

**Pro 8300S/8310S/8320S/8310/8320**

**Copier Models:**

**D0BX/D0BY/D0BZ**

**Printer Models:**

**M0CL/M0CM**

**Field Service Manual**

**Ver 1.0**

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**Initial Release: March, 2019**

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# Important Safety Notices

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## Warnings, Cautions, Notes

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In this manual, the following important symbols and notations are used.

### **WARNING**

- A Warning indicates a potentially hazardous situation. Failure to obey a Warning could result in death or serious injury.

### **CAUTION**

- A Caution indicates a potentially hazardous situation. Failure to obey a Caution could result in minor or moderate injury or damage to the machine or other property.

### **Important**

- Obey these guidelines to avoid problems such as misfeeds, damage to originals, loss of valuable data and to prevent damage to the machine.

### **Note**

- This information provides tips and advice about how to best service the machine.

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## General Safety Instructions

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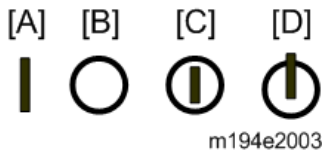
For your safety, please read this manual carefully before you use this product. Keep this manual handy for future reference.

### Safety Information

Always obey the following safety precautions when using this product.

### Safety During Operation

In this manual, the following important symbols and notations are used.



[A]: ON

[B]: OFF

[C]: Push ON/Push OFF

[D]: Standby

### Switches and Symbols

Where symbols are used on or near switches on machines for Europe and other areas, the meaning of each symbol conforms with IEC60417.

### For Norway

This product is also designed for an IT power distribution system with phase-to-phase voltage 230V.

## Safety Labels of the Machine

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For machines with the following label:



### CAUTION

DOUBLE POLE/NEUTRAL FUSING

Disconnect main power before changing fuse.

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## Safety

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### Prevention of Physical Injury

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1. Before disassembling or assembling parts of the machine and peripherals, make sure that the machine and peripheral power cords are unplugged.
2. The plug should be near the machine and easily accessible.
3. Note that some components of the machine and the paper tray unit are supplied with electrical voltage even if the main power switch is turned off.
4. Always unplug the power cord from the power source before you move the product. Before you move the machine, arrange the power cord so it will not fall under the machine.
5. Disconnect all peripheral units (finisher, LCT, etc.) from the mainframe before you move the machine.
6. If any adjustment or operation check has to be made with exterior covers off or open while the main switch is turned on, keep hands away from electrified or mechanically driven components.
7. The machine drives some of its components when it completes the warm-up period. Be careful to keep hands away from the mechanical and electrical components as the machine starts operation.
8. The inside and the metal parts of the fusing unit become extremely hot while the machine is operating. Be careful to avoid touching those components with your bare hands.
9. To prevent a fire or explosion, keep the machine away from flammable liquids, gases, and aerosols.
10. Do not use flammable sprays or solvent in the vicinity of the machine. Also, avoid placing these items in the vicinity of the machine. Doing so could result in fire or electric shock.
11. To avoid fire or explosion, never use an organic cleaner near any part that generates heat.
12. Clean the floor completely after accidental spillage of silicone oil or other materials to prevent slippery surfaces that could cause accidents leading to hand or leg injuries.
13. Never remove any safety device unless it requires replacement. Always replace safety devices immediately.
14. Never do any procedure that defeats the function of any safety device.
15. Modification or removal of a safety device (fuse, switch, etc.) could lead to a fire and personal injury. Always test the operation of the machine to ensure that it is operating normally and safely after removal and replacement of any safety device.
16. For replacements use only the correct fuses or circuit breakers rated for use with the machine. Using replacement devices not designed for use with the machine could lead to a fire and personal injuries.
17. For machines installed with the ADF/ARDF:  
When a thick book or three-dimensional original is placed on the exposure glass and the ARDF cover is lowered, the back side of the ARDF rises up to accommodate the original. Therefore, when closing the ARDF, please be sure to keep your hands away from the hinges at the back of the ARDF.

18. When using a vacuum cleaner around the machine, keep others away from the cleaner, especially small children.
19. For machines installed with the anti-tip components:

The anti-tip components are necessary to prevent the products, which are heavy in weight, from toppling as a result of people running into or leaning onto the products, which can lead to serious accidents such as persons becoming trapped under the product. Therefore, removal of such components must always be with the consent of the customer. Do not remove them at your own judgment.

### Health Safety Conditions

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1. For machines with ozone filters:
  - Never operate the machine without the ozone filters installed.
  - Always replace the ozone filters with the specified types at the proper intervals.
2. The machine, which use high voltage power source, can generate ozone gas. High ozone density is harmful to human health. Therefore, locate the machine in a large well ventilated room that has an air turnover rate of more than 50m<sup>3</sup>/hr/person.
3. Toner and developer are non-toxic, but if you get either of them in your eyes by accident, it may cause temporary eye discomfort. Try to remove with eye drops or flush with water as first aid. If unsuccessful, get medical attention.

### Observance of Electrical Safety Standards

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1. The machine and its peripherals must be installed and maintained by a customer service representative who has completed the training course on those models with exceptions on some machines where the installation can be handled by the user.

### Safety and Ecological Notes for Disposal

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- Do not incinerate toner bottles or used toner. Toner dust may ignite suddenly when exposed to an open flame.
- Dispose of used toner, developer, organic photoconductors, and AIO unit in accordance with local regulations. (These are non-toxic supplies.)
- Dispose of replaced parts in accordance with local regulations.
- For machines using replaceable lithium batteries:

When keeping used lithium batteries in order to dispose of them later, do not put more than 100 batteries per sealed box. Storing larger numbers or not sealing them apart may lead to chemical reactions and heat build-up.

#### **CAUTION**

The danger of explosion exists if a battery of this type is incorrectly replaced. Replace only with the same or an equivalent type recommended by the manufacturer. Discard used batteries in accordance with the manufacturer's instructions.

## Handling Toner

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- Work carefully when removing paper jams or replacing toner bottles or cartridges to avoid spilling toner on clothing or the hands.
- If toner is inhaled, immediately gargle with large amounts of cold water and move to a well-ventilated location. If there are signs of irritation or other problems, seek medical attention.
- If toner gets on the skin, wash immediately with soap and cold running water.
- If toner gets into the eyes, flush the eyes with cold running water or eye wash. If there are signs of irritation or other problems, seek medical attention.
- If toner is swallowed, drink a large amount of cold water to dilute the ingested toner. If there are signs of any problem, seek medical attention.
- If toner spills on clothing, wash the affected area immediately with soap and cold water. Never use hot water! Hot water can cause toner to set and permanently stain fabric.
- Always store toner and developer supplies such as toner and developer packages, cartridges, bottles (including used toner and empty bottles and cartridges), and AIO unit out of the reach of children.
- Always store fresh toner supplies or empty bottles or cartridges in a cool, dry location that is not exposed to direct sunlight.
- Do not use a vacuum cleaner to remove spilled toner (including used toner). Vacuumed toner may cause a fire or explosion due to sparks or electrical contact inside the cleaner. However, it is possible to use a cleaner designed to be dust explosion-proof. If toner is spilled over the floor, sweep up spilled toner slowly and clean up any remaining toner with a wet cloth.

## Lithium Batteries for Taiwan

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### 警告

本機器內的鋰電池如果更換不正確型號會有爆炸的危險。  
只能使用相同或製造商推薦同等類型的電池進行更換。  
請依製造商說明書處理用過之廢棄電池。

## Laser Safety

The Center for Devices and Radiological Health (CDRH) prohibits the repair of laser-based optical units in the field. The optical housing unit can only be repaired in a factory or at a location with the requisite equipment. The laser subsystem is replaceable in the field by a qualified Customer Engineer. The laser chassis is not repairable in the field. Customer engineers are therefore directed to return all chassis and laser subsystems to the factory or service depot when replacement of the optical subsystem is required.

### ⚠️ WARNING

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

**WARNING FOR LASER UNIT**

**WARNING:**  
Turn off the main switch before attempting any of the procedures in the Laser Unit section. Laser beams can seriously damage your eyes.

**WARNING  
WARNING  
AVERTISSEMENT**

WARNING-CLASS 3B INVISIBLE LASER RADIATION WHEN OPEN  
AVOID EXPOSURE TO THE BEAM  
WARNUNG-UNSICHTBARE LASERSTRAHLUNG KLASSE 3B, WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN  
AVERTISSEMENT-RAYONS LASER INVISIBLES DE CLASSE 3B À L'OUVERTURE ÉVITER L'EXPOSITION DIRECTE

>PS<

\_safe006

**WARNING  
WARNING  
AVERTISSEMENT**

WARNING-CLASS 3B LASER RADIATION WHEN OPEN  
AVOID EXPOSURE TO THE BEAM  
WARNUNG-LASERSTRAHLUNG KLASSE 3B, WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN  
AVERTISSEMENT-RAYONS LASER DE CLASSE 3B À L'OUVERTURE ÉVITER L'EXPOSITION DIRECTE

>PS<

\_safe007

WARNING-CLASS 3B INVISIBLE LASER RADIATION WHEN OPEN AVOID EXPOSURE TO THE BEAM  
WARNUNG-UNSICHTBARE LASERSTRAHLUNG KLASSE 3B, WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN  
AVERTISSEMENT-RAYONS LASER INVISIBLES DE CLASSE 3B À L'OUVERTURE ÉVITER L'EXPOSITION DIRECTE

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**AVISO** RADIACIÓN DE LÁSER INVISIBLE DE CLASE 3B AL ABRIR EVITE LA EXPOSICIÓN AL LÁSER  
경고 열 때 3B등급 비가시 레이저 방사원 레이저 광선에 노출되지 않게 주의  
警告 3B类不可见激光打开时有辐射 避免曝露到光线下  
警告 ここを開くとクラス3B不可視レーザー放射が出ます。ビームの被ばくを避けてください。

**WARNING** CLASS 3B INVISIBLE LASER RADIATION WHEN OPEN AVOID EXPOSURE TO THE BEAM  
WARNUNG UNSICHTBARE LASERSTRAHLUNG KLASSE 3B, WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN  
AVERTISSEMENT RAYONS LASER INVISIBLES DE CLASSE 3B À L'OUVERTURE ÉVITER L'EXPOSITION DIRECTE  
ATTENZIONE RADIAZIONE LASER INVISIBLE CLASSE 3B, CON COPERCHIO APERTO EVITARE L'ESPOSIZIONE AL LASER

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## Safety Instructions for the Color Controller

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### Fuse

The color controller uses a double pole fuse. If this fuse blows, be sure to replace it with an identical fuse.

### Batteries

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#### **CAUTION**

Always replace a battery with the same type of battery prescribed for use with the color controller unit. Replacing a battery with any type other than the one prescribed for use could cause an explosion.

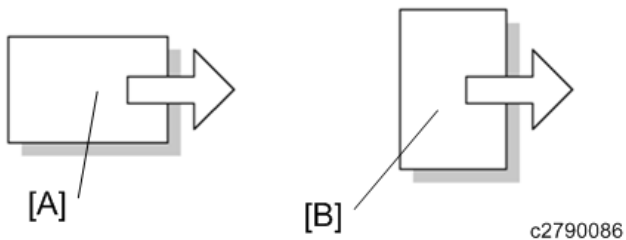
- Never discard used batteries by mixing them with other batteries or other refuse.
- Always remove used batteries from the work site and dispose of them in accordance with local laws and regulations regarding the disposal of such items.



# Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

Symbol	What it means
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
	Flat Flexible Cable
	Timing Belt
SEF	Short Edge Feed
LEF	Long Edge Feed
K	Black
C	Cyan
M	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

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Microsoft® Windows® 7 Enterprise

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Microsoft® Windows® 8.1 Pro

Microsoft® Windows® 8.1 Enterprise

- The product names of Windows 10 are as follows:

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Microsoft® Windows® 10 Enterprise

Microsoft® Windows® 10 Education

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- The product names of Windows Server 2016 are as follows:

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Microsoft® Windows Server® 2016 Standard

Microsoft® Windows Server® 2016 MultiPoint® Premium Server

Microsoft® Windows Server® 2016 Essentials

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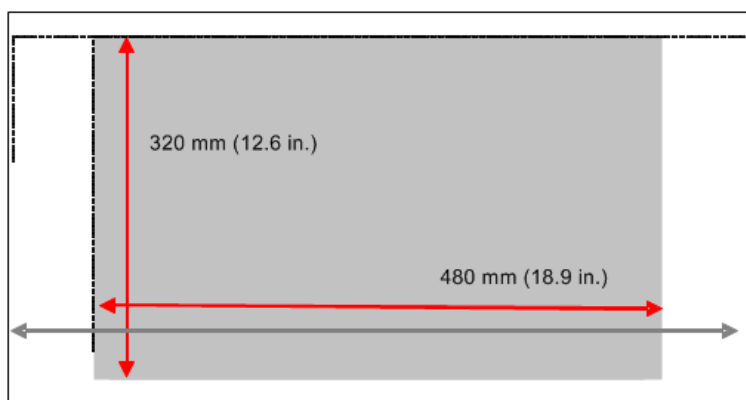
# 1. Product Information

## Product Overview

### Important Features

These important features are shared with the previous machine without modification.

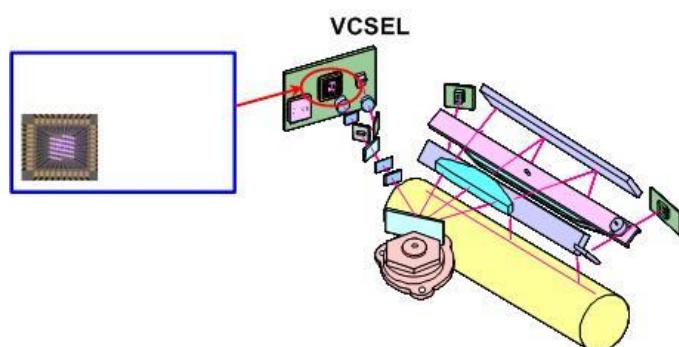
### Print Area, Warm-up Time



d1790701a

Max. print area	320 x 480 mm (12.6 x 18.9 in.)
Warm-up time	Less than 360 sec. (23°C, 73.4°F)

### Laser Unit



d1790703

This machine uses VCSEL technology. VCSEL (Vertical Cavity Surface Emitting Laser) is a two-dimensional array of 40 beams, with a resolution of 2400 x 4800 dpi. During two-sided printing, some paper may shrink or swell due to heat after passing through the fusing unit on the first pass. This small change in the paper size can cause inaccurate registration on the 2nd side. VCSEL compensates for this in two ways:

- **Magnification correction (sub scan direction).** Image magnification adjustment for the back side can be set by the operator. This feature is a new parameter in the Paper Library.

## 1.Product Information

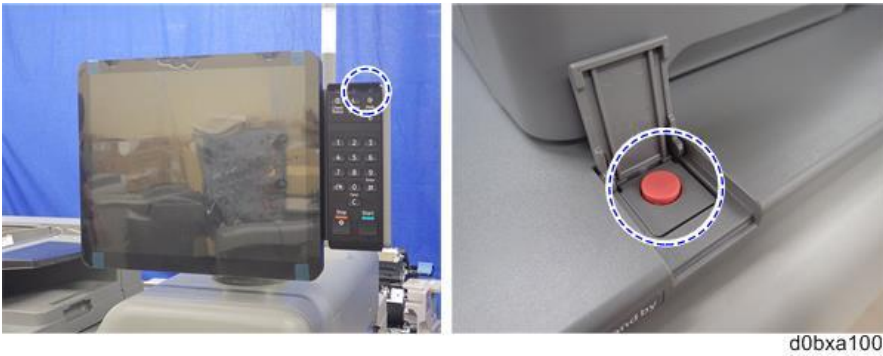
- **Pixel clock frequency (main scan direction).** The image can be adjusted front-to-back in increments of 1/48 of a dot, to avoid mismatch between front/back registration.

VCSEL also keeps the strength of the laser beams at a constant level by regulating the strength of the beams with optical waveform correction. This correction is especially important for the reproduction of thin diagonal lines.

The machine calculates the optimum optic settings for each color and uses an ND filter to adjust the settings.

### Power Switch

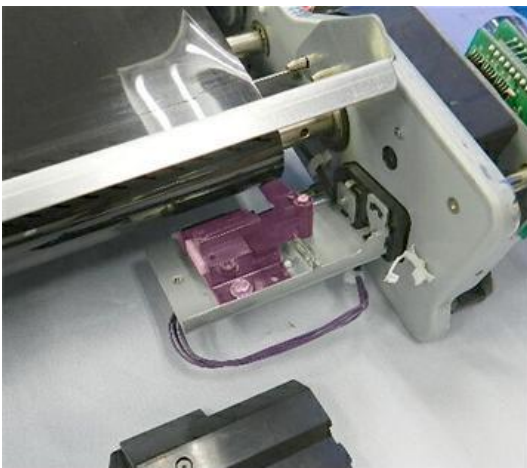
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This machine has a power indicator (LED) on the operation panel. The main power switch is located at the left, front corner of the machine.

### ITB Centering Control

---

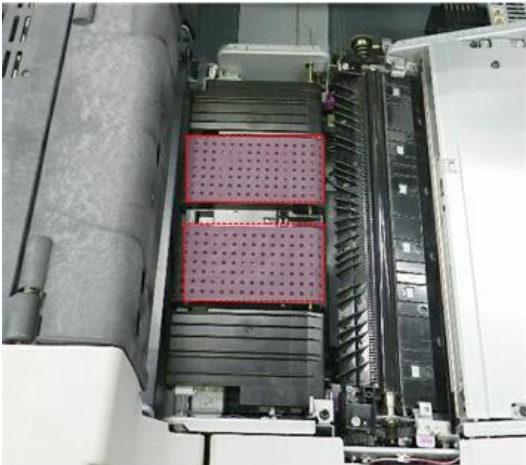


A centering control sensor at the upper right corner of the ITB unit monitors the rear edge of the belt to check its position. If the belt goes off center, a motor, roller, cable mechanism corrects the position of the belt.



## PTB Unit

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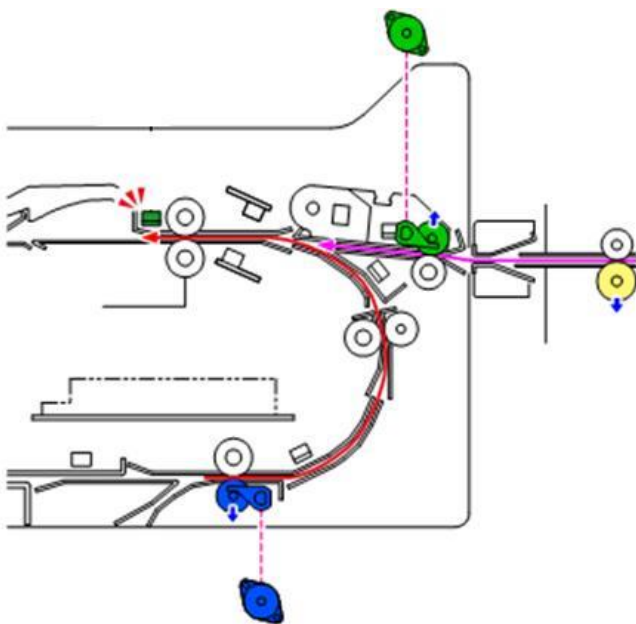


d1790705

There are two transport belts and two fans that hold the paper and move it into the fusing unit.

## Main and LCT Relay Rollers

---



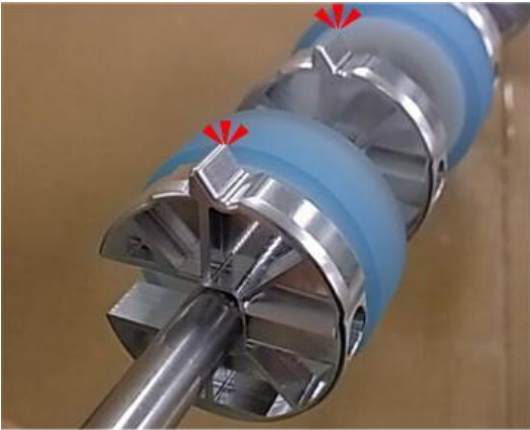
d1790707

The opening and closing of the main relay rollers and LCT relay rollers is controlled by two separate motors, not solenoids. These rollers are opened to free the paper for skew correction and image registration.

## 1.Product Information

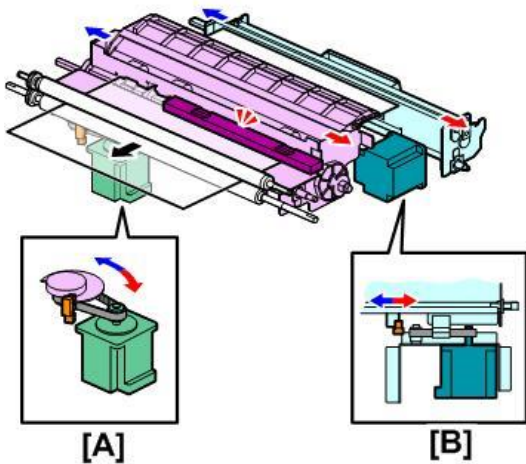
### Skew and Paper Registration

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d1790708

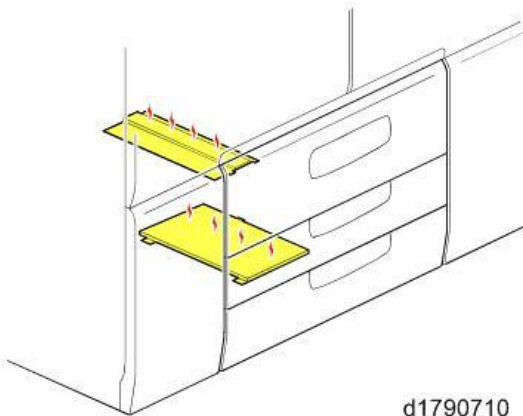
The gates are mounted on a roller that stops the paper for skew correction. The roller is raised and lowered by the registration timing motor.



d1790709

There are two shift units used to position the paper for image registration. The LE (leading edge) shift unit [A], located near the leading edge of the paper at the registration gate roller, grips the paper and adjusts the position in the main scan direction (front-to-rear). The TE (trailing edge) shift unit [B] (at the right toward the trailing edge) performs the same function. However, the TE shift unit operates only for paper larger than A4 SEF.

## Paper Tray Heaters

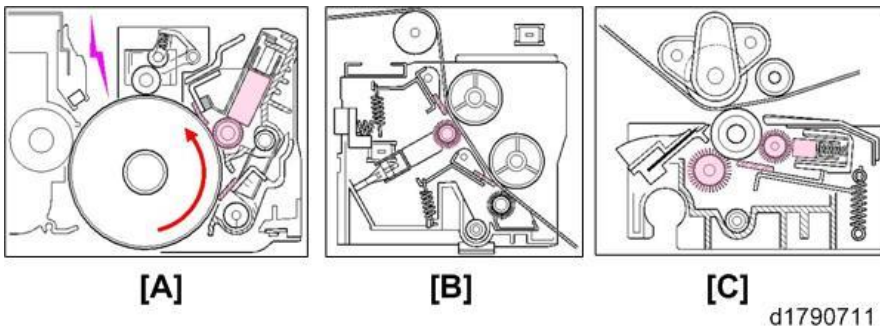


d1790710

There are two paper tray heaters.

- One is below Tray 1 and the other is below Tray 3.
- The heaters are connected to the AC control board at the back of the machine.
- Installation and connection of the heaters for this machine require removal of the rear cover.
- The heaters can be connected to remain on always, or to switch on only when the main machine has been switched off. For more details, please refer to the main machine installation section.

## Common Cleaning Mechanisms



d1790711

This machine employs the same cleaning mechanisms for [A] Drum cleaning unit, [B] ITB cleaning unit, and [C] PTR cleaning unit. Although the configuration of each unit is different, they all use a dry lubricant (Zinc Stearate) supplied from a lubrication bar and applied with a lubricant (brush) roller. The PTR unit uses an additional cleaning brush roller.

## Drum Charge



d1790713

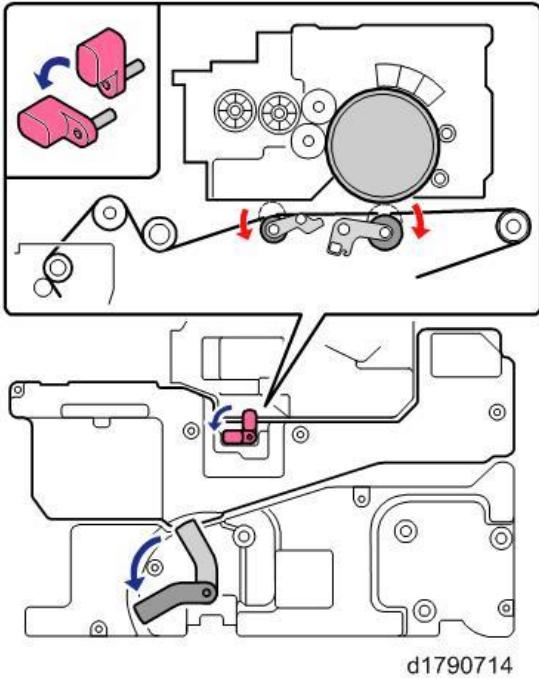
This machine does not use a charge roller. It uses a CGB (Charge, Grid, Bias) charge unit, identical to

## 1.Product Information

the charge units that employ the Scorotron method to charge the surface of the drum in other monochrome machines.

### ITB Separation

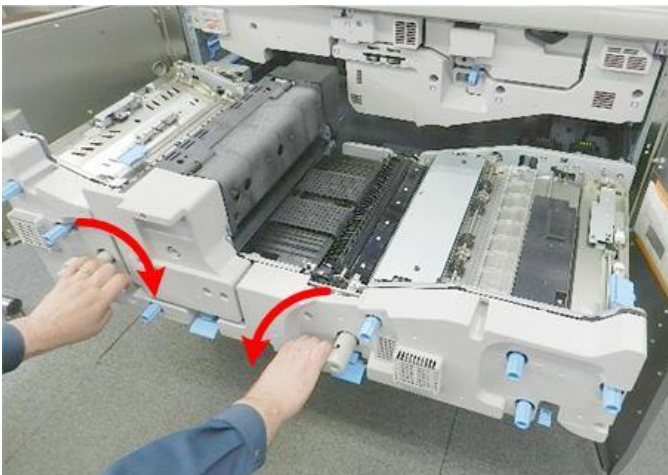
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Rotating a lever up and down raises the ITB against the drum and lowers it away from the drum. There is no motor or separation mechanism to separate the belt and drum when the machine is idle.

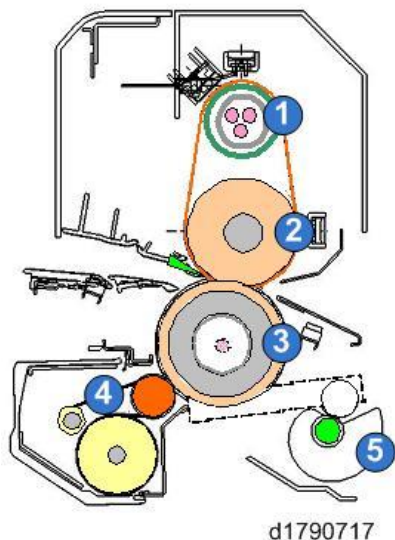
### Drawer

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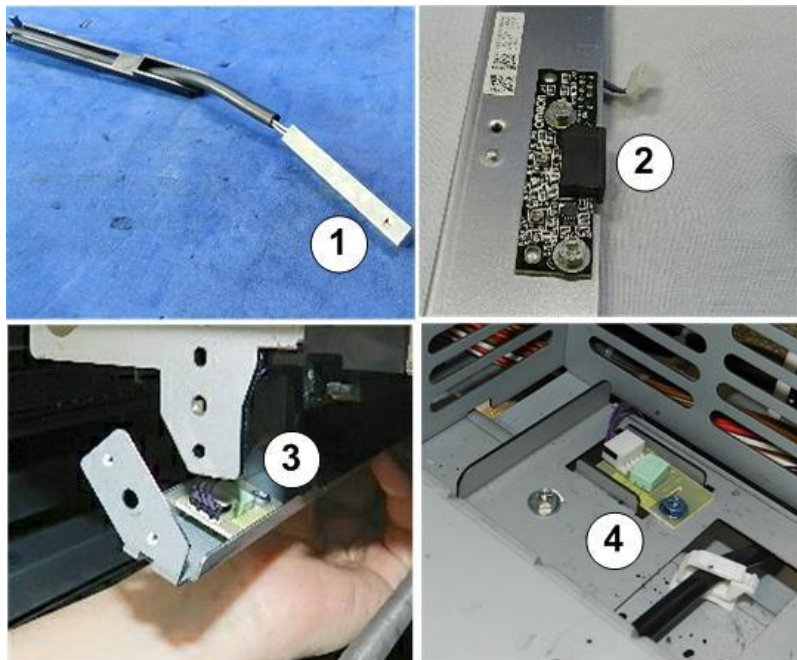
This machine has a single drawer opened from the front. It contains the paper path units for registration, paper separation, paper transport to fusing unit, fusing unit, cooling, and exit/invert unit.

Fusing Unit



A heating roller (1) heats the fusing belt which transfers heat to the hot roller (2), which applies heat to the paper and toner in the nip of the hot roller and pressure roller (3). Web fabric (4) is used to both clean and lubricate the surface of the fusing belt. Two cams (5) below the shaft of the pressure roller raise and lower the roller to vary the pressure at the nip. The cams are down when the machine is idle to relieve pressure at the nip (this prevents deformation of the rollers).

Process Control



d1790718

①	Potential Sensor
②	ID Sensor
③	Temperature/Humidity Sensor – PCU
④	Temperature/Humidity Sensor – Waste Toner Bottle

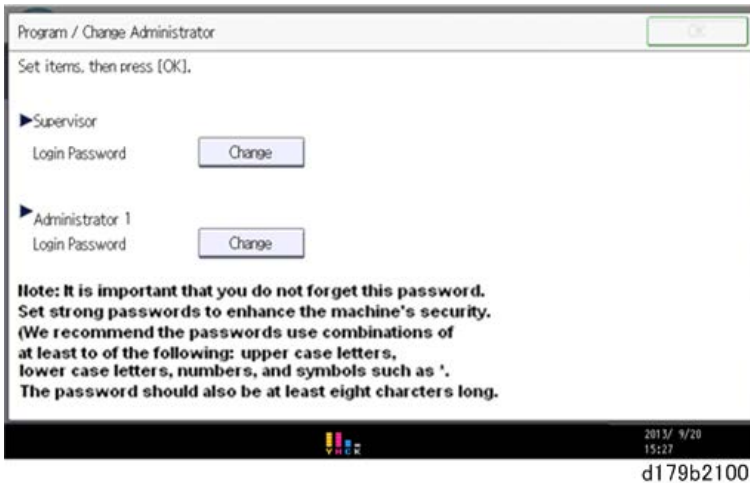
## 1.Product Information

This machine has only one potential sensor. There are no Music sensors for color registration correction. The ID sensor is the only sensor above the ITB.

### Password Setting (Copier Model Only)

---

When the machine is turned on, a Program/Change Administrator screen appears if passwords have not been set.



- The machine is waiting for input of the Supervisor and Administrator login passwords.
- It is the responsibility of the site supervisor and administration to set these passwords. The administrator/supervisor also has the option of setting the machine for no password protection.
- The machine cannot be used until the passwords have been set, or the machine has been set for no password protection.
- The service technician bypass this screen temporarily with an SP code for full access to machine features (making sample copies, etc.) to install or service the machine. The SP code to bypass the security screen is **SP5755-002**.

### Tip Prevention Braces (Printer Model Only)

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With no ADF on top of the machine, the printer model is slightly unstable, and may tip forward if the paper trays are full when they are pulled out of the machine. To prevent tipping, two braces are provided for the printer model.



m263b1028

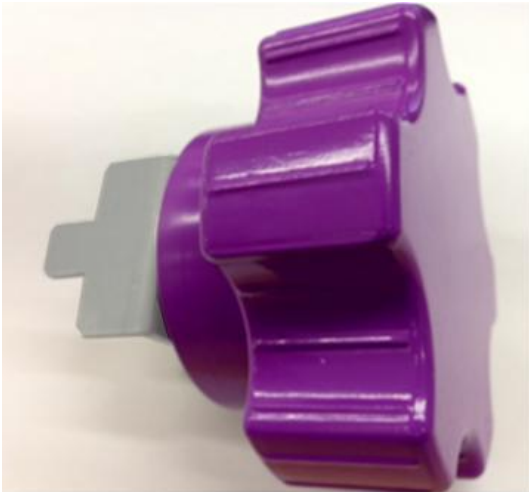
At installation, the blocks are inserted and fastened with two screws each under the left and right front corners of the machine.

### Drum Knob Fastening Tool

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This service part is used to tighten the drum knob completely. If the knob is not tightened completely, this can cause the developer/toner mixture to collect on the magnetic roller and scratch the drum.

([Drum Knob Tool](#))



d179b4029

### LCIT Units

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d1790719

The LCIT RT5130 (left) and LCIT RT5110 are both the same height as the main machine. This makes LCT installation and installation of the Multi Feed unit on top of either LCT much easier.

## 1.Product Information

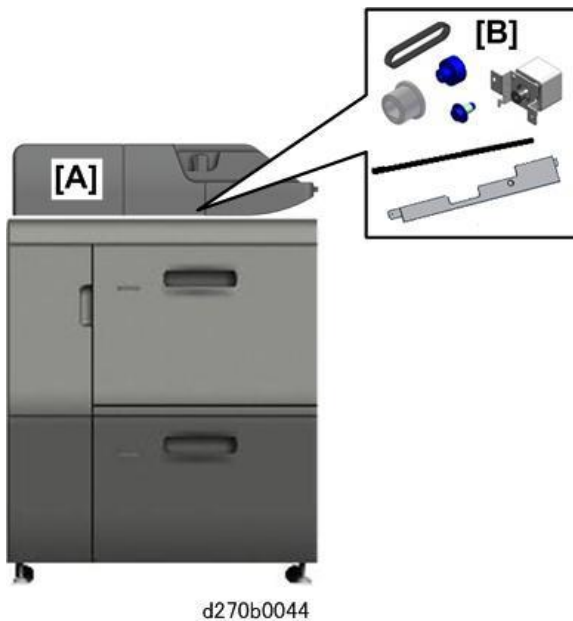
### Vacuum Feed LCIT RT5120

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The Vacuum Feed LCIT [A] is the third large capacity tray that can be used with either the copier or printer version of this machine.

- This LCIT contains fans that provide air separation for each sheet during paper feeding.
- With the installation of the Bridge Unit BU5010 [B], another Vacuum Feed LCIT [C], LCIT RT5110 (A3) or LCIT RT5130 (A4) can be installed in the line.



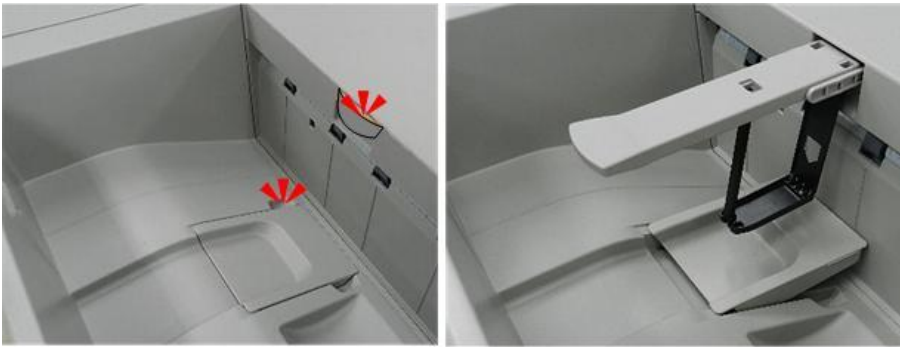
#### ★ Important

- The Multi Bypass Tray BY5020 [A] can be installed directly on either the LCIT RT5110 (A3) or LCIT RT5130 (A4). However, some adjustments and alterations are required with Multi Bypass Attachment Kit for Vacuum Feed LCIT Type S9 [B] before the Multi Bypass Tray can be installed on the Vacuum Feed LCIT RT5120.



### Multi-Folding Unit FD5020

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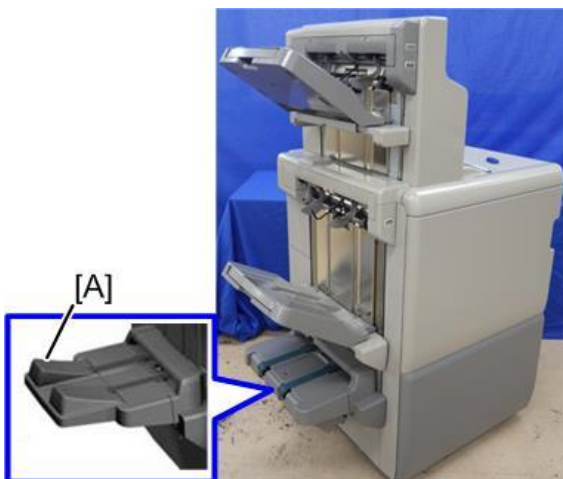


d1790720

The auxiliary tray and flexible page depressor are built into the unit. The auxiliary tray keeps Z-folded paper flat in the tray so that the trailing edges do not trigger an early tray full alert in the top tray. The flexible page depressor prevents folded paper from opening out and triggering an early tray full alert in the top tray.

### Booklet Finisher Tray

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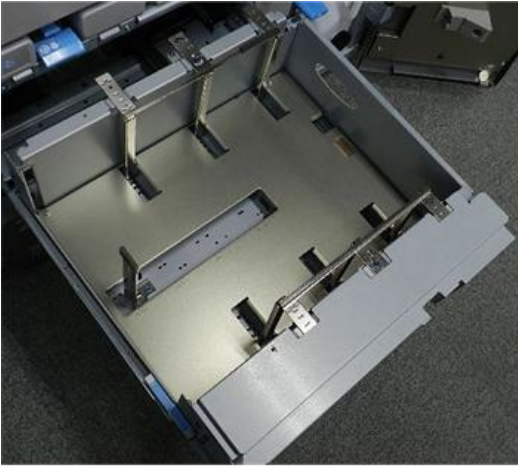
d0bxa9101

The booklet tray [A] of the Booklet Finisher SR5120 can be easily attached and detached by the operator as required. No installation is needed.

## 1.Product Information

### A3/11"x17" Tray Unit TK5020

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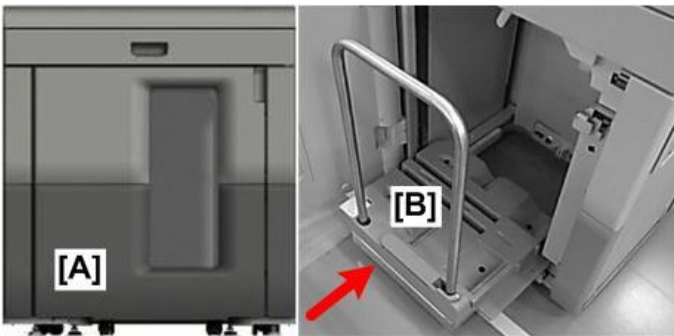


m263b0017

The A3/11"x17" Tray Kit can be installed to replace the left and right tandem trays in Tray 1 for the dedicated feed of either A3 or 11"x17" large size paper. The kit is set for either A3 or 11"x17" size paper at installation.

### High Capacity Stacker SK5040

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m263b0018

High Capacity Stacker SK5030 [A] stacks up to 5,000 sheets of large-size paper, or 2,500 sheets of small-size paper on a roll-away cart [B] (Roll-Away Cart Type 5010). Up to two of these units can be installed in the same line. The Roll-Away Cart is provided with the Stacker and requires assembly.

### RPIP Interface Box Type S3 (M462)

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m263b0019

This is a small device that allows the main machines to be connected to peripheral devices manufactured by third party vendors. The parameters for the operation of the third party device are written to the box with a parameter setting tool.

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### New Features/ Differences With Previous Machine

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For details, refer to the training materials for this machine.

## Machine Codes and Peripheral Configuration

### Main Machine

### Copier Models

#### Copier Version Area Codes

Code	Area	Power
-17	North America/Central, South America	208-240V, 20A, 50/60 Hz
-21	China	220-240V, 16A, 50/60 Hz
-27	Asia/Pacific, Europe/Russia/Middle, Near East/Africa/Taiwan/Korea	220-240V, 16A, 50/60 Hz

#### Copier Version Names

Name	Production Name
Pro 8300S	D0BX (96 ppm)
Pro 8310S	D0BY (111 ppm)
Pro 8320S	D0BZ (136 ppm)

### Printer Models

#### Printer Version Area Codes

Code	Area	Power
-17	North America/Central, South America	208-240V, 20A, 50/60 Hz
-27	Asia/Pacific, Europe/Russia/Middle, Near East/Africa/China	220-240V, 16A, 50/60 Hz

#### Printer Version Names

Name	Production Name
Pro 8310	M0CL (111 ppm)
Pro 8320	M0CM (136 ppm)

### Options

#### Peripheral Devices

- A3/11"x17" Tray Unit TK5020 (B331) (New)
- ADF Double-feed Detection Kit Type S7 (D3DS) \*1
- Attention Light AL3000 (M500) \*1
- Booklet Finisher SR5100 (D3GC) (New) \*1
- Booklet Finisher SR5120 (D3G8) (New)

- Bridge Unit BU5010 (D778)
- Bridge Unit BU5020 (D3GN) (New)
- Buffer Pass Unit Type S11 (D3FC) (New)
- Cover Interposer Tray CI5040 (D3GA)
- Cover Interposer Tray Double-Feed Detection Kit Type S11 (D3GA)
- Cover Interposer Tray for Perfect Binder Type S1 (D736)
- Decurl Unit DU5070 (D3DR) (NEW)
- Finisher SR5090 (D3GD) (New) \*1
- Finisher SR5110 (D3G9) (New)
- High Capacity Stacker SK5040 (D3DK)
- LCIT RT5110 (D3ET)
- LCIT RT5130 (D3GB)
- Media Identification Unit Type S3 (D3AK)
- Multi Bypass Attachment Kit for Vacuum Feed LCIT Type S9 (D3EW)
- Multi Bypass Banner Sheet Tray Type S9 (D3EV)
- Multi Bypass Tray BY5020 (D3EV)
- Multi-Folding Unit FD5020 (D740)
- Output Jogger Unit Type M25 (D3CJ) \*1
- Perfect Binder GB5010 (D736)
- Punch Unit PU3090 NA, EU, SC (D3FP) \*1
- Punch Unit PU5030 NA, EU, SC (D3GJ) (New)
- Ring Binder RB5030 (D3GH) (New)
- Roll-Away Cart Type 5010 (D456)
- RPIP Interface Box Type S3 (M462)
- Shift Sort Tray SH5000 (D3GE) (New)
- SR5000 series Output tray for Banner Sheet Type S6 (D3CC)
- Transit Pass Unit for Perfect Binder Type S1 (D736)
- Trimmer Unit TR5050 (D3GG) (New)
- Vacuum Feed Banner Sheet Tray Type S9 (D3EW)
- Vacuum Feed LCIT RT5120 (D3EW)

*1	<b>Copier version only</b>
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#### Controller Options

Item	Comment
Chinese Language Kit Type S11(D0BX)*2	SD Card
File Format Converter Type M19(D3BR)*1	PCB
IEEE 802.11a/g/n Interface Unit Type M19(D3BR)	PCB
IPDS Unit Type S11(D0C3)	SD Card
Korean Language Kit Type S11(D0BX)*1	SD Card

## 1.Product Information

Item	Comment
NFC Card Reader Type S6(D3DH)	Hardware (PCB, etc.)
OCR Unit Type M13(D3AC)*1	SD card
Optional Counter Interface Unit Type M12(B870)*1	Hardware (PCB, etc.)
PostScript3 Unit Type S11(D0C3)*1	SD card
PostScript3 Unit Type S12(D0C3)*2	SD card
SD Card for Fonts Type D(D641)	SD card
Taiwan Language Kit Type S11(D0BX)*1	SD card
Unicode Font Package for SAP(R) (B869)	SD card
VM Card Type P18(D3EN)	SD card
XPS Direct Print Option Type S11(D0C3)	SD card
*1 Copier model *2 Printer model	

## EFI Controller Option

Item	Comment
Printer Controller EB-35	D3GK
Fiery Impose	-
Fiery Compose	-
Fiery Impose Compose Suite*2	-
EFI ES-2000	D525
*2 Printer model	

## Consumables

Item
Glue Supply Type A (B917)*1
Refill Staple Type X*2
Refill Staple Type T Staples*3
Refill Staple Type V Staples*5
Refill Staple Type W Staples*6
Ring Cartridge A4 Type RB5000 (D421)*4
Ring Cartridge LT Type RB5000 (D421)*4
Ring Opener Type A (D419)*4
Ring Supply A4 Black 100 Type S4 (D392)*4
Ring Supply A4 Black 50 Type S4 (D392)*4

Item
Ring Supply A4 White 100 Type S4 (D392)*4
Ring Supply A4 White 50 Type S4 (D392)*4
Ring Supply LT Black 100 Type S4 (D392)*4
Ring Supply LT Black 50 Type S4 (D392)*4
Ring Supply LT White 100 Type S4 (D392)
Ring Supply LT White 50 Type S4 (D392)*4
Staple Type X Cartridge*2
Staple Type U Cartridge*3
Staple Type V Cartridge*5
Staple Type W Cartridge*6
*1 Perfect Binder GB5010 (D736)
*2 Finisher SR5110 (D3G9) Corner stapling only
*3 Booklet Finisher SR5120 (D3G8) Booklet, corner stapling both
*4 Ring Binder RB5030 (D3GH)
*5 Finisher SR5090 (D3GD) (Copier Models)
*6 Booklet Finisher SR5100 (D3GC) (Copier Models)

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## TCRU Kits

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TCRU/ORU Type S11 (Set A) (D910)
TCRU Type S11 (Set B) (D910)

### Important

- The TCRU kits for this series are not compatible with the TCRU kits of the previous series.

1.Product Information

## **Specifications**

See "Appendices" for the main machine and peripheral specifications.

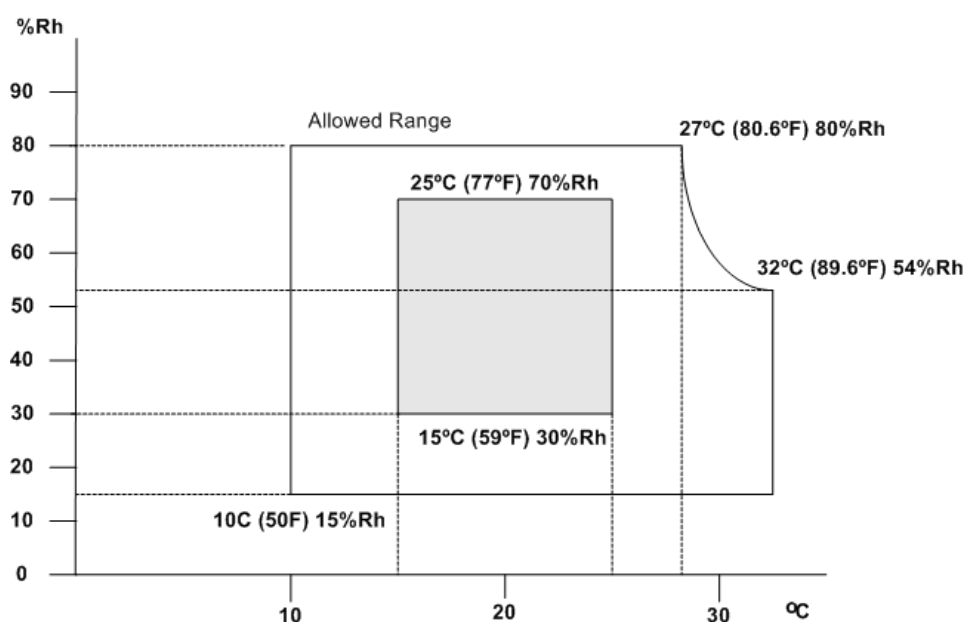


## 2. Installation

### Installation Requirements

#### Operating Environment

##### Recommended Temperature/Humidity Range for Operation



Recommended: 23°C (73.4°F), 50% Rh

w\_d1790801\_en

Item	Details
Target Temperature & Humidity	23°C (73.4°F), 50% RH
Temperature range	10° to 32°C (50° to 90°F) Perfect Binder: 15° to 30°C (59° to 86°F)
Humidity range	15 to 80% RH
Ambient illumination	Less than 1500 lux
Ventilation	Air turnover rate of more than 30m <sup>3</sup> /hr/person
Ambient dust	Less than 4.0 mg/m <sup>3</sup>

#### ★ Important

- If the machine is installed in a location where the ambient temperature is more than 30°C (86°F), do not run a job longer than 2 hours.
- Never turn the main power switch off immediately after a long print job. Leave the machine on so that the fans can expel the hot air from the machine and cool the electronic components.
- If this machine is to be used in a location where both temperature and humidity are high, the tray heaters (options) should be installed and connected. For details, please refer to “Main Machine” in the “Installation” section.

1. If the installation site has air-conditioners or heaters, put the machine in a location that agrees with

## 2. Installation

these conditions:

- Where there are no sudden temperature changes from low to high, or high to low.
  - Where the machine will not be directly exposed to cool air from an air conditioner in the summer.
  - Where the machine will not be directly exposed to reflected heat from a heater in the winter
2. Do not put the machine where it will be exposed to corrosive gases like ammonia.
  3. Put the machine on a strong level surface. The front and rear of the machine must be level  $\pm 2.5$  mm (0.1").
  4. Never put the machine where it can be subjected to strong vibration.
  5. Never connect the machine to a power source shared with other electrical devices.
  6. The machine can generate an electromagnetic field which can cause interference with radio or television reception.

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## Power Requirements

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### ★ Important

- Make sure that the wall outlet is near the mainframe.
- Keep the area around the power outlet open and free of clutter so the operator can get to it easily and quickly.
- Make sure the plug connection to the power outlet is tight.
- Do not connect more than one electrical device to the same power outlet.
- Never place anything on the cord and never wrap the cord around itself or around another object.

### Input Voltage Level

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North America	208 to 240V, 50/60 Hz: More than 20 A
Europe/Asia	220/230/240V, 50/60 Hz: More than 16 A

Permissible voltage fluctuation:  $\pm 10\%$

### Breaker Switch

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The machine is equipped with a breaker switch located at the rear, lower right corner. Inspect and test the breaker switch at least once a year.



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**★ Important**

- If the breaker switch appears dirty and covered with soot, it probably requires replacement.

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## Machine Level

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- The machine must be leveled (right to left) within 5 mm (0.2")
- The leveling bolt can be rotated to raise and lower each corner of the machine until it is level.

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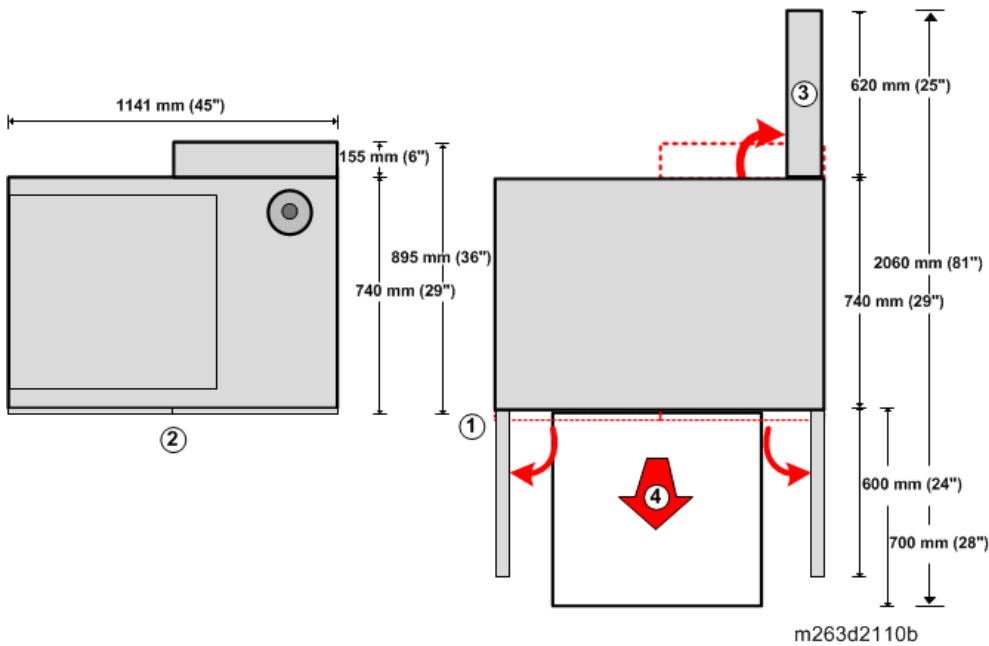
## Space Requirements

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Put the mainframe near the power source. Consideration should be given not only to machine operation, but servicing the machine as well, with front doors and rear boxes fully open.

## 2. Installation

### Space Around the Main Machine



The illustration above is a top view of the main machine. This illustration is not drawn to scale.

Measurements are rounded up slightly, but they will allow you to estimate how much space will be required to work around the machine and service the machine without moving it.

- Approximately 620 mm (25 in.) clearance required behind the machine with the control box open.
- Approximately 700 mm (28 in.) at the front of the machine with both front doors open and the drawer pulled out.

No.	Part	Range of Movement
1	Front Doors	Both doors swing open to the front
2	Main Machine	Remains stationary.
3	Controller Box	Swings open to the rear
4	Front Drawer	Pulls out to the front for servicing (fusing unit, registration unit, PTR unit, PTB unit etc.)

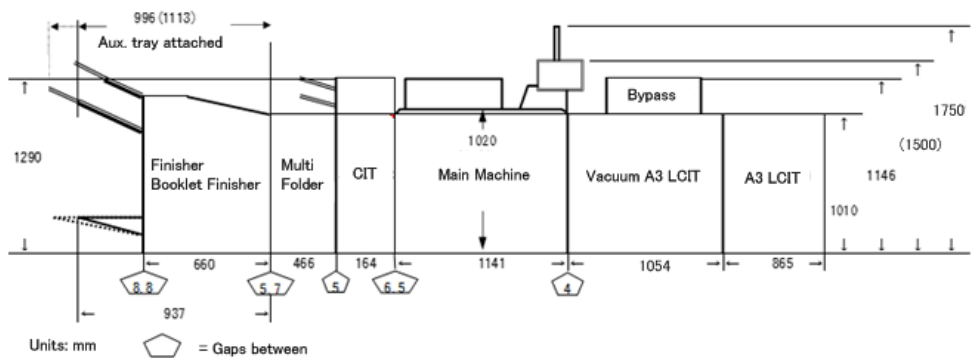
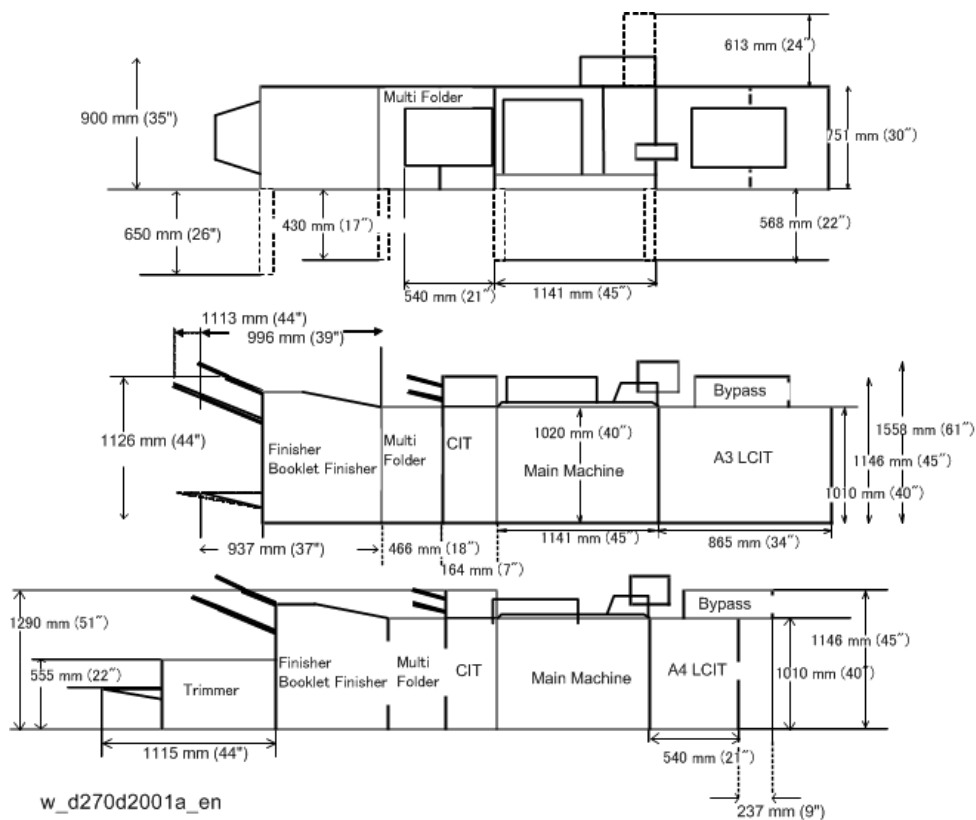
- The controller box is on hinges and can be swung open to the rear in order to service parts on the back of the machine (motors, sensors, etc.).
- The front doors swing open to the front, and then the front drawer can be pulled out the front of the machine on rails for servicing.

#### Note

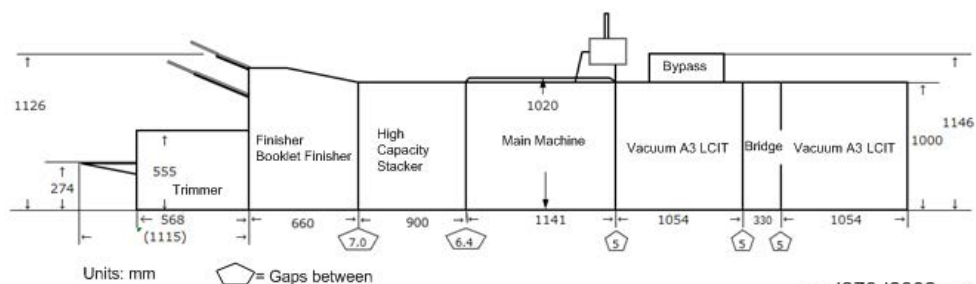
- According to specifications, at installation there must be at least 200 mm (8 in.) between a wall and the back of the machine. However, please remember that at least 650 mm (25 in.) of space is required in order to open the control box for servicing.

System Dimensions

Top and Side Views



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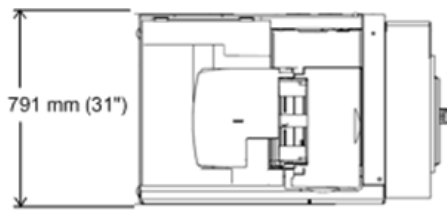
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## 2. Installation

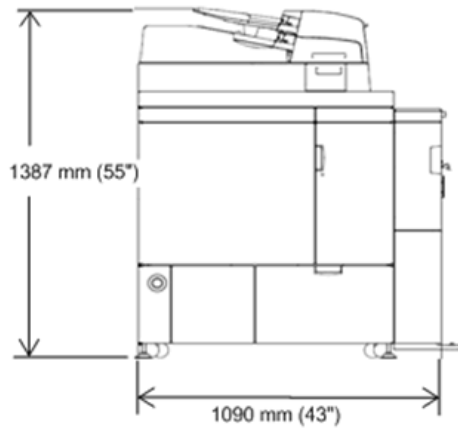
### Options

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#### Perfect Binder

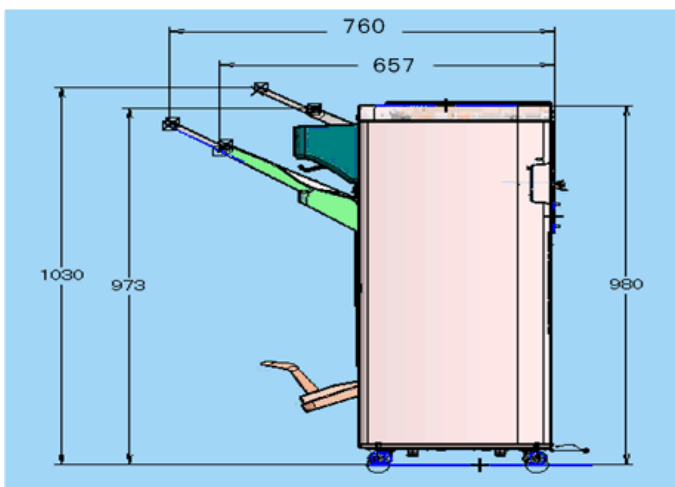


D736



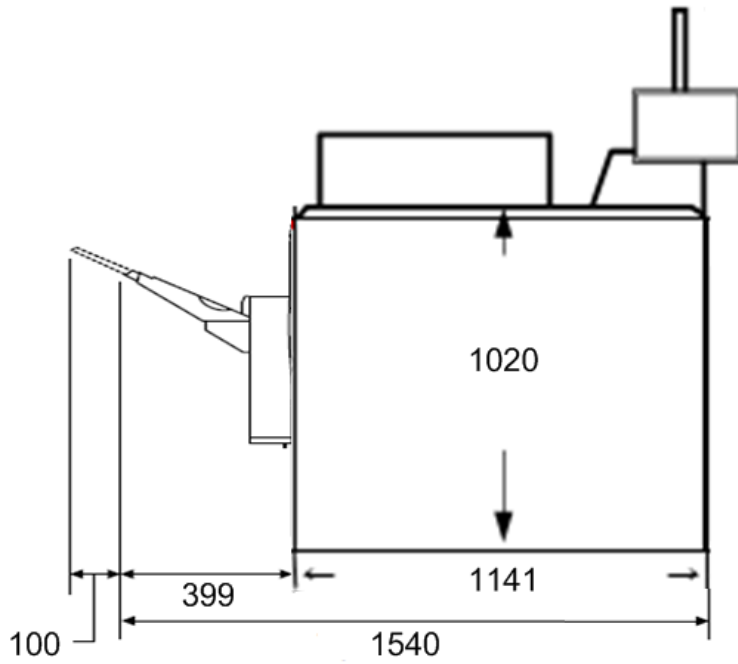
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#### Finisher SR5090/ Booklet Finisher SR5100



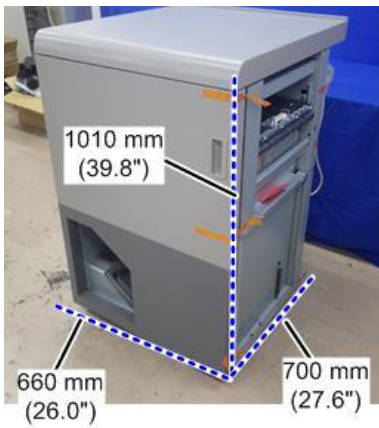
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#### Shift Sort Tray SH5000



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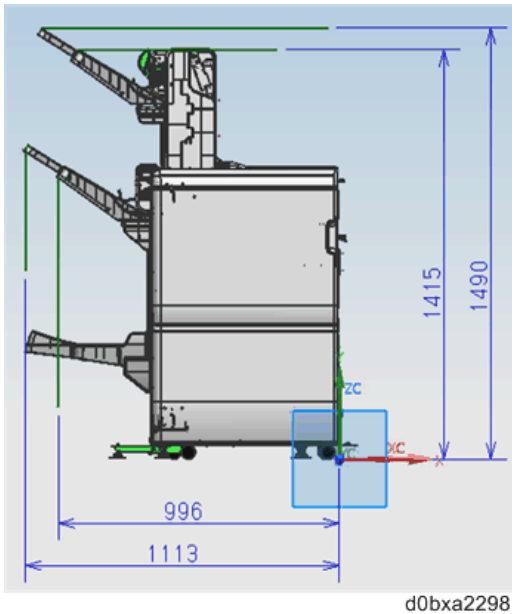
### Ring Binder



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### Booklet Finisher SR5120 / Finisher SR5110

## 2. Installation



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### AC Power Switch and Main Power Switch

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The AC Power Switch is located inside the front left door. This machine should be left on at the end of the work day.

**★ Important**

The AC Power Switch should always be turned off before servicing the machine. Always follow the procedure below to shut down the machine before servicing.

**⚠ WARNING**

- Never turn the machine on with the LD unit or the canopy cover removed.



1. Push the main power switch [A] on the front left corner of the machine.
2. A message appears and tells you to wait until the machine powers down completely. This gives the hard disk drive enough time to stop rotating and to shut down safely before the machine loses power.
3. Wait for the operation panel to switch off.
4. Open the left door and turn off the AC power switch [B].
5. Unplug the machine from the power source.
6. Allow the machine to cool for a few minutes.



## 2.Installation

- The polygon mirror motor may continue to rotate for approximately one to three minutes after the machine has been switched off.
- This also allows time for the fusing unit to cool.

# Main Machine

## Accessories

Check the items in the box to make sure that you have all the accessories.



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No.	Description	Q'ty		Comments
		Copier Model	Printer Model	
1	Operation Panel	1	1	
2	Cover	1	1	
3	COVER:HINGE:FRONT	1	1	
4	COVER:HINGE:MIDDLE	1	1	
5	Frame	1	1	
6	CD-ROM (DRV for Baron-C3 NA)	1	0	NA only
	CD-ROM (DRV for Baron-P3 NA)	0	1	NA only
	CD-ROM (DRV/OI for CHN)	1	0	CHN only
	CD-ROM (DRV for Baron-C3 EU)	1	0	EU only

No.	Description	Q'ty		Comments
		Copier Model	Printer Model	
	CD-ROM (DRV for Baron-P3 EU)	0	1	EU only
	CD-ROM (BA3_MMT_1.00)	1	1	CD-ROM (BA3_MMT_1.00) is not provided with Pro 8300S.
7	Safety Information (NA)	1	1	NA only
	Safety Information (CHN)	1	0	CHN only
	Safety Information (EU)	1	1	EU only
	Sheet (ERRATA_1)	1	1	
	Sheet (EPEAT)	1	1	NA only
	Sheet (NOTES SEC for Copier Model NA/EU)	1	0	NA/EU only
	Sheet (NOTES SEC for Copier Model CHN)	1	0	CHN only
	Sheet (NOTES SEC for Printer Model)	0	1	
	CAUTION CHART(FCC)	1	1	NA only
	CAUTION CHART (CAN)	1	1	NA only
	CAUTION CHART (CHEETAH)	1	1	
	CAUTION CHART (CE)	1	1	EU only
	SHEET (21LANGUAGES)	1	1	NA/EU only
	SHEET (CHINESE)	1	0	CHN only
	Decal (BLUETOOTH)	1	1	
	CAUTION CHART (NFC TAG)	1	1	
	SHEET (EAC:RU)	1	1	EU only
SHEET (CONTROL INSTRUMENTATION for EU)	1	1	EU only	
SHEET (CAUTION)	1	1	EU only	
8	OZONE FILTER:EXHAUST:PAPER EXIT SUB-UNIT	1	1	
9	Power Cord	1	1	250V 20A:NA 250V 16A:CHN, EU
10	Wood Block	4	4	
11	Holder	4	4	
12	WRENCH:HEXAGONAL BOLT	1	1	
13	Fusing Roller Knob	1	1	
14	Fusing Roller Knob Holder	1	1	
15	Fusing Unit Heater Case	2	2	

2. Installation

No.	Description	Q'ty		Comments
		Copier Model	Printer Model	
16	CLOTH - DF EXPOSURE GLASS	1	0	
17	HOLDER:EXPOSURE GLASS:ASS'Y	1	0	
18	ITB Jig (Large)	1	1	
19	ITB Jig (Small)	1	1	
20	Developer Bottle	1	1	
21	COVER:EXHAUST:PAPER EXIT SUB-UNIT	1	1	
22	TAPPING SCREW:4X8	1	1	
23	TAPPING SCREW:ROUND POINT:4X10	2	2	
24	PLATE:POWER SUPPLY CORD:INLET	1	1	
25	PAN HEAD SCREW:M5X10	1	1	
26	SCREW - M4X8	10	10	
27	TUBE TYPE LAMP:ASS'Y	1	1	"TUBE TYPE LAMP:ASS'Y" is not provided with Pro 8300S.
-	SCREW:POLISHED ROUND/SPRING:M5X10	0	4	
-	Bracket (Left Lower)	0	1	
-	Bracket (Right Lower)	0	1	
-	INTERFACE HIC:SCTPA1216R	1	1	
-	RICOH Logo Plate	1	1	NA only
-	SHEET:NAME:KEY TOP-TEL:CHN	1	0	CHN only
-	DECAL:CAUTION:PULL OUT:LANGUAGE:MULTI-LANGUAGE	1	1	CHN/EU only
-	DECAL:PICK-UP PAPER JAM:OPERATION PANEL:MANY LANGUAGES	1	1	CHN/EU only
-	SAFETY INFORMATION SHEET	1	1	EU only
-	ACCESSORY:EMC:ADDRESS:RIC	1	1	EU only
-	DECAL:PAPER SET DIRECTION	3	3	
-	DECAL:CAUTION CHART:INKJET:PAPER:NA	1	1	NA only
-	DECAL:CAUTION CHART:INKJET:PAPER:CHN	1	0	CHN only
-	DECAL:CAUTION:ORIGINAL:MANY LANGUAGES	1	0	
-	Decal (CAUTION CHART ABS:NO1)	1	1	EU only

No.	Description	Q'ty		Comments
		Copier Model	Printer Model	
-	Decal (CAUTION CHART ABS:NO2)	1	1	EU only
-	Decal (CAUTION CHART ABS:NO3)	1	1	EU only
-	Decal (POWER SOURCE OFF ABS for EU)	1	1	EU only

**Note**

- For printer model only:  
A separate power cord is provided for China with the Chinese decal kit. The power cord for China is 3 m long and the cord for other areas 4 m long. In China do not use the power cord provided with the machine. Use the 3 m power cord provided with the Chinese decal kit and dispose of the 4 m power cord provided with the machine.



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Here is a list of items that are not listed in the table above but may be provided, depending on your geographic area.

Item	EU	NA	CHN
Read This First	N	Y	N
Read This First - Chinese	N	N	Y
Ricoh Plate - RIC	N	Y	N
Telephone Number Sticker	N	N	Y
Tray Decal - Chinese	N	N	Y
Tray Decals	Y	N	N
User's Guide - Chinese	N	N	Y

## Installation Flow

1. Check the rating voltages for connection points.
2. Remove tapes and shipping materials.
3. Install the operation panel.
4. Install the attention light.
5. Connect the power cord, and attach the cable clamp.
6. Install the fusing roller knob holder, fusing unit heater case, and ITB jigs.
7. Attach the exposure glass cleaning cloth and holder (copier models only).
8. Attach the logo plate.

## 2. Installation

9. Attach the decals
10. Clean the exposure glass (copier models only).
11. Level the main machine.
12. Install the rear vent cover.
13. Test the breaker switch.
14. Turning the machine ON and OFF.
15. Check the "Important Notice on Security Issues", and set the password.
16. Install the toner bottles.
17. Install Paper Library data.
18. Install the tip prevention braces (printer models only)
19. Load the paper trays.
20. Print the SMC Report.
21. Make a test print.
22. Check and adjust image areas.
23. Connect the Ethernet cable (copier models only).
24. Check the explanations for moving and transporting the machine.
25. Install optional heaters.
26. Prepare TCRU Set B (applicable customers only).

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### Rating Voltages for Connection Points

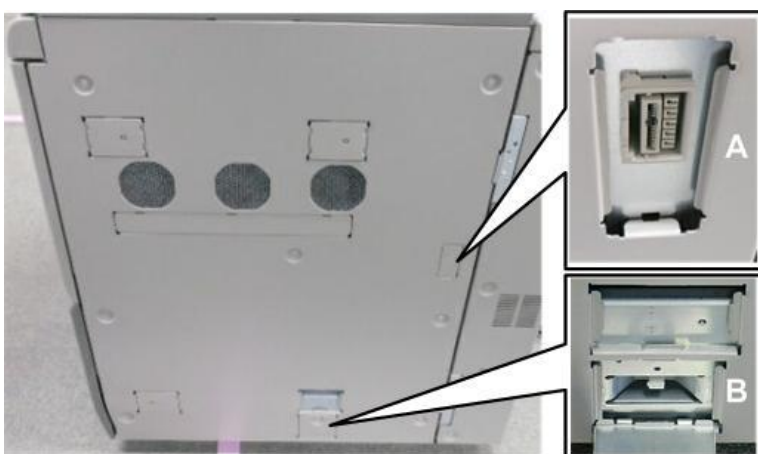
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**★ Important**

- Be sure to plug cable connectors into the correct sockets.

