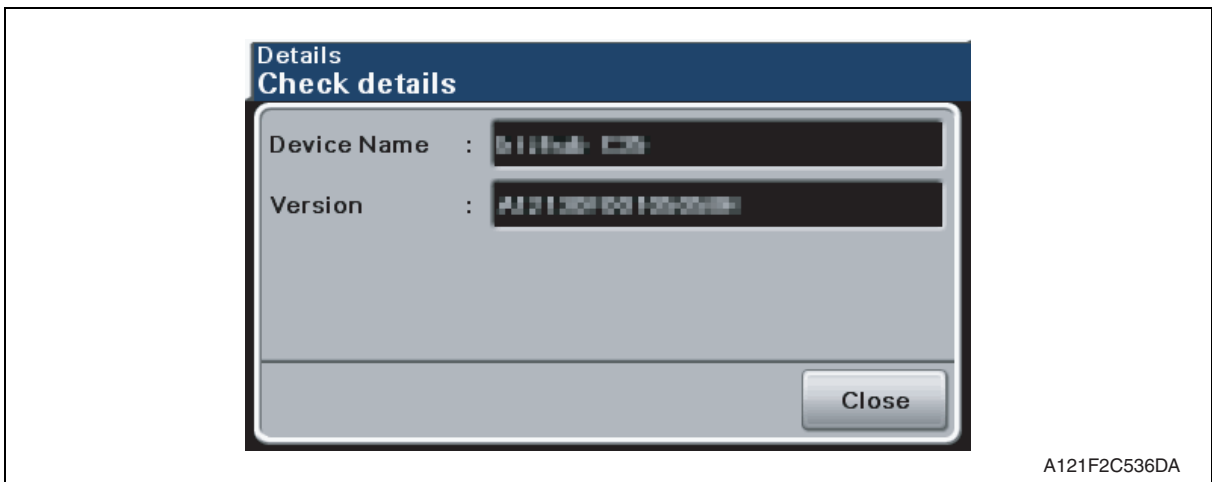


5. A list of firmware data in the USB memory device is displayed.



NOTE

- Before upgrading firmware, use [Details] to check that the firmware data is correct.



6. Press [Close].

7. Select the specific firmware data to be upgraded and press [Execute].
8. Press [OK].



9. The firmware upgrading procedure starts.

NOTE

- Do not turn off the printer while its firmware is being updated.
- NEVER disconnect the USB memory device from the printer during the firmware upgrading procedure.

10. The printer is automatically restarted as soon as the firmware is upgraded correctly.

6.3 Firmware upgrading procedure by updater

6.3.1 Updating method

- To update the firmware, perform "Firmware Updater."

A. System requirements

Computer	Windows	<ul style="list-style-type: none"> • PC with a Pentium 2, 400 MHz or faster processor (A Pentium 3, 500 MHz or faster processor is recommended.)
	Macintosh	<ul style="list-style-type: none"> • Apple Macintosh computer with a PowerPC G3 or later processor (A PowerPC G4 or later is recommended.) • Apple Macintosh computer with an Intel processor
OS	Windows	<ul style="list-style-type: none"> • Microsoft Windows XP Home Edition/Professional, Windows 2000, Windows Vista Home Basic/Home Premium/Business/Enterprise/Ultimate
	Macintosh	<ul style="list-style-type: none"> • MacOS X 10.2.8/10.3.x/10.4.x/10.5.x (We recommend installing the newest patch.)
Available hard disk space	Windows	<ul style="list-style-type: none"> • Approximately 20 to 26 MB
	Macintosh	<ul style="list-style-type: none"> • Approximately 30 to 42 MB
Memory		<ul style="list-style-type: none"> • 128 MB or more
Interface	Windows	<ul style="list-style-type: none"> • 10Base-T/100Base-TX/1000Base-T Ethernet • USB 2.0 (High Speed) compliant
	Macintosh	<ul style="list-style-type: none"> • 10Base-T/100Base-TX/1000Base-T Ethernet

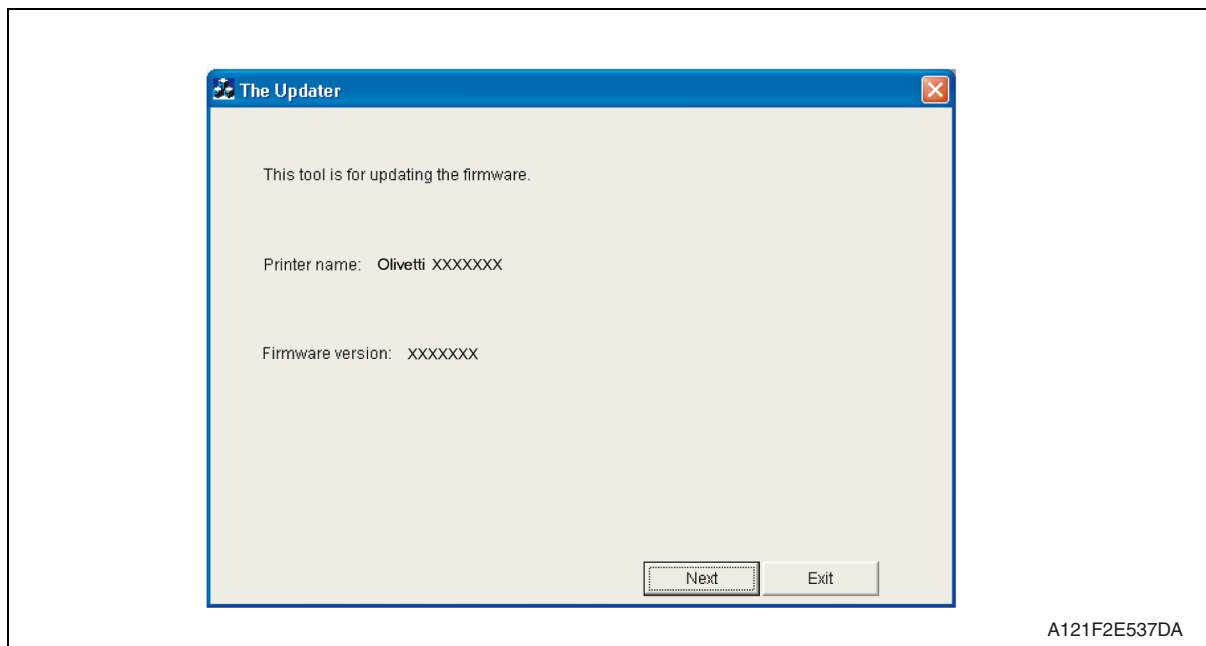
B. Connection for Windows

(1) Starting the firmware updater

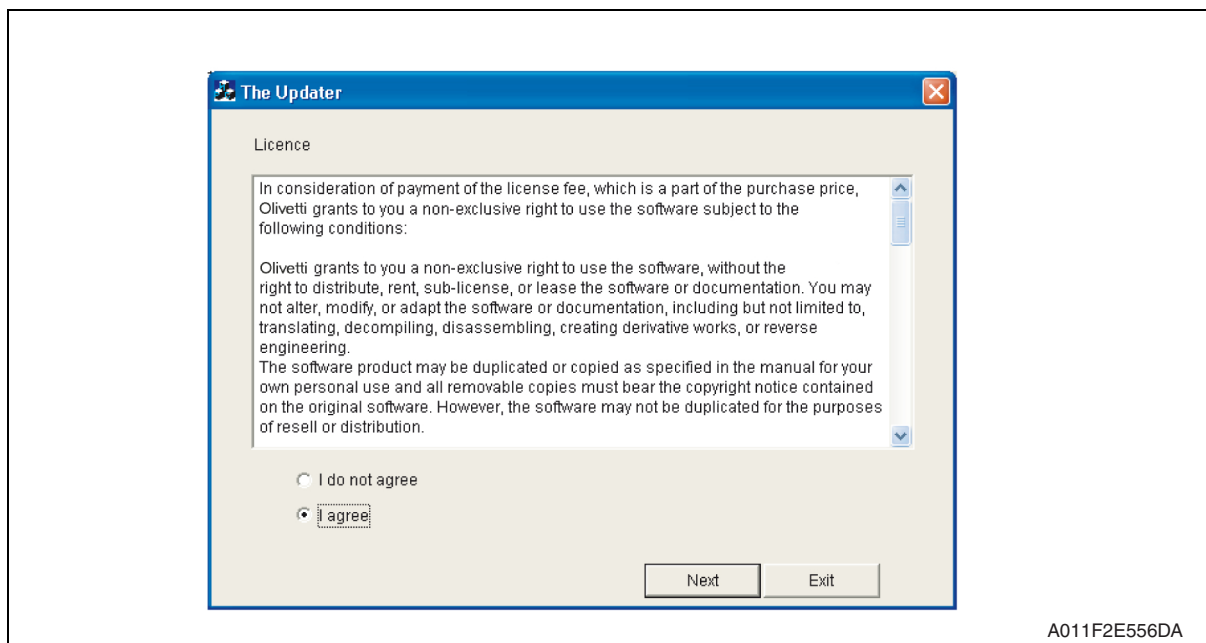
NOTE

- Before starting the firmware updater, turn on the printer, and make sure that it is correctly connected.

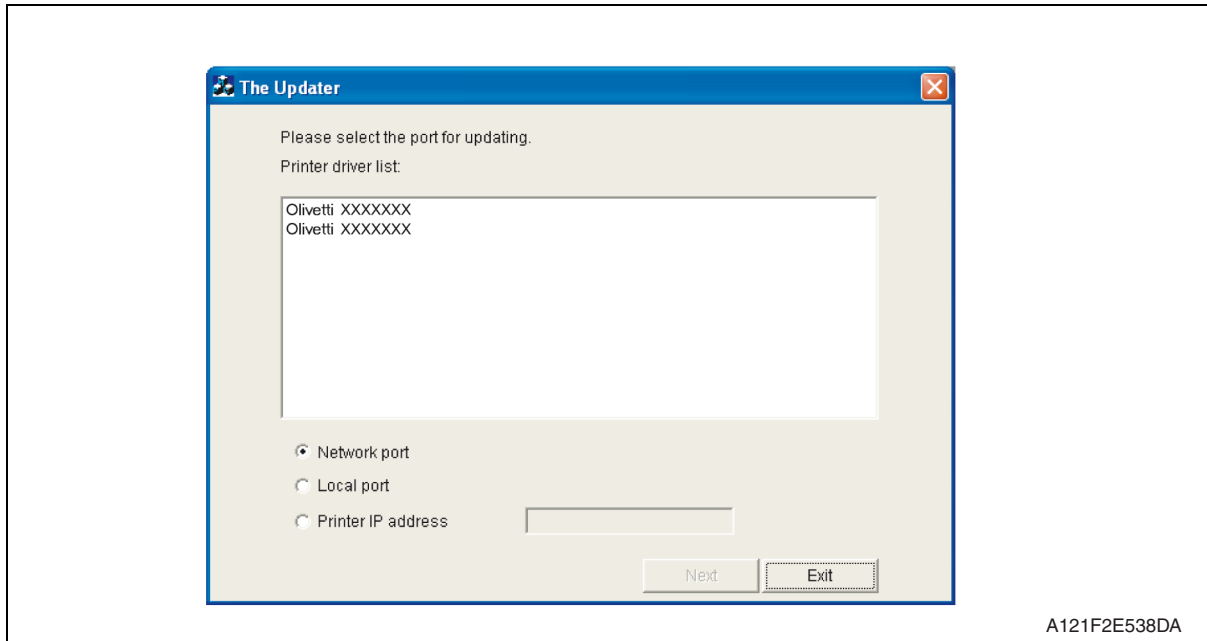
1. Download the firmware updater.
2. Double-click “xxxxxxxxxxxx.exe.”
3. The printer name and firmware version are displayed. Click the [Next].



4. The license agreement is displayed. Select “I agree”, and then click the [Next].



- The list of printer drivers is displayed. Select the appropriate connection for the environment where the printer is being used.



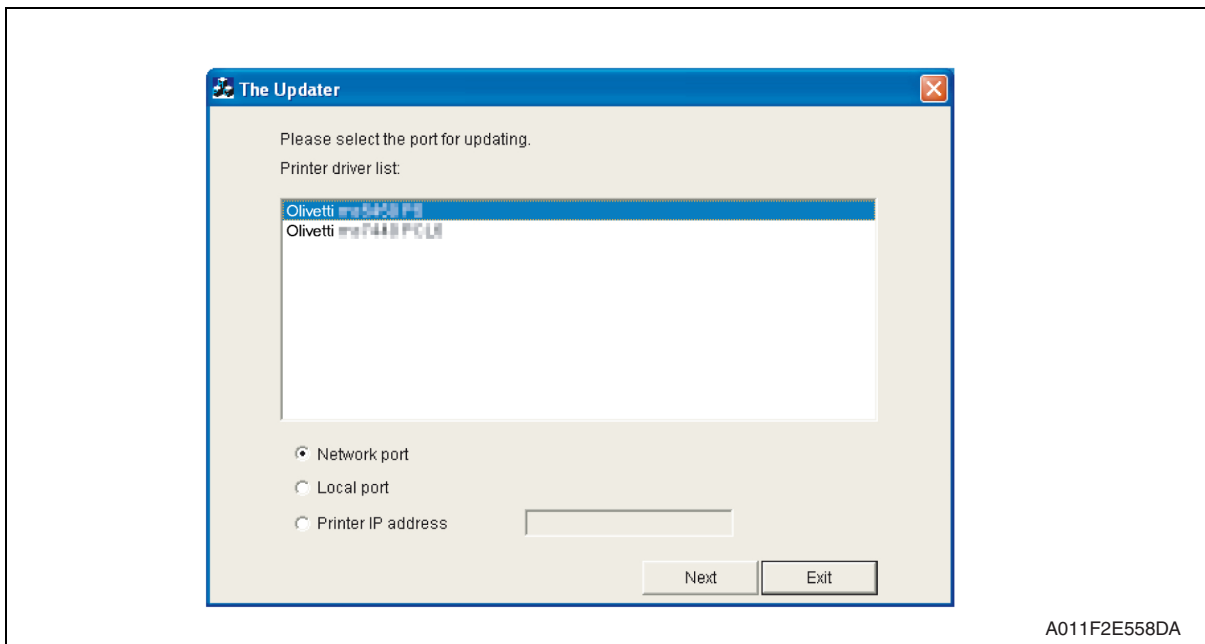
- For a network connection: Select “Network port.”
[See P.31](#)
- For a local connection: Select “Local port.”
[See P.34](#)
- When specifying the IP address of the printer: Select “Printer IP address.”
[See P.35](#)

NOTE

- If you select “Network port” or “Local port”, make sure that the printer driver has been installed.
- If you select “Printer IP address”, the firmware can be updated even if a printer driver is not already installed.

(2) For a network connection

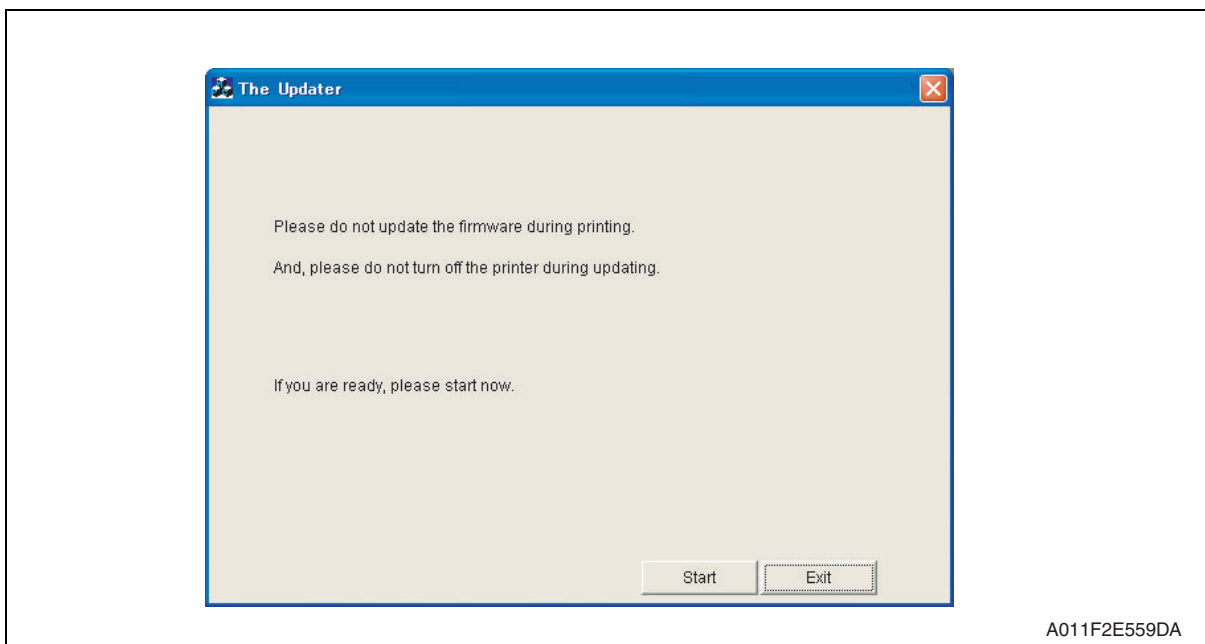
1. When “Network port” is selected, a list of printer drivers for the network port appears.
2. Select the printer driver, and then click the [Next].



3. A message appears, requesting confirmation to update the firmware. Click the [Start] to begin transferring the firmware.

NOTE

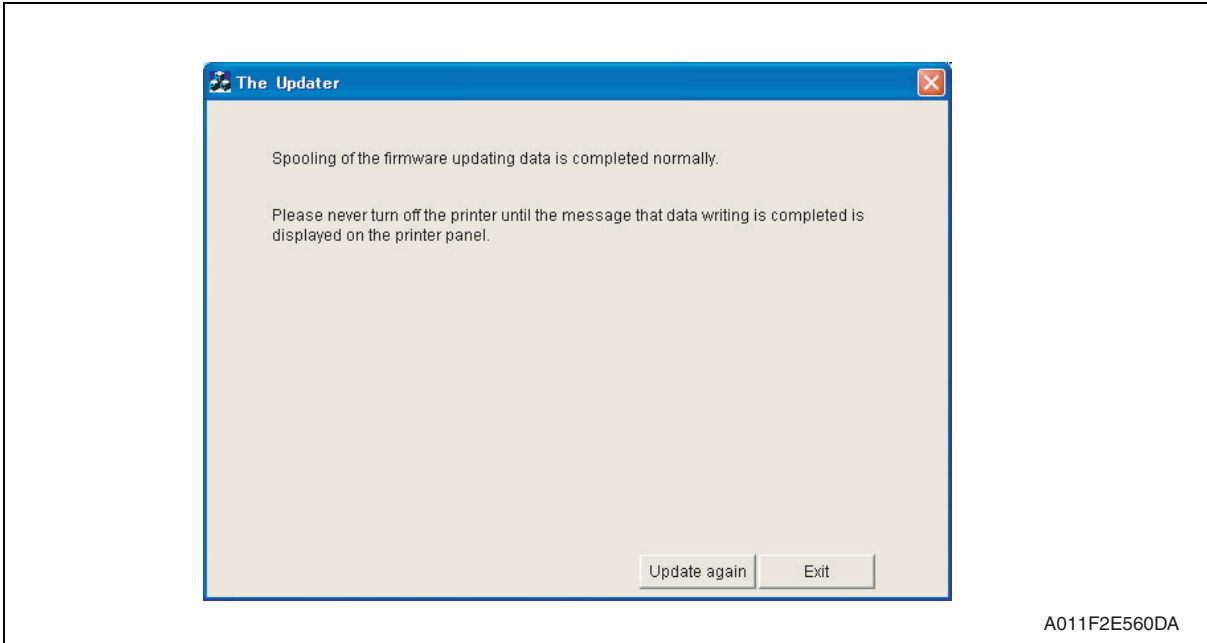
- Do not turn off the printer while its firmware is being updated.



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4. The result of the firmware transfer is displayed. Click the [Exit].



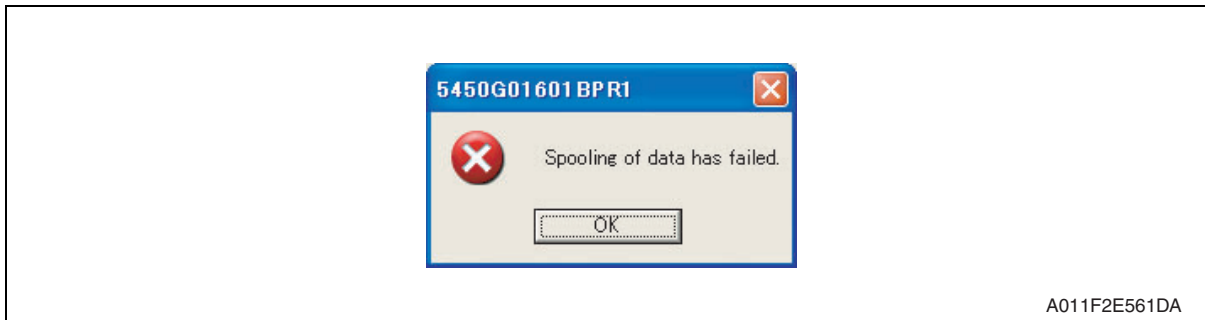
5. If the firmware was successfully updated, the printer will automatically restart.

<If spooling of the data fails>

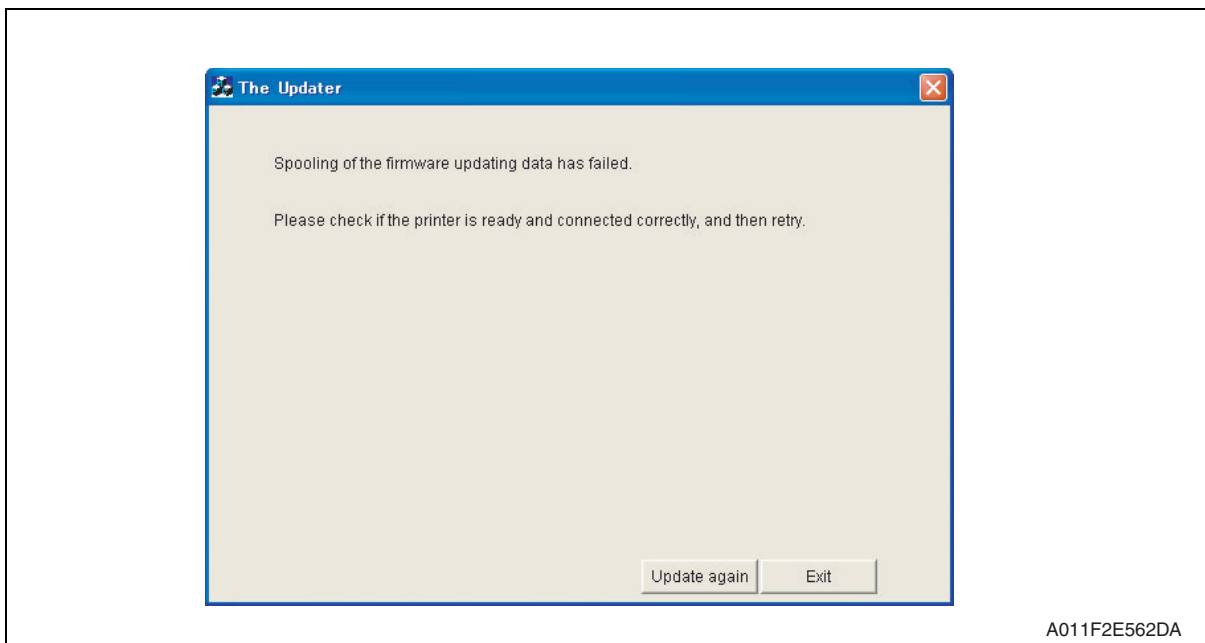
NOTE

- **If spooling fails, data may remain in the printer spooler. Delete this data, and then try again.**

1. If spooling of the data fails, the following message appears.
2. Click [OK].

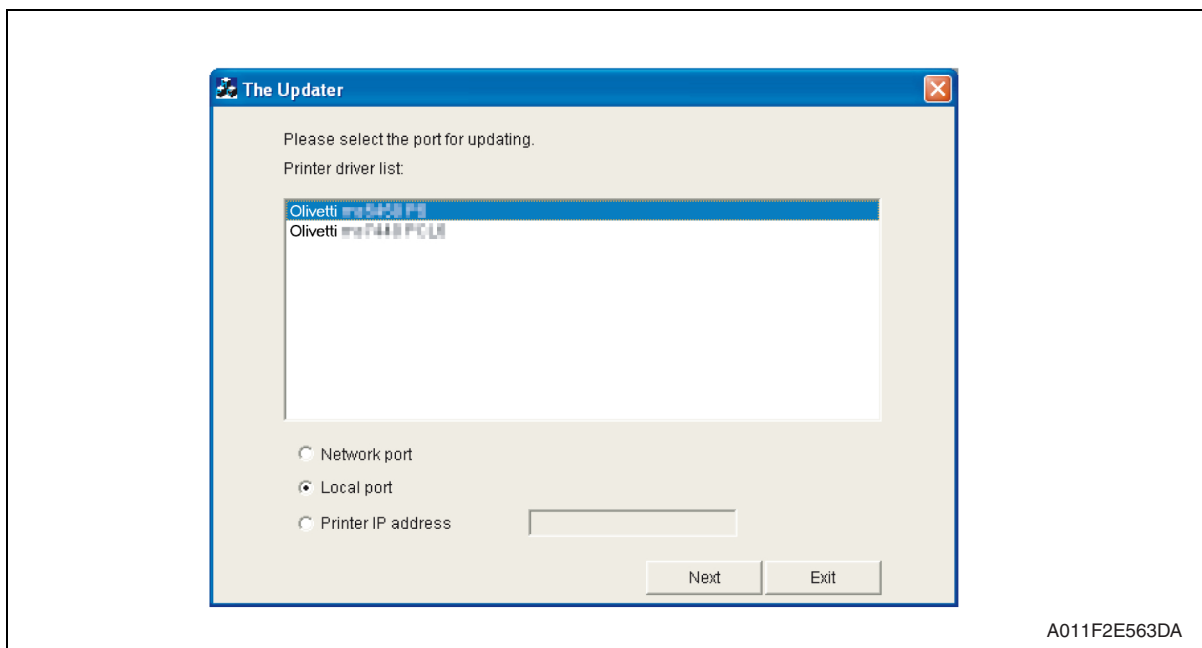


3. Check that the printer is ready and that it is correctly connected, and then click the [Update again].



(3) For a local connection

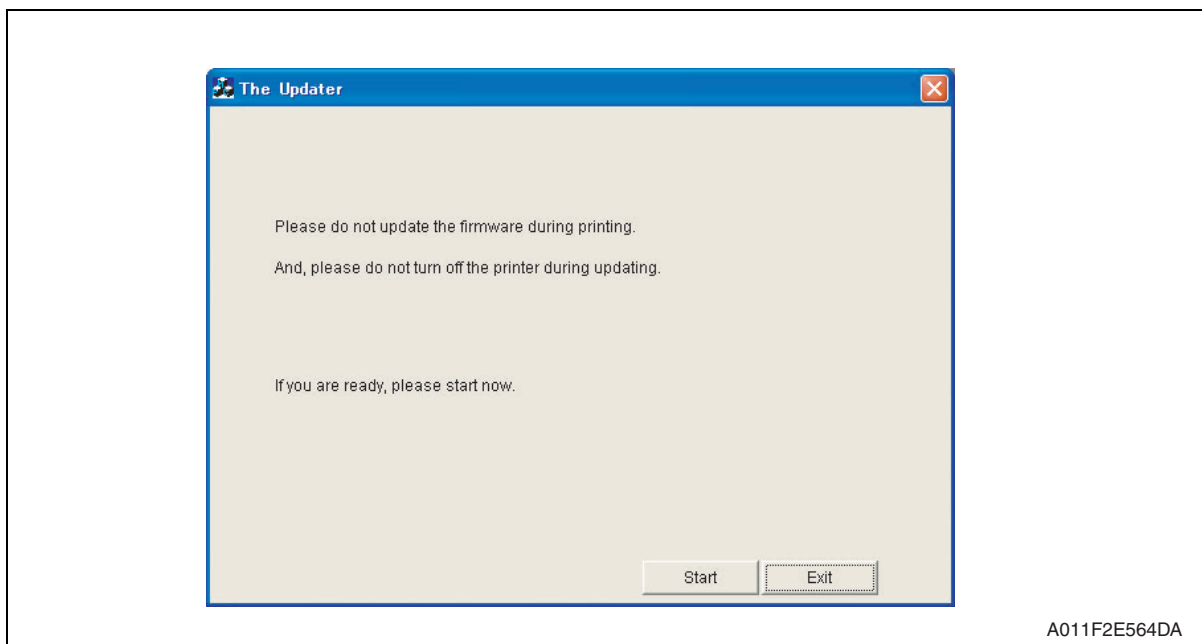
1. When “Local port” is selected, a list of printer drivers for the local port appears.
2. Select the printer driver, and then click the [Next].



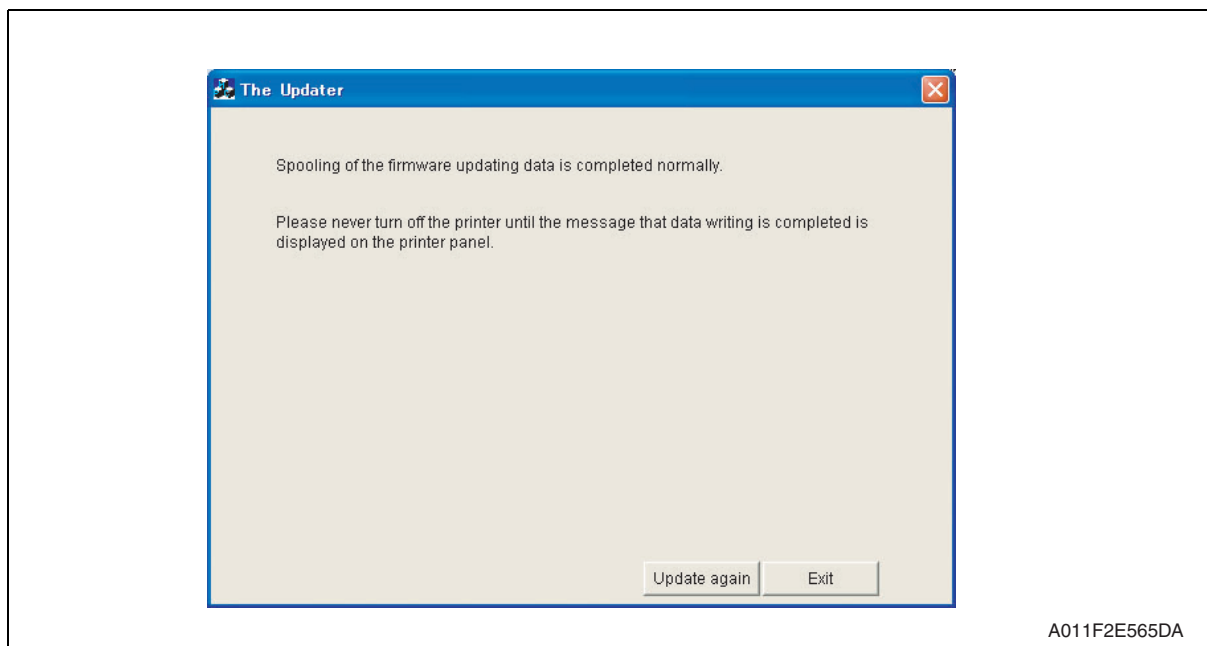
3. A message appears, requesting confirmation to update the firmware. Click the [Start] to begin transferring the firmware.

NOTE

- Do not turn off the printer while its firmware is being updated.



- 4. The result of the firmware transfer is displayed. Click the [Exit].



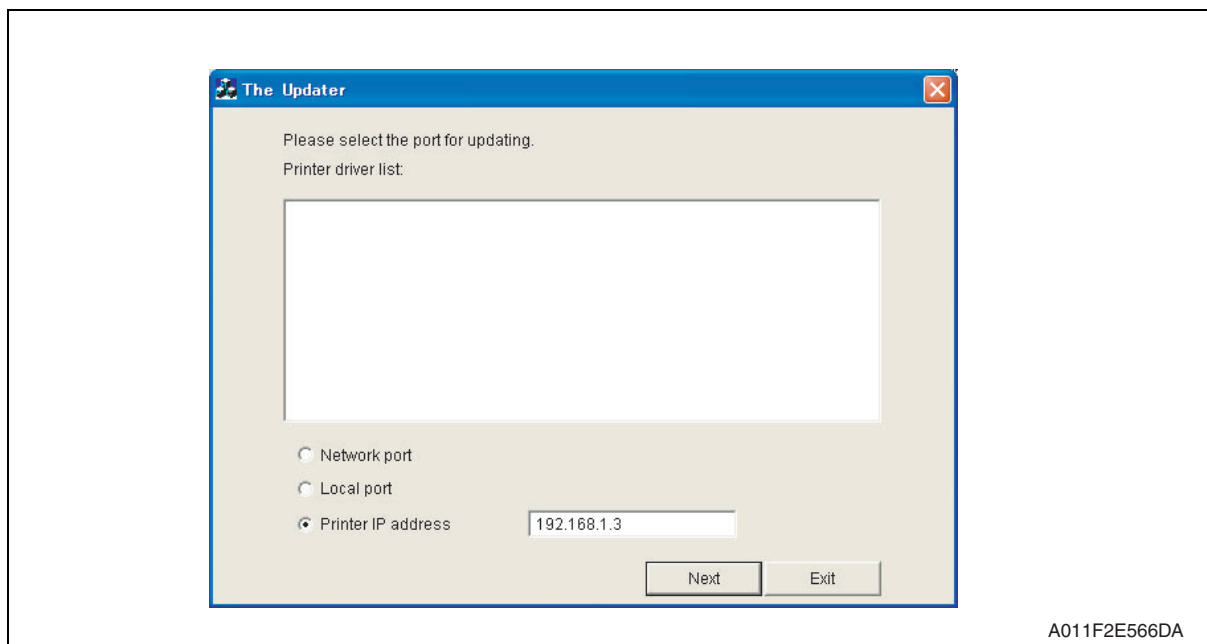
- 5. If the firmware was successfully updated, the printer will automatically restart.

<If spooling of the data fails>

For details, see [“For a network connection.”](#)
See P.33

(4) When specifying the IP address of the printer

- 1. When “Printer IP address” is selected, the “Printer IP address” box becomes available.
- 2. Type in the IP address, and then click the [Next].



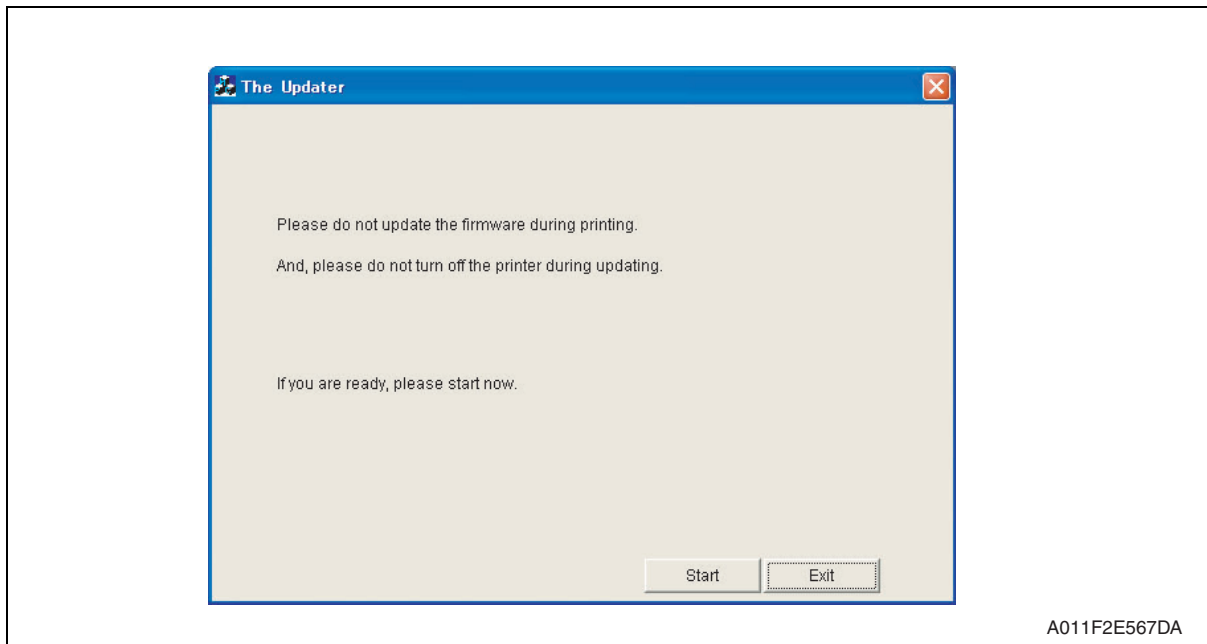
d-Color MF3000

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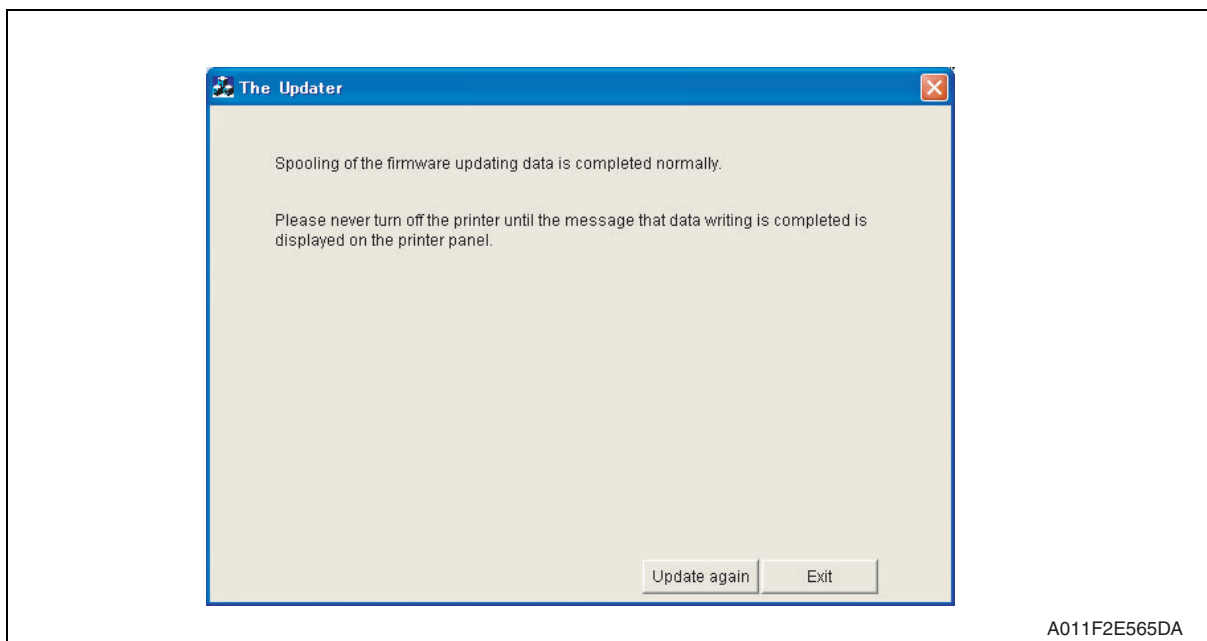
3. A message appears, requesting confirmation to update the firmware. Click the [Start] to begin transferring the firmware.

NOTE

- **Do not turn off the printer while its firmware is being updated.**



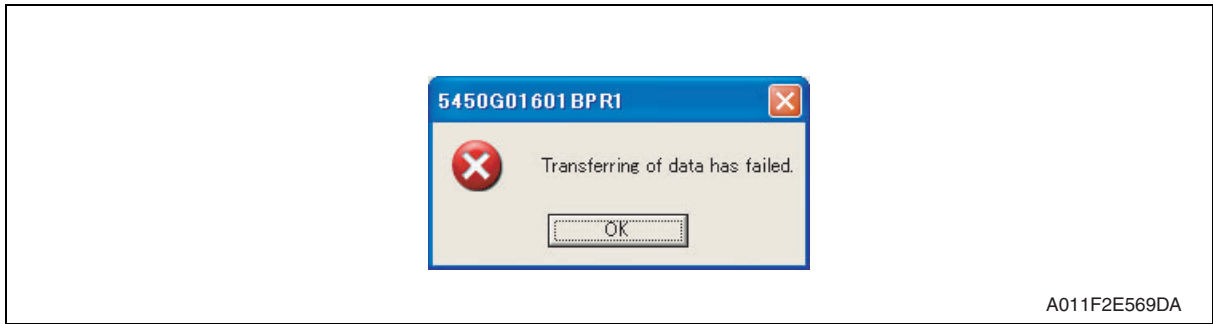
4. The result of the firmware transfer is displayed. Click the [Exit].



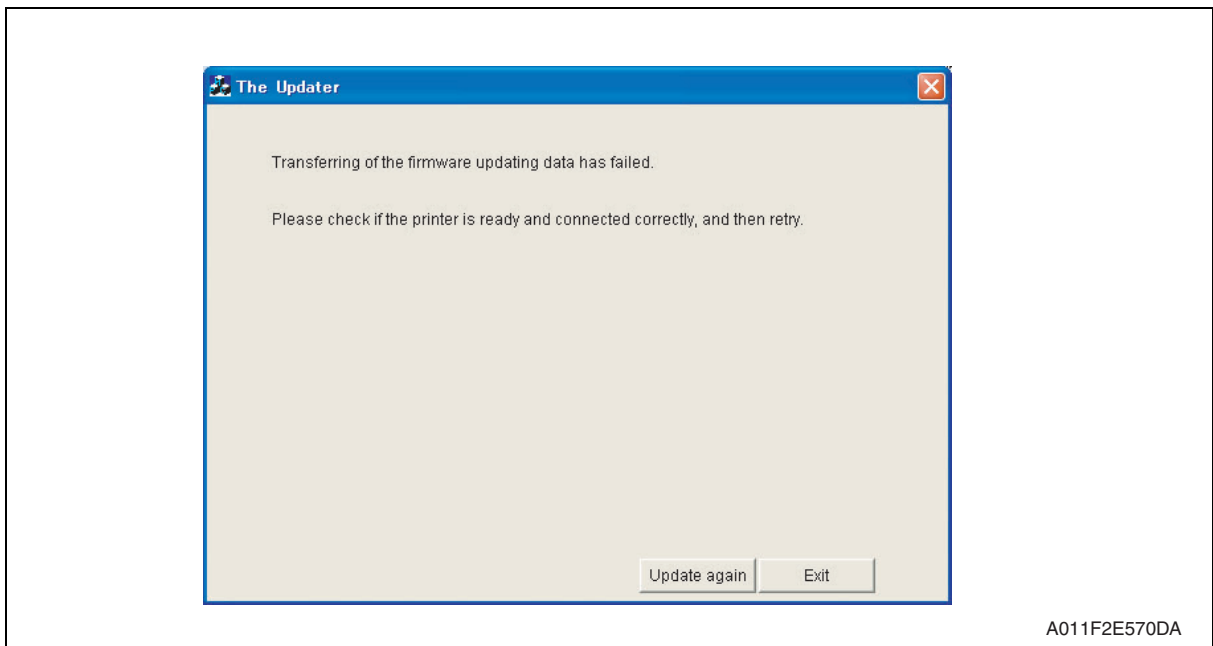
5. If the firmware was successfully updated, the printer will automatically restart.

<If transferring of the data fails>

1. If transferring of the data fails, the following message appears.
2. Click [OK].



3. Check that the printer is ready and that it is correctly connected, and then click the [Update again].



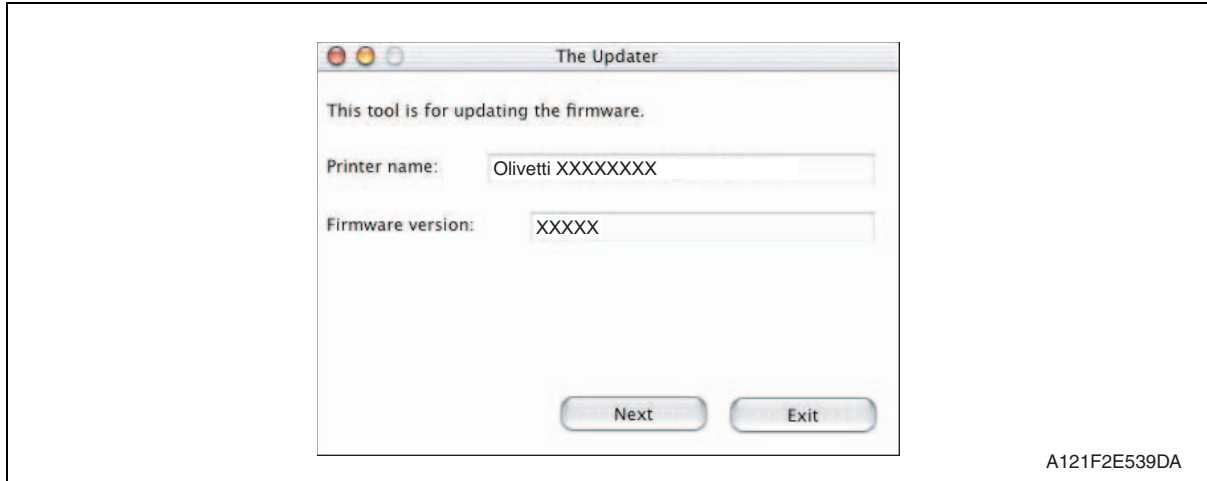
C. Connection for Macintosh

(1) Starting the firmware updater and the updating procedure

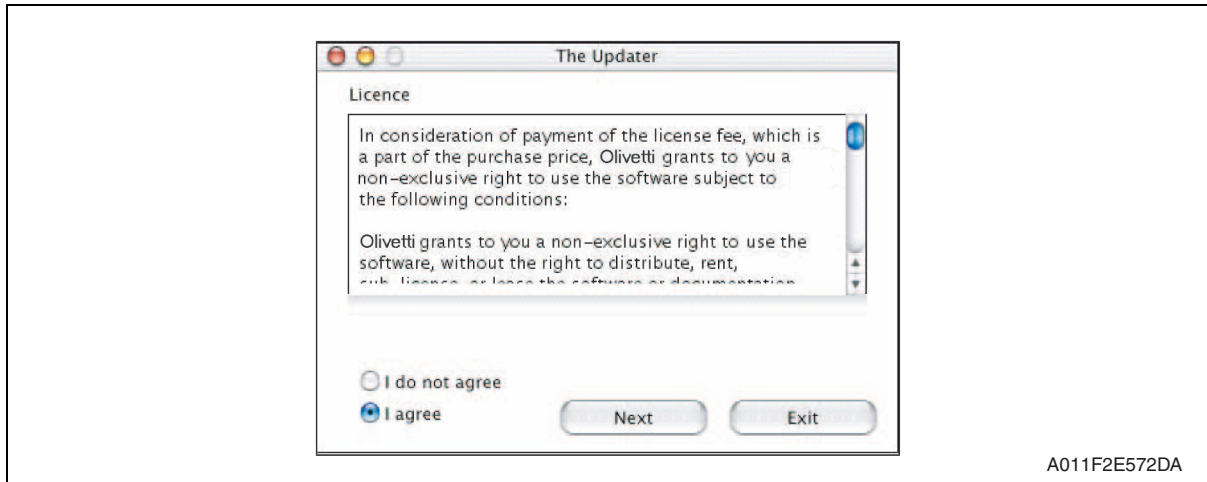
NOTE

- Before starting the firmware updater, turn on the printer, and make sure that it is correctly connected.

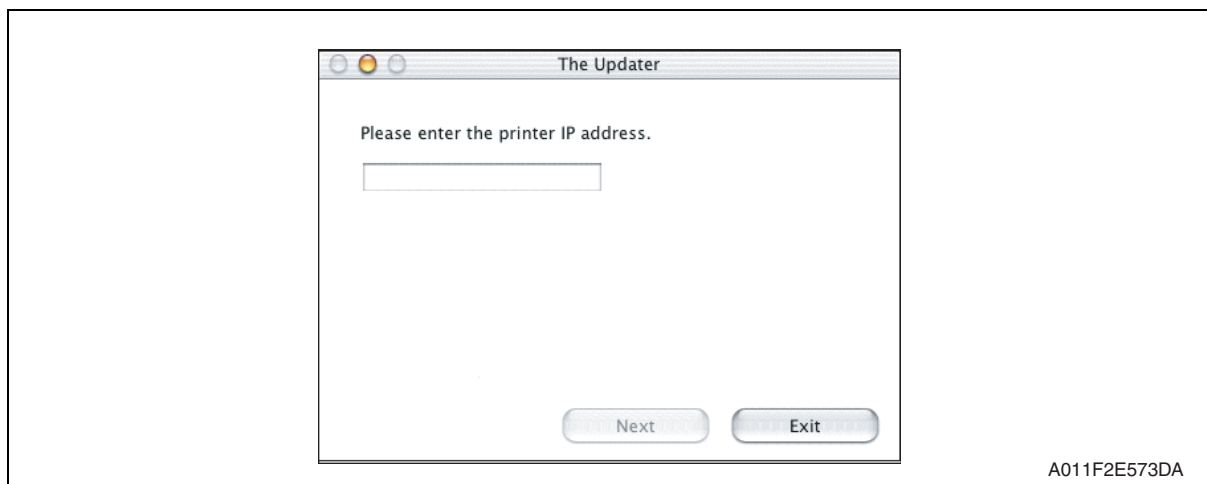
1. Download the firmware updater.
2. Double-click “xxxxxxxxxxxxx.”
3. The printer name and firmware version are displayed. Click the [Next].



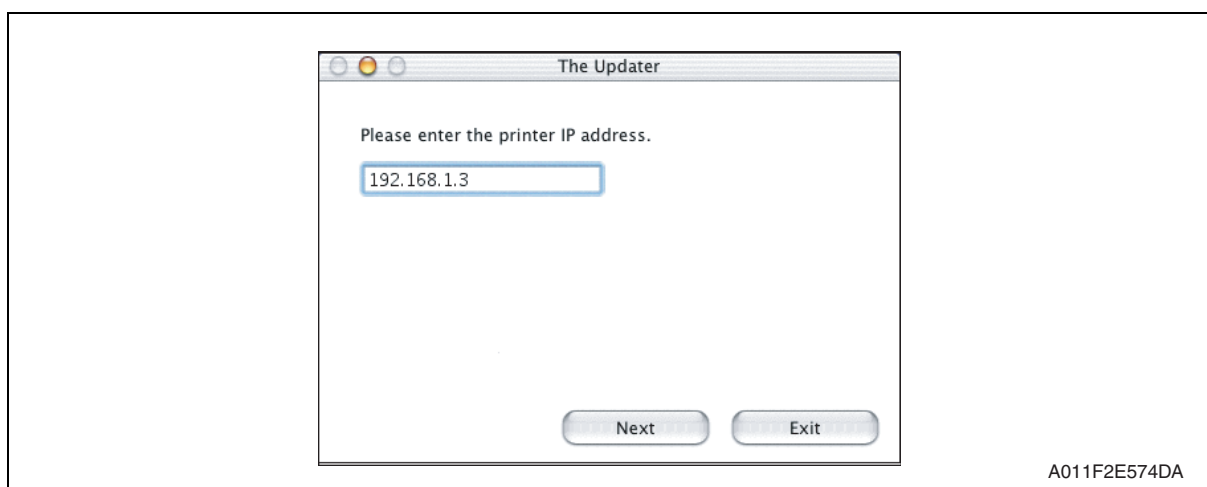
4. The license agreement is displayed. Select “I agree”, and then click the [Next].



- 5. The screen for specifying the IP address of the printer appears.



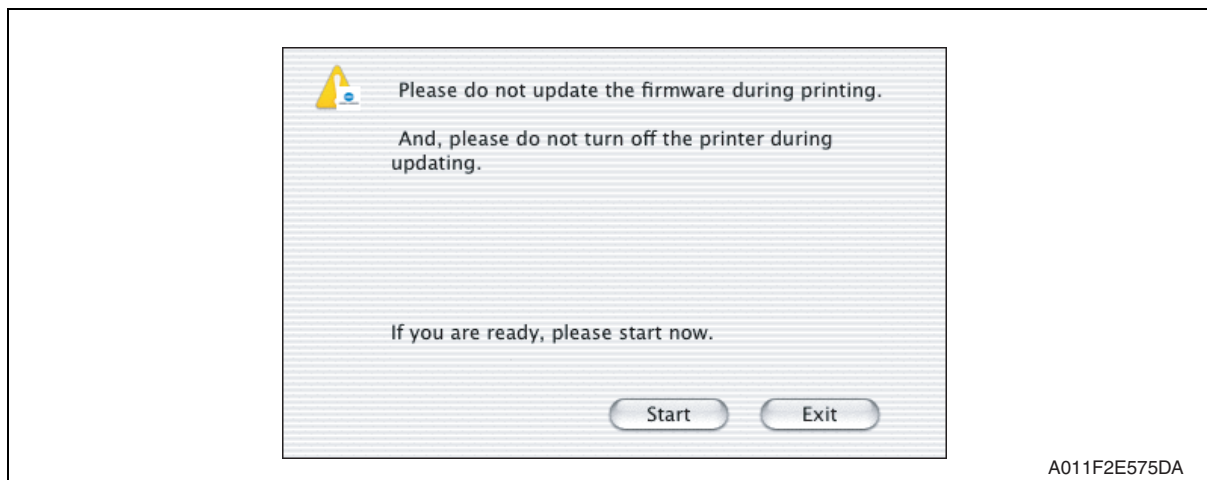
- 6. Type in the IP address, and then click the [Next].



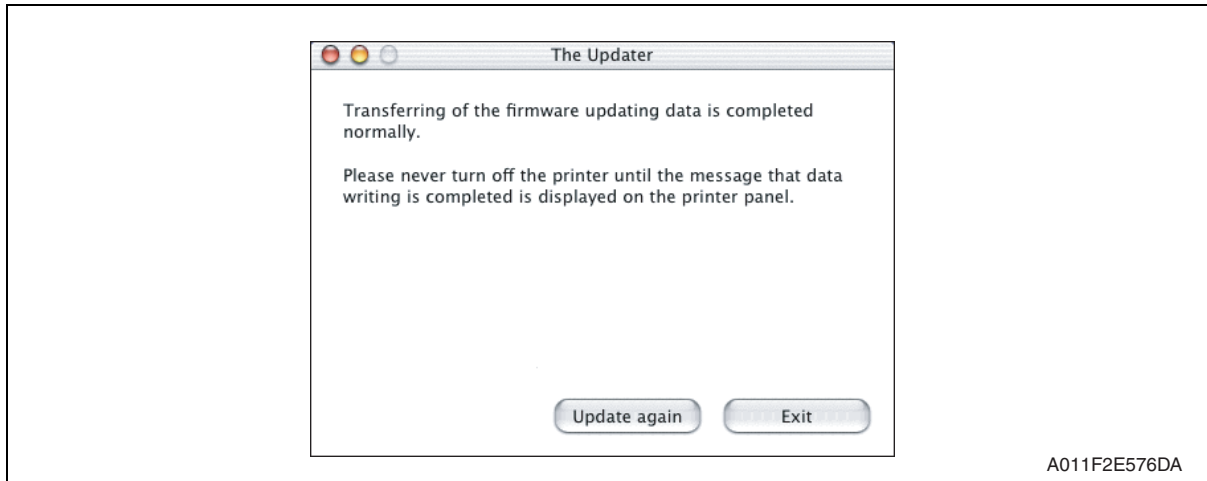
- 7. A message appears, requesting confirmation to update the firmware. Click the [Start] to begin transferring the firmware.

NOTE

- Do not turn off the printer while its firmware is being updated.



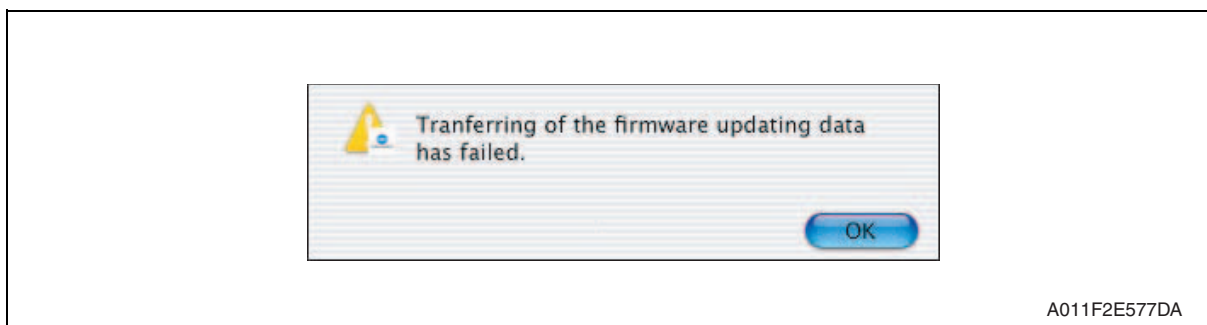
8. The result of the firmware transfer is displayed. Click the [Exit].



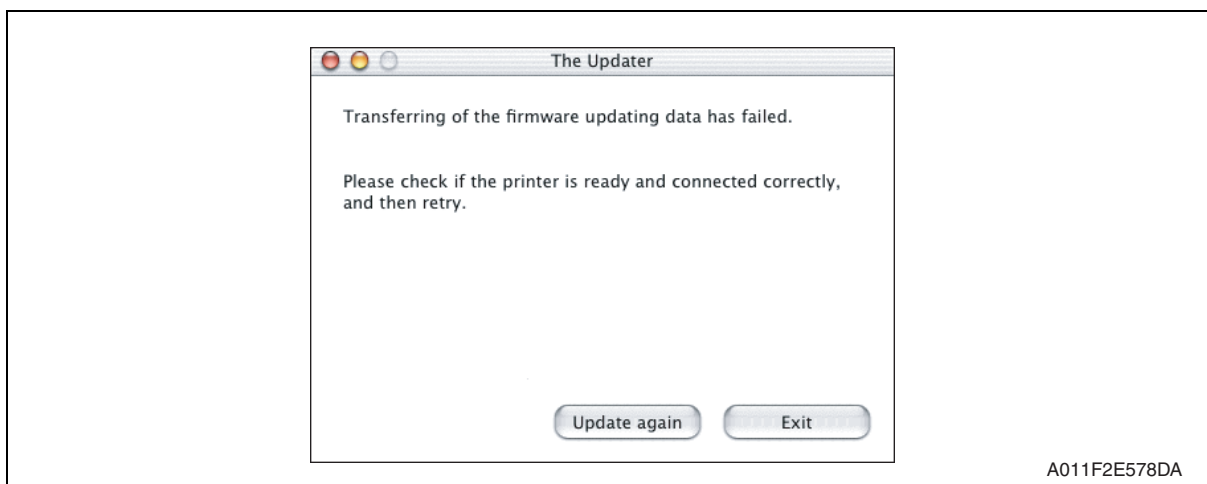
9. If the firmware was successfully updated, the printer will automatically restart.

<If transferring of the data fails>

1. If transferring of the data fails, the following message appears.
2. Click [OK].

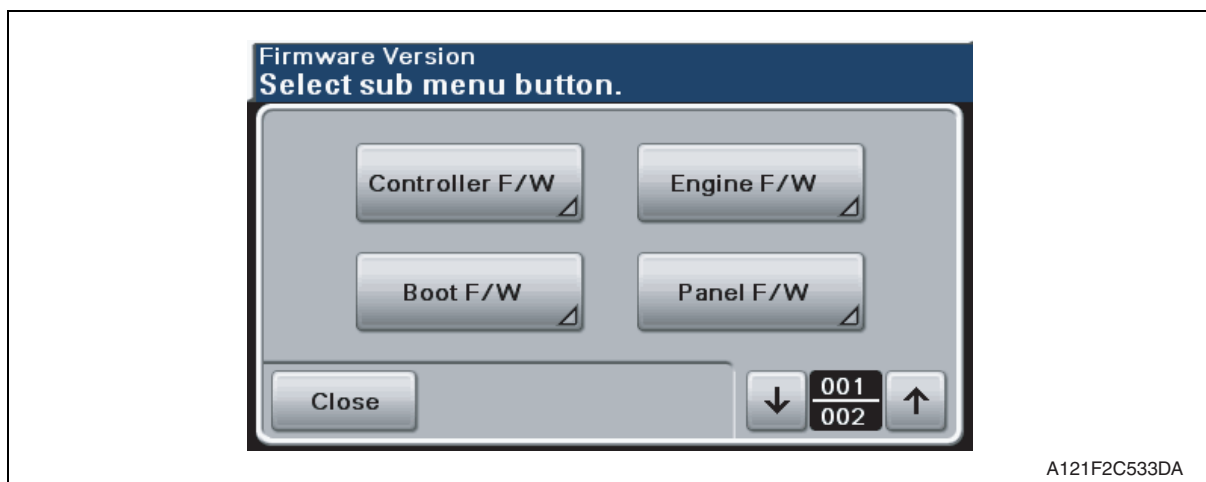


3. Check that the printer is ready and that it is correctly connected, and then click the [Update again].



6.3.2 Checking the version after the firmware update

1. Display [Service Mode].
2. Display [Firmware Version].
3. Select the firmware to be updated and check the current version.



7. OTHER MAINTENANCE ITEM

7.1 Items not allowed to be disassembled and adjusted

A. Paint-locked screws

NOTE

- To prevent loose screws, a screw lock in blue or green series color is applied to the screws.
- The screw lock is applied to the screws that may get loose due to the vibrations and loads created by the use of machine or due to the vibrations created during transportation.
- If the screw lock coated screws are loosened or removed, be sure to apply a screw lock after the screws are tightened.

B. Red-painted screws

NOTE

- The screws which are difficult to be adjusted in the field are painted in red in order to prevent them from being removed by mistake.
- Do not remove or loosen any of the red-painted screws in the field. It should also be noted that, when two or more screws are used for a single part, only one representative screw may be marked with the red paint.

C. Variable resistors on board

NOTE

- Do not turn the variable resistors on boards for which no adjusting instructions are given in Adjustment/Setting.

D. Removal of PWBs

CAUTION

- To avoid electrical shock, after turning OFF the power switch, do not touch the DC power supply for 9 minutes.
- When removing a circuit board or other electrical component, refer to “Handling of PWBs” and follow the corresponding removal procedures.
- The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.
- Where it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.

7.2 Disassembly/reassembly parts list

Section	Part name	Ref. Page
Exterior parts	Front door	P.44
	Rear cover	P.44
	Left cover	P.45
	Rear right cover	P.45
	Operation panel	P.46
Boards and etc.	FAX board (FAXB)	P.57
	MFP board (MFPB)	P.58
	Printer control board (PRCB)	P.62
	DC power supply (DCPU)	P.64
	High voltage unit (HV1)	P.66
	Temperature/ humidity sensor (TEM/HUMS)	P.88
	IDC sensor (IDC)	P.89
Units	ADF	P.47
	ADF feed roller unit	P.49
	ADF separation pad	P.51
	Scanner unit	P.52
	Tray1	P.54
	Tray2	P.55
	Hard disk (HDD)	P.55
	PH unit	P.67
Other parts	Backup battery	P.69
	Developing motor (M1)	P.71
	Main motor (M2)	P.71
	Color PC drum motor (M4)	P.71
	DC power supply fan motor (FM10)	P.72
	Cooling fan motor (FM11)	P.72
	MFP board cooling fan motor (FM12)	P.73
	Tray2 media feed clutch (CL1)	P.74
	Tray1 media feed clutch (CL2)	
	Registration clutch (CL3)	P.75
	Toner supply motor/Y (CL4)	P.76
	Toner supply motor/M (CL5)	
	Toner supply motor/C (CL6)	
	Toner supply motor/K (CL7)	
	Loop detection clutch (CL8)	P.79
	Switchback roller feed clutch (CL11)	P.82
	Switchback roller reverse clutch (CL12)	
	Duplex conveyance roller clutch (CL13)	P.85
2nd transfer release solenoid (SD2)	P.86	
Speaker (SP1)	P.91	

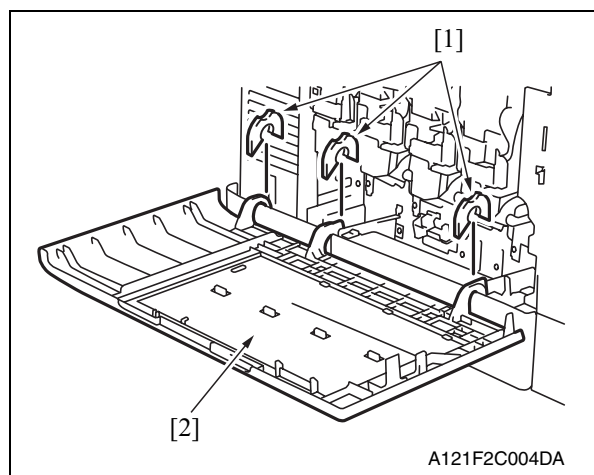
7.3 Cleaning parts list

Section	Part name	Ref. Page
Tray1	Tray1 feed roller	P.92
Tray2	Tray2 feed roller	P.92
ADF	ADF feed roller	P.93
Processing section	Laser irradiation section	P.93

7.4 Disassembly/reassembly procedure

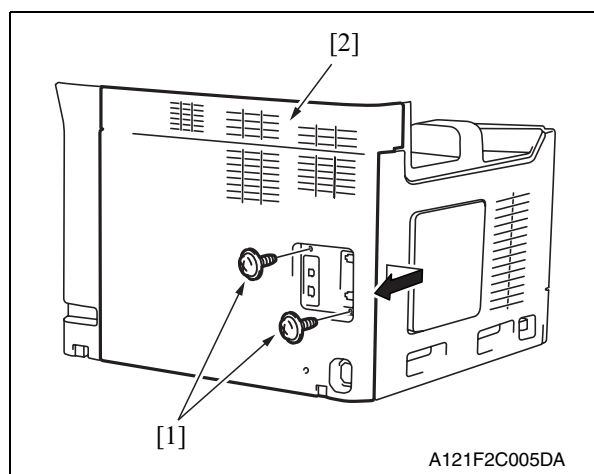
7.4.1 Front door

1. Remove the tray 2.
[See P.55](#)
2. Remove the waste toner bottle.
[See P.14](#)



3. Remove three C-rings [1], and remove the front door [2].

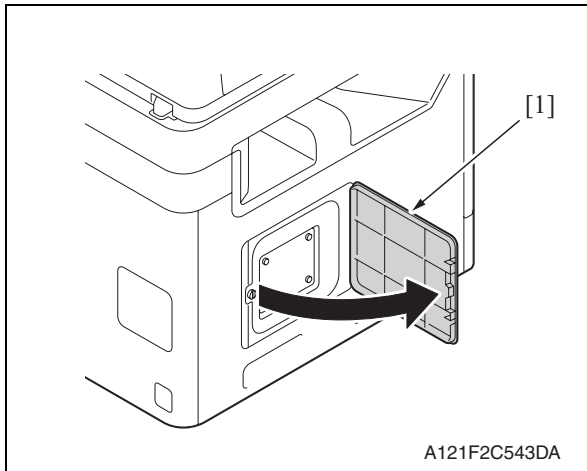
7.4.2 Rear cover



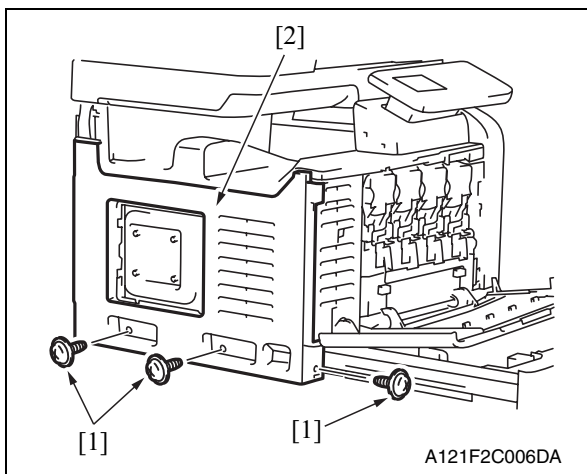
1. Remove two screws [1], and remove the rear cover [2] as shown in the illustration.

7.4.3 Left cover

1. Remove the rear cover.
[See P.44](#)
2. Slide out the tray 2.
3. Open the front cover.



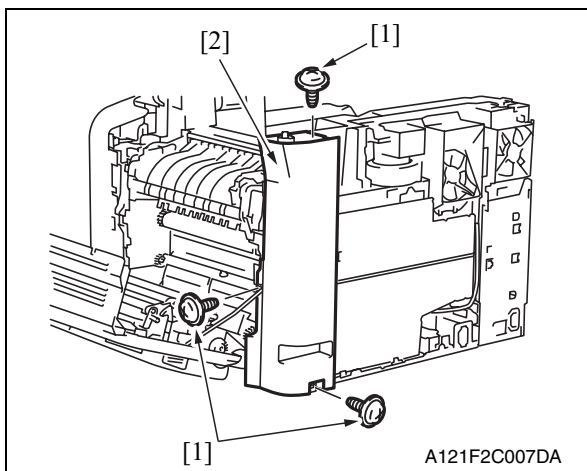
4. Remove the cover [1].



5. Remove three screws [1], and remove the left cover [2].

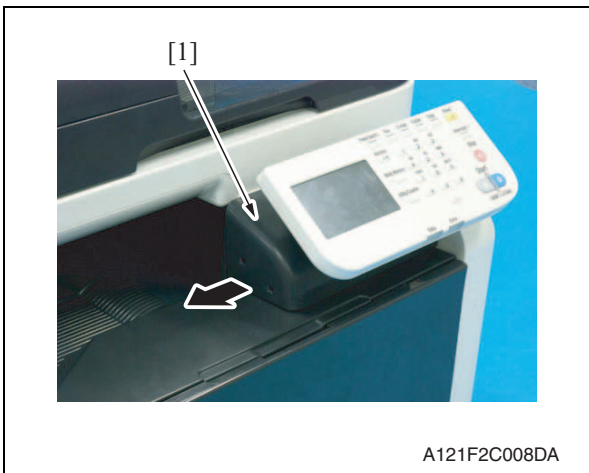
7.4.4 Rear right cover

1. Remove the ADF.
[See P.47](#)
2. Remove the scanner unit.
[See P.52](#)
3. Open the right door.

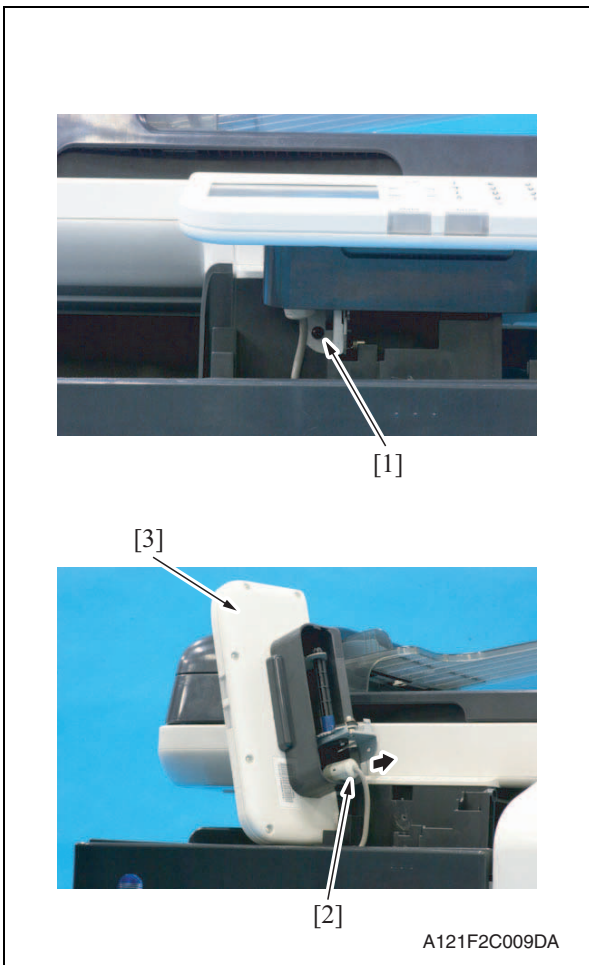


4. Remove three screws [1], and remove the rear right cover [2].

7.4.5 Operation panel



1. Remove the operation panel lower cover [1].



2. Remove the screw [1].
3. Disconnect the connector [2], and remove the operation panel [3].

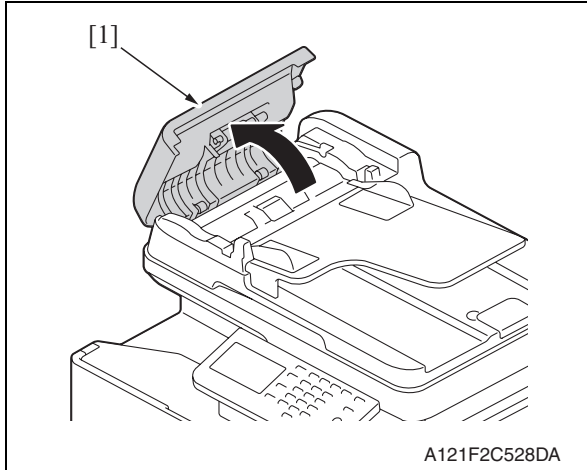
4. To reinstall, reverse the order of removal.

7.4.6 ADF

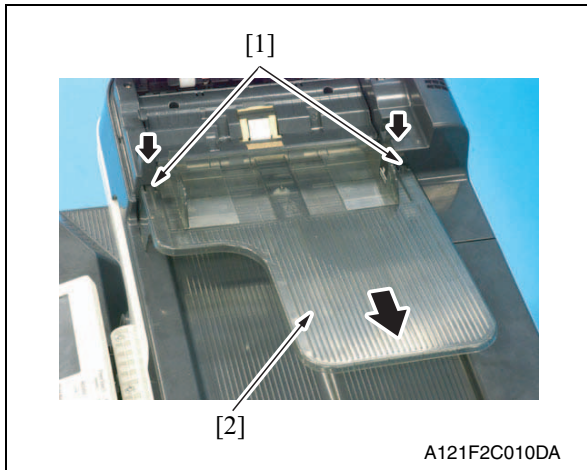
CAUTION



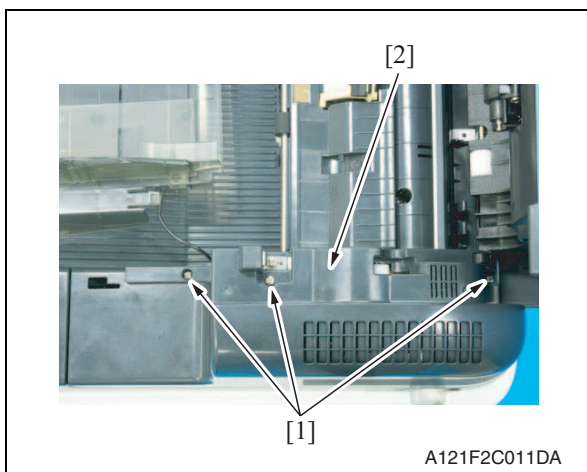
- Turn OFF the main power and then wait 15 seconds or more before disconnecting the connector from the DF control board.



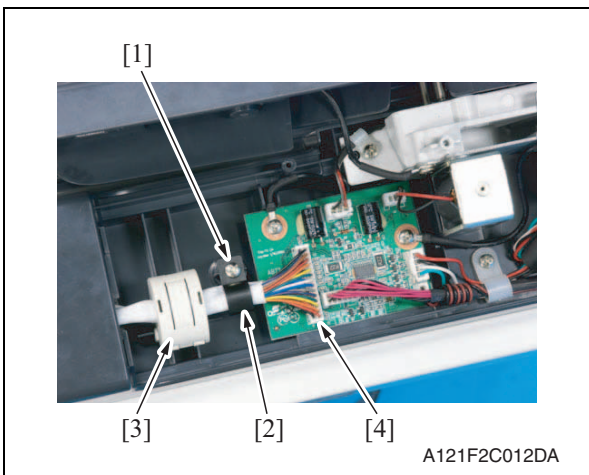
1. Open the ADF feed cover [1].



