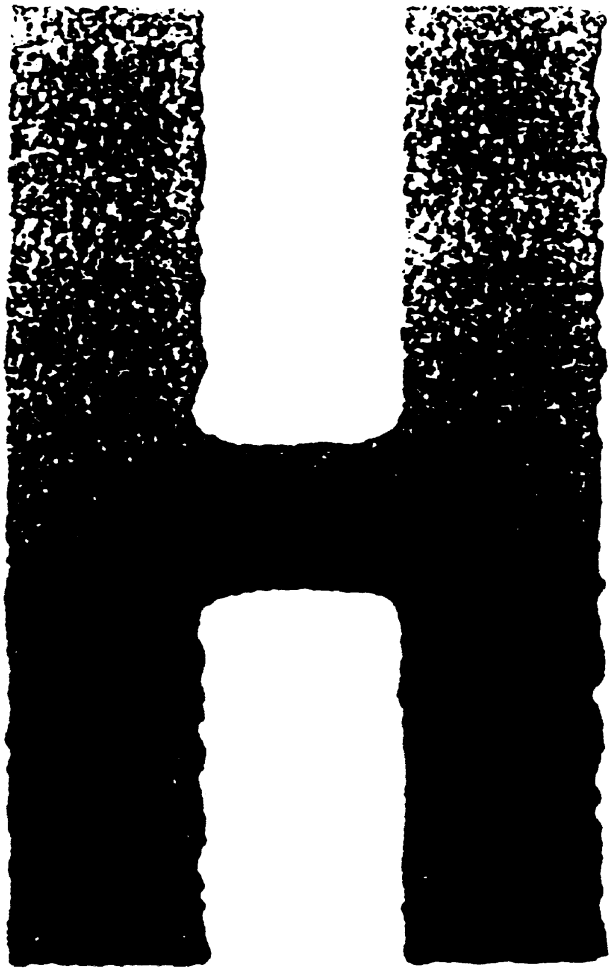
TOSHIBA

SERVICE HANDBOOK

MULTIFUNCTIONAL DIGITAL COLOR SYSTEMS

e-STUDIO5520C/6520C/6530C



Model: FC-5520C/6520C/6530C
Publish Date: August 2008
File No. SHE070005J0
R070921E4900-TTEC
Ver10_2011_11

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- The official name of Windows 98 is Microsoft Windows 98 Operating System.
- The official name of Windows Me is Microsoft Windows Millennium Edition Operating System.
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GENERAL PRECAUTIONS REGARDING THE SERVICE FOR e-STUDIO5520C/6520C/6530C

The installation and service should be done by a qualified service technician.

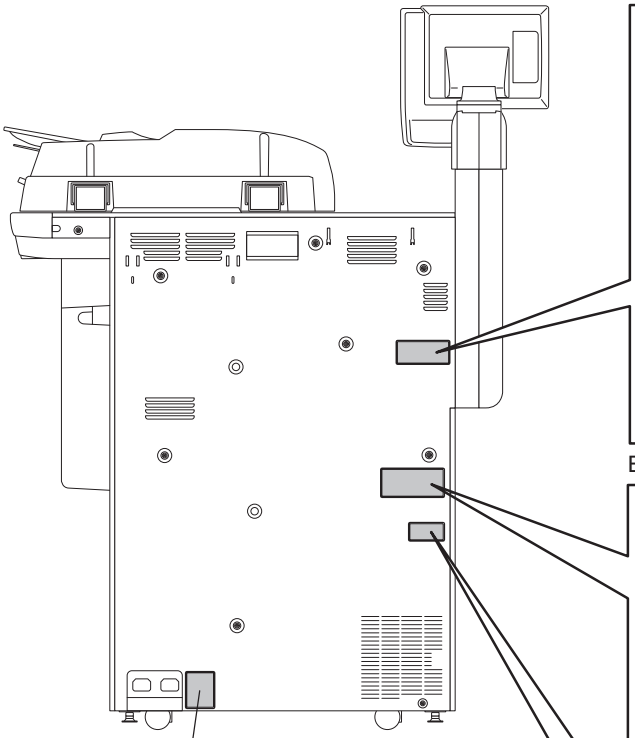
1. **Transportation/Installation**
   - When transporting/installing the equipment, employ four persons and be sure to move it by the casters while lifting the stoppers.
     The equipment is quite heavy and weighs approximately 245 kg (540.12 lb) or 246 kg (542.33 lb), therefore pay full attention when handling it.
   - Be sure not to hold the movable parts or units (e.g. the control panel, ADU or RADF) when transporting the equipment.
   - It is recommended to plug two power cables into two separate outlets. Be sure to use a dedicated outlet with AC 115 V / 20 A <for NAC/NAD>, 127 V / 20 A <for SAD>, 220-240 V / 10 A <for ASU, ASD, ARD, AUC/AUD, CND>, 220-240 V / 13 A <for <MJC/MJD> for its power source. If two power cables are plugged into a single outlet, be sure to use at least a 20A dedicated outlet.
   - The equipment must be grounded for safety.
   - Select a suitable place for installation. Avoid excessive heat, high humidity, dust, vibration and direct sunlight.
   - Provide proper ventilation since the equipment emits a slight amount of ozone.
   - To insure adequate working space for the copying operation, keep a minimum clearance of 80 cm (32”) on the left, 80 cm (32”) on the right and 10 cm (4”) on the rear.
   - The equipment shall be installed near the socket outlet and shall be easily accessible.
   - Be sure to fix and plug in the power cable securely after the installation so that no one trips over it.
   - If the unpacking place and where the equipment is to be installed differ, perform image quality adjustment (automatic gamma adjustment) according to the temperature and humidity of the place of installation and the paper to be used.
   - When the equipment is used after the option is removed, be sure to install the parts or the covers which have been taken off so that the inside of the equipment is not exposed.

2. **General Precautions at Service**
   - Be sure to turn the power OFF and unplug the power cables during service (except for the service should be done with the power turned ON).
   - Unplug the power cable and clean the area around the prongs of the plug and socket outlet once a year or more. A fire may occur when dust lies on this area.
   - When the parts are disassembled, reassembly is the reverse of disassembly unless otherwise noted in this manual or other related documents. Be careful not to install small parts such as screws, washers, pins, E-rings, star washers, harnesses in the wrong places.
   - Basically, the equipment should not be operated with any parts removed or disassembled.
   - The PC board must be stored in an anti-electrostatic bag and handled carefully using a wristband since the ICs on it may be damaged due to static electricity.
     Caution: Before using the wristband, unplug the power cable of the equipment and make sure that there are no charged objects which are not insulated in the vicinity.
   - Avoid expose to laser beam during service. This equipment uses a laser diode. Be sure not to expose your eyes to the laser beam. Do not insert reflecting parts or tools such as a screwdriver on the laser beam path. Remove all reflecting metals such as watches, rings, etc. before starting service.
   - Be sure not to touch high-temperature sections such as the exposure lamp, fuser unit, damp heater and areas around them.

- Be sure not to touch high-voltage sections such as the chargers, transfer belt, 2nd transfer roller, developer, high-voltage transformer, exposure lamp control inverter, inverter for the LCD back-light and power supply unit. Especially, the board of these components should not be touched since the electric charge may remain in the capacitors, etc. on them even after the power is turned OFF.
- Make sure that the equipment will not operate before touching potentially dangerous places (e.g. rotating/operating sections such as gears, belts pulleys, fans and laser beam exit of the laser optical unit).
- Be careful when removing the covers since there might be the parts with very sharp edges underneath.
- When servicing the equipment with the power turned ON, be sure not to touch live sections and rotating/operating sections. Avoid exposing your eyes to laser beam.
- Use designated jigs and tools.
- Use recommended measuring instruments or equivalents.
- Return the equipment to the original state and check the operation when the service is finished.
- Be very careful to treat the touch panel gently and never hit it. Breaking the surface could cause malfunctions.

3. **Important Service Parts for Safety**
   - The breaker, door switch, fuse, thermostat, thermofuse, thermistor, batteries, IC-RAMs including lithium batteries, etc. are particularly important for safety. Be sure to handle/install them properly. If these parts are short-circuited and their functions become ineffective, they may result in fatal accidents such as burnout. Do not allow a short-circuit or do not use the parts not recommended by Toshiba TEC Corporation.

4. **Cautionary Labels**
   - During servicing, be sure to check the rating plate and cautionary labels such as “Unplug the power cable during service”, “CAUTION. HOT”, “CAUTION. HIGH VOLTAGE”, “CAUTION. LASER BEAM”, etc. to see if there is any dirt on their surface and if they are properly stuck to the equipment.



Warning for grounding wire

Identification label

For U.S.A. and Canada

TOSHIBA
MULTIFUNCTIONAL DIGITAL COLOR SYSTEMS e-STUDIO6530C
MODEL FC-6530C
115V ~
50/60Hz 9.3A+9.2A(IH)
NO.
c UL us LISTED I.T.E. E201821
TOSHIBA TEC CORPORATION TC
MADE IN CHINA

For EU

TOSHIBA
MULTIFUNCTIONAL DIGITAL COLOR SYSTEMS
/SYSTEME MULTIFONCTION NUMERIQUE COULEUR e-STUDIO6530C
MODEL/MODELE FC-6530C
220-240V ~
50/60Hz 13A
NO.
TOSHIBA TEC CORPORATION TC
MADE IN CHINA/FABRIQUE EN CHINE

Explanatory label

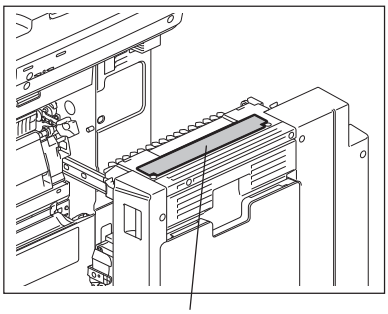
CLASS 1 LASER PRODUCT
APPAREIL À LASER DE CLASSE 1
LASER KLASSE 1
PRODUCTO DE LASER DE CLASE 1
クラス 1 レーザー製品
>PS<

Certification label (For U.S.A. and Canada)

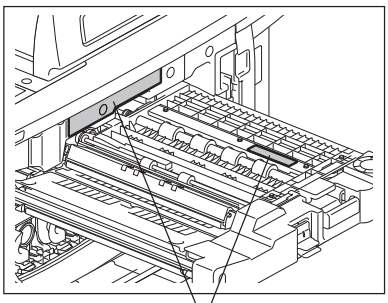
Product is certified by the manufacturer to comply with DHHS Rule 21 CFR subchapter J applicable at the date of Manufacture.

Manufactured: TC

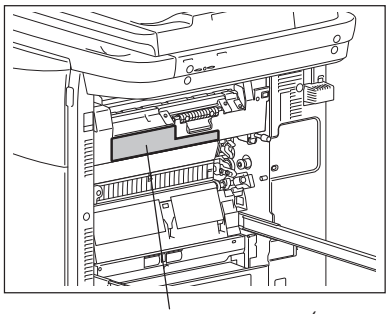
TOSHIBA TEC CORPORATION
2-17-2 Higashigotanda. Shinagawa-ku. Tokyo. Japan



Warning for high temperature area
(Duplexing unit / Fuser unit)



Warning for high temperature area (Bridge unit)



Warning for high temperature area (Fuser unit)

5. **Disposal of the Equipment, Supplies, Packing Materials, Used Batteries and IC-RAMs**
   - Regarding the recovery and disposal of the equipment, supplies, packing materials, used batteries and IC-RAMs including lithium batteries, follow the relevant local regulations or rules.

6. **When the option has been installed:**
   When the EFI printer board has been installed, be sure to unplug the power cable before performing maintenance and inspection, otherwise troubles such as a communication error may occur.

Caution:
Dispose of used batteries and IC-RAMs including lithium batteries according to this manual.
Attention:
Se débarrasser de batteries et IC-RAMs usés y compris les batteries en lithium selon ce manuel.
Vorsicht:
Entsorgung der gebrauchten Batterien und IC-RAMs (inclusive der Lithium-Batterie) nach diesem Handbuch.

1. Precautions for Transporting Equipment Once Unpacked

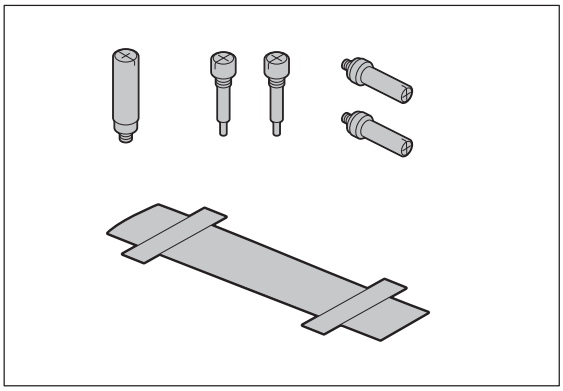
1 General Description

It is recommended to follow the procedure below when you transport equipment that has already been unpacked but has not been packed again. Note that the following procedure cannot guarantee the operation of the transported equipment.

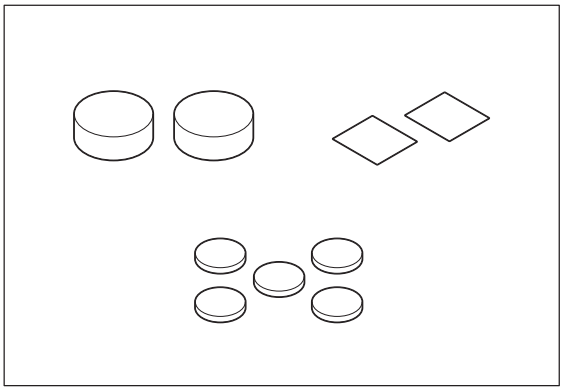
Item		Content
(1)	Gasket in Reversing Automatic Document Feeder (RADF)	Check that gaskets are not installed in the RADF. (If they are installed, remove them.)
(2)	Scanning section	Fix the scanning section.
(3)	Drum	Install a drum protection sheet.
(4)	Toner	Install sealing material on the toner supply opening of each toner cartridge.

Remarks:

- Keep packing material removed at unpacking to reuse it in steps (2) and (3) above.



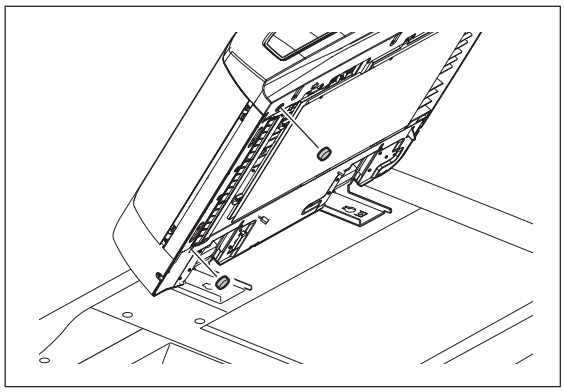
- Use a service jig PLATE-TONER-SEAL-4P (6LH035950, 4 pieces in 1 set) as sealing material to be used in step (4) above.
- Do not install the accessories shown below when unpacking the equipment.



2 Precautions and Procedures for Transporting Equipment

2.1 Checking gaskets in the RADF

The installation of gaskets to the RADF, which is described in the Unpacking Instructions, must not be performed when the equipment is unpacked but must be when it is reinstalled at a user's office. Do not install the gaskets in the equipment before transporting it because if it is transported with the gaskets installed, the screws fixing the scanner may contact with the gaskets and thus damage them.



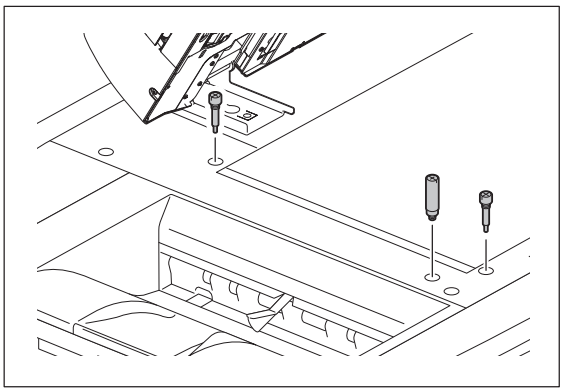
2.2 Fixing the scanning section

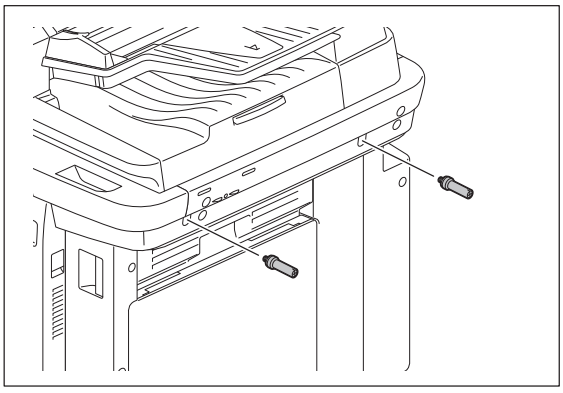
1. Move carriage-1 until it touches the left side of the frame. Then move it back to the right for 3 mm.

Note:

Rotate a drive pulley by hand to move carriage-1.

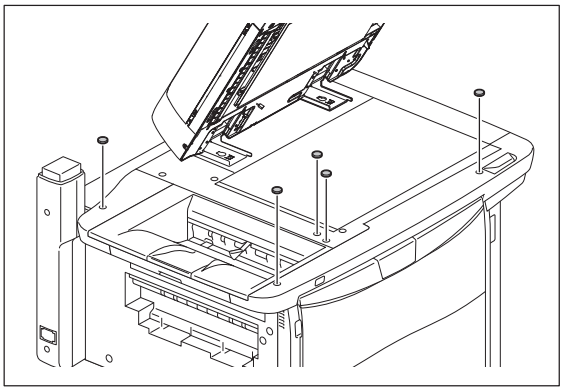
2. Reinstall 5 screws that were removed when unpacking the equipment.

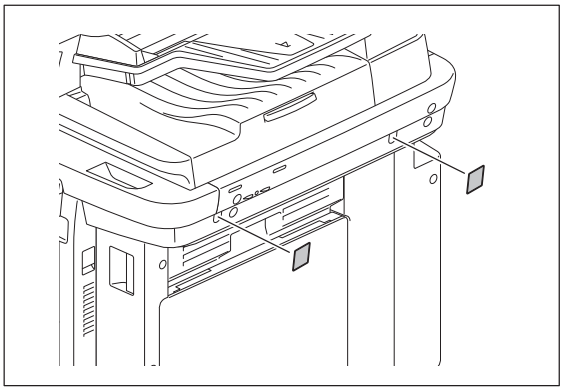




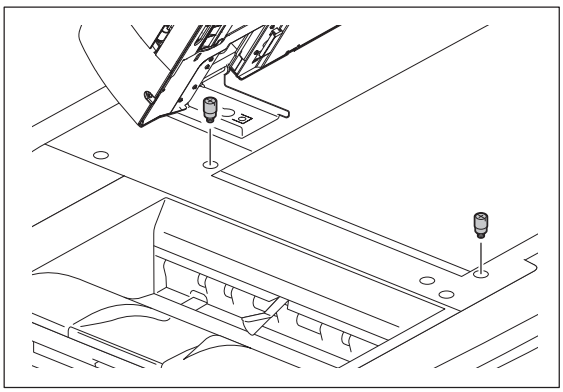
Notes:

- The installation of materials for covering the holes of the scanner fixing screws (e.g. rubber cap, blind seal), which is described in the Unpacking Instructions, must not be performed when the equipment is unpacked but must be when it is reinstalled at a user's office.





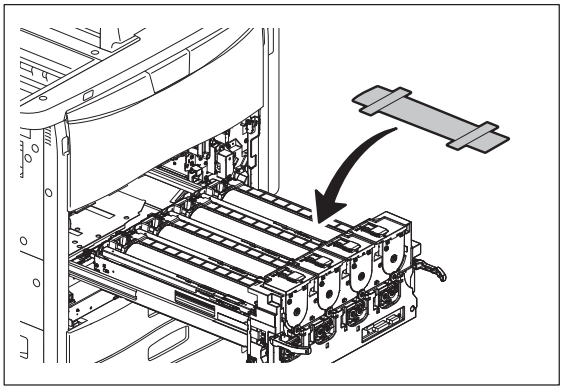
- The installation of grounding screws in the RADF, which is described in the Unpacking Instructions, must not be performed when the equipment is unpacked but must be when it is reinstalled at a user's office. Install them after you have removed the screws reinstalled in step (2).



2.3 Installing a drum protection sheet

1. Pull out the EPU tray.

2. Install a drum protection sheet on the K drum.



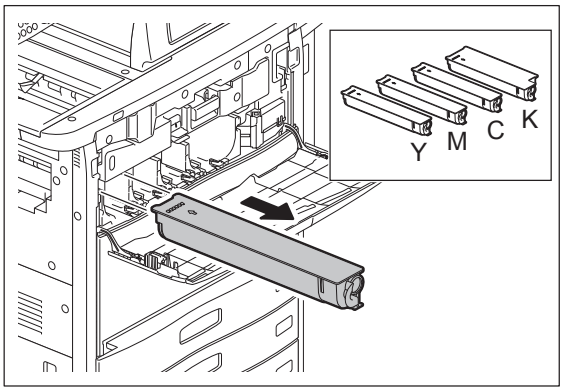
3. Push the EPU tray in, and then reassemble the equipment in the procedure reverse to disassembly.

Notes:

- It is recommended to keep the drum protection sheet removed at unpacking.
- Store the drum protection sheet in a place without high temperature and humidity, direct sunlight or dust.
- Do not scratch or bend the drum protection sheet. Avoid adhesion of dust, dirt or foreign matter, especially things that may damage the surface of the drums or the transfer belt (e.g. hard matter or matter that is highly adhesive, organic or chemical matter, grease) to the drum protection sheet.
- Do not use a drum protection sheet that is damaged or deformed, or one with any abnormality.

2.4 Installing the sealing material in toner supply opening

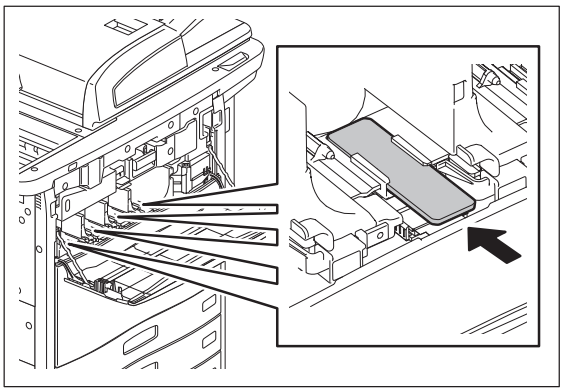
1. Open the front cover and then take off the toner cartridges (Y, M, C and K).



Note:

The toner cartridges must not be installed while the equipment is being transported. Pack them separately from the equipment.

2. Install PLATE-TONER-SEAL-4P (6LH035950) in the toner supply opening of each toner cartridge. Then close the front cover.



Notes:

- Pay attention to prevent dust from entering into the toner supply openings.
- When installing PLATE-TONER-SEAL-4P (6LH035950), be careful not to scratch or remove the sponge that is already attached to the toner supply openings.

ALLEGEMEINE SICHERHEITSMASSNAHMEN IN BEZUG AUF DIE WARTUNG FÜR e-STUDIO5520C/6520C/6530C

Die Installation und die Wartung sind von einem qualifizierten Service-Techniker durchzuführen.

1. Transport/Installation
   - Zum Transportieren/Installieren des Gerätes werden 4 Personen benötigt. Bewegen Sie es mit den Rollen, während Sie die Absperrvorrichtungen heben. Das Gerät ist sehr schwer und wiegt etwa 245 kg oder 246 kg; deshalb muss bei der Handhabung des Geräts besonders aufgepasst werden
   - Beim Transportieren des Geräts nicht an den beweglichen Teilen oder Einheiten (z.B. das Bedienungsfeld, die Duplexeinheit oder die automatische Dokumentenzuführung) halten.
   - Es empfiehlt sich, zwei Stromkabel in zwei getrennten Steckdosen einzustecken. Eine spezielle Steckdose mit Stromversorgung von AC 115 V / 20 A (für NAC/NAD), 220-240 V / 10 A (für ASU, ASD, ARD, AUC/AUD, CND), 220-240 V /13 A (für MJC/MJD) als Stromquelle verwenden. Mindestens eine 20A-Steckdose verwenden, wenn zwei Stromkabel in der selben Steckdose eingesteckt werden sollen.
   - Das Gerät ist aus Sicherheitsgründen zu erden.
   - Einen geeigneten Standort für die Installation wählen. Standorte mit zuviel Hitze, hoher Luftfeuchtigkeit, Staub, Vibrieren und direkter Sonneneinstrahlung sind zu vermeiden.
   - Für ausreichende Belüftung sorgen, da das Gerät etwas Ozon abgibt.
   - Um einen optimalen Kopierbetrieb zu gewährleisten, muss ein Abstand von mindestens 80 cm links, 80 cm rechts und 10 cm dahinter eingehalten werden.
   - Das Gerät ist in der Nähe der Steckdose zu installieren; diese muss leicht zu erreichen sein.
   - Nach der Installation muss das Netzkabel richtig hineingesteckt und befestigt werden, damit niemand darüber stolpern kann.
   - Falls der Auspackungsstandort und der Installationsstandort des Geräts verschieden sind, die Bildqualitätsjustierung (automatische Gammajustierung) je nach der Temperatur und Luftfeuchtigkeit des Installationsstandorts und der Papiersorte, die verwendet wird, durchführen.
   - Wenn das Gerät nach der Entfernung der Extras verwendet wird, die entfernten Teile oder Abdeckungen anbringen, damit das Innere des Gerät nicht freiliegt.

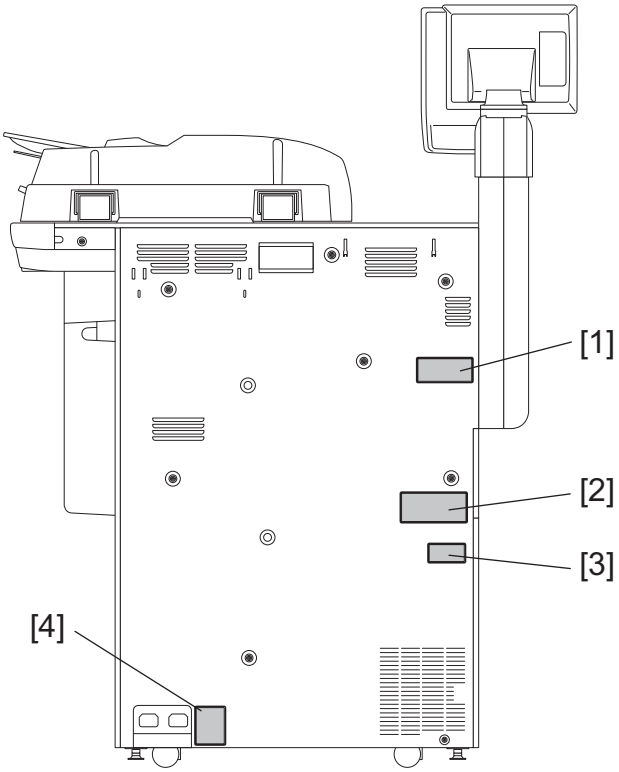
2. Allgemeine Sicherheitsmassnahmen in bezug auf die Wartung
   - Während der Wartung das Gerät ausschalten und das Netzkabel herausziehen (ausser Wartung, die bei einem eingeschalteten Gerät, durchgeführt werden muss).
   - Das Netzkabel herausziehen und den Bereich um die Steckerpole und die Steckdose die Umgebung in der Nähe von den Steckerzacken und der Steckdose wenigstens einmal im Jahr reinigen. Wenn Staub sich in dieser Gegend ansammelt, kann dies ein Feuer verursachen.
   - Wenn die Teile auseinandergenommen werden, wenn nicht anders in diesem Handbuch usw erklärt, ist das Zusammenbauen in umgekehrter Reihenfolge durchzuführen. Aufpassen, dass kleine Teile wie Schrauben, Dichtungsringe, Bolzen, E-Ringe, Stern-Dichtungsringe, Kabelbäume nicht an den verkehrten Stellen eingebaut werden.
   - Grundsätzlich darf das Gerät mit enfernten oder auseinandergenommenen Teilen nicht in Betrieb genommen werden.
   - Das PC-Board muss in einer Anti-elektrostatischen Hülle gelagert werden. Nur Mit einer Manschette bei Betätigung eines Armbandes anfassen, sonst könnte es sein, dass die integrierten Schaltkreise durch statische Elektrizität beschädigt werden.

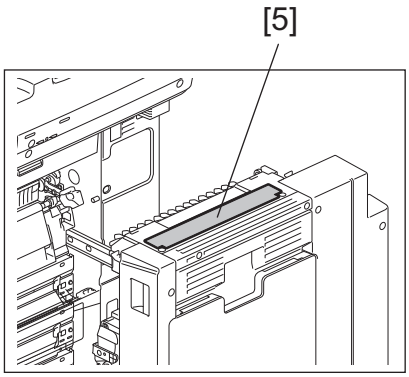
Vorsicht: Vor Benutzung der Manschette der Betätigung des Armbandes, das Netzkabel des Gerätes herausziehen und prüfen, dass es in der Nähe keine geladenen Gegenstände, die nicht isoliert sind, gibt.

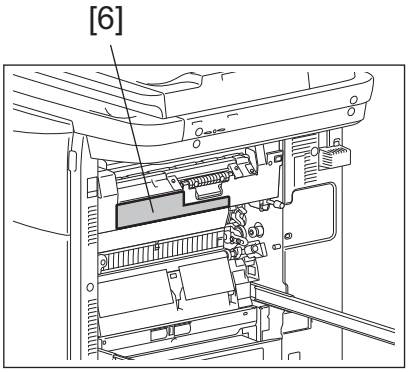
- Setzen Sie sich während der Wartungsarbeiten nicht dem Laserstrahl aus. Dieses Gerät ist mit einer Laserdiode ausgestattet. Es ist unbedingt zu vermeiden, direkt in den Laserstrahl zu blicken. Keine reflektierenden Teile oder Werkzeuge, wie z. B. Schraubendreher, in den Pfad des Laserstrahls halten. Vor den Wartungsarbeiten sämtliche reflektierenden Metallgegenstände, wie Uhren, Ringe usw., entfernen.
- Auf keinen Fall Hochtemperaturbereiche, wie die Belichtungslampe, die Fixiereinheit, die Heizquelle und die umliegenden Bereiche, berühren.
- Auf keinen Fall Hochspannungsbereiche, wie die Ladeeinheiten, das Transferband, die zweite Transferwalze, die Entwicklereinheit, den Hochspannungstransformator, den Steuerumrichter für die Belichtungslampe, den Umrichter für die LCD-Hintergrundbeleuchtung und das Netzgerät, berühren. Insbesondere sollten die Platinen dieser Komponenten nicht berührt werden, da die Kondensatoren usw. auch nach dem Ausschalten des Geräts noch elektrisch geladen sein können.
- Vor dem Berühren potenziell gefährlicher Bereiche (z. B. drehbare oder betriebsrelevante Bereiche, wie Zahnräder, Riemen, Riemenscheiben, Lüfter und die Laseraustrittsöffnung der optischen Lasereinheit) sicherstellen, dass das Gerät sich nicht bedienen lässt.
- Beim Entfernen von Abdeckungen vorsichtig vorgehen, da sich darunter scharfkantige Komponenten befinden können.
- Bei Wartungsarbeiten am eingeschalteten Gerät dürfen keine unter Strom stehenden, drehbaren oder betriebsrelevanten Bereiche berührt werden. Nicht direkt in den Laserstrahl blicken.
- Ausschließlich vorgesehene Werkzeuge und Hilfsmittel verwenden.
- Empfohlene oder gleichwertige Messgeräte verwenden.
- Nach Abschluss der Wartungsarbeiten das Gerät in den ursprünglichen Zustand zurück versetzen und den einwandfreien Betrieb überprüfen.
- Das berührungsempfindliche Bedienungsfeld stets vorsichtig handhaben und keinen Stößen aussetzen. Wenn die Oberfläche beschädigt wird, kann dies zu Funktionsstörungen führen.

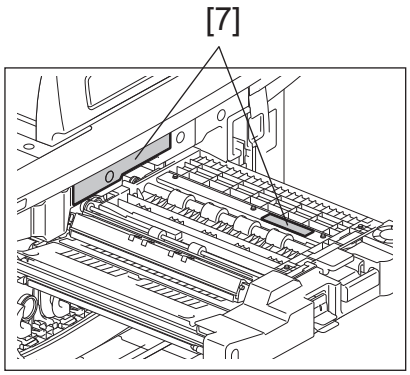
3. Sicherheitsrelevante Wartungsteile
   - Der Leistungsschutzschalter, der Türschalter, die Sicherung, der Thermostat, die Thermosicherung, der Thermistor, die IC-RAMs einschließlich der Lithium-Batterie sind besonders sicherheitsrelevant. Sie müssen unbedingt korrekt gehandhabt und installiert werden. Wenn diese Teile kurzgeschlossen und funktionsunfähig werden, kann dies zu schwerwiegenden Schäden, wie einem Abbrand, führen. Kurzschlüsse sind zu vermeiden, und es sind ausschließlich Teile zu verwenden, die von der Toshiba TEC Corporation empfohlen sind.

4. Warnetiketten
   - Im Rahmen der Wartung unbedingt das Leistungsschild und die Etiketten mit Warnhinweisen überprüfen, um sicherzustellen, dass sie nicht verschmutzt sind und korrekt am Gerät angebracht sind.









1) Erkennungsetikett
2) Erklärungsetikett
3) Klassifizierungsetikett
4) Warnung für Erdungskabel
5) Warnung für Bereiche mit höhen Temperaturen (Duplexeinheit / Fixiereinheit)
6) Warnung für Bereiche mit höhen Temperaturen (Fixiereinheit)
7) Warnung für Bereiche mit höhen Temperaturen (Brückeneinheit)

5. Entsorgung des Geräts, der Verbrauchs- und Verpackungsmaterialien, alter Akkus und IC-RAMs
   - In Bezug auf die Entsorgung und Wiederverwertung des Geräts, der Verbrauchs- und Verpackungsmaterialien, alter Akkus und IC-RAMs, einschließlich Lithiumakkus, sind die einschlägigen nationalen oder regionalen Vorschriften zu befolgen.

Caution:
Dispose of used batteries and IC-RAMs including lithium batteries according to this manual.
Attention:
Se débarrasser de batteries et IC-RAMs usés y compris les batteries en lithium selon ce manuel.
Vorsicht:
Entsorgung der gebrauchten Batterien und IC-RAMs (inclusive der Lithium-Batterie) nach diesem Handbuch.

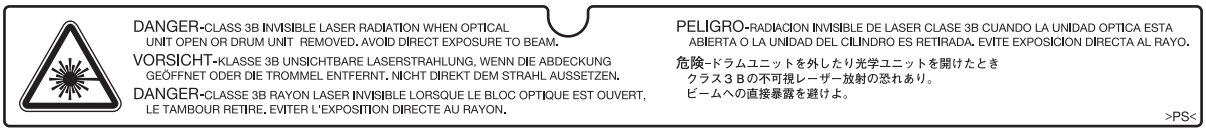
- Laseremissionseinheit

  Diese Einheit besteht aus der Laserdiode, dem Fokussierungsobjektiv, der Blende und dem Zylinderobjektiv.

Laserdiode
Diese Laserdiode zeichnet sich durch eine geringe Regeldifferenz, eine kleine Laservariation und einen niedrigen Schwellenstrom aus.
Die Blende der Laseremissionseinheit ist unter dem Fokussierobjektiv angeordnet, um die Form der Laserstrahlen in der primären und sekundären Scanrichtung festzulegen.
Die Laserdiode gibt Laserstrahlen als Reaktion auf die Signale der Laseremissionssteuerung (ein/aus) von der Lasertreiber-PC-Platine (LDR) aus. Die durch das Fokussierobjektiv geführten Laserstrahlen werden auf die Trommeloberfläche fokussiert.

Vorsichtsmaßnahmen im Zusammenhang mit Lasern
Dieses Gerät enthält eine Laserdiode, die einen unsichtbaren Laserstrahl emittiert.
Da man diesen Laserstrahl nicht sehen kann, ist bei der Handhabung der Komponenten der optischen Lasereinheit, bei der Durchführung von Arbeiten und bei der Justierung des Laserstrahls äußerste Vorsicht geboten. Arbeiten dürfen niemals anhand anderer als den vorgeschriebenen Anleitungen durchgeführt werden; andernfalls kann es zu einer Schädigung Exposition durch Laserstrahlung kommen.
Die Lasereinheit ist vollständig mit einer Schutzabdeckung versiegelt. Solange ausschließlich die Arbeitsschritte der vorgeschriebenen Anleitungen durchgeführt werden, tritt der Laserstrahl nicht aus, und es besteht keine Gefahr, der Laserstrahlung ausgesetzt zu werden.

Das folgende Laser-Warnetikett ist an der Abdeckung vorne rechts angebracht.



Warnhinweise:
Setzen Sie sich während der Wartungsarbeiten nicht dem Laserstrahl aus.
Dieses Gerät ist mit einer Laserdiode ausgestattet. Es ist unbedingt zu vermeiden, direkt in den Laserstrahl zu blicken. Keine reflektierenden Teile oder Werkzeuge, wie z. B. Schraubendreher, in den Pfad des Laserstrahls halten. Vor den Wartungsarbeiten sämtliche reflektierenden Metallgegenstände, wie Uhren, Ringe usw., entfernen.
Bei Wartungsarbeiten am eingeschalteten Gerät dürfen keine unter Strom stehenden, drehbaren oder betriebsrelevanten Bereiche berührt werden. Nicht direkt in den Laserstrahl blicken.
Im Rahmen der Wartung unbedingt das Leistungsschild und die Etiketten mit Warnhinweisen überprüfen [z. B. „Unplug the power cable during service“ („Netzkabel vor Beginn der Wartungsarbeiten abziehen“), „CAUTION. HOT“ („VORSICHT, HEISS“), „CAUTION. HIGH VOLTAGE“ („VORSICHT, HOCHSPANNUNG“), „CAUTION. LASER BEAM“ („VORSICHT, LASER“) usw.], um sicherzustellen, dass sie nicht verschmutzt sind und korrekt am Gerät angebracht sind.

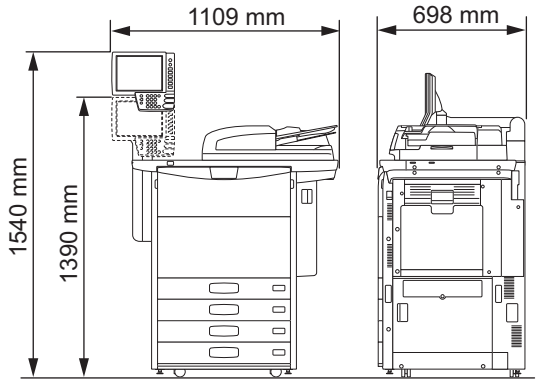
CONTENTS

1. SPECIFICATIONS/ACCESSORIES/OPTIONS/SUPPLIES

1.1 Specifications

1.1.1 General

Type		Console
Original glass		Fixed
Color		Full color, Twin color
Copy process		Indirect electrophotographic process
Developing system		2-component magnetic brush developing (Self-refreshing development)
Fixing method		External heating STF fusing system
Photosensor type		OPC
Original scanning sensor		Linear CCD sensor
Scanning light source		Xenon lamp
Resolution	Scanning	600 dpi × 600 dpi
	Writing	2400 dpi × 600 dpi (Black-and-white) 600 dpi × 600 dpi (Color, Gray scale)
Gradation		256
Paper feeding		4 drawers + Bypass feeding + LCF (optional) 2 drawers + Bypass feeding + Tandem LCF + LCF (optional)
Paper supply	Drawers	Stack height 60 mm, equivalent to 540 sheets; 80 g/m^2 (23 lb. Bond)
	Bypass feeding	Stack height 11 mm, equivalent to 100 sheets; 80 g/m^2 (23 lb. Bond)
	LCF (optional)	Stack height 290 mm, equivalent to 2500 sheets; 80 g/m^2 (23 lb. Bond)
	Tandem LCF	Stack height 270 mm, equivalent to 2360 sheets; 80 g/m^2 (23 lb. Bond)
Paper size	Drawers	A3, A4, A4-R, A5-R, B4, B5, B5-R, FOLIO, 8K, 16K, 16K-R, A3Wide (305 x 457 mm), SRA3 (320 x 450 mm), 320 x 460 mm, LD, LG, LT, LT-R, ST-R, COMPUTER, 13"LG, 8.5" x 8.5", Full Bleed (12" x 18")
	Bypass feeding	A3, A4, A4-R, A5-R, B4, B5, B5-R, FOLIO, 8K, 16K, 16K-R, A3Wide (305 x 457 mm), SRA3 (320 x 450 mm), 320 x 460 mm, 330 x 483mm*, LD, LG, LT, LT-R, ST-R, COMPUTER, 13"LG, 8.5" x 8.5", Full Bleed (12" x 18"), 13" x 19"*, Non-standard (Copy): Width 100 - 297 mm (3.9 - 11.7"), Length 148 - 432 mm (5.8 - 17") Non-standard (Print): Width 100 - 313.4 mm (3.9 - 12.34), Length 148 - 1200 mm (5.8 - 47.24")* * Note that black streaks may appear on the edge of the printed paper.
	LCF (optional)	A4, LT, B5, A5-R, ST-R
	Tandem LCF	A4, LT
Paper type	Drawers	Plain paper, Recycled paper, Thick 1, Thick 2, Thick 3
	Bypass feeding	Plain paper, Recycled paper, Thick 1, Thick 2, Thick 3, Thick 4, Sticker labels, OHP film, Tab paper, Water proof paper, Extra large paper
	LCF (optional)	Plain paper, Recycled paper, Thick 1, Thick 2, Thick 3
	Tandem LCF	
Paper weight	Drawers	64 g/m^2 to 256 g/m^2 (17 lb. Bond to 80 lb. Cover)
	Bypass feeding	64 g/m^2 to 300 g/m^2 (17 lb. Bond to 110 lb. Cover)
	LCF (optional)	64 g/m^2 to 256 g/m^2 (17 lb. Bond to 80 lb. Cover)
	Tandem LCF	

Automatic duplexing unit		Stackless, Switchback type
	Acceptable paper size	A3, A4, A4-R, A5-R, B4, B5, B5-R, FOLIO, 8K, 16K, 16K-R, A3Wide (305 x 457mm), SRA3 (320 x 450mm), 320 x 460mm, LD, LG, LT, LT-R, ST-R, COMPUTER, 13"LG, 8.5" x 8.5", Full Bleed (12" x 18")
	Acceptable paper weight	64 g/m^2 to 256 g/m^2 (17 lb. Bond to 80 lb. Cover)
Toner supply		Cartridge Type
Toner density adjustment		Magnetic auto-toner system + Pixel counter control system
Total counter		Electronical counter
Memory (RAM)	Main memory	1 GB
	Page Memory	1 GB
HDD		80GB (For hard drives, GB means 1 billion bytes.)
Account Codes		10,000 codes
Department Codes		1,000 codes
Warm-up time		Approx. 180 sec. (Stand-alone, temperature: 20 °C)
Dimensions of the equipment		W 1109 x D 698 x H 1540 (mm) <max.> W 1109 x D 698 x H 1390 (mm) <min.> 
Weight	4 drawers model	Approx. 246 kg (542.33 lb.) (equipment including drum)
	Tandem LCF model	Approx. 245 kg (540.12 lb.) (equipment including drum)

Power requirements						
			NAC/NAD	SAD	ASU, ASD, ARD, AUC/AUD, CND	MJC/MJD
	Rated voltage		AC 115 V	AC 127 V	AC 220-240 V	AC 220-240 V
			* The acceptable value of each voltage is ±10%.			
	Rated frequency		50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
	Rated current	e-STUDIO5520C	16 A	16 A	10 A	13 A
		e-STUDIO6520C	18.5 A	18.5 A		
		e-STUDIO6530C				
	Power consumption	e-STUDIO5520C	2.0 kW or less	2.1 kW or less	2.4 kW or less	3.2 kW or less
		e-STUDIO6520C	2.2 kW or less	2.4 kW or less		
		e-STUDIO6530C				
		* The electric power is supplied to the Finisher and LCF through the equipment.				

1.1.2 Copy

[1] Copy specifications

Storage capacity		Max. 1000 sheets or until the memory is full
Original glass	Original scanning system	Flat surface scanning system (the left rear corner used as guide to place originals)
	Original type	Sheets, books and 3-dimensional objects
	Original size	Max. A3/LD
Reversing Automatic Document Feeder	Original scanning system	Fixed scanning system by feeding the original (the center used as guide to place originals)
	Original type	Sheets (carbon, bounded or stapled originals cannot be accepted)
	Original size	A3, A4, A4-R, A5-R, B4, B5, B5-R LD, LG, LT, LT-R, ST-R
	Original paper weight	Single-sided copy: 35-209 g/m^2 (9.3 lb. Bond -110 lb. Index)* Double-sided copy: 50-157 g/m^2 (13.3 lb. Bond -40 lb. Bond) * You may not obtain enough image quality when an original with a paper weight of more than 157 g/m^2 (41.8 lb.) is used.
	Original capacity	Max. 100 sheets (80 g/m^2) (Stack height 16 mm)
Eliminated portion	Black copy	Leading edges: 3.0 (±2.0) mm, Trailing edges: 3.0 (±2.0) mm, Side edges: 2.0 (±2.0) mm
	Color copy	Leading edges: 5.0 (±2.0) mm, Trailing edges: 3.0 (±2.0) mm, Side edges: 2.0 (±2.0) mm
Multiple copying		Up to 9999 copies; Key in set numbers
Type		Desktop type (Console type: when optional Paper Feed Pedestal (PFP) or optional Large Capacity Feeder (LCF) is installed.)
Original table		Fixed type (the left rear corner used as guide to place originals)

[2] First copy time

e-STUDIO5520C	Black	Approx. 5.3 sec.
	Color	Approx. 6.5 sec.
e-STUDIO6520C	Black	Approx. 5.3 sec.
	Color	Approx. 6.5 sec.
e-STUDIO6530C	Black	Approx. 4.6 sec.
	Color	Approx. 6.5 sec.

[3] Copy speed (Copies/min.)

* "-" means "Not acceptable".
* When originals are manually placed for single-sided, continuous copying.
* The values in ( ) can be realized in the color mode.

[3-1] Plain paper1 / Plain paper2

- Plain paper1: 64 g/m^2 to 80 g/m^2 / 17 lb. Bond to 21.3 lb. Bond
- Plain paper2: 81 g/m^2 to 105 g/m^2 / 21.6 lb. Bond to 28 lb. Bond

e-STUDIO5520C

Paper supply / Paper size	Drawer	Bypass feed		Option LCF	Tandem LCF
		Size specified	Size not specified		
A4, LT	55 (55)	46 (46)	17 (17)	55 (55)	55 (55)
B5, A5-R, ST-R					-
A4-R, B5-R, LT-R	38 (38)	35 (35)	17 (17)	-	-
B4, LG, FOLIO, COMPUTER	29 (29)	27 (27)	17 (17)	-	-
A3, LD	27 (27)	24 (24)	17 (17)	-	-
305 x 457mm, SRA3 (320 x 450mm)	25 (25)	20 (20)	-	-	-

e-STUDIO6520C

Paper supply / Paper size	Drawer	Bypass feed		Option LCF	Tandem LCF
		Size specified	Size not specified		
A4, LT	65 (65)	48 (48)	18 (18)	65 (65)	65 (65)
B5, A5-R, ST-R					-
A4-R, B5-R, LT-R	46 (46)	36 (36)	18 (18)	-	-
B4, LG, FOLIO, COMPUTER	31 (31)	28 (28)	18 (18)	-	-
A3, LD	30 (30)	25 (25)	18 (18)	-	-
305 x 457mm, SRA3 (320 x 450mm)	27 (27)	21 (21)	-	-	-

e-STUDIO6530C

Paper supply / Paper size	Drawer	Bypass feed		Option LCF	Tandem LCF
		Size specified	Size not specified		
A4, LT	75 (65)	52 (48)	20 (18)	75 (65)	75 (65)
B5, A5-R, ST-R					-
A4-R, B5-R, LT-R	54 (46)	38 (36)	20 (18)	-	-
B4, LG, FOLIO, COMPUTER	39 (31)	30 (28)	20 (18)	-	-
A3, LD	37 (30)	27 (25)	20 (18)	-	-
305 x 457mm, SRA3 (320 x 450mm)	31 (31)	23 (21)	-	-	-

[3-2] Thick 1 / Thick 2

- Thick 1: 106 g/m^2 to 163 g/m^2 / 28 lb. Bond to 60 lb. Cover (90 lb. Index)
- Thick 2: 164 g/m^2 to 209 g/m^2 / 61 lb. Cover to 77.3 lb. Cover (115.7 lb. Index)

e-STUDIO5520C/6520C/6530C

Paper supply / Paper size	Drawer	Bypass feed		Option LCF	Tandem LCF
		Size specified	Size not specified		
A4, LT	32 (32)	26 (26)	8 (8)	32 (32)	32 (32)
B5, A5-R, ST-R					-
A4-R, B5-R, LT-R	23 (23)	20 (20)	8 (8)	-	-
B4, LG, FOLIO, COMPUTER	15.5 (15.5)	13 (13)	8 (8)	-	-
A3, LD	13.5 (13.5)	11 (11)	8 (8)	-	-
305 x 457mm, SRA3 (320 x 450mm)	12 (12)	9 (9)	-	-	-

[3-3] Thick 3

- Thick 3: 210 g/m^2 to 256 g/m^2 / 77.3 lb. Cover to 94.5 lb. Cover (141.4 lb. Index)

e-STUDIO5520C/6520C/6530C

Paper supply / Paper size	Drawer	Bypass feed		Option LCF	Tandem LCF
		Size specified	Size not specified		
A4, LT	32 (21)	26 (17)	8 (5)	32 (21)	32 (21)
B5, A5-R, ST-R					-
A4-R, B5-R, LT-R	23 (15)	20 (13)	8 (5)	-	-
B4, LG, FOLIO, COMPUTER	15.5 (10.5)	13 (9.5)	8 (5)	-	-
A3, LD	13.5 (9)	11 (8)	8 (5)	-	-
305 x 457mm, SRA3 (320 x 450mm)	12 (8)	9 (6)	-	-	-

[3-4] Thick 4

- Thick 4: 257 g/m^2 to 280 g/m^2 / 94.5 lb. Cover to 110 lb. Cover

e-STUDIO5520C/6520C/6530C

Paper supply / Paper size	Drawer	Bypass feed		Option LCF	Tandem LCF
		Size specified	Size not specified		
A4, LT	-	26 (17)	8 (5)	-	-
B5, A5-R, ST-R					-
A4-R, B5-R, LT-R	-	20 (13)	8 (5)	-	-
B4, LG, FOLIO, COMPUTER	-	13 (9.5)	8 (5)	-	-
A3, LD	-	11 (8)	8 (5)	-	-
305 x 457mm, SRA3 (320 x 450mm)	-	9 (6)	-	-	-

[3-5] Special paper 1

e-STUDIO5520C/6520C/6530C

Paper supply / Paper size	Drawer	Bypass feed		Option LCF	Tandem LCF
		Size specified	Size not specified		
A4, LT	-	6 (6)	1.5 (1.5)	-	-
B5, A5-R, ST-R					-
A4-R, B5-R, LT-R	-	4.5 (4.5)	1.5 (1.5)	-	-
B4, LG, FOLIO, COMPUTER	-	3 (3)	1.5 (1.5)	-	-
A3, LD	-	2.5 (2.5)	1.5 (1.5)	-	-
305 x 457mm, SRA3 (320 x 450mm)	-	2 (2)	1.5 (1.5)	-	-

[3-6] Special paper 2

e-STUDIO5520C/6520C/6530C

Paper supply / Paper size	Drawer	Bypass feed		Option LCF	Tandem LCF
		Size specified	Size not specified		
A4, LT	-	17 (17)	5 (5)	-	-
B5, A5-R, ST-R					-
A4-R, B5-R, LT-R	-	13 (13)	5 (5)	-	-
B4, LG, FOLIO, COMPUTER	-	9.5 (9.5)	5 (5)	-	-
A3, LD	-	8 (8)	5 (5)	-	-
305 x 457mm, SRA3 (320 x 450mm)	-	6 (6)	-	-	-

[3-7] OHP film

e-STUDIO5520C/6520C/6530C

Paper supply / Paper size	Drawer	Bypass feed		Option LCF	Tandem LCF
		Size specified	Size not specified		
A4, LT	-	17 (17)	5 (5)	-	-

[4] System copy speed

Copy mode		Sec.		
		e-STUDIO5520C	e-STUDIO6520C	e-STUDIO6530C
Single-sided originals ↓ Single-sided copies	1 set	17.49 (18.69)	16.84 (17.22)	14.05 (17.22)
	3 sets	36.10 (40.28)	35.20 (35.39)	30.01 (35.39)
	5 sets	60.74 (61.79)	53.52 (53.67)	45.84 (53.67)
Single-sided originals ↓ Double-sided copies	1 set	22.00 (23.18)	20.51 (22.01)	22.15 (22.01)
	3 sets	43.62 (44.76)	38.85 (40.27)	38.05 (40.27)
	5 sets	65.20 (66.25)	57.13 (58.50)	53.90 (58.50)
Double-sided originals ↓ Double-sided copies	1 set	39.90 (41.32)	38.73 (40.29)	37.52 (40.29)
	3 sets	83.15 (84.46)	75.34 (76.81)	69.24 (76.81)
	5 sets	126.32 (127.44)	112.03 (113.28)	100.88 (113.28)
Double-sided originals ↓ Single-sided copies	1 set	34.60 (35.93)	34.50 (35.70)	33.71 (35.70)
	3 sets	77.84 (78.99)	71.15 (72.18)	65.45 (72.18)
	5 sets	121.12 (122.20)	107.81 (108.57)	97.08 (108.57)

* Shows the period of time from when the [START] button is pressed until the message “Ready” is displayed. (10 sheets of A4/LT size original are set on the RADF and one of the copy modes above is selected.)
* Setting: when in the Text/Photo mode with Automatic density and APS/AMS set to OFF, or when in the sort mode with paper fed from the 1st drawer.
* The Saddle Stitch Finisher and hole punch unit not installed.
* The values in ( ) are the speeds of when in the color mode.

1.1.3 Print

Page Description Language (Printer Driver)		PCL6, PostScript 3 emulation, XPS
Page Description Language (RIP)		PCL6, PostScript 3 emulation, XPS, PCL5e, PCL5c, PDF (emulation)
Supported OS		Windows 2000 / XP / Vista / 7 / Server 2003 / Server 2008 Mac OS X (Ver.10.2 or higher) Solaris (SUN) / HP-UX / AIX (IBM) / Linux / SCO
Resolution	Black	600 x 600 dpi, 8bit 1200 x 1200 dpi, 2bit (PS only)
	Color	600 x 600 dpi, 8bit 1200 x 1200 dpi, 2bit (PS only)
Eliminated portion	Black print / Color print	Leading edges: 4.2 (+2.8 / -1.2) mm, Trailing edges: 4.2 (+1.2 / -2.8) mm, Side edges: 4.2 (±2.0) mm
Interface	Standard	USB 2.0 (High Speed), Ethernet (10BASE-T/100BASE-TX/1000BASE-T)
	Optional	WLAN (IEEE 802.11b/g), Bluetooth (HCRP and BIP)

1.1.4 Scan

Scanning speed	Black	62 sheets/min. (Text/Photo: 600 x 600 dpi) 62 sheets/min. (Gray scale: 600 x 600 dpi)
	Color	53 sheets/min. (Text/Photo)
Resolution		100, 150, 200, 300, 400 and 600 dpi
Color mode		BLACK, GRAY SCALE, FULL COLOR, AUTO COLOR
Original mode		[TEXT], [TEXT/PHOTO], [PHOTO], [PRTD IMAGE]
File formats		JPEG, Multi/Single page TIFF, Multi/Single page PDF, Slim PDF, Multi/Single page XPS

* When scanning single-sided A4/LT landscape originals using RADF

1.1.5 e-Filing

Number of Boxes	Public Box	1
	User Box	200
Number of Folder		100 folders per box
Number of Document		400 documents per box/folder
Number of Page		200 pages per document
Capacity of HDD	e-Filing	14 GB

1.1.6 Internet Fax

[1] Internet FAX transmission

Resolution	TX Resolution < dots/mm >	Standard (8 x 3.85), Fine (8 x 7.7), U-Fine (16 x 15.4)* * If U-Fine is selected in TX resolution, data is converted to Fine resolution in RX.
Scanning	Original Document Size	A3, B4, A4, A4-R, A5, B5, B5-R, A5-R, LT, LT-R, LG, LD, ST, ST-R, Computer, Folio
	Speed	0.7sec. (per page/A4) Max.50 spm (ITU-T No.1, A4, 8 x 3.85,Text mode)
	Gray scale	256 levels (Error Diffusion)
Address book	Address Book	1000 stations
	Group	Max. 200 stations
Transmission Features	Broadcast transmission	Max. 400 destinations/job. (Fax number and E-mail address are available to registered in same job.)
	Message size limitation	Max. 100 M Byte
	Message division	Page by page

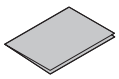
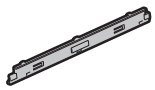
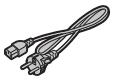
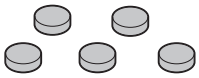
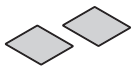
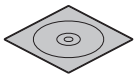
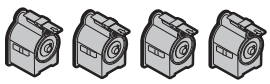
[2] Internet FAX receiving

Format of receive attachment	TIFF-FX (Profile S, F, J)

1.1.7 Network Fax

Compatibility		Super G3, G3 (ITU-T.30) Internet Fax (Simple mode) (ITU-T.37)
TX Resolution	PSTN	Standard: 200 x 100 dpi, Fine: 200 x 200 dpi, Super Fine: 200 x 400 dpi, Ultra Fine: 400 x 400 dpi
	Internet Fax	200 dpi x 200 dpi
Original Document Size		A3, B4, A4, B5, A5, LT, LG, LD, ST, Folio, Computer
Mail Box	User defined	Max. 300 boxes
Routed document format	Send to e-Filing	MMR
	Send to File (SMB)	Single TIFF, Multi-TIFF, Single PDF, Multi PDF
	Send to FTP	Single TIFF, Multi-TIFF, Single PDF, Multi PDF
	Send to E-mail	Single TIFF, Multi-TIFF, Single PDF, Multi PDF
	Send to I-Fax	TIFF-S
	Send to PSTN-FAX	MMR

1.2 Accessories

Unpacking/Setup instruction		1 set
Operator’s manual		1 set
Operator's manual pocket		1 pc.
Original feeding tray spacer		1 pc.
Power cable		MJC / MJD 1 pc. <e-STUDIO5520C> 2 pcs. <e-STUDIO6520C/6530C> ASU, ASD, ARD, AUC / AUD, CND 1 pc.
Warranty sheet		1 pc. (for NAC / NAD)
Setup report		1 set (for NAC / NAD, MJC / MJD, CND)
PM sticker		1 pc. (for MJC / MJD)
Cleaning cloth		1 pc.
Cloth case		1 pc.
Rubber plug		5 pcs.
Gasket		2 pcs.
Blind seal		2 pcs.
CD-ROM		2 pcs.
Developer material (Y, M, C, K)		1 pc. each

* Machine version

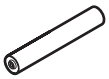
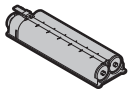
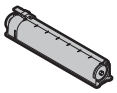
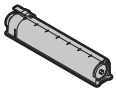
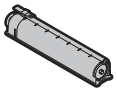
NAC / NAD:	North America, Brazil	SAD:	Saudi Arabia
MJC / MJD:	Europe	ASU:	Saudi Arabia, Asia
AUC / AUD:	Australia	ARD:	Argentina
ASD:	Asia, Hong Kong, Latin America	CND:	China

1.3 Options

Large Capacity Feeder (LCF)	MP-2501L/A
Finisher	MJ-1103
Saddle stitch finisher	MJ-1104
Hole punch unit	MJ-6102N/E/F/S (for MJ-1103/1104)
Staple cartridge	STAPLE-2400 (for MJ-1103/1104) STAPLE-3100 (for MJ-1104)
FAX unit	GD-1270NA/EU/AU/AS/C
2nd line for fax unit	GD-1260NA/EU/AU/C
Wireless LAN module	GN-1050
Bluetooth module	GN-2010
Antenna	GN-3010
Data Overwrite Enabler	GP-1070
Meta Scan Enabler	GS-1010
External Interface Enabler	GS-1020
IPSec Enabler	GP-1080
e-BRIDGE ID Gate (HID)	KP-2004
e-BRIDGE ID Gate (MIFARE)	KP-2005
EFI Printer Board	GA-1310
Imaging Acceleration Board	GE-1170
Finisher Guide Rail	KN-1103
Damp Heater Kit	MF-5520E/U
Harness kit for coin controller	GQ-1200

Note:
The antenna (GN-3010) is necessary to enable the wireless LAN module (GN-1050) and the bluetooth module (GN-2010).

1.4 Supplies

Drum 	OD-FC55
Toner cartridge (K) 	PS-ZTFC55K (for North America, Central and South America) PS-ZTFC55EK (for Europe) PS-ZTFC55DK (for Australia and Asia) PS-ZTFC55CK (for China)
Toner cartridge (Y) 	PS-ZTFC55Y (for North America, Central and South America) PS-ZTFC55EY (for Europe) PS-ZTFC55DY (for Australia and Asia) PS-ZTFC55CY (for China)
Toner cartridge (M) 	PS-ZTFC55M (for North America, Central and South America) PS-ZTFC55EM (for Europe) PS-ZTFC55DM (for Australia and Asia) PS-ZTFC55CM (for China)
Toner cartridge (C) 	PS-ZTFC55C (for North America, Central and South America) PS-ZTFC55EC (for Europe) PS-ZTFC55DC (for Australia and Asia) PS-ZTFC55CC (for China)
Waste toner box 	PS-TBFC55 (expect for Europe) PS-TBFC55E (for Europe) PS-TBFC55C (for China)

1.5 System List

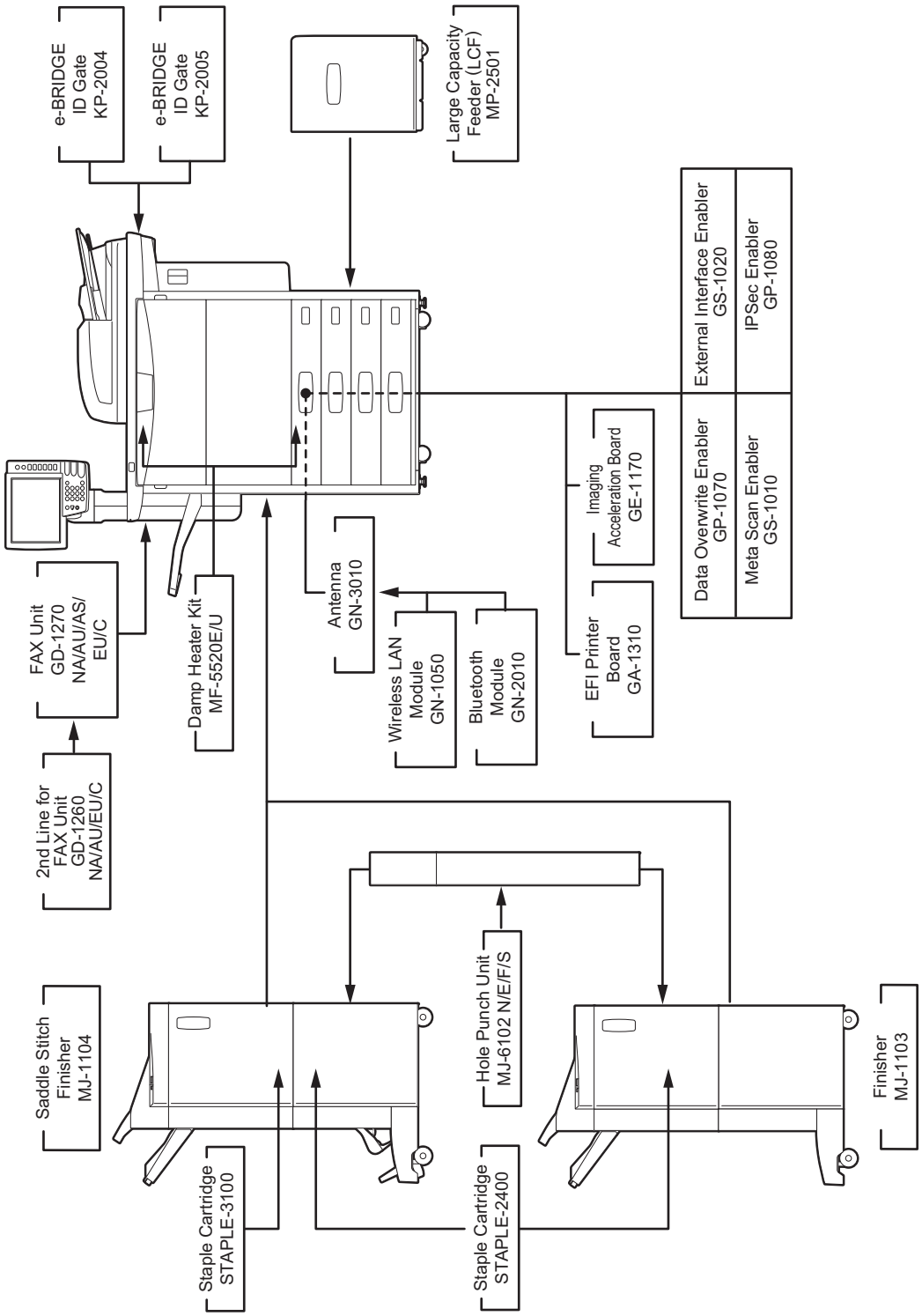


Fig. 1-1

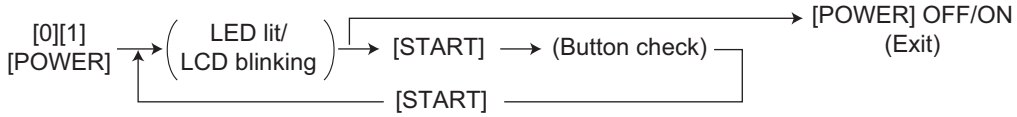
2. SELF-DIAGNOSTIC MODE

Mode	For start	Contents	For exit	Display
Control panel check mode	[0] + [1] + [POWER]	All LEDs on the control panel are lit, and all the LCD pixels blink.	[POWER] OFF/ON	-
Test mode	[0] + [3] + [POWER]	Checks the status of input/output signals.	[POWER] OFF/ON	100% C A4 TEST MODE
Test print mode	[0] + [4] + [POWER]	Outputs the test patterns.	[POWER] OFF/ON	100% P A4 TEST PRINT
Adjustment mode	[0] + [5] + [POWER]	Adjusts various items.	[POWER] OFF/ON	100% A A4 TEST MODE
Setting mode	[0] + [8] + [POWER]	Sets various items.	[POWER] OFF/ON	100% D TEST MODE
List print mode	[9] + [START] + [POWER]	Prints out the data lists of the codes 05 and 08, PM support mode, pixel counter, error history, firmware upgrade log and power ON/ OFF log, and also outputs them in a CSV format.	[POWER] OFF/ON	100% L A4 LIST PRINT
PM support mode	[6] + [START] + [POWER]	Clears each counter.	[POWER] OFF/ON	100% K TEST MODE
Firmware update mode	[8] + [9] + [POWER]	Performs updating of the system firmware.	[POWER] OFF/ON	-

Note:
To enter the desired mode, turn the power ON while pressing two digital keys designated to each mode (e.g. [0] and [5]) simultaneously. Hold the two keys until the [COPY] [e-FILING] [SCAN] [PRINT] [FAX] buttons are lit.

To exit from Adjustment mode and Setting mode:
Shut down the equipment. When the power should be turned OFF, be sure to shut down the equipment by pressing the [ON/OFF] button for a few seconds.

- Control panel check mode (01):
<Operation procedure>



Notes:
1. A mode can be cancelled by [POWER] OFF/ON when the LED is lit and the LCD is blinking.
2. Button Check
   Buttons with LED (Press to turn OFF the LED.)
   Buttons without LED (Press to display the message on the control panel.)
   Button on touch panel (Press to display the initial screen displayed at power-ON. Press [execution] on the touch panel and then the [CLEAR] button on the control panel. The screen then returns to the Button Check menu.)

- Test mode (03): Refer to 📖 P.2-4 "2.1 Input check (Test mode 03)" and 📖 P.2-15 "2.2 Output check (test mode 03)".

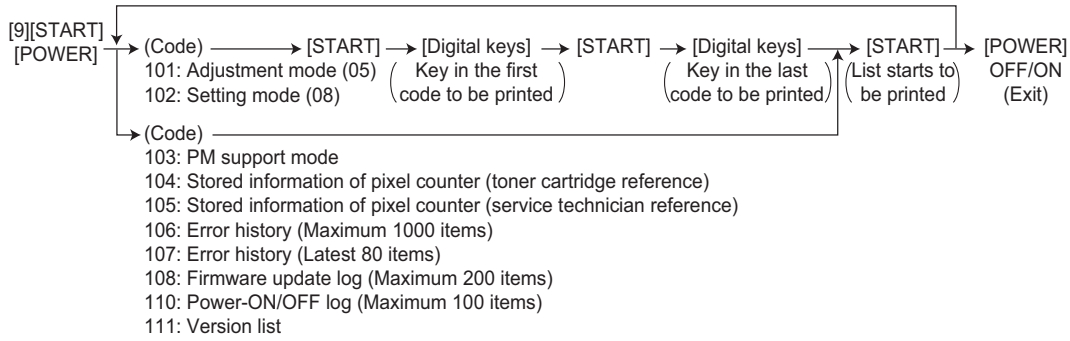
- Test print mode (04): Refer to 📖 P.2-22 "2.3 Test print mode (test mode 04)".

- Adjustment mode (05): Refer to 📖 P.2-35 "2.5 ADJUSTMENT MODE (05)".

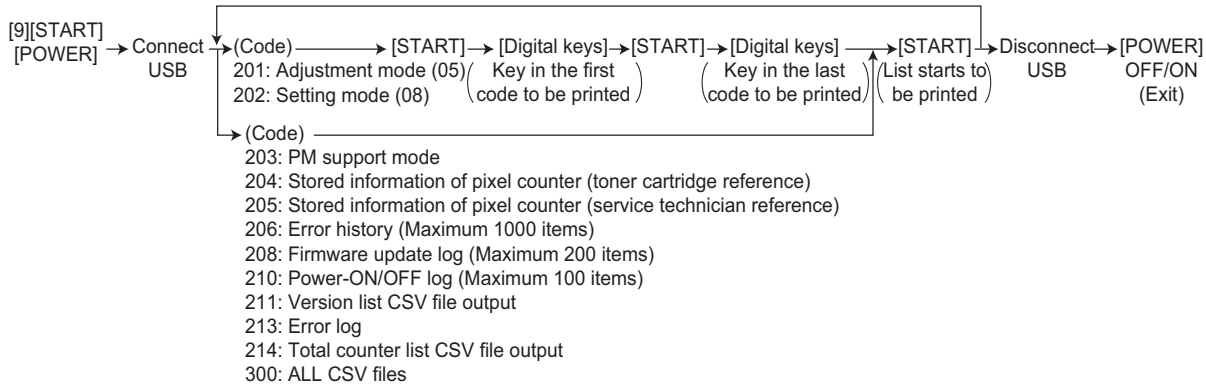
- Setting mode (08): Refer to 📖 P.2-116 "2.6 SETTING MODE (08)".

- List print mode (9S): The procedure varies depending on the code.
  <Operation procedure>

PRINT



USB (CSV format, txt format)



Notes:

Precautions when storing information into USB media

- When storing the setting information of the equipment into a USB media, be sure to obtain permission from a user in advance.
- When storing the setting information of the equipment into a USB media, the information is printed out in a CSV format. Handle and manage the information with extra care.
- Do not lose or leak the setting information of the equipment.
- Do not use the setting information of the equipment for purposes other than maintenance or product services.
- Provide the information promptly if a user requires so.

Remark:

In the USB storage procedure above, lists are stored in a CSV format. The names of the CSV files are shown below (the numbers represent the serial number of the machine: “0123456789”.)

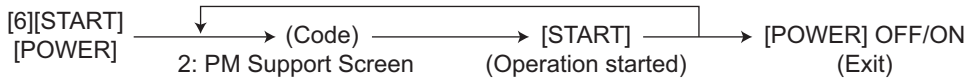
201:ADJUSTMENT_LIST_0123456789.csv
202:SETTING_LIST_0123456789.csv
203:PM_LIST_0123456789.csv
204:PIXEL_TONER_LIST_0123456789.csv
205:PIXEL_SERVICE_LIST_0123456789.csv
206:ERROR_LOG_0123456789.csv
208:FW_UPGRADE_LOG0123456789.csv
210:POWER_ONOFF_LOG_0123456789.csv
211:VERSION_LIST_0123456789.csv
213:logdump.txt / i.txt
214:TOTAL_COUNTER_LIST_0123456789.csv

Remark:

The buttons on the control panel keep blinking while data are being stored in the USB media.

- Do not disconnect the USB media while data are being stored.
- When the data of a code are printed again on the same equipment, the CSV file will be overwritten because the names of these files contain the same serial number.

- PM support mode (6S):
  <Operation procedure>



- Firmware update mode (89): Refer to P.8-1 "8. FIRMWARE UPDATING".

- State transition diagram of self-diagnosis modes

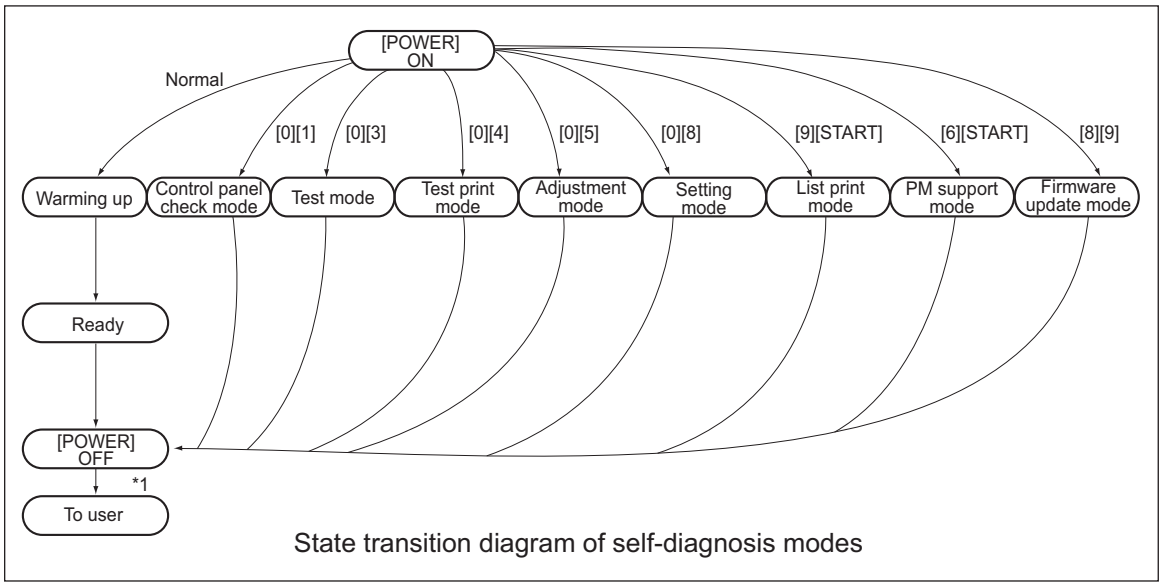


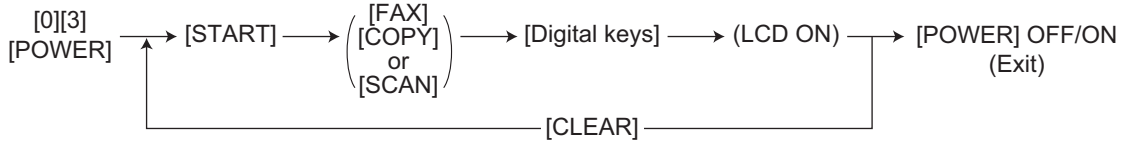
Fig. 2-1

*1 Turn OFF the power after using the self-diagnosis mode, and leave the equipment to the user.

2.1 Input check (Test mode 03)

The status of each input signal can be checked by pressing the [FAX] button, [COPY] button, [SCAN] button and the digital keys in the test mode (03).

<Operation procedure>



Note:
Initialization is performed before the equipment enters the test mode.

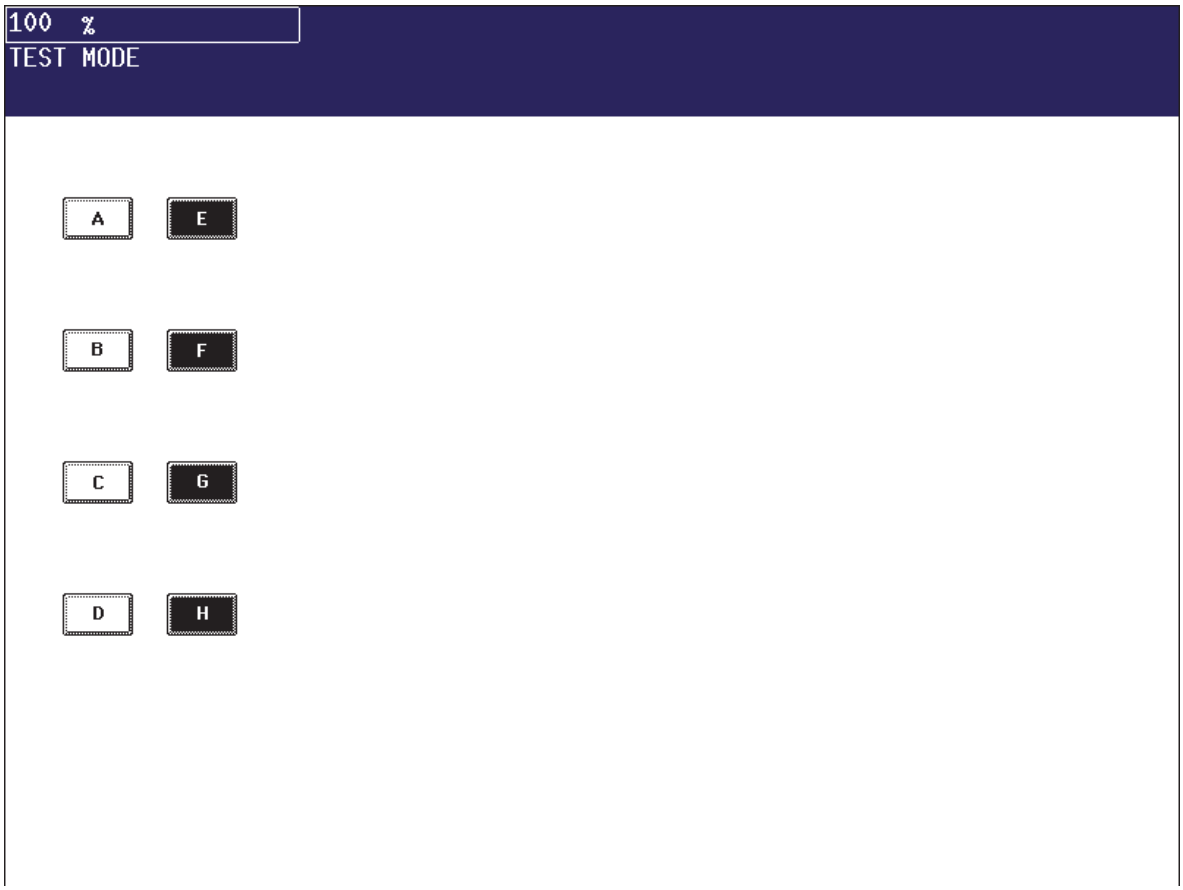


Fig. 2-2 Example of display during input check

Items to be checked and the condition of the equipment when the buttons [A] to [H] are highlighted are listed in the following pages.

[FAX] button: OFF/[COPY] button: OFF/[SCAN] button: OFF
([FAX] LED: OFF/[COPY] LED: OFF/[SCAN] LED: OFF)

Digital key	Button	Items to check	Contents	
			Highlighted display e.g. A	Normal display e.g. A
[1]	A	Bridge unit path exit sensor	Paper present	No paper
	B	Bridge unit path entrance sensor	Paper present	No paper
	C	Reverse path sensor	Paper present	No paper
	D	-	-	-
	E	Upper paper exit sensor	Paper present	No paper
	F	-	-	-
	G	-	-	-
	H	-	-	-
[2]	A	-	-	-
	B	Fuser belt temperature abnormality	Normal	Excessively high
	C	Fuser transport sensor	No paper	Paper present
	D	Thermopile wire breaking detection signal	Normal	Broken
	E	Fusing control abnormality	Normal	Abnormal
	F	-	-	-
	G	-	-	-
	H	-	-	-
[3]	A	-	-	-
	B	FIL board power cable detection signal (Detecting the number of cables)	1 cable	2 cables
	C	-	-	-
	D	-	-	-
	E	-	-	-
	F	Pressure roller contact/release detection sensor	Released	Contacted
	G	Pressure roller sub heater lamp (800W coil) control ON/OFF (only for MJD model)	ON	OFF
	H	Fuser roller rotation detection	Rotated	Damaged or stopped
[4]	A	-	-	-
	B	Registration sensor	Paper present	No paper
	C	Lower paper exit sensor	Paper present	No paper
	D	Sub-hopper toner motor-K locking	Rotated	Locked or stopped
	E	Sub-hopper toner motor-C locking	Rotated	Locked or stopped
	F	Sub-hopper toner motor-M locking	Rotated	Locked or stopped
	G	Sub-hopper toner motor-Y locking	Rotated	Locked or stopped
	H	-	-	-
[5]	A	Polygonal motor ready signal	No Ready (Stopped)	Ready (Rotated)
	B	Interlock switch	Cover closed (24 V normal)	Cover opened (24 V abnormal)
	C	Developer unit mixer motor-K locking signal	Abnormal	Normally rotated
	D	Developer unit mixer motor-YMC locking signal	Abnormal	Normally rotated
	E	TRU waste toner amount detection sensor	Toner bag full	Not full
	F	-	-	-
	G	TRU waste toner motor locking detection	Rotated	Locked or stopped
	H	Transfer belt contact / release detection sensor	Released (home position)	Contacted (No blocking)

Digital key	Button	Items to check	Contents	
			Highlighted display e.g. A	Normal display e.g. A
[6]	A	K-ATS connection detection	Not connected	Connected
	B	C-ATS connection detection	Not connected	Connected
	C	M-ATS connection detection	Not connected	Connected
	D	Y-ATS connection detection	Not connected	Connected
	E	-	-	-
	F	-	-	-
	G	-	-	-
	H	-	-	-
[7]	A	Pressure roller sub heater lamp wattage detection	800 W	200 W
	B	-	-	-
	C	-	-	-
	D	Shutter motor end position detection / Shutter sensor (end position) (Refer to table 1)	OFF (H)	ON (L)
	E	Shutter motor home position detection / Shutter sensor (home position) (Refer to table 1)	OFF (H)	ON (L)
	F	-	-	-
	G	-	-	-
	H	Pressure roller temperature abnormality	Normal	Excessively high
[8]	A	IH error signal-2 (Refer to table 2)	OFF (H)	ON (L)
	B	IH error signal-1 (Refer to table 2)	OFF (H)	ON (L)
	C	IH error signal-0 (Refer to table 2)	OFF (H)	ON (L)
	D	-	-	-
	E	-	-	-
	F	-	-	-
	G	Image position aligning sensor (rear)	Detecting reflection light from the belt	Not detecting reflection light from the belt
	H	Image position aligning sensor (front)	Detecting reflection light from the belt	Not detecting reflection light from the belt
[9]	A	Color drum phase sensor	Sensor shielded	Sensor not shielded
	B	K drum phase sensor	Sensor shielded	Sensor not shielded
	C	Transfer belt paper clinging detection sensor	Paper present	No paper
	D	2nd transfer side paper clinging detection sensor	Paper present	No paper
	E	-	-	-
	F	-	-	-
	G	Image position aligning sensor (Center)	Detecting reflection light from the belt	Not detecting reflection light from the belt
	H	2nd transfer roller contact / release detection sensor	Released (home position)	Contacted

Digital key	Button	Items to check	Contents	
			Highlighted display e.g. A	Normal display e.g. A
[0]	A	-	-	-
	B	Waste toner amount detection sensor	Nearly full	Not full
	C	-	-	-
	D	-	-	-
	E	Duplexing unit opening / closing detection sensor -LGC (Refer to table 3)	OFF(H)	ON(L)
	F	-	-	-
	G	Front cover opening / closing detection switch	Cover opened	Cover closed
	H	-	-	-

Table 1.Relation between signals of shutter motor end position detection and home position detection

Status	End position detection	Home position detection
Abnormal	H	H
Shutter opened	H	L
Shutter closed	L	H
Moving	L	L

Table 2.Relation between IH error signals and IH interlock switch

Status	IH error signal-2	IH error signal-1	IH error signal-0
Duplexing unit interlock switch ON (Duplexing unit closed)	L	L	H
Duplexing unit interlock switch OFF (Duplexing unit opened)	L	L	L
IH board abnormal	Other than the above		

Table 3.Relation between signals of duplexing unit cover opening/closing detection

Status	Duplexing unit opening/closing detection sensor (LGC side)	Duplexing unit opening/closing detection sensor (PFC side)
Closed	H	H
Opened	H	L
Opened	L	H
Opened	L	L

[FAX] button: ON/[COPY] button: OFF/[SCAN] button: OFF
([FAX] LED: ON/[COPY] LED: OFF/[SCAN] LED: OFF)

Digital key	Button	Items to check	Contents	
			Highlighted display e.g. A	Normal display e.g. A
[1]	A	-	-	-
	B	Waste toner box full detection sensor	Toner bag full	Not full
	C	Waste toner detection sensor	No box (or cover opened)	Box present
	D	-	-	-
	E	-	-	-
	F	-	-	-
	G	-	-	-
	H	-	-	-
[2]	A	IH board destination detection signal-1 (Refer to table 4)	OFF (H)	ON (L)
	B	IH board destination detection signal-0 (Refer to table 4)	OFF (H)	ON (L)
	C	-	-	-
	D	-	-	-
	E	-	-	-
	F	-	-	-
	G	-	-	-
	H	-	-	-
[3]	A	Developer unit drive ready signal (Sync signal)	Abnormally rotated (or stopped)	Normally rotated
	B	Fuser unit drive ready signal	Abnormally rotated (or stopped)	Normally rotated
	C	Color developer units drive ready signal (Sync signal)	Abnormally rotated (or stopped)	Normally rotated
	D	Upper exit tray paper full detection sensor	Full	Not full
	E	K cartridge genuine toner detection signal	Normal	Abnormal
	F	C cartridge genuine toner detection signal	Normal	Abnormal
	G	M cartridge genuine toner detection signal	Normal	Abnormal
	H	Y cartridge genuine toner detection signal	Normal	Abnormal
[4]	A	-	-	-
	B	Thermopile wire breaking detection signal	Normal	Broken
	C	Fuser belt temperature abnormality	Normal	Excessively high
	D	Fuser unit connection status	Connected	Not connected
	E	IH enabling	IH forcible OFF	IH enabled
	F	Fuser belt rotation detection sensor damage detection	Normal	Fuser motor (damaged or stopped)
	G	-	-	-
	H	-	-	-
[5]	A	-	-	-
	B	Original exit/reverse sensor	Paper present	No paper
	C	Original reverse unit opening/closing sensor	Cover opened	Cover closed
	D	Original reading end sensor	Paper present	No paper
	E	-	-	-
	F	RADF connection	Connected	Not connected
	G	Platen sensor	RADF opened	RADF closed
	H	Carriage home position sensor	Home position	Other than home position

Digital key	Button	Items to check	Contents	
			Highlighted display e.g. A	Normal display e.g. A
[6]	A	-	-	-
	B	-	-	-
	C	-	-	-
	D	APS sensor (APS-R)	No original	Original present
	E	APS sensor (APS-C)	No original	Original present
	F	APS sensor (APS-3)	No original	Original present
	G	APS sensor (APS-2)	No original	Original present
	H	APS sensor (APS-1)	No original	Original present
[7]	A	Original tray sensor	ON	OFF
	B	Original empty sensor	Original present	No original
	C	Original jam access cover opening/ closing sensor	Cover opened	Cover closed
	D	RADF open/close sensor	RADF opened	RADF closed
	E	Original exit sensor	Original present	No original
	F	Original intermediate transport sensor	Original present	No original
	G	Original reading start sensor	Original present	No original
	H	Original registration sensor	Original present	No original
[8]	A	Original tray width sensor (TWID0S) (Refer to table 5)	OFF (H)	ON (L)
	B	Original tray width sensor (TWID1S) (Refer to table 5)	OFF (H)	ON (L)
	C	Original tray width sensor (TWID2S) (Refer to table 5)	OFF (H)	ON (L)
	D	-	-	-
	E	-	-	-
	F	Original width sensor 1	Original present	No original
	G	Original width sensor 2	Original present	No original
	H	Original width sensor 3	Original present	No original
[9]	A	Sub-hopper toner sensor-M	Normal	Empty
	B	-	-	-
	C	M Needle electrode cleaner home position detection	Home position	Other than home
	D	Sub-hopper toner sensor-Y	Normal	Empty
	E	-	-	-
	F	Y needle electrode cleaner home position detection	Home position	Other than home
	G	Sub-hopper connection detection	All sub-hoppers connected	More than one sub-hopper disconnected
	H	-	-	-
[0]	A	Drawer installation detection (EPU tray installation detection)	Connected	Not connected
	B	Auger lock detection sensor	Sensor shielded	Sensor not shielded
	C	Sub-hopper toner sensor-K	Normal	Empty
	D	-	-	-
	E	K needle electrode cleaner home position detection	Home position	Other than home
	F	Sub-hopper toner sensor-C	Normal	Empty
	G	-	-	-
	H	C needle electrode cleaner home position detection	Home position	Other than home

Table 4.Relation between IH board destination detection signals-1 and -0

Status	IH board destination detection signal-1	IH board destination detection signal-0
MJD	L	L
SAD/ASU	H	L
NAD/TWD	L	H
JPD	H	H

Table 5. Relation between the status of the original tray width sensor and paper size (width).

Original tray width sensor			Paper width size (LT series)	Paper width size (A4 series)
TWID2S	TWID1S	TWID0S		
H	H	H	LD / LT	A3 / A4
H	H	L	-	B5-R
H	L	H	ST-R	A5-R
L	H	H	LD / LT	A3 / A4
L	H	L	-	-
L	L	H	8.5 x 8.5 / LT-R / LG / 13"LG	A4-R / FOLIO
L	L	L	COMPUTER	B4 / B5

H (= high level): Open L (= low level): Short

[FAX] button: OFF/[COPY] button: ON/[SCAN] button: OFF
([FAX] LED: OFF/[COPY] LED: ON/[SCAN] LED: OFF)

Digital key	Button	Items to check	Contents	
			Highlighted display e.g. A	Normal display e.g. A
[1]	-	Temperature/humidity sensor (displays temperature inside of the equipment)	-	Temperature [°C]
[2]	-	Temperature/humidity sensor (displays humidity inside of the equipment)	-	Humidity [%RH]
[3]	-	Drum thermistor-K (displays temperature on the drum surface of K color)	-	Temperature [°C]
[4]	-	Drum thermistor-Y (displays temperature on the drum surface of Y color)	-	Temperature [°C]
[5]	A	-	-	-
	B	5V SW monitor	OFF	ON
	C	-	-	-
	D	-	-	-
	E	-	-	-
	F	Fuser transport sensor	No paper	Paper present
	G	Lower paper exit sensor	Paper present	No paper
	H	Registration sensor	Paper present	No paper
[6]	A	Interlock detection (24 V shut-off detection)	Normal	24 V shut off
	B	-	-	-
	C	-	-	-
	D	-	-	-
	E	-	-	-
	F	-	-	-
	G	-	-	-
	H	-	-	-
[7]	A	Upper paper exit sensor	Paper present	No paper
	B	Bridge unit connecting detection switch (Refer to table 7)	OFF(H)	ON(L)
	C	-	-	-
	D	-	-	-
	E	Bypass paper size detection sensor-3 (Refer to table 8)	OFF (H)	ON (L)
	F	Bypass paper size detection sensor-2 (Refer to table 8)	OFF (H)	ON (L)
	G	Bypass paper size detection sensor-1 (Refer to table 8)	OFF (H)	ON (L)
	H	Bypass paper size detection sensor-0 (Refer to table 8)	OFF (H)	ON (L)
[8]	A	Reverse path cover switch	Cover opened	Cover closed
	B	Stopper opening/closing detection sensor (front)	Stopper opened	Stopper closed
	C	Stopper opening/closing detection sensor (rear)	Stopper opened	Stopper closed
	D	-	-	-
	E	Detecting connection between bridge unit and drawers (Refer to table 7)	OFF (H)	ON (L)
	F	Reverse section paper transport detection sensor	Paper present	No paper
	G	Standby side tray paper amount detection sensor	No paper	Paper present
	H	Feed cover sensor	Cover closed	Cover opened

Digital key	Button	Items to check	Contents	
			Highlighted display e.g. A	Normal display e.g. A
[9]	A	4th drawer bottom sensor	Bottom position	Normal
	B	3rd drawer bottom sensor	Bottom position	Normal
	C	2nd drawer bottom sensor	Bottom position	Normal
	D	1st drawer bottom sensor	Bottom position	Normal
	E	4th drawer tray-up sensor / End fence home position sensor	Upper limit position / Tray initial position	Normal
	F	3rd drawer/tandem LCF tray-up sensor	Upper limit position	Normal
	G	2nd drawer tray-up sensor	Upper limit position	Normal
	H	1st drawer tray-up sensor	Upper limit position	Normal
[0]	A	-	-	-
	B	-	-	-
	C	-	-	-
	D	Security enabler	Connectable	Not connectable
	E	Judgement for acceptable USB storage device (*1)	Acceptable	Not acceptable
	F	-	-	-
	G	-	-	-
	H	-	-	-

*1
- Be sure to install the USB storage device to the equipment and check if the device can be used with this code.
- Be sure to turn OFF the write protection (the function to prevent data from erasure by the accidental recording or deleting) of the USB storage device before performing the check, otherwise this code cannot be used.
- It may take some time (2 sec. to 10 sec.) before this check is completed depending on the USB storage device.

Table 7.Relation between the bridge unit connecting detection switch and connection detection for the bridge unit and drawers

Status	Bridge unit connecting detection switch	Connection detection between bridge unit and drawers
Connected	L	L
Not connected	L	H
Not connected	H	L
Not connected	H	H

Table 8. Relation between the status of the bypass paper width sensor and paper size (width).

Bypass paper width sensor				Paper width size
3	2	1	0	
L	H	H	H	A3/LD
H	L	H	H	A4-R/LT-R
H	H	L	H	A5-R/ST-R
H	H	H	L	Card size
L	L	H	H	B4-R/LG
H	L	L	H	B5-R

[FAX] button: OFF/[COPY] button: OFF/[SCAN] button: ON
([FAX] LED: OFF/[COPY] LED: OFF/[SCAN] LED: ON)

Digital key	Button	Items to check	Contents	
			Highlighted display e.g. A	Normal display e.g. A
[1]	A	4th drawer transport sensor	Paper present	No paper
	B	3rd drawer transport sensor / Tandem LCF transport sensor	Paper present	No paper
	C	2nd drawer transport sensor	Paper present	No paper
	D	1st drawer transport sensor	Paper present	No paper
	E	4th drawer feed sensor / End fence stop position sensor	Paper present / After the tray was moved	No paper / In cases other than the noted left
	F	3rd drawer/tandem LCF feed sensor	Paper present	No paper
	G	2nd drawer feed sensor	Paper present	No paper
	H	1st drawer feed sensor	Paper present	No paper
[2]	A	4th drawer empty sensor / Tandem LCF standby side empty sensor	No paper / No paper	Paper present/ Paper present
	B	3rd drawer/tandem LCF empty sensor	No paper / No paper	Paper present/ Paper present
	C	2nd drawer empty sensor	No paper	Paper present
	D	1st drawer empty sensor	No paper	Paper present
	E	4th drawer detection sensor / Tandem LCF bottom sensor	Drawer closed / Tray lifted down	Drawer opened / In cases other than the noted left
	F	3rd drawer/tandem LCF detection sensor	Drawer closed	Drawer opened
	G	2nd drawer detection sensor	Drawer closed	Drawer opened
	H	1st drawer detection sensor	Drawer closed	Drawer opened
[3]	A	Bypass feed sensor	No paper	Paper present
	B	Bypass paper sensor	No paper	Paper present
	C	Bridge unit path exit sensor	Paper present	No paper
	D	Bridge unit path entrance sensor	Paper present	No paper
	E	Reverse path sensor (Bridge unit)	Paper present	No paper
	F	Reverse sensor	Paper present	No paper
	G	Duplexing unit path exit sensor	Paper present	No paper
	H	Duplexing unit path entrance sensor	Paper present	No paper
[4]	A	Reverse section stationary jam detection sensor	Paper present	No paper
	B	-	-	-
	C	-	-	-
	D	-	-	-
	E	-	-	-
	F	Duplexing unit cover opening/closing detection sensor-1	Cover closed	Cover opened
	G	Duplexing unit opening/closing detection sensor (PFC side) (Refer to table 3)	OFF (H)	ON (L)
	H	-	-	-
[5]	A	-	-	-
	B	-	-	-
	C	Option LCF installation sensor	Not installed	Installed
	D	Option LCF tray position sensor	Tray unit opened	Tray unit closed
	E	Option LCF feed sensor	No paper	Paper present
	F	Option LCF empty sensor	No paper	Paper present
	G	Option LCF bottom sensor	Lower limit position	Normal
	H	Option LCF top sensor	Upper limit position	Normal

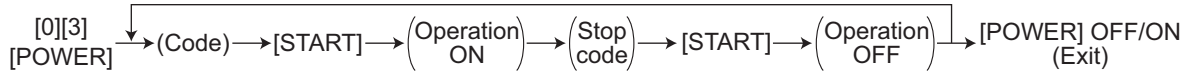
Digital key	Button	Items to check	Contents	
			Highlighted display e.g. A	Normal display e.g. A
[6]	A	-	-	-
	B	-	-	-
	C	-	-	-
	D	-	-	-
	E	-	-	-
	F	-	-	-
	G	Standby side tray detection sensor	No tray	Tray present
	H	-	-	-
[7]	A	1st drawer paper size detection sensor-7	OFF	ON
	B	1st drawer paper size detection sensor-6	OFF	ON
	C	1st drawer paper size detection sensor-5	OFF	ON
	D	1st drawer paper size detection sensor-4	OFF	ON
	E	1st drawer paper size detection sensor-3	OFF	ON
	F	1st drawer paper size detection sensor-2	OFF	ON
	G	1st drawer paper size detection sensor-1	OFF	ON
	H	1st drawer paper size detection sensor-0	OFF	ON
[8]	A	2nd drawer paper size detection sensor-7	OFF	ON
	B	2nd drawer paper size detection sensor-6	OFF	ON
	C	2nd drawer paper size detection sensor-5	OFF	ON
	D	2nd drawer paper size detection sensor-4	OFF	ON
	E	2nd drawer paper size detection sensor-3	OFF	ON
	F	2nd drawer paper size detection sensor-2	OFF	ON
	G	2nd drawer paper size detection sensor-1	OFF	ON
	H	2nd drawer paper size detection sensor-0	OFF	ON
[9]	A	3rd drawer paper size detection sensor-7	OFF	ON
	B	3rd drawer paper size detection sensor-6	OFF	ON
	C	3rd drawer paper size detection sensor-5	OFF	ON
	D	3rd drawer paper size detection sensor-4	OFF	ON
	E	3rd drawer paper size detection sensor-3	OFF	ON
	F	3rd drawer paper size detection sensor-2	OFF	ON
	G	3rd drawer paper size detection sensor-1	OFF	ON
	H	3rd drawer paper size detection sensor-0	OFF	ON
[0]	A	4th drawer paper size detection sensor-7	OFF	ON
	B	4th drawer paper size detection sensor-6	OFF	ON
	C	4th drawer paper size detection sensor-5	OFF	ON
	D	4th drawer paper size detection sensor-4	OFF	ON
	E	4th drawer paper size detection sensor-3	OFF	ON
	F	4th drawer paper size detection sensor-2	OFF	ON
	G	4th drawer paper size detection sensor-1	OFF	ON
	H	4th drawer paper size detection sensor-0	OFF	ON

2.2 Output check (test mode 03)

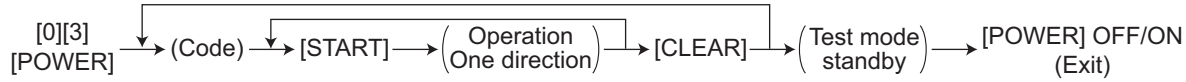
Status of the output signals can be checked by entering the following codes in the test mode 03.

<Operation procedure>

Procedure 1

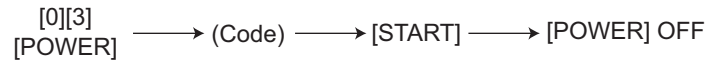


Procedure 2



Procedure 3

Procedure 4



Code	Function	Code	Function	Procedure
101	2nd transfer roller release / Transfer belt cam motor Contacted Transfer belt motor ON Drum motor-K ON Drum motor-YMC ON Developer unit motor-K ON Developer unit motor-YMC ON Developer unit mixer motor-K ON Developer unit mixer motor-YMC ON (Operation available with the process unit installed)	151	Code No.101 function OFF	1
103	Polygonal motor (600dpi) ON	153	Code No.103 function OFF	1
104	Laser ON * Do not radiate laser beam onto the photoconductive drums for a long time.	154	Code No.104 function OFF	1
110	Drum motor-K ON (Operation available without the process unit)	160	Code No.110 function OFF	1 (*1)
111	Drum motor-YMC ON (Operation available without the process unit)	161	Code No.111 function OFF	1 (*1)
112	Developer unit motor-K ON (Operation available without the process unit)	162	Code No.112 function OFF	1
113	Developer unit motor-YMC ON (Operation available without the process unit)	163	Code No.113 function OFF	1
114	Developer unit mixer motor-K ON	164	Code No.114 function OFF	1
115	Developer unit mixer motor-YMC ON	165	Code No.115 function OFF	1
116	Transfer belt motor ON (Operation available without the process unit)	166	Code No.116 function OFF	1(*2)

Code	Function	Code	Function	Procedure
117	Image position aligning sensors (front, center, rear) LED ON * The LED cannot be seen if the shutters of the image quality sensor and the image position aligning sensors are closed. Open the shutters by hand or perform No. 118 below in advance.	167	Code No.117 function OFF	1
118	Shutter for image quality sensor and image position aligning sensors ON	168	Code No.118 function OFF	1
119	2nd transfer motor ON	169	Code No.119 function OFF	1(*3)
120	Feed motor (normal rotation) ON (Paper fed from 1st drawer)	170	Code No.120 function OFF	1
121	Feed motor (reverse rotation) ON (Paper fed from 2nd drawer)	171	Code No.121 function OFF	1
122	Feed/transport motor ON	172	Code No.122 function OFF	1
123	Tandem LCF feed motor ON	173	Code No.123 function OFF	1
124	Transport motor-1 ON	174	Code No.124 function OFF	1
125	Transport motor-2 ON(	175	Code No.125 function OFF	1
126	Bypass motor ON	176	Code No.126 function OFF	1
127	Option LCF transport motor ON	177	Code No.127 function OFF	1
128	Registration motor ON	178	Code No.128 function OFF	1
129	Fuser motor (normal rotation) ON	179	Code No.129 function OFF	1
130	Bridge unit transport entrance motor ON	180	Code No.130 function OFF	1
132	Reverse motor (normal rotation) ON	182	Code No.132 function OFF	1
134	Reverse motor (reverse rotation) ON	184	Code No.134 function OFF	1
136	Bridge unit transport exit motor (normal rotation) ON (lower exit tray direction)	186	Code No.136 function OFF	1
138	Bridge unit transport exit motor (reverse rotation) ON (upper exit tray direction)	188	Code No.138 function OFF	1
140	Exit motor (normal rotation) ON (lower exit tray direction)	190	Code No.140 function OFF	1
142	Exit motor (reverse rotation) ON (upper exit tray direction)	192	Code No.142 function OFF	1
144	ADU motor-2 ON	194	Code No.144 function OFF	1
146	ADU motor-1 ON	196	Code No.146 function OFF	1

* 1

Fully pull out the EPU tray toward you while the transfer belt remains. If it is not fully pulled out, the drum shaft and the drum flange may scratch each other and thus the flange may be worn out.

* 2

Follow the procedure below.

1. Pull the duplexing unit lever and then separate the transfer belt and the 2nd transfer roller.
2. Pull out the EPU (developer unit) tray until it comes to a stop while the transfer belt is left.
   *: Pull out the EPU tray completely otherwise the transfer belt and the photoconductive drum may scratch each other.
3. Insert a door-switch jig into the cover interlock switch on the left upper side of the fuser unit in order not to turn the 24 V power OFF.

* 3
The procedure requires either of steps 1 and 2 below.
1. Pull out the EPU tray and then take off the transfer belt.
2. Pull out the duplexing unit lever and then separate the transfer belt and the 2nd transfer roller. Insert a door-switch jig into the cover interlock switch on the left upper side of the fuser unit in order not to turn the 24 V power OFF.

Code	Function	Procedure
201	LSU shutter opening/closing operation (Operation stops after the shutter is closed)	2
203	Fuser unit jam releasing LED	3
204	Needle electrode cleaner motor-Y reciprocating movement (Movement stops at the standby position)	2
205	Needle electrode cleaner motor-M reciprocating movement (Movement stops at the standby position)	2
206	Needle electrode cleaner motor-C reciprocating movement (Movement stops at the standby position)	2
207	Needle electrode cleaner motor-K reciprocating movement (Movement stops at the standby position)	2
209	Drum surface potential sensor shutter-Y opening/closing operation (Operation stops after the shutter is closed)	2
210	Drum surface potential sensor shutter-M opening/closing operation (Operation stops after the shutter is closed)	2
211	Drum surface potential sensor shutter-C opening/closing operation (Operation stops after the shutter is closed)	2
212	Drum surface potential sensor shutter-K opening/closing operation (Operation stops after the shutter is closed)	2
214	Discharge LED-K ON/OFF	3
215	Discharge LED-YMC ON/OFF	3
216	Toner motor-Y ON/OFF (Pull out the Y toner cartridge if the toner does not need to be supplied.) * When the front cover is kept opened during the operation, turn the toner motor interlock switch ON using a door switch jig; otherwise, the operation is not available.	3
217	Toner motor-M ON/OFF (Pull out the M toner cartridge if the toner does not need to be supplied.) * When the front cover is kept opened during the operation, turn the toner motor interlock switch ON using a door switch jig; otherwise, the operation is not available.	3
218	Toner motor-C ON/OFF (Pull out the C toner cartridge if the toner does not need to be supplied.) * When the front cover is kept opened during the operation, turn the toner motor interlock switch ON using a door switch jig; otherwise, the operation is not available.	3
219	Toner motor-K ON/OFF (Pull out the K toner cartridge if the toner does not need to be supplied.) * When the front cover is kept opened during the operation, turn the toner motor interlock switch ON using a door switch jig; otherwise, the operation is not available.	3
220	Sub-hopper toner motor-Y (normal rotation) ON/OFF (Pull out the sub-hopper unit or the Y toner cartridge if the toner does not need to be supplied.)	3
221	Sub-hopper toner motor-M (normal rotation) ON/OFF (Pull out the sub-hopper unit or the M toner cartridge if the toner does not need to be supplied.)	3
222	Sub-hopper toner motor-C (normal rotation) ON/OFF (Pull out the sub-hopper unit or the C toner cartridge if the toner does not need to be supplied.)	3
223	Sub-hopper toner motor-K (normal rotation) ON/OFF (Pull out the sub-hopper unit or the K toner cartridge if the toner does not need to be supplied.)	3

Code	Function	Procedure
224	Sub-hopper toner motor-Y (reverse rotation) ON/OFF (The toner will not be supplied but only mixed within the Y sub-hopper)	3 (*4)
225	Sub-hopper toner motor-M (reverse rotation) ON/OFF (The toner will not be supplied but only mixed within the M sub-hopper)	3 (*4)
226	Sub-hopper toner motor-C (reverse rotation) ON/OFF (The toner will not be supplied but only mixed within the C sub-hopper)	3 (*4)
227	Sub-hopper toner motor-K (reverse rotation) ON/OFF (The toner will not be supplied but only mixed within the K sub-hopper)	3 (*4)
234	Waste toner transport motor ON/OFF	3
237	Transfer belt cam motor ON/OFF (Operation stops after the belt is released)	2
239	TRU waste toner motor (normal rotation) ON/OFF (DC motor driving the auger for transporting waste toner from the 2nd transfer unit)	3
240	TRU waste toner transport motor ON/OFF (DC motor driving the auger for transporting waste toner to a TRU waste toner box)	3
241	2nd transfer unit waste toner exit mode ON/OFF (A mode used for transporting waste toner accumulated in the 2nd transfer unit to a TRU waste toner box)* Perform the codes 03-239 and 03-240 simultaneously.	3
243	2nd transfer roller contact/release (2nd transfer motor ON/OFF & 2nd transfer roller contact/release clutch ON/OFF)	3
244	2nd transfer roller drive clutch ON/OFF	3
246	Tray-up motor-1(1st drawer) ON (Tray up)	2
247	Tray-up motor-1(2nd drawer) ON (Tray up)	2
248	Tray-up motor-2(3rd drawer) ON (Tray up)	2
249	Tray-up motor-2(4th drawer) ON (Tray up)	2
250	3rd drawer feed clutch or tandem LCF feed clutch ON/OFF (Each clutch turns ON or OFF according to the installation status of the corresponding drawer.)	3
251	4th drawer feed clutch ON/OFF	3
252	3rd drawer transport clutch or tandem LCF transport clutch ON/OFF (Each clutch turns ON or OFF according to the installation status of the corresponding drawer.)	3
253	4th drawer transport clutch ON/OFF	3
254	Bypass pickup solenoid ON/OFF	3
255	Tandem LCF solenoid ON/OFF	3
256	Tandem LCF end fence motor reciprocating movement	2
257	Tandem LCF tray-up motor (Tray up/down)	2
258	Tandem LCF stopper opening/closing solenoid (front) ON/OFF	3
259	Tandem LCF stopper opening/closing solenoid (rear) ON/OFF	3
261	Scan motor ON (Automatically stops at limit position)	2
264	Scanner fan motor (high speed) ON/OFF	3
265	Scanner fan motor (low speed) ON/OFF	3
267	Scanner exposure lamp ON/OFF	3
268	Option LCF feed clutch ON/OFF	3
269	Option LCF transport clutch ON/OFF	3
270	Option LCF tray-up motor (Tray up/down)	2
272	Pressure roller contact/release (Fuser motor (reverse rotation) ON & Pressure roller contact/release clutch ON, operation stops after the roller is released)	2
273	Pressure roller contact/release clutch ON/OFF	3

Code	Function	Procedure
275	Transport path switching solenoid-1 ON/OFF (A solenoid on the right side when seen from a user. Switches transport paths to the upper exit tray direction (or reverse path) and the lower exit tray direction.)	3
276	Transport path switching solenoid-2 ON/OFF (A solenoid on the left side when seen from a user. Switches transport paths to the upper exit tray direction and the reverse path.)	3
281	RADF original feed motor ON/OFF (normal rotation)	3
282	RADF original feed motor ON/OFF (reverse rotation)	3
283	RADF read motor ON/OFF	3
284	RADF original exit motor ON/OFF (normal rotation)	3
285	RADF original exit motor ON/OFF (reverse rotation)	3
286	RADF original reverse motor (normal rotation) ON/OFF	3
287	RADF original reverse motor (reverse rotation) ON/OFF	3
288	RADF original reverse solenoid ON/OFF	3
294	RADF original exit solenoid ON/OFF	3
297	RADF cooling fan ON/OFF	3
433	Power supply unit cooling fan-1 & 2 (high speed) ON/OFF	3
434	Power supply unit cooling fan-1 & 2 (low speed) ON/OFF	3
437	Laser optical unit cooling fan (Front) (high speed) ON/OFF	3
438	Laser optical unit cooling fan (Front) (low speed) ON/OFF	3
439	Laser optical unit cooling fan (Rear) (high speed) ON/OFF	3
440	Laser optical unit cooling fan (Rear) (low speed) ON/OFF	3
441	EPU cooling fan (high speed) ON/OFF	3
442	EPU cooling fan (low speed) ON/OFF	3
443	Bridge unit cooling fan (rear) (high speed) ON/OFF	3
444	Bridge unit cooling fan (rear) (low speed) ON/OFF	3
445	Main charger blowing fan ON/OFF	3
447	Ozone suctioning fan (high speed) ON/OFF	3
448	Ozone suctioning fan (low speed) ON/OFF	3
449	Scattered toner suctioning fan ON/OFF	3
451	Toner cartridge heat insulation fan (high speed) ON/OFF	3
452	Toner cartridge heat insulation fan (low speed) ON/OFF	3
453	IH board cooling fan (high speed) ON/OFF	3
454	IH board cooling fan (low speed) ON/OFF	3
455	Reversed paper cooling fan (high speed) ON/OFF	3
456	Reversed paper cooling fan (low speed) ON/OFF	3
457	Exit paper cooling fan (front) (high speed) ON/OFF	3
458	Exit paper cooling fan (front) (low speed) ON/OFF	3
459	Bridge unit cooling fan (front) (high speed) ON/OFF	3
460	Bridge unit cooling fan (front) (low speed) ON/OFF	3
461	Exit paper cooling fan (rear) (high speed) ON/OFF	3
462	Exit paper cooling fan (rear) (low speed) ON/OFF	3
463	Upper exhaust fan (left) ON/OFF	3
464	Upper exhaust fan (right) ON/OFF	3
465	Toner cooling exhaust fan ON/OFF	3
466	Upper exit section cooling fan-1&2 ON/OFF	3
467	Lower exit section cooling fan-1&2 ON/OFF	3

Code	Function	Procedure
468	Lower exit section cooling fan-3 ON/OFF	3
470	Automatic power OFF at fuser unit temperature abnormality	4

* 4
Do not let the sub-hopper toner motors rotate in reverse when toner cartridges are installed because the cartridges will become locked.

For e-STUDIO6530c only

Code	Function	Code	Function	Procedure
503	Polygonal motor (600dpi) ON	553	Code No.503 function OFF	1
510	Drum motor-K ON (Operation available without the process unit)	560	Code No.510 function OFF	1(*5)
511	Drum motor-YMC ON (Operation available without the process unit)	561	Code No.511 function OFF	1(*5)
512	Developer unit motor-K ON (Operation available without the process unit)	562	Code No.512 function OFF	1
513	Developer unit motor-YMC ON (Operation available without the process unit)	563	Code No.513 function OFF	1
516	Transfer belt motor ON (Operation available without the process unit)	566	Code No.516 function OFF	1(*6)
519	2nd transfer motor ON	569	Code No.519 function OFF	1(*7)
520	Feed motor (normal rotation) ON (Paper fed from 1st drawer)	570	Code No.520 function OFF	1
521	Feed motor (reverse rotation) ON (Paper fed from 2nd drawer)	571	Code No.521 function OFF	1
522	Feed/transport motor ON	572	Code No.522 function OFF	1
523	Tandem LCF feed motor ON	573	Code No.523 function OFF	1
524	Transport motor-1 ON	574	Code No.524 function OFF	1
525	Transport motor-2 ON	575	Code No.525 function OFF	1
526	Bypass motor ON	576	Code No.526 function OFF	1
527	Option LCF transport motor ON	577	Code No.527 function OFF	1
528	Registration motor ON	578	Code No.528 function OFF	1
529	Fuser motor (normal rotation) ON	579	Code No.529 function OFF	1
530	Bridge unit transport entrance motor ON	580	Code No.530 function OFF	1
532	Reverse motor (normal rotation) ON	582	Code No.532 function OFF	1
534	Reverse motor (reverse rotation) ON	584	Code No.534 function OFF	1
536	Bridge unit transport exit motor (normal rotation) ON (lower exit tray direction)	586	Code No.536 function OFF	1
538	Bridge unit transport exit motor (reverse rotation) ON (upper exit tray direction)	588	Code No.538 function OFF	1
540	Exit motor (normal rotation) ON (lower exit tray direction)	590	Code No.540 function OFF	1
542	Exit motor (reverse rotation) ON (upper exit tray direction)	592	Code No.542 function OFF	1
544	ADU motor-2 ON	594	Code No.544 function OFF	1
546	ADU motor-1 ON	596	Code No.546 function OFF	1

* 5
Fully pull out the EPU tray toward you while the transfer belt remains. If it is not fully pulled out, the drum shaft and the drum flange may scratch each other and thus the flange may be worn out.

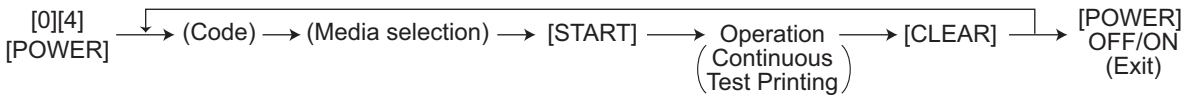
* 6
Follow the procedure below.
1. Pull the duplexing unit lever and then separate the transfer belt and the 2nd transfer roller.
2. Pull out the EPU (developer unit) tray until it comes to a stop while the transfer belt is left.
   *: Pull out the EPU tray completely otherwise the transfer belt and the photoconductive drum may scratch each other.
3. Insert a door-switch jig into the cover interlock switch on the left upper side of the fuser unit in order not to turn the 24V power OFF.

* 7
The procedure requires either of steps 1 and 2 below.
1. Pull out the EPU tray and then take off the transfer belt.
2. Pull out the duplexing unit lever and then separate the transfer belt and the 2nd transfer roller. Insert a door-switch jig into the cover interlock switch on the left upper side of the fuser unit in order not to turn the 24V power OFF.

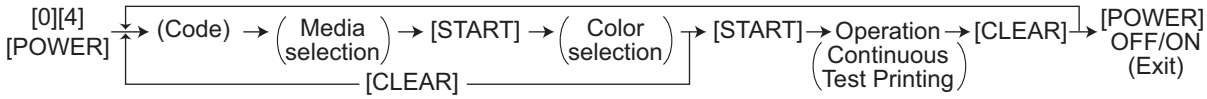
2.3 Test print mode (test mode 04)

The embedded test pattern can be printed out by keying in the following codes in the test print mode (04).

<Procedure 1>



<Procedure 2>



Notes:

1. When an error occurs, it is indicated on the panel, but the recovery operation is not performed.
   Turn OFF the power and then back ON to clear the error.
2. During test printing, the [CLEAR] button is disabled when “Wait adding toner” is displayed.

Code	Types of test pattern	Remarks	Remarks	Output from
70	Pattern for checking uneven image density correction in primary scanning direction	Available only when A4/LT paper is selected (Not available for bypass feeding)	1	LGC
142	Grid pattern (black)	Pattern width: 2 dots, Pitch: 10 mm	1	LGC
204	Grid pattern (color)	Pattern width: 1 dot, Pitch: 10 mm	2	LGC
219	6% test pattern		2	LGC
220	8% test pattern		2	LGC
231	Secondary scanning direction 33 gradation steps	3 pixels standard, Width: 10 mm	2	LGC
237	Halftone		2	LGC
262	Ladder pattern (4 lines ON / 4 lines OFF)	For color deviation confirmation	2	LGC
270	Image quality control test pattern	For checking the image quality control	2	LGC
286	Laser array damage detection pattern	For finding damaged parts on the laser array if any abnormality has been detected	1	LGC

Note:

In the (Color selection) of <Procedure 2>, the printing method is different between [K(1)] and [K(4)] as follows.

[K(1)] ..... Printing by bringing one K color developer unit into contact with the transfer belt

[K(4)] ..... The developer units of four (YMCK) colors are brought into contact with the transfer belt, but the test pattern is printed in K color only.

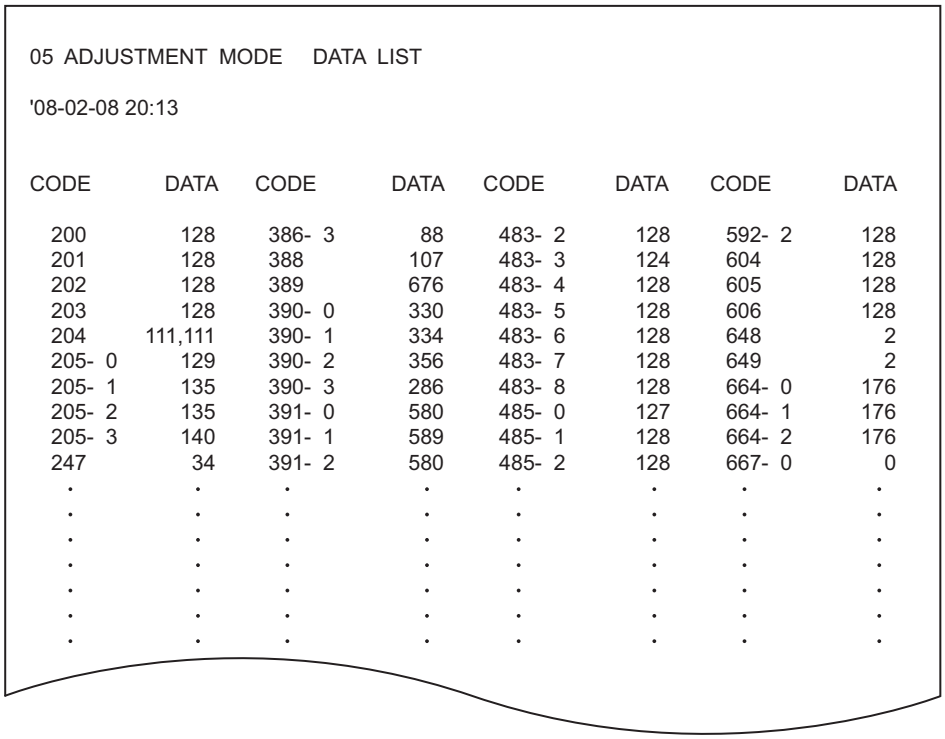
* The number in parentheses indicates the contact of the developer unit and the transfer belt.

2.4 List Printing

Lists below are output in the list print mode.
List data are printed out or output in a CSV or a txt format by storing them in a USB media. Paper sizes available for this printing are A4 or LT or larger. This section introduces a sample of each list.
Starting the list print mode: [9] + [START] + [ON/OFF]

Lists	List code		
	Printout	CSV file output	txt file output
Adjustment mode (05) data list	101	201	-
Setting mode (08) data list	102	202	-
PM support mode data list	103	203	-
Pixel counter list (toner cartridge reference)	104	204	-
Pixel counter list (service call reference)	105	205	-
Error history list	106 (Maximum 1000 items)	206 (Maximum 1000 items)	-
Error history list	107 (Latest 80 items)	-	-
Firmware upgrade log	108 (Maximum 200 items)	208 (Maximum 200 items)	-
Power ON/OFF log	110 (Maximum 100 items)	210 (Maximum 100 items)	-
Version list	111	211	-
Error log	-	-	213
Total counter list	-	214	-
Output all CSV files	-	300	-

- Adjustment mode (05)



05 ADJUSTMENT MODE DATA LIST

'08-02-08 20:13

CODE	DATA	CODE	DATA	CODE	DATA	CODE	DATA
200	128	386- 3	88	483- 2	128	592- 2	128
201	128	388	107	483- 3	124	604	128
202	128	389	676	483- 4	128	605	128
203	128	390- 0	330	483- 5	128	606	128
204	111,111	390- 1	334	483- 6	128	648	2
205- 0	129	390- 2	356	483- 7	128	649	2
205- 1	135	390- 3	286	483- 8	128	664- 0	176
205- 2	135	391- 0	580	485- 0	127	664- 1	176
205- 3	140	391- 1	589	485- 1	128	664- 2	176
247	34	391- 2	580	485- 2	128	667- 0	0

Fig. 2-3

The selected adjustment codes and the current adjustment value for each code are output in a list.
See the following page for the adjustment code (05):
📖 P.2-35 "2.5 ADJUSTMENT MODE (05)"

- Setting mode (08)

08 SETTING MODE DATA LIST

'08-02-08 20:13

CODE	DATA	CODE	DATA	CODE	DATA	CODE	DATA
201	2	288	12	304-10	0	307-11	0
202	0	289	5	304-11	0	307-12	0
203	0	290	1	304-12	0	307-13	0
204	0	291	6	304-13	0	307-14	0
205	15	292	0	304-14	0	307-15	0
206	20	293	0	304-15	0	307-16	0
207	0	294	1	304-16	0	307-17	0
209	1	295	0	304-17	0	307-18	0
210	148,105	296	1200	304-18	0	307-19	0
218	1	297	1000	304-19	0	307-21	0

Fig. 2-4

The selected setting codes and the current setting value for each code are output in a list. See the following page for the setting code (08):
📖 P.2-116 "2.6 SETTING MODE (08)"

- PM support mode

PM SUPPORT CODE LIST

'08-02-08 20:13

UNIT	OUTPUT PAGES/ DEVELOP COUNTS	PM OUTPUT PAGE/ DEVELOP COUNTS	DRIVE COUNTS	PM DRIVE COUNTS
DRUM (K)	2516	70000	11735	170000
DRUM BLADE (K)	2516	70000	11735	170000
GRID (K)	2516	70000	11735	170000
MAIN CHARGER NEEDLE (K)	2516	70000	11735	170000
CHARGER CLEANING PAD (K)	2516	70000	11735	170000
DRUM (Y)	411	70000	8625	170000
DRUM BLADE (Y)	411	70000	8625	170000
GRID (Y)	411	70000	8625	170000
MAIN CHARGER NEEDLE (Y)	411	70000	8625	170000
CHARGER CLEANING PAD (Y)	411	70000	8625	170000
DRUM (M)	411	70000	8625	170000
DRUM BLADE (M)	411	70000	8625	170000
GRID (M)	411	70000	8625	170000
MAIN CHARGER NEEDLE (M)	411	70000	8625	170000
CHARGER CLEANING PAD (M)	411	70000	8625	170000
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.

Fig. 2-5

The number of pages currently output (OUTPUT PAGES/DEVELOP COUNTS), the recommended number of output pages for PM (PM OUTPUT PAGES/DEVELOP COUNTS), the current drive count (DRIVE COUNTS) and the recommended drive count for PM (PM DRIVE COUNTS) are output together with PM units. Use this list for confirming the PM units to be replaced at each PM. See the following page for PM:

📖 P.5-1 "5. PREVENTIVE MAINTENANCE (PM)"

- Stored information of pixel counter (toner cartridge reference)

PIXEL COUNTER CODE LIST

'08-02-08 20:13

TONERCARTRIDGE

No	DATE	COL.		PPC	PRN	FAX	TOTAL
0	20080208	Y	Print Count[LT/A4]	181	45	---	226
1	20080208	Y	Average Pixel Count[%]	2.70	1.74	---	2.51
2	20080208	Y	Latest Pixel Count[%]	6.15	0.39	---	0.39
3	20080208	M	Print Count[LT/A4]	181	45	---	226
4	20080208	M	Average Pixel Count[%]	6.11	2	---	5.29
5	20080208	M	Latest Pixel Count[%]	6.82	2.15	---	2.15
6	20080208	C	Print Count[LT/A4]	181	45	---	226
7	20080208	C	Average Pixel Count[%]	5.46	2	---	4.81
8	20080208	C	Latest Pixel Count[%]	6.42	2.73	---	2.73
9	20080208	K	Print Count[LT/A4]	278	145	9	432
10	20080208	K	Average Pixel Count[%]	6.15	3.86	23.25	5.74
11	20080208	K	Latest Pixel Count[%]	7.32	2.19	6.25	2.19

Fig. 2-6

Pixel counter data (toner cartridge reference) are output in a list. See the following page for the pixel counter:
📖 P.2-139 "2.6.7 Pixel counter"

- Stored information of pixel counter (service technician reference)

PIXEL COUNTER CODE LIST

'08-02-08 20:13

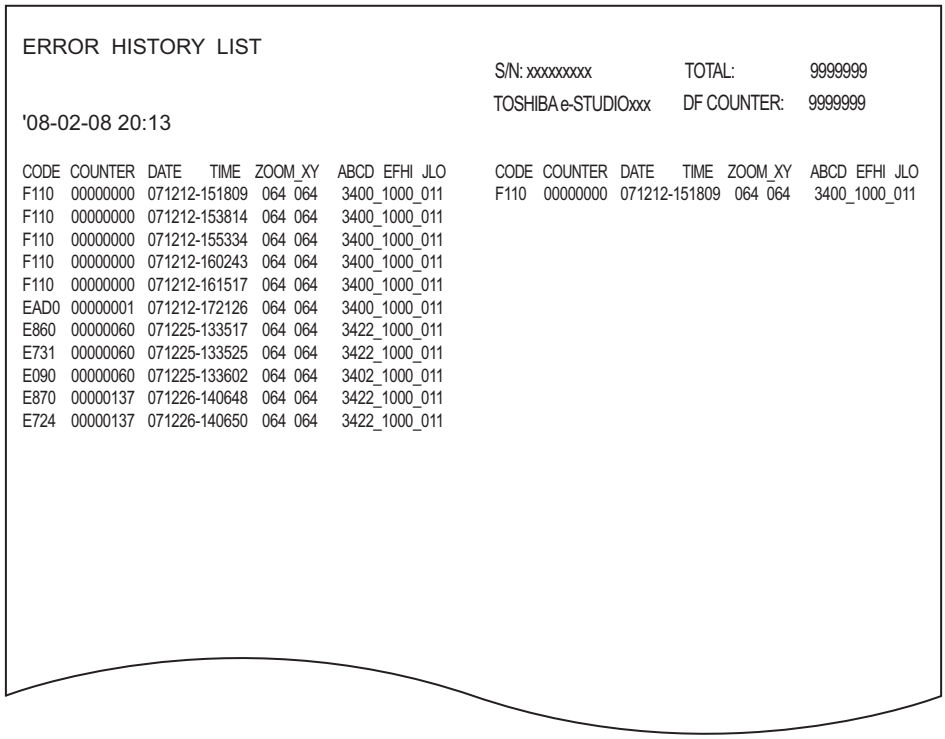
SERVICEMAN

No	DATE	COL.		PPC	PRN	FAX	TOTAL
0	20080208	F	Print Count[LT/A4]	181	45	---	226
1	20080208	F	Average Pixel Count[%]	4.95	2.34	---	4.43
2	20080208	F	Latest Pixel Count[%]	8.36	2.34	---	2.34
3	20080208	Y	Print Count[LT/A4]	181	45	---	226
4	20080208	Y	Average Pixel Count[%]	2.7	1.74	---	2.51
5	20080208	Y	Latest Pixel Count[%]	6.15	0.39	---	0.39
6	20080208	M	Print Count[LT/A4]	181	45	---	226
7	20080208	M	Average Pixel Count[%	6.11	2	---	5.29
8	20080208	M	Latest Pixel Count[%]	6.82	2.15	---	2.15
9	20080208	C	Print Count[LT/A4]	181	45	---	226
10	20080208	C	Average Pixel Count[%]	5.46	2.18	---	4.81
11	20080208	C	Latest Pixel Count[%]	6.42	2.73	---	2.73
12	20080208	K	Print Count[LT/A4]	181	45	---	226
13	20080208	K	Average Pixel Count[%]	5.51	3.43	---	5.10
14	20080208	K	Latest Pixel Count[%]	14.05	4.10	---	4.10
15	20080208	K	Print Count[LT/A4]	97	100	9	206
16	20080208	K	Average Pixel Count[%]	7.36	4.06	23.25	6.45
17	20080208	K	Latest Pixel Count[%]	7.32	2.19	6.25	2.19

Fig. 2-7

Pixel counter data (service call reference) are output in a list. See the following page for the pixel counter:
📖 P.2-139 "2.6.7 Pixel counter"

- Error history



ERROR HISTORY LIST

S/N: xxxxxxxxx TOTAL: 9999999

TOSHIBA e-STUDIOxxx DF COUNTER: 9999999

'08-02-08 20:13

CODE	COUNTER	DATE	TIME	ZOOM_XY	ABCD EFHI JLO
F110	00000000	071212-	151809	064 064	3400_1000_011
F110	00000000	071212-	153814	064 064	3400_1000_011
F110	00000000	071212-	155334	064 064	3400_1000_011
F110	00000000	071212-	160243	064 064	3400_1000_011
F110	00000000	071212-	161517	064 064	3400_1000_011
EAD0	00000001	071212-	172126	064 064	3400_1000_011
E860	00000060	071225-	133517	064 064	3422_1000_011
E731	00000060	071225-	133525	064 064	3422_1000_011
E090	00000060	071225-	133602	064 064	3402_1000_011
E870	00000137	071226-	140648	064 064	3422_1000_011
E724	00000137	071226-	140650	064 064	3422_1000_011

CODE	COUNTER	DATE	TIME	ZOOM_XY	ABCD EFHI JLO
F110	00000000	071212-	151809	064 064	3400_1000_011

Fig. 2-8

The error history is output. See the following page for the parameters for each error:
📖 P.6-26 "6.1.4 Printer function error"

- Firmware update log

FW UPGRADE LOG

'08-05-10 17:35

S / N : 12345678901
TOSHIBA e-STUDIO6530C

STATE	DATE	TOTAL	COPY(B)	COPY(2)	COPY(C)	PRINT(B)	PRINT(2)	PRINT(C)	LIST	FAX
MANUFACTURE	2007-04-17									
UNPACKING	2007-04-17									
V1.00	2007-04-17	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999
T430SY0J001	2007-04-17	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999
T430S-01	2007-04-17	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999
T430M-01	2007-05-18	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999
T430F-02	2007-05-18	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999
V1.01	2007-06-18	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999
T430SY0J002	2007-06-18	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999
T430S-02	2007-06-18	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999
T430M-02	2007-06-18	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999
T430F-03	2007-06-18	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999
V1.02	2007-07-17	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999
T430SY0J003	2007-07-17	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999
T430S-03	2007-07-17	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999
T430M-03	2007-07-17	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999
T430F-04	2007-08-18	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999	99999999
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.

Fig. 2-9

Firmware upgrade logs are output.

- The MANUFACTURE field shows the date of manufacture. The UNPACKING field shows the date that the equipment was unpacked.
- Only the versions of ROMs downloaded using a USB download jig are displayed.

Item	Content
STATE	Version name of ROM downloaded
DATE	Date that the ROM was downloaded
TOTAL	Total counter data when the ROM was downloaded
COPY (B)	Copier counter data (black) when the ROM was downloaded
COPY (2)	Copier counter data (twin color) when the ROM was downloaded
COPY (C)	Copier counter data (full color) when the ROM was downloaded
PRINT (B)	Printer counter data (black) when the ROM was downloaded
PRINT (2)	Printer counter data (twin color) when the ROM was downloaded
PRINT (C)	Printer counter data (full color) when the ROM was downloaded
LIST	List print counter data when the ROM was downloaded
FAX	Fax print counter data when the ROM was downloaded

- Power-ON/OFF log

POWER ON_OFF LOG

S / N : 12345678901
'08-05-10 17:35 TOSHIBA e-STUDIO6530C

DATE TIME	FUNCTION	TOTAL	DATE TIME	FUNCTION	TOTAL
030619-144650	ON	99999999	030624-163459	ON	99999999
030619-181201	OFF	99999999	030624-163459	OFF	99999999
030620-103551	ON	99999999	030624-163510	ON	99999999
030620-134930	OFF	99999999	030624-163735	OFF	99999999
030620-135026	ON	99999999	030624-164138	RMT_OFF	99999999
030620-141110	OFF	99999999			
030623-112540	ON	99999999			
030624-112524	OFF	99999999			
030624-162102	RMT_OFF	99999999			
030624-163459	OFF	99999999			

Fig. 2-10

Power ON/OFF logs are output.

- Note that cases that the power was turned OFF with the main switch (not with the [ON/OFF] button on the control panel) will not be displayed.

Item	Content
DATE	Date that the power was turned ON or OFF
TIME	Time that the power was turned ON or OFF
FUNCTION	Whether the power was turned ON or OFF, or if it was turned ON or OFF with a remote reset function
TOTAL	Total counter data when the power was turned OFF and then back ON

- Version list

VERSION LIST

TIME : 04-12-'00 09:00
SERIAL NUMBER: 01234567890123456789

SYSTEM FIRMWARE ROM VERSION	: T410SY0J230
SYSTEM FIRMWARE INTERNAL ROM VERSION	: VTD12.000 J
PRINTER ROM VERSION	: 390M-915
SCANNER ROM VERSION	: 390S-915
RADF ROM VERSION	: DF-9010
FINISHER STACKER ROM VERSION	: FIN-90
FINISHER SADDLE ROM VERSION	: SDL-07
FINISHER PUNCH ROM VERSION	:
CONVERTER ROM VERSION	:
FAX BOARD FIRMWARE ROM VERSION	:
SYSTEM FIRMWARE OS VERSION	: 3901-00
UI DATA FIX SECTION VERSION	: V0.70/0.B3
UI DATA COMMON SECTION VERSION	: V002.000 0
UI DATA INITIAL LANGUAGE AT POWER ON	: V002.000 0
UI DATA 1ST LANGUAGE IN HDD	: V002.000 3
UI DATA 2ND LANGUAGE IN HDD	: V002.000 3
UI DATA 3RD LANGUAGE IN HDD	: V034.000 7
UI DATA 4TH LANGUAGE IN HDD	: V034.000 6
UI DATA 5TH LANGUAGE IN HDD	: V034.000 11
UI DATA 6TH LANGUAGE IN HDD	: V034.000 10
UI DATA 7TH LANGUAGE IN HDD	: V030.000 4
HDD DATA VERSION	: T410HD0J230
WEB UI DATA 1ST LANGUAGE IN HDD	: V022.000 1
WEB UI DATA 2ND LANGUAGE IN HDD	: V022.000 2
WEB UI DATA 3RD LANGUAGE IN HDD	: V022.000 3
WEB UI DATA 4TH LANGUAGE IN HDD	: V022.000 4
WEB UI DATA 5TH LANGUAGE IN HDD	: V022.000 5
WEB UI DATA 6TH LANGUAGE IN HDD	: V022.000 6
CAPACITY OF HDD	: 74.5 GB
DEVICE INFORMATION OF HDD	:
SERIAL NUMBER OF HDD	:
MEMORY SIZE	: 512 MB
INSTALLED ELK NAME	: Data overwrite enabler IPSec enabler Meta scan enabler External interface enabler

Fig. 2-11

The list of versions is output.

- Error log
  The error logs stored in the HDD is copied to the USB media in the following structure.
  \LOG folder
  \LOG folder\yyyymmddhhmm_ss_xxxx(Date and time of the error log creation + error code)
  \LOG folder\logdump.txt
  \LOG folder\i.txt

- Total counter list

TOTAL COUNTER LIST
2010/9/28 17:07
TOSHIBA e-STUDIO6530C
CUE800200 TOTAL 220 DF TOTAL 22

PRINT COUNTER

TOTAL

	FULL COLOR	TWIN/MONO COLOR	BLACK	TOTAL
COPY	37	0	1	38
FAX	0	0	0	0
PRINTER	122	0	60	182
LIST	0	0	0	0
TOTAL	159	0	61	220

COPY

	FULL COLOR	TWIN/MONO COLOR	BLACK	TOTAL
SMALL	37	0	1	38
LARGE	0	0	0	0
TOTAL	37	0	1	38

FAX

	FULL COLOR	TWIN/MONO COLOR	BLACK	TOTAL
SMALL	0	0	0	0
LARGE	0	0	0	0
TOTAL	0	0	0	0

PRINTER

	FULL COLOR	TWIN/MONO COLOR	BLACK	TOTAL
SMALL	118	0	60	178
LARGE	4	0	0	4
TOTAL	122	0	60	182

LIST

	FULL COLOR	TWIN/MONO COLOR	BLACK	TOTAL
SMALL	0	0	0	0
LARGE	0	0	0	0
TOTAL	0	0	0	0

SCAN COUNTER

TOTAL

	FULL COLOR	TWIN/MONO COLOR	BLACK	TOTAL
COPY	7	0	1	8
FAX	0	0	0	0
NETWOF	0	0	0	0
TOTAL	7	0	1	8

COPY

	FULL COLOR	TWIN/MONO COLOR	BLACK	TOTAL
SMALL	7	0	1	8
LARGE	0	0	0	0
TOTAL	7	0	1	8

FAX

	FULL COLOR	TWIN/MONO COLOR	BLACK	TOTAL
SMALL	0	0	0	0
LARGE	0	0	0	0
TOTAL	0	0	0	0

NETWORK

	FULL COLOR	TWIN/MONO COLOR	BLACK	TOTAL
SMALL	0	0	0	0
LARGE	0	0	0	0
TOTAL	0	0	0	0

CALIBRATION COUNTER 0

Fig. 2-12

The list of Total counter is output.

2.5 ADJUSTMENT MODE (05)

Items in the adjustment mode list in the following pages can be corrected or changed in this adjustment mode (05). Turn ON the power with pressing the digital keys [0] and [5] simultaneously in order to enter this mode.

Note:

When the power should be turned OFF, be sure to shut down the equipment by pressing the [ON/OFF] button for a few seconds.

Remarks:

- The Service Handbook contains only the selected codes while the Service Manual contains all codes.
- The digit after the hyphen in “Code” of the following table is a sub code.
- In “RAM”, the SRAM of the board in which the data of each code is stored is indicated. “M” stands for the LGC board and “SYS” stands for the SYS board.

2.5.1 Classification List of Adjustment Mode (05)

Classification		Adjustment Mode (05)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
Scanner	[Log table]	361, 362	
	[Image position]		305, 306
	[Carriage position]	359, 360	
	[Fixed value]		363, 364
	[Shading position]	350, 351	
	[Distortion]		308
	[Reproduction ratio]		340
	[Automatic dust detection]	349	
Image	[ACS]		1675
	[RGB]	1080, 1081, 1082, 8372	
	[Black header density level adjustment]	7811, 7812, 7816	
	[Fine line enhancement switchover]	7322-0 to 2, 7323-0 to 2, 8102-0 to 2, 8103-0 to 2	
	[Leading edge adjustment]		408, 410, 411, 417-0 to 2, 428, 429, 440, 441, 442, 443, 444, 445, 494, 495, 498-0 to 2, 4065, 4066, 4067-0 to 7, 4068, 4069, 4562-0 to 3, 4563-0 to 3, 4564-0 to 3, 4565-0 to 3, 4566-0 to 3, 4567-0 to 8, 4568-0 to 5, 4569-0 to 3
	[Adjustment of drawer sideways deviation]		497-0 to 6

Classification		Adjustment Mode (05)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
Image	[Image density]	8340, 8341, 8342, 8344, 8345, 8346, 8348, 8349, 8350	503, 504, 505, 507, 508, 510, 514, 515, 700, 710, 714, 725, 729, 845, 846, 847, 848, 860, 861, 862, 863, 931, 934, 937, 940, 1585, 1586, 1587, 1588, 1589, 7475, 7478, 7641-0 to 2, 7642-0 to 2, 8210-0 to 3, 8211-0 to 3, 8212-0 to 3, 8213, 8214, 8215, 8249-0 to 4, 8250-0 to 4, 8251-0 to 4, 8252-0 to 4, 8253-0 to 4, 8254-0 to 4, 8371, 8380, 8381, 8382
	[Color balance]		1779-0 to 2, 1780-0 to 2, 1781-0 to 2, 1782-0 to 2, 1783-0 to 2, 1784-0 to 2, 1785-0 to 2, 1786-0 to 2, 1787-0 to 2, 1788-0 to 2, 1789-0 to 2, 1790-0 to 2, 1791-0 to 2, 1792-0 to 2, 1793-0 to 2, 1794-0 to 2, 1795-0 to 2, 1796-0 to 2, 1797-0 to 2, 1798-0 to 2, 7980-0 to 2, 7981-0 to 2, 7982-0 to 2, 7983-0 to 2, 8026-0 to 2, 8027-0 to 2, 8028-0 to 2, 8029-0 to 2, 8030-0 to 2, 8031-0 to 2, 8032-0 to 2, 8033-0 to 2, 8034-0 to 2, 8035-0 to 2, 8036-0 to 2, 8037-0 to 2, 8038-0 to 2, 8039-0 to 2, 8040-0 to 2, 8041-0 to 2, 8042-0 to 2, 8043-0 to 2, 8044-0 to 2, 8045-0 to 2, 8046-0 to 2, 8047-0 to 2, 8048-0 to 2, 8049-0 to 2, 8050-0 to 2, 8051-0 to 2, 8052-0 to 2, 8053-0 to 2, 8054-0 to 2, 8055-0 to 2, 8056-0 to 2, 8057-0 to 2, 8058-0 to 2, 8059-0 to 2, 8060-0 to 2, 8061-0 to 2, 8062-0 to 2, 8063-0 to 2, 8064-0 to 2, 8065-0 to 2, 8066, 8150-0 to 2, 8151-0 to 2, 8152-0 to 2, 8153-0 to 2, 8154-0 to 2, 8155-0 to 2, 8156-0 to 2, 8157-0 to 2, 8268-0 to 2, 8269-0 to 2, 8270-0 to 2, 8271-0 to 2, 8272-0 to 2, 8273-0 to 2, 8274-0 to 2, 8275-0 to 2
	[Gamma adjustment]	580, 1642, 1644-0 to 8, 7380-0 to 2	1004-0 to 8, 1005-0 to 8, 1008, 1009,
	[Gamma balance]		590-0 to 2, 591-0 to 2, 592-0 to 2, 880-0 to 2, 881-0 to 2, 882-0 to 2, 883-0 to 2, 949-0 to 2, 7309-0 to 2, 7310-0 to 2, 7315-0 to 2, 7316-0 to 2, 7317-0 to 2, 7318-0 to 2, 7319-0 to 2, 7320-0 to 2, 7480-0 to 2, 7956-0 to 2, 7957-0 to 2, 7958-0 to 2, 7959-0 to 2

Classification		Adjustment Mode (05)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
Image	[Black reproduction switching]	1761	
	[Graphic line density]		8242-0 to 1, 8243-0 to 3
	[Highlight pen]	1769-0 to 5	
	[Color / Black selection]	8218	
	[Line width minimum value adjustment]	8240, 8241	
	[Reproduction level adjustment]	1725, 7841	
	[Maximum text density]	1630, 1631, 1632, 1633	
	[Background/Black density]	1075, 1076, 1077	
	[Saturation]	8325, 8326, 8327, 8373	
	[Background processing]		1070, 1071, 1072, 1688, 1689, 1690, 1691, 1692, 1698, 1699, 1700, 1701, 1702, 7025, 7033, 7034, 7041, 7042, 7043, 7044, 7048, 7049, 7279, 7280, 7468, 7675, 7676, 7677, 7678, 7679, 7754, 7755, 7756, 7757, 7758, 7759, 7760, 7761, 7762, 7763, 7764, 7765, 7766, 8010-0 to 2, 8011-0 to 2, 8012-0 to 2, 8013-0 to 2, 8014-0 to 2, 8015-0 to 2, 8016-0 to 2, 8018-0 to 2, 8019-0 to 2, 8021-0 to 2, 8370, 8385, 8386, 8387, 8389, 8390, 8391, 8392, 8394, 8395, 8400, 8402, 8403, 8404, 8405, 8407, 8408, 8409
	[Sharpness]		604, 605, 606, 840, 841, 842, 843, 1086, 1087, 1088, 1737, 1738, 1739, 1740, 1741, 1757, 7470, 7795, 7807, 7808, 7809, 8110-0 to 2, 8111-0 to 2, 8112-0 to 2, 8113-0 to 2, 8118-0 to 2, 8119-0 to 2, 8375
	[Switchover on screens]		8176, 8179, 8187, 8188, 8190, 8191
	[Smudged/faint text]		648, 649, 654, 925, 7102, 7103, 7340, 7341, 8130, 8131, 8132
	[Toner saving]		664-0 to 2, 1055-0 to 2, 7302-0 to 2, 8161-0 to 2
	[Toner limit threshold]		8070-0 to 9, 8071-0 to 9, 8089-0 to 9, 8090-0 to 9
	[Toner amount]		1050, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620, 7903, 8149
	[Blank page judgment]	7618	
	[Background processing]	9104, 9107	
	[Setting beam level conversion]	667-0 to 4, 672-0 to 4, 678-0 to 4	

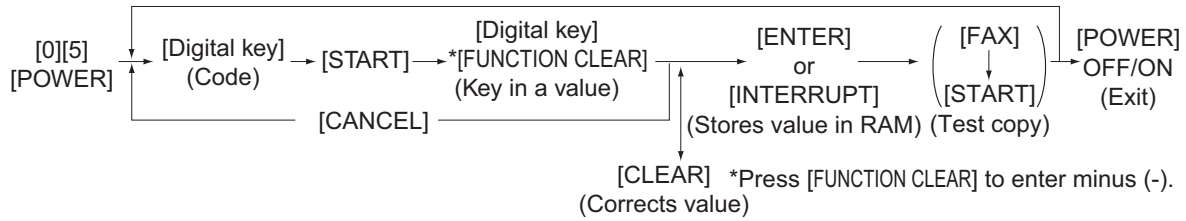
Classification		Adjustment Mode (05)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
Image	[Image void correction]	4731-0 to 7, 7489	
	[Margin]		430, 431, 432, 433, 434-0 to 5, 435, 436, 437, 438
	[Range correction]		7236, 7237, 7283, 7284, 7286, 7287, 7295, 7296, 7416, 7417, 7418, 7419, 7421, 7422, 7423, 7424, 7425, 7426, 7667, 7668, 7669, 7670, 7767, 7768, 7769, 7770, 7771, 7772, 7773, 7774, 7775, 7776, 7777, 7778, 8330, 8331, 8332, 8334, 8361, 8362, 8363, 8365
Color registration	[Color registration adjustment]		4719, 4720-0 to 1
Image control	[Temperature/ Humidity]	393	
	[Color/Black developer]	386-0 to 3	
	[Contrast voltage]	330-0 to 3, 380-0 to 3, 381-0 to 3, 1815-0 to 3, 2675-0 to 3	
	[Performing]		394, 396
	[Drum surface potential sensor]		2780-0 to 3, 2782-0 to 13, 2787-0 to 8, 2788, 2789-0 to 3
	[image quality sensor]		388, 389, 390-0 to 3, 392
	[Main charger]	385-0 to 3	
	[Laser power]	382-0 to 3, 383-0 to 3, 384-0 to 3	
	[TRC control]	2801-0 to 11 2802-0 to 11	2800-0 to 11 2803-0 to 11
Drive system	[2nd transfer motor]	4748-0 to 11	
	[ADU motor]	491-0 to 17, 4747-0 to 17	
	[3rd / 4th drawer feed motor]	4707-0 to 17	
	[T-LCF motor]	4708-0 to 17	
	[O-LCF motor]	4762-0 to 17	
	[Feed/transport motor]		489-0 to 17, 4740-0 to 17, 4741-0 to 17, 4742-0 to 17, 4743-0 to 17
	[Transfer belt motor]		487-0 to 11
	[Drum motor]	481-0 to 11	
	[Exit motor]	446-0 to 17	
	[Fuser belt]	485-0 to 11	
	[Registration motor]	483-0 to 17	
	[Reverse motor]	4744-0 to 17	
	[Bridge unit transport motor]	4745-0 to 17, 4746-0 to 17	

Classification		Adjustment Mode (05)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
Feeding system / Paper transport	[Aligning amount]		473-0 to 3, 480, 4100-0 to 4, 4101-0 to 4, 4103-0 to 4, 4104-0 to 4, 4105-0 to 4, 4106-0 to 4, 4107-0 to 4, 4108-0 to 4, 4109-0 to 4, 4110-0 to 4, 4111, 4115-0 to 4, 4116-0 to 4, 4117-0 to 4, 4118-0 to 4, 4120-0 to 4, 4122-0 to 4, 4123-0 to 4, 4124-0 to 4, 4125-0 to 4, 4126, 4127-0 to 4, 4128-0 to 4, 4129-0 to 4, 4580-0 to 4, 4581-0 to 4, 4582-0 to 4, 4583-0 to 4, 4584-0 to 4, 4585-0 to 4, 4586-0 to 4, 4587-0 to 4, 4588-0 to 4, 4589-0 to 4, 4590-0 to 4, 4591-0 to 4, 4592-0 to 4, 4593-0 to 4, 4600-0 to 4, 4601-0 to 4, 4602-0 to 4, 4603-0 to 4, 4604-0 to 4, 4605-0 to 4, 4606-0 to 4, 4607-0 to 4, 4608-0 to 4, 4609-0 to 4, 4610-0 to 4, 4611-0 to 4, 4612-0 to 4, 4613-0 to 4, 4615-0 to 4
	[Paper pushing amount]	466-0 to 10	
	[Remaining amount of paper]	476-0 to 5, 477-0 to 5	
	[Media Sensor]	4784, 9092	
Laser	[Clock cycle for image reproduction ratio]	4772, 4773, 4782	
Transfer	[1st transfer]	2900-0 to 18, 2905-0 to 18, 2920-0 to 18, 2921-0 to 18, 2981-0 to 1, 2985-0 to 1, 2986-0 to 1, 2987-0 to 1, 2988-0 to 1, 2991-0 to 1, 2992-0 to 1, 2993-0 to 1	
	[2nd transfer]	2924-0 to 9, 2925-0 to 9, 2926-0 to 9, 2927-0 to 9, 2983-0 to 1, 2984-0 to 1	
	[Color registration]	4789	
	[Temperature/ humidity]	247, 270	
	[Cleaning]	2962-0 to 1	
	[Bias offset]	2934-0 to 9, 2935-0 to 9, 2936-0 to 9, 2937-0 to 9, 2938-0 to 9, 2939-0 to 9, 2940-0 to 9, 2941-0 to 9	
Charger	[Charger grid calibration]	241, 242, 243, 244, 248, 2622-0 to 1, 2623-0 to 1, 2624-0 to 1, 2625-0 to 1, 2764	
Development	[Auto-toner]		200, 201, 202, 203, 204, 205-0 to 3, 206
	[Developer]	2627-0 to 1, 2628-0 to 1, 2629-0 to 1, 2630-0 to 1	2417
	[Mixer]		2416

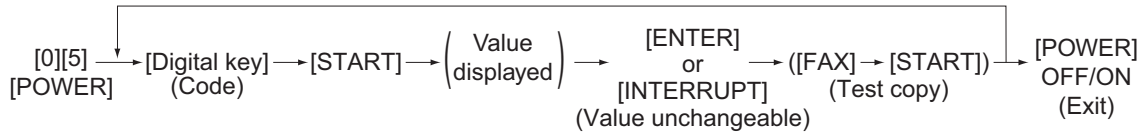
Classification		Adjustment Mode (05)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
RADF	[Aligning amount]	354, 355	
	[Sensor/EEPROM]		352, 353, 356
	[Transporting]		357, 358, 365, 366
Maintenance	[Equipment number]	976	
	[Tilt motor initial excitation]		4721

2.5.2 Operating Procedure

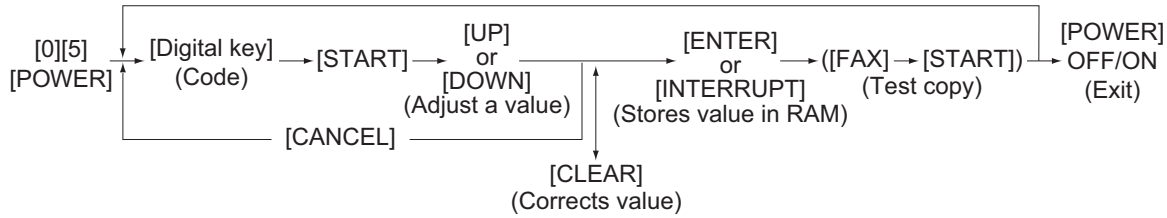
Procedure 1



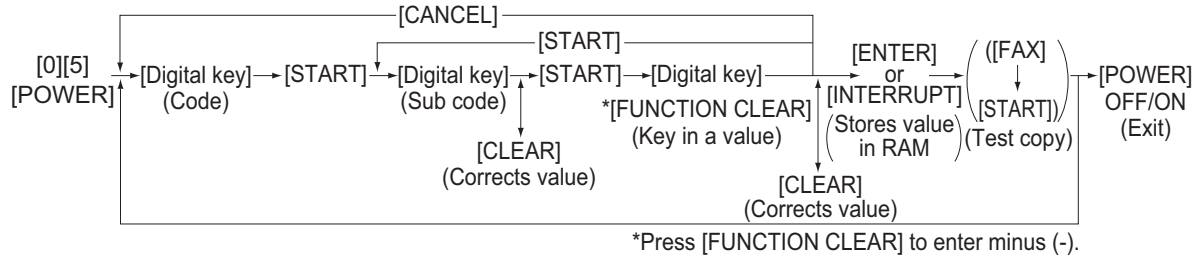
Procedure 2



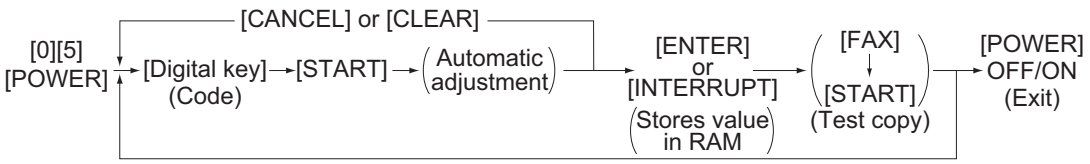
Procedure 3



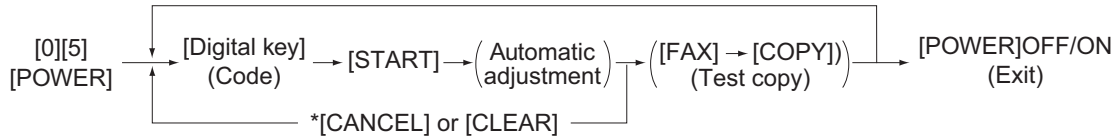
Procedure 4



Procedure 5



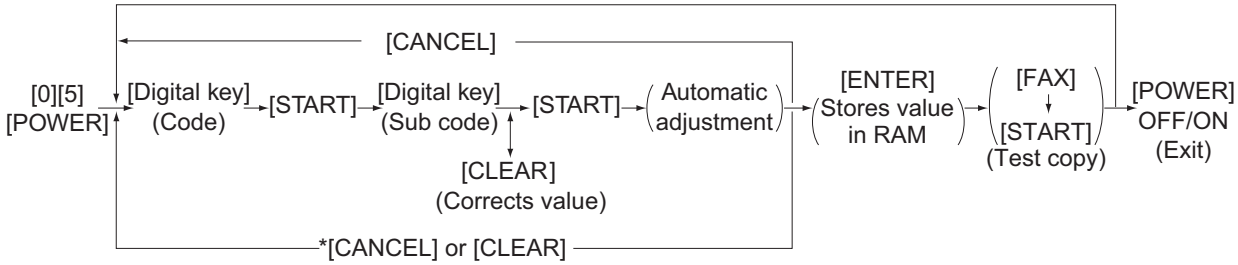
Procedure 6



* When the automatic adjustment ends abnormally, an error message is displayed.

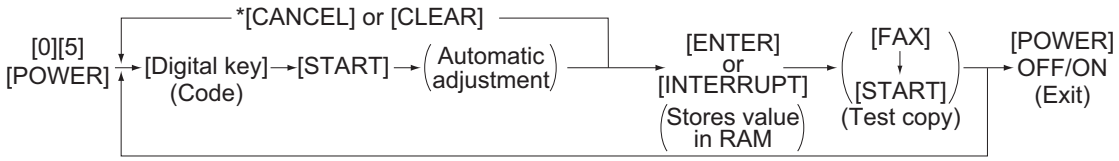
* Return to standby screen by pressing the [CANCEL] or [CLEAR] button.

Procedure 7



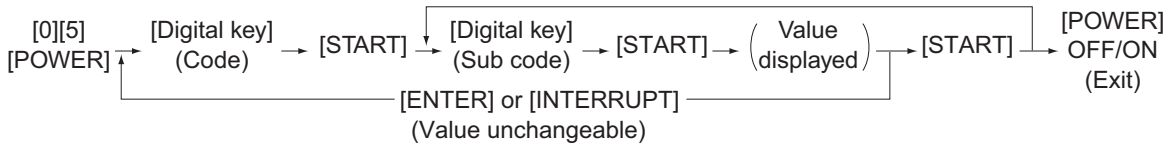
* When the automatic adjustment ends abnormally, an error message is displayed.
* Return to standby screen by pressing the [CANCEL] or [CLEAR] button.

Procedure 8

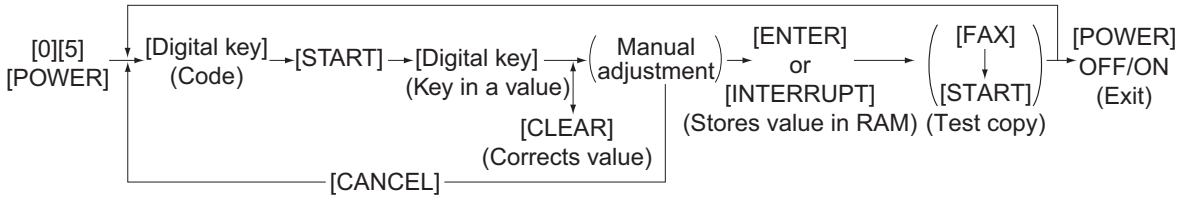


* When the automatic adjustment ends abnormally, an error message is displayed.
* Return to standby screen by pressing the [CANCEL] or [CLEAR] button.

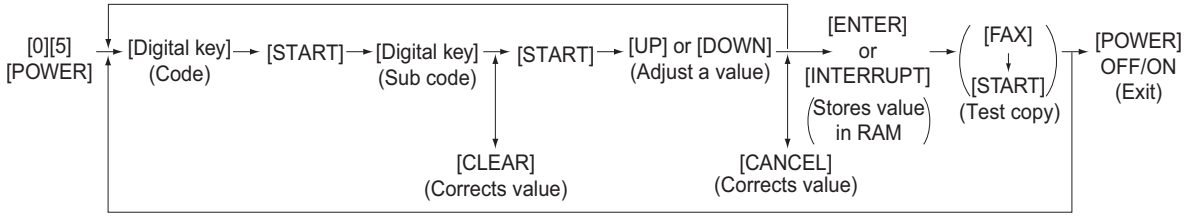
Procedure 10



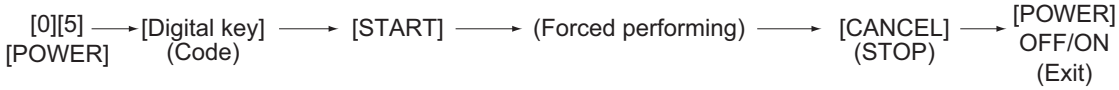
Procedure 12



Procedure 14



Procedure 15



2.5.3 Test print pattern in Adjustment Mode (05)

Operation:
One test print is printed out when the [FAX] button is pressed after the code is keyed in at Standby Screen.

