KONICA MINOLTA

SERVICE MANUAL

FIELD SERVICE

magicolor
5650EN/5670EN

2008.04
KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. Ver. 1.0

FIELD SERVICE TOTAL CONTENTS

magicolor 5650EN/5670EN Main body

Lower feeder unit

Duplex option

Staple finisher

Blank Page

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, KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. (hereafter called the KMBT) strongly recommends that all servicing be performed only by KMBT-trained service technicians.
Changes may have been made to this product to improve its performance after this Service Manual was printed. Accordingly, KMBT 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

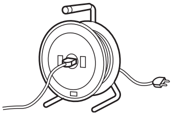
[1] MODIFICATIONS NOT AUTHORIZED BY KONICA MINOLTA BUSINESS TECHNOLOGIES, INC.

KONICA MINOLTA 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.

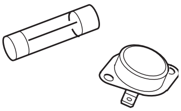
Prohibited Actions

⚠ DANGER

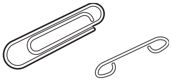
- Using any cables or power cord not specified by KMBT. 🚫



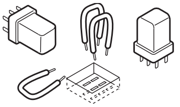
- Using any fuse or thermostat not specified by KMBT. Safety will not be assured, leading to a risk of fire and injury. 🚫



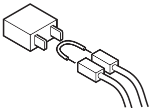
- Disabling fuse functions or bridging fuse terminals with wire, metal clips, solder or similar object. 🚫



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

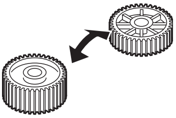


- Disabling safety functions (interlocks, safety circuits, etc.) Safety will not be assured, leading to a risk of fire and injury. 🚫



- Making any modification to the product unless instructed by KMBT 🚫

- Using parts not specified by KMBT 🚫



[2] POWER PLUG SELECTION

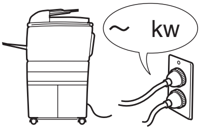
In some countries or areas, the power plug provided with the product may not fit wall outlet used in the area. In that case, it is obligation of customer engineer (hereafter called the CE) to attach appropriate power plug or power cord set in order to connect the product to the supply.

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.

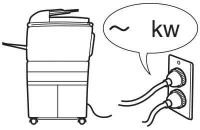
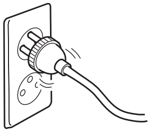
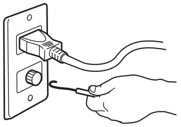
[3] CHECKPOINTS WHEN PERFORMING ON-SITE SERVICE

KONICA MINOLTA 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

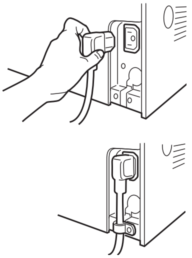
• Check that mains voltage is as specified. Connection to wrong voltage supply may result in fire or electric shock.	❗	
• Connect power plug directly into wall outlet having same configuration as the plug. Use of an adapter leads to the product connecting to inadequate power supply (voltage, current 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

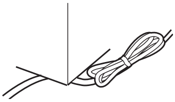
- When using the power cord set (inlet type) that came with this product, make sure the connector is securely inserted in the inlet of the product.
  When securing measure is provided, secure the cord with the fixture properly.

  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.



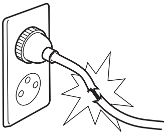
- Check whether the power cord is not stepped on or pinched by a table and so on.

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



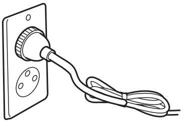
- Check whether the power cord is damaged. Check whether the sheath is damaged.

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



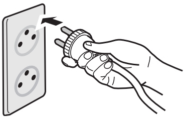
- Do not bundle or tie the power cord.

  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.

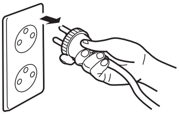


- Do not insert the power plug into the wall outlet with a wet hand.

  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.

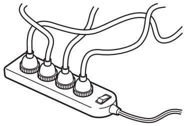


Wiring

⚠WARNING

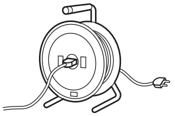
- Never use multi-plug adapters to plug multiple power cords in the same outlet.

  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

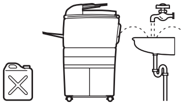
⚠WARNING

- 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.

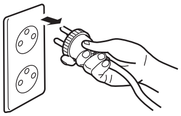


When not Using the Product for a long time

⚠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.

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

Stability

⚠CAUTION

- Be sure to lock the caster stoppers.

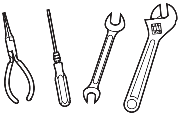
  In the case of an earthquake and so on, the product may slide, leading to a injury.

Inspection before Servicing

⚠CAUTION

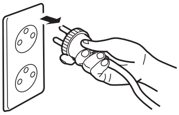
- Before conducting an inspection, read all relevant documentation (service manual, technical notices, etc.) and proceed with the inspection following the prescribed procedure in safety clothes, using only the prescribed tools. Do not make any adjustment not described in the documentation.

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



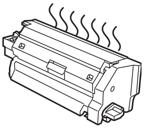
- Before conducting an inspection, be sure to disconnect the power plugs from the product and options.

  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.

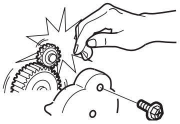


Work Performed with the Product Powered On

⚠ 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.

Safety Checkpoints

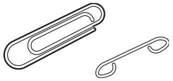
⚠ WARNING

- Check the exterior and frame for edges, burrs, and other damage.

  The user or CE may be injured.

- 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.

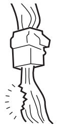
  Current can leak, leading to a risk of electric shock or fire.

- 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.



Safety Checkpoints

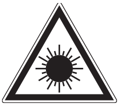
⚠ WARNING

- 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.

- 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.

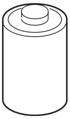


- Do not remove the cover of the write unit. Do not supply power with the write unit shifted from the specified mounting position.

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

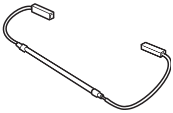
- When replacing a lithium battery, replace it with a new lithium battery specified in the Parts Guide Manual. Dispose of the used lithium battery using the method specified by local authority.

  Improper replacement can cause explosion.



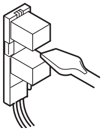
- After replacing a part to which AC voltage is applied (e.g., optical lamp and fixing lamp), be sure to check the installation state.

  A risk of fire exists.



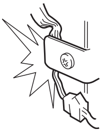
- Check the interlock switch and actuator for loosening and check whether the interlock functions properly.

  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.

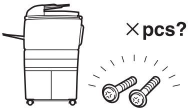


Safety Checkpoints

WARNING

- 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.

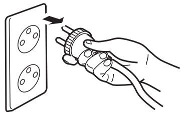
  You may be burned due to dust explosion.

Handling of Service Materials

CAUTION

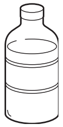
- Unplug the power cord from the wall outlet.

  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.

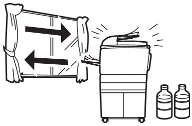


Handling of Service Materials

⚠ CAUTION

- 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] Used Batteries Precautions

ALL Areas

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer’s instructions.

Germany

VORSICHT!

Explosionsgefahr bei unsachgemäßem Austausch der Batterie.
Ersatz nur durch denselben oder einen vom Hersteller empfohlenen gleichwertigen Typ.
Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

France

ATTENTION

Il y a danger d’explosion s’il y a remplacement incorrect de la batterie.
Remplacer uniquement avec une batterie du même type ou d’un type équivalent recommandé par le constructeur.
Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

Denmark

ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

Finland, Sweden

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

Norway

ADVARSEL

Eksplosjonsfare ved feilaktig skifte av batteri.
Benytt samme batteritype eller en tilsvarende type anbefalt av apparatfabrikanten.
Brukte batterier kasseres i henhold til fabrikantens instruksjoner.

[5] Laser Safety

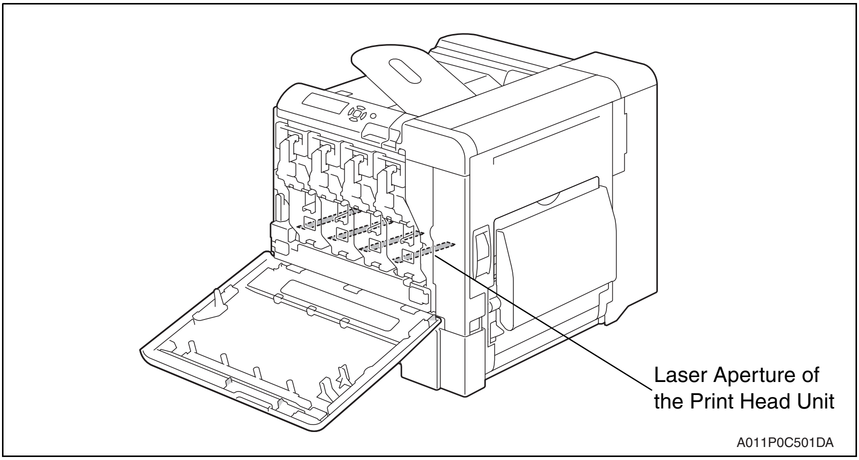
- This is a digital machine certified as a Class 1 laser product. There is no possibility of danger from a laser, provided the machine is serviced according to the instruction in this manual.

5.1 Internal Laser Radiation

semiconductor laser	
Maximum power of the laser diode	15 mW
Maximum average radiation power (*)	8.5 μW
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 lasersäteilylle.**

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.**

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

VARO!

- **Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättomälle lasersäteilylle. Älä katso säteeseen.**

VARNING!

- **Osynlig laserstråining när denna del är öppnad och spärren är urkopplad. Betrakta ej stråien.**

Norway

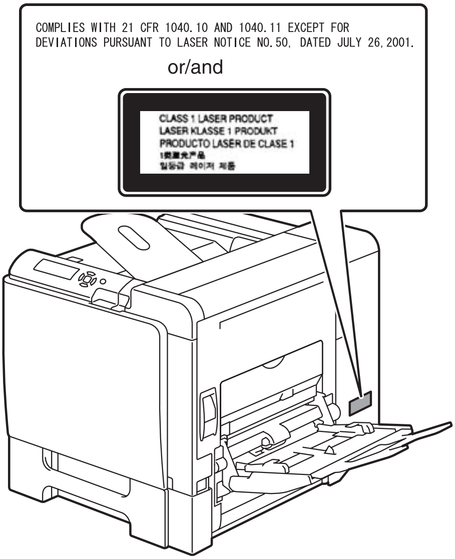
ADVERSEL

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

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

5.2 Laser Safety Label

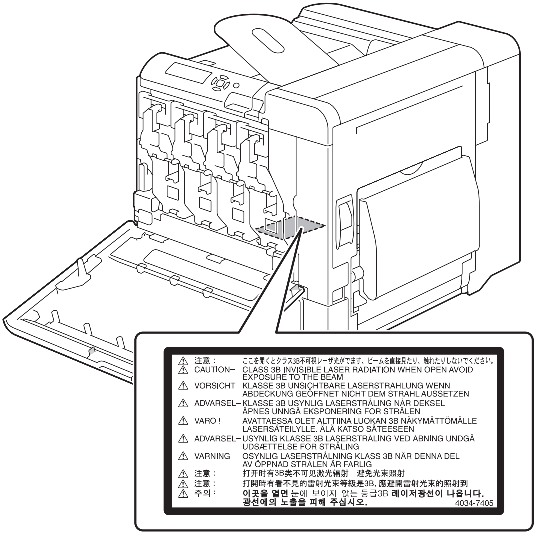
- A laser safety label is attached to the inside of the machine as shown below.


COMPLIES WITH 21 CFR 1040.10 AND 1040.11 EXCEPT FOR DEVIATIONS PURSUANT TO LASER NOTICE NO.50, DATED JULY 26,2001.
or/and
CLASS 1 LASER PRODUCT
LASER KLASSE 1 PRODUKT
PRODUCTO LASER DE CLASE 1

A011P0E504DA

5.3 Laser Caution Label

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


⚠ 注意： ここを開くとクラス3B不可視レーザ光がでます。ビームを直接見たり、触れたりしないでください。
⚠ CAUTION– CLASS 3B INVISIBLE LASER RADIATION WHEN OPEN AVOID EXPOSURE TO THE BEAM
⚠ VORSICHT– KLASSE 3B UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN
⚠ ADVARSEL– KLASSE 3B USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN
⚠ VARO ! AVATTAESSA OLET ALTTIINA LUOKAN 3B NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN
⚠ ADVARSEL– USYNLIG KLASSE 3B LASERSTRÅLING VED ÅBNING UNDGÅ UDSÆTTELSE FOR STRÅLING
⚠ VARNING– OSYNLIG LASERSTRÅLNING KLASS 3B NÄR DENNA DEL AV ÖPPNAD STRÅLEN ÄR FARLIG
⚠ 注意： 打开时有3B类不可见激光辐射 避免光束照射
⚠ 注意： 打開時有看不見的雷射光束等級是3B, 應避開雷射光束的照射到
⚠ 주의： 이곳을 열면 눈에 보이지 않는 등급3B 레이저광선이 나옵니다. 광선에의 노출을 피해 주십시오.
4034-7405

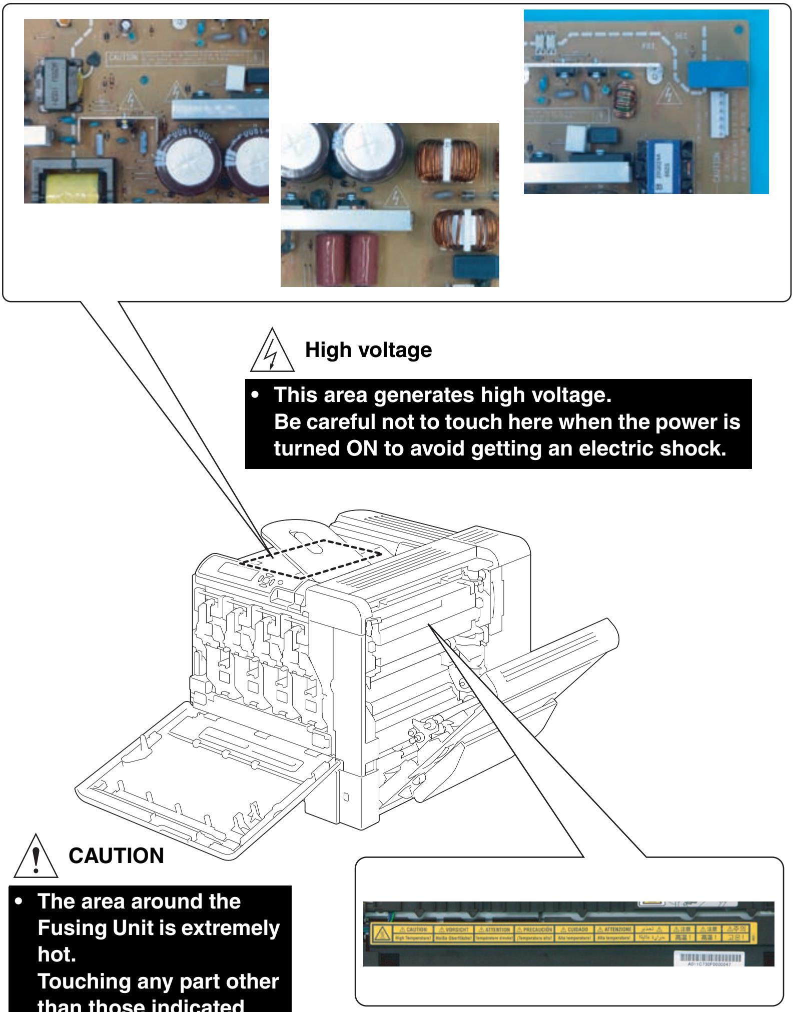
A011P0C503DA

5.4 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.
- The Print Head is not to be disassembled or adjusted in the field. Replace the Unit or Assembly including the control board. Therefore, remove the laser diode, and do not perform control board trimmer adjustment.

WARNING INDICATIONS ON THE MACHINE

Caution labels shown 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.



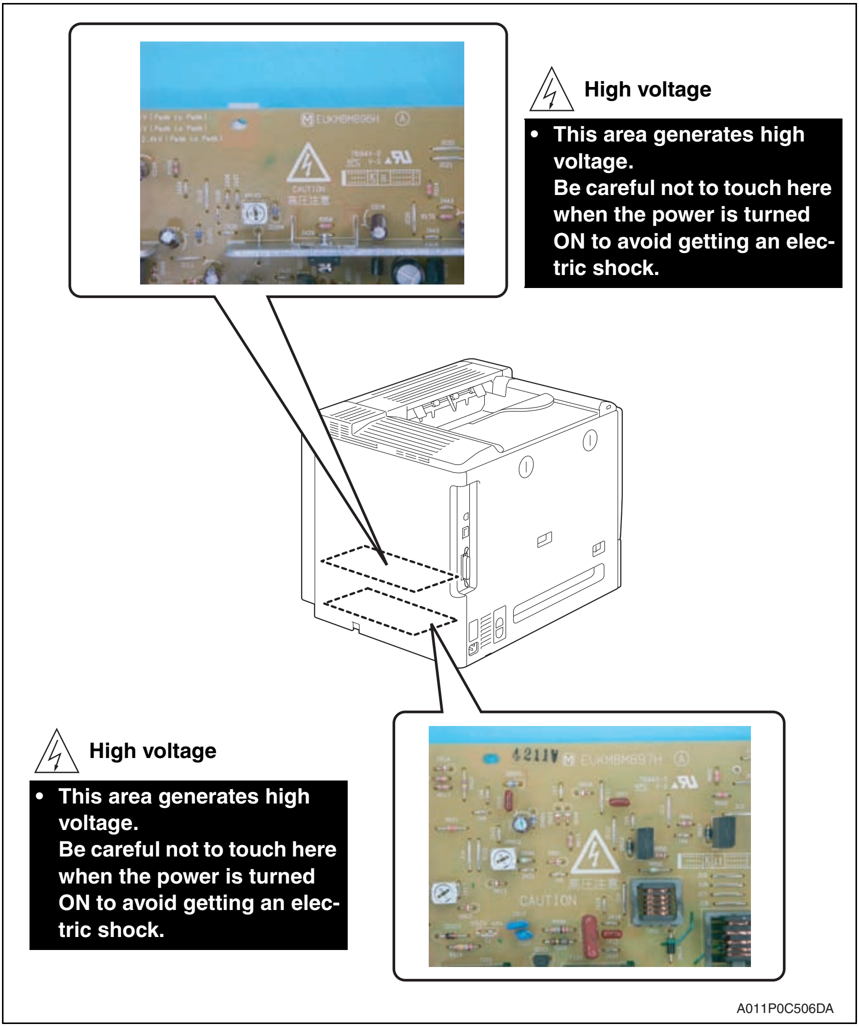
High voltage

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

CAUTION

- **The area around the Fusing Unit is extremely hot.
Touching any part other than those indicated may result in burns.**

A011P0C505DA

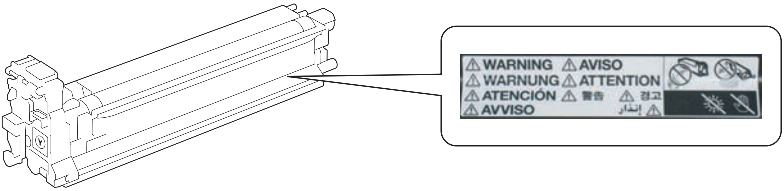


⚠ **High voltage**

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

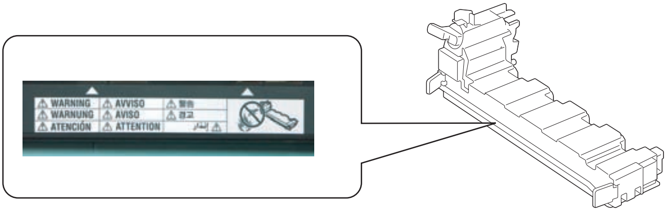
⚠ **High voltage**

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



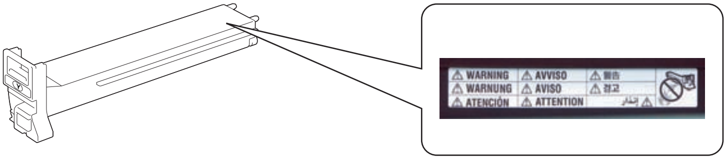
WARNING

- **Do not burn used Print Units.**
  Toner expelled from the fire is dangerous.



WARNING

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



WARNING

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

A0EAP0C501DA

⚠ CAUTION:

- **You may be burned or injured if you touch any area that you are advised not to touch by any caution label. Do not remove caution labels. If any caution label has come off or soiled and therefore the caution cannot be read, contact our Service Office.**

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 KMBT 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 KMBT.
4. For reports and measures concerning serious accidents, follow the regulations specified by every distributor.

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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>

GENERAL:	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)	magicolor 5650/5670	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

When the description is made in combination of the OS's mentioned above:

Windows 98/Me
Windows NT 4.0/2000
Windows NT/2000/XP/Vista

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

KONICA MINOLTA

SERVICE MANUAL

FIELD SERVICE

magicolor 5650EN/5670EN

Main body

2008.04

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. Ver. 1.0

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 specific section revised within text, △1 is shown at the left margin of the corresponding revised section.
  The number inside △1 represents the number of times the revision has been made.

- To indicate clearly a specific page that contains a revision or revisions, the page number appearing at the left or right bottom of the specific page is marked with ▲1 .
  The number inside ▲1 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.

2008/04	1.0	—	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

CONTENTS

magicolor 5650EN/5670EN Main body

General

Maintenance

Adjustment/Setting

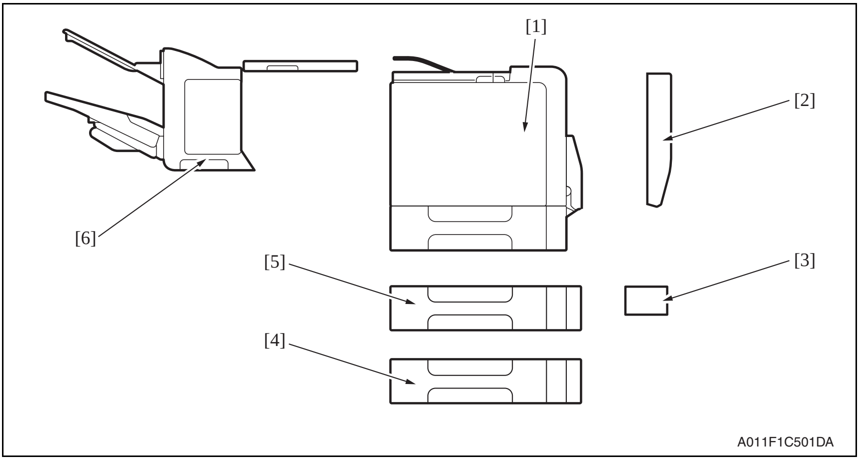
Troubleshooting

Appendix

General

1. System configuration

System front view



[1]	magicolor 5650EN magicolor 5670EN magicolor 5670EN (MPC type)	[4]	Lower feeder unit
[2]	Duplex option	[5]	Lower feeder unit
[3]	Hard disk kit	[6]	Staple finisher

2. Product specifications

A. Type

Type	Desktop tandem full-color laser beam printer
Printing system	Semiconductor laser and electrostatic image transfer to media
Exposure system	4 laser diode and polygon mirror
PC drum type	OPC (organic photo conductor)
Photoconductor cleaning	Blade cleaning system
Print resolution	600 dpi x 600 dpi x 4 bit
Media feeding system	Two-way system (Tray 1: 100 sheets, Tray 2: 500 sheets) * Expandable up to a four-way system by adding lower feeder units (up to two)
Developing system	Single-element developing system
Charging system	Needle charging system (with ozone suctionfeature)
Image transfer system	Intermediate transfer belt system
Media separating system	Curvature separation + charge-neutralizing system
Fusing system	Belt fusing
Media exit system	Face down (Output tray capacity: A4S/LetterS, 250 sheets)

B. Functions

Warm-up time	magicolor 5650EN	Average: 47 sec. or less (Sleep mode to ready, at ambient temperature of 23° C/ 73.4° F and rated source voltage)
	magicolor 5670EN	Average: 52 sec. or less (Sleep mode to ready, at ambient temperature of 23° C/ 73.4° F and rated source voltage)
Process speed	magicolor 5650EN	185 mm/sec (plain paper, full-color mode)
	magicolor 5670EN	216 mm/sec (plain paper, full-color mode)
First-page-out-time	14.0 second (Full-color mode, A4S/LetterS, 1-sided mode, plain paper)	
Print speed	magicolor 5650EN	31.7 pages/min. (LetterS, 1-sided print, plain paper) 30.0 pages/min. (A4S, 1-sided print, plain paper)
	magicolor 5670EN	37.0 pages/min. (LetterS, 1-sided print, plain paper) 35.0 pages/min. (A4S, 1-sided print, plain paper)

Media sizes	Tray 1 (Manual tray)	Standard size: *SEF only Legal, Letter, Government Letter, Statement, Executive, Folio, SP Folio, UK Quatro, Foolscap, Government Legal, A4, B5, B5(ISO), A5, A6, B6, Photo size, 16K, Kai16, Kai32, Com10, C5, C6, DL, Monarch Youkei #4, Youkei 4, Choukei #3, Youkei 0, Choukei #4, Japanese postcard, Double postcard Custom size: Minimum size /92 mm x 148 mm (3.6 inch x 5.8 inch) Maximum size /216 mm x 356 mm (8.5 inch x 14.0 inch) Long size paper /357 mm to 1,200 mm (14.0 inch x 47.2 inch)(1-sided mode only)
	Tray 2 (magicolor 5670EN)	A4S/LetterS
	Tray 2 (magicolor 5670EN MPC type)	Standard size: *SEF only Letter, Government Letter, Statement, Executive, UK Quatro, A4, B5, B5(ISO), A5, A6, B6, Photo size, 16K, Kai16, Kai32, Com10, C5, C6, DL, Monarch Youkei #4, Youkei 4, Choukei #3, Youkei 0, Choukei #4, Japanese postcard, Double postcard Custom size: Minimum size /92 mm x 148 mm (3.6 inch x 5.8 inch) Maximum size /216 mm x 297 mm (8.5 inch x 11.69 inch)
Media types	Tray 1 (Manual tray)	• Plain paper (60 to 90 g/m^2 / 16 to 24 lb) • Recycled paper (60 to 90 g/m^2 / 16 to 24 lb) • Thick stock 1 (91 to 150 g/m^2/ 24 to 40 lb) • Thick stock 2 (128 to 210 g/m^2/ 34 to 56 lb) • Glossy paper 1 (100 to 150 g/m^2/ 26.6 to 40 lb) • Glossy paper 2 (128 to 210 g/m^2/ 34 to 56 lb) • OHP film • Letterhead • Envelopes • Labels • Postcards • Double postcards (Folded double postcards cannot be used.) • Long size paper (up to 1200 mm/47.2 inches)
	Tray 2 (magicolor 5670EN)	• Plain paper (60 to 90 g/m^2 / 16 to 24 lb) • Recycled paper (60 to 90 g/m^2 / 16 to 24 lb)
	Tray 2 (magicolor 5670EN MPC type)	• Plain paper (60 to 90 g/m^2 / 16 to 24 lb) • Recycled paper (60 to 90 g/m^2 / 16 to 24 lb) • Thick stock 1 (91 to 150 g/m^2/ 24 to 40 lb) • Thick stock 2 (128 to 210 g/m^2/ 34 to 56 lb) • Glossy paper 1 (100 to 150 g/m^2/ 26.6 to 40 lb) • Glossy paper 2 (128 to 210 g/m^2/ 34 to 56 lb) • OHP film • Letterhead • Envelopes • Labels • Postcards • Double postcards (Folded double postcards cannot be used.)

Tray capacities	Tray 1 (Manual tray)	Plain paper and recycled paper: 100 sheets Thick stock 1, thick stock 2, glossy paper 1, glossy paper 2, OHP film, letterhead, labels, postcards and double postcards: 20 sheets Envelopes: 10 sheets Long size paper: 1 sheet * No indication of remaining media amount
	Tray 2 (magicolor 5670EN)	Plain paper and recycled paper: 500 sheets * Indication of remaining media amount available
	Tray 2 (magicolor 5670EN MPC type)	Plain paper and recycled paper: 250 sheets Thick stock 1, thick stock 2, postcards and double postcards: 50 sheets ,Glossy paper 1, glossy paper 2, OHP film, letterhead and labels: 20 sheets Envelopes: 10 sheets * Indication of remaining media amount available
Interfaces	• Parallel (IEEE 1284) Support only an ECP mode • 10 Base-T/100 Base-TX/1000 Base-T (IEEE 802.3) Ethernet • USB 2.0 (High-Speed) • Host USB (PictBridge 1.0/USB Drive Printing)	
CPU	magicolor 5650EN	Freescale PowerPC 7448, 733 MHz
	magicolor 5670EN	Freescale PowerPC 7448, 866 MHz
Memory	DDR-SDRAM 133 MHz 184 pin non ECC CL2 or 2.5 256 MB (Upgradable up to a 1024 MB)	
Hard disk	Optional: 40 GB	
Compact flash card	Commercially available compact flash cards of 512 MB, 1 GB, 4 GB storage capacity are supported. (Microdrive is not supported)	

Lower feeder unit : Only plain paper and recycled paper weighing 60 to 90 g/m^2 (16 to 24 lb) can be loaded.

Duplex option : Only plain paper and recycled paper weighing 60 to 90 g/m^2 (16 to 24 lb) can be fed through the unit.

C. Maintenance

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

D. Machine specifications

Power requirements Voltage:	AC 110 to 127 V, -10 % +6 % (AC 120 V -10 % +10 %: only US/Canada) AC 220 to 240 V, -10 % +10 %
Frequency:	50 to 60 Hz ± 3 Hz
Max power consumption	1,450 W or less
Dimensions	420 mm (W) x 526 mm (D) x 420 mm (H) 16.5 inch (W) x 20.7 inch (D) x 16.5 inch (H)
Weight	33.4 kg (73.6 lb) or less without consumables
Operating noise	During standby : 39 dB (A) or less During printing : 56 dB (A) or less

E. Operating environment

Temperature	10° to 35° C / 50° to 95° F (with a fluctuation of 10° C / 18° F or less per hour)
Humidity	15% to 85% (with a fluctuation of 20%/h)

NOTE

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

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Maintenance

3. Periodical check

3.1 Maintenance items

3.1.1 Parts to be replaced by users (CRU)

No	Class	Part to be replaced	Number of prints	Clean	Replace	Description
1	Processing section	Standard-capacity toner cartridge*1 (C,M,Y,K)	6,000 (Continuous printing)		●	
2		High-capacity toner cartridge*1 (C,M,Y,K)	12,000 (Continuous printing)		●	
3		Imaging unit (C,M,Y,K)	30,000 (Continuous printing)		●	
4		Ozone filter*5	120,000		●	
5	Tray 2 media feed section	Feed roller	When malfunction occurs	●		
6	Tray 1 media feed section	Feed roller	When malfunction occurs	●		
7	Image transfer section	Transfer belt unit	120,000 (Continuous printing, 2P/J*2)		●	
8		Transfer roller*5	120,000 (Continuous printing, 2P/J*2)		●	
9		Waste toner bottle	36,000 (K*3)		●	
			9,000 (Y,M,C,K*4)			

*1: The life of the toner cartridges furnished with the machine at the time of shipment is different according to the marketing area. Refer to the table below for details.

Europe	magicolor 5650EN	6,000 prints
	magicolor 5670EN	12,000 prints
North America	magicolor 5650EN	3,000 prints
	magicolor 5670EN	6,000 prints
Other areas	magicolor 5650EN	3,000 prints
	magicolor 5670EN	3,000 prints

*2: 2 pages/job

*3: When printed in black only

*4: When printed in color only

*5: The transfer roller and ozone filter are available as a kit and must be replaced at the same time

3.1.2 Parts to be replaced by a service engineer (FRU)

No	Class	Part to be replaced	Number of prints	Clean	Replace	Description
1	Fusing section	Fuser unit	150,000 (Continuous printing)		●	
			130,000 (2P/J*1)			
2	Tray 2 media feed section	Feed roller	300,000		●	
3	Tray 1 media feed section	Feed roller	300,000		●	
4	Lower feeder unit	Feed roller	300,000		●	

*1: 2 pages/job

3.2 Maintenance parts

- 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.

3.2.1 Replacement parts

A. Main body

No	Class	Maintenance parts	Quantity	Actual durable cycle	Parts No.	Description	Ref.page
1	Tray 2 media feed section	Feed roller	1	300,000	4138 3032 ##		P.12
2	Tray 1 media feed section	Feed roller	1	300,000	4138 3032 ##		P.13
3	Fusing section	Fuser unit	1	150,000 (Continuous printing) 130,000 (2P/J*2)	A0EA R706 ## *2 A0EA R707 ## *3 A0EA R708 ## *4 A0EA R709 ## *5		P.27

*1: 2 pages/job
*2: magicolor 5670EN/120 V areas only
*3: magicolor 5670EN/230 V areas only
*4: magicolor 5650EN/120 V areas only
*5: magicolor 5650EN/230 V areas only

B. Option

No	Class	Maintenance parts	Quan tity	Actual durable cycle	Parts No.	Descrip- tions	Ref.page
1	Lower feeder unit	Feed roller	1	300,000	4128 3214 ##		*1

*1: For details, see the optional lower feeder unit service manual.

3.3 Concept of parts life

	Description	Near life value	Life value
Waste toner bottle	• Detected by the waste toner full sensor. • A waste toner full condition is detected under the following conditions after a waste toner near full condition has been detected. Monochrome: About 4,000 printed pages are produced (continuous printing) Color: About 1,000 printed pages are produced (continuous printing)	Monochrome : 32,000 prints	Monochrome : 36,000 prints
		Color: 8,000 prints	Color: 9,000 prints
Fuser unit	• Based on the fusing motor rotation data, the fuser unit driving time is counted. • The consumption rate is calculated from each of the fuser unit driving time count value and the number of pages printed. The machine then detects the life when whichever of these values reaches the value corresponding to the life value shown on the right earlier. * The actual number of pages printed relative to the consumption rate varies depending on the print conditions.	104,000 prints (120,000 prints for continuous printing)	130,000 prints (150,000 prints for continuous printing)
Ozone filter	—	—	120,000 prints
Transfer roller	• The life is detected based on the number of pages printed. • The consumption rate is calculated from the number of pages printed and the machine detects the life when the consumption rate reaches the value corresponding to the life value shown on the right.	96,000 prints	120,000 prints
Transfer belt	• Base on the intermediate transport motor rotation data, the transfer belt driving time is counted. • The consumption rate is calculated from the transfer belt driving time count value and the machine detects the life when the consumption rate reaches the value corresponding to the life value shown on the right.	96,000 prints	120,000 prints
Imaging unit	• Base on the color PC drum motor or intermediate transport motor rotation data, the imaging unit driving time is counted. The consumption rate is calculated from each of the imaging unit driving time count value and the number of pages printed. The machine then detects the life when whichever of these values reaches the value corresponding to the life value shown on the right earlier.	25,500 prints	30,000 prints

A. Conditions for life specifications values

- The life specification values represent the number of pages printed or figures equivalent to it when the given conditions (see the table given below) are met. They may be more or less, depending on the machine operating conditions of each individual user.

Item	Description	
Job type	2 consecutive pages (2 pages/job)	
PV/M	magicolor 5670	1,800
	magicolor 5650	1,600
Media size	A4S or LetterS	
Color ratio	Black to Color = 1:1	
Original density	C/W ratio = 5% each color	

3.4 Maintenance Procedure (periodical check parts)

3.4.1 Replacing the tray 2 feed roller

A. Periodically replacing parts/cycle

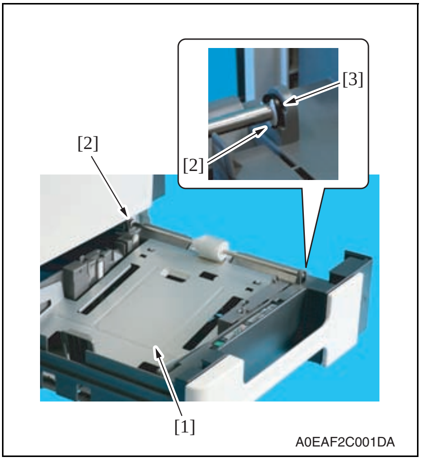
- Tray 2 feed roller: Every 300,000 prints

B. Procedure

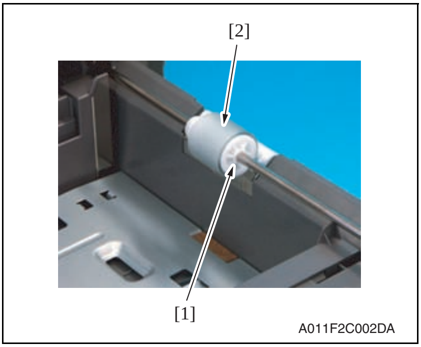
NOTE

- **This procedure shows the steps taken for the magicolor 5650EN/5670EN. However, the tray 2 feed roller of the magicolor 5670EN (MPC type) can be replaced according to the same procedure.**

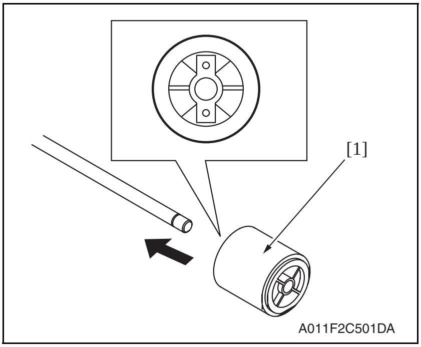
1. Slide out tray 2.



2. Lock the media lift plate [1].
3. Snap off two C-rings [2], and remove the bearing [3] at the front.



4. Snap off the C-ring [1], and remove the feed roller [2].



NOTE

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

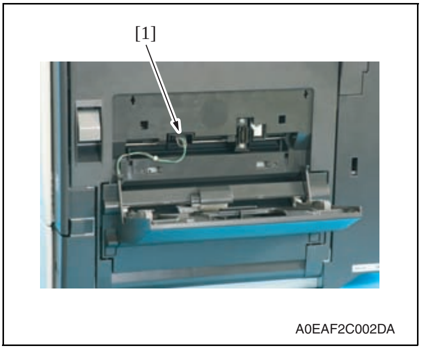
3.4.2 Replacing the tray 1 feed roller

A. Periodically replacing parts/cycle

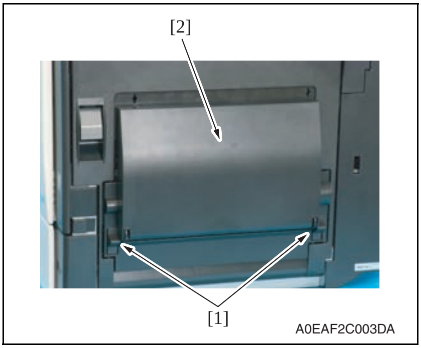
- Tray 1 feed roller: Every 300,000 prints

B. Procedure

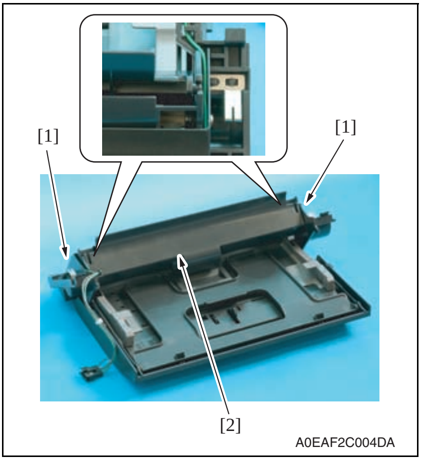
1. Open the tray 1.
2. Remove the tray 1 cover.



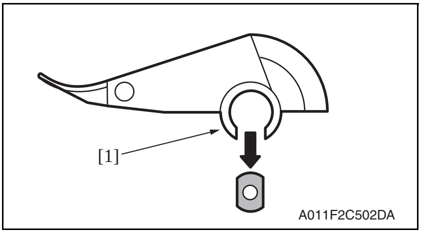
3. Disconnect the connector [1].



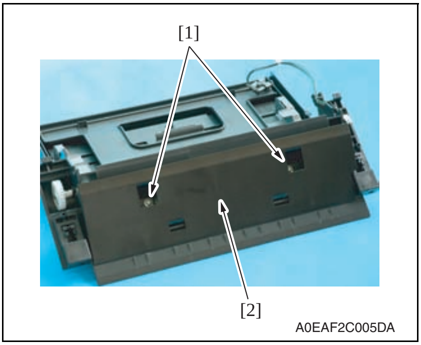
4. Move two lock levers [1] up.
5. Remove the tray 1 [2].



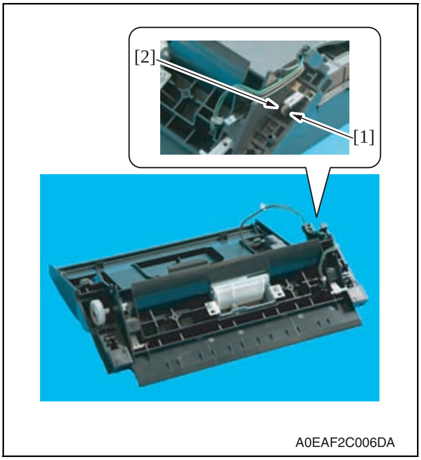
6. Press two pins [1] in, and lift the feed roller cover [2] upward to remove it.



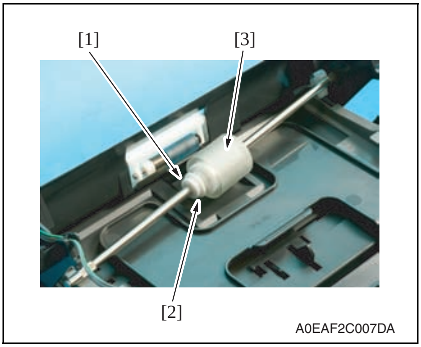
NOTE
Make sure that the bearing goes all the way into both of [1] shown on the left when installing the feed roller cover.



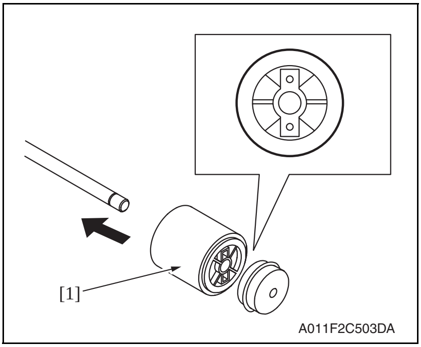
7. Remove the two screws [1], and remove the cover [2].



8. Snap off the C-ring [1], and remove the bearing [2] at the front.



9. Snap off the C-ring [1], and remove the clutch [2] and the feed roller [3].



NOTE

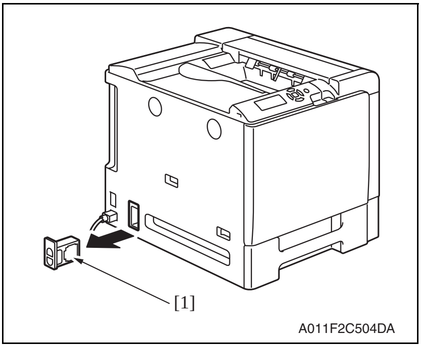
- **When reinstalling the feed roller [1] and the clutch, make sure that it is mounted in the direction shown in the illustration on the left.**

3.4.3 Replacing the ozone filter

A. Periodically replacing parts/cycle

- Ozone filter: Every 120,000 prints

B. Procedure



1. Hold onto the handle of the ozone filter [1], and slide it out of the machine.
2. Install a new ozone filter in the machine.
3. Replace the transfer roller.
   See P.24

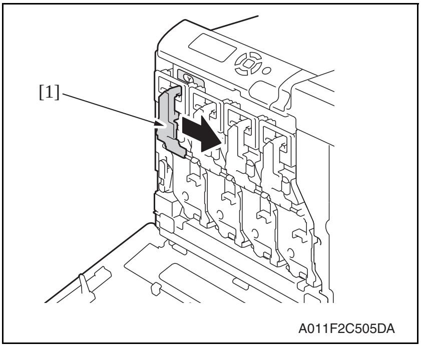
3.4.4 Replacing the toner cartridge (C,M,Y,K)

A. Periodically replacing parts/cycle

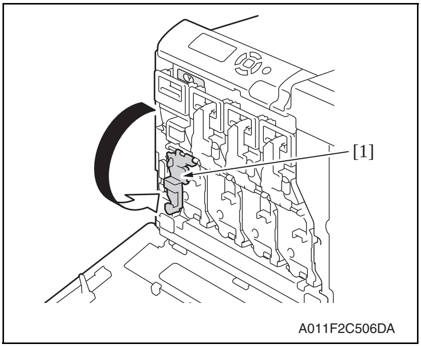
- Standard-capacity toner cartridge (C,M,Y,K) : Every 6,000 prints
- High-capacity toner cartridge (C,M,Y,K) : Every 12,000 prints

B. Removal procedure

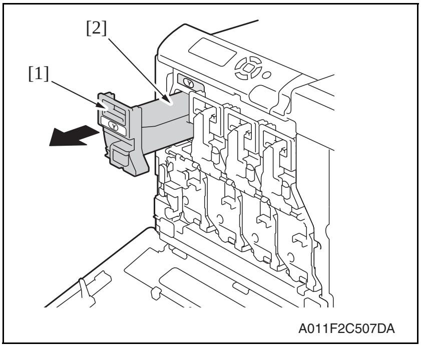
1. Open the front door.



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



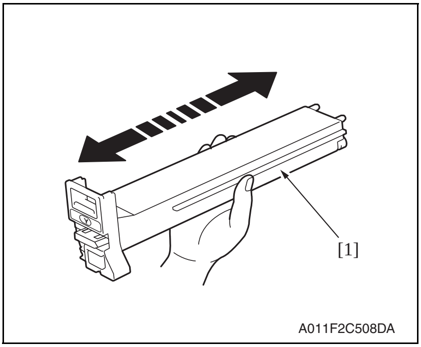
3. Pull down the lock lever [1] to unlock the toner cartridge.



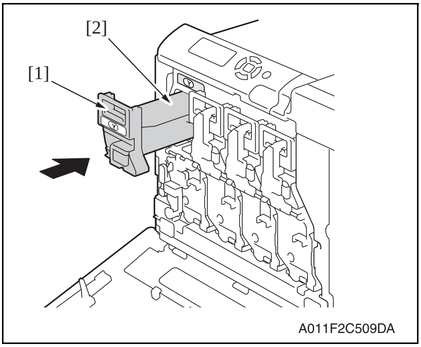
4. Grasp the toner cartridge handle [1], and pull the toner cartridge [2] out.

C. Reinstallation procedure

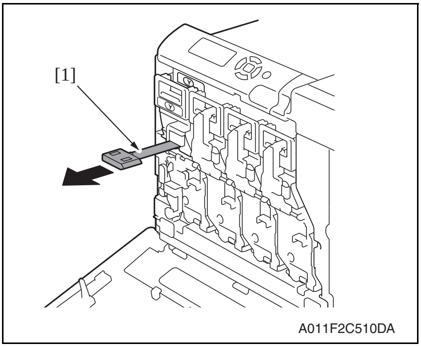
1. Take the toner cartridge out of its plastic bag.



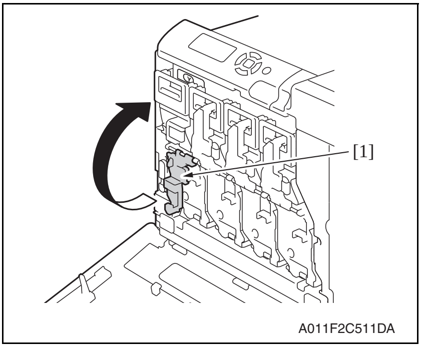
2. Gently shake the toner cartridge [1] three times to agitate the toner.



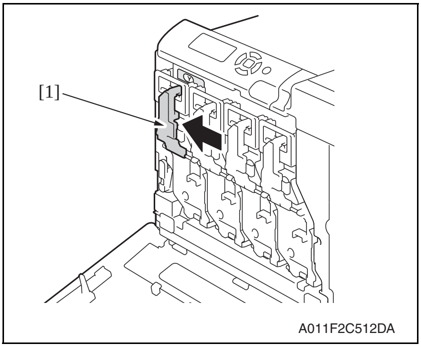
3. Grasp the toner cartridge handle [1], and slide the toner cartridge [2] in.



4. Remove the protective sheet by pulling it.



5. Raise the lock lever [1].



6. Slide the lock lever [1] to the left to lock the toner cartridge.

7. Close the front door.

NOTE

- **When removing or reinstalling the toner cartridge while it is being used or after it has been used up, do not hold it or place it upside down, as spilled toner could result.**

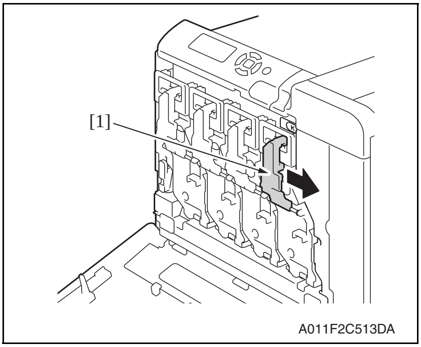
3.4.5 Replacing the imaging unit (C,M,Y,K)

A. Periodically replacing parts/cycle

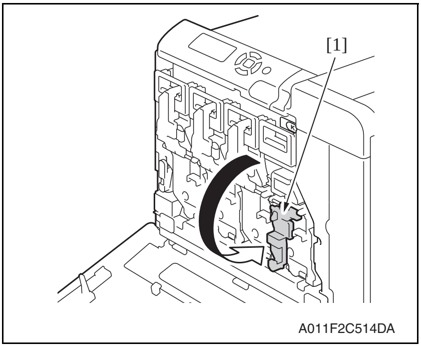
- Imaging unit (C,M,Y,K): Every 30,000 prints (continuous)/20,000 prints (2 pages/job)

B. Removal procedure

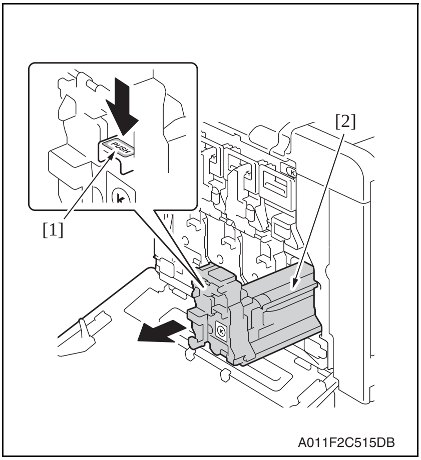
1. Open the front door.



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

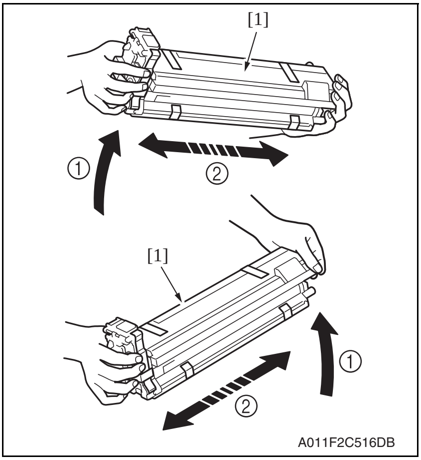


3. Pull down the lock lever [1] to unlock the imaging unit.

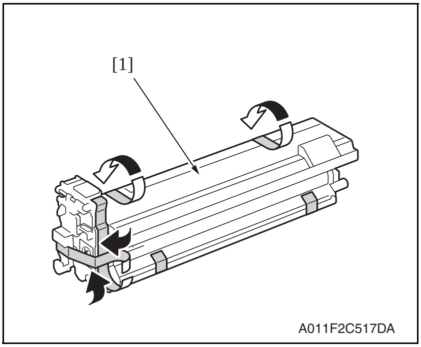


4. Press down the “Push” marked place [1].
5. Pull the imaging unit [2] out.

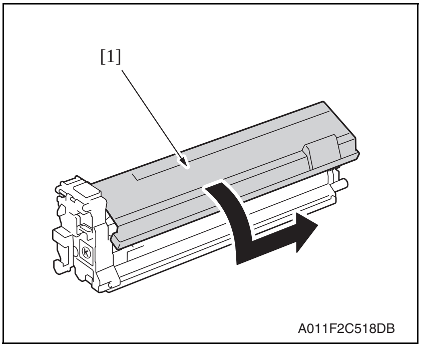
C. Reinstallation procedure



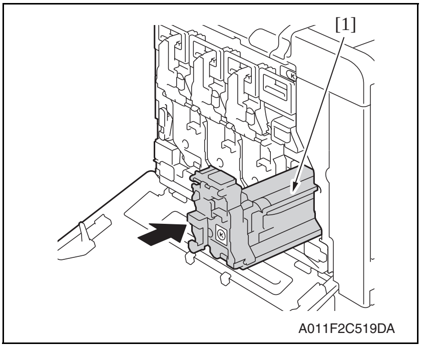
1. After removing the plastic bag, hold the imaging unit [1] with your hands and shake it two times as shown in the left illustration.



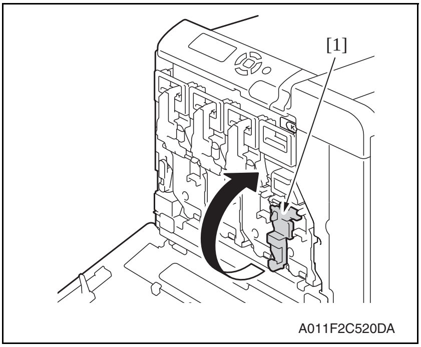
2. Remove the shipping tape of the imaging unit [1].



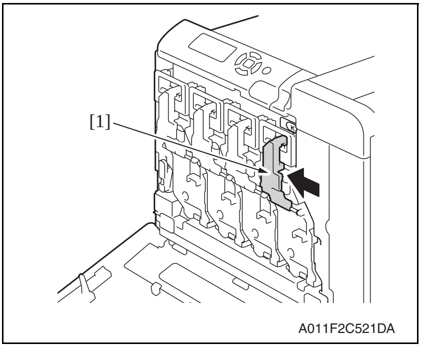
3. Remove the protective cover [1].



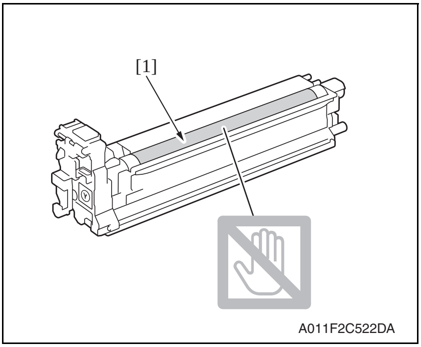
4. Slide the imaging unit [1] in.



5. Raise the lock lever [1].



6. Slide the lock lever [1] to the left to lock the imaging unit.
7. Close the front door.



NOTE

- **When installing and removing the imaging unit, take care not to touch the surface of the PC drum [1].**

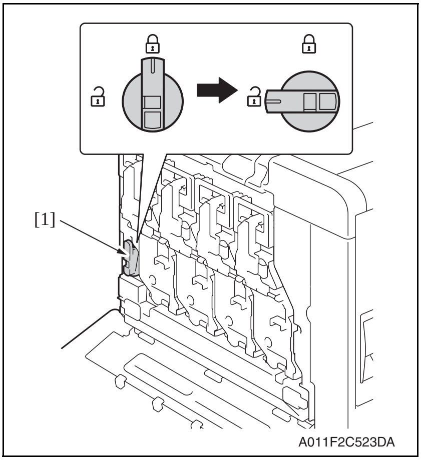
3.4.6 Replacing the waste toner bottle

A. Periodically replacing parts/cycle

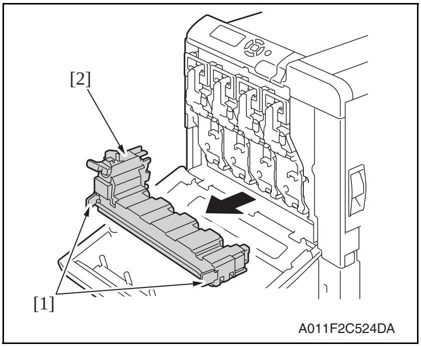
- Waste toner bottle: Every 36,000 prints (black print only)/9,000 prints (color print only)

B. Procedure

1. Open the front door.



2. Turn the lever [1] to unlock the waste toner bottle.



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

4. To reinstall, reverse the order of removal.

3.4.7 Replacing t

A. Periodically r

- Transfer roller

B. Proced

1. Ope

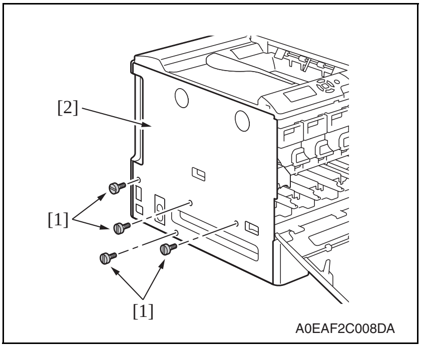
3.4.8 Replacing the transfer belt

A. Periodically replacing parts/cycle

- Transfer belt: Every 120,000 prints

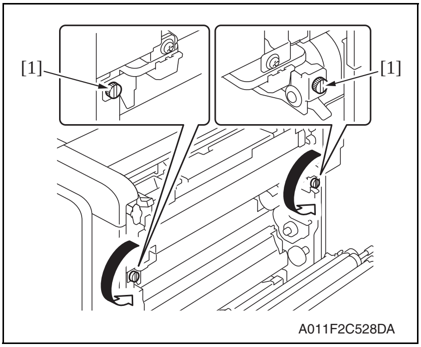
B. Procedure

1. Turn OFF the power switch.
2. Open the front door.
3. Remove the imaging units (C,M,Y,K).
   See P.19
4. Remove the waste toner bottle.
   See P.23

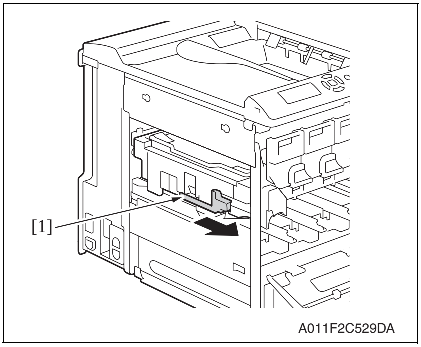


5. Remove four screws [1], and remove the left cover [2].

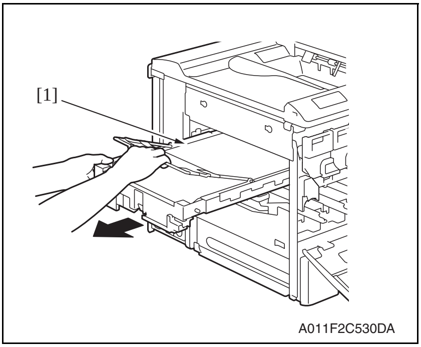
6. Open the right door.



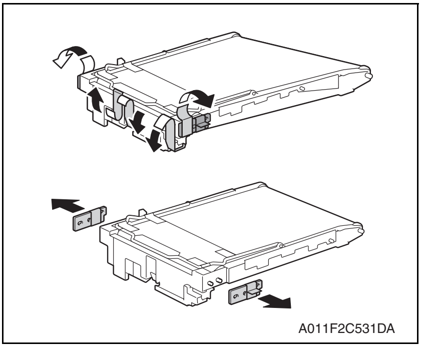
7. Loosen two screws [1], and unlock the transfer belt.



8. Slide the shutter lever [1] to the front.



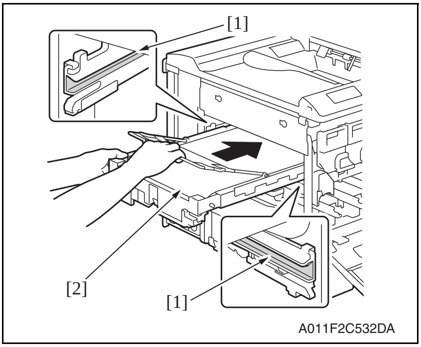
9. Grasp the transfer belt handle and pull the transfer belt [1] out.