2. Unhook two tabs [1], and remove the ADF document feed tray [2].

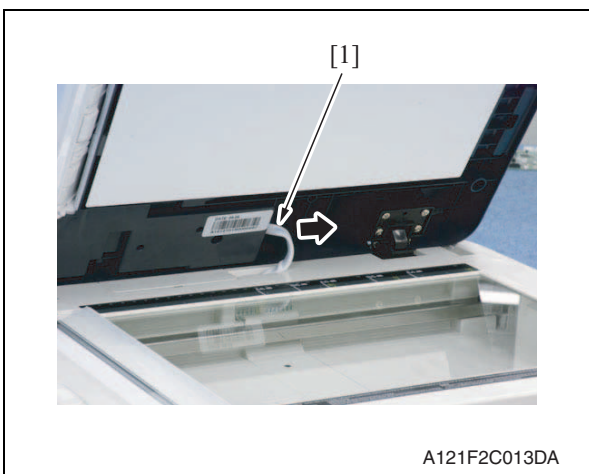


3. Remove three screws [1], and remove the ADF rear cover [2].



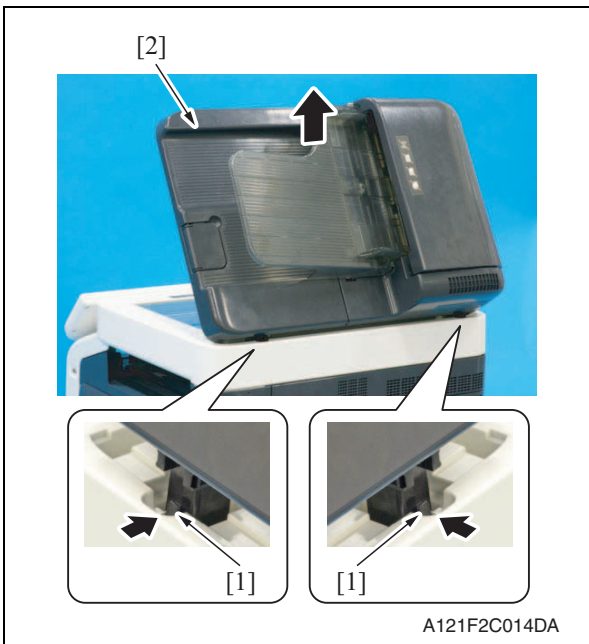
A121F2C012DA

- 4. Remove the screw [1], and remove the clamp [2].
- 5. Remove the ferrite core [3].
- 6. Disconnect the connector (J1) [4].



A121F2C013DA

- 7. Pull the cable [1] out.



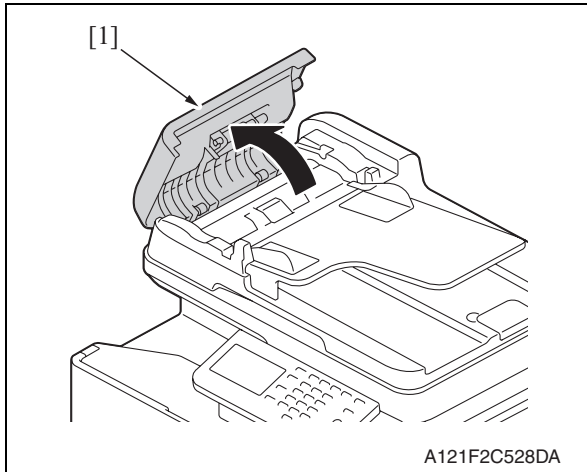
A121F2C014DA

- 8. While pushing two tabs [1], remove the ADF [2].

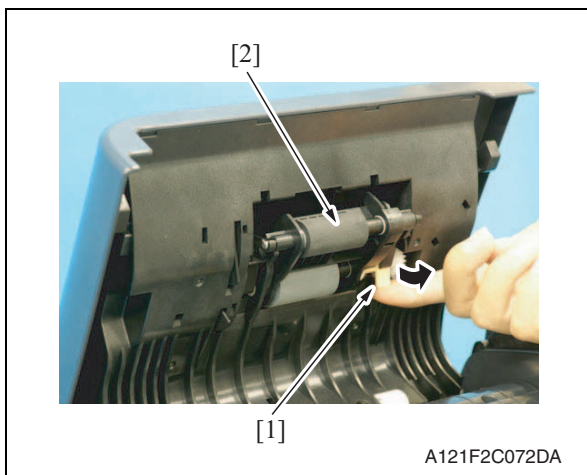
- 9. To reinstall, reverse the order of removal.

7.4.7 ADF feed roller unit

A. Removal procedure

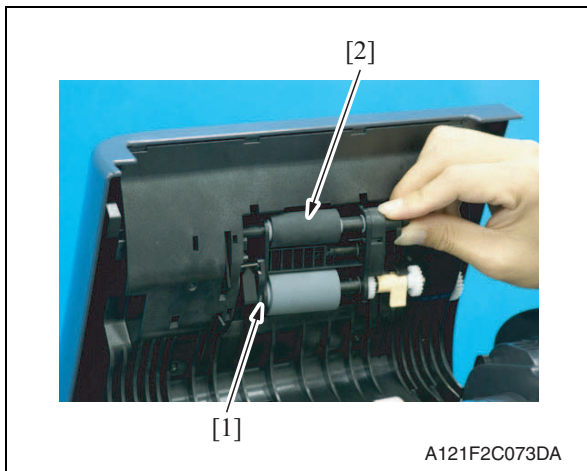


1. Open the ADF feed cover [1].

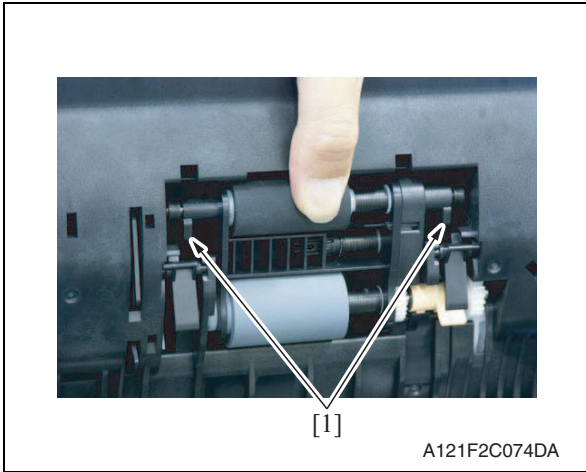


2. Pull the lock lever [1] upward to release the lock and remove the ADF feed roller unit [2].

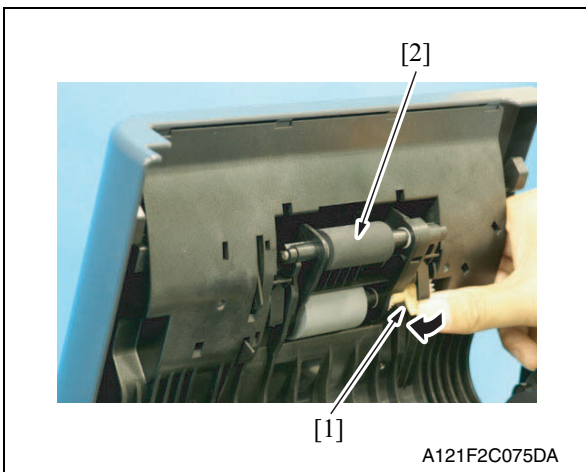
B. Reinstall procedure



1. To install the ADF feed roller unit, attach the bearing side [1] first.

**NOTE**

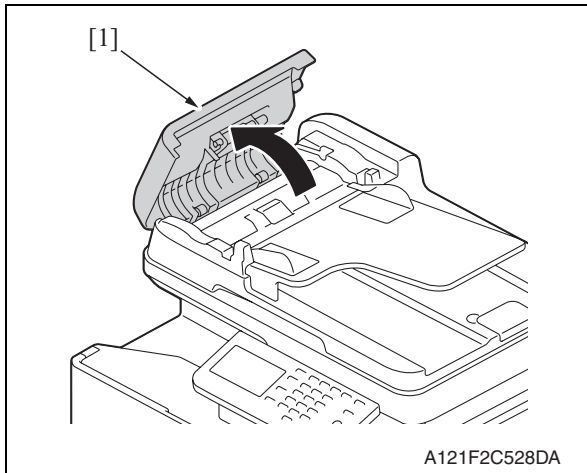
- Install the ADF feed roller unit, fitting the two levers [1] into the housing.



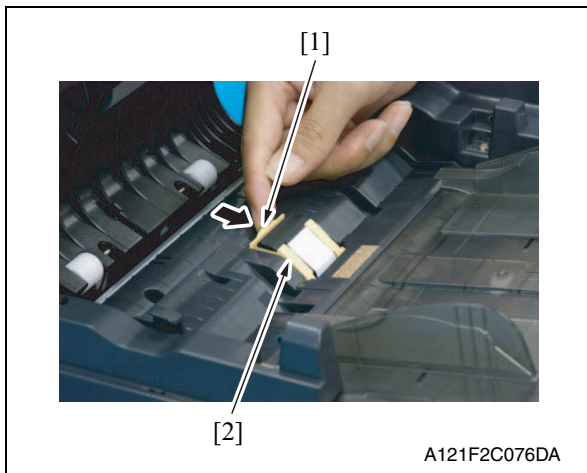
2. To fix the ADF feed roller unit, press the lock lever [1] until it clicks.

3. To reinstall, reverse the order of removal.

7.4.8 ADF separation pad



1. Open the ADF feed cover [1].

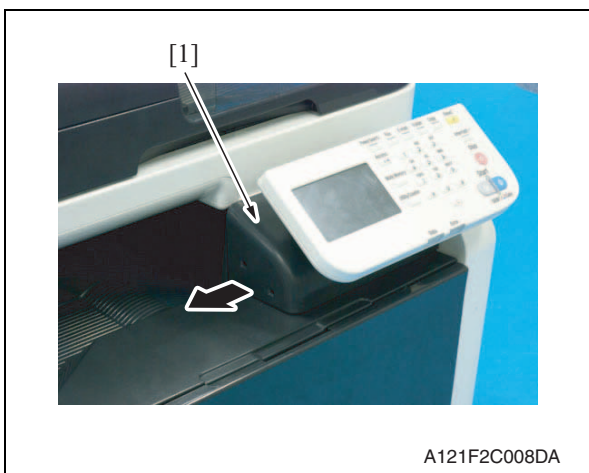


2. Unhook the tab [1], and remove the ADF separator pad/1 [2].

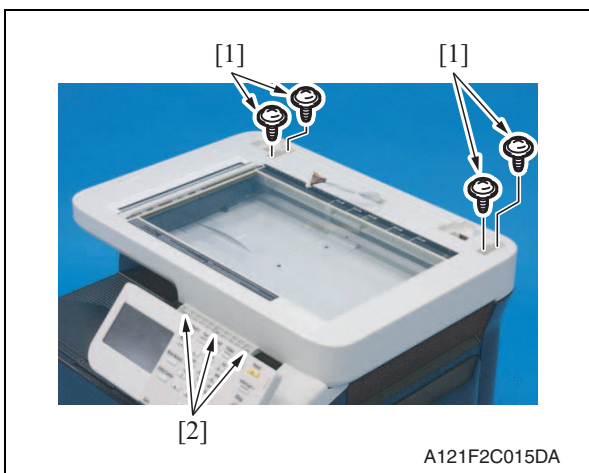
3. To reinstall, reverse the order of removal.

7.4.9 Scanner unit

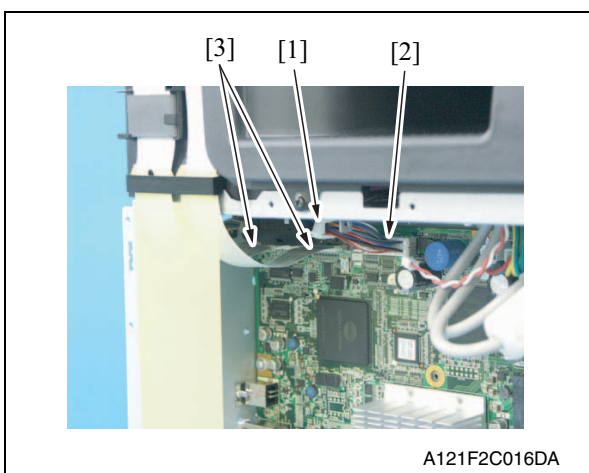
1. Remove the rear cover.
[See P.44](#)
2. Remove the left cover.
[See P.45](#)
3. Remove the hard disk.
[See P.55](#)
4. Remove the FAX board.
[See P.57](#)
5. Remove the ADF.
[See P.47](#)



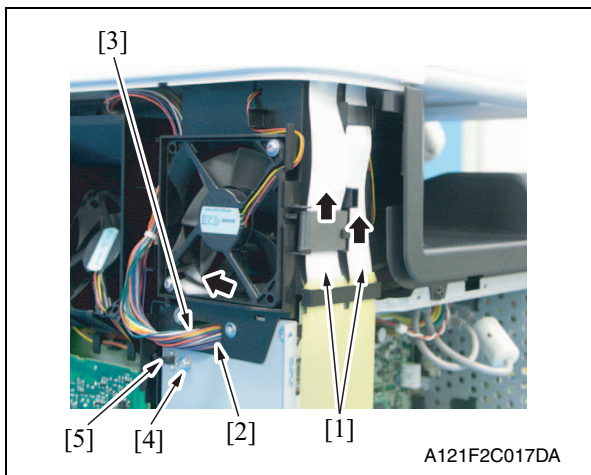
6. Remove the operation panel lower cover [1].



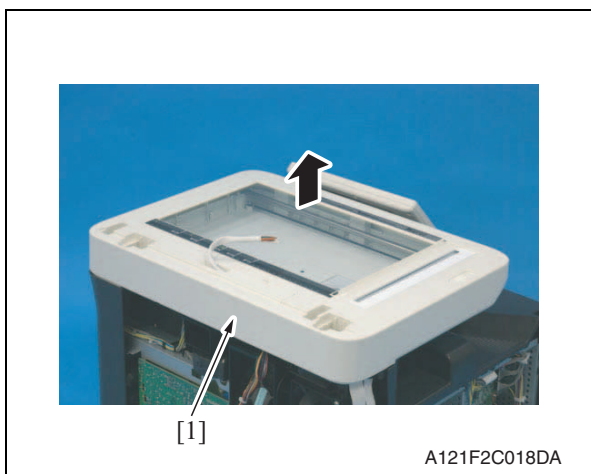
7. Remove four screws (rear side) [1] and three screws (front side) [2].



8. Remove the harness from the wire saddle [1].
9. Disconnect the connector (CN104) [2] and two flat cables (CN102, CN103) [3].



- 10. Pull the flat cables [1] out of the guide.
- 11. Pull the harness [3] out of the hole [2] shown in the illustration.
- 12. Remove the screw [4], and remove the earth cable [5].



- 13. Remove the scanner unit [1].

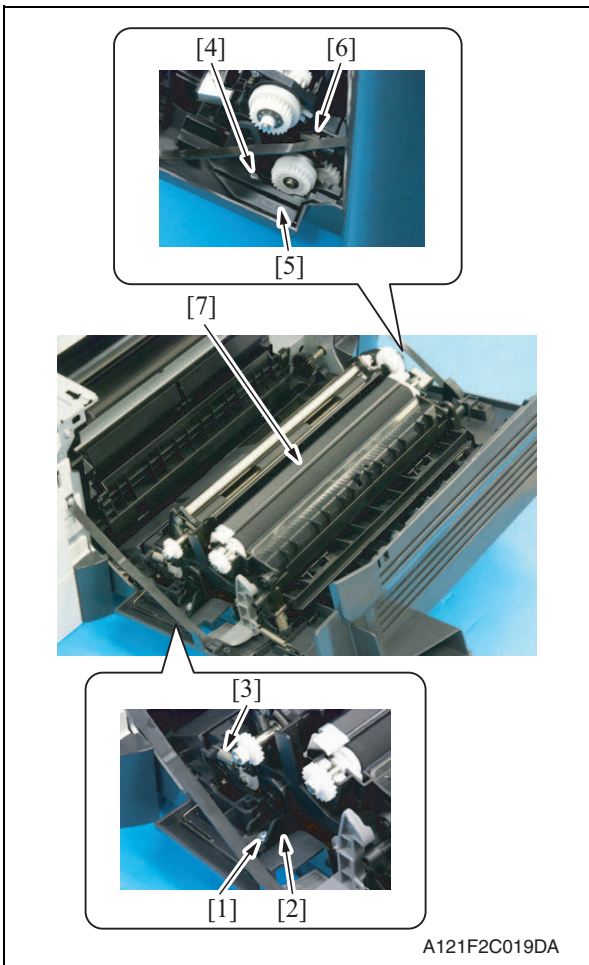
14. To reinstall, reverse the order of removal.

d-Color MF3000

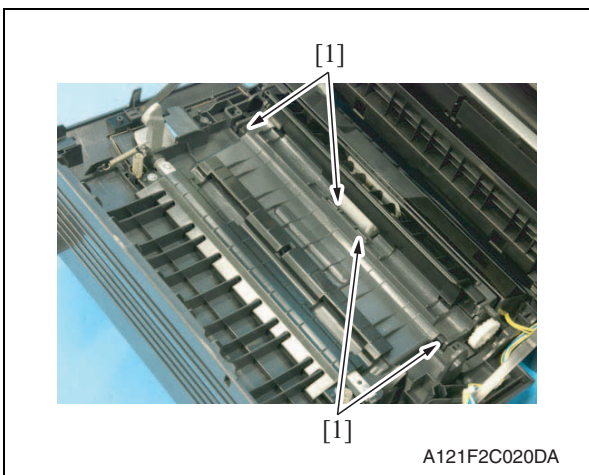
MAINTENANCE

7.4.10 Tray1

1. Open the right door.



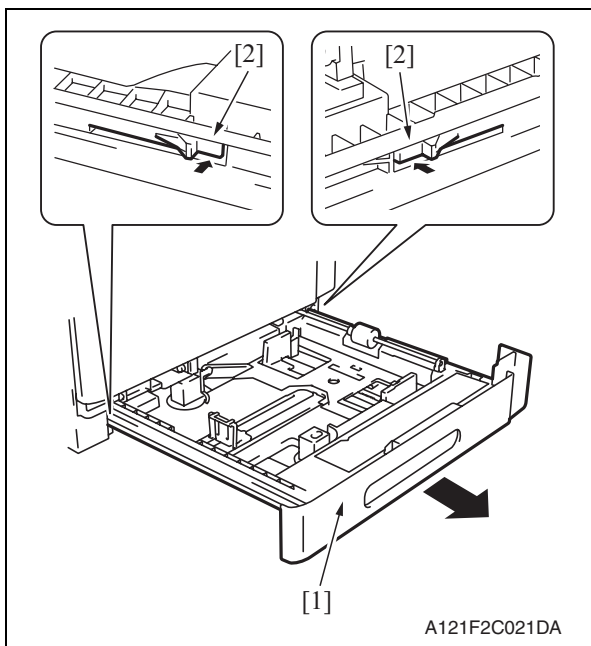
2. Remove the screw [1], and remove the fixed cover [2].
3. Remove the spring [3].
4. Remove the screw [4], and remove the harness cover [5].
5. Remove the spring [6].
6. Remove the conveyance unit [7].



7. Unlock four tabs [1], and remove the tray 1.

8. To reinstall, reverse the order of removal.

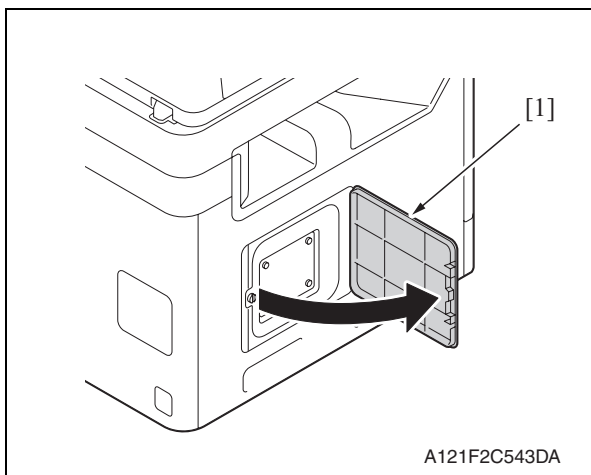
7.4.11 Tray2



1. Pull out the tray 2 [1].
2. While pushing the left and right tabs [2], remove the tray 2 [1].

3. To reinstall, reverse the order of removal.

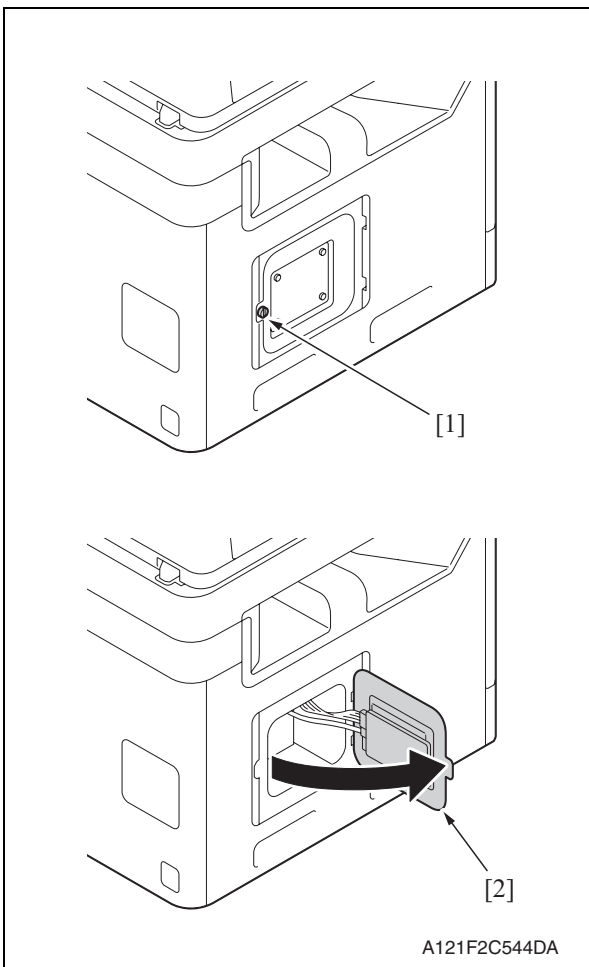
7.4.12 Hard disk (HDD)



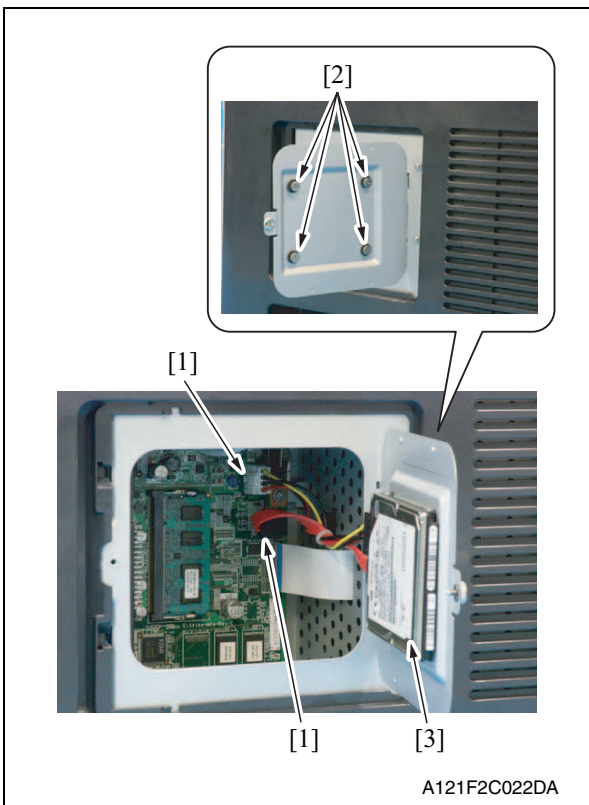
1. Remove the cover [1].

d-Color MF3000

MAINTENANCE



2. Remove the screw [1], and remove the cover [2].

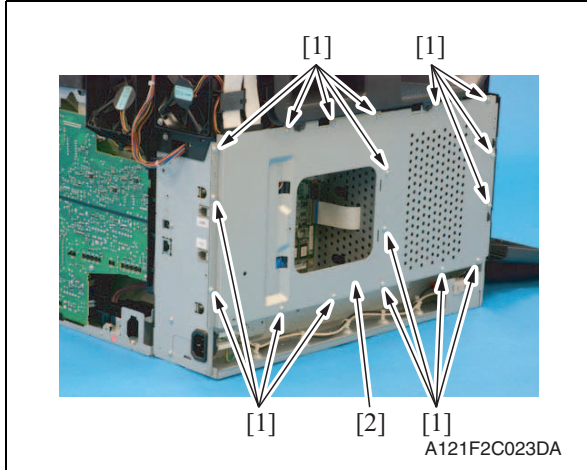


3. Disconnect two connectors (CN5, CN7) [1].
4. Remove four screws [2], and remove the hard disk [3].

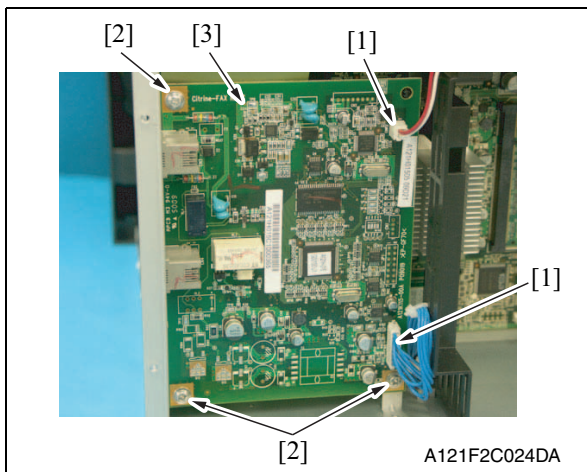
5. To reinstall, reverse the order of removal.

7.4.13 FAX board (FAXB)

1. Remove the rear cover.
[See P.44](#)
2. Remove the left cover.
[See P.45](#)
3. Remove the hard disk.
[See P.55](#)



4. Remove seventeen screws [1], and remove the board protective shield [2].



5. Disconnect two connectors [1].
6. Remove three screws [2], and remove the FAX board [3].

7. To reinstall, reverse the order of removal.

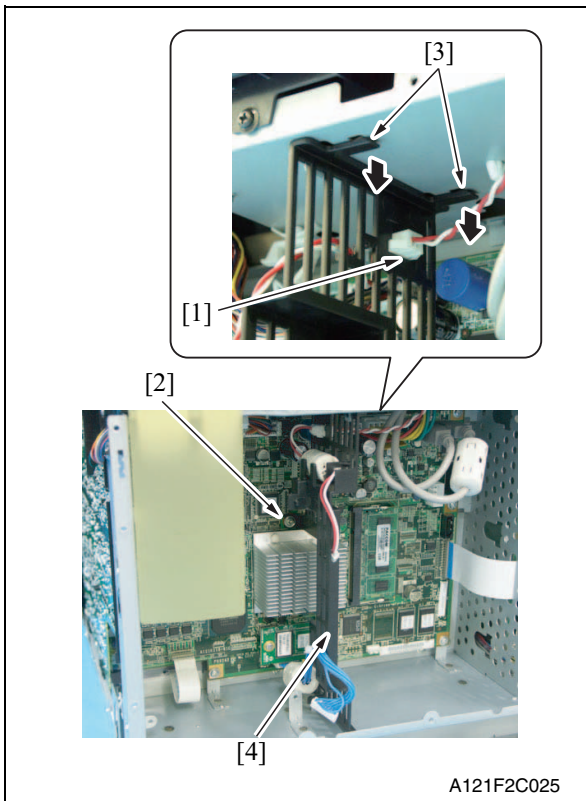
7.4.14 MFP board (MFPB)

NOTE

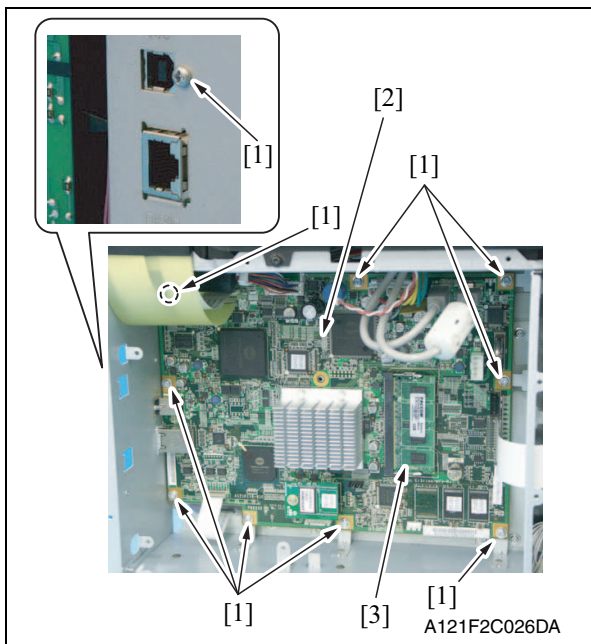
- When replacing the MFP board, in order to make the existing counter data become available in the new board, be sure to back up the counter data following the replacement procedure below.
- When the MFP board is replaced, upgrade the firmware to the latest version.
See P.26
- When the MFP board is replaced with a new one, be sure to execute [BK CLEAR].
See P.159

A. Replacement procedure

1. Remove the rear cover.
See P.44
2. Remove the left cover.
See P.45
3. Remove the hard disk.
See P.55
4. Remove the FAX board.
See P.57



5. Disconnect the connector [1].
6. Remove the screw [2] and two tabs [3], and remove the harness guide [4].



- 7. Disconnect all connectors and flat cables.
- 8. Remove ten screws [1], and remove the MFP board [2].

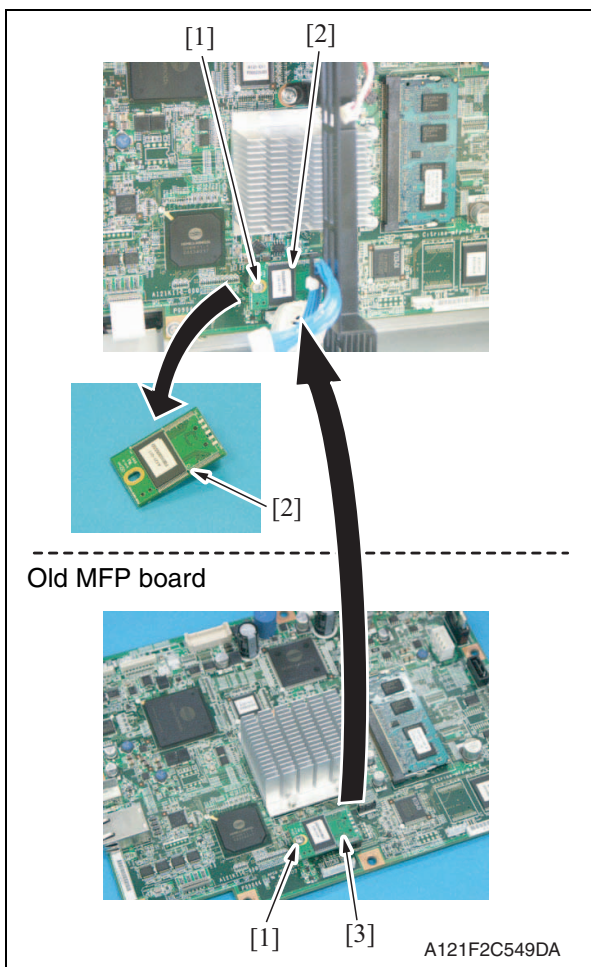
NOTE

- If the memory board (DIMM) [3] is not mounted on the new MFP board, be sure to remove the memory board from the old MFP board and mount it on the new MFP board.

- 9. Install the new MFP board.
- 10. Turn ON the power switch.

NOTE

- Do not perform any printing operation at this stage.
- 11. Enter the SERVICE MODE.
- 12. Select [Soft Switch] - [↓] - [Switch 7]. Set [Switch 7] to "159."
- 13. Turn OFF the power switch.



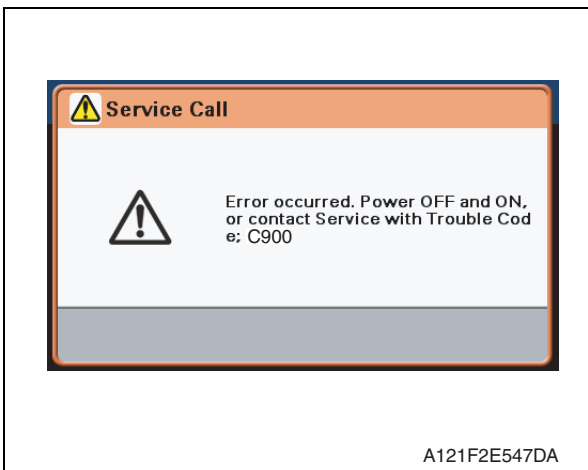
- 14. Remove the screw [1], remove the new SSD board [2] from the MFP board, and mount the old SSD [3] board that is located on the old MFP board.

- 15. Turn ON the power switch.

16. Counter data starts to be backed up.

NOTE

- Do not perform any printing operation at this stage.
- Do not turn OFF the power switch during the backup process.

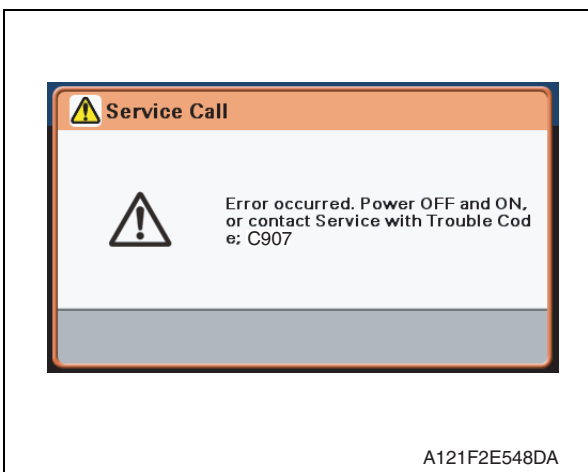


<When backup is completed successfully>

17. When backup is completed successfully, "Service Call: C900" appears on the screen.

NOTE

- When backup is completed successfully, the setting of Soft Switch 7 automatically returns to the initial value of "0."



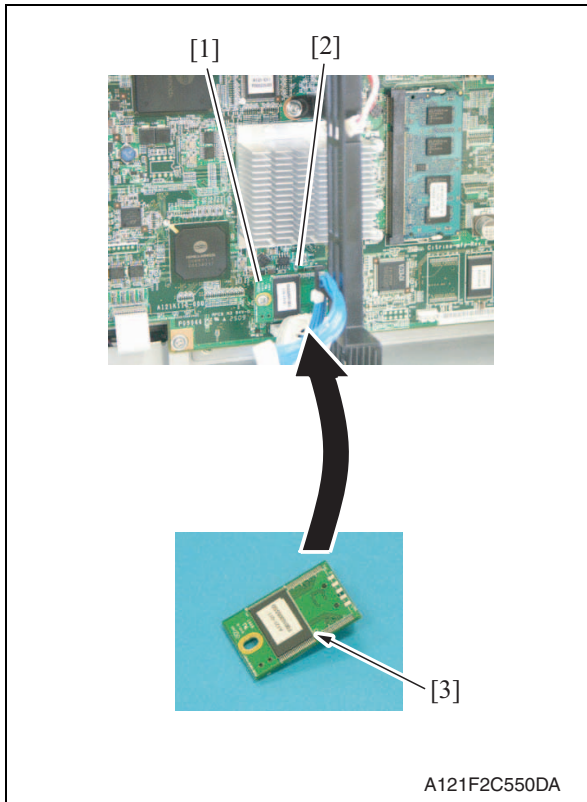
<When backup results in an abnormal end>

18. When backup results in an abnormal end, "Service Call: C907" appears on the screen.

NOTE

- If an abnormal end recurs after turning OFF/ON the power switch of the machine again, the MFP board or the SSD board can be faulty.

19. Turn OFF the power switch.



20. Remove the screw [1], remove the old SSD board [2], and mount the new SSD board [3].

21. Install the FAX board.

22. Turn ON the power switch of the machine and confirm that the machine operates properly.

7.4.15 Printer control board (PRCB)

NOTE

- When the printer control board is replaced with a new one, be sure to execute [BK CLEAR].

See P.159

1. Remove the rear cover.

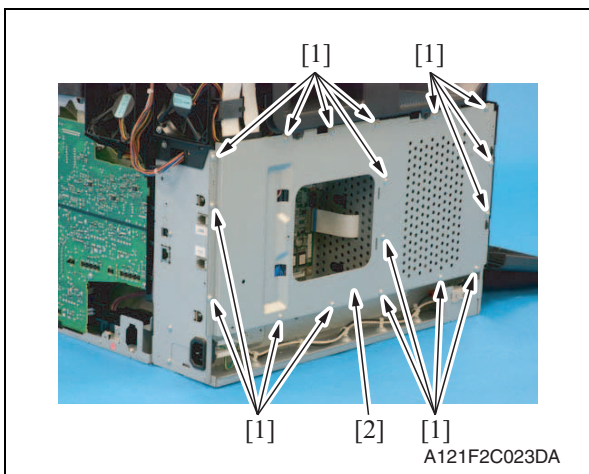
See P.44

2. Remove the left cover.

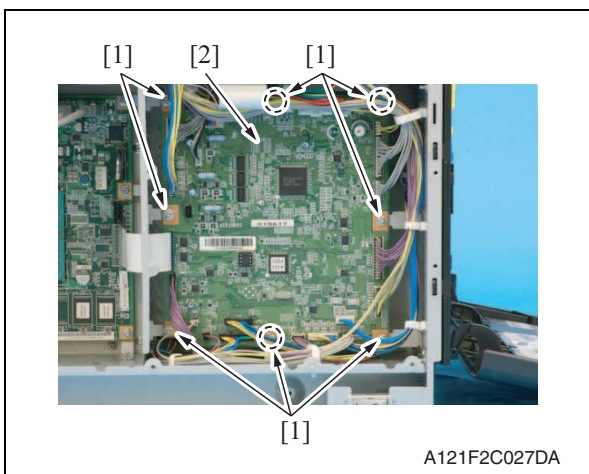
See P.45

3. Remove the hard disk.

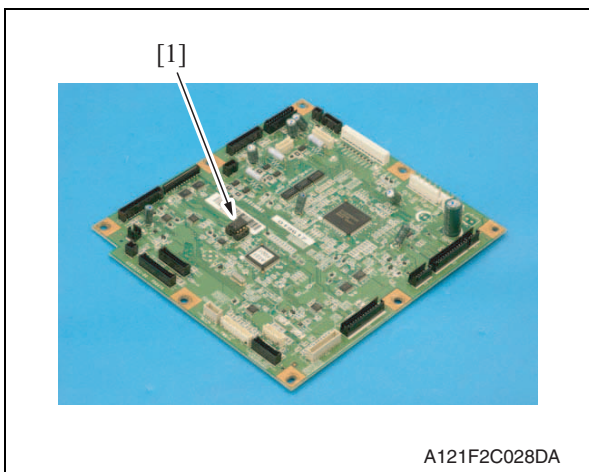
See P.55



4. Remove seventeen screws [1], and remove the board protective shield [2].

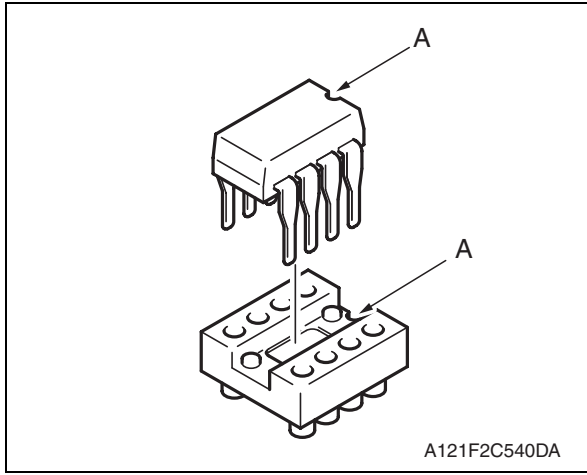


5. Disconnect all connectors and flat cables.
6. Remove eight screws [1], and remove the printer control board [2].



NOTE

- When the printer control board (PRCB) has been replaced, be sure to remount EEPROM (ICS1) [1]. Unmount EEPROM (ICS1) [1] from the old printer control board and mount it on the new printer control board.



NOTE

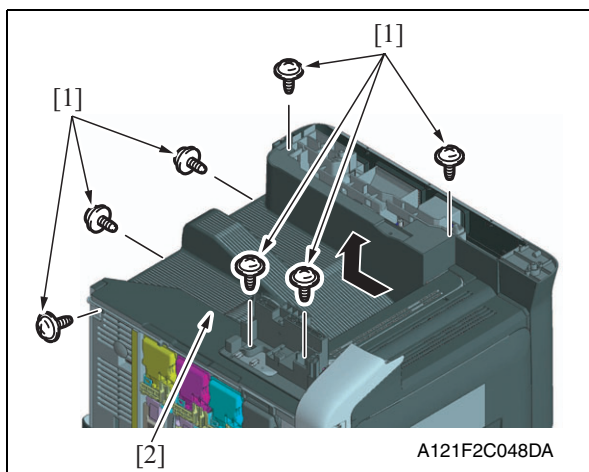
- When mounting EEPROM (ICS1), make sure the notches (“A”) are precisely lined up.

7.4.16 DC power supply (DCPU)

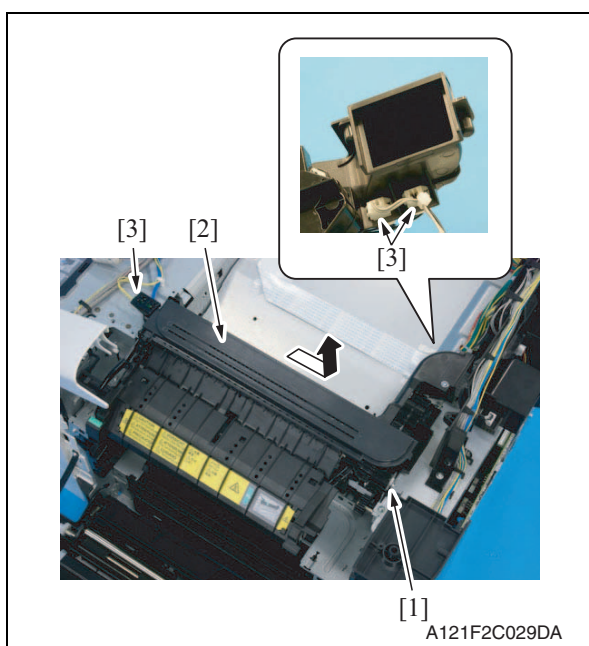
 CAUTION

- Note that in the event of DC power supply failure, it can take long before voltage drops even after turning OFF the power switch. To avoid electrical shock, after turning OFF the power switch, do not touch the DC power supply for 9 minutes.

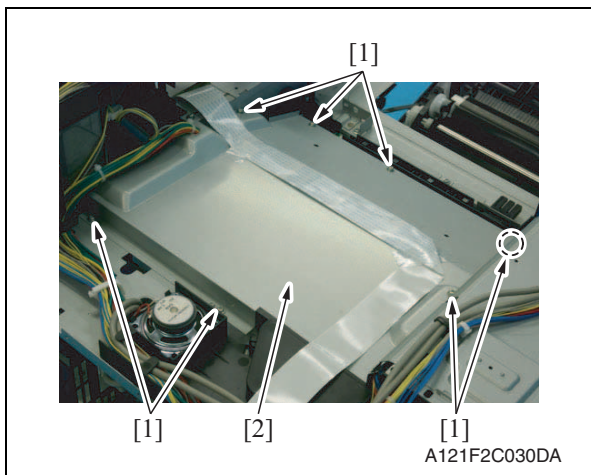
1. Remove the fuser unit.
[See P.20](#)
2. Remove the high voltage unit.
[See P.66](#)
3. Remove the ADF.
[See P.47](#)
4. Remove the scanner unit.
[See P.52](#)
5. Remove the operation panel.
[See P.46](#)
6. Remove the cooling fan motor.
[See P.72](#)



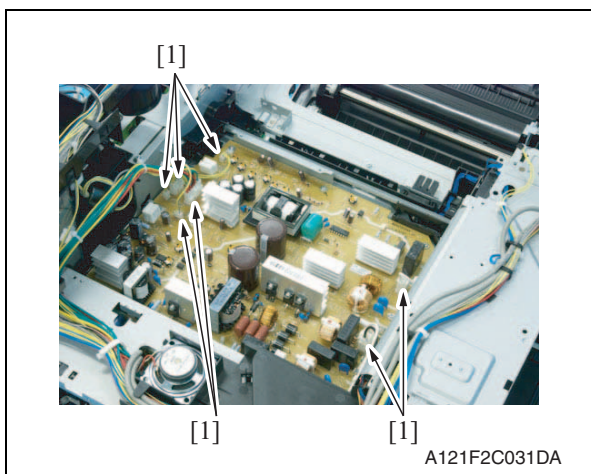
7. Remove seven screws [1], and remove the upper cover [2].



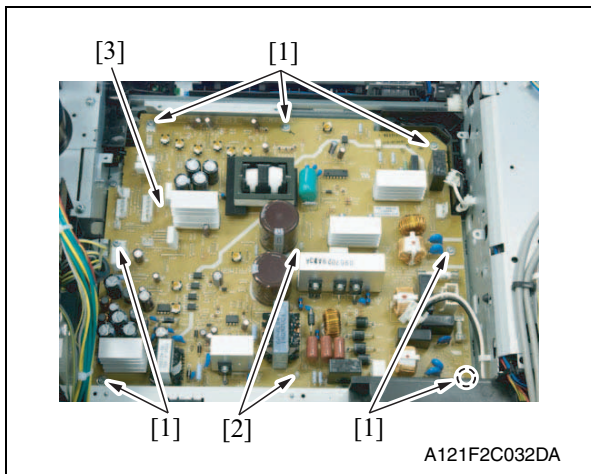
8. Remove the screw [1], and remove the exit drive assy [2].
9. Disconnect three connectors [3].



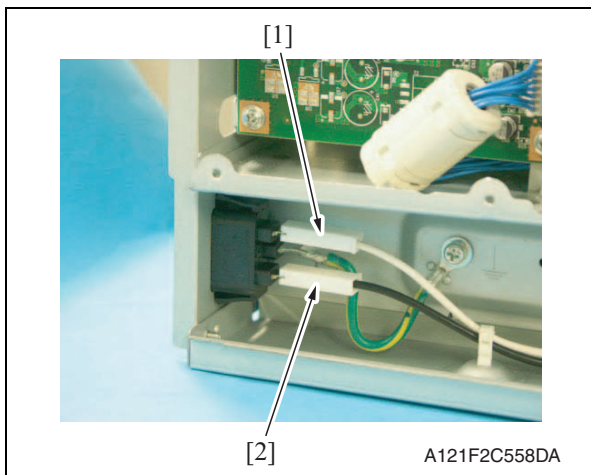
10. Remove seven screws [1], and remove the DC power supply protective cover [2].



11. Disconnect seven connectors [1].



12. Remove seven screws [1] and two board supports [2], and remove the DC power supply [3].



CAUTION

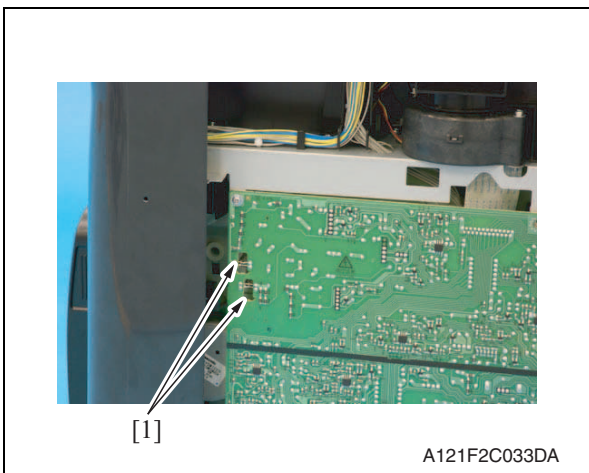
- When reconnecting the AC inlet, make sure that the white harness [1] is connected to the upper part and the black harness [2] is connected to the lower part of the AC inlet.

13. To reinstall, reverse the order of removal.

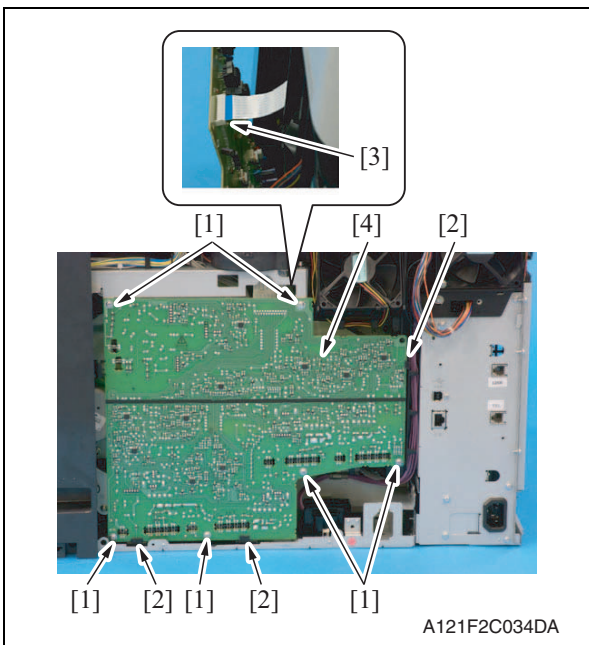
7.4.17 High voltage unit (HV1)

1. Remove the rear cover.

See P.44



2. Detach the spring from two hooks [1].






3. Remove six screws [1] and three tabs [2].

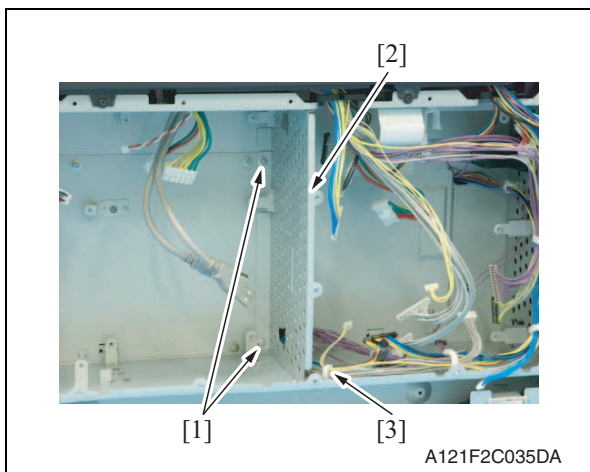
4. Disconnect the flat cable [3], and remove the high voltage unit [4].

5. To reinstall, reverse the order of removal.

7.4.18 PH Unit

 CAUTION	
	<ul style="list-style-type: none">• Do not replace the printer head unit while the power is ON. Laser beam generated during the above mentioned activity may cause blindness.
	<ul style="list-style-type: none">• Do not disassemble or adjust the printer head unit. Laser beam generated during the above mentioned activity may cause blindness.

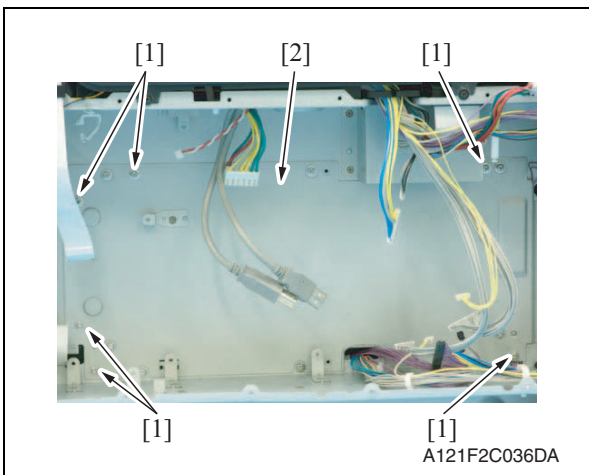
1. Remove the toner cartridge (C, M, Y, K).
[See P.8](#)
2. Remove the waste toner bottle.
[See P.14](#)
3. Remove the imaging unit (C, M, Y, K).
[See P.11](#)
4. Remove the fuser unit.
[See P.20](#)
5. Remove the rear cover.
[See P.44](#)
6. Remove the left cover.
[See P.45](#)
7. Remove the hard disk.
[See P.55](#)
8. Remove the MFP board.
[See P.58](#)
9. Remove the printer control board.
[See P.62](#)



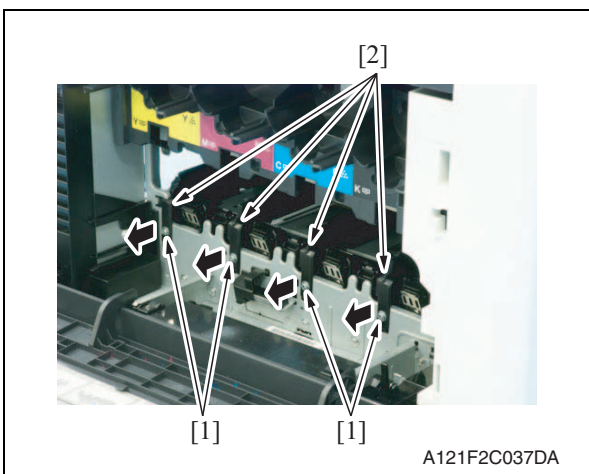
10. Remove two screws [1], and remove the shield sheet metal [2].

NOTE

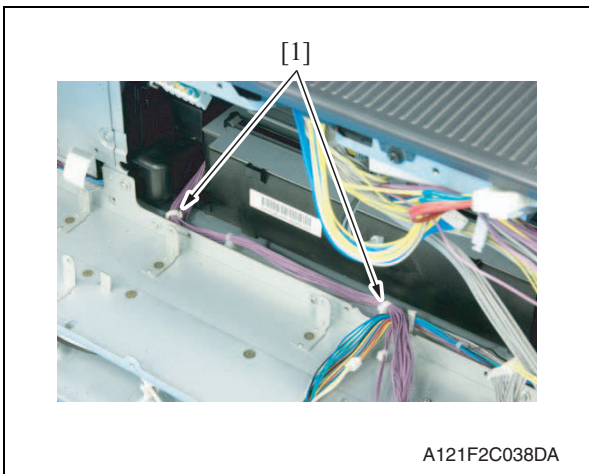
- **Remove the wire saddle [3].**



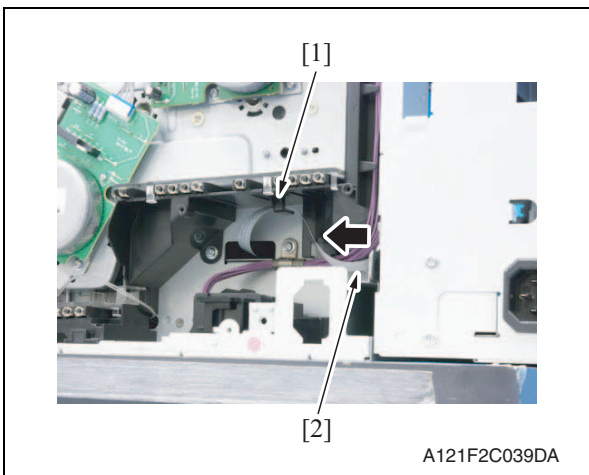
11. Remove six screws [1], and remove the installation sheet metal [2].



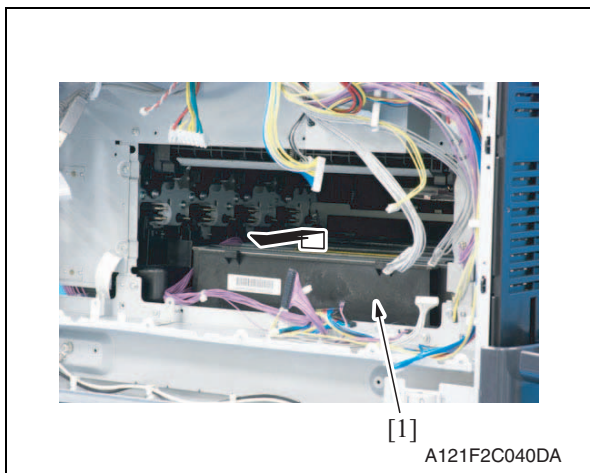
12. Remove four screws [1], and remove four rails [2].



13. Remove the harness from two harness guides [1].



14. Detach the flat cable [2] from the hook [1] as shown in the illustration.



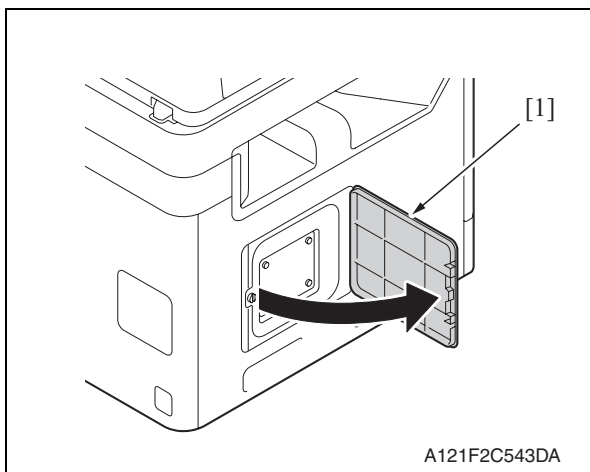
15. Remove the PH unit [1].
16. To reinstall, reverse the order of removal.
17. Perform the following setting.
[Service Mode] - [Main Scan Adjust]
[See P.129](#)

7.4.19 Backup battery

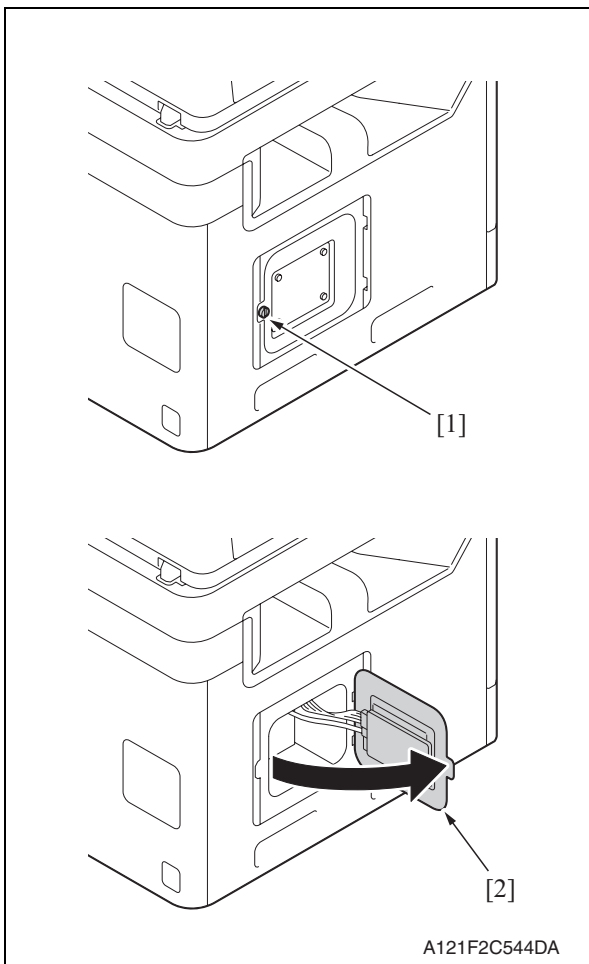
NOTE

- This printer uses a lithium battery to backup memory. Replace the battery with our specified memory backup battery (CR2032). Use of a different battery or the one not equal to our specified battery may present risk of explosion.
- Before your backup battery replacement, refer to the section of Removal of PWBs on P.42.

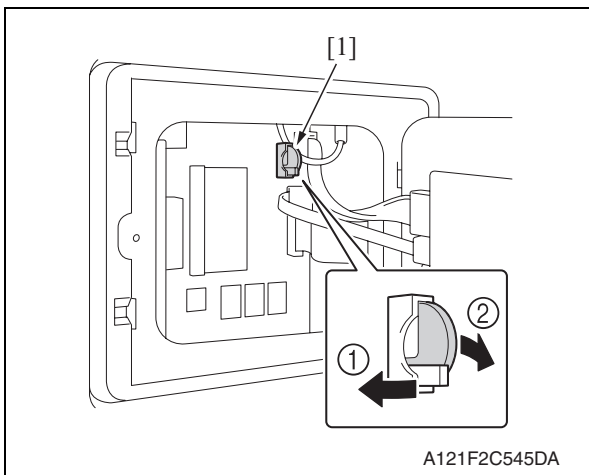
1. Turn OFF the power switch.



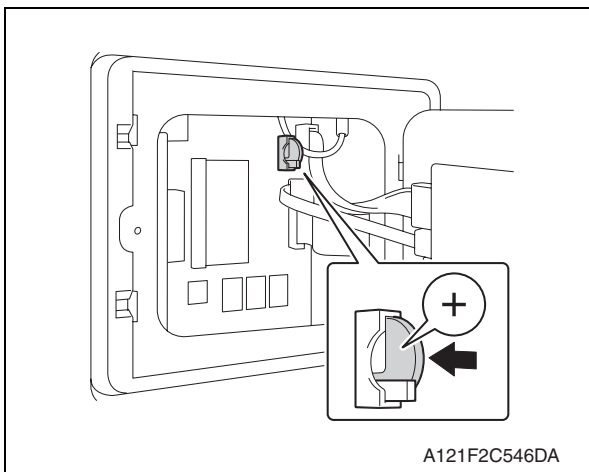
2. Remove the cover [1].



3. Remove the screw [1], and remove the cover [2].



4. Remove the backup battery [1].

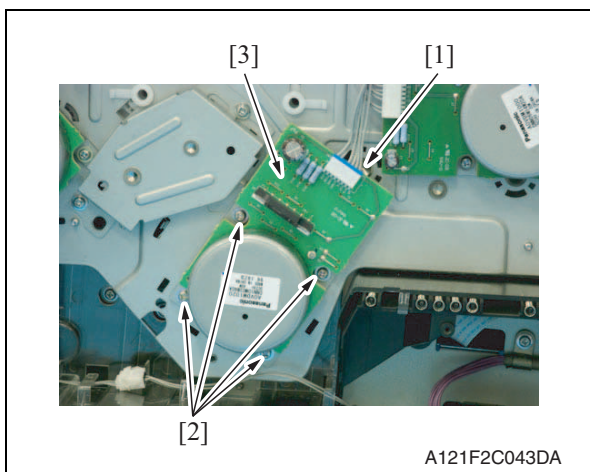


NOTE

- When attaching a new backup battery, the side marked with “+” must be located on the left front side.

7.4.20 Developing motor (M1)

1. Remove the high voltage unit.
See P.66



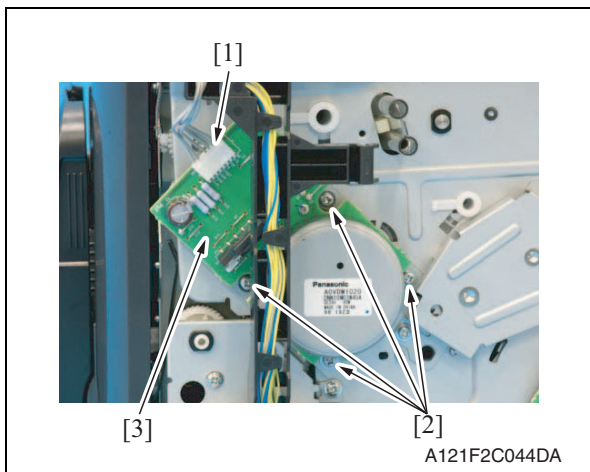
2. Disconnect the connector [1].
3. Remove four screws [2], and remove the developing motor [3].

NOTE

- When installing the motor, try to insert it straight, and take care not to damage the gears.
4. To reinstall, reverse the order of removal.

7.4.21 Main motor (M2)

1. Remove the high voltage unit.
See P.66
2. Remove the rear right cover.
See P.45



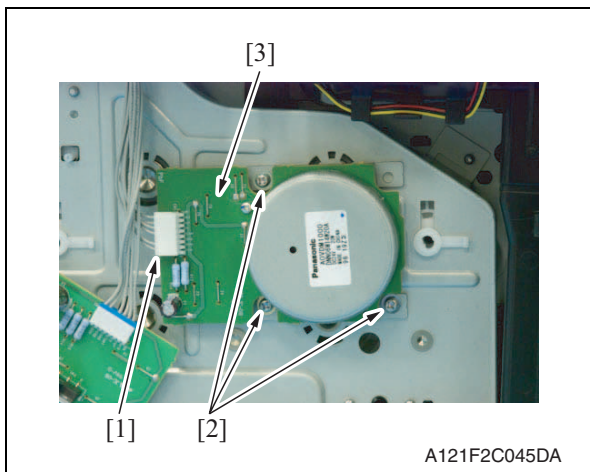
3. Disconnect the connector [1].
4. Remove four screws [2], and remove the main motor [3].

NOTE

- When installing the motor, try to insert it straight, and take care not to damage the gears.
5. To reinstall, reverse the order of removal.

7.4.22 Color PC drum motor (M4)

1. Remove the high voltage unit.
See P.66



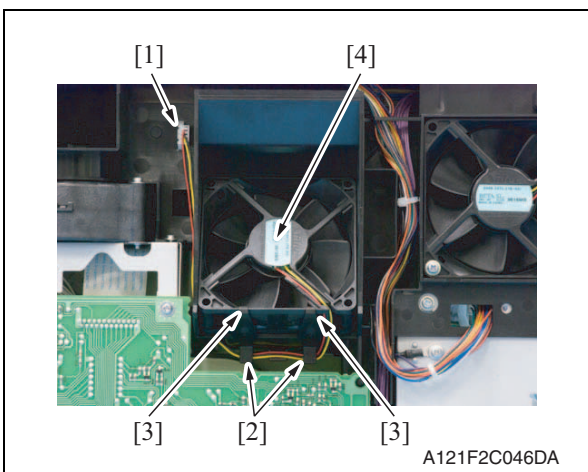
2. Disconnect the connector [1].
3. Remove four screws [2], and remove the color PC drum motor [3].

NOTE

- When installing the motor, try to insert it straight, and take care not to damage the gears.
4. To reinstall, reverse the order of removal.

7.4.23 DC power supply fan motor (FM10)

1. Remove the rear cover.
[See P.44](#)

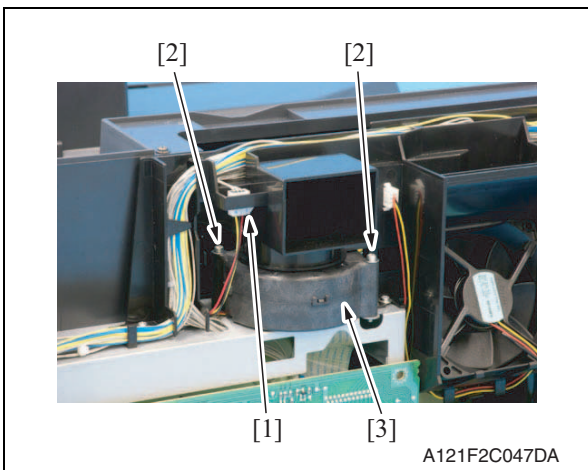


2. Disconnect the connector [1].
3. Remove the harness from the wire saddle [2].
4. Unlock the tab [3], and remove the DC power supply fan motor [4].

5. To reinstall, reverse the order of removal.

7.4.24 Cooling fan motor (FM11)

1. Remove the ADF.
[See P.47](#)
2. Remove the scanner unit.
[See P.52](#)

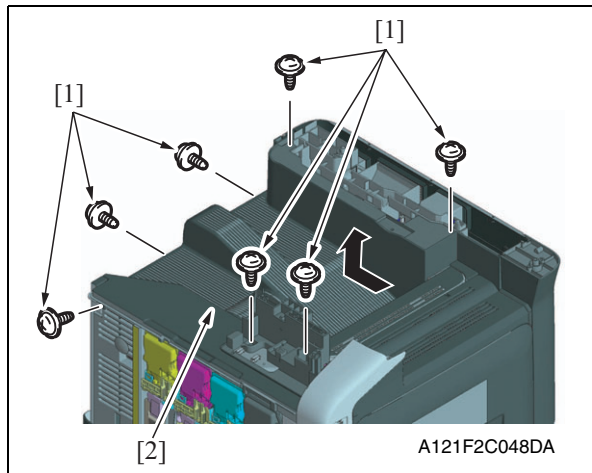


3. Disconnect the connector [1].
4. Remove two screws [2], and remove the cooling fan motor [3].

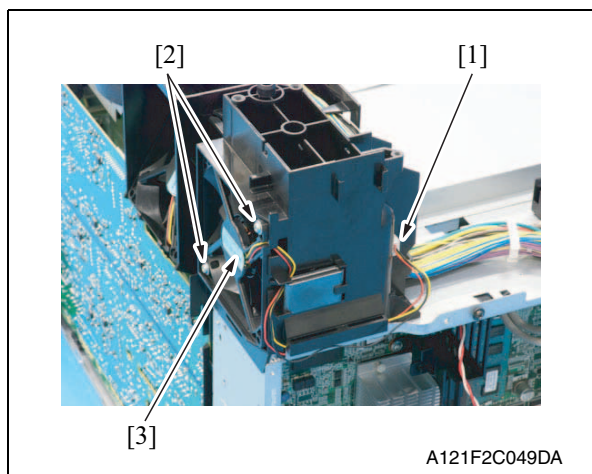
5. To reinstall, reverse the order of removal.

7.4.25 MFP board cooling fan motor (FM12)

1. Remove the ADF.
[See P.47](#)
2. Remove the scanner unit.
[See P.52](#)
3. Remove the operation panel.
[See P.46](#)



4. Remove seven screws [1], and remove the upper cover [2].

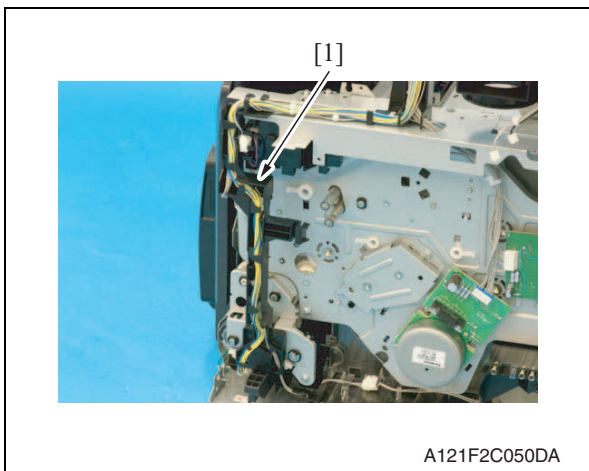


5. Disconnect the connector [1].
6. Remove two screws [2], and remove the MFP board cooling fan motor [3].

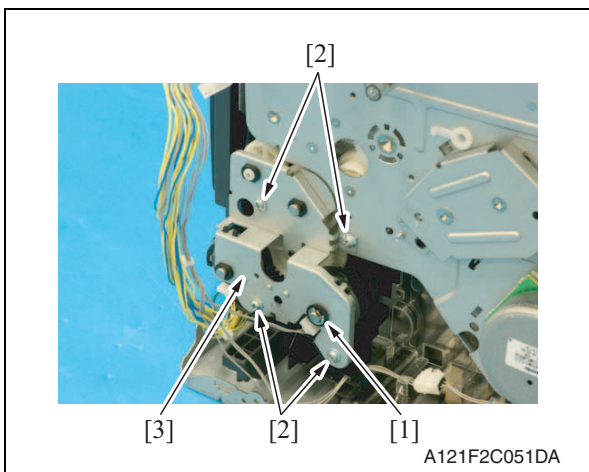
7. To reinstall, reverse the order of removal.

7.4.26 Tray2 media feed clutch (CL1) / Tray1 media feed clutch (CL2)

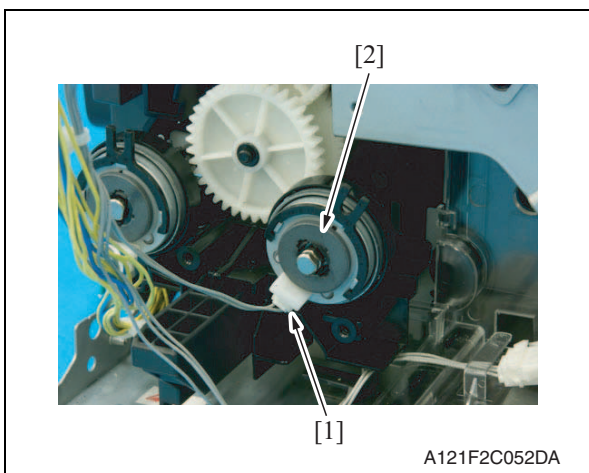
1. Remove the rear cover.
[See P.44](#)
2. Remove the main motor.
[See P.71](#)



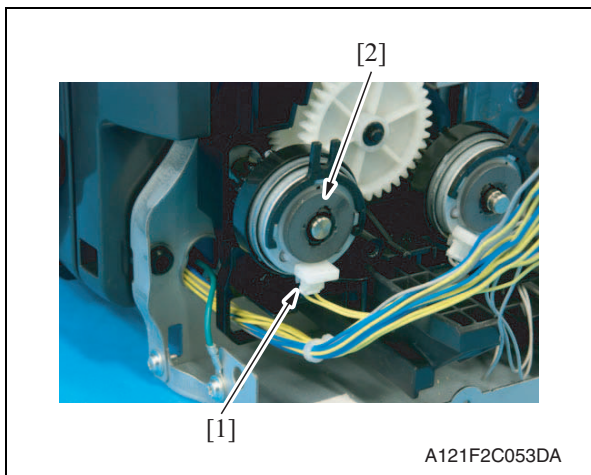
3. Remove the harness from the harness guide [1], and remove the harness guide [1].



4. Remove the E-ring [1].
5. Remove four screws [2], and remove the fixing metal plate [3].



6. Disconnect the connector [1], and remove the tray2 media feed clutch [2].

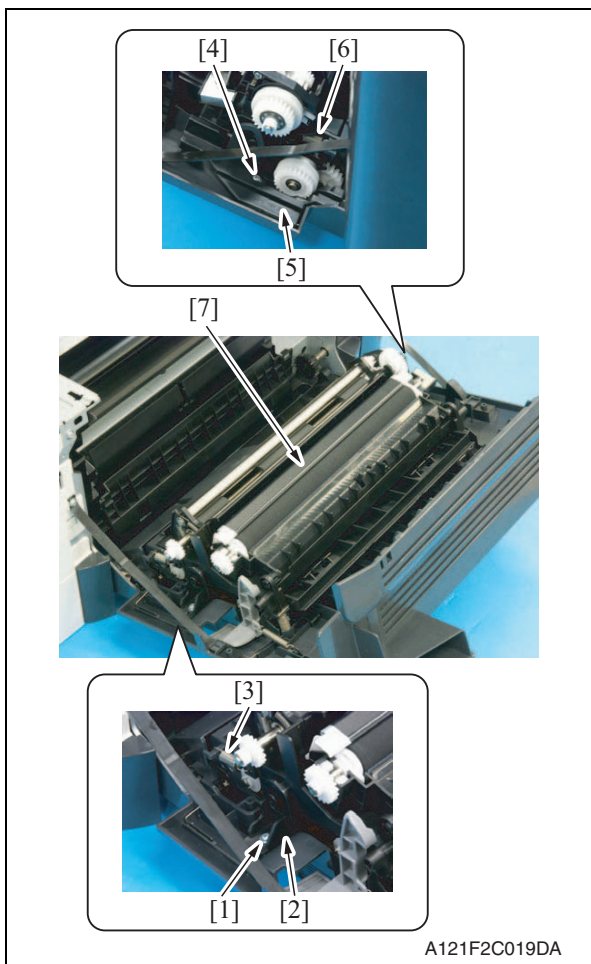


7. Disconnect the connector [1], and remove the tray1 media feed clutch [2].

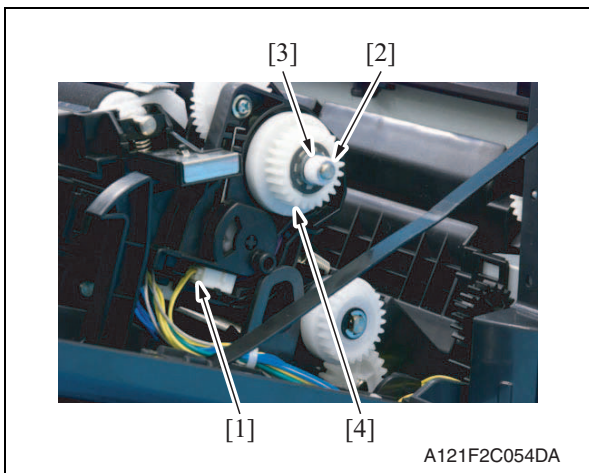
8. To reinstall, reverse the order of removal.