Code	Types of test pattern	Remarks
1	Grid pattern (Black)	For printer related adjustment
3	Grid pattern (Black/Duplex printing)	Refer to 3.1.7Printer-related image dimensional adjustment
4	Copier gamma adjustment pattern (Color & black / All media types)	Refer to 3.2.1Automatic gamma adjustment
5	Copier gamma adjustment pattern (Color / All media types)	Refer to 3.2.1Automatic gamma adjustment
6	Copier gamma confirmation pattern (Black / All media types)	Refer to 3.2.1Automatic gamma adjustment
7	Copier gamma confirmation pattern (Color / All media types)	Refer to 3.2.1Automatic gamma adjustment
8	Grid pattern (Color)	
10	For gamma adjustment (Black)	Refer to 3.2.1Automatic gamma adjustment
12	Secondary scanning direction 33 gradation steps (Y)	For checking the image of printer section
13	Secondary scanning direction 33 gradation steps (M)	For checking the image of printer section
14	Secondary scanning direction 33 gradation steps (C)	For checking the image of printer section
15	Secondary scanning direction 33 gradation steps (K)	For checking the image of printer section
55	Grid pattern (Full Color / Thick paper 2)	Refer to 3.1.6Paper alignment at the registration roller
56	Grid pattern (Full Color / Thick paper 3)	Refer to 3.1.6Paper alignment at the registration roller
57	Grid pattern (Full Color / OHP)	Refer to 3.1.6Paper alignment at the registration roller
58	Grid pattern (Black / Thick paper 2)	Refer to 3.1.6Paper alignment at the registration roller
59	Grid pattern (Black / Thick paper 3)	Refer to 3.1.6Paper alignment at the registration roller
60	Grid pattern (Black / OHP)	Refer to 3.1.6Paper alignment at the registration roller
63	For color deviation correction (Full Color)	Only for A3/LD size
70	Printer gamma correction table creation pattern (PS: 600dpi) (Plain paper 1)	Refer to 3.3.1Automatic gamma adjustment
71	Printer gamma correction table confirmation pattern (PS: 600dpi) (Plain paper 1)	Refer to 3.3.1Automatic gamma adjustment
72	Printer gamma correction table creation pattern (PS: 600dpi) (Plain paper 2)	Refer to 3.3.1Automatic gamma adjustment
73	Printer gamma correction table confirmation pattern (PS: 600dpi) (Plain paper 2)	Refer to 3.3.1Automatic gamma adjustment
74	Printer gamma correction table creation pattern (PS: 600dpi) (Recycled paper)	Refer to 3.3.1Automatic gamma adjustment

Code	Types of test pattern	Remarks
75	Printer gamma correction table confirmation pattern (PS: 600dpi) (Recycled paper)	Refer to 3.3.1Automatic gamma adjustment
76	Printer gamma correction table creation pattern (PS: 600dpi) (Thick paper 1)	Refer to 3.3.1Automatic gamma adjustment
77	Printer gamma correction table confirmation pattern (PS: 600dpi) (Thick paper 1)	Refer to 3.3.1Automatic gamma adjustment
78	Printer gamma correction table creation pattern (PS: 600dpi) (Thick paper 2)	Refer to 3.3.1Automatic gamma adjustment
79	Printer gamma correction table confirmation pattern (PS: 600dpi) (Thick paper 2)	Refer to 3.3.1Automatic gamma adjustment
80	Printer gamma correction table creation pattern (PS: 600dpi) (Thick paper 3)	Refer to 3.3.1Automatic gamma adjustment
81	Printer gamma correction table confirmation pattern (PS: 600dpi) (Thick paper 3)	Refer to 3.3.1Automatic gamma adjustment
82	Printer gamma correction table creation pattern (PS: 600dpi) (Thick paper 4)	Refer to 3.3.1Automatic gamma adjustment
83	Printer gamma correction table confirmation pattern (PS: 600dpi) (Thick paper 4)	Refer to 3.3.1Automatic gamma adjustment
84	Printer gamma correction table creation pattern (PS: 600dpi) (Special paper 1)	Refer to 3.3.1Automatic gamma adjustment
85	Printer gamma correction table confirmation pattern (PS: 600dpi) (Special paper 1)	Refer to 3.3.1Automatic gamma adjustment
86	Printer gamma correction table creation pattern (PS: 600dpi) (Special paper 2)	Refer to 3.3.1Automatic gamma adjustment
87	Printer gamma correction table confirmation pattern (PS: 600dpi) (Special paper 2)	Refer to 3.3.1Automatic gamma adjustment
98	Grid pattern -2 (For printing K(4) / Plain paper)	Refer to 3.1.7Printer-related image dimensional adjustment
99	Grid pattern -2 (For printing K(4) / Thick paper 1)	Refer to 3.2.1Automatic gamma adjustment
100	Grid pattern - 1 (Full color / Thick paper 1)	Refer to 3.2.1Automatic gamma adjustment
101	Grid pattern - 1 (Black / Thick paper 1)	Refer to 3.2.1Automatic gamma adjustment
104	Color deviation confirmation pattern (A3/LD)	Refer to 3.2.1Automatic gamma adjustment
112	Media sensor feeding check	Printing on blank paper
138	Grid pattern - 2 (For printing K (4) / duplex printing)	
151	Pattern for checking uneven image density correction in primary scanning direction	Available only when A4/LT paper is selected (Not available for bypass feeding)
200	Copier gamma adjustment pattern (Color & black / Plain paper 1)	Refer to 3.2.1Automatic gamma adjustment
201	Copier gamma confirmation pattern (Color / Plain paper 1)	Refer to 3.2.1Automatic gamma adjustment

Code	Types of test pattern	Remarks
202	Copier gamma adjustment pattern (Color & black / Plain paper 2)	Refer to 3.2.1Automatic gamma adjustment
203	Copier gamma confirmation pattern (Color / Plain paper 2)	Refer to 3.2.1Automatic gamma adjustment
204	Copier gamma adjustment pattern (Color & black / Recycled paper)	Refer to 3.2.1Automatic gamma adjustment
205	Copier gamma confirmation pattern (Color / Recycled paper)	Refer to 3.2.1Automatic gamma adjustment
206	Copier gamma adjustment pattern (Color & black / Thick paper 1)	Refer to 3.2.1Automatic gamma adjustment
207	Copier gamma confirmation pattern (Color / Thick paper 1)	Refer to 3.2.1Automatic gamma adjustment
208	Copier gamma adjustment pattern (Color & black / Thick paper 2)	Refer to 3.2.1Automatic gamma adjustment
209	Copier gamma confirmation pattern (Color / Thick paper 2)	Refer to 3.2.1Automatic gamma adjustment
210	Copier gamma adjustment pattern (Color & black / Thick paper 3)	Refer to 3.2.1Automatic gamma adjustment
211	Copier gamma confirmation pattern (Color / Thick paper 3)	Refer to 3.2.1Automatic gamma adjustment
212	Copier gamma adjustment pattern (Color & black / Thick paper 4)	Refer to 3.2.1Automatic gamma adjustment
213	Copier gamma confirmation pattern (Color / Thick paper 4)	Refer to 3.2.1Automatic gamma adjustment
214	Copier gamma adjustment pattern (Color & black / Special paper 1)	Refer to 3.2.1Automatic gamma adjustment
215	Copier gamma confirmation pattern (Color / Special paper 1)	Refer to 3.2.1Automatic gamma adjustment
216	Copier gamma adjustment pattern (Color & black / Special paper 2)	Refer to 3.2.1Automatic gamma adjustment
217	Copier gamma confirmation pattern (Color / Special paper 2)	Refer to 3.2.1Automatic gamma adjustment
230	Printer gamma correction table creation pattern (PS: 1200dpi) (Plain paper 1)	Refer to 3.3.1Automatic gamma adjustment
231	Printer gamma correction table confirmation pattern (PS: 1200dpi) (Plain paper 1)	Refer to 3.3.1Automatic gamma adjustment
232	Printer gamma correction table creation pattern (PS: 1200dpi) (Plain paper 2)	Refer to 3.3.1Automatic gamma adjustment
233	Printer gamma correction table confirmation pattern (PS: 1200dpi) (Plain paper 2)	Refer to 3.3.1Automatic gamma adjustment
234	Printer gamma correction table creation pattern (PS: 1200dpi) (Recycled paper)	Refer to 3.3.1Automatic gamma adjustment
235	Printer gamma correction table confirmation pattern (PS: 1200dpi) (Recycled paper)	Refer to 3.3.1Automatic gamma adjustment
236	Printer gamma correction table creation pattern (PS: 1200dpi) (Thick paper 1)	Refer to 3.3.1Automatic gamma adjustment
237	Printer gamma correction table confirmation pattern (PS: 1200dpi) (Thick paper 1)	Refer to 3.3.1Automatic gamma adjustment

Code	Types of test pattern	Remarks
238	Printer gamma correction table creation pattern (PS: 1200dpi) (Thick paper 2)	Refer to 3.3.1Automatic gamma adjustment
239	Printer gamma correction table confirmation pattern (PS: 1200dpi) (Thick paper 2)	Refer to 3.3.1Automatic gamma adjustment
240	Printer gamma correction table creation pattern (PS: 1200dpi) (Thick paper 3)	Refer to 3.3.1Automatic gamma adjustment
241	Printer gamma correction table confirmation pattern (PS: 1200dpi) (Thick paper 3)	Refer to 3.3.1Automatic gamma adjustment
242	Printer gamma correction table creation pattern (PS: 1200dpi) (Thick paper 4)	Refer to 3.3.1Automatic gamma adjustment
243	Printer gamma correction table confirmation pattern (PS: 1200dpi) (Thick paper 4)	Refer to 3.3.1Automatic gamma adjustment
244	Printer gamma correction table creation pattern (PS: 1200dpi) (Special paper 1)	Refer to 3.3.1Automatic gamma adjustment
245	Printer gamma correction table confirmation pattern (PS: 1200dpi) (Special paper 1)	Refer to 3.3.1Automatic gamma adjustment
246	Printer gamma correction table creation pattern (PS: 1200dpi) (Special paper 2)	Refer to 3.3.1Automatic gamma adjustment
247	Printer gamma correction table confirmation pattern (PS: 1200dpi) (Special paper 2)	Refer to 3.3.1Automatic gamma adjustment

2.5.4 Process

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
200	Development	Automatic adjustment for developer material supply and auto-toner sensors	All (Y,M,C,K)	ALL	128 <0-255>	M	Sets the auto-toner sensor output and supply of developer material automatically. The larger the value is, the larger the sensor output becomes.	5
201			Y	ALL	128 <0-255>	M		5
202			M	ALL	128 <0-255>	M		5
203			C	ALL	128 <0-255>	M		5
204			K	ALL	128 <0-255>	M		5
205-0	Development	Adjustment of auto-toner initial adjustment reference setting value (YMCK)	Y	ALL	130 <0-255>	M		4
205-1			M	ALL	130 <0-255>	M		4
205-2			C	ALL	130 <0-255>	M		4
205-3			K	ALL	130 <0-255>	M		4
206	Development	Automatic adjustment for developer material supply and auto-toner sensors	3 colors (Y, M, C)	ALL	128 <0-255>	M	Sets the auto-toner sensor output and supply of developer material automatically. The larger the value is, the larger the sensor output becomes.	5
388	Image control	Output value display of image quality sensor	When the light source is OFF	ALL	0 <0-1023>	M	Displays the output value of image quality sensor when the sensor light source is OFF.	2
389			Transfer belt surface	ALL	0 <0-1023>	M	Displays the output value of image quality sensor (when there is no test pattern) on the transfer belt.	2
390-0			High density pattern Y	ALL	0 <0-1023>	M	Displays the output value of image quality sensor when a high-density test pattern is written. The larger the value is, the smaller the toner amount adhered becomes.	10
390-1			High density pattern M	ALL	0 <0-1023>	M		10
390-2			High density pattern C	ALL	0 <0-1023>	M		10
390-3			High density pattern K	ALL	0 <0-1023>	M		10
392	Image control	Light amount adjustment result of image quality sensor		ALL	0 <0-255>	M	The LED light amount adjustment value of this sensor is the reference value to set the reflected light from the belt surface.	2
394	Image control	Enforced performing of image quality open-loop control		ALL	-	-	Performs the image quality open-loop control.	6

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
396	Image control	Image quality control initialization		ALL	-	M	Performs the image quality control, initialize each control value.	6
2416	Developer	Forcible mixing in the developer unit		ALL	-	-	Decelerates the rotation of each developer unit mixer motor to mix the developer material in the developer unit forcibly. Perform this code when the process unit is installed or removed.	5
2417	Developer	Manual forcible discharge of developer material		ALL	-	-	Discharges developer material forcibly.	5
2780-0	Image control	Drum surface potential sensor controlling status	Sensor shutter-Y	ALL	0 <0-2>	M	Displays the controlling status of the drum surface potential sensor with a digit as follows: 0: Normally finished 1: Control paused 2: Sensor abnormality	10
2780-1			Sensor shutter-M	ALL	0 <0-2>	M		10
2780-2			Sensor shutter-C	ALL	0 <0-2>	M		10
2780-3			Sensor shutter-K	ALL	0 <0-2>	M		10
2782-0	Image control	Drum surface potential sensor output	Y (low bias)	ALL	292 <0-1020>	M	Outputs the detection value of the drum surface potential sensor when the drum surface potential sensor shutter is opened.	10
2782-1			M (low bias)	ALL	292 <0-1020>	M		10
2782-2			C (low bias)	ALL	292 <0-1020>	M		10
2782-3			K (low bias)	ALL	292 <0-1020>	M		10
2782-5			Y (high bias)	ALL	886 <0-1020>	M		10
2782-6			M (high bias)	ALL	886 <0-1020>	M		10
2782-7			C (high bias)	ALL	886 <0-1020>	M		10
2782-8			K (high bias)	ALL	886 <0-1020>	M		10
2782-10			Y (medium bias)	ALL	490 <0-1020>	M		10
2782-11			M (medium bias)	ALL	490 <0-1020>	M		10
2782-12			C (medium bias)	ALL	490 <0-1020>	M		10
2782-13			K (medium bias)	ALL	490 <0-1020>	M		10

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
2787-0	Image control	Drum surface potential sensor output (Shutter closed)	Y (high bias)	ALL	0 <0-1020>	M	Outputs the detection value of the drum surface potential sensor when the drum surface potential sensor shutter is closed.	10
2787-1			M (high bias)	ALL	0 <0-1020>	M		10
2787-2			C (high bias)	ALL	0 <0-1020>	M		10
2787-3			K (high bias)	ALL	0 <0-1020>	M		10
2787-5			Y (medium bias)	ALL	0 <0-1020>	M		10
2787-6			M (medium bias)	ALL	0 <0-1020>	M		10
2787-7			C (medium bias)	ALL	0 <0-1020>	M		10
2787-8			K (medium bias)	ALL	0 <0-1020>	M		10
2788	Image control	Inspection of the sensors around the process unit		ALL	-	-	Displays the controlling status of the drum surface potential (V0) sensor and the drum surface potential (V0) sensor shutter closing in each of Y, M, C and K when [ERROR] occurs. Upper row: Drum surface potential (V0) sensor Lower row: Drum surface potential (V0) sensor shutter closing 0: Normally finished 1: Control paused 2: Sensor / shutter closing abnormality	6
2789-0	Image control	Drum surface potential sensor shutter closing controlling status	Sensor shutter-Y	ALL	0 <0-2>	M	Displays the controlling status of the drum surface potential sensor shutter closing with a digit as follows: 0: Normally finished 1: Control paused 2: Sensor abnormality	10
2789-1			Sensor shutter-M	ALL	0 <0-2>	M		10
2789-2			Sensor shutter-C	ALL	0 <0-2>	M		10
2789-3			Sensor shutter-K	ALL	0 <0-2>	M		10
2800-0	Image control	TRC control pattern detection value	Y color Low Gradation 1	ALL	0 <0-1020>	M	TRC control pattern Detection values for low gradation 1, low gradation 2, low gradation 3 of each color	10
2800-1			Y color Low Gradation 2	ALL	0 <0-1020>	M		10
2800-2			Y color Low Gradation 3	ALL	0 <0-1020>	M		10

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
2800-3	Image control	TRC control pattern detection value	M color Low Gradation 1	ALL	0 <0-1020>	M	TRC control pattern Detection values for low gradation 1, low gradation 2, low gradation 3 of each color	10
2800-4			M color Low Gradation 2	ALL	0 <0-1020>	M		10
2800-5			M color Low Gradation 3	ALL	0 <0-1020>	M		10
2800-6	Image control	TRC control pattern detection value	C color Low Gradation 1	ALL	0 <0-1020>	M	TRC control pattern Detection values for low gradation 1, low gradation 2, low gradation 3 of each color	10
2800-7			C color Low Gradation 2	ALL	0 <0-1020>	M		10
2800-8			C color Low Gradation 3	ALL	0 <0-1020>	M		10
2800-9	Image control	TRC control pattern detection value	K color Low Gradation 1	ALL	0 <0-1020>	M	TRC control pattern Detection values for low gradation 1, low gradation 2, low gradation 3 of each color	10
2800-10			K color Low Gradation 2	ALL	0 <0-1020>	M		10
2800-11			K color Low Gradation 3	ALL	0 <0-1020>	M		10
2803-0	Image control	TRC control pattern detection value	Y color High Gradation 1	ALL	0 <0-1020>	M	TRC control pattern Detection values for high gradation 1, high gradation 2, and high gradation 3 of each color	10
2803-1			Y color High Gradation 2	ALL	0 <0-1020>	M		10
2803-2			Y color High Gradation 3	ALL	0 <0-1020>	M		10
2803-3	Image control	TRC control pattern detection value	M color High Gradation 1	ALL	0 <0-1020>	M	TRC control pattern Detection values for high gradation 1, high gradation 2, and high gradation 3 of each color	10
2803-4			M color High Gradation 2	ALL	0 <0-1020>	M		10
2803-5			M color High Gradation 3	ALL	0 <0-1020>	M		10

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
2803-6	Image control	TRC control pattern detection value	C color High Gradation 1	ALL	0 <0-1020>	M	TRC control pattern Detection values for high gradation 1, high gradation 2, and high gradation 3 of each color	10
2803-7			C color High Gradation 2	ALL	0 <0-1020>	M		10
2803-8			C color High Gradation 3	ALL	0 <0-1020>	M		10
2803-9	Image control	TRC control pattern detection value	K color High Gradation 1	ALL	0 <0-1020>	M	TRC control pattern Detection values for high gradation 1, high gradation 2, and high gradation 3 of each color	10
2803-10			K color High Gradation 2	ALL	0 <0-1020>	M		10
2803-11			K color High Gradation 3	ALL	0 <0-1020>	M		10

2.5.5 Image Processing

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
503	Image	Density adjustment Manual adjustment / Center value	Text/Photo	PPC (black)	128 <0-255>	SYS	The larger the value is, the darker the image at the center value becomes.	1
504			Text	PPC (black)	128 <0-255>	SYS		1
505	Image	Density adjustment Manual adjustment / Light step value	Text/Photo	PPC (black)	20 <0-255>	SYS	The larger the value is, the lighter the image of the “light” step becomes.	1
507			Text	PPC (black)	20 <0-255>	SYS		1
508	Image	Density adjustment Manual adjustment / Dark step value	Text/Photo	PPC (black)	20 <0-255>	SYS	The larger the value is, the darker the image of the “dark” step becomes.	1
510			Text	PPC (black)	20 <0-255>	SYS		1
514	Image	Density adjustment Automatic adjustment	Text/Photo	PPC (black)	128 <0-255>	SYS	The larger the value is, the darker the image becomes.	1
515			Text	PPC (black)	128 <0-255>	SYS		1
590-0	Image	Gamma balance adjustment (Text / Photo)	Low density	PPC (black)	128 <0-255>	SYS	The larger the value is, the darker the image of the area surrounding the target area becomes.	Image
590-1			Medium density	PPC (black)	128 <0-255>	SYS		
590-2			High density	PPC (black)	128 <0-255>	SYS		
591-0	Image	Gamma balance adjustment (Text)	Low density	PPC (black)	128 <0-255>	SYS		Image
591-1			Medium density	PPC (black)	128 <0-255>	SYS		
591-2			High density	PPC (black)	128 <0-255>	SYS		
592-0	Image	Gamma balance adjustment (Photo)	Low density	PPC (black)	128 <0-255>	SYS		Image
592-1			Medium density	PPC (black)	128 <0-255>	SYS		
592-2			High density	PPC (black)	128 <0-255>	SYS		
604	Image	Sharpness adjustment (Black)	Text/Photo	PPC (black)	128 <0-255>	SYS	The larger the value is, the sharper the image becomes. The smaller the value is, the softer the image becomes and the less moire appears.	1
605			Text	PPC (black)	128 <0-255>	SYS		1
606			Photo	PPC (black)	128 <0-255>	SYS		1
648	Image	Smudged/ faint text adjustment	Text/Photo	PPC (black)	2 <0-4>	SYS	0: Faint text is suppressed most. 4: Smudged text is suppressed most.	1
649			Text	PPC (black)	2 <0-4>	SYS		1
654	Image	Smudged/ faint text adjustment (1200dpi)	PS	PRT (black)	5 <0-9>	SYS	The larger the value is, the lighter the small letters or fine lines become and the less smudged text appears.	1

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
664-0	Image	Upper limit value in toner saving mode (Black / 600 dpi)	PS	PRT (black)	176 <0-255>	SYS	The smaller the value is, the lighter the printed image becomes.	4
664-1			PCL	PRT (black)	176 <0-255>	SYS		4
664-2			XPS	PRT (black)	176 <0-255>	SYS		4
700	Image	Density adjustment Manual adjustment / Center value	Text	FAX (black)	128 <0-255>	SYS	The larger the value is, the lighter the image at the center value becomes.	1
710	Image		Photo	FAX (black)	128 <0-255>	SYS	The larger the value is, the darker the image at the center value becomes.	1
714			Text/Photo	FAX (black)	128 <0-255>	SYS		1
725	Image	Density adjustment Automatic adjustment	Photo	FAX (black)	128 <0-255>	SYS	The larger the value is, the darker the image becomes.	1
729			Text/Photo	FAX (black)	128 <0-255>	SYS		1
840	Image	Sharpness adjustment (Black)	Text/Photo	SCN (black)	128 <0-255>	SYS	The larger the value is, the sharper the image becomes. The smaller the value is, the softer the image becomes and the less moire appears.	1
841			Text	SCN (black)	128 <0-255>	SYS		1
842			Photo	SCN (black)	128 <0-255>	SYS		1
843			Image smoothing	SCN (black)	128 <0-255>	SYS		1
845	Image	Density adjustment Manual adjustment / Center value	Text/Photo	SCN (black)	128 <0-255>	SYS	The larger the value is, the darker the image of the center value becomes.	1
846			Text	SCN (black)	128 <0-255>	SYS		1
847			Photo	SCN (black)	128 <0-255>	SYS		1
848			Image smoothing	SCN (black)	128 <0-255>	SYS		1
860	Image	Density adjustment “automatic density” fine adjustment	Text/Photo	SCN (black)	128 <0-255>	SYS	When the value increases, the image becomes darker.	1
861			Text	SCN (black)	64 <0-255>	SYS		1
862			Photo	SCN (black)	128 <0-255>	SYS		1
863			Gray scale	SCN (black)	128 <0-255>	SYS		1

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
880-0	Image	Gamma balance adjustment (Text/Photo)	Low density	SCN (black)	128 <0-255>	SYS	The larger the value is, the darker the image of the area surrounding the target area becomes.	4
880-1			Medium density	SCN (black)	128 <0-255>	SYS		4
880-2			High density	SCN (black)	128 <0-255>	SYS		4
881-0	Image	Gamma balance adjustment (Text)	Low density	SCN (black)	128 <0-255>	SYS		4
881-1			Medium density	SCN (black)	128 <0-255>	SYS		4
881-2			High density	SCN (black)	128 <0-255>	SYS		4
882-0	Image	Gamma balance adjustment (Photo)	Low density	SCN (black)	128 <0-255>	SYS		4
882-1			Medium density	SCN (black)	128 <0-255>	SYS		4
882-2			High density	SCN (black)	128 <0-255>	SYS		4
883-0	Image	Gamma balance adjustment (Image smoothing)	Low density	SCN (black)	128 <0-255>	SYS		4
883-1			Medium density	SCN (black)	128 <0-255>	SYS		4
883-2			High density	SCN (black)	128 <0-255>	SYS		4
922	Image	Sharpness adjustment (Black)	User custom	PPC (black)	128 <0-255>	SYS	The larger the value is, the sharper the image becomes. The smaller the value is, the softer the image becomes and the less moire appears.	1
925	Image	Smudged/ faint text adjustment	User custom	PPC (black)	2 <0-4>	SYS	0: Faint text is suppressed most. 4: Smudged text is suppressed most.	1
931	Image	Density adjustment Manual adjustment/ Center value	User custom	PPC (black)	128 <0-255>	SYS	The larger the value is, the darker the image of the center value becomes.	1
934	Image	Density adjustment Manual adjustment/ Light step value	User custom	PPC (black)	20 <0-255>	SYS	The larger the value is, the lighter the image of the “light” step becomes.	1
937	Image	Density adjustment Manual adjustment/ Dark step value	User custom	PPC (black)	20 <0-255>	SYS	The larger the value is, the darker the image of the “dark” step becomes.	1
940	Image	Density adjustment Automatic adjustment	User custom	PPC (black)	128 <0-255>	SYS	The larger the value is, the darker the image becomes.	1

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
949-0	Image	Gamma balance adjustment (User custom)	Low density	PPC (black)	128 <0-255>	SYS	The larger the value is, the darker the image of the target area becomes.	4
949-1			Medium density	PPC (black)	128 <0-255>	SYS		4
949-2			High density	PPC (black)	128 <0-255>	SYS		4
1004-0	Image	Automatic gamma adjustment (600dpi)	Plain paper 1	PRT (color)	-	SYS	• When color deviation is found in gradation reproduction, the gradation reproduction of 4 colors can be corrected with the automatic gamma adjustment. • The result of the correction above will be applied for each media type.	7
1004-1			Plain paper 2	PRT (color)	-	SYS		7
1004-2			Recycled paper	PRT (color)	-	SYS		7
1004-3			Thick paper 1	PRT (color)	-	SYS		7
1004-4			Thick paper 2	PRT (color)	-	SYS		7
1004-5			Thick paper 3	PRT (color)	-	SYS		7
1004-6			Thick paper 4	PRT (color)	-	SYS		7
1004-7			Special paper 1	PRT (color)	-	SYS		7
1004-8			Special paper 2	PRT (color)	-	SYS		7
1005-0	Image	Automatic gamma adjustment (1200dpi)	Plain paper 1	PRT (color)	-	SYS	• When color deviation is found in gradation reproduction, the gradation reproduction of 4 colors can be corrected with the automatic gamma adjustment. • The result of the correction above will be applied for each media type.	7
1005-1			Plain paper 2	PRT (color)	-	SYS		7
1005-2			Recycled paper	PRT (color)	-	SYS		7
1005-3			Thick paper 1	PRT (color)	-	SYS		7
1005-4			Thick paper 2	PRT (color)	-	SYS		7
1005-5			Thick paper 3	PRT (color)	-	SYS		7
1005-6			Thick paper 4	PRT (color)	-	SYS		7
1005-7			Special paper 1	PRT (color)	-	SYS		7
1005-8			Special paper 2	PRT (color)	-	SYS		7
1008	Image	Automatic gamma adjustment (600dpi)	All media types	PRT (color)	-	SYS	• When color deviation is found in gradation reproduction, the gradation reproduction of 4 colors can be corrected with the automatic gamma adjustment. • The result of the correction above will be applied to all media types.	7

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
1009	Image	Automatic gamma adjustment (1200dpi)	All media types	PRT (color)	-	SYS	• When color deviation is found in gradation reproduction, the gradation reproduction of 4 colors can be corrected with the automatic gamma adjustment. • The result of the correction above will be applied to all media types.	7
1050	Image	Maximum toner density adjustment to OHP film (600 dpi)		PRT (color)	200 <0-255>	SYS	The larger the value is, the darker the image becomes. The smaller the value is, the lighter the image becomes. * Image offset may occur if the value is too large.	1
1055-0	Image	Upper limit value in toner saving mode (Color / 600 dpi)	PS	PRT (color)	176 <0-255>	SYS	The smaller the value is, the lighter the printed image becomes.	4
1055-1			PCL	PRT (color)	176 <0-255>	SYS		4
1055-2			XPS	PRT (color)	176 <0-255>	SYS		4
1070	Image	Background adjustment	Text	SCN (color)	50 <0-50>	SYS	The smaller the value is, the lighter the background becomes.	1
1071			Printed image	SCN (color)	50 <0-50>	SYS		1
1072			Photo	SCN (color)	50 <0-50>	SYS		1
1086	Image	Sharpness adjustment (Full color)	Text	SCN (color)	128 <0-255>	SYS	The larger the value is, the sharper the image becomes. The smaller the value is, the softer the image becomes and the less moire appears.	1
1087			Printed image	SCN (color)	128 <0-255>	SYS		1
1088			Photo	SCN (color)	128 <0-255>	SYS		1
1585	Image	Density adjustment Automatic/ Manual adjustment/ Center value	Text/Photo	PPC (color)	128 <0-255>	SYS	The larger the value is, the darker the image becomes.	1
1586			Text	PPC (color)	128 <0-255>	SYS		1
1587			Printed image	PPC (color)	128 <0-255>	SYS		1
1588			Photo	PPC (color)	128 <0-255>	SYS		1
1589			Map	PPC (color)	128 <0-255>	SYS		1

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
1612	Image	Maximum toner density adjustment to paper type	Plain paper 1	PPC (color)	255 <0-255>	SYS	The smaller the value is, the less toner is adhered to the high-density section of the image.	1
1613			Thick paper 1	PPC (color)	255 <0-255>	SYS		1
1614			Thick paper 2	PPC (color)	255 <0-255>	SYS		1
1615			Thick paper 3	PPC (color)	255 <0-255>	SYS		1
1616			OHP film	PPC (color)	240 <0-255>	SYS		1
1617			Special paper 1	PPC (color)	255 <0-255>	SYS		1
1618			Special paper 2	PPC (color)	255 <0-255>	SYS		1
1619			Recycled paper	PPC (color)	255 <0-255>	SYS		1
1620			Thick paper 4	PPC (color)	255 <0-255>	SYS		1
1675	Image	ACS judgment threshold		PPC/ SCN	70 <0-255>	SYS	The larger the value is, the more an original tends to be judged as black even in the auto color mode. The smaller value is, the more it tends to be judged as color.	1
1688	Image	Background adjustment (Full color / Automatic density adjustment)	Text/Photo	PPC (color)	128 <0-255>	SYS	The larger the value is, the lighter the background becomes.	1
1689			Text	PPC (color)	128 <0-255>	SYS		1
1690			Printed image	PPC (color)	128 <0-255>	SYS		1
1691			Photo	PPC (color)	128 <0-255>	SYS		1
1692			Map	PPC (color)	128 <0-255>	SYS		1
1698	Image	Background adjustment (Full color / Manual density adjustment)	Text/Photo	PPC (color)	128 <0-255>	SYS	The larger the value is, the lighter the background becomes.	1
1699			Text	PPC (color)	128 <0-255>	SYS		1
1700			Printed image	PPC (color)	128 <0-255>	SYS		1
1701			Photo	PPC (color)	128 <0-255>	SYS		1
1702			Map	PPC (color)	128 <0-255>	SYS		1
1737	Image	Sharpness adjustment (Full color)	Text/Photo	PPC (color)	128 <0-255>	SYS	The larger the value is, the sharper the image becomes. The smaller the value is, the softer the image becomes and the less moire appears.	1
1738			Text	PPC (color)	128 <0-255>	SYS		1
1739			Printed image	PPC (color)	128 <0-255>	SYS		1
1740			Photo	PPC (color)	128 <0-255>	SYS		1
1741			Map	PPC (color)	128 <0-255>	SYS		1

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
1757	Image	Sharpness adjustment (Auto color)	Text/Photo	PPC (color)	128 <0-255>	SYS	The larger the value is, the sharper the image becomes. The smaller the value is, the softer the image becomes and the less moire appears.	1
1779-0	Image	Color balance adjustment for "Y" (Text/ Photo)	L	PPC (color)	128 <0-255>	SYS	The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area	4
1779-1			M	PPC (color)	128 <0-255>	SYS		4
1779-2			H	PPC (color)	128 <0-255>	SYS		4
1780-0	Image	Color balance adjustment for "Y" (Text)	L	PPC (color)	128 <0-255>	SYS		4
1780-1			M	PPC (color)	128 <0-255>	SYS		4
1780-2			H	PPC (color)	128 <0-255>	SYS		4
1781-0	Image	Color balance adjustment for "Y" (Printed image)	L	PPC (color)	128 <0-255>	SYS		4
1781-1			M	PPC (color)	128 <0-255>	SYS		4
1781-2			H	PPC (color)	128 <0-255>	SYS		4
1782-0	Image	Color balance adjustment for "Y" (Photo)	L	PPC (color)	128 <0-255>	SYS		4
1782-1			M	PPC (color)	128 <0-255>	SYS		4
1782-2			H	PPC (color)	128 <0-255>	SYS		4
1783-0	Image	Color balance adjustment for "Y" (Map)	L	PPC (color)	128 <0-255>	SYS		4
1783-1			M	PPC (color)	128 <0-255>	SYS		4
1783-2			H	PPC (color)	128 <0-255>	SYS		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
1784-0	Image	Color balance adjustment for “M” (Text/ Photo)	L	PPC (color)	128 <0-255>	SYS	The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area	4
1784-1			M	PPC (color)	128 <0-255>	SYS		4
1784-2			H	PPC (color)	128 <0-255>	SYS		4
1785-0	Image	Color balance adjustment for “M” (Text)	L	PPC (color)	128 <0-255>	SYS		4
1785-1			M	PPC (color)	128 <0-255>	SYS		4
1785-2			H	PPC (color)	128 <0-255>	SYS		4
1786-0	Image	Color balance adjustment for “M” (Printed image)	L	PPC (color)	128 <0-255>	SYS		4
1786-1			M	PPC (color)	128 <0-255>	SYS		4
1786-2			H	PPC (color)	128 <0-255>	SYS		4
1787-0	Image	Color balance adjustment for “M” (Photo)	L	PPC (color)	128 <0-255>	SYS		4
1787-1			M	PPC (color)	128 <0-255>	SYS		4
1787-2			H	PPC (color)	128 <0-255>	SYS		4
1788-0	Image	Color balance adjustment for “M” (Map)	L	PPC (color)	128 <0-255>	SYS		4
1788-1			M	PPC (color)	128 <0-255>	SYS		4
1788-2			H	PPC (color)	128 <0-255>	SYS		4
1789-0	Image	Color balance adjustment for “C” (Text/ Photo)	L	PPC (color)	128 <0-255>	SYS		4
1789-1			M	PPC (color)	128 <0-255>	SYS		4
1789-2			H	PPC (color)	128 <0-255>	SYS		4
1790-0	Image	Color balance adjustment for “C” (Text)	L	PPC (color)	128 <0-255>	SYS		4
1790-1			M	PPC (color)	128 <0-255>	SYS		4
1790-2			H	PPC (color)	128 <0-255>	SYS		4
1791-0	Image	Color balance adjustment for “C” (Printed image)	L	PPC (color)	128 <0-255>	SYS		4
1791-1			M	PPC (color)	128 <0-255>	SYS		4
1791-2			H	PPC (color)	128 <0-255>	SYS		4
1792-0	Image	Color balance adjustment for “C” (Photo)	L	PPC (color)	128 <0-255>	SYS		4
1792-1			M	PPC (color)	128 <0-255>	SYS		4
1792-2			H	PPC (color)	128 <0-255>	SYS		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
1793-0	Image	Color balance adjustment for "C" (Map)	L	PPC (color)	128 <0-255>	SYS	The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area	4
1793-1			M	PPC (color)	128 <0-255>	SYS		4
1793-2			H	PPC (color)	128 <0-255>	SYS		4
1794-0	Image	Color balance adjustment for "K" (Text/ Photo)	L	PPC (color)	128 <0-255>	SYS		4
1794-1			M	PPC (color)	128 <0-255>	SYS		4
1794-2			H	PPC (color)	128 <0-255>	SYS		4
1795-0	Image	Color balance adjustment for "K" (Text)	L	PPC (color)	128 <0-255>	SYS		4
1795-1			M	PPC (color)	128 <0-255>	SYS		4
1795-2			H	PPC (color)	128 <0-255>	SYS		4
1796-0	Image	Color balance adjustment for "K" (Printed image)	L	PPC (color)	128 <0-255>	SYS		4
1796-1			M	PPC (color)	128 <0-255>	SYS		4
1796-2			H	PPC (color)	128 <0-255>	SYS		4
1797-0	Image	Color balance adjustment for "K" (Photo)	L	PPC (color)	128 <0-255>	SYS		4
1797-1			M	PPC (color)	128 <0-255>	SYS		4
1797-2			H	PPC (color)	128 <0-255>	SYS		4
1798-0	Image	Color balance adjustment for "K" (Map)	L	PPC (color)	128 <0-255>	SYS		4
1798-1			M	PPC (color)	128 <0-255>	SYS		4
1798-2			H	PPC (color)	128 <0-255>	SYS		4
7025	Image	Background offset adjustment for ADF	Text/Photo Text User custom mode	PPC (black)	128 <0-255>	SYS	The larger the adjustment value is, the lighter the background becomes. The smaller the adjustment value is, the darker the background becomes.	1
7033	Image	Background adjustment (Black / Automatic density adjustment)	Text/Photo	PPC (black)	128 <0-255>	SYS	The larger the value is, the lighter the background becomes.	1
7034	Image		Text	PPC (black)	128 <0-255>	SYS		1
7041	Image	Background adjustment (Black / Manual density adjustment)	Text/Photo	PPC (black)	128 <0-255>	SYS		1
7042	Image		Text	PPC (black)	128 <0-255>	SYS		1

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
7043	Image	Background adjustment (Black / Automatic density adjustment)	Photo	PPC (black)	128 <0-255>	SYS	The larger the value is, the lighter the background becomes.	1
7044	Image		Image smoothing	PPC (black)	128 <0-255>	SYS		1
7048	Image	Background adjustment (Black / Manual density adjustment)	Photo	PPC (black)	128 <0-255>	SYS		1
7049	Image		Image smoothing	PPC (black)	128 <0-255>	SYS		1
7102	Image	Smudged/ faint text adjustment (Auto color & black)	Text/Photo	PPC (black)	2 <0-4>	SYS	0: Faint text is suppressed most. 4: Smudged text is suppressed most.	1
7103	Image		Text	PPC (black)	2 <0-4>	SYS		1
7236	Image	Range correction adjustment (Black / Automatic density adjustment)	User custom	PPC (black)	1 <0-1>	SYS	0: Background peak - Fixed 1: Background peak - Varied	1
7237	Image	Range correction adjustment (Black / Manual density adjustment)	User custom	PPC (black)	1 <0-1>	SYS		1
7279	Image	Background adjustment (Black / Automatic density adjustment)	User custom	PPC (black)	128 <0-255>	SYS	The larger the value is, the lighter the background becomes.	1
7280	Image	Background adjustment (Black / Manual density adjustment)	User custom	PPC (black)	128 <0-255>	SYS		1
7283	Image	Range correction adjustment (Black / Automatic density adjustment)	Text/Photo	PPC (black)	1 <0-1>	SYS	0: Background peak - Fixed 1: Background peak - Varied	1
7284	Image		Text	PPC (black)	1 <0-1>	SYS		1
7286	Image	Range correction adjustment (Black / Manual density adjustment)	Text/Photo	PPC (black)	1 <0-1>	SYS	0: Background peak - Fixed 1: Background peak - Varied	1
7287	Image		Text	PPC (black)	1 <0-1>	SYS		1

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
7295	Image	Range correction adjustment (Automatic density adjustment)	Image smoothing	PPC (black)	1 <0-1>	SYS	0: Background peak - Fixed 1: Background peak - Varied	1
7296	Image	Range correction adjustment (Manual density adjustment)	Image smoothing	PPC (black)	0 <0-1>	SYS		1
7302-0	Image	Upper limit value in toner saving mode (black / 1200 dpi)	PS	PRT (black)	176 <0-255>	SYS	The smaller the value is, the lighter the printed image becomes.	4
7302-1			PCL	PRT (black)	176 <0-255>	SYS		4
7302-2			XPS	PRT (black)	176 <0-255>	SYS		4
7309-0	Image	Gamma balance adjustment (PS / Smooth / 1200 dpi)	L	PRT (black)	128 <0-255>	SYS	When the value increases, the density in the target area becomes higher. L: Low density area M: Medium density area H: High density area	4
7309-1			M	PRT (black)	128 <0-255>	SYS		4
7309-2			H	PRT (black)	128 <0-255>	SYS		4
7310-0	Image	Gamma balance adjustment (PS / Detail / 1200 dpi)	L	PRT (black)	128 <0-255>	SYS		4
7310-1			M	PRT (black)	128 <0-255>	SYS		4
7310-2			H	PRT (black)	128 <0-255>	SYS		4
7315-0	Image	Gamma balance adjustment (PS / Smooth / 600dpi)	L	PRT (black)	128 <0-255>	SYS	When the value increases, the density in the target area becomes higher. L: Low density area M: Medium density area H: High density area	4
7315-1			M	PRT (black)	128 <0-255>	SYS		4
7315-2			H	PRT (black)	128 <0-255>	SYS		4
7316-0	Image	Gamma balance adjustment (PS / Detail / 600dpi)	L	PRT (black)	128 <0-255>	SYS	When the value increases, the density in the target area becomes higher. L: Low density area M: Medium density area H: High density area	4
7316-1			M	PRT (black)	128 <0-255>	SYS		4
7316-2			H	PRT (black)	128 <0-255>	SYS		4
7317-0	Image	Gamma balance adjustment (PCL / Smooth / 600dpi)	L	PRT (black)	128 <0-255>	SYS	When the value increases, the density in the target area becomes higher. L: Low density area M: Medium density area H: High density area	4
7317-1			M	PRT (black)	128 <0-255>	SYS		4
7317-2			H	PRT (black)	128 <0-255>	SYS		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
7318-0	Image	Gamma balance adjustment (PCL / Detail / 600dpi)	L	PRT (black)	128 <0-255>	SYS	When the value increases, the density in the target area becomes higher. L: Low density area M: Medium density area H: High density area	4
7318-1			M	PRT (black)	128 <0-255>	SYS		4
7318-2			H	PRT (black)	128 <0-255>	SYS		4
7319-0	Image	Gamma balance adjustment (XPS / Smooth / 600dpi)	L	PRT (black)	128 <0-255>	SYS	When the value increases, the density in the target area becomes higher. L: Low density area M: Medium density area H: High density area	4
7319-1			M	PRT (black)	128 <0-255>	SYS		4
7319-2			H	PRT (black)	128 <0-255>	SYS		4
7320-0	Image	Gamma balance adjustment (XPS / Detail / 600dpi)	L	PRT (black)	128 <0-255>	SYS	When the value increases, the density in the target area becomes higher. L: Low density area M: Medium density area H: High density area	4
7320-1			M	PRT (black)	128 <0-255>	SYS		4
7320-2			H	PRT (black)	128 <0-255>	SYS		4
7340	Image	Smudged/ faint text adjustment	PS	PRT (black)	0 <0-8>	SYS	The larger the value is, the darker the small text and fine lines become and the more faint text is suppressed.	1
7341			PCL	PRT (black)	0 <0-8>	SYS		1
7342			XPS	PRT (black)	0 <0-8>	SYS		1
7416	Image	Range correction adjustment (Black / Automatic density adjustment)	Text/Photo	SCN (black)	1 <0-1>	SYS	0: Background peak - Fixed 1: Background peak - Varied	1
7417			Text	SCN (black)	1 <0-1>	SYS		1
7418			Photo	SCN (black)	1 <0-1>	SYS		1
7419			Image smoothing	SCN (black)	1 <0-1>	SYS		1
7421	Image	Range correction adjustment (Black / Manual density adjustment)	Text/Photo	SCN (black)	0 <0-1>	SYS	0: Background peak - Fixed 1: Background peak - Varied	1
7422			Text	SCN (black)	0 <0-1>	SYS		1
7423			Photo	SCN (black)	0 <0-1>	SYS		1
7424			Image smoothing	SCN (black)	0 <0-1>	SYS		1
7425	Image	Range correction adjustment (Black / Automatic density adjustment)	User custom	SCN (black)	1 <0-1>	SYS	0: Background peak - Fixed 1: Background peak - Varied	1
7426	Image	Range correction adjustment (Black / Manual density adjustment)	User custom	SCN (black)	0 <0-1>	SYS		1

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
7468	Image	Background offset adjustment for ADF		SCN (black)	128 <0-255>	SYS	The larger the value is, the lighter the background becomes.	1
7470	Image	Sharpness adjustment (Black)	User custom	SCN (black)	128 <0-255>	SYS	The larger the value is, the sharper the image becomes. The smaller the value is, the softer the image becomes and the less moire appears.	1
7475	Image	Density adjustment Manual density adjustment / Center value	User custom	SCN (black)	128 <0-255>	SYS	The larger the value is, the darker the image at the center value becomes.	1
7478	Image	Density adjustment Automatic density adjustment	User custom	SCN (black)	128 <0-255>	SYS	The larger the value is, the darker the image becomes.	1
7480-0	Image	Gamma balance adjustment (User custom)	L	SCN (black)	128 <0-255>	SYS	The larger the value is, the darker the image of the area surrounding the target area becomes. L: Low density area M: Medium density area H: High density area	4
7480-1			M	SCN (black)	128 <0-255>	SYS		4
7480-2			H	SCN (black)	128 <0-255>	SYS		4
7641-0	Image	Black area adjustment in twin color copy mode (Selected 2 colors)	H	PPC (color)	128 <0-255>	SYS	The larger the value is, the larger the area recognized as black in the original becomes. The smaller the value is, the larger the area recognized as colors other than black becomes. L: Low density area M: Medium density area H: High density area	4
7641-1			M	PPC (color)	128 <0-255>	SYS		4
7641-2			L	PPC (color)	128 <0-255>	SYS		4
7642-0	Image	Black area adjustment in twin color copy mode (Black and red)	H	PPC (color)	128 <0-255>	SYS	The larger the value is, the larger the area recognized as red in the original becomes. The smaller the value is, the larger the area recognized as colors other than red becomes. L: Low density area M: Medium density area H: High density area	4
7642-1			M	PPC (color)	128 <0-255>	SYS		4
7642-2			L	PPC (color)	128 <0-255>	SYS		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
7667	Image	Range correction adjustment (Auto color & black / Automatic density adjustment)	Text/Photo	PPC (black)	1 <0-1>	SYS	0: Background peak - Fixed 1: Background peak - Varied	1
7668	Image		Text	PPC (black)	1 <0-1>	SYS		1
7669	Image	Range correction adjustment (Auto color & black / Manual density adjustment)	Text/Photo	PPC (black)	1 <0-1>	SYS		1
7670	Image		Text	PPC (black)	1 <0-1>	SYS		1
7675	Image	Background offset adjustment for ADF	Auto color & black	PPC (black)	128 <0-255>	SYS	The larger the value is, the lighter the background becomes.	1
7676	Image	Background adjustment (Auto color & black / Automatic density adjustment)	Text/Photo	PPC (black)	128 <0-255>	SYS	The larger the value is, the lighter the background becomes.	1
7677	Image		Text	PPC (black)	128 <0-255>	SYS		1
7678	Image	Background adjustment (Auto color & black / Manual density adjustment)	Text/Photo	PPC (black)	128 <0-255>	SYS		1
7679	Image		Text	PPC (black)	128 <0-255>	SYS		1
7754	Image	Background adjustment (Monocolor / Automatic density adjustment)	Text/Photo	PPC (color)	128 <0-255>	SYS	The larger the value is, the lighter the background becomes.	1
7755			Text	PPC (color)	128 <0-255>	SYS		1
7756			Printed image	PPC (color)	128 <0-255>	SYS		1
7757			Photo	PPC (color)	128 <0-255>	SYS		1
7758			Map	PPC (color)	128 <0-255>	SYS		1
7759	Image	Background adjustment (Twin color / Manual density adjustment)	Text/Photo	PPC (color)	128 <0-255>	SYS	The larger the value is, the lighter the background becomes.	1
7760			Text	PPC (color)	128 <0-255>	SYS		1
7761			Printed image	PPC (color)	128 <0-255>	SYS		1

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
7762	Image	Background adjustment (Monocolor / Automatic density adjustment)	User custom	PPC (color)	128 <0-255>	SYS	The larger the value is, the lighter the background becomes.	1
7763	Image	Background adjustment (Monocolor / Manual density adjustment)	User custom	PPC (color)	128 <0-255>	SYS		1
7764	Image	Background offset adjustment for ADF	Full color	PPC (color)	128 <0-255>	SYS	The larger the value is, the lighter the background becomes.	1
7765	Image		Mono color	PPC (color)	128 <0-255>	SYS		1
7766	Image		Twin color	PPC (color)	128 <0-255>	SYS		1
7767	Image	Range correction adjustment (Full color / Automatic adjustment)	Text/Photo	PPC (color)	1 <0-1>	SYS	0: Background peak - Fixed 1: Background peak - Varied	1
7768	Image		Text	PPC (color)	1 <0-1>	SYS		1
7769	Image		Printed image	PPC (color)	1 <0-1>	SYS		1
7770	Image		Photo	PPC (color)	1 <0-1>	SYS		1
7771	Image		Map	PPC (color)	1 <0-1>	SYS		1
7772	Image	Range correction adjustment (Full color / Manual adjustment)	Text/Photo	PPC (color)	0 <0-1>	SYS	0: Background peak - Fixed 1: Background peak - Varied	1
7773	Image		Text	PPC (color)	0 <0-1>	SYS		1
7774	Image		Printed image	PPC (color)	0 <0-1>	SYS		1
7775	Image		Photo	PPC (color)	0 <0-1>	SYS		1
7776	Image		Map	PPC (color)	0 <0-1>	SYS		1
7777	Image	Range correction adjustment (Full color / Automatic adjustment)	User custom	PPC (color)	1 <0-1>	SYS	0: Background peak - Fixed 1: Background peak - Varied	1
7778	Image	Range correction adjustment (Full color / Manual adjustment)	User custom	PPC (color)	0 <0-1>	SYS		1

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
7795	Image	Sharpness adjustment (Full color)	User custom	PPC (color)	128 <0-255>	SYS	The larger the value is, the sharper the image becomes. The smaller the value is, the softer the image becomes and the less moire appears.	1
7807	Image	Sharpness adjustment (Auto color)	Text	PPC (color)	128 <0-255>	SYS		1
7808	Image	Sharpness adjustment (Auto color)	Photo	PPC (color)	128 <0-255>	SYS		1
7809	Image	Sharpness adjustment (black)	Image smoothing	PPC (black)	128 <0-255>	SYS		1
7903	Image	Maximum toner density adjustment to paper type	Plain paper 2	PPC (color)	255 <0-255>	SYS	The smaller the value is, the less toner is adhered to the high-density section of the image.	1
7956-0	Image	Gamma balance adjustment (Black / Image smoothing)	L	PPC (black)	128 <0-255>	SYS	The larger the value is, the darker the image of the area surrounding the target area becomes. L: Low density area M: Medium density area H: High density area	4
7956-1			M	PPC (black)	128 <0-255>	SYS		4
7956-2			H	PPC (black)	128 <0-255>	SYS		4
7957-0	Image	Gamma balance adjustment (Auto color & black / Text/ photo)	L	PPC (black)	128 <0-255>	SYS	The larger the value is, the darker the image of the area surrounding the target area becomes. L: Low density area M: Medium density area H: High density area	4
7957-1			M	PPC (black)	128 <0-255>	SYS		4
7957-2			H	PPC (black)	128 <0-255>	SYS		4
7958-0	Image	Gamma balance adjustment (Auto color & black / Text)	L	PPC (black)	128 <0-255>	SYS		4
7958-1			M	PPC (black)	128 <0-255>	SYS		4
7958-2			H	PPC (black)	128 <0-255>	SYS		4
7959-0	Image	Gamma balance adjustment (Auto color & black / Photo)	L	PPC (black)	128 <0-255>	SYS		4
7959-1			M	PPC (black)	128 <0-255>	SYS		4
7959-2			H	PPC (black)	128 <0-255>	SYS		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
7980-0	Image	Color balance adjustment for "Y" (User custom)	L	PPC (color)	128 <0-255>	SYS	The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area	4
7980-1			M	PPC (color)	128 <0-255>	SYS		4
7980-2			H	PPC (color)	128 <0-255>	SYS		4
7981-0	Image	Color balance adjustment for "M" (User custom)	L	PPC (color)	128 <0-255>	SYS		4
7981-1			M	PPC (color)	128 <0-255>	SYS		4
7981-2			H	PPC (color)	128 <0-255>	SYS		4
7982-0	Image	Color balance adjustment for "C" (User custom)	L	PPC (color)	128 <0-255>	SYS		4
7982-1			M	PPC (color)	128 <0-255>	SYS		4
7982-2			H	PPC (color)	128 <0-255>	SYS		4
7983-0	Image	Color balance adjustment for "K" (User custom)	L	PPC (color)	128 <0-255>	SYS		4
7983-1			M	PPC (color)	128 <0-255>	SYS		4
7983-2			H	PPC (color)	128 <0-255>	SYS		4
8010-0	Image	Background adjustment (Smooth / Color / 600 dpi)	PS	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker the background becomes. The smaller the value is, the lighter the background becomes.	4
8010-1			PCL	PRT (color)	128 <0-255>	SYS		4
8010-2			XPS	PRT (color)	128 <0-255>	SYS		4
8011-0	Image	Background adjustment (Smooth / Twin color / 600 dpi)	PS	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker the background becomes. The smaller the value is, the lighter the background becomes.	4
8011-1			PCL	PRT (color)	128 <0-255>	SYS		4
8011-2			XPS	PRT (color)	128 <0-255>	SYS		4
8012-0	Image	Background adjustment (Smooth / Monocolor / 600 dpi)	PS	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker the background becomes. The smaller the value is, the lighter the background becomes.	4
8012-1			PCL	PRT (color)	128 <0-255>	SYS		4
8012-2			XPS	PRT (color)	128 <0-255>	SYS		4
8013-0	Image	Background adjustment (Detail / Color / 600 dpi)	PS	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker the background becomes. The smaller the value is, the lighter the background becomes.	4
8013-1			PCL	PRT (color)	128 <0-255>	SYS		4
8013-2			XPS	PRT (color)	128 <0-255>	SYS		4
8014-0	Image	Background adjustment (Detail / Twin color / 600 dpi)	PS	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker the background becomes. The smaller the value is, the lighter the background becomes.	4
8014-1			PCL	PRT (color)	128 <0-255>	SYS		4
8014-2			XPS	PRT (color)	128 <0-255>	SYS		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
8015-0	Image	Background adjustment (Detail / Monocolor / 600 dpi)	PS	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker the background becomes. The smaller the value is, the lighter the background becomes.	4
8015-1			PCL	PRT (color)	128 <0-255>	SYS		4
8015-2			XPS	PRT (color)	128 <0-255>	SYS		4
8016-0	Image	Background adjustment (Smooth / Color / 1200 dpi)	PS	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker the background becomes. The smaller the value is, the lighter the background becomes.	4
8016-1			PCL	PRT (color)	128 <0-255>	SYS		4
8016-2			XPS	PRT (color)	128 <0-255>	SYS		4
8018-0	Image	Background adjustment (Smooth / Monocolor / 1200 dpi)	PS	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker the background becomes. The smaller the value is, the lighter the background becomes.	4
8018-1			PCL	PRT (color)	128 <0-255>	SYS		4
8018-2			XPS	PRT (color)	128 <0-255>	SYS		4
8019-0	Image	Background adjustment (Detail / Color / 1200 dpi)	PS	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker the background becomes. The smaller the value is, the lighter the background becomes.	4
8019-1			PCL	PRT (color)	128 <0-255>	SYS		4
8019-2			XPS	PRT (color)	128 <0-255>	SYS		4
8021-0	Image	Background adjustment (Detail / Monocolor / 1200 dpi)	PS	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker the background becomes. The smaller the value is, the lighter the background becomes.	4
8021-1			PCL	PRT (color)	128 <0-255>	SYS		4
8021-2			XPS	PRT (color)	128 <0-255>	SYS		4
8026-0	Image	Color balance adjustment for twin color mode (PS/ smooth/Y/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the yellow density of the area becomes.	4
8026-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8026-2			High density	PRT (color)	128 <0-255>	SYS		4
8027-0	Image	Color balance adjustment for twin color mode (PS/ smooth/M/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the magenta density of the area becomes.	4
8027-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8027-2			High density	PRT (color)	128 <0-255>	SYS		4
8028-0	Image	Color balance adjustment for twin color mode (PS/ smooth/C/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the cyan density of the area becomes.	4
8028-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8028-2			High density	PRT (color)	128 <0-255>	SYS		4
8029-0	Image	Color balance adjustment for twin color mode (PS/ smooth/K/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the black density of the area becomes.	4
8029-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8029-2			High density	PRT (color)	128 <0-255>	SYS		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
8030-0	Image	Color balance adjustment for twin color mode (PS/ detail/Y/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the yellow density of the area becomes.	4
8030-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8030-2			High density	PRT (color)	128 <0-255>	SYS		4
8031-0	Image	Color balance adjustment for twin color mode (PS/ detail/M/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the magenta density of the area becomes.	4
8031-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8031-2			High density	PRT (color)	128 <0-255>	SYS		4
8032-0	Image	Color balance adjustment for twin color mode (PS/ detail/C/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the cyan density of the area becomes.	4
8032-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8032-2			High density	PRT (color)	128 <0-255>	SYS		4
8033-0	Image	Color balance adjustment for twin color mode (PS/ detail/K/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the black density of the area becomes.	4
8033-0			Medium density	PRT (color)	128 <0-255>	SYS		4
8033-0			High density	PRT (color)	128 <0-255>	SYS		4
8034-0	Image	Color balance adjustment for twin color mode (PCL/ smooth/Y/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the yellow density of the area becomes.	4
8034-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8034-2			High density	PRT (color)	128 <0-255>	SYS		4
8035-0	Image	Color balance adjustment for twin color mode (PCL/ smooth/M/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the magenta density of the area becomes.	4
8035-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8035-2			High density	PRT (color)	128 <0-255>	SYS		4
8036-0	Image	Color balance adjustment for twin color mode (PCL/ smooth/C/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the cyan density of the area becomes.	4
8036-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8036-2			High density	PRT (color)	128 <0-255>	SYS		4
8037-0	Image	Color balance adjustment for twin color mode (PCL/ smooth/K/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the black density of the area becomes.	4
8037-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8037-2			High density	PRT (color)	128 <0-255>	SYS		4
8038-0	Image	Color balance adjustment for twin color mode (PCL/ detail/Y/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the yellow density of the area becomes.	4
8038-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8038-2			High density	PRT (color)	128 <0-255>	SYS		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
8039-0	Image	Color balance adjustment for twin color mode (PCL/ detail/M/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the magenta density of the area becomes.	4
8039-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8039-2			High density	PRT (color)	128 <0-255>	SYS		4
8040-0	Image	Color balance adjustment for twin color mode (PCL/ detail/C/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the cyan density of the area becomes.	4
8040-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8040-2			High density	PRT (color)	128 <0-255>	SYS		4
8041-0	Image	Color balance adjustment for twin color mode (PCL/ detail/K/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the black density of the area becomes.	4
8041-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8041-2			High density	PRT (color)	128 <0-255>	SYS		4
8042-0	Image	Color balance adjustment (Y) (XPS/ smooth/600 dpi)	L	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker only the target color becomes. L: Low density area M: Medium density area H: High density area	4
8042-1			M	PRT (color)	128 <0-255>	SYS		4
8042-2			H	PRT (color)	128 <0-255>	SYS		4
8043-0	Image	Color balance adjustment (M) (XPS/ smooth/600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8043-1			M	PRT (color)	128 <0-255>	SYS		4
8043-2			H	PRT (color)	128 <0-255>	SYS		4
8044-0	Image	Color balance adjustment (C) (XPS/ smooth/600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8044-1			M	PRT (color)	128 <0-255>	SYS		4
8044-2			H	PRT (color)	128 <0-255>	SYS		4
8045-0	Image	Color balance adjustment (K) (XPS/ smooth/600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8045-1			M	PRT (color)	128 <0-255>	SYS		4
8045-2			H	PRT (color)	128 <0-255>	SYS		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
8046-0	Image	Color balance adjustment (Y) (XPS/ detail/600 dpi)	L	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker only the target color becomes. L: Low density area M: Medium density area H: High density area	4
8046-1			M	PRT (color)	128 <0-255>	SYS		4
8046-2			H	PRT (color)	128 <0-255>	SYS		4
8047-0	Image	Color balance adjustment (M) (XPS/ detail/600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8047-1			M	PRT (color)	128 <0-255>	SYS		4
8047-2			H	PRT (color)	128 <0-255>	SYS		4
8048-0	Image	Color balance adjustment (C) (XPS/ detail/600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8048-1			M	PRT (color)	128 <0-255>	SYS		4
8048-2			H	PRT (color)	128 <0-255>	SYS		4
8049-0	Image	Color balance adjustment (K) (XPS/ detail/600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8049-1			M	PRT (color)	128 <0-255>	SYS		4
8049-2			H	PRT (color)	128 <0-255>	SYS		4
8050-0	Image	Color balance adjustment (Y) (PS / Smooth / 600 dpi)	L	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker only the target color becomes. L: Low density area M: Medium density area H: High density area	4
8050-1			M	PRT (color)	128 <0-255>	SYS		4
8050-2			H	PRT (color)	128 <0-255>	SYS		4
8051-0	Image	Color balance adjustment (M) (PS / Smooth / 600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8051-1			M	PRT (color)	128 <0-255>	SYS		4
8051-2			H	PRT (color)	128 <0-255>	SYS		4
8052-0	Image	Color balance adjustment (C) (PS / Smooth / 600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8052-1			M	PRT (color)	128 <0-255>	SYS		4
8052-2			H	PRT (color)	128 <0-255>	SYS		4
8053-0	Image	Color balance adjustment (K) (PS / Smooth / 600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8053-1			M	PRT (color)	128 <0-255>	SYS		4
8053-2			H	PRT (color)	128 <0-255>	SYS		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
8054-0	Image	Color balance adjustment (Y) (PS / Detail / 600 dpi)	L	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker only the target color becomes. L: Low density area M: Medium density area H: High density area	4
8054-1			M	PRT (color)	128 <0-255>	SYS		4
8054-2			H	PRT (color)	128 <0-255>	SYS		4
8055-0	Image	Color balance adjustment (M) (PS / Detail / 600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8055-1			M	PRT (color)	128 <0-255>	SYS		4
8055-2			H	PRT (color)	128 <0-255>	SYS		4
8056-0	Image	Color balance adjustment (C) (PS / Detail / 600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8056-1			M	PRT (color)	128 <0-255>	SYS		4
8056-2			H	PRT (color)	128 <0-255>	SYS		4
8057-0	Image	Color balance adjustment (K) (PS / Detail / 600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8057-1			M	PRT (color)	128 <0-255>	SYS		4
8057-2			H	PRT (color)	128 <0-255>	SYS		4
8058-0	Image	Color balance adjustment (Y) (PCL / Smooth / 600 dpi)	L	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker only the target color becomes. L: Low density area M: Medium density area H: High density area	4
8058-1			M	PRT (color)	128 <0-255>	SYS		4
8058-2			H	PRT (color)	128 <0-255>	SYS		4
8059-0	Image	Color balance adjustment (M) (PCL / Smooth / 600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8059-1			M	PRT (color)	128 <0-255>	SYS		4
8059-2			H	PRT (color)	128 <0-255>	SYS		4
8060-0	Image	Color balance adjustment (C) (PCL / Smooth / 600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8060-1			M	PRT (color)	128 <0-255>	SYS		4
8060-2			H	PRT (color)	128 <0-255>	SYS		4
8061-0	Image	Color balance adjustment (K) (PCL / Smooth / 600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8061-1			M	PRT (color)	128 <0-255>	SYS		4
8061-2			H	PRT (color)	128 <0-255>	SYS		4

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
8062-0	Image	Color balance adjustment (Y) (PCL / Detail / 600 dpi)	L	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker only the target color becomes. L: Low density area M: Medium density area H: High density area	4
8062-1			M	PRT (color)	128 <0-255>	SYS		4
8062-2			H	PRT (color)	128 <0-255>	SYS		4
8063-0	Image	Color balance adjustment (M) (PCL / Detail / 600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8063-1			M	PRT (color)	128 <0-255>	SYS		4
8063-2			H	PRT (color)	128 <0-255>	SYS		4
8064-0	Image	Color balance adjustment (C) (PCL / Detail / 600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8064-1			M	PRT (color)	128 <0-255>	SYS		4
8064-2			H	PRT (color)	128 <0-255>	SYS		4
8065-0	Image	Color balance adjustment (K) (PCL / Detail / 600 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8065-1			M	PRT (color)	128 <0-255>	SYS		4
8065-2			H	PRT (color)	128 <0-255>	SYS		4
8066	Image	Color balance adjustment mode switchover (Network print)		PRT (color)	0 <0-1>	SYS	Switches the image processing method for color balance adjustment for network printing by changing the default value “0” to “1” so that the density of solid images will become lighter along with the adjustment. 0: Adjusts color balance with the solid image density fixed 1: Adjusts color balance with the solid image density varied	1

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
8070-0	Image	Maximum toner density Threshold adjustment (Detail / 600 dpi)	Plain paper 1	PRT (color)	128 <0-255>	SYS	The larger the value is, the larger the maximum amount of toner to be adhered becomes. The smaller the value is, the smaller the maximum amount of toner to be adhered becomes.	4
8070-1			Plain paper 2	PRT (color)	128 <0-255>	SYS		4
8070-2			Recycled paper	PRT (color)	128 <0-255>	SYS		4
8070-3			Thick paper 1	PRT (color)	128 <0-255>	SYS		4
8070-4			Thick paper 2	PRT (color)	128 <0-255>	SYS		4
8070-5			Thick paper 3	PRT (color)	128 <0-255>	SYS		4
8070-6			Thick paper 4	PRT (color)	128 <0-255>	SYS		4
8070-7			Special paper 1	PRT (color)	128 <0-255>	SYS		4
8070-8			Special paper 2	PRT (color)	128 <0-255>	SYS		4
8070-9			OHP film	PRT (color)	128 <0-255>	SYS		4
8071-0	Image	Maximum toner density Threshold adjustment (Smooth / 600 dpi)	Plain paper	PRT (color)	128 <0-255>	SYS	The larger the value is, the larger the maximum amount of toner to be adhered becomes. The smaller the value is, the smaller the maximum amount of toner to be adhered becomes.	4
8071-1			Plain paper 2	PRT (color)	128 <0-255>	SYS		4
8071-2			Recycled paper	PRT (color)	128 <0-255>	SYS		4
8071-3			Thick paper 1	PRT (color)	128 <0-255>	SYS		4
8071-4			Thick paper 2	PRT (color)	128 <0-255>	SYS		4
8071-5			Thick paper 3	PRT (color)	128 <0-255>	SYS		4
8071-6			Thick paper 4	PRT (color)	128 <0-255>	SYS		4
8071-7			Special paper 1	PRT (color)	128 <0-255>	SYS		4
8071-8			Special paper 2	PRT (color)	128 <0-255>	SYS		4
8071-9			OHP film	PRT (color)	128 <0-255>	SYS		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
8089-0	Image	Maximum toner density Threshold adjustment (Detail / 1200 dpi)	Plain paper 1	PRT (color)	128 <0-255>	SYS	The larger the value is, the larger the maximum amount of toner to be adhered becomes. The smaller the value is, the smaller the maximum amount of toner to be adhered becomes.	4
8089-1			Plain paper 2	PRT (color)	128 <0-255>	SYS		4
8089-2			Recycled paper	PRT (color)	128 <0-255>	SYS		4
8089-3			Thick paper 1	PRT (color)	128 <0-255>	SYS		4
8089-4			Thick paper 2	PRT (color)	128 <0-255>	SYS		4
8089-5			Thick paper 3	PRT (color)	128 <0-255>	SYS		4
8089-6			Thick paper 4	PRT (color)	128 <0-255>	SYS		4
8089-7			Special paper 1	PRT (color)	128 <0-255>	SYS		4
8089-8			Special paper 2	PRT (color)	128 <0-255>	SYS		4
8089-9			OHP film	PRT (color)	128 <0-255>	SYS		4
8090-0	Image	Maximum toner density Threshold adjustment (Smooth / 1200 dpi)	Plain paper	PRT (color)	128 <0-255>	SYS	The larger the value is, the larger the maximum amount of toner to be adhered becomes. The smaller the value is, the smaller the maximum amount of toner to be adhered becomes.	4
8090-1			Plain paper 2	PRT (color)	128 <0-255>	SYS		4
8090-2			Recycled paper	PRT (color)	128 <0-255>	SYS		4
8090-3			Thick paper 1	PRT (color)	128 <0-255>	SYS		4
8090-4			Thick paper 2	PRT (color)	128 <0-255>	SYS		4
8090-5			Thick paper 3	PRT (color)	128 <0-255>	SYS		4
8090-6			Thick paper 4	PRT (color)	128 <0-255>	SYS		4
8090-7			Special paper 1	PRT (color)	128 <0-255>	SYS		4
8090-8			Special paper 2	PRT (color)	128 <0-255>	SYS		4
8090-9			OHP film	PRT (color)	128 <0-255>	SYS		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
8110-0	Image	Sharpness adjustment (e-BRIDGE / PS / General)	Text	PRT (color)	128 <0-255>	SYS	The larger the value is, the sharper the image becomes. The smaller the value is, the softer the image becomes.	4
8110-1			Graphics	PRT (color)	128 <0-255>	SYS		4
8110-2			Image	PRT (color)	128 <0-255>	SYS		4
8111-0	Image	Sharpness adjustment (e-BRIDGE / PS / Photograph)	Text	PRT (color)	128 <0-255>	SYS		4
8111-1			Graphics	PRT (color)	128 <0-255>	SYS		4
8111-2			Image	PRT (color)	128 <0-255>	SYS		4
8112-0	Image	Sharpness adjustment (e-BRIDGE / PS / Presentation)	Text	PRT (color)	128 <0-255>	SYS		4
8112-1			Graphics	PRT (color)	128 <0-255>	SYS		4
8112-2			Image	PRT (color)	128 <0-255>	SYS		4
8113-0	Image	Sharpness adjustment (e-BRIDGE / PS / Line art)	Text	PRT (color)	128 <0-255>	SYS		4
8113-1			Graphics	PRT (color)	128 <0-255>	SYS		4
8113-2			Image	PRT (color)	128 <0-255>	SYS		4
8118-0	Image	Sharpness adjustment (e-BRIDGE / PS)	Text	PRT (black)	128 <0-255>	SYS	The larger the value is, the sharper the image becomes. The smaller the value is, the softer the image becomes.	4
8118-1			Graphics	PRT (black)	128 <0-255>	SYS		4
8118-2			Image	PRT (black)	128 <0-255>	SYS		4
8119-0 (EFI)	Image	Sharpness adjustment (EFI / PS)	Text	PRT (black)	128 <0-255>	SYS	The larger the value is, the sharper the image becomes. The smaller the value is, the softer the image becomes.	4
8119-1 (EFI)			Graphics	PRT (black)	128 <0-255>	SYS		4
8119-2 (EFI)			Image	PRT (black)	128 <0-255>	SYS		4
8130	Image	Smudged/ faint text adjustment	PS	PRT (color)	0 <0-8>	SYS	The larger the value is, the darker the small text and fine lines become and the more faint text is suppressed.	1
8131			PCL	PRT (color)	0 <0-8>	SYS		1
8132			XPS	PRT (color)	0 <0-8>	SYS		1
8149	Image	Maximum toner density adjustment to OHP film (1200 dpi)		PRT (color)	200 <0-255>	SYS	The larger the value is, the darker the image becomes. The smaller the value is, the lighter the image becomes. * Image offset may occur if the value is too large.	1
8150-0	Image	Color balance adjustment for twin color mode (XPS/ smooth/Y/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the yellow density of the area becomes.	4
8150-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8150-2			High density	PRT (color)	128 <0-255>	SYS		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
8151-0	Image	Color balance adjustment for twin color mode (XPS/ smooth/M/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the magenta density of the area becomes.	4
8151-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8151-2			High density	PRT (color)	128 <0-255>	SYS		4
8152-0	Image	Color balance adjustment for twin color mode (XPS/ smooth/C/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the cyan density of the area becomes.	4
8152-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8152-2			High density	PRT (color)	128 <0-255>	SYS		4
8153-0	Image	Color balance adjustment for twin color mode (XPS/ smooth/K/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the black density of the area becomes.	4
8153-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8153-2			High density	PRT (color)	128 <0-255>	SYS		4
8154-0	Image	Color balance adjustment for twin color mode (XPS/ detail/Y/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the yellow density of the area becomes.	4
8154-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8154-2			High density	PRT (color)	128 <0-255>	SYS		4
8155-0	Image	Color balance adjustment for twin color mode (XPS/ detail/M/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the magenta density of the area becomes.	4
8155-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8155-2			High density	PRT (color)	128 <0-255>	SYS		4
8156-0	Image	Color balance adjustment for twin color mode (XPS/ detail/C/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the cyan density of the area becomes.	4
8156-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8156-2			High density	PRT (color)	128 <0-255>	SYS		4
8157-0	Image	Color balance adjustment for twin color mode (XPS/ detail/K/ 600dpi)	Low density	PRT (color)	128 <0-255>	SYS	The larger the value is, the higher the black density of the area becomes.	4
8157-1			Medium density	PRT (color)	128 <0-255>	SYS		4
8157-2			High density	PRT (color)	128 <0-255>	SYS		4
8161-0	Image	Upper limit value in toner saving mode (Color / 1200 dpi)	PS	PRT (color)	176 <0-255>	SYS	The smaller the value is, the lighter the printed image becomes.	4
8161-1			PCL	PRT (color)	176 <0-255>	SYS		4
8161-2			XPS	PRT (color)	176 <0-255>	SYS		4
8176	Image	Screen switchover (e-BRIDGE)		PRT (color)	0 <0-1>	SYS	0: High screen ruling value (smoother image) 1: Low screen ruling value (rougher image)	1

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
8179 (EFI)	Image	Screen switchover (EFI)		PRT (color)	0 <0-1>	SYS	0: High screen ruling value (smoother image) 1: Low screen ruling value (rougher image)	1
8187	Image	Screen switchover	Graphics	PRT (black)	11 <0-15>	SYS	3: High screen ruling value (smoother image) 11: Low screen ruling value (rougher image) Only “3” and “11” are acceptable.	1
8188			Image	PRT (black)	11 <0-15>	SYS		1
8190 (EFI)	Image	Screen switchover (EFI)	Graphics	PRT (black)	11 <0-15>	SYS	3: High screen ruling value (smoother image) 11: Low screen ruling value (rougher image) Only “3” and “11” are acceptable.	1
8191 (EFI)			Image	PRT (black)	11 <0-15>	SYS		1
8210-0	Image	PureBlack / Gray threshold adjustment (PCL / Graphics)	General	PRT (color)	8 <1-255>	SYS	The larger the value is, the wider the range of colors to be replaced with black becomes. The smaller the value is, the narrower the range becomes.	4
8210-1			Photograph	PRT (color)	8 <1-255>	SYS		4
8210-2			Presentation	PRT (color)	8 <1-255>	SYS		4
8210-3			Line art	PRT (color)	8 <1-255>	SYS		4
8211-0	Image	PureBlack / Gray threshold adjustment (PCL / Image)	General	PRT (color)	1 <1-255>	SYS	The larger the value is, the wider the range of colors to be replaced with black becomes. The smaller the value is, the narrower the range becomes.	4
8211-1			Photograph	PRT (color)	1 <1-255>	SYS		4
8211-2			Presentation	PRT (color)	1 <1-255>	SYS		4
8211-3			Line art	PRT (color)	8 <1-255>	SYS		4
8212-0	Image	PureBlack / Gray threshold adjustment (PCL / Image)	General	PRT (color)	1 <1-255>	SYS	The larger the value is, the wider the range of colors to be replaced with black becomes. The smaller the value is, the narrower the range becomes.	4
8212-1			Photograph	PRT (color)	1 <1-255>	SYS		4
8212-2			Presentation	PRT (color)	1 <1-255>	SYS		4
8212-3			Line art	PRT (color)	8 <1-255>	SYS		4
8213	Image	PureBlack / Gray threshold adjustment (Twin color print) / General	Text	PRT (color)	8 <1-255>	SYS	The larger the value is, the wider the range of colors to be replaced with black becomes. The smaller the value is, the narrower the range becomes.	1
8214			Graphics	PRT (color)	1 <1-255>	SYS		1
8215			Image	PRT (color)	1 <1-255>	SYS		1
8242-0	Image	Graphic line density adjustment (1200dpi)	Gray (K)	PRT	3 <0-5>	SYS	The larger the value is, the darker the fine lines become.	4
8242-1			Color (CMYK)	PRT	1 <0-5>	SYS		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
8243-0	Image	Effective range of graphic line density adjustment (1200dpi)	Gray (K) lower limit value	PRT	1 <0-255>	SYS	Sets the value in which 05-8242 is effective from the density range (0-255).	4
8243-1			Gray (K) upper limit value	PRT	200 <0-255>	SYS		4
8243-2			Color (CMYK) lower limit value	PRT	1 <0-255>	SYS		4
8243-3			Color (CMYK) upper limit value	PRT	255 <0-255>	SYS		4
8249-0	Image	PureBlack / Gray threshold adjustment (XPS / Text)	General	PRT (color)	8 <1-255>	SYS	The larger the value is, the wider the range of colors to be replaced with black becomes. The smaller the value is, the narrower the range becomes.	4
8249-1			Photograph	PRT (color)	8 <1-255>	SYS		4
8249-2			Presentation	PRT (color)	8 <1-255>	SYS		4
8249-3			Line art	PRT (color)	8 <1-255>	SYS		4
8249-4			Advanced	PRT (color)	8 <1-255>	SYS		4
8250-0	Image	PureBlack / Gray threshold adjustment (XPS / Graphic)	General	PRT (color)	1 <1-255>	SYS	The larger the value is, the wider the range of colors to be replaced with black becomes. The smaller the value is, the narrower the range becomes.	4
8250-1			Photograph	PRT (color)	1 <1-255>	SYS		4
8250-2			Presentation	PRT (color)	1 <1-255>	SYS		4
8250-3			Line art	PRT (color)	8 <1-255>	SYS		4
8250-4			Advanced	PRT (color)	1 <1-255>	SYS		4
8251-0	Image	PureBlack / Gray threshold adjustment (XPS / Image)	General	PRT (color)	1 <1-255>	SYS	The larger the value is, the wider the range of colors to be replaced with black becomes. The smaller the value is, the narrower the range becomes.	4
8251-1			Photograph	PRT (color)	1 <1-255>	SYS		4
8251-2			Presentation	PRT (color)	1 <1-255>	SYS		4
8251-3			Line art	PRT (color)	8 <1-255>	SYS		4
8251-4			Advanced	PRT (color)	1 <1-255>	SYS		4
8252-0	Image	PureBlack / Gray threshold adjustment (PS / Text)	General	PRT (color)	8 <1-255>	SYS	The larger the value is, the wider the range of colors to be replaced with black becomes. The smaller the value is, the narrower the range becomes.	4
8252-1			Photograph	PRT (color)	8 <1-255>	SYS		4
8252-2			Presentation	PRT (color)	8 <1-255>	SYS		4
8252-3			Line art	PRT (color)	8 <1-255>	SYS		4
8252-4			Advanced	PRT (color)	8 <1-255>	SYS		4

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
8253-0	Image	PureBlack / Gray threshold adjustment (PS / Graphic)	General	PRT (color)	1 <1-255>	SYS	The larger the value is, the wider the range of colors to be replaced with black becomes. The smaller the value is, the narrower the range becomes.	4
8253-1			Photograph	PRT (color)	1 <1-255>	SYS		4
8253-2			Presentation	PRT (color)	1 <1-255>	SYS		4
8253-3			Line art	PRT (color)	8 <1-255>	SYS		4
8253-4			Advanced	PRT (color)	1 <1-255>	SYS		4
8254-0	Image	PureBlack / Gray threshold adjustment (PS / Image)	General	PRT (color)	1 <1-255>	SYS	The larger the value is, the wider the range of colors to be replaced with black becomes. The smaller the value is, the narrower the range becomes.	4
8254-1			Photograph	PRT (color)	1 <1-255>	SYS		4
8254-2			Presentation	PRT (color)	1 <1-255>	SYS		4
8254-3			Line art	PRT (color)	8 <1-255>	SYS		4
8254-4			Advanced	PRT (color)	1 <1-255>	SYS		4
8268-0	Image	Color balance adjustment (Y) (PS / Smooth / 1200 dpi)	L	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker only the target color becomes. L: Low density area M: Medium density area H: High density area	4
8268-1			M	PRT (color)	128 <0-255>	SYS		4
8268-2			H	PRT (color)	128 <0-255>	SYS		4
8269-0	Image	Color balance adjustment (M) (PS / Smooth / 1200 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8269-1			M	PRT (color)	128 <0-255>	SYS		4
8269-2			H	PRT (color)	128 <0-255>	SYS		4
8270-0	Image	Color balance adjustment (C) (PS / Smooth / 1200 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8270-1			M	PRT (color)	128 <0-255>	SYS		4
8270-2			H	PRT (color)	128 <0-255>	SYS		4
8271-0	Image	Color balance adjustment (K) (PS / Smooth / 1200 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8271-1			M	PRT (color)	128 <0-255>	SYS		4
8271-2			H	PRT (color)	128 <0-255>	SYS		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
8272-0	Image	Color balance adjustment (Y) (PS / Detail / 1200 dpi)	L	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker only the target color becomes. L: Low density area M: Medium density area H: High density area	4
8272-1			M	PRT (color)	128 <0-255>	SYS		4
8272-2			H	PRT (color)	128 <0-255>	SYS		4
8273-0	Image	Color balance adjustment (M) (PS / Detail / 1200 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8273-1			M	PRT (color)	128 <0-255>	SYS		4
8273-2			H	PRT (color)	128 <0-255>	SYS		4
8274-0	Image	Color balance adjustment (C) (PS / Detail / 1200 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8274-1			M	PRT (color)	128 <0-255>	SYS		4
8274-2			H	PRT (color)	128 <0-255>	SYS		4
8275-0	Image	Color balance adjustment (K) (PS / Detail / 1200 dpi)	L	PRT (color)	128 <0-255>	SYS		4
8275-1			M	PRT (color)	128 <0-255>	SYS		4
8275-2			H	PRT (color)	128 <0-255>	SYS		4
8330	Image	Range correction adjustment (Full color / Automatic density adjustment)	Text	SCN (color)	1 <0-1>	SYS	0: Background peak - Fixed 1: Background peak - Varied	1
8331			Printed image	SCN (color)	1 <0-1>	SYS		1
8332			Photo	SCN (color)	1 <0-1>	SYS		1
8334			User custom	SCN (color)	1 <0-1>	SYS		1
8361	Image	Range correction adjustment (Full color / Manual density adjustment)	Text	SCN (color)	0 <0-1>	SYS	0: Background peak - Fixed 1: Background peak - Varied	1
8362			Printed image	SCN (color)	0 <0-1>	SYS		1
8363			Photo	SCN (color)	0 <0-1>	SYS		1
8365			User custom	SCN (color)	0 <0-1>	SYS		1
8370	Image	Background adjustment	User custom mode	SCN (color)	50 <0-50>	SYS	When the value increases, the background becomes darker.	1
8371	Image	Fine adjustment of black density	User custom mode	SCN (color)	0 <0-4>	SYS	Adjusts the black density of the scanned image. When the value increases, the black density becomes darker.	1
8375	Image	Sharpness adjustment	User custom mode	SCN (color)	128 <0-255>	SYS	When the value increases, the image becomes sharper. When the value decreases, the image becomes softer. The smaller the value is, the less the moire becomes.	1

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
8380	Image	Density adjustment Fine curve compensation / Center value	User custom mode	SCN (color)	128 <0-255>	SYS	The larger the value is, the darker the image of the center step density becomes.	1
8381	Image	Density adjustment / Light step value	User custom mode	SCN (color)	20 <0-255>	SYS	Sets the changing amount by 1 step at density adjustment on the control panel The larger the value is, the lighter the image of the light steps becomes.	1
8382	Image	Density adjustment / Dark step value	User custom mode	SCN (color)	20 <0-255>	SYS	Sets the changing amount by 1 step at density adjustment on the control panel The larger the value is, the darker the image of the dark steps becomes.	1
8385	Image	Background offset adjustment (Automatic density adjustment)	Text	SCN (color)	128 <0-255>	SYS	The larger the value is, the less easily the background (low density area) is printed. The smaller the value is, the more easily the background (low density area) is printed.	1
8386			Printed image	SCN (color)	128 <0-255>	SYS		1
8387			Photo	SCN (color)	128 <0-255>	SYS		1
8389			User custom mode	SCN (color)	128 <0-255>	SYS		1
8390	Image	Background offset adjustment (Manual density adjustment)	Text	SCN (color)	128 <0-255>	SYS	The larger the value is, the less easily the background (low density area) is printed. The smaller the value is, the more easily the background (low density area) is printed.	1
8391			Printed image	SCN (color)	128 <0-255>	SYS		1
8392			Photo	SCN (color)	128 <0-255>	SYS		1
8394			User custom mode	SCN (color)	128 <0-255>	SYS		1
8395	Image	Background offset adjustment for ADF		SCN (color)	128 <0-255>	SYS	The larger the adjustment value is, the lighter the background becomes.	1
8400	Image	Background offset adjustment (Automatic density adjustment)	Text/Photo	SCN (black)	128 <0-255>	SYS	The larger the value is, the less easily the background (low density area) is printed. The smaller the value is, the more easily the background (low density area) is printed.	1
8402			Photo	SCN (black)	128 <0-255>	SYS		1
8403			Gray scale	SCN (black)	128 <0-255>	SYS		1
8404			User custom mode	SCN (black)	128 <0-255>	SYS		1

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
8405	Image	Background offset adjustment (Manual density adjustment)	Text/Photo	SCN (black)	128 <0-255>	SYS	The larger the value is, the less easily the background (low density area) is printed. The smaller the value is, the more easily the background (low density area) is printed.	1
8407			Photo	SCN (black)	128 <0-255>	SYS		1
8408			Gray scale	SCN (black)	128 <0-255>	SYS		1
8409			User custom mode	SCN (black)	128 <0-255>	SYS		1

2.5.6 Scanner

Adjustment mode (05)							
Code	**Classification**	**Items**	**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
305	Scanner	Image location adjustment of secondary scanning direction (scanner section)	ALL	124 <68-188>	SYS	When the value increases by “1”, the image shifts by approx. 0.09 mm toward the trailing edge of the paper.	1
306	Scanner	Image location adjustment of secondary scanning direction (scanner section)	ALL	113 <0-255>	SYS	When the value increases by “1”, the image shifts by approx. 0.0423 mm toward the front side of the paper.	1
308	Scanner	Distortion mode	ALL	-	-	Moves carriages to the adjusting position.	6
340	Scanner	Reproduction ratio adjustment of secondary scanning direction (scanner section)	ALL	128 <0-255>	SYS	When the value increases by “1”, the reproduction ratio in the secondary scanning direction (vertical to paper feeding direction) increases by approx. 0.025%.	1
352	RADF	EEPROM initialization	ALL	-	-	Initializes EEPROM for the RADF.	6
353		RADF original reading start sensor Manual adjustment	ALL	-	-	Adjusts the RADF original reading start sensor of the RADF manually.	6
356	RADF	Automatic adjustment of RADF original reading start sensor	ALL	-	SYS	Performs the adjustment and initialization when the RADF board or RADF original reading start sensor is replaced.	6
357	RADF	Fine adjustment of RADF transport speed	ALL	50 <0-100>	SYS	When the value increases by “1”, the reproduction ratio of the secondary scanning direction on original (fed from the RADF) increases by approx. 0.1%.	1
358	RADF	RADF sideways deviation adjustment	ALL	128 <0-255>	SYS	When the value increases by “1”, the image of original fed from the RADF shifts toward the rear side of paper by approx. 0.0423 mm.	1

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
363	Scanner	Data transfer of characteristic value of scanner / SYS board → SLG board		SCN	-	SYS	Transfers the characteristic values of the scanner (shading correction factor / RGB color correction / reproduction ratio color aberration correction / shading position correction factor / reproduction ratio correction value in primary scanning direction) from the SRAM of the SYS board to the SRAM of the SLG board.	6
364	Scanner	Data transfer of characteristic value of scanner / SLG board → SYS board		SCN	-	SYS	Transfers the characteristic values of the scanner (shading correction factor / RGB color correction / reproduction ratio color aberration correction / shading position correction factor / reproduction ratio correction value in primary scanning direction) from the SRAM of the SLG board to the SRAM of the SYS board.	6
365	RADF	RADF leading edge position 1 adjustment	Front side	ALL	50 <0-100>	SYS	When the value increases by “1”, the copied image of original fed from the RADF shifts toward the trailing edge of paper by approx. 0.2 mm.	1
366			Back side	ALL	50 <0-100>	SYS		1

2.5.7 Printer

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
408	Image	Leading edge position adjustment (Normal speed)	Common items	PPC	100 <0-200>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	1
410	Image	Adjustment of primary scanning laser writing start position		PPC	128 <0-255>	M	When the value increases by “1”, the writing start position shifts to the front side by approx. 0.0423 mm.	1
411				PRT	128 <0-255>	M		1
417-0	Image	Secondary scanning laser writing start position correction offset value		ALL	128 <118-138>	M	Corrects image position to be shifted to the trailing edge side of paper. 0.5 line/bit	4
417-1				ALL	128 <118-138>	M		4
417-2				ALL	128 <118-138>	M		4
428	Image	Leading edge position adjustment (Normal speed)	4th drawer	ALL	50 <0-100>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	1
429	Image	Leading edge position adjustment (Normal speed)	T-LCF	ALL	50 <0-100>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	1
430	Image	Top margin adjustment (blank area at the leading edge of the paper))		PPC	0 <0-255>	M	When the value increases by “1”, the blank area becomes wider by approx. 0.0423 mm.	1
431	Image	Left margin adjustment (blank area at the left of the paper along the paper feeding direction)		PPC	0 <0-255>	M		1
432	Image	Right margin adjustment (blank area at the right of the paper along the paper feeding direction)		PPC	0 <0-255>	M		1
433	Image	Bottom margin adjustment (blank area at the trailing edge of the paper)		PPC	0 <0-255>	M		1

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
434-0	Image	Bottom margin adjustment (blank area at the trailing edge of the paper) /Reverse side at duplexing (black)		PPC/ PRT	24 <0-255>	M	When the value increases, the blank area becomes wider.	4
434-1	Image	Right margin adjustment (blank area at the right of the paper along the paper feeding direction) /Reverse side at duplexing (black)		PPC/ PRT	18 <0-255>	M		4
434-2	Image	Bottom margin adjustment (blank area at the trailing edge of the paper) /Reverse side at duplexing (color)		PPC/ PRT	24 <0-255>	M		4
434-3	Image	Right margin adjustment (blank area at the right of the paper along the paper feeding direction) /Reverse side at duplexing (color)		PPC/ PRT	18 <0-255>	M		4
434-4	Image	Bottom margin adjustment (blank area at the trailing edge of the paper) /Reverse side at duplexing (Thick paper 1)		PPC/ PRT	18 <0-255>	M		4
434-5	Image	Right margin adjustment (blank area at the right of the paper along the paper feeding direction) /Reverse side at duplexing (Thick paper 1)		PPC/ PRT	12 <0-255>	M		4
435	Image	Top margin adjustment (blank area at the leading edge of the paper)		PRT	24 <0-255>	M	When the value increases by “1”, the blank area becomes wider by approx. 0.0423 mm.	1
436	Image	Left margin adjustment (blank area at the left of the paper along the paper feeding direction)		PRT	0 <0-255>	M	When the value increases by “1”, the blank area becomes wider by approx. 0.0423 mm.	1
437	Image	Right margin adjustment (blank area at the right of the paper along the paper feeding direction)		PRT	0 <0-255>	M		1
438	Image	Bottom margin adjustment (blank area at the trailing edge of the paper)		PRT	0 <0-255>	M		1
440	Image	Leading edge position adjustment (Normal speed)	1st drawer	ALL	50 <0-100>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	1
441			2nd drawer	ALL	50 <0-100>	M		1
442			Bypass feeding	ALL	50 <0-100>	M		1
443			O-LCF	ALL	50 <0-100>	M		1
444			3rd drawer	ALL	50 <0-100>	M		1
445			Duplex feeding	ALL	50 <0-100>	M		1

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
473-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (T-LCF)	Thick paper 1	ALL	38 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm.	4
473-1			Thick paper 2	ALL	38 <0-63>	M		4
473-2			Thick paper 3 (black)	ALL	38 <0-63>	M		4
473-3			Thick paper 3 (color)	ALL	39 <0-63>	M		4
480	Feeding system / Paper transport	Paper feed aligning amount adjustment (using icons)		ALL	-	M	Press the button on the LCD.	4
487-0	Drive	Fine adjustment of transfer belt motor rotational speed	Transport speed: Normal speed	PRT	128 <0-255>	M	When the value increases, the reproduction ratio in the secondary scanning direction becomes larger. (Approx. 0.1 mm/1 steps)	4
487-1				FAX	128 <0-255>	M		4
487-2				PPC	128 <0-255>	M		4
487-3			Transport speed: Decelerated by 1/2	PRT	128 <0-255>	M		4
487-4				FAX	128 <0-255>	M		4
487-5				PPC	128 <0-255>	M		4
487-6			Transport speed: Decelerated by 2/3	PRT	128 <0-255>	M		4
487-7				FAX	128 <0-255>	M		4
487-8				PPC	128 <0-255>	M		4
487-9			Transport speed: High speed	PRT	128 <0-255>	M		4
487-10				FAX	128 <0-255>	M		4
487-11				PPC	128 <0-255>	M		4

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
489-0	Drive	Fine adjustment of feed/transport motor rotational speed	Transport speed: Normal speed	PRT	128 <0-255>	M		4
489-1				FAX	128 <0-255>	M		4
489-2				PPC	128 <0-255>	M		4
489-3			Transport speed: Decelerated by 1/2	PRT	128 <0-255>	M		4
489-4				FAX	128 <0-255>	M		4
489-5				PPC	128 <0-255>	M		4
489-6			Transport speed: Decelerated by 2/3	PRT	128 <0-255>	M		4
489-7				FAX	128 <0-255>	M		4
489-8				PPC	128 <0-255>	M		4
489-9			Transport speed: High speed	PRT	128 <0-255>	M		4
489-10				FAX	128 <0-255>	M		4
489-11				PPC	128 <0-255>	M		4
489-12			Transport speed: 1	ALL	128 <0-255>	M		4
489-13			Transport speed: 2	ALL	128 <0-255>	M		4
489-14			Transport speed: 3	ALL	128 <0-255>	M		4
489-15			Transport speed: 4	ALL	128 <0-255>	M		4
489-16			Transport speed: 5	ALL	128 <0-255>	M		4
489-17			Transport speed: 6	ALL	128 <0-255>	M		4
494	Image	Leading edge position adjustment (Decelerated by 2/3)	Common items	ALL	100 <0-200>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	1
495	Image	Leading edge position adjustment (Decelerated by 2/3)	Common items (Black)	ALL	100 <0-200>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	1

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
497-0	Image	Adjustment of drawer sideways deviation	1st drawer	ALL	128 <0-255>	M	When the value increases by “1”, the image shifts toward the front side by 0.0423 mm.	4
497-1			2nd drawer	ALL	128 <0-255>	M		4
497-2			3rd drawer	ALL	128 <0-255>	M		4
497-3			4th drawer	ALL	128 <0-255>	M		4
497-4			T-LCF	ALL	128 <0-255>	M		4
497-5			Bypass feeding	ALL	128 <0-255>	M		4
497-6			O-LCF	ALL	128 <0-255>	M		4
498-0	Image	Adjustment of primary scanning laser writing start position at duplex feeding	Long size	ALL	128 <0-255>	M	When the value increases by “1”, the image shifts toward the front side by 0.0423 mm.	4
498-1			Short size (A4/LT or smaller)	ALL	128 <0-255>	M		4
498-2			Middle size	ALL	128 <0-255>	M		4
4065	Image	Leading edge position adjustment (Decelerated by 1/2)	Common items	ALL	100 <0-200>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	1
4066	Image	Leading edge position adjustment (High speed)	Common items	ALL	100 <0-200>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	1
4067-0	Image	Leading edge position adjustment (High speed)	1st drawer	ALL	50 <0-100>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	4
4067-1			2nd drawer	ALL	50 <0-100>	M		4
4067-2			3rd drawer	ALL	50 <0-100>	M		4
4067-3			4th drawer	ALL	50 <0-100>	M		4
4067-4			Bypass feed	ALL	50 <0-100>	M		4
4067-5			ADU	ALL	50 <0-100>	M		4
4067-6			T-LCF	ALL	50 <0-100>	M		4
4067-7			O-LCF	ALL	50 <0-100>	M		4
4068	Image	Leading edge adjustment/ Black print correction (Normal speed)		ALL	100 <0-200>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	1

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
4069	Image	Leading edge adjustment/ Black print correction (Decelerated by 1/2)		ALL	100 <0-200>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	1
4100-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (1st drawer / Plain paper)	Plain paper Long size	ALL	48 <0~63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4100-1			Plain paper Middle size	ALL	38 <0~63>	M		4
4100-2			Plain paper Short size 1	ALL	35 <0-63>	M		4
4100-3			Plain paper Short size 2	ALL	35 <0-63>	M		4
4100-4			Plain paper Short size 3	ALL	35 <0-63>	M		4
4101-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (2nd drawer / Plain paper)	Plain paper Long size	ALL	33 <0~63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4101-1			Plain paper Middle size	ALL	38 <0~63>	M		4
4101-2			Plain paper Short size 1	ALL	35 <0-63>	M		4
4101-3			Plain paper Short size 2	ALL	35 <0-63>	M		4
4101-4			Plain paper Short size 3	ALL	35 <0-63>	M		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
4103-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (Bypass feed / Plain paper)	Plain paper Long size	ALL	30 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4103-1			Plain paper Middle size	ALL	30 <0-63>	M		4
4103-2			Plain paper Short size 1	ALL	30 <0-63>	M		4
4103-3			Plain paper Short size 2	ALL	30 <0-63>	M		4
4103-4			Plain paper Short size 3	ALL	30 <0-63>	M		4
4104-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (Bypass feed / Thick paper 1)	Thick paper 1 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4104-1			Thick paper 1 Middle size	ALL	35 <0-63>	M		4
4104-2			Thick paper 1 Short size 1	ALL	35 <0-63>	M		4
4104-3			Thick paper 1 Short size 2	ALL	35 <0-63>	M		4
4104-4			Thick paper 1 Short size 3	ALL	35 <0-63>	M		4
4105-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (Bypass feed / Thick paper 2)	Thick paper 2 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4105-1			Thick paper 2 Middle size	ALL	35 <0-63>	M		4
4105-2			Thick paper 2 Short size 1	ALL	35 <0-63>	M		4
4105-3			Thick paper 2 Short size 2	ALL	35 <0-63>	M		4
4105-4			Thick paper 2 Short size 3	ALL	35 <0-63>	M		4

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
4106-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (Bypass feed / Thick paper 3)	Thick paper 3 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4106-1			Thick paper 3 Middle size	ALL	35 <0-63>	M		4
4106-2			Thick paper 3 Short size 1	ALL	35 <0-63>	M		4
4106-3			Thick paper 3 Short size 2	ALL	35 <0-63>	M		4
4106-4			Thick paper 3 Short size 3	ALL	35 <0-63>	M		4
4107-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (Bypass feed / OHP film)	OHP film Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4107-1			OHP film Middle size	ALL	35 <0-63>	M		4
4107-2			OHP film Short size 1	ALL	35 <0-63>	M		4
4107-3			OHP film Short size 2	ALL	35 <0-63>	M		4
4107-4			OHP film Short size 3	ALL	35 <0-63>	M		4
4108-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (3rd drawer / Plain paper)	Plain paper Long size	ALL	30 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4108-1			Plain paper Middle size	ALL	35 <0-63>	M		4
4108-2			Plain paper Short size 1	ALL	35 <0-63>	M		4
4108-3			Plain paper Short size 2	ALL	35 <0-63>	M		4
4108-4			Plain paper Short size 3	ALL	35 <0-63>	M		4

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
4109-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (4th drawer / Plain paper)	Plain paper Long size	ALL	30 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4109-1			Plain paper Middle size	ALL	35 <0-63>	M		4
4109-2			Plain paper Short size 1	ALL	35 <0-63>	M		4
4109-3			Plain paper Short size 2	ALL	35 <0-63>	M		4
4109-4			Plain paper Short size 3	ALL	35 <0-63>	M		4
4110-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (ADU / Plain paper)	Plain paper Long size	ALL	30 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4110-1			Plain paper Middle size	ALL	30 <0-63>	M		4
4110-2			Plain paper Short size 1	ALL	30 <0-63>	M		4
4110-3			Plain paper Short size 2	ALL	30 <0-63>	M		4
4110-4			Plain paper Short size 3	ALL	30 <0-63>	M		4
4111	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (T-LCF)		ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm.	1

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
4115-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (1st drawer / Thick paper 1)	Thick paper 1 Long size	ALL	38 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4115-1			Thick paper 1 Middle size	ALL	38 <0-63>	M		4
4115-2			Thick paper 1 Short size 1	ALL	38 <0-63>	M		4
4115-3			Thick paper 1 Short size 2	ALL	38 <0-63>	M		4
4115-4			Thick paper 1 Short size 3	ALL	38 <0-63>	M		4
4116-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (2nd drawer / Thick paper 1)	Thick paper 1 Long size	ALL	38 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4116-1			Thick paper 1 Middle size	ALL	38 <0-63>	M		4
4116-2			Thick paper 1 Short size 1	ALL	38 <0-63>	M		4
4116-3			Thick paper 1 Short size 2	ALL	38 <0-63>	M		4
4116-4			Thick paper 1 Short size 3	ALL	38 <0-63>	M		4
4117-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (3rd drawer / Thick paper 1)	Thick paper 1 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4117-1			Thick paper 1 Middle size	ALL	35 <0-63>	M		4
4117-2			Thick paper 1 Short size 1	ALL	38 <0-63>	M		4
4117-3			Thick paper 1 Short size 2	ALL	38 <0-63>	M		4
4117-4			Thick paper 1 Short size 3	ALL	38 <0-63>	M		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
4118-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (4th drawer / Thick paper 1)	Thick paper 1 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4118-1			Thick paper 1 Middle size	ALL	35 <0-63>	M		4
4118-2			Thick paper 1 Short size 1	ALL	38 <0-63>	M		4
4118-3			Thick paper 1 Short size 2	ALL	38 <0-63>	M		4
4118-4			Thick paper 1 Short size 3	ALL	38 <0-63>	M		4
4120-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (ADU / Thick paper 1)	Thick paper 1 Long size	ALL	30 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4120-1			Thick paper 1 Middle size	ALL	30 <0-63>	M		4
4120-2			Thick paper 1 Short size 1	ALL	30 <0-63>	M		4
4120-3			Thick paper 1 Short size 2	ALL	30 <0-63>	M		4
4120-4			Thick paper 1 Short size 3	ALL	30 <0-63>	M		4
4122-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section: High speed / black (1st drawer / Plain paper)	Plain paper Long size	ALL	40 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4122-1			Plain paper Middle size	ALL	29 <0-63>	M		4
4122-2			Plain paper Short size 1	ALL	27 <0-63>	M		4
4122-3			Plain paper Short size 2	ALL	27 <0-63>	M		4
4122-4			Plain paper Short size 3	ALL	27 <0-63>	M		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
4123-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section: High speed / black (2nd drawer / Plain paper)	Plain paper Long size	ALL	25 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4123-1			Plain paper Middle size	ALL	29 <0-63>	M		4
4123-2			Plain paper Short size 1	ALL	27 <0-63>	M		4
4123-3			Plain paper Short size 2	ALL	27 <0-63>	M		4
4123-4			Plain paper Short size 3	ALL	27 <0-63>	M		4
4124-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section: High speed / black (3rd drawer / Plain paper)	Plain paper Long size	ALL	22 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4124-1			Plain paper Middle size	ALL	26 <0-63>	M		4
4124-2			Plain paper Short size 1	ALL	27 <0-63>	M		4
4124-3			Plain paper Short size 2	ALL	27 <0-63>	M		4
4124-4			Plain paper Short size 3	ALL	27 <0-63>	M		4
4125-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section: High speed / black (4th drawer / Plain paper)	Plain paper Long size	ALL	22 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4125-1			Plain paper Middle size	ALL	26 <0-63>	M		4
4125-2			Plain paper Short size 1	ALL	27 <0-63>	M		4
4125-3			Plain paper Short size 2	ALL	27 <0-63>	M		4
4125-4			Plain paper Short size 3	ALL	27 <0-63>	M		4

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
4126	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section: High speed / black (T-LCF)		ALL	27 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm.	1
4127-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section: High speed / black (Bypass feed / Plain paper)	Plain paper Long size	ALL	30 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4127-1			Plain paper Middle size	ALL	30 <0-63>	M		4
4127-2			Plain paper Short size 1	ALL	30 <0-63>	M		4
4127-3			Plain paper Short size 2	ALL	30 <0-63>	M		4
4127-4			Plain paper Short size 3	ALL	30 <0-63>	M		4
4128-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (Bypass feed / Special paper 1)	Special paper 1 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4128-1			Special paper 1 Middle size	ALL	35 <0-63>	M		4
4128-2			Special paper 1 Short size 1	ALL	35 <0-63>	M		4
4128-3			Special paper 1 Short size 2	ALL	35 <0-63>	M		4
4128-4			Special paper 1 Short size 3	ALL	35 <0-63>	M		4

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
4129-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (Bypass feed / Special paper 2)	Special paper 2 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4129-1			Special paper 2 Middle size	ALL	35 <0-63>	M		4
4129-2			Special paper 2 Short size 1	ALL	35 <0-63>	M		4
4129-3			Special paper 2 Short size 2	ALL	35 <0-63>	M		4
4129-4			Special paper 2 Short size 3	ALL	35 <0-63>	M		4
4562-0	Image	Leading edge position adjustment / 1st drawer (Decelerated by 1/2)	Thick paper 1	ALL	50 <0-100>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	4
4562-1			Thick paper 2	ALL	50 <0-100>	M		4
4562-2			Thick paper 3	ALL	50 <0-100>	M		4
4562-3		Leading edge position adjustment / 1st drawer (Decelerated by 2/3)	Thick paper 3	ALL	50 <0-100>	M		4
4563-0	Image	Leading edge position adjustment / 2nd drawer (Decelerated by 1/2)	Thick paper 1	ALL	50 <0-100>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	4
4563-1			Thick paper 2	ALL	50 <0-100>	M		4
4563-2			Thick paper 3	ALL	50 <0-100>	M		4
4563-3		Leading edge position adjustment / 2nd drawer (Decelerated by 2/3)	Thick paper 3	ALL	50 <0-100>	M		4
4564-0	Image	Leading edge position adjustment / 3rd drawer (Decelerated by 1/2)	Thick paper 1	ALL	50 <0-100>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	4
4564-1			Thick paper 2	ALL	50 <0-100>	M		4
4564-2			Thick paper 3	ALL	50 <0-100>	M		4
4564-3		Leading edge position adjustment / 3rd drawer (Decelerated by 2/3)	Thick paper 3	ALL	50 <0-100>	M		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
4565-0	Image	Leading edge position adjustment / 4th drawer (Decelerated by 1/2)	Thick paper 1	ALL	50 <0-100>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	4
4565-1			Thick paper 2	ALL	50 <0-100>	M		4
4565-2			Thick paper 3	ALL	50 <0-100>	M		4
4565-3		Leading edge position adjustment / 4th drawer (Decelerated by 2/3)	Thick paper 3	ALL	50 <0-100>	M		4
4566-0	Image	Leading edge position adjustment / T-LCF (Decelerated by 1/2)	Thick paper 1	ALL	50 <0-100>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	4
4566-1			Thick paper 2	ALL	50 <0-100>	M		4
4566-2			Thick paper 3	ALL	50 <0-100>	M		4
4566-3		Leading edge position adjustment / T-LCF (Decelerated by 2/3)	Thick paper 3	ALL	50 <0-100>	M		4
4567-0	Image	Leading edge position adjustment Bypass feed (Decelerated by 1/2)	Thick paper 1	ALL	51 <0-100>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	4
4567-1			Thick paper 2	ALL	52 <0-100>	M		4
4567-2			Thick paper 3	ALL	54 <0-100>	M		4
4567-3			Thick paper 4	ALL	55 <0-100>	M		4
4567-4		Leading edge position adjustment Bypass feed (Decelerated by 2/3)	OHP film	ALL	54 <0-100>	M		4
4567-5			Special paper 1	ALL	54 <0-100>	M		4
4567-6			Special paper 2	ALL	54 <0-100>	M		4
4567-7			Thick paper 3	ALL	54 <0-100>	M		4
4567-8			Thick paper 4	ALL	55 <0-100>	M		4
4568-0	Image	Leading edge position adjustment / ADU (Decelerated by 1/2)	Thick paper 1	ALL	50 <0-100>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	4
4568-1			Thick paper 2	ALL	50 <0-100>	M		4
4568-2			Thick paper 3	ALL	50 <0-100>	M		4
4568-3		Leading edge position adjustment / ADU (Decelerated by 2/3)	Special paper 1	ALL	50 <0-100>	M		4
4568-4			Special paper 2	ALL	50 <0-100>	M		4
4568-5			Thick paper 3	ALL	50 <0-100>	M		4

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
4569-0	Image	Leading edge position adjustment / O-LCF (Decelerated by 1/2)	Thick paper 1	ALL	50 <0-100>	M	When the value increases by “1”, the image shifts toward the trailing edge of the paper by approx. 0.1 mm.	4
4569-1			Thick paper 2	ALL	50 <0-100>	M		4
4569-2			Thick paper 3	ALL	50 <0-100>	M		4
4569-3		Leading edge position adjustment / O-LCF (Decelerated by 2/3)	Thick paper 3	ALL	50 <0-100>	M		4
4580-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (O-LCF / Plain paper)	Plain paper Long size	ALL	30 <0~63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4580-1			Plain paper Middle size	ALL	35 <0~63>	M		4
4580-2			Plain paper Short size 1	ALL	35 <0~63>	M		4
4580-3			Plain paper Short size 2	ALL	35 <0~63>	M		4
4580-4			Plain paper Short size 3	ALL	35 <0~63>	M		4
4581-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (O-LCF / Thick paper 1)	Thick paper 1 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4581-1			Thick paper 1 Middle size	ALL	35 <0-63>	M		4
4581-2			Thick paper 1 Short size 1	ALL	38 <0-63>	M		4
4581-3			Thick paper 1 Short size 2	ALL	38 <0-63>	M		4
4581-4			Thick paper 1 Short size 3	ALL	38 <0-63>	M		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
4582-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (1st drawer / Thick paper 2)	Thick paper 2 Long size	ALL	38 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4582-1			Thick paper 2 Middle size	ALL	38 <0-63>	M		4
4582-2			Thick paper 2 Short size 1	ALL	38 <0-63>	M		4
4582-3			Thick paper 2 Short size 2	ALL	38 <0-63>	M		4
4582-4			Thick paper 2 Short size 3	ALL	38 <0-63>	M		4
4583-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (2nd drawer / Thick paper 2)	Thick paper 2 Long size	ALL	38 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4583-1			Thick paper 2 Middle size	ALL	38 <0-63>	M		4
4583-2			Thick paper 2 Short size 1	ALL	38 <0-63>	M		4
4583-3			Thick paper 2 Short size 2	ALL	38 <0-63>	M		4
4583-4			Thick paper 2 Short size 3	ALL	38 <0-63>	M		4
4584-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (3rd drawer / Thick paper 2)	Thick paper 2 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4584-1			Thick paper 2 Middle size	ALL	35 <0-63>	M		4
4584-2			Thick paper 2 Short size 1	ALL	38 <0-63>	M		4
4584-3			Thick paper 2 Short size 2	ALL	38 <0-63>	M		4
4584-4			Thick paper 2 Short size 3	ALL	38 <0-63>	M		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
4585-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (4th drawer / Thick paper 2)	Thick paper 2 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4585-1			Thick paper 2 Middle size	ALL	35 <0-63>	M		4
4585-2			Thick paper 2 Short size 1	ALL	38 <0-63>	M		4
4585-3			Thick paper 2 Short size 2	ALL	38 <0-63>	M		4
4585-4			Thick paper 2 Short size 3	ALL	38 <0-63>	M		4
4586-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (O-LCF / Thick paper 2)	Thick paper 2 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4586-1			Thick paper 2 Middle size	ALL	35 <0-63>	M		4
4586-2			Thick paper 2 Short size 1	ALL	38 <0-63>	M		4
4586-3			Thick paper 2 Short size 2	ALL	38 <0-63>	M		4
4586-4			Thick paper 2 Short size 3	ALL	38 <0-63>	M		4
4587-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (ADU / High speed)	Long size	ALL	30 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4587-1			Middle size	ALL	30 <0-63>	M		4
4587-2			Short size 1	ALL	30 <0-63>	M		4
4587-3			Short size 2	ALL	30 <0-63>	M		4
4587-4			Short size 3	ALL	30 <0-63>	M		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
4588-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (1st drawer / Thick paper 3) (black)	Thick paper 3 Long size	ALL	38 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4588-1			Thick paper 3 Middle size	ALL	38 <0-63>	M		4
4588-2			Thick paper 3 Short size 1	ALL	38 <0-63>	M		4
4588-3			Thick paper 3 Short size 2	ALL	38 <0-63>	M		4
4588-4			Thick paper 3 Short size 3	ALL	38 <0-63>	M		4
4589-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (2nd drawer / Thick paper 3) (black)	Thick paper 3 Long size	ALL	38 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4589-1			Thick paper 3 Middle size	ALL	38 <0-63>	M		4
4589-2			Thick paper 3 Short size 1	ALL	38 <0-63>	M		4
4589-3			Thick paper 3 Short size 2	ALL	38 <0-63>	M		4
4589-4			Thick paper 3 Short size 3	ALL	38 <0-63>	M		4
4590-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (3rd drawer / Thick paper 3) (black)	Thick paper 3 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4590-1			Thick paper 3 Middle size	ALL	35 <0-63>	M		4
4590-2			Thick paper 3 Short size 1	ALL	38 <0-63>	M		4
4590-3			Thick paper 3 Short size 2	ALL	38 <0-63>	M		4
4590-4			Thick paper 3 Short size 3	ALL	38 <0-63>	M		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
4591-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (4th drawer / Thick paper 3) (black)	Thick paper 3 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4591-1			Thick paper 3 Middle size	ALL	35 <0-63>	M		4
4591-2			Thick paper 3 Short size 1	ALL	38 <0-63>	M		4
4591-3			Thick paper 3 Short size 2	ALL	38 <0-63>	M		4
4591-4			Thick paper 3 Short size 3	ALL	38 <0-63>	M		4
4592-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (O-LCF / Thick paper 3) (black)	Thick paper 3 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4592-1			Thick paper 3 Middle size	ALL	35 <0-63>	M		4
4592-2			Thick paper 3 Short size 1	ALL	38 <0-63>	M		4
4592-3			Thick paper 3 Short size 2	ALL	38 <0-63>	M		4
4592-4			Thick paper 3 Short size 3	ALL	38 <0-63>	M		4
4593-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (ADU / Thick paper 3) (black)	Thick paper 3 Long size	ALL	30 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4593-1			Thick paper 3 Middle size	ALL	30 <0-63>	M		4
4593-2			Thick paper 3 Short size 1	ALL	30 <0-63>	M		4
4593-3			Thick paper 3 Short size 2	ALL	30 <0-63>	M		4
4593-4			Thick paper 3 Short size 3	ALL	30 <0-63>	M		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
4600-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (O-LCF / Plain paper) (High speed / black)	Plain paper Long size	ALL	22 <0~63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4600-1			Plain paper Middle size	ALL	26 <0~63>	M		4
4600-2			Plain paper Short size 1	ALL	27 <0-63>	M		4
4600-3			Plain paper Short size 2	ALL	27 <0-63>	M		4
4600-4			Plain paper Short size 3	ALL	27 <0-63>	M		4
4601-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (Bypass feed / Thick paper 4) (black)	Thick paper 4 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4601-1			Thick paper 4 Middle size	ALL	35 <0-63>	M		4
4601-2			Thick paper 4 Short size 1	ALL	35 <0-63>	M		4
4601-3			Thick paper 4 Short size 2	ALL	35 <0-63>	M		4
4601-4			Thick paper 4 Short size 3	ALL	35 <0-63>	M		4
4602-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (ADU / Thick paper 4) (black)	Thick paper 4 Long size	ALL	30 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4602-1			Thick paper 4 Middle size	ALL	30 <0-63>	M		4
4602-2			Thick paper 4 Short size 1	ALL	30 <0-63>	M		4
4602-3			Thick paper 4 Short size 2	ALL	30 <0-63>	M		4
4602-4			Thick paper 4 Short size 3	ALL	30 <0-63>	M		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
4603-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (ADU / Special paper 1)	Special paper 1 Long size	ALL	30 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4603-1			Special paper 1 Middle size	ALL	30 <0-63>	M		4
4603-2			Special paper 1 Short size 1	ALL	30 <0-63>	M		4
4603-3			Special paper 1 Short size 2	ALL	30 <0-63>	M		4
4603-4			Special paper 1 Short size 3	ALL	30 <0-63>	M		4
4604-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (ADU / Special paper 2)	Special paper 2 Long size	ALL	30 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4604-1			Special paper 2 Middle size	ALL	30 <0-63>	M		4
4604-2			Special paper 2 Short size 1	ALL	30 <0-63>	M		4
4604-3			Special paper 2 Short size 2	ALL	30 <0-63>	M		4
4604-4			Special paper 2 Short size 3	ALL	30 <0-63>	M		4
4605-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (1st drawer / Thick paper 3) (color)	Thick paper 3 Long size	ALL	39 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4605-1			Thick paper 3 Middle size	ALL	39 <0-63>	M		4
4605-2			Thick paper 3 Short size 1	ALL	39 <0-63>	M		4
4605-3			Thick paper 3 Short size 2	ALL	39 <0-63>	M		4
4605-4			Thick paper 3 Short size 3	ALL	39 <0-63>	M		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
4606-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (2nd drawer / Thick paper 3) (color)	Thick paper 3 Long size	ALL	39 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4606-1			Thick paper 3 Middle size	ALL	39 <0-63>	M		4
4606-2			Thick paper 3 Short size 1	ALL	39 <0-63>	M		4
4606-3			Thick paper 3 Short size 2	ALL	39 <0-63>	M		4
4606-4			Thick paper 3 Short size 3	ALL	39 <0-63>	M		4
4607-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (3rd drawer / Thick paper 3) (color)	Thick paper 3 Long size	ALL	34 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4607-1			Thick paper 3 Middle size	ALL	34 <0-63>	M		4
4607-2			Thick paper 3 Short size 1	ALL	39 <0-63>	M		4
4607-3			Thick paper 3 Short size 2	ALL	39 <0-63>	M		4
4607-4			Thick paper 3 Short size 3	ALL	39 <0-63>	M		4
4608-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (4th drawer / Thick paper 3) (color)	Thick paper 3 Long size	ALL	34 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4608-1			Thick paper 3 Middle size	ALL	34 <0-63>	M		4
4608-2			Thick paper 3 Short size 1	ALL	39 <0-63>	M		4
4608-3			Thick paper 3 Short size 2	ALL	39 <0-63>	M		4
4608-4			Thick paper 3 Short size 3	ALL	39 <0-63>	M		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
4609-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (O-LCF / Thick paper 3) (color)	Thick paper 3 Long size	ALL	34 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4609-1			Thick paper 3 Middle size	ALL	34 <0-63>	M		4
4609-2			Thick paper 3 Short size 1	ALL	39 <0-63>	M		4
4609-3			Thick paper 3 Short size 2	ALL	39 <0-63>	M		4
4609-4			Thick paper 3 Short size 3	ALL	39 <0-63>	M		4
4610-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (ADU / Thick paper 3) (color)	Thick paper 3 Long size	ALL	30 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4610-1			Thick paper 3 Middle size	ALL	30 <0-63>	M		4
4610-2			Thick paper 3 Short size 1	ALL	30 <0-63>	M		4
4610-3			Thick paper 3 Short size 2	ALL	30 <0-63>	M		4
4610-4			Thick paper 3 Short size 3	ALL	30 <0-63>	M		4
4611-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (ADU / Thick paper 4) (color)	Thick paper 4 Long size	ALL	30 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4611-1			Thick paper 4 Middle size	ALL	30 <0-63>	M		4
4611-2			Thick paper 4 Short size 1	ALL	30 <0-63>	M		4
4611-3			Thick paper 4 Short size 2	ALL	30 <0-63>	M		4
4611-4			Thick paper 4 Short size 3	ALL	30 <0-63>	M		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
4612-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (Bypass feed / Thick paper 3) (color)	Thick paper 3 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4612-1			Thick paper 3 Middle size	ALL	35 <0-63>	M		4
4612-2			Thick paper 3 Short size 1	ALL	35 <0-63>	M		4
4612-3			Thick paper 3 Short size 2	ALL	35 <0-63>	M		4
4612-4			Thick paper 3 Short size 3	ALL	35 <0-63>	M		4
4613-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (Bypass feed / Thick paper 4) (color)	Thick paper 4 Long size	ALL	35 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4613-1			Thick paper 4 Middle size	ALL	35 <0-63>	M		4
4613-2			Thick paper 4 Short size 1	ALL	35 <0-63>	M		4
4613-3			Thick paper 4 Short size 2	ALL	35 <0-63>	M		4
4613-4			Thick paper 4 Short size 3	ALL	35 <0-63>	M		4
4615-0	Feeding system / Paper transport	Paper aligning amount adjustment at the registration section (ADU / Thick paper 2)	Thick paper 2 Long size	ALL	30 <0-63>	M	When the value increases by “1”, the aligning amount increases by approx. 0.54 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4615-1			Thick paper 2 Middle size	ALL	30 <0-63>	M		4
4615-2			Thick paper 2 Short size 1	ALL	30 <0-63>	M		4
4615-3			Thick paper 2 Short size 2	ALL	30 <0-63>	M		4
4615-4			Thick paper 2 Short size 3	ALL	30 <0-63>	M		4

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
4719	Image control	Color registration adjustment		ALL	-	M	Forcibly performs the color registration control adjustment in order to eliminate the color deviation of Y, M, C and K colors.	6
4720-0	Image control	Displaying parameters for color registration adjustment detection abnormality	Front & rear sides	ALL	0 <0-255>	M	Checks the cause of a “CA00” error when it occurs. Ch.6.2.20	10
4720-1			Center	ALL	0 <0-255>	M		10
4721	Maintenance	Tilt motor initial excitation setting		ALL	-	M	Perform this adjustment when the SRAM on the laser unit or the LGC board has been replaced.	6
4740-0	Drive	Fine adjustment of 2nd drawer feed motor rotational speed	Transport speed: Normal speed	PRT	128 <0-255>	M		4
4740-1				FAX	128 <0-255>	M		4
4740-2				PPC	128 <0-255>	M		4
4740-3			Transport speed: Decelerated by 1/2	PRT	128 <0-255>	M		4
4740-4				FAX	128 <0-255>	M		4
4740-5				PPC	128 <0-255>	M		4
4740-6			Transport speed: Decelerated by 2/3	PRT	128 <0-255>	M		4
4740-7				FAX	128 <0-255>	M		4
4740-8				PPC	128 <0-255>	M		4
4740-9			Transport speed: High speed	PRT	128 <0-255>	M		4
4740-10				FAX	128 <0-255>	M		4
4740-11				PPC	128 <0-255>	M		4
4740-12			Transport speed: 1	ALL	128 <0-255>	M		4
4740-13			Transport speed: 2	ALL	128 <0-255>	M		4
4740-14			Transport speed: 3	ALL	128 <0-255>	M		4
4740-15			Transport speed: 4	ALL	128 <0-255>	M		4
4740-16			Transport speed: 5	ALL	128 <0-255>	M		4
4740-17			Transport speed: 6	ALL	128 <0-255>	M		4

Adjustment mode (05)								
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
4741-0	Drive	Fine adjustment of 1st drawer transport motor rotational speed	Transport speed: Normal speed	PRT	160 <0-255>	M		4
4741-1				FAX	128 <0-255>	M		4
4741-2				PPC	128 <0-255>	M		4
4741-3			Transport speed: Decelerated by 1/2	PRT	128 <0-255>	M		4
4741-4				FAX	128 <0-255>	M		4
4741-5				PPC	128 <0-255>	M		4
4741-6			Transport speed: Decelerated by 2/3	PRT	128 <0-255>	M		4
4741-7				FAX	128 <0-255>	M		4
4741-8				PPC	128 <0-255>	M		4
4741-9			Transport speed: High speed	PRT	128 <0-255>	M		4
4741-10				FAX	128 <0-255>	M		4
4741-11				PPC	128 <0-255>	M		4
4741-12			Transport speed: 1	ALL	128 <0-255>	M		4
4741-13			Transport speed: 2	ALL	128 <0-255>	M		4
4741-14			Transport speed: 3	ALL	128 <0-255>	M		4
4741-15			Transport speed: 4	ALL	128 <0-255>	M		4
4741-16			Transport speed: 5	ALL	128 <0-255>	M		4
4741-17			Transport speed: 6	ALL	128 <0-255>	M		4

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
4742-0	Drive	Fine adjustment of 2nd drawer transport motor rotational speed	Transport speed: Normal speed	PRT	128 <0-255>	M		4
4742-1				FAX	128 <0-255>	M		4
4742-2				PPC	128 <0-255>	M		4
4742-3			Transport speed: Decelerated by 1/2	PRT	128 <0-255>	M		4
4742-4				FAX	128 <0-255>	M		4
4742-5				PPC	128 <0-255>	M		4
4742-6			Transport speed: Decelerated by 2/3	PRT	128 <0-255>	M		4
4742-7				FAX	128 <0-255>	M		4
4742-8				PPC	128 <0-255>	M		4
4742-9			Transport speed: High speed	PRT	128 <0-255>	M		4
4742-10				FAX	128 <0-255>	M		4
4742-11				PPC	128 <0-255>	M		4
4742-12			Transport speed: 1	ALL	128 <0-255>	M		4
4742-13			Transport speed: 2	ALL	128 <0-255>	M		4
4742-14			Transport speed: 3	ALL	128 <0-255>	M		4
4742-15			Transport speed: 4	ALL	128 <0-255>	M		4
4742-16			Transport speed: 5	ALL	128 <0-255>	M		4
4742-17			Transport speed: 6	ALL	128 <0-255>	M		4

Adjustment mode (05)								
Code	**Classification**	**Items**		**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
4743-0	Drive	Fine adjustment of Bypass feeding feed motor rotational speed	Transport speed: Normal speed	PRT	128 <0-255>	M		4
4743-1				FAX	128 <0-255>	M		4
4743-2				PPC	128 <0-255>	M		4
4743-3			Transport speed: Decelerated by 1/2	PRT	128 <0-255>	M		4
4743-4				FAX	128 <0-255>	M		4
4743-5				PPC	128 <0-255>	M		4
4743-6			Transport speed: Decelerated by 2/3	PRT	128 <0-255>	M		4
4743-7				FAX	128 <0-255>	M		4
4743-8				PPC	128 <0-255>	M		4
4743-9			Transport speed: High speed	PRT	128 <0-255>	M		4
4743-10				FAX	128 <0-255>	M		4
4743-11				PPC	128 <0-255>	M		4
4743-12			Transport speed: 1	ALL	128 <0-255>	M		4
4743-13			Transport speed: 2	ALL	128 <0-255>	M		4
4743-14			Transport speed: 3	ALL	128 <0-255>	M		4
4743-15			Transport speed: 4	ALL	128 <0-255>	M		4
4743-16			Transport speed: 5	ALL	128 <0-255>	M		4
4743-17			Transport speed: 6	ALL	128 <0-255>	M		4

2.6 SETTING MODE (08)

The items in the setting code list can be set or changed in this setting mode (08).Turn ON the power with pressing the digital keys [0] and [8] simultaneously in order to enter this mode.

Note:

When the power should be turned OFF, be sure to shut down the equipment by pressing the [ON/OFF] button for a few seconds.

Remarks:

- The Service Handbook contains only the selected codes while the Service Manual contains all codes.
- The digit after the hyphen in “Code” of the following table is a sub code.
- In “RAM”, the SRAM of the board in which the data of each code is stored is indicated. “M” stands for the LGC board, “SYS”, “NIC” and “UTY” stands for the SYS board.

2.6.1 Classification List of Setting Mode (08)

Classification		Setting Mode (08)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
User interface	[ACS]	9698	
	[AMS]	605	
	[Feeding paper media]	9185-0 to 1	
	[X in 1]	650	
	[Color specification]	643, 644	
	[Indicator]	671	
	[Edit copying]	645, 646	
	[Sound]	610, 969, 970	
	[Counter]	202	
	[Cascade]	652, 653	
	[ACS]	268	
	[Screen]	207, 602, 983, 9985	
	[Administrator]	263, 9882	
	[Feeding setting]	658, 659	
	[Language]	220, 221, 1929, 1930, 1931, 1932, 1933, 1935	
	[Original counter]	302	
	[Original direction]	628	
	[Copy volume]	300	
	[Automatic calibration]	632	
	[Default setting]	276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 289, 331, 603, 604, 607, 618, 642, 9986	
	[Jam releasing]	9359	
	[Offsetting between jobs]	682	
	[Security level]	1708	
	[Sorting]	627, 634, 641, 649	
	[Timer]	204, 205, 206	

Classification		Setting Mode (08)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
User interface	[Template]	1140	
	[Image shift]	636, 1429, 1430, 8546	
	[Tray reset]	648	
	[Panel calibration]	9051	
	[Date]	640	
	[Annotation]	651, 657	
	[Displaying number]	342	
	[Job Build]	1130, 1131, 9891	
	[File]	209, 218, 219	
	[Department management]	617, 620, 621, 622, 623, 624, 629	
	[Black-free]		343
	[Book duplexing]	611	
	[Box printing]	951, 953, 954	
	[Paper size]	613	
	[Blank copy prevention]	625	
	[User mode]	506, 508, 580, 590	
	[EXTENSION button]	9955	
	[Icon]	8598, 9982	
	[Trial copy function]	3635	
	[ACC operation]	8591	
	[Display method of file name]	8624	
	[File name form for exporting]	8625	
	[Private print/Hold print job continue operation]	8626	
Scanner	[E-mail]	272, 273	
	[Pre-scan]	3015	
	[Date/time]	8540	
Fax	[FAX mistransmission prevention function]	3847, 3848, 3849	
	[Receiving confidential data]	3846	
	[Function]	1498, 1926, 8612	
	[Destination]		701
	[Default setting]	274	
	[Priority drawer]	689	
	[Setting retention]	9987	

Classification		Setting Mode (08)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
Image	[ACS]	609-0 to 4, 9825, 9974, 9975, 9977	
	[All clearing]	7000, 7001, 7300, 7301, 7400, 7500	
	[Automatic calibration]	595	
	[Default setting]	1149, 9382, 9897, 9898, 9899	
	[Toner density ratio]	2707-0 to 3	
	[Smoothing]	560, 562	
	[Image repeat gap]	7612	
	[Outlining white text]	8011	
	[Blank page judgment]	9972, 9973	
	[Quantized coefficient correction]	8304-0 to 2	
Image control	[Abnormality detection]		573, 574, 575, 576
	[Contrast voltage]	2513-0 to 3, 2514-0 to 3, 2515, 2546-0 to 3	556
	[Automatic starting]	569, 570, 571, 572, 2492, 2494, 2496, 2498, 2499, 2500, 2501, 2703	
	[Smoothing]	560	
	[Drum surface potential sensor]	2508, 2560-0 to 3, 2561, 2577-0 to 3	
	[Potential on white background correction]	2548-0 to 3	
	[TRC control]	8103	2600

Classification		Setting Mode (08)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
Feeding system / Paper transport	[Feeding setting]	254, 619, 1438	
	[Paper source]	480, 481, 1135, 1431, 4016-0 to 1	
	[detection]	449, 1492, 4621, 4622	
	[Setting]	988	
	[Coated paper Mode]	675-0 to 4	
	[Paper size]	224, 225, 226, 227, 228, 256, 630, 8548	
	[Paper dimension]	210, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 470, 471, 4567, 4568, 4585	
	[Paper retry]	463-0 to 1, 464-0 to 1, 465-0 to 1, 466-0 to 1, 467-0 to 1, 468-0 to 1, 482, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398, 1399, 1400, 1401, 1402, 1900-0 to 1, 6245	
	[Inserter Unit]	211	
	[Paper information]	9300, 9301, 9302, 9303, 9304, 9305, 9347	
	[Media Sensor]	4598, 4599, 8503	
	[Paper transport period]	4602	
	[Stop jam at registration sensor]	4603	
	[Color registration adjustment]	4550-0 to1, 4562, 4605	4546
	[Drum phase adjustment]	4766	
Laser	[Polygonal motor]	478, 483, 484, 485, 486, 489, 490, 4604, 9805	
	[Laser shutter]	4609	
Main charger	[Cleaning]	1389-0 to 1, 4606-0 to 3	
	[Charger]	808	
	[Drum rotation without fusing]	2380, 2381	

Classification		Setting Mode (08)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
Development	[Toner nearly empty]	1415, 1416-0 to 3, 6452-0 to 3, 6453-0 to 3, 6454-0 to 3, 9804	
	[Developer material replacement timing]	2675-0 to 3	
	[Enforced toner supply]	2411, 2412, 2413	
	[Toner refreshing mode]	2677, 2678-0 to 3, 2679-0 to 3, 2681	
	[Developer replacement display]	2670	
	[Forcible detection of developer material]	2694, 2695	
	[Toner motor drive count]	1410-0 to 3	
	[Sub-hopper toner motor drive count]	1519-0 to 3	
	[Toner/carrier supply motor drive count]	6469-0 to 3	
	[Number of output pages available at toner cartridge replacement]	1520	
Waste toner	[Waste toner motor lock detection]	4595	
Transfer	[1st transfer]	816	
	[2nd transfer]	548, 2490, 4596, 4597	
	[Resistance detection]	2511	
	[Transfer bias]	2510	
Cleaner	[Drum and belt reverse rotation amount control]	2367	
	[Automatic interruption page number]	949, 2702	
	[2nd transfer roller reverse rotation amount control]	2376	
	[Ozone suctioning fan rotation period]	2370	

Classification		Setting Mode (08)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
Fuser	[Temperature]	404, 405, 407, 410-0 to 1, 411-0 to 5, 412-0 to 1, 413-0 to 1, 416-0 to 1, 433-0 to 15, 434-0 to 9, 435-0 to 1, 436-0 to 1, 437-0 to 1, 438, 450-0 to 1, 451-0 to 1, 452-0 to 1, 453, 518-0 to 1, 531-0 to 9, 532, 534-0 to 1, 801-0 to 7, 885, 896-0 to 15, 1902, 1903, 1904, 2017-0 to 3, 2018-0 to 3, 2019-0 to 3, 2124-0 to 1, 2133-0 to 2, 2134-0 to 2, 2151-0 to 1, 2153-0 to 1, 2155-0 to 1, 2159-0 to 1, 2161, 2179-0 to 2, 2209-0 to 7, 2210-0 to 7, 2246-0 to 1, 2255, 2256-0 to 3, 4545, 4572, 5236-0 to 1, 5240-0 to 3, 5271-0 to 1, 5272-0 to 1, 5275-0 to 3,5277-0 to 7, 5278, 5281-0 to 1, 5282-0 to 1, 5283-0 to 3, 5284-0 to 1, 5289-0 to 7, 5291-0 to 7, 5292-0 to 7, 5293-0 to 1, 5294-0 to 1, 5296-0 to 3, 5300-0 to 15, 5301-0 to 15, 5315, 5323-0 to 3, 5390, 5391-0 to 9, 5401-0 to 9, 5402-0 to 14, 5413-0 to 3, 5417, 5409-0 to 1, 5410-0 to 1, 5411, 5412, 5430	
	[Intermittence setting]	5449-0 to 6	
	[Status counter]		400
	[Power supply at fusing error]	1906	
	[Pre-running]	417-0 to 1, 439-0 to 1, 440-0 to 1, 441-0 to 1, 461-0 to 9, 526, 583-0 to 1, 584-0 to 4, 2020-0 to 3, 2074, 5239, 5248, 5280-0 to 1, 5299-0 to 1, 5325	
	[Speed switchover]	2245-0 to 1, 5276-0 to 3, 5414-0 to 1	
	[Small size paper]	5316, 5455, 5456, 5457-0 to 1	
	[Energy saving mode]	5432-0 to 1	
	[Warming-up]	5207, 5208	
	[Heater being forcibly turned on]	415-0 to 3, 426-0 to 3, 427-0 to 3, 428-0 to 3, 429-0 to 1, 2016-0 to 7, 2033-0 to 1, 2248, 5279-0 to 3, 5297-0 to 3, 5324-0 to 1	
Image processing	[Counter]	1371, 1372, 1378, 1380, 1382, 1383, 1385, 1386, 1387, 1388	
RADF	[Switchback]	462	
Finisher	[Stapling]	704-0 to 1, 1911, 9811-0 to 3, 9937-0 to 3, 9938-0 to 3	
	[Hole punching]	1437, 9847	
	[Finisher model switching]	1912	

Classification		Setting Mode (08)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
Network	[AppleTalk]	1014, 1015, 1936, 3729, 3730	
	[Bindery]	1026	
	[Cloning]	3789, 9791	
	[Community]	1065, 1066	
	[DDNS]	1020, 1112, 3737, 3745, 3746, 3747, 3748	
	[DHCP]	1755, 1756, 1757, 1759, 1760, 1762, 3772, 3773, 3774, 3778, 3779, 3780	
	[Directory]	1028, 1029	
	[DNS]	1017, 1018, 1019, 3736, 3781, 3782, 3784	
	[DPWS]	3749, 3750, 3751, 3752, 3753, 3754, 3755, 3757, 3758, 3759, 3760, 3765, 3766, 3785, 3796	
	[E-mail]	265, 1097, 1098, 1477, 1478, 1489, 1491, 3837, 8584, 8585, 8586, 8587, 8588, 9384, 9946, 9947, 9957, 9958, 9959, 9980, 9981	
	[File]	1779, 1782, 1783, 1784, 1785, 1786	
	[FTP]	1055, 1059, 1060, 1089, 1090, 1091, 1092, 3739, 3804	
	[HTTP]	1030, 1031, 1032, 3738	
	[IP Conflict]	1440	
	[IP Filter]	1720, 1721, 1722, 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 8804	
	[IPP]	1078, 1079, 1080, 1081, 1082, 1083, 1084, 1085, 1086, 1087, 1088, 1447,1448, 1449, 1450, 1451, 3725, 3726	
	[IPv6]	3767, 3768, 3770, 3775, 3776, 3777	
	[IPX]	1011, 1099	
	[IP address]	1006, 1007, 1008, 1009, 1010, 1767, 1768	
	[LDAP]	1016, 1138, 1923, 1924, 3743, 9629, 9933	
	[LLTD]	3793	
	[LPD]	1075, 1076, 1077, 3727, 3728	
	[MAC address]	1141, 8805	
	[MIB]	1063	
	[Network logs]	8535, 8536, 8590, 8605, 8606	
	[NDS]	1027	
	[NIC]	1002	

Classification		Setting Mode (08)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
Network	[Novell]	1093, 1094	
	[PCL setting]	973	
	[PMK]	9747	
	[POP3]	1046, 1047, 1048, 1049, 1050, 1051, 1052, 3742, 3744	
	[RawPort]	945	
	[Raw/TCP]	1073, 1074, 3731, 3732	
	[Raw printing]	290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 978, 979	
	[Rendezvous]	1103, 1104, 1105	
	[Role Base Access]	1493, 1928, 3871	
	[Samba]	1464, 3783, 3833	
	[SearchRoot]	1095	
	[SLP]	1021	
	[SMB]	1023, 1024, 1025, 1117, 1124, 1950, 1951	
	[SMTP]	1022, 1037, 1038, 1039, 1040, 1041, 1042, 1100, 1101, 1102, 1111, 3741	
	[SNMP]	3631, 3845, 8803	
	[SNTP]	1441, 1442, 1444, 1445, 1446, 3740	
	[SSL]	1740, 1741, 1742, 1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 9819, 9822	
	[TRAP]	1069, 1070	
	[WIA Scan Driver]	9749	
	[InternetFAX]	266, 1114, 1485, 3812	
	[Offramp]	1043, 1044, 1045	
	[Function]	1432, 1435, 1436	
	[Automatic transferring]	660, 661	
	[Initialization]	1119	
	[Scan setting]	1781-0 to 1, 1940, 3805, 3815, 3816, 3817, 3818, 3850	
	[Speed and settings]	1003	
	[Direct SMTP]	3810, 3811	
	[Data retention period]	259, 260, 264	
	[Domain]	1113, 1121, 1122, 1123, 8589	
	[Authentication]	1484, 1487, 1920, 1921, 1922, 1925, 1937, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 3722, 3723, 3724, 8608, 8609, 8610, 8823	
	[Print queue]	1096	
	[Prefix]	3771	

Classification		Setting Mode (08)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
Network	[Frame type]	1012	
	[Temporary communication password]	9798	
	[Local I/F]	614	
	[telnet]	3864, 3865, 3866, 3867, 3868	
	[802.1X]	8800, 8801, 8816, 8819, 9746	
	[IPsec]	8802, 8815, 8820, 8821	
	[SCEP]	8806, 8807, 8808, 8809, 8810, 8811, 8812, 8813, 8814	
	[WS Pull Scan]	8817, 8818	
Wireless LAN	[Supplicant]	1679, 1681, 1682, 1684, 1685, 1686, 1689, 1690, 1691, 1692, 1693, 1696, 1697, 1699, 1700, 1701, 1704, 1705, 1706, 1707, 1764, 1765, 1766	
	[Driver]	1661, 1662, 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677, 1678	
Bluetooth	[Data encryption]	1715	
	[Setting]	1710, 1711, 1712, 1713, 1714, 1719, 1941	
Counter	[ACS]	6853-0 to 2, 6854-0 to 2, 6855-0 to 2, 6856-0 to 2, 6857-0 to 2, 6858-0 to 2, 6859-0 to 2, 6860-0 to 2, 6861-0 to 2, 6862-0 to 2, 6863-0 to 2, 6864-0 to 2	
	[HDD]	390, 391, 392, 393	
	[JOB]	6850-0 to 2, 6851-0 to 2, 6852-0 to 2	
	[External counter]	381, 1126, 8549, 8594	
	[Image control]	6161, 6162	
	[Calibration counter]	6817	
	[Count method]	616, 663	
	[Paper source]	356, 357, 358, 359, 360, 370, 372, 374, 6118	
	[Paper size]	301-0 to 23, 303-0 to 23, 304-0 to 23, 305-0 to 23, 306-0 to 23, 307-0 to 23, 308-0 to 23, 309-0 to 23, 310-0 to 23, 311-0 to 23, 312-0 to 23, 313-0 to 23, 314-0 to 23, 315-0 to 23, 316-0 to 23, 6027-0 to 23, 6078-0 to 2	

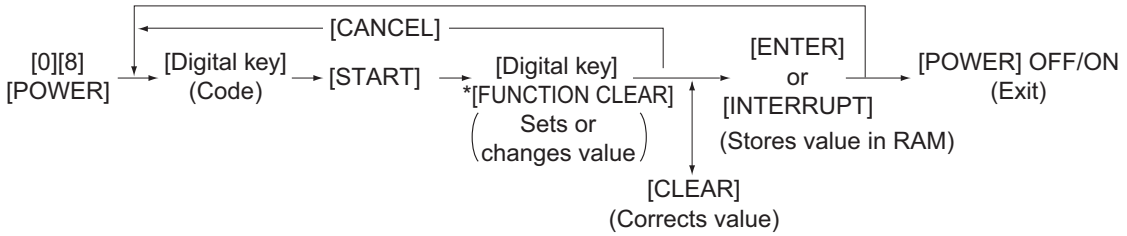
Classification		Setting Mode (08)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
Counter	[Accelerating/Decelerating mode]	1652, 1653, 1654, 1655, 1870, 1871-0 to 3, 1872-0 to 3, 1873-0 to 3, 1874-0 to 3, 1875-0 to 3, 1876-0 to 3, 1877-0 to 3, 1878-0 to 3, 1879-0 to 3, 1880-0 to 3, 1881-0 to 3, 6900, 6901, 6905-0 to 3, 6906-0 to 3, 6907-0 to 3, 6908-0 to 3, 6925-0 to 3, 6926-0 to 3, 6927-0 to 3, 6928-0 to 3, 6929-0 to 3, 6930-0 to 3, 6931-0 to 3, 6932-0 to 3, 6933-0 to 3, 6935-0 to 3, 6950-0 to 3, 6955-0 to 3, 6956-0 to 3, 6960-0 to 3, 6962-0 to 3	
	[Tab paper]	1412	
	[Special paper]	6243	
	[Extra long size]	3800-0 to 1	
	[Double count]	6018	344, 346, 347, 348, 349, 352, 353,
	[Large/Small size]	317-0 to 2, 318-0 to 2, 319-0 to 2, 320-0 to 2, 321-0 to 2, 322-0 to 2, 323-0 to 2, 324-0 to 2, 325-0 to 2, 326-0 to 2, 327-0 to 2, 328-0 to 2, 329-0 to 2, 330-0 to 2, 332-0 to 2, 333-0 to 2, 334-0 to 2, 335-0 to 2	
	[n-UP printing]	1530-0 to 7, 1531-0 to 7, 1532-0 to 7, 1533-0 to 7, 1534-0 to 7, 1535-0 to 7, 6806-0 to 7,6810-0 to 7, 6811-0 to 7, 6812-0 to 7, 6813-0 to 7,6814-0 to 7, 6815-0 to 7,6816-0 to 7	
	[Department counter]	8616, 8617, 8618, 8619, 8620	
Version	[FAX]		915
	[HDD]		944
	[Engine]		903, 905, 906, 907
	[System]		900, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 933, 934, 935, 936, 937, 938, 939
	[Finisher]	9945	908, 911
	[Imaging Acceleration Board]		9965
	[Inserter]		909

Classification		Setting Mode (08)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
Maintenance	[FSMS]	999	
	[HTTP]	726, 727, 728, 729, 730, 731	
	[PM counter]	223, 5550, 5551, 5552, 5553, 5562, 5563, 5564, 5565, 5566, 5567, 5576, 5577, 5578, 5579, 5580, 5585, 6192, 6193, 6196, 6197	251, 252, 375, 376
	[Error history]		253
	[Equipment number]		995
	[Calibration]		9059
	[Emergency Mode]	710, 711	
	[Service notification]	702, 703, 707, 715, 716, 717, 718, 719, 720, 721, 723, 767, 768, 769, 770, 771, 772, 773, 775, 776, 777, 778, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 1145, 1495, 9739	774
	[Remote update]	3630	
	[Supply order]	732, 733, 734, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764	765
	[Telephone]		250
	[Panel calibration]		692
Electronic Filing	[Setting]	267, 270, 950, 976, 1497, 8613	
Data overwrite kit	[HDD]	1422, 1424	1426
	[SRAM]		1428
General	[HDD]	271, 691, 3625	670, 690, 693, 694, 9379
	[EFI]	700, 9950, 9956	
	[EWB]	3869	
	[PJL]	3797	
	[Raw printing]	8504, 9117	
	[S-ACS]	9934	
	[USB]	3615, 3802, 9889	
	[Thick paper]	8533, 8534	
	[TAT partition]	1118	
	[Address book]	1125, 3508	
	[Imaging Acceleration Board]	9966	
	[Overprint function setting]	8513-0	
	[Card authentication]	1776	
	[Card reader]	1772, 1773, 1774, 1775, 8595	
	[Custom size]	9381	
	[Administrator's password]	1778	

Classification		Setting Mode (08)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
General	[Summer time]	3852, 3853, 3854, 3855, 3856, 3857, 3858, 3859, 3860, 3861, 3862, 3863	
	[Destination]	201	
	[Initialization]		947
	[Setting]	975, 986, 1470, 1471, 9814, 9815, 9828, 9829, 9848, 9892, 9893, 9894, 9799	9826
	[Direct print]	3803	
	[Databases]	685, 686	684
	[Default repeat count]	9789	
	[Template]	3851, 9886, 9888	
	[Partition]		662, 666, 667
	[Banner]	678, 679, 680	
	[Date/Time]	200, 638	
	[File]	288, 1913, 1914, 1916	
	[Department management]	672	
	[Private print]	8537, 8597, 8601	
	[BANNER MESSAGE button]	681	
	[Memory]	615	
	[User data management]	1468, 1469, 1472, 1473, 1474, 1481, 1482, 1483, 1496	
	[Line]	203	
	[Duplex printing]	683	
	[KS/KSSM]	1960, 1961, 1963, 1964, 1965, 1966, 1967, 1968, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994	
	[Profile]	1790-0 to 53, 1791, 1792, 1793, 1794-0 to 53, 1795, 1796, 1797, 1798-0 to 53, 3600-0 to 53, 3601, 3602, 3603, 3604-0 to 53, 3605, 3606, 3607, 3608-0 to 53,	
	[SRAM board data check]	4586, 4587-0 to 15, 4588-0 to 15, 4589-0 to 15, 4590-0 to 15	
	[Date unpacked]	3612	
	[DIG partition]	3619	
	[Counter/job list print]	9954	
	[Default setting]	503, 550, 585, 587, 588	
	[Cartridge empty]	8506	

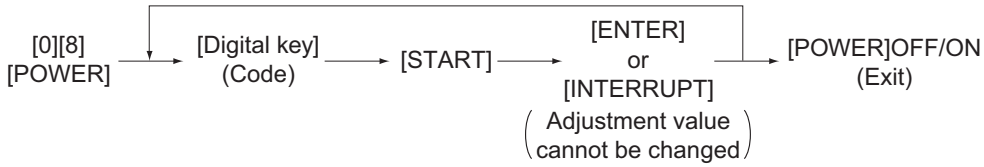
Classification		Setting Mode (08)	
		Given in the Service Manual	Given in the Service Manual and Service Handbook
General	[Print image position adjustment in secondary scanning direction]	8508, 8509, 8510	
	[Wide A4 Mode (for PCL)]	8511	
	[Number of jobs in batch processing]	8512	
	[RIP standard paper judgment]	8514	
	[Outside erase]	8515, 8516, 8600	
	[Scan setting]	8517, 8518, 8519, 8526, 8527, 8528	
	[No paper message]	8525, 8524	
	[ACS release]	8529-0 to 2, 8530-0 to 2, 8531-0 to 2,	
	[Panel]	8532	
	[Hardcopy security printing]	9883, 9884	
	[Electronic key]	3840, 3841, 3842, 3870	
	[Easy setup]	9022	
	[Real time log notification]	3623, 3624, 3626	
	[Job status]	8596, 9984	
	[Folder name null character conversion]	8599	
	[Scan To File]	8602, 8622	
	[External option interface]	8603, 8604	
	[hrPrinterTable]	8611	
	[Saving log]	8615	
	[Operation of machine when coin controller is used]	8628	
	[Default setting of color mode]	8629	

2.6.2 Operating Procedure

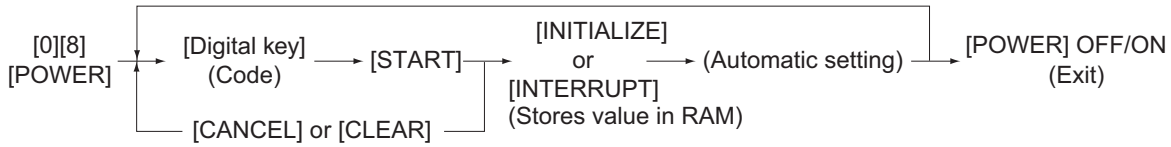


* Press [FUNCTION CLEAR] to enter minus (-).

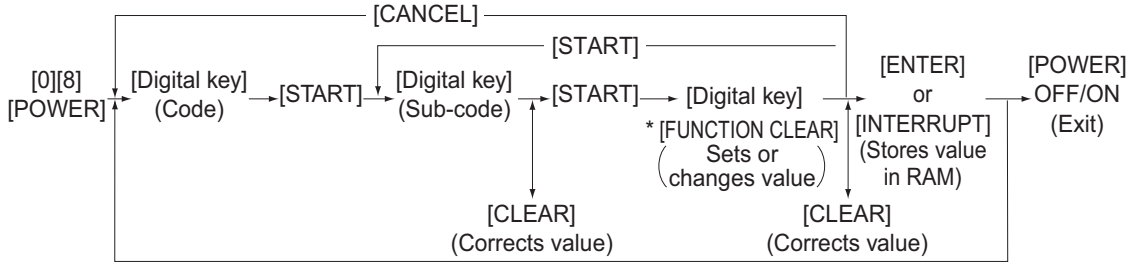
Procedure 2



Procedure 3

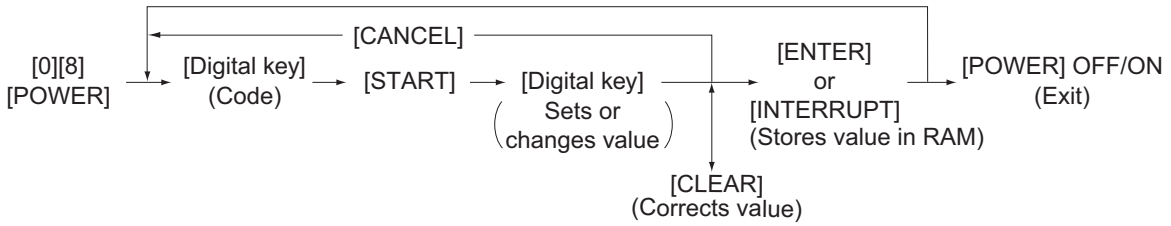


Procedure 4

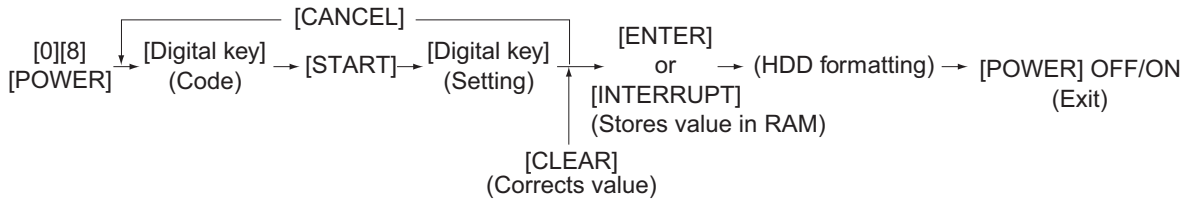


* Press [FUNCTION CLEAR] to enter minus (-).

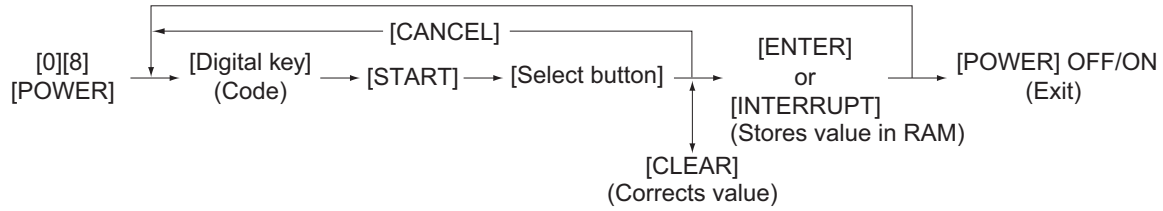
Procedure 5



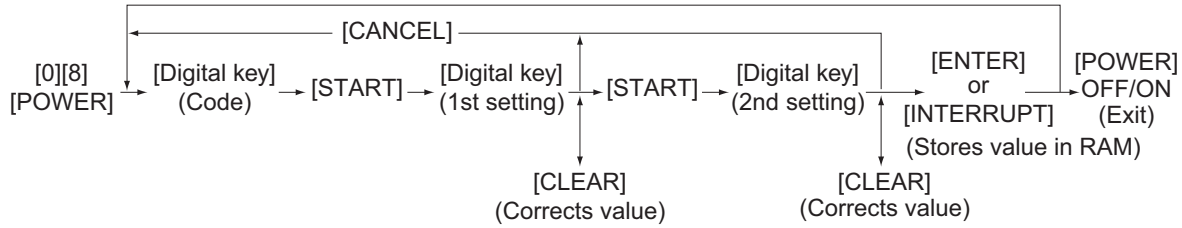
Procedure 7



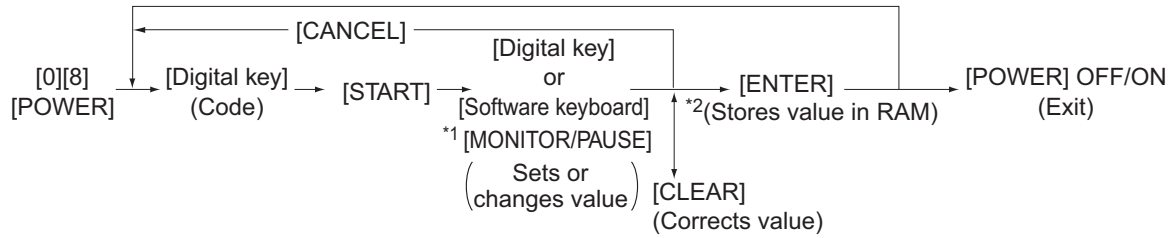
Procedure 9



Procedure 10

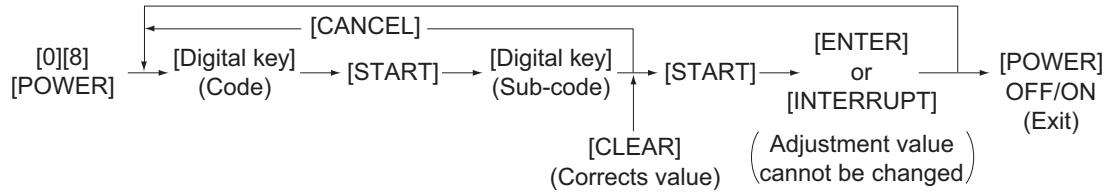


Procedure 11 and 12



*1 Press [MONITOR/PAUSE] to enter "-", when entering telephone number.
*2 The data are stored in SYS-RAM in procedure 11 and stored in NIC-RAM in procedure 12.

Procedure 14



2.6.3 Process

Setting mode (08)							
Code	Classification	Items	Function	Default <Acceptable value>	RAM	Contents	Procedure
400	Fuser	Fuser unit error status counter	ALL	0 <0-71>	M	0: No error 1: C411 2: C412 3: C443 4: - 5: C445, C465 6: C446, C466 7: C447, C467 8: C468 9: C449 10: C475 11: C471 12: C472 13: C473 14: C480 15: C481 16: C474 17: C490 18: C468 19: C449 20: C468 21: C449 22: C449 23: C449 24: C447, C446 25: C449 26: C468 27: C449 28: C468 29: C449 30: - 31: - 32: C448 33: C467 34: C467 35 to 49: - 50: C452 51: C452 52 to 60: - 61: C461 62: C462 63 to 69: - 70: C464 71: C464	1
556	Image control	Image quality closed-loop control/Contrast voltage	ALL	1 <0-1>	M	Sets whether or not correcting the contrast voltage in closed-loop control. 0: Invalid 1: Valid	1
573	Image control	Abnormality detection count (Y) Display/0 clearing	ALL	0 <0-16>	M	Counts the abnormality detection of image quality control. Accumulating total of [CE10], [CE20] and [CE40]	1
574	Image control	Abnormality detection count (M) Display/0 clearing	ALL	0 <0-16>	M	Counts the abnormality detection of image quality control. Accumulating total of [CE10], [CE20] and [CE40]	1
575	Image control	Abnormality detection count (C) Display/0 clearing	ALL	0 <0-16>	M	Counts the abnormality detection of image quality control. Accumulating total of [CE10], [CE20] and [CE40]	1
576	Image control	Abnormality detection count (K) Display/0 clearing	ALL	0 <0-16>	M	Counts the abnormality detection of image quality control. Accumulating total of [CE10], [CE20] and [CE40]	1

Setting mode (08)							
Code	**Classification**	**Items**	**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
2600	Image control	Pattern formation for image quality TRC control, Valid/ Invalid	ALL	1 <0-1>	M	Sets whether to perform TRC control correction. 0: Disabled 1: Enabled	1

2.6.4 Printer

Setting mode (08)							
Code	**Classification**	**Items**	**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
4546	Feeding system / Paper transport	Color registration adjustment control mode setting	ALL	5 <0-5>	M	0: Not performed automatically 1: (a) 2: (b) 3: (a) + (b) 4: (b) + (c) 5: (a) + (b) + (c) [Description] (a) Performs the adjustment automatically at warming-up. (b) Performs the adjustment automatically when printing after a specified period of time has been completed. (c) Performs the adjustment automatically at a ready status after a specified period of time, or at a forcible interruption of large amount of printing.	1

2.6.5 Counter

Setting mode (08)							
Code	**Classification**	**Items**	**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
251	Maintenance	Setting value of PM counter / K	ALL (black)	Refer to content <8 digits>	M	Sets the threshold for displaying a message for PM timing. 0: Not displayed <Default> e-STUDIO5520C : 225,000 e-STUDIO6520C : 250,000 e-STUDIO6530C : 275,000	1
252	Maintenance	Current value of PM counter Display/0 clearing / K	ALL (black)	0 <8 digits>	M	Counts up when the registration sensor is ON. 08-1150-0	1
344	Counter	Count setting of tab paper (PM)	ALL	1 <0-1>	M	0: Counted as 1 1: Counted as 2	1
346	Counter	Count setting of large-sized paper (PM)	ALL	1 <0-1>	M	0: Counted as 1 1: Counted as 2	1
347	Counter	Definition setting of large sized paper (PM)	ALL	1 <0-1>	M	0: A3/LD 1: A3/LD/B4/LG/ FOLIO/COMP	1
348	Counter	Count setting of thick paper (PM)	ALL	1 <0-1>	M	0: Counted as 1 1: Counted as 2	1
349	Counter	Count setting of OHP film (PM)	ALL	1 <0-1>	M	0: Counted as 1 1: Counted as 2	1
352	Counter	Count setting of large-sized paper (Fee charging system counter)	ALL	JPN: 0 OTHER: 1 <0-2>	M	0: Counted as 1 1: Counted as 2 2: Counted as 1 (Mechanical counter is double counter)	1
353	Counter	Definition setting of large sized paper (Fee charging system counter)	ALL	0 <0-1>	M	0: A3/LD 1: A3/LD/B4/LG/ FOLIO/COMP	1
375	Maintenance	Setting value of PM time counter display/0 clearing / K	ALL (black)	285,000 <8 digits>	M	Sets the threshold for displaying a message for PM timing. 0: Not displayed	1
376	Maintenance	Current value of PM time counter / K	ALL (black)	0 <8 digits>	M	Counts the drum driving time. 08-1150-3	1

Note:

In this equipment, a toner image is formed on the transfer belt prior to a paper feeding.
When the feeding retry occurs and the transport timing is delayed, the toner image on the transfer belt is cleaned off without the 2nd transfer since the paper cannot be reached for the 2nd transfer process.
After that, the toner image formation is retried while the paper is waited.
In this case, the toner for this image formation is consumed wastefully since the toner image on the transfer belt is already cleaned off, even though the printing is normally completed.
Therefore, note that the excessive toner will be consumed consequently when the upper limit value of feeding retry counter is set larger or set as “0” (no limit).
The toner is also consumed wastefully when the paper misfeeding occurs. Replace the roller at earlier timing if the paper misfeedings have occurred frequently.

2.6.6 System

Setting mode (08)							
Code	Classification	Items	Function	Default <Acceptable value>	RAM	Contents	Procedure
250	Maintenance	Service technician telephone number	ALL	0 <32 digits>	SYS	A telephone number can be entered up to 32 digits. Use the [MONITOR/PAUSE] button to enter a hyphen (-).	11
253	Maintenance	Error history display	ALL	-	SYS	Displays the latest 20 errors data	2
343	User interface	Black-free function	ALL	0 <0-1>	SYS	0: Disabled 1: Enabled If this code is set to "1" (enabled), 08-588 is automatically set to "1" (black) and "0" (ACS) and "2" (Full color) cannot be selected. If 08-629 is set to "0" (OFF) and 08-1482 is set to "1" (ON), this code is set to "0" (Disabled) and "1" (ON) cannot be set.	1
662	General	Clearing of SMS partition	ALL	-	SYS	Clears SMS partition. (Performs when the service call [F106] has occurred.)	3
666	General	BOX partition clearing	ALL	-	SYS	Initializes the Electronic Filing.	3
667	General	/SHA partition clearing	ALL	-	SYS	Initializes the shared folder.	3
670	General	HDD diagnostic menu display	ALL	-	SYS	Display the HDD information (Ch.7.2.2)	2
684	General	Rebuilding all databases	ALL	-	SYS	Rebuilds all databases.	3
690	General	HDD formatting	ALL	2 <2>	SYS	2: Normal formatting	7
692	Maintenance	Performing panel calibration	ALL	-	SYS	Performs the calibration of the pressing position on the touch panel (LCD screen). The calibration is performed by pressing 2 reference positions after this code is started up.	1
693	General	Initialization of NIC information	ALL	-	SYS	Returns the value to the factory shipping default value.	3
694	General	Performing HDD testing	ALL	-	SYS	Checks the bad sector.	3

Setting mode (08)							
Code	Classification	Items	Function	Default <Acceptable value>	RAM	Contents	Procedure
701	FAX	Destination setting for FAX	FAX	EUR: 5 UC: 4 JPN: 0 Other: 1 <0-25>	SYS	0: Japan 1: Asia 2: Australia 3: Hong Kong 4: U.S.A./Canada 5: Germany 6: U.K. 7: Italy 8: Belgium 9: Netherlands 10: Finland 11: Spain 12: Austria 13: Switzerland 14: Sweden 15: Denmark 16: Norway 17: Portugal 18: France 19: Greece 20: Poland 21: Hungary 22: Czech 23: Turkey 24: South Africa 25: Taiwan	1
765	Maintenance (Remote)	Automatic ordering supplies Display	ALL	EUR: 2 UC: 0 JPN: 2 <0-2>	SYS	0: Valid (FAX/Internet FAX) 1: Valid (FAX/Internet FAX/ HTTP) 2: Invalid	1
774	Maintenance (Remote)	Display setting of [Service Notification] button	ALL	MJC/ MJD/ NAC/ NAD: 1 Other: 0 <0-1>	SYS	0: Not displayed 1: Displayed	1
900	Version	System firmware ROM version	ALL	-	-	JPN: T430SY0JXXX UC: T430SY0UXXX EUR: T430SY0EXXX Others: T430SY0XXXX	2
903	Version	Engine ROM version	ALL	-	-	430M-XXX	2
905	Version	Scanner ROM version	ALL	-	-	430S-XXX	2
906	Version	PFC ROM version	ALL	-	-	430F-XXX If "NGD" is displayed for the PFC ROM version (08-906), the downloading of PFC ROM fails. Update the firmware again. 📖 P.8-51 "8.5 When Firmware Updating Fails"	2
907	Version	RADF ROM version	ALL	-	-	DF-XXXX	2
908	Version	Finisher ROM version	ALL	-	-	SDL-XXX FIN-XXX	2
909	Version	Inserter ROM version	ALL	-	-	INS-XX	2
911	Version	Finisher punch ROM version	ALL	-	-	PUN-XXX	2
915	Version	FAX board ROM version	FAX	-	-	F562-XXX	2

Setting mode (08)							
Code	Classification	Items	Function	Default <Acceptable value>	RAM	Contents	Procedure
920	Version	FROM basic section software version	ALL	-	-	VX.XX/X.XX	2
921	Version	FROM basic section software internal program version	ALL	-	-	VXXX.XXX X	2
922	Version	UI data fixed section version	ALL	-	-	VXXX.XXX X	2
923	Version	UI data common section version	ALL	-	-	VXXX.XXX X	2
924	Version	Version of UI data language 1 in HDD	ALL	-	-	VXXX.XXX X	2
925	Version	Version of UI data language 2 in HDD	ALL	-	-	VXXX.XXX X	2
926	Version	Version of UI data language 3 in HDD	ALL	-	-	VXXX.XXX X	2
927	Version	Version of UI data language 4 in HDD	ALL	-	-	VXXX.XXX X	2
928	Version	Version of UI data language 5 in HDD	ALL	-	-	VXXX.XXX X	2
929	Version	Version of UI data language 6 in HDD	ALL	-	-	VXXX.XXX X	2
930	Version	Version of UI data in FROM displayed at power-ON	ALL	-	-	VXXX.XXX X	2
931	Version	Version of UI data language 7 in HDD	ALL	-	-	VXXX.XXX X	2
933	Version	Web data whole version	ALL	-	-	VXXX.XXX X	2
934	Version	Web UI data in HDD Version: Language 1	ALL	-	-	VXXX.XXX X	2
935	Version	Web UI data in HDD Version: Language 2	ALL	-	-	VXXX.XXX X	2
936	Version	Web UI data in HDD Version: Language 3	ALL	-	-	VXXX.XXX X	2
937	Version	Web UI data in HDD Version: Language 4	ALL	-	-	VXXX.XXX X	2
938	Version	Web UI data in HDD Version: Language 5	ALL	-	-	VXXX.XXX X	2
939	Version	Web UI data in HDD Version: Language 6	ALL	-	-	VXXX.XXX X	2
944	Version	HDD version	ALL	-	-	JPN: T430HD0JXXX UC: T430HD0UXXX EUR: T430HD0EXXX Others: T430HD0XXXX	2
947	General	Initialization after software version upgrade	ALL	-	SYS	Perform this code when the software in this equipment has been upgraded.	3
995	Maintenance	Equipment number (serial number) display	ALL	- <10 digits>	SYS	This code can be also keyed in from the adjustment mode (05-976). 10 digits	11
1426	General	Forcible HDD data clearing	ALL	-	-	HDD data is cleared in the procedure set in 08-1424.	3

Setting mode (08)							
Code	**Classification**	**Items**	**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
1428	Data overwrite kit	Forcible SRAM backup data all clearing	ALL	-	-	When this code is performed, the equipment cannot be started up. * This setting is enabled only when the GP-1070 is installed.	3
9059	Maintenance	Operation switching at calibration	ALL	MJC/ MJD: 1 Other: 0 <0-1>	SYS	Switches whether a menu for selecting paper in user calibration (automatic gamma adjustment) is displayed or not. 0: Not displayed 1: Displayed (copy/print)	1
9379	User interface	AES data encryption function setting (Except for CND)	ALL	0 <0-2>	SYS	0: Encryption invalid 1: Encryption valid (Security priority) Encrypts all of the user's data. 2: Encryption valid (Performance priority) Encrypts the user's data except the files temporarily created and deleted in the image processing such as copying or printing.	1
9826	General	Disabling Media File Save	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
9965	Version	Imaging Acceleration Board SROM version	ALL	-	-	I-XX.X.X	2

2.6.7 Pixel counter

[A] Outline

1. Outline
   Pixel counter is a function that counts the number of dots emitted by the laser and converts it into the print ratio (%) per standard paper size. This “Print ratio (%) per standard paper size” is called Pixel count (%).

   This function enables you to know how each user uses the equipment and to grasp the tendency of toner consumption (number of output pages per cartridge).
2. Factors affecting toner consumption
   Standard number of output pages per cartridge shows the average number of output pages under the condition that the data of print ratio 6% is printed on the standard paper size (A4/LT) at a normal temperature and humidity.
   However, users do not always print under the above condition. As for the type of original, copy/print mode and environment, each user has different tendency, and as a result, the number of output pages per cartridge becomes different depending on the user.

   The major factors affecting toner consumption are as follows:
   - Original/Data coverage
   - Original/Data density
   - Original/Print mode
   - Density setting

   Also there are other factors in addition to the above, such as environment, individual difference of equipment, difference in lot quality of materials, toner density and drum surface potential.

The general relations between the above 4 factors and toner consumption per output page in the copy function are as follows:

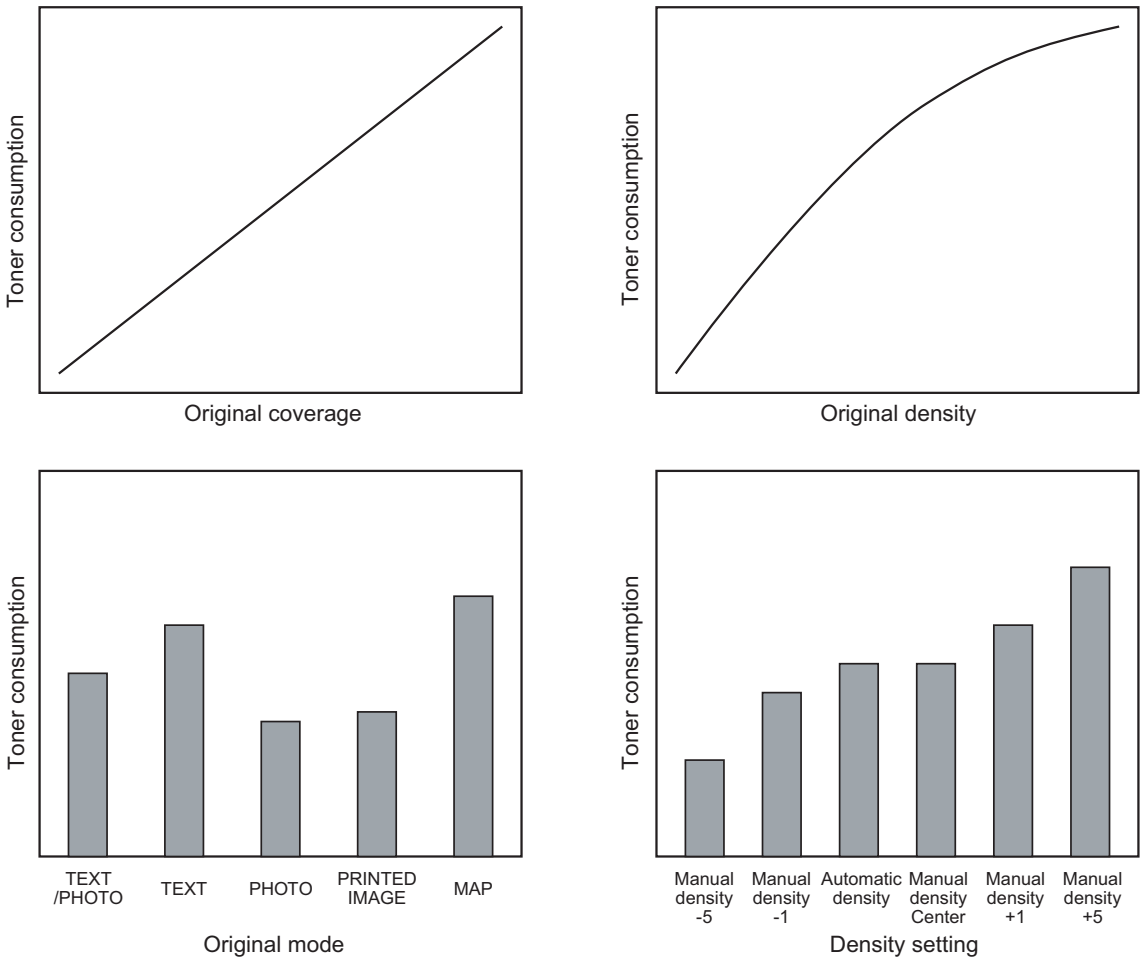


Fig. 2-1

3. Details of pixel counter
   - Toner cartridge reference and service technician reference
     The pixel counter function in this equipment has 2 references, toner cartridge reference and service technician reference.

     Toner cartridge reference
     This is a system that accumulates data between the installation of a new toner cartridge and next installation.
     The installation of new toner cartridge is judged when the total number of pixel count or output pages after the detection of toner cartridge empty has exceeded the threshold.
     The threshold to be used is selectable in the setting mode (08-1506) between the pixel count and output pages (0: Output pages 1: Pixel counter). The threshold of pixel count is set in the setting mode (08-1508) and that of output pages is set in the setting mode (08-1507). When the new toner cartridge is judged as installed, the data related with the previous cartridge is cleared and replaced with the data after the installation of new cartridge. Clearing of the counter of the toner cartridge reference is performed in the setting mode (08-1503).

Service technician reference
This is a system that accumulates data between clearing the counter of the service technician reference by service technician and subsequently clearing the same counter.
Clearing of the counter of the service technician reference is performed in the setting mode (08-1502).

- Print count (number of output pages)
The number of output pages shown at the pixel counter is counted after converting all paper sizes to the standard paper size (A4/LT). Printing on other than the standard size is converted by paper area ratio. The standard paper size is set in the setting mode (08-1500).
The examples of conversion are as follows:

Ex.)
"1" is added to the print count when printing on A4/LT size.