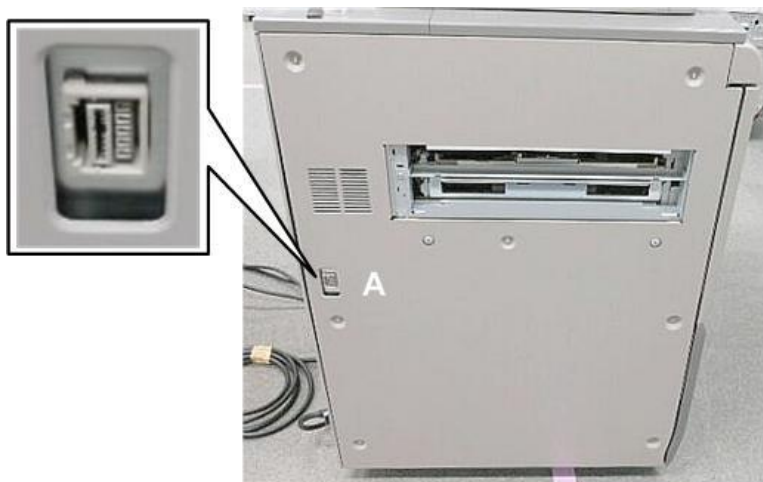
#### Right Side

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A	LCIT: Max. DC24V
B	LCIT Anti-Condensation Heaters: Max. AC230V±10%

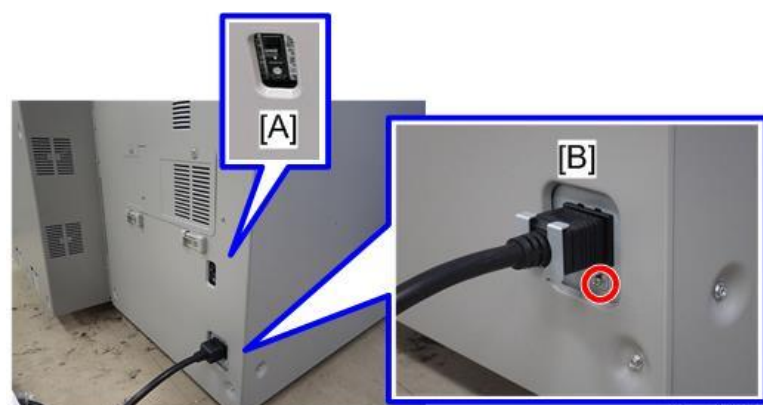
Left Side



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A	1st Downstream Device: Max. DC24V
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Left Rear



×1

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A	Breaker Switch: Tested at installation
B	Power Plug: 208-240V 20A 50/60 Hz Attached with reinforced clamp secured with a screw.

Remove Tapes, Shipping Materials

1. Remove all visible tape from the surface of the machine (and the accessory box from the back of the machine for printer models).
2. Open the right front door.

## 2. Installation

### 3. Remove the tape ([A] and [B]).

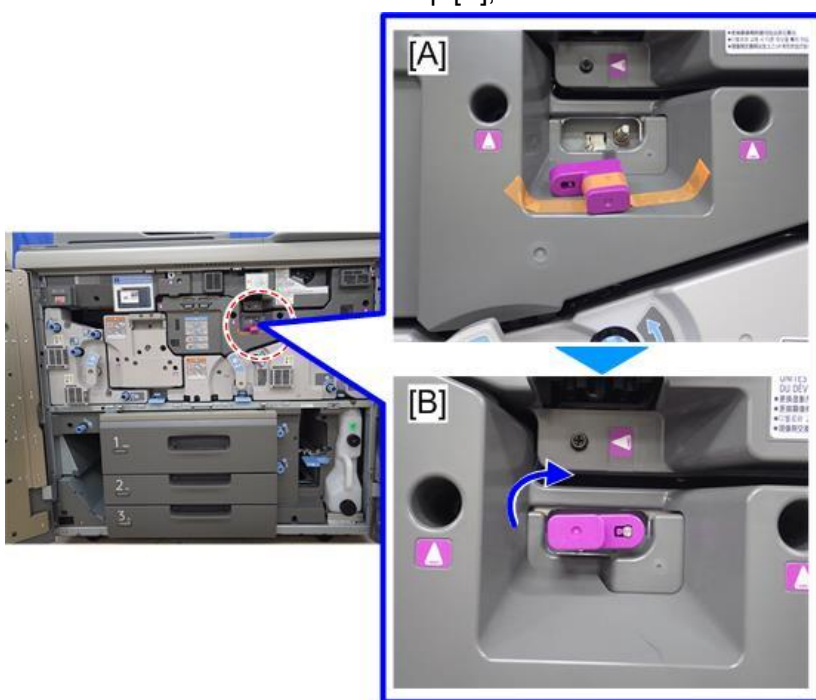


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## ITB Lever

### 1. Remove the tape holding the ITB lever [A].

### 2. Attach the ITB lever and rotate it up [B], and then close the doors.

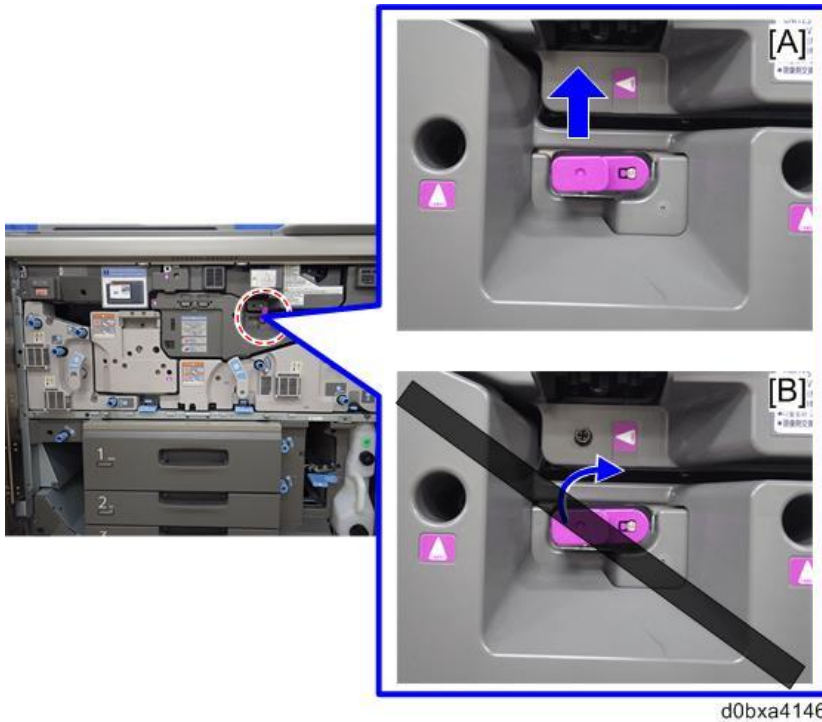


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### ★ Important

- When moving the lever to the original position, make the lever jump up [A]. If you raise the lever by weak force to avoid the impact [B], SC caused by incorrect belt tension will occur.





**Note**

- The right door will not close if the ITB lever is down.

**3.** Remove the waste toner bottle and store the data sheet inside the machine.



**Note**

- The data sheet is under the original tray. For details, see [ADF Tapes: Copier Only](#).

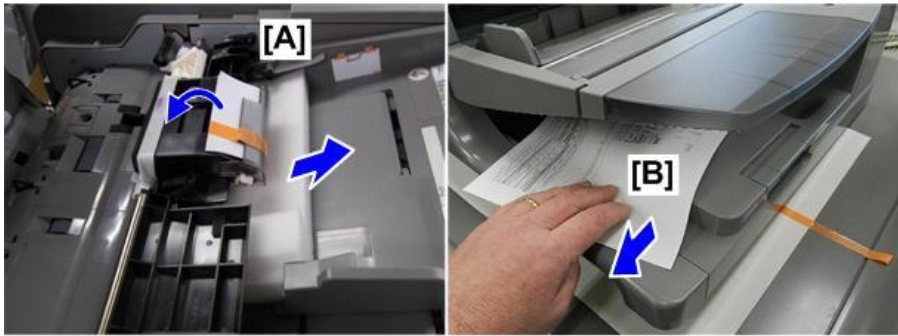
**ADF Tapes: Copier Only**

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- 1.** Lift the ADF.
- 2.** Lift the tape, paper, and sponge pad [A].

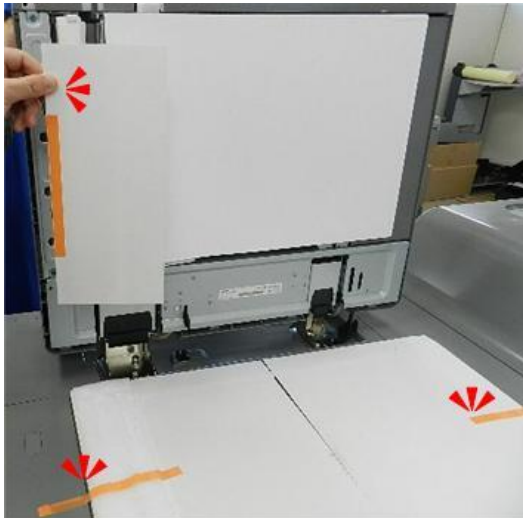
## 2. Installation

- 3.** Remove the data sheet [B] from under the original tray.



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- 4.** Lift the ADF. Remove the paper and tapes from under the ADF and from the exposure glass.

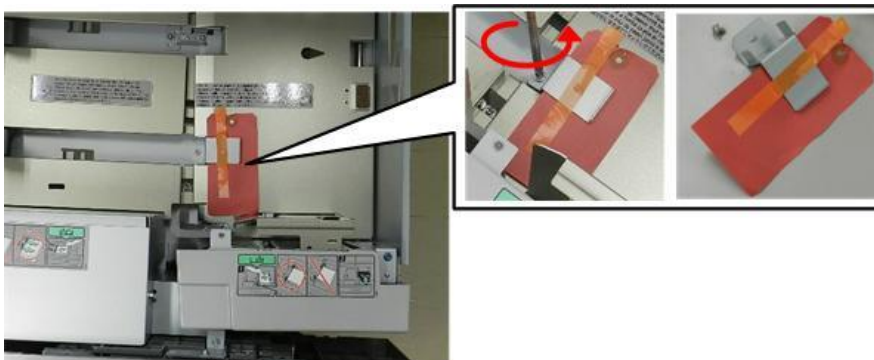


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## Paper Tray Clamps and Tags

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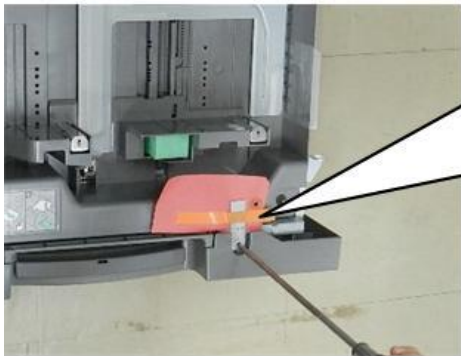
- 1.** Open Tray 1 (top tray).
- 2.** Remove the clamp, tag, and tape (🔑 x1).
- 3.** Discard the clamp, tag, tape, and screw.



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- 4.** Open Tray 2 (middle tray).
- 5.** Remove the tag, tape, and clamp (🔑 x1).

- 6.** Re-attach the screw at the same place. **Do not discard this screw.**

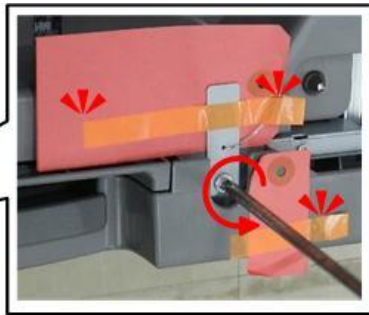
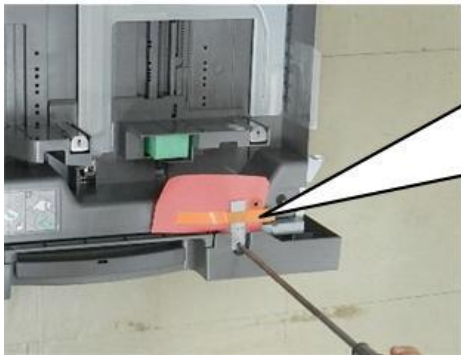


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- 7.** Open Tray 3 (bottom tray).

- 8.** Remove the tag, tape, and clamp (🔩x1).

- 9.** Re-attach the screw at the same place. **Do not discard this screw.**

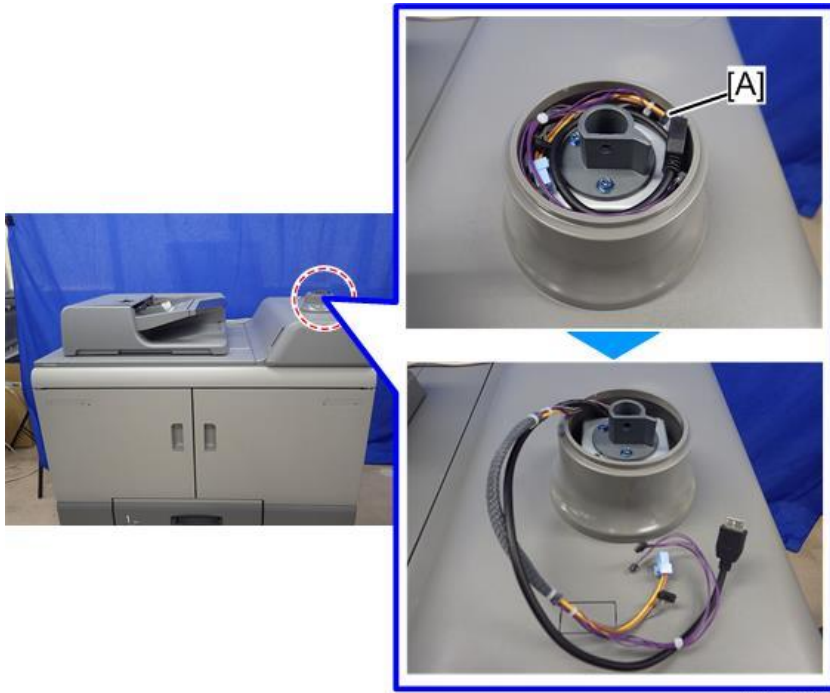


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## 2. Installation

### Operation Panel

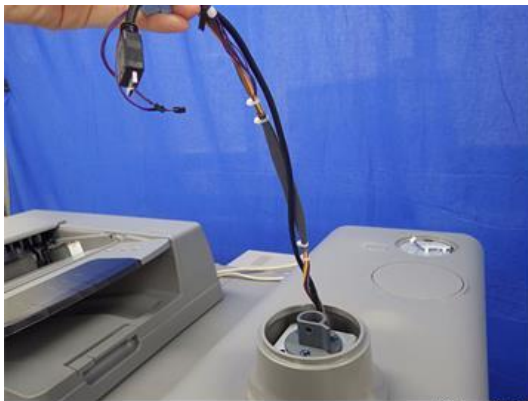
1. Pull out the cables [A] from the base for attaching the operation panel.



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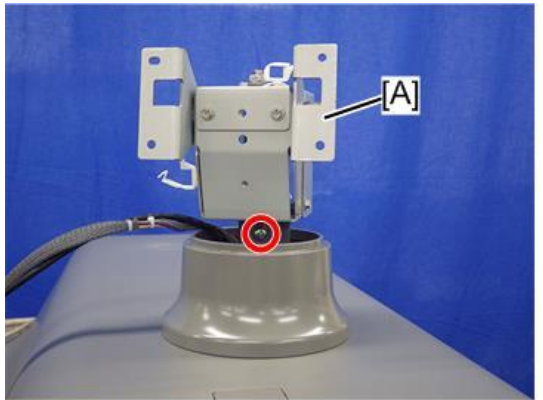
#### Note

- Pull out the cables completely.



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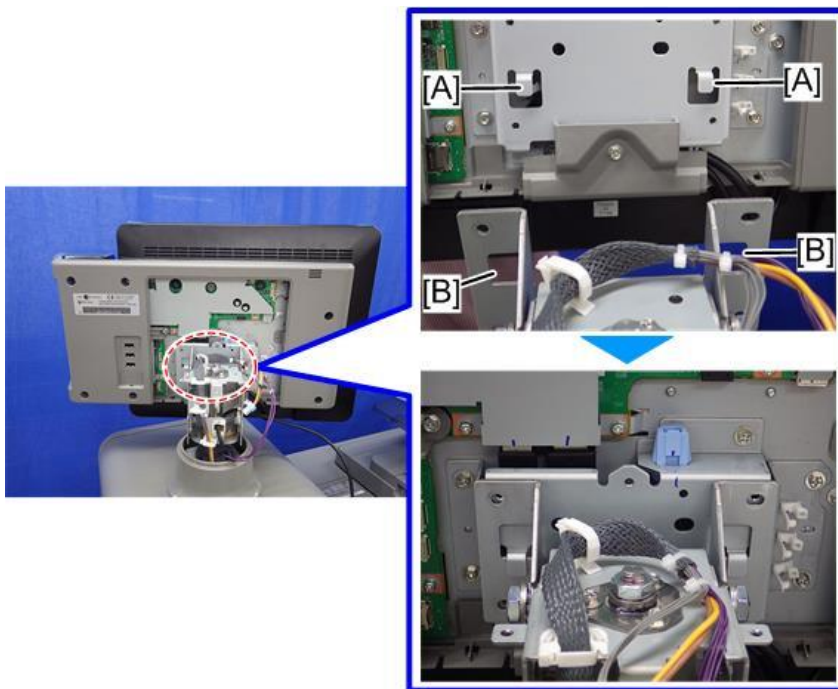
**2.** Attach the frame [A] provided with the machine.



**Note**

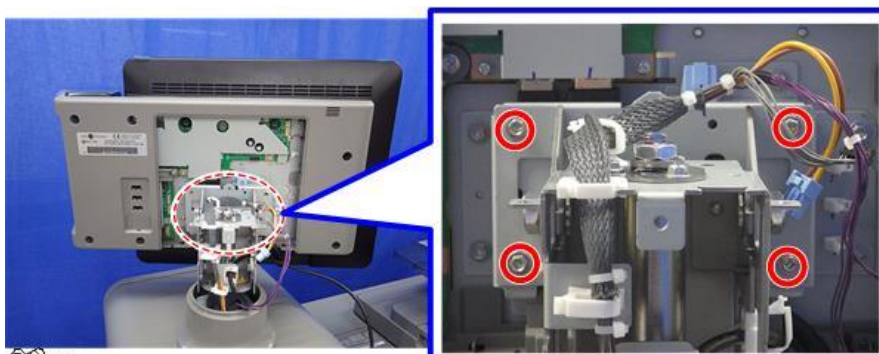
- After this step, work from the rear side.

**3.** Hook the hooks [A] of the operation panel onto the cutouts [B] of the frame.



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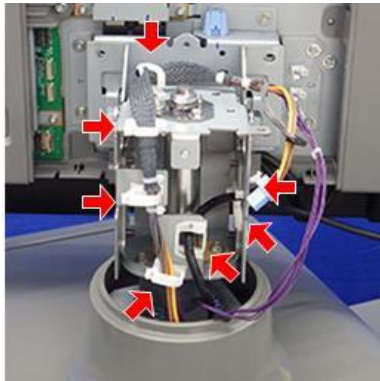
**4.** Fix the operation panel.



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## 2. Installation

- 5.** Fix the harnesses with the clamps that is equipped with the frame.

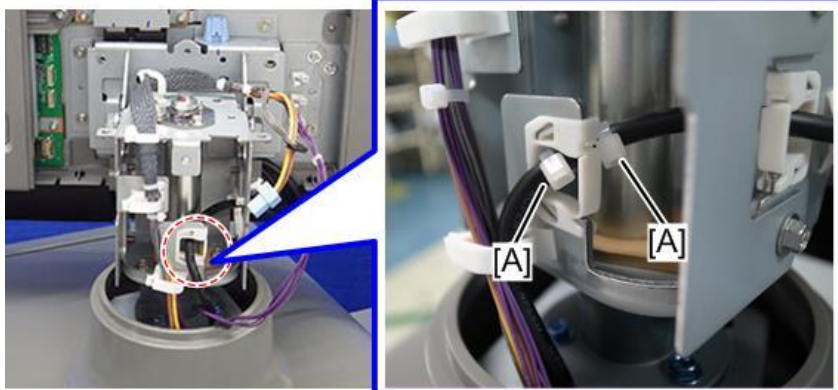


 x7

d0bxa2311

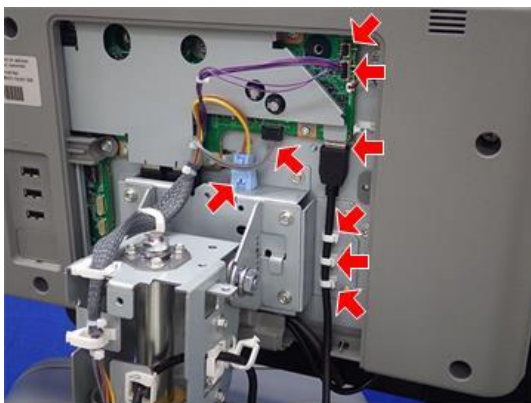
### Note



- Fix the harness so that the edge saddle is between the clamps [A].



d0bxa2312

- 6.** Connect the connectors.

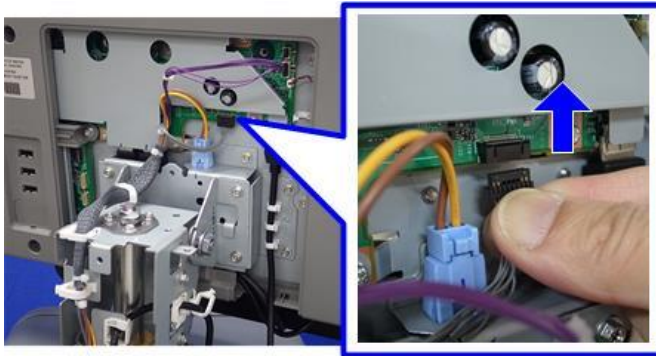


 x5  x3

d0bxa2142

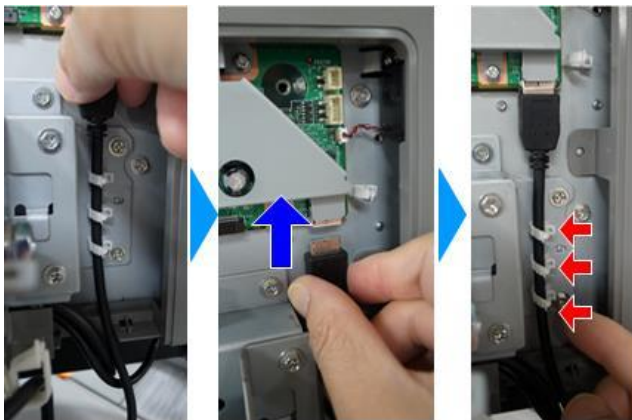
**Note**

- Insert the connector upright. If the connector is slanted, it might be broken.



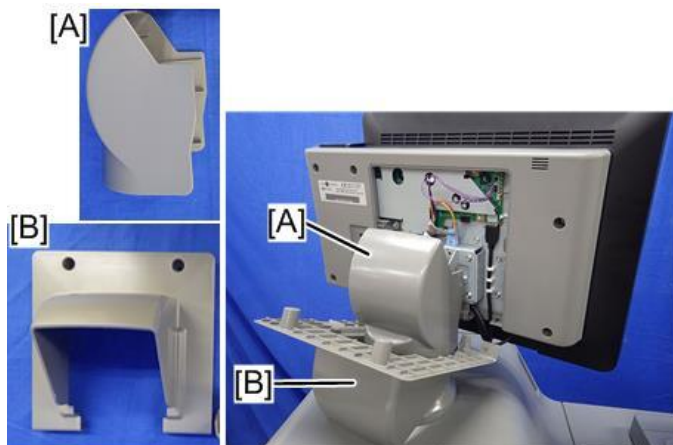
d0bxa2314

- Set the cable to the open clamps, insert the connector upright holding the left and right side of it between the finger tips, and then fix it with the clamps.



d0bxa2313

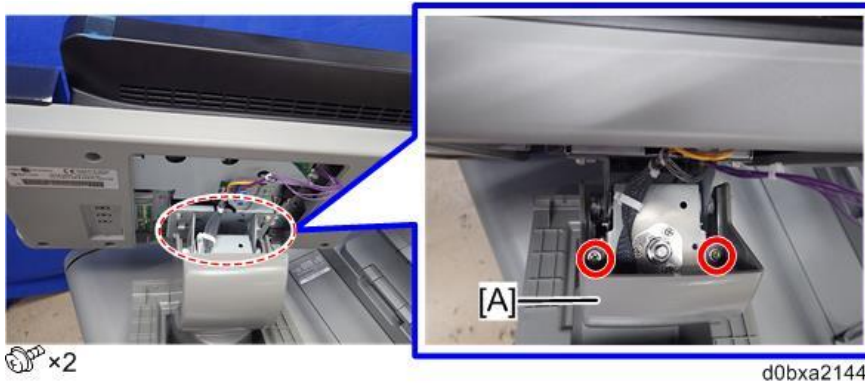
**7.** Set the covers [A] [B] as shown below.



d0bxa2143

## 2. Installation

### 8. Fix the cover [A].

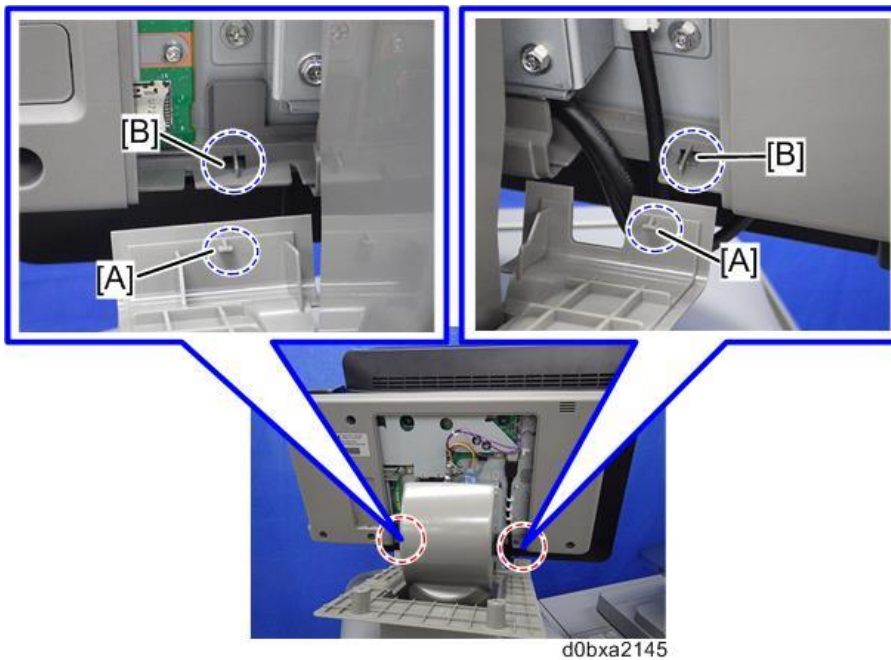


### 9. Fix the cover [A].



#### Note

- When attaching the cover, hook the hooks [A] onto the cutouts [B] of the operation panel.



- Support the lower side of the cover with your hand to keep the cover fitting to the cutouts,



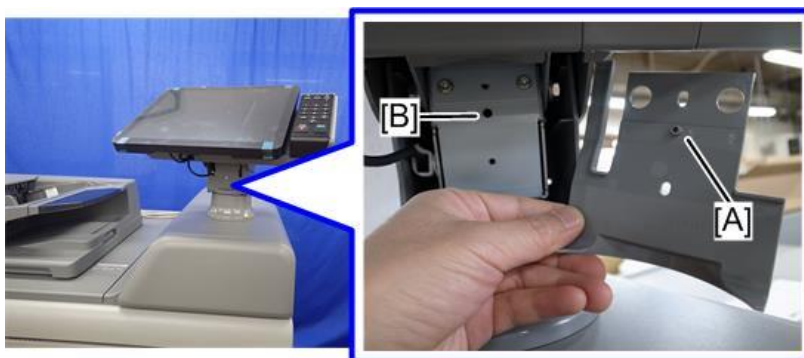
and then tighten the screws.



d0bxa2315

**10.** Tilt the operation panel so that its screw hole faces upward.

**11.** Insert the boss [A] on the rear side of the cover into the hole [B] of the hinge unit.



d0bxa2316

**12.** Attach the cover [A], and then fix the operation panel.



 x2

d0bxa2147

## Attention Light

### Note

- For Pro 8300S, Attention Light AL3000 is an option.
- For models other than Pro 8300S, Attention Light AL3000 is a standard accessory.

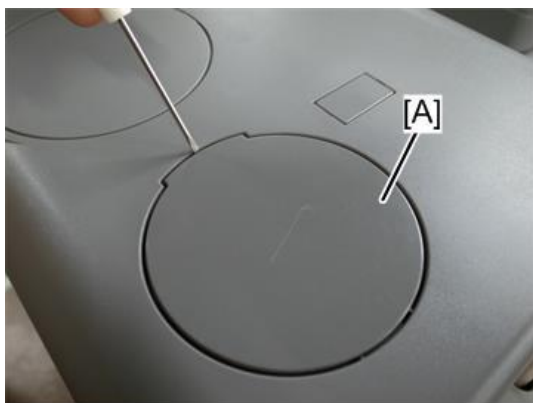
## 2. Installation

- 1.** (Pro 8300S only) Dispose the accessories shown in the picture below.



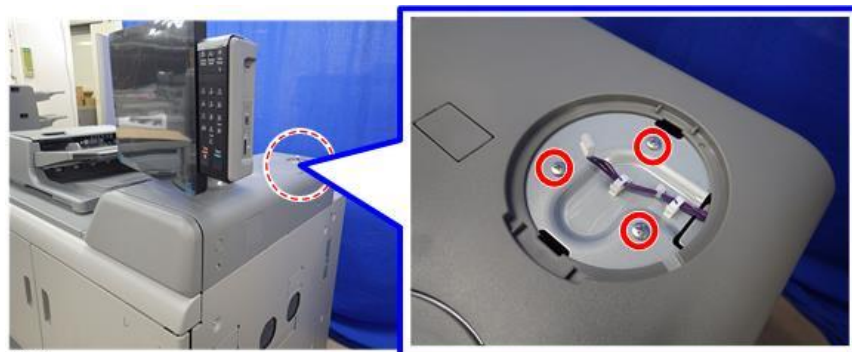
d0bxa2304

- 2.** (Pro 8300S only) Remove the lid [A] from the base for attaching the attention light.



d0bxa2305

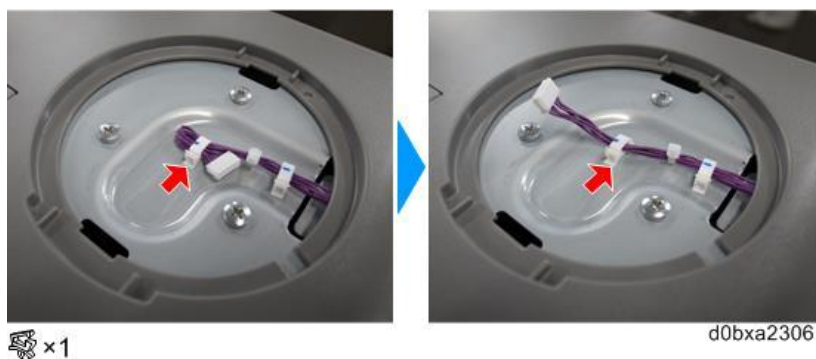
- 3.** Remove the attention light screws [A].



 x3

d0bxa2126

- 4.** Open the clamp to release it, and then close the clamp.  
This is because the edge of the cable is folded back,



5. Connect the connector to the attention light.



6. Set the base of the light [A] in the notch.
7. Fix the light base [B] using the removed screws (⚙️ x3).




---

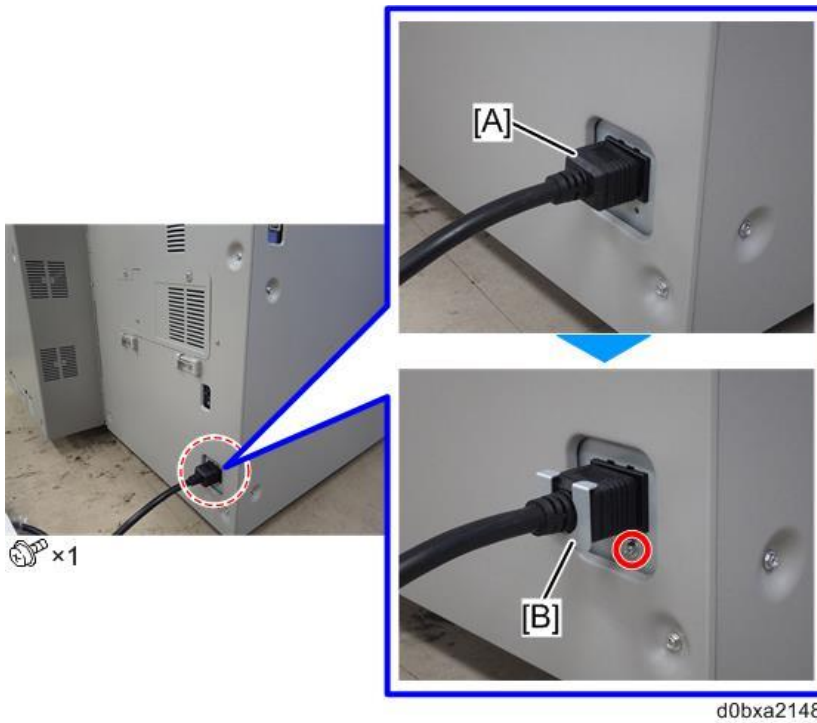
### Power Cord, Cable Clamp

---

1. Attach the power cord bracket to the head of the power cord [A]. Connect the power cord to the AC connection point at the rear lower left corner of the machine.

## 2. Installation

2. Fix the cable clamp [B] to the back of the machine.



---

## Fusing Roller Knob Holder, Fusing Unit Heater Case, ITB Jigs, Exposure Glass Cleaning Cloth Holder

---

### Fusing Roller Knob Holder

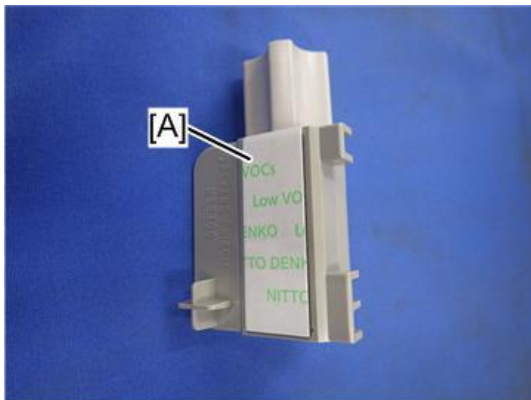
---

1. Open the left front door [A].



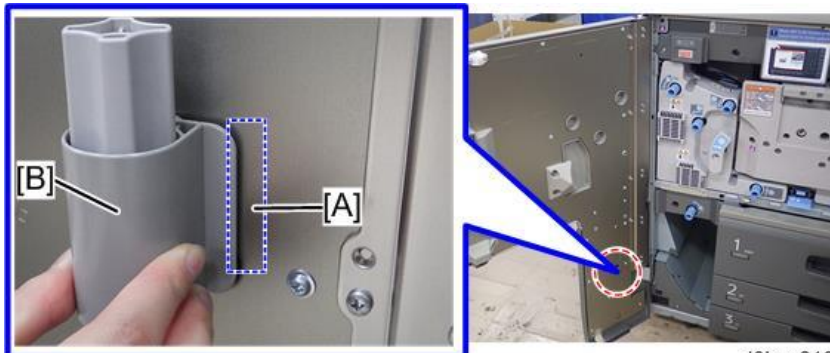
2. Locate the hole and the faint vertical guideline where the holder will be installed.
3. Clean the area around the hole with a clean cloth dampened with alcohol.

4. Peel the cover off the tape on the back of the holder [A].



d0bxa2129

5. Align the holder with the vertical guideline [A] on the surface of the cover.
6. Press the holder [B] onto the inside cover.

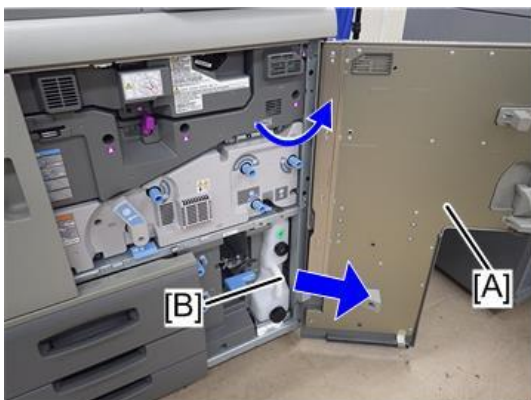


d0bxa2130

### Fusing Unit Heater Case

---

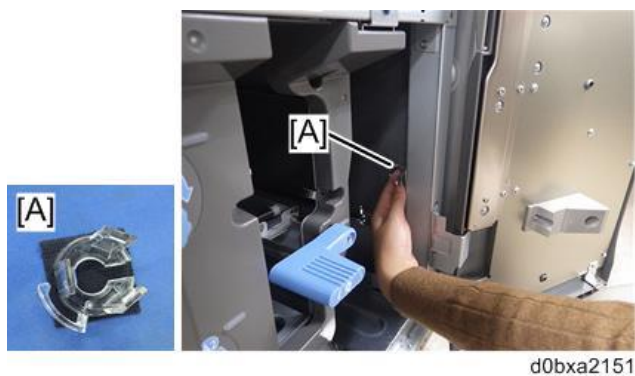
1. Open the right door [A], and then remove the waste toner bottle [B].



d0bxa2150

## 2. Installation

2. Peel off the tape from the fusing unit heater holder [A], and then attach it to the back of the pillar.



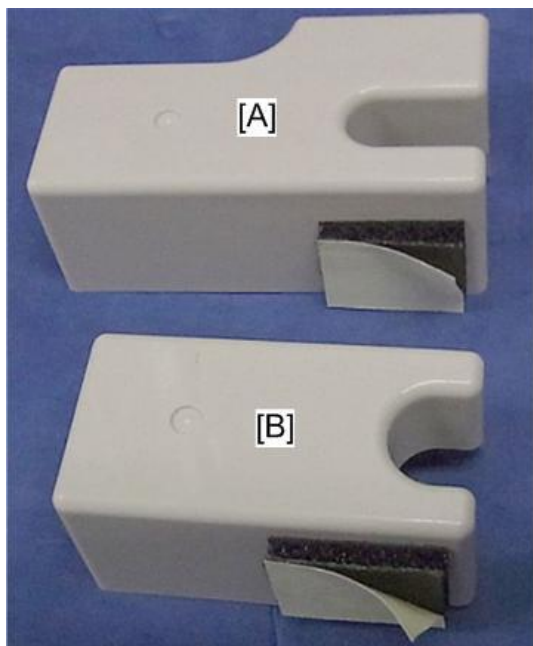
## ITB Jigs

---

There are two ITB jigs:

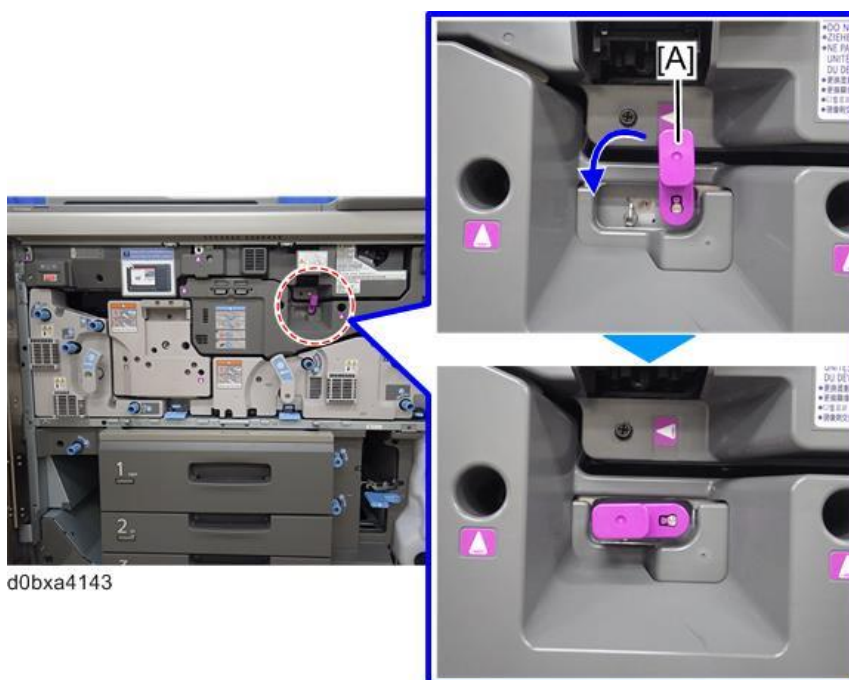
1. Cleaning belt jig [A] (the large jig)
2. ITB drive roller jig [B] (the small jig)

These jigs are stored inside the machine. They are required for servicing the ITB belt.



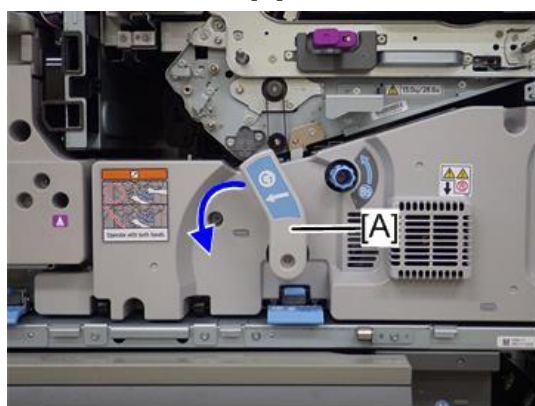
1. Open the front doors.

**2.** Lower the ITB lever [A].



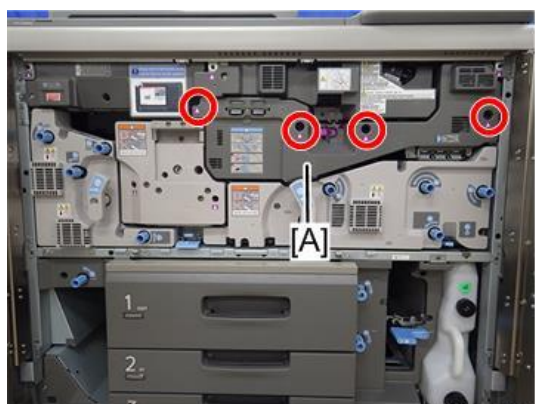
d0bxa4143

**3.** Lower the C1 lever [A].



d0bxa4150

**4.** Remove the screws from the cover. (#x4)



d0bxa4144

**5.** Remove the ITB cover.

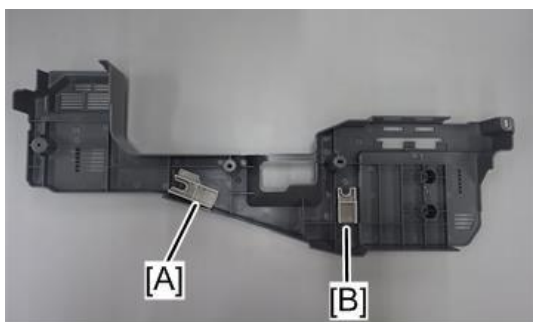
## 2. Installation

- 6.** Lay the cover on a flat clean surface.



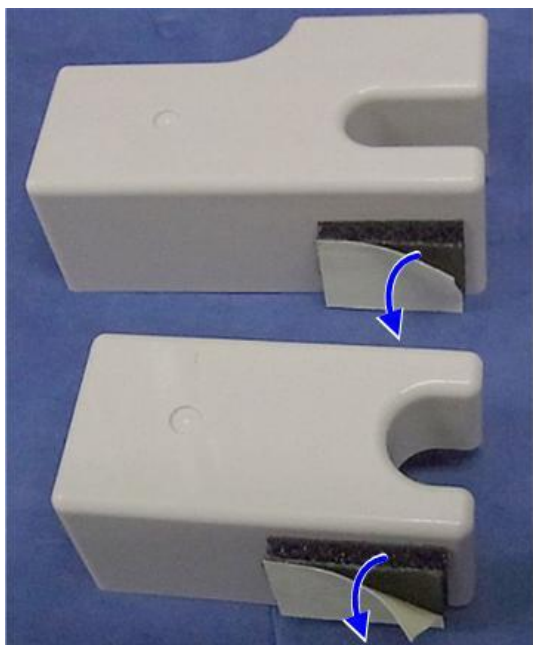
d270b1015

The large jig is to be attached at [A], and the small jig at [B].



d0bxa4232

- 7.** Peel the covers off the tapes on the back of the jigs.

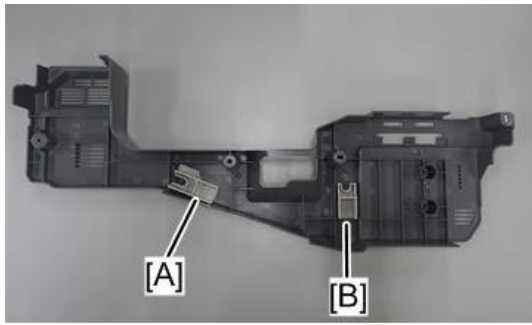


d270b1017

- 8.** Attach the large jig [A] to the compartment on the left, and the small jig [B] to the compartment on



the right.



d0bxa4232

**Note**

- When a jig is required for servicing the ITB unit, detach it by pulling it off from its hook-and-loop (Velcro) fastener.

**Exposure Glass Cleaning Cloth and Holder (Copier Models Only)**

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- 1.** Remove the cover from the tape on the back of the exposure glass cleaning cloth holder.
- 2.** Attach the holder to the left rear corner of the ADF.



d1790989

## 2. Installation

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### Logo Plate

---

1. Attach the logo plate to the left front corner of the machine.



d179b0990

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### Attaching the Decals

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#### NFC Tag

1. Attach the NFC tag [A].



d0bxa2136

---

#### "Precautions for Printing" Decal

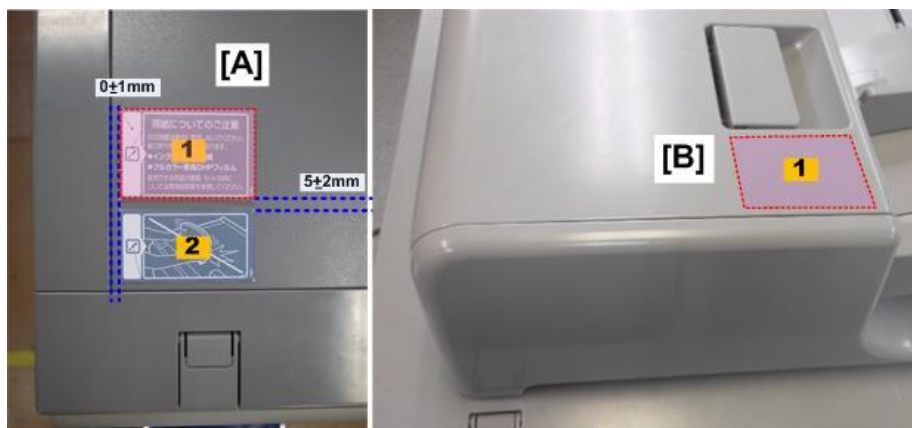
---

1. Peel off the "Precautions for Printing" decal.



m263b1006

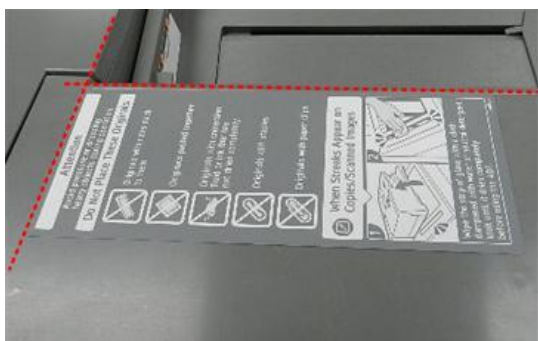
- 2.** For printer models [A], attach the decal [1] above the other decal [2] (attached at the factory).  
For copier models [B], attach the decal [1] to the top of the ADF.



m263b1007

### ADF Decals (Copier Models Only)

- 1.** Peel off the "Original Precautions" decal and attach it to the top of the ADF feeder cover.



d1790991

### Cleaning the Exposure Glass (Copier Models Only)

- 1.** Raise the ADF.  
**2.** Clean the exposure glass with glass cleaner and a clean cloth. Or use the accessory cleaning cloth.



d1790915

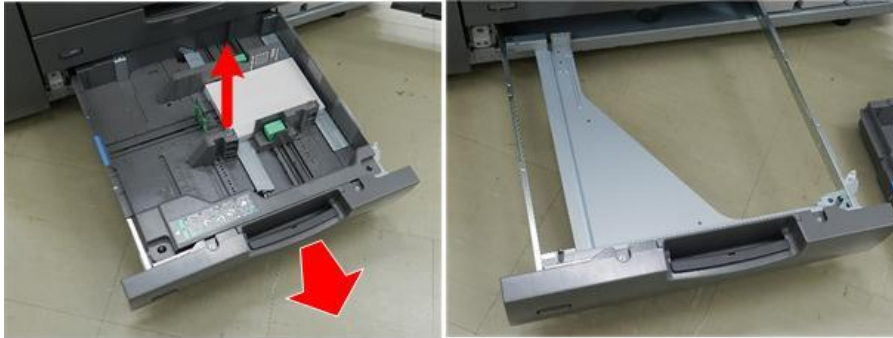
## 2. Installation

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### Leveling the Main Machine

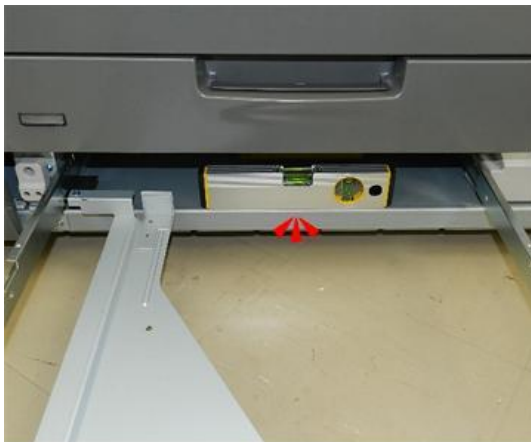
---

- 1.** Pull out the bottom tray, and remove the feed tray.



d1790916

- 2.** Set a level on the machine frame.



d1790917

- 3.** Use the wide end of the accessory wrench to adjust the gap of the height of the leveling bolts at the front-to-back and left-to-right 5 mm or less.
- 4.** Turn the leveling bolt in the direction of the arrow, and then set a holder below the leveling bolt.

**Note**

- The upper nut is spot-welded to the frame and does not move.



d1795700

- 5.** Continue to turn the leveling bolt until it stops against the holder.

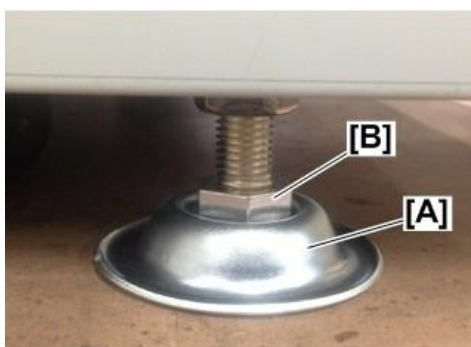
- 6.** Adjust the height of the leveling bolts by turning them at each corner until the unit is level.



d1795701

- 7.** Check if the holders [A] move or not.

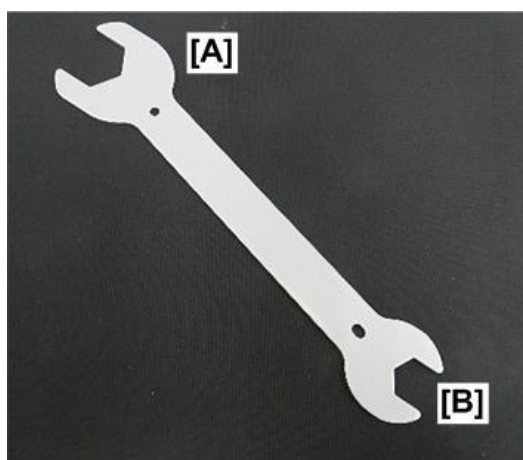
If the holder moves, tighten the leveling bolt [B] until there is no space between the leveling bolt and the holder [A]. If there is some space between them, the holder move.



d194e9107a

**Note**

- If there is some space between the leveling bolt and the holder, SC471 may occur.
- The wide end [A] of the wrench is for the main machine, and the smaller end [B] is for adjusting the height of the peripheral units.



d1790999

- When you are finished, open the right front door, remove the waste toner bottle, and then

## 2. Installation

store the wrench in the gap in the frame [A].



d270d2122

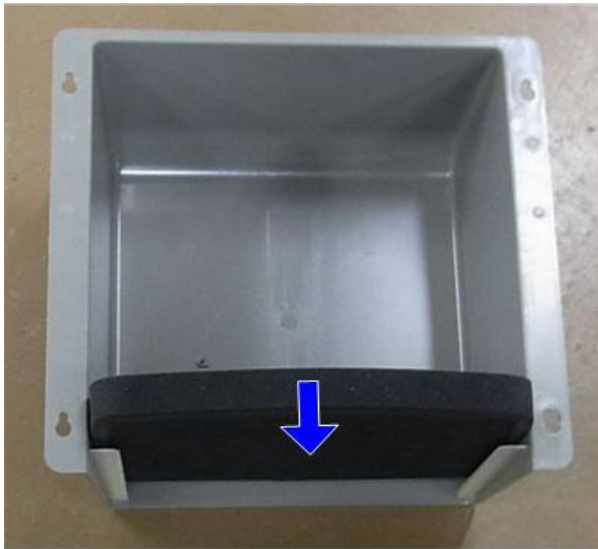
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### Installing the Rear Vent Cover

---

Install the vent cover on the back of the main machine if it is needed.

1. Set the accessory ozone filter in the vent cover (if it is not already inserted).

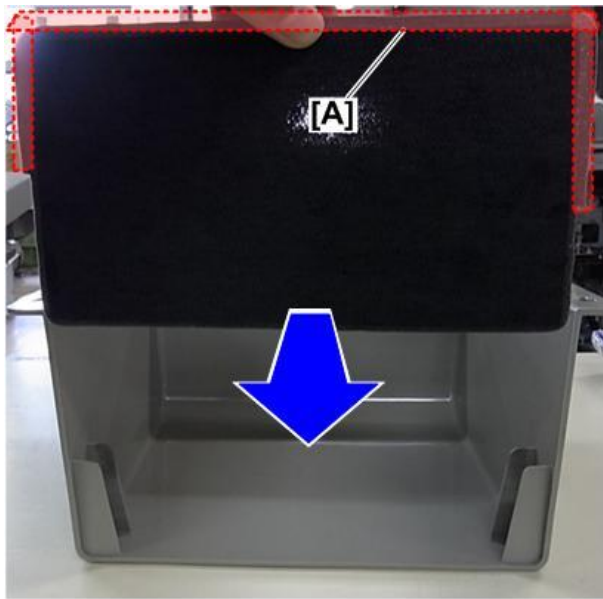


d270b7025

#### Note

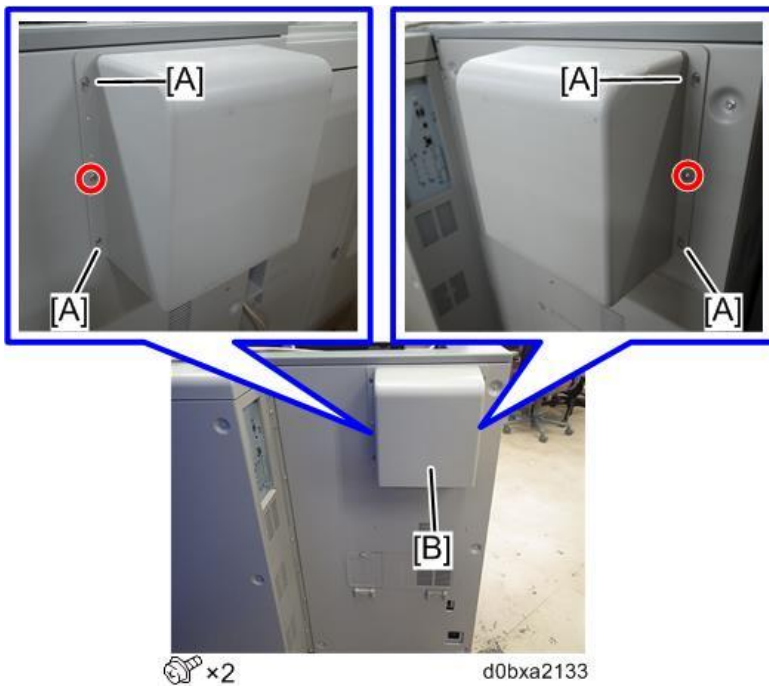
- Set the ozone filter by inserting the side without sponges [A] of the filter into the vent

cover.



d270d2123

2. Hang the rear vent cover [B] on the two pre-installed studs [A], and then slide it down.



---

## Testing the Breaker Switch

---

The breaker switch is at the left rear corner of the machine.

It should be tested at installation.

Subsequently, the breaker switch should be inspected, cleaned, and tested at least once a year.

## 2. Installation



d0bxa2124

- After prolonged use, the breaker switch may be covered with soot. This indicates that the switch may have malfunctioned or has been damaged.
- To prevent damage to the breaker switch, installation of a voltage stabilizer (constant voltage transformer) is recommended for work sites where there is significant fluctuation in the AC power source.

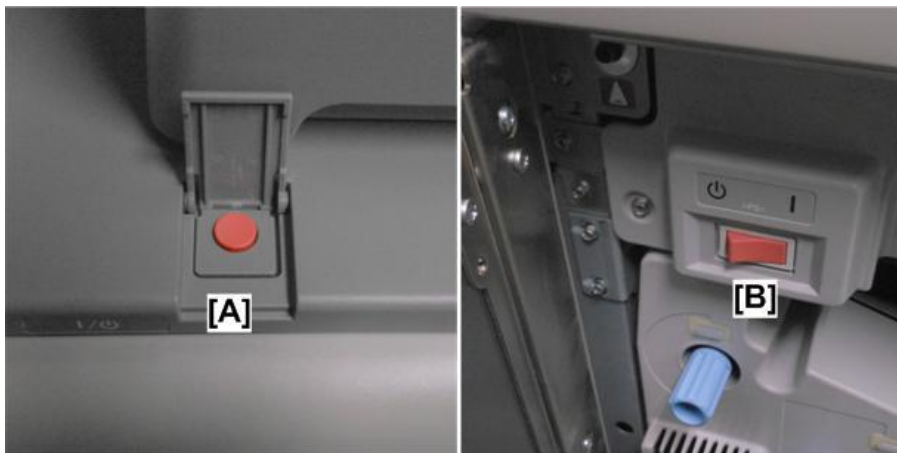
### ★ Important

- The Ring Binder and Perfect Binder also have breaker switches. These breaker switches should also be tested at installation, and then inspected, cleaned, and tested at least once a year.

1. Confirm that the main machine is connected to its power source.
2. If the machine is on, press the main power switch [A] to turn it OFF.

### ★ Important

- **Do not** touch the AC power switch [B] behind the left front door. This switch must remain in the ON position for the breaker switch test.

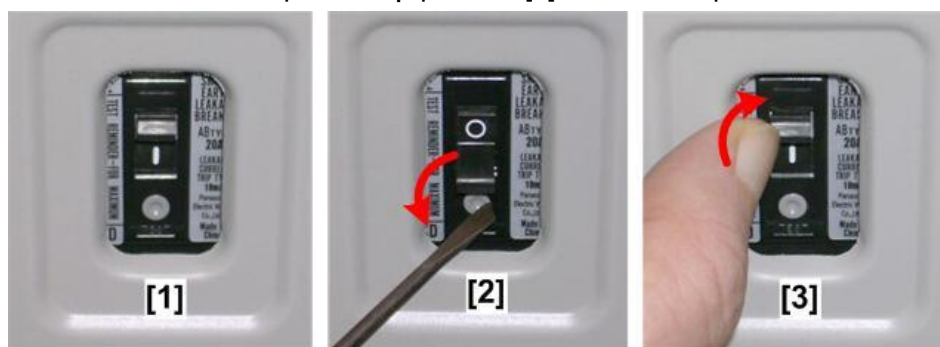


d270b0048

3. Test the breaker switch.
  - [1] indicates the normal (correct) position of the breaker switch test button.
  - Use the tip of a small screwdriver or pen to push the breaker test button. The breaker switch should flip to the "O" position [2]. This indicates that the breaker switch is operating normally.
  - If the breaker switch does not flip to the "O" position, the switch must be replaced.



- Push the switch up to the "I" position [3] for normal operation.



d1790910

#### ★ Important

- The main machine will not turn on if the breaker switch is not returned to the "I" position as shown at [1].

---

## Turning the Machine ON/OFF

---

#### ★ Important

- Before the machine leaves the factory, the AC power switch behind the left front door is set to ON. If this switch is OFF, it must be set to ON.
- As a safety precaution, set both switches to OFF and disconnect the main machine power cord before servicing the machine.
- After servicing the machine, be sure to set the AC power switch back to ON.

#### ↓ Note

- The operator should use the main power switch on the left front corner of the machine to turn the machine ON and OFF, not the AC power switch behind the left front door.
- However, the operator may not be able to switch the machine OFF after a serious error occurs (a fatal error in the fusing unit, for example). In such cases, the operator can use the AC power switch to switch the machine OFF. This is the only time the operator should use the AC power switch to turn the machine off.
- The service technician should always switch off both switches (and disconnect the power cord) before servicing the machine.

---

## Turning the Machine ON

---

1. Plug the power cord into the power source.

#### ↓ Note

- There is no power switch on the operation panel of this machine.

## 2. Installation

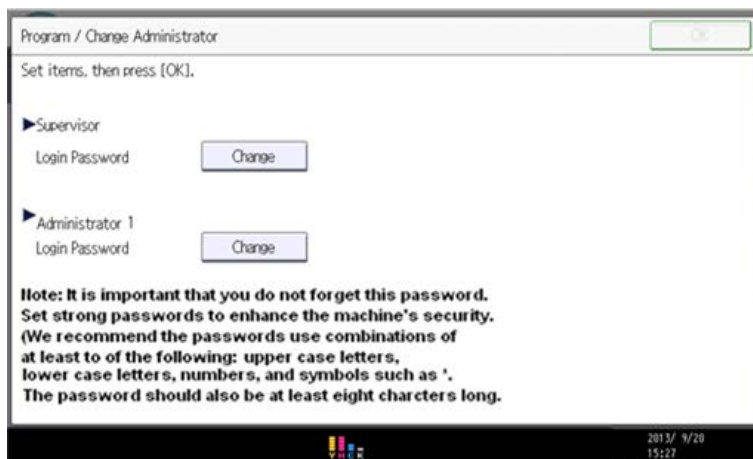
2. At the front left corner of the machine, open the cover, and then push the main power switch.



d1790405

### For Copier Models

1. The Program/Change Administrator screen is displayed.



w\_d179b2100\_en

#### Note

- This screen does not appear if you are using the printer model.
- The machine is waiting for input of the Supervisor and Administrator login passwords.
- It is the responsibility of the site supervisor and administration to set these passwords.
- The initial copy menu will not display until these passwords have been set by the Administrator and Supervisor. However, you can bypass this screen temporarily.

2. Enter the SP mode.

3. Execute **SP5755-002**. This SP bypasses the password request and allows you to use the machine to complete the installation.

#### Note

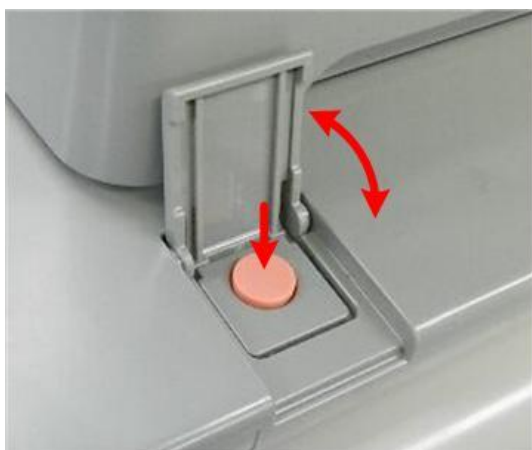
- For more information, see [Important Notice on Security Issues](#).

### Turning the Machine OFF

---

1. At the front left corner of the machine, open the cover, and press the main power switch. Close the

cover.



d1792202

A message appears telling you to wait until the machine shuts down completely. It takes time for the hard disk drive to stop rotating so that it is safe to shut down the machine.

---

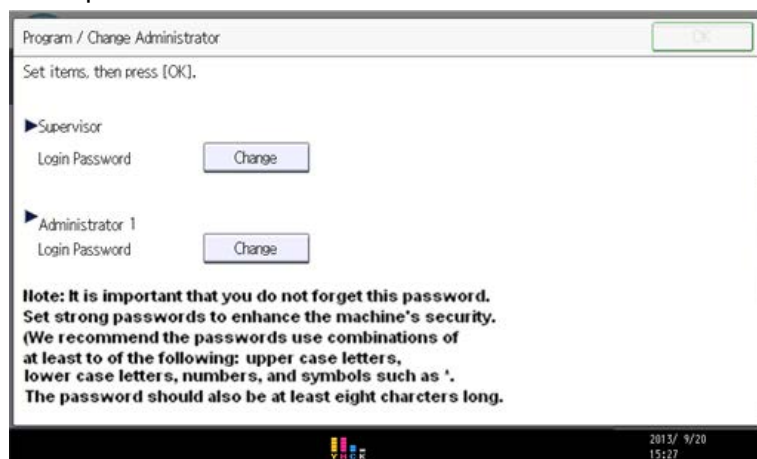
## Important Notice on Security Issues

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### Overview

---

The following Program/Change Administrator screen is displayed at the first power-up if you are using the copier model.



d176f2100

- When the customers set the administrator/supervisor login password, the display disappears and the home display will appear.
  - The customers, however, can erase this screen with the following procedure if they think there is no need to set the password.
- 1.** On the Program/Change Administrator screen, press [Change] next to Supervisor and then touch [OK] without inputting any password.
  - 2.** Touch [OK] again when the Confirm password display shows up.
  - 3.** For Administrator 1, do the same procedure as steps 1 and 2.
  - 4.** Press the [OK] button, then the home display appears.

## 2. Installation

- **SP5-755-002** allows the service technician to skip this screen temporarily and continue the installation procedure without setting an administrator password.
- However, the Program/Change Administrator screen appears every time the machine is cycle off/on if the password has not been set.

### Setting the Password

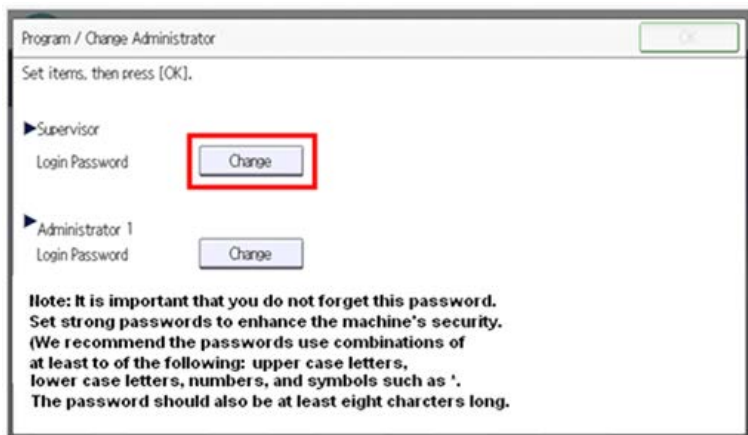
---

For the security of the machine, when it is turned ON for the first time, the Program/Change Administrator display appears to prompt the customer to set the administrator password,

#### **⚠ CAUTION**

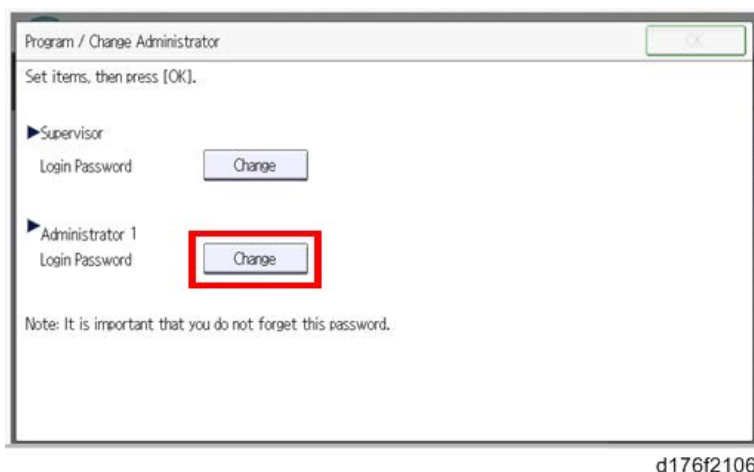
- If Supervisor/Administrators 1-4 passwords are already configured via network, the "Change Supervisor login password" screen will not appear.
- The passwords for Supervisor/Administrators 1 to 4 can be set using "System Settings". However, if the passwords are set in this way, the Program/Change Administrator screen will appear every time the machine is turned ON. Therefore, it is recommended that customers set the passwords via network or from the Program/Change Administrator screen.

- 1.** Turn the main power of the machine ON.
- 2.** Change the Supervisor login password.



a176f2101

- 3.** Enter the password.
- 4.** Press [OK].
- 5.** Confirm the Password.
- 6.** Press [OK].

**7.** Change the Administrator 1 login password.**8.** Enter the password.**9.** Press [OK].**10.** Confirm the password.**11.** Press [OK].**12.** Turn OFF the machine, and then turn it ON again.

---

## Installing the Toner Bottles

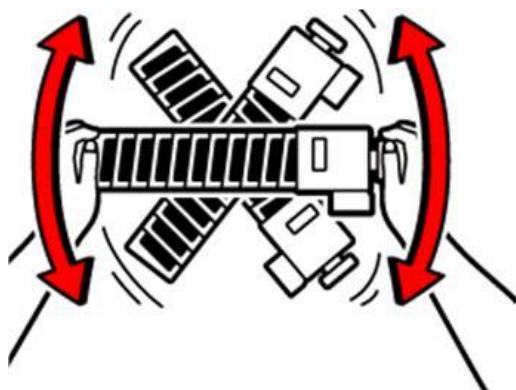
---

### Bottle Installation and Initialization

---

**★ Important**

- Before you begin this procedure, confirm that the main power of the machine is OFF.

**1.** Turn OFF the main power of the machine.**2.** Wait for the message to go off before you do the procedure below.**3.** Open the left front door, and turn off the AC power switch.**4.** Make sure the machine is OFF before **opening the left front door**.**5.** Turn on the AC power switch. (Ignore the door open alert).**6.** Remove the two toner bottles from the packaging.**7.** Rotate each bottle at least 10 times to make sure that the toner inside is loose.

d1790904

**8.** Open the toner cover, insert both toner bottles, and then close the toner cover.

## 2. Installation

- 9.** Enter the SP mode
- 10.** Execute **SP7628-002** (Clear PM Counter).
- 11.** Exit the SP mode.
- 12.** Close the left front door. Toner filling will begin automatically after closing the left front door.  
As soon as toner filling completes, the machine will automatically start process control. (If there is a problem, see [Problems During Toner Bottle Installation.](#))
- 13.** Process control is performed.  
As soon as process control completes, a message on the operation panel tells you that copying can begin. (If there is a problem, see [Problems During Toner Bottle Installation.](#))
- 14.** Enter the SP mode.
- 15.** Execute **SP3012-001** (ProCon OK?) to confirm that process control succeeded.
  - If process control was successful, "11" is displayed.
  - If any other numbers displayed, see [Problems During Toner Bottle Installation.](#)
- 16.** Exit the SP mode.

### Problems During Toner Bottle Installation

---

#### Toner Filling Failed

- 1.** Open the toner cover and remove the toner bottles.
- 2.** Rotate each bottle at least 10 times to make sure that the toner inside is loose.
- 3.** Insert both toner bottles, and then close the toner cover.
- 4.** Make sure the left front door is open.
- 5.** Turn the machine OFF and then ON.
- 6.** Close the left front door.
- 7.** Proceed to Step 10 of [Bottle Installation and Initialization.](#)

#### Process Control Failed

- 1.** If the machine has returned an SC error, refer to the SC error list and perform the troubleshooting procedure to solve the problem.
- 2.** Make sure that the left front door is open.
- 3.** Turn the machine OFF and then ON.
- 4.** Close the left front door.
- 5.** Proceed to **Step 12** of [Bottle Installation and Initialization.](#)

#### SP3012-001 Did Not Return "11"

- 1.** Refer to the Troubleshooting manual for this machine.
- 2.** Perform the troubleshooting procedure according to the number displayed.

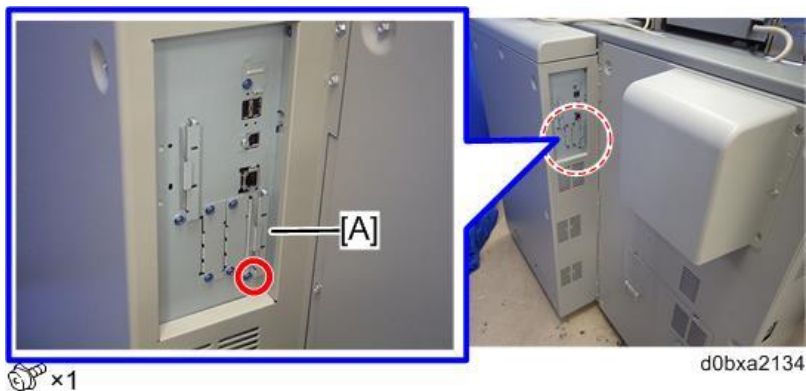
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### Installing Paper Library Data

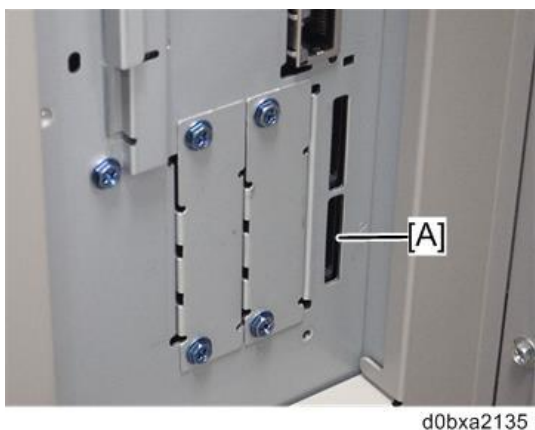
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- 1.** Create a folder in the root directory of an SD card and name the folder "mqp".
- 2.** Copy the paper database file into the "mqp" folder, and then rename the copied file "library.mqp".