7.4.27 Registration clutch (CL3)

1. Open the right door.



2. Remove the screw [1], and remove the fixed cover [2].
3. Remove the spring [3].
4. Remove the screw [4], and remove the harness cover [5].
5. Remove the spring [6].
6. Remove the conveyance unit [7].

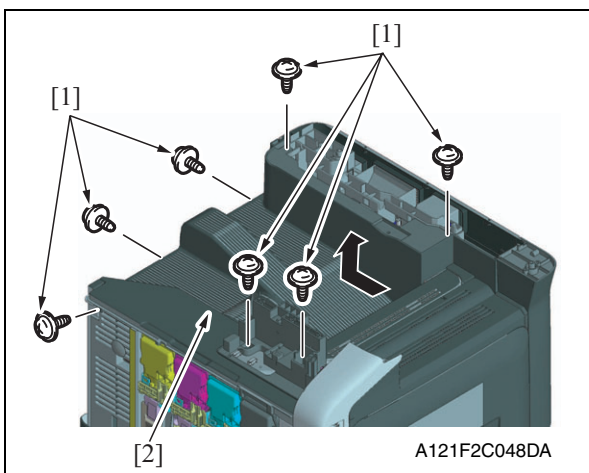


7. Disconnect the connector [1].
8. Remove the E-ring [2] and the bearing [3], and remove the registration clutch [4].

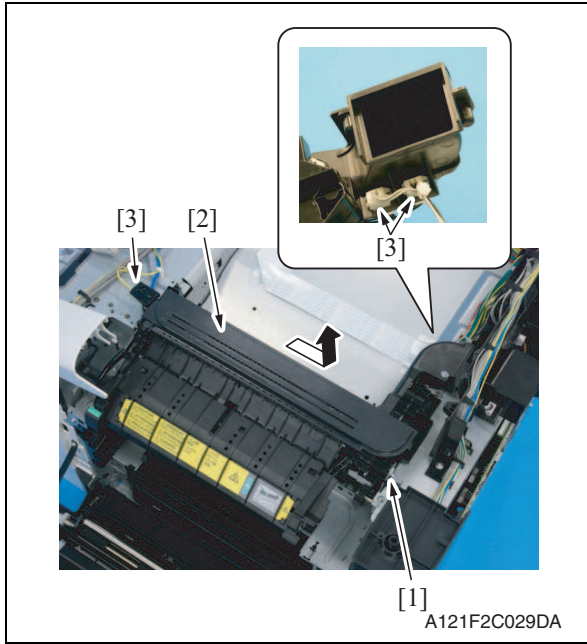
9. To reinstall, reverse the order of removal.

7.4.28 Toner supply clutch/Y (CL4) / Toner supply clutch/M (CL5) Toner supply clutch/C (CL6) / Toner supply clutch/K (CL7)

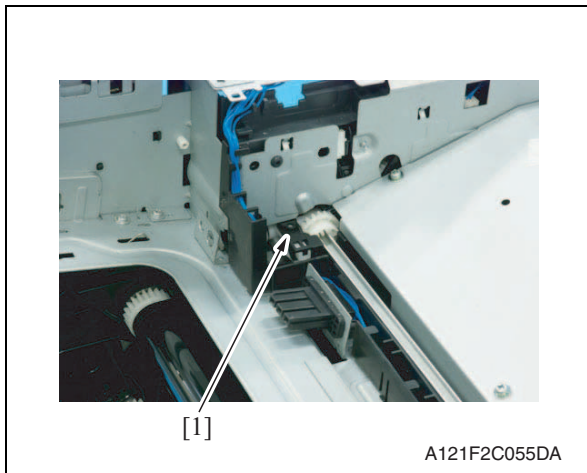
1. Remove the toner cartridge (C,M,Y,K).
[See P.8](#)
2. Remove the waste toner bottle.
[See P.14](#)
3. Remove the imaging unit (C,M,Y,K).
[See P.11](#)
4. Remove the fuser unit.
[See P.20](#)
5. Remove the ADF.
[See P.47](#)
6. Remove the scanner unit.
[See P.52](#)
7. Remove the rear right cover.
[See P.45](#)
8. Remove the operation panel.
[See P.46](#)
9. Remove the cooling fan motor.
[See P.72](#)



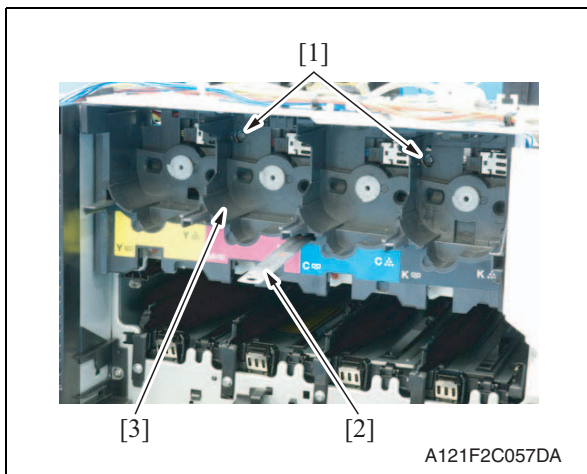
10. Remove seven screws [1], and remove the upper cover [2].



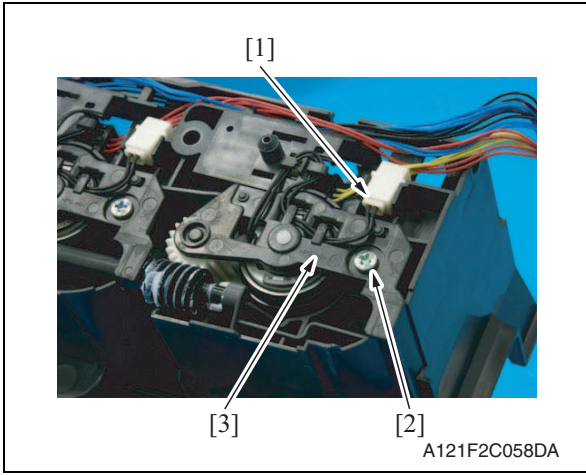
- 11. Remove the screw [1], and remove the exit drive assy [2].
- 12. Disconnect three connectors [3].



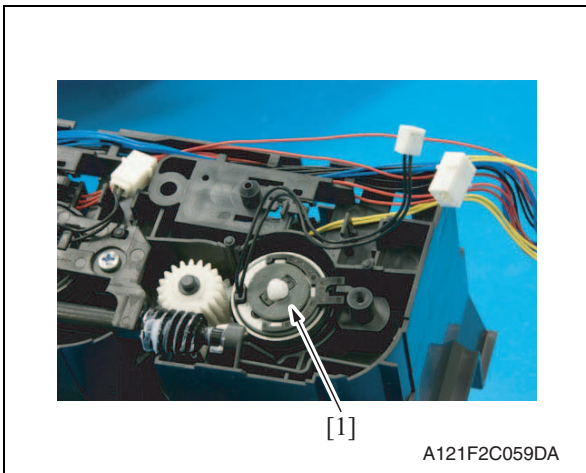
- 13. Remove the stopper [1].



- 14. Remove two screws [1].
- 15. While releasing the lock with the inserted metal ruler [2] or another similar tool as shown in the illustration, remove the toner box drive Assy [3].



- 16. Remove the harness from guide, and disconnect the connector [1].
- 17. Remove the screw [2], and remove the cover [3].

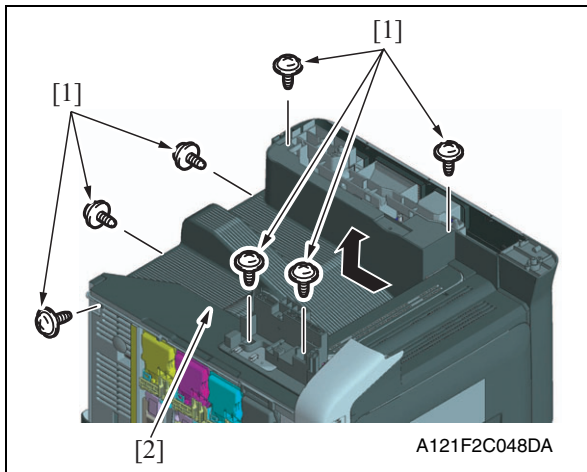


- 18. Remove the toner supply clutch [1].

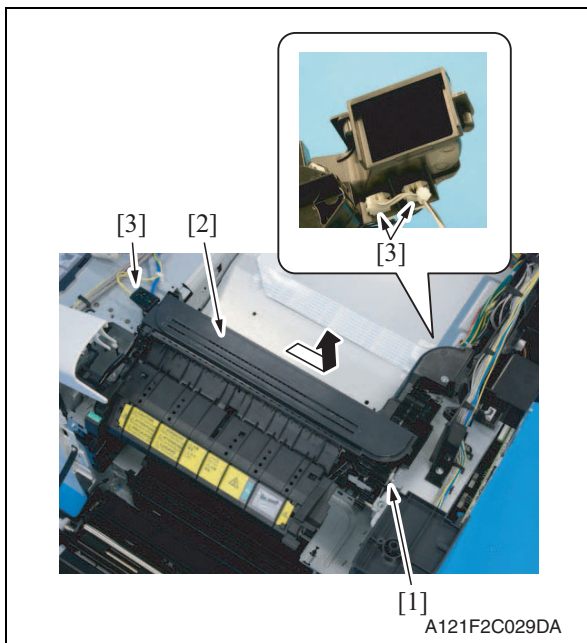
19. To reinstall, reverse the order of removal.

7.4.29 Loop detection clutch (CL8)

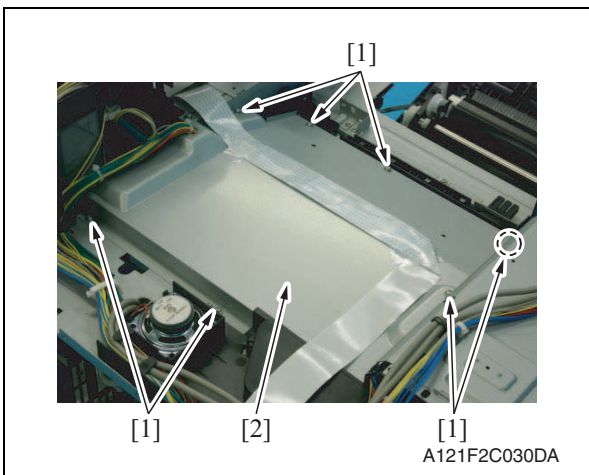
1. Remove the fuser unit.
[See P.20](#)
2. Remove the high voltage unit.
[See P.66](#)
3. Remove the ADF.
[See P.47](#)
4. Remove the scanner unit.
[See P.52](#)
5. Remove the rear right cover.
[See P.45](#)
6. Remove the cooling fan motor.
[See P.72](#)



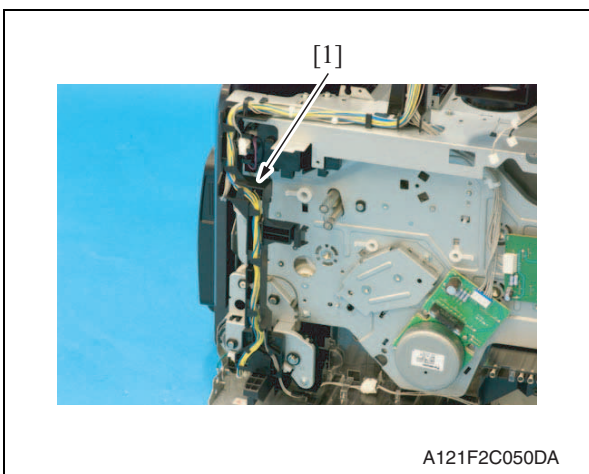
7. Remove seven screws [1], and remove the upper cover [2].



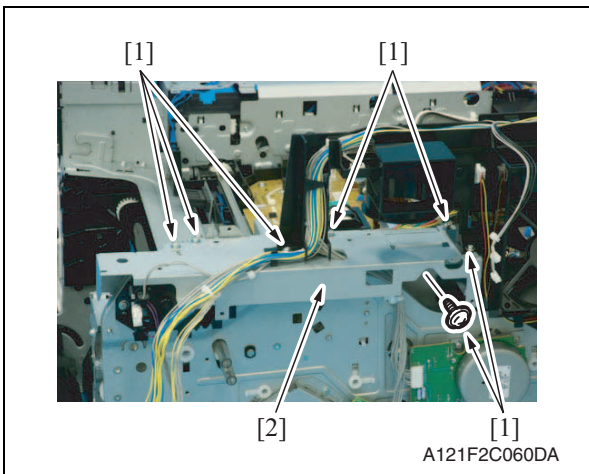
8. Remove the screw [1], and remove the exit drive assy [2].
9. Disconnect three connectors [3].



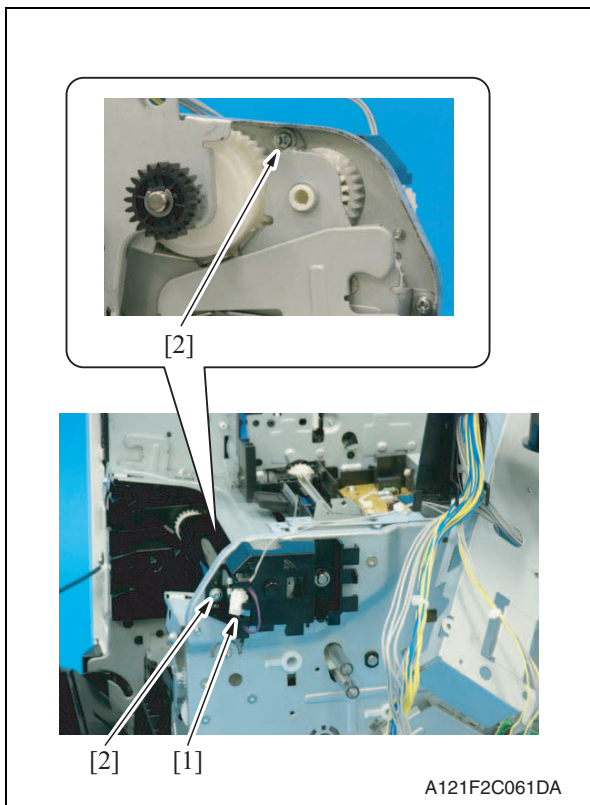
10. Remove seven screws [1], and remove the DC power supply protective cover [2].



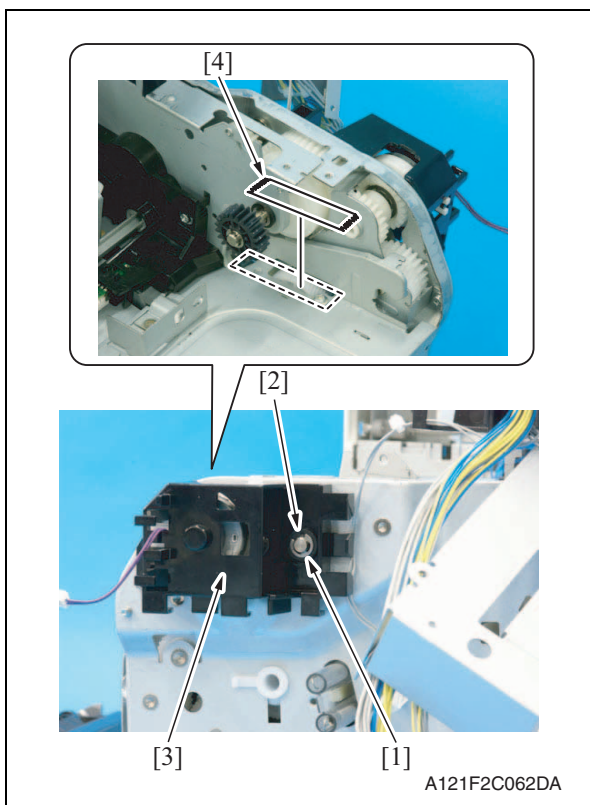
11. Remove the harness from the harness guide [1], and remove the harness guide [1].



12. Remove seven screws [1], and remove the sheet metal [2].



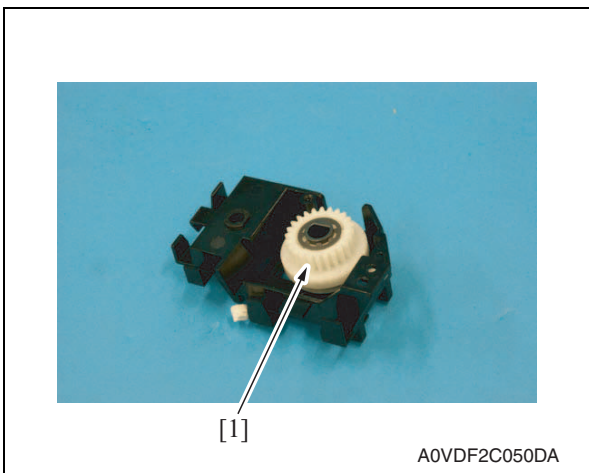
- 13. Disconnect the connector [1].
- 14. Remove two screws [2].



- 15. Remove the E-ring [1] and bearing [2], and remove the holder [3].

NOTE

- Before removing the holder [3], attach tape or similar material [4] to the section shown in the illustration to prevent the shaft from falling down and being lost.

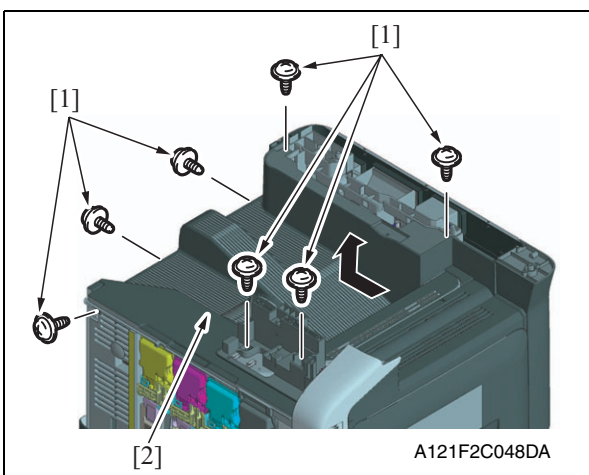


16. Remove the loop detection clutch [1].

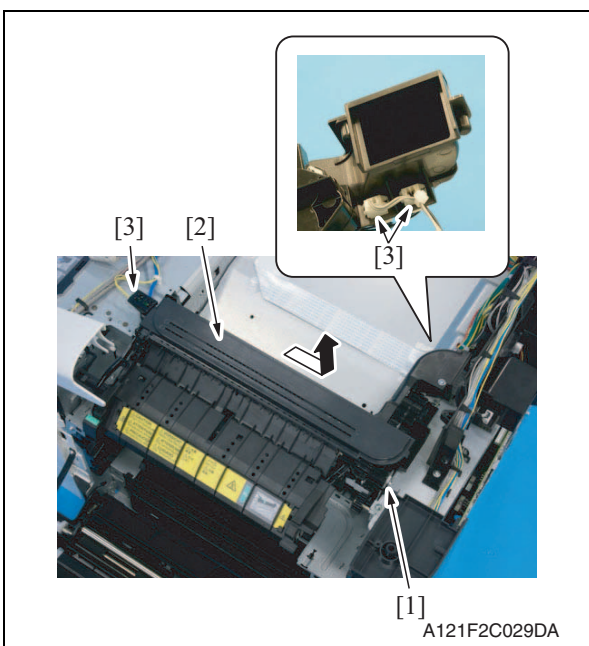
17. To reinstall, reverse the order of removal.

7.4.30 Switchback roller feed clutch (CL11) / Switchback roller reverse clutch (CL12)

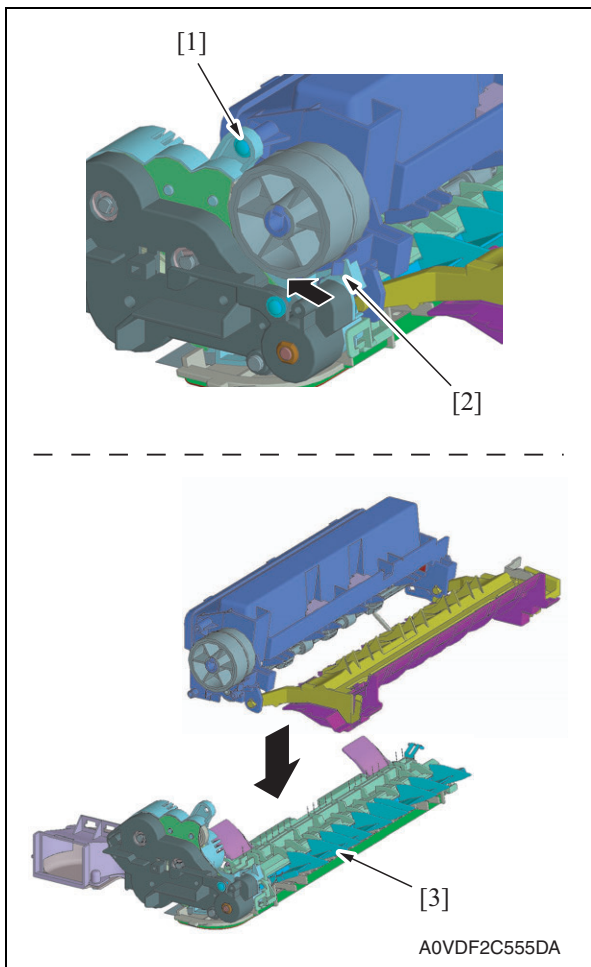
1. Remove the fuser unit.
[See P.20](#)
2. Remove the cooling fan motor.
[See P.72](#)



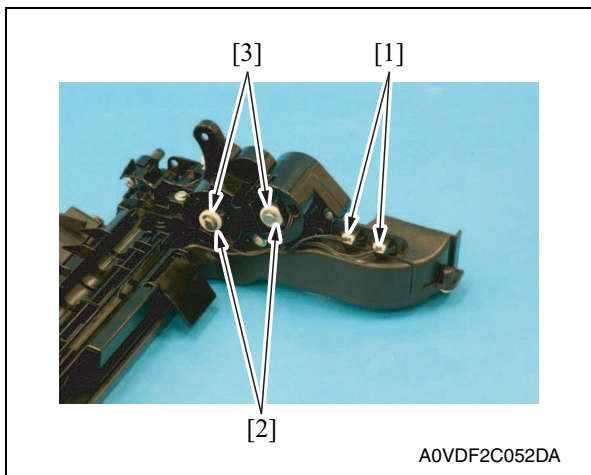
3. Remove seven screws [1], and remove the upper cover [2].



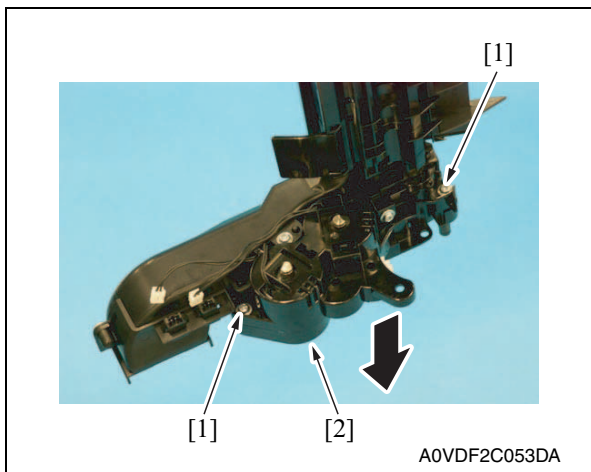
4. Remove the screw [1], and remove the exit drive assy [2].
5. Disconnect three connectors [3].



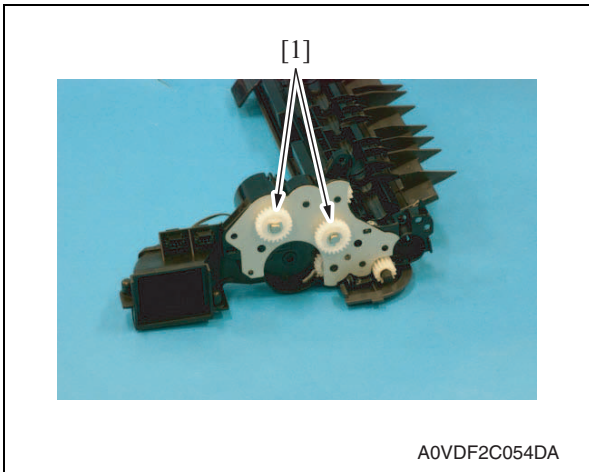
- 6. Remove the screw [1].
- 7. While pushing the tab [2] in the direction of the arrow to unlock it, disassemble and remove the exit drive assy [3].



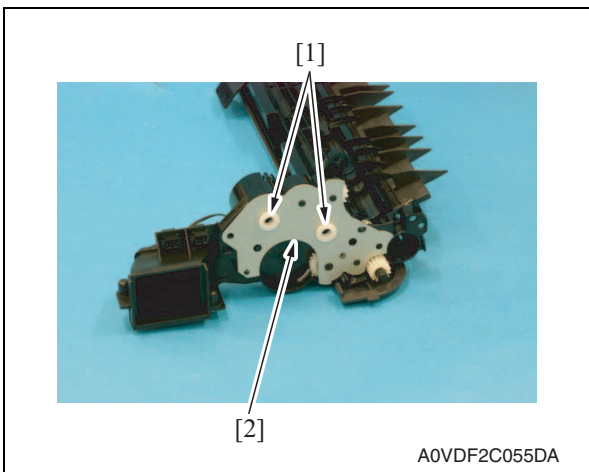
- 8. Disconnect two connectors [1].
- 9. Remove two E-rings [2] and two bearings [3].



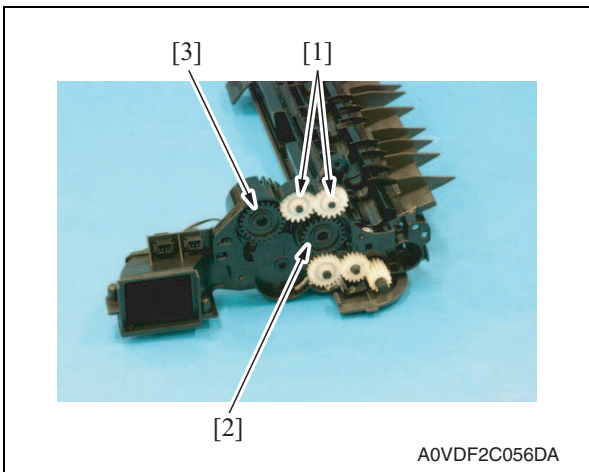
- 10. Remove two screws [1], and remove the gear assy [2].



11. Remove two gears [1].



12. Remove two bearings [1], and remove the metal plate [2].

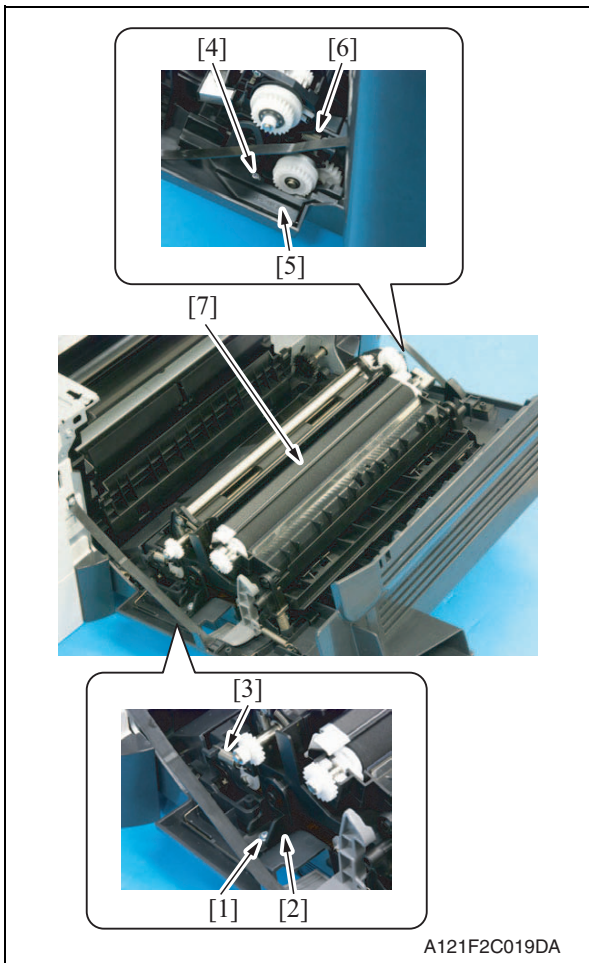


13. Remove two gears [1] and remove the switchback roller feed clutch [2] or the switchback roller reverse clutch [3].

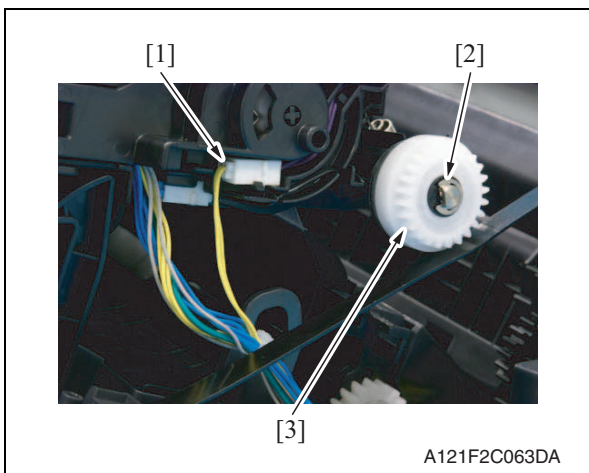
14. To reinstall, reverse the order of removal.

7.4.31 Duplex conveyance roller clutch (CL13)

1. Open the right door.



2. Remove the screw [1], and remove the fixed cover [2].
3. Remove the spring [3].
4. Remove the screw [4], and remove the harness cover [5].
5. Remove the spring [6].
6. Remove the conveyance unit [7].

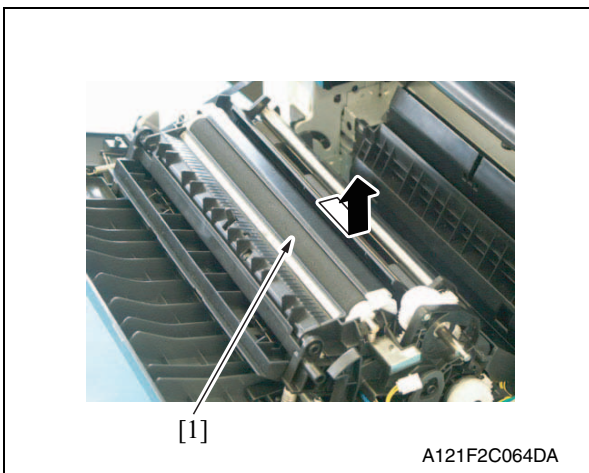


7. Disconnect the connector [1].
8. Remove the E-ring [2] and remove the duplex conveyance roller clutch [3].

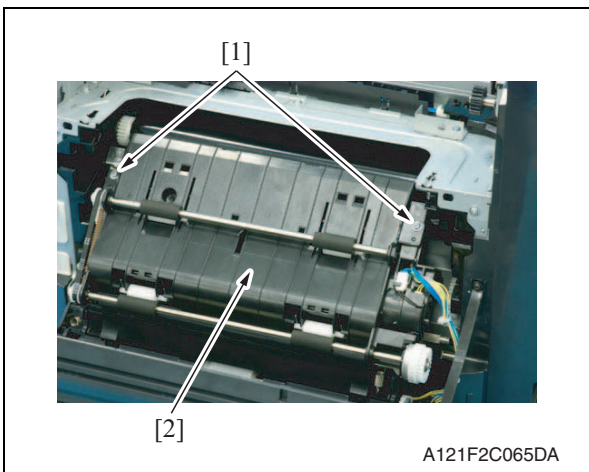
9. To reinstall, reverse the order of removal.

7.4.32 2nd transfer release solenoid (SD2)

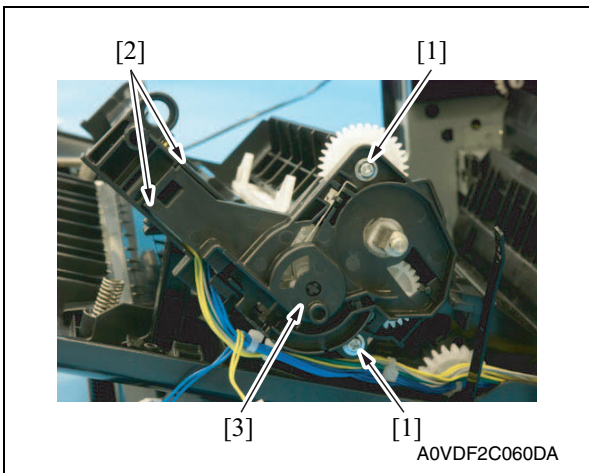
1. Remove the registration clutch.
[See P.75](#)



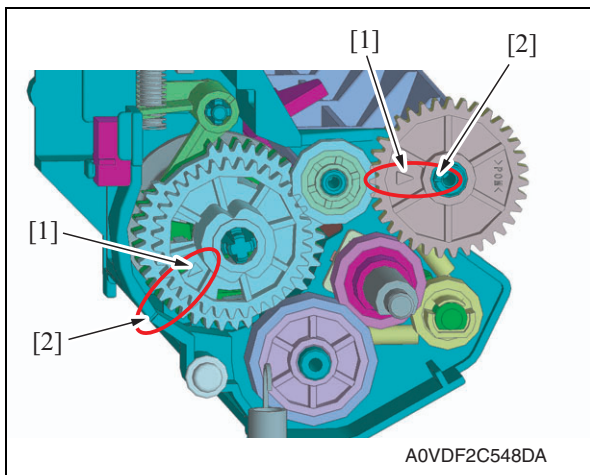
2. Remove the 2nd transfer roller unit assy [1].



3. Remove two screws [1], and remove the duplex conveyance roller assy [2].

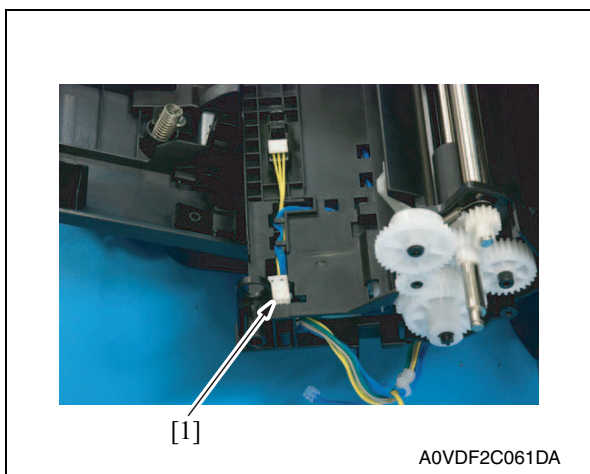


4. Remove two screws [1] and unlock two tabs [2], and remove the holder [3].

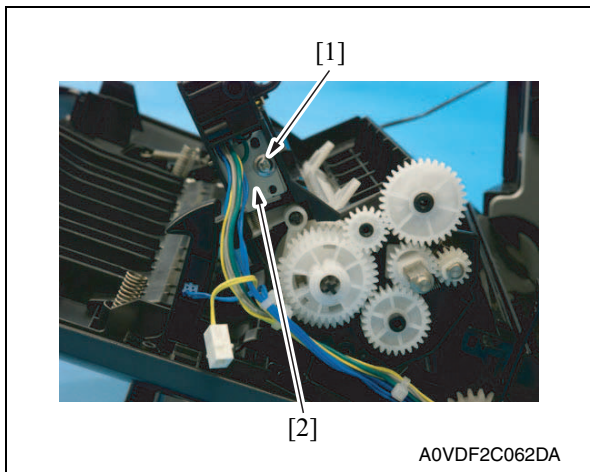


NOTE

- If the gears come off and they need to be reinstalled, align the arrow [1] on the gear with the marked line [2] on the holder.



5. Disconnect the connector [1].

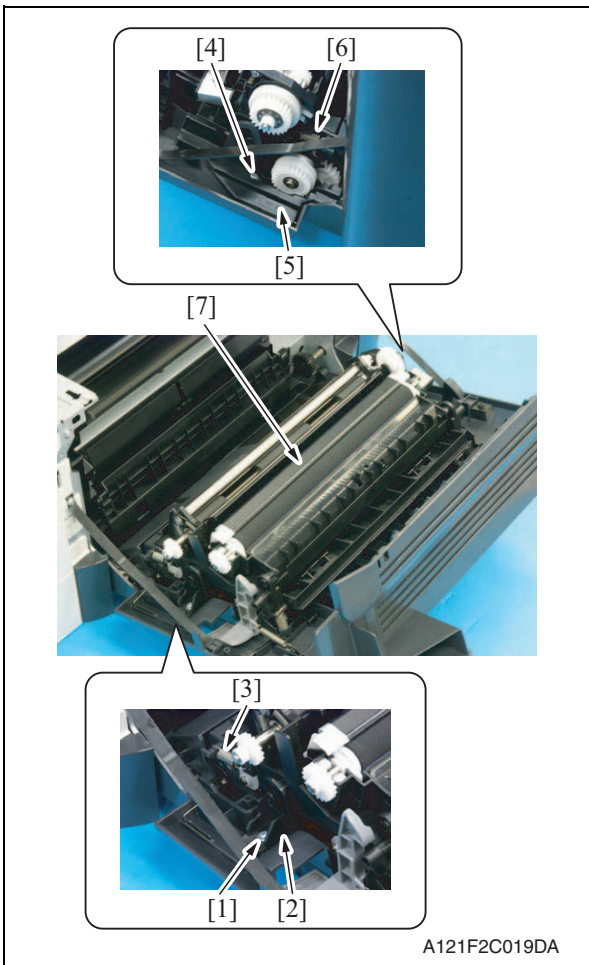


6. Remove the screw [1], and remove the 2nd transfer release solenoid [2].

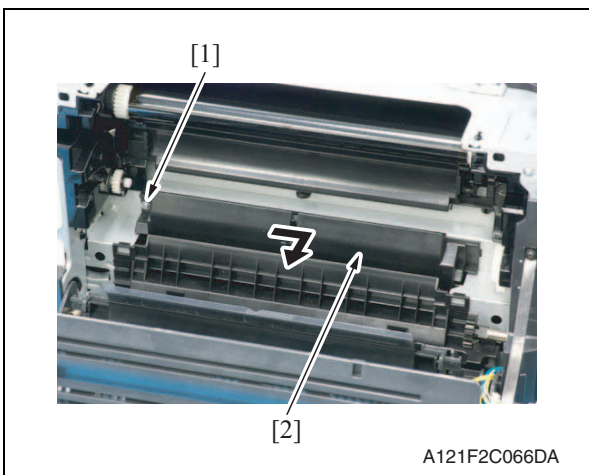
7. To reinstall, reverse the order of removal.

7.4.33 Temperature/ humidity sensor (TEM/HUMS)

1. Open the right door.



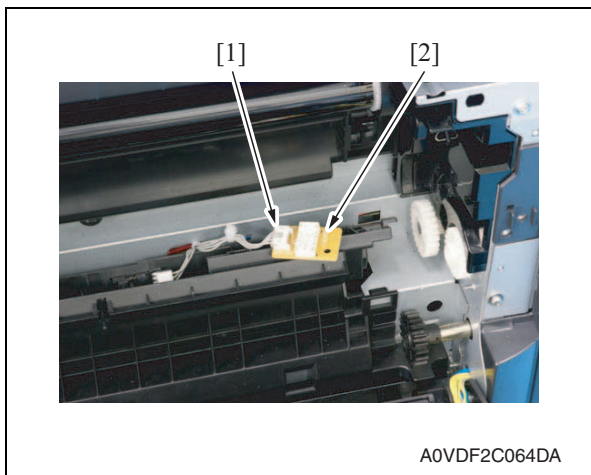
2. Remove the screw [1], and remove the fixed cover [2].
3. Remove the spring [3].
4. Remove the screw [4], and remove the harness cover [5].
5. Remove the spring [6].
6. Remove the conveyance unit [7].



7. Remove the screw [1] and remove the sensor holder [2] as shown in the illustration on the left.

NOTE

- Do not jerk off the sensor holder, to which a harness is connected.



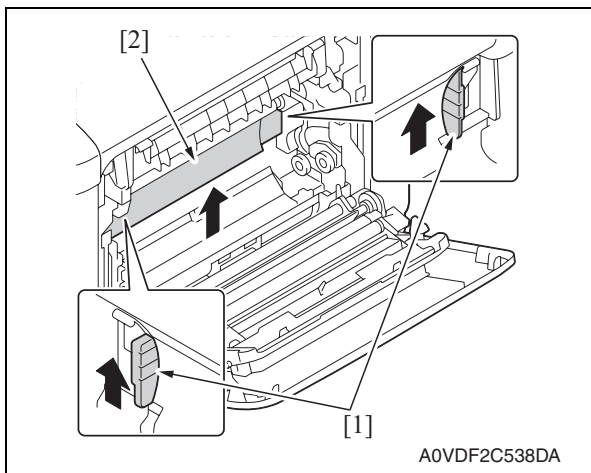
A0VDF2C064DA

8. Disconnect the connector [1], and remove the temperature/ humidity sensor [2].

9. To reinstall, reverse the order of removal.

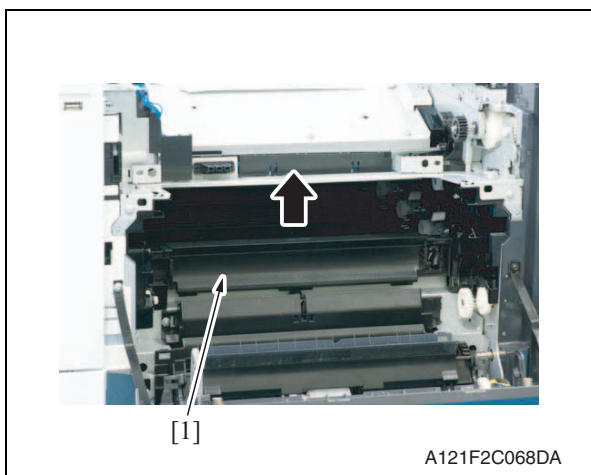
7.4.34 IDC sensor (IDC)

1. Remove the toner cartridge (C,M,Y,K).
[See P.8](#)
2. Remove the waste toner bottle.
[See P.14](#)
3. Remove the imaging unit (C,M,Y,K).
[See P.11](#)
4. Remove the transfer belt unit.
[See P.15](#)



A0VDF2C538DA

5. Hold the both handles [1] and raise the guide [2].

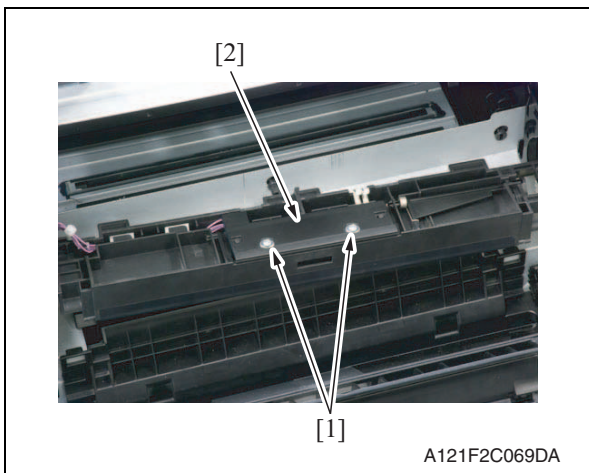


A121F2C068DA

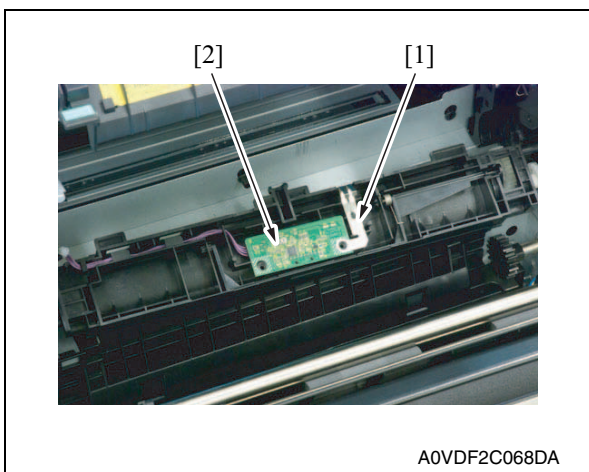
6. Raise the guide [1] further and remove it.

NOTE

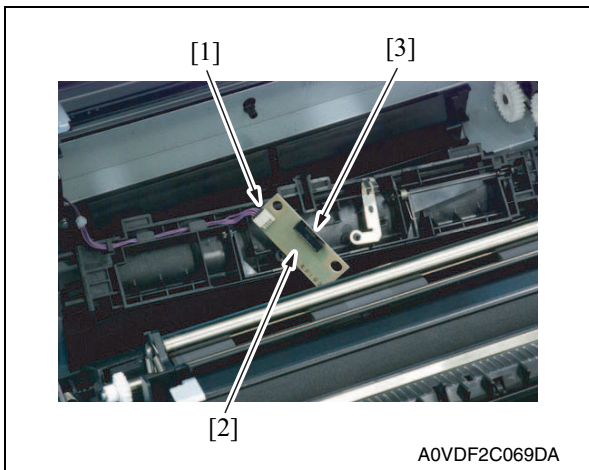
- Do not jerk off the sensor holder, to which a harness is connected.



7. Remove two screws [1], and remove the sensor cover [2].



8. While slightly raising the ground plate [1], remove the IDC sensor [2].



9. Disconnect the connector [1], and remove the IDC sensor [2].

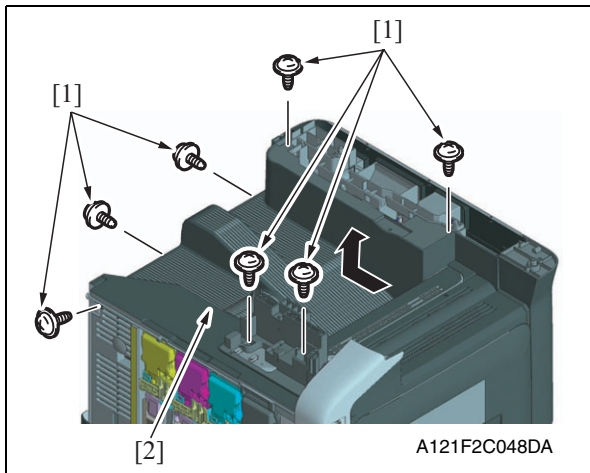
NOTE

- Be careful not to break the sensor head [3] of the IDC sensor.

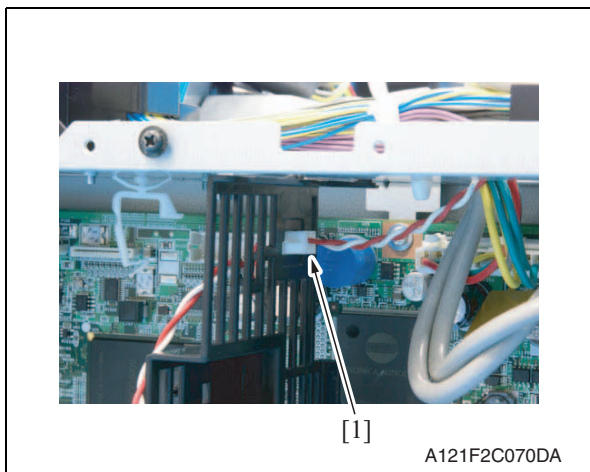
10. To reinstall, reverse the order of removal.

7.4.35 Speaker (SP1)

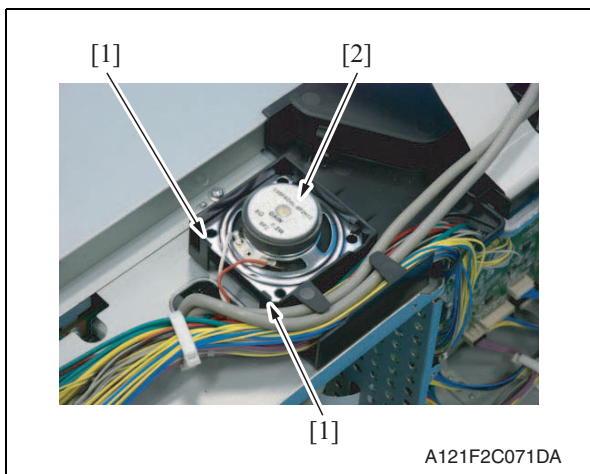
1. Remove the ADF.
[See P.47](#)
2. Remove the scanner unit.
[See P.52](#)
3. Remove the operation panel.
[See P.46](#)



4. Remove seven screws [1], and remove the upper cover [2].



5. Disconnect the connector [1].



6. Remove two tabs [1], and remove the speaker [2].

7. To reinstall, reverse the order of removal.

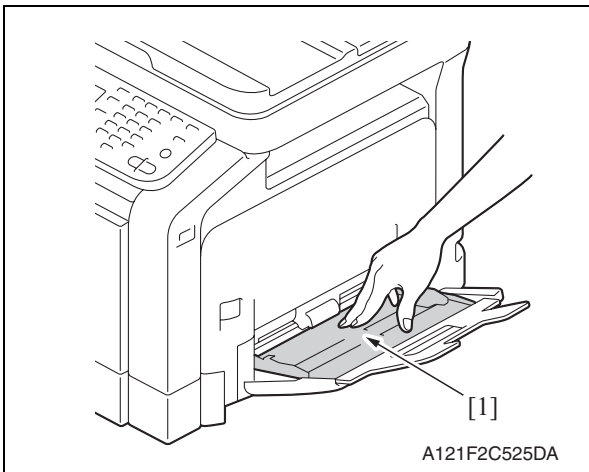
7.5 Cleaning procedure

NOTE

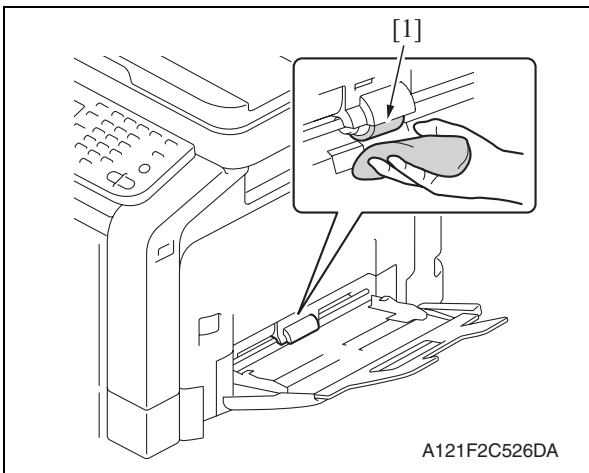
- The alcohol described in the cleaning procedure represents the isopropyl alcohol.

7.5.1 Tray1 feed roller

1. Open the tray1.



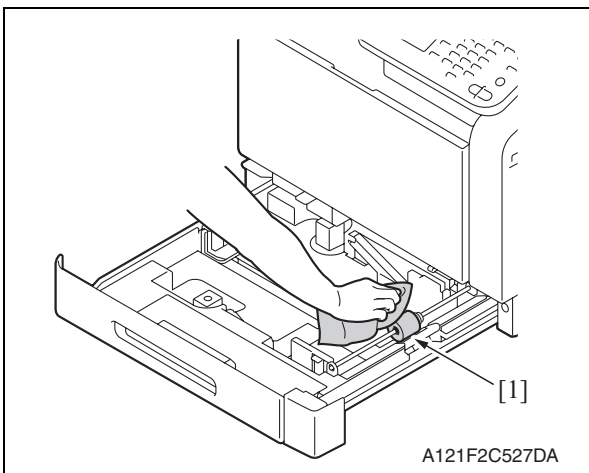
2. Press down the media lifting metal plate [1].



3. Using a cleaning pad dampened with alcohol, wipe the tray1 feed roller [1] clean of dirt.

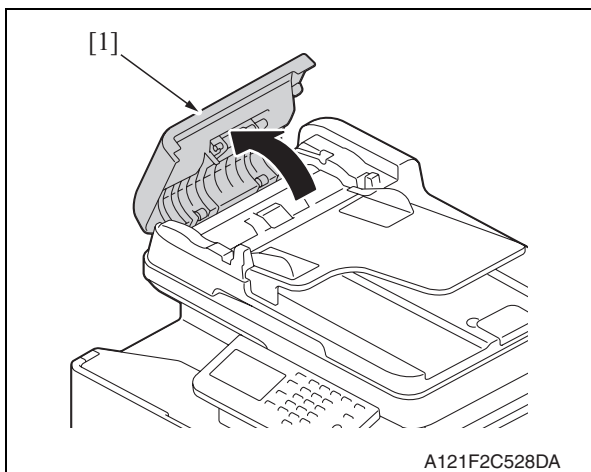
7.5.2 Tray2 feed roller

1. Slide out tray2.

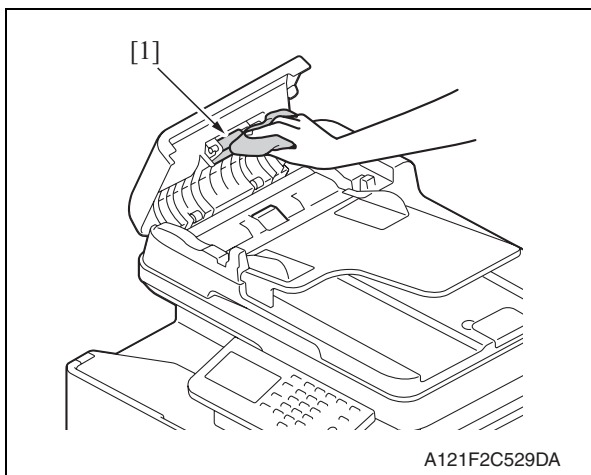


2. Using a cleaning pad dampened with alcohol, wipe the tray2 feed roller [1] clean of dirt.

7.5.3 ADF feed roller



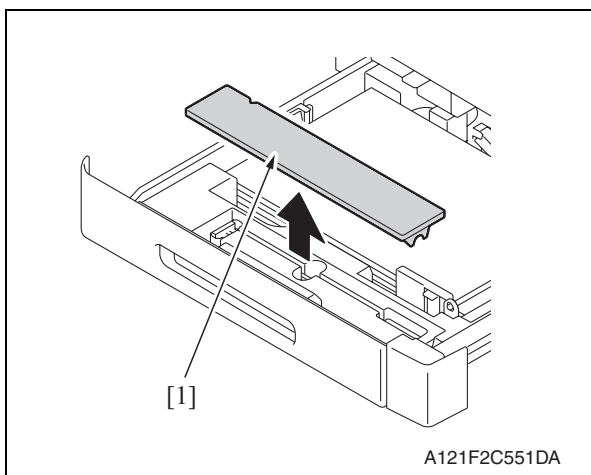
1. Open the ADF feed cover [1].



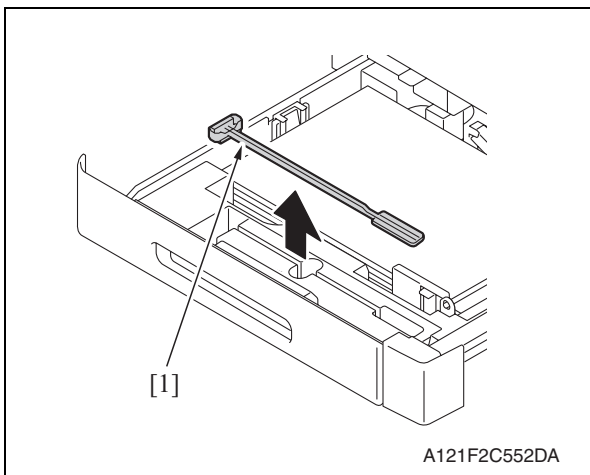
2. Using a cleaning pad dampened with alcohol, wipe the ADF feed roller [1] clean of dirt.

7.5.4 Laser irradiation section

1. Slide out tray2.

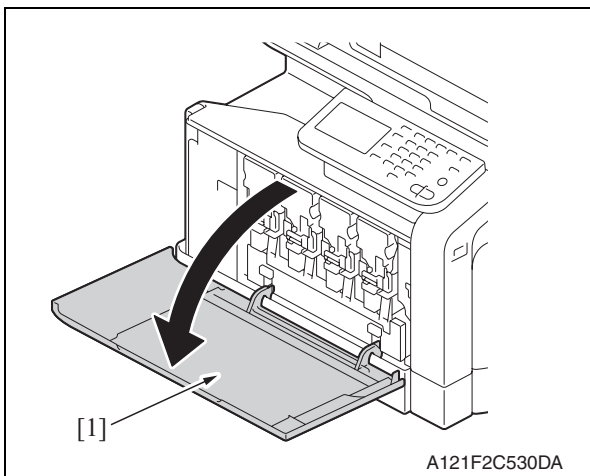


2. Remove the cover [1].

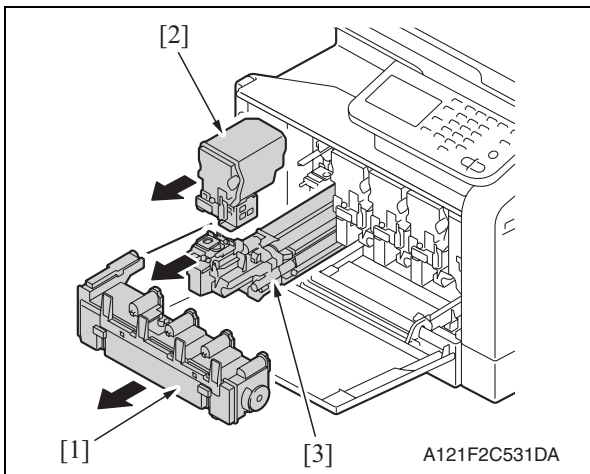


- 3. Remove the laser lens cleaning tool [1].

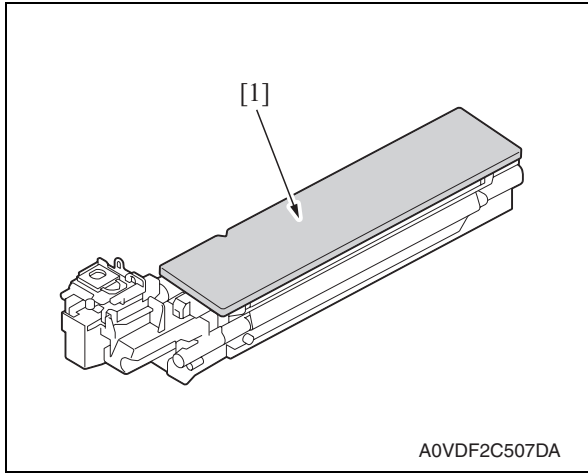
- 4. Close the tray2.



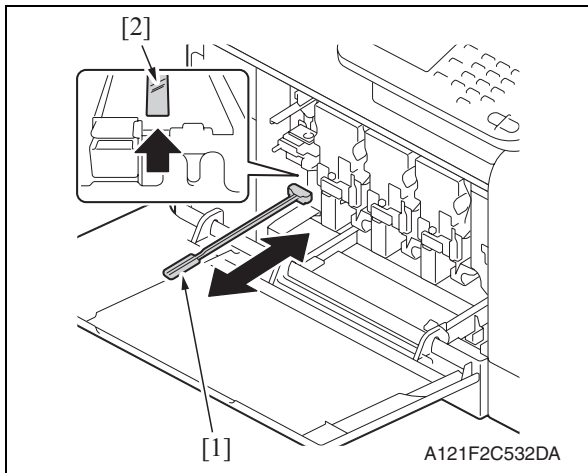
- 5. Open the front cover [1].



- 6. Remove the waste toner bottle [1].
[See P.14](#)
- 7. Remove the toner cartridge [2].
[See P.8](#)
- 8. Remove the imaging unit [3].
[See P.11](#)



9. Attach the cover [1] to the removed imaging unit.



10. Insert the laser lens cleaning tool [1] into the imaging unit opening [2], pull it out, and then repeat this back and forth movement 2 or 3 times.

d-Color MF3000

MAINTENANCE

Blank Page

ADJUSTMENT/SETTING

8. HOW TO USE THE ADJUSTMENT/SETTING SECTION

- “Adjustment/Setting” contains detailed information on the adjustment items and procedures for this machine.
- Throughout this “Adjustment/Setting,” the default settings are indicated by “ ”.

Advance checks

- Before attempting to solve the customer problem, the following advance checks must be made. Check to see if:
 - The power supply voltage meets the specifications.
 - The power supply is properly grounded.
 - The machine shares the power supply with any other machine that draws large current intermittently (e.g., elevator and air conditioner that generate electric noise).
 - The installation site is environmentally appropriate: high temperature, high humidity, direct sunlight, ventilation, etc.; levelness of the installation site.
 - The original has a problem that may cause a defective image.
 - The density is properly selected.
 - The original glass, slit glass, or related part is dirty.
 - Correct paper is being used for printing.
 - The units, parts, and supplies used for printing (developer, PC drum, etc.) are properly replenished and replaced when they reach the end of their useful service life.
 - Toner is not running out.

CAUTION

- **To unplug the power cord of the machine before starting the service job procedures.**
- **If it is unavoidably necessary to service the machine with its power turned ON, use utmost care not to be caught in the scanner cables or gears of the exposure unit.**
- **Special care should be used when handling the fuser unit which can be extremely hot.**
- **The developing unit has a strong magnetic field. Keep watches and measuring instruments away from it.**
- **Take care not to damage the PC drum with a tool or similar device.**
- **Do not touch IC pins with bare hands.**

9. Utility

9.1 List of utility mode

NOTE

- Keys displayed on screens are different depending on the setting.

Utility				
Address Registration	Fax/Scan Address Registration	Address Book	E-Mail	
			Fax	
User Settings	Machine Setting	Language		
		Measurement Unit Setting		
		Paper Tray Settings	Auto Tray Switch	
			Enable ATS/APS	
		ACS Level		
	Copy Setting	Auto Zoom for Combine		
		Auto Sort/Group Selection		
		Copy Initialize Settings		
		Separate Scan Output Method		
	Scan Settings	JPEG Compression Level		
		Black Compression Level		
		Scan Initialize Settings		
	Print Setting	Paper Settings	Paper Tray Settings	Default Tray
				Tray1
				Tray2
				Tray3
				Tray4
Simplex/Duplex				
Copies				
Collate				
Auto Tray Switching				
Tray Mapping				
User Settings	Print Setting	Report Print	Config. Page	
			Stats. Page	
			Font List	PostScript
				PCL
			HDD Direct.	
			Counter List Print	
			Fax Settings	

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ADJUSTMENT / SETTING

Utility				
Admin Setting	Machine Setting	Sleep Mode Settings		
		Sleep Time Settings		
		Date & Time Setting	DATE (XX.XX.XX)	
			Time	
			Time Zone	
		Daylight Saving Time	Enable	
			Offset	
		List/Counter	Job Settings List	
		Auto Reset Settings	Enable	
			Auto Reset	
	Default Function			
	Report Input Tray			
	Administrator Registration	Administrator Registration	Name	
			Ext Number	
			Address	
		Machine Setting	Device Name	
			Address	
	Address Registration	Address Book	Address Book	
			Group Address	
			Program Address	
	Authentication	User List Display Settings		
		Logout Confirmation Display		
	Ethernet	TCP/IP	Enable	
			IP Address	
			Subnet Mask	
			Gateway	
			DHCP	
BOOTP				
ARP/Ping				
HTTP				
FTP				
Telnet				
Bonjour				
Ethernet	TCP/IP	Dynamic DNS		
		IPP		
		RAW Port	Enable	
			Bidirectional	
		SLP		
		SMTP		
		SNMP		
		WSD Print		
IPSec				

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Utility					
Admin Setting	Ethernet	TCP/IP	IP Address Filter	Access Permission	
				Access Rejection	
			IPv6	Enable	
				Auto Setting	
				Link Local	
				Global Address	
				Gateway Address	
		Netware			
		AppleTalk			
		Network Speed			
		IEEE802.1X			
		Binary Division			
		S/MIME Settings	S/MIME Enabled		
			Signature		
			Encryption		
			Auto. Obtain Certificates		
			Print Digital Signature		
		Memory Direct Print			
		Job Timeout			
		Copy Setting	Select Tray when APS OFF		
			Paper Priority		
		Print Setting	Grayscale Page		
			Startup Page Setting		
			Auto Continue		
			Paper	Default Paper	Paper Size
					Custom Size
Measurement Unit Setting					
Hold Job Timeout					
Quality Settings	Color Mode				
	Brightness				
	Halftone		Image Printing		
			Text Printing		
			Graphics Printing		
	Edge Enhancement		Image Printing		
			Text Printing		
			Graphics Printing		
	Edge Strength				
	Economy Print				
PCL Settings	Contrast				
	Image Printing				

Utility					
Admin Setting	Print Setting	Quality Settings	PCL Settings	Text Printing	
				Graphics Printing	
			PS Setting	Image Printing	
				Text Printing	
				Graphics Printing	
				Simulation	
			Gradation Adjust	Tone Calibration	
				AIDC Process	
				CMYK Density	
			Color Separation		
		Emulation		Default Emulation	
		Postscript	Wait Timeout		
			Print PS Errors		
			PS Protocol		
	Auto Trapping				
	Postscript	Black Overprint			
	PCL	CR/LF Mapping			
		Lines Per Page			
		Font Source			
	XPS	Digital Signature			
XPS Error Page					
Fax Settings					
Maintenance Menu	Print Menu	Error Log			
		Halftone 64			
		Halftone 128			
		Halftone 256			
		Gradation			
		Activity Report			
		Scan Send Report Print			
		Scan Event Log			
		Printer Adjustment	Leading Edge Adjustment		
			Side Edge Adjustment		
	Left ADJ Duplex				
	2nd Image Transfer Current		Simplex Pass		
			Manual Duplex		
	Thick Paper Image Density				
	Black Image Density				
	Fine Line ADJ				
	AIDC Mode				
	Thick Mode				
	Engine DipSW				

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ADJUSTMENT / SETTING

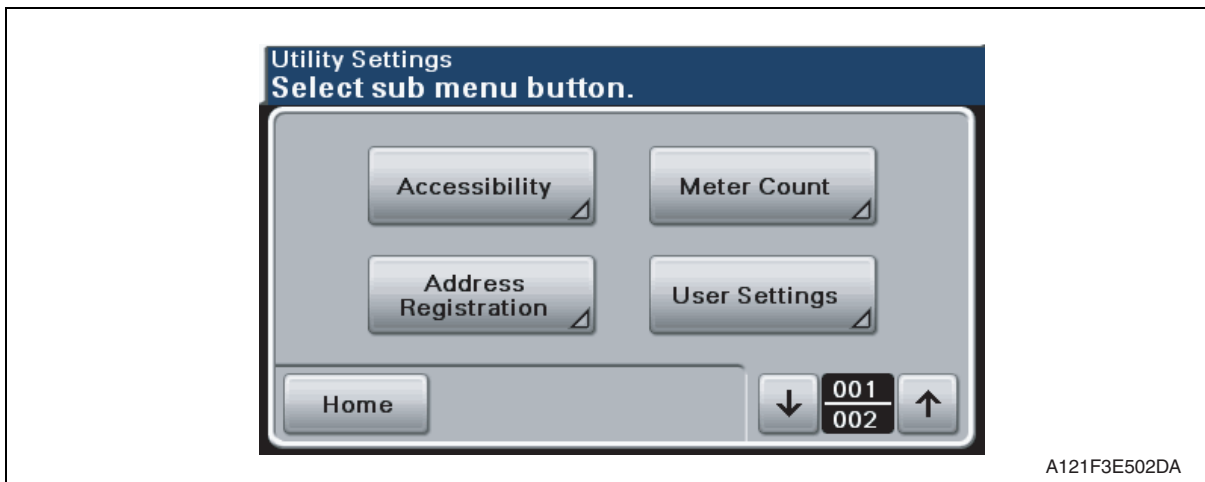
Utility				
Admin Setting	Maintenance Menu	Main Scan Adjust	Main Scan Page	
			Scan Adjust Value	
		Supplies		
	Scan Settings	Auto Del Interval		
		File Storage		
		Document Hold Setting		
	Security Settings	Administrator Password		
		Security Details	Password Rules	
			Manual Destination Input	
			Direct Input	
			Hide Personal Data	
			Disable Job History Display	
			Restrict Scan to USB	
		Enhanced Security Mode		
		HDD Settings	Check HDD Capacity	
			Overwrite All Data	
	SSD Lowlevel Format			
	Restore Defaults	Restore Network		
		Restore System		
		Restore All		
	HDD Format	User Area Only		
		User Area (Scan)		
		All		
Paper Empty	Tray 1			
	Tray 2			
	Tray 3			
	Tray 4			

* The settings list shown in the above is in accordance with the screen display format.

9.2 Starting/Exiting

9.2.1 Starting procedure

1. Press the Utility/Counter key.
2. The Utility Mode screen will appear.



9.2.2 Exiting procedure

- Touch the [Home] key.

A. Supplies Status

- Display the estimated percent of life remaining in the toner cartridge and imaging unit. The type of the toner cartridges that are installed in the printer is also displayed (See the table below).
- Display the status of the waste toner bottle.

Types of toner cartridges	
Starter	• Toner cartridge included with a product shipped from the factory: 6.0 K
High	• High-capacity toner cartridge: 6.0 K

NOTE

- **The percent of life remaining in the toner cartridge or imaging unit can be used as a guide, but may not exactly reflect the amount that has been used in the toner cartridge or imaging unit.**

B. PM Parts Information

- Display the estimated percent of life remaining in periodic replacement parts and units such as the transfer roller unit, transfer belt unit and fuser unit.

C. Counter Information

- The total number of pages that have been printed is counted and displayed based on the description shown in the following table.

<Counter information list>

Types of count		Contents	Count timing
Total Count	Monochrome	• The total number of monochrome pages ejected from the printer. Increment by one per simplex and by two per duplex	When a sheet of media is ejected properly
	Full color	• The total number of color pages ejected from the printer. Increment by one per simplex and by two per duplex	
Total Count (duplex)	Monochrome	• The total number of monochrome duplex sheets ejected from the printer. Increment by one per duplex (and by zero per simplex)	
	Full color	• The total number of color duplex sheets ejected from the printer. Increment by one per duplex (and by zero per simplex)	
Sheets Printed by Paper Tray		• The number of sheets used for each media source. Increment by one for both simplex and duplex	When a sheet of media is fed
Sheets Printed by Paper Size		• The number of sheets used for each media size. Increment by one for both simplex and duplex	
Sheets Printed by Paper Type		• The number of pages used per each media type. Increment by one for both simplex and duplex	

*1: A count of 100 in the counter is converted to 1 sheet of media and display the number of decimals are discarded.

No.	Contents	
23	Rate of transfer belt unit use (%)	
24	Number of times a transfer belt unit has been replaced	
25	Rate of fuser unit use (%)	
26	Number of times a fuser unit has been replaced	
27	Number of times a imaging unit (K) has been replaced	
28	Number of times a imaging unit (C) has been replaced	
29	Number of times a imaging unit (M) has been replaced	
30	Number of times a imaging unit (Y) has been replaced	
1	Start date of use *1	Year (e.g. The year 2009 is displayed as 8.)
2		Month (e.g. January is displayed as A. February is B. March is C. and December is L.)
3		Day (e.g. The day 1 is displayed as 01.)

*1: Start date of use begins when 100 prints are complete after the first new toner cartridge was detected following the main body installation.
 “-2000000” is displayed before the start date of use.

E. How to read coverage information.

- The lower left part of the statistics page (② in the sample page) shows numerical values that represent coverage information.
 The table below explains coverage information that is provided by each numerical data.

<Display on the statistics page>

0/0/0/0/0/0/0/0/0/0/0/0

<Meaning of counter value> (From the left of the numerical values)

No.	Contents
1	Display the average dot coverage of cyan in the last job. (Calculated on an A4/Letter)
2	Display the average dot coverage of magenta in the last job. (Calculated on an A4/Letter)
3	Display the average dot coverage of yellow in the last job. (Calculated on an A4/Letter)
4	Display the average dot coverage of black in the last job. (Calculated on an A4/Letter)
5	Display the average dot coverage of cyan in the current toner cartridges. (Calculated on an A4/Letter)
6	Display the average dot coverage of magenta in the current toner cartridges. (Calculated on an A4/Letter)
7	Display the average dot coverage of yellow in the current toner cartridges. (Calculated on an A4/Letter)
8	Display the average dot coverage of black in the current toner cartridges. (Calculated on an A4/Letter)
9	Display the average dot coverage of cyan for all prints performed after the printer was installed. (Calculated on an A4/Letter)
10	Display the average dot coverage of magenta for all prints performed after the printer was installed. (Calculated on an A4/Letter)
11	Display the average dot coverage of yellow for all prints performed after the printer was installed. (Calculated on an A4/Letter)

No.	Contents
12	Display the average dot coverage of black for all prints performed after the printer was installed. (Calculated on an A4/Letter)
13	Display the average dot coverage of color print for all prints performed after the printer was installed. (Calculated on an A4/Letter)
14	Display the average dot coverage of monochrome print for all prints performed after the printer was installed. (Calculated on an A4/Letter)

NOTE

- **Coverage information can be used as a guide and may not completely reflect the actual amount of toner used.**

F. How to read total count information.

- The lower left part of the statistics page (③ in the sample page) shows numerical values that represent total count information.
The table below explains total count information that is provided by each numerical data.

<Display on the statistics page>

0/0/0

<Meaning of counter value> (From the left of the numerical values)

No.	Contents
1	The number of pages that have been printed in monochrome is counted on an A4 or Letter basis and displayed in the hexadecimal notation. Printed pages are counted.
2	The number of pages that have been printed in color is counted on an A4 or Letter basis and displayed in the hexadecimal notation. Printed pages are counted.
3	The total number of pages that have been printed is counted on an A4 or Letter basis and displayed in the hexadecimal notation. Printed pages are counted.

9.4 Restore Defaults

- Restores various settings to their default values.
- Use when restoring settings to their default values.
 Restore Network : Restores the [Admin Setting] → [Ethernet] setting to its default value.
 Restore System : Restores both the [User Settings] → [Print Setting] and [Admin Setting] → [Print Setting] settings to their default values.
 Restore All : Restores all settings, which Restore Network and Restore System apply to, to their default values.

- Touch [Restore Defaults].
- Touch the key for desired mode.
- The confirmation message is displayed.
- When you touch [OK], the initialization is started.
- The default setting is restored and the machine reboots itself.
 Once the initialization is started, it cannot be canceled.