"2" is added to the print count when printing on A3/LD size. (area ratio to A4/LT: 200%)

"1.49" is added to the print count when printing on B4 size. (area ratio to A4: 149%)

"1.27" is added to the print count when printing on LG size. (area ratio to LT: 127%)

- Pixel count (%)
Pixel count (%) shows the ratio of laser emitting pixels to all pixels on standard paper.
The examples of pixel count are as follows:

Note:
In the following examples, 'solid copy' is considered to be 100%. But since the image has 4 margins, it never becomes 100% actually.

Ex.)
Printing 5 pages on A4/LT size with solid copy (Laser emits to all pixels.)
→ Pixel count: 100%, Print count: 5

Printing 5 pages on A4/LT size with blank copy (Laser never emits.)
→ Pixel count: 0%, Print count: 5

Printing 2 pages on A4/LT size with solid copy (Laser emits to all pixels.)
Printing 2 pages on A4/LT size with blank copy (Laser never emits.)
→ Pixel count: 50%, Print count: 4

Printing 3 pages on A4/LT size with 6% of laser emission
Printing 1 page on A4/LT size with 2% of laser emission
→ Pixel count: 5%, Print count: 4

Printing 2 pages on A3/LD size with solid copy (Laser emits to all pixels.)
→ Pixel count: 100%, Print count: 4

Printing 2 pages on A3/LD size with 6% of laser emission
→ Pixel count: 6%, Print count: 4

- Average pixel count (%) and latest pixel count (%)
  There are 2 types of the value calculated as the pixel count, average pixel count (%) and latest pixel count (%).

  Average pixel count (%)
  The average value of all pixel count data after each reference data is cleared is calculated and displayed.

  Latest pixel count (%)
  The value is displayed for printing just before the pixel counter is confirmed.

- Type of calculated data
  Since this is multifunctional and color equipment, the data of pixel count is calculated for each function and color.
  The following list is the information that can be confirmed by LCD screen. But actually, more information can be confirmed by the setting mode (08).
  See after-mentioned “5)-Display in the setting mode (08)” for details.

○: With data
—: Without data

	Toner cartridge reference				Service technician reference					
					Full color/Twin color					Black
	Yellow	Magenta	Cyan	Black	Total	Yellow	Magenta	Cyan	Black	
Copier function	○	○	○	○	○	○	○	○	○	○
Printer function	○	○	○	○	○	○	○	○	○	○
FAX function	-	-	-	○	-	-	-	-	-	○
Total	○	○	○	○	○	○	○	○	○	○

Table 2-201 Type of calculated data

- Setting related with the pixel counter function
  Standard paper size setting
  The standard paper size (A4 or LT) to convert it into the pixel count is selected (08-1500).

  Pixel counter display setting
  Whether or not to display the pixel counter on the LCD screen is selected (08-1504).

  Display reference setting
  The reference when displaying the pixel counter on the LCD screen (toner cartridge reference or service technician reference) is selected (08-1505).

  Determination counter of toner empty
  This is the counter to determine the replacement of new toner cartridge after the toner empty is detected.
  After the toner empty is detected by the auto-toner sensor, this counter checks if toner empty is not detected one more time while the specified number of pixel count or output pages is counted.

  Pixel counter clearing
  There are 3 types for the pixel count clear as follows:
  08-1501: All information related to the pixel count is cleared.
  08-1502: All information related to the service technician reference pixel count is cleared.
  08-1503: All information related to the toner cartridge reference pixel count is cleared.

4. Relation between pixel count and toner consumption
   The user's printing out the image with large coverage or high density may cause the large value of pixel count. And the setting that toner consumption becomes high in the original mode or density setting may cause it as well.
   In this case, the replacement cycle of toner cartridge is faster than the standard number of output pages. Therefore, this trend needs to be grasped for the service.
   The relation between pixel count and number of output pages per cartridge is as follows:

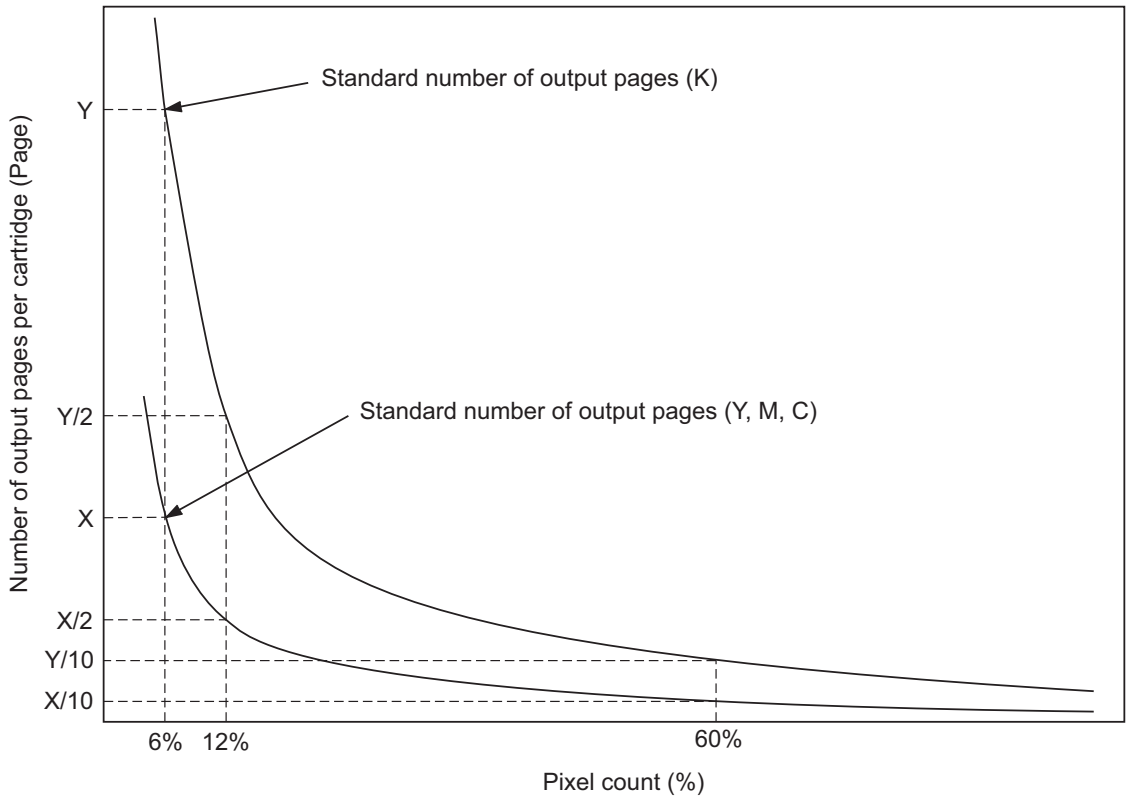


Fig. 2-2 Pixel count and number of output pages per cartridge

5. Pixel counter confirmation
   - Display on LCD screen
     Whether or not to display the pixel counter on the LCD screen is selected (0: Displayed, 1: Not displayed) in the setting mode (08-1504), and whether or not to display it at the service technician reference or toner cartridge reference is selected (0: Service technician reference, 1: Toner cartridge reference) in the setting mode (08-1505).

     The following screen is displayed when the buttons, [COUNTER] and [PIXEL COUNTER] are pressed in this order after “Displayed” is selected with the code above and the power is, as usual, turned ON. (The displayed buttons are depending on the setting of 08-1505.)

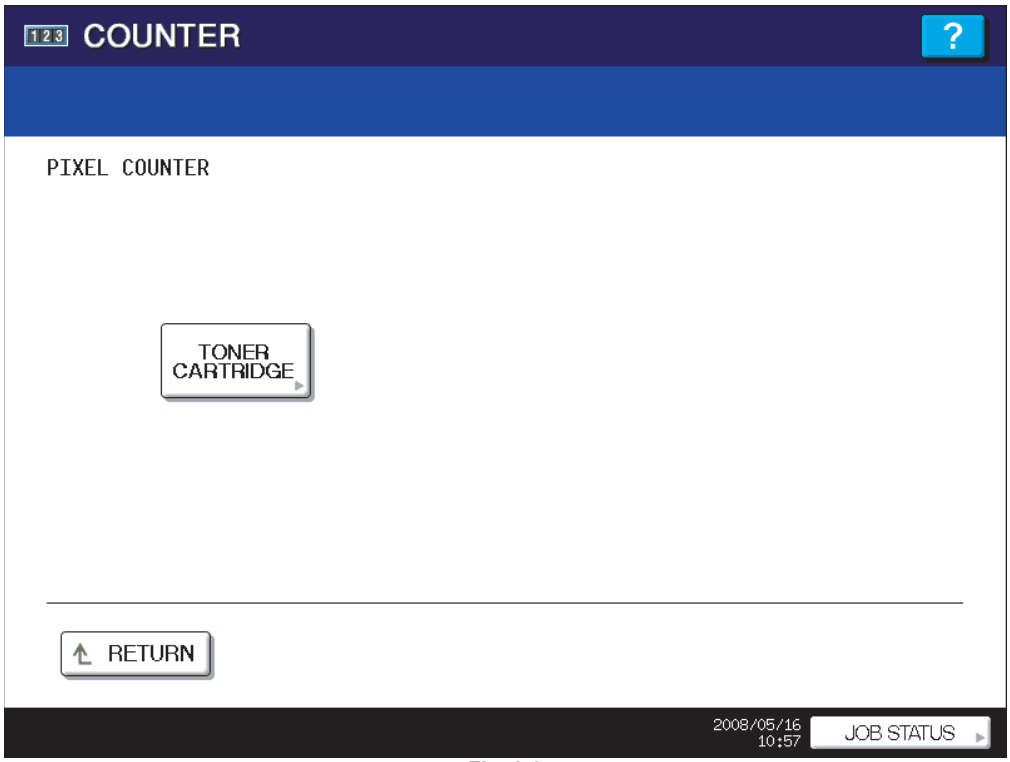


Fig. 2-3

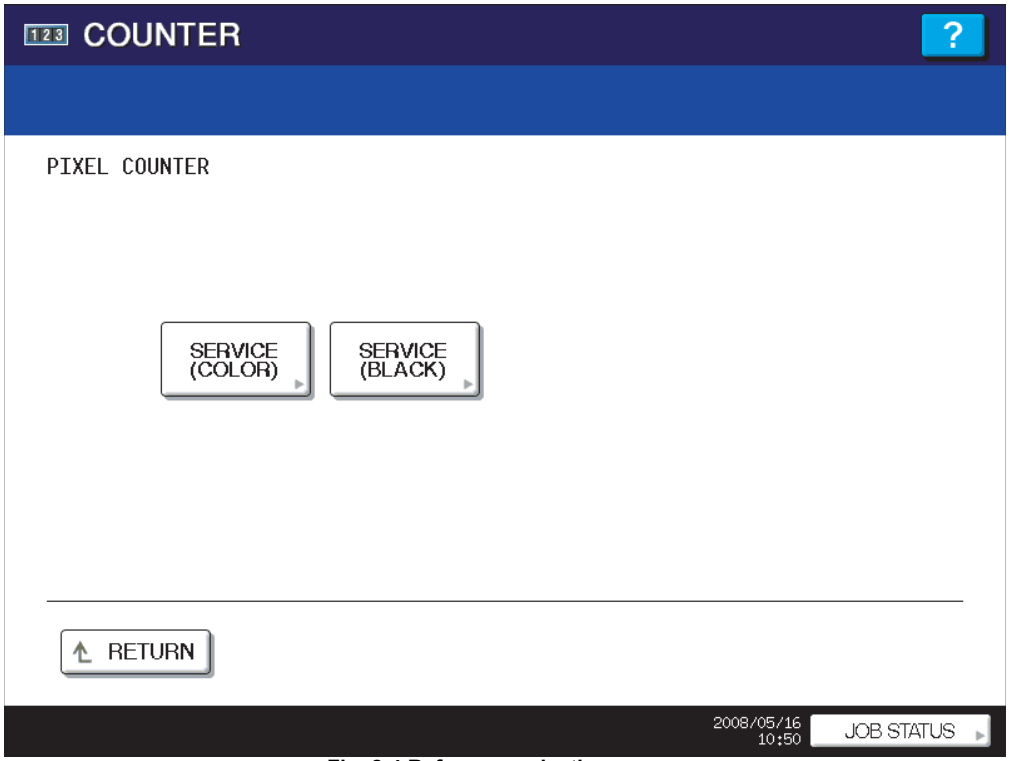


Fig. 2-4 Reference selection screen

When selecting and pressing the button in the above screen, each pixel counter screen is displayed.
[TONER CARTRIDGE] button: Information screen of toner cartridge reference is displayed.
[SERVICE (COLOR)] button: Information screen of service technician reference (full color) is displayed.
[SERVICE (BLACK)] button: Information screen of service technician reference (black) is displayed.

The following screen is displayed when pressing the [TONER CARTRIDGE] button.

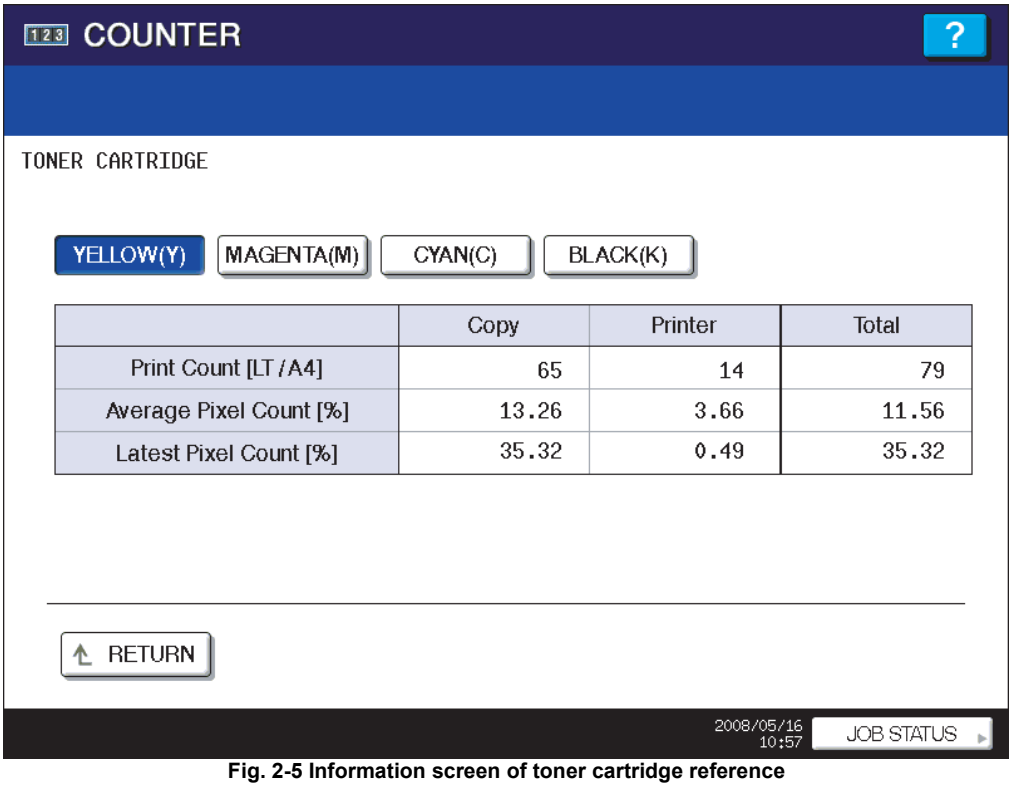


Fig. 2-5 Information screen of toner cartridge reference

The following screen is displayed when pressing the [SERVICE (COLOR)] button.

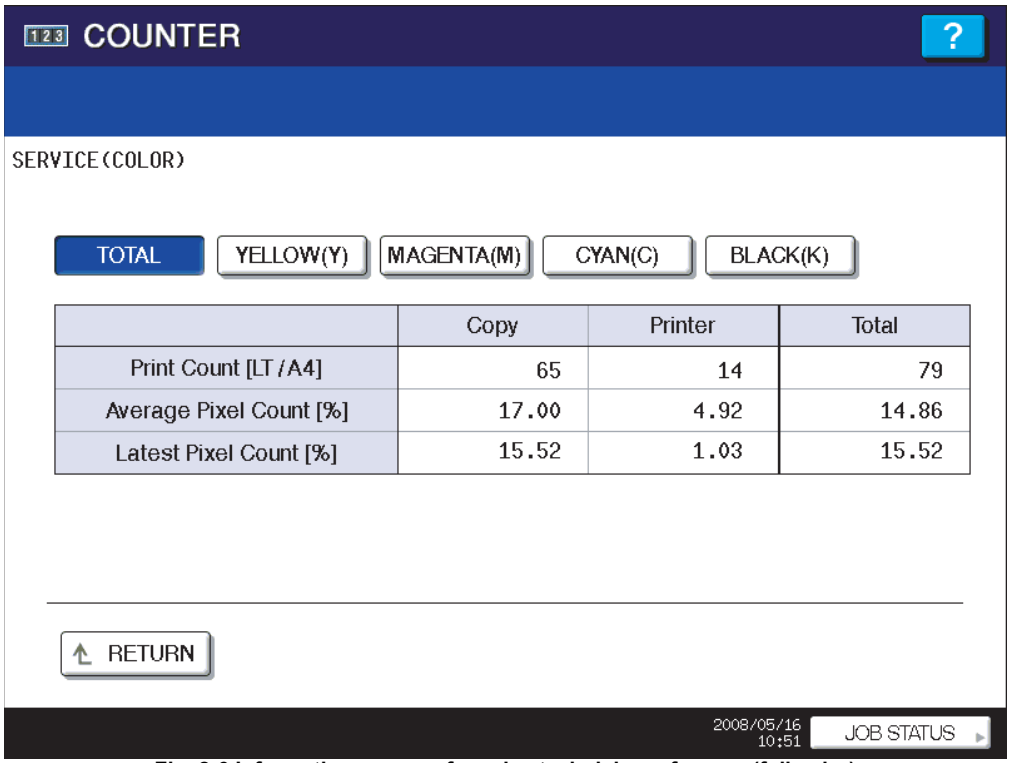


Fig. 2-6 Information screen of service technician reference (full color)

The following screen is displayed when pressing the [SERVICE (BLACK)] button.

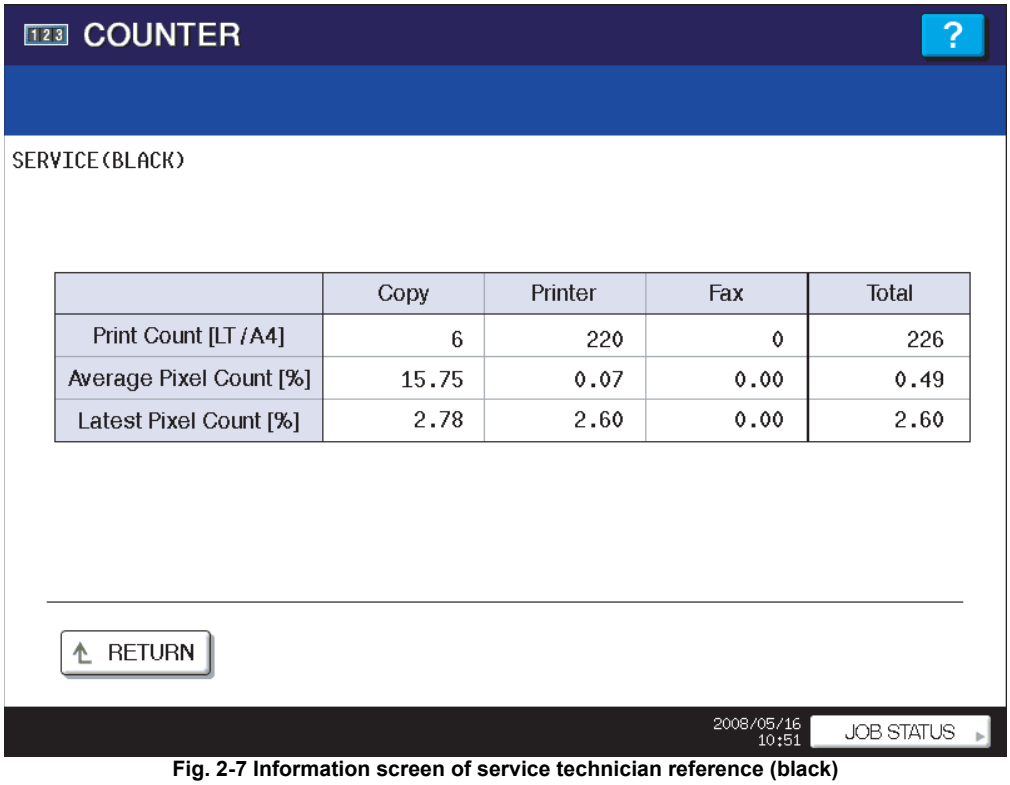


Fig. 2-7 Information screen of service technician reference (black)

- Data list printing
  The data for pixel counter can be printed in the list print mode (9S).
  9S-104: The data of the toner cartridge reference is printed.
  9S-105: The data of service technician reference is printed.

PIXEL COUNTER CODE LIST

'08-02-08 20:13

TOSHIBA e-STUDIO6530C

TONERCARTRIDGE

No	DATE	COL.		PPC	PRN	FAX	TOTAL
0	20080208	Y	Print Count[LT/A4]	181	45	---	226
1	20080208	Y	Average Pixel Count[%]	2.70	1.74	---	2.51
2	20080208	Y	Latest Pixel Count[%]	6.15	0.39	---	0.39
3	20080208	M	Print Count[LT/A4]	181	45	---	226
4	20080208	M	Average Pixel Count[%]	6.11	2	---	5.29
5	20080208	M	Latest Pixel Count[%]	6.82	2.15	---	2.15
6	20080208	C	Print Count[LT/A4]	181	45	---	226
7	20080208	C	Average Pixel Count[%]	5.46	2	---	4.81
8	20080208	C	Latest Pixel Count[%]	6.42	2.73	---	2.73
9	20080208	K	Print Count[LT/A4]	278	145	9	432
10	20080208	K	Average Pixel Count[%]	6.15	3.86	23.25	5.74
11	20080208	K	Latest Pixel Count[%]	7.32	2.19	6.25	2.19

Fig. 2-8 Data list of toner cartridge reference

PIXEL COUNTER CODE LIST

'08-02-08 20:13

TOSHIBA e-STUDIO6530C

SERVICEMAN

No	DATE	COL.		PPC	PRN	FAX	TOTAL
0	20080208	F	Print Count[LT/A4]	181	45	---	226
1	20080208	F	Average Pixel Count[%]	4.95	2.34	---	4.43
2	20080208	F	Latest Pixel Count[%]	8.36	2.34	---	2.34
3	20080208	Y	Print Count[LT/A4]	181	45	---	226
4	20080208	Y	Average Pixel Count[%]	2.7	1.74	---	2.51
5	20080208	Y	Latest Pixel Count[%]	6.15	0.39	---	0.39
6	20080208	M	Print Count[LT/A4]	181	45	---	226
7	20080208	M	Average Pixel Count[%	6.11	2	---	5.29
8	20080208	M	Latest Pixel Count[%]	6.82	2.15	---	2.15
9	20080208	C	Print Count[LT/A4]	181	45	---	226
10	20080208	C	Average Pixel Count[%]	5.46	2.18	---	4.81
11	20080208	C	Latest Pixel Count[%]	6.42	2.73	---	2.73
12	20080208	K	Print Count[LT/A4]	181	45	---	226
13	20080208	K	Average Pixel Count[%]	5.51	3.43	---	5.10
14	20080208	K	Latest Pixel Count[%]	14.05	4.10	---	4.10
15	20080208	K	Print Count[LT/A4]	97	100	9	206
16	20080208	K	Average Pixel Count[%]	7.36	4.06	23.25	6.45
17	20080208	K	Latest Pixel Count[%]	7.32	2.19	6.25	2.19

Fig. 2-9 Data list of service technician reference

- Display in the setting mode (08)
  Information of pixel count can be also checked in the setting mode (08).
  For details, see 📖 P.2-134 "2.6.5 Counter".

Print count, pixel count

		Full color/Twin color				Black	Black (at color) + Black
		Yellow	Magenta	Cyan	Black		
Copier function	Print count (page)	1557	1559	1561	1552	1553	-
	Average pixel count (%)	1609	1610	1611	1612	1613	1614
	Latest pixel count (%)	1626	1627	1628	1629	1639	-
Printer function	Print count (page)	1558	1560	1562	1554	1555	-
	Average pixel count (%)	1615	1616	1617	1618	1619	1620
	Latest pixel count (%)	1630	1631	1632	1633	1640	-
FAX function	Print count (page)	-	-	-	-	1556	-
	Average pixel count (%)	-	-	-	-	1625	-
	Latest pixel count (%)	-	-	-	-	1634	-
Total	Average pixel count (%)	1621	1622	1623	-	-	1624

Table 2-202 Pixel count code table (toner cartridge reference)

		Full color/Twin color					Black
		Total	Yellow	Magenta	Cyan	Black	
Copier function	Print count (page)	1547	-	-	-	-	1548
	Average pixel count (%)	1577	1578	1579	1580	1581	1592
	Latest pixel count (%)	1596	1597	1598	1599	1600	1606
Printer function	Print count (page)	1549	-	-	-	-	1550
	Average pixel count (%)	1582	1583	1584	1585	1586	1593
	Latest pixel count (%)	1601	1602	1603	1604	1605	1607
FAX function	Print count (page)	-	-	-	-	-	1551
	Average pixel count (%)	-	-	-	-	-	1594
	Latest pixel count (%)	-	-	-	-	-	1608
Total	Average pixel count (%)	1587	1588	1589	1590	1591	1595

Table 2-203 Pixel count code table (service technician reference)

Pixel count distribution

		Full color/Twin color				Black
		Yellow	Magenta	Cyan	Black	
Copier function	Print count distribution (page)	1641	1642	1643	1644	1649
Printer function	Print count distribution (page)	1645	1646	1647	1648	1650
FAX function	Print count distribution (page)	-	-	-	-	1651

Table 2-204 Pixel count code table

Note:

By entering the sub code at the above code, the pixel count distribution can be displayed dividing into 10 ranges. The sub codes are as follows.

0: 0 - 5% 1: 5.1 - 10% 2: 10.1 - 15% 3: 15.1 - 20% 4: 20.1 - 25%
5: 25.1 - 30% 6: 30.1 - 40% 7: 40.1 - 60% 8: 60.1- 80% 9: 80.1 - 100%

Other information

Toner cartridge replacement counter.
The toner cartridge replacement count is displayed.

08-1563: Toner cartridge Y
08-1564: Toner cartridge M
08-1565: Toner cartridge C
08-1566: Toner cartridge K

Toner cartridge reference count started date
The toner cartridge reference count started date is displayed.

08-1515: Toner cartridge Y
08-1516: Toner cartridge M
08-1517: Toner cartridge C
08-1518: Toner cartridge K

Service technician reference cleared date
The service technician reference cleared date (08-1510) is displayed.
The date (08-1502 was performed) is stored.

Toner cartridge reference cleared date
The toner cartridge reference cleared date is displayed.
The date (08-1503 was performed) is stored.

08-1511: Toner cartridge Y
08-1512: Toner cartridge M
08-1513: Toner cartridge C
08-1514: Toner cartridge K

[B] Pixel counter related code

Note:
In the pixel counter function, the twin color copy mode is regarded as the full color mode.

Setting mode (08)							
Code	**Classification**	**Items**	**Function**	**Default <Acceptable value>**	**RAM**	**Contents**	**Procedure**
1504	Pixel counter	Pixel counter display setting	ALL	1 <0-1>	SYS	Selects whether or not to display the pixel counter on the LCD screen. 0: Displayed 1: Not displayed	1
1505	Pixel counter	Displayed reference setting	ALL	0 <0-1>	SYS	Selects the reference when displaying the pixel counter on the LCD screen. 0: Service technician reference 1: Toner cartridge reference	1
1617	Pixel counter	Average pixel count/full color (C) (Toner cartridge reference)	PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the printer function, full color mode, toner C and toner cartridge reference. [Unit: 0.01%]	2

2.6.8 PM support mode related code

The management items at PM support mode can also be operated at setting mode (08).
The following items are displayed or set by using sub-codes at PM management setting in the table below.

<Sub-codes>
0: Present number of output pages
- Means the present number of output pages.

1: Recommended number of output pages for replacement
- Means the recommended number of output pages for replacement.

2: Number of output pages at the last replacement
- Means the number of output pages at the last replacement.

3: Present driving counts
- Means the present drive counts (1 count = 2 seconds).

4: Recommended driving counts to be replaced
- Means the recommended drive counts for replacement (1 count = 2 seconds).

5: Driving counts at the last replacement
- Means the drive counts at the last replacement.

6: Present output pages for control
- Means the present number of output pages for controlling.

7: Present driving counts for control
- Means the present drive counts for controlling (1 count = 2 seconds).

8: Number of times replaced
- Counts up when clearing the counter of each unit in the PM Support Mode Screen.

Notes:
- Sub-code 0 is equivalent to sub-code 6.
- Sub-code 3 is equivalent to sub-code 7.
- When the value of sub-code 3 is changed, the value of sub-code 7 is also updated and vice versa.
- When "0" is set at one of sub-codes 0, 3, 6 and 7, the rest of them are automatically updated to "0".

Items	PM management setting <Procedure 4> *Indicated in 8 digits	Date of previous replacement <Procedure 2>	Remarks
Photoconductive drum (K)	1150-0 to 8	1151	<Default values of code 1150 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Photoconductive drum (Y)	1152-0 to 8	1153	<Default values of code 1152 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Photoconductive drum (M)	1154-0 to 8	1155	<Default values of code 1154 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000

Items	PM management setting <Procedure 4> *Indicated in 8 digits	Date of previous replacement <Procedure 2>	Remarks
Photoconductive drum (C)	1156-0 to 8	1157	<Default values of code 1156 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Drum cleaning blade (K)	1158-0 to 8	1159	<Default values of code 1158 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Drum blade cleaner (Y)	1160-0 to 8	1161	<Default values of code 1160 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 270,000/270,000/ 270,000 Sub-code 4: 285,000/285,000/ 285,000
Drum blade cleaner (M)	1162-0 to 8	1163	<Default values of code 1162 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Drum blade cleaner (C)	1164-0 to 8	1165	<Default values of code 1164 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Charger grid (K)	1174-0 to 8	1175	<Default values of code 1174 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Charger grid (Y)	1176-0 to 8	1177	<Default values of code 1176 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Charger grid (M)	1178-0 to 8	1179	<Default values of code 1178 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000

Items	PM management setting <Procedure 4> *Indicated in 8 digits	Date of previous replacement <Procedure 2>	Remarks
Charger grid (C)	1180-0 to 8	1181	<Default values of code 1180 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Charger (Wire/needle)(K)	1182-0 to 8	1183	<Default values of code 1182 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Charger (Wire/needle)(Y)	1184-0 to 8	1185	<Default values of code 1184 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Charger (Wire/needle)(M)	1186-0 to 8	1187	<Default values of code 1186 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Charger (Wire/needle)(C)	1188-0 to 8	1189	<Default values of code 1188 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Charger cleaning pad (K)	1190-0 to 8	1191	<Default values of code 1190 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Charger cleaning pad (Y)	1192-0 to 8	1193	<Default values of code 1192 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Charger cleaning pad (M)	1194-0 to 8	1195	<Default values of code 1194 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000

Items	PM management setting <Procedure 4> *Indicated in 8 digits	Date of previous replacement <Procedure 2>	Remarks
Charger cleaning pad (C)	1196-0 to 8	1197	<Default values of code 1196 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Ozone filter-1	1198-0 to 8	1199	<Default values of code 1198 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
Developer material	1200-0, 2, 3, 5, 6, 7, 8	1201	<Default values of code 1200 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0
Developer material Y	1202-0, 2, 3, 5, 6, 7, 8	1203	<Default values of code 1202 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0
Developer material M	1204-0, 2, 3, 5, 6, 7, 8	1205	<Default values of code 1204 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0
Developer material C	1206-0, 2, 3, 5, 6, 7, 8	1207	<Default values of code 1206 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0
Toner filter	1208-0 to 8	1209	<Default values of code 1208 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 222,000/222,000/ 222,000
1st transfer roller (K)	1214-0, 2, 3, 5, 6, 7, 8	1215	<Default values of code 1214 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0
1st transfer roller (Y)	1216-0, 2, 3, 5, 6, 7, 8	1217	<Default values of code 1216 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0
1st transfer roller (M)	1218-0, 2, 3, 5, 6, 7, 8	1219	<Default values of code 1218 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0
1st transfer roller (C)	1220-0, 2, 3, 5, 6, 7, 8	1221	<Default values of code 1220 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0
Transfer belt	1228-0, 2, 3, 5, 6, 7, 8	1229	<Default values of code 1228 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0
Transfer belt cleaning blade	1232-0 to 8	1233	<Default values of code 1232 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000

Items	PM management setting <Procedure 4> *Indicated in 8 digits	Date of previous replacement <Procedure 2>	Remarks
2nd transfer roller	1240-0 to 8	1241	<Default values of code 1240 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 242,000/242,000/ 242,000
2nd transfer roller blade cleaner	1242-0 to 8	1243	<Default values of code 1242 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 242,000/242,000/ 242,000
Pressure roller	1250-0 to 8	1251	<Default values of code 1250 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 450,000/500,000/ 550,000 Sub-code 4: 1,804,000/1,804,000/ 1,804,000
Pressure roller separation finger	1270-0 to 8	1271	<Default values of code 1270 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 450,000/500,000/ 550,000 Sub-code 4: 1,804,000/1,804,000/ 1,804,000
Fuser belt	1272-0 to 8	1273	<Default values of code 1272 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 902,000/902,000/ 902,000
Fuser roller	1274-0 to 8	1275	<Default values of code 1274 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 902,000/902,000/ 902,000
Fuser belt guide	1276-0 to 8	1277	<Default values of code 1276 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 902,000/902,000/ 902,000
Pickup roller (RADF)	1282-0, 1, 2, 8	1283	<Default values of code 1282 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 120,000/120,000/ 120,000
Feed roller (RADF)	1284-0,1,2,8	1285	<Default values of code 1284 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 120,000/120,000/ 120,000

Items	PM management setting <Procedure 4> *Indicated in 8 digits	Date of previous replacement <Procedure 2>	Remarks
Separation roller (RADF)	1286-0, 1, 2, 8	1287	<Default values of code 1286 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 120,000/120,000/ 120,000
Pickup roller (T-LCF)	1288-0, 1, 2, 8	1289	<Default values of code 1288 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 400,000/400,000/ 400,000
Pickup roller (1st drawer)	1290-0, 1, 2, 8	1291	<Default values of code 1290 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 200,000/200,000/ 200,000
Pickup roller (2nd drawer)	1292-0,1,2,8	1293	<Default values of code 1292 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 200,000/200,000/ 200,000
Pickup roller (O-LCF)	1294-0,1,2,8	1295	<Default values of code 1294 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 500,000/500,000/ 500,000
Feed roller (T-LCF)	1296-0,1,2,8	1297	<Default values of code 1296 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 400,000/400,000/ 400,000
Feed roller (1st drawer)	1298-0,1,2,8	1299	<Default values of code 1298 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 200,000/200,000/ 200,000
Feed roller (2nd drawer)	1300-0,1,2,8	1301	<Default values of code 1300 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 200,000/200,000/ 200,000
Feed roller (O-LCF)	1302-0, 1, 2, 8	1303	<Default values of code 1302 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 500,000/500,000/ 500,000
Separation roller (T-LCF)	1304-0,1,2,8	1305	<Default values of code 1304 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 400,000/400,000/ 400,000
Separation roller (1st drawer)	1306-0,1,2,8	1307	<Default values of code 1306 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 200,000/200,000/ 200,000
Separation roller (2nd drawer)	1308-0,1,2,8	1309	<Default values of code 1308 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 200,000/200,000/ 200,000

Items	PM management setting <Procedure 4> *Indicated in 8 digits	Date of previous replacement <Procedure 2>	Remarks
Separation roller (O-LCF)	1310-0,1,2,8	1311	<Default values of code 1310 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 500,000/500,000/500,000
Separation roller (3rd drawer)	1312-0,1,2,8	1313	<Default values of code 1312 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 200,000/200,000/200,000
Separation roller (4th drawer)	1314-0,1,2,8	1315	<Default values of code 1314 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 200,000/200,000/200,000
Separation roller (Bypass unit)	1316-0,1,2,8	1317	<Default values of code 1316 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 100,000/100,000/100,000
Feed roller (3rd drawer)	1320-0,1,2,8	1321	<Default values of code 1320 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 200,000/200,000/200,000
Feed roller (4th drawer)	1322-0,1,2,8	1323	<Default values of code 1322 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 200,000/200,000/200,000
Feed roller (Bypass unit)	1324-0,1,2,8	1325	<Default values of code 1324 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 100,000/100,000/100,000
Pickup roller (3rd drawer)	1328-0,1,2,8	1329	<Default values of code 1328 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 200,000/200,000/200,000
Pickup roller (4th drawer)	1330-0,1,2,8	1331	<Default values of code 1330 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 200,000/200,000/200,000
Pickup roller (Bypass unit)	1332-0,1,2,8	1333	<Default values of code 1332 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 100,000/100,000/100,000
Ozone filter-2	1340-0 to 8	1341	<Default values of code 1340 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/275,000 Sub-code 4: 222,000/222,000/222,000

Items	PM management setting <Procedure 4> *Indicated in 8 digits	Date of previous replacement <Procedure 2>	Remarks
2nd transfer facing roller cleaning pad	1342-0 to 8	1343	<Default values of code 1342 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 285,000/285,000/ 285,000
2nd transfer roller lubricant unit	1866-0 to 8	1867	<Default values of code 1866 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 242,000/242,000/ 242,000
TRU waste toner box	1868-0 to 8	1869	<Default values of code 1868 (e-STUDIO5520C/6520C/6530C)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 225,000/250,000/ 275,000 Sub-code 4: 242,000/242,000/ 242,000

2.6.9 Default setting / restore setting of the EFI Printer Board

The codes whose value can be changed by performing "Default setting of the EFI Printer Board (08-700)" or "Restore setting of the EFI Printer Board (08-9952)" are listed below.

Adjustment mode (05)

Code	Item		Default value when 08-700 is performed	Default value when 08-9952 is performed
7323-0	Tagbit extension processing for printing (Black mode)	PS	1	1
7323-1		PCL	1	1
7323-2		XPS	1	1
8103-0	Tagbit extension processing for printing (Color mode)	PS	1	1
8103-1		PCL	1	1
8103-2		XPS	1	1

Setting mode (08)

Code	Item	Default value when 08-700 is performed	Default value when 08-9952 is performed
1006	Address Mode	1	2
1008	IP address	10 250 250 249	000 000 000 000
1009	Subnet mask	255 255 255 252	000 000 000 000
1010	Gateway	10 250 250 250	000 000 000 000
1011	Availability of IPX	2	1
1014	Availability of AppleTalk	2	1
1060	TCP port number of FTP server	50021	21
1073	Availability of Raw/TCP	2	1
1075	Availability of LPD client	2	1
1078	Availability of IPP	2	1
1089	Availability of FTP print	2	1
1103	Rendezvou setting	2	1
1464	Samba server ON/OFF setting	2	1
1482	User data department management	0	0
1496	Operation setting for User authentication/registration	0	1

3. ADJUSTMENT

3.1 Image Related Adjustment

3.1.1 Adjustment Order

This chapter mainly explains the procedures for image related adjustment. When replacing components which have other specified instructions for adjustment, those specified instructions are to be obeyed in priority.
In the following diagram, the solid lines with arrow lead to essential adjustments, while the dotted lines lead to adjustments to be performed if necessary.

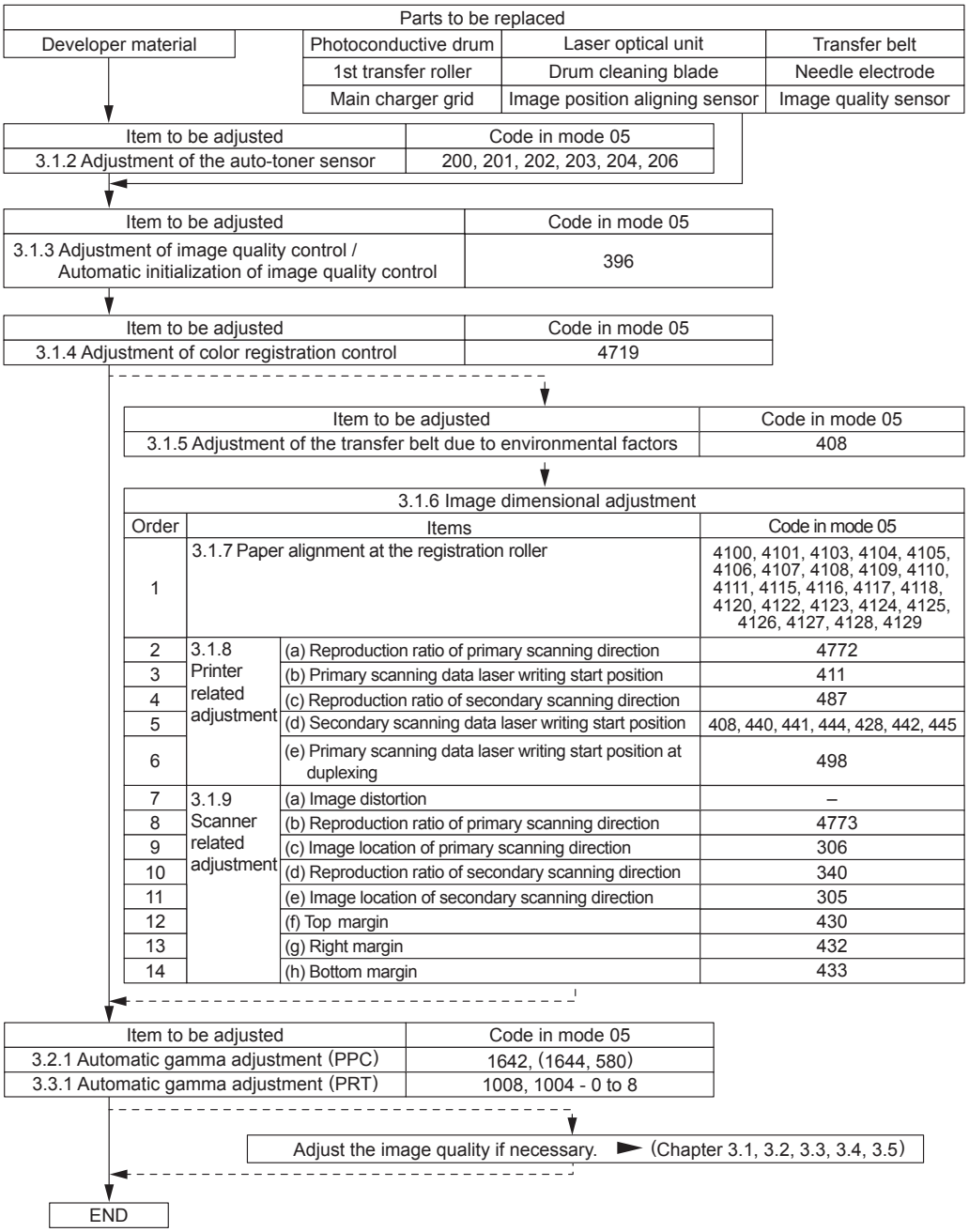


Fig. 3-1

3.1.2 Adjustment of the Auto-Toner Sensor

When the developer material is replaced, adjust the auto-toner sensor in the following procedure.

(1) Install the cleaner and developer unit.
Take off the sub-hopper unit and install the developer cartridge.

Note:
Adjustment cannot be done if the sub-hopper unit is installed.

(2) While pressing [0] and [5] simultaneously, turn the power ON. The following message will be displayed.

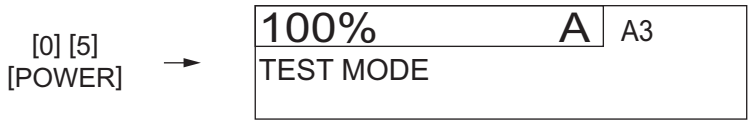


Fig. 3-2

(3) Key in a code and press the [START] button.
Code 200: All developer materials 201: Developer material (Y) 202: Developer material (M)
203: Developer material (C) 204: Developer material (K) 206: Developer materials (Y, M, C)

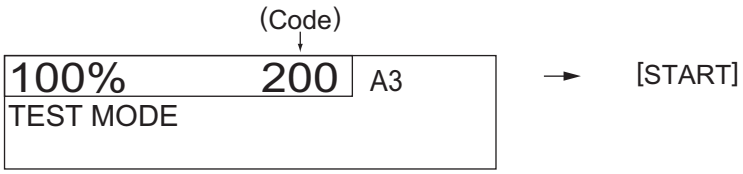


Fig. 3-3

(4) The message “Has developer in the developer unit run out?” appears on the display.
If there is no problem, press the [Yes] button on the display.

(5) The message “Have the [**] developer cartridges been installed?” appears on the display. If there is no problem, press the [Yes] button on the display. Tip: “**” varies as follows depending on the code you have entered.

Code	200: 4 colors (Y, M, C, K)	201: Yellow	202: Magenta
	203: Cyan	204: Black	206: 3 colors (Y, M, C)

Note:
Be sure that the developer cartridge is completely empty before you press [Yes]. If you press [Yes] while developer material still remains in the developer cartridge, it will overflow and thus may lock the developer unit.

(6) The message “Supplying developer.” appears on the display and developer material is filled in the developer unit for approx. 90 sec.

Remark:
For example, if the filling of the Y and M color developer materials fails, the following screen is displayed. Press the [OK] button, turn the power OFF and check the developer unit.

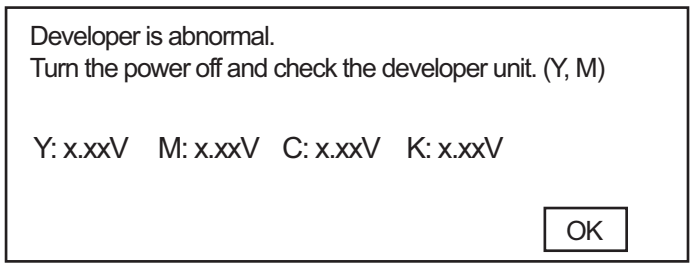
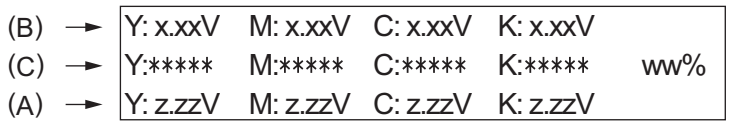


Fig. 3-4

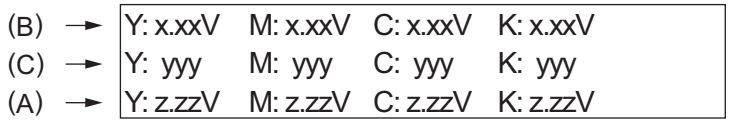
(7) After 2 min. have passed, the following screen is displayed and the auto-toner adjustment starts. During the adjustment, “Current sensor voltage (V)” shown in B automatically changes and gradually approaches the “Target value (V) for the adjustment reference voltage” shown in A.



(B): Current sensor voltage (V)
(C): Adjustment value, Humidity (%)
(A): Target value (V) for adjustment reference voltage

Fig. 3-5

(8) When the “Current sensor voltage (V)” in (B) is converged and the “Sensor output control value (bit value)” corresponding to the value for initial developer material is displayed in (C), the adjustment is completed.
When the adjustment is completed, the [ENTER] button is displayed on the screen.



(B): Current sensor voltage (V)
(C): Sensor output control value (bit value)
(A): Target value (V) for adjustment reference voltage

Fig. 3-6

Note:
The values in (A), (B) and (C) vary with humidity.

(9) Press the [ENTER] button to store the adjustment result in the memory.

Note:
If you enter any of the codes 200, 201, 202, 203, 204 or 206 after pressing the [CANCEL] button without pressing the [ENTER] button, or after auto-toner adjustment has failed, the operation in step (7) starts without that in step (4) to (6).

(10) Turn the power OFF.

(11) Take out the developer cartridge.

(12) Install the sub-hopper unit to the equipment.

3.1.3 Performing Image Quality Control (IQC)

(1) When unpacking
Prior to image dimensional adjustment, perform the “Automatic initialization of image quality control (05-396)” procedure.

(2) When any of the following parts is replaced, be sure to perform the “Automatic initialization of image quality control (05-396)” procedure.

- Photoconductive drum
- Developer material
- Laser optical unit
- Transfer belt
- 1st transfer roller
- Drum cleaning blade
- Needle electrode
- Main charger grid
- Image position aligning sensor
- Image quality sensor

Notes:

- When performing “Automatic gamma adjustment” in addition, “Automatic initialization of image quality control (05-396)” should be done.
  An adjustment error may occur when you perform “Automatic initialization of image quality control (05-396)”.
  See “[4] Image quality control initialization (05-396) / check the controlling status” in
  📖 Service Manual “25.4.1 Drum surface potential sensor control related troubleshooting” to clear the error.
- If “Readjust from IQC-Adjustment” is displayed, perform “Automatic initialization of image quality control (05-396)”.

Code	Item to be adjusted	Contents
396	Automatic initialization of image quality control	<Procedure> (A) While pressing [0] and [5] simultaneously, turn the power ON. → Adjustment ModeP (B) Key in [396] and press the [START] button. (C) “WAIT” is displayed. (D) When the adjustment finishes normally, the equipment will return to initial state of the Adjustment Mode. When an error occurs <When “Waste toner box replacement” is displayed> 1. Replace the waste toner box with a new one and close the waste toner box cover. 2. Press and hold the [ON/OFF] button for a few seconds to shut down the equipment. 3. Turn the power ON. 4. Release the waste toner box full status by the warming-up operation. 5. Check that “Ready” is displayed. 6. Press and hold the [ON/OFF] button for a few seconds to shut down the equipment. 7. Perform steps (A) to (D) in <Procedure>. <When “ERROR” is displayed>> (1)“ERROR” which occurs when toner is supplied 1. Press the [CANCEL] button to return to the original state in the adjustment mode in order to check the toner low status. 2. Press and hold the [ON/OFF] button for a few seconds to shut down the equipment. 3. Turn the power ON. 4. Check that the toner is being added properly in the warming-up status. When a message prompts you to replace the toner cartridge, open the front cover and replace the cartridge with a new one so that toner-empty status will be released. 5. Check that “Ready” is displayed. 6. Press and hold the [ON/OFF] button for a few seconds to shut down the equipment. 7. Perform steps (A) to (D) in <Procedure>. (2)“ERROR” which occurs in the surface potential sensor control 1. Specify the colors (Y,M,C,K) corresponding to 1 or 2 from the numbers displayed in “ERROR”. 2. Press the [CANCEL] button to return to the initial state of the Adjustment mode. 3. Press and hold the [ON/OFF] button for a few seconds to shut down the equipment. 4. Clear the error following the procedure on 📖 Service Manual “25.4.1 Drum surface potential sensor control related troubleshooting” or 📖 Service Manual “25.4.3 Drum surface potential sensor control related troubleshooting when setting up the equipment at unpacking”. 5. Perform steps (A) to (D) in <Procedure>. <Other abnormalities> Take the appropriate action described in Troubleshooting. 📖 P.6-1 "6. ERROR CODE and TROUBLESHOOTING"

3.1.4 Adjustment of Color Registration Control

After having finished the “Automatic initialization of image quality control (05-396)” procedure, perform the “Forced performing of color registration control adjustment (05-4719)” procedure.

Code	Item to be adjusted	Contents
4719	Forced performing of color registration control	<Procedure> (A) While pressing [0] and [5] simultaneously, turn the power ON. → Adjustment ModeP (B) Key in [4719] and press the [START] button. (C) “WAIT” is displayed. (D) When the adjustment finishes normally, the equipment will return to initial state of the Adjustment Mode. When an error occurs <When “Waste toner box replacement” is displayed> 1. Replace the waste toner box with a new one and close the waste toner box cover. 2. Press and hold the [ON/OFF] button for a few seconds to shut down the equipment. 3. Turn the power ON. 4. Release the waste toner box full status by the warming-up operation. 5. Check that “Ready” is displayed. 6. Press and hold the [ON/OFF] button for a few seconds to shut down the equipment. 7. Perform steps (A) to (D) in <Procedure> <When “ERROR” is displayed>> (1)“ERROR” which occurs when toner is supplied 1. Press the [CANCEL] button to return to the original state in the adjustment mode in order to check the toner low status. 2. Press and hold the [ON/OFF] button for a few seconds to shut down the equipment. 3. Turn the power ON. 4. Check the toner adding status in the warming-up operation. When a message prompts you to replace the toner cartridge, open the front cover and replace the cartridge with a new one. (“Adding Toner” is displayed.) 5. Check that “Ready” is displayed. 6. Press and hold the [ON/OFF] button for a few seconds to shut down the equipment. 7. Perform steps (A) to (D) in <Procedure>. (2)“ERROR” which occurs in the surface potential sensor control 1. Specify the colors (Y,M,C,K) corresponding to 1 or 2 from the numbers displayed in “ERROR”. 2. Press the [CANCEL] button to return to the initial state of the Adjustment mode. 3. Press and hold the [ON/OFF] button for a few seconds to shut down the equipment. 4. Clear the error following the procedure on 🕮 Service Manual “25.4.1 Drum surface potential sensor control related troubleshooting” or 🕮 Service Manual “25.4.3 Drum surface potential sensor control related troubleshooting when setting up the equipment at unpacking” 5. Perform steps (A) to (D) in <Procedure>. <Other abnormalities> Take the appropriate action described in Troubleshooting. 🕮 P.6-1 "6. ERROR CODE and TROUBLESHOOTING"

3.1.5 Image Dimensional Adjustment (General description)

There are several adjustment items in the image dimensional adjustment, as listed below. Prior to this image dimensional adjustment, perform the “Automatic initialization of image quality control (05-396)”. When adjusting these items, the following adjustment order should strictly be observed.

Item to be adjusted		Code in mode 05
1. Paper alignment an the registration roller		473, 4100, 4101, 4103, 4104, 4105, 4106, 4107, 4108, 4109, 4110, 4111, 4115, 4116, 4117, 4118, 4120, 4122, 4123, 4124, 4125, 4126, 4127, 4128,4129, 4580, 4581, 4582, 4583, 4584, 4585, 4586, 4587, 4588, 4589, 4590, 4591, 4592, 4593, 4600, 4601, 4602, 4603, 4604, 4605, 4606, 4607, 4608, 4609, 4610, 4611, 4612, 4613, 4615
2. Printer-related image dimensional adjustment	Reproduction ratio of primary scanning direction (Image clock fine adjustment (Printer))	4772
	Primary scanning data laser writing start position	411
	Reproduction ratio of secondary scanning direction (Fine adjustment of transfer belt motor rotation speed)	487
	Secondary scanning data laser writing start position	408, 440, 441, 444, 428, 442, 445
	Primary scanning data laser writing start position at duplexing	498
3. Scanner-related image dimensional adjustment	Image distortion	-
	Reproduction ratio of primary scanning direction	4773
	Image location of primary scanning direction	306
	Reproduction ratio of secondary scanning direction	340
	Image location of secondary scanning direction	305
	Top margin	430
	Right margin	432
	Bottom margin	433

[Procedure to key in adjustment values]

In accordance with the procedure described below, make adjustment of each adjustment item so that the measured values obtained from test copies satisfy the specification. By pressing the [FAX] button, immediately after starting the Adjustment Mode (05), single-sided test copying can be performed (normal copy mode).

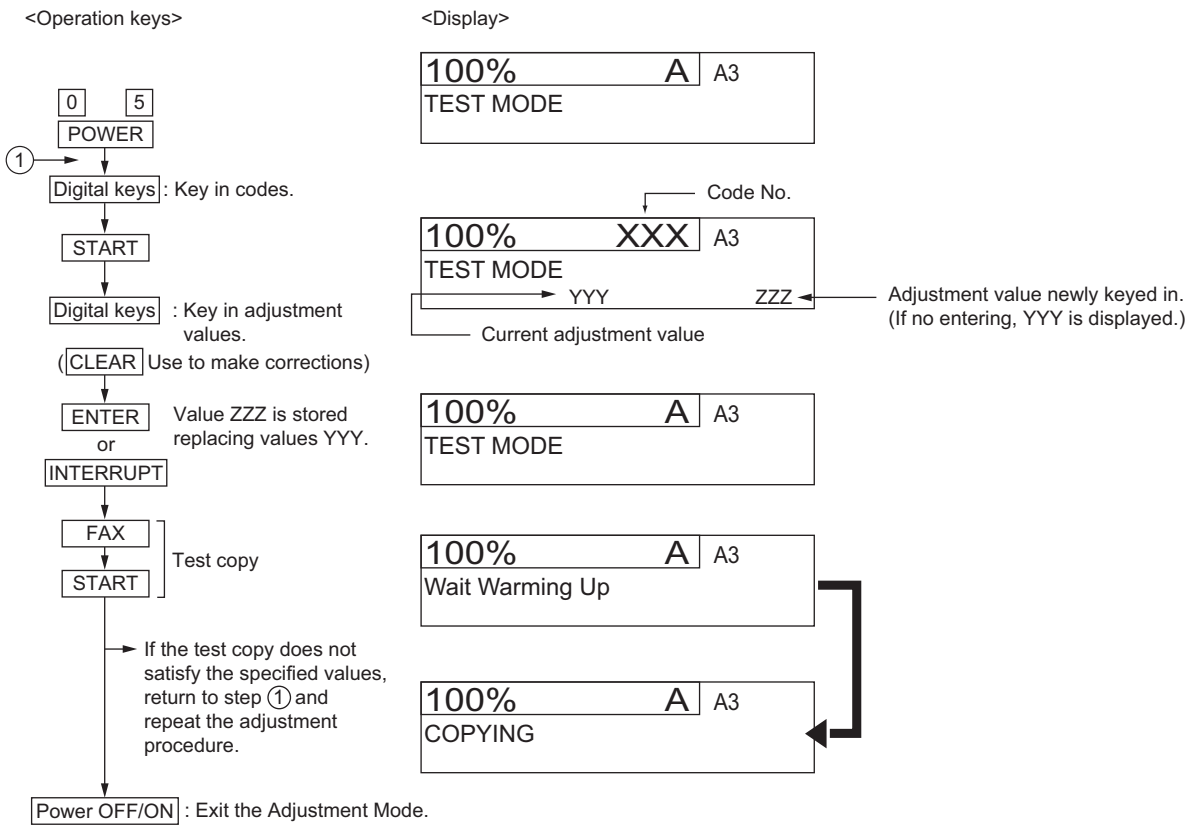


Fig. 3-7

3.1.6 Paper alignment at the registration roller

[A] Adjustment with touch panel

Paper alignment at the registration roller can be adjusted in the following procedure by performing the code 05-480.

1. Select the drawer.

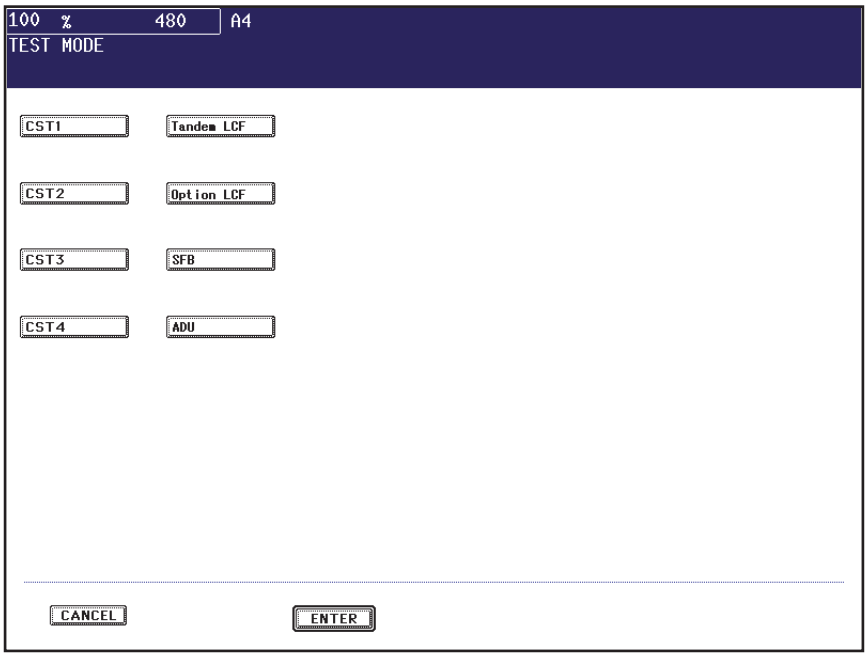


Fig. 3-8

2. Select the paper size.

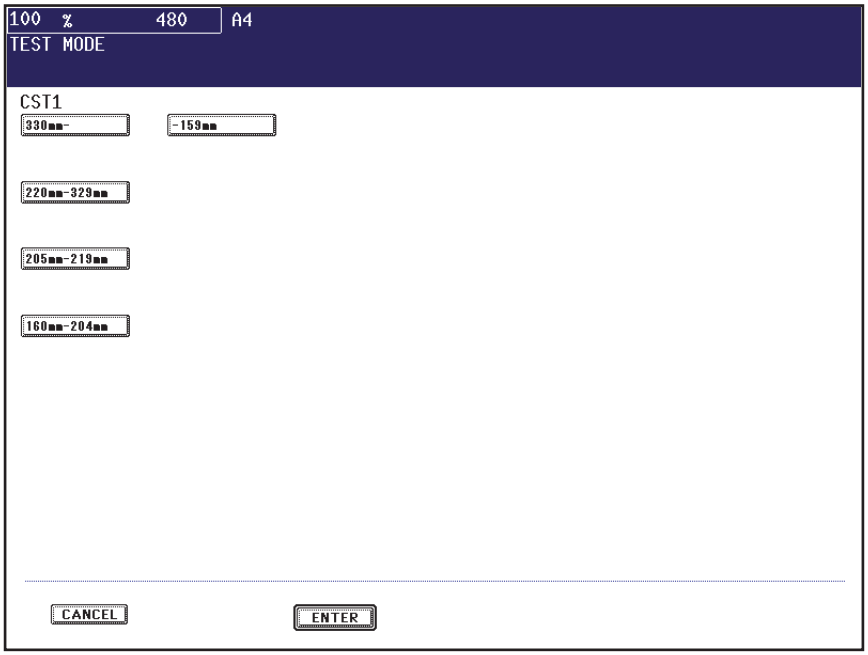


Fig. 3-9

3. Select the media type.

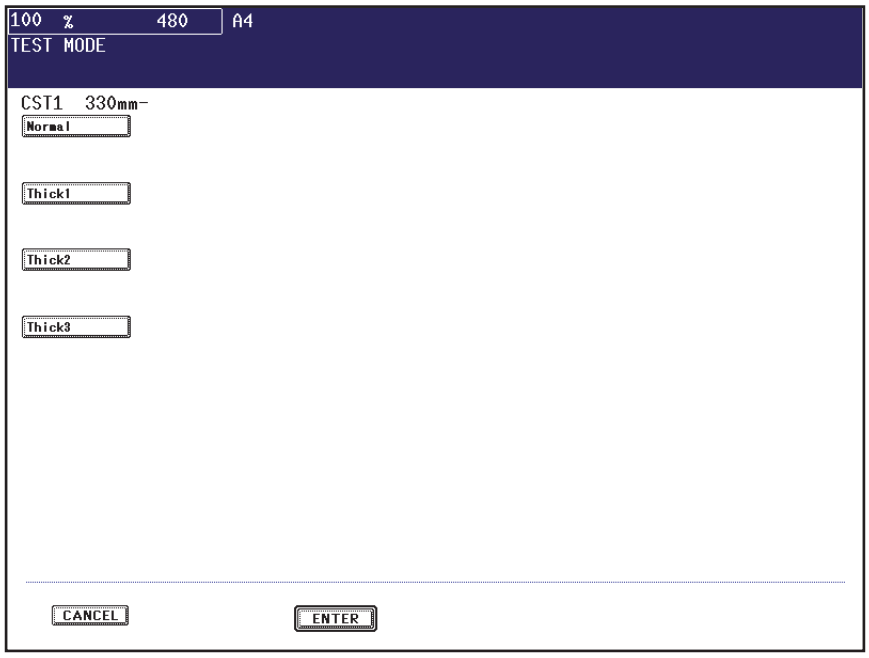


Fig. 3-10

4. Select the copy speed.
   ("75ppm" for the black copying in e-STUDIO6530C or "Other" for others)

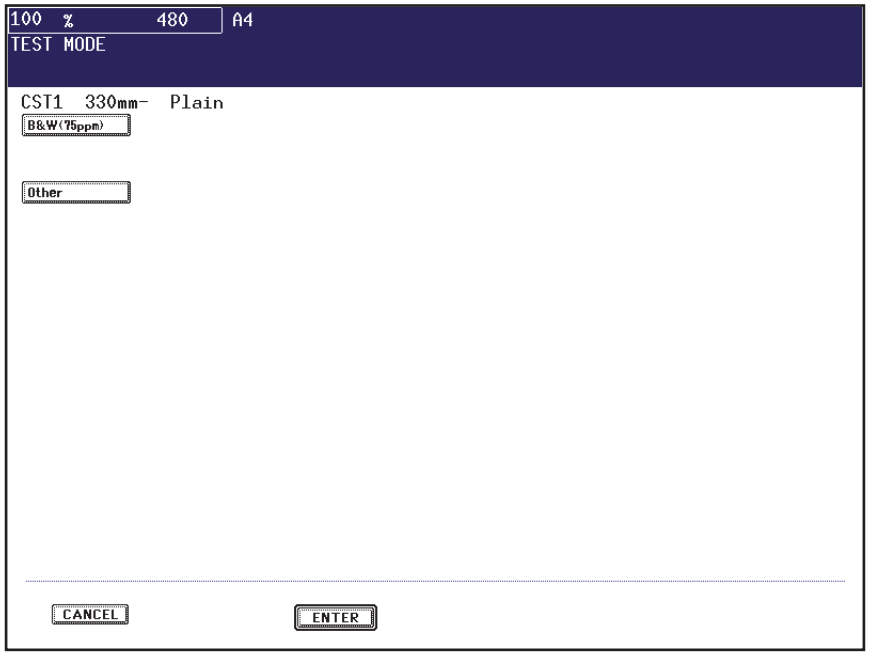


Fig. 3-11

5. Key in the adjustment value.

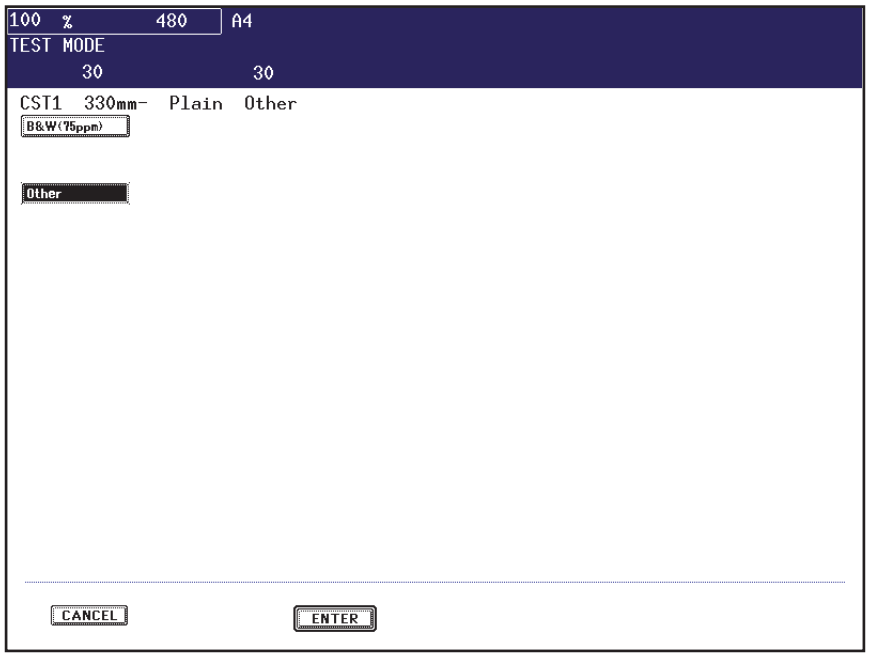


Fig. 3-12

6. Press the [ENTER] button to finish the adjustment.
   * Press the [FUNCTION CLEAR] button to return to the previous menu.

[B] Adjustment by direct code entry

The aligning amount is adjusted by using the following codes in Adjustment Mode (05).

Drawer	Code	Sub code	Paper size (Select the paper size with the sub code.)	Paper type[*1]
1st drawer (CST1)	4100	0, 1, 2, 3, 4	0: 330 mm or longer (13.0 inches or longer) 1: 220–329 mm (8.7–12.9 inches) 2: 205–219 mm (8.1–8.6 inches) 3: 160-204 mm (6.3–8.0 inches) 4: 159 mm or shorter (6.26 inches or shorter)	Plain paper
	4115	0, 1, 2, 3, 4		Thick paper 1
	4122	0, 1, 2, 3, 4		Plain paper (High speed/black)
	4582	0, 1, 2, 3, 4		Thick paper 2
	4588	0, 1, 2, 3, 4		Thick paper 3 (Black)
	4605	0, 1, 2, 3, 4		Thick paper 3 (Color)
2nd drawer (CST2)	4101	0, 1, 2, 3, 4		Plain paper
	4116	0, 1, 2, 3, 4		Thick paper 1
	4123	0, 1, 2, 3, 4		Plain paper (High speed/black)[*2]
	4583	0, 1, 2, 3, 4		Thick paper 2
	4589	0, 1, 2, 3, 4		Thick paper 3 (Black)
	4606	0, 1, 2, 3, 4		Thick paper 3 (Color)
3rd drawer (CST3)	4108	0, 1, 2, 3, 4		Plain paper
	4117	0, 1, 2, 3, 4		Thick paper 1
	4124	0, 1, 2, 3, 4		Plain paper (High speed/black)[*2]
	4584	0, 1, 2, 3, 4		Thick paper 2
	4590	0, 1, 2, 3, 4		Thick paper 3 (Black)
	4607	0, 1, 2, 3, 4		Thick paper 3 (Color)
4th drawer (CST4)	4109	0, 1, 2, 3, 4		Plain paper
	4118	0, 1, 2, 3, 4		Thick paper 1
	4125	0, 1, 2, 3, 4		Plain paper (High speed/black)[*2]
	4585	0, 1, 2, 3, 4		Thick paper 2
	4591	0, 1, 2, 3, 4		Thick paper 3 (Black)
	4608	0, 1, 2, 3, 4		Thick paper 3 (Color)
Bypass feed	4103	0, 1, 2, 3, 4		Plain paper
	4104	0, 1, 2, 3, 4		Thick paper 1
	4105	0, 1, 2, 3, 4		Thick paper 2
	4106	0, 1, 2, 3, 4		Thick paper 3 (Black)
	4107	0, 1, 2, 3, 4		OHP
	4127	0, 1, 2, 3, 4		Plain paper (High speed/black)[*2]
	4128	0, 1, 2, 3, 4		Special paper 1
	4129	0, 1, 2, 3, 4		Special paper 2
	4601	0, 1, 2, 3, 4		Thick paper 4 (Black)
	4612	0, 1, 2, 3, 4		Thick paper 3 (Color)
	4613	0, 1, 2, 3, 4		Thick paper 4 (Color)
Tandem LCF	473	0	-	Thick paper 1
		1	-	Thick paper 2
		2	-	Thick paper 3 (Black)
		3	-	Thick paper 3 (Color)
	4111	-	-	Plain paper
	4126	-	-	Plain paper (High speed/black)[*2]

Drawer	Code	Sub code	Paper size (Select the paper size with the sub code.)	Paper type[*1]
Option LCF	4580	0, 1, 2, 3, 4	0: 330 mm or longer (13.0 inches or longer) 1: 220-329 mm (8.7-12.9 inches) 2: 205-219 mm (8.1-8.6 inches) 3: 160-204 mm (6.3-8.0 inches) 4: 159 mm or shorter (6.26 inches or shorter)	Plain paper
	4581	0, 1, 2, 3, 4		Thick paper 1
	4586	0, 1, 2, 3, 4		Thick paper 2
	4592	0, 1, 2, 3, 4		Thick paper 3 (Black)
	4600	0, 1, 2, 3, 4		Plain paper (High speed/black)[*2]
	4609	0, 1, 2, 3, 4		Thick paper 3 (Color)
ADU	4110	0, 1, 2, 3, 4		Plain paper
	4120	0, 1, 2, 3, 4		Thick paper 1
	4587	0, 1, 2, 3, 4		Plain paper (High speed/black)[*2]
	4593	0, 1, 2, 3, 4		Thick paper 3 (Black)
	4602	0, 1, 2, 3, 4		Thick paper 4 (Black)
	4603	0, 1, 2, 3, 4		Special paper 1
	4604	0, 1, 2, 3, 4		Special paper 2
	4610	0, 1, 2, 3, 4		Thick paper 3 (Color)
	4611	0, 1, 2, 3, 4		Thick paper 4 (Color)
	4615	0, 1, 2, 3, 4		Thick paper 2

*1: Weight:
Plain paper: 64 to 105 g/m^2 (17 lb. Bond to 28 lb. Bond)
Thick paper 1: 106 to 163 g/m^2 (28 lb. Bond to 60 lb. Cover (90 lb. Index))
Thick paper 2: 164 to 209 g/m^2 (61 lb. Cover to 77.3 lb. Cover (115.7 lb. Index))
Thick paper 3: 210 to 256 g/m^2 (77.3 lb. Cover to 94.5 lb. Cover (141.4 lb. Index))
Thick paper 4: 257 to 300 g/m^2 (94.5 lb. Cover to 110 lb. Cover (150 lb. Index))

*2: e-STUDIO6530C: Black only

<Procedure>

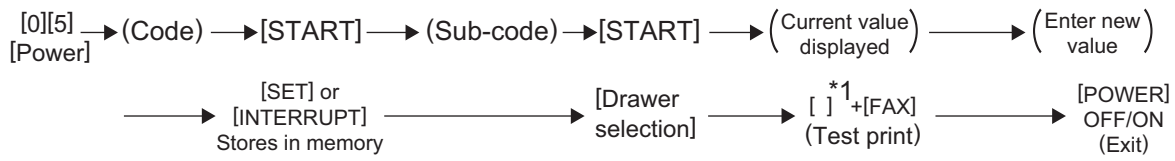


Fig. 3-13

(*1) 1: Single-sided grid pattern in Black Mode
3: Double-sided grid pattern in Black Mode
55: Grid pattern of thick paper 2 in Full Color Mode
56: Grid pattern of thick paper 3/thick paper 4 in Full Color Mode
57: Grid pattern of OHP film in Full Color Mode
58: Single-sided grid pattern of thick paper 2 in Black Mode
59: Single-sided grid pattern of thick paper 3 / thick paper 4 in Black Mode
60: Single-sided grid pattern of OHP film in Black Mode
98: Single-sided grid pattern in K(4) Mode

K(4) : System in which the test pattern is printed only in the black mode, though the four color developers (Y, M, C, K) are contacted to the transfer belt.

Note:

If the aligning amount is too large, abnormal noise (paper-folding noise) or actual paper folding may occur during paper feeding. If the aligning amount is too small, on the other hand, a skew, an image dislocation in feeding direction or a paper exit jam (E010) may occur. Pay attention to the above and select the appropriate value.

3.1.7 Printer-related image dimensional adjustment

The printer related adjustment is performed by using the printed out grid pattern.

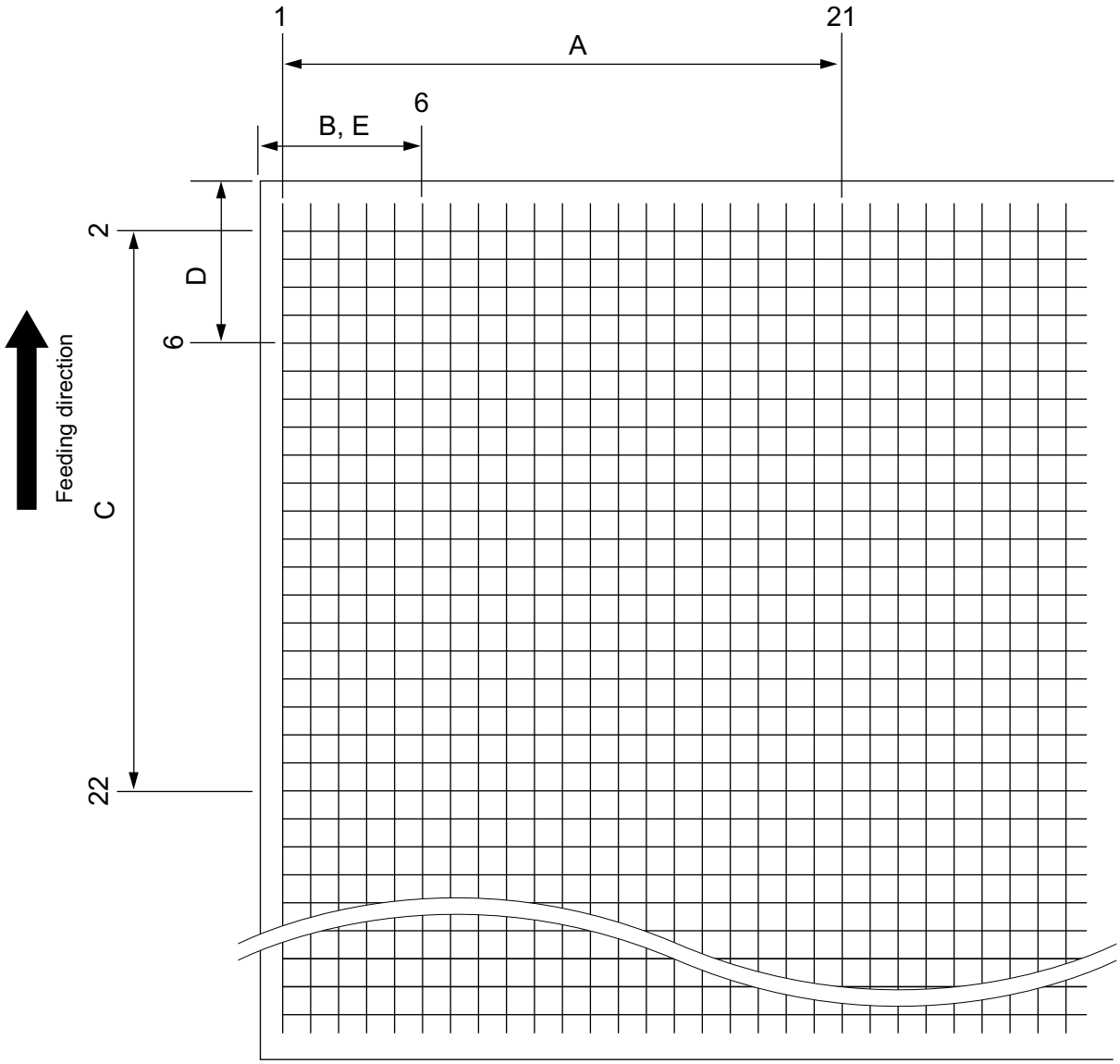


Fig. 3-14

	Adjustment Tolerance	Detail of adjustment
A	200 ± 0.5mm	Refer to “[A] Reproduction ratio of primary scanning direction (Image clock fine adjustment (Printer))”
B	52 ± 0.5mm	Refer to “[B] Image position of primary scanning direction (Laser writing start position (Printer))”
C	200 ± 0.5mm	Refer to “[C] Reproduction ratio of secondary scanning direction (Fine adjustment of transfer belt motor rotation speed (Printer))”
D	52 ± 0.5mm	Refer to “[D] Image position of secondary scanning direction (Laser writing start position)”
E	52 ± 0.5mm	Refer to “[E] Primary scanning data laser writing start position at duplexing”

[A] Reproduction ratio of primary scanning direction (Image clock fine adjustment (Printer))

(1) While pressing [0] and [5] simultaneously, turn the power ON.→ (Adjustment Mode)
(2) Press [98] → [FAX]. (A grid pattern with 10 mm squares is printed out. Use A3/LD from the 2nd drawer.)
(3) Measure the distance A from the 1st line to the 21st line of the grid pattern.
(4) Check if the distance A is within 200±0.5 mm.
(5) If not, use the following procedure to change values and measure the distance A again.
<Procedure>
(Adjustment Mode) → (Key in the code [4772]) → [START]
→ (Key in a value (acceptable values: 0 to 255))
→ [ENTER] or [INTERRUPT] (Stored in memory)
→ "100% A" is displayed.
→ Press [98] → [FAX] → (A grid pattern is printed out.)
* The larger the adjustment value is, the longer the distance A becomes (approx. 0.1 mm/step).

[B] Primary scanning data laser writing start position (Laser writing start position (Printer))

Performing the code 05-411 covers this adjustment for all paper sources.
The adjustment for each paper source is also available. Be sure to perform the code 05-411 (for all paper sources) before doing 05-497 or 05-498 (for each paper source).

For all paper sources

Code	Paper size	Acceptable value	Remarks	Reference value
411	A3/LD (Recommended)	0 to 255	Performs the adjustment for all paper sources.	70 to 128

For each paper source
<4-drawer model>

Order for adjustment	Paper source	Code	Paper size	Acceptable value	Remarks
1	1st drawer	497-0	A4/LT	0 to 255	
2	2nd drawer	497-1	A3/LD	0 to 255	
3	3rd drawer	497-2	A4/LT	0 to 255	
4	4th drawer	497-3	A4/LT	0 to 255	
5	Bypass feed	497-5	A4/LT	0 to 255	
6	Duplex feeding	498-*	A3/LD (A4/LT)	0 to 255	P.3-21 "[E] Primary scanning data laser writing start position at duplexing"
7	Option LCF	497-6	A4/LT	0 to 255	Only when the optional LCF is installed

<Tandem LCF model>

Order for adjustment	Paper source	Code	Paper size	Acceptable value	Remarks
1	1st drawer	497-0	A4/LT	0 to 255	
2	2nd drawer	497-1	A3/LD	0 to 255	
3	Tandem LCF	497-4	A4/LT	0 to 255	
4	Bypass feed	497-5	A4/LT	0 to 255	
5	Duplex feeding	498-*	A3/LD (A4/LT)	0 to 255	P.3-21 "[E] Primary scanning data laser writing start position at duplexing"
6	Option LCF	497-6	A4/LT	0 to 255	Only when the optional LCF is installed

1. Perform "Adjustment of drawer sideways deviation (05-497)" and set "128" for the sub code "1".
2. Perform "Primary scanning data laser writing start position (05-411)".
3. Key in "98" and then press the [FAX] button.
4. Measure the distance B from the left edge of the paper to the 6th line of the grid pattern.
5. If the distance B is not within 52±0.5 mm, use the following procedure to change values and measure it again.
6. Perform adjustment for each paper source following the procedure below.

Note:
Do not change the value "128" for the 05-497 sub code "1".

<Procedure>
(Adjustment Mode) → (Key in the code shown above) → [START]
→ (Key in an acceptable value shown above)
→ [ENTER] or [INTERRUPT] (Stored in memory) → “100% A” is displayed →
→ Press [98] ([3] for duplexing) → [FAX] → (A grid pattern is printed out.)

* The larger the adjustment value is, the longer the distance B becomes (approx. 0.04 mm/ step).

Note:
Make sure the first line of the grid pattern is printed out since the line is occasionally vanished.

[C] Reproduction ratio of secondary scanning direction (Fine adjustment of transfer belt motor rotation speed)

Code	Sub code	Function	Remarks
487	0	PRT	When the value increases, the reproduction ratio in the secondary scanning direction becomes larger. (Approx. 0.1 mm/1steps)
	1	FAX	
	2	PPC	
	3	PRT	
	4	FAX	
	5	PPC	
	6	PRT	
	7	FAX	
	8	PPC	
	9	PRT	
	10	FAX	
	11	PPC	

When the sub code “0” is performed in the code “05-487”, the proper value is automatically calculated for the size of an image from the sub code 1 to 11. Due to this, the speed of the transfer belt motor is also adjusted. Therefore, use the above default value other than the sub code “0”, unless otherwise required.

[C-1] Confirmation of 05-487-0

1. While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
2. Press [98] → [FAX]. (A grid pattern with 10 mm squares is printed out. Use A3/LD from the 2nd drawer.)
3. Measure the distance C from the 2nd line at the leading edge of the paper to the 22nd line of the grid pattern.
   * Normally, the 1st line of the grid pattern is not printed.
4. Check if the distance C is within 200±0.5 mm.
5. If not, perform the procedure in “[C-2] Adjustment of 05-487-0” to change the values and measure the distance C again.
6. Perform the color registration (4719) after the adjustment.

[C-2] Adjustment of 05-487-0

(Adjustment Mode) → (Key in the code [487]) → [START] → (Key in the sub-code [0])
→ [START] → (Key in a value (acceptable values: 0 to 255))
→ [ENTER] or [INTERRUPT] (Stored in memory)

* When the value is not within the recommended values, the trailing edge area of the image may be out of position for the paper length or the density at the trailing edge area of the image may become lighter. Perform the adjustment confirming the image.
  → “100% A” is displayed
  → Press [98] → [FAX] → (A grid pattern is printed out.)
* The larger the adjustment value is, the longer the distance C becomes (approx. 0.1 mm/ step).
  → (Key in the code [4719]) → [START] → (Enforced color registration)

Note:
The grid pattern outputted by pressing [0][5] → [98] → [FAX] is the one of PRT (05-487-0). Even though the sub codes “1” to “11” are adjusted, the result cannot be confirmed in the grid pattern outputted by pressing [0][5] → [98] → [FAX].

Remark:

For long paper (length: 484 mm to 1,200 mm) and A3/LD, it is recommended to adjust the distance C above within the range of 199.5 mm and 200 mm otherwise the margin of the trailing edge may be deleted.

[D] Image position of secondary scanning direction (Laser writing start position)

Performing the code 05-408 covers this adjustment for all paper sources.
The adjustment for each paper source is also available.

For all paper sources

Code	Paper size	Acceptable value	Remarks
408	A3/LD	0 to 200	Performs the adjustment for all paper sources.

For each paper source
<4-drawer model>

Order for adjustment	Paper source	Code	Paper size	Acceptable value	Remarks
1	1st drawer	440	A4/LT	0 to 100	
2	2nd drawer	441	A3/LD	0 to 100	
3	3rd drawer	444	A4/LT	0 to 100	
4	4th drawer	428	A4/LT	0 to 100	
5	Bypass feed	442	A4/LT	0 to 100	
6	Duplex feeding	445	A3/LD	0 to 100	Paper fed from the 2nd drawer
7	Option LCF	443	A4/LT	0 to 100	Only when the optional LCF is installed

<Tandem LCF model>

Order for adjustment	Paper source	Code	Paper size	Acceptable value	Remarks
1	1st drawer	440	A4/LT	0 to 100	
2	2nd drawer	441	A3/LD	0 to 100	
3	Tandem LCF	429	A4/LT	0 to 100	
4	Bypass feed	442	A4/LT	0 to 100	
5	Duplex feeding	445	A3/LD	0 to 100	Paper fed from the 2nd drawer
6	Option LCF	443	A4/LT	0 to 100	Only when the optional LCF is installed

(1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
(2) Press [98] ([3] for duplexing) → [FAX]. (A grid pattern with 10 mm squares is printed out.)
(3) Measure the distance D from the leading edge of the paper to the 6th line of the grid pattern.
    * Normally, the 1st line of the grid pattern is not printed.
    * At the duplexing, measure it on the top side of the grid pattern.
(4) Check if the distance D is within 52±0.5 mm.
(5) If not, use the following procedure to change values and measure the distance D again.

<Procedure>
(Adjustment Mode) → (Key in the code shown above) → [START]
→ (Key in an acceptable value shown above)
→ [ENTER] or [INTERRUPT] (Stored in memory)
→ "100% A" is displayed
→ Press [98] ([3] for duplexing)
→ [FAX] → (A grid pattern is printed out.)
* The larger the adjustment value is, the longer the distance D becomes (approx. 0.10 mm/step).

[E] Primary scanning data laser writing start position at duplexing

Note:
Make sure the first line of the grid pattern is printed out since the line is occasionally vanished.

[E-1] Adjustment for long-sized paper (Length: 330 mm or more)

(1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
(2) Press [3] → [FAX]. (A grid pattern with 10 mm squares is printed out. Use A3/LD from the 2nd drawer.)
(3) Check the grid pattern on the test print and measure the distance E from the left edge of the paper to the 6th line of the grid pattern.
(4) Check if the distance E is within 52±0.5 mm.
(5) If not, use the following procedure to change values and measure the distance E again.
<Procedure>
(Adjustment Mode) → (Key in the code [498]) → [START] → [0] → [START]
→ (Key in a value (acceptable values: 0 to 255))
→ [ENTER] or [INTERRUPT] (Stored in memory)
→ "100% A" is displayed.
→ Press [3] → [FAX] → (A grid pattern is printed out.)
* The larger the adjustment value is, the longer the distance E becomes (approx. 0.04 mm/step).

[E-2] Adjustment for short-sized paper (Length: 219 mm or less)

(1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
(2) Press [3] → [FAX]. (A grid pattern with 10 mm squares is printed out. Use A4/LT from the 1st drawer.)
(3) Check the grid pattern on the test print and measure the distance E from the left edge of the paper to the 6th line of the grid pattern.
(4) Check if the distance E is within 52±0.5 mm.
(5) If not, use the following procedure to change values and measure the distance E again.
<Procedure>
(Adjustment Mode) → (Key in the code [498]) → [START] → [1] → [START]
→ (Key in a value (acceptable values: 0 to 255))
→ [ENTER] or [INTERRUPT] (Stored in memory)
→ "100% A" is displayed
→ Press [3] → [FAX] → (A grid pattern is printed out.)
* The larger the adjustment value is, the longer the distance E becomes (approx. 0.04 mm/step).

[E-3] Adjustment for medium-sized paper (Length: 220 mm to 329 mm)

(1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
(2) Press [3] → [FAX]. (A grid pattern with 10 mm squares is printed out. Use A4-R/LT-R from the 1st drawer.)
(3) Check the grid pattern on the test print and measure the distance E from the left edge of the paper to the 6th line of the grid pattern.
(4) Check if the distance E is within 52±0.5 mm.
(5) If not, use the following procedure to change values and measure the distance E again.
<Procedure>
(Adjustment Mode) → (Key in the code [498]) → [START] → [2] → [START]
→ (Key in a value (acceptable values: 0 to 255))
→ [ENTER] or [INTERRUPT] (Stored in memory)
→ "100% A" is displayed
→ Press [3] → [FAX] → (A grid pattern is printed out.)
* The larger the adjustment value is, the longer the distance E becomes (approx. 0.04 mm/step).

Note:
When the laser writing start position (05-498-0) for long-sized paper is changed, the one for medium-sized paper is also altered. (However, the value of 05-498-2 is not changed.)
If 05-498-0 is changed, check it with A4-R/LT-R paper and adjust the value of 05-498-2 again as required.

<Adjustment procedure summarization for A to E>

[0] [5] [Power ON] → [98] ([3] (05-445, 498) for duplexing) → [FAX]

A: 05-4772 (2nd drawer, A3/LD) → 200±0.5 mm (0.1 mm/step)
B: 05-411 (2nd drawer, A3/LD) → 52±0.5 mm (0.04 mm/step)
05-497-0 (1st drawer, A4/LT)
05-497-1 (2nd drawer, A3/LD)
05-497-2 (3rd drawer, A4/LT)
05-497-3 (4th drawer, A4/LT)
05-497-4 (2nd drawer, A4/LT)
05-497-5 (Bypass feed, A4/LT)
05-497-6 (2nd drawer, A4/LT)
C: 05-487-0 to 11 (2nd drawer, A3/LD) → 200±0.5 mm (0.1 mm/step)
D: 05-408 (2nd drawer, A3/LD) → 52±0.5 mm (0.10 mm/step)
05-440 (1st drawer, A4/LT)
05-441 (2nd drawer, A3/LD)
05-444 (3rd drawer, A4/LT)
05-428 (4th drawer, A4/LT)
05-442 (Bypass feed, A4/LT)
05-445 (Duplex feeding, A3/LD)
05-429 (2nd drawer, A4/LT) → 52±0.5 mm (0.10 mm/step)
05-443 (2nd drawer, A4/LT) → 52±0.5 mm (0.10 mm/step)
E: 05-498-0 (2nd drawer, A3/LD), → 52±0.5 mm (0.04 mm/step)
05-498-1 (1st drawer, A4/LT)
05-498-2 (A4-R/LT-R)

3.1.8 Scanner-related image dimensional adjustment

[A] Image distortion

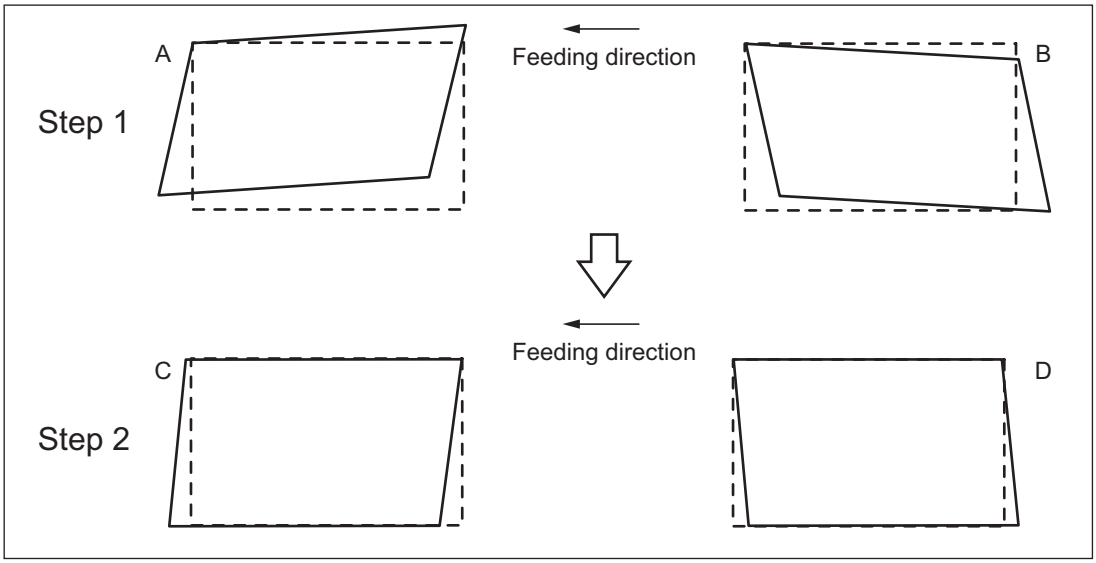


Fig. 3-15

(1) While pressing [0] and [5] simultaneously, turn the power ON.

(2) Press [FAX] to make a copy of any image on a sheet of A3/LD paper.

(3) Key in [308] and press the [START] button to move the carriage to the adjustment position.

(4) Make an adjustment in the order of step 1 and 2.

Step 1

In case of A:
Tighten the mirror-3 adjustment screw (CW).
In case of B:
Loosen the mirror-3 adjustment screw (CCW).

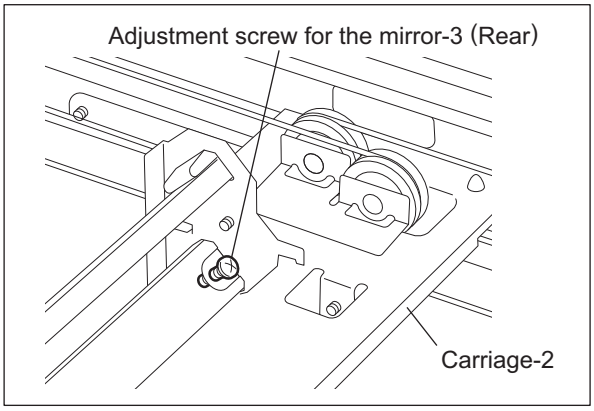


Fig. 3-16

Step 2

In case of C:
Tighten the mirror-1 adjustment screw (CW).
In case of D:
Loosen the mirror-1 adjustment screw (CCW).

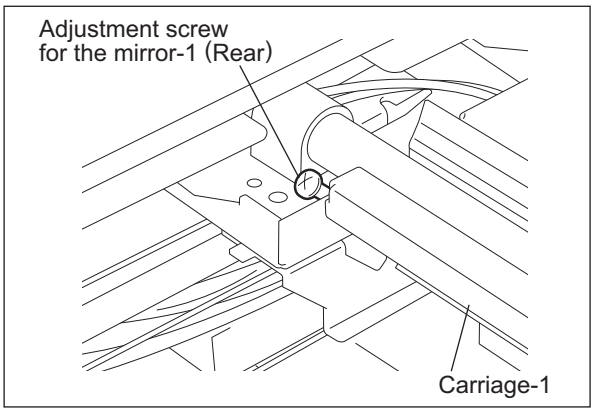


Fig. 3-17

(5) Apply the screw locking agents to the adjustment screws. (2 areas)
- Recommended screw lock agent
  Manufacturer: Three Bond
  Product name: 1401E

The following adjustments (b) to (e) should be performed with Test Chart No. TCC-1.
📖 P.3-30 " Adjustments and Checks using Test Chart No. TCC-1"

[B] Reproduction ratio adjustment of primary scanning direction

(1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
(2) Place Test Chart No. TCC-1 on the original glass (with the arrow positioned at the left rear side).
(3) Press [FAX] → [START] to make a copy at the mode of A4/LT, 100%, Full color and Text/Photo.
(4) Measure the distance A between M1 and M2 on the copy with a ruler.
(5) Check if the distance A is within 200±0.5 mm.
(6) If not, use the following procedure to change values and repeat step 3. to 5. above.
<Procedure>
(Adjustment Mode) → (Key in the code [4773]) → [START]
→ (Key in a value (acceptable values: 0 to 255) with digital keys)
→ [ENTER] or [INTERRUPT] (Stored in memory)
* The larger the adjustment value is, the longer the distance A becomes (approx. 0.1 mm/step).

[C] Image location of primary scanning direction

(1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
(2) Place Test Chart No. TCC-1 on the original glass (with the arrow positioned at the left rear side).
(3) Press [FAX] → [START] to make a copy at the mode of A4/LT, 100%, Full color and Text/Photo.
(4) Measure the distance B from the left paper edge to the 5 mm line of left grid pattern on the copy with a ruler.
(5) Check if the distance B is within 5±0.5 mm.
(6) If not, use the following procedure to change values and repeat step 3. to 5. above.
<Procedure>
(Adjustment Mode) → (Key in code [306]) → [START]
→ (Key in a value (acceptable values: 0 to 255))
→ [ENTER] or [INTERRUPT] (Stored in memory)
* The larger the adjustment value is, the longer the distance B becomes (approx. 0.04 mm/step).

[D] Reproduction ratio of secondary scanning direction

(1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
(2) Place Test Chart No. TCC-1 on the original glass (with the arrow positioned at the left rear side).
(3) Press [FAX] → [START] to make a copy at the mode of A4/LT, 100%, Full color and Text/Photo.
(4) Measure the distance C between M3 and M4 on the copy with a ruler.
(5) Check if the distance C is within 150±0.5 mm.
(6) If not, use the following procedure to change values and repeat step 3. to 5. above.
<Procedure>
(Adjustment Mode) → (Key in the code [340]) → [START]
→ (Key in a value (acceptable values: 0 to 255))
→ [ENTER] or [INTERRUPT] (Stored in memory)
* The larger the adjustment value is, the longer the distance C becomes (approx. 0.02 mm/step).

[E] Image location of secondary scanning direction

(1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
(2) Place Test Chart No. TCC-1 on the original glass (with the arrow positioned at the left rear side).
(3) Press [FAX] → [START] to make a copy at the mode of A4/LT, 100%, Full color and Text/Photo.
(4) Measure the distance D from the top paper edge to the 10 mm line of top grid pattern on the copy with a ruler.
(5) Check if the distance D is within 10±0.5 mm.
(6) If not, use the following procedure to change values and repeat step 3. to 5. above.
<Procedure>
(Adjustment Mode) → (Key in the code [305]) → [START]
→ (Key in a value (acceptable values: 68 to 188))
→ [ENTER] or [INTERRUPT] (Stored in memory)
* The larger the adjustment value is, the longer the distance D becomes (approx. 0.09 mm/step).

[F] Top margin

(1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
(2) Open the RADF.
(3) Press [FAX] → [START] to make a copy at the mode of A3/LD, 100%, Full color, Text/Photo and 2nd drawer.
(4) Measure the blank area E at the leading edge of the copied image.
(5) Check if the blank area E is within the range.

Function	Black	Color
Copy	3±2.0 mm	5-1.0 mm, 5+2.0 mm (4.0 to 7.0 mm)

(6) If not, use the following procedure to change values and repeat the steps 3. to 5. above.
<Procedure>
(Adjustment Mode) → (Key in the code [430]) → [START]
→ (Key in a value (acceptable values: 0 to 255))
→ [ENTER] or [INTERRUPT] (Stored in memory)
→ ("100% A" is displayed.)
* The larger the adjustment value is, the wider the blank area becomes (approx. 0.04 mm/step).

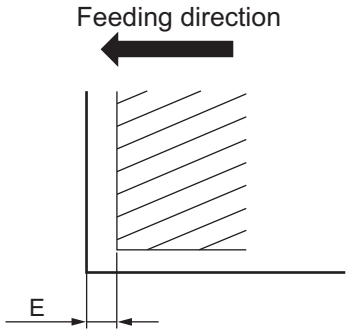


Fig. 3-18

Note:

Paper jams tend to occur in equipment in which thin paper such as 64g/m^2 (17lb. Bond) paper is used or a large amount of high density images such as pictures are output. For this equipment, we recommend that you adjust the top margin "in the plus direction" in order to prevent paper jamming.

Range of top margin adjustment (e.g.)

Function	Black	Color
Copy	3.0 - 5.0 mm	5.0 - 7.0 mm

[G] Right margin

(1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
(2) Open the RADF.
(3) Press [FAX] → [START] to make a copy at the mode of A3/LD, 100%, Full color, Text/Photo and 2nd drawer.
(4) Measure the blank area F at the right side of the copied image.
(5) Check if the blank area F is within the range.

Function	Black	Color
Copy	2±2.0 mm	2±2.0 mm

(6) If not, use the following procedure to change values and repeat the steps 3. to 5. above.
<Procedure>
(Adjustment Mode) → (Key in the code [432]) → [START]
→ (Key in a value (acceptable values: 0 to 255))
→ [ENTER] or [INTERRUPT] (Stored in memory).
→ ("100% A" is displayed.)
* The larger the adjustment value is, the wider the blank area at the right side becomes (approx. 0.04 mm/step).

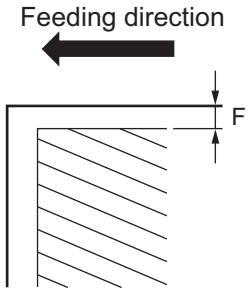


Fig. 3-19

[H] Bottom margin

(1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
(2) Open the RADF.
(3) Press the [FAX] → [START] to make a copy at the mode of A3/LD, 100%, Full color, Text/Photo and 2nd drawer.
(4) Measure the blank area G at the trailing edge of the copied image.
(5) Check if the blank area G is within the range.

Function	Black	Color
Copy	3±2.0 mm	3±2.0 mm

(6) If not, use the following procedure to change values and repeat the steps 3. to 5. above.
<Procedure>
(Adjustment Mode) → (Key in the code [433]) → [START]
→ (Key in value (acceptable values: 0 to 255))
→ [ENTER] or [INTERRUPT] (stored in memory)
→ ("100% A" is displayed.)
* The larger the adjustment value is, the wider the blank area at the trailing edge becomes (approx. 0.04 mm/step).

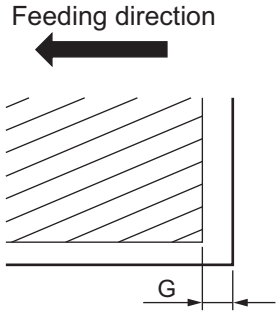


Fig. 3-20

Adjustments and Checks using Test Chart No. TCC-1

Following items can be checked with the Test Chart No. TCC-1.

1. Points to be measured in the chart

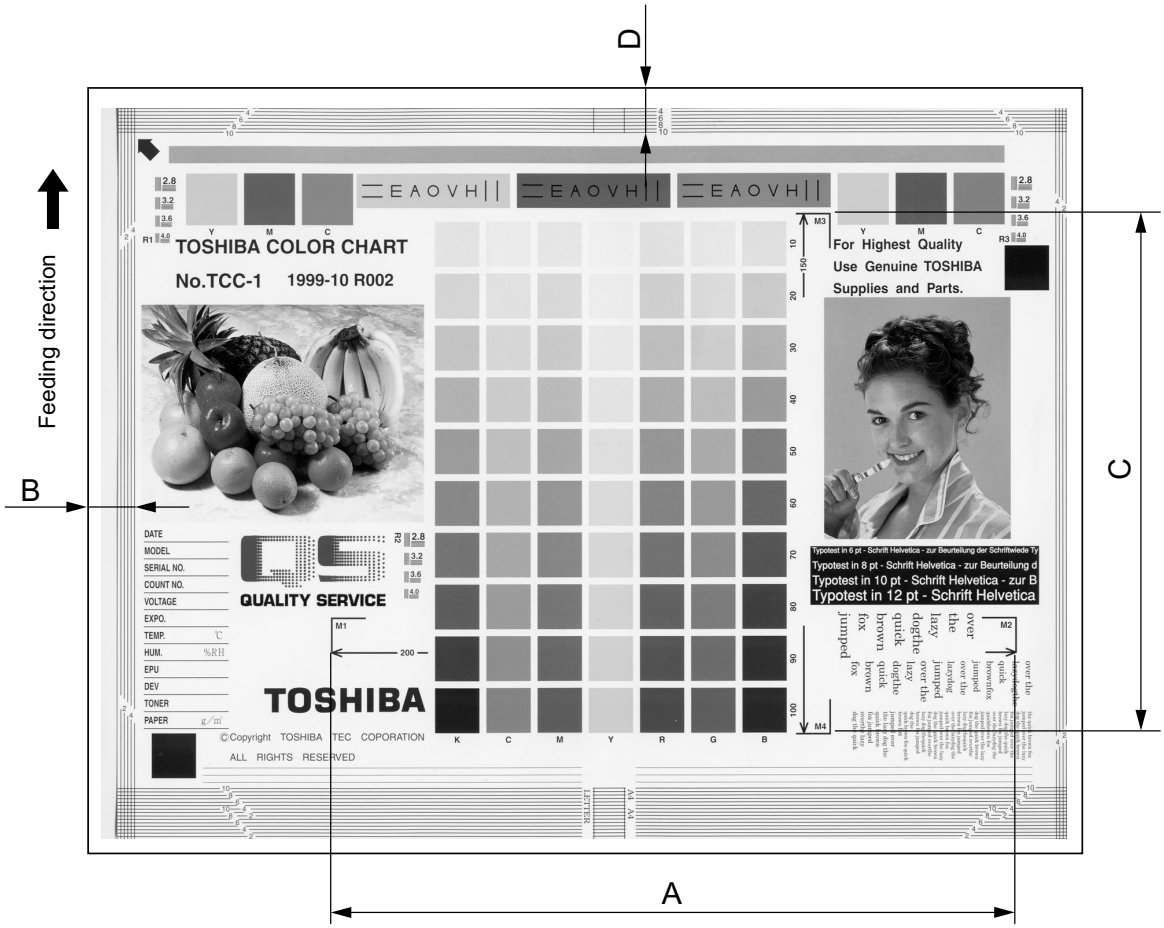


Fig. 3-21

<Adjustment order>

[0] [5] [Power ON] → (Chart TCC-1) → [FAX] → [START] (A3/LD, 100%, Full color and Text/Photo)

A: 05-4773 → 200±0.5 mm (0.1 mm/step)

B: 05-306 → 5±0.5 mm (0.04 mm/step)

C: 05-340 → 150±0.5 mm (0.02 mm/step)

D: 05-305 → 10±0.5 mm (0.08 mm/step)

2. Checking areas of the chart and their descriptions

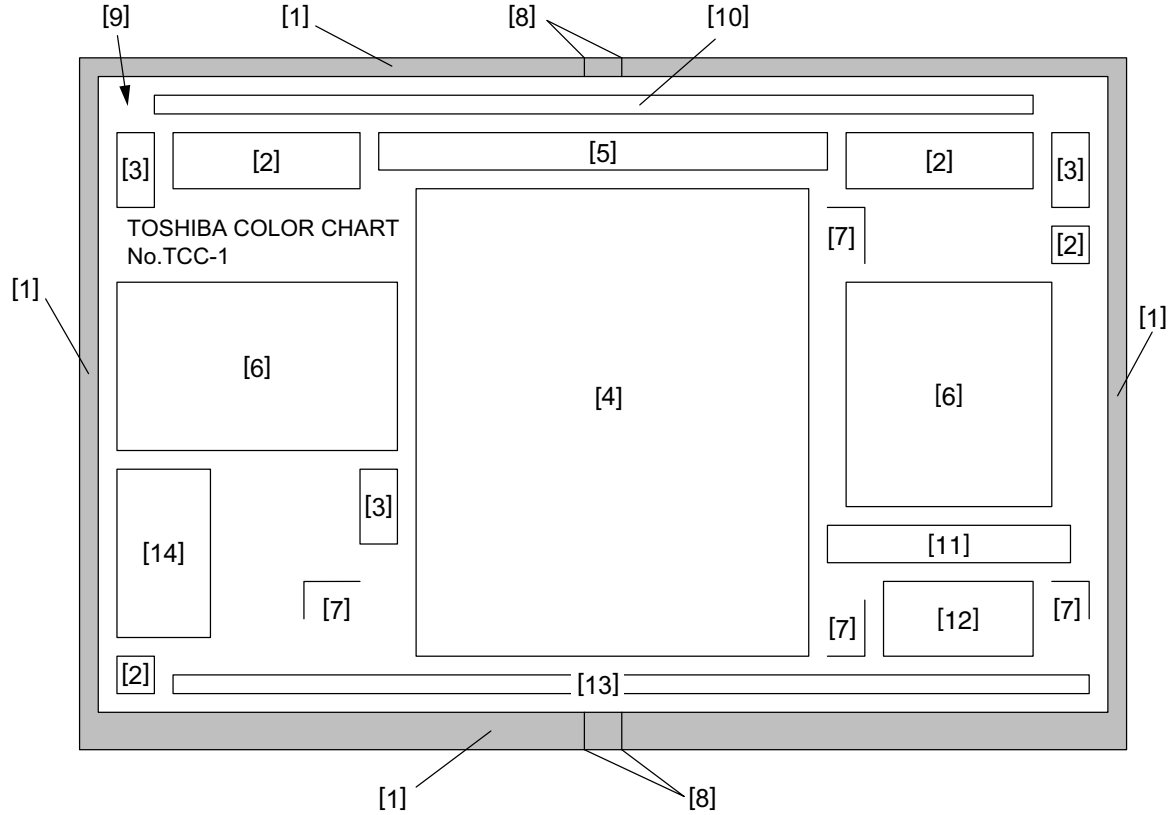


Fig. 3-22

[1]	Grid patterns	: For adjusting margin (void) and scanner section
[2]	YMCK patches	: For checking uniformity
[3]	Resolution patterns	: For checking resolution
[4]	Gradation pattern	: Gradation pattern of seven colors (Y, M, C, R, G, B and K) Coverage: 10-100% For adjusting the halftone reproduction and gray balance
[5]	Color registration pattern	: For checking color registration
[6]	Pictures	: For checking color reproduction and moire
[7]	Magnification lines	: For checking the magnification error of primary and secondary scanning directions
[8]	Center lines	: Center lines for A4/LT sizes
[9]	Arrow	: A mark for placing the chart properly onto the original glass (place it to the left rear corner of the original glass.)
[10]	Halftone band	: For checking uniformity
[11]	White text on the black solid	: For checking the reproduction of white text on black solid
[12]	Text	: For checking reproduction of text
[13]	Thin lines	: For checking reproduction of the thin lines (line width: 100µm)
[14]	Note area	: For recording the date, conditions, etc.

3.2 Image Quality Adjustment (Copying Function)

3.2.1 Automatic gamma adjustment

When the reproduction of gradation is not appropriate, the gradation reproducibility of all colors Y, M, C and K can be corrected by performing this automatic gamma adjustment. In case the gradation reproduction of the image checked is not satisfactory, make this adjustment as described below at parts replacement.

(1) When unpacking or any of the following parts has been replaced, be sure to make this adjustment:
- Photoconductive drum
- Developer material
- Laser optical unit
- Transfer belt
- 1st transfer roller
- Drum cleaning blade
- Needle electrode
- Main charger grid
- Image position aligning sensor
- Image quality sensor
- SRAM board (LGC board, SYS board)

(2) When any of the following parts are replaced or adjusted, make a copy and check the image to determine if adjustment is necessary:
- 2nd transfer roller

Notes:
1. Be sure that this adjustment be made after performing the image adjustment in 📖 P.3-4 "3.1.3 Performing Image Quality Control (IQC)" and 📖 P.3-7 "3.1.5 Image Dimensional Adjustment (General description)".
2. Normally, only the adjustment of color/black integrated pattern is needed. When the adjustment of 📖 P.3-42 "3.2.11 Beam level conversion setting" is made, color pattern and black pattern need to be adjusted individually.

<Adjustment Mode (05)>

Code	Item to be adjusted	Contents
1642 (1644) (580)	Automatic gamma adjustment	When the reproduction of gradation is not appropriate, the gradation reproducibility of all colors Y, M, C and K can be corrected by performing this automatic gamma adjustment. The result will be applied to all paper sizes.

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.→ Adjustment Mode
(2) Select the A4/LT drawer. Key in the pattern number and press the [FAX] button to output a “Patch chart for gamma adjustment”.

Pattern No.	Pattern	Remark	Paper type
4	Color/black integrated	When performing code 05-1642	All paper types
10	Black	When performing code 05-580	All paper types
200	Color/black integrated	When performing code 05-1644-0	Plain paper1
202	Color/black integrated	When performing code 05-1644-1	Plain paper2
204	Color/black integrated	When performing code 05-1644-2	Recycled paper
206	Color/black integrated	When performing code 05-1644-3	Thick paper1
208	Color/black integrated	When performing code 05-1644-4	Thick paper2
210	Color/black integrated	When performing code 05-1644-5	Thick paper3
212	Color/black integrated	When performing code 05-1644-6	Thick paper4
214	Color/black integrated	When performing code 05-1644-7	Special paper 1
216	Color/black integrated	When performing code 05-1644-8	Special paper 2

(3) Place the patch chart for adjustment printed in step (2) face down on the original glass.
Place the chart aligning its side with 2 black squares against the original scale.
(4) Key in a code and press the [START] button.
→ The scanner reads the chart automatically and performs automatic gamma adjustment calculation (approx. 30 sec.).
(5) When the adjustment has finished normally, “ENTER” is shown. Press the [ENTER] button to have the adjustment results reflected.
(To cancel the reflection of adjustment results, press the [CANCEL] button.)
In the case of an abnormal ending, “ADJUSTMENT ERROR” is shown.
Press the [CANCEL] button to clear the error display. When it is cleared, the control panel display will return to the ready state. Then, check if the patch chart on the original glass is placed in the wrong direction or if it is placed inclined on the original glass, and then repeat step (3) and afterward.

3.2.2 Density adjustment

The center density and the density variation controlled by density adjustment keys can be adjusted as follows.

<Adjustment Mode (05)>

Color mode	Original mode					Item to be adjusted	Remarks
	Text/ Photo*	Text*	Printed Image*	Photo	Map		
mono Color	1585	1586	1587	1588	1589	center value	The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128)

* If this setting has been changed, the density levels of “Gray scale” or “Photo” in the black mode may be affected.

<Adjustment Mode (05)>

Color mode	Original mode			Item to be adjusted	Remarks
	Text/Photo	Text	User custom		
Black	503	504	931	Manual density mode center value	The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128)
	508	510	937	Manual density mode dark step value	The larger the value is, the darker the dark side becomes. Acceptable values: 0 to 255 (Default: 20)
	505	507	934	Manual density mode light step value	The larger the value is, the lighter the light side becomes. Acceptable values: 0 to 255 (Default: 20)
	514	515	940	Automatic density mode	The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128)

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustments according to the following procedure.

Note:
Be sure that this adjustment is made after performing 📖 P.3-32 "3.2.1 Automatic gamma adjustment".

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in a code and press the [START] button.
(3) Key in an adjustment value.
(To correct the value once keyed in, press the [CLEAR] button.)
(4) Press the [ENTER] or [INTERRUPT] button to store the value. → The equipment goes back to the ready state.
(5) Press the [FAX] button and then press the [START] button to make a test copy.
(6) If the desired image quality has not been attained, repeat step (2) to (5).

3.2.3 Color balance adjustment

The color balance is adjusted by adjusting the density of each color at the Full Color Mode. The adjustment is performed by selecting its density area from the following: low density, medium density and high density.

<Adjustment Mode (05)>

Color	Original mode						Item to be adjusted	Remarks
	Text/ Photo	Text	Printed Image	Photo	Map	User Custom		
Yellow	1779-0	1780-0	1781-0	1782-0	1783-0	7980-0	Low density	The larger the value is, the darker the color to be adjusted becomes. Acceptable values: 0 to 255 (Default: 128)
	1779-1	1780-1	1781-1	1782-1	1783-1	7980-1	Medium density	
	1779-2	1780-2	1781-2	1782-2	1783-2	7980-2	High density	
Magenta	1784-0	1785-0	1786-0	1787-0	1788-0	7981-0	Low density	
	1784-1	1785-1	1786-1	1787-1	1788-1	7981-1	Medium density	
	1784-2	1785-2	1786-2	1787-2	1788-2	7981-2	High density	
Cyan	1789-0	1790-0	1791-0	1792-0	1793-0	7982-0	Low density	
	1789-1	1790-1	1791-1	1792-1	1793-1	7982-1	Medium density	
	1789-2	1790-2	1791-2	1792-2	1793-2	7982-2	High density	
Black	1794-0	1795-0	1796-0	1797-0	1798-0	7983-0	Low density	
	1794-1	1795-1	1796-1	1797-1	1798-1	7983-1	Medium density	
	1794-2	1795-2	1796-2	1797-2	1798-2	7983-2	High density	

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustments according to the following procedure.

Notes:

- Be sure that this adjustment is made after performing 📖 P.3-32 "3.2.1 Automatic gamma adjustment".
- Changing the adjustment setting influences the adjacent density area slightly.
  E.g.: When the value of the medium density is larger, the adjacent areas in the low density and high density range will become slightly darker.

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in the code of the mode to be adjusted (color and original mode) and press the [START] button.
(3) Select the density area to be adjusted with digital keys (0, 1 or 2), and press the [START] button.
  0: Low density (L)
  1: Medium density (M)
  2: High density (H)
(4) Key in an adjustment value. (To correct the value once keyed in, press the [CLEAR] button.)
(5) Press the [ENTER] or [INTERRUPT] button to store the value in memory.
  → The equipment goes back to the ready state.
(6) For resetting the value, repeat step (2) to (5).
(7) Press the [FAX] button and then press the [START] button to make a test copy.
(8) If the desired image quality has not been attained, repeat step (2) to (7).

<Range of the density area (low density, medium density, high density)>

The color from 10 to 30 (low density), from 40 to 70 (medium density) and from 80 to 100 (high density) in No. TCC-1 chart can be used as a guide for the range of the density area influenced by the change of the adjustment value (low density, medium density, high density).

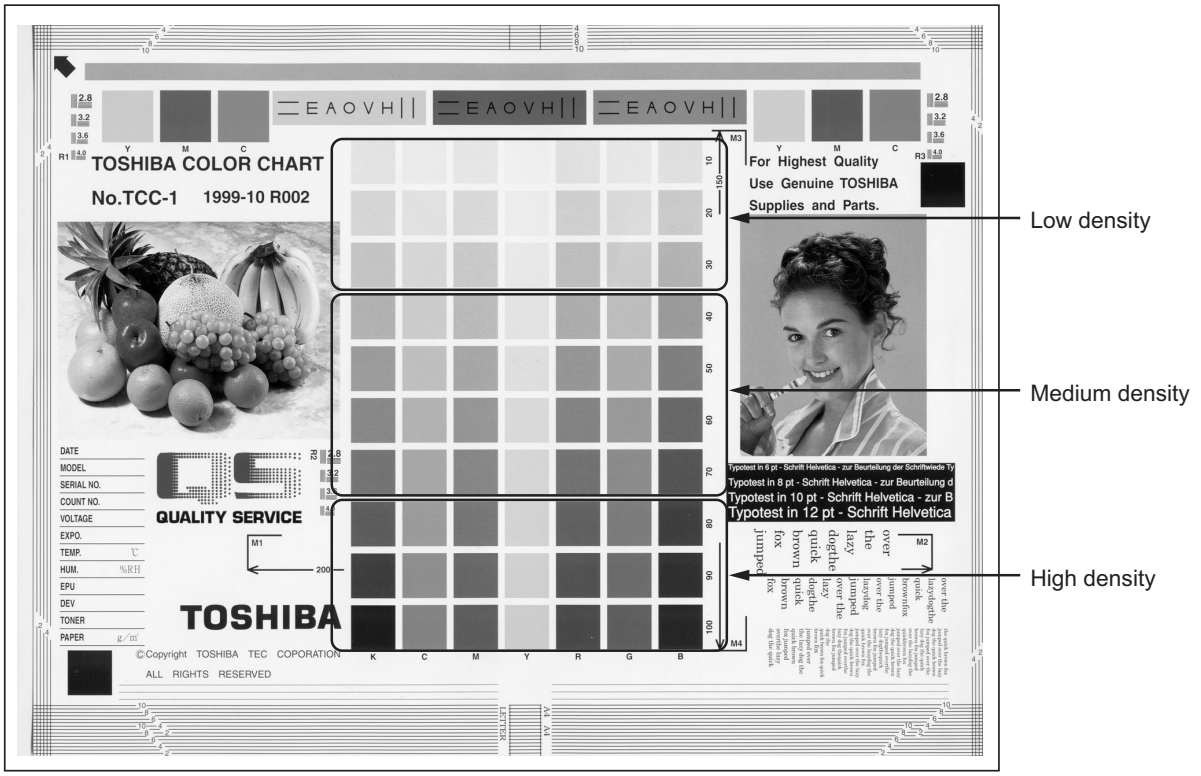


Fig. 3-23

3.2.4 Gamma balance adjustment

The density adjustment at the Black Mode is performed by selecting its density area from the following: low density, medium density and high density.

<Adjustment Mode (05)>

Original mode								Item to be adjusted	Remarks
Text/ Photo	Text	Photo	Gray Scale	ACS/ Black/ Text/ Photo	ACS/ Black/ Text	ACS/ Black/ Photo	User custo m		
590-0	591-0	592-0	7956-0	7957-0	7958-0	7959-0	949-0	Low density	The larger the value is, the density of the item to be adjusted becomes darker. Acceptable values: 0 to 255 (Default: 128)
590-1	591-1	592-1	7956-1	7957-1	7958-1	7959-1	949-1	Medium density	
590-2	591-2	592-2	7956-2	7957-2	7958-2	7959-2	949-2	High density	

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustments according to the following procedure.

Note:
Be sure that this adjustment is made after performing 📖 P.3-32 "3.2.1 Automatic gamma adjustment".

<Procedure>
The procedure is the same as that of 📖 P.3-35 "3.2.3 Color balance adjustment".

3.2.5 Background adjustment

The density of background can be adjusted as follows.

<Adjustment Mode (05)>

Color mode	Original mode							Item to be adjusted	Remarks
	Text/ Photo	Text	Printed Image	Photo	Map	user custo m	Gray scale		
Full Color	1688	1689	1690	1691	1692	7762	---	Automatic density adjustment for background	The larger the value is, the lighter the background becomes. Acceptable values: 0 to 255 (Default: 128)
	1698	1699	1700	1701	1702	7763	---	Manual density adjustment for background	
Mono Color	7754	7755	7756	7757	7758	---	---	Automatic density adjustment for background	
Twin color mode	7759	7760	7761	---	---	---	---	Manual density adjustment for background	
ACS black	7676	7677	---	---	---	---	---	Automatic density adjustment for background	
	7678	7679	---	---	---	---	---	Manual density adjustment for background	
Black	7033	7034	7043	---	---	7279	7044	Automatic density adjustment for background	
	7041	7042	7048	---	---	7280	7049	Manual density adjustment for background	

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment using the following procedure.

<Procedure>

The procedure is the same as that of 📖 P.3-34 "3.2.2 Density adjustment".

3.2.6 Judgment threshold for ACS (common for copy & network scan)

The judgment level is adjusted for the automatic identification of whether the original set on the glass is black or color. Namely, this is to adjust the judgment level used when “Auto Color” is selected at a color mode. The same adjustment value will be applied to all cases of the copying, network scanning, RADF scanning and manual scanning (using the original glass) simultaneously.

<Adjustment Mode (05)>

Code	Item to be adjusted	Contents
1675	Judgment threshold for ACS	The larger the value is, the more an original tends to be judged as black even at the Auto Color Mode. The smaller value is, the more it tends to be judged as color. Acceptable values: 0 to 255 (Default: 70)

Make a test copy and compare the image obtained with the current settings; if necessary and make adjustment.

<Procedure>
The procedure is the same as that of 📖 P.3-34 "3.2.2 Density adjustment".

3.2.7 Sharpness adjustment

If you want to make copy images look softer or sharper, perform the following adjustment. The adjustment can be made for each of the color modes and original modes independently.

<Adjustment Mode (05)>

Code	Color mode	Original mode	Contents
1737	Full Color	Text/Photo	The larger the value is, the sharper the image becomes; while the smaller the value is, the softer the image becomes. The smaller the value is, the less moire tends to appear. Acceptable values: 0 to 255 (Default: 128)
1738		Text	
1739		Printed Image	
1740		Photo	
1741		Map	
7795		User custom	
604	Black	Text/Photo	
605		Text	
606		Photo	
922		User custom	
7809		Gray scale	
1757	Auto Color	Text/Photo	
7807		Text	
7808		Photo	

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment.

Note:
You have to make adjustment by balancing between moire and sharpness.

<Procedure>
The procedure is the same as that of 📖 P.3-34 "3.2.2 Density adjustment".

3.2.8 Setting range correction

The values of the background peak in the range correction at the Black Mode can be switched to “varied” or “fixed” in the following codes.
If they are fixed, the range correction is performed with standard values.
The values of the background peak affects the reproduction of the background density, and the values of the text peak affects that of the text density.

<Adjustment Mode (05)>

Color mode	Original mode							Item to be adjusted	Remarks
	Text/ Photo	Text	Printed Image	Photo	Map	User Custom	Gray Scale		
Full color	7767	7768	7769	7770	7771	7777	---	Automatic density mode	0:Background peak/fixed 1:Background peak/varied
	7772	7773	7774	7775	7776	7778	---	Manual density mode	
ACS black mode	7667	7668	---	---	---	---	---	Automatic density mode	
	7669	7670	---	---	---	---	---	Manual density mode	
Black	7283	7284	---	---	---	7236	7295	Automatic density mode	
	7286	7287	---	---	---	7237	7296	Manual density mode	

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment.

<Procedure>
The procedure is the same as that of 🕮 P.3-34 "3.2.2 Density adjustment".

3.2.9 Adjustment of smudged/faint text

The smudge/faint text at a Black Mode can be set at the following codes.

<Adjustment Mode (05)>

Color mode	Original mode			Item to be adjusted	Remarks
	Text/ Photo	Text	User custom		
Black	648	649	925	Adjustment of smudged/ faint text	When the value decreases, the faint text is improved. When the value increases, the smudged text is improved. Acceptable values: 0 to 4 (Default: 2)
ACS black	7102	7103	---		

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment.

Note:

Remember the image specifications and life span of the replacing parts may not meet the standard when the setting value is changed from the default value.

<Procedure>

The procedure is the same as that of 📖 P.3-34 "3.2.2 Density adjustment".

3.2.10 Color Adjustment of Marker

The color of the one touch adjustment “MARKER” can be adjusted so that any marker colors already on the original can be distinguished.

<Adjustment Mode (05)>

Code	Item to be adjusted	Relation between the adjustment value and the color (Acceptable values: 0 to 6)		
		0 to 2	3 (Default)	4 to 6
1769-0	Yellow	The smaller the value is, the more reddish the color becomes.	Yellow	The larger the value is, the more greenish the color becomes.
1769-1	Magenta	The smaller the value is, the more bluish the color becomes.	Magenta	The larger the value is, the more reddish the color becomes.
1769-2	Cyan	The smaller the value is, the more greenish the color becomes.	Cyan	The larger the value is, the more bluish the color becomes.
1769-3	Red	The smaller the value is, the closer to Magenta the color becomes.	Red	The larger the value is, the more yellowish the color becomes.
1769-4	Green	The smaller the value is, the more yellowish the color becomes.	Green	The larger the value is, the closer to Cyan the color becomes.
1769-5	Blue	The smaller the value is, the closer to Cyan the color becomes.	Blue	The larger the value is, the closer to Magenta the color becomes.

Note:

The color may not always be reproduced precisely due to the characteristics of the fluorescent ink.

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in a code and press the [START] button.
(3) Key in a sub-code and press the [START] button.
(4) Key in an adjustment value.
(To correct a value once keyed in, press the [CLEAR] button.)
(5) Press the [ENTER] or [INTERRUPT] button to store the value. → The equipment goes back to the ready state.
(6) Turn the power OFF and back ON in the normal mode. Then make a copy in the one touch adjustment “MARKER” mode.
(7) If the desired image quality has not been attained, repeat step (1) to (6).

3.2.11 Beam level conversion setting

The beam level for 4 divided smoothing is set at the Black Mode. This adjustment enables to adjust the dot size.

<Adjustment Mode (05)>

Code	Item to be adjusted	Remarks
667-0	Beam level 0/4	The smaller the value is, the smaller the beam width becomes. Therefore, the smaller dot is reproduced accordingly. Acceptable values: 0 to 255 (Default: Level 0/4: 0, Level 1/4: 63, Level 2/4: 127, Level 3/4: 191, Level 4/4: 255)
667-1	Beam level 1/4	
667-2	Beam level 2/4	
667-3	Beam level 3/4	
667-4	Beam level 4/4	

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustments according to the following procedure.

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in a code and press the [START] button.
(3) Key in a sub-code and press the [START] button.
(4) Key in an adjustment value.
(To correct a value once keyed in, press the [CLEAR] button.)
(5) Press the [ENTER] or [INTERRUPT] button to store the value. → The equipment goes back to the ready state.
(6) Press the [FAX] button and then press the [START] button to make a test copy.
(7) If the desired image quality has not been attained, repeat step (2) to (6).

Notes:

1. When this adjustment was performed, perform “Automatic gamma adjustment (black) (05-580)” as well because the density reproduction level in the black mode will vary. In addition to performing the code 05-580, perform the code 05-1642 or 05-1644 individually because the result of this adjustment will not be reflected to the color & black integrated pattern.
2. After this adjustment, set “1” in 08-595 so that the correction result of the Black Mode is not reflected on “Automatic Calibration”.
3. The setting value must increase as the beam level number (0 to 4) becomes higher. Do not increase this order when setting the values.
4. Usually, beam level 4 / 4 is most effective on black mode.

3.2.12 Maximum toner density adjustment to paper type

The maximum toner amount adhering to the paper can be controlled.

<Adjustment Mode (05)>

Code	Paper type	Remarks
1612	Plain paper 1	The smaller the value is, the toner amount adhered decreases of the high density area (ex. prevention of fusing offsetting, etc.). Acceptable values: 0 to 255 (Default: Plain paper: 255, Recycled paper: 255, Thick paper 1: 255, Thick paper 2: 255, Thick paper 3: 255, Thick paper 4: 255, special paper 1: 255, special paper 2: 255, OHP film: 240)
7903	Plain paper 2	
1619	Recycled paper	
1613	Thick paper 1	
1614	Thick paper 2	
1615	Thick paper 3	
1620	Thick paper 4	
1617	Special paper 1	
1618	Special paper 2	
1616	OHP film	

Note:
The larger the value is, the more frequently fusing offsetting occurs.

<Procedure>
The procedure is the same as that of 📖 P.3-34 "3.2.2 Density adjustment".

3.2.13 Maximum text density adjustment

The maximum text density of each color at Full Color Mode can be adjusted as follows.

<Adjustment Mode (05)>

Color	Code	Item to be adjusted	Remarks
Yellow	1630	Maximum text density	The larger the value is, the darker the maximum text density of each color to be adjusted becomes. Acceptable values: 0 to 10 (Default: 5)
Magenta	1631		
Cyan	1632		
Black	1633		

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustments according to the following procedure.

Note:
Be sure that this adjustment is made after performing 📖 P.3-32 "3.2.1 Automatic gamma adjustment".

<Procedure>
The procedure is the same as that of 📖 P.3-34 "3.2.2 Density adjustment".

3.2.14 Text/Photo reproduction level adjustment

Text/Photo reproduction level at the Full color mode, Auto color mode and Gray scale mode can be adjusted.
Text/Photo reproduction level adjustment can be switched to “Photo oriented 1”, “Photo oriented 2”, “Text oriented 1” or “Text oriented 2” in the following codes.

<Adjustment Mode (05)>

Mode	Mode	Item to be adjusted	Contents
Text/Photo	User custom		
1725	7841	Text/Photo reproduction level adjustment	0: Default 1: Photo oriented 2 (The printed image reproduction level higher than that of the Photo oriented 1) 2: Photo oriented 1 (The printed image reproduction level higher than that of the Default) 3: Equivalent to the Default 4: Text oriented 1 (The text reproduction level higher than that of the Default) 5: Text oriented 2 (The text reproduction level higher than that of the Text oriented 1)

Notes:

- The text reproduction level is lower when the mode is switched from the default value to the Photo oriented 1 or Photo oriented 2. (The text reproduction level in Photo oriented 2 is lower than that in Photo oriented 1.)
- Changing the setting value from default value to the Text oriented 1 or Text oriented 2 causes image noise in the printed photo image with few lines per inch. (Photo oriented 2 causes more image noise than Photo oriented 1.)

<Procedure>
The procedure is the same as that of 📖 P.3-34 "3.2.2 Density adjustment".

3.2.15 Black reproduction switching at the Twin color copy mode

Black reproduction can be switched at the Twin color (Black/Red) copy mode.

<Adjustment Mode (05)>

Mode	Code	Item to be adjusted	Remarks
Twin color copy mode (Black/Red)	1761	Black reproduction switching	0: Default 1: Black reproduction oriented

Note:

The boundary between Red and Black may not be smooth when the setting value is “1”.

<Procedure>
The procedure is the same as that of 📖 P.3-34 "3.2.2 Density adjustment".

3.2.16 Black header density level adjustment

The density level of headers in the black mode is adjusted.

<Adjustment Mode (05)>

Mode	Code	Original mode	Remarks
Full Color/ ACS color	7811	Text/Photo	The larger the value is, the darker the headers become. However, the density level differs depending on the modes. Acceptable values: 0 to 8 (Default: 0) Refers to the table specified by default when 0 is set. The default table is: Text/Photo:4 Text:5 User custom:4
	7812	Text	
Full Color	7816	User custom	

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment.

<Procedure>
The procedure is the same as that of 📖 P.3-34 "3.2.2 Density adjustment".

3.2.17 Black area adjustment in twin color copy mode

<Adjustment Mode (05)>

Mode	Code	Item to be adjusted	Remarks
Twin color mode with selected colors	7641-0	High density	The larger the value is, the larger the area recognized as black in the original becomes. The smaller the value is, the larger the area recognized as the color other than black becomes. Acceptable values: 0 to 255 (Default: 128)
	7641-1	Medium density	
	7641-2	Low density	
Twin color mode (Black and red)	7642-0	High density	The larger the value is, the larger the black area becomes. The smaller the value is, the larger the red area becomes. Acceptable values: 0 to 255 (Default: 128)
	7642-1	Medium density	
	7642-2	Low density	

<Procedure>
The procedure is the same as that of 📖 P.3-35 "3.2.3 Color balance adjustment".

3.2.18 Judgment threshold adjustment for blank original

The judgment level is adjusted for automatic identification of whether the original set is blank or not.
This adjustment is made when “Omit Blank Page” is selected on the control panel.
The adjustment value is simultaneously applied to all modes at PPC and NW scanning.

<Adjustment Mode (05)>

Code	Item to be adjusted	Remarks
7618	Judgment threshold adjustment for blank original	The larger the value is, the more an original tends to be judged as a bank sheet. Acceptable values: 0 to 255 (Default: 128)

3.2.19 Background offsetting adjustment for ADF

The background level for scanning originals with the ADF is adjusted when the background fogging at the scanning of the manually-set original and the original used with the ADF is different.This is to adjust the level of the background image removed when the scanning of the originals with the ADF is performed.

<Adjustment Mode (05)>

Color mode	Code	Remarks
Full Color	7764	The larger the value is, the lighter the background density becomes. Acceptable values: 0 to 255 (Default: 128)
Mono Color	7765	
Twin Color mode	7766	
ACS Black	7675	
Black	7025	

3.3 Image Quality Adjustment (Printing Function)

3.3.1 Automatic gamma adjustment

When the reproduction of gradation is not appropriate, the gradation reproducibility of all colors Y, M, C and K can be corrected by performing this automatic gamma adjustment. In case the gradation reproduction of the image checked is not satisfactory, make this adjustment as described below at parts replacement.

1. When unpacking or any of the following parts has been replaced, be sure to make this adjustment:
   - Photoconductive drum
   - Developer material
   - Laser optical unit
   - Transfer belt
   - 1st transfer roller
   - Drum cleaning blade
   - Needle electrode
   - Main charger grid
   - Image position aligning sensor
   - Image quality sensor
   - SRAM board (LGC board, SYS board)

2. When any of the following parts are replaced or adjusted, make a print and check the image to determine if adjustment is necessary:
   - 2nd transfer roller

   Note:
   Be sure that this adjustment be made after performing the image adjustment in 📖 P.3-4 "3.1.3 Performing Image Quality Control (IQC)" and 📖 P.3-7 "3.1.5 Image Dimensional Adjustment (General description)".

<Adjustment Mode (05)>

Code (600dpi)	Code (1200dpi)	Paper type	Remarks
1004-0	1005-0	Plain paper 1	When the reproduction of gradation is not appropriate, the gradation reproducibility of all colors Y, M, C and K can be corrected by performing this automatic gamma adjustment.
1004-1	1005-1	Plain paper 2	
1004-2	1005-2	Recycled paper	
1004-3	1005-3	Thick paper 1	
1004-4	1005-4	Thick paper 2	
1004-5	1005-5	Thick paper 3	
1004-6	1005-6	Thick paper 4	
1004-7	1005-7	Special paper 1	
1004-8	1005-8	Special paper 2	
1008	1009	All type paper*	

* If the code 1008 (600dpi) or 1009 (1200dpi) is performed, the adjustment will be applied to all paper types.

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON. → Adjustment Mode

(2) Select the A4/LT drawer. Key in the pattern number and press the [FAX] button to output a “Patch chart for gamma adjustment”

Pattern No.	Paper type	Remarks
70	Plain paper 1	Used when the code 1004-0 is performed (600dpi)
72	Plain paper 2	Used when the code 1004-1 is performed (600dpi)
74	Recycled paper	Used when the code 1004-2 is performed (600dpi)
76	Thick paper 1	Used when the code 1004-3 is performed (600dpi)
78	Thick paper 2	Used when the code 1004-4 is performed (600dpi)
80	Thick paper 3	Used when the code 1004-5 is performed (600dpi)
82	Thick paper 4	Used when the code 1004-6 is performed (600dpi)
84	Special paper 1	Used when the code 1004-7 is performed (600dpi)
86	Special paper 2	Used when the code 1004-8 is performed (600dpi)
230	Plain paper 1	Used when the code 1005-0 is performed (1200dpi)
232	Plain paper 2	Used when the code 1005-1 is performed (1200dpi)
234	Recycled paper	Used when the code 1005-2 is performed (1200dpi)
236	Thick paper 1	Used when the code 1005-3 is performed (1200dpi)
238	Thick paper 2	Used when the code 1005-4 is performed (1200dpi)
240	Thick paper 3	Used when the code 1005-5 is performed (1200dpi)
242	Thick paper 4	Used when the code 1005-6 is performed (1200dpi)
244	Special paper 1	Used when the code 1005-7 is performed (1200dpi)
246	Special paper 2	Used when the code 1005-8 is performed (1200dpi)

Note:
However, this is applied to all paper types when 05-1008 (600dpi) or 05-1009 (1200dpi) is performed.

Code	Remarks
08-9059	0: No paper selecting buttons displayed 1: Paper selecting buttons displayed. (For both Copy and Printer)

(3) Place the patch chart for adjustment printed in step (2) face down on the original glass, with its side, on which two black squares are present, aligned against the original scale.

(4) Key in a code and press the [START] button. → The scanner reads the chart automatically and performs automatic gamma adjustment calculation.

(5) When the adjustment has finished normally, “ENTER” is shown.
Press the [ENTER] button to have the adjustment results reflected.
(To cancel the reflection of adjustment results, press the [CANCEL] button.)
In the case of an abnormal ending, “ADJUSTMENT ERROR” is shown. Press the [CANCEL] button to clear the error display.
When it is cleared, the control panel display will return to the ready state. Then, check if the patch chart on the original glass is placed in the wrong direction or if it is placed inclined on the original glass, and then repeat step (3) and afterward.

3.3.2 Gamma balance adjustment (Black Mode)

The gamma balance is adjusted by adjusting the density at the Black Mode. The adjustment is performed by selecting its density area from the following: low density, medium density and high density.

<Adjustment Mode (05)>

Color mode	Smooth (PS)	Detail (PS)	Smooth (PCL)	Detail (PCL)	Smooth (XPS)	Detail (XPS)	Item to be adjusted	Remarks
Black (600dpi)	7315-0	7316-0	7317-0	7318-0	7319-0	7320-0	Low density	The larger the value is, the density of the item to be adjusted becomes darker. Acceptable values: 0 to 255 (Default: 128)
	7315-1	7316-1	7317-1	7318-1	7319-1	7320-1	Medium density	
	7315-2	7316-2	7317-2	7318-2	7319-2	7320-2	High density	
Black (1200dpi)	7309-0	7310-0	---	---	---	---	Low density	The larger the value is, the density of the item to be adjusted becomes darker. Acceptable values: 0 to 255 (Default: 128)
	7309-1	7310-1	---	---	---	---	Medium density	
	7309-2	7310-2	---	---	---	---	High density	

Notes:

- Be sure that this adjustment be made after performing 📖 P.3-47 "3.3.1 Automatic gamma adjustment".
- Changing the adjustment setting influences the adjacent density area slightly.
  E.g.: When the value of the medium density is larger, the adjacent areas in the low density and high density range will become slightly darker.

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in the codes to be adjusted (language and screen) and press the [START] button.
(3) Key in the value corresponding to the density area to be adjusted (0, 1 or 2) and press the [START] button.
  0: Low density (L) 1: Medium density (M) 2: High density (H)
(4) Key in the adjustment value. (To correct the value once keyed in, press the [CLEAR] button.)
(5) Press the [ENTER] or [INTERRUPT] button to store the value in memory. → The equipment goes back to the ready state.
(6) For resetting the value, repeat step (2) to (5).
(7) Let the equipment restart and perform the printing job.
(8) If the image density has not been attained, repeat step (1) to (7).

<Range of the density area (low density, medium density, high density)>
The color from the 1st to the 7th stage (low density), from the 8th to the 11th stage (medium density) and from the 12th to the 13th stage (high density) in “Patch chart for gamma adjustment ([71] [FAX])” output in “3.3.1Automatic gamma adjustment” can be used as a guide for the range of the density area influenced by the adjustment with the change of the adjustment value (low density, medium density, high density).

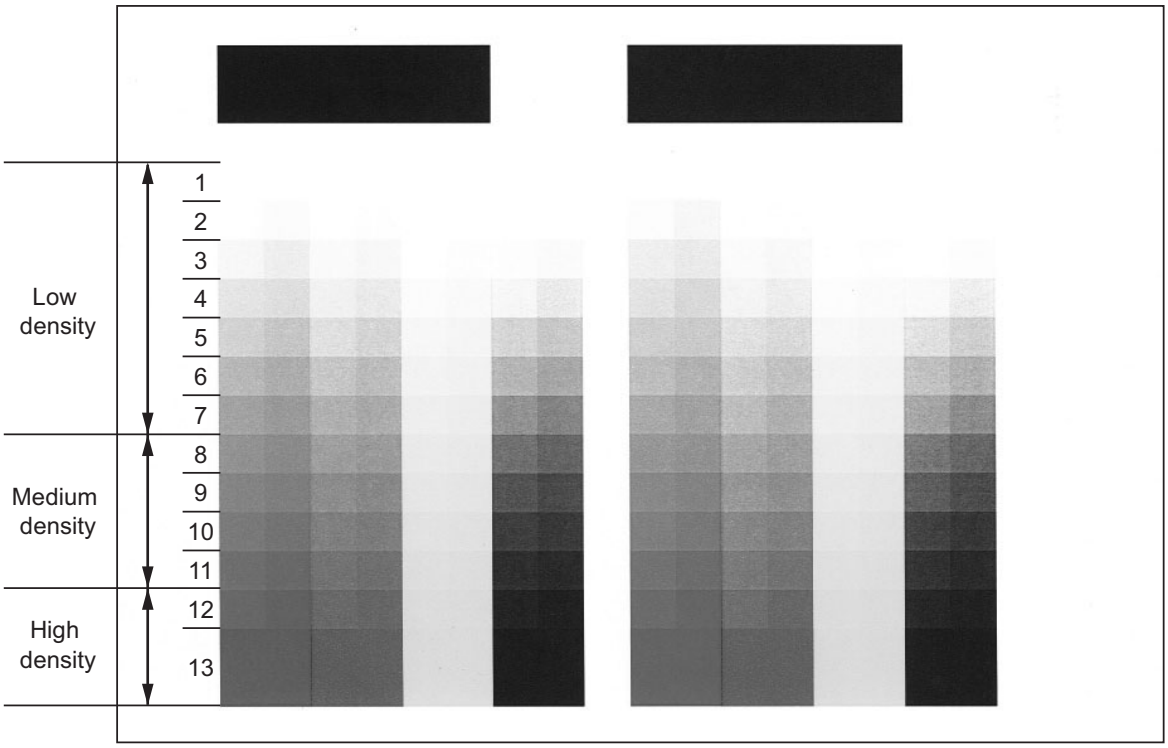


Fig. 3-24

3.3.3 Color balance adjustment

The color balance is adjusted by adjusting the density of each color. The adjustment is performed by selecting its density area from the following: low density, medium density and high density.

<Adjustment Mode (05)>

Color	PS		PCL		XPS		Density	Remarks
	Smooth	Detail	Smooth	Detail	Smooth	Detail		
Yellow (600dpi)	8050-0	8054-0	8058-0	8062-0	8042-0	8046-0	Low	The larger the value is, the darker the color to be adjusted becomes. Acceptable values: 0 to 255 (Default: 128)
	8050-1	8054-1	8058-1	8062-1	8042-1	8046-1	Medium	
	8050-2	8054-2	8058-2	8062-2	8042-2	8046-2	High	
Magenta (600dpi)	8051-0	8055-0	8059-0	8063-0	8043-0	8047-0	Low	
	8051-1	8055-1	8059-1	8063-1	8043-1	8047-1	Medium	
	8051-2	8055-2	8059-2	8063-2	8043-2	8047-2	High	
Cyan (600dpi)	8052-0	8056-0	8060-0	8064-0	8060-0	8048-0	Low	
	8052-1	8056-1	8060-1	8064-1	8060-1	8048-1	Medium	
	8052-2	8056-2	8060-2	8064-2	8060-2	8048-2	High	
Black (600dpi)	8053-0	8057-0	8061-0	8065-0	8061-0	8049-0	Low	
	8053-1	8057-1	8061-1	8065-1	8061-1	8049-1	Medium	
	8053-2	8057-2	8061-2	8065-2	8061-2	8049-2	High	
Yellow (1200dpi)	8268-0	8272-0	---	---	---	---	Low	The larger the value is, the darker the color to be adjusted becomes. Acceptable values: 0 to 255 (Default: 128)
	8268-1	8272-1	---	---	---	---	Medium	
	8268-2	8272-2	---	---	---	---	High	
Magenta (1200dpi)	8269-0	8273-0	---	---	---	---	Low	
	8269-1	8273-1	---	---	---	---	Medium	
	8269-2	8273-2	---	---	---	---	High	
Cyan (1200dpi)	8270-0	8274-0	---	---	---	---	Low	
	8270-1	8274-1	---	---	---	---	Medium	
	8270-2	8274-2	---	---	---	---	High	
Black (1200dpi)	8271e-0	8275-0	---	---	---	---	Low	
	8271-1	8275-1	---	---	---	---	Medium	
	8271-2	8275-2	---	---	---	---	High	

Notes:

- Be sure that this adjustment be made after performing 📖 P.3-47 "3.3.1 Automatic gamma adjustment".
- Changing the adjustment setting influences the adjacent density area slightly.
  E.g.: When the value of the medium density is larger, the adjacent areas in the low density and high density range will become slightly darker.

<Procedure>
The procedure is the same as that of 📖 P.3-49 "3.3.2 Gamma balance adjustment (Black Mode)".

<Range of the density area (low density, medium density, high density)>
The color from the 1st to the 7th stage (low density), from the 8th to the 11th stage (medium density) and from the 12th to the 13th stage (high density) in “Patch chart for gamma adjustment ([71] [FAX])” output in “3.3.1Automatic gamma adjustment” can be used as a guide for the range of the density area influenced by the adjustment with the printer driver and the change of the adjustment value (low density, medium density, high density (Refer to P.3-50 "Fig. 3-24").

3.3.4 Adjustment of faint text

The faint text can be improved in the following codes.

<Adjustment Mode (05)>

Black mode			Color mode			Remarks
PS	PCL	XPS	PS	PCL	XPS	
7340	7341	7342	8130	8131	8132	When the small characters or fine lines in a halftone image are faint, they can be improved by increasing the value to raise the density level. Acceptable values: 0 to 8 (Default: 0)

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in the codes to be adjusted and press the [START] button.
(3) Key in the adjustment value. (To correct the value once keyed in, press the [CLEAR] button.)
(4) Press the [ENTER] or [INTERRUPT] button to store the value in memory. → The equipment goes back to the ready state.
(5) For resetting the value, repeat step (2) to (4).
(6) Let the equipment restart and perform the printing job.
(7) If the desired image has not been attained, repeat step (1) to (6).

3.3.5 Upper limit value at Toner Saving Mode

The upper limit value is adjusted at the Toner Saving Mode.

<Adjustment Mode (05)>

Color	PS	PCL	XPS	Remarks
Black mode (600dpi)	664-0	664-1	664-2	The smaller the value is, the lighter the density of image becomes. Acceptable values: 0 to 255
Color mode (600dpi)	1055-0	1055-1	1055-2	
Black mode (1200dpi)	7302-0	7302-1	7302-2	
Color mode (1200dpi)	8161-0	8161-1	8161-2	

<Procedure>

The procedure is the same as that of 📖 P.3-49 "3.3.2 Gamma balance adjustment (Black Mode)".

3.3.6 Maximum toner density adjustment (OHP)

The maximum toner amount adhering can be controlled.

<Adjustment Mode (05)>

Code	Paper type	Remarks
1050	OHP film (600dpi)	The smaller the value is, the toner amount adhered decreases of the high density area (ex. prevention of fusing offsetting, etc.). Acceptable values: 0 to 255
8149	OHP film (1200dpi)	

<Procedure>

The procedure is the same as that of 📖 P.3-52 "3.3.4 Adjustment of faint text".

Note:

The larger the value is, the more frequently fusing offsetting occurs.

3.3.7 Fine line enhancement switchover

<Adjustment Mode (05)>

<e-Bridge>

Black mode			Color mode			Remarks
PS	PCL	XPS	PS	PCL	XPS	
7322-0	7322-1	7322-2	8102-0	8102-1	8102-2	Whether fine lines are enhanced or not can be switched. 0: OFF 1: ON (default)

<EFI>

Black mode			Color mode			Remarks
PS	PCL	XPS	PS	PCL	XPS	
7323-0	7323-1	7323-2	8103-0	8103-1	8103-2	Whether fine lines are enhanced or not can be switched. 0: OFF 1: ON (default)

<Procedure>

The procedure is the same as that of 📖 P.3-49 "3.3.2 Gamma balance adjustment (Black Mode)".

3.3.8 “PureBlack/PureGray” threshold adjustment (PS)

<Adjustment Mode (05)>

Original mode					Item to be adjusted	Remarks
General	Photographic	Presentation	Line art	Advanced		
8252-0	8252-1	8252-2	8252-3	8252-4	Text	The larger the value is, the wider the color range to be printed only with the black toner becomes. The smaller the value is, the narrower this color range becomes. Acceptable values: 1 to 255
8253-0	8253-1	8253-2	8253-3	8253-4	Graphics	
8254-0	8254-1	8254-2	8254-3	8254-4	Image	

<Procedure>

The procedure is the same as that of 📖 P.3-49 "3.3.2 Gamma balance adjustment (Black Mode)".

3.3.9 “PureBlack/PureGray” threshold adjustment (PCL)

<Adjustment Mode (05)>

Original mode				Item to be adjusted	Remarks
General	Photographic	Presentation	Line art		
8210-0	8210-1	8210-2	8210-3	Text	The larger the value is, the wider the color range to be printed only with the black toner becomes. The smaller the value is, the narrower this color range becomes. Acceptable values: 1 to 255
8211-0	8211-1	8211-2	8211-3	Graphics	
8212-0	8212-1	8212-2	8212-3	Image	

<Procedure>

The procedure is the same as that of 📖 P.3-49 "3.3.2 Gamma balance adjustment (Black Mode)".

3.3.10 “PureBlack/PureGray” threshold adjustment (XPS)

<Adjustment Mode (05)>

Original mode					Item to be adjusted	Remarks
General	Photographic	Presentation	Line art	Advanced		
8249-0	8249-1	8249-2	8249-3	8249-4	Text	The larger the value is, the wider the color range to be printed only with the black toner becomes. The smaller the value is, the narrower this color range becomes. Acceptable values: 1 to 255
8250-0	8250-1	8250-2	8250-3	8250-4	Graphics	
8251-0	8251-1	8251-2	8251-3	8251-4	Image	

<Procedure>

The procedure is the same as that of 📖 P.3-49 "3.3.2 Gamma balance adjustment (Black Mode)".

3.3.11 “PureBlack/PureGray” threshold adjustment (Twin color print)

<Adjustment Mode (05)>

Code	Paper type	Remarks
8213	Text	The larger the value is, the wider the color range to be printed only with the black toner becomes. The smaller the value is, the narrower this color range becomes. Acceptable values: 1 to 255
8214	Graphics	
8215	Image	

<Procedure>

The procedure is the same as that of 📖 P.3-52 "3.3.4 Adjustment of faint text".

3.3.12 Toner limit threshold adjustment

<Adjustment Mode (05)>

<600dpi>

Smooth (PS/PCL/XPS)	Detail (PS/PCL/XPS)	Paper type	Remarks
8071-0	8070-0	Plain paper 1	The larger the value is, the darker the image in the high density area becomes. Acceptable values: 0 to 255
8071-1	8070-1	Plain paper 2	
8071-2	8070-2	Recycled paper	
8071-3	8070-3	Thick paper 1	
8071-4	8070-4	Thick paper 2	
8071-5	8070-5	Thick paper 3	
8071-6	8070-6	Thick paper 4	
8071-7	8070-7	Special paper 1	
8071-8	8070-8	Special paper 2	
8071-9	8070-9	OHP film	

<1200dpi>

Smooth (PS)	Detail (PS)	Paper type	Remarks
8090-0	8089-0	Plain paper 1	The larger the value is, the darker the image in the high density area becomes. Acceptable values: 0 to 255
8090-1	8089-1	Plain paper 2	
8090-2	8089-2	Recycled paper	
8090-3	8089-3	Thick paper 1	
8090-4	8089-4	Thick paper 2	
8090-5	8089-5	Thick paper 3	
8090-6	8089-6	Thick paper 4	
8090-7	8089-7	Special paper 1	
8090-8	8089-8	Special paper 2	
8090-9	8089-9	OHP film	

3.3.13 Screen switchover

<Adjustment Mode (05)>

Code	Remarks
8176	The level of screen ruling shown in the screen selecting menu of the printer driver can be switched. 0: High screen ruling value (smoother image) 1: Low screen ruling value (rougher image)
8179 (EFI Printer Board)	

<Procedure>

The procedure is the same as that of 📖 P.3-52 "3.3.4 Adjustment of faint text".

3.3.14 Sharpness adjustment

This adjustment is applied when images need to be softer or sharper.
The adjustment is available for each original mode.

<Adjustment Mode (05)>

Black	General	Photo	Presentation	Line art	EFI	Item to be adjusted	Remarks
8118-0	8110-0	8111-0	8112-0	8113-0	8119-0	Text	The larger the value is, the sharper the image becomes. The smaller the value is, the softer the image becomes. Acceptable values: 0 to 255 (Default: 128)
8118-1	8110-1	8111-1	8112-1	8113-1	8119-1	Graphics	
8118-2	8110-2	8111-2	8112-2	8113-2	8119-2	Image	

<Procedure>
The procedure is the same as that of 📖 P.3-49 "3.3.2 Gamma balance adjustment (Black Mode)".

3.3.15 Adjustment of smudged text (1200 dpi)

The smudged text can be improved in the following codes.

<Adjustment Mode (05)>

Code	Remarks
654	The larger the value is, the lighter the small text and fine lines become and the more smudged text is suppressed. 0: Smudged text is suppressed most 9: Faint text is suppressed most Acceptable values: 0 to 9

<Procedure>
The procedure is the same as that of 📖 P.3-52 "3.3.4 Adjustment of faint text".

3.3.16 Thin line width lower limit adjustment

<Adjustment Mode (05)>

Code	Remarks
8240 (600dpi)	Sets the lower limit value of the thin line width when “Distinguish Thin Lines” is selected in the screen selecting menu of the printer driver. The larger the value is, the thicker (darker) the thin line becomes. Acceptable values: 1 to 9 (Default: 2(600dpi), 4(1200dpi))
8241 (1200dpi)	

<Procedure>
The procedure is the same as that of 📖 P.3-52 "3.3.4 Adjustment of faint text".

3.3.17 Color/black judgment setting for twin color printing images

<Adjustment Mode (05)>

Code	Remarks
8218	Sets whether or not to replace the image object with black at the time of twin color printing. 0: OFF 1: ON (replacing with black)

<Procedure>
The procedure is the same as that of 📖 P.3-52 "3.3.4 Adjustment of faint text".

3.3.18 Background adjustment

The density of background can be adjusted as follows.

<Adjustment Mode (05)>

Color mode	PS		PCL		XPS		Remarks
	Smooth	Detail	Smooth	Detail	Smooth	Detail	
Color (600dpi)	8010-0	8013-0	8010-1	8013-1	8010-2	8013-2	The larger the value, the darker the background becomes. The smaller the value, the lighter the background becomes. Acceptable value: 0 to 255 (Default: 128)
Twin color (600dpi)	8011-0	8014-0	8011-1	8014-0	8011-2	8014-2	
Black (600dpi)	8012-0	8015-0	8012-1	8015-1	8012-2	8015-2	
Color (1200dpi)	8016-0	8019-0	8016-1	8019-1	8016-2	8019-2	
Twin color (1200dpi)	8017-0	8020-0	8017-1	8020-1	8017-2	8020-2	
Black (1200dpi)	8018-0	8021-0	8018-1	8021-1	8018-2	8021-2	

<Procedure>

The procedure is the same as that of 📖 P.3-49 "3.3.2 Gamma balance adjustment (Black Mode)".

3.4 Image Quality Adjustment (Scanning Function)

3.4.1 Gamma balance adjustment

The gamma balance at the Black Mode is adjusted by adjusting the density. The adjustment is performed by selecting its density area from the following: low density, medium density and high density.

<Adjustment Mode (05)>

Black				Gray Scale	Item to be adjusted	Remarks
Original mode						
Text/ Photo	Text	Photo	User custom			
880-0	881-0	882-0	7480-0	883-0	Low density	The larger the value is, the density of the item to be adjusted becomes darker. Acceptable values: 0 to 255 (Default: 128)
880-1	881-1	882-1	7480-1	883-1	Medium density	
880-2	881-2	882-2	7480-2	883-2	High density	

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in the code corresponding to the desired original mode and press the [START] button.
(3) Key in the value corresponding to the density area to be adjusted (0, 1 or 2) and press the [START] button.
0: Low density (L), 1: Medium density (M), 2: High density (H)
(4) Key in the adjustment value. (To correct the value once keyed in, press the [CLEAR] button.)
(5) Press the [ENTER] or [INTERRUPT] button to store the value in memory. → The equipment goes back to the ready state.
(6) For resetting the value, repeat step (2) to (5).
(7) Let the equipment restart and perform the scanning job.
(8) If the desired image has not been attained, repeat step (1) to (7).

3.4.2 Density adjustment

Adjusts the center density and the variation of density adjustment buttons.

<Adjustment Mode (05)>

Color Mode	Original mode				Item to be adjusted	Remarks
	Text	Photo	Printed image	User custom		
Color	8340	8341	8342	8380	Manual density center value	The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128)
	8344	8345	8346	8381	Manual density light step value	Sets the changing amount by 1 step at the density adjustment on the control panel. The larger the value is, the lighter the light side becomes. Acceptable values: 0 to 255 (Default: 20)
	8348	8349	8350	8382	Manual density dark step value	Sets the changing amount by 1 step at the density adjustment on the control panel. The larger the value is, the darker the dark side becomes. Acceptable values: 0 to 255 (Default: 20)

<Adjustment Mode (05)>

Black				Gray Scale	Item to be adjusted	Remarks
Original mode						
Text/ Photo	Text	Photo	User custom			
845	846	847	7475	848	Manual density center value	The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128)
860	861	862	7478	863	Automatic density	

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in a code and press the [START] button.
(3) Key in an adjustment value (acceptable values: 0 to 255).
(To correct a value once keyed in, press the [CLEAR] button.)
(4) Press the [ENTER] or [INTERRUPT] button to store the value in memory. → The equipment goes back to the ready state.
(5) Let the equipment restart and perform the scanning.
(6) If the desired image quality has not been attained, repeat step (1) to (5).

3.4.3 Background adjustment (Color Mode)

The adjustment level of background center value is adjusted. The control value of background adjustment button is automatically adjusted to the same level as the adjusted center value.
For example, when the control value of background adjustment key ranges from 0 to 6, the background center value (-2 to +2) is used to be the range from 6 to 14 accordingly.

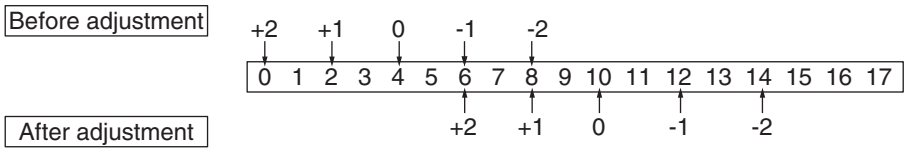


Fig. 3-25

<Adjustment Mode (05)>

Code	Original mode	Remarks
1070	Text	The smaller the value is, the background becomes lighter. Acceptable values: 0 to 50 (Default: 50)
1071	Printed Image	
1072	Photo	
8370	User custom	

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in the codes and press the [START] button.
(3) Key in the adjustment values. Acceptable values: 0 to 50. (To correct the value once keyed in, press the [CLEAR] button.)
(4) Press the [ENTER] or [INTERRUPT] button to store the value in memory. → The equipment goes back to the ready state.
(5) Let the equipment restart and perform the scanning job.
(6) If the desired image has not been attained, repeat step (1) to (5).

3.4.4 Judgment threshold for ACS (common for copy & network scan)

The judgment level is adjusted for the automatic identification of whether the original set on the glass is black or color. Namely, this is to adjust the judgment level used when “Auto Color” is selected at color modes. The same adjustment value will be applied to all cases of the copying, network scanning, RADF scanning and manual scanning (using the original glass) simultaneously.

<Adjustment Mode (05)>

Code	Item to be adjusted	Contents
1675	Judgment threshold for ACS	The larger the value is, the more an original tends to be judged as black even at the Auto Color Mode. The smaller the value is, the more it tends to be judged as color. Acceptable values: 0 to 255 (Default: 70)

<Procedure>:
The procedure is the same as that of 📖 P.3-59 "3.4.2 Density adjustment".

3.4.5 Sharpness adjustment

If you want to make scan images look softer or sharper, perform the following adjustment. The adjustment can be made for each of the color modes and original modes independently.

<Adjustment Mode (05)>

Code	Color mode	Original mode	Contents
1086	Full Color	Text	• The larger the value is, the sharper the image becomes; while the smaller the value is, the softer the image becomes. • The smaller the value is, the less moire tends to appear. • The acceptable values are 0 to 255. The center value is 128.
1087		Printed Image	
1088		Photo	
8375		User custom	
840	Black	Text/Photo	
841		Text	
842		Photo	
7470		User custom	
843	Gray Scale	-	

Note:
You have to make adjustment by balancing between moire and sharpness.

<Procedure>
The procedure is the same as that of 📖 P.3-59 "3.4.2 Density adjustment".

3.4.6 Setting range correction

The values of the background peak in the range correction can be switched to “varied” or “fixed” in the following codes.
If they are fixed, the range correction is performed with standard values.

<Adjustment Mode (05)>

Color mode	Original mode				Gray Scale	Item to be adjusted	Remarks
	Text/ Photo	Text	Photo	User custom			
Black	7416	7417	7418	7425	7419	Range correction (Automatic density adjustment)	0: Background peak - fixed 1: Background peak - varied
	7421	7422	7423	7426	7424	Range correction (Manual density adjustment)	

Color mode	Original mode				Item to be adjusted	Remarks
	Text	Printed image	Photo	User custom		
Color	8330	8331	8332	8334	Range correction (Automatic density adjustment)	0: Background peak - fixed 1: Background peak - varied
	8361	8362	8363	8365	Range correction (Manual density adjustment)	

<Procedure>
The procedure is the same as that of 📖 P.3-59 "3.4.2 Density adjustment".

3.4.7 Fine adjustment of black density

The density of black side on scanned image is adjusted at color-scanning.

<Adjustment Mode (05)>

Code	Original mode	Remarks
1075	Text	The larger the value is, the black side of the image becomes darker. Acceptable values: 0 to 4 (Default: 0)
1076	Printed Image	
1077	Photo	
8371	User custom	

Note:
Be careful for the value not to be too large since the gradation is reproduced worse in darker side.

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in the codes and press the [START] button.
(3) Key in the adjustment values. Acceptable values: 0 to 4. (To correct the value once keyed in, press the [CLEAR] button.)
(4) Press the [ENTER] or [INTERRUPT] button to store the value in memory. → The equipment goes back to the ready state.
(5) Let the equipment restart and perform the scanning job.
(6) If the desired image has not been attained, repeat step (1) to (5).

3.4.8 RGB conversion method selection

The color space conversion method of image is decided at color-scanning.

<Adjustment Mode (05)>

Code	Original mode	Remarks
1080	Text	0: sRGB, 1: AppleRGB, 2: ROMMRGB, 3: AdobeRGB (Default: 0)
1081	Printed Image	
1082	Photo	
8372	User custom	

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in the codes and press the [START] button.
(3) Key in the adjustment values. Acceptable values: 0 to 3. (To correct the value once keyed in, press the [CLEAR] button.)
(4) Press the [ENTER] or [INTERRUPT] button to store the value in memory.→ The equipment goes back to the ready state.
(5) Let the equipment restart and perform the scanning job.
(6) If the desired image has not been attained, repeat step (1) to (5).

3.4.9 Adjustment of saturation

The brightness of the scanned image is adjusted at color-scanning.

<Adjustment Mode (05)>

Code	Original mode	Remarks
8325	Text	The larger the value is, the brighter the image becomes. The smaller the value is, the duller the image becomes. Acceptable values: 0 to 255 (Default: 128)
8326	Printed Image	
8327	Photo	
8373	User custom	

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in the codes and press the [START] button.
(3) Key in the adjustment values. Acceptable values: 0 to 255.
(To correct the value once keyed in, press the [CLEAR] button.)
(4) Press the [ENTER] or [INTERRUPT] button to store the value in the memory. → The equipment goes back to the ready state.
(5) Let the equipment restart and perform the scanning job.
(6) If the desired image has not been attained, repeat step (1) to (5).

3.4.10 Background processing offset adjustment

The density of background is adjusted.

<Adjustment Mode (05)>

Black				Item to be adjusted	Remarks
Original mode					
Text/ Photo	Photo	Gray Scale	User Custom		
8400	8402	8403	8404	Background density adjustment / Automatic density adjustment	The larger the value is, the lower the density of the image background (low density section) becomes.The smaller the value is, the higher the density of the image background (low density section) becomes. Acceptable values: 0 to 255 (Default: 128)
8405	8407	8408	8409	Background density adjustment / Manual density adjustment	

Color				Item to be adjusted	Remarks
Original mode					
Text	Photo	Printed Image	User Custom		
8385	8386	8387	8389	Background density adjustment / Automatic density adjustment	The larger the value is, the lower the density of the image background (low density section) becomes.The smaller the value is, the higher the density of the image background (low density section) becomes. Acceptable values: 0 to 255 (Default: 128)
8390	8391	8392	8394	Background density adjustment / Manual density adjustment	

ADF		Item to be adjusted	Remarks
Black/ Gray Scale	Color		
7468	8395	Background density processing / ADF scanning	Adjusts the density of background for ADF scanning. The larger the value is, the lower the density of the background and the low density section (e.g. light text or lines) becomes. The smaller the value is, the higher the density of them becomes. Acceptable values: 0 to 255 (Default: 128)

<Procedure>

The procedure is the same as that of 📖 P.3-59 "3.4.2 Density adjustment".

3.5 Image Quality Adjustment (FAX Function)

3.5.1 Density adjustment

The center density and the density variation controlled by density adjustment keys can be adjusted as follows.

<Adjustment Mode (05)>

Color mode	Original mode			Item to be adjusted	Remarks
	Text/ Photo	Text *	Photo		
Black	714	700	710	Manual density center value	The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128)
	729	-	725	Automatic density mode	

* Since the gradation in this mode is reproduced in a binary image (black and white), this adjustment should be a simple binary threshold adjustment.