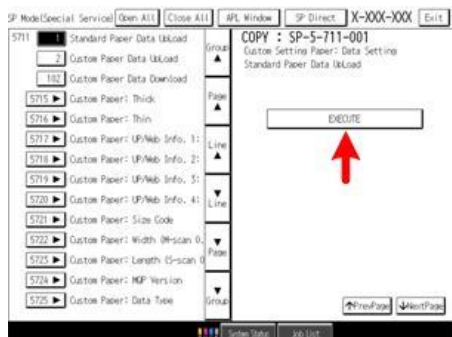
3. Make sure that the machine is turned OFF.
4. Remove the SD card slot cover [A]. (✎x 1).



5. Insert the SD card which has the "library.mqp" file into SD card Slot 2 (lower slot) [A] on the right side of the controller box.



6. Turn on the machine.
7. Make sure that the data version of the SD card is newer than the data version of the flash ROM on the controller. If not, prepare the latest data version of the Paper Library on an SD card.
  - The version of the data on the SD card can be checked with **SP5711-202**.
  - The version of the data in the flash ROM on the controller can be checked with **SP5711-201**.
8. Select SP5-711-001, and then touch [EXECUTE].



## 2. Installation

### 9. Touch [EXECUTE] again.



d1790912

### 10. When the machine displays "Completed" and prompts you to re-boot, touch [Exit] to leave the SP mode.



d1790913

### 11. Turn OFF the machine, and remove the SD card from SD card Slot 2.

### 12. Turn ON the machine.

### 13. Check the Paper Library data version with SP5-711-201 (Flash ROM) to confirm that the Paper Library data has been updated.

---

## Tip Prevention Braces (Printer Models Only)

---

### **⚠ CAUTION**

- Because printer models do not have the ADF, they are lighter on the top compared to the copier models. When all the paper trays are full, the printer model may tip forward.

Two braces can be installed under the front corners of the printer model to prevent tipping.

### **★ Important**

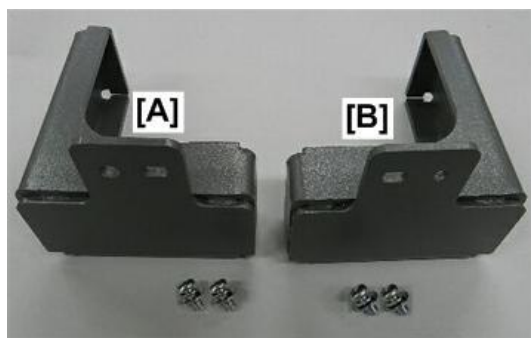
- Perform this procedure before loading the paper trays.

### 1. Open both front doors.

The braces are provided with the machine.

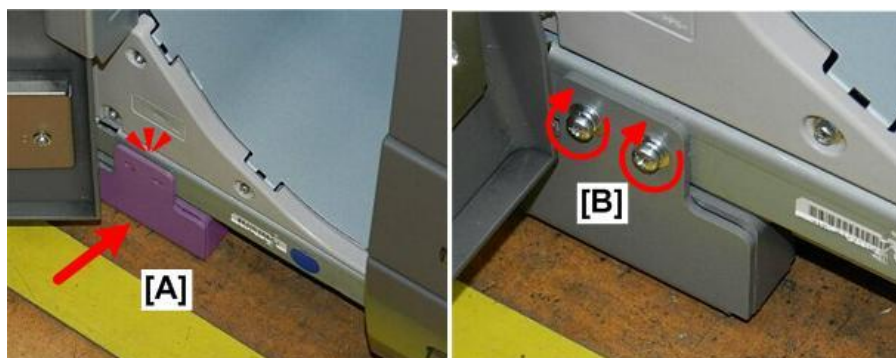
- Left brace [A]
- Right brace [B]





m263b1024

2. Slide the left brace [A] under the left corner of the machine.
3. Fasten the brace [B] with the screws provided (✎x2).



m263b1025

4. Slide the right brace [A] under the right corner of the machine.
5. Fasten the brace [B] with the screws provided (✎x2).



m263b1026

6. Close the front doors.

---

## Paper Trays

---

### Loading the Paper Trays

---

#### ★ Important

- For printer models, install the tip prevention braces before loading the paper trays. For the procedure, see [Tip Prevention Braces \(Printer Models Only\)](#).

## 2. Installation

1. Load each paper tray.
2. Move the side fence and bottom fence to the correct positions for the paper.
3. Attach the paper size decals to the front of the paper cassette trays and the tandem tray.
4. Load the left side of Tray 1 (tandem tray).
5. Close Tray 1 and confirm that the machine moves the paper stack from the left side to the empty right side of the tray.
6. Fill Tray 2 and Tray 3 with paper.  
The size of the paper in each tray is detected automatically.

## Paper Tray Settings

---

1. Press the [Paper Settings] key on the operation panel.
2. Select the Tray icon.
3. Select the paper type and paper weight for each tray.

### ★ Important

- The paper type and paper weight for the paper provided with the machine should be set to "Plain Paper" and "Weight 2".



d1790914

## Printing the SMC Report

---

Print the SMC report. This is a complete list of all SP settings and defaults.

1. Go into the SP mode.
2. Do **SP5990-6** to print a list of the non-default SP code settings for future reference.
  - The SP5990-1 (All) printout is about 140 pages single-sided.
  - SP5990-6 (non-default) requires only about 5 sheets.
3. Keep the SMC report in the space on the right side of the waste toner bottle, together with the factory setting sheet.

## Making Test Prints

---

### ★ Important

- Make sure that A3 or DLT paper is loaded in one of the trays. Use the same type of paper that the customer normally uses for output.

## Copier Models

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- 1.** Place a test chart on the exposure glass.
- 2.** Print one copy of the chart.
- 3.** Check the printing results.

## Printer Models

---

- 1.** Print the test print from the printer driver.
- 2.** Check the printing results.

---

## Checking and Adjusting Image Areas after Installation or Moving

---

Perform adjustments in the following order:

1. Front/Back Alignment (Magnification Adjustment)  
Use one of the two methods described below.
2. Main Scan/Sub Scan Registration Adjustment

### Copier Magnification Front/Back Adjustment (Method 1)

---

Perform this procedure or the one in the next section (Method 2). The second method is faster and easier.

This adjustment ensures that the image areas on both sides (front and back) of the paper are aligned with one another. This adjustment is made before the machine leaves the factory, and can also be done at machine installation.

The adjustment flow is as follows:

- Set Tray 2 for Normal Paper, Thickness 2.
- Load A3 size Normal Paper in Tray 2.
- Print the Trim Pattern
- Make calculations based on measurements of the Trim Pattern, and then make adjustments

- 1.** Set the A3 size Normal paper in Tray 2.
- 2.** Enter the SP mode. Check and set the following SP codes.

2103-001	<ul style="list-style-type: none"> <li>• Note the setting.</li> <li>• If it is not "4.0", set it to "4.0".</li> <li>• Restore to the original setting after adjustment.</li> </ul>
2122-112	<ul style="list-style-type: none"> <li>• Note the setting.</li> <li>• If it is not "0", set it to "0".</li> <li>• Restore to the original setting after adjustment.</li> </ul>
2103-002	<ul style="list-style-type: none"> <li>• Note the setting.</li> <li>• If it is not "4.0", set it to "4.0".</li> <li>• Restore to the original setting after adjustment.</li> </ul>
2103-003	<ul style="list-style-type: none"> <li>• Note the setting.</li> <li>• If it is not "2.0", set it to "2.0".</li> </ul>

## 2. Installation

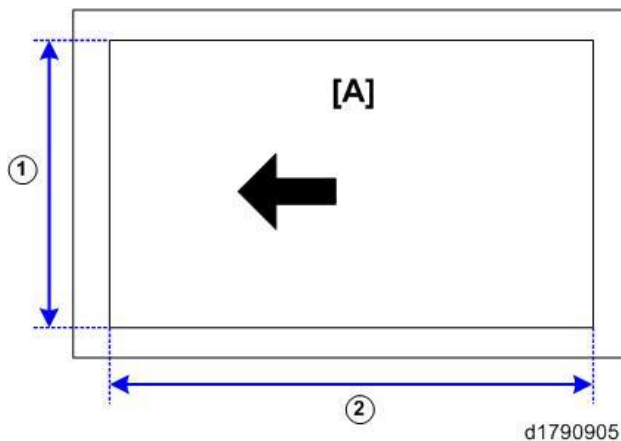
	<ul style="list-style-type: none"> <li>Restore to the original setting after adjustment.</li> </ul>
2103-004	<ul style="list-style-type: none"> <li>Note the setting.</li> <li>If it is not "2.0", set it to "2.0".</li> <li>Restore to the original setting after adjustment.</li> </ul>
1004-001 to 003	<ul style="list-style-type: none"> <li>Note the settings.</li> <li>Make sure that all these SP codes are set to their defaults.</li> <li>Do not restore to the original settings after adjustment.</li> </ul>
1005-001 to 004	
2102 - 041 to 044	<ul style="list-style-type: none"> <li>Set all of these SP codes to "0".</li> </ul>

- 3.** Go to SP2109-003, select pattern #14, and then print Trimming Area patterns **on both sides** of 5 A3 sheets.

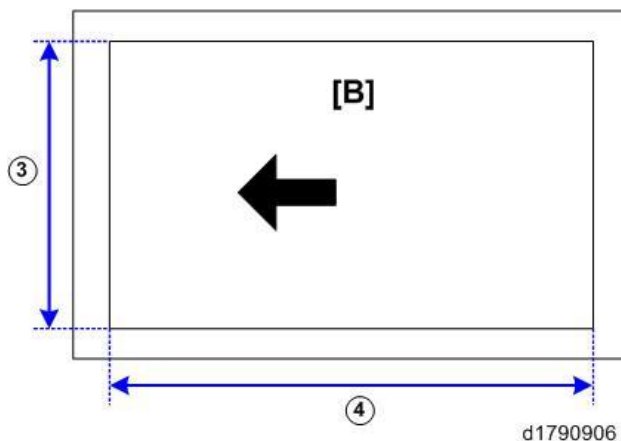
**Note**

- The procedure for printing the pattern is different for printer models. For details, see [Printing Pattern #14 for Printer Models](#).

- 4.** On the front side [A] of each A3 sheet, record the measurements for ① and ② at the leading edge and left edge. Calculate the average of 5 measurements.



- 5.** On the back side [B] of each A3 sheet, record the measurements for ③ and ④ at the leading edge and left edge. Calculate the average of 5 measurements.



You can use the table below to record the measurements and averaged results.

Print	①	②	③	④
-------	---	---	---	---

1st				
2nd				
3rd				
4th				
5th				
Ave.				

- 6.** Use the averages for ①, ②, ③, ④ to determine the magnification rates.

Front, Main Scan (%) = Ave. ① mm / 293 mm x100

Front, Sub Scan (%) = Ave. ② mm / 412 mm x100

Back, Main Scan (%) = Ave. ③ mm / 293 mm x 100

Back, Sub Scan (%) = Ave. ④ mm / 412 mm x 100

#### Theoretical Trim Pattern Values

	A3	DLT
①, ③	293 mm	275.4 mm
②, ④	412 mm	423.8 mm

- 7.** Enter the results calculated in Step 6 into SP2102-041, 042, 043, 044 (front/back, main/sub scan) to adjust magnification for both the front and rear sides of the paper (you can adjust in 0.001% steps).
- 8.** After entering the calculated values, print another 5 Trim Patterns (front/back sides) using SP2109-003 Pattern #14. Repeat Steps 4 and 5 to check the magnification rates for the front and back sides of the paper.

#### Note

- The procedure for printing the pattern is different for printer models. For details, see [Printing Pattern #14 for Printer Models](#).

### Copier Magnification Front/Back Adjustment (Method 2)

This method is faster and easier than Method 1 described in the previous section.

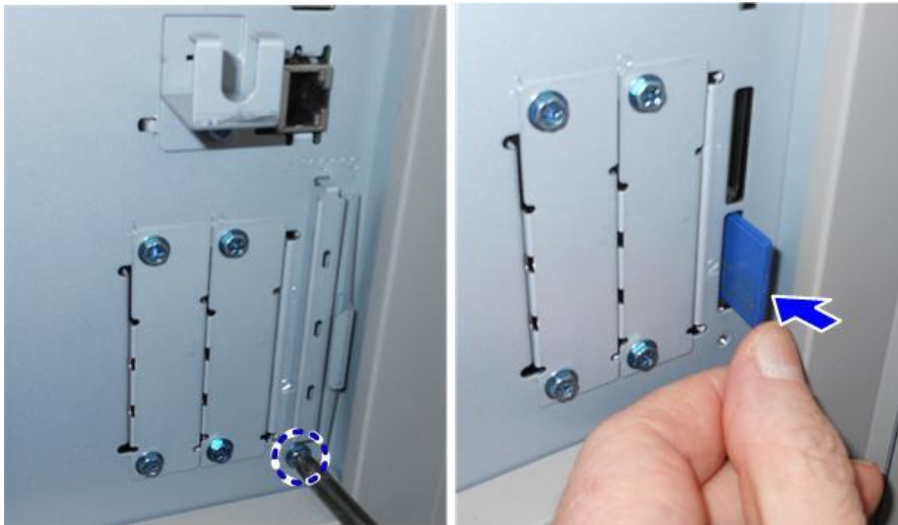
#### Important

- If there is any image skew, this must be corrected before performing front/back registration adjustment.
- This adjustment can be done using the following paper sizes:  
SRA3, A3, 13" x 19", 12" x 18", 11" x 17", 315 mm x 450 mm, 318 mm x 469 mm, Custom paper sizes between A4 and 13" x19"

- Turn OFF the main machine.
- Remove the SD card slot cover, and then insert the "NICE for registration" SD card into Slot 2. (➤)

## 2. Installation

x1)



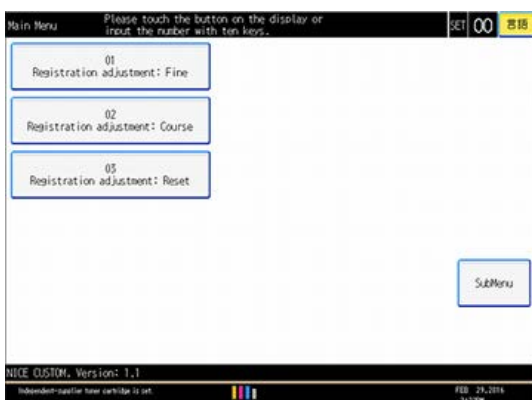
d270b0054

- 3.** Turn ON the main machine.
- 4.** Press the Program key on the operation panel to open the NICE menu.



d270b0055

- 5.** On the Main Menu, press [01 Registration adjustment: Fine] or [02 Registration adjustment: Coarse].



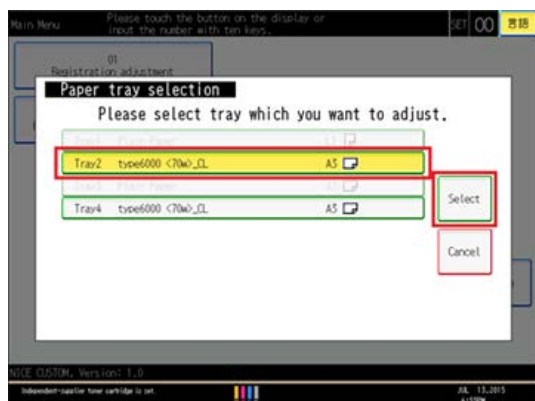
d270b1401

- **01 Registration adjustment: Fine**  
Adjusts the registration of front and back sides by scanning a test chart six times (front and back 3 times each).

- **02 Registration adjustment: Coarse**

Adjusts the registration of front and back sides by scanning a test chart twice (front and back once each). This adjustment is easier, but is less precise compared to 'Fine'.

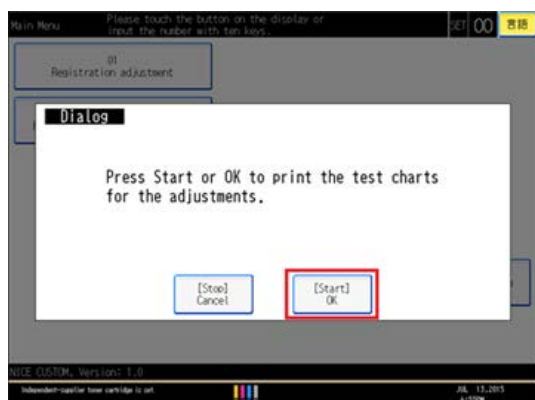
6. Select the tray for the registration adjustment, and then press [Select]. Note that the adjustment is done for each tray.



d270b1402

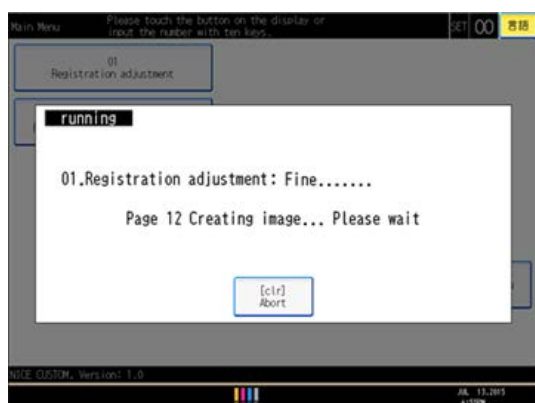
Adjustment is available only for trays associated with custom paper settings. Trays used under manual settings are grayed out and cannot be adjusted.

7. Press [Start OK].



d270b1403

8. Wait for the test chart to print out.



d270b1404

## 2. Installation

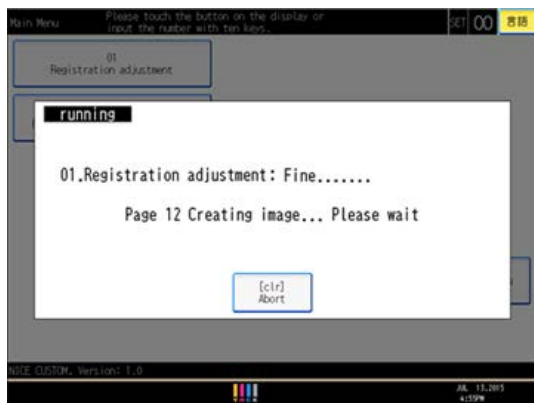
The illustration above shows an example of the sequence for the 'Registration adjustment: Fine.' procedure

### **9.** Check the printouts.

The number of test charts printed differs depending on the type of adjustment selected (01 Fine, or 02 Coarse).

#### **01 Registration adjustment: Fine**

Test chart (x3), Blank sheet (3 copies printed respectively before and after the test chart).



d270b1404

#### **Registration adjustment: Coarse**

Test chart (x1), Blank sheet (3 copies printed respectively before and after the test chart)



d270b1406

#### **Note**

- The blank sheets are not used for the adjustment.



**10.** Press [Start OK].

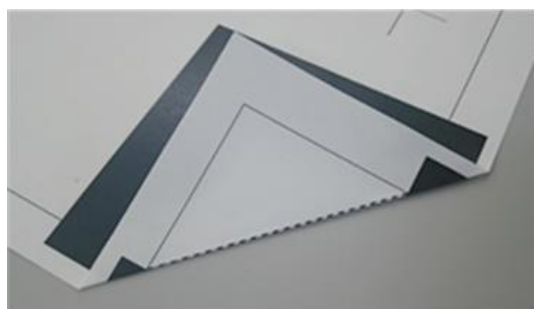
d270b1407

- 11.** To start scanning the FIRST side (front), place the test chart so that the side marked 'FIRST' is facing up. Fold the 4 corners along the dotted lines printed on the back side. For '01 Registration adjustment: Fine', do the same for the remaining 2 charts.



d270b1408

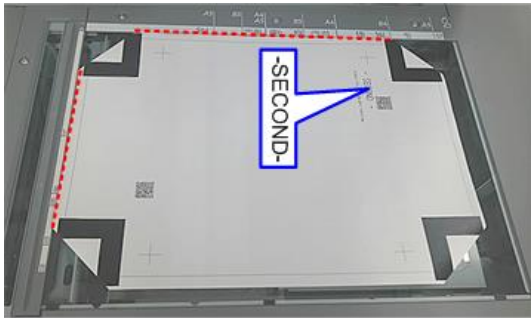
For best results, fold along the line exactly



d270b1409

- 12.** Place the chart on the exposure glass so that the side marked 'SECOND' is facing up, because you will be scanning the FIRST side. Make sure the top and left edges of the chart are set flush against the edges of the exposure glass.

## 2. Installation



d270b1410

**13.** Press [Start OK] to start scanning.



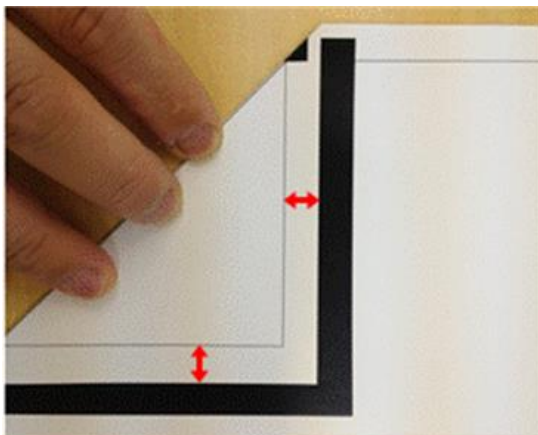
d270b1411

**14.** After scanning is completed, remove the chart from the exposure glass, and then press [Start OK]. For 'Registration adjustment: Fine', do the same for the 2 other charts.



d270b1412

From the scanned data, the software application on the NICE SD card reads the distance between the dotted lines along the folded edges and the paper edge on all 4 corners.

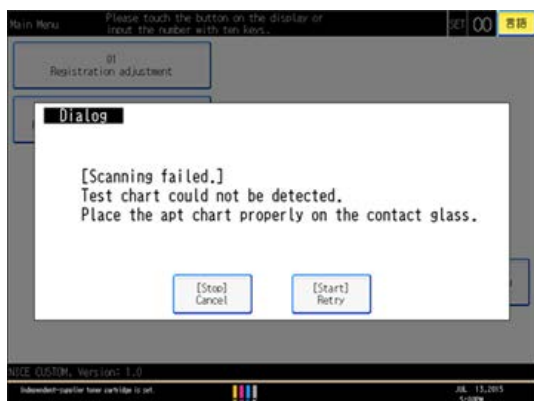


d270b1413

An error message will appear in the following cases:

- (1) if the same chart was scanned
- (2) if the wrong side of the chart was scanned
- (3) if the chart was not placed correctly on the exposure glass.

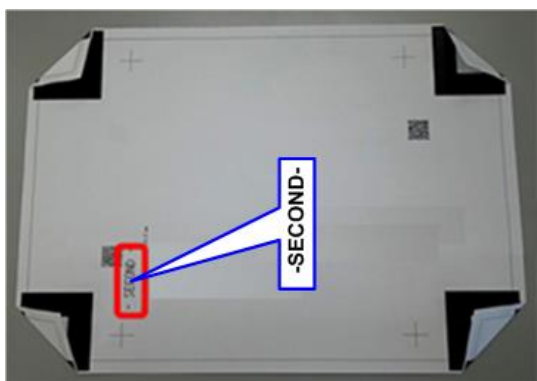
Press [Start Retry], and scan again to recover from the error



d270b1414

- 15.** To start scanning the SECOND side (back), flip the chart and fold the 4 corners along the dotted lines as you did for the FRONT side above, but this time with the side inscribed 'SECOND' facing up.

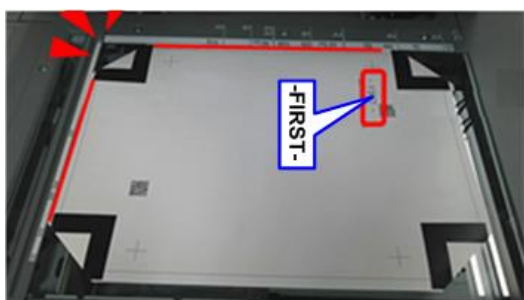
For '01 Registration adjustment: Fine', do the same for the 2 other charts.



d270b1415

- 16.** Place the chart on the exposure glass so that the side marked 'FIRST' is facing up, because you will be scanning the SECOND side.

Make sure the top and left edges of the chart are set flush against the edges of the exposure glass.



d270b1416

## 2. Installation

### 17. Press [Start OK] to start scanning.



### 18. After scanning is completed, remove the chart from the exposure glass and press [Start OK].



d270b1418

For 'Registration adjustment: Fine', do the same for the 2 other charts. The screen below is displayed while the system makes the adjustments.



d270b1419

**19.** Press [Start OK] to print out the test charts and blank sheets, and check the results.



d270b1420

The number of test charts printed differs depending on the adjustment (Fine or Coarse).

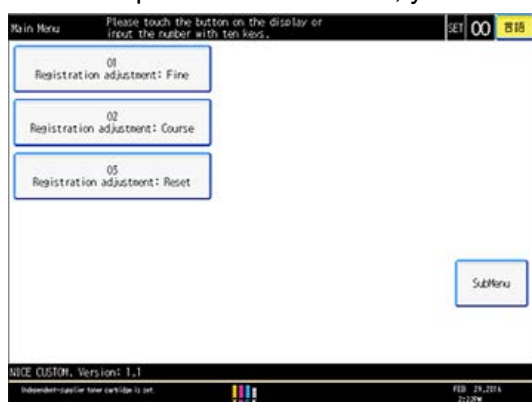
- **01 Registration adjustment: Fine:** Test chart (x3) and blank sheets (3 copies respectively before and after the test charts).
- **Registration adjustment: Coarse:** Test chart (x1) and blank sheets (3 copies respectively before and after the test charts).

**20.** Press [Start OK] to finish.



d270b1421

When the procedure is finished, you will see the initial NICE menu.



d270b1422

**21.** Press the Program key to exit NICE.

**22.** Turn the machine OFF, remove the SD card from Slot 2, and then replace the SD card slot cover.

**23.** Turn the machine ON.

## 2. Installation

### Main Scan/Sub Scan Registration Adjustment

---

Perform this adjustment for the optimum settings for paper registration in the Main and Sub Scan directions.

The adjustment flow is as follows::

- Set Tray 2 for Normal Paper, Thickness 2.
- Load A3 size Normal Paper in Tray 2.
- Print the Trim Pattern.
- Make calculations based on measurements of the Trim Patterns, and then make adjustments.

**1.** Set A3 size Normal paper in Tray 2.

**2.** Enter the SP mode. Check and set the following SP codes.

1001-001 to 009	<ul style="list-style-type: none"><li>• Check each setting.</li><li>• If it is not "0", set it to "0".</li><li>• Do not restore to the original settings after adjustment.</li></ul>
1003-001 to 008	<ul style="list-style-type: none"><li>• Check each setting.</li><li>• If it is not "0", set it to "0".</li><li>• Do not restore to the original settings after adjustment.</li></ul>

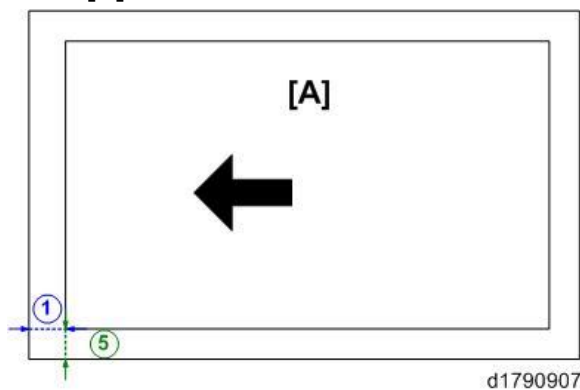
**3.** Go to SP2109-003, select pattern #14, and then print Trimming Area patterns **on one side** of 5 A3 sheets.

**Note**

- The procedure for printing the pattern is different for printer models. For details, see [Printing Pattern #14 for Printer Models](#).

**4.** Measure ① and ⑤ on each sheet [A], and average the values.

**Front [A]**

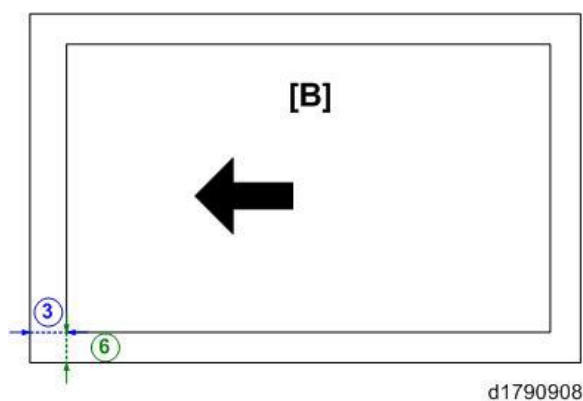


You can use the table below to record the measurements and averaged results.

Print	① (X)	⑤ (Y)
1st		
2nd		
3rd		
4th		

Print	① (X)	⑤ (Y)
5th		
Ave.		
Adjustment for X, Y		

- 5.** Use the average value of ① to calculate the sub scan adjustment (X) with the following equation:  
 $4 \text{ mm} - \text{Ave. } ① \text{ mm} = X \text{ mm}$
- 6.** Use the averaged value calculated in Step 5 to adjust the setting of SP1501-001.
- The calculated value is added to the current setting of SP1501-001.
  - For example, if the current value of SP1501-001 is "1.0" mm, and the calculated value is "-0.2", then you should enter "0.8" (mm).
- 7.** Use the average value of ⑤ to calculate the main scan adjustment (Y) with the following equation:  
 $2 \text{ mm} - \text{Ave. } ⑤ \text{ mm} = Y \text{ mm}$
- 8.** Use the averaged value calculated in Step 7 to adjust the setting of SP1502-001.
- The calculated value is added to the current setting of SP1502-001.
  - For example, if the current value of SP1502-001 is "1.0" mm, and the calculated value is "0.2", then you should enter "1.2" (mm).
- 9.** After making the adjustments, go to SP2109-003, select pattern #14, and then print Trimming Area patterns **on both sides** of 5 A3 sheets.
- The procedure for printing the pattern is different for printer models. For details, see [Printing Pattern #14 for Printer Models](#).
  - Measure ① and ⑤ for the front side, just as you did above, and then measure ③ and ⑥ for the back side as shown in the diagram below.
  - The measurements for ①,③ should be  $4 \pm 0.3 \text{ mm}$ .
  - If each value for ⑤ and ⑥ is  $2.0 \pm 0.1$  and the averaged value is  $2.0 \pm 0.3$ , no further adjustment is required.
  - If ① and ⑤ are not within these, repeat the procedure from Step 3.
  - If ③ and ⑥ are not within range, proceed to the next step



Print	① (X)	⑤ (Y)
1st		
2nd		

## 2. Installation

Print	① (X)	⑤ (Y)
3rd		
4th		
5th		
Average		
Adjustment for X, Y		

Print	③ (X)	⑥ (Y)
1st		
2nd		
3rd		
4th		
5th		
Average		
Adjustment for X, Y		

- 10.** If the calculated average ③ is not within  $2.0 \pm 0.1$  mm, or if none of the measurements (1 to 5) ③ are within  $2.0 \pm 0.3$  (recommended), calculate the offset for the sub scan registration value for the average value of ③:
- $$2 \text{ mm} - \text{③ mm} = X \text{ mm}$$
- 11.** Enter the SP mode, and **add** the offset value for the sub scan adjustment on the back page to the current setting of SP1501-002.
- 12.** If the calculated average of ⑥ is not within  $2.0 \pm 0.1$  mm, or if none of the measurements (1 to 5) ⑥ are within  $2.0 \pm 0.3$  (recommended), calculate the offset for the main scan registration value for the average value of ⑥:  $2 \text{ mm} - \text{⑥ mm} = Y \text{ mm}$
- 13.** Enter the SP mode, and **add** the offset value for the main scan adjustment on the back page to the current setting of SP1502-002.
- 14.** Go to SP2109-003, select pattern #14, and then print Trimming Area patterns **on both sides** of 5 A3 sheets. Measure the results.
- The averaged result for ③ should be  $4.0 \pm 0.1$  mm, and each value should be in the range  $4.0 \pm 0.3$  mm.
  - The averaged result for ⑥ should be  $2.0 \pm 0.1$  mm, and each value should be in the range  $2.0 \pm 0.3$  mm.

### Printing Pattern #14 for Printer Models

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With the copier models, the pattern for front/back adjustment can be printed by accessing SP2109-003, selecting the pattern number, and then touching "Copy Window" at the top of the page. Because printer models do not have "Copy Window" on their displays, the pattern is printed in a different way.

- Enter the SP mode.
- Select SP2109-003, and select Pattern #14.



- 3.** Select a tray and load only the number of sheets for the number of prints that you want to make.
- 4.** Unload the paper from the other paper trays. (The machine may print up to 100 sheets if paper is loaded in another tray.)
- 5.** Select SP5990-001 (SP Print Mode: All (Data List)). Touch “Execute”, and then select either single-side or double-side printing.
- 6.** When the machine displays the paper out message, touch “Cancel” to stop printing.

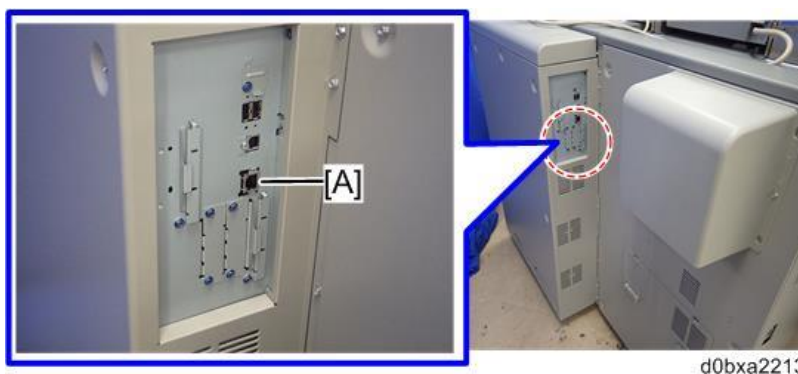
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## Connecting the Ethernet Cable (Copier Models Only)

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### ★ Important

- Switch the machine off before you connect the Ethernet cable.
1. Make sure that the main machine is turned off.
  2. Connect the Ethernet cable to the Ethernet interface [A] connection point.




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## Moving and Transporting the Machine

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### ★ Important

- Before moving the main machine, raise the leveling bolts that were lowered when leveling the machine. (Copier models only)
- When moving the main machine, do not press down on the ADF. The ADF may be bent, and distortion of the scan or copy images may occur. (Copier models only)

### Moving the Machine

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This procedure is the same, whether you are moving the machine long-distance, or simply moving the machine to another room, another building, or to another floor of the same building.

### ★ Important

- Remove the four height adjustment holders under the machine.
- For printer models, remove the left brace [A] and right brace [B] at the front corners of the machine. (✎x4).
- Remove the paper from the paper trays.

## 2. Installation



m263b1027

- Turn the AC power switch to OFF.
- Grip the power cord by its head, and then unplug the power cord.
- Make sure all doors and trays are closed.

### **⚠ CAUTION**

- The machine is heavy. To avoid damaging the machine, place your hands at the corners of the main frame and push it slowly and straight.

### **★ Important**

- If the passageway is too narrow for the machine, the controller box can be removed. See the procedures for removing the controller box.

#### 1. Clear the waste toner path

- Make sure that the waste toner bottle is set in the machine.
- Close both front doors.
- Enter the SP mode and execute SP5805-067 to turn on the toner feed motor.
- While the toner feed motor is running, execute SP5804-168 to turn on the waste toner transport motor. These two SP codes should be executed at the same time.
- Wait at least 2 minutes, and then disable SP5805-067 and SP5804-168.

#### 2. Remove the toner supply bottles (the machine should be moved with the bottles removed)

- Make sure that the toner supply bottles are set correctly, and then remove them.
- If the bottle cannot be released by the release lever, do the following:
  - If there is a toner bottle on the left side of the toner bottle unit, enter the SP mode, select SP2780-001 and then set it to "0" (Off).
  - If there is a toner bottle on the right side of the toner bottle unit, enter the SP mode, select SP2780-002, and then set it to "0" (Off).

#### 3. Separate the ITB unit from the drum.

- Open the front door, and rotate the ITB lift lever down to the left.
- Remove the lever (the door will not close if the lever is down).
- Close the front door.

#### 4. After arriving at the new installation site, do the following:

- Open the front doors.
- Re-attach the ITB lever, rotate it up, and then close the doors.

- Turn the power of the machine ON.
- Open the toner cover and insert the toner supply bottles.
- Close the toner cover.

### If Peripheral Devices Are Installed

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#### ★ Important

- Always disconnect the ground wire before you detach the LCT completely from the machine.

If a finisher is installed, perform the following procedure:

- 1.** Turn the AC power switch to OFF.
- 2.** Grip the head of the power cord, and disconnect the main machine from its power source.
- 3.** Disconnect all I/F cables in the machine configuration.
- 4.** Make sure the front doors of the main machine and all other peripherals are closed.
- 5.** Loosen the screw of the caster of the stack/staple unit of the finisher.
  - Normally, the lowered caster supports the stack/staple unit of the finisher from sagging when it is pulled out of the finisher.
  - However, the caster should be raised before the finisher is moved. This prevents the caster from snagging on a carpet or door jamb when the finisher is moved.
  - Be sure to lower the caster again after the finisher reaches its next location.
- 6.** Raise the caster so it is not in contact with the floor, and then tighten the screw.

### Heater Options

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#### Paper Tray Heater

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There are two tray heaters for the paper trays, an upper heater for Tray 1 and a lower heater for Trays 2 and 3.

Open the left door, and you will find the bank LCT heater SW in the left lower area.

#### ↓ Note

- These heaters are options and require installation.
- Do not turn the bank LCT heater SW to ON unless necessary. We recommend that this heater is used only when the humidity is high.
- Explain to the customer that, while heaters can effectively reduce moisture in the paper trays, they will consume electricity.
- Use the SP mode if you want to change the settings for the paper heater.

#### Optics Anti-condensation Heater (Copier Models Only)

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The optics anti-condensation heater is an option and requires installation.

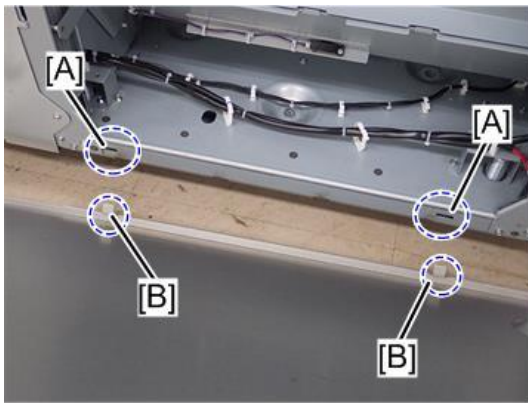
## 2. Installation

### 1. Remove the left cover [A] (🔧 x7).



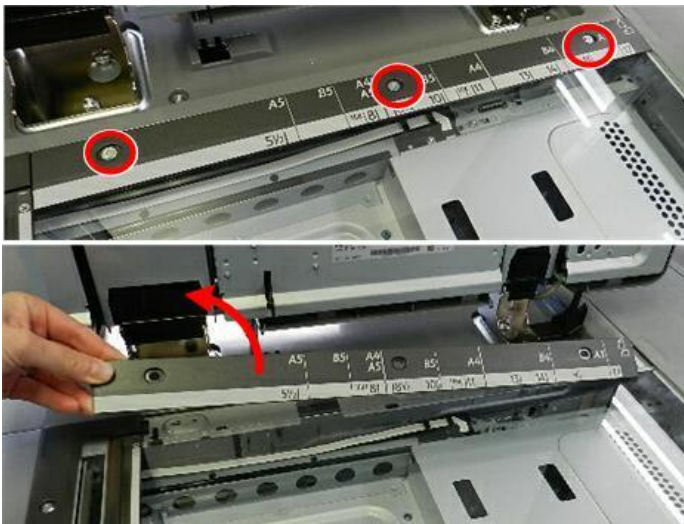
#### Note

- When removing the left cover, unhook the hooks [B] of the left cover from the cutouts [A] of the lower side of the machine.

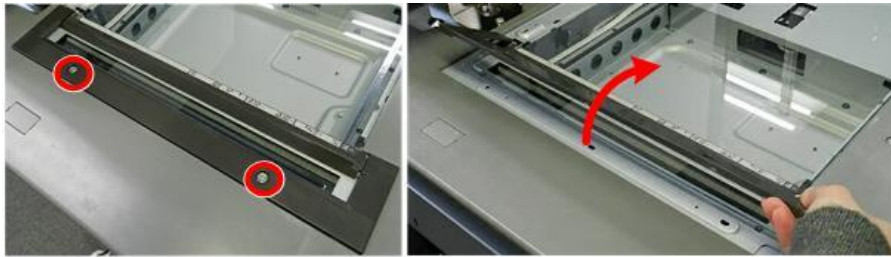


### 2. Open the ADF.

### 3. Remove the rear scale (🔧 x3).

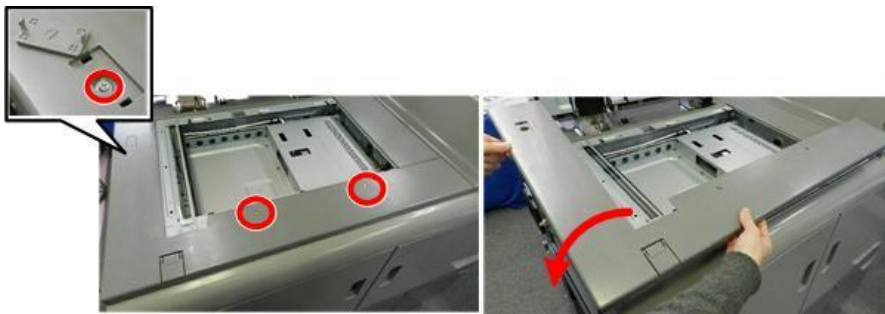


- 4.** Remove the left cover (⊕ x2).



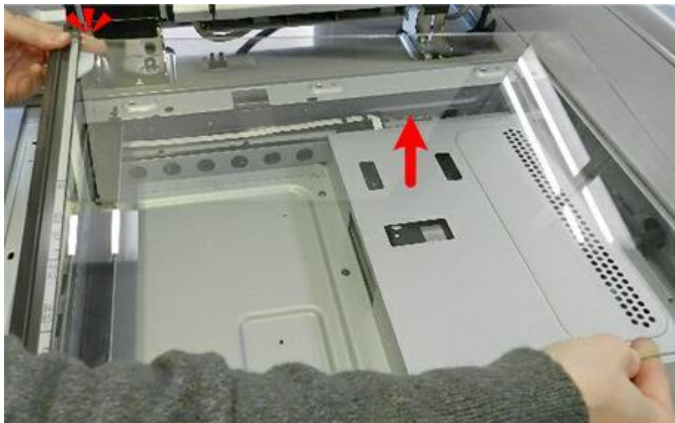
d1792622

- 5.** Remove the front “L” cover (cap x1, ⊕ x1, ⊕ x 2)



d1792643

- 6.** Remove the exposure glass.



d1792624

- 7.** Turn the scanner motor belt to move the 1st scanner carriage from left to right as far as the lens

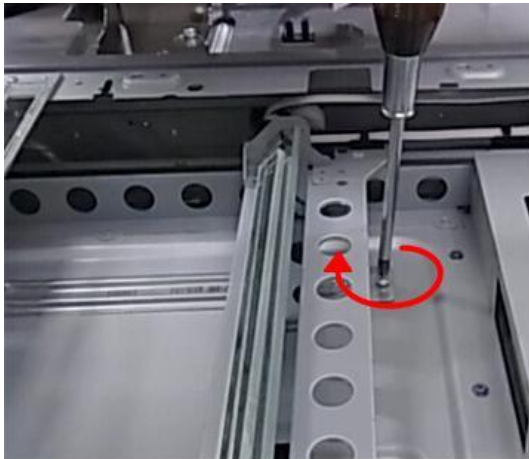
## 2. Installation

block cover.



d1790997

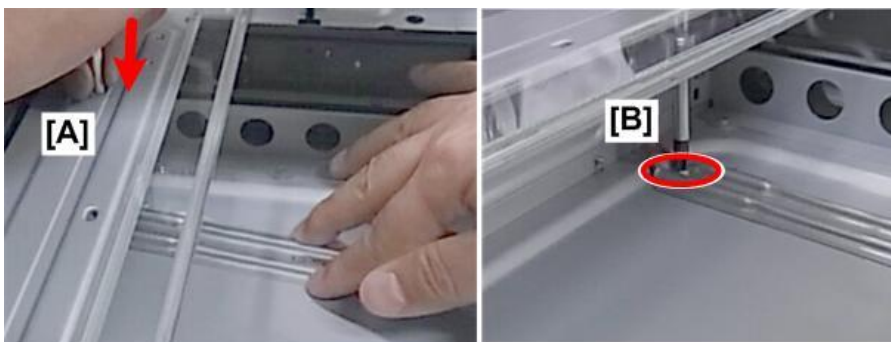
- 8.** Position the heater and fasten the right end (🔩 x1).



d1792695

- 9.** Align the hole of the heater with the hole [A] in the plate.

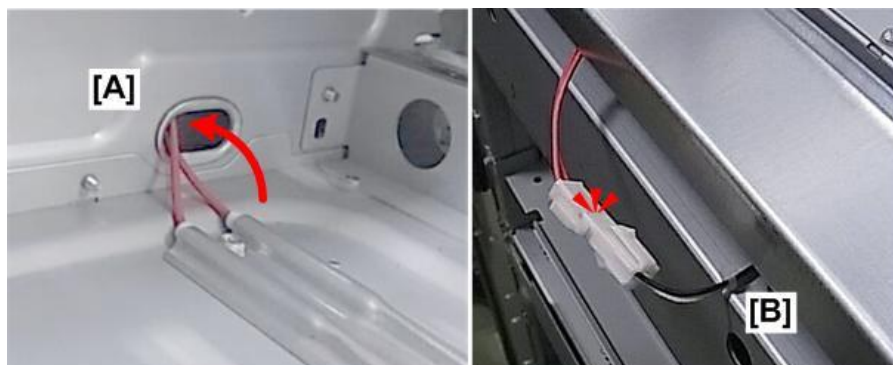
- 10.** Pass a screwdriver through the hole and fasten the screw [B] (🔩 x1).



d1792696

- 11.** Pass the heater harness through the hole in the frame [A].

**12.** Connect the connectors on the right side of the machine [B].



d1792697

## TCRU Set B

If the customer has ordered TCRU Set B (a fusing unit), remove the shipping brackets.

### ★ Important

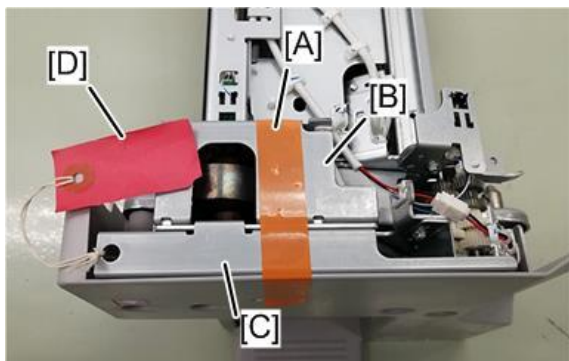
- The TCRU set for this machine cannot be used with the previous machine.

- Open the TCRU Set B box, and then remove the fusing unit.
- Peel off the strip [A] attached to the side of the fusing unit.



d0bxa9003

- From the top, pull off the strip [A] of the tape, and then remove the shipping bracket [B] and the bracket [C] with the red tag [D].



d0bxa9004

- Re-pack the unit in its original box so the customer can store it at the job site.

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## Firmware Update for Peripherals

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After the main machine has been installed, you are ready to install the peripheral units selected for the installation.

**★ Important**

In order to achieve optimal performance of the main machine with installed peripheral units, after the main machine and the peripheral units have been connected, you must check the version number of each installed peripheral unit to make sure that the most recent firmware is installed.

If the version number is not equal to or higher than the version numbers in the list below, you must download the correct version and install it for the peripheral.

Do this procedure after you have finished the installation of the main machine and the peripheral units.

1. Make sure that the machine power cable is connected to the power source and that all the peripherals I/F cables are connected.
2. If the peripheral has an independent power cable, make sure that the cable is connected to an independent power source.
3. Turn the machine on.
4. Go into the SP mode.
5. Open **SP7801**.
6. Check the version number of each peripheral unit against the list below.
7. If the displayed version number is **equal to or higher** than the version number in the list, you are finished.
8. If the displayed number is **less than** the version number in the list, you must download the correct version of the firmware for the peripheral unit, and then install it.

Peripheral	Firmware	Version
LCIT RT5110	LCT_SIBERIA_H	01.000:03
LCIT RT5110 *1	LCT2_SIBERIA_H	01.000:03
LCIT RT5130	LCT_ALASKA-F	01.010:02
Vacuum Feed LCIT RT5120	LCT1_ANATOLIA-B	02.000:02
Vacuum Feed LCIT RT5120 *1	LCT2_ANATOLIA-B	02.000:02
Cover Interposer Tray CI5040	Inserrer_LAPLATA	01.010:02
Booklet Finisher SR5120/Finisher SR5110	Finisher_IGUAZU	01.010:19
High Capacity Stacker SK5040	Stacker_LOIRE_D1	01.060:02
High Capacity Stacker SK5040 *1	Stacker_LOIRE_D2	01.060:02

\*1 If the Vacuum Feed LCIT RT5120 and High Capacity Stacker SK5040 are installed in the same line, you must install Firmware Version 01.060:02 for the High Capacity Stacker.

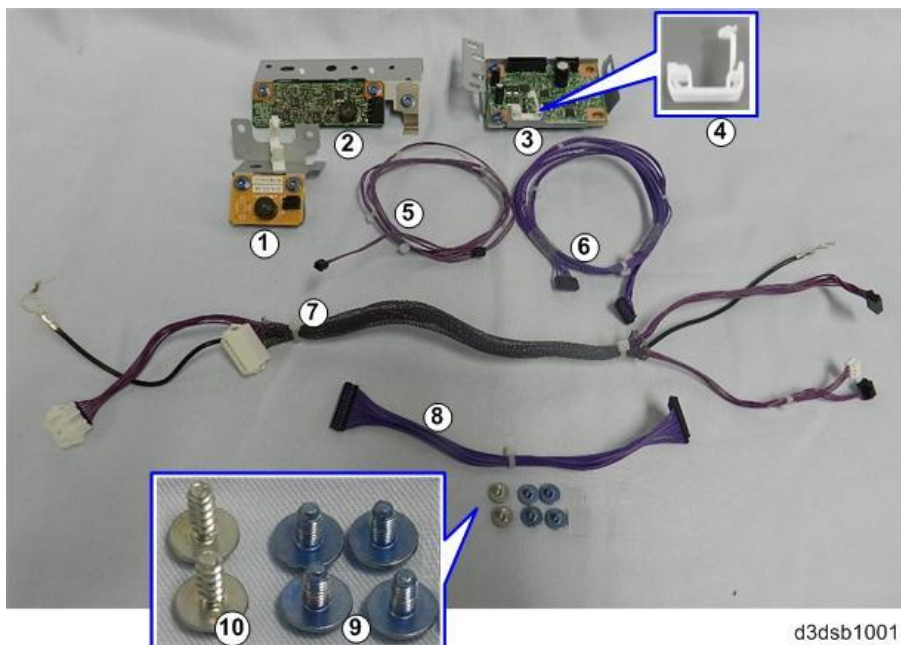


## ADF Double-feed Detection Kit Type S7 (D3DS)

### Note

- This option is for copier models only.

### Accessories



No.	Description	Q'ty
1	Double Feed Detect Sensor (Emitter)	1
2	Double Feed Detect Sensor (Receptor)	1
3	Double-feed Sensor Board	1
4	Saddle Clamp	1
5	Long Harness (2-pin)	1
6	Long Harness (7-pin)	1
7	Shielded Harnesses	1
8	Short Harness (13-pin)	1
9	Screws M3x6	4
10	Screws M3x8	2

## 2. Installation

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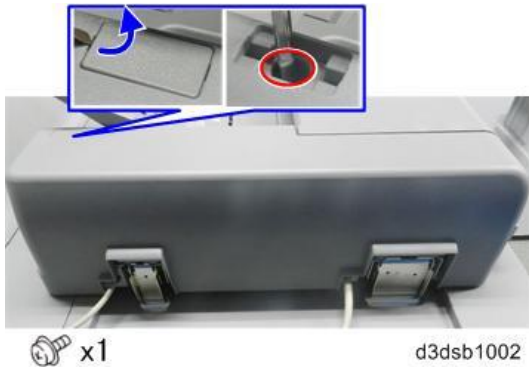
### Installation

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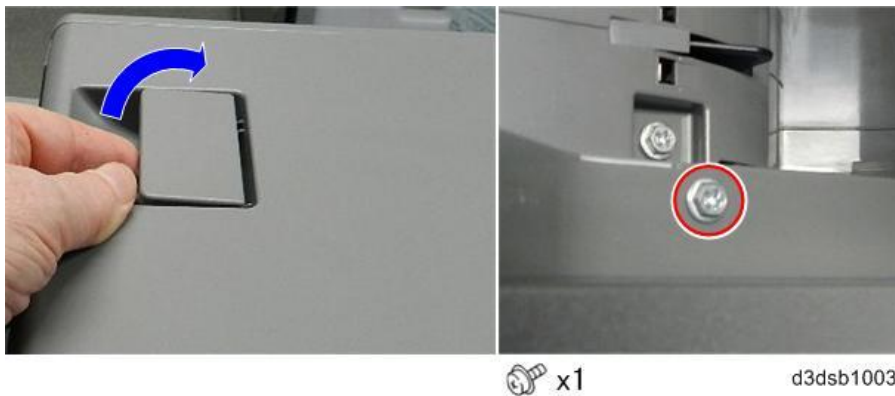
#### Removing the ADF Covers

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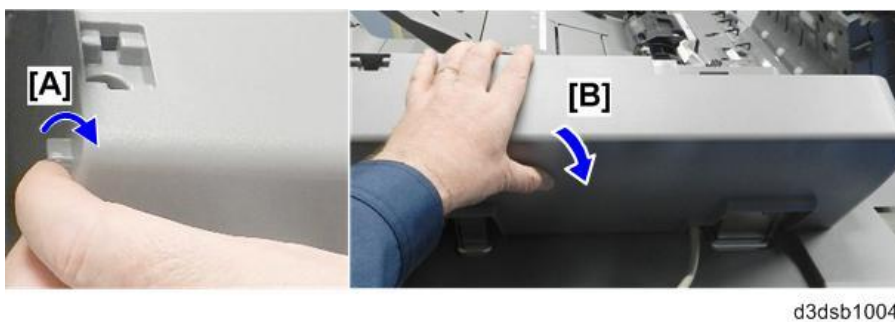
- 1.** At the back of the machine, remove the cap and screw from the rear cover of the ADF.



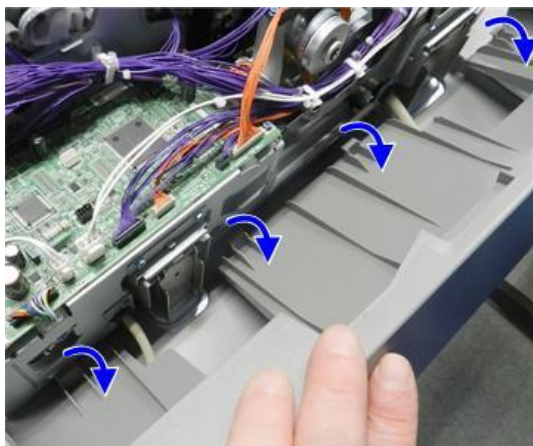
- 2.** Raise the feed cover, and then remove the screw from the top edge of the rear cover.



- 3.** Press the tab [A] on the end of the rear cover to release the cover, and then rotate the cover [B] down slowly.



- 4.** Disconnect the bottom tabs, and then remove the rear cover.



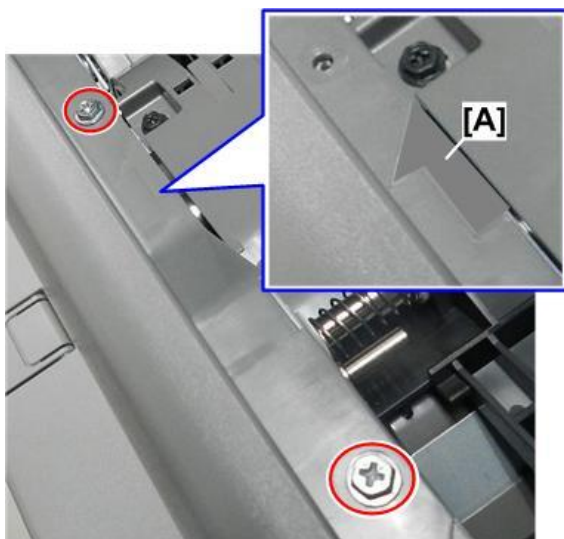
d3dsb1005

- 5.** At the front, raise the ADF slightly.



d3dsb1006

- 6.** Disconnect the top edge of the front cover. The embossed arrow [A] shows which direction to slide the cover to unlock the tabs.

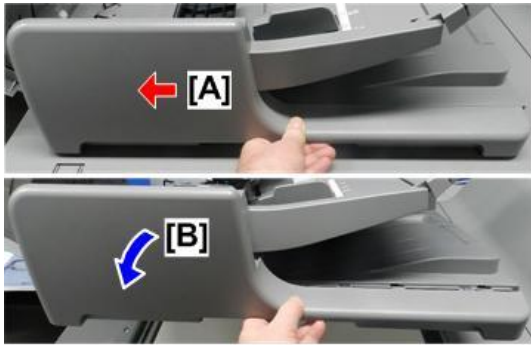


 x2

d3dsb1007

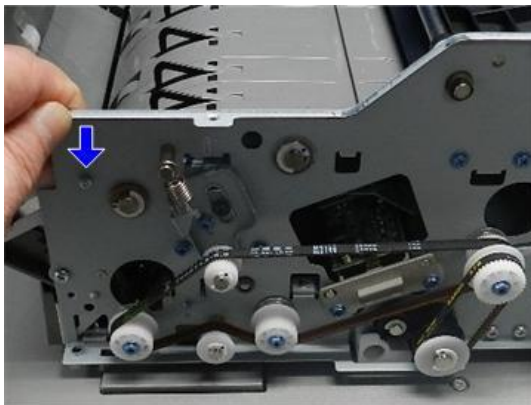
## 2. Installation

7. Push the front cover [A] to the left, and then remove it [B].



d3dsb1008

8. Lower the ADF.

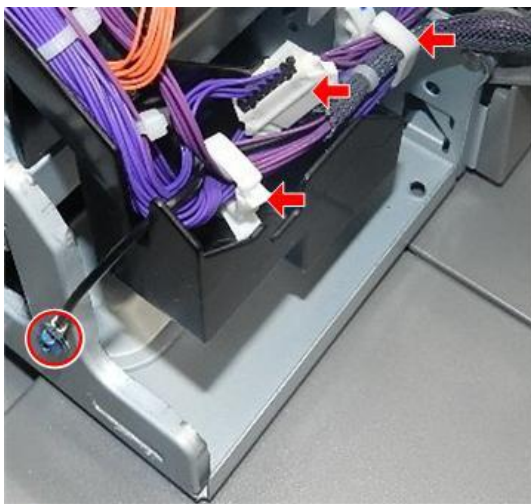





d3dsb1009

### Removing the Feed Cover and Upper Guide

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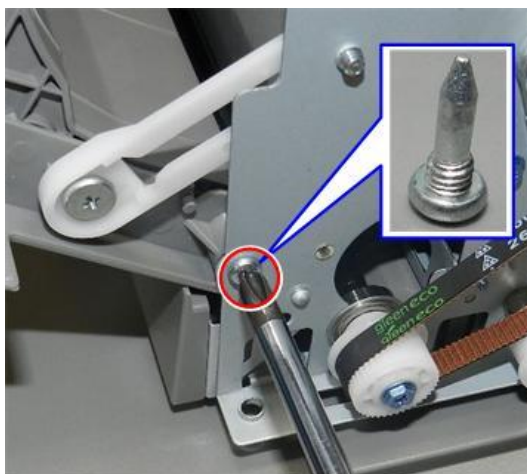
1. At the left rear corner of the ADF, disconnect and free the shielded harnesses.



 x1  x2  x1

d3dsb1010

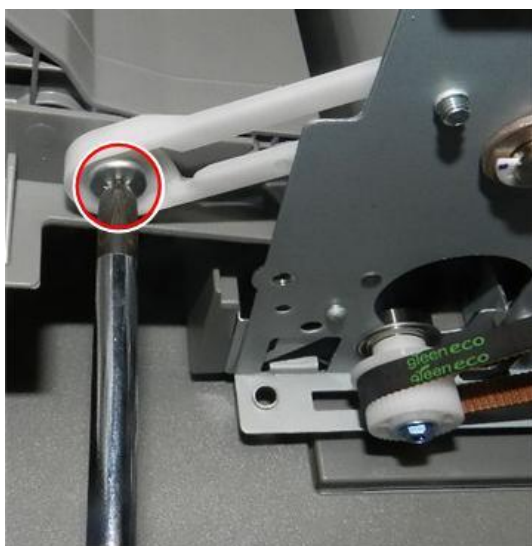
- 2.** At the front, remove the pivot screw.



 x1

d3dsb1011

- 3.** Disconnect the hinge arm.



 x1

d3dsb1012

- 4.** Carefully disconnect the cover at the rear [A].

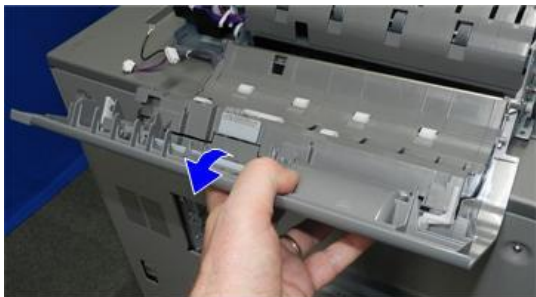
- 5.** At the front, disconnect the hinge arm [B].



d3dsb1013

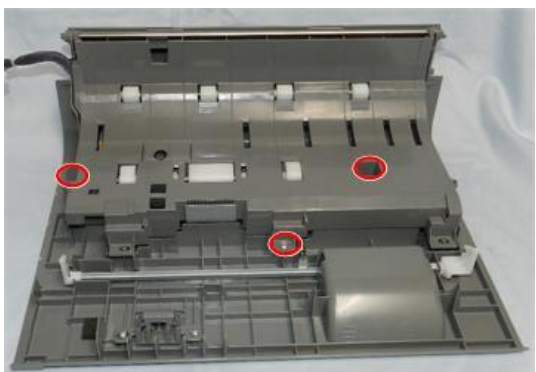
## 2. Installation

6. Remove the feed cover.



d3dsb1014

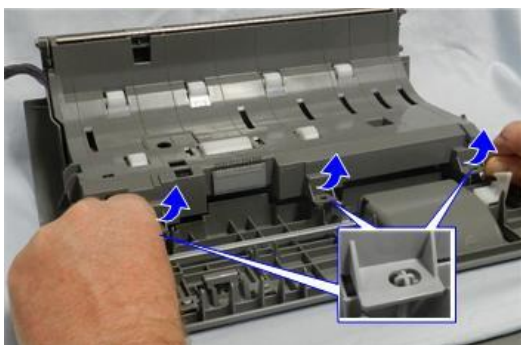
7. Lay the feed over on a flat clean surface as shown, and then disconnect the upper guide.



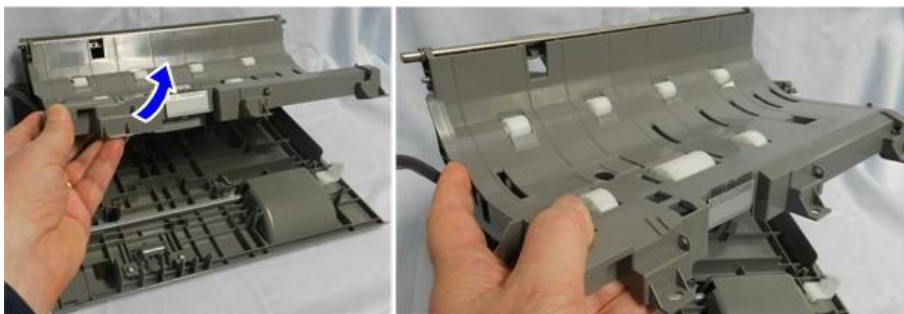
 x3

d3dsb1015

8. Release the edge of the upper guide from the posts.



9. Swing the upper guide up, and then remove it.



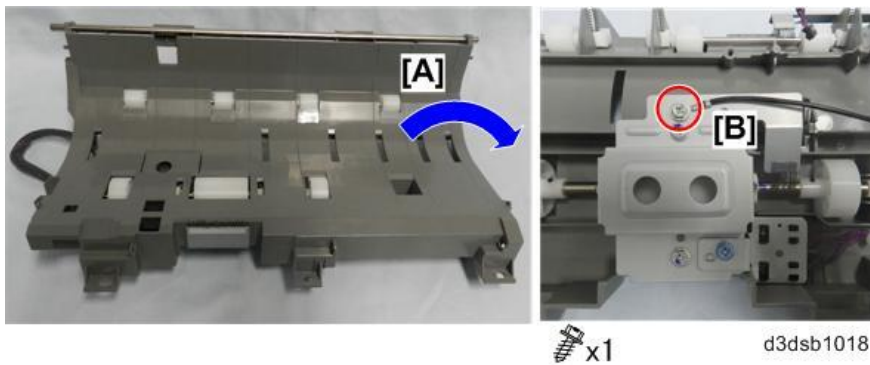
d3dsb1017

## Installing the Kit

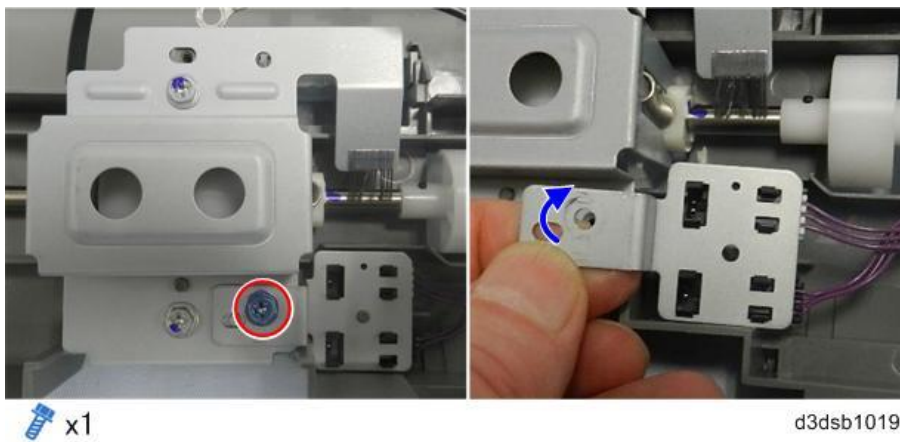
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1. Turn the upper guide [A] upside down.

- 2.** Disconnect the ground wire [B].



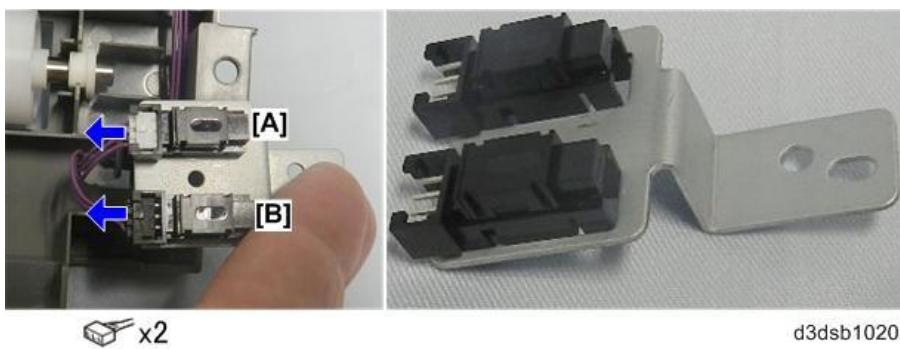
- 3.** Remove the sensor bracket.



- 4.** Disconnect the skew correction sensor [A] (white connector).  
**5.** Disconnect the separation sensor [B] (black connector).

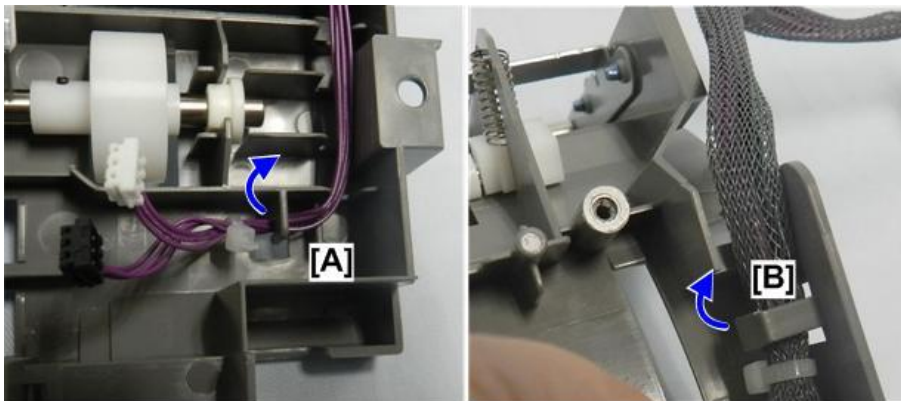
**Note**

- These sensor harnesses must be re-connected as shown.



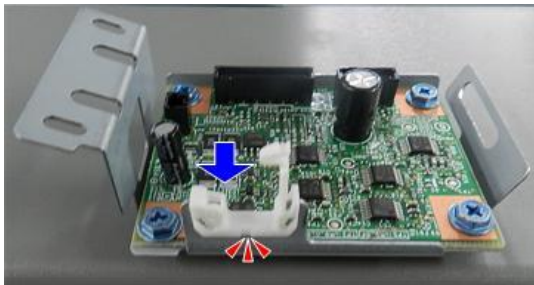
## 2. Installation

- 6.** Release the shielded harnesses at the front [A] and rear [B].



d3dsb1021

- 7.** Remove the original shielded harnesses.  
**8.** Set the saddle clamp on the edge of the double-feed sensor board.

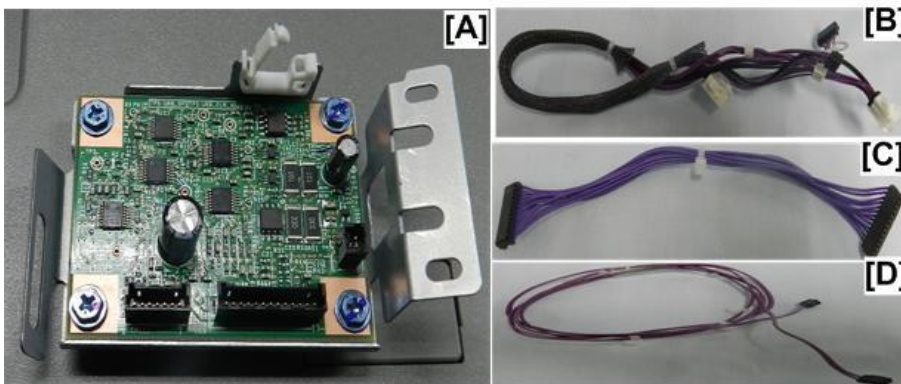


d3dsb1057

### Note

- You will need a short screwdriver to fasten the double-feed sensor board.

- 9.** Gather these items:
- [A] Double-feed sensor board with attached clamp
  - [B] Shielded harnesses
  - [C] Short harness (13-pin)
  - [D] Long harness (2-pin)

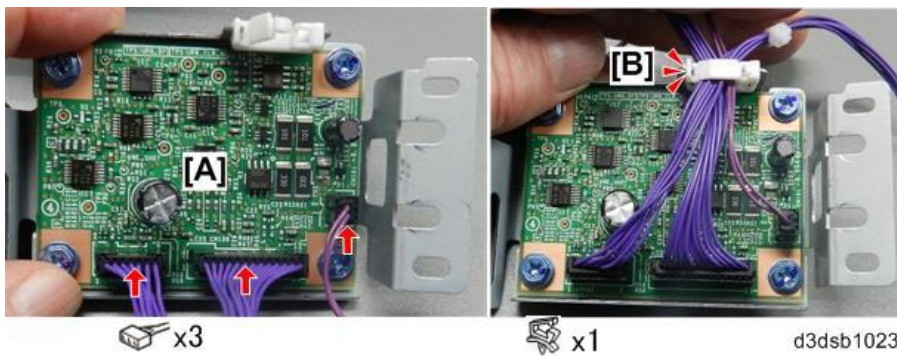


d3dsb1022

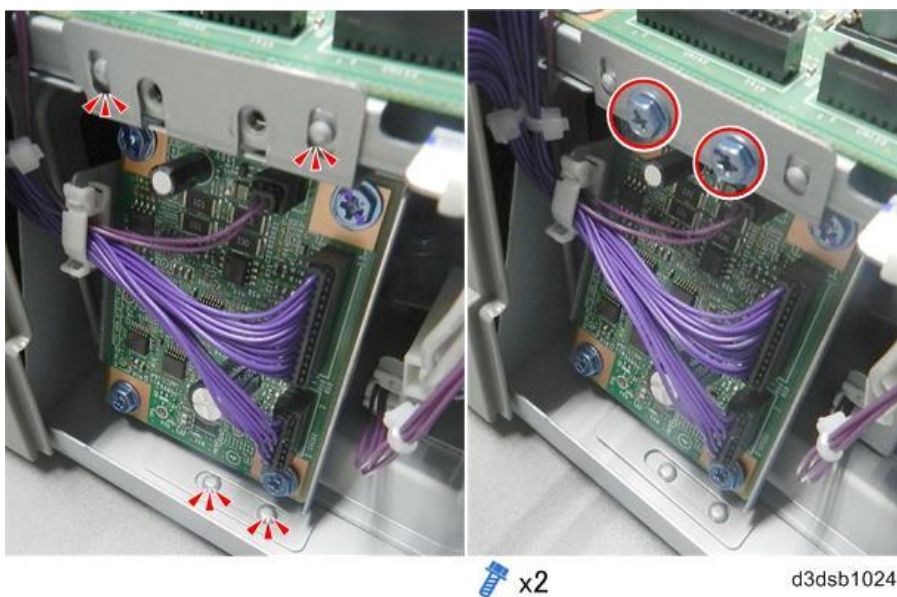
- 10.** Connect the harnesses to the board [A].  
**11.** Clamp the harnesses at [B].