NOTE

- While the Enhanced Security Mode is set to “ON,” if Restore Network or Restore All is performed, the network related settings are initialized and the setting of Enhanced Security Mode is changed to “OFF.”**

Utility		Restore Defaults			Initial value	
		Restore Network	Restore System	Restore All		
Accessibility						
Key Repeat/Interval						
Time to Start		-	Reset	Reset	0.8	
Key Interval		-	Reset	Reset	0.3	
Sound Setting						
Confirmation Sound						
Input Confirmation Sound	Enable	-	Reset	Reset	Yes	
	Volume	-	Reset	Reset	Middle	
Invalid Input Sound	Enable	-	Reset	Reset	Yes	
	Volume	-	Reset	Reset	Middle	
Basic Sound	Enable	-	Reset	Reset	Yes	
	Volume	-	Reset	Reset	Middle	
Successful Complete Sound	Completed Operation Sound	Enable	-	Reset	Reset	Yes
		Volume	-	Reset	Reset	Middle
	Completed TX Sound	Enable	-	Reset	Reset	Yes
		Volume	-	Reset	Reset	Middle
Completed Preparation	Enable	-	Reset	Reset	Yes	
	Volume	-	Reset	Reset	Middle	
Caution Sound	Low Caution Sound (Level 1)	Enable	-	Reset	Reset	Yes
		Volume	-	Reset	Reset	Middle
	Low Caution Sound (Level 2)	Enable	-	Reset	Reset	Yes
		Volume	-	Reset	Reset	Middle

Utility				Restore Defaults			Initial value
				Restore Network	Restore System	Restore All	
Caution Sound	Low Caution Sound (Level 3)	Enable	-	Reset	Reset	Yes	
		Volume	-	Reset	Reset	Middle	
	High	Enable	-	Reset	Reset	Yes	
		Volume	-	Reset	Reset	Middle	
Error Message Display Time				-	Reset	Reset	3 sec.
LCD Brightness				-	Reset	Reset	0
User Settings							
Machine Settings							
Language				-	Reset	Reset	English
Measurement Unit Setting				-	Reset	Reset	Inch/mm
Paper Tray Settings							
Auto Tray Switch				-	Reset	Reset	OFF
Enable ATS/APS	Tray 1		-	Reset	Reset	ON	
	Tray 2		-	Reset	Reset	ON	
	Tray 3		-	Reset	Reset	ON	
	Tray 4		-	Reset	Reset	ON	
ACS Level				-	Reset	Reset	2
Copy Settings							
Auto Zoom for Combine				-	Reset	Reset	Yes
Auto Sort/Group Selection				-	Reset	Reset	Yes
Copy Initialize Settings				-	Reset	Reset	Private
Separate Scan Output Method				-	Reset	Reset	Page Print
Scan Settings							
JPEG Compression Level				-	Reset	Reset	Standard
Black Compression Level				-	Reset	Reset	MMR
Scan Initialize Settings				-	Reset	Reset	Private
Print Setting							
Paper Settings							
Paper Tray Settings	Default Tray		-	Reset	Reset	Tray 2	
	Tray1	Paper Size	-	Reset	Reset	Letter/A4	
		Custom Size	-	Reset	Reset	-	
		Paper Type	-	Reset	Reset	Plain Paper	
	Tray2	Paper Size	-	Reset	Reset	Letter/A4	
		Custom Size	-	Reset	Reset	-	
		Paper Type	-	Reset	Reset	Plain Paper	
	Tray3	Paper Size	-	-	Reset	Letter/A4	
		Paper Type	-	Reset	Reset	Plain Paper	
	Tray4	Paper Size	-	-	Reset	Letter/A4	
Paper Type		-	Reset	Reset	Plain Paper		
Simplex/Duplex				-	Reset	Reset	Off

Utility	Restore Defaults			Initial value	
	Restore Network	Restore System	Restore All		
User Settings					
Print Setting					
Paper Settings					
Copies	-	Reset	Reset	1	
Collate	-	Reset	Reset	Off	
Auto Tray Switching	-	Reset	Reset	On	
Tray Mapping	Tray Mapping Mode	-	Reset	Reset	Off
		Logical Tray 0-9	-	Reset	Reset
Fax Settings					
Remote RX Enabled	-	Reset	Reset	No	
Remote RX No.	-	Reset	Reset	-	
Fax Initialize Setting	-	Reset	Reset	Private	
Admin Setting					
Machine Settings					
Sleep Mode Setting	-	Reset	Reset	ON	
Sleep Time Setting	-	Reset	Reset	30 min.	
Report Input Tray	-	Reset	Reset	Tray 2	
Administrator Registration					
Administrator Registration					
Name	-	Reset	Reset	-	
Ext Number	-	Reset	Reset	-	
Address	-	Reset	Reset	-	
Machine Settings					
Device Name	-	Reset	Reset	-	
Address	Reset	-	Reset	-	
Authentication					
Logout Confirmation Display	-	Reset	Reset	OFF	
Ethernet					
TCP/IP					
Enable	Reset	-	Reset	Yes	
IP Address	Reset	-	Reset	000.000.000.000	
Subnet Mask	Reset	-	Reset	000.000.000.000	
Gateway	Reset	-	Reset	000.000.000.000	
DHCP	Reset	-	Reset	Off	
BOOTP	Reset	-	Reset	Off	
ARP/Ping	Reset	-	Reset	Off	

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Utility		Restore Defaults			Initial value
		Restore Network	Restore System	Restore All	
Admin Setting					
Ethernet					
TCP/IP					
HTTP		Reset	-	Reset	Enable
FTP		Reset	-	Reset	Enable
Telnet		Reset	-	Reset	Enable
Bonjour		Reset	-	Reset	Enable
Dynamic DNS		Reset	-	Reset	Disable
IPP		Reset	-	Reset	Disable
RAW Port	Enable	Reset	-	Reset	Yes
	Bidirectional	Reset	-	Reset	Off
SLP		Reset	-	Reset	Enable
SMTP		Reset	-	Reset	Enable
SNMP		Reset	-	Reset	Enable
WSD Print		Reset	-	Reset	Enable
IPSec		Reset	-	Reset	Disable
IP Address Filter	Access Permission	Reset	-	Reset	Disable
	Access Rejection	Reset	-	Reset	Disable
IPv6	Enable	Reset	-	Reset	Yes
	Auto Setting	Reset	-	Reset	Enable
	Link Local	Reset	-	Reset	-
	Global Address	Reset	-	Reset	-
	Gateway Address	Reset	-	Reset	-
Netware		Reset	-	Reset	Disable
AppleTalk		Reset	-	Reset	Enable
Network Speed		Reset	-	Reset	Auto
IEEE802.1X		Reset	-	Reset	Disable
Binary Division		Reset	-	Reset	Off
S/MIME Settings					
S/MIME Enabled		Reset	-	Reset	Disable
Signature		Reset	-	Reset	Do not add signature
Encryption		Reset	-	Reset	3DES
Auto. Obtain Certificates		Reset	-	Reset	No
Print Digital Signature		Reset	-	Reset	No
Memory Direct Print		-	Reset	Reset	Enable
Copy Settings					
Select Tray when APS OFF		-	Reset	Reset	Tray Before APS ON
Paper Priority		-	Reset	Reset	Tray 2

Utility		Restore Defaults			Initial value	
		Restore Network	Restore System	Restore All		
Admin Setting						
Print Setting						
Grayscale Page		-	Reset	Reset	Auto	
Startup Page Setting		-	Reset	Reset	Off	
Auto Continue		-	Reset	Reset	Off	
Paper						
Default Paper	Paper Size	-	Reset	Reset	Letter/A4	
	Custom Size	-	Reset	Reset	-	
	Paper Type	-	Reset	Reset	Plain Paper	
Measurement Unit Setting		-	Reset	Reset	Inch	
Hold Job Timeout		-	Reset	Reset	Disable	
Quality Settings						
Color Mode		-	Reset	Reset	Color	
Brightness		-	Reset	Reset	0	
Halftone	Image Printing	-	Reset	Reset	Detail	
	Text Printing	-	Reset	Reset	Line Art	
	Graphics Printing	-	Reset	Reset	Detail	
Edge Enhancement	Image Printing	-	Reset	Reset	Off	
	Text Printing	-	Reset	Reset	On	
	Graphics Printing	-	Reset	Reset	On	
Edge Strength		-	Reset	Reset	Middle	
Economy Print		-	Reset	Reset	Off	
PCL Settings	Contrast		-	Reset	Reset	0
	Image Printing	RGB Source	-	Reset	Reset	sRGB
		RGB Intent	-	Reset	Reset	Photographic
		RGB Gray	-	Reset	Reset	Bk=K Gray=K
	Text Printing	RGB Source	-	Reset	Reset	sRGB
		RGB Intent	-	Reset	Reset	Vivid
		RGB Gray	-	Reset	Reset	Bk=K Gray=K
	Graphics Printing	RGB Source	-	Reset	Reset	sRGB
		RGB Intent	-	Reset	Reset	Vivid
		RGB Gray	-	Reset	Reset	Bk=K Gray=K
	Image Printing	RGB Source	-	Reset	Reset	sRGB
		RGB Intent	-	Reset	Reset	Photographic
		RGB Gray	-	Reset	Reset	Bk=K Gray=K
		Destination Profile	-	Reset	Reset	Auto

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Utility		Restore Defaults			Initial value		
		Restore Network	Restore System	Restore All			
Admin Setting							
Print Setting							
Quality Settings							
PS Setting	Text Printing	RGB Source	-	Reset	Reset	sRGB	
		RGB Intent	-	Reset	Reset	Vivid	
		RGB Gray	-	Reset	Reset	Bk=K Gray=K	
		Destination Profile	-	Reset	Reset	Auto	
	Graphics Printing	RGB Source	-	Reset	Reset	Auto	
		RGB Intent	-	Reset	Reset	sRGB	
		RGB Gray	-	Reset	Reset	Vivid	
		Destination Profile	-	Reset	Reset	Bk=K Gray=K	
	Simulation	Simulation Profile	-	Reset	Reset	NONE	
		Sim. Intent	-	Reset	Reset	Relative Color	
		CMYK Gray	-	Reset	Reset	Bk=CMYK Gray=CMYK	
	Gradation Adjust	Tone Calibration		-	Reset	Reset	ON
		CMYK Density		-	Reset	Reset	0
Color Separation			-	Reset	Reset	OFF	
Emulation							
Default Emulation			-	Reset	Reset	Auto	
Postscript	Wait Timeout		-	Reset	Reset	0	
	Print PS Errors		-	Reset	Reset	OFF	
	PS Protocol		-	Reset	Reset	Auto	
	Auto Trapping		-	Reset	Reset	OFF	
	Black Overprint		-	Reset	Reset	OFF	
PCL	CR/LF Mapping		-	Reset	Reset	CR = CR LF = LF	
	Lines Per Page		-	Reset	Reset	60	
	Font Source	Font Number	-	Reset	Reset	0	
		Pitch Size/ Point Size	-	Reset	Reset	10.00	
		Symbol Set	-	Reset	Reset	PC8	
XPS	Digital Signature		-	Reset	Reset	Disable	
	XPS Error Page		-	Reset	Reset	ON	

Utility	Restore Defaults			Initial value
	Restore Network	Restore System	Restore All	
Admin Setting				
Fax Settings				
Sender Settings				
Sender	-	Reset	Reset	-
Sender Fax No.	-	Reset	Reset	-
Header/Footer Settings				
Header Position	-	Reset	Reset	Outside Body Text
Fax TX Header Name	-	Reset	Reset	ON
Footer Position	-	Reset	Reset	RX Ft. OFF
Comm. Setting				
PB/DP	-	Reset	Reset	PB
RX Mode	-	Reset	Reset	Auto RX
Number of RX Call Rings	-	Reset	Reset	2
Redial	-	Reset	Reset	1
Redial Interval	-	Reset	Reset	2
Line Monitor	-	Reset	Reset	OFF
Line Monitor Volume	-	Reset	Reset	Low
Ring Pattern	-	Reset	Reset	Double
Manual RX V.34 OFF	-	Reset	Reset	No
Function Settings				
Inch Paper Priority	-	Reset	Reset	ON/OFF
Paper Priority	-	Reset	Reset	Auto Select
Print Paper Size	-	Reset	Reset	Letter/A4
Tray Selection for RX Print	-	Reset	Reset	Auto
Min. Reduction for RX Print	-	Reset	Reset	96%
Print Separate Fax Pages	-	Reset	Reset	OFF
Duplex Print	-	Reset	Reset	OFF
Fax Function Settings				
F-Code TX	-	Reset	Reset	ON
Dest. Check Display Func.	-	Reset	Reset	OFF
Confirm Addr (TX)	-	Reset	Reset	OFF
Confirm Addr (Register)	-	Reset	Reset	ON
Restrict Fax TX	-	Reset	Reset	OFF
Restrict Fax RX	-	Reset	Reset	OFF
Restrict PCFax TX	-	Reset	Reset	OFF
Memory RX				
Memory RX	-	Reset	Reset	OFF
Password	-	Reset	Reset	-

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Utility	Restore Defaults			Initial value	
	Restore Network	Restore System	Restore All		
Admin Setting					
Fax Settings					
RX Password					
Fax RX PWD Enable	-	Reset	Reset	No	
Closed Network RX Password	-	Reset	Reset	-	
Forward TX Setting					
Forward TX Setting	-	Reset	Reset	OFF	
Forwarding Address	-	Reset	Reset	-	
Forward & Print	-	Reset	Reset	Forward & Print (If TX Fails)]	
Remote RX Setting					
Remote RX Enabled	-	Reset	Reset	No	
Remote RX No.	-	Reset	Reset	-	
PC-Fax RX Settings					
PC-Fax RX Setting	-	Reset	Reset	OFF	
PC-Fax RX Print	-	Reset	Reset	OFF	
Nighttime RX Setting					
Night Fax RX Print	-	Reset	Reset	OFF	
Night RX Start Time	-	Reset	Reset	-	
Night RX End Time	-	Reset	Reset	-	
PBX Connection Settings					
PBX Function	-	Reset	Reset	OFF	
PBX Number	-	Reset	Reset	-	
Fax Report					
Activity Report	Output Settings	-	Reset	Reset	Every 100 comm.
	Output Interval	-	Reset	Reset	-
	Activity Report	-	Reset	Reset	Journal 100
TX Result Report		-	Reset	Reset	If TX Fails
TX Result Report Image		-	Reset	Reset	OFF
TX Reserve		-	Reset	Reset	ON
PC-Fax TX Error Report		-	Reset	Reset	ON
Broadcast Report		-	Reset	Reset	ON
Broadcast Result Report		-	Reset	Reset	All Dest.
TX Result Report Screen		-	Reset	Reset	OFF
Fax Target		-	Reset	Reset	U.S.A.
Maintenance Menu					
Printer Adjustment					
Thick Paper Image Density	Cyan	-	Reset	Reset	0
	Magenta	-	Reset	Reset	0
	Yellow	-	Reset	Reset	0
	Black	-	Reset	Reset	0

Utility	Restore Defaults			Initial value
	Restore Network	Restore System	Restore All	
Admin Setting				
Maintenance Menu				
Printer Adjustment				
Black Image Density	-	Reset	Reset	0
Scan Settings				
Auto Del Interval	-	Reset	Reset	1 Day
File Storage	-	Reset	Reset	1 Day
Document Hold Setting	-	Reset	Reset	Disable
Security Settings				
Security Details				
Password Rules	-	Reset	Reset	OFF
Manual Destination Input	-	Reset	Reset	Allow
Direct Input	-	Reset	Reset	Allow
Hide Personal Data	-	Reset	Reset	OFF
Disable Job History Display	-	Reset	Reset	OFF
Enhanced Security Mode	-	Reset	Reset	OFF
Paper Empty				
Tray 1	-	Reset	Reset	OFF
Tray 2	-	Reset	Reset	ON
Tray 3	-	Reset	Reset	ON
Tray 4	-	Reset	Reset	ON

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10. SERVICE MODE

10.1 List of service mode

* The function tree is shown to comply with the format displayed on the screen.

Service Mode		Ref. page	
Serial Number		P.122	
Firmware Version	Controller F/W	P.122	
	Engine F/W		
	Boot F/W		
	Panel F/W		
	Fax F/W		
	Scanner F/W		
Printer Adjustment	Leading Edge Adjustment	Plain Paper	P.123
		Thick 1	
		Thick 2	
		Envelope	
	Side Edge Adjustment	Tray1	P.124
		Tray2	
		Tray3	
		Tray4	
	Left ADJ Duplex	Tray1	P.125
		Tray2	
		Tray3	
		Tray4	
	2nd Image Transfer Current	Simplex Pass	P.126
		Manual Duplex	P.126
	Thick Paper Image Density	Cyan	P.127
		Magenta	
		Yellow	
		Black	
	Black Image Density		P.127
	Image ADJ Param		P.127
Fuser Temp Control	Plain Paper	P.128	
	Thick		
	Envelope		
Fuser Control		P.128	
AIDC Mode		P.128	
Thick Mode		P.129	
Fine Line ADJ		P.129	

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Service Mode		Ref. page	
Main Scan Adjust	Main Scan Page	P.129	
	Scan Adjust Value	Yellow	P.130
		Magenta	
		Cyan	
Service Fax Settings	Restrict Fax TX	P.132	
	Restrict Fax RX	P.132	
	Restrict PC-Fax TX	P.132	
	TX Speed	P.132	
	RX Speed	P.133	
	ECM RX OFF	P.133	
	Redial V34 Dis.	P.133	
	RX V34 OFF	P.133	
	V17 Mod. Permit.	P.133	
	Retry Start Pg	P.134	
	DT Detect	P.134	
	BT Detect	P.134	
	Cable Equalize	P.134	
	Echo Measure	P.134	
	CFR to Phase C	P.135	
	TX Level	P.135	
	Connect. Timeout	P.135	
	CED Level	P.135	
	eRTN %	P.136	
	V34 Symbol Rate	P.136	
	Data Format	P.136	
	V34 Tran.Pt	P.136	
	Fax Target	P.136	
	Fax Factory Default	P.137	
	Fax File Initializing	P.137	
	Fax Maint.	P.138	
	DTMF Test	P.138	
	Modem Test	P.138	
	FAX Diagnostics Code	P.139	
	Data Dmp. List	P.139	
	Fax EventLog	P.139	
Scanner Adjustment	FB Leading Edge	P.140	
	FB Side Edge	P.141	
	ADF(F) Leading Edge	P.142	
	ADF(F) Side Edge	P.143	
	ADF(B) Leading Edge	P.144	
	ADF(B) Side Edge	P.145	

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Service Mode		Ref. page	
Scanner Adjustment	FB CD Multiplier	P.146	
	FB FD Multiplier	P.147	
	ADF(F) CD Multiplier	P.148	
	ADF(F) FD Multiplier	P.149	
	ADF(B) CD Multiplier	P.150	
	ADF(B) FD Multiplier	P.151	
	Tilt(F)	P.152	
	Tilt(B)	P.152	
Print Menu	Mgmt. List	P.153	
	Event Log	P.155	
	Adjust Information	P.155	
	Element Page	P.156	
	Halftone 64	P.157	
	Halftone 128	P.157	
	Halftone 256	P.157	
	Gradation	P.158	
	Scanner Adjustment	P.158	
	Scan Event Log	P.158	
Supplies	Consumables Replace	Transfer Belt Unit	P.158
		Transfer Roller Unit	P.159
		Fusing Unit	P.159
BK Clear		P.159	
Firmware Update *1		P.159	
CS Remote Care		P.161	
Count Mode	Count Mode	P.172	
	Large Paper size Mode	P.172	
Clear Admin Password		P.172	
CE Password		P.173	
Soft Switch		P.173	
Engine DipSW		P.173	
Function	Print	P.174	
	Comp. Check	P.174	
	Sensor Check	P.176	
	Scanner Sensor Check		
Toner Out Mode		P.177	
IU Yield Settings		P.177	
Enable Warning	Toner Low	P.178	
	Imaging Unit Low	P.178	
	Waste Toner Box Near Full	P.178	

*1: It will be displayed only when the USB memory device is connected to the machine.

10.2 Starting/Exiting

10.2.1 Starting procedure

NOTE

- Ensure appropriate security for Service Mode function setting procedures. They should NEVER be shown to any unauthorized person not involved with service jobs.

A. Procedure

1. Press the Utility/Counter key.
2. Touch [Meter Count] on meter count display.
3. Press the following keys in this order.; Stop → 0 → 0 → Stop → 0 → 1
4. Touch [Password], and enter the CE password using the display keyboard or the 10-key pad.

NOTE

- The initial setting for CE password is “92729272.”
- Access attempts to the Service Mode with a CE password is limited to up to 3 times.

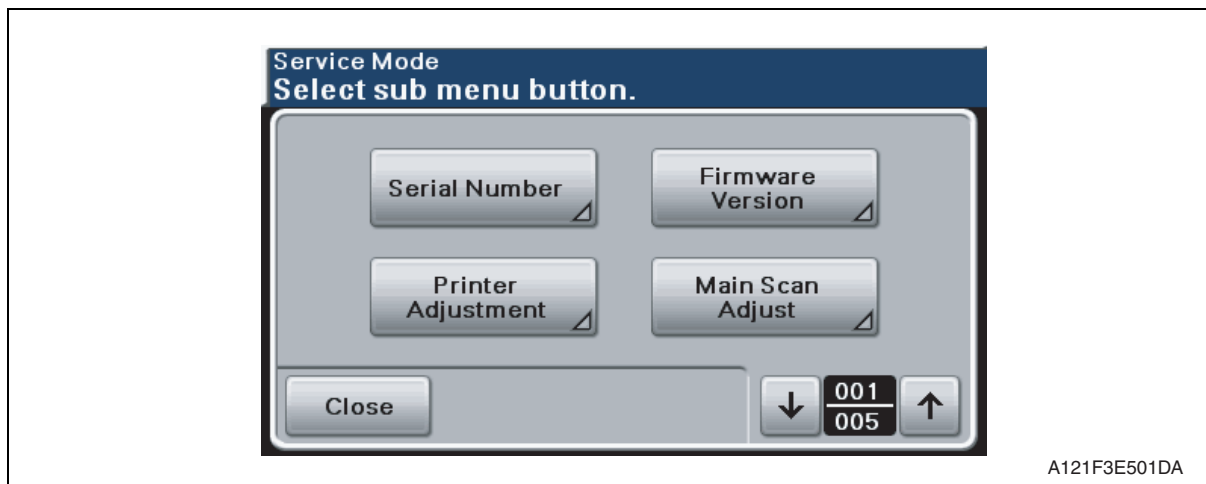
If the number of invalid access attempts reaches three, your access is locked. Until access lock is released, the Service Mode is not accessible.

To release access lock, turning OFF/ON the power switch and rebooting the machine is necessary.

(When the machine is rebooted, the invalid access attempts count is cleared.)

- The service code entered is displayed as “*.”

5. The Service Mode menu will appear.



NOTE

- Be sure to change the CE password from its default value.
- For the procedure to change the CE password, see the [CE Password].
[See P.173](#)

B. Exiting procedure

- Touch the [Close].

10.3 Serial Number

A. Use

- Displays the serial number of the machine.
- Use when maintaining and managing the machine.

B. Procedure

1. Call the Service Mode to the display.
2. Touch [Serial Number].
3. The serial number of the machine is displayed.

10.4 Firmware Version

A. Use

- Displays the firmware version number of the machine.
- To use when the firmware is updated.
- Use when maintaining and managing the machine.
 - Controller F/W : Firmware for the controller software
 - Engine F/W : Firmware for the printer engine software
 - Boot F/W : Firmware for the boot program
 - Panel F/W : Firmware for the control panel display
 - Fax F/W : Firmware for the fax control software
 - Scanner F/W : Firmware for the scanner control software

B. Procedure

1. Call the Service Mode to the display.
2. Touch [Firmware Version].
3. Touch the key for desired firmware.
4. Version number of firmware is displayed.

10.5 Printer Adjustment

10.5.1 Leading Edge Adjustment

A. Use

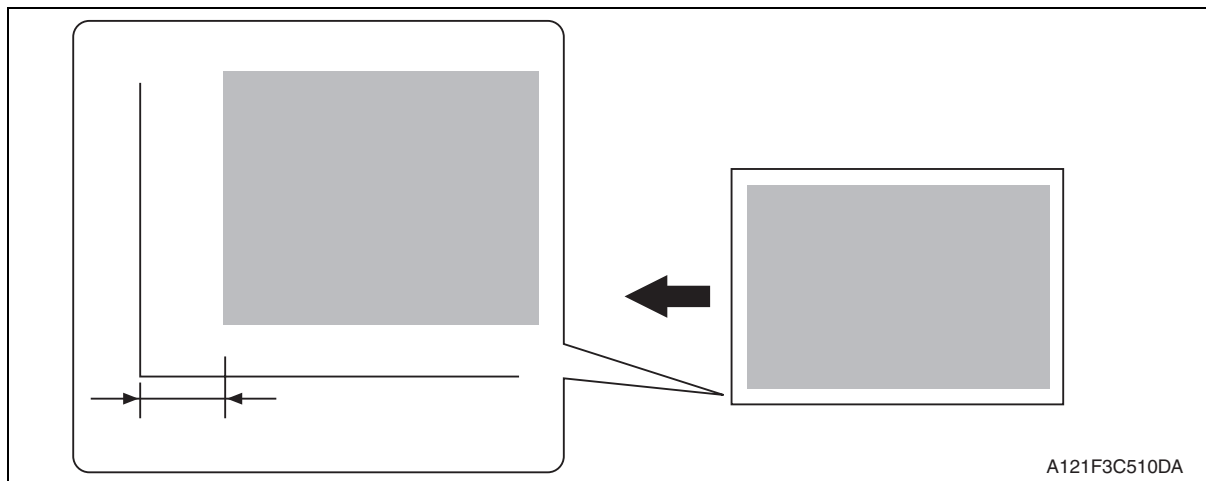
- Adjusts the leading edge margin of media for single-sided printing.
- To correct a misaligned print image.

Plain Paper : Adjust the leading edge margin of plain paper.

Thick : Adjust the leading edge margin of thick 1 paper.

Thick2 : Adjust the leading edge of thick 2 paper

Envelope : Adjust the leading edge margin of envelope.



B. Procedure

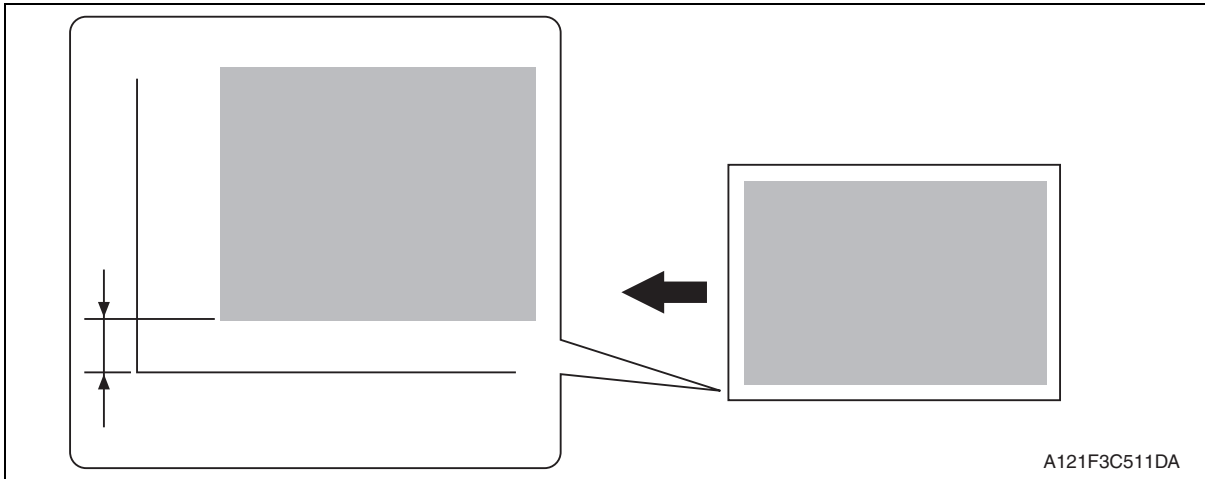
1. Call the Service Mode to the display.
2. Touch [Printer Adjustment]→[Leading Edge Adjustment].
3. Touch the key for desired paper type.
4. Using the [+] / [-] key on the screen or the ten-key pad, enter a correction amount and touch [OK].

- 15 to 15 (1 step: 0.2 mm)

10.5.2 Side Edge Adjustment

A. Use

- Adjusts the left margin of media for single-sided printing.
- To correct a misaligned print image.
 - Tray1: Adjust the left margin of paper fed from tray 1 (manual tray.)
 - Tray2: Adjust the left margin of paper fed from tray 2.
 - Tray3: Adjust the left margin of paper fed from tray 3.
 - Tray4: Adjust the left margin of paper fed from tray 4.



B. Procedure

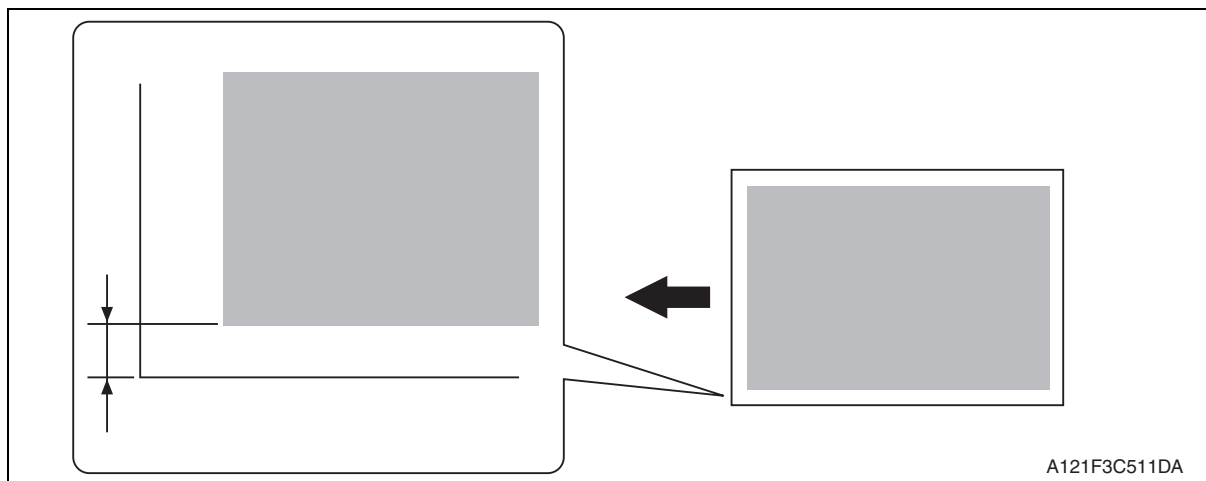
1. Call the Service Mode to the display.
2. Touch [Printer Adjustment]→[Side Edge Adjustment].
3. Touch the key for desired paper tray.
4. Using the [+] / [-] key on the screen or the ten-key pad, enter a correction amount and touch [OK].

- 15 to 15 (1 step: 0.2 mm)

10.5.3 Left ADJ Duplex

A. Use

- Adjusts the left margin of media for double-sided printing.
- To correct a misaligned print image.
 - Tray1: Adjust the left margin of duplex print paper fed from tray 1 (manual tray.)
 - Tray2: Adjust the left margin of duplex print paper fed from tray 2.
 - Tray3: Adjust the left margin of duplex print paper fed from tray 3.
 - Tray4: Adjust the left margin of duplex print paper fed from tray 4.



B. Procedure

1. Call the Service Mode to the display.
2. Touch [Printer Adjustment]→[Left ADJ Duplex].
3. Touch the key for desired paper tray.
4. Using the [+] / [-] key on the screen or the ten-key pad, enter a correction amount and touch [OK].

- 15 to 15 (1 step: 0.2 mm)

10.5.4 2nd Image Transfer-Simplex Pass

A. Use

- Adjust the 2nd image transfer output (ATVC) on the single-sided pages for each media type.
- To use when the transfer failure at the trailing edge occurs.

B. Procedure

- The default setting is 0.

-8 to +7

1. Call the Service Mode to the display.
2. Touch [Printer Adjustment]→[2nd Image Transfer]→[Simplex Pass].
3. Touch the key for desired paper type.
4. Using the [+]/[-] key on the screen or the ten-key pad, enter a correction amount and touch [OK].

<Adjustment instructions>

To increase the ATVC value (in the direction of a foggier image), decrease the setting value.

To decrease the ATVC value (in the direction of a less foggy image), increase the setting value.

10.5.5 2nd Image Transfer-Manual Duplex

A. Use

- Adjust the 2nd image transfer output (ATVC) on the manual duplexed pages for each media type.
- To use when the transfer failure at the trailing edge occurs.

B. Procedure

- The default setting is 0.

-8 to +7

1. Call the Service Mode to the display.
2. Touch [Printer Adjustment]→[2nd Image Transfer]→[Manual Duplex].
3. Touch the key for desired paper type.
4. Using the [+]/[-] key on the screen or the ten-key pad, enter a correction amount and touch [OK].

<Adjustment instructions>

To increase the ATVC value (in the direction of a foggier image), decrease the setting value.

To decrease the ATVC value (in the direction of a less foggy image), increase the setting value.

10.5.6 Thick Paper Image Density

A. Use

- To fine-adjust density of printed images of each color for thick paper.
- To change the density of the printed image for each color with thick paper.

B. Procedure

- The default setting is 0.

-5 to +5

1. Call the Service Mode to the display.
2. Touch [Printer Adjustment]→[Thick Paper Image Density].
3. Touch the key for desired color.
4. Using the [+]/[-] key on the screen or the ten-key pad, enter a correction amount and touch [OK].

<Adjustment instructions>

Light color: increase the setting value

Dark color: decrease the setting value

10.5.7 Black Image Density

A. Use

- To fine-adjust the density of the printed image for a black printing.
- To vary the density of the printed image of a black printing.

B. Procedure

- The default setting is 0.

-2 to +2

1. Call the Service Mode to the display.
2. Touch [Printer Adjustment]→[Black Image Density].
3. Using the [+]/[-] key on the screen or the ten-key pad, enter a correction amount and touch [OK].

<Adjustment instructions>

If the black is light, increase the setting value.

If the black is dark, decrease the setting value.

10.5.8 Image ADJ Param

A. Use

- Adjusts the printer in case of an image quality problem (uneven density)
- To correct image quality problems (uneven density) due to the machine being operated at a high altitude.

B. Procedure

- The default setting is 0.

0 to 6

10.5.9 Fuser Temp Control**A. Use**

- To adjust the fusing heating temperature individually for each paper type so as to ensure good fusing performance that varies with varying environmental conditions.
- When fusing performance is poor, or wax streak or offset occurs when the type of paper is changed or environmental conditions change.
- Use this function when curled paper, or paper misfeed as a result of the curled paper, occurs under varying environmental conditions or depending on the type of paper used.
 - Plain Paper : -10 °C to 0 °C (Step: 5 °C)
 - Thick : -10 °C to 0 °C (Step: 5 °C)
 - Envelope : -10 °C to 0 °C (Step: 5 °C)

B. Procedure

1. Call the Service Mode to the display.
2. Touch [Printer Adjustment]→[Fuser Temp Control].
3. Touch the key for desired paper type.
4. Using the [+]/[-] key on the screen or the ten-key pad, enter a correction amount and touch [OK].

<Adjustment instructions>

If fusing performance is poor, increase the setting.

If wax streaks occur, decrease the setting.

If offset occur, decrease the setting.

If curling of the paper occurs, decrease the setting.

10.5.10 Fuser Control**A. Use**

- Sets the heater lamp lighting control so that it implements the flicker standards.
- To use when flickering from fluorescent light occurs.
 - 0: Not set flicker control
 - 1: Control flickering
 - 2: Not control flickering
 - 3: Undefined (When “3” is selected, it becomes “0: Not set flicker control.”)

B. Procedure

- The default setting is 0.

“0” to 3

10.5.11 AIDC Mode**A. Use**

- Sets the frequency of image stabilization that is performed when the power switch is turned ON or the machine returns from sleep mode.
 - Mode1: Always performs image stabilization when the main power switch is turned ON or the machine returns from sleep mode. (Standard mode)
 - Mode2: Reduces the frequency of image stabilization that is performed when the main power switch is turned ON or the machine returns from sleep mode. (Low mode)

B. Procedure

- The default setting is Mode2.

Mode1

“Mode2”

10.5.12 Thick Mode

A. Use

- In order to prevent toner from clogging within the developer unit as a result of it being driven at half-speed, select the timing for driving the developer unit at full speed for a fixed length of time when thick paper is being fed.

Quality Mode: While printing on thick paper, printing is periodically paused, and the developer unit is driven at full speed for a fixed length of time. Since printing is paused, the quality is not affected; however, a standby time of approximately 70 seconds occurs every 400 seconds or so of half-speed operation.

Speed Mode: While printing on thick paper, only the drive of the developer unit periodically switches to full speed for a fixed length of time.

Since printing continues during full-speed drive, the print quality is slightly affected, however the standby time is short.

B. Procedure

- The default setting is Quality Mode.

“Quality Mode”

Speed Mode

10.5.13 Fine Line ADJ

A. Use

- Adjust how fine lines are reproduced by changing the applied voltage (VC) to the electrostatic roller.

B. Procedure

- The default setting is 0.

-4 to 3

NOTE

- The administrator can also make this setting by selecting [Admin Settings]→[Maintenance Menu]→[Printer Adjustment]→[Fine Line ADJ]. However, the adjustable range of the parameter is narrowed to -3 to 2.

10.6 Main Scan Adjust

10.6.1 Main Scan Page

A. Use

- Prints the test pattern used for the main scan adjustment.

B. Procedure

1. Call the Service Mode to the display.
2. Touch [Main Scan Adjust]→[Main Scan Page].
3. Select [Print], and touch [OK].
4. The test pattern is output.

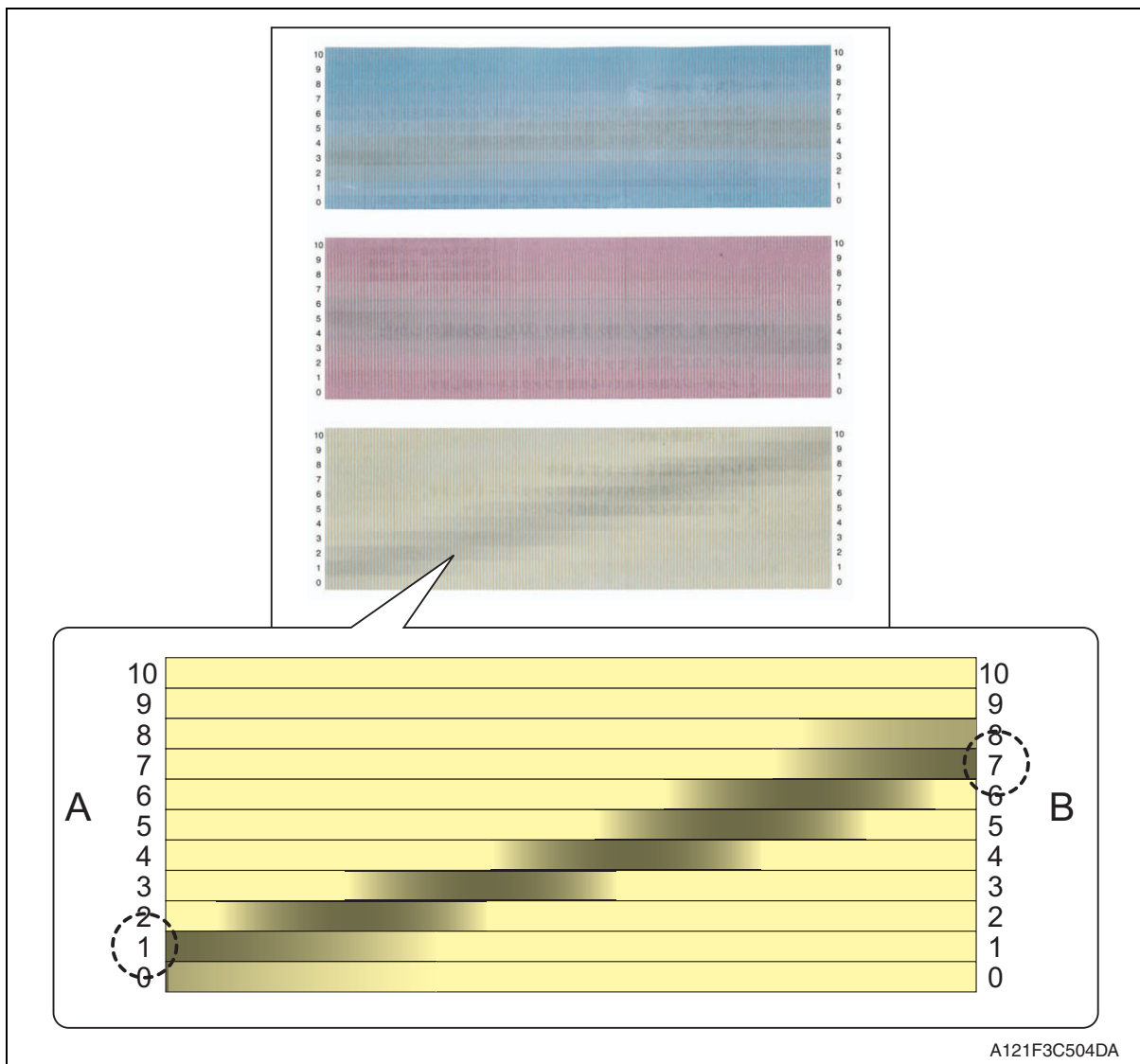
10.6.2 Scan Adjust Value

A. Use

- Adjusts magnification in the main scan direction.
- Use when replacing the PH unit.
- This adjustment is necessary when the adjustment values are cleared due to the replacement of the EEPROM on the print control board or other reasons.

B. Procedure

1. Touch [Main Scan Adjust] → [Main Scan Page] to print the test pattern.



2. Make adjustments so that the gray area on each color sample of the output test pattern becomes parallel to the main scan direction.

Calculate the correction values for cyan, magenta, and yellow in the following way.

- <1> Check the numbers indicated on the ends of A and B which correspond to the darkest black lines in the gray area of each color pattern.

(In the example of the yellow pattern, "1" is selected for the end of A and "7" is selected for the end of B.)

- <2> The number indicated on the end of A minus the number on the end of B equals the correction value.

(In the example of the yellow pattern, the calculation is $1-7=-6$. "-6" is the correction value.)

3. Call the Service Mode to the display.
 4. Touch [Main Scan Adjust] → [Scan Adjust Value].
 5. Touch the key for color to be adjusted.
 6. Enter the correction value calculated in step 2 and touch [OK].
 7. Enter the correction values for cyan, magenta, and yellow respectively.
 8. Touch [Main Scan Adjust] → [Main Scan Page] and output the test pattern again to check the results of the adjustments.
- **Specification: The difference between the respective numbers indicated on the ends of A and B which correspond to the darkest black lines must be within 2 steps.**

10.7 Service Fax Settings

10.7.1 Restrict Fax TX

A. Use

- Set whether to enable or disable G3 Fax transmission.

B. Procedure

- The default setting is OFF.

ON

“OFF”

10.7.2 Restrict Fax RX

A. Use

- Set whether to enable or disable G3 Fax reception.

B. Procedure

- The default setting is OFF.

ON

“OFF”

10.7.3 Restrict PC-Fax TX

A. Use

- Set whether to enable or disable PC-Fax transmission.

B. Procedure

- The default setting is OFF.

ON

“OFF”

10.7.4 TX Speed

A. Use

- Set the transmission starting speed.

B. Procedure

- The default setting is 33600bps.

2400bps	4800bps	7200bps	9600bps	12000bps	14400bps
16800bps	19200bps	21600bps	24000bps	26400bps	28800bps
31200bps	“33600bps”				

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10.7.5 RX Speed

A. Use

- Set the max. reception speed.

B. Procedure

- The default setting is 33600bps.

2400bps	4800bps	7200bps	9600bps	12000bps	14400bps
16800bps	19200bps	21600bps	24000bps	26400bps	28800bps
31200bps	"33600bps"				

10.7.6 ECM RX OFF

A. Use

- Set whether or not to cancel reception ECM (error correction mode).

B. Procedure

- The default setting is No.

Yes "No"

- Yes: Ignores all errors that occur during communication.
- "No": If an error occurs during communication, retransmits the frame, in which the error occurred.
- If "Yes" is selected, select Yes for RX V34 OFF and MR or MH for the coding system.

10.7.7 Redial V34 Dis.

A. Use

- Set whether to enable or disable V.34 communication when redialing after a communication error.

B. Procedure

- The default setting is ON.

"ON" OFF

10.7.8 RX V34 OFF

A. Use

- Set V34 OFF during reception.

B. Procedure

- The default setting is No.

Yes "No"

10.7.9 V17 Mod. Permit.

A. Use

- Set whether to enable or disable the V.17 modulation/demodulation mode.

B. Procedure

- The default setting is ON.

"ON" OFF

10.7.10 Retry Start Pg**A. Use**

- Set whether, during redial, to start with the first page or the page in which an error occurs during the transmission.

B. Procedure

- The default setting is Error Page.

1st Page

"Error Page"

10.7.11 DT Detect**A. Use**

- Set whether or not to detect the dial tone before dialing.
- No transmission is executed if the dial tone is not detected.

B. Procedure

- The default setting is ON.

"ON"

OFF

10.7.12 BT Detect**A. Use**

- Set whether or not to detect the busy tone.

B. Procedure

- The default setting is ON.

"ON"

OFF

10.7.13 Cable Equalize**A. Use**

- Set the cable equalizer setting value.
- Adjust this when communication fails.

B. Procedure

- The default setting is 0Km.

"0Km"

1.8Km

3.6Km

7.2Km

10.7.14 Echo Measure**A. Use**

- Set whether or not to take the echo measure.
- Adjust this when communication fails.

B. Procedure

- The default setting is OFF.

ON

"OFF"

10.7.15 CFR to Phase C

A. Use

- Set the wait time between CFR and phase C.
- Adjust this when communication fails.

B. Procedure

- The default setting is 400.

10 to 1000 ms (Step: 10)

1. Call the Service Mode to the display.
2. Touch [Service Fax Setting]→[CFR to Phase C].
3. Use [+]/[-] key on the screen to set the wait time and touch [OK].

10.7.16 TX Level

A. Use

- Set the transmission level.
- Adjust this when communication fails.

B. Procedure

- The default setting is -10.

-15 to -4db (Step: 1)

1. Call the Service Mode to the display.
2. Touch [Service Fax Setting]→[TX Level].
3. Use [+]/[-] key or 10-key pad on the screen to set the transmission level and touch [OK].

10.7.17 Connect. Timeout

A. Use

- Set the T0 timer (call connection wait time).
- Adjust this when communication fails.

B. Procedure

- The default setting is 55.

30 to 120 s (Step: 1)

1. Call the Service Mode to the display.
2. Touch [Service Fax Setting]→[Connect. Timeout].
3. Use [+]/[-] key or 10-key pad on the screen to set the call connection wait time and touch [OK].

10.7.18 CED Level

A. Use

- Set the answer tone output level.

B. Procedure

- The default setting is -43db.

-35db	-36db	-37db	-38db	-39db	-40db
-41db	-42db	"-43db"	-44db	-45db	

10.7.19 eRTN %

A. Use

- Set the RTN transmission reference.

B. Procedure

- The default setting is 10.

1	2	3	4	5	“10”	15	20
---	---	---	---	---	------	----	----

10.7.20 V34 Symbol Rate

A. Use

- Set the V34 symbol rate.

B. Procedure

- The default setting is 3429.

2400	2800	3000	3200	“3429”
------	------	------	------	--------

10.7.21 Data Format

A. Use

- Set the coding system for communication.

B. Procedure

- The default setting is JBIG.

MH	MR	MMR	“JBIG”
----	----	-----	--------

10.7.22 V34 Tran.Pt

A. Use

- Set the number of training points for V.34 communication.

B. Procedure

- The default setting is Auto.

“Auto”	16 pts	4 pts
--------	--------	-------

10.7.23 Fax Target

A. Use

- Set the region (country) in which the machine is installed.
- Use this during setup procedures.

B. Procedure

- The default setting is U.S.A.

“U.S.A.”	Canada	Mexico	Austria	Belgium	Denmark	Finland
France	Germany	Greece	Ireland	Italy	The Netherlands	
Norway	Poland	Portugal	Spain	Sweden	Switzerland	
The U.K.	Russia	Argentina	Brazil	South Africa	Australia	
New Zealand	China	Hong Kong	Malaysia	Singapore	Korea	
Taiwan	Israel	Japan	Saudi Arabia	Turkey	Hungary	
Slovakia	Vietnam	The Czech Republic	The Philippines	Europe		

10.7.24 Fax Factory Default

A. Use

- Initialize the fax settings (not including the address book).

B. Procedure

- The default setting is No.

Yes

"No"

1. Call the Service Mode to the display.
2. Touch [Service Fax Setting]→[Fax Factory Default].
3. Select [Yes], and touch [OK].
4. Initialization is started.
5. The settings are initialized.

10.7.25 Fax File Initializing

A. Use

- Delete all data (jobs) saved in the fax transmission/reception area for initialization.
(The address book is not included.)

B. Procedure

- The default setting is No.

Yes

"No"

1. Call the Service Mode to the display.
2. Touch [Service Fax Setting]→[Fax File Initializing].
3. Select [Yes], and touch [OK].
4. Initialization is started.
5. All saved data (jobs) are deleted and the machine is automatically restarted.

10.7.26 Fax Maint.

A. Use

- Check a signaling tone by connecting the machine to the line to output a test signal of the fax board.

B. Procedure

- The default setting is G3 Maint Off-Hook.

“G3 Maint Off-Hook”	G3 Maint CED	G3 Maint CNG
G3 Maint Ansam	G3 Maint Ringtone	G3 Maint DTMF
G3 Maint Modem	G3 Maint Stop	

- The signaling tone can be checked with a monitor speaker.

1. Call the Service Mode to the display.
2. Touch [Service Fax Setting]→[Fax Maint.].
3. Select the signal to be checked and touch [OK].
4. Check the signaling tone.
5. Touch [Fax Maint.].
6. Select [G3 Maint Stop] and touch [OK] to stop the signaling tone.
7. Following the same steps, check other signaling tones.

NOTE

- “Once” or “All” must be selected for [Admin Settings] → [Fax Settings] → [Comm. Settings] → [Line Monitor].

10.7.27 DTMF Test

A. Use

- Select the type of signal transmission at the start of the DTMF test.

B. Procedure

- The default setting is 0.

“0”	1	2	3	4	5
6	7	8	9	*	#

10.7.28 Modem Test

A. Use

- Select the type of signal transmission at the start of the modem test.

B. Procedure

- The default setting is V.34(33600bps).

“V.34(33600bps)”	V.34(28800bps)	V.17(14400bps)	V.17(12000bps)
V.17(9600bps)	V.17(7200bps)	V.29(9600bps)	V.29(7200bps)
V.27(4800bps)	V.27(2400bps)	V.21(300bps)	

10.7.29 Fax Diagnostics Code**A. Use**

- Set the fax diagnostics code.
- Use to describe the error code in the communication management journal.

B. Procedure

- The default setting is OFF.

ON

"OFF"

10.7.30 Data Dmp. List**A. Use**

- Print the data dump list (protocol report) of G3 fax.

B. Procedure

1. Call the Service Mode to the display.
2. Touch [Service Fax Setting]→[Data Dmp. List].
3. Select [Print], and touch [OK].
4. The data dump list is printed.

10.7.31 Fax EventLog**A. Use**

- Print the event log list of G3 fax.

B. Procedure

1. Call the Service Mode to the display.
2. Touch [Service Fax Setting]→[Data Dmp. List].
3. Select [Print], and touch [OK].
4. The event log list is printed.

10.8 Scanner Adjustment

10.8.1 FB Leading Edge

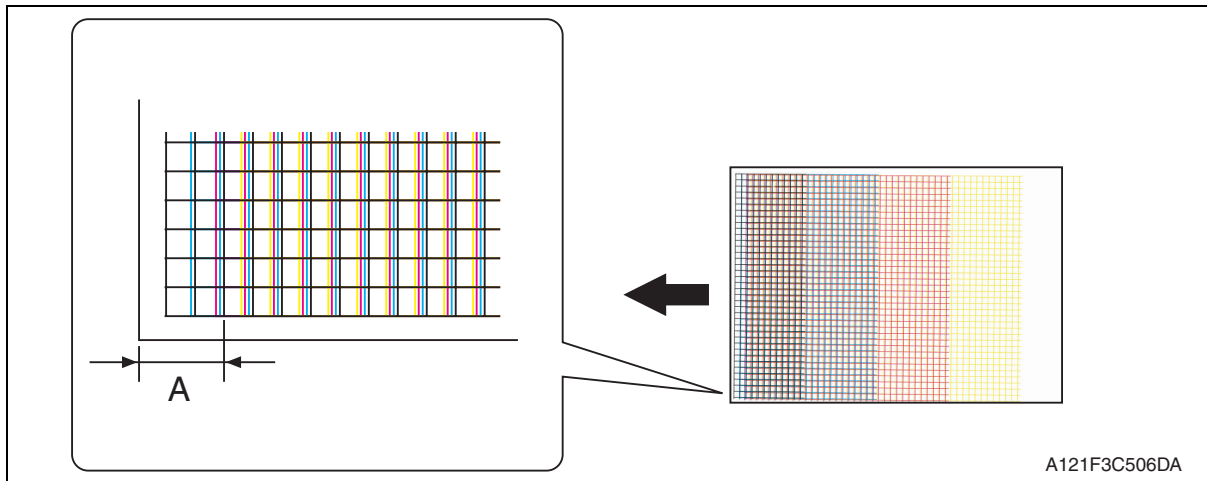
A. Use

- To adjust for variations in the accuracy of scanner parts and their mounting accuracy by varying the scanning start position at the flatbed scanning in the sub-scanning direction.
- When the scanner unit has been replaced.

NOTE

- **After the [FB FD Multiplier] adjustments have been performed**

B. Procedure



- Make adjustments so that the difference in the width of A between the test pattern and the copy of the test pattern is within the following specification.
- Specification value: 2.5 mm or less
- The default setting is 0.
- -5.0 (-5.0 mm) ~ "0 (0 mm)" ~ +5.0 (+5.0 mm)
- Step: 0.25 mm

1. Print the test pattern.
[See P.174](#)
2. Make a test copy.

NOTE

- **The test pattern should be positioned vertically.**
 - **Use A4 or Letter paper loaded into tray1 to make the test copy.**
3. Check that the width of A in the original and its copy of the test pattern are shifted.
If the width of A is out of specification, adjust it according to the following procedure.
 4. Call the Service Mode to the display.
 5. Touch [Scanner Adjustment]→[FB Leading Edge].
 6. Using the [+]/[-] key on the screen or the ten-key pad, enter a setting value and touch [OK].
If width A of the copy image is exceeds one on the test pattern, decrease the setting.
If width A of the copy image is less than one on the test pattern, increase the setting.
 7. Make a test copy again and check it.

10.8.2 FB Side Edge

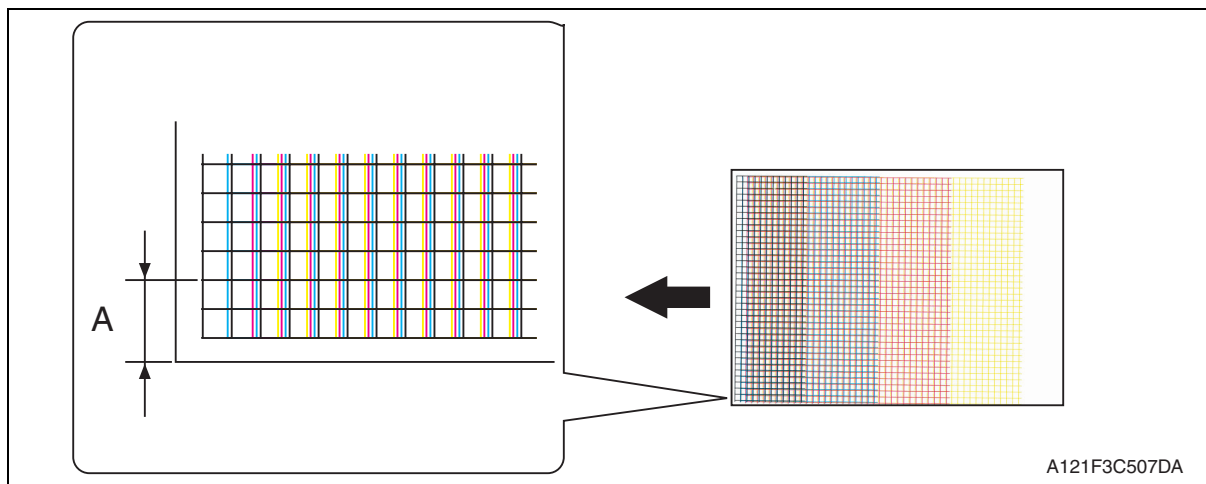
A. Use

- To adjust for variations in the accuracy of scanner parts and their mounting accuracy by varying the scanning start position at the flatbed scanning in the main-scanning direction.
- When the scanner unit has been replaced.

NOTE

- After the [FB CD Multiplier] adjustments have been performed

B. Procedure



- Make adjustments so that the difference in the width of A between the test pattern and the copy of the test pattern is within the following specification.
- Specification value: 2.0 mm or less (front side), 3.0 mm or less (back side)
- The default setting is 0.
- -5.0 (-5.0 mm) ~ "0 (0 mm)" ~ +5.0 (+5.0 mm)
- Step: 0.25 mm

1. Print the test pattern.
[See P.174](#)
2. Make a test copy.

NOTE

- **The test pattern should be positioned vertically.**
 - **Use A4 or Letter paper loaded into tray1 to make the test copy.**
3. Check that the width of A in the original and its copy of the test pattern are shifted. If the width of A is out of specification, adjust it according to the following procedure.
 4. Call the Service Mode to the display.
 5. Touch [Scanner Adjustment]→[FB Leading Edge].
 6. Using the [+]/[-] key on the screen or the ten-key pad, enter a setting value and touch [OK].
If width A of the copy image is exceeds one on the test pattern, decrease the setting.
If width A of the copy image is less than one on the test pattern, increase the setting.
 7. Make a test copy again and check it.

10.8.3 ADF(F) Leading Edge

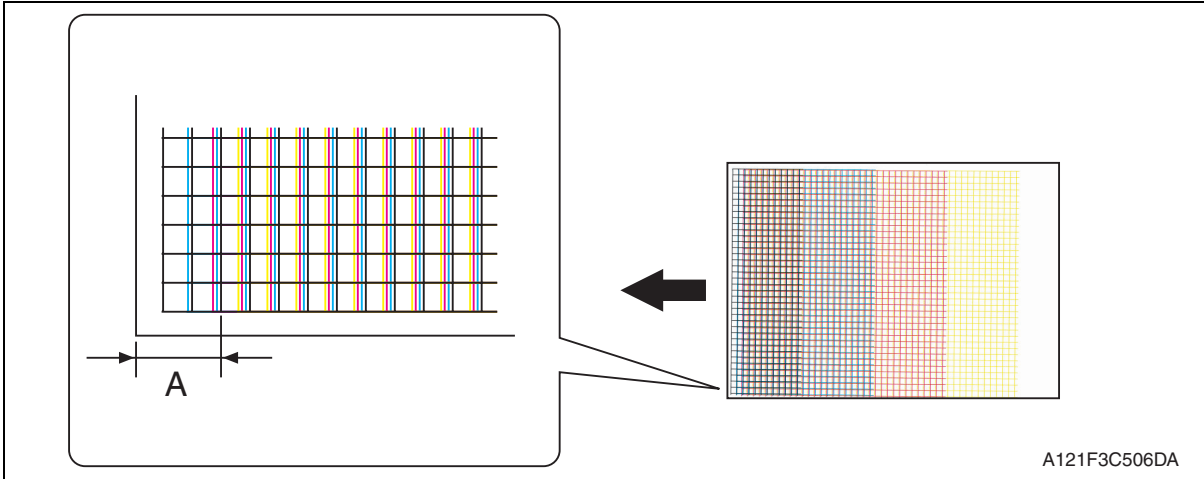
A. Use

- To adjust for variations in the accuracy of scanner parts and their mounting accuracy by varying the scanning start position at the ADF scanning (front side) in the sub-scanning direction.
- When the scanner unit or the ADF has been replaced.

NOTE

- After the [ADF(F) FD Multiplier] adjustments have been performed

B. Procedure



- Make adjustments so that the difference in the width of A between the test pattern and the copy of the test pattern is within the following specification.
- Specification value: 3.0 mm or less
- The default setting is 0.
- -5.0 (-5.0 mm) ~ "0 (0 mm)" ~ +5.0 (+5.0 mm)
- Step: 0.25 mm

1. Print the test pattern.
[See P.174](#)
2. Make a test copy.

NOTE

- **Set the test pattern on the ADF.**
 - **Use A4 or Letter paper loaded into tray1 to make the test copy.**
3. Check that the width of A in the original and its copy of the test pattern are shifted. If the width of A is out of specification, adjust it according to the following procedure.
 4. Call the Service Mode to the display.
 5. Touch [Scanner Adjustment]→[ADF(F) Leading Edge].
 6. Using the [+]/[-] key on the screen or the ten-key pad, enter a setting value and touch [OK].
If width A of the copy image is exceeds one on the test pattern, decrease the setting.
If width A of the copy image is less than one on the test pattern, increase the setting.
 7. Make a test copy again and check it.

10.8.4 ADF(F) Side Edge

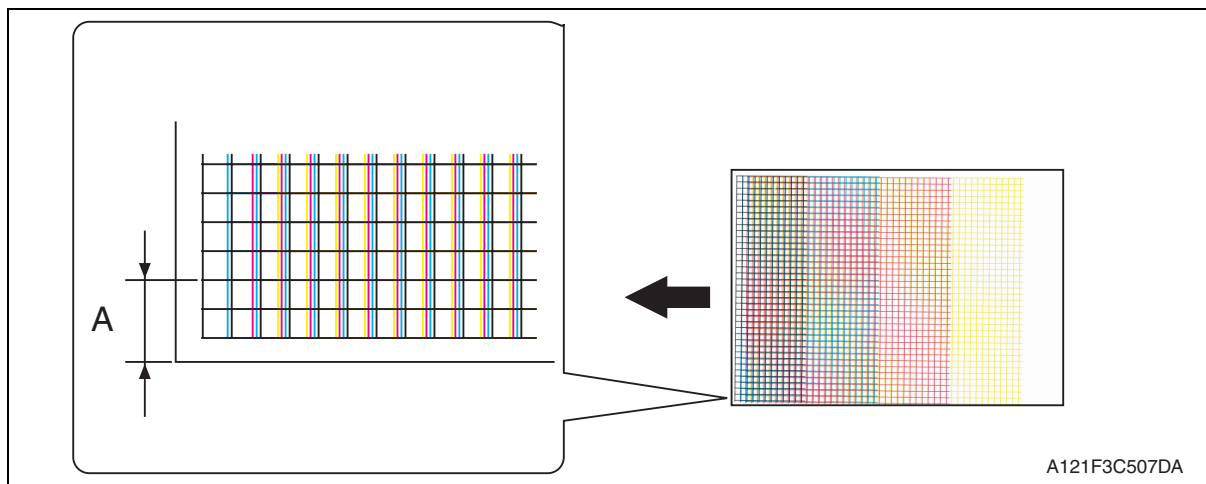
A. Use

- To adjust for variations in the accuracy of scanner parts and their mounting accuracy by varying the scanning start position at the ADF scanning (front side) in the main-scanning direction.
- When the scanner unit or the ADF has been replaced.

NOTE

- After the [ADF(F) CD Multiplier] adjustments have been performed

B. Procedure



- Make adjustments so that the difference in the width of A between the test pattern and the copy of the test pattern is within the following specification.
- Specification value: 2.0 mm or less
- The default setting is 0.
- -5.0 (-5.0 mm) ~ "0 (0 mm)" ~ +5.0 (+5.0 mm)
- Step: 0.25 mm

1. Print the test pattern.
[See P.174](#)
2. Make a test copy.

NOTE

- **Set the test pattern on the ADF.**
 - **Use A4 or Letter paper loaded into tray1 to make the test copy.**
3. Check that the width of A in the original and its copy of the test pattern are shifted. If the width of A is out of specification, adjust it according to the following procedure.
 4. Call the Service Mode to the display.
 5. Touch [Scanner Adjustment]→[ADF(F) Side Edge].
 6. Using the [+]/[-] key on the screen or the ten-key pad, enter a setting value and touch [OK].
If width A of the copy image is exceeds one on the test pattern, decrease the setting.
If width A of the copy image is less than one on the test pattern, increase the setting.
 7. Make a test copy again and check it.

10.8.5 ADF(B) Leading Edge

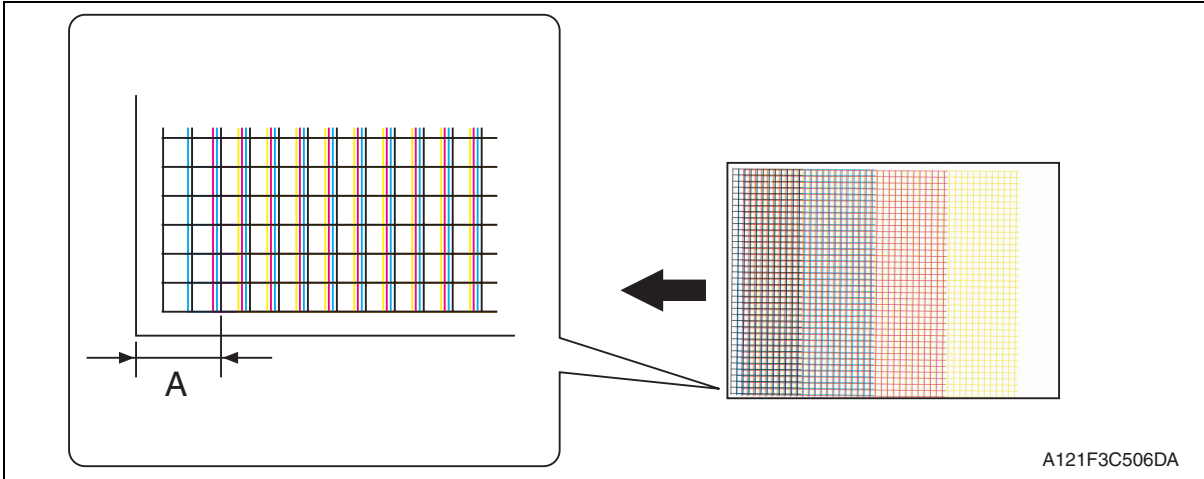
A. Use

- To adjust for variations in the accuracy of scanner parts and their mounting accuracy by varying the scanning start position at the ADF scanning (back side) in the sub-scanning direction.
- When the scanner unit or the ADF has been replaced.

NOTE

- After the [ADF(B) FD Multiplier] adjustments have been performed

B. Procedure



- Make adjustments so that the difference in the width of A between the test pattern and the copy of the test pattern is within the following specification.
- Specification value: 3.0 mm or less
- The default setting is 0.
- -5.0 (-5.0 mm) ~ "0 (0 mm)" ~ +5.0 (+5.0 mm)
- Step: 0.25 mm

1. Print the test pattern.
[See P.174](#)
2. Make a test copy.

NOTE

- **Set the test pattern with the printed side down on the ADF.**
 - **Use A4 or Letter paper loaded into tray1 to make the test copy.**
3. Check that the width of A in the original and its copy of the test pattern are shifted. If the width of A is out of specification, adjust it according to the following procedure.
 4. Call the Service Mode to the display.
 5. Touch [Scanner Adjustment]→[ADF(B) Leading Edge].
 6. Using the [+]/[-] key on the screen or the ten-key pad, enter a setting value and touch [OK].
If width A of the copy image is exceeds one on the test pattern, decrease the setting.
If width A of the copy image is less than one on the test pattern, increase the setting.
 7. Make a test copy again and check it.

10.8.6 ADF(B) Side Edge

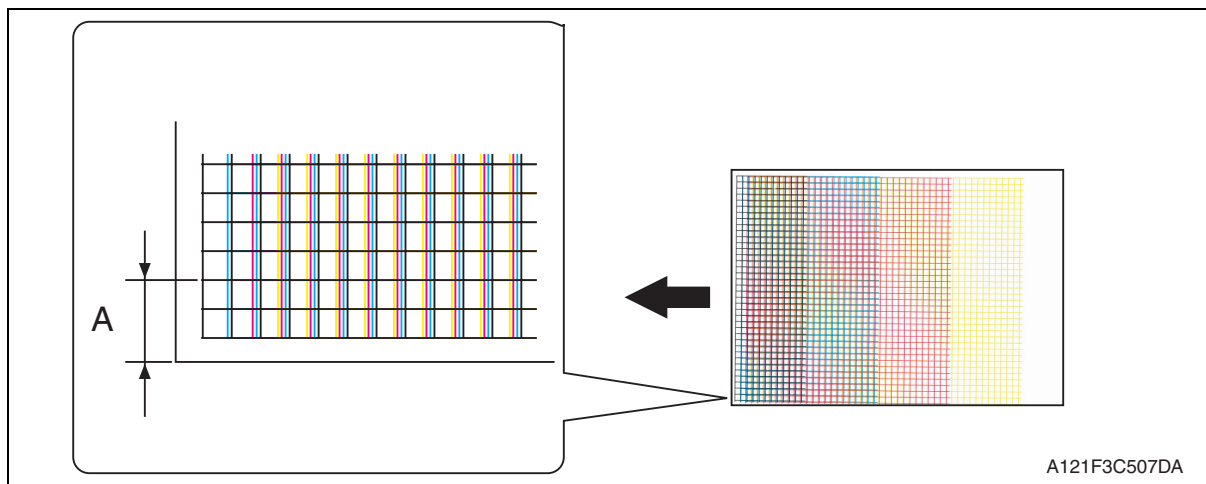
A. Use

- To adjust for variations in the accuracy of scanner parts and their mounting accuracy by varying the scanning start position at the ADF scanning (back side) in the main-scanning direction.
- When the scanner unit or the ADF has been replaced.

NOTE

- After the [ADF(B) CD Multiplier] adjustments have been performed

B. Procedure



- Make adjustments so that the difference in the width of A between the test pattern and the copy of the test pattern is within the following specification.
- Specification value: 3.0 mm or less
- The default setting is 0.
- -5.0 (-5.0 mm) ~ "0 (0 mm)" ~ +5.0 (+5.0 mm)
- Step: 0.25 mm

1. Print the test pattern.
[See P.174](#)
2. Make a test copy.

NOTE

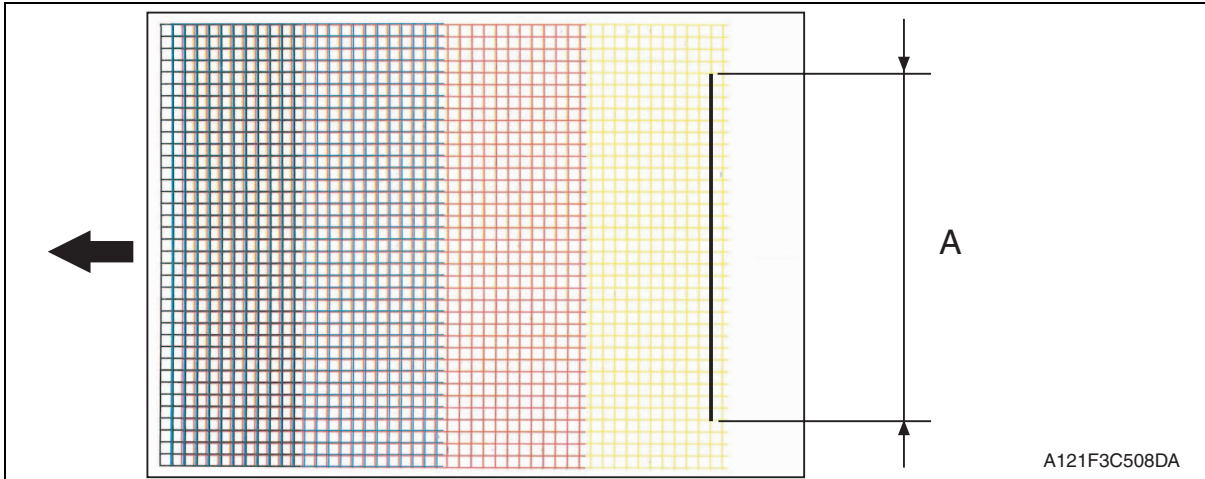
- **Set the test pattern with the printed side down on the ADF.**
 - **Use A4 or Letter paper loaded into tray1 to make the test copy.**
3. Check that the width of A in the original and its copy of the test pattern are shifted. If the width of A is out of specification, adjust it according to the following procedure.
 4. Call the Service Mode to the display.
 5. Touch [Scanner Adjustment]→[ADF(B) Side Edge].
 6. Using the [+]/[-] key on the screen or the ten-key pad, enter a setting value and touch [OK].
If width A of the copy image is exceeds one on the test pattern, decrease the setting.
If width A of the copy image is less than one on the test pattern, increase the setting.
 7. Make a test copy again and check it.

10.8.7 FB CD Multiplier

A. Use

- To adjust for variations in the accuracy of scanner parts and their mounting accuracy by varying the scanning zoom ratio in the main scanning direction.
- When the scanner unit has been replaced.

B. Procedure



- Draw a straight line 200 mm on the test pattern. Make adjustments so that the difference between the line length on the test pattern (length A) and length A on the test copy is within the following specification.
 - Specification value: $100 \pm 1.0\%$ (Zoom ratio = Full Size:100%)
 - The default setting is 0%.
 - -2.0% ~ "0%" ~ +2.0%
 - Step: 0.2%
1. Print the test pattern.
[See P.174](#)
 2. Draw a straight line 200 mm on the test pattern.
 3. Make a test copy.

NOTE

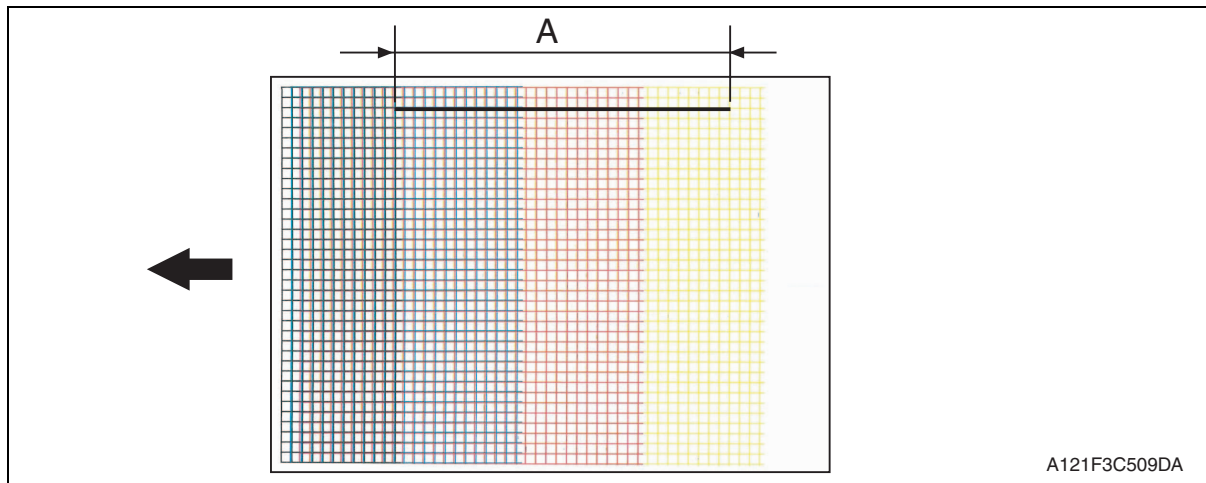
- **The test pattern should be positioned vertically.**
 - **Use A4 or Letter paper loaded into tray1 to make the test copy.**
4. If the difference between the length A on the test pattern and that on the test copy is greater than ± 2 mm, perform the adjustment steps below.
 5. Call the Service Mode to the display.
 6. Touch [Scanner Adjustment]→[FB CD Multiplier].
 7. Using the [+]/[-] key on the screen or the ten-key pad, enter a setting value and touch [OK].
 8. Make a test copy again and check it.