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in a code and press the [START] button.
(3) Key in an adjustment value.
(To correct the value once keyed in, press the [CLEAR] button.)
(4) Press the [ENTER] or [INTERRUPT] button to store the value. → The equipment goes back to the ready state.
(5) Turn the power OFF.

<Confirmation>
If possible, perform a Fax transmission and check the adjusted density with the image on the recipient's side.

3.5.2 Beam level conversion setting

A beam level for smoothing process (divided into 4) in the fax function can be set. In this setting the size of dots is adjusted.

<Adjustment Mode (05)>

Code	Item to be adjusted	Remarks
678-0	Beam level 0/4	The smaller the value is, the smaller the beam width becomes. Therefore, the smaller dot is reproduced accordingly. Acceptable values: 0 to 255 (Default: Level 0/4: 0, Level 1/4: 63, Level 2/4: 127, Level 3/4: 191, Level 4/4: 255)
678-1	Beam level 1/4	
678-2	Beam level 2/4	
678-3	Beam level 3/4	
678-4	Beam level 4/4	

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in a code and press the [START] button.
(3) Key in a sub-code and press the [START] button.
(4) Key in an adjustment value.
(To correct a value once keyed in, press the [CLEAR] button.)
(5) Press the [ENTER] or [INTERRUPT] button to store the value. → The equipment goes back to the ready state.
(6) Take the POWER OFF.

<Confirmation>
Check the beam level conversion setting with the actual fax data received, if possible.

Notes:
1. The setting value must increase as the beam level number (0 to 4) becomes higher. Do not increase this order when setting the values.
2. Usually, beam level 4 / 4 is most effective on black mode.

3.6 Adjustment of the Process Unit Related Section

3.6.1 High-Voltage Transformer Setting

The high-voltage transformers supply high-voltage to the parts related to charging, development, transfer and Discharging blade.
The high-voltage transformer has the following high-voltage outputs.

Out1	1	Main charger needle electrode cleaner bias (Y)
	2	Main charger needle electrode cleaner bias (M)
	3	Main charger needle electrode cleaner bias (C)
	4	Main charger needle electrode cleaner bias (K)
Out2	1	Main charger grid bias (Y)
	2	Main charger grid bias (M)
	3	Main charger grid bias (C)
	4	Main charger grid bias (K)
Out3	1	Developer bias (Y)
	2	Developer bias (M)
	3	Developer bias (C)
	4	Developer bias (K)
Out4	1	1st transfer roller bias (Y)
	2	1st transfer roller bias (M)
	3	1st transfer roller bias (C)
	4	1st transfer roller bias (K)
Out5	-	2nd transfer roller bias

Note:
Never move the variable resistance on the board since the output adjustment has been performed at the shipment for the high-voltage transformer supplied as a service part. Also do not perform the setting change when the high-voltage power supply is replaced.

3.6.2 Adjustment of the Auto-Toner Sensor

When the developer material is replaced, adjust the auto-toner sensor in the following procedure.
📖 P.3-2 "3.1.2 Adjustment of the Auto-Toner Sensor"

3.6.3 Adjustment of the doctor-sleeve gap

For the adjustment of the doctor-sleeve gap, perform the same procedure for the Y, M, C and K developer units.
Adjustment tool to use: Doctor-sleeve gap jig

<Adjustment procedure>

(1) Take off the developer unit from the equipment.
(2) Discharge the developer material.
(3) Loosen 2 doctor blade fixing screws. Insert the gauge “0.65” of the doctor sleeve jig between the developer sleeve and doctor blade (3 points) to adjust the gap, and tighten the screws.

Adjustment standard: 0.65 +/- 0.05mm

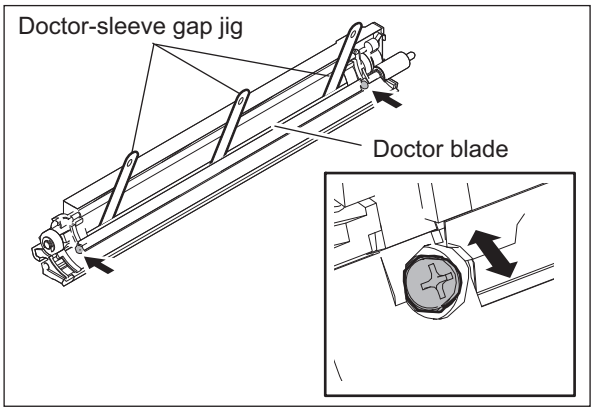


Fig. 3-26

Notes:

1. Flip up the protection sheet for the doctor blade from the sleeve before inserting the gauge. Also, be sure not to damage the protection sheet.

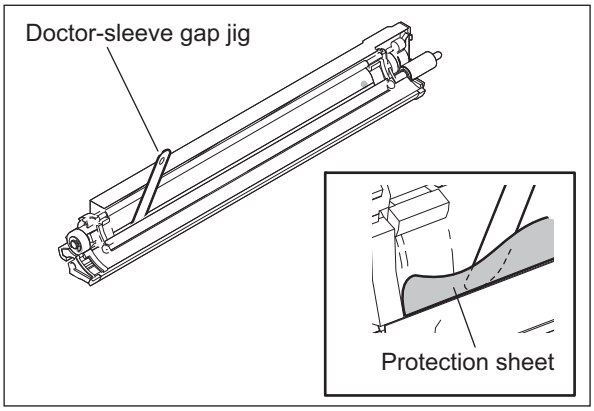


Fig. 3-27

2. When confirming and adjusting the gap between the developer sleeve and the doctor blade, insert the gauges into the gap after rotating the developer sleeve so that its marking faces the doctor blade.

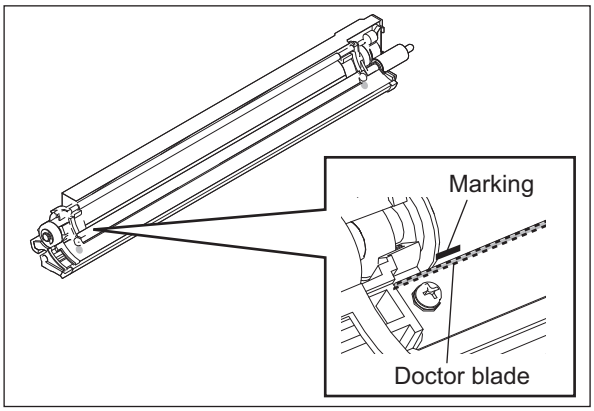


Fig. 3-28

(4) Insert the gauge “0.60” of the doctor-sleeve jig into the gap between the developer sleeve and the doctor blade and make sure that the gauge can move smoothly in the front/rear direction. In addition, confirm that the gauge “0.70” cannot be inserted into the gap.

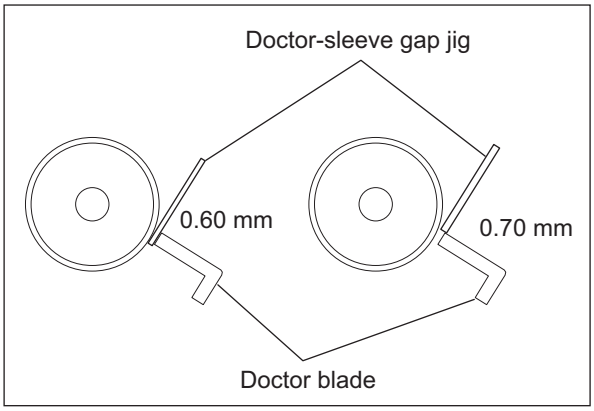


Fig. 3-29

3.7 Adjustment of the Scanner Section

3.7.1 Adjustment carriages-1 and -2 positions

(1) Move the carriage-2 toward the exit side.
(2) Loosen the screws fixing the front side pulley bracket, make the sections A and B of the carriage-2 touch with the inside of the exit side frame and screw them up.

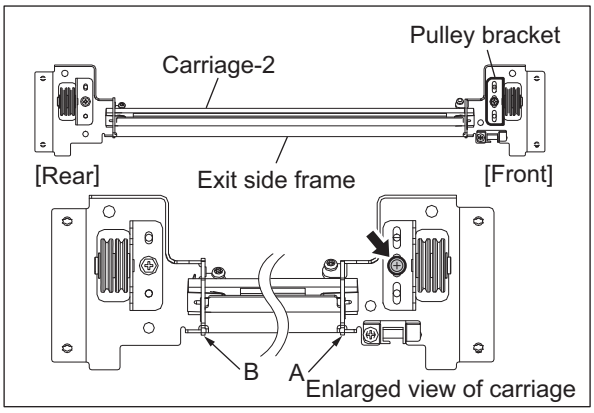


Fig. 3-30

(3) Put the carriage-1 on the rail, make the sections C and D of it touch with the inside of the exit frame and screw up the front/rear side of the bracket to fix it.

Note:
Make sure that the sections A and B of the carriage-2 touch with the exit side frame.

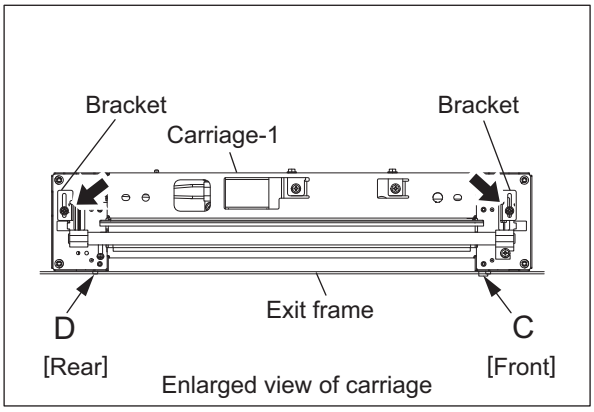


Fig. 3-31

3.7.2 Belt tension adjustment of the Scan motor

(1) Hook the belt tension jig to the motor bracket and the flame.
(2) Loosen screw-A and -C. (There is no need to loosen screw-B, since it is a shoulder screw.)
(3) The scan motor is pulled by the belt tension jig. Fix screw-A and then -C at the stopped position.
(4) Remove the belt tension jig.

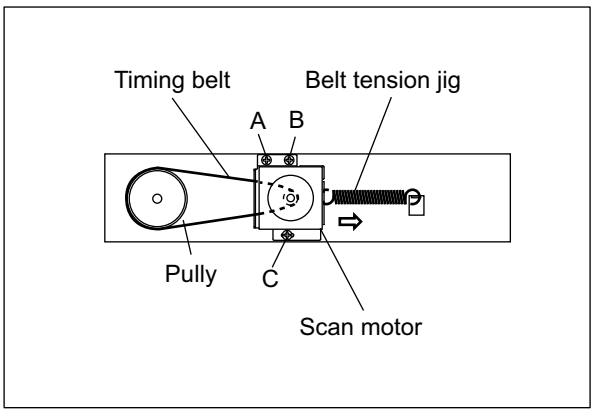


Fig. 3-32

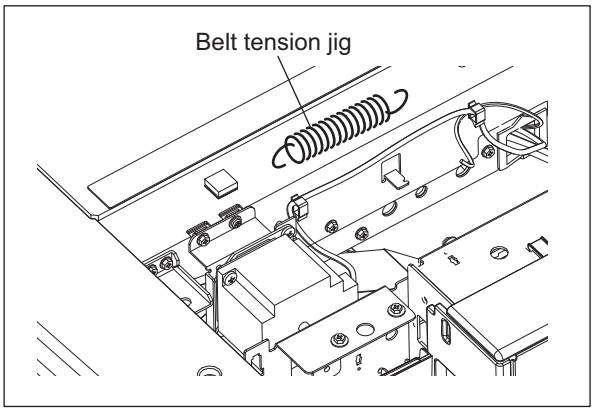


Fig. 3-33

3.8 Adjustment of the Reversing Automatic Document Feeder (RADF)

3.8.1 RADF position adjustment

Perform this adjustment when the RADF is removed.

(1) Place the RADF aligning its installation shoulder screw with the hole of the hinge bracket, and then slide it to the front side.

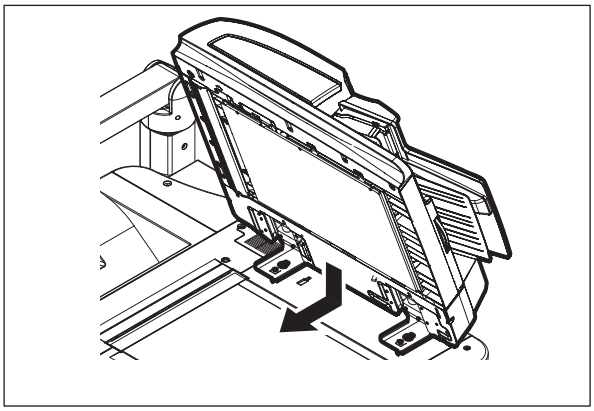


Fig. 3-34

(2) Tighten the 2 fixing screws of the hinge bracket (front side) temporarily.

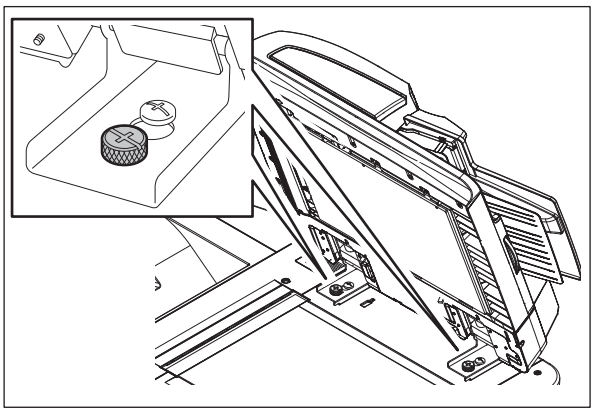


Fig. 3-35

(3) Remove the platen sheet.

Note:

Be sure not to fold or stain the removed platen sheet.

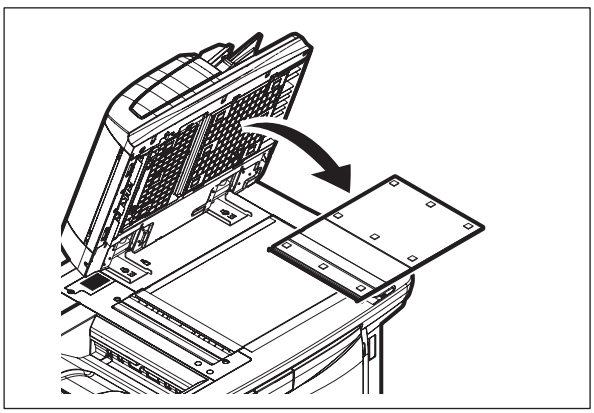


Fig. 3-36

(4) Remove 2 gaskets.

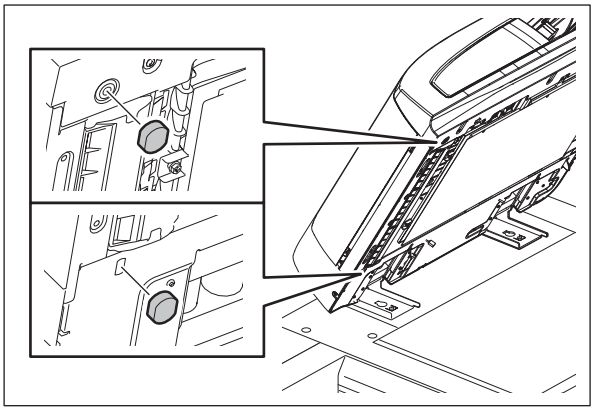


Fig. 3-37

(5) Remove 2 screws.

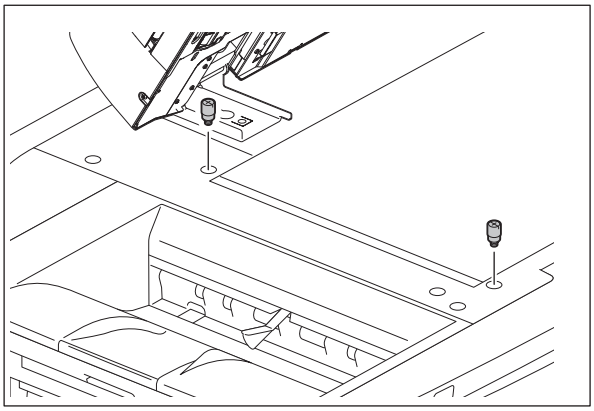


Fig. 3-38

(6) Install 2 positioning pins.

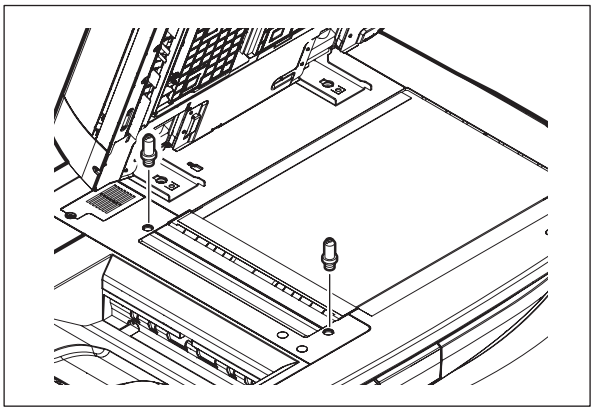


Fig. 3-39

(7) Close the RADF gently and check if the positioning pins fit the holes on the RADF.

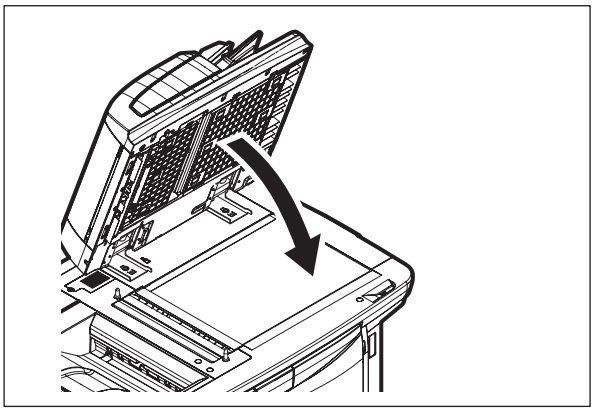


Fig. 3-40

(8) When the RADF is closed, check if the hole of the adjustment plate on the right-hand hinge is aligned with the hole on the equipment. If it is not, turn the adjustment screw to match the hole.

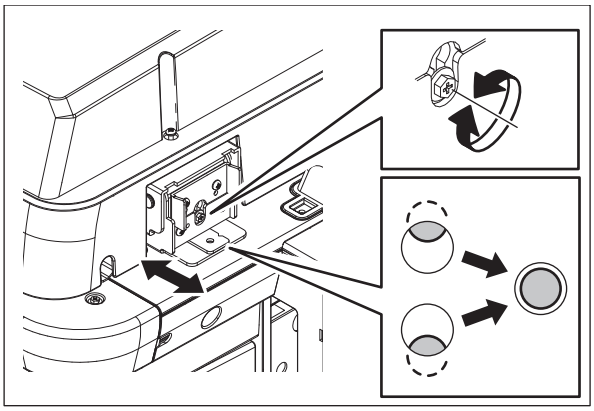


Fig. 3-41

(9) Install 1 fixing screw (rear side) on the right-hand hinge bracket.

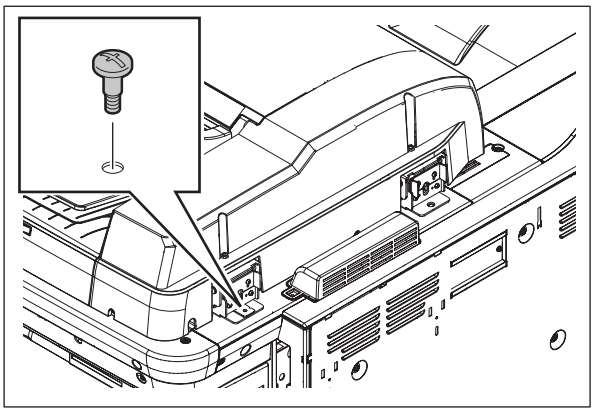


Fig. 3-42

(10) Insert a washer, and install 1 fixing screw (rear side) on the left-hand hinge bracket.

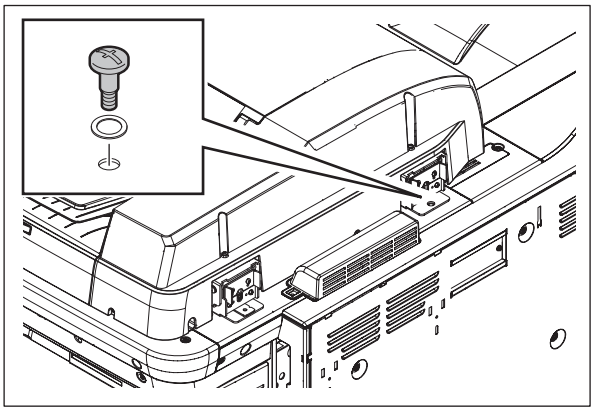


Fig. 3-43

(11) Tighten the 2 fixing screws (front side) on the hinge bracket.

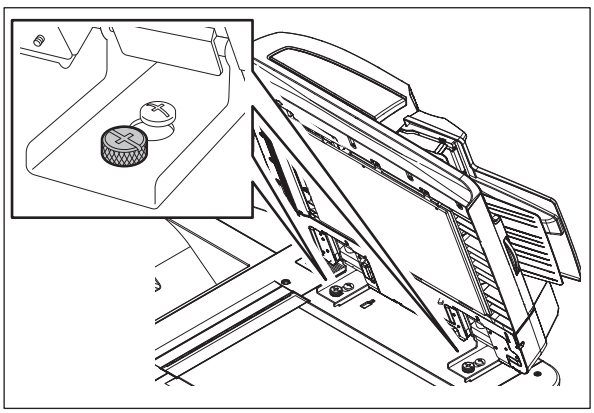


Fig. 3-44

(12) Open the RADF and remove 2 positioning pins.

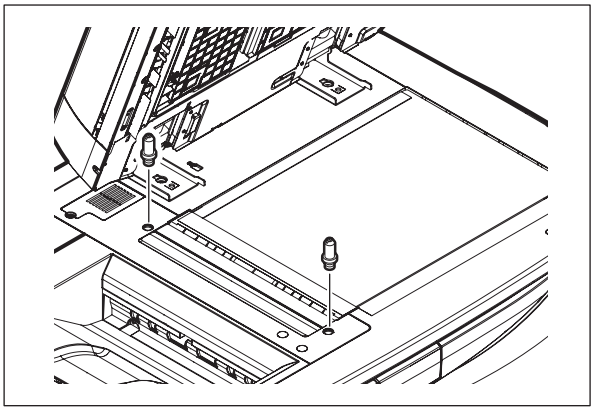


Fig. 3-45

(13) Install 2 screws.

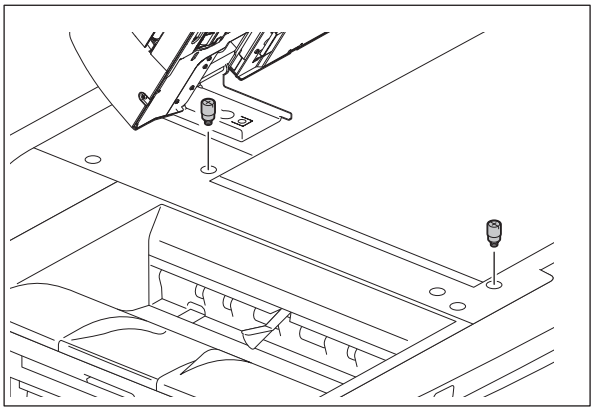


Fig. 3-46

(14) Place the platen sheet on the original glass and align it to the top left corner.
Close the RADF gently and open it to check if the platen sheet is attached properly.

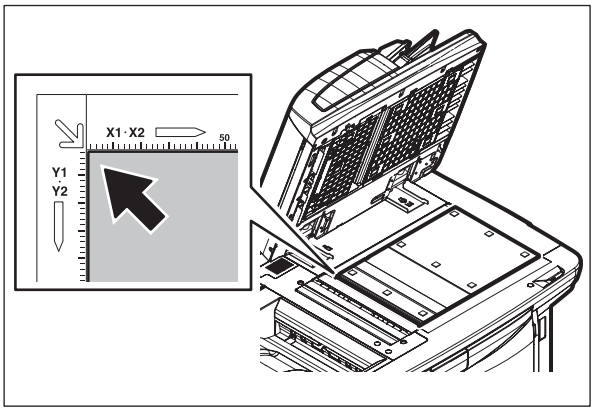


Fig. 3-47

(15) Install the gaskets.

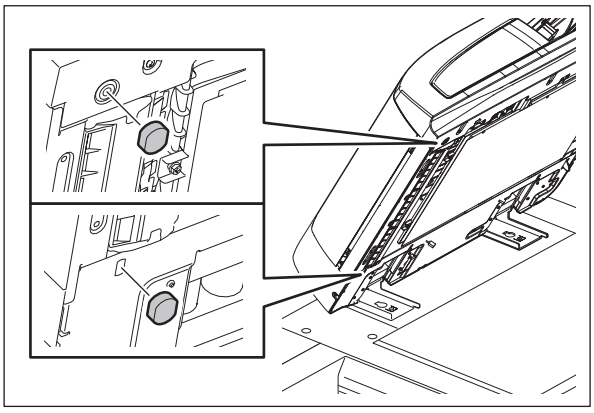


Fig. 3-48

3.8.2 RADF height adjustment

Note:
Check if the image adjustment for the equipment is performed properly before this adjustment of the RADF.

[A] Adjustment

(1) Remove the top left cover.
📖 Service Manual “3.5.6 Top left cover”
(2) Close the RADF.
(3) Light the exposure lamp.
- Turn the power ON while pressing [0] and [3] simultaneously.
- Key in [267] and then press the [START] button. The exposure lamp is turned ON for a given length of time.

(4) Visually check the gap between platen guide holder “A” and upper surface of the original glass “B” from the left hand side of the equipment. If the value is not within the tolerance, perform the adjustment according to the following procedure.
[Tolerance of the gap]
Rear side: 0 - 0.2 mm
Front side: 0 mm

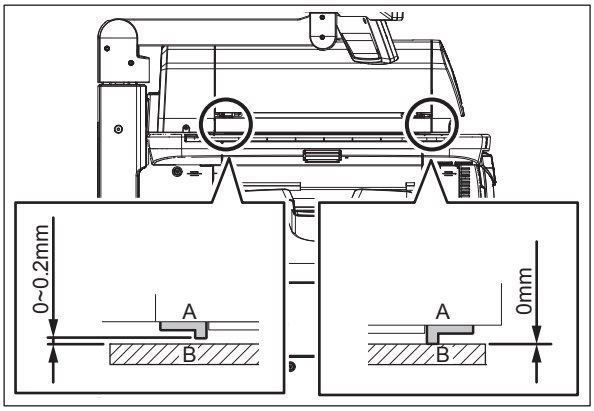


Fig. 3-49

(5) Close the RADF. Adjust it by turning the adjustment screws on the hinges.
- Adjust the gap on the rear side by means of the screw on the hinge on the feed side (right side) of the RADF.
  Turn it clockwise ..... Heightened
  Turn it counterclockwise .... Lowered

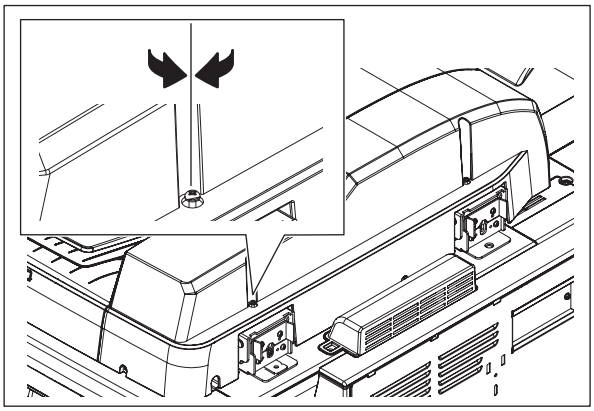


Fig. 3-50

- Adjust the gap on the front side by means of the screw on the hinge on the exit side (left side) of the RADF.
  Turn it clockwise ..... Lowered
  Turn it counterclockwise .... Heightened

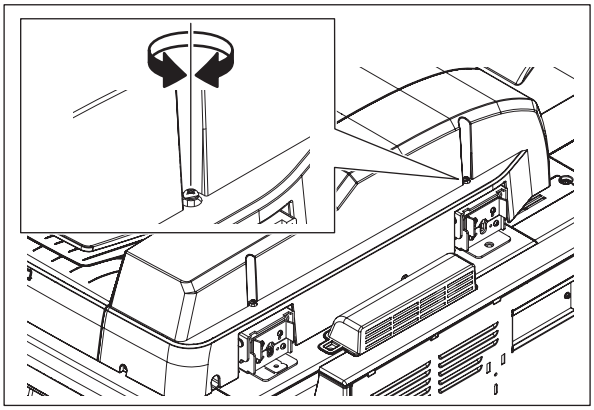


Fig. 3-51

Note:

Open the original jam access cover and check the height adjustment pointer on the front and rear side. When taking off / reinstalling the RADF, be sure to check the position of the height adjustment pointer before taking off the RADF. Check the position of the pointer again after the RADF is reinstalled. Perform the RADF height adjustment only when the position is not aligned with that before the reinstallation.

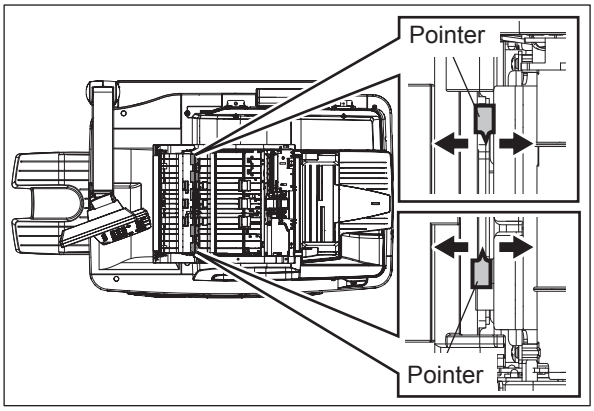


Fig. 3-52

3.8.3 RADF image skew adjustment

Note:

First check if the image adjustment has been performed properly and then start this adjustment for the RADF. Also, the RADF position and height shall be adjusted correctly.

[A] Simplex copying:

(1) Check the image using the chart (original) with vertical and horizontal lines in the following procedure.
Place the chart provided as an original with its face up on the original tray of the RADF, select [1 Sided -> 1 Sided] and make copies.

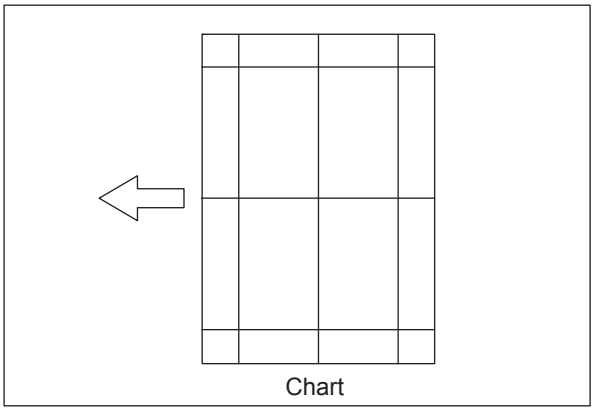


Fig. 3-53

(2) Superimpose the chart on the copy and check the inclination of the copy image.

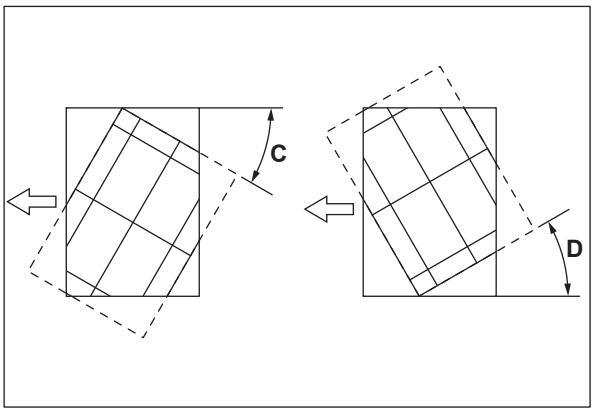


Fig. 3-54

(3) If the adjustment is necessary, open the original jam access cover and change the position of the lower screw fixing the plate. Loosen the screw, and then if the image skew is “C” as shown in the figure above, shift the aligning plate in the direction of “+”, and if “D”, shift it to “-”.

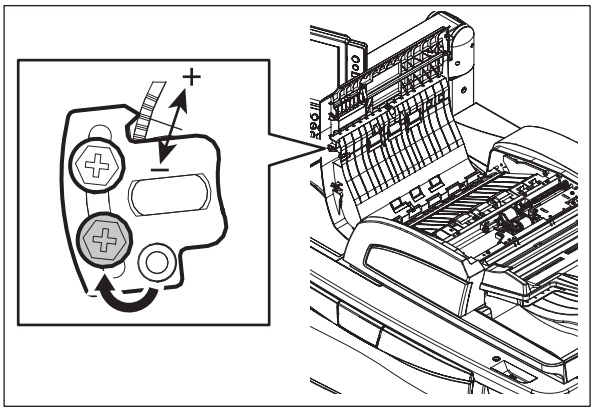


Fig. 3-55

[B] Duplex copying:

(1) Check the image using the chart (original) with vertical and horizontal lines in the following procedure.
Place the chart provided as an original with its face up on the original tray of the RADF, select [2 Sided -> 2 Sided] and make copies.

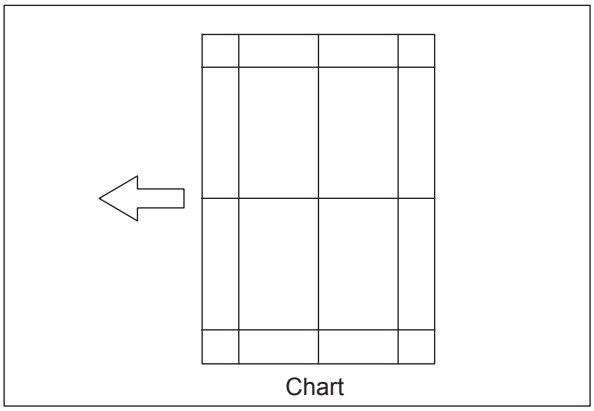


Fig. 3-56

(2) Superimpose the chart on the copy and check the inclination of the copy image.

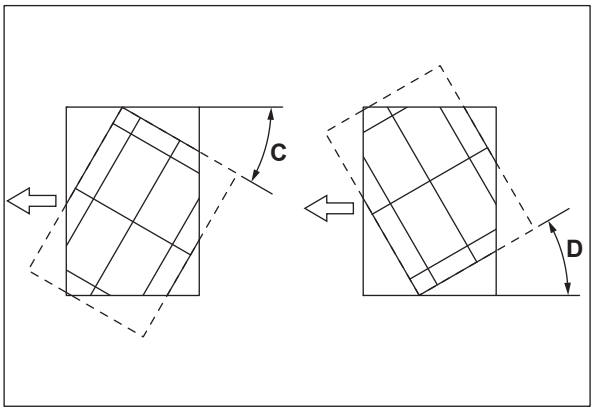


Fig. 3-57

(3) If the adjustment is necessary, open the original jam access cover and change the position of the lower screw fixing the plate. Loosen the screw, lift the guide and then if the image skew is “C” as shown in the figure above, shift the aligning plate in the direction of “+”, and if “D”, shift it to “-”.

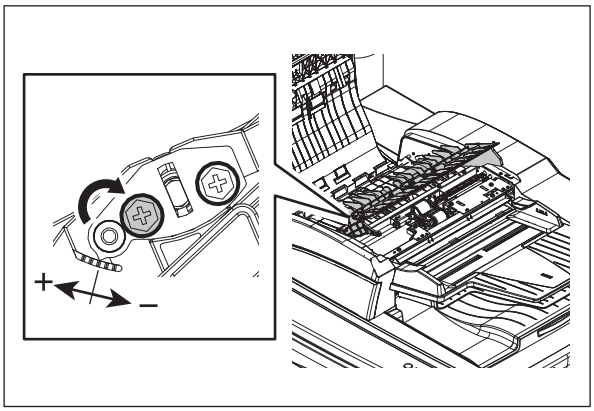


Fig. 3-58

3.8.4 RADF leading edge position adjustment

Note:
First check if the image adjustment has been performed properly and then start this adjustment for the RADF. Also, the RADF position and height shall be adjusted correctly.

[A] Simplex copying:

(1) Check the image using the chart (original) with vertical and horizontal lines in the following procedure.
Place the chart provided as an original with its face up on the original tray of the RADF, select [1 Sided -> 1 Sided] and make copies.

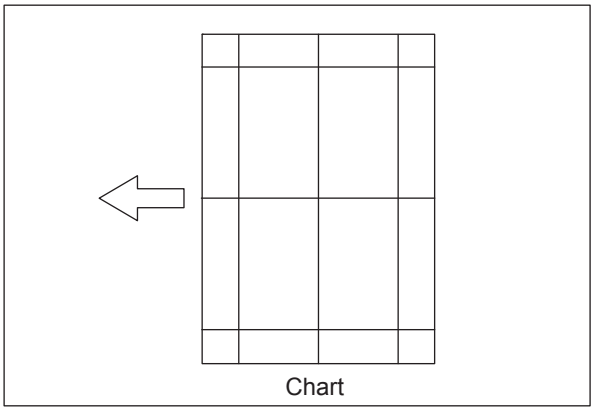


Fig. 3-59

(2) Superimpose the chart on the copy and check the leading edge E of the chart and F of the copy.
(3) If the adjustment is necessary, shut down the equipment and turn the power ON while pressing [0] and [5] simultaneously, key in [365] and then press the [START] button.
(4) Enter the value.
If the leading edge (F) margin of the copy image is larger than the (E) margin of the chart, enter a value smaller than the current one. If the leading edge (F) margin of the copy image is smaller than the (E) margin of the chart, enter a value larger than the current one.

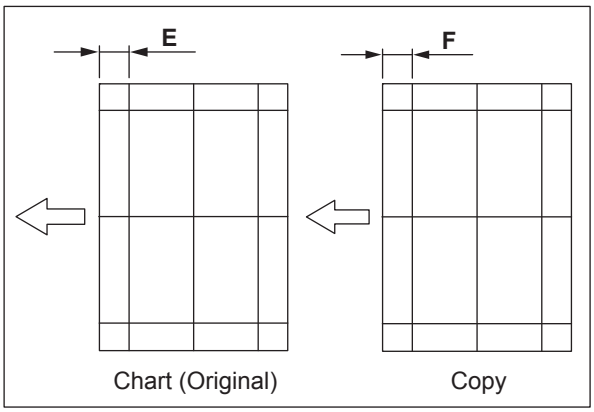


Fig. 3-60

Note:
Changing one value shifts the copy image by 0.2 mm.

(5) Press the [ENTER] button.

[B] Duplex copying:

(1) Check the image using the chart (original) with vertical and horizontal lines in the following procedure.
Place the chart provided as an original with its face up on the original tray of the RADF, select [2 Sided -> 2 Sided] and make copies.

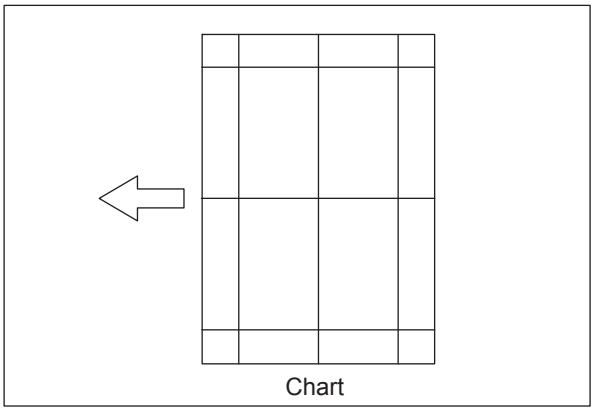


Fig. 3-61

(2) Superimpose the chart on the copy and check the leading edge E of the chart and F of the copy.
(3) If the adjustment is necessary, shut down the equipment and turn the power ON while pressing [0] and [5] simultaneously, key in [366] and then press the [START] button.
(4) Enter the value.

If the leading edge (F) margin of the copy image is larger than the (E) margin of the chart, enter a value smaller than the current one. If the leading edge (F) margin of the copy image is smaller than the (E) margin of the chart, enter a value larger than the current one.

Note:
Changing one value shifts the copy image by 0.2 mm.

(5) Press the [ENTER] button.

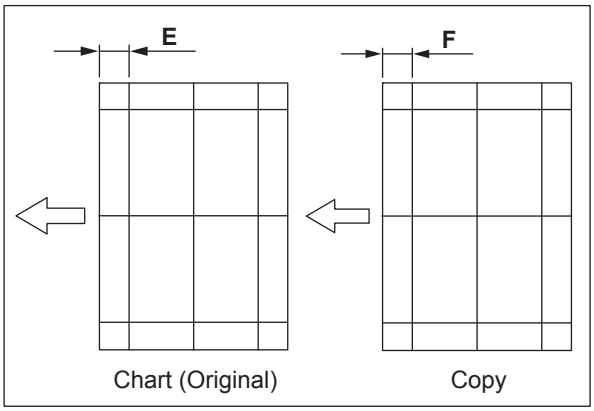


Fig. 3-62

3.8.5 RADF horizontal position adjustment

Note:
First check if the image adjustment has been performed properly and then start this adjustment for the RADF. Also, the RADF position and height shall be adjusted correctly.

(1) Check the image using the chart (original) with a center line in the following procedure. Place the chart provided as an original with its face up on the original tray of the RADF, and then make copies.

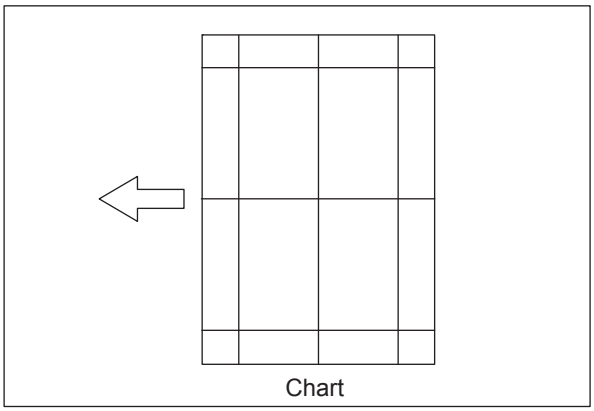


Fig. 3-63

(2) Fold the copy in half and check if the center line is misaligned.
(3) If the adjustment is necessary, shut down the equipment and turn the power ON while pressing [0] and [5] simultaneously.
(4) Key in [358] and then press the [START] button.
(5) If the center line of the copy image is shifted to the front side of the equipment (G), enter a value larger than the current one.

Note:
Changing one value shifts the copy image by 0.08 mm.

(6) If the center line of the copy image is shifted to the rear side of the equipment (H), enter a value smaller than the current one.
(7) Press the [ENTER] button.

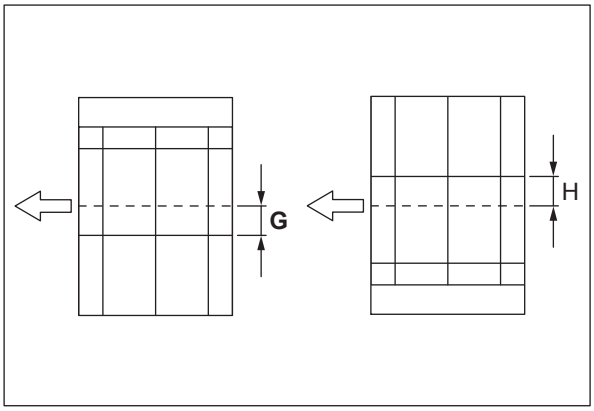


Fig. 3-64

3.8.6 RADF copy ratio adjustment

Note:
First check if the image adjustment has been performed properly and then start this adjustment for the RADF. Also, the RADF position and height shall be adjusted correctly.

(1) Check the image using the chart (original) with vertical and horizontal lines in the following procedure.
Place the chart provided as an original with its face up on the original tray of the RADF.

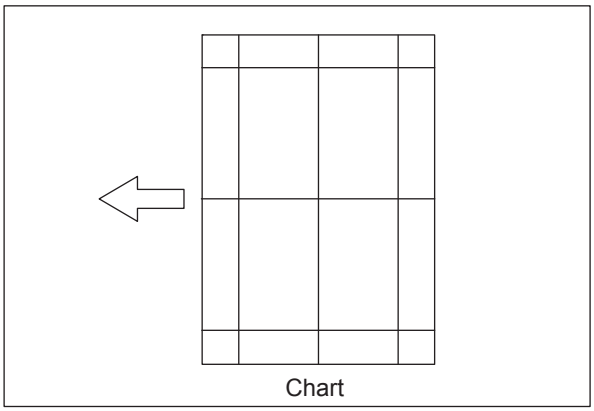


Fig. 3-65

(2) Press the [START] button.
(3) Superimpose the chart on the copy and check the image dimension “I“.
(4) If the adjustment is necessary, shut down the equipment and turn the power ON while pressing [0] and [5] simultaneously.
(5) Key in [357] and then press the [START] button.
(6) If the copy image dimension “I” is larger than the chart dimension, enter a value smaller than the current one. If the copy image dimension “I” is smaller than the chart dimension, enter a value larger than the current one.

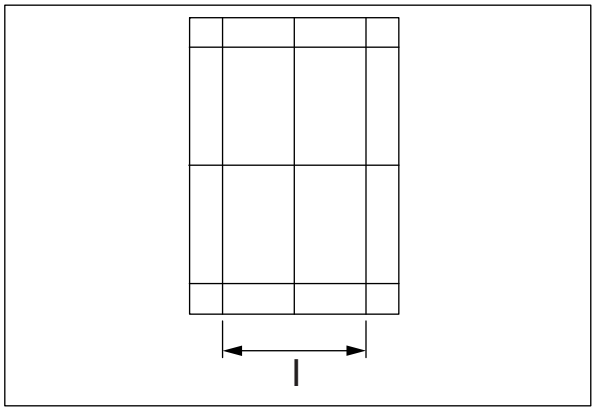


Fig. 3-66

Note:
When the value is increased (decreased) by 1, the copy image (ratio in the secondary scanning direction) is affected correspondingly by 1%.

(7) Press the [ENTER] button.

3.8.7 RADF opening/closing switch adjustment

Adjust the bracket position so that the sensor is turned ON when the height “J” becomes 145 mm or less (within the empty weight falling limit).

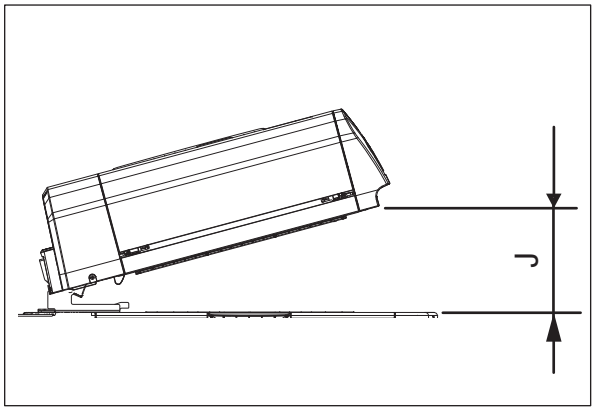


Fig. 3-67

(1) Take off the RADF rear cover.
📖 Service Manual “16.5.3 RADF rear cover”
(2) Loosen the fixing screw of the bracket. Slide the bracket vertically using the scale as a guide to adjust the position where the switch is turned ON.
(3) Tighten the fixing screw of the bracket. Install the RADF rear cover.

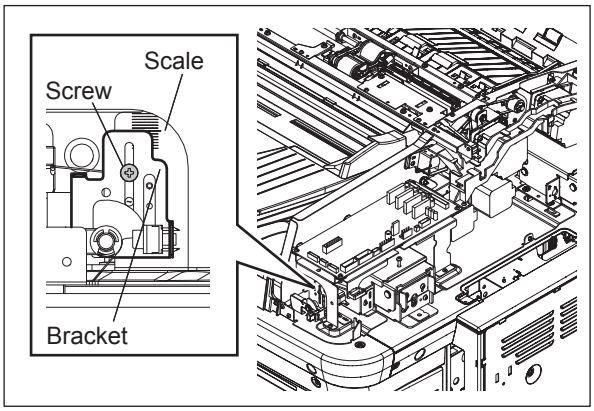


Fig. 3-68

3.8.8 Original reading start sensor adjustment

When the RADF board or the original reading start sensor (sensor section or prism) is replaced, be sure to perform this adjustment. If not, paper jams (E721, E725, E774) or operational problems may occur.

[A] Automatic adjustment

(1) Turn the power ON while pressing [0] and [5] simultaneously.
(2) Key in [356] and then press the [START] button.

Notes:

1. Be sure to close all of the RADF cover before the adjustment is performed.
2. Check that there is no paper on the original reading start sensor so that the light is not shielded.

[B] Manual adjustment

Note:

When the reading start sensor is replaced or re-installed, perform this manual adjustment.

(1) Take off the left RADF cover.
(2) Close the original jam access cover and the RADF.
(3) Turn the power ON while pressing [0] and [5] simultaneously.
(4) Key in [353] and then press the [START] button.

Note:

Be sure not to close or open the original jam access cover and the RADF until step 6 is finished. If you do so, the adjustment value will be reset. In this case, repeat the adjustment from step 2.

(5) Loosen 2 prism vertical adjustment screws of the prism.

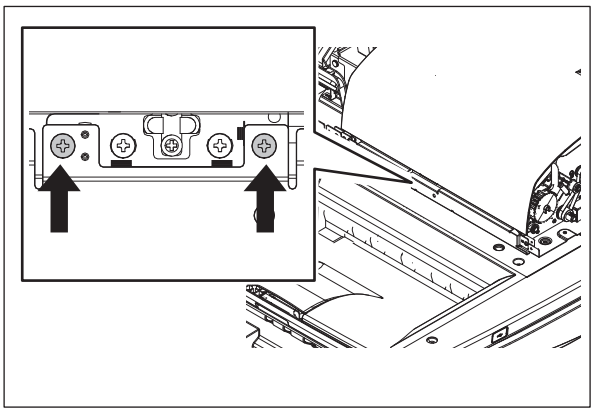


Fig. 3-69

(6) Slide the prism vertically. When the prism comes to the proper adjustment position, LED 3 on the RADF board lights. At this position, tighten 2 prism vertical adjustment screws.

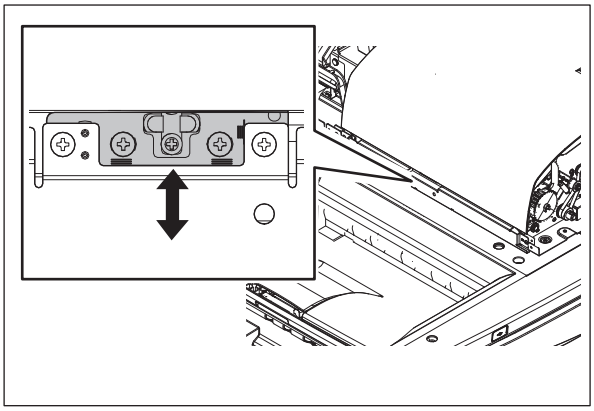


Fig. 3-70

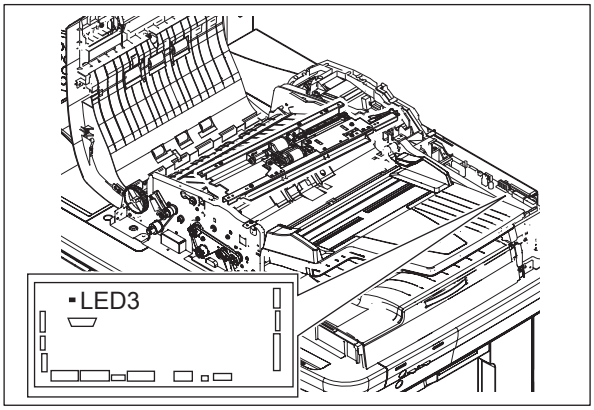


Fig. 3-71

Notes:

If LED 3 does not light, follow the procedure below.

1. Tighten 2 prism vertical fixing screws aligning with the forth mark-off line from the top.

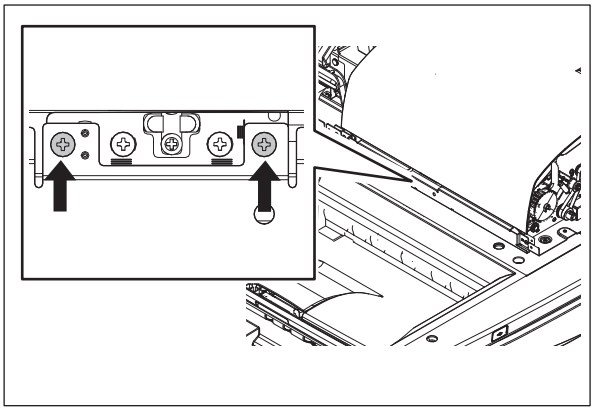


Fig. 3-72

2. Loosen the 2 prism horizontal adjustment screws.

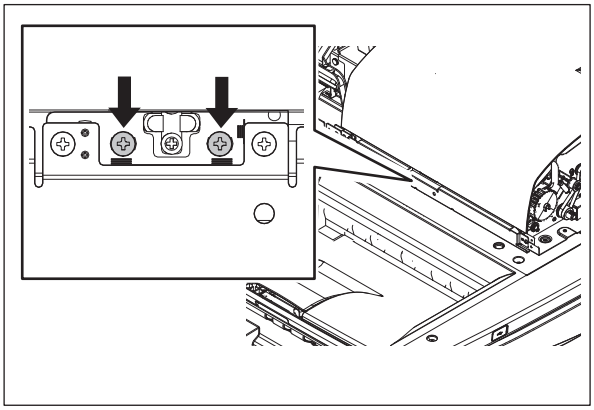


Fig. 3-73

3. Slide the prism horizontally. When the prism comes to the proper adjustment position, LED 3 on the RADF board lights. At this position, tighten 2 prism horizontal adjustment screws.

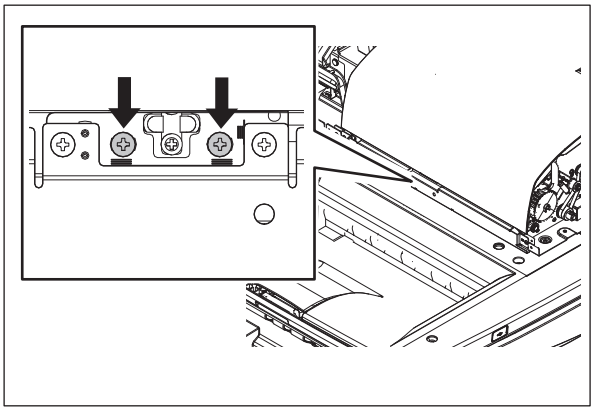


Fig. 3-74

(7) Perform the automatic adjustment (05-356).

Note:

After the manual adjustment is performed, be sure to do the automatic one.

(8) Turn the power OFF and install the cover.

3.8.9 Platen Sheet

If a shadow-like dark area appears on the edge of the image, reset the platen sheet

(1) Open the RADF and remove the platen sheet.

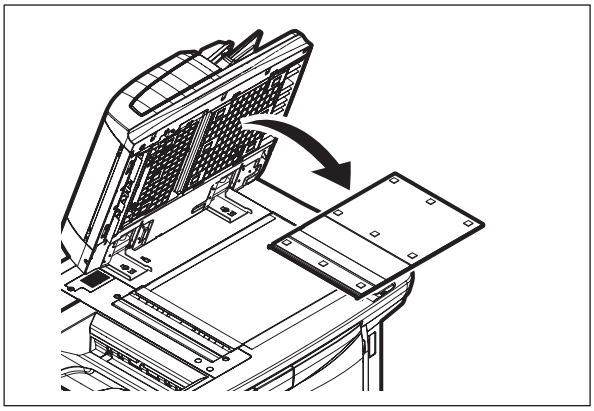


Fig. 3-75

(2) Place the platen sheet on the original glass and align it to the top left corner. Close the RADF gently and open it to check if the platen sheet is attached properly.

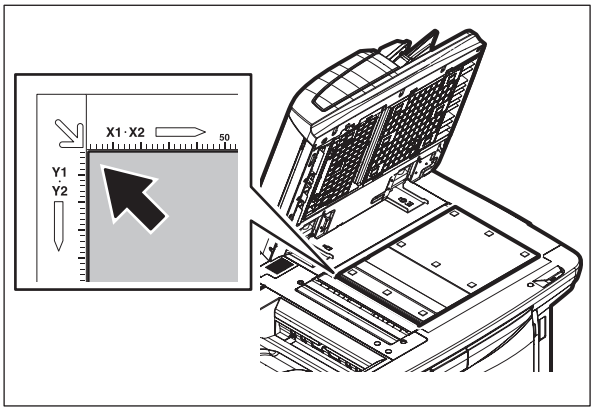


Fig. 3-76

3.9 Adjustment of the Paper Feeding System

Adjust the position of the sensor in the code 05-9092 within the adjustment values from 460+/-100.

3.9.1 Adjustment of the media sensor position

<Procedure>

- Remove 1 screw and take off the SFB lower cover.

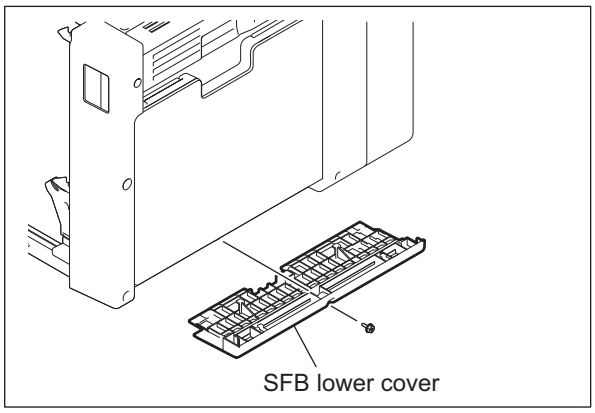


Fig. 3-77

- Turn the power of this equipment ON while pressing [0] and [5] simultaneously. Then perform the code 9092.
  Turn a screw to make the displayed adjustment value fall within the range from 460+/-100.
  The value increases to approx. 160 by turning the screw 360 degrees clockwise.

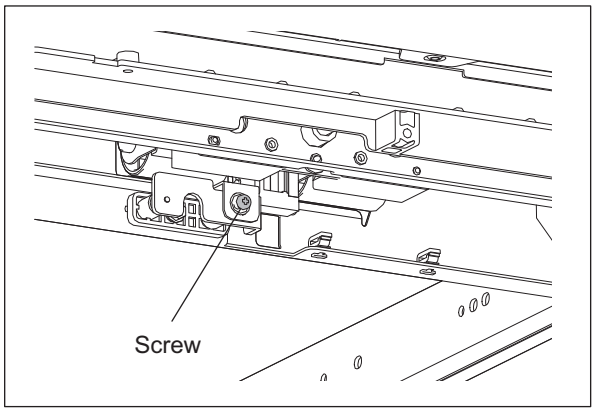


Fig. 3-78

3.9.2 Separation roller pressure force adjustment

In some cases the life of the separation roller may be shortened or paper jams and multiple feeding (EB50) may occur regardless of the operation frequency of the equipment. This comes from the weight or edge status of paper used and the amount of paper dust.
Generally paper jams and multiple feeding often occur as the life end of the roller approaches. However, if they often occur even though its life has not yet reached its replacement timing, or if the life end comes much earlier than the scheduled replacement timing, the jams and multiple feeding can be suppressed by adjusting the pressure force of the separation roller.
In this method, however, when the roller life becomes longer, jams and multiple feeding may occur frequently, and when the jams and multiple feeding are suppressed, the roller life may become shorter. Therefore, perform this adjustment while checking the status carefully, and if necessary, give a sufficient explanation to users.

<Procedure>

(1) Take off the drawer feeding unit.
(2) Remove 1 screw, and then screw it temporarily to an oblong hole located next to it.

Note:
Make a mark for the installation position of the bracket in advance.

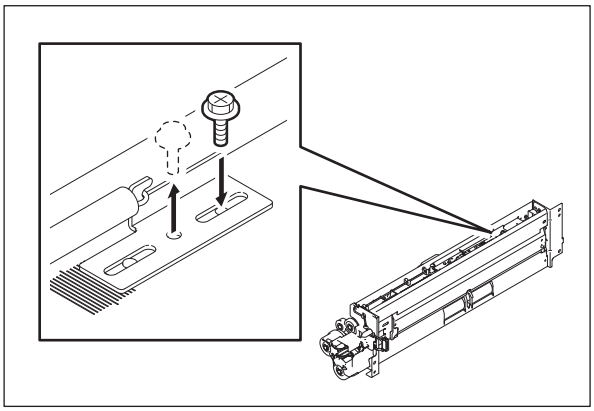


Fig. 3-79

(3) Move the bracket.
Move to the direction A: The roller life will become longer (but multiple feeding may occur frequently).
Move to the direction B: Multiple feeding will be suppressed (but the roller life may become shorter).

Note:
The recommended moving distance of the bracket is within 2 or 3 scale marks.

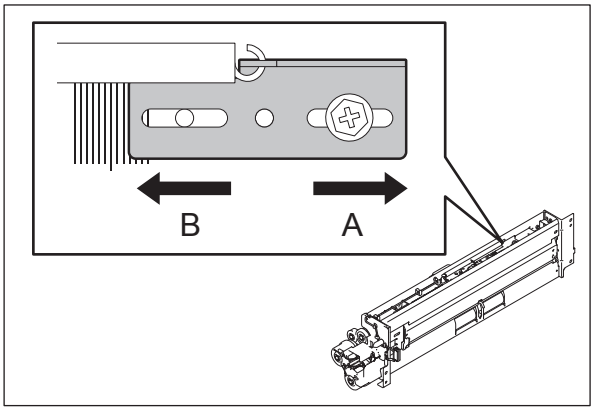


Fig. 3-80

(4) Tighten the screw that was temporarily screwed.

Note:

In this step check the Mylar attached before the separation roller because the roller life may become shorter if this Mylar is scraped and worn.

Reference value of distance C (from the edge of the plate to that of the Mylar): 7.0±0.2 mm

* If the distance C is 6.5 mm or shorter, the Mylar must be replaced.

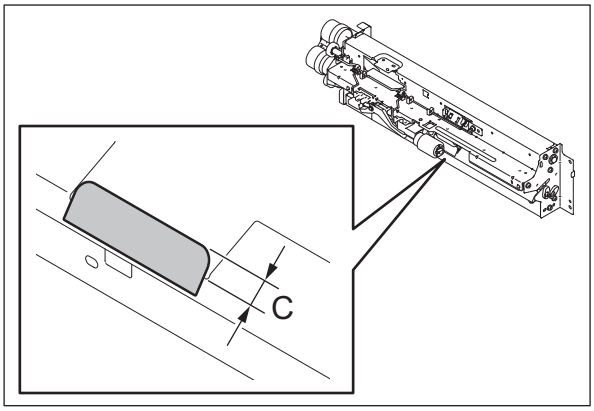


Fig. 3-81

3.9.3 Sheet sideways deviation caused by paper transporting adjustment

If paper folding at the leading edge or a paper jam occurs due to sideways deviation of the paper transport, perform adjustment of the paper transport position.
Also, when paper of a 330 mm width is transported from the bypass tray, stripe images may appear on one side.In that case, adjust the paper transport position in the direction where the stripe images disappear.

Notes:

1. When the paper transport position has been adjusted, perform adjustment of the laser writing start position.
2. Perform adjustment of the laser writing start position in order to adjust sideways deviation of the image and paper. (Do not perform adjustment of the paper transport position for this purpose.)

<Procedure>

[A] Removal of the drawer paper tray

(1) Take off the drawer.
(2) Adjust the side guides to the size of LG/LT-R.

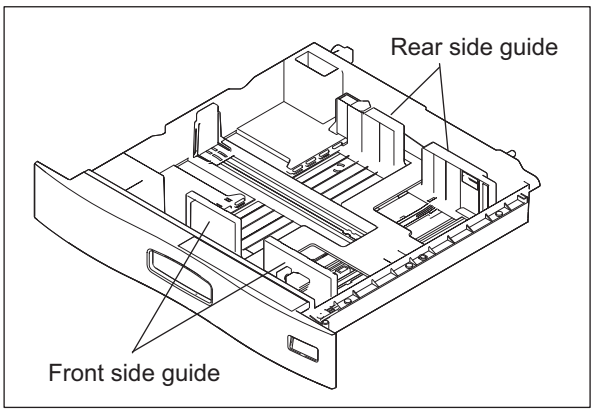


Fig. 3-82

(3) Lift up the drawer paper tray.
(4) Take off the drawer tray upward by releasing it from a stopper on the front side.

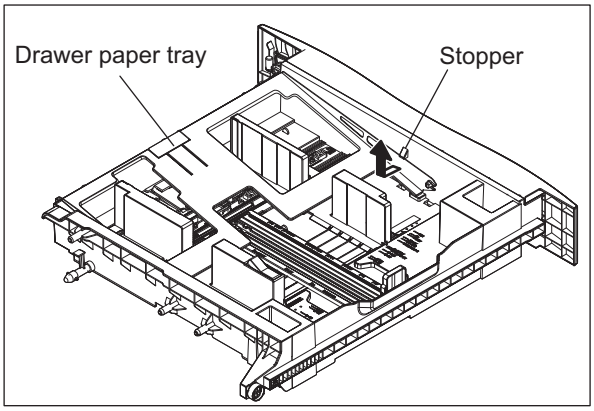


Fig. 3-83

[B] Adjustment of the gear holder

(1) Rotate 2 screws fixing the gear holder about half a turn to loosen it.
(2) Move the rear side guide to the front and rear sides while slightly lifting up the gear holder so that it can be moved.
(3) Move the gear holder matching with the scales, and tighten the screw. (Be sure that the teeth of the gear are securely engaged when you are moving the gear holder.)
    * The paper transport position is moved the same amount and direction as the gear holder.
      The acceptable moving amount is from -3 mm to +3 mm, in increments of 1 mm.

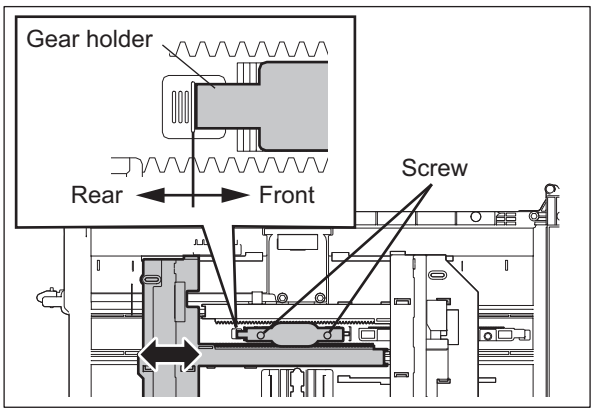


Fig. 3-84

[C] Adjustment of the rear side guide

(1) Adjust the end guide to the size of A4-R.
(2) Rotate the screw fixing the side guide adjustment piece about half a turn to loosen it.
(3) Move the side guide adjustment piece the same amount as the paper transport position and in the opposite direction to the one of the paper transport position, and then fix it with a screw.
    * For example, if you move the paper transport position to the rear side by 1 mm, you must move the side guide adjustment piece to the front side by 1 mm and fix it.
    * If you move the paper transport position to the front side by 1 mm, you must move the side guide adjustment piece to the rear side by 1 mm and fix it.

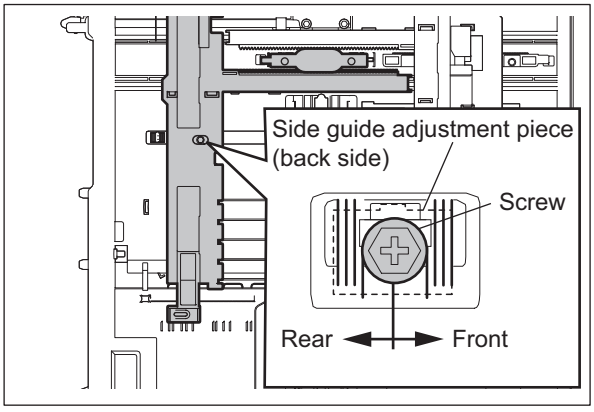


Fig. 3-85

Notes:

1. Be sure that the moving amount of the gear holder and the side guide adjustment piece is the same. If it is different, it could cause a drawer automatic size detection defect.
2. Do not tighten the screw too much. The side guide adjustment piece could disengage the groove, making correct adjustment impossible.

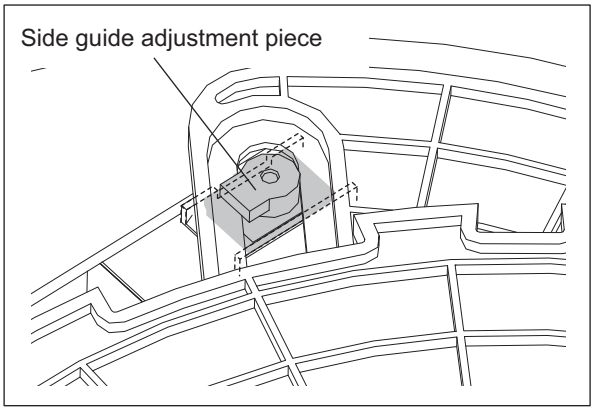


Fig. 3-86

* Table of the adjustment combination of the gear holder and the side guide adjustment piece

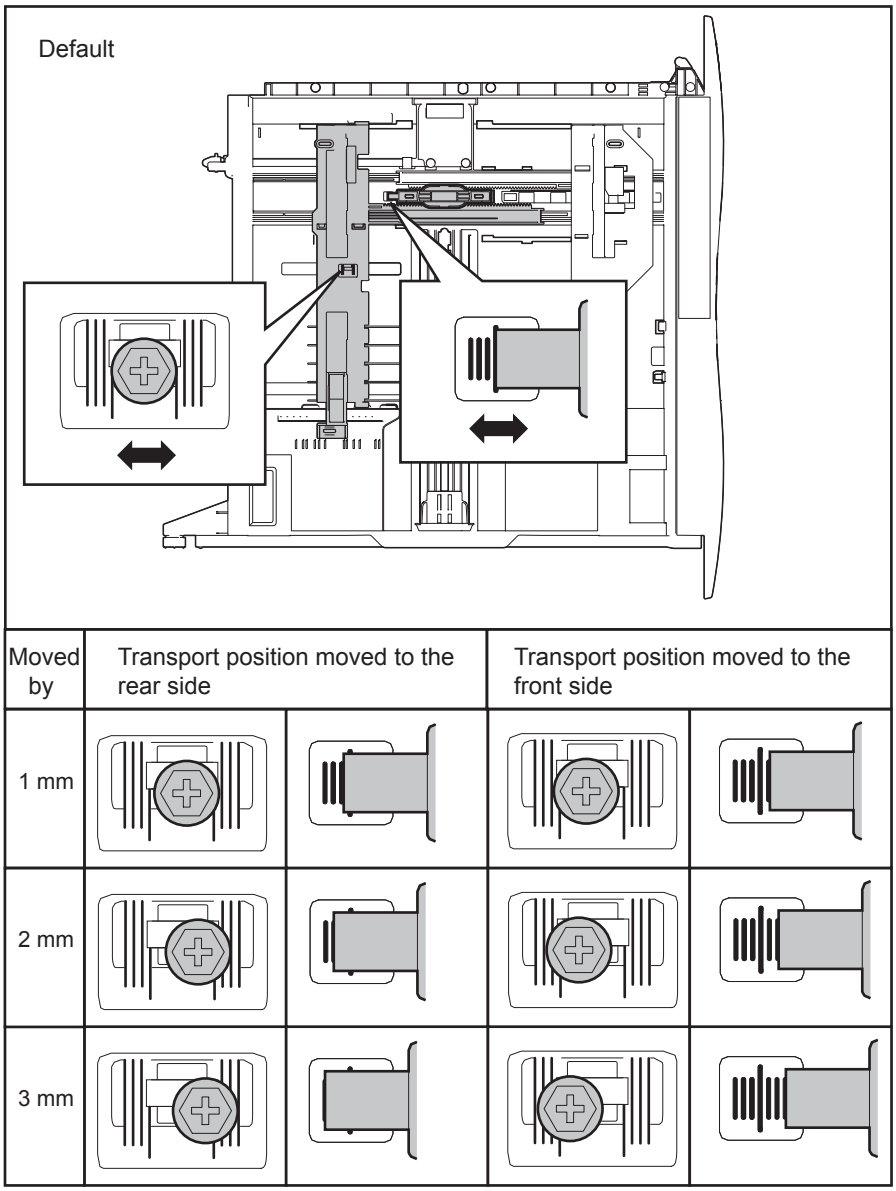


Fig. 3-87

<In the case of bypass feeding>

(1) Move the side guides halfway to the center.
(2) Loosen 1 screw.
(3) Move the rear side guide to the front or rear side.
    * The position of the screw is adjustable within the diameter of the long screw hole; from - 3 mm to + 3 mm.
(4) Fix the 1 screw.

Note:
The paper transport position is moved the same amount and direction as the side guide.

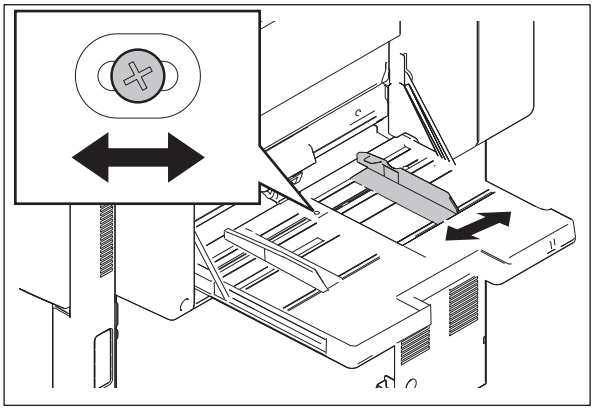


Fig. 3-88

3.9.4 Adjusting the clearance of the paper and side guides

If the clearance between the paper and the side guides is too wide, it can be adjusted to between 0 and 1 mm (the clearance between the paper and the guides is 1 to 2 mm (including both front and rear sides))

<Procedure>

(1) Take off the drawer.
(2) Lift up the paper tray and let it run up onto the stopper in the front of the drawer. Then lift it up further to remove it.

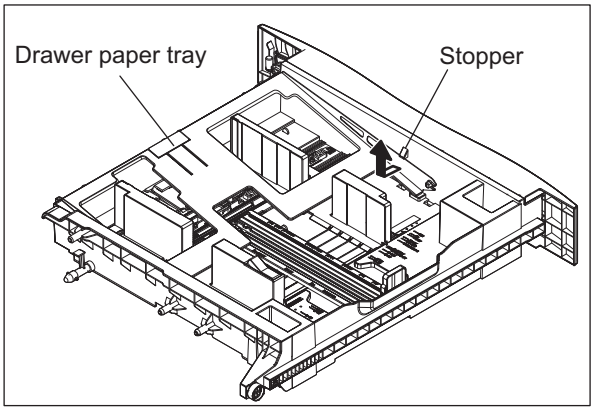


Fig. 3-89

(3) Set the side guide to the 12 inch mark.

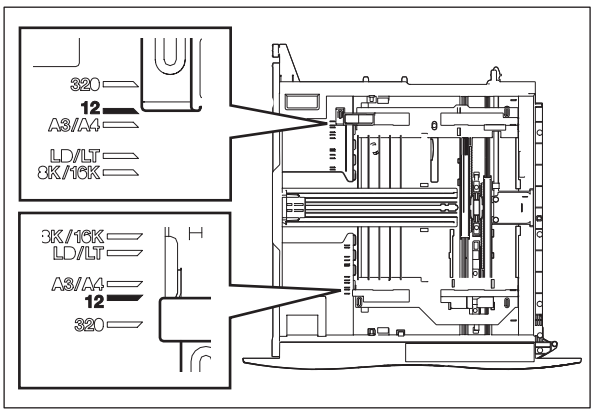


Fig. 3-90

(4) Loosen 2 screws.
(5) Move the side guide adjustment piece to the rear and tighten the screws (by 0.5 mm).

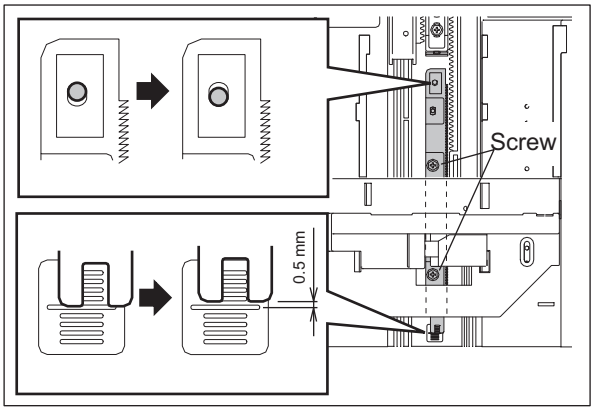


Fig. 3-91

3.10 Adjustment of the transfer belt

3.10.1 Adjustment of the degree of the transfer belt unit parallelization

By default, the position of the transfer belt unit has been adjusted using the lever assembly bracket in order to regulate the parallelization between the unit and the registration roller.
Therefore, when the transfer belt unit or the lever assembly has been replaced, make sure it is aligned with the position before the replacement.

<Checking method>

Check the position of the lever assembly bracket of the transfer belt unit currently installed
The bracket can be assembled in the following three positions

1. Normal position
2. Pushed to the upper end (Rotate the bracket a half turn.
3. Pushed to the lower end (Rotate the bracket a half turn.)

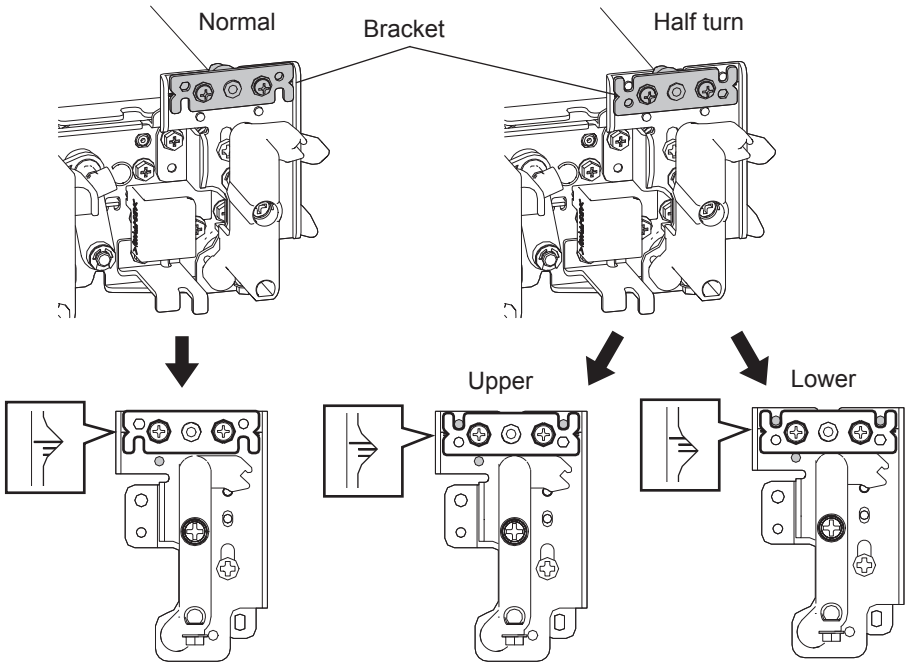


Fig. 3-92

Adjustment is not needed when the bracket position of the new unit or assembly is the same as that of the unit before the replacement.
When the bracket position of the new unit or assembly is the same as that of the new one, align the bracket to the installation position before the replacement.

<Changing procedure of the bracket position>

When the cut-out portion of the bracket before the replacement is facing downward
Remove 2 screws from the transfer belt unit to be replaced and rotate the bracket a half turn
Align the bracket in the position the same as that before the replacement (pushed to the upper/lower end) and fix it with 2 screws.

Note:

Remove red screws only when a position adjustment is necessary.

3.11 Gap Adjustment for Fuser Unit

When PM parts were replaced at a PM timing or in any other case these parts were removed or replaced, the gap adjustment described in this section is required.

3.11.1 Gap adjustment for fuser belt thermostats

When any of the parts shown below was replaced or removed, check the gap between the fuser belt thermostat and the fuser belt, and then adjust it if required.

- Fuser roller
- Fuser belt
- Satellite roller
- Fuser belt thermostat (center/side)

Notes:

- Wait until the fuser unit has completely cooled down, and then start the adjustment.
- Place the fuser unit on a flat surface, confirming that its 4 legs are securely grounded.
- Measure the gap while pressure is being applied to the pressure roller with the spring force. At this time be sure that the pressure screw is securely tightened so that it will no longer be turned.
- Be sure not to damage the fuser belt with the gap confirmation jig.
- Adjust the gap while the pressure roller is released from the fuser belt.
- If the fuser unit is not installed to the equipment after the replacement or adjustment but must be stored as a unit for a long time, be sure to leave the pressure roller released from the fuser belt.

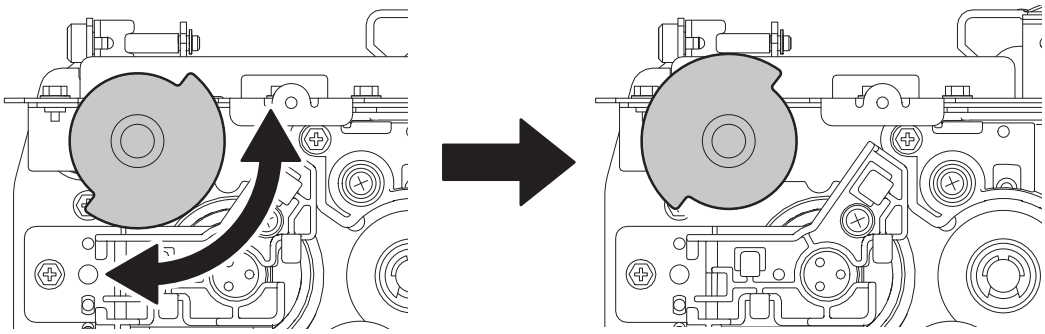


Fig. 3-93

Gap to be confirmed

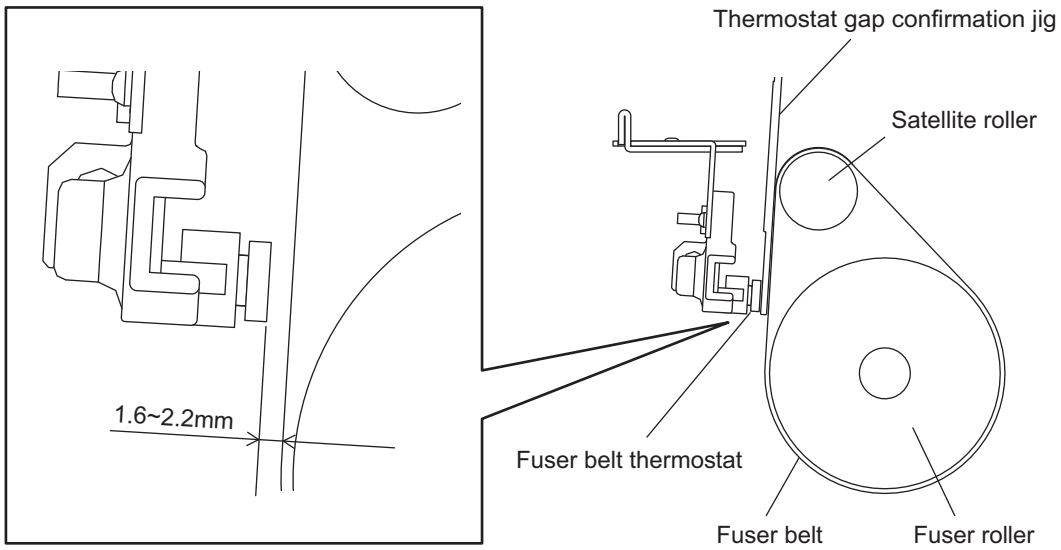


Fig. 3-94

Gap confirmation jig

- Thermostat gap confirmation jig (JIG-FU-THRMST-BP)

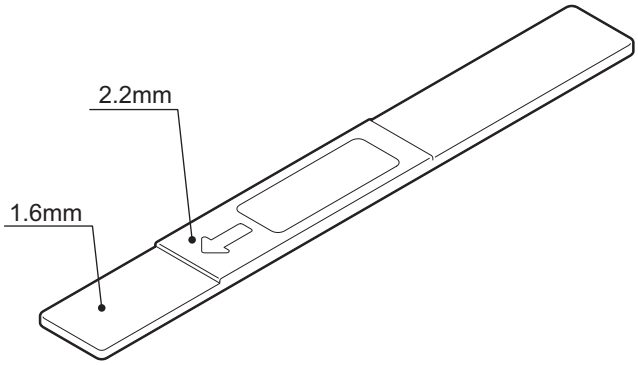


Fig. 3-95

<Adjustment procedure>

Notes:

- When the fuser belt was replaced with a new one, turn the gear by hand for 2 or 3 rotations until the new belt works smoothly.

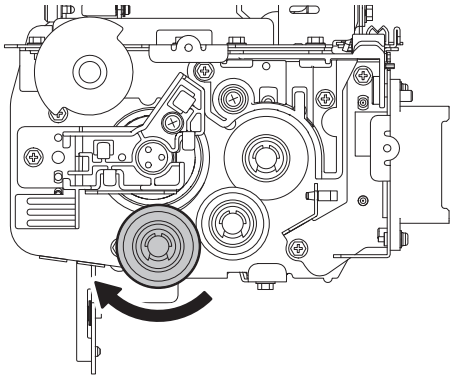
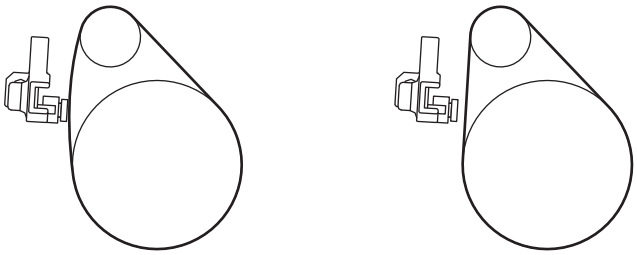


Fig. 3-96

- When the fuser belt was not replaced, do not turn the belt before you start the gap adjustment. When the fuser belt is heated and then cooled down, it has a slack where the satellite roller rolls up the belt. When this slack is moved away from the satellite roller, it makes the gap adjustment incorrect.



The slack of the fuser belt is not on the satellite roller.

The slack of the fuser belt is on the satellite roller.

Fig. 3-97

If you turned the belt before the gap adjustment by mistake, follow the procedure below to move the slack back to the position where the satellite roller rolls up the belt.
Loosen the pressure screw to remove the spring so that the pressure roller will not be pressed. Then rotate the gear to turn the belt so that a heavy load is applied on the rotation of the gear when the slack on the fuser belt passes over the satellite roller. At this time release your hand so that the slack comes at the position where the satellite roller rolls up the belt. It is easier when you check from the side if the slack has come at an appropriate position.

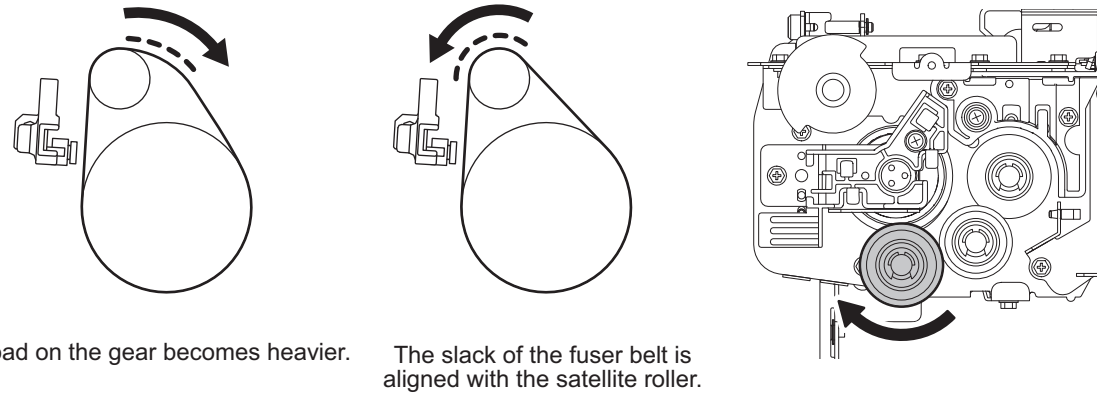


Fig. 3-98

(1) Take off the transport guide-1 from the fuser unit.
📖 Service Manual “14.6.3 Transport guide-1”
(2) Insert the gap confirmation jig at 2 points; the gap between the fuser belt center thermostat and the fuser belt, and the gap between the fuser belt side thermostat and the fuser belt. Insert it parallel to the thermostat surface.
(3) Confirm that the 1.6 mm section of the jig is inserted without touching, but its 2.2 mm section makes contact. If this condition is met, end the procedure because no adjustment is needed. If it is not, go to step (4).
(4) Change the screw hole of the adjustment screw to a long one. Leave the adjustment screw loosened.
(5) Adjust the position of the bracket by moving it up or down while you are screwing until you can insert the 1.6 mm section of the jig without touching, but its 2.2 mm section contacts the thermostat surface.
(6) End the procedure when the statuses of both points meet the condition above.

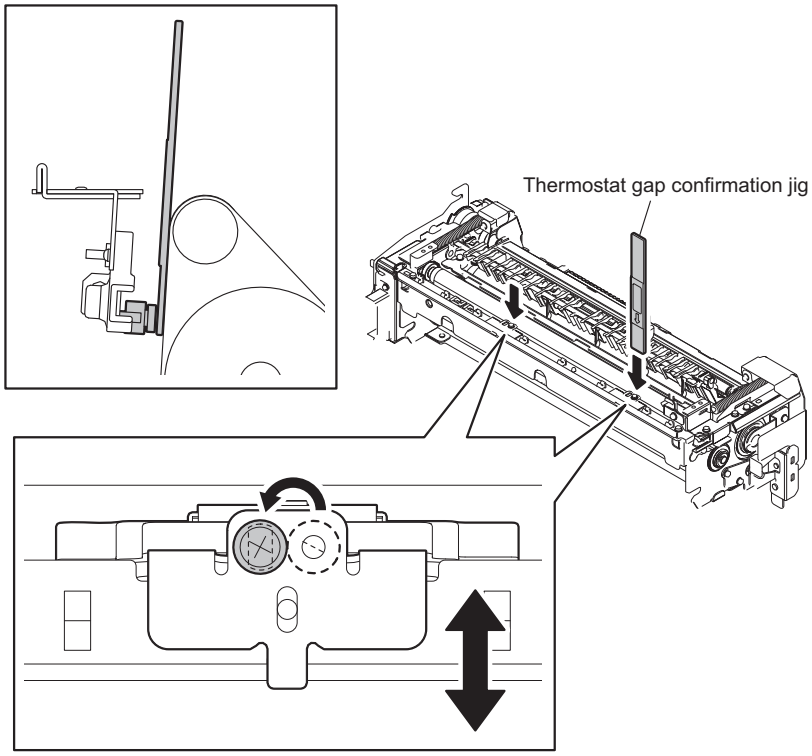


Fig. 3-99

3.11.2 Gap adjustment for pressure roller thermistors

When any of the parts shown below was replaced or removed, check the gap between the pressure roller thermistor and the pressure roller, and then adjust it if required.

- Pressure roller
- Pressure roller thermistor (center/side)

Notes:

- Wait until the fuser unit is completely cooled down, and then start the adjustment.
- Place the fuser unit on a flat surface, confirming that its 4 legs are securely grounded.
- Measure the gap while pressure is being applied to the pressure roller with the spring force. At this time be sure that the pressure screw is securely tightened so that it will no longer be turned.
- Be sure not to damage the pressure roller and the pressure roller thermistors with the gap confirmation jig.
- Adjust the gap while the pressure roller is released from the fuser belt.
- If the fuser unit is not installed to the equipment after the replacement or adjustment but must be stored as a unit for a long time, be sure to leave the pressure roller released from the fuser belt.

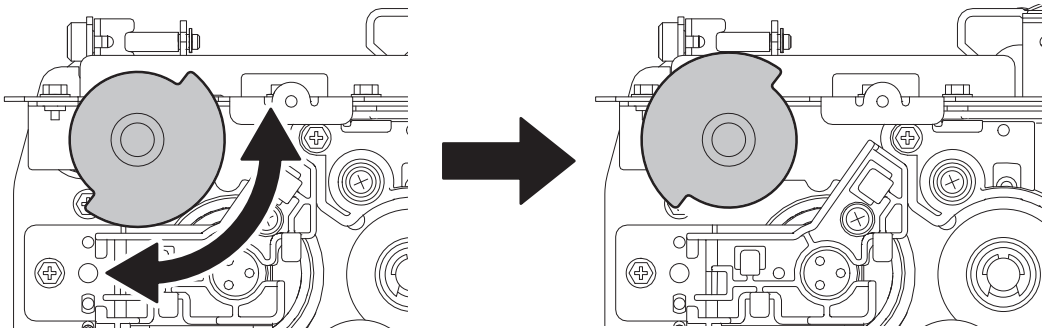


Fig. 3-100

Gap to be confirmed

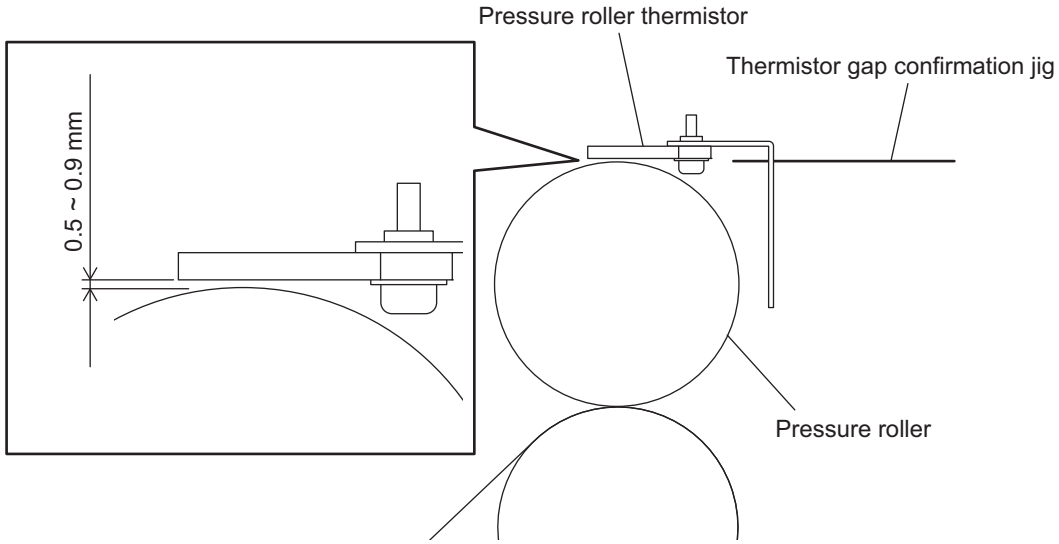


Fig. 3-101

Gap confirmation jig

- Thermistor gap confirmation jig (ASYB-JIG-THRMIS-BP)

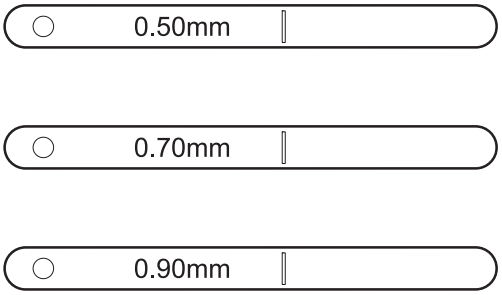


Fig. 3-102

<Adjustment procedure>

(1) Take off the pressure roller cover from the fuser unit.
    📖 Service Manual “14.6.2 Pressure roller cover”
(2) Take off the entrance guide.
    📖 Service Manual “14.6.5 Entrance guide cover”
(3) Loosen the adjustment screw on the bracket of each thermistor. Then insert the 0.70 mm-thermistor gap confirmation jig at 2 points; the gap between the pressure roller center thermistor and the pressure roller, and the gap between the pressure roller side thermistor and the pressure roller. Insert it parallel to the thermistor surface. Then adjust the position of the bracket by moving it up or down and then fix the adjustment screw.

Note:
Adjust the scale mark of the jig to the position shown below. If not, it makes the gap adjustment incorrect.

(4) Confirm that the 0.50 mm-thermistor gap confirmation jig is inserted without touching, but the 0.90 mm-jig contacts the thermistor surface. If this condition is met, end the procedure because no adjustment is needed. If it is not, repeat the procedure from step (3).

Note:
Adjust the scale mark of the jig to the position shown below. If not, it makes the gap adjustment incorrect.

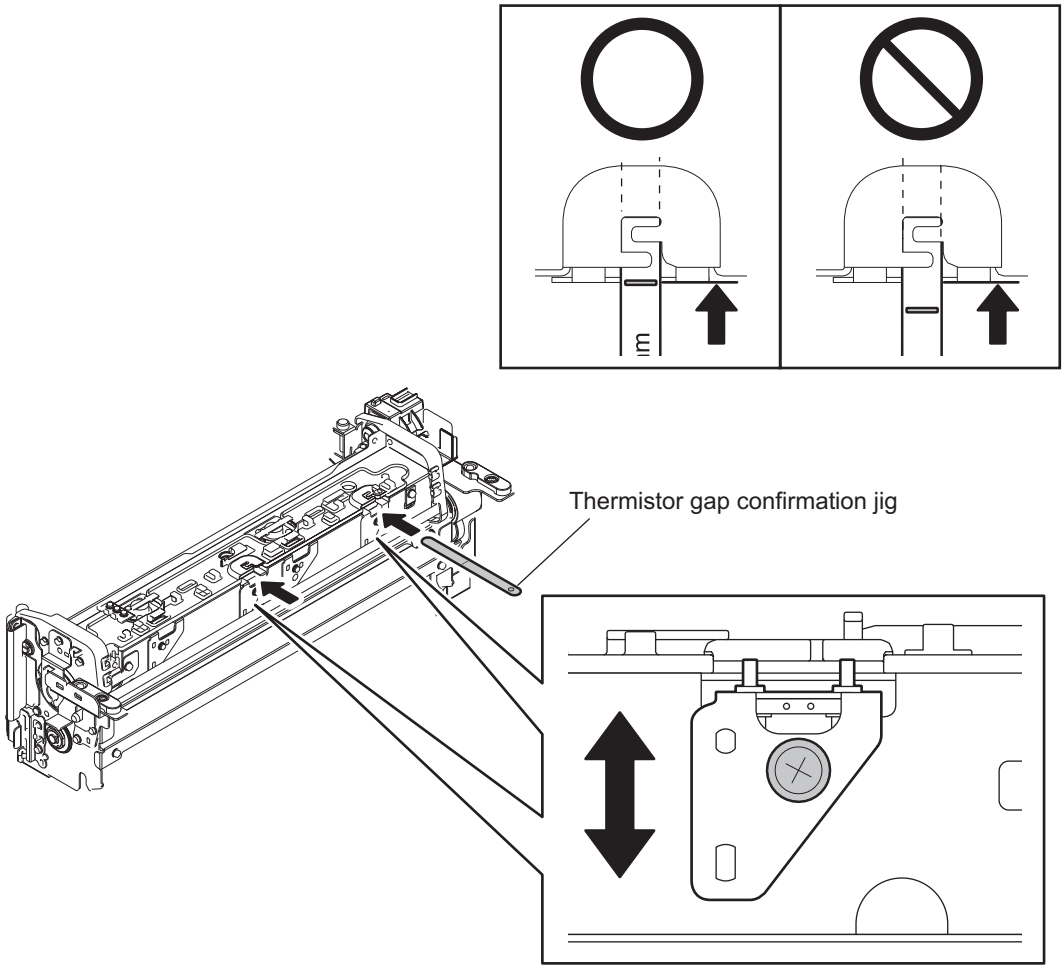


Fig. 3-103

3.11.3 Gap adjustment for pressure roller thermostats

When any of the parts shown below was replaced or removed, check the gap between the pressure roller thermostat and the pressure roller, and then adjust it if required.

- Pressure roller
- Pressure roller thermostat (center/side)

Notes:

- Wait until the fuser unit is completely cooled down, and then start the adjustment.
- Place the fuser unit on a flat surface, confirming that its 4 legs are securely grounded.
- Measure the gap while pressure is being applied to the pressure roller with the spring force. At this time be sure that the pressure screw is securely tightened so that it will no longer be turned.
- Be sure not to damage the pressure roller with the gap confirmation jig.
- Adjust the gap while the pressure roller is released from the fuser belt.
- If the fuser unit is not installed to the equipment after the replacement or adjustment but must be stored as a unit for a long time, be sure to leave the pressure roller released from the fuser belt.

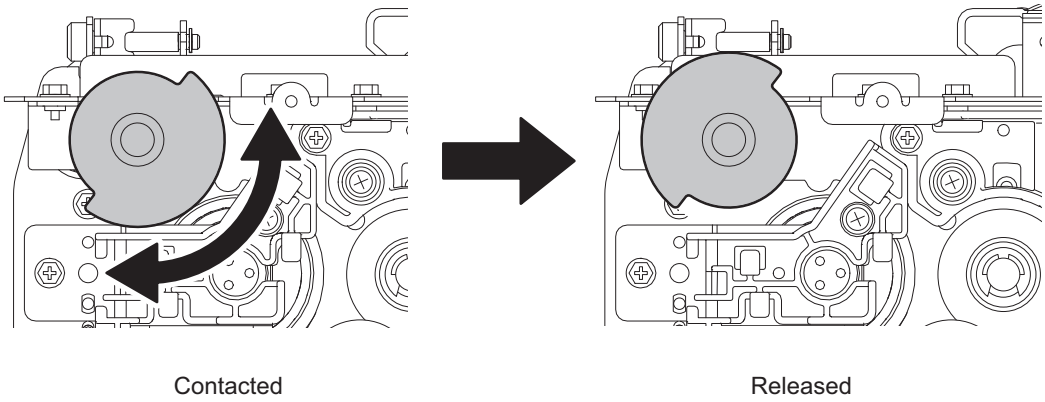


Fig. 3-104

Gap to be confirmed

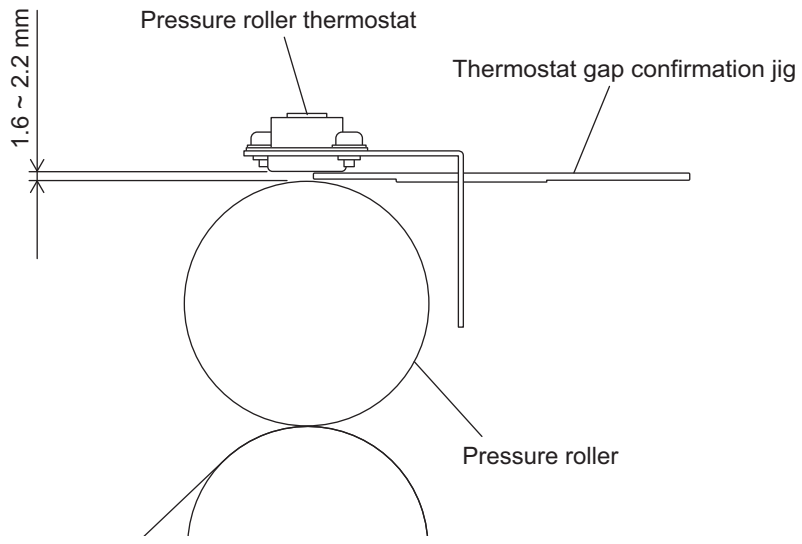


Fig. 3-105

Gap confirmation jig

- Thermostat gap confirmation jig (JIG-FU-THRMST-BP)

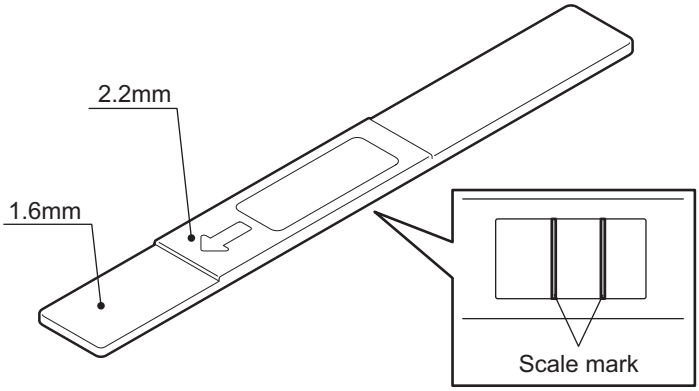


Fig. 3-106

<Adjustment procedure>

(1) Take off the pressure roller cover from the fuser unit.
📖 Service Manual “14.6.2 Pressure roller cover”
(2) Take off the entrance guide.
📖 Service Manual “14.6.5 Entrance guide cover”
(3) Insert the thermostat gap confirmation jig at 2 points; the gap between the pressure roller center thermostat and the pressure roller, and the gap between the pressure roller side thermostat and the pressure roller. Insert it parallel to the thermostat surface.
(4) Confirm that the 1.6 mm section of the thermostat gap confirmation jig is inserted without touching, but its 2.2 mm section contacts the thermostat surface. If this condition is met, end the procedure because no adjustment is needed. If it is not, go to step (5).

Note:
Adjust the scale mark of the jig to the position shown below. If not, it makes the gap adjustment incorrect.

(5) Change the screw hole of the adjustment screw to a long one. Leave the adjustment screw loosened.
(6) Adjust the position of the bracket by moving it up or down while you are screwing until you can insert the 1.6 mm section of the jig without touching, but its 2.2 mm section contacts the thermostat surface.

Note:
Adjust the scale mark of the jig to the position shown below. If not, it makes the gap adjustment incorrect.

(7) End the procedure when both points meet the condition above.

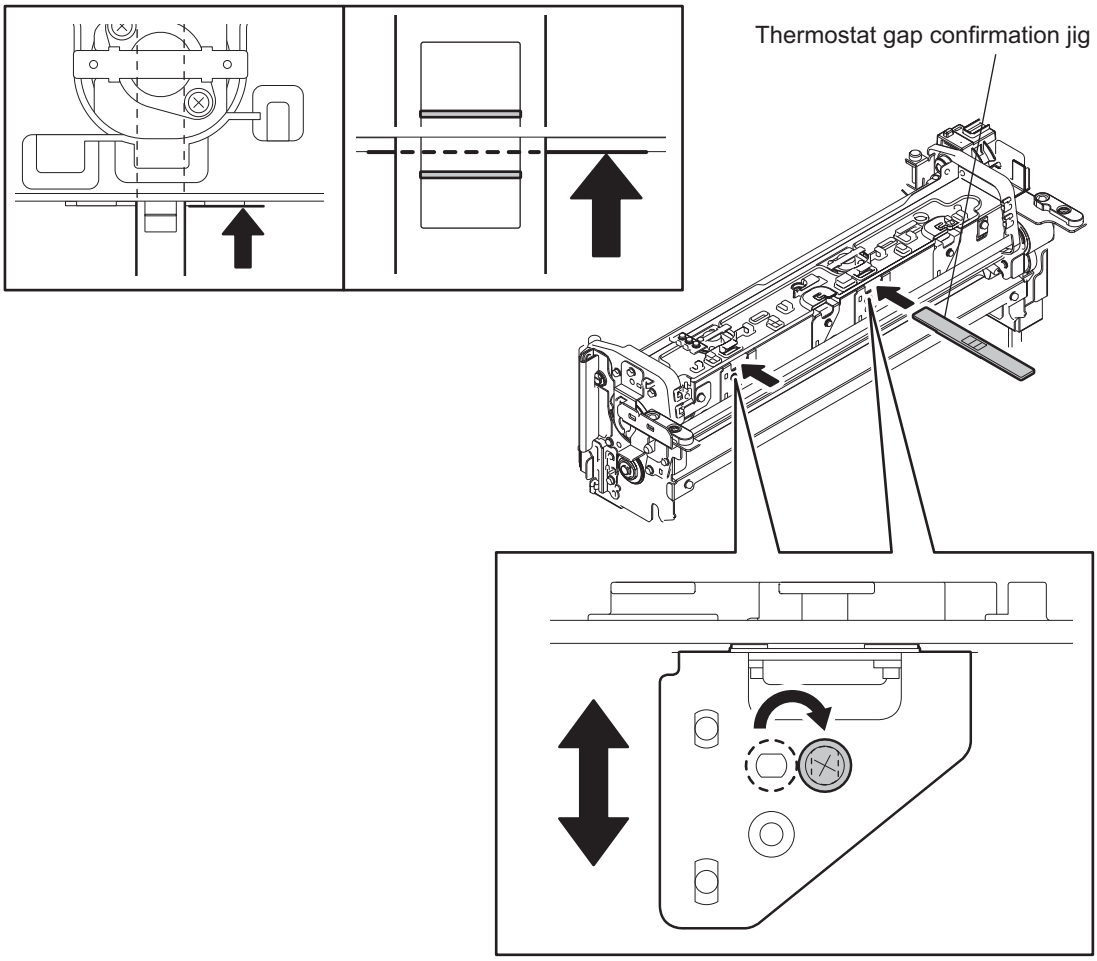


Fig. 3-107

3.11.4 Gap adjustment for separation plate

When the separation plate was replaced or removed or when the adjustment screw was moved, check the gap between the separation plate and the fuser belt, and then adjust it if required.

Notes:

- Wait until the fuser unit is completely cooled down, and then start the adjustment.
- Place the fuser unit on a flat surface, confirming that its 4 legs are securely grounded.
- Measure the gap while pressure is being applied to the pressure roller with the spring force. At this time be sure that the pressure screw is securely tightened so that it will no longer be turned.
- Be sure not to damage the fuser belt with the gap confirmation jig.
- Adjust the gap while the pressure roller is released from the fuser belt.
- If the fuser unit is not installed to the equipment after the replacement or adjustment but must be stored as a unit for a long time, be sure to leave the pressure roller released from the fuser belt.

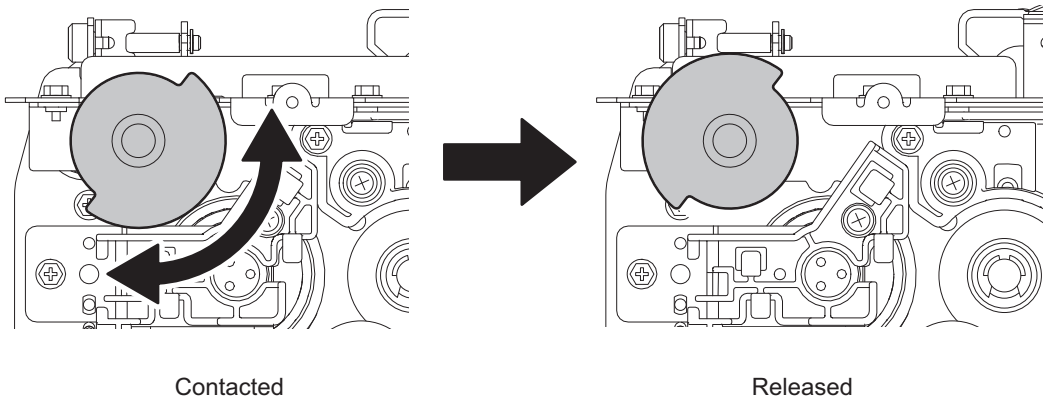


Fig. 3-108

Gap to be confirmed

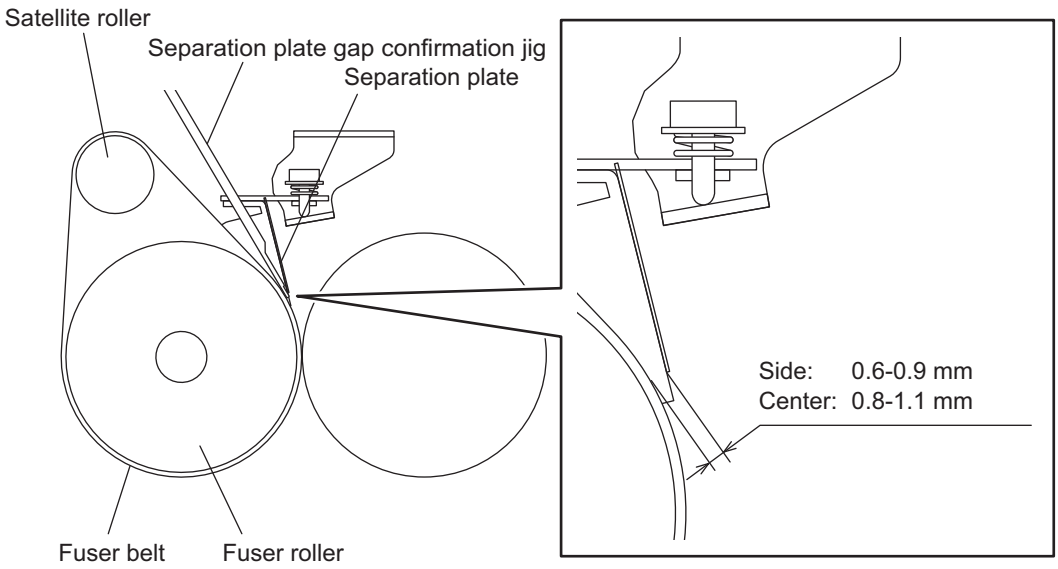


Fig. 3-109

Gap confirmation jig

- Separation plate gap confirmation jig (JIG-FU-SEP-BP)

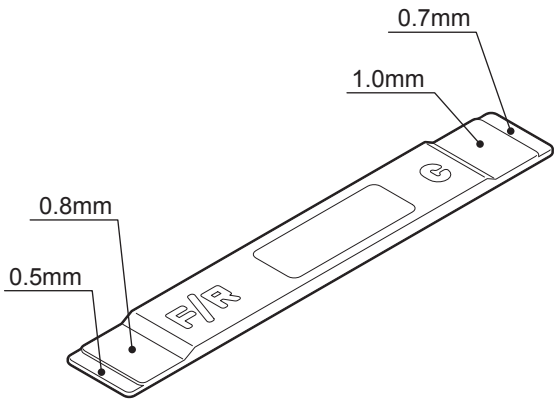


Fig. 3-110

<Adjustment procedure>

Notes:

- When the fuser belt was replaced with a new one, turn the gear by hand for 2 or 3 rotations until the new belt works smoothly.

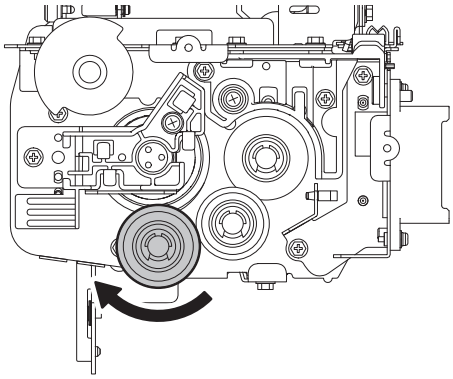
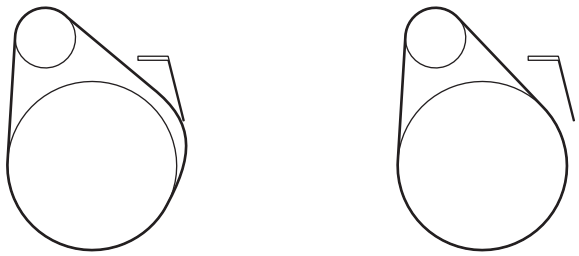


Fig. 3-111

- When the fuser belt was not replaced, do not turn the belt before you start the gap adjustment. When the fuser belt is heated and then cooled down, it has a slack where the satellite roller rolls up the belt. When this slack is moved away from the satellite roller, it makes the gap adjustment incorrect.

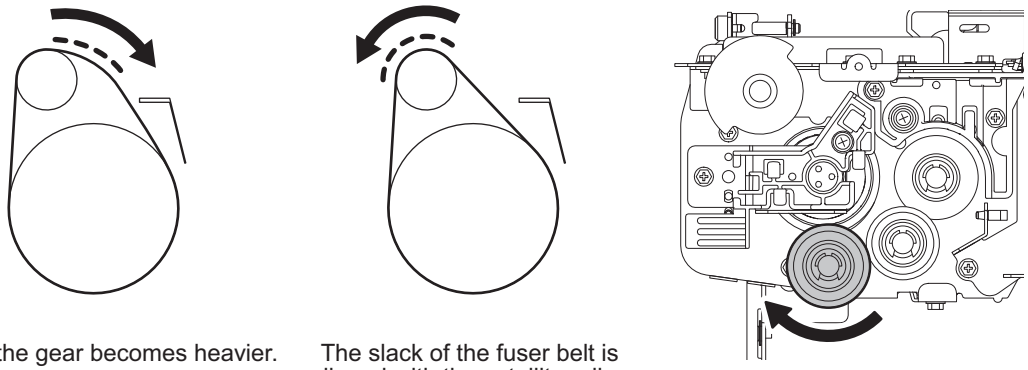


The slack of the fuser belt is not on the satellite roller.

The slack of the fuser belt is on the satellite roller.

Fig. 3-112

If you turned the belt before the gap adjustment by mistake, follow the procedure below to move the slack back to the position where the satellite roller rolls up the belt.
Loosen the pressure screw to remove the spring so that the pressure roller will not be pressed. Then rotate the gear to turn the belt so that a heavy load is applied on the rotation of the gear when the slack on the fuser belt passes over the satellite roller. At this time release your hand so that the slack comes at the position where the satellite roller rolls up the belt. It is easier when you check from the side if the slack has come at an appropriate position.



Load on the gear becomes heavier.

The slack of the fuser belt is aligned with the satellite roller.

Fig. 3-113

(1) Remove 3 screws to take off the transport guide-1 cover from the fuser unit.

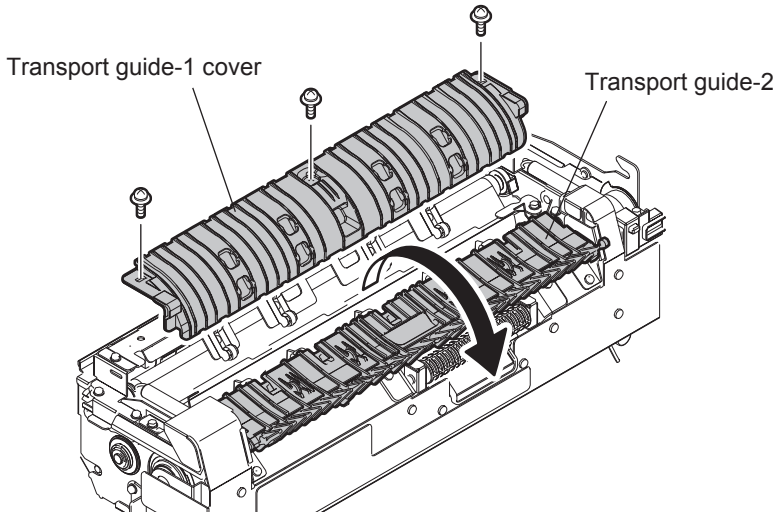


Fig. 3-114

(2) Insert the “F/R” side of the separation plate gap confirmation jig into the window closest to you of the separation plate.
(3) Adjust the gap with the adjustment screw until the 0.5 mm section of the jig is inserted without touching, but its 0.8 mm section contacts the separation plate.
(4) Insert the “F/R” side of the jig into the window of the separation plate, which is farthest away from you, and then adjust the gap.
(5) Insert the “C” side of the jig into the window at the center of the separation plate.
(6) Adjust the gap with the adjustment screw until the 0.7 mm section of the jig is inserted without touching, but its 1.0 mm section contacts the separation plate surface.

(7) Repeat step (2) to (6). If you can confirm that all gaps are the correct values, end the procedure.

Notes:

If the separation plate gap is not adjusted correctly, the problems below may occur.

- If the gap is too large, paper jams may occur frequently when photo images are copied on thin paper.
- If the gap is too small, stains may appear on the copied image because the separation plate may scratch the fuser belt.

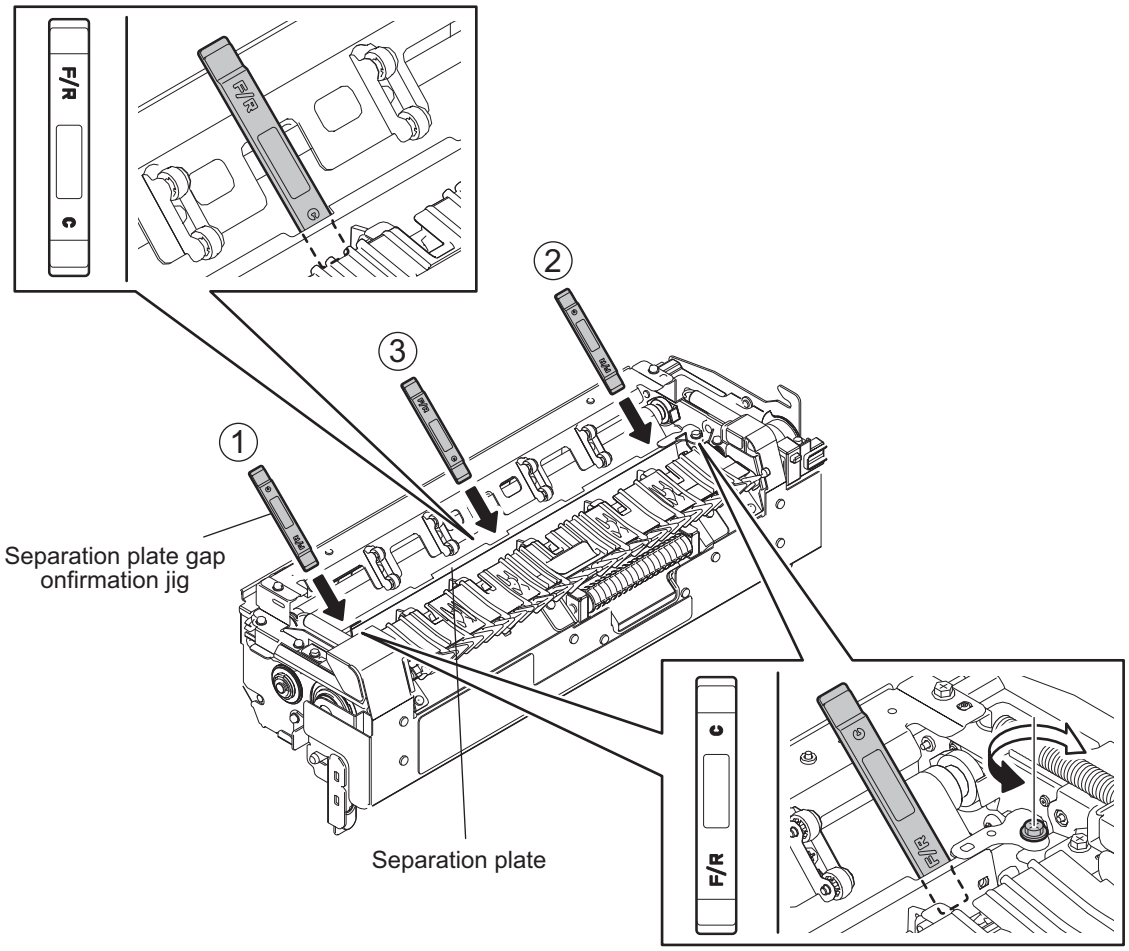


Fig. 3-115

4. BACKUP FUNCTION

4.1 Data Cloning

4.1.1 General description

Data cloning is a function that backs up user data, setting data and SRAM data into a USB media and also restores these data into the equipment. The types of data to back up or restore are selectable. You can back up or restore all data in a batch, or only the required one separately.

4.1.2 Precautions

1. Programs required for data cloning are as follows:

System ROM version	Storage location	Program file name
---	Root directory	rootusb2 clone_5520C_6530C.xxx

2. Be sure to check the “Status display of the USB data cloning permission (08-9889)” before data cloning. When the value of 08-9889 is “1 (Prohibited)”, data cloning cannot be performed. Contact and ask the user (machine administrator) to change the setting on the [Data Cloning Function] in TopAccess, or set “0 (Accepted)” in 08-9889.
3. It is assumed that data cloning is to be performed when equipment is installed or options are installed. If the address book has been registered, do not perform restore. Registered / set data are lost.
4. The USB media for the data cloning must meet the following conditions. A data cloning operation with any devices other than the following will not be guaranteed.
   - A combination USB medium with a flash memory (to be connected directly to the USB port) having a capacity of 256 MB to 512 MB (or 1 GB) or more.
   - A device compliant with the following specifications established by USB-IF (USB Implementers Forum)
     Class number: 8 (=08h) (Mass storage class)
     Sub-Class number: 6 (=06h) (SCSI transfer command set)
     Protocol number: 80 (=50h) (Bulk-only)
   - Most of the common USB medias are compliant with the above specifications and are therefore applicable to this data cloning. However, most of these devices were originally developed to be used in an environment for PCs (e.g. Windows or Macintosh) and thus operations exclusively with this equipment have not been fully guaranteed. Therefore, the user must thoroughly check in advance whether there will be any problem in operating with this equipment when adopting one of these devices.
5. The USB medias compliant with both USB 1.1 and USB 2.0 can be used for this data cloning.
6. Data cloning with any storage devices other than a flash memory (e.g. USB-connectable memory card reader, CD/DVD drive, hard disk) will never be guaranteed. Therefore never use them for this operation.
7. Be sure to unplug the LAN cable and Fax line before data are backed up / restored. Also, do not use the RADF and open the cover, drawer, etc. during the data cloning.
8. Data can be backed up / restored only for the same model and version. If the version is different, update the firmware and back up / restore data in the same version.
9. Restore data to equipment which has the same options as when the data are backed up.
10. If “Department management” or “User management information” is restored, the counter values are copied as well, so clear all of them. However, the total counter is not copied.
11. Delete the backed up data in the USB media after the data cloning.
12. [ERROR12: Device is Busy] is displayed if the equipment is in one of the following statuses when running data cloning.
    - When backing up
      - Control panel is in use
      - JOB is in process

- When restoring
  - Control panel is in use
  - JOB is in process
  - Private job has been reserved
  - Schedule print job has been reserved
  - Proof print job has been reserved
  - Hold print job has been reserved
  - Invalid job is pending

4.1.3 Backup files

Data files that are available for backup are limited to user data, setting data and SRAM data.The detailed descriptions for each file are shown below. Note that backup files are encrypted.

1.User data file

The folder “user_data” is created in the root directory and the following files are stored in it.

Data item	folder	File name
Address book	user_data	BACKUP_ADDR.sct
Mailbox	user_data	BACKUP_MBOX.sct
Template	user_data	BACKUP_TEMP.sct
Back up the Address book, Mailbox and Template in a batch	user_data	BACKUP_ALL.sct
Department management information	user_data	BACKUP_Department.sct
User management information	user_data	BACKUP_User.sct
Role information	user_data	BACKUP_Role.sct
Mata Scan information	user_data\metaScan	xxxx.sct * The file name that the user has set for saving this file comes at “XXXX”.

2.Setting data file

The folder “setting_data” is created in the root directory and the following files are stored in it.

Data item	folder	File name
Network / Print service	setting_data	network.sct IPsec.sct*
SaveAsFile / Email / InternetFAX	setting_data	scan.sct
Notification setting	setting_data	notice.sct
Directory Service	setting_data	ldap.sct
FAX setting	setting_data	fax.sct fax08.sct
Wireless LAN setting / Bluetooth setting	setting_data	wl.sct bl.sctt
COPY setting	setting_data	copy.sct
GENERAL setting	setting_data	general.sct
User management setting	setting_data	Usrmng.sct

* Enabled when IPSec (GP-1080, optional) is installed

3.SRAM data file

The folder “sram_data” is created in the root directory and the following files are stored in it.

Data item	folder	File name
SRAM	sram_data	sram.sct

Note:

In addition to the backed up data, the following files are created in each folder

Data item	folder	File name
User data	user_data	user_data.txt
Setting data	setting_data	setting_data.txt
SRAM data	sram_data	sram_data.txt

<Contents of file>

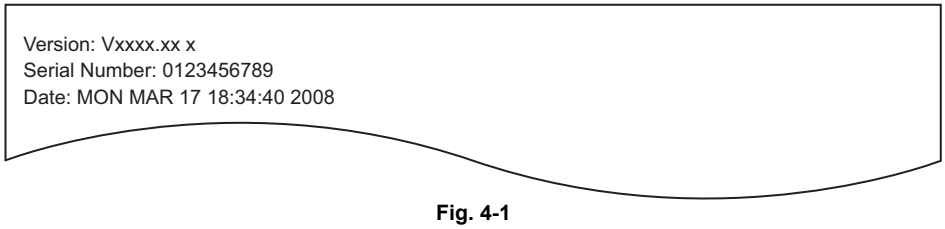


Fig. 4-1

- File format (user_data.txt, setting_data.txt, sram_data.txt: all in common)
  Line 1: Version
  Line 2: Serial number
  Line 3: Date

4.1.4 List of codes available for cloning

Setting mode (08)

08-204	08-205	08-206	08-209	08-218
08-219	08-221	08-250	08-254	08-259
08-260	08-264	08-272	08-273	08-274
08-288	08-290	08-291	08-292	08-293
08-294	08-295	08-296	08-297	08-298
08-299	08-300	08-302	08-331	08-342
08-503	08-550	08-603	08-610	08-611
08-619	08-620	08-621	08-622	08-623
08-624	08-629	08-634	08-638	08-640
08-642	08-645	08-649	08-650	08-651
08-652	08-653	08-658	08-659	08-671
08-702	08-703	08-707	08-721	08-723
08-726	08-727	08-728	08-729	08-730
08-780	08-781	08-782	08-783	08-784
08-785	08-786	08-787	08-788	08-789
08-790	08-945	08-969	08-970	08-973
08-976	08-978	08-979	08-1002	08-1007
08-1011	08-1012	08-1014	08-1015	08-1016
08-1017	08-1018	08-1019	08-1020	08-1022
08-1024	08-1025	08-1026	08-1027	08-1028
08-1029	08-1030	08-1031	08-1032	08-1037
08-1038	08-1039	08-1040	08-1041	08-1042
08-1043	08-1044	08-1045	08-1046	08-1047
08-1048	08-1049	08-1050	08-1051	08-1052
08-1055	08-1059	08-1060	08-1063	08-1065
08-1066	08-1069	08-1070	08-1073	08-1074
08-1075	08-1076	08-1078	08-1079	08-1080
08-1089	08-1090	08-1091	08-1092	08-1094
08-1095	08-1096	08-1097	08-1098	08-1099
08-1100	08-1101	08-1102	08-1103	08-1111
08-1114	08-1123	08-1125	08-1138	08-1432
08-1440	08-1441	08-1442	08-1444	08-1445
08-1446	08-1447	08-1448	08-1449	08-1450
08-1451	08-1464	08-1472	08-1661	08-1662
08-1665	08-1666	08-1667	08-1668	08-1669
08-1670	08-1671	08-1672	08-1673	08-1674
08-1675	08-1676	08-1677	08-1678	08-1685
08-1686	08-1689	08-1690	08-1691	08-1692
08-1693	08-1696	08-1697	08-1699	08-1700
08-1701	08-1704	08-1705	08-1706	08-1707
08-1708	08-1710	08-1711	08-1712	08-1713
08-1714	08-1715	08-1719	08-1720	08-1721
08-1722	08-1723	08-1724	08-1725	08-1726
08-1727	08-1728	08-1729	08-1730	08-1731
08-1732	08-1733	08-1734	08-1735	08-1736
08-1737	08-1738	08-1739	08-1740	08-1741
08-1743	08-1744	08-1745	08-1746	08-1748
08-1749	08-1750	08-1755	08-1756	08-1759
08-1760	08-1762	08-1764	08-1765	08-1766
08-1767	08-1772	08-1779	08-1780	08-1781-0
08-1781-1	08-1782	08-1783	08-1784-0	08-1784-1
08-1785	08-1786	08-1920	08-1937	08-1941
08-1950	08-1951	08-1953	08-1958	08-1959
08-3506	08-3507	08-3508	08-3631	08-3722

08-3723	08-3724	08-3736	08-3737	08-3738
08-3739	08-3740	08-3741	08-3742	08-3743
08-3745	08-3746	08-3747	08-3748	08-3754
08-3755	08-3757	08-3758	08-3759	08-3760
08-3767	08-3768	08-3774	08-3775	08-3776
08-3777	08-3778	08-3779	08-3780	08-3781
08-3782	08-3783	08-3785	08-3789	08-3793
08-3796	08-3797	08-3812	08-3833	08-3846
08-3847	08-3848	08-3849	08-3851	08-3852
08-3853	08-3854	08-3855	08-3856	08-3857
08-3858	08-3859	08-3860	08-3861	08-3862
08-3863	08-8504	08-8511	08-8543	08-8580
08-8581	08-8582	08-8583	08-8584	08-8585
08-8586	08-8587	08-8588	08-8589	08-8590-0
08-8590-1	08-8590-2	08-8590-3	08-8590-4	08-8591
08-8592	08-8593	08-8604	08-8605	08-8606
08-8608	08-8609	08-8610	08-8615	08-8616
08-8617	08-8618	08-8619	08-8620	08-8624
08-8625	08-8626	08-8628	08-8629	08-8800
08-8801	08-8803	08-8804	08-8805	08-8817
08-8818	08-9015	08-9103	08-9117	08-9120
08-9121	08-9122	08-9123	08-9124	08-9125
08-9126	08-9193	08-9294	08-9384	08-9394
08-9629	08-9700	08-9746	08-9747	08-9748
08-9791	08-9799	08-9829	08-9889	08-9891
08-9946	08-9947	08-9957	08-9958	08-9980
08-9981	08-9984-0	08-9984-1	08-9984-2	08-9984-3
08-9984-4				

Fax function mode (13)

13-100	13-101	13-102	13-103	13-104
13-105	13-106	13-107	13-108	13-109
13-110	13-111	13-112	13-116	13-117
13-122	13-123	13-125	13-127	13-128
13-129	13-132	13-135	13-137	13-138
13-139	13-140	13-141	13-142	13-143
13-149	13-150	13-151	13-152	13-153
13-200	13-201	13-203	13-206	13-210
13-211	13-213	13-216	13-220	13-221
13-222	13-223	13-224	13-225	13-226
13-227	13-228	13-229	13-230	13-231
13-232	13-236	13-245	13-247	13-249
13-262	13-267	13-268	13-269	13-270
13-271	13-272	13-273	13-279	13-280
13-281	13-282	13-283	13-312	13-313
13-317	13-325	13-328	13-331	13-335
13-338	13-339	13-340	13-346	13-350
13-351	13-355	13-356	13-357	13-359
13-361	13-362	13-363	13-365	13-367
13-368	13-370	13-371	13-372	13-373
13-375	13-377	13-378	13-379	13-382
13-389	13-391	13-394	13-398	13-430
13-433	13-501	13-509	13-510	13-511
13-512	13-517	13-518	13-519	13-564
13-565	13-566	13-567	13-569	13-571
13-574	13-575	13-576	13-577	13-578
13-580	13-581	13-584	13-585	13-586
13-587	13-601	13-602	13-605	13-606
13-607	13-610	13-611	13-612	13-614
13-615	13-616	13-706	13-707	13-709
13-711	13-720	13-722	13-723	13-724
13-725	13-726	13-727	13-728	13-922
13-923	13-924	13-925	13-926	13-927
13-930	13-931	13-940	13-941	13-944
13-955	13-961	13-962	13-970	13-971

4.1.5 Cloning procedure

[A] Backup procedure

(1) Shut down the equipment.

(2) Connect the USB media to the USB port on the right upper cover.

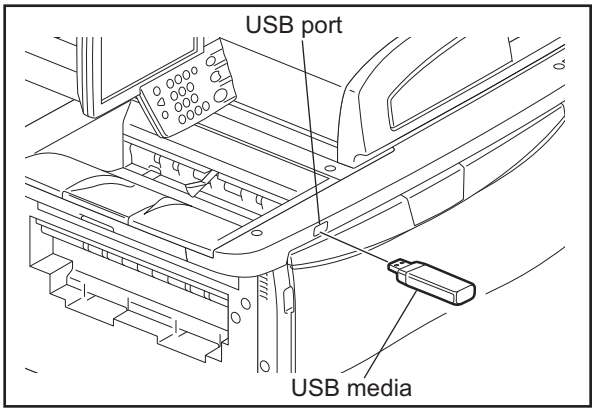


Fig. 4-2

Note:
Backing up cannot be performed with multiple USB media connected at the same time.

(3) Turn the power ON while pressing the [5] and [9] buttons simultaneously.
A screen for selecting items to back up is displayed. Select the number (any of “1”, “3” and “5”) for data you want to back up. Press the [START] button.

Number	Backup Item
1: User Data Back Up	Backing up User data
3: Setting Back Up	Backing up Setting item
5: SRAM Data Back Up	Backing up SRAM data

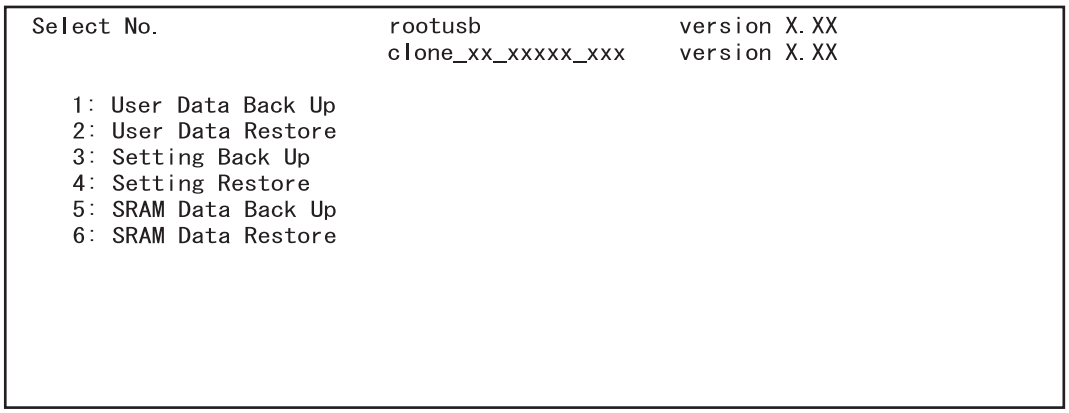


Fig. 4-3

Notes:
- It may take some time for the next screen to appear after you key in the number for the item.
- The screen above is not displayed if the data cloning function is disabled. In this case, ask the user (machine administrator) to enable the data cloning function on the TopAccess menu, or set “0 (Accepted)” in 08-9889.
- To clear the selection, press the [CLEAR] or [FUNCTION CLEAR] button.

(4) A certain time after the [START] button is pressed, the following screen is displayed. Select the number of the desired data. The selected item will be displayed with an asterisk.

<When “1: User Data Back Up” is selected>

Number	Backup Item
1: Address Book	Backing up Address book
2: MailBoxes	Backing up Mail box
3: Template	Backing up Template and meta scan definition file
4: Combined	Backing up Address Book, Mail Box, Template, and meta scan definition file in a batch
5: FAX Kit	Backing up Department management
6: User Info	Backing up User management information
7: Role Info	Backing up Role information

* The items “4”, “5”, “6”, and “7” are selected in the screen by default.

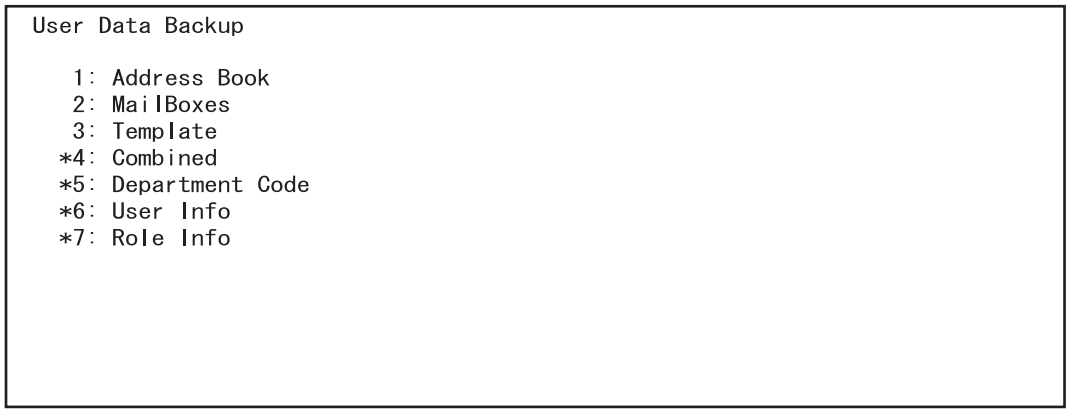


Fig. 4-4

<When “3: Setting Back Up” is selected>

Number	Backup Item
1: Network/Print Service	Backing up TopAccess: Network/Print Service
2: SaveAsFile/Email/InternetFAX	Backing up TopAccess: SaveAsFile/Email/InternetFAX
3: Notification	Backing up TopAccess: Notification
4: Directory Service	Backing up TopAccess: Directory Service
5: FAX Kit	Backing up Option: Fax setting
6: WirelessLAN/Bluetooth Kit	Backing up Option: WirelessLAN/Bluetooth setting
7: Copy	Backing up TopAccess: Copy setting
8: General	Backing up TopAccess: General setting
9: User Management	Backing up TopAccess: User management setting

* No items are selected in the screen by default.

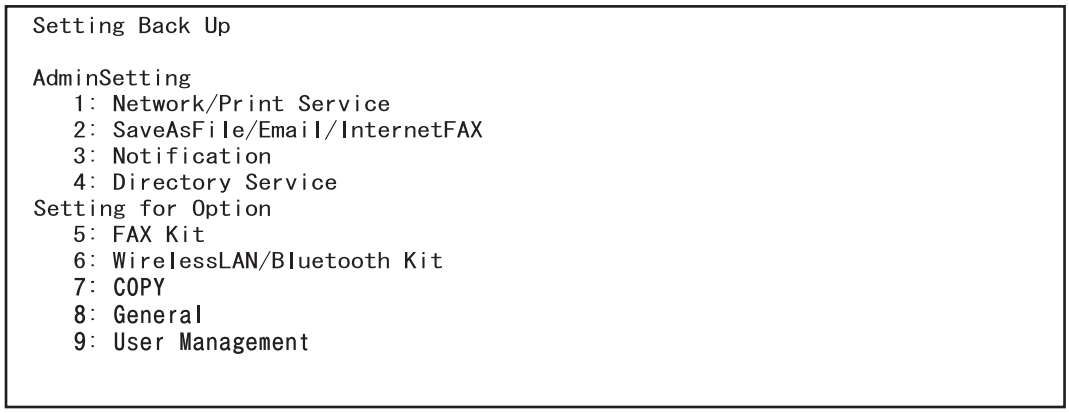


Fig. 4-5

<When “5: SRAM Data Back Up” is selected>

Number	Backup Item
1. SRAM	Backing up SRAM Data

* No items are selected in the screen by default.

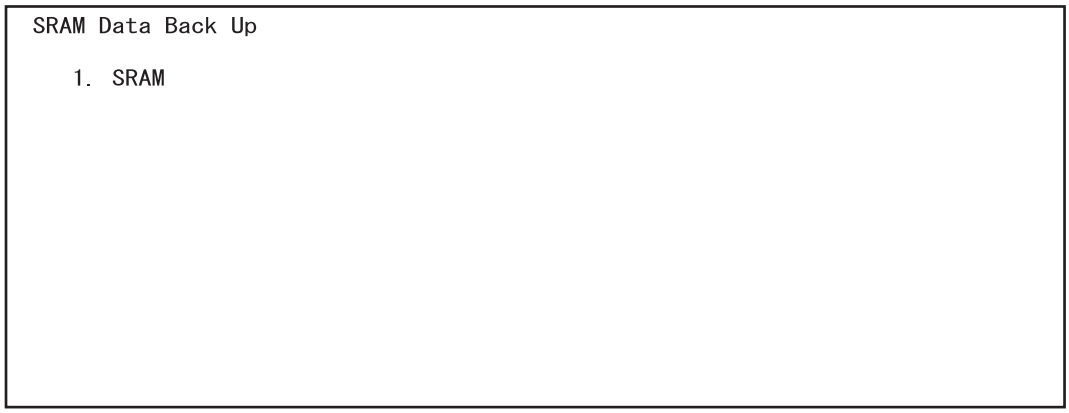


Fig. 4-6

(5) Press the [START] button. The backup starts and the backing up status is displayed on the LCD screen.

(6) “Back Up Completed” is displayed on the LCD screen when the backup has been properly completed.

(7) Turn the power OFF and remove the USB media.

[B] Restoring procedure

(1) Shut down the equipment.

(2) Connect the USB media to the USB port on the right upper cover.

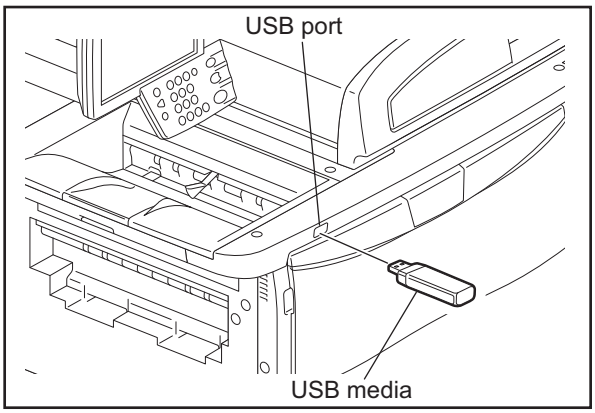


Fig. 4-7

Note:
Restoring cannot be performed with multiple USB medias connected simultaneously.

(3) Turn the power ON while pressing the [5] and [9] buttons simultaneously.
A screen for selecting items to restore is displayed. Select the number (any of “2”, “4” and “6”) for data you want to restore. Press the [START] button.

Number	Restore Item
2: User Data Restore	Restoring up User data
4: Setting Restore	Restoring up Setting item
6: SRAM Data Restore	Restoring up SRAM data

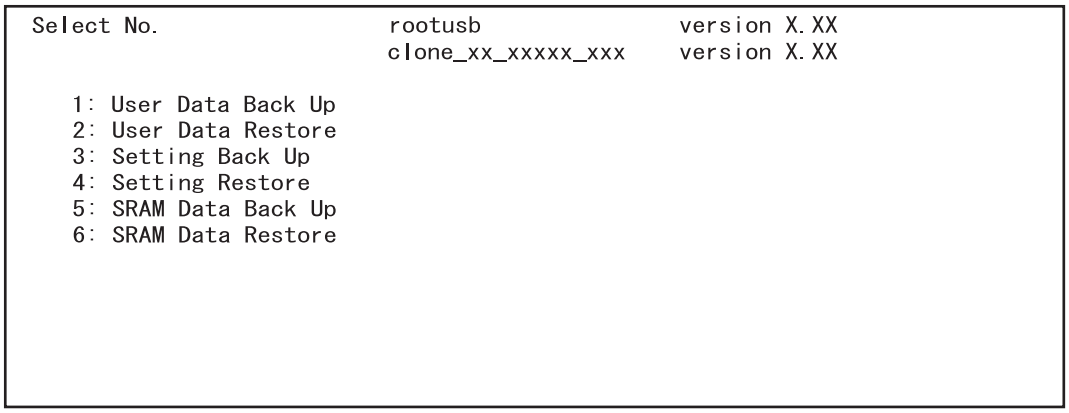


Fig. 4-8

Notes:
- It may take some time for the next screen to appear after you key in the number for the item.
- The screen above is not displayed if the data cloning function is disabled.In this case, ask the user (machine administrator) to enable the data cloning function on the TopAccess menu, or set “0 (Accepted)” in 08-9889.
- To clear the selection, press the [CLEAR] or [FUNCTION CLEAR] button.

(4) A certain time after the [START] button is pressed, the following screen is displayed. Select the number of the desired data. The selected item will be displayed with an asterisk.

<When “2: User Data Restore” is selected>

Number	Restore Item
1: Address Book	Restoring Address book
2: MailBoxes	Restoring Mail box
3: Template	Restoring Template and meta scan definition file
4: Combined	Restoring Address Book, Mail Box, Template, and meta scan definition file in a batch
5: Department Code	Restoring Department management
6: User Info	Restoring User management information
7: Role Info	Restoring role information

* The items “4”, “5”, “6”, and “7” are selected in the screen by default.

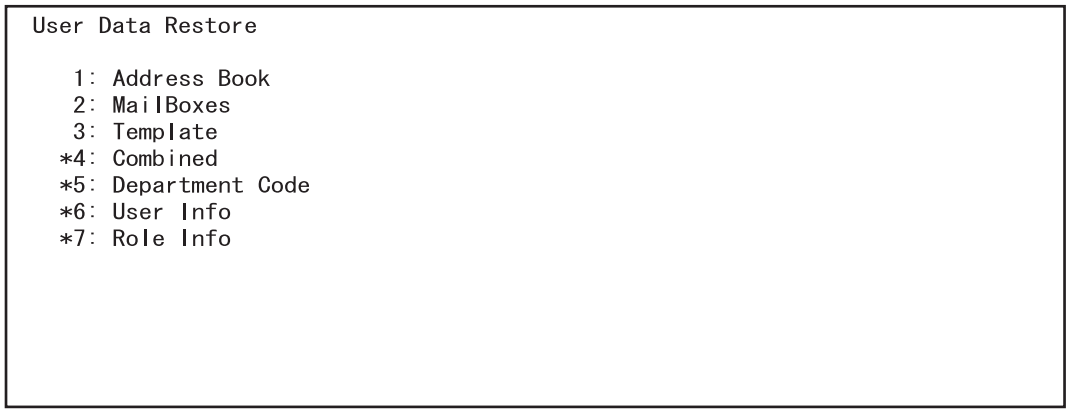


Fig. 4-9

<When “4: Setting Restore” is selected>

Number	Restore Item
1: Network/Print Service	Restoring TopAccess: Network/Print Service
2: SaveAsFile/Email/InternetFAX	Restoring TopAccess: SaveAsFile/Email/InternetFAX
3: Notification	Restoring TopAccess: Notification
4: Directory Service	Restoring TopAccess: Directory Service
5: FAX Kit	Restoring Option: Fax setting
6: WirelessLAN/Bluetooth Kit	Restoring Option: WirelessLAN/Bluetooth setting
7: Copy	Restoring TopAccess: Copy setting
8: General	Restoring TopAccess: General setting
9: User Management	Restoring TopAccess: User management setting

* No items are selected in the screen by default.
* Be sure to restore the same option items in the same condition as when the option items were backed up.

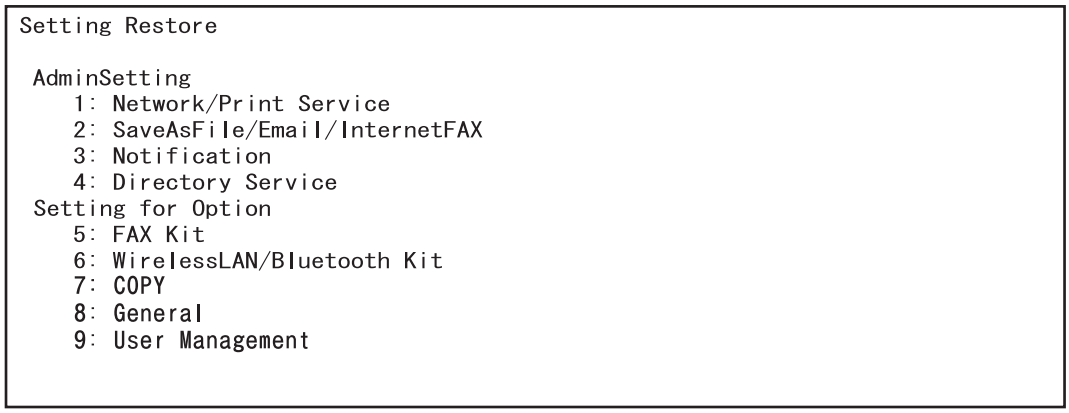


Fig. 4-10

<When “6: SRAM Data Restore” is selected>

Number	Restore Item
1. SRAM	Restoring SRAM Data

* No items are selected in the screen by default.

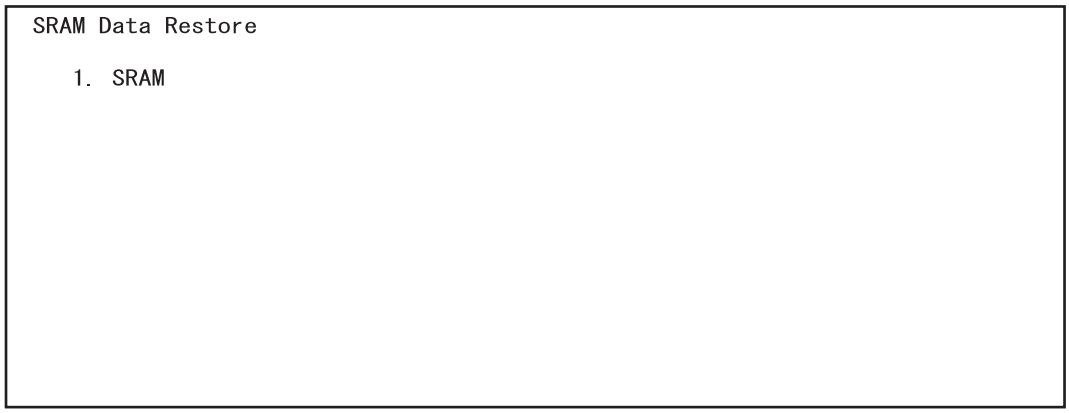


Fig. 4-11

(5) Press the [START] button. The restore starts and the restoring status is displayed on the LCD screen.

(6) “Restore Completed” is displayed on the LCD screen when restoring has been properly completed.

(7) Turn the power OFF and remove the USB media.

* When “department management data” or “user management data” are restored, clear their counter values in a procedure below.

(8) Counter values can be all cleared as the data are copied. Note that the total counter values are not copied.

<Procedure>
Press the buttons as follows: [COUNTER]→[DEPARTMANT MANAGEMENT]→Enter the password→[RESET ALL COUNTERS]

* Enable the department management when the [RESET ALL COUNTERS] buttons is set to be disabled.

[C] Confirmation of the error

“Back Up ERROR X” (X: Error number) is displayed at the top of the LCD screen when the data have not been properly backed up / restored. In this case, turn the power OFF and then check the following items. After confirming and solving the problem, back up / restore the data again from the beginning.

- Does the USB media meet the conditions being used for this cloning?
- Is the updated program file written on the USB media properly?
- Is the USB media installed properly?
- Is the USB media or the equipment damaged?

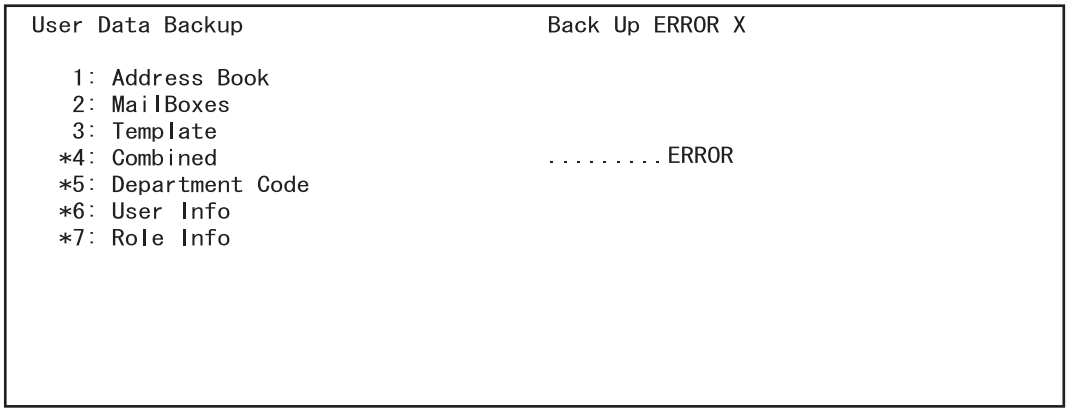


Fig. 4-12

Error number	Error content
ERROR 1	Copy error
ERROR 2	I/F error
ERROR 3	USB memory full error
ERROR 4	Working folder error
ERROR 5	File not found error
ERROR 6	Security error
ERROR 7	Checksum error
ERROR 8	Model check error
ERROR 9	Version check error
ERROR 10	Destination check error
ERROR 11	Serial number check error
ERROR 12	Device is Busy

4.2 AES Data Encryption Function Setting

4.2.1 General description

Data encryption is a function that encrypts data in the HDD to enhance the security.
Note that this function may affect the equipment performance.

4.2.2 Precautions

When the data encryption function is set enabled, data currently stored in the HDD will not be retrieved. Therefore when data encryption function needs to be enabled after the installation of the equipment, it is necessary to back up the data in the HDD before setting this function and then recover them after the setting.

- To ensure security, ask the user (machine administrator) to back up or restore the user's data and information in the HDD. A service technician can back up or restore them only when the user (machine administrator) permits it.
- Some data in the HDD cannot be backed up and can be left only on printouts.

4.2.3 Setting procedure

A procedure for setting the data encryption function is shown below.

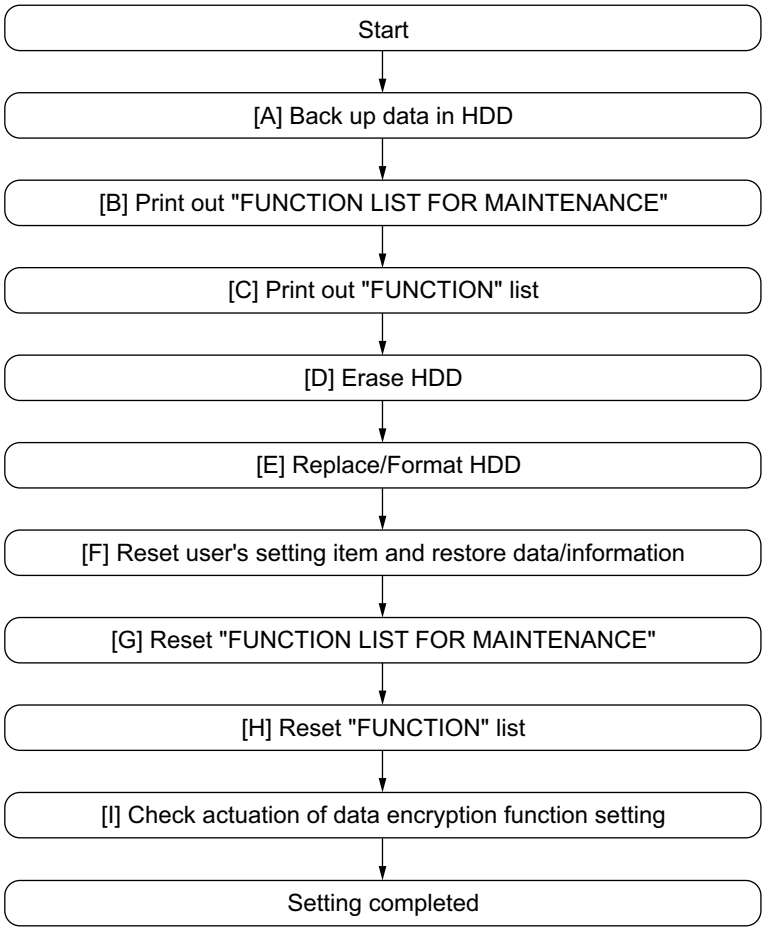


Fig. 4-13

[A] Back up in HDD

Ask the user (machine administrator) to back up the data in the HDD. Refer to the table below for the type of data, availability and method of backup.

Type of data in HDD	Availability	Backup method
Image data in the e-Filing	Available	Archive them in the “e-Filing” of TopAccess. As for the backup in Box data, all data (selectable by the box) can be backed up / restored in one go by using “e-Filing Backup/ Restore Utility”.
F-code information, Template registration information, Address book data	Available	Back them up in the “Administrator” menu of TopAccess.
Department management data	Available	Export them in “Administrator” menu of TopAccess.
Log data (Print, Scan, FAX (Transmission/Reception)	Available	Export them in the “Administrator” menu of TopAccess. (Import cannot be performed.)
Data in the shared folder (Scanned data, Saved data of copy / FAX transmission)	Available	Copy them to the client computer via the network. (The data which have been copied to the client computer cannot be copied to the shared folder.)
Role information	Available	Export role information on the TopAccess menus. [User Management] tab > [User Confirm/Create/Modify] > [Role Information]
Print waiting data (Copying data and FAX reception data that are waiting to be printed due to the paper run-out and jam, etc.)	Not available	Finish printing them after the paper supply and the jam release, etc. (The data cannot be kept.)
Print job (Private print data, Schedule print data)	Not available	If any jobs are left, print them. (The data cannot be backed up.)
FAX saved data (Confidential / Bulletin board data)	Not available	Print them. (The data cannot be backed up.)
Registration data for FAX transmission (Delayed transmission / Recovery transmission)	Not available	Print them. (The data cannot be backed up.)

[B] Print out “FUNCTION LIST FOR MAINTENANCE”

(1) Press the [USER FUNCTIONS] button and then the [USER] tab.

(2) Press the [LIST] button.

(3) Key in [*] [#] [*] [*] [3] [3] and then press the [START] button. The “FUNCTION LIST FOR MAINTENANCE” is printed out.

[C] Print out "FUNCTION" list

(1) Press the [USER FUNCTIONS] button.

(2) Press the [ADMIN] button, enter the password, and then press the [ENTER] button.

(3) Press the [LIST/REPORT] button and then the [LIST] button.

(4) Press the [FUNCTION] button. The "FUNCTION" list is printed out.

Note:
Explain the procedure to the user (machine administrator) and ask him/her to enter his/her password.

[D] Enable data encryption function

Perform the setting of the data encryption function in the code 08-9379. The setting values are shown below.

0: Encryption disabled
1: Encryption enabled (Security priority)
2: Encryption enabled (Performance priority)

Security priority: All user data are encrypted.
Performance priority: Encryption data are generated only in a copying or a printing process temporarily. All user data except files which are deleted in a corresponding process are encrypted.

[E] Format HDD

Perform the code 08-690:2 to format the HDD.

When the FAX Unit (GD-1250) is installed, perform "Fax Set Up (1*-100)" and "Clearing the image data (1*-102)". Then turn the power OFF.

1. Turn the power ON while pressing the digital keys [1] and [*] simultaneously.
2. Key in [100] and then press the [START] button.
3. Key in [102] and then press the [START] button.
4. Turn the power OFF.

[F] Reset user's setting items and restore data/information

Ask the user (machine administrator) to reset the user's setting items and to restore data or information. Refer to the following for the reset and restore:

Items to reset/restore	Method
Printer driver	Upload them in the "Administrator" menu of TopAccess.
F-code information, Template registering information, Address book data	Restore them in the "Administrator" menu of TopAccess.
Department management data	Import them in the "Administrator" menu of TopAccess.
Image data in the e-Filing	Restore them in the "e-Filing" of the TopAccess.
Role information	Import role information on the TopAccess menus. [User Management] tab > [User Confirm/Create/Modify] > [Role Information]

* When the SSL is enabled, perform the setting of the following items again with "Create self-certificate" of TopAccess.

Country Name
State or Province Name
Locality Name
Organization Name
Organizational Unit Name
Common Name
Email Address

* When wireless LAN is used, perform the setting again on the LCD panel. (only when security with a certificate is used)
  Also, upload the following certificate file with “Install Certificate for Wireless LAN” of TopAccess.

  CA certificate
  User certificate

[G] Reset “FUNCTION LIST FOR MAINTENANCE”

(1) Print out the “FUNCTION LIST FOR MAINTENANCE” list after the formatting.For how to print it out, refer to 🕮 P.4-16 "[B] Print out “FUNCTION LIST FOR MAINTENANCE”".

(2) While pressing [1] and [3] simultaneously, turn the power ON. (Function Mode)

(3) Compare the lists which were printed before and after the formatting to check the setting items having the different setting values. Set the value which was set before the formatting.

(4) Turn the power OFF.

[H] Reset “FUNCTION” list

• Reset the fax function by referring to the “function list” that was printed out in 🕮 P.4-17 "[C] Print out “FUNCTION” list".

(1) Press the [USER FUNCTIONS] button.

(2) Press the [ADMIN] button, enter the password, and then press the [ENTER] button.

(3) Press the [FAX] button and then the [TERMINAL ID] button to set each item.

(4) Press the [INITIAL SETUP] button to set each item.

Note:
Explain to the user (machine administrator) about the next operation and ask him/her to enter his/her password.

[I] Check actuation of data encryption function setting

Check if the data encryption function is in operation.

- Press the [COUNTER] button on the control panel. If a key-shaped icon is displayed at the top right of the screen, the data encryption function is in operation.

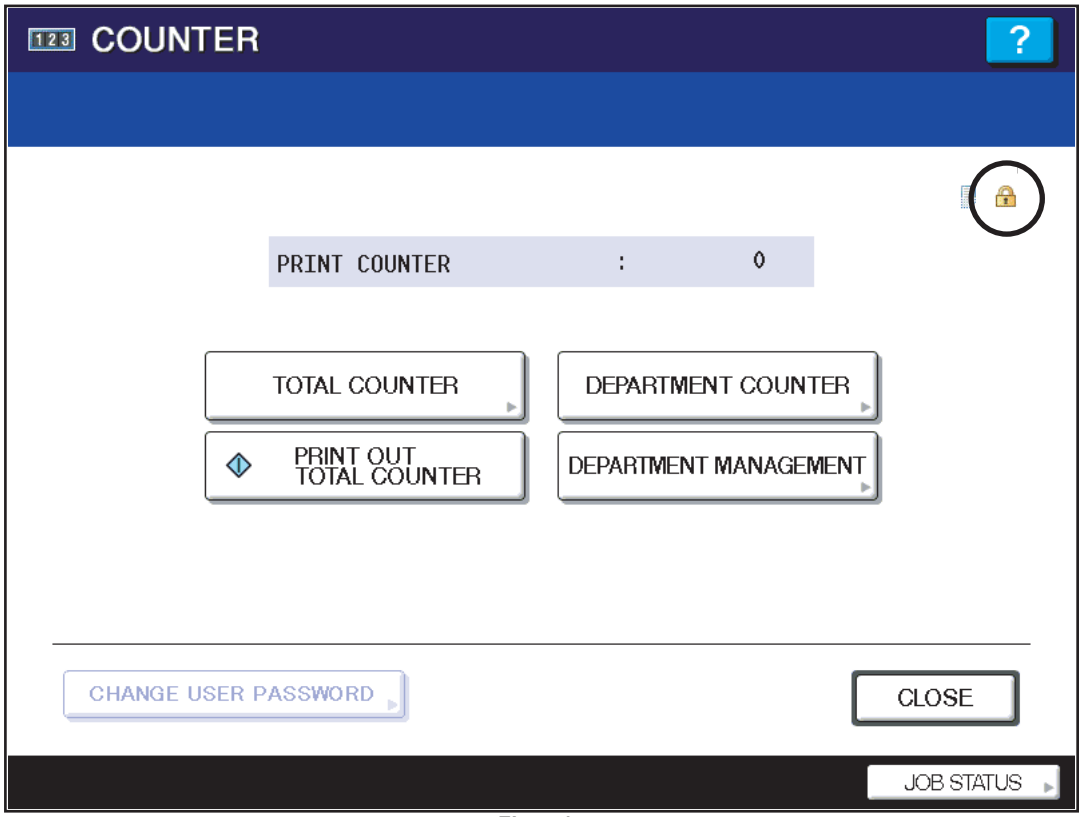


Fig. 4-14

4.2.4 Procedure for disabling data encryption function

The basic procedure is the same as the one for enabling this function. To disable it, set “0 (Invalid)” in the code 08-9379 at step “🕮 P.4-17 "[D] Enable data encryption function".

4.2.5 Procedure for discarding HDD when data encryption function is enabled

Set the data encryption function disabled following the procedure shown in 21.2.4. Then perform the code 08-1426 (Forcible HDD data clearing) to completely erase the data in the HDD.

4.3 Assist Mode

4.3.1 Assist Mode

This equipment has the Assist Mode to enable the following functions.

(1) Update Error flags clearing (“Clear update Error Flags.”)
Even if the firmware downloading has been completed normally, the Recovery Mode may accidentally start up when the power is turned ON again. In this case, clear the update error flags used in the download process with this function. (Normally, the flags are automatically cleared in the download process.)
Also in the case the Recovery Mode accidentally starts up after the replacement of SRAM on the SYS board, the flags are cleared with this function.

(2) Data storage partition formatting (“Format Loader Partition.”)
When a defection occurs on the UI data, etc. which are stored in the HDD, the partition with the stored UI data, etc. is formatted with this function. (Do not use this function since it is not normally necessary.)

(3) HDD partition creation (“All Partition Delete and Create Loader Partition.”)
When the HDD is replaced or UI data, etc. are downloaded using the USB storage, it is necessary to format a partition in the HDD before downloading. In this case, the partition is created in the HDD with this function.

Notes:
1. When downloading with a download jig, it is not necessary to format a partition in advance.
2. Perform the HDD partition formatting only when a new HDD is installed since all data in the current HDD are erased by this operation.

(4) SRAM data format
When SRAM board is replaced with a new one on the SYS board, abnormal values may be written in the new SRAM. In such cases, SRAM data must be formatted with this function.

Notes:
1. This function is required only when a new SRAM board is installed.
2. Do not perform this function in cases other than the installation of a new SRAM board because all data in the SRAM will be deleted as a result.

4.3.2 Operating Procedure of Assist Mode

(1) Turn ON the power while [3] button and [CLEAR] button are pressed simultaneously.
- The following screen is displayed.

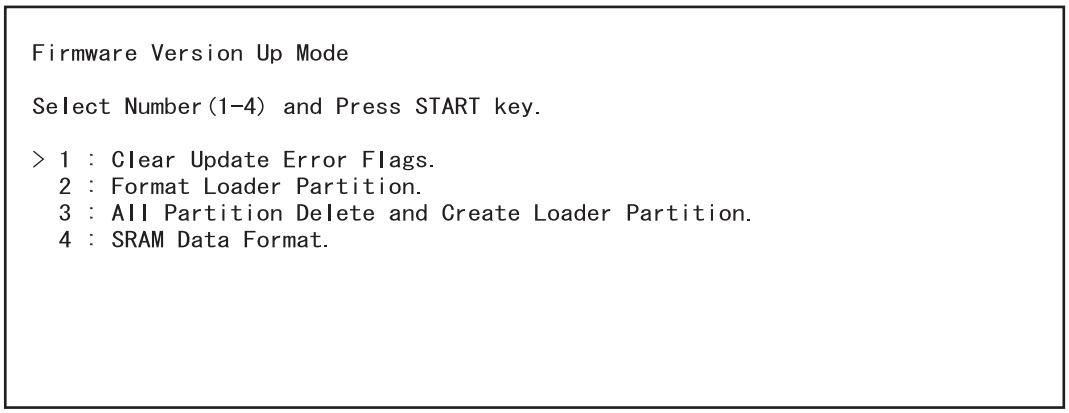


Fig. 4-15

(2) Select the item with the digital keys and press the [START] button.