**12.** Make sure there is no slack in the harness cables between their connectors and the clamp.

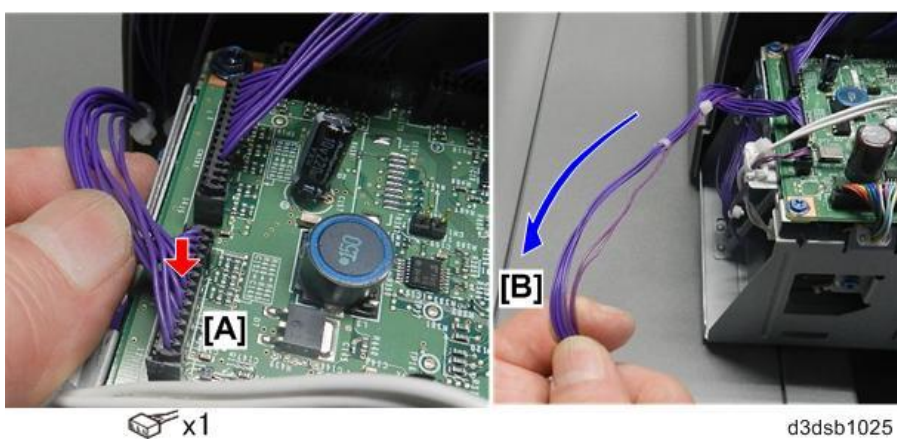


**13.** At the back of the machine, set the double-feed sensor board below the edge of the ADF control board, and then use a short screwdriver to fasten the sensor board.



**14.** Connect the end of the short harness to the ADF control board [A].

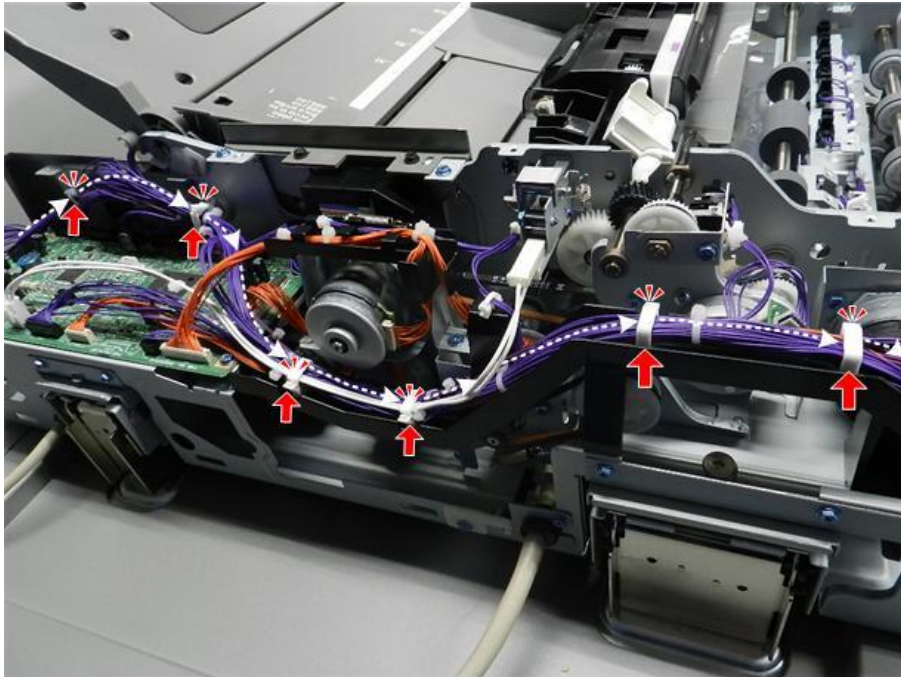
**15.** Gather the long harnesses [B] away from the back of the machine.



**16.** At the back of the ADF, work from left to right and close each clamp over both harnesses. Make

## 2. Installation

sure that there is no slack in the harnesses between clamps.



 x6

d3dsb1026

**17.** At the left corner of the ADF, pass the long harness (2-pin) under the open clamp [A].

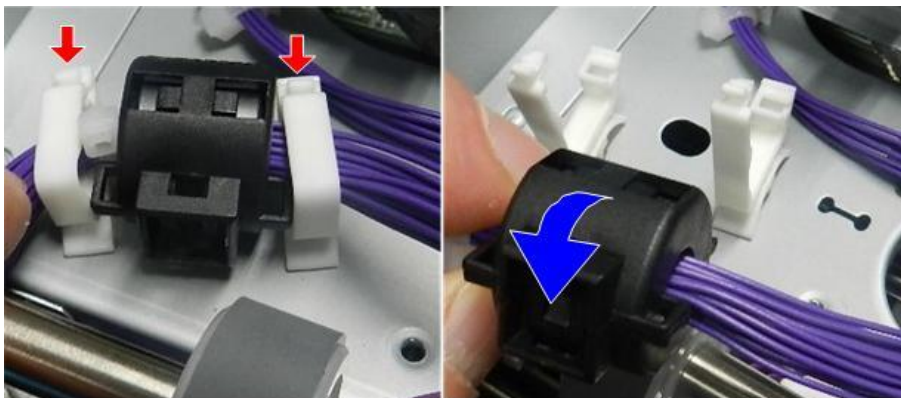
**18.** Open clamp [B], and then pass the harness through it as you pull the harness as far as [C].



 x1

d3dsb1027

**19.** Free the ferrite core.

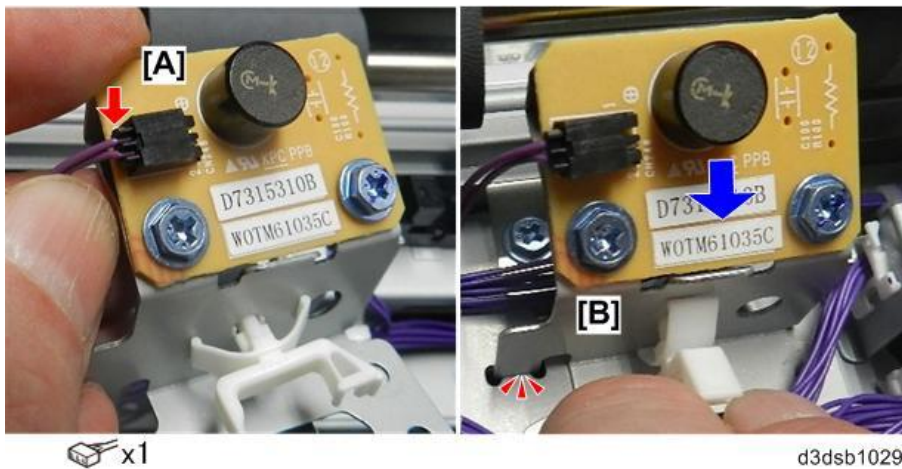


 x2

d3dsb1028

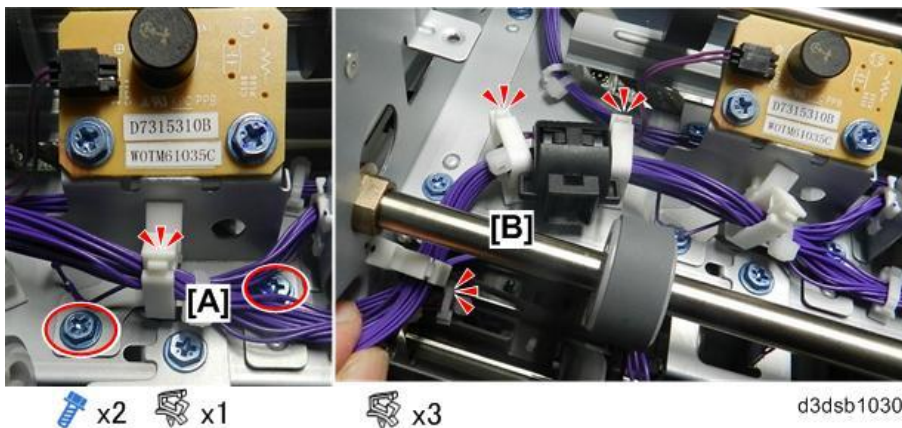
**20.** Hold double feed detect sensor (emitter) as shown [A], and then connect the harness.

**21.** Insert the blade of the bracket [B] into the slot.



**22.** Fasten the sensor bracket [A], and then close the clamp.

**23.** Thread the harness through the three clamps [B] and then close them.

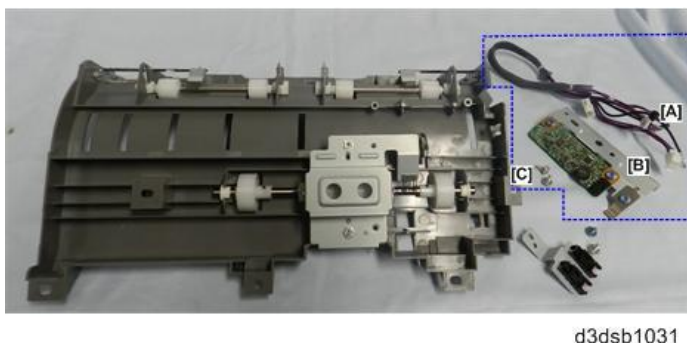


**24.** Set the upper guide as shown, and then gather these items from the accessories.

[A] Shielded harnesses

[B] Double feed detect sensor (receptor)

[C] Screws (M3x8)

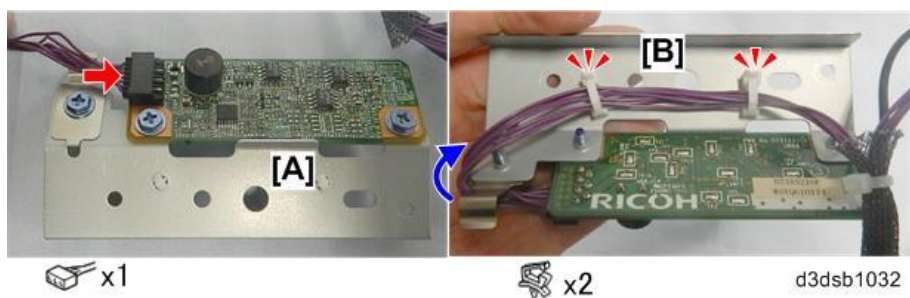


**25.** Connect the harness to the sensor board [A].

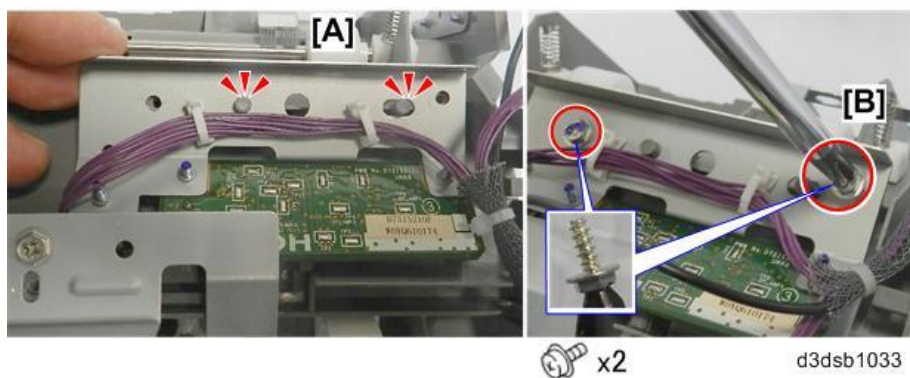
**26.** Turn the bracket over, make sure that there is no slack in the harness, and then fasten the harness

## 2. Installation

to the bracket [B].

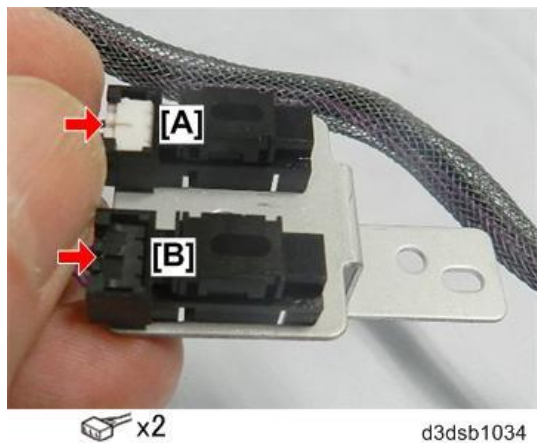


**27.** Set the bracket [A] and then fasten it [B].

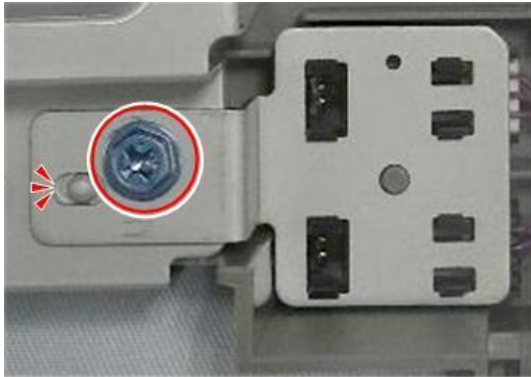


**28.** Hold the sensor bracket as shown.

**29.** Connect the skew correction sensor harness [A], and then connect the separation sensor harness [B].



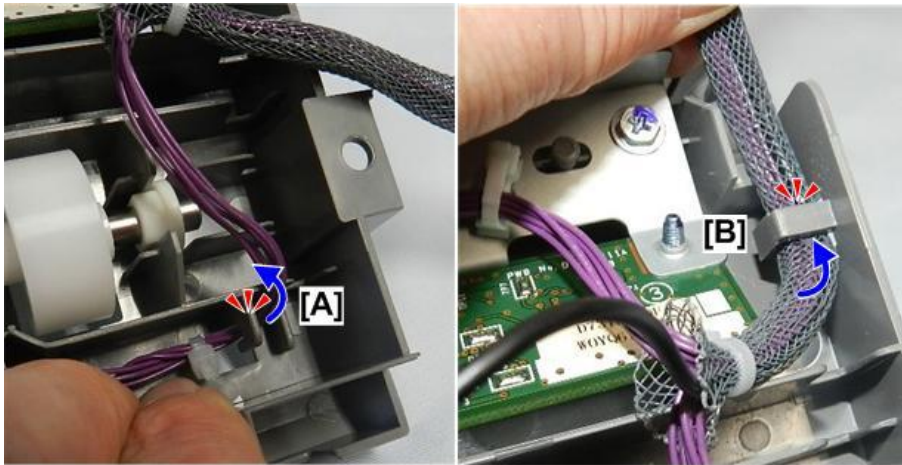
**30.** Attach the sensor bracket



 x1

d3dsb1035

**31.** Make sure there is no slack in the harnesses, and then fasten the sensor harnesses under the hooks at [A] and [B].



d3dsb1036

**32.** Push the shielded harnesses into the channel at the rear corner.



d3dsb1037

## 2. Installation

### Re-assembly

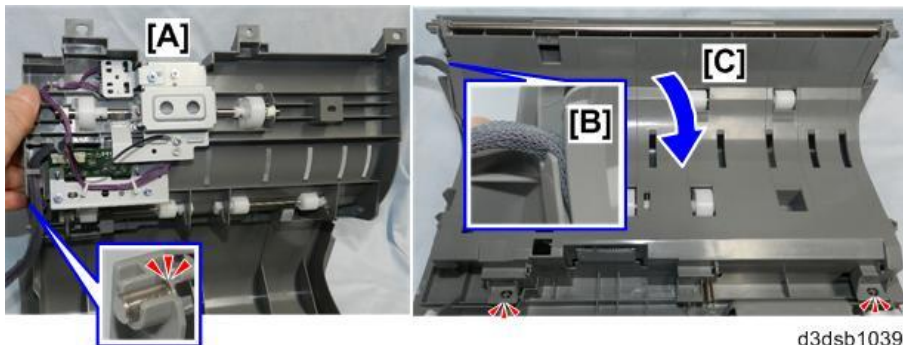
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1. Set the feed cover as shown.



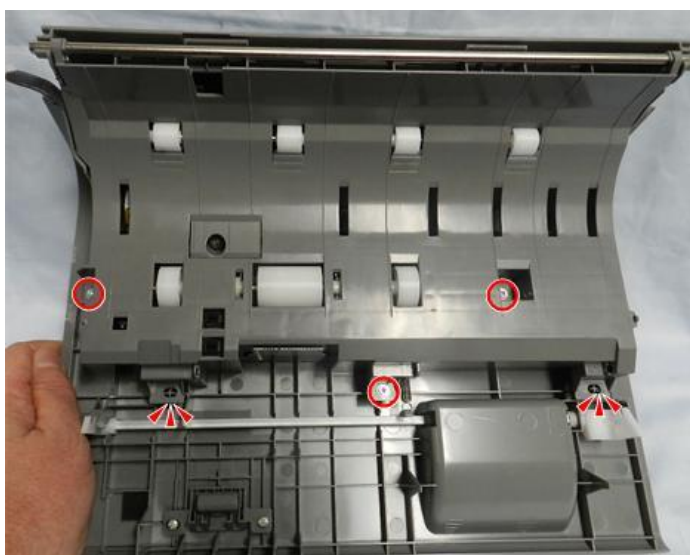
d3dsb1038

2. Set the shaft of the upper guide [A] on the edge of the feed cover.
3. Make sure that the shielded harnesses [B] are not pinched between the cover and guide, and then lower the guide [C] onto the feed cover.



d3dsb1039

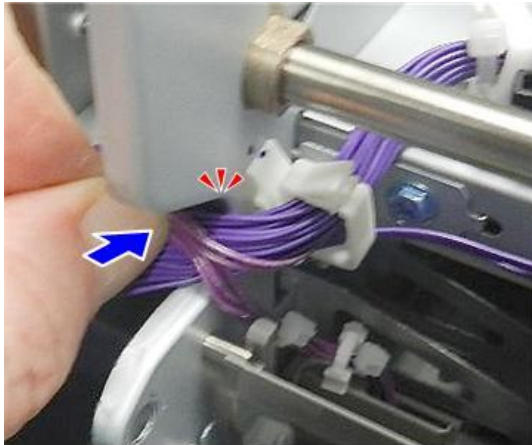
4. Snap the edge of the guide onto the posts, and then fasten the guide with the screws.



 x3

d3dsb1040

- 5.** At the left rear corner of the ADF, push the harnesses into the cutout.

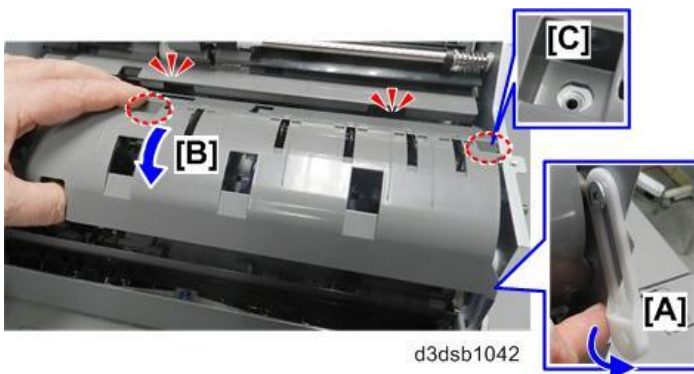


d3dsb1041

- 6.** At the front, pull the hinge arm [A] out slightly.  
**7.** Set the lower guide [B].  
**8.** Make sure that three holes [C] across the top are aligned with the frame below.

**★ Important**

- If the holes are not perfectly aligned, or if the guide is floating above the holes, make sure the harnesses are completely tucked into the cutout at the rear left corner of the ADF. (See the previous step.)



d3dsb1042

- 9.** Use the black step screws to fasten the guide at the front [A] and center [B].

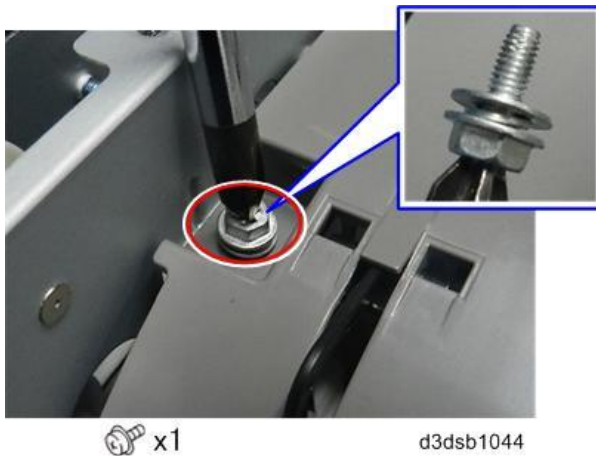


x2

d3dsb1043

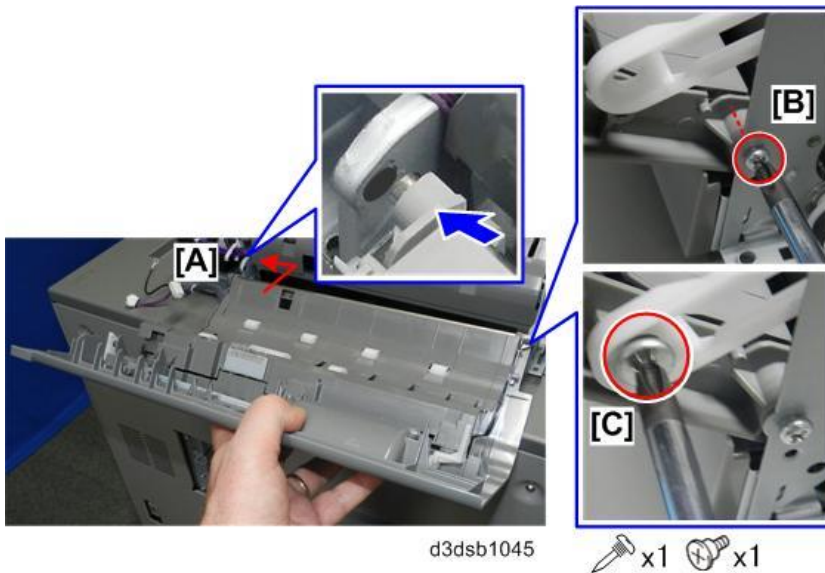
## 2. Installation

**10.** Use the longer screw to fasten the back end of the guide.

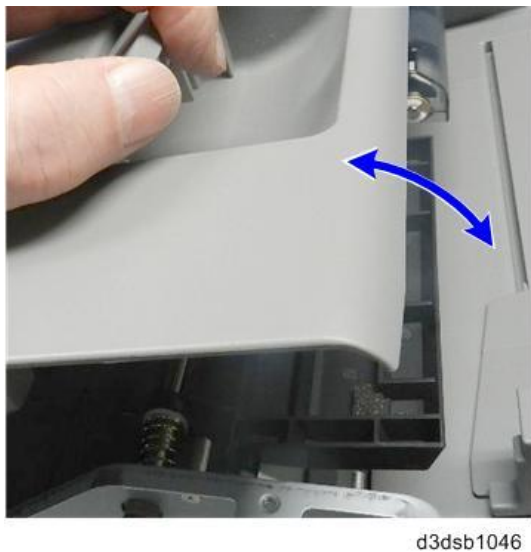


**11.** Insert the feed cover [A] at the rear.

**12.** At the front, set pivot screw [B], and then fasten hinge arm [C].



**13.** Open and close the feed cover to make sure that it is operating smoothly.



**14.** At the left rear corner of the ADF, make sure that the shielded harnesses are not pinched between

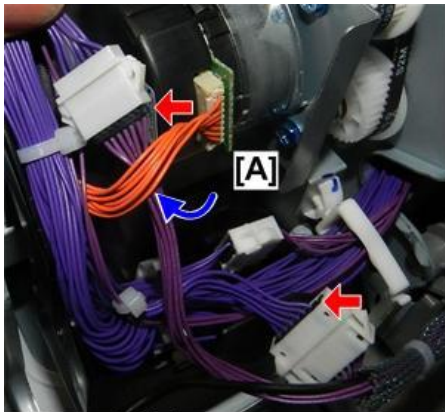


feed cover and upper guide.

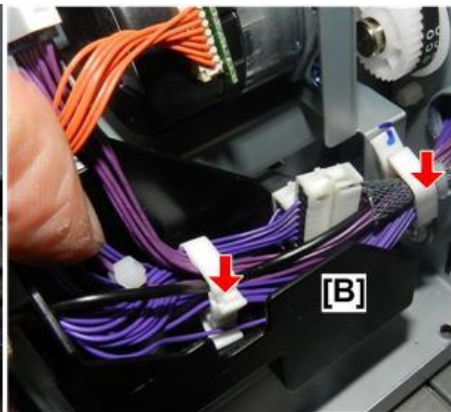


d3dsb1047

**15.** Connect the shielded harnesses [A] and then close the clamps [B].



 x2



 x2

d3dsb1048

**16.** Fasten the ground wire.



 x1

d3dsb1049

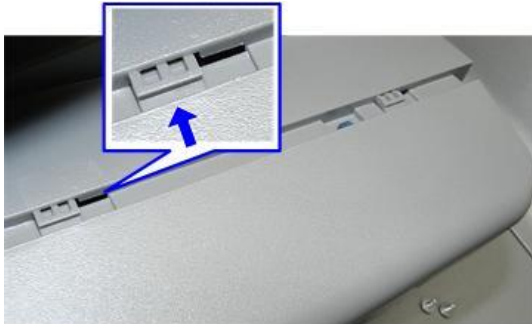
## 2. Installation

**17.** At the front, lower the ADF.



d3dsb1050

**18.** Set the tabs to attach the front cover.



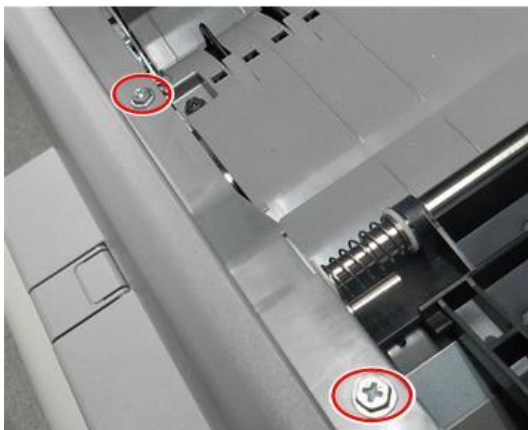
d3dsb1051

**19.** Push the attached front cover to the right to lock the tabs.



d3dsb1052

**20.** Fasten the top edge front cover.

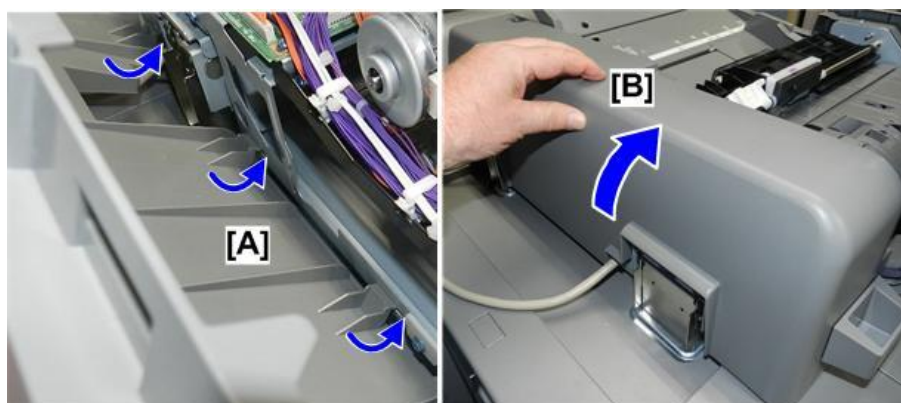


 x2

d3dsb1053

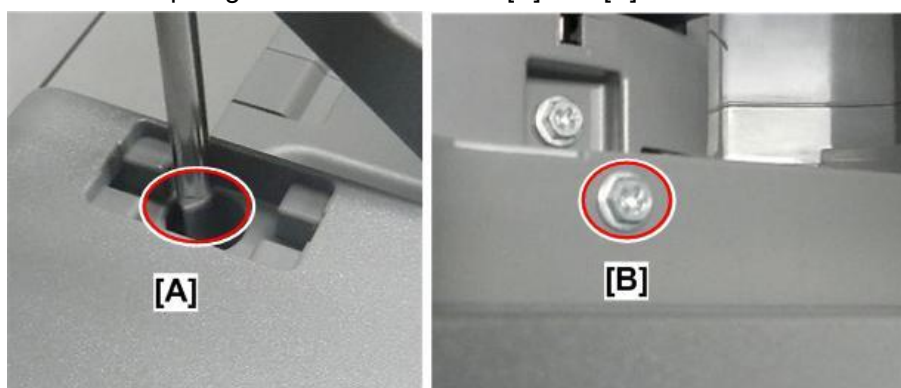
**21.** At the rear, set the bottom tabs [A] of the rear cover.

- 22.** Rotate the rear cover up [B].



d3dsb1054

- 23.** Fasten the top edge of the rear cover at [A] and [B].


 x1

 x1

d3dsb1055

- 24.** Attach the cover screw cover plate [A], and then lower the feed cover [B].



d3dsb1056

### Final Adjustments

---

Double-feed detection must be enabled, and the detection sensitivity must be specified.

- 1.** Make sure that the machine is fully reassembled.
- 2.** Connect the machine to the power source and turn it ON.
- 3.** Enter the SP mode.
- 4.** Go to **SP6040-001**, and then set it to "1" (On).  
This enables double-feed detection.
- 5.** Go to **SP6040-008** to adjust double-feed sensitivity.
- 6.** Set an original in the ADF, and then press [Start]. (If you set more than one original, only one will feed.)

## 2. Installation

### **7.** Touch "EXECUTE" to feed one sheet

- The sensitivity setting for one sheet is written into flash memory.
- The machine displays the "Completed" message. This tells you the setting was successfully stored.

-or-

- If the machine displays the "Failed" message, repeat the procedure.

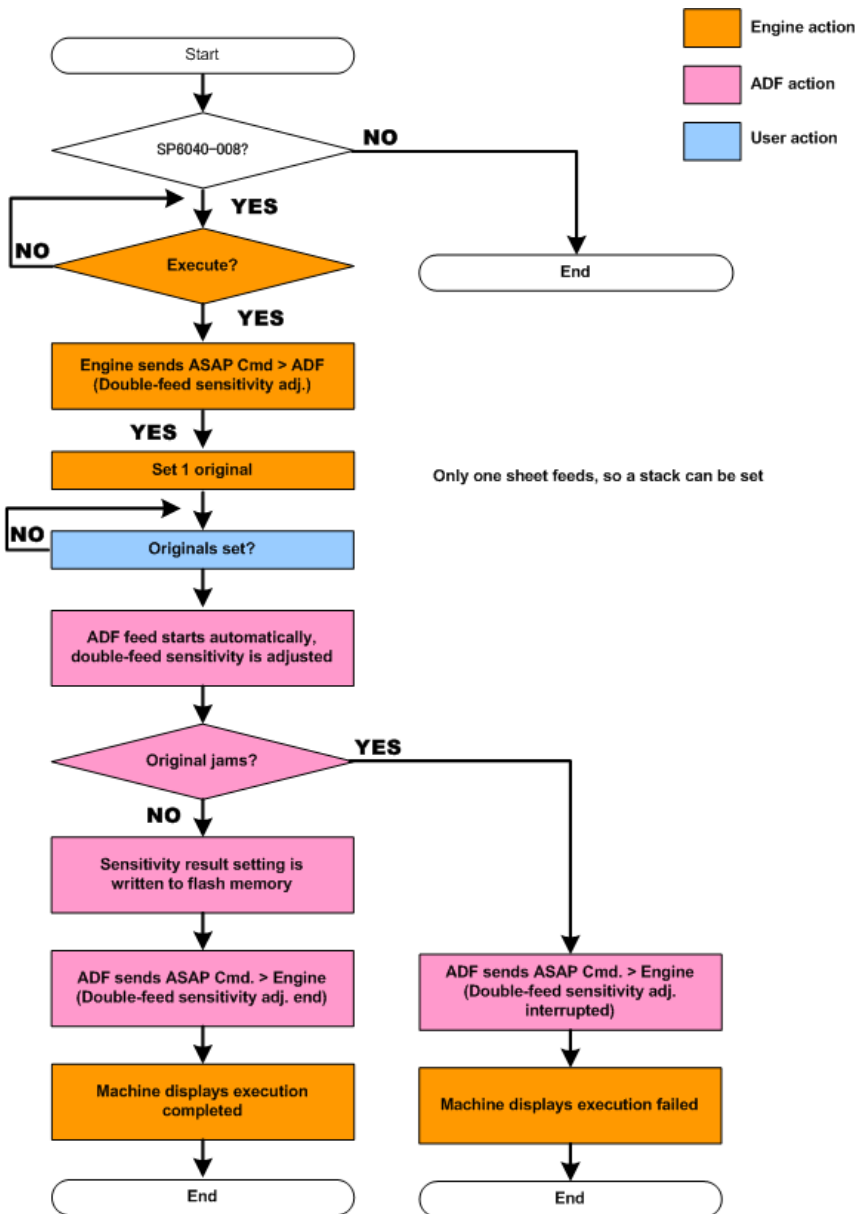
### **8.** Touch "CLOSE".

### **9.** Go to **SP6040-009** to check the value of the registered setting.

### **10.** Touch "EXECUTE".

### **11.** When you see the "COMPLETE" message, touch "CLOSE".

You will see the sensitivity setting displayed below the "EXECUTE" button on the screen.



Only one sheet feeds, so a stack can be set

Refer to SP6040-009 for adjusted sensitivity setting

Remove jammed sheet, and then repeat procedure

w\_d3dsb1057\_en

## RPIP Interface Box Type S3 (M462)

### Overview

This device is an interface (I/F) for connecting Ricoh products and peripherals of 3rd party vendors.

### Configuration

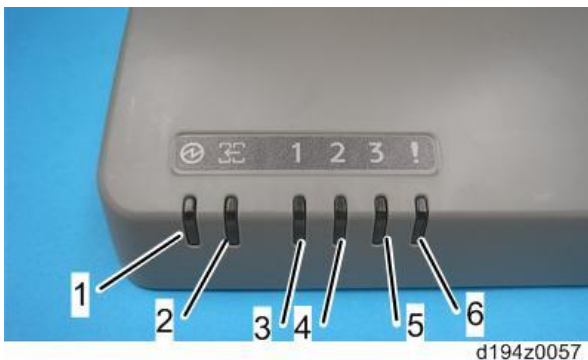
The RPIP interface box type S3 consists of just the hardware and core software. It functions as an interface after a parameter settings file compatible with the 3rd party peripheral has been prepared and written to the RPIP interface box type S3.

### Writing Data

The parameter setting tool is used to write the specific parameters of the 3rd party peripheral to the RPIP interface box type S3.

Only data for one model can be written. Parameter settings files for multiple peripherals cannot be written to the RPIP interface box type S3. If you wish to use a peripheral from a different maker, it is necessary to reconnect the peripheral and then overwrite the parameter settings file.

### LED



d194z0057

	Name	Color	Description
1	Power LED	Blue	Power is supplied from the main machine and the LED lights up in tandem with the power of the main machine
2	3rd party peripheral status LED	Blue	Lights when ready for paper feeding and blinks when feeding.
3	Spare LED1	Blue	Lights when in write mode.
4	Spare LED2	Blue	-
5	Spare LED3	Blue	-
6	Error LED	Red	Lights up red when an error occurs. Lit: 3rd party peripheral jam Blinking: Communication error, error with main machine or emergency stop switch pressed

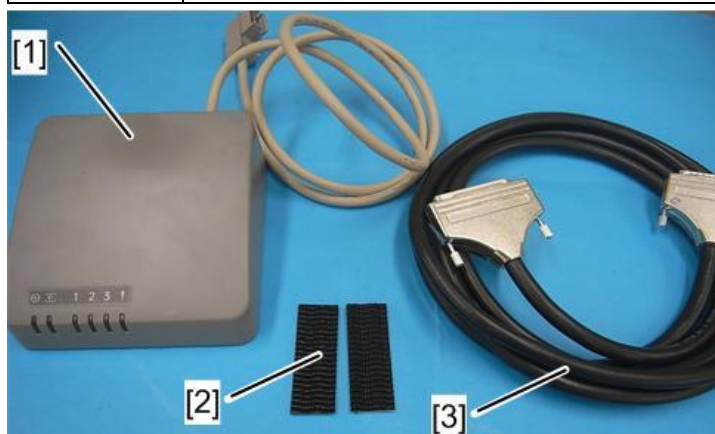
## Rear Panel I/F



	Name	Description
[A]	RPIP interface box type S3 I/F cable	Connects to the main machine or the most downstream Ricoh peripheral.
[B]	Emergency stop switch	Used in emergencies to stop a job. Also used to cancel the blinking during an emergency stop.
[C]	Serial ports	Upper: Connects to a PC. Normally the upper port is used. Lower: Normally not used. Configured for potential custom applications.
[D]	Parallel port	Connects to the 3rd party peripheral.

## Accessories

No.	Description	Q'ty
1	RPIP Interface Box Type S3 (The cable is 1.5m long.)	1
2	Hook-and-loop fasteners	1set
3	Parallel cable	2



## Installation

Connect the interface box to the main machine (or the most downstream Ricoh peripheral) and the 3rd

## 2. Installation

party peripheral.

### **⚠ CAUTION**

- Make sure that the main power switch and AC power switch of the main machine are turned OFF and that its power cord is disconnected before doing the following procedures.
- Also make sure that the power of the 3rd party peripheral is turned OFF and that its power cord is disconnected.
- Rated voltage of output connector for accessory: Max.DC24V.

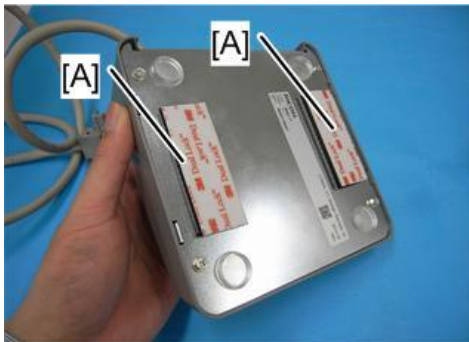
### **↓ Note**

- RPIP interface box type S3 is only compatible with post-processing related peripherals. At this time, it cannot be used with paper feed related peripherals.

### **Recommended Installation Location**

- A flat space where this option can be fastened to securely and where the status indicator LEDs can be seen.

- 1.** Attach the hook-and-loop fasteners to the bonding surface [A] on the back of the RPIP interface box type S3 (2 pieces).



d194z1002

- 2.** Peel off the films from the hook-and-loop fasteners.
- 3.** Press the RPIP interface box type S3 [A] onto the surface at the installation location so it sticks securely in place.



m263b1029

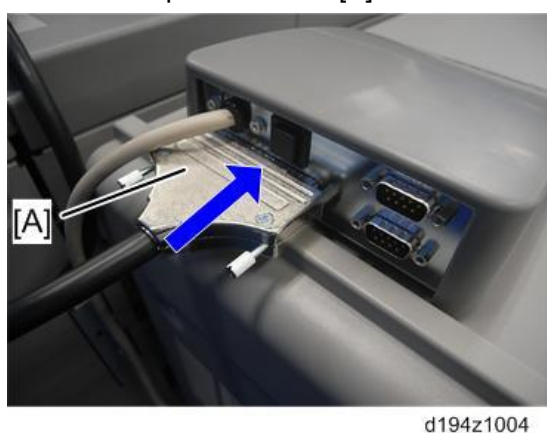
Before performing the subsequent steps, turn OFF the AC power switch and leave it for 5 minutes so the residual charge can dissipate.



- 4.** Connect the I/F cable [A] to the main machine or the most downstream Ricoh peripheral.



- 5.** Connect the parallel cable [A] to the RPIP interface box type S3 (x2).



- 6.** Connect a 3rd party peripheral to the main machine or the most downstream Ricoh peripheral.  
**7.** Connect the parallel cable to the connector on the 3rd party peripheral.




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## Settings

---

### Required software/middleware

- Notebook PC
- RS-232C cable (for example: SANWA SUPPLY / KR-LK2)
- NET Framework 4.0X

## 2. Installation

### Note

- When using a USB-RS-232C adapter, use an adapter from a reputable manufacturer, or you may get illegible text or installation errors. We recommend the following device.
  - ELECOM / UC-SGT1

### Preparation

---

- 1.** Decompress the compressed folder [Parameter\_Setting\_Tool\_ver.xx] and copy it to the desired directory (use the notebook PC).
- 2.** Copy the specific parameter settings file for the 3rd party vendor peripheral to the desired directory (use the notebook PC).
- 3.** Remove the connector cover [A] on the serial port [B] and connect the notebook PC to it.

### Note

- Do not discard the connector cover.



d194z1005

- 4.** Turn the AC power switch [A] ON and then turn the main power switch [B] ON. Wait until the main machine warms up.



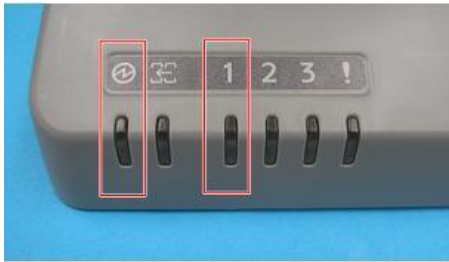
d194z0322a

- 5.** Press and hold the emergency stop switch on the rear panel of the RPIP interface box for about 3 seconds to put it in the write mode.

### Note

- When the RPIP interface box type S3 is in the write mode, the power LED and spare

LED1 light up blue.



d194z0057a

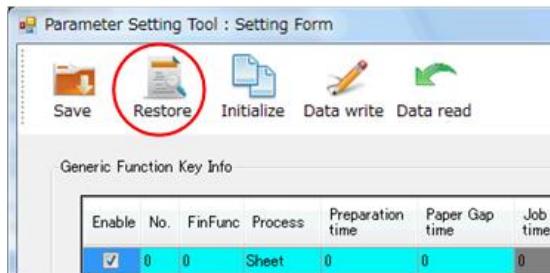
- Jobs cannot be received while in the write mode.

## Parameter Setting Tool

### Note

- These procedures are performed at the notebook PC.

1. Launch [ParameterSettingTool.exe].
2. Press the [Restore] button.



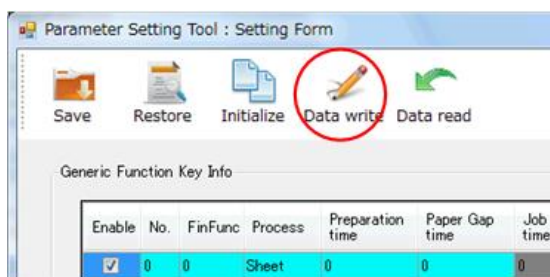
d194d9302

3. Select the parameter settings file that was prepared and select [Open].

### Note

- The parameters are displayed on the screen. Do not edit numerical values.

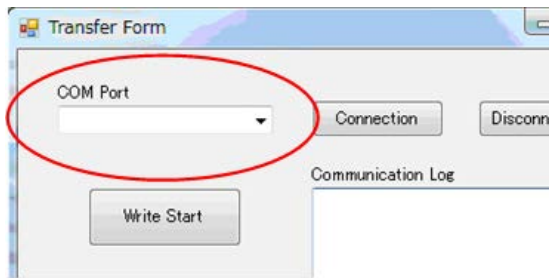
4. Press the [Data Write] button and the "Transfer Form" opens.



d194z0060

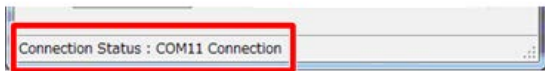
## 2. Installation

5. Select the port to use from the COM Port box.



d194z0061

6. Press the [Connection] button and check that the Connection Status bar changes to "COMXX Connection."

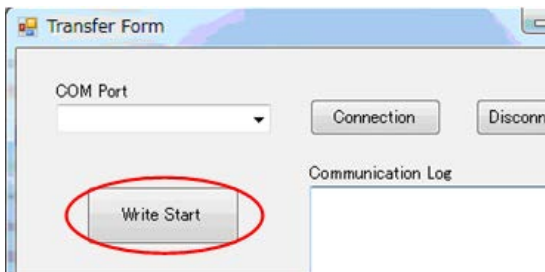


d194z0062

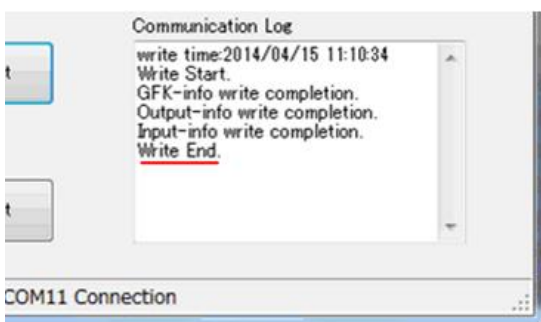
7. Press the [Write Start] button.

It starts writing the data.

When "Write End" is displayed in the [Communication Log], writing is complete.

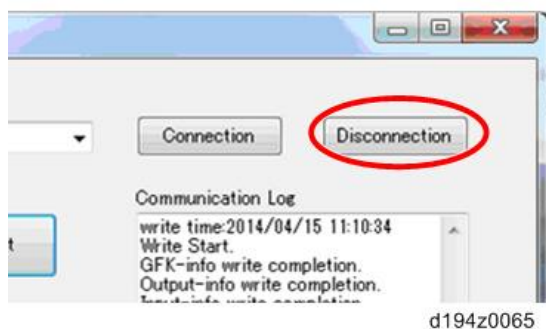


d194z0063



d194z0064

- 8.** Press the [Disconnection] button and close the tool.

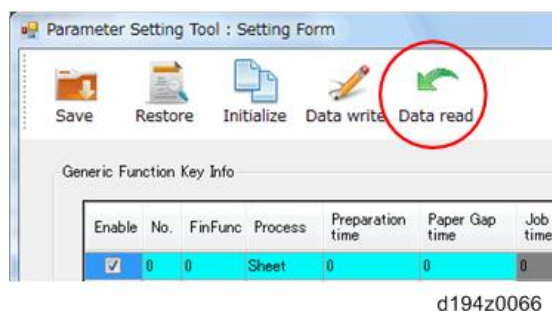


- 9.** Press and hold the emergency stop switch on the rear panel of the RPIP interface box for about 3 seconds to cancel the write mode.
- 10.** Make sure the LEDs, which lit up in the write mode, turn off.
- 11.** Turn the main power switch off.
- 12.** Disconnect the RS-232C cable and attach the connector cover to the serial connector. Then turn the main power switch ON.

The written parameter data is updated after the machine is restarted (main power switch is turned off/on). So don't forget to restart the machine.

**Note**

- "Data read" can be used to read the current parameters written to the RPIP interface box type S3.



d194z0066

## Media Identification Unit Type S3 (D3AK)

### Installation

#### **⚠ CAUTION**

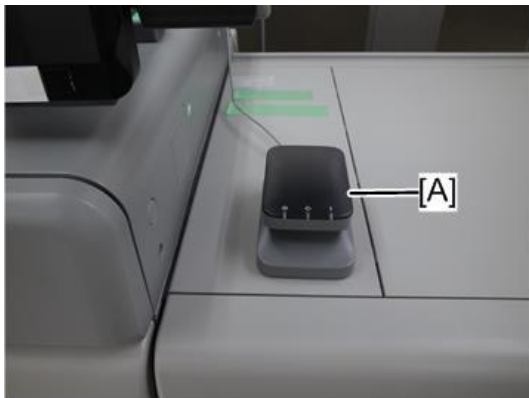
- Make sure that the main power switch and AC power switch of the machine are switched off and that its power cord is disconnected before doing the following procedure. Doing the following procedure in an energized state constitutes an electric shock hazard and could cause a malfunction.

#### **↓ Note**

- If the media identification unit cannot be installed at the left side of the main machine, install it on a safe and level surface.
- Connect the USB cable of the unit to the USB port on the right side of the machine. This unit is not enabled when it is connected to the port on the side of the operation panel.

#### **1.** Place the media identification unit [A].

- If the LCT is connected to the machine, lay the media identification unit [A] on the top of the LCT.



d0bxa2307

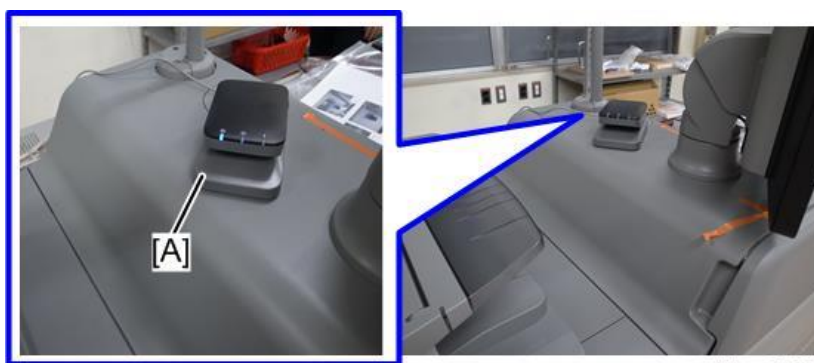
- If the LCT is connected to the multi bypass tray, lay the media identification unit [A] on the top of the multi bypass tray.



d0bxa2308

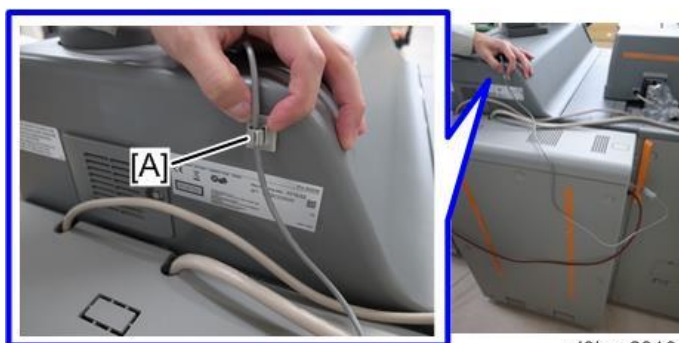
- If the LCT is not connected to the machine, lay the media identification unit [A] on the toner

bottle cover.



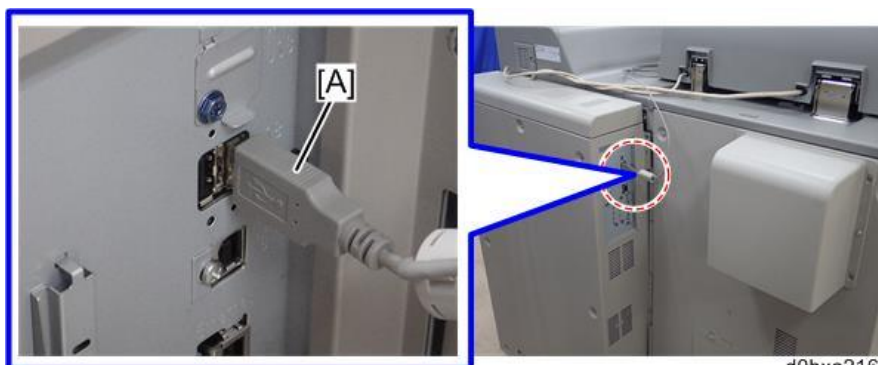
d0bxa2309

- 2.** Attach the clamp [A] to the area attached no decal to of the rear side of the toner bottle cover, and then fix the USB cable.



d0bxa2310

- 3.** Connect the USB cable [A] to a USB port of the machine. There is no problem whichever USB port is used.



d0bxa2169

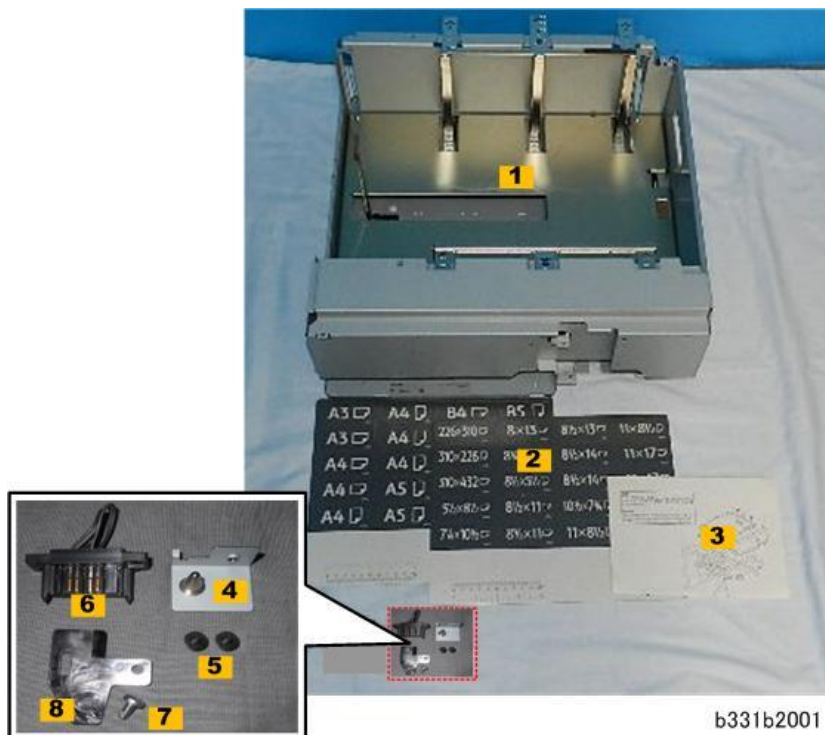
## 2. Installation

# A3/11"x17" Tray Unit TK5020 (B331)

## Accessories

Check the quantity and condition of the accessories in the box against the following illustration and list.

No.	Description	Q'ty
1	A3/DLT Tray	1
2	Paper Size Decals	2
3	Instruction Sheet	1
4	Pin Bracket	1
5	Screws (Black)	2
6	Short Connector	1
7	Screw (M4x8)	1
8	Rail Guide	1



## Installation

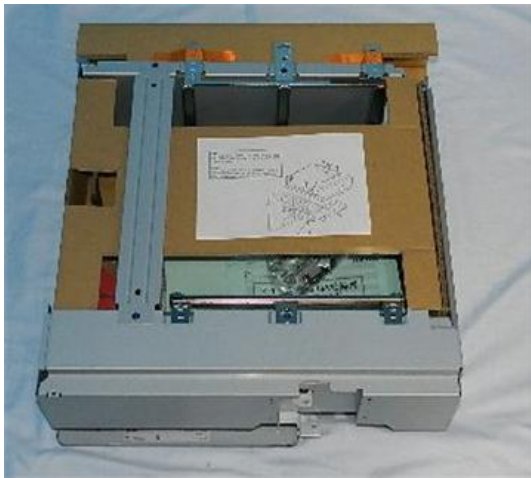
### ⚠ CAUTION

- The unit must be connected to a power source that is close to the unit and easily accessible.
- Make sure that the main machine is switched off and that its power cord is disconnected before doing the following procedures.



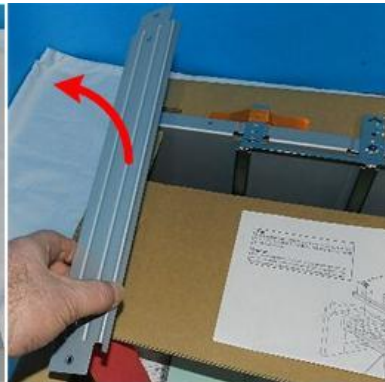
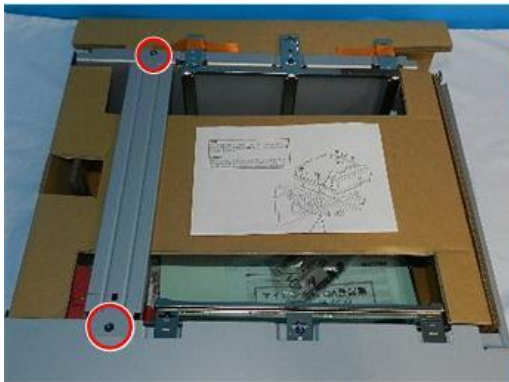
Removing the Tapes and Retainers

1. Remove the unit from its box.



b331b2002

2. Remove the stay (x2).



b331b2003

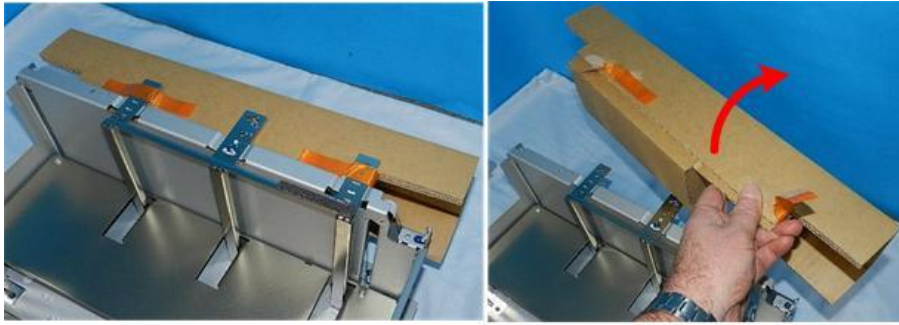
3. Remove the center packing [A].
4. Unpack the accessories [B].



b331b2004

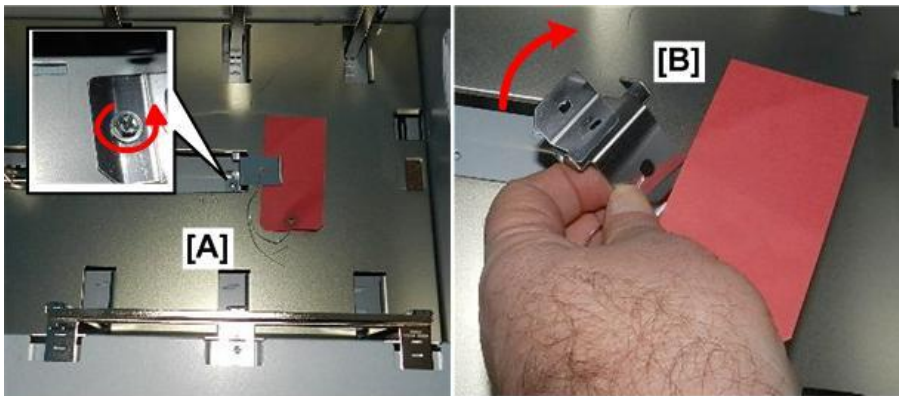
## 2. Installation

5. Remove the rear packing strip.



b331b2005

6. Unfasten the center retainer [A] (⚙️ x1).
7. Remove the retainer, wire, and red tag [B].

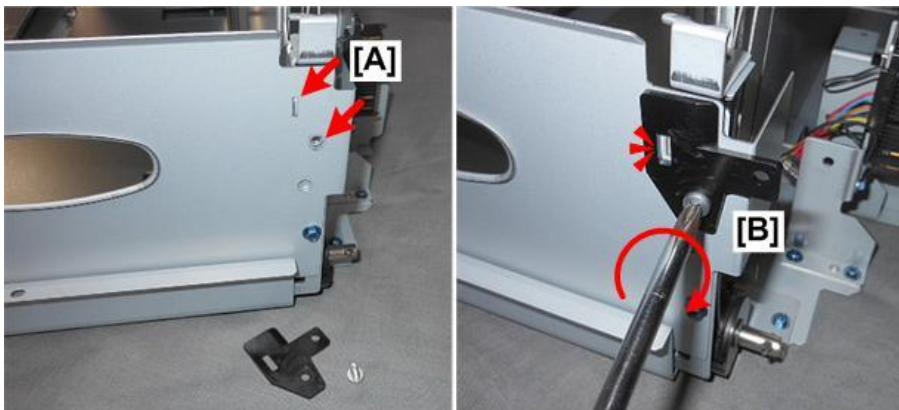


b331b2006

## Accessory Rail Guide

---

1. At the right rear corner of the A3/DLT Tray [A], locate the boss and screw hole at [B].
2. Attach the rail guide (⚙️ x1 M4x8)



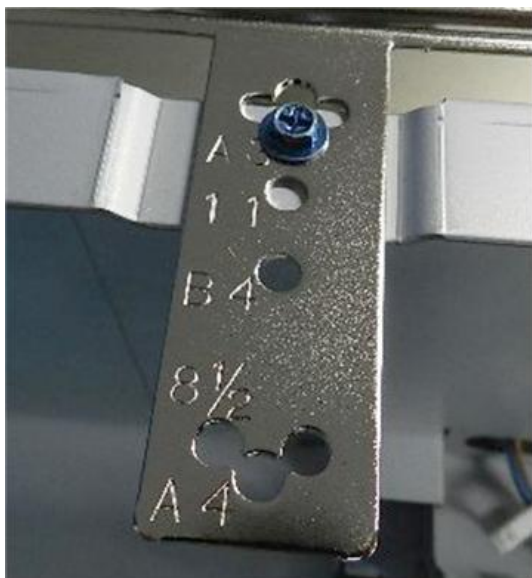
b331b2043

## Checking and Setting the Paper Size

---

1. Look at the scales and check the positions of the front, back, and side fences to see what size the

tray is set for.



b331b2039

2. The tray can be set for only the following sizes.

- A4 SEF/LEF
- A3 SEF
- B4 SEF
- LT (8.5"x11") SEF/LEF
- DLT (11"x17") SEF only
- LG (8.5"x14")

**Note**

- Custom paper sizes cannot be used in this tray.

3. If you need to adjust the positions of the side fences for the paper to be loaded in the tray, you must do this now before the tray is installed in the machine.

**Note**

- The side fences must set with the tray removed from the machine. If the tray has been installed for one paper size, it must be removed to reset the positions of the side fences for another paper size.

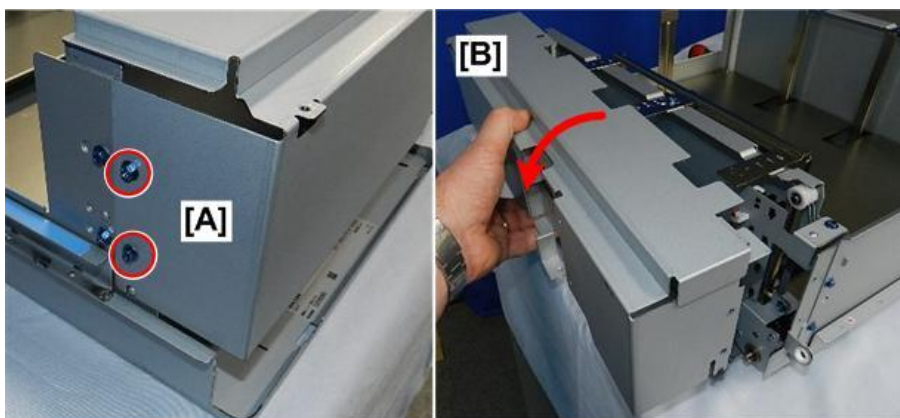
## 2. Installation

4. Remove the right screws (🔩 x2).



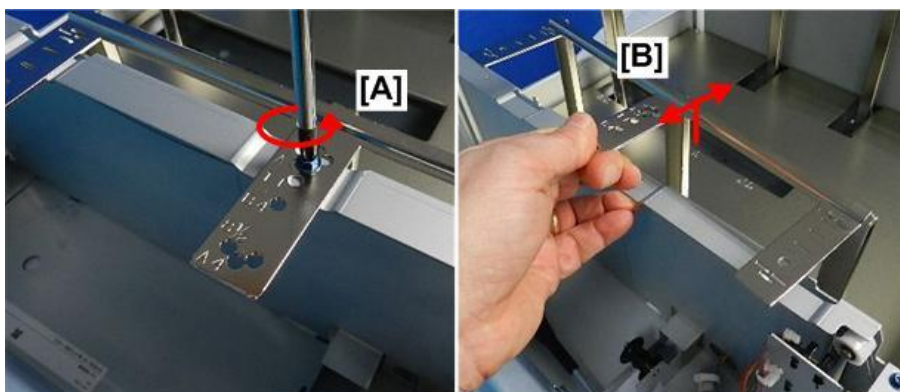
b331b2007

5. Remove the left screws [A], and then remove the front panel [B] (🔩 x2).



b331b2008

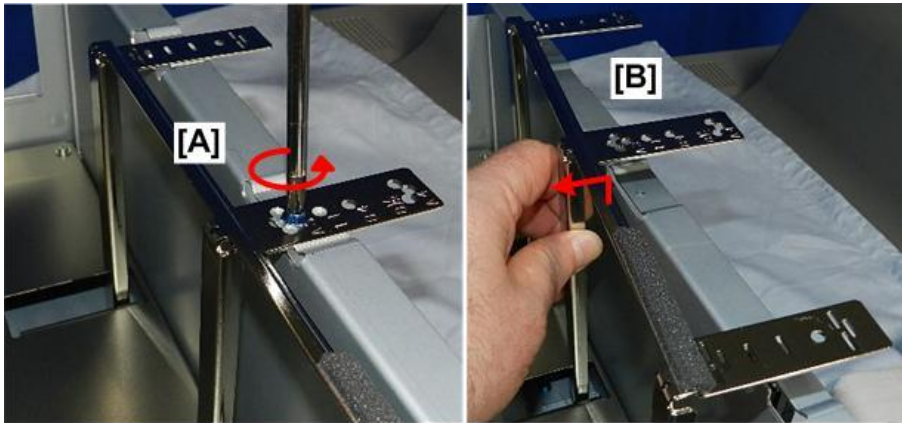
6. Loosen the screw of the **front fence** [A] (🔩 x1).
7. Set the fence [B] at the correct position, and then re-attach the screw (🔩 x1).



b331b2010

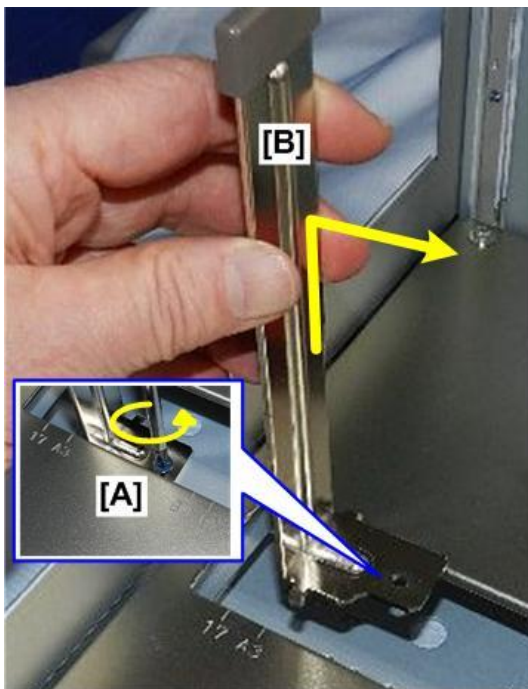
8. Loosen the screw of the **rear fence** [A] (🔩 x1).

9. Set the fence [B] at the correct position, and then re-attach the screw (⚙x1).



b331b2011

10. Loosen the screw of the **side fence** [A] (⚙x1).  
11. Set the fence [B] at the correct position, and then re-attach the screw (⚙x1).



b331b2012

## 2. Installation

12. Re-attach the front panel (🔩 x4).

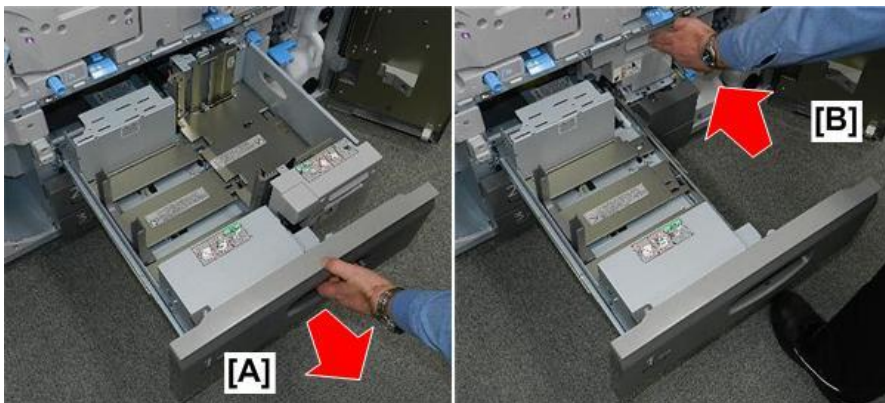


b331b2013

### Removing the Tandem Trays

---

1. Open the front doors.
2. Pull the top tray [A] out until it stops.
3. Push the right tandem tray [B] back into the machine.

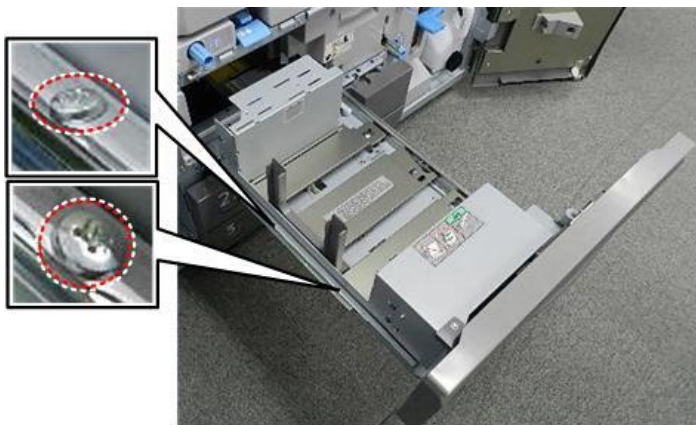


b331b2014

4. Disconnect the left side of the left tandem tray (🔩 x2).

#### ⚠ Note

- These screws on the left are **short** screws.