10.8.8 FB FD Multiplier

A. Use

- To adjust for variations in the accuracy of scanner parts and their mounting accuracy by varying the scanning zoom ratio in the sub scanning direction.
- When the scanner unit has been replaced.

B. Procedure



- Draw a straight line 200 mm on the test pattern. Make adjustments so that the difference between the line length on the test pattern (length A) and length A on the test copy is within the following specification.
 - Specification value: $100 \pm 1.0\%$ (Zoom ratio = Full Size:100%)
 - The default setting is 0%.
 - -2.0% ~ "0%" ~ +2.0%
 - Step: 0.2%
1. Print the test pattern.
[See P.174](#)
 2. Draw a straight line 200 mm on the test pattern.
 3. Make a test copy.

NOTE

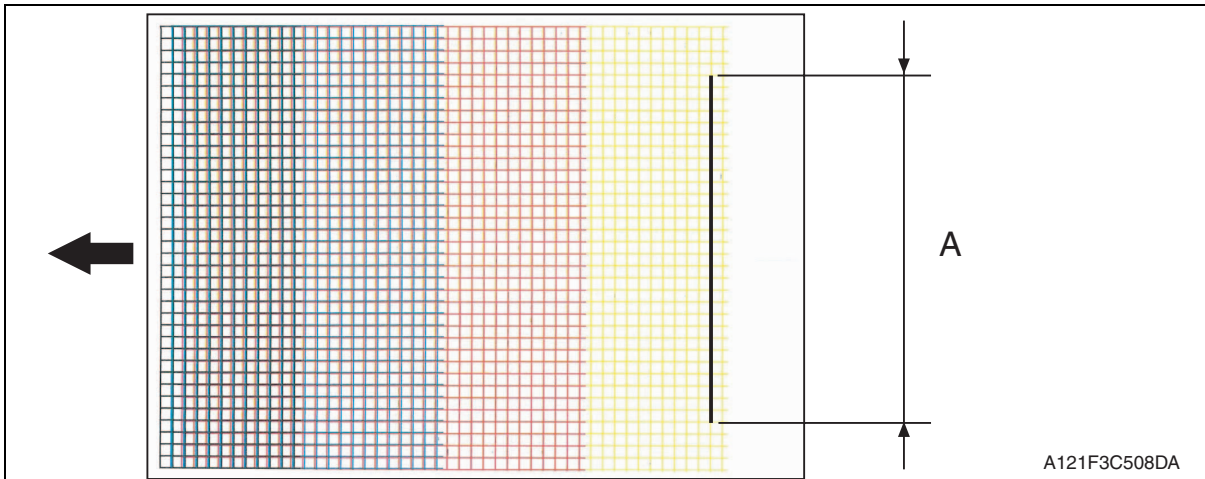
- **The test pattern should be positioned vertically.**
 - **Use A4 or Letter paper loaded into tray1 to make the test copy.**
4. If the difference between the length A on the test pattern and that on the test copy is greater than ± 2 mm, perform the adjustment steps below.
 5. Call the Service Mode to the display.
 6. Touch [Scanner Adjustment]→[FB FD Multiplier].
 7. Using the [+]/[-] key on the screen or the ten-key pad, enter a setting value and touch [OK].
 8. Make a test copy again and check it.

10.8.9 ADF(F) CD Multiplier

A. Use

- To adjust for variations in the accuracy of scanner parts and their mounting accuracy by varying the scanning zoom ratio at the ADF scanning (front side) in the main scanning direction.
- When the scanner unit or the ADF has been replaced.

B. Procedure



- Draw a straight line 200 mm on the test pattern. Make adjustments so that the difference between the line length on the test pattern (length A) and length A on the test copy is within the following specification.
 - Specification value: $100 \pm 1.0\%$ (Zoom ratio = Full Size:100%)
 - The default setting is 0%.
 - -2.0% ~ "0%" ~ +2.0%
 - Step: 0.2%
1. Print the test pattern.
[See P.174](#)
 2. Draw a straight line 200 mm on the test pattern.
 3. Make a test copy.

NOTE

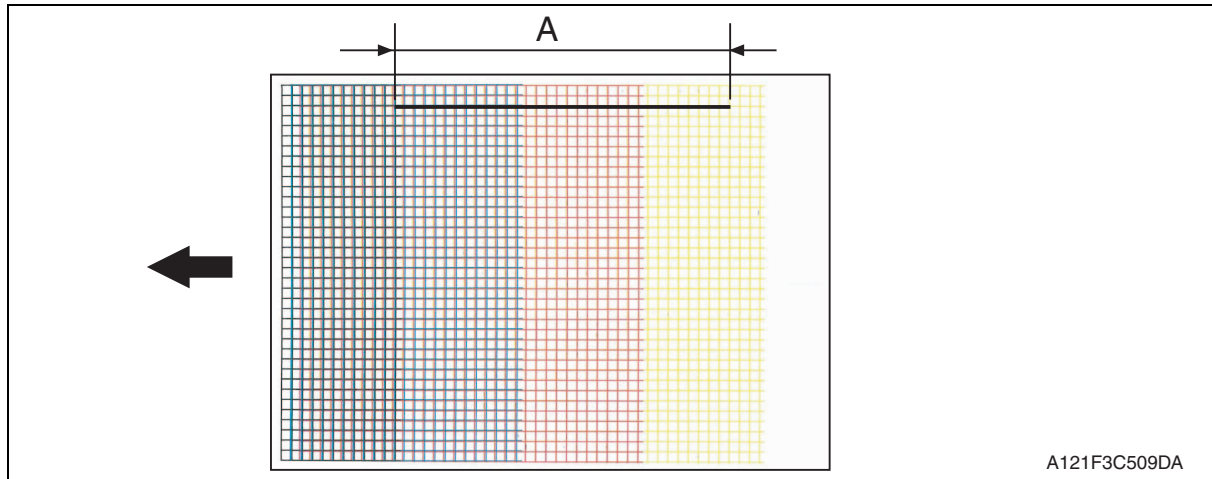
- **Set the test pattern on the ADF.**
 - **Use A4 or Letter paper loaded into tray1 to make the test copy.**
4. If the difference between the length A on the test pattern and that on the test copy is greater than ± 2 mm, perform the adjustment steps below.
 5. Call the Service Mode to the display.
 6. Touch [Scanner Adjustment]→[ADF(F) CD Multiplier].
 7. Using the [+]/[-] key on the screen or the ten-key pad, enter a setting value and touch [OK].
 8. Make a test copy again and check it.

10.8.10 ADF(F) FD Multiplier

A. Use

- To adjust for variations in the accuracy of scanner parts and their mounting accuracy by varying the scanning zoom ratio at the ADF scanning (front side) in the sub scanning direction.
- When the scanner unit or the ADF has been replaced.

B. Procedure



- Draw a straight line 200 mm on the test pattern. Make adjustments so that the difference between the line length on the test pattern (length A) and length A on the test copy is within the following specification.
 - Specification value: $100 \pm 1.0\%$ (Zoom ratio = Full Size:100%)
 - The default setting is 0%.
 - -2.0% ~ "0%" ~ +2.0%
 - Step: 0.2%
1. Print the test pattern.
[See P.174](#)
 2. Draw a straight line 200 mm on the test pattern.
 3. Make a test copy.

NOTE

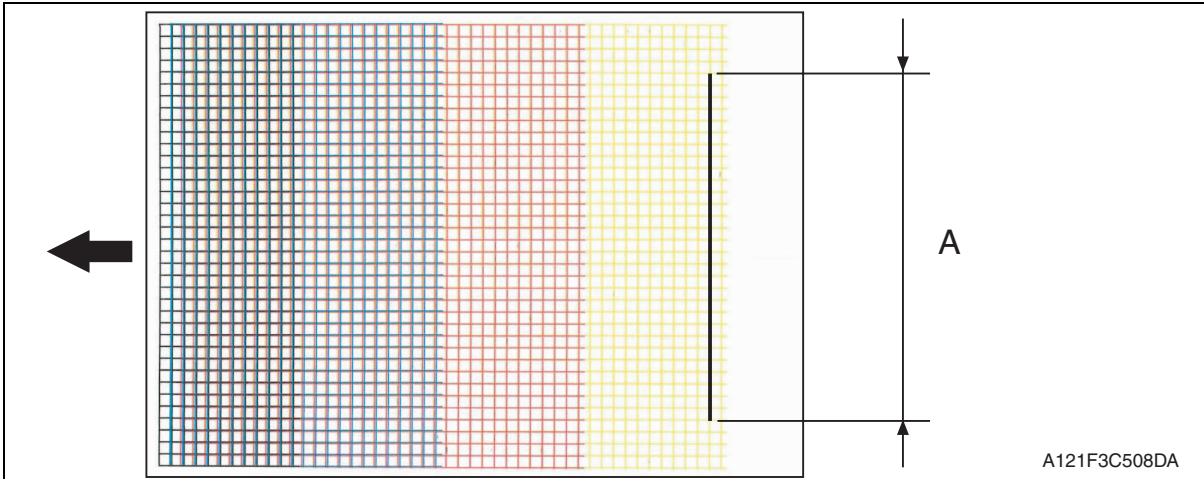
- **Set the test pattern on the ADF.**
 - **Use A4 or Letter paper loaded into tray1 to make the test copy.**
4. If the difference between the length A on the test pattern and that on the test copy is greater than ± 2 mm, perform the adjustment steps below.
 5. Call the Service Mode to the display.
 6. Touch [Scanner Adjustment]→[ADF(F) FD Multiplier].
 7. Using the [+]/[-] key on the screen or the ten-key pad, enter a setting value and touch [OK].
 8. Make a test copy again and check it.

10.8.11 ADF(B) CD Multiplier

A. Use

- To adjust for variations in the accuracy of scanner parts and their mounting accuracy by varying the scanning zoom ratio at the ADF scanning (back side) in the main scanning direction.
- When the scanner unit or the ADF has been replaced.

B. Procedure



- Draw a straight line 200 mm on the test pattern. Make adjustments so that the difference between the line length on the test pattern (length A) and length A on the test copy is within the following specification.
 - Specification value: $100 \pm 1.0\%$ (Zoom ratio = Full Size:100%)
 - The default setting is 0%.
 - -2.0% ~ "0%" ~ +2.0%
 - Step: 0.2%
1. Print the test pattern.
[See P.174](#)
 2. Draw a straight line 200 mm on the test pattern.
 3. Make a test copy.

NOTE

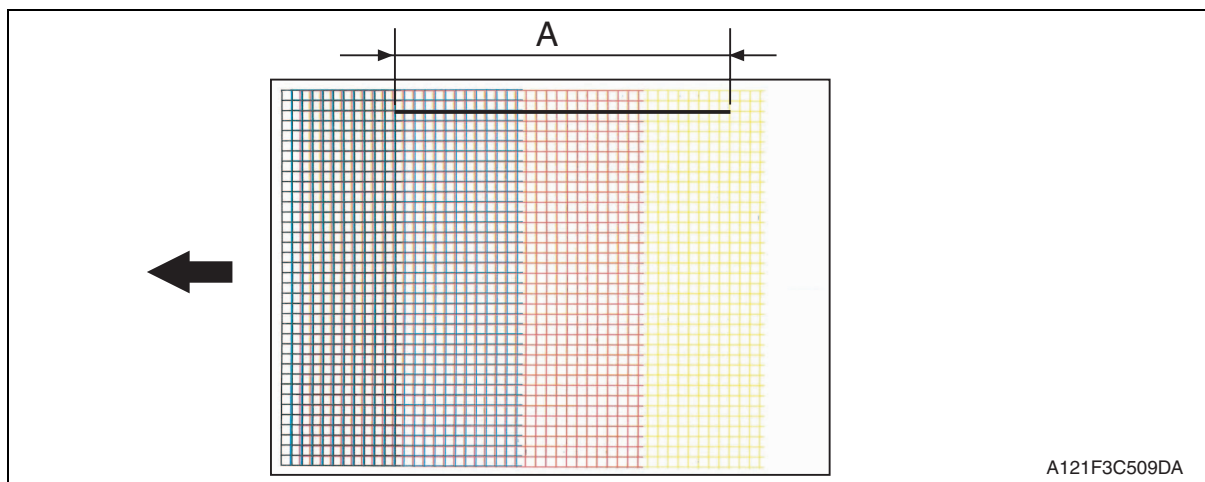
- **Set the test pattern with the printed side down on the ADF.**
 - **Use A4 or Letter paper loaded into tray1 to make the test copy.**
4. If the difference between the length A on the test pattern and that on the test copy is greater than ± 2 mm, perform the adjustment steps below.
 5. Call the Service Mode to the display.
 6. Touch [Scanner Adjustment]→[ADF(B) CD Multiplier].
 7. Using the [+]/[-] key on the screen or the ten-key pad, enter a setting value and touch [OK].
 8. Make a test copy again and check it.

10.8.12 ADF(B) FD Multiplier

A. Use

- To adjust for variations in the accuracy of scanner parts and their mounting accuracy by varying the scanning zoom ratio at the ADF scanning (back side) in the sub scanning direction.
- When the scanner unit or the ADF has been replaced.

B. Procedure



- Draw a straight line 200 mm on the test pattern. Make adjustments so that the difference between the line length on the test pattern (length A) and length A on the test copy is within the following specification.
 - Specification value: $100 \pm 1.0\%$ (Zoom ratio = Full Size:100%)
 - The default setting is 0%.
 - -2.0% ~ "0%" ~ +2.0%
 - Step: 0.2%
1. Print the test pattern.
[See P.174](#)
 2. Draw a straight line 200 mm on the test pattern.
 3. Make a test copy.

NOTE

- **Set the test pattern with the printed side down on the ADF.**
 - **Use A4 or Letter paper loaded into tray1 to make the test copy.**
4. If the difference between the length A on the test pattern and that on the test copy is greater than ± 2 mm, perform the adjustment steps below.
 5. Call the Service Mode to the display.
 6. Touch [Scanner Adjustment]→[ADF(B) FD Multiplier].
 7. Using the [+]/[-] key on the screen or the ten-key pad, enter a setting value and touch [OK].
 8. Make a test copy again and check it.

10.8.13 Tilt(F)**A. Use**

- Adjusts the amount of loop produced before the ADF registration roller for the front side of the original fed from the ADF.
- When original jam or skew occurs, use this function for the front side of the original fed from the ADF.

B. Procedure

- The default setting is 0.
 - -5.0 (-5.0 mm) ~ "0 (0 mm)" ~ +5.0 (+5.0 mm)
 - Step: 0.25 mm
1. Call the Service Mode to the display.
 2. Touch [Scanner Adjustment]→[Tilt(F)].
 3. Using the [+]/[-] key on the screen or the ten-key pad, enter a setting value and touch [OK].

10.8.14 Tilt(B)**A. Use**

- Adjusts the amount of loop produced before the ADF registration roller for the back side of the original fed from the ADF.
- When original jam or skew occurs, use this function for the back side of the original fed from the ADF.

B. Procedure

- The default setting is 0.
 - -5.0 (-5.0 mm) ~ "0 (0 mm)" ~ +5.0 (+5.0 mm)
 - Step: 0.25 mm
1. Call the Service Mode to the display.
 2. Touch [Scanner Adjustment]→[Tilt(B)].
 3. Using the [+]/[-] key on the screen or the ten-key pad, enter a setting value and touch [OK].

10.9 Print Menu

10.9.1 Mgmt. List

A. Use

- Prints the management information of the machine.
- To check the maintenance information. The items which can be checked are as follows.
 - Device Caution Information : Caution information, Process caution information
 - Count (total) : Counter value for each color
 - Coverage (total) : Coverage rate for each color
 - Replace count (total) : Number of times IU, TC, transfer belt, transfer roller, and fuser unit have been replaced.
 - Imaging Unit Information : Information concerning the imaging unit
 - Toner Cartridge Information : Information concerning the toner cartridge

B. Procedure

1. Call the Service Mode to the display.
2. Touch [Print Menu]→[Mgmt. List].
3. Select [Print], and touch [OK].

C. Process Caution Information

(1) List of the process caution information

BIT	Item	Status	
0	—	—	
1	—	—	
2	—	—	
3	Temperature/ humidity sensor failure	1	• No response is provided from the temperature/ humidity sensor.
		0	• Power switch OFF/ON, and normal image stabilization are complete besides the ones listed above.
4	—	—	
5	IDC Sensor failure	1	• IDC sensor output values are out of the specified range.
		0	• Right door or front cover open/close, power switch OFF/ON, and normal image stabilization are complete besides the ones listed above.
6	—	—	
7	—	—	
8	—	—	
9	—	—	
10	—	—	
11	Color Shift Test Pattern failure	1	<ul style="list-style-type: none"> • The number of points detected in the main scan direction is more or less than the specified value during main scan direction registration correction. • The number of points detected in the sub scan direction is more or less than the specified value during sub scan direction registration correction.
		0	• Right door or front cover open/close, power switch OFF/ON, and normal image stabilization are complete besides the ones listed above.

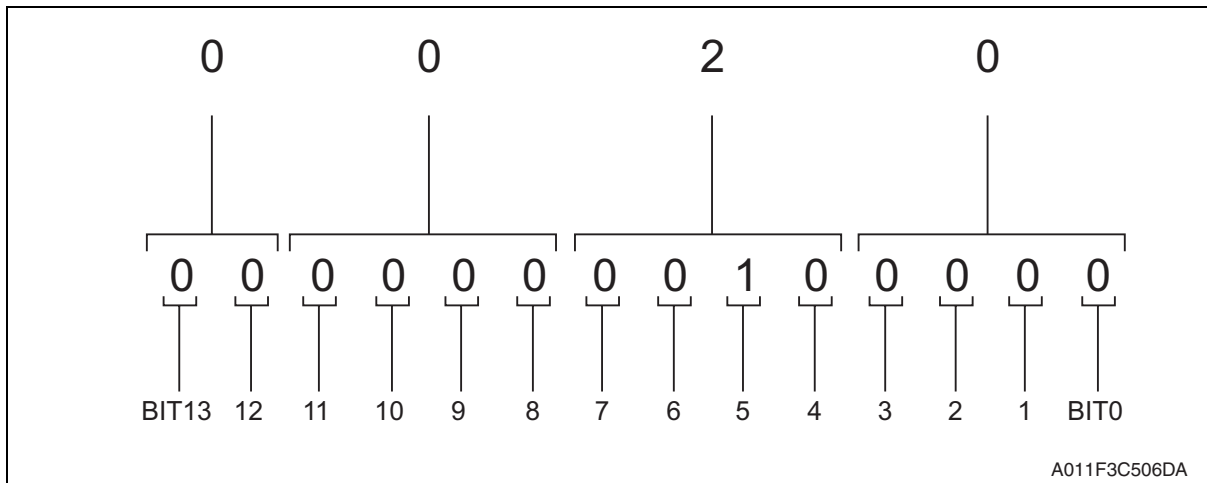
BIT	Item	Status	
12	Color Shift Adjust failure	1	<ul style="list-style-type: none"> The color shift amount is greater than the specified range during main scan direction registration correction. The color shift amount is greater than the specified range during sub scan direction registration correction. The skew correction amount is greater than the specified value.
		0	<ul style="list-style-type: none"> Right door or front cover open/close, power switch OFF/ON, and normal image stabilization are complete besides the ones listed above.
13	—	—	

(2) How to read process caution information

- Convert the numerical value of the hexadecimal number printed on “PROCESS CAUTION INFORMATION in [MAINTENANCE INFO] into the binary number, it compares with the allocation of each BIT, and the caution status is confirmed.

ex. When process caution information is displayed as 0x0020.

- Convert four end digits “0020” of 0x0020 into the binary number (14 digits).
- The BIT number is allocated in converted value “00000000100000.” (BIT0 to BIT13 is sequentially allocated from the first digit.)



- In this case, BIT No. “5” corresponds to “1”. From the “PROCESS CAUTION INFORMATION”, IDC sensor failure can be detected.

Conversion method from hexadecimal number to binary number

- The hexadecimal number (four digits) is converted in each digit based on the following table.

Hexadecimal number	Binary number	Hexadecimal number	Binary number	Hexadecimal number	Binary number	Hexadecimal number	Binary number
0	0000	4	0100	8	1000	C	1100
1	0001	5	0101	9	1001	D	1101
2	0010	6	0110	A	1010	E	1110
3	0011	7	0111	B	1011	F	1111

- Match the converted numerical value of four digits, then two head digits are excluded and it is assumed the binary number of 14 digits.

10.9.2 Event Log

A. Use

- To print the error log information.
- To check the jams/troubles which occurred, and the history of replacing the consumables.

The items which can be checked are as follows.

Paper Jam Error	: The number of times jam have occurred and its history
Engine Fatal Error	: The history of the troubles which required service call
Fuser Unit	: The history of replacing the fuser unit
Transfer Belt	: The history of replacing the transfer belt
Second Trans	: The history of replacing the transfer roller
Toner Cartridge	: The history of replacing the toner cartridge
Imaging Unit	: The history of replacing the print unit
Trouble Counter	: Trouble counting for each section

B. Procedure

1. Call the Service Mode to the display.
2. Touch [Print Menu]→[Event Log].
3. Select [Print], and touch [OK].

10.9.3 Adjust Information

A. Use

- To print the engine adjustment information.
- To check the adjustment values set by the Utility menu and Service Mode.

The items which can be checked are as follows.

Leading Edge Adjustment/Side Edge Adjustment/Left ADJ Duplex/2nd Image Transfer Current/Thick Paper Image Density/Black Image Density/Image ADJ Param/Fuser Temp Control/Fuser Control/AIDC Mode/Engine DipSW/Thick Mode/Fine Line ADJ/Toner Out Mode/IU Yield Settings

- The scanner and ADF related adjustment values can be checked from [Scanner Adjustment].

[See P.158](#)

B. Procedure

1. Call the Service Mode to the display.
2. Touch [Print Menu]→[Adjust Information].
3. Select [Print], and touch [OK].

10.9.4 Element Page

A. Use

- To print the engine element data information.
- To check the element data.
- See the attached chart listed below for details.

B. Procedure

1. Call the Service Mode to the display.
2. Touch [Print Menu]→[Element Page].
3. Select [Print], and touch [OK].

C. Engine element data information

Element data name	Description
Inside Humidity	• Displays the inside humidity (in 1% increments).
INSIDE TEMPERATURE	• Displays the inside temperature (in 1 °C increments).
PH TEMPRATURE	• Displays the PH temperature (in 1 °C increments).
Sensor Information 1	• Displays the input port status of the sensors and switches in hexadecimal numbers.
Sensor Information 2	
Sensor Information 3	
Sensor Information 4	
Sensor Information 5	
Fuser Heater 1 Temperature	• Displays the latest temperature on the middle of the heating roller (in 1 °C increments).
Fuser Heater 2 Temperature	• Displays the latest temperature at the edges of the heating roller (in 1 °C increments).
IDC Sensor 1 PS	• Shows the latest IDC data. • Range of output: 0V to 9.99V (in 0.01V increments)
IDC Sensor 1 P	
TONER LEVEL SENSOR C	• Displays the number of times the toner level sensor has detected an empty condition during one cycle of developer agitation. • Range of output: 0 to 200 (in increments of one time)
TONER LEVEL SENSOR M	
TONER LEVEL SENSOR Y	
TONER LEVEL SENSOR K	
VDC Volt C	• Displays the Vdc voltage of each color of toner. • Range of output: -1000V to 255V (in 1V increments)
VDC Volt M	
VDC Volt Y	
VDC Volt K	
VPP Volt C	• Displays the Vpp voltage of each color of toner. • Range of output: 700V to 2000V (in 1V increments)
VPP Volt M	
VPP Volt Y	
VPP Volt K	
VPP Volt Limit C	• Displays the limit value of Vpp voltage of each color of toner. • Range of output: 700V to 2000V (in 1V increments)
VPP Volt Limit M	
VPP Volt Limit Y	
VPP Volt Limit K	

Element data name	Description
Duty C	<ul style="list-style-type: none"> • Displays the duty ratio of each color of toner. • Range of output: 0% to 100.0% (in 0.1% increments)
Duty M	
Duty Y	
Duty K	
IDC Base Reflection 1	<ul style="list-style-type: none"> • Displays the IDC intensity adjustment value. • Range of output: 0 to 1023 (in 1 increments)
Trans Current 2	<ul style="list-style-type: none"> • Displays the latest second image transfer output value. • Range of output: -800V to 5000V (in 1V increments)

10.9.5 Halftone 64

A. Use

- Prints the halftone pattern with 25% level for CMYK respectively.
- To check the unevenness of the density and the pitch.

B. Procedure

1. Set the A4 or Letter paper on the tray.
2. Call the Service Mode to the display.
3. Touch [Print Menu]→[Halftone 64].
4. Touch the key for desired color.
5. Select [Print], and touch [OK].

10.9.6 Halftone 128

A. Use

- Prints the halftone pattern with 50% level for CMYK respectively.
- To check the unevenness of the density and the pitch.

B. Procedure

1. Set the A4 or Letter paper on the tray.
2. Call the Service Mode to the display.
3. Touch [Print Menu]→[Halftone 128].
4. Touch the key for desired color.
5. Select [Print], and touch [OK].

10.9.7 Halftone 256

A. Use

- Prints the halftone pattern with 100% level for CMYK respectively.
- To check the unevenness of the density and the pitch.

B. Procedure

1. Set the A4 or Letter paper on the tray.
2. Call the Service Mode to the display.
3. Touch [Print Menu]→[Halftone 256].
4. Touch the key for desired color.
5. Select [Print], and touch [OK].

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10.9.8 Gradation

A. Use

- Prints the gradation pattern.
- To check the gradation reproductively.

B. Procedure

1. Set the A4 or Letter paper on the tray.
2. Call the Service Mode to the display.
3. Touch [Print Menu]→[Gradation].
4. Select [Print], and touch [OK].

10.9.9 Scanner Adjustment

A. Use

- Prints the list of the scanner and ADF related setting values.

B. Procedure

1. Set the A4 or Letter paper on the tray.
2. Call the Service Mode to the display.
3. Touch [Print Menu]→[Scanner Adjustment].
4. Select [Print], and touch [OK].

10.9.10 Scan Event Log

A. Use

- Prints the data of the number of times jam has occurred during scanning and the jam history.

B. Procedure

1. Set the A4 or Letter paper on the tray.
2. Call the Service Mode to the display.
3. Touch [Print Menu]→[Scan Event Log].
4. Select [Print], and touch [OK].

10.10 Supplies

10.10.1 Consumable Replace-Transfer Belt Unit

A. Use

- Resets the transfer belt unit counter.
- To use when the transfer belt unit has been replaced.

B. Procedure

1. Call the Service Mode to the display.
2. Touch [Supplies]→[Consumable Replace]→[Transfer Belt Unit].
3. Select [Yes], and touch [OK].

10.10.2 Consumable Replace-Transfer Roller Unit

A. Use

- Resets the transfer roller unit counter.
- To use when the transfer roller unit has been replaced.

B. Procedure

1. Call the Service Mode to the display.
2. Touch [Supplies]→[Consumable Replace]→[Transfer Roller Unit].
3. Select [Yes], and touch [OK].

10.10.3 Consumable Replace-Fusing Unit

A. Use

- Resets the fuser unit counter.
- To use when the fuser unit has been replaced.

B. Procedure

1. Call the Service Mode to the display.
2. Touch [Supplies]→[Consumable Replace]→[Fusing Unit].
3. Select [Yes], and touch [OK].

10.11 BK Clear

A. Use

- To clear engine information backup data.
- Use when the engine information backup data is cleared.
- Use when the MFP board is replaced.
Yes: Executes data clear
No: Does not execute data clear

B. Procedure

- The default setting is No.

Yes

"No"

10.12 Firmware Update

10.12.1 Details

A. Use

- To display the firmware information stored in the USB memory device.
- The following information is displayed:
Model name (d-Color MF3000) of firmware data
Version information of firmware data

B. Procedure

1. Set the USB memory device.
2. Call the Service Mode to the display.
3. Touch [Firmware Update].
4. Select the firmware to be updated and touch [Details].

NOTE

- An error message appears if the selected data is not of the appropriate data format.

10.12.2 Execute**A. Use**

- To upgrade firmware using the USB memory device.
- Use for upgrading firmware.

B. Procedure

- For details, see “Firmware Rewriting.”
[See P.26](#)

10.13 CS Remote Care

10.13.1 Outlines

- CS Remote Care enables the machine and the computer at CS Remote Care center to exchange data through network in order to control the machine.
- CS Remote Care enables the machine to call the computer at the center when trouble occurs. It also enables the computer at the center to contact the machine for the necessary data.
- Data which CS Remote Care handles can be divided into the following groups.
 - a. Data which show the status of use of the machine such as total count, PM count.
 - b. Data which show the abnormal situation on the machine such as where and how often errors occur.
 - c. Data on adjustment
 - d. Data on setting

10.13.2 Setting up the CS Remote Care

NOTE

- **The following describes how to set up the CS Remote Care from the Service Mode on the control panel.**
In addition to the set-up from the control panel, the CS Remote Care can be set from the PageScope Web Connection.
- **For resetting up the machine which CS Remote Care has already been set up, clear the RAM for CS Remote Care before resetting.**

[See P.168](#)

	Two-way communication	One-way communication
Step	Procedure	
0	Register the device ID to the application at CS Remote Care center. The initial connection is not available unless the device ID is registered.	
1	Clearing the RAM for CS Remote Care 1. Select [Service Mode]→[CS Remote Care]→[RAM Clear]. 2. Select [Yes], and touch [OK]. See P.168	
2	Setting the date and time for CS Remote Care 1. Select [Service Mode]→[CS Remote Care]→[CSRC Clock]. 2. Select [Date], [Time] or [Time Zone], and touch [OK]. 3. Input the date, time or time zone, and touch [OK]. See P.167	
3	Setting the communication method 1. Select [Service Mode]→[CS Remote Care]→[Basic Setting]→[Comm. Method]. 2. Select [Duplex], and touch [OK].	Setting the communication method 1. Select [Service Mode]→[CS Remote Care]→[Basic Setting]→[Comm. Method]. 2. Select [Simplex], and touch [OK].
4	Inputting the ID code 1. Select [Service Mode]→[CS Remote Care]→[Service Engr ID]. 2. Input the seven digits ID of the service engineer, and touch [OK]. See P.164	
5	Setting the Center ID 1. Select [Service Mode]→[CS Remote Care]→[Basic Setting]→[Center ID]. 2. Input the six digits ID of the CS Remote Care center, and touch [OK]. See P.165	

	Two-way communication	One-way communication									
Step	Procedure										
6	Encryption setting 1. Select [Service Mode]→[CS Remote Care]→[Basic Setting]→[Encryption]. 2. Select [Yes] or [No] according to the necessity of encryption, and touch [OK].										
7	Heart Beat *1 1. Select [Service Mode]→[CS Remote Care]→[CSRC Settings]→[Heartbeat Settings]. 2. In [Enable Heartbeat], set whether or not to enable Heart Beat communication. (Default: Yes) 3. Select [Interval] and enter a Heart Beat transmission interval (1 to 256 minutes, Default: 30 minutes). 4. In [Enable Fixed Time], set whether or not to enable Heartbeat transmission at a fixed interval. (Default: Yes) 5. Select [Fixed Time] and enter a Heartbeat transmission interval (1 to 256 minutes, Default: 30 minutes).										
8	Proceed to step 10.	Periodic transmission setting 1. Select [Service Mode]→[CS Remote Care]→[CSRC Settings]→[Periodic Trans.]. 2. In [Enable Trans.], set whether or not to enable periodic transmission. (Default: On) 3. Select [Interval], [Time], [Day of the Week] or [Date] and set the schedule of periodic transmission. See P.167									
9		Report setting 1. Select [Service Mode]→[CS Remote Care]→[CSRC Settings]→[Report Settings]. 2. Select the report item and set items that will be reported to the Center. See P.167									
10	Setting the http server 1. Select [Service Mode]→[CS Remote Care]→[Basic Setting]→[Web Server] 2. Input the server name of the CS Remote Care center, and touch [OK]. When the WebDAV server of the CS Remote Care center is operated with IIS (Internet Information Service) Ver7.0 or later, it is necessary to add the port number to the host address. Refer to the followig sample and make sure to set the appropriate address. <Conditions precedent of the sample> • Server address: 192.168.0.1/WebDAV • Port number: default setting (HTTP;80/HTTPS;443) <table border="1"> <thead> <tr> <th></th> <th>HTTP</th> <th>HTTPS</th> </tr> </thead> <tbody> <tr> <td>Connect without a proxy server</td> <td>192.168.0.1:80/WebDAV</td> <td>192.168.0.1:443/WebDAV</td> </tr> <tr> <td>Connect using a proxy server *1</td> <td>192.168.0.1/WebDAV</td> <td>192.168.0.1:443/WebDAV</td> </tr> </tbody> </table> *1: When using proxy server at HTTP connection, no adding “:80” is required. 3. Select [Service Mode]→[CS Remote Care]→[WebDAV Settings], and make the settings of communication with the server according to the network environment. See P.166			HTTP	HTTPS	Connect without a proxy server	192.168.0.1:80/WebDAV	192.168.0.1:443/WebDAV	Connect using a proxy server *1	192.168.0.1/WebDAV	192.168.0.1:443/WebDAV
	HTTP	HTTPS									
Connect without a proxy server	192.168.0.1:80/WebDAV	192.168.0.1:443/WebDAV									
Connect using a proxy server *1	192.168.0.1/WebDAV	192.168.0.1:443/WebDAV									



	Two-way communication	One-way communication
Step	Procedure	
11	Enables/disables some special warning and report functions 1. Select [Service Mode]→[CS Remote Care]→[CSRC Settings]→[Switches Settings], and set whether or not to enable each function. See P.167	
12	Executing the initial transmission 1. Select [Service Mode]→[CS Remote Care]→[Subscribe]. 2. Select [Yes], and touch [OK] to start initial transmission. 3. When the machine is properly connected with the center, the “Completed” message will be displayed.	

*1 Heartbeat is a feature that uploads a Heartbeat file to the registered web server at a specified interval to report that the device is operating. Heartbeat files include total counter and status information.

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10.13.3 Service Engr ID**A. Use**

- To register the service engineer ID.
- Use when registering and changing service engineer ID.

B. Procedure

- Enter a 7-digit code with the up key▲/down key▼/right key▶/left key◀.
(0000001 to 9999999)

10.13.4 Subscribe

- Not displayed when the machine is registered in the CS Remote Care center.

A. Use

- Sent the information to the CS Remote Care center to register the machine.

B. Procedure

1. Select [Service Mode]→[CS Remote Care]→[Subscribe].
2. Press the Menu/Select key to start initial transmission.

10.13.5 Maintenance Start.**A. Use**

- Starts the maintenance using the CS Remote Care.
- Not displayed in the following cases.
The machine is not registered in the center.
The Service Engineer ID is not registered.
The maintenance is already provided.

B. Procedure

1. Select [Service Mode]→[CS Remote Care]→[Maintenance Start.].
2. Select [Yes], and touch [OK] to start the maintenance.

10.13.6 Maintenance End.**A. Use**

- Ends the maintenance provided by the CS Remote Care.
- Not displayed in the following cases.
The machine is not registered in the center.
The Service Engineer ID is not registered.
The maintenance is not provided.

B. Procedure

1. Select [Service Mode]→[CS Remote Care]→[Maintenance End.].
2. Select [Yes], and touch [OK] to finish the maintenance.

10.13.7 Manual Trans.

A. Use

- Use when enabling the manual transmission for the CS Remote Care.
- Not displayed in the following cases.
 - The machine is not registered in the center.
 - The maintenance is already provided.

B. Procedure

1. Select [Service Mode]→[CS Remote Care]→[Manual Trans.].
2. Select [Yes], and touch [OK] to start manual transmission.

10.13.8 Basic Settings

A. Center ID

(1) Use

- Registers and checks the Center ID for the CS Remote Care.

(2) Procedure

1. Select [Service Mode]→[CS Remote Care]→[Basic Settings]→[Center ID].
2. Touch [Center ID].
3. Enter the ID number using the software keyboard.

B. Web Server

(1) Use

- Registers and checks the Web Server which is used for communication with the CS Remote Care.

(2) Procedure

1. Select [Service Mode]→[CS Remote Care]→[Basic Settings]→[Web Server].
2. Touch [Web Server].
3. Enter the server address or domain name using the software keyboard.

C. Encryption

(1) Use

- Sets whether or not to enable encryption for communication with the CS Remote Care.

(2) Procedure

1. Select [Service Mode]→[CS Remote Care]→[Basic Settings]→[Encryption].
2. Select [Yes] or [No], and touch [OK].

D. Comm. Method

(1) Use

- Sets the communication method for the CS Remote Care.
 - Simplex: One-way communication
 - Duplex: Two-way communication

(2) Procedure

1. Select [Service Mode]→[CS Remote Care]→[Basic Settings]→[Comm. Method].
2. Select [Simplex] or [Duplex], and touch [OK].

10.13.9 WebDAV Settings

A. Enable Proxy

(1) Use

- Sets whether or not to use the proxy server for communication with the CS Remote Care

(2) Procedure

1. Select [Service Mode]→[CS Remote Care]→[WebDAV Settings]→[Enable Proxy].
2. Select [Yes] or [No], and touch [OK].

B. Proxy Address

(1) Use

- Sets the proxy server address.

(2) Procedure

1. Select [Service Mode]→[CS Remote Care]→[WebDAV Settings]→[Proxy Address].
2. Touch [Proxy Address].
3. Enter the server address or domain name using the software keyboard.

C. Proxy Port

(1) Use

- Sets the proxy server port number.

(2) Procedure

1. Select [Service Mode]→[CS Remote Care]→[WebDAV Settings]→[Proxy Port].
2. Touch [Number].
3. Enter the port number using the software keyboard.

D. Proxy User Name

(1) Use

- Sets the user name of the proxy server.

(2) Procedure

1. Select [Service Mode]→[CS Remote Care]→[WebDAV Settings]→[Proxy User Name].
2. Touch [Proxy User Name].
3. Enter the user name using the software keyboard.

E. Proxy Password

(1) Use

- Sets the proxy server password.

(2) Procedure

1. Select [Service Mode]→[CS Remote Care]→[WebDAV Settings]→[Proxy Password].
2. Touch [Proxy Password].
3. Enter the password using the software keyboard.

F. Enable SSL

(1) Use

- Sets whether or not to enable SSL for communication with the CS Remote Care.

(2) Procedure

1. Select [Service Mode]→[CS Remote Care]→[WebDAV Settings]→[Enable SSL].
2. Select [Yes] or [No], and touch [OK].

G. WebDAV Auth.**(1) Use**

- Sets whether or not to use the WebDAV server authentication for communication with the CS Remote Care.

(2) Procedure

1. Select [Service Mode]→[CS Remote Care]→[WebDAV Settings]→[WebDAV Auth.].
2. Select [Yes] or [No], and touch [OK].

H. WebDAV User Name**(1) Use**

- Sets the user name used to access the WebDAV server.

(2) Procedure

1. Select [Service Mode]→[CS Remote Care]→[WebDAV Settings]→[WebDAV User Name].
2. Touch [WebDAV User Name].
3. Enter the user name using the software keyboard.

I. WebDAV Password**(1) Use**

- Sets the password used to access the WebDAV server.

(2) Procedure

1. Select [Service Mode]→[CS Remote Care]→[WebDAV Settings]→[WebDAV Password].
2. Touch [WebDAV Password].
3. Enter the password using the software keyboard.

10.13.10 CSRC Clock**A. Use**

- Sets the time for the time stamp used in the reports provided by the CS Remote Care.
- Not displayed in the following cases.
The machine is registered in the center but the maintenance is not provided.

B. Procedure

1. Select [Service Mode]→[CS Remote Care]→[CSRC Clock].
2. Select [Date], [Time] or [Time Zone].
3. Input the date, time or time zone, and touch [OK].

10.13.11 CSRC Settings

- Not displayed in the following cases.
The machine is not registered in the center.
The Service Engineer ID is not registered.
The maintenance is not provided.

A. Heartbeat Settings**(1) Use**

- To make Heartbeat related settings.
- Heart Beat is a feature that uploads a Heartbeat file to the registered web server at a specified interval to report that the device is operating. Heartbeat files include total counter and status information.

B. Switches Settings

(1) Use

- To change the CS Remote Care settings.
- The items which can be set are as follows.

Retry Settings	Retry Count
	Retry Interval
SC Error [SC]	
Parts Life [TP]	
Toner Rep. [TN]	
Waste Full [T0]	
Paper Jam Threshold.	
Originals Jam Threshold	
Paper Jam Warning	
Jam History	

C. Periodic Trans.

(1) Use

- Set the schedule of periodic transmission to the center.
- Select the notification interval from [Daily], [Weekly], or [Monthly].
When selecting [Daily] for the notification interval, set the [Time].
When selecting [Weekly] for the notification interval, set the [Time] and [Day of the Week].
When selecting [Monthly], set the [Time] and [Date].

D. Fixed Date Trans.

(1) Use

- Set the schedule of fixed date transmission to the center.
- Set the transmission date and transmission time in [Fixed Date] and [Fixed Time] respectively.

E. Report Settings

(1) Use

- Select the items of report data that will be sent to the center.
- The items of report data which can be set are as follows.
Sales Count/Error Count/Service Count/Life Count/System Data/History Data/
Adjustment Data/Coverage Data

10.13.12 RAM Clear

A. Use

- To reset the every setting data for CS Remote Care to the default settings.
- To be used for setting CS Remote Care.

NOTE

- **If RAM clear is selected during transmission, RAM clear processing will be implemented at the time the transmission is completed regardless of whether it is done properly or not.**

10.13.13 List of the CS Remote Care error code**NOTE**

- **When a code other than the ones listed below is displayed, contact CSRC Server Administrator and inform the error code.**

Error code	Error	Solution
0001	Connection timeout during transmission	<ul style="list-style-type: none"> • Check the http server on User side.
0***	Transmission error ###: http responding code (hexadecimal)	<ul style="list-style-type: none"> • Check the http server on User side.
0003	Connection timeout when receiving	<ul style="list-style-type: none"> • Check the POP3 server on User side.
0005	Receiving error	<ul style="list-style-type: none"> • Check the POP3 server on User side.
1030	Machine ID mismatching <ul style="list-style-type: none"> • Received an e-mail which tells that machine ID mismatches. 	<ul style="list-style-type: none"> • Check the machine ID setting. • Check the machine ID setting on host side.
1050	Grammar error <ul style="list-style-type: none"> • Received mail did not define the CS Remote Care command (2 digits). • The Type of Subject and the command of attached file are not consistent. 	<ul style="list-style-type: none"> • Check mail content.
1061	Modifying not allowed <ul style="list-style-type: none"> • The host sent a command mail that asked modifying data of item where setting change is not allowed. 	<ul style="list-style-type: none"> • Ask the host to send another instruction mail for modifying.
1062	Modifying not available due to the copy job currently performing <ul style="list-style-type: none"> • When informing the host that it cannot be modified due to the copy job currently performing. 	<ul style="list-style-type: none"> • Ask the host to send another instruction mail for modifying.
1080	Data length problem <ul style="list-style-type: none"> • LEN value of TEXT data and actual data length are not consistent. 	<ul style="list-style-type: none"> • Ask the host to send another instruction mail for modifying.
1081	Frame No. error <ul style="list-style-type: none"> • The last frame has not been received. • There are missing frame No. 	<ul style="list-style-type: none"> • Check the status of the machine registration on host side.
1082	Subject Type problem <ul style="list-style-type: none"> • Received code did not define the Type of Subject. 	<ul style="list-style-type: none"> • Ask the host to send another instruction mail for modifying.
1084	Date expired <ul style="list-style-type: none"> • Expiration date for data modification command has passed. 	<ul style="list-style-type: none"> • Ask the host to send another instruction mail for modifying.
1091	Oversized command <ul style="list-style-type: none"> • Received attached file exceeds the machine's receive buffer size. 	<ul style="list-style-type: none"> • Ask the host to send another instruction mail for modifying.

Error code	Error	Solution
2001	http request result problem • Internal status error	<ul style="list-style-type: none"> • Check user network environment. • Check http server environment.
2002	http request result problem • File list acquisition result problem	
2003	http request result problem • Request header transmission failure	
2004	http request result problem • Request body transmission failure	
2005	http request result problem • Response header receive response failure	
2006	http request result problem • Response body receive response failure	
2007	http request result problem • Session ID inconsistent	
3002	http request result problem • Unopened client ID was specified	
3003	http request result problem • Receive time out occurred	
3004	http request result problem • Receive error occurred. Or wrong request URL was specified.	
3005	http request result problem • Content-Length or receive size exceeded the specified max. transfer size. Message body size was too large.	
3006	http request result problem • Due to reset, process was stopped. Or message body size exceeded the specified max. transfer size.	
3007	http request result problem • Internal error occurred. Or due to internal reset, process was stopped.	
3008	http request result problem • Connection to WebDAV server failed.	
3009	http request result problem • Error occurred during transmission to the WebDAV server.	
3010	http request result problem • Time out occurred during transmission to the WebDav server.	
3011	http request result problem • Connection to the proxy server failed.	
3012	http request result problem • The proxy server refused CONNECT request.	
3013	http request result problem • The proxy server was set to enabled, but the proxy server host was not set.	
3014	http request result problem • Proxy server authentication failed.	

Error code	Error	Solution
3015	http request result problem • Other errors were sent from the proxy server.	<ul style="list-style-type: none"> • Check user network environment. • Check http server environment.
3016	http request result problem • Internal error occurred.	
3017	http request result problem • As the device application specified MIO_REQBODY_ERROR, process was stopped.	
4103	Not Ready • After turning the main power switch ON, the machine tried to start http communication though http communication was not ready to work.	<ul style="list-style-type: none"> • Wait for a while and try transmitting again.
4106	Not Ready other than the ones listed above.	<ul style="list-style-type: none"> • Wait for a while and try transmitting again.

NOTE

- **When a code other than the ones listed above is displayed, contact CSRC Server Administrator and inform the error code.**

10.13.14 CS Remote Care Operation under Enhanced Security Mode

CS Remote Care can be used even when “ON” is selected in [Administrator Settings] → [Security Settings] → [Enhanced Security Mode].

However, to keep the enhanced security level, the following restrictions are accompanied.

- Only SSL communication is available.
- Error occurs if the Center tries to send the following commands.
 - Command of reading and updating account track information
 - Machine settings update command

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10.14 Count Mode

10.14.1 Display method of the Count Mode

1. Call the Service Mode to the display.
2. Press the following keys in this order.; Stop → 2 → 2 → 2 → 0 → 0
3. Count Mode display will appear.

10.14.2 Count Mode

A. Use

- To set the counting method for the total counter and size counter.
- Use to change the counting method for the counters.

B. Procedure

- The default setting is depend on the marketing area.
 Mode 1 : 1 count per 1 copy cycle (Default: Japan)
 Mode 2 : Large size is double counts (Default: US, Europe, Asian pacific)

10.14.3 Large Paper size Mode

A. Use

- To set the size regarded as the large size (2 counts.)

B. Procedure

- The default setting is depend on the marketing area.
 Large Paper size Mode 0 : Not counted - Never regard any size as the large size
 (Default: Japan)
 Large Paper size Mode 1 : Regard A3/11 x 17 or more size as the large size.
 In this machine, it is virtually no different than [Large Paper
 size Mode 0]. (Default: US)
 Large Paper size Mode 2 : Regard 8¹/₂ x 14 or more size as the large size. When it
 exceeds 215.9 mm in the main scan direction and 355.6
 mm in the sub scan direction (exceeds 337.8 mm at fax
 scan) (Default: Europe, Asian pacific)
 Large Paper size Mode 3 : Regard Foolscap or more size as the large size. When it
 exceeds 203 mm in the main scan direction and 330 mm in
 the sub scan direction (exceeds 313.5 mm at fax scan)

10.15 Clear Admin Password

A. Use

- To initialize the administrator password (Default value: 12345678).
- Use this function when the administrator forget the administrator password.

NOTE

- **If the administrator password is initialized, after the initialization, immediately ask the administrator for a new administrator password and change the default value to the new password.**

B. Procedure

1. Call the Service Mode to the display.
2. Touch [Clear Admin Password].
3. Touch [OK] on the confirmation screen to initialize the administrator password.

10.16 CE Password

A. Use

- To set and change the CE password.

B. Procedure

1. Call the Service Mode to the display.
2. Touch [CE Password].
3. Touch [Password] of the upper section, and enter the 8-digit new CE password using the screen key board or the 10-key pad.
4. Touch [Password] of the lower section, and reenter the 8-digit new CE password using the screen key board or the 10-key pad.

NOTE

- If **Password Rules of Security Settings** available from **Admin Settings** is set to “ON,” the machine does not accept any new password that contains only the same character, consists of less than 8 digits, or that is the same as the previous password.
- In the CE password change display, enter the same CE password to the entry areas (upper and lower).
- For the CE Password, set a value other than the default.
- Quitting the Service Mode after the new password has been set will validate the setting of the new password.
- **NEVER** forget the CE password. When forgetting the CE password, call responsible person of Olivetti.

10.17 Soft Switch

A. Use

- To set the operating characteristic of each function from software switch depending on what types of printing are normally made.
- To use when the MFP board is replaced.
[See P.58](#)

10.18 Engine DipSW

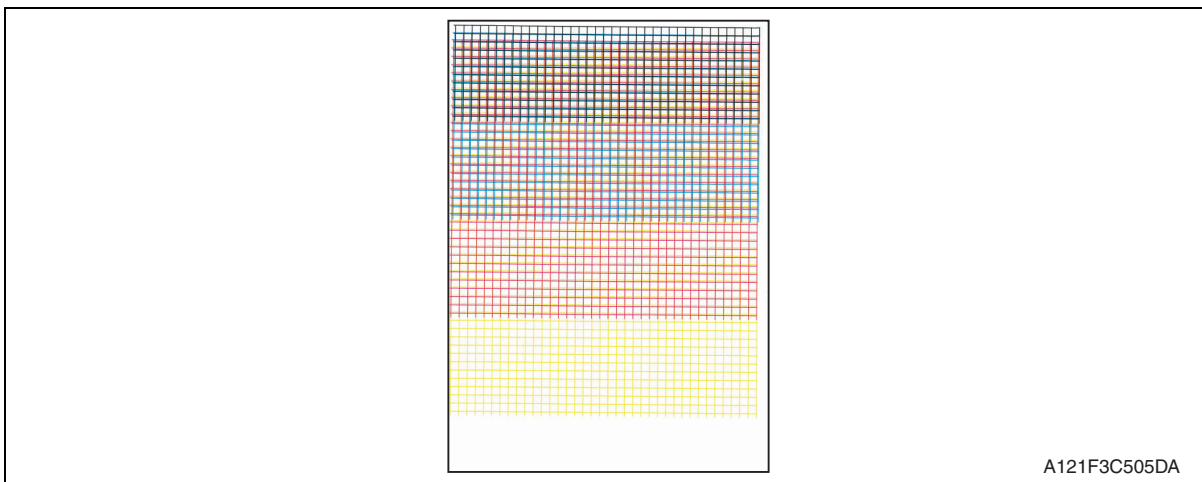
- Not used.

10.19 Function

10.19.1 Print-Test Print A4/Test Print Letter

A. Use

- Prints the test pattern for the image adjustment.
- Use when adjusting skew, registration, and magnification.



B. Procedure

1. Set plain paper of A4 or Letter size in the tray1.

NOTE

- **To output the test pattern, the paper feed is only from the tray1.**
2. Call the Service Mode to the display.
 3. Touch [Function]→[Print]→[Test Print A4] or [Test Print Letter].
 4. Select [Execute], and touch [OK].
 5. The test pattern is output.

10.19.2 Comp. Check

A. Use

- Checks the operation of each electrical component.
- The electrical components which can be checked are as follows.

Name	Electric parts name	Symbol
LV Fan (H-S)	DC power supply fan motor (High speed)	FM10
DUP Fan (H-S)	Cooling fan motor (High speed)	FM11
DUP Fan (M-S)	Cooling fan motor (Half speed)	
Polygon Motor	Polygon motor	M5
Tray 3 Feed Motor	Tray 3 media feed motor	M1
Color PC Motor	Color PC drum motor	M4
DEV Motor K	Developing motor (reverse rotation)	M1
DEV Motor YMCK	Developing motor (normal rotation)	M1
Tray 2 Feed Clutch	Tray 2 media feed clutch	CL1
Tray 1 Feed Clutch	Tray 1 media feed clutch	CL2
Sync roller Clutch	Registration clutch	CL3
2nd Trans Clutch	2nd transfer release solenoid	SD2
1st Trans Clutch	1st transfer release solenoid	SD1

Name	Electric parts name	Symbol
Tray 3 Feed Clutch	Tray 3 media feed clutch	CL1
Toner Clutch Y	Toner supply clutch/Y	CL4
Toner Clutch M	Toner supply clutch/M	CL5
Toner Clutch C	Toner supply clutch/C	CL6
Toner Clutch K	Toner supply clutch/K	CL7
DUP Normal Clutch	Switchback roller feed clutch	CL11
DUP Rev Clutch	Switchback roller reverse clutch	CL12
DUP Feed Clutch	Duplex conveyance roller clutch	CL13
Main Motor	Main motor	M2
CONT Fan (H-S)	MFP board cooling fan motor (High speed)	FM12
CONT Fan (M-S)	MFP board cooling fan motor (Half speed)	
Tray 4 Feed Motor	Tray 4 media feed motor	M1
Tray 4 Feed Clutch	Tray 4 media feed clutch	CL1
Fuser Loop Clutch	Loop detection clutch	CL8
Check FB Motor	Scanner motor	M101
Check ADF Motor	Transport motor	M100
Check Pickup CL	Pick-up clutch	CL100
Check Scan CL	Registration clutch	CL101
Check Bring Paper SL	Pick-up solenoid	SD100
Check Duplex SL	Release solenoid	SD101
Check Lamp	Exposure lamp	LA1

NOTE

- Any component does not operate in the event of jam or when a cover is open.
- When making the developing motor or the registration clutch driven, be sure to install the waste toner bottle.

B. Procedure

1. Call the Service Mode to the display.
2. Touch [Function]→[Comp. Check].
3. Touch the key for electrical component of which operation is checked.
4. Select [Execute], and touch [OK].
The corresponding component starts to operate.
5. If the component is the one which can be stopped during its operation, you can press [Stop] to stop the operation.

10.19.3 Sensor Check/Scanner Sensor Check

A. Use

- To display the states of the input ports of sensors and switches when the machine remains stationary.
- Used for troubleshooting when a malfunction or a misfeed occurs.
- The operation of each of the switches and sensors can be checked on a real-time basis.
- It can be checked as long as the 5-V power line remains intact even when a door is open.

B. Sensor check list

Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			ON	OFF
001/004				
PS2	Tray 2 Empty	Tray2 media empty sensor	Paper present	Paper not present
PS3	Tray 1 Empty	Tray1 media empty sensor	Paper present	Paper not present
PS1	Tray 3 Empty	Tray3 media empty sensor	Paper present	Paper not present
PS1	Tray 4 Empty	Tray4 media empty sensor	Paper present	Paper not present
PS5	Sync Roller	Registration sensor	Paper present	Paper not present
002/004				
PS6	Paper Loop	Loop detection sensor	Paper present	Paper not present
PS8	Exit	Exit sensor	Paper present	Paper not present
PS7	Paper Full	Tray media full sensor	Paper present	Paper not present
PS9	Duplex	Duplex conveyance sensor	Paper present	Paper not present
PS3	Tray 3 Feeder	Tray3 media feed sensor	Paper present	Paper not present
003/004				
PS3	Tray 4 Feeder	Tray4 media feed sensor	Paper present	Paper not present
PS17	1st Trans	1st transfer release sensor	Engaged	Released
PS1	Tray 2 Set	Tray2 set sensor	Set	Unset
SW1	Tray 3 Size 1	Tray3 media size switch	ON	OFF
SW1	Tray 3 Size 2	Tray3 media size switch	ON	OFF
004/004				
SW1	Tray 3 Size 3	Tray3 media size switch	ON	OFF
SW1	Tray 4 Size 1	Tray4 media size switch	ON	OFF
SW1	Tray 4 Size 2	Tray4 media size switch	ON	OFF
SW1	Tray 4 Size 3	Tray4 media size switch	ON	OFF
PS12	Waste Toner	Waste toner near full sensor	Full	Not full

C. Scanner sensor check list

Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			ON	OFF
001/002				
REYB 102	FB Home Sensor	Scanner home sensor	Home	Out of home
PS101	ADF Pickup Sensor	Pick-up sensor	Paper present	Paper not present
PS102	ADF Doc Sensor	Document sensor	Paper present	Paper not present
REYB 100	ADF Deskew Sensor	Registration sensor	Paper present	Paper not present
REYB 101	ADF Paper Out Sensor	Before read sensor	Paper present	Paper not present
002/002				
PS100	ADF Cover Sensor	ADF door sensor	Open	Close
PS103	ADF Paper Gap Sensor	Paper interval sensor	Paper present	Paper not present

10.20 Toner Out Mode

A. Use

- Sets whether or not to enable monochrome print when the toner cartridge/Y,M,C becomes empty.
 Mode1: Enables monochrome print.
 Mode2: Disables monochrome print.

B. Procedure

- The default setting is Mode1.

“Mode1”

Mode2

10.21 IU Yield Settings

A. Use

- Sets the life detection timing of the imaging unit.
 Standard : Detect the imaging unit life (prohibition of printing) as the specification value.
 Long : Change the threshold value of the imaging unit life (prohibition of printing) detection, and extend the detection timing.

	Standard	Long
Life (prohibition of printing) threshold value (consumption rate)	105 %	150 %

B. Procedure

- The default setting is Standard.

“Standard”

Long

10.22 Enable Warning

10.22.1 Toner Low

A. Use

- Specifies whether or not a warning appears when the toner is about to run out.

B. Procedure

- The default setting is ON.

“ON”

OFF

10.22.2 Imaging Unit Low

A. Use

- Specifies whether or not a warning appears when the imaging unit is about to reach the end of its service life.

B. Procedure

- The default setting is ON.

“ON”

OFF

10.22.3 Waste Toner Box Near Full

A. Use

- Specifies whether or not a warning appears when the waste toner bottle becomes a near full condition.

B. Procedure

- The default setting is ON.

“ON”

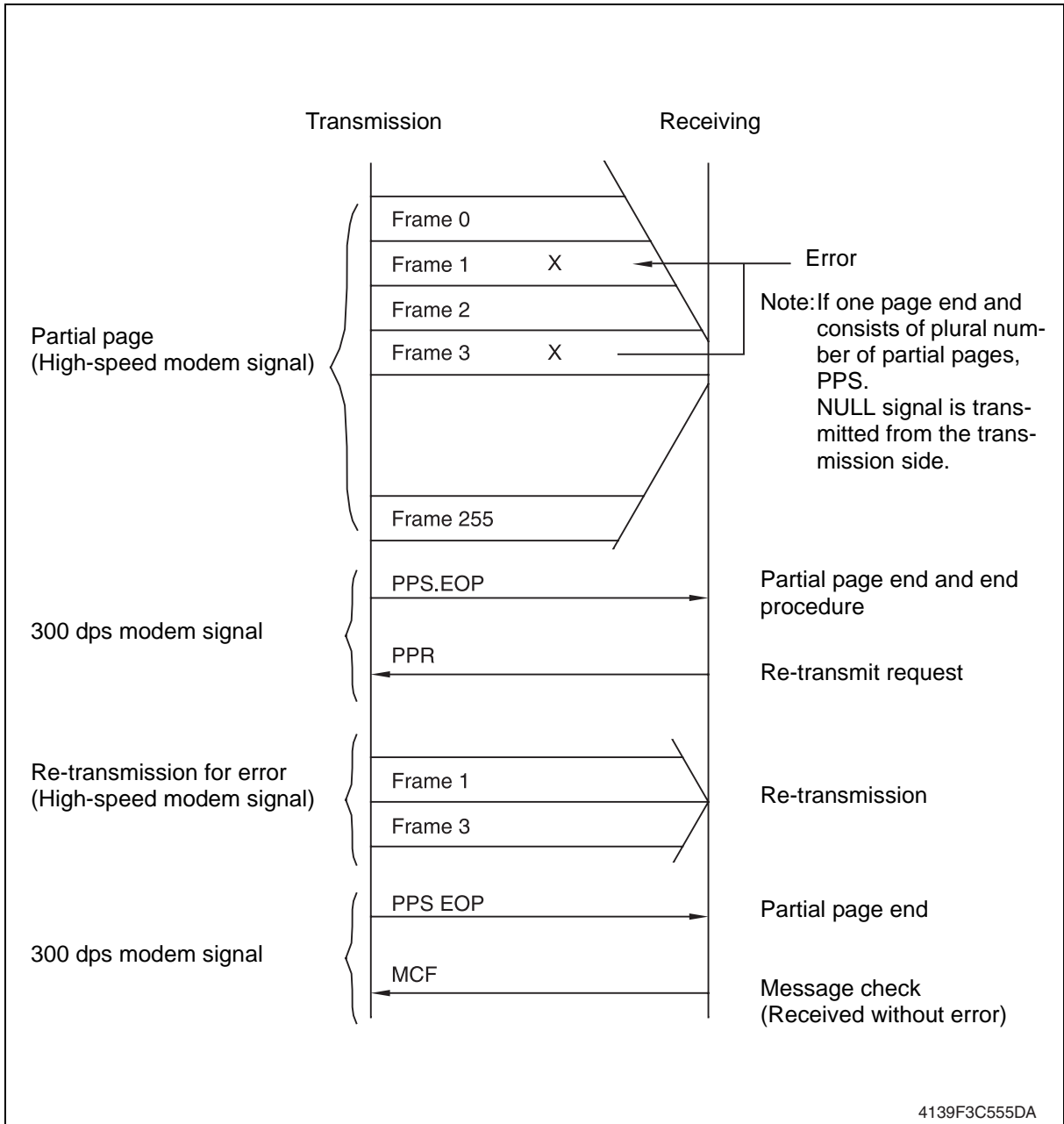
OFF

11. FAX PROTOCOLS

11.1 G3 ECM (G3 Error Correction Mode)

- G3 ECM is the error correction system newly recommended by consultative committee of international telephone & telegraph of 1988.
- By G3 ECM, documents are divided into blocks (called partial page) for transmission. If any error takes place in any frame (one partial page consists of 256 frames at a maximum) on a partial page, the receiving party generates the retransmit request with erroneous frame numbers.

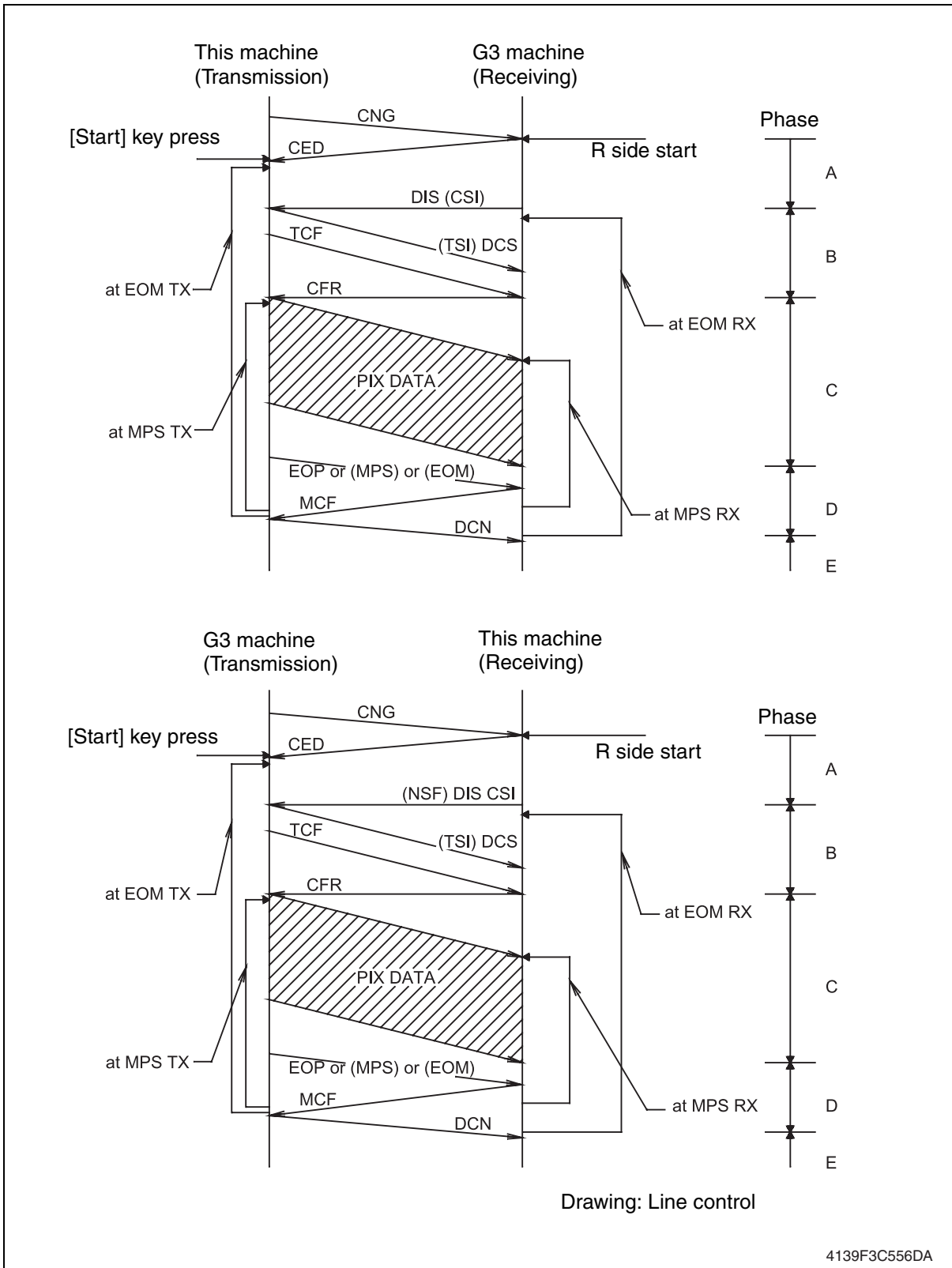
Here is an example where frame 1 and frame 3 are subjected to error:



11.2 Line control

11.2.1 Procedure of G3 mode communication

- Basic communications diagram of G3 mode.



11.3 Table of reference code

Code	Function
CFR	Confirmation to Receive. 1850 Hz or 1650 Hz 3 sec.
CIG	Calling Station Identification.
CRP	Command Repeat.
CSI	Called Subscriber Identification.
DCN	Disconnect.
DCS	Digital Identification Signal.
DIS	Digital Transmit Command.
DTC	Digital Transmit Command.
EOM	End of Message. 1,100 Hz.
EOP	End of Procedure.
FTT	Failure to Train.
MCF	Message Confirmation. 1,650 Hz or 1,850 Hz.
MPS	Multi-Page Signal.
NCS	Non-Standard Facilities Command.
NCF	Non-Standard Facilities.
NSS	Non-Standard Facilities Set-up.
PIN	Procedural Interrupt Negative.
PIP	Procedural Interrupt Positive.
PRI-EOM	Procedure Interrupt-End of Message (COM).
PRI-MPS	Procedure Interrupt-Multi Page Signal (MPS).
PRI-EOP	Procedure Interrupt-End of Procedure (EOP).
RTN	Retrain Negative.
RTP	Retrain Positive.
TSI	Transmitting Station Identification.

DIS (DTC) / DCS bit allocation table of FIF (Facsimile Information Field)

Bit No.	Designation	DIS/DTC	DCS																																																																																																																																																																																		
1	"0"= Invalid "1"= Store-and-forward switching Internet fax simple mode																																																																																																																																																																																				
2	Set to "0"																																																																																																																																																																																				
3	"0"= Invalid "1"= Real-time Internet fax																																																																																																																																																																																				
4	Set to "0"																																																																																																																																																																																				
5	Set to "0"																																																																																																																																																																																				
6	"0"= Invalid "1"= V.8 capabilities		Invalid																																																																																																																																																																																		
7	Flame size	"0" = 256 octets preferred "1"= 64 octets preferred	Invalid																																																																																																																																																																																		
8	Set to "0"																																																																																																																																																																																				
9	"0"= Invalid "1"= Ready to transmit a facsimile document (polling)		Set to "0"																																																																																																																																																																																		
10	"0"= Invalid "1"= Receiver fax operation																																																																																																																																																																																				
11	Data signalling rate	<table border="1"> <thead> <tr> <th colspan="4">Bit No.</th> <th rowspan="2">Data signalling rate</th> </tr> <tr> <th>14</th> <th>13</th> <th>12</th> <th>11</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>V.27 <i>ter</i> fall-back mode</td> </tr> <tr> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>Rec. V.29</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>Rec. V.27 <i>ter</i></td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>1</td> <td>Rec. V.27 <i>ter</i> and V.29</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>Not used</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>1</td> <td>Not used</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>0</td> <td>Reserved</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>1</td> <td>Reserved</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>Not used</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>1</td> <td>Not used</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> <td>0</td> <td>Reserved</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> <td>1</td> <td>Rec. V.27 <i>ter</i>, V.29, V.33 and V.17</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> <td>0</td> <td>Not used</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> <td>1</td> <td>Not used</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>0</td> <td>Reserved</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>Reserved</td> </tr> </tbody> </table>	Bit No.				Data signalling rate	14	13	12	11	0	0	0	0	V.27 <i>ter</i> fall-back mode	0	0	0	1	Rec. V.29	0	0	1	0	Rec. V.27 <i>ter</i>	0	0	1	1	Rec. V.27 <i>ter</i> and V.29	0	1	0	0	Not used	0	1	0	1	Not used	0	1	1	0	Reserved	0	1	1	1	Reserved	1	0	0	0	Not used	1	0	0	1	Not used	1	0	1	0	Reserved	1	0	1	1	Rec. V.27 <i>ter</i> , V.29, V.33 and V.17	1	1	0	0	Not used	1	1	0	1	Not used	1	1	1	0	Reserved	1	1	1	1	Reserved	<table border="1"> <thead> <tr> <th colspan="4">Bit No.</th> <th rowspan="2">Data signalling rate</th> </tr> <tr> <th>14</th> <th>13</th> <th>12</th> <th>11</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>2400 bit/s, rec. V.27 <i>ter</i></td> </tr> <tr> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>9600 bit/s, rec. V.29</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>4800 bit/s, rec. V.27 <i>ter</i></td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>1</td> <td>7200 bit/s, rec. V.29</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>Invalid</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>1</td> <td>Reserved</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>0</td> <td>Invalid</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>1</td> <td>Reserved</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>14,400 bit/s, rec. V.17</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>1</td> <td>9,600 bit/s, rec. V.17</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> <td>0</td> <td>12,000 bit/s, rec. V.17</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> <td>1</td> <td>7,200 bit/s, rec. V.17</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> <td>0</td> <td>Reserved</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> <td>1</td> <td>Reserved</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>0</td> <td>Reserved</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>Reserved</td> </tr> </tbody> </table>	Bit No.				Data signalling rate	14	13	12	11	0	0	0	0	2400 bit/s, rec. V.27 <i>ter</i>	0	0	0	1	9600 bit/s, rec. V.29	0	0	1	0	4800 bit/s, rec. V.27 <i>ter</i>	0	0	1	1	7200 bit/s, rec. V.29	0	1	0	0	Invalid	0	1	0	1	Reserved	0	1	1	0	Invalid	0	1	1	1	Reserved	1	0	0	0	14,400 bit/s, rec. V.17	1	0	0	1	9,600 bit/s, rec. V.17	1	0	1	0	12,000 bit/s, rec. V.17	1	0	1	1	7,200 bit/s, rec. V.17	1	1	0	0	Reserved	1	1	0	1	Reserved	1	1	1	0	Reserved	1	1	1	1	Reserved
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15	"0"= Invalid "1"= R8 × 7.7 lines/mm and/or 200 × 200 pels/25.4 mm																																																																																																																																																																																				
16	"0"= Invalid "1"= Two-dimensional coding capability		"0"= Invalid "1"= Two-dimensional coding																																																																																																																																																																																		

d-Color MF3000

ADJUSTMENT / SETTING

Bit No.	Designation	DIS/DTC			DCS					
17	Recording width capabilities	Bit No.		Data signalling rate	Bit No.		Data signalling rate			
18		18	17		18	17				
		0	0	Scan line length 215 mm ± 1%		0	0	Scan line length 215 mm ± 1%		
		0	1	Scan line length 215 mm ± 1% and scan line length 255 mm ± 1%		0	1	Scan line length 255 mm ± 1%		
		1	0	Scan line length 215 mm ± 1% and scan line length 255 mm ± 1% and scan line length 303 mm ± 1%		1	0	Scan line length 303 mm ± 1%		
1	1	Invalid		1	1	Invalid				
19	Recording length capability	Bit No.		Recording length capability	Bit No.		Recording length capability			
20		20	19		20	19				
		0	0	A4 (297 mm)		0	0	A4 (297 mm)		
		0	1	A4 (297 mm) and B4 (364 mm)		0	1	B4 (364 mm)		
		1	0	Unlimited		1	0	Unlimited		
1	1	Invalid		1	1	Invalid				
21	Minimum scan line time capability at the receive	Bit No.			Minimum scan line time	Bit No.				
22		23	22	21		23	22	21		
23		0	0	0	20 ms at 3.85 1/mm: T 7.7 = T 3.85 20 ms		0	0	0	20 ms
		0	0	1	5 ms at 3.85 1/mm: T 7.7 = T 3.85		0	0	1	5 ms
		0	1	0	10 ms at 3.85 1/mm: T 7.7 = T 3.85 10 ms		0	1	0	10 ms
		0	1	1	20 ms at 3.85 1/mm: T 7.7 = 1/2 T 3.85		0	1	1	40 ms
		1	0	0	40 ms at 3.85 1/mm: T 7.7 = T 3.85 40 ms		1	0	0	40 ms
		1	0	1	40 ms at 3.85 1/mm: T 7.7 = 1/2 T 3.85		1	1	1	0 ms
		1	1	0	10 ms at 3.85 1/mm: T 7.7 = 1/2 T 3.85					
	1	1	1	0 ms at 3.85 1/mm: T 7.7 = T 3.85						
24	Extension field	"0"= Without "1"= With								
25	Reserved									
26	"0"= Invalid "1"= Un-compressed mode									
27	"0"= Invalid "1"= ECM									
28	Set to "0"						Frame size 0: 256 octets Frame size 1: 64 octets			
29	Set to "0"									
30	Set to "0"									

Bit No.	Designation	DIS/DTC	DCS
31	"0"= Invalid "1"= T.6 coding capability		"0"= Invalid "1"= T.6 coding enabled
32	Extend field	"0"= Without "1"= With	
33	"0"= Invalid "1"= Field not valid capability		
34	"0"= Invalid "1"= Multiple selective polling capability		Set to "0"
35	"0"= Invalid "1"= Polling sub address transmission (DTC) by Polled Sub Address (DIS)/PSA		Set to "0"
36	"0"= Invalid "1"= T.43 coding		
37	"0"= Invalid "1"= Plane interleave		
38	Set to "0"		
39	Set to "0"		
40	Extend field	"0"= Without "1"= With	
41	"0"= Invalid "1"= R8 x 15.4 lines/mm		
42	"0"= Invalid "1"= 300 x 300 pels/25.4 mm		
43	"0"= Invalid "1"= R16 x 15.4 lines/mm and/or 400 x 400 pels/25.4 mm		
44	"0"= Invalid "1"= Inch based resolution preferred		Resolution type selection "0"= metric based resolution "1"= inch based resolution
45	"0"= Invalid "1"= Metric based resolution preferred		Do not care
46	Minimum scan line time capability for higher resolutions.	"0": T 15.4 = T 7.7 "1": T 15.4 = 1/2 T 7.7	Do not care
47	"0"= Invalid "1"= Selective polling (DIS)/ Selective polling transmission (DTC)		Set to "0"
48	Extend field	0: Without 1: With	
49	"0"= Invalid "1"= Sub addressing capability		"0"= Invalid "1"= Sub addressing transmission
50	"0"= Invalid "1"= Password/ Sender identification capability (DIS)/ Password transmission (DTC)		"0"= Invalid "1"= Sender identification transmission
51	"0"= Invalid "1"= Ready to transmit a data file (polling)		Set to "0"
52	Set to "0"		
53	"0"= Invalid "1"= Binary File Transfer (BFT)		

Bit No.	Designation	DIS/DTC	DCS
54	"0"= Invalid "1"= Document Transfer Mode (DTM)		
55	"0"= Invalid "1"= EDIFACT Transfer (EDI)		
56	Extend field	0: Without 1: With	
57	"0"= Invalid "1"= Basic Transfer Mode (BTM)		
58	Set to "0"		
59	"0"= Invalid "1"= Ready to transmit a character or mixed mode document (polling)		Set to "0"
60	"0"= Invalid "1"= Character mode		
61	Set to "0"		
62	"0"= Invalid "1"= Mixed mode		
63	Set to "0"		
64	Extend field	"0"= Without "1"= With	
65	"0"= Invalid "1"= Processable mode 26		
66	"0"= Invalid "1"= Digital network capability		
67	Duplex and half duplex capabilities	"0"= Half duplex operation only "1"= Duplex and half duplex operation	"0"= Half duplex operation only "1"= Duplex operation
68	"0"= Invalid "1"= JPEG coding		
69	"0"= Invalid "1"= Full color mode		
70	Set to "0"		"0"= Invalid "1"= Preferred huffmann tables
71	"0"= Invalid "1"= 12 bit/pixel/element		
72	Extend field	"0"= Without "1"= With	
73	"0"= Invalid "1"= No sampling (1:1:1)		
74	"0"= Invalid "1"= Custom illuminant		
75	"0"= Invalid "1"= Custom gamut range		
76	"0"= Invalid "1"= North american letter (215.9 mm x 279.4 mm) capability		"0"= Invalid "1"= North american letter (215.9 mm x 279.4 mm)

Bit No.	Designation	DIS/DTC	DCS
77	"0"= Invalid "1"= North American Legal (215.9 mm x 355.6 mm) capability		"0"= Invalid "1"= North American Legal (215.9 mm x 355.6 mm)
78	"0"= Invalid "1"= Single layer sequential encoding, basic capability		"0"= Invalid "1"= Single layer sequential encoding, basic
79	"0"= Invalid "1"= Single layer sequential encoding, optional L0 capability		"0"= Invalid "1"= Single layer sequential encoding, optional L0
80	Extend field	"0"= Without "1"= With	
81	"0"= Invalid "1"= HKM key management capability		"0"= Invalid "1"= HKM key management selected
82	"0"= Invalid "1"= RSA key management capability		"0"= Invalid "1"= RSA key management selected
83	"0"= Invalid "1"= Override mode capability		"0"= Invalid "1"= Override mode selected
84	"0"= Invalid "1"= HFX40 code capability		"0"= Invalid "1"= HFX40 code selected
85	"0"= Invalid "1"= Alternative code number 2 capability		"0"= Invalid "1"= Alternative code number 2 selected
86	"0"= Invalid "1"= Alternative code number 3 capability		"0"= Invalid "1"= Alternative code number 3 selected
87	"0"= Invalid "1"= HFX40-1 hashing capability		"0"= Invalid "1"= HFX40-1 hashing selected
88	Extend field	"0"= Without "1"= With	
89	"0"= Invalid "1"= Alternative hashing system number 2 capability		"0"= Invalid "1"= Alternative hashing system number 2 selected
90	"0"= Invalid "1"= Alternative hashing system number 3 capability		"0"= Invalid "1"= Alternative hashing system number 3 selected
91	Reserved		
92	"0"= Invalid "1"= T.44 (Mixed raster content) mode		
93	"0"= Invalid "1"= T.44 (Mixed raster content) mode		
94	"0"= Invalid "1"= T.44 (Mixed raster content) mode		
95	"0"= Invalid "1"= Page length maximum strip size for T.44 (Mixed raster content)		
96	Extend field	"0"= Without "1"= With	
97	"0"= Invalid "1"= Color/mono-color multi-value 300 pixels x 300 pixels or 400 pixels x 400 pixels / 25.4 mm		

Bit No.	Designation	DIS/DTC	DCS
98	"0"= Invalid "1"= R4 x 3.85 lines/mm and/or 100 pixels x 100 pixels / 25.4 mm for color/mono-color multi-value		
99	"0"= Invalid "1"= Single phase C BFT negotiation capability		
100	Set to "0"		
101	Set to "0"		
102	Set to "0"		
103	Set to "0"		
104	Extend field	"0"= Without "1"= With	

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12. JAM DISPLAY

- When the paper jam occurred, the message is displayed on the control panel.