Note:
Explain the user (machine administrator) about the next operation and ask him/her to enter his/her password.

5. PREVENTIVE MAINTENANCE (PM)

5.1 General Description

The purpose of preventive maintenance (PM) is to maintain the quality level of this equipment by periodically inspecting and cleaning this equipment and also replacing the parts whose replacement timing has come according to the maintenance contract. There are PM kits packaged for each unit or a group of parts with the same replacement number of output pages, allowing you to carry out efficient parts replacement.
Also to maintain the quality level of the equipment, overhauling is required when a specified number of pages has been printed or when a specified period of time has passed, regardless of the number of output pages.

5.2 PM Display

5.2.1 General Description

The maintenance timing for the PM parts of the process unit, such as the drum and main charger needle, and the PM parts of the units other than the process unit, such as the 2nd transfer roller and fuser belt varies depending on the conditions of the use, such as the ratio of color/black printing. Therefore, this equipment shows the appropriate maintenance timing of each part on the control panel LCD.

5.2.2 PM Display Conditions

The conditions of the PM display consist of the codes of the setting mode (08) for “the setting value treated as a threshold of the PM display”, “the counter indicating the current number of prints and driving time” and “the setting value which determines the display conditions”.
The PM timing is displayed when the counter exceeds the setting value according to the display condition based on “the setting value which determines the display conditions”.

- Setting value treated as a threshold of the PM display

  Note:
  When “0” is entered as the setting value, PM timing is not displayed.

  08-251 : Setting value of PM counter [process unit (K)]
  08-375 : Setting value of PM time counter [process unit (K)]
  08-6192 : Setting value of PM counter [process unit (Y)]
  08-6193 : Setting value of PM time counter [process unit (Y)]
  08-5550 : Setting value of PM counter [process unit (M)]
  08-5551 : Setting value of PM time counter [process unit (M)]
  08-5552 : Setting value of PM counter [process unit (C)]
  08-5553 : Setting value of PM time counter [process unit (C)]
  08-5562 : Setting value of PM counter [parts other than the PM parts of the process unit]
  08-5563 : Setting value of PM time counter [parts other than the PM parts of the process unit]

- Counter indicating the current number of prints and driving time
  - 08-252 : Current value of PM counter [process unit (K)]
  - 08-376 : Current value of PM time counter [process unit (K)]
  - 08-6196 : Current value of PM counter [process unit (Y)]
  - 08-6197 : Current value of PM time counter [process unit (Y)]
  - 08-5564 : Current value of PM counter [process unit (M)]
  - 08-5565 : Current value of PM time counter [process unit (M)]
  - 08-5566 : Current value of PM counter [process unit (C)]
  - 08-5567 : Current value of PM time counter [process unit (C)]
  - 08-5576 : Current value of PM counter [parts other than the PM parts of the process unit]
  - 08-5577 : Current value of PM time counter [parts other than the PM parts of the process unit]

- Setting value which determines the display conditions
  - 08-223 : Switching of output pages/driving counts at PM [process unit (K)]
  - 08-5578 : Switching of output pages/driving counts at PM [process unit (Y)]
  - 08-5579 : Switching of output pages/driving counts at PM [process unit (M)]
  - 08-5580 : Switching of output pages/driving counts at PM [process unit (C)]
  - 08-5585 : Switching of output pages/driving counts at PM [parts other than the PM parts of the process unit]

5.2.3 PM Display Contents

When the counter value exceeds the setting value, the equipment notifies you of when the maintenance time has come by displaying the message “Time for periodic maintenance ****” on the control panel LCD. “****” in the message is a 4-digit hexadecimal number code. This number is allocated in the following manner, therefore the parts needing maintenance can be identified.

PM parts of the process unit (K)	: 0008
PM parts of the process unit (Y)	: 0001
PM parts of the process unit (M)	: 0002
PM parts of the process unit (C)	: 0004
Parts other than the PM parts of the process unit	: 0100

If multiple parts have reached the maintenance time, the sum of the corresponding code values listed above is displayed in hexadecimal numbers.

For example, if the peripheral parts of the process units (K) and (C) reach the maintenance time, the 4-digit hexadecimal number code will be “000C” in hexadecimal numbers: 0008+0004=000C.

4th digit	3rd digit		2nd digit		1st digit	
None	Part (transfer roller)		Developer material		Photoconductive drum	
	Hexadecimal number code	Explanation	Hexadecimal number code	Explanation	Hexadecimal number code	Explanation
Always “0”	0	No maintenance required	0	No maintenance required	0	No maintenance required
	1	Maintenance required	1	Y	1	Y
			2	M	2	M
			3	M+Y	3	M+Y
			4	C	4	C
			5	Y+C	5	Y+C
			6	C+M	6	C+M
			7	Y+M+C	7	Y+M+C
			8	K	8	K
			9	K+Y	9	K+Y
			A	K+M	A	K+M
			B	K+M+Y	B	K+M+Y
			C	K+C	C	K+C
			D	K+Y+C	D	K+Y+C
			E	K+C+M	E	K+C+M
			F	K+Y+M+C	F	K+Y+M+C

5.2.4 Counter Clearing

The counter indicating “current number of prints and driving time” used for the PM display function is reset by entering “0” in it or clearing it in the PM support mode.

Note:
Even if “0” is entered in the PM management setting value of the setting mode (08), the corresponding counter for the PM display is not reset. Be sure to clear the counter in the PM support mode when the maintenance is finished.

The reset condition of each counter is as follows:

- 08-252: Current value of PM counter [process unit (K)]
- 08-376: Current value of PM time counter [process unit (K)]
  When the current value of “CLEANER/DRUM/CHARGER (K)” on the main screen or “DRUM (K)” on the sub-screen in the PM support mode is cleared, the counter is reset.

- 08-6196: Current value of PM time counter [process unit (Y)]
- 08-6197: Current value of PM time counter [process unit (Y)]
  When the current value of “CLEANER/DRUM/CHARGER (Y)” on the main screen or “DRUM (Y)” on the sub-screen in the PM support mode is cleared, the counter is reset.

- 08-5564: Current value of PM counter [process unit (M)]
- 08-5565: Current value of PM time counter [process unit (M)]
  When the current value of “CLEANER/DRUM/CHARGER (M)” on the main screen or “DRUM (M)” on the sub-screen in the PM support mode is cleared, the counter is reset.

- 08-5566: Current value of PM counter [process unit (C)]
- 08-5567: Current value of PM time counter [process unit (C)]
  When the current value of “CLEANER/DRUM/CHARGER (C)” on the main screen or “DRUM (C)” on the sub-screen in the PM support mode is cleared, the counter is reset.

- 08-5576: Current value of PM counter [parts other than the PM parts of the process unit]
- 08-5577: Current value of PM time counter [parts other than the PM parts of the process unit]
  When the current value of “2nd TRANSFER” on the main screen or “2nd TRANSFER ROLLER” on the sub screen in the PM support mode is cleared, the counter is reset.

5.3 General Descriptions for PM Procedure

(1) Preparation
- Ask the user about the current conditions of the equipment and note them down.
- Before starting maintenance, make some sample copies and store them.
- See the replacement record and check the parts to be replaced in the PM support mode (6S-2) or list printing mode (9S-103).
  6S-2 : [6] + [START] + [POWER] ON → [2] → [START]
  9S-103 : [9] + [START] + [POWER] ON → [103] → [START]

PM SUPPORT CODE LIST

MM-DD-YY HH:MM

UNIT	OUTPUT PAGES/ DEVELOP COUNTS	PM OUTPUT PAGE/ DEVELOP COUNTS	DRIVE COUNTS	PM DRIVE COUNTS
DRUM(K)	342	70000	4377	130000
DRUM BLADE(K)	342	70000	4377	130000
DRUM BRUSH(K)	342	70000	4377	130000
GRID(K)	342	70000	4377	130000
MAIN CHARGER NEEDLE(K)	342	70000	4377	130000
CHARGER CLEANING PAD(K)	177	70000	3681	130000

Fig. 5-1

- Turn OFF the power and make sure to unplug the equipment.

(2) Perform a preventive maintenance using the following checklist and illustrations.

(3) Plug in the equipment after the maintenance has been finished. Then turn ON the power and make some copies to confirm that the equipment is working properly.

5.4 PM Support Mode

5.4.1 General Description

This equipment has a PM support mode which enables you to confirm the use status of each part (the number of output pages or developed pages, and drive counts) requiring periodic replacement and also the replacement record, as well as resetting counter values efficiently. This record can be printed out in the list print mode.

5.4.2 Operational flow

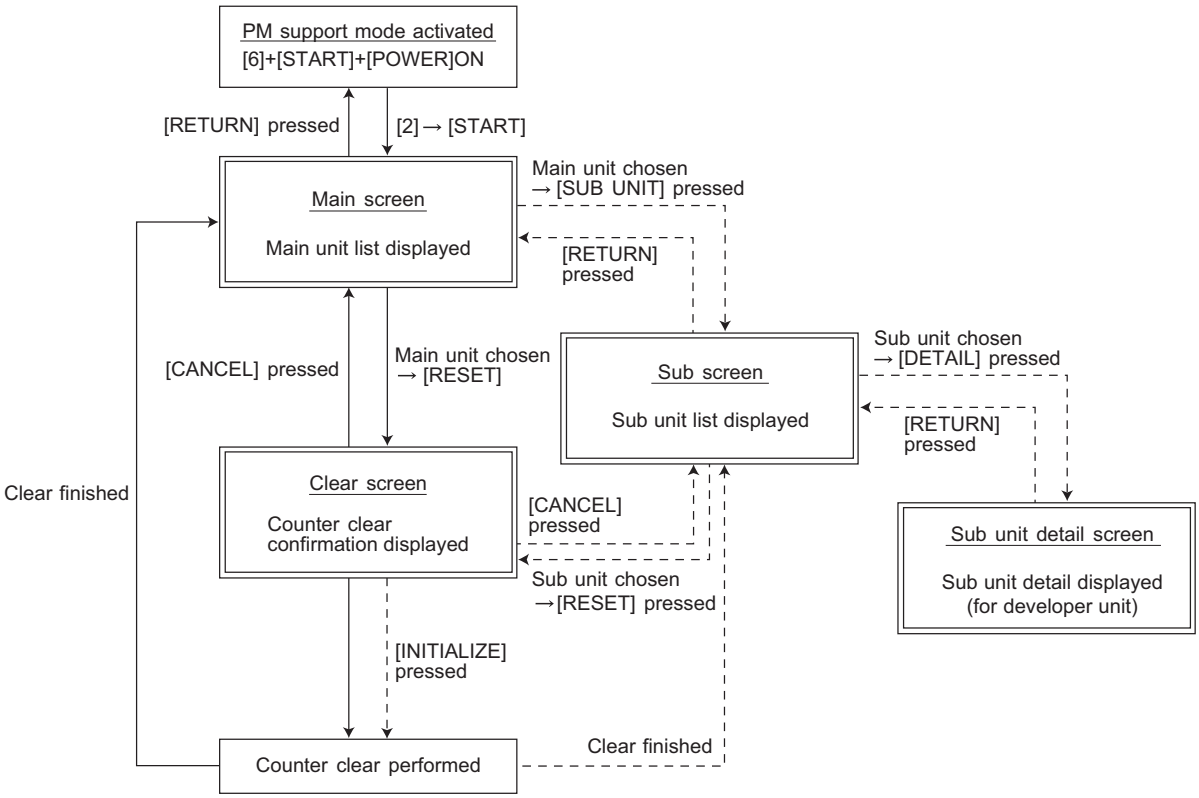


Fig. 5-2

* The screen goes back to the main screen when the counter clear is performed or the [CANCEL] button is pressed after moving from the main screen, while it goes back to the sub screen after moving from the sub screen.

5.4.3 Operational screen

The description of the display (including the function of each button) on the LCD screen is shown below.

1. Main screen

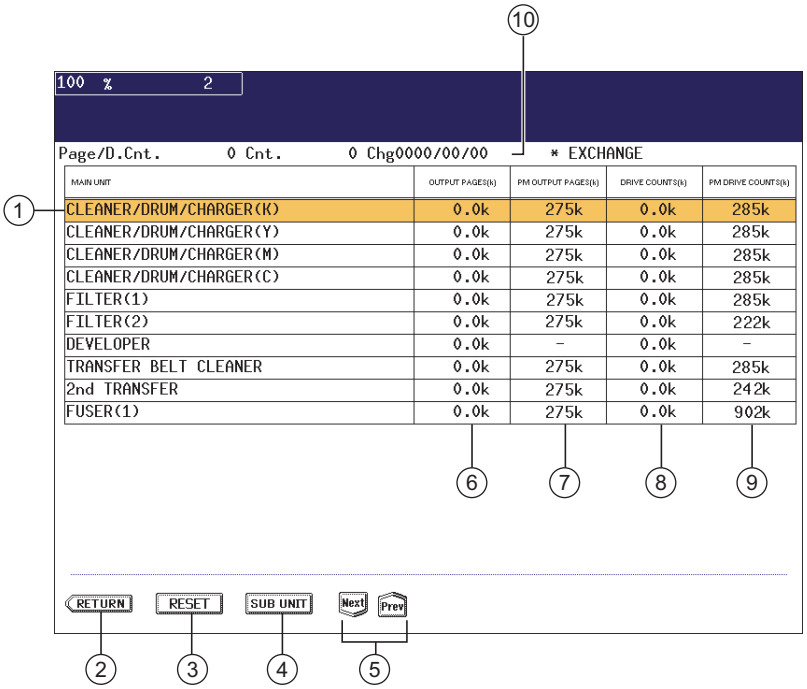


Fig. 5-3

① Displaying of the main unit name

② Back to the PM support mode activation screen

③ Moving to the clear screen to clear the selected unit counters ⑥ and ⑧, including all sub unit (parts) counters belonging to that unit When the unit is not selected, all counters are cleared.

④ Moving to the sub screen of the selected unit

⑤ Moving to the next/previous page

⑥ Displaying of the present number of printed / developed pages
When there are differences among the sub units (parts), "-" is displayed and "CHECK SUBUNIT" is displayed at the top
"*" is displayed next to the present number when the number of printed / developed pages has exceeded its PM standard number.

⑦ Displaying of the standard number of printed / developed pages to replace the unit parts

⑧ Displaying of the present drive counts
"*" is displayed next to the present number when the number of drive counts has exceeded its PM standard number.

⑨ Displaying of the standard number of drive counts to replace the unit parts

⑩ Displaying of the number of printed / developed pages (Page/D. cnt), drive counts (Cnt.) and previous replacement date (Chg.) for a chosen unit
When the replacement date for the sub unit is different, press the [SUB UNIT] button to move to the sub screen and see each information, otherwise information is not displayed

Notes:

1. "—" is always displayed at the drive counts section for the reversing automatic document feeder (RADF) and feed unit.
2. "—" is displayed at the numeric section for the paper source which is not installed since the paper source is different depending on the structure of options.

2. Sub screen (for other than the developer unit)

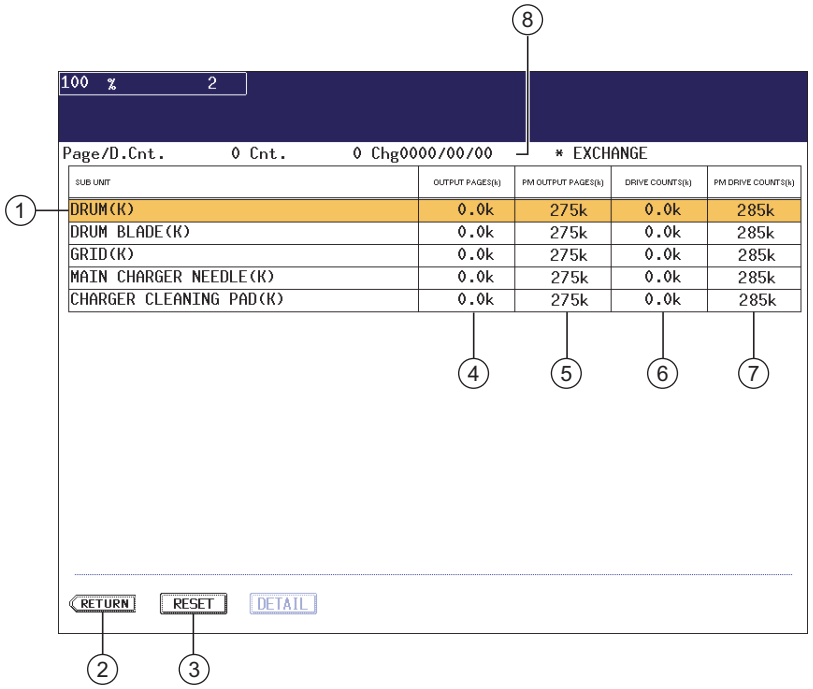


Fig. 5-4

① Displaying of the sub unit (parts) name

② Back to the main screen

③ Moving to the clear screen to clear the selected unit (parts) counters

④ Displaying of the present number of printed / developed pages
"*" is displayed next to the present number when the number of printed / developed pages has exceeded its PM standard number.

⑤ Displaying of the standard number of printed / developed pages to replace the sub unit (parts)

⑥ Displaying of the present drive counts
"*" is displayed next to the present number when the number of drive counts has exceeded its PM standard number.

⑦ Displaying of the standard number of drive counts to replace the sub unit (parts)

⑧ Displaying of the number of printed / developed pages and drive counts and previous replacement date for a chosen sub unit

3. Sub screen (for the developer unit)

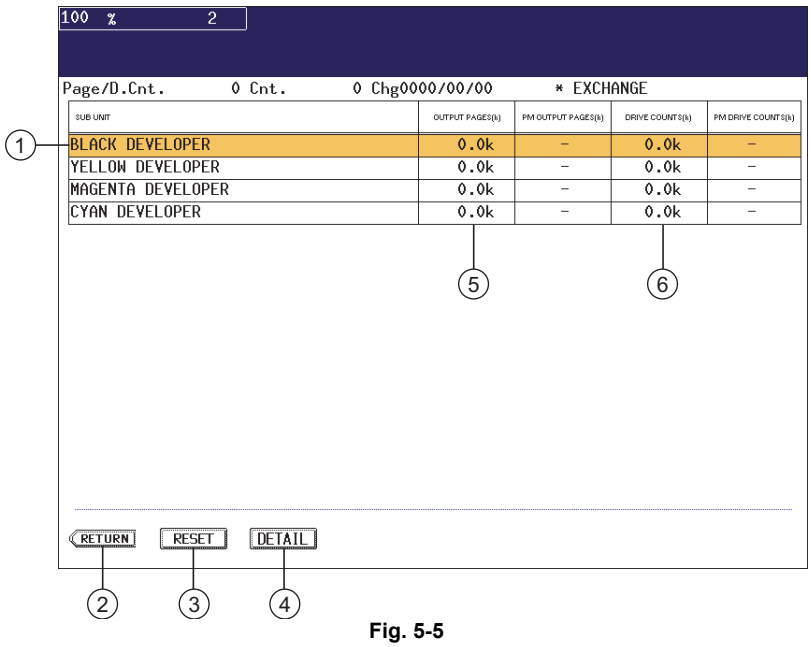


Fig. 5-5

① Displaying of the sub unit (parts) name

② Back to the main screen

③ Moving to the clear screen to clear the selected unit (parts) counters
Be sure to clear the counter after the selected sub unit (developer) is replaced.

④ Moving to the sub unit detail screen of the developer unit

⑤ Displaying of the present number of print / developer pages

⑥ Displaying of the present drive counts

Note:
"—" is displayed since there is no standard number in the number of printed / developed pages and drive count.

4. Sub unit detail screen (for the developer material)

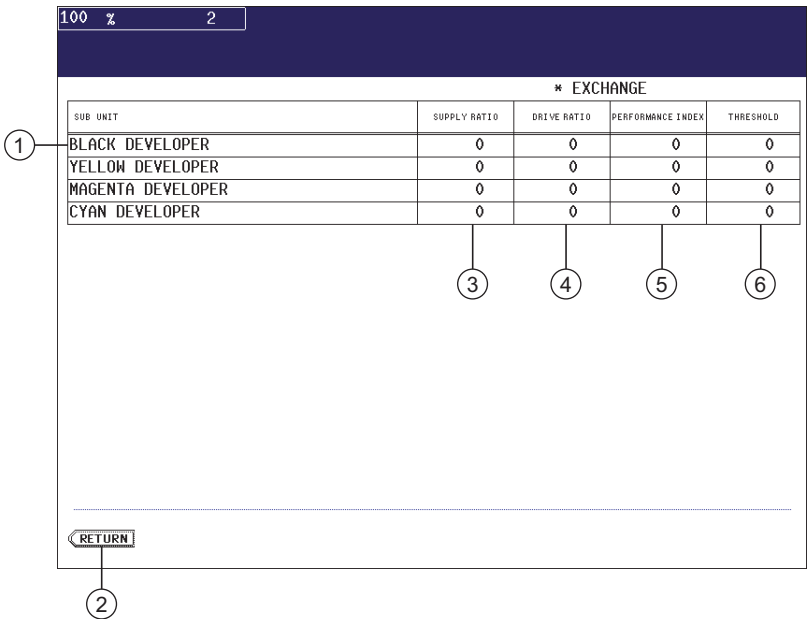


Fig. 5-6

① Displaying of the sub unit (parts) name

② Back to the sub unit screen

③ Displaying of the present number of supply ratio

④ Displaying of the present number of drive ratio

⑤ Displaying of the present number of performance index
"*" is displayed next to the present number of the performance index if it has exceeded its threshold number.

⑥ Displaying of the threshold number of performance index

5. Clear screen

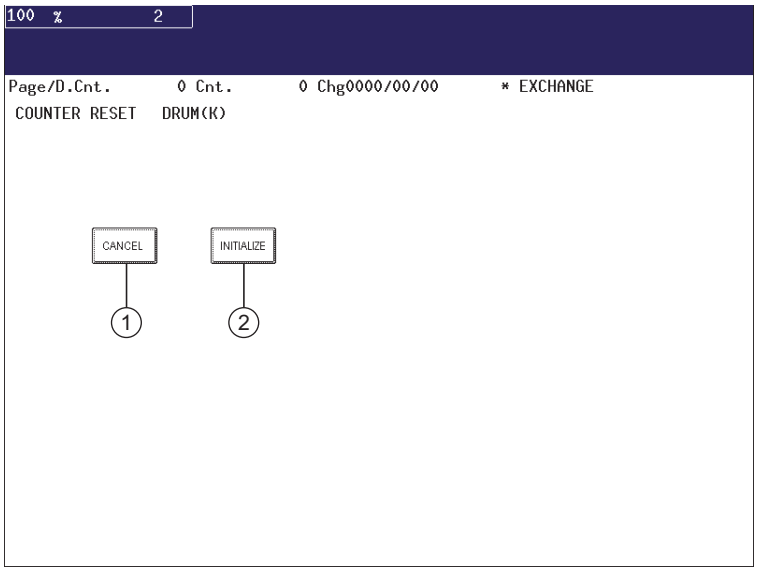


Fig. 5-7

① When the [CANCEL] button is pressed, the counter is not cleared and the display returns to the main or sub screen.

② When the [INITIALIZE] button is pressed, “Present number of printed / developed pages” and Present driving counts” are cleared and “Previous replacement date” is updated.

5.4.4 Access tree

The relation between the main unit and the sub unit is shown below.

Note:

Some parts in this manual are described with different names on the LCD screen. In this case, the name in this manual is indicated in square brackets [ ].

Main screen	Sub-screen
CLEANER/DRUM/CHARGER (K) [Process unit (K)]	DRUM (K) DRUM BLADE (K) [Drum cleaning blade] GRID (K) [Main charger grid] MAIN CHARGER NEEDLE (K) [Needle electrode] CHARGER CLEANING PAD (K) [Needle electrode cleaner]
CLEANER/DRUM/CHARGER (Y) [Process unit (Y)]	DRUM (Y) DRUM BLADE (Y) [Drum cleaning blade] GRID (Y) [Main charger grid] MAIN CHARGER NEEDLE (Y) [Needle electrode] CHARGER CLEANING PAD (Y) [Needle electrode cleaner]
CLEANER/DRUM/CHARGER (M) [Process unit (M)]	DRUM (M) DRUM BLADE (M) [Drum cleaning blade] GRID (M) [Main charger grid] MAIN CHARGER NEEDLE (M) [Needle electrode] CHARGER CLEANING PAD (M) [Needle electrode cleaner]
CLEANER/DRUM/CHARGER (C) [Process unit (C)]	DRUM DRUM BLADE (C) [Drum cleaning blade] GRID (C) [Main charger grid] MAIN CHARGER NEEDLE (C) [Needle electrode] CHARGER CLEANING PAD (C) [Needle electrode cleaner]
FILTER 1	OZONE FILTER 1
FILTER 2	TONER FILTER OZONE FILTER 2
DEVELOPER	BLACK DEVELOPER [Developer material K] YELLOW DEVELOPER [Developer material Y] MAGENTA DEVELOPER [Developer material M] CYAN DEVELOPER [Developer material C]
TRANSFER BELT CLEANER [Transfer belt cleaning unit]	BELT BLADE [Transfer belt cleaning blade] CLEANING PAD [2nd transfer facing roller cleaning pad]
2nd TRANSFER	2nd TRANSFER ROLLER 2nd TRANSFER BLADE [2nd transfer roller cleaning blade] 2nd TRANSFER TONER BAG 2nd TRANSFER LUBRICANT UNIT
FUSER (1)	FUSER ROLLER FUSER BELT FUSER BELT GUIDE
FUSER (2)	PRESS ROLLER PRESS ROLLER FINGER
1st CST. [1st drawer]	PICK UP ROLLER (1st CST.) FEED ROLLER (1st CST.) SEP ROLLER (1st CST.) [Separation roller]
2nd CST. [2nd drawer]	PICK UP ROLLER (2nd CST.) FEED ROLLER (2nd CST.) SEP ROLLER (2nd CST.) [Separation roller]
3rd CST. [3rd drawer]	PICK UP ROLLER (3rd CST.) FEED ROLLER (3rd CST.) SEP ROLLER (3rd CST.) [Separation roller]

Main screen	Sub-screen
4th CST. [4th drawer]	PICK UP ROLLER (4th CST.) FEED ROLLER (4th CST.) SEP ROLLER (4th CST.) [Separation roller]
SFB [Bypass unit]	PICK UP ROLLER (SFB) FEED ROLLER (SFB) SEP ROLLER (SFB) [Separation roller]
T-LCF [Tandem LCF]	PICK UP ROLLER (T-LCF) FEED ROLLER (T-LCF) SEP ROLLER (T-LCF) [Separation roller]
O-LCF [Option LCF]	PICK UP ROLLER (O-LCF) FEED ROLLER (O-LCF) SEP ROLLER (O-LCF) [Separation roller]
RADF	PICK UP ROLLER (RADF) FEED ROLLER (RADF) SEP ROLLER (RADF) [Separation roller]

Note:

When the counter value of any of the pickup roller, feed roller and separation roller in each unit is reset, the value of the feeding retry counter is also reset simultaneously. When the [RESET] button is pressed after selecting the feed unit in the Main Screen, the value of the feeding retry counter is also reset simultaneously.

The feeding retry counter:

- 1st drawer Reset the feeding retry counter (08-1390)
- 2nd drawer Reset the feeding retry counter (08-1391)
- 3rd drawer Reset the feeding retry counter (08-1392)
- 4th drawer Reset the feeding retry counter (08-1393)
- Bypass unit Reset the feeding retry counter (08-1394)
- T-LCF Reset the feeding retry counter (08-1395)
- O-LCF Reset the feeding retry counter (08-1402)

5.5 General Description

The life span of the parts changes depending on their general use, such as the ratio of the color/black printing or the adjustment for keeping the printing quality. Therefore, it is necessary to consider not only the number of printed/developed pages but also the drive counts when deciding the timing for parts replacement. Even if the number of printed / developed pages has reached the level of replacement, for instance, the part may still be usable with its drive counts not reaching the specified drive counts. On the other hand, the part may need replacement even if the number of printed / developed pages has not reached the level of replacement with its driving time exceeding the specified drive counts. The life span of some parts such as feed roller is heavily dependent on the number of output pages rather than the drive counts.
The following work flow diagram shows how to judge the timing of replacement with the number of printed / developed pages.

Example 1:
When the number of printed / developed pages has reached the specified level

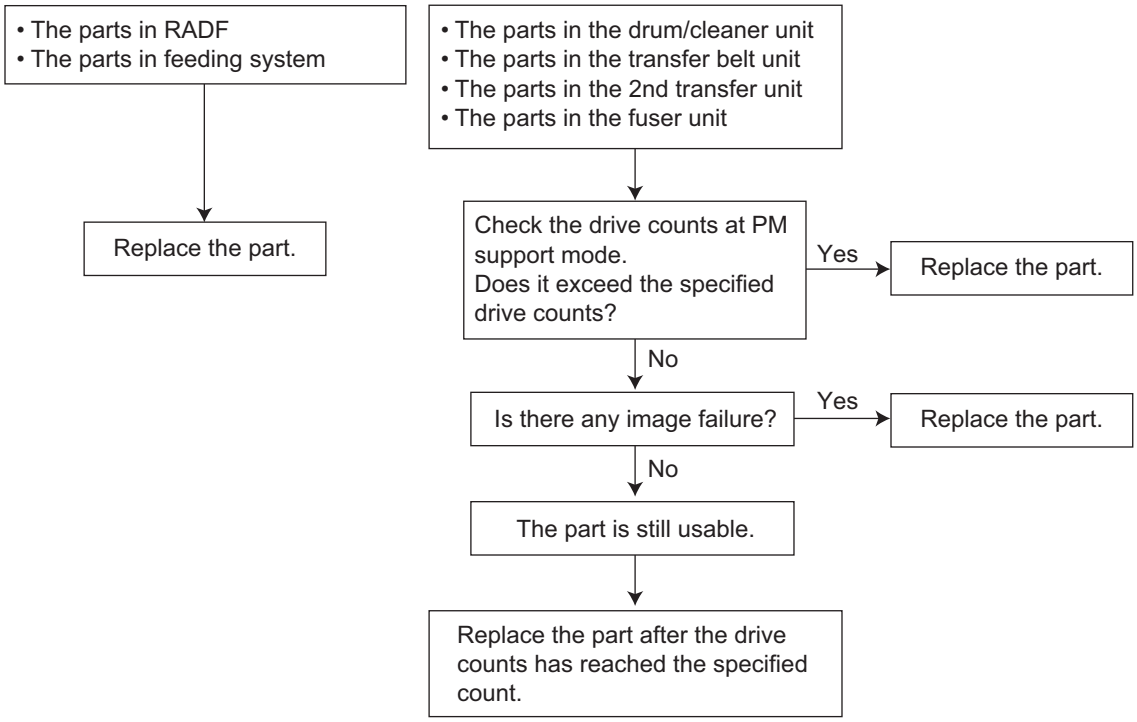


Fig. 5-8

Example 2:
When the image failure occurred before the number of printed / developed pages has reached the specified level

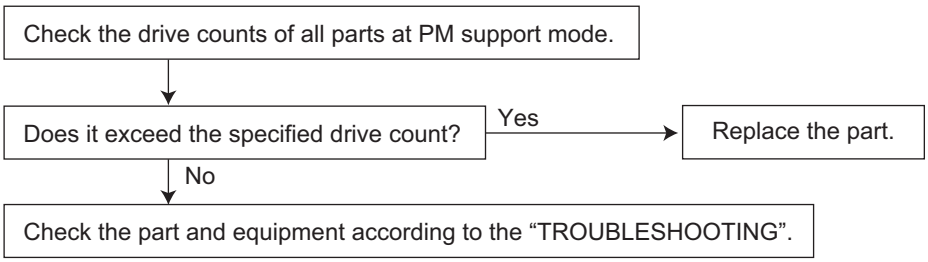


Fig. 5-9

Example 3:
When the performance index of the developer exceeds its threshold number

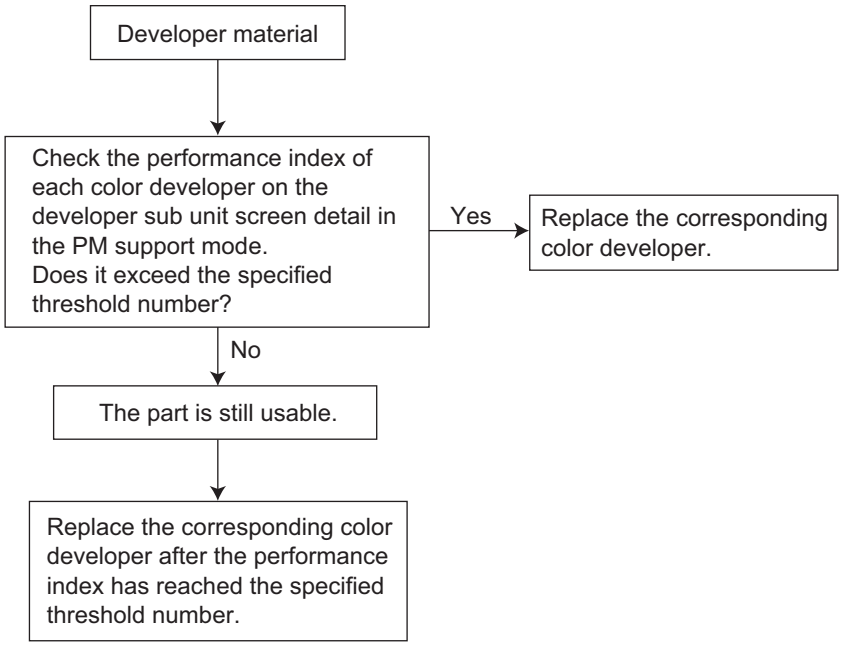


Fig. 5-10

Example 4:
When an image failure occurs though the performance index does not exceed the threshold number

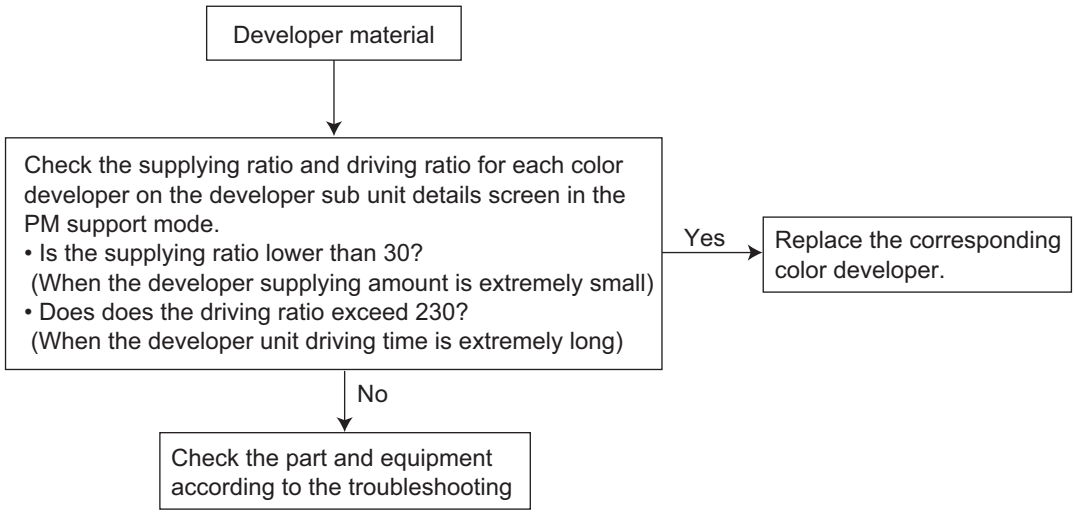


Fig. 5-11

5.6 Preventive Maintenance Checklist

Symbols/value used in the checklist

Cleaning	Lubrication/Coating	Replacement	Operation check
A: Clean with alcohol B: Clean with soft pad, cloth or vacuum cleaner	L: Launa 40 SI: Silicon oil W1: White grease (Molykote EM-30L) W2: White grease (Molykote HP-300) AV: Alvania No.2 FL: Floil (GE-334C)	Value: Replacement cycle R: Replace if deformed or damaged	O: After cleaning or replacement, confirm there is no problem.

Notes:

1. Perform cleaning and lubricating in the following timing. Lubricate the replacement parts according to the replacement cycle.

Model name	Black	Full color
e-STUDIO5520C	every 225,000 sheets	every 225,000 sheets
e-STUDIO6520C	every 250,000 sheets	every 250,000 sheets
e-STUDIO6530C	every 275,000 sheets	every 275,000 sheets

2. The value in the “Replacement” field of the table below indicates the replacement number of output pages in either the black or the full color mode. If they differ according to the model, they are indicated in the order of the e-STUDIO5520C, e-STUDIO6520C and e-STUDIO65300C.
3. The replacement cycle of the parts in the feeding section equals to the number of sheets fed from each paper source.
4. Be careful not to put oil on the rollers, belts and belt pulleys when lubricating.
5. Parts list <P-I> represents the page item in “e-STUDIO5520C/6520C/6530C Service Parts List”.
6. Check if the toner supply opening of each sub-hopper, the shutter of the waste toner box and the entrance of the waste toner transport path are dirty every time you pull out the process unit or take off the drum cleaner unit or the developer unit. Clean them if required.
7. When the entire drum cleaner unit is replaced, install the color chips of the old unit to the new drum cleaner unit.
8. When you pull out the process unit and then set it back to the equipment, perform the code 05-2416 (forcible mixing in the developer unit) from 20 to 30 seconds to mix the developer material.

5.6.1 Scanner

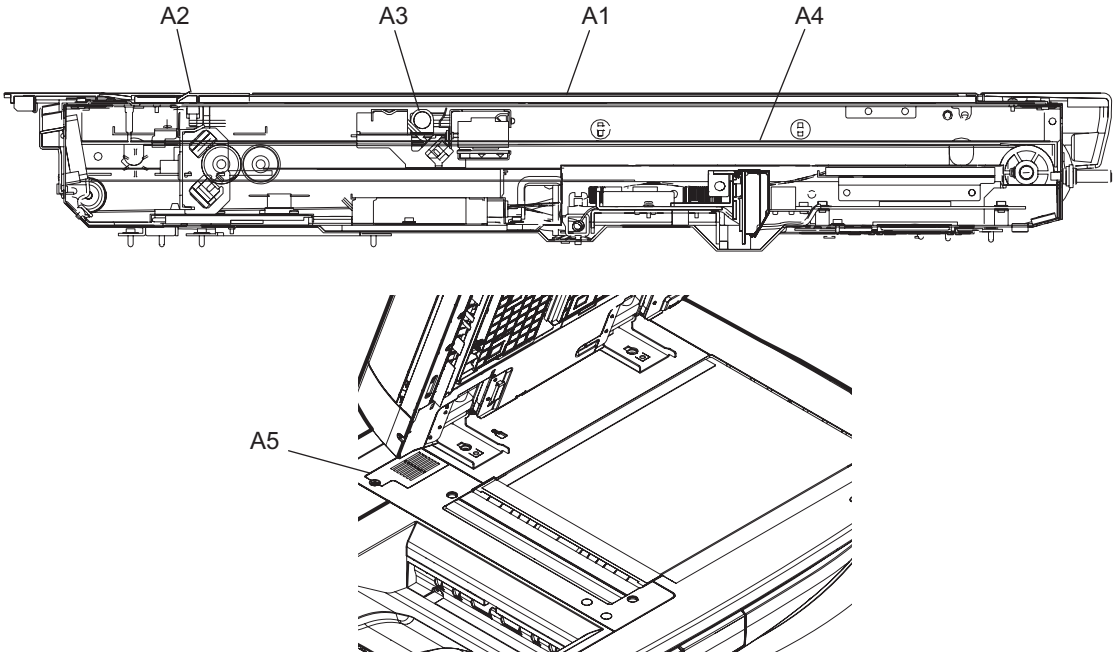


Fig. 5-12

Items to check		Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list <P-I>
				(x 1,000 sheets)	(x 1,000 drive counts)		
A1	Original glass	B					51-15
A2	RADF original glass	B					51-18
A3	Exposure lamp			R	R	O	52-9
A4	Slide sheet (front and rear)			R	R		
A5	Filter cover	B					1-36

* A1: Original glass, A2: ADF original glass
Clean both sides of the original glass and ADF original. Make sure that there is no dust on the mirrors-1, -2, -3 and lens after cleaning. Then install the original glass and ADF original glass.

Note:
Make sure that there is no fingerprints or oil staining on part of the original glass on where the original scale is mounted since the shading correction plate is located below the scale to be scanned.

5.6.2 Feed unit

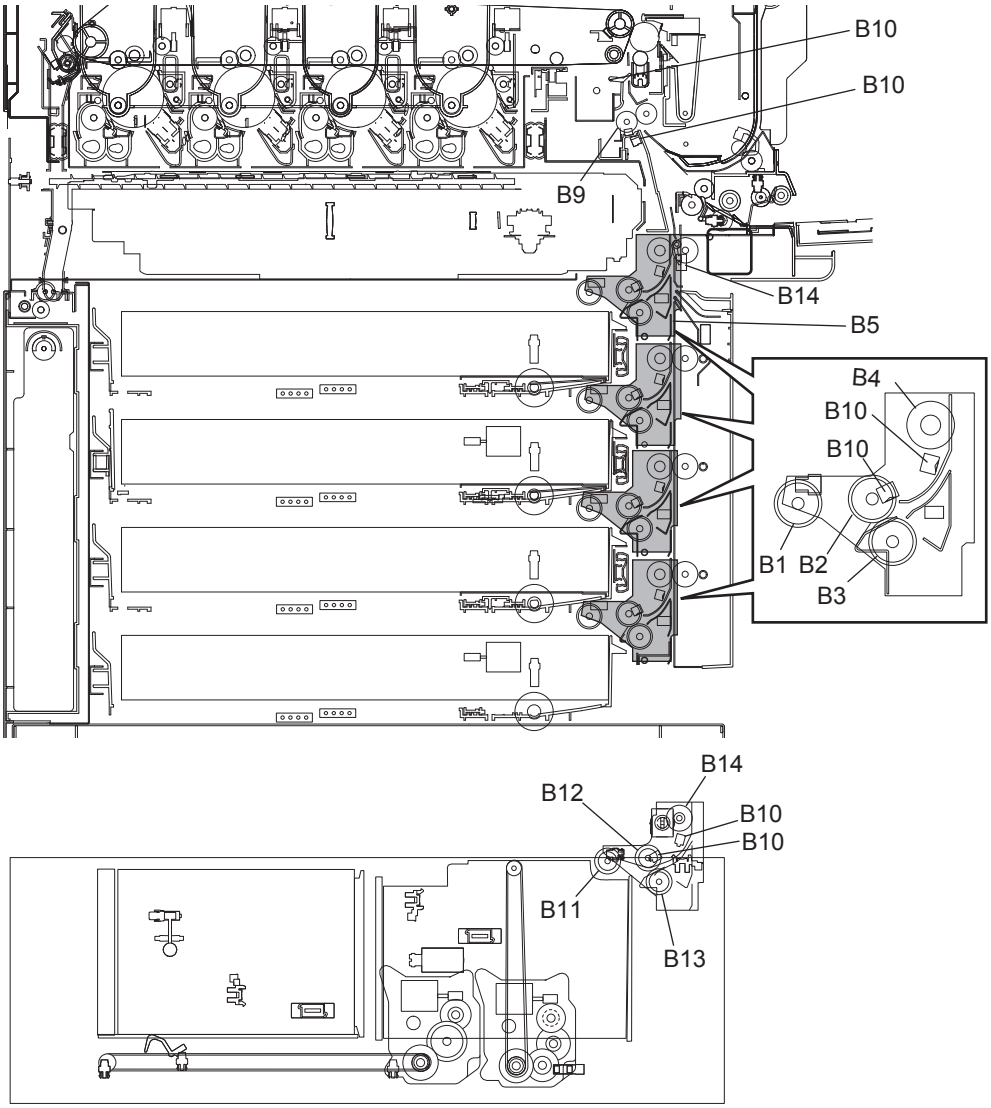


Fig. 5-13

Items to check		Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list <P-I>
				(x 1,000 sheets)	(x 1,000 drive counts)		
B1	Pickup roller			200	-		11-36
B2	Feed roller			200	-		11-36
B3	Separation roller			200	-		11-35
B4	Transport roller	A		R	R		11-22
B5	Paper guide	B					
B6	Drive gear (tooth face and shaft)		W1				
B7	GCB bushing bearing		L				
B8	One side of the plastic bushing to which the shaft is inserted		W1				
B9	Registration roller (metal)	A		R	R		10-1
B10	Sensor section	A					
B11	Pickup roller (Tandem LCF)	A		400	-		11-36
B12	Feed roller (Tandem LCF)	A		400	-		11-36
B13	Separation roller (Tandem LCF)	A		400	-		11-35
B14	Transport roller (Tandem LCF)	A		R	R		11-22

* B6: Drive gear

Apply some white grease (Molykote EM-30L) to the teeth of gears and shafts of the drive gears.

Note:

Make sure that oil is not running over or scattered around as the gear is rotated coming into the clutch after applying molykote to the gear which is located near the clutch. The quantity of molykote should be smaller than that to be applied to the other parts.

5.6.3 Duplexing unit

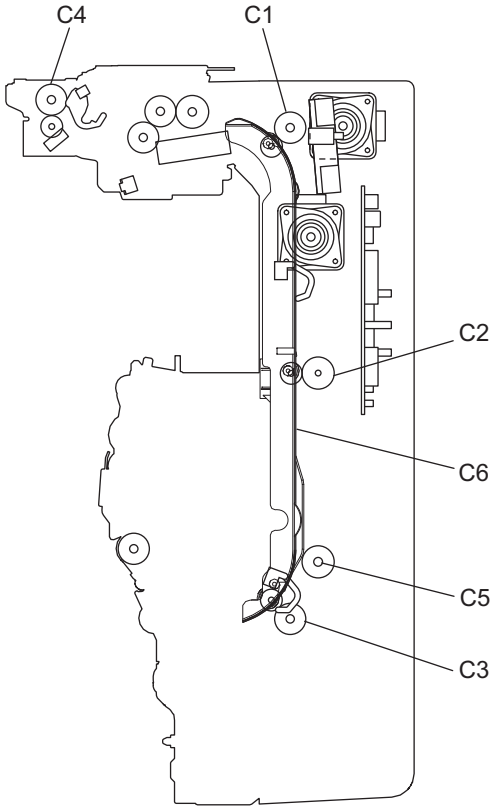


Fig. 5-14

Items to check		Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list <P-I>
				(x 1,000 sheets)	(x 1,000 drive counts)		
C1	ADU transport roller 1	A		R	R		18-6
C2	ADU transport roller 2	A		R	R		18-5
C3	ADU transport roller 3	A		R	R		18-7
C4	Duplexing bridge transport roller	A		R	R		20-12
C5	Pulley stud		W1				
C6	Paper guide	B					19-2

5.6.4 Bypass feed unit

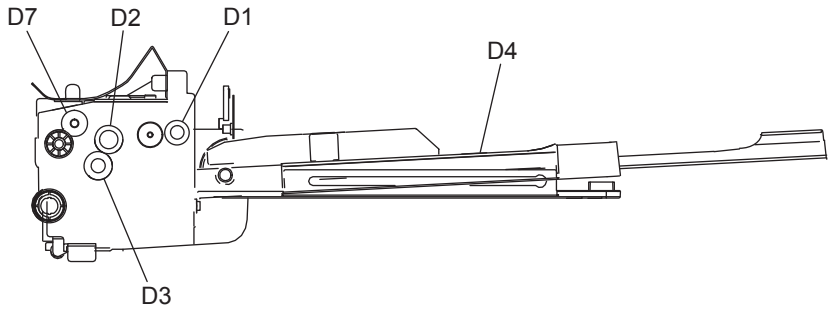


Fig. 5-15

Items to check		Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list <P-I>
				(x 1,000 sheets)	(x 1,000 drive counts)		
D1	Pickup roller			100	-		15-15
D2	Feed roller			100	-		15-10
D3	Separation roller		AV, W2	100	-		16-43
D4	Bypass tray	B					17-5
D5	Drive gear (shaft)		W1				
D6	GCB bushing bearing		L				
D7	Transport roller	A		R	R		15-8

* D3: Separation roller

Apply an even coat of grease (Alvania No.2) to all round the inside of the spring.
When replacing the separation roller, apply 1 rice-sized grain of white grease (Molykote HP-300) on the places of the holder shown in the figure (4 places).

Note:

Make sure that the grease does not adhere to the roller surface. Wipe it off with alcohol if adhered.

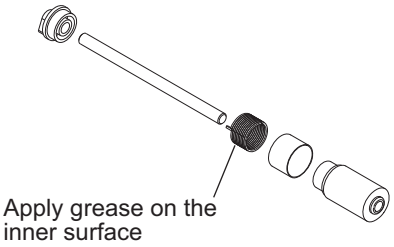


Fig. 5-16

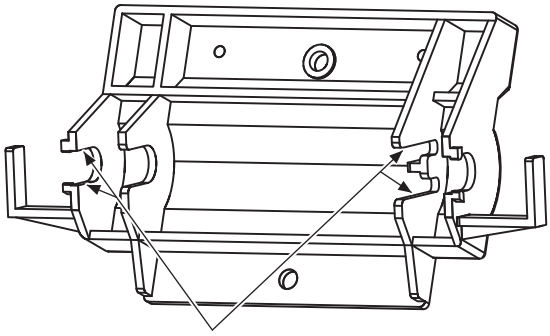


Fig. 5-17

5.6.5 Main charger

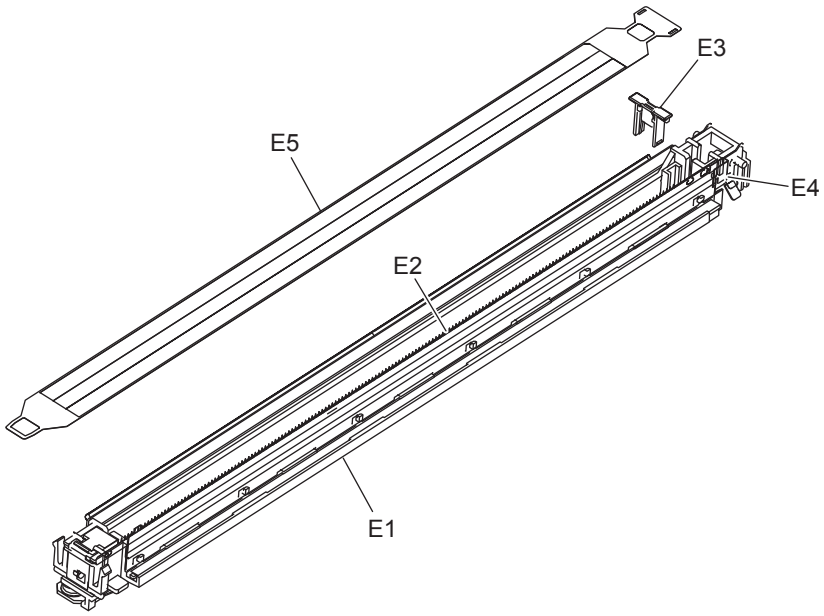


Fig. 5-18

Items to check		Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list <P-I>
				(x 1,000 sheets)	(x 1,000 drive counts)		
E1	Main charger case	B					64-1
E2	Needle electrode			225/250/275	285	O	64-13
E3	Needle electrode cleaner			225/250/275	285	O	64-16
E4	Contact point of terminals	B					64-2
E5	Main charger grid			225/250/275	285	O	64-17

* E1: Main charger case
Clean the main charger case with a cloth soaked in water and squeezed tightly, and then wipe them with a dry cloth.

5.6.6 Drum / Cleaner unit / Filter

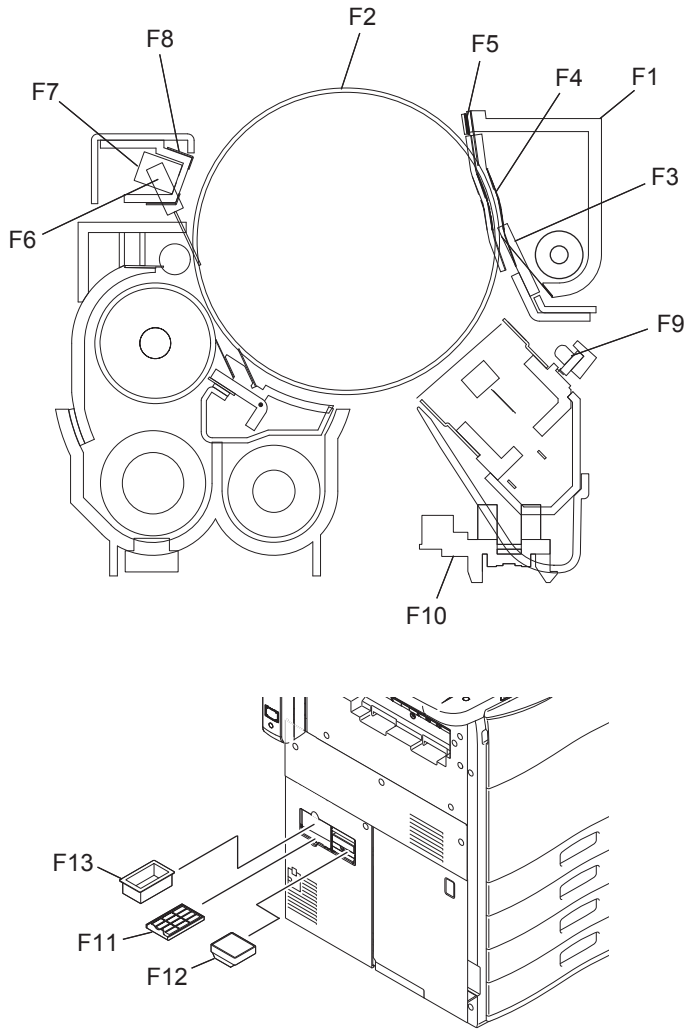


Fig. 5-19

Items to check		Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list <P-I>
				(x 1,000 sheets)	(x 1,000 drive counts)		
F1	Whole cleaner unit	B					
F2	Drum			225/250/275	285		203-1
F3	Drum cleaning blade			225/250/275	285		63-21
F4	Blade side seal			225/250/275	285		63-23
F5	Recovery blade	B		R	R		63-25
F6	Drum thermistor	B					59-27
F7	Drum surface potential (V0) sensor	B					59-22
F8	Drum surface potential (V0) sensor shutter	B					59-24
F9	Discharge LED	B					64-20
F10	Needle electrode cleaner detection sensor	B					59-4
F11	Ozone filter-1			225/250/275	285		49-14
F12	Ozone filter-2			225/250/275	222		49-4
F13	Toner filter			225/250/275	222		49-11

* F1: Whole cleaner unit

Remove any toner on the waste toner section of the drum cleaner unit and the upper section of the EPU tray toner duct.

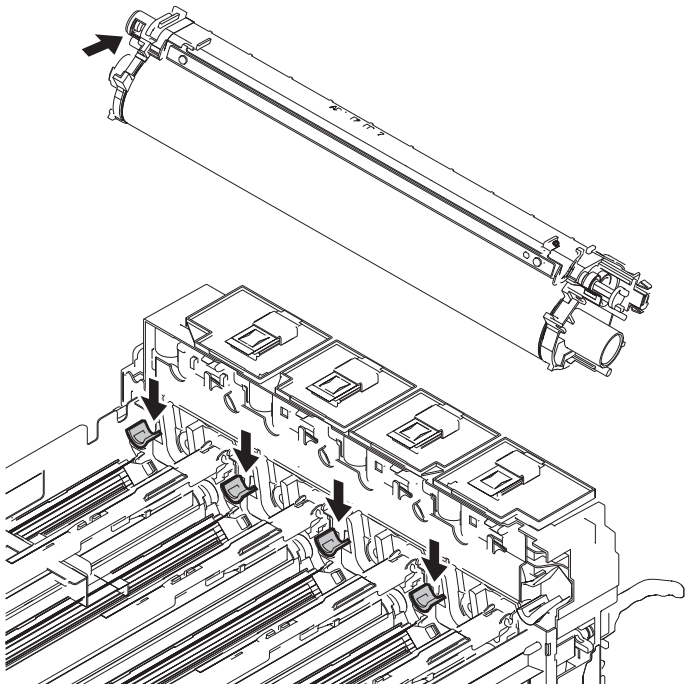


Fig. 5-20

* F2: Drum
  - Handling precautions
    If fingerprints or oil adhere to the surface of the drum, its properties may degrade, affecting the quality of the copy image. So, wear gloves to avoid touching the drum surface with your bare hands. Be sure to handle the drum carefully when installing and removing it so as not to damage its surface.
    After you installed the process unit to the equipment, there may be grease at the inner side of the drum flange (shown as “B” in the figure below) that was transferred from the drum coupling. So hold the levers (shown as “A” in the figure below) when you hold the drum or the drum cleaner unit. Do not hook your finger on the flange hole on the rear side.

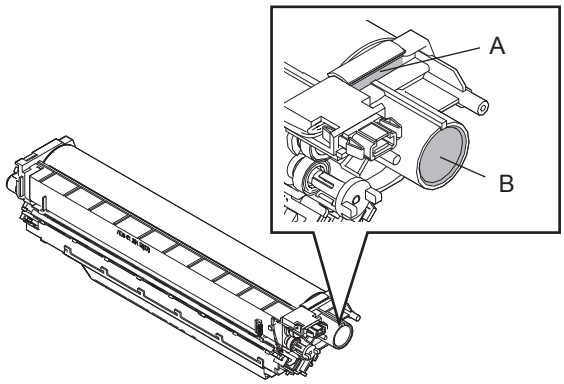


Fig. 5-21

  - Clearing the drum counter
    When the drum has been replaced with a new one, the drum counter for the new drum (K, Y, M, C) must be cleared to 0 (zero). This clearing can be performed in PM support mode.

    - Drum counter
    Drum (K): 08-1150-0, 3, 6, 7
    Drum (Y): 08-1152-0, 3, 6, 7
    Drum (M): 08-1154-0, 3, 6, 7
    Drum (C): 08-1156-0, 3, 6, 7

  - Storage location of drums
    The drum should be stored in a dark place where the ambient temperature is between 10°C to 35°C (no condensation). Be sure to avoid places where drums may be subjected to high humidity, chemicals and/or their fumes.
    Do not place the drum in a location where it is exposed to direct sunlight or high intensity light such as near a window. Otherwise the drum will fatigue, and will not produce sufficient image density immediately after being installed in the equipment.

  - Cleaning the drum
    At periodic maintenance calls, wipe the entire surface of the drum clean using the designated cleaning cotton. Note that there is no need to clean the surface of the new drum unless there is a problem. Use sufficiently thick cleaning cotton (dry soft pad) so as not to scratch the drum surface inadvertently with your fingertips or nails. Also, remove your rings and wristwatch before starting cleaning work to prevent accidental damage to the drum.
    Do not use alcohol, selenium refresher and other organic solvents or silicon oil as they will have an adverse effect on the drum.
    Also clean the doctor blade when the drum is being replaced.

  - Scratches on drum surface
    If the surface is scratched in such a way that the aluminum substrate is exposed, no copy image will be produced on this area. In addition, the cleaning blade will be damaged so replacement with a new drum will be necessary.

- Collecting used drums
  If the surface is scratched in such a way that the aluminum substrate is exposed, no copy image will be produced on this area. In addition, the cleaning blade will be damaged so replacement with a new drum will be necessary.

* F3: Drum cleaning blade

- Handling precautions
  Pay attention to the following points as the cleaning blade life is determined by the condition of its edge. Since the edge of the blade is vulnerable and can be easily damaged by factors such as the adherence of paper dust.
  - Do not allow hard objects to hit or rub against blade edge.
  - Do not rub the edge with a cloth or soft pad.
  - Do not leave oil (or fingerprints, etc.) on the edge.
  - Do not apply solvents such as paint thinner to the blade.
  - Do not allow paper fibers or dirt to contact the blade edge.
  - Do not place the blade near a heat source.

- Cleaning procedure
  Clean the blade edge with a cloth moistened with water and squeezed lightly.
  Replace the cleaning blade with new ones if poor images are copied due to the damaged blade regardless of the number of output pages which have been made

* F4: Blade side seal

Be sure to attach the blade side seals according to the criteria in the figure below.
Part A: Pay attention to the following. If the blade is caught by the side seal or comes up on to it, the blade may turn up. If the gap between the blade and the side seal is too wide, this will cause toner scattering.
Part B:Be sure not to have any gap since it would cause toner scattering.

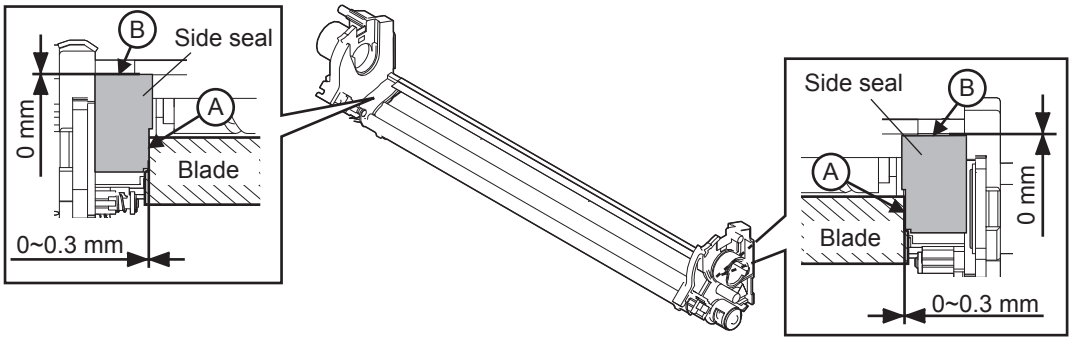
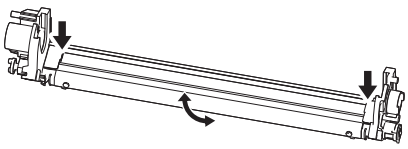


Fig. 5-22

After the side seals are attached, move the bracket retaining the blade and check that it is neither caught nor comes up on to the side seal.



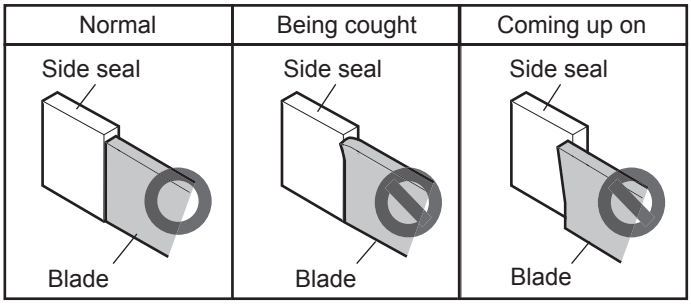


Fig. 5-23

* F5: Recovery blade
  Clean the surface of the recovery blade with a soft pad or cloth, if dirt cannot be removed with a vacuum cleaner. If the edge of recovery blade is damaged, replace the blade regardless of the number of output pages.

  Note:
  Never use water or alcohol for cleaning the transfer belt recovery blade.

* F7: Drum surface potential (VO) sensor / G8: Drum surface potential (VO) sensor shutter
  Clean them with a vacuum cleaner.

  Note:
  When cleaning them, be careful not to let any toner or developer material enter into the detecting section of each drum surface potential (VO) sensor.

* F13: Toner filter
  If the toner filter is not replaced at the specified replacement timing, the suction efficiency against the scattered toner decreases, and thus it may cause suction failure and the amount of scattered toner in the equipment may increase. So be sure to replace it periodically.

5.6.7 Developer unit (K, Y, M, and C)

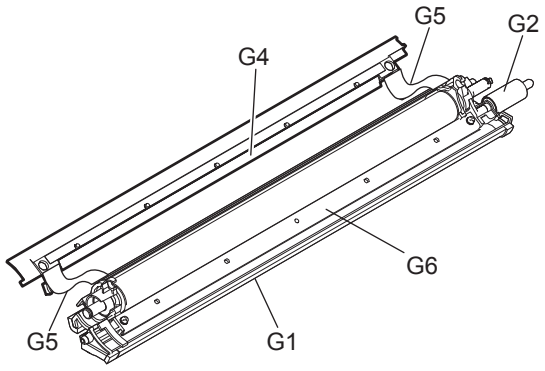


Fig. 5-24

Items to check		Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list <P-I>
				(x 1,000 sheets)	(x 1,000 drive counts)		
G1	Developer unit	B					204-6
G2	Developer unit drive gear		W1				62-39
G3	Developer material			R	R		203-2
G4	Front shield	B		R	R		62-32
G5	Side shield	B		R	R		63-23 63-24
G6	Doctor blade	B		R	R		62-30

* G1: Developer unit

- Cleaning
  Clean the doctor blade so as to prevent developer material from adhering to it when the drum is being replaced.
  Space the front shield from the developer sleeve and then insert a doctor blade cleaning jig into the doctor sleeve gap. Then clean the doctor blade by running the jig for 3 times to and fro along with the edge of the blade.

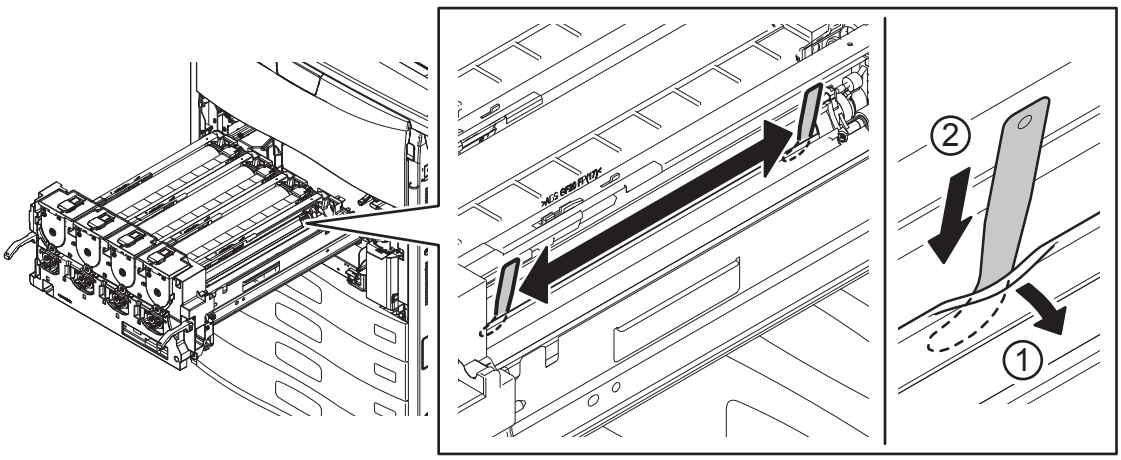


Fig. 5-25

- Removal of foreign matter in the developer unit
  (1) Pull out the process unit (EPU).
  (2) Lift up the urethane sheet.
  (3) Insert the cleaning jig all the way in the developer unit at a position approx. 30 mm away from the white streak.

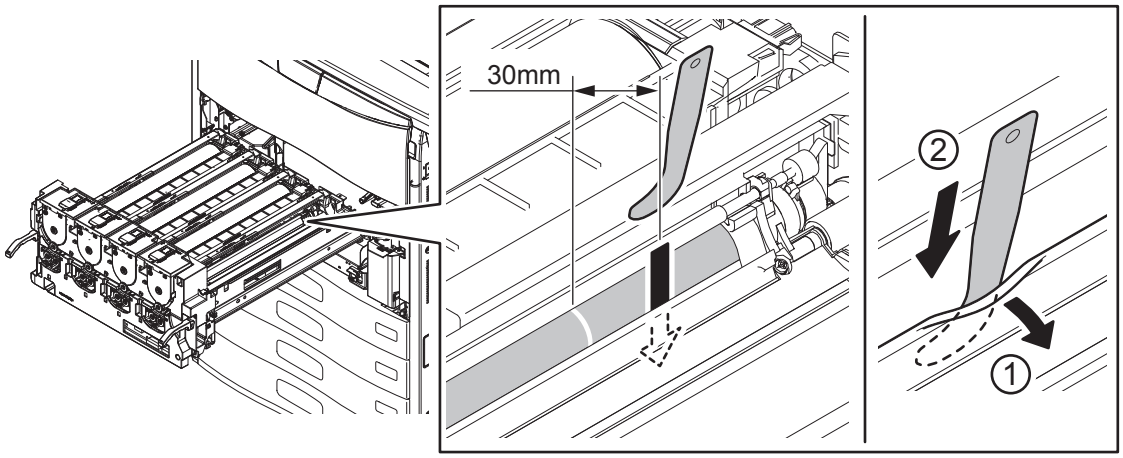


Fig. 5-26

(4) Slide the cleaning jig to where the white streak appears.
(5) Pull out the cleaning jig while manually turning the gear to rotate the developer sleeve.

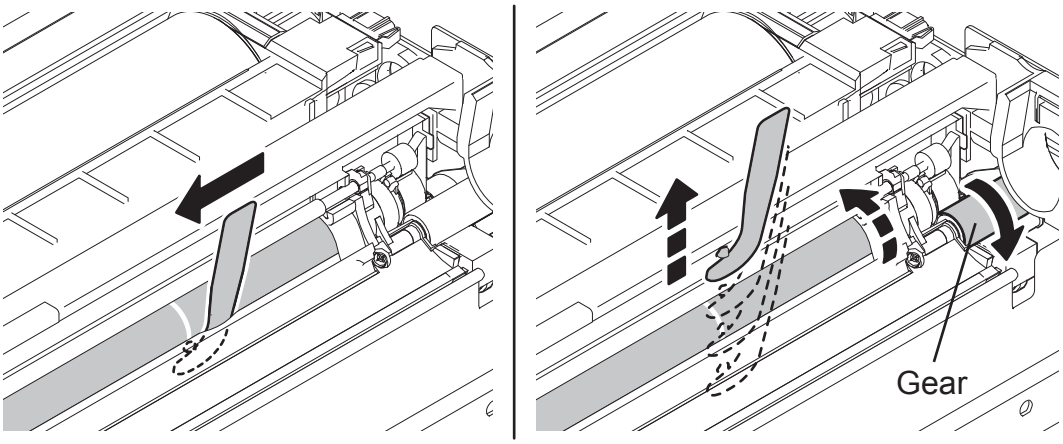


Fig. 5-27

Tip:
If foreign matter is not removed by the above procedure, take off the developer unit, discharge the developer material on to a sheet of clean paper and then remove any foreign matter found. If you cannot find any foreign matter, exchange the developer material.

- Removal of foreign matter on the developer sleeve
  (1) Apply a sheet of paper to the developer sleeve.
  (2) Scrape off foreign matter and developer material on the developer sleeve using the jig.

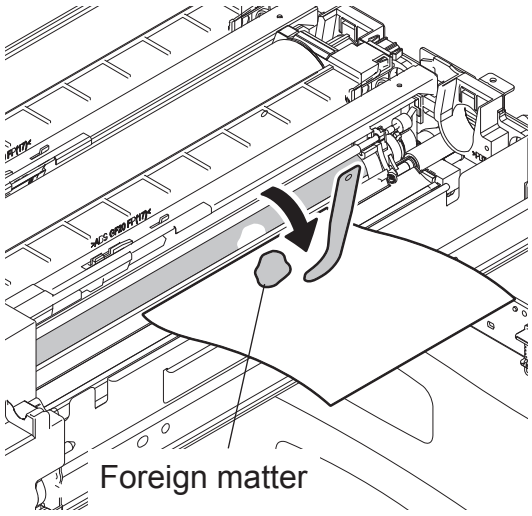


Fig. 5-28

- Scattered toner
  If toner is scattered in the developer unit or has accumulated in the developer unit duct, check if the toner filter has been periodically replaced. If not, it may increase the amount of the toner scattered around the developer unit.

Note:
After the toner filter was replaced, check if the following parts are stained with toner and clean them if required:
G1: Developer unit, G2: Developer unit drive section, G4: Front shield, G5: Side shield

* G3: Developer material
After replacing the developer material, be sure to perform the auto-toner sensor adjustment and then image quality control initialization.
📖 P.3-2 "3.1.2 Adjustment of the Auto-Toner Sensor"
📖 P.3-4 "3.1.3 Performing Image Quality Control (IQC)"

5.6.8 Waste toner box

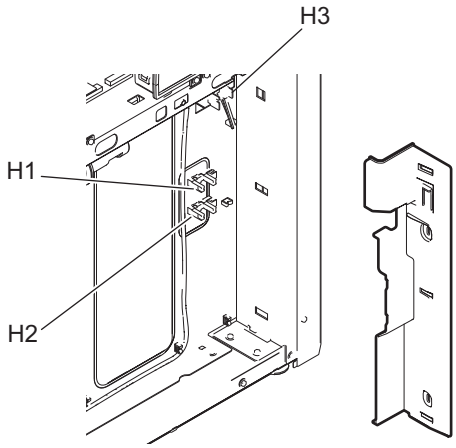


Fig. 5-29

Items to check		Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list <P-I>
				(x 1,000 sheets)	(x 1,000 drive counts)		
H1	Waste toner box full detection sensor	B					65-45
H2	Waste toner amount detection sensor	B					65-45
H3	Waste toner detection sensor	B					5-17

5.6.9 Transfer belt unit / Transfer belt cleaning unit

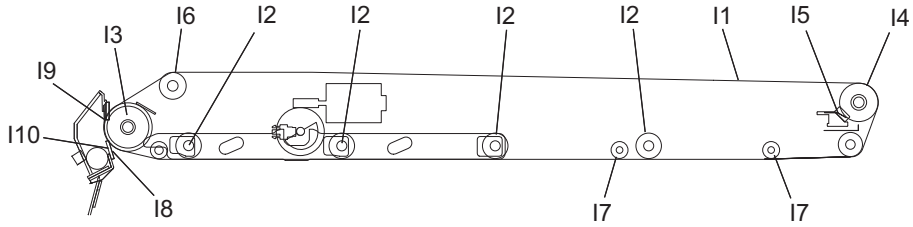


Fig. 5-30

Items to check		Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list <P-I>
				(x 1,000 sheets)	(x 1,000 drive counts)		
I1	Transfer belt			R	R		31-33
I2	1st transfer roller			R	R		30-58 31-23
I3	Drive roller			R	R		31-16
I4	2nd transfer facing roller			R	R		30-34
I5	2nd transfer facing roller cleaning mylar			225/250/275	285		30-51
I6	Tension roller			R	R		33-11
I7	Idling roller			R	R		30-55
I8	Transfer belt cleaning blade			225/250/275	285		34-1
I9	Recovery blade	B		R	R		34-17
I10	Transfer belt cleaner side seal			225/250/275	285		34-18 34-22

* I1: Transfer belt

- Handling precautions
  - Do not touch the front and rear surfaces of the transfer belt surface with bare hands.
  - Prevent oil or other foreign matter from adhering to both surfaces of the transfer belt.
  - Do not apply external pressure that might scratch the transfer belt.
  - When replacing the belt and transfer belt cleaning unit, apply patting powder sufficiently and evenly. Otherwise, it may reduce the cleaning efficiency.
  - When replacing the transfer belt, clean the drive roller, 2nd transfer facing roller and tension roller with alcohol. Then make sure that there is no foreign matter on the 1st transfer roller surface and then install a new transfer belt.

- Cleaning procedure
  Fully clean up the toner and such adhering to the roller with alcohol, and then wipe it with a dry cloth until no trace remains. Take care not to have the transfer belt surface being damaged or dented. Replace the transfer belt with a new one regardless of the number of output pages, if any crack or major scar is found.

- Resetting the counter at the replacement
  Counter resetting is not possible in the PM support mode because the transfer belt is not a PM part. Therefore reset the counter in the PM management setting (08-1228-0) after the transfer belt has been replaced.

* I2: 1st transfer roller
    - When the 1st transfer roller is replaced, apply FLOIL (GE-334C) all around the shaft on both edges of the 1st transfer roller contacting with the bushing inside the 1st transfer roller holder

    - Counter resetting is not possible in the PM support mode because the 1st transfer roller is not a PM part. Therefore reset the counter in the following PM management settings after the 1st transfer roller was replaced.
        - 08-1214-0: 1st transfer roller (K)
        - 08-1216-0: 1st transfer roller (Y)
        - 08-1218-0: 1st transfer roller (M)
        - 08-1220-0: 1st transfer roller (C)

* I3: Drive roller, I4: 2nd transfer facing roller, I6: Tension roller, I7: Idling roller
  Fully clean up the toner and such adhering to the roller with alcohol, since an image failure may occur if there is any dirt remaining on the roller. Also, remove dust and toner scattering adhering to the inside of the transfer belt unit in order to keep rollers clean.

* I8: Transfer belt cleaning blade
    - Handling precautions
        - Do not allow hard objects to hit or rub against blade edge.
        - Do not rub the edge with a cloth or soft pad.
        - Do not leave oil (or fingerprints, etc.) on the edge.
        - Do not apply solvents such as paint thinner to the blade.
        - Do not allow paper fibers or dirt to contact the blade edge.
        - Do not place the blade near a heat source.

    - Cleaning procedure
      Clean the blade edge with a cloth moistened with water and squeezed lightly.

* I10: Transfer belt cleaner side seal

Be sure to attach the transfer belt cleaner side seals according to the criteria in the figure below.
Part A: Pay attention to the following. If the blade is caught by the side seal or comes up on to it, the blade may turn up. If the gap between the blade and the side seal is too wide, this will cause toner scattering.

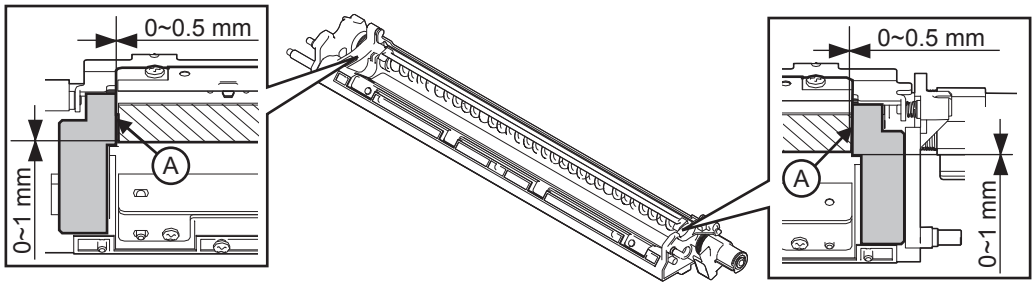


Fig. 5-31

After the side seals are attached, move the bracket retaining the blade and check that it is neither caught nor comes up on to the side seal.

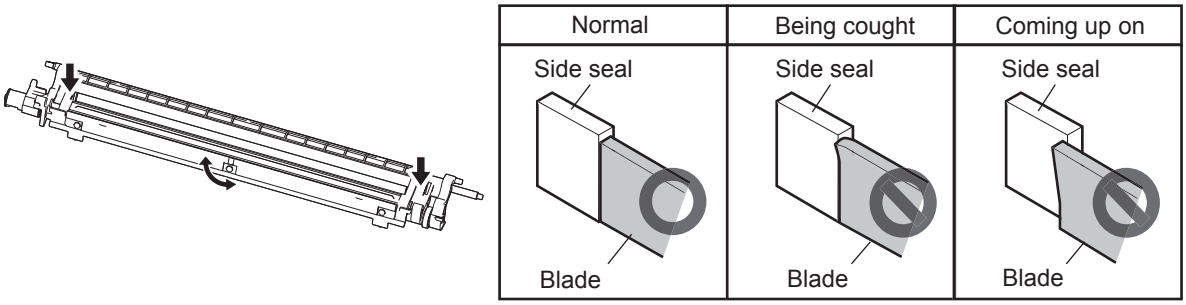


Fig. 5-32

When replacing the transfer belt cleaner side seal, check if the molded part on the back side of the removed recovery blade is dirty. Clean it if required.

Notes:

- Do not use alcohol because urethane foam will be removed.
- Cleaning on the back side of the Mylar is not necessary even if it is dirty.

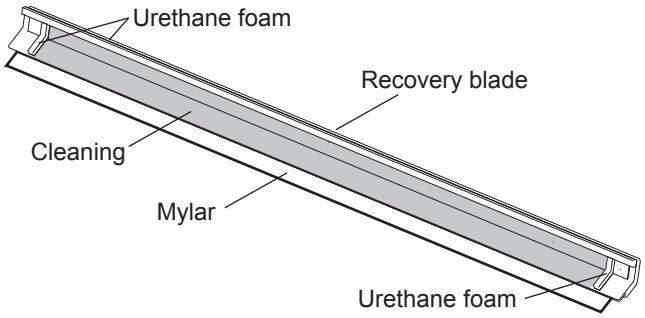


Fig. 5-33

5.6.10 Image quality control unit

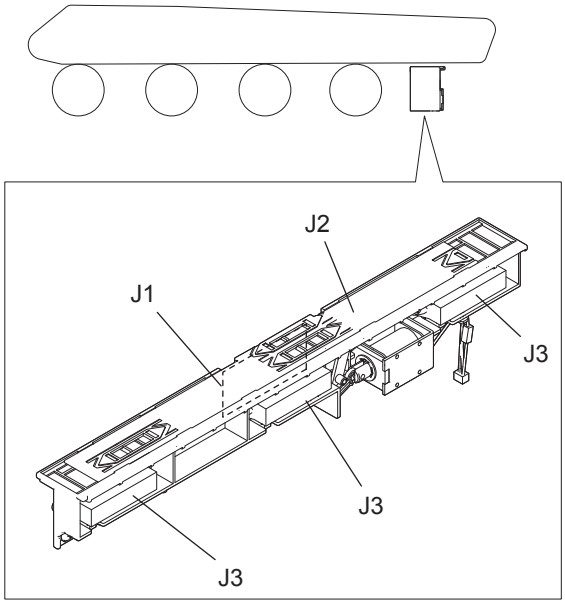


Fig. 5-34

Items to check		Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list <P-I>
				(x 1,000 sheets)	(x 1,000 drive counts)		
J1	Image quality sensor	A		R	R		6-6
J2	Sensor shutter	B		R	R		6-28
J3	Image position aligning sensor (Front/Center/Rear)	A		R	R		6-5

* J1: Image quality sensor, J2: Sensor shutter, J3: Image position aligning sensor
Clean the image quality sensor, image position aligning sensor (Front/Center/Rear) and the sensor shutter when replacing the transfer belt cleaning blade and the blade seal, or the transfer belt itself.

5.6.11 2nd transfer roller unit

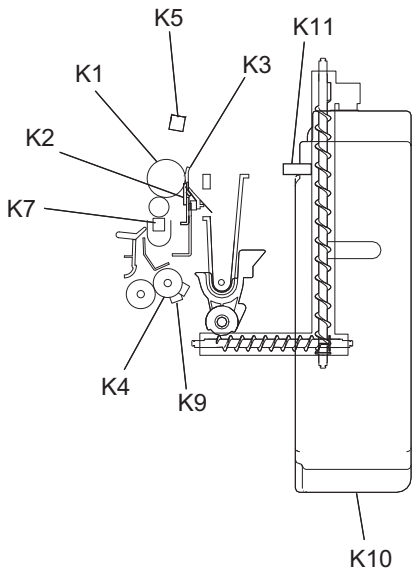


Fig. 5-35

Items to check		Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list <P-I>
				(x 1,000 sheets)	(x 1,000 drive counts)		
K1	2nd transfer roller			225/250/275	242		29-31
K2	2nd transfer roller cleaning blade			225/250/275	242		29-24
K3	2nd transfer roller side seal			225/250/275	242		29-34
K4	Registration roller (rubber)	A		R	R		21-28
K5	2nd transfer side paper clinging detection sensor	B					
K6	2nd transfer roller paper guide	A					29-41
K7	2nd transfer lubricant unit	A		225/250/275	242		29-9
K8	Grounding plate		FL				29-35
K9	Paper dust cleaning brush	B					22-45
K10	TRU waste toner box			225/250/275	242		27-47
K11	TRU waste toner amount detection sensor	B					27-46
K12	TRU waste toner auger drive gear (tooth face and shaft)		W1				

* K1: 2nd transfer roller
  Since the bearing is press-fitted in the bushing, be sure to remove it straight so that it does not fall off.

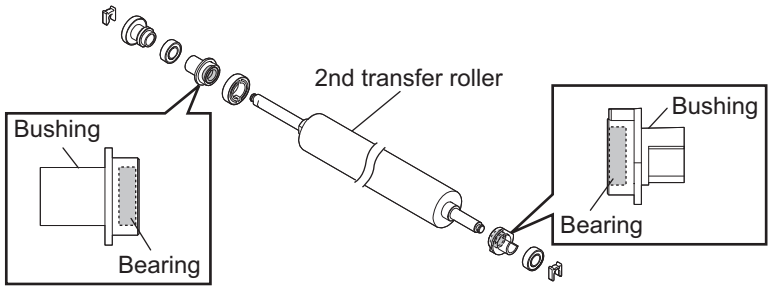


Fig. 5-36

* K3: 2nd transfer roller side seal
  Be sure to attach the 2nd transfer roller side seal according to the criteria in the figure below.
  Part A: Pay attention to the following. If the blade is caught by the side seal or comes up on to it, the blade may turn up. If the gap between the blade and the side seal is too wide, this will cause toner scattering.

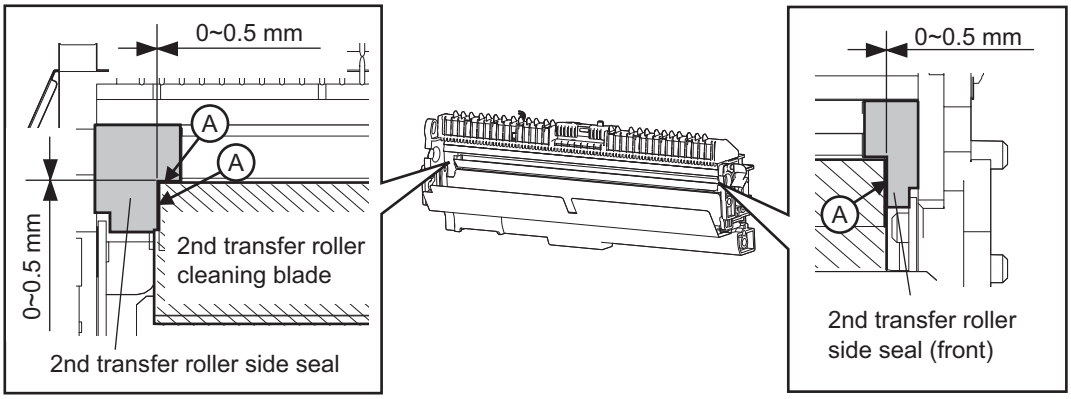


Fig. 5-37

After the side seals are attached, move the bracket retaining the blade and check that it is neither caught nor comes up on to the side seal.

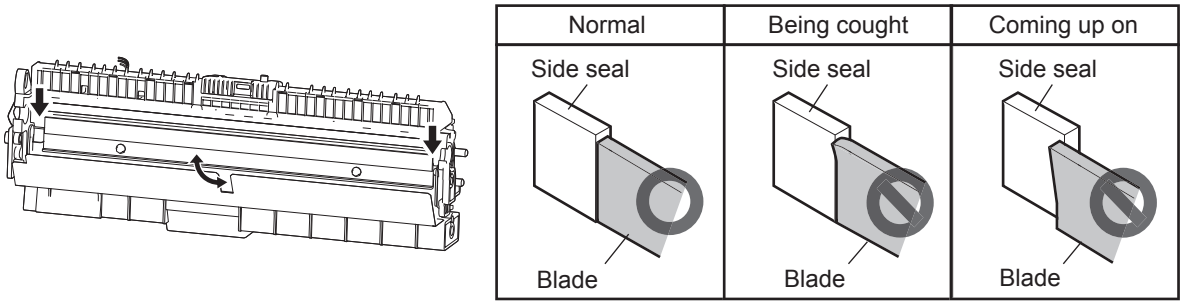


Fig. 5-38

* K8: Grounding plate
  Apply 1 rice-sized grain of Floil (GE-334C) at the point that contacts with the shaft of the 2nd transfer roller.

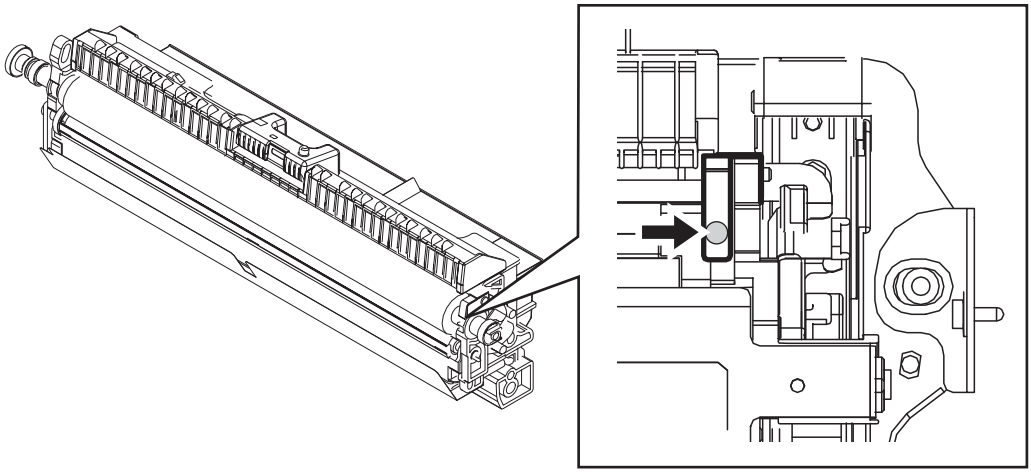


Fig. 5-39

* K9: Paper dust cleaning brush (registration roller)
  Take off the paper dust removing brush (registration roller) from the 2nd transfer unit, and then remove the paper dust on the brush with a vacuum cleaner.

* K12: TRU waste toner auger drive gear
  After the TRU waste toner box was replaced, apply 1 rice-sized grain of white grease (Molykote EM30-L) over the teeth of the TRU waste toner auger drive gear.

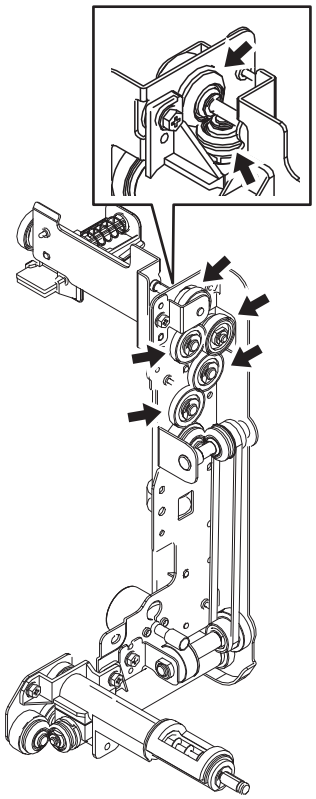


Fig. 5-40

5.6.12 Fuser unit

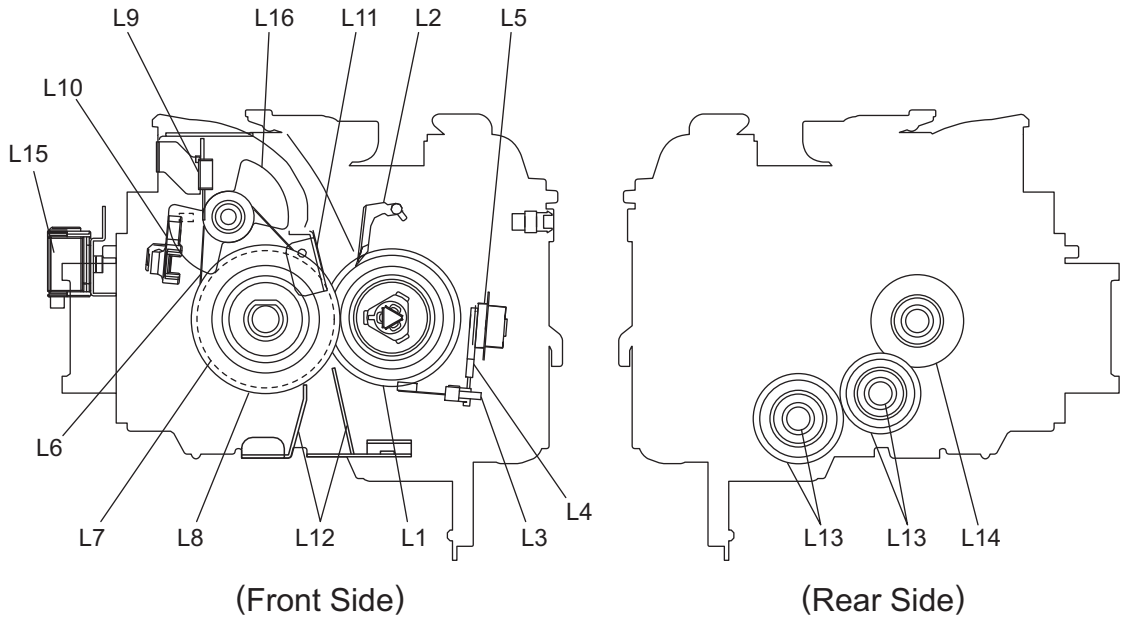


Fig. 5-41

Items to check		Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list <P-I>
				(x 1,000 sheets)	(x 1,000 drive counts)		
L1	Pressure roller			450/500/550	1804		42-1
L2	Pressure roller separation finger			450/500/550	1804		41-3
L3	Pressure roller thermistor (edge)	A		R	R		42-15
L4	Pressure roller thermistor (center/side)	A		R	R		42-15
L5	Pressure roller thermostat (center/side)	A		R	R		42-16 42-17
L6	Fuser belt			225/250/275	902		43-16
L7	Fuser roller			225/250/275	902		43-17
L8	Fuser belt guide			225/250/275	902		43-18
L9	Fuser belt thermistor (edge)	A		R	R		40-23
L10	Fuser belt thermostat (center/side)	A		R	R		43-42
L11	Separation plate	A					43-53
L12	Entry guide	A					
L13	Fuser unit gear (tooth face and shaft)		W2				
L14	Fuser unit gear (tooth face)		W2				
L15	Fuser belt thermopile (center/side)	A		R	R		38-2
L16	Rotor	A					

Note:
When the energy saver or the sleep mode is OFF or the settings are changed, PM parts of the fuser unit must be managed with the driving count together with the printing count.

* L1: Pressure roller, M6: Fuser belt

- Handling precautions
  Pressure roller
  - Do not leave any oil (fingerprints, etc.) on the pressure roller.
  - Be careful not to allow any hard object to hit or rub against the pressure roller, or it may be damaged, possibly resulting in poor cleaning.

  Fuser belt
  - Be careful not to fold the surface of the fuser belt.
  - Do not touch the fuser belt surface with bare hands.
  - Prevent oil or other foreign matter from staining the fuser belt surface.
  - Do not apply external pressure that might scratch the fuser belt.

- Cleaning procedure
  When the fuser belt and pressure roller become dirty, they will cause jamming. If this happens, wipe the surface clean with a suitable cloth. For easier cleaning, clean the belt and roller while they are still warm.
  However, toner adhering to and hardened on the surface of the fuser belt or the pressure roller may not be cleaned out only with dry cloth.
  In this case, use alcohol (e.g. ethanol) to clean it. If the toner is still not removed completely, use a toner remover.
  When using alcohol or a toner remover, soak soft cloth in it and wipe over the surface.

Notes:

- Be careful not to rub the fuser belt and pressure roller surface with your nails or hard objects because it can be easily damaged. Do not use silicone oil on the fuser belt and pressure roller.
- If alcohol or a toner remover has been used, trail marks may be left. In this case, remove them by wiping with dry cloth.
- Be careful not to make any scratch, dent or crease on the surface of the pressure roller.

- Checking
  - Check for stain and damage on the fuser belt and pressure roller, and clean if necessary.
  - Check the separation plate and fingers and check for chipped tips.
  - Check the thermistors contact and non-contact status.
  - Check the fused and fixed condition of the toner.
  - Check the gap between the inlet guide and pressure roller.
  - Check the gap between the inlet guide and pressure roller.
  - Check the fuser belt for proper transportation.
  - Check the pressure roller for proper rotation.

- Checking after the assembly of the fuser belt unit
  After the assembly, rotate the fuser belt for a round to confirm that the belt is neither folded nor scratched.
  A folded or scratched belt may be broken when it is in use.

Note:
Never rotate the fuser belt in the reverse direction as it will cause deformation of the thermistor and discharge brush.

* L2: Pressure roller separation finger
The paper jam may be caused if the tip of the finger is damaged or deformed. If there is any problem with it, replace the finger with a new one regardless of the number of output pages which have been made. Do not damage the tip of the finger during the cleaning. The finger may be damaged if the toner adhering to the tip of it is scraped off forcibly. Replace the finger if the toner is sticking to it heavily.

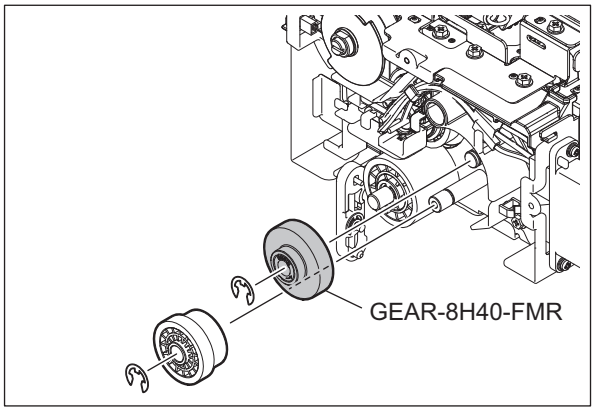
* L3, L4: Pressure roller thermistor
  Clean the thermistor with alcohol if the toner or dirt is sticking to it when the fuser belt is replaced. Do not deform or damage the thermistor during the cleaning. Replace the thermistor with a new one if it is damaged or deformed regardless of degree.

* L11: Separation plate
  If toner adheres to the separation plate, wipe it off with dry cloth.
  Do not take off the separation plate unless otherwise required.

* L13: Fuser unit gear (tooth face and shaft)
  Wipe off any old grease, and then apply 3 to 4 rice-sized grains of white grease (Molykote HP-300) onto the gear teeth and shafts.

* L14: Fuser unit gear (tooth face)
  Wipe off any old grease, and then apply 3 to 4 rice-sized grains of white grease (Molykote HP-300) onto the gear teeth.

  Note:
  Since the one-way clutch is pressed into the gear (GEAR-8H40-FMR) that is attached to the shat of the fuser roller, apply grease on the tooth face only. Do not apply grease on the shaft.



* L15: Fuser belt thermopile
  Take off the fuser belt thermopile from the equipment and wipe off the dirt using a cloth with a small amount of alcohol. Do not touch the lens of the thermopile by hand. Clean the thermopile at the timing shown below.

Model name	Black	Full color
e-STUDIO5520C	every 225,000 sheets	every 225,000 sheets
e-STUDIO6520C	every 250,000 sheets	every 250,000 sheets
e-STUDIO6530C	every 275,000 sheets	every 275,000 sheets

* L16: Rotor
  If the surface of the rotor is dirty, wipe off the dirt.

5.6.13 Bridge unit

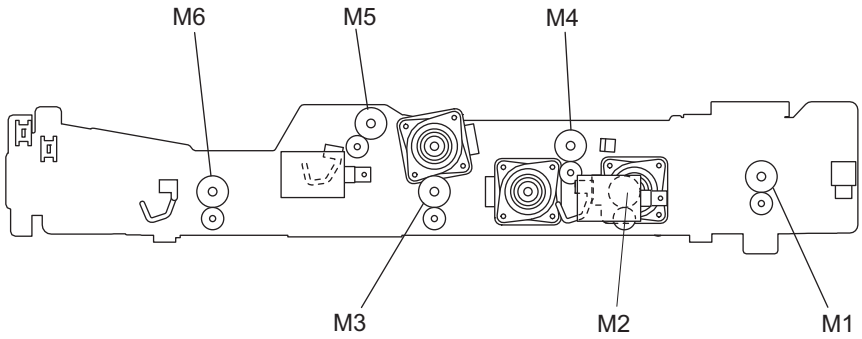


Fig. 5-42

Items to check		Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list <P-I>
				(x 1,000 sheets)	(x 1,000 drive counts)		
M1	Bridge unit transport roller-1	A					24-17
M2	Bridge unit transport roller-2	A					23-3
M3	Bridge unit transport roller-3	A					23-4
M4	Reverse roller	A					24-25
M5	Bridge unit exit roller-1	A					24-26
M6	Bridge unit exit roller-2	A					23-5

5.6.14 Paper exit unit

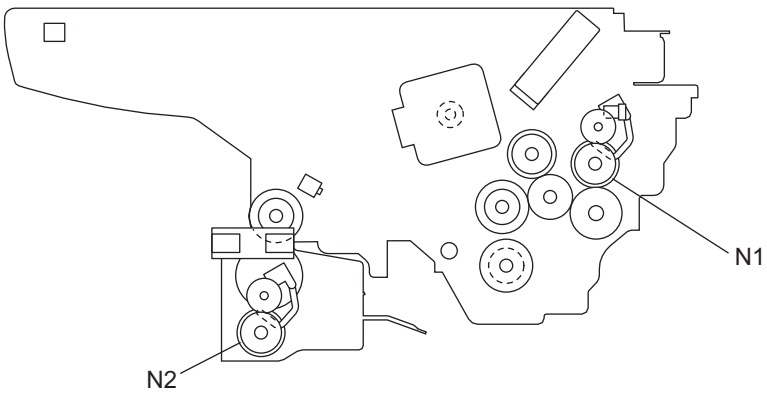


Fig. 5-43

Items to check		Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list <P-I>
				(x 1,000 sheets)	(x 1,000 drive counts)		
N1	Upper paper exit roller	A					36-6
N2	Lower paper exit roller	A					35-27

5.6.15 RADF

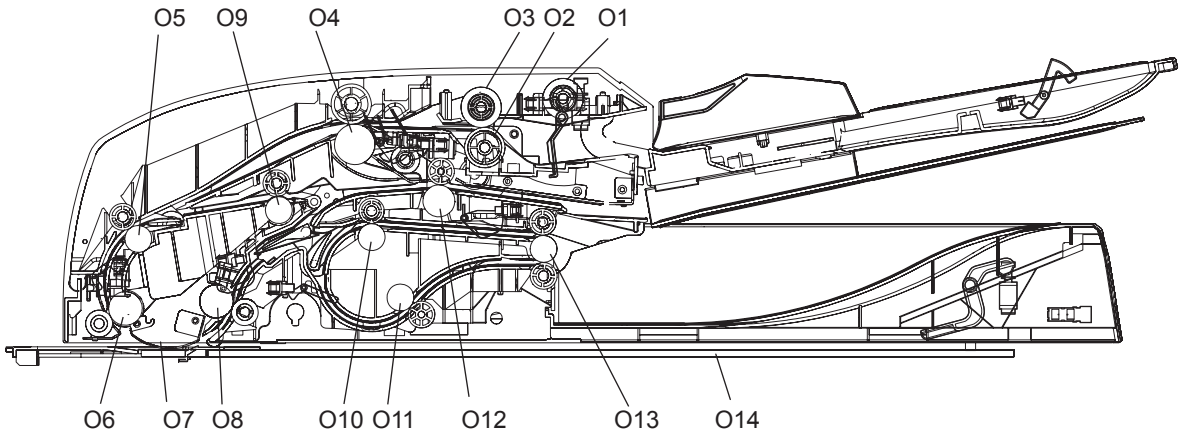


Fig. 5-44

Items to check		Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list <P-I>
				(x 1,000 sheets)	(x 1,000 drive counts)		
O1	Pickup roller	A		120	-		81-12
O2	Separation roller	A		120	-		82-8
O3	Feed roller	A		120	-		81-12
O4	Original registration roller	A					84-12
O5	Intermediate transfer roller	A					84-4
O6	Reading start roller	A					84-6
O7	RADF original glass	A					51-18
O8	Reading end roller	A					84-2
O9	Reverse registration roller	A					84-1
O10	Exit intermediate roller	A					86-26
O11	Exit/reverse roller	A					86-26
O12	Reverse roller	A					83-16
O13	Exit roller	A					86-28
O14	Platen sheet	B or A					92-3

5.6.16 LCF (MP-2501)

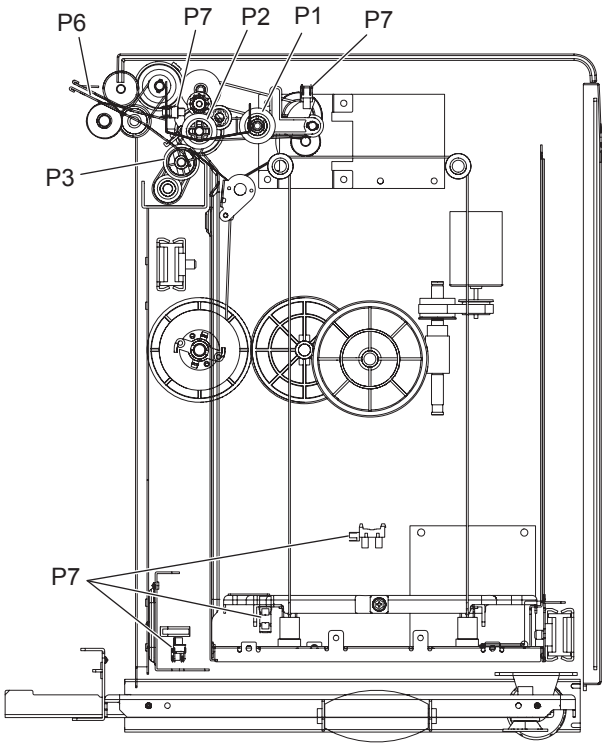


Fig. 5-45

Items to check		Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list <P-I>
				(x 1,000 sheets)	(x 1,000 drive counts)		
P1	Pickup roller	A		500	-		5-46
P2	Feed roller	A		500	-		4-2
P3	Separation roller	A		500	-		4-3
P4	Drive gear (tooth face)		W1				
P5	Brush unit	B					
P6	Paper path section	B					
P7	Sensor section	B					2-3

* P5: Brush unit
  Remove the brush unit, and clean the paper dust of the entire brush unit.

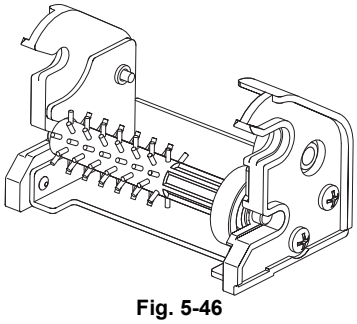


Fig. 5-46

* P6: Paper path section
  Remove the brush unit and feed roller, clean the paper dust of paper path section and the shaded area of figure bellow.

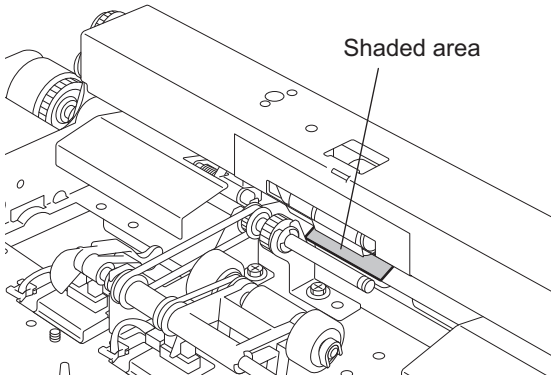


Fig. 5-47

5.7 Storage of Supplies and Replacement Parts

Precautions for storing supplies and replacement parts are shown below.

1. Toner/Developer
   Toner and developer should be stored in a place where the ambient temperature is between 10°C to 35°C (no condensation), and should also be protected against direct sunlight during transportation.

2. Photoconductive drum
   Like the toner and developer, photoconductive drum should be stored in a dark place where the ambient temperature is between 10°C to 35°C (no condensation). Be sure to avoid places where drums may be subjected to high humidity, chemicals and/or their fumes.

3. Drum cleaning blade / Transfer belt cleaning blade
   This item should be stored in a flat place where the ambient temperature is between 10°C to 35°C, and should also be protected against high humidity, chemicals and/or their fumes.

4. Transfer belt / Transfer roller / Fuser belt / Pressure roller
   Avoid places where the rollers may be subjected to high humidity, chemicals and/or their fumes.

5. Paper
   Avoid storing copy paper in places where it may be subjected to high humidity.
   After a package is opened, be sure to place and store it in a storage bag.

5.8 PM KIT

A PM kit is a package for each unit of replacement parts requiring PM

KIT name	Component	Part name	Qty.
EPU-KIT-FC55	Needle electrode	PIN_ARRAY-CHARGR-MAIN-430	4
	Main charger grid	GRID-CHARGR-MAIN-430	4
	Needle electrode cleaner	ASYS-HLDR-CLNR-CH	4
	Drum cleaning blade	BL-FC55D	4
	Blade side seal (front)	SEAL-BLADE-SIDE-FRT	4
	Blade side seal (rear)	SEAL-BLADE-SIDE-RER	4
TBU-KIT-FC55	2nd transfer facing roller cleaning pad	ASYB-CLN-RLR-TBU	1
	Transfer belt cleaning blade	BL-FC55-TBU	1
	Transfer belt cleaner side seal (front)	SEAL-CLN-TBU-F	1
	Transfer belt cleaner side seal (rear)	SEAL-CLN-TBU-R	1
TR2-KIT-FC55	2nd transfer roller	CR-FC55TR2	1
	2nd transfer roller cleaning blade*	BL-FC55TR2	1
	2nd transfer Lubricant unit	LB-FC55TR2	1
FLTR-KIT-FC55	Toner filter	FLTR-TONER-430_N	1
	Ozone filter 1	FLTR-OZ-430_TR	1
	Ozone filter 2	FLTR-OZ-TNR-430_TR	1
FR-KIT-FC55	Fuser roller	FR-FC55-U	1
	Fuser belt	BT-FC55-FU	1
	Pressure roller	HR-FC55-L	1
	Pressure roller separation finger	SCRAPR-FUS-350	5
	Fuser belt guide	COLLAR-BLT-MCR	2
ROL-KIT-81CST	Pickup roller	ASYS-ROL-FEED	1
	Feed roller	ASYS-ROL-FEED	1
	Separation roller	ASYS-ROL-SPT	1
DF-KIT-3018	Pickup roller	ASYS-ROL-FEED	1
	Feed roller	ASYS-ROL-FEED	1
	Separation roller	ASYS-ROL-RET	1
ROL-KIT-4004	Pickup roller	ASYS-ROL-PICK-L	2
	Feed roller	ASYS-ROL-FEED	2
	Separation roller	ASYS-ROL-SPT-LCF	2

* The following seal is attached to the 2nd transfer roller cleaning blade.

Part	Part name	Qty.
2nd transfer roller side seal	SHLD-BLADE-TR2-SIDE-R	1

5.9 Maintenance Part List

The parts used for the maintenance of this equipment are as follows.

No.	Item	Purpose	Parts list <P-I>*1
1	Cleaning brush	Cleaning inside of the equipment	201-1
2	Doctor blade cleaning jig*2	Cleaning the doctor blade	201-7
3	Wire holder jig	Fixing the wire at the assembly of the carriage wire	201-2
4	RADF positioning pin	Determining the position of the RADF	201-5
5	Doctor-sleeve jig	Measuring the gap between the development sleeve and the doctor blade	201-6
6	Belt tension jig	Adjusting the belt tension at the installation of the scan motor	201-3
7	Separation plate gap jig*2	Measuring the gap between the separation plate and the fuser belt	201-11
8	Thermostat gap confirmation jig*2	Measuring the gap between the thermostat and the fuser belt, and the thermostat and the pressure roller	201-9
9	Thermistor gap confirmation jig*2	Measuring the gap between the thermistor and the pressure roller	201-10
10	Drum bag	Storing the drum	201-4
11	Download jig (DLM board)	Updating the scanner/options ROM	202-1
12	ROM	Installing the DLM board	202-10
13	Download jig-2 (6 Flash ROMs)	Updating the system/engine ROM	202-2
14	ROM writer adapter (For 1881)	Writing the data of PWA-DWNLD-350-JIG2	202-4
15	ROM writer adapter (For 1931)	Writing the data of PWA-DWNLD-350-JIG2	202-5
16	Toner seal plate*2	Preventing foreign matter from entering into the toner supply opening (for transporting the unpacked equipment)	201-8

*1: Part list <P-I> represents the page item in “e-STUDIO5520C/6520C/6530C Service Parts List”.

*2: This part has been newly added in e-STUDIO5520C/6520C/6530C, others are common to those used for other models.

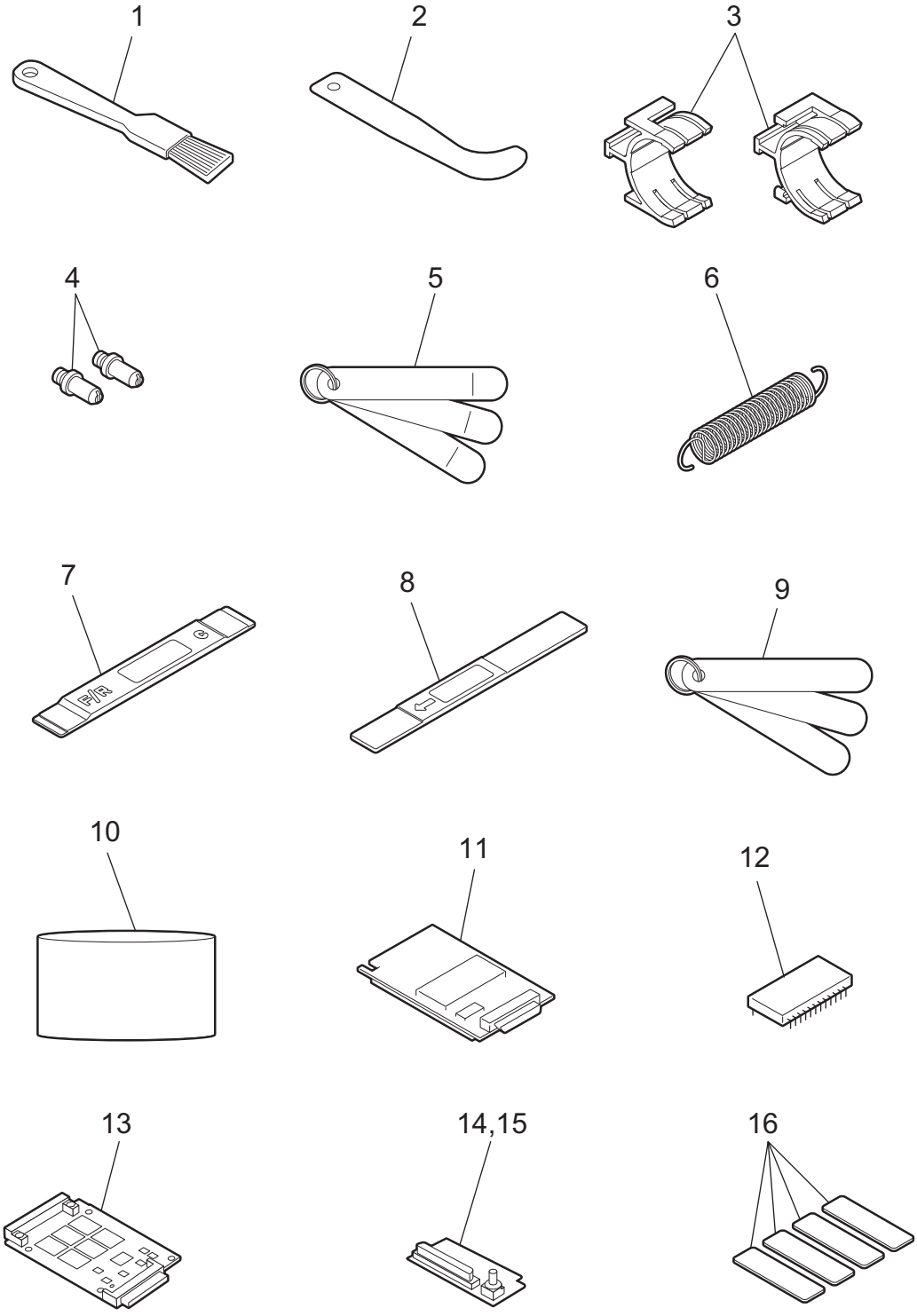


Fig. 5-48

5.10 Grease List

The parts used for the maintenance of this equipment are as follows.

Symbol	Grease name	Volume	Container	Parts list <P-I>*
L	Launa 40	100 cc	Oiler	201-21
W1	White grease (Molykote EM-30L)	100 g	Tube	201-24
W2	White grease (Molykote HP-300)	100 g	Bottle	201-22A
W2	White grease (Molykote HP-300)	10 g	Bottle	201-22B
AV	Alvania No.2	100 g	Tube	201-23
FL	Floil (GE-334C)	20 g	Bottle	

* Part list <P-I> represents the page item in “e-STUDIO5520C/6520C/6530C Service Parts List”.

5.11 Operational Items in Overhauling

Overhauling must be performed in order to maintain the quality level of this equipment at the following timing.

e-STUDIO5520C: When the number of output pages has reached 900,000 or 2.5 years have passed from the start of use (Whichever is earlier.)

e-STUDIO6520C: When the number of output pages has reached 1,000,000 or 2.5 years have passed from the start of use (Whichever is earlier.)

e-STUDIO6530C: When the number of output pages has reached 1,000,000 or 2.5 years have passed from the start of use (Whichever is earlier.)

(1) Replace all the PM parts.
(2) Check the components in the drive section (gears, pulleys, timing belts, etc.). Replace them with new ones if they are damaged.
(3) Check all the adhesives such as tape and Mylar if they are damaged or have become unstuck. Replace them with new ones if necessary.
(4) Check the performance of all the switches and sensors. Replace them with new ones if necessary.
(5) Clean inside the equipment thoroughly.

6. ERROR CODE and TROUBLESHOOTING

6.1 Error Code List

The following error codes is displayed at the upper right of the screen when the “CLEAR PAPER” or “CALL SERVICE” symbol is blinking.

6.1.1 Jam

Error code	Classification	Contents	Troubleshooting
E010	Paper transport jam	Jam not reaching the fuser transport sensor The paper which has passed through the fuser unit does not reach the fuser transport sensor.	P. 6-34
E011	Other paper jam	Transfer belt paper-clinging jam: The paper after the 2nd transfer is clinging to the transfer belt, or a paper jam occurred between the registration roller and the paper clinging detection sensor.	P. 6-44
E020	Paper transport jam	Stop jam at the fuser transport sensor: The trailing edge of the paper does not pass the fuser transport sensor after its leading edge has reached this sensor.	P. 6-34
E030	Other paper jam	Power-ON jam: The paper is remaining on the paper transport path when power is turned ON.	P. 6-45
E061		Incorrect paper size setting for 1st drawer: The size of paper in the 1st drawer differs from size setting of the equipment.	P. 6-45
E062		Incorrect paper size setting for 2nd drawer: The size of paper in the 2nd drawer differs from size setting of the equipment.	P. 6-45
E063		Incorrect paper size setting for 3rd drawer: The size of paper in the 3rd drawer differs from size setting of the equipment.	P. 6-45
E064		Incorrect paper size setting for 4th drawer: The size of paper in the 4th drawer differs from size setting of the equipment.	P. 6-45
E065		Incorrect paper size setting for bypass tray: The size of paper in the bypass tray differs from size setting of the equipment.	P. 6-45
E071		1st drawer media type mis-setting jam: The media type setting of the 1st drawer is incorrect.	P. 6-46
E072		2nd drawer media type mis-setting jam: The media type setting of the 2nd drawer is incorrect.	P. 6-46
E073		3rd drawer media type mis-setting jam: The media type setting of the 3rd drawer is incorrect.	P. 6-46
E074		4th drawer media type mis-setting jam: The media type setting of the 4th drawer is incorrect.	P. 6-46
E075		Option LCF media type mis-setting jam: The media type setting of the option LCF is incorrect.	P. 6-46
E076		Tandem LCF media type mis-setting jam: The media type setting of the tandem LCF is incorrect.	P. 6-46
E090		Image data delay jam: Image data to be printed cannot be prepared.	P. 6-46
E091		Motor-ON time-out jam: The equipment does not operate normally because abnormality occurred on an interface between the SYS board and engine firmware.	P. 6-46
E0A0		Image transport ready time-out jam: Image data to be printed cannot be sent.	P. 6-46

Error code	Classification	Contents	Troubleshooting
E110	Paper misfeeding	ADU misfeeding (Paper not reaching the registration sensor): The paper which has passed through ADU does not reach the registration sensor during duplex printing.	P. 6-31
E120		Bypass misfeeding (Paper not reaching the bypass feed sensor): Paper fed from the bypass tray does not reach the bypass feed sensor.	P. 6-31
E130		1st drawer misfeeding (Paper not reaching the 1st drawer feed sensor): The paper fed from the 1st drawer does not reach the 1st drawer feed sensor.	P. 6-31
E140		2nd drawer misfeeding (Paper not reaching the 2nd drawer feed sensor): The paper fed from the 2nd drawer does not reach the 2nd drawer feed sensor.	P. 6-32
E150		3rd drawer misfeeding (Paper not reaching the 3rd drawer feed sensor): The paper fed from the 3rd drawer does not reach the 3rd drawer feed sensor.	P. 6-32
E160		4th drawer misfeeding (Paper not reaching the 4th drawer feed sensor): The paper fed from the 4th drawer does not reach the 4th drawer feed sensor.	P. 6-33
E180		Option LCF misfeeding (Paper not reaching the LCF feed sensor): Paper fed from the LCF does not reach the LCF feed sensor.	P. 6-33
E190		LCF misfeeding (Paper not reaching the LCF feed sensor): The paper fed from the LCF does not reach the LCF feed sensor.	P. 6-33

Error code	Classification	Contents	Troubleshooting
E200	Paper transport jam	1st drawer transport jam (Paper not reaching the registration sensor): The paper does not reach the registration sensor after it has passed the 1st drawer feed sensor.	P. 6-35
E210		2nd drawer transport jam (Paper not reaching the registration sensor): The paper does not reach the registration sensor after it has passed the 1st drawer feed sensor.	P. 6-35
E220		2nd drawer transport jam (Paper not reaching the 1st drawer feed sensor): The paper does not reach the 1st drawer feed sensor after it has passed the 2nd drawer feed sensor.	P. 6-35
E230		1st drawer misfeeding (Paper not reaching the 1st drawer transport sensor): Paper fed from the 1st drawer does not reach the 1st drawer transport sensor.	P. 6-36
E240		.2nd drawer misfeeding (Paper not reaching the 2nd drawer transport sensor): Paper fed from the 2nd drawer does not reach the 2nd drawer transport sensor.	P. 6-36
E260		Option LCF transport jam (Paper not reaching the registration sensor):	P. 6-36
E270		Bypass transport jam (Paper not reaching the registration sensor): Paper fed from the bypass tray and passed through the bypass feed sensor does not reach the registration sensor.	P. 6-35
E290		Option LCF transport jam: Paper fed from the Option LCF does not reach the 1st drawer transport sensor.	P. 6-37
E2B0		Stop jam at the registration sensor (1st drawer)	P. 6-42
E2B1		Stop jam at the registration sensor (2nd drawer)	P. 6-42
E2B2		Stop jam at the registration sensor (3rd drawer)	P. 6-42
E2B3		Stop jam at the registration sensor (4th drawer)	P. 6-42
E2B4		Stop jam at the registration sensor (Bypass tray)	P. 6-42
E2B5		Stop jam at the registration sensor (LCF)	P. 6-42
E2B6		Stop jam at the registration sensor (ADU)	P. 6-42
E2B7		Stop jam at the registration sensor (option LCF)	P. 6-42
E300		3rd drawer transport jam (Paper not reaching the registration sensor): The paper does not reach the registration sensor after it has passed the 1st drawer feed sensor.	P. 6-35

Error code	Classification	Contents	Troubleshooting
E310	Paper transport jam	3rd drawer transport jam (Paper not reaching the 1st drawer feed sensor): The paper does not reach the 1st drawer feed sensor after it has passed the 2nd drawer feed sensor.	P. 6-35
E320		3rd drawer transport jam (Paper not reaching the 2nd drawer feed sensor): The paper does not reach the 2nd drawer feed sensor after it has passed the 3rd drawer feed sensor.	P. 6-37
E330		4th drawer transport jam (Paper not reaching the registration sensor): The paper does not reach the registration sensor after it has passed the 1st drawer feed sensor.	P. 6-35
E340		4th drawer transport jam (Paper not reaching the 1st drawer feed sensor): The paper does not reach the 1st drawer feed sensor after it has passed the 2nd drawer feed sensor.	P. 6-35
E350		4th drawer transport jam (Paper not reaching the 2nd drawer feed sensor): The paper does not reach the 2nd drawer feed sensor after it has passed the 3rd drawer feed sensor.	P. 6-37
E360		4th drawer transport jam (Paper not reaching the 3rd drawer feed sensor): The paper does not reach the 3rd drawer feed sensor after it has passed the 4th drawer feed sensor.	P. 6-38
E370		3rd drawer misfeeding (Paper not reaching the 3rd drawer transport sensor): Paper fed from the 3rd drawer does not reach the 3rd drawer transport sensor.	P. 6-38
E380		4th drawer misfeeding (Paper not reaching the 4th drawer transport sensor): Paper fed from the 4th drawer does not reach the 4th drawer transport sensor.	P. 6-39
E3C0		LCF transport jam (Paper not reaching the registration sensor): Paper fed from the LCF and passed through the 1st drawer feed sensor does not reach the registration sensor.	P. 6-35
E3D0		LCF transport jam (Paper not reaching the 1st drawer feed sensor): Paper fed from the LCF and passed through the 2nd drawer feed sensor does not reach the 1st drawer feed sensor.	P. 6-35
E3E0		LCF transport jam (Paper not reaching the 2nd drawer feed sensor): Paper fed from the LCF and passed through the LCF feed sensor does not reach the 2nd drawer feed sensor.	P. 6-37
E3F0		Tandem LCF misfeeding (Paper not reaching the tandem LCF feed sensor): Paper fed from the Tandem LCF does not reach the tandem LCF transport sensor.	P. 6-39
E400	Cover open jam	Duplexing unit open jam	P. 6-48
E430		ADU open jam: The ADU has opened during printing.	P. 6-48
E440		Paper feed cover open jam: The paper feed cover has opened during printing.	P. 6-48
E450		LCF side cover open jam: The LCF side cover has opened during printing.	P. 6-48
E480		Bridge unit open jam: The bridge unit has opened during printing.	P. 6-48
E4A0		Waste toner cover open jam (printing)	P. 6-49
E4B0		Bridge unit open jam (printing): The bridge unit has opened during printing.	P. 6-49

Error code	Classification	Contents	Troubleshooting
E510	Paper transport jam (ADU section)	Jam not reaching the ADU entrance sensor: The paper does not reach the ADU entrance sensor after it is switchbacked in the exit section.	P. 6-40
E511		ADU misfeeding (Paper not reaching the ADU transport sensor-1)	P. 6-40
E540		ADU misfeeding (Paper not reaching the ADU feed sensor): Paper does not reach the duplexing unit path exit sensor after it has passed the duplexing unit path entrance sensor.	P. 6-41
E550	Other paper jam	Paper remaining jam on the transport path: The paper is remaining on the transport path when printing is finished (caused by a multiple paper feeding).	P. 6-47
E570	Paper transport jam	Jam not reaching the bridge unit.	P. 6-41
E580		Stop jam at the bridge unit	P. 6-42
E590		Jam not reaching the upper paper exit sensor	P. 6-29
E5A0		Stop jam at the upper paper exit sensor	P. 6-29

Error code	Classification	Contents	Troubleshooting
E712	RADF jam	Jam not reaching the original registration sensor: The original fed from the original feeding tray does not reach the original registration sensor.	P. 6-50
E714		Feed signal reception jam: The feed signal is received even no original exists on the original feeding tray.	P. 6-50
E721		Jam not reaching the original reading start sensor: The original does not reach the reading start sensor after it has passed the registration sensor (when scanning obverse side) or the reverse sensor (when scanning reverse side).	P. 6-50
E722		Jam not reaching the original exit sensor (during scanning): The original which passed the read sensor does not reach the original exit/reverse sensor when it is transported from the scanning section to exit section.	P. 6-51
E724		Stop jam at the original registration sensor: The trailing edge of the original does not pass the original registration sensor after its leading edge has reached this sensor.	P. 6-51
E725		Stop jam at the reading start sensor: The trailing edge of the original does not pass the read sensor after its leading edge has reached this sensor.	P. 6-50
E726		Transport/exit signal reception jam during ADF standby status	P. 6-51
E727		Jam not reaching the original reading end sensor	P. 6-51
E729		Stop jam at the original reading end sensor	P. 6-51
E731		Stop jam at the original exit/reverse sensor: The trailing edge of the original does not pass the original exit/reverse sensor after its leading edge has reached this sensor.	P. 6-52
E744		Stop jam at the exit/reverse sensor	P. 6-52
E745		Jam not reaching the exit reverse sensor	P. 6-52
E746		Exit/reverse sensor paper remaining jam	P. 6-52
E762		Registration sensor paper remaining jam	P. 6-52
E770		Original width detection sensor-1 paper remaining jam	P. 6-52
E771		Original width detection sensor-2 paper remaining jam	P. 6-52
E772		Original width detection sensor-3 paper remaining jam	P. 6-52
E773		Intermediate transport sensor paper remaining jam	P. 6-52
E774		Reading start sensor paper remaining jam	P. 6-50
E775		Reading end sensor paper remaining jam	P. 6-52
E777		Exit sensor paper remaining jam	P. 6-52
E860		Original jam access cover open: The Original jam access cover has opened during RADF operation.	P. 6-53
E870		RADF open jam: RADF has opened during RADF operation.	P. 6-53
E871		Cover open jam in the read ready status: Jam caused by opening of the Original jam access cover or front cover while the RADF is waiting for the scanning start signal from the equipment.	P. 6-53
E890		ADF time out jam	P. 6-53

Error code	Classification	Contents	Troubleshooting
E910	Paper transport jam (Relay transport section)	Jam at the bridge unit transport sensor 1: The paper does not reach the bridge unit transport sensor 1 after it has passed the exit sensor.	P. 6-54
E920		Stop jam at the bridge unit transport sensor 1: The trailing edge of the paper does not pass the bridge unit transport sensor 1 after its leading edge has reached the sensor.	P. 6-54
E930		Jam at the bridge unit transport sensor 2: The trailing edge of the paper does not reach the bridge unit transport sensor 2 after its leading edge has reached the bridge unit transport sensor 1.	P. 6-54
E940		Stop jam at the bridge unit transport sensor 2: The trailing edge of the paper does not pass the bridge unit transport sensor 2 after its leading edge has reached the bridge unit transport sensor 2.	P. 6-54
E970		Jam not reaching the lower paper exit sensor: Paper transported from the bridge unit does not reach the lower paper exit sensor.	P. 6-29
E980		Stop jam at the lower paper exit sensor: Paper transported from the bridge unit does not pass the lower paper exit sensor.	P. 6-30
E9F0	Finisher jam (Punch unit)	Punching jam: Punching is not performed properly. [MJ-1103/1104 (when MJ-6102 is installed)]	P. 6-63

Error code	Classification	Contents	Troubleshooting
EA10	Finisher jam (Finisher section)	Paper transport delay jam: The paper which has passed the relay transport path does not reach the inlet sensor. [MJ-1103/1104]	P. 6-55
EA20		Paper transport delay jam: The paper which has passed through the inlet sensor does not reach the transport sensor. [MJ-1103/1104]	P. 6-55
EA21		Paper size error jam: Paper does not reach the sensor because the paper is shorter than spec. [MJ-1103/1104]	P. 6-56
EA22		Paper transport jam (Finisher paper punching edge detection sensor): [MJ-1103/1104]	P. 6-56
EA23		Paper transport jam (exit sensor): [MJ-1103/1104]	P. 6-56
EA24		Paper transport jam (between entrance and exit sensors): [MJ-1103/1104]	P. 6-57
EA25		Paper transport jam (after paper stack exit): [MJ-1103/1104]	P. 6-57
EA26		Paper transport jam (stop command request): [MJ-1103/1104]	P. 6-58
EA27		Paper transport jam (paper not inserted): [MJ-1103/1104]	P. 6-57
EA28		Paper transport jam (assisting arm operation delay): [MJ-1103/1104]	P. 6-58
EA29		Paper transport jam (stack transport delay): [MJ-1103/1104]	P. 6-58
EA31		Transport path paper remaining jam: The paper which has passed through the inlet sensor does not reach the transport sensor. [MJ-1103/1104]	P. 6-59
EA32		Exit paper remaining jam: The paper is remaining on the finishing tray when the power is turned ON. [MJ-1103/1104]	P. 6-59
EA40		Door open jam: The upper/front cover of the finisher section or the upper/ front door of the puncher section has opened during printing. [MJ-1103/1104] Cover open error: The front cover or stationary tray cover is opened during paper transport. [MJ-1103/1104]	P. 6-59
EA50		Stapling jam: Stapling is not performed properly. [MJ-1103/1104]	P. 6-59
EA60	Finisher jam (Finisher section)	Early arrival jam: The inlet sensor detects the paper earlier than a specified timing. [MJ-1103/1104]	P. 6-59
EA70		Stack exit belt home position error: The stack exit belt is not at the home position. [MJ-1103/1104]	P. 6-60
EA90	Finisher jam (Saddle stitcher section)	Door open jam: The delivery cover or inlet cover has opened during printing [MJ-1103/1104].	P. 6-61
EAA0		Power-ON jam: Paper exists at No.1 paper sensor, No. 2 paper sensor, No.3 paper sensor, vertical path paper sensor or delivery sensor when power is turned ON. [MJ-1103/1104]	P. 6-61
EAB0		Transport stop jam: The paper which passed through the inlet sensor does not reach or pass No.1 paper sensor, No. 2 paper sensor, No.3 paper sensor or delivery sensor. [MJ-1103/1104]	P. 6-61
EAB1		Short paper jam (Saddle Stitch Finisher)	P. 6-62
EAD0	Other paper jam	Print end command time-out jam: The printing has not finished normally because of the communication error between the SYS board and LGC board at the end of printing.	P. 6-64

Error code	Classification	Contents	Troubleshooting
EAE0	Finisher jam	Receiving time time-out jam: The printing has been interrupted because of the communication error between the equipment and finisher when the paper is transported from the equipment to the finisher.	P. 6-64
EB30		Ready time time-out jam: The equipment judges that the paper transport to the finisher is disabled because of the communication error between the equipment and finisher at the start of printing.	P. 6-64
EB50	Paper transport jam	Paper remaining on the transport path: The multiple feeding of preceding paper caused the misfeeding of upcoming paper.	P. 6-43
EB60		Paper remaining on the transport path: The multiple feeding of preceding paper caused the misfeeding of upcoming paper (redetection after no jam is detected at [EB50]).	P. 6-43
ED10	Finisher jam	Skew adjustment motor (M1) home position detection abnormality: The Skew adjustment motor is not at the home position. [MJ-1103/1104 (when MJ-6102 is installed)]	P. 6-64
ED11		Sideways adjustment motor (M2) home position detection error: The Sideways adjustment motor is not at the home position. [MJ-1103/1104 (when MJ-6102 is installed)]	P. 6-64
ED12		Shutter home position error: The shutter is not at the home position. [MJ-1103/1104]	P. 6-65
ED13		Front alignment plate home position error: The front alignment plate is not at the home position. [MJ-1103/1104]	P. 6-65
ED14	Finisher jam (Finisher section)	Rear alignment plate home position error: The rear alignment plate is not at the home position. [MJ-1103/1104]	P. 6-65
ED15		Paddle home position error: The paddle is not at the home position. [MJ-1103/1104]	P. 6-65
ED16		Buffer tray home position error: The buffer tray is not at the home position. [MJ-1103/1104]	P. 6-65

Error code	Classification	Contents	Troubleshooting
EF10	Finisher jam (Saddle section)	Paper not supported for Saddle Stitch Finisher	P. 6-66
EF11		Saddle Stitch Finisher stapling error (front)	P. 6-66
EF12		Saddle Stitch Finisher stapling error (rear)	P. 6-66
EF13		Saddle paper holder home position detection abnormality	P. 6-65
EF14		Saddle paper exit jam	P. 6-67
EF15		Saddle Stitch Finisher side alignment motor home position detection abnormality	P. 6-65
EF16		Saddle Stitch Finisher stacker motor home position detection abnormality	P. 6-65
EF17		Saddle Stitch Finisher folding blade home position detection abnormality	P. 6-69
EF18		Saddle Stitch Finisher additional folding roller home position detection abnormality	P. 6-69
EF19		Saddle paper folding jam	P. 6-70
EF20		Saddle stacker jam	P. 6-70
EF21		Hole Punch Unit paper leading edge skew detection abnormality	P. 6-71
EF22		Hole Punch Unit paper leading edge detection abnormality	P. 6-71
EF23		Hole Punch Unit paper alignment abnormality	P. 6-72
EF24		Hole Punch Unit paper trailing edge skew detection abnormality	P. 6-72
EF25		Hole Punch Unit paper trailing edge detection abnormality	P. 6-73
EF27		Hole Punch Unit paper edge detection order abnormality-1	P. 6-73
EF28		Hole Punch Unit paper edge detection order abnormality-2	P. 6-73

6.1.2 Service call

Error code	Classification	Contents	Troubleshooting
C021	Copy process related service call	Developer unit motor-YMC locking error: The developer unit motor-YMC is not rotating normally.	P. 6-119
C022		Developer unit mixer motor-YMC locking error: The developer unit mixer motor-YMC is not rotating normally.	P. 6-119
C023		Developer unit motor-K locking error: The developer unit motor-K is not rotating normally.	P. 6-119
C024		Developer unit mixer motor-K locking error: The developer unit mixer motor-K is not rotating normally.	P. 6-120
C130	Paper feeding system related service call	1st drawer tray abnormality: The tray-up motor is not rotating or the 1st drawer tray is not moving normally. (the case that paper can be fed from any drawer except the 1st drawer)	P. 6-74
C140		2nd drawer tray abnormality: The tray-up motor is not rotating or the 2nd drawer tray is not moving normally. (the case that paper can be fed from any drawer except the 2nd drawer)	P. 6-74
C150		3rd drawer tray abnormality: The 3rd drawer tray-up motor is not rotating or the 3rd drawer tray is not moving normally. (the case that paper can be fed from any drawer except the 3rd drawer)	P. 6-75
C160		4th drawer tray abnormality: The 4th drawer tray-up motor is not rotating or the 4th drawer tray is not moving normally. (the case that paper can be fed from any drawer except the 4th drawer)	P. 6-75
C180		LCF tray-up motor abnormality: The LCF tray-up motor is not rotating or the LCF tray is not moving normally. (the case that paper can be fed from any drawer except the LCF)	P. 6-75
C1A0		LCF end fence motor abnormality: The LCF end fence motor is not rotating or the LCF end fence is not moving normally. (the case that paper can be fed from any drawer except the LCF)	P. 6-76
C1C0		Option LCF tray-up motor abnormality: The option LCF tray-up motor is not moving normally	P. 6-76
C260	Scanning system related service call	Peak detection error: Lighting of the exposure lamp (white reference) is not detected when power is turned ON.	P. 6-77
C270		(1) Carriage home position sensor not turning OFF within a specified period of time: The carriage does not shift from its home position in a specified time. (2) Downloading firmware with an incorrect model.	P. 6-77
C280		Carriage home position sensor not turning ON within a specified period of time: The carriage does not reach to its home position in a specified period of time.	P. 6-77

Error code	Classification	Contents	Troubleshooting
C360	Copy process related service call	Needle electrode cleaner operation abnormality	P. 6-120
C370		Transfer belt operation abnormality	P. 6-121
C380		Auto-toner sensor-K abnormality (upper limit)	P. 6-121
C381		Auto-toner sensor-K abnormality (lower limit)	P. 6-121
C382		Auto-toner sensor-K connection error	P. 6-121
C390		Auto-toner sensor-C abnormality (upper limit)	P. 6-121
C391		Auto-toner sensor-C abnormality (lower limit)	P. 6-121
C392		Auto-toner sensor-C connection error	P. 6-121
C3A0		Auto-toner sensor-M abnormality (upper limit)	P. 6-121
C3A1		Auto-toner sensor-M abnormality (lower limit)	P. 6-121
C3A2		Auto-toner sensor-M connection error	P. 6-121
C3B0		Auto-toner sensor-Y abnormality (upper limit)	P. 6-121
C3B1		Auto-toner sensor-Y abnormality (lower limit)	P. 6-121
C3B2		Auto-toner sensor-Y connection error	P. 6-121
C3C0		Process unit connection error	P. 6-121
C411	Fuser unit related service call	Thermistor or heater lamp abnormality at power-ON: Abnormality of the thermistor is detected when power is turned ON or the temperature of the fuser belt does not rise in a specified period of time after power is turned ON.	P. 6-78
C412		Thermistor/heater lamp abnormality at power-ON: Thermistor abnormality is detected at power-ON or the fuser belt temperature does not rise within a specified period of time after power-ON.	P. 6-78
C443		Heater lamp abnormality after abnormality judgment (not reaching to intermediate temperature)	P. 6-79
C445		Heater lamp abnormality after abnormality judgment (pre-running end temperature abnormality)	P. 6-79
C446		Heater lamp abnormality after abnormality judgment (pre-running end temperature abnormality)	P. 6-79
C447		Heater lamp abnormality after abnormality judgment (temperature abnormality at ready status)	P. 6-79
C448		Heater lamp continuous lighting abnormality: Heater lamp lights continuously for a certain period of time when the pressure roller temperature during ready status is higher than the specified	P. 6-79
C451		Thermopile and edge thermistor temperature difference	P. 6-80
C452		Thermopile temperature difference	P. 6-78
C461		Pressure roller heater 40°C detection (Not determined)	P. 6-80
C462		Pressure roller heater 40°C detection (Determined)	P. 6-80
C463		Pressure roller thermistor and edge thermistor temperature difference	P. 6-80
C464		Pressure roller thermistor temperature difference	P. 6-80
C465		Pressure roller thermistor abnormality after entering ready status (pre-running end temperature abnormality)	P. 6-81
C466		Pressure roller thermistor abnormality after entering ready status (pre-running end temperature abnormality)	P. 6-81

Error code	Classification	Contents	Troubleshooting
C467	Fuser unit related service call	Pressure roller thermistor abnormality after entering ready status (temperature abnormality at ready status)	P. 6-81
C468		Pressure roller thermistor abnormality after entering ready status (overheating)	P. 6-81
C471		IH board initialization abnormality	P. 6-82
C472		Power supply abnormality	P. 6-82
C473		Surge pressure detection / power and voltage upper limit abnormality	P. 6-83
C474		Power and voltage lower limit abnormality	P. 6-83
C476		IH low power supply	-
C480		IGBT high temperature abnormality	P. 6-83
C481		IH drive circuit abnormality	P. 6-83
C490		IH circuit abnormality / IH coil abnormality	P. 6-83
C4B0		Fuser unit counter abnormality	P. 6-84
C4B1		Fuser unit voltage judgment abnormality	P. 6-84
C4D0		Fuser belt thermopile abnormality	P. 6-84
C4E0		Fuser pressure release abnormality - Though the pressure roller is released, its position cannot be detected.	P. 6-85
C4E1		Fuser pressure contact abnormality - Though the pressure roller is contacted, its position cannot be detected.	P. 6-85
C4E2		Fuser belt rotation detection sensor abnormality - The fuser belt does not rotate or incorrectly rotates.	P. 6-85
C4E3		Fuser motor rotation abnormality	-
C550	Optional communication related service call	RADF I/F error: Communication error has occurred between the RADF and the scanner.	P. 6-86
C560		Communication error between Engine-CPU and PFC board	P. 6-86
C570		Communication error between Engine-CPU and CNV ROM	P. 6-86
C580		Communication error between CNV ROM and finisher	P. 6-86
C5A0		SRAM board not connected (LGC board)	P. 6-89
C5A1		SRAM board data abnormality (LGC board)	P. 6-89
C730		RADF EEPROM error: Data abnormality occurs during the EEPROM writing of the RADF is performed.	P. 6-88
C880		RADF original feed motor abnormality: An error signal has been detected when the motor is rotating.	P. 6-88
C890		RADF read motor abnormality: An error signal has been detected when the motor is rotating.	P. 6-88
C8A0		RADF original reverse motor abnormality: An error signal has been detected when the motor is rotating.	P. 6-88
C8B0		RADF original exit motor abnormality: An error signal has been detected when the motor is rotating.	P. 6-88
C8C0		RADF original reading start sensor abnormality: The automatic adjustment for the original reading start sensor has been performed, but is ended unsuccessfully.	P. 6-88
C8E0		RADF communication protocol abnormality: The system has to be stopped because the control abnormality occurred.	P. 6-88

Error code	Classification	Contents	Troubleshooting
C900	Circuit related service call	Connection error between SYS board and LGC board	P. 6-89
C940		Engine-CPU abnormality	P. 6-89
C962		LGC board ID abnormality	P. 6-89
C970	Process related service call	High-voltage transformer abnormality: Leakage of the main charger is detected.	P. 6-122
C9E0	Circuit related service call	Connection error between SLG board and SYS board	P. 6-90
CA00	Image control related service call	Image position alignment abnormality	P. 6-106
CA10	Laser optical unit related service call	Polygonal motor abnormality: The polygonal motor is not rotating normally.	P. 6-91
CA20		H-Sync detection error: H-Sync signal detection PC board cannot detect laser beams.	P. 6-92
CA47		SNS board abnormality: The SNS board does not operate due to disconnection or the harness breaking.	P. 6-93
CB00	Finisher related service call	Finisher not connected: Communication error has occurred between the equipment and finisher. [MJ-1103/1104]	P. 6-94
CB01		Finisher communication error: Communication error has occurred between the equipment and finisher. [MJ-1103/1104]	P. 6-94
CB10		Entrance motor abnormality: The entrance motor is not rotating normally. [MJ-1103/1104]	P. 6-94
CB11		Buffer tray guide motor abnormality: The buffer tray guide motor is not rotating or the buffer tray guide is not moving normally. [MJ-1103/1104]	P. 6-94
CB12		Buffer roller drive motor abnormality: The buffer roller drive motor is not rotating or the buffer roller is not moving normally. [MJ-1103/1104]	P. 6-95
CB13		Finisher exit motor abnormality	P. 6-95
CB14		Paper holding arm motor abnormality	P. 6-95
CB30		Movable tray shift motor abnormality: The movable tray shift motor is not rotating or the movable tray is not moving normally. [MJ-1103/1104]	P. 6-96
CB31		Movable tray paper-full detection error: The actuator of the movable tray paper-full detection sensor does not move smoothly. [MJ-1103/1104]	P. 6-96
CB40		Rear aligning plate motor abnormality: Rear aligning plate motor is not rotating or aligning plate is not moving normally. [MJ-1103/1104] Front alignment motor abnormality: The front alignment motor is not rotating or the front alignment plate is not moving normally. [MJ-1103/1104]	P. 6-96
CB50		Stapler home position error: The stapler home position sensor does not work. [MJ-1103/1104]	P. 6-97
CB51		Stapler shift home position error: The stapler is not at the home position. [MJ-1103/1104]	P. 6-97
CB60		Stapler shift motor abnormality: Stapler shift motor is not rotating or staple unit is not moving normally. [MJ-1103/1104]	P. 6-97
CB80		Backup RAM data abnormality: Abnormality of checksum value on finisher controller PC board is detected when the power is turned ON	P. 6-98
CB81		Flash ROM abnormality: Abnormality of checksum value on finisher controller PC board is detected when the power is turned ON. [MJ-1103/1104]	P. 6-98

Error code	Classification	Contents	Troubleshooting
CB82	Finisher related service call	Finisher - Main CPU program error	P. 6-98
CB83		Saddle Stitch Finisher - Main CPU program error	P. 6-98
CB84		Hole Punch Unit - Main CPU program error	P. 6-98
CB91		Saddle Stitch Finisher flash ROM abnormality	P. 6-98
CB92		Saddle Stitch Finisher RAM abnormality	P. 6-98
CB93		Additional folding motor abnormality	P. 6-99
CB94		Saddle transport motor abnormality	P. 6-99
CB95		Stacker motor abnormality	P. 6-99
CBA0		Stitch motor (front) abnormality: Stitch motor (front) is not rotating or rotary cam is not moving normally. [MJ-1103/1104]	P. 6-100
CBB0		Stitch motor (rear) abnormality: Stitch motor (rear) is not rotating or rotary cam is not moving normally. [MJ-1103/1104]	P. 6-100
CBC0		Alignment motor abnormality: Alignment motor is not rotating or aligning plate is not moving normally. [MJ-1103/1104]	P. 6-100
CBE0		Paper folding motor abnormality: Paper folding motor or paper folding roller is not rotating normally. [MJ-1103/1104]	P. 6-100
CC20		Communication error between finisher and saddle stitcher: Communication error between finisher controller PC board and saddle stitcher controller board [MJ-1103/1104]	P. 6-100
CC30		Stack transport motor abnormality: The stack transport motor is not rotating or the stack transport belt is not moving normally. [MJ-1103/1104]	P. 6-101
CC31		Transport motor abnormality: The transport motor is not rotating or the stack transport roller -1 and -2 is not rotating normally. [MJ-1103/1104]	P. 6-101
CC41		Paper holder cam home position abnormality: The paper holder cam is not at the home position. [MJ-1103/1104]	P. 6-101
CC51		Sideways adjustment motor (M2) abnormality: Sideways adjustment motor is not rotating or puncher is not shifting normally. [MJ-1103/1104 (when MJ-6102 is installed)]	P. 6-102
CC52		Skew adjustment motor (M1) abnormality: Skew adjustment motor is not rotating or puncher is not shifting normally. [MJ-1103/1104 (when MJ-6102 is installed)]	P. 6-102
CC60		Punch motor abnormality: Punch motor is not rotating or puncher is not shifting normally. [MJ-1103/1104 (when MJ-6102 is installed)]	P. 6-103
CC61		Punch motor (M3) home position detection error: Punch motor is not rotating or puncher is not shifting normally. [MJ-1103/1104 (when MJ-6102 is installed)]	P. 6-103
CC71		Punch ROM checksum error: Abnormality of checksum value on Hole punch controller PC board is detected when the power is turned on. [MJ-1103/1104 (when MJ-6102 is installed)]	P. 6-103
CC72		Punch RAM read/write error: Abnormality of checksum value on Hole punch controller PC board is detected when the power is turned on. [MJ-1103/1104 (when MJ-6102 is installed)]	P. 6-103
CC73		Punching device power supply abnormality	P. 6-103
CC74		Punch unit transport pulse abnormality	P. 6-103

Error code	Classification	Contents	Troubleshooting
CC80	Finisher related service call	Rear alignment motor abnormality: The rear alignment motor is not rotating or the rear alignment plate is not moving normally. [MJ-1103/1104]	P. 6-104
CD60	Process related service call	Sub-hopper toner sensors abnormality.	P. 6-122
CD61		Sub-hopper toner motor-Y abnormality.	P. 6-122
CD62		Sub-hopper toner motor-M abnormality.	P. 6-122
CD63		Sub-hopper toner motor-C abnormality.	P. 6-122
CD64		Sub-hopper toner motor-K abnormality.	P. 6-122
CD71		Waste toner transport motor locking error: The auger in the waste toner transport path does not rotate.	P. 6-123
CD80		TRU waste toner motor locking error: The auger (TRU side) in the TRU waste toner transport path does not rotate.	P. 6-123
CD81		TRU waste toner transport motor locking error: The auger (waste toner box side) in the TRU waste toner transport path does not rotate.	P. 6-124
CD82		TRU waste toner full-status error -	P. 6-124
CDE0	Finisher related service call	Paddle motor abnormality: The paddle motor is not rotating or the paddle is not rotating normally. [MJ-1103/1104]	P. 6-104
CE00		Communication error between finisher and punch unit: Communication error between finisher controller PC board and punch controller PC board [MJ-1103/1104 (when MJ-6102 is installed)]	P. 6-104
CE10	Image control related service call	Image quality sensor abnormality (OFF level): The output value of this sensor is out of a specified range when sensor light source is OFF.	P. 6-112
CE20		Image quality sensor abnormality (no pattern level): The output value of this sensor is out of a specified range when the image quality control test pattern is not formed.	P. 6-113
CE40		Image quality control test pattern abnormality: The test pattern is not formed normally.	P. 6-115
CE41		Image quality TRC control test pattern abnormality: The image quality TRC control test pattern is not printed normally.	P. 6-116
CE42		Image quality TRC control test pattern abnormality (EFI printer board): Image quality TRC control test pattern is not printed normally.	P. 6-117
CE50		Temperature/humidity sensor abnormality: The output value of this sensor is out of a specified range.	P. 6-117
CE60	Copy process related service call	Drum thermistor-Y abnormality: The output value of the drum thermistor-Y is out of a specified range.	P. 6-117
CE71		Drum phase adjustment abnormality: Drum phase sensors (Color drum phase sensor and K drum phase sensor) are not turned ON after the drum motor was rotated for a specified period of time.	P. 6-118
CE90		Drum thermistor-K abnormality: The output value of the drum thermistor-K is out of a specified range.	P. 6-117
CEC0		2nd transfer roller position detection abnormality: The 2nd transfer roller does not contact/release normally.	P. 6-125
CF10	Finisher related service call	Communication module SRAM reading failure.	P. 6-105
CF90	Laser optical unit related service call	Laser optical unit shutter abnormality.	P. 6-92

Error code	Classification	Contents	Troubleshooting
CFA0	Paper transport service call	Media sensor output abnormality before paper reaching: The sensor output value before paper is reached to the media sensor is not normal.	P. 6-93
CFA1		Media sensor output abnormality during paper passing: The sensor output value while paper is being passed is not normal.	P. 6-93
F070	Communication related service call	Communication error between System-CPU and Engine-CPU	P. 6-87
F090	Circuit related service call	SRAM abnormality on the SYS board	P. 6-90
F100	Other service call	HDD format error: HDD cannot be initialized normally.	P. 6-126
F101		HDD unmounted: Connection of HDD cannot be detected.	P. 6-126
F102		HDD start error: HDD cannot become 'Ready' state.	P. 6-126
F103		HDD transfer time-out: Reading/writing cannot be performed in the specified period of time.	P. 6-126
F104		HDD data error: Abnormality is detected in the data of HDD.	P. 6-126
F105		HDD other error	P. 6-126
F106		Point and Print partition damage	P. 6-126
F107		/BOX partition damage	P. 6-126
F108		/SHA partition damage	P. 6-126
F110	Communication related service call	Communication error between System-CPU and Scanner-CPU	P. 6-87
F111		Scanner response abnormality	P. 6-87
F120	Other service call	Database abnormality: Database is not operating normally.	P. 6-126
F130		Invalid MAC address	P. 6-126
F140		Accelerator ASIC format error	P. 6-126
F200		Data Overwrite option (GP-1070) disabled	P. 6-127
F350	Circuit related service call	SLG board abnormality	P. 6-90
F400		SYS board cooling fan abnormality	P. 6-90

6.1.3 Error in Internet FAX / Scanning Function

1. Internet FAX related error

Error code	Classification	Troubleshooting
1C10	System access abnormality	P. 6-127
1C11	Insufficient memory	P. 6-127
1C12	Message reception error	P. 6-127
1C13	Message transmission error	P. 6-127
1C14	Invalid parameter	P. 6-127
1C15	Exceeding file capacity	P. 6-127
1C20	System management module access abnormality	P. 6-127
1C21	Job control module access abnormality	P. 6-127
1C22	Job control module access abnormality	P. 6-127
1C30	Directory creation failure	P. 6-128
1C31	File creation failure	P. 6-128
1C32	File deletion failure	P. 6-127
1C33	File access failure	P. 6-128
1C40	Image conversion abnormality	P. 6-128
1C60	HDD full failure during processing	P. 6-128
1C61	Address Book reading failure	P. 6-128
1C62	Memory acquiring failure	P. 6-128
1C63	Terminal IP address unset	P. 6-128
1C64	Terminal mail address unset	P. 6-128
1C65	SMTP address unset	P. 6-128
1C66	Server time time-out error	P. 6-128
1C67	NIC time time-out error	P. 6-128
1C68	NIC access error	P. 6-128
1C69	SMTP server connection error	P. 6-128
1C6A	HOST NAME error	P. 6-128
1C6B	Terminal mail address error	P. 6-129
1C6C	Destination mail address error	P. 6-129
1C6D	System error	P. 6-128
1C70	SMTP client OFF	P. 6-129
1C71	SMTP authentication error	P. 6-129
1C72	POP before SMTP error	P. 6-129
1C80	Internet FAX transmission failure when processing E-mail job received	P. 6-129
1C81	Onramp Gateway transmission failure	P. 6-129
1C82	Internet FAX transmission failure when processing FAX job received	P. 6-129
1CC0	Job canceling	-
1CC1	Power failure	P. 6-129

2. RFC related error

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
2500	Syntax error, command unrecognized	HOST NAME error (RFC: 500) Destination mail address error (RFC: 500) Terminal mail address error (RFC: 500)	P. 6-130
2501	Syntax error in parameters or arguments	HOST NAME error (RFC: 501) Destination mail address error (RFC: 501) Terminal mail address error (RFC: 501)	P. 6-130
2503	Bad sequence of commands	Destination mail address error (RFC: 503)	P. 6-130
2504	Command parameter not implemented	HOST NAME error (RFC: 504)	P. 6-130
2550	Mailbox unavailable	Destination mail address error (RFC: 550)	P. 6-130
2551	User not local	Destination mail address error (RFC: 551)	P. 6-130
2552	Insufficient system storage	Terminal/Destination mail address error (RFC: 552)	P. 6-130
2553	Mailbox name not allowed	Destination mail address error (RFC: 553)	P. 6-130

3. Electronic Filing related error

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
2B10	There was no applicable job.	No applicable job error in job control module	P. 6-131
2B11	Job status failed.	JOB status abnormality	P. 6-131
2B20	Failed to access file.	File library function error	P. 6-131
2B30	Insufficient disk space.	Insufficient disk space in /BOX partition	P. 6-131
2B31	Failed to access Electronic Filing.	Status of specified Electronic Filing or folder is undefined or being created/deleted	P. 6-131
2B32	Failed to print Electronic Filing document.	Electronic Filing printing failure: Specified document can not be printed because of client's access (being edited, etc.).	P. 6-131
2B50	Failed to process image.	Image library error	P. 6-131
2B51	Failed to process print image.	List library error	P. 6-131
2B71	Document(s) expire(s) in a few days	Documents expiring in a few days exist	-
2B80	Hard Disk space for Electronic Filing nearly full.	Hard disk space in /BOX partition is nearly full (90%).	-
2B90	Insufficient Memory.	Insufficient memory capacity	P. 6-131
2BA0	Invalid Box password specified.	Invalid Box password	P. 6-131
2BA1	Incorrect paper size/ color mode	A Paper size or a color mode not supported in the Electronic Filing function is being selected.	P. 6-131
2BB0	Job canceled	Job canceling	-
2BB1	Power failure occurred	Power failure	P. 6-132
2BC0	System fatal error.	Fatal failure occurred	P. 6-131
2BC1	Failed to acquire resource.	System management module resource acquiring failure	P. 6-131
2BD0	Power failure occurred during e-Filing restoring.	Power failure occurred during restoring of Electronic Filing	P. 6-132
2BE0	Failed to get machine parameter.	Machine parameter reading failure	P. 6-132
2BF0	Maximum number of page range is reached.	Exceeding maximum number of pages	P. 6-132
2BF1	Maximum number of document range is reached.	Exceeding maximum number of documents	P. 6-132
2BF2	Maximum number of folder range is reached.	Exceeding maximum number of folders	P. 6-132

4. Remote scanning related error

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
2A20	Failed to acquire resource	System management module resource acquiring failure	P. 6-133
2A40	System fatal error	System error	P. 6-133
2A50	Job canceling	Job canceling	-
2A51	Power failure	Power failure	P. 6-133

5. E-mail related error

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
2C10	Illegal Job status	System access abnormality	P. 6-134
2C11	Not enough memory	Insufficient memory	P. 6-134
2C12	Illegal Job status	Message reception error	P. 6-134
2C13	Illegal Job status	Message transmission error	P. 6-134
2C14	Invalid parameter specified	Invalid parameter	P. 6-134
2C15	Message size exceeded limit or maximum size	Exceeding file capacity	P. 6-134
2C20	Illegal Job status	System management module access abnormality	P. 6-134
2C21	Illegal Job status	Job control module access abnormality	P. 6-134
2C22	Illegal Job status	Job control module access abnormality	P. 6-134
2C30	Failed to create directory	Directory creation failure	P. 6-134
2C31	Failed to create file	File creation failure	P. 6-134
2C32	Failed to delete file	File deletion failure	P. 6-134
2C33	Failed to create file	File access failure	P. 6-134
2C40	Failed to convert image file format	Image conversion abnormality	P. 6-134
2C43	Encryption error. Failed to create file	Encryption error	P. 6-134
2C44	Creating the image file was not permitted.	Encryption PDF enforced mode error	P. 6-134
2C60	Failed to process your Job. Insufficient disk space.	HDD full failure during processing	P. 6-134
2C61	Failed to read AddressBook	Address Book reading failure	P. 6-135
2C62	Not enough memory	Memory acquiring failure	P. 6-134
2C63	Invalid Domain Address	Terminal IP address unset	P. 6-135
2C64	Invalid Domain Address	Terminal mail address unset	P. 6-135
2C65	Failed to connect to SMTP server	SMTP address unset	P. 6-135
2C66	Failed to connect to SMTP server	Server time time-out error	P. 6-135
2C67	Failed to send E-Mail message	NIC time time-out error	P. 6-135
2C68	Failed to send E-Mail message	NIC access error	P. 6-135
2C69	Failed to connect to SMTP server	SMTP server connection error	P. 6-135
2C6A	Failed to send E-Mail message	HOST NAME error (No RFC error)	P. 6-135
2C6B	Invalid address specified in From: field	Terminal mail address error	P. 6-135
2C6C	Invalid address specified in To: field	Destination mail address error (No RFC error)	P. 6-135
2C6D	NIC system error	System error	P. 6-135
2C70	SMTP service is not available	SMTP client OFF	P. 6-135
2C71	Failed SMTP Authentication	SMTP authentication error	P. 6-135
2C72	POP Before SMTP Authentication Failed	POP before SMTP error	P. 6-135
2C80	Failed to process received E-mail job	E-mail transmission failure when processing E-mail job received	P. 6-136
2C81	Failed to process received Fax job	Process failure of FAX job received	P. 6-136
2CC0	Job canceled	Job canceling	-
2CC1	Power failure occurred	Power failure	P. 6-136

6. File sharing related error

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
2D10	Illegal Job status	System access abnormality	P. 6-137
2D11	Not enough memory	Insufficient memory	P. 6-137
2D12	Illegal Job status	Message reception error	P. 6-137
2D13	Illegal Job status	Message transmission error	P. 6-137
2D14	Invalid parameter specified	Invalid parameter	P. 6-137
2D15	Document size exceeded limit or maximum size.	Exceeding the maximum size for file sharing	P. 6-137
2D20	Illegal Job status	System management module access abnormality	P. 6-137
2D21	Illegal Job status	Job control module access abnormality	P. 6-137
2D22	Illegal Job status	Job control module access abnormality	P. 6-137
2D30	Failed to create directory	Directory creation failure	P. 6-137
2D31	Failed to create file	File creation failure	P. 6-137
2D32	Failed to delete file	File deletion failure	P. 6-137
2D33	Failed to create file	File access failure	P. 6-137
2D40	Failed to convert image file format	Image conversion abnormality	P. 6-137
2D43	Encryption error. Failed to create file	Encryption error	P. 6-138
2D44	Creating the image file was not permitted.	Encryption PDF enforced mode error	P. 6-138
2D60	Failed to copy file	File library access abnormality	P. 6-137
2D61	Invalid parameter specified	Invalid parameter	P. 6-137
2D62	Failed to connect to network destination. Check destination path	File server connection error	P. 6-138
2D63	Specified network path is invalid. Check destination path	Invalid network path	P. 6-138
2D64	Logon to file server failed. Check username and password	Login failure	P. 6-138
2D65	There are too many documents in the folder. Failed in creating new document.	Exceeding documents in folder: Creating new document is failed.	P. 6-138
2D66	Failed To Process your Job. Insufficient Storage space.	Storage capacity full failure during processing	P. 6-138
2D67	FTP service is not available	FTP service not available	P. 6-138
2D68	File Sharing service is not available	File sharing service not available	P. 6-138
2DA0	Expired scan documents deleted from share folder.	Periodical deletion of scanned documents completed properly.	-
2DA1	Expired Sent Fax documents deleted from shared folder.	Periodical deletion of transmitted FAX documents completed properly.	-
2DA2	Expired Received Fax documents deleted from shared folder.	Periodical deletion of received FAX documents completed properly.	-
2DA3	Scanned documents in shared folder deleted upon user's request.	Manual deletion of scanned documents completed properly.	-
2DA4	Sent Fax Documents in shared folder deleted upon user's request.	Manual deletion of transmitted FAX documents completed properly.	-
2DA5	Received Fax Documents in shared folder deleted upon user's request.	Manual deletion of received FAX documents completed properly.	-
2DA6	Failed to delete file.	File deletion failure	P. 6-137
2DA7	Failed to acquire resource.	Resource acquiring failure	P. 6-137
2DC0	Job canceled	Job canceling	-
2DC1	Power failure occurred	Power failure	P. 6-138

7. E-mail reception related error

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
3A10	MIME Error has been detected in the received mail.	E-mail MIME error	P. 6-139
3A11	MIME Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 6-139
3A12	MIME Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 6-139
3A20	Analyze Error has been detected in the received mail.	E-mail analysis error	P. 6-139
3A21	Analyze Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 6-139
3A22	Analyze Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 6-139
3A30	Whole partial mails were not reached by timeout.	Partial mail time-out error	P. 6-139
3A40	Partial Mail Error has been detected in the received mail.	Partial mail related error	P. 6-139
3A50	HDD Full Error has been occurred in this mail.	Insufficient HDD capacity error	P. 6-139
3A51	HDD Full Error has been occurred in this mail. This mail has been transferred to the administrator.		P. 6-139
3A52	HDD Full Error has been occurred in this mail. This mail could not be transferred to the administrator.		P. 6-139
3A60	HDD Full Warning has been occurred in this mail.	Warning of insufficient HDD capacity	P. 6-139
3A61	HDD Full Warning has been occurred in this mail. This mail could not be transferred to the administrator.		P. 6-139
3A62	HDD Full Warning has been occurred in this mail. This mail could not be transferred to the administrator.		P. 6-139
3A70	Receiving partial mail was aborted since the partial mail setting has been changed to Disable.	Warning of partial mail interruption	P. 6-139
3A80	Partial mail was received during the partial mail setting is disabled.	Partial mail reception setting OFF	P. 6-139
3A81	Partial mail was received during the partial mail setting is disabled. This mail has been transferred to the administrator.		P. 6-139
3A82	Partial mail was received during the partial mail setting is disabled. This mail could not be transferred to the administrator.		P. 6-139
3B10	Format Error has been detected in the received mail.	E-mail format error	P. 6-139
3B11	Format Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 6-139
3B12	Format Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 6-139

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
3B20	Content-Type Error has been detected in the received mail.	Content-Type error	P. 6-139
3B21	Content-Type Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 6-139
3B22	Content-Type Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 6-139
3B30	Charset Error has been detected in the received mail.	Charset error	P. 6-139
3B31	Charset Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 6-139
3B32	Charset Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 6-139
3B40	Decode Error has been detected in the received mail.	E-mail decode error	P. 6-139
3B41	Decode Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 6-139
3B42	Decode Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 6-139
3C10	Tiff Analyze Error has been detected in the received mail.	TIFF analysis error	P. 6-139
3C11	Tiff Analyze Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 6-139
3C12	Tiff Analyze Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 6-139
3C13	Tiff Analyze Error has been detected in the received mail.		P. 6-139
3C20	Tiff Compression Error has been detected in the received mail.	TIFF compression error	P. 6-139
3C21	Tiff Compression Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 6-139
3C22	Tiff Compression Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 6-139
3C30	Tiff Resolution Error has been detected in the received mail.	TIFF resolution error	P. 6-140
3C31	Tiff Resolution Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 6-140
3C32	Tiff Resolution Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 6-140

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
3C40	Tiff Paper Size Error has been detected in the received mail.	TIFF paper size error	P. 6-140
3C41	Tiff Paper Size Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 6-140
3C42	Tiff Paper Size Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 6-140
3C50	Offramp Destination Error has been detected in the received mail.	Offramp destination error	P. 6-140
3C51	Offramp Destination Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 6-140
3C52	Offramp Destination Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 6-140
3C60	Offramp Security Error has been detected in the received mail.	Offramp security error	P. 6-140
3C61	Offramp Security Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 6-140
3C62	Offramp Security Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 6-140
3C70	Power Failure has been occurred in Email receiving.	Power failure error	P. 6-140
3D10	SMTP Destination Error has been detected in the received mail. This mail was deleted.	Destination address error	P. 6-140
3D20	Offramp Destination limitation Error has been detected in the received mail.	Offramp destination limitation error	P. 6-140
3D30	Fax Board Error has been occurred in the received mail.	FAX board error	P. 6-140
3E10	POP3 Connection Error has been occurred in the received mail.	POP3 server connection error	P. 6-140
3E20	POP3 Connection Timeout Error has been occurred in the received mail.	POP3 server connection time-out error	P. 6-140
3E30	POP3 Login Error has been occurred in the received mail.	POP3 login error	P. 6-140
3E40	POP3 Login Error occurred in the received mail.	POP3 login method error	P. 6-140
3F00	File I/O Error has been occurred in this mail. The mail could not be received until File I/O is recovered.	File I/O error	P. 6-140
3F10			P. 6-140
3F20			P. 6-140
3F30			P. 6-140
3F40			P. 6-140

6.1.4 Printer function error

Following codes are displayed at the end of the user name on the print job log screen.