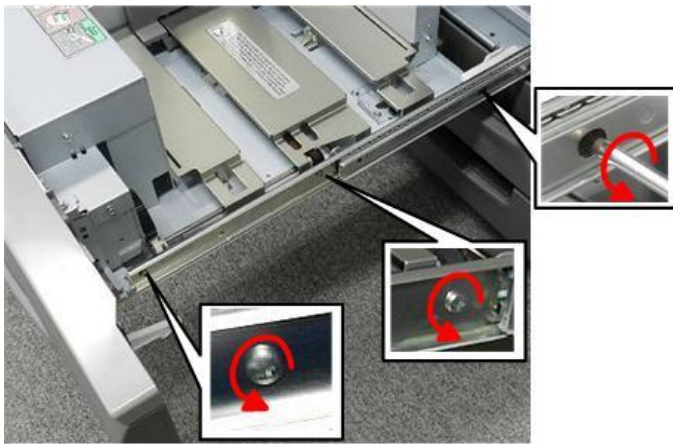


b331b2015

5. Disconnect the right side of the left tandem tray (⚙x3).

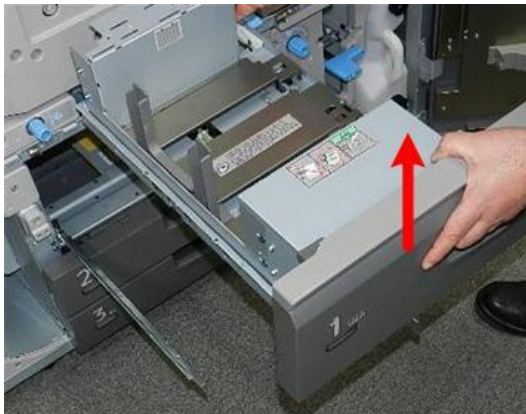
**Note**

- These screws on the right are **longer** screws.



b331b2016

6. Remove the left tandem tray.



b331b2017

7. Three screws behind the front cover hold it in place.

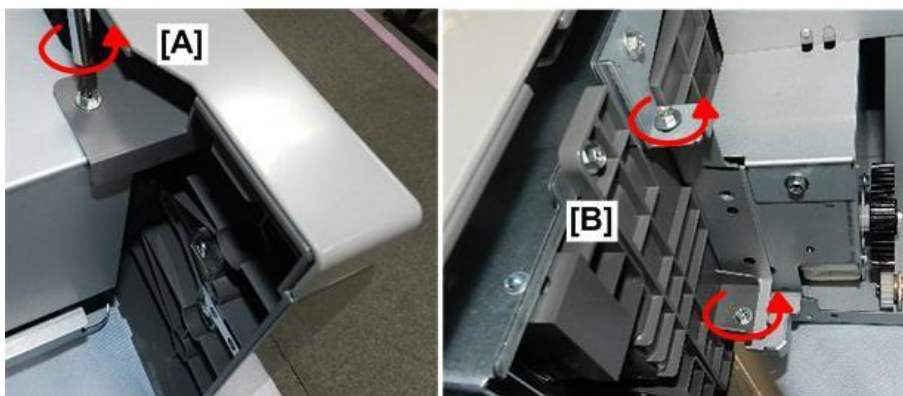


b331b2018

8. Disconnect the screw [A] behind the upper left corner of the front cover (⚙x1).

## 2. Installation

9. Disconnect the high and low screws that hold the right side of the cover [B] (⊖x1).



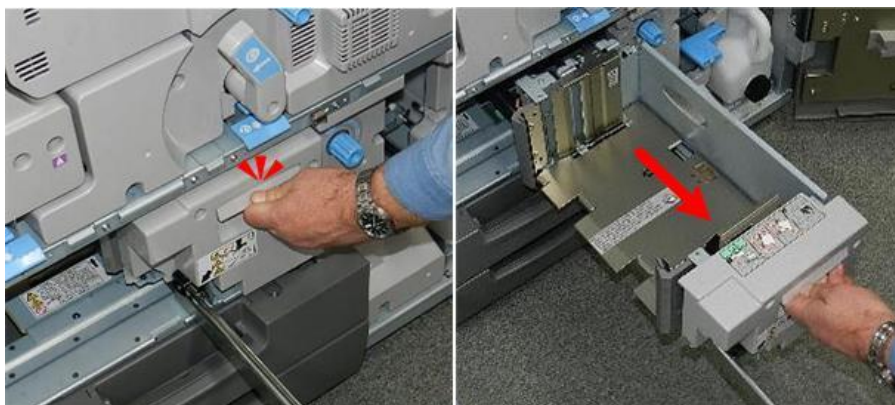
b331b2019

10. Remove the front cover.



b331b2020

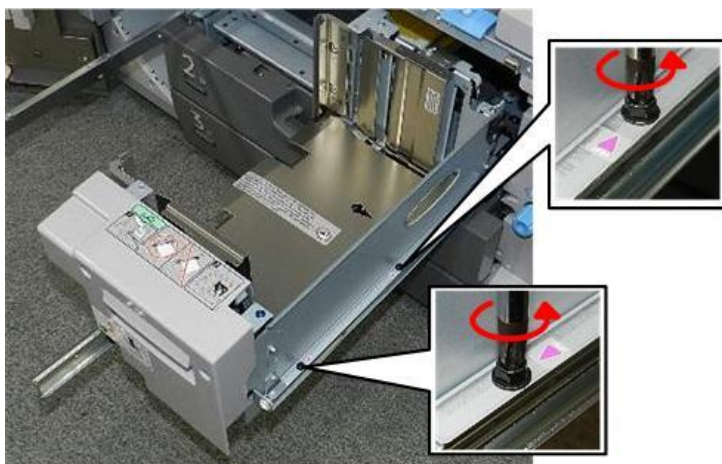
11. Lay the cover face down on a flat, clean surface.  
12. Pull out the right tandem tray.



b331b2021

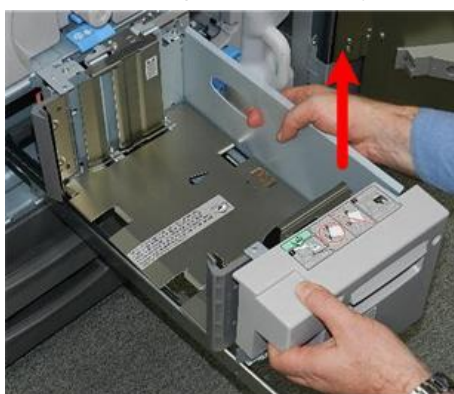


13. Disconnect the right side of the right tandem tray (🔩 x2). **Do not discard these screws!**



b331b2022

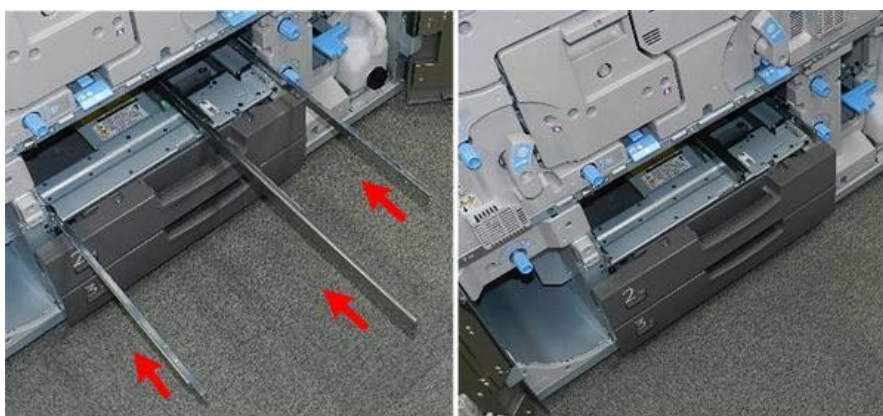
14. Remove the right tandem tray.



b331b2023

### Installing the Short Connector

1. Push the rails into the machine.

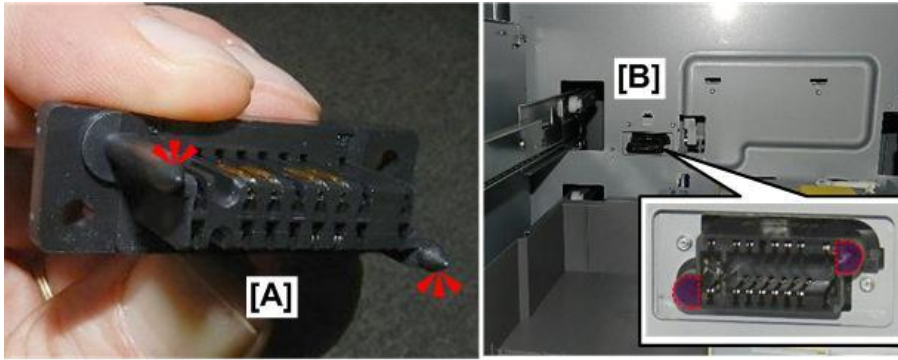


b331b2024

2. Hold the connector as shown.

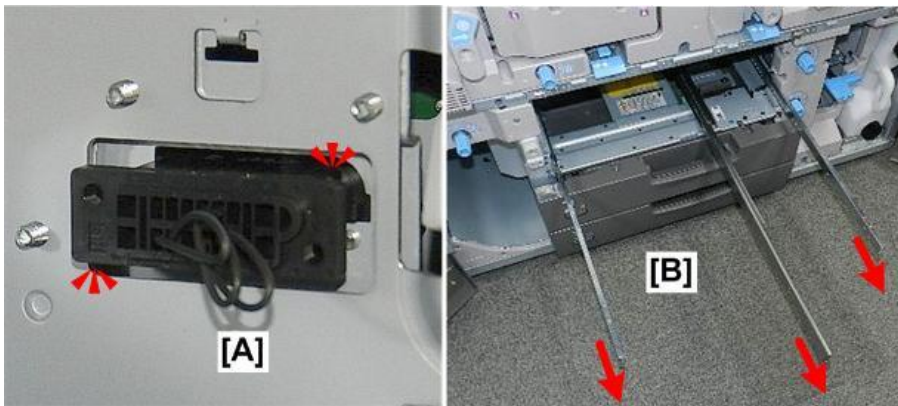
- The pins [A] on the back of the short connector are mounted at opposite corners.
- The pins fit into the holes in the receptacle [B] inside the machine.

## 2. Installation



b331b2025

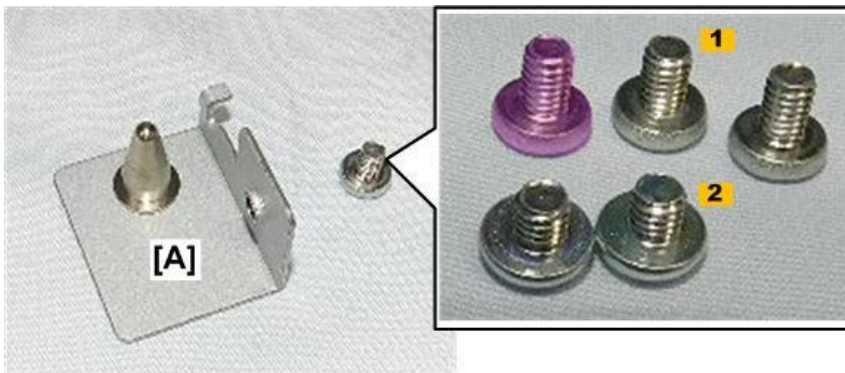
3. Insert the short connector [A] into the receptacle on the rear wall inside the machine.
4. Pull out the rails [B].



b331b2026

### Installing the Tray and Front Cover

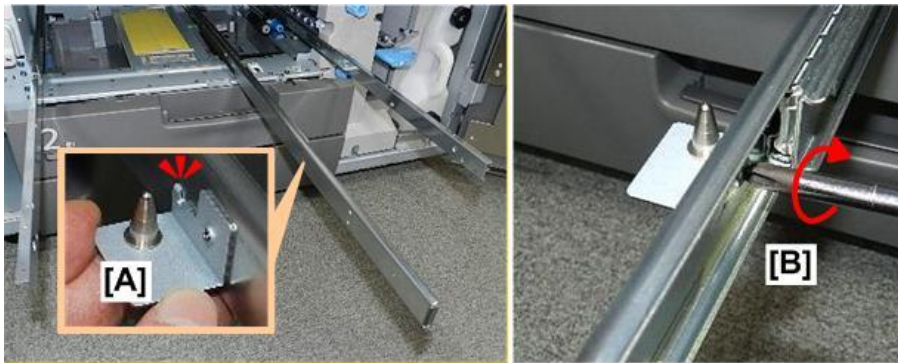
1. The long screws round-head [1] were removed from the right side of the left tandem tray, and the short round-head screws [2] were removed from the left side of the left tandem tray.
2. Select **one of the long screws** to fasten the pin bracket [A].



b331b2027

3. Set the pin bracket [A] in the center of the middle rail.

4. Fasten the bracket to the middle rail [B] (1x1).



b331b2028

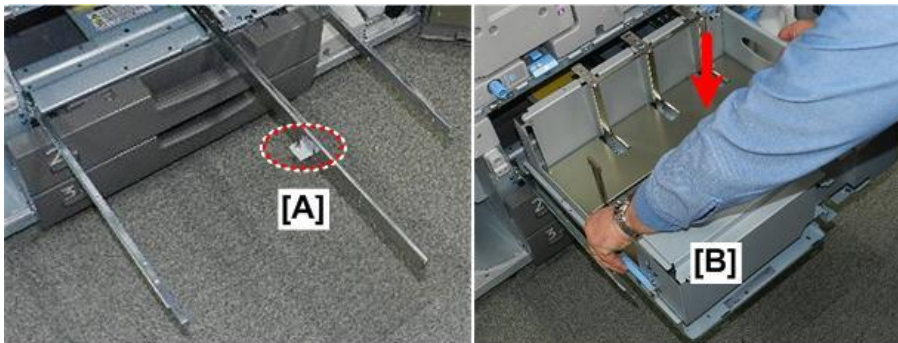
5. You need four TCRU screws to attach the tray unit:

- [1] The screws you removed from the right side of the right tandem unit
- [2] Two accessory screws provided. (These four screws are the same size.)



b331b2029

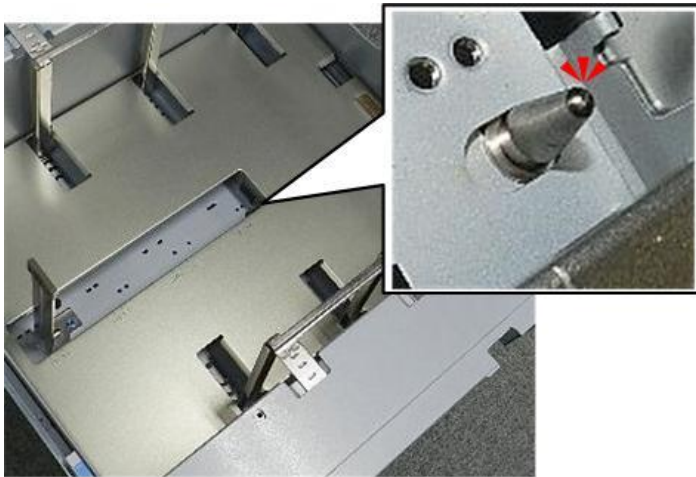
6. Using the installed pin bracket [A] as an aiming point for the hole in the bottom of the tray unit [B], lower the tray unit onto the rails.



b331b2030

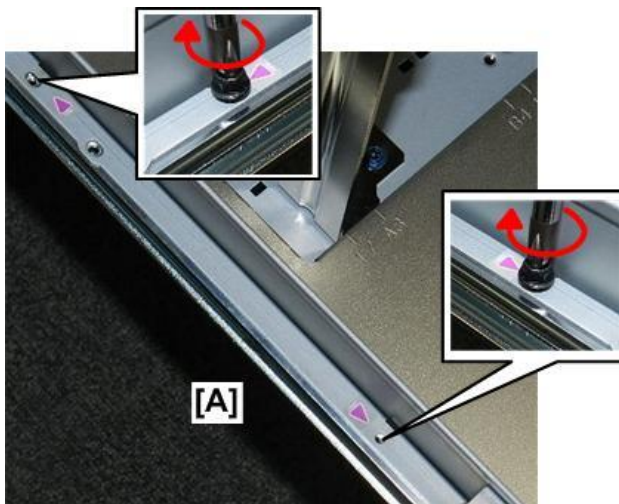
## 2. Installation

7. Make sure that the head of the pin is through the hole in the bottom of the tray.



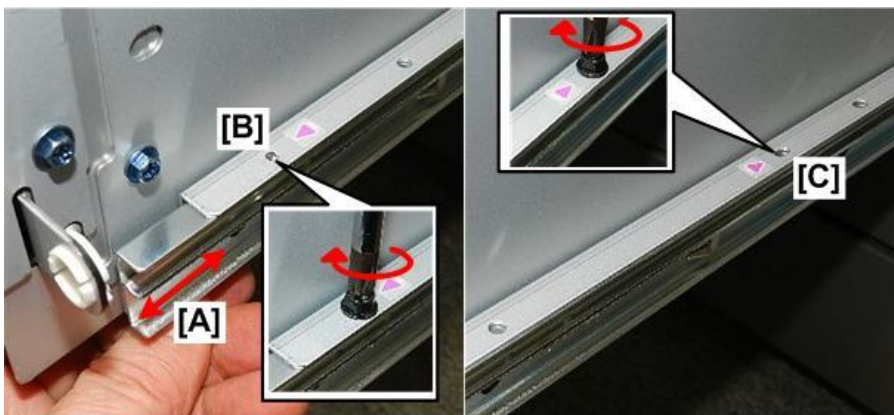
b331b2031

8. Loosely attach the left side of the tray unit to the left rail [A] (🔩 x2). **Do not tighten these screws yet.**



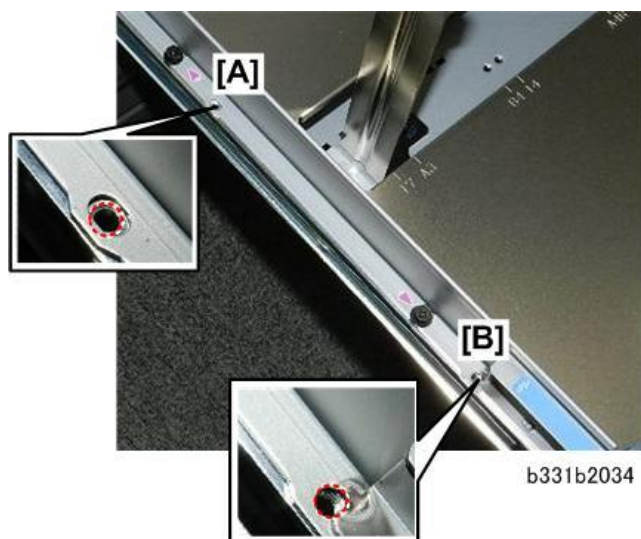
b331b2032

9. Slide the rail [A] to the front or back to align the screw holes.
10. Loosely attach the right side of the tray unit at the front [B] and center [C] (🔩 x2). **Do not tighten these screws yet!**



b331b2033

## 11. Check the left rail.



- Make sure that you can see the holes of the rail aligned at holes [A] and [B] of the tray unit.
- There are no screws here, but the alignment of these holes at [A] and [B] tells you that the tray is positioned correctly.
- If the holes are out of alignment, loosen or remove some of the screws, and then adjust the position of the rails until the holes appear aligned.

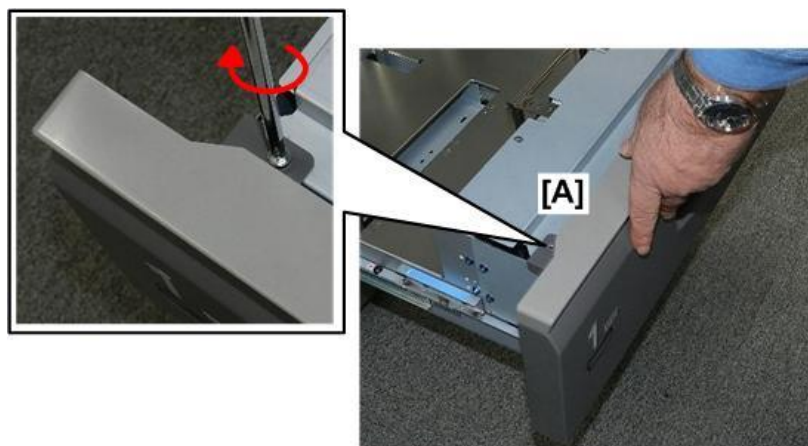
**★ Important**

- If the four screws are tightened with these holes not aligned correctly, you may not be able to open the paper tray after it has been pushed into the machine.

## 12. After confirming that the holes are aligned correctly, tighten the screws on the left and right sides of the tray unit (🔩 x4).

Attach the Front Cover, Attach the Decal

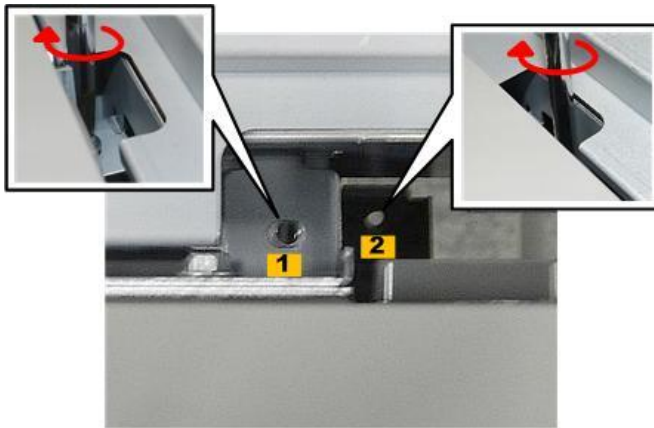
## 1. Fasten the upper left corner of the front cover [A] (🔩 x1).



b331b2035

## 2. Installation

2. On the right, behind the cover, fasten the high screw [1] and the low screw [2] (⊕ x2).



b331b2036

3. Push the drawer into the machine.



b331b2037

4. Use **SP5-019-002** to select the size of the paper to be loaded in the Tray.

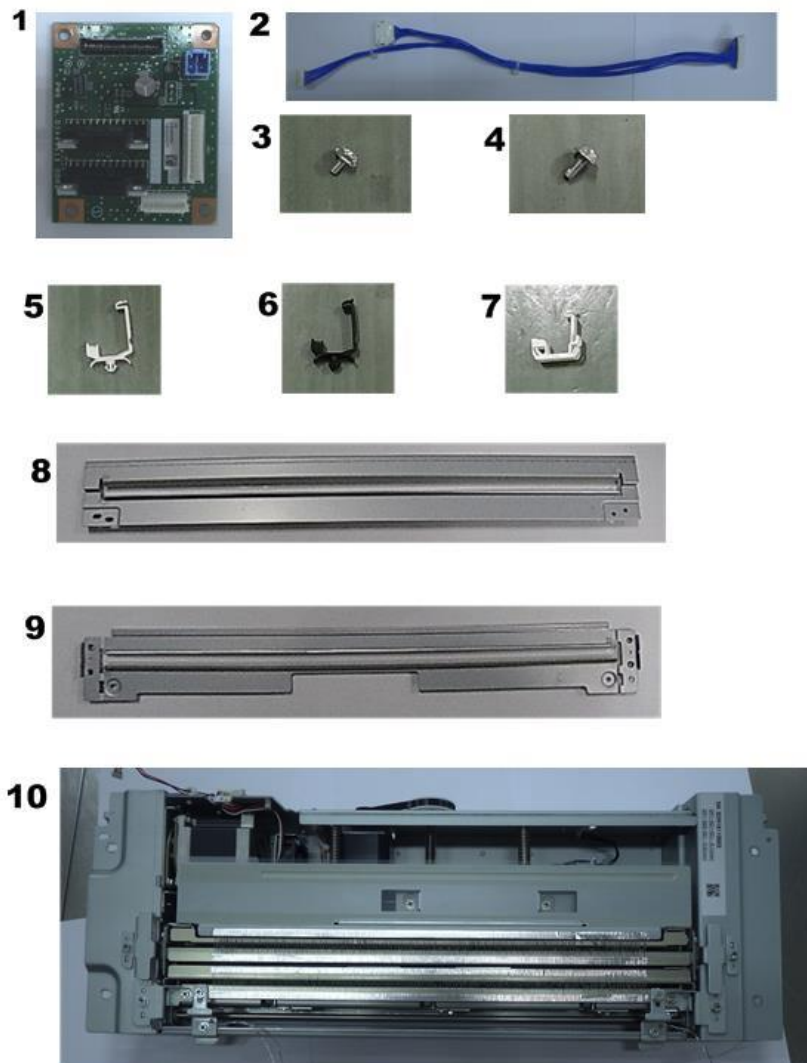
### ★ Important

- The size you select must match the size of that you selected by positioning the side fences earlier.
  - A4 SEF/LEF
  - A3 SEF
  - B4 SEF
  - LT (8.5"x11") SEF/LEF
  - DLT (11"x17") SEF only
  - LG (8.5"x14")
5. After selecting the paper size, switch the machine off and on to change the indicator on the operation panel.

## Decurl Unit DU5070 (D3DR)

### Accessories

Check the quantity and condition of the accessories in the box against the following illustration and list.



d179b2026b

No.	Description	Q'ty
1	DDRB (Main Board)	1
2	Motor Harness	1
3	Screw M3x6 (with washer)	4
4	Hex Screw (M4x8)	8
5	Harness Clamp (White): LWSM-0511	2
6	Harness Clamp (Black): LWSM-0511-2M	4
7	Edge Saddle: WES-0507	1
8	Connector Guide Plate A	1
9	Connector Guide Plate C	1

## 2. Installation

No.	Description	Q'ty
10	Decurl Unit	1

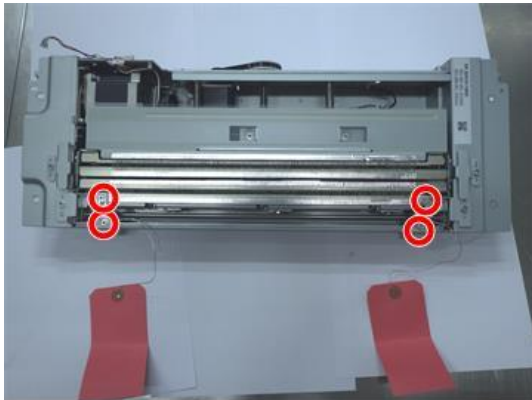
### Installation

#### **⚠ CAUTION**

- Make sure that the main machine is switched off and unplugged from its power source before installing the Decurl Unit.
1. If a peripheral unit is connected to the left side of the main machine, disconnect it.
  2. Remove the joint bracket from the side of the machine.

#### Mounting the Decurl Unit

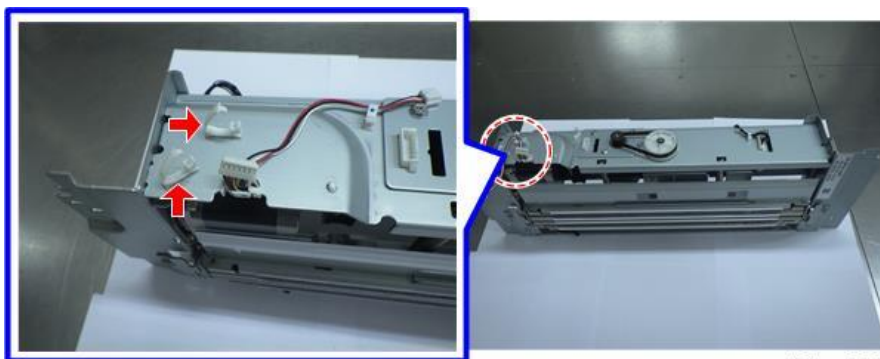
1. Remove the unit from the box and separate the accessories.
2. Disconnect the retainers (⚙ x4).



⚙ x4

d0bxa2231

3. Attach the clamps.

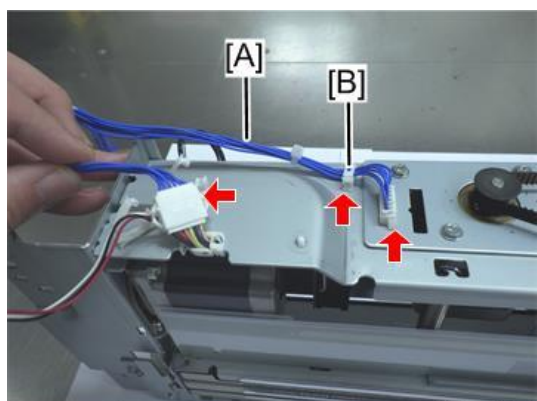


⚙ x2

d0bxa2232



4. Connect the accessory harnesses [A], and then close the clamp [B] and pull out the harness.



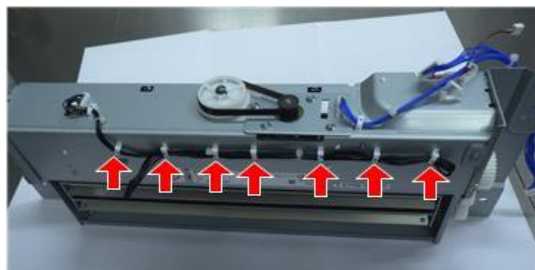
📦 x2 🛠️ x1

d0bxa2233

**Note**

When connecting the accessory harnesses, connect the connector of the longer cable to the port near the motor at the center.

5. On the back of the decurl unit, free the folded harness.

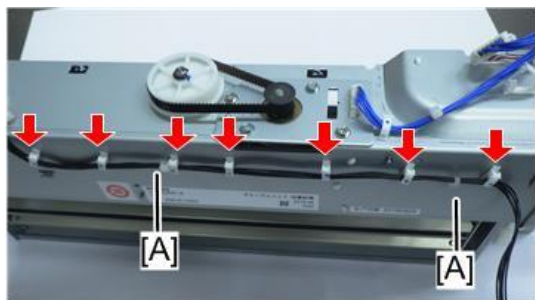


🛠️ x7

d0bxa2234

6. Close the clamps again around the single harness (🛠️ x7).

Make sure that the permanent bands [A] are positioned as shown at the arrows.

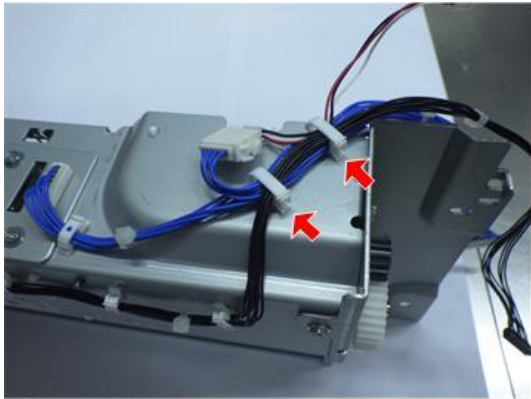


🛠️ x7

d0bxa2235


## 2. Installation

7. Gather the loose harnesses and clamp them at the rear.



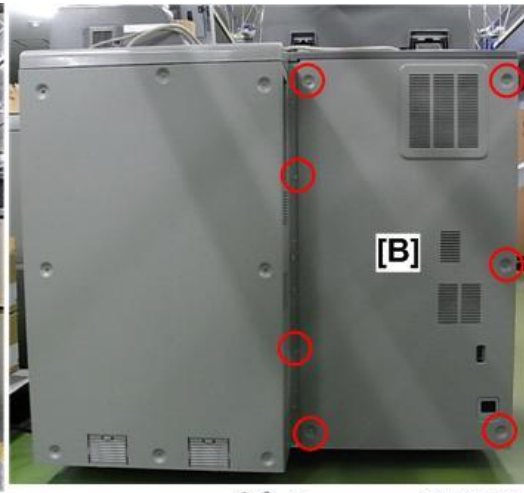
 x2

d0bxa2236

8. Remove the left cover [A] and the rear cover [B] ( x7 each).



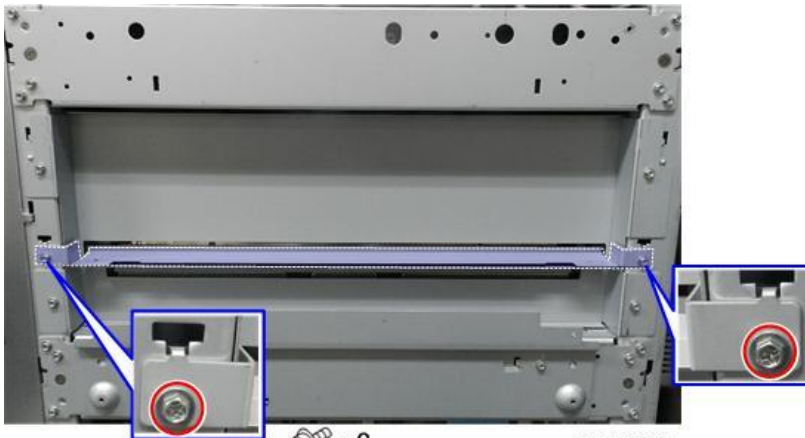
 x7



 x7

d1792030

9. On the left side of the main machine, disconnect the exit guide ( x2).



 x2

d3drb0008

10. Remove the exit guide.



d3drb0009

11. Disconnect the safety plate (🔩 x4).



🔩 x4

d3drb0010

12. Unhook and remove the safety plate.



d3drb0011

13. Disconnect the bracket. **Do not discard the screws!** This bracket will be re-attached (🔩 x2).



🔩 x2

d3drb0012

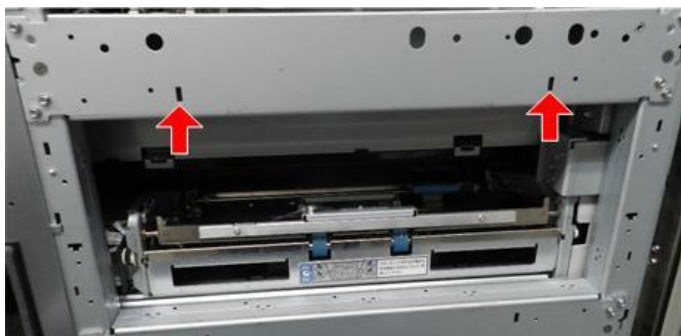
## 2. Installation

14. Push the bracket up to unhook it, and then remove it.



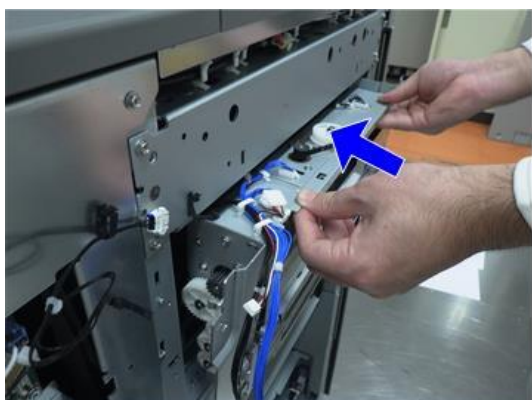
d3drb0013

15. Locate the holes where you are going to hang the decurl unit.



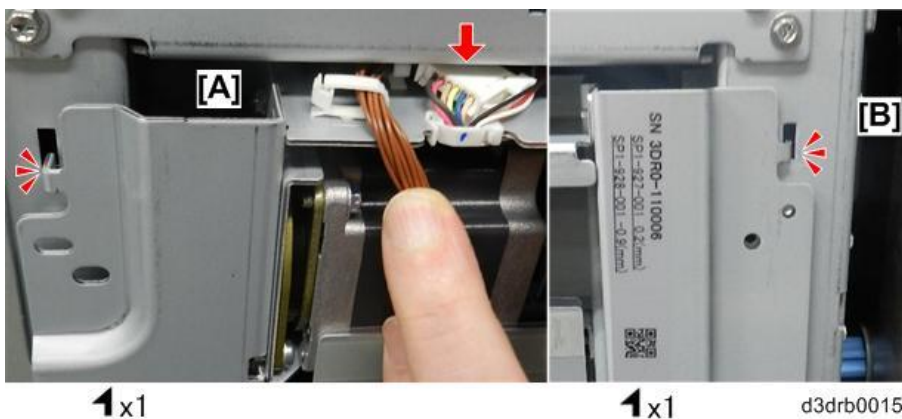
d3drb0014

16. Bring the decurl unit to the left side of the machine.



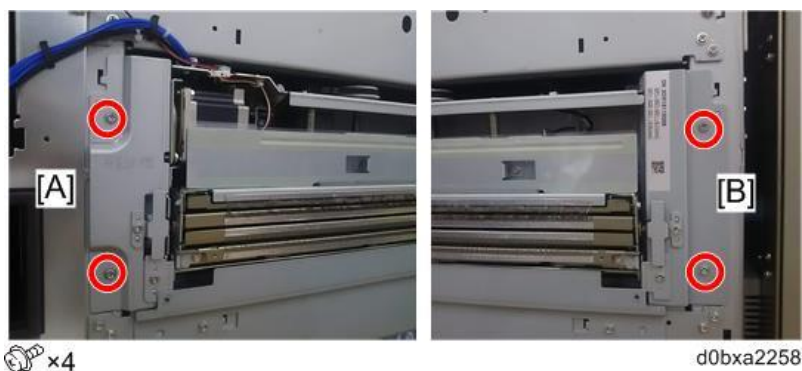
d0bxa2237

17. Hang the unit on the left side of the machine by the rear hook [A] and the front hook [B].

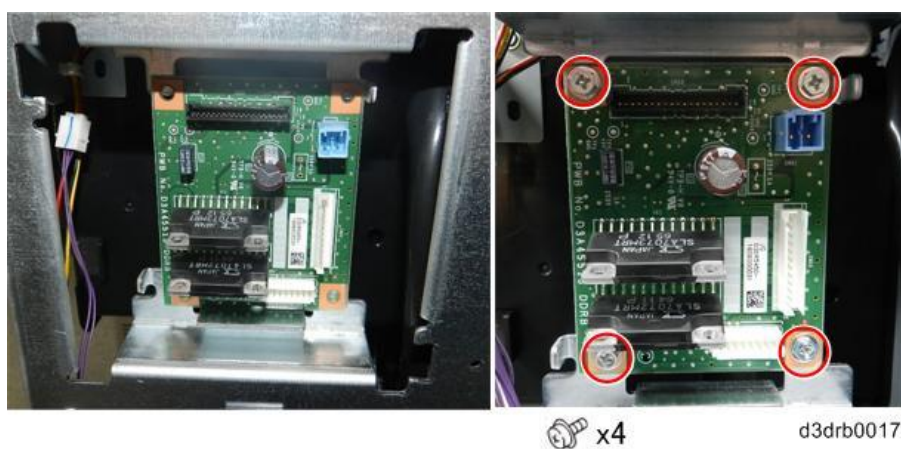


d3drb0015

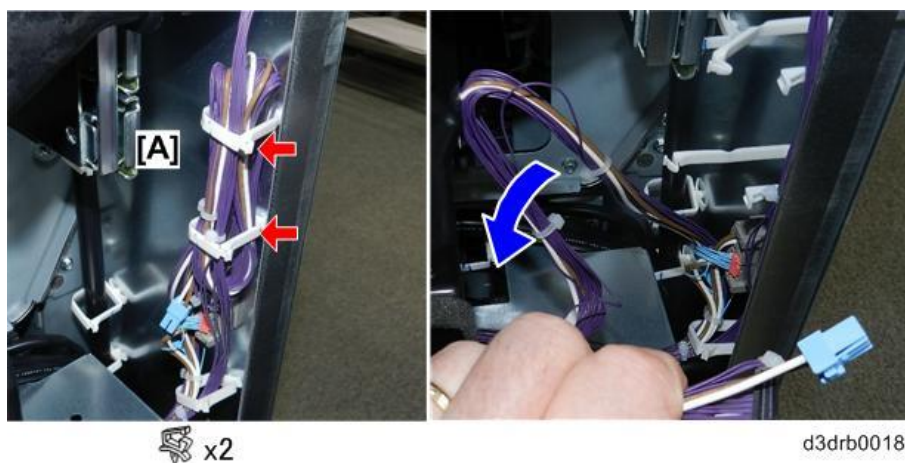
18. Fasten the rear end [A] and the front end [B] of the decurl unit (🔩 x4 M4x8).



19. Set the DDRB as shown, and then fasten it (🔩 x4 M3x6).



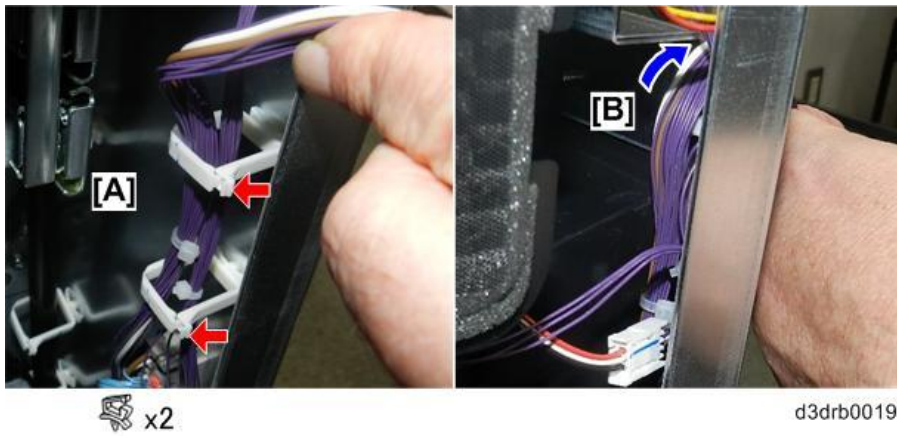
20. At the rear left corner of the machine [A] open the clamps and free the three folded harnesses (🔪 x3).



21. Clamp the harnesses again [A], and then push the freed ends of the harnesses through the frame

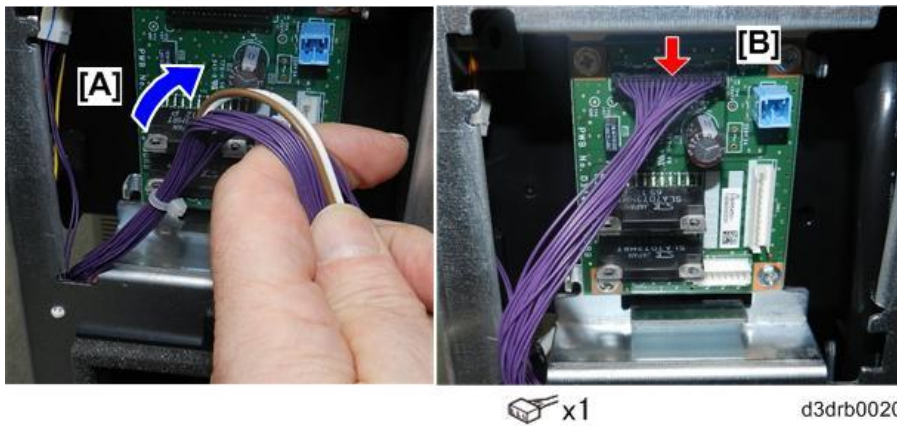
## 2. Installation

[B].



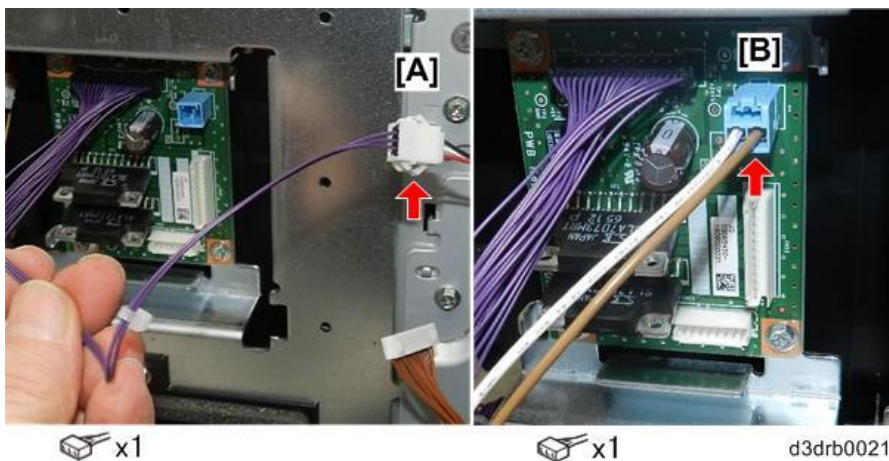
22. Pull the harnesses [A] up toward the PCB.

23. Connect the large connector [B] (x1).



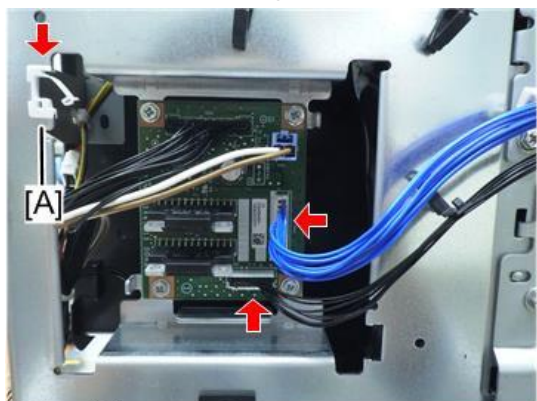
24. Connect the small connector [A] (x1).

25. Connect the socket connector [B] (x1).



26. Set the edge saddle clamp [A] in the corner (x1).

27. Connect the remaining harnesses from the decurl unit (🔌 x2).



🔌 x2 🧰 x1 d0bxa2238

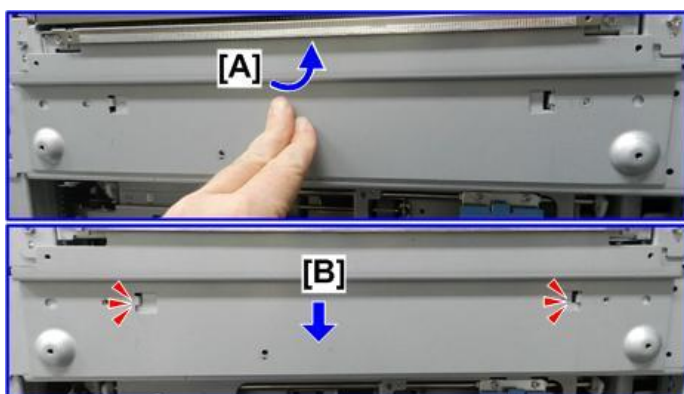
28. Select the bracket and screws you removed earlier (🔌 x2).



d3drb0023

29. Slip the top edge of the bracket [A] up under the lip of the decurl unit, and then push it up.

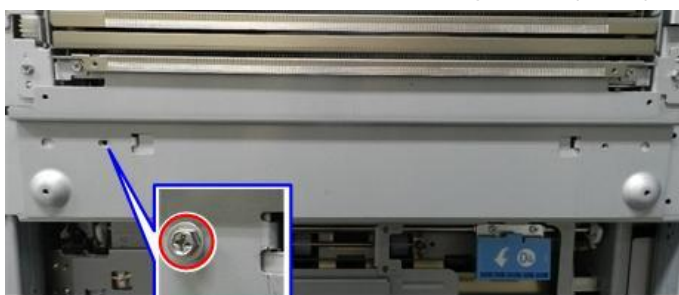
30. Set the hooks on both sides [B], and then let the bracket slip down and lock in place.



d3drb0024

31. Make sure the plate is flat against the side of the machine, and that the hooks are set securely.

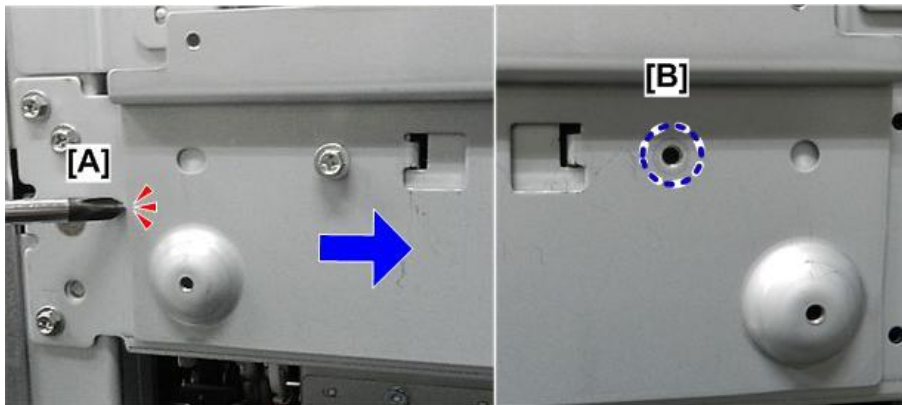
32. Set the screw at the rear, but do not tighten it (🔌 x1).



🔌 x1 d3drb0025

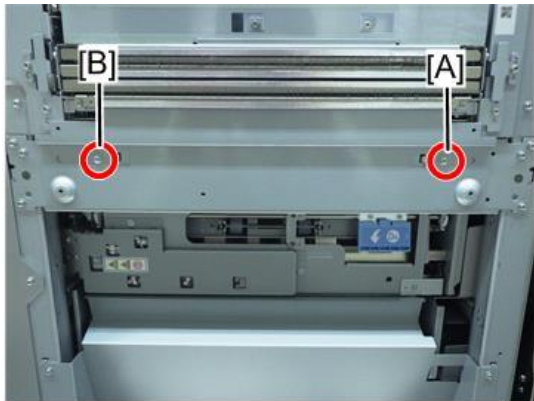
## 2. Installation

33. Tap the rear edge of the bracket [A] until you see the holes [B] aligned at the front.




d3drb0026

34. Fasten screw [A] at the front, and then tighten screw [B] at the rear.



 x2

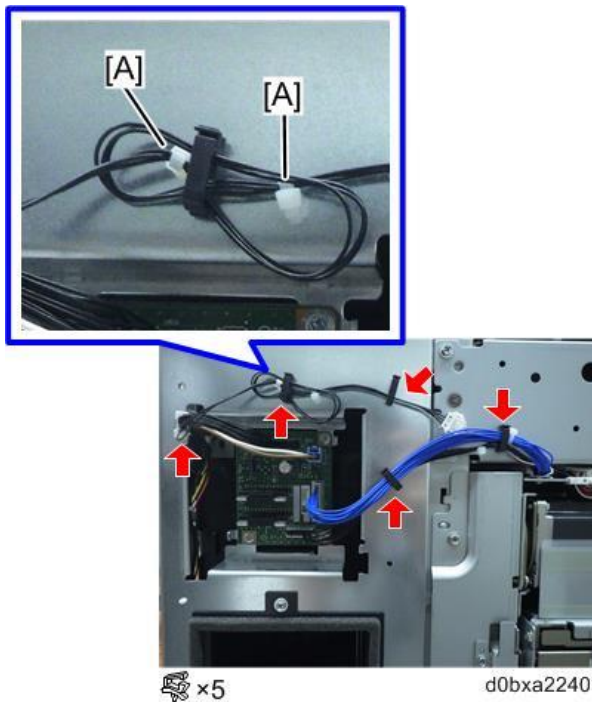
d0bxa2239

35. Clamp the harnesses (x5).

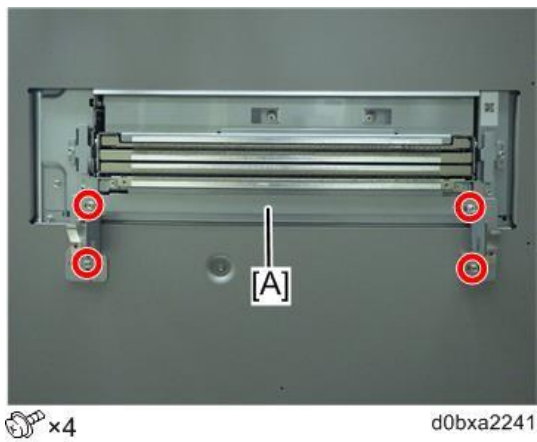
36. Before clamping harness [A], fold it over to take up slack with the permanent bands on either side



of the clamp as shown.



37. Re-attach the right and left covers of the main machine (🔩x7 each)
38. Attach the connection bracket [A] of the downstream unit (🔩x4 M4x8).



### Jam Removal Decal

---

1. Open the left front door of the main machine.

## 2. Installation

2. Attach the decal to the rear upper corner.



m263d4002

### ★ Important

- Position the decal so it is perfectly flat against the surface of the door.
- Make sure it does not cover the hole in the door that provides a recess for the knob. This could interfere with closing the door.

## Entrance Guide Plate

Two guide plates are provided for the connection between the Decurl Unit and the entrance of the downstream unit. You must select the correct guide plate for the downstream peripheral unit (refer to the table below).

Peripheral Unit	Guide Plate
Multi-Folding Unit FD5020	A
Cover Interposer Tray CI5040	
Ring Binder RB5030	
Perfect Binder GB5010	
Booklet Finisher SR5120	C
Finisher SR5110	
High Capacity Stacker SK5040	

1. Remove the guide plate from the right side of the downstream unit (🔧 x2).



d1792038

2. Select either entrance guide [A] or entrance guide [C] for attachment to the left side of the main

machine. (See the table above.)

[A]



[C]



d1792039

3. Use the screws removed in Step 1 to fasten the entrance guide to the main machine (🔩x2).



d1792040

4. If the first downstream unit is the Multi FoldUnit:

- Fasten the screws at the outer (wide) holes (this is for the Multi Fold Unit only).
- This is not done for either the Cover Interposer Tray or the Ring Binder.



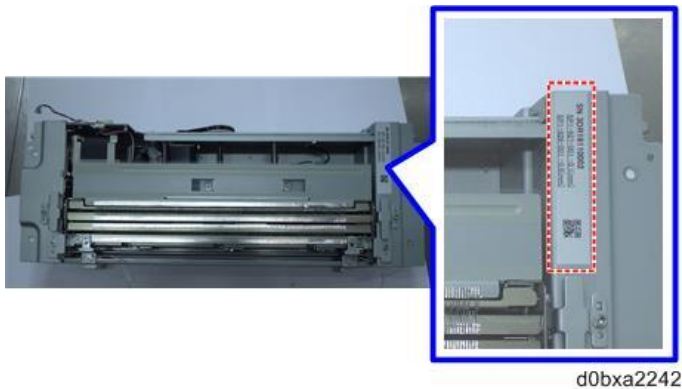
d1792041

## SP Settings

1. Plug the main machine into its power source, and then switch the machine on.
2. Enter the SP mode, and then enter the settings for SP1927-001 and SP1928-001 written on the

## 2. Installation

attached label.



3. Leave the SP mode.
4. Turn the machine off, and then unplug it from its power source.

### Connecting Peripheral Units

---

1. Connect the I/F cable to the main machine.
2. Connect the peripheral to the left side of the machine.
3. Plug the main machine into its power source, and then switch the machine on.
4. Enter the SP mode, and then do SP5-804-128 (Output Check De-curler Unit Move: Upper Default).
5. Send a sheet of paper through the Decurl Unit (the upper path is the default).
6. Turn the machine off, and then unplug it from its power source.

If the output check is not successful, do the procedure in the next section below to change the unit path.

### Adjustments

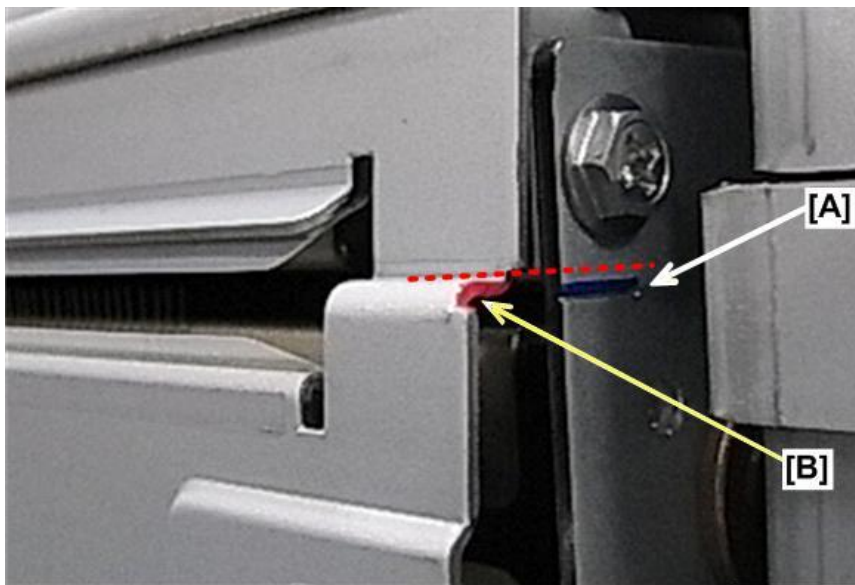
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1. Do SP1-906-001 (De-curler Setting Tray 1: Paper Path Selection) to confirm that the upper path is selected as the default path.
2. Switch to the COPY WINDOW, select one-side copy from Tray 1, and then press [Start].
3. Make sure that the paper exits the machine through the default upper path of the Decurl Unit, and then open the front door to interrupt operation of the machine.
4. Turn the machine off, and then unplug it from its power source.

#### **If Guide Plate A is Attached**

1. Check the red and blue marks between the main machine and the downstream unit.
2. Remove the rear cover of the peripheral.
3. Check to see if the blue mark [A] at the front and back of the Decurl Unit is at the same height as

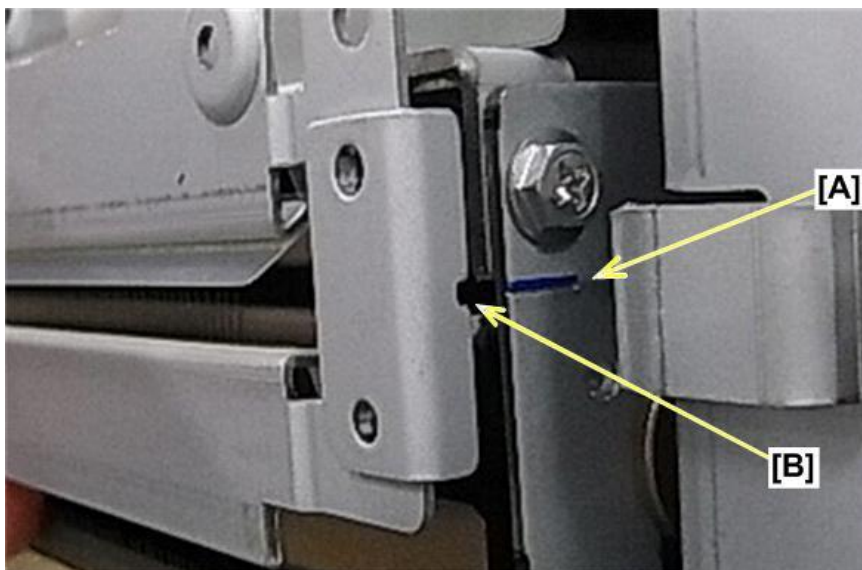
the red mark [B] at the front and back of the downstream peripheral.



d1792043

#### If Guide Plate C is Attached

1. Check the blue marks between the main machine and the first downstream unit.
2. Remove the rear cover of the peripheral.
3. Check the blue mark [A] at the front and back of the Decurl Unit with the cut-outs [B] in guide plate C, and then turn the leveling bolts until they are at the same height.



d1792044

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## Curl Correction

---

### SP Mode Adjustments

---

Turn on the machine and do some test prints and check for excessive curling.

#### ★ Important

- Do test prints with paper feed from each paper tray.

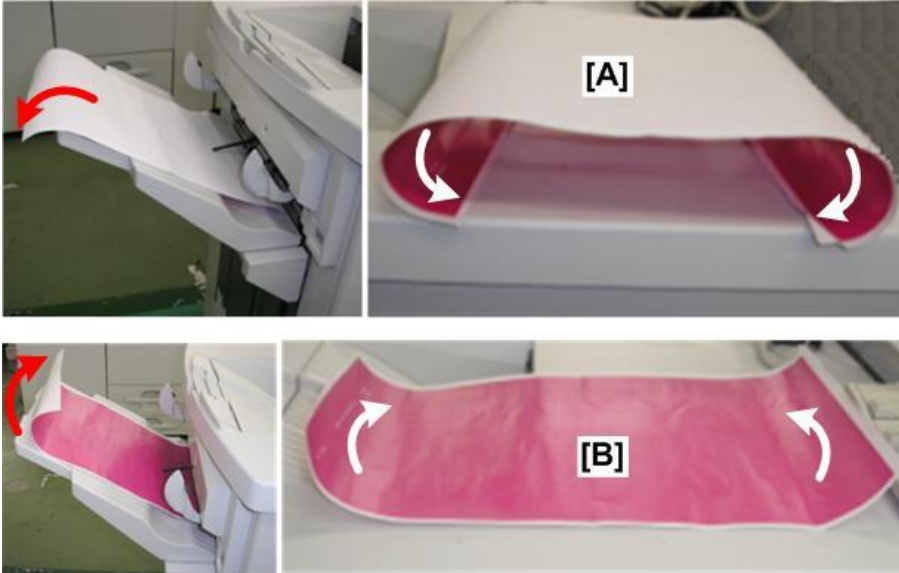
## 2. Installation

### Back Curl [A]

Back curling (convex curling) occurs when the leading and trailing edges of the sheets curl under.

### Front Curl [B]

Face curling (concave curling) occurs when the leading and trailing edges of the sheets curl up.



d1792045

### Curl Correction

Curl correction is done with settings in the SP mode. There are 11 SP codes for curl correction, one for each paper tray.

Paper Source		SP	Range
Tray 1	1st Tray: Main Machine	1906 001	[0 to 5 / 3 / 1]
Tray 2	2nd Tray: Main Machine	1906 002	
Tray 3	3rd Tray: Main Machine	1906 003	
Tray 4	Top Tray: LCIT	1906 004	
Tray 5	Middle Tray: LCIT	1906 005	
Tray 6	Bottom Tray: LCIT	1906 006	
Tray 7	Multi Bypass Tray: On top of LCIT	1906 007	
T1	Vacuum Feed LCIT RT5120	1-906-008	
T2	Vacuum Feed LCIT RT5120	1-906-009	
T3	Vacuum Feed LCIT RT5120	1-906-010	
T4	Vacuum Feed LCIT RT5120	1-906-011	

### 1st Tray Main Machine: SP1906 001

This is the list of settings for Tray 1. These settings are identical for each paper tray.

Setting	Used For	Sample
1	Slight Front Curl	Example [B] in the illustration above.
2	Excessive Front Curl	
3	None. This is the normal default setting.	No pressure applied by the soft roller.

Setting	Used For	Sample
4	Slight Back Curl	Example [A] in the illustration above.
5	Excessive Back Curl	

### Tray Heaters

---

If the machine is being used where humidity is high:

- Turn on the tray heaters of the main unit. This will prevent moisture from collecting around and in the paper trays while the machine is idle or switched off.
- If an LCIT is installed, we recommend installing the optional tray heaters in the LCIT. This will prevent moisture from collecting around and in the paper trays in the LCIT while the machine is idle or switched off.

## 2. Installation

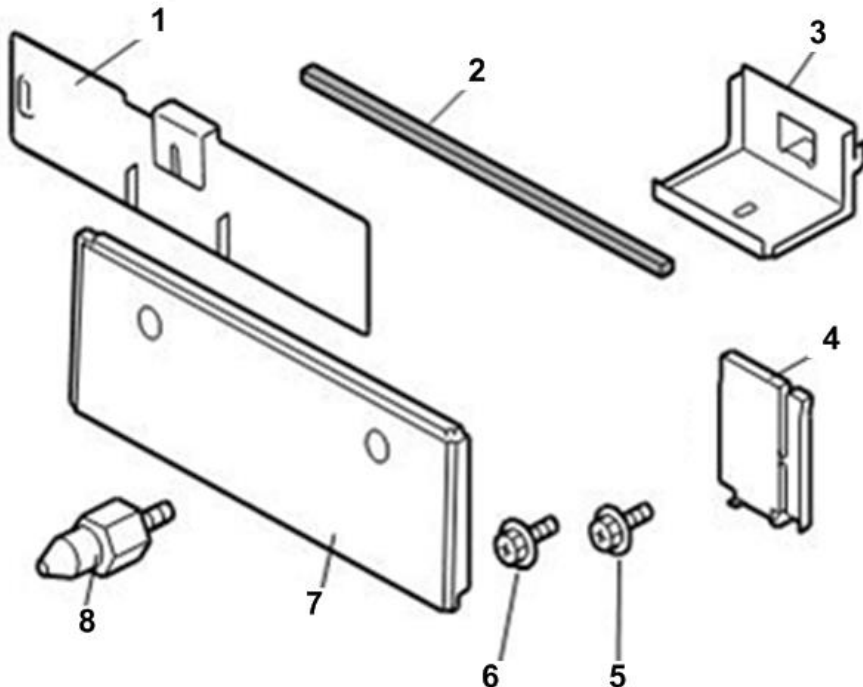
### Multi Bypass Tray BY5020 (D3EV)

#### Note

- The Multi Bypass Tray can be installed on Vacuum Feed LCIT RT5120 or LCIT RT5130 or LCIT RT5110.
- When Vacuum Feed LCIT RT5120 is connected, the Multi Bypass Tray can be installed on only the downstream Vacuum Feed LCIT (the closest one to the main machine).

#### Accessories

No.	Description	Q'ty
1	Tab Sheet Fence	1
2	Sponge Strip (Not used)	1
3	Bracket	1
4	End Fence	1
5	Screws (M4x8)	2
6	Screws (M4x6)	4
7	Left Cover	1
8	Joint Pins	2
-	Decal (ROHS) *China Only	1



m0b2d8304

#### Before You Begin

- The Multi Bypass Tray must be installed on the LCIT before the LCIT is docked to the mainframe.



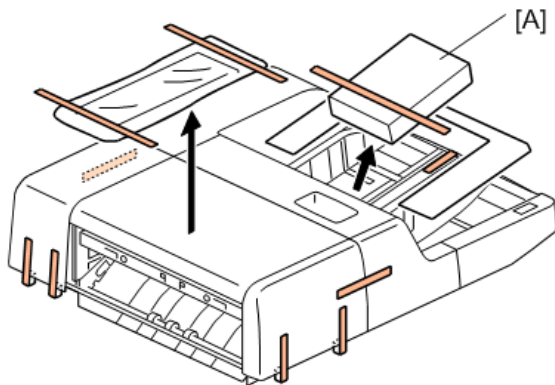
- If the LCIT is already installed, it must be disconnected from the mainframe before installation of the Multi Bypass Tray.

---

## Removing the Tapes and Retainers

---

- 1.** Take the multi bypass tray out from the box and place it on a work space.
- 2.** Remove the accessory packet [A] and open it.
- 3.** Remove all tape and shipping materials.



d517i101

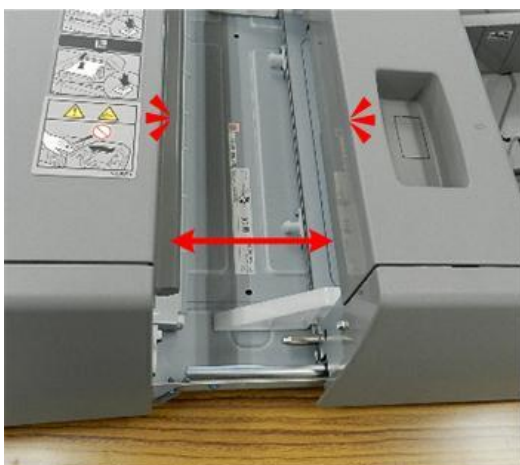
### Note

- The guide plate of the unit bottom sticks out, so place the unit on a table as shown below.



d194d8205

- 4.** Open the bypass tray.



d5170014

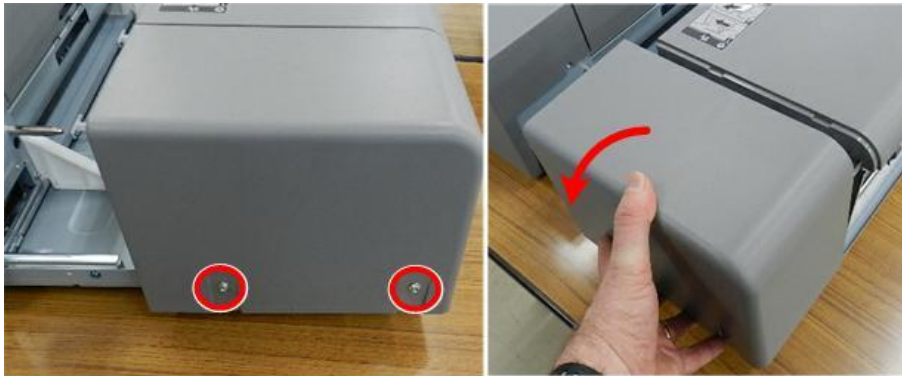
## 2. Installation

5. Remove the front cover (🔑 x1).



d5170015

6. Remove the rear cover (🔑 x2).



d5170016

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## Installation (LCIT RT5130)

---

### ⚠ CAUTION

- Make sure that the main machine is switched off and that its power cord is disconnected before doing the following procedures.

### Mounting the Multi Bypass Tray

---

These are the instructions for installing the unit on the LCIT RT5070. If you are doing this installation for the LCIT RT5080, go to the next section.

1. Remove the right edge cover (🔑 x2).



d5170003

- Next, remove the top cover (🔩 x2).



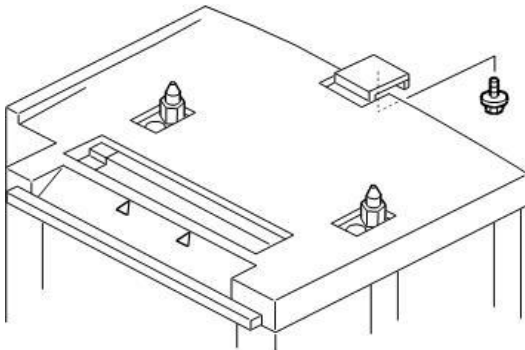
d5170004

- Install the joint pins.
- Turn the pins clockwise until they are snug against the frame.



d5170005

- Attach the accessory support plate (🔩 x1).



d5170037

**Note**

- The Multi Bypass Unit weighs about 20 kg. (44 lb.).

- Lift the bypass tray and set it on top of the joint pins. The pins should slide into holes in the bottom

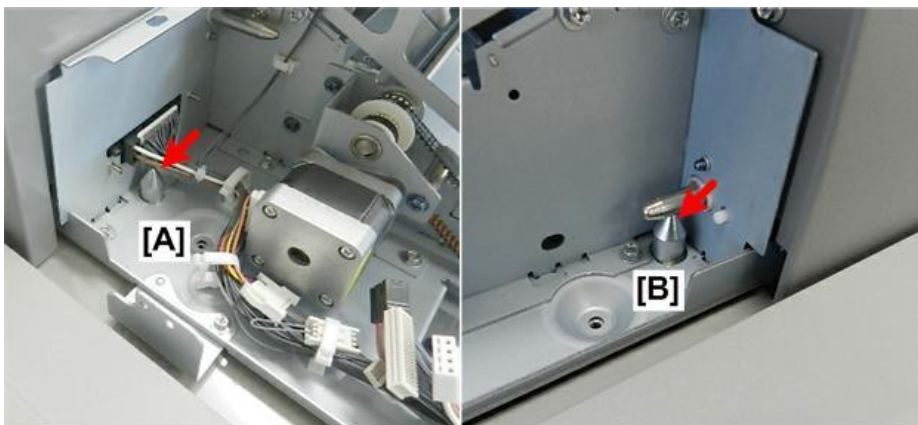
## 2. Installation

of the tray.



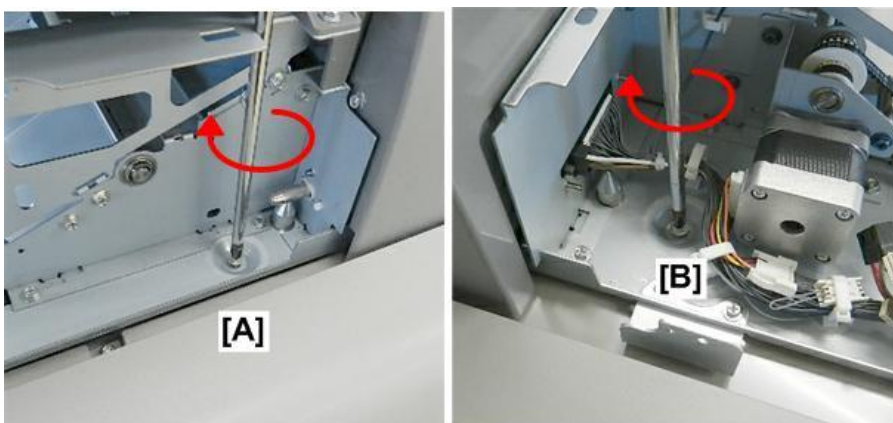
d5170017

7. On the right, secure the tray with one screw at the accessory support plate attached in Step 5 (🔩 x1).
8. Check the rear [A] and front [B].



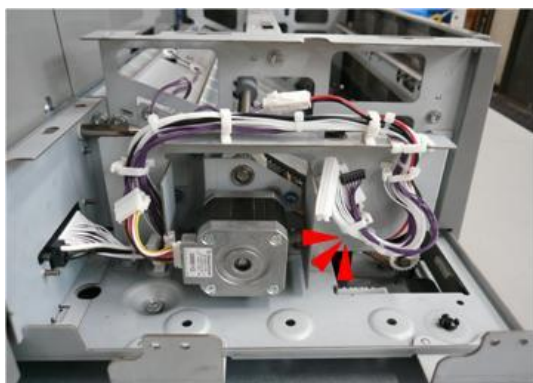
d5170018

9. Make sure the tray is flat on top of the LCIT, and that the joint pins are visible.
10. Fasten the tray at the front [A] and rear [B] (🔩 x2).



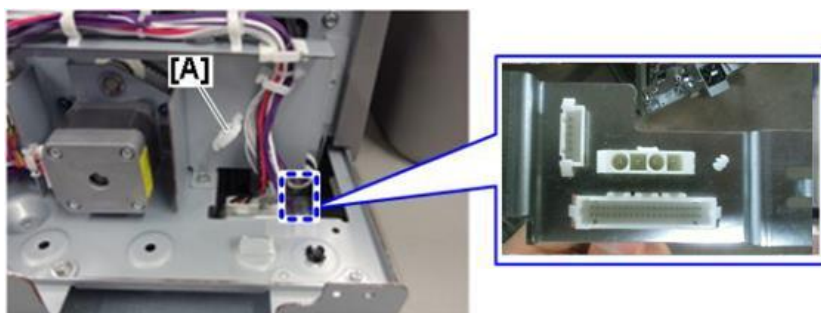
d5170019

11. At the rear, open the clamp to free the three harness cables.



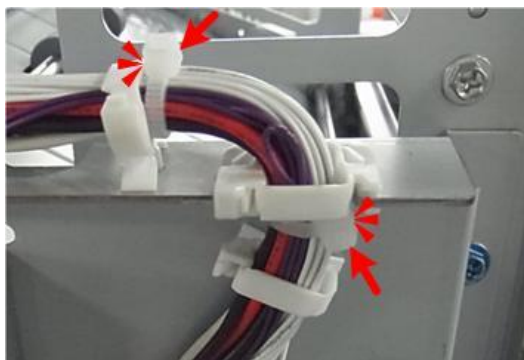
m0b2d8302

12. Locate the three connection points inside the tray, and then connect the harnesses (📦 x3).
- The clamp [A] which is opened in step 11 is not used for this installation.



d0bxa2301

13. When you close the harnesses, make sure that the two lock bands are positioned as shown above.



d5170040

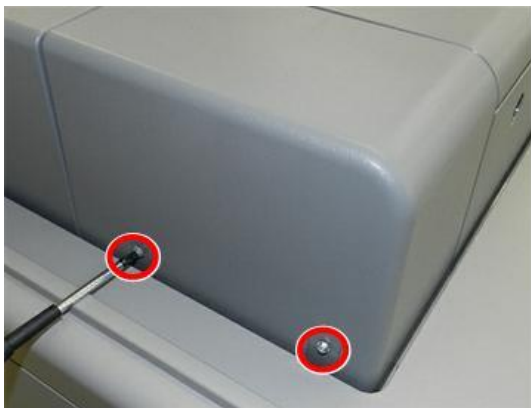
14. Next, install the left cover (🔩 x2).



d5170022

## 2. Installation

15. Attach the rear cover (🔩 x2).



d5170023

16. If the tray is closed, open it.



d5170024

17. Attach the front cover (🔩 x1).



d5170025

18. This completes installation of the Multi Bypass Tray.

19. Dock the LCIT to the side of the main machine.

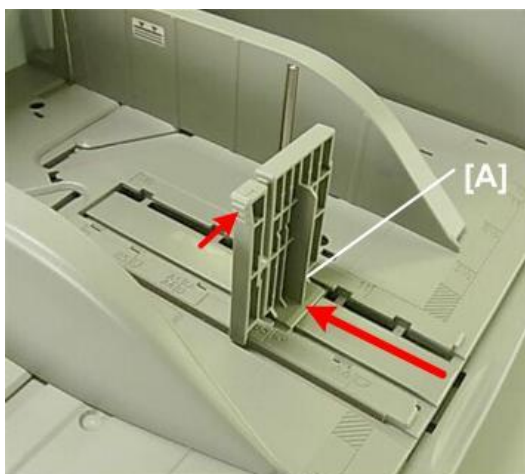
### End Fence, Tab Sheet Fence

---

#### ⚠ Note

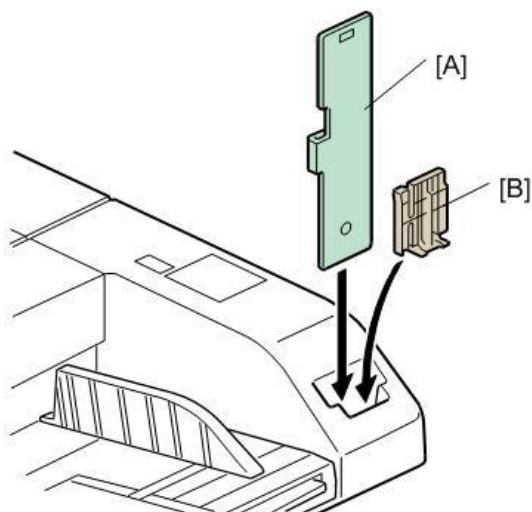
- The items in this section are bypass unit accessories.