10. Remove the packing material from the new transfer belt.

NOTE

- **Use care not to touch the belt of the transfer belt.**



11. Insert the transfer belt [2] along the rails [1].

NOTE

- **When inserting the unit, use care not to allow the docking gear to hit against the rail or other mechanism to prevent damage.**

12. To reinstall, reverse the order of removal.
13. From the Menu, select [SERVICE MENU] → [SUPPLIES] → [REPLACE] → [TRANS. BELT] and execute this function to reset the transfer belt counter value.
    See P.194
14. From the Menu, select [QUALITY MENU] → [CALIBRATION] → [AIDC PROCESS] and execute this function.
    See P.146

3.4.9 Replacing the fuser unit

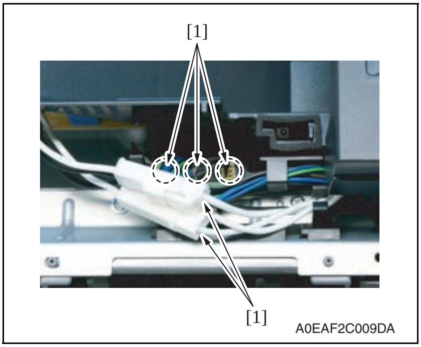
⚠ CAUTION	
	- **The temperature gets high in the vicinity of the fuser unit. You may get burned when you come into contact with the area. Before replacement operations, make sure that more than 20 minutes have elapsed since the main and sub power switches were turned off.**

A. Periodically replacing parts/cycle

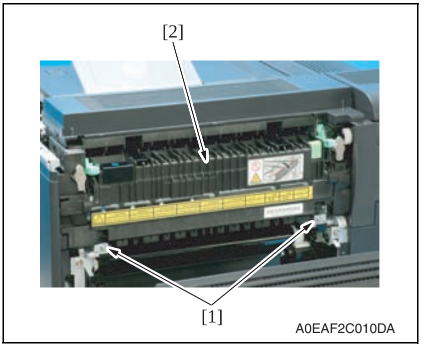
- Fuser unit: Every 150,000 prints (continuous)/130,000 prints (2 pages/job)

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 front door.
3. Remove the operation board.
   See P.54
4. Remove the upper front cover.
   See P.49



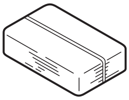
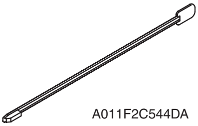
5. Disconnect five connectors [1].



6. Remove two screws [1], and remove the fuser unit [2].
7. Install the new fuser unit.
8. From the Menu, select [SERVICE MENU] → [SUPPLIES] → [REPLACE] → [FUSER UNIT] and execute this function to reset the fuser unit counter value.
   See P.195

4. Service tool

4.1 CE tool list

Tool name	Shape	Material No.	Remarks
Cleaning pad	 A02EF2C526DA	000V-18-1	10pcs/1pack
Isopropyl alcohol	 A00KF2C506DA	—	
Laser lens cleaning tool	 A011F2C544DA	A011 1901 ##	

4.2 Consumable parts

4.2.1 Toner cartridge

Part name	Life expectancy
Standard-capacity toner cartridge - black (K)	6,000 prints
Standard-capacity toner cartridge - yellow (Y)	6,000 prints
Standard-capacity toner cartridge - magenta (M)	6,000 prints
Standard-capacity toner cartridge - cyan (C)	6,000 prints
High-capacity toner cartridge - black (K)	12,000 prints
High-capacity toner cartridge - yellow (Y)	12,000 prints
High-capacity toner cartridge - magenta (M)	12,000 prints
High-capacity toner cartridge - cyan (C)	12,000 prints

For the predetermined conditions, See P.11

NOTE

- **The life of the toner cartridges furnished with the machine at the time of shipment is different according to the marketing area. Refer to the table below for details.**

Europe	magicolor 5650EN	6,000 prints
	magicolor 5670EN	12,000 prints
North America	magicolor 5650EN	3,000 prints
	magicolor 5670EN	6,000 prints
Other areas	magicolor 5650EN	3,000 prints
	magicolor 5670EN	3,000 prints

4.2.2 Imaging unit

Part name	Life expectancy
Black imaging unit	30,000 prints
Yellow imaging unit	30,000 prints
Magenta imaging unit	30,000 prints
Cyan imaging unit	30,000 prints

For the predetermined conditions, See P.11

4.2.3 Waste toner bottle

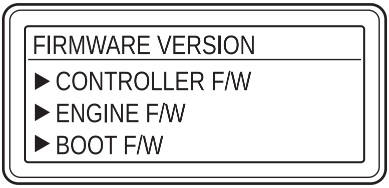
Part name	Life expectancy
Waste toner bottle	Monochrome: 36,000 prints
	Color: 9,000 prints

For the predetermined conditions, See P.11

5. Firmware upgrade

5.1 Checking the current firmware version

1. Display [SERVICE MENU].
2. Display [FIRMWARE VERSION].



A011F2E545DA

3. Select the firmware to be updated and check the current version.
   See P.187

5.2 Firmware upgrading procedure by USB memory device

5.2.1 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

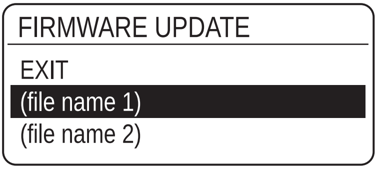
1. Save the firmware data in appropriate space in the PC.
2. Connect the USB memory device to the PC.
3. Create a “firmware” folder immediately under the drive of the USB memory device.
4. Copy the firmware data (***.exe) in the firmware folder created in step 3.

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. Call the SERVICE MENU to the display.
   See P.185
4. Select [FIRMWARE UPDATE] and press the Menu/Select key.
   A list of firmware data in the USB memory device is displayed.

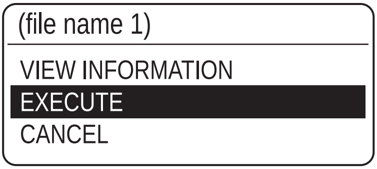


A0DXF2E535DA

NOTE

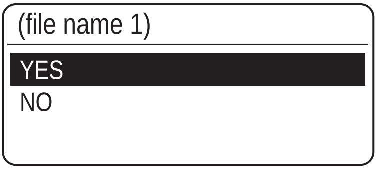
- **Before upgrading firmware, use [VIEW INFORMATION] to check that the firmware data is correct.**
  See P.197

5. Select the specific firmware data to be upgraded and press the Menu/Select key.
6. Select [EXECUTE] and press the Menu/Select key.



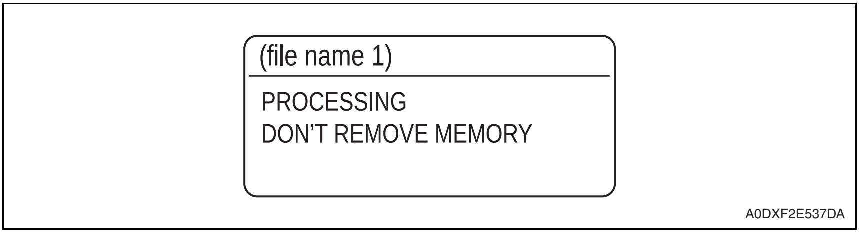
A0DXF2E536DA

7. Select [YES] and press the Menu/Select key.



A0DXF2E538DA

8. The firmware upgrading procedure starts.



(file name 1)

PROCESSING
DON'T REMOVE MEMORY

NOTE

- **NEVER disconnect the USB memory device from the printer during the firmware upgrading procedure.**

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

5.3 Firmware upgrading procedure by updater

5.3.1 Updating method

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

A. System requirements

Computer	Windows	• PC with a Pentium 2,400 MHz or faster processor (A Pentium 3,500 MHz or faster processor is recommended.)
	Macintosh	• Apple Macintosh computer with a PowerPC G3 or later processor (A PowerPC G4 or later is recommended.)
OS	Windows	• Microsoft Windows XP Home Edition/Professional, Windows 2000
	Macintosh	• MacOS X 10.2 or later (We recommend installing the newest patch.)
Available hard disk space	Windows	• Approximately 20 to 26 MB
	Macintosh	• Approximately 30 to 42 MB
Memory		• 128 MB or more
Interface	Windows	• 10Base-T/100Base-TX/1000Base-T Ethernet • USB 2.0 (High Speed) compliant • Parallel (IEEE 1284)
	Macintosh	• 10Base-T/100Base-TX/1000Base-T Ethernet

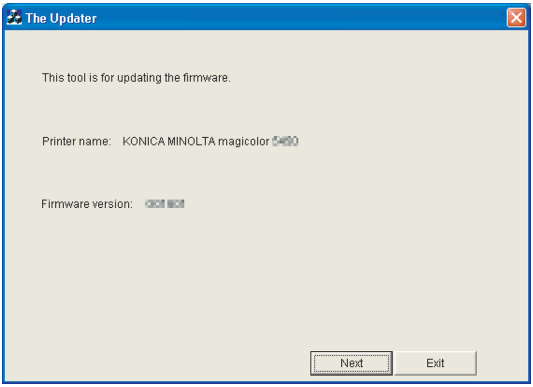
B. Connection for Windows

(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].



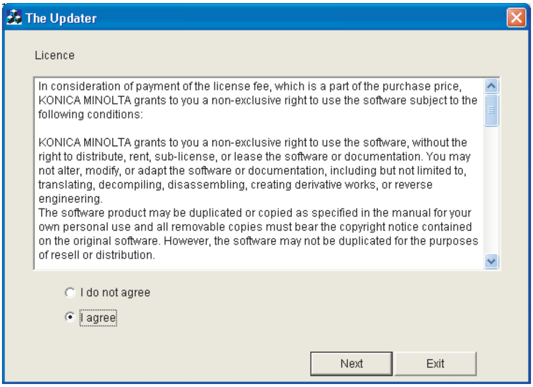
This tool is for updating the firmware.

Printer name: KONICA MINOLTA magicolor [redacted]

Firmware version: [redacted]

A011F2E555DA

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



Licence

In consideration of payment of the license fee, which is a part of the purchase price, KONICA MINOLTA grants to you a non-exclusive right to use the software subject to the following conditions:

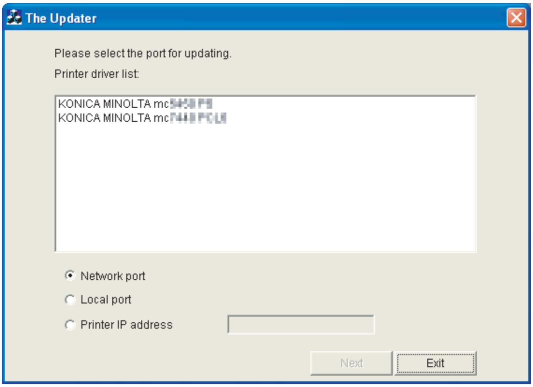
KONICA MINOLTA grants to you a non-exclusive right to use the software, without the right to distribute, rent, sub-license, or lease the software or documentation. You may not alter, modify, or adapt the software or documentation, including but not limited to, translating, decompiling, disassembling, creating derivative works, or reverse engineering.
The software product may be duplicated or copied as specified in the manual for your own personal use and all removable copies must bear the copyright notice contained on the original software. However, the software may not be duplicated for the purposes of resell or distribution.

○ I do not agree

● I agree

A011F2E556DA

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



Please select the port for updating.

Printer driver list:

KONICA MINOLTA mc[redacted]
KONICA MINOLTA mc[redacted]

● Network port
○ Local port
○ Printer IP address

A011F2E557DA

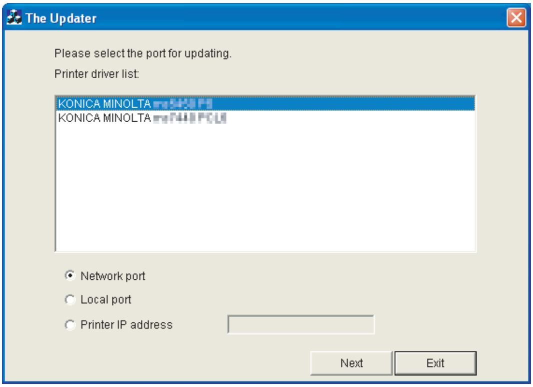
- For a network connection: Select “Network port.”
  See P.35
- For a local connection: Select “Local port.”
  See P.38
- When specifying the IP address of the printer: Select “Printer IP address.”
  See P.39

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].



The Updater

Please select the port for updating.

Printer driver list:

KONICA MINOLTA
KONICA MINOLTA

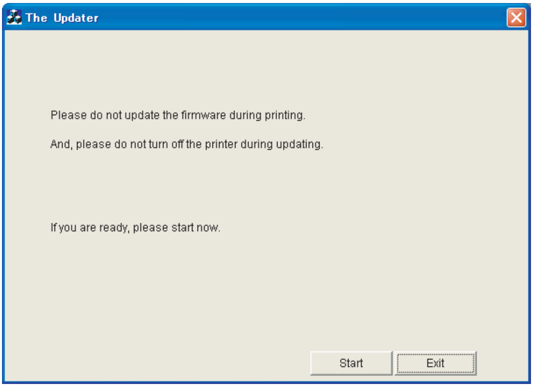
● Network port
○ Local port
○ Printer IP address

A011F2E558DA

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.**



The Updater

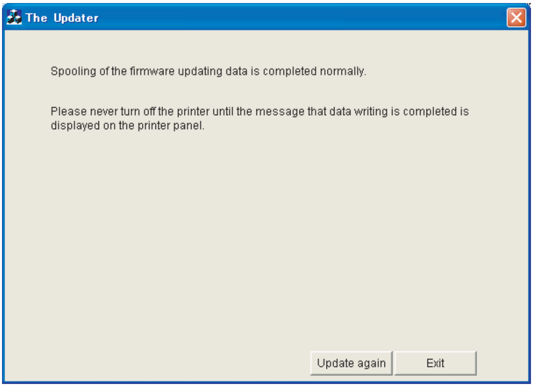
Please do not update the firmware during printing.

And, please do not turn off the printer during updating.

If you are ready, please start now.

A011F2E559DA

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



Spooling of the firmware updating data is completed normally.

Please never turn off the printer until the message that data writing is completed is displayed on the printer panel.

A011F2E560DA

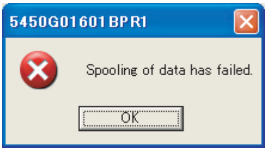
5. If the firmware was successfully updated, the printer will automatically restart.

<If spooling of the data fails>

NOTE

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

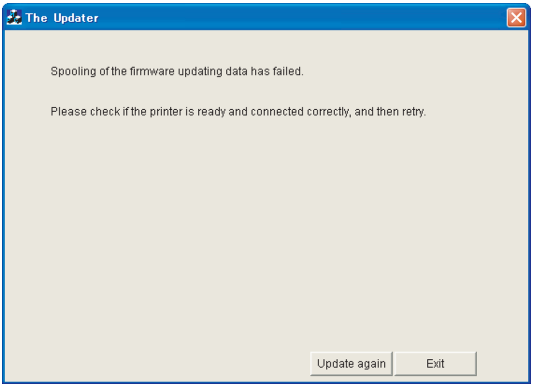
1. If spooling of the data fails, the following message appears.
2. Click [OK].



Spooling of data has failed.

A011F2E561DA

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



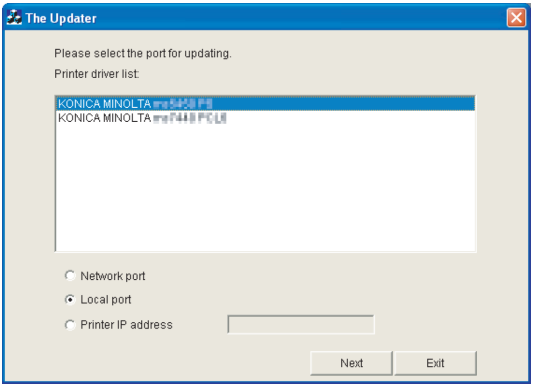
Spooling of the firmware updating data has failed.

Please check if the printer is ready and connected correctly, and then retry.

A011F2E562DA

(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].



Please select the port for updating.

Printer driver list:

KONICA MINOLTA [redacted]
KONICA MINOLTA [redacted]

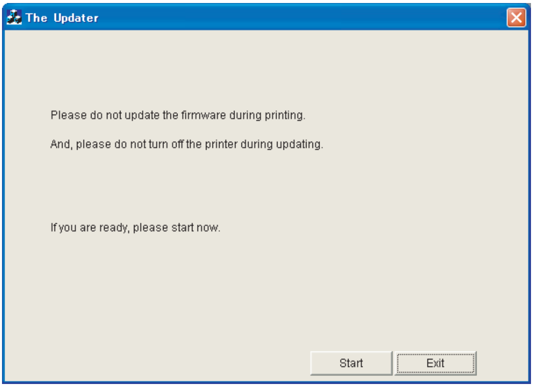
○ Network port
● Local port
○ Printer IP address

A011F2E563DA

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.**



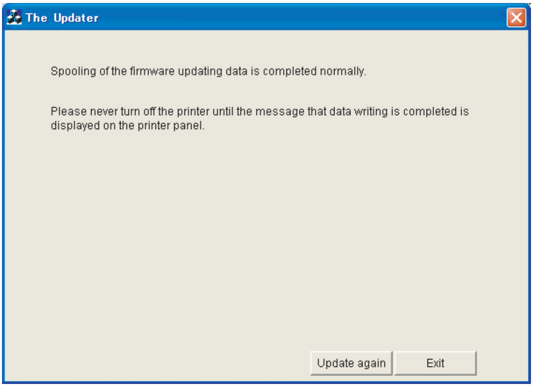
Please do not update the firmware during printing.

And, please do not turn off the printer during updating.

If you are ready, please start now.

A011F2E564DA

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



Spooling of the firmware updating data is completed normally.

Please never turn off the printer until the message that data writing is completed is displayed on the printer panel.

A011F2E565DA

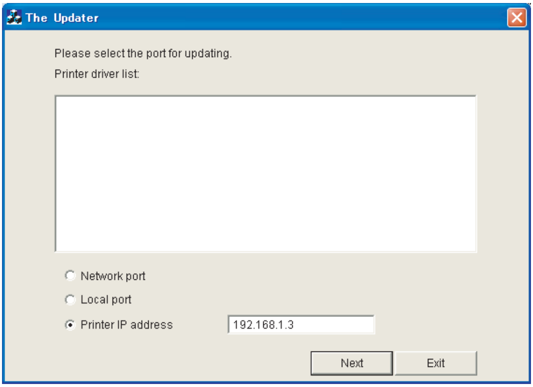
5. If the firmware was successfully updated, the printer will automatically restart.

<If spooling of the data fails>

- For details, see “For a network connection.”
  See P.37

(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].



Please select the port for updating.

Printer driver list:

○ Network port

○ Local port

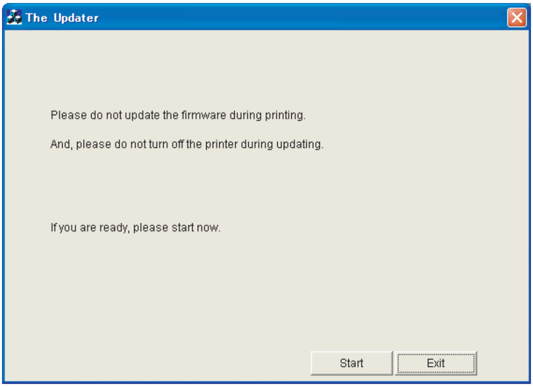
● Printer IP address 192.168.1.3

A011F2E566DA

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.**



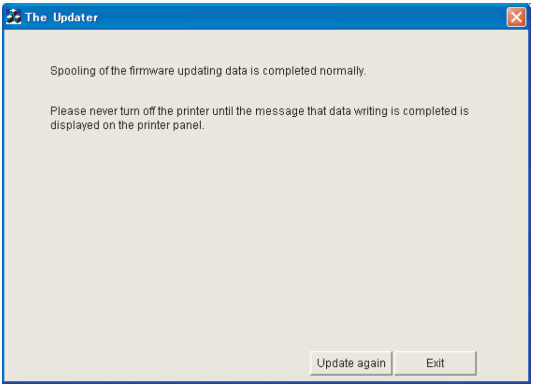
Please do not update the firmware during printing.

And, please do not turn off the printer during updating.

If you are ready, please start now.

A011F2E567DA

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



Spooling of the firmware updating data is completed normally.

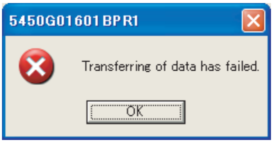
Please never turn off the printer until the message that data writing is completed is displayed on the printer panel.

A011F2E565DA

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

<If transferring of the data fails>

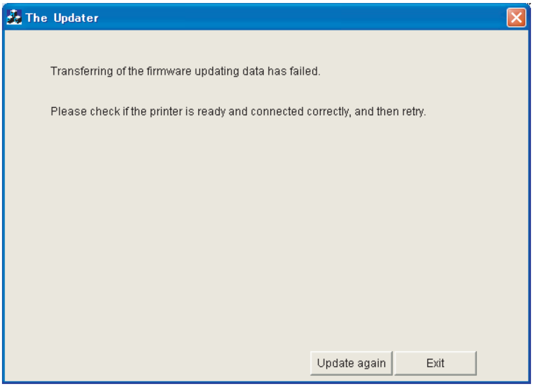
1. If transferring of the data fails, the following message appears.
2. Click [OK].



Transferring of data has failed.

A011F2E569DA

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



Transferring of the firmware updating data has failed.

Please check if the printer is ready and connected correctly, and then retry.

A011F2E570DA

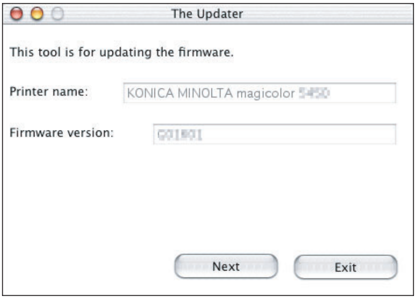
C. Connection for Macintosh

(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 “xxxxxxxxxxxx.”
3. The printer name and firmware version are displayed. Click the [Next].



The Updater

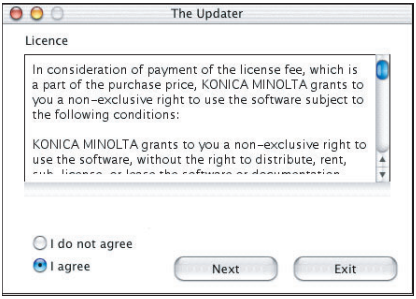
This tool is for updating the firmware.

Printer name: KONICA MINOLTA magicolor 5450

Firmware version: G01E01

A011F2E571DA

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



The Updater

Licence

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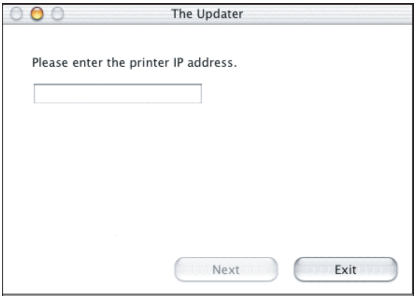
KONICA MINOLTA grants to you a non-exclusive right to use the software, without the right to distribute, rent,

○ I do not agree
● I agree

A011F2E572DA

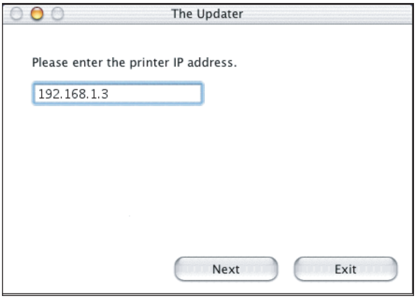
5. The screen for specifying the IP address of the printer appears.



Please enter the printer IP address.

A011F2E573DA

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



Please enter the printer IP address.

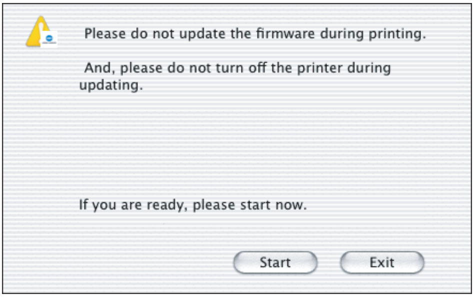
192.168.1.3

A011F2E574DA

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.**



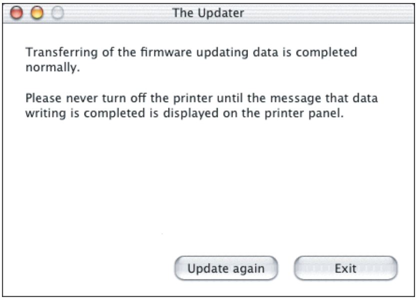
Please do not update the firmware during printing.

And, please do not turn off the printer during updating.

If you are ready, please start now.

A011F2E575DA

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



The Updater

Transferring of the firmware updating data is completed normally.

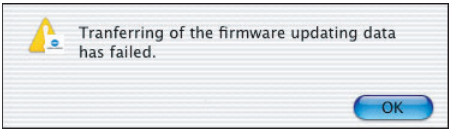
Please never turn off the printer until the message that data writing is completed is displayed on the printer panel.

A011F2E576DA

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

<If transferring of the data fails>

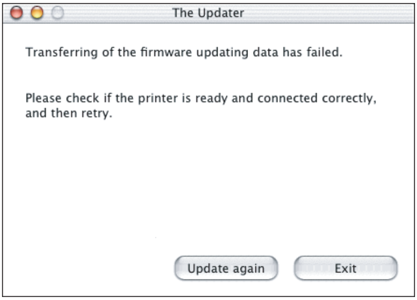
1. If transferring of the data fails, the following message appears.
2. Click [OK].



Tranferring of the firmware updating data has failed.

A011F2E577DA

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



The Updater

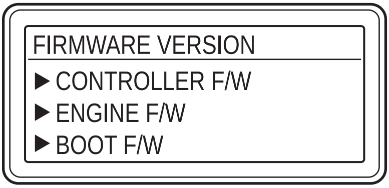
Transferring of the firmware updating data has failed.

Please check if the printer is ready and connected correctly, and then retry.

A011F2E578DA

5.3.2 Checking the version after the firmware update

1. Display [SERVICE MENU].
2. Display [FIRMWARE VERSION].



FIRMWARE VERSION

▶ CONTROLLER F/W

▶ ENGINE F/W

▶ BOOT F/W

3. Select the firmware that has been updated and check the current version.
   See P.187

6. Other

6.1 Disassembly/adjustment prohibited items

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.**

6.2 Disassembly/assembly/cleaning list (other parts)

6.2.1 Disassembly/assembly parts list

No	Section	Part name	Ref.Page
1	Exterior parts	Front door	P.49
2		Upper front cover	P.49
3		Right front cover	P.50
4		Left cover	P.50
5		Rear cover	P.51
6		Exit tray	P.51
7		Right rear cover	P.52
8		Tray 2	P.53
9		Tray 1	P.54
10	Boards and etc.	Operation board (OB)	P.54
11		Hard disk kit (option)	P.55
12		MFP board (MFPB)	P.56
13		Print control board (PRCB)	P.59
14		DC power supply (DCPU)	P.61
15		High voltage unit/1 (HV1)	P.63
16		High voltage unit/2 (HV2)	P.64
17		Toner level sensor board (TLSB)	P.65
18	Units	PH Unit	P.68
19		Driving unit	P.75
20	Other Parts	MFP board fan motor (FM5)	P.76
21		Backup battery	P.77
22		PWB box/1	P.78
23		PWB box/2	P.79
24		Color PC drum motor (M2)	P.79
25		Intermediate transport motor (M3)	P.82
26		Fusing motor (M4)	P.81
27		Developing motor/K (M5)	P.80
28		Toner supply motor/Y,M (M6)	P.80
29		Toner supply motor/C,K (M7)	P.81
30		Media feed clutch/1 (CL1)	P.86
31		Media feed clutch/2 (CL3)	P.90
32		Registration roller clutch (CL2)	P.82
33		Pressure/retraction clutch/2 (CL5)	P.83
34		Pressure/retraction clutch/1 (CL4)	P.85
35		Temperature/ humidity sensor (TEM/HUMS)	P.93
36		IDC sensor board/Re (IDCSB/R)	P.94
37		IDC sensor board/Fr (IDCSB/F)	

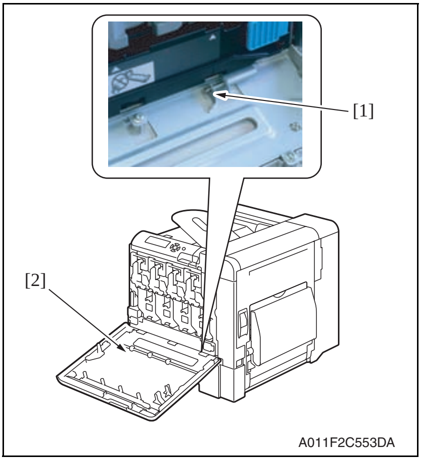
6.2.2 Cleaning parts list

No	Section	Part name	Ref.Page
1	Tray 1	Feed roller	P.95
2	Tray 2	Feed roller	P.95
3	Processing section	Laser irradiation section	P.96

6.3 Disassembly/assembly procedure

6.3.1 Front door

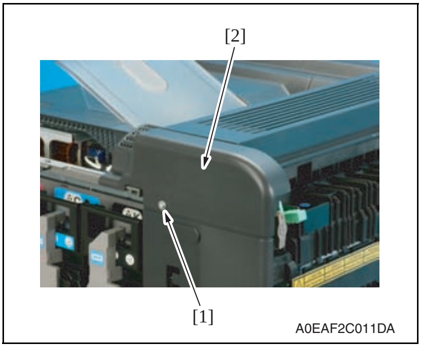
1. Open the front door.



2. Remove the E-ring [1].
3. Slide the front door [2] to the left off the machine.

6.3.2 Upper front cover

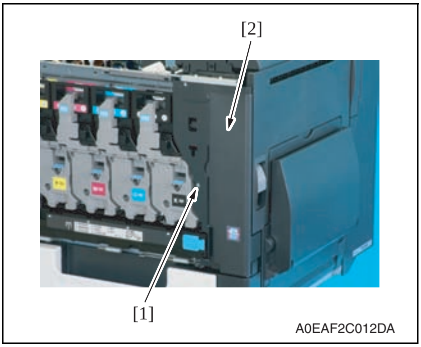
1. Open the front door.
2. Open the right door.
3. Remove the operation board.
   See P.54



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

6.3.3 Right front cover

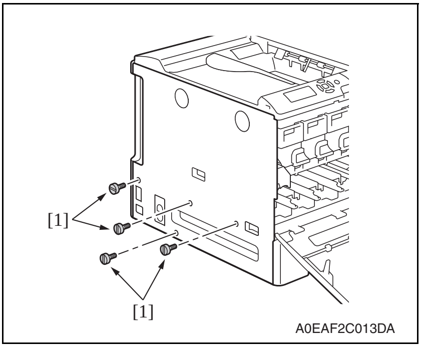
1. Remove the front door.
   See P.49
2. Remove the upper front cover.
   See P.49



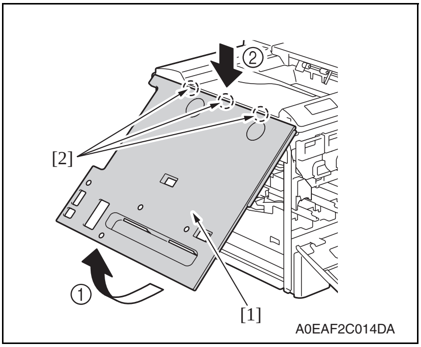
3. Remove the screw [1], and remove the right front cover [2].

6.3.4 Left cover

1. Open the front door.



2. Remove four screws [1].

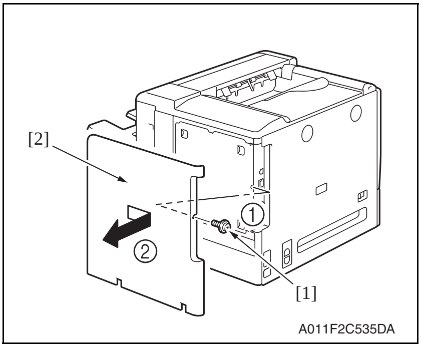


3. Remove the left cover [1].

NOTE

- **Remove the left cover as shown in the illustration on the left, taking care not to damage three tabs [2] on the upper edge of the left cover.**

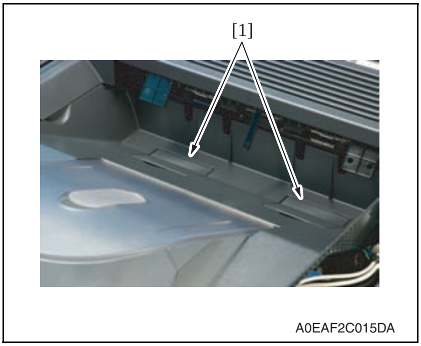
6.3.5 Rear Cover



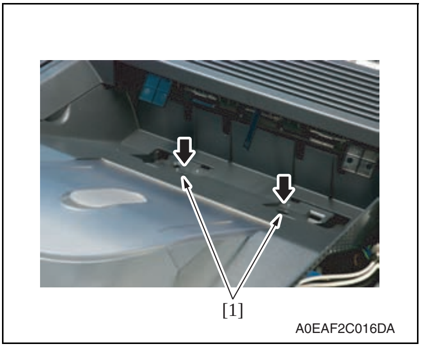
1. Remove the screw [1].
2. Slide the rear cover [2] in the direction shown in the illustration on the left off the machine.

6.3.6 Exit tray

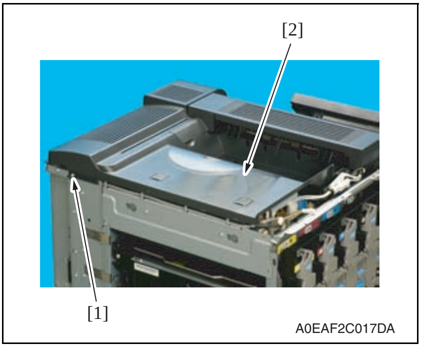
1. Open the front door.
2. Remove the operation board.
   See P.54
3. Remove the upper front cover.
   See P.49
4. Remove the left cover.
   See P.50
5. Remove the rear cover.
   See P.51



6. Remove two covers [1].



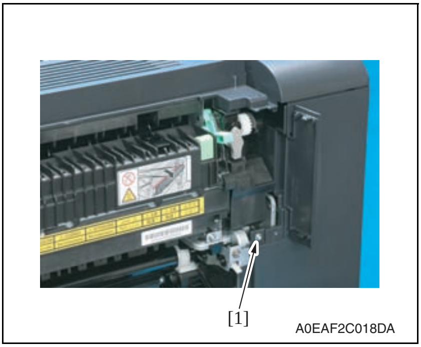
7. Remove two screws [1].



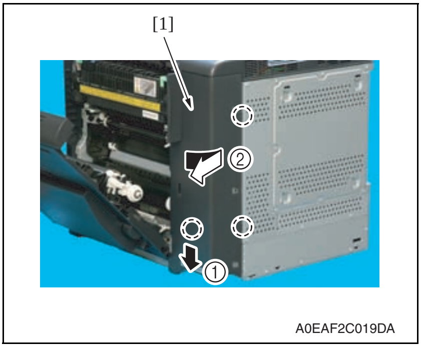
8. Remove the screw [1], and remove the exit tray [2].

6.3.7 Right rear cover

1. Open the right door.
2. Remove the rear cover.
   See P.51



3. Open the cover and remove the screw [1].

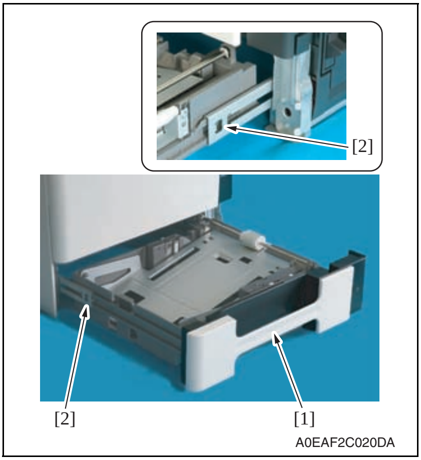


4. Unhook three tabs, and remove the right rear cover [1].

6.3.8 Tray 2

NOTE

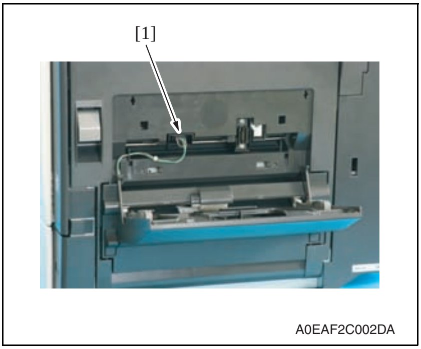
- **This procedure shows the steps taken for the magicolor 5650EN/5670EN. However, the tray 2 feed roller of the magicolor 5670EN (MPC type) can be replaced according to the same procedure.**



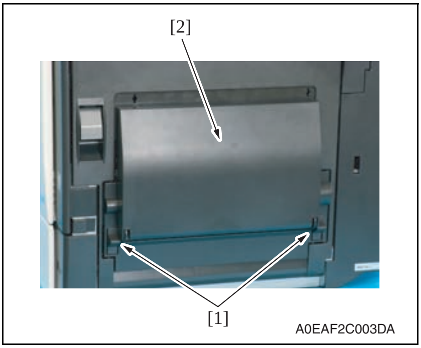
1. Slide out the tray 2 [1].
2. Pressing the tabs [2] on both sides, remove the tray 2 [1].

6.3.9 Tray 1

1. Open the tray 1.
2. Remove the tray 1 cover.



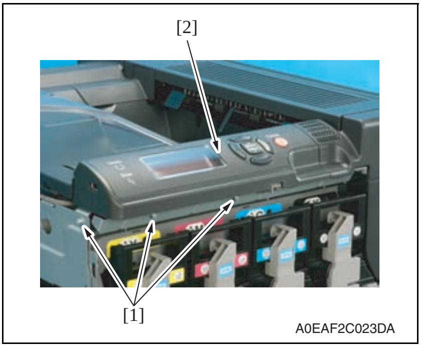
3. Disconnect the connector [1].



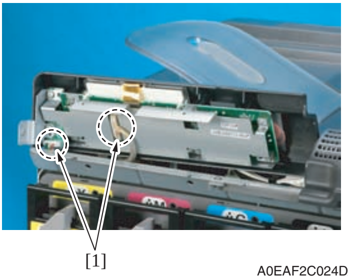
4. Move two lock levers [1] up.
5. Remove the tray 1 [2].

6.3.10 Operation board (OB)

1. Open the front door.
2. Remove the left cover.
   See P.50



3. Remove three screws [1], and remove the operation board [2].

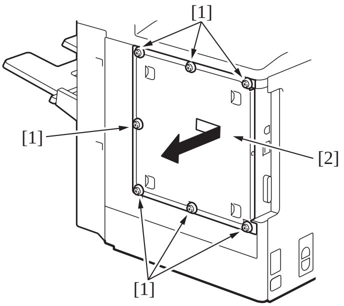


A0EAF2C024DA

4. Disconnect two connectors [1].

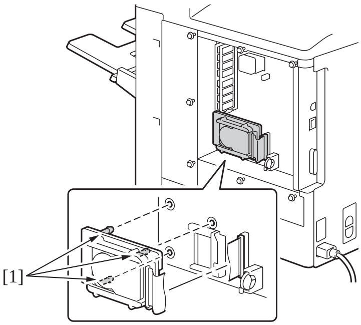
6.3.11 Hard disk kit (option)

1. Remove the rear cover.
   See P.51



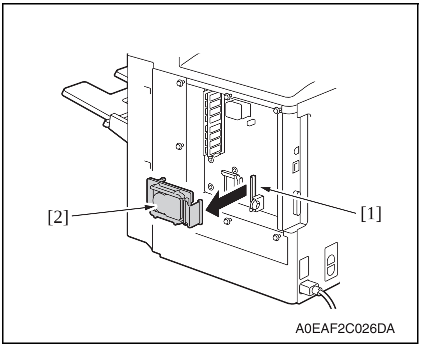
A011F2C536DB

2. Loosen seven screws [1], and remove the MFP board protective shield [2].



A0EAF2C025DA

3. Remove three mounting pins [1].



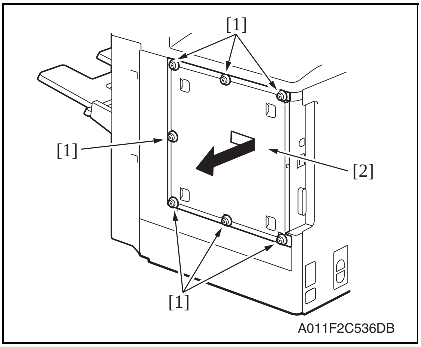
4. Disconnect the connector [1], and remove the hard disk kit [2].

6.3.12 MFP board (MFPB)

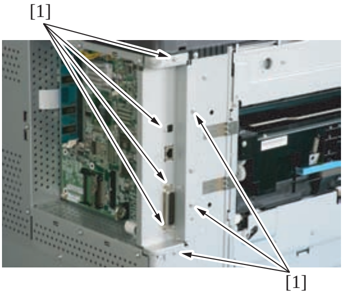
NOTE

- **After the MFP board replacement, you need to set the language to be displayed on the control panel again.**
  See P.158

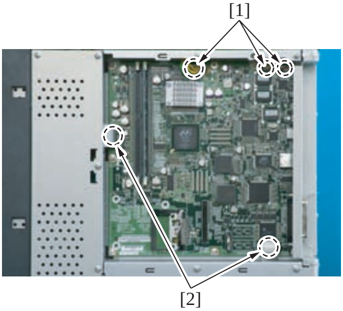
1. Remove the rear cover.
   See P.51



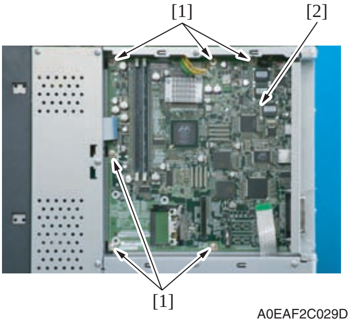
2. Loosen seven screws [1], and remove the MFP board protective shield [2].
3. Remove the MFP board fan motor.
   See P.76
4. Remove the left cover.
   See P.50



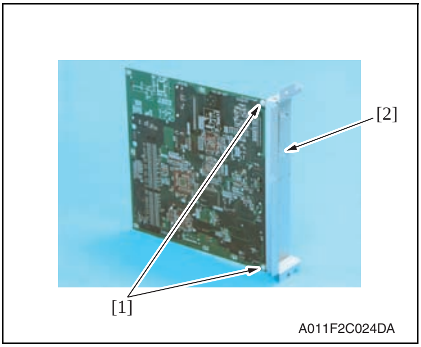
5. Remove seven screws [1].



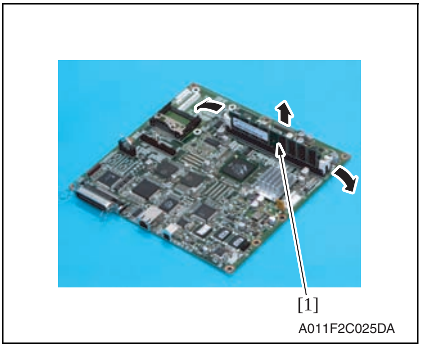
6. Disconnect three connectors [1] on the MFP board.
7. Disconnect two flat cables [2] from the MFP board.



8. Remove six screws [1], and remove the MFP board assy [2].



9. Remove two screws [1] and the interface protective cover [2].



10. Remove the memory [1] from the MFP board.

11. Remove the backup battery from the MFP board.
    See P.77

NOTE

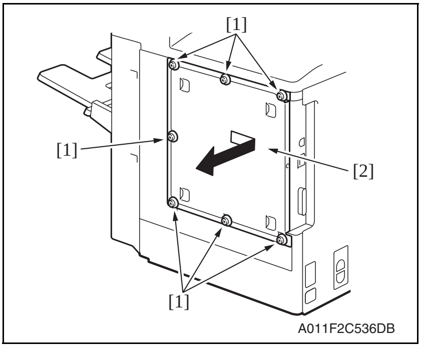
- **When the MFP board is replaced, upgrade the firmware to the latest version.**
  See P.30

NOTE

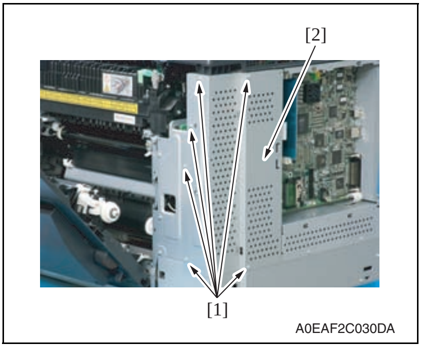
- **After the replacement of the MFP board, you need to rewrite new security data into the hard disk and the compact flash if you would like to continue to use the data that has been stored in these disks.**
  See P.198

6.3.13 Print control board (PRCB)

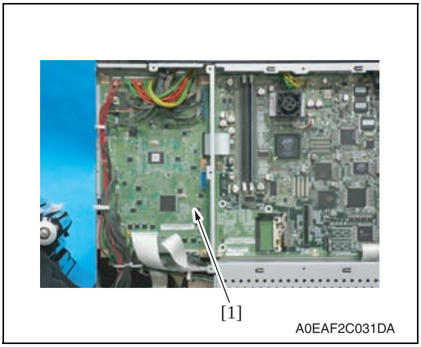
1. Remove the rear cover.
   See P.51
2. Remove the right rear cover.
   See P.52



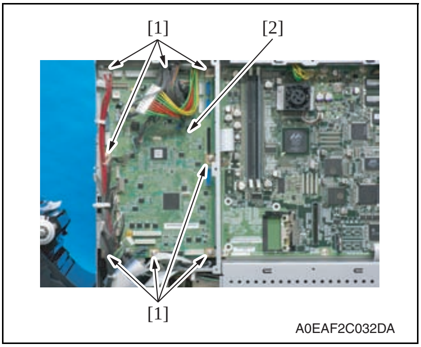
3. Remove seven screws [1], and remove the MFP board protective shield [2].



4. Remove six screws [1] and the print control board protective shield [2].



5. Disconnect all connectors and flat cables from the print control board [1].

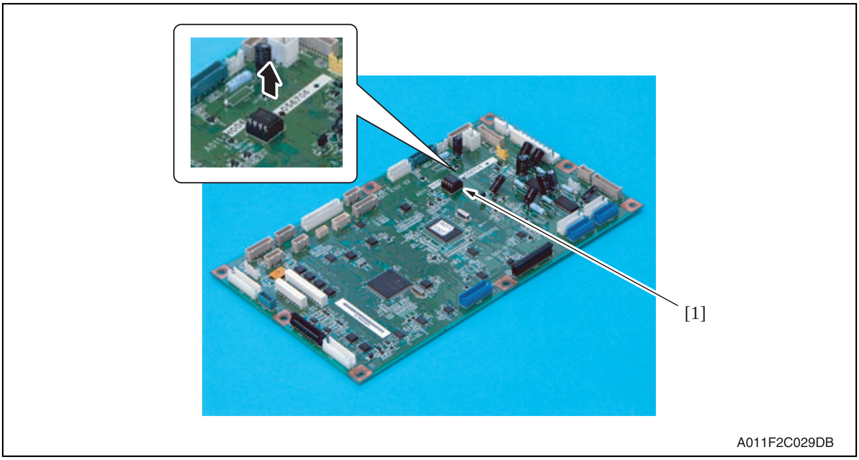


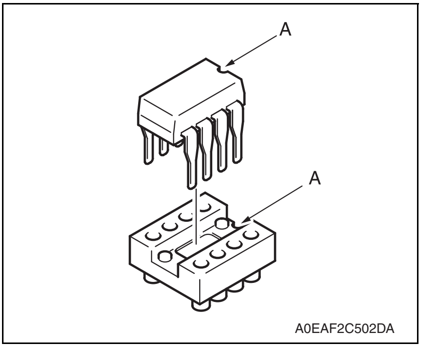
6. Remove eight screws [1], and remove the print control board [2].

7. Remove parameter chip (IC4) [1] from the print control board.

NOTE

- **When the print control board (PRCB) has been replaced, be sure to remount parameter chip (IC4). Unmount parameter chip (IC4) from the old print control board and mount it on the new print control board.**



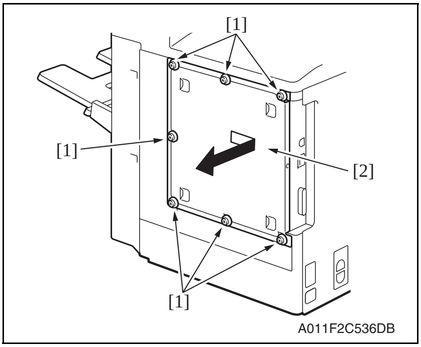


NOTE

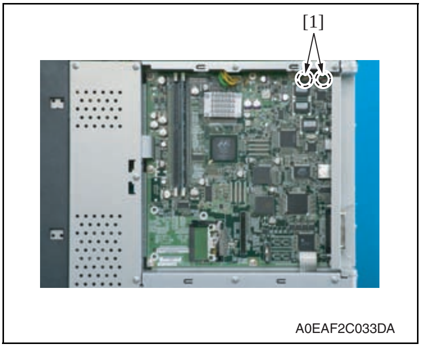
- **When mounting parameter chip (IC4), make sure the notches (“A”) are precisely lined up.**

6.3.14 DC power supply (DCPU)

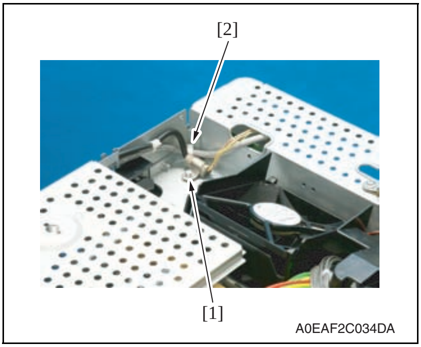
1. Remove the rear cover.
   See P.51
2. Remove the left cover.
   See P.50
3. Remove the operation board.
   See P.54
4. Remove the upper front cover.
   See P.49
5. Remove the exit tray.
   See P.51



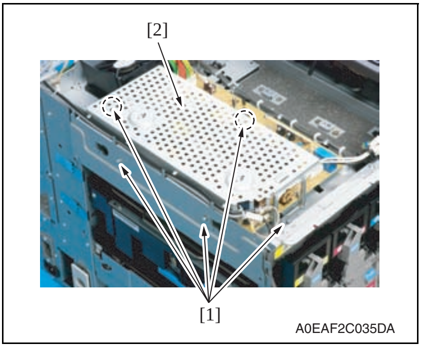
6. Loosen seven screws [1], and remove the MFP board protective shield [2].



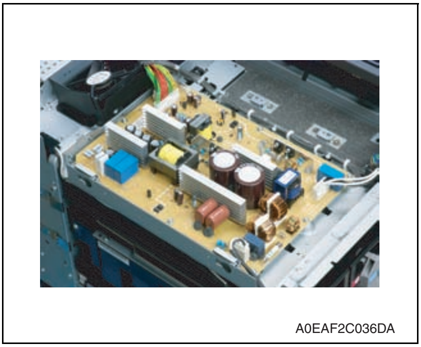
7. Disconnect two connectors [1] on the MFP board.



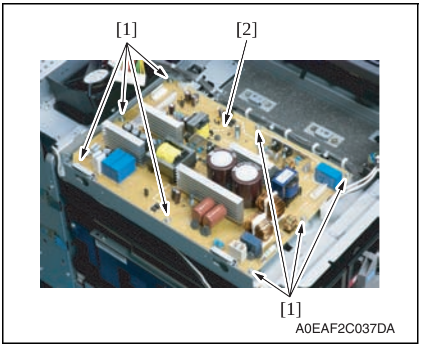
8. Remove the screw [1].
9. Remove the cable from the wire saddle [2].



10. Remove five screws [1] and the DC power supply protective cover [2].



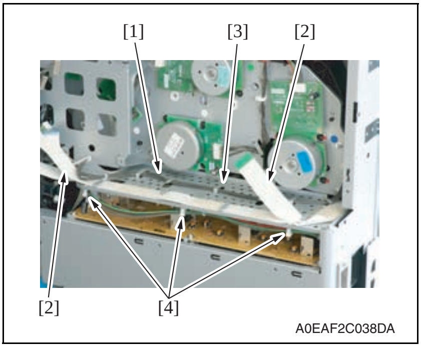
11. Disconnect all connectors on the DC power supply.



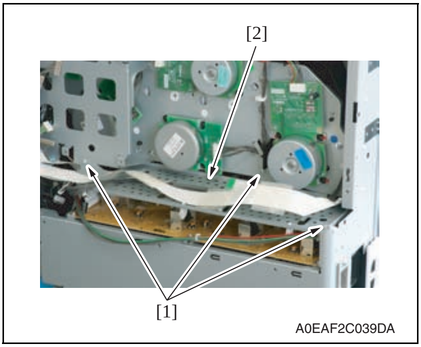
12. Remove eight screws [1] and the DC power supply [2].

6.3.15 High voltage unit/1 (HV1)

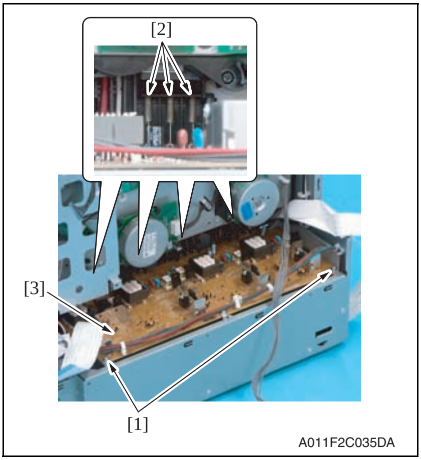
1. Remove PWB box/1.
   See P.78



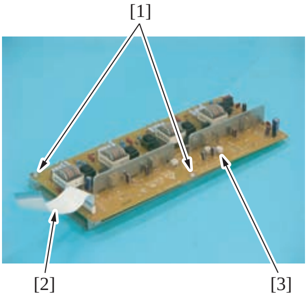
2. Disconnect the harness [1] and two flat cables [2] from the harness plate [3].
3. Remove the harness from three wire saddles [4].



4. Remove three screws [1], and remove the harness plate [2].



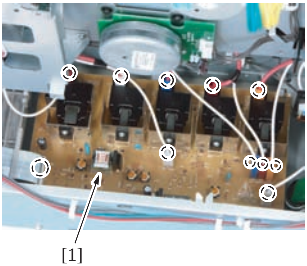
5. Remove two screws [1], twelve springs [2], and the high voltage unit/1 assy [3].



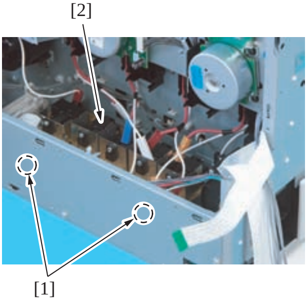
6. Remove two screws [1], and disconnect the flat cable [2].
7. Remove the high voltage unit/1 [3].

6.3.16 High voltage unit/2 (HV2)

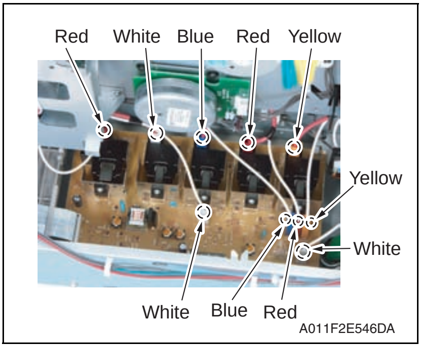
1. Remove the high voltage unit/1.
   See P.63



2. Disconnect all connectors and flat cables from the high voltage unit/2 [1].



3. Remove two screws [1], and remove the high voltage unit/2 [2].



NOTE

- **When reinstalling high voltage unit/2, make sure that each color connector is in the correct position, as shown in the illustration on the left.**

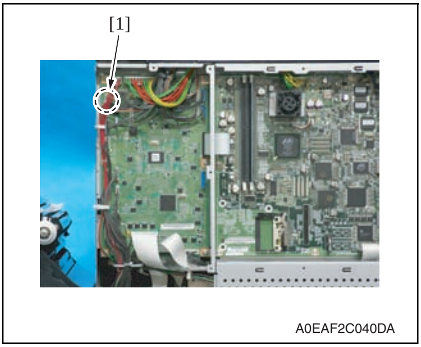
6.3.17 Toner level sensor board (TLSB)

1. Open the Front Door.
2. Remove the toner cartridge (C,M,Y,K).
   See P.16
3. Remove the imaging unit (C,M,Y,K).
   See P.19

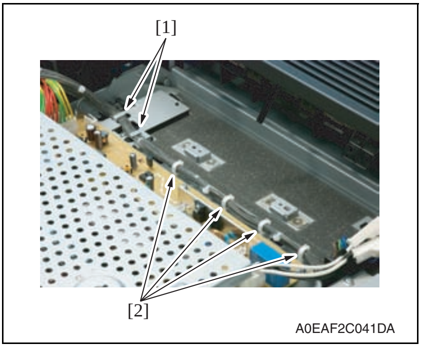
NOTE

- **After the imaging unit has been removed from the main body, be sure to place it in the plastic bag (black) or wrap it in a light shielding cloth, and store it in a dark place.**
  Do not leave the imaging unit exposed to light for a extended period of time, as it may become damaged.

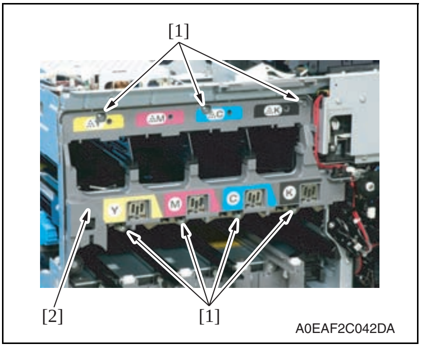
4. Remove the waste toner bottle.
   See P.23
5. Remove the upper front cover.
   See P.49
6. Remove the right front cover.
   See P.50
7. Remove the operation board.
   See P.54
8. Remove the exit tray.
   See P.51
9. Remove the print control board protective shield.
   See the steps 1 to 4 on P.59 “Print control board”.



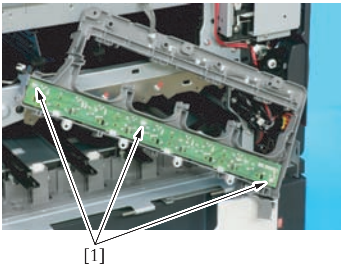
10. Disconnect the connector (PJ13A) [1] from the print control board.



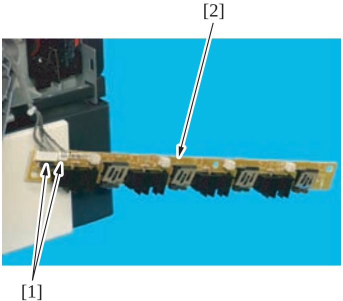
11. Remove the harness from the harness plate [1] and four wire saddles [2].