12.1 List of JAM display

Misfeed type	Misfeed location	Misfeed processing location	Action
Fusing/paper exit section	• Fusing/paper exit section	• Right door • Fuser unit	P.191
Transfer section	• Transfer section	• Right door	P.192
Conveyance section	• Vertical conveyance section	• Right door • Tray 3 right door	P.196
Duplex section	• Duplex pre-registration section	• Duplex door	P.198
	• Duplex paper conveyance section		P.197
Tray 1	• Tray 1 (manual bypass tray) paper feed section	• Manual bypass tray • Right door	P.193
Tray 2	• Tray 2 paper feed section	• Tray 2 • Right door	P.194
Tray 3 *1	• Tray 3 paper feed section • Vertical conveyance section	• Tray 3 • Tray 3 right door	P.195 P.196
Tray 4 *1	• Tray 4 paper feed section • Vertical conveyance section	• Tray 3 • Tray 4 right door	P.195 P.196
ADF section	• ADF paper feed section • ADF conveyance section • ADF paper exit section	• ADF feed cover	P.199
Controller JAM Service Call: F001	• Controller JAM	-	P.200

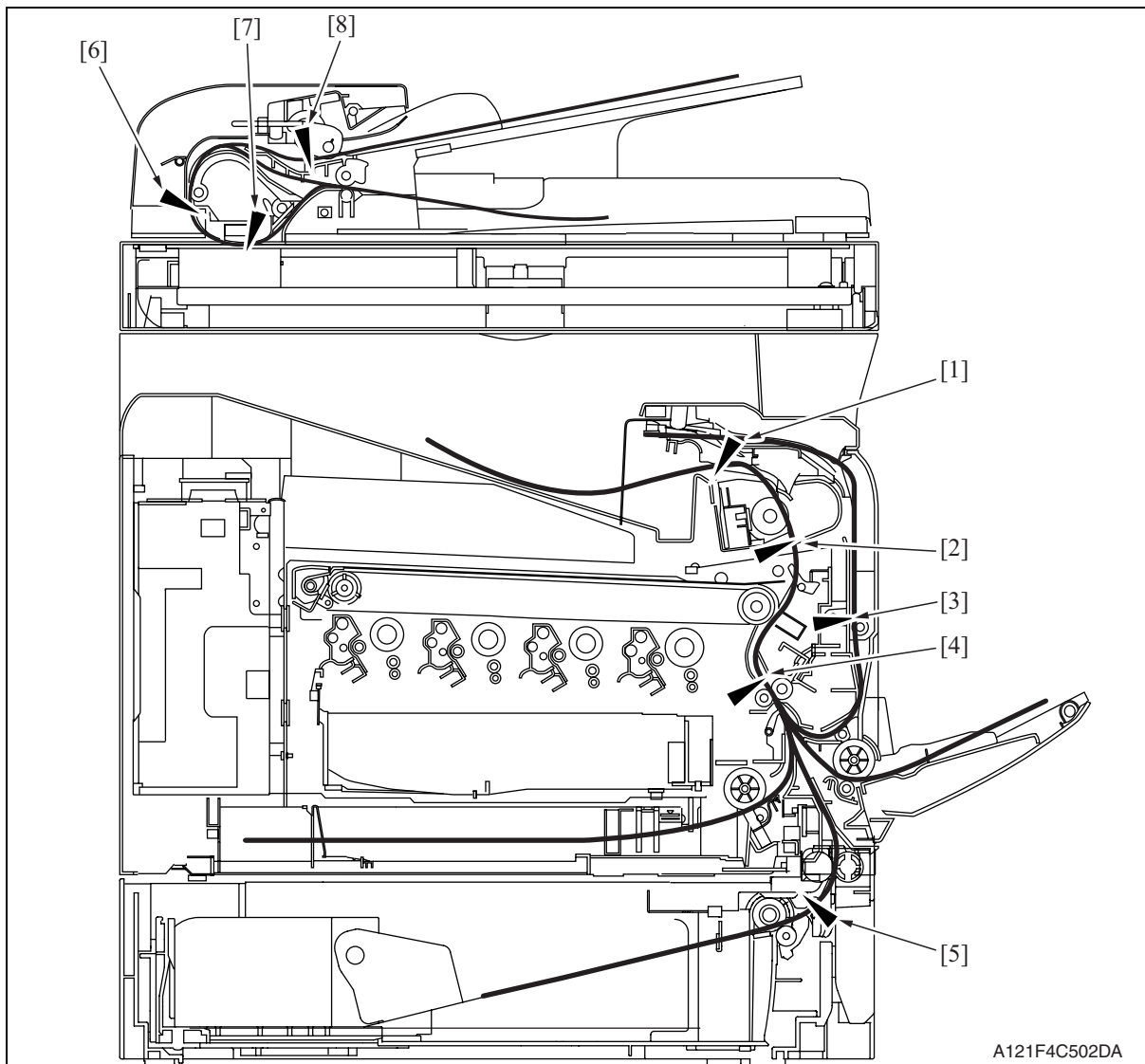
*1: Only when the optional paper feeder unit is installed.

12.1.1 Misfeed display resetting procedure

- Open the corresponding door, clear the sheet of paper misfed, and close the door.
- Turn OFF the power switch and then ON.

12.2 Sensor layout

- When the optional paper feeder unit is installed.



- | | |
|------------------------------------|-----------------------------------|
| [1] Exit sensor (PS8) | [5] Media feed sensor (PS3) *1 |
| [2] Loop detection sensor (PS6) | [6] Registration sensor (REYB100) |
| [3] Duplex conveyance sensor (PS9) | [7] Before read sensor (REYB101) |
| [4] Registration sensor (PS5) | [8] Paper interval sensor (PS103) |

*1: Only when the optional paper feeder unit is installed.

12.3 Solution

12.3.1 Initial check items

- When a paper misfeed occurs, first perform the following initial check items.

Check item	Action
Does paper meet product specifications?	Replace paper.
Is the paper curled, wavy, or damp?	Replace paper.
Is a foreign object present along the paper path, or is the paper path deformed or worn?	Clean the paper path and replace if necessary.
Are rolls/rollers dirty, deformed, or worn?	Clean or replace the defective roll/roller.
Are the edge guide and trailing edge stop at the correct position to accommodate the paper?	Set as necessary.
Are the actuators operating correctly?	Correct or replace the defective actuator.

12.3.2 Misfeed at fusing/paper exit section

A. Detection timing

Type	Description
Detection of misfeed at fusing/paper exit section	<ul style="list-style-type: none"> The exit sensor (PS8) is not blocked even after the lapse of a given period of time after the paper has unblocked the exit sensor (PS8). The exit sensor (PS8) is blocked even before the lapse of a given period of time after the paper has unblocked the exit sensor (PS8).
Detection of paper left in fusing/paper exit section	<ul style="list-style-type: none"> The exit sensor (PS8) is unblocked when the power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

B. Action

Relevant electrical parts	
Exit sensor (PS8) Duplex conveyance roller clutch (CL13)	Printer control board (PRCB) Main motor (M2)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	-	-
2	Check the connector between M2-PRCB PJ6 for proper connection and correct as necessary.	-	-
3	Check the M2 connector for proper drive coupling and correct as necessary.	-	-
4	Check the connector between PS8-PRCB PJ9 for proper connection and correct as necessary.	-	-
5	Check the connector between CL13-relay CN20-PRCB PJ16 for proper connection and correct as necessary.	-	-
6	PS8 sensor check	PRCB PJ9-9 (ON)	I-15
7	CL13 operation check	PRCB PJ16-15 (REM)	C-7
8	M2 operation check	PRCB PJ6-3 to 6	C-15
9	Change PRCB.	-	-

12.3.3 Misfeed at transfer section

A. Detection timing

Type	Description
Detection of misfeed at transfer section	<ul style="list-style-type: none"> The registration sensor (PS5) is not blocked even after the lapse of a given period of time after the registration roller driving is started. The paper does not unblock the exit sensor (PS8) even after the lapse of a given period of time after the registration roller driving is started.
Detection of paper left in transfer section	<ul style="list-style-type: none"> The registration sensor (PS5) is unblocked when the power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset. The loop detection sensor (PS6) is unblocked when the power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

B. Action

Relevant electrical parts	
Registration sensor (PS5) Exit sensor (PS8) Loop detection sensor (PS6)	Printer control board (PRCB) Main motor (M2) Loop detection clutch (CL8)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	-	-
2	Check the connector between M2-PRCB PJ6 for proper connection and correct as necessary.	-	-
3	Check the M2 connector for proper drive coupling and correct as necessary.	-	-
4	Check the connector between PS5-PRCB PJ27 for proper connection and correct as necessary.	-	-
5	Check the connector between PS6-PRCB PJ16 for proper connection and correct as necessary.	-	-
6	Check the connector between PS8-PRCB PJ9 for proper connection and correct as necessary.	-	-
7	Check the connector between CL8-relay CN2-PRCB PJ15 for proper connection and correct as necessary.	-	-
8	PS5 sensor check	PRCB PJ27-7 (ON)	E-15
9	PS8 sensor check	PRCB PJ9-9 (ON)	I-15
10	PS6 sensor check	PRCB PJ16-3 (ON)	A-7
11	CL8 operation check	PRCB PJ15-6 (REM)	E-7
12	M2 operation check	PRCB PJ6-3 to 6	C-15
13	Change PRCB.	-	-

12.3.4 Misfeed at tray1 paper feed section

A. Detection timing

Type	Description
Detection of tray 1 paper feed section	<ul style="list-style-type: none"> The paper does not unblock the registration sensor (PS5) even after the lapse of a given period of time after the tray1 media feed clutch (CL2) is turned ON.

B. Action

Relevant electrical parts	
Registration sensor (PS5) Tray1 media feed clutch (CL2)	Printer control board (PRCB) Main motor (M2)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	-	-
2	Check the connector between M2-PRCB PJ6 for proper connection and correct as necessary.	-	-
3	Check the M2 connector for proper drive coupling and correct as necessary.	-	-
4	Check the connector between PS5-PRCB PJ27 for proper connection and correct as necessary.	-	-
5	Check the connector between CL2-PRCB PJ11 for proper connection and correct as necessary.	-	-
6	PS5 sensor check	PRCB PJ27-7 (ON)	E-15
7	CL2 operation check	PRCB PJ11-7 (REM)	K-15
8	M2 operation check	PRCB PJ6-3 to 6	C-15
9	Change PRCB.	-	-

12.3.5 Misfeed at tray 2 paper feed section

A. Detection timing

Type	Description
Detection of misfeed at tray 2 paper feed section	<ul style="list-style-type: none"> The paper does not unblock the registration sensor (PS5) even after the lapse of a given period of time after the tray2 media feed clutch (CL1) is turned ON.

B. Action

Relevant electrical parts	
Registration sensor (PS5) Tray2 media feed clutch (CL1)	Printer control board (PRCB) Main motor (M2)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	-	-
2	Check the connector between M2-PRCB PJ6 for proper connection and correct as necessary.	-	-
3	Check the M2 connector for proper drive coupling and correct as necessary.	-	-
4	Check the connector between PS5-PRCB PJ27 for proper connection and correct as necessary.	-	-
5	Check the connector between CL1-PRCB PJ11 for proper connection and correct as necessary.	-	-
6	PS5 sensor check	PRCB PJ27-7 (ON)	E-15
7	CL1 operation check	PRCB PJ11-2 (REM)	J-15
8	M2 operation check	PRCB PJ6-3 to 6	C-15
9	Change PRCB.	-	-

12.3.6 Misfeed at tray 3/tray 4 paper feed section

A. Detection timing

Type	Description
Detection of misfeed at tray 3/ tray 4 paper feed section	<ul style="list-style-type: none"> The paper does not unblock the media feed sensor (PS3) even after the lapse of a given period of time after the media feed clutch (CL1) is turned ON.
Detection of paper left in tray 3/tray 4 paper feed section	<ul style="list-style-type: none"> The media feed sensor (PS3) is unblocked when the power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

B. Action

Relevant electrical parts	
Media feed sensor (PS3) Media feed clutch (CL1)	Printer control board (PRCB) PC control board (PCCB) Media feed motor (M1)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	-	-
2	Check the connector between M1-PCCB PJ3 for proper connection and correct as necessary.	-	-
3	Check the M1 connector for proper drive coupling and correct as necessary.	-	-
4	Check the connector between PS3-PCCB PJ5 for proper connection and correct as necessary.	-	-
5	Check the connector between CL1-relay CN57-PCCB PJ15 for proper connection and correct as necessary.	-	-
6	PS3 sensor check	PCCB PJ5-3 (ON)	I-2
7	CL1 operation check	PCCB PJ5-8 (REM)	I-2
8	M1 operation check	PCCB PJ3-4 to 8	K-2
9	Check the connector between PCCB PJ1, PJ2-relay CN53, CN70-PRCB PJ7 for proper connection and correct as necessary.	-	-
10	Change PCCB.	-	-
11	Change PRCB.	-	-

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12.3.7 Misfeed at tray 3/tray 4 vertical conveyance section

A. Detection timing

Type	Description
Detection of misfeed at tray 3/ tray 4 vertical conveyance section	<ul style="list-style-type: none"> The paper does not unblock the registration sensor (PS5) or the upper tray's media feed sensor (PS3) even after the lapse of a given period of time after the paper has unblocked the media feed sensor (PS3). The paper does not block the media feed sensor (PS3) even after the lapse of a given period of time after the paper has unblocked the media feed sensor (PS3).

B. Action

Relevant electrical parts	
Media feed sensor (PS3) Media feed clutch (CL1) Registration sensor (PS5)	Printer control board (PRCB) PC control board (PCCB) Media feed motor (M1)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	-	-
2	Check the connector between M1-PCCB PJ3 for proper connection and correct as necessary.	-	-
3	Check the M1 connector for proper drive coupling and correct as necessary.	-	-
4	Check the connector between PS5-PRCB PJ27 for proper connection and correct as necessary.	-	-
5	Check the connector between PS3-PCCB PJ5 for proper connection and correct as necessary.	-	-
6	Check the connector between CL1-relay CN57-PCCB PJ15 for proper connection and correct as necessary.	-	-
7	Check the connector between PCCB PJ1, PJ2-relay CN53, CN70-PRCB PJ7 for proper connection and correct as necessary.	-	-
8	PS3 sensor check	PCCB PJ5-3 (ON)	I-2
9	PS5 sensor check	PRCB PJ27-7 (ON)	E-15
10	CL1 operation check	PCCB PJ5-8 (REM)	I-2
11	M1 operation check	PCCB PJ3-4 to 8	K-2
12	Change PCCB.	-	-
13	Change PRCB.	-	-

12.3.8 Misfeed at duplex paper transport section

A. Detection timing

Type	Description
Detection of mis-feed at duplex paper transport section	<ul style="list-style-type: none"> The duplex conveyance sensor (PS9) is not blocked even after the lapse of a given period of time after the paper has unblocked PS9. The duplex conveyance sensor (PS9) is not unblocked even after the lapse of a given period of time after the paper has blocked the exit sensor (PS8).
Detection of paper left at duplex paper transport section	<ul style="list-style-type: none"> The duplex conveyance sensor (PS9) is unblocked when the power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

B. Action

Relevant Electrical Parts	
Exit sensor (PS8) Duplex conveyance sensor (PS9) Duplex conveyance roller clutch (CL13)	Printer control board (PRCB) Main motor (M2)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Initial check items	-	-
2	Check the connector between M2-PRCB PJ6 for proper connection and correct as necessary.	-	-
3	Check the M2 connector for proper drive coupling and correct as necessary.	-	-
4	Check the connector between PS8-PRCB PJ9 for proper connection and correct as necessary.	-	-
5	Check the connector between PS9-PRCB PJ16 for proper connection and correct as necessary.	-	-
6	Check the connector between CL13-relay CN20-PRCB PJ16 for proper connection and correct as necessary.	-	-
7	PS8 sensor check	PRCB PJ9-9 (ON)	I-15
8	PS9 sensor check	PRCB PJ16-13 (ON)	C-7
9	CL13 operation check	PRCB PJ16-15 (REM)	C-7
10	M2 operation check	PRCB PJ6-3 to 6	C-15
11	Change PRCB.	-	-

12.3.9 Misfeed at duplex paper feed section

A. Detection timing

Type	Description
Detection of misfeed at duplex paper feed section	<ul style="list-style-type: none"> The paper does not unblock the registration sensor (PS5) even after the lapse of a given period of time after the paper feed sequence has been started at the duplex.

B. Action

Relevant Electrical Parts	
Registration sensor (PS5) Duplex conveyance roller clutch (CL13)	Printer control board (PRCB) Main motor (M2)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Initial check items	-	-
2	Check the connector between M2-PRCB PJ6 for proper connection and correct as necessary.	-	-
3	Check the M2 connector for proper drive coupling and correct as necessary.	-	-
4	Check the connector between PS5-PRCB PJ27 for proper connection and correct as necessary.	-	-
5	Check the connector between CL13-relay CN20-PRCB PJ16 for proper connection and correct as necessary.	-	-
6	PS5 sensor check	PRCB PJ27-7 (ON)	E-15
7	CL13 operation check	PRCB PJ16-15 (REM)	C-7
8	M2 operation check	PRCB PJ6-3 to 6	C-15
9	Change PRCB.	-	-

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12.3.10 Misfeed at ADF section

A. Detection timing

Type	Description
Detection of misfeed at ADF section	<ul style="list-style-type: none"> • The original does not block the paper interval sensor (PS103) even after the lapse of a given period of time after the original feed is started. • The original does not block the registration sensor (REYB100) even after the lapse of a given period of time after the original blocks the paper interval sensor (PS103). • The duration between the original's blocking and unblocking of the paper interval sensor (PS103) is shorter than a given period of time. • When the preceding page of the original blocks and then unblocks the registration sensor (REYB100), the subsequent page of the original does not block the paper interval sensor (PS103). • The original does not block the registration sensor (REYB100) even after the lapse of a given period of time after the original is fed again. • The original does not block the before read sensor (REYB101) even after the lapse of a given period of time after the original blocked the registration sensor (REYB100). • The original blocks the before read sensor (REYB101) longer than a given period of time.
Detection of paper left in ADF section	<ul style="list-style-type: none"> • When the power switch is turned ON, the registration sensor (REYB100), before read sensor (REYB101), or paper interval sensor (PS103) is blocked.

B. Action

Relevant electrical parts	
Registration sensor (REYB100) Before read sensor (REYB101) Paper interval sensor (PS103)	DF control board (DFCB) MFP board (MFPB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	-	-
2	Check the connectors on the DFCB for proper connection and correct as necessary.	-	-
3	Change MFPB.	-	-
4	Change ADF.	-	-

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12.3.11 Controller JAM

A. Detection timing

Type	Description
Detection of controller JAM	<ul style="list-style-type: none"> • A duplex print job is sent with the number of pages that goes beyond the maximum number of pages allowed to be in the printer for the selected media type. • When trying to feed duplex media though there is no media to be fed to the duplex print unit. • When printing is directed with the duplex print unit selected as a media source and an exit media set to be fed to the duplex unit. • While two sheets of media are in the printer, printing is directed with normal media feed settings other than a duplex media feed setting. • In duplex printing, a size error occurs.

B. Action

Relevant electrical parts	
Print control board (PRCB)	MFP board (MFPB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check printer driver settings.	-	-
2	Change PRCB.	-	-
3	Change MFPB.	-	-

13. PROCESS CAUTION INFORMATION

13.1 Display procedure

- The machine's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the process caution information in the report that is output by [Service Mode]→[Print Menu]→[Mgmt. List].
See P.153
- When receiving the process caution information, user can continue printing. However, as the information indicates that some error has occurred in the image stabilization process, the error must be addressed rapidly.

13.2 List

- If an image stabilization fault occurs, the process caution information is provided.

Item	
Temperature/ humidity sensor failure	<ul style="list-style-type: none"> • No response is provided from the temperature/ humidity sensor.
IDC Sensor failure	<ul style="list-style-type: none"> • IDC sensor output values are out of the specified range.
Color Shift Test Pattern failure	<ul style="list-style-type: none"> • The number of points detected in the main scan direction is more or less than the specified value during main scan direction registration correction. • The number of points detected in the sub scan direction is more or less than the specified value during sub scan direction registration correction.
Color Shift Adjust failure	<ul style="list-style-type: none"> • The color shift amount is greater than the specified range during main scan direction registration correction. • The color shift amount is greater than the specified range during sub scan direction registration correction. • The skew correction amount is greater than the specified value.

13.3 Solution

13.3.1 Temperature/ humidity sensor failure

Relevant parts	
Temperature/ humidity sensor (TEM/HUMS)	Printer control board (PRCB)

Step	Action
1	Check the connector between TEM/HUMS-PRCB PJ27 for proper connection and correct as necessary.
2	Change TEM/HUMS.
3	Change PRCB.

13.3.2 IDC sensor failure

Relevant parts	
IDC sensor (IDC) Transfer belt unit	Printer control board (PRCB) High voltage unit (HV)

Step	Action
1	Wipe clean the surface of the transfer belt with a soft cloth, if it is dirty.
2	Change the image transfer belt unit if the transfer belt is damaged.
3	Reinstall or reconnect IDC, sensor shutter or connector, if it is installed or connected improperly.
4	Clean IDC if it is dirty.
5	Check the HV connector for proper connection and correct as necessary.
6	Change IDC.
7	Change PRCB.

13.3.3 Color regist test pattern failure

Relevant parts	
Transfer belt unit PH unit	Printer control board (PRCB) MFP board (MFPB)

Step	Action
1	Wipe clean the surface of the transfer belt with a soft cloth, if it is dirty.
2	Change the image transfer belt unit if the transfer belt is damaged.
3	Change PH unit.
4	Change PRCB.
5	Change MFPB.

13.3.4 Color regist adjust failure

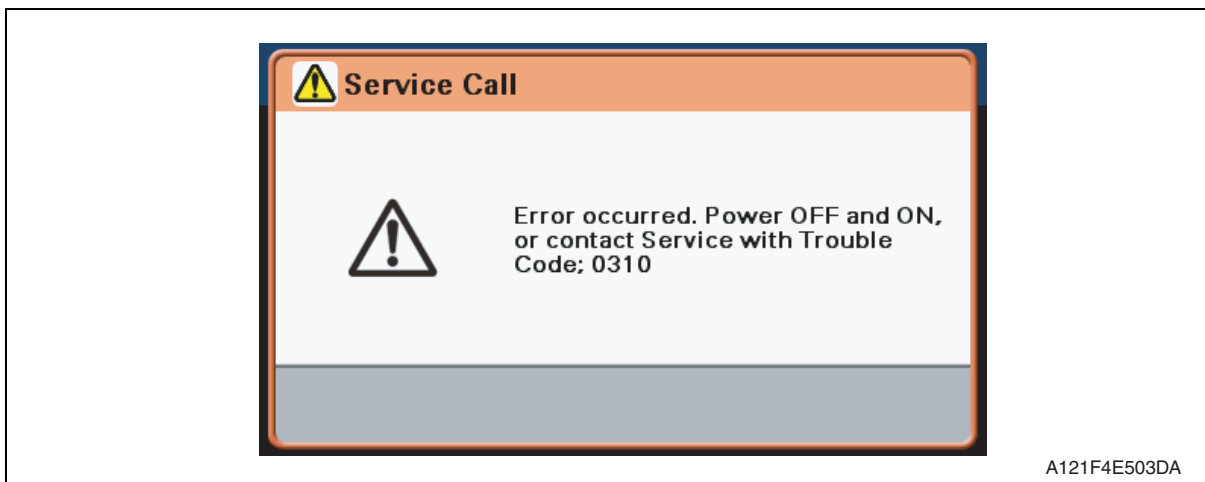
Relevant parts	
IDC sensor (IDC)	Printer control board (PRCB)

Step	Action
1	Slide out the imaging unit and reinstall it in position.
2	Reinstall or reconnect IDC if it is installed or connected improperly.
3	Change IDC.
4	Change PRCB.

14. MALFUNCTION CODE

14.1 Trouble code (Service Call)

- The machine's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code on the control panel.



14.2 List

Code	Description	Detection timing
0010	Color PC drum motor malfunction	<ul style="list-style-type: none"> The color PC drum motor does not rotate evenly even after the lapse of a given period of time while it is being started. The motor lock signal remains HIGH for a given period of consecutive time while the color PC drum motor is being rotated.
0017	Main motor malfunction	<ul style="list-style-type: none"> The main motor does not rotate evenly even after the lapse of a given period of time while it is being started. The motor lock signal remains HIGH for a given period of consecutive time while the main motor is being rotated.
0018	Developing motor malfunction	<ul style="list-style-type: none"> The developing motor does not rotate evenly even after the lapse of a given period of time while it is being started. The motor lock signal remains HIGH for a given period of consecutive time while the developing motor is being rotated.
0045	MFP board cooling fan motor malfunction	<ul style="list-style-type: none"> The MFP board cooling fan motor does not rotate evenly even after the lapse of a given period of time while it is being started. The motor lock signal remains HIGH for a given period of consecutive time while the MFP board cooling fan motor is being rotated.
004A	Cooling fan motor malfunction	<ul style="list-style-type: none"> The cooling fan motor does not rotate evenly even after the lapse of a given period of time while it is being started. The motor lock signal remains HIGH for a given period of consecutive time while the cooling fan motor is being rotated.
004E	DC power supply fan motor malfunction	<ul style="list-style-type: none"> The DC power supply fan motor does not rotate evenly even after the lapse of a given period of time while it is being started. The motor lock signal remains HIGH for a given period of consecutive time while the DC power supply fan motor is being rotated.

Code	Description	Detection timing
0062	Tray 3 media feed motor malfunction	<ul style="list-style-type: none"> The motor lock signal remains HIGH for a given period of consecutive time while the media feed motor is being rotated.
0063	Tray 4 media feed motor malfunction	<ul style="list-style-type: none"> The motor lock signal remains HIGH for a given period of consecutive time while the media feed motor is being rotated.
0094	2nd image transfer pressure / retraction failure	<ul style="list-style-type: none"> The IDC sensor does not come into the condition where the level detection is available (retracted position = IDC sensor shutter is open) within a given period of time after the 2nd transfer release solenoid has turned ON. The IDC sensor does not come into the condition where the level detection is not available (pressed position = IDC sensor shutter is closed) within a given period of time after the 2nd transfer release solenoid has turned ON.
0096	1st image transfer pressure / retraction failure	<ul style="list-style-type: none"> The 1st transfer release sensor is not activated (retracted position) within a given period of time after the 1st transfer release solenoid has turned ON. The 1st transfer release sensor is not deactivated (pressed position) within a given period of time after the 1st transfer release solenoid has turned ON.
0300	Polygon motor malfunction	<ul style="list-style-type: none"> The polygon motor does not rotate evenly even after the lapse of a given period of time after it has been started. The motor lock signal remains HIGH for a given period of consecutive time while the polygon motor is being rotated.
0310	Laser malfunction	<ul style="list-style-type: none"> The SOS signal is not detected within a given period of time after the output of the laser has been started.
0500	Heating roller warm-up failure	<ul style="list-style-type: none"> The thermistor /1 does not detect the specified temperature and the warm-up cycle is not completed even after the lapse of a given period of time after the cycle has been started.
0502	Thermistor open-circuit failure	<ul style="list-style-type: none"> The temperature detected by the thermistor/1 does not reach a predetermined level even after the lapse of a given period time after the warm-up cycle has been started.
0503	Thermistor resistance failure	<ul style="list-style-type: none"> The difference between the temperature detected by thermistor/1 and that detected by thermistor/2 exceeds a predetermined value.
0510	Abnormally low heating roller temperature	<ul style="list-style-type: none"> The temperature detected by the thermistor /1 remains lower than the specified value for a given period of time or longer.
0520	Abnormally high heating roller temperature	<ul style="list-style-type: none"> The temperature detected by the thermistor /1 remains higher than the specified value for a given period of time or longer. The heater lamp remains ON for a given period of time or longer.

Code	Description	Detection timing
0F52	Toner level sensor/Y malfunction	<ul style="list-style-type: none"> An error occurs on the toner level sensor for each color.
0F53	Toner level sensor/M malfunction	
0F54	Toner level sensor/C malfunction	
0F55	Toner level sensor/K malfunction	
13DD	Backup data error	<ul style="list-style-type: none"> The engine counter data and the controller counter data are inconsistent.
13E2	Engine flash ROM write error	<ul style="list-style-type: none"> Flash ROM writing is found faulty during a check.
13E3	Engine flash ROM device fault	<ul style="list-style-type: none"> An erase error occurs during erasing of data in flash ROM.
13F0	Engine control failure	<ul style="list-style-type: none"> An undefined malfunction occurs in the engine section (PRCB, etc.). <p>While the machine is operating, if it detects defective conditions, e.g. the next print is not started after the lapse of a given period of time, it stops operating and the trouble code is displayed.</p>
3C00	Trouble related to security	<ul style="list-style-type: none"> Contact the responsible people of Olivetti when not returning in power switch OFF/ON.
3C10		
6751	Gain adjustment error	<ul style="list-style-type: none"> Reading the white pixel output of each color from the data provided by the shading plate, the machine makes the gain adjustment for each color so that the maximum value of each color becomes within the specified range. However, after the machine attempts the adjustment three times in total (including two retries), the value is out of the specified range.
6790	Offset adjustment error	<ul style="list-style-type: none"> Reading the black pixel output of each color from the data provided by the shading plate, the machine makes the offset adjustment for each color so that the average value of each color becomes within the specified range. However, after the machine attempts the offset adjustment three times in total (including two retries), the value is out of the specified range.
6791	Register setting error	<ul style="list-style-type: none"> After the default values of AFE gain and offset are set, the machine reads the gain and offset values again. Inconsistency between the values that are set and read is found.
6792	White reference plate search error	<ul style="list-style-type: none"> During an initialization, the black edge and the white edge read by the shading plate cannot be detected.
6793	Scanner communication error	<ul style="list-style-type: none"> An undefined communication error occurs between the controller and the scanner.
9401	Lamp illumination check error	<ul style="list-style-type: none"> In the lamp stabilization check process during the lamp warm-up, light quantity does not become steady within a given period of time.
B116	Communication error with the fax board	<ul style="list-style-type: none"> An undefined communication error occurs between the controller and the fax board.
C023	FlashROM error	<ul style="list-style-type: none"> A SSD board failure occurs.

Code	Description	Detection timing
C026	Controller ROM error (Access error)	<ul style="list-style-type: none"> Flash ROM access error is detected during the printer starting.
C027	Controller ROM error (Data error)	<ul style="list-style-type: none"> Final check sum error is detected during the printer starting.
C050	HDD access error	<ul style="list-style-type: none"> When correct access to the hard disk kit is failed during access.
C051	HDD full error	<ul style="list-style-type: none"> Range for user space is full during access to the hard disk kit.
C060	Firmware update error	<ul style="list-style-type: none"> Firmware update fails to complete correctly during update.
C072	Counter not installed	<ul style="list-style-type: none"> The total counter (TCT) is not installed.
C080	Memory error	<ul style="list-style-type: none"> The failure of the RAM on the MFP board occurs.
C900	Successful completion of counter backup	<ul style="list-style-type: none"> The counter backup process is completed successfully.
C907	Abnormal end of counter backup	<ul style="list-style-type: none"> The counter backup process results in an abnormal end due to a write error or other reasons.
FF10	<ul style="list-style-type: none"> Undetectable 	
FF20	<ul style="list-style-type: none"> Undetectable 	
FF40	<ul style="list-style-type: none"> Undetectable 	
FF80	<ul style="list-style-type: none"> Undetectable 	
FFFF	Interface communication error	<ul style="list-style-type: none"> Correct communication is failed when receiving/sending the command between PRCB and MFPB/2.

14.3 Trouble resetting procedure

- To reset a malfunction, turn the power switch OFF and then ON again.

14.4 Solution

14.4.1 0010: Color PC drum motor malfunction

Relevant electrical parts			
Color PC drum motor (M4)		Printer control board (PRCB)	
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the connector between M4-PRCB PJ5 for proper connection and correct as necessary.	-	-
2	Check the M4 connector for proper drive coupling and correct as necessary.	-	-
3	M4 operation check	PRCB PJ5-3 to 6	B-15
4	Change M4.	-	-
5	Change PRCB.	-	-

14.4.2 0017: Main motor malfunction

Relevant electrical parts			
Main motor (M2)		Printer control board (PRCB)	
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the connector between M2-PRCB PJ6 for proper connection and correct as necessary.	-	-
2	Check the M2 connector for proper drive coupling and correct as necessary.	-	-
3	M2 operation check	PRCB PJ6-3 to 6	C-15
4	Change M2.	-	-
5	Change PRCB.	-	-

14.4.3 0018: Developing motor malfunction

Relevant electrical parts			
Developing motor (M1)		Print control board (PRCB)	
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the connector between M1-PRCB PJ5 for proper connection and correct as necessary.	-	-
2	Check the M1 connector for proper drive coupling and correct as necessary.	-	-
3	M1 operation check	PRCB PJ5-10 to 13	B-15
4	Change M1.	-	-
5	Change PRCB.	-	-

14.4.4 0045: MFP board cooling fan motor malfunction

Relevant electrical parts			
MFP board cooling fan motor (FM12)		Printer control board (PRCB)	
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the connector between FM12-relay CN64-PRCB PJ14 for proper connection and correct as necessary.	-	-
2	Check the fan for possible overload and correct as necessary.	-	-
3	FM12 operation check	PRCB PJ14-7 (REM) PRCB PJ14-9 (LOCK)	H-15
4	Change FM12.	-	-
5	Change PRCB.	-	-

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TROUBLESHOOTING

14.4.5 004A: Cooling fan motor malfunction

Relevant electrical parts			
Cooling fan motor (FM11)		Printer control board (PRCB)	
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the connector between FM11-relay CN29-PRCB PJ14 for proper connection and correct as necessary.	-	-
2	Check the fan for possible overload and correct as necessary.	-	-
3	FM11 operation check	PRCB PJ14-4 (REM) PRCB PJ14-6 (LOCK)	G-15
4	Change FM11.	-	-
5	Change PRCB.	-	-

14.4.6 004E: DC power supply fan motor malfunction

Relevant electrical parts			
DC power supply fan motor (FM10)		Printer control board (PRCB)	
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the connector between FM10-relay CN43-PRCB PJ14 for proper connection and correct as necessary.	-	-
2	Check the fan for possible overload and correct as necessary.	-	-
3	FM10 operation check	PRCB PJ14-1 (REM) PRCB PJ14-3 (LOCK)	G-15
4	Change FM10.	-	-
5	Change PRCB.	-	-

14.4.7 0062: Tray 3 media feed motor malfunction**14.4.8 0063: Tray 4 media feed motor malfunction**

Relevant electrical parts	
Media feed motor (M1)	Printer control board (PRCB) PC control board (PCCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the connector between M1-PCCB PJ3 for proper connection and correct as necessary.	-	-
2	Check the connector between PCCB PJ1, PJ2-relay CN53, CN70-PRCB PJ7 for proper connection and correct as necessary.	-	-
3	Check the M1 connector for proper drive coupling and correct as necessary.	-	-
4	M1 operation check	PCCB PJ3-4 to 8	K-2
5	Change M1.	-	-
6	Change PCCB.	-	-
7	Change PRCB.	-	-

14.4.9 0094: 2nd image transfer pressure/retraction failure

Relevant electrical parts	
IDC sensor (IDC) 2nd transfer release solenoid (SD2) Main motor (M2)	Printer control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the connector between M2-PRCB PJ6 for proper connection and correct as necessary.	-	-
2	Check the M2 connector for proper drive coupling and correct as necessary.	-	-
3	Check the connector between IDC-PRCB PJ24 for proper connection and correct as necessary.	-	-
4	Check the connector between SD2-relay CN23-PRCB PJ16 for proper connection and correct as necessary.	-	-
5	IDC sensor check	PRCB PJ24-1 (IDC_V01) PRCB PJ24-4 (IDC_VREF)	F-15
6	SD2 operation check	PRCB PJ16-7 (REM)	B-7
7	M2 operation check	PRCB PJ6-3 to 6	C-15
8	Change SD2.	-	-
9	Change M2.	-	-
10	Change IDC.	-	-
11	Change PRCB.	-	-

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TROUBLESHOOTING

14.4.10 0096: 1st image transfer pressure/retraction failure

Relevant electrical parts	
1st transfer release sensor (PS17) 1st transfer release solenoid (SD1) Main motor (M2)	Printer control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the connector between M2-PRCB PJ6 for proper connection and correct as necessary.	-	-
2	Check the M2 connector for proper drive coupling and correct as necessary.	-	-
3	Check the connector between PS17-PRCB PJ26 for proper connection and correct as necessary.	-	-
4	Check the connector between SD1-relay CN25-PRCB PJ14 for proper connection and correct as necessary.	-	-
5	PS17 sensor check	PRCB PJ26-7 (ON)	G-7
6	SD1 operation check	PRCB PJ14-11 (REM)	H-15
7	M2 operation check	PRCB PJ6-3 to 6	C-15
8	Change PS17.	-	-
9	Change SD1.	-	-
10	Change M2.	-	-
11	Change PRCB.	-	-

14.4.11 0300: Polygon motor malfunction

Relevant electrical parts	
PH unit	Printer control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the connector between PH unit-PRCB PJ19 for proper connection and correct as necessary.	-	-
2	Change PH unit.	-	-
3	Change PRCB.	-	-

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TROUBLESHOOTING

14.4.12 0310: Laser malfunction

Relevant electrical parts	
PH unit	Printer control board (PRCB) MFP board (MFPB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the connector between PH unit-PRCB PJ19 for proper connection and correct as necessary.	-	-
2	Check the connector between PH unit-MFPB PJ4 for proper connection and correct as necessary.	-	-
3	Change PH unit.	-	-
4	Change PRCB.	-	-

14.4.13 0500: Heating roller warm-up failure

14.4.14 0502: Thermistor open-circuit failure

14.4.15 0503: Thermistor resistance failure

14.4.16 0510: Abnormally low heating roller temperature

14.4.17 0520: Abnormally high heating roller temperature

Relevant electrical parts	
Fuser unit	Printer control board (PRCB) DC power supply (DCPU)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the fuser unit for correct installation (whether it is secured in position).	-	-
2	Check the connector between fuser unit-PRCB PJ26 for proper connection and correct as necessary.	-	-
3	Check the connector between fuser unit-DCPU CN2 for proper connection and correct as necessary.	-	-
4	Change fuser unit.	-	-
5	Change PRCB.	-	-
6	Change DCPU.	-	-

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TROUBLESHOOTING

14.4.18 0F52: Toner level sensor/Y malfunction**14.4.19 0F53: Toner level sensor/M malfunction****14.4.20 0F54: Toner level sensor/C malfunction****14.4.21 0F55: Toner level sensor/K malfunction**

Relevant electrical parts	
Toner level sensor/Y (PS13) Toner level sensor/M (PS14) Toner level sensor/C (PS15) Toner level sensor/K (PS16)	Printer control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the connector between each sensor-PRCB PJ25 for proper connection and correct as necessary.	-	-
2	Replace the toner level sensor of the corresponding color.	-	-
3	Change PRCB.	-	-

14.4.22 13DD: Backup data error

Relevant electrical parts	
Print control board (PRCB)	MFP board (MFPB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Select [Service Mode] → [BK Clear], and execute the BK Clear function.	-	-
2	Check the connector between MFPB CN16-PRCB PJ21 for proper connection and correct as necessary.	-	-
3	Change PRCB.	-	-
4	Change MFPB.	-	-

14.4.23 13E2: Engine flash ROM write error

14.4.24 13E3: Engine flash ROM device fault

Relevant electrical parts			
Print control board (PRCB)			
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Rewrite the engine firmware.	-	-
2	Change PRCB.	-	-

14.4.25 13F0: Engine control failure

Relevant electrical parts			
Print control board (PRCB)			
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	-	-

14.4.26 6751: Gain adjustment error

14.4.27 6790: Offset adjustment error

14.4.28 6792: White reference plate search error

14.4.29 6793: Scanner communication error

14.4.30 9401: Lamp illumination check error

Relevant electrical parts			
Scanner unit		MFP board (MFPB)	
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	-	-
2	Clean the original glass.	-	-
3	Check the connector CN102, CN103 on MFPB for proper connection and correct as necessary.	-	-
4	Change scanner unit.	-	-
5	Change MFPB.	-	-

14.4.31 6791: Register setting error

Relevant electrical parts	
MFP board (MFPB)	

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	-	-
2	Check the connector CN102, CN103 on MFPB for proper connection and correct as necessary.	-	-
3	Change MFPB.	-	-

14.4.32 B116: Communication error with the fax board

Relevant electrical parts			
Fax board (FAXB)		MFP board (MFPB)	
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the connector CN106 on MFPB for proper connection and correct as necessary.	-	-
2	Change FAXB.	-	-
3	Change MFPB.	-	-

14.4.33 C023: Flash ROM error

Relevant electrical parts			
SSD board (SSDB)		MFP board (MFPB)	
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	-	-
2	Check the SSDB for proper connection and correct as necessary.	-	-
3	Change MFPB.	-	-

14.4.34 C025: Controller ROM error (Configuration information error)

14.4.35 C026: Controller ROM error (Access error)

14.4.36 C027: Controller ROM error (Data error)

Relevant electrical parts			
MFP board (MFPB)			
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	-	-
2	Check the MFPB connector for proper connection and correct as necessary.	-	-
3	If this error message is displayed after update of firmware, conduct the firmware update procedures again.	-	-
4	Change MFPB.	-	-

14.4.37 C050: HDD access error

Relevant electrical parts			
MFP board (MFPB)		Hard disk kit (HDD)	
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	-	-
2	Check the connector between HDD-MFPB CN7 for proper connection and correct as necessary.	-	-
3	Change HDD.	-	-
4	Change MFPB.	-	-

14.4.38 C051: HDD full error

Relevant electrical parts			
MFP board (MFPB)		Hard disk kit (HDD)	
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	-	-
2	Delete the job hold in [PS/PCL PRINT] - [PROOF/PRINT MENU] to increase the available range for user space.	-	-
3	Check the connector between HDD-MFPB CN7 for proper connection and correct as necessary.	-	-
4	Format HDD with [SYS DEFAULT MENU] - [HDD FORMAT].	-	-
5	Change HDD.	-	-

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TROUBLESHOOTING

14.4.39 C060: Firmware update error

Relevant electrical parts			
MFP board (MFPB)			
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	-	-
2	Check the cable that has been used for update of the firmware for proper connection and correct as necessary.	-	-
3	Check the firmware update file and if the file is not the correct one, update the firmware again.	-	-
4	Check the firmware update procedure and if the procedure is not correct, update the firmware again.	-	-
5	Update the firmware again.	-	-
6	Check the MFPB connector for proper connection and correct as necessary.	-	-
7	Change MFPB.	-	-

14.4.40 C072: Counter not installed

Relevant electrical parts			
Total counter (TCT)		Printer control board (PRCB)	
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	-	-
2	Check the connector between TCT-PRCB PJ13 for proper connection and correct as necessary.	-	-
3	Change PRCB.	-	-

14.4.41 C080: Memory error

Relevant electrical parts			
MFP board (MFPB)			
Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	-	-
2	Change MFPB.	-	-

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TROUBLESHOOTING

14.4.42 C900: Successful completion of counter backup

- This code is displayed when the counter backup process is completed successfully. When this code is displayed, turn OFF/ON the power switch and then perform the given steps.

See P.58

14.4.43 C907: Abnormal end of counter backup

Relevant electrical parts	
MFP board (MFPB)	SSD board (SSDB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the MFPB connector for proper connection and correct as necessary	-	-
2	Check the SSDB connector for proper connection and correct as necessary	-	-
3	Change MFPB.	-	-
4	After taking the above actions, if the counter backup process results in the same trouble code again, the SSD can be broken. In this case, the counter backup is unavailable.	-	-

14.4.44 FFFF: Interface communication error

Relevant electrical parts	
MFP board (MFPB)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	-	-
2	Check the MFPB connector for proper connection and correct as necessary	-	-
3	Check the PRCB connector for proper connection and correct as necessary.	-	-
4	Change PRCB.	-	-
5	Change MFPB.	-	-

15. POWER SUPPLY TROUBLE

15.1 Machine is not energized at all (DCPU operation check)

Relevant parts	
Power switch (SW1) Printer control board (PRCB)	DC power supply (DCPU)

Step	Check item	WIRING DIAGRAM (Location)	Result	Action
1	Is a power voltage supplied across CN1 on DCPU?	G-10	NO	Check the wiring from the wall outlet to inlet to SW1 to CN1DCPU.
2	Are DC5 V and DC3.3V being output from CN11 ON MFPB?	C-2	NO	Check the wiring from the CN5, CN9DCPU to CN11MFPB.
3	Is DC3.3 V being output from PJ1 on PRCB?	F-13	NO	Check the wiring from the CN4DCPU to PJ1PRCB.
4	Is DC24 V being output from CN105 on MFPB?	C-2	YES	Change MFPB.
5	Check the wiring from the CN16MFPB to PJ21PRCB.	-	YES	Reconnect. Change flat cable.
6	Check the wiring from the PJ1PRCB to CN4DCPU.		YES	Reconnect.
			NO	Change PRCB.

15.2 Control panel indicators do not light

Relevant electrical parts	
MFP board (MFPB) Control panel	DC power supply (DCPU)

Step	Check item	Location (electrical component)	Result	Action
1	Is a power voltage supplied across CN1 on DCPU?	G-10	NO	Check the wiring from the wall outlet to inlet to SW1 to CN1DCPU.
2	Are the fuses on DCPU conducting?	-	NO	Change DCPU.
3	Is CN13 on MFPB properly connected?	C-2	NO	Reconnect.
4	Is CN11 on MFPB properly connected?	C-2	NO	Reconnect.
			YES	Change MFPB. Change scanner unit. Change operation panel.

15.3 Fusing heaters do not operate

Relevant parts	
Main power switch (SW1) Right door switch (SW3) Fuser unit	DC power supply (DCPU) Printer control board (PRCB)

Step	Check item	WIRING DIAGRAM (Location)	Result	Action
1	Is the power source voltage applied across CN1 on DCPU?	G-10	NO	Check the wiring from the wall outlet to inlet to SW1 to CN1DCPU.
2	Is the power source voltage applied across CN2 on DCPU?	G-6	YES	Change fuser unit.
			NO	Check the wiring from the CN3DCPU to PJ4PRCB. Change DCPU. Change PRCB.

16. IMAGE QUALITY PROBLEM

16.1 How to identify problematic part

- This chapter is divided into two parts: “Initial check items” and “Troubleshooting procedure by a particular image quality problem.”
- When an image quality problem occurs, first go through the “Initial check items” and, if the cause is yet to be identified, go to “Troubleshooting procedure by a particular image quality problem.”

16.1.1 Initial check items

A. Initial check items 1

- Let the machine produce a test print and determine whether the image problem is attributable to the scanner or printer system.
- Evaluation procedure

Action	Result	Cause	Next step
From [Service Mode], select [Print Menu] → [Gradation], and produce a test print. Is image problem evident?	YES	Printer	Initial check items 2
	NO	Scanner	P.224

B. Initial check items 3

- If the printer is responsible for the image problem, let the machine produce a test print and determine whether the image problem occurs in a specific single color or four colors
- Evaluation procedure

Action	Result	Cause	Next step
From [Service Mode], select [Print Menu] → [Gradation], and produce a test print. Is image problem evident in each of all four colors?	YES	Printer, 4 colors	P.247
	NO	Printer, single color	P.235

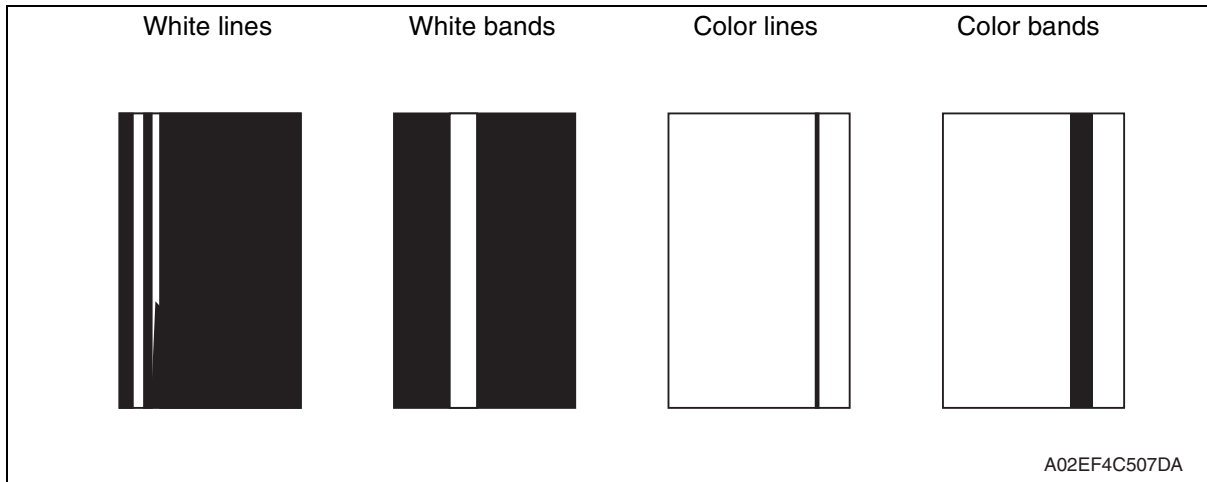
16.2 Solution

NOTE

- Typical faulty image samples shown in the following are all printed with A4S setting.

16.2.1 Scanner system: white lines, white bands, colored lines and colored bands in sub scan direction

A. Typical faulty images

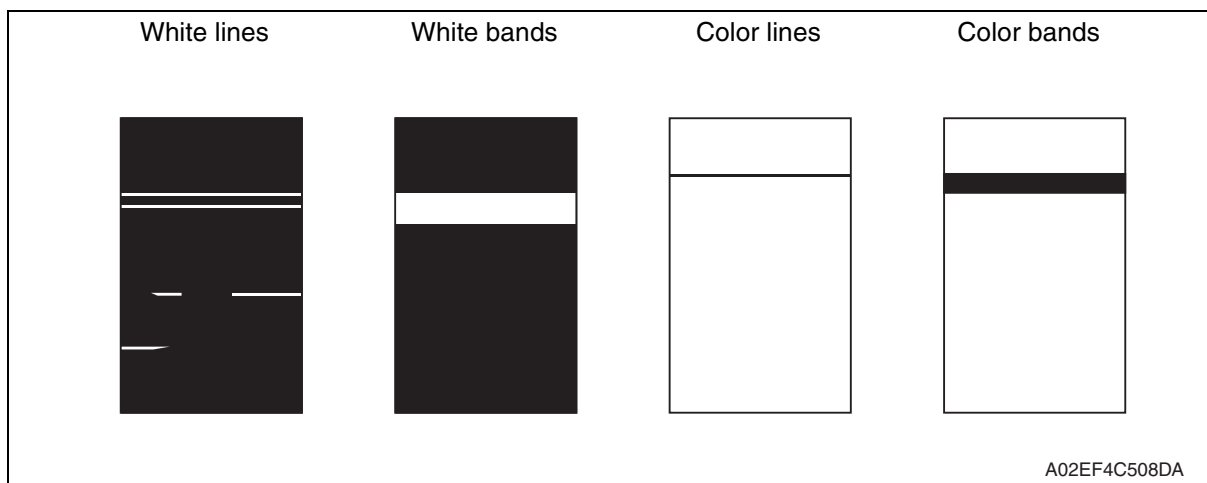


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change original.
2	ADF	Original pad is dirty.	YES	Clean.
3	Original glass	Original glass is dirty.	YES	Wipe the surface clean with a soft cloth.
4	Service Mode → Scanner Adjustment → FB Side Edge	The adjustment value for [FB Side Edge] falls within the specified range.	NO	Readjust.
5		The problem has been eliminated through the checks of steps up to 4.	NO	Change scanner unit.

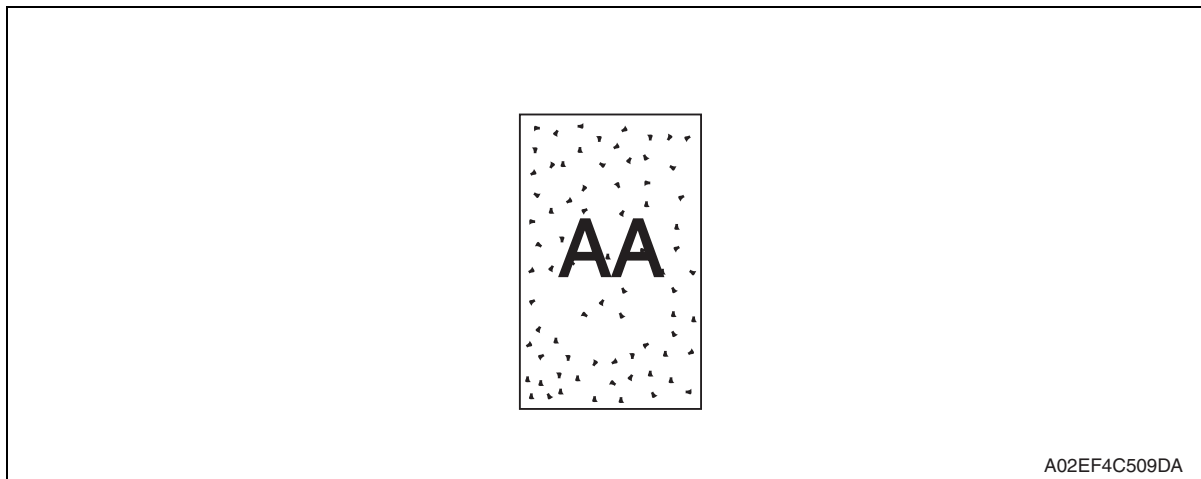
16.2.2 Scanner system: white lines, white bands, colored lines and colored bands in main scan direction

A. Typical faulty images



B. Troubleshooting procedure

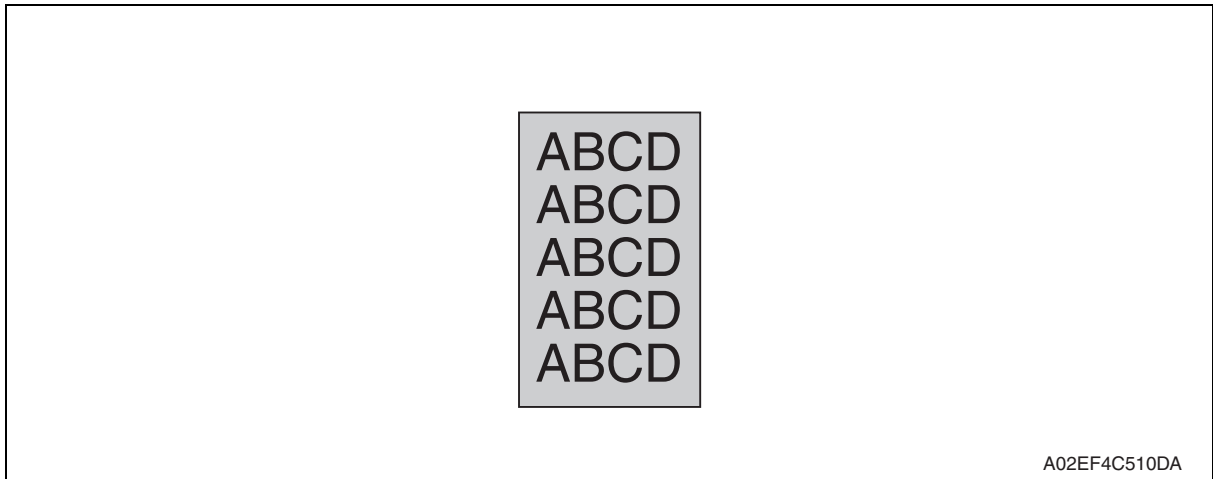
Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change original.
2	ADF	Original pad is dirty.	YES	Clean.
3	Original glass	Original glass is dirty.	YES	Wipe the surface clean with a soft cloth.
4	Service Mode → Scanner Adjustment → FB Side Edge	The adjustment value for [FB Side Edge] falls within the specified range.	NO	Readjust.
5		The problem has been eliminated through the checks of steps up to 4.	NO	Change scanner unit.

16.2.3 Scanner system: color spots**A. Typical faulty images****B. Troubleshooting procedure**

Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change original.
2	ADF	Original pad is dirty.	YES	Clean.
3	Original glass	Original glass is dirty.	YES	Wipe the surface clean with a soft cloth.
4		The problem has been eliminated through the checks of steps up to 3.	NO	Change scanner unit. Change MFPB.

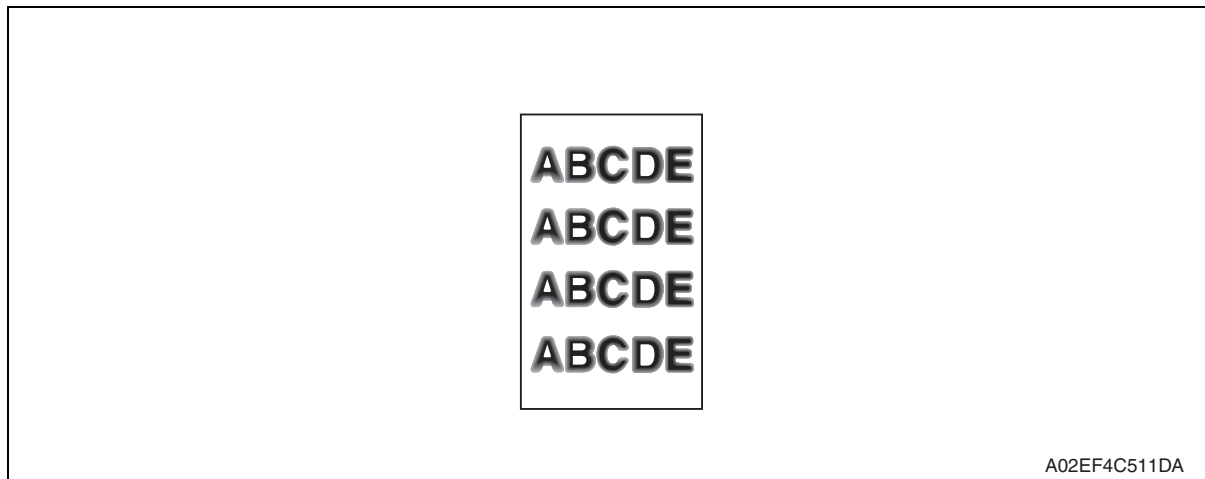
16.2.4 Scanner system: fog

A. Typical faulty images



B. Troubleshooting procedure

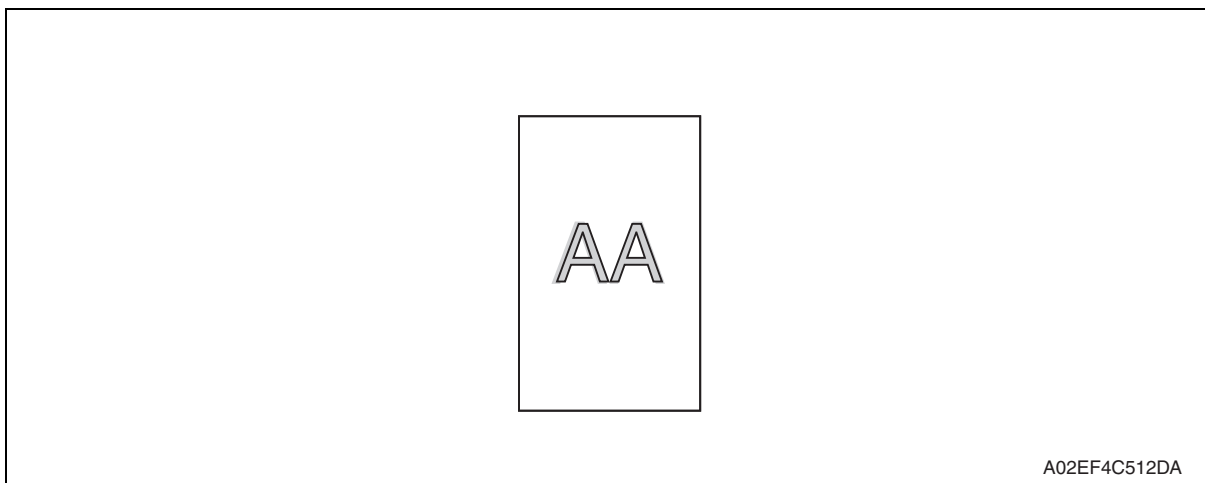
Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change original.
2	ADF	Original pad is dirty.	YES	Clean.
3		ADF does not lie flat.	YES	Change ADF if it is deformed or hinges are broken.
4	Original glass	Original glass is dirty.	YES	Wipe the surface clean with a soft cloth.
5	Basic screen Quality/Density	The problem is eliminated when the image is produced in the manual exposure setting.	NO	Try another exposure level in manual.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Change scanner unit. Change MFPB.

16.2.5 Scanner system: blurred image, blotchy image**A. Typical faulty images****B. Troubleshooting procedure**

Step	Section	Check item	Result	Action
1	Original	Original does not lie flat.	YES	Change original.
2	ADF	ADF does not lie flat.	YES	Change ADF if it is deformed or hinges are broken.
3	Original glass	Original glass tilts.	YES	Position original glass correctly. Check original loading position.
4		The problem has been eliminated through the checks of steps up to 3.	NO	Change scanner unit.

16.2.6 Scanner system: incorrect color image registration, sync shift (lines in main scan direction)

A. Typical faulty images

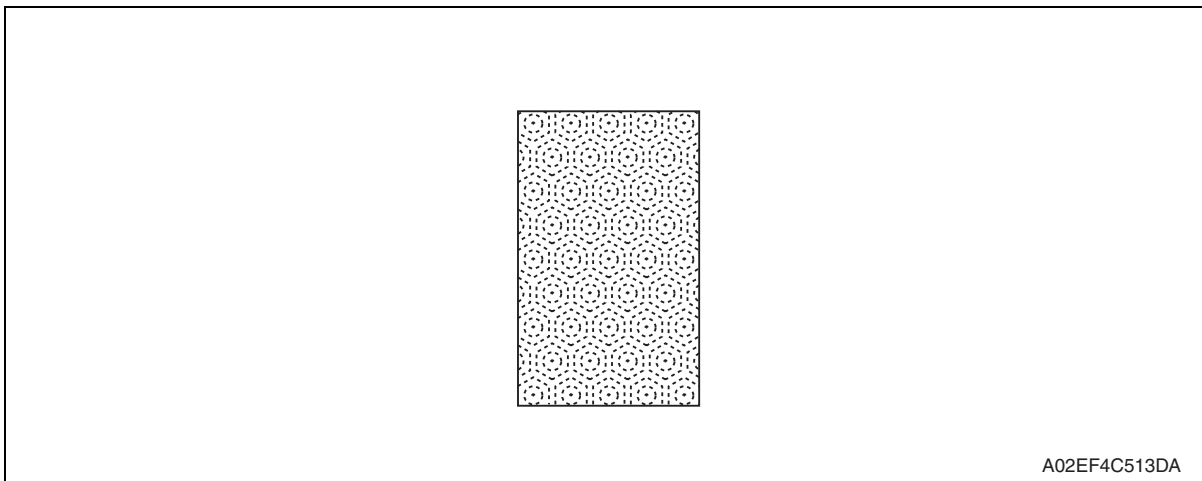


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Original	Original does not lie flat.	YES	Change original.
2	ADF	ADF does not lie flat.	YES	Change ADF if it is deformed or hinges are broken.
3		The problem has been eliminated through the checks of steps up to 2.	NO	Change scanner unit.

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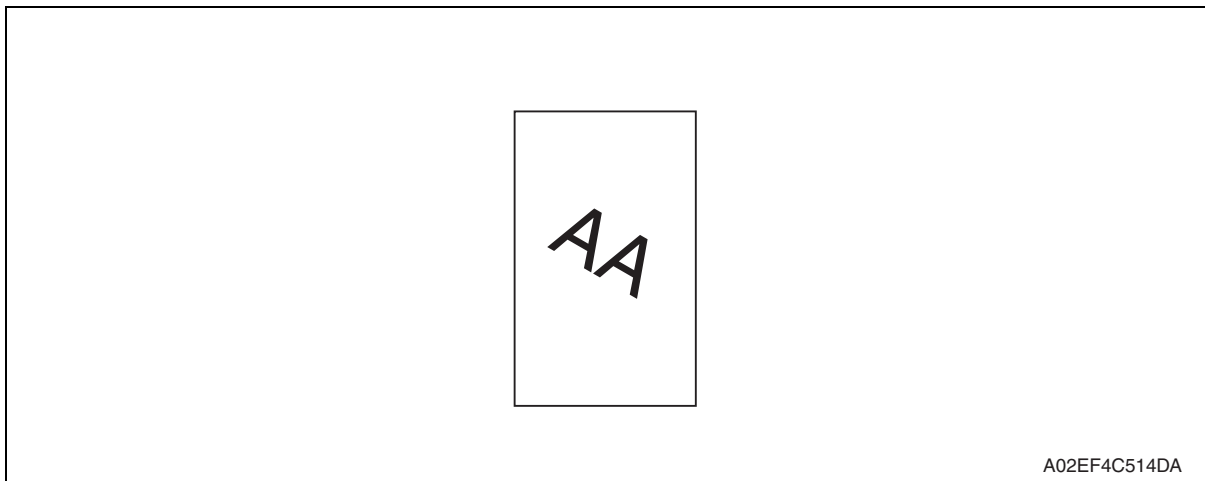
TROUBLESHOOTING

16.2.7 Scanner system: moire**A. Typical faulty images****B. Troubleshooting procedure**

Step	Section	Check item	Result	Action
1	Original	Moire distortions recur even after the orientation of original has been changed.	NO	Change the original orientation.
2	Basic screen Quality/Density	Moire distortions recur even after the original mode has been changed.	YES	Select "Text Mode" or "Photo Mode".
3	Basic screen Zoom	The problem has been eliminated through the checks of steps up to 2.	NO	Change the zoom ratio.

16.2.8 Scanner system: skewed image

A. Typical faulty images



B. Troubleshooting procedure

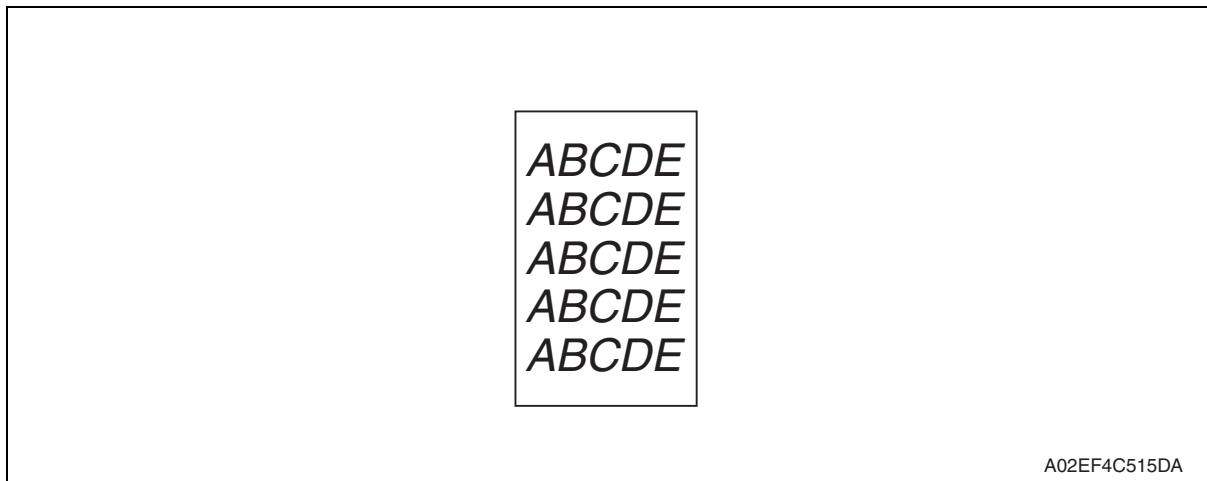
Step	Section	Check item	Result	Action
1	Original	Original is skew.	YES	Reposition original.
2	Original glass	Original glass is in positive contact with the flat spring without being tilt.	NO	Reinstall the glass. Check the original loading position.
3		The problem has been eliminated through the checks of steps up to 2.	NO	Change scanner unit.

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TROUBLESHOOTING

16.2.9 Scanner system: distorted image

A. Typical faulty images

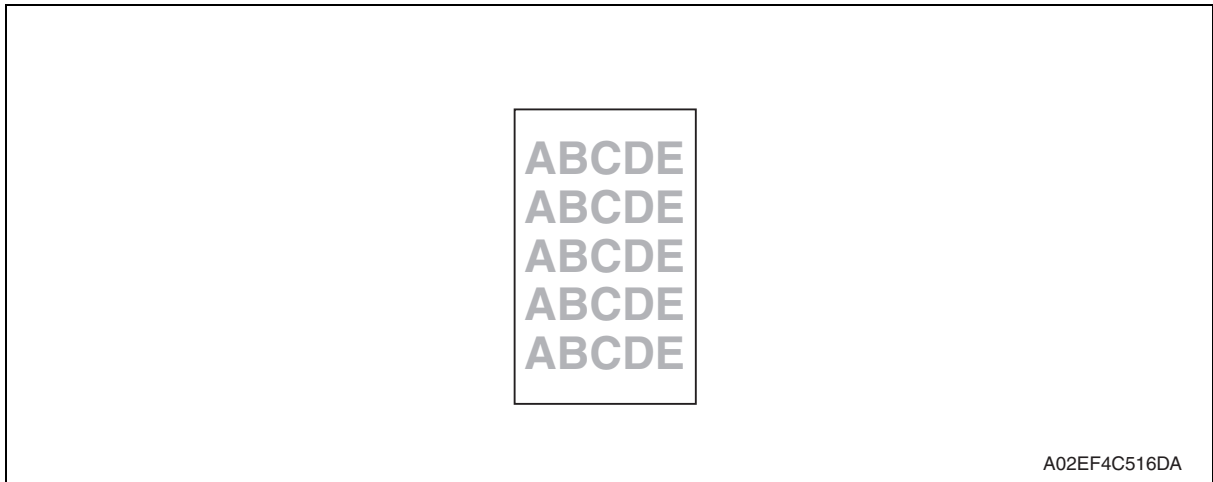


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Installation	Machine is installed on a level surface.	NO	Reinstall.
2		The problem has been eliminated through the checks of steps up to 1.	NO	Change scanner unit.