1. Set the end fence [A].



d5170033

2. Store the tab sheet fence [A] as shown. Also store the end fence [B] here if the customer does not need to use it at this time.



d5170034

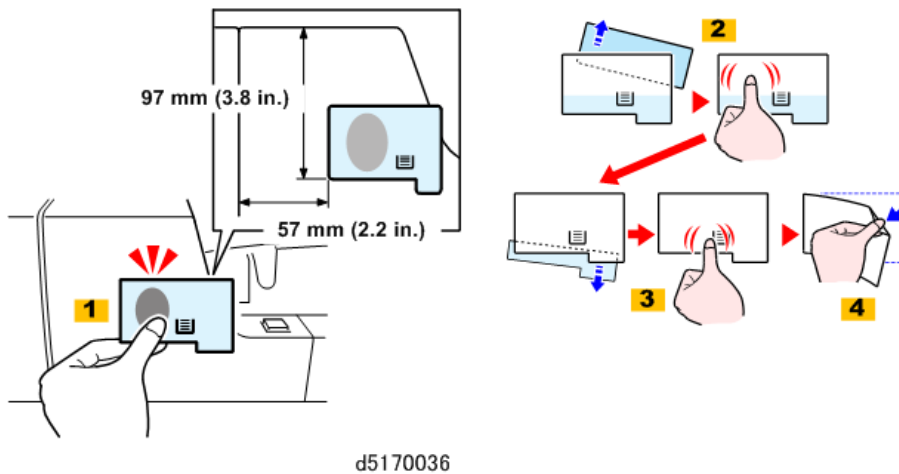
### Attaching the Tray Number Decals

---

1. Attach decal number **A** to the front of the unit as shown.
2. First, attach the "7" decal [1] at the position shown.
3. Pull the back strip [2] from behind the upper part of the decal, and then press where the strip was removed.
4. Pull the back strip [3] from behind the lower part of the decal, and then press where the strip was removed.

## 2. Installation

5. Pull the clear sheet [4] from the surface of the decal.



---

## Installation (LCIT RT5110)

---

This section describes how to install the Multi Bypass Tray BY5020 on the LCIT RT5110.

### **⚠ CAUTION**

- The unit must be connected to a power source that is close to the unit and easily accessible.
- Make sure that the main power switch and AC power switch of the main machine are turned OFF and that the power cord is disconnected before performing the following procedures.

If the LCIT Has Already Been Installed...

- 1.** If the LCIT is connected to the machine, disconnect it.
- 2.** To prevent damage to the connectors and ground wire, before pulling the LCIT away from the mainframe:
  - Pull the LCIT about 20 cm (8") away from the main machine.
  - Disconnect the connectors and the ground wire (⚙ x1 M4x8).
  - Pull the LCIT completely away from the machine.

### Mounting the Multi Bypass Tray

---

- 1.** Open the front door [A].
- 2.** Remove the front screws [B] (⚙ x2).





- 3.** Remove the rear screws [A], and then remove the top left cover [B] (⊙ x2).



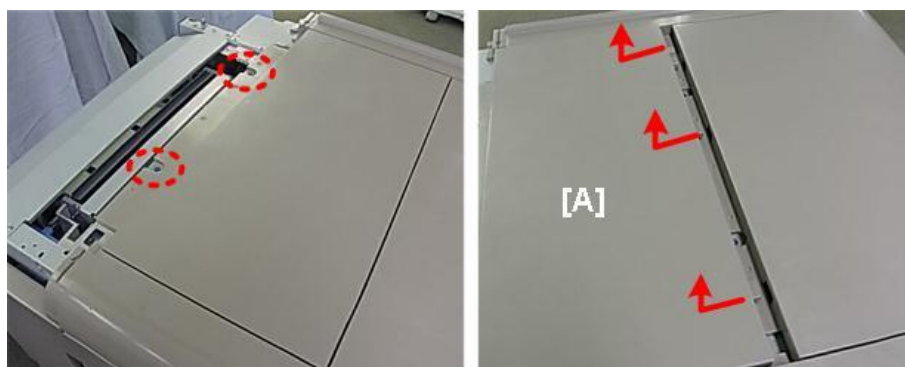
d5170007

- 4.** Remove the left flat cover (⊙ x2).



d5170008

- 5.** Remove the center flat cover [A] (⚙ x2 M4x8).



d517i002

- 6.** Remove the screws of the right flat cover [A] (⚙ x2 M4x8).


Keep these screws. You need them to attach the supplied cover.

- 7.** Slide the right flat cover to the right to disconnect the claws under the right edge and then lift it off.

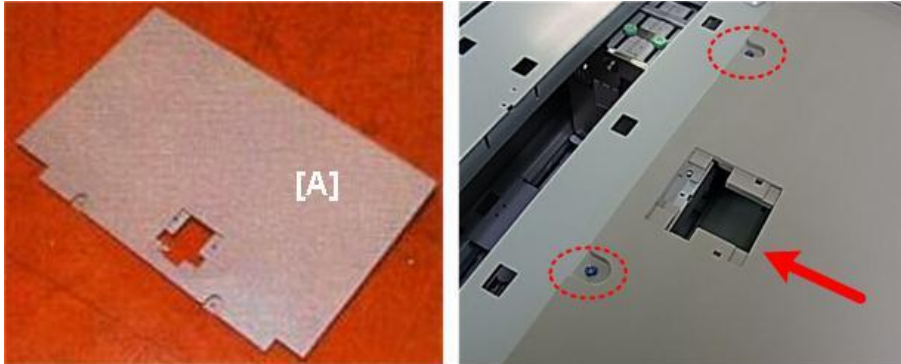


d517i003


## 2. Installation

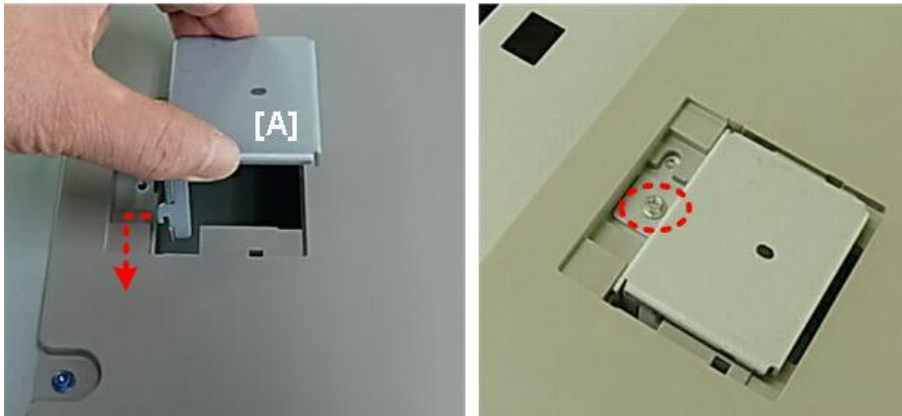
**8.** Attach the flat cover [A] (provided with this option) with the screws removed from the previous right flat cover (  x2: M4x8).

- This flat cover (like the previous cover) has three large claws under the right edge. Make sure these claws engage in the holes in the LCIT frame.



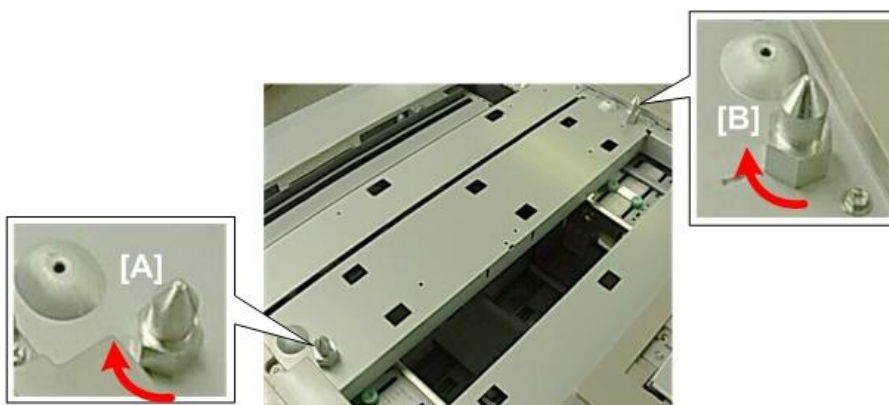
d517i004

**9.** Install the bracket [A] and fasten it (  x1 M4x6).



d517i005

**10.** Attach the joint pins [A] and [B].

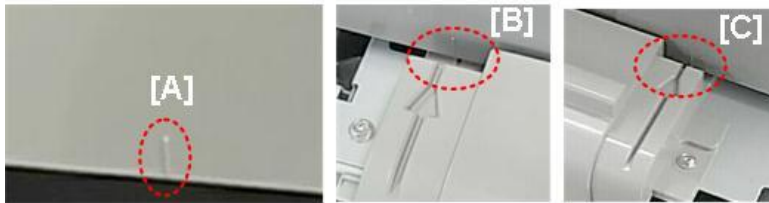


d517i006

**11.** Locate the alignment marks for the bypass unit.

- Two thin vertical lines [A] on the bypass unit (one on the front, one on the rear).
- Two arrows on the LCIT frame cover at the front [B], at the rear [C].
- These lines and arrows must be aligned correctly when you mount the bypass tray on top of

the LCIT.



d517i007

- 12.** Pick up the bypass unit on its left side [A] and right side [B].



d517i008



d5170017

**⚠ CAUTION**

- The bypass unit weighs 20 kg (44 lb.). You may need assistance to mount the bypass unit on top of the LCIT.

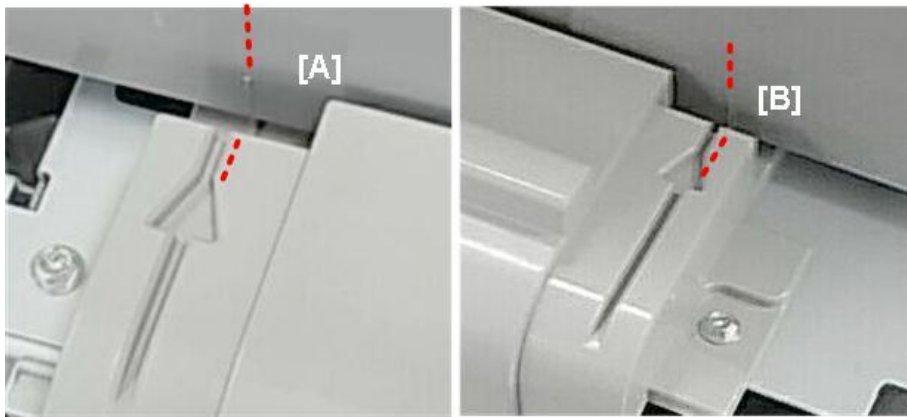
- 13.** Mount the bypass unit on top of the LCIT. Align the thin lines on the front [A] and rear [B] of the bypass covers with the arrows on the front and rear sides of the LCIT frame.

**★ Important**

- Aligning these points ensures that the holes on the bottom of the bypass unit will slip

## 2. Installation

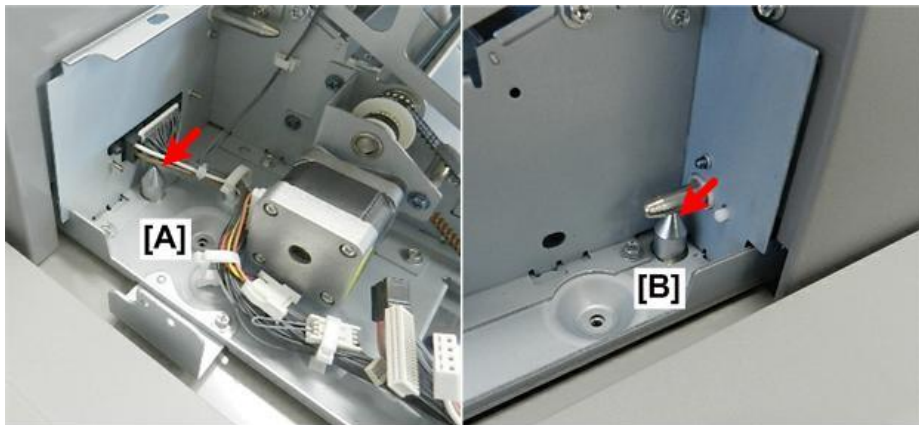
easily over the vertical joint pins on the LCIT.



d517i007a

### **14.** Check the rear [A] and front [B].

Make sure the unit is flat on top of the LCIT, and that the joint pins are visible.



d5170018

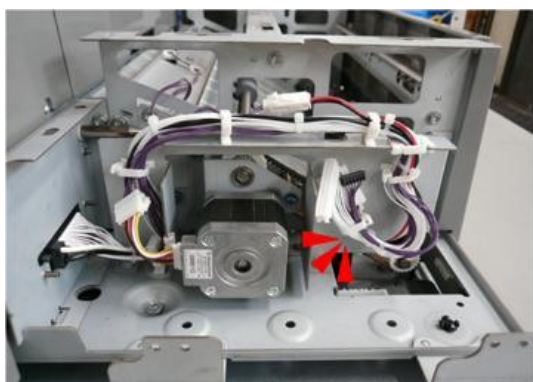
- 15.** Fasten the unit at the front and rear (🔩 x2 M4x6).



d194d8210



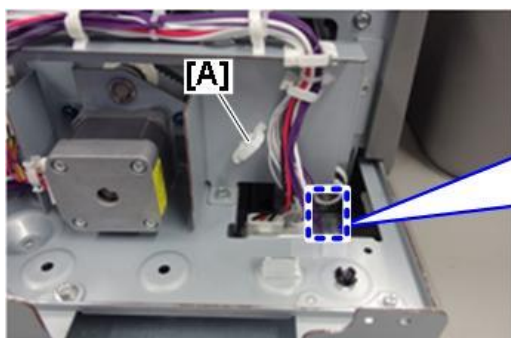
- 16.** At the rear, open the clamp to disconnect the three harness cables (🔗 x1).



m0b2d8302

- 17.** Locate the three connection points [A] on the LCIT (inside the tray), and then connect the three harnesses (🔗 x3).

Clamp [A] is not used for this installation.

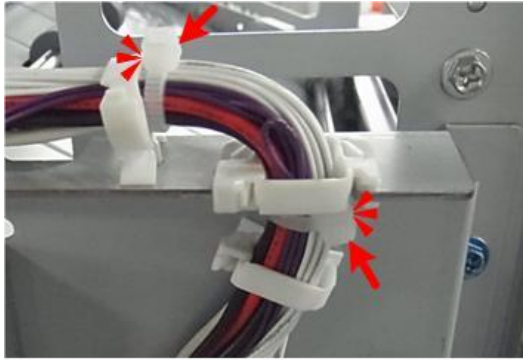


m0b2m8303



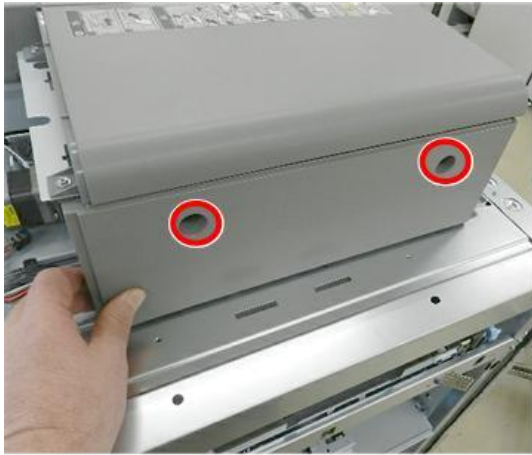
## 2. Installation

- 18.** When connecting the harnesses, make sure that the two lock bands are positioned as shown below.



d5170040

- 19.** Reattach the left cover (🔩 x2).



d5170026

- 20.** Reattach the rear cover (🔩 x2).



d5170029

**21.** Open the bypass tray if it is closed.



d5170027

**22.** Reattach the left top cover removed in Step 3.



d5170030

**23.** Fasten the front [A] and rear [B] screws of the top left cover (⊕ x4).



d5170031

## End Fence and Tab Sheet Fence

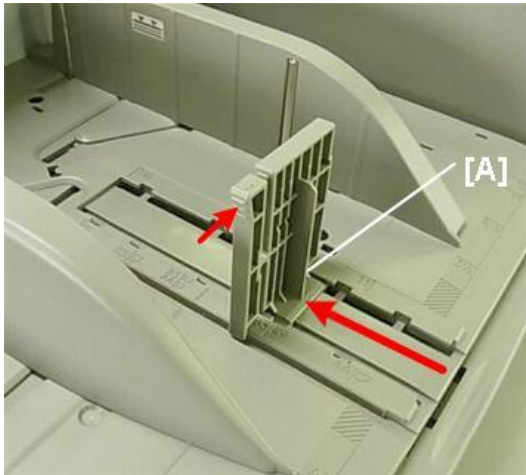
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### ↓ Note

- The items in this section are bypass unit accessories.

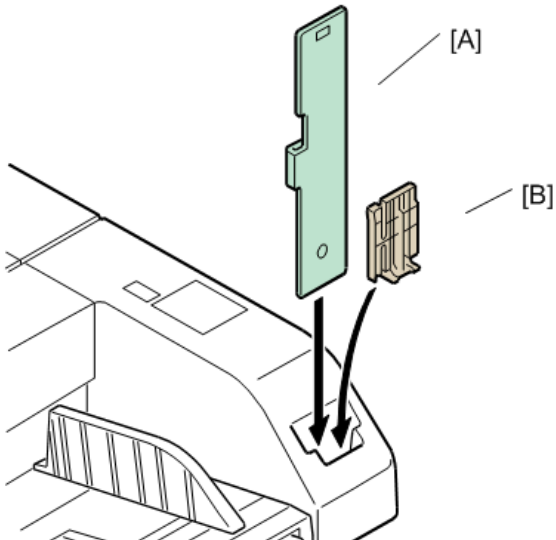
## 2. Installation

1. Set the end fence [A].



d517i031

2. Store the tab sheet fence [A] as shown. Also store the end fence [B] here if the customer does not need to use it at this time.



d517i033

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### Installation (Vacuum Feed LCIT RT5120)

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When installing the Multi Bypass Tray on the Vacuum Feed LCIT RT5120, the Multi Bypass Attachment Kit for Vacuum Feed LCIT Type S9 is required.

Refer to "[Multi Bypass Attachment Kit for Vacuum Feed LCIT Type S9 \(D3EW\)](#)" for how to install the Multi Bypass Tray on the Vacuum Feed LCIT RT5120.

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### Docking, Height Adjustment

---

Follow the procedures in the LCIT installation section to complete this installation.

- Docking ([Docking to the Main Machine](#))
- Height adjustment ([Height and Level Adjustment](#))



## Multi Bypass Attachment Kit for Vacuum Feed LCIT Type S9 (D3EW)

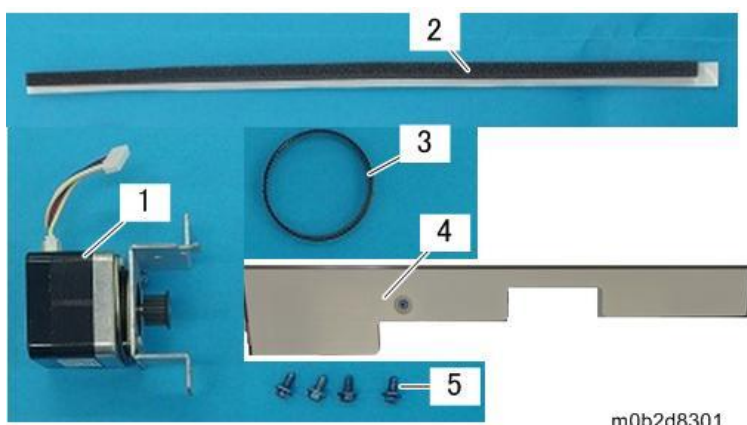
### Note

- When using Multi Bypass Tray BY5020 on the Vacuum Feed LCIT RT5120, this option must be installed.

### Before You Begin

- When two or more vacuum feed LCITs are connected, the multi bypass tray can be installed on only the vacuum feed LCIT closest one to the main machine.
- The multi bypass tray must be installed on the vacuum feed LCIT before the vacuum feed LCIT is connected to the main machine.
- If the vacuum feed LCIT is already installed, it must be disconnected from the main machine before the multi bypass tray can be installed.

### Accessories



No.	Description	Q'ty
1	Stepping motor assembly	1
2	Sponge cushion	1
3	Timing belt	1
4	Cover plate	1
5	Tapping screws (4X8)	4

### Installation (When Connecting to Vacuum Feed LCIT RT5120)

#### CAUTION

- Before installation, make sure that the main power switch and AC power switch of the main machine are turned OFF and that the power cord is disconnected. Installing the unit when the machine's power is ON could result in an electric shock or cause a malfunction.

## 2. Installation

### If the Vacuum Feed LCIT Has Already Been Installed

---

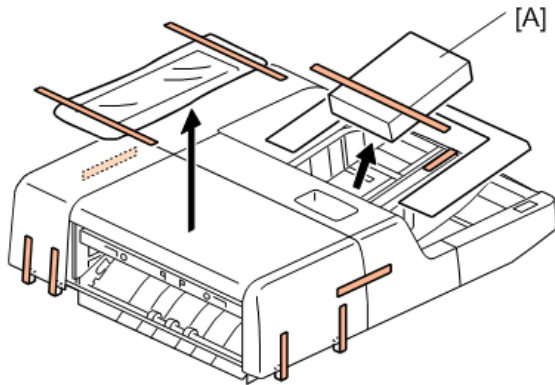
Proceed to the next section if you are installing the vacuum feed LCIT and multi bypass tray together.

1. If the vacuum feed LCIT is connected to the machine, disconnect it.
2. To prevent damage to the connectors, do the following before pulling the vacuum feed LCIT away from the main machine:
  - Pull the vacuum feed LCIT about 20 cm (8") away from the main machine.
  - Disconnect the connectors.
  - Pull the vacuum feed LCIT completely away from the machine.

### Preparing for the Multi Bypass Tray

---

- 1.** Take the multi bypass tray out from the box and place it on a work space.
- 2.** Remove the accessory packet [A] and open it.
- 3.** Remove all tape and shipping materials.



d517i101

#### Note

- The guide plate of the unit bottom sticks out, so place the unit on a table as shown below.



d194d8205

- 4.** Remove the rear cover [A] (🔩×2: M4×8)



d194d8206

- 5.** Open the bypass tray.



d194d8207

- 6.** Remove the front cover [A] (🔩×1: M4×8)



d194d8208

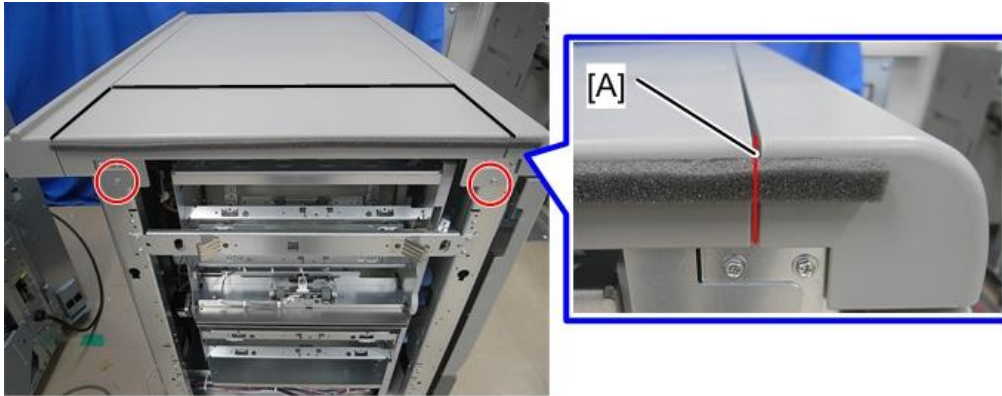
### Mounting the Multi Bypass Tray

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- 1.** Cut the cushion at the position [A] along the groove of the left top cover of the vacuum feed LCIT.

## 2. Installation

- 2.** Remove the screws on the left top cover. (🔩×2)



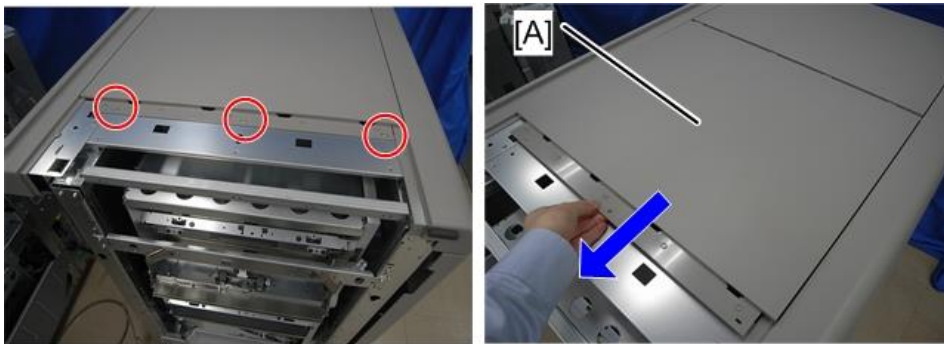
d777z0047

- 3.** Slide the left top cover [A] in the direction of the blue arrow and remove it.



d777z0048

- 4.** Slide the center top cover [A] in the direction of the blue arrow and remove it. (🔩×3)

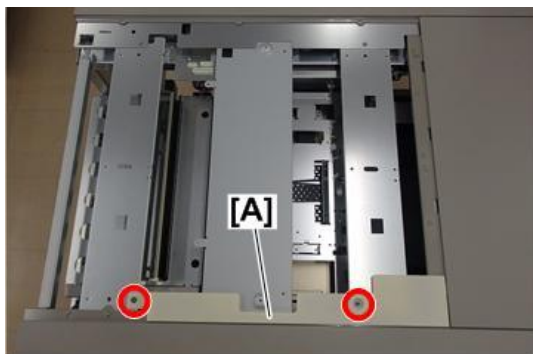


d777z0049

- 5.** Attach the cover plate [A] (provided with the Multi Bypass Attachment Kit) to the front edge. (🔩×2: M4×8)

**Note**

- Fixing screws are also provided with the Multi Bypass Attachment Kit.

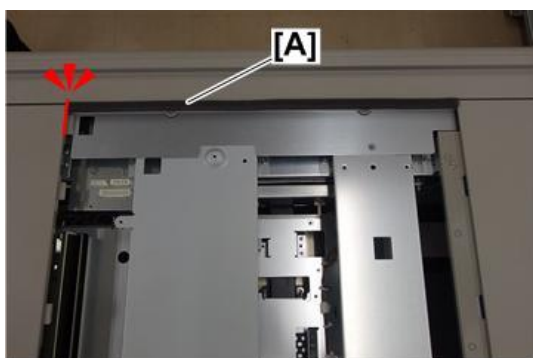


d194d8203

**6.** Attach the cushion [A] to the rear edge.

**Note**

- Paste it from the left end so that there is no gap at the left and right ends of the cushion.

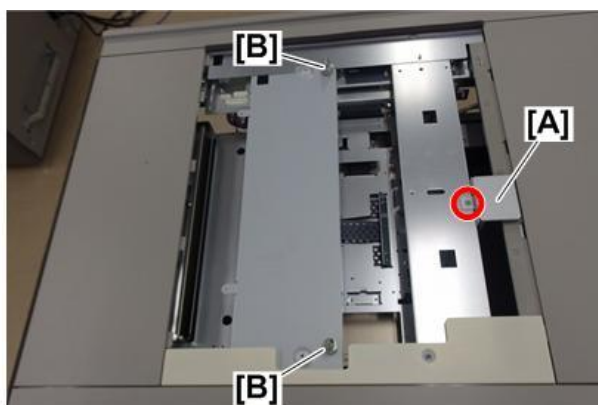
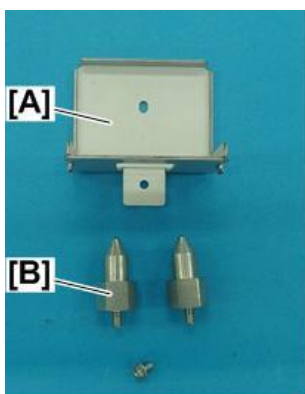


d194d8204

**7.** Attach the bracket [A] and joint pins [B]. (⌀×1: M4×6)  
These are provided with the multi bypass tray.

**Note**

- The fixing screw is also provided with the multi bypass tray.



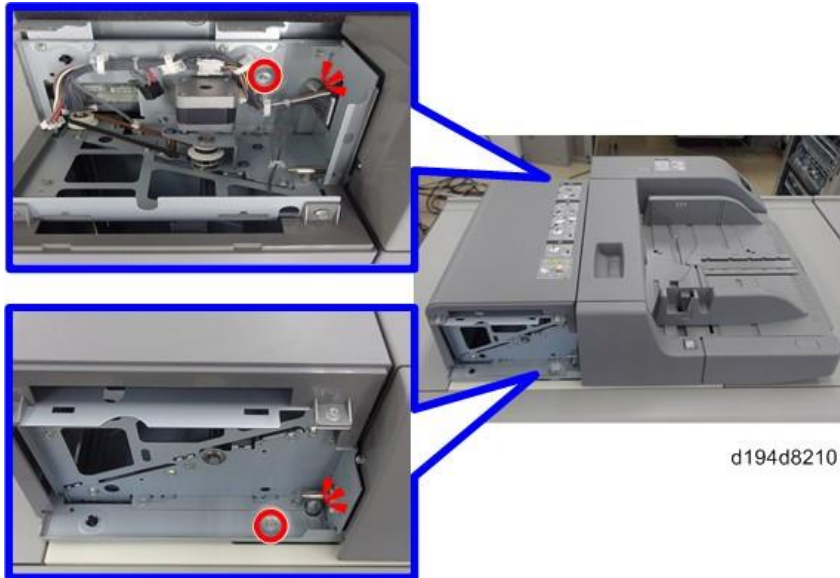
d194d8209

**8.** Mount the multi bypass tray on the vacuum feed LCIT. (⌀×2: M4×6)  
Align the holes at the front and rear of the multi bypass tray with the joint pins on the vacuum feed LCIT.

## 2. Installation

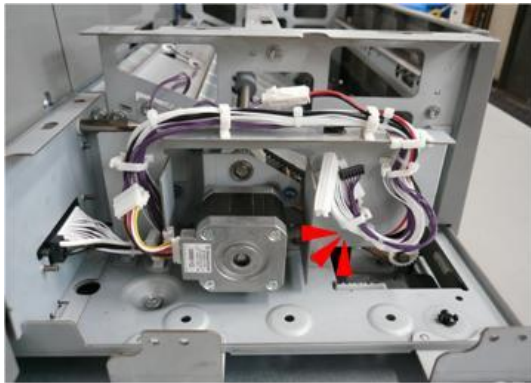
### Note

- The bypass unit weighs 20 kg (44 lb.). You may need assistance to set the bypass unit on top of the vacuum feed LCIT.
- Fixing screws are provided with the multi bypass tray.

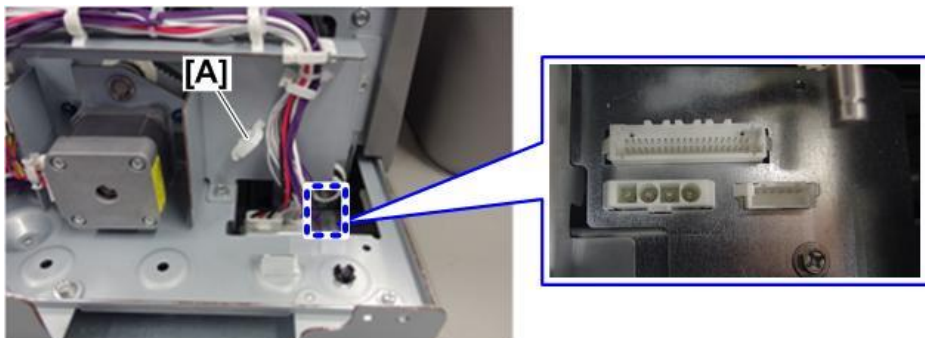


### Connecting the Multi Bypass Tray

1. At the rear, open the clamp to disconnect the harness. (🔧×1)



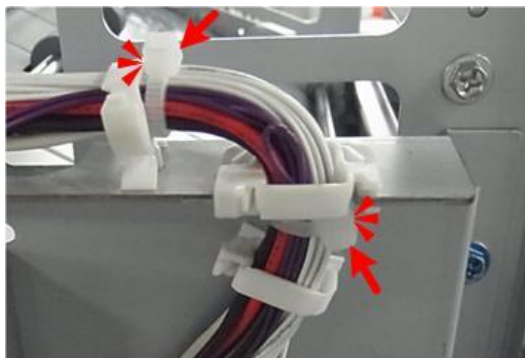
2. Securely connect the harnesses inside the LCIT. (🔧×3)  
Clamp [A] is not used for this installation.



**★ Important**

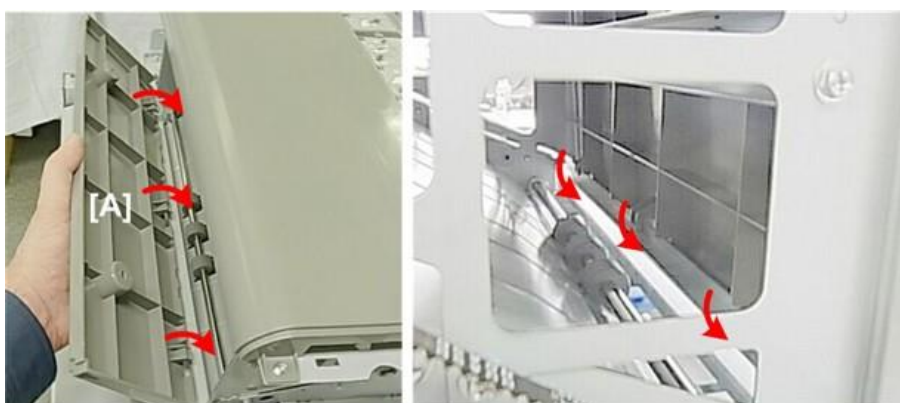
To securely connect the harnesses, push down the harness connectors firmly.

- 3.** When you close the harnesses, make sure that the two lock bands and clamps are positioned as shown below.



d5170040

- 4.** Set the left cover [A] provided with the multi bypass tray. Make sure that the claws are set correctly in their holes.



d517i015

- 5.** Fasten the left cover [A]. (🔩×2, M4×8)

**↓ Note**

- Fixing screws are provided with the multi bypass tray.



d517i016

- 6.** Re-attach:  
Front cover [A] (🔩×1: M4×8)

## 2. Installation

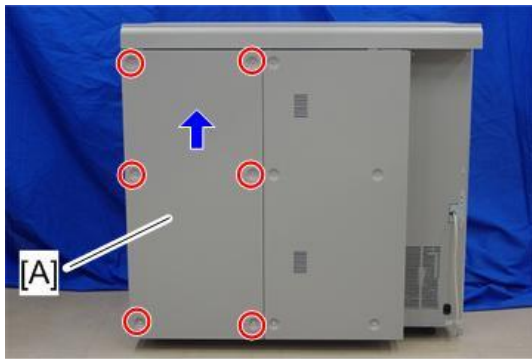
Rear cover [B] (🔩×2: M4×8)



d517i017

### Installing the Motor on the Vacuum Feed LCIT

1. Lift the rear left cover [A] of the vacuum feed LCIT slightly and remove it. (🔩×6)



d777z5004

#### Note

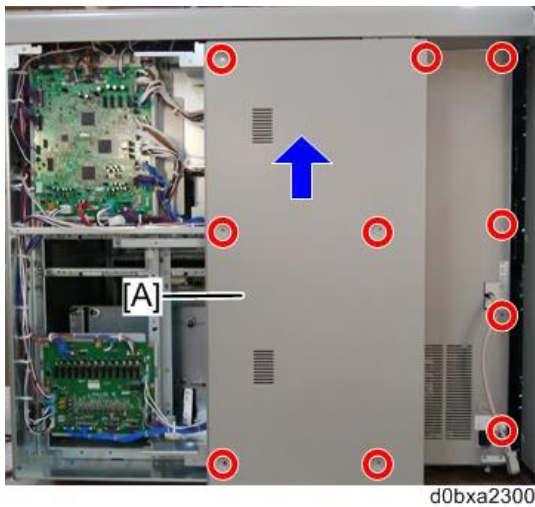
- When attaching the rear left cover, hang it on the hook.



d777z0061



- 2.** Lift the rear right cover [A] slightly and remove it. (🔩×10)



**Note**

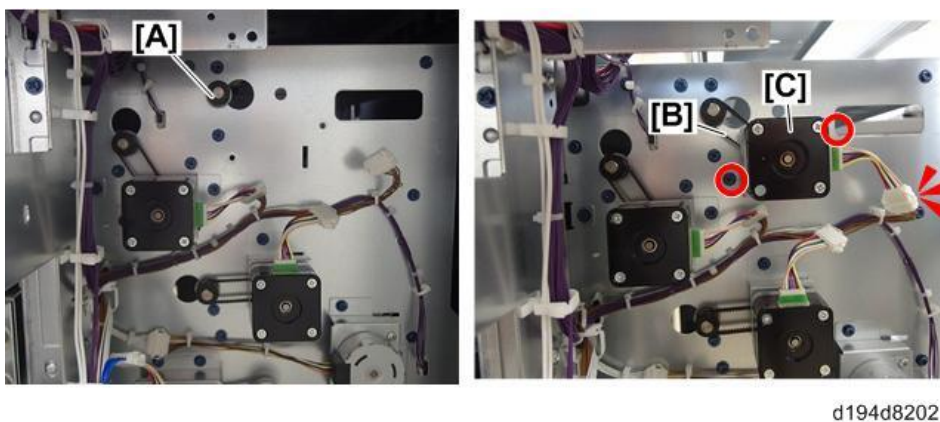
- When attaching the rear right cover, hang it on the hook.



- 3.** Attach the stepping motor assembly [C] while attaching the timing belt: M140 [B] to the pulley [A] and stepping motor. (🔩×2: M4×8, 📦×1)

**Note**

- The stepping motor assembly, timing belt: M140 and fixing screws are provided with the Multi Bypass Attachment Kit.



- 4.** Re-attach the covers.

## 2. Installation

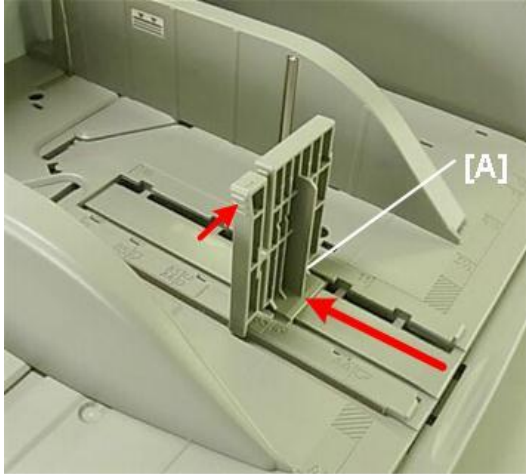
### End Fence and Tab Sheet Fence

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#### Note

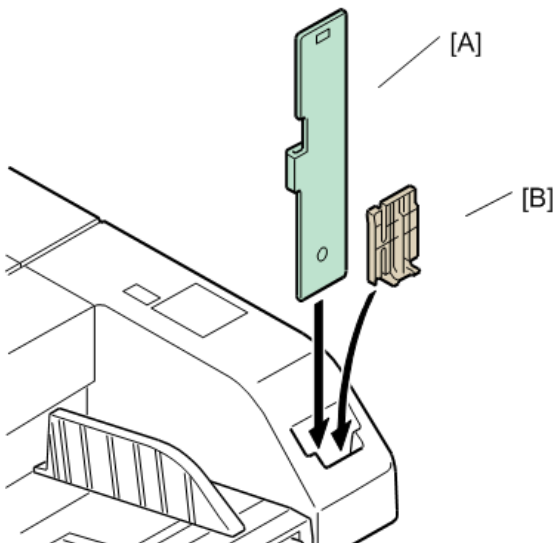
- The items in this section are bypass unit accessories.

#### 1. Set the end fence [A].



d517i031

#### 2. Store the tab sheet fence [A] as shown. Also store the end fence [B] here if the customer does not need to use it at this time.



d517i033

### Docking, Height Adjustment

---

Follow the procedures in the vacuum feed LCIT installation section to complete this installation.

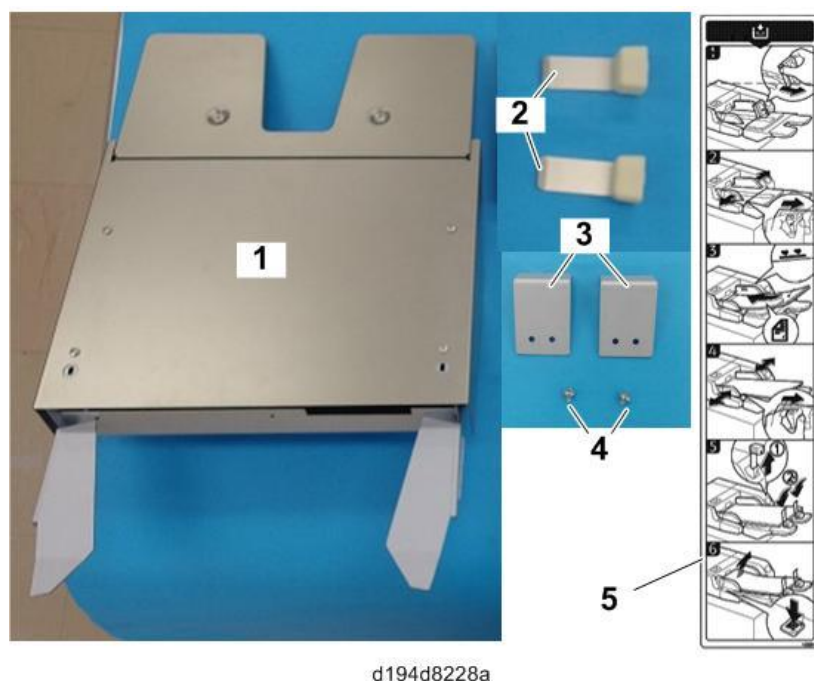
- Docking ([Vacuum Feed LCIT RT5120 \(D3EW\)](#))
- Height adjustment ([Height and Level Adjustment](#))

## Multi Bypass Banner Sheet Tray Type S9 (D3EV)

### Note

This option is for Multi Bypass Tray BY5020 (D3EV) that is installed on Vacuum Feed LCIT RT5120 (D3EW) or LCIT RT5110 (D3ET).

### Accessories



d194d8228a

No.	Description	Q'ty
1	Banner Sheet Tray	1
2	End Fence	2
3	Joint Plate	2
4	Tapping Bind Screw: M4×6	2
5	Decal	1

### Installation

#### ⚠ CAUTION

- Make sure that the main power switch and AC power switch of the main machine are turned OFF and that its power cord is disconnected before doing the following procedure. Doing the following procedure in an energized state constitutes an electric shock hazard and could cause a malfunction.

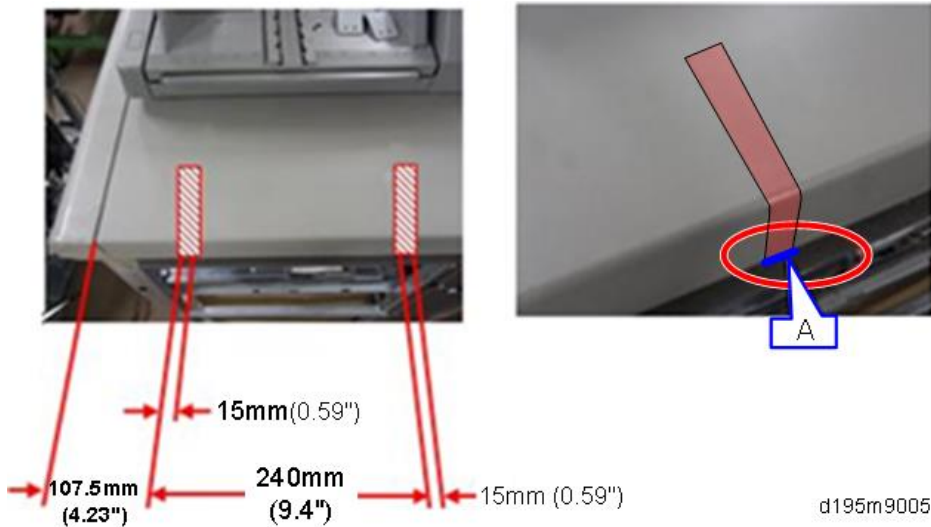
#### Attaching the Protection Tapes

Attach the protective sheets to protect the LCIT's top cover.

## 2. Installation

### Attaching to the Vacuum Feed LCIT

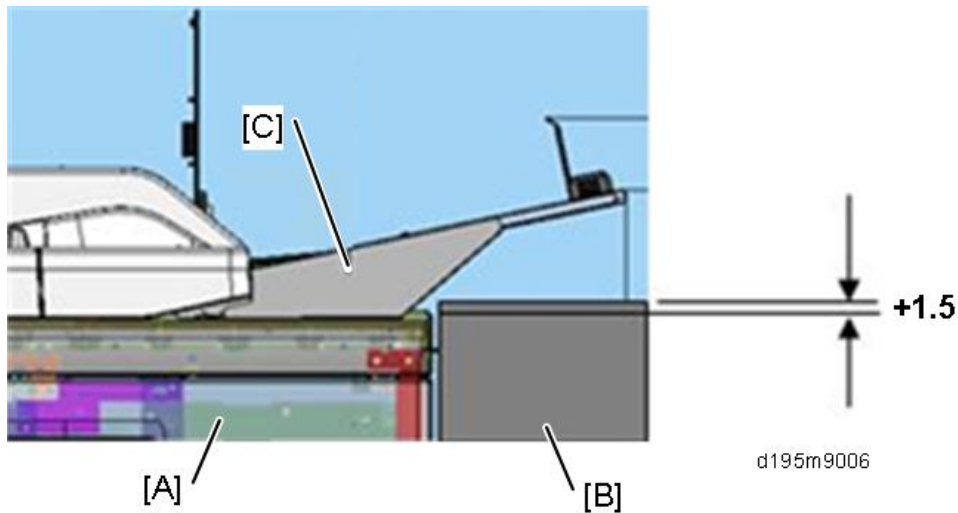
Align the ends of the sheets with the edge [A] on the right side, and attach the sheets according to the following dimensions. (Be sure not to let any bubbles form under the sheets.)



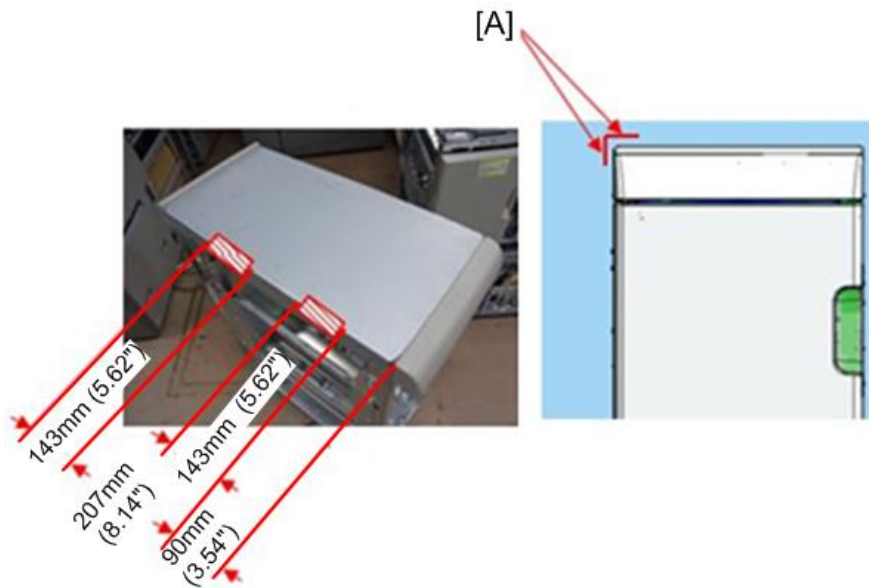
### When two or more vacuum feed LCITs are connected

1. Make sure that the height difference between the LCIT [A] and the bridge unit [B] is not more than 1.5 mm.

(C: Multi Bypass Banner Sheet Tray)



2. Attach the sheets to the bridge unit in landscape orientation, according to the following dimensions.  
[A]: Attach each sheet with its center on the ridge line and a width of approximately 7.5 mm on the vertical and horizontal sides.



d195m9007

### Attaching to LCIT RT5110

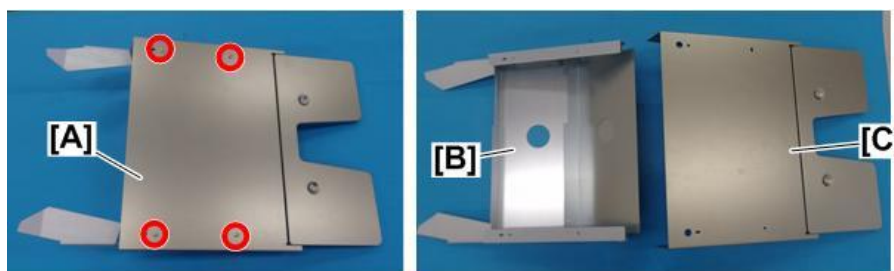
The lines [A] on the top cover are reference lines. Attach the protective sheets at the same positions as in the case of a single LCIT RT5120 Vacuum Feed unit. (Be sure not to let any bubbles form under the sheets.)



d195m9008

### Attaching the Multi Bypass Banner Sheet Tray to the Bypass Tray

1. Remove the screws from the banner sheet tray [A] and then separate the base tray [B] and cover [C]. (⚙️ ×4)



d194d8229

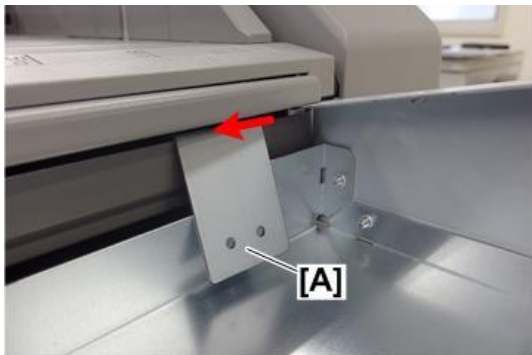
## 2. Installation

- 2.** Insert the base tray [A] under the bypass tray.



d194d8230

- 3.** Hang the two joint plates [A] (provided with this option) in the gap under the extension tray.



d194d8231

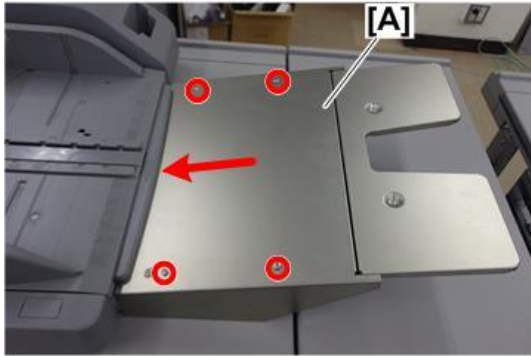
- 4.** Move each joint plate [A] under the base tray edges and then fix them to the base tray. (🔩×1 each: M4×6)

Fixing screws are provided with this option.



d194d8232

- 5.** Insert the cover [A] separated in step 1 between the extension tray and base tray. To fix it, use the screws that were removed in step 1. (🔩×4: M4×6)



d194d8233

- 6.** Pull the extension tray [A] and then hang it on screws as shown below.



d194d8234

- 7.** Stand the end fences [A] (provided with this option) as shown below. The end fences are held to the banner sheet tray by magnets.



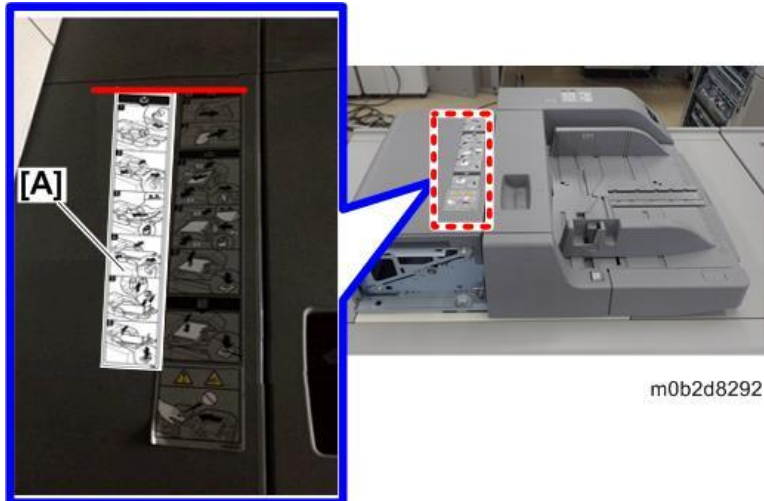
d194d8235

- 8.** Attach the decal [A] next to the existing one.

**Note**

When attaching the decal, align its upper edge with the upper edge of the existing decal.

## 2. Installation



### SP Settings

After starting up the main machine, it is necessary to make sure the Multi Bypass Banner Sheet Tray is recognized by using the following SP.

- 1.** Enter the SP mode.
- 2.** Change SP5-150-001 from [0] to [1].
- 3.** Exit the SP mode.
- 4.** Restart the main machine.

Also, the default settings of two SPs are changed from the previous model as follows.

Ask the sales representative if there are any problems with these settings because they affect the counter method.

SP No.	Previous Model	This Model
SP5-104-101 (Banner Count Setting)	0	1
SP5-104-102 (Banner Count Threshold)	0	487

#### Note

SP5-104 is not a normal SP but an SSP. Please contact your regional supervisor for how to enter SSP mode.

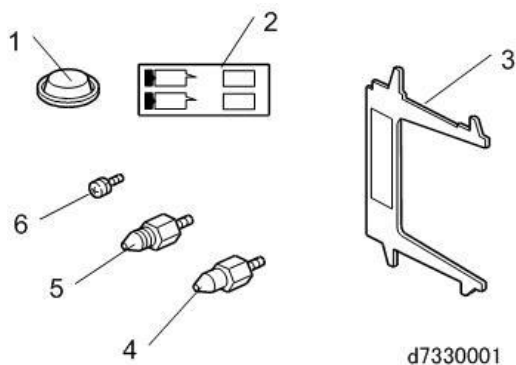
SP No.	Remarks	Range
SP5-104-101 (Banner Count Setting)	Sets banner count on/off. 0: OFF does not count banner size (over 488mm). 1: ON counts banner size (over 488mm)	Default: 1 [0 or 1 ]
SP5-104-102 (Banner Count Threshold)	Counts every size (mm) you specified as banner. Setting 0mm counts over 488mm as 1.	Default: 487 [0 or 65535]



## LCIT RT5130 (D3GB)

### Accessories

Check the quantity and condition of the accessories in the box against the following illustration and list:



No.	Description	Q'ty
1.	Leveling Shoes	3
2.	Decal – Paper Set	3
3.	Tab Paper End Fence	1
4	Lower Joint Pin (smooth)	1
5	Upper Joint Pins (notched)	2
6	Screw M4 x10 with lock washer	1

#### Note

- The tab paper end fence (3) is located in the LCIT unit, mounted on hooks behind the front door.

### Installation

#### ⚠ CAUTION

- Make sure that the main machine is switched off and that its power cord is disconnected before doing the following procedure.

## 2. Installation

### Removing the Tapes and Retainers

---

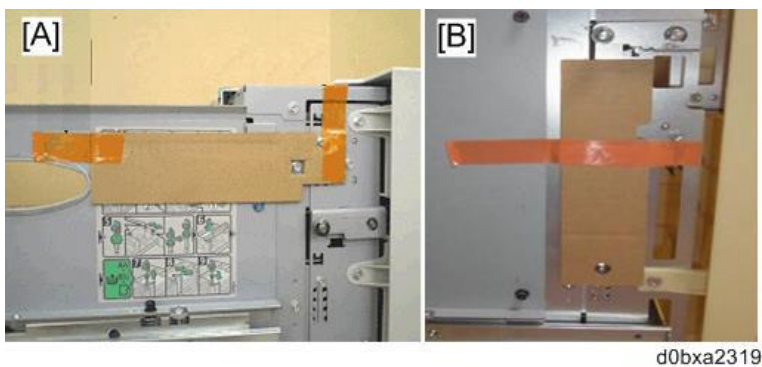
1. Remove the fixing tape from the exterior section.



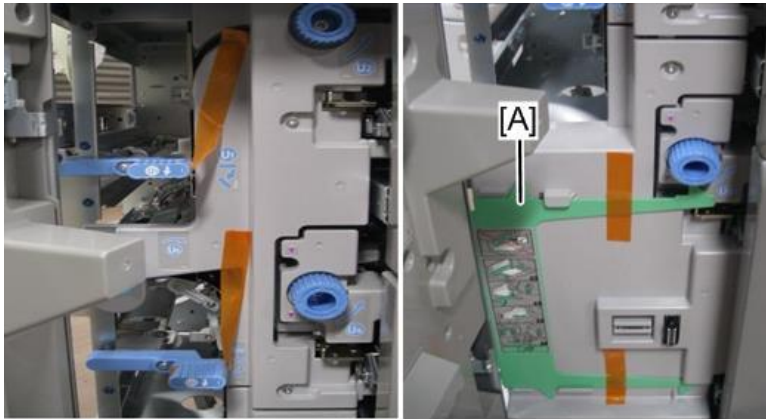
2. Remove the fixing tapes attached to the rear cover and plastic bag of the connector.



3. Remove the fixing tape and packing materials from the upper tray [A] and the lower tray [B].



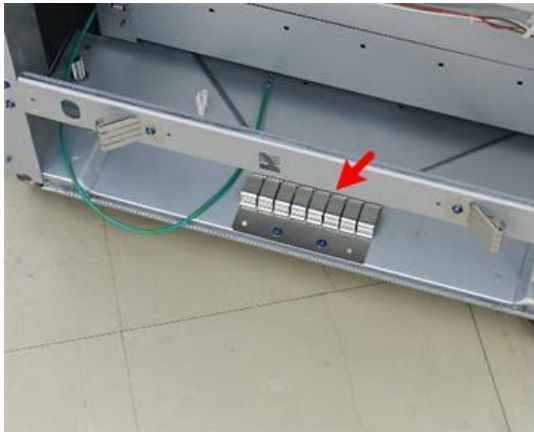
4. Open the front door and remove the tapes attached to the levers and the end fence tab [A].



d0bxa2320

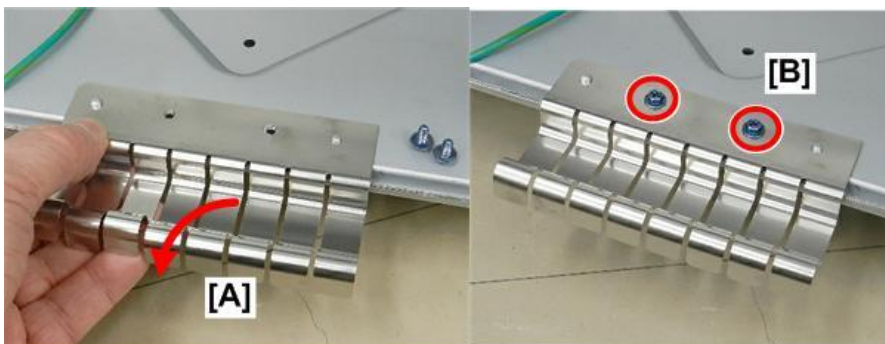
### Attaching the Ground Plate

1. Locate the ground plate on the bottom left edge of the unit.



d7330002

2. Remove the ground plate [A] (✎x2).
3. Turn the plate over so that the tines are pointing down [B], and then attach it to the same holes with the same screws (✎x2).



d7330003

#### ★ Important

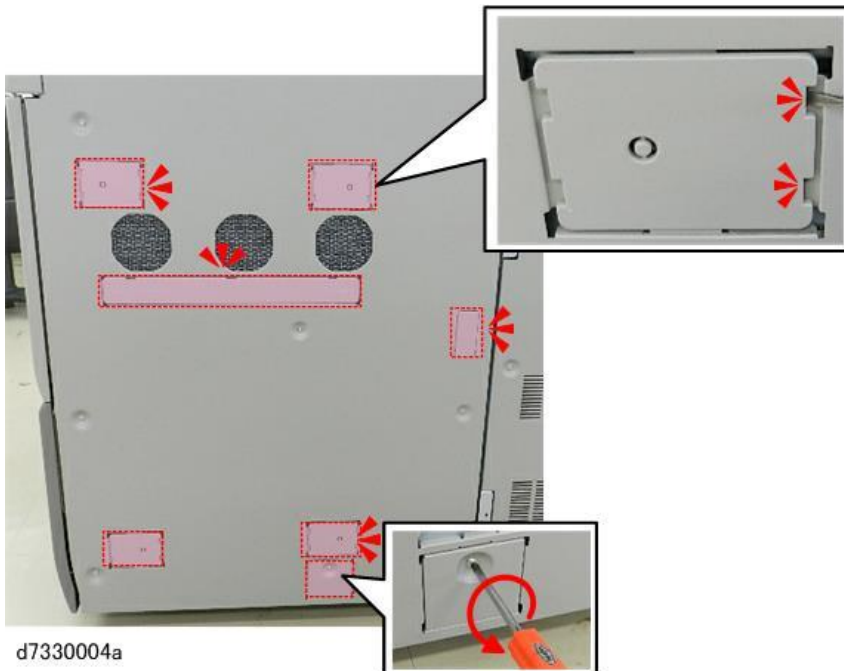
- If you are going to install the Multi Bypass Tray, the tray heaters, or both, install them now. These must be installed before the unit is docked to the main machine.

## 2. Installation

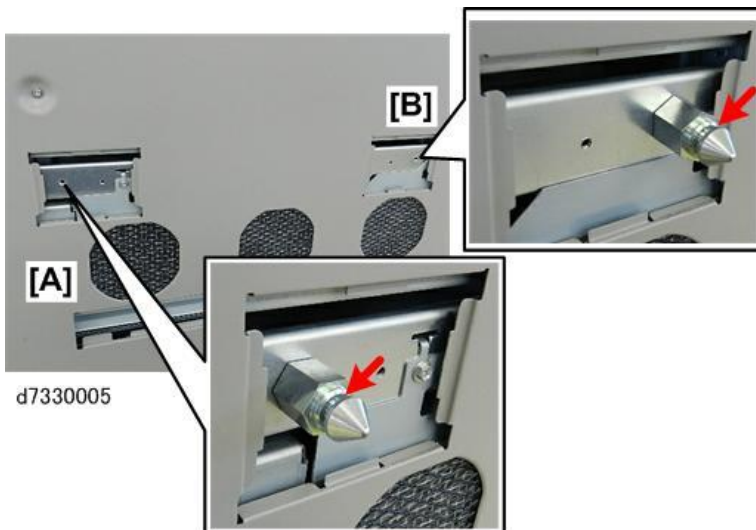
### Connecting to the Main Machine

---

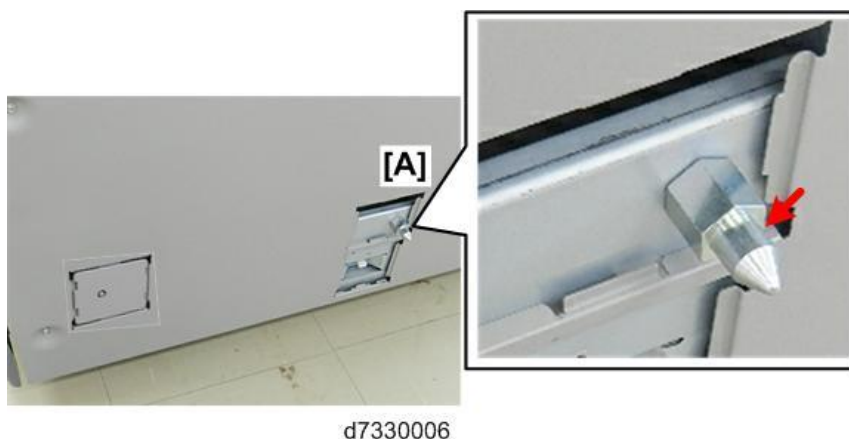
1. Remove seven plates on the right side of the main machine (▼ x all, ⚙️ x1)



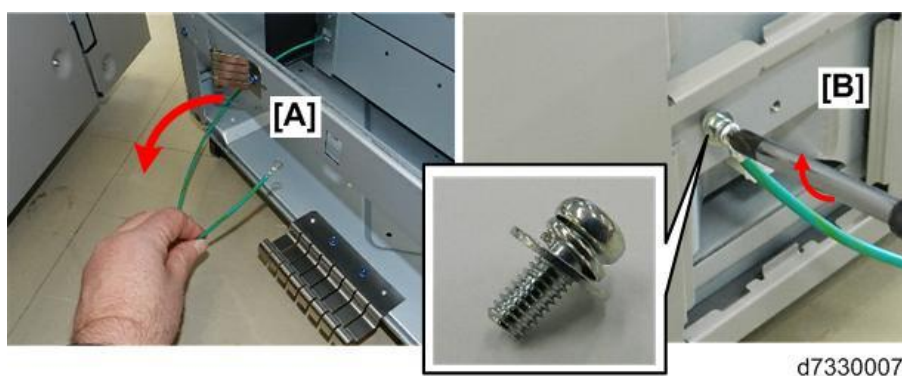
2. There are two **notched** joint pins with the accessories.
3. Attach one notched pin on the right side of the main machine at the rear [A], and the other notched pin at the front [B].



4. Attach the smooth joint pin to the right rear edge [A] of the machine.
  - There is only one smooth joint pin.
  - The smooth pin must be attached at [A].



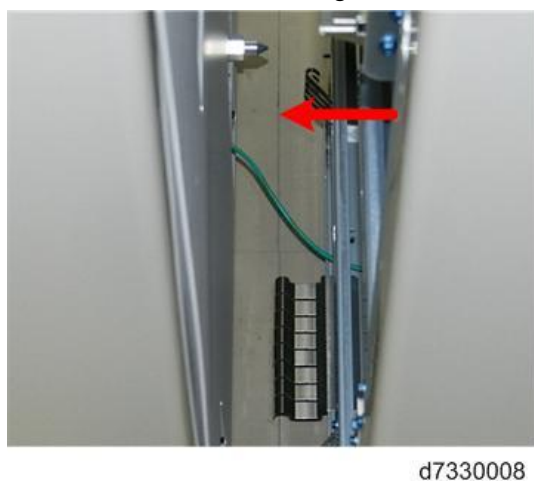
5. Push the unit close to the side of the main machine.
6. Pull the ground wire [A] out of the unit.
7. Use the accessory screw to fasten the ground wire [B] to the left bottom edge of the main machine.



**★ Important**

- Remember to always disconnect the ground wire before pulling the unit away from the main machine.

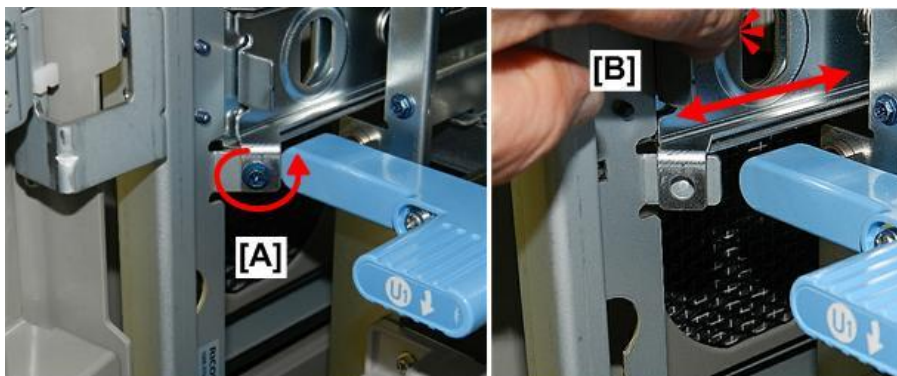
8. Align the unit with the right side of the main machine.
9. Push the unit toward the right side of the main unit until they are about 15 cm (6 in.) apart.



10. Open the front door of the unit.
11. Remove screw [A] (✎x1).
12. Pull the spring-loaded lock lever [B] forward and release it to make sure that it is free and moves

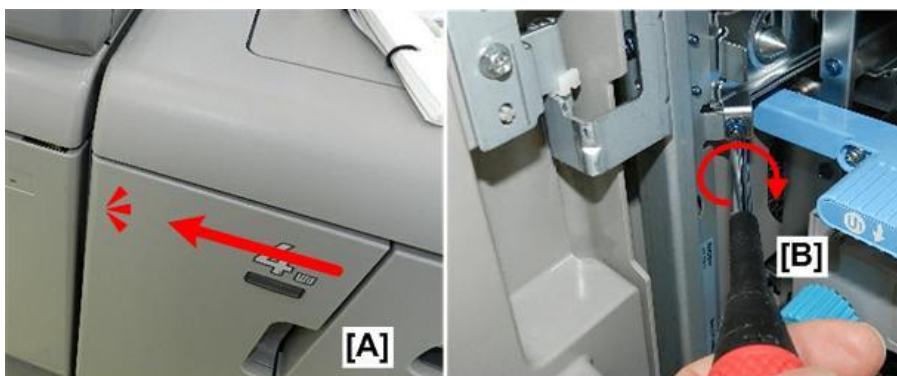
## 2. Installation

easily.



d7330009

13. Slowly, push the unit [A] onto the right side of the main machine. You should hear two clicks as the lock lever connects with the two upper joint pins.
14. Behind the door, re-attach screw [B] to fasten the lock lever.



d7330010

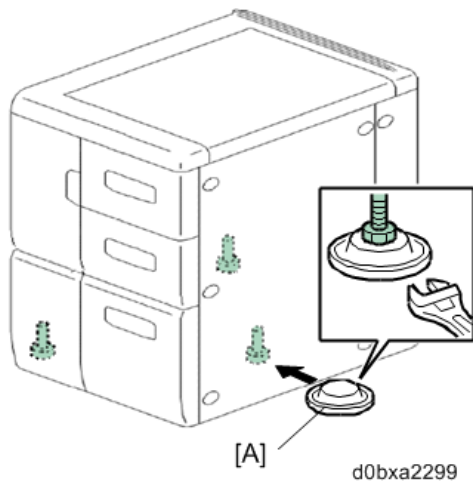
15. At the rear, attach the unit I/F connector to the side of the main machine.



d7330012

### Height Adjustment

1. Set the holders [A] to the leveling bolt.



2. Adjust the height of the leveling bolt and make sure that it is level.

### Tray Heaters (Service Option)

#### Accessories

Check the accessories against the list below.



d7323003

No.	Description	Qty
1	PTC Heater	1
2	Heater Relay Harness	1
3	Heater Cover	2
4	Screws M4x8	7

## 2. Installation

No.	Description	Qty
5	Saddle Clamps	2
6	Harness Clamps	2

### Installation

#### **⚠ CAUTION**

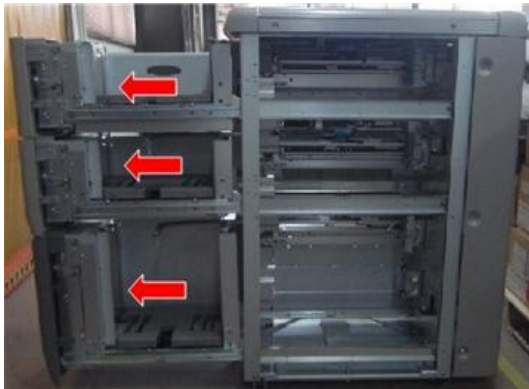
- Make sure that the main machine is switched off and that its power cord is disconnected before doing the following procedure.