12. Remove seven screws [1], and remove the toner level sensor board assy [2].



13. Remove three screws [1].



14. Disconnect two connectors [1] and remove the toner level sensor board [2].

6.3.18 PH Unit

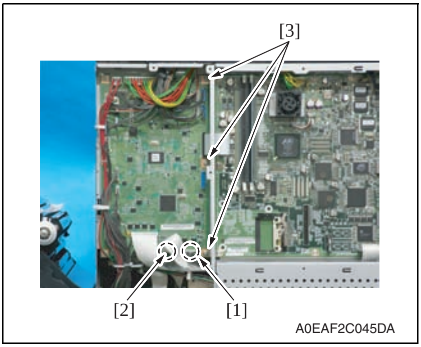
A. Removal procedure

1. Open the front door.
2. Remove the toner cartridge (C,M,Y,K).
   See P.16
3. Remove the imaging unit (C,M,Y,K).
   See P.19

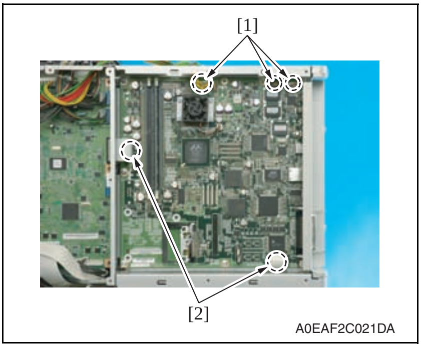
NOTE

- **After the imaging unit has been removed from the main body, be sure to place it in the plastic bag (black) or wrap it in a light shielding cloth, and store it in a dark place.**
  Do not leave the imaging unit exposed to light for a extended period of time, as it may become damaged.

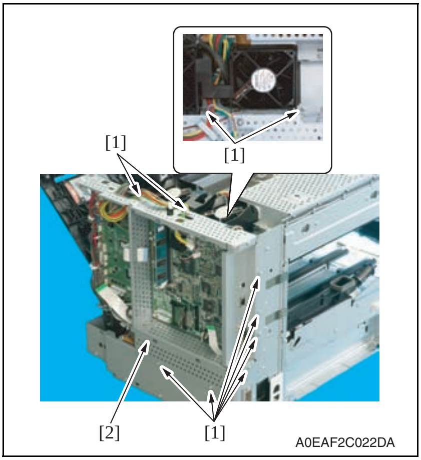
4. Remove the waste toner bottle.
   See P.23
5. Remove the transfer belt.
   See P.25
6. Remove the left cover.
   See P.50
7. Remove the print control board protective shield.
   See the steps 1 to 4 on P.59 “Print control board”.



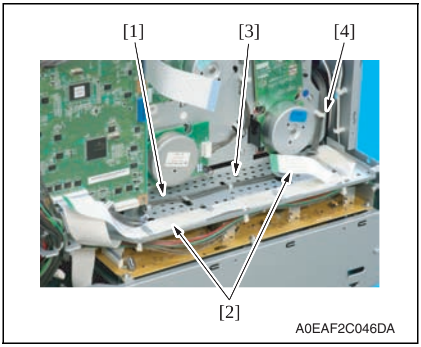
8. Disconnect the connector (PJ22A) [1] and the flat cable (PJ23A) [2] from the print control board.
9. Remove three screws [3].



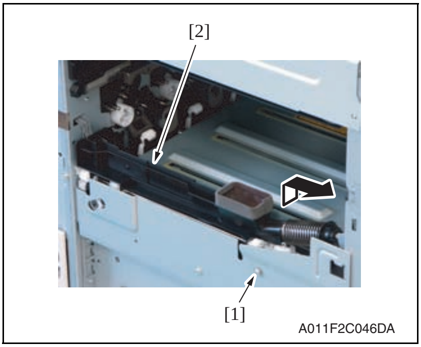
10. Disconnect three connectors [1] on the MFP board.
11. Disconnect two flat cables [2] from the MFP board.



12. Remove ten screws [1].
13. Remove the harness, and remove the PWB box/1 [2].



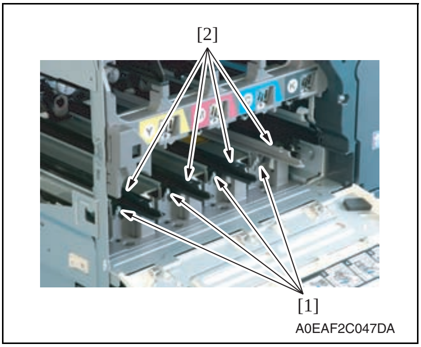
14. Disconnect the harness [1] and two flat cables [2] from the harness plate [3].
15. Remove the harness from the wire saddle [4].



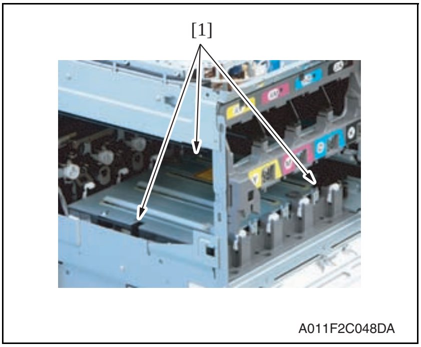
16. Remove the screw [1], and remove the drawing up transportation assy [2].

NOTE

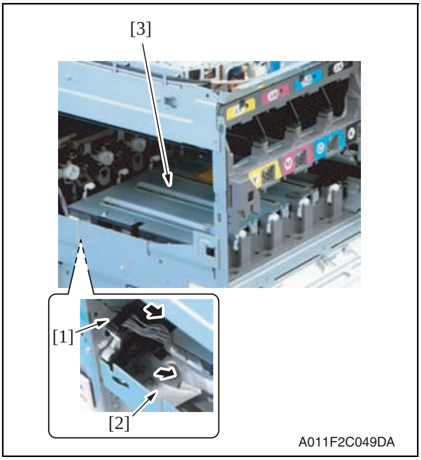
- **Waste toner may spill out from the waste toner inlet of the drawing up transportation assy.**
  Take care not to tilt the waste toner inlet when removing the drawing up transportation assy [2]. The drawing up transportation assy [2] also needs to be placed in a horizontal position where no waste toner will spill out.



17. Remove four screws [1], and remove corresponding four imaging unit rails [2].



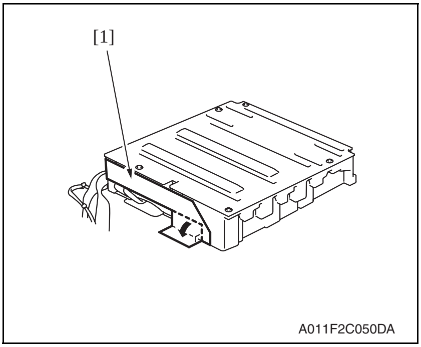
18. Remove three shoulder screws [1] of the PH unit.



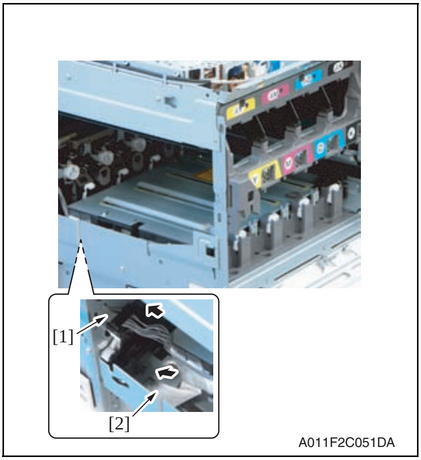
19. Pull the connector [1] and the flat cable [2] out, and remove the PH unit [3].

B. Reinstallation procedure

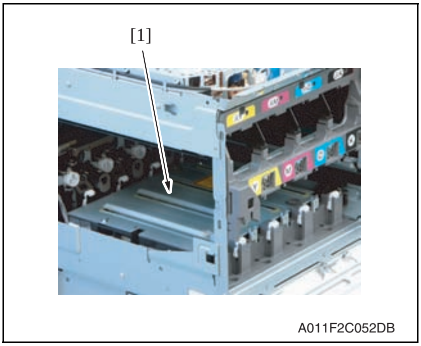
1. Remove the shipping tape affixed on the new PH unit shield sheet.



2. Unfold the rectangular area of the shield sheet [1] so that the part is lying flat.



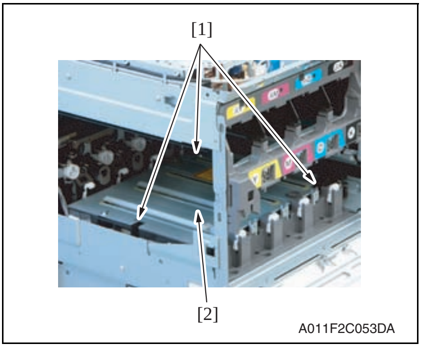
3. Insert the PH unit connector [1] and flat cable [2] from the positions shown in the left illustration.
   Then route them to the rear direction.



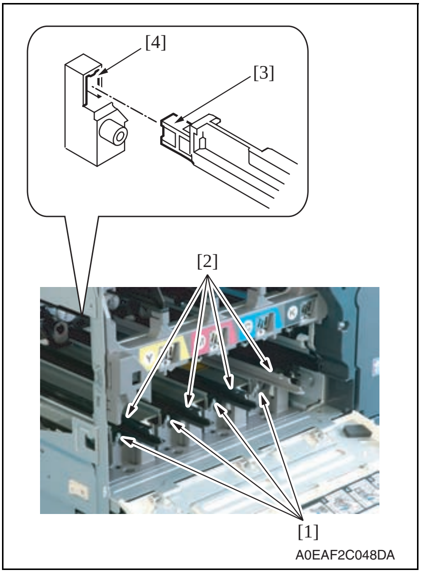
4. Install the PH unit [1] into the main body.

NOTE

- **After the PH unit installation, check that the shield sheet is grounded properly onto the base of the PH unit.**
- **Make sure that the shield sheet does not have any unnecessary crease, positional misalignment nor loose attachment.**



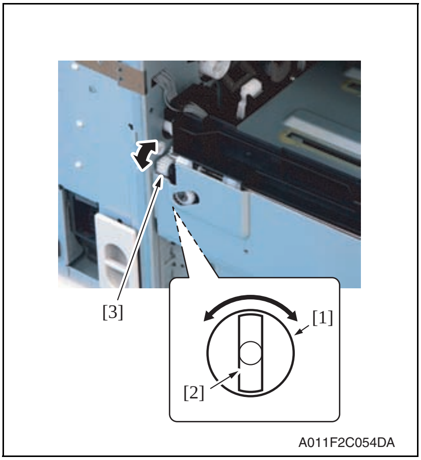
5. Fix the PH unit [2] with three shoulder screws [1].



6. Attach the four imaging unit rails [2] with one screw [1] for each rail.

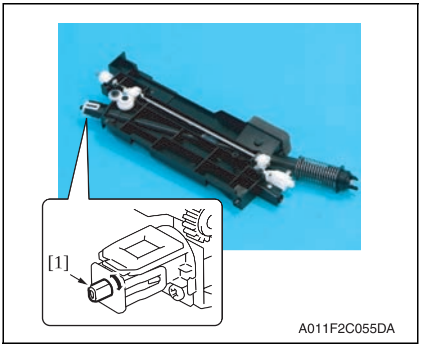
NOTE

- **Make sure that the convex parts [3] at rear end of the rail are fit in the locating hole [4] on the main body.**

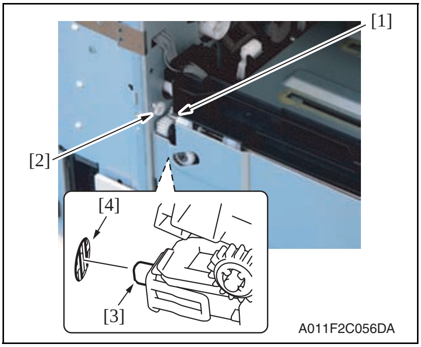


7. Install the drawing up transportation assy into the main body.

<1> Turn the middle drive gear [3] so that the rear gear [1] keeps its own rectangular slot [2] vertically long.

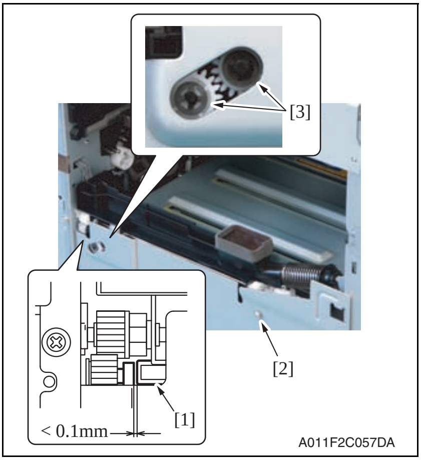


<2> Turn the connecting part [1] so that it becomes vertically long.



<3> Insert the drawing up transportation assy shaft [1] into the rear mounting hole [2].

<4> Insert the connecting part [3] of the drawing up transportation assy into the rear gear slot [4].



8. While pushing the positioning protrusion [1] of the drawing up transportation assy against the housing, fix the assy with one screw [2].

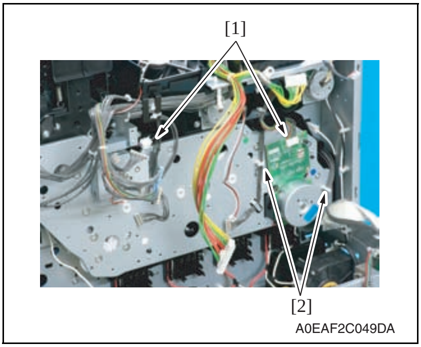
NOTE

- **Check that the two drive gears [3] of the drawing up transportation assy are engaged.**
- **Use a 0.1 mm piece of a thickness gauge to check the gap between the positioning protrusion [1] and the main body frame. Make sure that the piece of the thickness gauge cannot pass through the gap.**
  (A transparency can replace the thickness gauge.)
- **Check that the shield sheet which confirmed in step 4, is well grounded onto PH unit base plate at malt of drawing up transportation assy.**

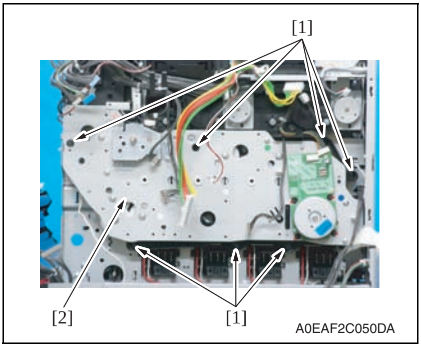
9. To reinstall, reverse the order of removal.

6.3.19 Driving unit

1. Remove the PWB box/1.
   See P.78
2. Remove the PWB box/2.
   See P.79
3. Remove the high voltage unit/1.
   See P.63
4. Remove the color PC drum motor.
   See P.79
5. Remove the developing motor/K.
   See P.80
6. Remove the fusing motor.
   See P.81
7. Remove the intermediate transport motor.
   See P.82
8. Remove the media feed and transport assy.
   See the steps 1 to 6 on P.86 "Media feed clutch/1".



9. Disconnect the connector [1].
10. Remove the harness from two wire saddles [2].



11. Remove seven screws [1], and remove the driving assy [2].

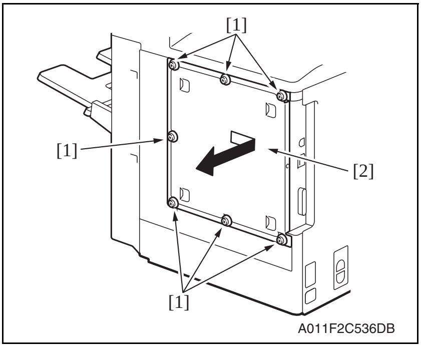
NOTE

- **When installing the driving unit assy [2], take care not to damage or soil the gears.**

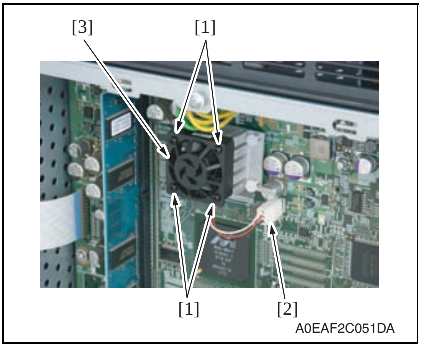
12. Remove the pressure/retraction clutch/1 assy.
    See the steps 3 on P.85 "Pressure/retraction clutch/1".

6.3.20 MFP board fan motor (FM5)

1. Remove the rear cover
   See P.51



2. Loosen seven screws [1], and remove the MFP board protective shield [2].



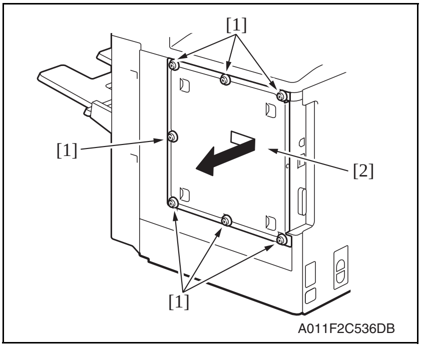
3. Remove four screws [1], connector [2], and remove the MFP board fan motor [3].

6.3.21 Backup battery

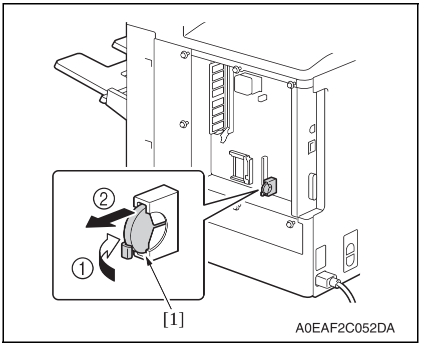
NOTE

- **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.46.**
- **When working with printed boards, hold the boards only by the edges.**

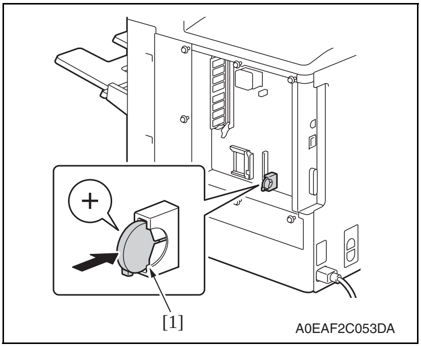
1. Remove the rear cover.
   See P.51



2. Loosen seven screws [1], and remove the MFP board protective shield [2].



3. Press the backup battery [1] in the way shown in the picture on the left and remove it from the housing.



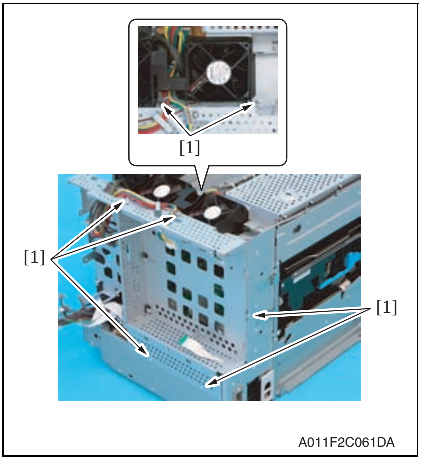
4. Insert a new backup battery [1].

NOTE

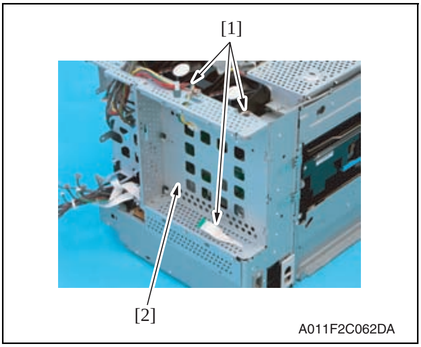
When inserting the new backup battery, be sure that the + side faces toward the left.

6.3.22 PWB box/1

1. Remove the MFP board.
   See P.56
2. Remove the print control board.
   See P.59
3. Remove the exit tray.
   See P.51



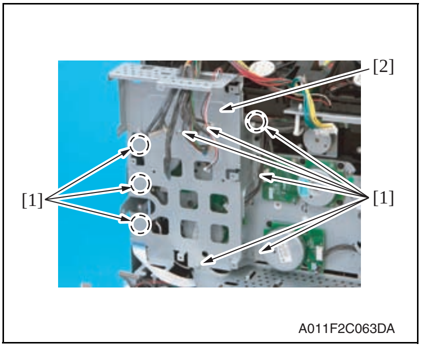
4. Remove seven screws [1].



5. Remove the harness [1], and remove the PWB box/1 [2].

6.3.23 PWB box/2

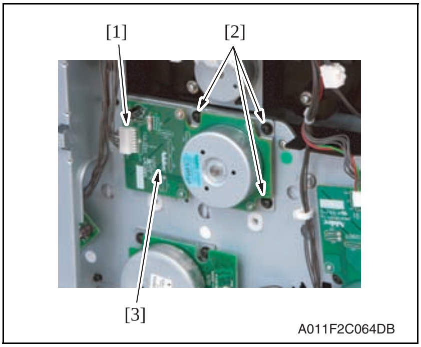
1. Remove the MFP board.
   See P.56
2. Remove the print control board.
   See P.59
3. Remove the PWB box/1.
   See P.78



4. Remove nine screws [1], and remove the PWB box/2 [2].

6.3.24 Color PC drum motor (M2)

1. Remove the PWB box/1.
   See P.78



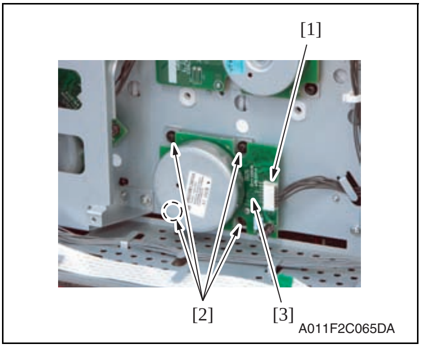
2. Disconnect the connector [1] and remove three screws [2], and the color PC drum motor [3].

NOTE

- **When installing the color PC drum motor [3], try to insert it straight, and take care not to damage the gears.**

6.3.25 Developing motor/K (M5)

1. Remove the PWB box/1.
   See P.78



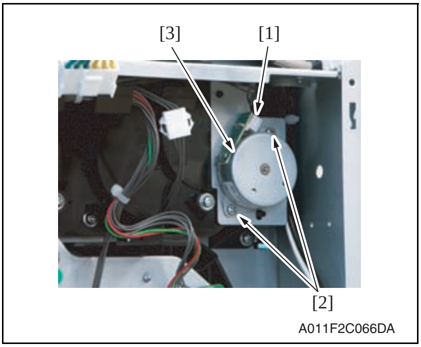
2. Disconnect the connector [1] and remove four screws [2], and the developing motor/K [3].

NOTE

- **When installing the developing motor/K [3], try to insert it straight, and take care not to damage the gears.**

6.3.26 Toner supply motor/Y,M (M6)

1. Remove the PWB box/1.
   See P.78



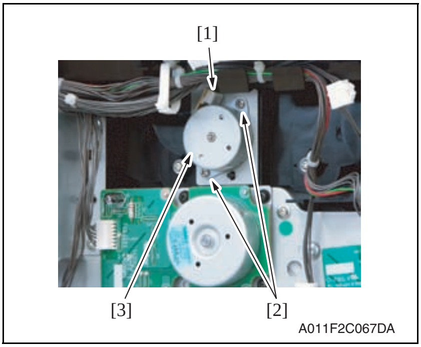
2. Disconnect the connector [1] and remove two screws [2], and the toner supply motor/Y,M [3].

NOTE

- **When installing the toner supply motor/Y,M [3], try to insert it straight, and take care not to damage the gears.**

6.3.27 Toner supply motor/C,K (M7)

1. Remove the PWB box/1.
   See P.78



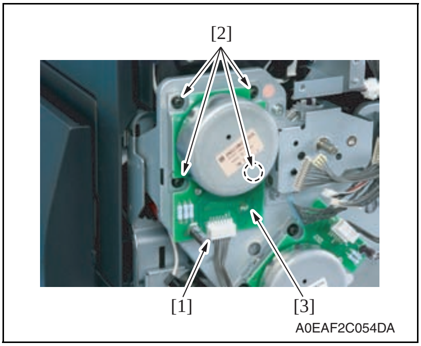
2. Disconnect the connector [1] and remove two screws [2], and the toner supply motor/C,K [3].

NOTE

- **When installing the toner supply motor/C,K [3], try to insert it straight, and take care not to damage the gears.**

6.3.28 Fusing motor (M4)

1. Remove the PWB box/1.
   See P.78
2. Remove the PWB box/2.
   See P.79



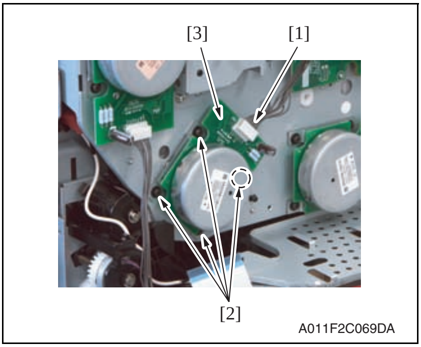
3. Disconnect the connector [1] and remove four screws [2], and the fusing motor [3].

NOTE

- **When installing the fusing motor [3], try to insert it straight, and take care not to damage the gears.**

6.3.29 Intermediate transport motor (M3)

1. Remove the PWB box/1.
   See P.78
2. Remove the PWB box/2.
   See P.79



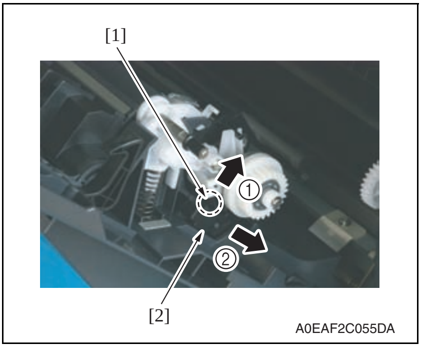
3. Disconnect the connector [1] and remove four screws [2], and the intermediate transport motor [3].

NOTE

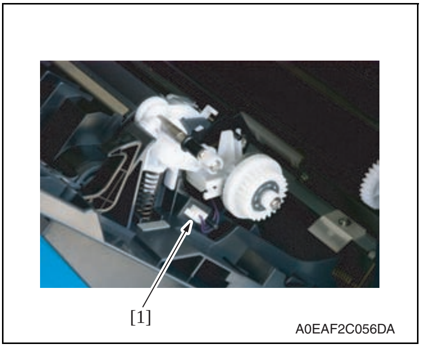
- **When installing the intermediate transport motor [3], try to insert it straight, and take care not to damage the gears.**

6.3.30 Registration roller clutch (CL2)

1. Open the right door.



2. Unhook the tab [1], and remove the connector cover [2].

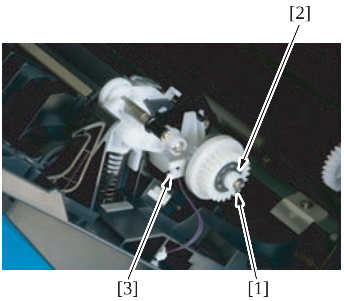


3. Disconnect the connector [1].

4. Remove the E-ring [1] and the bearing [2].

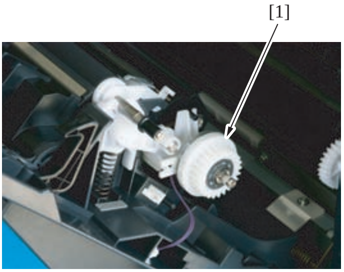
Precautions for reinstallation

- **When reinstalling the bearing, make sure that the notch [3] on the registration roller clutch comes to the position shown in the left picture.**



A0EAF2C057DA

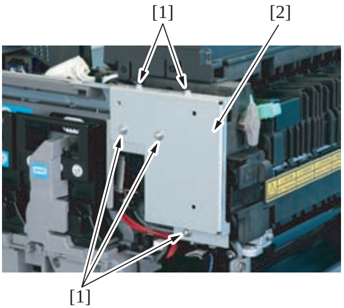
5. Remove the registration roller clutch [1].



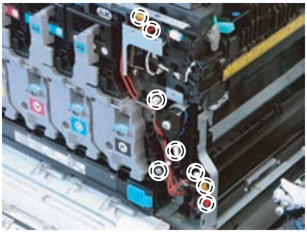
A0EAF2C058DA

6.3.31 Pressure/retraction clutch/2 (CL5)

1. Open the front door.
2. Remove the right front cover.
   See P.50
3. Open the right door.
4. Remove five screws [1], and remove the connector cover [2].

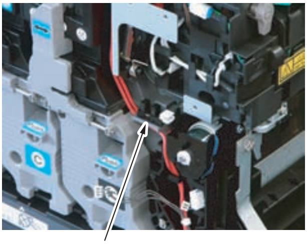


A0EAF2C059DA



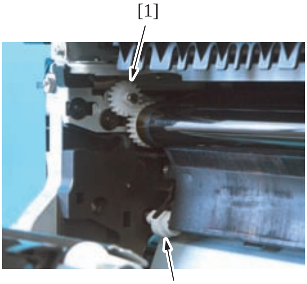
A011F2C075DB

5. Disconnect eight connectors.



A011F2C076DA

6. Remove the door sensor/Fr (PS14) [1].



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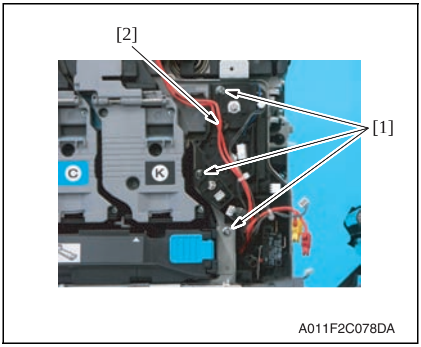
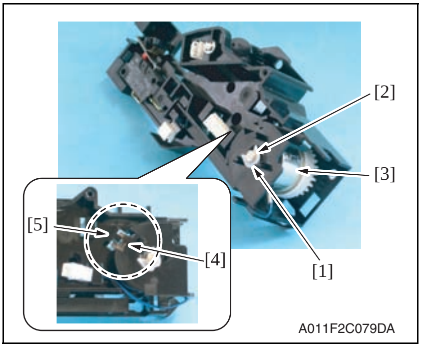
7. Remove the gear/1 [1] and the gear/2 [2].



8. Remove three screws [1], and remove the 2nd image transfer pressure/retraction drive assy [2].



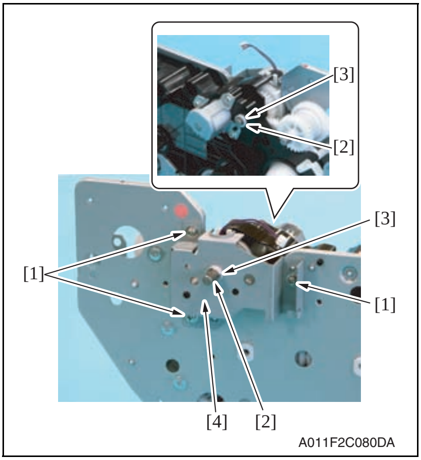
9. Snap off the C-ring [1].
10. Remove the bearing [2] and the pressure/retraction clutch/2 [3].

NOTE

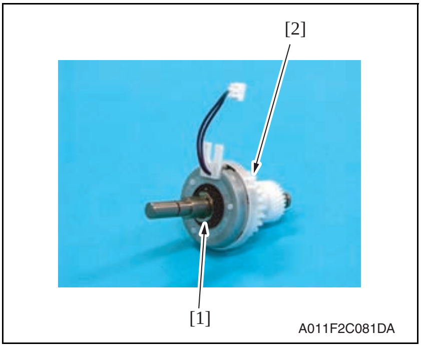
- **When reinstalling the bearing and pressure/retraction clutch/2, make sure that the protrusion [4] on the pressure/retraction clutch/2 fits into the locking slot [5].**

6.3.32 Pressure/retraction clutch/1 (CL4)

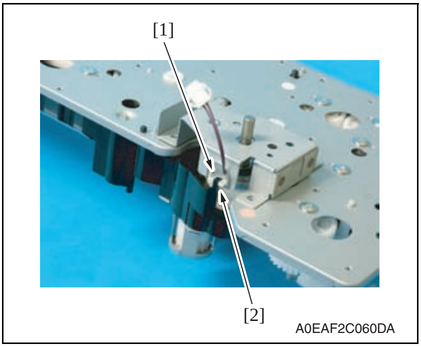
1. Remove the driving unit assy.
   See P.75



2. Remove three screws [1].
3. Snap off two E-rings [2].
4. Remove two bearings [3] and the pressure/retraction clutch/1 assy [4].



5. Remove the gear [1], and remove the pressure/retraction clutch/1 [2].

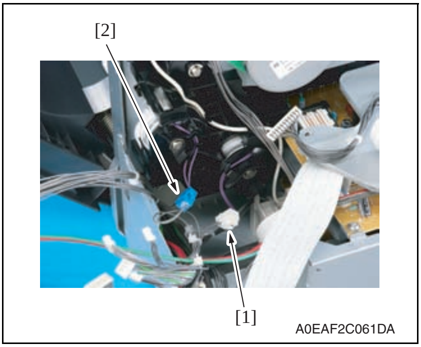


NOTE

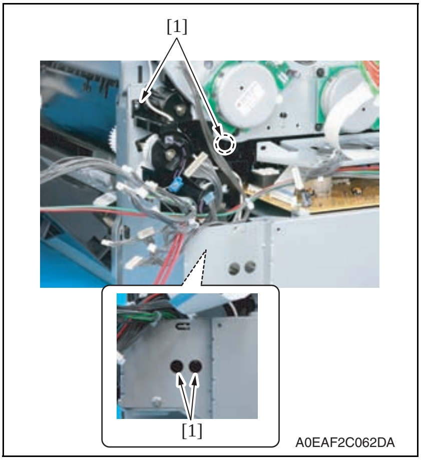
- **When reinstalling the bearing and pressure/retraction clutch/1, make sure that the protrusion [1] on the pressure/retraction clutch/1 fits into the locking slot [2].**

6.3.33 Media feed clutch/1 (CL1)

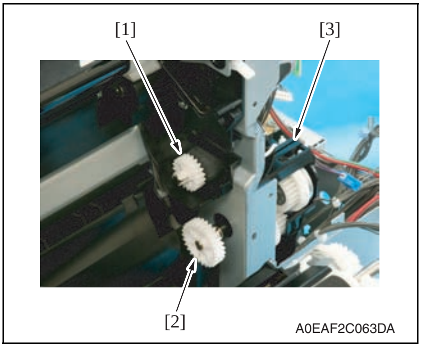
1. Remove the PWB box/1.
   See P.78
2. Remove the PWB box/2.
   See P.79



3. Disconnect the white connector [1] and the blue connector [2].



4. Remove four screws [1].

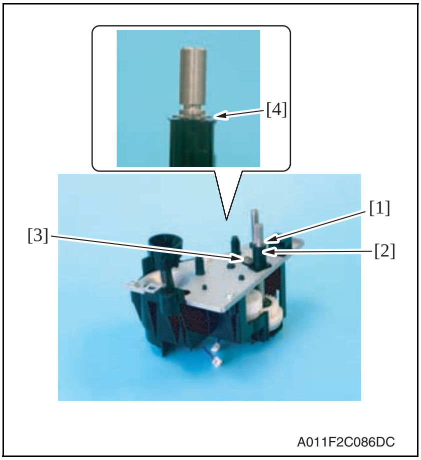


5. Remove the gear [1] and the gear [2].

NOTE

- **When the media feed clutch/1 is reinstalled, replace the gears that have been removed, as these gears could have been damaged.**

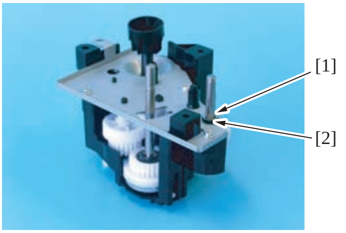
6. Remove the media feed and transport assy [3].



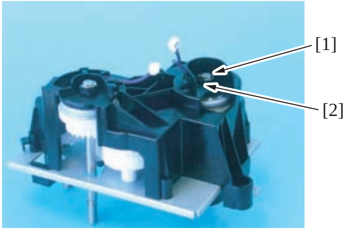
7. Snap off the E-ring [1].
8. Remove the bearing [2] and spring [3].

NOTE

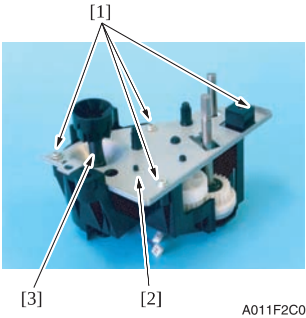
- **Fit the E-ring [1] to the lower groove [4] of the two grooves in the shaft.**



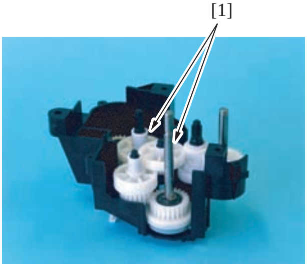
9. Snap off the E-ring [1], and remove the bearing [2].



10. Snap off the E-ring [1], and remove the bearing [2].



11. Remove four screws [1].
12. Remove the media feed and transport assy holding metal plate [2] and the shaft [3].



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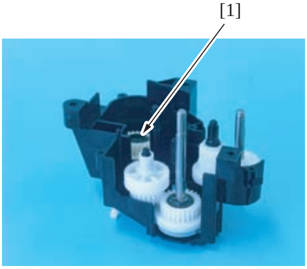
13. Remove two gears [1].



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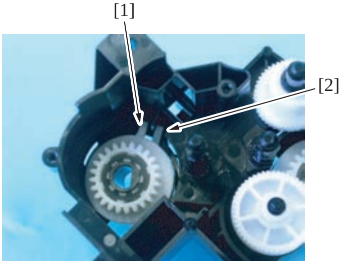
14. Remove the media feed clutch/1 [1].



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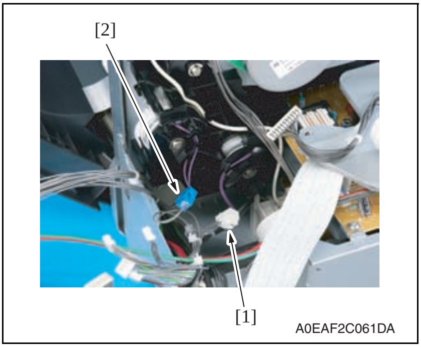
NOTE

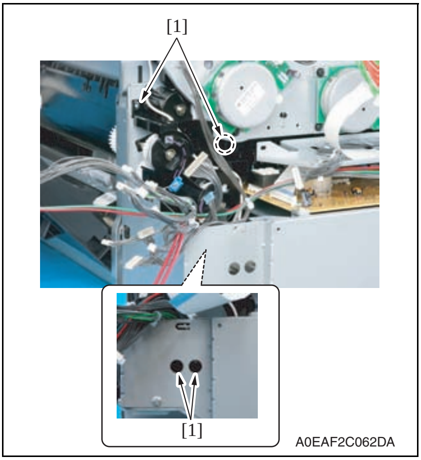
- **When reinstalling the media feed clutch/1, make sure that the protrusion [1] on the media feed clutch fits into the locking slot [2].**
- **Pass the harness of the media feed clutch through the location shown in the picture on the left.**

6.3.34 Media feed clutch/2 (CL3)

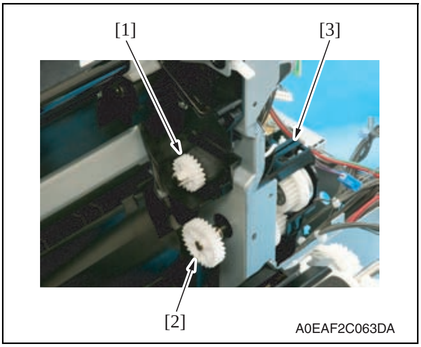
1. Remove the PWB box/1.
   See P.78
2. Remove the PWB box/2.
   See P.79



3. Disconnect the white connector [1] and the blue connector [2].



4. Remove four screws [2].

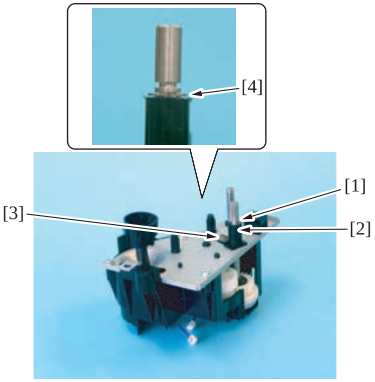


5. Remove the gear [1] and the gear [2].

NOTE

- **When the media feed clutch/2 is reinstalled, replace the gears that have been removed, as these gears could have been damaged.**

6. Remove the media feed and transport assy [3].



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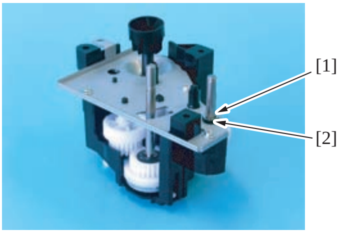
7. Snap off the E-ring [1].
8. Remove the bearing [2] and spring [3].

NOTE

- **When reinstalling the E-ring [1], fit it to the lower groove [4] of the two grooves in the shaft.**



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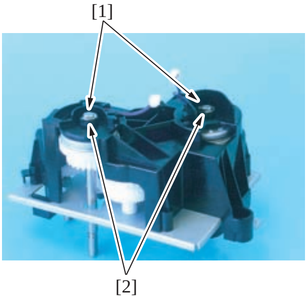
9. Snap off the E-ring [1], and remove the bearing [2].



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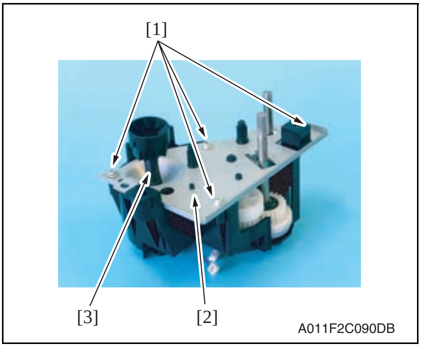
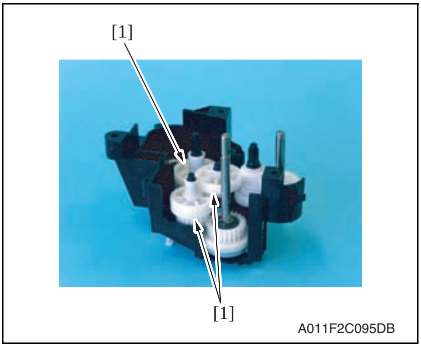
10. Snap off two E-rings [1], and remove two bearings [2].

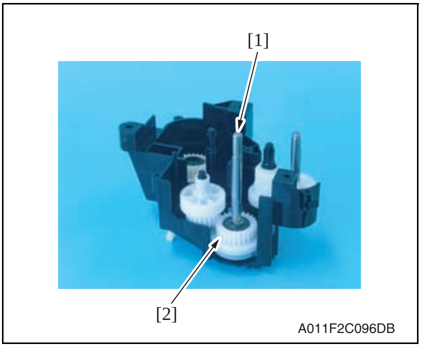


11. Remove four screws [1].

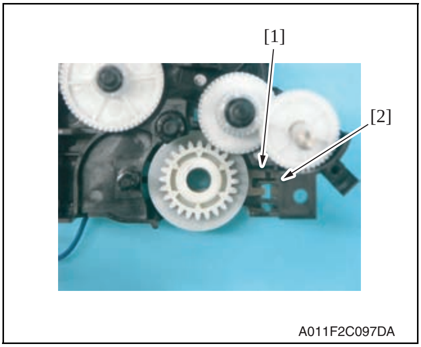
12. Remove the media feed and transport assy holding metal plate [2] and the shaft [3].



13. Remove three gears [1].



14. Remove the shaft [1], and remove the media feed clutch/2 [2].

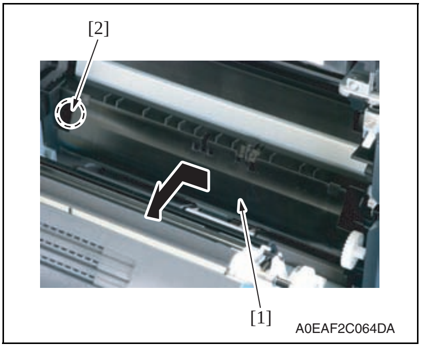


NOTE

- **When reinstalling the shaft and the media feed clutch/2, make sure that the protrusion [1] on the media feed clutch/2 fits into the locking slot [2].**

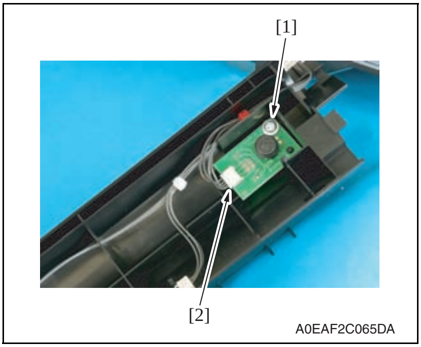
6.3.35 Temperature/ humidity sensor (TEM/HUMS)

1. Open the right door.



2. Remove the screw [2] from the sensor holder [1].

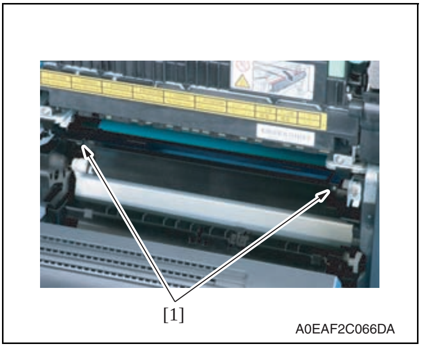
3. Remove the sensor holder [1] by sliding it to the front.



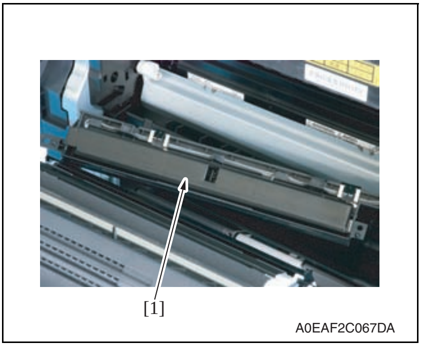
4. Remove the screw [1], disconnect the connector [2], and remove the temperature/humidity sensor.

6.3.36 IDC sensor board/Re, IDC sensor board/Fr (IDCSB/R, IDCSB/L)

1. Open the right door.
2. Remove the transfer belt.
   See P.25



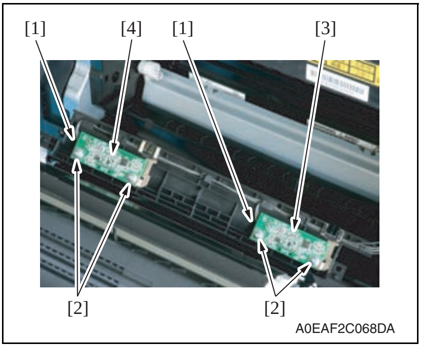
3. Remove two screws [1].



4. Unhook the spring, and remove the cover [1].

NOTE

- **Be careful not to lose the spring.**



5. Disconnect one connector [1] each.
6. Remove two screws [2] each, and remove the IDC sensor board/Fr [3] and IDC sensor board/Re [4].

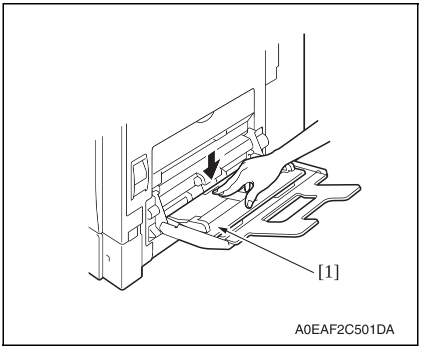
6.4 Cleaning procedure

NOTE

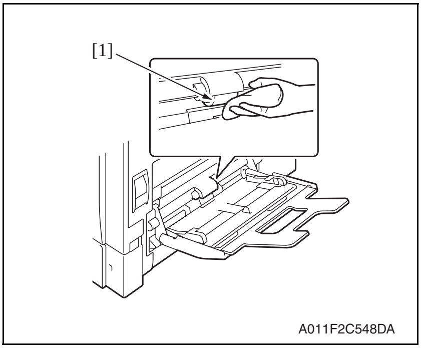
- **The alcohol described in the cleaning procedure represents the ethanol isopropyl alcohol.**

6.4.1 Tray 1 feed roller

1. Open the tray 1.



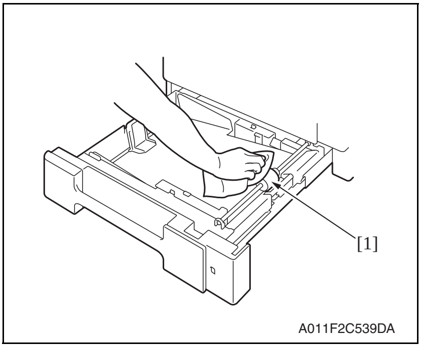
2. Press down on the center of the media lifting plate [1] until the left and right locking tabs lock into place.



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

6.4.2 Tray 2 feed roller

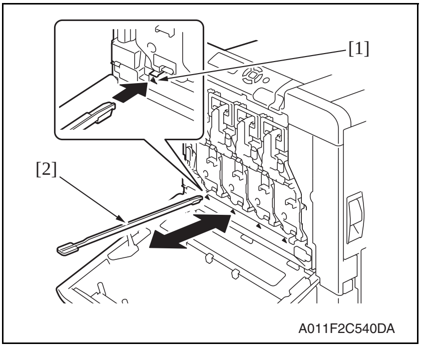
1. Slide out tray 2.



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

6.4.3 Laser irradiation section

1. Open the front door.



2. Align the edge of the laser lens cleaning tool [2] with the marker [1] (at four places) of the waste toner bottle.
   Insert the tool [2], and make two to three reciprocating motions to clean the laser irradiation section.

NOTE

- **For cleaning, do not use any tool other than the specified laser lens cleaning tool.**

Adjustment/Setting

7. How to use the adjustment 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 “   ”.

A. Advance checks

- Before attempting to solve the customer problem, the following advance checks must be made. Check to see if:

1. The power supply voltage meets the specifications.
2. The power supply is properly grounded.
3. 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).
4. The installation site is environmentally appropriate: high temperature, high humidity, direct sunlight, ventilation, etc.; levelness of the installation site.
5. The original has a problem that may cause a defective image.
6. The density is properly selected.
7. Correct media is being used for printing.
8. 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.
9. Toner is not running out.

B. Precautions for service jobs

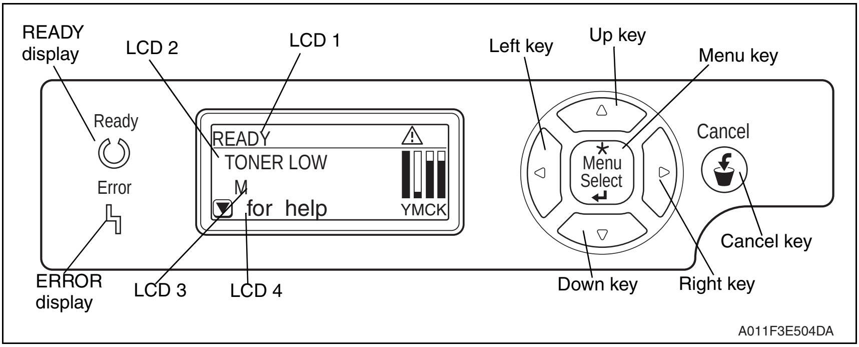
1. To unplug the power cord of the machine before starting the service job procedures.
2. Special care should be used when handling the fuser unit which can be extremely hot.
3. The developing unit has a strong magnetic field. Keep watches and measuring instruments away from it.
4. Take care not to damage the PC drum with a tool or similar device.
5. Do not touch IC pins with bare hands.

8. Description of the control panel

8.1 Control panel display

8.1.1 Parts of the control panel display

- The following shows the names of each part of the control panel. These names are used throughout this manual.
  From the top, the panel is divided into LCD 1, LCD 2, LCD 3, and LCD 4.
- LCD 4 may display a message instructing you to press a key on the control panel. When you press that key, the displayed message changes.



NOTE

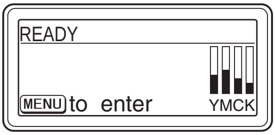
- **The display screen is not designed for touch panel operation; therefore, do not touch the icons on the screen. If it is pushed too hard, the LCD (liquid crystal display) may be damaged.**

8.1.2 Message structure

- There are five types of messages.

Message	Description
Normal messages	These messages are displayed after warmup has been completed: • Toner remaining gauge • Data-receiving message • Printing message • Firmware update messages • Warnings
Menu messages	These messages are displayed after the MENU key is pressed.
Operator call messages	These messages are displayed when minor error(s) that can be handled by users occur.
Service call messages	These messages are displayed when error(s) that cannot be handled by users occur.
Help messages	These messages are displayed when the down key ▼ is pressed when a normal message/warning or operator call message is displayed.

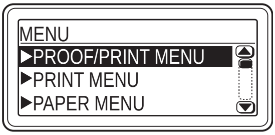
Normal message



READY
MENU to enter

4138F3E002DA

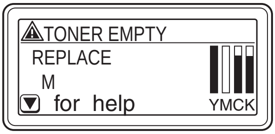
Menu message



MENU
▶PROOF/PRINT MENU
▶PRINT MENU
▶PAPER MENU

4138F3E003DA

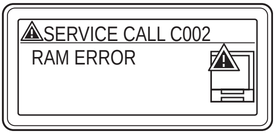
Operator call message



⚠TONER EMPTY
REPLACE
M
▼ for help

4138F3E004DA

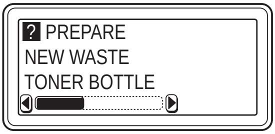
Service call message



⚠SERVICE CALL C002
RAM ERROR

4138F3E005DA

Help message



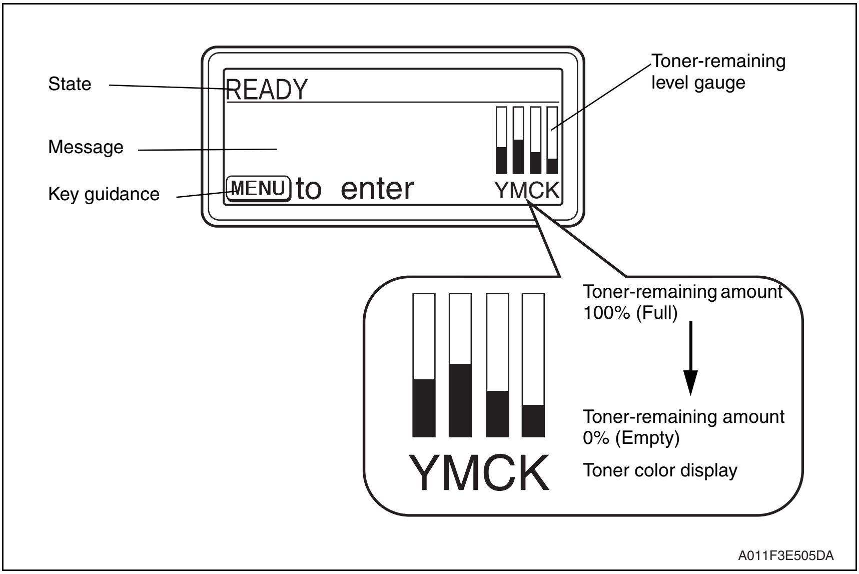
? PREPARE
NEW WASTE
TONER BOTTLE

4138F3E006DA

8.1.3 Normal messages

- The basic screen is displayed after warmup has been completed.
- The "READY LED○" lights up while the message is displayed.

Display	Description
LCD 1	Printer mode is displayed. (Normally, "READY" is displayed.)
LCD 2	The message is displayed. (Normally, no message is displayed.)
LCD 3	
LCD 4	Key guidance is displayed. • Normally "MENU to enter" is displayed. When the MENU key is pressed, the panel displays the MENU screen. • When a WARNING message is displayed, "▼ for help" is also displayed. When the Down key ▼ is pressed, the panel displays the HELP screen.


State
Message
Key guidance
READY
MENU to enter
YMCK
Toner-remaining level gauge
Toner-remaining amount 100% (Full)
Toner-remaining amount 0% (Empty)
YMCK
Toner color display
A011F3E505DA

A. Toner-remaining level gauge

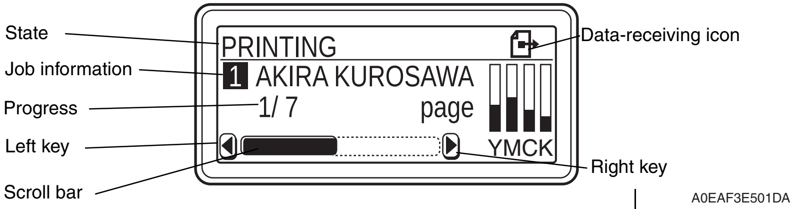
- The amount of each color of toner remaining is graphed in 10% increments (11 scales.) However, it's not displayed during the following states:

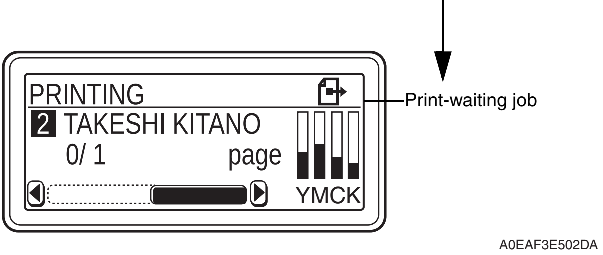
  - Operator call
  - Service call
  - Menu
  - Help menu
  - BOOT message
  - When the toner remaining amount is not determined immediately after startup.
  - When using toner made by companies other than KMBT

B. Data receiving message/print

- The control panel displays the following description at data receiving message/print.

Display	Description
LCD 1	Printer mode is displayed (for example, PRINTING). • PROCESSING is displayed during data receiving or printer startup. • PRINTING is displayed during printing. • When printing in sets, [COPYING] is displayed after the second set starts printing. • The normal printing data-receiving icon “⇨” is displayed on the right during data receiving. • The Camera-Direct connecting icon “📷” is displayed on the right when the digital camera is connected to the machine. • The Camera-Direct printing data-receiving icon “∕V” is displayed on the right during data receiving. • The Memory-Direct connecting icon “•⇹” is displayed on the right when the USB memory device is connected to the machine. • The Memory-Direct printing data-receiving icon “∕V” is displayed on the right during data receiving.
LCD 2	Job information is displayed (for example, 1 AKIRA KUROSAWA). • The job owner name, etc. set with PJL commands is displayed. • When multiple jobs are set, the number is displayed to the left of the owner name.
LCD 3	Job progress is displayed (for example, 1/7 page). • In normal print mode, “Number of processed print / Total number of print” is displayed. • When printing in sets, “Number of processed print/Total number of a set print” is displayed while the first set is copying. After the second set starts printing, the LCD 1 state is changed to COPYING and “Number of processed print /Total number of print” is displayed.
LCD 4	Scroll bar is displayed. • When multiple jobs are sent, a scroll bar is displayed. • By pressing the left key◀/right key▶, the jobs waiting to be printed are displayed. The following example shows the scroll bar in the case of two jobs. By pressing the right key, the panel displays the job waiting to be printed. To return to the display of the job currently processing, press the left key.

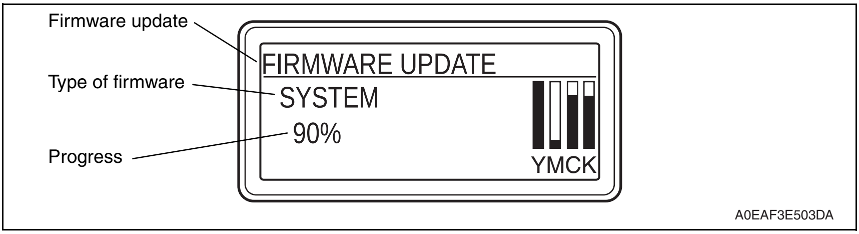




C. Firmware update

- The control panel displays the following description at firmware update.