Error code	Contents	Troubleshooting
4031	HDD full during print - Large quantity image data by private print or invalid network print are saved in HDD.	P. 6-141
4032	Private-print-only error: Jobs other than Private print jobs cannot be performed.	P. 6-141
4033	Printing data storing limitation error: Printing with its data being stored to the HDD temporarily (Proof print, Private print, Scheduled print, etc.) cannot be performed.	P. 6-141
4034	e-Filing storing limitation error: Printing with its data being stored to the HDD (print and e-Filing, print to e-Filing, etc.) cannot be performed.	P. 6-141
4035	Local file storing limitation error: Network FAX or Internet FAX cannot be sent when “Local” is selected for the destination of the file to save.	P. 6-141
4036	User authentication error: The user who intended to print a document is not registered as a user.	P. 6-141
4037	Hardcopy security printing error: hardcopy security printing job is performed when the function is restricted.	P. 6-141
4040	Not being authorized to perform JOB	P. 6-141
4050	Problem in LDAP server connection or LDAP server authorization settings	P. 6-141
4300	USB direct printing: Job execution error due to functional restrictions - Printing with he USB direct printing function restricted	P. 6-141
4301	USB direct printing: File conversion error - Printing a file whose format is not supported, or an invalid file	P. 6-141
4310	Double-sign encoding error: A double-sign encoding error occurred because the PDF file is encrypted in a forbidden language or in a language not supported.	P. 6-141
4311	Printing not permitted: Printing is not permitted or only printing in a low resolution level is permitted due to the encryption language of the encrypted PDF file. * Permitted only when a user password is entered.	P. 6-141
4312	Password mismatching: The entered password is neither matched with a user password nor an owner password.	P. 6-141
A221	Print job cancellation - Print job (copy, list print, network print) is deleted from the print job screen.	P. 6-141
A222	Print job power failure - The power of the equipment is turned OFF during print job (copy, list print, network print).	P. 6-142
A290	Limit over error (Black): The numbers of output pages have exceeded those specified with both of the department code and the user code at the same time.	P. 6-142
A291	Limit over error (Black): The number of output pages has exceeded the one specified with the user code.	P. 6-142
A292	Limit over error (Black): The number of output pages has exceeded the one specified with the department code.	P. 6-142
A2A0	Limit over error (Color): The number of prints has exceeded the one specified for the department code and user code, or users (guests) are not authorized to perform color printing.	P. 6-142
A2A1	Limit over error (Color): The number of prints has exceeded the one specified for the user code, or users (guests) are not authorized to perform color printing.	P. 6-142
A2A2	Limit over error (Color): The number of output pages has exceeded the one specified with the department code.	P. 6-142

<<Error history>>
In the setting mode (08-253), the latest twenty groups of error data will be displayed.
Display example

EA10	99999999	06 04 14 17 57 32	064	064	2362 1000 0000 0
Error code	Total counter	YY MM DD HH MM SS	MMM	NNN	ABCD_EFHI_JLOP_Q
4 digits	8 digits	12 digits (Year is indicated with its last two digits.)	3 digits	3 digits	13 digits

A	Paper source
	0: Not selected 1: Bypass feed 2: LCF 3: 1st drawer 4: 2nd drawer 5: 3rd drawer 6: 4th drawer 7: Option LCF 8: Unused
B	Paper size code
	0: A5/ST 1: A5-R 2: ST-R 3: LT 4: A4 5: B5-R 6: LT-R 7: A4-R 8: OTHER/UNIV 9: B5 A: FOLIO/COMP B: LG C: B4 D: LD E: A3 F: 13"LG G: Unused H: A6-R I: Post card J: 8.5"SQ K: A3-wide L: LD-wide M: 8K N: 16K-R O: 16K P, Q, R, S, T: Unused U: SRA3 (320x450) V: SRA3 (320 x 460) Z: Not selected
C	Sort mode/staple mode
	0: Non-sort/Non-staple 1: Group 2: Sort 7: Front staple 8: Double staple 9: Rear staple A: Saddle stitch
D	ADF mode
	0: Unused 1: AUTO FEED (SADF) 2: STACK FEED
E	APS/AMS mode
	0: Not selected 1: APS 2: AMS
F	Duplex mode
	0: Not selected 1: Book 2: Double-sided/Single-sided 4: Double-sided/Duplex copying 8: Single-sided/Duplex copying
G	Unused
H	Image shift
	0: Unused 1: Book 2: Left 3: Right 4: Top 5: Bottom 6: Book+Top 7: Book+Bottom 8: Left+Top 9: Left+Bottom A: Right+Top B: Right+Bottom
I	Editing
	0: Unused 1: Masking 2: Trimming 3: Mirror image 4: Unused 5: NEG/POS
J	Edge erase/Dual-page
	0: Unused 1: Edge erase 2: Dual-page 3: Edge erase and Dual-page
K	Unused
L	Function
	0: Unused 1: Copying 2: FAX/Internet FAX transmission 3: FAX/Internet FAX/E-mail reception printing 4: Unused 5: Printing/List print 6: Scan/E-mail transmission
MMM	Primary scanning reproduction ratio (Display in hexadecimal)
	(Mx256)+(Mx16)+M
NNN	Secondary scanning reproduction ratio (Display in hexadecimal)
	(Nx256)+(Nx16)+N
O	Color mode
	0: Auto color 1: Full color 2: Black 3: Unused 4: Twin color copy 5: Gray scale 6: Unused 7: Image smoothing
P	Media type
	0: Plain paper 1: Thick 1 2: Thick 2 3: Thick 3 4: Thick 4 5: Special paper 1 6: Special paper 2 7: Recycled paper 8: Plain paper 1 9: Plain paper 2 A: Thin paper B: OHP film C: Thick 1/ reverse D: Thick 2/ reverse E: Thick 3/ reverse F: Thick 4/ reverse G: Special paper 1/ reverse H: Special paper 2/ reverse I: Envelope J: Tab paper Z: Unused
Q	RADF size mixed
	0: Unused 1: Single-size document 2: Size mixed

6.1.5 TopAccess related error

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
5110	Toner Not Recognized - Please Check Toner.	Toner cartridge detection error	P. 6-143
5BD0	Power failure occurred during restore	Power supply is cut off during the restoration of database sent from TopAccess	P. 6-143
5C10	FAX Unit is not attached.	Network FAX is disabled because the FAX Unit is not attached	P. 6-143
5C11	Security error on Address Book.	The network FAX job failed because the specified address is not registered in the Address Book	P. 6-143
5C20	The file has been imported	Displayed when data have been imported from TopAccess (Not an error message)	P. 6-143
5C21	Failed to import the file - Invalid file format	Data import from TopAccess failed due to invalid file format	P. 6-143
5C22	Failed to import the file - Internal error	Data import from TopAccess failed due to an internal error, the cause of which is unknown	P. 6-143

6.2 Diagnosis and Prescription for Each Error Code

6.2.1 Paper transport jam (paper exit section)

[E590] Stop jam at the upper paper exit sensor

1. Is the upper paper exit sensor working? (Perform the input check: 03-[COPY]ON/[7]/[A]).
   * If it is working properly, proceed to 6. If not, check 2 to 5 below.
2. Check if the connector CN516 on the PFC board is disconnected from the exit sensor or the harnesses are open circuited. Correct if so.
3. Check if the upper paper exit sensor is correctly installed or the actuator is properly moved.
4. Replace the upper paper exit sensor.
5. Replace the PFC board.
6. Is the exit motor working? (Perform the output check: 03-142))
   * If it is working properly, proceed to 10. If not, check 7 to 9 below.
7. Check if the connector CN515 on the PFC board is disconnected from the exit motor or the harnesses are open circuited. Correct if so (including CN537, CN539, CN540 on the DRV board).
8. Replace the exit motor.
9. Replace the PFC board.
10. Check if there is any abnormality on the driving section of the exit motor or the roller. Correct if any.

[E5A0] Jam not reaching the upper paper exit sensor

1. Is the upper paper exit sensor working? (Perform the input check: 03-[COPY]ON/[7]/[A]).
   * If it is working properly, proceed to 6. If not, check 2 to 5 below.
2. Check if the connector CN516 on the PFC board is disconnected from the exit sensor or the harnesses are open circuited. Correct if so.
3. Check if the upper paper exit sensor is correctly installed or the actuator is properly moved.
4. Replace the upper paper exit sensor.
5. Replace the PFC board.
6. Is the bridge unit transport exit motor working? (Perform the output check: 03-136)
   * If it is working properly, proceed to 10. If not, check 7 to 9 below.
7. Check if the connector CN515 on the PFC board is disconnected from the bridge unit transport exit motor or the harnesses are open circuited. Correct if so (including CN537, 539, 540 on the DRV board).
8. Replace the bridge unit transport exit motor.
9. Replace the PFC board.
10. ICheck if there is any abnormality on the driving section of the bridge unit transport exit motor or the roller. Correct if any.

[E970] Jam not reaching the lower paper exit sensor

1. Is the lower paper exit sensor working? (Perform the input check: 03-[COPY]ON/[5]/[G]).
   * If it is working properly, proceed to 6. If not, check 2 to 5 below.
2. Check if the connector CN516 on the PFC board is disconnected from the exit sensor or the harnesses are open circuited. Correct if so.
3. Check if the lower paper exit sensor is correctly installed or the actuator is properly moved.
4. Replace the upper paper exit sensor.
5. Replace the PFC board.
6. Is the bridge unit transport exit motor working? (Perform the output check: 03-136)
   * If it is working properly, proceed to 10. If not, check 7 to 9 below.
7. Check if the connector CN515 on the PFC board is disconnected from the bridge unit transport exit motor or the harnesses are open circuited. Correct if so (including CN537, 539, 540 on the DRV board).
8. Replace the bridge unit transport exit motor.
9. Replace the PFC board.
10. Check if there is any abnormality on the driving section of the bridge unit transport exit motor or the roller. Correct if any.

[E980] Stop jam at the lower paper exit sensor

1. Is the lower paper exit sensor working? (Perform the input check: 03-[COPY]ON/[5]/[G]).
   * If it is working properly, proceed to 6. If not, check 2 to 5 below.
2. Check if the connector CN516 on the PFC board is disconnected from the exit sensor or the harnesses are open circuited. Correct if so.
3. Check if the lower paper exit sensor is correctly installed or the actuator is properly moved.
4. Replace the upper paper exit sensor.
5. Replace the PFC board.
6. Is the exit motor working? (Perform the output check: 03-140)
   * If it is working properly, proceed to 10. If not, check 7 to 9 below.
7. Check if the connector CN515 on the PFC board is disconnected from the bridge unit transport exit motor or the harnesses are open circuited. Correct if so (including CN537, 539, 540 on the DRV board).
8. Replace the exit motor.
9. Replace the PFC board.
10. Check if there is any abnormality on the driving section of the exit motor or the roller. Correct if any.

6.2.2 Paper misfeeding

[E110] ADU misfeeding (paper not reaching the registration sensor)

1. Open the jam access cover and check if there is any paper in front of the registration sensor. Remove it if there is.
   * If the error still occurs, check the following.
2. Is the registration sensor working? (Perform the input check:03-[FAX]OFF/[7]/[F])
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN337 on the LGC board is disconnected from the registration sensor or the harnesses are open circuited. Correct if any.
4. Replace the registration sensor.
5. Replace the LGC board.
6. Is the ADU clutch working? (Perform the output check: 03-222)
   * If it is working properly, proceed to 10. If not, check 7 to 9 below.
7. Check if the connector CN338 on the LGC board is disconnected from the ADU clutch or the harnesses are open circuited. Correct if any.
8. Replace the ADU clutch.
9. Replace the LGC board.
10. Check the rollers in the ADU. Replace them if they are worn out.

[E120] Bypass misfeeding (paper not reaching the bypass feed sensor)

1. Are the bypass motor, bypass pick-up solenoid and bypass feed sensor working? (Perform the output check: 03-126, 03-254 and the input check: 03-[FAX]ON/[4]/[D])
   * If it is working properly, proceed to 6. If not, check 2 to 5 below.
2. Check if the connector CN469, CN497, CN498 on the ADU board is disconnected from the bypass motor or the bypass feed sensor, or the harnesses are open circuited. Correct if any.
3. Replace the bypass motor.
4. Replace the bypass pick-up solenoid.
5. Replace the bypass feed sensor.
6. Replace the LGC board.
7. Check the rollers in the ADU. Replace them if they are worn out.

[E130] 1st drawer misfeeding (paper not reaching the 1st drawer feed sensor)

1. Open the jam access cover and check if there is any paper in front of the 1st drawer feed sensor. Remove it if there is.
   * If the error still occurs, check the following.
2. Is the 1st drawer feed sensor working? (Perform the input check: 03-[FAX]ON/[1]/[G])
   * If it is working properly, proceed to 9. If not, check 3 to 8 below.
3. Check if the connector CN513 on the PFC board is disconnected from the 1st drawer feed sensor or the harnesses are open circuited. Correct if any.
4. Replace the 1st drawer feed sensor.
5. Replace the PFC board.
6. Is the feed motor working? (Perform the output check: 03-120)
   * If it is working properly, proceed to 10. If not, check 7 to 9 below.
7. Check if the connector CN512 on the PFC board is disconnected from the feed motor or the harnesses are open circuited. Correct if any.
8. Replace the feed motor.
9. Replace the PFC board.
10. Check the 1st drawer feed roller, separation roller and pickup roller. Replace them if they are worn out.

[E140] 2nd drawer misfeeding (paper not reaching the 2nd drawer feed sensor)

1. Open the paper feed cover and check if there is any paper in front of the 2nd drawer feed sensor. Remove it if there is.
   * If the error still occurs, check the following.
2. Is the 2nd drawer feed sensor working? (Perform the input check: 03-[FAX]ON/[1]/[F])
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN512 on the PFC board is disconnected from the 2nd drawer feed sensor or the harnesses are open circuited. Correct if any.
4. Replace the 2nd drawer feed sensor.
5. Replace the PFC board.
6. Is the feed motor working? (Perform the output check: 03-121)
   * If it is working properly, proceed to 10. If not, check 7 to 9 below.
7. Check if the connector CN512 on the PFC board is disconnected from the feed motor or the harnesses are open circuited. Correct if any.
8. Replace the feed motor.
9. Replace the PFC board.
10. Check the 2nd drawer feed roller, separation roller and pickup roller. Replace them if they are worn out.

[E150] 3rd drawer misfeeding (paper not reaching the 3rd drawer feed sensor)

1. Open the paper feed cover and check if there is any paper in front of the 3rd drawer feed sensor. Remove it if there is.
   * If the error still occurs, check the following.
2. Is the 3rd drawer feed sensor working? (Perform the input check: 03-[FAX]OFF/[2]/[D])
   * If it is working properly, proceed to 7. If not, check 3 to 6 below.
3. Check if the connector CN505 on the PFC board is disconnected from the 3rd drawer feed sensor or the harnesses is open circuited. Check if the connector CN505 on the PFC board is disconnected. Correct if any.
4. Replace the 3rd drawer feed sensor.
5. Replace the PFC board.
6. Is the feed/transfer motor working? (Perform the output check: 03-226)
   * If it is working properly, proceed to 12. If not, check 8 to 11 below.
7. Check if the connectors CN502 on the LGC board is disconnected from the feed/transfer motor or the harnesses are open circuited. Check if the connector CN502 on the PFC board is disconnected. Correct if any.
8. Replace the feed/transfer motor.
9. Replace the PFC board.
10. Check the 3rd drawer feed roller, separation roller and pickup roller. Replace them if they are worn out.

[E160] 4th drawer misfeeding (paper not reaching the 4th drawer feed sensor)

1. Open paper feed cover and check if there is any paper in front of the 4th drawer feed sensor. Remove it if there is.
   * If the error still occurs, check the following.
2. Is the 4th drawer feed sensor working? (Perform the input check: 03-[FAX]OFF/[8]/[D])
   * If it is working properly, proceed to 7. If not, check 3 to 6 below.
3. Check if the connectors CN502 on the PFC board is disconnected from the 4th drawer feed sensor or the harnesses are open circuited. Check if the connector CN502 on the PFC board is disconnected. Correct if any.
4. Replace the 4th drawer feed sensor.
5. Replace the PFC board.
6. Is the 4th drawer feed clutch working? (Perform the output check: 03-122)
   * If it is working properly, proceed to 10. If not, check 7 to 9 below.
7. Check if the connectors CN507 on the PFC board is disconnected from the 4th drawer feed clutch or the harnesses are open circuited. Check if the connectors CN502 on the PFP board is disconnected. Correct if any.
8. Replace the 4th drawer feed clutch.
9. Replace the PFC board.
10. Check the 4th drawer feed roller, separation roller and pickup roller. Replace them if they are worn out.

[E180] Option LCF misfeeding (Paper not reaching the LCF feed sensor)

1. Is the LCF feed sensor working? (Perform the input check: 03-[SCAN]ON/[5]/[E]).
   * If it is working properly, proceed to 7. If not, check 2 to 6 below.
2. Check if the connector CN503 on the PFC board is disconnected from the LCF feed sensor or the harnesses are open circuited. Correct if so.
3. Check if the LCF feed sensor is correctly installed or the actuator is properly moved.
4. Replace the LCF feed sensor.
5. Replace the LCF board.
6. Replace the PFC board.
7. Is the LCF transport motor working? (Perform the output check: 03-127.)
   * If it is working properly, proceed to 11. If not, check 8 to 10 below.
8. Check if the connector CN503 on the PFC board is disconnected from the LCF transport motor or the harnesses are open circuited. Correct if so (including J854 and J850 on the LCF board).
9. Replace the LCF transport motor.
10. Replace the PFC board.
11. Check if there is any abnormality on the driving section of the LCF transport motor the roller. Correct if any.

[E190] LCF misfeeding (paper not reaching the LCF feed sensor)

1. Open the LCF side cover and check if there is any paper in front of the LCF feed sensor. Remove it if there is.
   * If the error still occurs, check the following.
2. Is the LCF feed sensor working? (Perform the input check: 03-[SCAN]ON/[1]/[F])
   * If it is working properly, proceed to 7. If not, check 3 to 6 below.
3. Check if the connectors CN349 on the LGC board is disconnected from the LCF feed sensor or the harnesses are open circuited. Check if the connectors CN1 and CN6 on the LCF board are disconnected. Correct if any.
4. Replace the LCF feed sensor.
5. Replace the LGC board.
6. Is the LCF feed clutch working? (Perform the output check: 03-250)
   * If it is working properly, proceed to 12. If not, check 8 to 11 below.
7. Check if the connectors CN349 on the LGC board is disconnected from the LCF feed clutch or the harnesses are open circuited. Check if the connectors CN1 and CN5 on the LCF board are disconnected. Correct if any.
8. Replace the LCF feed clutch.
9. Replace the LGC board.
10. Check the LCF feed roller, separation roller and pickup roller. Replace them if they are worn out.

6.2.3 Paper transport jam

[E010] Jam not reaching the fuser transport sensor

1. Check if there is any paper on the transport path or in the fuser unit. Remove it if there is.
   * If the error still occurs, check the following.
2. Is the fuser transport sensor working? (Perform the input check: 03-[FAX]OFF/[2]/[C]).
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN333 on the LGC board is disconnected from the fuser transport sensor or the harnesses are open circuited. Correct if any.
4. Replace the fuser transport sensor.
5. Replace the LGC board.
6. Check if there is any abnormality on the paper transport path in the fuser unit. Correct it if there is.
7. Check if there is any abnormality on the gap between the separation plate and the fuser belt. Correct it if there is.
8. If jams occur on the back side in duplex printing, change the media type mode to the recycled paper mode, and then check if there are still jams. (When this type of jam occurs on heavily curled paper during duplex printing, the jam may be resolved by selecting the recycled paper mode.)
9. Change the 2nd transfer bias offset value as shown below and then check if there are still jams. Change the default value 5 of each code below to 6 or 7.
   Color: 05-2935 Subcode: 7
   Black: 05-2937 Subcode: 7

[E020] Stop jam at the fuser transport sensor

1. Open the jam access cover and check if there is any paper on the transport path. Remove it if there is.
   * If the error still occurs, check the following.
2. Is the fuser transport sensor working? (Perform the input check: 03-[FAX]OFF/[2]/[C]).
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN333 on the LGC board is disconnected from the exit sensor or the harnesses are open circuited. Correct if any.
4. Replace the fuser transport sensor.
5. Replace the LGC board.
6. Check if there is any abnormality on each transport path section of the exit of the fuser unit and the entrance of the bridge unit. Correct if any.

[E200] 1st drawer transport jam (not reaching the registration sensor)
[E210] 2nd drawer transport jam (not reaching the registration sensor)
[E270] Bypass transport jam (not reaching the registration sensor)
[E300] 3rd drawer transport jam (not reaching the registration sensor)
[E330] 4th drawer transport jam (not reaching the registration sensor)
[E3C0] LCF transport jam (not reaching the registration sensor)

1. Open the jam access cover and check if there is any paper in front of the 1st drawer feed sensor. Remove it if there is.
   * If the error still occurs, check the following.
2. Is the 1st drawer feed sensor working? (Perform the input check: 03-[FAX]ON/[1]/[G])
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN516 on the PFC board is disconnected from the 1st drawer feed sensor or the harnesses are open circuited. Correct if any.
4. Replace the 1st drawer feed sensor.
5. Replace the PFC board.
6. Is the transport motor-1 working? (Perform the output check: 03-124 or 524)
   * If it is working properly, proceed to 10. If not, check 7 to 9 below.
7. Check if the connector CN512 on the PFC board is disconnected from the transport motor-1 or the harnesses are open circuited. Correct if any.
8. Replace the transport motor-1.
9. Replace the PFC board.
10. Check the condition of the feed roller, separation roller and pickup roller of each paper source, and replace them if they are worn out.
11. Check the transport roller. Replace it if it is worn out.

[E220] 2nd drawer transport jam (not reaching the 1st drawer feed sensor)
[E310] 3rd drawer transport jam (not reaching the 1st drawer feed sensor)
[E340] 4th drawer transport jam (not reaching the 1st drawer feed sensor)
[E3D0] LCF transport jam (not reaching the 1st drawer feed sensor)

1. Open the jam access cover and check if there is any paper in front of the 1st drawer feed sensor. Remove it if there is.
   * If the error still occurs, check the following.
2. Is the 1st drawer feed sensor working? (Perform the input check: 03-[FAX]ON/[1]/[G])
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN512 on the PFC board is disconnected from the registration sensor or the harnesses are open circuited. Correct if any.
4. Replace the 1st drawer feed sensor.
5. Replace the PFC board.
6. Is the transport motor-2 working? (Perform the output check: 03-229, 231)
   * If it is working properly, proceed to 11. If not, check 7 to 10 below.
7. Check if the connector CN512 on the PFC board is disconnected from the transport motor-2 or the harnesses are open circuited. Correct if any.
8. Replace the transport motor-2.
9. Replace the PFC board.
10. Check the condition of the feed roller, separation roller and pickup roller of each paper source, and replace them if they are worn out.
11. Check the transport roller. Replace it if it is worn out.

[E230] 1st drawer misfeeding (Paper not reaching the 1st drawer transport sensor)

1. Is the 1st drawer transport sensor working? (Perform the input check: 03-[SCAN]ON/[1]/[D]).
   * If it is working properly, proceed to 6. If not, check 2 to 5 below.
2. Check if the connector CN513 on the PFC board is disconnected from the 1st drawer transport sensor or the harnesses are open circuited. Correct if so.
3. Check if the 1st drawer transport sensor is correctly installed or the actuator is properly moved.
4. Replace the 1st drawer transport sensor.
5. Replace the PFC board.
6. Are the transport motor-1 and the feed motor working properly? (Perform the output check: 03-124, 03-120.)
   * If they are working properly, proceed to 10. If not, check 7 to 9 below.
7. Check if the connector CN512 on the PFC board is disconnected from the transport motor-1 or the feed motor, or the harnesses are open circuited. Correct if so.
8. Replace the transport motor-1 or the feed motor.
9. Replace the PFC board.
10. Check if there is any abnormality on the driving section of each motor or the roller. Correct if any.

[E240] 2nd drawer transport jam (Paper not reaching the 2nd drawer transport sensor)

1. Is the 2nd drawer transport sensor working? (Perform the input check: 03-[SCAN]ON/[1]/[C]).
   * If it is working properly, proceed to 6. If not, check 2 to 5 below.
2. Check if the connector CN513 on the PFC board is disconnected from the 2nd drawer transport sensor or the harnesses are open circuited. Correct if so.
3. Check if the 2nd drawer transport sensor is correctly installed or its detecting element is not damaged or stained.
4. Replace the 2nd drawer transport sensor.
5. Replace the PFC board.
6. Are the transport motor-2 and the feed motor working? (Perform the output check: 03-125, 03-121.)
   * If they are working properly, proceed to 10. If not, check 7 to 9 below.
7. Check if the connector CN512 on the PFC board is disconnected from the transport motor-2 or the feed motor, or the harnesses are open circuited. Correct if so.
8. Replace the transport motor-2 or the feed motor.
9. Replace the PFC board.
10. Check if there is any abnormality on the driving section of each motor or the roller. Correct if any.

[E260] Option LCF transport jam (Paper not reaching the registration sensor)

1. Is the registration sensor working? (Perform the input check: 03-[COPY]ON/[5]/[H]).
   * If it is working properly, proceed to 6. If not, check 2 to 5 below.
2. Check if the connector CN516 on the PFC board is disconnected from the registration sensor or the harnesses are open circuited. Correct if so.
3. Check if the registration sensor is correctly installed or its detecting element is not damaged or stained.
4. Replace the registration sensor.
5. Replace the PFC board.
6. Is the transport motor-1 working? (Perform the output check: 03-124.)
   * If they are working properly, proceed to 10. If not, check 7 to 9 below.
7. Check if the connector CN512 on the PFC board is disconnected from the transport motor-1 or the harnesses are open circuited. Correct if so.
8. Replace the transport motor-1.
9. Replace the PFC board.
10. Check if there is any abnormality on the driving section of the transport motor-1 or the roller. Correct if any.

[E290] Option LCF transport jam

1. Is the 1st drawer transport sensor working? (Perform the input check: 03-[SCAN]ON/[1]/[D]).
   * If it is working properly, proceed to 6. If not, check 2 to 5 below.
2. Check if the connector CN513 on the PFC board is disconnected from the 1st drawer transport sensor or the harnesses are open circuited. Correct if so.
3. Check if the 1st drawer transport sensor is correctly installed or its detecting element is not damaged or stained.
4. Replace the 1st drawer transport sensor.
5. Replace the PFC board.
6. Are the transport motor-1 and the LCF transport motor working? (Perform the output check: 03-124, 03-127.)
   * If they are working properly, proceed to 9. If not, check 7 to 8 below.
7. Check if the connector CN512 on the PFC board is disconnected from the transport motor-1 or the LCF transport motor, or the harnesses are open circuited. Correct if so.
8. Replace the transport motor-1 or the LCF transport motor.
9. Is the LCF transport clutch working? (Perform the output check: 03-269.)
   * If they are working properly, proceed to 12. If not, check 10 to 11 below.
10. Replace the LCF transport clutch.
11. Replace the PFC board.
12. Check if there is any abnormality on the driving section of each motor or the roller. Correct if any.

[E320] 3rd drawer transport jam (not reaching the 2nd drawer feed sensor)
[E350] 4th drawer transport jam (not reaching the 2nd drawer feed sensor)
[E3E0] LCF transport jam (not reaching the 2nd drawer feed sensor)

1. Open the side cover and check if there is any paper in front of the 2nd drawer feed sensor. Remove it if there is.
   * If the error still occurs, check the following.
2. Is the 2nd drawer feed sensor working? (Perform the input check: 03-[FAX]ON/[1]/[F])
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN348 on the LGC board is disconnected from the 2nd drawer feed sensor or the harnesses are open circuited. Correct if any.
4. Replace the 2nd drawer feed sensor.
5. Replace the LGC board.
6. Are the lower transport clutches working? (Perform the output check: 03-230, 233)
   * If they are working properly, proceed to 10. If not, check 7 to 9 below.
7. Check if the connector CN348 on the LGC board is disconnected from the lower transport clutches (high/low) or the harnesses are open circuited. Correct if any.
8. Replace the lower transport clutches (high/low speed).
9. Replace the LGC board.
10. Is the PFP transport clutch working? (Perform the output check: 03-225)
    * If they are working properly, proceed to 16. If not, check 11 to15 below.
11. Check if the connectors CN349 on the LGC board is disconnected from the PFP transport clutch or the harnesses are open circuited. Check if the connectors CN241 and CN244 on the PFP board are disconnected. Correct if any.
12. Replace the PFP transport clutch.
13. Replace the LGC board.
14. Check the condition of the feed roller, separation roller and pickup roller of each paper source, and replace them if they are worn out.
15. Check the transport roller. Replace it if it is worn out.

[E360] 4th drawer transport jam (not reaching the 3rd drawer feed sensor)

1. Open the PFP paper feed cover and check if there is any paper in front of the 3rd drawer feed sensor. Remove it if there is.
   * If the error still occurs, check the following.
2. Is the 3rd feed sensor working? (Perform the input check: 03-[FAX]OFF/[2]/[D])
   * If it is working properly, proceed to 7. If not, check 3 to 6 below.
3. Check if the connectors CN349 on the LGC board is disconnected from the 3rd drawer feed sensor or the harnesses are open circuited. Check if the connectors CN 241 and CN243 on the PFP board are disconnected. Correct if any.
4. Replace the 3rd drawer feed sensor.
5. Replace the LGC board.
6. Is the PFP transport clutch working? (Perform the output check: 03-225)
   * If it is working properly, proceed to 12. If not, check 8 to 11 below.
7. Check if the connectors CN349 on the LGC board is disconnected from the PFP transport clutch or the harnesses are open circuited. Check if the connectors CN 241 and CN244 on the PFP board are disconnected. Correct if any.
8. Replace the PFP transport clutch.
9. Replace the LGC board.
10. Check the condition of the feed roller, separation roller and pickup roller of each paper source, and replace them if they are worn out.
11. Check the PFP transport roller. Replace it if it is worn out.

[E370] 3rd drawer transport jam (Paper not reaching the 3rd drawer transport sensor)

1. Is the 3rd drawer transport sensor working? (Perform the input check: 03-[SCAN]ON/[1]/[B]).
   * If it is working properly, proceed to 6. If not, check 2 to 5 below.
2. Check if the connector CN505 on the PFC board is disconnected from the 3rd drawer transport sensor or the harnesses are open circuited. Correct if so.
3. Check if the 3rd drawer transport sensor is correctly installed or its detecting element is not damaged or stained.
4. Replace the 3rd drawer transport sensor.
5. Replace the PFC board.
6. Are the 3rd drawer transport clutch and the 3rd drawer feed clutch working? (Perform the output check: 03-252, 03-250.)
   * If they are working properly, proceed to 9. If not, check 7 to 8 below.
7. Check if the connector CN502 on the PFC board is disconnected from the 3rd drawer transport clutch or the 3rd drawer feed clutch, or the harnesses are open circuited. Correct if so.
8. Replace the 3rd drawer transport clutch or the 3rd drawer feed clutch.
9. Is the feed/transport motor working? (Perform the output check: 03-122.))
   * If they are working properly, proceed to 12. If not, check 10 to 11 below.
10. Replace the feed/transport motor.
11. Replace the PFC board.
12. Check if there is any abnormality on the driving section of the feed/transport motor or the roller. Correct if any.

[E380]4th drawer transport jam (Paper not reaching the 4th drawer transport sensor)

1. Is the 4th drawer transport sensor working? (Perform the input check: 03-[COPY]ON/[5]/[E]).
   * If it is working properly, proceed to 6. If not, check 2 to 5 below.
2. Check if the connector CN516 on the PFC board is disconnected from the 4th drawer transport sensor or the harnesses are open circuited. Correct if so.
3. Check if the 4th drawer transport sensor is correctly installed or its detecting element is not damaged or stained.
4. Replace the 4th drawer transport sensor.
5. Replace the PFC board.
6. Are the 4th drawer transport clutch and the 4th drawer feed clutch working? (Perform the output check: 03-253, 03-251.)
   * If they are working properly, proceed to 9. If not, check 7 to 8 below.
7. Check if the connector CN502 on the PFC board is disconnected from the 4th drawer transport clutch or the 4th drawer feed clutch, or the harnesses are open circuited. Correct if so.
8. Replace the 4th drawer transport clutch or the 4th drawer feed clutch.
9. Is the feed/transport motor working? (Perform the output check: 03-122.)
   * If they are working properly, proceed to 12. If not, check 10 to 11 below.
10. Replace the feed/transport motor.
11. Replace the PFC board.
12. Check if there is any abnormality on the driving section of the feed/transport motor or the roller. Correct if any.

[E3F0]Tandem LCF transport jam (Paper not reaching the tandem LCF transport sensor)

1. Is the tandem LCF transport sensor working? (Perform the input check: 03-[SCAN]ON/[1]/[B].).
   * If it is working properly, proceed to 6. If not, check 2 to 5 below.
2. Check if the connector CN505 on the PFC board is disconnected from the tandem LCF transport sensor or the harnesses are open circuited. Correct if so.
3. Check if the tandem LCF transport sensor is correctly installed or its detecting element is not damaged or stained.
4. Replace the tandem LCF transport sensor.
5. Replace the PFC board.
6. Are the tandem LCF transport clutch and the tandem LCF feed clutch working? (Perform the output check: 03-252, 03-250.)
   * If they are working properly, proceed to 9. If not, check 7 to 8 below.
7. Check if the connector CN502 on the PFC board is disconnected from the tandem LCF transport clutch or the tandem LCF feed clutch, or the harnesses are open circuited. Correct if so.
8. Replace the tandem LCF transport clutch or the tandem LCF feed clutch.
9. Is the feed/transport motor working? (Perform the output check: 03-122.)
   * If they are working properly, proceed to 12. If not, check 10 to 11 below.
10. Replace the feed/transport motor.
11. Replace the PFC board.
12. Check if there is any abnormality on the driving section of the feed/transport motor or the roller. Correct if any.

[E510] ADU transport stop jam

1. Open the ADU and check if there is any paper in front of the ADU entrance sensor.
   * If the error still occurs, check the following.
2. Is the ADU entrance sensor working? (Perform the input check: 03-[FAX]ON/[4]/[B])
   * If it is working properly, proceed to 7. If not, check 3 to 6 below.
3. Check if the connectors CN511 on the PFC board is disconnected from the ADU entrance sensor or the harnesses are open circuited. Check if the connectors CN491 and CN492 on the ADU board are disconnected. Correct if any.
4. Replace the ADU entrance sensor.
5. Replace the ADU board.
6. Replace the PFC board.
7. Is the reverse motor working? (Perform the output check: 03-132/134)
   * If it is working properly, proceed to 11. If not, check 8 to 10 below.
8. Check if the connector CN515 on the PFC board is disconnected from the reverse motor or the harnesses are open circuited. Correct if any.
9. Replace the reverse motor.
10. Replace the PFC board.
11. Is the ADU motor working? (Perform the output check: 03-144)
    * If it is working properly, proceed to 16. If not, check 12 to 15 below.
12. Check if the connectors CN511 on the PFC board is disconnected from the ADU motor or the harnesses are open circuited. Check if the connectors CN495 and CN491 on the ADU board are disconnected. Correct if any.
13. Replace the ADU motor.
14. Replace the ADU board.
15. Replace the PFC board.
16. Check the rollers in the ADU, the exit roller and the pressure spring of the equipment. Replace them if they are worn out.

[E511]Jam not reaching the ADU (Paper not reaching the duplexing unit path entrance sensor)

1. Is the duplexing unit path entrance sensor working? (Perform the input check: 03-[SCAN]ON/[3]/[H].)
   * If it is working properly, proceed to 6. If not, check 2 to 5 below.
2. Check if the connector CN511 on the PFC board is disconnected from the duplexing unit path entrance sensor or the harnesses are open circuited. Correct if so (including CN491 and CN492 on the ADU board).
3. Check if the duplexing unit path entrance sensor is correctly installed or the actuator is properly moved.
4. Replace the duplexing unit path entrance sensor.
5. Replace the PFC board.
6. Are the reverse motor and the ADU motor-1 working? (Perform the output check: 03-134, 03-146.)
   * If they are working properly, proceed to 11. If not, check 7 to 10 below.
7. Check if the connector CN515 on the PFC board is disconnected from the reverse motor or the ADU motor-1, or the harnesses are open circuited. Correct if so (including CN537 and CN539 on the DRV board).
8. Replace the reverse motor or the ADU motor-1.
9. Replace the DRV board.
10. Replace the PFC board.
11. Check if there is any abnormality on the driving section of each motor or the roller. Correct if any.

[E540]ADU transport jam (Paper not reaching the duplexing unit path exit sensor)

1. Is the duplexing unit path exit sensor working? (Perform the input check: 03-[SCAN]ON/[3]/[G].)
   * If it is working properly, proceed to 6. If not, check 2 to 5 below.
2. Check if the connector CN511 on the PFC board is disconnected from the duplexing unit path exit sensor or the harnesses are open circuited. Correct if so (including CN491 and CN492 on the ADU board).
3. Check if the duplexing unit path exit sensor is correctly installed or the actuator is properly moved.
4. Replace the duplexing unit path exit sensor.
5. Replace the PFC board.
6. Are the ADU motor-1 and the ADU motor-2 working? (Perform the output check: 03-146, 03-144.)
   * If they are working properly, proceed to 11. If not, check 7 to 10 below.
7. Check if the connector CN511 on the PFC board is disconnected from the ADU motor-1 or the ADU motor-2, or the harnesses are open circuited. Correct if so (including CN491 and CN495 on the ADU board).
8. Replace the ADU motor-1 or the ADU motor-2.
9. Replace the ADU board.
10. Replace the PFC board.
11. Check if there is any abnormality on the driving section of the two motors or the roller. Correct if any.

[E570]Jam not reaching the bridge unit

1. Is the reverse sensor working? (Perform the input check: 03-[SCAN]ON/[3]/[E].))
   * If it is working properly, proceed to 6. If not, check 2 to 5 below.
2. Check if the connector CN514 on the PFC board is disconnected from the reverse sensor or the harnesses are open circuited. Correct if so (including CN538 and CN539 on the DRV board).
3. Check if the reverse sensor is correctly installed or its detecting element is not damaged or stained.
4. Replace the reverse sensor.
5. Replace the PFC board.
6. Are the bridge unit transport entrance motor and the fuser motor working? (Perform the output check: 03-130, 03-129.)
   * If they are working properly, proceed to 11. If not, check 7 to 10 below.
7. Check if the connector CN515 on the PFC board is disconnected from the bridge unit transport entrance motor or the fuser motor, or the harnesses are open circuited. Correct if so (including CN537 and CN539 on the DRV board).
8. Replace the bridge unit transport entrance motor or the fuser motor.
9. Replace the DRV board.
10. Replace the PFC board.
11. Check if there is any abnormality on the driving section of each motor or the roller. Correct if any.

[E580]Stop jam at the bridge unit

1. Is the reverse sensor working? (Perform the input check: 03-[SCAN]ON/[3]/[E].))
   * If it is working properly, proceed to 6. If not, check 2 to 5 below.
2. Check if the connector CN514 on the PFC board is disconnected from the reverse sensor or the harnesses are open circuited. Correct if so (including CN538 and CN539 on the DRV board).
3. Check if the reverse sensor is correctly installed or its detecting element is not damaged or stained.
4. Replace the reverse sensor.
5. Replace the PFC board.
6. Are the bridge unit transport exit motor and the reverse motor working? (Perform the output check: 03-132-134, 03-136.)
   * If they are working properly, proceed to 11. If not, check 7 to 10 below.
7. Check if the connector CN515 on the PFC board is disconnected from the bridge unit transport exit motor or the reverse motor, or the harnesses are open circuited. Correct if so (including CN537 and CN539 on the DRV board).
8. Replace the bridge unit transport exit motor or the reverse motor.
9. Replace the DRV board.
10. Replace the PFC board.
11. Check if there is any abnormality on the driving section of each motor or the roller. Correct if any.

[E2B0] Stop jam at the registration sensor (1st drawer)
[E2B1] Stop jam at the registration sensor (2nd drawer)
[E2B2] Stop jam at the registration sensor (3rd drawer)
[E2B3] Stop jam at the registration sensor (4th drawer)
[E2B4] Stop jam at the registration sensor (Bypass tray drawer)
[E2B5] Stop jam at the registration sensor (LCF)
[E2B6] Stop jam at the registration sensor (ADU)
[E2B7] Stop jam at the registration sensor (Option LCF)

1. Open the paper feed cover and check if there is any paper in front of the registration sensor. Remove it if there is.
   * If the error still occurs, check the following.
2. Is the registration sensor working? (Perform the input check: 03-[All OFF]/[4]/[B])
   * If it is working properly, proceed to 5. If not, check 3 to 4 below.
3. Check if the connector CN516 on the PFC board is disconnected from the registration sensor or the harnesses are open circuited. Correct if any.
4. Replace the registration sensor.
5. Is the registration motor rotating? (Perform the input check. 03-128/528)
6. Check if the connector CN512 on the PFC board is disconnected from the registration motor or the harnesses are open circuited. Correct if any.
7. Replace the registration motor.
8. Replace the PFC board.
9. Check the rollers. Replace them if they are worn out.

[EB50] Paper remaining on the transport path due to multiple feeding

When the paper is fed from any of the 1st drawer, bypass feed unit or ADU:

(When the paper is fed from the 1st drawer:)

1. Open the paper feed cover and check if there is any paper in front of the registration sensor (when the paper is fed from the 1st drawer).
2. Is the 1st drawer feed sensor working? (Perform the input check: 03-[FAX]ON/[1]/[G])
   * If it is working properly, proceed to 11. If not, check 3 to 10 below.
3. Check if the connector CN348 on the LGC board is disconnected from the 1st drawer feed sensor or the harnesses are open circuited. Correct if any.
4. Replace the 1st drawer feed sensor.
5. Replace the LGC board.

(When the paper is fed from the bypass feed unit:)

1. Is the bypass feed sensor working? (Perform the input check: 03-[FAX]ON/[4]/[D])
2. Check if the connector CN347 on the LGC board is disconnected from the bypass feed sensor or the harnesses are open circuited. Correct if any.
3. Replace the bypass feed sensor.
4. Replace the LGC board.

(When the paper is fed from the ADU:)

1. Is the ADU exit sensor working? (Perform the input check: 03-[FAX]ON/[4]/[A])
2. Check if the connector CN338 on the LGC board is disconnected from the ADU exit sensor or the harnesses are open circuited. Check if the connectors CN211 and CN213 on the ADU board are disconnected. Correct if any.
3. Replace the ADU exit sensor.
4. Replace the ADU board.
5. Replace the LGC board.
6. Is the registration sensor working? (Perform the input check: 03-[FAX]OFF/[7]/[F])
7. Check if the connector CN337 on the LGC board is disconnected from the registration sensor or the harnesses are open circuited. Correct if any.
8. Replace the registration sensor
9. Replace the LGC board.
10. Check the rollers. Replace them if they are worn out.

When the paper is fed from any of the 2nd drawer, PFP or LCF:

1. Open the paper feed cover and check if there is any paper in front of the 1st drawer feed sensor. Remove it if there is.
2. Are the 1st/2nd drawer feed sensors working? (Perform the input check: 03-[FAX]ON/[1]/[G], /[1]/[F])
   * If it is working properly, proceed to 11. If not, check 3 to 10 below.
3. Check if the connector CN348 on the LGC board is disconnected from the 1st and 2nd drawer feed sensors or the harnesses are open circuited. Correct if any.
4. Replace the 1st/2nd drawer feed sensors.
5. Replace the LGC board.
6. Check the rollers. Replace them if they are worn out.

[EB60] Paper remaining on the transport path due to multiple feeding

1. Open the paper feed cover and check if there is any paper in front of the registration sensor. Remove it if there is.
   * If the error still occurs, check the following.
2. Is the registration sensor working? (Perform the input check: 03-[All OFF]/[4]/[B])
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN516 on the PFC board is disconnected from the registration sensor or the harnesses are open circuited. Correct if any.
4. Replace the registration sensor.
5. Replace the PFC board.
6. Check the rollers. Replace them if they are worn out.

6.2.4 Other paper jam

[E011] Paper jam caused by clinging to the transfer belt (Paper not reached the paper clinging detection sensor)

1. Check if there is any paper clinging to the transfer belt or entering under the receiving tray. Remove it if there is.
2. Use the paper within the specification if the thin paper being used is out of specification.
3. Is the registration motor rotating? (Perform the input check. 03-128/528)
4. Check if the connector CN512 on the PFC board is disconnected from the registration motor or the harnesses are open circuited. Correct if any.
5. Replace the registration motor.
6. Replace the PFC board.
7. Check the state of the registration roller and replace it if it is deteriorated.
8. Is the paper clinging detection sensor working? (Perform the input check: 03-[FAX]OFF/[7]/[E])
9. Check if the connector CN307 on the LGC board is disconnected from the paper clinging detection sensor or the harnesses are open circuited. Correct if any.
10. Replace the paper clinging detection sensor.
11. Is the transfer belt rotating normally? (Perform the output check: 03-116)
12. Is the transfer belt cleaning blade peeled?
13. Is the auger of the transfer belt cleaner unit locked?
14. Is the connector of the transfer belt motor disconnected?
15. Is the transfer belt motor broken?
16. Check if the tooth surface of the transfer belt drive gear is damaged.
17. Replace the PFC board.
18. Use the paper within the specification if the special paper whose reflection rate is lower than the specification is used.
19. If jams occur on the back side in duplex printing, change the media type mode to the recycled paper mode, and then check if there are still jams. (When this type of jam occurs on heavily curled paper during duplex printing, the jam may be resolved by selecting the recycled paper mode.)
20. Change the 2nd transfer bias offset value as shown below and then check if there are still jams. Change the default value 5 of each code below to 6 or 7.
    Color: 05-2935 Subcode: 7
    Black: 05-2937 Subcode: 7

[E030] Power-ON jam

1. Open the cover of the unit/area whose picture is flashing on the control panel and remove if there is any paper on the transport path. (Refer to the table below.)
2. Is the sensor in the jamming area working? (Perform the input check: Refer to the following table.)
3. Check if the connector on the PFC board is disconnected from the corresponding sensor in the jamming area or the harnesses are open circuited. Correct if any.
4. Replace the sensor.
5. Replace the PFC board.

Relation between the jamming area and the corresponding sensors/covers.
(If a jam is occurring in the ADU or LCF check the board in each unit.)

Jamming area	Cover	Sensor	Test Mode/Input check
Paper path section	Duplexing unit	Registration sensor	03-[ALL]OFF/[4]/[B] 03-[COPY]ON/[5]/[H]
		Transfer belt paper clinging detection sensor	03-[ALL]OFF/[9]/[C]
		2nd transfer side paper clinging detection sensor	03-[ALL]OFF/[9]/[D]
		1st drawer transport sensor	03-[SCAN]ON/[1]/[D]
Fuser	Duplexing unit	Fuser transport sensor	03-[ALL]OFF/[2]/[C] 03-[COPY]ON/[5]/[F]
		Reverse path sensor	03-[ALL]OFF/[1]/[C] 03-[SCAN]ON/[3]/[E]
ADU	Duplexing unit Cover	Duplexing unit path exit sensor	03-[SCAN]ON/[3]/[G]
		Duplexing unit path entrance sensor	03-[SCAN]ON/[3]/[H]
Bypass unit	Duplexing unit	Bypass feed sensor	03-[SCAN]ON/[3]/[A]
Feeding area (equipment)	Paper feed cover	4th drawer transport sensor	03-[SCAN]ON/[1]/[A]
		3rd drawer/tandem LCF transport sensor	03-[SCAN]ON/[1]/[B]
		2nd drawer transport sensor	03-[SCAN]ON/[1]/[C]
LCF	LCF side cover	Option LCF feed sensor	03-[SCAN]ON/[5]/[E]
Bridge unit	Front cover	Bridge unit path exit sensor	03-[ALL]OFF/[1]/[A] 03-[SCAN]ON/[3]/[C]
		Bridge unit path entrance sensor	03-[ALL]OFF/[1]/[B] 03-[SCAN]ON/[3]/[D]
		Reverse sensor	03-[SCAN]ON/[3]/[F]
		Reverse section stationary jam detection sensor	03-[SCAN]ON/[4]/[A]
Upper exit section	-	Upper paper exit sensor	03-[ALL]OFF/[1]/[E] 03-[COPY]ON/[7]/[A]
Lower exit section	-	Lower paper exit sensor	03-[ALL]OFF/[4]/[C] 03-[COPY]ON/[5]/[G]
Reverse section	Reverse path cover	Reverse section paper transport detection sensor	03-[COPY]ON/[8]/[F]
Finisher	Finisher door	Sensors in the finisher	-

[E061]Incorrect paper size setting for 1st drawer
[E062]Incorrect paper size setting for 2nd drawer
[E063]Incorrect paper size setting for 3rd drawer
[E064]Incorrect paper size setting for 4th drawer
[E065]Incorrect paper size setting for bypass tray

If any paper remains in the equipment or drawer, remove it. Match the paper size of the drawer setting and the one in the drawer.

* Paper size detection is performed at the first sheet of paper when the drawer is opened or closed, or when the power of the equipment is turned ON.

[E071]Incorrect paper size setting for 1st drawer
[E072]Incorrect paper size setting for 2nd drawer
[E073]Incorrect paper size setting for 3rd drawer
[E074]Incorrect paper size setting for 4th drawer
[E075]Incorrect paper size setting for bypass tray
[E076]Incorrect paper size setting for bypass tray

Remove any paper which has jammed due to media type mis-setting and then confirm and set the following:

* When this jam occurred during fax data printing, the user must place paper of the same media type as that of the set paper. If the user does not have this media type, the media type setting must be changed by means of the following codes.

08-9300: 1st drawer media type setting (*1)
08-9301: 2nd drawer media type setting (*1)
08-9302: 3rd drawer media type setting (*1)
08-9303: 4th drawer media type setting (*1)
08-9304: Tandem LCF media type setting (*1)
08-9347: Option LCF media type setting (*1)

(*1) 0: Plain paper, 1: Thick paper 1, 2: Thick paper 2, 3: Thick paper 3, 8: Recycled paper, 9: Plain paper 1, 10: Plain paper 2

Cases media type setting change (08 code) is required

- When a drawer is set for fax data printing but the user does not have the media type set for the fax drawer
- When no drawer is set for fax data printing but the user does not have any media type set for each drawer

If the media type is correctly set but this error occurs frequently, this media type may be the one which cannot be distinguished easily. In this case change the code below to disable the media type setting checking function.

08-4598 0: Enabled 1: Disabled

[E090]Image data delay jam

1. Remove the paper remained in front of the registration sensor.
2. Check if the error is cleared by turning the power OFF and then back ON.
3. Check if the connectors connecting the SYS board, IMG board and LGC board are disconnected.
4. Check if the connectors connecting the IMG board and SLG board are disconnected.
5. Check if the connectors of the HDD are disconnected.
6. Check if the page memory is correctly connected to the connector on the SYS board.
7. Replace the page memory.
8. Replace the HDD, SYS board, IMG board and LGC board.

[E091]Motor on time-out jam

1. Check if there is any paper in the equipment. Remove it if there is.
2. If the error still occurs, check the following.
3. Check if the error is cleared by turning the power OFF and then back ON.
4. Check if the connectors connecting the SYS board, IMG board and LGC board are disconnected.
5. Check if the connectors connecting the IMG board and SLG board are disconnected.
6. Check if the connectors of the HDD are disconnected.
7. Replace the HDD, SYS board, IMG board and LGC board.

[E0A0]Image transport ready time-out jam

1. Remove the paper remained in front of the registration sensor.
2. Check if the error is cleared by turning the power OFF and then back ON.
3. Check if the connectors on the LGC board are disconnected.
4. Replace the LGC board.

[E550] Paper remaining on the transport path

1. Open the cover of the unit/area whose picture is flashing on the control panel and remove if there is any paper on the transport path.
2. Is the sensor in the jamming area working? (Perform the input check: Refer to the following table)
3. Check if the connector on the LGC board is disconnected from the corresponding sensor in the jamming area or the harnesses are open circuited. Correct if any.
4. Replace the sensor.
5. Replace the LGC board.

Relation between the jamming area and the corresponding sensors/covers.
(If a jam is occurring in the ADU or LCF check the board in each unit.)

Jamming area	Cover	Sensor	Test Mode/Input check
Paper path section	Duplexing unit	Registration sensor	03-[ALL]OFF/[4]/[B] 03-[COPY]ON/[5]/[H]
		Transfer belt paper clinging detection sensor	03-[ALL]OFF/[9]/[C]
		2nd transfer side paper clinging detection sensor	03-[ALL]OFF/[9]/[D]
		1st drawer transport sensor	03-[SCAN]ON/[1]/[D]
Fuser	Duplexing unit	Fuser transport sensor	03-[ALL]OFF/[2]/[C] 03-[COPY]ON/[5]/[F]
		Reverse path sensor	03-[ALL]OFF/[1]/[C] 03-[SCAN]ON/[3]/[E]
ADU	Duplexing unit Cover	Duplexing unit path exit sensor	03-[SCAN]ON/[3]/[G]
		Duplexing unit path entrance sensor	03-[SCAN]ON/[3]/[H]
Bypass unit	Duplexing unit	Bypass feed sensor	03-[SCAN]ON/[3]/[A]
Feeding area (equipment)	Paper feed cover	4th drawer transport sensor	03-[SCAN]ON/[1]/[A]
		3rd drawer/tandem LCF transport sensor	03-[SCAN]ON/[1]/[B]
		2nd drawer transport sensor	03-[SCAN]ON/[1]/[C]
LCF	LCF side cover	Option LCF feed sensor	03-[SCAN]ON/[5]/[E]
Bridge unit	Front cover	Bridge unit path exit sensor	03-[ALL]OFF/[1]/[A] 03-[SCAN]ON/[3]/[C]
		Bridge unit path entrance sensor	03-[ALL]OFF/[1]/[B] 03-[SCAN]ON/[3]/[D]
		Reverse sensor	03-[SCAN]ON/[3]/[F]
		Reverse section stationary jam detection sensor	03-[SCAN]ON/[4]/[A]
Upper exit section	-	Upper paper exit sensor	03-[ALL]OFF/[1]/[E] 03-[COPY]ON/[7]/[A]
Lower exit section	-	Lower paper exit sensor	03-[ALL]OFF/[4]/[C] 03-[COPY]ON/[5]/[G]
Reverse section	Reverse path cover	Reverse section paper transport detection sensor	03-[COPY]ON/[8]/[F]
Finisher	Finisher door	Sensors in the finisher	-

6.2.5 Cover open jam

[E400] Duplexing unit open jam

1. Close the duplexing unit if it is opened. Remove if there is any paper before closing it.
2. Is the voltage of 24V being supplied from the power supply unit? (Perform the input check: 03-[COPY] ON/[6]/[A])
3. Check if the connector CN309 on the LGC board is disconnected from the connector CN403 on the switching regulator or the harnesses are open circuited. Correct if any.
4. Check if the fuse (F201, F202, F203, and F204) on the switching regulator has blown.
5. Replace the PFC board.
6. Replace the switching regulator.
7. Is the interlock switch working properly? (Perform the input check: 03-[SCAN] ON/[4]/[G])
8. Check if the connector CN312 on the LGC board is disconnected from the interlock switch or the harnesses are open circuited. Correct if any.

[E430] ADU open jam

1. Close the ADU if it is opened. Remove if there is any paper before closing it.
2. Is the ADU opening/closing switch working? (Perform the input check: 03-[FAX]ON/[2]/[C])
3. Check if the connector CN338 on the LGC board is disconnected from the ADU opening/closing switch or the harnesses are open circuited. Check if the connectors CN211 and CN217 on the ADU board are disconnected. Correct if any.
4. Replace the ADU opening/closing switch.
5. Replace the ADU board.
6. Replace the PFC board.
7. Replace the LGC board.

[E440] Paper feed cover open jam

1. Close the paper feed cover if it is opened. Remove if there is any paper before closing it.
2. Is the side door switch working? (Perform the input check: 03-[FAX]ON/[0]/[B])
3. Check if the connector CN348 on the LGC board is disconnected from the paper feed cover switch or the harnesses are open circuited. Correct if any.
4. Replace the side door switch.
5. Replace the LGC board.

[E450] LCF side cover open jam

1. Close the LCF side cover if it is opened. Remove if there is any paper before closing it.
2. Is the LCF side cover opening/closing switch working? (Perform the input check: 03-[FAX]OFF/[0]/[D])
3. Check if the connector CN349 on the LGC board is disconnected from the LCF side cover opening/closing switch or the harnesses are open circuited. Check if the connectors CN1 and CN6 on the LCF board are disconnected. Correct if any.
4. Replace the LCF side cover opening/closing switch.
5. Replace the LCF board.
6. Replace the LGC board.

[E480] Bridge unit open jam

1. Close the bridge unit if it is opened. Remove if there is any paper before closing it.
2. Is the bridge unit cover opening/closing detection switch working? (Perform the input check: 03-[FAX]OFF/[5]/[E])
3. Check if the connector CN334 on the LGC board is disconnected from the bridge unit cover opening/closing detection switch or the harnesses are open circuited. Correct if any.
4. Replace the bridge unit cover opening/closing detection switch.
5. Replace the LGC board.

[E4A0] Waste toner cover open jam (printing)

1. Close the waste toner cover if it is opened. Remove if there is any paper before closing it.
2. Is the waste toner detection sensor working? (Perform the input check: 03-[FAXON]/[1]/[C])
3. Check if the connector CN331 on the LGC board is disconnected from the waste toner detection sensor or the harnesses are open circuited. Correct if any.
4. Replace the waste toner detection sensor.
5. Replace the LGC board.

[E4B0] Bridge unit open jam (printing)

1. Close the bridge unit if it is opened. Remove if there is any paper before closing it.
2. Is the bridge unit connecting detection switch working? (Perform the input check: 03-[COPYON]/[7]/[B])
3. Check if the connector CN308 on the LGC board is disconnected from the bridge unit connecting detection switch or the harnesses are open circuited. Correct if any.
4. Replace the bridge unit connecting detection switch.
5. Replace the LGC board.

6.2.6 RADF jam

[E712] Jam not reaching the original registration sensor

1. Clean the pickup roller, feed roller and separation roller if they are stained.
2. Flatten the original if it is folded or excessively curled and place it again.
3. Is the original registration sensor working? (Perform the input check: 03-[FAX]ON/[7]/[H])
   * If it is working properly, proceed to 7. If not, check 4 to 6.
4. Check if the connector CN74 on the RADF board is disconnected from the original registration sensor or the harnesses are open circuited. Correct if any.
5. Replace the original registration sensor.
6. Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).
7. Is the original pickup solenoid working?
   * If it is working properly, proceed to 12. If not, check 8 to 11.
8. Check if the solenoid is installed at the center of the scale. (The scale is longer in the center.)
9. If it is not, correct the position, aligning with the center of the scale.
10. Check if the connector CN79 on the RADF board is disconnected from the original pickup solenoid or the harnesses are open circuited. Correct if any.
11. Replace the original pickup solenoid.
12. Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).
13. Replace the pickup roller, feed roller and separation roller if they are worn out.

[E714] Feed signal reception jam

1. Is the empty sensor working? (Perform the input check: 03-[FAX]ON/[7]/[B])
2. Check if the lever of empty sensor is working normally.
3. Check if the connector CN75 on the RADF board is disconnected from the empty sensor or the harnesses are open circuited. Correct if any.
4. Replace the empty sensor.
5. Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).

[E721] Jam not reaching the original reading start sensor
[E725] Stop jam at the reading start sensor
[E774] Reading start sensor paper remaining jam

1. Clean the registration roller and the read roller if they are stained.
2. Is the reading start sensor working? (Perform the input check: 03-[FAX]ON/[7]/[G])
   * If it is working properly, proceed to 8. If not, check 3 to 7 below.
3. Check if the connector CN75 on the RADF board is disconnected from the reading start sensor or the harnesses are open circuited. Correct if any.
4. Perform the automatic adjustment of the original reading start sensor (05-356).
5. Perform the manual adjustment of the original reading start sensor.
6. Replace the original reading sensor, and then perform the automatic adjustment of the original reading start sensor (05-356).
7. Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).
8. Replace the registration roller and the read roller if they are worn out.

[E722] Jam not reaching the original exit sensor

1. Clean the read roller if it is stained.
2. Is the original exit sensor working? (Perform the input check: 03-[FAX]ON/[7]/[E])
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN75 on the RADF board is disconnected from the original exit/reverse sensor or the harnesses are open circuited. Correct if any.
4. Replace the original exit sensor
5. Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).
6. Replace the read roller if it is worn out.

[E724] Stop jam at the registration sensor

1. Clean the registration roller if it is stained.
2. Is the registration sensor working? (Perform the input check: 03-[FAX]ON/[7]/[H])
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN74 on the RADF board is disconnected from the registration sensor or the harnesses are open circuited. Correct if any.
4. Replace the registration sensor.
5. Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).
6. Replace the registration roller if it is worn out.

[E726] Transport/exit signal reception jam during ADF standby status

1. Check if there is any paper in the RADF. Remove it if there is.
2. Check if there is any paper in the equipment. Remove it if there is.
3. If a jam still occurs, turn the power OFF and then back ON to check if the equipment operates normally.

[E727] Jam not reaching the original reading end sensor

1. Check the RADF position adjustment.
   📖 P.3-72 "3.8.1 RADF position adjustment"
2. Check the Adjustment of the Reversing Automatic Document Feeder (RADF).
   📖 P.3-72 "3.8 Adjustment of the Reversing Automatic Document Feeder (RADF)"
3. Clean the read end roller if it is stained.
4. Is the reading end sensor working? (Perform the input check: 03-[FAX]ON/[5]/[D])
   * If it is working properly, proceed to 8. If not, check 5 to 7 below.
5. Check if the connector CN75 on the RADF board is disconnected from the read end sensor or the harnesses are open-circuited. Correct if this is the case.
6. Replace the original reading end sensor.
7. Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).
8. Replace the reading end roller, if it is worn out.

[E729] Stop jam at the original reading end sensor

1. Clean the reading end roller if it is stained.
2. Is the original reading end sensor working? (Perform input check: 03: [FAX]/ON/[5]/[D])
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN75 on the RADF board is disconnected from the read end sensor or the harnesses are open-circuited. Correct if this is the case.
4. Replace the original reading end sensor.
5. Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).
6. Replace the reading end roller, if it is worn out.

[E731] Stop jam at the original exit sensor

1. Clean the exit roller if it is stained.
2. Is the original exit sensor working? (Perform the input check: 03-[FAX]ON/[7]/[E])
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN4 on the RADF board is disconnected from the original exit sensor or the harnesses are open circuited. Correct if any.
4. Replace the original exit sensor.
5. Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).
6. Replace the exit roller if it is worn out.

[E744] Stop jam at the exit/reverse sensor

1. Clean the exit/reverse roller if it is stained.
2. Is the original exit/reverse sensor working? (Perform input check: 03: [FAX]/ON/[5]/[B])
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN75 on the RADF board is disconnected from the original exit/reverse sensor or the harnesses are open-circuited. Correct if this is the case.
4. Replace the original exit/reverse sensor.
5. Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).
6. Replace the exit/reverse intermediate roller, if it is worn out.

[E745] Jam not reaching the exit reverse sensor

1. Clean the exit intermediate roller if it is stained.
2. Is the original exit/reverse sensor working? (Perform input check: 03: [FAX]/ON/[5]/[B])
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN75 on the RADF board is disconnected from the original exit/reverse sensor or the harnesses are open-circuited. Correct if this is the case.
4. Replace the original reverse sensor.
5. Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).
6. Replace the exit intermediate transport roller, if it is worn out.

[E746] Exit/reverse sensor paper remaining jam
[E762] Registration sensor paper remaining jam
[E770] Original width detection sensor-1 paper remaining jam
[E771] Original width detection sensor-2 paper remaining jam
[E772] Original width detection sensor-3 paper remaining jam
[E773] Intermediate transport sensor paper remaining jam
[E775] Reading end sensor paper remaining jam
[E777] Exit sensor paper remaining jam

1. Check if there is any paper on each sensor. Remove it if there is.
2. Is each sensor working?
   (Perform input check: 03)
   [E746]: [FAX]/ON/[5]/[B], [E762]: [FAX]/ON/[7]/[H],
   [E770]: [FAX]/ON/[8]/[F], [E771]: [FAX]/ON/[8]/[G],
   [E772]: [FAX]/ON/[8]/[H], [E773]: [FAX]/ON/[7]/[F],
   [E775]: [FAX]/ON/[5]/[D], [E777]: [FAX]/ON/[7]/[E]
3. Check if the connector CN74 or CN75 on the RADF board is disconnected from the original registration sensor or the harnesses are open-circuited. Correct if this is the case.
4. Replace each sensor.
5. Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).

[E860] Original jam access cover open

1. Close the Original jam access cover if it is opened. Remove if there is any original before closing it.
2. Is the Original jam access cover opening/closing sensor working? (Perform the input check: 03-[FAX]ON/[7]/[C])
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN8 on the RADF board is disconnected from the Original jam access cover opening/closing sensor or the harnesses are open circuited. Correct if any.
4. Replace the Original jam access cover opening/closing sensor.
5. Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).

[E870] RADF open jam

1. Close the RADF if it is opened. Remove if there is any original before closing it.
2. Is the RADF opening/closing sensor working? (Perform the input check: 03-[FAX]ON/[7]/[D])
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN75 on the RADF board is disconnected from the RADF opening/closing sensor or the harnesses are open circuited. Correct if any.
4. Replace the RADF opening/closing sensor.
5. Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).
6. Is the RADF opening/closing sensor adjusted within the specified range?

[E871] Cover open jam in the read ready status

1. Close the Original jam access cover or the front cover if they are opened in the read ready status.
2. Is the Original jam access cover sensor working? (Perform the input check: 03-[FAX]ON/[7]/[C])
3. Check if the connector CN75 on the RADF board is disconnected from the Original jam access cover sensor or the harnesses are open circuited. Correct if any.
4. Replace the Original jam access cover sensor.
5. Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).

[E890] ADF time out jam

1. Check if there is any paper in the RADF. Remove it if there is.
2. Check if there is any paper in the equipment. Remove it if there is.
3. If a jam still occurs, turn the power OFF and then back ON to check if the equipment operates normally.

6.2.7 Jam in bridge unit

[E910] Paper not reaching the bridge unit transport sensor-1
[E920] Paper stopping at the bridge unit transport sensor-1

1. Check if there is any paper in the bridge unit and remove it if there is.
2. Is the bridge unit transport sensor-1 working? (Perform the input check:03-[FAX]OFF/[5]/[F])
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN334 on the LGC board is disconnected from the bridge unit transport sensor-1 (entrance sensor) or the harnesses are open circuited. Check if the connector J510 of the bridge unit is disconnected. Correct if any.
4. Replace the bridge unit transport sensor-1.
5. Replace the LGC board.
6. Is the bridge unit gate solenoid working? (Perform the output check: 03-232)
   * If it is working properly, proceed to 10. If not, check 7 to 9 below.
7. Check if the connector CN334 on the LGC board is disconnected from the bridge unit gate solenoid or the harnesses are open circuited. Check if the connector J510 of the bridge unit is disconnected. Correct if any.
8. Replace the bridge unit gate solenoid.
9. Replace the LGC board.
10. Does the transport roller of the bridge unit work when the fuser motor is rotated? (Perform the output check: 03-113/163)
    * If it is working properly, proceed to 12. If not, check 11 below.
11. Check the drive system of the equipment and bridge unit.
12. Check if the rollers in the exit roller, the pressure spring and the bridge unit are worn out.

[E930] Paper not reaching the bridge unit transport sensor-2
[E940] Paper stopping at the bridge unit transport sensor-2

1. Check if there is any paper in the bridge unit and remove it if there is.
2. Is the bridge unit transport sensor-2 working? (Perform the input check:03-[FAX]OFF/[5]/[D])
   * If it is working properly, proceed to 6. If not, check 3 to 5 below.
3. Check if the connector CN334 on the LGC board is disconnected from the bridge unit transport sensor-2 (exit sensor) or the harnesses are open circuited. Check if the connector J510 of the bridge unit is disconnected. Correct if any.
4. Replace the bridge unit transport sensor-2.
5. Replace the LGC board.
6. Does the transport roller of the bridge unit work when the fuser motor is rotated? (Perform the output check: 03-113/163)
   * If it is working properly, proceed to 10. If not, check 7 to 9 below.
7. Check the drive system of the equipment and bridge unit.
8. Check if the rollers in the exit roller, the pressure spring and the bridge unit are worn out.
9. Replace the LGC board.
10. Does the transport roller of the bridge unit work when the fuser motor is rotated? (Perform the output check: 03-113/163)
    * If it is working properly, proceed to 12. If not, check 11 below.
11. Check the drive system of the equipment and bridge unit.
12. Check if the rollers in the exit roller, the pressure spring and the bridge unit are worn out.

6.2.8 Paper jam in finisher section

[EA10] Transport delay jam (paper not inserted)

Is there any paper remaining on the transport path in the finisher or equipment?

↓ →YES Remove the paper.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the feeding sensor (S22)?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Reinstall the sensor correctly if there is any incorrect installation.
- Replace the sensor if there is any breakage.

NO

Is the gap between the upper surface of the flapper edge and the transport guide surface in the acceptable range according to the status of the transport path switching solenoid (SOL5) (solenoid OFF: 1.5-2.1 mm, solenoid ON: 2.3-2.9 mm)?

↓ →YES Adjust the gap.

NO

Is the harness between the entrance motor (M1) and the CN26 of the finisher control PC board (FIN) disconnected or open circuited?
Is the harness between the transport path switching solenoid (SOL5) and the CN6 of the interface PC board (I/F) disconnected or open circuited?
Is any of the harnesses between the CN25 and CN27 of the finisher control PC board (FIN) and the CN5 and CN7 of the interface PC board (I/F) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

1. Replace the interface control PC board (I/F).
2. Replace the finisher control PC board (FIN).

[EA20] Paper transport jam in Finisher (entrance sensor)

Is there any paper remaining on the transport path in the finisher or equipment?

↓ →YES Remove the paper.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the entrance sensor (S1)?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Reinstall the sensor correctly if there is any incorrect installation.
- Replace the sensor if there is any breakage.

NO

Is the harness between the entrance sensor (S1) and the CN26 of the finisher control PC board (FIN) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

Replace the finisher control PC board (FIN).

[EA21] Paper size error jam

MJ-1103/1104

1. Check if there is any paper in the finisher or on the transport path of the equipment and remove it if there is.
2. Is the paper size used shorter than the size specified in the specifications?
3. Check if the connectors CN7 and CN22 on the finisher controller PC board are disconnected from the inlet sensor (S1) and the transport sensor (S2), or the harnesses are open circuited. Correct if any.
4. Reinstall the sensor correctly if there is any incorrect installation.
5. Replace the sensor.
6. Replace the finisher controller PC board.

[EA22] Short length paper jam in Finisher (paper position sensors S6-1/2)

Is there any paper remaining on the transport path?

↓ →YES Remove the paper, not leaving any chips.

NO

Is the paper too short for specifications?

↓ →YES Use paper accepted in the specifications.

NO

Are the paper position sensor (S6-1 and S6-2) and its wiring correct?

↓ →NO Replace the sensor. Correct the wiring.

YES

Replace the hole punch control PC board (HP).

[EA23] Paper transport jam in Finisher (transport sensor)

Is there any paper remaining on the transport path in the finisher or equipment?

↓ →YES Remove the paper.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the transport sensor (S2)?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Reinstall the sensor correctly if there is any incorrect installation.
- Replace the sensor if there is any breakage.

NO

Replace the finisher control PC board (FIN).

[EA24] Paper transport jam in Finisher (entrance sensor? transport sensor)

Is there any paper remaining on the transport path in the finisher or equipment?

↓ →YES Remove the paper.

NO

Is the paper size used shorter than the size specified in the specifications?

↓ →YES Use the paper size specified in the specifications.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the entrance sensor (S1)?

Is there a disconnection of the connector, incorrect installation or breakage of the transport sensor (S2)?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Reinstall the sensor correctly if there is any incorrect installation.
- Replace the sensor if there is any breakage.

NO

Is the harness between the entrance motor (M1) and the CN26 of the finisher control PC board (FIN) disconnected or open circuited?

Is the harness between the transport sensor (S2) and the CN6 of the finisher control PC board (FIN) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

Replace the finisher control PC board (FIN).

[EA25] **Paper transport jam in Finisher (after paper stack was exited)**

Is there any paper remaining on the transport path in the finisher or equipment?

↓ →YES Remove the paper.

NO

Is there any mechanical problem when the actuator of the finishing tray paper detection sensor (S12) is moved?

↓ →YES Fix the mechanism.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the finishing tray paper detection sensor (S12)?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Reinstall the sensor correctly if there is any incorrect installation.
- Replace the sensor if there is any breakage.

NO

Is the harness between the finishing tray paper detection sensor (S12) and the CN18 of the finisher control PC board (FIN) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

Replace the finisher control PC board (FIN).

[EA26] Paper transport jam in Finisher (Stop signal received from equipment)

[EA27] Paper transport jam in Finisher (Paper not inserted but paper detected)

Is there any paper remaining on the transport path in the Finisher or the equipment?

↓ →YES Remove the paper.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the entrance sensor (S1)?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Reinstall the sensor correctly if there is any incorrect installation.
- Replace the sensor if there is any breakage.

NO

Is the harness between the entrance sensor (S1) and the CN26 of the finisher control PC board (FIN) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

Replace the finisher control PC board (FIN).

[EA28] Paper transport jam in Finisher (paper holding delay)

Is there any paper remaining on the transport path in the finisher or equipment?

↓ →YES Remove the paper.

NO

Is there any mechanical problem when the paper holding cam is rotated?

↓ →YES Fix the mechanism.

NO

Is the harness between the assist arm motor (M10) and the CN13 of the finisher control PC board (FIN) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

Replace the finisher control PC board (FIN).

[EA29] Paper transport jam in Finisher (paper stack transport delay)

Is there any paper remaining on the transport path in the Finisher or the equipment?

↓ →YES Remove the paper.

NO

Is there any mechanical problem when the buffer tray guide is opened and closed while the buffer roller is kept raised?

↓ →YES Fix the mechanism.

NO

Is the harness between the buffer tray guide motor (M2) and the CN11 of the finisher control PC board (FIN) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

Replace the finisher control PC board (FIN).

[EA31] Transport path paper remaining jam

1. Check if there is any paper in the finisher or on the transport path of the equipment and remove it if there is.
2. Check if the connector CN22 on the finisher controller PC board is disconnected from the transport sensor (S2) or the harnesses are open circuited. Correct if any.
3. Reinstall the sensor correctly if there is any incorrect installation.
4. Replace the sensor.
5. Replace the finisher controller PC board.

[EA32] Exit paper remaining jam

1. Check if there is any paper in the finisher or on the transport path of the equipment and remove it if there is.
2. Check and correct the mechanism.
3. Check if the connector CN11 on the finisher controller PC board is disconnected from the finishing tray paper detection sensor (S12) or the harnesses are open circuited. Correct if any.
4. Reinstall the sensor correctly if there is any incorrect installation.
5. Replace the sensor.
6. Replace the finisher controller PC board.

[EA40] Door open jam

1. Close the front cover or the stationary tray cover if they are opened.
2. Replace the handle cover installed inside of the front cover if it is broken.
3. Reinstall the stationary tray opening/closing switch if it is incorrectly installed.
4. Check if the connector CN16 on the finisher controller PC board is disconnected from the front cover switch (SW1) and the stationary tray opening/closing switch (SW2) or the harnesses are open circuited. Correct if any.
5. Replace the sensors.
6. Replace the finisher controller PC board.

[EA50] Stapling jam

1. Check if there is any paper in the finisher or on the transport path of the equipment or on the finishing tray. Remove it if there is.
2. Is the jam cleared by taking off the staple cartridge from the finisher and removing the staple sheet slid from the staple case?
3. heck if the actuator of the stapler interference sensor (S11) moves smoothly.
4. Check if the connector CN2 on the finisher controller PC board is disconnected from the stapler or the harnesses are open circuited. Correct if any.
5. Check the harnesses in the stapler are disconnected or open circuited. Correct if any.
6. Replace the finisher controller PC board.

[EA60] Early arrival jam

1. Check if there is any paper in the finisher or on the transport path of the equipment or on the finishing tray. Remove it if there is.
2. Check if there is any disconnection, incorrect installation or breakage on the entrance sensor (S1). Correct if any.
3. Check if the connector CN7 on the finisher controller PC board is disconnected from the entrance sensor (S1) and the harnesses are disconnected or open circuited. Correct if any.
4. Replace the entrance sensor.
5. Replace the finisher controller PC board.

[EA70] Stack exit belt home position error

1. Check if the connector CN11 on the finisher controller PC board is disconnected from the stack belt exit home position sensor (S9) and the harnesses are open circuited. Correct if any.
2. Is the harness between the stack transport motor (M5) and the finisher control PC board (CN10) disconnected or open circuited?
3. Replace the sensor.
4. Replace the finisher controller PC board.
5. Is the upper surface detection sensor normal? (See CB31.)

6.2.9 Paper jam in saddle stitcher section

[EA90] Door open jam

MJ-1103/1104

1. Check if there is any paper in the finisher, saddle stitcher or on the transport path of the equipment. Remove it if there is.
2. Check if the saddle stitcher door is closed.
3. Check if the connectors J10 and J11 on the saddle stitcher controller PC board are disconnected from any of the cover opening switches (the delivery cover sensor [P13] and the inlet cover sensor [P19]) or the harnesses are open circuited. Correct if any.
4. Check if the cover opening switches noted above are working properly.
5. Replace the sensor.
6. Replace the finisher controller PC board.

[EAA0] Power-ON jam

MJ-1103/1104

1. Check if there is any paper on the transport path of the saddle stitcher or the finisher. Remove it if there is.
2. Is any of the connectors J9, J10 and J13 on the saddle stitcher controller PC board disconnected?
3. Check if the connectors on the saddle stitcher controller PC board are disconnected from the No. 1 paper sensor (PI18), No. 2 paper sensor (PI19), No. 3 paper sensor (PI20), vertical path paper sensor (PI17) and delivery sensor (PI11), or the harnesses are open circuited. Correct if any.
4. Is each of the sensors (No.1 paper sensor, No.2 paper sensor, No.3 paper sensor, the vertical path paper sensor, and the delivery sensor) working properly? (Check the movement of the actuator.)
5. Replace the sensor.
6. Replace the saddle stitcher controller PC board.

[EAB0] Paper transport stop jam

MJ-1103/1104

1. Check if there is any paper in the finisher, saddle stitcher or the on the transport path of the equipment. Remove it if there is.
2. Is the connector J708 on finisher controller PC board disconnected?
3. Is the harness between the finisher controller PC board and inlet sensor [PI33] open circuited?
4. Is either of the connectors J9 or J10 on the saddle stitcher controller PC board disconnected?
5. Is the harness between the saddle stitcher controller PC board and each sensor (No.1 paper sensor [PI18], No.2 paper sensor [PI19], No.3 paper sensor [PI20] and the delivery sensor [PI11]) open circuited?
6. Is each of the sensors (the inlet sensor, No.1 paper sensor, No.2 paper sensor, No.3 paper sensor and the delivery sensor) working properly? (Check the movement of the actuator.)
7. Replace the sensor.
8. Replace the saddle stitcher controller PC board.

[EAB1] Short paper jam in Saddle Stitch Finisher

Is there any paper remaining in the paper transport path in the equipment or the saddle stitch section of the Finisher?

↓ →YES Remove the paper.

NO

Is the paper too short for specifications?

↓ →YES Use paper accepted in the specifications.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the feeding sensor (S22)?
Is there a disconnection of the connector, incorrect installation or breakage of the junction box paper detection sensor (S24)?
Is there a disconnection of the connector, incorrect installation or breakage of the transport path-2 (S27)?
Is there a disconnection of the connector, incorrect installation or breakage of the transport path-3 (S28)?
Is there a disconnection of the connector, incorrect installation or breakage of the ejecting roller (S29)?

↓	→YES	• Reconnect the connector securely if there is any disconnection.
↓		• Reinstall the sensor correctly if there is any incorrect installation.
↓		• Replace the sensor if there is any breakage.

NO

Is the harness between the feeding sensor (S22) or the junction box paper detection sensor (S24) and the CN8 of the interface PC board (I/F) disconnected or open circuited?
Is the harness between the transport path-2 sensor (S27), transport path-3 sensor (S28) or ejecting roller sensor (S29) and the CN20 of the saddle control PC board (SDL) disconnected or open circuited?

↓	→YES	• Reconnect the connector securely if there is any disconnection.
↓		• Replace the harness if open circuited.

NO

1. Replace the saddle control PC board (SDL).
2. Replace the finisher control PC board (FIN).

6.2.10 Paper jam in puncher unit

[E9F0] Punching jam

MJ-1103/1104(when MJ-6102 installed)

1. Check if there is any paper in the finisher, saddle stitcher or the on the transport path of the equipment. Remove it if there is.
2. Rotate the punch motor (M3) and fix its mechanism if it does not rotate smoothly.
3. Check if the harnesses and the punch HP sensor (S4) are connected properly. Correct if any.
4. Check if the wiring of the hole punch controller PC board (HP board) and the punch motor (M3) is proper. Correct if any.
5. Replace the punch motor (M3).
6. Replace the hole punch control PC board.

6.2.11 Other paper jam

[EAD0] Print end command time-out jam

1. Is the drum motor rotating normally?
2. Replace the SYS board.
3. Replace the LGC board.

[EAE0] Receiving time-out jam

1. Is the finisher working?
2. Check if the voltage (24V) is being supplied to the finisher.
3. Check if the conductor pattern on the LGC board is open circuited or short circuited.
4. Check if the harness connecting the LGC board and the finisher controller PC board is disconnected or open circuited.
5. Check if the harness connecting the I/F connector of the finisher side and finisher controller PC board is open circuited.
6. Replace the finisher controller PC board.

[EB30] Ready time-out jam

1. Check if there is any paper in the equipment. Remove it if there is.
2. Check if the connector on the equipment is disconnected from the finisher or the harnesses are open circuited. Correct if any.
3. Replace the LGC board.
4. Replace the finisher controller PC board.

[ED10] Skew adjustment motor (M1) home position detection abnormality

MJ-1103/1104

1. Check if there is any paper in the finisher or the on the transport path of the equipment. Remove it if there is.
2. Rotate skew adjustment motor and fix its mechanism if it does not rotate smoothly.
3. Check if the connectors on the hole punch controller PC board (HP board) are disconnected from the skew HP sensor (S2) and the skew adjustment motor, or the harnesses are open circuited. Correct if any.
4. Replace the skew adjustment motor.
5. Replace the hole punch control PC board.

[ED11] Sideways adjustment motor (M2) home position detection error

MJ-1103/1104

1. Check if there is any paper on the transport path and remove it if there is.
2. Rotate sideways adjustment motor and fix its mechanism if it does not rotate smoothly.
3. Check if the connectors on the hole punch controller PC board (HP board) are disconnected from the sideways deviation HP sensor (S3)and the sideways adjustment motor, or the harnesses are open circuited. Correct if any.
4. Replace the sideways adjustment motor.
5. Replace the hole punch control PC board.

[ED12] Shutter home position error

MJ-1103/1104

1. Open and close the shutter. If there is any mechanical problem, fix its mechanism.
2. Check if the connectors on the finisher controller PC board are disconnected from the shutter opening/closing sensor (S4) and the shutter clutch (CLT1), or the harnesses are open circuited. Correct if any.
3. Replace the shutter clutch (CLT1).
4. Replace the shutter opening/closing sensor (S4).
5. Replace the finisher controller PC board.

[ED13] Front alignment plate home position error

MJ-1103/1104

1. Move the front alignment plate. If there is any mechanical problem, fix its mechanism.
2. Check if the connectors on the finisher controller PC board are disconnected from the front alignment plate home position sensor (S7) and the front alignment motor (M9), or the harnesses are open circuited. Correct if any.
3. Replace the front alignment motor (M9).
4. Replace the front alignment plate home position sensor (S7).
5. Replace the finisher controller PC board.

[ED14] Rear alignment plate home position error

MJ-1103/1104

1. Move the rear alignment plate. If there is any mechanical problem, fix its mechanism.
2. Check if the connectors on the finisher controller PC board are disconnected from the rear alignment plate home position sensor (S8) and the rear alignment motor (M10), or the harnesses are open circuited. Correct if any.
3. Replace the rear alignment motor (M10).
4. Replace the rear alignment plate home position sensor (S8).
5. Replace the finisher controller PC board.

[ED15] Paddle home position error

MJ-1103/1104

1. Rotate the paddle. If there is any mechanical problem, fix its mechanism.
2. Check if the connectors on the finisher controller PC board are disconnected from the paddle home position sensor (S3) and the paddle motor (M8), or the harnesses are open circuited. Correct if any.
3. Replace the paddle motor (M8).
4. Replace the paddle home position sensor (S3).
5. Replace the finisher controller PC board.

[ED16] Buffer tray home position error

MJ-1103/1104

1. Open and close the buffer tray guide. If there is any mechanical problem, fix its mechanism.
2. Check if the connectors on the finisher controller PC board are disconnected from the buffer tray home position sensor (S5) and the buffer tray guide motor (M3), or the harnesses are open circuited. Correct if any.
3. Replace the buffer tray guide motor (M3).
4. Replace the buffer tray home position sensor (S5).
5. Replace the finisher controller PC board.

[EF10] Selecting paper not supported by Saddle Stitch Finisher

[EF11] Front saddle staple error

Is there any paper remaining on the paper transport path in the Finisher or the equipment, or on the finishing tray?

↓ →YES Remove the paper.

NO

Is the jam released by taking off the front staple cartridge from the Finisher and removing the staple sheet slid from the staple case?

↓ →YES End.

NO

Is the harness between the front saddle stapler drive unit and the CN3 of the saddle control PC board (SDL) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely.
- Replace the harness if open circuited.

NO

1. Reconnect the connector securely if there is any disconnection.
2. Replace the saddle control PC board (SDL).

[EF12] Rear saddle staple error

Is there any paper remaining on the paper transport path in the Finisher or the equipment, or on the finishing tray?

↓ →YES Remove the paper.

NO

Is the jam released by taking off the rear staple cartridge from the Finisher and removing the staple sheet slid from the staple case?

↓ →YES End.

NO

Is the harness between the rear saddle stapler drive unit and the CN3 of the saddle control PC board (SDL) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

1. Replace the rear saddle stapler drive unit.
2. Replace the saddle control PC board (SDL).

[EF13] Saddle unit paper holding home position detection error

Is there any mechanical problem when the paper holding cam is rotated?

↓ →YES Fix the mechanism.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the paper holding home position sensor (S38)?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Reinstall the sensor correctly if there is any incorrect installation.
- Replace the sensor if there is any breakage.

NO

Is the harness between the paper holding home position sensor (S38), paper holding clutch (CLT4) or saddle transport motor (M16) and the CN8 of the saddle control PC board (SDL) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

Replace the saddle control PC board (SDL).

[EF14] Saddle exit jam

Is there any paper remaining in the paper transport path of the equipment or the saddle stitch section of the Finisher?

↓ →YES Remove the paper.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the exit sensor (S31)?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Reinstall the sensor correctly if there is any incorrect installation.
- Replace the sensor if there is any breakage.

NO

Is the harness between the exit sensor (S31) and the CN19 of the saddle control PC board (SDL) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

Replace the saddle control PC board (SDL).

[EF15] Saddle Stitch Finisher side alignment home position detection error

Is there any mechanical problem when the jog is moved?

↓ →YES Fix the mechanism.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the side alignment home position sensor (S36)?

I	→YES	• Reconnect the connector securely if there is any disconnection.
I		• Reinstall the sensor correctly if there is any incorrect installation.
↓		• Replace the sensor if there is any breakage.

NO

Is the harness between the side alignment home position sensor (S36) and the CN5 of the saddle control PC board (SDL) disconnected or open circuited?
Is the harness between the side alignment motor (M15) and the CN5 of the saddle control PC board (SDL) disconnected or open circuited?

I	→YES	• Reconnect the connector securely if there is any disconnection.
↓		• Replace the harness if open circuited.

NO

Replace the saddle control PC board (SDL).

[EF16] Saddle Stitch Finisher stacker motor (M14) home position detection error

Is there any mechanical problem when the stacker carrier is moved?

↓ →YES Fix the mechanism.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the stacker home position sensor (S33)?

I	→YES	• Reconnect the connector securely if there is any disconnection.
I		• Reinstall the sensor correctly if there is any incorrect installation.
↓		• Replace the sensor if there is any breakage.

NO

Is the harness between the stacker home position sensor (S33) and the CN4 of the saddle control PC board (SDL) disconnected or open circuited?
Is the harness between the stacker motor (M14) and the CN4 of the saddle control PC board (SDL) disconnected or open circuited?

I	→YES	• Reconnect the connector securely if there is any disconnection.
↓		• Replace the harness if open circuited.

NO

Replace the saddle control PC board (SDL).

[EF17] Saddle Stitch Finisher folding blade home position detection error

Is there any mechanical problem when the folding blade cam is rotated?

↓ →YES Fix the mechanism.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the folding blade home position sensor (S35)?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Reinstall the sensor correctly if there is any incorrect installation.
- Replace the sensor if there is any breakage.

NO

Is the harness between the folding blade home position sensor (S35) and the CN15 of the saddle control PC board (SDL) disconnected or open circuited?
Is there a disconnection of the connector, incorrect installation or breakage of the folding blade clutch (CLT3)?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

Replace the saddle control PC board (SDL).

[EF18] Saddle Stitch Finisher additional folding roller home position detection error

Is there any mechanical problem when the additional folding carrier is moved?

↓ →YES Fix the mechanism.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the additional folding home position sensor (S39)?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Reinstall the sensor correctly if there is any incorrect installation.
- Replace the sensor if there is any breakage.

NO

Is the harness between the additional folding home position sensor (S39) or the additional folding motor encoder sensor (S42) and the CN19 of the saddle control PC board (SDL) disconnected or open circuited?
Is the harness between the additional folding motor (M20) and the CN18 of the saddle control PC board (SDL) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

Replace the saddle control PC board (SDL).

[EF19] Saddle Stitch Finisher paper folding jam

Is there any paper remaining in the paper transport path in the equipment or the saddle stitch section of the Finisher?

↓ →YES Remove the paper.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the exit transport sensor (S41)?

I	→YES	• Reconnect the connector securely if there is any disconnection.
I		• Reinstall the sensor correctly if there is any incorrect installation.
↓		• Replace the sensor if there is any breakage.

NO

Is the harness between the exit transport sensor (S41) and the CN19 of the saddle control PC board (SDL) disconnected or open circuited?

I	→YES	• Reconnect the connector securely if there is any disconnection.
↓		• Replace the harness if open circuited.

NO

Replace the saddle control PC board (SDL).

[EF20] Saddle stacker jam

Is there any paper remaining in the paper transport path in the equipment or the saddle stitch section of the Finisher?

↓ →YES Remove the paper.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the stacker paper detection sensor (S30)?

I	→YES	• Reconnect the connector securely if there is any disconnection.
I		• Reinstall the sensor correctly if there is any incorrect installation.
↓		• Replace the sensor if there is any breakage.

NO

Is the harness between the stacker paper detection sensor (S30) and the CN14 of the saddle control PC board (SDL) disconnected or open circuited?

I	→YES	• Reconnect the connector securely if there is any disconnection.
↓		• Replace the harness if open circuited.

NO

Replace the saddle control PC board (SDL).

[EF21] Paper leading edge skew detection abnormality

Is there any paper remaining on the paper transport path? Is it staying at the position shown below?

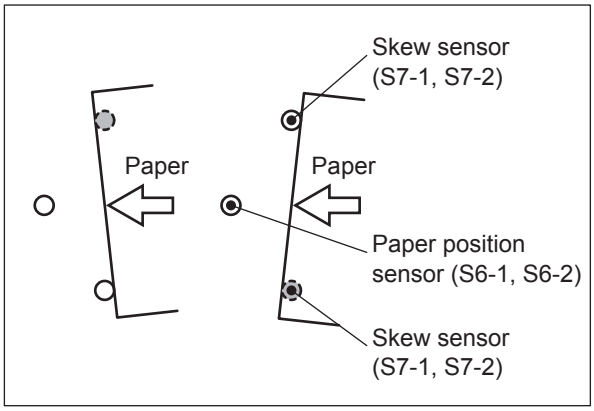


Fig. 6-1

↓ →YES Figure out the cause of the paper stopping (e.g. folding) and correct it. Then remove the paper.

NO

Are the skew sensor (S7-1 and S7-2) and its wiring correct?

↓ →NO Replace the sensor. Correct the wiring.

YES

Replace the hole punch control PC board (HP).

[EF22] Paper leading edge detection abnormality

Is there any paper remaining on the paper transport path? Is it staying at the position shown below?

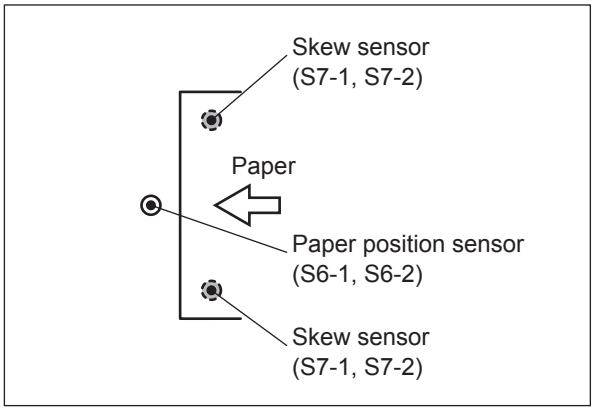


Fig. 6-2

↓ →YES Figure out the cause of the paper stopping (e.g. folding) and correct it. Then remove the paper.

NO

Are the paper position sensor (S6-1 and S6-2) and its wiring correct?

↓ →NO Replace the sensor. Correct the wiring.

YES

Replace the hole punch control PC board (HP).

[EF23] Paper alignment abnormality

Is there any paper remaining on the transport path?

↓ →YES 1. Open the front cover.
2. Remove the paper, not leaving any chips.

NO

Rotate the sideways adjustment motor (M2). Does it rotate smoothly?

↓ →NO Fix the mechanism.

YES

Are the sideways deviation home position sensor (S3) and its wiring correct?

↓ →NO Replace the sensor. Correct the wiring.

YES

Is the wiring between the hole punch control PC board (HP) and punch sideways adjustment motor (M2) correct?

↓ →NO Correct the wiring.

YES

Are the paper position sensor (S6-1 and S6-2) and its wiring correct?

↓ →NO Replace the sensor. Correct the wiring.

YES

Replace the hole punch control PC board (HP).

[EF24] Paper trailing edge skew detection abnormality

Is there any paper remaining on the paper transport path? Is it staying at the position shown below?

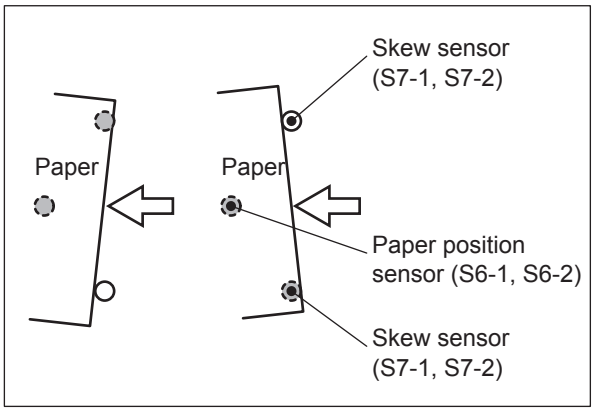


Fig. 6-3

↓ →YES Figure out the cause of the paper stopping (e.g. folding) and correct it. Then remove the paper.

NO

Are the skew sensor (S7-1 and S7-2) and its wiring correct?

↓ →NO Replace the sensor. Correct the wiring.

YES

Replace the hole punch control PC board (HP).

[EF25] Paper trailing edge detection abnormality

Is there any paper remaining on the paper transport path? Is it staying at the position shown below?

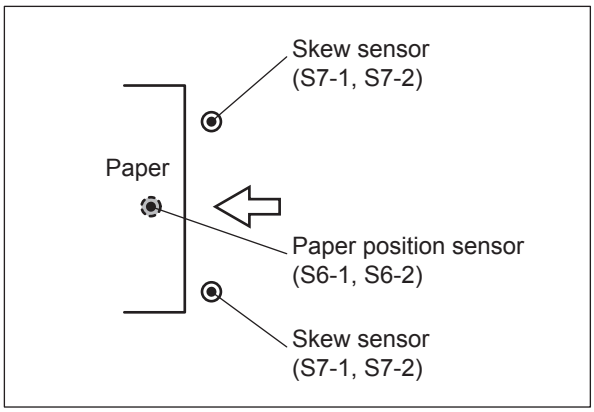


Fig. 6-4

↓ →YES Figure out the cause of the paper stopping (e.g. folding) and correct it. Then remove the paper.

NO

Are the paper position sensors (S6-1 and S6-2) obstructed by paper dust or punching scraps?

↓ →YES Remove the obstruction from the sensors.

NO

Are the paper position sensor (S6-1 and S6-2) and its wiring correct?

↓ →NO Replace the sensor. Correct the wiring.

YES

Replace the hole punch control PC board (HP).

[EF27] Paper position detection error 1

[EF28] Paper position detection error 2

Is there any paper remaining on the transport path?

↓ →YES Remove the paper, not leaving any chips.

NO

Are the skew sensor (S7-1 and S7-2) and its wiring correct?

↓ →NO Replace the sensor. Correct the wiring.

YES

Replace the hole punch control PC board (HP).

6.2.12 Paper feeding system related service call

[C130] 1st drawer tray abnormality
[C140] 2nd drawer tray abnormality

Does the tray go up? (Perform the output check: 03-246, 247)

NO →
1. Check if the connector of the tray-up motor is disconnected.
2. Check if the connector CN508 on the PFC board is disconnected.
3. Check if the connector pins are disconnected or the harnesses are open circuited.
4. Check if the conductor pattern on the PFC board is short circuited or open circuited.
5. Replace the tray-up motor.
6. Replace the PFC board.

↓

YES

Is the tray-up sensor working? (Perform the input check: 03-[Copy ON]/[9]/[H], /[9]/[G])

NO →
1. Check if the connector of the sensor is disconnected.
2. Check if the connector CN513 on the PFC board is disconnected.
3. Check if the slit reaches the sensor.
4. Check if the connector pins are disconnected or the harnesses are open circuited.
5. Check if the conductor pattern on the PFC board is short circuited or open circuited.
6. Replace the tray-up sensor.
7. Replace the PFC board.

↓

YES

1. Check if the conductor pattern on the PFC board is short circuited or open circuited.
2. Replace the PFC board.

[C150] 3rd drawer tray abnormality
[C160] 4th drawer tray abnormality

Does the tray go up? (Perform the output check: 03-248, 249)

NO →
1. Check if the connector of the tray-up motor is disconnected.
2. Check if the connector CN504 on the PFC board is disconnected.
3. Check if the connector pins are disconnected or the harnesses are open circuited.
4. Check if the conductor patterns on the PFC board is short circuited or open circuited.
5. Replace the tray-up motor.
6. Replace the PFC board.

↓

YES

Is the tray-up sensor working? (Perform the input check: 03-[CopyON]/[9]/[F], /[9]/[E])

NO →
1. Check if the connector of the sensor is disconnected.
2. Check if any of the connectors CN505 and CN506 on the PFC board is disconnected.
3. Check if the slit reaches the sensor.
4. Check if the connector pins are disconnected or the harnesses are open circuited.
5. Check if the conductor patterns on the PFC board is short circuited or open circuited.
6. Replace the tray-up sensor.
7. Replace the PFC board.

↓

YES

1. Check if the conductor pattern on the PFC board is short circuited or open circuited.
2. Replace the PFC board.

[C180] LCF tray-up motor abnormality

Does the tray move? (Perform the output check: 03-257)

NO →
1. Check if the connector of the LCF tray-up motor is disconnected.
2. Check if the connector CN507 on the PFC board is disconnected.
3. Check if the connector pins are disconnected or the harnesses are open circuited.
4. Check if the conductor patterns on the PFC board is short circuited or open circuited.
5. Replace the LCF tray-up motor.
6. Replace the PFC board.

↓

YES

Are the LCF tray-up sensor and LCF tray bottom sensor working?
(Perform the input check: 03-[CopyON]/[9]/[F], [ScanON]/[2]/[E])

NO →
1. Check if the connectors of the sensors are disconnected.
2. Check if the connector CN505 and CN507 on the PFC board is disconnected.
3. Check if the slit reaches the sensors.
4. Check if the connector pins are disconnected or the harnesses are open circuited.
5. Check if the conductor patterns on the PFC board is short circuited or open circuited.
6. Replace the sensor.
7. Replace the PFC board.

↓

YES

1. Check if the conductor pattern on the PFC board is short circuited or open circuited.
2. Replace the PFC board.

[C1A0] LCF end fence motor abnormality

Is the LCF end fence motor working? (Perform the output check: 03-256)

NO →
1. Check if the connector of the LCF end fence motor is disconnected.
2. Check if the connector CN507 on the PFC board is disconnected.
3. Check if the connector pins are disconnected or the harnesses are open circuited.
4. Check if the conductor patterns on the PFC board is short circuited or open circuited.
5. Replace the LCF end fence motor.
6. Replace the PFC board.

↓

YES

Are the LCF end fence home/stop position sensors working?
(Perform the input check: 03-[Copy ON]/[9]/[E], [Scan ON /[1]/[E])

NO →
1. Check if the connectors of the sensors are disconnected.
2. Check if the connector CN507 on the LGC board is disconnected.
3. Check if the slit reaches the sensors.
4. Check if the connector pins are disconnected or the harnesses are open circuited.
5. Check if the conductor patterns on the PFC board is short circuited or open circuited.
6. Replace the sensors.
7. Replace the PFC board.

↓

YES

1. Check if the conductor pattern on the PFC board is short circuited or open circuited.
2. Replace the PFC board.

[C1C0] Option LCF tray-up motor abnormality

(1) Is the option LCF tray motor working?
(2) Is the option LCF tray up sensor working?
(3) Replace the tray motor.
(4) Replace the tray up sensor.
(5) Replace the option LCF board.

6.2.13 Scanning system related service call

[C260] Peak detection error

Does the exposure lamp light? (Perform the output check: 03-267)

YES →
1. Check if the connectors on the CCD and SLG boards are disconnected.
2. Check if the shading correction plate is dirty.
3. Check if the conductor pattern on the CCD board is short circuited or open circuited.
4. Check if the conductor pattern on the SLG board is short circuited or open circuited.
5. Replace the lens unit.
6. Replace the SLG board.

↓

NO

1. Check if the connectors of the exposure lamp and inverter are disconnected.
2. Check the SLG board if the connector pin CN21 is disconnected or the harness is short circuited or open circuited.
3. Check if the conductor pattern on the SLG board is short circuited or open circuited.
4. Replace the SLG board.
5. Replace the inverter.
6. Replace the exposure lamp.

[C270] Carriage home position sensor not going OFF within a specified time/ Downloading firmware with an incorrect model

Remove the original glass and move the carriages to the paper feeding side. Turn ON the power and check the following items.

Are the carriages slightly moved to the feeding direction?/Are the carriages staying at a position other than home position?

↓ YES → Check if the circuits of the SLG board are abnormal.

NO

1. Check if the connector pin is disconnected or the harness is short circuited or open circuited.
2. Check if the conductor pattern on the SLG board is short circuited or open circuited.
3. Replace the SLG board.
4. If the model of the firmware downloaded is incorrect, a C270 error (exposure lamp blinks twice) occurs.
   If the exposure lamp blinks twice, download the correct ROM.

[C280] Carriage home position sensor not going ON within a specified time

Remove the original glass and move the carriages to the paper feeding side. Turn ON the power and check the following items.

Do the carriages make a big noise after they arrive at the home position?

YES → The carriage home position sensor is not turned ON.
1. Check if the connector of the sensor is disconnected.
2. Check if the circuits of the SLG board are abnormal.

↓

NO

The carriages are stopped at the home position and do not move.

1. Check if the connector pins are disconnected or the harnesses are short circuited or open circuited.
2. Check if the conductor pattern on the SLG board is short circuited or open circuited.
3. Replace the SLG board.

6.2.14 Fuser unit related service call

Note:
Be sure to turn OFF the power and unplug the power cable beforehand when checking the power supply unit and fuser unit.
The fuser unit itself or the part of the unit remains heated and the capacitors are still charged after a while the power cable is unplugged. So make sure the unit is cooled down enough before checking.

[C411/C412/C452] Thermistor/heater lamp abnormality at power-ON

1.Check the power voltage

(1) Check if the power voltage is normal.(Is the voltage during the operation ±10% of the rated voltage?)

2.Check the error detection history

(1) Check the error detection history of each temperature detecting element when the error occurred. If any of the elements detects an abnormal temperature, check step 3.
08-1902: Fuser belt center thermopile temperature
08-1903: Fuser belt side thermopile temperature
08-1904: Fuser belt edge thermistor temperature
08-1905: Pressure roller center thermistor temperature
08-4545: Pressure roller rear thermistor temperature

3.Check the thermopiles

(1) Check if the fuser belt center and side thermopiles (front, rear) are installed properly.
(2) Check if the harnesses of the fuser belt center and side thermopiles (front, rear) are open circuited.

4. Check the IH board, IH coil and the fuser unit

(1) Is the fuser unit installed correctly?
(2) heck if foreign matter or paper in the fuser unit is plugging up the monitoring opening of the fuser belt thermopile.
(3) Check if the opening of the fuser belt thermopile of the equipment is plugged up.
(4) Is the IH coil open circuited? (Check if power is supplied to the IH coil.)
(5) Check if the connector of the IH coil is disconnected.
(6) Check if the thermostat is broken.
(7) Check if any of the connectors (AC input connector and LGC I/F connector CN462) on the IH board is disconnected.
(8) Is the IH board broken?.
- Replace the IH board.

5. Check the LGC board

(1) Check if the connectors CN333 and CN345 are disconnected.
(2) Check if the conductor pattern on the LGC board is short circuited or open circuited.
(3) Replace the LGC board.

6. Clear the status counter

After repairing the matter which caused the error [C411/C412], perform the following:

(1) Turn ON the power while [0] and [8] are pressed simultaneously.
(2) Key in “400”, then press [START].
(3) Change the current status counter value “1” or “2” to “0”, then press [ENTER] or [INTERRUPT] (to cancel [C411/C412]).
(4) Turn the power OFF and then back ON. Make sure that the equipment enters the normal ready state.

[C443/C445/C446/C447/C449] Heater lamp abnormality after abnormality judgment

1,2,3,4. Check the thermopiles, Heater and LGC board

Check the above components following the procedures 1, 2,3 and 4 for [C411/C412].

5. Clear the status counter

Change the current status counter value (08-400) “3”, “5”, “6”, “9”, “19”, “21”, “22”, “23”, “24”, “25”, “27” or “29” to “0” for [C44X], taking the same procedure as that for [C41X].

- The status counter value is as follows in the following cases.
  - The error occurred during warming-up: “3”, “5” or “6”
  - The error occurred after the equipment has become ready: “7”
  - The temperature detected by the fuser belt center thermopile is 230°C or higher, the temperature detected by the side thermopile is 230°C or higher or the temperature detected by the edge thermopile is 230°C or higher: “9”, “19”, “21”, “22”, “23”, “25”, “27” or “29”.
  - The error occurred during printing: “24” or “25
  - The error occurred during energy saving: “27”
  - A paper jam occurred: “29”

[C448] Heater lamp lights continuously for a certain period of time when the pressure roller temperature during ready status is higher than the specified

1. Check the power supply and fuser unit

(1) Check if the fuser unit is installed properly.
(2) Check if foreign matter or paper in the fuser unit is plugging up the monitoring opening of the fuser belt thermopile.
(3) Check if the opening of the fuser belt thermopile of the equipment is plugged up.
(4) Check if the connectors of the power supply are disconnected (power supply unit AC output connector CN409 and LGC Interface connector CN403).
(5) Check if the power supply unit is abnormal.
    * Replace the power supply unit.

2. Check the LGC board

(1) Check if the connector CN333 is disconnected.
(2) Check if the conductor pattern on the LGC board is short circuited or open circuited.
(3) Replace the LGC board.

3. Clear the status counter

After repairing the matter which caused the error [C448], perform the following:

(1) Turn the power ON while [0] and [8] are pressed simultaneously.
(2) Key in “400”, then press the [START] button.
(3) Change the displayed current status counter value “32” to “0”, then press [ENTER] or [INTERRUPT] (to cancel C448).
(4) Turn the power OFF and then back ON. Make sure that the equipment enters the normal status.

[C451] Thermopile and edge thermistor temperature difference

1. Check if any paper is clinging to the fuser belt.
2. Check if there is any foreign matter between the fuser belt thermopile (center/side) and the fuser belt. Remove it if any.
3. Replace the fuser belt thermopile (center/side)

[C463] Pressure roller thermistor and edge thermistor temperature difference

1. Check if any paper is clinging to the pressure roller.
2. Check if there is any foreign matter between the pressure roller thermistor (center/side) and the pressure roller. Remove it if any.
3. Replace the pressure roller center thermistor (center/side)

[C461] Pressure roller temperature detection (40 degrees C) abnormality (not determined)
[C462] Pressure roller temperature detection (40 degrees C) abnormality (determined)
[C464] Pressure roller thermistor temperature difference abnormality

1.Check the power voltage

(1) Check if the power voltage is normal.(Is the voltage during the operation ±10% of the rated voltage?)

2.Check the error detection history

(1) Check the error detection history of each temperature detecting element when the error occurred. If any of the elements detects an abnormal temperature, check step 3.
08-1902: Fuser belt center thermopile temperature
08-1903: Fuser belt side thermopile temperature
08-1904: Fuser belt edge thermistor temperature
08-1905: Pressure roller center thermistor temperature
08-4545: Pressure roller rear thermistor temperature

3.Check the pressure roller thermistor.

(1) Check if the connector is disconnected.
(2) Is the pressure roller center thermistor installed properly?
(3) Is the pressure roller rear thermistor contacted with the pressure roller surface securely?
(4) Is any of the harnesses for the pressure roller center thermistor and the pressure roller rear thermistor open circuited?

4. Check the switching regulator and fuser unit

(1) Is the fuser unit installed correctly?
(2) Is a harness for the heater lamp open circuited? (Is power supplied to the heater lamp?)
(3) Is the connector of the heater lamp disconnected?
(4) Check if the thermostat is blown.
(5) Is the connector of the switching regulator disconnected? (Check the AC output connector CN409 of the switching regulator and the I/F connector CN403 of the LGC board.)
(6) Is the switching regulator damaged?
(7) Replace the switching regulator.

5. Check the LGC board

(1) Are the connectors CN301 and CN306 disconnected?.
(2) Is the conductor pattern on the board short circuited or open circuited?
(3) Replace the LGC board.

6. Reset the status counter

Follow the procedure below after each cause of C461, C462 and C464 is corrected.

(1) Turn the power of the equipment ON while pressing [0] and [8] simultaneously.
(2) Key in "400" and then press the [START] button.
(3) Reset the status counter values "61", "70", "71" or "62" to "0". Then press [ENTER] on the touch panel or the [INTERRUPT] button on the control panel. (The error C461, C462 or C464 is released.)
(4) Turn the power of the equipment OFF and then back ON. Then check that the equipment normally enters into the standby mode.

[C465/C466/C467/C468] Pressure roller thermistor abnormality after entering ready status

1. Check the pressure roller thermistor

(1) Check if the connector is disconnected.
(2) Check if the pressure roller center thermistor is installed properly.
(3) Check if the pressure roller rear thermistor is in contact with the surface of the pressure roller properly.
(4) Check if the harnesses of the pressure roller center and rear thermistors are open circuited.

2. Check the power supply unit and fuser unit

(1) Check if the fuser unit is installed properly.
(2) Check if the heater lamp is open circuited. (Check if the heater lamp has electric continuity.)
(3) Check if the connector of the heater lamp is disconnected.
(4) Check if the thermistor is open circuited.
(5) Check if the connectors of the power supply (power supply AC output connector CN409, LGCI/F connector CN403) are disconnected.
(6) Check if the power supply unit is broken.
    * Replace the power supply unit if it is broken.

3. Check the LGC board

(1) Check if the connector CN333/CN345 is disconnected.
(2) Check if the conductor pattern on the board is short circuited or open circuited.
(3) Replace the LGC board.

4. Clear the status counter

Change the current status counter value (08-400) “5”, “6”, “8”, “18”, “20”, “26”, “28”, “33” or “34” to “0”

* The status counter value is set as follows in the following cases.
- The error occurred during warming-up: “5” or “6”
- The error occurred after the equipment has become ready: “33”
- Regardless of the equipment’s status (i.e. during warming-up or in ready status), when the temperature detected by the pressure roller thermistor is 210°C or higher: “8”, “18”, “20”, “26” or “28”.
- The error occurred during printing: “34”

[C471] IH board initialization abnormality
[C472] Power supply abnormality

1. Check the power cable

(1) Check if the power cable is properly plugged in.
(2) Check if the power cable is properly connected to the equipment.
(3) It is recommended to plug in the power cable again since it could be connected halfway.

2. Check the AC input voltage

(1) Check if the AC input voltage is within the specification.

3. Check the duplexing unit interlock switch

(1) Is the interlock switch lever inserted when the duplexing unit is closed?
(2) Check if there is any damage or bending in the installation of the duplexing unit interlock switch lever, and replace it if there is.
(3) Replace the duplexing unit interlock switch.

4. Check the thermostat

(1) Check if the terminal of the thermostat is correctly connected.
(2) Check if the thermostat is blown.
(3) Check if the harness is open circuited in the fuser unit.
(4) Replace the fuser unit.

5. Check the IH board

(1) Check if the AC input connector of the IH board and the LGC I/F connector CN404 are disconnected.
(2) Check if the fuse on the IH board has blown.
(3) Replace the IH board.
(4) If the breaker is turned off, return it to the original position.

6. Check the LGC board

(1) Check if the connectors CN301, CN305 and CN306 are disconnected.
(2) Check if the conductor pattern on the board is short circuited or open circuited.
(3) Replace the LGC board.

7. Check the FIL board

(1) Check if the connectors CN431, CN433, CN434 and CN435 are disconnected.
(2) Replace the FIL board.

8. Check the relay connector

(1) Check if the relay connector J655 near the IH board has come off.

9. Clear the status counter

Change the current status counter value (08-400) “10”, “11”, “12”, “13” or “16” to “0”

[C473] Surge pressure detection / power and voltage upper limit abnormality
[C474] Power and voltage lower limit abnormality
1. Check the AC input voltage

(1) Check if the AC input voltage is within the specification.

2. Check the IH board

(1) Replace the IH board.

[C480] IGBT high temperature abnormality
1. Check the IH cooling fan

(1) Is the IH cooling fan rotating normally? (Check if the connector is disconnected.)

2. Check the IH board

(1) Replace the IH board.

3. Check the LGC board

(1) Check if the connectors CN305/CN306 are disconnected.
(2) Check if the conductor pattern on the board is short circuited or open circuited.
(3) Replace the LGC board.

4. Clear the status counter
Change the current status counter value (08-400) "14" to "0".

[C481] IH drive circuit abnormality
1. Check the IH board

(1) Replace the IH board.

2. Check the LGC board

(1) Check if the connectors CN305/CN306 are disconnected.
(2) Check if the conductor pattern on the board is short circuited or open circuited.
(3) Replace the LGC board.

3. Clear the status counter
Change the current status counter value (08-400) "15" to "0".

[C490] IH circuit abnormality / IH coil abnormality
1. Check the power voltage

(1) Check if the power voltage is normal.(Is the voltage during the operation?10% of the rated voltage?)

2. Check the IH board

(1) Check if the heaness of IH coil.
(2) Check if the conductor pattern on the board is short circuited or open circuited.
(3) Replace the IH board.

3. Check the IH coil

(1) Check if the IH coil is open circuited or short circuited.
(2) Replace the IH coil.
(3) Check if the fuser belt is damaged.
(4) Replace the fuser belt.
(5) Replace the fuser unit.

[C4B0] IGBT overheating abnormality

1. Check the LGC board

(1) Check if the conductor pattern on the board is short circuited or open circuited.
(2) Check if SRAM is mounted.
(3) Replace the LGC board.

2. Clear the status counter

Change the values “30” or above, or “4” of the status counter (08-400) to “0”.

[C4B1] Fuser unit voltage judgment abnormality

(1) Check if any of the harnesses in the fuser unit is open circuited.
(2) Check if any of the connectors CN305, CN306 and CN330 on the LGC board is open circuited.
(3) Check if there is any abnormality on the harnesses between the connectors CN305, CN306 and CN330 on the LGC board and the fuser unit.
(4) Replace the LGC board.
(5) Replace the fuser unit.
(6) Check if the AC input connector on the IH board is disconnected.
(7) Check if the connector CN404 of the switching regulator is disconnected.
(8) Check if the fuse of the IH board has blown.
(9) Replace the IH board.
(10) Replace the FIL board.

[C4D0] Fuser belt thermopile abnormality

1. Check the thermopile

(1) Check if the connector of the thermopile is disconnected.
(2) Check if the harnesses of the fuser belt center thermopile and the fuser belt side thermopile are open circuited.
(3) Replace the thermopile.

2. Check the LGC board

(1) Check if the connector CN333 is disconnected.
(2) Check if the conductor pattern on the LGC board is open circuited or short circuited.
(3) Replace the LGC board.

3. Cancel the service call

After repairing the matter which caused the error [C4D0], turn the power OFF and then back ON to cancel the service call. However, the counter value will be stored until it is written over by the value of the other service call.

[C4E0] Fuser pressure release abnormality
[C4E1] Fuser pressure contact abnormality

1. Is the pressure roller contact/release detection sensor working? (Perform the input check: 03-[FAX]OFF/[3]/[F])
   * If it is working properly, proceed to 7. If not, check 2 to 6 below.
2. Is there any foreign matter or damage on the pressure roller contact/release detection sensor?
3. Check if the drawer connector for the fuser unit or any of connectors on the equipment side is disconnected or open-circuited.
4. Check if the harness between the pressure roller contact/release detection sensor and the connector (CN306) on the LGC board is disconnected or open-circuited.
5. Replace the sensor.
6. Replace the LGC board.
7. Is the pressure roller contact/release clutch working? (Perform the output check: 03-273)
   * If it is working properly, proceed to 12. If not, check 8 to 11 below.
8. Is the drawer connector for the fuser unit or any of connectors on the equipment side is disconnected or open-circuited?
9. Is the harness between the pressure roller contact/release clutch and the connector (CN311) on the LGC board disconnected or open-circuited?
10. Replace the clutch.
11. Replace the LGC board.
12. If there is any mechanical problem on the fuser unit, fix the mechanism.
13. Check that 2 dowels are securely fitted into the holes of the fuser drive unit.

[C4E2] Fuser belt rotation detection sensor abnormality

1. Is the fuser belt rotation detection sensor working? (Perform the input check: 03-[FAX]ON/[4]/[F])
   * If it is working properly, proceed to 7. If not, check 2 to 6 below.
2. Check if there is any foreign matter or damage on the fuser belt rotation detection sensor.
3. Check if the connector for the fuser unit or any of connectors on the equipment side is disconnected or open-circuited.
4. Check if the harness between the fuser belt rotation detection sensor and the connector (CN306) on the LGC board is disconnected or open-circuited.
5. Replace the sensor.
6. Replace the LGC board.
7. Is the sensing plate of the fuser belt rotation detection sensor damaged or smudged?
8. Check if the fuser belt and its drive section have any abnormality.
9. Check if the gear of the fuser drive unit is not engaged, any parts are extremely abraded, the one-way clutch is not smoothly operated or the surface of the bushing is scraped.
10. Check if grease is applied to the gears and shafts of the fuser unit and fuser drive unit.

6.2.15 Communication related service call

[C550] RADF I/F error

(1) Check if the harness connecting the RADF board and SLG board is disconnected or open circuited.
(2) Check if the conductor pattern on the RADF board is short circuited or open circuited.
(3) Check if the conductor pattern on the SLG board is short circuited or open circuited.
(4) Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).
(5) Replace the SLG board.

[C560] Communication error between Engine-CPU and PFC board

(1) Check if the LGC board and PFC board are connected properly.
(2) Check if the conductor pattern on the PFC board is short circuited or open circuited.
(3) Check if the conductor pattern on the LGC board is short circuited or open circuited.
(4) Replace the PFC board.
(5) Replace the LGC board.

[C570] Communication error between Engine-CPU and CNV ROM

(1) Check if the harness connecting the LGC board and the finisher controller PC board is disconnected or open circuited.
(2) Check if the conductor pattern on the LGC board is short circuited or open circuited.
(3) Replace the LGC board.

[C580] Communication error between CNV ROM and finisher

(1) Check if the specified finisher is attached.
(2) Check if the harness connecting the LGC board and the finisher controller PC board is disconnected or open circuited.
(3) Check if the conductor pattern on the LGC board is short circuited or open circuited.
(4) Check if the conductor pattern on the finisher controller PC board is short circuited or open circuited.
(5) Replace the LGC board.
(6) Replace the finisher controller PC board.

[F070] Communication error between System-CPU and Engine-CPU

(1) Check the version of the system ROM on the SYS board.
(2) Check the version of the engine ROM on the LGC board.
(3) Check if the connector CN423 and CN424 on the IMG board and the connector CN319 and CN320 on the LGC board are completely inserted.
(4) Check if the connector CN422 on the IMG board and the connector CN135 on the SYS board are completely inserted.
(5) Check if the connector pin between the IMG board (connector CN422) and the SYS board (connector CN135) is disconnected.
(6) Check if the conductor patterns on the IMG board, LGC board and SYS board are short circuited or open circuited.
(7) Replace the LGC board if no problem is found in steps from (1) to (7) above.
(8) If the problem is not corrected with the replacement of the LGC board, reinstall the removed LGC board and replace the SYS board.
(9) If the problem is still not corrected with the replacement of the SYS board, reinstall the removed SYS board and replace the IMG board.

[F110] Communication error between System-CPU and Scanner-CPU
[F111] Scanner response abnormality

(1) Check if the harness connecting the IMG board and SLG board is disconnected or open circuited.
(2) Check the version of the system ROM on the SYS board.
(3) Check the version of the scanner ROM version on the SLG board.
(4) Replace the SYS board.
(5) Replace the SLG board.

6.2.16 RADF related service call

[C730] EEPROM abnormality

1. Check the IC-1, -2 and around on the RADF board to see if there is any burnout or short-circuiting.
2. Replace the Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).

[C880] ADF feed motor abnormality

1. Check if the connector CN76 on the RADF board is disconnected from the ADF feed motor or the harnesses are open-circuited. Correct if this is the case.
2. Replace the ADF feed motor.

[C890] ADF read motor abnormality

1. Check if the connector CN76 on the RADF board is disconnected from the ADF read motor or the harnesses are open-circuited. Correct if this is the case.
2. Replace the ADF read motor.

[C8A0] ADF reverse motor abnormality

1. Check if the connector CN77 on the RADF board is disconnected from the ADF reverse motor or the harnesses are open-circuited. Correct if this is the case.
2. Replace the ADF reverse motor.

[C8B0] ADF exit motor abnormality

1. Check if the connector CN78 on the RADF board is disconnected from the ADF exit motor or the harnesses are open-circuited. Correct if this is the case.
2. Replace the ADF exit motor.

[C8C0] RADF original reading start sensor abnormality

1. Check if the RADF original reading start sensor is not damaged or stained.
2. Check that the prism is installed in the correct position and that it is not damaged.
3. Check if the connector CN75 on the RADF board is disconnected from the RADF original reading start sensor or the harnesses are open circuited. Correct if so.
4. Replace the RADF original reading start sensor, and then perform the automatic adjustment for the original reading start sensor (05-356).
5. Replace the RADF board, and then perform the automatic adjustment for the original reading start sensor (05-356).

[C8E0] ADF communication protocol abnormality

1. Turn the power OFF and then back ON to check if the equipment operates normally.

6.2.17 Circuit related service call

[C5A0] SRAM board not connected (LGC board)
[C5A1] SRAM board data abnormality (LGC board)

(1) Check if the SRAM board has been installed properly.
(2) Check if the conductor patterns on the SRAM board is short circuited or open circuited.
(3) Check if the battery on the SRAM board has not run out.
(4) Replace the SRAM board.
(5) Replace the LGC board.

[C900] Connection error between the SYS board and the LGC board

(1) Check if the connector CN423, CN424 on the IMG board and the connector CN319, CN320 on the LGC board are completely inserted.
(2) Check if the connector pin between the IMG board (connector CN423, CN424) and the LGC board (connector CN319, CN320) is disconnected.
(3) Check if the connector CN422 on the IMG board and the connector CN135 on the SYS board are completely inserted.
(4) Check if the connector pin between the IMG board (connector CN422) and the SYS board (connector CN135) is disconnected.
(5) Check if the conductor patterns on the IMG board, LGC board and SYS board are short circuited or open circuited.
(6) Replace the LGC board if no problem is found in steps from (1) to (5) above.
(7) If the problem is not corrected with the replacement of the LGC board, reinstall the removed LGC board and replace the IMG board.
(8) If the problem is still not corrected with the replacement of the IMG board, reinstall the removed IMG board and replace the SYS board.

[C940] Engine-CPU abnormality

Does service call still occur even after turning OFF the main switch then back ON?
↓ NO → Leave it for a while and see how.
YES
1. Check if the conductor pattern between the Engine-CPU and FROM, SRAM is short circuited or open circuited.
2. Replace the LGC board if it frequently occurs.

[C962] LGC board ID abnormality

(1) Check if the connector CN304 on the LGC board is completely inserted or not disconnected.
(2) Check if the connectors CN423 and CN424 on the IMG board and the connectors CN319 and CN320 on the LGC board are completely inserted.
(3) Check if the connector pin between the IMG board (connector CN423, CN424) and the LGC board (connector CN319, CN320) is disconnected.
(4) Check if the connector CN426 on the IMG board is completely inserted or not disconnected.
(5) Check if the conductor patterns on the IMG board and the LGC board are short circuited or open circuited.
(6) Replace the LGC board if no problem is found in steps from (1) to (5) above.
(7) If the problem is not corrected with the replacement of the LGC board, reinstall the removed LGC board and replace the IMG board.
(8) If the problem is still not corrected with the replacement of the IMG board, reinstall it and ask a specialist to repair it. (Abnormal ID)

[C9E0] Connection error between the SLG board and the SYS board

(1) Check if the connector CN12 on the SLG board is completely inserted or not disconnected.
(2) Check if the connector CN421 on the IMG board is completely inserted or not disconnected.
(3) Check if the connector pin between the SLG board (connector CN12) and the IMG board (connector CN421) is disconnected, or the harness connecting these boards is short circuited or open circuited.
(4) Check if the connector CN422 on the IMG board and the connector CN135 on the SYS board are completely inserted.
(5) Check if the connector pin between the IMG board (connector CN422) and the SYS board (connector CN135) is disconnected.
(6) Check if the conductor patterns on the SLG board, IMG board and SYS board are short circuited or open circuited.
(7) Replace the SLG board if no problem is found in steps from (1) to (6) above.
(8) If the problem is not corrected with the replacement of the SLG board, reinstall the removed SLG board and replace the IMG board.
(9) If the problem is still not corrected with the replacement of the IMG board, reinstall the removed IMG board and replace the SYS board.

[F090] SRAM abnormality on the SYS board

(1) Turn the power OFF and start up the Setting Mode (08).
(2) When “SRAM ERROR DOES IT INITIALIZE” is displayed on the LCD, check the destination and then press the [START] button. If the destination is not correct, key in the correct one and then press the [START] button.
(3) After the confirmation message is displayed on the LCD, press the [INTERRUPT] button (to initialize the SRAM).
(4) Perform the panel calibration (08-692).
(5) Enter the serial number (08-995). Be sure that the serial number is the same as that on the identification label attached on the rear cover of the equipment.
(6) Initialize the NIC information (08-693).
(7) Turn the power OFF and then start up with the Adjustment mode (05).
(8) Perform “Data transfer of characteristic value of scanner” (05-364).
(9) Perform “Automatic gamma adjustment” <PRC> (05-1642) (using [4] [FAX] test pattern).
(10) Perform “Automatic gamma adjustment” <PRT (600dpi)> (05-1008) (using [70] [FAX] test pattern).
(11) Perform “Automatic gamma adjustment” <PRT (1200dpi)> (05-1009) (using [230] [FAX] test pattern).
(12) Turn the power OFF and then back ON. If the error is not recovered, replace the SRAM on the SYS board.

[F350] SLG board abnormality

(1) Check if the conductor pattern on the SLG board is short circuited or open circuited.
(2) If there is no problem found in the check (1) above, check the combination of the firmware version of the system ROM, engine ROM and scanner ROM. Reinstall the scanner ROM firmware.
(3) If an error occurs after step (2) above has been performed, replace the SLG board.

[F400] SYS board cooling fan abnormality

(1) Check if the fan is rotating properly.
(2) If not, check if any foreign object is adhered.
(3) Is the connector CN126 of the SYS board connected securely?
(4) Replace the SYS board cooling fan.
(5) Replace the SYS board.

6.2.18 Laser optical unit related service call

[CA10] Polygonal motor abnormality

Is the polygonal motor rotating? (Perform the output check: 03-103)

NO →
1. Check if the relay connector CN207 (28-pin connector) is almost disconnected.
2. Check if the connector (CN329) on the LGC board is disconnected.
3. Check if the connector pins are disconnected or the harnesses are open-circuited.
4. Check if the conductor pattern on the LGC board is short-circuited or open-circuited.
5. Replace the LGC board.
6. Replace the laser optical unit.

↓

YES

Is the printed image distorted or does an abnormal noise occur?

YES →
1. Check if the laser unit cooling fan (front) and the laser unit cooling fan (rear) have stopped.
   (Perform the output check: 03-437 for front side, 03-439 for rear side)
2. Check if the suction areas of the laser unit cooling fan (front) and the laser unit cooling fan (rear) are plugged up.
3. Check if the relay connector CN207 (28-pin connector) is almost disconnected.
4. Check if the connector (CN329) on the LGC board is almost disconnected.
5. Check if the harnesses are almost open circuited or the connector pins are almost disconnected.
6. Check if the conductor pattern on the LGC board is short circuited or open circuited.
7. Replace the laser optical unit.
8. Replace the LGC board.

↓

NO

Does an image control related/process related service call or an image failure occur?

NO →
1. Check if the laser unit cooling fan (front) and the laser unit cooling fan (rear) have stopped.
   (Perform the output check: 03-437 for the front side, 03-439 for the rear side)
2. Check if the suction areas of the laser unit cooling fan (front) and the laser unit cooling fan (rear) are clogged up.
3. Check if the relay connector CN207 (28-pin connector) is almost disconnected.
4. Check if the connector (CN329) on the LGC board is almost disconnected.
5. Check if the harnesses are open-circuited or the connector pins are almost disconnected.
6. Check if the conductor pattern on the LGC board is short-circuited or open-circuited.
7. Replace the laser optical unit.
8. Replace the LGC board.

↓

YES

Perform the troubleshooting procedures for when an image control related/process related service call or an image failure occurs.
Replace the laser optical unit.
Replace the LGC board.

[CA20] H-Sync detection error

Is the relay connector (CN212) disconnected or almost disconnected? (Are they locked with the latches?)

Is the harness between the LGC board (CN321) and the SNS board open circuited, broken or disconnected?

Is the cable between the LGC board (CN326) and the LDR board open circuited or broken?

Are the connectors (CN321 and CN326) on the LGC board disconnected?

| YES → 1. Reconnect the harness and the cable.

↓

NO

Has the contact terminal of the cable between the LGC board (CN326) and the LDR board come off?

| NO → 1. Replace the laser optical unit. between the power supply unit and the LGC board.

↓

YES

1. Check if the conductor pattern on the LGC board is open-circuited or short-circuited.
2. Check if the equipment is grounded.
3. Replace the laser optical unit.
4. Replace the LGC board.

[CF90] Laser optical unit shutter abnormality

1. Take off the left center cover so that the connector relay plate and the shutter motor can be seen.
2. Is the shutter motor working? (Perform the output check: 03-201).
   * If it is working properly, proceed to 10. If not, check 3 to 9 below.
3. Check if the shutter motor connector CN214 (2-pin connector) is disconnected.
4. Check if the connector CN218 (8-pin connector) on the connector relay plate is disconnected.
5. Check if the connector CN327 on the LGC board is disconnected.
6. Check if the connector pins are disconnected or the harnesses are open circuited.
7. Check if the conductor pattern on the LGC board is short circuited or open circuited.
8. Replace the shutter motor.
9. Replace the LGC board.
10. Is the shutter motor working and the shutter plate moving? (Perform the output check: 03-201)
    * If it is working properly, proceed to 14. If not, check 11 to 13 below.
11. Check if the shutter motor and the shutter crank are assembled correctly, or not damaged.
12. Check if the shutter plate is assembled correctly.
13. Check if the shutter plate contacts with any parts inside the machine.
14. Is the shutter motor working, and the shutter plate reciprocates one cycle to stop at its original position.
    * If it is working properly, proceed to 25. If not, check 15 to 24 below.
15. Perform the input check for the shutter detection sensor (Perform the input check: 03-[All OFF]/ [7]/[D] and /[E]).
16. Manually move the shutter to see that it is “opened” when the crank is in the front, and it is “closed” when the crank is in the back. Therefore, check if the sensor detects as described in the table below.

States	End detection	HP detection
Abnormal	H	H
Open	H	L
Close	L	H
Midstream	L	L

17. Check if the detection sensor is coming off of or lift off from the plate base.
18. Check if the connector of the shutter status detection sensor (CN216, CN217) are disconnected.
19. Check if the detection sensor cut-out part of the shutter plate is deformed.
20. Check if the connector (CN327) on the LGC board disconnected.
21. Check if the connector pins are disconnected or the harnesses are open-circuited.
22. Check if the conductor pattern on the LGC board is open-circuited or short-circuited.

23. Replace the shutter status detection sensor.
24. Replace the LGC board.
25. Take off the LSU and check if there is no foreign matter between the shutter plate and the LSU cover.
26. Check if the conductor pattern on the LGC board is open-circuited or short-circuited.
27. Check the LGC board.

[CA47] SNS board abnormality

(1) Is the relay connector CN212 (4-pin connector) disconnected or almost disconnected? (Are they locked with the latches?)
(2) Is the harness between the LGC board (CN327) and the SNS board open circuited, broken or disconnected?
(3) Check if the conductor pattern on the LGC board is short circuited or open circuited.
(4) Replace the LGC board.
(5) Replace the laser optical unit.

[CFA0] Media sensor output abnormality before paper reaching
[CFA1] Media sensor output abnormality during paper passing

(1) If these codes are recorded in the error history, the media sensor may have a malfunction. In this case check the following:
(2) Is the connector of the media sensor disconnected or is any harness open circuited?
(3) Are the arm of the media sensor and the bearing rollers operating properly?
(4) Is the media sensor adjusted correctly?
3.9.1Adjustment of the media sensor position
(5) If any abnormality was found in step 3 above or no abnormality was found in steps 2 and 4, replace the media sensor.

* Note that printing is available even if the media sensor is in a faulty condition. The functions that the media sensor usually performs are then carried out as follows:
If the media type of paper is set as plain paper, a media type (plain paper 1 or 2) set in advance in the code below will be used.
08-4599
0: Plain paper 1 1: Plain paper 2 (Factory default - JPD: 0, overseas: 1)
Media type setting checking function will be disabled.
Even if the media sensor is in a faulty condition, any message notifying this will not be appear.
Check the condition with the error history.

6.2.19 Finisher related service call

[CB00] Finisher not connected

[CB01] Finisher communication error

MJ-1103/1104

1. Check if the harness connecting the LGC board and the finisher controller PC board is disconnected or open circuited.
2. Check if the conductor pattern on the finisher controller PC board is open circuited or short circuited.
3. Update the firmware version of the finisher ROM.
4. Update the firmware version of the converter ROM.
5. Replace the finisher control PC board.
6. Check if the conductor pattern on the LGC board is open circuited or short circuited.
7. Replace the LGC board.

[CB10] Entrance motor abnormality

MJ-1103/1104

Is there any mechanical problem when the entrance roller is rotated?

↓ →YES Fix the mechanism.

NO

Is the harness between the entrance motor (M1) and the finisher control PC board (CN7) disconnected or open circuited?

↓ →YES • Reconnect the connector securely.
• Replace the harness.

NO

1. Replace the entrance motor (M1).
2. Replace the finisher control PC board.

[CB11] Buffer tray guide motor abnormality

*** You receive a [CB11] error when the [ED16] error occurs three times in succession.**

MJ-1103/1104

Is there any mechanical problem when the buffer tray guide is opened/closed while the buffer roller is lifted up?

↓ →YES Fix the mechanism.

NO

Is the harness between the buffer tray guide motor (M3) and the finisher control PC board (CN18) disconnected or open circuited?

↓ →YES • Reconnect the connector securely.
• Replace the harness.

NO

1. Replace the buffer tray guide motor (M3).
2. Replace the finisher control PC board.

[CB12] Buffer roller drive motor abnormality

MJ-1103/1104

Is there any mechanical problem when the buffer roller is rotated?

↓ →YES Fix the drive mechanism.

NO

Is the harness between the buffer roller drive motor (M6) and the finisher control PC board (CN18) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely.
- Replace the harness.

NO

1. Replace the buffer roller drive motor (M6).
2. Replace the finisher control PC board.

[CB13] Exit motor (M11) abnormality

Is there any mechanical problem when the exit roller is rotated?

↓ →YES Fix the mechanism.

NO

Is the harness between the exit motor (M11) and the CN13 of the finisher control PC board (FIN) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

1. Replace the exit motor (M11).
2. Replace the finisher control PC board (FIN).

[CB14] Paper pusher arm motor (M10) abnormality

Is there any mechanical problem when the paper pusher cam is rotated?

↓ →YES Fix the drive mechanism.

NO

Is the harness between the assist arm motor (M10) and the CN13 of the finisher control PC board (FIN) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

1. Replace the buffer roller drive motor (M10).
2. Replace the finisher control PC board (FIN).

[CB30] Movable tray shift motor abnormality

MJ-1103/1104

Is there any mechanical problem when the movable tray is moved?

↓ →YES Fix the mechanism.

NO

Is the harness between the movable tray shift motor (M7) and the finisher control PC board (CN8) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely.
- Replace the harness.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the movable tray position A, B, and C sensors (S13, S14, and S15)?

↓ →YES
- Replace the harness.
- Reinstall the sensor correctly.
- Replace the sensor.

NO

1. Replace the movable tray shift motor (M7).
2. Replace the finisher control PC board.

[CB31] Movable tray paper-full detection error

MJ-1103/1104

Is there any mechanical problem when the actuator of the movable tray paper-full detection sensor (S16) is moved?

↓ →YES Fix the mechanism.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the movable tray paper-full detection sensor (S16)?

↓ →YES
- Connect the connector securely.
- Reinstall the sensor correctly.
- Replace the sensor.

NO

Is the harness between the movable tray paper-full detection sensor (S16) and the finisher control PC board (CN12) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely.
- Replace the harness.

NO

Replace the finisher control PC board.

[CB40] Front alignment motor abnormality

*** You receive a [CB40] error when the [ED13] error occurs three times in succession.**

MJ-1103/1104

Is there any mechanical problem when the front alignment plate is moved?

↓ →YES Fix the mechanism.

NO

Is the harness between the front alignment motor (M9) and the finisher control PC board (CN10) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely.
- Replace the harness.

NO

Replace the front alignment motor (M9).

Replace the finisher control PC board.

[CB50] Stapler home position error

*** You receive a [CB50] error when the [EA50] error occurs three times in succession.**

MJ-1103/1104

Is the harness between the stapler and the finisher control PC board (CN2) disconnected or open circuited?

I →YES • Reconnect the connector securely.
↓ • Replace the harness.

NO

Are the harnesses in the stapler disconnected or open circuited?

I →YES • Reconnect the connector securely.
↓ • Replace the harness.

NO

Replace the finisher control PC board.

[CB51] Stapler shift home position error

MJ-1103/1104

Is there any mechanical problem when the stapler is moved?

↓ →YES Fix the mechanism.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the stapler unit home position sensor (S10)?

I →YES • Connect the connector securely.
I • Reinstall the sensor correctly.
↓ • Replace the sensor.

NO

Is the harness between the stapler unit home position sensor (S10) and the finisher control PC board (CN1) disconnected or open circuited?

I →YES • Reconnect the connector securely.
↓ • Replace the harness.

NO

Is the harness between the stapler unit shift motor (M4) and the finisher control PC board (CN5) disconnected or open circuited?

I →YES • Reconnect the connector securely.
↓ • Replace the harness.

NO

Replace the finisher control PC board.

[CB60] Stapler unit shift motor (M9) abnormality

Is there any mechanical problem when the stapler is moved?

↓ →YES Fix the mechanism.

NO

Is the harness between the stapler unit shift motor (M9) and the CN10 of the finisher control PC board (FIN) disconnected or open circuited?

I →YES • Reconnect the connector securely if there is any disconnection.
↓ • Replace the harness if open circuited.

NO

1. Replace the stapler unit shift motor (M9).
2. Replace the finisher control PC board (FIN).

[CB80] RAM abnormality

MJ-1103/1104

Is the error recovered when the power of the equipment is turned OFF and then back ON?

↓ →YES End.

NO

Replace the finisher control PC board.

[CB81] Flash ROM abnormality

MJ-1103/1104

Is the error recovered when the power of the equipment is turned OFF and then back ON?

↓ →YES End.

NO

1. Check if the conductor pattern on the finisher controller PC board is open circuited or short circuited.
2. Replace the finisher control PC board.

[CB82] Finisher main program error

1. Update the firmware version of the finisher control PC board (FIN).
2. Replace the finisher control PC board (FIN).

[CB83] Saddle main program error

1. Update the firmware version of the saddle control PC board (ADL).
2. Replace the saddle control PC board (SDL).

[CB84] Punch unit main program error

Is the firmware version of the PNC board (HP) latest?

↓ →YES Update the firmware of the PNC board (HP).

NO

Replace the hole punch control PC board (HP).

[CB91] Saddle flash ROM abnormality

Is the error recovered when the power of the equipment is turned OFF and then back ON?

↓ →YES End.

NO

1. Check if the conductor pattern on the saddle controller PC board (SDL) is open circuited or short circuited.
2. Replace the saddle control PC board (SDL).

[CB92] Saddle RAM abnormality

Is the error recovered when the power of the equipment is turned OFF and then back ON?

↓ →YES End.

NO

Replace the Saddle control PC board (SDL).

[CB93] Saddle Stitch Finisher additional folding motor (M20) abnormality

***The [CB93] error also occurs when the error [EF18] has occurred consecutively for 3 times.**

Is there any mechanical problem when the additional folding carrier is moved?

↓ →YES Fix the mechanism.

NO

Is the harness between the additional folding motor (M20) and the CN18 of the saddle control PC board (SDL) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

1. Replace the additional folding motor (M20).
2. Replace the saddle control PC board (SDL).

[CB94] Saddle transport motor (M16) abnormality

*** The [CB94] error also occurs when the error [EAB0] or [EF13] has occurred consecutively for 3 times.**

Is there any mechanical problem when the transport rollers are rotated?

↓ →YES Fix the mechanism.

NO

Is the harness between the saddle transport motor (M16) and the CN18 of the saddle control PC board (SDL) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

1. Replace the saddle transport motor (M16).
2. Replace the saddle control PC board (SDL).

[CB95] Saddle Stitch Finisher stacker motor (M14) abnormality

***The [CB95] error also occurs when the error [EF16] has occurred consecutively for 3 times.**

Is there any mechanical problem when the stacker carrier is moved?

↓ →YES Fix the mechanism.

NO

Is the harness between the stacker motor (M14) and the CN4 of the saddle control PC board (SDL) disconnected or open circuited?

↓ →YES
- Reconnect the connector securely if there is any disconnection.
- Replace the harness if open circuited.

NO

Replace the saddle control PC board (SDL).

[CBA0] Stitch motor (front) abnormality

[CBB0] Stitch motor (rear) abnormality

MJ-1103/1104

Are the front and rear stitchers and their stands installed properly?

↓ NO → Install them properly.

YES

Are the stitcher home position switches (SW7/SW5) and stitcher motors (M7/M6) on the front and rear stitchers working normally?

↓ NO → Replace the front or rear stitcher.

YES

Replace the saddle stitcher controller PC board.

[CBC0] Alignment motor abnormality

MJ-1103/1104

Is the alignment plate home position sensor (PI5) working normally?

↓ NO → Replace the sensor.

YES

Is the alignment plate drive mechanism normal?

↓ NO → Fix the mechanism.

YES

1. Replace the alignment motor (M5).
2. Replace the saddle stitcher controller PC board.

[CBE0] Paper folding motor abnormality

MJ-1103/1104

Are the paper folding motor clock sensor (PI4) and paper folding home position sensor (PI21) working normally?

↓ NO → Replace the sensors.

YES

Is the paper folding roller drive mechanism normal?

↓ NO → Fix the mechanism.

YES

1. Replacing the paper folding motor (M2).
2. Replace the saddle stitcher controller PC board.

[CC20] Communication error between finisher and saddle stitcher

MJ-1103/1104

Is the problem solved by turning OFF and ON the power switch of the equipment?

↓ YES→ End.

NO

Is the wiring between the finisher controller PC board and the saddle stitcher controller PC board connected?

↓ NO → Connect the wiring.

YES

1. Replace the finisher controller PC board.
2. Replace the saddle stitcher controller PC board.

[CC30] Stack transport motor abnormality

*** You receive a [CC30] error when the [EA70] error occurs three times in succession.**

MJ-1103/1104

Is there any mechanical problem when the stack transport belt is moved?

↓ →YES Fix the mechanism.

NO

Is the harness between the stack transport motor (M5) and the finisher control PC board (CN10) disconnected or open circuited?

↓ →YES • Reconnect the connector securely.
• Replace the harness.

NO

1. Replace the stack transport motor (M5).
2. Replace the finisher control PC board.

[CC31] Transport motor abnormality

*** You receive a [CC31] error when the [ED12] error occurs three times in succession.**

MJ-1103/1104

Is there any mechanical problem when the stack transport roller -1 and -2 are rotated?

↓ →YES Fix the mechanism.

NO

Is the harness between the transport motor (M2) and the finisher control PC board (CN5) disconnected or open circuited?

↓ →YES • Reconnect the connector securely.
• Replace the harness.

NO

1. Replace the transport motor (M2).
2. Replace the finisher control PC board.

[CC41] Paper holder cam home position abnormality

MJ-1103/1104

Is there any mechanical problem when the paper holder cam is rotated?

↓ →YES Fix the mechanism.

NO

Is the harness between the paper holder home position sensor (S6) and the finisher control PC board (CN17) disconnected or open circuited?

↓ →YES • Reconnect the connector securely.
• Replace the harness.

NO

1. Replace the paper holder home position sensor (S6).
2. Replace the finisher control PC board.

[CC51] Sideways adjustment motor (M2) abnormality

*** The [CC51] error will be displays when the [ED11] error occurs three times in succession or during the initial operation.**

MJ-1103/1104 (When MJ-6102 is installed)

Is there any paper remaining on the transport path?

↓ →YES Remove the paper.

NO

Rotate the sideways adjustment motor (M2). Does it rotate smoothly?

↓ →NO Fix the mechanism.

YES

Are the sideways deviation home position sensor (S3) and its wiring correct?

↓ →NO Replace the sensor. Correct the wiring.

YES

Is the wiring between the hole punch control PC board (HP) and sideways adjustment motor (M2) correct?

↓ →NO Correct the wiring.

YES

1. Replace the punch sideways adjustment motor (M2).
2. Replace the hole punch control PC board (HP).

[CC52] Skew adjustment motor (M1) abnormality

*** The [CC52] error will be displays when the [ED10] error occurs three times in succession or during the initial operation.**

MJ-1103/1104 (When MJ-6102 is installed)

Is there any paper remaining on the transport path?

↓ →YES Remove the paper.

NO

Rotate the skew adjustment motor (M1). Does it rotate smoothly?

↓ →NO Fix the mechanism.

YES

Are the skew home position sensor (S2) and its wiring correct?

↓ →NO Replace the sensor. Correct the wiring.

YES

Is the wiring between the hole punch control PC board (HP) and skew adjustment motor (M1) correct?

↓ →NO Correct the wiring.

YES

1. Replace the skew adjustment motor (M1).
2. Replace the hole punch control PC board (HP).

[CC60] Punch motor abnormality

MJ-1103/1104 (when MJ-6102 is installed)

Are the punch home position sensor (PI63) and punch motor clock sensor (PI62) working normally?

↓ NO → Replace the sensors.

YES

Is the wiring between the sensors and finisher controller PC board correct?

↓ NO → Correct the wiring.

YES

Is the punching mechanism normal?

↓ NO → Fix the mechanism.

YES

1. Replace the punch motor (M61).
2. Replace the punch controller PC board.
3. Replace the finisher controller PC board.

[CC61] Punch motor (M3) home position detection error

*** The [CC61] error will be displays when the [E9F0] error occurs three times in succession or during the initial operation.**

MJ-1103/1104 (When MJ-6102 is installed)

Is there any paper remaining on the transport path?

↓ →YES Remove the paper.

NO

Rotate the punch motor (M3). Does it rotate smoothly?

↓ →NO Fix the mechanism.

YES

Are the punch home position sensor (S4) and its wiring correct?

↓ →NO Replace the sensor. Correct the wiring.

YES

Is the wiring between the hole punch control PC board (HP) and punch motor (M3) correct?

↓ →NO Correct the wiring.

YES

1. Replace the punch motor (M3).
2. Replace the hole punch control PC board (HP).

[CC71] Punch ROM checksum error

[CC72] Punch RAM read/write error

[CC73] Punching device power supply abnormality

[CC74] Transport pulse abnormality

[CE00] Punch communication error

Download the latest version of the PNC board (HP) firmware again and then check its operation.

↓

NO

Replace the hole punch control PC board (HP).

[CC80] Rear alignment motor abnormality

*** You receive a [CC80] error when the [ED14] error occurs three times in succession.**

MJ-1103/1104

Is there any mechanical problem when the rear alignment plate is moved?

↓ →YES Fix the mechanism.

NO

Is the harness between the rear alignment motor (M10) and the finisher control PC board (CN10) disconnected or open circuited?

↓ →YES • Reconnect the connector securely.
• Replace the harness.

NO

1. Replace the rear alignment motor (M10).
2. Replace the finisher control PC board.

[CDE0] Paddle motor abnormality

*** You receive a [CDE0] error when the [ED15] error occurs three times in succession or during the initial operation.**

MJ-1103/1104

Is there any mechanical problem with the paddle is rotated?

↓ →YES Fix the mechanism.

NO

Is the harness between the paddle motor (M8) and the finisher control PC board (CN6) disconnected or open circuited?

↓ →YES • Reconnect the connector securely.
• Replace the harness.

NO

1. Replace the paddle motor (M8).
2. Replace the finisher control PC board.

[CE00] Punch communication error

MJ-1103/1104 (When MJ-6102 is installed)

Is the harness between the hole punch control PC board (HP) and the finisher control PC board disconnected or open circuited?

↓ →YES Replace the harness. Correct the wiring.

NO

Is the conductor pattern on the hole punch control PC board (HP) open circuited or short circuited?

↓ →YES Replace the hole punch control PC board (HP).

NO

Replace the finisher control PC board.

[CF10] Communication module SRAM reading failure

MJ-1103/1104

1. Is the error recovered when the power of the equipment is turned OFF and then back ON?
2. Check if the MJ-1103/1104 is set as the specified finisher on the equipment.
3. Check if the harness connecting the LGC board and the finisher controller PC board is disconnected or open circuited.
4. Check if the conductor pattern on the LGC board is open circuited or short circuited.
5. Check if the conductor pattern on the finisher controller PC board is open circuited or short circuited.
6. Replace the LGC board.
7. Replace the finisher control PC board.

MJ-1103/1104 (When MJ-6102 is installed)

1. Is the error recovered when the power of the equipment is turned OFF and then back ON?
2. Check if the MJ-1103/1104 is set as the specified finisher on the equipment.
3. Check if the harness connecting the LGC board and the finisher controller PC board is disconnected or open circuited.
4. Check if the harness connecting the hole punch control PC board and the finisher control PC board is disconnected or open circuited.
5. Check if the conductor pattern on the LGC board is open circuited or short circuited.
6. Check if the conductor pattern on the finisher controller PC board is open circuited or short circuited.
7. Check if the conductor pattern on the hole punch control PC board is open circuited or short circuited.
8. Replace the LGC board.
9. Replace the finisher control PC board.
10. Replace the hole punch control PC board.

6.2.20 Image control related service call

(1) Based on the procedure of [CE10], [CE20] and [CE40] described below, check the status and take appropriate actions. And then perform the forced performing of image quality control initialization to the following procedure.

1. While pressing [0] and [5] simultaneously, turn ON the power.
2. Key in [396], and then press the [START] button. Confirm that the image quality control has finished normally.

(2) After confirming the items in (1), clear the abnormal detection counter of image quality control.

1. While pressing [0] and [8] simultaneously, turn ON the power.
2. Key in [573], and then press the [START] button.
3. Rewrite the displayed status counter from “1” - “16” to “0”, and then press the [ENTER] or [INTERRUPT] button.
4. Key in [574], and then press the [START] button.
5. Rewrite the displayed status counter from “1” - “16” to “0”, and then press the [ENTER] or [INTERRUPT] button.
6. Key in [575], and then press the [START] button.
7. Rewrite the displayed status counter from “1” - “16” to “0”, and then press the [ENTER] or [INTERRUPT] button.
8. Key in [576], and then press the [START] button.
9. Rewrite the displayed status counter from “1” - “16” to “0”, and then press the [ENTER] or [INTERRUPT] button.
10. Turn the power OFF and then back ON. Make sure that the equipment enters the normal ready state.

[CA00] Image position alignment abnormality

< Invalidating image position alignment control >

(1) Turn the power ON while [0] and [8] are pressed simultaneously.
(2) Key in “4546”, then press the [START] button. (08-4546: Position adjustment control / Mode setting)
(3) Set the value to “0” (not performed automatically).
(4) Turn the power OFF.

< Checking the abnormal status on image position alignment >

(5) Turn the power ON while [0] and [5] are pressed simultaneously.
(6) Key in “4720”, then press the [START] button.
(7) Press the [START] button again, then check the displayed value. (05-4720-0: Displaying the cause of image position alignment detection error front and rear sides.)

When the error [CA00] occurs, the value between 1 and 255 is displayed. (0: Detection normality on the front and rear sides)
(The statues of total 8 sections (4 colors on the front and rear sides) are displayed.)
1 : Y on the rear side detection abnormality (*1)
2 : Y on the front side detection abnormality (*1)
3 : Y on the front and rear sides detection abnormality
4 : M on the rear side detection abnormality (*1)
8 : M on the front side detection abnormality (*1)
12 : M on the front and rear sides detection abnormality
16 : C on the rear side detection abnormality (*1)
32 : C on the front side detection abnormality (*1)
48 : C on the front and rear sides detection abnormality)
64 : K on the rear side detection abnormality (*1)
85 : All colors on the rear side detection abnormality -> (I)
128: K on the front side detection abnormality (*1)
170: All colors on the front side detection abnormality -> (I)
192: K on the front and rear sides detection abnormality
255: All colors on the front and rear sides detection abnormality -> (I)
Other than the above: Multiple colors detection abnormality

(*2) The adjustment value is the sum of (*1), which, as in the example below, specifies the cause of the detection abnormality.
(E.g. 1) 05-4720-0 --- in case of 72
72 = 64 + 8
-> K on the rear side / M on the front side detection abnormality
(E.g. 2) 05-4720-0 --- in case of 146
146 = 128 + 18 = 128 + 16 + 2
-> K on the front side / C on the rear side / Y on the front side detection abnormality

(8) Press the [START] button.
(9) After [1] is pressed, then press the [START] button.

(10) Check the displayed value. (05-4720-1: Displaying the cause of image position alignment detection error center side.)

When the error [CA00] occurs, the value between 1 and 85 is displayed. (0: Detection normality on the center side)
(The statues of total 4 sections (4 colors on the front and rear sides) are displayed.)
1 : Y on the center side detection abnormality (*3)
4 : M on the center side detection abnormality (*3)
16 : C on the center side detection abnormality (*3)
64 : K on the center side detection abnormality (*3)
85 : All colors on the center side detection abnormality -> (I)
Other than the above: Multiple colors detection abnormality

(*4) The adjustment value is the sum of (*3), which, as in the example below, specifies the cause of the detection abnormality.
(E.g. 1) 05-4720-0 --- in case of 65
65 = 64 + 1
-> K on the rear side / Y on the front side detection abnormality

(11) If the adjustment value fits (I) in step 7 or 10, proceed to step (12). In other cases, proceed to step (30).

< Checking the status of the image position aligning sensor >
Check if the light emitting area of the image position aligning sensor emits LEDs and if the reflected lights on the transfer belt surface are detected by the light receiving area of the image position aligning sensor.

(12) Turn the power ON while [0] and [3] are pressed simultaneously.
(13) Press the [START] button.
(14) Check how items [G] and [H] are displayed while [8] is pressed.
(15) Check how items [G] is displayed while [9] is pressed.
(16) Press the [CLEAR] button.
(17) Key in “118”, then press the [START] button. (03-118: Sensor shutter is opened)
(18) Key in “117”, then press the [START] button. (03-117: Image position aligning sensor / LED ON)
(19) Press the [START] button.
(20) Check how items [G] and [H] are displayed while [8] is pressed.
(21) Compare them with the statues of [G] and [H] displayed in step 10.

Both [G] and [H] are changed	-	The image position aligning sensors on both sides are operating normally.
[G] remains same	-	The image position aligning sensor on the rear side is not operating normally.
[H] remains same	-	The image position aligning sensor on the front side is not operating normally.
Both [G] and [H] remain same	-	The image position aligning sensors on both sides are not operating normally.

(22) Check how item [G] is displayed while [9] is pressed.
(23) Compare it with the statue of [G] displayed in step 15.

[G] is changed	-	The image position aligning sensor on the center side is not operating normally.
[H] remains same	-	The image position aligning sensor on the center side is not operating normally.

(24) Press the [CLEAR] button.
(25) Key in “167”, then press the [START] button. (03-167: Image position aligning sensor / LED OFF)
(26) Key in “168”, then press the [START] button. (03-168: Sensor shutter closed)
(27) Turn the power OFF.
(28) If the image position aligning sensors on all sides are operating normally, proceed to step (30). In other cases, proceed to step (29).
(29) Check the following items if the image position aligning sensors are not operating normally:

Is the connector CN337 on the LGC board disconnected?
Is the connector of the image position aligning sensor disconnected?
Is the harness between the LGC board and the image position aligning sensor broken?
Is the light emitting or receiving area of the image position aligning sensor stained with toner?
Are the sensor shutter and the image quality sensor opening or closing normally? Or are they damaged?
Is the light emitting area of the image position aligning sensor emitting LEDs?

< Checking procedure for the sensor shutter opening/closing status >
1. Take off the transfer belt unit so that the sensor unit can be seen.
2. Turn the power ON while [0] and [3] are pressed simultaneously.
3. The shutter should be opened when “118” is keyed in. It should be closed when “168” is keyed in.

< Checking procedure for the LED emission of the image position aligning sensor >
1. Key in “118” to open the sensor shutter.
2. The light emitting area of the sensor should emit LEDs when “117” is keyed in.

Abnormal→
1. Reconnect the connector.
2. Replace the harness.
3. Clean the light emitting and receiving areas of the image position aligning sensor.
4. If the sensor shutter is damaged, replace it.
   If the sensor shutter solenoid is not operating normally, replace the solenoid.

↓

Proceed to step (12).

↓

Normal (Proceed to step (30).)

6

< Checking with test pattern >

(30) Turn the power ON while [0] and [4] are pressed simultaneously.
(31) Key in “220”, then press the [START] button.
(32) Select “C”, “M”, “Y” or “K”, then press the [START] button.
(33) Press the [CLEAR] button after one sheet of test pattern has been exited.
(34) Check if the printed image of the test pattern in each color contains difference in density on its front, center and rear sides, or if there is any image trouble in a whole image.

Is the test pattern printed in blank?

Abnormal→ Check if the laser shutter is operating normally.
< Checking procedure for the laser shutter opening/closing status >
1. Take off the developer unit so that the laser shutter can be seen.
* Clean around the laser shutter if the toner or developer material is spilled over.
2. Turn the power ON while [0] and [3] are pressed simultaneously.
3. Key in “201”. (03-201: Laser shutter opening/closing status)
4. Press the [START] button and check if the shutter is opened and then closed (reciprocating 1cycle).

Abnormal→ If the laser shutter is not opening or closing normally, check the shutter and correct it if necessary.

↓

Proceed to step (30).

↓

Normal

Is the image of the test pattern printed normally without any difference in density on its front, center and rear sides?

NO→
1. Check the contacting status of the transfer belt and the photoconductive drum.
2. Check the amount of the developer material. (Check if the developer material is supplied on the developer sleeve.)

↓ ↓

YES ↓

Is the image printed normally without yellow, magenta, cyan or black streaks in the secondary scanning direction?

NO→ Check if the main charger wire corresponding to the color of the streaks is stained.

↓ ↓

YES ↓

Is the image printed normally without white streaks in the secondary scanning direction?

NO→ Check if the slit glass of the laser optical unit is stained.

↓ ↓

YES ↓

Is a certain color in the printed image turned to black solid?

Abnormal→
- Abnormality in the main high-voltage transformer corresponding to the color or abnormality in the laser optical unit.
- Replace one of 4 main high-voltage transformers which possibly contains abnormality, and also the one possibly normal. Then print the same test pattern.
- If the color which turned into black solid changes along with the replacement of the main high-voltage transformer, this main high-voltage transformer is defined as abnormal.
- If the color which turned into black solid does not change, check if the harness between the LGC board and the main high-voltage transformer is broken or if the power is sufficiently supplied to the main charger (breaking of the high-voltage harness or connection defect). If no problem is found, check the laser optical unit.

↓

Normal

↓

<u>If the density level is low on all of the sides, is the image printed normally in cases other than noted above?</u>

NO→ Check the following items:

1. Check if the photoconductive drum and the transfer belt are rotating. If not, correct their mechanism.
2. Check if there are abnormal stain, large breaking or scratches on the transfer belt surface.
3. Check if the connector of the transfer transformer is disconnected.
4. Check if the high-voltage harnesses of the main high-voltage transformer and the transfer transformer are disconnected.
5. Check if the harness between the LGC board and the transfer transformer is broken.
6. Check if the high-voltage joints of the transfer belt unit are securely contacted or if they are not stained.
7. Check if the high-voltage harness is broken.
8. Check if the connector of the main high-voltage transformer is disconnected.
9. Check if the harness between the LGC board and the main high-voltage transformer is broken.
10. Replace the transfer transformer.
11. Replace the main high-voltage transformer.

↓

YES

↓

Proceed to step (30).

(Proceed to step (35).)

< Checking with the enforced image position adjustment >

(35) Turn the power ON while [0] and [5] are pressed simultaneously.
(36) Key in “4719”, then press the [START] button. (05-4719: Enforced position adjustment)
Does the error [CA00] occur during the position adjustment control?
↓ YES→ Proceed to step (5).
NO (Proceed to step (30).)

< Validating the image position alignment control >
Check the operation and correct if necessary. Then be sure to perform the following:

(37) Turn the power ON while [0] and [8] are pressed simultaneously.
(38) Key in “4546”, then press the [START] button. (08-4546: Position adjustment control / Mode setting)
(39) Set the value to “5” (performed automatically).
(40) Turn the power OFF.

<Checking the image position aligning sensor>

(41) Clean the image position aligning sensor (S20/S21/S22).

<Checking the power supply>

(42) Check if any of the springs for supplying power to the transfer belt unit is deformed. Replace the spring if it is deformed.

[CE10] Image quality sensor abnormality (OFF level)

Is the connector of the image quality sensor, or the connector CN307 on the LGC board disconnected?
Is the harness between the LGC board and the image quality sensor, or the harness between the LGC board and the switching regulator open circuited?
↓ YES→ Connect the connector securely. Replace the harness.
NO
Is the output voltage from the 12V-power supply normal?
↓ NO → Check the power supply system and replace the switching regulator.
YES
1. Replace the image quality sensor.
2. Replace the LGC board.

[CE20] Image quality sensor abnormality

Is the transfer belt or the transfer belt unit securely installed?
Are there any abnormal stains (cleaning defects), large scratches or breaking on the transfer belt surface?
Are the drum and the transfer belt rotating?

NO→ <Checking procedure>

1. Check if the transfer belt unit is securely installed. Correct it if not.
2. Check if any toner image remains on the transfer belt surface.
   If any, check the installation status of the TBU cleaner unit. If there is any abnormality, correct it, and clean the transfer belt.
3. Check if the drum and the transfer belt are properly operated.
   (ON: 03-101 / OFF: 03-151)
   If they are not rotating normally, check if their drive gears are damaged or if they contact the equipment. Correct it if needed.

↓

Proceed to step (6). (to step (1) for the second time)

YES

Is the sensor shutter of the image quality sensor opening or closing normally? Or is it damaged?
Is the sensor surface of the image quality sensor stained with toner? If so, has it been cleaned?

NO → <Checking procedure>

1. Take off the transfer belt unit so that you can see the sensor unit.
2. Check if the sensor shutter is opening or closing normally.
   (Opening: 03-118 / Closing: 03-168)
   If the sensor shutter is not opening or closing, check if it is damaged or there is any abnormality in the sensor shutter solenoid.
   Check the connector and the harness between the sensor shutter solenoid and the LGC board. (LGC CN307-A7pin, A8pin)
3. Slide the sensor shutter so that the sensor surface can be seen.
4. Clean the sensor surface with a cotton swab or a soft cloth.
5. Clean the area around the sensor (e.g.: sensor shutter) if it is stained, so that the sensor surface does not become dirty.

↓

Proceed to step (6). (to step (1) for the second time)

YES

Is the connector of the image quality sensor securely connected?
Is the connector CN307 on the LGC board securely connected?
Is the harness between the LGC board and the image quality sensor disconnected?

NO → <Checking procedure>

- Reconnect the connector.
- Replace the harness.

↓

Proceed to step (6). (to step (1) for the second time)

YES

Is +12V power supply voltage normally supplied to the image quality sensor?
Is +12V voltage normally output by the CN301-9pin on the LGC board?

NO → <Checking procedure>

1. Check if +12V voltage is output by the switching regulator (PS-ACC CN404-7pin).
2. Check if +12V voltage is output by the CN301-9pin on the LGC board.
   Check if the supply harness between the switching regulator and the LGC board is open circuited, damaged or disconnected.

↓

Proceed to step (6). (to step (1) for the second time)

YES

(1) Set the values of “Image quality closed-loop control / Contrast voltage (08-556)” and “Drum surface potential sensor control setting (08-2561)” to “0” (Invalid).

↓

(2) Perform “Enforced performing of image quality open-loop control (05-394)”.

↓

(3) Output the image quality control test pattern (04-270) more than one time and the list print ([9][START]) in the adjustment mode (05), and then check if the image is normal.

Normal	Abnormal
	Abnormal image: Blank print, Solid print, White banding, Color banding, White spots, Poor transfer, Uneven image density, Faded image (low density), Uneven light distribution, Blotched image. * Blank print: including when one of the YMCK colors is not printed. ↓ Correct the abnormal image. ↓
↓	Proceed to step (5).

(4) Replace the image quality sensor or the LGC board.

↓

(5) Set the values of “Image quality closed-loop control / Contrast voltage (08-556)” and “Drum surface potential sensor control setting (08-2561)” to “1” (Valid).

↓

(6) Perform “Automatic initialization of image quality control (05-396)” and make sure it is completed normally. (Error [CE10], [CE20] and [CE40] do not appear.) Then perform “Automatic gamma adjustment”.

| When an error occurs:
↓
Check and correct it accordingly.

(7) Reset all of the values in the codes “Abnormality detection count (Y/M/C/K) Display/0 clearing (08-573 to 08-576)”.

[CE40] Image quality control test pattern abnormality

(1) Use “Image quality control abnormal detection counter Y to K display/0 clearing (08-573 to 576)” to check the abnormal occurring condition for each color.

(2) Check “Output value display of image quality sensor / High-density pattern (05-390-0 to 3)” to check if the high-density pattern abnormality occurs for each color and identify the color which pattern is abnormal. If the value is 628 or above, it is defined as high-density pattern abnormality.

- Under 628 (Y, M, C and K) ↓
- 628 or above (Y, M, C and K) ↓

High-density pattern abnormality

- Check if the laser shutter is working properly.
  <Procedure>
  1. Take off the process unit so that the laser shutter can be easily seen.
  * Clean around the laser shutter if the developer has been spilled over.
  2. While pressing the digital keys [0] and [3] simultaneously, turn the power ON.
  3. Key in “201”.
  4. Press the [START] button and check if the shutter is opened and then closed (reciprocating 1cycle).
- Check if the developer unit has been installed properly.

1. Visually check the installation status of the developer unit, and correct it if there is any abnormality.

↓

To (8)
(If you have already performed this checking cycle once, proceed to step (3).)

(3) Set the values of “Image quality closed-loop control / Contrast voltage (08-556)” and “Drum surface potential sensor control setting (08-2561)” to “0” (Invalid).

(4) Perform “Enforced performing of image quality open-loop control (05-394)”.

(5) Output the image quality control test pattern (04-270) more than one time and the list print ([9][START]) in the adjustment mode (05), and check the patch of the color identified in step (1) to see if the image is abnormal.

- Normal ↓
- Abnormal

Abnormal image:
Blank print, Solid print, White banding, Color banding, White spots, Poor transfer, Uneven image density, Faded image (low density), Uneven light distribution, Blotched image.

* Blank print: including when one of the YMCK colors is not printed.

↓

Correct the abnormal image.

↓

Proceed to step (7).

(6) Replace the image quality sensor or LGC board.

(7) Set the values of “Image quality closed-loop control / Contrast voltage (08-556)” and “Image quality closed-loop control / Laser power (08-557)” to “1” (Valid).

(8) Perform “Automatic initialization of image quality control (05-396)” and make sure it is completed normally. (Error [CE40] does not appear.) Then perform “Automatic gamma adjustment”.

| | When an error occurs:
| ↓
↓ Check and correct it accordingly.

(9) Clear all “Image quality control abnormal detection counter Y to K display/0 clearing (08-573 to 576)”.

(10) Check if any of the springs for supplying power to the transfer belt unit is deformed. Replace the spring if it is deformed.