16.2.10 Scanner system: low image density, rough image

A. Typical faulty images



B. Troubleshooting procedure

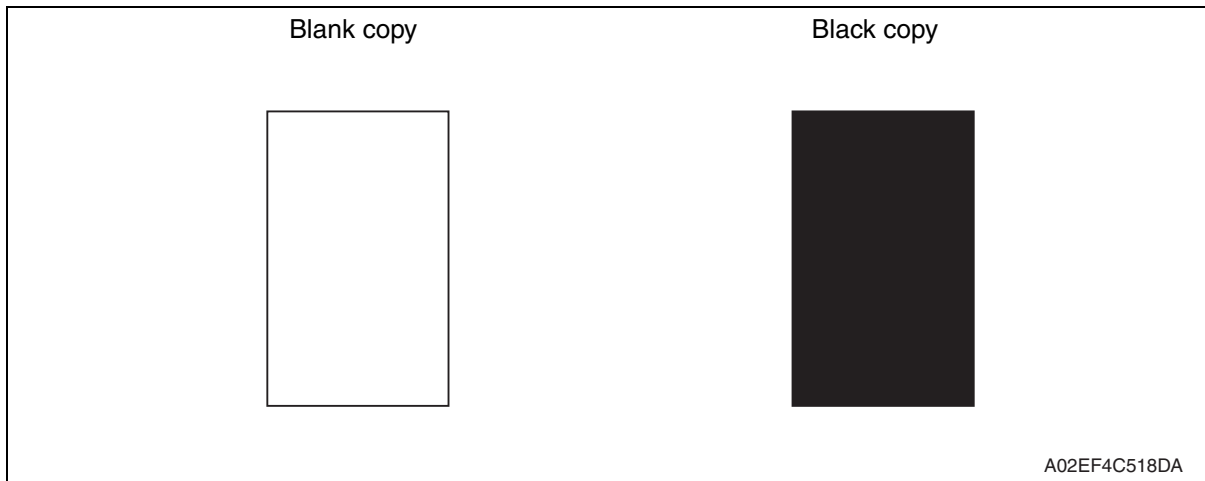
Step	Section	Check item	Result	Action
1	Original glass	Original Glass is dirty.	YES	Wipe the surface clean with a soft cloth.
2		The problem has been eliminated through the checks of steps up to 1.	NO	Change scanner unit. Change MFPB.

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TROUBLESHOOTING

16.2.11 Scanner system: blank copy, black copy

A. Typical faulty images

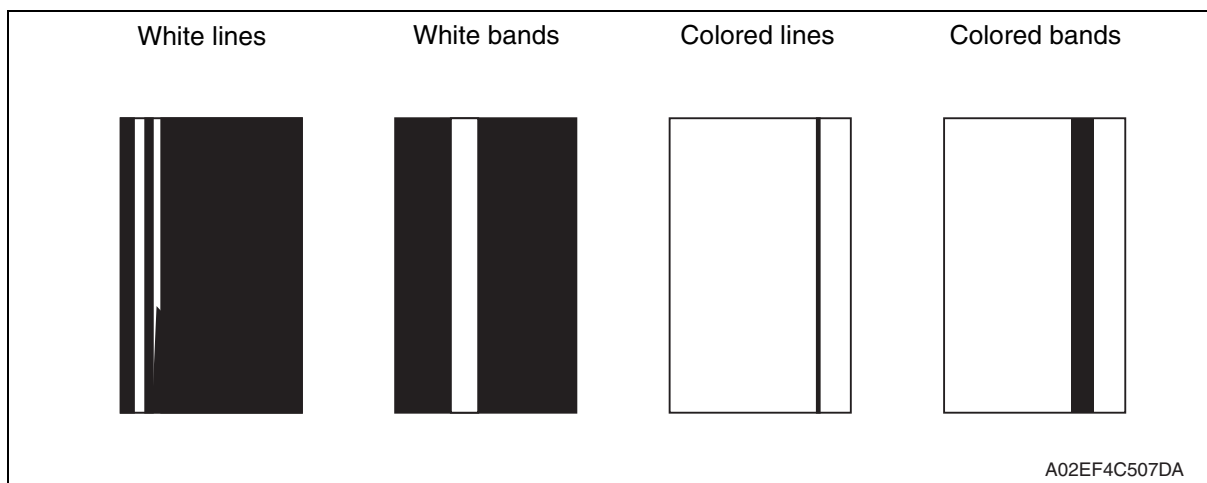


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Cable connecting scanner and printer	Connector CN102, CN103 on MFPB are connected properly with no pins bent.	NO	Reconnect.
2	MFP board (MFPB)	The problem is eliminated after the I/F connection cable has been changed.	NO	Change MFP board. Change scanner unit.

16.2.12 Printer monochrome: white lines, white bands, colored lines and colored bands in sub scan direction

A. Typical faulty images



B. Troubleshooting procedure

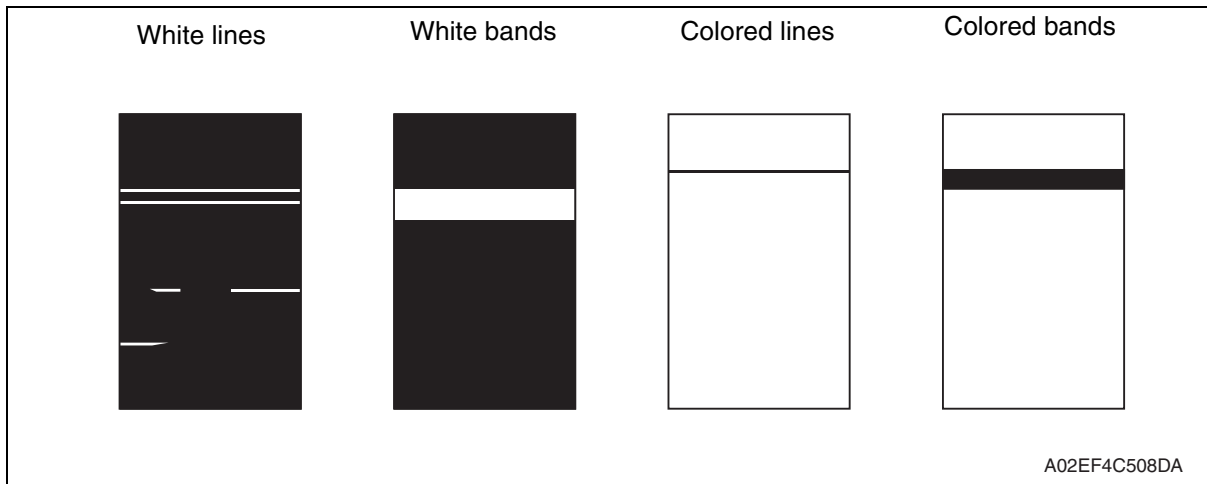
Step	Section	Check item	Result	Action
1	Image check	A white line or black line in sub scan direction is sharp.	YES	Clean the electrostatic charger wire.
2		When printing thick paper, black lines appear.	YES	Select [Service Mode] → [Printer Adjustment] → [Thick Mode] and set [Quality Mode].
3	Imaging unit	The surface of the PC drum is scratched.	YES	Change imaging unit.
4		Dirty on the outside.	YES	Clean.
5		Contact terminals make good connection between each imaging unit and machine.	NO	Clean contact terminals.
6		Developing bias contact terminal makes good connection.	NO	Clean contact terminal and check terminal position.
7	PH unit	The surface of the PH window is dirty.	YES	Clean with cleaning jig.
8		The problem has been eliminated through the checks of steps up to 7.	NO	Change transfer belt unit. Change PH unit.

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TROUBLESHOOTING

16.2.13 Printer monochrome: white lines, white bands, colored lines and colored bands in main scan direction

A. Typical faulty images

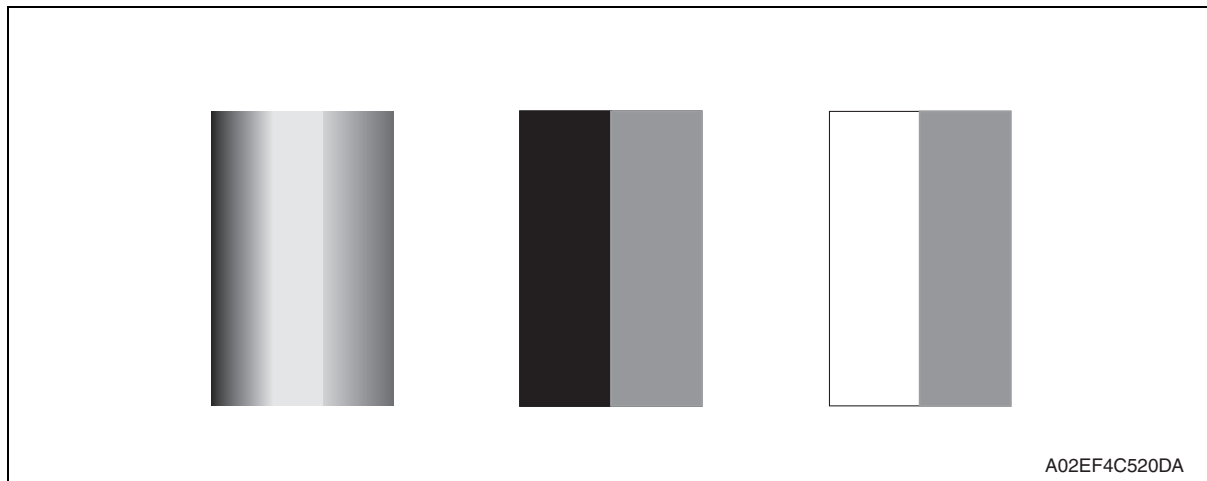


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Image check	A white line or black line in main scan direction is sharp.	NO	Clean the electrostatic charger wire.
2	Imaging unit	The surface of the PC drum is scratched.	YES	Change imaging unit.
3		Dirty on the outside.	YES	Clean.
4		Contact terminals make good connection between each imaging unit and machine.	NO	Clean contact terminals.
5		Developing bias contact terminal makes good connection.	NO	Clean contact terminal and check terminal position.
6	PH unit	The surface of the PH window is dirty.	YES	Clean with cleaning jig.
7		The problem has been eliminated through the checks of steps up to 6.	NO	Change transfer belt unit. Change PH unit.

16.2.14 Printer monochrome: uneven density in sub scan direction

A. Typical faulty images



B. Troubleshooting procedure

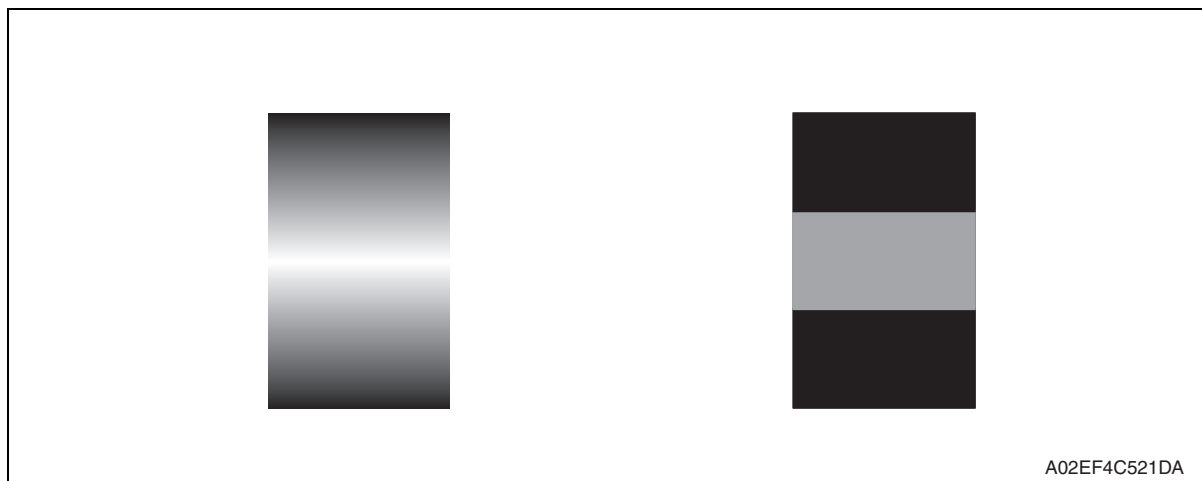
Step	Section	Check item	Result	Action
2	Imaging unit	The surface of the PC drum is scratched.	YES	Change imaging unit.
2		Dirty on the outside.	YES	Clean.
3	PH unit	The surface of the PH window is dirty.	YES	Clean with cleaning jig.
4	Transfer roller unit	Image transfer roller is installed properly.	NO	Reinstall.
5		Image transfer roller is dirty or scratched.	YES	Change transfer roller unit.
6	Transfer belt unit	Is abnormality found in the cam gear?	YES	Change transfer belt unit.
7		The problem has been eliminated through the checks of steps up to 7.	NO	Change PH unit. Change High voltage unit. Printer control board.

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TROUBLESHOOTING

16.2.15 Printer monochrome: uneven density in main scan direction

A. Typical faulty images



B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Imaging unit	The surface of the PC drum is scratched.	YES	Change imaging unit.
2		Dirty on the outside.	YES	Clean.
3	PH unit	The surface of the PH window is dirty.	YES	Clean with cleaning jig.
4	Transfer roller	Check that the spring does not come off during the pressure operation of the transfer roller.	NO	Correct. Change transfer roller unit.
5	Transfer belt unit	Transfer belt unit makes positive contact with plates on rails.	NO	Check and correct contacts.
6		Is abnormality found in the cam gear?	YES	Change image transfer belt unit.
7		The problem has been eliminated through the checks of steps up to 6.	NO	Change PH unit. Change high voltage unit.

16.2.16 Printer monochrome: low image density

A. Typical faulty images

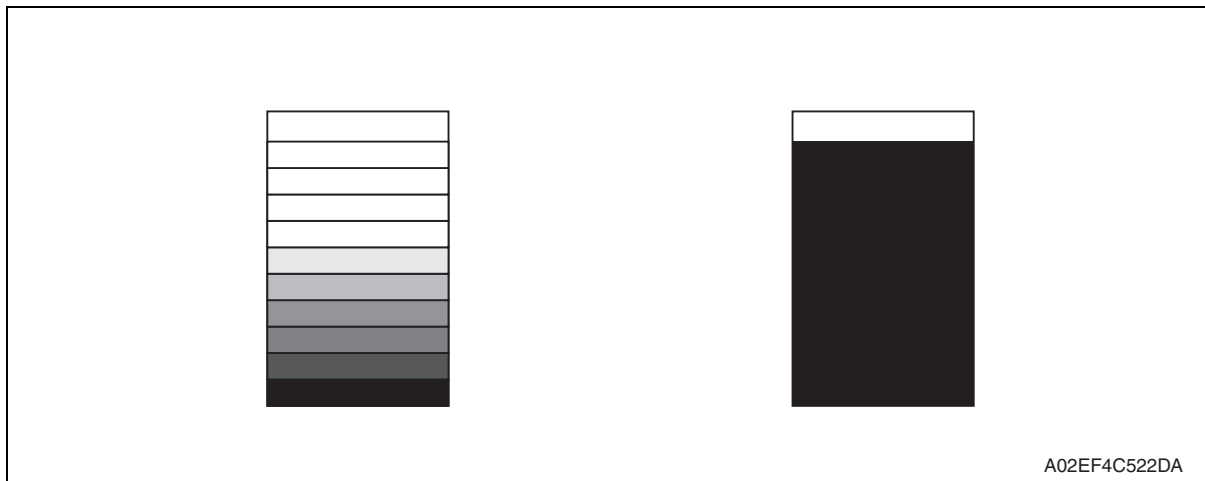


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	IDC sensor	The surface of the IDC sensor is dirty.	YES	Clean.
2	PH unit	The surface of the PH window is dirty.	YES	Clean with cleaning jig.
3	Transfer belt unit	Transfer belt unit makes positive contact with plates on rails.	NO	Check and correct contacts.
4		Is abnormality found in the cam gear?	YES	Change image transfer belt unit.
5		The problem has been eliminated through the checks of steps up to 3.	NO	Change imaging unit. → Change IDC sensor. → Change printer control board. → Change PH unit. → Change high voltage unit.

16.2.17 Printer monochrome: gradation reproduction failure

A. Typical faulty images

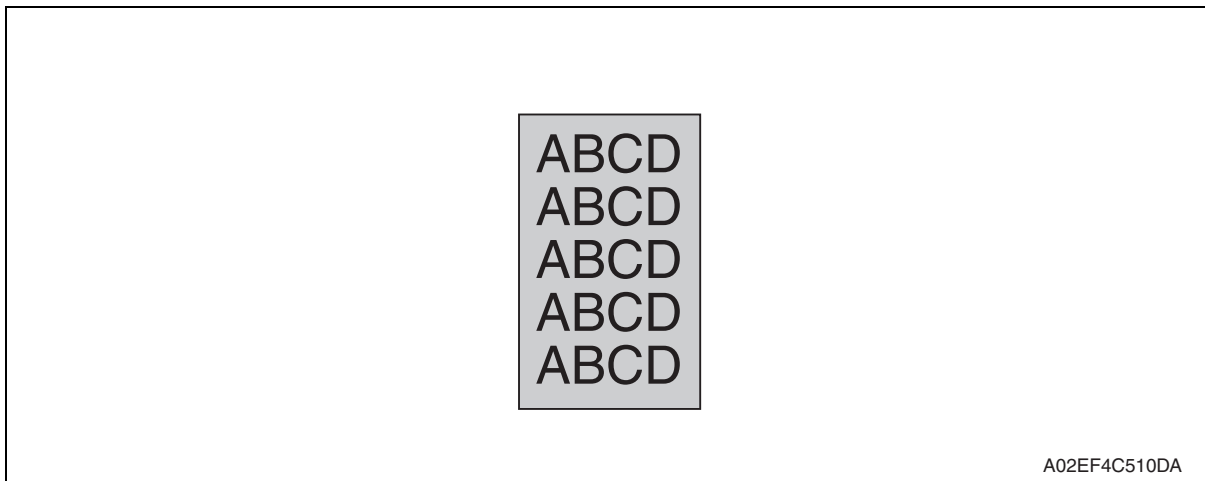


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Photo/density	Original type and screen pattern are selected properly.	NO	Change screen pattern.
2	PH unit	The surface of the PH window is dirty.	YES	Clean with cleaning jig.
3	IDC sensor	The surface of the IDC sensor is dirty.	YES	Clean.
4		The problem has been eliminated through the checks of steps up to 3.	NO	Change imaging unit. → Change printer control board → Change PH unit. → Change high voltage unit.

16.2.18 Printer monochrome: foggy background

A. Typical faulty images



B. Troubleshooting procedure

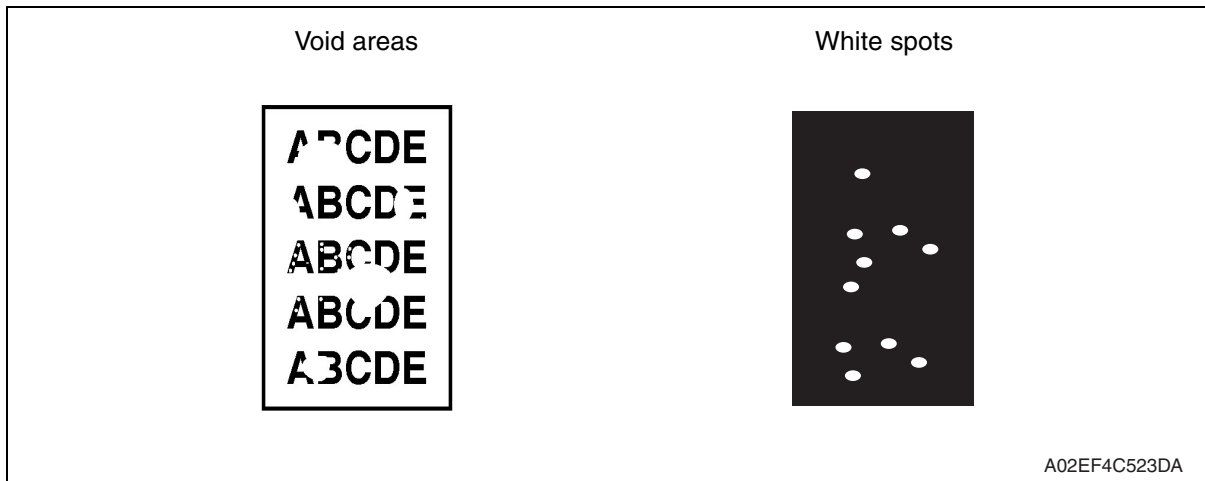
Step	Section	Check item	Result	Action
1	IDC sensor	The surface of the IDC sensor is dirty.	YES	Clean.
2	Imaging unit	Dirty on the outside.	YES	Clean.
3	PH unit	The surface of the PH window is dirty.	YES	Clean with cleaning jig.
4	Printer control board (PRCB)	Check the connection of connectors, harness, and flat cables between PRCB and PH unit, and correct if necessary.	NO	Change printer control board.
5		The problem has been eliminated through the checks of steps up to 4.	NO	Change imaging unit. → Change PH unit. → Change high voltage unit.

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TROUBLESHOOTING

16.2.19 Printer monochrome: void areas, white spots

A. Typical faulty images

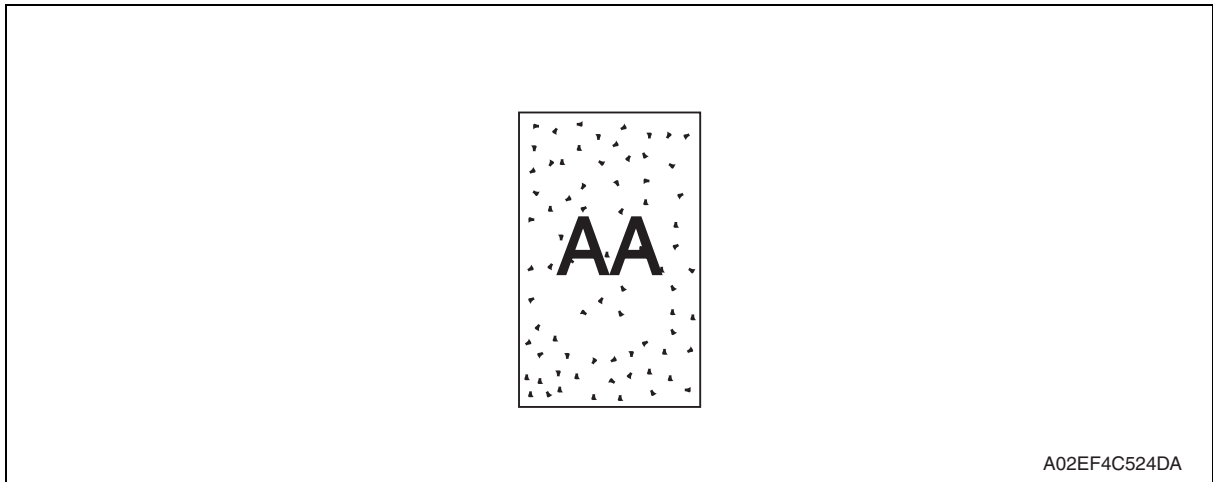


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Image Check	There are void areas at the front side or high density section.	YES	See P.239
2		There is void area at the rear side section.	YES	Perform [2nd Image transfer Current] of [Printer Adjustment] under Service Mode.
3	Imaging unit	The surface of the PC drum is scratched.	YES	Change drum unit.
4	Toner cartridge	Foreign matter or caked toner in the toner cartridge.	YES	Remove foreign matter.
5	Installation environment	Is the atmospheric pressure at the installation site low?	YES	Make the following adjustment: [Service Mode] → [Printer Adjustment] → [Image ADJ Param].

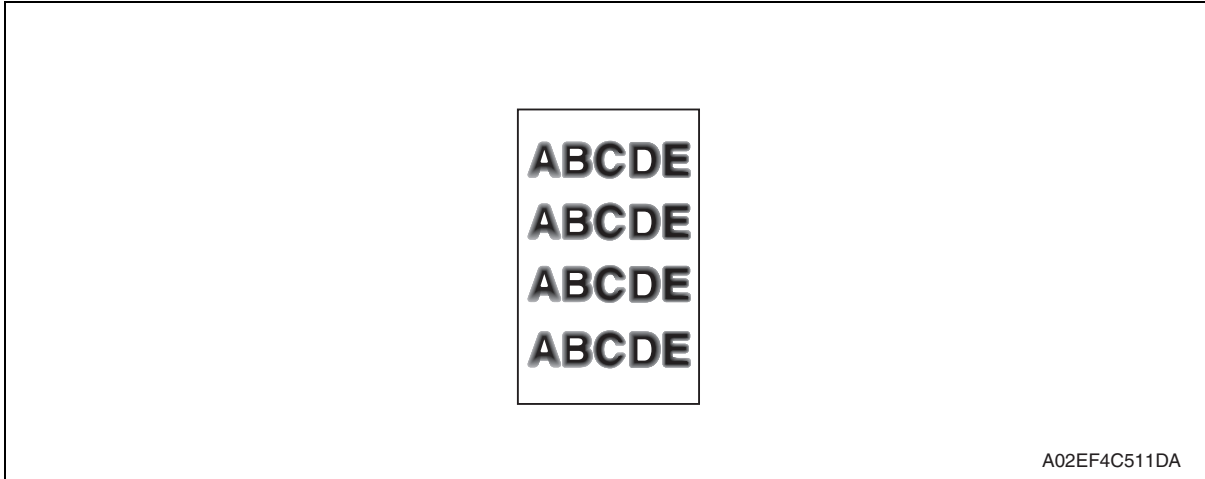
16.2.20 Printer monochrome: colored spots

A. Typical faulty images



B. Troubleshooting procedure

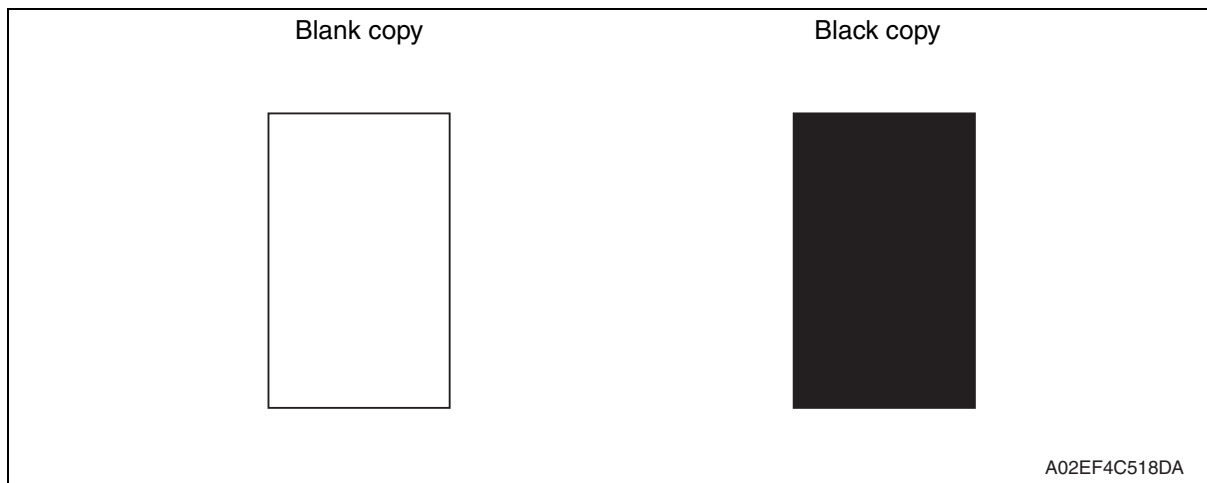
Step	Section	Check item	Result	Action
1	Imaging unit	Developing bias contact terminal makes good connection.	NO	Clean contact terminal and check terminal position.
2		The surface of the PC drum is scratched.	YES	Change imaging unit.
3		Dirty on the outside.	YES	Clean.

16.2.21 Printer monochrome: blurred image**A. Typical faulty images****B. Troubleshooting procedure**

Step	Section	Check item	Result	Action
1	PH unit	The surface of the PH window is dirty.	YES	Clean with cleaning jig.
2	Imaging unit	Dirty on the outside.	YES	Clean.
3		The problem has been eliminated through the checks of steps up to 2.	NO	Change imaging unit. → Change PH unit.

16.2.22 Printer monochrome: blank copy, black copy

A. Typical faulty images

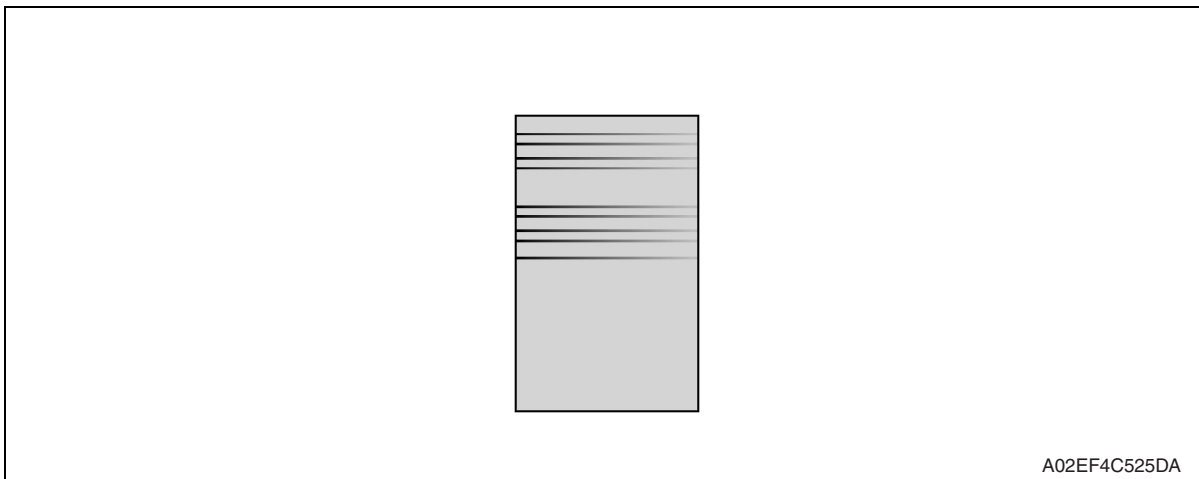


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Image check	A blank copy occurs.	YES	Check PH unit connector for proper connection.
2	Imaging unit	Coupling of drum unit drive mechanism is installed properly.	NO	Check and correct drive transmitting coupling. Change imaging unit.
3		The PC drum charge corona voltage contact or PC drum ground contact of the imaging unit is connected properly.	NO	Check, clean, or correct the contact.
4	High voltage unit/	Connector is connected properly.	NO	Reconnect.
5		The problem has been eliminated through the check of step 4.	NO	Change high voltage unit. → Change printer control board → Change PH unit. → Change MFP board.

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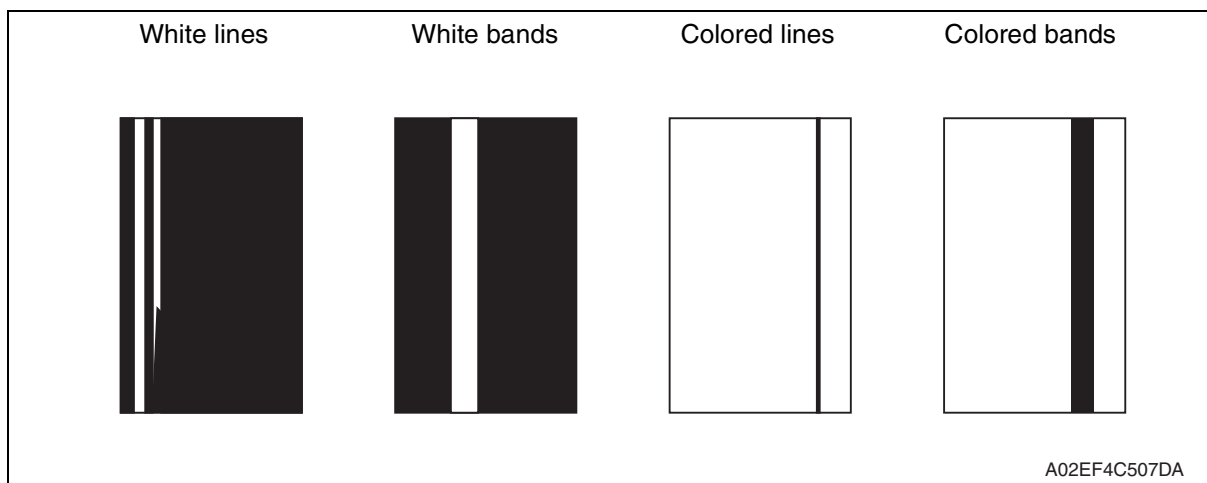
TROUBLESHOOTING

16.2.23 Printer monochrome: uneven image**A. Typical faulty images****B. Troubleshooting procedure**

Step	Section	Check item	Result	Action
1	Toner cartridge	The toner cartridge of every color is surely installed.	NO	Re-install it.
2	PH unit	The PH unit is surely installed.	NO	Re-install it.
3	Toner cartridge	There is any stain or breakage on the drive section of the toner cartridge.	YES	Clean/replace the toner cartridge.
4	Imaging unit	There is any stain, damage or abrasion on the PC drum.	YES	Replace the imaging unit.
5	Transfer roller	There is any stain, damage, deformation or abrasion on the transfer roller.	YES	Replace the transfer roller.
6	Fuser unit	There is any stain, damage, deformation or abrasion on the roller and drive section of the fuser unit.	YES	Replace the fuser unit.
7		The problem has been eliminated through the check of step 6.	NO	Replace the image transfer belt unit.

16.2.24 Printer 4-color: white lines, white bands, colored lines and colored bands in sub scan direction

A. Typical faulty images



B. Troubleshooting procedure

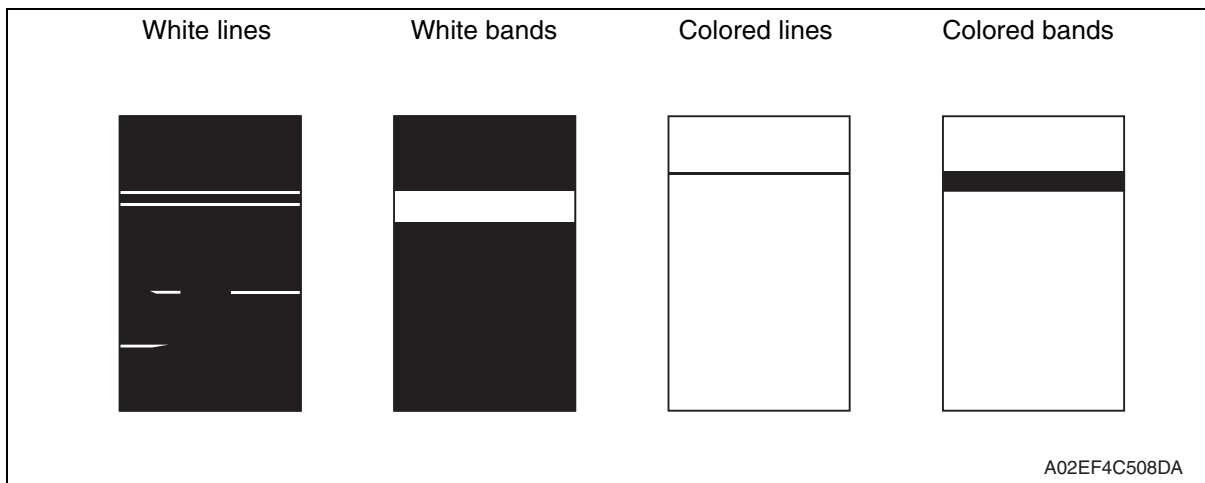
Step	Section	Check item	Result	Action
1	Image check	A white line or colored line in sub scan direction.	YES	Clean the comb electrode.
2	Transfer belt unit	Fingerprints, oil, or other foreign matter is evident on the transfer belt.	YES	Clean with specified solvent. (See Maintenance.)
3		Transfer belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change transfer belt unit if belt is damaged.
4		Cleaning blade is not effective in removing toner completely.	YES	Change transfer belt unit.
5	Transfer roller unit	Transfer roller is dirty or scratched.	YES	Change transfer roller unit.
6	Paper path	There is foreign matter on paper path.	YES	Remove foreign matter.
7		Image transfer paper separator fingers are damaged or dirty.	YES	Clean or change.
8	Fuser unit	Fusing entrance guide plate is dirty or damaged.	YES	Clean. Change fuser unit.
9		Fusing paper separator fingers are dirty.	YES	Clean.
10		The problem has been eliminated through the checks of steps up to 9.	NO	Change printer control board

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TROUBLESHOOTING

16.2.25 Printer 4-color: white lines, white bands, colored lines and colored bands in main scan direction

A. Typical faulty images



B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Transfer belt unit	Fingerprints, oil, or other foreign matter is evident on the transfer belt.	YES	Clean with specified solvent. (See Maintenance.)
2		Transfer belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change transfer belt unit if belt is damaged.
3	Transfer roller unit	Transfer roller is dirty or scratched.	YES	Change transfer roller unit.
4	Paper path	There is foreign matter on paper path.	YES	Remove foreign matter.
5		Image transfer paper separator fingers are damaged or dirty.	YES	Clean or change.
6	Fuser unit	Fusing entrance guide plate is dirty or damaged.	YES	Clean. Change fuser unit.
7		Fusing paper separator fingers are dirty.	YES	Clean.
8	Neutralizing brush	The resistance values between the neutralizing brush and the ground terminal is not ∞.	NO	Check the contact. Change neutralizing brush.
9		The problem has been eliminated through the checks of steps up to 8.	NO	Change printer control board

16.2.26 Printer 4-color: uneven density in sub scan direction

A. Typical faulty images

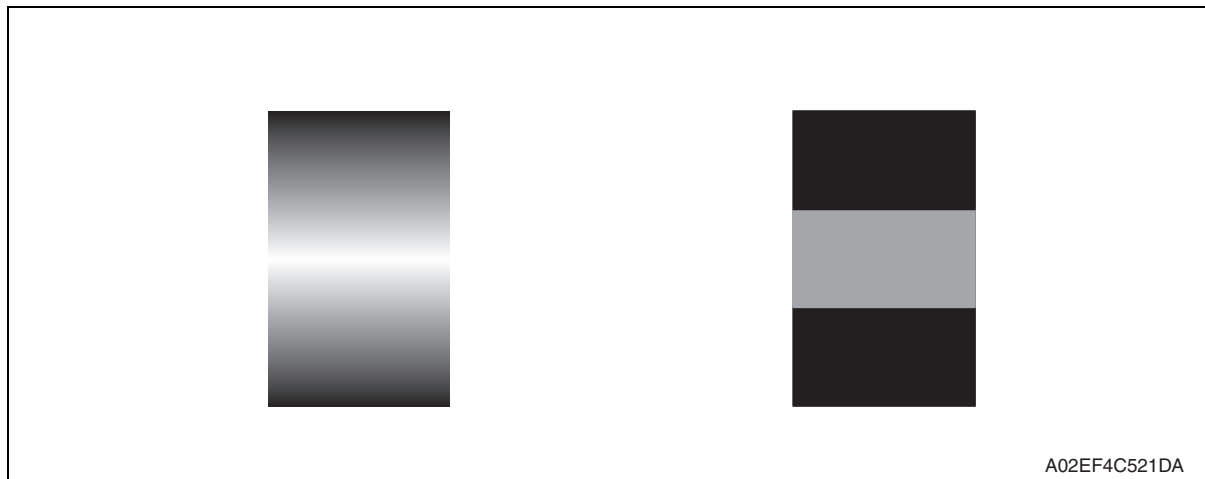


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Transfer belt unit	Fingerprints, oil, or other foreign matter is evident on the transfer belt.	YES	Clean it with the tender cloth or paper which is dusted with the toner.
2		Transfer belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change transfer belt unit if belt is damaged.
3		Terminal is dirty.	YES	Clean.
4	Transfer roller unit	Image transfer roller is installed properly.	NO	Reinstall.
5		Image transfer roller is dirty or scratched.	YES	Change transfer roller unit.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Change transfer belt unit.

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TROUBLESHOOTING

16.2.27 Printer 4-color: uneven density in main scan direction**A. Typical faulty images****B. Troubleshooting procedure**

Step	Section	Check item	Result	Action
1	Transfer belt unit	Fingerprints, oil, or other foreign matter is evident on the transfer belt.	YES	Clean it with the tender cloth or paper which is dusted with the toner.
2		Transfer belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change transfer belt unit if belt is damaged.
3		Terminal is dirty.	YES	Clean.
4	Transfer roller unit	Image transfer roller is installed properly.	NO	Reinstall.
5		Image transfer roller is dirty or scratched.	YES	Change transfer roller unit.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Change transfer belt unit. → Change high voltage unit.

16.2.28 Printer 4-color: low image density

A. Typical faulty images

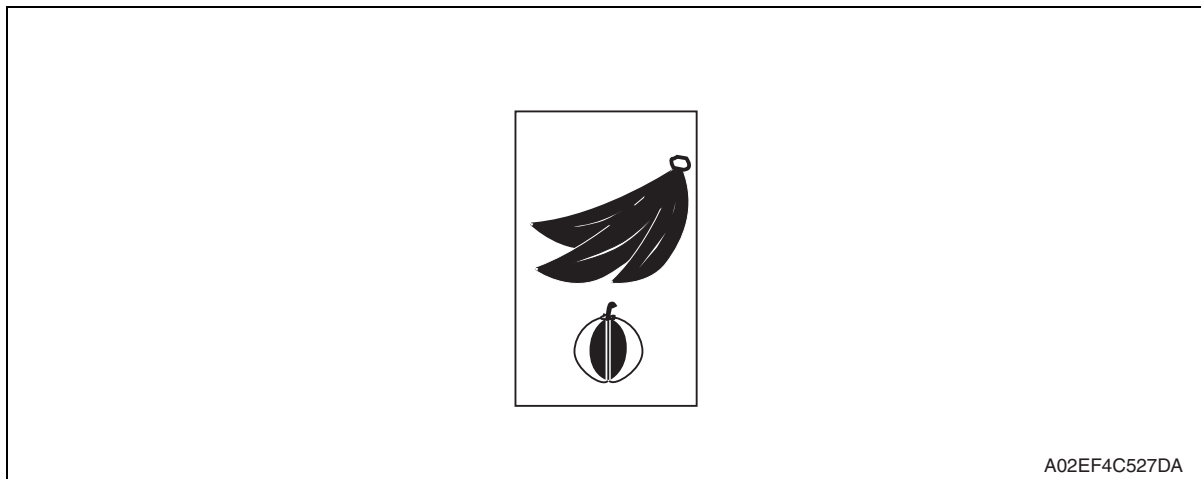


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
2	Transfer belt unit	Terminal is dirty.	YES	Clean.
3	Transfer roller unit	Transfer roller is installed properly.	NO	Reinstall.
4		Charge neutralizing needle is not separated and ground terminal is connected properly.	NO	Correct or change.
5	IDC sensor	Sensor is dirty.	YES	Clean IDC sensor and execute the image stabilization.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Change image transfer belt unit. → Change IDC sensor. → Change printer control board. → Change high voltage unit.

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TROUBLESHOOTING

16.2.29 Printer 4-color: poor color reproduction**A. Typical faulty images**

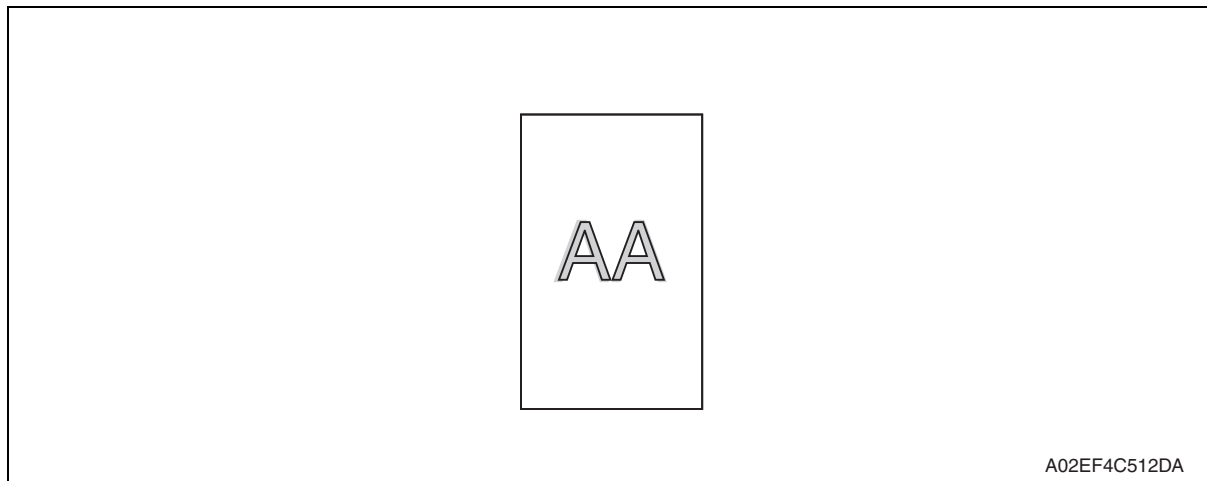
A02EF4C527DA

B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
2	Transfer belt unit	Terminal is dirty.	YES	Clean.
3	Transfer roller unit	Transfer roller is installed properly.	NO	Reinstall.
4		Charge neutralizing needle is not separated and ground terminal is connected properly.	NO	Correct or change.
5	IDC sensor	Sensor is dirty.	YES	Clean IDC sensor and execute the image stabilization.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Change transfer belt unit. → Change printer control board. → Change high voltage unit. → Change MFP board.

16.2.30 Printer 4-color: incorrect color image registration

A. Typical faulty images



B. Troubleshooting procedure

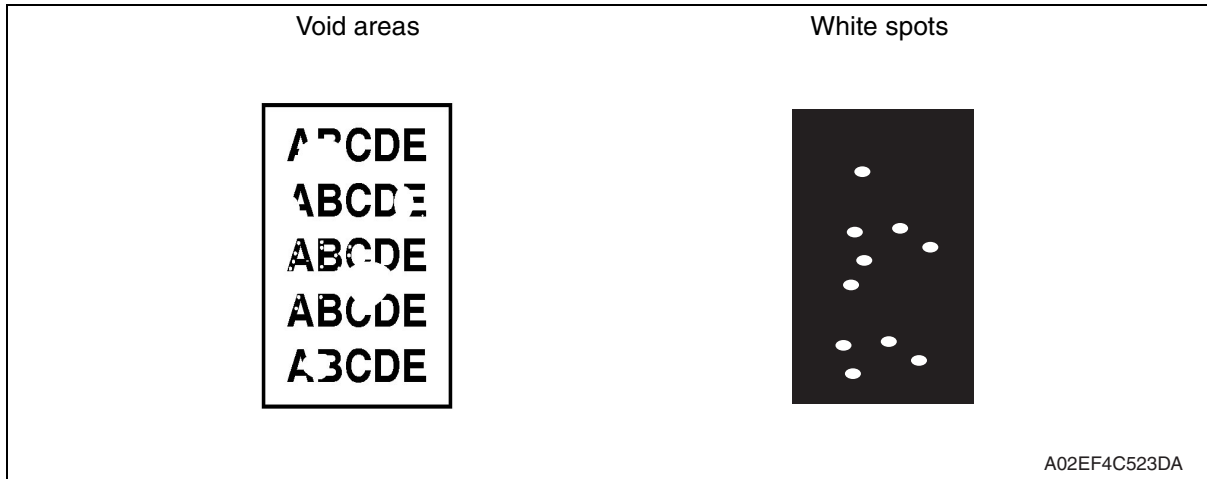
Step	Section	Check item	Result	Action
1	Machine condition	Vibration is given to the machine after main power switch has been turned ON.	YES	Turn off the main power switch and turn it on again more than 10 seconds after.
2	Transfer belt unit	Fingerprints, oil, or other foreign matter is evident on the transfer belt.	YES	Clean it with the tender cloth or paper which is dusted with the toner.
3		Transfer belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change transfer belt unit if belt is damaged.
4		Drive coupling to the machine is dirty.	YES	Clean.
5	Imaging unit	The surface of the PC drum is scratched.	YES	Change imaging unit.
6	Transfer roller unit	Transfer roller is installed properly.	NO	Reinstall.
7		Transfer roller is dirty or scratched.	YES	Change transfer roller unit.
8		The problem has been eliminated through the checks of steps up to 7.	NO	Change transfer belt unit. Change printer control board. Change MFP board.

d-Color MF3000

TROUBLESHOOTING

16.2.31 Printer 4-color: void areas, white spots

A. Typical faulty images

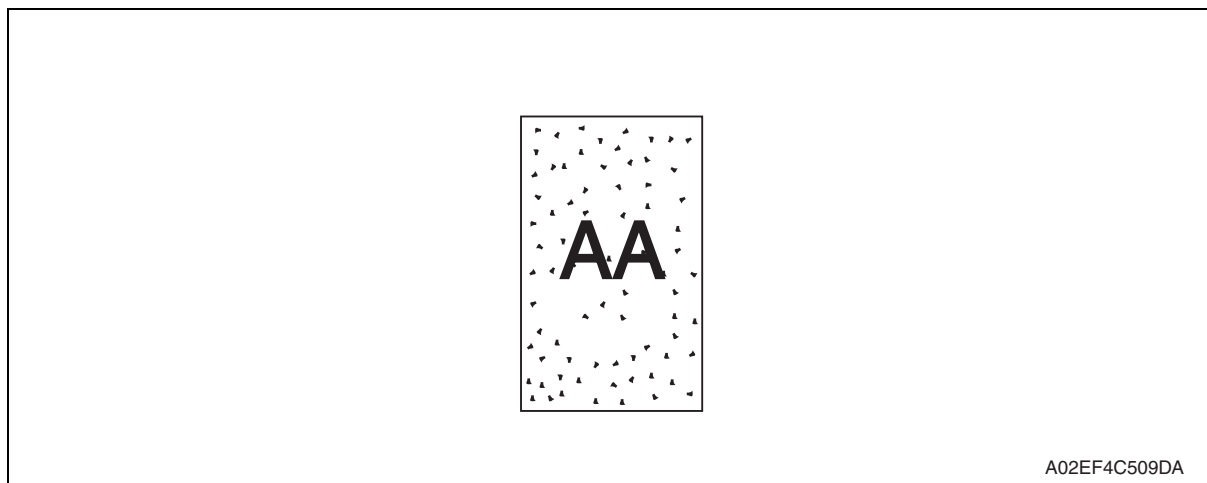


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Image check	There are void areas at the front side or high density section.	YES	See P.252
2		There are void areas in the trailing edge.	YES	Perform [2nd Image transfer Current] of [Printer Adjustment] under Service Mode.
3	Transfer belt unit	Fingerprints, oil, or other foreign matter is evident on the transfer belt.	YES	Clean it with the tender cloth or paper which is dusted with the toner.
4		Transfer belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change transfer belt unit if belt is damaged.
5	Transfer roller unit	Transfer roller is dirty or scratched.	YES	Change 2nd image transfer roller unit.
6		Charge neutralizing needle is not separated and ground terminal is connected properly.	NO	Correct or change.
7	Paper path	There is foreign matter on paper path.	YES	Remove foreign matter.
8		Pre-image transfer guide plate is damaged or dirty.	YES	Clean or change.
9		The problem has been eliminated through the checks of steps up to 8.	NO	Change transfer belt unit.

16.2.32 Printer 4-color: colored spots

A. Typical faulty images



B. Troubleshooting procedure

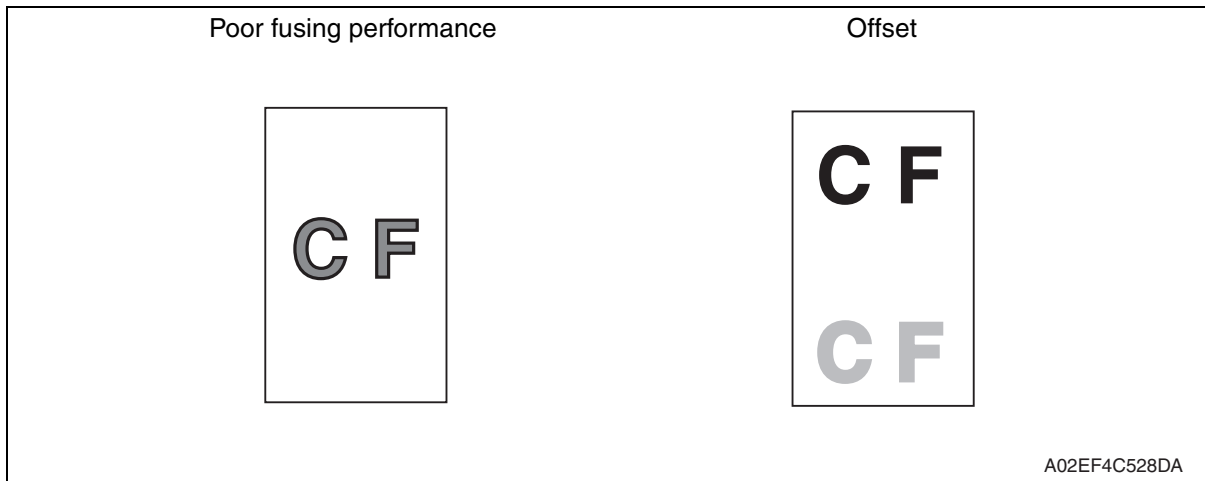
Step	Section	Check item	Result	Action
1	Imaging unit	The surface of the PC drum is scratched.	YES	Change imaging unit.
2	Transfer belt unit	Fingerprints, oil, or other foreign matter is evident on the image transfer belt.	YES	Clean it with the tender cloth or paper which is dusted with the toner.
3		Transfer belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change transfer belt unit if belt is damaged.
4	Transfer roller unit	Transfer roller is dirty or scratched.	YES	Change transfer roller unit.
5	Paper path	There is foreign matter on paper path.	YES	Remove foreign matter.
6	Fuser unit	Fusing belt is dirty or scratched.	YES	Change fuser unit.
7		The problem has been eliminated through the checks of steps up to 6.	NO	Change transfer belt unit.

d-Color MF3000

TROUBLESHOOTING

16.2.33 Printer 4-color: poor fusing performance, offset

A. Typical faulty images

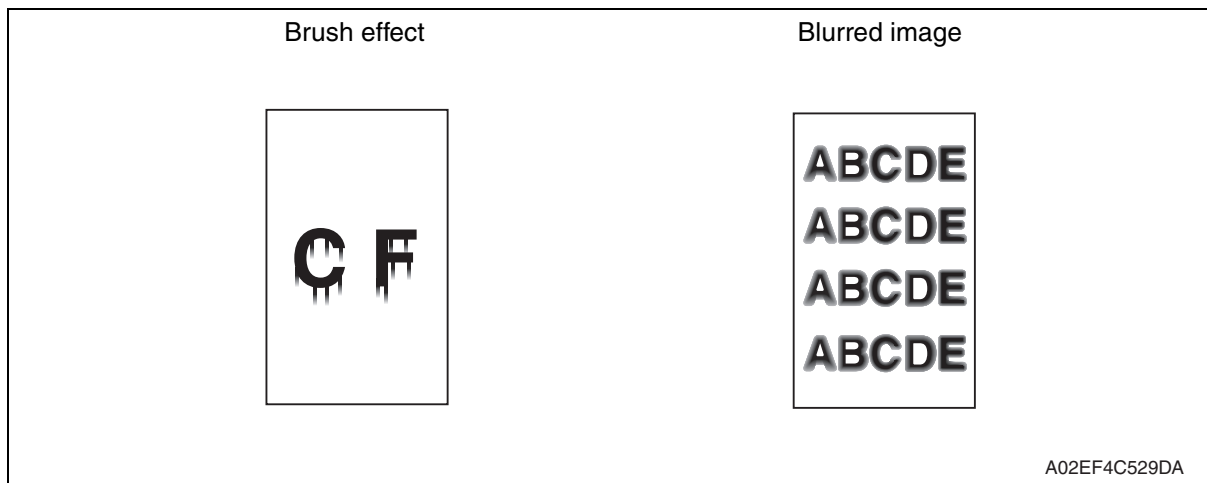


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper	Paper type does not match.	YES	Change the setting.
2	Printer Adjustment→ Fuser Temp Control (Service Mode)	Changing fusing temperature eliminates the problem of poor fusing performance and offset.	YES	Readjust fusing temperature.
3		The problem has been eliminated through the checks of steps up to 2.	NO	Change fuser unit.

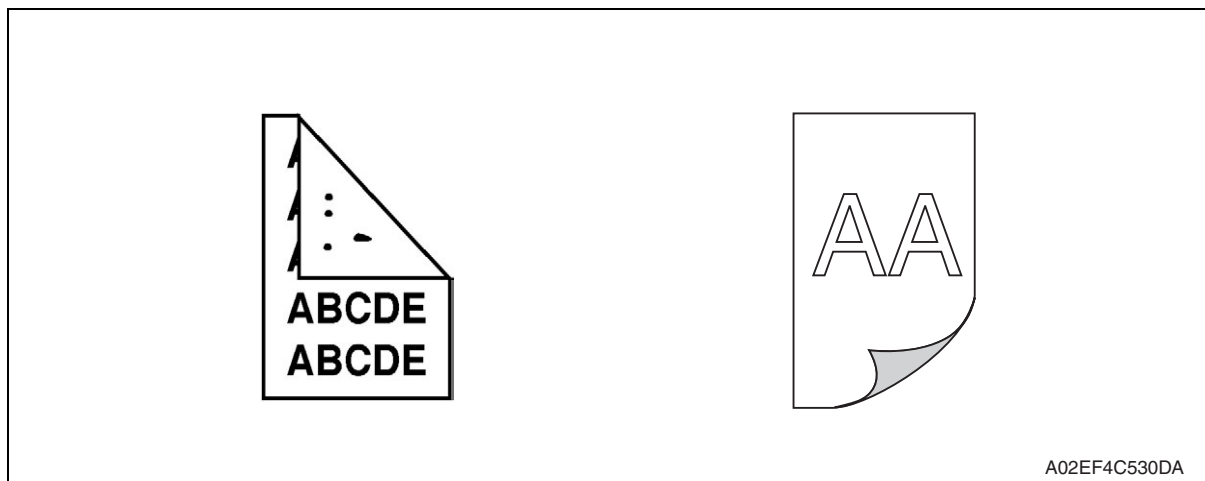
16.2.34 Printer 4-color: brush effect, blurred image

A. Typical faulty images



B. Troubleshooting procedure

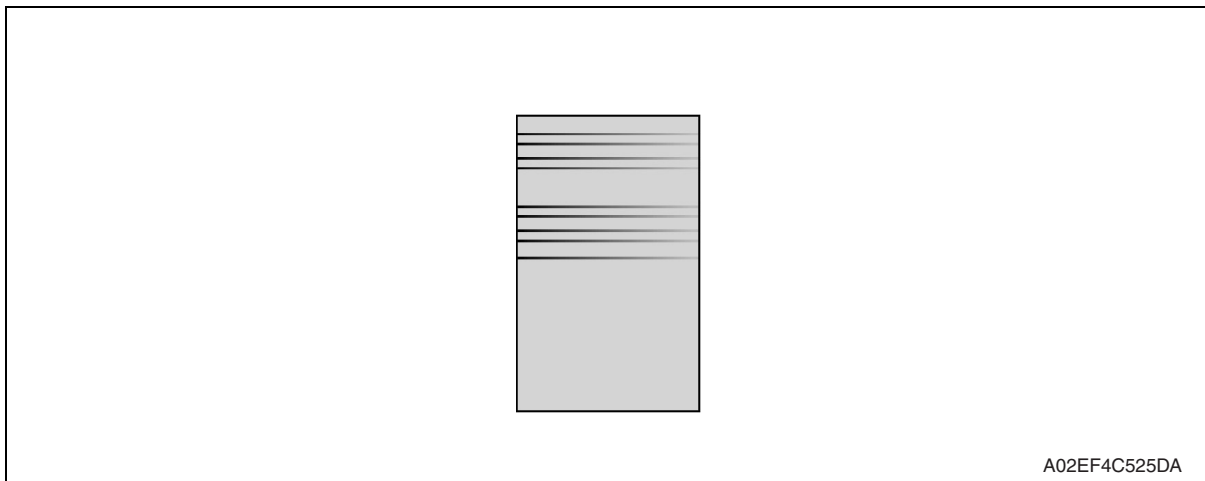
Step	Section	Check item	Result	Action
1	Paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
2		Paper type does not match.	YES	Change the setting.
3	Fuser unit	Fuser unit is installed properly.	NO	Reinstall.
4		Fusing entrance guide plate is dirty.	YES	Clean.
5		Fusing belt is dirty or scratched.	YES	Change fuser unit.

16.2.35 Printer 4-color: back marking**A. Typical faulty images****B. Troubleshooting procedure**

Step	Section	Check item	Result	Action
1	Transfer roller unit	Transfer roller is scratched or dirty.	YES	Change transfer roller unit.
2	Paper path	There is foreign matter on paper path.	YES	Remove foreign matter.
3	Fuser unit	Fusing entrance guide plate is scratched or dirty.	YES	Clean or change.
4		Lower fusing roller is scratched or dirty.	YES	Change fuser unit.
5	Transfer belt unit	Fingerprints, oil, or other foreign matter is evident on the transfer belt.	YES	Clean it with the tender cloth or paper which is dusted with the toner.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Change transfer belt unit. → Change high voltage unit.

16.2.36 Printer 4-color: uneven image

A. Typical faulty images



B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Toner cartridge	The toner cartridge of every color is surely installed.	NO	Re-install it.
2	PH unit	The PH unit is surely installed.	NO	Re-install it.
3	Toner cartridge	There is any stain or breakage on the drive section of the toner cartridge.	YES	Clean/replace the toner cartridge.
4	Imaging unit	There is any stain, damage or abrasion on the PC drum.	YES	Replace the imaging unit.
5	Transfer roller unit	There is any stain, damage, deformation or abrasion on the transfer roller.	YES	Replace the transfer roller unit.
6	Fuser unit	There is any stain, damage, deformation or abrasion on the roller and drive section of the fuser unit.	YES	Replace the fuser unit.
7		The problem has been eliminated through the check of step 6.	NO	Replace the transfer belt unit.

17. IC protector

17.1 Outline

- To increase product safety, this MFP has an IC protector (ICP) installed in each board. ICP is a component that protects IC. If the amount of the current supplied to the electrical parts such as motor exceeds the set level, ICP trips to protect IC from over current. The following list contains ICP installed in each board, related devices, and symptoms that occur when ICP trips.

17.2 IC protector list

17.2.1 Main body

A. Printer control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1	-	SOS sensor	No function	0310
	-	Laser diode		
F2	CL1	Media feed clutch	No function	Misfeed at tray 3/tray 4 paper feed section *1
	CL2	Conveyance clutch		
	M1	Media feed motor		
ICP1	FM10	DC power supply fan motor	No function	0045 *1
	FM11	Cooling fan motor		
	FM12	MFP board cooling fan motor		
ICP2	CL1	Tray 2 media feed clutch	No function	0094 *1 0096 *1
	CL2	Tray 1 media feed clutch		
	CL3	Registration clutch		
	CL4	Toner supply clutch/Y		
	CL5	Toner supply clutch/M		
	CL6	Toner supply clutch/C		
	CL7	Toner supply clutch/K		
	CL8	Loop detection clutch		
	CL11	Switchback roller feed clutch		
	CL12	Switchback roller reverse clutch		
	CL13	Duplex conveyance roller clutch		
	SD1	1st transfer release solenoid		
	SD2	2nd transfer release solenoid		
TCT	Total counter			
ICP3	HV	High voltage unit	No function	Process caution *1
ICP4	M5	Polygon motor	No function	0300
ICP5	-	On-board components	No function	Regardless of whether the door is open or closed, Door Open error is displayed.

*1: This is an error that occurs when the power switch is turned ON. If the IC protector trips after the power switch is turned ON, another error may occur.

B. DC power supply

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
FU101	-	DC power supply circuit	DC power supply does not supply power.	Power switch is not turned ON.
FU191	-	Heater circuit	The heater does not turn ON.	0500 *1

*1: This is an error that occurs when the power switch is turned ON. If the IC protector trips after the power switch is turned ON, another error may occur.

17.2.2 Lower feeder unit PF-P08

A. PC control board

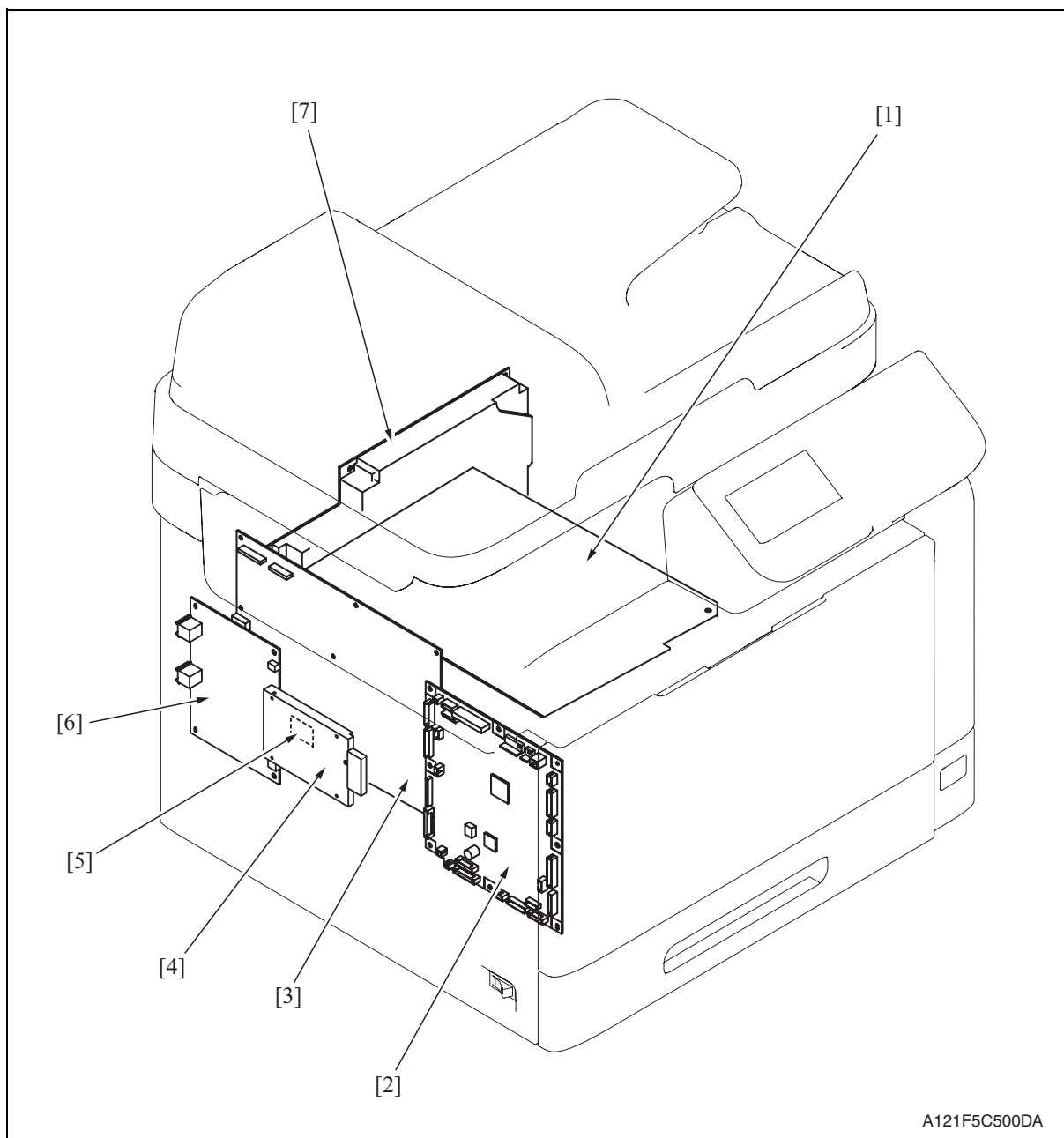
ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP1	CL1	Media feed clutch	No function	Misfeed at tray 3/tray 4 paper feed section
ICP2	CL2	Conveyance clutch	No function	Misfeed at tray 3/tray 4 vertical conveyance section

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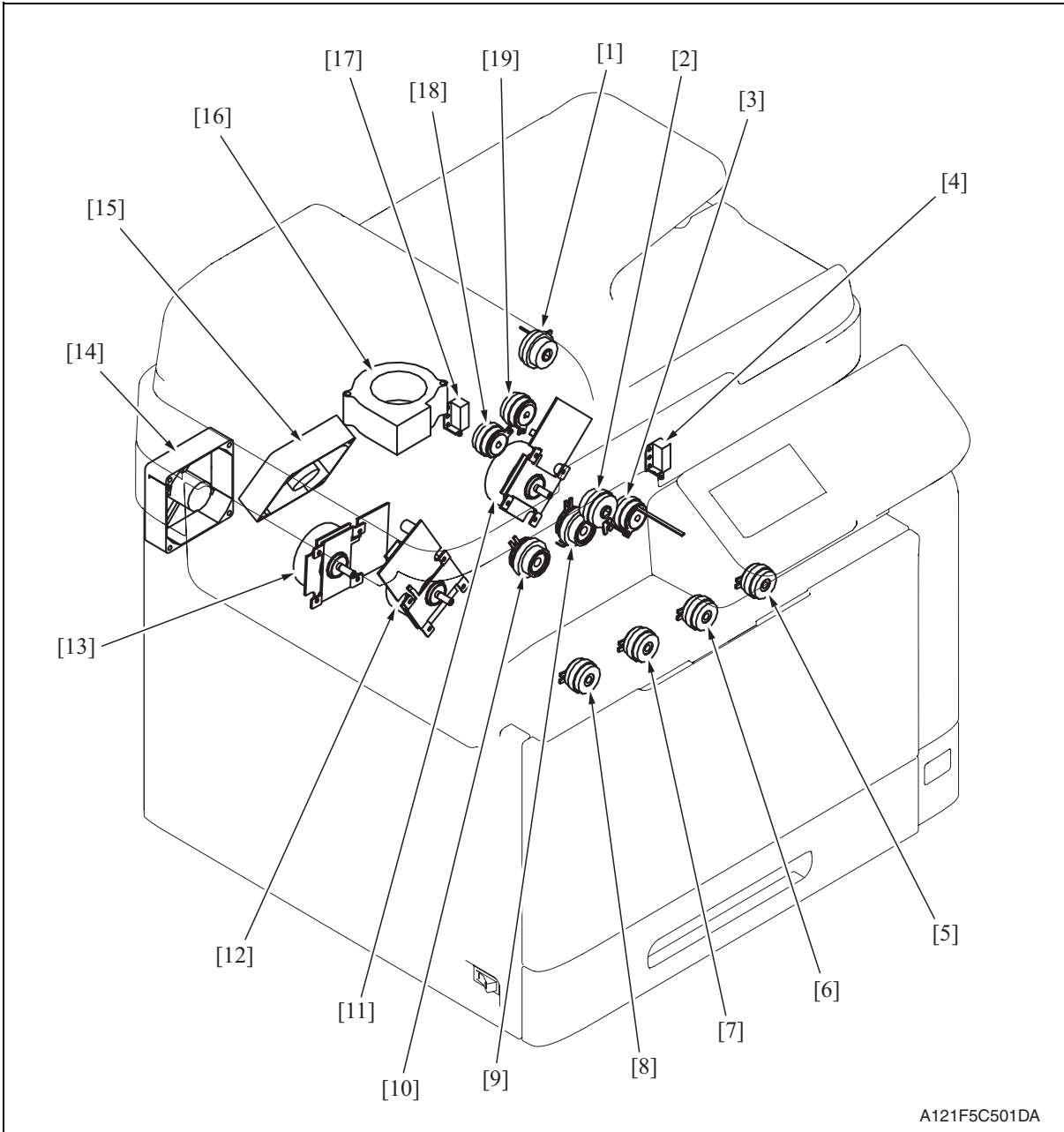
18. PARTS LAYOUT DRAWING

18.1 Main body



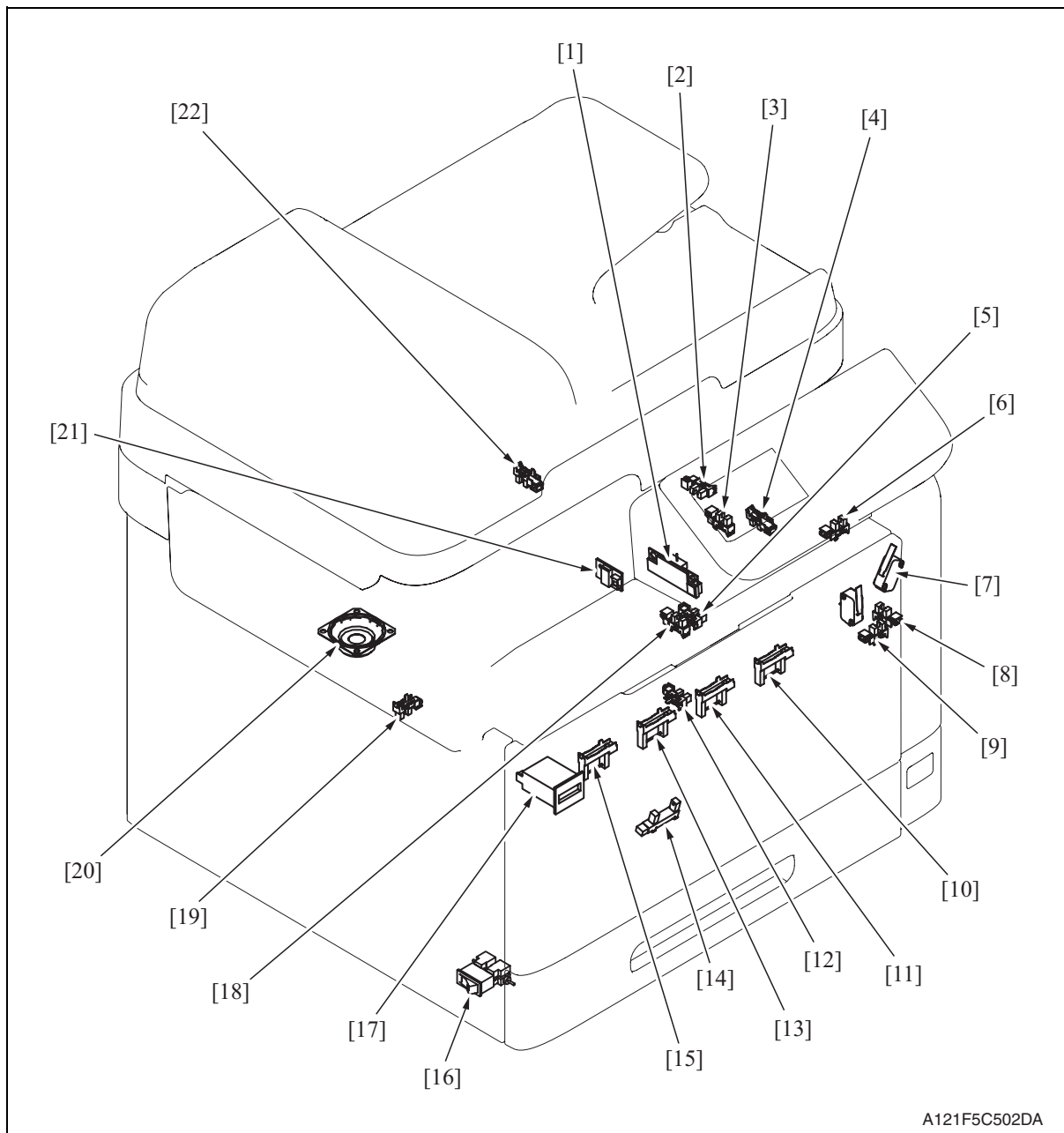
A121F5C500DA

- [1] DC power supply (DCPU)
- [2] Printer control board (PRCB)
- [3] MFP board (MFPB)
- [4] Hard disk (HDD)
- [5] SSD board (SSDB)
- [6] FAX board (FAXB)
- [7] High voltage unit (HV1)