Display	Description
LCD 1	FIRMWARE UPDATE is displayed.
LCD 2	LCD 2 displays the type of firmware (for example, SYSTEM). • SYSTEM: Controller firmware • BOOT: Boot firmware • RESOURCE: Resource file • CONFIGURATION: Equipment configuration file • ENGINE: Engine firmware
LCD 3	Progress of the update is displayed (for example, 90%).
LCD 4	No display

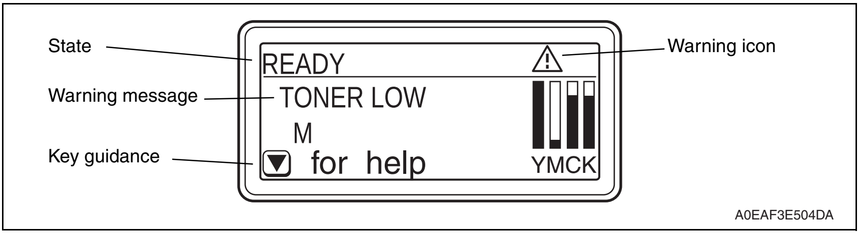


A0EAF3E503DA

D. Warning

- This message is displayed when the print is available but some user manipulation(s) are required. The control panel displays the following description for warning.

Display	Description
LCD 1	Print mode is displayed and warning icon is displayed on the right (for example, READY).
LCD 2	Warning message is displayed (for example, TONER LOW M).
LCD 3	
LCD 4	Key guidance is displayed (for example, ▼ for help: By pressing the down key ▼, the screen displays the help screen).



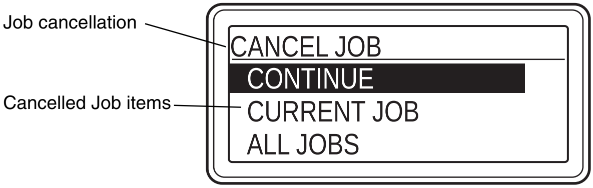
A0EAF3E504DA

E. Job cancellation

- By pressing the Cancel key after the job is sent, the control panel displays the job cancel menu.
- When no job is has been sent, pressing the Cancel key has no effect.
- The control panel displays the following description at the job cancel menu.

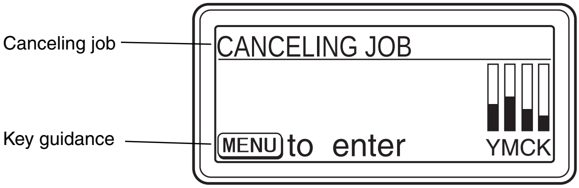
Display	Description
LCD 1	CANCEL JOB is displayed.
LCD 2	CONTINUE is displayed. • Function: Continue the print of currently processing job.
LCD 3	CURRENT JOB is displayed. • Function: Stop the print of currently processing job.
LCD 4	ALL JOBS is displayed • Stop the printing of all jobs, including the job currently being processed and all jobs waiting to be printed.

- By pressing the up key▲/down key▼, the item can be selected.
- The selected item is displayed with highlighted text. The default setting is CONTINUE.
- By pressing the MENU key, the selected item is entered.
- By pressing the Cancel key, the job cancel menu is closed.



A0EAF3E505DA

- By selecting CURRENT JOB or ALL JOB and pressing the MENU key, job cancellation is implemented.



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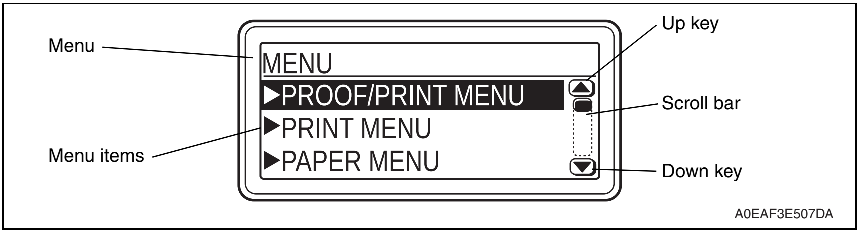
F. Menu

- The menu is displayed when the MENU key is pressed.
- The control panel displays the following description at the menu screen.

Display	Description
LCD 1	A Warning icon is displayed.
LCD 2	Menu items are displayed (3 items/ 7 items). • By pressing the up key▲/down key▼, the item is selected. • The menu consists of the following 8 items: - PROOF/ PRINT MENU - PRINT MENU - PAPER MENU - QUALITY MENU - MEMORY DIRECT - CAMERA DIRECT - INTERFACE MENU - SYS DEFAULT MENU - MAINTENANCE MENU - SERVICE MENU
LCD 3	
LCD 4	



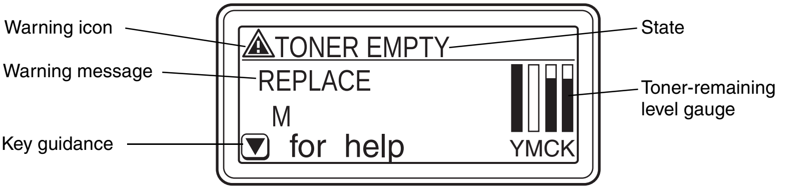
- For the details of each item, see “Menu.”
  See P.117

8.1.4 Operator call messages

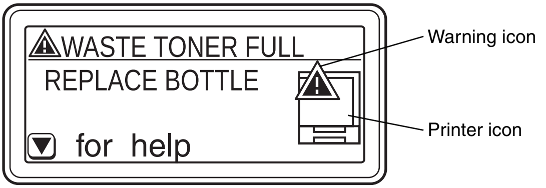
- These messages are displayed when minor error(s) that can be handled by user occur.
- The “Error LED ϟ” lights while the message is displayed on the control panel.
- The “Ready LED ○” on control panel turns OFF during operator call.
- The control panel displays the following when an operator call message is displayed.

Display	Description
LCD 1	A warning icon “ ⚠ ” is displayed and the state is displayed on the right (for example, TONER EMPTY).
LCD 2	Message is displayed (for example, REPLACE M).
LCD 3	
LCD 4	“▼ for help” is displayed. • By pressing the down key, the panel displays the Help screen.

- In the case of an operator call message related to a toner cartridge, the toner-remaining level gauge is displayed, and the gauge of the appropriate color flashes (for example, the M gauge).
- In the case of an operator call message for another reason, the printer icon is displayed with a flashing “warning icon ⚠.”



A0EAF3E508DA



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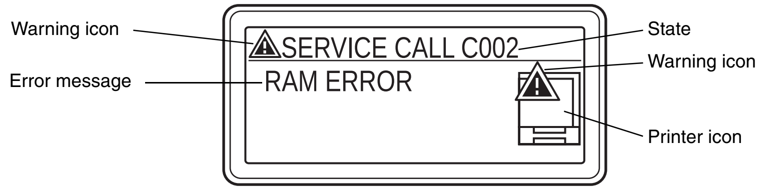
- For the details of each item, see “Operator call messages.”
  See P.111

8.1.5 Service call messages

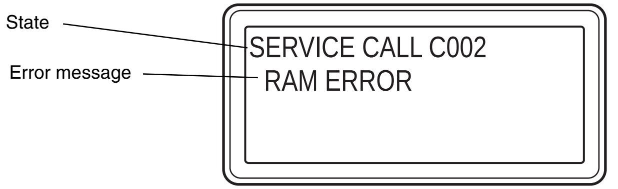
- These messages are displayed when error(s) that cannot be handled by the user occur.
- The "Error LED ϟ" turns ON while the message is displayed on the control panel.
- The "Ready LED ○" on control panel turns OFF while an service call message is displayed on the control panel.
- The control panel displays the following description at service call.

Display	Description
LCD 1	A "Warning icon ⚠" is displayed and the service call message and a 4-digit-service call ID are displayed on the right (for example, SERVICE CALL C002).
LCD 2	The error description is displayed (for example, RAM ERROR).
LCD 3	
LCD 4	No display

- A printer icon is displayed with a flashing "warning icon ⚠."
- A service call detected during startup of the printer is displayed as shown in the bottom of the following picture.



SERVICE CALL C002
RAM ERROR



SERVICE CALL C002
RAM ERROR

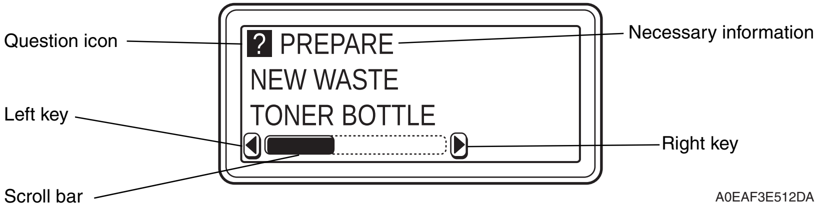
- For the details of each item, see "Service call messages."
  See P.114

8.1.6 Help screen

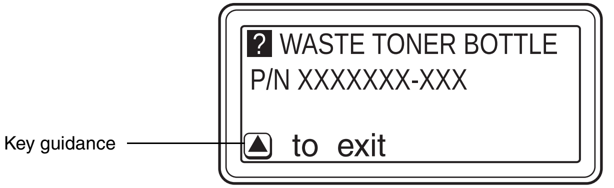
- This screen is displayed when the down key ▼ is pressed when a normal message/ warning or operator call message is displayed.
- The control panel displays the following description at the help screen.

Display	Description
LCD 1	A “Question icon ?” is displayed and the necessary information is displayed on the right (for example, PREPARE NEW WASTE TONER BOTTLE).
LCD 2	
LCD 3	
LCD 4	A scroll bar or “▲ to exit” message is displayed. • If there are several messages, a scroll bar is displayed. • By pressing the left key◀/right key▶, a previous/next screen message is displayed. • If all messages are displayed, “▲ to exit” displays on the screen.

- A graphic is displayed if necessary.



A0EAF3E512DA



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8.2 List of control panel messages

NOTE

- **When two or more messages are to be displayed, the message with the higher priority will be displayed.**
- **When a message concerning consumables/periodic replacement parts (units) is displayed, print a statistics page from the [PRINT MENU] → [STATISTICS] menu and check the status of the other consumables, too.**

  See P.123

8.2.1 Normal messages

A. Normal messages

Message (LCD1)	Description
INITIALIZING	The printer is being initialized
READY	Print enabled (Data not being printed)
OFFLINE	Off line condition (Data reception not available) • TELNET allows offline setting.
ENERGY SAVER	Machine in energy saver mode
PROCESSING	Print data processing (Data receiving - printer is started)
PRINTING	Data being printed (Printer is started)
COPYING	Data being printed in sets
WARMING UP	During warmup
CALIBRATING	Color shift correction in progress
CANCELING JOB	Job canceled
REBOOTING	The printer is restarting
FIRMWARE UPDATE	The printer's firmware is being upgraded

B. Warning messages

Priority	Message (LCD2/LCD3)	Description
High 1	UNABLE TO COLLATE JOB	Print in sets disabled (full hard disk) (This warning message is displayed during printing.)
2	UNABLE TO STAPLE JOB *1	When a job with stapling is printing, the number of printed pages already exceeds the number of pages that can be stapled. (This warning message is displayed during printing.)
3	HDD NEAR FULL	The hard disk space will run out soon.
4	MEMORY CARD NEAR FULL	The compact flash space will run out soon.
5	I-UNIT END X	Service life of the imaging unit (X) has been reached. (END status) • Executing the printing with one of Y,M,C,K being at the END will make the operator call.
6	I-UNIT LIFE X	Service life of the imaging unit has been reached. Printing can be continued, but print quality is out of guarantee.
7	TONER OUT X	The specified color toner cartridge is empty.
8	TRANS. BELT END OF LIFE	Transfer belt unit service life has been reached.
9	TRANS.ROLLER END OF LIFE	Transfer roller service life has been reached.
10	FUSER UNIT END OF LIFE	Fuser unit service life has been reached.
11	STAPLER EMPTY *1	The staple finisher has run out of staples. Otherwise, the staples are almost empty.
12	WASTE TONER NEAR FULL	The waste toner bottle needs replacement soon.
13	I-UNIT LOW X	The specified color imaging unit will run out soon. (This message appears when SYS DEFAULT MENU/ENABLE WARNING/I-UNIT LOW is set to ON.)
14	TONER LOW X	The specified color toner cartridge will run out soon. (This message appears when SYS DEFAULT MENU/ENABLE WARNING/TONER LOW is set to ON.)
15	UNKNOWN PAPER TRAY 2 *2	Paper which size cannot be automatically detected has been inserted.
16	PAPER EMPTY TRAY X	No media in the specified tray. The specified tray is not installed, but it is set in the printer driver.
17	INCORRECT I-UNIT X	The specified color imaging unit is not the correct type. A print cycle can be initiated, but is run at 1/3 the normal print speed.
18	INCORRECT TONER X	The specified color toner cartridge is not the correct type. A print cycle can be initiated, but is run at 1/3 the normal print speed.
19	NON SUPPORT CARD	A compact flash card which is inserted is not supported. The compact flash card will be invalid.
20	INCORRECT HDD	A hard disk which was formatted by other unit is installed.
21	INCORRECT MEMORY CARD	A compact flash card which was formatted by other unit is installed.

Priority	Message (LCD2/LCD3)	Description
22	HUBS NOT SUPPORTED	A USB hub is connected to the USB host I/F.
23	DEVICE NOT SUPPORTED	An unsupported device is connected to the USB host I/F.
24	AUTH TIMEOUT	Time-out of the IEEE 802.1X port authentication processing.
Low 25	PORT AUTH ACTIVE	IEEE 802.1X port authentication processing is being executed.

*1: Only when the optional staple finisher is mounted.
*2: magicolor 5670EN (MPC type) only

8.2.2 Operator call messages

Priority	Message		Description
	LCD1	LCD2/LCD3	
High 1	CONFIGURATION ERR	TURN OFF THEN ON	Device configuration was changed while the main switch was ON. • In this condition, key operation on the control panel is disabled. • To make the machine recover from the condition, turn the power switch OFF and ON.
2	COVER OPEN	FRONT COVER	The front door of the machine is open.
		SIDE COVER	The right door of the machine is open.
		DUPLEX COVER	The duplex option door is open.
		TRAY3 COVER	The right cover of tray 3 is open.
		TRAY4 COVER	The right cover of tray 4 is open.
		FINISHER COVER *1	The finisher cover is open.
		UPPER COVER *1	The finisher upper cover is open.
		STAPLER COVER *1	The finisher stapler cover is open.
3	INCORRECT TONER	INCORRECT TONER DETECTED	The printer detects a toner manufactured by KMBT but not the type specified for the model. • By pressing the right key, different messages appear one after another. (During the display of the messages, key operations other than the right key are disabled.) • In the last message screen, the machine can recover from the error by pressing the Menu Select key. However, the same message appears when the power switch is turned OFF and ON, the printer is being rebooted, or the printer covers are being opened or closed.
4	PAPER JAM	STAPLER *1	A media jam has occurred at the staple section of the optional staple finisher.
		MAIN EXIT *1	A media jam has occurred at the main tray of the optional staple finisher.
		SUB EXIT *1	A media jam has occurred at the sub tray of the optional staple finisher.
		FINISHER *1	A media jam has occurred at the optional staple finisher.
		UPPER TRANS *1	A media jam has occurred at the upper transport section of the optional staple finisher.
		FUSER/EXIT	A media jam has occurred at the fusing section.
		SECOND TRANS	A media jam has occurred at the second transfer section.
		VERTICAL TRANS	A media jam has occurred at the vertical transport.
		DUPLEX1	A media jam has occurred at the duplex media feed section of the duplex option.

Priority	Message		Description
	LCD1	LCD2/LCD3	
4	PAPER JAM	DUPLEX2	A media jam has occurred at the duplex transport section of the duplex option.
		TRAY1	A media jam has occurred at tray 1 (manual feed tray).
		TRAY2	A media jam has occurred at tray 2.
		TRAY3	A media jam has occurred at tray 3.
		TRAY4	A media jam has occurred at tray 4.
5	I-UNIT MISSING	CHECK X	The specified color imaging unit is not installed.
6	TONER MISSING	CHECK X	The specified color toner cartridge is not installed.
7	FUSER MISSING	CHECK UNIT	The fuser unit is not installed.
8	WASTE TONER FULL	REPLACE BOTTLE	The waste toner bottle is full.
9	I-UNIT END	REPLACE XY	The specified color imaging unit has reached its life. • This message will be displayed when performing the printing while warning message [I-UNIT END] is being displayed.
10	TONER OUT	REPLACE X	The specified color toner cartridge has run out.
11	TRAYX SIZE ERR	ADD SSSS *2	The media size set in the printer driver does not match that of the media loaded in the specified tray. • Load “SSSS” size media in the specified tray.
12	TRAYX TYPE ERROR	ADD TTTT *2	The media size set in the printer driver does not match that of the media loaded in the specified tray. • Load “TTTT” type media in the specified tray.
13	ADJUST TRAY1	—	Tray 1 (manual feed tray) is removed from the printer.
14	STAPLER EMPTY	REPLACE STAPLE CARTRIDGE	The staples are empty when an attempt was made to print a staple job.
15	MANUAL FEED	SSSS *2 TTTT *2	• During print start-up, media has been loaded in manual feed tray and is waiting for a print start command. After the user confirms the media and gives the print start command, printing starts. How to start printing: *1.* Press the up key. *2.* Press the down keys, select tray with help menu and press the MENU key. *3.* Set the media loaded in the tray 1 again.
16	PAPER EMPTY	SSSS *2 TTTT *2	• No specified media in trays 1 to 4. • Tray 3/4 is loaded with the specified media but is not set appropriately. • Displays when [TRAY CHAINING] is set to [ON].
	TRAYX EMPTY	SSSS *2 TTTT *2	• No specified media in the specified tray or tray 3/4 is not set appropriately. • Displays when [TRAY CHAINING] is set to [OFF].

Priority	Message		Description
	LCD1	LCD2/LCD3	
17	PAPER ERROR	SSSS *2 TTTT *2	• The size and type of media specified in the driver is not loaded in any tray. • A different size of media from the one specified in the driver is loaded in the tray at media feeding. • Displays when [TRAY CHAINING] is set to [ON].
	TRAYX PAPER ERR	SSSS *2 TTTT *2	• The size and type of media specified in the driver is not loaded in the specified tray. • A different size of media from the one specified in the driver is loaded in the specified tray at media feeding. • Displays when [TRAY CHAINING] is set to [OFF].
18	OUTPUT FULL	REMOVE PAPER	The printed media volume has reached maximum capacity in the exit tray of the main body.
		REMOVE PAPER (SUB TRAY) *1	The printed media volume has reached maximum capacity in the sub tray of the staple finisher.
		REMOVE PAPER (MAIN TRAY) *1	The printed media volume has reached maximum capacity in the main tray of the staple finisher.
19	MEMORY FULL	PRESS CANCEL	The volume of data to be printed exceeds the permissible amount of data to be processed by the machine's memory.
20	HOLD JOB ERROR	UNABLE TO STORE JOB	The specified data of the held job is being received, but an optional HDD is not installed.
Low 21		XXXX PRESS CANCEL	When printing a stored job, the printer configuration was changed since the job was stored.

*1: Only when the optional staple finisher is mounted.

*2: SSSS represents the media size while TTTT shows the media type.

8.2.3 Service call messages

- For troubleshooting procedures, see “Troubleshooting”.
  See P.206

Message		Description
LCD1 (Service Call ID)	LCD2/LCD3 (Error description)	
0010	P MOTOR 1	Color PC drum motor malfunction
0017	P MOTOR 2	Intermediate transport motor malfunction
0018	D MOTOR 2	Developing motor/K malfunction
001B	D MOTOR 1	Developing motor/Y,M,C malfunction
0046	FUSER FAN	Fusing fan motor malfunction
004C	OZONE FAN	Ozone ventilation fan motor malfunction
004E	POWER FAN	DC power supply fan motor malfunction
0060	FUSER MOTOR	Fusing motor malfunction
0094	XFER DETACH2	2nd image transfer pressure/retraction failure
0096	XFER DETACH1	1st image transfer pressure/retraction failure
0300	POLYGON MOTOR	Polygon motor malfunction
0310	LASER ERROR	Laser malfunction
0500	FUSER ERROR	Heating roller warm-up failure
0501	FUSER ERROR	Fusing pressure roller warm-up failure
0510	FUSER ERROR	Abnormally low heating roller temperature
0511	FUSER ERROR	Abnormally low fusing pressure roller temperature
0520	FUSER ERROR	Abnormally high heating roller temperature
0521	FUSER ERROR	Abnormally high fusing pressure roller temperature
0B30	FINISHER ERROR	Finisher aligning plate drive malfunction
0B47	FINISHER ERROR	Finisher media holding drive malfunction
0B48	FINISHER ERROR	Finisher exit roller pressure/retraction malfunction
0B4A	FINISHER ERROR	Finisher aligning belt pressure/retraction malfunction
0B4C	FINISHER ERROR	Finisher media ejector motor malfunction
0BA0	FINISHER ERROR	Finisher tray up/down motor ascent/descent drive malfunction
0BE1	FINISHER FAN	Finisher fan motor malfunction
0F52	TE SENSOR Y	Toner level sensor/Y malfunction
0F53	TE SENSOR M	Toner level sensor/M malfunction
0F54	TE SENSOR C	Toner level sensor/C malfunction
0F55	TE SENSOR K	Toner level sensor/K malfunction
133B	FINISHER COMMUNICATION	Finisher communication error
13C0	ENGINE H/W ERROR	MFP board malfunction
13E2	FLASH WRITE	Flash ROM write error
13E3	FLASH DEVICE	Flash ROM device fault
3C00	EEPROM1	Trouble related to security
3C10	EEPROM2	

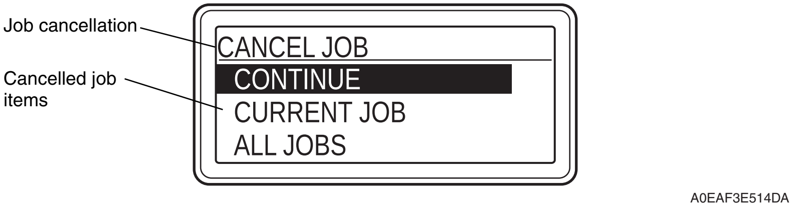
Message		Description
LCD1 (Service Call ID)	LCD2/LCD3 (Error description)	
3FFB	FINISHER ROM	Finisher flash ROM error
C002,	RAM ERROR	RAM error at startup (standard memory)
C003		RAM error at startup (expanded memory)
C013	H/W ADDRESS	MAC address error at startup (MAC address is invalid)
C015	BOOT ROM	Boot ROM error at startup
C025	CONTROLLER ROM	Controller ROM error (Configuration information error)
C026		Controller ROM error (Access error)
C027		Controller ROM error (Data error)
C050	HDD ERROR	HDD access error
C051	HDD DISK FULL	HDD full error *1
C052	CARD ERROR	Compact flash access error
C053	CARD FULL	Compact flash full error *1
C060	UPDATE ERROR	Firmware update error
C071	H/W CONFIGURATION ERROR	Hardware configuration error
FFFF	I/F COMMUNICATION ERROR	Interface communication error

8.3 Cancelling a print job

- A print job being processed or printed can be cancelled by pressing the Cancel key.
- When no job has been sent, pressing the Cancel key has no effect.

1. If the Cancel key is pressed while a print job is being printed, a message appears on the control panel.
2. Select the job to be cancelled using the up key▲/ down key▼ and press the MENU SELECT key.
   By pressing the Cancel key, the job cancel menu is closed.

Panel Display (LCD2-LCD4)	Description
CONTINUE	Continue printing the currently processing job.
CURRENT JOB	Stop printing the currently processing job.
ALL JOB	Stop printing all jobs, including the currently processing job and all jobs waiting to be printed.



9. Menu

9.1 List of menu functions

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	STATISTICS PAGE			P.123
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		TRAY 2		P.134
		TRAY 3		P.134
		TRAY 4		
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			BONJOUR	ENABLE	P.154
			DYNAMIC DNS	ENABLE	P.154
			IPP	ENABLE	P.154
			RAW PORT	ENABLE	P.154
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			SLP	ENABLE	P.155
			SMTP	ENABLE	P.155
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				SYMBOL SET	P.160
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*1: It will be displayed only when an optional hard disk kit or compact flash is installed.
*2: It will be displayed only when an optional duplex option is installed.
*3: It will not be displayed when an optional staple finisher is installed.
*4: It will be displayed only when an optional hard disk kit or compact flash (1 GB or more) is installed.
*5: It will be displayed only when an optional staple finisher is installed.
*6: It will be displayed only when the following setting is set to “ENABLE.”
[INTERFACE MENU] → [MEMORY DIRECT]
*7: It will not be displayed when the flash memory is not connected or not recognized.
*8: It will be displayed only when the following setting is set to “ENABLE.”
[INTERFACE MENU] → [CAMERA DIRECT]
*9: It will be displayed when [ENERGY SAVER] is set to either of the options other than OFF.
*10: It will be displayed only when a compact flash is installed.
*11: It will be displayed only when a USB memory device is installed.

9.2 PROOF/PRINT MENU

Function	• Selects and prints the job held temporarily in the printer. • Selects and deletes the job held temporarily in the printer. **NOTE** • **This menu is available only when an optional hard disk kit is installed.**
Use	• To proof one copy of a print job before printing the rest of the copies.
Setting /procedure	How to print the held job *1.* Select [PROOF/PRINT MENU] and press the Menu/Select key. *2.* Select user name and press the Menu/Select key. *3.* Select desired print job and press the Menu/Select key. *4.* Select [PRINT] and press the Menu/Select key. *5.* If the hold job is set as secured job, enter the password with the up key▲/down key▼. *6.* Set the number of copies with the up key▲/down key▼ and press the Menu/Select key. **NOTE** • **If the hold job is set as secured job, the held job cannot be printed until the correct password is entered at the printer control panel.** • **The held job is deleted automatically after the period of time specified in the "SYSTEM DEFAULT MENU/HOLD JOB TIMEOUT" menu.**
	How to delete the held job *1.* Select [PROOF/PRINT MENU] and press the Menu/Select key. *2.* Select user name and press the Menu/Select key. *3.* Select desired print job and press the Menu/Select key. *4.* Select [DELETE] and press the Menu/Select key. *5.* If the held job is set as secured job, enter the password with the up key▲/down key▼. *6.* Select [YES] and press the Menu/Select key. **NOTE** • **If the hold job is set as secured job, the held job cannot be deleted until the correct password is entered.**

9.3 PRINT MENU

9.3.1 CONFIGURATION PG

Function	• Prints a configuration page.
Use	• To check the configuration and the setting values of the machine. The following items can be checked: PRINTER INFORMATION OPTIONS INTERFACE MENU PAPER MENU SYSTEM DEFAULT MENU QUALITY MENU CAMERA DIRECT MEMORY DIRECT
Setting /procedure	• Select [PRINT] and press the Menu/Select key.

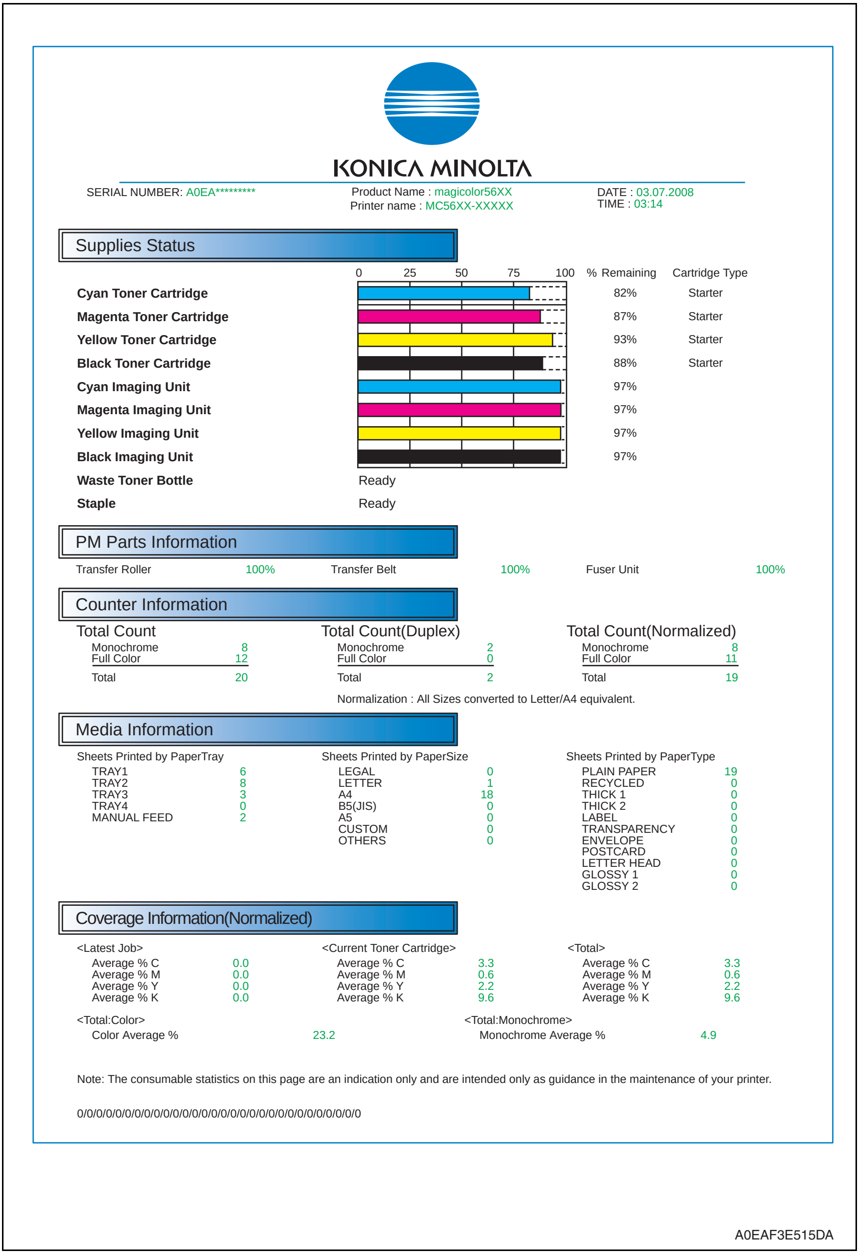
9.3.2 DEMO PAGE

Function Use	• Prints a demo page.
Setting /procedure	• Select [PRINT] and press the Menu/Select key.

9.3.3 STATISTICS PAGE

Function	• Prints a statistics page.
Use	• To check consumable status and the usage of the machine. The following items can be checked: Supplies Status PM Parts Information Counter Information Media Information Coverage Information Consumable/periodic replacement parts (units) counter information*1 *1: For details, see the following table, “How to read consumable/periodic replacement parts (units) counter information.
Setting /procedure	• Select [PRINT] and press the Menu/Select key.

A. Sample of STATISTICS PAGE



KONICA MINOLTA

SERIAL NUMBER: A0EA*********

Product Name : magicolor56XX
Printer name : MC56XX-XXXXX

DATE : 03.07.2008
TIME : 03:14

Supplies Status

0
25
50
75
100

	% Remaining	Cartridge Type
Cyan Toner Cartridge	82%	Starter
Magenta Toner Cartridge	87%	Starter
Yellow Toner Cartridge	93%	Starter
Black Toner Cartridge	88%	Starter
Cyan Imaging Unit	97%	
Magenta Imaging Unit	97%	
Yellow Imaging Unit	97%	
Black Imaging Unit	97%	

Waste Toner Bottle	Ready
Staple	Ready

PM Parts Information

Transfer Roller	100%	Transfer Belt	100%	Fuser Unit	100%

Counter Information

Total Count

Monochrome	8
Full Color	12
Total	20

Total Count(Duplex)

Monochrome	2
Full Color	0
Total	2

Total Count(Normalized)

Monochrome	8
Full Color	11
Total	19

Normalization : All Sizes converted to Letter/A4 equivalent.

Media Information

Sheets Printed by PaperTray

TRAY1	6
TRAY2	8
TRAY3	3
TRAY4	0
MANUAL FEED	2

Sheets Printed by PaperSize

LEGAL	0
LETTER	1
A4	18
B5(JIS)	0
A5	0
CUSTOM	0
OTHERS	0

Sheets Printed by PaperType

PLAIN PAPER	19
RECYCLED	0
THICK 1	0
THICK 2	0
LABEL	0
TRANSPARENCY	0
ENVELOPE	0
POSTCARD	0
LETTER HEAD	0
GLOSSY 1	0
GLOSSY 2	0

Coverage Information(Normalized)

<Latest Job>

Average % C	0.0
Average % M	0.0
Average % Y	0.0
Average % K	0.0

<Current Toner Cartridge>

Average % C	3.3
Average % M	0.6
Average % Y	2.2
Average % K	9.6

<Total>

Average % C	3.3
Average % M	0.6
Average % Y	2.2
Average % K	9.6

<Total:Color>

Color Average % 23.2

<Total:Monochrome>

Monochrome Average % 4.9

Note: The consumable statistics on this page are an indication only and are intended only as guidance in the maintenance of your printer.

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

A0EAF3E515DA

B. 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 and the staple unit.

Types of toner cartridges	
Starter	• Toner cartridge included with a product shipped from the factory: 3.0 K
Standard	• Standard-capacity toner cartridge: 6.0 K
High	• High-capacity toner cartridge: 12.0 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.**

C. PM Parts Information

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

D. 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)	
Total Count (Normalized)	Monochrome	• The total number of monochrome pages on a A4 basis that have been ejected from the printer. Increment by 100 per A4 simplex and by 200 per A4 duplex *1	
	Full color	• The total number of color pages on a A4 basis that have been ejected from the printer. Increment by 100 per A4 simplex and by 200 per A4 duplex *1	
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.

NOTE

- **The total counters and the print counters count at a different timing, when a sheet of media is properly ejected and when a sheet of media is fed, respectively. Therefore, the sum of each total counter value may not be same with the sum of each print counter value if a sheet of media cannot be ejected due to media jam inside the machine or other possible problems.**

E. Coverage Information

- Each coverage information is calculated and displayed based on the description shown in the following table.

<Coverage information list>

Coverage information	Contents
Normalized Coverage Information <Latest Job>	• Individual average dot coverage of four colors (Y,M,C,K) in the last job is calculated on an A4 basis. (The average of the ratios of dot space on each page when the printable area is defined as 100% and shown in 0.1 percent increments)
Normalized Coverage Information <Current Toner Cartridge>	• Individual average dot coverage of four colors (Y,M,C,K) in the current toner cartridges is calculated on an A4 basis. (The average of the ratios of dot space on each page when the printable area is defined as 100% and shown in 0.1 percent increments)
Normalized Coverage Information <Total>	• Individual average dot coverage of four colors (Y,M,C,K) is calculated on an A4 basis for all prints performed after the printer was installed. (The average of the ratios of dot space on each page when the printable area is defined as 100% and shown in 0.1 percent increments)
Normalized Color (CMYK) Coverage Information	• Average dot coverage is calculated on an A4 basis for full color printing performed after the printer was installed. (The average of the ratios of dot space on each page when the printable area is defined as 100% and shown in 0.1 percent increments)
Normalized Monochrome Coverage Information	• Average dot coverage is calculated on an A4 basis for monochrome printing performed after the printer was installed. (The average of the ratios of dot space on each page when the printable area is defined as 100% and shown in 0.1 percent increments)

NOTE

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

F. How to read consumable/periodic replacement parts (units) counter information.

- The lower left part of the statistics page shows numerical values that represent consumable/periodic replacement parts (units) counter information.
  The table below explains counter information that is provided by each numerical data.

<Display on the statistics page>

0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0	8C07

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

No.	Contents
1	Number of times a high-capacity toner cartridge (K) has been replaced
2	Number of times a standard-capacity toner cartridge (K) has been replaced
3	Number of times a toner cartridge (K) made by companies other than KMBT has been replaced
4	Number of times a high-capacity toner cartridge (C) has been replaced
5	Number of times a standard-capacity toner cartridge (C) has been replaced
6	Number of times a toner cartridge (C) made by companies other than KMBT has been replaced
7	Number of times a high-capacity toner cartridge (M) has been replaced
8	Number of times a standard-capacity toner cartridge (M) has been replaced
9	Number of times a toner cartridge (M) made by companies other than KMBT has been replaced
10	Number of times a high-capacity toner cartridge (Y) has been replaced
11	Number of times a standard-capacity toner cartridge (Y) has been replaced
12	Number of times a toner cartridge (Y) made by companies other than KMBT has been replaced.
13	Use of counterfeit toner cartridge (K) is set at “1.” (The default value is 0.)
14	Use of counterfeit toner cartridge (C) is set at “1.” (The default value is 0.)
15	Use of counterfeit toner cartridge (M) is set at “1.” (The default value is 0.)
16	Use of counterfeit toner cartridge (Y) is set at “1.” (The default value is 0.)
17	Use of toner refill cartridge (K) is set at “1.” (The default value is 0.)
18	Use of toner refill cartridge (C) is set at “1.” (The default value is 0.)
19	Use of toner refill cartridge (M) is set at “1.” (The default value is 0.)
20	Use of toner refill cartridge (Y) is set at “1.” (The default value is 0.)
21	Rate of transfer roller use (%)
22	Number of times a transfer roller has been replaced
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

No.	Contents	
1	Start date of use *1	Year (e.g. The year 2008 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 7 is displayed as 07.)

*1: Start date of use begins when 100 prints are complete after the first new toner cartridge was detected following the main body installation.

9.3.4 FONT LIST

A. POSTSCRIPT

Function	• Prints a postscript font list.
Use	• To determine which postscript fonts are available on the printer.
Setting /procedure	• Select [PRINT] and press the Menu/Select key.

B. PCL

Function	• Prints a PCL font list.
Use	• To determine which PCL fonts are available on the printer.
Setting /procedure	• Select [PRINT] and press the Menu/Select key.

9.3.5 MENU MAP

Function	• Prints a menu map.
Use	• To see the printer’s menu structure.
Setting /procedure	• Select [PRINT] and press the Menu/Select key.

9.3.6 DIRECTORY LIST

Function	• Prints a directory list of the hard disk kit’s contents.
Use	• To check the data saved in the optional hard disk kit.
Setting /procedure	• Select [PRINT] and press the Menu/Select key. **NOTE** **• This menu is available only when an optional hard disk kit is installed.**

9.4 PAPER MENU

9.4.1 PAPER SOURCE

A. DEFAULT TRAY

Function	• Sets the priority feed tray.
Use	• To set the priority media feed tray.
Setting /procedure	*1.* Select [DEFAULT TRAY] and press the Menu/Select key. *2.* Select desired tray and press the Menu/Select key. • The default setting is TRAY 2. TRAY 1 "TRAY 2" TRAY 3 TRAY 4 **NOTE** • **TRAY 3/TRAY 4 can be selected only when one or more optional lower feeder units are installed.**

B. TRAY 1

(1) PAPER SIZE

Function	• Sets the size of the media in tray 1.
Use	• To specify the size of the media loaded in tray 1.
Setting /procedure	*1.* Select [PAPER SIZE] and press the Menu/Select key. *2.* Select desired paper size and press the Menu/Select key. For North America • The default setting is LETTER. For other destinations • The default setting is A4. ANY/LETTER/LEGAL/EXECUTIVE/A4/A5/A6/B5(JIS)/B6(JIS)/GOVT LETTER/STATEMENT/FOLIO/SP FOLIO/UK QUARTO/FOOLSCAP/GOVT LEGAL/16K/PHOTO 4x6/KAI 16/KAI 32/ENV C5/ENV C6/ENV DL/ENV MONARCH/ENV CHOU#3/ENV CHOU#4/B5(ISO)/ENV #10/ENV YOU#4/JPOST/JPOST-D/CUSTOM **NOTE** • **ANY specifies any media size.** • **CUSTOM is used to set a "custom media size."** • **Depending on the setting selected for SYS DEFAULT MENU/PAPER/UNIT OF MEASURE, PHOTO 4x6 may change to PHOTO 10x15.**

(2) CUSTOM SIZE

Function	• Sets the custom size of media in tray 1.
Use	• To specify the custom size media loaded in tray 1.
Setting /procedure	*1.* Select [CUSTOM SIZE] and press the Menu/Select key. *2.* Select [WIDTH] or [LENGTH] and press Menu/Select key. *3.* Set desired number with the up key△/down key▽ and press the Menu/Select key. <For North America> • The default setting of WIDTH is 8.50 inches. WIDTH: 3.63 inches to 8.50 inches. • The default setting of LENGTH is 11.00 inches. LENGTH: 5.83 inches to 14.00 inches. <For other destinations> • The default setting of WIDTH is 210 mm. WIDTH: 92 mm to 216 mm. • The default setting of LENGTH is 297 mm. LENGTH: 148 mm to 356 mm. **NOTE** **• By changing the [UNIT OF MEASURE] setting (INCHES/MILLIMETERS), the custom size units are changed.**

(3) PAPER TYPE

Function	• Sets the media type for tray 1.
Use	• To specify the type of media loaded in tray 1.
Setting /procedure	*1.* Select [PAPER TYPE] and press the Menu/Select key. *2.* Select desired paper type and press Menu/Select key. • The default setting is PLAIN PAPER. ANY/PLAIN PAPER/RECYCLED/THICK 1/THICK 2/LABEL/TRANSPARENCY/ ENVELOPE/POSTCARD/LETTERHEAD/GLOSSY 1/GLOSSY 2 **NOTE** **• ANY identifies any media type.**

C. TRAY 2

- For magicolor 5650EN/magicolor 5670EN

(1) PAPER SIZE

Function	• Sets the size of the media in tray 2.
Use	• To specify the size of the media loaded in tray 2.
Setting /procedure	*1.* Select [PAPER SIZE] and press the Menu/Select key. *2.* Select desired paper size and press the Menu/Select key. <For North America> • The default setting is LETTER. <For other destinations> • The default setting is A4. LETTER A4

(2) PAPER TYPE

Function	• Sets the media type for tray 2.
Use	• To specify the type of media loaded in tray 2.
Setting /procedure	*1.* Select [PAPER TYPE] and press the Menu/Select key. *2.* Select desired paper type and press Menu/Select key. • The default setting is PLAIN PAPER. ANY “PLAIN PAPER” RECYCLED **NOTE** • **ANY identifies any media type.**

- For magicolor 5670EN (MPC type)

(1) PAPER SIZE

Function	• Sets the size of the media in tray 2.
Use	• To specify the size of the media loaded in tray 2.
Setting /procedure	*1.* Select [PAPER SIZE] and press the Menu/Select key. *2.* Select desired paper size and press the Menu/Select key. For North America • The default setting is LETTER. For other destinations • The default setting is A4. ANY/LETTER/EXECUTIVE/A4/A5/A6/B5(JIS)/B6(JIS)/GOVT LETTER/STATEMENT/UK QUARTO/16K/PHOTO 4x6/KAI 16/KAI 32/ENV C5/ENV C6/ENV DL/ENV MONARCH/ENV CHOU#3/ENV CHOU#4/B5(ISO)/ENV #10/ENV YOU#4/JPOST/JPOST-D/CUSTOM **NOTE** • **ANY specifies any media size.** • **CUSTOM is used to set a “custom media size.”** • **Depending on the setting selected for SYS DEFAULT MENU/PAPER/UNIT OF MEASURE, PHOTO 4x6 may change to PHOTO 10x15.** • **If AUTO is selected from the PAPER MENU/PAPER SOURCE/TRAY 2/SIZE SETTING menu, the printer automatically detects the paper size.**

(2) CUSTOM SIZE

Function	• Sets the custom size of media in tray 2.
Use	• To specify the custom size media loaded in tray 2.
Setting /procedure	*1.* Select [CUSTOM SIZE] and press the Menu/Select key. *2.* Select [WIDTH] or [LENGTH] and press Menu/Select key. *3.* Set desired number with the up key△/down key▽ and press the Menu/Select key. <For North America> • The default setting of WIDTH is 8.50 inches. WIDTH: 3.63 inches to 8.50 inches. • The default setting of LENGTH is 11.00 inches. LENGTH: 5.83 inches to 11.69 inches. <For other destinations> • The default setting of WIDTH is 210 mm. WIDTH: 92 mm to 216 mm. • The default setting of LENGTH is 297 mm. LENGTH: 148 mm to 297 mm. **NOTE** • **By changing the [UNIT OF MEASURE] setting (INCHES/MILLIMETERS), the custom size units are changed.**

(3) PAPER TYPE

Function	• Sets the media type for tray 2.
Use	• To specify the type of media loaded in tray 2.
Setting /procedure	*1.* Select [PAPER TYPE] and press the Menu/Select key. *2.* Select desired paper type and press Menu/Select key. • The default setting is PLAIN PAPER. ANY/PLAIN PAPER/RECYCLED/THICK 1/THICK 2/LABEL/TRANSPARENCY/ ENVELOPE/POSTCARD/LETTERHEAD/GLOSSY 1/GLOSSY 2 **NOTE** • **ANY identifies any media type.**

(4) SIZE SETTING

Function	• Sets the method to select the paper size for tray 2.
Use	• To set the paper size for tray 2 at user's option.
Setting /procedure	• The default setting is AUTO. "AUTO" USER SELECT **NOTE** • **When selecting "USER SELECT", the paper size will be set with [PAPER SIZE] setting.**

D. TRAY 3 / TRAY 4

(1) PAPER SIZE

Function	• Automatically detects the set paper size and displays it.
Use	• To check the paper size.
Setting /procedure	*1.* Select [PAPER SOURCE] and press the Menu/Select key. *2.* Select desired feed tray (TRAY 3-4) and press the Menu/Select key. *3.* Select [PAPER SIZE] and press the Menu/Select key. **NOTE** • **TRAY3/TRAY4 can be selected only when one or more optional lower feeder units are installed.**

(2) PAPER TYPE

Function	• Sets the paper type for tray 3 or tray 4.
Use	• To specify the type of media loaded in tray 3 or tray 4.
Setting /procedure	• The default setting is PLAIN PAPER. ANY “PLAIN PAPER” RECYCLED **NOTE** • **TRAY3/TRAY4 can be selected only when one ore more optional lower feeder units are installed.** • **ANY identifies any media type.**

E. TRAY CHAINING

Function	• Sets auto tray switching.
Use	• To specify that the printer should pull media from another tray when the specified tray runs is empty.
Setting /procedure	• The default setting is ON. “ON” OFF

F. TRAY MAPPING

(1) TRAY MAPPING MODE

Function	• Selects whether or not the tray mapping function is used.
Use	• To specify whether trays are mapped.
Setting /procedure	• The default setting is OFF. ON “OFF”

(2) LOGICAL TRAY0-9

Function	• Specifies whether jobs received from another manufacturer's printer driver are printed using tray 1 to tray 4.
Use	• To specify the media source for print jobs using another manufacturer's printer driver.
Setting /procedure	• Only the default for LOGICAL TRAY 1 is PHYSICAL TRAY 1. PHYSICAL TRAY 2 is the default for all trays other than LOGICAL TRAY 1. PHYSICAL TRAY 1 "PHYSICAL TRAY 2" PHYSICAL TRAY 3 PHYSICAL TRAY 4 **NOTE** • **Only the mounted tray can be selected.**

9.4.2 DUPLEX

Function	• Sets duplex printing mode.
Use	• To specify duplex printing. OFF : Duplex print is OFF LONG EDGE : Duplex print is ON, long edge SHORT EDGE : Duplex print is ON, short edge
Setting /procedure	• The default setting is OFF. "OFF" LONG EDGE SHORT EDGE **NOTE** • **This menu is available only when a duplex option is installed.** • **The setting in the printer driver overrides the setting in this menu.**

9.4.3 COPIES

Function	• Sets the number of prints.
Use	• To specify the number of copies of the job to be printed.
Setting /procedure	*1.* Select [COPIES] and press the Menu/Select key. *2.* Select desired print number with the up key▲/down key▼ and press the Menu/Select key. • The default setting is "1" copy. "1" copy to 9999 copies. **NOTE** • **The setting in the printer driver overrides the setting in this menu.**

9.4.4 COLLATE

Function	• Sets printing in sets.
Use	• To print several sets of multiple pages. ON : Print in sets. OFF : Print in page.
Setting /procedure	• The default setting is OFF. ON “OFF” **NOTE** • **This menu is available only when an optional hard disk kit is installed.** • **The setting in the printer driver overrides the setting in this menu.**

9.4.5 FINISHING

Function	• Selects an exit tray and finishing option at the staple finisher.
Use	• To select an exit tray and finishing option when a optional staple finisher is installed. SUB TRAY : Printing to the sub tray MAIN TRAY : Printing to the main tray OFFSET : The media is fed to the main tray with each copy slightly shifted. STAPLING : Each copy is stapled and fed to the main tray. (When the collate function is selected, each set of copy is stapled.)
Setting /procedure	• The default setting is MAIN TRAY. SUB TRAY “MAIN TRAY” OFFSET STAPLING **NOTE** • **This menu is available only when a staple finisher option is installed.** • **The setting in the printer driver overrides the setting in this menu.** • **OFFSET and STAPLING functions are available only for the following media types and media sizes. Media type: Plain/Recycled/Letterhead paper Paper size: 182 to 216 mm in width and 257 to 356 mm in length** • **2 to 30 sheets of paper can be stapled at a time.**

9.4.6 JOB SEPARATION

Function	• Selects whether or not to use a shift function for each job that prints to the staple finisher.
Use	
Setting /procedure	• The default setting is OFF. ON “OFF” **NOTE** • **This menu is available only when a staple finisher option is installed.** • **This setting is disabled when “SUB TRAY” or “STAPLING” is selected for [FINISHING].** • **This function is available only for the following media types and media sizes. Media type: Plain/Recycled/Letterhead paper. Paper size: 182 to 216 mm in width and 257 to 356 mm in length**

9.4.7 IMAGE ROTATION

Function	• Prints 180 degrees rotated images.
Use	• To exit the leading edge of a printed image first during printing when an optional staple finisher is not installed.
Setting /procedure	• The default setting is OFF. ON “OFF” **NOTE** **• This menu is available only when an optional staple finisher is not installed.**

9.5 QUALITY MENU

9.5.1 COLOR MODE

Function	• Sets the color mode for printing.
Use	• To specify whether jobs should be printed in color or grayscale.
Setting /procedure	• The default setting is COLOR. “COLOR” GRAYSCALE

9.5.2 BRIGHTNESS

Function	• Sets the brightness of the printed image.
Use	• To adjust the brightness of the printed image.
Setting /procedure	• The default setting is 0 %. -15 % -10 % -5 % “0 %” +5 % +10 % +15 %

9.5.3 HALFTONE

A. IMAGE PRINTING

Function	• Sets the halftone characteristic of image to be printed.
Use	• To set the halftone characteristic that is used for the printed image (picture.) LINE ART : HALFTONE characteristic that emphasizes the resolution of the print image. DETAIL : HALFTONE characteristic that emphasizes the balance between the resolution and the tone reproducibility of the print image. SMOOTH : HALFTONE characteristic that emphasizes the tone reproducibility of the print image.
Setting /procedure	• The default setting is DETAIL. LINE ART “DETAIL” SMOOTH

B. TEXT PRINTING

Function	• Sets the halftone characteristic of the text to be printed.
Use	• To set the halftone characteristic that is used for printing text (letter). LINE ART : HALFTONE characteristic that emphasizes the resolution of the print image. DETAIL : HALFTONE characteristic that emphasizes the balance between the resolution and the tone reproducibility of the print image. SMOOTH : HALFTONE characteristic that emphasizes the tone reproducibility of the print image.
Setting /procedure	• The default setting is LINE ART. “LINE ART” DETAIL SMOOTH

C. GRAPHICS PRINTING

Function	• Sets the halftone characteristic for graphics printing.
Use	• To set the halftone characteristic that is used for printing graphics (figures). LINE ART : HALFTONE characteristic that emphasizes the resolution of the print image. DETAIL : HALFTONE characteristic that emphasizes the balance between the resolution and the tone reproducibility of the print image. SMOOTH : HALFTONE characteristic that emphasizes the tone reproducibility of the print image.
Setting /procedure	• The default setting is LINE ART. LINE ART “DETAIL” SMOOTH

9.5.4 EDGE ENHANCEMENT

A. IMAGE PRINTING

Function	• Selects whether or not to add edge enhancement during image printing.
Use	• To add edge enhancement and sharpen the outline of images when printing image data such as photographs.
Setting /procedure	• The default setting is OFF. ON “OFF”

B. TEXT PRINTING

Function	• Selects whether or not to add edge enhancement during text printing.
Use	• To add edge enhancement and sharpen the outline of images when printing text data such as letters.
Setting /procedure	• The default setting is ON. “ON” OFF

C. GRAPHICS PRINTING

Function	• Selects whether or not to add edge enhancement during graphic printing.
Use	• To add edge enhancement and sharpen the outline of images when printing text data such as graphics.
Setting /procedure	• The default setting is ON. "ON" OFF

9.5.5 EDGE STRENGTH

Function	• Sets edge strength applied to printing with edge enhancement.
Use	• To adjust edge strength depending on each image. In the order of Low, Middle, and High, edge strength increases.
Setting /procedure	• The default setting is MIDDLE. OFF LOW "MIDDLE" HIGH **NOTE** • **If this setting is set to OFF, the [EDGE ENHANCEMENT] setting is disabled and jobs print without edge enhancement.**

9.5.6 ECONOMY PRINT

Function	• Selects whether or not to use the economy print mode where job prints with lower print density and less toner consumption.
Use	• To reduce toner consumption • In the economy print mode, toner consumption will be reduced by approx. 30 % compared to the normal mode.
Setting /procedure	• The default setting is OFF. ON "OFF" **NOTE** • **When [GLOSSY MODE] is set to "ON", the economy print setting is disabled even if the economy mode is set to "ON."**

9.5.7 GLOSSY MODE

Function	• Selects whether or not to use the glossy mode that increases toner adhesion and enhances glossiness of images.
Use	• To print more glossy images. • This mode can be used for media types other than transparencies and envelopes.
Setting /procedure	• The default setting is OFF. ON "OFF" **NOTE** • **When this setting is set to "ON", the [ECONOMY PRINT] setting is automatically recognized as "OFF."**

9.5.8 PCL SETTING

A. CONTRAST

Function	• Sets the contrast of a PCL printed image.
Use	• To adjust the contrast of a PCL printed image.
Setting /procedure	• The default setting is 0%. -15 % -10 % -5 % "0 %" +5 % +10 % +15 %

B. IMAGE PRINTING

(1) RGB SOURCE

Function	• Sets the RGB color space of the image to be printed.
Use	• To set the input RGB color space that is used for printing the image (picture). sRGB : Profile that has been preset to the printer. DEVICE COLOR: It uses the device color in the color space.
Setting /procedure	• The default setting is sRGB. DEVICE COLOR "sRGB"

(2) RGB INTENT

Function	• Sets the RGB characteristics of the image to be printed.
Use	• To set the color conversion characteristic from input RGB to device CMYK that is used for printing the image (picture). VIVID : Color conversion characteristic suited to the image emphasizing on color vividness. PHOTOGRAPHIC: Color conversion characteristic suited to the image emphasizing on color image.
Setting /procedure	• The default setting is PHOTOGRAPHIC. VIVID "PHOTOGRAPHIC"

(3) RGB GRAY

Function	• Sets the RGB gray reproduction of the image to be printed.
Use	• To set the gray print method that is used for the printed image (picture). COMPOSITE BLACK : Print gray with the toner of 4 colors CMYK. BLACK AND GRAY : Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY : Print gray only with K toner.
Setting /procedure	• The default setting is COMPOSITE BLACK. "COMPOSITE BLACK" BLACK AND GRAY BLACK ONLY

C. TEXT PRINTING

(1) RGB SOURCE

Function	• Sets the RGB color space of the text to be printed.
Use	• To set the input RGB color space that is used for printing text (letter). sRGB : Profile that has been preset to the printer. DEVICE COLOR: It uses the device color in the color space.
Setting /procedure	• The default setting is sRGB. DEVICE COLOR “sRGB”

(2) RGB INTENT

Function	• Sets the RGB characteristic of the text to be printed.
Use	• To set the color conversion characteristic from input RGB to device CMYK that is used for printing text (letter). VIVID : Color conversion characteristic suited to the image emphasizing on color vividness. PHOTOGRAPHIC: Color conversion characteristic suited to the image emphasizing on color image.
Setting /procedure	• The default setting is VIVID. “VIVID” PHOTOGRAPHIC

(3) RGB GRAY

Function	• Sets the RGB gray reproduction of the text to be printed.
Use	• To set the gray print method that is used for printing text (letter). COMPOSITE BLACK : Print gray with the toner of 4 colors CMYK. BLACK AND GRAY : Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY : Print gray only with K toner.
Setting /procedure	• The default setting is BLACK AND GRAY. COMPOSITE BLACK “BLACK AND GRAY” BLACK ONLY

D. GRAPHICS PRINTING

(1) RGB SOURCE

Function	• Sets the RGB color space of the graphics to be printed.
Use	• To set the input RGB color space that is used for printing graphics (figures). sRGB : Profile that has been preset to the printer. DEVICE COLOR: It uses the device color in the color space.
Setting /procedure	• The default setting is sRGB. DEVICE COLOR “sRGB”

(2) RGB INTENT

Function	• Sets the RGB characteristic for graphics printing.
Use	• To set the color conversion characteristic from input RGB to device CMYK that is used for graphics (figures). VIVID : Color conversion characteristic suited to the image emphasizing on color vividness. PHOTOGRAPHIC : Color conversion characteristic suited to the image emphasizing on color image.
Setting /procedure	• The default setting is VIVID. "VIVID" PHOTOGRAPHIC

(3) RGB GRAY

Function	• Sets the RGB gray reproduction of the graphics to be printed.
Use	• To set the gray print method that is used for graphics (figures). COMPOSITE BLACK : Print gray with the toner of 4 colors CMYK. BLACK AND GRAY : Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY : Print gray only with K toner.
Setting /procedure	• The default setting is BLACK AND GRAY. COMPOSITE BLACK "BLACK AND GRAY" BLACK ONLY

9.5.9 PS SETTING

A. IMAGE PRINTING

(1) RGB SOURCE

Function	• Sets the RGB color space of the image to be printed.
Use	• To set the input RGB color space that is used for printing the image (picture). sRGB...BlueAdjustRGB : Profile that has been preset to the printer. DEVICE COLOR : It uses the device color in the color space.
Setting /procedure	• The default setting is sRGB. DEVICE COLOR / "sRGB" /AppleRGB /AdobeRGB1998 /ColorMatchRGB / BlueAdjustRGB

(2) RGB INTENT

Function	• Sets the RGB characteristics of the image to be printed.
Use	• To set the color conversion characteristic from input RGB to device CMYK that is used for printing the image (picture). VIVID : Color conversion characteristic suited to the image emphasizing on color vividness. PHOTOGRAPHIC : Color conversion characteristic suited to the image emphasizing on color image. RELATIVE COLOR : Reproduce the color that minimize the color difference between original and print by adjusting the basic color (white.) ABSOLUTE COLOR : Reproduce the color that maintains the absolute color within the device reproduced color.
Setting /procedure	• The default setting is PHOTOGRAPHIC. VIVID "PHOTOGRAPHIC" RELATIVE COLOR ABSOLUTE COLOR

(3) RGB GRAY

Function	• Sets the RGB gray reproduction of the image to be printed.
Use	• To set the gray print method that is processed by the printer for the printed image (picture). COMPOSITE BLACK : Print gray with the toner of 4 colors CMYK. BLACK AND GRAY : Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY : Print gray only with K toner.
Setting /procedure	• The default setting is COMPOSITE BLACK. “COMPOSITE BLACK” BLACK AND GRAY BLACK ONLY

(4) DESTINATION PROF

Function	• Sets the output profile.
Use	• To set the custom profile used for output. AUTO : Select automatically appropriate output profile that has been preset at the printer with other print conditions. Custom Profile : Custom profile that has been downloaded to the printer by user.
Setting /procedure	• The default setting is AUTO. “AUTO” Custom Profile...