[CE41] Image quality TRC control test pattern abnormality

Notes:

1. Steps 1 and 2 are usable only for models to which T430SY0*115, T430HD0*115 or a later version is applied.
2. Note that steps 1 and 2 have different subcodes to be entered.

(1) Check each value of the subcodes 2 (Y), 5 (M), 8 (C) and 11 (K) of the code 05-2803.

* If all the values of Y, M, C and K are 628 or less, proceed to step 2. If any of them is over 628, follow the procedure below.
(High density pattern abnormality)

(1)-1 Set both values of the codes 08-2600 and 08-8103 to 0.

(1)-2 Print the test chart 04-270 with A3/LD for more than 2 pages. Then perform list printing ([9]+[START]) to check if no abnormality is found in the image density.
If any abnormality is found, correct it referring to "25.5 Troubleshooting for the Image"

(1)-3 .Check if the process unit (EPU tray) and the developer unit are installed properly.

(1)-4 Check if any toner or developer material is spilt around the laser shutter. Clean if so.

(1)-5 Check the center position adjustment for each drawer is within the range preset at the shipment (rear side: 0-3 mm).
📖 P.3-92 "[B] Adjustment of the gear holder"

(1)-6 Adjust the image dimension with A3/LD.
📖 P.3-16 "[A] Reproduction ratio of primary scanning direction (Image clock fine adjustment (Printer))"
📖 P.3-17 "[B] Primary scanning data laser writing start position (Laser writing start position (Printer))"

(1)-7 Return both values of the codes 08-2600 and 08-8103 to 1. Then proceed to step 3. If it is the second time, proceed to step 4.

(2) Check each value of the subcodes 0 (Y), 3 (M), 6 (C) and 9 (K) of the code 05-2800.

* If all the values of Y, M, C and K are 180 or over, proceed to step 3. If any of them is less than 180, follow the procedure below.
(Low density pattern abnormality)

(2)-1 Set both values of the codes 08-2600 and 08-8103 to 0.

(2)-2 Print the test chart 04-270 with A3/LD for more than 2 pages. Then perform list printing ([9]+[START]) to check that no abnormality is found in the image density.
If any abnormality is found, correct it referring to 📖 Service Manual “6.4 Troubleshooting for the Image”"

(2)-3 Return both values of the codes 08-2600 and 08-8103 to 1. Then proceed to step 3. If it is the second time, proceed to step 4.

(3) Perform the automatic gamma adjustment. If the adjustment is normally finished, this is the end of the procedure. If the error CE41 still occurs, repeat the procedure from step 1.
(4) Check if the harness between the connector CN423 on the IMG board and the connector CN319 on the LGC board is disconnected or open circuited. Correct if so.
(5) Check if the harness between the connector CN424 on the IMG board and the connector CN320 on the LGC board is disconnected or open circuited. Correct if so.
(6) Check if the conductor patterns on the IMG board and the LGC board are short circuited or open circuited.
(7) If no abnormality is found in steps 4 to 6 above, replace the IMG board.
(8) Perform automatic gamma adjustment. If the adjustment is normally finished, this is the end of the procedure. If the error CE41 still occurs, proceed to step 9.
(9) Reinstall the removed IMG board and then replace the LGC board.
* Perform automatic gamma adjustment after the board is replaced.

[CE42] Image quality TRC control test pattern abnormality (EFI printer board)

(1) Check if the connector between CN135 of the SYS board and CN422 of the IMG board is connected securely.
(2) Check if the harness or connector between CN116 and CN132 of the SYS board and the HDD is disconnected or open circuited. Correct if it is.
(3) Format the HDD. (Key in “2” in the code 08-690.)
(4) Replace the HDD.
(5) Replace the SYS board.

[CE50] Temperature/humidity sensor abnormality

Is the connector CN310 on the LGC board or the connector of the temperature/humidity sensor disconnected?
Is the harness between the LGC board and the temperature/humidity sensor disconnected?
↓ YES→ Connect the connector securely. Replace the harness.
NO
1. Replace the temperature/humidity sensor.
2. Replace the LGC board.

[CE60] Drum thermistor Y abnormal
[CE90] Drum thermistor K abnormal

(1) Check if there is any abnormality on the connector between the equipment and the EPU tray of the process unit. (05-2788)
(2) Is the harness between the LGC board and the drawer connector for developer unit disconnected?
(3) Is the harness inside of the developer unit and the harness of the drum thermistor Y or K disconnected?
(4) Is the connector CN341 on the LGC board, or the connector of the drum thermistor Y or K disconnected?
(5) Replace the drum thermistor Y or K.
(6) Replace the EPU board.
(7) Replace the LGC board.

[CE71] Drum phase adjustment abnormality

(1) Is the drum shaft rotating normally? (Perform the output check: 03-110 and 03-111)
(2) Check if the harness or connector of the color drum phase sensor or the K drum phase senor is disconnected or open-circuited.
(3) Is the drum loaded abnormally?
(4) Is the drum motor (K)/(YMC) broken?
(5) Check if the harness or connector of the drum motor (K)/(YMC) is disconnected or open-circuited.
(6) Check if the tooth surface of the transfer belt drive gear is damaged.

6.2.21 Copy process related service call

[C021] Developer unit motor-YMC locking error

(1) Pull out the EPU tray and perform the output check (03-113) to check if the 3 outputs of the YMC-developer sleeve and 3 outputs of the drum cleaner auger are rotating normally.
When it is not rotating
(2) Check if the connector of the YMC-developer unit motor is connected securely.
(3) Check if the harness or connector of the drum motor (K)/(YMC) is disconnected or open-circuited.
(4) Check if the YMC-developer unit motor is abnormal.
(5) Check if the column of the drive gears has any abnormality such as damage.
When it is rotating
(6) Check if waste toner is clogged on the waste toner transport path of the YMC-drum cleaner.
(7) Check if the developer material is excessively supplied to each YMC-developer unit.
(8) Check if the drive gear array of each YMC-developer unit has any abnormality such as breakage.

[C022] Developer unit mixer motor-YMC locking error

(1) Pull out the EPU tray and perform the output check (03-115) to check if the 3 outputs of the YMC-developer unit mixer are rotating normally.
When it is not rotating
(2) Is the connector of the YMC-developer unit mixer motor connected securely?
(3) Check if the harness or connector of the YMC-drum motor is disconnected or open-circuited.
(4) Check if the YMC-developer unit mixer motor is abnormal.
(5) Check if the drive gear array has any abnormality such as breakage.
When it is rotating
(6) Check if developer material is excessively supplied to each YMC-developer unit.
(7) Check if the drive gear array of each YMC-developer unit has any abnormality such as breakage.

[C023] Developer unit motor-K locking error

(1) Pull out the EPU tray and perform the output check (03-113) to check if the 3 outputs of the K-developer sleeve and 3 outputs of the drum cleaner auger are rotating normally.
When it is not rotating
(2) Is the connector of the K-developer unit motor connected securely?
(3) Check if the connector of the K-developer motor is disconnected or the harnesses are open circuited.
(4) Check if the K-developer unit motor is abnormal.
(5) Check if the drive gear array has any abnormality such as breakage.
When it is rotating
(6) Check if waste toner is clogged on the waste toner transport path of the K-drum cleaner.
(7) Check if the developer material is excessively supplied to the K-developer unit.
(8) Check if the drive gear array of the K-developer unit has any abnormality such as breakage.

[C024] Developer unit mixer motor-K locking error

(1) Pull out the EPU tray and perform the output check (03-114) to check if the 3 outputs of the K-developer unit mixer are rotating normally.
When it is not rotating
(2) Is the connector of the K-developer unit mixer motor connected securely?
(3) Check if the connector of the K-developer mixer motor is disconnected or the harnesses are open circuited.
(4) Check if the K-developer unit mixer motor is abnormal.
(5) Check if the drive gear array has any abnormality such as breakage.
When it is rotating
(6) Check if the developer material is excessively supplied to the K-developer unit.
(7) Check if the drive gear array of the K-developer unit has any abnormality such as breakage.

[C360] Needle electrode cleaner operation abnormality

(1) Check if there is any abnormality on the connector between the equipment and the EPU tray of the process unit. (05-2788)
(2) Perform the code 08-4606- 0 to -3 (-0: K, -1: Y, -2: M, -3: C) to check which station the error is found.
(3) Check if the needle electrode cleaner detection sensors (S30 - S33) are coming off of the plate of the EPU tray.
(4) Are the needle electrode cleaner detection sensors (S30 - S33) working normally?
(Input check: K: 03-[Fax ON]/[0]/[E], C: 03-[Fax ON]/[0]/[H], M: 03-[Fax ON]/[9]/[C], Y: 03-[Fax ON]/[9]/[F])
* If it is working properly, proceed to 11. If not, check 5 to 10 below.
(5) Check if connectors of needle electrode cleaner detection sensors (S30 - S33) disconnected.
(6) Check if the connectors for the needle electrode cleaner detection sensors (S30 - S33) on the EPU board (CN553 to CN556) are disconnected.
(7) Check if the connector pins are disconnected or the harnesses are open circuited.
(8) Check if the conductor pattern on the EPU board is open circuited or short circuited.
(9) Replace the needle electrode cleaner detection sensors (S30 - S33).
(10) Replace the EPU board
(11) Is the needle electrode cleaner drive motors (M23 - M26) working normally?
(Input check: K: 03-207, C: 03-206, M: 03-205, Y: 03-204)
* If it is working properly, proceed to 22. If not, check 12 to 21 below.
(12) Check if the needle electrode cleaner drive section rotates smoothly, and if it does not, clean or replace it.
(13) Check if the connectors of the needle electrode cleaner drive motors (M23 - M26) and relay harnesses are disconnected.
(14) Check if the relay harness and the harness relay connector on the EPU board side are disconnected
(15) Check if the connectors on the EPU board (CN553 - CN556) are disconnected.
(16) Check if the connector pins are disconnected or the harnesses are open circuited.
(17) Check if the conductor pattern on the EPU board is open circuited or short circuited.
(18) Replace the Replace the needle electrode cleaner drive motors (M23 - M26).
(19) Replace the EPU board
(20) Check if the harness between the EPU board (CN550) and the LGC board (CN310) is open circuited.
(21) Replace the LGC board.
(22) Correct the needle electrode cleaner drive section (timing belt or gears).

[C370] Transfer belt motor abnormality

(1) Check if the connector of the transfer belt unit is not disconnected.
(2) Is the transport belt unit working normally?
(3) Check if the connector of the transfer belt motor is not disconnected.
(4) Check if the connector CN311 on the LGC board is disconnected.
(5) Check if the fuse on the switching regulator has blown.
(6) Check if the transfer belt release detection sensor is working properly.
(7) Replace the transfer belt motor.
(8) Replace the LGC board.

[C380] Auto-toner sensor (K) abnormality (upper limit)
[C381] Auto-toner sensor (K) abnormality (lower limit)
[C382] Auto-toner sensor (K) connection error
[C390] Auto-toner sensor (C) abnormality (upper limit)
[C391] Auto-toner sensor (C) abnormality (lower limit)
[C392] Auto-toner sensor (C) connection error
[C3A0] Auto-toner sensor (M) abnormality (upper limit)
[C3A1] Auto-toner sensor (M) abnormality (lower limit)
[C3A2] Auto-toner sensor (M) connection error
[C3B0] Auto-toner sensor (Y) abnormality (upper limit)
[C3B1] Auto-toner sensor (Y) abnormality (lower limit)
[C3B2] Auto-toner sensor (Y) connection error

(1) Check if there is any abnormality on the connector between the equipment and the EPU tray of the process unit. (05-2788)
(2) Check if the process unit (EPU tray) is securely installed.
(3) Check if the harnesses between the connectors (CN550, CN551, CN555) on the EPU board, the drawer connectors for the LGC board of the EPU tray, and the connector of the LGC board are disconnected or open-circuited.
(4) Check if the harnesses between the connectors (CN553, CN554, CN555, and CN556) and the auto toner sensor are disconnected or open-circuited.
(5) Replace the auto-toner sensor.
(6) Replace the EPU board.
(7) Replace the LGC board.

[C3C0] Process unit (EPU tray) connection error

(1) Check if there is any abnormality on the connector between the equipment and the EPU tray of the process unit. (05-2788)
(2) Check if the process unit (EPU tray) is securely installed.
(3) Check if the connector (CN551) on the EPU board, the drawer connectors for the EPU tray and the LGC board, and the harness between the connectors CN308 and CN310 are disconnected or open-circuited.
(4) Check if the harnesses between the connectors (CN553, CN554, CN555, and CN556) and the auto toner sensor are disconnected or open-circuited.
(5) Replace the EPU board.
(6) Replace the LGC board.

[C970] High-voltage transformer abnormality

(1) Is the main charger installed securely?
(2) Check if the spring of high-voltage supply contact point is deformed.
(3) Check if the needle electrode is broken or the main charger grid is deformed.
(4) Check if any foreign matter is on the needle electrode or main charger grid.
(5) Check if any foreign matter is adhering on the high-voltage terminal of the EPU tray.
(6) Check if there is a sign of discharge on the joint of the high-voltage terminal of the EPU tray and the main charger. Correct if there is.

[CD60] Sub-hopper toner sensor-Y, -M, -C, -K abnormality

(1) Check if there is any abnormality on the connector between the equipment and the EPU tray of the process unit. (05-2788)
(2) Check if the sub-hopper tone sensor is working normally.
K: 03-[FAX]ON/[0]/[C], C: 03-[FAX]ON/[0]/[F], M: 03-[FAX]ON/[9]/[A], Y: 03-[FAX]ON/[9]/[D]
(3) If it is not working normally, check if the harness of the sub-hopper toner sensor is disconnected.
(4) Check if the connectors (CN558, CN551) on the EPU board are securely connected.
(5) Check if the conductor pattern on the EPU board or the harness is open circuited or short circuited.
(6) Replace the sub-hopper toner sensor.
(7) Replace the EPU board.
(8) Replace the LGC board.

[CD61] Sub-hopper toner motor-Y abnormality
[CD62] Sub-hopper toner motor-M abnormality
[CD63] Sub-hopper toner motor-C abnormality
[CD64] Sub-hopper toner motor-K abnormality

(1) Check if there is any abnormality on the connector between the equipment and the EPU tray of the process unit. (05-2788)
(2) Check if the sub-hopper toner motor is rotating. (Input check: 03-[FAX]OFF/[4]/[D/E/F/G])
(3) Is the sub-hopper toner supply motor locked? (Is there any foreign matter or toner-clump in the sub-hopper?
(4) Check if the connector of the sub-hopper toner motor is disconnected.
(5) Check if the connectors on the EPU board (CN553, 554, 555, and 556) are disconnected, or the harness is open circuited or short circuited.
(6) Replace the sub-hopper toner motor.
(7) Replace the EPU board.
(8) Replace the LGC board.

[CD71] Waste toner transport motor locking error

(1) Pull out the process unit, rotate the gear counterclockwise and check if the load is extremely heavy.
(2) Is the load still extremely heavy after the gear is rotated for a while to discharge the toner from the waste toner transport path?
(3) Is the load still extremely heavy after the actuator is removed, the auger is pulled out and clean them?

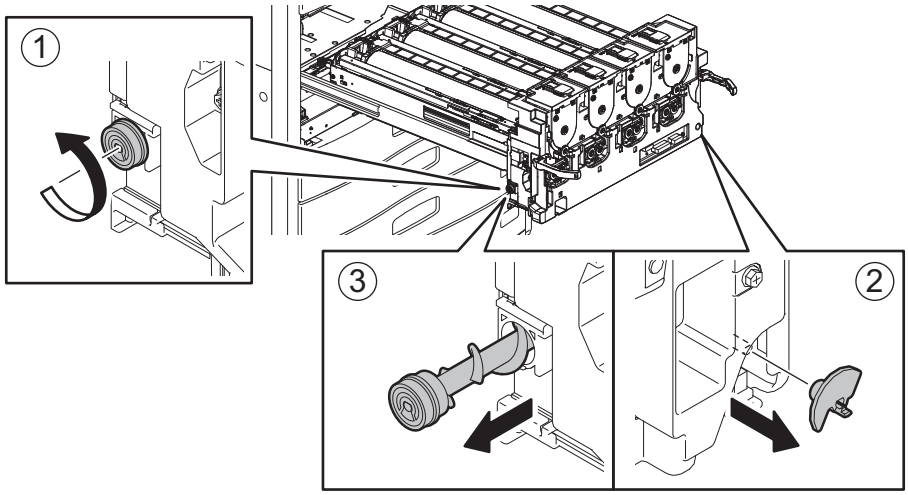


Fig. 6-5

(4) Check if there is any abnormality of the mechanism in the waste toner transport path.
(5) Does the waste toner transport motor (M33) rotate? (Output check: 03-234)
(6) Are the connector of the waste toner transport motor and the relay connector disconnected?
(7) Is the driving gear of the waste toner transport motor damaged or abnormal?
(8) Is the connector (CN331) on the LGC board disconnected?
(9) Check if the connector pins are disconnected or the harnesses are open-circuited.
(10) Check if the conductor pattern on the LGC board is short circuited or open circuited.
(11) Replace the waste toner transport motor.
(12) Replace the LGC board.
(13) Are the auger lock detection sensor (S42) working? (Input check: 03-[FAX]ON/[0]/[B])
(14) Check if each Normal/Highlighted display is reflected correctly to judge the malfunction.
(15) Is the connector of the auger lock sensor disconnected?
(16) Is the connector (CN557) on the EPU board disconnected?
(17) Check if the connector pins are disconnected, the EPU drawer connector pins are disconnected or bent or the harnesses are open-circuited.
(18) Check if the conductor pattern on the EPU board is short circuited or open circuited.
(19) Replace the auger lock detection sensor.
(20) Replace the EPU board.
(21) Check if there is any abnormality of the mechanism such as the sensor's actuator.

[CD80] TRU waste toner motor locking error

(1) Check if the TRU waste toner motor rotates.(Output check: 03-239)
(2) Check if toner is clogged at the entrance of the TRU waste toner transport path.
(3) Check if any of the motor and the driving gears is improperly installed or deformed.
(4) Check if the connector of the motor is disconnected, and CN491 and CN492 on the ADU board are disconnected.
(5) Check if the connector pins are disconnected or the wires of harnesses are open circuited.
(6) Replace the TRU waste toner motor.
(7) Replace the ADU board.

(8) Replace the PFC board.

[CD81] TRU waste toner transport motor locking error

(1) Take off the TRU waste toner box, and then rotate the gear by hand to discharge the waste toner on the transport path.
(2) If the gear still does not rotate smoothly, apply grease to it.
(3) Check if the TRU waste toner transport motor rotates.(Output check: 03-240)
(4) Check if toner is clogged on the TRU waste toner transport path.
(5) Check if any of the motor and the driving gears is improperly installed or deformed.
(6) Check if the connector of the motor is disconnected, and CN497 and CN490 on the ADU board are disconnected.
(7) Check if the connector pins are disconnected or the wires of harnesses are open circuited.
(8) Replace the TRU waste toner transport motor.
(9) Replace the ADU board.
(10) Replace the PFC board.

[CD82] TRU waste toner full-status error

(1) Check if the TRU waste toner box is full of used toner.
(2) Replace it, if it is full. Check the following steps, if not.
(3) Check if the TRU waste toner amount detection sensor is working normally. (Input check: 03-[FAX]OFF/[5]/[E])
(4) Check if the connector and the relay connector of the TRU waste toner amount detection sensor disconnected.
(5) Are the connectors (CN491 and CN493) on the ADU board disconnected?
(6) Check if the conductor pattern on the ADU board or the harness is open circuited or short circuited.
(7) Replace the TRU waste toner amount detection sensor.
(8) Replace the ADU board.
(9) Replace the PFC board.

[CEC0] 2nd transfer roller position detection abnormality

Is the 2nd transfer roller contacted and released properly? (Perform the output check: 03-119/519)

NO →
1. Check if the connector of the 2nd transfer motor is disconnected.
2. Check if the connector CN314 on the LGC board is disconnected.
3. Check if the connector pins are disconnected or the wires of harnesses are open circuited.
4. Check if the conductor pattern on the LGC board is short circuited or open circuited.
5. Replace the 2nd transfer motor.
6. Replace the LGC board.

↓

YES

Is the 2nd transfer roller contact/release detection sensor(S50) working properly? (Perform the input check:03-[All OFF]/[9]/[H])

NO →
1. Check if the connector or joint connectors of the 2nd transfer roller position detection sensor are disconnected.
2. Check if the connector CN307 on the LGC board is disconnected.
3. Check if the connector pins are disconnected or the wires of harnesses are open circuited.
4. Check if the conductor pattern on the LGC board is short circuited or open circuited.
5. Replace the 2nd transfer roller position detection sensor.
6. Replace the LGC board.

↓

YES

1. Check if there is any abnormality with the mechanical section (sensor's actuator, etc.).
2. Check if the conductor pattern on the LGC board is short circuited or open circuited.
3. Replace the LGC board.

6.2.22 Other service call

[F100] HDD format error

(1) Check if the HDD is mounted.
(2) Check if the specified HDD is mounted.
(3) Check if the connector pins of the HDD are bent.
(4) Check if the connectors CN116, CN132 on the SYS board is disconnected.
(5) Replace the harness.
(6) Format the HDD. (Key in “2” at 08-690.)
(7) Replace the HDD.
(8) Replace the SYS board.

[F101] HDD unmounted
[F102] HDD start error
[F103] HDD transfer time-out
[F104] HDD data error
[F105] HDD other error

(1) Check if the connectors of the HDD are disconnected.
(2) Check if the connector pins are disconnected or the wires of harnesses are open circuited.
(3) Perform the bad sector check (08-694). If the check result is OK, recover the data in the HDD. If the check result is failed, replace the HDD.
(4) Replace the SYS board.

[F106] Point and Print partition damage

(1) Turn the power OFF and start up the Setting Mode (08).
(2) Key in “662” and press the [START] button. (Partition clearing is performed.)
(3) Restart the equipment.
(4) Access TopAccess. Click the [Administration] tab, and then click the Maintenance Menu to open. Then install the “Point and Print” driver.

[F107] / BOX partition damage
Initialize the Electronic Filing using the Setting Mode (08-666).

[F108] /SHA partition damage
Initialize the shared folder using the Setting Mode (08-667).

[F120] Database abnormality

(1) Check that no jobs remain and rebuild the databases. (Perform 08-684.)
(2) If the error is not recovered, initialize the HDD. (Key in “2” at 08-690.)

Notes:
- If you rebuild the databases with a job remaining, delete it after finishing.
- When “Rebuilding all databases (08-684)” is performed, all data in the Address Book and Mailbox are deleted. If you back up the data in advance, they will be recovered by restoring them after rebuilding the database.

[F130] Invalid MAC address
Replace the SYS board.

[F140] Accelerator ASIC format error

(1) Check if the connector on the SYS board is connected.
(2) Replace the SYS board.

[F200] Data overwrite option (GP-1070) disabled

Perform firmware installation (all firmware: OS, HDD, SYS, PFC Firmware, Engine Main Firmware, and Scanner Firmware) with the USB media.

* When the function of the Data Overwrite option (GP-1070) is deleted from the equipment, the service call “F200” occurs.

6.2.23 Error in Internet FAX / Scanning Function

Notes:

1. When initializing the Electronic Filing (Setting Mode (08-666)), all data in the Electronic Filing are erased. Back up the data in the Electronic Filing by using the Electronic Filing Function of TopAccess before the initialization.
2. When initializing the shared folder (Setting Mode (08-667)), all data in the shared folder are erased. Back up the data in the shared folder by using Explorer before the initialization.
3. When formatting the HDD (Setting Mode (08-690)), all data in the shared folder, Electronic Filing, Address Book, template, etc. are erased. Back up these data before the initialization. Note that some of data cannot be backed up.
   📖 P.7-22 "7.2.3 Precautions and procedures when replacing the HDD"

[1] Internet FAX related error

[1C10] System access abnormality
[1C32] File deletion failure

Turn the power OFF and then back ON. Perform the job in error again.
If the error still occurs, first, check if there are no jobs existing and then perform the HDD formatting (08-690).

[1C11] Insufficient memory

When there are running jobs, perform the job in error again after the completion of the running jobs.
If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[1C12] Message reception error
[1C13] Message transmission error

Turn the power OFF and then back ON. Perform the job in error again.

[1C14] Invalid parameter

When a template is used, form the template again.
If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[1C15] Exceeding file capacity

Reset and extend the “Maximum send to E-mail/iFAX size” or reduce the number of pages and perform the job again.

[1C20] System management module access abnormality
[1C21] Job control module access abnormality
[1C22] Job control module access abnormality

Turn the power OFF and then back ON. Perform the job in error again.
Check if there are no other running jobs and perform the HDD formatting (08-690).
If the recovery is still not completed, replace the SYS board.

[1C30] Directory creation failure
[1C31] File creation failure
[1C33] File access failure

Check if the access privilege to the storage directory is writable.
Check if the server or local disk has a sufficient space in disk capacity.

[1C40] Image conversion abnormality

Turn the power OFF and then back ON. Perform the job in error again.
Replace the main memory and perform the job again.

[1C60] HDD full failure during processing

Reduce the number of pages of the job in error and perform the job again.
Check if the server or local disk has a sufficient space in disk capacity.

[1C61] Address Book reading failure

Turn the power OFF and then back ON. Perform the job in error again.
Reset the data in the Address Book and perform the job again.

[1C62] Memory acquiring failure

Check if there is any job being performed and perform the job in error again.
Turn the power OFF and then back ON. Perform the job in error again.
Replace the main memory and perform the job again.

[1C63] Terminal IP address unset

Reset the Terminal IP address.
Turn the power OFF and then back ON. Perform the job in error again.

[1C64] Terminal mail address unset

Reset the Terminal mail address.
Turn the power OFF and then back ON. Perform the job in error again.

[1C65] SMTP address unset

Reset the SMTP address and perform the job.
Turn the power OFF and then back ON. Perform the job in error again.

[1C66] Server time-out error

Check if the SMTP server is operating properly.

[1C67] NIC time-out error
[1C68] NIC access error
[1C6D] System error

Turn the power OFF and then back ON. Perform the job in error again.
If the error still occurs, replace the SYS board.

[1C69] SMTP server connection error

Reset the login name or password of SMTP server and perform the job again.
Check if the SMTP server is operating properly.

[1C6A] HOST NAME error

Check if there is an illegal character in the device name.
Delete the illegal character and reset the appropriate device name.

[1C6B] Terminal mail address error

Check the SMTP Authentication method.
Check if there is an illegal character in the Terminal mail address.
Set the correct SMTP Authentication method or delete the illegal character and reset the appropriate Terminal mail address, then perform the job again.

[1C6C] Destination mail address error

Check if there is an illegal character in the Destination mail address.
Delete the illegal character and reset the appropriate Destination mail address, then perform the job again.

[1C70] SMTP client OFF

Set the SMTP valid and perform the job again.

[1C71] SMTP authentication ERROR

Check that SMTP authentication method, login name and password are correct, then perform authentication again.

[1C72] POP Before SMTP ERROR

Check that both the POP Before SMTP setting and POP3 setting are correct, then perform authentication again.

[1C80] Internet FAX transmission failure when processing E-mail job received

Reset the “Received InternetFax Forward”.

[1C81] Onramp Gateway transmission failure

Reset the mail box.

[1C82] Internet FAX transmission failure when processing FAX job received

Reset the “Received Fax Forward”.

[1CC1] Power failure

Check if the power cable is connected properly and it is inserted securely.
Check if the power voltage is unstable.

[2] RFC related error

[2500] HOST NAME error (RFC: 500) / Destination mail address error (RFC: 500) / Terminal mail address error (RFC: 500)

[2501] HOST NAME error (RFC: 501) / Destination mail address error (RFC: 501) / Terminal mail address error (RFC: 501)

Check if the Terminal mail address and Destination mail address are correct.
Check if the mail server is operating properly.
Turn the power OFF and then back ON. Perform the job in error again.

[2503] Destination mail address error (RFC: 503)

[2504] HOST NAME error (RFC: 504)

[2551] Destination mail address error (RFC: 551)

Check if the mail server is operating properly.
Turn the power OFF and then back ON. Perform the job in error again.
If the error still occurs, replace the SYS board.

[2550] Destination mail address error (RFC: 550)

Check the state of the mail box in the mail server.

[2552] Terminal/Destination mail address error (RFC: 552)

Confirm the size on the mail server.
Transmit again in text mode or with lower resolution or divide the document and transmit again.
If the error still occurs, turn the power OFF and then back ON. Perform the job in error again.

[2553] Destination mail address error (RFC: 553)

Check if there is an illegal character in the mail box in the mail server.

[3] Electronic Filing related error

[2B10] No applicable job error in Job control module
[2B11] JOB status abnormality
[2B20] File library function error
[2B30] Insufficient disk space in BOX partition
[2BC0] Fatal failure occurred
[2BC1] System management module resource acquiring failure

Erase some data in the Electronic Filing and perform the job in error again (in case of [2B30]).
Ask the administrator if e-Filing has been disabled. (In case of [2CC1])
Turn the power OFF and then back ON. Perform the job in error again.
Check if there are no other running jobs and perform the HDD formatting (08-690).
If the recovery is still not completed, replace the SYS board.

[2B50] Image library error
[2B90] Insufficient memory capacity

Turn the power OFF and then back ON. Perform the job in error again.
If the error still occurs, replace the main memory.
Perform the job in error again.
Check if there are no other running jobs and initialize the Electronic Filing using the Setting Mode (08-666).

[2B31] Status of specified Electronic Filing or folder is undefined or being created/deleted

Check if the specified Electronic Filing or folder exists. (If no, this error would not occur.)
Delete the specified Electronic Filing or folder.
Perform the job in error again.
If the specified Electronic Filing or folder can not be deleted, initialize the Electronic Filing using the Setting Mode (08-666).

[2B32] Electronic Filing printing failure: Specified document can not be printed because of client's access (being edited, etc.)

Check if the specified document exists. (If no, this error would not occur.)
Delete the specified document.
Perform the job in error again.
If the specified document can not be deleted, initialize the Electronic Filing using the Setting Mode (08-666).

[2B51] List library error

Check if the Function List can be printed out.
If it can be printed out, perform the job in error again.
If it can not be printed out, replace the main memory.
If the recovery is still not completed, perform the HDD formatting (08-690).

[2BA0] Invalid Box password

Check if the password is correct.
Reset the password.
When this error occurs when printing the data in the Electronic Filing, perform the printing with the administrator's password.
If the recovery is still not completed or in case of invalid password for the operation other than printing (opening the file, etc.), initialize the Electronic Filing using the Setting Mode (08-666).

[2BA1] A paper size or a color mode not supported in the Electronic Filing function is being selected.

Check the paper size or color mode.

[2BB1] Power failure
[2BD0] Power failure occurred during restoring of Electronic Filing

Check if the power cable is connected properly and it is inserted securely.
Check if the power voltage is unstable.

[2BE0] Machine parameter reading error

Turn the power OFF and then back ON. Perform the job in error again.

[2BF0] Exceeding maximum number of pages

Reduce the number of inserting pages and perform the job again.

[2BF1] Exceeding maximum number of documents

Backup the documents in the box or folder to PC or delete them.

[2BF2] Exceeding maximum number of folders

Backup the folders in the box or folder to PC or delete them.

[4] Remote scanning related error

[2A20] System management module resource acquiring failure

Retry the job in error.
If the error still occurs, turn the power OFF and then back ON, then retry the job in error.

[2A40] System error

Turn the power OFF and then back ON, then retry the job in error.

[2A51] Power failure

Check if the power cable is properly connected.
Check if the power supply voltage is inconstant.

[5] E-mail related error

[2C10] System access abnormality
[2C32] File deletion failure

Turn the power OFF and then back ON. Perform the job in error again.
If the error still occurs, first, check if there are no jobs existing and then perform the HDD formatting (08-690).

[2C11] Insufficient memory

When there are running jobs, perform the job in error again after the completion of the running jobs.
If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[2C12] Message reception error
[2C13] Message transmission error

Turn the power OFF and then back ON. Perform the job in error again.

[2C14] Invalid parameter

When a template is used, form the template again.
If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[2C15] Exceeding file capacity

Reset and extend the “Maximum send to E-mail/iFAX size” or reduce the number of pages and perform the job again.

[2C20] System management module access abnormality
[2C21] Job control module access abnormality
[2C22] Job control module access abnormality

Turn the power OFF and then back ON. Perform the job in error again.
Check if there are no other running jobs and perform the HDD formatting (08-690).
If the recovery is still not completed, replace the SYS board.

[2C30] Directory creation failure
[2C31] File creation failure
[2C33] File access failure

Check if the access privilege to the storage directory is writable.
Check if the server or local disk has a sufficient space in disk capacity.

[2C40] Image conversion abnormality
[2C62] Memory acquiring failure

Turn the power OFF and then back ON. Perform the job in error again.
Replace the main memory and perform the job again.

[2C43] Encryption error

Turn the power OFF and then back ON. Perform the job in error again.

[2C44] Encryption PDF enforced mode error

Reset the encryption and perform the job in error again.
If an image file not encrypted is created, consult your administrators.

[2C60] HDD full failure during processing

Reduce the number of pages of the job in error and perform the job again.
Check if the server or local disk has a sufficient space in disk capacity.

[2C61] Address Book reading failure

Turn the power OFF and then back ON. Perform the job in error again.
Reset the data in the Address Book and perform the job again.

[2C63] Terminal IP address unset

Reset the Terminal IP address.
Turn the power OFF and then back ON. Perform the job in error again.

[2C64] Terminal mail address unset

Reset the Terminal mail address.
Turn the power OFF and then back ON. Perform the job in error again.

[2C65] SMTP address unset

Reset the SMTP address and perform the job.
Turn the power OFF and then back ON. Perform the job in error again.

[2C66] Server time-out error

Check if the SMTP server is operating properly.

[2C67] NIC time-out error
[2C68] NIC access error
[2C6D] NIC system error

Turn the power OFF and then back ON. Perform the job in error again.
If the error still occurs, replace the SYS board.

[2C69] SMTP server connection error

Reset the login name and password of SMTP server and perform the job again.
Check if the SMTP server is operating properly.

[2C6A] HOST NAME error (No RFC error)

Check if there is an illegal character in the device name.
Delete the illegal character and reset the appropriate device name.

[2C6B] Terminal mail address error

Check the SMTP Authentication method.
Check if there is an illegal character in the Terminal mail address.
Set the correct SMTP Authentication method or delete the illegal character and reset the appropriate Terminal mail address, then perform the job again.

[2C6C] Destination mail address error (No RFC error)

Check if there is an illegal character in the Destination mail address.
Delete the illegal character and reset the appropriate Destination mail address, then perform the job again.

[2C70] SMTP client OFF

Set the SMTP valid and perform the job again.

[2C71] SMTP authentication ERROR

Check that SMTP authentication method, login name and password are correct, then perform authentication again.

[2C72] POP Before SMTP ERROR

Check that both the POP Before SMTP setting and POP3 setting are correct, then perform authentication again.

[2C80] E-mail transmission failure when processing E-mail job received

Reset the “Received InternetFax Forward”.

[2C81] Process failure of FAX job received

Reset the setting of the mail box or “Received InternetFax Forward”.

[2CC1] Power failure

Check if the power cable is connected properly and it is inserted securely.
Check if the power voltage is unstable.

[6] File sharing related error

[2D10] System access abnormality
[2D32] File deletion failure
[2DA6] File deletion failure
[2DA7] Resource acquiring failure

Delete some files in the shared folder by using Explorer because of automatic/manual file deletion failure (in case of [2DA6])
Turn the power OFF and then back ON. Perform the job in error again.
If the error still occurs, first, check if there are no jobs existing and then perform the HDD formatting (08-690).

[2D11] Insufficient memory

When there are running jobs, perform the job in error again after the completion of the running jobs.
If the error still occurs, turn the power OFF and then back ON, and perform the job again.

When the Imaging Acceleration Board (GE-1170, optional) is installed

Since the input data are a high-compression PDF created at high speed, an error code is displayed when the input data cause the overflow of the memory capacity specified for data processing.
Check the content of the data and reattempt the process because the specified memory capacity cannot be changed. You cannot see if this error will occur until you actually perform the process.

[2D12] Message reception error
[2D13] Message transmission error

Turn the power OFF and then back ON. Perform the job in error again.

[2D14] [2D61] Invalid parameter

When a template is used, form the template again.
If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[2D15] Exceeding the maximum size for file sharing

Divide the file in error into several files and retry. Or retry the job in a single-page format.

[2D20] System management module access abnormality
[2D21] Job control module access abnormality
[2D22] Job control module access abnormality
[2D60] File library access abnormality

Turn the power OFF and then back ON. Perform the job in error again.
Check if there are no other running jobs and perform the HDD formatting (08-690).
If the recovery is still not completed, replace the SYS board.

[2D30] Directory creation failure
[2D31] File creation failure
[2D33] File access failure

Check if the access privilege to the storage directory is writable.
Check if the server disc, local disk or USB storage device has a sufficient space in capacity.

[2D40] Image conversion abnormality

Turn the power OFF and then back ON. Perform the job in error again.
Replace the main memory and perform the job again.
If the error still occurs, first, check if there are no jobs existing and then initialize the shared folder using the Setting Mode (08-667).

When the Imaging Acceleration Board (GE-1170, optional) is installed

Refer to the following page:
📖 Service Manual “25.4.10 Abnormality Related to Imaging Acceleration Board (GE-1170, optional)”

[2D43] Encryption error

Turn the power OFF and then back ON. Perform the job in error again.

[2D44] Encryption PDF enforced mode error

Reset the encryption and perform the job in error again.
If an image file not encrypted is created, consult your administrators.

[2D62] File server connection error

Check the IP address or path of the server.
Check if the server is operating properly.

[2D63] Invalid network path

Check the network path.
If the path is correct, turn the power OFF and then back ON, and perform the job again.

[2D64] Login failure

Reset the login name and password. Perform the job.
Check if the account of the server is properly set up.

[2D65] Exceeding documents in folder: Creating new document is failed

Delete some documents in the folder.

[2D66] Storage capacity full failure during processing

Reduce the number of pages of the job in error or set the resolution mode low, and perform the job again.
Check if the server disc, local disk or USB storage device has a sufficient space in capacity.

[2D67] FTP service not available

Check if the setting of FTP service is valid.

[2D68] File sharing service not available

Check if the setting of SMB is valid.

[2DC1] Power failure

Check if the power cable is connected properly and it is inserted securely.
Check if the power voltage is unstable.

[7] E-mail reception related error

[3A10] [3A11] [3A12] E-mail MIME error

The format of the mail is not corresponding to MIME 1.0.
Request the sender to retransmit the mail in the format corresponding to MIME 1.0.

[3A20] [3A21] [3A22] E-mail analysis error
[3B10] [3B11] [3B12] E-mail format error
[3B40] [3B41] [3B42] E-mail decode error

These errors occur when the mail data is damaged from the transmission to the reception of the mail.
Request the sender to retransmit the mail.

[3A30] Partial mail time-out error

The partial mail is not received in a specified period of time.
Request the sender to retransmit the partial mail, or set the time-out period of the partial mail longer.

[3A40] Partial mail related error

The format of the partial mail is not corresponding to this equipment.
Request the sender to remake and retransmit the partial mail in RFC2046 format.

[3A50] [3A51] [3A52] Insufficient HDD capacity error
[3A60] [3A61] [3A62] Warning of insufficient HDD capacity

These errors occur when the HDD capacity is not sufficient for a temporary concentration of the jobs, etc.
Request the sender to retransmit after a certain period of time, or divide the mail into more than one.
Insufficient HDD capacity error also occurs when printing is disabled for no printing paper.
In this case, supply the printing paper.

[3A70] Warning of partial mail interruption

This error occurs when the partial mail reception setting becomes OFF during the partial mail reception.
Reset the partial mail reception setting ON and then request the sender to retransmit the mail.

[3A80] [3A81] [3A82] Partial mail reception setting OFF

Reset the partial mail reception setting ON and then request the sender to retransmit the mail.

[3B20] [3B21] [3B22] Content-Type error

The format of the attached file is not supported by this equipment (TIFF-FX).
Request the sender to retransmit the file in TIFF-FX.

[3B30] [3B31] [3B32] Charset error

These errors occur when the standard of the Charset is other than ISO-8559-1 or ISO-8559-2.
Request the sender to reformat the Charset into either of the standards described above and then retransmit the mail.

[3C10] [3C11] [3C12] [3C13] TIFF analysis error

These errors occur when the mail data is damaged from the transmission to the reception of the mail, or when the format of the attached file is not supported by this equipment (TIFF-FX).
Request the sender to retransmit the mail.

[3C20] [3C21] [3C22] TIFF compression error

The compression method of the TIFF file is not acceptable for this equipment. (Acceptable: MH/MR/MMR/JBIG)
Request the sender to retransmit the file in the acceptable compression method.

[3C30] [3C31] [3C32] TIFF resolution error

The resolution of the TIFF file is not acceptable for this equipment. (Acceptable: 200 x 100, 200 x 200, 200 x 400, 400 x 400, 300 x 300 or equivalent)

Request the sender to retransmit the file in the acceptable resolution.

[3C40] [3C41] [3C42] TIFF paper size error

The paper size of the TIFF file is not acceptable for this equipment. (Acceptable: A4, B4, A3, B5, LT, LG, LD or ST)

Request the sender to retransmit the file in the acceptable paper size.

[3C50] [3C51] [3C52] Offramp destination error

These errors occur when the FAX number of the offramp destination is incorrect.

Request the sender to correct the FAX number of offramp destination and then retransmit the mail.

[3C60] [3C61] [3C62] Offramp security error

These errors occur when the FAX number of the offramp destination is not on the Address Book.

Check if the FAX number of the offramp destination is correctly entered or the number has not been changed.

[3C70] Power failure error

Check if the mail is recovered after turning ON the power again.

Request the sender to retransmit the mail if it is not recovered.

[3D10] Destination address error

Check if the setting of the server or DNS is correct. Correct if any of the setting is incorrect.

When the content of the setting is correct, confirm the sender if the destination is correct.

[3D20] Offramp destination limitation error

Inform the sender that the transfer of the FAX data over 40 is not supported.

[3D30] FAX board error

This error occurs when the FAX board is not installed or the FAX board has an abnormality.

Check if the FAX board is correctly connected.

[3E10] POP3 server connection error

Check if the IP address or domain name of the POP3 server set for this equipment is correct, or check if POP3 server to be connected is operating properly.

[3E20] POP3 server connection time-out error

Check if POP3 server to be connected is operating properly.

Check if the LAN cable is correctly connected.

[3E30] POP3 login error

Check if the POP3 server login name and password set for this equipment are correct.

[3E40] POP3 Login Type ERROR

Check that the login type (Auto, POP3 or APOP) to the POP3 server is correct.

[3F00] [3F10] [3F20] [3F30] [3F40] File I/O error

These errors occur when the mail data is not transferred properly to the HDD.

Request the sender to retransmit the mail.

Replace the HDD if the error still occurs after retransmission.

6.2.24 Printer function error

[4031] HDD full failure during printing

Reduce the number of pages of the job in error and perform the job again.
Check if the server or local disk has a sufficient space in disk capacity.

[4032] Private-print-only error

Select “Private”, and then perform the printing again.

[4033] Printing data storing limitation error

Select “Normal Print”, and then perform the printing again.

[4034] e-Filing storing limitation error

Select “Normal Print”, and then perform the printing again.

[4035] Local file storing limitation error

Select “Remote” (SMB/FTP) for the destination of the file to save.

[4036] User authentication error

Perform the authentication or register as a user, and then perform the printing again.

[4037] Hardcopy security printing error

Hardcopy security printing cannot be performed because the function is restricted in the self-diagnosis mode.

[4040] Not being authorized to perform JOB

Confirm the administrator for the JOB authorization.

[4050] Problem in LDAP server connection or LDAP server authorization settings

Confirm the administrator for the LDAP server connection or LDAP server authorization settings.

[4300] Job execution error due to functional restrictions

USB direct printing cannot be performed because the function is restricted by the self-diagnosis. Check the self-diagnosis setting.

[4301] File conversion error

The format of this file (other than PDF and JPEG) is not supported in USB direct printing, or the file is invalid. Check the file.

[4310] Double-sign encoding error

Printing using this function cannot be performed due to a decoding process error which occurs because the PDF file is encrypted incorrectly or encrypted in a language not supported.

[4311] Printing not permitted

This file cannot be printed using this function due to the encrypted PDF file not permitting printing or permitting it only with a low resolution.

[4312] Password mismatching

The entered password is neither matched with a user password nor an owner password. Check the password again.

[A221] Print job cancellation

This message appears when deleting the job on the screen.

[A222] Print job power failure

When there are running jobs, perform the job in error again after the completion of the running jobs. If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[A290] Limit over error (black)
[A291] Limit over error (black)
[A292] Limit over error (black)

Clear the limit counter (black).

[A2A0] Limit over error (color)
[A2A1] Limit over error (color)

Clear the limit counter (color), or authorize users so that they can perform color printing.

[A2A2] Limit over error (color)

Clear the limit counter (color).

6.2.25 TopAccess related error

[5110] Toner cartridge detection error

(1) Check if the toner cartridge is installed properly.
(2) Check if the toner cartridge detection sensor operates properly.

[5BD0] Power failure during restoration

(1) Check if the power cable is connected properly and is inserted securely.
(2) Check if the power voltage is unstable.
(3) Reattempt the restoration of the database (Address Book, templates, F-code (Mailbox) or user information).

[5C10] FAX Unit attachment error

(1) Check if the FAX Unit is attached.
(2) Check if there is any damage or abnormality on the FAX board.
(3) Check if the connector on the FAX board is connected properly.

[5C11] Network FAX transmission error

The address specified for the network FAX is not registered on the Address Book. Register it.

[5C20] Data import from TopAccess succeeded

Data (Address book, department or user information) have been imported successfully. No troubleshooting is required.

[5C21] Error in data import from TopAccess

Data import failed because the specified file (Address Book, department or user information) is incorrect or damaged. Check if the file is incorrect or damaged, and then reattempt the import.

[5C22] Error on data import from TopAccess

(1) Data import failed because the specified file (Address Book, department or user information) is incorrect or damaged. Check if the file is incorrect or damaged, and then reattempt the import.
(2) Check that no jobs remain and rebuild the databases (Perform 08-684).
(3) If the error is not recovered, initialize the HDD (Key in "2" at 08-690).

Notes:

- If you rebuild the databases with a job remaining, delete it after finishing.
- When "Rebuilding all databases (08-684)" is performed, all the data in the Address Book and Mailbox are deleted. If you back up the data in advance, they will be recovered by restoring them after rebuilding the database.

7. REPLACEMENT OF PC BOARDS/HDD

7.1 Removal and Installation of PC Boards/HDD

Notes:

- When the PC board/HDD is replaced, refer to the respective Notes and Cautions of “Replacement of PC boards and HDD” in Chapter 📖 P.7-19 "7.2 Precautions, Procedures and Settings for Replacing PC Boards and HDD".
- If the PC board has to be replaced due to an operational defect, this may have been caused by a contact failure of the connector. Before replacing the board, disconnect and then reconnect the connector to check if this action eliminates the operational defect.

7.1.1 SYS board cover

(1) Take off the rear cover.
📖 Service Manual “3.5.18 Rear cover”
(2) Loosen 11 screws and take off the SYS board cover by slightly sliding it.

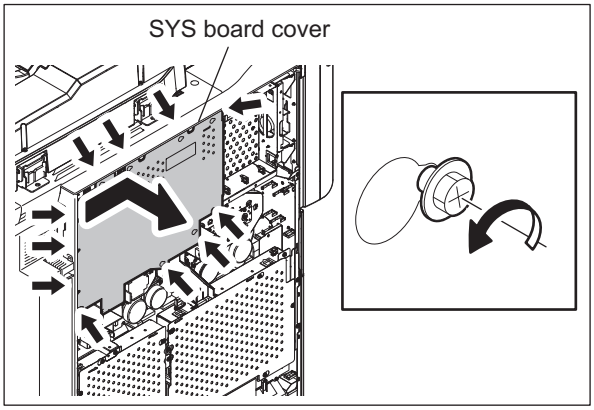


Fig. 7-1

7.1.2 SYS board (SYS)

(1) Take off the SYS board cover.
📖 P.7-1 "7.1.1 SYS board cover"
(2) Disconnect 1 USB terminal and 6 connectors.

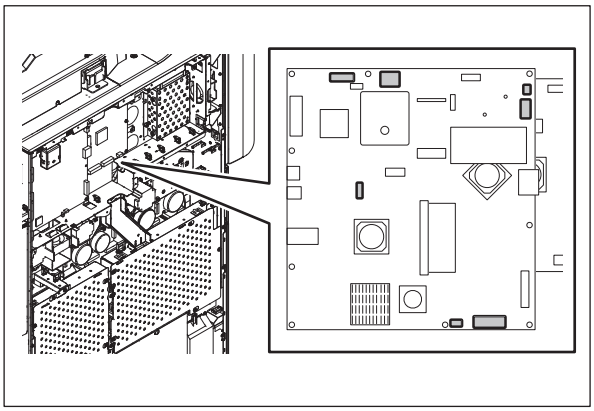


Fig. 7-2

(3) Remove 6 screws, release 2 locking supports and take off the SYS board.

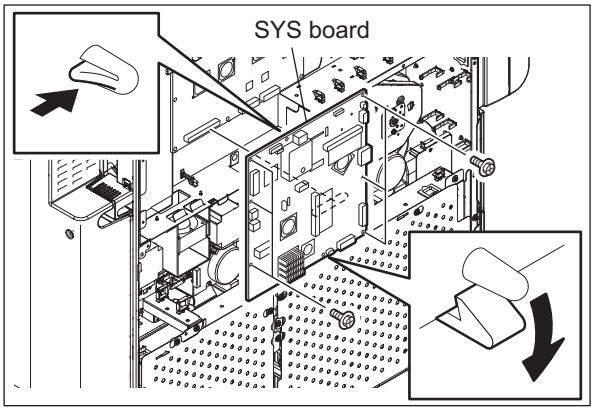


Fig. 7-3

7.1.3 SYS board case

(1) Take off the SYS board cover.
📖 P.7-1 "7.1.1 SYS board cover"
(2) Disconnect 3 connectors on the IMG board.

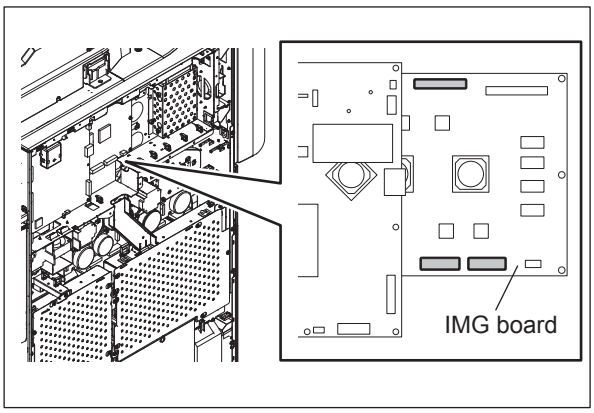


Fig. 7-4

(3) Remove 5 screws.

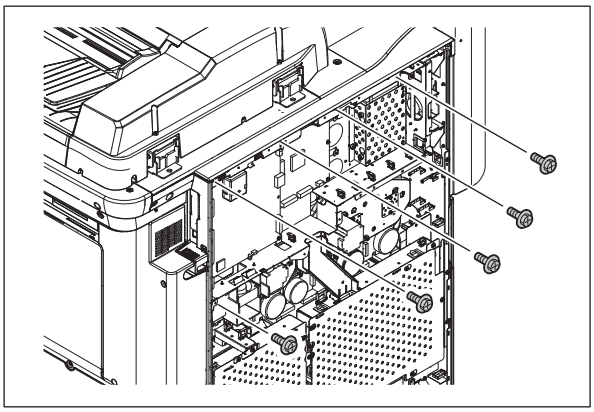


Fig. 7-5

(4) Open the SYS board case slightly. Then release harness from 2 clamps.

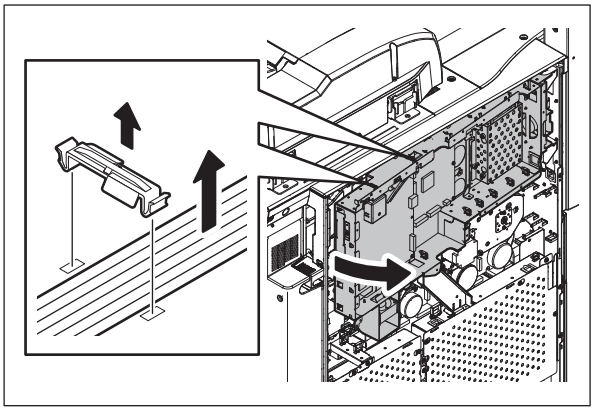


Fig. 7-6

(5) Open the SYS board case for approx. 90 degrees.

Note:
Open the board case gently during maintenance work or similar.

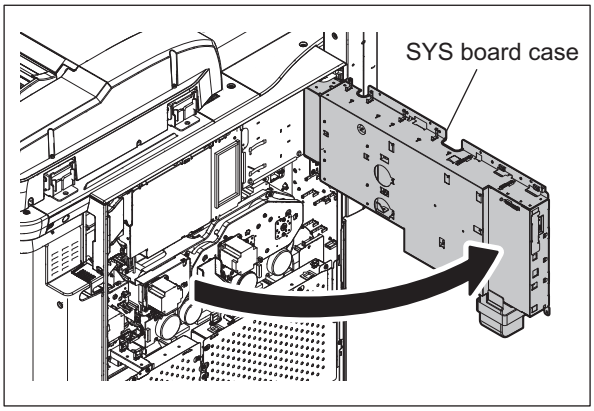


Fig. 7-7

7.1.4 SYS board cooling fan (F27)

(1) Take off the SYS board cover.
📖 P.7-1 "7.1.1 SYS board cover"
(2) Disconnect 1 connector.

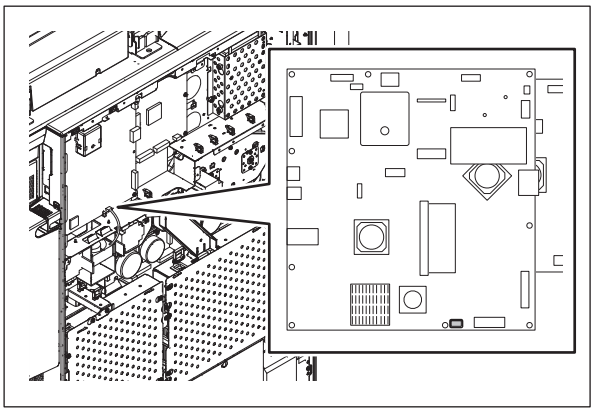


Fig. 7-8

(3) Slide the SYS board cooling fan in the direction of the arrow in the figure to take it off.

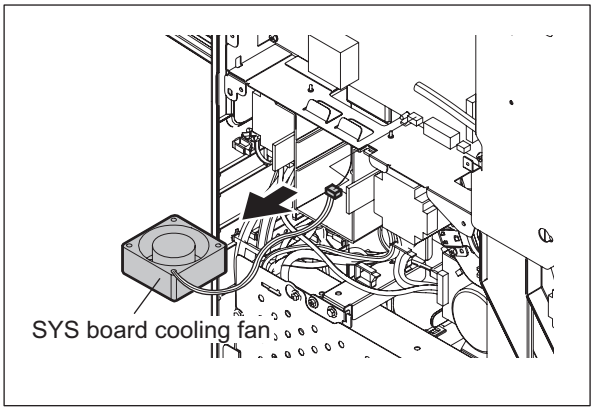


Fig. 7-9

7.1.5 IMG board (IMG)

(1) Take off the SYS board.
📖 P.7-1 "7.1.2 SYS board (SYS)"
(2) Disconnect 4 connectors.

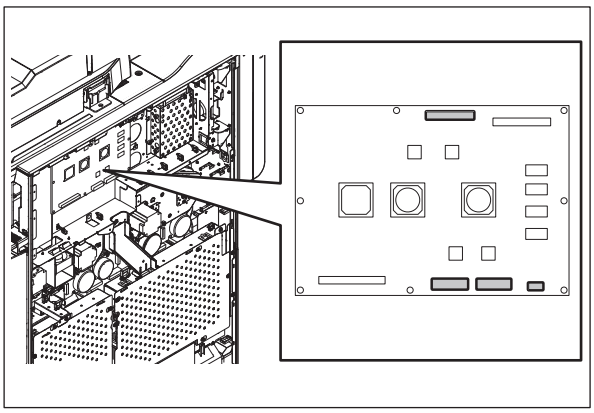


Fig. 7-10

(3) Remove 8 screws and take off the IMG board.

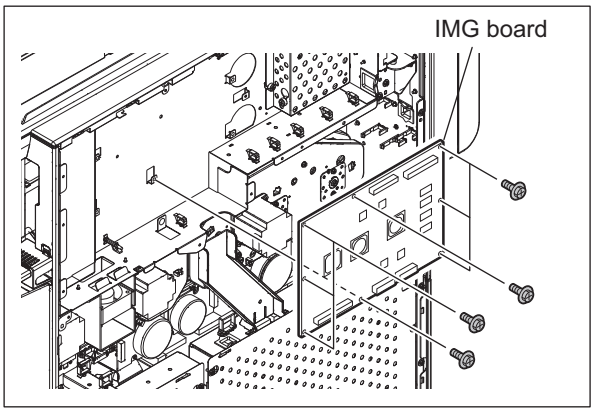


Fig. 7-11

7.1.6 LGC board (LGC)

(1) Take off the rear cover.
📖 Service Manual “3.5.18 Rear cover”
(2) Disconnect 28 connectors.

Note:
When installing, be sure to connect the flat cables at the proper positions.

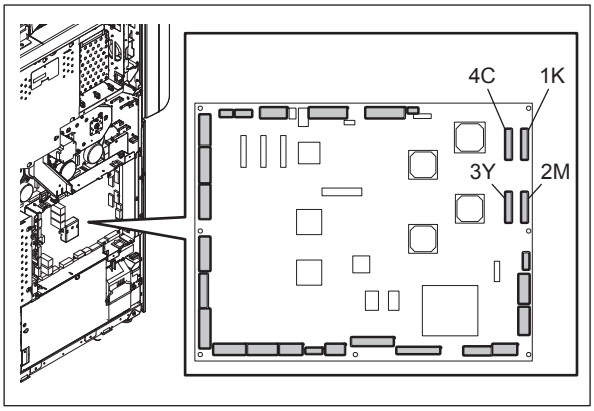


Fig. 7-12

(3) Remove 8 screws and take off the LGC board.

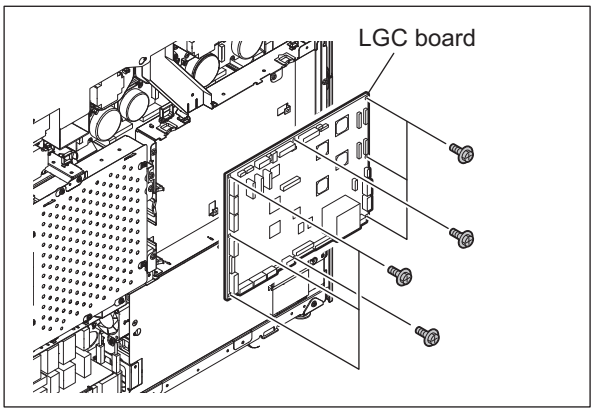


Fig. 7-13

7.1.7 LGC board case

(1) Take off the rear cover.
📖 Service Manual “3.5.18 Rear cover”
(2) Disconnect 28 connectors.

Note:
When installing, be sure to connect the flat cables at the proper positions.

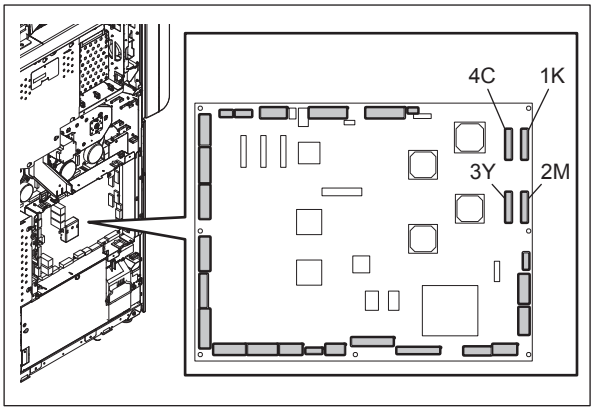


Fig. 7-14

(3) Release harness from 4 clamps and 4 clamps with a lock.

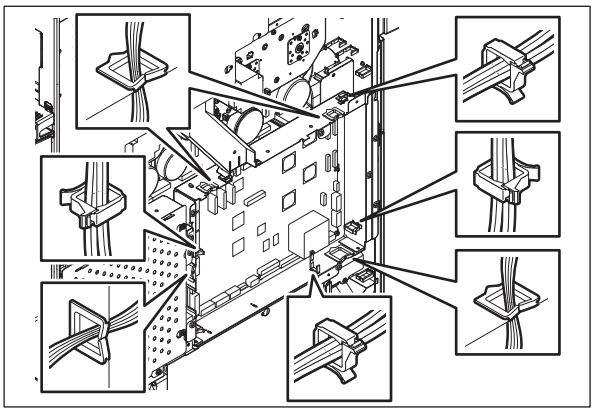


Fig. 7-15

(4) Remove the harness guide.

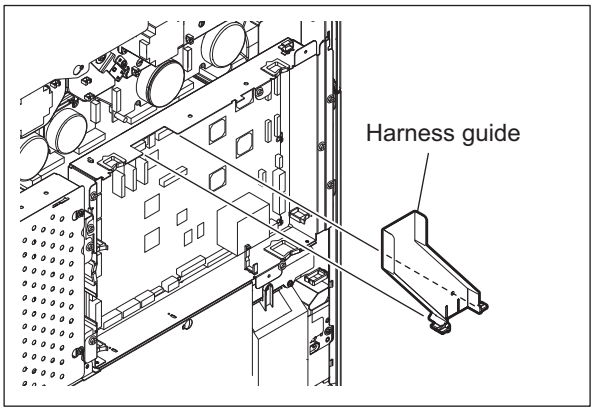


Fig. 7-16

(5) Remove 4 screws and take off the LGC board case.

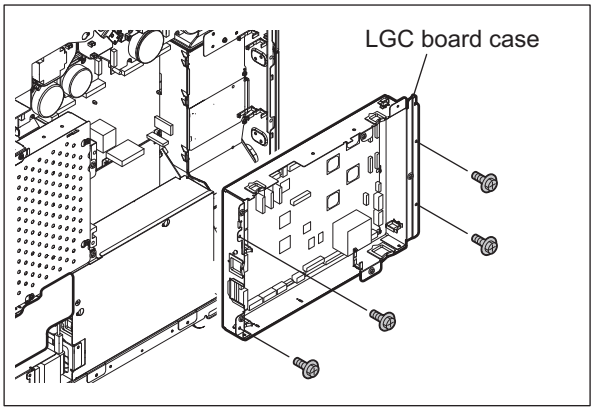


Fig. 7-17

7.1.8 PFC board (PFC)

(1) Take off the rear cover.
📖 Service Manual “3.5.18 Rear cover”
(2) Disconnect 15 connectors. (in case of a 4-drawer model)

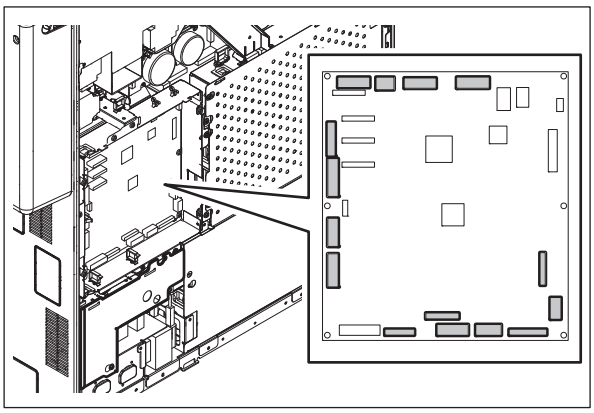


Fig. 7-18

Note:
If the equipment is a tandem LCF-model, disconnect 13 connectors.

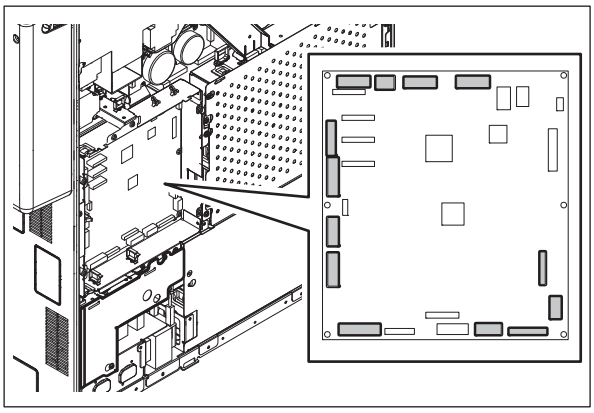


Fig. 7-19

(3) Remove 6 screws and take off the PFC board.

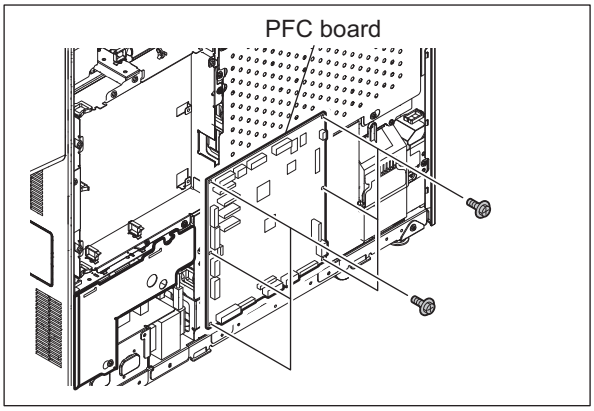


Fig. 7-20

7.1.9 PFC board case

(1) Take off the rear cover.
📖 Service Manual “3.5.18 Rear cover”
(2) Disconnect 15 connectors. (in case of a 4-drawer model)

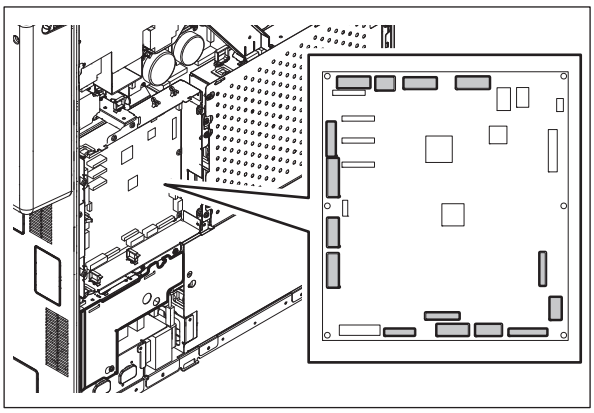


Fig. 7-21

Note:
If the equipment is a tandem LCF-model, disconnect 13 connectors.

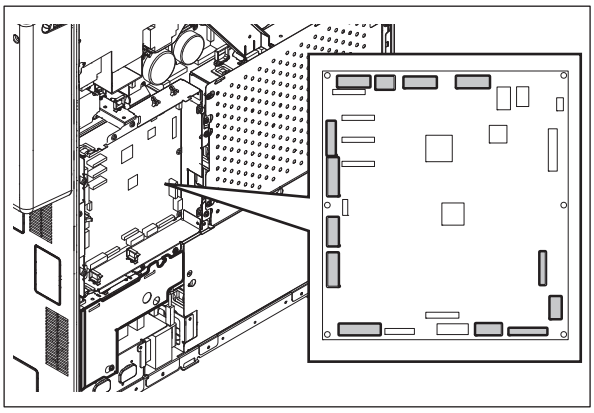


Fig. 7-22

(3) Remove 2 harness clamps on the upper side of the case. Release harness from 2 clamps with a lock.

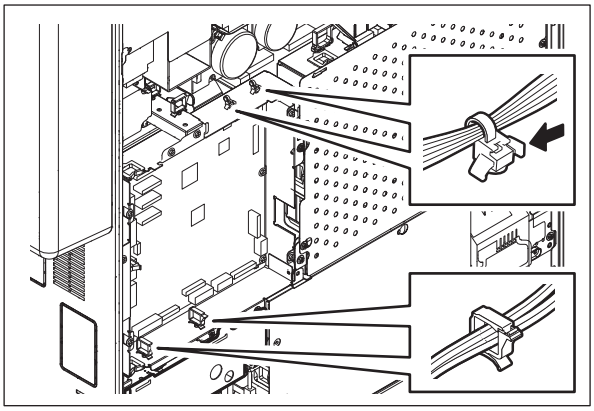


Fig. 7-23

(4) Remove 4 screws and take off the PFC board case.

Note:
The removed PFC board case can be hooked on the equipment temporarily.

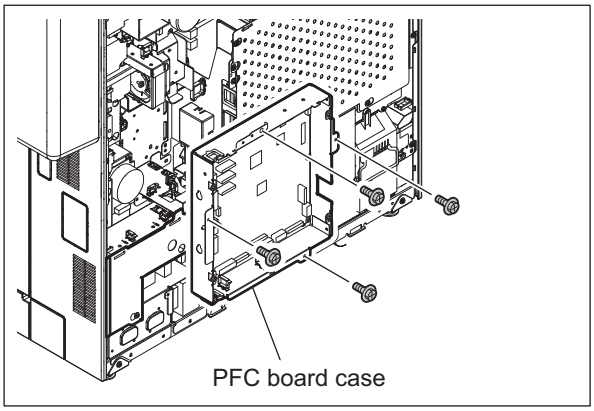


Fig. 7-24

7.1.10 Hard disk (HDD)

(1) Take off the rear cover.
📖 Service Manual “3.5.18 Rear cover”
(2) Disconnect 2 connectors.

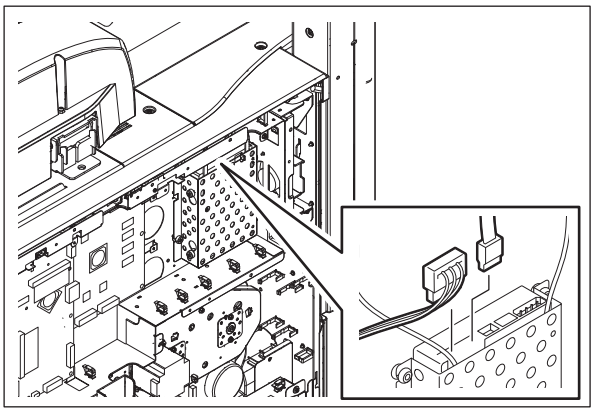


Fig. 7-25

(3) Remove 6 screws and take off the hard disk.

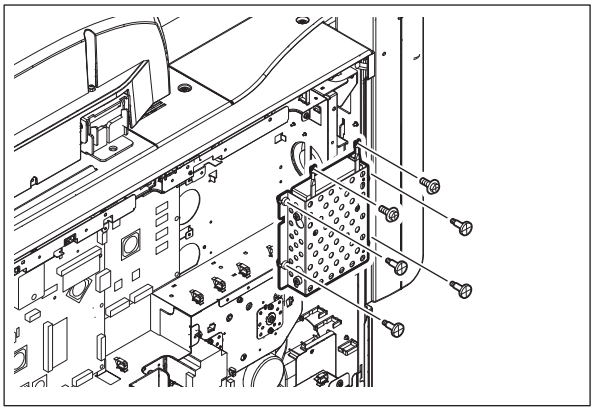


Fig. 7-26

(4) Remove 4 screws and take off the hard disk from the bracket.
(5) Remove 2 screws and take off the 2 cables.

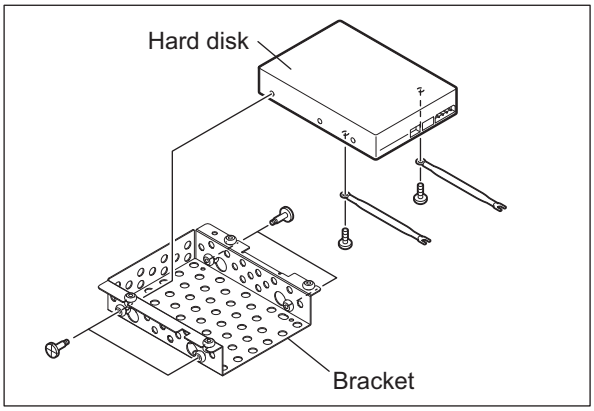


Fig. 7-27

7.1.11 HDD cooling fan (F28)

(1) Open the SYS board case for approx. 90 degrees.
📖 P.7-2 "7.1.3 SYS board case"

Note:
Open the board case gently during maintenance work or similar.

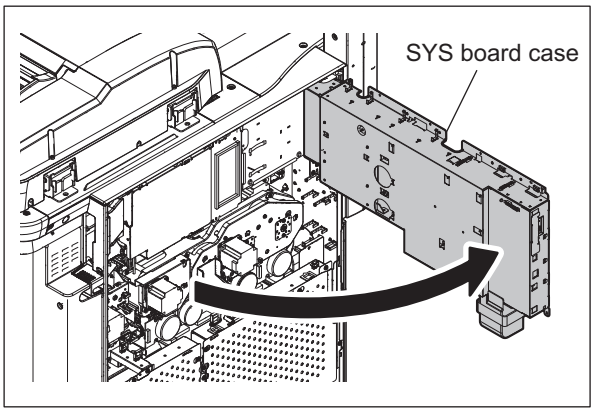


Fig. 7-28

(2) Disconnect 1 USB terminal and 3 connectors.

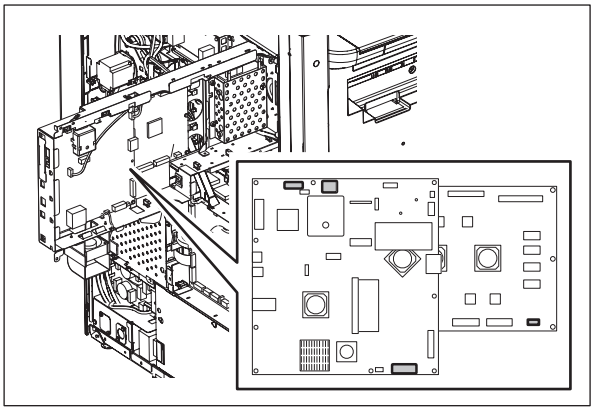


Fig. 7-29

(3) Release a harness from 1 harness clamp and 10 harness clamps with a lock.

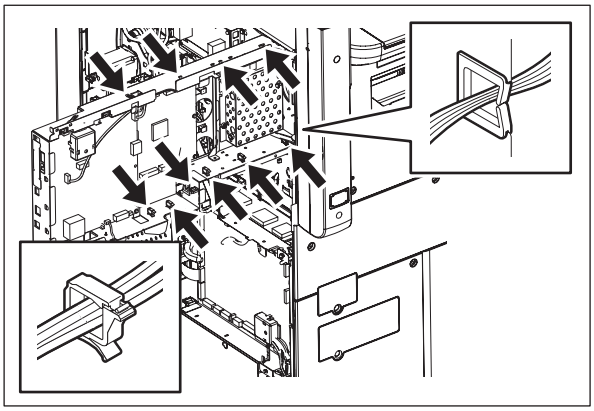


Fig. 7-30

(4) Lift the SYS board case to remove it.

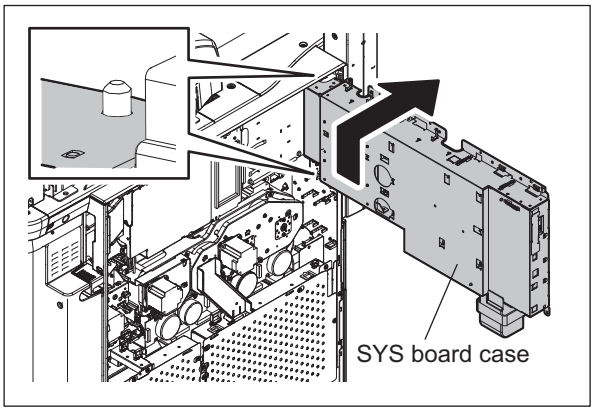


Fig. 7-31

(5) Disconnect 1 connector.
(6) Remove 5 harness clamps with a lock.

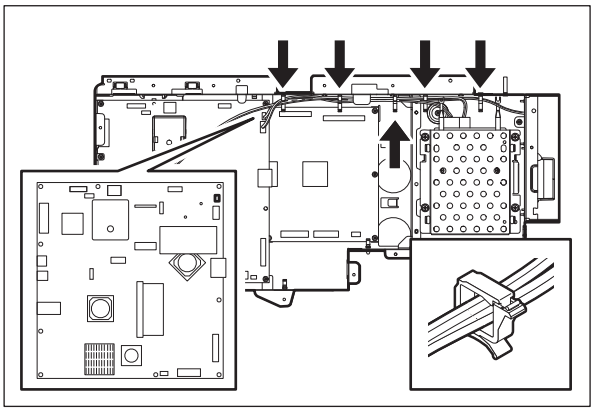


Fig. 7-32

(7) Release harness from 1 clamp.
(8) Remove 2 screws and take off the HDD cooling fan and duct.

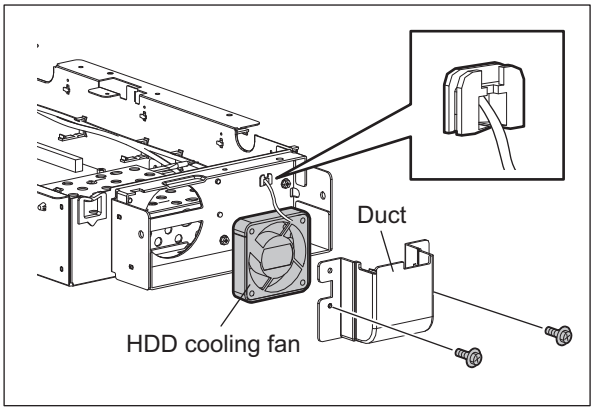


Fig. 7-33

7.1.12 SRAM board <for LGC board> (RAM-L)

(1) Take off the rear cover.
📖 Service Manual "3.5.18 Rear cover"
(2) Release 2 latches and take off the SRAM board for the LGC board with the case.

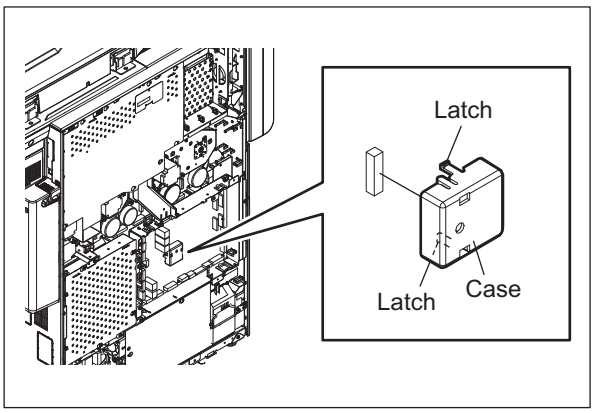


Fig. 7-34

(3) Release 2 latches and take off the SRAM board for LGC board from the case.

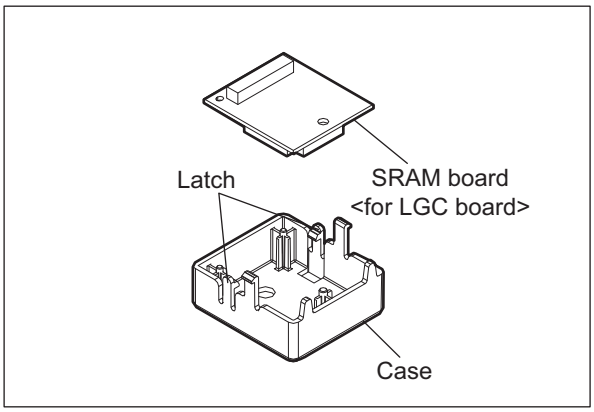


Fig. 7-35

Note:

The shape of the SRAM board for the LGC board differs from the one for the SYS board. Be sure to assemble the correct SRAM board.

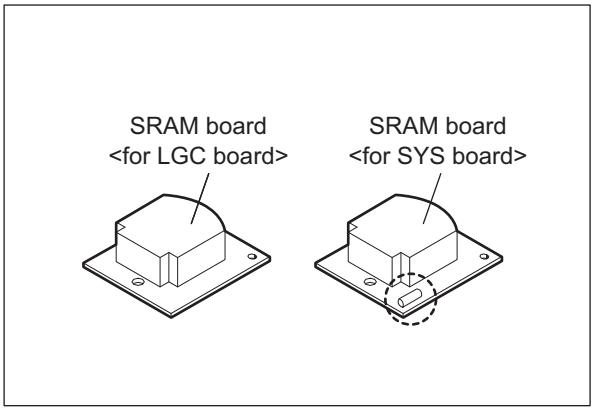


Fig. 7-36

7.1.13 SRAM board <for SYS board> (RAM-S)

(1) Take off the SYS board cover.
📖 P.7-1 "7.1.1 SYS board cover"

(2) Release 2 latches and take off the SRAM board for the SYS board with the case.

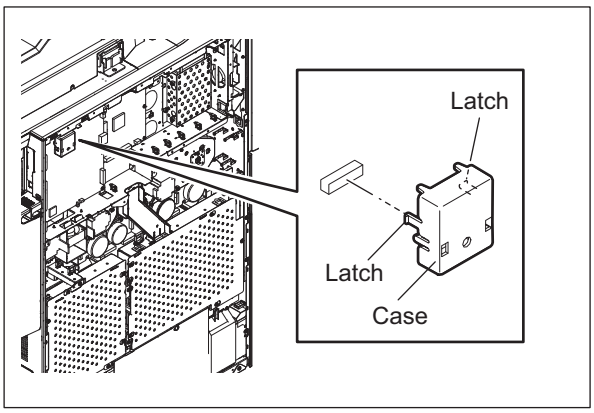


Fig. 7-37

(3) Release 2 latches and take off the SRAM board for SYS board from the case.

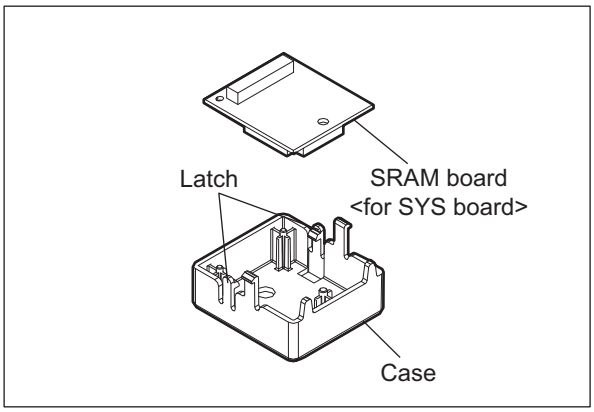


Fig. 7-38

Note:

The shape of the SRAM board for the SYS board differs from the one for the LGC board. Be sure to assemble the correct SRAM board.

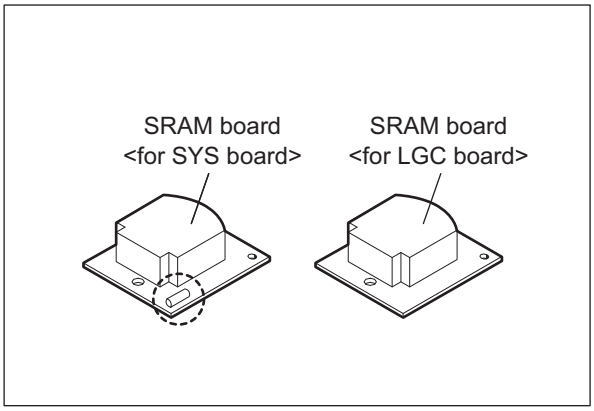


Fig. 7-39

7.1.14 Switching regulator (PS)

(1) Take off the rear cover.
🕮 Service Manual “3.5.18 Rear cover”
(2) Take off the PSU cover.

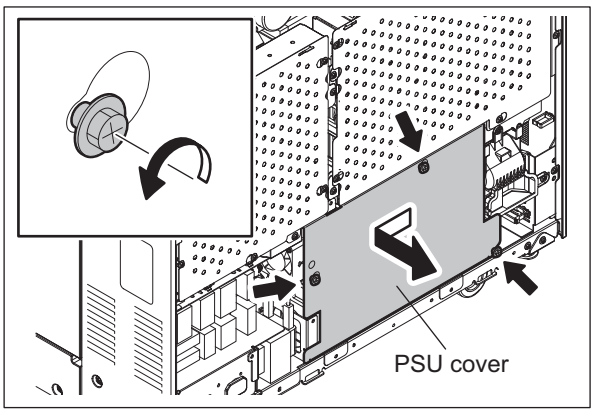


Fig. 7-40

(3) Disconnect 2 connectors.

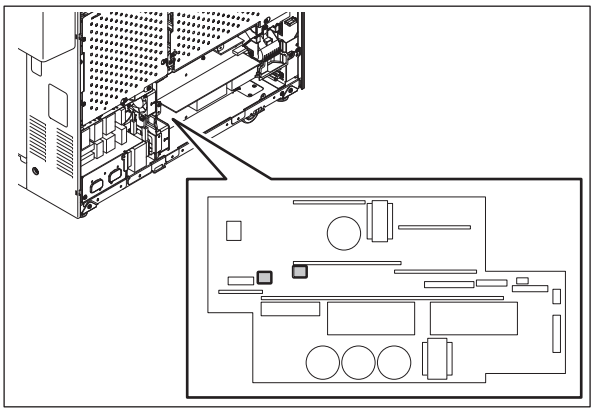


Fig. 7-41

(4) Release the harness from 1 harness clamp.
(5) Remove 3 screws and take off the reactor (trance).

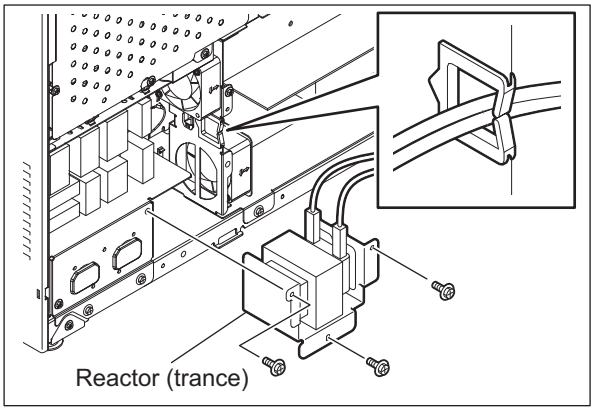


Fig. 7-42

(6) Remove 2 screws and take off the duct.

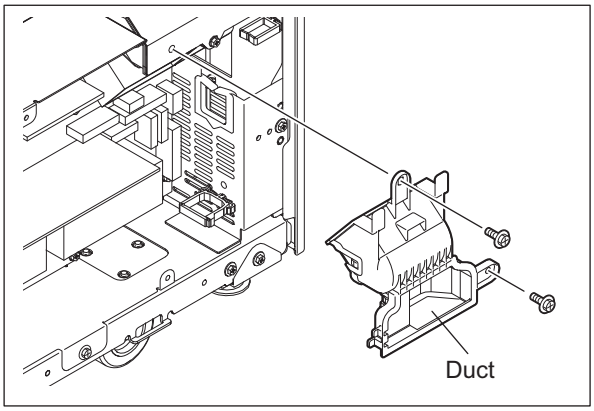


Fig. 7-43

(7) Disconnect 7 connectors.

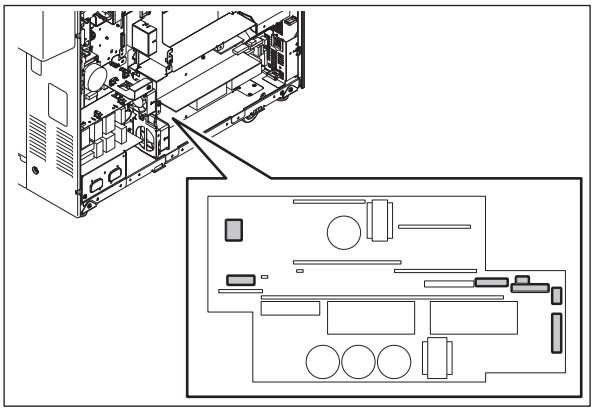


Fig. 7-44

(8) Remove 4 screws and take off the switching regulator.

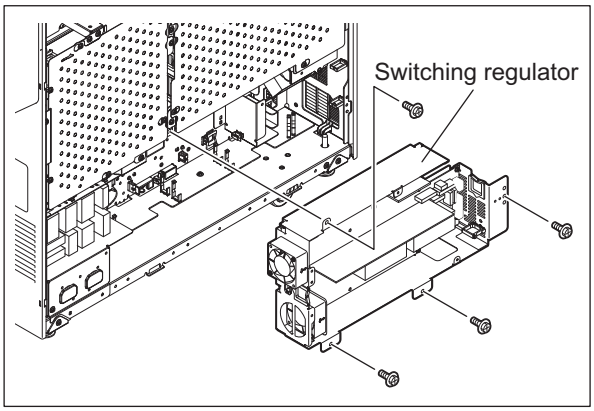


Fig. 7-45

7.1.15 High-voltage transformer-1 (HVT1)

(1) Take off the LGC board case.
📖 P.7-6 "7.1.7 LGC board case"
(2) Take off the PFC board case.
📖 P.7-8 "7.1.9 PFC board case"
(3) Disconnect 18 connectors.

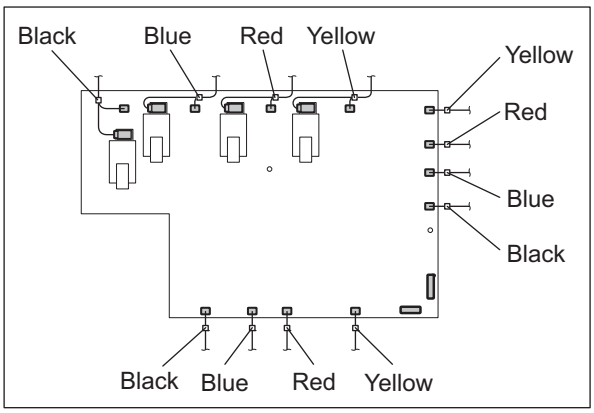


Fig. 7-46

(4) Remove 7 screws, release 2 locking supports and then take off the high-voltage transformer-1.

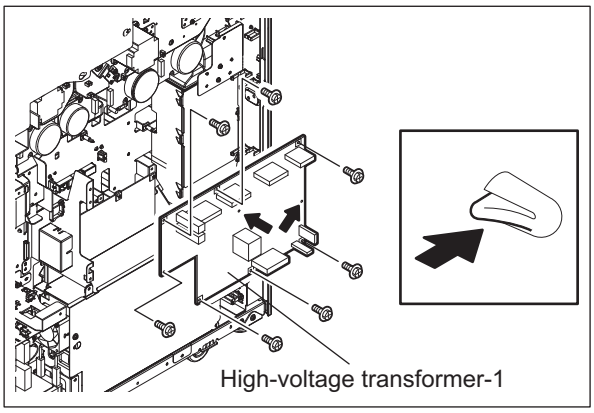


Fig. 7-47

7.1.16 High-voltage transformer-2 (HVT2)

(1) Take off the LGC board case.
📖 P.7-6 "7.1.7 LGC board case"
(2) Take off the PFC board case.
📖 P.7-8 "7.1.9 PFC board case"
(3) Take off the switching regulator.
📖 P.7-14 "7.1.14 Switching regulator (PS)"
(4) Disconnect 7 connectors.

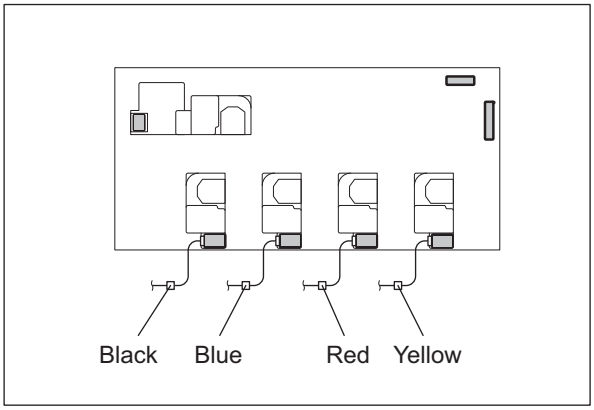


Fig. 7-48

(5) Remove 6 screws, release 1 locking support and then take off the high-voltage transformer-2.

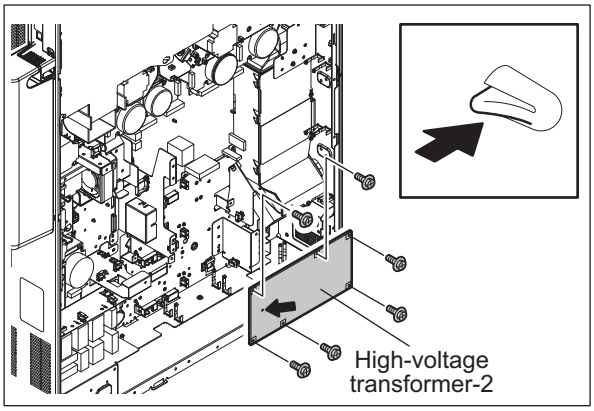


Fig. 7-49

7.1.17 FIL board

(1) Take off the rear cover.
🕮 Service Manual “3.5.18 Rear cover”
(2) Loosen 1 screw and take off the FIL board cover by slightly sliding it.

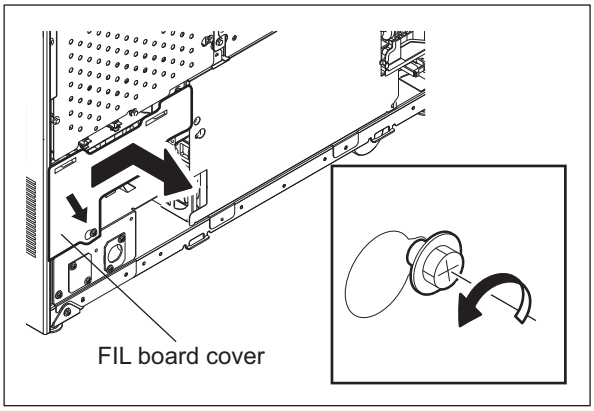


Fig. 7-50

(3) Disconnect 8 connectors.

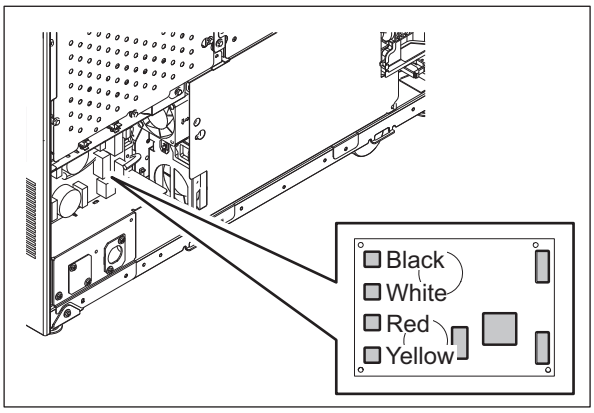


Fig. 7-51

(4) Remove 4 screws and take off the FIL board.

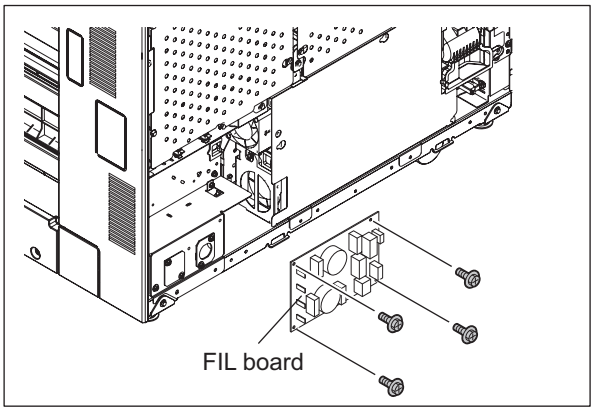


Fig. 7-52

7.2 Precautions, Procedures and Settings for Replacing PC Boards and HDD

7.2.1 Precautions when replacing PC boards

- The ID for each equipment is registered on the LGC board, the IMG board, the SYS board and the SLG board. So, if their replacement is required, be sure to replace only one board at a time.

- If more than one of the LGC board, the IMG board and the SYS board require replacement, replace them in the following procedure.
  1. First, replace one of the board to be replaced.
  2. Turn the power ON and confirm that “READY” is displayed.
  3. Turn the power OFF.
  4. Replace another board that requires replacement.
  5. Repeat steps 2 to 4.

- The LGC board and IMG board can be replaced without other settings.

- When the HDD requires replacement, see 🕮 P.7-22 "7.2.3 Precautions and procedures when replacing the HDD".

- When the SYS board requires replacement, see 🕮 P.7-27 "7.2.4 Precautions and Procedures when replacing the SYS board".

- When the SLG board requires replacement, see 🕮 P.7-28 "7.2.5 Procedures and settings when replacing the SLG board".

- When SRAM requires replacement, see 🕮 P.7-29 "7.2.6 Precautions and Procedures when replacing SRAM board (for SYS board)" / 🕮 P.7-33 "7.2.7 Precautions and Procedures when replacing SRAM board (for LGC board)".

7.2.2 HDD fault diagnosis

This code displays the HDD operation history, which is recorded in the HDD, on the control panel. HDD failure can be diagnosed or predicted with the information displayed.

1. Display
   The following screen is displayed with setting code 08-670.

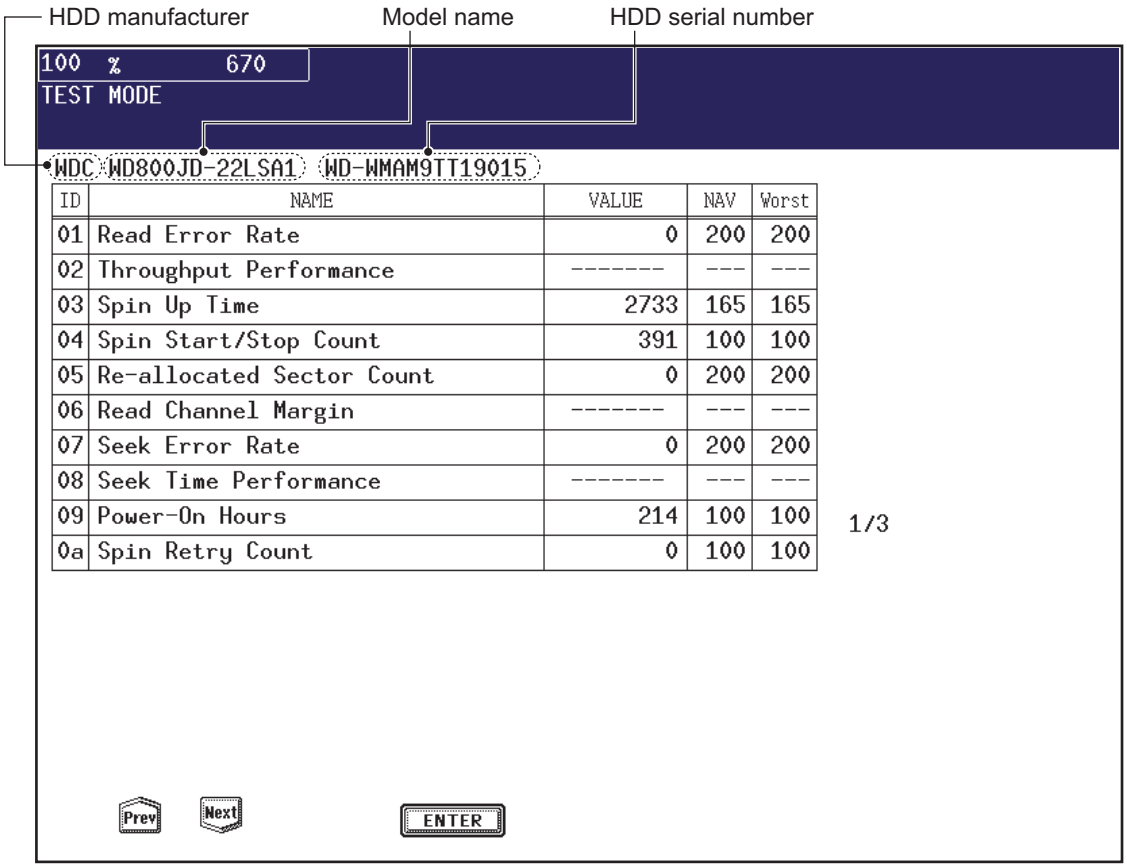


Fig. 7-53

- Items supported differ depending on the HDD manufacturer.
- "---" is displayed on the VALUE, NAV and Worst columns if items are not supported.

2. Usage
   The combination of the values of ID=05 and c5 is used to diagnose whether or not the HDD has a physical failure when HDD failure is suspected (service call F100-108 or 120 occurred).

Result		Description	Diagnosis
ID	VALUE		
05	0	Low possibility of physical failure	HDD replacement is not required.
c5	0		
05	From 1 to 999	Defective sector has been reassigned and HDD is recovered.	HDD replacement is not required.
c5	0		
05	Any value	High possibility of defective sector existence. (There will be a possibility of physical failure depending on the use of HDD.)	HDD replacement is recommended.
c5	1 or more		
05	Either one is at least 1000.	High possibility of physical failure	HDD replacement is recommended.
c5			
05	All values are displayed as "-------".	High possibility of physical failure (A HDD connector, harness or SYS board may be one of the causes.)	HDD replacement is recommended.
c5			

3. ID=05 and c5

ID	Name	Description	Remarks
05	Re-allocated Sector Count	The number of sectors reassigned	This value tends to increase at HDD failure.
c5	Current Pending Sector Count	The number of candidate sectors to be reassigned	This value tends to increase at HDD failure.

4. Description of each ID

ID	Name	Meaning
01	Read Error Rate	This attribute is a measure of the read error rate.
02	Throughput Performance	This attribute is a measure of the throughput performance.
03	Spin Up Time	This attribute is a measure of how quickly the drive is able to spin up from a spun down condition.
04	Spin Start/Stop Count	This attribute is a measure of the total number of spin ups from a spun down condition.
05	Re-allocated Sector Count	This attribute is a measure of the total number of reallocated sectors.
07	Seek Error Rate	This is a measure of the seek error rate.
08	Seek Time Performance	This attribute is a measure of a drive's seek performance during normal online operations.
09	Power-On Hours	This attribute is a measure of the total time (hours or minutes depending on disk manufacturer) the drive has been on.
0a	Spin Retry Count	This attribute is a measure of the total number of spin retries.
0c	Power Cycle Count	This attribute is a measure of the number of times the drive has been turned on.
c0	Power off Retract Count	This attribute is a measure of the total number of emergency unloads.
c1	Load Cycle Count	This attribute is a measure of the total number of load/ unloads.
c2	Temperature	This attribute is a measure of the temperature in the HDD.
c3	ECC On the Fly Count	This attribute is a measure of the total number of the ECC On the Fly.
c4	Reallocation Event Count	This attribute is a measure of the total number of the reallocation events.
c5	Current Pending Sector Count	This attribute is a measure of the total number of candidate sectors to be reallocated.
c6	Off-Line Scan Uncorrectable Sector Count	This attribute is a measure of the total number of uncorrectable sectors found during the off-line scan.
c7	Ultra DMA CRC Error Count (Rate)	This attribute is a measure of the total number of errors found in data transfer in the Ultra-DMA mode.
c8	Write Error Rate	This attribute is a measure of the write error rate.

Note:
"Over-range" is displayed if the number of digits acquired from the HDD exceeds the maximum digits which can be displayed on the control panel; however, this does not indicate an error.

7.2.3 Precautions and procedures when replacing the HDD

Notes:

- When the HDD is replaced, it is necessary to back up the data in the HDD before replacing and to recover them after replacing.
- To maintain the security, ask users to perform the backup/restore for users' data/information in the HDD. The service technician can perform them only when users permit it.
- Some data in the HDD cannot be backed up and can be kept only on the paper.
- When 08-690 is performed, the HDD self-certificate is not available, so the SSL-related setting becomes disabled.
- Do not replace the HDD and the SRAM board (for the SYS board) together.

A procedure for replacing the HDD is shown below.

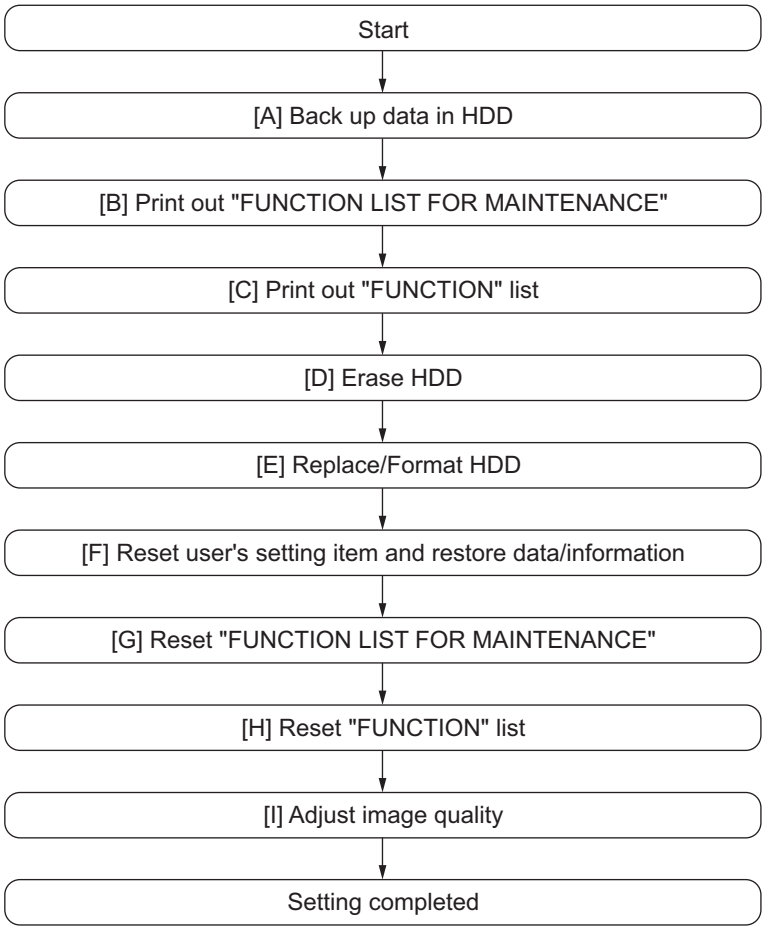


Fig. 7-54

[A] Back up in HDD

Ask the user (machine administrator) to back up the data in the HDD. Refer to the table below for the type of data, availability and method of backup.

Type of data in HDD	Availability	Backup method
Image data in the e-Filing	Available	Archive them in the “e-Filing” of TopAccess. As for the backup in Box data, all data (selectable by the box) can be backed up / restored in one go by using “e-Filing Backup/ Restore Utility”.
F-code information, Template registration information, Address book data	Available	Back them up in the “Administrator” menu of TopAccess.
Department management data	Available	Export them in “Administrator” menu of TopAccess.
Log data (Print, Scan, FAX (Transmission/Reception)	Available	Export them in the “Administrator” menu of TopAccess. (Import cannot be performed.)
Data in the shared folder (Scanned data, Saved data of copy / FAX transmission)	Available	Copy them to the client computer via the network. (The data which have been copied to the client computer cannot be copied to the shared folder.)
Print waiting data (Copying data and FAX reception data that are waiting to be printed due to the paper run-out and jam, etc.)	Not available	Finish printing them after supplying paper or releasing the jam, etc. (The data cannot be left.)
Print job (Private print data, Schedule print data)	Not available	If any jobs are left, print them. (The data cannot be backed up.)
FAX saved data (Confidential / Bulletin board data)	Not available	Print them. (The data cannot be backed up.)
Registration data for FAX transmission (Delayed transmission / Recovery transmission)	Not available	Print them. (The data cannot be backed up.)

[B] Print out “FUNCTION LIST FOR MAINTENANCE”

(1) Press the [USER FUNCTIONS] button and then the [USER] button.

(2) Press the [LIST] button.

(3) Key in [*] [#] [*] [*] [3] [3] and then press the [START] button. The “FUNCTION LIST FOR MAINTENANCE” is printed out.

[C] Print out “FUNCTION” list

(1) Press the [USER FUNCTIONS] button.

(2) Press the [ADMIN] button, enter the password, and then press the [ENTER] button.

Note:
Explain the procedure to the user (machine administrator) and ask him/her to enter his/her password.

(3) Press the [LIST/REPORT] button and then the [LIST] button.

(4) Press the [FUNCTION] button. The “FUNCTION” list is printed out.

[D] Erase HDD

When the Data Overwrite Enabler (GP-1070) is installed, be sure to perform 08-1426 (forcible HDD data clearing) and confirm that deleting of the HDD data is completed.
📖 P.7-37 "7.3.1 Precautions for Installation of GP-1070 and Disposal of HDD/Board"

[E] Replace / Format HDD

(1) Confirm that the power is turned OFF.

(2) Replace the HDD. (📖 P.7-9 "7.1.10 Hard disk (HDD)")

(3) Clear the partitions on the HDD.
1. Turn the power ON while pressing [3] and [CLEAR] button simultaneously.
2. When “Firmware Version Up Mode” appears on the LCD, key in [3] to select “3: All Partition Delete and Create Loader Partition.” and then press the [START] button.
3. When “Initialize completed.” is displayed on the LCD, clearing of the partitions is completed.

(4) Turn the power OFF.

(5) Update the master data using the USB media.
See “8.1Firmware Updating with USB Media” for details.

(6) Start up with the Setting Mode (08).

(7) Format the HDD (08-690).
- When “REBOOT THE MACHINE” is displayed on the LCD, formatting of the HDD is completed.

(8) Turn the power OFF.

(9) When the Fax Unit (GD-1270) is installed, perform “Fax Set Up” (1*-100) and “Clearing the image data” (1*-102).Then turn the power OFF.

(10) Start up with the Setting mode (08).

(11) Check the version of the HDD (08-944).
- Confirm the version displayed on the LCD, and then press the [ENTER] button.

(12) Turn the power OFF.

[F] Reset user's setting items and restore data/information

Ask the user (machine administrator) to reset the user's setting items and to restore data or information. Refer to the following for the reset and restore:

Items to reset/restore	Method
Printer driver	Upload them in the "Administrator" menu of TopAccess.
F-code information, Template registering information, Address book data	Restore them in the "Administrator" menu of TopAccess
Department management data	Import them in the "Administrator" menu of TopAccess.
Image data in the Electronic Filing	Upload them in the "e-Filing" of TopAccess.

* When the SSL is enabled, perform the setting of the following items again with "Create self-certificate" of TopAccess.

Country Name
State or Province Name
Locality Name
Organization Name
Organizational Unit Name
Common Name
Email Address

* When wireless LAN is used, perform the setting again on the LCD panel.
(only when security with a certificate is used)
Also, upload the following certificate file with "Install Certificate for Wireless LAN" of TopAccess.

CA certificate
User certificate

[G] Reset "FUNCTION LIST FOR MAINTENANCE"

(1) Print out the "FUNCTION LIST FOR MAINTENANCE" list after the formatting. For how to print it out, refer to 🕮 P.7-23 "[B] Print out "FUNCTION LIST FOR MAINTENANCE"".

(2) While pressing [1] and [3] simultaneously, turn the power ON. (Function Mode)

(3) Compare the lists which were printed before and after the formatting to check the setting items having the different setting values. Set the value which was set before the formatting.

(4) Turn the power OFF.

[H] Reset "FUNCTION" list

Reset the fax function by referring to the "FUNCTION" list that was printed out in "🕮 P.7-24 "[C] Print out "FUNCTION" list".

(1) Press the [USER FUNCTIONS] button.

(2) Press the [ADMIN] button, enter the password, and then press the [ENTER] button.

Note:
Explain the user (machine administrator) about the next operation and ask him/her to enter his/her password.

(3) Press the [FAX] button and then the [TERMINAL ID] button to set each item.

(4) Press the [INITIAL SETUP] button to set each item.

[l] Adjust image quality

(1) Start up with the Adjustment mode (05).

(2) Perform “Automatic gamma adjustment” <PPC> (05-580).
📖 P.3-32 "3.2.1 Automatic gamma adjustment"

(3) Turn the power OFF.

7.2.4 Precautions and Procedures when replacing the SYS board

A procedure for SYS board replacement is shown below.

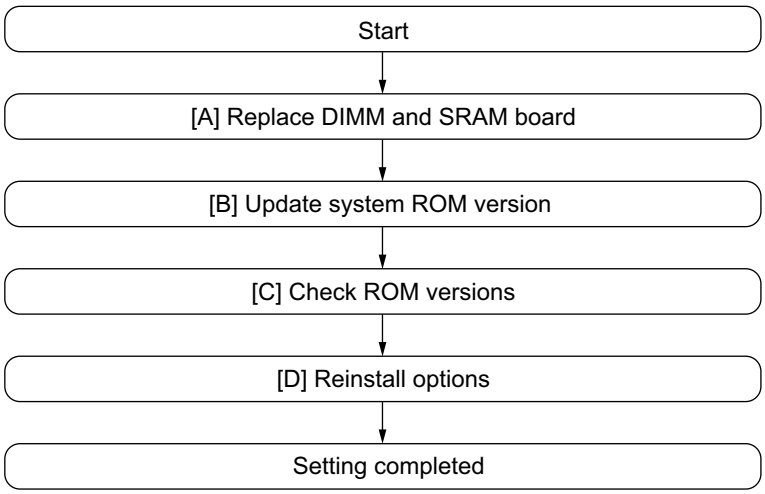


Fig. 7-55

[A] Replace DIMM and SRAM boards

Note:
Before replacing the SYS board, perform the following procedure.
📖 P.7-19 "7.2.1 Precautions when replacing PC boards"

(1) Confirm that the power is turned OFF.

(2) Replace the SYS board.

(3) Install DIMM (main memory, page memory) to the new SYS board (from the old SYS board).

(4) Install SRAM board to the new SYS board (from the old SYS board).

[B] Update system ROM version

Update the version of system ROMs (OS data, UI data, System Firmware) with the USB media.
📖 P.8-5 "8.1 Firmware Updating with USB Media"

[C] Check ROM versions

- System firmware ROM version (08-900)
- FROM basic section software version (08-920)
- System firmware internal program version (08-921)
- Version of UI data in FROM displayed at power ON (08-930)

[D] Reinstall options

When any of the options below was installed, reinstall a license for the corresponding option following its unpacking instructions.

- Meta Scan Enabler (GS-1010)
- External Interface Enabler (GS-1020)
- IPSec Enabler (GP-1080)

When GP-1070 (Data Overwrite Enabler) has been installed, “F200” service call occurs. In this case, perform cancelling the “F200” service call (installing the OS / HDD SYS / PFC Firmware / Engine MainFirmware / Scanner Firmware using the USB media), and then install GP-1070 (Data Overwrite Enabler) again.

7.2.5 Procedures and settings when replacing the SLG board

Note:
Before replacing the SLG board, perform the following procedure.
📖 P.7-19 "7.2.1 Precautions when replacing PC boards"

When the SLG board has been replaced, make sure to follow the procedure below.

(1) Confirm that the power is turned OFF.

(2) Replace the SLG board.
📖 Service Manual “7.6.18 SLG board (SLG)”

(3) Update the scanner ROM using the USB Media.
📖 P.8-5 "8.1 Firmware Updating with USB Media"

(4) Start up with the Adjustment Mode (05).

(5) Perform “Data transfer of characteristic value of scanner / SYS board -> SLG board (05-363)”.

(6) Perform “Shading correction plate Automatic dust detection adjustment (05-349)”.

(7) Turn the power OFF.

(8) Start up with the Setting Mode (08).

(9) Check the version of the scanner ROM (08-905).

(10) Turn the power OFF.

7.2.6 Precautions and Procedures when replacing SRAM board (for SYS board)

Note:

Do not replace the HDD and the SRAM board (for the SYS board) together.
Be careful not to damage the board when replacing the SRAM board.
When you replace the SRAM board while the data encryption function is enabled, readout of the user data/information stored in the HDD becomes impossible.

A procedure for replacing the SRAM board is shown below.
When disposing of the SRAM board, perform the items in 📖 P.7-37 "7.3.3 Precautions when disposing of the SRAM board".

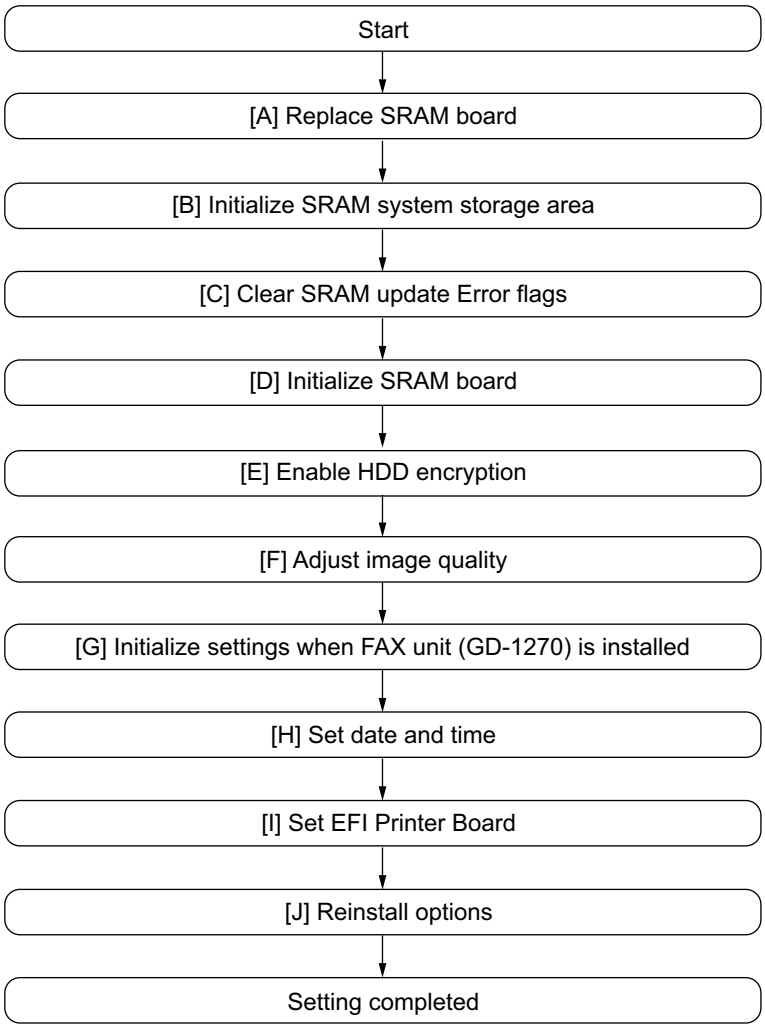


Fig. 7-56

[A] Replace SRAM board

(1) Confirm that the power is turned OFF.

(2) Take off the Fax Unit (GD-1270) if it is installed.

(3) Replace the SRAM board (for the SYS board).
📖 P.7-13 "7.1.13 SRAM board <for SYS board> (RAM-S)"

[B] Initialized SRAM system storage area

(1) Turn the power ON while pressing [3] and [CLEAR] simultaneously.

(2) When “Firmware Version Up Mode” appears on the LCD, check that “4: SRAM Data Format.” is marked and then press the [START] button. If not marked, key in [4] and then press the [START] button.

(3) When “SRAM Data Format Complete.” is displayed on the LCD, the formatting is completed.

(4) Turn the power OFF.

[C] Clear SRAM update Error flags

(1) Turn the power ON while pressing [3] and the [CLEAR] button simultaneously.

(2) After “Firmware Version Up Mode” is displayed on the LCD, check that “1: Clear SRAM update Error flags.” is marked and press the [START] button.
If not, key in [1] and then press the [START] button.

(3) When “SRAM update Error flags cleared.” is displayed on the LCD, clearing the flag is completed.

(4) Turn the power OFF.

[D] Initialize SRAM board

(1) Start up with the Setting Mode (08).

(2) Initialize the SRAM error.
1. When “SRAM ERROR DOES IT INITIALIZE” is displayed on the LCD, check the destination and then press the [START] button.
   If the destination is not correct, key in the correct one and then press the [START] button.
2. After the confirmation message is displayed, press the [INTERRUPT] button.

(3) Perform the panel calibration (08-692).
1. Touch the center of “+” mark displayed on the upper left of the LCD.
2. Touch the center of “+” mark displayed on the lower right of the LCD.

(4) Perform the initialization at the software version upgrade (08-947).

(5) Initialize the NIC information (08-693).

(6) Enter the serial number (08-995).
Key in the serial number on the label attached to the rear cover of the equipment, and then press the [OK] button.

(7) Turn the power off.

[E] Enable HDD encryption

If the HDD encryption function has been set, perform the following procedure.

(1) Start up with the Setting mode (08).

(2) Enable the HDD encryption function (08-9379).

(3) Format the HDD (08-690).

(4) Turn the power OFF.

[F] Adjust image quality

(1) Start up with the Adjustment mode (05).

(2) Perform “Data transfer of characteristic value of scanner” (05-364).

(3) Perform “Automatic gamma adjustment” <PPC> (05-1642).
📖 P.3-32 "3.2.1 Automatic gamma adjustment"

(4) Perform “Automatic gamma adjustment” <PRT> (600dpi: 05-1008, 1200dpi: 05-1009).
📖 P.3-47 "3.3.1 Automatic gamma adjustment"

(5) Turn the power OFF.

[G] Initialize settings when FAX Unit (GD-1270) is installed

(1) Reinstall the FAX Unit (GD-1270) which was taken off at step (1) of 📖 P.7-29 "[A] Replace SRAM board".

(2) Start up with the Setting mode (08).

(3) Set the destination of FAX (08-701).

(4) Turn the power OFF.

(5) Start up with the FAX Clearing Mode (1*).

(6) Perform the FAX Set Up (1*-100).

(7) Turn the power OFF and then back ON.

(8) Set the dial type according to these buttons: [USER FUNCTIONS] -> [ADMIN] -> [FAX] -> [INITIAL SETUP]

[H] Set date and time

Set the date and time according to these buttons.
[USER FUNCTIONS] → [ADMIN] → [GENERAL] → [CLOCK] → [DATE/TIME]

[I] Set EFI Printer Board

If the EFI Printer Board (GA-1310) is installed, perform the following procedure.

(1) Turn the power OFF.

(2) Start the setting mode (08).

(3) Initialize the EFI Printer Board (08-700).

(4) Turn the power OFF.

[J] Reinstall options

When any of the options below was installed, reinstall a license for the corresponding option following its unpacking instructions.

- Meta Scan Enabler (GS-1010)
- External Interface Enabler (GS-1020)
- IPSec Enabler (GP-1080)

When GP-1070 (Data Overwrite Enabler) has been installed, “F200” service call occurs. In this case, perform cancelling the “F200” service call (installing the OS / HDD SYS / PFC Firmware / Engine MainFirmware / Scanner Firmware using the USB media), and then install GP-1070 (Data Overwrite Enabler) again.

7.2.7 Precautions and Procedures when replacing SRAM board (for LGC board)

Note:
Be careful not to damage the board when replacing the SRAM board.

A procedure for replacing the SRAM board is shown below.
When disposing of the SRAM board, perform the items in 📖 P.7-37 "7.3.3 Precautions when disposing of the SRAM board"

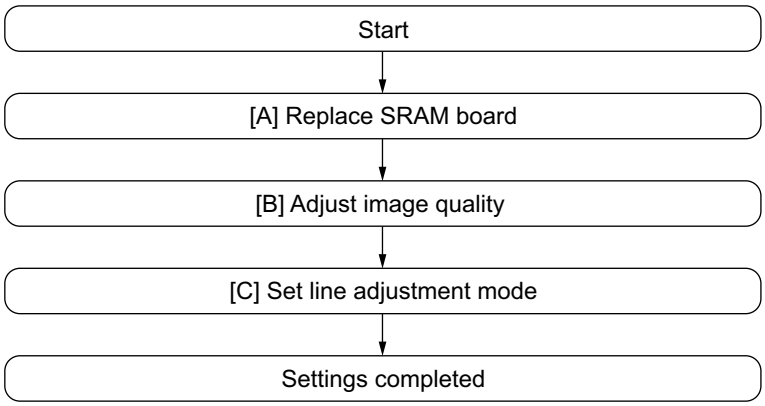


Fig. 7-57

[A] Replace SRAM board

(1) Confirm that the power is turned OFF.

(2) Replace the SRAM board (for the LGC board).
📖 P.7-12 "7.1.12 SRAM board <for LGC board> (RAM-L)"

Note:
After the TRU waste toner amount detection sensor has detected the near-full status, and the number of prints has reached the specified value (08-4597), the TRU waste toner box is judged as being full. The count value of the number of prints is stored in the SRAM board until it reaches the specified value. When the SRAM board is replaced, the data stored in the SRAM board are reset. Check the TRU waste toner box and if the amount of the waste toner exceeds the position of the line shown in the following figure, replace the TRU waste toner box.
📖 Service Manual “12.6.20 TRU waste toner box”

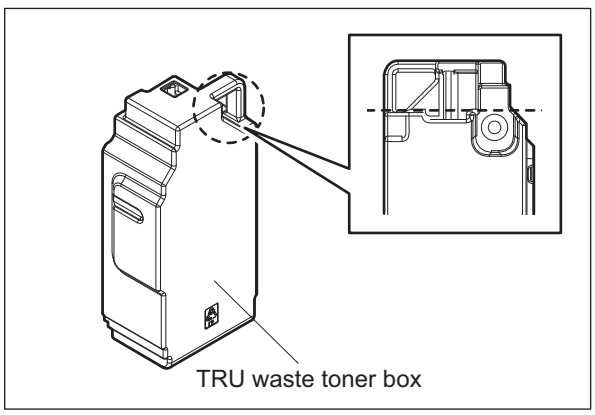


Fig. 7-58

[B] Adjust image quality

(1) Take off the front lower cover.
🕮 Service Manual “3.5.1 Front lower cover”

(2) Correctly write down the adjustment values of the following (05) codes attached on the laser optical unit cooling duct.

	L (0)	H (1)
05/2622		
05/2623		
05/2624		
05/2625		
05/2627		
05/2628		
05/2629		
05/2630		

(3) Start up with the Adjustment mode (05).

(4) Enter the all adjustment values written down in step (1).

(5) Reset the auto toner sensor.
1. Turn the power OFF.
2. Take off the developer units of 4 colors (Y, M, C and K).
🕮 Service Manual “11.5.24 Developer unit”
3. Discharge developer material in each developer unit and make sure that the developer unit is completely empty. Or prepare empty developer units of 4 colors (Y, M, C and K).
🕮 Service Manual “11.5.25 Developer material”
4. Install the empty developer units of 4 colors (Y, M, C and K) to the equipment
🕮 Service Manual “11.5.24 Developer unit”
5. Install the developer cartridges of 4 colors (Y, M, C and K) to the equipment.
6. Install the front cover.
🕮 Service Manual “3.5.2 Front cover”
7. Perform automatic adjustment of auto-toner sensor.
Start up with the Adjustment mode (05), enter [200] and press the [START] button.
8. Turn the power OFF.
9. Take off the front cover.
🕮 Service Manual “3.5.2 Front cover”
10. Take out all the developer cartridges and then install the sub-hoppers of 4 colors (Y, M, C and K).
🕮 Service Manual “11.5.11 Sub-hopper”
11. Install the front cover.
🕮 Service Manual “3.5.2 Front cover”

Note:
You can reset the auto-toner sensor by directly entering the adjustment values for (05) 205-0 to 3 with the Adjustment mode data list, which has been printed during normal operation of equipment such as when it is setup, when preventive maintenance (PM) is performed or when developer material is replaced, etc.

(6) Adjust the image quality control (05-396).

(7) Perform “Tilt motor initial excitation setting” (05-4721).

(8) Perform the enforced position adjustment (05-4719).

(9) Perform printer related adjustment and scanner related adjustment.
📖 P.3-15 "3.1.7 Printer-related image dimensional adjustment"
📖 P.3-23 "3.1.8 Scanner-related image dimensional adjustment"

(10) Perform “Automatic gamma adjustment” <PPC> (05-1642).

(11) Perform “Automatic gamma adjustment” <PRT> (600dpi : 05-1008, 1200dpi : 05-1009).

Note:
Usually, it is only necessary to perform automatic gamma adjustment for [Plain paper]; however if other paper is used, perform automatic gamma adjustment per paper type.

[C] Set line adjustment mode

(1) Turn the power OFF.

(2) Start up with the Setting Mode (08).

(3) Set “Line adjustment mode” to “0: For factory shipment” (08-203).

Note:
Be sure to change the setting of “Line adjustment mode” (08-203) to “0: For factory shipment”. Since “1: For line” is set for “Line adjustment mode” in SRAM supplied as a service part, number of prints is not counted unless it is changed.

7.2.8 Firmware confirmation after the PC board/HDD replacement

After replacing the PC board/HDD, check the firmware version in the setting mode (08) and confirm if the firmware combination is correct.

Firmware	Code	Remarks
Updating HDD/UI data	08-944	HDD Version
	08-924	Version of UI data language 1 in HDD
Updating System ROM	08-900	System firmware ROM version
	08-921	System firmware ROM internal program version
Updating OS	08-920	FROM basic section software version
Updating Engine ROM	08-903	Engine ROM version
Updating Scanner ROM	08-905	Scanner ROM version
Updating PFC ROM	08-906	PFC ROM version
Updating RADF ROM	08-907	RADF ROM version
Updating Finisher ROM	08-908	Finisher ROM version Saddle stitcher ROM version
	08-911	Hole punch unit ROM version
	08-9945	Converter ROM version
Updating FAX ROM	08-915	FAX ROM version
Imaging Acceleration Board ROM	08-9965	Imaging Acceleration Board SROM version

* If “NGD” is displayed for the PFC ROM.version (08-906), the downloading of PFC ROM fails. Update the firmware again.
📖 P.8-51 "8.5 When Firmware Updating Fails"

7.2.9 Electronic key re-registration using the one-time dongle

[A] When the board is replaced

The Electronic key registered using the one-time dongle can be re-registered only in the same equipment. When the SYS board or SRAM board (for SYS board) is replaced, follow the procedures for re-registration given below.

(1) After the SYS board or SRAM board is replaced, set up the equipment referring to the following procedures.
📖 P.7-27 "7.2.4 Precautions and Procedures when replacing the SYS board"
📖 P.7-29 "7.2.6 Precautions and Procedures when replacing SRAM board (for SYS board)"

(2) Perform 08-3840 with the one-time dongle previously used for registering the Electronic key.
📖 P.7-27 "[D] Reinstall options"
📖 P.7-32 "[J] Reinstall options"

(3) When the authentication succeeds, the re-registration screen appears and the available reregistration numbers are displayed after the option names.

(4) Perform the registration in the same manner as a regular one.

Note:
This procedure is available only with the one-time dongle used for the previous registration, since the model information registered in it is utilized. Use the same one-time dongle and the equipment when registering the Electronic key.

[B] When the equipment is replaced due to malfunction

When the equipment has to be replaced due to a malfunction, return the Electronic key registered in the equipment to the one-time dongle and register it to the new equipment following the procedure below.

Note:
The Electronic key of the IPSec option (GP-1080) cannot be re-registered.

(1) Start up with the Setting mode (08).

(2) Perform 08-3870 and check the registered Electronic key.

(3) Connect the one-time dongle used for registering the Electronic key to the USB port of the equipment.

Note:
The one-time dongle to be used is the one for the previous registration of the Electronic key.

(4) Perform 08-3841. The Electronic keys which can be returned to the one-time dongle are displayed.

(5) Select one and press the [RETURN] button.

Note:
The Electronic key is deleted from the equipment and is stored in the one-time dongle.

(6) After the equipment is replaced, start up with the Setting mode (08).

(7) Connect the one-time dongle to the USB port and perform 08-3840.

(8) Perform the re-registration in the same manner as a regular one.

7.3 Precautions for Installation of GP-1070 and Disposal of HDD/ Board

7.3.1 Precautions for Installation of GP-1070 and Disposal of HDD/ Board

When installing the Data Overwrite Enabler (GP-1070), perform the following setting:

08-1422: HDD data overwriting type setting
This setting is the overwriting method complying with DoD 5220.22-M.
0: LOW: This is the standard overwriting method. (This method is used normally.)
1: MEDIUM: This overwriting method is more secure than LOW. The erasing time is between LOW and HIGH.
2: HIGH: This is the most secure overwriting method. It takes the longest time to erase data

If disposing of the HDD when the Data Overwrite Enabler (GP-1070) has been installed, perform the following settings for security.
📖 P.2-135 "2.6.6 System"

08-1424: HDD data clearing type setting (forcible clearing)
This setting is the overwriting method complying with DoD 5220.22-M.
0: LOW: This is the standard overwriting method. (This method is used normally.)
1: MEDIUM: This overwriting method is more secure than LOW. The erasing time is between LOW and HIGH.
2: HIGH: This is the most secure overwriting method. It takes the longest time to erase data.

08-1426: Forcible HDD data clearing
HDD data are cleared according to the setting of 08-1424

Note:
The process is displayed as a percentage during forcible HDD data clearing. Never turn the power OFF until 100% is displayed and the process is completed.

7.3.2 Precautions when disposing of the SYS board

When disposing of the SYS board, data clearing is not required since important data, such as user information, etc. are stored in the SRAM board.

7.3.3 Precautions when disposing of the SRAM board

When disposing of the SRAM board, perform 08-1428 (Forcible SRAM backup data all clearing) for security reasons.

Note:
If these codes are performed, the equipment cannot be started up.

8. FIRMWARE UPDATING

When you want to update the firmware to the latest one or the equipment becomes inoperable due to some defect in the firmware, updating can be performed as follows.

Equipment

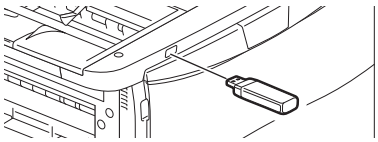
Firmware	Updating method
Master data (HDD program data, System firmware, UI data)	USB media
System ROM (OS data)	USB media
	Download jig (PWA-DWNLD-350-JIG2)
PFC ROM	USB media
	Download jig (PWA-DWNLD-350-JIG2)
Engine ROM (Main firmware)	USB media
	Download jig (PWA-DWNLD-350-JIG2)
Scanner ROM (Scanner firmware)	USB media
	Download jig (K-PWA-DLM-320)
Reversing Automatic Document Feeder (RADF)	Download jig (K-PWA-DLM-320)

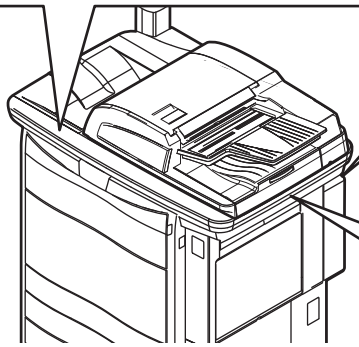
Options

Model name	Firmware	Updating method
Finisher (MJ-1103)	Finisher firmware	Download jig (K-PWA-DLM-320)
	Converter firmware	
Saddle Stitch Finisher (MJ-1104)	Finisher firmware	
	Saddle stitcher firmware	
	Converter firmware	
Hole Punch Unit (MJ-6102)	Hole punch unit firmware	
Fax Unit (GD-1270)	FAX firmware	
Imaging Acceleration Board (GE-1170)	Imaging Acceleration Board firmware	USB media

A. Master data / System ROM / PFC ROM
Engine ROM / Scanner ROM /
Imaging Acceleration Board ROM

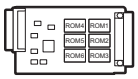
USB media

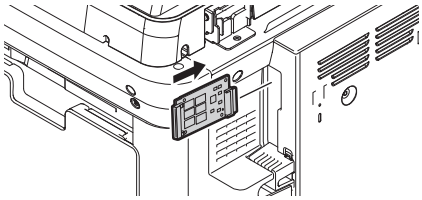




B. System ROM

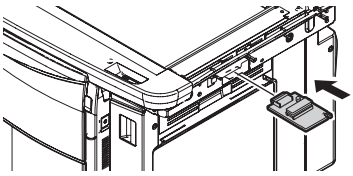
PWA-DWNLD-350-JIG2





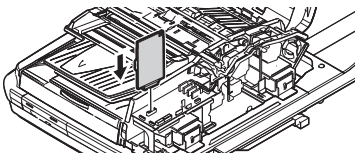
C. Scanner ROM

K-PWA-DLM-320



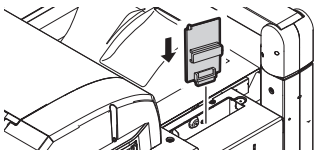
D. RADF ROM

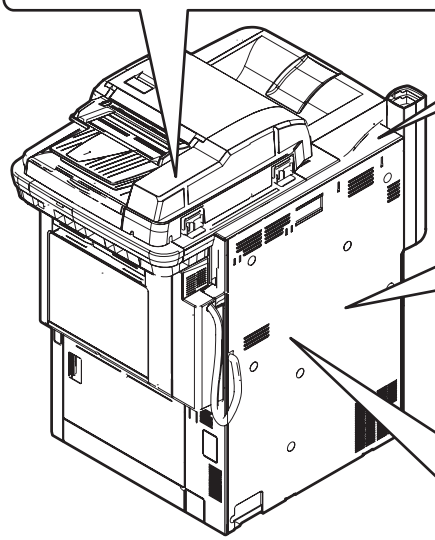
K-PWA-DLM-320



E. FAX ROM (GD-1270)

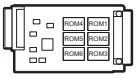
K-PWA-DLM-320

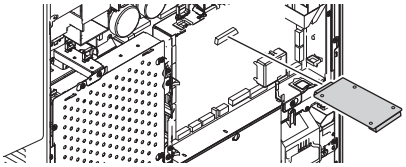




F. Engine ROM

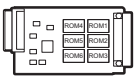
PWA-DWNLD-350-JIG2

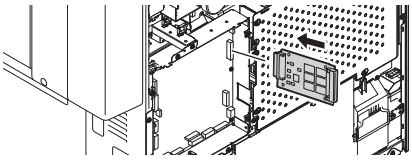


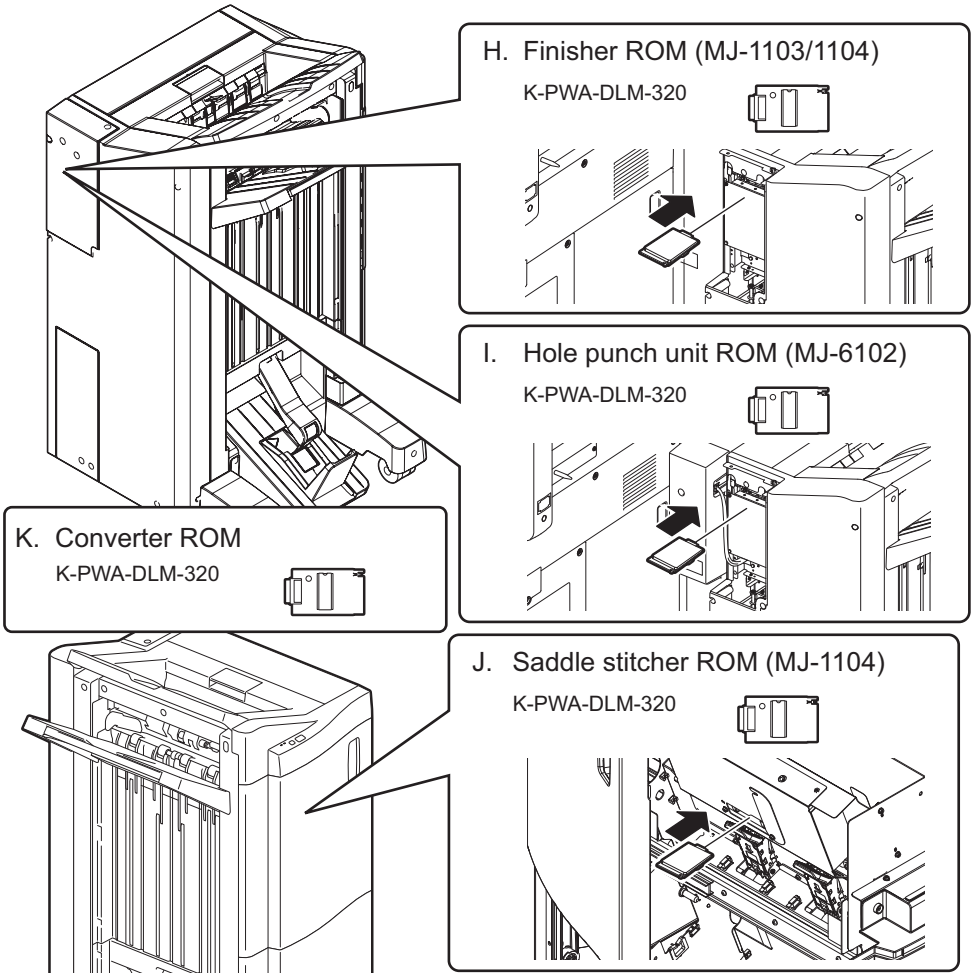


G. PFC ROM

PWA-DWNLD-350-JIG2







A	Master data, System ROM, PFC ROM, Engine ROM, Scanner ROM	P. 8-7
	Imaging Acceleration Board ROM	P. 8-17
B	System ROM	P. 8-26
C	Scanner ROM	P. 8-33
D	RADF ROM	P. 8-36
E	FAX ROM (GD-1270)	P. 8-47
F	Engine ROM	P. 8-28
G	PFC ROM	P. 8-30
H	Finisher ROM (MJ-1103/1104)	P. 8-38
I	Hole punch unit ROM (MJ-6102)	P. 8-42
J	Saddle stitcher ROM (MJ-1104)	P. 8-40
K	Converter ROM (MJ-1103/1104)	P. 8-45

Notes:

- Written firmware varies depending on the kinds of the boards provided as service parts. For updating, only the minimum firmware is installed on the system control PC board, logic PC board, PFC PC board, and scanning section control PC board. No firmware is installed on the FAX board. The latest version of the firmware at the time of delivery is written on the RADF control PC board and finisher control PC board.
  When any of above boards is replaced with a new one in the field, check the other firmware version used and then update with a corresponding suitable version.
- The firmware (master data) is not installed on the hard disk provided as a service part. When the hard disk is replaced with a new one, check the other firmware version used and then write a corresponding suitable version.
- "Can't fetch Ver." is displayed in the Installed Version field when the version of the installed ROM cannot be acquired properly. If a normal power on is not performed after the firmware is updated and the [ON/OFF] button is pressed while simultaneously holding down the [4] and [9] buttons, "Can't fetch Ver." may be displayed on the control panel for some ROMS. A normal power on must be performed.

8.1 Firmware Updating with USB Media

Firmware can be updated by storing update programs and firmware data files in the USB media.

Note:
When performing the update, use the latest program.

Program necessary for updating

Update program	Data file name	Remarks
Update program loader	mentusb2.o	An error occurs at a time of the [4] + [9] startup, unless this program is stored in the USB media. * Be sure to save this data file to the root directory of the USB media.
Model specific update program	dlFirmWare_5520C_6530C	An error occurs at a time of the [4] + [9] startup, unless this program is stored in the USB media.

Firmware type and data file name for updating

Equipment

Firmware	Stored	Data file name	Remarks
System ROM	System control PC board (SYS board)	firmImage0.bin	OS data
Master data	Hard disk	hdd.bin	HDD program data, System firmware, UI data
PFC ROM	Paper feeding control board (PFC board)	T430FWW.xxx * xxx is version.	PFC firmware
Engine ROM	Logic PC board (LGC board)	T430MWW.xxx * xxx is version.	Main firmware
Scanner ROM	Scanning section control PC board (SLG board)	T430SLGWW.xxx * xxx is version.	Scanner firmware

Options

Firmware	Stored	Data file name	Remarks
Imaging Acceleration Board ROM	Imaging Acceleration Board (MEP board)	T430IWW.xxx * xxx is version.	Imaging Acceleration Board firmware

Store the update program loader (mentusb2.o) in the root directory, and store the model specific update program (dlFirmWare_5520C_6530C) and the data file for updating in the model specific folder.

Model specific folder name	5520C_6530C

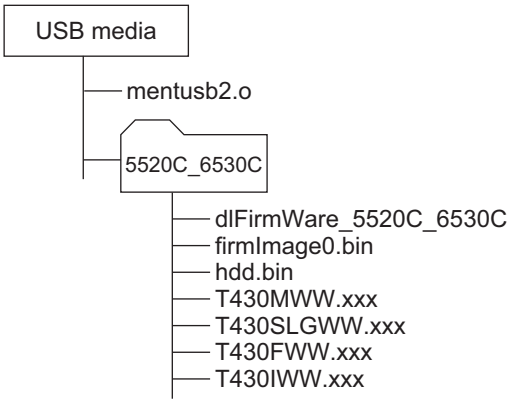


Fig. 8-1

Notes:

- Since the date and time set in the equipment are recorded in the firmware update log, make sure that they are correct before updating the firmware.
- Never change the model specific folder name, since it is used for identifying the data file when the data files used for updating multiple models are stored in the USB media.

Important:

- Only the USB media which meet the following conditions should be used for updating. Be careful since updating with any device other than the above is never guaranteed.
  - A combination USB media with a flash memory (to be connected directly to the USB port) and its capacity is between 256 MB and 512 MB (or 1 GB).
  - Operation of the USB media used for updating has been confirmed at the input check of this equipment (Test mode 03).
    (📖 P.2-4 "2.1 Input check (Test mode 03)")
  - USB media which comply with the following standards regulated by USB-IF (USB Implementers Forum)
    Class number: 8 (=08h) (Mass-storage class)
    Sub-class number: 6 (=06h) (SCSI transfer command set)
    Protocol number: 80 (=50h) (Bulk-Only)
    * Most common USB media comply with the specification above and can be used for updating. However, the operation in all the Multi Functional Digital Color Systems and Multi Functional Digital Systems is not necessarily guaranteed since the most of these devices are developed based on use in a PC environment (Windows or Macintosh). Therefore, check thoroughly that the device is operational in the equipment for which the updating will be performed when purchasing it.

- The USB media complying with USB1.1 and USB2.0 can be used for updating.

- Do not update the firmware by any storage device other than a flash memory (such as a USB connection type memory card reader, CD/DVD drive or hard disk), since it is never guaranteed.

- It is possible to store the model specific update program and the data file for updating directly in the root directory when you store the updating data file for one specific model in the USB media. However, if the model specific folder for the same model as that of the data file stored in the root directory already exists, this will have priority.

8.1.1 Master data/System ROM/PFC ROM/Engine ROM/Scanner ROM

Important:

- The file system of USB media should be formatted in the FAT or FAT32 format. Be careful since the devices formatted in NTFS format will not be able to be operated. The file system can be confirmed on the properties in applications such as Explorer of Windows.
- Never shut down the equipment during the update. Firmware data and the following option data (if installed) could be damaged and may not be able to be operated properly.
  - Data Overwrite Enabler (GP-1070)
  - Meta Scan Enabler (GS-1010)
  - External Interface Enabler (GS-1020)
  - IPSec Enabler (GP-1080)

[A] Update procedure

(1) Connect the USB media to the PC and write the model specific folder in which the data file is stored.
Store the update program loader (mentusb2.o) in the root directory, and store the model specific update program (dlFirmWare_5520C_6530C) and the data file for updating in the model specific folder.

(2) Press the [ON/OFF] button on the control panel to shut down the equipment.

(3) Connect the USB media to the USB port on the right upper cover.

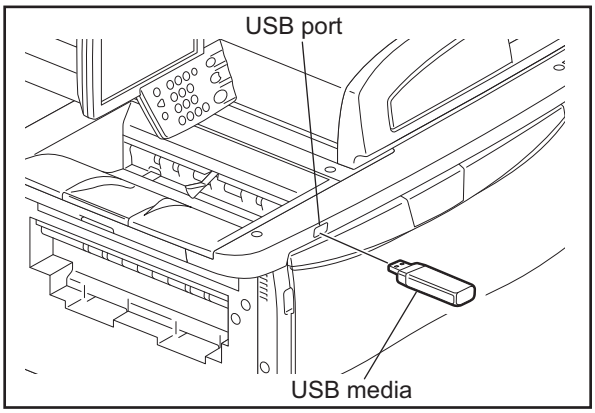


Fig. 8-1

Note:

Updating cannot be performed with multiple USB media connected at the same time.

(4) Press the [ON/OFF] button while simultaneously holding down the [4] and [9] buttons.
Data in the USB media are checked and the checking status is displayed on the screen.

The screen for selecting items to be updated is displayed after approx. 1 minute.
On this screen, the current firmware version of this equipment and the firmware version of data to be updated are displayed.

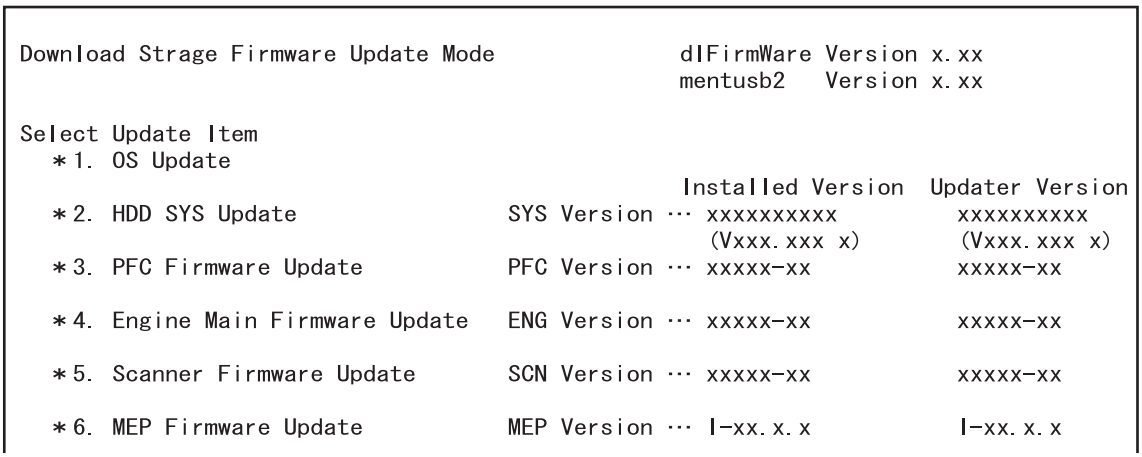


Fig. 8-2

Notes:

- The display of items on this screen varies depending on the types of data written on the USB media. Each item is displayed only when each data file is written on the USB media in the following conditions.

Item	Condition
1. OS Update	firmImage0.bin is written.
2. HDD SYS Update	hdd.bin is written.
3. PFC Firmware Update	T430FWW.xxx is written. (xxx is version.)
4. Engine Main Firmware Update	T430MWW.xxx is written. (xxx is version.)
5. Scanner Firmware Update	T430SLGWW.xxx is written. (xxx is version.)
6. MEP Firmware Update	For the details, see the following page: 📖 P.8-17 "8.1.2 Imaging Acceleration Board ROM (GE-1170)"

- If the USB media are not recognized properly, “Set Correct USB Storage Device” message is displayed. In this case, disconnect the USB media and connect it again within 3 minutes, or shut down the equipment and connect the device properly. Then repeat the procedure from (4).
- If any of the error messages below is displayed, confirm if the update program or the data file in the USB media is correct. Then repeat the procedure from (4)

Error number	Error message	Cause
-	There is no mentusb2.o	Update program loader (mentusb2.o) is not stored.
01	There is no dlFirmWare_5520C_6530C	Model specific update program (dlFirmWare_5520C_6530C) is not stored.
02	Error Loadmodule	Module loading failed.
03	Machine Model Get Error	Model information was not downloaded.
04	Please Change USB Storage or Please Check ROMDATA	Checking of data file failed.
05	Other models ROMDATA Vxxxx.xxx x * The version name comes at “xxxx.xxx.x”.	Master data of other model (hdd.bin) are stored.

(5) Select the item with the digital keys.
"*" is displayed next to the selected item. Display or delete the "*" by pressing the number of the item.

Item	Remarks
1. OS Update	Updating OS data and UI data
2. HDD SYS Update	Updating Master data and System data
3. PFC Firmware Update	Updating PFC ROM
4. Engine Main Firmware Update	Updating Engine ROM
5. Scanner Firmware Update	Updating Scanner ROM

(6) Press the [START] button.
Updating starts and the processing status is displayed on the LCD screen.

Status display during update	Status display when update is completed
OS Update.....FROM write	OS Update.....Completed
HDD SYS Update ..... Copy file	HDD SYS Update ..... Completed
PFC Firm Update .....Flash Update	PFC Firm Update .....Completed
Engine Firm Update.....Flash Update	Engine Firm Update.....Completed
Scanner Firm Update .....Flash Update	Scanner Firm Update .....Completed

(7) "Update Completed." is displayed at the bottom of the LCD screen after the updating is completed properly.

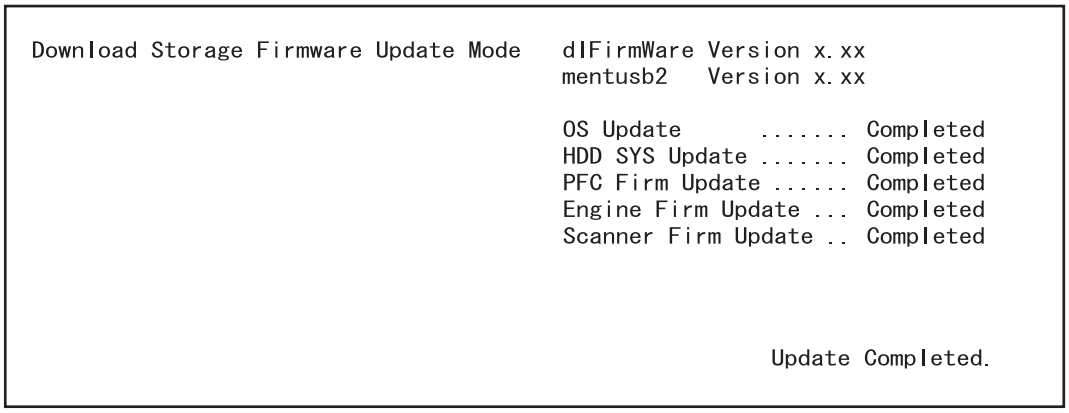


Fig. 8-3

8

Notes:

- "Update Failed." is displayed at the bottom of the LCD screen when the updating is not completed properly. "Failed" appears next to the failed item on the status display. In this case, shut down the equipment after all the updates are stopped (when either "Completed" or "Failed" is displayed for each item), and then check the following.
  - Do the USB media meet the conditions to be used for updating?
  - Is the data file written properly on the USB media?
  - Are the USB media installed properly?
  - Do the USB media and equipment operate properly?
- When an error occurred and the update failed, "Update Failed" or "Failed" appears on the screen and an error code appears next to the message. The content of each error code is shown below.

OS update Error	
Error number	**Error content**
O01	FROM writing failed
O02	FROM verification error
O03	File operation error
O04	SRAM flag set error
O05	Electronic key data backup error
O06	Device error

HDD update Error	
Error number	**Error content**
H01	File creation error
H02	File decompression error
H03	Partition mount error
H00	Other errors

Engine Update Error		
Error number	**Error message**	**Error content**
M01	Time out (When the download is requested)	Communication timeout (When the download is requested)
M02	Time out (When the download is written)	Communication timeout (When the download is written)
M03	Time out (When the download is finished)	Communication timeout (When the download is finished)
M04	Reception failed (When the download is requested)	Downloading request was denied. (When the download is requested)
M05	Deletion error (When the download is written)	Deletion error (When the download is written)
M06	Writing error (When the download is written)	Writing error (When the download is written)
M07	Checksum error (When the download is finished)	Checksum error (When the download is finished)
M08	Reception status code abnormality (When the download is requested)	Reception status code abnormality (When the download is requested)
M09	Reception status code abnormality (When the download is written)	Reception status code abnormality (When the download is written)
M10	Reception status code abnormality (When the download is finished)	Reception status code abnormality (When the download is finished)
M00	Other error	Other error

PFC Update Error		
Error number	**Error message**	**Error content**
F01	Time out (When the download is requested)	Communication timeout (When the download is requested)
F02	Time out (When the download is written)	Communication timeout (When the download is written)
F03	Time out (When the download is finished)	Communication timeout (When the download is finished)
F04	Reception failed (When the download is requested)	Downloading request was denied. (When the download is requested)
F05	Deletion error (When the download is written)	Deletion error (When the download is written)
F06	Writing error (When the download is written)	Writing error (When the download is written)
F07	Checksum error (When the download is finished)	Checksum error (When the download is finished)
F08	Reception status code abnormality (When the download is requested)	Reception status code abnormality (When the download is requested)
F09	Reception status code abnormality (When the download is written)	Reception status code abnormality (When the download is written)
F10	Reception status code abnormality (When the download is finished)	Reception status code abnormality (When the download is finished)
F00	Other error	Other error

Scanner Update Error		
Error number	**Error message**	**Error content**
S01	Time out (When the download is requested)	Communication timeout (When the download is requested)
S02	Time out (When the download is written)	Communication timeout (When the download is written)
S03	Time out (When the download is finished)	Communication timeout (When the download is finished)
S05	Deletion error (When the download is written)	Deletion error (When the download is written)
S06	Writing error (When the download is written)	Writing error (When the download is written)
S08	Reception status code abnormality (When the download is requested)	Reception status code abnormality (When the download is requested)
S09	Reception status code abnormality (When the download is written)	Reception status code abnormality (When the download is written)
S10	Reception status code abnormality (When the download is finished)	Reception status code abnormality (When the download is finished)
S00	Other error	Other error

(8) Press the [ON/OFF] button to shut down the equipment, and then remove the USB media.

(9) Perform the initialization of the updating data.
- Turn ON the power while [0] button and [8] button are pressed simultaneously.
- Key in “947”, and then press the [START] button.
- Press the [INITIALIZE] button.

[B] Confirmation of the updated data

After the updating is completed, check each data version in the Setting Mode (08) to confirm that the data were overwritten properly.

🕮 P.8-50 "8.4 Confirmation of the updated data"

[C] Adjustment

Perform the adjustment of the equipment.

- Performing Image Quality Control (05-396):
  🕮 P.3-4 "3.1.3 Performing Image Quality Control (IQC)"

- Adjustment of Color Registration Control (05-4719):
  🕮 P.3-6 "3.1.4 Adjustment of Color Registration Control"

- Automatic gamma adjustment <PPC> (05-1642) (using [4][FAX] test pattern):
  🕮 P.3-32 "3.2.1 Automatic gamma adjustment"

- Automatic gamma adjustment < PRT > (05-1008) (using [70][FAX] test pattern):
  🕮 P.3-47 "3.3.1 Automatic gamma adjustment"

[D] Display during the update

Update is performed in parallel as shown in the transition diagram below.

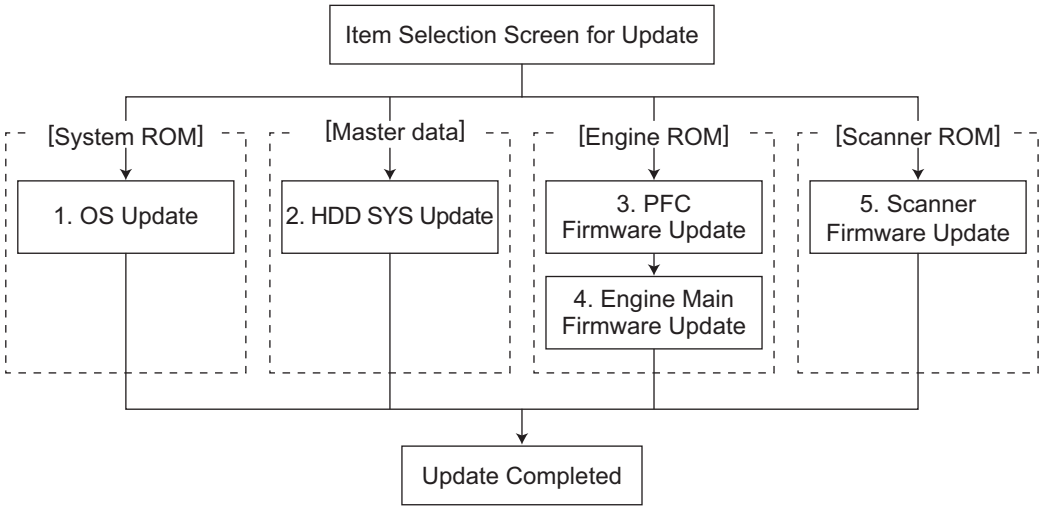


Fig. 8-4

Below is an example of the changes of the LCD screen during update.

System ROM

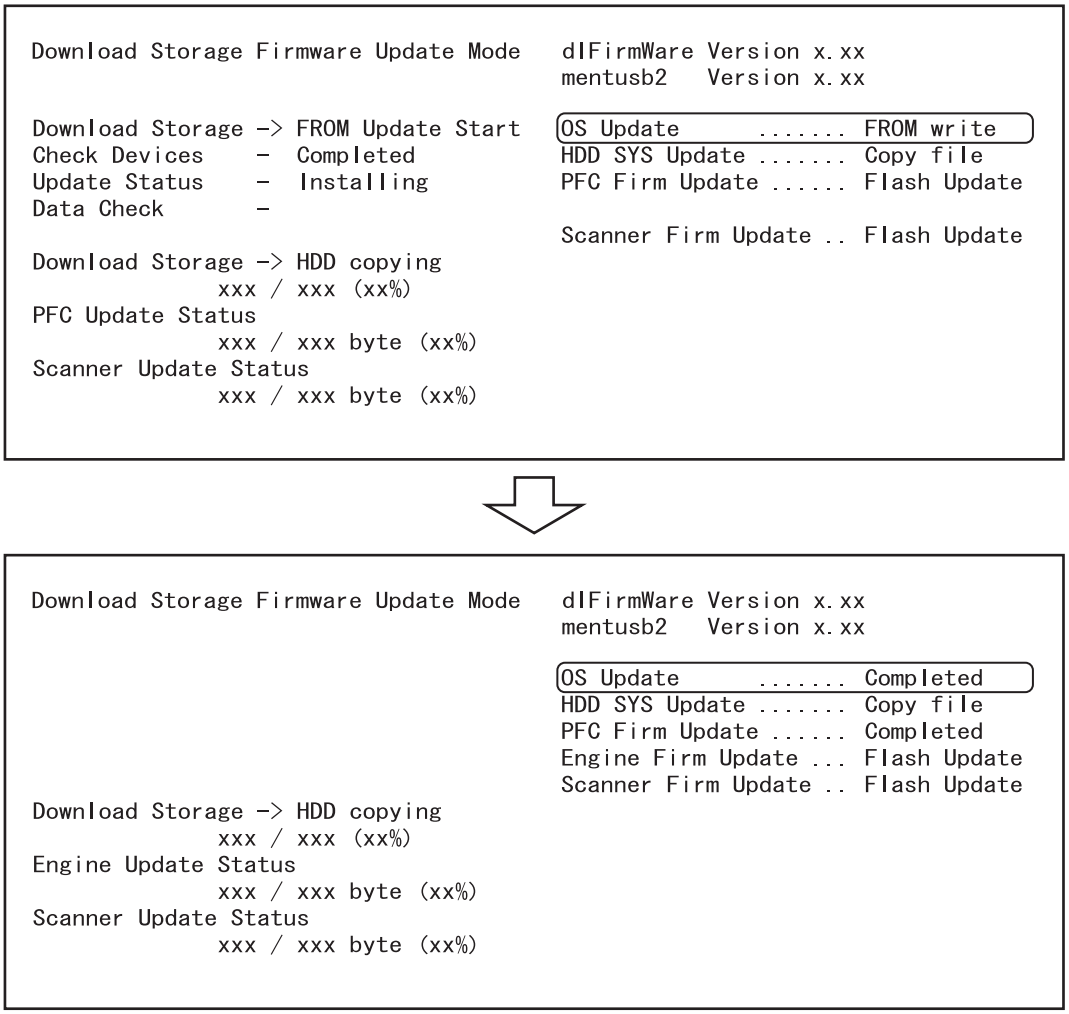


Fig. 8-5

Master data

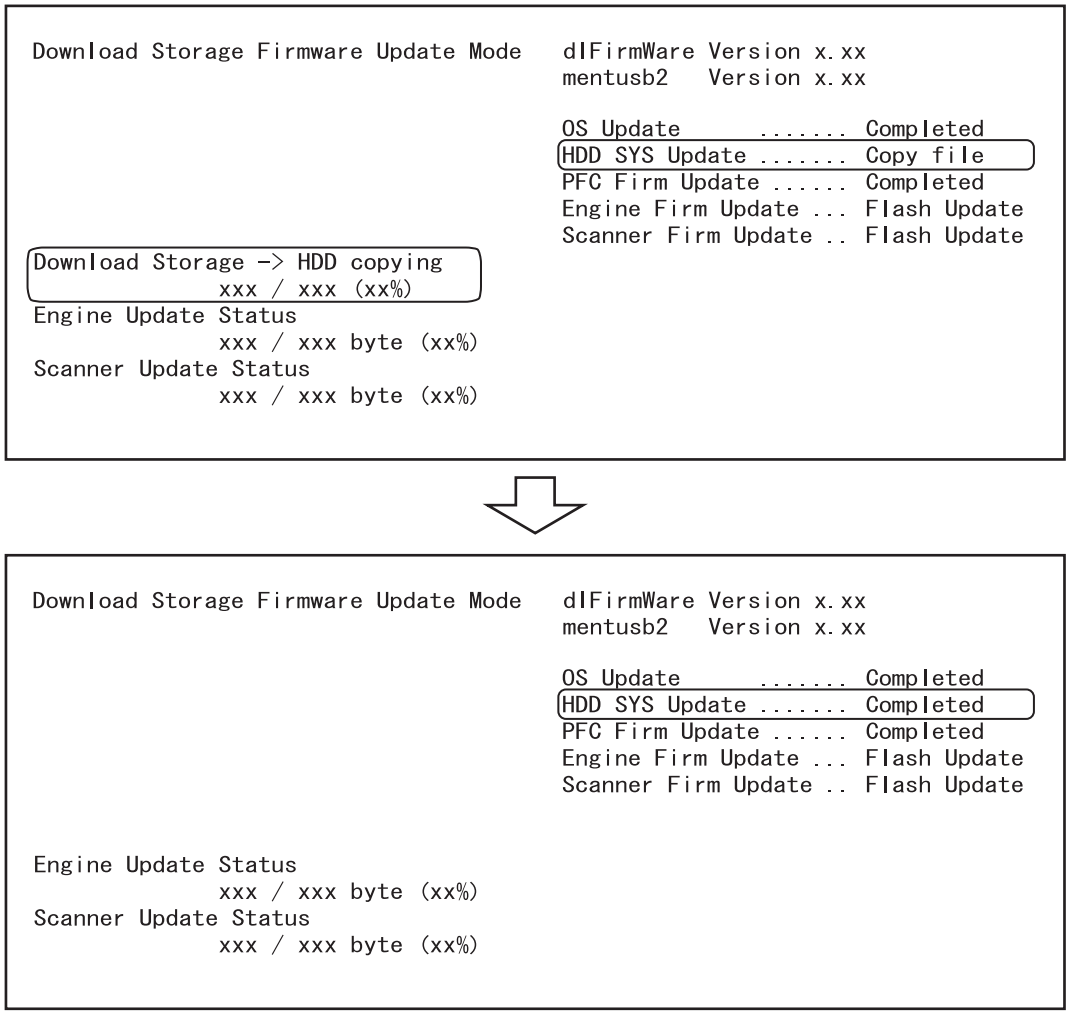


Fig. 8-6

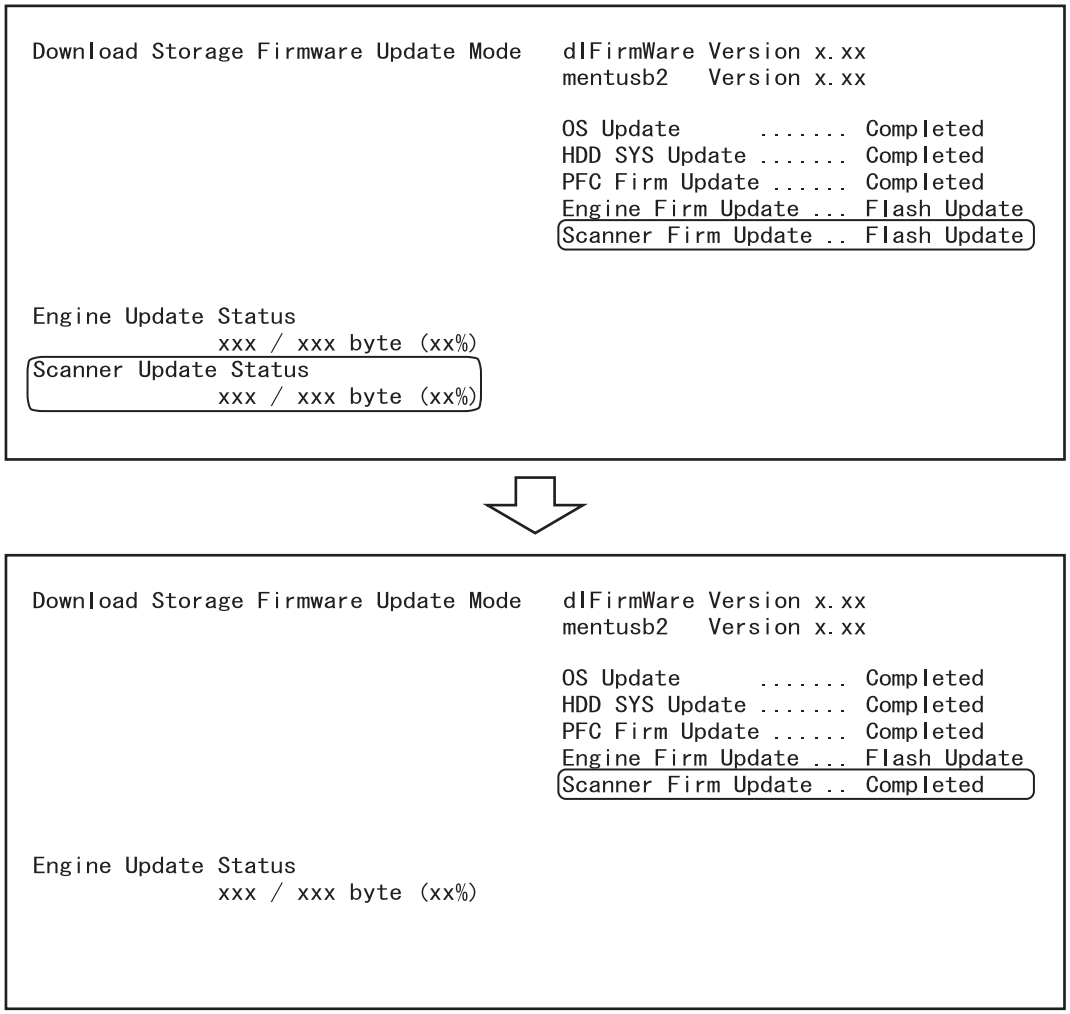


Fig. 8-7

PFC ROM / Engine ROM

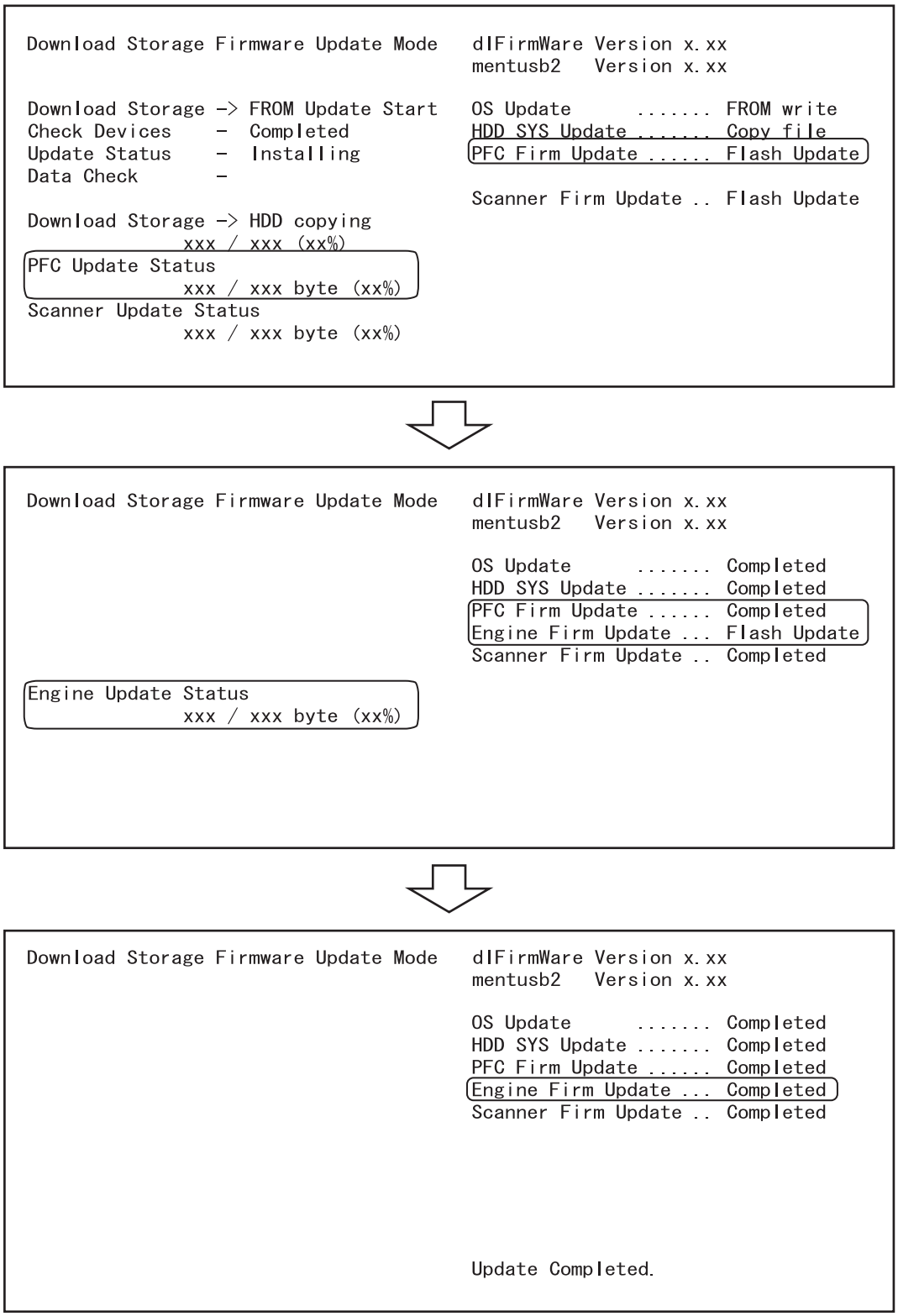


Fig. 8-8

8.1.2 Imaging Acceleration Board ROM (GE-1170)

Important:

- The file system of USB media should be formatted in the FAT or FAT32 format. Be careful since the devices formatted in NTFS format will not be able to be operated. The file system can be confirmed on the properties in applications such as Explorer of Windows.
- The firmware version of the Imaging Acceleration Board ROM differs depending on the version of the system firmware.
  Therefore confirm in advance that the version is the correct one before updating the Imaging Acceleration Board ROM.