- 1.** If the LCT is already installed, disconnect it and pull it away from the side of the machine.
  - Lock lever (↗x1)
  - Interface cable (🔌x1)
  - Ground screw (🔩x1)
- 2.** Remove the screws from the right cover of the LCIT (🔩x6).
- 3.** Hold the bottom of the right cover, push it to the left to disconnect the hooks at the top edge of the cover, and pull it away.



d4530004

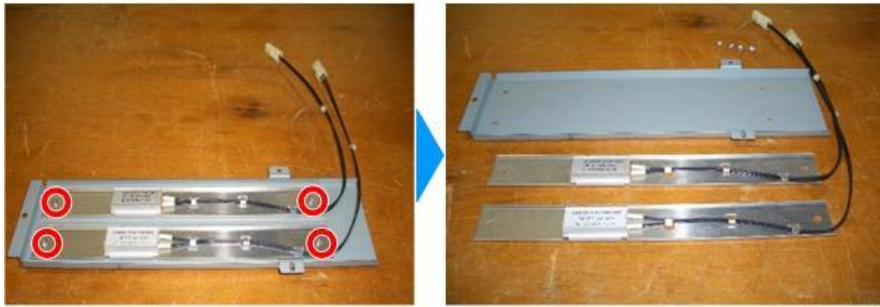
- 4.** Pull out each tray until it stops. You do not need to remove them.



d7320042

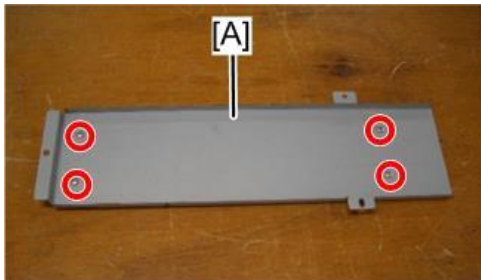


**5.** Separate Heater ASSY from the heater cover (🔧x4).



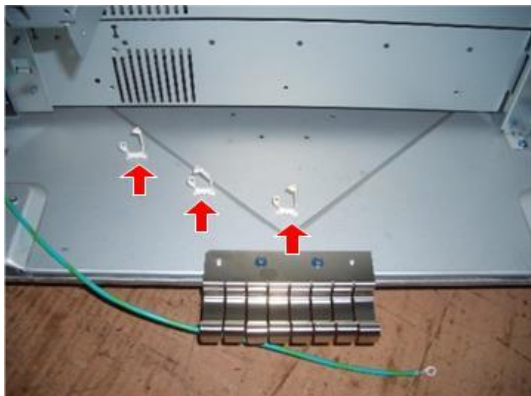
d0bxa2174

**6.** Attach the screw to the heater cover [A] (🔧x4).



d0bxa2175

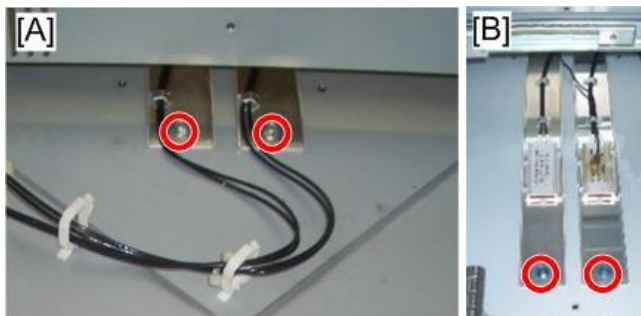
**7.** Attach the clamps to the bottom plate (🔧x3).



d0bxa2176

**8.** Attach the heater to the bottom plate (🔧x4).

- [A]:Outside
- [B]:Tray side

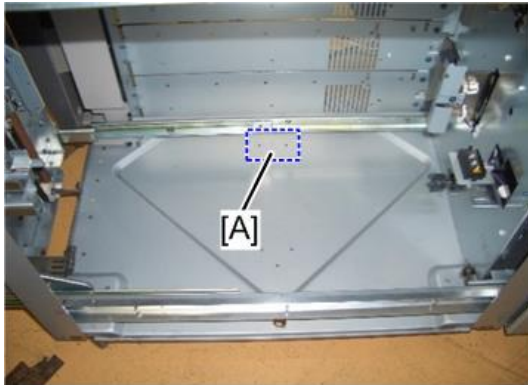


d0bxa2177

## 2. Installation

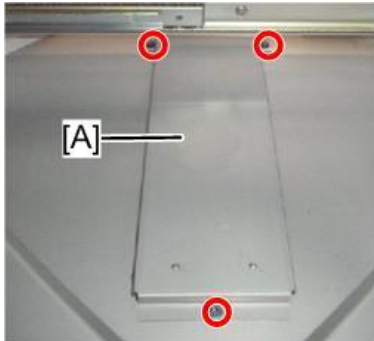
### Note

- Do not use the screw hole [A] at the tray side.



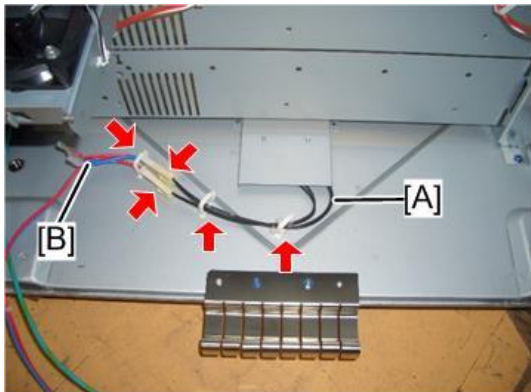
d0bxa2178

- 9.** Attach the heater cover [A] to the bottom plate of the LCT (🔩 x3).



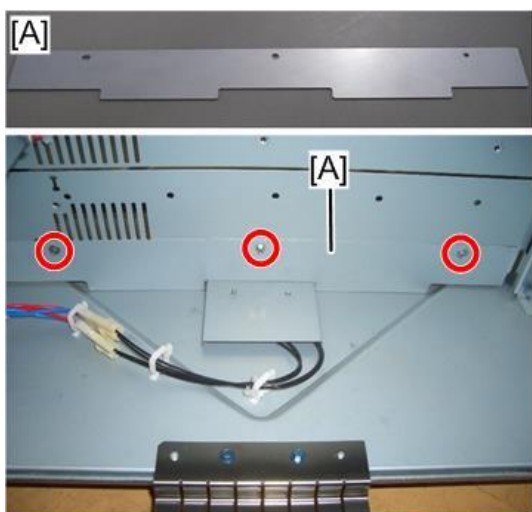
d0bxa2179

- 10.** Connect the heater harness [A] and the relay harness [B] (🔌 x2, 📡 x3).



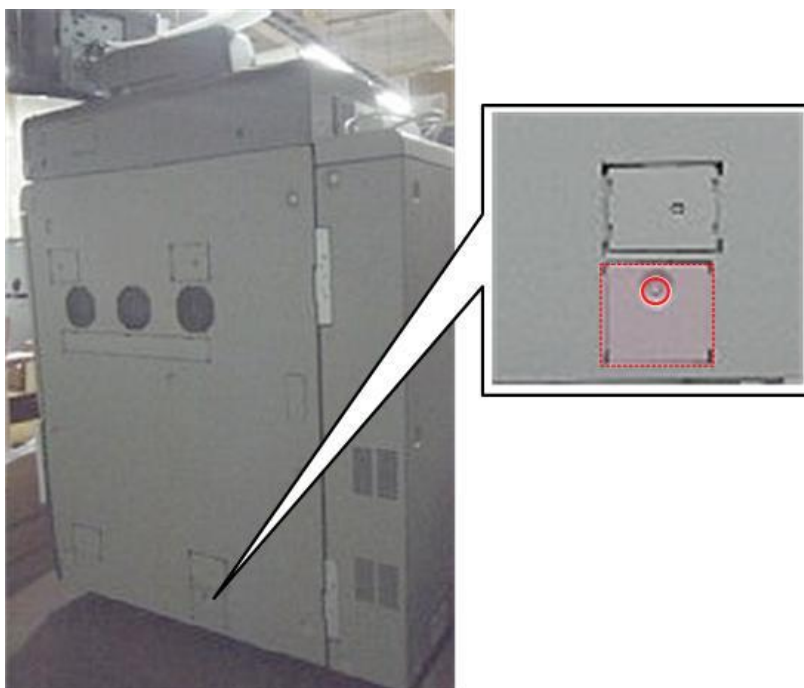
d0bxa2180

- 11.** Attach the metal plate [A] (🔩x3).



d0bxa2181

- 12.** Remove the connector plate from the bottom edge of the main machine (🔩x1).



d7320046

- 13.** Push the LCT close to the main machine.

- 14.** Re-connect the green ground wire (⚡x1).

## 2. Installation

**15.** Connect the heater cable (📦 x1).



d7320047

### ★ Important

- Confirm that the relay harness and the ground wire are not pinched between the mainframe and the LCIT.

**16.** Connect the LCT to the main machine.

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## Moving the LCIT

---

Always follow this procedure before moving the LCIT.

### ★ Important

- To prevent damage to the ground wire (and the heater connector if the heater is installed), never attempt to move or change the position of the main machine with the LCIT connected to the right side of the machine.

1. At the rear, disconnect the unit I/F connector.



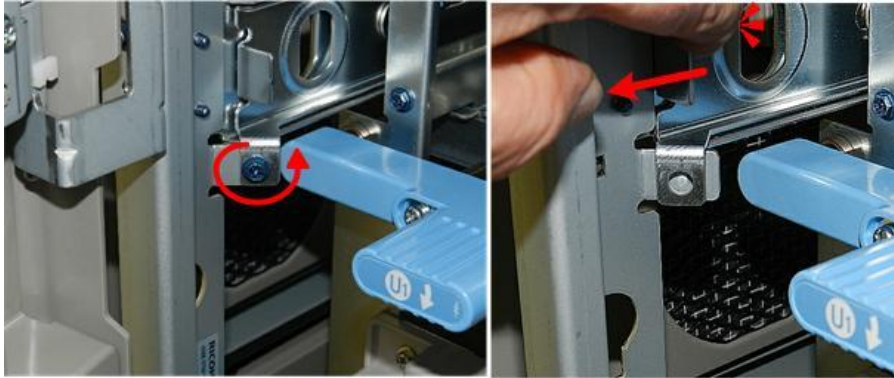
d7330014

2. Open the front door of the unit.

3. Remove the screw (🔩 x1).

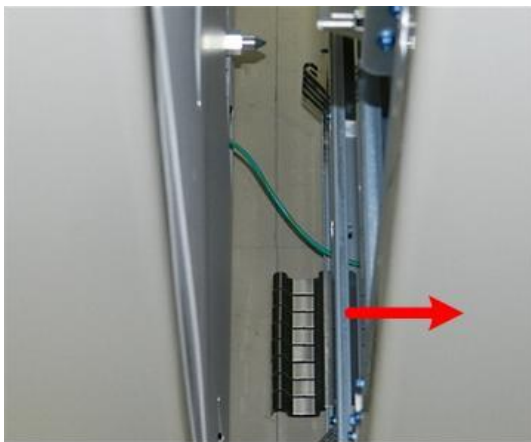
4. Pull the spring-loaded lock lever forward to separate it from the joint pins on the side of the main

machine.



d7330015

5. Slowly, pull the LCIT a short distance away from the machine.



d7330016

6. Disconnect the ground wire (⚡x1).



d7330017

7. Disconnect the heater connector, if the heaters (optional) have been installed (🔌 x1).
8. Pull the LCIT away from the side of the main machine.

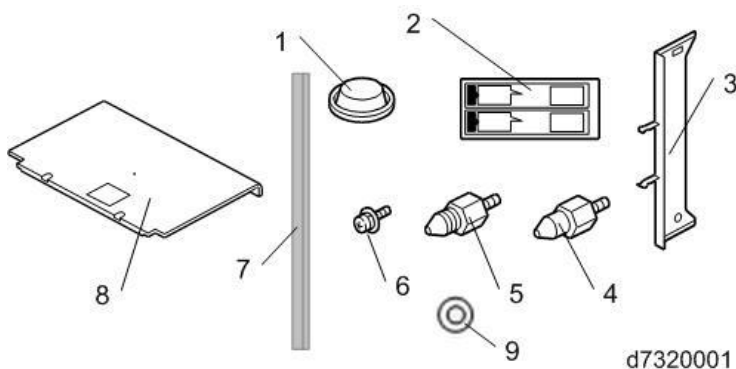
## LCIT RT5110 (D3ET)

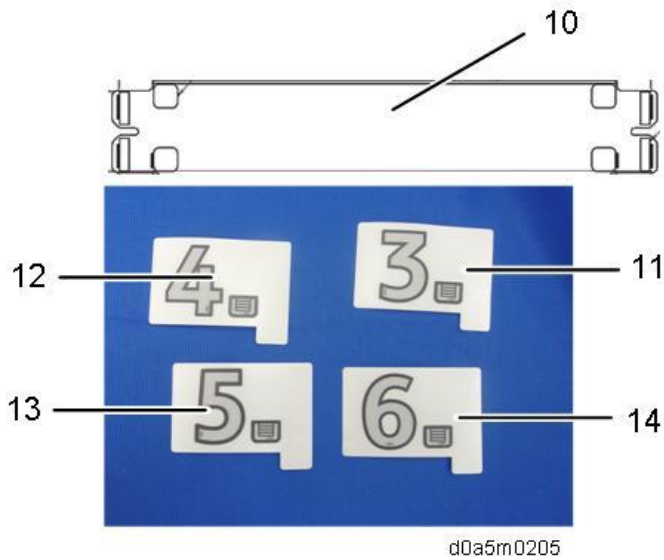
### Accessories

No.	Description	Q'ty
1	Leveling Shoes	4
2	Decals - Paper Set	3
3	Tab Fences	3
4	Lower Joint Pins (Smooth)	1
5	Upper Joint Pins (Grooved)	2
6	Binding Screw (with lock washer)	1
7	Sponge Strip	1
8	Flat Cover (for the Multi Bypass Tray)	1
9	Washer	1
10	Auxiliary bottom plate	6
11	Decal – Tray Number 3	1
12	Decal – Tray Number 4	1
13	Decal – Tray Number 5	1
14	Decal – Tray Number 6	1
-	Paper Feed Roller (Pickup)	1
-	Paper Feed Roller (Manual Feed)	1
-	Paper Feed Roller (Separate)	1

**Note**

- Flat Cover (No.8) will be needed to install the Multi Bypass Tray BY5020.
- Auxiliary bottom plate (No.10) is a component that helps loading paper having a width of 257 mm or more.





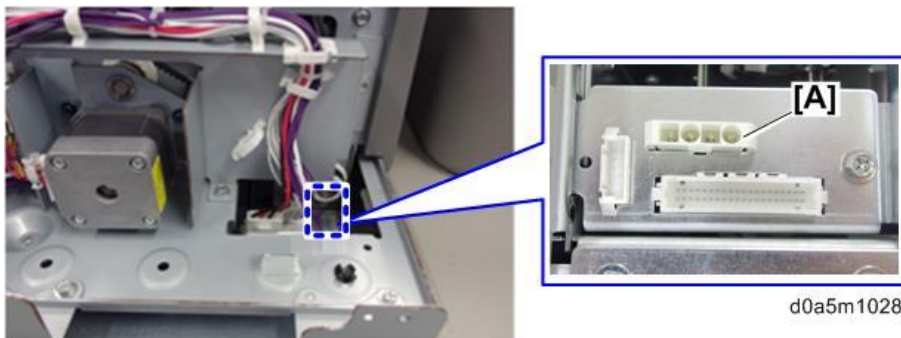

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## Installation

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### **⚠ CAUTION**

- Before performing the following procedure, make sure that the main power switch and AC power switch of the main machine are turned OFF and that the power cord is disconnected. Performing the procedure with the power on could result in an electric shock or could cause a malfunction.
- Rated voltage of output connector for accessory [A]: Max.DC24V.




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## Removing the Tapes and Retainers

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- 1.** At the front, left, and right, remove all visible tapes.
- 2.** Remove all the tapes and the cover from the I/F connector.
- 3.** Open each tray and remove the tape.

## 2. Installation

### Attaching the Ground Plate

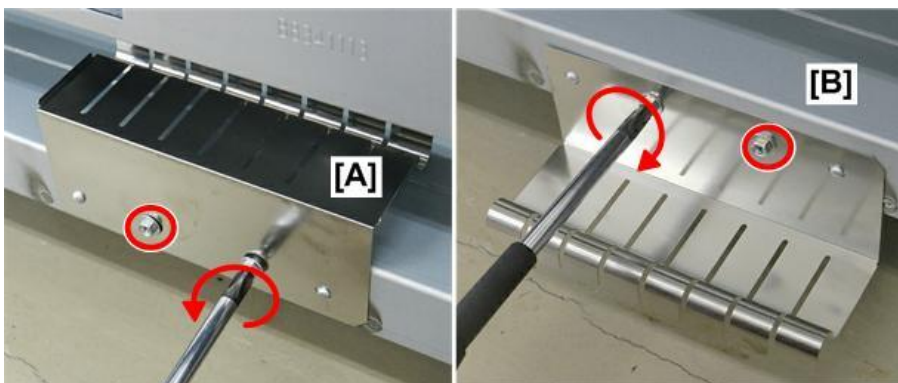
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- 1.** Locate the ground plate on the bottom left edge of the unit.



d7320004

- 2.** Remove the ground plate [A] (⌀ x2).
- 3.** Turn the plate over so that the tines are down [B], and then attach it to the same holes with the same screws (⌀ x2).

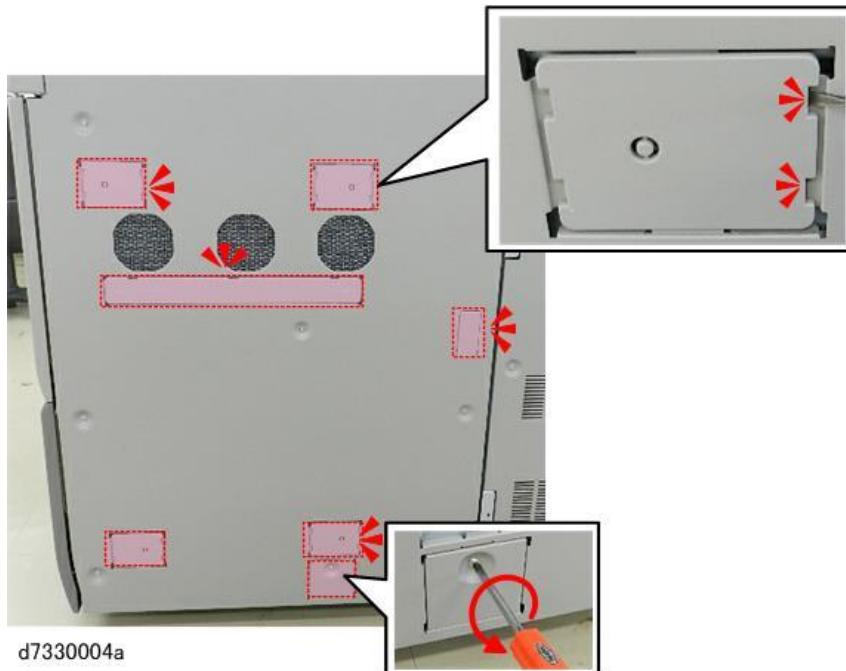


d7320005

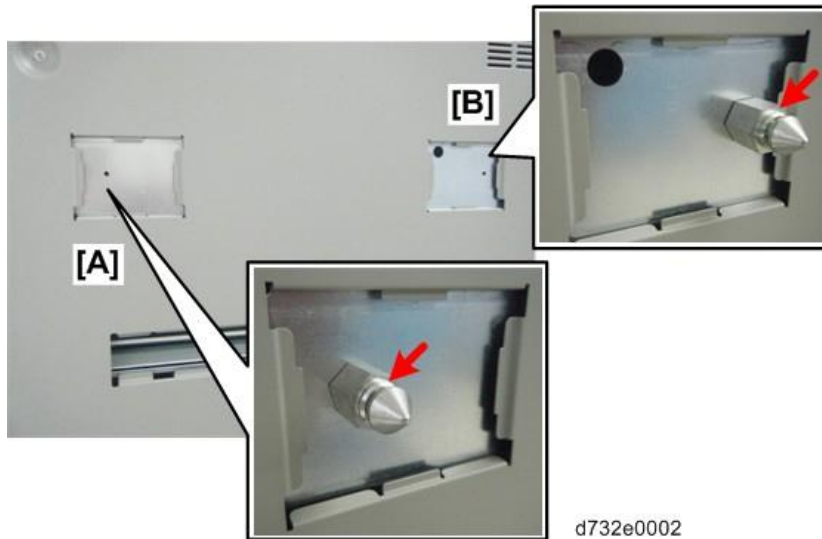


## Docking to the Main Machine

- 1.** Remove seven plates on the right side of the main machine (▼ x all, ⚙️ x1).

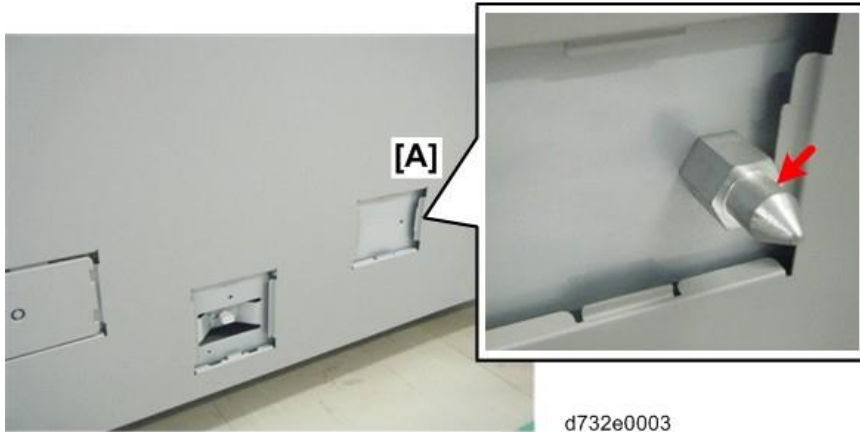


- 2.** There are two notched joint pins with the accessories.
- 3.** Attach one notched pin on the right side of the main machine at the front [A], and the other notched pin at the rear [B].



- 4.** Attach the smooth joint pin to the right rear edge [A] of the machine.
- There is only one smooth joint pin.
  - The smooth pin must be attached at [A].

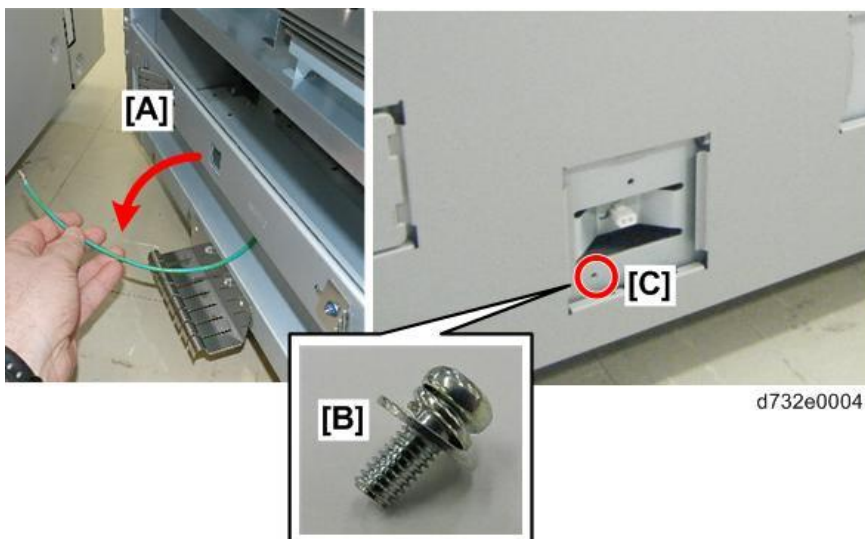
## 2. Installation



5. Peel the tape from the back of the sponge strip, and then attach the sponge strip to the top left edge of the unit.



6. Pull the ground wire [A] out of the unit.
7. Push the unit close to the side of the main machine.
8. Fasten the ground wire to the main machine at [C] with the accessory screw and flat washer [B].




### ★ Important

- When disconnecting the LCIT from the main machine, be sure to disconnect the ground wire before pulling the unit away from the main machine.

- 9.** Align the unit with the right side of the main machine.
- 10.** Push the unit toward the right side of the main machine until they are about 15 cm (6 in.) apart.



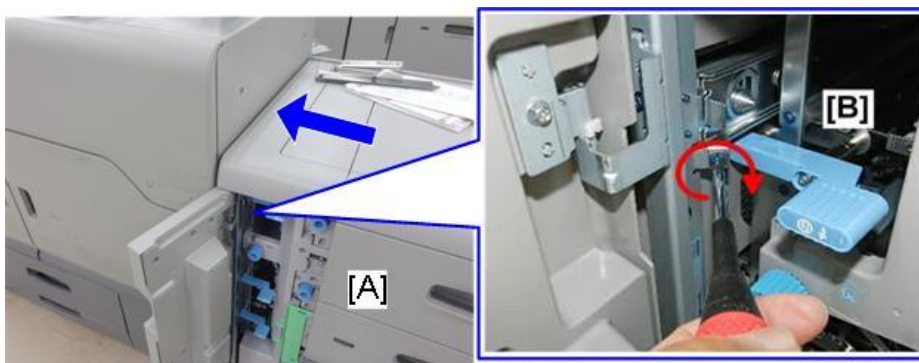
d732e0005

- 11.** Open the front door of the unit.
- 12.** Remove the screw [A] (  x1).
- 13.** Pull the spring-loaded lock lever [B] forward and release it to make sure that it is free and moves easily.



d7320008

- 14.** Slowly, push the unit [A] against the right side of the main machine. You should hear two clicks as the lock lever connects with the two upper joint pins.
- 15.** Re-attach screw [B] to fasten the lock lever.



 x1

d0a5m0206

## 2. Installation

**16.** At the rear, attach the unit I/F connector to the side of the main machine.

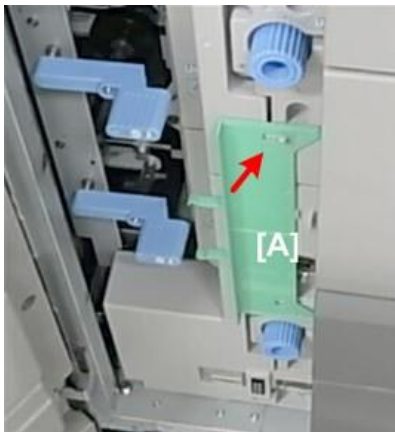


d7330012

**17.** Hang one tab fence [A].

**Note**

- Three tab fences are provided with this option, but only one can be stored inside the LCIT. Give the remaining two tab fences to the operator for safekeeping.



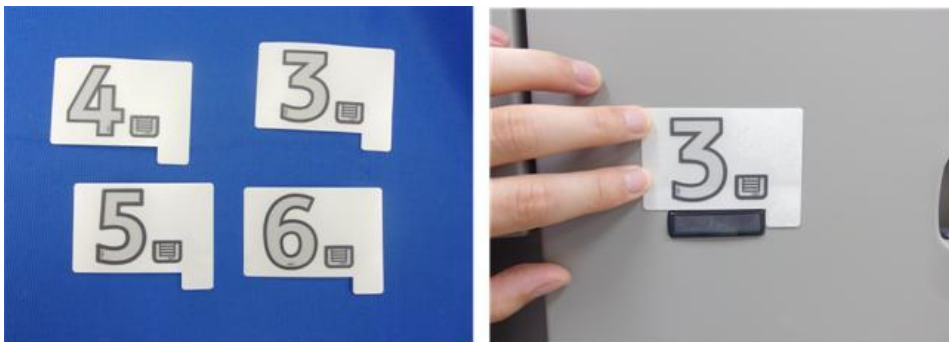
d732e0007

## Attaching the Decals

Attach the decals provided with LCIT to the each tray.

**1.** Attach the tray number decals along the edge of the LED on the paper tray.

“Tray 3” is not used with this machine.



d0a5m0184

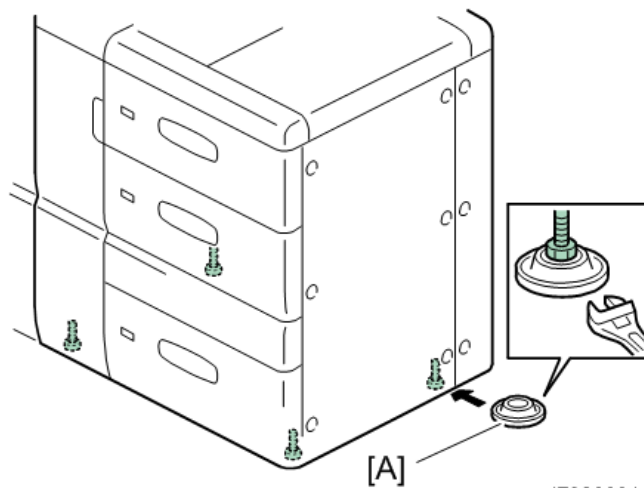
- 2.** Attach the “Paper Set” decals along a rib on the top of the front cover.



d0a5m0184

### Height Adjustment

- 1.** Set the holders [A] to the leveling bolts.
- 2.** Adjust the height of the leveling bolts and make sure that it is level.



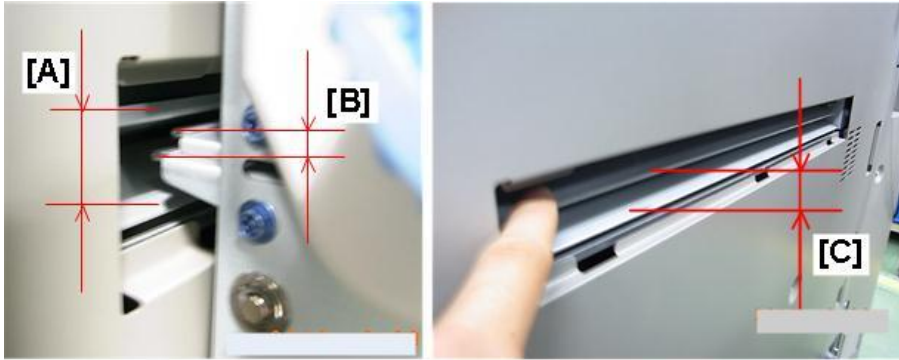
d7320031

#### ↓ Note

- On the right side of the main machine [A], check the height of the LCIT paper exit [B].
- Move the main machine entrance plate [C] up and down and confirm that it does not contact

## 2. Installation

the paper exit of the LCIT.



d074i886

## Dehumidification Heater

### Accessories

Check the accessories against the list below.

No.	Description	Q'ty
1	PTC heater assembly (composed of PTC heater: 2pcs, Clamp: 1pc, Screws M4x4, Metal cover: 1pc)	1
2	Heater Relay Harness	1
3	Heater Cover	2
4	Screws M4x8	7
5	Saddle Clamps	2
6	Harness Clamps	2



d7323003

## Installation (Connecting to the Main Machine)

**⚠ CAUTION**

- Make sure that the main power switch and AC power switch of the main machine are turned OFF and that its power cord is disconnected before doing the following procedure.

**1.** If the LCT is already installed, disconnect it and pull it away from the side of the machine.

- Lock lever (🔑 x1)
- Interface cable (🔌 x1)
- Ground screw (🔩 x1)

**2.** Remove the screws from the right cover of the LCIT (🔩 x6).

Hold the bottom of the right cover, push it to the left to disconnect the hooks at the top edge of the cover, and pull it away.



d4530004

**3.** Separate the PTC heater [A] and the clamp [B] from the heater assembly.



🔩 x4, 🧰 x1

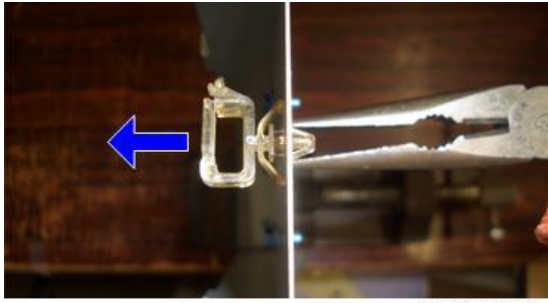
[B]

d0a5m0564

**Note**

Remove the clamp with pliers.

## 2. Installation



d0a5m0565

- 4.** Attach the screws to where you removed them from in Step 3.  
This protects against hand injuries caused by the edge of the screw hole.



 x4

d0a5m0566

- 5.** Pull out each tray until it stops.  
You do not need to remove them.



d7320042

- 6.** Attach the heater to the bottom plate of the LCIT.  
Attach the screws in the order from 1, then 2.

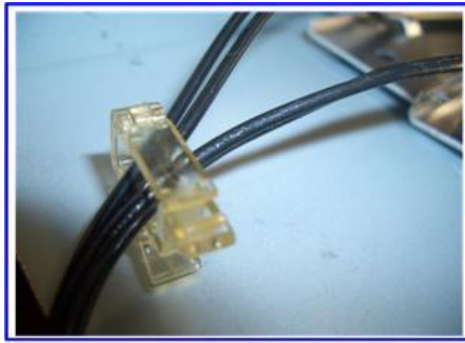


 x4

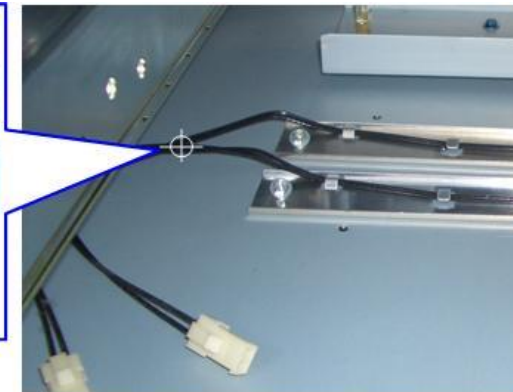
d0a5m0567



- 7.** Attach the clamp that you removed in Step 3, and clamp the harness of the heater.

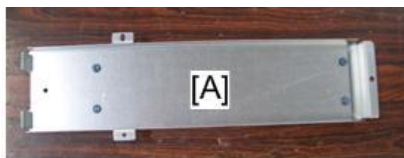


 x1




d0a5m0568

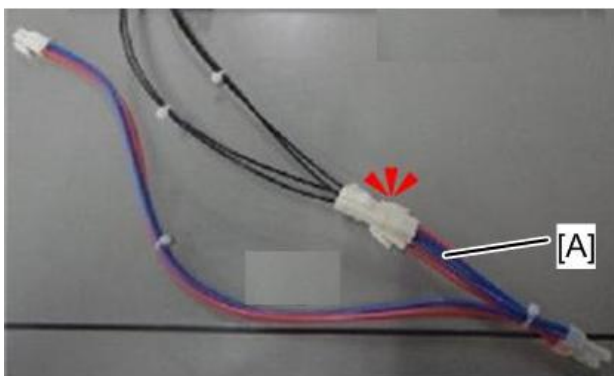
- 8.** Attach the metal cover [A].



 x3

d0a5m0569

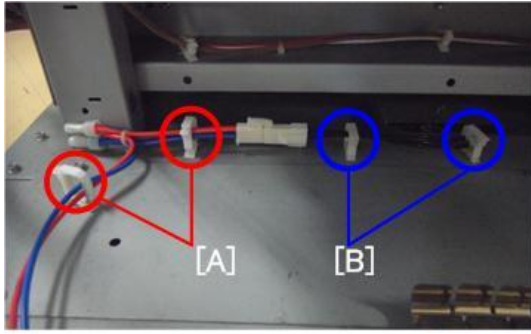
- 9.** Connect the heater assembly and the heater relay harness [A] ( x1).



d0a5m0563

## 2. Installation

**10.** Attach the clamps [A] and saddle clamps [B], and then close the clamps around the harness (🔧x4).



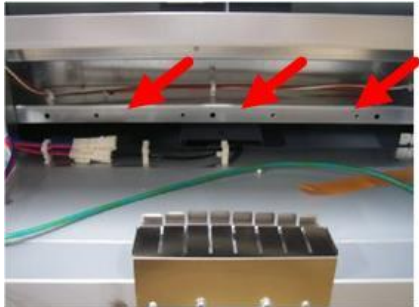
d7323001

**11.** Re-attach the right cover (🔧x6).

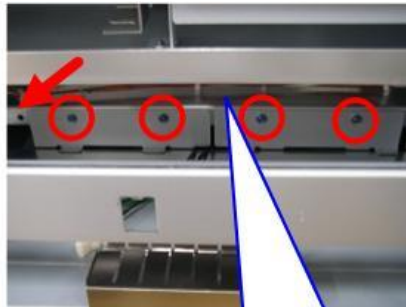
**12.** Attach the two heater covers at the bottom of the LCIT (🔧x4).

### ⚠ CAUTION

- The heater harnesses must pass between the two covers.
- Make sure that the harnesses are not pinched between the covers.



d7323002



**13.** Remove the connector plate from the bottom edge of the main machine (🔧x1).



d194z0054b

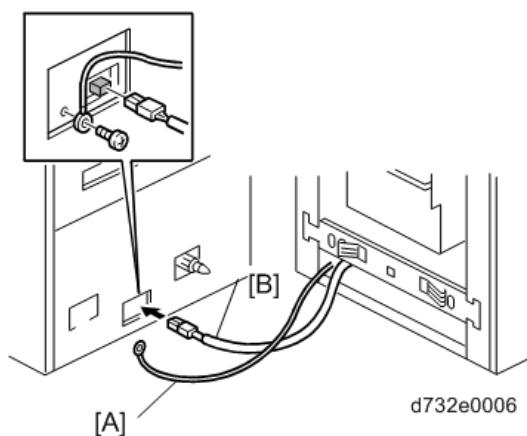
**14.** Push the LCIT close to the main machine.

**15.** Re-connect the green ground wire [A] (🔧x1).

**16.** Connect the heater cable [B] (🔌 x1).

**Note**

- Confirm that the relay harness and the ground wire are not pinched between the mainframe and the LCIT.



Installation (Connecting to Vacuum Feed LCIT RT5120)

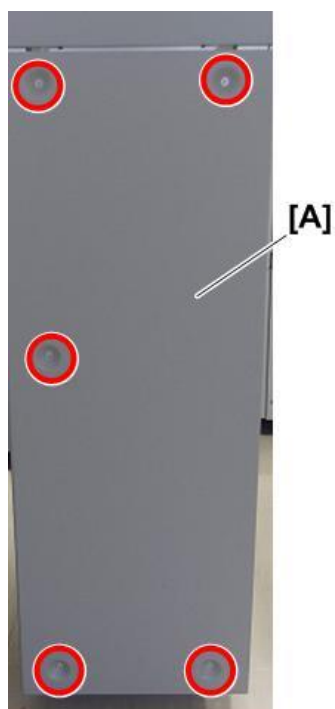
**★ Important**

When connecting the dehumidification heater, install the software for connecting.

**Note**

Make sure that the main machine is switched off and that its power cord is disconnected before doing the following procedure.

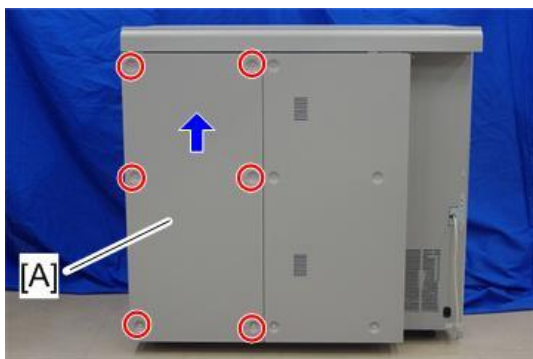
1. Separate the vacuum feed LCIT from the bridge unit.
2. Remove the rear cover [A] of the bridge unit (🔩 x5).



d194d9177

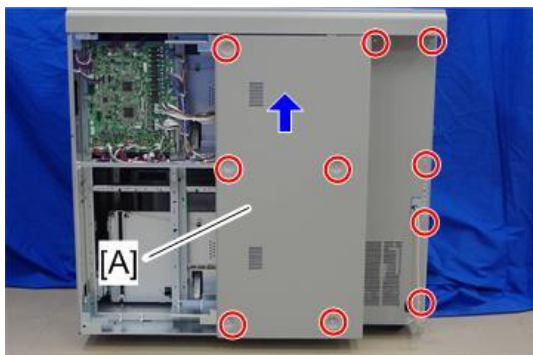
## 2. Installation

3. Remove the rear right cover [A] of the vacuum feed LCIT by raising it up slightly (🔩x6).



d777z5004

4. Remove the rear left cover [A] of the vacuum feed LCIT by raising it up slightly (🔩x10).



d777z5005

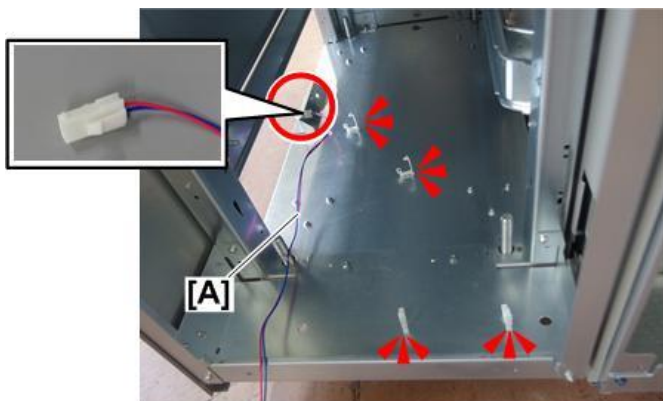
5. Remove the blindfold board [A] from the right side lower cover of the vacuum feed LCIT (🔩x1).



m263d8105

6. Connect the bridge unit to the vacuum feed LCIT.
7. Insert the connector of the harness [A] provided with the heater into the hole of the bracket of the bridge unit.

8. Attach the clamps provided with the heater to the bracket as shown below.



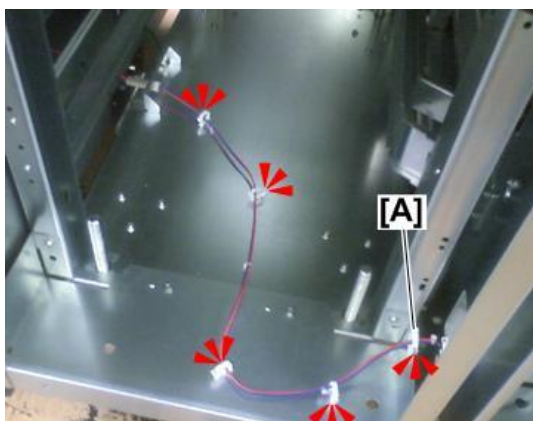
m263d8107

9. Connect the heater harness from the left side of the vacuum feed LCIT to the connector attached to the bracket in the previous steps (🔌x1).



m263d8108

10. Set the edge saddle [A], and then route the harness inside the vacuum feed LCIT (🔌x4).



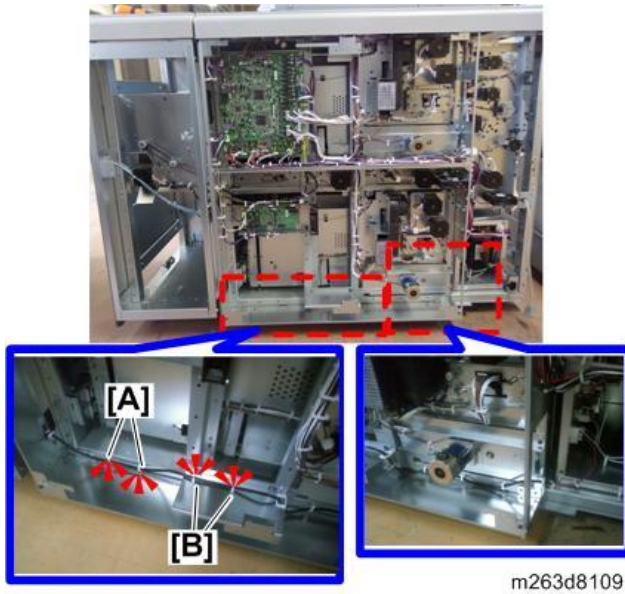
m263d8111

11. Set the clamps [A] [B], and then route the harness inside the vacuum feed LCIT (🔌x4).

**Note**

The bosses of the clamps [A] [B] are different in sizes. When attaching the clamps, make sure that each boss fits holes.

## 2. Installation



12. Connect the harness to the connector of the AC drive board of the vacuum feed LCIT (🔌 x1).



13. Reattach the removed covers.

---

### Moving the LCIT

---

Always follow this procedure before moving the LCIT.


**★ Important**

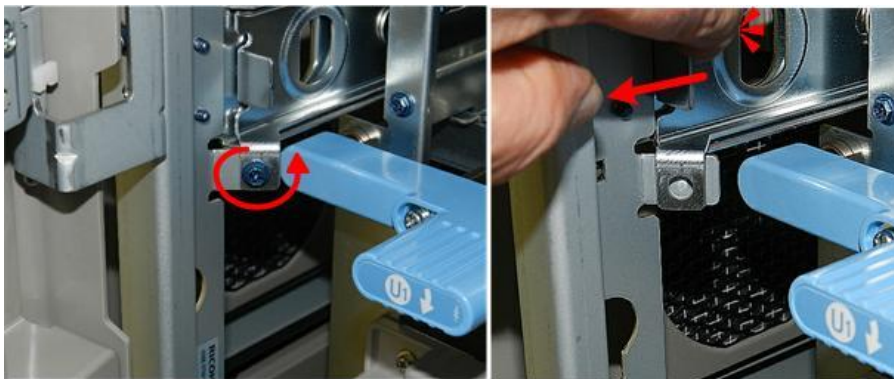
- To prevent damage to the ground wire (and the heater connector if the heater is installed) never attempt the move or change the position of the main machine with the LCIT connected to the right side of the machine.

1. At the rear, disconnect the unit I/F connector.



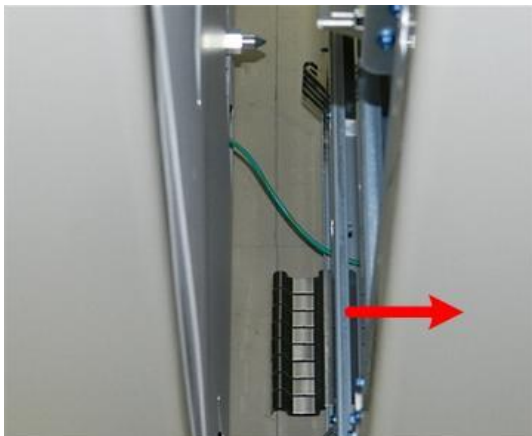
d7330014

2. Open the front door of the unit.
3. Remove the screw (  x1).
4. Pull the spring-loaded lock lever forward to separate it from the joint pins on the side of the main machine.




d7330015

5. Slowly, pull the LCT a short distance away from the machine.

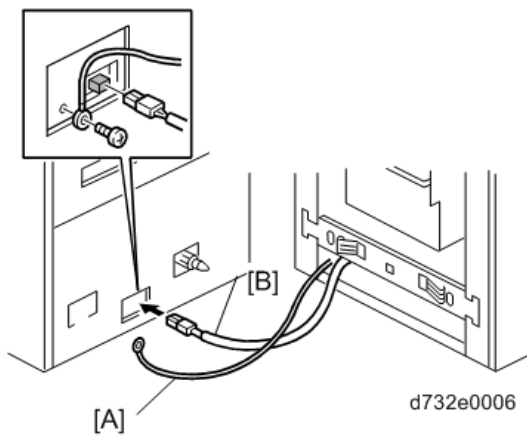


d7330016

6. Disconnect the ground wire [A] (  x1).

## 2. Installation

- 7.** Disconnect the heater connector [B], if the heaters (optional) have been installed (📦 x1).

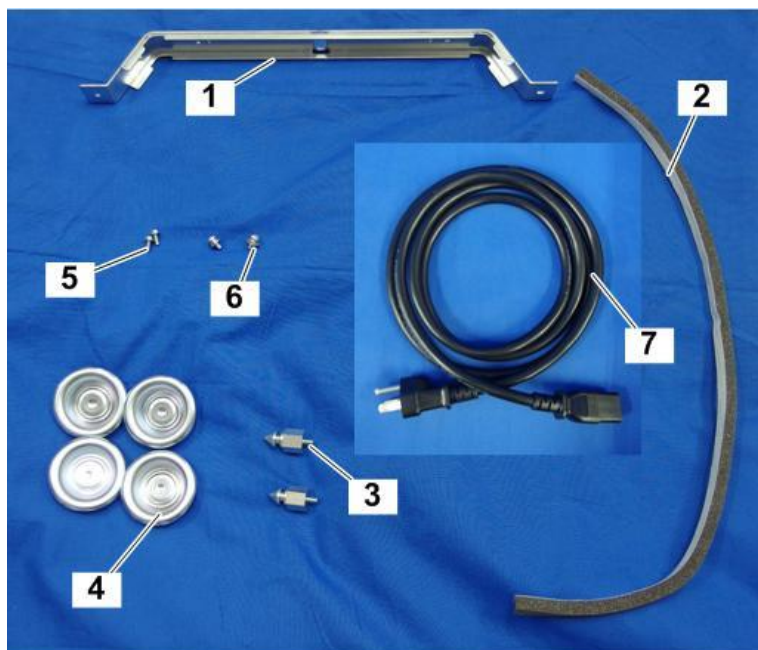


- 8.** Pull the LCIT away from the side of the main machine.

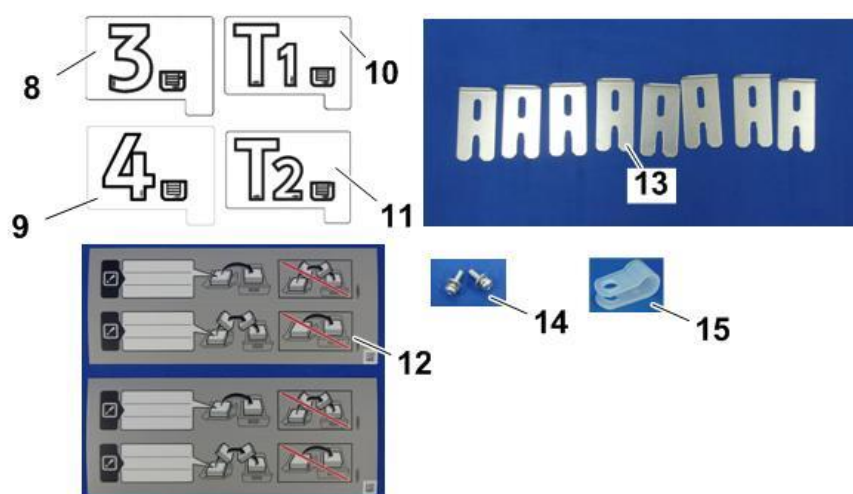


# Vacuum Feed LCIT RT5120 (D3EW)

## Accessories



d194d9164a



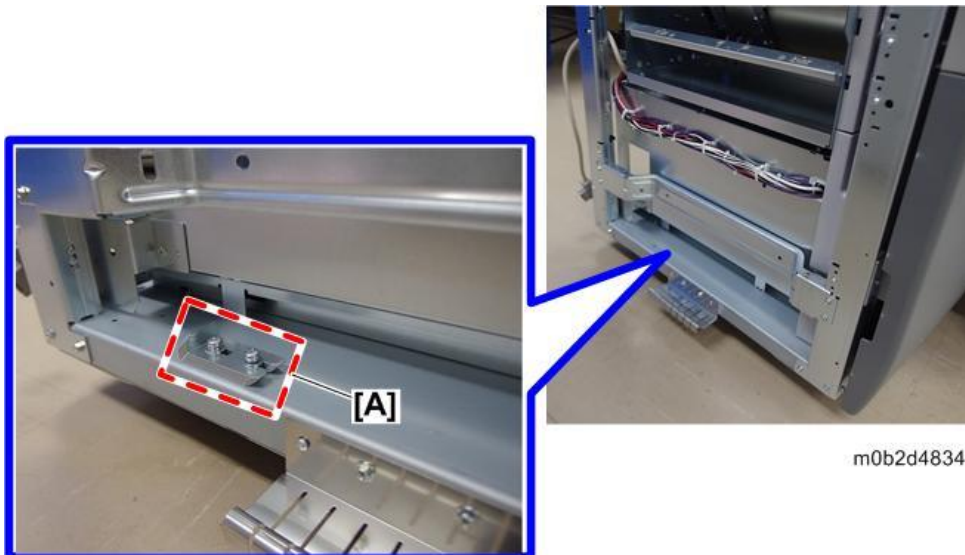
d194d9165a

No.	Description	Q'ty
1	Joint Bracket	1
2	Cushion	1
3	Joint Pins	2
4	Leveling Shoes	4
5	Tapping Screw : 4x10	2
6	Screw: Polished Round/Spring: M5x10	2
7	Power Cord	1

## 2. Installation

No.	Description	Q'ty
8	Decal - Paper Tray [3]	1
9	Decal - Paper Tray [4]	1
10	Decal - Paper Tray [T1] Not used with this machine	1
11	Decal - Paper Tray [T2] Not used with this machine	1
12	Decal: Paper Set Direction	2
13	Support Plate*	8
14	Screws (M5x14)	2
15	Clamp	1
-	Cushion (EU only)	4

\*1: The support plates (No.13) [A] are included as a countermeasure against skew at the LCT output. To store them, stack and secure them with the screws (M5x14) as shown below.

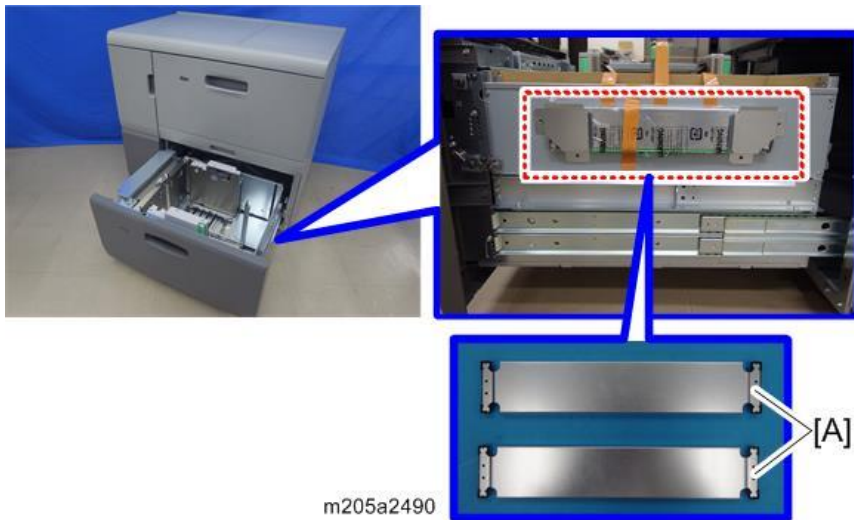


For details about how to use these plates, refer to "[Correcting Skew for the Vacuum Feed LCIT](#)".

### Note

- Attach the auxiliary bottom plates [A] to the bottom of the tray when using paper wider than

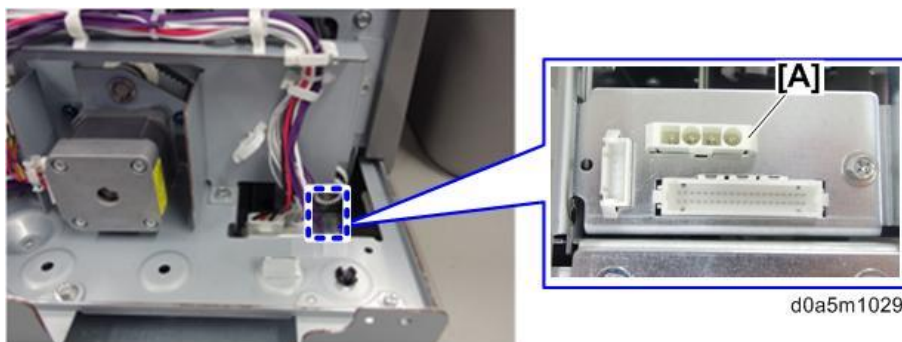
204 mm.



## Installation

### ⚠ CAUTION

- Before performing the following procedure, make sure that the main power switch and AC power switch of the main machine are turned OFF and that the power cord is disconnected. Performing the procedure with the power on could result in an electric shock or could cause a malfunction.
- Rated voltage of output connectors for accessory:  
 [A]: Max.DC24V.  
 [B]: Max.DC24V.

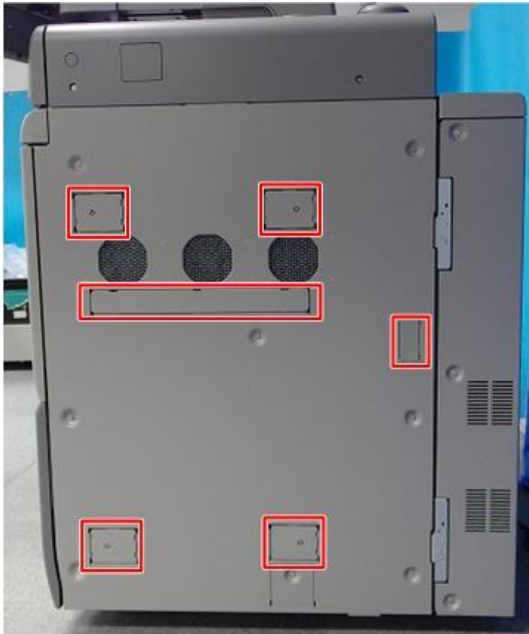


## 2. Installation

### Note

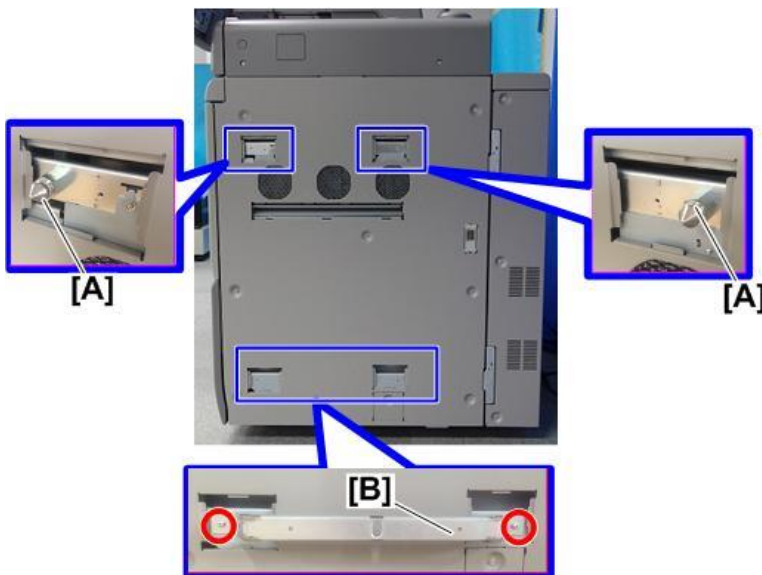
- This option is installed on the main machine as an upstream unit. Up to two LCITs can be connected on the main machine using a Bridge Unit BU5010 between each LCIT. The installation procedure is the same whether you install the LCIT on the main machine or on Bridge Unit BU5010. This section describes how to install the LCIT on the main machine.

1. Remove all visible external tapes on the external surfaces of the LCIT.
2. Remove the LCIT connecting covers from the main machine.



m263d9101

3. Attach the joint pins [A] and joint bracket [B] to the main machine (🔩 x2: M5x10).

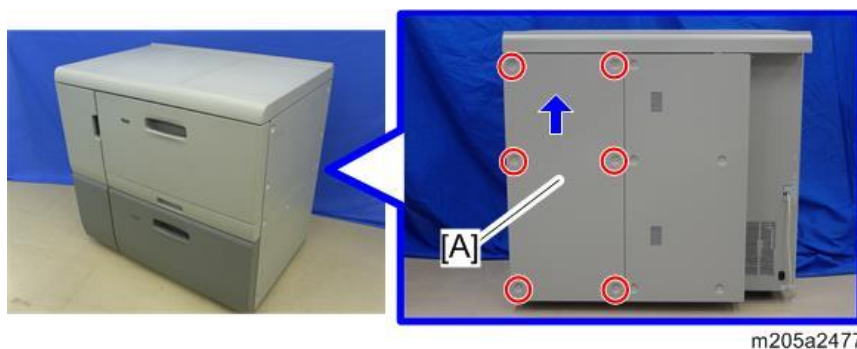


m263d9102

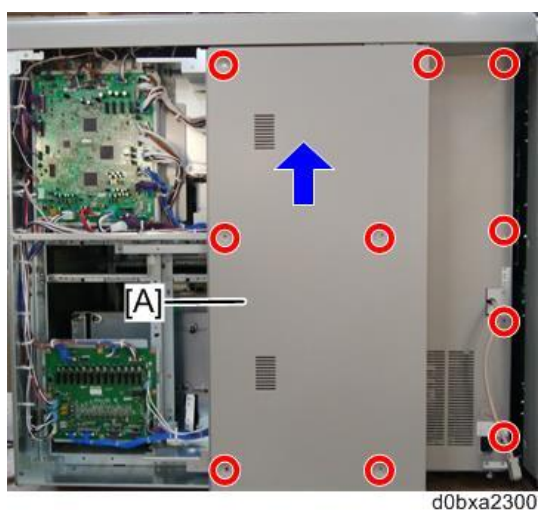
### Note

- Tighten the joint pins [A] with a wrench.
- Fix the joint bracket [B] with the M5x10 screws provided with this option.

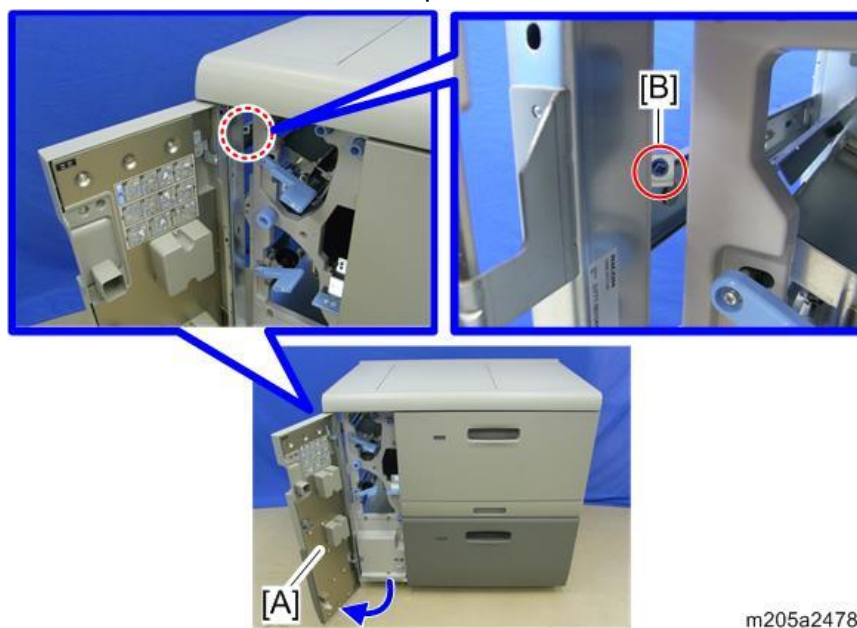
- 4.** Lift the rear right cover [A] of the LCIT slightly and remove it (⚙️ x6).



- 5.** Lift the rear left cover [A] of the LCIT slightly and remove it (⚙️ x10).



- 6.** Open the front door [A] and release the lock lever [B] (⚙️ x1).  
The removed screw is used in step 11.

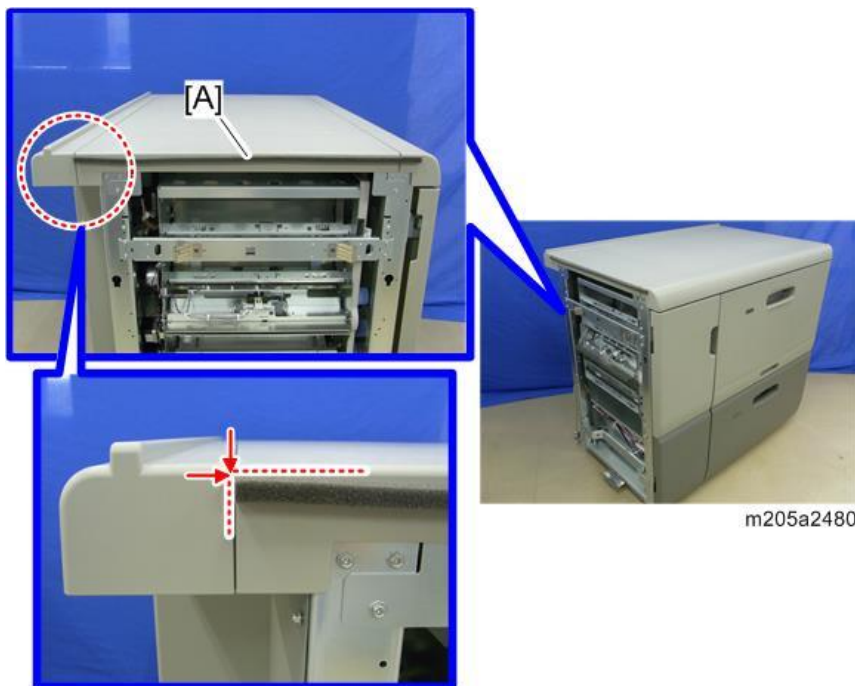


## 2. Installation

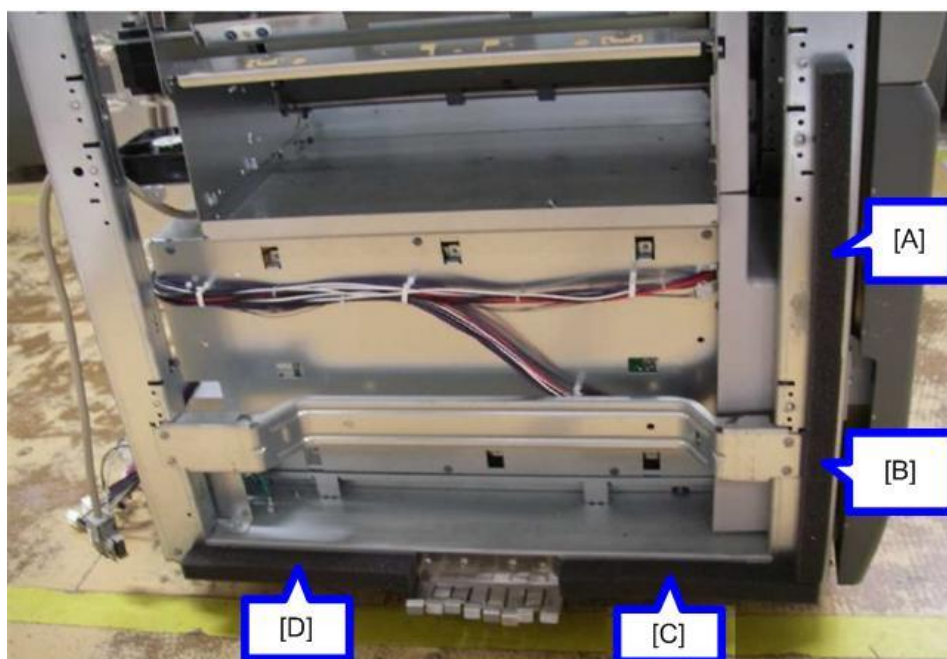
- 7.** Remove the ground plate [A], and then reinstall it as shown below (⊙ x2).



- 8.** Attach the cushion [A] to the docking side of the LCIT as shown below.

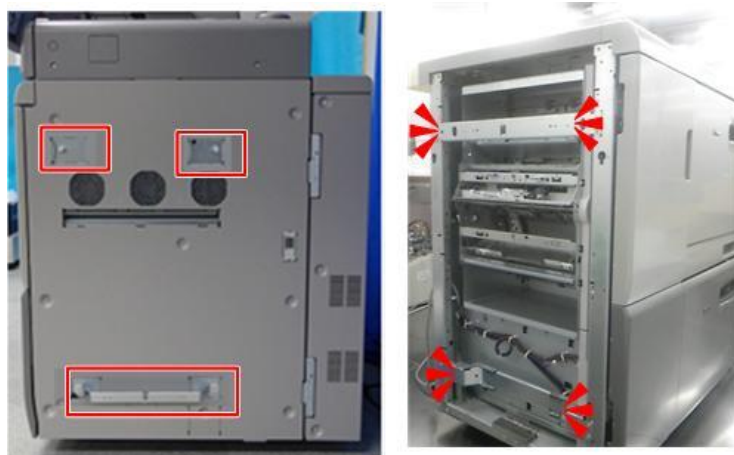


- 9.** For EU only: Attach the sponge strips [A] [B] [C] [D] as shown below.



m0b2d8080

- 10.** Install the LCIT on the main machine.  
Match the frames of the LCIT with the joint pins and joint bracket of the main machine.



m263d9105

- 11.** Open the front door and fix the lock lever (🔑 x1).  
Use the screw removed in step 6.

## 2. Installation

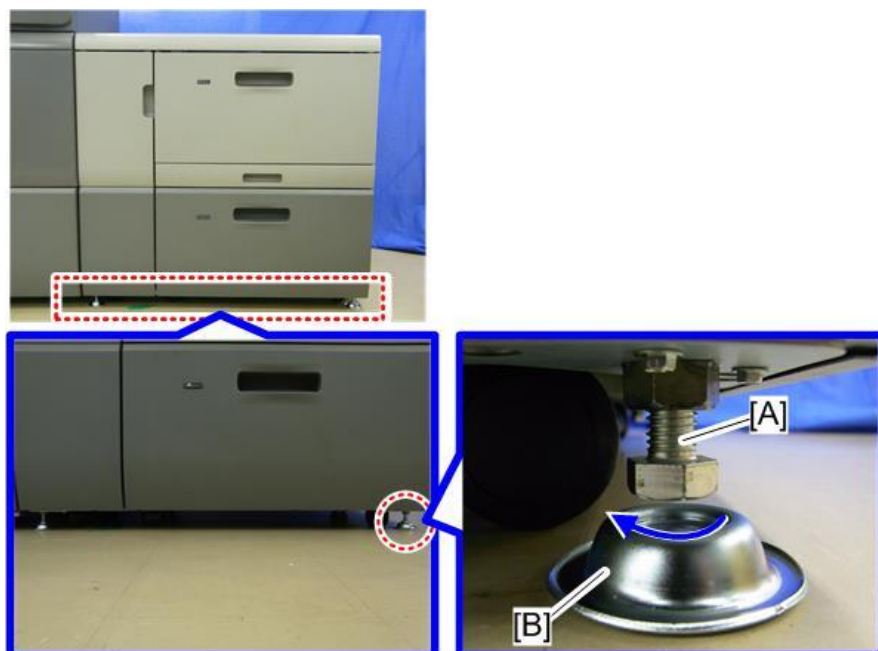


m263d9103

**12.** Place the four holders [B] below the leveling bolts [A] under each corner of the LCIT.

**13.** Turn the nuts to lower the bolt until the bolts reach the holders.

Example below: Front side



m205a2484

**14.** Place a level on the top of the LCIT and then adjust the machine level and height with leveling bolts.

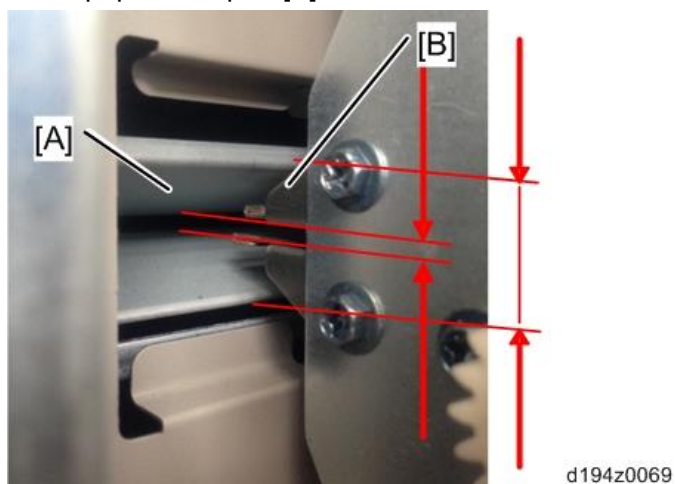


d194d9168



**Note**

- Machine level: Less than 5mm (0.2") from level (measure from left-to-right and front-to-rear)
- Machine height: The paper feed port [A] of the LCIT must be positioned within the range of the paper feed port [B] of the main machine.



- 15.** Open the front door. Secure the LCIT to the front side of the main machine (🔩x1: M4x10).



m263d9104a

- 16.** Secure the LCIT to the rear side of the main machine (🔩x1:M4x10).

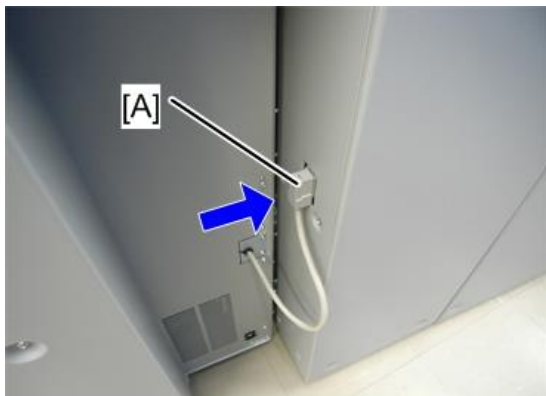


d194d9113

- 17.** Re-attach both rear covers of the LCIT.

## 2. Installation

**18.** Connect the LCIT I/F cable [A] to the main machine.



d778z0037

**19.** To attach the tray number decals provided with the LCIT, attach them a (above the LEDs). Attach the decal "3" on the top tray, and attach the decal "4" on the bottom tray.

### Note

- "T1", "T2" decals are not used with this machine.



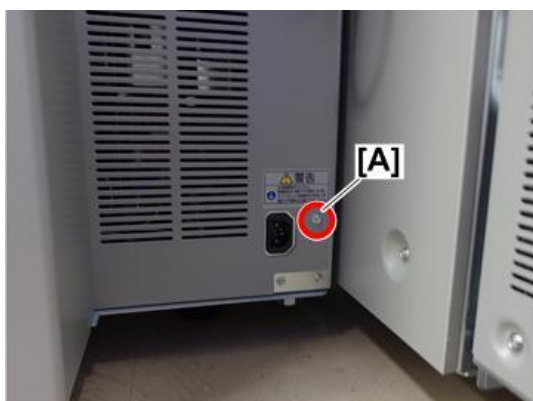
d194d9166

**20.** Connect the power cord provided with the LCIT to the power inlet on the LCIT.



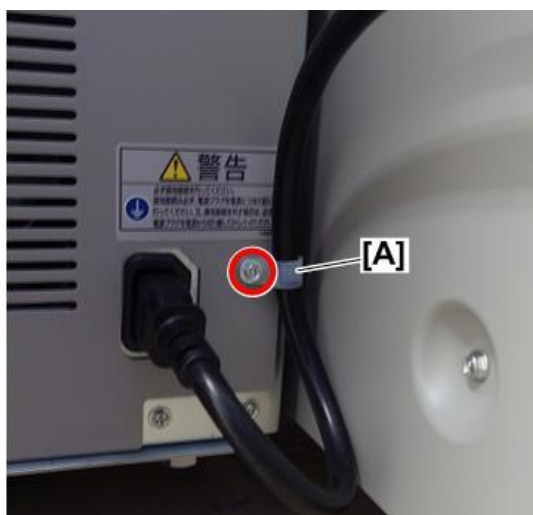
d194d9167

- 21.** Remove the screw [A] beside the rear inlet (🔩×1)



m0b2d8001

- 22.** Secure the power cord with the accessory clamp [A] and one removed screw (🔩×1, 🔩×1).



m0b2d8002

- 23.** Plug the power cord of the LCIT into the power source.  
**24.** Plug the power cord of the main machine into the power source, and then turn on the main power switch.