B. TEXT PRINTING

(1) RGB SOURCE

Function	• Sets the RGB color space of the text to be printed.
Use	• To set the input RGB color space that is used for printing text (letter). sRGB...BlueAdjustRGB : Profile that has been preset to the printer. DEVICE COLOR : It uses the device color in the color space.
Setting /procedure	• The default setting is sRGB. DEVICE COLOR / “sRGB” /AppleRGB /AdobeRGB1998 /ColorMatchRGB / BlueAdjustRGB

(2) RGB INTENT

Function	• Sets the RGB characteristic of the text to be printed.
Use	• To set the color conversion characteristic from input RGB to device CMYK that is used for printing text (letter). VIVID : Color conversion characteristic suited to the image emphasizing on color vividness. PHOTOGRAPHIC : Color conversion characteristic suited to the image emphasizing on color image. RELATIVE COLOR : Reproduce the color that minimize the color difference between original and print by adjusting the basic color (white.) ABSOLUTE COLOR : Reproduce the color that maintains the absolute color within the device reproduced color.
Setting /procedure	• The default setting is VIVID. “VIVID” PHOTOGRAPHIC RELATIVE COLOR ABSOLUTE COLOR

(3) RGB GRAY

Function	• Sets the RGB gray reproduction of the text to be printed.
Use	• To set the gray print method that is used for printing text (letter). COMPOSITE BLACK : Print gray with the toner of 4 colors CMYK. BLACK AND GRAY : Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY : Print gray only with K toner.
Setting /procedure	• The default setting is BLACK AND GRAY. COMPOSITE BLACK “BLACK AND GRAY” BLACK ONLY

(4) DESTINATION PROF

Function	• Sets the output profile.
Use	• To set the custom profile used for output. AUTO : Select automatically appropriate output profile that has been preset at the printer with other print conditions. Custom Profile : Custom profile that has been downloaded to the printer by user.
Setting /procedure	• The default setting is AUTO. “AUTO” Custom Profile...

C. GRAPHICS PRINTING

(1) RGB SOURCE

Function	• Sets the RGB color space of the graphics to be printed.
Use	• To set the input RGB color space that is used for printing graphics (figures). sRGB...BlueAdjustRGB : Profile that has been preset to the printer. DEVICE COLOR : It uses the device color in the color space.
Setting /procedure	• The default setting is sRGB. DEVICE COLOR / “sRGB” /AppleRGB /AdobeRGB1998 /ColorMatchRGB / BlueAdjustRGB

(2) RGB INTENT

Function	• Sets the RGB characteristic of the graphics to be printed.
Use	• To set the color conversion characteristic from input RGB to device CMYK that is used for printing graphics (figures). VIVID : Color conversion characteristic suited to the image emphasizing on color vividness. PHOTOGRAPHIC : Color conversion characteristic suited to the image emphasizing on color image. RELATIVE COLOR : Reproduce the color that minimize the color difference between original and print by adjusting the basic color (white.) ABSOLUTE COLOR : Reproduce the color that maintains the absolute color within the device reproduced color.
Setting /procedure	• The default setting is VIVID. “VIVID” PHOTOGRAPHIC RELATIVE COLOR ABSOLUTE COLOR

(3) RGB GRAY

Function	• Sets the RGB gray reproduction of the graphics to be printed.
Use	• To set the gray print method that is used for printing graphics (figures). COMPOSITE BLACK : Print gray with the toner of 4 colors CMYK. BLACK AND GRAY : Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY : Print gray only with K toner.
Setting /procedure	• The default setting is BLACK AND GRAY. COMPOSITE BLACK “BLACK AND GRAY” BLACK ONLY

(4) DESTINATION PROF

Function	• Sets the output profile.
Use	• To set the custom profile used for output. AUTO : Select automatically appropriate output profile that has been preset at the printer with other print conditions. Custom Profile : Custom profile that has been downloaded to the printer by user.
Setting /procedure	• The default setting is AUTO. “AUTO” Custom Profile...

D. SIMULATION

(1) SIMULATION PROF

Function	• Sets the simulation profile.
Use	• To set a CMYK simulation profile at implementation of the simulation. SWOP...DIC : Profile that has been preset at the printer. Custom profile : Custom profile that has been downloaded to the printer by users.
Setting /procedure	• The default setting is NONE. “NONE” /SWOP /Euroscale /CommercialPress /TOYO /DIC /Custom Profile...

(2) SIMULATION INTENT

Function	• Sets the color characteristics.
Use	• To set the color characteristics at the implementation of the simulation. RELATIVE COLOR : Reproduce the color that minimizes the color difference between original and print by adjusting the basic color (white.) ABSOLUTE COLOR : Reproduce the color that maintains the absolute color within the device reproduced color.
Setting /procedure	• The default setting is RELATIVE COLOR. “RELATIVE COLOR” ABSOLUTE COLOR

(3) CMYK GRAY

Function	• Sets CMYK gray reproduction.
Use	• To set the CMYK data K maintain method at the implementation of the simulation. COMPOSITE BLACK : Print according to the result of color conversion with profile. BLACK AND GRAY : Print by maintaining the value only for black (C=M=Y=0, K=255) BLACK ONLY : Print by maintaining the value only for gray (C=M=Y=0, K=any)
Setting /procedure	• The default setting is COMPOSITE BLACK. "COMPOSITE BLACK" BLACK AND GRAY BLACK ONLY

9.5.10 CALIBRATION

A. TONE CALIBRATION

Function	• Sets the gradation adjustment (Image stabilization with the controller).
Use	• To use for a particular calibration made by users. ON : Gradation adjustment is ON. OFF : Gradation adjustment is OFF.
Setting /procedure	• The default setting is ON. "ON" OFF

B. AIDC PROCESS

Function	• Controls the image stability.
Use	• To be used to adjust image quality. • To be used when the transfer belt unit and/or the transfer roller are replaced.
Setting /procedure	• The default setting is CANCEL. EXCUTE "CANCEL"

C. CMYK DENSITY

(1) CYAN

Function	• Sets the cyan level for the HIGHLIGHT, MIDDLE, and SHADOW area respectively.
Use	• To set the cyan level for the HIGHLIGHT, MIDDLE, and SHADOW are respectively.
Setting /procedure	• The default setting is 0. -3 to +3

(2) MAGENTA

Function	• Sets the magenta level for the HIGHLIGHT, MIDDLE, and SHADOW area respectively.
Use	• To set the magenta level for the HIGHLIGHT, MIDDLE, and SHADOW are respectively.
Setting /procedure	• The default setting is 0. -3 to +3

(3) YELLOW

Function	• Sets the yellow level for the HIGHLIGHT, MIDDLE, and SHADOW area respectively.
Use	• To set the yellow level for the HIGHLIGHT, MIDDLE, and SHADOW are respectively.
Setting /procedure	• The default setting is 0. -3 to +3

(4) BLACK

Function	• Sets the black level for the HIGHLIGHT, MIDDLE, and SHADOW area respectively.
Use	• To set the black level for the HIGHLIGHT, MIDDLE, and SHADOW are respectively.
Setting /procedure	• The default setting is 0. -3 to +3

9.5.11 COLOR SEPARATION

Function	• Sets the color separation function.
Use	• To create color separations.
Setting /procedure	• The default setting is OFF. ON “OFF”

9.6 MEMORY DIRECT

- This menu appears only when the optional hard disk kit and/or the compact flash is installed.
- This menu does not appear when “DISABLE” is selected in the [INTERFACE MENU] → [MEMORY DIRECT] setting.

9.6.1 LIST OF FILES

Function	• Displays folders and files stored in a USB memory connected to the USB port and sends print jobs.
Use	• To select files to be printed with the USB memory direct print function. • The maximum of 99 files and folders in total can be displayed. • The maximum of 7 folder hierarchies can be displayed.
Setting /procedure	*1.* Insert a USB memory into the USB port. *2.* Select [MEMORY DIRECT] → [LIST OF FILES] and select files to be printed then press the menu/select key. (When a desired file is in a folder, select the folder that includes the file and press the Menu/select key.) *3.* Specify a media type, duplex printing ON/OFF, the number of copies, and other necessary settings. *4.* Select [PRINT] and press the menu/select key. **NOTE** • **Do not remove the USB memory from the main body during memory direct printing.**

9.6.2 TYPE OF FILES

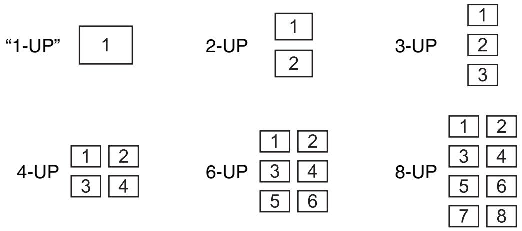
Function	• Specifies the types of files to be displayed on [LIST OF FILES].
Use	• To limit the types of files that can be listed.
Setting /procedure	• The default setting is PDF, XPS. PDF, XPS, JPEG, TIFF “PDF, XPS”

9.7 CAMERA DIRECT

9.7.1 PAPER SOURCE

Function	• Sets the tray using for camera direct photo printing.
Use	• To change the tray using for camera direct photo printing.
Setting /procedure	• The default setting is TRAY 2. TRAY1” “TRAY2” TRAY3 TRAY4 **NOTE** • **Only the mounted tray can be selected.**

9.7.2 LAYOUT

Function	• Sets the number of images printed on one page for camera direct photo printing.
Use	• To specify the number of camera direct photo printing images to be printed on each sheet.
Setting /procedure	• The default setting is 1-UP.  “1-UP” 2-UP 3-UP 4-UP 6-UP 8-UP

9.7.3 PAPER MARGIN

Function	• Sets the media margin for direct photo printing.
Use	• To perform direct photo printing with the minimum media margin.
Setting /procedure	• The default setting is STANDARD. “STANDARD” MINIMUM

9.7.4 IMAGE QUALITY

A. BRIGHTNESS

Function	• Sets the brightness of the printed image for camera direct photo printing.
Use	• To adjust the brightness of the printed image for camera direct photo printing.
Setting /procedure	• The default setting is 0 %. -15 % -10 % -5 % “0 %” +5 % +10 % +15 %

B. CONTRAST

Function	• Sets the contrast of the printed image for camera direct photo printing.
Use	• To adjust the contrast of the printed image for camera direct photo printing.
Setting /procedure	• The default setting is 0%. -15 % -10 % -5 % “0 %” +5 % +10 % +15 %

C. ECONOMY PRINT

Function	• Sets whether or not to use the economy print mode during camera direct photo printing.
Use	• To reduce toner consumption during camera direct photo printing. • In the economy print mode, toner consumption can be reduced by approx. 30 % compared to the normal print mode.
Setting /procedure	• The default setting is OFF. ON “OFF” **NOTE** • **When [GLOSSY MODE] is set to “ON”, the economy print setting is disabled even if the economy mode is set to “ON.”**

D. GLOSSY MODE

Function	• Selects whether or not to use the glossy mode during camera direct photo printing.
Use	• To print more glossy images during camera direct photo printing. • This mode can be used for media types other than transparencies and envelopes.
Setting /procedure	• The default setting is OFF. ON “OFF” **NOTE** • **When this mode is set to “ON”, the [ECONOMY PRINT] setting is recognized as being “OFF.”**

E. RGB SOURCE

Function	• Sets the RGB color space of the printed image for camera direct photo printing.
Use	• To set the input RGB color space that is used for camera direct photo printing. sRGB : Profile that has been preset to the printer. DEVICE COLOR: It uses the device color in the color space.
Setting /procedure	• The default setting is sRGB. DEVICE COLOR “sRGB”

F. RGB INTENT

Function	• Sets the RGB characteristics of the printed image for camera direct photo printing.
Use	• To set the color conversion characteristic from input RGB to device CMYK that is used for camera direct photo printing. VIVID : Color conversion characteristic suited to the image emphasizing on color vividness. PHOTOGRAPHIC : Color conversion characteristic suited to the image emphasizing on color image.
Setting /procedure	• The default setting is PHOTOGRAPHIC. VIVID “PHOTOGRAPHIC”

G. RGB GRAY

Function	• Sets the RGB gray reproduction of the printed image for camera direct photo printing.
Use	• To set the gray print method that is processed by the printer for camera direct photo printing. COMPOSITE BLACK : Print gray with the toner of 4 colors CMYK. BLACK AND GRAY : Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY : Print gray only with K toner.
Setting /procedure	• The default setting is COMPOSITE BLACK. “COMPOSITE BLACK” BLACK AND GRAY BLACK ONLY

H. HALFTONE

Function	Sets the halftone characteristic of the printed image for camera direct photo printing.
Use	• To set the halftone characteristic that is used for camera direct photo printing. LINE ART : HALFTONE characteristic that emphasizes the resolution of the print image. DETAIL : HALFTONE characteristic that emphasizes the balance between the resolution and the tone reproducibility of the print image. SMOOTH : HALFTONE characteristic that emphasizes the tone reproducibility of the print image.
Setting /procedure	• The default setting is DETAIL. LINE ART “DETAIL” SMOOTH

9.8 INTERFACE MENU

9.8.1 JOB TIMEOUT

Function	• Sets the time to activate JOB TIMEOUT.
Use	• To specify the amount of time before a print job times out.
Setting /procedure	• The default setting is 15 seconds. 5 seconds to 300 seconds

9.8.2 ETHERNET

NOTE

- **When the ETHERNET setting is changed, the printer restarts automatically.**

A. TCP/IP

(1) ENABLE

Function	• Enables TCP/IP
Use	• To specify that the printer is connected to a TCP/IP network. YES : Enable TCP/IP. Print can be made at TCP/IP environment. NO : Disable TCP/IP. Print cannot be made at TCP/IP environment.
Setting /procedure	• The default setting is YES. “YES” NO **NOTE** • **The following screen displays only when [ENABLE/YES] is selected. IP ADDRESS/SUBNET MASK/DEFAULT GATEWAY/DHCP/BOOTP/ARP/PING/ HTTP/FTPTELNET/BONJOUR/DYNAMIC DNS/IPP/RAW PORT/SLP/SMTP/ SNMP/WSD PRINT/IPSEC/IP ADDRESS FILTER/IPv6**

(2) IP ADDRESS

Function	• Sets the IP address of the printer used for the network.
Use	• To set the printer’s IP address.
Setting /procedure	*1.* Select [IP ADDRESS] and press the Menu/Select key. *2.* Set desired IP address (first bite) with the up key▲/down key▼ and press the right key ▶. *3.* Repeat the above procedures and set the IP address up to fourth bite. *4.* Press the Menu/Select key. **NOTE** • **When setting the IP address manually, [DHCP/BOOTP] (IP auto acquisition function) setting is set to [OFF] automatically.** • **When IP address is not allocated from the server, the IP address is set automatically within the range “169.254.0.0. to 169.254.255.255.”**

(3) SUBNET MASK

Function	• Sets the subnet mask of the printer used in the network.
Use	• To set the printer's subnet mask.
Setting /procedure	*1.* Select [SUBNET MASK] and press the Menu/Select key. *2.* Set desired subnet mask (first bite) with the up key▲/down key▼ and press the right key ▶. *3.* Repeat the above procedures and set the subnet mask up to fourth bite. *4.* Press the Menu/Select key. • The default setting is "000.000.000.000." 000.000.000.000 to 255.255.255.255

(4) DEFAULT GATEWAY

Function	• Sets the gateway address of the printer used in the network.
Use	• To set the printer's gateway address.
Setting /procedure	*1.* Select [DEFAULT GATEWAY] and press the Menu/Select key. *2.* Set desired default gateway address (first bite) with the up key▲/down key▼ and press the right key ▶. *3.* Repeat the above procedures and set the default gateway address up to fourth bite. *4.* Press the Menu/Select key. • The default setting is "000.000.000.000." 000.000.000.000 to 255.255.255.255

(5) DHCP

Function	• Automatically acquires an IP address from the DHCP server, if there is one in the network, and specifies whether to load other network information.
Use	• To automatically acquire an IP address and load other network information. YES : Enable IP auto acquisition setting. No : Disable IP auto acquisition setting.
Setting /procedure	• The default setting is ON. "ON" OFF **NOTE** • **When setting the IP address manually, the [DHCP] setting is changed to [OFF].**

(6) BOOTP

Function	• Automatically acquires an IP address from BOOTP and specifies whether to load other network information.
Use	• To automatically acquire an IP address and load other network information. ON : Enable IP auto acquisition setting. OFF : Disable IP auto acquisition setting.
Setting /procedure	• The default setting is OFF. ON "OFF" **NOTE** • **When setting the IP address manually, the [BOOTP] setting is changed to [OFF].**

(7) ARP/PING

Function	• Select whether or not the IP address is automatically acquired.
Use	• To automatically acquire an IP address and load other network information. ON : Enable IP auto acquisition setting. OFF : Disable IP auto acquisition setting.
Setting /procedure	• The default setting is OFF. ON “OFF” **NOTE** • **When setting the IP address manually, the [ARP/PING] setting is changed to [OFF].**

(8) HTTP
<ENABLE>

Function	• Enables HTTP.
Use	• To enable HTTP. YES : HTTP is enabled. NO : HTTP is disabled.
Setting /procedure	• The default setting is YES. “YES” NO **NOTE** • **Setting this function to “NO” will automatically set [IPP] to “NO.”**

(9) FTP
<ENABLE>

Function	• Enables FTP.
Use	• To enable FTP. YES : FTP is enabled. NO : FTP is disabled.
Setting /procedure	• The default setting is YES. “YES” NO

(10) TELNET

Function	• Select whether to enable or disable TELNET transmissions.
Use	• To specify that the printer is connected by TELNET transmissions.
Setting /procedure	• The default setting is ENABLE. “ENABLE” DISABLE

(11) BONJOUR

<ENABLE>

Function	• Select whether or not to use the bonjour setting.
Use	• To use when operating under the bonjour service environment. YES : Bonjour is enabled. NO : Bonjour is disabled.
Setting /procedure	• The default setting is YES. "YES" NO

(12) DYNAMIC DNS

<ENABLE>

Function	• Select whether or not to use the dynamic DNS setting.
Use	• To use when operating under the dynamic DNS service environment. YES : Dynamic DNS is enabled. NO : Dynamic DNS is disabled.
Setting /procedure	• The default setting is NO. YES "NO"

(13) IPP

<ENABLE>

Function	• To set whether to enable or disable IPP setting. YES : IPP is enabled. NO : IPP is disabled.
Use	
Setting /procedure	• The default setting is YES. "YES" NO

(14) RAW PORT

<ENABLE>

Function	• To set whether to enable or disable raw port setting. YES : Raw port is enabled. NO : Raw port is disabled.
Use	
Setting /procedure	• The default setting is YES. "YES" NO

<BIDIRECTIONAL>

Function	• Enables or disables bi-directional communication for the raw port. ON : Raw port is enabled for bi-directional communication. OFF : Raw port is disabled for bi-directional communication.
Use	
Setting /procedure	• The default setting is OFF. ON "OFF"

(15) SLP

<ENABLE>

Function Use	• To set whether to enable or disable SLP setting. YES : SLP is enabled. NO : SLP is disabled.
Setting /procedure	• The default setting is YES. "YES" NO

(16) SMTP

<ENABLE>

Function Use	• To set whether to enable or disable SMTP setting. YES : SMTP is enabled. NO : SMTP is disabled.
Setting /procedure	• The default setting is YES. "YES" NO

(17) SNMP

<ENABLE>

Function Use	• To set whether to enable or disable SNMP setting. YES : SNMP is enabled. NO : SNMP is disabled.
Setting /procedure	• The default setting is YES. "YES" NO

(18) WSD PRINT

<ENABLE>

Function Use	• To set whether to use this printer as a WSD printer. YES : WSD print is enabled. NO : WSD print is disabled.
Setting /procedure	• The default setting is YES. "YES" NO

(19) IPSEC

<ENABLE>

Function	• To set whether to use IPsec protocol for IP network communication.
Use	• When IPsec protocol is used to perform encrypted communication. YES : IPsec is enabled. NO : IPsec print is disabled.
Setting /procedure	• The default setting is NO. YES "NO"

(20) IP ADDRESS FILTER

<ACCESS PERMISSION>

Function	• To set the IP filtering (access permission). ENABLE : Access permission is enabled. DISABLE : Access permission is disabled. **NOTE** • **The range for the IP addresses, to which access is enabled, is set using the PageScope Web Connection.**
Use	
Setting /procedure	• The default setting is DISABLE. ENABLE “DISABLE”

<ACCESS REFUSE>

Function	• To set the IP filtering (access refuse). ENABLE : Access refuse is enabled. DISABLE : Access refuse is disabled. **NOTE** • **The range for the IP addresses, to which access is disabled, is set using the PageScope Web Connection.**
Use	
Setting /procedure	• The default setting is DISABLE. ENABLE “DISABLE”

(21) IPV6

<ENABLE>

Function	• To set whether to use IPv6 in IP network communication. YES : IPv6 is enabled. NO : IPv6 is disabled.
Use	
Setting /procedure	• The default setting is YES. “YES” NO

<AUTO SETTING>

Function	• To set whether to use the IPv6 address automatic acquisition setting. YES : IPv6 address is automatically obtained. NO : IPv6 auto configuration is disabled.
Use	
Setting /procedure	• The default setting is YES. “YES” NO

<LINK LOCAL>

Function	• Displays the link-local address of IPv6.
Use	

<GLOBAL ADDRESS>

Function	• Displays the global address of IPv6.
Use	

<GATEWAY ADDRESS>

Function Use	• Displays the gateway address of IPv6.

B. NETWARE

(1) ENABLE

Function	• Enables NetWare.
Use	• To specify that the printer is connected to a NetWare network. YES : Enable NetWare. Printing can be done via NetWare. No : Disable NetWare. Printing cannot be done via NetWare.
Setting /procedure	• The default setting is NO. YES “NO”

C. APPLETALK

(1) ENABLE

Function	• Enables AppleTalk.
Use	• To specify that the printer is connected to an AppleTalk network. YES : Enable AppleTalk. Printing can be done via AppleTalk. No : Disable Apple Talk. Printing cannot be done via AppleTalk.
Setting /procedure	• The default setting is YES. “YES” NO

D. SPEED/DUPLEX

Function	• Sets the communication speed and method of network.
Use	• To set the network communication speed and method.
Setting /procedure	• Setting items Network speed (SPEED): AUTO, 10 Mbps, 100 Mbps, 1,000 Mbps Duplex mode (DUP): AUTO, full-duplex mode, half-duplex mode • The default setting is AUTO. “AUTO” 10BASE FULL 10BASE HALF 100BASE FULL 100BASE HALF 1000BASE FULL

E. IEEE802.1X

(1) ENABLE

Function	• Enables IEEE802.1X.
Use	• To carry out wireless LAN communication. YES : IEEE802.1X is enabled. NO : IEEE802.1X is disabled.
Setting /procedure	• The default setting is NO. YES “NO”

9.8.3 MEMORY DIRECT

Function Use	• Select whether to enable or disable memory direct printing. ENABLE : MEMORY DIRECT menu is appeared, and memory direct printing is enabled. DISABLE : MEMORY DIRECT menu is disappeared, and memory direct printing is disabled.
Setting /procedure	• The default setting is ENABLE. "ENABLE" DISABLE

9.8.4 CAMERA DIRECT

Function Use	• Select whether to enable or disable camera direct printing. ENABLE : CAMERA DIRECT menu is appeared, and camera direct printing is enabled. DISABLE : CAMERA DIRECT menu is disappeared, and camera direct printing is disabled.
Setting /procedure	• The default setting is ENABLE. "ENABLE" DISABLE

9.9 SYS DEFAULT MENU

9.9.1 LANGUAGE

Function	• Sets the language of the control panel display.
Use	• To change the language of the control panel display at user's option.
Setting /procedure	• The default setting is ENGLISH. "ENGLISH"/FRENCH/GERMAN/SPANISH/ITALIAN/PORTUGUESE/CZECH/JAPANEASE/KOREAN/SIMPLIFIED CHINESE/TRADITIONAL CHINESE/DUTCH/RUSSIAN/POLISH

9.9.2 EMULATION

A. DEF. EMULATION

Function	• To set the PDL (Page Description Language).
Use	• To fix the PDL as necessary. It usually switches automatically.
Setting /procedure	• The default setting is AUTO. "AUTO" POSTSCRIPT PCL

B. POSTSCRIPT

(1) WAIT TIMEOUT

Function	• Sets the amount of time to wait for a postscript file.
Use	• To set the amount of time to wait for a postscript file before the print job times out.
Setting /procedure	*1.* Select [WAIT TIMEOUT] and press the Menu/Select key. *2.* Select desired time with the up key▲/down key▼ and press the Menu/Select key. • The default setting is 0 second. "0" second to 300 seconds.

(2) PS ERROR PAGE

Function	• Specifies whether error pages are printed at the time of a postscript error.
Use	• To specify whether error pages are printed after a postscript error occurs. ON : Error pages are printed at the time of postscript error. OFF : Error pages are not printed at the time of postscript error.
Setting /procedure	• The default setting is OFF. ON “OFF”

(3) PS PROTOCOL

Function	• Sets the protocol to be used for postscript printing.
Use	• To use the protocol when printing by postscript printing. AUTO : Automatic recognition NORMAL : ASCII letter code data BINARY : Binary data
Setting /procedure	• The default setting is AUTO. “AUTO” NORMAL BINARY

C. PCL

(1) CR/LF MAPPING

Function	• Sets the linefeed code for PCL printing.
Use	• To specify the type of linefeed to be used for PCL printing.
Setting /procedure	• The default setting is “CR=CR LF=LF.” “CR=CR LF=LF” CR=CRLF LF=LF CR=CR LF=LFCR CR=CRLF LF=LFCR

(2) LINES PER PAGE

Function	• Sets the lines per page for PCL printing.
Use	• To set the number of lines to be printed per page for PCL jobs.
Setting /procedure	*1.* Select [LINES PER PAGE] and press the Menu/Select key. *2.* Select desired line number with the up key▲/down key▼ and press the Menu/Select key. • The default setting is 60 lines. 5 lines to 128 lines

(3) FONT SOURCE

<FONT NUMBER>

Function	• Sets the PCL font to be used for PCL printing.
Use	• To set the font to be used for printing PCL jobs.
Setting /procedure	*1.* Select [FONT NUMBER] and press the Menu/Select key. *2.* Select desired font with the up key▲/down key▼ and press the Menu/Select key. • The default setting is 0. “0” to 102 **NOTE** • **According to the selected [FONT NUMBER], [PITCH SIZE] or [POINT SIZE] setting is available.** • **Details on the font which corresponds to the font No. can be checked by the PCL font list.** See P.129

<PITCH SIZE>

Function	• Sets the pitch size of the PCL font for PCL printing.
Use	• To set the pitch size of the font to be used for printing PCL jobs.
Setting /procedure	*1.* Select [PITCH SIZE] and press the Menu/Select key. *2.* Select desired pitch size with the up key▲/down key▼ and press the Menu/Select key. • The default setting is 10.00 pt. 0.44 pt to 99.99 pt **NOTE** • **When one of the following “FONT NUMBERs” is selected, “PITCH SIZE” setting is available.** **FONT NUMBER: 0 to 5, 21 to 23, 54 to 57, 81, 82.**

<SYMBOL SET>

Function	• Sets the symbol set for PCL printing.
Use	• To set the symbol set to be used for printing PCL jobs.
Setting /procedure	• The default setting is PC8. “PC8”/DESKTOP/ISO4/ISO6/ISO11/ISO15/ISO17/ISO21/ISO60/ISO69/ISOL1/ISOL2/ISOL5/ISOL6/ISOL9/LEGAL/MATH8/MCTEXT/MSPUBL/PC775/PC850/PC852/PC858/PC8DN/PC8TK/PC1004/PIFONT/PSMATH/PSTEXT/ROMAN8/WIN30/WINBALT/WINL1/WINL2/WINL5/ARABIC8/HPWARA/PC864ARA/HEBREW7/HEBREW8/ISOHEB/PC862HEB/ISOCYR/PC866CYR/WINCYR/PC866UKR/GREEK8/WINGRK/PC851GRK/PC8GRK/ISOGRK

D. XPS
(1) DIGITAL SIGNATURE

Function	• Selects whether to verify digital signatures attached to XPS (XML Paper Specification) files when printing the files. • When ON is selected, files with invalid digital signatures are not printed.
Use	
Setting /procedure	• The default setting is DISABLE. ENABLE “DISABLE”

(2) XPS ERROR PAGE

Function	• To set whether to print error information when an error occurs while printing a XPS use file. ON : XPS error page is printed when an XPS error occurs. OFF : No XPS error page is printed when an XPS error occurs.
Use	
Setting /procedure	• The default setting is ON. “ON” OFF

9.9.3 PAPER

A. DEFAULT PAPER
(1) PAPER SIZE

Function	• Sets the default media size.
Use	• To set the default media size.
Setting /procedure	<For North America> • The default setting is LETTER. <For other destinations> • The default setting is A4. LETTER/LEGAL/EXECUTIVE/A4/A5/A6/B5(JIS)/B6(JIS)/GOVT LETTER/STATEMENT/FOLIO/SP FOLIO/UK QUARTO/FOOLSCAP/GOVT LEGAL/16K/PHOTO 4x6/KAI 16/KAI 32/ENV C5/ENV C6/ENV DL/ENV MONARCH/ENV CHOU#3/ENV CHOU#4/B5(ISO)/ENV #10/ENV YOU#4/JPOST/JPOST-D/CUSTOM **NOTE** • **Depending on the setting selected for SYS DEFAULT MENU/PAPER/UNIT OF MEASURE, PHOTO 4x6 may change to PHOTO 10x15.**

(2) CUSTOM SIZE

Function	• Sets the custom media width and length.
Use	• To set the width and length of the custom media size.
Setting /procedure	*1.* Select [CUSTOM SIZE] and press the Menu/Select key. *2.* Select [WIDTH] or [LENGTH] and press Menu/Select key. *3.* Set desired number with the up key▲/down key▼ and press the Menu/Select key. <For North America> • The default setting of WIDTH is 8.50 inches. WIDTH: 3.63 inches to 8.50 inches. • The default setting of LENGTH is 11.00 inches. LENGTH: 5.83 inches to 14.00 inches. <For other destinations> • The default setting of WIDTH is 210 mm. WIDTH: 92 mm to 216 mm. • The default setting of LENGTH is 297 mm. LENGTH: 148 mm to 356 mm. **NOTE** • **By changing the [UNIT OF MEASURE] setting (INCHES/MILLIMETERS), the custom size units are changed.**

(3) PAPER TYPE

Function	• Sets the default media type.
Use	• To set the default media type.
Setting /procedure	• The default setting is PLAIN PAPER. “PLAIN PAPER”/RECYCLED/THICK 1/THICK 2/LABEL/TRANSPARENCY/ENVELOPE/POSTCARD/LETTERHEAD/GLOSSY 1/GLOSSY 2

B. UNIT OF MEASURE

Function	• Sets the measurement units for custom size mode. • Sets the measurement units for SYS DEFAULT MENU/DEFAULT PAPER/CUSTOM SIZE mode.
Use	• To change media measurement units.
Setting /procedure	<For North America> • The default setting is INCHES. <For other destinations> • The default setting is MILLIMETERS. INCHES MILLIMETERS

9.9.4 GRAY SCALE PAGE

Function	• Sets the color mode (color or monochrome) applied to monochrome pages included in a color print job. AUTO : Automatically determines color or monochrome from the job's first page. GRAYSCALE PRINT: Automatically determines color or monochrome on a job's page basis. COLOR PRINT : Always makes color printing for a job where it selected color print.
Use	
Setting /procedure	• The default setting is AUTO. "AUTO" GRAYSCALE PRINT COLOR PRINT

9.9.5 STARTUP OPTIONS

A. DO STARTUP PAGE

Function	• Sets whether a startup page is printed at startup of the printer.
Use	• To specify whether a startup page is printed. ON : Start up page is printed at startup the printer. OFF : Start up page is not printed at startup of the printer.
Setting /procedure	• The default setting is OFF. ON "OFF"

9.9.6 AUTO CONTINUE

Function	• At the time of the following operator call, continues auto printing by ignoring the media type or size. • "PAPER EMPTY" (except "MANUAL FEED"), "xxxx SIZE ERROR", "xxxx TYPE ERROR".
Use	• To specify whether printing should continue when the specified media size and type are not available. ON : Auto continuous printing is ON. OFF : Auto continuous printing is OFF.
Setting /procedure	• The default setting is OFF. ON "OFF"

9.9.7 HOLD JOB TIMEOUT

Function	• Sets the amount of time before a job saved temporarily in the printer is automatically deleted.
Use	• To change the amount of time a job is held before being deleted.
Setting /procedure	• The default setting is DISABLE (No auto delete.). "DISABLE" 1 hour 4 hours 1 day 1 week **NOTE** • **This menu is available only when an optional hard disk kit is installed.**

9.9.8 ENERGY SAVER

Function	• Sets whether the printer should go into energy saver mode when not printing or processing a print job and when the control panel is not being used. To set the amount of time before energy saver mode is activated, use the “ENERGY SAVER TIME” menu. • Energy saver mode is automatically cancelled when any of the following operations is performed: The machine is restarted. A print job is received. Any of the keys on the control panel is pressed.
Use	• To specify whether energy saver mode is to be used.
Setting /procedure	• The default setting is ON. “ON” OFF

9.9.9 ENERGY SAVER TIME

Function	• Sets the amount of time before the machine enters energy saver mode after the last print is received or the last key operated.
Use	• To change the amount of time before the machine enters energy saver mode.
Setting /procedure	• The default setting is 15 minutes. 5 minutes 6 minutes 7 minutes 8 minutes 9 minutes 10 minutes 11 minutes 12 minutes 13 minutes 14 minutes “15 minutes” 30 minutes 1 hour 3 hours **NOTE** • **This menu is available only when [ENERGY SAVER] is not set to “OFF.”**

9.9.10 MENU TIMEOUT

Function	• Sets the amount of time before the control panel returns to the status screen from menu mode and the help display.
Use	• To set the amount of the time before the control panel returns to the status screen from the menu and the help display.
Setting /procedure	• The default setting is 2 minutes. OFF 1 minute “2 minutes”

9.9.11 LCD CONTRAST

Function	• Sets the brightness of the control panel LCD display.
Use	• To set the brightness of the control panel LCD display.
Setting /procedure	The default setting is 0. -3 -2 -1 “0” +1 +2 +3

9.9.12 SECURITY

A. CHANGE PASSWORD

Function	• Sets the password used for the lock panel function.
Use	• To change the password used for the lock panel function. 0000 : Panel lock function is OFF. 0001 to FFFF : Valid password for panel lock function.
Setting /procedure	*1.* Select [CHANGE PASSWORD] and press the Menu/Select key. *2.* Set desired password (first digit) with the up key▲/down key▼ and press the right key▶. *3.* Repeat the above procedures to set up to fourth digit password. • The default setting is 0000. “0000” to FFFF **NOTE** • **Make sure to set the password to something other than “0000” when the [LOCK PANEL] function is set to [ON].** • **If you forget the password, it can be initiated (0000) with [SERVICE MENU/ RESTORE PASSWORD].** See P.195

B. LOCK PANEL

Function	• Protects the menu (except the service menu) with a password.
Use	• To make the menu (except the service menu) impossible to change unless the correct password is entered. OFF : Panel lock function is OFF. MINIMUM : Panel lock function is ON. Protect the operation of [INTERFACE MENU], [SYS DEFAULT MENU]. ON : Panel lock function is ON. Protect the operation of [PROF/PRINT MENU], [PRINT MENU], [PAPER MENU], [QUALITY MENU], [INTERFACE MENU], [SYS DEFAULT MENU], [MEMORY DIRECT], [CAMERA DIRECT].
Setting /procedure	• The default setting is “OFF.” “OFF” MINIMUM ON

9.9.13 CLOCK

A. DATE

Function	• Sets the date of the printer's built-in clock.
Use	• To change the date of the printer's built-in clock.
Setting /procedure	DATE (DD.MM.YY): For Europe DATE (MM.DD.YY): For North America DATE(YY.MM.DD): For Japan, Asia, China The following shows how to set DATE (DD.MM.YY). *1.* Select [CLOCK] and press the Menu/Select key. *2.* Select [DATE (DD.MM.YY)] and press the Menu/Select key. *3.* Set date with the up key△/down key▽ and press the right key▷. *4.* Repeat the above procedures to set month and year. *5.* Press the Menu/Select key. DD : 01 to 31 MM : 01 to 12 YY : 2006 to 2032

B. TIME

Function	• Sets the time of the printer's built-in clock.
Use	• To change the time of the printer's built-in clock.
Setting /procedure	*1.* Select [CLOCK] and press the Menu/Select key. *2.* Select [TIME] and press the Menu/Select key. *3.* Set hour with the up key▲/down key▼ and press the right key▶. *4.* Repeat the above procedures to set minute. *5.* Press the Menu/Select key.

C. TIME ZONE

Function	• Sets the time zone.
Use	
Setting /procedure	*1.* Select [CLOCK] and press the Menu/Select key. *2.* Select [TIME ZONE] and press the Menu/Select key. *3.* Set time zone with the up key▲/down key▼. *4.* Press the Menu/Select key.

9.9.14 HDD FORMAT

Function	• Initializes the format of the optional hard disk kit.
Use	• To initialize the format of the optional hard disk kit. USER AREA ONLY : Initialize only user area ALL : Initialize all area
Setting /procedure	*1.* Select [HDD FORMAT] and press the Menu/Select key. *2.* Select desired initialization method and press the Menu/Select key. *3.* [ARE YOU SURE?] is displayed. *4.* By pressing the Menu/Select key, initialization starts. By pressing the Cancel key without pressing the Menu/Select key, the start of initialization can be cancelled. *5.* The printer restarts and the hard disk is initialized. Once the initialization starts, it cannot be cancelled. • The default setting is USER AREA ONLY. USER AREA ONLY ALL **NOTE** • **This menu is available only when an optional hard disk kit is installed.**

9.9.15 CARD FORMAT

Function	• Initializes the format of the optional compact flash card.
Use	• To initialize the format of the optional compact flash card. USER AREA ONLY : Initialize only user area ALL : Initialize all area
Setting /procedure	*1.* Select [CARD FORMAT] and press the Menu/Select key. *2.* Select desired initialization method and press the Menu/Select key. *3.* [ARE YOU SURE?] is displayed. *4.* By pressing the Menu/Select key, initialization starts. By pressing the Cancel key without pressing the Menu/Select key, the start of initialization can be cancelled. *5.* The printer restarts and the hard disk is initialized. Once the initialization starts, it cannot be cancelled. • The default setting is USER AREA ONLY. USER AREA ONLY ALL **NOTE** • **This menu is available only when an optional compact flash card is installed.**

9.9.16 RESTORE DEFAULTS

Function	• Restores the factory default of each setting.
Use	• To restore the defaults of all settings. RESTORE NETWORK : Restore the default for [INTERFACE MENU/ETHERNET] setting. RESTORE PRINTER : Restore the default for [PAPER MENU], [QUALITY MENU], [SYS DEFAULT MENU] and [CAMERA DIRECT] setting. RESTORE ALL : Restore defaults for all settings.
Setting /procedure	*1.* Select [RESTORE DEFFAULTS] and press the Menu/Select key. *2.* Select desired mode and press the Menu/Select key. *3.* [ARE YOU SURE?] is displayed. *4.* By pressing the Menu/Select key, initialization starts. By pressing the Cancel key without pressing the Menu/Select key, the start of initialization can be cancelled. *5.* The printer restarts and the hard disk is initialized. Once the initialization starts, it cannot be cancelled. • The default setting is RESTORE NETWORK. RESTORE NETWORK RESTORE PRINTER RESTORE ALL

List of reset items 1

Item				Reset Item			Initial Value	Ref. Page
				RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
PAPER MENU	PAPER SOURCE	DEFAULT TRAY		—	Reset	Reset	TRAY2	P.130
		TRAY1	PAPER SIZE	—	Reset	Reset	Letter/A4 *1	P.130
			CUSTOM SIZE	—	Reset	Reset	WIDTH: 8.5inches LENGTH: 11inches	P.131
				—	Reset	Reset	WIDTH:210mm LENGTH:297mm	
			PAPER TYPE	—	Reset	Reset	PLAIN PAPER	P.131
		TRAY2 *2	PAPER SIZE	—	Reset	Reset	Letter/A4 *1	P.132
			PAPER TYPE	—	Reset	Reset	PLAIN PAPER	P.132
		TRAY2 *3	PAPER SIZE	—	Reset	Reset	Letter/A4 *1	P.132
			CUSTOM SIZE	—	Reset	Reset	WIDTH: 8.5inches LENGTH: 11inches	P.133
				—	Reset	Reset	WIDTH:210mm LENGTH:297mm	
			PAPER TYPE	—	Reset	Reset	PLAIN PAPER	P.133
			SIZE SETTING	—	Reset	Reset	AUTO	P.133
		TRAY 3 to 4	PAPER TYPE	—	Reset	Reset	PLAIN PAPER	P.134
		TRAY CHAINING		—	Reset	Reset	ON	P.134
		DUPLEX		—	Reset	Reset	OFF	P.135
		COPIES		—	Reset	Reset	1	P.135
		COLLATE		—	Reset	Reset	OFF	P.136
		FINISHING		—	Reset	Reset	MAIN TRAY	P.136
		JOB SEPARATION		—	Reset	Reset	OFF	P.136
		IMAGE ROTATION		—	Reset	Reset	OFF	P.137

*1: Destination items. For details, see the page referenced.
*2: magicolor 5650EN/5670EN only
*3: magicolor 5670EN (MPC type) only

List of reset items 2

Item				Reset Item			Initial Value	Ref. Page
				RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
QUALITY MENU	COLOR MODE			—	Reset	Reset	COLOR	P.137
	BRIGHTNESS			—	Reset	Reset	0 %	P.137
	HALFTONE	IMAGE PRINTING		—	Reset	Reset	DETAIL	P.137
		TEXT PRINTING		—	Reset	Reset	LINE ART	P.138
		GRAPHICS PRINTING		—	Reset	Reset	DETAIL	P.138
	EDGE ENHANCEMENT	IMAGE PRINTING		—	Reset	Reset	OFF	P.138
		TEXT PRINTING		—	Reset	Reset	ON	P.138
		GRAPHICS PRINTING		—	Reset	Reset	ON	P.139
	EDGE STRENGTH			—	Reset	Reset	MIDDLE	P.139
	ECONOMY PRINT			—	Reset	Reset	OFF	P.139
	GLOSSY MODE			—	Reset	Reset	OFF	P.139
	PCL SETTING	CONTRAST		—	Reset	Reset	0 %	P.140
		IMAGE PRINTING	RGB SOURCE	—	Reset	Reset	sRGB	P.140
			RGB INTENT	—	Reset	Reset	PHOTO-GRAPHIC	P.140
			RGB GRAY	—	Reset	Reset	COMPOSITE BLACK	P.140
		TEXT PRINTING	RGB SOURCE	—	Reset	Reset	sRGB	P.141
			RGB INTENT	—	Reset	Reset	VIVID	P.141
			RGB GRAY	—	Reset	Reset	BLACK AND GRAY	P.141
		GRAPHICS PRINTING	RGB SOURCE	—	Reset	Reset	sRGB	P.141
			RGB INTENT	—	Reset	Reset	VIVID	P.142
			RGB GRAY	—	Reset	Reset	BLACK AND GRAY	P.142
	PS SETTING	IMAGE PRINTING	RGB SOURCE	—	Reset	Reset	sRGB	P.142
			RGB INTENT	—	Reset	Reset	PHOTO-GRAPHIC	P.142
			RGB GRAY	—	Reset	Reset	COMPOSITE BLACK	P.143
			DESTINATION PROF	—	Reset	Reset	AUTO	P.143

Item				Reset Item			Initial Value	Ref. Page
				RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
QUALITY MENU	PS SETTING	TEXT PRINTING	RGB SOURCE	—	Reset	Reset	sRGB	P.143
			RGB INTENT	—	Reset	Reset	VIVID	P.143
			RGB GRAY	—	Reset	Reset	BLACK AND GRAY	P.144
			DESTINA-TION PROF	—	Reset	Reset	AUTO	P.144
		GRAPHICS PRINTING	RGB SOURCE	—	Reset	Reset	sRGB	P.144
			RGB INTENT	—	Reset	Reset	VIVID	P.144
			RGB GRAY	—	Reset	Reset	BLACK AND GRAY	P.145
			DESTINA-TION PROF	—	Reset	Reset	AUTO	P.145
		SIMULA-TION	SIMULA-TION PROF	—	Reset	Reset	NONE	P.145
			SIMULA-TION INTENT	—	Reset	Reset	RELATIVE COLOR	P.145
			CMYK GRAY	—	Reset	Reset	COMPOSITE BLACK	P.146
	CALIBRA-TION	TONE CALIBRATION		—	Reset	Reset	ON	P.146
		CMYK DENSITY	CYAN	—	Reset	Reset	0	P.146
			MAGENTA	—	Reset	Reset	0	P.146
			YELLOW	—	Reset	Reset	0	P.147
			BLACK	—	Reset	Reset	0	P.147
	COLOR SEPARATION			—	Reset	Reset	OFF	P.147

List of reset items 3

Item			Reset Item			Initial Value	Ref. Page
			RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
MEMORY DIRECT	TYPE OF FILES		—	Reset	Reset	PDF	P.148
CAMERA DIRECT	PAPER SOURCE		—	Reset	Reset	TRAY2	P.148
	LAYOUT		—	Reset	Reset	1-UP	P.148
	PAPER MARGIN		—	Reset	Reset	STANDARD	P.148
	IMAGE QUALITY	BRIGHTNESS	—	Reset	Reset	0 %	P.149
		CONTRAST	—	Reset	Reset	0 %	P.149
		ECONOMY PRINT	—	Reset	Reset	OFF	P.149
		GLOSSY MODE	—	Reset	Reset	OFF	P.149
		RGB SOURCE	—	Reset	Reset	sRGB	P.149
		RGB INTENT	—	Reset	Reset	PHOTOGRAPHIC	P.150
		RGB GRAY	—	Reset	Reset	COMPOSITE BLACK	P.150
		HALFTONE	—	Reset	Reset	DETAIL	P.150

List of reset items 4

Item				Reset Item			Initial Value	Ref. Page
				RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
INTERFACE MENU	JOB TIMEOUT			—	Reset	Reset	15 seconds	P.151
	ETHERNET-TCP/IP	ENABLE		Reset	—	Reset	YES	P.151
		IP ADDRESS		Reset	—	Reset	000.000.000.000	P.151
		SUBNET MASK		Reset	—	Reset	000.000.000.000	P.152
		DEFAULT GATEWAY		Reset	—	Reset	000.000.000.000	P.152
		DHCP		Reset	—	Reset	ON	P.152
		BOOTP		Reset	—	Reset	OFF	P.152
		ARP/PING		Reset	—	Reset	OFF	P.153
		HTTP		Reset	—	Reset	YES	P.153
		FTP		Reset	—	Reset	YES	P.153
		TELNET		Reset	—	Reset	ENABLE	P.153
		BONJOUR		Reset	—	Reset	YES	P.154
		DYNAMIC DNS		Reset	—	Reset	NO	P.154
		IPP		Reset	—	Reset	YES	P.154
		RAW PORT	ENABLE	Reset	—	Reset	YES	P.154
			BIDIRECTIONAL	—	Reset	Reset	OFF	
		SLP		Reset	—	Reset	YES	P.155

Item				Reset Item			Initial Value	Ref. Page
				RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
INTER-FACE MENU	ETHER-NET-TCP/IP	SMTP		Reset	—	Reset	YES	P.155
		SNMP		Reset	—	Reset	YES	P.155
		WSD PRINT		Reset	—	Reset	YES	P.155
		IPSEC		Reset	—	Reset	NO	P.155
		IP ADDRESS FILTER	ACCESS PERMIS-SION	Reset	—	Reset	DISABLE	P.156
			ACCESS REFUSE	Reset	—	Reset	DISABLE	
		IPv6	ENABLE	Reset	—	Reset	YES	P.156
			AUTO SETTING	Reset	—	Reset	YES	
	NETWARE			Reset	—	Reset	NO	P.157
	APPLE TALK			Reset	—	Reset	YES	P.157
	SPEED/DUPLEX			Reset	—	Reset	AUTO	P.157
	IEEE802.1X			Reset	—	Reset	NO	P.157
	MEMORY DIRECT			—	Reset	Reset	ENABLE	P.158
	CAMERA DIRECT			Reset	—	Reset	ENABLE	P.158

List of reset items 5

Item				Reset Item			Initial Value	Ref. Page
				RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
SYS DEFAULT MENU	LANGUAGE			—	Reset	Reset	ENGLISH	P.158
	EMULA-TION	DEF. EMULATION		—	Reset	Reset	AUTO	P.158
		POST-SCRIPT	WAIT TIM-EOUT	—	Reset	Reset	0	P.158
			PS ERROR PAGE	—	Reset	Reset	OFF	P.159
			PS PRO-TOCOL	—	Reset	Reset	AUTO	P.159
		PCL	CR/LF MAPPING	—	Reset	Reset	CR=CR LF=LF	P.159
			LINES PER PAGE	—	Reset	Reset	60	P.159
			FONT SOURCE/ FONT NUMBER	—	Reset	Reset	0	P.160
			FONT SOURCE/ PITCH SIZE	—	Reset	Reset	10.00	P.160
			FONT SOURCE/ SYMBOL SET	—	Reset	Reset	PC8	P.160

Item				Reset Item			Initial Value	Ref. Page
				RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
SYS DEFAULT MENU	EMULATION	XPS	DIGITAL SIGNATURE	—	Reset	Reset	DISABLE	P.161
			XPS ERROR PAGE	—	Reset	Reset	ON	P.161
	PAPER	DEFAULT PAPER	PAPER SIZE	—	Reset	Reset	LETTER	P.161
			CUSTOM SIZE/ WIDTH	—	Reset	Reset	8.5 inches	P.162
			CUSTOM SIZE/ LENGTH	—	Reset	Reset	11.00 inches	
			PAPER TYPE	—	Reset	Reset	PLAIN PAPER	P.162
		UNIT OF MEASURE		—	Reset	Reset	INCHES	P.162
	STARTUP OPTIONS	DO STARTUP PAGE		—	Reset	Reset	OFF	P.163
	AUTO CONTINUE			—	Reset	Reset	OFF	P.163
	HOLD JOB TIMEOUT			—	Reset	Reset	DISABLE	P.163
	ENERGY SAVER			—	Reset	Reset	ON	P.164
	ENERGY SAVER TIME			—	Reset	Reset	15 minutes	P.164
	MENU TIMEOUT			—	Reset	Reset	2 minutes	P.164
	LCD CONTRAST			—	Reset	Reset	0	P.164
	SECURITY	CHANGE PASSWORD		—	Reset	Reset	0000	P.165
		LOCK PANEL		—	Reset	Reset	OFF	P.165
	ENABLE WARNING	PAPER EMPTY	TRAY 1	—	Reset	Reset	OFF	P.176
			TRAY 2	—	Reset	Reset	ON	
			TRAY 3	—	Reset	Reset	ON	
			TRAY 4	—	Reset	Reset	ON	
		TONER LOW		—	Reset	Reset	ON	P.177
		I-UNIT LOW		—	Reset	Reset	ON	P.177

List of reset items 6

Item		Reset Item			Initial Value	Ref. Page
		RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
PageScope Web Connection	Admin Password	—	Reset	Reset	administrator	—
	Refresh Rate	—	Reset	Reset	30 sec.	—
	Contact Name	—	Reset	Reset	KONICA MINOLTA Customer Support	—
	Contact Information	—	Reset	Reset	http://printer.konicaminolta.com/	—
	Contact Utility Link	—	Reset	Reset	http://pagescope.com/	—
	Corporate URL	—	Reset	Reset	http://printer.konicaminolta.com/	—
	Supplies and Accessories	—	Reset	Reset	http://www.q-shop.com/	—
	Product Help URL	—	Reset	Reset	http://printer.konicaminolta.com/	—
	Auto IP	Reset	—	Reset	DHCP	—
	WINS/NetBIOS Resolution	Reset	—	Reset	Checked	—
	** NetBIOS Name	Reset	—	Reset	MC56XX-XXXXXX	—
	Domain/Workgroup	Reset	—	Reset	WORKGROUP	—
	Use DHCP	Reset	—	Reset	Checked	—
	IPP Config Printer Name	Reset	—	Reset	Blank	—
	IPP Config Printer Location	Reset	—	Reset	Blank	—

*: Destination items. For details, see the page referenced.

**: XXXXXX are the final 6 digits of the printer's MAC address.

9.9.17 ENABLE WARNING

A. PAPER EMPTY

(1) TRAY1

Function	• Specifies whether a [TRAY 1 Paper Empty] (manual feed tray) is displayed as a normal message when it is empty.
Use	• To specify whether to display a [TRAY 1 Paper Empty] message as a normal message. ON : Paper empty message is displayed on normal message when tray is empty. OFF : Paper empty message is not displayed on normal message when tray is empty.
Setting /procedure	• The default setting is OFF. “OFF” ON

(2) TRAY2

Function	• Specifies whether a [TRAY 2 Paper Empty] is displayed as a normal message when it is empty.
Use	• To specify whether to display a [TRAY 2 Paper Empty] message as a normal message. ON : Paper empty message is displayed on normal message when tray is empty. OFF : Paper empty message is not displayed on normal message when tray is empty.
Setting /procedure	• The default setting is ON. OFF “ON”

(3) TRAY3

Function	• Specifies whether a [TRAY 3 Paper Empty] is displayed as a normal message when it is empty.
Use	• To specify whether to display a [TRAY 3 Paper Empty] message as a normal message. ON : Paper empty message is displayed on normal message when tray is empty. OFF : Paper empty message is not displayed on normal message when tray is empty.
Setting /procedure	• The default setting is ON. OFF “ON” **NOTE** • **This menu is available only when an optional lower feeder unit is installed.**

(4) TRAY4

Function	• Specifies whether a [TRAY 4 Paper Empty] is displayed as a normal message when it is empty.
Use	• To specify whether to display a [TRAY 4 Paper Empty] message as a normal message. ON : Paper empty message is displayed on normal message when tray is empty. OFF : Paper empty message is not displayed on normal message when tray is empty.
Setting /procedure	• The default setting is ON. OFF “ON” **NOTE** **• This menu is available only when an optional lower feeder unit is installed.**

B. TONER LOW

Function	• Specifies whether or not a warning appears when the toner is about to run out.
Use	
Setting /procedure	• The default setting is ON. “ON” OFF

C. I-UNIT LOW

Function	• Specifies whether or not a warning appears when the imaging unit is about to reach the end of its service life.
Use	
Setting /procedure	• The default setting is ON. “ON” OFF

9.10 MAINTENANCE MENU

9.10.1 How to enter the MAINTENANCE MENU

A. Procedure

1. Display [MAINTENANCE MENU] on the menu screen and press the Menu/Select key.
2. [ENTER PASSWORD] message is displayed.
3. Set the first digit of user password with the up key▲/down key▼ and press the right key▶.
4. Repeat the above procedures to set up to fourth digit of password.
   (The initial setting for user password is [0000].)
5. Press the Menu/Select key.

B. Exiting

- Press the Cancel key.

9.10.2 PRINT MENU

A. EVENT LOG

Function	• Prints the event log.
Use	• To check the jams/troubles that occurred, and history of replacing the consumables, etc. The items that can be checked are as follows. Paper Jam Error : The number of jams occurred and its history Engine Fatal Error : The history of troubles which caused 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 imaging unit Trouble Counter : Troubles counted at each section
Setting /procedure	1. Select [EVENT LOG] and press the Menu/Select key. 2. Select [PRINT] and press the Menu/Select key.

B. HALFTONE 64

Function	• Prints the halftone pattern with 25 % level for CMYK respectively.
Use	• To check the unevenness of the density and the pitch.
Setting /procedure	1. Set the A4S or letterS media on the tray. 2. Select [HALFTONE 64] and press the Menu/Select key. 3. Select desired color with the up key▲/down key▼ and press the Menu/Select key. 4. Select [PRINT] and press the Menu/Select key.

C. HALFTONE 128

Function	• Prints the halftone pattern with 50 % level for CMYK respectively.
Use	• To check the unevenness of the density and the pitch.
Setting /procedure	1. Set the A4S or letterS media on the tray. 2. Select [HALFTONE 128] and press the Menu/Select key. 3. Select desired color with the up key▲/down key▼ and press the Menu/Select key. 4. Select [PRINT] and press the Menu/Select key.

D. HALFTONE 256

Function	• Prints the halftone pattern with 100 % level for CMYK respectively.
Use	• To check the unevenness of the density and the pitch.
Setting /procedure	*1.* Set the A4S or letterS media on the tray. *2.* Select [HALFTONE 256] and press the Menu/Select key. *3.* Select desired color with the up key▲/down key▼ and press the Menu/Select key. *4.* Select [PRINT] and press the Menu/Select key.

E. GRADATION

Function	• Prints the gradation pattern.
Use	• To check the gradation reproductively.
Setting /procedure	*1.* Set the A4S or letterS media on the tray. *2.* Select [GRADATION] and press the Menu/Select key. *3.* Select [PRINT] and press the Menu/Select key.

9.10.3 ALIGNMENT

A. TOP ADJUSTMENT

Function	• Adjusts the top margin of media for single-sided printing.
Use	• To correct a misaligned print image. PLAIN PAPER : Adjust the head margin of plain paper. THICK : Adjust the head margin of thick paper. ENVELOPE : Adjust the head margin of envelope. TRANSPARENCY: Adjust the head margin of transparency.
Setting /procedure	*1.* Select [TOP ADJUSTMENT] and press the Menu/Select key. *2.* Select desired media type and press the Menu/Select key. *3.* Select desired adjustment amount with the up key▲/down key▼ and press the Menu/Select key. -15 to +15 (1 step: 0.2 mm)

B. LEFT ADJUSTMENT

Function	• Adjusts the left margin of media for single-sided printing.
Use	• To correct a misaligned print image. LEFT ADJ TRAY 1: Adjust the left margin of media fed from tray 1 (manual tray.) LEFT ADJ TRAY 2: Adjust the left margin of media fed from tray 2. LEFT ADJ TRAY 3: Adjust the left margin of media fed from tray 3. LEFT ADJ TRAY 4: Adjust the left margin of media fed from tray 4.
Setting /procedure	*1.* Select [LEFT ADJUSTMENT] and press the Menu/Select key. *2.* Select desired tray and press the Menu/Select key. *3.* Select desired adjustment amount with the up key▲/down key▼ and press the Menu/Select key. -15 to +15 (1 step: 0.2 mm)

C. LEFT ADJ DUPLEX

Function	• Adjusts the left margin of media for double-sided printing.
Use	• To correct a misaligned print image. LEFT ADJ TRAY 1: Adjust the left margin of duplex print media fed from tray 1 (manual tray.) LEFT ADJ TRAY 2: Adjust the left margin of duplex print media fed from tray 2. LEFT ADJ TRAY 3: Adjust the left margin of duplex print media fed from tray 3. LEFT ADJ TRAY 4: Adjust the left margin of duplex print media fed from tray 4.
Setting /procedure	*1.* Select [LEFT ADJ DUPLEX] and press the Menu/Select key. *2.* Select desired tray and press the Menu/Select key. *3.* Select desired adjustment amount with the up key▲/down key▼ and press the Menu/Select key. -15 to +15 (1 step: 0.2 mm)

D. TRANSFER POWER

(1) SIMPLEX PASS

Functions	• Adjust the 2nd image transfer output (ATVC) on the single-sided pages for each media type.
Use	• To use when the transfer failure at the trailing edge occurs.
Adjustment Range	• The default setting is 0. -8 to +7
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.
Setting/ Procedure	*1.* Select [TRANSFER POWER] and press the Menu/Select key. *2.* Select [SIMPLEX PASS] and press the Menu/Select key. *3.* Select desired media type with theup key▲/down key▼ and press the Menu/Select key. *4.* Select desired setting value with the up key▲/down key▼ and press the Menu/ Select key.

(2) DUPLEX PASS

Functions	• Adjust the 2nd image transfer output (ATVC) on the duplexed pages for each media type.
Use	• To use when the transfer failure at the trailing edge occurs.
Adjustment Range	• The default setting is 0. -8 to +7
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.
Setting/ Procedure	*1.* Select [TRANSFER POWER] and press the Menu/Select key. *2.* Select [DUPLEX PASS] and press the Menu/Select key. *3.* Select desired media type with the up key▲/down key▼ and press the Menu/Select key. *4.* Select desired setting value with the up key▲/down key▼ and press the Menu/ Select key.