[A] Update procedure

(1) Connect the USB media to the PC and write the model specific folder in which the data file is stored.
Store the update program loader (mentusb2.o) in the root directory, and store the model specific update program (dlFirmWare_5520C_6530C) and the data file for updating in the model specific folder.

(2) Press the [ON/OFF] button on the control panel to shut down the equipment.

(3) Connect the USB media to the USB port on the right upper cover.

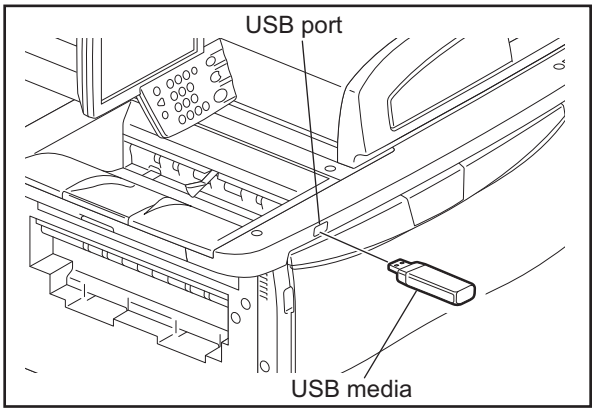


Fig. 8-9

Note:
Updating cannot be performed with multiple USB media connected at the same time.

(4) Press the [ON/OFF] button while simultaneously holding down the [4] and [9] buttons.
Data in the USB media are checked and the checking status is displayed on the screen.

The screen for selecting items to be updated is displayed after approx. 1 minute.
On this screen, the current firmware version of this equipment and the firmware version of data to be updated are displayed.

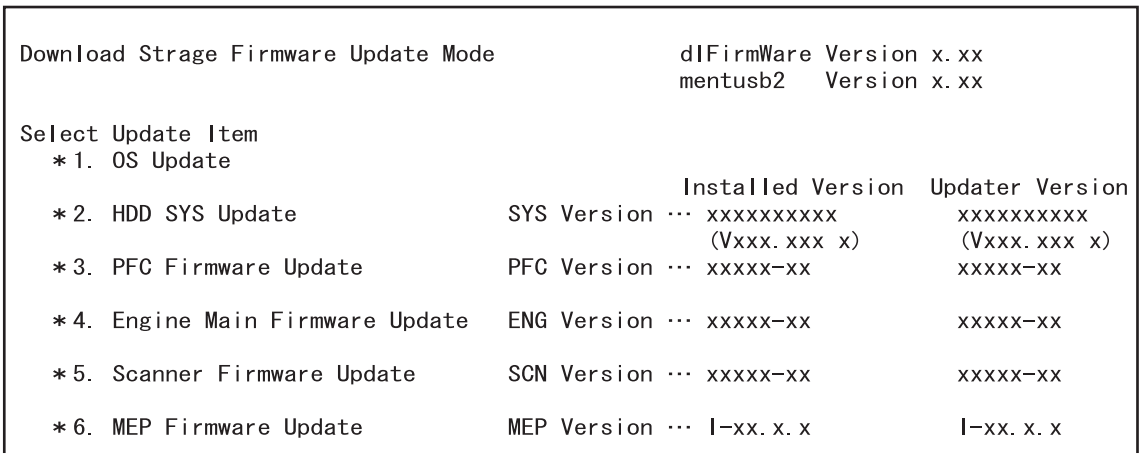


Fig. 8-10

Notes:

- The display of items on this screen varies depending on the types of data written on the USB media. Each item is displayed only when each data file is written on the USB media in the following conditions.

Item	Condition
1. OS Update	For the details, see the following page: 📖 P.8-7 "8.1.1 Master data/System ROM/PFC ROM/ Engine ROM/Scanner ROM"
2. HDD SYS Update	
3. PFC Firmware Update	
4. Engine Main Firmware Update	
5. Scanner Firmware Update	
6. MEP Firmware Update	• The Imaging Acceleration Board (GE-1170, optional) must be installed. • T430IWW.xxx is written. * xxx is version.

- If the USB media are not recognized properly, “Set Correct USB Storage Device” message is displayed. In this case, disconnect the USB media and connect it again within 3 minutes, or shut down the equipment and connect the device properly. Then repeat the procedure from (4).
- If any of the error messages below is displayed, confirm if the update program or the data file in the USB media is correct. Then repeat the procedure from (4)

Error number	Error message	Cause
-	There is no mentusb2.o	Update program loader (mentusb2.o) is not stored.
01	There is no dlFirmWare_5520C_6530C	Model specific update program (dlFirmWare_5520C_6530C) is not stored.
02	Error Loadmodule	Module loading failed.
03	Machine Model Get Error	Model information was not downloaded.
04	Please Change USB Storage or Please Check ROMDATA	Checking of data file failed.
05	Other models ROMDATA Vxxxx.xxx x * The version name comes at “xxxx.xxx.x”.	Master data of other model (hdd.bin) are stored.

(5) Select “6. MEP Firmware Update” with the digital keys.
“*” is displayed next to the selected item. Display or delete the “*” by pressing the number of the item.

Item	Remarks
6. MEP Firmware Update	Updating the Imaging Acceleration Board ROM

(6) Press the [START] button.
Updating starts and the processing status is displayed on the LCD screen.

Status display during update	Status display when update is completed
MEP Firm Update ..... SROM Update	MEP Firm Update ..... Completed

(7) “Update Completed.” is displayed at the bottom of the LCD screen after the updating is completed properly.

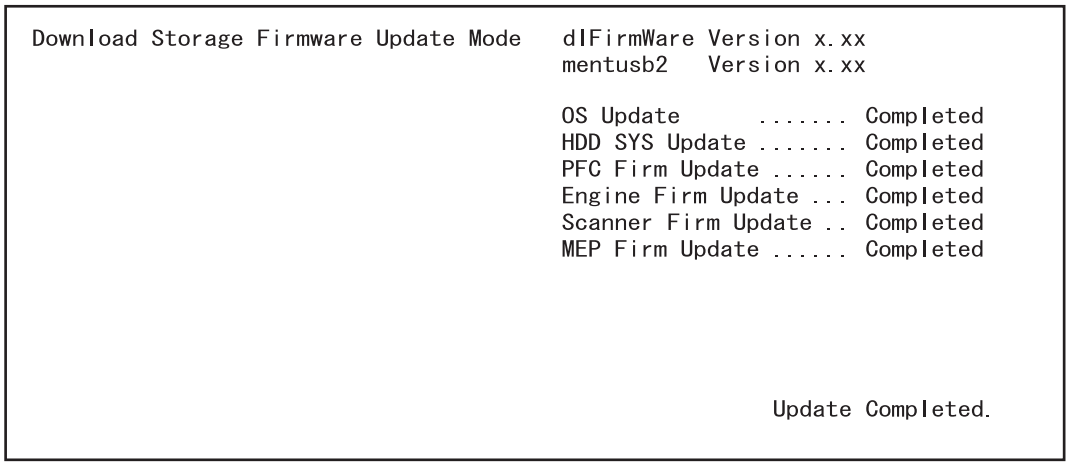


Fig. 8-11

Notes:

- “Update Failed.” is displayed at the bottom of the LCD screen when the updating is not completed properly. “Failed” appears next to the failed item on the status display. Even if though an update fails, do not turn the power OFF until all other updates are finished. If "Update Failed" appears at the bottom of the screen, turn OFF the power and then check the following items. After confirming and clearing the problems, restart updating from the beginning.
  - Do the USB media meet the conditions to be used for updating?
  - Is the data file written properly on the USB media?
  - Are the USB media installed properly?
  - Do the USB media and equipment operate properly?
- When an error occurred and the update failed, “Update Failed” or “Failed” appears on the screen and an error code appears next to the message. The content of each error code is shown below.

Imaging Acceleration Board update Error		
Error number	**Error message**	**Error content**
I01	Board Error	The MEP board is not operating properly.
I02	Parameter Error	The parameter for API function is incorrect.
I03	File Read Failed	An error occurred during a file input operation.
I04	Temporary File Error	An error occurred during a temporary file operation.
I05	File Format Error	The format of the input file is incorrect.
I06	Memory Allocation Failed	An error occurred during the memory allocation.
I00	Other error	Other error

(8) Press the [ON/OFF] button to shut down the equipment, and then remove the USB media.

[B] Confirmation of the updated data

After the updating is completed, check each data version in the Setting Mode (08) to confirm that the data were overwritten properly.

📖 P.8-50 "8.4 Confirmation of the updated data"

Note:

Check that the icon of the Imaging Acceleration Board on the scan menu is displayed in color.

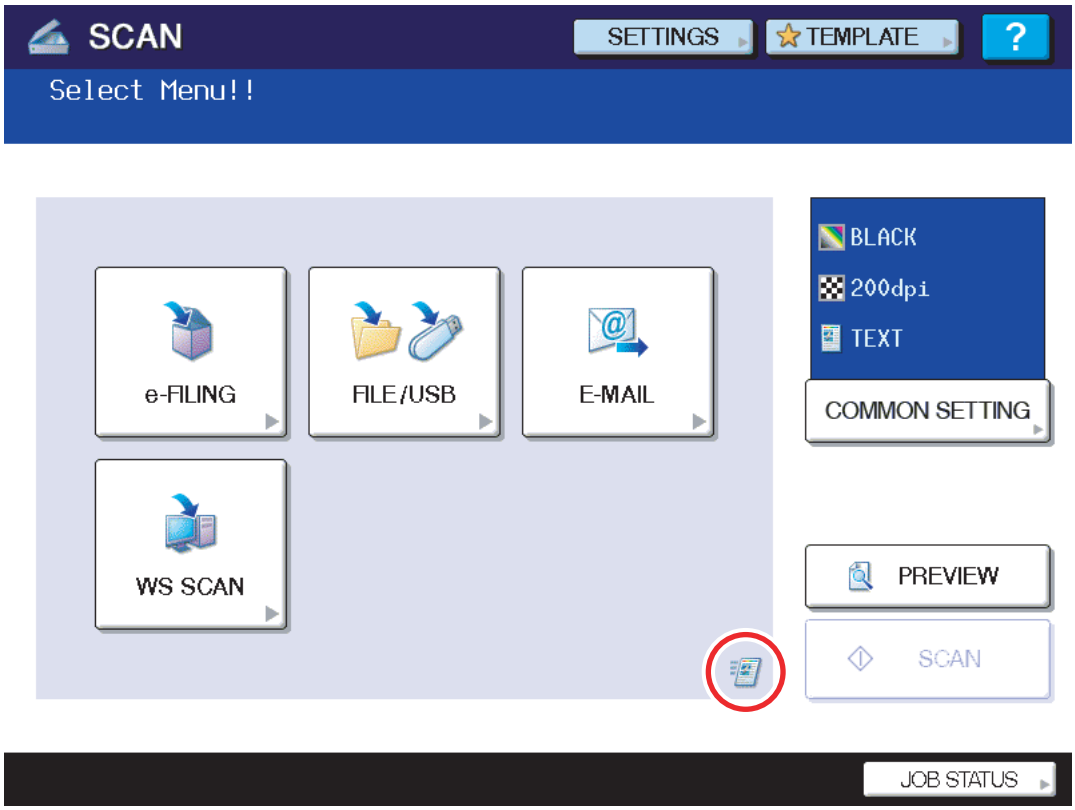


Fig. 8-12

[C] Display during the update

Below is an example of the changes of the LCD screen during update.

Imaging Acceleration Board ROM

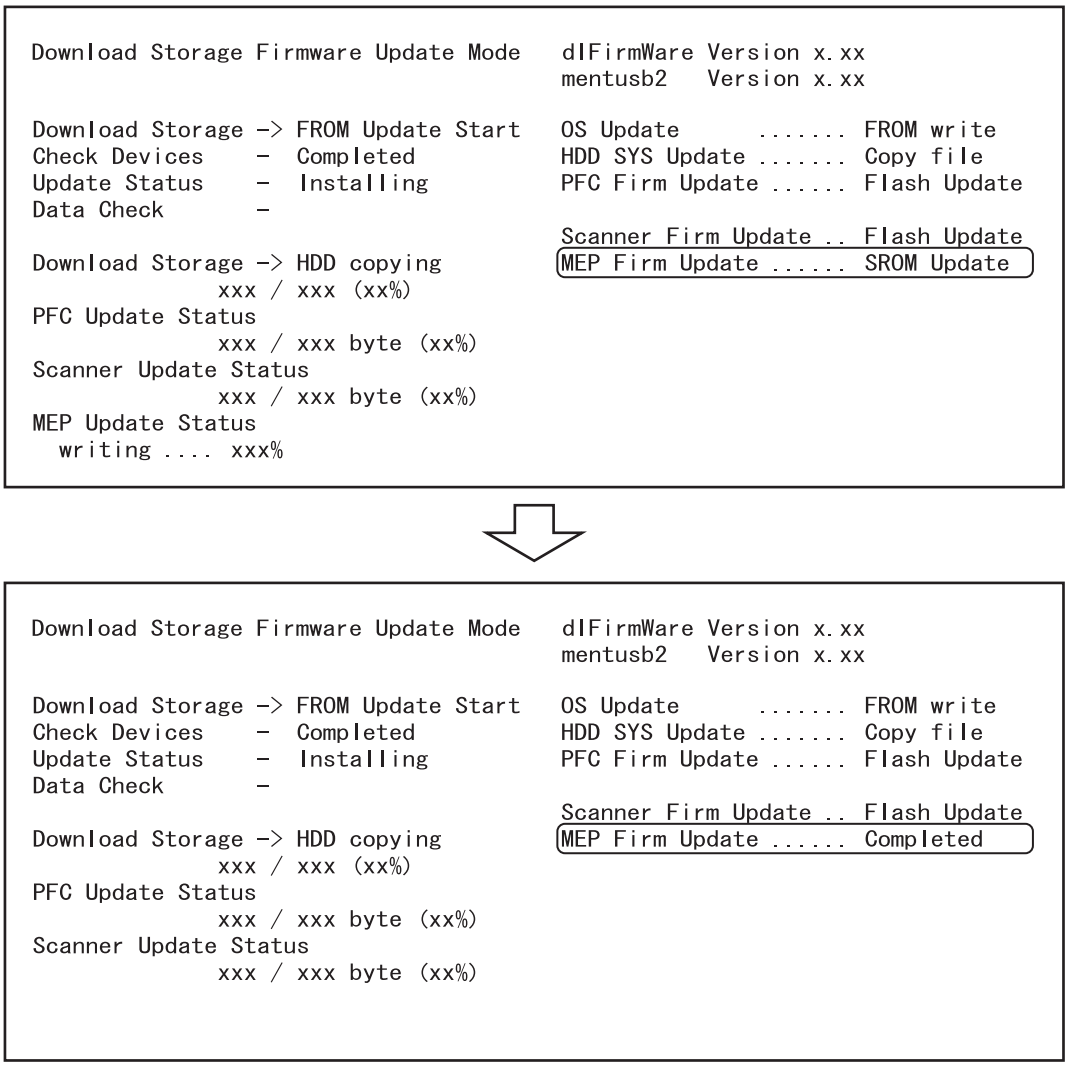


Fig. 8-13

8

8.2 Firmware Updating with PWA-DWNLD-350-JIG2

The data to be overwritten by this update are as follows.
Update the ROM data written on each board according to the need such as the case of replacing the system control PC board, logic PC board or scanning section control PC board.

Equipment

Firmware	Stored
System ROM (OS data)	Hard disk
Engine ROM (Main firmware)	Logic PC board (LGC board)
PFC ROM	Paper feeding control board (PFC board)

PWA-DWNLD-350-JIG2 (48MB)

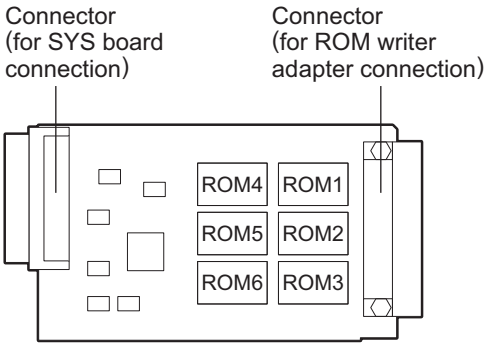


Fig. 8-14 Jig board: PWA-DWNLD-350-JIG2 (48 MB)

Important:

The download jig (PWA-DWNLD-350-JIG2) is the jig in which the Flash ROM is mounted on the board directly. Therefore, ROM writer adapter (PWA-DL-ADP-350) is required to write the data to these Flash ROMs. Refer to the following to write the data.

8.2.1 Writing the data to the download jig (PWA-DWNLD-350-JIG2)

The download jig (PWA-DWNLD-350-JIG) is the jig in which the Flash ROM is mounted on the board directly. The ROM writer adapter (PWA-DL-ADP-350) is required to write data to these Flash ROMs. Connect the download jig with the ROM writer via ROM writer adapter to write data. For the procedure to write data, refer to the download procedure, instruction manual of each ROM writer, or others.

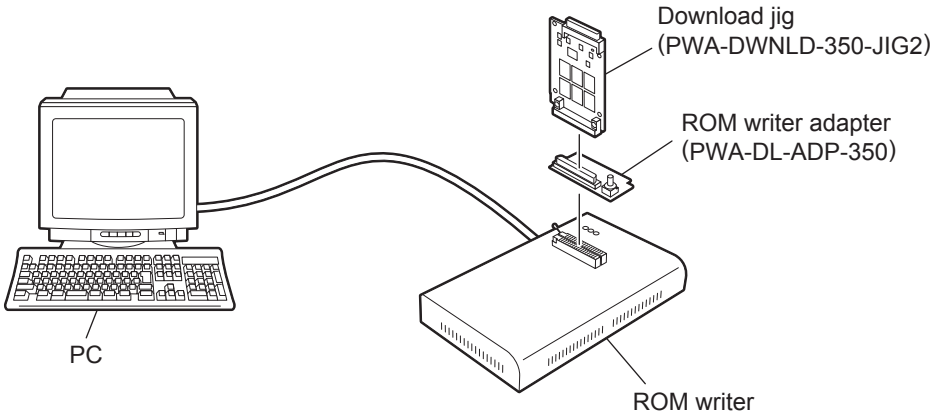
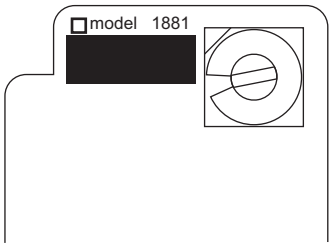


Fig. 8-15

Note:

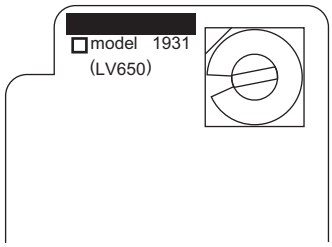
There are two types of the ROM writer adapter. Use the proper one according to the ROM writer to be used. Applicable type of the adapter for the ROM writer can be confirmed by the model name indicated on the board. Confirm that the adapter is available for the ROM writer to be used before connecting them. If an unapplied adapter is connected, the application of the ROM writer judges it as an error and writing the data cannot be implemented. Applicable combinations of the ROM writer and adapter are as follows.

ROM writer	ROM writer adapter
Minato Electronics MODEL 1881XP/1881UXP (or equivalent)	PWA-DL-ADP-350-1881 (model 1881)
Minato Electronics MODEL 1893/1895/1931/1940 (or equivalent)	PWA-DL-ADP-350-1931 (model 1931)



[PWA-DL-ADP-350-1881]

Fig. 8-16



[PWA-DL-ADP-350-1931]

Fig. 8-17

[A] Precautions when writing the System ROM data

- Set the writing voltage (VID) to 3.3 V.
  When an error appears while the data are being written to the download jig, set the writing voltage (VID) to 12 V and then write them.
- When writing the data, set the address from 0 to 3FFFFF. The data may not be written correctly if it is not set.
- Load the data file into the buffer by means of the following settings.

Auto Format Detected	Binary
From File	Normal
To Buffer	Normal
From File Address	0
To Buffer Address	0
Buffer Size	800100
Clear Buffer Before Loading the file	Clear buffer with blank state

[A-1] System ROM

Rotary Switch	File Name	Flash ROM
1	firmImage_jig0.bin	ROM1
2	firmImage_jig1.bin	ROM2
3	N/A	ROM3
4	N/A	ROM4
5	N/A	ROM5
6	N/A	ROM6

Note:
Be sure not to confuse different ROM Versions since the file name is identical although the ROM version is different.

[B] Precautions when writing the Engine/PFC ROM data

- Clear the buffer of the ROM writer by means of the following settings.

From Address	To Address	Code
0	800000	FF
800000	8000FF	00

- Set the writing voltage (VID) to 3.3 V.
  When an error appears while the data are being written to the download jig, set the writing voltage (VID) to 12 V and then write them.
- When writing the data, set the address from 0 to 3FFFFF. The data may not be written correctly if it is not set.
- Load the data file into the buffer by means of the following settings.

Auto Format Detected	Binary
From File	Normal
To Buffer	Normal
From File Address	0
To Buffer Address	300000
Buffer Size	800000
Clear Buffer Before Loading the file	Clear buffer with blank state

[B-1] Engine ROM

Rotary Switch	File Name	Flash ROM
1	T430MWW.xxx	ROM1
2	N/A	ROM2
3	N/A	ROM3
4	N/A	ROM4
5	N/A	ROM5
6	N/A	ROM6

[B-2] PFC ROM

Rotary Switch	File Name	Flash ROM
1	T430FWW.xxx	ROM1
2	N/A	ROM2
3	N/A	ROM3
4	N/A	ROM4
5	N/A	ROM5
6	N/A	ROM6

8.2.2 System ROM

The firmware of the system ROM can be updated individually by using WA-DWNLD-350-JIG2.

Important:

- Be sure to shut down the equipment before installing and removing the download jig.
- Do not shut down the equipment during the update. The data could be damaged and not be able to be operated properly.

[A] Update procedure

(1) Write the ROM data to be updated to the download jig (PWA-DWNLD-350-JIG2).

(2) Press the [ON/OFF] button on the control panel to shut down the equipment.

(3) Take off the cover plate.

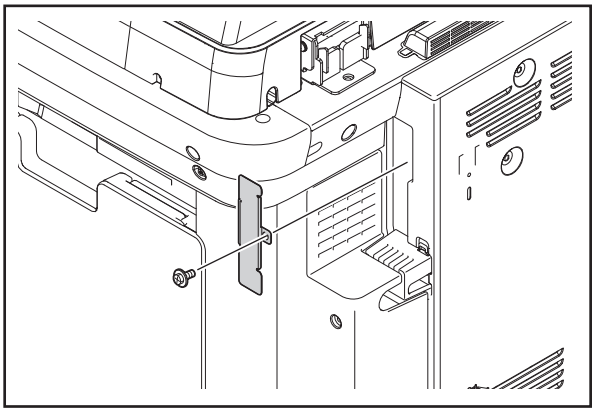


Fig. 8-18

(4) Connect the download jig with the jig connector on the SYS board.

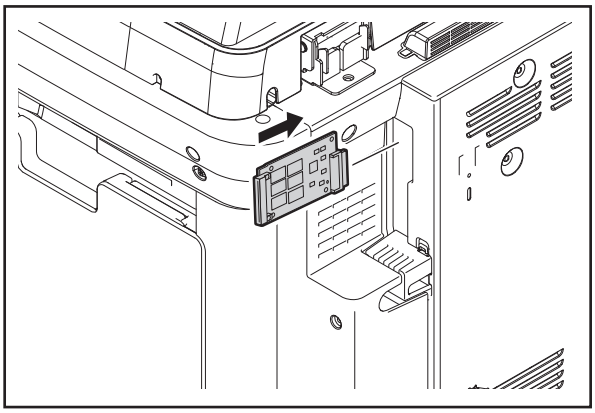


Fig. 8-19

(5) Press the [ON/OFF] button while simultaneously holding down the [8] and [9] buttons.

(6) Select the item with the digital keys.
"*" is displayed next to the selected item. Display or delete the "*" by pressing the number of the item. All items are selected in the default settings.

(7) Press the [START] button.
Updating starts and the processing status is displayed on the LCD screen.

(8) “Update Completed.” is displayed at the bottom of the LCD screen after the updating is completed properly.

Note:
“Update Failed.” is displayed at the bottom of the LCD screen when the updating is not completed properly. “Failed” appears next to the failed item on the status display. In this case, shut down the equipment and check the following items. Then clear the problems and restart updating from the beginning.
- Is the download jig connected properly?
- Is the updating data written to the download jig properly?
- Do the download jig and the equipment operate properly?

(9) Turn the power OFF using the main power switch on the right-hand surface of the equipment, remove the download jig, and then install the cover plate.

(10) Perform the initialization of the updating data.
- Turn the power ON using the main power switch while pressing the [0] and [8] buttons simultaneously.
- Key in “947”, and then press the [START] button.
- Press the [INITIALIZE] button.

[B] Confirmation of the updated data

After the updating is completed, check each data version in the Setting Mode (08) to confirm that the data were overwritten properly.
📖 P.8-50 "8.4 Confirmation of the updated data"

8.2.3 Engine ROM

The firmware of the engine ROM can be updated individually by using PWA-DWNLD-350-JIG2.

Important:

- Be sure to unplug the power cable before installing and removing the download jig.
- Do not shut down the equipment during the update. The data could be damaged and not be able to be operated properly.
- When servicing the equipment with the power cable plugged in, be sure not to touch live sections or motors, etc.

[A] Update Procedure

(1) Write the ROM data to be updated to the download jig (PWA-DWNLD-350-JIG2).

(2) Turn the power OFF using the main power switch on the right-hand surface of the equipment.

(3) Unplug the power cable from the outlet.

(4) Take off the rear cover.

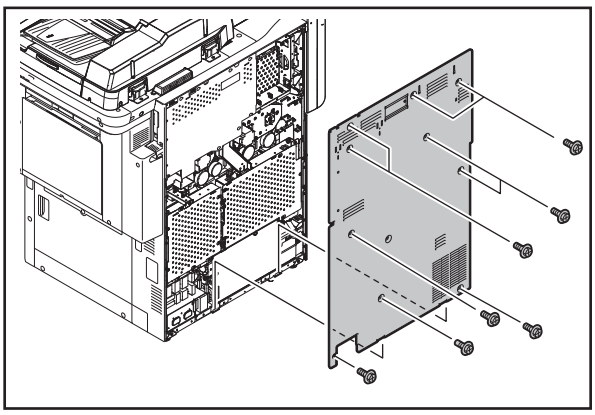


Fig. 8-20

(5) Take off the cover plate.

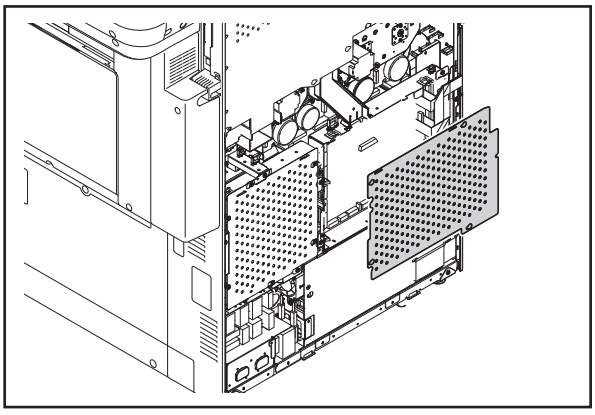


Fig. 8-21

(6) Connect the download jig with the jig connector (CN334) on the logic PC board (LGC board).

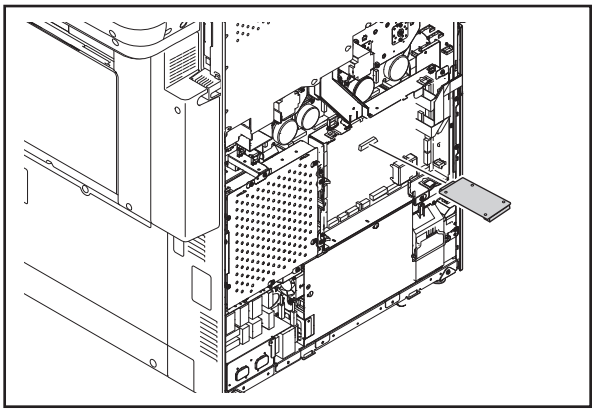


Fig. 8-22

(7) Open the duplexing unit.

(8) Plug the power cable into the outlet.

(9) Turn the power ON using the main power switch while simultaneously holding down the [0] and [8] buttons.
Updating starts automatically and the LED on the download jig lights.

(10) When the update is completed properly, the LED (END) on the download jig blinks.
The LED starts blinking approx. 15 sec. after the update starts. It is assumed that the update has failed if it does not start blinking even though 1 min. has passed. In this case, shut down the equipment and check the following items. Then clear the problems and restart updating from the beginning.
- Is the download jig connected properly?
- Is the updating data written on the ROM of the download jig properly?
- Do the download jig and the equipment operate properly?

(11) Turn the power OFF using the main power switch on the right-hand surface of the equipment.

(12) Unplug the power cable from the outlet and remove the download jig.

(13) Install the cover plate and rear cover, and then close the duplexing unit.

(14) Plug the power cable into the outlet.

[B] Confirmation of the updated data

After the updating is completed, check each data version in Setting Mode (08) to confirm that the data were overwritten properly.
📖 P.8-50 "8.4 Confirmation of the updated data"

8.2.4 PFC ROM

The firmware of the PFC ROM can be updated individually by using PWA-DWNLD-350-JIG2.

Important:

- Be sure to unplug the power cable before installing and removing the download jig.
- Do not shut down the equipment during the update. The data could be damaged and not be able to be operated properly.
- When servicing the equipment with the power cable plugged in, be sure not to touch live sections or motors, etc.

[A] Update Procedure

(1) Write the ROM data to be updated to the download jig (PWA-DWNLD-350-JIG2).

(2) Turn the power OFF using the main power switch on the right-hand surface of the equipment.

(3) Unplug the power cable from the outlet.

(4) Take off the rear cover.

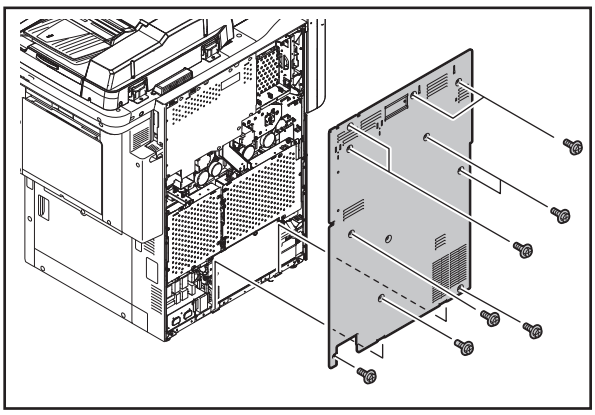


Fig. 8-23

(5) Take off the cover plate.

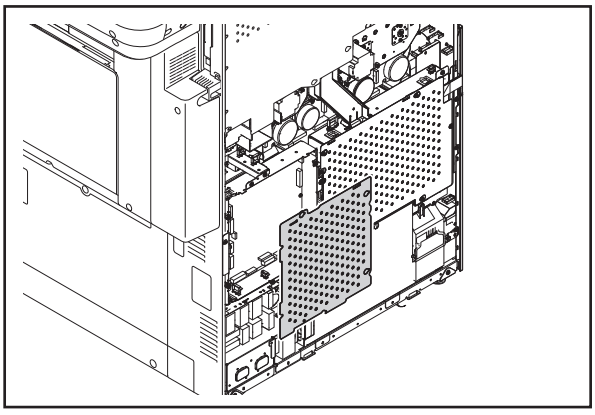


Fig. 8-24

(6) Connect the download jig with the jig connector (CN518) on the paper feeding control board (PFC board).

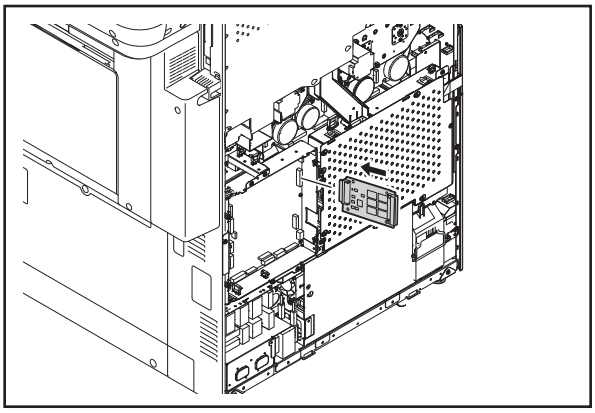


Fig. 8-25

(7) Open the duplexing unit.

(8) Plug the power cable into the outlet.

(9) Turn the power ON using the main power switch while simultaneously holding down the [0] and [8] buttons.
Updating starts automatically and the LED on the download jig lights.

(10) When the update is completed properly, the LED (END) on the download jig blinks.
The LED starts blinking approx. 15 sec. after the update starts. It is assumed that the update has failed if it does not start blinking even though 1 min. has passed. In this case, shut down the equipment and check the following items. Then clear the problems and restart updating from the beginning.
- Is the download jig connected properly?
- Is the updating data written on the ROM of the download jig properly?
- Do the download jig and the equipment operate properly?

(11) Turn the power OFF using the main power switch on the right-hand surface of the equipment.

(12) Unplug the power cable from the outlet and remove the download jig.

(13) Install the cover plate and rear cover, and then close the duplexing unit.

(14) Plug the power cable into the outlet.

[B] Confirmation of the updated data

After the updating is completed, check each data version in Setting Mode (08) to confirm that the data were overwritten properly.
📖 P.8-50 "8.4 Confirmation of the updated data"

8.3 Firmware Updating with K-PWA-DLM-320

The firmware of the equipment (scanner ROM) and the option (RADF ROM, Finisher ROM, FAX ROM) can be updated individually by using K-PWA-DLM-320. Update the ROM data written on each board according to the need such as the case of replacing the board.

Equipment

Firmware	Stored
Scanner ROM (Scanner firmware)	Scanning section control PC board (SLG board)
Reversing Automatic Document Feeder (RADF) (RADF firmware)	RADF control PC board (RADF board)

Options

Model name	Firmware	Stored
Finisher (MJ-1103)	Finisher firmware	Finisher control PC board
	Converter firmware	LGC board
Saddle Stitch Finisher (MJ-1104)	Finisher firmware	Finisher control PC board
	Saddle stitcher firmware	Saddle stitcher PC board
	Converter firmware	LGC board
Hole Punch Unit (MJ-6102)	Hole punch unit firmware	Hole punch control PC board
Fax Unit (GD-1270)	Fax unit firmware	FAX board

K-PWA-DLM-320

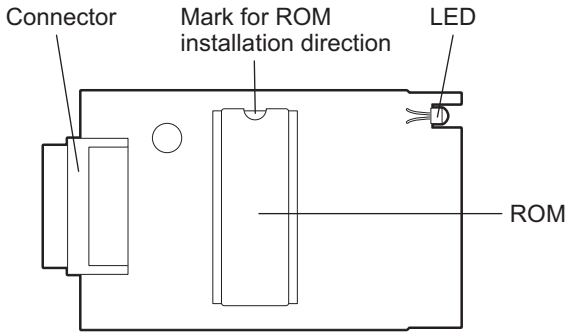


Fig. 8-26 Jig board: K-PWA-DLM-320

Important:

Pay attention to the direction of the ROM.

8.3.1 Scanner ROM

Important:

- Be sure to shut down the equipment before installing and removing the download jig.
- Do not shut down the equipment during the update. The data could be damaged and not be able to be operated properly.

[A] Update Procedure

(1) Install the ROM to the download jig (K-PWA-DLM-320).
Make sure the direction is correct.

(2) Press the [ON/OFF] button on the control panel to shut down the equipment.

(3) Take off the top right cover.

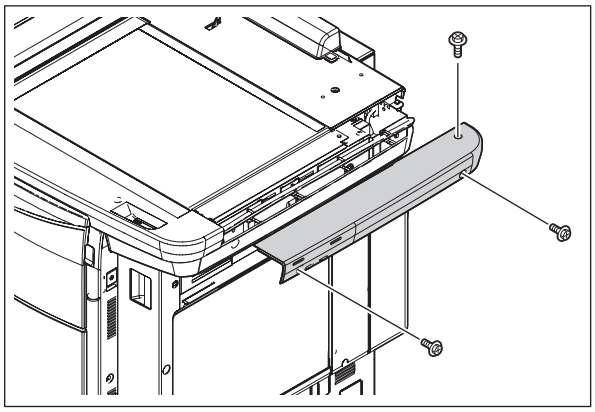


Fig. 8-27

(4) Take off the right top cover.

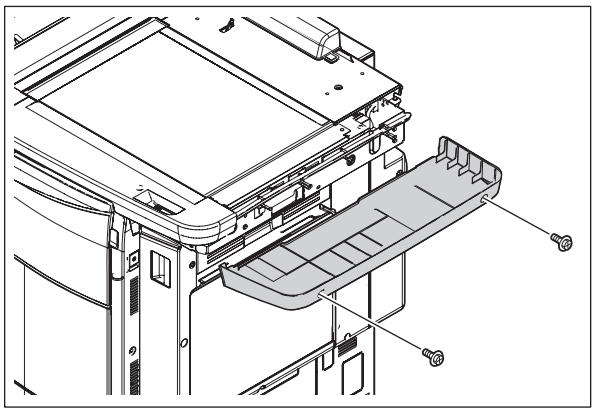


Fig. 8-28

(5) Remove the cover plate.

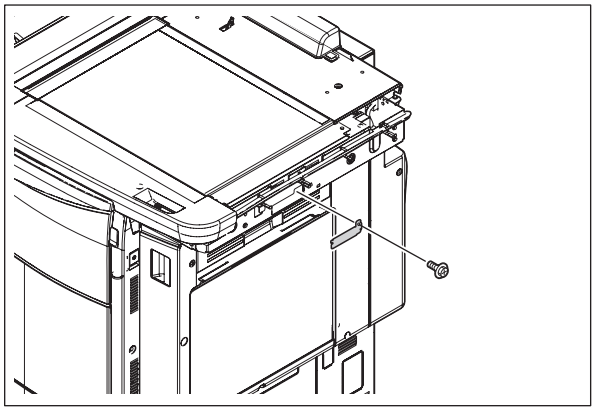


Fig. 8-29

(6) Connect the download jig with the jig connector on the scanning section control PC board (SLG board).

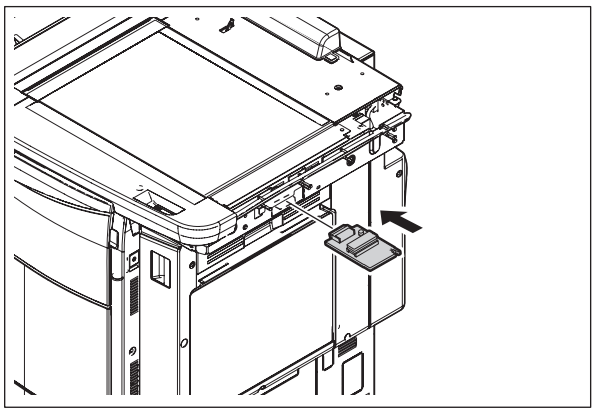


Fig. 8-30

(7) Press the [ON/OFF] button while simultaneously holding down the [0] and [8] buttons.
Updating starts automatically and the LED on the download jig lights.

(8) After the update is completed properly, the LED on the download jig blinks.
The LED starts blinking approx. 20 sec. after the update starts. It is assumed that the update has failed if it does not start blinking even though 1 min. has passed. In this case, shut down the equipment and check the following items. Then clear the problems and restart updating from the beginning.
- Is the download jig connected properly?
- Is the ROM installed to the download jig properly?
- Is the updating data written on the ROM of the download jig properly?
- Do the download jig and the equipment operate properly?

(9) Turn the power OFF using the main power switch on the right-hand surface of the equipment, remove the download jig, and then install the cover plate, top right cover and right top cover.

[B] Confirmation of the updated data

After the updating is completed, check each data version in Setting Mode (08) to confirm that the data were overwritten properly.

📖 P.8-50 "8.4 Confirmation of the updated data"

Important:

If the exposure lamp blinks twice at the time of start-up and a “C270” error occurs, the model of the scanner ROM updated may be incorrect.
Check the model of the scanner ROM and retry updating.

8.3.2 RADF firmware

Important:

- Be sure to shut down the equipment before installing and removing the download jig.
- Do not shut down the equipment during the update. The data could be damaged and not be able to be operated properly.

[A] Update Procedure

(1) Install the ROM to the download jig (K-PWA-DLM-320).
Make sure the direction is correct.

(2) Press the [ON/OFF] button on the control panel to shut down the equipment.

(3) Take off the upper exhaust fan cover.
📖 Service Manual “3.5.19 Upper exhaust fan cover”

(4) Take off the RADF rear cover.

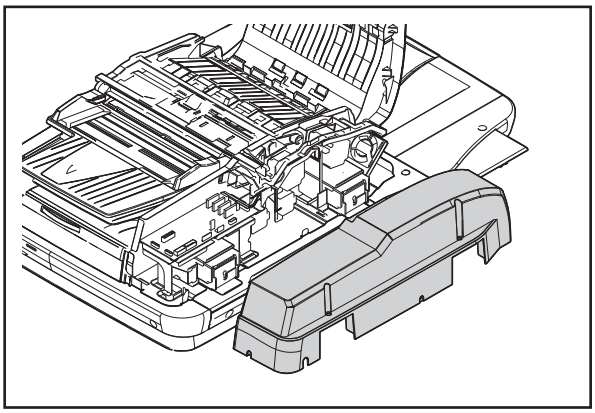


Fig. 8-31

(5) Connect the download jig with the jig connector on the RADF control PC board.

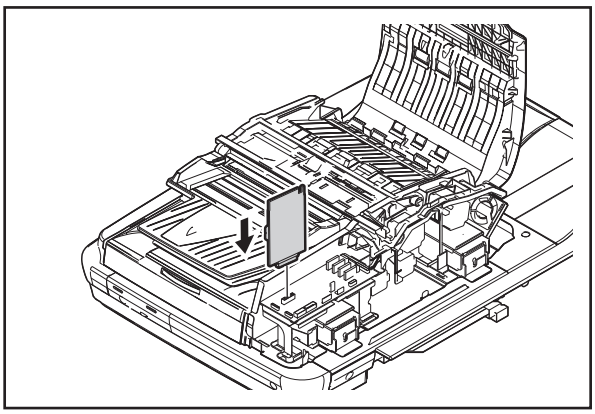


Fig. 8-32

(6) Press the [ON/OFF] button while simultaneously holding down the [0] and [8] buttons.
Updating starts automatically and the LED on the download jig lights.

(7) After the update is completed properly, the LED on the download jig blinks (at an interval of approx. 1 sec.).
The LED starts blinking approx. 50 sec. after the update starts. It is assumed that the update has failed if it does not start blinking even though 2 min. has passed. In this case, shut down the equipment and check the following items. Then clear the problems and restart updating from the beginning.
- Is the download jig connected properly?
- Is the ROM installed to the download jig properly?
- Is the updating data written on the ROM of the download jig properly?
- Do the download jig and the equipment operate properly?

(8) Turn the power OFF using the main power switch on the right-hand surface of the equipment, remove the download jig, and then install the RADF rear cover and upper exhaust fan cover.

[B] Confirmation of the updated data

After the updating is completed, check each data version in Setting Mode (08) to confirm that the data were overwritten properly.
📖 P.8-50 "8.4 Confirmation of the updated data"

8.3.3 Finisher firmware (MJ-1103/1104)

Important:

- Be sure to shut down the equipment before installing and removing the download jig.
- Do not shut down the equipment during the update. The data could be damaged and not be able to be operated properly.

[A] Update Procedure

(1) Install the ROM to the download jig (K-PWA-DLM-320).
Make sure the direction is correct.

(2) Press the [ON/OFF] button on the control panel to shut down the equipment.

(3) Remove 2 screws and take off the board access cover.

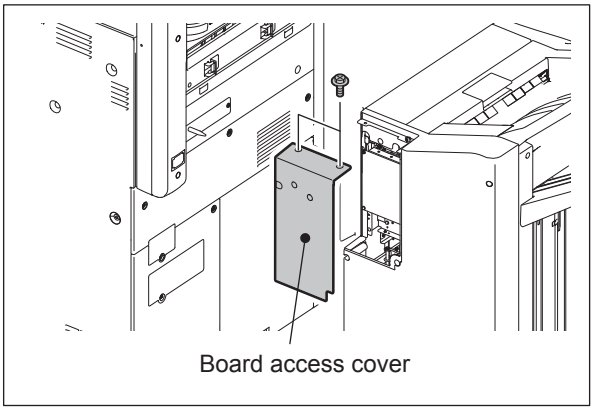


Fig. 8-33

(4) Connect the download jig with the jig connector (CN28) on the Finisher control board.

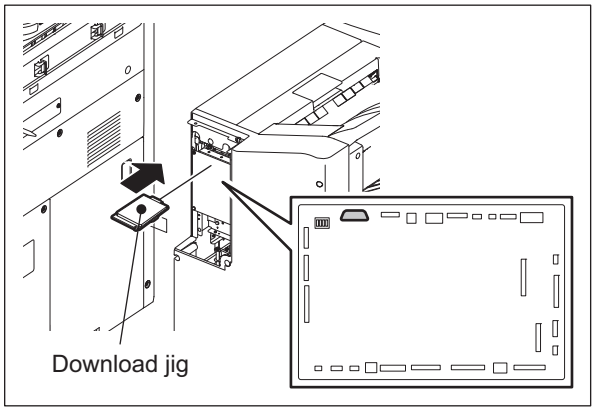


Fig. 8-34

(5) Press the [ON/OFF] button while simultaneously holding down the [0] and [8] buttons.
Updating starts and the LED on the download jig lights.

(6) When the update completes normally, the LED on the download jig starts blinking.
The LED on the download jig starts blinking approx. 12 seconds after the update started.
It is assumed that the update has failed if the LED does not start blinking even after 20 seconds have elapsed.
In this case, turn the power OFF and check the following items.
Then, clear the problem and restart updating from the beginning.
- Is the downloading jig connected properly?
- Is the ROM attached to the downloading jig properly?
- Has the update data been written correctly to the ROM on the jig?
- Is the download jig or the equipment damaged?

(7) Turn the power OFF using the main power switch on the right-hand surface of the equipment and remove the download jig.

(8) Install the board access cover.

[B] Confirmation of the updated data

After the updating is completed, check each data version in Setting Mode (08) to confirm that the data were overwritten properly.
📖 P.8-50 "8.4 Confirmation of the updated data"

8.3.4 Saddle stitcher firmware (MJ-1104)

Important:

- Be sure to shut down the equipment before installing and removing the download jig.
- Do not shut down the equipment during the update. The data could be damaged and not be able to be operated properly.

[A] Update Procedure

(1) Install the ROM to the download jig (K-PWA-DLM-320).
Make sure the direction is correct.

(2) Press the [ON/OFF] button on the control panel to shut down the equipment.

(3) Open the front upper cover and then pull out the saddle unit.

(4) Loosen 2 screws and turn the saddle control PC board access cover in the direction of the arrow.

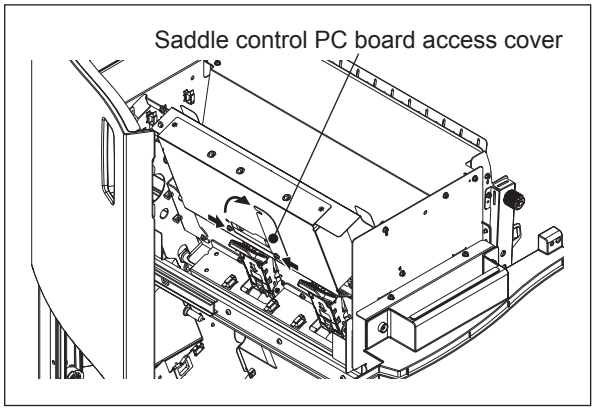


Fig. 8-35

(5) Connect the download jig with the jig connector (CN16) on the Saddle control board.

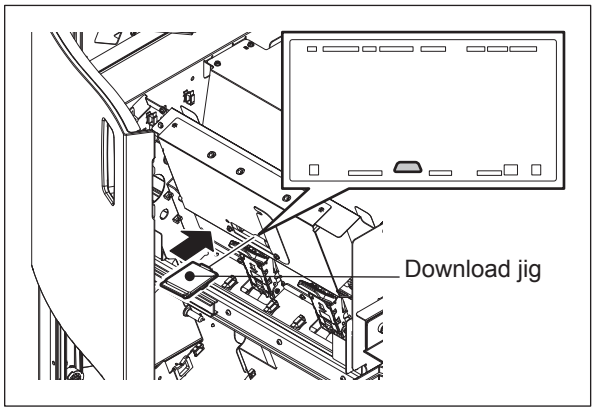


Fig. 8-36

(6) Press the [ON/OFF] button while simultaneously holding down the [0] and [8] buttons.
Updating starts and the LED on the download jig lights.

(7) When the update completes normally, the LED on the download jig starts blinking.
The LED on the download jig starts blinking approx. 8 seconds after the update started.
It is assumed that the update has failed if the LED does not start blinking even after 15 seconds have elapsed.
In this case, turn the power OFF and check the following items.
Then, clear the problem and restart updating from the beginning.
- Is the downloading jig connected properly?
- Is the ROM attached to the downloading jig properly?
- Has the update data been written correctly to the ROM on the jig?
- Is the download jig or the equipment damaged?

(8) Turn the power OFF using the main power switch on the right-hand surface of the equipment and remove the download jig.

(9) Return the saddle control PC board access cover to its original position.

(10) Set the saddle unit back to the main unit and then close the upper front cover.

[B] Confirmation of the updated data

After the updating is completed, check each data version in Setting Mode (08) to confirm that the data were overwritten properly.
📖 P.8-50 "8.4 Confirmation of the updated data"

8.3.5 Hole punch unit firmware (MJ-6102)

Important:

- Be sure to shut down the equipment before installing and removing the download jig.
- Do not shut down the equipment during the update. The data could be damaged and not be able to be operated properly.

[A] Checking the hole punch position

Follow the procedure below to check the stopping position of the paper transport during the punching operation before updating the firmware, as the value for the position is defaulted when the firmware is updated.

(1) Press the [ON/OFF] button on the control panel to shut down the equipment.

(2) Remove the finisher board access cover and change the setting of the DIP-SW1 (SW1) on the finisher control PC board as shown in the figure below.

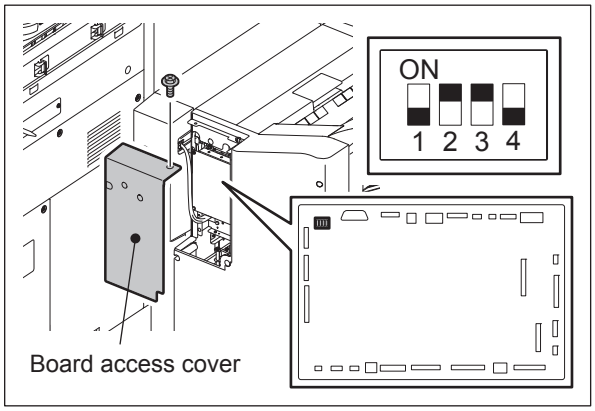


Fig. 8-37

(3) Press the [ON/OFF] button while simultaneously holding down the [0] and [8] buttons. The [LED1] on the finisher control panel starts blinking. Count the number of times it blinks. If the number of blinks is “6”, this indicates that the value for the stopping position is the default. If the number is other than “6”, record it because the value needs to be reset after the firmware is updated.

(4) Return the DIP-SW1 to the status before checking.

[B] Firmware update

(1) Install the ROM to the download jig (K-PWA-DLM-320).
Make sure the direction is correct.

(2) Press the [ON/OFF] button on the control panel to shut down the equipment.

(3) Remove 2 screws and take off the finisher board access cover.

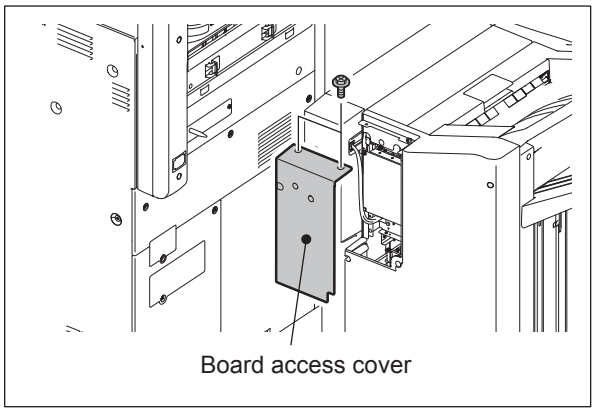


Fig. 8-38

(4) Connect the download jig with the jig connector (CN28) on the finisher control PC board.

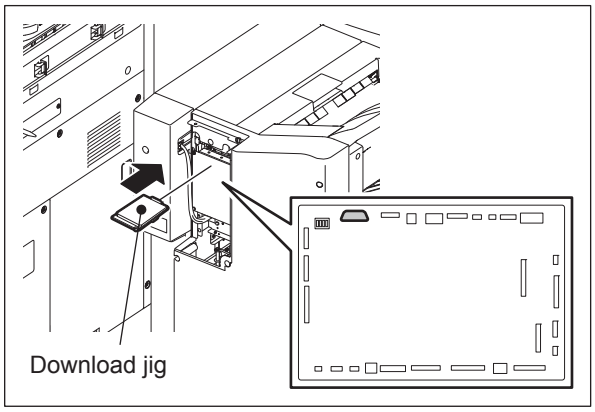


Fig. 8-39

(5) Press the [ON/OFF] button while simultaneously holding down the [0] and [8] buttons.
Updating starts and the LED on the download jig lights.

(6) When the update is completed normally, the LED on the download jig starts blinking. The LED on the download jig starts blinking approx. 60 seconds after the update started. It is assumed that the update has failed if the LED does not start blinking even after 90 seconds have elapsed, or if it repeats blinking 5 times, going out for 2 sec., blinking twice and going out for 2 more sec. This is a blinking error.
In this case, turn the power OFF and check the following items. Then, clear the problem and restart updating from the beginning.
- Is the downloading jig connected properly?
- Is the ROM attached to the downloading jig properly?
- Has the update data been written correctly to the ROM on the jig?
- Is the download jig or the equipment damaged?
- Is the connector (CN25) on the finisher control PC board properly connected with the one (CN5) on the interface PC board?
- Are the connector (CN4) on the Interface PC board and the connector (CN4) on the hole punch control PC board connected properly?

(7) Turn the power OFF using the main power switch on the right-hand surface of the equipment and remove the download jig.

Note:
When the number of blinks is other than “6” (which indicates that the adjustment value is “0”) at the section “[A]Checking the hole punch position”, follow the steps of “5.1 Stopping Position Adjustment” in the MJ-6102 Service Manual to adjust the value to the one that has been set before the update.

(8) Install the finisher board access cover.

[C] Confirmation of the updated data

After the updating is completed, check each data version in Setting Mode (08) to confirm that the data were overwritten properly.
📖 P.8-50 "8.4 Confirmation of the updated data"

8.3.6 Converter Firmware (MJ-1103/1104)

Important:

- Be sure to shut down the equipment before installing and removing the download jig.
- Do not shut down the equipment during the update. The data could be damaged and not be able to be operated properly.

[A] Update Procedure

(1) Install the ROM to the download jig (K-PWA-DLM-320).
Make sure the direction is correct.

(2) Press the [ON/OFF] button on the control panel to shut down the equipment.

(3) Remove 2 screws and take off the board access cover.

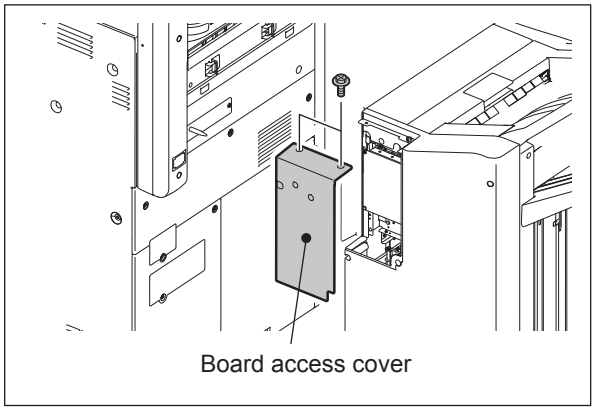


Fig. 8-40

(4) Set the SW1 on the Finisher control board as shown in the figures below.

(5) Connect the download jig with the jig connector (CN28) on the Finisher control board.

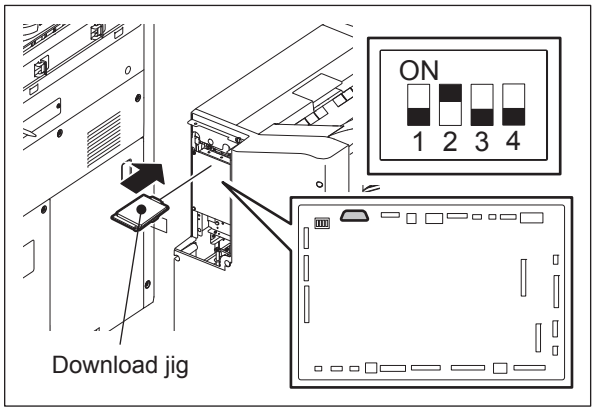


Fig. 8-41

(6) Press the [ON/OFF] button while simultaneously holding down the [0] and [8] buttons.
Updating starts and the LED on the download jig lights.

(7) When the update completes normally, the LED on the download jig starts blinking.
The LED on the download jig starts blinking approx. 12 seconds after the update started.
It is assumed that the update has failed if the LED does not start blinking even after 20 seconds have elapsed.
In this case, turn the power OFF and check the following items.
Then, clear the problem and restart updating from the beginning.
- Is the downloading jig connected properly?
- Is the ROM attached to the downloading jig properly?
- Has the update data been written correctly to the ROM on the jig?
- Is the download jig or the equipment damaged?

(8) Turn OFF all bits of the SW1 on the Finisher control board.

(9) Turn the power OFF using the main power switch on the right-hand surface of the equipment and remove the download jig.

(10) Install the board access cover.

[B] Confirmation of the updated data

After the updating is completed, check each data version in Setting Mode (08) to confirm that the data were overwritten properly.
📖 P.8-50 "8.4 Confirmation of the updated data"

8.3.7 Fax unit firmware (GD-1270)

Important:

- Before updating the FAX ROM, make sure to print out the current Function list for maintenance, Function list (ADMIN), Address book list and Group number information. In case the updating is failed and the registered information of the users is lost for some reason, re-register the user information referring to the lists and recover it.
- Confirm the following items before turning OFF the power of the equipment. Turning OFF the power may clear the data below.
  - Confirm that the “MEMORY RX” LED is OFF and there are no memory reception data.
  - Print the “Mailbox/Relay box report” and then confirm that there are no F code data.
  - Press the [JOB STATUS] button to display the screen and then confirm that there are no memory transmission data.

[A] Firmware update

(1) Install the ROM to the download jig (K-PWA-DLM-320).
Make sure the direction is correct.

(2) Press the [ON/OFF] button on the control panel to shut down the equipment.

(3) Remove the modular cable cover.

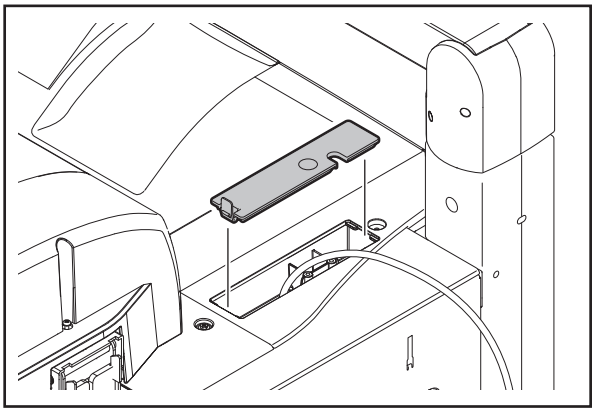


Fig. 8-42

(4) Remove the FAX cover.

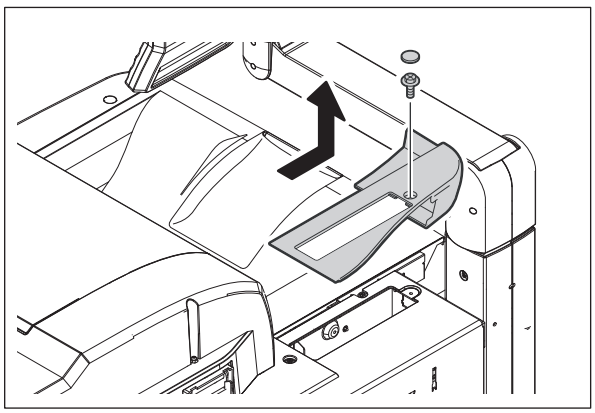


Fig. 8-43

(5) Remove the internal cover.

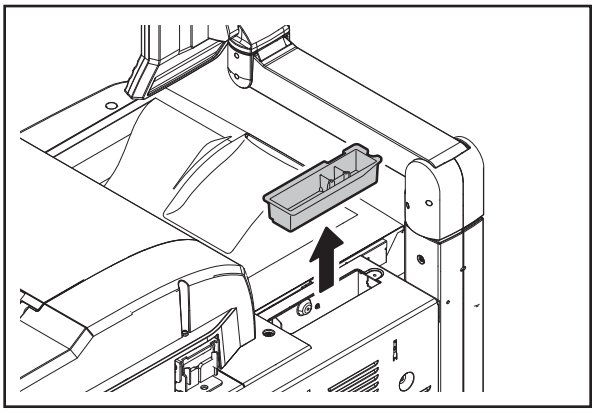


Fig. 8-44

(6) Remove the cover plate.

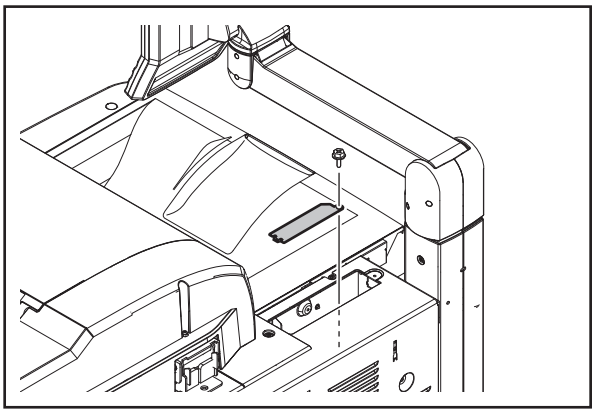


Fig. 8-45

(7) Connect the download jig with the jig connector on the FAX board.

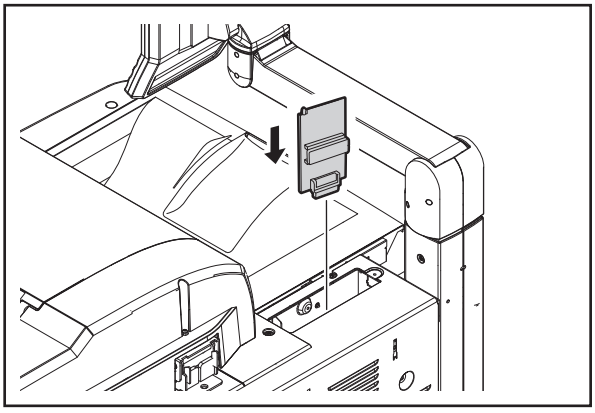


Fig. 8-46

(8) Press the [ON/OFF] button while simultaneously holding down the [0] and [8] buttons. Updating starts automatically and the LED on the download jig lights.

(9) After the update is completed properly, the LED on the download jig blinks. The LED starts blinking approx. 30 sec. after the update starts. It is assumed that the update has failed if it does not start blinking even though 1 min. has passed. In this case, shut down the equipment and check the following items. Then clear the problems and restart updating from the beginning.
- Is the download jig connected properly?
- Is the ROM installed to the download jig properly?
- Is the updating data written on the ROM of the download jig properly?
- Do the download jig and the equipment operate properly?

(10) Turn the power OFF using the main power switch on the right-hand surface of the equipment, remove the download jig, and then install the cover plate.

(11) In the FAX Clearing Mode, perform the “FAX Set Up”.
- Confirm the destination setting is correct in the Setting Mode (08).
  08-201: Destination setting of the equipment
  08-701: Destination setting of the FAX machine
- Turn ON the power while [1] button and [*] button are pressed simultaneously.
- Key in “100”.
- Press the [START] button.

Notes:

If the equipment does not work properly after the operation (9), follow the procedure below and then perform the “Clearing the image data” in the FAX Clearing Mode to erase the image data in the memory.
- Confirm the destination setting is correct in the Setting Mode (08).
  08-201: Destination setting of the equipment
  08-701: Destination setting of the FAX machine
- Turn ON the power while [1] button and [*] button are pressed simultaneously.
- Key in “102”.
- Press the [START] button.

[B] Confirmation of the updated data

After the updating is completed, check each data version in Setting Mode (08) to confirm that the data were overwritten properly.

📖 P.8-50 "8.4 Confirmation of the updated data"

8.4 Confirmation of the updated data

After the updating is completed, check each data version in Setting Mode (08) to confirm that the data were overwritten properly.

Firmware	Code	Remarks
Updating HDD/UI data	08-944	HDD Version
	08-924	Version of UI data language 1 in HDD
Updating System ROM	08-900	System firmware ROM version
	08-921	System firmware ROM internal program version
Updating OS	08-920	FROM basic section software version
Updating Engine ROM	08-903	Engine ROM version
Updating Scanner ROM	08-905	Scanner ROM version
Updating PFC ROM	08-906	PFC ROM version
Updating RADF ROM	08-907	RADF ROM version
Updating Finisher ROM	08-908	Finisher ROM version Saddle stitcher ROM version
	08-911	Hole punch unit ROM version
	08-9945	Converter ROM version
Updating FAX ROM	08-915	FAX ROM version
Imaging Acceleration Board ROM	08-9965	Imaging Acceleration Board SROM version

* If “NGD” is displayed for the PFC ROM version (08-906), the downloading of PFC ROM fails. Update the firmware again.

📖 P.8-51 "8.5 When Firmware Updating Fails"

8.5 When Firmware Updating Fails

When the equipment was shut down during firmware updating or it could not be started after updating for some reason, perform firmware updating again following the procedure below.

8.5.1 Procedure

(1) Update “System ROM” of the system control PC board (SYS board) using the download jig (PWA-DWNLD-350-JIG2).
Updating with the USB media becomes possible only after the “System ROM” (OS data) has been updated.
See the updating procedure below for details.
📖 P.8-26 "8.2.2 System ROM"

(2) Update “Master Data”, “PFC ROM”, “Engine ROM” and “Scanner ROM” using the USB media.
See the updating procedure below for details.
📖 P.8-5 "8.1 Firmware Updating with USB Media"

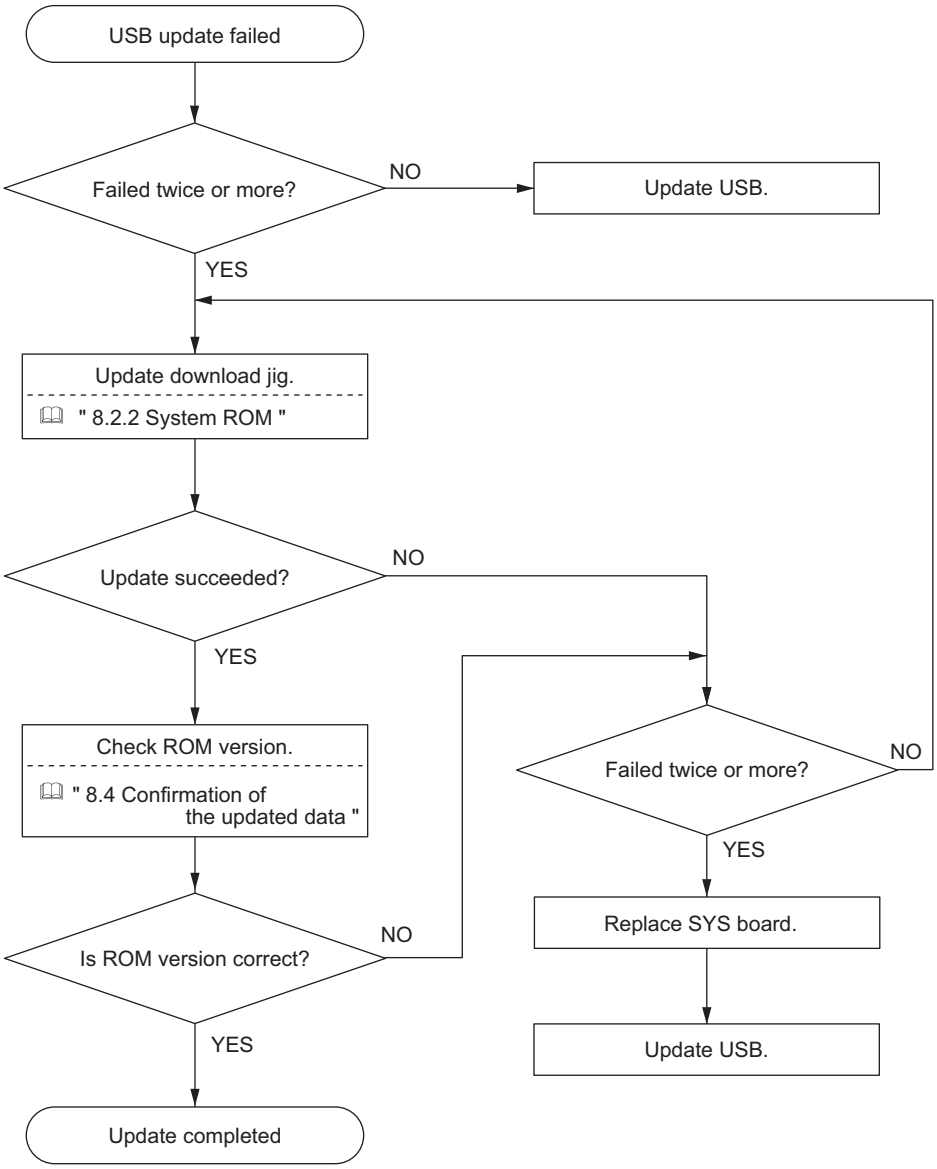
(3) When the update with the USB media for “Engine ROM”, “PFC ROM” and “Scanner ROM” failed, update these ROMs using the respective download jigs in the table below.

Firmware	Storage location	Download jig
Engine ROM	Logic PC board (LGC board)	PWA-DWNLD-350-JIG2 📖 P.8-28 "8.2.3 Engine ROM"
PFC ROM	Paper feeding control board (PFC board)	PWA-DWNLD-350-JIG2 📖 P.8-30 "8.2.4 PFC ROM"
Scanner ROM	Scanning section control PC board (SLG board)	K-PWA-DLM-320 📖 P.8-33 "8.3.1 Scanner ROM"

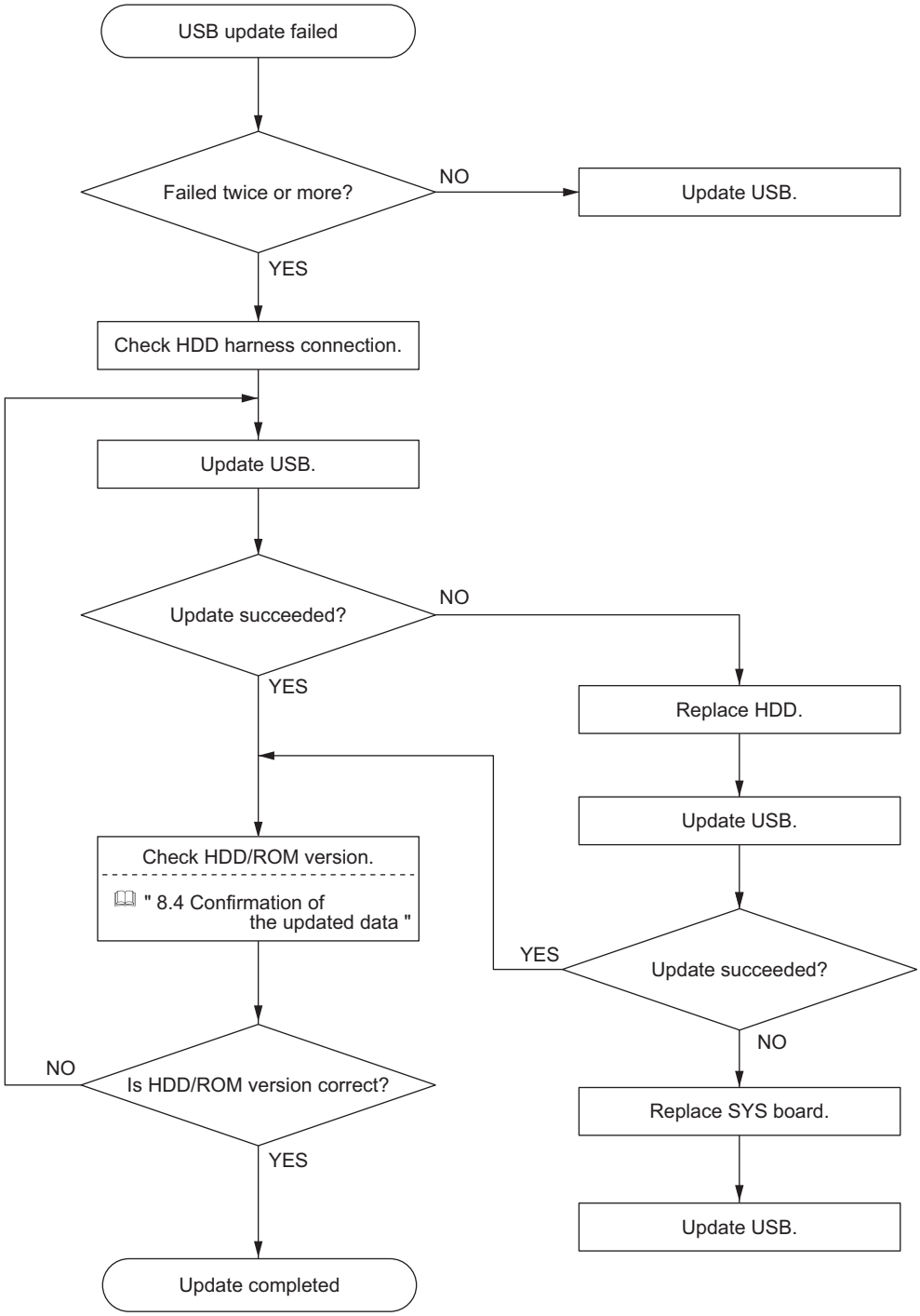
Important:
If the equipment cannot be started even when the above update has been performed, check that there is no damage to the “SYS board”, “LGC board”, “PFC board” or “SLG board”. Replace them if necessary.

8.5.2 Flow chart for correcting USB update failure

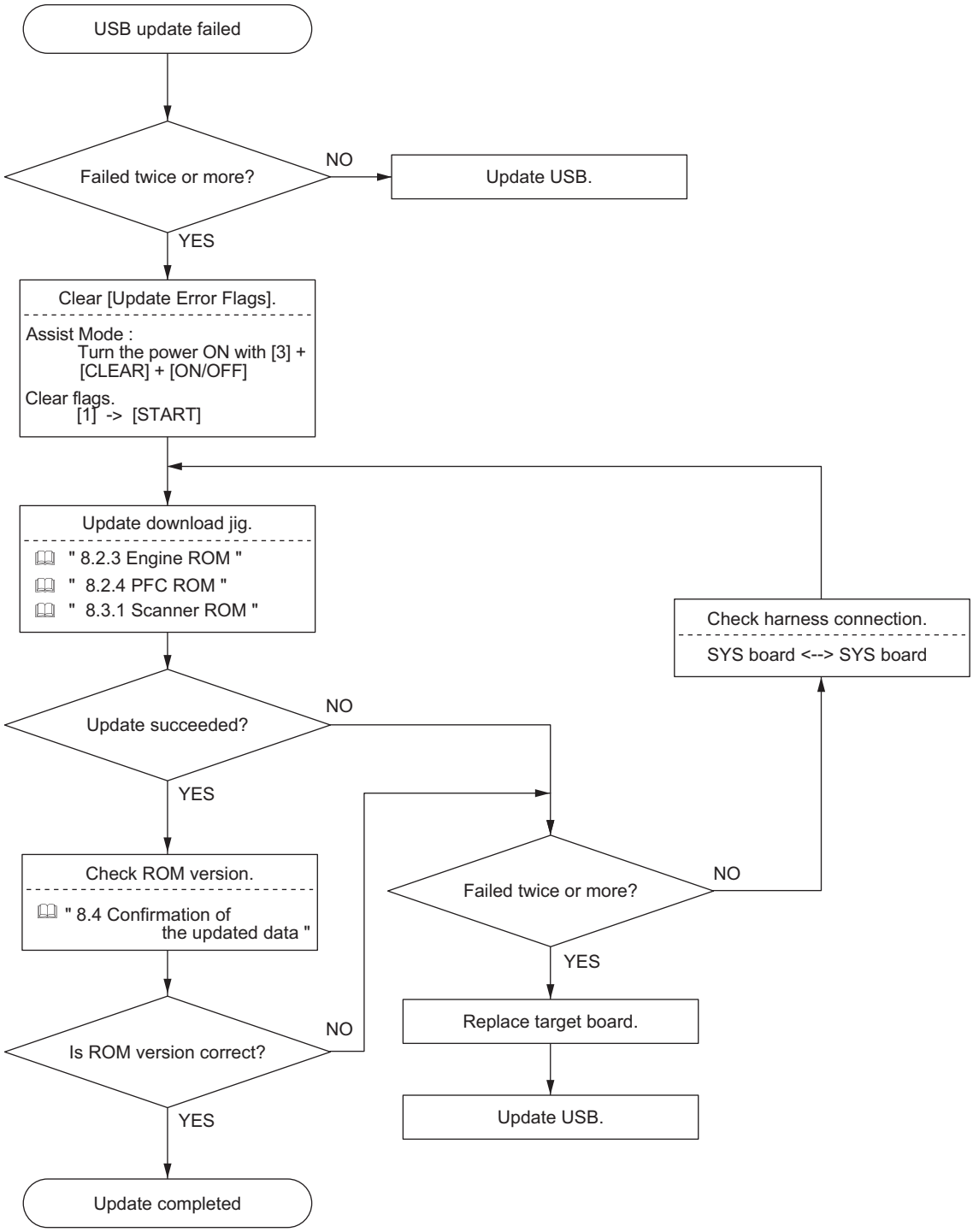
[A] When the update of the System ROM (OS data) failed



[B] When the update of HDD program data / system firmware / UI data (master data) failed



[C] When the update of Engine ROM / PFC ROM failed / Scanner ROM failed



9. POWER SUPPLY UNIT

9.1 Construction

The power supply unit consists of the AC filter, insulation type DC output circuits and heater lamp control circuit.

Note:
In a model with 2 power cables, the total current capacity to be used should not exceed the breaker rating.

1. AC filter
   Eliminates noise from the outside and prevents the noise generated by the equipment from leaking to the outside.

2. DC output circuits
   Converts AC voltage input from outside to DC voltage and supplies it to each electric part. The DC voltage is divided into the following two lines.

   a. Main switch line: Power supply used in the entire equipment during image forming process. Two kinds of voltage (+5.1 V and +12V) are output when the main switch of the equipment is turned ON.

   b. Cover switch line: Power supply used in the entire equipment during image forming process, being supplied via the cover switch. Two kinds of voltage (+5.1VD and +24VD) are output only when the main switch of the equipment is turned ON and two covers (front cover and automatic duplexing unit) are closed.

3. Heater lamp control circuit
   TRC (Triac) is driven by the control signal from the LGC board and then AC power is supplied to each heater lamp in the pressure roller.

9.2 Operation of DC Output Circuits

1. Starting operation of the equipment
   When the main switch of the equipment is turned ON, power starts supplying to all the lines only when two covers (front cover and duplexing unit) are closed.

2. Stopping operation of the equipment
   When the main switch of the equipment is turned OFF, PER-DN signal is output after the instantaneous outage insurance time (20 ms or more) elapses and then the supply of each voltage stops. If the supply of voltage of the main switch line (+5.1VS, +5.1VA, +12VA) stops earlier than the 24 V line does, it may cause the damage of the electron device on each control circuit. To prevent this, the supply of these voltages stops after the PWR-DN signal is output and the minimum retaining time (50 ms) elapses.

3. Normal stopping (shifting to auto shut off mode)
   When the [ON/OFF] button on the control panel is pressed for 1 second or more while the main switch of the equipment is toggled ON, an auto shut off mode shifting signal (SYS-EN) is output from the SYS board after the initialization is finished and then all lines for output voltage except +5.1 VS are closed.

4. Normal starting (recovering from auto shut off mode)
   When the [ON/OFF] button on the control panel is pressed for 1 second or more during the auto shut off mode, an auto shut off mode recovery signal (PWR-SW) is output from the SYS board and then voltage starts being supplied to all the lines, if no error was detected.

5. Output protection
   Each output system includes an overcurrent and overvoltage protection circuits (a fuse and internal protection circuit). This is to prevent the defectives (damage or abnormal operation of the secondary circuit) which may be caused by an overcurrent due to a short circuit or an overvoltage due to a short circuit between different voltages. If the protection circuit is activated (except the case the fuse is blown out), remove the causes such as short-circuit. Turn ON the power again 1 minute later to clear the overcurrent protection.

6. State of the power supply
   - Power OFF
     The main power switch of the equipment is turned OFF. Since DC voltage is not supplied to each board, the equipment is not operable.

   - Normal state (including Energy saving mode)
     The main power switch of the equipment is turned ON and DC voltage is supplied to each board. When the cover of the equipment is closed, 24V DC voltage is supplied and the equipment enters into the ready/printing state.

   - Sleep mode
     Since +5VB, +5VD, +12VB and +24V DC voltages are not supplied but +12VA, +5.1VA and +5.1VS DC voltages only, the equipment does not enter into the ready state.

   - Off mode
     Only DC voltage and +5VS are output from the power supply unit. The [POWER] button is monitored and the LED of the main power switch is lit.

9.3 Output Channel

The following are 2 output channels for the main switch line.

1. +5.1 V

+5.1VS:	CN402 Pin 6 Output to the SYS board
+5.1VA:	CN402 Pins 8, 9 and 10 Output to the SYS board
+5.1VB:	CN402 Pins 19. 20 Output to the SYS board
+5.1VB:	CN403 Pins 2 and 3 Output to the IMG board
+5.1VB:	CN404 Pin 1 Output to the LGC, PFP/LCF (via LGC board)
+5.1VB:	CN405 Pin 1 Output to the LGC board
+5.1VB:	CN406 Pin 4 Output to the Finisher
+5.1VB:	CN407 Pins 1 and 2 Output to the SLG board and RADF

2. +12 V

+12VA:	CN402 Pins 13 and 14 Output to the SYS board
+12VB:	CN402 Pin 18 Output to the SYS board
+12VB:	CN404 Pin 7 Output to the LGC board
+12VB:	CN407 Pin 14 Output to the SLG board

The following are 2 output channels for the cover switch line.

1. +5.1 V

+5.1VD:	CN405 Pin 4 Output to the LGC board

2. +24 V

+24VD1:	CN405 Pin 5 Output to the LGC board
+24VD2:	CN405 Pin 6 Output to the LGC board, PFC board (via LGC board), high-voltage transformer (via LGC board)
+24VD3:	CN405 Pins 7 Output to the PFC board (via LGC board)
+24VD4:	CN406 Pin 2 Output to the Finisher
+24VD5:	CN407 Pins 9, 10, 11 and 12 Output to the SLG board, RADF

Output voltage by the type of connector

Main switch line

Connector	Destination	Voltage
J898	For the SYS board (via relay harness)	+5.1VA, +5.1VB, +5.1VS, +12VA, +12VB
CN403	For the IMG board	+5.1VB
CN404	For the LGC board, LCF (via LGC board)	+5.1VB, +12VB
CN405	For the LGC board	+5.1VB
CN406	For the Finisher	+5.1VB
CN407	For the SLG board, RADF	+5.1V, +12VB

Cover switch line

Connector	Destination	Voltage
CN405	For the LGC board, LCF (via LGC board), high-voltage transformer (via LGC board)	+5.1VD, +24VD1, +24VD2, +24VD3
CN406	For the Finisher	+24VD4
CN407	For the SLG, RADF	+24VD5

AC line

Connector	Destination	Voltage
CN401	AC input	-
CN408	Heater lamp	Lamp output
CN425	Output from the LIVE of AC inlet to the reactor	AC input (cover switch line)
CN426	Input from the reactor to the LIVE	AC input (cover switch line)

9.4 Fuse

When the power supply secondary fuse is blown out, confirm that there is no abnormality with each part using the following table.

Voltage	Board/Unit	Part		Fuse type
+24VD1	LGC board	Fuser motor	M6	F201: 8 A (Semi time-lag)
		2nd transfer motor	M9	
		Transfer belt cam motor	M14	
		Toner motor-K	M15	
		Toner motor-C	M16	
		Toner motor-M	M17	
		Toner motor-Y	M18	
		Drum motor-K	M27	
		Drum motor-YMC	M28	
		Developer unit motor-K	M29	
		Developer unit mixer motor-K	M30	
		Developer unit motor-YMC	M31	
		Developer unit mixer motor-YMC	M32	
		Pressure roller contact/release clutch	CLT1	
		2nd transfer roller contact/release clutch	CLT2	
		2nd transfer roller drive clutch	CLT3	
		Discharge LED-Y	ERS-Y	
		Discharge LED-M	ERS-M	
		Discharge LED-C	ERS-C	
		Discharge LED-K	ERS-K	
		Laser optical unit cooling fan (Rear)	F23	
		Key copy counter, copy key card, coin controller		

Voltage	Board/Unit	Part		Fuse type
+24VD2	LGC board	Transfer belt motor	M13	F202: 8 A (Semi time-lag)
		Sub-hopper toner motor-K	M19	
		Sub-hopper toner motor-C	M20	
		Sub-hopper toner motor-M	M21	
		Sub-hopper toner motor-Y	M22	
		Needle electrode cleaner motor-K	M23	
		Needle electrode cleaner motor-C	M24	
		Needle electrode cleaner motor-M	M25	
		Needle electrode cleaner motor-Y	M26	
		Waste toner transport motor	M33	
		Polygonal motor	M34	
		Mirror motor-M	M35	
		Mirror motor-C	M36	
		Mirror motor-K	M37	
		Shutter motor	M38	
		Auto-toner sensor-K	S26	
		Auto-toner sensor-C	S27	
		Auto-toner sensor-M	S28	
		Auto-toner sensor-Y	S29	
		Drum surface potential (V0) sensor-K	S34	
		Drum surface potential (V0) sensor-C	S35	
		Drum surface potential (V0) sensor-M	S36	
		Drum surface potential (V0) sensor-Y	S37	
		Image quality shutter solenoid	SOL3	
		V0 sensor shutter solenoid-K	SOL4	
		V0 sensor shutter solenoid-C	SOL5	
		V0 sensor shutter solenoid-M	SOL6	
		V0 sensor shutter solenoid-Y	SOL7	
		IH board cooling fan-1	F8	
		IH board cooling fan-2	F9	
		EPU cooling fan	F14	
		Toner cartridge heat insulation fan	F21	
		Laser optical unit cooling fan (Front)	F22	
		Ozone suctioning fan	F24	
		Scattered toner suctioning fan	F25	
		Toner cooling exhaust fan	F31	
		High-voltage transformer-1	HVT1	
		High-voltage transformer-2	HVT2	
	PFC board	Tray-up motor-1	M44	
		3rd drawer transport clutch	CLT4	
		3rd drawer feed clutch	CLT5	
		4th drawer transport clutch	CLT6	
		4th drawer feed clutch	CLT7	
		Bridge unit cooling fan (front)	F6	
		Bridge unit cooling fan (rear)	F7	
		Stopper opening/closing solenoid (front)	SOL10	
		Stopper opening/closing solenoid (rear)	SOL11	

Voltage	Board/Unit	Part		Fuse type
+24VD3	PFC board	Exit motor	M2	F203: 8 A (Semi time-lag)
		Reverse motor	M3	
		Bridge unit transport entrance motor	M4	
		Bridge unit transport exit motor	M5	
		ADU motor-1	M7	
		ADU motor-2	M8	
		TRU waste toner motor	M10	
		TRU waste toner transport motor	M11	
		Bypass motor	M12	
		Registration motor	M39	
		Transport motor-1	M40	
		Transport motor-2	M41	
		Feed motor	M42	
		Feed/transport motor	M43	
		Tray-up motor-2	M45	
		Tandem LCF tray-up motor	M46	
		Tandem LCF end fence motor	M47	
		Transport path switching solenoid-1	SOL1	
		Transport path switching solenoid-2	SOL2	
		Bypass pickup solenoid	SOL8	
		Reversed paper cooling fan	F11	
+24VD4	Finisher			F204: 8 A (Semi time-lag)
+24VD5	SLG board			F205: 8 A (Semi time-lag)
	RADF			
+5VB	LGC board			F210: 5 A (Semi time-lag)
+5VS	SYS board, Control panel			F211: 0.4 A (PolySwitch)

9.5 Configuration of Power Supply Unit

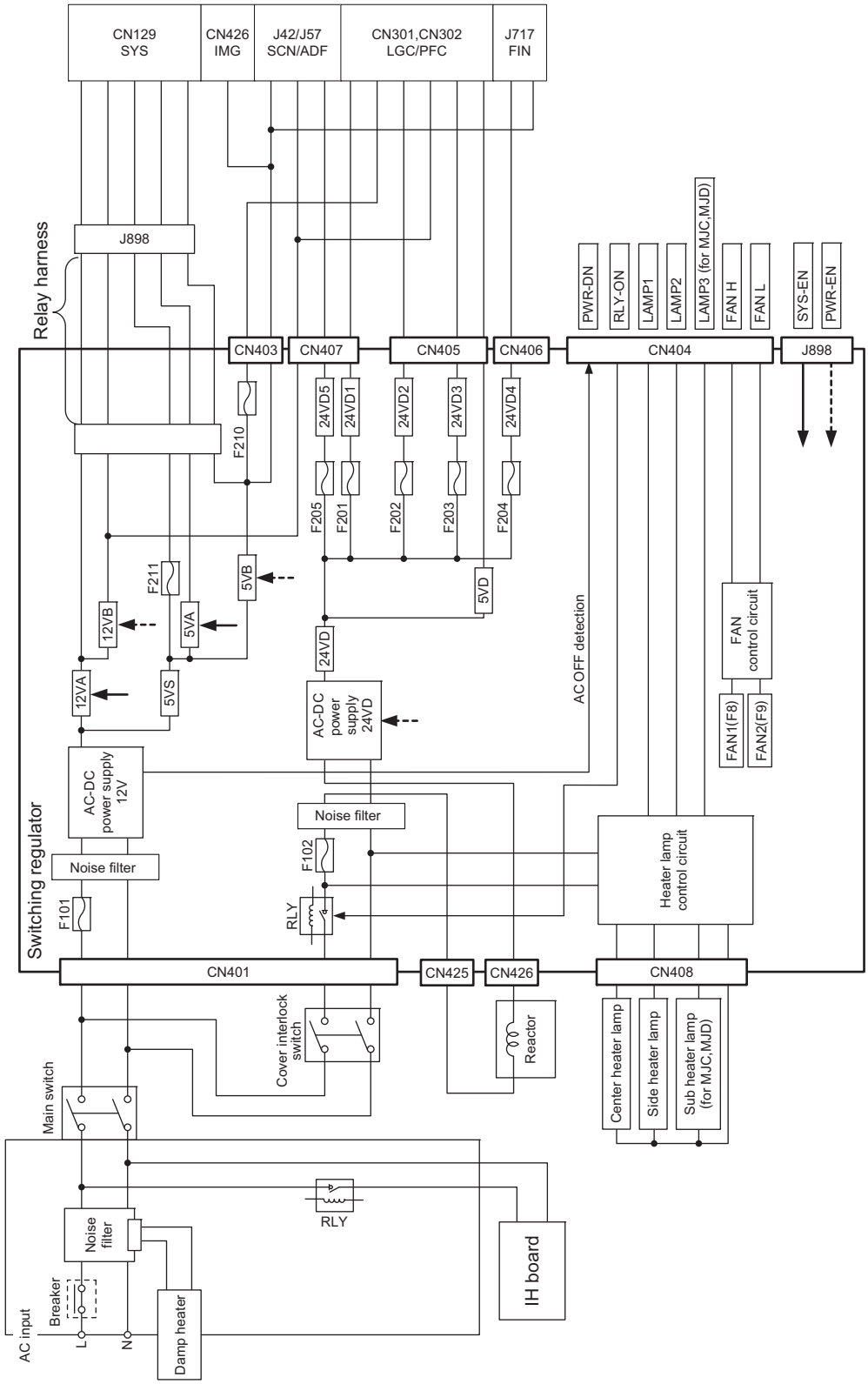


Fig. 9-1

9.6 Sequence of Power Supply

- Power ON, Power failure, Power OFF

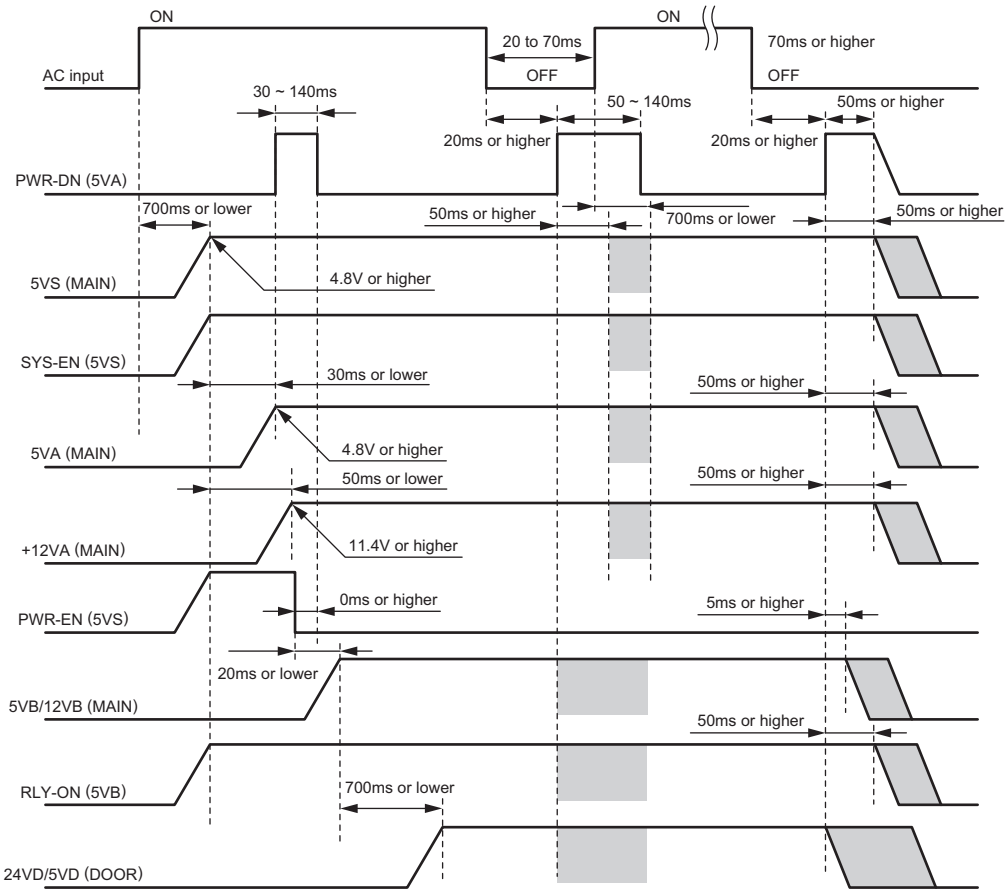


Fig. 9-2

9

- Sleep mode, OFF mode

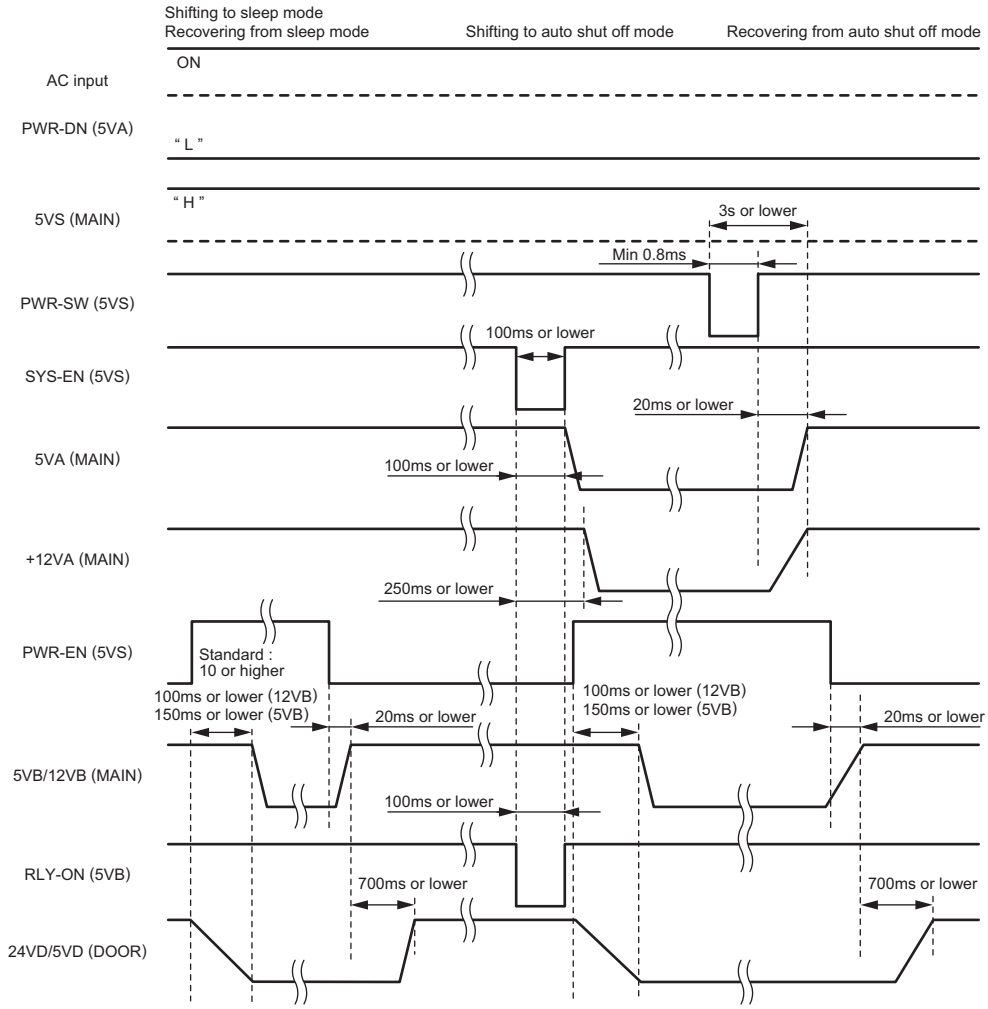


Fig. 9-3

9.7 AC Wire Harness

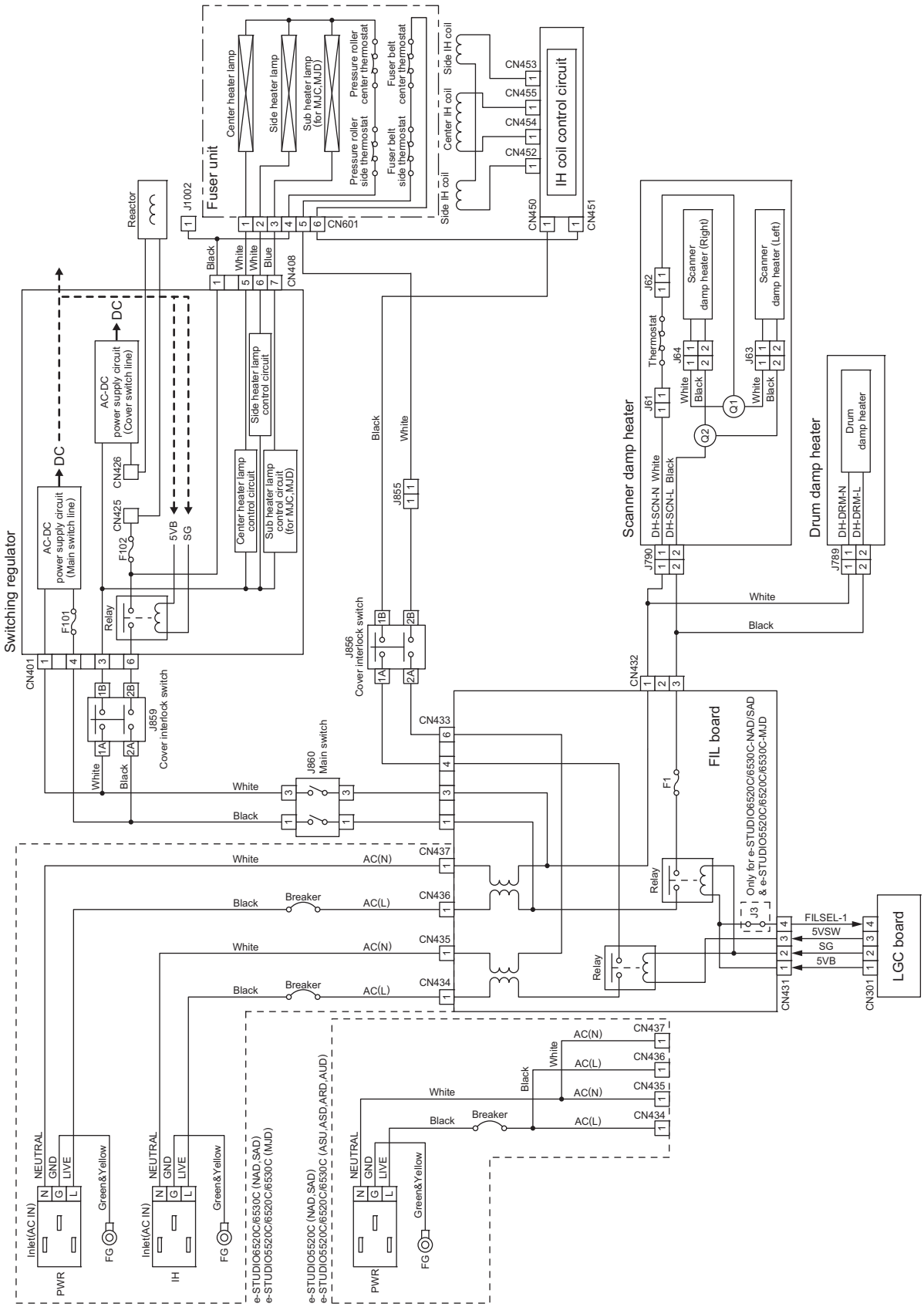
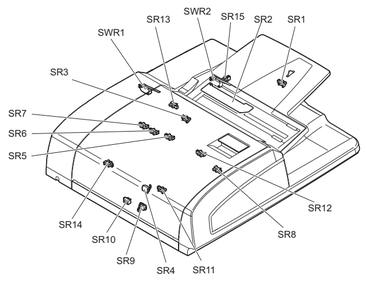


Fig. 9-4

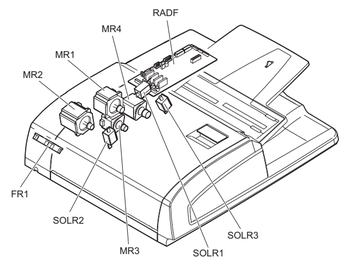
10.1 DC Wire Harness

10.2 Electric Parts Layout

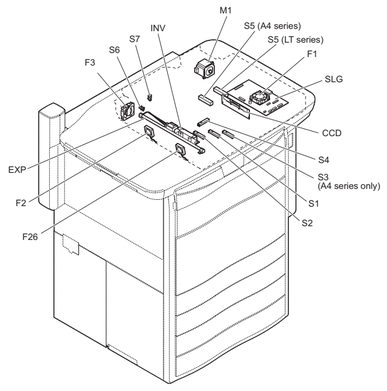
[A]-1 Reversing Automatic Document Feeder (RADF)



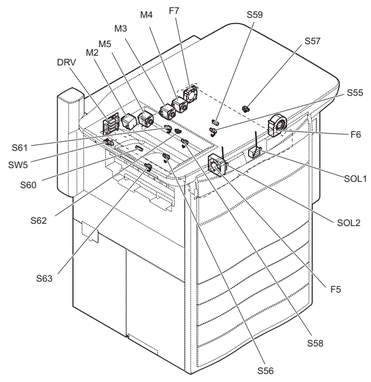
[A]-2 Reversing Automatic Document Feeder (RADF)



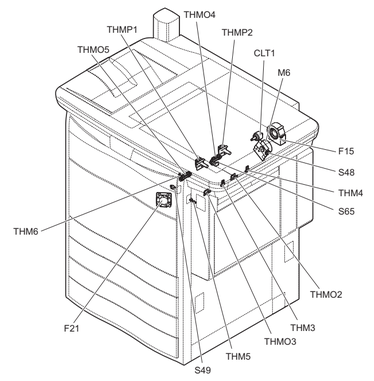
[B] Scanner unit



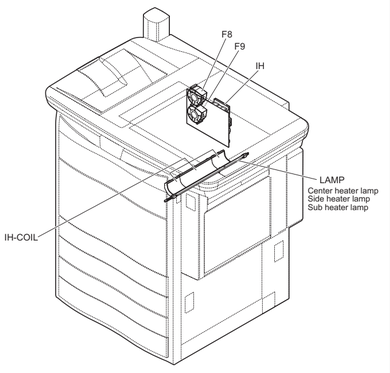
[C] Bridge unit/Paper exit



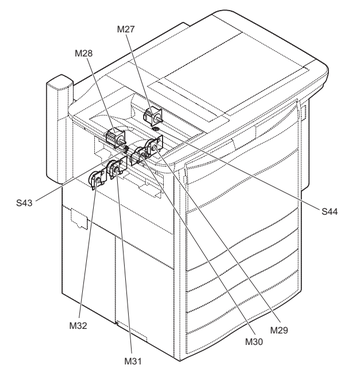
[D]-1 Fuser related section



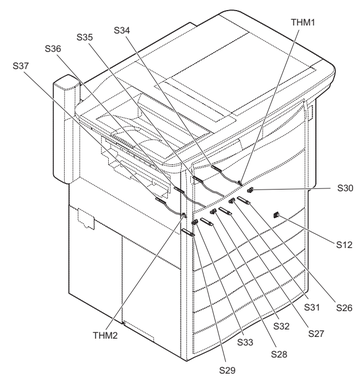
[D]-2 Fuser related section



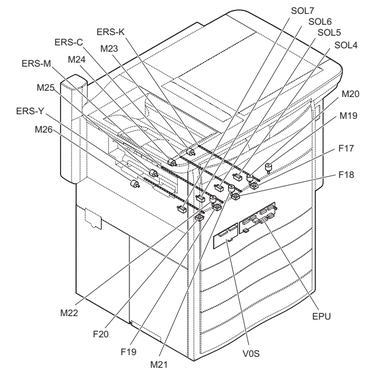
[E]-1 Developer unit



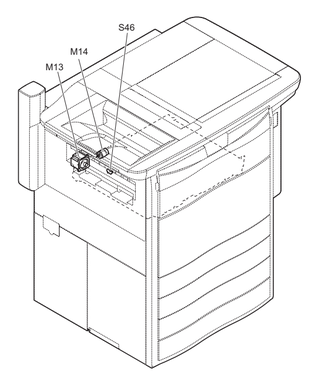
[E]-2 Developer unit



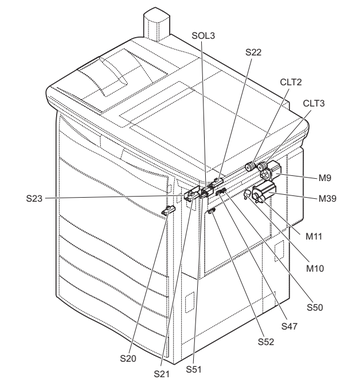
[E]-3 Developer unit



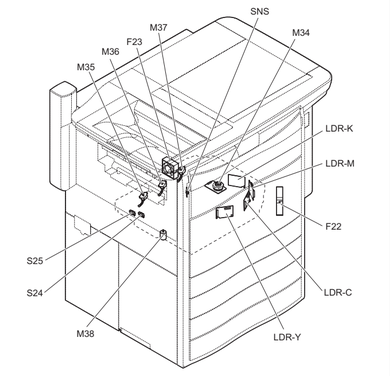
[F] Transfer belt unit



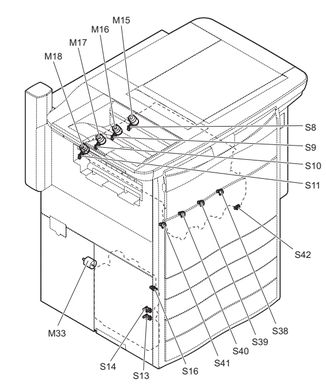
[G] Transfer unit



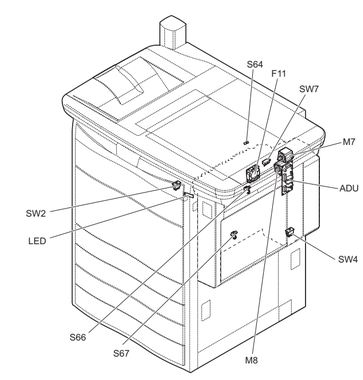
[H] Laser unit



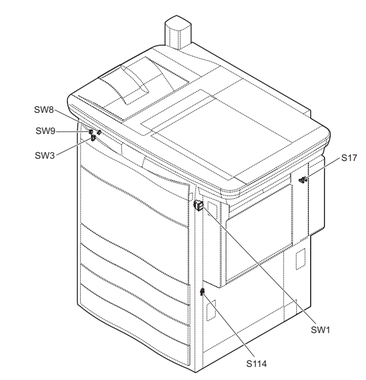
[I] Toner cartridge/Waste toner box



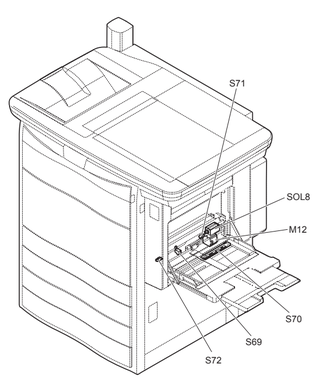
[J] Automatic duplexing unit



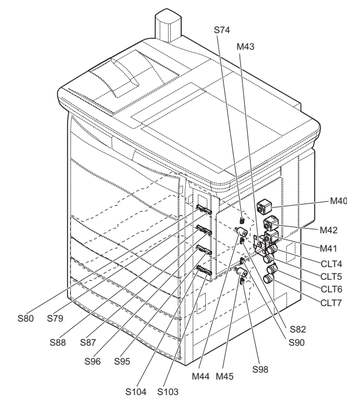
[K] Cover switches/Cover sensor/TRU waste toner box



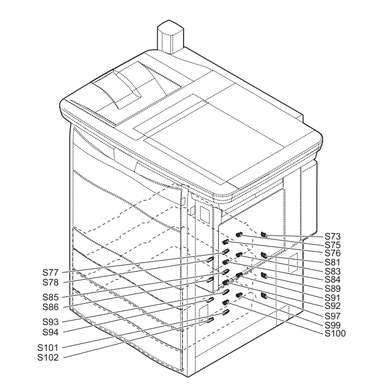
[L] Bypass feed unit



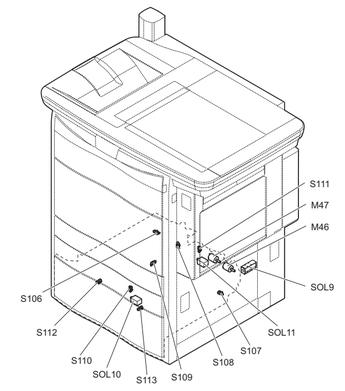
[M]-1 Paper feeding section



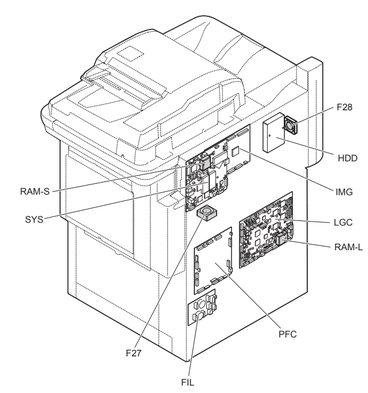
[M]-2 Paper feeding section



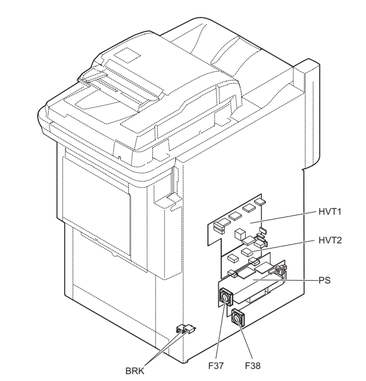
[N] Tandem LCF



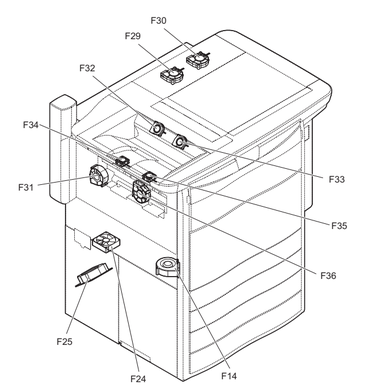
[O] PC boards



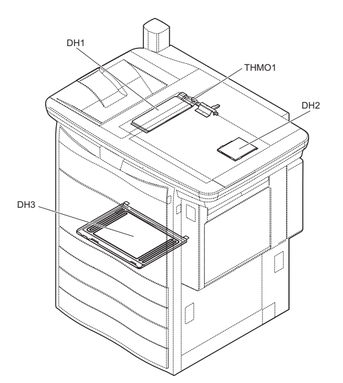
[P] Power supply



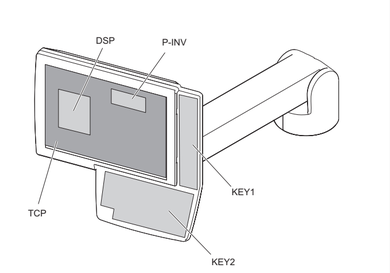
[Q] Fans



[R] Damp heater



[S] Control panel



Motors

Symbol	Name	Figure	Wire harness location
MR1	FEED-MOT Original feed motor	[A]-2	3-F
MR2	READ-MOT Read motor	[A]-2	3-F
MR3	SB-MOT Original reverse motor	[A]-2	3-F
MR4	EXIT-MOT Original exit motor	[A]-2	3-G
M1	SCAN-MOT Scan motor	[B]	2-F
M2	EXIT-MOT Exit motor	[C]	6-H
M3	REV-MOT Reverse motor	[C]	6-H
M4	BRIDGE-ENT-MOT Bridge unit transport entrance motor	[C]	6-H
M5	BRIDGE-EXIT-MOT Bridge unit transport exit motor	[C]	6-G
M6	FUS-MOT Fuser motor	[D]-1	6-D
M7	ADU-MOT-1 ADU motor-1	[J]	8-D
M8	ADU-MOT-2 ADU motor-2	[J]	8-D
M9	TR2-MOT 2nd transfer motor	[G]	4-A
M10	TRU-WASTE-TNR-MOT TRU waste toner motor	[G]	7-D
M11	TRU-WASTE-TNR-TEPT-MOT TRU waste toner transport motor	[G]	8-E
M12	SFB-MOT Bypass motor	[L]	8-D
M13	TBU-MOT Transfer belt motor	[F]	7-E
M14	TBU-CAM-MOT Transfer belt cam motor	[F]	7-E
M15	TNR-MOT-K Toner motor-K	[I]	6-E
M16	TNR-MOT-C Toner motor-C	[I]	6-D
M17	TNR-MOT-M Toner motor-M	[I]	6-D
M18	TNR-MOT-Y Toner motor-Y	[I]	6-D
M19	SUB-HOP-MOT-K Sub-hopper toner motor-K	[E]-3	8-B
M20	SUB-HOP-MOT-C Sub-hopper toner motor-C	[E]-3	8-A
M21	SUB-HOP-MOT-M Sub-hopper toner motor-M	[E]-3	7-B
M22	SUB-HOP-MOT-Y Sub-hopper toner motor-Y	[E]-3	7-A
M23	CH-CLN-MOT-K Needle electrode cleaner motor-K	[E]-3	8-C
M24	CH-CLN-MOT-C Needle electrode cleaner motor-C	[E]-3	8-B
M25	CH-CLN-MOT-M Needle electrode cleaner motor-M	[E]-3	7-C
M26	CH-CLN-MOT-Y Needle electrode cleaner motor-Y	[E]-3	7-B
M27	DRM-MOT-K Drum motor-K	[E]-1	4-B
M28	DRM-MOT-YMC Drum motor-YMC	[E]-1	4-B
M29	DEV-MOT-K Developer unit motor-K	[E]-1	5-F
M30	K-DEV-MIX-MOT Developer unit mixer motor-K	[E]-1	5-E
M31	DEV-MOT-YMC Developer unit motor-YMC	[E]-1	4-C
M32	DEV-MIX-MOT-YMC Developer unit mixer motor-YMC	[E]-1	4-B
M33	WASTE-TNR-TRPT-MOT Waste toner transport motor	[I]	6-C
M34	POL-MOT Polygonal motor	[H]	5-D
M35	MIR-MOT-M Mirror motor-M	[H]	5-C
M36	MIR-MOT-C Mirror motor-C	[H]	5-D
M37	MIR-MOT-K Mirror motor-K	[H]	5-D
M38	SHT-MOT Shutter motor	[H]	5-C
M39	RGST-MOT Registration motor	[G]	6-H
M40	TRNS-MOT-1 Transport motor-1	[M]-1	6-H
M41	TRNS-MOT-2 Transport motor-2	[M]-1	7-H
M42	FEED-MOT Feed motor	[M]-1	7-H
M43	FED/TR-MOT Feed/transport motor	[M]-1	8-C
M44	CST-TRY-MOT-1 Tray-up motor-1	[M]-1	8-F
M45	CST-TRY-MOT-2 Tray-up motor-2	[M]-1	8-G
M46	YLCF-TRY-MOT Tandem LCF tray-up motor	[N]	8-G
M47	TLCF-END-MOT Tandem LCF end fence motor	[N]	8-F

Fans

Symbol	Name	Figure	Wire harness location
FR1	DF-FAN-MOT RADF cooling fan	[A]-2	4-H
F1	FAN-SLG-MOT SLG board cooling fan	[B]	2-G
F2	FAN-INV-MOT Scanner unit cooling fan-1	[B]	2-G
F3	FAN-REAR-MOT Exposure lamp cooling fan-1	[B]	2-F
F5	EXIT-PAPER-FAN-MOT-R Exit paper cooling fan (front)	[C]	7-G
F6	BRIDGE-FAN-MOT-F Bridge unit cooling fan (front)	[C]	6-G
F7	BRGE-FAN-MOT-R Bridge unit cooling fan (rear)	[C]	7-G
F8	IH-FAN-MOT-1 IH board cooling fan-1	[D]-2	6-D
F9	IH-FAN-MOT-2 IH board cooling fan-2	[D]-2	6-D
F11	ADU-FAN-MOT Reversed paper cooling fan	[J]	7-E
F14	EPU-FAN-MOT EPU cooling fan	[Q]	6-C
F15	EXIT-PAPER-FAN-MOT-F Exit paper cooling fan (rear)	[D]-1	7-H
F17	EPU-FAN-MOT-K Main charger blowing fan-K	[E]-3	8-B
F18	EPU-FAN-MOT-C Main charger blowing fan-C	[E]-3	8-B
F19	EPU-FAN-MOT-M Main charger blowing fan-M	[E]-3	7-B
F20	EPU-FAN-MOT-Y Main charger blowing fan-Y	[E]-3	7-B
F21	TNR-CTRG-FAN-MOT Toner cartridge heat insulation fan	[D]-1	8-C
F22	LSU-FAN-MOT-F Laser optical unit cooling fan (Front)	[H]	7-C
F23	LSU-FAN-MOT-R Laser optical unit cooling fan (Rear)	[H]	7-E
F24	QZN-FAN-MOT Ozone suctioning fan	[Q]	6-C
F25	DEV-FAN-MOT Scattered toner suctioning fan	[Q]	6-C
F26	FAN-FRONT-MOT Exposure lamp cooling fan-2	[B]	2-F
F27	SYS-FAN-MOT SYS board cooling fan	[O]	1-H
F28	HDD-FAN-MOT HDD cooling fan	[O]	1-H
F29	UPPER-FAN-MOT-L Upper exhaust fan (left)	[Q]	8-C
F30	UPPER-FAN-MOT-R Upper exhaust fan (right)	[Q]	8-C
F31	TNR-EX-FAN-MOT Toner cooling exhaust fan	[Q]	7-C
F32	UP-EXIT-FAN-MOT-1 Upper exit section cooling fan-1	[Q]	7-F
F33	UP-EXIT-FAN-MOT-2 Upper exit section cooling fan-2	[Q]	7-F
F34	LOW-EXIT-FAN-MOT-1 Lower exit section cooling fan-1	[Q]	7-F
F35	LOW-EXIT-FAN-MOT-2 Lower exit section cooling fan-2	[Q]	7-F
F36	LOW-EXIT-FAN-MOT-3 Lower exit section cooling fan-3	[Q]	7-F
F37	PS-FAN-MOT-1 Power supply unit cooling fan-1	[P]	4-G
F38	PS-FAN-MOT-2 Power supply unit cooling fan-2	[P]	4-G

Sensors

Symbol	Name	Figure	Wire harness location
SR1	TRAY LENGTH-SNR Original tray sensor	[A]-1	3-E
SR2	TRAY WIDTH-SNR Original tray width sensor	[A]-1	3-F
SR3	EMPTY-SNR Original empty sensor	[A]-1	4-E
SR4	READ OUT-SNR Original reading end sensor	[A]-1	4-G
SR5	RGT-SNR Original registration sensor	[A]-1	4-F
SR6	WIDTH1-SNR Original width detection sensor-1	[A]-1	4-E
SR7	WIDTH2-SNR Original width detection sensor-2	[A]-1	4-F
SR8	WIDTH3-SNR Original width detection sensor-3	[A]-1	4-F
SR9	MIDDLE-SNR Original intermediate transport sensor	[A]-1	4-G
SR10	READ IN-SNR Original reading start sensor	[A]-1	4-G
SR11	EXITR-SNR Original exit/reverse sensor	[A]-1	4-F
SR12	EXIT-SNR Original exit sensor	[A]-1	4-G
SR13	JAM COVER-UPPER-SNR Original jam access cover opening/closing sensor	[A]-1	4-E
SR14	JAM COVER-LOWER-SNR Original reverse unit opening/closing sensor	[A]-1	4-G
SR15	DF OPEN-SNR RADF opening/closing sensor	[A]-1	4-G
S1	APS-2 Automatic original detection sensor (APS-2)	[B]	2-E
S2	APS-C Automatic original detection sensor (APS-C)	[B]	2-E
S3	APS-1 Automatic original detection sensor (APS-1)	[B]	2-E
S4	APS-3 Automatic original detection sensor (APS-3)	[B]	2-E
S5	APS-R Automatic original detection sensor (APS-R)	[B]	2-E
S6	HOME-SNR Carriage home position sensor	[B]	2-F
S7	PLTN-SNR Platen sensor	[B]	2-E
S8	TNR-SNR-K Toner cartridge paddle rotation detection sensor-K	[I]	6-E
S9	TNR-SNR-C Toner cartridge paddle rotation detection sensor-C	[I]	6-D
S10	TNR-SNR-M Toner cartridge paddle rotation detection sensor-M	[I]	6-D
S11	TNR-SNR-Y Toner cartridge paddle rotation detection sensor-Y	[I]	6-D
S12	TEMP/HUMI-SNR Temperature/humidity sensor	[E]-2	7-C
S13	WASTE-TNR-AMOT-SNR Waste toner amount detection sensor	[I]	6-C
S14	WASTE-TNRFLL-SNR Waste toner box full detection sensor	[I]	6-B
S16	WASTE-TNR-BOX-SNR Waste toner detection sensor	[I]	6-C
S17	TRU-WASTE-TNR-AMT-SNR TRU waste toner amount detection sensor	[K]	8-E
S20	IMG-POS-SNR-F Image position aligning sensor (front)	[G]	6-D
S21	IMG-POS-SNR-C Image position aligning sensor (center)	[G]	6-C
S22	IMG-POS-SNR-R Image position aligning sensor (rear)	[G]	6-C
S23	TNR-LVL-SNR Image quality sensor	[G]	6-C
S24	SHT-SNR-HP Shutter sensor (home position)	[H]	5-C
S25	SHT-SNR-EP Shutter sensor (end position)	[H]	5-C
S26	ATTNR-SNR-K Auto-toner sensor-K	[E]-2	8-C
S27	ATTNR-SNR-C Auto-toner sensor-C	[E]-2	8-B
S28	ATTNR-SNR-M Auto-toner sensor-M	[E]-2	7-C
S29	ATTNR-SNR-Y Auto-toner sensor-Y	[E]-2	7-B
S30	CH-CLN-SNR-K Needle electrode cleaner detection sensor-K	[E]-2	8-C
S31	CH-CLN-SNR-C Needle electrode cleaner detection sensor-C	[E]-2	8-A
S32	CH-CLN-SNR-M Needle electrode cleaner detection sensor-M	[E]-2	7-B
S33	CH-CLN-SNR-Y Needle electrode cleaner detection sensor-Y	[E]-2	7-B
S34	Drum surface potential (V0) sensor-K	[E]-2	8-A
S35	Drum surface potential (V0) sensor-C	[E]-2	8-A
S36	Drum surface potential (V0) sensor-M	[E]-2	8-A
S37	Drum surface potential (V0) sensor-Y	[E]-2	8-A
S38	SUB-HOP-TNR-SNR-K Sub-hopper toner sensor-K	[I]	8-B
S39	SUB-HOPTNR-SNR-C Sub-hopper toner sensor-C	[I]	8-A
S40	SUB-HOPTNR-SNR-M Sub-hopper toner sensor-M	[I]	8-A
S41	SUB-HOP-TNR-SNR-Y Sub-hopper toner sensor-Y	[I]	8-B
S42	AUG-LOCK-SNR Auger lock detection sensor	[I]	7-C
S43	YMC-DRM-PHASE-SNR Color drum phase sensor	[E]-1	5-E
S44	K-DRM-PHASE-SNR K drum phase sensor	[E]-1	5-E
S46	TBU-CONT-SNR Transfer belt contact/release detection sensor	[F]	7-E
S47	CLNG-SNR Transfer belt paper clinging detection sensor	[G]	6-C
S48	PRPOS-SNR Fuser unit contact/release detection sensor	[D]-1	6-B
S49	HRLOCK-SNR Fuser belt rotation detection sensor	[D]-1	6-B
S50	TR2-SNR 2nd transfer roller contact/release detection sensor	[G]	6-C
S51	TR2-CLNG-SNR 2nd transfer side paper clinging detection sensor	[G]	8-D
S52	RGST-SNR Registration sensor	[G]	7-G
S55	BRIDGE-ENT-SNR Bridge unit path entrance sensor	[C]	6-G
S56	BRIDGE-EXIT-SNR Bridge unit path exit sensor	[C]	6-G
S57	REV-PATH-SNR Reverse path sensor	[C]	6-G
S58	REV-JAM-SNR Reverse section stationary jam detection sensor	[C]	6-G
S59	REV-PATH-OPEN-SNR Reverse sensor	[C]	7-H
S60	REV-JAM-SNR Reverse section paper transport detection sensor	[C]	7-H
S61	UP-EXIT-SNR Upper paper exit sensor	[C]	7-G
S62	UP-EXIT-SNR Upper exit tray paper full detection sensor	[C]	7-G
S63	LOW-EXIT-SNR Lower paper exit sensor	[C]	7-G
S64	ADU-OPEN-SNR Duplexing unit opening/closing detection sensor	[J]	7-G
S65	FUS-TRPT-SNR Fuser transport sensor	[D]-1	8-D
S66	ADU-ENT-SNR Duplexing unit path entrance sensor	[J]	8-D
S67	ADU-EXIT-SNR Duplexing unit path exit sensor	[J]	8-D
S69	MEDIA-SNR Media sensor	[L]	8-E
S70	SFB-SIZE-SNR Bypass paper size detection sensor	[L]	8-E
S71	SFB-SNR Bypass paper sensor	[L]	8-C
S72	SFB-FEED-SNR Bypass feed sensor	[L]	8-C
S73	CST1-SNR 1st drawer detection sensor	[M]-2	8-D
S74	CST1-BTM-SNR 1st drawer bottom sensor	[M]-1	8-F
S75	CST1-EMP-SNR 1st drawer empty sensor	[M]-2	8-D
S76	CST1-TRY-SNR 1st drawer tray-up sensor	[M]-2	8-D
S77	CST1-TRNS-SNR 1st drawer transport sensor	[M]-2	8-D
S78	CST1-FEED-SNR 1st drawer feed sensor	[M]-2	8-D
S79	CST1-SIZE-SNR-1 1st drawer paper size detection sensor-1	[M]-1	8-F
S80	CST1-SIZE-SNR-2 1st drawer paper size detection sensor-2	[M]-1	8-F
S81	CST2-SNR 2nd drawer detection sensor	[M]-2	8-E
S82	CST2-BTM-SNR 2nd drawer bottom sensor	[M]-1	8-F
S83	CST2-EMP-SNR 2nd drawer empty sensor	[M]-2	8-E
S84	CST2-TRY-SNR 2nd drawer tray-up sensor	[M]-2	8-E
S85	CST2-TRNS-SNR 2nd drawer transport sensor	[M]-2	8-E
S86	CST2-FEED-SNR 2nd drawer feed sensor	[M]-2	8-E
S87	CST2-SIZE-SNR-1 2nd drawer paper size detection sensor-1	[M]-1	8-F
S88	CST2-SIZE-SNR-2 2nd drawer paper size detection sensor-2	[M]-1	8-G
S89	CST3/LCF-SNR 3rd drawer/tandem LCF detection sensor	[M]-2	8-F
S90	CST3-BTM-SNR 3rd drawer bottom sensor	[M]-1	8-G
S91	CST3/LCF-EMP-SNR 3rd drawer/tandem LCF empty sensor	[M]-2	8-F
S92	CST3/LCF-TRY-SNR 3rd drawer/tandem LCF tray-up sensor	[M]-2	8-E
S93	CST3/LCF-TRNS-SNR 3rd drawer/tandem LCF transport sensor	[M]-2	8-E
S94	CST3/LCF-FEED-SNR 3rd drawer/tandem LCF feed sensor	[M]-2	8-F
S95	CST3-SIZE-SNR-1 3rd drawer paper size detection sensor-1	[M]-1	8-G
S96	CST3-SIZE-SNR-2 3rd drawer paper size detection sensor-2	[M]-1	8-G
S97	CST4-SNR 4th drawer detection sensor	[M]-2	7-F
S98	CST4-BTM-SNR 4th drawer bottom sensor	[M]-1	8-H
S99	CST4-EMP-SNR 4th drawer empty sensor	[M]-2	7-F
S100	CST4-TRY-SNR 4th drawer tray-up sensor	[M]-2	7-E
S101	CST4-TRNS-SNR 4th drawer transport sensor	[M]-2	7-E
S102	CST4-FEED-SNR 4th drawer feed sensor	[M]-2	7-F
S103	CST4-SIZE-SNR-1 4th drawer paper size detection sensor-1	[M]-1	8-H
S104	CST4-SIZE-SNR-2 4th drawer paper size detection sensor-2	[M]-1	8-H
S106	TLCF-STTBY Standby side tray paper amount detection sensor	[N]	8-G
S107	TLCF-BTM-SNR Tandem LCF bottom sensor	[N]	8-H
S108	TLCF-STBY-TRY-SNR Standby side tray detection sensor	[N]	8-F
S109	TLCF-STTBY Standby side empty sensor	[N]	8-G
S110	TLCF-STPR-SNR-R Stopper opening/closing detection sensor (front)	[N]	8-H
S111	TLCF-STPR-SNR-F Stopper opening/closing detection sensor (rear)	[N]	8-H
S112	TLCF-HOME-SNR End fence home position sensor	[N]	8-G
S113	TLCF-STP-SNR End fence stop position sensor	[N]	8-G
S114	FEED-COV-SNR Feed cover sensor	[K]	7-C

Switches

Symbol	Name	Figure	Wire harness location
SWR1	JAM COVER-SW Jam access cover opening/closing switch	[A]-1	3-E
SWR2	DF OPEN-SW RADF opening/closing switch	[A]-1	3-E
SW1	Main power switch	[K]	AC Wire Harness
SW2	Interlock switch	[J]	AC Wire Harness
SW3	TNR-MOT-SW Toner motor interlock switch	[K]	6-E
SW4	Duplexing unit interlock switch	[J]	AC Wire Harness
SW5	REV-PATH-COV-SW Reverse path cover switch	[C]	7-H
SW7	Duplexing unit cover opening/closing detection switch	[J]	AC Wire Harness
SW8	Bridge unit connecting detection switch	[K]	AC Wire Harness
SW9	FRONT-COV-SW Front cover opening/closing detection switch	[K]	6-E

Electromagnetic spring clutches

Symbol	Name	Figure	Wire harness location
CLT1	PRS-ROL-CLT Pressure roller contact/release clutch	[D]-1	7-E
CLT2	TR2-CONT-CLT 2nd transfer roller contact/release clutch	[G]	7-F
CLT3	TR2-DRV-CLT 2nd transfer roller drive clutch	[G]	7-F
CLT4	CST3-TR-CLT 3rd drawer transport clutch	[M]-1	8-B
CLT5	CST3-FEED-CLT 3rd drawer feed clutch	[M]-1	8-B
CLT6	CST4-TR-CLT 4th drawer transport clutch	[M]-1	8-B
CLT7	CST4-FEED-CLT 4th drawer feed clutch	[M]-1	8-B

Solenoids

Symbol	Name	Figure	Wire harness location
SOLR1	PICKUP-SOL Original pickup solenoid	[A]-2	2-G
SOLR2	SB-SOL Original reverse solenoid	[A]-2	2-G
SOLR3	GATE-SOL Original exit solenoid	[A]-2	2-G
SOL1	TRNS-SOL-1 Transport path switching solenoid-1	[C]	6-F
SOL2	TRNS-SOL-2 Transport path switching solenoid-2	[C]	6-F
SOL3	SNR-SHUT-SOL Image quality shutter solenoid	[G]	6-C
SOL4	V0-SHUT-SOL-K V0 sensor shutter solenoid-K	[E]-3	8-C
SOL5	V0-SHUT-SOL-C V0 sensor shutter solenoid-C	[E]-3	8-B
SOL6	V0-SHUT-SOL-M V0 sensor shutter solenoid-M	[E]-3	7-C
SOL7	V0-SHUT-SOL-Y V0 sensor shutter solenoid-Y	[E]-3	7-B
SOL8	SFB-SOL Bypass pickup solenoid	[L]	8-E
SOL9	TLCF-SOL Tandem LCF solenoid	[N]	8-F
SOL10	TLCF-STPR-SOL-F Stopper opening/closing solenoid (front)	[N]	8-G
SOL11	TLCF-STPR-SOL-R Stopper opening/closing solenoid (rear)	[N]	8-H

PC boards

Symbol	Name	Figure	Wire harness location
DLG	PWA-D-DLG RADF control PC board	[A]-2	3-G
CCD	PWA-F-CCD CCD driving PC board (CCD board)	[B]	2-F
SLG	PWA-F-SLG Scanning section control PC board (SLG board)	[B]	2-E
INV	INV Lamp inverter board	[B]	2-F
DSP	PWA-F-DSP Display PC board (DSP board)	[S]	1-B
KEY1	PWA-F-KEY1 Key PC board-1 (KEY-1 board)	[S]	1-B
KEY2	PWA-F-KEY2 Key PC board-2 (KEY-2 board)	[S]	1-B
P-INV	P-INV Panel inverter board (P-INV board)	[S]	1-A
IMG	PWA-F-IMG Image processing PC board (IMG board)	[O]	4-D
SYS	PWA-F-SYS System control PC board (SYS board)	[O]	2-A
LGC	PWA-F-LGC Logic PC board (LGC board)	[O]	5-A
SNS	PWA-F-SNS H-sync detection PC board (SNS board)	[H]	5-E
LDR-Y	PWA-F-LDR-Y Laser driving PC board-Y (LDR-Y board)	[H]	5-D
LDR-M	PWA-F-LDR-M Laser driving PC board-M (LDR-M board)	[H]	5-B
LDR-C	PWA-F-LDR-C Laser driving PC board-C (LDR-C board)	[H]	5-D
LDR-K	PWA-F-LDR-K Laser driving PC board-K (LDR-K board)	[H]	5-B
EPU	PWA-F-EPU EPU PC board (EPU board)	[E]-3	7-A
V0S	PWA-F-V0 Drum surface potential sensors control PC board (V0S board)	[E]-3	8-A
PFC	PWA-F-PFC Paper feeding control PC board (PFC board)	[O]	7-C
ADU	PWA-F-ADU ADU control PC board (ADU board)	[J]	8-D
DRV	PWA-F-DRV DRV PC board	[C]	7-G
IH	PWA-F-IH Heater control PC board (IH board)	[D]-2	6-D
FIL	PWA-F-FIL Filter PC board (FIL board)	[O]	4-F
SRAM-S	PWA-F-SRAM-S SRAM board <for SYS board>	[O]	2-A
SRAM-L	PWA-F-SRAM-L SRAM board <for LGC board>	[O]	5-A

Lamps, coils, and heaters

Symbol	Name	Figure	Wire harness location
EXP	LP-EXPO Exposure lamp	[B]	2-F
ERS-K	LP-ERS-K Discharge LED-K	[E]-3	6-F
ERS-C	LP-ERS-C Discharge LED-C	[E]-3	6-E
ERS-M	LP-ERS-M Discharge LED-M	[E]-3	6-E
ERS-Y	LP-ERS-Y Discharge LED-Y	[E]-3	6-E
LED	PWA-F-LED Fuser unit jam releasing LED	[J]	8-H
LAMP	Pressure roller heater lamp	[D]-2	AC Wire Harness
IH-COIL	IH coil	[D]-2	AC Wire Harness
DH1	Scanner damp heater (Left)	[R]	AC Wire Harness
DH2	Scanner damp heater (Right)	[R]	AC Wire Harness
DH3	Drum damp heater	[R]	AC Wire Harness

Thermistors, thermopiles, and thermostats

Symbol	Name	Figure	Wire harness location
THM1	THMS-DRM-K Drum thermistor-K	[E]-2	8-C
THM2	THMS-DRM-Y Drum thermistor-Y	[E]-2	7-A
THM3	THMS-PR-C Pressure roller center thermistor	[D]-1	6-A
THM4	THMS-PR-S Pressure roller side thermistor	[D]-1	6-A
THM5	THMS-PR-E Pressure roller edge thermistor	[D]-1	6-A
THM6	THMS-FBLT-E Fuser belt edge thermistor	[D]-1	6-B
THMP1	THMP-FBLT-C Fuser belt center thermopile	[D]-1	6-B
THMP2	THMP-FBLT-S Fuser belt side thermopile	[D]-1	6-B
THMO1	Scanner damp heater thermostat	[R]	AC Wire Harness
THMO2	Pressure roller center thermostat	[D]-1	AC Wire Harness
THMO3	Pressure roller side thermostat	[D]-1	AC Wire Harness
THMO4	Fuser belt center thermostat	[D]-1	AC Wire Harness
THMO5	Fuser belt side thermostat	[D]-1	AC Wire Harness

Transformer

Symbol	Name	Figure	Wire harness location
HVT1	PS-HVT1 High-voltage transformer-1	[P]	6-A
HVT2	PS-HVT1 High-voltage transformer-2	[P]	6-B

Others

Symbol	Name	Figure	Wire harness location
TCP	TCP Touch panel	[S]	1-A
HDD	HDD Hard disk	[O]	1-G
PS	PS-ACC Switching regulator	[P]	5-G
BRK	BRK Breaker	[P]	AC Wire Harness

REVISION RECORD

Ver.10

Ver.10 <2011.11.25>	
Page	**Contents**
2	Copyright description has been changed.
2-36	8026-0 to 2, 8027-0 to 2, 8028-0 to 2, 8029-0 to 2, 8030-0 to 2, 8031-0 to 2, 8032-0 to 2, 8033-0 to 2, 8034-0 to 2, 8035-0 to 2, 8036-0 to 2, 8037-0 to 2, 8038-0 to 2, 8039-0 to 2, 8040-0 to 2, 8041-0 to 2, 8150-0 to 2, 8151-0 to 2, 8152-0 to 2, 8153-0 to 2, 8154-0 to 2, 8155-0 to 2, 8156-0 to 2, 8157-0 to 2 have been changed.
2-60	Items of 7025 have been changed.
2-69	8026-0 to 2, 8027-0 to 2, 8028-0 to 2, 8029-0 to 2 have been added.
2-70	8030-0 to 2, 8031-0 to 2, 8032-0 to 2, 8033-0 to 2, 8034-0 to 2, 8035-0 to 2, 8036-0 to 2, 8037-0 to 2, 8038-0 to 2 have been added.
2-71	8039-0 to 2, 8040-0 to 2, 8041-0 to 2 have been added.
2-77	8150-0 to 2 has been added.
2-78	8151-0 to 2, 8152-0 to 2, 8153-0 to 2, 8154-0 to 2, 8155-0 to 2, 8156-0 to 2, 8157-0 to 2 have been added.
2-117	8624, 8625, 8626 have been added.
2-123	3631 has been added.
2-128	8628 and 8629 have been added.
4-5	08-620, 621, 622, 623, 624, 629, 1472 have been added.
4-5	08-3631, 8624, 8625, 8626, 8628, 8629 have been added.
4-5	08-3506, 3507, 8608, 8609, 8610, 9015, 9103, 9193, 9700 have been added.
4-21	“and scrambler board” has been deleted.
6-13	[C4E0] and [C4E1] have been changed.
6-13	[C570] and [C580] have been changed.
6-64	[EAE0] and [EB30] have been changed.
6-85	“Fuser unit releasing operation abnormality” has been changed to “Fuser pressure release abnormality”. “Fuser unit contacting operation abnormality” has been changed to “Fuser pressure contact abnormality”.
6-86	[C570] and [C580] have been changed.
6-94	[CB00] and [CB01] have been changed.
6-105	“Converter PC board” has been changed to “LGC board”.
6-123	“M31” has been changed to “M33”.
6-125	“2nd transfer roller position detection sensor” has been changed to “2nd transfer roller contact/release detection sensor”.
8-29	Step 10 has been changed.
8-31	Step 10 has been changed.
8-32	“Converter PC board” has been changed to “LGC board”.
10-1	“10.1 DC Wire Harness” has been added.
10-2	“10.2 Electric Parts Layout” has been added.

Ver.09

Ver.09 <2011.04.25>	
Page	**Contents**
1-9	Message size limitation has been changed.
2-36	7380-0 to 2 has been added.
2-114	8612 has been added.
2-119	8608, 8609, 8610 have been added.
2-121	8616, 8617, 8618, 8619, 8620 have been added.
2-122	8613 has been added.
2-124	3626, 8611, 8615 have been added.
2-125	Procedure 3 has been changed.
2-133	08-1426 has been changed.
3-25	[B] Reproduction ratio adjustment of primary scanning direction has been changed.
4-1 to 4-2	Added in 4.1.2 Precautions.
4-3	Added in 2.Setting data file.
4-5	08-204, 205, 206, 218, 219, 221, 250, 254, 259, 260, 272, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 302, 331, 342, 503, 550, 603, 610, 611, 619, 634, 638, 640, 642, 645, 649, 650, 651, 652, 653, 658, 659, 671, 702, 703, 707, 721, 723, 726, 727, 728, 729, 730, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 969, 970, 973, 978, 979, 1002, 1017, 1022, 1125, 1432, 1740, 1744, 1772, 1780 have been added.
4-6	08-3508, 3722, 3723, 3724, 3736, 3737, 3738, 3739, 3740, 3754, 3755, 3757, 3758, 3759, 3760, 3783, 3785, 3789, 3796, 3797, 3812, 3833, 3851, 3852, 3853, 3854, 3855, 3856, 3857, 3858, 3859, 3860, 3861, 3862, 3863, 8504, 8511, 8543, 8580, 8581, 8582, 8583, 8584, 8585, 8586, 8587, 8588, 8589, 8590-0 to 4, 8591, 8592, 8593, 8604, 8605, 8606, 8615, 8616, 8617, 8618, 8619, 8620, 8803, 8804, 8805, 8817, 8818, 9117, 9120, 9121, 9122, 9123, 9124, 9125, 9126, 9294, 9384, 9629, 9791, 9799, 9829, 9889, 9891, 9957, 9958, 9980, 9984-0 to 4 have been added.
4-9	Added in <When “3: Setting Back Up” is selected>.
4-10	Fig. 4-5 has been changed.
4-12	Added in <When “4: Setting Restore” is selected>.
4-13	Fig. 4-10 has been changed.
4-14	ERROR 12 has been added.
6-45	[E030] has been changed.
6-47	[E550] has been changed.
6-55	[EA10] has been changed.
6-73	[EF25] has been changed.

Ver.08

Ver.08 <2010.12.13>	
Page	**Contents**
3	Description has been added.
3-4	Description has been changed.
3-5	Notes have been added.
5-39	Fig. 5-41 has been changed. L14 has been added.
5-41	L14 has been added. Description has been changed.
8-4	Notes have been added.
-	7.1.18 has been deleted.
7-21	Notes have been added.
7-36	7.2.9 has been added.
4-1	Description has been changed.
4-4	4.1.4 has been added.
4-5	Fax function mode (13) has been added.
4-6	Notes have been changed.
4-9	Notes have been changed.
2-2	<Operation procedure> has been changed. Description has been added.
2-8	Description has been changed.
2-9	Description has been changed.
2-10	Table 5 has been deleted.
2-13	Description has been changed.
2-16	Description has been changed.
2-20	Description has been changed.
2-23	Description has been changed.
2-33	Description has been added.
2-34	Description has been added.
2-38	05-2675-0 to 3 has been added.
2-79	8361, 8362, 8363, 8365 have been changed.
2-113	08-983, 9985, 9986 have been added.
2-114	08-8598, 8591, 9987 have been added.
2-115	08-2492, 2494, 2496, 2498, 2499, 2500, 2501 have been added.
2-117	08-404, 405, 416-0 to 1, 433-0 to 15, 434-0 to 9, 435-0 to 1, 436-0 to 1, 801-0 to 7, 885, 896-0 to 15, 531-0 to 9, 532, 2133-0 to 2, 2134-0 to 2, 2179-0 to 2, 2209-0 to 7, 2210-0 to 7, 2246-0 to 1, 5275-0 to 3, 5300-0 to 15, 5301-0 to 15, 5390, 5391-0 to 9, 5401-0 to 9, 5402-0 to 14, 5413-0 to 3, 5417, 2074, 5239, 5248, 415-0 to 3, 426-0 to 3, 427-0 to 3, 428-0 to 3, 429-0 to 1, 2016-0 to 7, 2033-0 to 1, 2248, 5279-0 to 3, 5297-0 to 3, 5324-0 to 1 have been added.
2-118	08-3789, 9791, 8584, 8585, 8586, 8587, 8588, 8590, 8605, 8606 have been added.
2-119	08-8589, 8823 have been added.
2-120	08-8594 has been added.
2-121	08-1530-5 to 7, 1531-5 to 7, 1532-5 to 7, 1533-2 to 7, 1534-2 to 7 have been added.
2-122	08-3625, 8595 have been added.
2-123	08-8597, 8601 have been added.
2-124	08-8600, 8596, 9984, 8599, 8602, 8603, 8604 have been added.
6-17	F140 has been added.
6-27	Description has been changed.
6-126	F140 has been added.

Ver.07

Ver.07 <2010.1.22>	
Page	**Contents**
3	Description has been added.
1-6	OHP film has been added.
1-8	Page Description Language and Supported OS have been added.
2-29	Fig. 2-8 has been changed.
2-34	05-1799-0 to 2, 1800-0 to 2, 1801-0 to 2, 1802-0 to 2 have been deleted.
2-58	05-1799-0 to 2, 1800-0 to 2, 1801-0 to 2, 1802-0 to 2 have been deleted.
2-111	08-1934 has been deleted.
2-112	08-8546, 9982, 3635, 8540 have been added.
2-113	08-2703, 8548, 2380, 2381 have been added. 08-2548-0 to 3 have been changed.
2-114	08-2677, 2678-0 to 3, 2679-0 to 3, 2702 have been added. 08-2380 and 2381 have been deleted.
2-115	08-461-0 to 9 and 583 have been added.
2-116	08-9933 and 3871 have been added.
2-118	08-8549 has been added.
2-120	08-3508 has been added.
2-121	08-1132 has been deleted.
2-122	08-8514, 3623, 3624 have been added.
2-129	08-343 has been changed.
2-132	08-9059 has been changed.
3-35	Codes for User Custom have been changed.
4-1	File name has been changed.
4-2	Item and file name have been added.
4-4	Notes have been added.
4-5	Backup items have been added.
4-7	Notes have been added.
4-8	Restored items have been changed.
5-39	Fig. 18-41 has been changed.
5-40	L15 has been added.
5-41	Note has been added. Fig. 18-42 has been added. L15 has been added.
6-27	Error history has been changed.
6-28	6.1.5 has been added.
6-33	Step has been changed.
6-51	Step has been changed.
6-82	Step has been added.
6-84	Step has been changed and added.
6-143	25.3.25 has been added.
7-19	7.1.18 has been added.
8-3	Note has been deleted.
8-4	Note has been added.

Ver.06

Ver.06 <2009.8.06>	
Page	**Contents**
2-23	"Version list" has been added.
2-32	"Version list" has been added.
2-33	(05) 4732 -0 to 1 have been deleted.
2-36	(05) 7489 has been added. (05) 4719 and 4720-0 to 1 have been changed.
2-38	(05) 468-0 to 2 have been deleted. (05) 4721 has been changed.
2-84	(05) 468-0 to 2 have been deleted.
2-107	(05) 4732-0 to 1 have been deleted.
2-113	(08) 4621 and 4622 have been added.
2-115	(08) 5433 has been deleted.
2-116	(08) 9981 has been added.
3-1	The code number 1643 has been corrected to 1644.
3-5	The adjustment procedure of (05) 396 has been corrected.
3-6	The adjustment procedure of (05) 4719 has been corrected.
3-33	A pattern number "10" has been added.
3-97	A note for long-time storage of the fuser unit has been added.
3-101	A note for long-time storage of the fuser unit has been added.
3-104	A note for long-time storage of the fuser unit has been added.
3-107	A note for long-time storage of the fuser unit has been added.
5-3	An explanation of PM display has been added.
5-40	The note for handling the fuser belt has been deleted. Notes for the pressure roller and fuser belt have been added.
5-41	A description of the separation plate has been added.
5-47	The quantity of the PM kit has been corrected.
6-33	Step 7 has been added to E010.
6-83	Step 13 has been added to C4E0 and C4E1. Step 9 has been added to C4E2.
6-118	The name has been corrected from "Developer roller" to "Developer sleeve". (Uniform terminology)
7-1	A note for replacing the board has been added.
7-5	The disassembly procedure of the LGC board cover has been deleted. The procedure has been changed due to discontinuation of the LGC/PFC board covers.
7-6	The procedure has been changed due to discontinuation of the LGC/PFC board covers.
7-7	The disassembly procedure of the PFC board cover has been deleted. The procedure has been changed due to discontinuation of the LGC/PFC board covers.
7-8	The procedure has been changed due to discontinuation of the LGC/PFC board covers.
7-12	The procedure has been changed due to discontinuation of the LGC/PFC board covers.
7-27	The procedure of "[D] Reinstall options" has been changed.
7-28	Procedures have been added to "7.2.5 Procedures and settings when replacing the SLG board".
7-32	The procedure of "[J] Reinstall options" has been changed.
8-47	A procedure for removing the FAX cover plate has been added.

Ver.05

Ver.05 <2009.5.22>	
Page	**Contents**
3-1	Fig. 3-1 has been changed.
5-25	A note and an illustration have been added when the side seal is to be replaced.
5-33	A note and an illustration have been added when the side seal is to be replaced.
5-36	A note and an illustration have been added when the 2nd transfer roller is to be replaced. A note and an illustration have been added when the side seal is to be replaced.
5-37	The layout of the illustration has been changed in Fig 5-39.
6-45	Step 2 has been added to E091.
6-49	The procedure in E712 has been changed.
6-54	Step 4 has been added to EA21.
6-55	YES has been exchanged for NO in EA22.
6-57	Step 3 has been corrected in EA31. Step 4 has been added to EA32.
6-61	A model name has been added to E9F0.
6-78	Step 7 has been added to C461.
6-80	The procedure in C471-474 has been changed.
6-90	The connector number in CA20 has been corrected. YES has been exchanged for NO.
6-95	A procedure has been added to CB40.
7-23	Fig. 7-56 has been changed.
7-27	"[I] Adjustment image quality" has been added.
7-28	The procedure in "7.2.4 Precaution and Procedures when replacing the SYS board" has been changed.
7-29	The procedure in "7.2.5 Procedures and settings when replacing the SLG board" has been changed.
8-9	The contents of Note have been changed.

Ver.04

Ver.04 <2009.2.19>	
Page	**Contents**
1-10	The "Harness kit for coin controller" has been added to "Options".
4-3	Step 3 has been corrected. The contents of Note have been changed.
4-6	Step 3 has been corrected. The contents of Note have been changed.
5-24	"Also clean the doctor blade when the drum is being replaced." has been added.
5-25	The attachment criteria have been added.
5-27	"Clean the doctor blade so as to prevent developer material from adhering to it when the drum is being replaced." has been added. Fig.5-24 has been replaced with one including an illustration of the equipment.
5-33	The attachment criteria have been added to Fig.5-30. Names of the parts have been added to Fig.5-31.
5-36	The attachment criteria in Fig.5-34 have been corrected.
6-45	[E090] has been revised. (Check items for the page memory have been added.)
6-76	Contents of [C452] have been revised.
6-93	The connector and sensor numbers in [CB31] have been corrected.
8-5	A note regarding updating with the USB media has been added.
8-9	A note has been added.
8-18	A note has been added.

Ver.03

Ver.03 <2008.12.17>	
Page	**Contents**
2-22	(04) 70 has been added.
2-35	(05) 2800-0 to 11, 2801-0 to 11, 2802-0 to 11 and 2803-0 to 11 have been added.
2-36	(05) 2924-9, 2925-9, 2926-9, 2927-9, 2934-9, 2935-9, 2936-9, 2937-9, 2938-9, 2939-9, 2940-9 and 2941-9 have been added.
2-41	(05) 151 has been added.
2-46	(05) 2800-0 to 2 have been added.
2-47	(05) 2802-3 to 11 and 2803-0 to 5 have been added.
2-48	(05) 2803-6 to 11 have been added.
2-112	(08) 8103 and 2600 have been added.
2-114	(08) 5323-0 to 3 and 5325 have been added.
2-121	(08) 3870 has been added.
2-125	(08) 2600 has been added.
3-17	"[B] Primary scanning data laser writing start position" has been changed.
3-92	"Front" and "Rear" in Fig3-84 have been switched.
4-4	Step 4 in the "[A] Backup procedure" has been corrected.
4-7	Step 4 in the "[B] Restoring procedure" has been corrected.
5-28	"Removal of foreign matter in the developer unit" has been added.
5-29	"Removal of foreign matter on the developer sleeve" has been added.
6-1	The classification and contents of E010 and E020 have been corrected.
6-2	The link for E180 has been added.
6-3	The links for E230, E240, E260 and E290 have been added.
6-4	The name of E400 has been corrected. The links for E370, E380 and E3F0 have been added.
6-5	The links for E511, E540, E570 and E580 have been added. The classifications of E590 and E5A0 have been corrected.
6-6	The names of E727 and E729 have been corrected.
6-7	The classifications and contents of E970 and E980 have been corrected.
6-8	The links for EA22-EA29 and EAB1 have been added.
6-10	The links for EF10, EF11 and EF12 have been added.
6-12	The links for C451, C452, C461, C462, C463 and C464 have been added.
6-13	The links for C471-C474, C480, C481, C490, C4B1, C730 and C8C0 have been added.
6-14	The links for CB13 and CB14 have been added.
6-15	The links for CB82 - CB84, CB91 - CB95, CC73 and CC74 have been added.
6-28	The contents of E590, E5A0 and E970 have been corrected.
6-29	The contents of E980 have been corrected.
6-32	E180 has been added.
6-34	The contents of E010 and E020 have been corrected.
6-35	E230 and E240 have been added.
6-36	E260 and E290 have been added.
6-37	E370 has been added.
6-38	E380 and E3F0 have been added.
6-39	E511 and E540 have been added.
6-40	E570 and E580 have been added.
6-47	The name and troubleshooting for E400 have been corrected. A step has been added to E430.
6-50	The name and troubleshooting for E727 have been changed. The name of E729 has been corrected.

Ver.03 <2008.12.17>	
Page	**Contents**
6-55	EA22-EA24 have been added.
6-56	EA25-EA28 have been added.
6-57	EA29 has been added.
6-59	EAB1 has been added.
6-64	EF10 and EF1 have been added. EF12 has been added.
6-76	C452 has been added.
6-77	Troubleshooting for C451 and C463 has been added.
6-78	Troubleshooting for C461, C462 and C464 has been added.
6-79	Troubleshooting for C471-C474 has been added.
6-80	Troubleshooting for C480, C481 and C490 has been added.
6-81	Troubleshooting for C4B1 has been added.
6-115	Troubleshooting for CE41 has been changed
6-116	Steps have been added to CE60 and CE90.
6-119	A step has been added to C360.
6-120	Steps have been added to C380, C381, C382, C390, C391, C392, C3A0, C3A1, C3A2, C3B0, C3B1, C3B2 and C3C0.
6-121	Steps have been added to CD60, CD61, CD62, CD63 and CD64.
6-122	A step has been added to CD80.
6-123	Steps have been added to CD81.
7-23	A note has been added to "7.2.3 Precautions and procedures when replacing the HDD".
7-29	A note has been added to "7.2.6 Precautions and procedures when replacing SRAM board (for SYS board)"
7-35	"7.2.8 Firmware confirmation after the PC board/HDD replacement" has been added.
7-36	The title of 7.3 has been changed to "Precautions for Installation of GP-1070 and Disposal of HDD/board".
8-49	A note has been added to "8.4 Confirmation of the updated data".

Ver.02

Ver.02 <2008.10.31>	
Page	**Contents**
1-2	"1.1.1 General" SAD Rated current and Power consumption have been corrected.
1-9	"1.2 Accessories" - Power cable NAC/NAD and SAD have been deleted.
2-34	(05) 8066, (05) 8242-0 to 1 and 8243-0 to 3 have been added.
2-36	(05) 2788 has been added.
2-38	(05) 2417 has been added.
2-47	The procedure of (05) 2416 has been corrected from 15 to 5. (05) 2417 has been added.
2-48	(05) 2788 has been added.
2-70	(05) 8066 has been added.
2-74	(05) 8242-0 to 1 and 8243-0 to 3 have been added.
2-113	(08) 9051 and 3846 have been added.
2-116	(08) 411-0 to 5 have been added.
2-117	(08) 8535, 8536, 9957, 9958, 9959 and 9980 have been added. (08) 3506 and 3507 have been deleted.
2-118	(08) 1021 and 9749 have been added.
2-119	(08) 9746 and 9798 have been added.
2-120	(08) 9965 has been added.
2-121	(08) 3630, 3797, 8513-0, 9966 and 8534 have been added.
2-122	(08) 8537 and 9799 have been added.
2-133	The content of (08) 9379 has been changed. (08) 9965 has been added.
5-1	The contents of PM display have been added.
5-2	The contents of PM display have been added.
5-3	The contents of PM display have been added.
5-25	The contents of the attachment criteria of the blade side seals have been changed.
5-32	The attachment criteria of the transfer belt cleaner side seals have been added.
5-35	The attachment criteria of the 2nd transfer roller side seal have been added.
6-12	The descriptions and linked pages for C4E0, C4E1 and C4E2 have been added. "Heat roller rotation detection abnormality" (name of C4E2) has been corrected to "Fuser belt rotation detection sensor abnormality".
6-13	IPC board and PFC board have been corrected to CNV board.
6-52	IPC board has been corrected to CNV board.
6-70	The troubleshooting of C4E0, C4E1 and C4E2 has been added.
6-71	IPC board and PFC board have been corrected to CNV board.
6-121	Imaging Acceleration Board (GE-1170) has been added.
6-122	Imaging Acceleration Board (GE-1170) has been added.
8-1	"8. FIRMWARE UPDATING" The item of "Imaging Acceleration Board (GE-1170)" has been added.
8-2	"8. FIRMWARE UPDATING" The item of "Imaging Acceleration Board (GE-1170)" has been added.
8-3	"8. FIRMWARE UPDATING" The item of "Imaging Acceleration Board (GE-1170)" has been added.
8-4	"8.1 Firmware Updating with USB Media" The item of "Imaging Acceleration Board (GE-1170)" has been added.
8-5	"8.1 Firmware Updating with USB Media" The item of "Imaging Acceleration Board (GE-1170)" has been added.
8-7	"8.1 Firmware Updating with USB Media" The item of "Imaging Acceleration Board (GE-1170)" has been added.

Ver.02 <2008.10.31>	
Page	**Contents**
8-17 to 8-22	"8.1.2 Imaging Acceleration Board ROM (GE-1170)" The update procedure has been added.
8-51	"8.4 Confirmation of the updated data" The item of "Imaging Acceleration Board (GE-1170)" has been added.

Ver.01

Ver.01 <2008.09.30>	
Page	**Contents**
2-2	207 has been deleted. 300 has been added.
2-3	207 has been deleted.
2-24	207 has been deleted. 300 has been added.
2-33	The "Classification" name for 497 has been corrected.
2-35	8240 has been added.
2-112	7000, 7001, 7300, 7301, 7400 and 7500 have been added.
2-120	3869 and 9956 have been added.
3-8	"2. Printer related adjustment" has been corrected to "2. Printer-related image dimensional adjustment". "3. Scanner related adjustment" has been corrected to "2. Scanner-related image dimensional adjustment".
3-15	"[B] Adjustment by direct code entry" The code list has been corrected.
3-16	"3.1.7 Printer related adjustment" has been corrected to "3.1.7 Printer-related image dimensional adjustment".
3-23	"3.1.8 Scanner related adjustment" has been corrected to "3.1.8 Scanner-related image dimensional adjustment".
3-25	"10 mm" has been corrected to "5 mm". "10±0.5 mm" has been corrected to "5±0.5 mm".
3-30	"10±0.5 mm" has been corrected to "5±0.5 mm".
3-95	The procedure for "3.9.3 Sheet sideways deviation caused by paper transporting adjustment" has been changed.
3-103	The name of the jig has been changed from "JIG-FU-THRMT-BP" to "JIG-FU-THRMST-BP".
3-107	The name of the jig has been changed from "JIG-FU-THRMIS-BP" to "ASYB-JIG-THRMIS-BP".
3-110	The name of the jig has been changed from "JIG-FU-THRMT-BP" to "JIG-FU-THRMST-BP".
5-10	The flow in Fig.5-8 has been corrected.
5-13	The content of "A5: Filter cover" has been added to Fig.5-12 and the list. The corresponding page-items have been added to the column of <P-I> in the list.
5-15	The corresponding page-items have been added to the column of <P-I> in the list.
5-16	The corresponding page-items have been added to the column of <P-I> in the list.
5-17	The corresponding page-items have been added to the column of <P-I> in the list. The amount for applying white grease (Molykote HP-300) has been changed from "adequate amount" to "1 rice-sized grain".
5-18	The corresponding page-items have been added to the column of <P-I> in the list.
5-20	The corresponding page-items have been added to the column of <P-I> in the list.
5-24	The corresponding page-items have been added to the column of <P-I> in the list.
5-26	The corresponding page-items have been added to the column of <P-I> in the list.
5-27	The corresponding page-items have been added to the column of <P-I> in the list.
5-29	The corresponding page-items have been added to the column of <P-I> in the list.
5-30	The corresponding page-items have been added to the column of <P-I> in the list.
5-32	The amount for applying white grease (Molykote EM30-L) has been changed from "adequate amount" to "1 rice-sized grain".
5-33	The corresponding page-items have been added to the column of <P-I> in the list.
5-34	The corresponding page-item has been added to the column of <P-I> in the list.
5-36	The corresponding page-items have been added to the column of <P-I> in the list.

Ver.01 <2008.09.30>	
Page	**Contents**
5-37	The corresponding page-items have been added to the column of <P-I> in the list.
5-38	The corresponding page-items have been added to the column of <P-I> in the list.
5-39	The corresponding page-items have been added to the column of <P-I> in the list.
5-42	"Pressure roller: HR-FC55-L" has been added to the component of "FR-KIT-FC55". The content for "ROL-KIT-4004" has been added.
5-43	The corresponding page-items have been added to the column of <P-I> in the list.
5-45	The corresponding page-items have been added to the column of <P-I> in the list. Step 1 for "5.10 Operation Items in Overhauling" has been corrected.
6-28	The procedure has been added to E010.
6-37	The procedure has been added to E011.
6-107	The name has been corrected from "Sub-hopper toner supply motors" to "Sub-hopper toner motor".
7-1	The illustration in Fig.7-1 has been corrected.
7-5	The illustration in Fig.7-12 has been corrected.
7-7	The illustration in Fig.7-19 has been corrected.
7-18	The illustration in Fig.7-52 has been corrected.

TOSHIBA

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