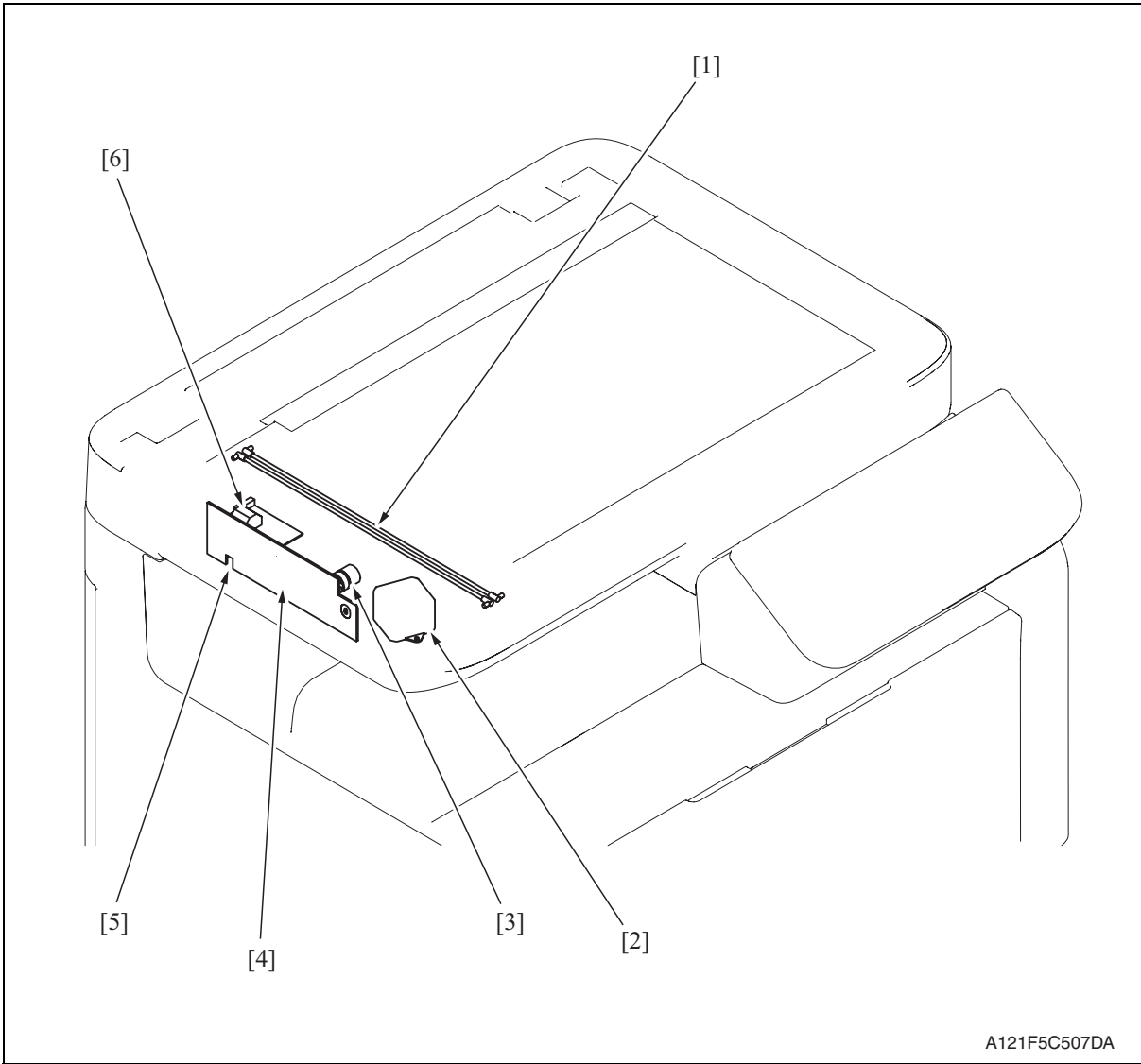
A121F5C501DA

- [1] Loop detection clutch (CL8)
- [2] Registration clutch (CL3)
- [3] Duplex conveyance roller clutch (CL13)
- [4] 2nd transfer release solenoid (SD2)
- [5] Toner supply motor/K (CL7)
- [6] Toner supply motor/C (CL6)
- [7] Toner supply motor/M (CL5)
- [8] Toner supply motor/Y (CL4)
- [9] Tray 1 media feed clutch (CL2)
- [10] Tray 2 media feed clutch (CL1)
- [11] Main motor (M2)
- [12] Developing motor (M1)
- [13] Color PC drum motor (M4)
- [14] MFP board cooling fan motor (FM12)
- [15] DC power supply fan motor (FM10)
- [16] Cooling fan motor (FM11)
- [17] 1st transfer release solenoid (SD1)
- [18] Switchback roller reverse clutch (CL12)
- [19] Switchback roller feed clutch (CL11)



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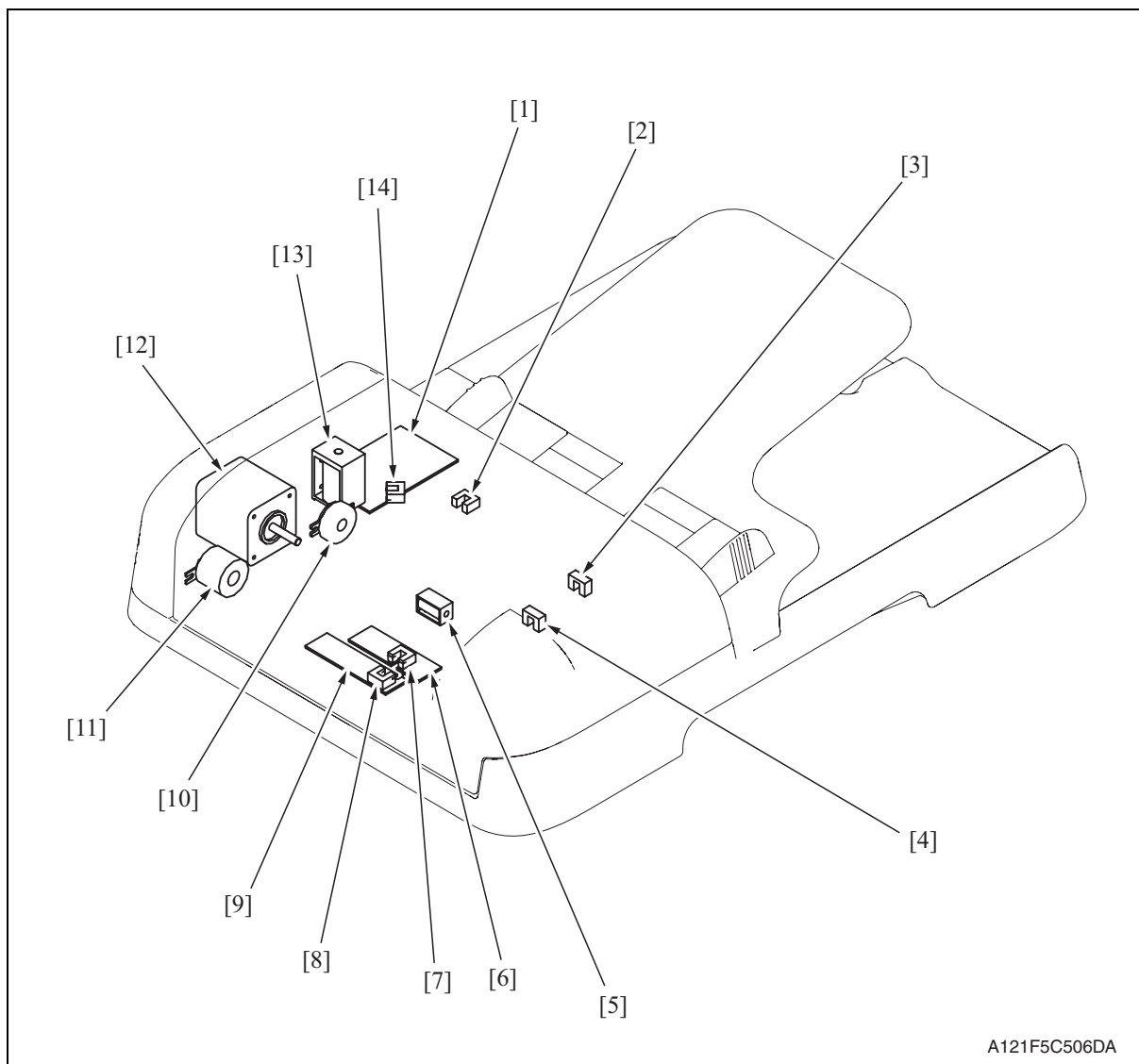
- | | |
|------------------------------------|--|
| [1] IDC sensor (IDC) | [12] Tray2 media empty sensor (PS2) |
| [2] Loop detection sensor (PS6) | [13] Toner level sensor/M (PS14) |
| [3] Duplex conveyance sensor (PS9) | [14] Waste toner near full sensor (PS12) |
| [4] Tray media full sensor (PS7) | [15] Toner level sensor/Y (PS13) |
| [5] Tray1 media empty sensor (PS3) | [16] Power switch (SW1) |
| [6] Exit sensor (PS8) | [17] Total counter (TCT) |
| [7] Right door switch (SW3) | [18] Registration sensor (PS5) |
| [8] Right door sensor (PS11) | [19] Tray2 set sensor (PS1) |
| [9] Front door sensor (PS10) | [20] Speaker (SP1) |
| [10] Toner level sensor/K (PS16) | [21] Temperature/ humidity sensor (TEM/HUMS) |
| [11] Toner level sensor/C (PS15) | [22] 1st transfer release sensor (PS17) |



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- | | |
|--------------------------|--------------------------------------|
| [1] Exposure lamp (LA1) | [4] Relay board/3 (REYB102) |
| [2] Scanner motor (M101) | [5] Scanner home sensor (on REYB102) |
| [3] CCD board (CCDB) | [6] Inverter board (INVB) |

18.2 ADF



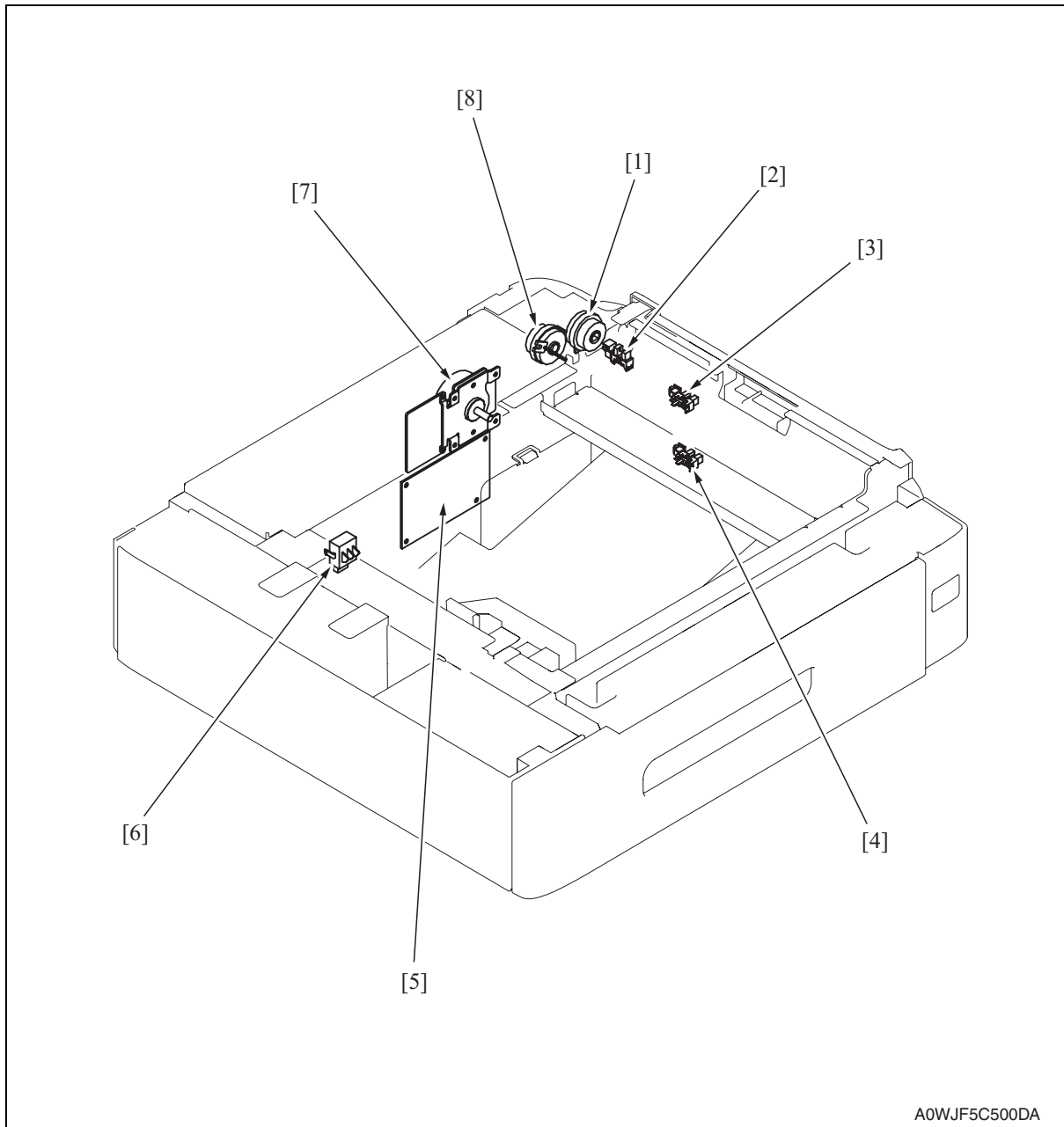
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- | | |
|-------------------------------------|--------------------------------------|
| [1] DF control board (DFCB) | [8] Relay board/1 (REYB100) |
| [2] Pick-up sensor (PS101) | [9] Registration sensor (on REYB100) |
| [3] Document sensor (PS102) | [10] Pick-up clutch (CL100) |
| [4] Paper interval sensor (PS103) | [11] Registration clutch (CL101) |
| [5] Pick-up solenoid (SD100) | [12] Transport motor (M100) |
| [6] Relay board/2 (REYB101) | [13] Release solenoid (SD101) |
| [7] Before read sensor (on REYB101) | [14] ADF door sensor (PS100) |

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18.3 Lower feeder unit (option)

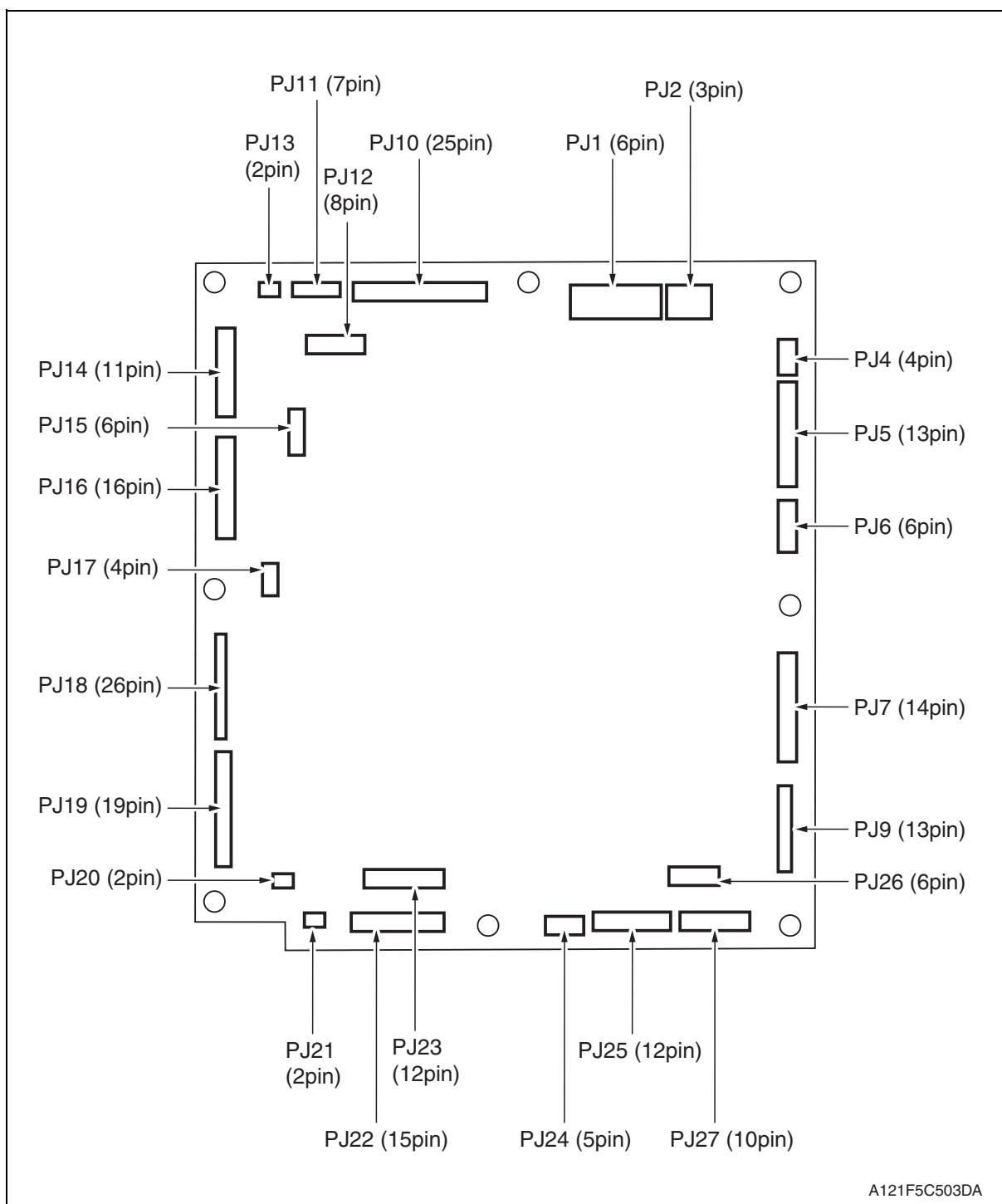


- | | |
|------------------------------|-----------------------------|
| [1] Conveyance clutch (CL2) | [5] PC control board (PCCB) |
| [2] Right door sensor (PS5) | [6] Media size switch (SW1) |
| [3] Media feed sensor (PS3) | [7] Media feed motor (M1) |
| [4] Media empty sensor (PS1) | [8] Media feed clutch (CL1) |

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19. CONNECTOR LAYOUT DRAWING

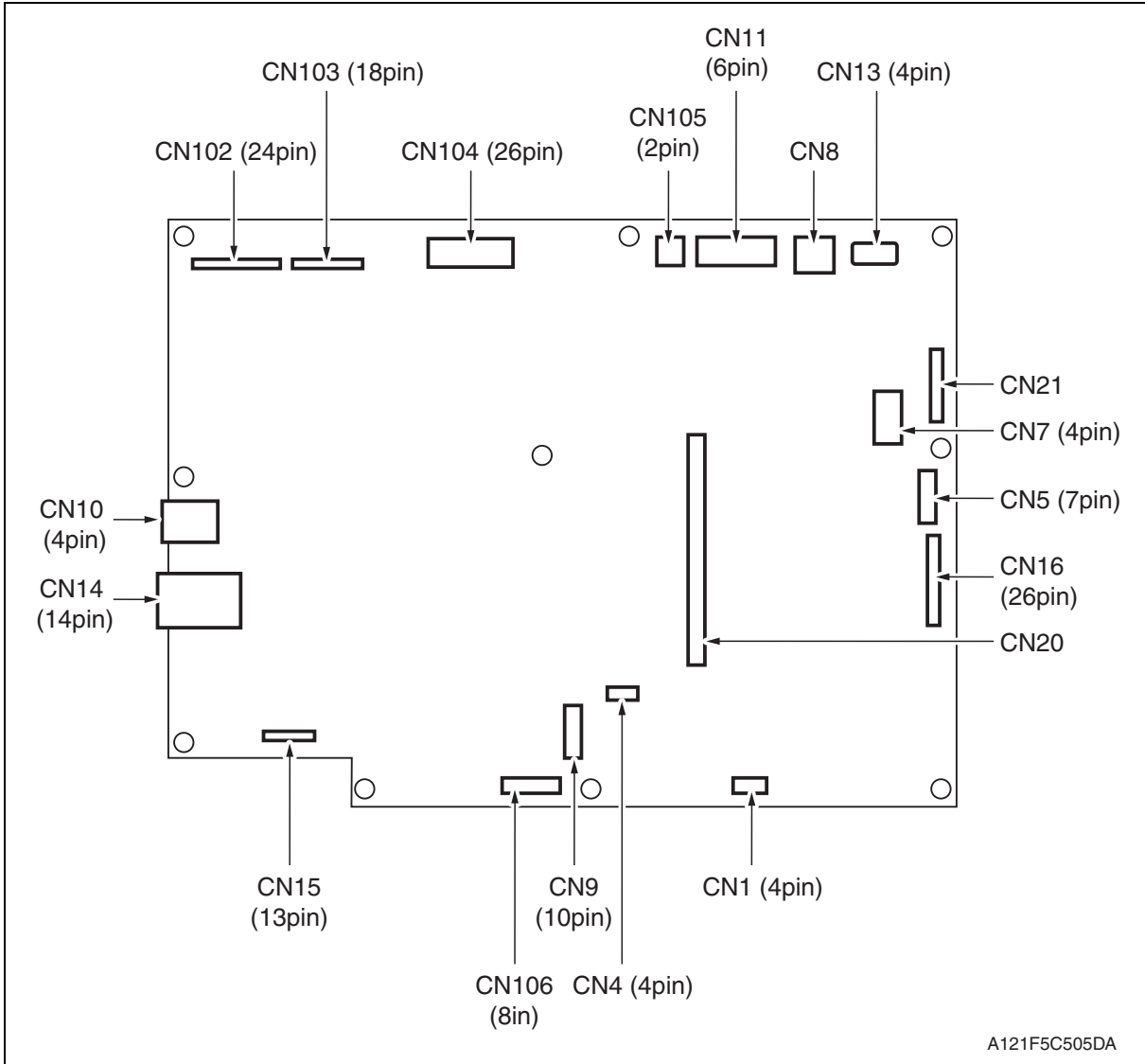
19.1 Printer control board (PRCB)



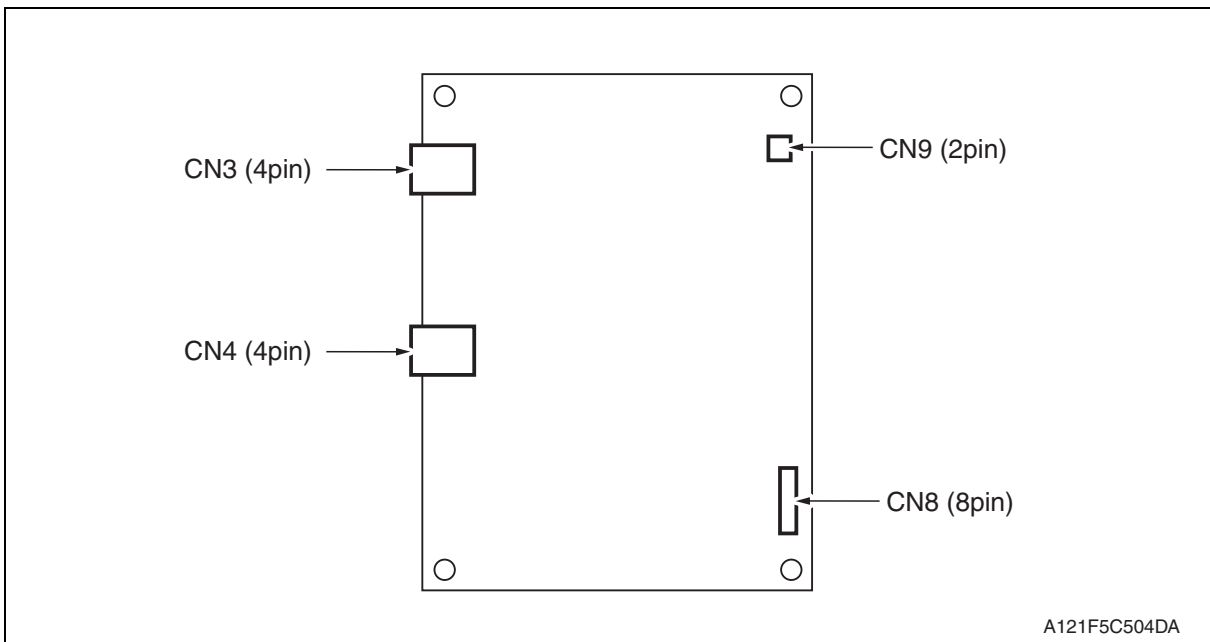
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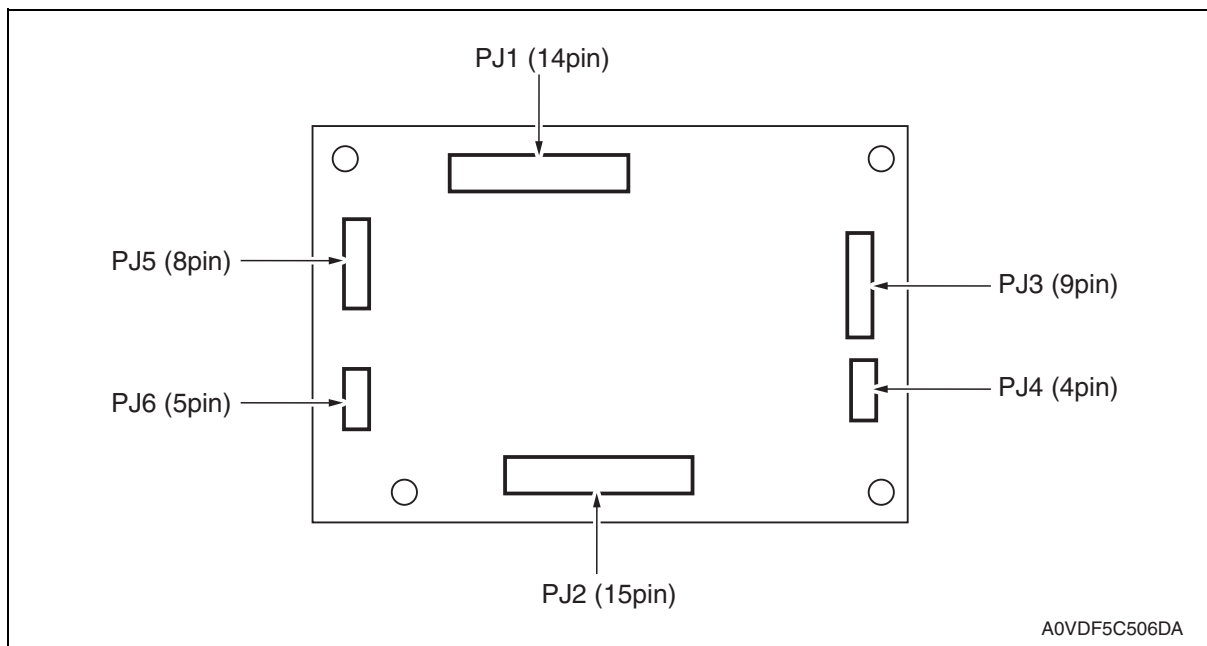
19.2 MFP board (MFPB)



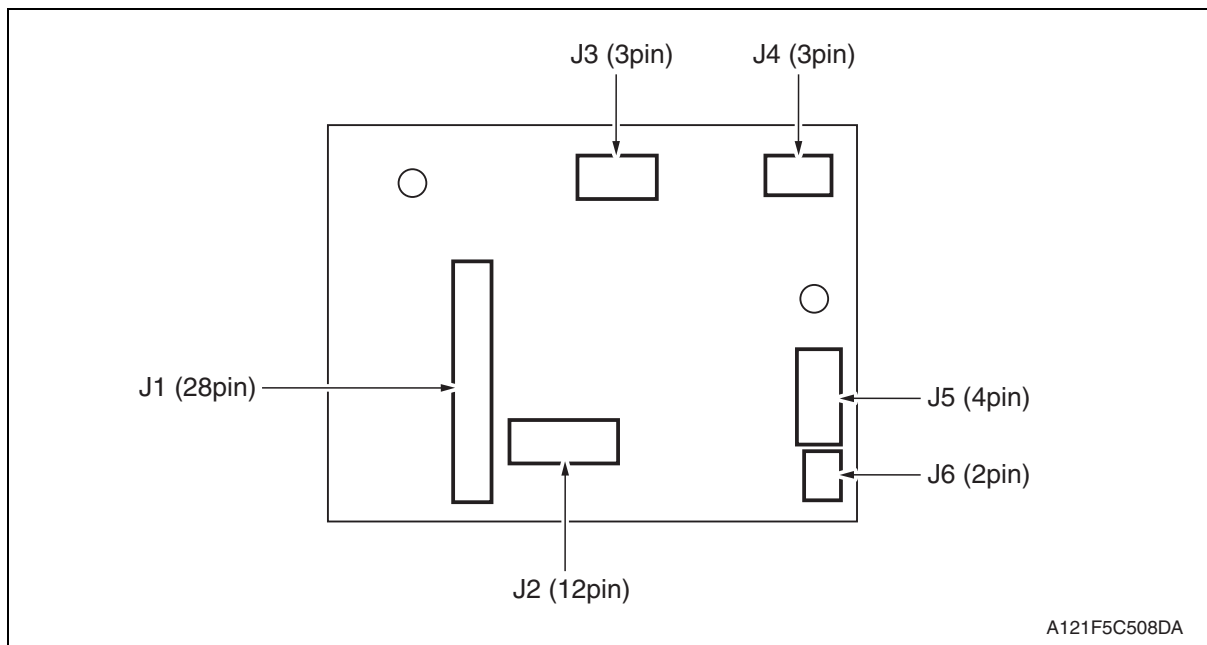
19.3 FAX board (FAXB)



19.4 PC control board (PCCB)



19.5 DF control board (DFCB)



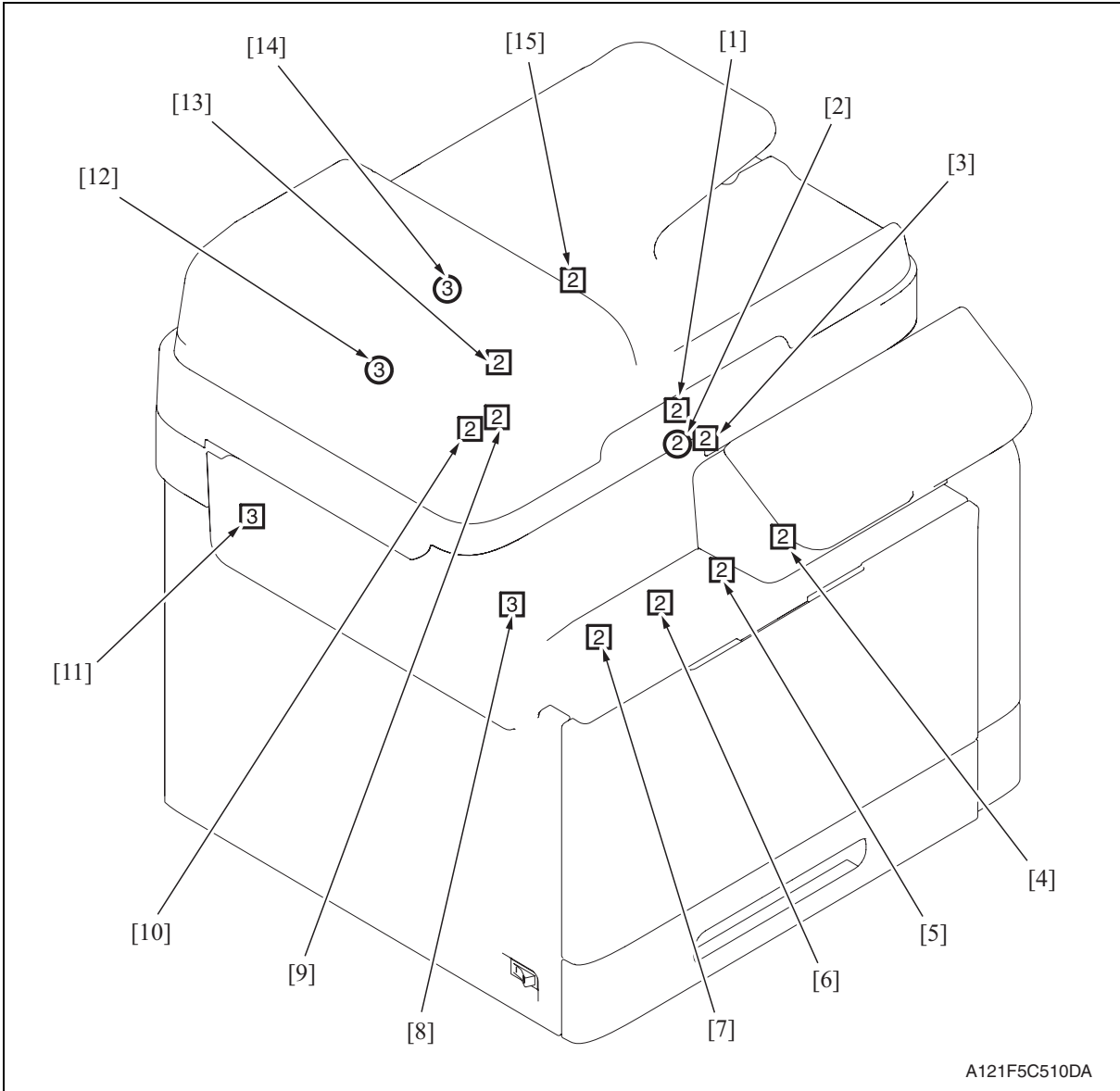
d-Color MF3000

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20. CONNECTOR LAYOUT DRAWING

Description

Number of Pin → ① Possible to confirm by removing external cover.
 → [1] Not possible to confirm by removing external cover.



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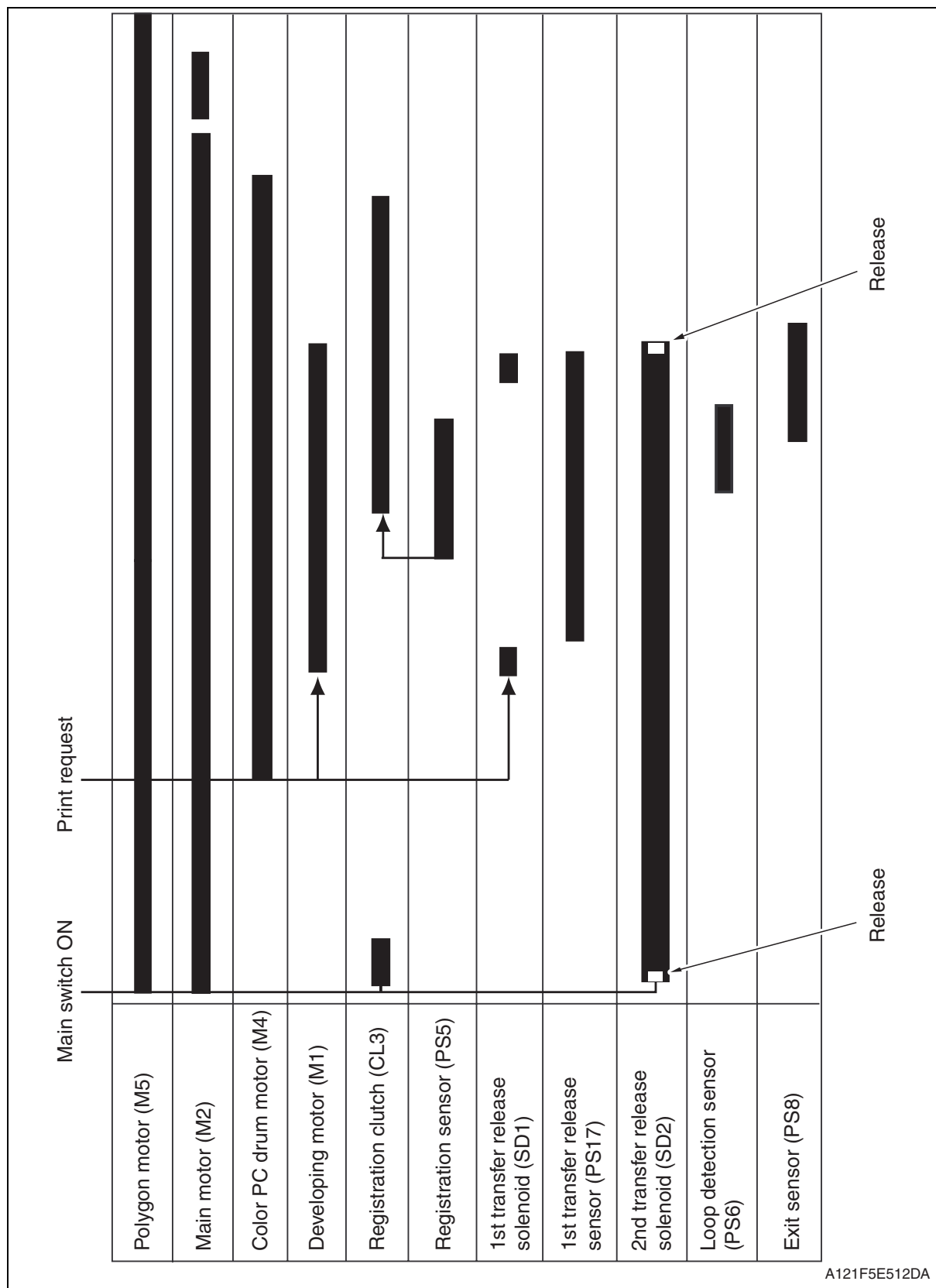
No.	CN No.	Location	No.	CN No.	Location
[1]	CN23	B-7	[9]	CN27	D-7
[2]	CN22	B-7	[10]	CN28	D-7
[3]	CN20	C-7	[11]	CN64	H-15
[4]	CN35	I-7	[12]	CN43	G-15
[5]	CN34	H-7	[13]	CN25	H-15
[6]	CN33	H-7	[14]	CN29	G-15
[7]	CN32	H-7	[15]	CN2	E-7
[8]	CN63	J-15			

21. TIMING CHART

A. Operating conditions

- Color, A4 or Letter

B. Timing chart

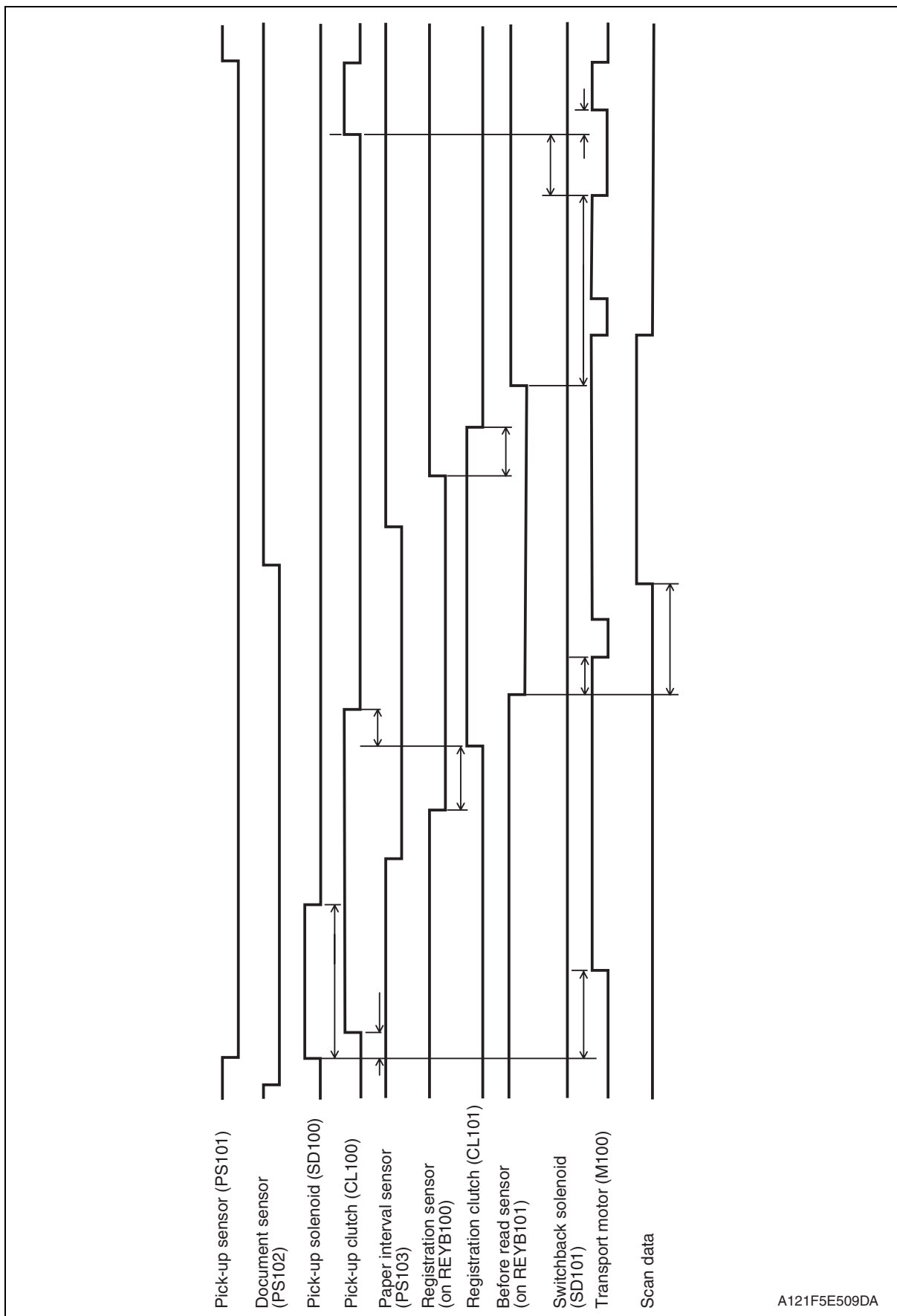


21.1 ADF

A. Operating conditions

- Color, A4 or Letter

B. Timing chart



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22. d-Color MF3000 Concept of parts life

Conditions for life specifications values (standard mode)

Item	Description
Job type	2 page prints/job (2P/J)
Media size	A4S or LetterS
Print color ratio	K (Black) : C (Color) = 1 : 1

The number of prints to be actually produced varies depending on print conditions.

Life value details

	Part replaced by	Life value (Specification value)	New article detection	Unit-in-position detection	Life value	Near life (Near empty)			Life (Empty)				
						Near life value	Near life detection	Near life display Message and display function availability	Near life control method	Life detection	Life display Message and display function availability	Life stop	Life control method
Imaging Unit (C/M/Y/K)	User	30K images	CSIC	CSIC	Standard mode: 20K Monochrome continuous printing (K only): 30K Color continuous printing (all colors): 30K	Use rate 80% Equivalent to 16,000 images (standard mode) Equivalent to 24,000 images (continuous printing)	Effectuated	<Life display> Available <Message> Replace imaging unit soon X (X denotes color) <Display function> Available Default is [ON: displayed] [Service mode] -> [Enable Warning] -> [Imaging Unit Low]	K: Calculate based on the main motor drive time (distance). YMC: Calculate based on the Color PC drum motor drive time (distance). The drive time of each motor is compared with the number of prints produced and whichever has a higher use rate is set as the life value to determine a near life condition.	Effectuated	<Life display> Available <Message> Replace imaging unit X (X denotes color) <Display function> Not available (No display prohibit function available)	Effectuated Life stop display is given at timing equivalent to about 1000 images counted from the life display. Note, however, that the timing may be extended to that equivalent to about 10,000 images when [Long] is selected for [IU Yield Settings].	K: Calculate based on the main motor drive time (distance). YMC: Calculate based on the Color PC drum motor drive time (distance). The drive time of each motor is compared with the number of prints produced and whichever has a higher use rate is set as the life value to determine a life condition.
Toner Cartridge (Replacement)	User	6K images (by ISO chart)	CSIC	CSIC	6K by ISO19798 chart	K: Use rate 75% Equivalent to 4,500 images Y,M,C: Use rate 80% Equivalent to 4,800 images	Effectuated	<Life display> Available <Message> Toner is low X (X denotes color) <Display function> Available Default is [ON: displayed] [Service mode] -> [Enable Warning] -> [Toner Low]	Calculate based on the toner replenishing time (the number of times the toner supply clutch is energized).	Effectuated	<Life display> Available <Message> Replace toner (X) (X denotes color) <Display function> Not available (No display prohibit function available)	Effectuated Stopped at an empty condition. Monochrome printing only can, however, continue as long as the K toner is not empty (when [MODE1] is selected in [SERVICE MODE] -> [TONER OUT MODE]).	The toner level sensor is used for the detection. An empty condition is determined, if toner is not replenished even after the lapse of a predetermined period of time after a toner replenishing sequence is started.
Toner Cartridge (In-box)	User	6K images (by ISO chart)	Not available	Not available		K: Use rate 75% Equivalent to 4,500 images Y,M,C: Use rate 80% Equivalent to 4,800 images	Effectuated	<Life display> Available <Message> Toner is low X (X denotes color) <Display function> Available Default is [ON: displayed] [Service mode] -> [Enable Warning] -> [Toner Low]		Effectuated	<Life display> Available <Message> Replace toner (X) (X denotes color) <Display function> Not available (No display prohibit function available)		
Waste Toner Bottle	User	Monochrome: 36K images Color: 9K images	Not available. The error is reset by replacing the part with a new one.	Not available	Waste toner equivalent to 36K images during printing in standard mode to be collected	Use rate 92% Equivalent to 33,120 images (standard mode: monochrome) Equivalent to 8,280 images (standard mode: color)	Effectuated	<Life display> Available <Message> Waste toner Box Full <Display function> Available Default is [ON: displayed] [Service mode] -> [Enable Warning] -> [Waste Toner Box Near Full]	A waste toner near full condition is detected when the waste toner near full sensor is blocked for a predetermined continuous period of time. Approx. 600 prints can be produced before a life condition is detected after the near full condition has been detected. (based on the standard mode)	Effectuated	<Life display> Available <Message> Replace waste toner box <Display function> Not available (No display prohibit function available)	Effectuated	A waste toner full condition is determined after approx. 600 prints are produced in the standard mode. No more print jobs are accepted after the detection of the waste toner full condition.
Transfer Belt Unit	User	100K images	Not available. Select [Utility] -> [Admin Setting] -> [Maintenance Menu] -> [Supplies] -> [Consumables Replace] and execute [Transfer Belt Unit]. This resets the counter and the image stabilization sequence is automatically performed.	Not available	Standard mode: 100K			Near life not displayed		Effectuated	<Life display> Available <Message> Replace image transfer belt <Display function> Not available (No display prohibit function available)	Not effected	The drive time of the transfer belt is counted. The use rate is calculated based on the transfer belt drive time and a life is determined when a predetermined life value is reached.
Transfer Roller	User	100K images	Not available. Select [Utility] -> [Admin Setting] -> [Maintenance Menu] -> [Supplies] -> [Consumables Replace] and execute [Transfer Roller Unit]. This resets the counter and the image stabilization sequence is automatically performed.	Not available	Standard mode: 100K			Near life not displayed		Effectuated	<Life display> Available <Message> Replace transfer roller unit <Display function> Not available (No display prohibit function available)	Not effected	The drive time of the 2nd image transfer roller is counted. The use rate is calculated based on the 2nd image transfer roller drive time and a life is determined when a predetermined life value is reached.
Fuser Unit	User	100K images	Not available. Select [Utility] -> [Admin Setting] -> [Maintenance Menu] -> [Supplies] -> [Consumables Replace] and execute [Fusing Unit]. This resets the counter.	Not available	Standard mode: 100K Monochrome continuous printing: 120K Color continuous printing: 120K			Near life not displayed		Effectuated	<Life display> Available <Message> Replace fusing unit <Display function> Not available (No display prohibit function available)	Not effected	The drive time of the fusing unit is counted. The use rate is calculated based on each of the fusing unit drive time, the number of prints produced, and the fusing heater ON time; the largest use rate is set as the use rate of the fusing unit and a life is determined when a predetermined life value is reached.

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Option Printer

PF-P08

SERVICE MANUAL

Code Y112690-5

PUBLICATION ISSUED BY:

Olivetti S.p.A.

77, Via Jervis - 10015 Ivrea (TO)

Italy

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Revision history

After publication of this service manual, the parts and mechanism may be subject to change for improvement of their performance.

Therefore, the descriptions given in this service manual may not coincide with the actual machine.

When any change has been made to the descriptions in the service manual, a revised version will be issued with a revision mark added as required.

Revision mark:

- To indicate clearly a section revised, show  to the left of the revised section.
A number within  represents the number of times the revision has been made.
- To indicate clearly a section revised, show  in the lower outside section of the corresponding page.
A number within  represents the number of times the revision has been made.

NOTE

Revision marks shown in a page are restricted only to the latest ones with the old ones deleted.

- When a page revised in Ver. 2.0 has been changed in Ver. 3.0:
The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0:
The revision marks for Ver. 2.0 are left as they are.

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OUTLINE

MAINTENANCE

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OUTLINE

1. PRODUCT SPECIFICATIONS

A. Type

Name	Add-on 500-sheet media feed cassette
Type	Front-loading type
Installation	Desk type
Media feeding system	Media separation by a small-diameter roller with torque limiter
Document alignment	Center

B. Media type

Media size	B5S(JIS)/Executive/LetterS/A4S/Letter Plus/G-Legal/Legal
Media type	<ul style="list-style-type: none"> • Plain paper: 60 to 90 g/m² (16 to 24 lb) • Recycled paper: 60 to 90 g/m² (16 to 24 lb)
Capacity	500 sheets

C. Machine specifications

Power Requirements	DC 24 V ± 10% (supplied from the main body)
	DC 3.3 V ± 5%
Max. Power Consumption	16 W or less
Dimensions	447 mm (W) × 519 mm (D) × 117 mm (H) 17.6 inch (W) × 20.4 inch (D) × 4.6 inch (H)
Weight	Approx. 6.5 kg (14.25 lb)

D. Operating environment

Temperature	10° to 35° C/50° to 95° F (with a fluctuation of 10° C/h (18° F/h))
Humidity	15% to 85% (with a fluctuation of 20%/h)

NOTE

These specifications are subject to change without notice.

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MAINTENANCE

2. PERIODICAL MAINTENANCE PROCEDURE

2.1 Feed section

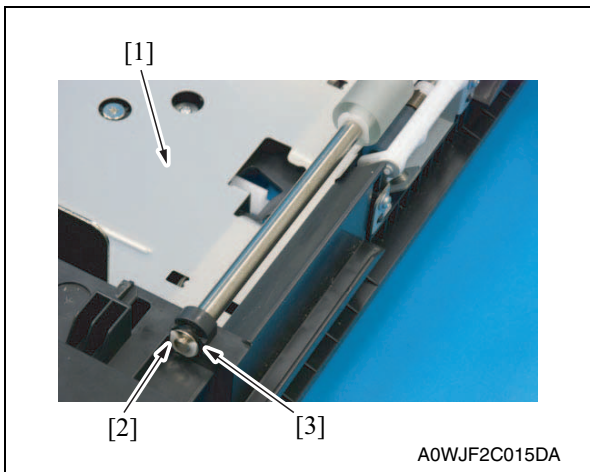
2.1.1 Replacing the tray3 feed roller/tray4 feed roller

A. Periodically replaced parts/cycle

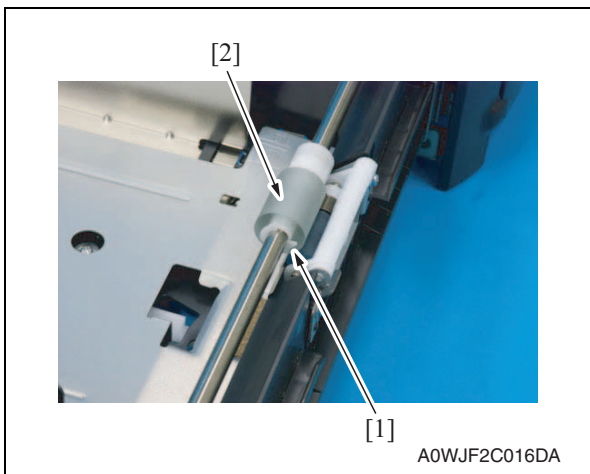
- Tray3 feed roller/Tray4 feed roller: Every 300,000 counts

B. Procedure

1. Pull out the tray3/tray4.



2. Lock the media lifting metal plate [1].
3. Remove the C-ring [2] and front bearing [3].



4. Remove the C-ring [1], and remove the tray3 feed roller/tray4 feed roller [2].

3. OTHER MAINTENANCE ITEM

3.1 Items not allowed to be disassembled and adjusted

A. Paint-locked screws

NOTE

- To prevent loose screws, a screw lock in blue or green series color is applied to the screws.
- The screw lock is applied to the screws that may get loose due to the vibrations and loads created by the use of machine or due to the vibrations created during transportation.
- If the screw lock coated screws are loosened or removed, be sure to apply a screw lock after the screws are tightened.

B. Red-painted screws

NOTE

- The screws which are difficult to be adjusted in the field are painted in red in order to prevent them from being removed by mistake.
- Do not remove or loosen any of the red-painted screws in the field. It should also be noted that, when two or more screws are used for a single part, only one representative screw may be marked with the red paint.

C. Variable resistors on board

NOTE

- Do not turn the variable resistors on boards for which no adjusting instructions are given in Adjustment/Setting.

D. Removal of PWBs

CAUTION

- When removing a circuit board or other electrical component, refer to “Handling of PWBs” and follow the corresponding removal procedures.
- The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.
- Where it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.

3.2 Disassembly/reassembly parts list

Section	Part name	Ref. page
Exterior parts	Rear cover	P.5
	Rear sheet metal cover	P.6
Unit	Lower Feeder Unit	P.6
Board and etc	PC control board (PCCB)	P.7
Others	Media feed motor (M1)	P.8
	Media feed clutch (CL1)	P.8
	Conveyance clutch (CL2)	P.10

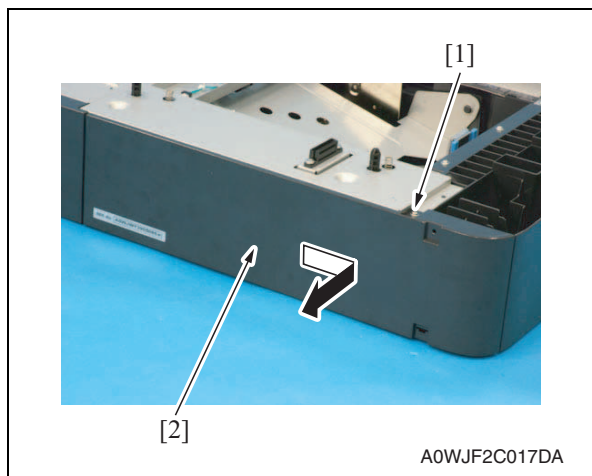
3.2.1 Cleaning parts list

Section	Part name	Ref. page
Rollers	Tray3 feed roller / tray4 feed roller	P.12
	Conveyance roller	P.12

3.3 Disassembly/reassembly procedure

3.3.1 Rear cover

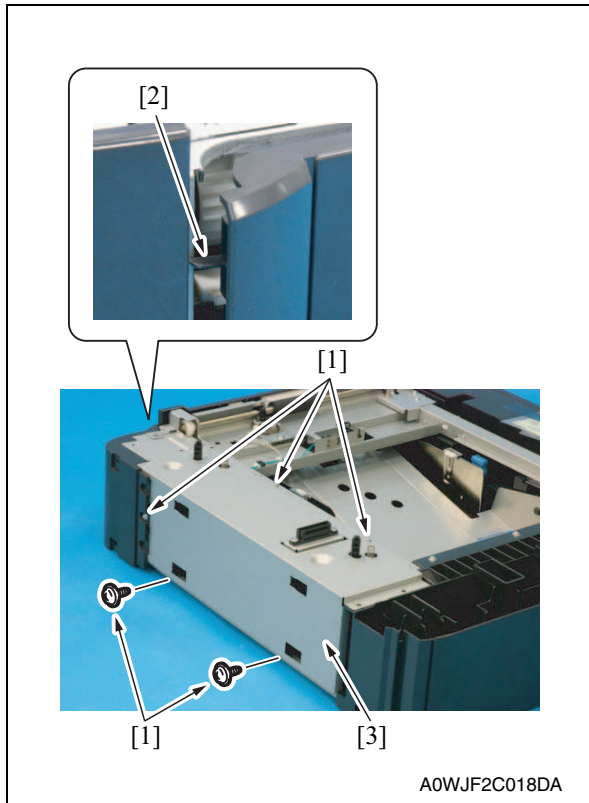
1. Remove the Lower Feeder Unit from the main body.
[See P.6](#)



2. Remove the screw [1], and remove the rear cover [2].

3.3.2 Rear sheet metal cover

1. Remove the Lower Feeder Unit from the main body.
See P.6
2. Remove the rear cover.
See P.5

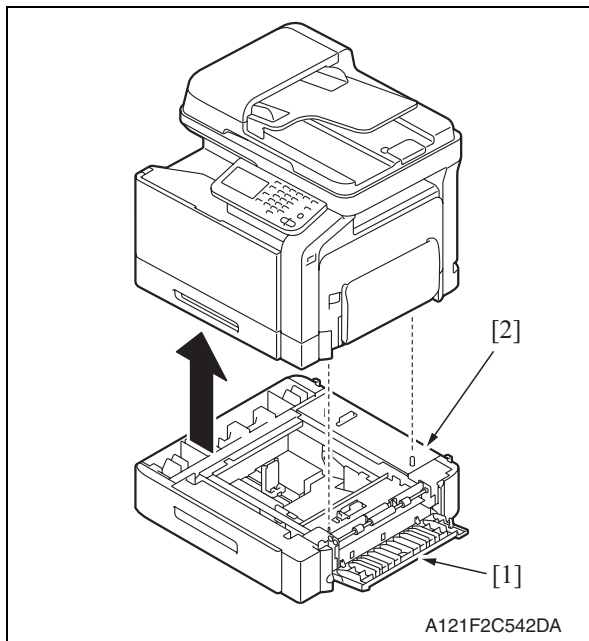


3. Remove five screws [1], unlock the tab [2], and remove the rear plate cover [3].

3.3.3 Lower Feeder Unit

NOTE

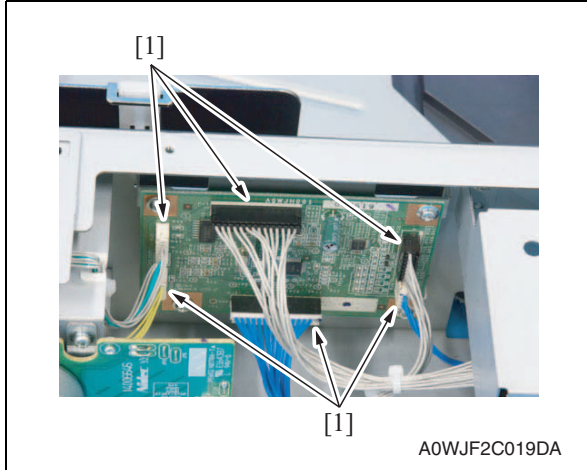
- Whenever removing or reinstalling the Lower Feeder Unit, be sure first to unplug the power cord of the printer from the power outlet.



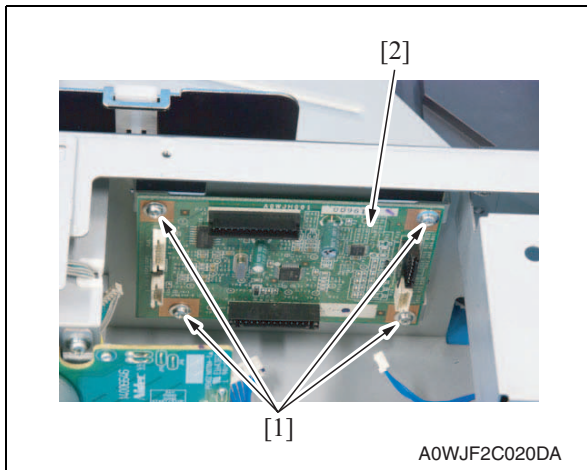
1. Open the right door [1].
2. Lift the printer main body and then remove the lower feeder unit [2] from the printer.

3.3.4 PC control board (PCCB)

1. Remove the Lower Feeder Unit from the main body.
[See P.6](#)
2. Remove the rear cover.
[See P.5](#)
3. Remove the rear sheet metal cover.
[See P.6](#)



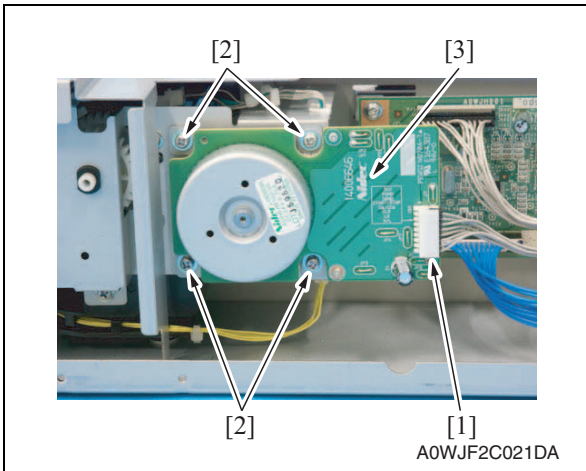
4. Disconnect six connectors [1] from the PC control board.



5. Remove four screws [1], and remove the PC control board [2].

3.3.5 Media feed motor (M1)

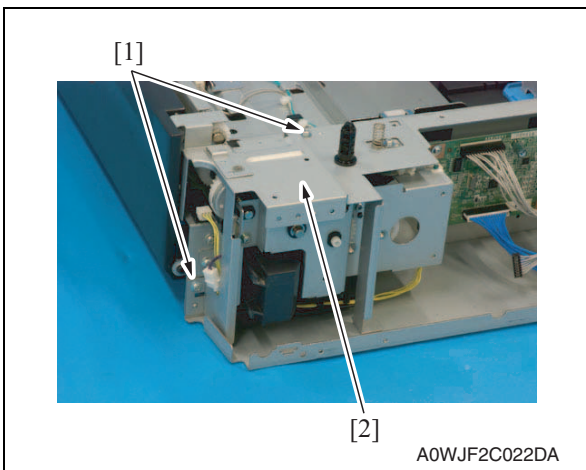
1. Remove the rear cover.
[See P.5](#)
2. Remove the rear sheet metal cover.
[See P.6](#)



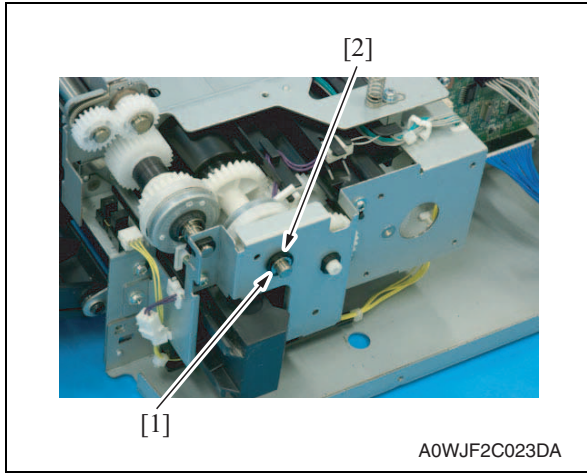
3. Disconnect the connector [1].
4. Remove four screws [2], and remove the media feed motor [3].

3.3.6 Media feed clutch (CL1)

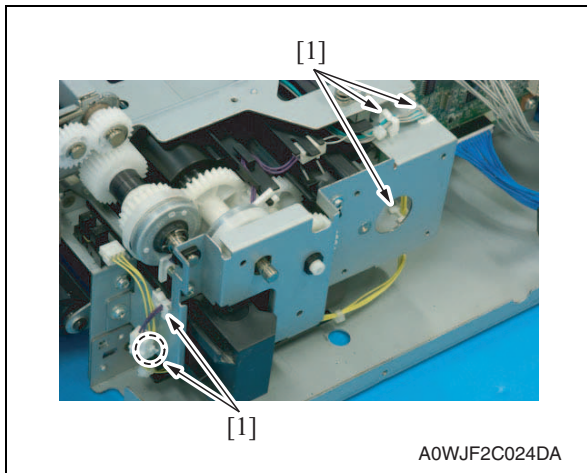
1. Remove the Lower Feeder Unit from the main body.
[See P.6](#)
2. Remove the rear cover.
[See P.5](#)
3. Remove the rear sheet metal cover.
[See P.6](#)
4. Remove the media feed motor.
[See P.8](#)



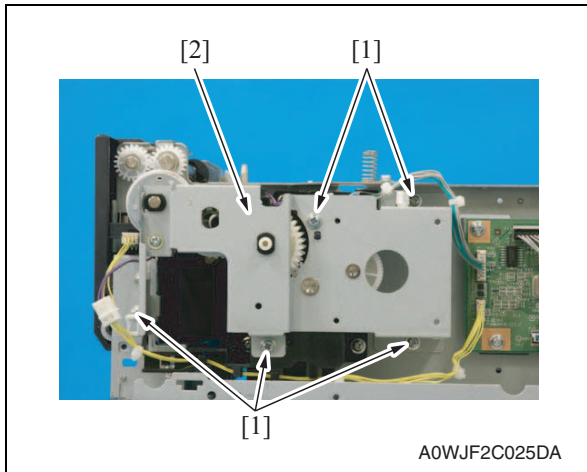
5. Remove two screws [1], and remove the sheet metal [2].



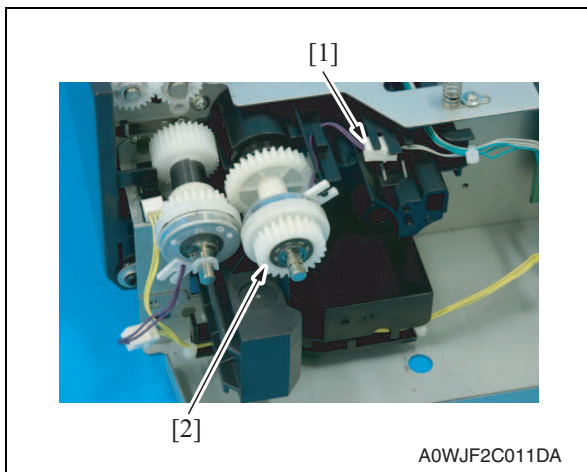
- 6. Remove the E-ring [1] and the bearing [2].



- 7. Remove the harness from five edge covers [1].



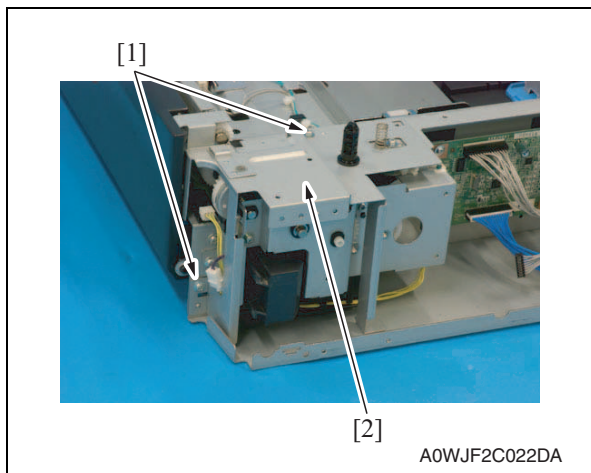
- 8. Remove five screws [1], and remove the gear fixing sheet metal [2].



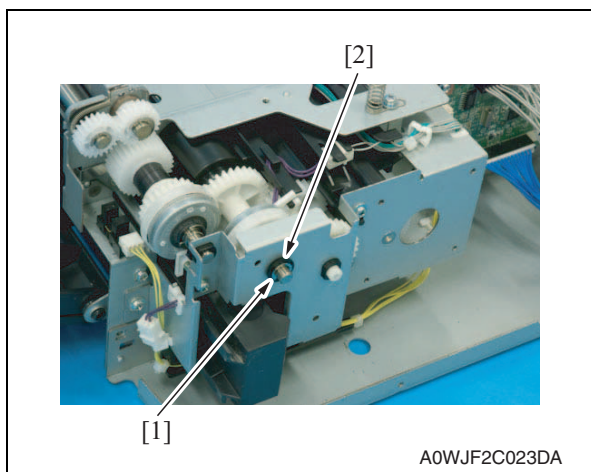
- 9. Disconnect the connector [1], and remove the media feed clutch [2].

3.3.7 Conveyance clutch (CL2)

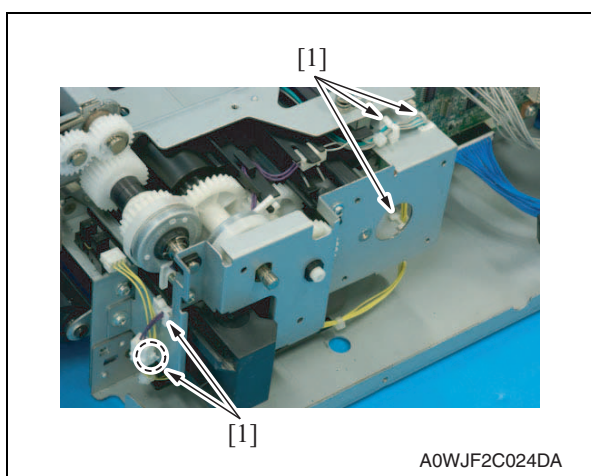
1. Remove the Lower Feeder Unit from the main body.
[See P.6](#)
2. Remove the rear cover.
[See P.5](#)
3. Remove the rear sheet metal cover.
[See P.6](#)
4. Remove the media feed motor.
[See P.8](#)



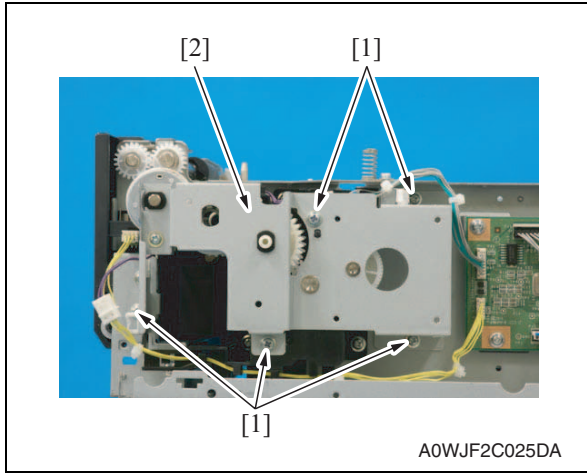
5. Remove two screws [1], and remove the sheet metal [2].



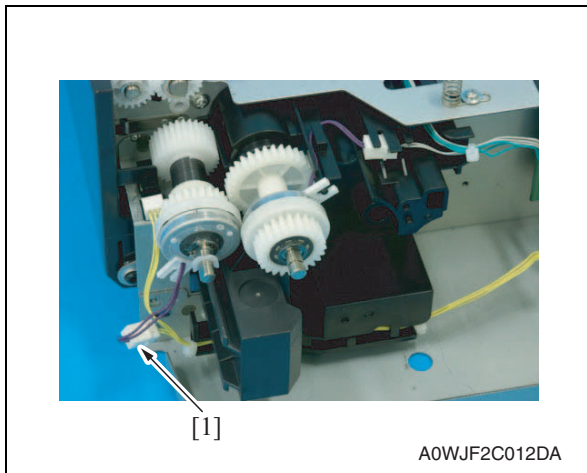
6. Remove the E-ring [1] and the bearing [2].



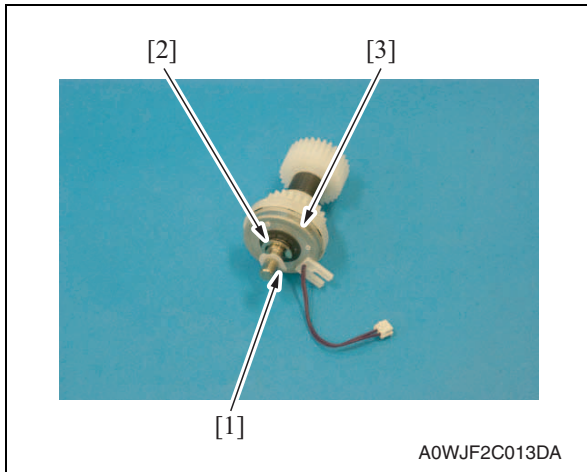
7. Remove the harness from five edge covers [1].



- 8. Remove five screws [1], and remove the gear fixing sheet metal [2].



- 9. Disconnect the connector [1].



- 10. Remove the C-ring [1] and E-ring [2], and remove the media feed clutch [3].

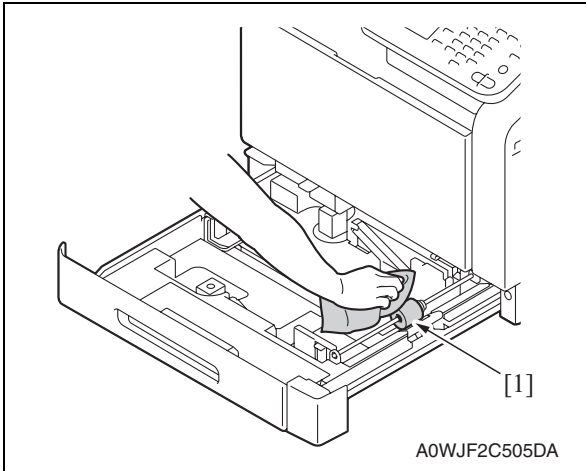
3.4 Cleaning procedure

NOTE

- The alcohol described in the cleaning procedure is isopropyl alcohol.

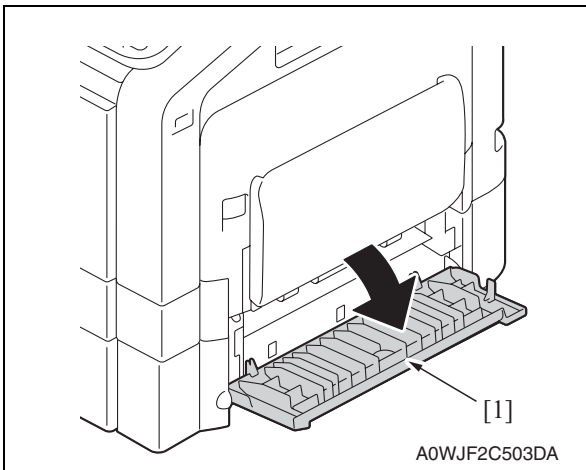
3.4.1 Tray3 feed roller / tray4 feed roller

1. Pull out the tray3/tray4.

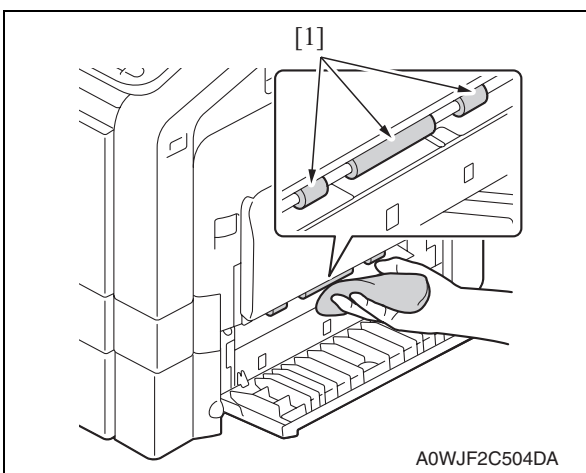


2. Wipe the tray3 feed roller/tray4 feed roller [1] clean of dirt using a cleaning pad dampened with alcohol.

3.4.2 Conveyance roller



1. Open the right door [1].



2. Wipe the conveyance roller [1] clean of dirt using a cleaning pad dampened with alcohol.