(3) MANUAL DUPLEX

Functions	• Adjust the 2nd image transfer output (ATVC) on the manual duplexed pages for each media type.
Use	• To use when the transfer failure at the trailing edge occurs.
Adjustment Range	• The default setting is 0. -8 to +7
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.
Setting/ Procedure	*1.* Select [TRANSFER POWER] and press the Menu/Select key. *2.* Select [MANUAL DUPLEX] and press the Menu/Select key. *3.* Select desired media type with the up key▲/down key▼ and press the Menu/Select key. *4.* Select desired setting value with the up key▲/down key▼ and press the Menu/Select key.

E. IMG ADJ THICK

Functions	• To fine-adjust density of printed images of each color for thick paper and OHP transparencies.
Use	• To change the density of the printed image for each color with thick paper and OHP transparencies.
Adjustment Range	• The default setting is 0. -5 to +5
Adjustment Instructions	Light color: increase the setting value Dark color: decrease the setting value
Setting/ Procedure	*1.* Select [IMG ADJ THICK] and press the Menu/Select key. *2.* Select desired color with the up key▲/down key▼ and press the Menu/Select key. *3.* Select desired setting value with the up key▲/down key▼ and press the Menu/Select key.

F. IMG ADJ BLACK

Functions	• To fine-adjust the density of the printed image for a black printing.
Use	• To vary the density of the printed image of a black printing.
Adjustment Range	• The default setting is 0. -2 to +2
Adjustment Instructions	If the black is light, increase the setting value. If the black is dark, decrease the setting value.
Setting/ Procedure	*1.* Select [IMG ADJ BLACK] and press the Menu/Select key. *2.* Select desired setting value with the up key▲/down key▼ and press the Menu/Select key.

9.10.4 SUPPLIES

A. REPLACE

(1) TRANS. BELT

Function	• Resets the transfer belt counter.
Use	• To use when the transfer belt has been replaced.
Setting /procedure	*1.* Select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [TRANS. BELT] and select YES. *2.* Press the menu/select key and reset the counter.

(2) TRANS. ROLLER

Function	• Resets the transfer roller counter.
Use	• To use when the transfer roller has been replaced.
Setting /procedure	*1.* Select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [TRANS Roller] and select YES. *2.* Press the menu/select key and reset the counter.

(3) FUSER UNIT

Function	• Resets the fuser unit counter.
Use	• To use when the fuser unit has been replaced.
Setting /procedure	*1.* Select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [FUSER UNIT] and select YES. *2.* Press the Menu/select key and reset the counter.

9.10.5 QUICK SETTING

A. UPDATE SETTING

Function	• To update printer settings according to the printer setting definition file stored in the USB memory device.
Use	• Printer definition files are saved according to various setting patterns and a pattern the most appropriate for a specific need can be selected promptly.
Setting /procedure	*1.* Set the USB memory device. *2.* Call the MAINTENANCE MENU screen to the display. *3.* Select [QUICK SETTING] → [UPDATE SETTING]. *4.* The “/setup/*.ini” files in the USB memory device appear on the display. **NOTE** • **The directory name (setup) and file extension (*.ini) are fixed. The definition file with any other name or file extension is not recognized.** • **Up to 20 files can be displayed.** *5.* Using the up key▲/down key▼, select the definition file to be updated and press the Menu/Select key. *6.* Select [EXECUTE] and press the Menu/Select key. *7.* The selected definition file is loaded and the settings are updated. The message “PROCESSING” appears during the updating procedure. *8.* When the updating procedure is completed, the printer gives a message notifying that the procedure is completed. **NOTE** • **The printer is automatically restarted, if an item that calls for a restart of the printer is included in the updated items.**

B. BACKUP SETTING

Function	• To store, as a definition file, the current printer setting information in the USB memory device.
Use	• Printer definition files are saved according to various setting patterns and a pattern the most appropriate for a specific need can be selected promptly.
Setting /procedure	*1.* Set the USB memory device. *2.* Call the MAINTENANCE MENU screen to the display. *3.* Select [QUICK SETTING] → [BACKUP SETTING]. *4.* Select [EXECUTE] and press the Menu/Select key. *5.* The definition file with a file name of “SETUP**.ini” is saved in the “/setup” folder of the USB memory device. The message “PROCESSING” appears while the definition file is being saved. **NOTE** **• Any number from 01 to 20 takes the place of “ ** ” in the file name.** **• Up to 20 definition files can be saved.** **If the USB memory device already contains 20 files, the maximum number of files saved is exceeded and any new file cannot be saved.** *6.* When the saving procedure is completed, the printer gives a message notifying that the procedure is completed.

10. Adjustment item list

Adjustment/setting Items			Replacement part/Service job	No	Change media type (tray 2)	Install lower feeder unit	Install duplex option	Replace transfer roller	Replace transfer belt	Replace fuser unit	Replace PH unit	Replace print control board	Replace MFP board	RESTORE DEFAULTS	Execute F/W update
MENU	QUALITY MENU	CALIBRATION	AIDC PROCESS	1				(2)	(2)	(2)					
	SERVICE MENU	FIRMWARE VERSION	CONTROLLER F/W	2									(2)		❍
			ENGINE F/W	3								(3)			❍
			BOOT F/W	4											❍
		ALIGNMENT	TOP ADJUSTMENT	5	❍	❍					(1)				
			LEFT ADJUSTMENT	6		❍					(2)				
			LEFT ADJ DUPLEX	7			❍								
		SUPPLIES	TRANS. BELT	8					(1)						
			TRANS. ROLLER	9				(1)							
			FUSER UNIT	10						(1)					
Re-entry				11										❍	
F/W update				12								(2)	(1)		
Remounting of parameter chip (PRCB)				13								(1)			

* This table shows the adjustment items that are required when a part of the machine has been replaced. Priority order, if applicable, during the adjustment procedures is indicated by the corresponding number.

11. SERVICE MENU

11.1 How to enter the service menu

NOTE

- **Make sure not to reveal the password of the service menu to any unauthorized person.**

A. Procedure 1

1. Display [SERVICE MENU] on the menu screen and press the Menu/Select key.
2. [ENTER PASSWORD] message is displayed.
3. Set first digit of password with the up key▲/down key▼ and press the right key▶.
4. Repeat the above procedures to set up to seventh digit of password.
   Enter “KMM5650” or “KMM5670” for service password.

NOTE

- **The service password needs to correspond to the product name.**

5. Press the Menu/Select key.

B. Procedure 2

1. Turn the power switch ON while pressing the up key▲ and the Menu/Select key at the power switch OFF.

NOTE

- **Continue to press the up key▲ and the Menu/Select key until “INITIALIZING” message appears on the control panel.**

2. When initializing is complete, the service menu appears.

NOTE

- **Password authentication is not required before starting to operate the service menu, however, once the service menu is closed, you need to enter the password to display the service menu again.**

C. Procedure 3

- If a service call message is on the display, perform the following steps, since the ordinary procedure may not be good for entering the service menu.

1. With the service call message on the display, hold down the Menu/Select key for 5 sec. or more.
2. Set first digit of password with the up key▲/down key▼ and press the right key▶.
3. Repeat the above procedures to set up to seventh digit of password.
   Enter “KMM5650” or “KMM5670” for service password.

Only the following menu items are, however, available if the service menu is accessed through the above steps.

- SERIAL NUMBER
- FIRMWARE VERSION
- RESTORE PASSWORD
- BK CLEAR
- FIRMWARE UPDATE
- SOFT SWITCH

D. Exiting

- Press the Cancel key.

11.2 Service menu function tree

SERVICE MENU			Ref. Page
SERIAL NUMBER			P.187
FIRMWARE VERSION	CONTROLLER F/W		P.187
	ENGINE F/W		
	FINISHER F/W *1		
	BOOT F/W		
ALIGNMENT	TOP ADJUSTMENT		P.187
	LEFT ADJUSTMENT		P.187
	LEFT ADJ DUPLEX		P.188
	TRANSFER POWER	SIMPLEX PASS	P.188
		DUPLEX PASS	P.188
		MANUAL DUPLEX	P.189
	IMG ADJ THICK		P.189
	IMG ADJ BLACK		P.189
	IMAGE ADJ PARAM		P.190
	MAXIMUM DENSITY		P.190
	FUSER CONTROL		P.190
	AIDC MODE		P.191
PRINT MENU	MAINTENANCE INFO		P.191
	EVENT LOG		P.193
	CONFIGURATION PG		P.193
	HALFTONE 64		P.194
	HALFTONE 128		P.194
	HALFTONE 256		P.194
	GRADATION		P.194
SUPLLIES	REPLACE	TRANS. BELT	P.194
		TRANS. ROLLER	P.195
		FUSER UNIT	P.195
RESTORE PASSWORD			P.195
BK CLEAR			P.195
QUICK SETTING *2	UPDATE SETTING		P.196
	BACKUP SETTING		P.196
FIRMWARE UPDATE *2			P.197
SOFT SWITCH	SOFT SWITCH 1		P.197
	SOFT SWITCH 2		
	SOFT SWITCH 3		
	SOFT SWITCH 4		

*1: It will be displayed only when the optional staple finisher is mounted.
*2: It will be displayed only when a USB memory device is mounted.

11.3 SERVICE MENU

11.3.1 SERIAL NUMBER

Function	• Displays the serial number of the printer.
Use	• To confirm the printer's serial number.
Setting /procedure	*1.* Select [SERVICE MENU] and press the Menu/Select key. *2.* Select [SERIAL NUMBER] and press the Menu/Select key. *3.* The serial number of the printer is displayed.

11.3.2 FIRMWARE VERSION

Function	• Displays the version number of the printer firmware.
Use	• To use when the firmware is updated. • To confirm the version number of the printer firmware. CONTROLLER F/W: Firmware of controller ENGINE F/W : Firmware of engine FINISHER F/W : Firmware of finisher (only when the optional staple finisher is mounted.) BOOT/F/W : Boot firmware
Setting /procedure	*1.* Select [FIRMWARE VERSION] and press the Menu/Select key. *2.* Select desired firmware and press the Menu/Select key. *3.* Version number of firmware is displayed.

11.3.3 ALIGNMENT

A. TOP ADJUSTMENT

Function	• Adjusts the top margin of media for single-sided printing.
Use	• To correct a misaligned print image. PLAIN PAPER : Adjust the head margin of plain paper. THICK : Adjust the head margin of thick paper. ENVELOPE : Adjust the head margin of envelope. TRANSPARENCY: Adjust the head margin of transparency.
Setting /procedure	*1.* Select [TOP ADJUSTMENT] and press the Menu/Select key. *2.* Select desired paper type and press the Menu/Select key. *3.* Select desired adjustment amount with the up key▲/down key▼ and press the Menu/Select key. -15 to +15 (1 step: 0.2 mm)

B. LEFT ADJUSTMENT

Function	• Adjusts the left margin of media for single-sided printing.
Use	• To correct a misaligned print image. LEFT ADJ TRAY 1: Adjust the left margin of media fed from tray 1 (manual tray.) LEFT ADJ TRAY 2: Adjust the left margin of media fed from tray 2. LEFT ADJ TRAY 3: Adjust the left margin of media fed from tray 3. LEFT ADJ TRAY 4: Adjust the left margin of media fed from tray 4.
Setting /procedure	*1.* Select [LEFT ADJUSTMENT] and press the Menu/Select key. *2.* Select desired tray and press the Menu/Select key. *3.* Select desired adjustment amount with the up key▲/down key▼ and press the Menu/Select key. -15 to +15 (1 step: 0.2 mm)

C. LEFT ADJ DUPLEX

Function	• Adjusts the left margin of media for double-sided printing.
Use	• To correct a misaligned print image. LEFT ADJ TRAY 1: Adjust the left margin of duplex print media fed from tray 1 (manual tray.) LEFT ADJ TRAY 2: Adjust the left margin of duplex print media fed from tray 2. LEFT ADJ TRAY 3: Adjust the left margin of duplex print media fed from tray 3. LEFT ADJ TRAY 4: Adjust the left margin of duplex print media fed from tray 4.
Setting /procedure	*1.* Select [LEFT ADJ DUPLEX] and press the Menu/Select key. *2.* Select desired tray and press the Menu/Select key. *3.* Select desired adjustment amount with the up key▲/down key▼ and press the Menu/Select key. -15 to +15 (1 step: 0.2 mm)

D. TRANSFER POWER

(1) SIMPLEX PASS

Functions	• Adjust the 2nd image transfer output (ATVC) on the single-sided pages for each media type.
Use	• To use when the transfer failure at the trailing edge occurs.
Adjustment Range	• The default setting is “0.” -8 to +7
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.
Setting/ Procedure	*1.* Select [TRANSFER POWER] and press the Menu/Select key. *2.* Select [SIMPLEX PASS] and press the Menu/Select key. *3.* Select desired media type with the up key▲/down key▼ and press the Menu/Select key. *4.* Select desired setting value with the up key▲/down key▼ and press the Menu/ Select key.

(2) DUPLEX PASS

Functions	• Adjust the 2nd image transfer output (ATVC) on the duplexed pages for each media type.
Use	• To use when the transfer failure at the trailing edge occurs.
Adjustment Range	• The default setting is “0.” -8 to +7
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.
Setting/ Procedure	*1.* Select [TRANSFER POWER] and press the Menu/Select key. *2.* Select [DUPLEX PASS] and press the Menu/Select key. *3.* Select desired media type with the up key▲/down key▼ and press the Menu/Select key. *4.* Select desired setting value with the up key▲/down key▼ and press the Menu/ Select key.

(3) MANUAL DUPLEX

Functions	• Adjust the 2nd image transfer output (ATVC) on the manual duplexed pages for each media type.
Use	• To use when the transfer failure at the trailing edge occurs.
Adjustment Range	• The default setting is 0. -8 to +7
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.
Setting/ Procedure	*1.* Select [TRANSFER POWER] and press the Menu/Select key. *2.* Select [MANUAL DUPLEX] and press the Menu/Select key. *3.* Select desired media type with the up key▲/down key▼ and press the Menu/Select key. *4.* Select desired setting value with the up key▲/down key▼ and press the Menu/ Select key.

E. IMG ADJ THICK

Functions	• To fine-adjust density of printed images of each color for thick paper and OHP transparencies.
Use	• To change the density of the printed image for each color with thick paper and OHP transparencies.
Adjustment Range	• The default setting is 0. -5 to +5
Adjustment Instructions	Light color: increase the setting value Dark color: decrease the setting value
Setting/ Procedure	*1.* Select [IMG ADJ THICK] and press the Menu/Select key. *2.* Select desired color with the up key▲/down key▼ and press the Menu/Select key. *3.* Select desired setting value with the up key▲/down key▼ and press the Menu/ Select key.

F. IMG ADJ BLACK

Functions	• To fine-adjust the density of the printed image for a black printing.
Use	• To vary the density of the printed image of a black printing.
Adjustment Range	• The default setting is 0. -2 to +2
Adjustment Instructions	If the black is light, increase the setting value. If the black is dark, decrease the setting value.
Setting/ Procedure	*1.* Select [IMG ADJ BLACK] and press the Menu/Select key. *2.* Select desired setting value with the up key▲/down key▼ and press the Menu/ Select key.

G. IMAGE ADJ PARAM

Function	• Adjusts the printer in case of an image quality problem (uneven density)
Use	• To correct image quality problems (uneven density) due to the printer being operated at a high altitude.
Setting /procedure	• The default setting is 0. “0” 1 **NOTE** • **When the setting has been changed, be sure to run a CALIBRATION/AIDC process.** See P.146

H. MAXIMUM DENSITY

Functions	• To adjust gradation, color, and image density to target reproduction levels by varying the maximum amount of toner sticking to media through auxiliary manual fine-adjustment of gamma of each color after gradation adjust.
Use	• An image quality problem is not corrected even after gradation adjust has been run.
Adjustment Range	-10 to +10
Adjustment Instructions	To increase the maximum amount of toner sticking, increase the setting value. To decrease the maximum amount of toner sticking, decrease the setting value.
Setting/ Procedure	*1.* Select [MAXIMUM DENSITY] and press the Menu/Select key. *2.* Select desired color with the up key▲/down key▼ and press the Menu/Select key. *3.* Select desired setting value with the up key▲/down key▼ and press the Menu/ Select key. **NOTE** • **When the setting has been changed, be sure to run a CALIBRATION/AIDC process.** See P.146

I. FUSER CONTROL

Function	• Sets the heater lamp lighting control so that it implements the flicker standards.
Use	• 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.”)
Setting /procedure	• The default setting is “0.” 0 to 3

J. AIDC MODE

Function	• Sets the frequency of image stabilization that is performed when the main power switch is turned ON or the machine returns from sleep mode.
Use	• 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)
Setting /procedure	• The default setting is MODE1. “MODE1” MODE2

11.3.4 DIAGNOSIS MENU

A. PRINT MENU

(1) MAINTENANCE INFO

Functions	• To produce an output of a list of setting values, adjustment values, total counter values, and others.
Use	• To check the maintenance information. The items which can be checked are as follows. Device 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
Setting/ Procedure	*1.* Select [MAINTENANCE INFO] and press the Menu/Select key. *2.* Select [PRINT] and press the Menu/Select key.

PROCESS CAUTION INFORMATION 1

BIT	Item	Description	
0	—	—	
1	—	—	
2	—	—	
3	—	—	
4	—	—	
5	IDC Sensor (Front) failure	1	• IDC sensor output values are out of the specified range.
		0	• Front door open/close, power switch OFF/ON, and normal image stabilization are complete besides the ones listed above.
6	—	—	
7	—	—	
8	—	—	
9	—	—	
10	IDC Sensor (Back) failure	1	• IDC sensor output values are out of the specified range.
		0	• Front door open/close, power switch OFF/ON, and normal image stabilization are complete besides the ones listed above.

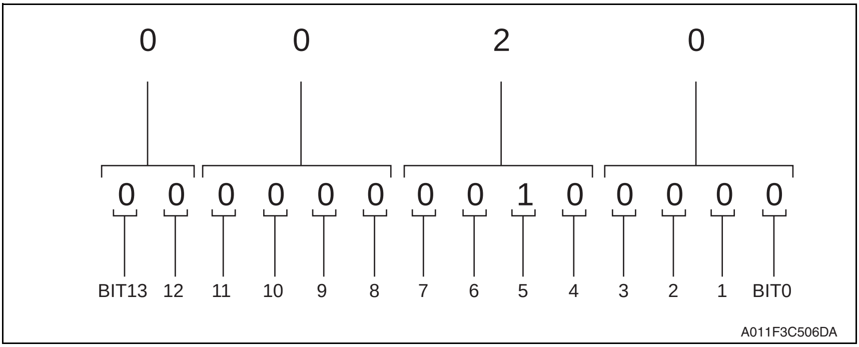
BIT	Item	Description	
11	Color Shift Test Pattern failure	1	• The number of points detected in the main scan direction is more or less than the specified value during main scan direction registration correction. • The number of points detected in the sub scan direction is more or less than the specified value during sub scan direction registration correction.
		0	• Front door open/close, power switch OFF/ON, and normal image stabilization are complete besides the ones listed above.
12	Color Shift Adjust failure	1	• 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	• Front door open/close, power switch OFF/ON, and normal image stabilization are complete besides the ones listed above.
13	—	—	

<How to read process caution information>

- Convert the numerical value of the hexadecimal number printed on “PROCESS CAUTION INFORMATION 1 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.

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



3. In this case, BIT No. “5” corresponds to “1”. From the “PROCESS CAUTION INFORMATION 1”, IDC sensor (front) malfunction can be detected.

Conversion method from hexadecimal number to binary number

1. 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

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

(2) EVENT LOG

Functions	• To print the EVENT LOG.
Use	• 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 imaging unit Trouble Counter : Trouble counting for each section
Setting/ Procedure	*1.* Select [EVENT LOG] and press the Menu/Select key. *2.* Select [PRINT] and press the Menu/Select key.

(3) CONFIGURATION PG

Functions	• Prints the information concerning the Configuration.
Use	• To check the adjustment values set by the Maintenance Menu and Service Menu. The items which can be checked are as follows. TOP ADJUSTMENT LEFT ADJUSTMENT LEFT ADJ DUPLEX TRANSFER POWER IMG ADJ THICK IMG ADJ BLACK IMAGE ADJ PARAM MAXIMUM DENSITY FUSER CONTROL
Setting/ Procedure	*1.* Select [CONFIGURATION PG] and press the Menu/Select key. *2.* Select [PRINT] and press the Menu/Select key.

(4) HALF TONE 64

Functions	• Prints the halftone pattern with 25 % level for CMYK respectively.
Use	• To check the unevenness of the density and the pitch.
Setting/ Procedure	*1.* Set the A4S or letterS media on the tray. *2.* Select [HALF TONE 64] and press the Menu/Select key. *3.* Select desired color with the up key▲/down key▼ and press the Menu/Select key. *4.* Select [PRINT] and press the Menu/Select key.

(5) HALF TONE 128

Functions	• Prints the halftone pattern with 50 % level for CMYK respectively.
Use	• To check the unevenness of the density and the pitch.
Setting/ Procedure	*1.* Set the A4S or letterS media on the tray. *2.* Select [HALF TONE 128] and press the Menu/Select key. *3.* Select desired color with the up key▲/down key▼ and press the Menu/Select key. *4.* Select [PRINT] and press the Menu/Select key.

(6) HALF TONE 256

Functions	• Prints the halftone pattern with 100 % level for CMYK respectively.
Use	• To check the unevenness of the density and the pitch.
Setting/ Procedure	*1.* Set the A4S or letterS media on the tray. *2.* Select [HALF TONE 256] and press the Menu/Select key. *3.* Select desired color with the up key▲/down key▼ and press the Menu/Select key. *4.* Select [PRINT] and press the Menu/Select key.

(7) GRADATION

Functions	• Prints the gradation pattern.
Use	• To check the gradation reproductively.
Setting/ Procedure	*1.* Set the A4S or letterS media on the tray. *2.* Select [GRADATION] and press the Menu/Select key. *3.* Select [PRINT] and press the Menu/Select key.

11.3.5 SUPPLIES

A. REPLACE

(1) TRANS. BELT

Function	• Resets the transfer belt counter.
Use	• To use when the transfer belt has been replaced.
Setting /procedure	*1.* Call the service menu to the screen. *2.* Select [SUPPLIES] → [REPLACE] → [TRANS. BELT], and select “YES.” *3.* Press the menu/select key and reset the counter.

(2) TRANS. ROLLER

Function	• Resets the transfer roller counter.
Use	• To use when the transfer roller has been replaced.
Setting /procedure	*1.* Call the service menu to the screen. *2.* Select [SUPPLIES] → [REPLACE] → [TRANS. ROLLER], and select “YES.” *3.* Press the menu/select key and reset the counter.

(3) FUSER UNIT

Function	• Resets the fuser unit counter.
Use	• To use when the fuser unit has been replaced.
Setting /procedure	*1.* Call the service menu to the screen. *2.* Select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [FUSER UNIT], and select “YES.” *3.* Press the menu/select key and reset the counter.

11.3.6 RESTORE PASSWARD

Function	• Reinitializes the user password used for the “INTERFACE MENU / SYSTEM DEFAULT MENU / MAINTENANCE MENU” set by user.
Use	• To reinitialize the user password when the menu cannot be opened even when entering the correct password. • To reinitialize the user password when the user forgets the password. YES : Initialize password NO : Not initialize password
Setting /procedure	*1.* Select “RESTORE PASSWORD” and press the Menu/Select key. *2.* Select “YES” and press the Menu/Select key. *3.* Return the password set at “INTERFACE MENU/SYSTEM DEFAULT MENU/MAINTENANCE MENU” to “0000.” • The default setting is NO. YES “NO”

11.3.7 BK CLEAR

Function	• To clear engine information backup data
Use	• Use when the engine information backup data is cleared. YES: Executes data clear NO: Does not execute data clear
Setting /procedure	• The default setting is NO. YES “NO”

11.3.8 QUICK SETTING

A. UPDATE SETTING

Function	• To update printer settings according to the printer setting definition file stored in the USB memory device.
Use	• Printer definition files are saved according to various setting patterns and a pattern the most appropriate for a specific need can be selected promptly.
Setting /procedure	*1.* Set the USB memory device. *2.* Call the SERVICE MENU screen to the display. *3.* Select [QUICK SETTING] → [UPDATE SETTING]. *4.* The "/setup/*.ini" files in the USB memory device appear on the display. **NOTE** • **The directory name (setup) and file extension (*.ini) are fixed. The definition file with any other name or file extension is not recognized.** • **Up to 20 files can be displayed.** *5.* Using the up key▲/down key▼, select the definition file to be updated and press the Menu/Select key. *6.* Select [EXECUTE] and press the Menu/Select key. *7.* The selected definition file is loaded and the settings are updated. The message "PROCESSING" appears during the updating procedure. *8.* When the updating procedure is completed, the printer gives a message notifying that the procedure is completed. **NOTE** • **The printer is automatically restarted, if an item that calls for a restart of the printer is included in the updated items.**

B. BACKUP SETTING

Function	• To store, as a definition file, the current printer setting information in the USB memory device.
Use	• Printer definition files are saved according to various setting patterns and a pattern the most appropriate for a specific need can be selected promptly.
Setting /procedure	*1.* Set the USB memory device. *2.* Call the SERVICE MENU screen to the display. *3.* Select [QUICK SETTING] → [BACKUP SETTING]. *4.* Select [EXECUTE] and press the Menu/Select key. *5.* The definition file with a file name of "SETUP**.ini" is saved in the "/setup" folder of the USB memory device. The message "PROCESSING" appears while the definition file is being saved. **NOTE** • **Any number from 01 to 20 takes the place of " ** " in the file name.** • **Up to 20 definition files can be saved. If the USB memory device already contains 20 files, the maximum number of files saved is exceeded and any new file cannot be saved.** *6.* When the saving procedure is completed, the printer gives a message notifying that the procedure is completed.

11.3.9 FIRMWARE UPDATE

A. VIEW INFORMATION

Function Use	• To display the firmware information stored in the USB memory device. • The following information is displayed: Model name (magicolor 5650 or 5670) of firmware data Version information of firmware data
Setting /procedure	*1.* Set the USB memory device. *2.* Call the SERVICE MENU screen to the display. *3.* Select [FIRMWARE UPDATE] and press the Menu/Select key. *4.* Select the specific type of firmware data to be upgraded and press the Menu/Select key. *5.* Select [VIEW INFORMATON] and press the Menu/Select key. **NOTE** **• An error message appears if the selected data is not of the appropriate data format.**

B. EXECUTE

Function	• To upgrade firmware using the USB memory device.
Use	• Use for upgrading firmware.
Setting /procedure	See P.30

11.3.10 SOFT SWITCH

Function Use Setting /procedure	• Not used.

12. Other functions

12.1 Rewriting security information into the hard disk kit and the compact flash

12.1.1 Outline

- When the optional hard disk kit and compact flash are formatted, they save the values specific to the MFP board (MFPB) installed in each printer.
  Because of this, the hard disk kit and compact flash that have been used in a printer cannot be used in a different printer, in this way, job and account information stored in the hard disk kit and compact flash are protected.
- There may be cases where the print control board is damaged and replaced, in that case, it is required to rewrite security information into the user's current hard disk kit and compact flash in order to continue to use the data included in the hard disk kit and compact flash.
- Without rewriting new security information, the hard disk kit and compact flash can be used if they are formatted again.

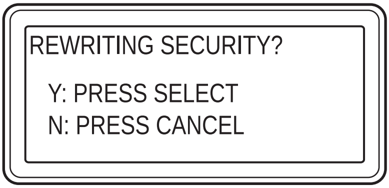
12.1.2 Procedure

1. After the MFP board (MFPB) replacement, in the condition of the hard disk and the compact flash being installed, turn the power switch ON while pressing the up key▲ and the cancel key.

NOTE

- **Continue to press the up key▲ and the cancel key until “INITIALIZING” message appears on the control panel.**

2. After startup, “REWRITING SECURITY” message will appears.



REWRITING SECURITY?

Y: PRESS SELECT
N: PRESS CANCEL

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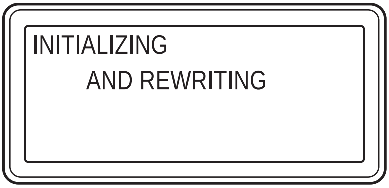
3. When the menu/select key is pressed, the printer starts rewriting security information and then start operating. (If the cancel key is pressed, the printer starts operating without rewriting security information.)



INITIALIZING
AND REWRITING

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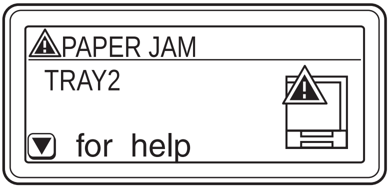
Troubleshooting

13. Jam display

13.1 Misfeed display

- When a media misfeed occurs a message is displayed on the control panel.



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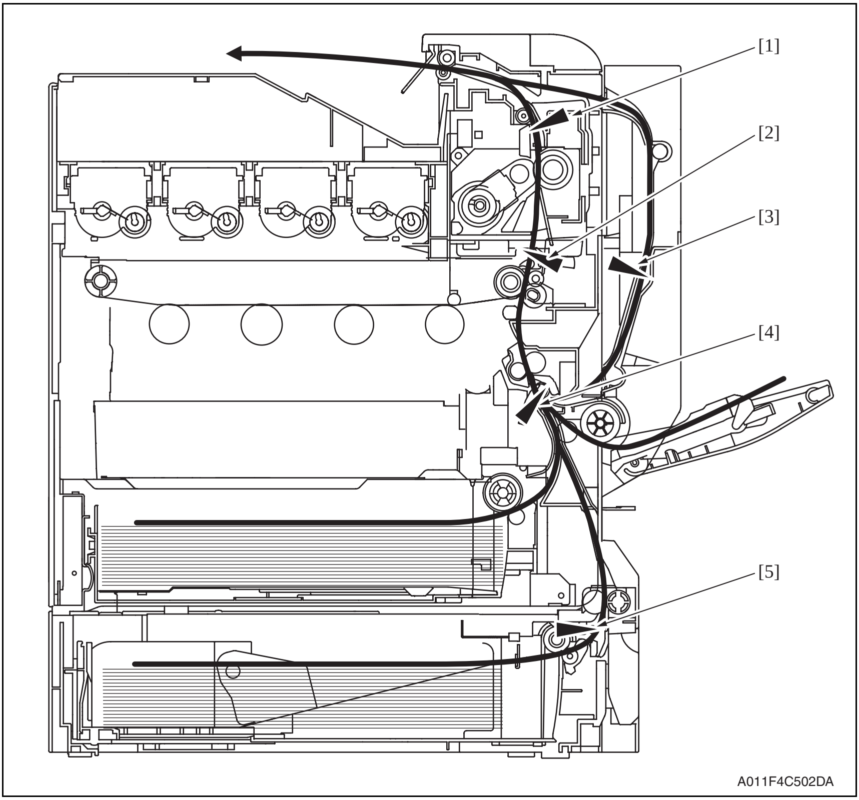
Display		Misfeed location	Misfeed processing location	Action
LCD 1	LCD 2			
PAPER JAM	FUSER/EXIT	• Fusing/exit section	• Right door • Fuser unit	P.204
	SECOND TRANS	• Transfer section	• Right door	P.203
	VERTICAL TRANS	• Vertical transport	• Right door	P.202
			• Tray 3 right door • Tray 4 right door	See P.15 of the lower feeder unit service manual.
	DUPLEX1	See P.9 of the duplex option service manual.		
	DUPLEX2			
	TRAY1	• Tray 1 media feed	• Manual feed tray • Right door	P.202
	TRAY2	• Tray 2 media feed	• Tray 2 • Right door	P.202
	TRAY3	See P.15 of the lower feeder unit service manual.		
	TRAY4			
	FINISHER	See P.23 of the staple finisher service manual.		
	SUB EXIT			
	UPPER TRANS			
	MAIN EXIT			
	STAPLER			
Service call: F001		• Media misfeed in control logic		P.205

13.2 Misfeed display resetting procedure

- Open the relevant door, clear the sheet of misfed media, and close the door.

13.3 Sensor layout

- System equipped with a lower feeder units and a duplex option



[1]	Exit sensor (PS8)	[4]	Registration sensor (PS4)
[2]	Media loop sensor (PS6)	[5]	Media feed sensor (optional lower feeder unit) (PS2)
[3]	Sensor on AD control board (ADCB)		

13.4 Solution

13.4.1 Initial check items

- When a media misfeed occurs, first make checks of the following initial check items.

Check item	Action
Does media meet product specifications?	• Change media.
Is media curled, wavy, or damp.	• Change media. • Instruct user in correct media storage.
Is a foreign matter present along the media path, or is the media path deformed or worn?	• Clean or change the media path.
Are the media separator fingers dirty, deformed, or worn?	• Clean or change the defective media separator finger.
Are rolls/rollers dirty, deformed, or worn?	• Clean or change the defective roll/roller.
Are the edge guide and trailing edge stop at correct position to accommodate the media?	• Set as necessary.
Are actuators found operational as checked for correct operation?	• Correct or change the defective actuator.

13.4.2 Misfeed at tray 2 media feed section

A. Detection timing

Type	Description
Detection of misfeed at tray 2 media feed section	• The media does not unblock the registration sensor (PS4) even after the lapse of a given period of time after the media feed clutch/1 (CL1) is turned ON.

B. Action

Relevant electrical parts	
Registration sensor (PS4) Media feed clutch/1 (CL1) Intermediate transport motor (M3)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	—	—
2	PS4 sensor check	PRCB PJ15-3 (ON)	C-3
3	CL1 operation check	PRCB PJ6-2 (ON)	I-6
4	M3 operation check	PRCB PJ27-3 (REM) PRCB PJ27-6 (LOCK)	C-5
5	Change PRCB.	—	—

13.4.3 Misfeed at tray1 media feed section

A. Detection timing

Type	Description
Detection of tray 1 media feed section	• The media does not unblock the registration sensor (PS4) even after the lapse of a given period of time after the media feed clutch/2 (CL3) is turned ON.

B. Action

Relevant electrical parts	
Registration sensor (PS4) Media feed clutch/2 (CL3) Intermediate transport motor (M3)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	—	—
2	PS4 sensor check	PRCB PJ15-3 (ON)	C-3
3	CL3 operation check	PRCB PJ6-4 (ON)	I-6
4	M3 operation check	PRCB PJ27-3 (REM) PRCB PJ27-6 (LOCK)	C-5
5	Change PRCB.	—	—

13.4.4 Misfeed at transfer section

A. Detection timing

Type	Description
Detection of misfeed at transfer section	• The registration sensor (PS4) is not blocked even after the lapse of a given period of time after the media has unblocked PS4. • The media does not block the exit sensor (PS8) even after the lapse of a given period of time after the media has unblocked the registration sensor (PS4). • When a sheet of media is passing through the registration sensor (PS4), the pressure sequence of the 2nd transfer section has not started.
Detection of media left in transfer section	• The registration sensor (PS4) 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 media loop 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 (PS4) Exit sensor (PS8) Media loop sensor (PS6) Pressure/retraction clutch/2 (CL5)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	—	—
2	PS4 sensor check	PRCB PJ15-3 (ON)	C-3
3	PS8 sensor check	PRCB PJ4-6 (ON)	I-2
4	PS6 sensor check	PRCB PJ16-3 (ON)	C-3 to 4
5	CL5 operation check	PRCB PJ10-8 (ON)	I-7
6	Change PRCB.	—	—

13.4.5 Misfeed at fusing/exit section

A. Detection timing

Type	Description
Detection of misfeed at fusing/ exit section	• The exit sensor (PS8) is not unblocked even after the lapse of a given period of time after the media has blocked PS8. • The media does not unblock the sensor on the AD control board (ADCB) even after the lapse of a given period of time after it has blocked the exit sensor (PS8) during media feeding from the duplex option.
Detection of media left in fusing/exit section	• The exit sensor (PS8) is blocked 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)	AD control board (ADCB) Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	—	—
2	PS8 sensor check	PRCB PJ4-6 (ON)	I-2
3	Change ADCB.	—	—
4	Change PRCB.	—	—

13.4.6 Media misfeed in control logic

A. Detection timing

Type	Description
Detection of media misfeed in control logic	By image write start signal timing • The pressure operation of the first image transfer mechanism is not completed during full color printing. • The first image transfer mechanism is not in the state of retraction during monochrome printing.
	• While the leading edge of an image has reached the position where the first image transfer process is performed, the pressure operation of the second image transfer mechanism is not completed.
	• 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 or media error occurs.

B. Action

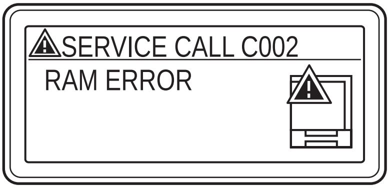
Relevant electrical parts	
MFP board (MFPB) AD control board (ADCB)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check printer driver settings.	—	—
2	Change ADCB.	—	—
3	Change MFPB.	—	—
4	Change PRCB.	—	—

14. Malfunction code

14.1 Trouble codes (service call)

- The printer's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code and maintenance call mark on the control panel.



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14.1.1 Trouble code list

- For the details of the malfunction codes of the options, see the service manual for the corresponding option.

LCD1 (service call ID)	LCD2/LCD3 (error description)	Item	Detection timing
0010	P MOTOR 1	Color PC drum motor malfunction	• 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	P MOTOR 2	Intermediate transport motor malfunction	• The intermediate transport 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 intermediate transport motor is being rotated.
0018	D MOTOR 2	Developing motor/K malfunction	• The developing motor/K 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/K is being rotated.
001B	D MOTOR 1	Developing motor/ Y,M,C malfunction	• The developing motor/Y,M,C 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/Y,M,C is being rotated.
0046	FUSER FAN	Fusing fan motor malfunction	• The fusing 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 fusing fan motor is being rotated.

LCD1 (service call ID)	LCD2/LCD3 (error description)	Item	Detection timing
004C	OZONE FAN	Ozone ventilation fan motor malfunction	• The ozone ventilation 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 ozone ventilation fan motor is being rotated.
004E	POWER FAN	DC power supply fan motor malfunction	• 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.
0060	FUSER MOTOR	Fusing motor malfunction	• The fusing 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 fusing motor is being rotated.
0094	XFER DETACH 2	2nd image transfer pressure/ retraction failure	• The retraction position sensor/2 is not activated (retracted position) within a given period of time after the retraction sequence of the 2nd transfer roller has been started. • The retraction position sensor/2 is not deactivated (pressed position) within a given period of time after the pressure sequence of the 2nd transfer roller has been started.
0096	XFER DETACH 1	1st image transfer pressure/ retraction failure	• The retraction position sensor/1 is not activated (retracted position) within a given period of time after the intermediate transport motor has started rotating. • The retraction position sensor/1 is not deactivated (pressed position) within a given period of time after the intermediate transport motor has started rotating.
0300	POLYGON MOTOR	Polygon motor malfunction	• 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 ERROR	Laser malfunction	• The SOS signal is not detected within a given period of time after the output of the laser has been started.
0500	FUSER ERROR	Heating roller warm-up failure	• 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.
0501	FUSER ERROR	Fusing pressure roller warm-up failure	• The thermistor/2 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.

LCD1 (service call ID)	LCD2/LCD3 (error description)	Item	Detection timing
0510	FUSER ERROR	Abnormally low heating roller temperature	• The temperature detected by the thermistor/1 remains lower than the specified value for a given period of time or longer.
0511	FUSER ERROR	Abnormally low fusing pressure roller temperature	• The temperature detected by the thermistor/2 remains lower than the specified value for a given period of time or longer.
0520	FUSER ERROR	Abnormally high heating roller temperature	• 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.
0521	FUSER ERROR	Abnormally high fusing pressure roller temperature	• The temperature detected by the thermistor/2 remains higher than the specified value for a given period of time or longer.
0B30	FINISHER ERROR	Finisher aligning plate drive malfunction	See P.29 of the staple finisher service manual.
0B47	FINISHER ERROR	Finisher media holding drive malfunction	
0B48	FINISHER ERROR	Finisher exit roller pressure/retraction malfunction	
0B4A	FINISHER ERROR	Finisher aligning belt pressure/retraction malfunction	
0B4C	FINISHER ERROR	Finisher media ejector motor malfunction	
0BA0	FINISHER ERROR	Finisher tray up/down motor ascent/descent drive malfunction	
0BE1	FINISHER ERROR	Finisher fan motor malfunction	
0F52	TE SENSOR Y	Toner level sensor/Y malfunction	• An error occurs on the toner level sensor board (TLSB).
0F53	TE SENSOR M	Toner level sensor/M malfunction	
0F54	TE SENSOR C	Toner level sensor/C malfunction	
0F55	TE SENSOR K	Toner level sensor/K malfunction	
133B	FINISHER COMMUNICATION	Finisher communication error	• A communication error occurs between the main body and the finisher.
13C0	ENGINE H/W ERROR	Print control board malfunction	• A communication error occurs in print control board (PRCB).
13E2	FLASH WRITE	Flash ROM write error	• Flash ROM writing is found faulty during a check.

LCD1 (service call ID)	LCD2/LCD3 (error description)	Item	Detection timing
13E3	FLASH DEVICE	Flash ROM device fault	• An erase error occurs during erasing of data in flash ROM.
3C00	EEPROM1	Trouble related to security	• Contact the responsible people of KMBT when not returning in power switch OFF/ON.
3C10	EEPROM2		
3FFB	FINISHER ROM	Finisher flash ROM error	• An error occurs with flash ROM of the optional staple finisher.
C002	RAM ERROR	RAM error at startup (standard memory)	• RAM error at standard memory is detected during printer start-up.
C003	RAM ERROR	RAM error at startup (expanded memory)	• RAM error at expanded memory is detected during printer start-up.
C013	H/W ADDRESS	MAC address error at startup	• Invalid MAC address is detected during printer start-up.
C015	BOOT ROM	Boot ROM error at startup	• Boot ROM error is detected during printer start-up.
C025	CONTROLLER ROM	Controller ROM error (Configuration information error)	• Lead error of destination setting file is detected during the printer starting.
C026		Controller ROM error (Access error)	• Flash ROM access error is detected during the printer starting.
C027		Controller ROM error (Data error)	• Final check sum error is detected during the printer starting.
C050	HDD ERROR	HDD access error	• When correct access to the hard disk kit is failed during access.
C051	HDD DISK FULL	HDD full error	• Range for user space is full during access to the hard disk kit.
C052	CARD ERROR	Compact flash access error	• When correct access to the compact flash card is failed during access.
C053	CARD FULL	Compact flash full error	• Range for user space is full during access to the compact flash card.
C060	UPDATE ERROR	Firmware update error	• Firmware update fails to complete correctly during update.
C071	H/W CONFIG ERROR	Hardware configuration error	• An error occurs with hardware configuration (video clock etc.).
FFFF	I/F COMM ERROR	Interface communication error	• Correct communication is failed when receiving/ sending the command between PRCB and MFPB.

14.2 Resetting a malfunction

- To reset a malfunction, turn the power switch OFF and then ON again.

14.3 Solution

14.3.1 0010: Color PC drum motor malfunction

Relevant electrical parts	
Color PC drum motor (M2)	Print control board (PRCB) DC power supply (DCPU)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the M2 connector for proper connection and correct as necessary.	—	—
2	Check M2 for proper drive coupling and correct as necessary.	—	—
3	Check the PRCB connector for proper connection and correct as necessary.	—	—
4	M2 operation check	PRCB PJ14-3 (REM) PRCB PJ14-6 (LOCK)	C-6
5	Change M2.	—	—
6	Change PRCB.	—	—
7	Change DCPU.	—	—

14.3.2 0017: Intermediate transport motor malfunction

Relevant electrical parts	
Intermediate transport motor (M3)	Print control board (PRCB) DC power supply (DCPU)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the M3 connector for proper connection and correct as necessary.	—	—
2	Check M3 for proper drive coupling and correct as necessary.	—	—
3	Check the PRCB connector for proper connection and correct as necessary.	—	—
4	M3 operation check	PRCB PJ27-3 (REM) PRCB PJ27-6 (LOCK)	C-5
5	Change M3.	—	—
6	Change PRCB.	—	—
7	Change DCPU.	—	—

14.3.3 0018: Developing motor/K malfunction

Relevant electrical parts	
Developing motor/K (M5)	Print control board (PRCB) DC power supply (DCPU)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the M5 connector for proper connection and correct as necessary.	—	—
2	Check M5 for proper drive coupling and correct as necessary.	—	—
3	Check the PRCB connector for proper connection and correct as necessary.	—	—
4	M5 operation check	PRCB PJ33-3 (REM) PRCB PJ33-6 (LOCK)	C-6
5	Change M5.	—	—
6	Change PRCB.	—	—
7	Change DCPU.	—	—

14.3.4 001B: Developing motor/Y,M,C malfunction

Relevant electrical parts	
Developing motor/Y,M,C (M1) Driving unit	Print control board (PRCB) DC power supply (DCPU)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the M1 connector for proper connection and correct as necessary.	—	—
2	Check the PRCB connector for proper connection and correct as necessary.	—	—
3	M1 operation check	PRCB PJ8-3 (REM) PRCB PJ8-6 (LOCK)	C-7
4	Change driving unit.	—	—
5	Change PRCB.	—	—
6	Change DCPU.	—	—

14.3.5 0046: Fusing fan motor malfunction

Relevant electrical parts	
Fusing fan motor (FM2)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the FM2 connector for proper connection and correct as necessary.	—	—
2	Check the fan for possible overload and correct as necessary.	—	—
3	FM2 operation check	PRCB PJ21-1 (ON) PRCB PJ21-3 (LOCK)	C-9
4	Change FM2.	—	—
5	Change PRCB.	—	—

14.3.6 004C: Ozone ventilation fan motor malfunction

Relevant electrical parts	
Ozone ventilation fan motor (FM3)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the FM3 connector for proper connection and correct as necessary.	—	—
2	Check the fan for possible overload and correct as necessary.	—	—
3	FM3 operation check	PRCB PJ6-5 (ON) PRCB PJ6-7 (LOCK)	J-6
4	Change FM3.	—	—
5	Change PRCB.	—	—

14.3.7 004E: DC power supply fan motor malfunction

Relevant electrical parts	
DC power supply fan motor (FM1)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the FM1 connector for proper connection and correct as necessary.	—	—
2	Check the fan for possible overload and correct as necessary.	—	—
3	FM1 operation check	PRCB PJ9-1 (ON) PRCB PJ9-3 (LOCK)	C-2
4	Change FM1.	—	—
5	Change PRCB.	—	—

14.3.8 0060: Fusing motor malfunction

Relevant electrical parts	
Fusing motor (M4)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the M4 connector for proper connection and correct as necessary.	—	—
2	Check the fuser unit driving mechanism for possible overload and correct as necessary.	—	—
3	Check the PRCB connector for proper connection and correct as necessary.	—	—
4	M4 operation check	PRCB PJ19-3 (REM) PRCB PJ19-6 (LOCK)	C-9
5	Change M4.	—	—
6	Change PRCB.	—	—

14.3.9 0094: 2nd image transfer pressure/retraction failure

Relevant electrical parts	
Retraction position sensor/2 (PS10) Pressure/retraction clutch/2 (CL5) Intermediate transport motor (M3)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the M3 connector for proper connection and correct as necessary.	—	—
2	Check the CL5 connector for proper connection and correct as necessary.	—	—
3	Check M3 for proper drive coupling and correct as necessary.	—	—
4	Check CL5 for proper drive coupling and correct as necessary.	—	—
5	Check the PRCB connector for proper connection and correct as necessary.	—	—
6	PS10 sensor check	PRCB PJ10-6 (ON)	J-7
7	CL5 operation check	PRCB PJ10-8 (ON)	J-7
8	M3 operation check	PRCB PJ27-3 (REM) PRCB PJ27-6 (LOCK)	C-5
9	Change M3.	—	—
10	Change CL5.	—	—
11	Change PRCB.	—	—

14.3.10 0096: 1st image transfer pressure/retraction failure

Relevant electrical parts	
Retraction position sensor/1 (PS9) Pressure/retraction clutch/1 (CL4) Intermediate transport motor (M3)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the M3 connector for proper connection and correct as necessary.	—	—
2	Check the CL4 connector for proper connection and correct as necessary.	—	—
3	Check M3 for proper drive coupling and correct as necessary.	—	—
4	Check CL4 for proper drive coupling and correct as necessary.	—	—
5	Check the PRCB connector for proper connection and correct as necessary.	—	—
6	PS9 sensor check	PRCB PJ7-13 (ON)	C-2
7	CL4 operation check	PRCB PJ7-10 (ON)	C-1
8	M3 operation check	PRCB PJ27-3 (REM) PRCB PJ27-6 (LOCK)	C-5
9	Change M3.	—	—
10	Change CL4.	—	—
11	Change PRCB.	—	—

14.3.11 0300: Polygon motor malfunction

Relevant electrical parts	
PH unit	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the cable and connector for proper connection and correct as necessary.	—	—
2	Change PH unit.	—	—
3	Change PRCB.	—	—

14.3.12 0310: Laser malfunction

Relevant electrical parts	
PH unit	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the cable and connector for proper connection and correct as necessary.	—	—
2	Change PH unit.	—	—
3	Change PRCB.	—	—

14.3.13 0500: Heating roller warm-up failure

14.3.14 0501: Fusing pressure roller warm-up failure

14.3.15 0510: Abnormally low heating roller temperature

14.3.16 0511: Abnormally low fusing pressure roller temperature

14.3.17 0520: Abnormally high heating roller temperature

14.3.18 0521: Abnormally high fusing pressure roller temperature

Relevant electrical parts	
Fuser unit	Print 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 fuser unit, DCPU, and PRCB for proper connection and correct as necessary.	—	—
3	Change fuser unit.	—	—
4	Change PRCB.	—	—
5	Change DCPU.	—	—

14.3.19 0F52: Toner level sensor/Y malfunction

14.3.20 0F53: Toner level sensor/M malfunction

14.3.21 0F54: Toner level sensor/C malfunction

14.3.22 0F55: Toner level sensor/K malfunction

Relevant electrical parts	
Toner level sensor board (TLSB)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the TLSB and PRCB for proper connection and correct as necessary.	—	—
2	Change TLSB.	—	—
3	Change PRCB.	—	—

14.3.23 133B: Finisher communication malfunction

Relevant electrical parts	
FS control board (FSCB)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	—	—
2	Change FSCB.	—	—
3	Change PRCB.	—	—

14.3.24 13C0: Print control board malfunction

Relevant electrical parts
Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	—	—
2	Change PRCB.	—	—

14.3.25 13E2: Flash ROM write error

14.3.26 13E3: Flash ROM device fault

Relevant electrical parts	
MFP board (MFPB)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the PRCB for proper connection and correct as necessary.	—	—
2	Change MFPB.	—	—
3	Change PRCB.	—	—

14.3.27 3FFB: Finisher flash ROM error

Relevant electrical parts
FS control board (FSCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the FSCB for proper connection and correct as necessary.	—	—
2	Change FSCB.	—	—

14.3.28 C002: RAM error at startup (standard memory)

14.3.29 C003: RAM error at startup (expanded memory)

Relevant electrical parts	
MFP board (MFPB)	Standard memory Expanded memory

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	—	—
2	Check connection state of the standard/expanded memory and correct as necessary.	—	—
3	Check the MFPB connector for proper connection and correct as necessary.	—	—
4	Change the standard/expanded memory.	—	—
5	Change MFPB.	—	—

14.3.30 C013: MAC address error at startup

14.3.31 C015: BOOT ROM error at startup

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	Change MFPB.	—	—

14.3.32 C025: Controller ROM error (Configuration information error)

14.3.33 C026: Controller ROM error (Access error)

14.3.34 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.	—	—

14.3.35 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 HDD connector for proper connection and correct as necessary.	—	—
3	Check the MFPB connector for proper connection and correct as necessary.	—	—
4	Change HDD.	—	—
5	Change MFPB.	—	—

14.3.36 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 “PROOF/PRINT MENU” to increase the available range for user space.	—	—
3	Check the HDD connector for proper connection and correct as necessary.	—	—
4	Format HDD with “SYS DEFAULT MENU/ HDD FORMAT.”	—	—
5	Change HDD.	—	—

14.3.37 C052: Compact flash access error

Relevant electrical parts	
MFP board (MFPB)	Compact flash card

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	—	—
2	Check the compact flash for proper connection and correct as necessary.	—	—
3	Check the MFPB connector for proper connection and correct as necessary.	—	—
4	Change compact flash.	—	—
5	Change MFPB.	—	—

14.3.38 C053: Compact flash full error

Relevant electrical parts	
MFP board (MFPB)	Compact flash card

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	—	—
2	Delete the job hold in “PROOF/PRINT MENU” to increase the available range for user space.	—	—
3	Check the compact flash for proper connection and correct as necessary.	—	—
4	Format compact flash with “SYS DEFAULT MENU/CARD FORMAT.”	—	—
5	Change compact flash.	—	—

14.3.39 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.	—	—

14.3.40 C071: Hardware configuration 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	Change MFPB.	—	—

14.3.41 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 troubles

15.1 Machine is not energized at all (DCPU operation check)

Relevant electrical parts	
Power switch (S1) Print control board (PRCB)	DC power supply (DCPU)

Step	Check item	Location (electrical component)	Result	Action
1	Is the power source voltage being applied to CN1 on DCPU?	H to I-4	NO	Check wiring from power outlet to PG1 to CN1DCPU.
2	Are fuses (F1 and F2) on DCPU conducting?	—	NO	Change DCPU.
3	Are DC 24 V, DC 5 V and DC 3.3 V being applied to PJ1 on the print control board?	F-3	NO	Change PRCB. Change MFPB.
			YES	Change DCPU.

15.2 Control panel indicators do not light

Relevant electrical parts	
MFP board (MFPB) Operation board (OB)	DC power supply (DCPU)

Step	Check item	Location (electrical component)	Result	Action
1	Is the power source voltage being applied to CN1 on DCPU?	H to I-4	NO	Check wiring from power outlet to PG1 to CN1DCPU.
2	Are fuses (F1 and F2) on DCPU conducting?	—	NO	Change DCPU.
3	Is J22 on MFPB properly connected?	I-10	NO	Reconnect.
4	Is J7000 on MFPB properly connected?	I-11	NO	Reconnect.
5	Is CN2 on OB properly connected?	K-10 to 11	NO	Reconnect.
			YES	Change OB. Change MFPB.

15.3 Fusing heaters do not operate

Relevant electrical parts	
Safety switch/Fr (S2) Safety switch/Rt (S3) Fuser unit	DC power supply (DCPU)

Step	Check item	Location (electrical component)	Result	Action
1	Is the power source voltage being applied to CN1 on DCPU? The front door and right door should in closed position at this time.	H to I-4	NO	Check wiring from power outlet to PG1 to CN1DCPU.
2	Is the power source voltage being applied to CN2 on DCPU?	H to I-3	YES	Change fuser unit.
			NO	Change DCPU.

16. Image quality problems

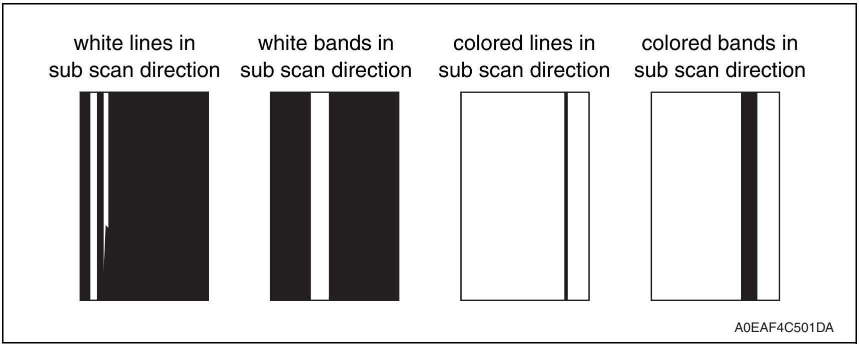
16.1 Solution

NOTE

- **Typical faulty image samples shown in the following are all printed with A4S setting.**

16.1.1 White lines/bands, colored lines/bands in sub scan direction

A. Typical faulty images

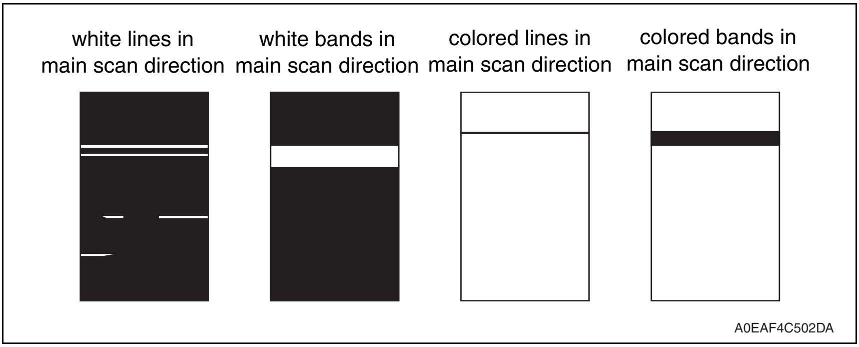

white lines in sub scan direction
white bands in sub scan direction
colored lines in sub scan direction
colored bands in sub scan direction
A0EAF4C501DA

B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Imaging unit	Are there scratches or lines evident on photo conductor surface?	YES	Change the imaging unit.
2		Is the outside dirty?	YES	Clean.
3		Is the connector or contact terminal between each imaging unit and PH unit connected properly?	NO	Clean the contact terminal or reconnect the connector.
4		Is the developing bias contact terminal in good contact?	NO	Clean the contact terminal or check the terminal position.
5	PH unit	Is the window surface dirty?	YES	Clean.
6	Transfer belt	Is the transfer belt dirty with fingerprints or oil?	YES	Clean.
7		Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
8		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
9	Media path	Is there a foreign matter on the media path?	YES	Remove foreign matter.
10	Fuser unit	Is the fusing entrance guide plate dirty or scratched?	YES	Clean. Change the fuser unit.
11		Is the separator fingers dirty?	YES	Change the fuser unit.
12		Has the problem been eliminated through the checks of steps up to 11?	NO	Change the transfer belt. Change the PH unit.

16.1.2 White lines/bands, colored lines/bands in main scan direction

A. Typical faulty images

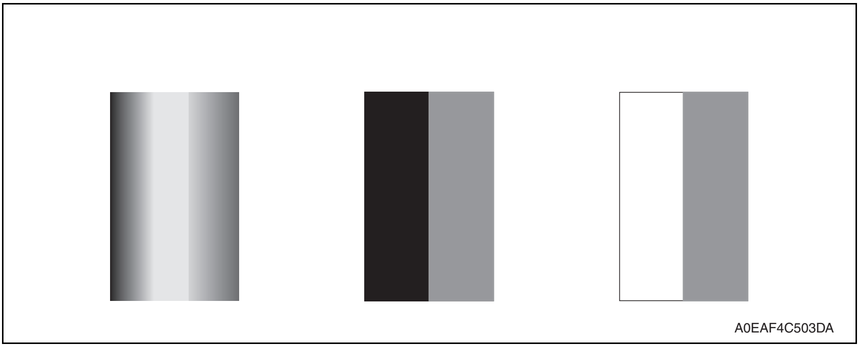

white lines in main scan direction
white bands in main scan direction
colored lines in main scan direction
colored bands in main scan direction
A0EAF4C502DA

B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Imaging unit	Are there scratches or lines evident on photo conductor surface?	YES	Change the imaging unit.
2		Is the outside dirty?	YES	Clean.
3		Is the connector or contact terminal between each imaging unit and PH unit connected properly?	NO	Clean the contact terminal or reconnect the connector.
4		Is the developing bias contact terminal in good contact?	NO	Clean the contact terminal or check the terminal position.
5	Transfer belt	Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
6		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
7	Media path	Is there a foreign matter on the media path?	YES	Remove the foreign matter.
8	Fuser unit	Is the fusing entrance guide plate dirty or scratched?	YES	Clean.
9		Is the separator fingers dirty?	YES	Change the fuser unit.
10		Has the problem been eliminated through the checks of steps up to 9?	NO	Change the DC power supply. Change the transfer belt.

16.1.3 Uneven density in sub scan direction

A. Typical faulty images

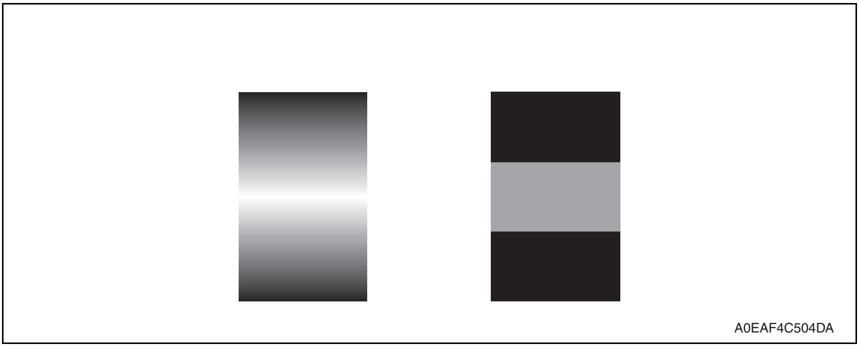


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Adjustment /Setting	The printer is being operated at high altitude.	YES	Adjust the image with “IMAGE ADJ PRAM” → SERVICE MENU/ALIGNMENT/IMAGE ADJ PRAM
2	Imaging unit	Are there scratches or lines evident on photo conductor surface?	YES	Change the imaging unit.
3		Is the outside dirty?	YES	Clean.
4	PH unit	Is the window surface dirty?	YES	Clean.
5	Transfer belt	Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
6		Is the terminal dirty?	YES	Clean.
7		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
8		Has the problem been eliminated through the checks of steps up to 7?	NO	Change the transfer belt unit. Change the PH unit. Change the high voltage unit/1. Change the high voltage unit/2.

16.1.4 Uneven density in main scan direction

A. Typical faulty images



B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Adjustment /Setting	The printer is being operated at high altitude.	YES	Adjust the image with “IMAGE ADJ PRAM.” → SERVICE MENU/ALIGNMENT/IMAGE ADJ PRAM
2	Imaging unit	Are there scratches or lines evident on photo conductor surface?	YES	Change the imaging unit.
3		Is the outside dirty?	YES	Clean.
4	Transfer belt	Is the contact on the rail of the Transfer belt in good contact with the mating part?	NO	Check or correct contact.
5		Is the transfer belt dirty with fingerprints or oil?	YES	Clean.
6		Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
7		Is the terminal dirty?	YES	Clean.
8		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
9		Has the problem been eliminated through the checks of steps up to 8?	NO	Change the transfer belt. Change the high voltage unit/1. Change the high voltage unit/2.

16.1.5 Low image density

A. Typical faulty images

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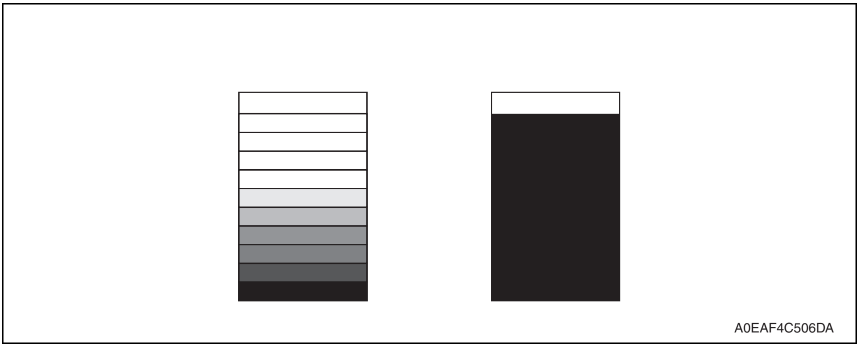
B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Adjustment /Setting	The printer is being operated in the climate such as dry or highly humid.	YES	Adjust the image with “TRANSFER POWER” → SERVICE MENU/ALIGNMENT /TRANSFER POWER/
2	Imaging unit	Is the outside dirty?	YES	Clean.
3	PH unit	Is the window surface dirty?	YES	Clean.
4	Transfer belt	Is the contact on the rail of the transfer belt in good contact with the mating part?	NO	Check or correct contact.
5		Is the terminal dirty?	YES	Clean.
6	Media	Is the media damp?	YES	Replace the media with media that has just been unwrapped.
7	IDC sensor board/Re, Fr	Is the sensor dirty?	YES	Clean.
8		Has the problem been eliminated through the checks of steps up to 7?	NO	Change the imaging unit. Change the transfer belt. Change the PH unit. Change the IDC sensor board. Change the print control board. Change the high voltage unit/1. Change the high voltage unit/2.

16.1.6 Gradation reproduction failure

A. Typical faulty images

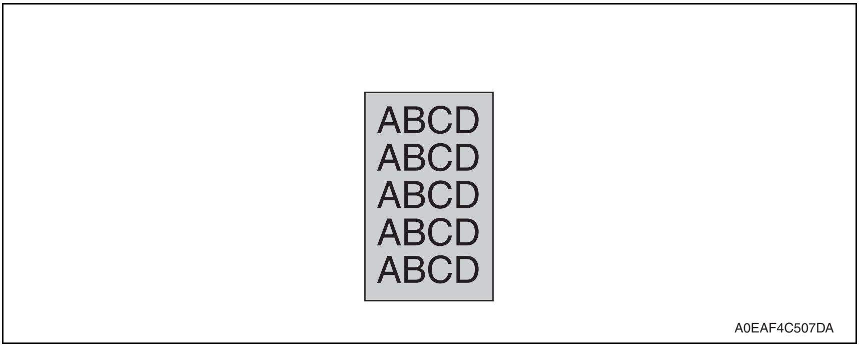


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Imaging unit	Is the outside dirty?	YES	Clean.
2	PH unit	Is the window surface dirty?	YES	Clean.
3	IDC sensor board/Re, Fr	Is the sensor dirty?	YES	Clean.
4		Has the problem been eliminated through the checks of steps up to 3?	NO	Change the imaging unit. Change the PH unit. Change the IDC sensor board. Change the high voltage unit/1. Change the high voltage unit/2.

16.1.7 Foggy background

A. Typical faulty images



B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Adjustment /Setting	The Printer is being operated in the climate such as dry or highly humid.	YES	Adjust the image with "TRANSFER POWER." → SERVICE MENU/ALIGNMENT /TRANSFER POWER/
2	Imaging unit	Are there scratches or lines evident on photo conductor surface?	YES	Change the imaging unit.
3		Is the outside dirty?	YES	Clean.
4		Is the connector or contact terminal between each imaging unit and PH unit connected properly?	NO	Clean the contact terminal or reconnect the connector.
5		Is the developing bias contact terminal in good contact?	NO	Clean the contact terminal or check the terminal position.
6	PH unit	Is the window surface dirty?	YES	Clean.
7	IDC sensor board/Re, Fr	Is the sensor dirty?	YES	Clean.
8		Has the problem been eliminated through the checks of steps up to 7?	NO	Change the PH unit. Change the IDC sensor board.

16.1.8 Poor color reproduction

A. Typical faulty images

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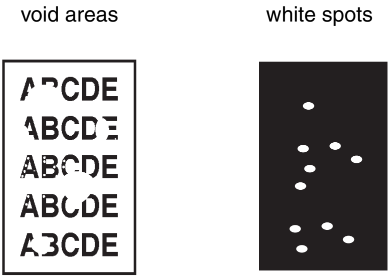
B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Media	Is the media damp?	YES	Replace the media with media that has just been unwrapped.
2	Transfer belt	Is the terminal dirty?	YES	Clean.
3	IDC sensor board/Re, Fr	Is the sensor dirty?	YES	Clean.
4		Has the problem been eliminated through the checks of steps up to 3?	NO	Change the transfer belt. Change the IDC sensor board. Change the print control board. Change the high voltage unit/1. Change the high voltage unit/2.

16.1.9 Void areas, white spots

A. Typical faulty images



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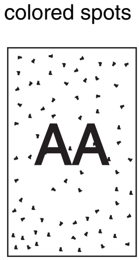
B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Adjustment /Setting	Thick or special media is being used.	YES	Adjust the image with "TRANSFER POWER." → SERVICE MENU/ALIGNMENT /TRANSFER POWER/
2	Imaging unit	Are there scratches or lines evident on photo conductor surface?	YES	Change the imaging unit.
3		Is the outside dirty?	YES	Clean.
4	Transfer belt	Is the transfer belt dirty with fingerprints, oil, or other foreign matter?	YES	Clean.
5		Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
6		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
7		Is the ground terminal connected properly?	NO	Correct.
8	Media path	Is there a foreign matter on the media path?	YES	Remove foreign matter.
9		Is the fusing entrance guide plate dirty or scratched?	YES	Clean or change.
10		Has the problem been eliminated through the checks of steps up to 9?	NO	Change the transfer belt.

16.1.10 Colored spots

A. Typical faulty images



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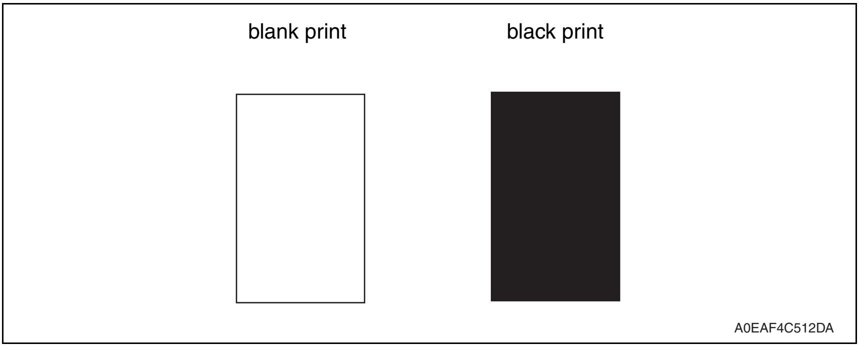
B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Imaging unit	Are the spots in a single color?	YES	Change the imaging unit.
2		Are there scratches or lines evident on photo conductor surface?	YES	Change the imaging unit.
3	Transfer belt	Is the transfer belt dirty with fingerprints, oil, or other foreign matter?	YES	Clean.
4		Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
5		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
6	Media path	Is there a foreign matter on the media path?	YES	Remove foreign matter.
7	Fuser unit	Is the fusing roller dirty or scratched?	YES	Change the fuser unit.
8		Has the problem been eliminated through the checks of steps up to 7?	NO	Change the transfer belt.

16.1.12 Blank copy, black copy

A. Typical faulty images

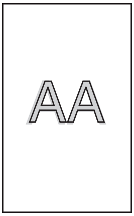


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Image check	Does a blank print occur?	YES	Check the PH unit connector for proper connection.
2	Imaging unit	Is the coupling of the imaging unit drive mechanism installed properly?	NO	Check or correct drive transmitting coupling or change the imaging unit.
3		Is the charge corona voltage contact or photo conductor ground contact of the imaging unit connected properly?	NO	Check, clean, or correct the contact.
4	High voltage unit/1, 2	Is the connector corrected properly?	NO	Reconnect.
5		Has the problem been eliminated through the checks of steps up to 4?	NO	Change the high voltage unit/1. Change the high voltage unit/2. Change the print control board. Change the PH unit.

16.1.13 Incorrect color image registration

A. Typical faulty images



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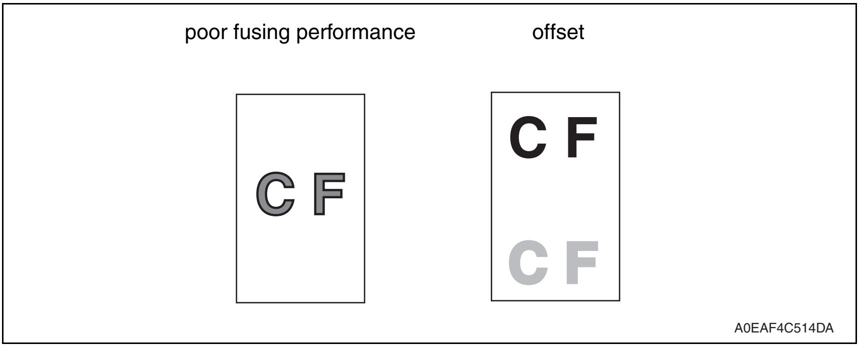
B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Transfer belt	Is the transfer belt dirty with fingerprints, oil, or other foreign matter?	YES	Clean.
2		Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
3		Is the drive coupling to the machine dirty?	YES	Clean.
4		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
5	Imaging unit	Is the imaging unit installed in position?	NO	Reinstall the imaging unit.
6		Is the photo conductor scratched?	YES	Change the imaging unit.
7		Has the problem been eliminated through the checks of steps up to 6?	NO	Change the transfer belt. Change the PH unit. Change the print control board.

16.1.14 Poor fusing performance, offset

A. Typical faulty images

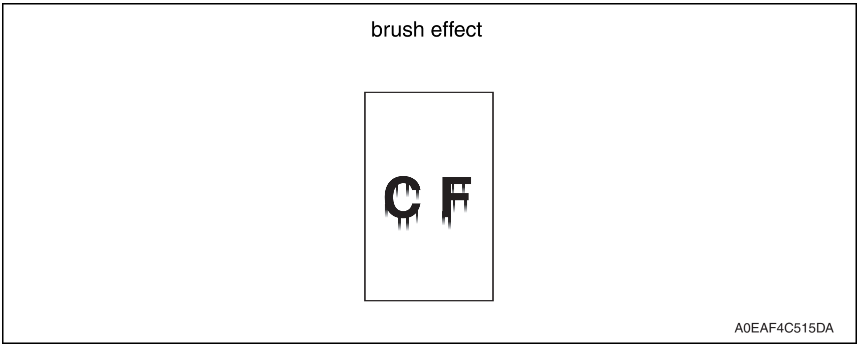


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Media	Does the media being used conform to specifications?	NO	Change the media.
2		Has the problem been eliminated through the check of step 1?	NO	Change the fuser unit. Change the print control board.

16.1.15 Brush effect

A. Typical faulty images

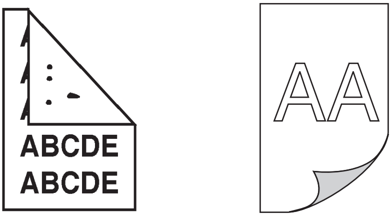


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Media	Is the media damp?	YES	Replace the media with media that has just been unwrapped.
2		Does the media being used conform to specifications?	NO	Replace the media.
3	Fuser unit	Is the fusing entrance guide plate dirty?	YES	Clean.
			NO	Change the fuser unit.

16.1.16 Back marking

A. Typical faulty images



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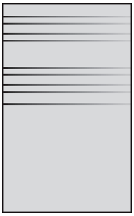
B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Media path	Is there a foreign matter on the media path?	YES	Remove the foreign matter.
2	Fuser unit	Is the fusing entrance guide plate dirty or scratched?	YES	Clean or change.
3		Is the fusing roller scratched or dirty?	YES	Change the fuser unit.
4	Transfer belt	Is the transfer belt dirty with fingerprints, oil, or other foreign matter?	YES	Clean.
5		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
6		Has the problem been eliminated through the checks of steps up to 5?	NO	Change the transfer belt. Change the fuser unit. Change the high voltage unit/1. Change the high voltage unit/2.

16.1.17 Uneven pitch

A. Typical faulty images



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B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Toner cartridge	Is the toner cartridge for each color of toner installed in position?	NO	Reinstall.
2	PH unit	Is the PH unit secured in position with the fixing screw?	NO	Secure it in position.
3	Imaging unit	Is the drive mechanism of the imaging unit dirty or damaged?	YES	Clean or change the imaging unit.
4		Is the photo conductor dirty, scratched, or worn?	YES	Change the imaging unit.
5	Transfer roller	Are the transfer roller and drive mechanism dirty, scratched, deformed, or worn?	YES	Change the transfer roller.
6	Fuser unit	Are the rollers and drive mechanism of the fuser unit dirty, scratched, deformed, or worn?	YES	Change the fuser unit.
7	Driving unit	During color printing, this symptom happens with 0.5 mm pitches.	YES	Change the driving unit.
8		Has the problem been eliminated through the checks of steps up to 7?	NO	Change the transfer belt.

16.1.18 No print cycles can be run as commanded via the network

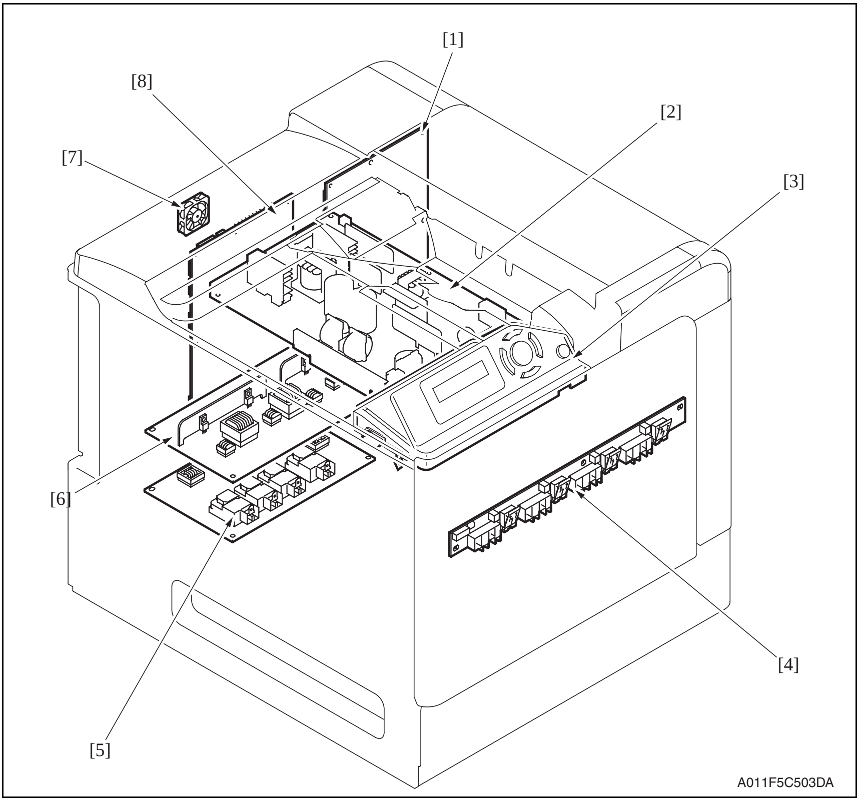
A. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	MFPB	Is the ethernet cable connected properly?	NO	Reinstall.
2	Control panel/ MENU	Are the network address and other data input correctly?	NO	Retype.
3		Is the INTERFACE MENU/ETHERNET/TCP/IP/SPEED/DUPLEX setting made correctly according to the network environment being used?	NO	Reset.
4	MFPB	Is the MFPB connector connected properly?	NO	Reinstall.
			YES	Change the MFPB.

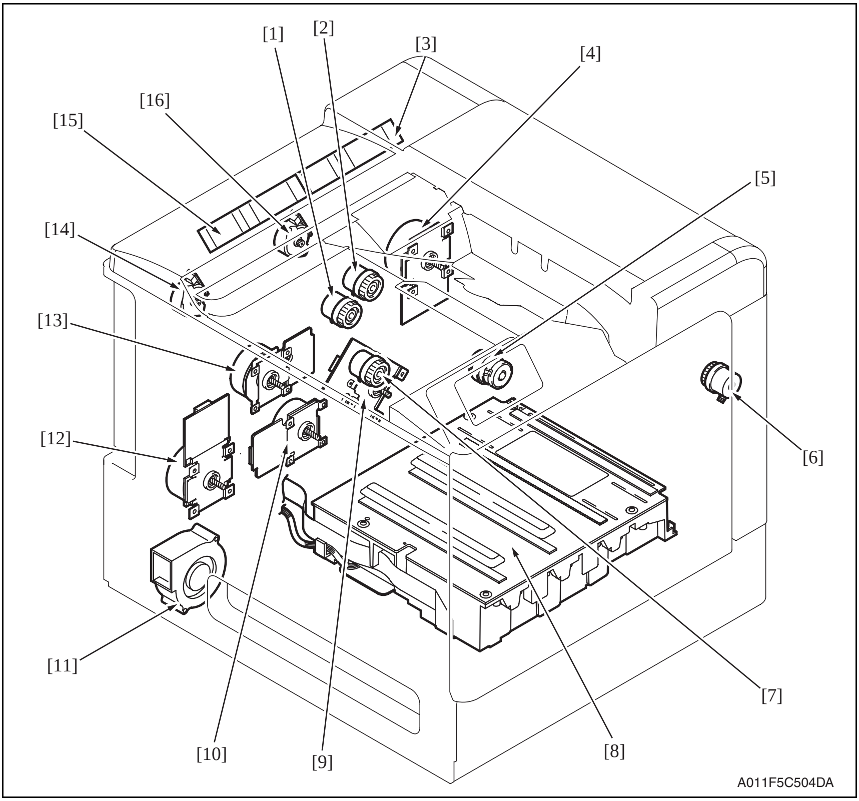
Appendix

17. Parts layout drawing

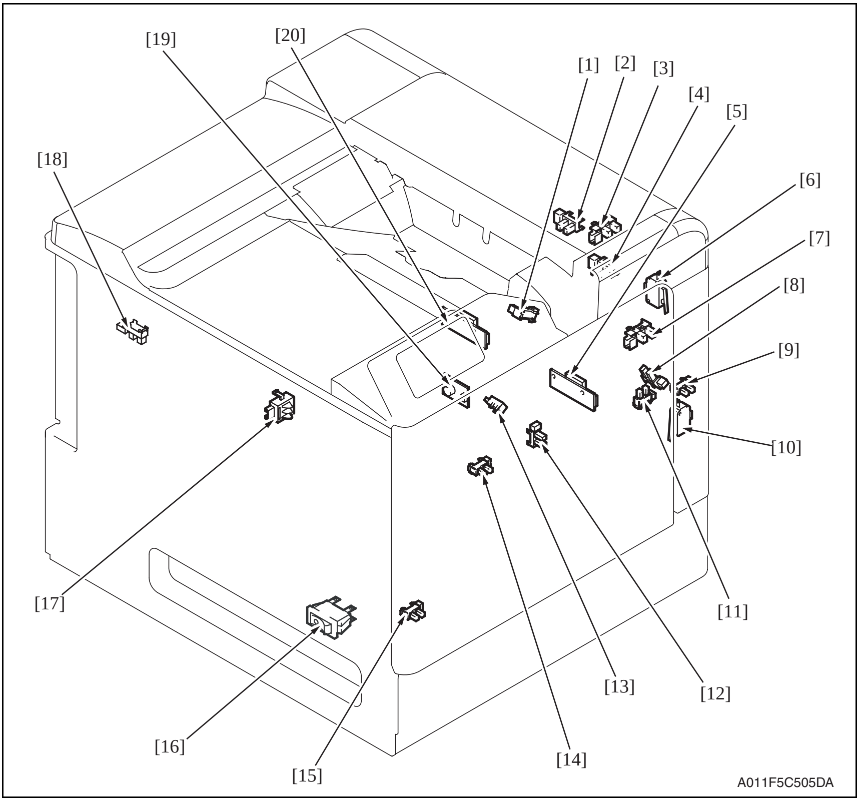
17.1 Main body



[1]	Print control board (PRCB)	[5]	High voltage unit /2 (HV2)
[2]	DC power supply (DCPU)	[6]	High voltage unit /1 (HV1)
[3]	Operation board (OB)	[7]	MFP board fan motor (FM5)
[4]	Toner level sensor board (TLSB)	[8]	MFP board (MFPB)

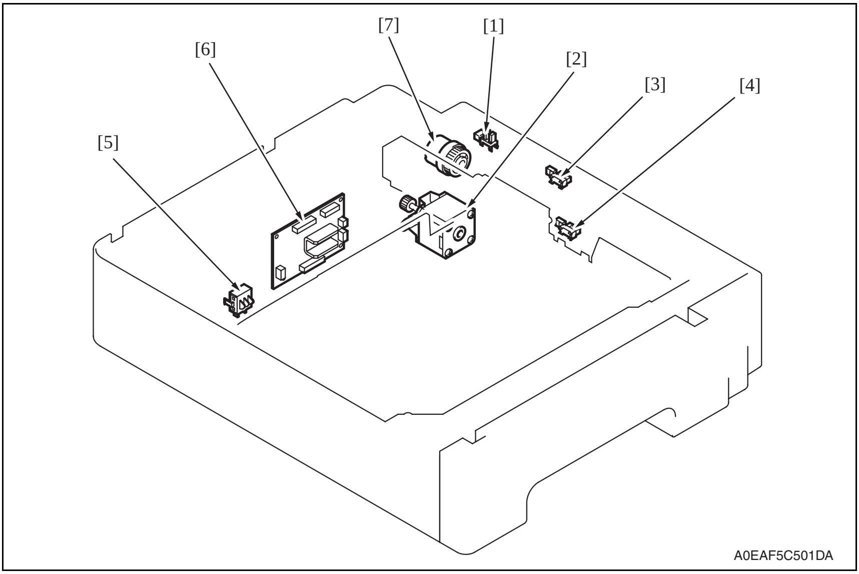


[1] Media feed clutch/1 (CL1)
[2] Media feed clutch/2 (CL3)
[3] Fusing fan motor (FM2)
[4] Fusing motor (M4)
[5] Registration roller clutch (CL2)
[6] Pressure/retraction clutch/2 (CL5)
[7] Pressure/retraction clutch/1 (CL4)
[8] PH unit
[9] Intermediate transport motor (M3)
[10] Developing motor/K (M5)
[11] Ozone ventilation fan motor (FM3)
[12] Developing motor/Y,M,C (M1)
[13] Color PC drum motor (M2)
[14] Toner supply motor/Y,M (M6)
[15] DC power supply fan motor (FM1)
[16] Toner supply motor/C,K (M7)



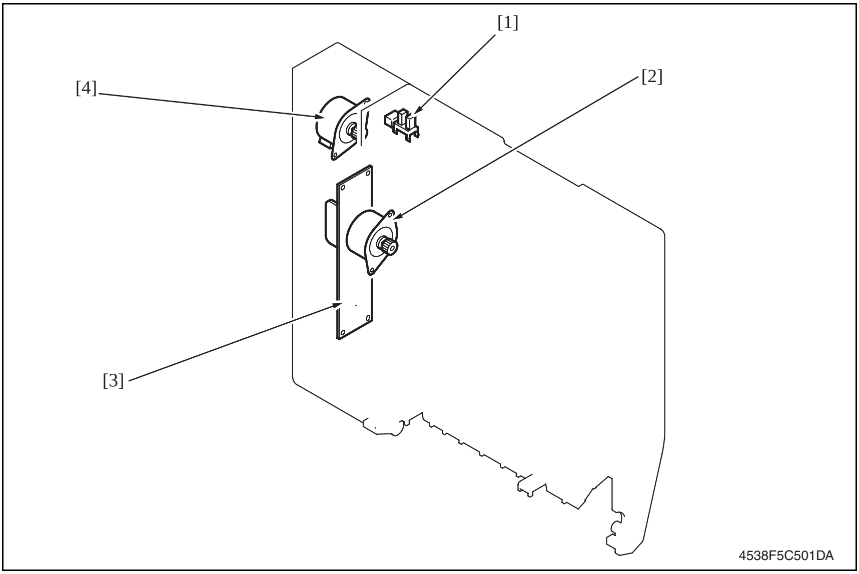
[1]	Media loop sensor (PS6)	[11]	Door Sensor/Fr (PS14)
[2]	Fusing media size sensor (PS15)	[12]	Registration sensor (PS4)
[3]	Media full sensor (PS12)	[13]	OHP sensor (PC7)
[4]	Media empty sensor /2 (PS3)	[14]	Media empty sensor/1 (PS1)
[5]	IDC sensor board/Fr (IDCSB/F)	[15]	Waste toner sensor (PS11)
[6]	Safety switch/Fr (S2)	[16]	Power switch (S1)
[7]	Exit sensor (PS8)	[17]	Tray 2 switch (S5)
[8]	Retraction position Sensor/2 (PS10)	[18]	Retraction position sensor/1 (PS9)
[9]	Door sensor/Rt (PS13)	[19]	Temperature/ humidity sensor (TEM/HUMS)
[10]	Safety switch/Rt (S3)	[20]	IDC sensor board/Re (IDCSB/R)

17.2 Lower feeder unit (option)



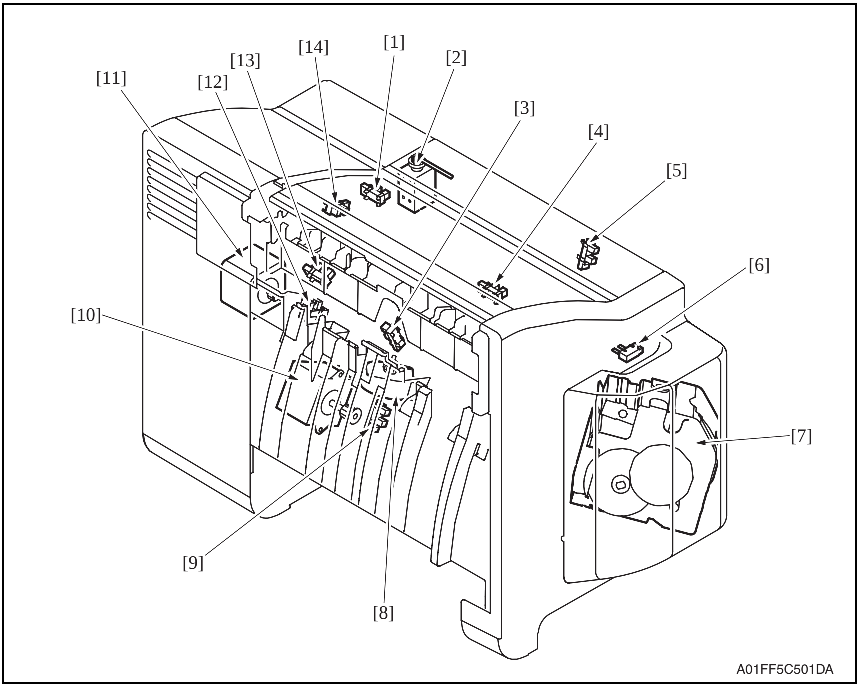
[1]	Right door switch (MS1)	[5]	Media size switch (MS2)
[2]	Transfer motor (M1)	[6]	PC control board (PCCB)
[3]	Media feed sensor (PS2)	[7]	Media feed clutch (CL1)
[4]	Media empty sensor (PS1)		

17.3 Duplex option (option)

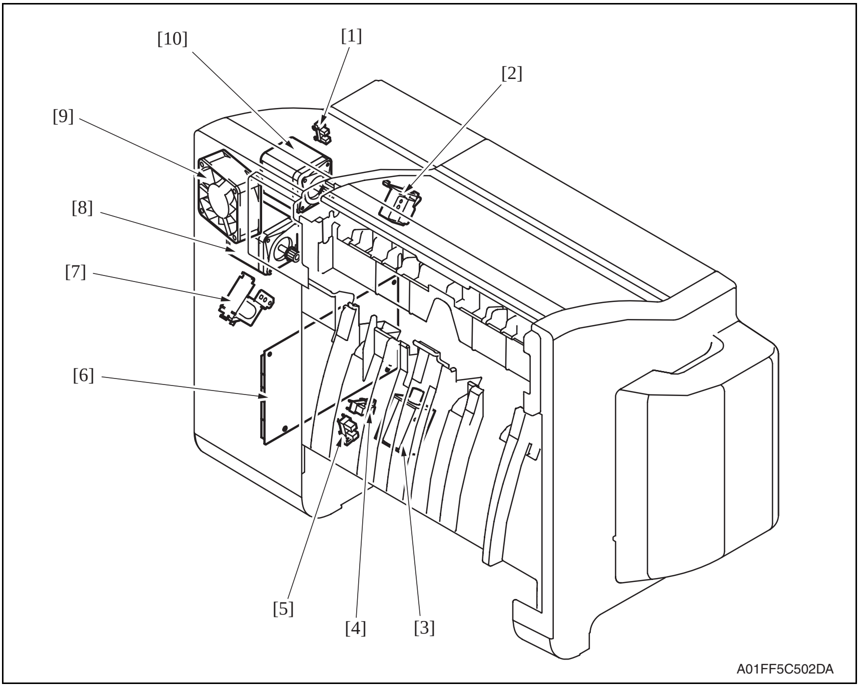


[1]	Door sensor (PC1)	[3]	AD control board (ADCB)
[2]	Transport motor (M1)	[4]	Reverse motor (M2)

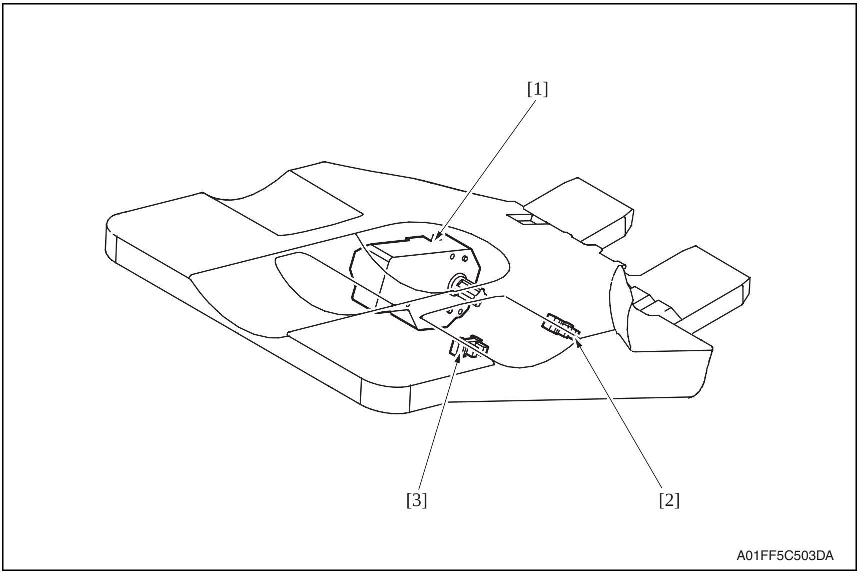
17.4 Staple finisher (option)



[1]	Finisher cover sensor (PS3)	[8]	Align motor (M2)
[2]	Entrance solenoid (SL1)	[9]	Storage section sensor (PS7)
[3]	Media ejector sensor (PS5)	[10]	Media ejector motor (M1)
[4]	Transport section sensor (PS2)	[11]	Exit roller up/down motor (M5)
[5]	Entrance sensor (PS1)	[12]	Aligning plate home position sensor (PS6)
[6]	Stapler cover switch (MS1)	[13]	Exit roller sensor (PS8)
[7]	Staple unit	[14]	Media full sensor (PS4)



[1]	Aligning belt sensor (PS11)	[6]	FS control board (FSCB)
[2]	Aligning belt up/down solenoid (SL3)	[7]	Paddle solenoid (SL4)
[3]	Media level lever solenoid (SL2)	[8]	Exit motor (M4)
[4]	Media level sensor/2 (PS10)	[9]	Fan motor (FM1)
[5]	Media level sensor/1 (PS9)	[10]	Transport motor (M3)



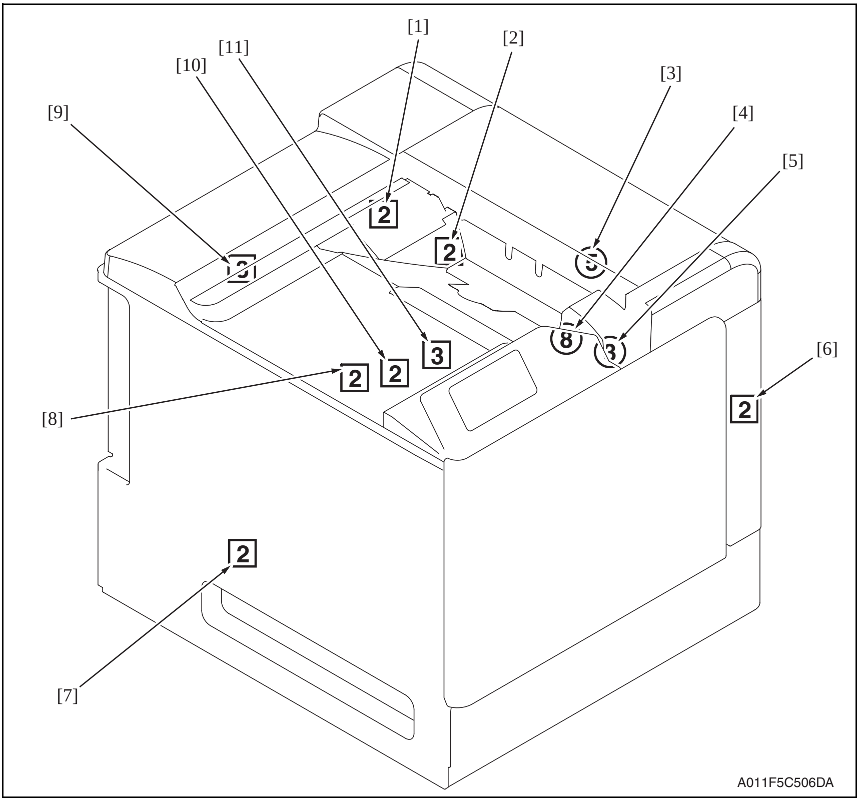
[1]	Tray up/down motor (M6)	[3]	Tray lower sensor (PS13)
[2]	Tray upper sensor (PS12)		

18. Connector layout drawing

Description

Number of pin → ① Possible to confirm by removing external cover.

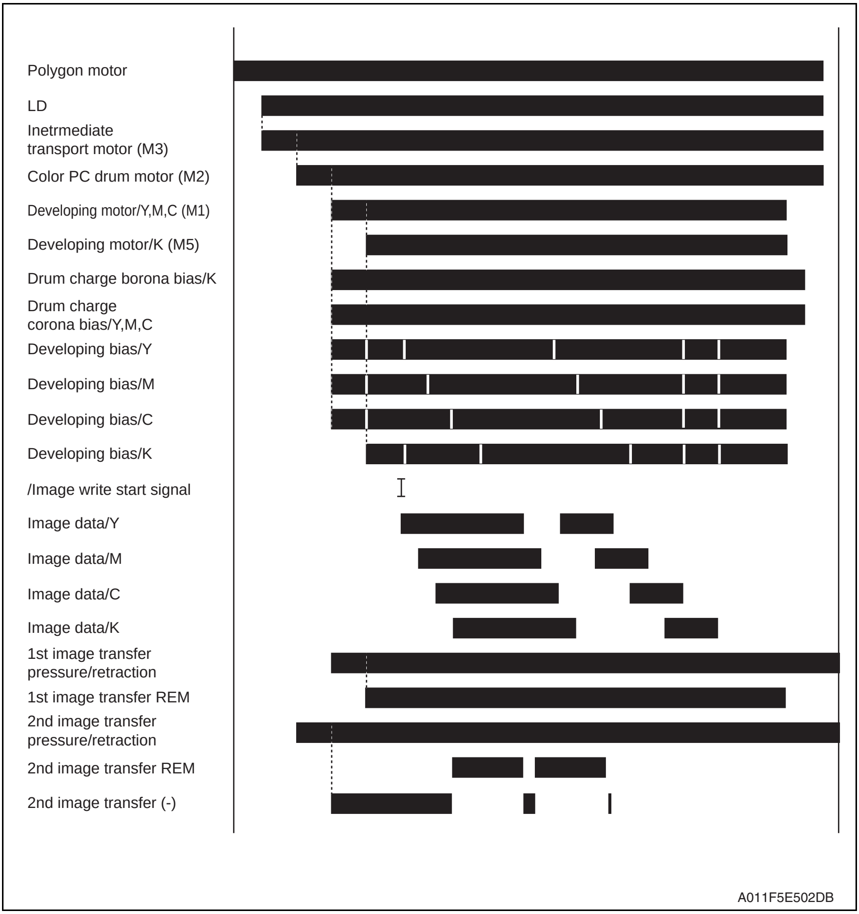
→ $\boxed{1}$ Not possible to confirm by removing external cover.



No.	CN No.	Location	No.	CN No.	Location
[1]	CN16	C-3	[7]	CN31	C-7
[2]	CN26	C-1	[8]	CN12	H-6
[3]	CN15	H-5 to 6	[9]	CN27	C-2
[4]	CN19	H-1 to 2	[10]	CN11	H-6
[5]	CN28	C-2	[11]	CN13	H-6
[6]	CN17	H-7			

19. Timing chart

Color A4 2-print



KONICA MINOLTA

SERVICE MANUAL FIELD SERVICE

Lower Feeder Unit

2008.04

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. Ver. 1.0

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 specific section revised within text, △1 is shown at the left margin of the corresponding revised section.
  The number inside △1 represents the number of times the revision has been made.

- To indicate clearly a specific page that contains a revision or revisions, the page number appearing at the left or right bottom of the specific page is marked with ▲1 .
  The number inside ▲1 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.

2008/04	1.0	—	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

CONTENTS

Lower feeder unit

General

Maintenance

Adjustment/Setting

Troubleshooting

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General

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	• 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 5 V ± 5%
Max. Power Consumption	16 W
Dimensions	448 mm (W) × 520 mm (D) × 111.5 mm (H) 17.6 inch (W) × 4.4 inch (D) × 20.5 inch (H)
Weight	Approx. 6.5 kg (14.25 lb)

D. Operating environment

Temperature	10° to 30° 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. Periodic check

2.1 Maintenance procedure (periodic parts check)

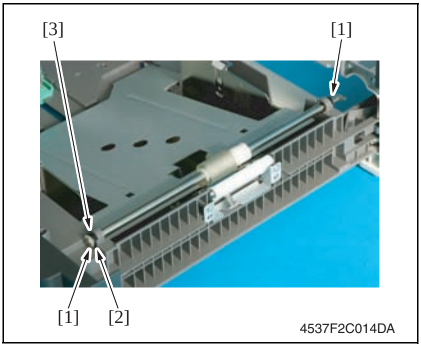
2.1.1 Replacing the feed roller

A. Periodically replacing parts/cycle

- Feed roller: Every 300,000 prints

B. Procedure

1. Slide out tray 1.
2. Lock the media lift plate.



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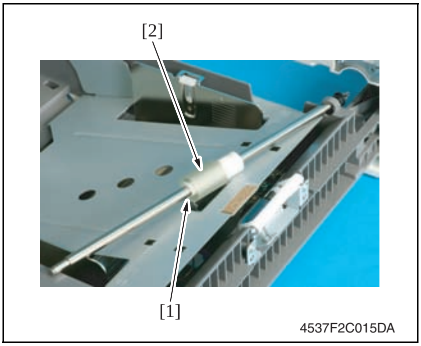
3. Snap off two C-rings [1].
4. Remove the washer [2] and the bearing [3] at the front.



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5. Snap off the C-ring [1] and remove the feed roller [2].

3. Other

3.1 Disassembly/adjustment prohibited items

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/assembly list (other parts)

A. Disassembly/assembly parts list

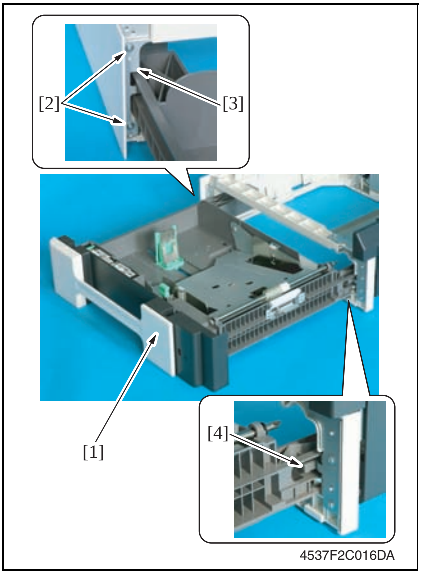
No	Section	Part name	Ref. page
1	Exterior parts	Tray	P.6
2	Board and etc.	PC control board (PCCB)	P.6
3	Others	Media feed clutch (CL1)	P.8
4		Transport motor (M1)	P.11

B. Cleaning parts list

No	Section	Part name	Ref. page
1	Media feed section	Feed roller	P.12

3.3 Disassembly/assembly procedure

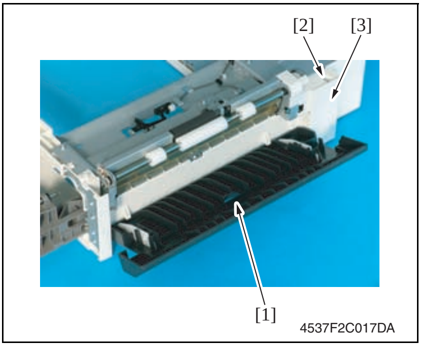
3.3.1 Tray



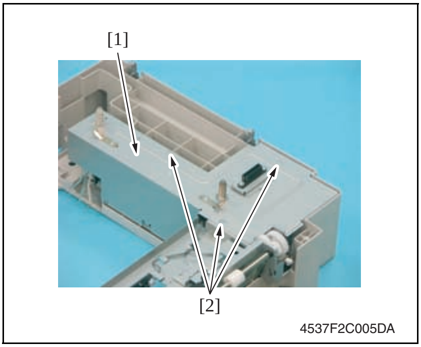
1. Slide out the tray [1].
2. Remove two screws [2], and remove the stopper [3].
3. Pressing the tab [4], remove the tray [1].

3.3.2 PC control board (PCCB)

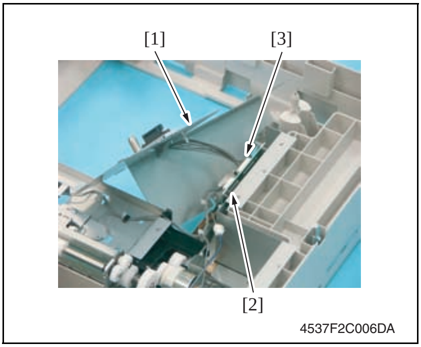
1. Remove the lower feeder unit from the machine.
2. Slide out the tray.



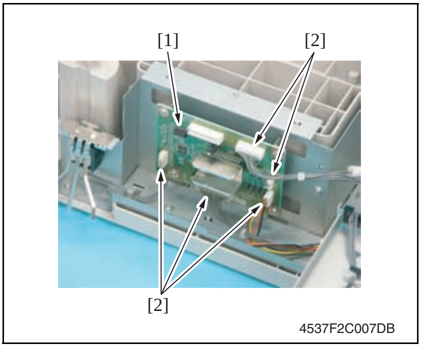
3. Open the lower feeder unit right door [1].
4. Remove screw [2] and the gear cover [3].



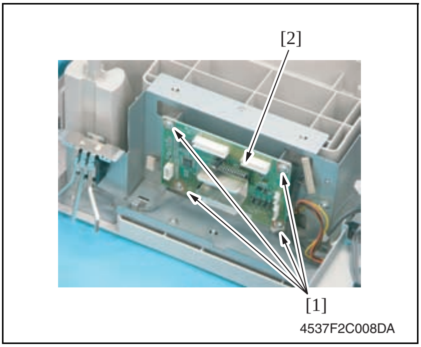
5. Remove three screws [2] from the PWB protective cover [1].



6. Slightly raise the PWB protective cover [1] and, at the same time, disconnect the connector [3] from the PC control board [2].
7. Remove the PWB protective cover [1].



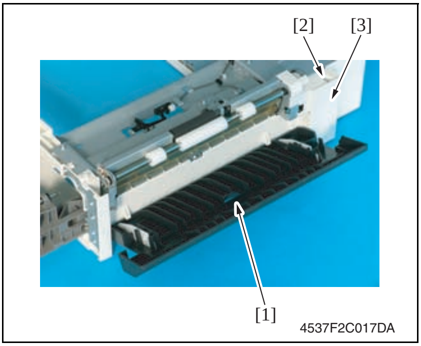
8. Disconnect all connectors [2] from the PC control board [1].



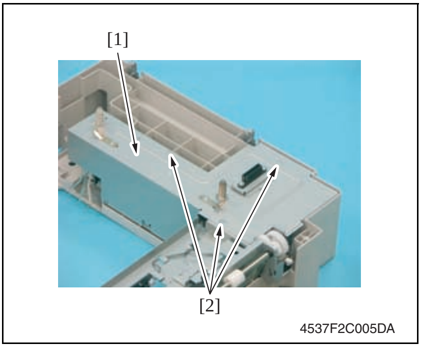
9. Remove four screws [1] and the PC control board [2].

3.3.3 Media feed clutch (CL1)

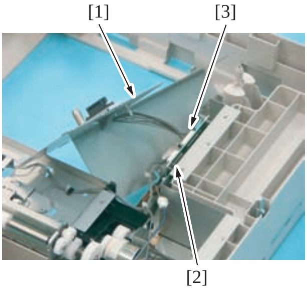
1. Remove the lower feeder unit from the machine.
2. Slide out the tray.



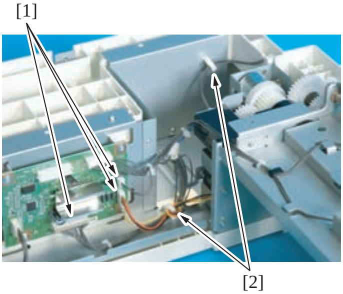
3. Open the lower feeder unit right door [1].
4. Remove screw [2] and the gear cover [3].



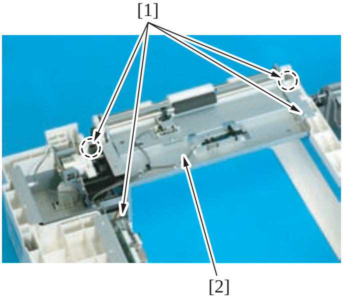
5. Remove three screws [2] from the PWB protective cover [1].



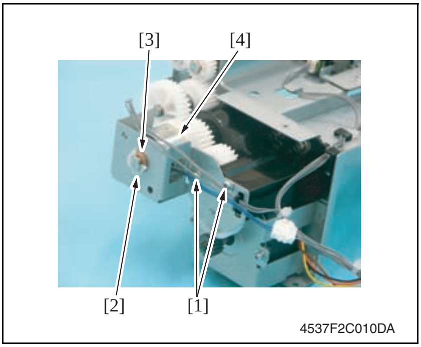
6. Slightly raise the PWB protective cover [1] and, at the same time, disconnect the connector [3] from the PC control board [2].
7. Remove the PWB protective cover [1].



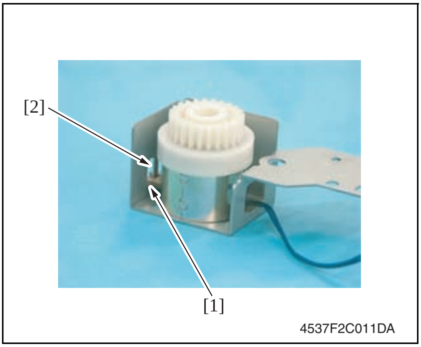
8. Disconnect three connectors [1], and remove the harness from two wire saddles [2].



9. Remove four screws [1], and remove the media feed drive assy [2].



10. Remove two screws [1], snap off the C-ring [2] and bearing [3], and remove the media feed clutch [4].

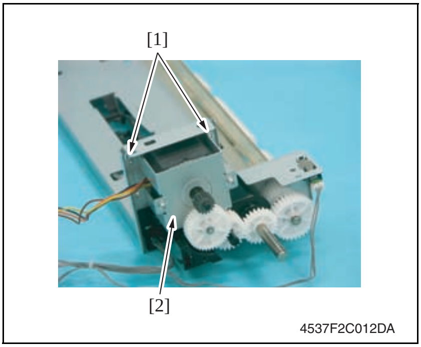


NOTE

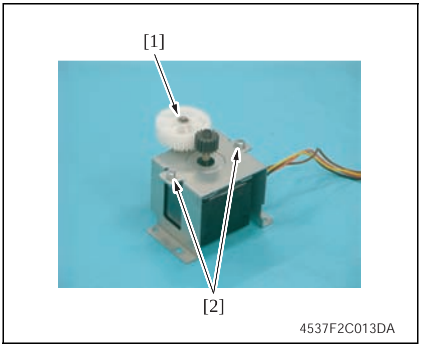
- **When reinstalling the media feed clutch, make sure that the protrusion [1] on the media feed clutch fits into the locking slot [2].**

3.3.4 Transport motor (M1)

1. Remove the media feed drive assy and media feed clutch.
   See P.8



2. Remove two screws [1] and the transport motor assy [2].



3. Remove the gear [1].
4. Remove two screws [2] and the transport motor.

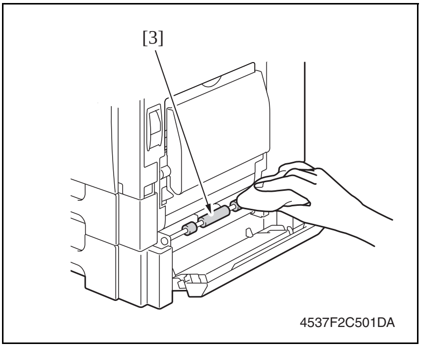
3.4 Cleaning procedure

NOTE

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

3.4.1 Feed roller

1. Open the lower feeder unit right door.



2. Wipe the feed roller [1] clean of dirt using a cleaning pad dampened with alcohol.

Adjustment/Setting

4. How to use the adjustment 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**

- **Be sure 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 fusing 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.**

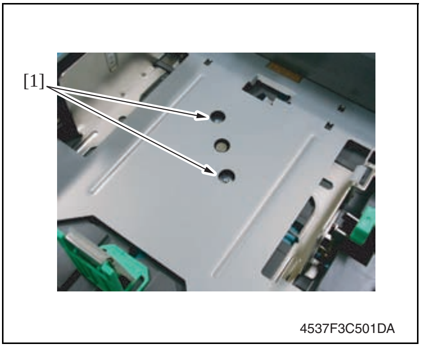
5. Mechanical adjustment

5.1 Registration adjustment

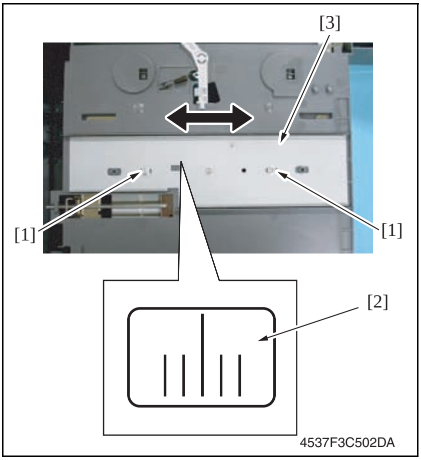
NOTE

- **Make this adjustment after any of the following procedures has been performed. When the printed image deviates in the CD direction.**

1. Remove the tray.



2. Loosen two screws [1].



3. Loosen two screws [1].

4. Watching the graduations [2] on the adjusting plate, move the edge guide plate [3] as necessary.

Adjustment range: ± **2.0 mm**

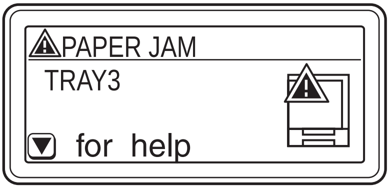
5. Tighten the four screws that have been loosened, and mount the tray.

Troubleshooting

6. Jam display

6.1 Misfeed display

- When a media misfeed occurs, a message is displayed on the control panel.



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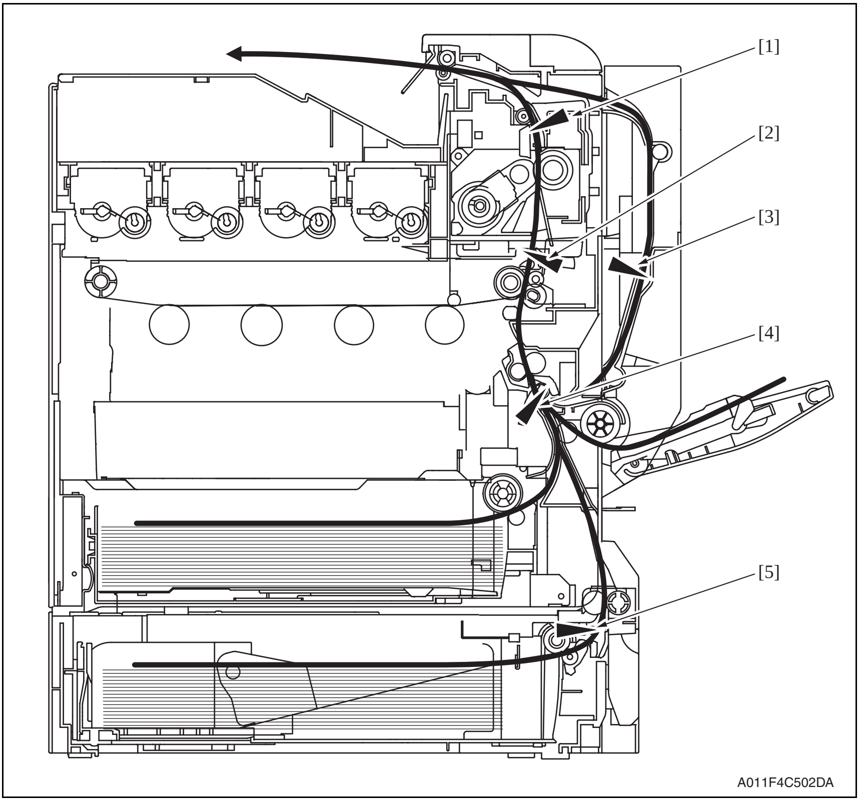
Display		Misfeed location	Misfeed clearing location	Ref. page
LCD1	LCD2			
PAPER JAM	TRAY 3	• Tray 3 media feed section	Tray 3	P.18
		• Vertical transport section	Tray 3 right door	P.19
PAPER JAM	TRAY 4	• Tray 4 media feed section	Tray 4	P.18
		• Vertical transport section	Tray 4 right door	P.19

6.2 Misfeed display resetting procedure

- Open the relevant door, clear the sheet of misfed media, and close the door.

6.3 Sensor layout

- For a system equipped with a lower feeder unit and a duplex option.



[1]	Exit sensor	PS8	[4]	Registration sensor	PS4
[2]	Media loop sensor	PS6	[5]	Media feed sensor (Lower feeder unit)	PS2
[3]	Sensor on AD control board	ADCB			

6.4 Solution

6.4.1 Initial check items

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

Check Item	Action
Does the media meet product specifications?	Change the media.
Is the media curled, wavy, or damp.	Change the media. Instruct the user in correct media storage requirements.
Is a foreign object present along the media path, or is the media path deformed or worn?	Clean or change the media path.
Are the Media Separator Fingers dirty, deformed, or worn?	Clean or change the defective Media Separator Finger.
Are the rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.
Are the Edge Guide and Trailing Edge Stop at the correct position to accommodate media?	Set as necessary.
Are the actuators found operational as checked for correct operation?	Correct or change the defective actuator.

6.4.2 Misfeed at the tray 3/ tray 4 media feed section

A. Detection timing

Type	Description
Detection of misfeed at tray 3/ tray 4 media feed section	The media does not block the media feed sensor (PS2) even after the lapse of a given period of time after the media feed clutch (CL1) has turned ON.
Detection of media left at tray 3/ tray 4 media feed section	The media feed sensor (PS2) is not blocked when the main 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 (PS2) Media feed clutch (CL1) Transport motor (M1)	PC control board (PCCB) Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	—	—
2	PS2 sensor check	PCCB PJ5-6 (ON)	B to C-4
3	CL1 operation check	PCCB PJ6-2 (REM)	B to C-5
4	M1 operation check	PCCB PJ3-1 to 4	B to C-5
5	Change PCCB.	—	—
6	Change PRCB.	—	—

6.4.3 Misfeed at the tray 3/ tray 4 vertical transport section

A. Detection timing

Type	Description
Detection of misfeed at tray 3 vertical transport section	The media does not block the registration sensor (PS4) even after the lapse of a given period of time after it has blocked the media feed sensor (PS2).
	The media does not unblock the media feed sensor (PS2) even after the lapse of a given period of time after it has blocked the media feed sensor (PS2).
Detection of misfeed at tray 4 vertical transport section	The media does not block the media feed sensor (PS2) of tray 3 even after the lapse of a given period of time after it has blocked the media feed sensor (PS2).
	The media does not unblock the media feed sensor (PS2) even after the lapse of a given period of time after it has blocked the media feed sensor (PS2).

B. Action

Relevant electrical parts	
Media feed sensor (PS2) Registration sensor (PS4) Transport motor (M1)	PC control board (PCCB) Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	—	—
2	PS2 sensor check	PCCB PJ5-6 (ON)	B to C-4
3	PS4 sensor check	PRCB PJ15-3 (ON)	C-3 (main body)
4	M1 operation check	PCCB PJ3-1 to 4	B to C-5
5	Change PCCB.	—	—
6	Change PRCB.	—	—

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KONICA MINOLTA

SERVICE MANUAL

FIELD SERVICE

Duplex Option

2008.04

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. Ver. 1.0

Revision history

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2008/04	1.0	—	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

CONTENTS

Duplex option

General

Maintenance

Troubleshooting

Blank Page

General

1. Product specifications

A. Type

Name	Duplex unit
Type	Switchback and circulating duplex unit
Installation	Mounted on the right side door of main body
Reversing system	Exit roller switchback
Transfer system	Rubber roller + driven rolls
Document alignment	Center

B. Media type

Media size	B5/A4S/LetterS/Legal
Media type	• Plain paper: 60 to 90 g/m^2 (16 to 24 lb) • Recycled paper: 60 to 90 g/m^2 (16 to 24 lb)

C. Machine specifications

Power requirements	DC 24 V ± 10% (supplied from the main body)
	DC 5 V ± 5% (supplied from the main body)
Max. power consumption	35 W
Dimensions	394 mm (W) × 320 mm (D) × 58 mm (H) 15.5 inch (W) × 12.6 inch (D) × 2.3 inch (H)
Weight	Approx. 1.8 kg (4.0 lb)

D. Operating environment

Temperature	10° C to 30° C/50° F to 86° 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. Other

2.1 Disassembly/adjustment prohibited items

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.**

2.2 Disassembly/assembly list (other parts)

2.2.1 Disassembly/assembly parts list

No	Section	Part name	Ref. page
1	—	Duplex option	P.5
2	Exterior parts	Right cover	P.6
3	Board and etc.	AD control board (ADCB)	P.6
4	Others	Transport motor (M1)	P.7
5		Reverse motor (M2)	P.7

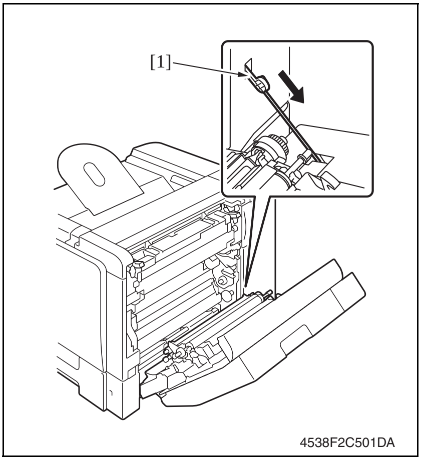
2.2.2 Cleaning parts list

No	Section	Part name	Ref. page
1	Media feed section	Feed roller	P.8

2.3 Disassembly/assembly procedure

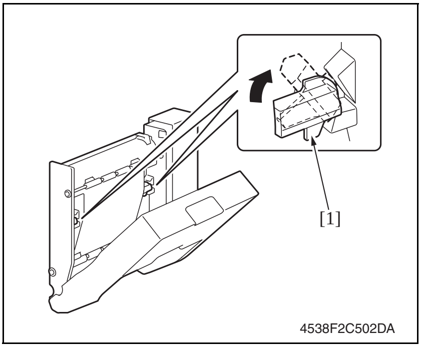
2.3.1 Duplex option

1. Open the right door.

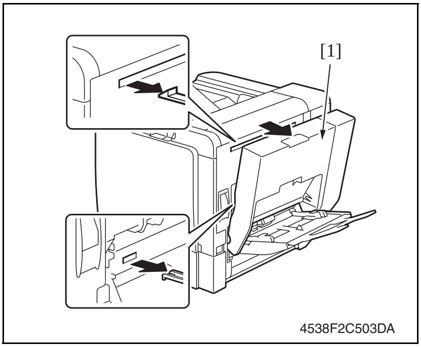


2. Remove the support wire [1] from the machine.

3. Close the right door.
4. Open the duplex cover.



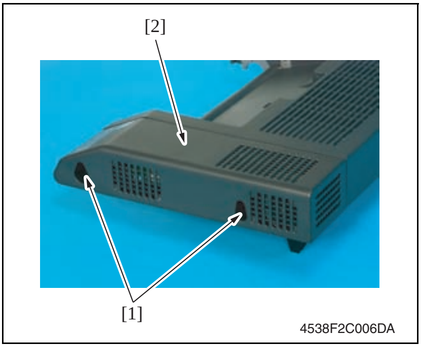
5. Turn the two locking knobs [1] to unlock the duplex option.



6. Remove the duplex option [1].

2.3.2 Right cover

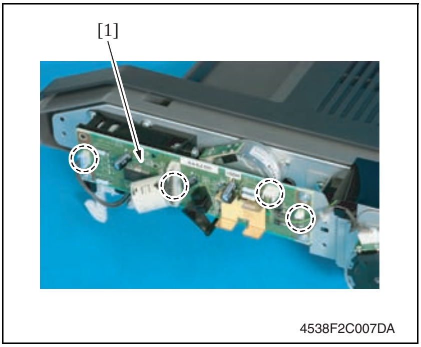
1. Remove the duplex option.
   See P.5



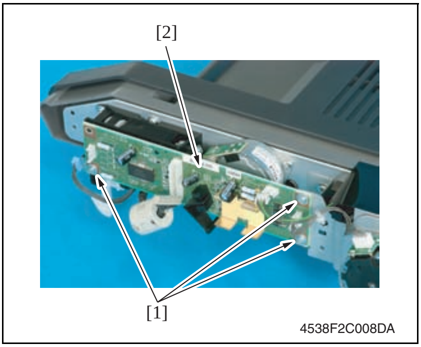
2. Remove two screws [1] and the right cover [2].

2.3.3 AD control board (ADCB)

1. Remove the right cover.
   See P.6



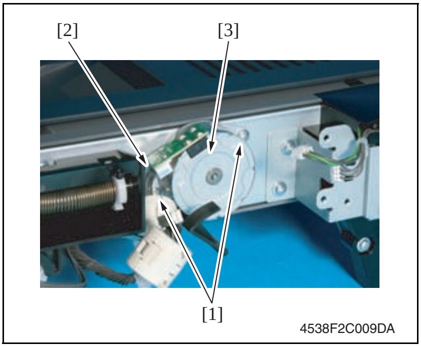
2. Disconnect all connectors from the AD control board [1].



3. Remove three screws [1] and the AD control board [2].

2.3.4 Transport motor (M1)

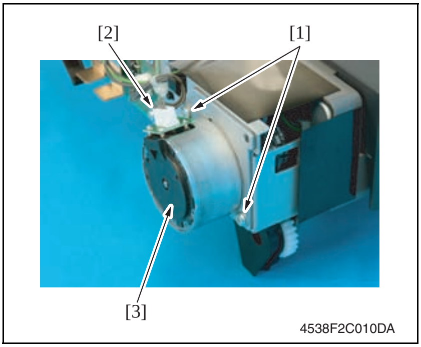
1. Remove the AD control board.
   See P.6



2. Remove two screws [1], disconnect the connector [2], and remove the transport motor [3].

2.3.5 Reverse motor (M2)

1. Remove the right cover.
   See P.6



2. Remove two screws [1], disconnect the connector [2], and remove the reverse motor [3].

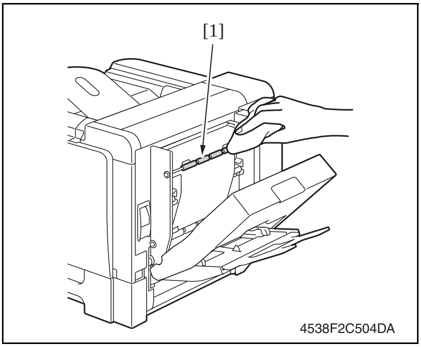
2.4 Cleaning procedure

NOTE

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

2.4.1 Feed roller

1. Open the duplex door.



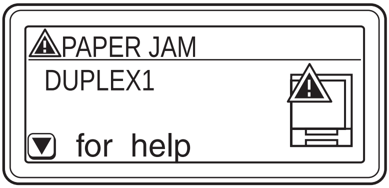
2. Using a cleaning pad dampened with alcohol, wipe the feed rollers [1] clean of dirt.

Troubleshooting

3. Jam display

3.1 Misfeed display

- When a media misfeed occurs, a message is displayed on the Control Panel.



PAPER JAM
DUPLEX1
for help

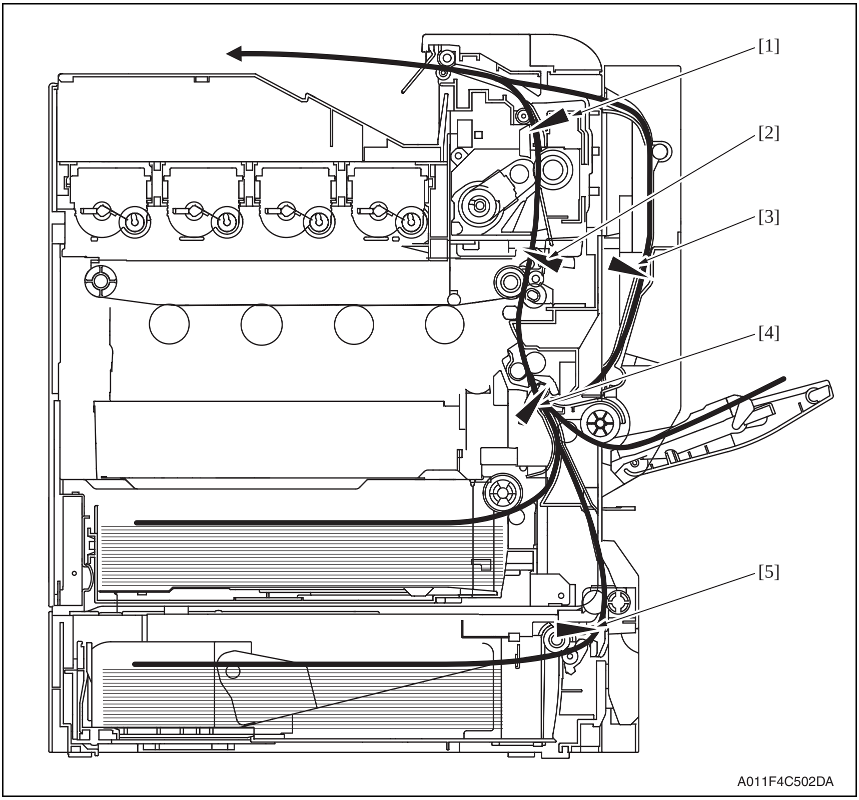
4538F4E502DA

Display		Misfeed location	Misfeed clearing location	Ref. page
LCD1	LCD2			
PAPER JAM	DUPLEX 1	• Duplex option media transport section	Duplex option door	P.13
PAPER JAM	DUPLEX 2	• Duplex option media feed section		P.12

3.2 Misfeed display resetting procedure

- Open the relevant door, clear the sheet of misfed media, and close the door.

3.3 Sensor layout



[1]	Exit sensor	PS8	[4]	Registration sensor	PS4
[2]	Media loop sensor	PS6	[5]	Media feed sensor (Lower feeder unit)	PS2
[3]	Sensor on AD control board	ADCB			

3.4 Solution

3.4.1 Initial check items

- When a media misfeed occurs, first make checks of the following initial check items.

Check Item	Action
Does media meet product specifications?	Change media.
Is media curled, wavy, or damp.	Change media. Instruct user in correct media storage.
Is a foreign object present along the media path, or is the media path deformed or worn?	Clean or change the media path.
Are the Media Separator Fingers dirty, deformed, or worn?	Clean or change the defective Media Separator Finger.
Are rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.
Are the Edge Guide and Trailing Edge Stop at correct position to accommodate media?	Set as necessary.
Are actuators found operational as checked for correct operation?	Correct or change the defective actuator.

3.4.2 Misfeed at duplex option media transport section

A. Detection timing

Type	Description
Detection of misfeed at duplex option media transport section	The sensor on the AD control board (ADCB) is not blocked even after the lapse of a given period of time after it has been unblocked.
	The media does not unblock the registration sensor (PS4) even after the lapse of a given period of time after the sensor on the AD control board (ADCB) has been unblocked.
Detection of media left at duplex option media transport section	The sensor on the AD control board (ADCB) is unblocked when the main 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	
Transport motor (M1) Reverse motor (M2)	AD control board (ADCB) Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	—	—
2	Sensor check on the ADCB	ADCB PJ1-12	D-3 to 4
3	M1 operation check	ADCB PJ2-1 to 4	C-4 to 5
4	M2 operation check	ADCB PJ3-1 to 4	F to G-4
5	Change ADCB.	—	—
6	Change PRCB.	—	—

3.4.3 Misfeed at duplex option media feed section

A. Detection timing

Type	Description
Detection of misfeed at duplex option media feed section	The media does not unblock the registration sensor (PS4) even after the lapse of a given period of time after the media feed sequence has been started at the duplex option.

B. Action

Relevant Electrical Parts	
Registration sensor (PS4) Transport motor (M1)	AD control board (ADCB) Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	—	—
2	PS4 sensor check	PRCB PJ15-3 (ON)	C-3 (main body)
3	M1 operation check	ADCB PJ2-1 to 4	C-4 to 5
4	Change ADCB.	—	—
5	Change PRCB.	—	—

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KONICA MINOLTA

SERVICE MANUAL

FIELD SERVICE

Staple Finisher

2008.04

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. Ver. 1.0

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2008/04	1.0	—	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

CONTENTS

Staple finisher

General

Maintenance

Troubleshooting

General

1. Product specifications

A. Type

Type	Staple finisher suspended on the main body
Installation	Suspended on the main body
Document alignment	Center
Media ejection system	Face down, Output from the back end
Consumables	Staples

B. Functions

Modes	Sub tray	Sort, group
	Main tray	Sort, group, Sort offset, group offset, Sort stable

C. Media type

(1) Non sort, sort, group

Type	Size	Weight	Max. Capacity (Sub tray, Main tray)	
			8-$^1/_2$ x 11S, A4S or less	Media length: longer than 300 mm
Plain paper Recycled paper	A6S, A5S, B5S, A4S 5-$^1/_2$ x 8-$^1/_2$S, 8-$^1/_2$ x 11S, 8-$^1/_2$ x 14 Max.: 216 mm x 356 mm 8.5 x 14 inch Min.: 92 mm x 148 mm 3.5 x 5.75 inch	60 to 90 g/m^2 16 to 24 lb	Sub: 100 sheets Main: 500 sheets	Sub: 50 sheets Main: 250 sheets
Postcard		-	Sub: 20 sheets Main: 20 sheets	Sub: 20 sheets Main: 20 sheets
Envelope		-		
OHP Film		-		
Glossy paper		-		
Label		-		
Letterhead		-		
Thick paper 1		91 to 150 g/m^2 24.25 to 40 lb		
Thick paper 2		151 to 210 g/m^2 40.25 to 55.75 lb		

(2) Sort offset, group offset

Type	Size	Weight	Max. Capacity (Main tray)	
			8-$^1/_2$ x 11S, A4S or less	Media length: longer than 300 mm
Plain paper Recycled paper	B5S, A4S 8-$^1/_2$ x 11S, 8-$^1/_2$ x 14 Max.: 216 mm x 356 mm 8.5 x 14 inch Min.: 182 mm x 257 mm 7.25 x 10 inch	60 to 90 g/m^2 16 to 24 lb	500 sheets or 50 sets	250 sheets or 25 sets

(3) Sort stable

<Normal mode>

Type	Size	Weight	Max. Capacity (Main tray)		No. of sheets to be stapled
			8-$^{1}/_{2}$ x 11S, A4S or less	Media length: longer than 300 mm	
Plain paper Recycled paper	B5S, A4S 8-$^{1}/_{2}$ x 11S, 8-$^{1}/_{2}$ x 14 Max.: 216 mm x 356 mm 8.5 x 14 inch Min.: 182 mm x 257 mm 7.25 x 10 inch	60 to 90 g/m^2 16 to 24 lb	400 sheets or 40 sets	200 sheets or 20 sets	30 sheets *

*: The number of sheets to be stapled is limited for high-density images.
(Color wise 3: 20 sheets x 20 sets)

<Cover mode>

Type	Size	Weight	Max. Capacity (Main tray)		No. of sheets to be stapled
			8-$^{1}/_{2}$ x 11S, A4S or less	Media length: longer than 300 mm	
Plain paper Recycled paper	B5S, A4S 8-$^{1}/_{2}$ x 11S, 8-$^{1}/_{2}$ x 14 Max.: 216 mm x 356 mm 8.5 x 14 inch Min.: 182 mm x 257 mm 7.25 x 10 inch	60 to 210 g/m^2 16 to 55.75 lb	—	—	28 sheets (2 sheets or less for thick paper)

D. Stapling

Staple filling mode	Dedicated Staple Cartridge (5000 staples)
Staple detection	Available (Near empty: 20 remaining staples)
Stapling position	Rear corner (49 degrees)
Media size	B5S, A4S, 8-$^{1}/_{2}$ x 11S, 8-$^{1}/_{2}$ x 14
Manual staple	None

E. Machine specifications

Power requirements	DC 24 V ± 10% (supplied from the main body)
Max. power consumption	48 W or less
Dimensions	Stapling unit: 475 (W) × 462 (D) × 360 (H) mm 18.75 (W) × 18.25 (H) × 14.25 (D) inch Relay unit: 284 (W) × 394 (D) × 360 (H) mm 11.0 (W) × 15.5 (D) × 14.0 (D) inch
Weight	Stapling unit: 10.0 kg (22 lb) Relay unit: 2.0 kg (4.5 lb) (Excluding items furnished with the unit.)

F. Operating environment

- Conforms to the operating environment of the main body.

NOTE

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

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Maintenance

2. Other

2.1 Disassembly/adjustment prohibited items

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.**

2.2 Disassembly/assembly list (Other parts)

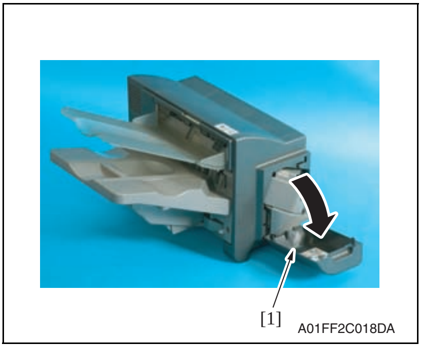
2.2.1 Disassembly/assembly parts list

No	Section	Part name	Ref. page
1	Exterior parts	Front cover	P.7
2		Rear cover	P.8
3		Carry-in entrance upper cover	P.8
4		Right metal plate cover	P.9
5		Sub tray	P.9
6		Main tray	P.9
7	Unit	Stapling unit	P.10
8		Relay unit	P.11
9		Staple finisher	P.13
10	Board and etc.	FS control board (FSCB)	P.13
11	Others	Tray up/down motor assy	P.14
12		Fan motor (FM1)	P.15
13		Transport motor (M3)	P.16
14		Exit motor (M4)	P.17
15		Exit roller up/down motor (M5)	P.18
16		Entrance solenoid (SL1)	P.19

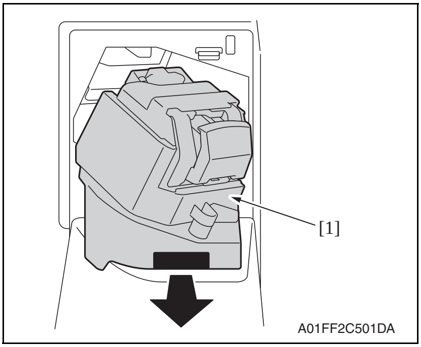
2.3 Disassembly/Assembly procedure

2.3.1 Front cover

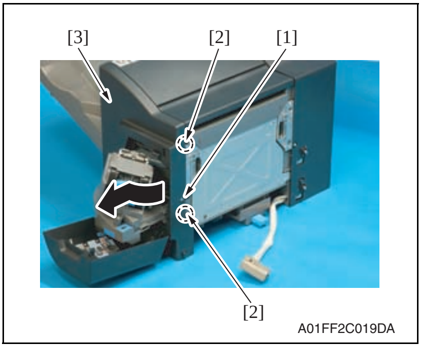
1. Remove the staple finisher.
   See P.13



2. Open the staple cover. [1].



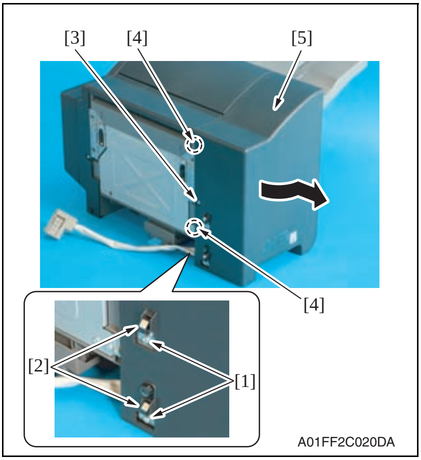
3. Pull out the stapling unit [1].



4. Remove the screw [1].
5. Unhook two tabs [2] and remove the front cover [3].

2.3.2 Rear cover

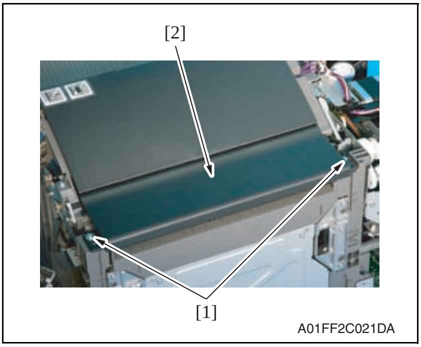
1. Remove the staple finisher.
   See P.13



2. Remove two screws [1] and remove two earth metal plates [2].
3. Remove the screw [3].
4. Unhook two tabs [4] and remove the rear cover [5].

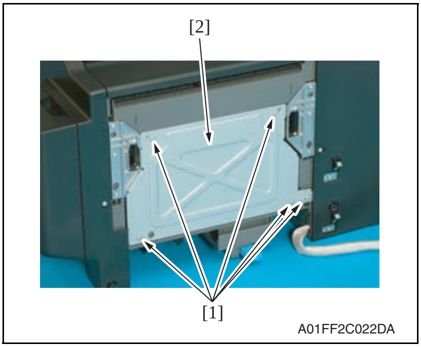
2.3.3 Carry-in entrance upper cover

1. Remove the front cover.
   See P.7
2. Remove the rear cover.
   See P.8



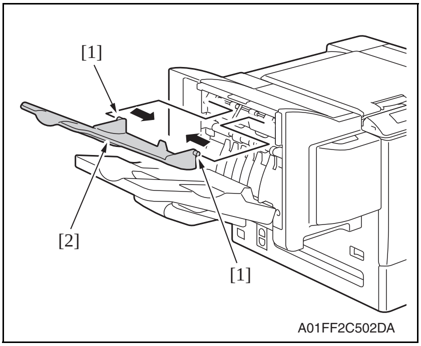
3. Remove two screws [1] and remove the carry-in entrance upper cover [2].

2.3.4 Right metal plate cover



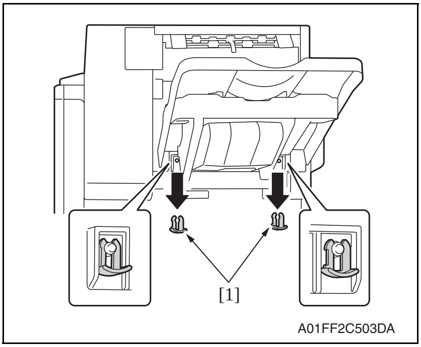
1. Remove five screws [1] and remove the right metal plate cover [2].

2.3.5 Sub tray

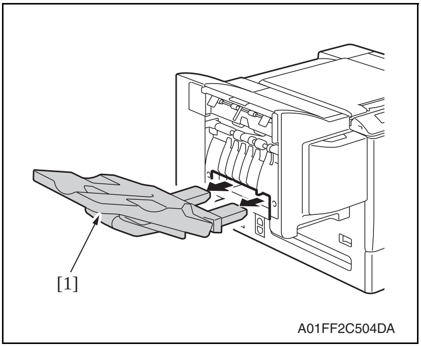


1. Hold two tabs [1] and remove the sub tray [2].

2.3.6 Main tray



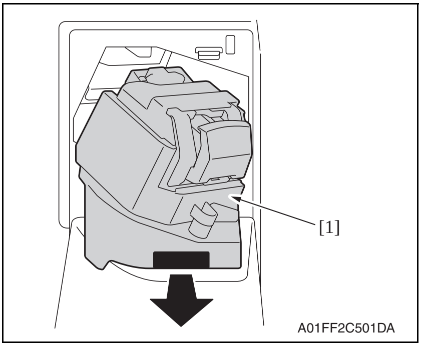
1. Remove two clips [1].



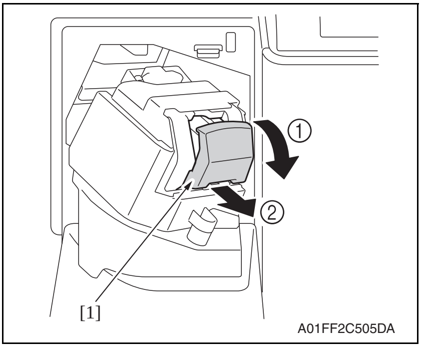
2. Remove the main tray [1].

2.3.7 Stapling unit

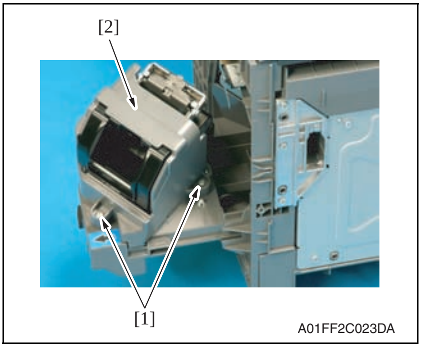
1. Remove the front cover.
   See P.7



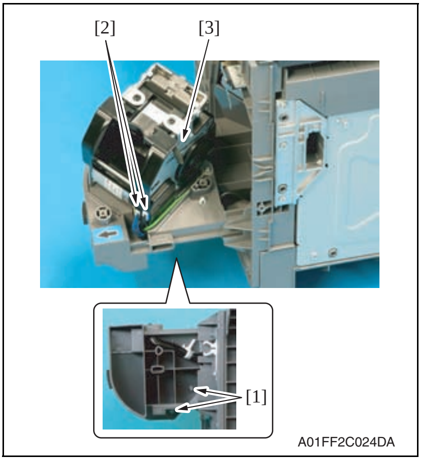
2. Pull out the stapling unit [1].



3. Remove the stapler [1].

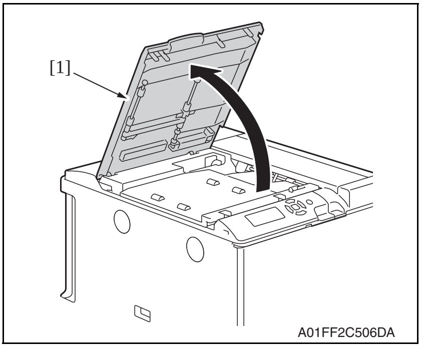


4. Remove two screws [1] and remove the stapling unit cover [2].

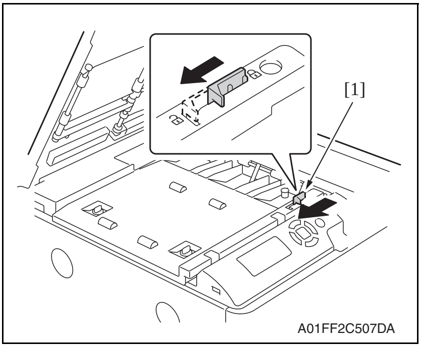


5. Remove two screws [1], disconnect two connectors [2] and remove the stapling unit [3].

2.3.8 Relay unit



1. Open the relay unit cover [1].



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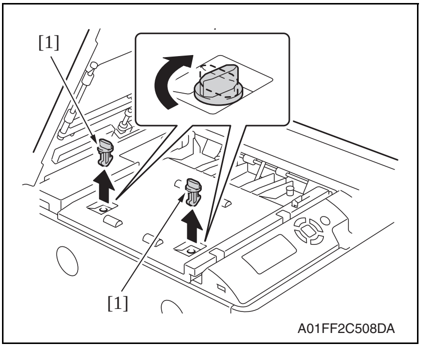
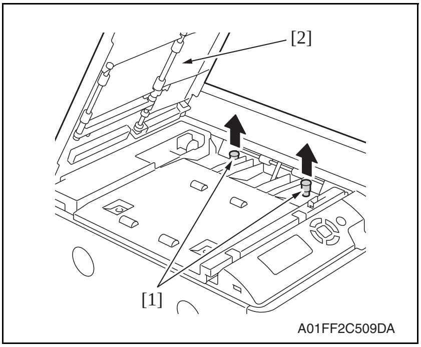
2. Unlock the relay unit lever [1].



A01FF2C508DA

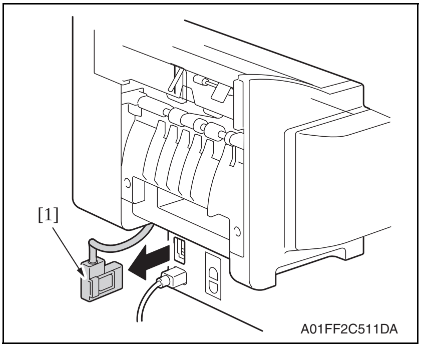
3. Remove two mounting hooks [1].



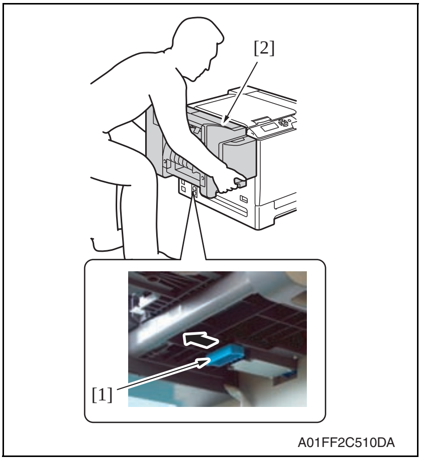
A01FF2C509DA

4. Pull up two fixed pins [1] for unlocking.
5. Remove the relay unit [2].

2.3.9 Staple finisher



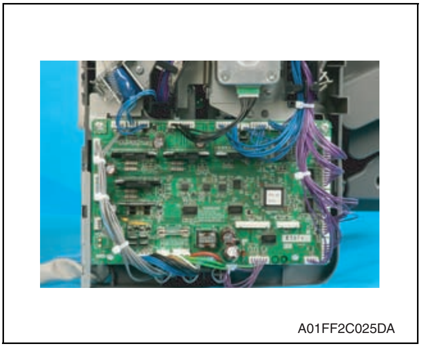
1. Disconnect the connector [1] from the main body.



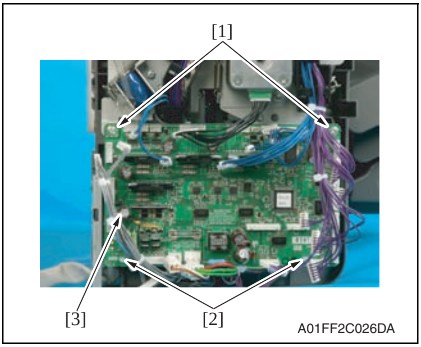
2. Pull the lever [1] and remove the staple finisher [2].

2.3.10 FS control board (FSCB)

1. Remove the rear cover.
   See P.8



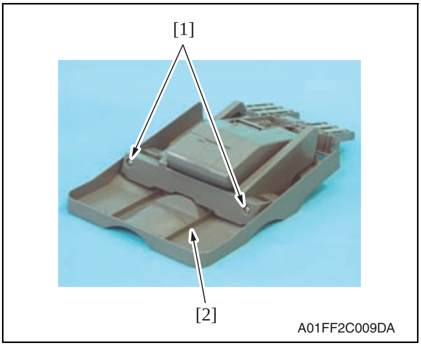
2. Remove all connectors on the FS control board.



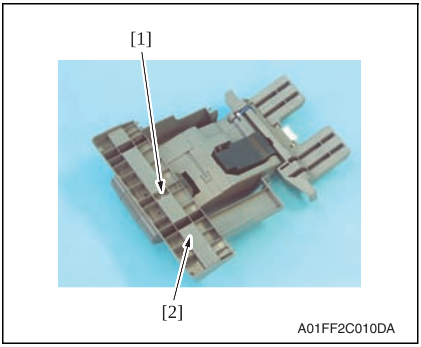
3. Remove two screws [1], remove two card spacers [2], and remove the FS control board [3].

2.3.11 Tray up/down motor assy

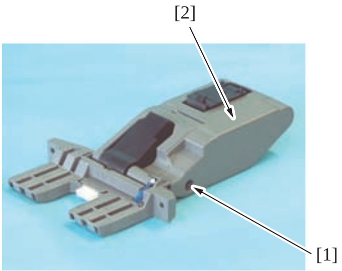
1. Remove the main tray.
   See P.9



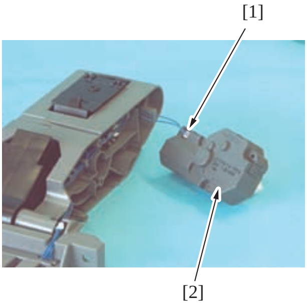
2. Remove two screws [1] and remove the output tray [2].



3. Remove the screw [1] and remove the output tray fixing cover [2].



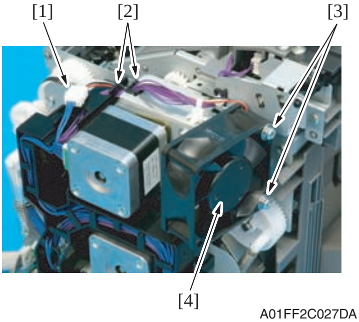
4. Remove the screw [1] and remove the tray up/down motor cover [2].



5. Disconnect the connector [1] and remove the tray up/down motor assy [2].

2.3.12 Fan motor (FM1)

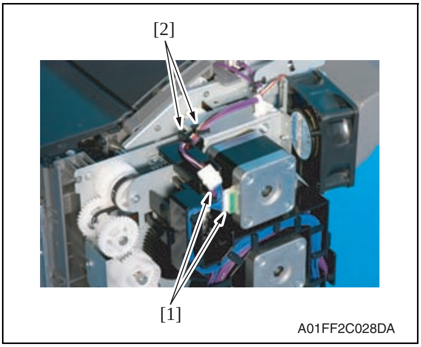
1. Remove the rear cover.
   See P.8



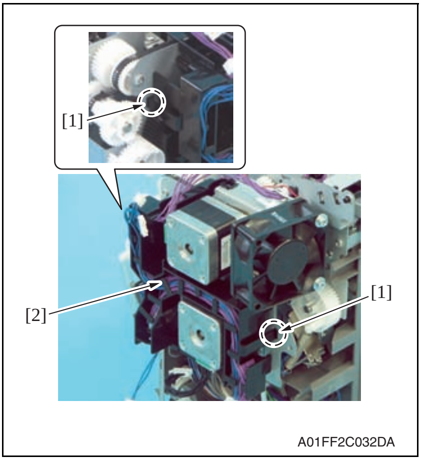
2. Disconnect the connector [1] and remove two wire saddles [2].
3. Remove two screws [3] and remove the fan motor [4].

2.3.13 Transport motor (M3)

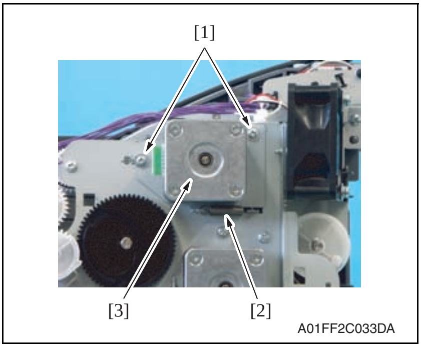
1. Remove the rear cover.
   See P.8
2. Remove the FS control board.
   See P.13



3. Disconnect two connectors [1].
4. Remove the harness from the wire saddle [2].



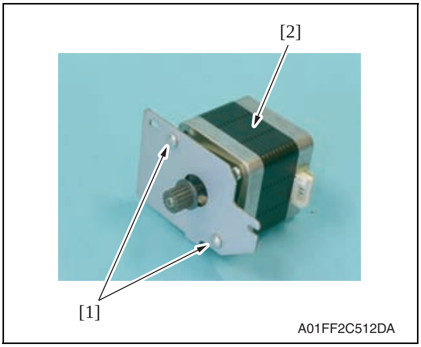
5. Hold down and unhook two tabs [1] and remove the harness guide [2].



6. Remove two screws [1], spring [2] and remove the transport motor assy [3].

NOTE

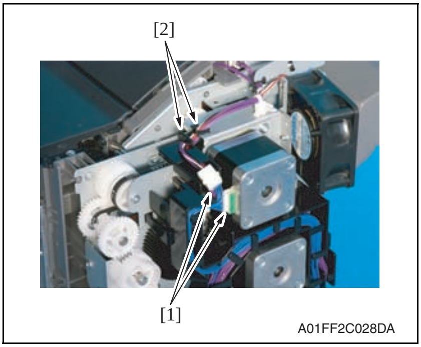
- **To reinstall the transport motor assy, hook the spring first and screw the transport motor assy while the spring is stretched to a certain degree.**



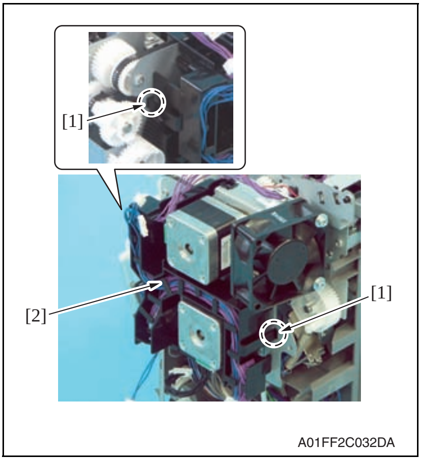
7. Remove two screws [1] and remove the transport motor [2].

2.3.14 Exit motor (M4)

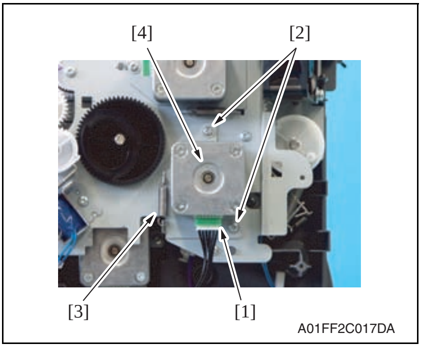
1. Remove the rear cover.
   See P.8
2. Remove the FS control board.
   See P.13



3. Disconnect two connectors [1].
4. Remove the harness from the wire saddle [2].



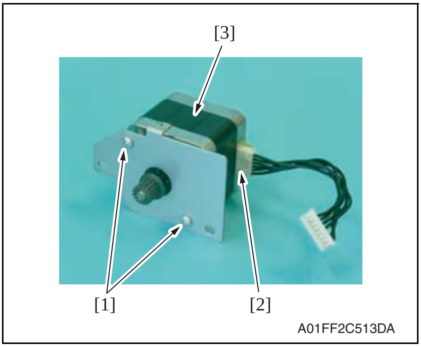
5. Hold down and unhook two tabs [1] and remove the harness guide [2].



6. Disconnect the connector [1].
7. Remove two screws [2], spring [3] and remove the exit motor assy [4].

NOTE

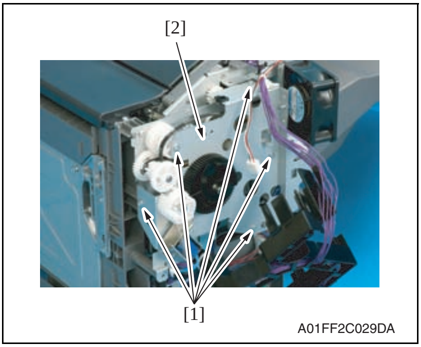
- **To reinstall the exit motor assy, hook the spring first and screw the exit motor assy while the spring is stretched to a certain degree.**



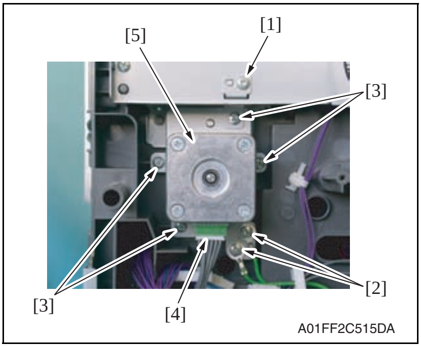
8. Remove two screws [1], connector [2] and remove the exit motor [3].

2.3.15 Exit roller up/down motor (M5)

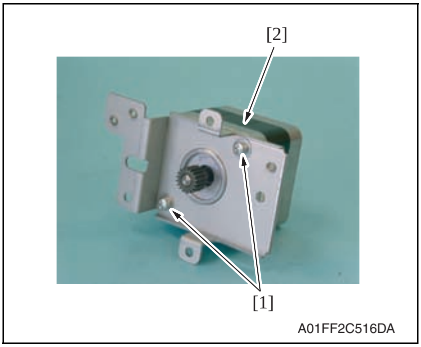
1. Remove the rear cover.
   See P.8
2. Remove the FS control board.
   See P.13
3. Remove the transport motor assy.
   See P.16
4. Remove the exit motor assy.
   See P.17



5. Remove five screws [1] and remove the mounting metal plate assy [2].



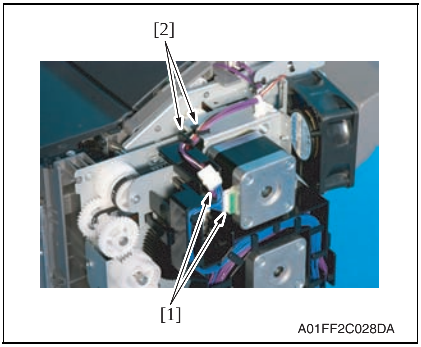
6. Loosen the screw [1].
7. Remove two screws [2] and remove the ground wire.
8. Remove four screws [3], disconnect the connector [4] and remove the exit roller up/down motor assy [5].



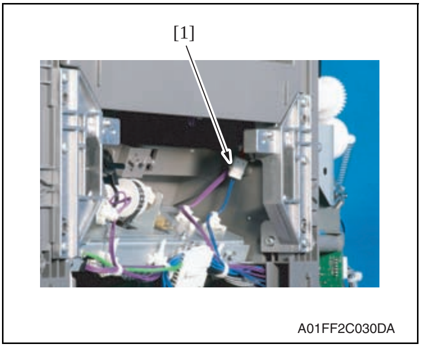
9. Remove two screws [1] and remove the exit roller up/down motor [2].

2.3.16 Entrance solenoid (SL1)

1. Remove the front cover.
   See P.7
2. Remove the rear cover.
   See P.8

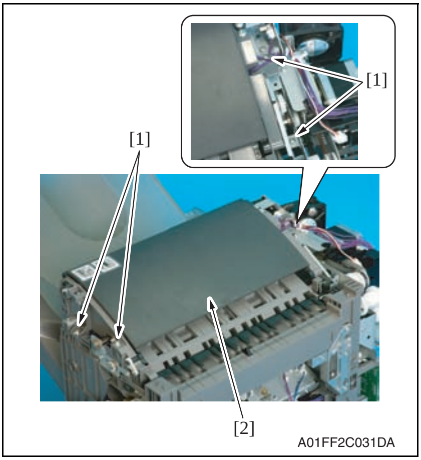


3. Disconnect two connectors [1].
4. Remove the harness from the wire saddle [2].
5. Remove the right metal plate cover.
   See P.9

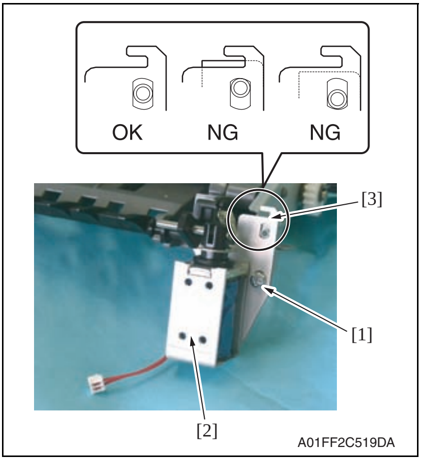


6. Disconnect the connector [1].

7. Remove the carry-in entrance upper cover.
   See P.8



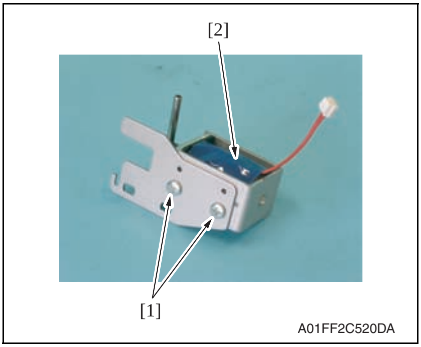
8. Remove four screws [1] and remove the carry-in entrance upper assy [2].



9. Remove the screw [1] and remove the entrance solenoid assy [2].

NOTE

- **To reinstall the entrance solenoid assy, the side of the mounting plate [3] needs to be aligned.**



10. Remove two screws [1] and remove the entrance solenoid [2].

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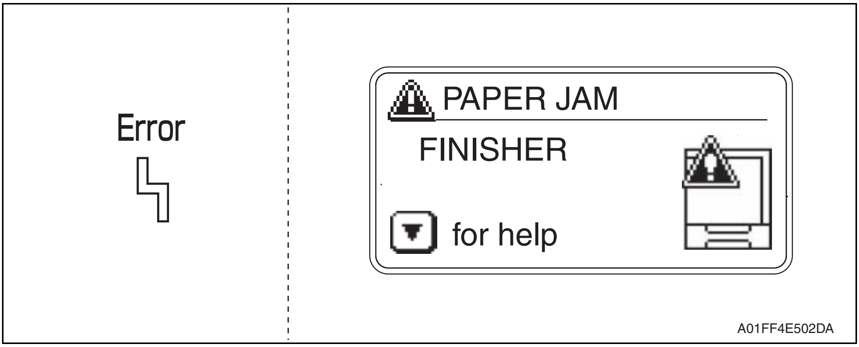
Troubleshooting

3. Jam display

3.1 Misfeed display

- When a media misfeed occurs, the printer shows the corresponding media misfeed status by means of the Error indicator on the control panel or LCD display.

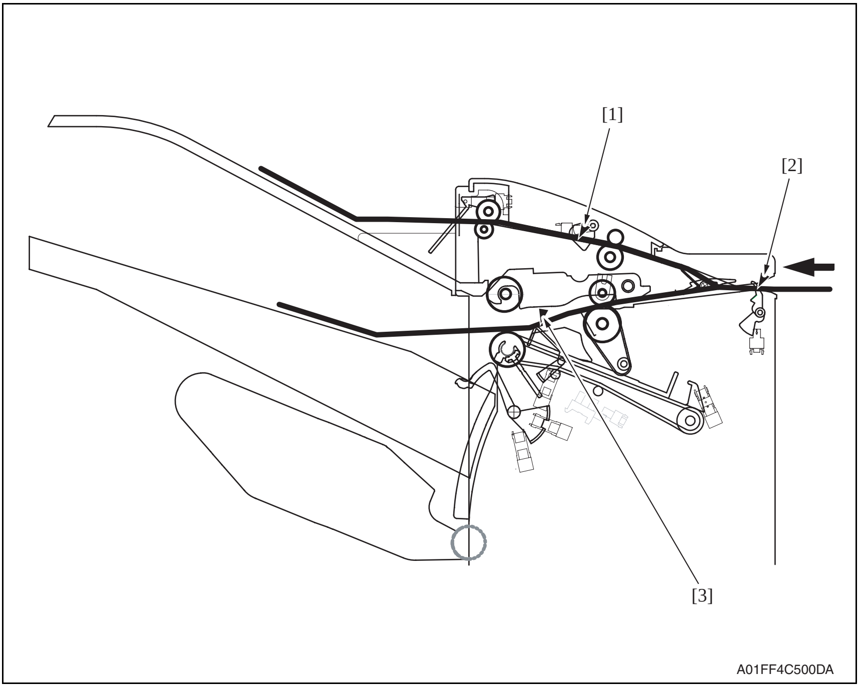


Display		Misfeed location	Misfeed processing location	Action
LCD 1	LCD 2			
PAPER JAM	STAPLER	Staple misfeed	Staple cover	P.25
	UPPER TRANS	Horizontal transport section	Relay unit cover	P.26
	FINISHER	Finisher transport section	Relay unit cover Finisher cover	P.26
	SUB EXIT	Sub tray section	Relay unit cover Finisher cover	P.27
	MAIN EXIT	Main tray section	Relay unit cover Finisher cover	P.28

3.1.1 Misfeed display resetting procedure

- Open the relevant door, clear the sheet of misfed media, and close the door.

3.2 Sensor layout



[1]	Transport section sensor	PS3
[2]	Entrance sensor	PS1
[3]	Storage section sensor	PS7

3.3 Solution

3.3.1 Initial check items

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

Check Item	Action
Does the media meet product specifications?	Change the media.
Is media curled, wavy, or damp.	Change the media. Instruct the user in correct media storage.
Is a foreign object present along the media path, or is the media path deformed or worn?	Clean or change the media path.
Are the rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.
Are the edge guide and trailing edge stop at the correct position to accommodate the media?	Set as necessary.
Are the actuators found operational when checked for correct operation?	Correct or change the defective actuator.

3.3.2 Staple misfeed

A. Detection timing

Type	Description
Stapler section misfeed detection	The stapler does not return to the home position even after the set of time has elapsed after the staple motor starts to drive based on normal rotation.

B. Action

Relevant electrical parts	
Stapling unit	FS control board (FSCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the initial check items.	—	—
2	Stapling unit replacement	—	—
3	FSCB replacement	—	—

3.3.3 Horizontal transport section misfeed

A. Detection timing

Type	Description
Horizontal transport section misfeed detection	The entrance sensor (PS1) is not unblocked even after the set of time has elapsed after the main body exit sensor (PS8) is blocked.

B. Action

Relevant electrical parts	
Exit sensor (PS8) Entrance sensor (PS1)	FS control board (FSCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the initial check items.	—	—
2	PS8 I/O, sensor check *	PRCB PJ4-6 (ON)	I-2
3	PS1 I/O, sensor check	FSCB CN10-3 (ON)	B-4
4	FSCB replacement	—	—

3.3.4 Finisher transport section misfeed

A. Detection timing

Type	Description
Detection of media left in finisher transport section	The entrance sensor (PS1) is unblocked when the main switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
	The storage section sensor (PS7) is blocked when the main switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

B. Action

Relevant electrical parts	
Entrance sensor (PS1) Storage section sensor (PS7)	FS control board (FSCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the initial check items.	—	—
2	PS1 I/O, sensor check	FSCB CN10-3 (ON)	B-4
3	PS7 I/O, sensor check	FSCB CN9-3 (ON)	B-4
4	FSCB replacement	—	—

3.3.5 Sub tray section misfeed

A. Detection timing

Type	Description
Sub tray section misfeed detection	The transport section sensor (PS2) is not unblocked even after the set period of time has elapsed after the entrance sensor (PS1) has been unblocked by the media.
	The transport section sensor (PS2) is not blocked even after the set period of time has elapsed after the entrance sensor (PS1) has been blocked by the media.
Detection of media left in sub tray section	The transport section sensor (PS2) is unblocked when the main switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

B. Action

Relevant electrical parts	
Entrance sensor (PS1) Transport section sensor (PS2)	FS control board (FSCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the initial check items.	—	—
2	PS1 I/O, sensor check	FSCB CN10-3 (ON)	B-4
3	PS2 I/O, sensor check	FSCB CN6-3 (ON)	B-2
4	FSCB replacement	—	—

3.3.6 Main tray section misfeed

A. Detection timing

Type	Description
Main tray section misfeed detection	The storage section sensor (PS7) is not blocked even after the set period of time has elapsed after the entrance sensor (PS1) has been unblocked by the media.
	The storage section sensor (PS7) is not unblocked even after the set period of time has elapsed after the entrance sensor (PS1) has been blocked by the media.
Detection of media left in main tray section	The storage section sensor (PS7) is blocked when the main switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

B. Action

Relevant electrical parts	
Entrance sensor (PS1) Storage section sensor (PS7)	FS control board (FSCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the initial check items.	—	—
2	PS1 I/O, sensor check	FSCB CN10-3 (ON)	B-4
3	PS7 I/O, sensor check	FSCB CN9-3 (ON)	B-4
4	FSCB replacement	—	—

4. Error codes

4.1 Trouble code list (Service call)

- The CPU performs a self-diagnosis on the condition of the unit, and if a malfunction is detected, the warning appears with the service call ID in the display.

Code	Item	Detection timing
0B30	Aligning plate drive malfunction	• The aligning plate home position sensor (PS6) is not blocked even after the set period of time has elapsed after the main switch is set to ON. • The aligning plate home position sensor (PS6) is not unblocked even after the set period of time has elapsed after the align motor (M2) is energized (Start to align operation). • The aligning plate home position sensor (PS6) is not blocked even after the set period of time has elapsed after the align motor (M2) is energized (Start to move to the home position).
0B47	Media holding drive malfunction	• The media level sensor/1 (PS9) is not transmissive even after the set period of time has elapsed after the tray up/down motor (M6) is turned ON and the tray upper sensor (PS12) is shaded.
0B48	Exit roller pressure/ retraction malfunction	• The exit roller sensor (PS8) is not blocked even after the set period of time has elapsed after the exit roller up/down motor (M5) is energized (beginning of pressure operation). • The exit roller sensor (PS8) is not unblocked even after the set period of time has elapsed after the exit roller up/down motor (M5) is energized (beginning of retraction operation).
0B4A	Aligning belt pressure/ retraction malfunction	• The aligning belt sensor (PS11) is not unblocked even after the set period of time has elapsed after the aligning belt up/down solenoid (SL3) is energized (beginning of retraction operation). • The aligning belt sensor (PS11) is not blocked even after the set period of time has elapsed after the aligning belt up/down solenoid (SL3) is energized (beginning of pressure operation).
0B4C	Media ejector motor malfunction	• The media ejector sensor (PS5) is not unblocked even after the set period of time has elapsed after the media ejector motor (M1) is energized (Stacks of prints ejection). • The media ejector sensor (PS5) is not blocked even after the set period of time has elapsed after the media ejector motor (M1) is energized (Start to move to the home position).
0BA0	Tray up/down motor ascent/descent drive malfunction	• The media level sensor/1 (PS9) and the media level sensor/2 (PS10) are not blocked and unblocked even after the set period time has elapsed after the tray up/down motor (M6) is energized. • The tray upper sensor (PS12) and the tray lower sensor (PS13) are not blocked and unblocked even after the set period of time has elapsed after the tray up/down motor (M6) is turned ON.
0BE1	Fan motor malfunction	• The fan motor lock signal remains HIGH for a predetermined consecutive period of time while the fan motor remains energized.
133B	Communication malfunction	• Contact the responsible people of KMBT before taking some countermeasures.
3FFB	Flash ROM malfunction	• Data of flash ROM of the finishing options is determined to be faulty when the power is turned ON.

4.2 Solution

4.2.1 0B30: Aligning plate drive malfunction

Relevant electrical parts	
Align motor (M2) Aligning plate home position sensor (PS6)	FS control board (FSCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the M2 connector for proper connection and correct as necessary.	—	—
2	Check M2 for proper drive coupling and correct as necessary.	—	—
3	M2 operation check *	FSCB CN12-1 to 4	G-6
4	PS6 I/O check *	FSCB CN9-6 (ON)	B-3 to 4
5	FSCB replacement	—	—

*1: M2 and PS6 are not available as a replacement part. If M2 or PS6 has a problem, the staple finisher unit must be replaced.

4.2.2 0B47: Media holding drive malfunction

Relevant electrical parts	
Tray up/down motor (M6) Tray upper sensor (PS12) Media level sensor/1 (PS9)	FS control board (FSCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the M6 connector for proper connection and correct as necessary.	—	—
2	Check M6 for proper drive coupling and correct as necessary.	—	—
3	M6 operation check	FSCB CN22-1 to 2	G-2
4	PS12 I/O check	FSCB CN5-4 (ON)	G-2 to 3
5	PS9 I/O check	FSCB CN8-3 (ON)	B-3
6	FSCB replacement	—	—

4.2.3 0B48: Exit roller pressure/retraction malfunction

Relevant electrical parts	
Exit roller up/down motor (M5) Exit roller sensor (PS8)	FS control board (FSCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the M5 connector for proper connection and correct as necessary.	—	—
2	Check M5 for proper drive coupling and correct as necessary.	—	—
3	M5 operation check	FSCB CN20-1 to 4	G-3
4	PS8 I/O check *	FSCB CN2-3 (ON)	B-1
5	FSCB replacement	—	—

*1: PS8 is not available as a replacement part. If PS8 has a problem, the staple finisher unit must be replaced.

4.2.4 0B4A: Aligning belt pressure/retraction malfunction

Relevant electrical parts	
Aligning belt up/down solenoid (SL3) Aligning belt sensor (PS11)	FS control board (FSCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the SL3 connector for proper connection and correct as necessary.	—	—
2	SL3 operation check	FSCB CN19-2 (ON)	G-3 to 4
3	PS11 I/O check	FSCB CN11-3 (ON)	B-4 to 5
4	FSCB replacement	—	—

4.2.5 0B4C: Media ejector motor malfunction

Relevant electrical parts	
Media ejector motor (M1) Media ejector sensor (PS5)	FS control board (FSCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the M1 connector for proper connection and correct as necessary.	—	—
2	Check M1 for proper drive coupling and correct as necessary.	—	—
3	M1 operation check *	FSCB CN21-3 to 6	G-3
4	PS5 I/O check	FSCB CN9-9 (ON)	B-3
5	FSCB replacement	—	—

*1: M1 is not available as a replacement part. If M1 has a problem, the staple finisher unit must be replaced.

4.2.6 0BA0: Tray up/down motor ascent/descent drive malfunction

Relevant electrical parts	
Tray up/down motor (M6) Media level sensor/1 (PS9) Media level sensor/2 (PS10) Tray upper sensor (PS12) Tray lower sensor (PS13)	FS control board (FSCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the M6 connector for proper connection and correct as necessary.	—	—
2	Check M6 for proper drive coupling and correct as necessary.	—	—
3	M6 operation check	FSCB CN22-1 to 2	G-2
4	PS9 I/O check	FSCB CN8-3 (ON)	B-3
5	PS10 I/O check	FSCB CN8-6 (ON)	B-3
6	PS12 I/O check	FSCB CN5-4 (ON)	G-2 to 3
7	PS13 I/O check	FSCB CN5-1 (ON)	G-2
8	FSCB replacement	—	—

4.2.7 0BE1: Fan motor malfunction

Relevant electrical parts	
Fan motor (FM1)	FS control board (FSCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the FM1 connector for proper connection and correct as necessary.	—	—
2	Check FM1 for proper drive coupling and correct as necessary.	—	—
3	FM1 operation check	FSCB CN13-2 (LOCK)	G-6
4	FSCB replacement	—	—

4.2.8 133B: Communication malfunction

Relevant electrical parts	
FS control board (FSCB)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the FSCB connector for proper connection and correct as necessary.	—	—
2	Check the PRCB connector for proper connection and correct as necessary.	—	—
3	FSCB replacement	—	—
4	PRCB replacement	—	—

4.2.9 3FFB: Flash ROM malfunction

Relevant electrical parts	
FS control board (FSCB)	

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Disconnect and then connect the power cord. Turn OFF the main switch, wait for 10 sec. or more, and turn ON the main switch.	—	—
2	The firmware data is overwritten.	—	—
3	FSCB replacement	—	—

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