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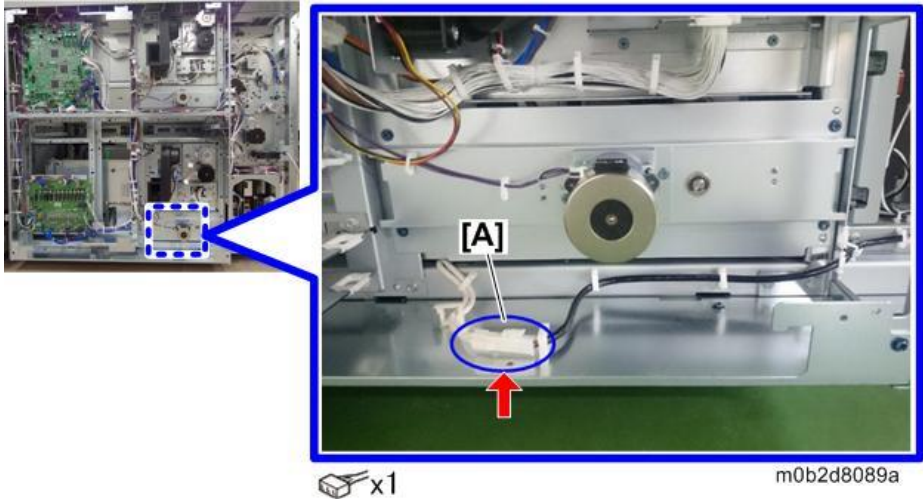
### Tray Heater (Service Option)

---

An optional tray heater can be installed under paper feed tray 2. ([Tray Heater for Vacuum Feed LCIT \(Service Option\)](#))

The heater itself does not have an ON/OFF switch. It remains ON as long as the power cord of the vacuum feed LCIT is connected. To turn the heater OFF, the relay connector [A] must be disconnected.

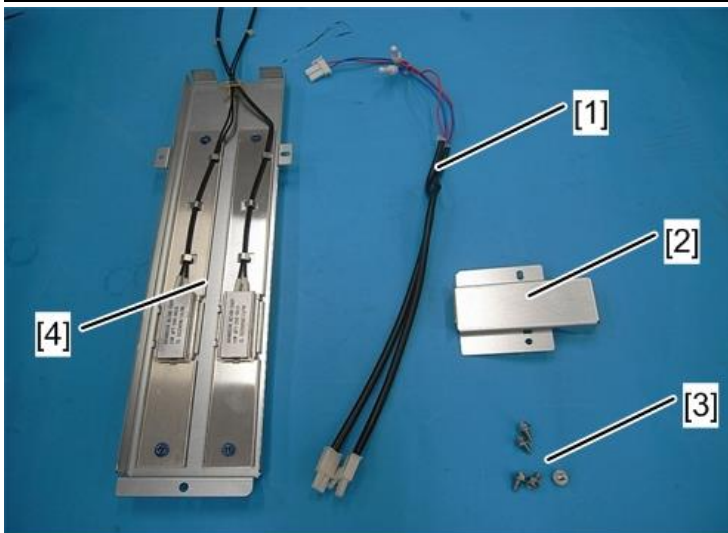
## 2. Installation



### Tray Heater for Vacuum Feed LCIT (Service Option)

#### Accessories

No.	Description	Q'ty
1	Relay Harness	1
2	Heater Bracket	1
3	Screw	5
4	PTC heater assembly (composed of PTC heater: 2pcs, Clamp: 1pc, Screws M4x4, Metal cover: 1pc)	1



d777z0104

#### Installation

#### **⚠ CAUTION**

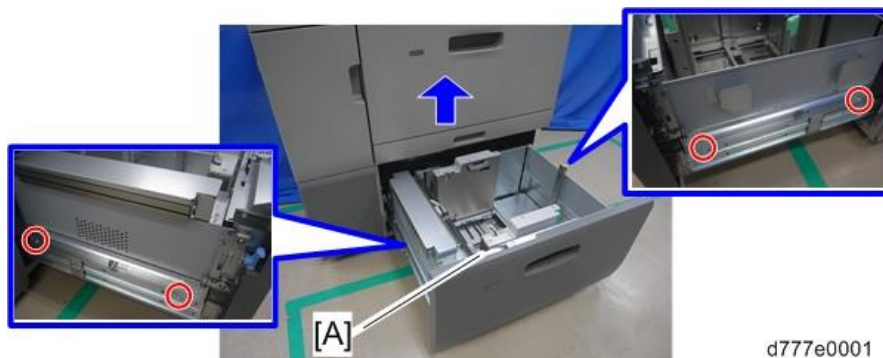
- Before performing the following procedure, make sure that the main power switch and AC power switch of the main machine are turned OFF and that the power cord is disconnected. Performing the procedure with the power on could result in an electric shock or could cause a

malfunction.

**Note**

- The tray heater is independent of the ON/OFF power switch of the main machine and is constantly activated if the power cord of the vacuum feed LCIT is plugged in.

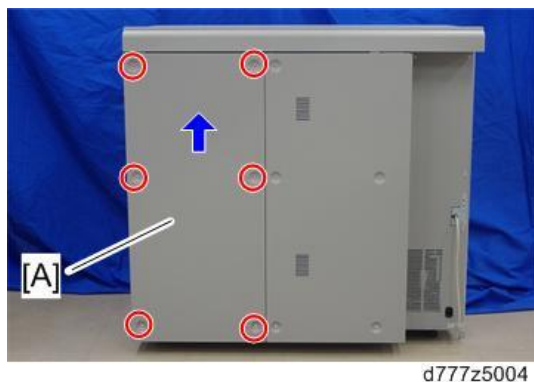
- Pull paper tray 2 from the vacuum feed LCIT.
- Remove paper tray 2 [A] (⚙️×4).



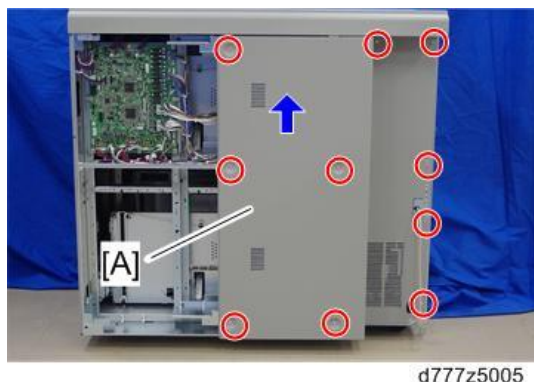
**Important**

- Two or more customer engineers are required to lift paper tray 2 off the rails because paper tray 2 is extremely heavy. Work carefully when lifting or moving it.

- Lift the rear right cover [A] of the vacuum feed LCIT and remove it. (⚙️×6)

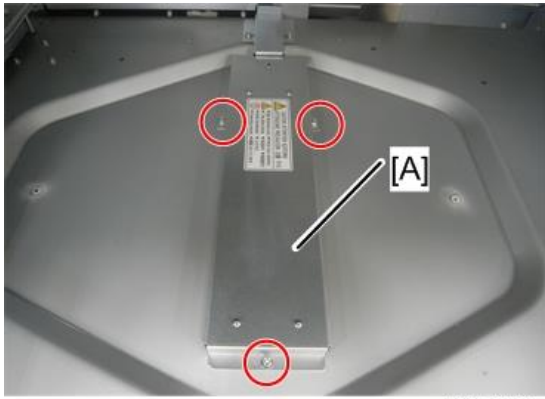


- Lift the rear left cover [A] of the vacuum feed LCIT and remove it. (⚙️×10)



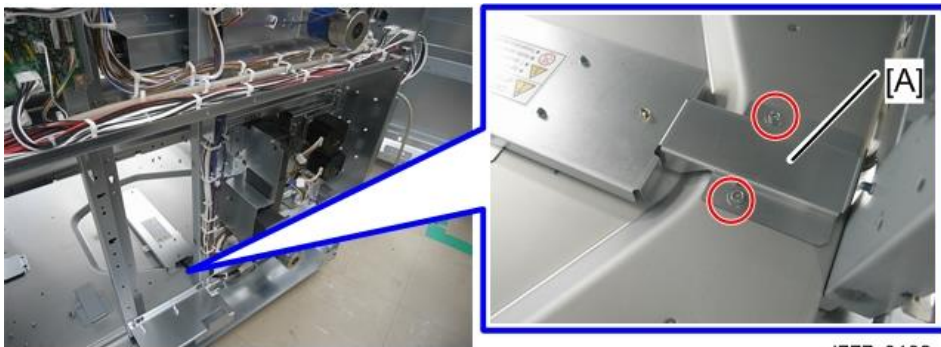
- Attach the heater [A] to the bottom of the vacuum feed LCIT. (⚙️×3: 4×8)  
Access from the front.

## 2. Installation



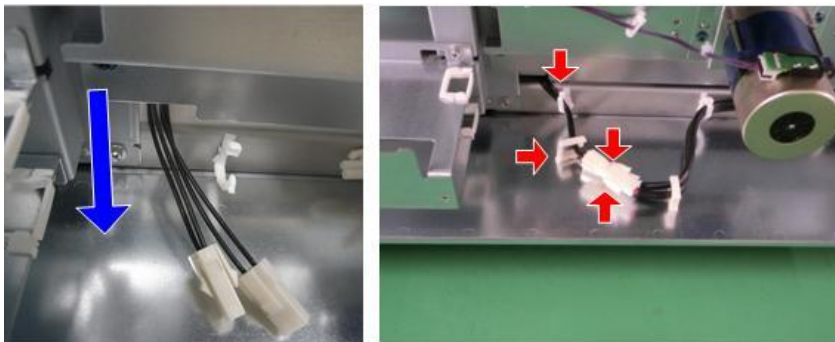
d777z0101

- 6.** Attach the heater bracket [A]. (⚙️ ×2: 4×8)  
Access from the rear.



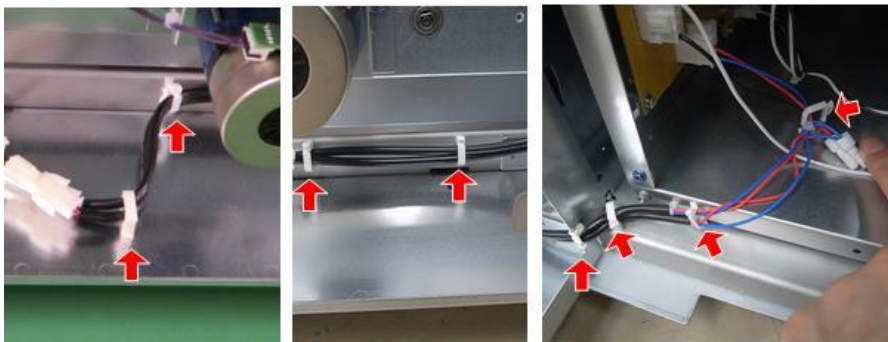
d777z0102

- 7.** Pass the heater harness through the hole in the rear side, and connect it to the relay harness. (⚙️ ×2, 📦 ×2)



d777z0105

- 8.** Route the relay harness as shown below. (📦 ×8)



d777z0106

- 9.** Connect the relay harness to the PSU.

Red arrow: CN803



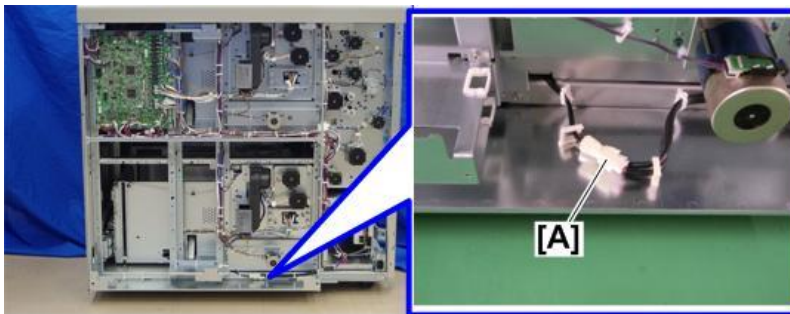
d777z0107

**10.** Re-attach both rear covers.

**11.** Re-attach paper tray 2.

**Note**

- The tray heater is not operated by the ON/OFF switch, but is always ON when the AC power of the vacuum feed LCIT is plugged in. If you wish to turn the heater OFF, you have to disconnect the relay connector [A].



d194d9169

## Correcting Skew for the Vacuum Feed LCIT

- One Vacuum Feed LCIT attached  
Skew can be corrected at the pin [A] and bracket [B] between the main machine and LCIT with insertion of an accessory support plate [C].
- Two Vacuum Feed LCIT attached  
If more than one LCIT is in the line, the skew correction can be done with the support plate at the connection between the main machine and LCIT closest to the main machine.

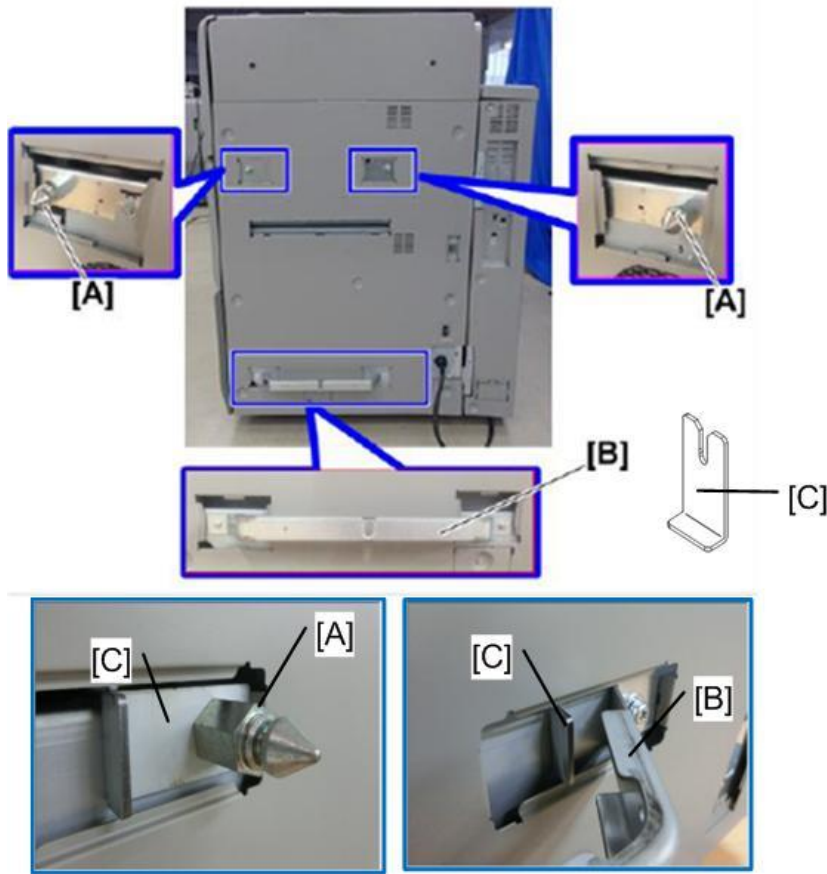
**Note**

- Each support plate is 1.0 mm thick. Inserting one plate is equivalent to about 0.25/100 mm of correction in paper skew.
- Up to four plates can be inserted to correct skew.

## 2. Installation

### Inserting Support plates

1. Remove the joint bracket attached to the main machine, and insert the support plates and tighten the screws.



d270d6708

### Checking paper skew

Follow the procedure below to check for paper skew after installation.

1. Enter the SP mode, open SP2-109-003 and print Test Pattern #14. This is the Trim Pattern.
2. At the top of the SP mode screen, touch "Copy Screen" or "APL Window" to go into the copy/printer mode.
3. Make sure at least three sheets of paper are set, and then print three sheets.
4. Check the placement of the Trim Pattern on the sheets as shown below.

#### Case 1: Image Skewed to the Front

Measure the amount of skew. This is the difference between A and B.



If the amount of skew (difference between A and B) is 1 mm and there is only one LCIT in the line, insert two support plates at the rear [A] as shown.



If the amount of skew (difference between A and B) is 1 mm and there are two LCITs in the line, insert two support plates at the rear [A] as shown on the left side of the upstream LCIT.





**Case 2: Image Skewed to the Rear**

Measure the amount of skew. This is the difference between A and B.



If the amount of skew (difference between A and B) is 1 mm and there is only one LCIT in the line, insert two support plates at the front [A] as shown.



If the amount of skew (difference between A and B) is 1 mm and there are two LCIT in the line, insert two support plates at the front [A] as shown on the left side of the upstream LCIT.



## Bridge Unit BU5010 (D778)

### Note

- Up to two units of vacuum feed LCIT RT5120 can be connected by installing a bridge unit [A] between them.

### Accessories

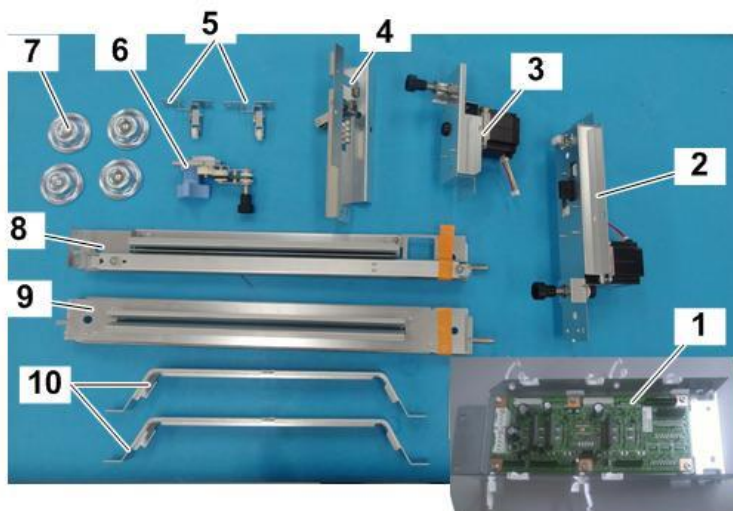
No.	Description	Q'ty
*	Horizontal Transport Unit	1
1	Control Board	1
2	Exit Motor Unit	1
3	Entrance Motor Unit	1
4	Detent Unit	1
5	Detent	2
6	Jam Removal Lever	1
7	Leveling Shoes	4
8	Left Slide Rail	1
9	Right Slide Rail	1
10	Joint Bracket	2
11	Interface Harness	1
12	Interlock Switch Harness	1
13	Drawer Connector Harness	1
14	Communication Harness	1
15	Cooling Fan Harness	1
16	Motor Harness	1
17	Clamp (large)	6
18	Clamp (small)	3
19	Edge Saddle (large)	1
20	Edge Saddle (small)	1
21	Screw with Spring Washer (M5x10)	8
22	Screw (M3x6)	4
23	Tapping screw (M4x8)	25
24	Fan Assembly	1
25	Decal - Paper Feed Tray [5] Not used for this machine.	1
26	Decal - Paper Feed Tray [6] Not used for this machine.	1
27	Decal - Paper Feed Tray [7]	1

## 2.Installation

No.	Description	Q'ty
	Not used for this machine.	
28	Decal - Paper Feed Tray [8] Not used for this machine.	1
29	Decal – U10 Knob	1
30	Decal - Paper Feed Tray [T3]	1
31	Decal - Paper Feed Tray [T4]	1

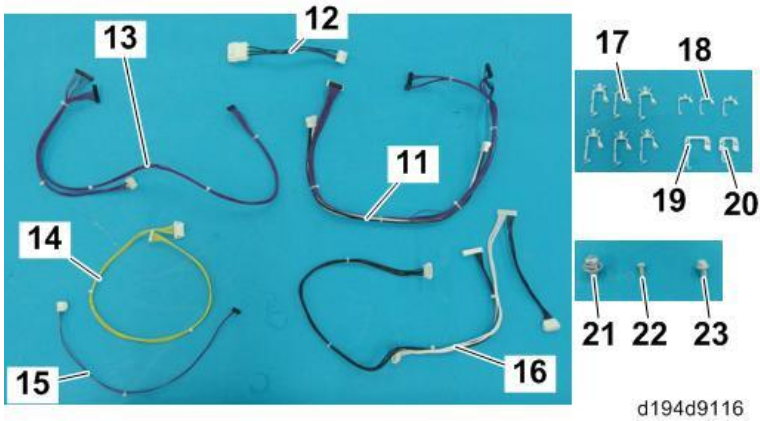


d194d9117

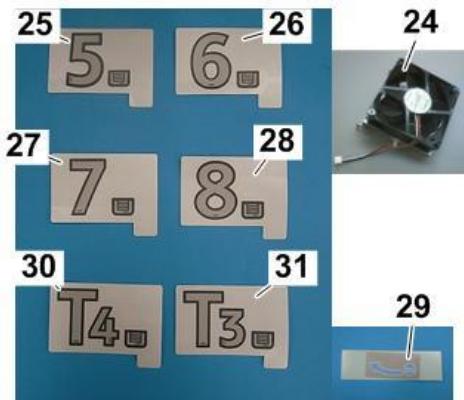


d194d9115

## 2. Installation



d194d9116



d194d9170

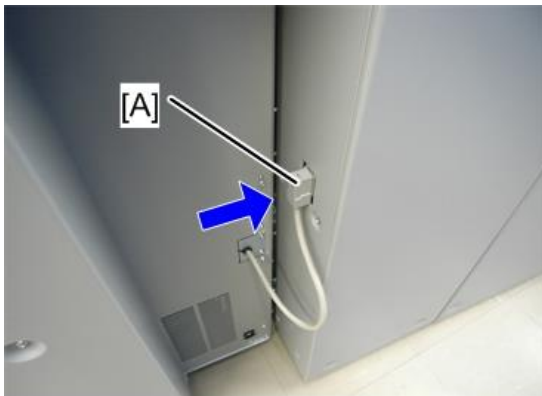
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## Installation

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### **⚠ CAUTION**

- Before performing the following procedure, make sure that the main power switch and AC power switch of the main machine are turned OFF and that the power cord is disconnected. Performing the procedure with the power on could result in an electric shock or could cause a malfunction.
- Rated voltage of output connector for accessory [A]: Max. DC24V.



d778z0037

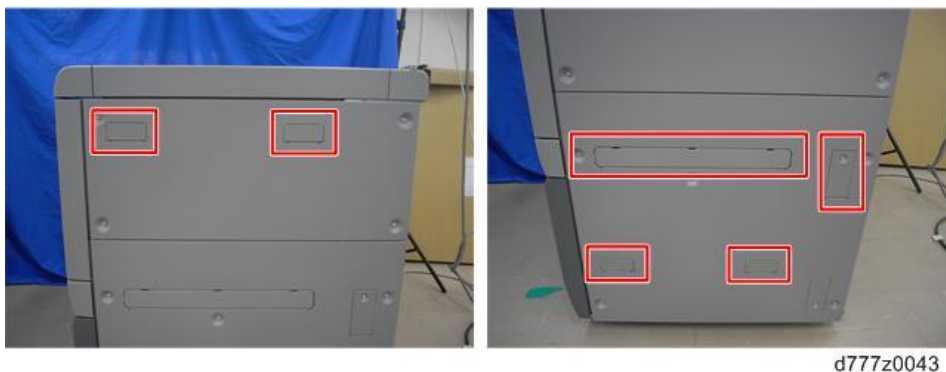
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## Horizontal Transport Unit

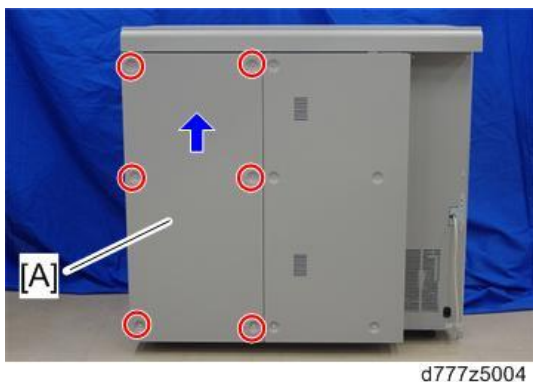
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- 1.** Remove all visible external tapes on the external surfaces.

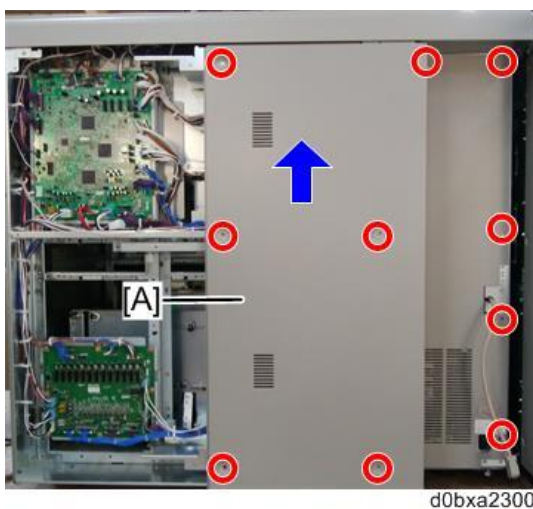
- 2.** Remove the six covers on the right side of the downstream vacuum feed LCIT.



- 3.** Lift the rear right cover [A] of the downstream vacuum feed LCIT and remove it (⌀ x6).



- 4.** Lift the rear left cover [A] of the downstream vacuum feed LCIT and remove it (⌀ x10).

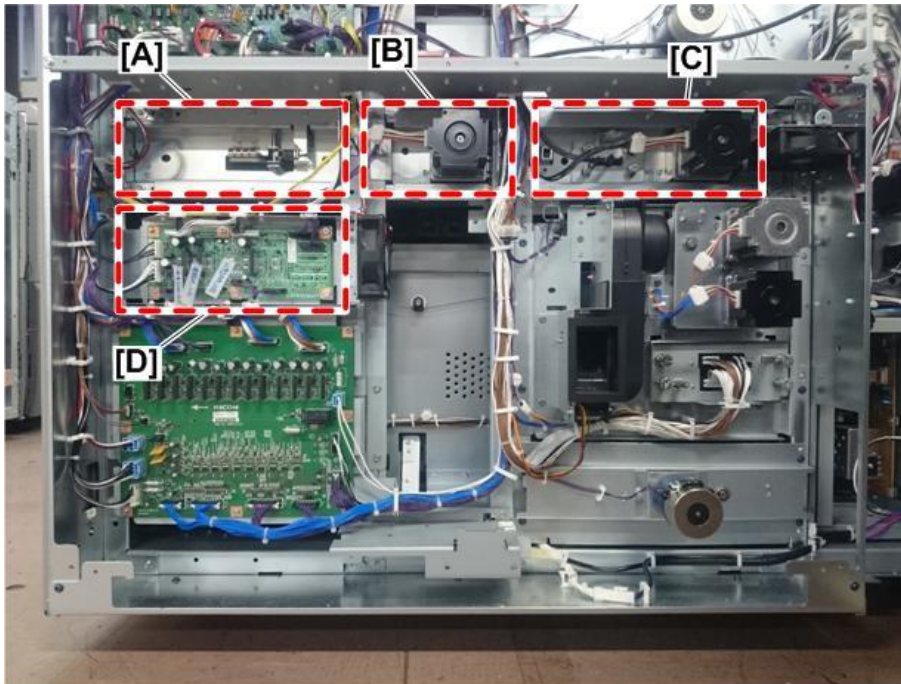


- 5.** Attaching position of the four units

- [A]: Detent unit
- [B]: Entrance motor unit
- [C]: Exit motor unit

## 2. Installation

- [D]: Control board



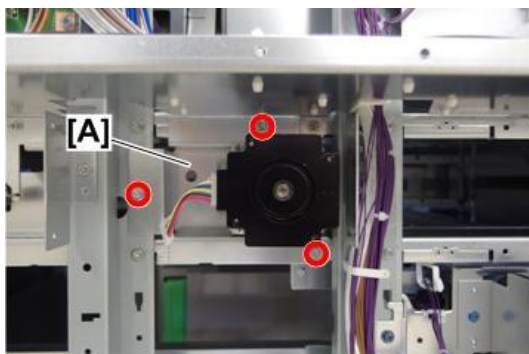
m0b2d8218

- 6.** Attach the detent unit [A] (⚙️ x3: M4x8).



d194d9119

- 7.** Attach the entrance motor unit [A] (⚙️ x3: M4x8).

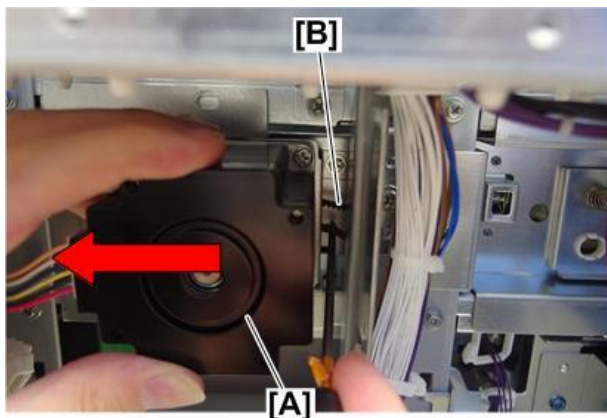


d194d9120

### Note

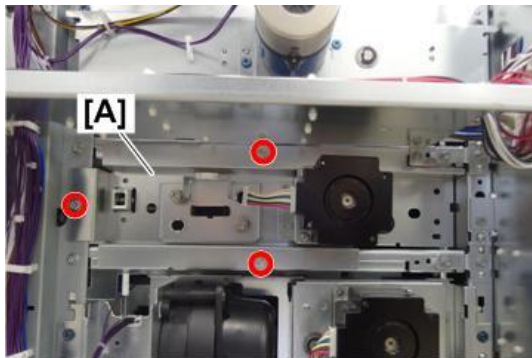
- Check that the belt is not out of position. If the belt is out of position, a horizontal transport unit jam occurs.
- Before securing the motor unit [A], slide it to the left. From the resulting gap, insert a thin

screwdriver or other tool to check the belt [B] tension.



d194d9173

**8.** Attach the exit motor unit [A] (⚙️ x3: M4x8).

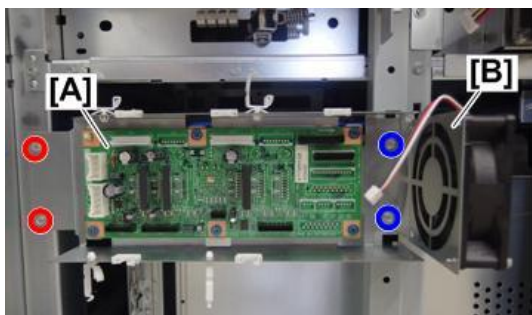


d194d9121

**9.** Attach the control board [A] and fan assembly [B] (⚙️ x4: M4x8).

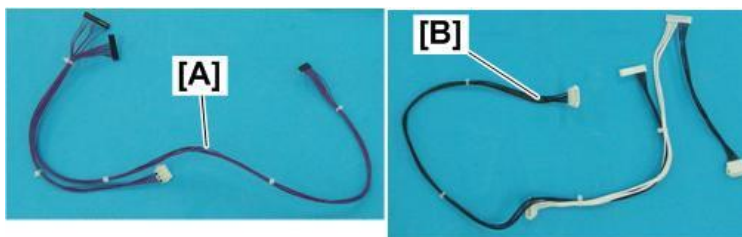
**Note**

- Tighten the fan assembly [B] and control board [A] together (blue circles).



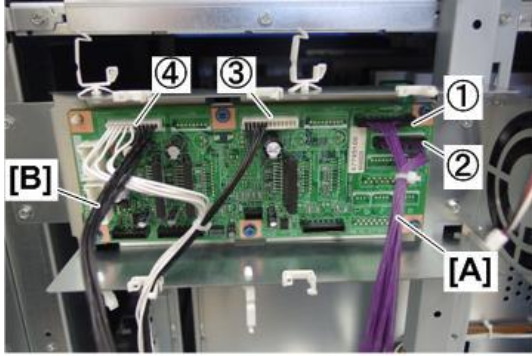
d194d9122

**10.** Connect the drawer connector harness [A] and motor harness [B] to the control board (⚙️ x4).



d194d9124

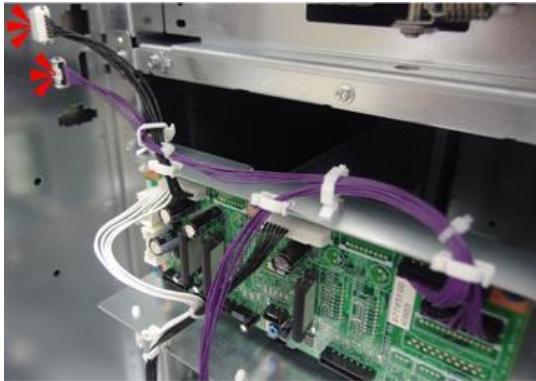
## 2. Installation



d194d9126

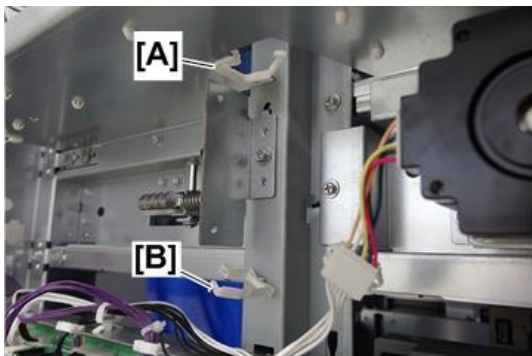
①	CN208	③	CN210
②	CN207	④	CN205

- 11.** Route the drawer connector harness and motor harness as shown below, and then insert the connectors into the relay connectors in the frame.



d194d9127

- 12.** Attach the edge saddles [A] [B] provided with this option to the following locations.



d194d9128

- 13.** Route the drawer connector harness and motor harness as shown below. Then connect the connectors to the drawer connector and motor (🔌 x2, 🌀 x3).

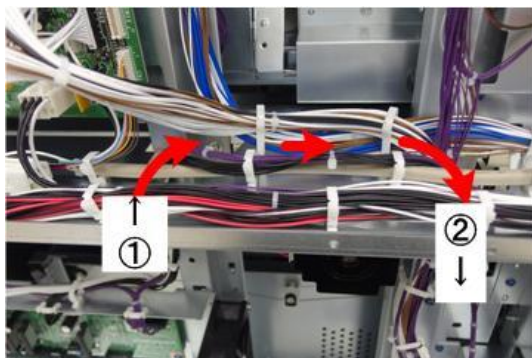


### Control Board



d194d9129a

### Upper Side



d194d9129b

### Exit Motor Unit



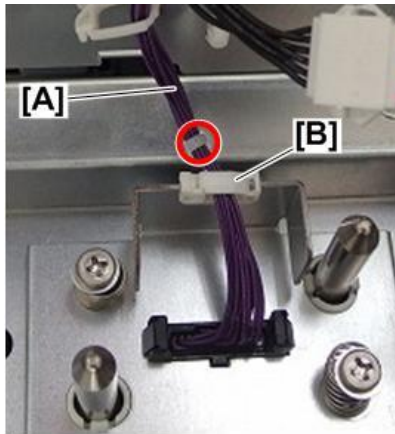
d194d9129c

#### Note

- Route the harness [A] so that the band shown in the red circle is located above the edge

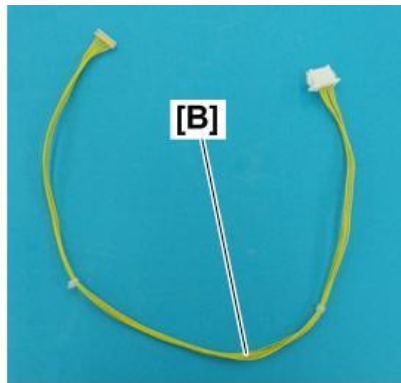
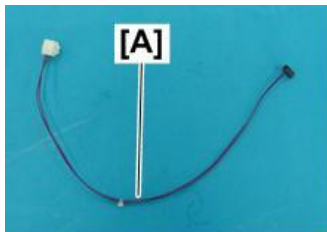
2.Installation

saddle [B].



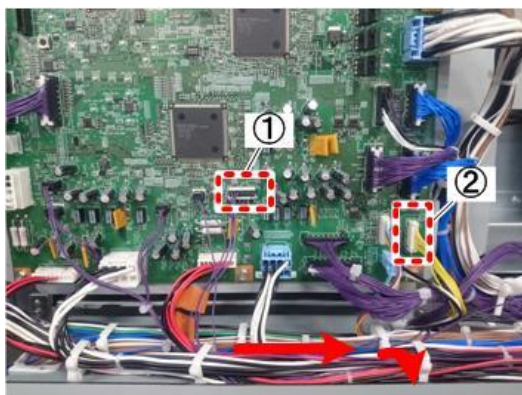
d194d9129d

- 14.** Connect the cooling fan harness [A] and communication harness [B] to the main board of the vacuum feed LCIT.
- 15.** Route the cooling fan harness and communication harness as shown below. Then connect the connector of the cooling fan harness to the cooling fan, and insert the connector of the communication harness into the relay connector in the frame. (📦 ×1)



d194d9131

**Main Board of the Vacuum Feed LCIT**

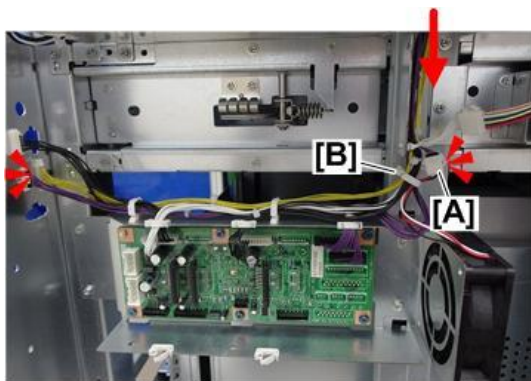


📦 x2

m0b2d8219

①	CN37
②	CN13

**Control Board**

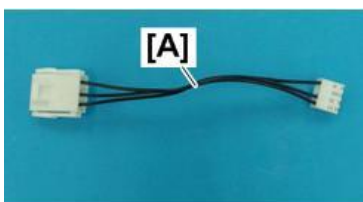


d194d9130b

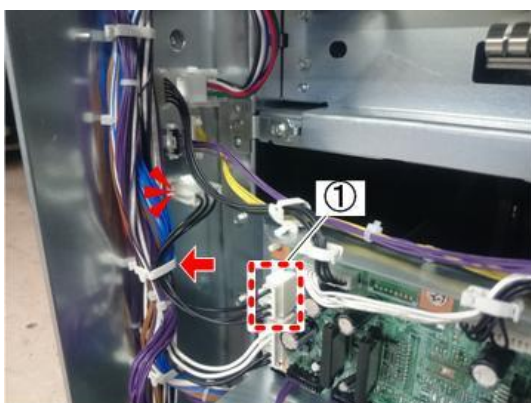
**Note**

- Route the cooling fan harness so that the connector [A] is located above the clamp [B].

**16.** Connect the interlock switch harness [A] to the control board, and then route the other end to the clamp and the hole in the frame. (🔌 ×1)



d194d9132



🔌 x1 🧰 x1

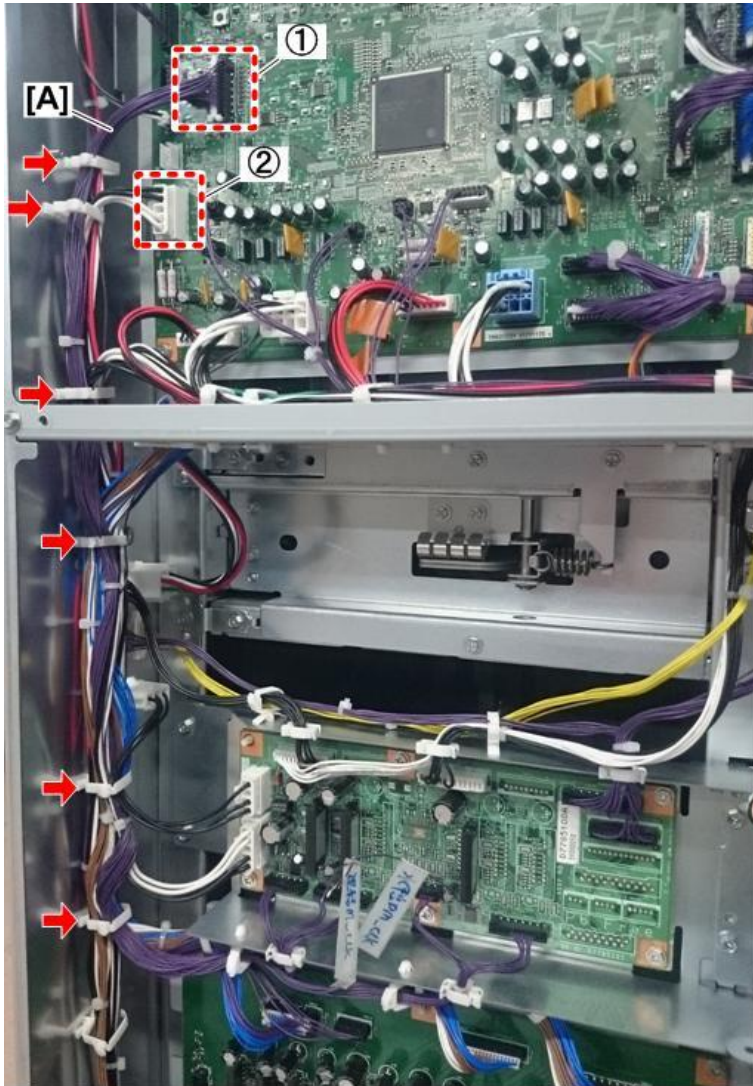
m0b2d8220

①	CN216
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**17.** Connect the interface harness [A] to the main board of the vacuum feed LCIT, and then route the harness as shown below through the clamps.


①	CN29
②	CN30

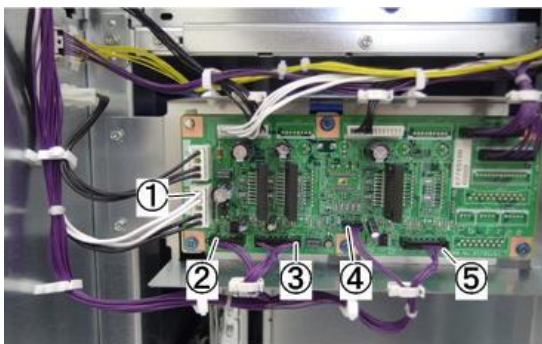
2. Installation



 x2  x6

m0b2d8221

**18.** Connect the interface harnesses to the control board ( x5).



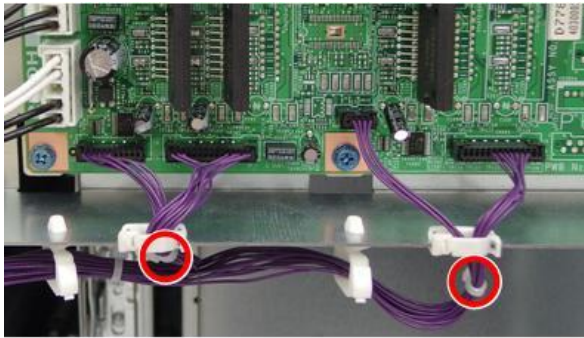
d194d9135

①	CN245	④	CN217
②	CN201	⑤	CN203
③	CN202	-	-

**Note**

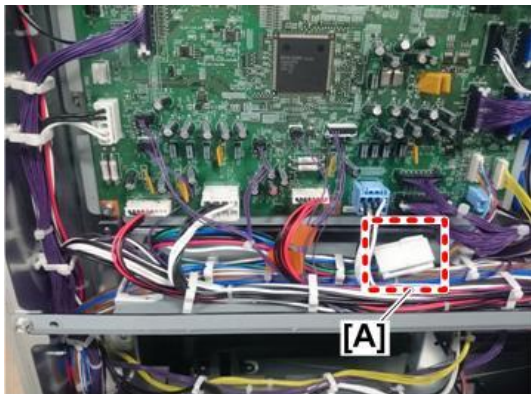
- Route the interface harnesses so that the bands of the harness are located below the

edge saddles.



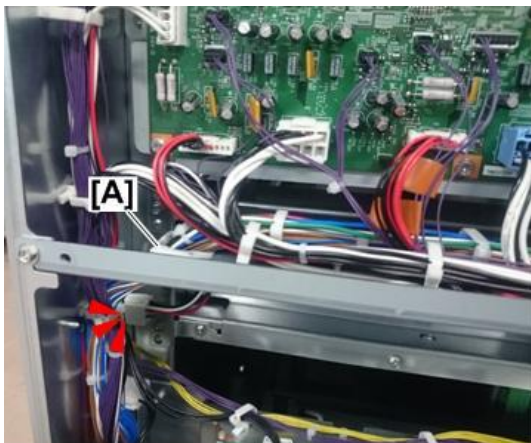
d194d9123

**19.** Take out the harness [A].



m0b2d8222

**20.** Insert the connector into the hole in the frame through the clamp [A].



m0b2d8223

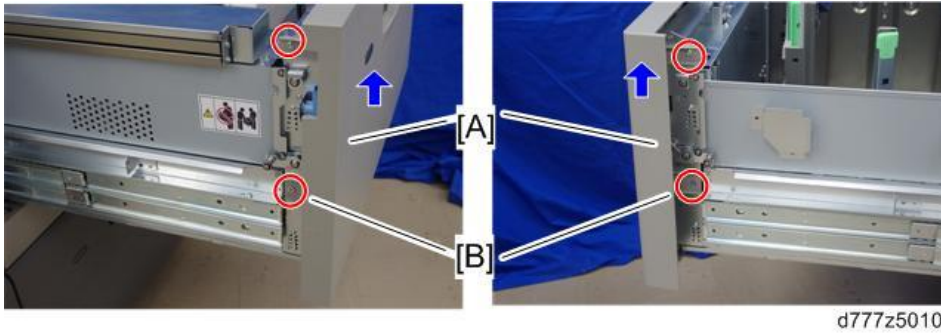
**21.** Lift the tray 1 front cover [A] and remove it (🔑x4).

Screws [B]: shoulder screws

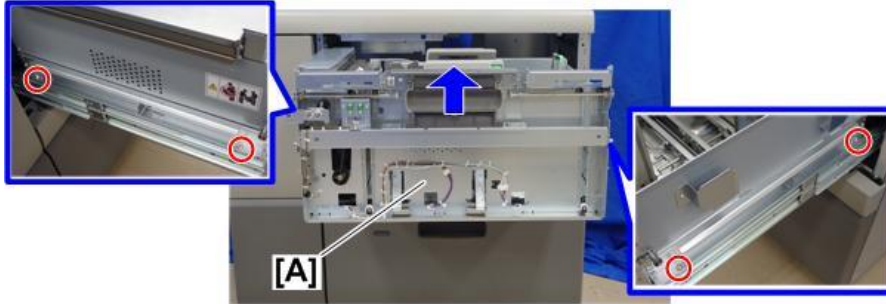
**Note**

- Remove the tray 1 front cover beforehand so that it does not hit the floor when putting paper tray 1 on the floor.

## 2. Installation



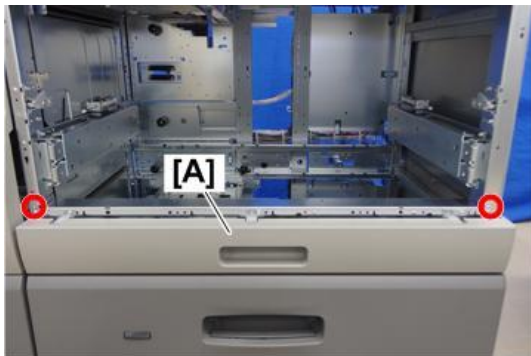
**22.** Remove paper tray 1 [A] from the vacuum feed LCIT (⚙️ x4).



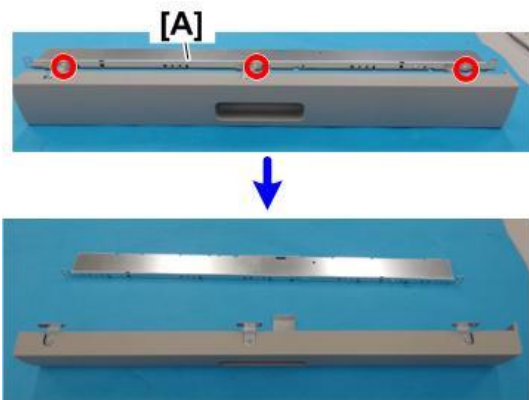
### ★ Important

- Two or more customer engineers are required to lift the paper feed unit off the rails because the paper feed unit is extremely heavy (approx. 30kg (66.1 lb.)). Work carefully when lifting or moving it.

**23.** Remove the horizontal transport front cover [A] from the vacuum feed LCIT (⚙️ x2).

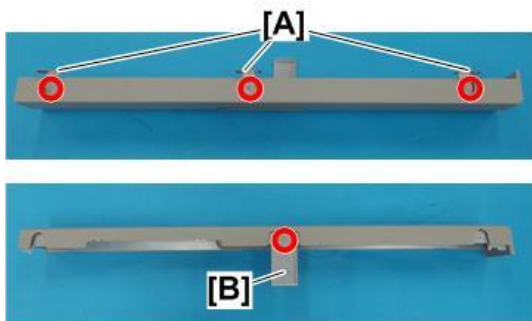


**24.** Remove the stay [A] from the horizontal transport front cover (⚙️ x3).



d194d9139

**25.** Remove the brackets [A] [B] from the horizontal transport front cover (⚙️ x4).



d194d9140a



d194d9140b

**26.** Attach the horizontal transport front cover to the horizontal transport unit (⚙️ x5).

**Note**

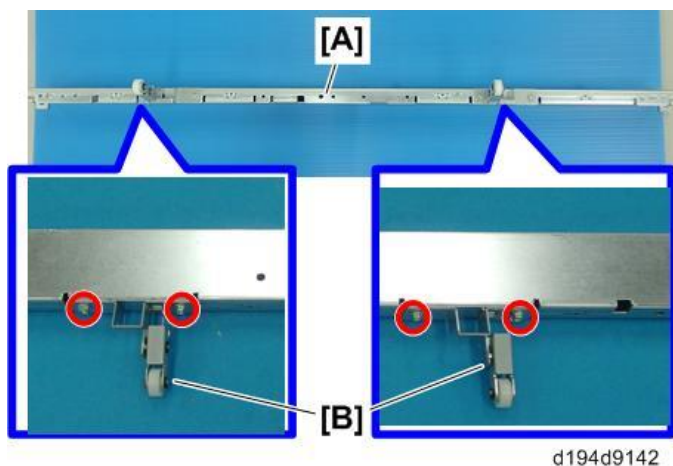
- Do not remove fixing tapes when turning over the horizontal transport unit to attach the screws to the back side.



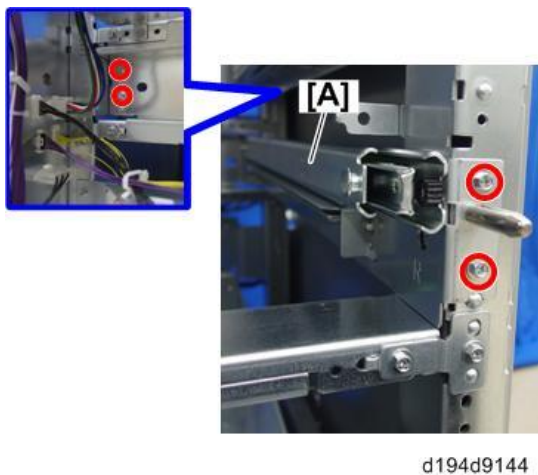
d194d9141

## 2. Installation

**27.** Attach the detents [B] to the stay [A] removed in Step 24 (🔩x4: M4x8).

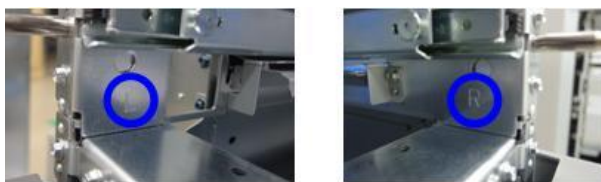


**28.** Attach the right slide rail [A] provided with this option to the vacuum feed LCIT (🔩x4: M4x8).



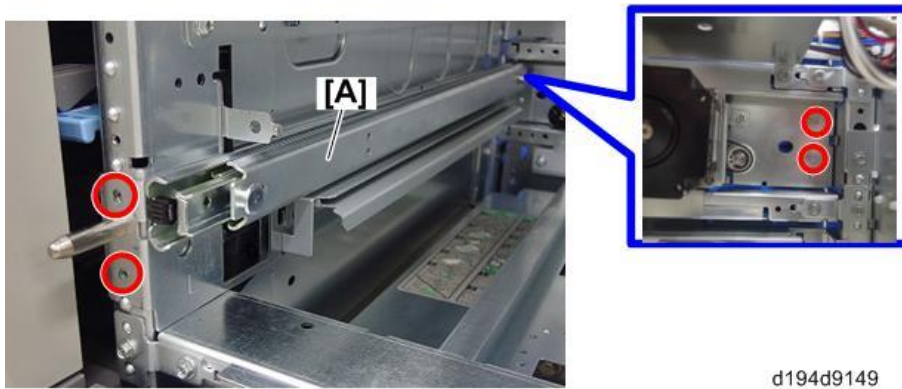
### Note

- “L” is engraved on the left slide rail.
- “R” is engraved on the right slide rail.



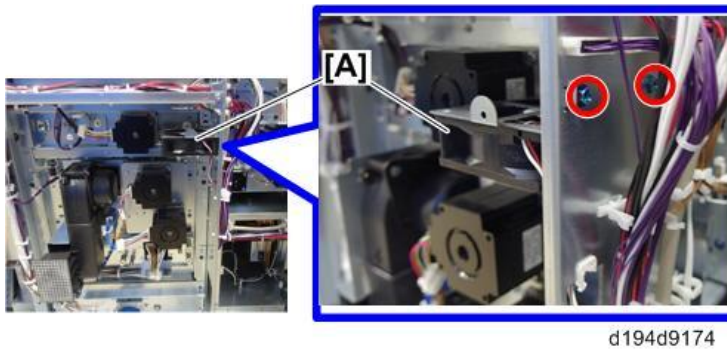


**29.** Attach the left slide rail [A] provided with this option to the vacuum feed LCIT (⚙️ x4: M4x8).



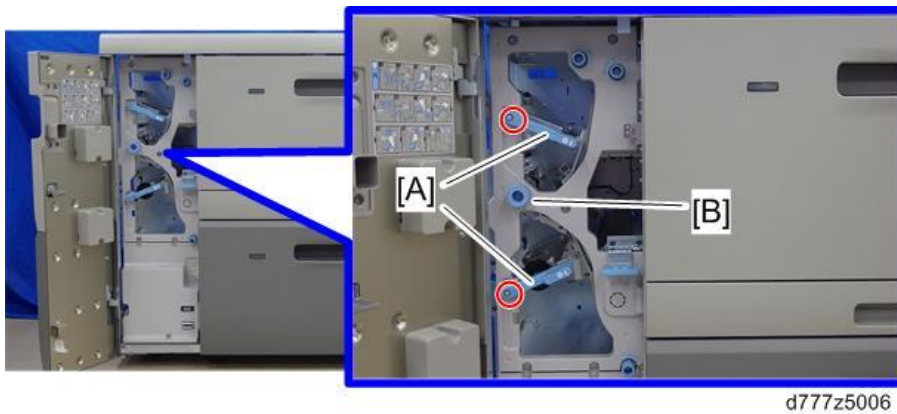
**Note**

- Attach the rear screws after removing the fan bracket [A].



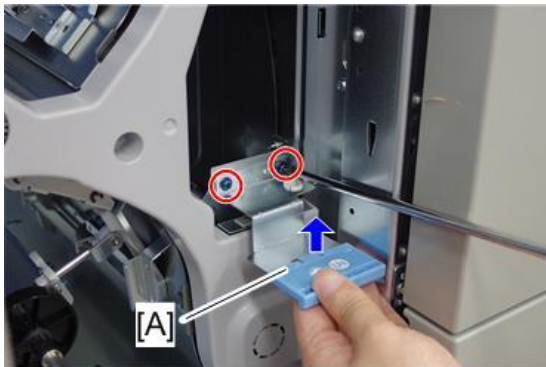
**30.** Remove the upper inner cover from the vacuum feed LCIT.

1. Open the front door.
2. Remove two levers [A] (⚙️ x1 each)
3. Remove the knob [B] (⚙️ x1)



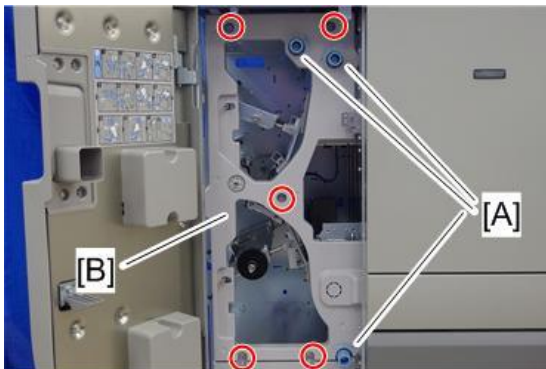
## 2. Installation

4. Raise the U9 jam removal plate and remove the handle [A] (🔩 x2).



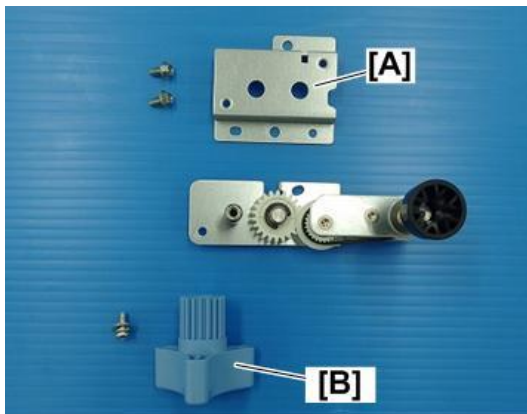
d777z5007

5. Remove three knobs [A] (🔩 x1 each)
6. Remove the upper inner cover [B] (🔩 x5)



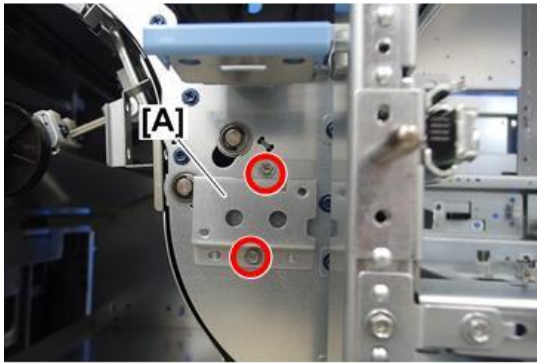
d777z5008

- 31.** Remove the bracket [A] and knob [B] from the jam removal lever provided with this option (🔩 x3).



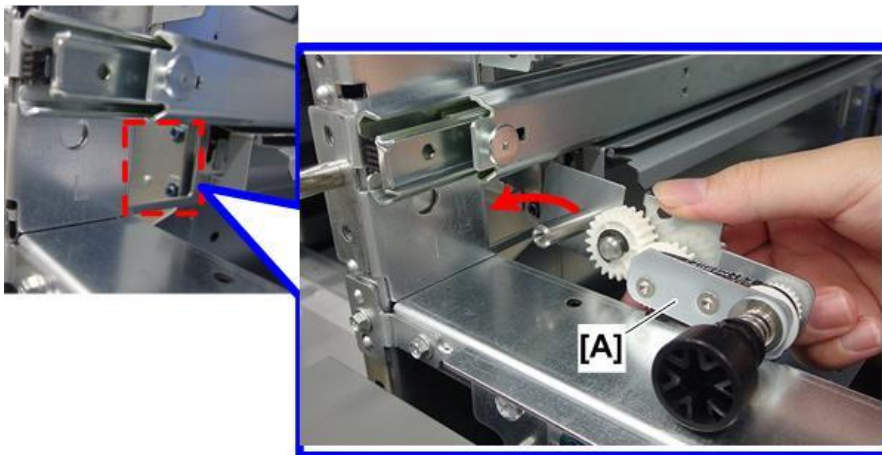
d194d9147

**32.** Attach the bracket [A] removed in Step 34 to the vacuum feed LCIT (🔩 x2).

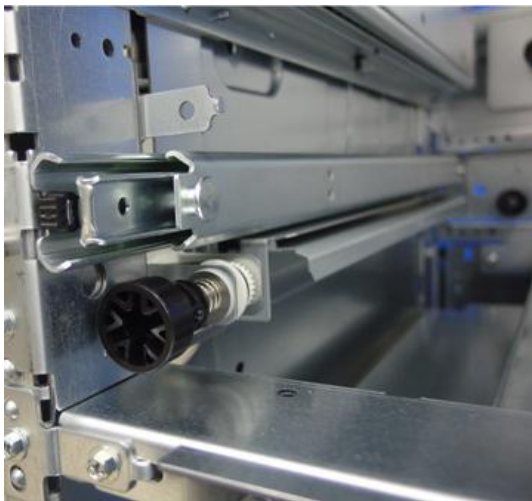


d194d9175

**33.** Set the jam removal lever [A] through the hole in the slide rail as shown below.



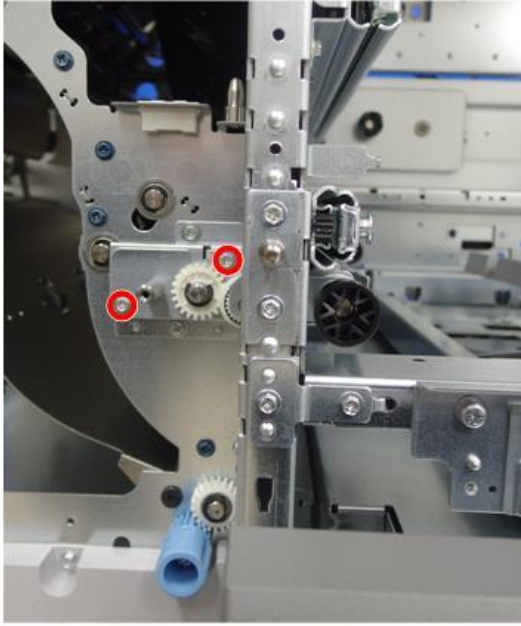
d194d9148a



d194d9148b

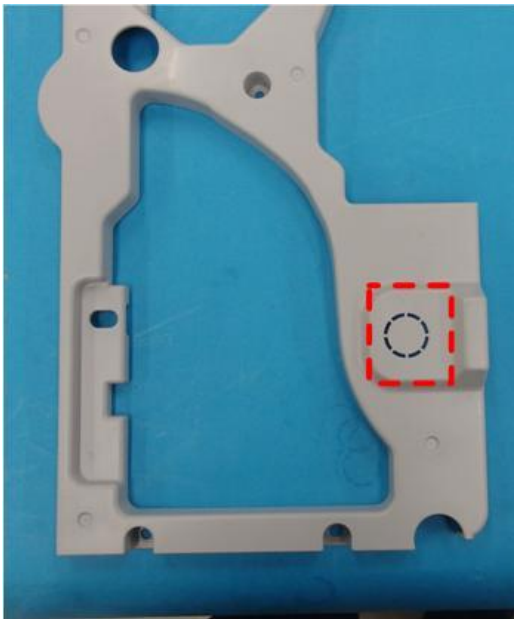
## 2. Installation

- 34.** Fix the jam removal lever to the bracket (🔩 x2).



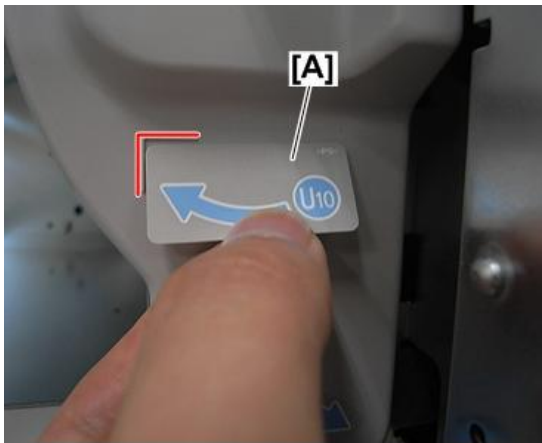
d194d9150

- 35.** Cut out the plastic knockouts for the jam removal lever from the upper inner cover.



d194d9151

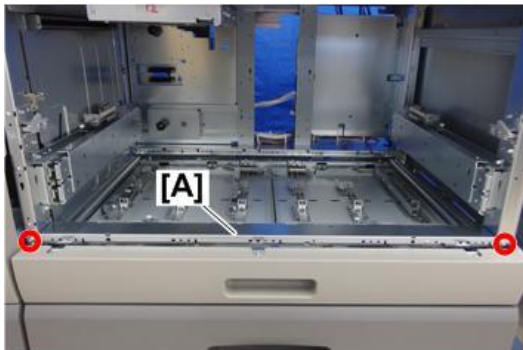
**36.** Paste the decal – U10 knob [A] below the place where you removed the cutout.



d194d9171

**37.** Re-attach the upper inner cover.

**38.** Attach the stay [A], which the detents were attached to in Step 27, to the vacuum feed LCIT (⊕ x2).



d194d9152

**39.** Set the horizontal transport unit on the slide rails.

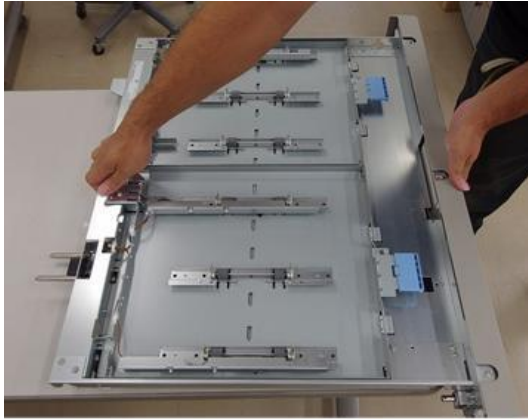


d194d9153

## 2. Installation

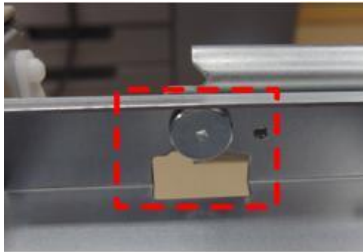
### Note

- When holding the horizontal transport unit, hold its rear center and front center.



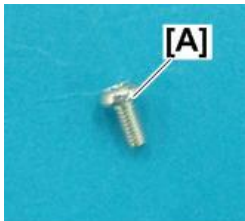
d194d9178

- Hang the tabs at the four corners of the slide rail into the cutouts in the horizontal transport unit.

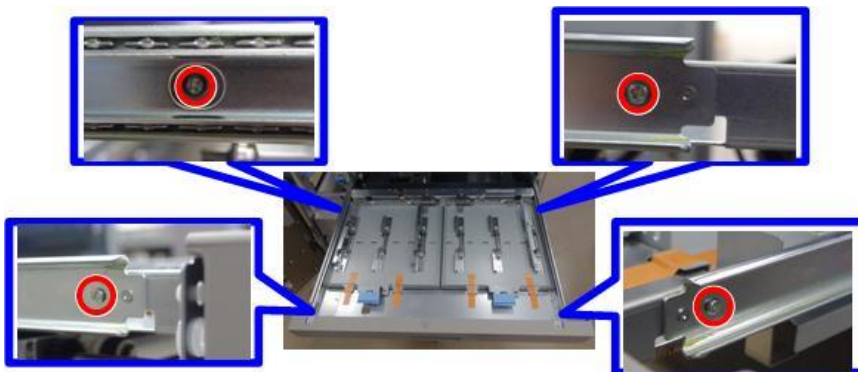


d194d9154

**40.** Attach four screws [A] provided with this option (x4: M3x6).



d194d9155



d194d9156

**41.** Push in the horizontal transport unit.

**42.** Re-attach the covers.

## Connecting to Downstream Vacuum Feed LCIT

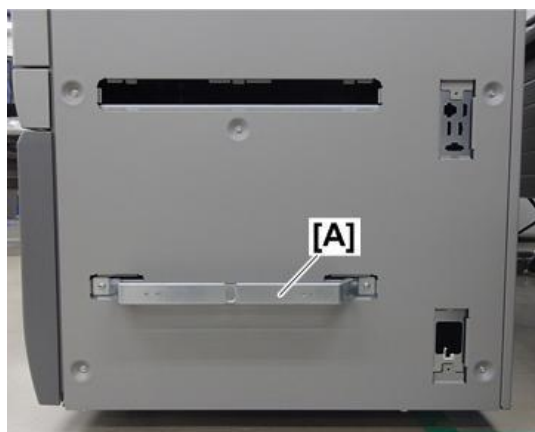
1. Attach the two joint brackets [A] provided with this option to the right side of the downstream vacuum feed LCIT (🔩 x 2 each: M5x10).

### Upper side



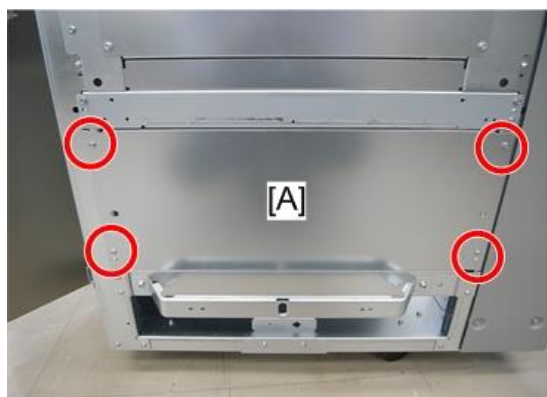
d194d9157a

### Lower side



d194d9157b

2. Remove the plate [A] from the right side of the bridge unit (🔩 x4).

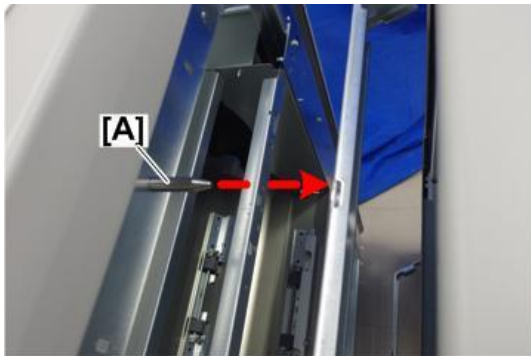


d778z0007

3. Dock the downstream vacuum feed LCIT.  
To do this, insert the upper joint pin [A] and lower joint pin [B] on the left side of the bridge unit into the holes in the joint brackets on the downstream vacuum feed LCIT.

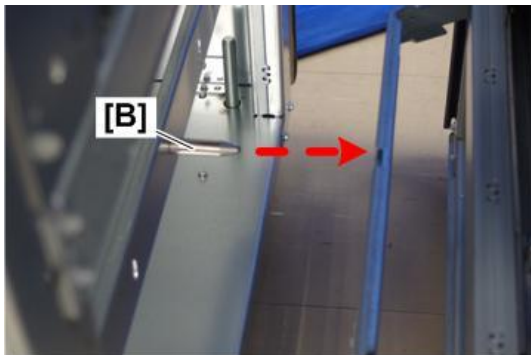
## 2. Installation

### Upper Side



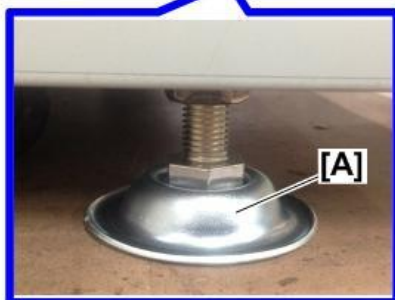
d194d9159a

### Lower Side



d194d9159b

- 4.** Attach the holders [A] and then adjust the height so that the tops of the units are at the same level (Four locations: front left, front right, rear left, rear right).



d194d9176



- 5.** Fix the upper joint bracket to the bridge unit (🔩x2: M5x10).



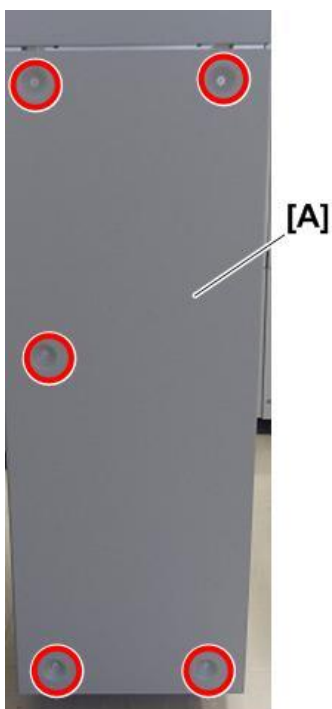
d778z0006

- 6.** Fix the lower joint bracket to the bridge unit (🔩x2: M5x10).



d778z0008

- 7.** Remove the rear cover [A] from the bridge unit (🔩x5).



d194d9177

- 8.** Connect the harness of the rear side of the bridge unit to the downstream vacuum feed LCIT (🔌)

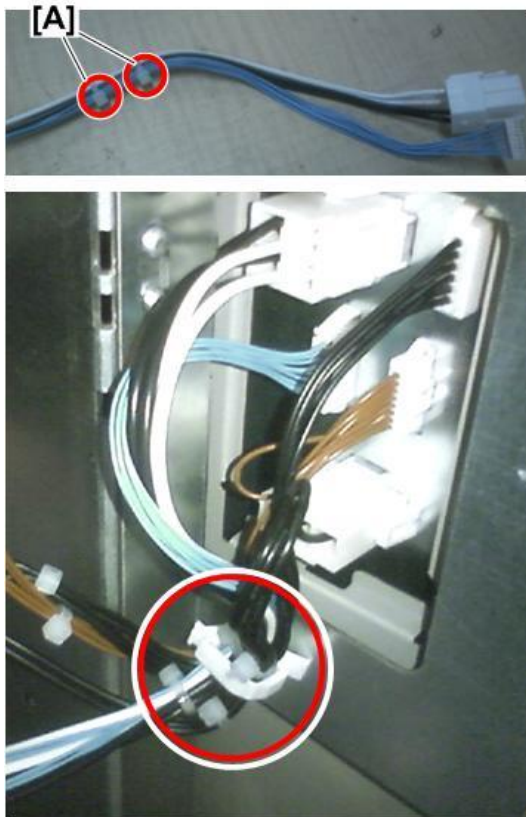
## 2. Installation

x5).



### Note

- Route the harnesses so that the clamp is located between the bands [A].



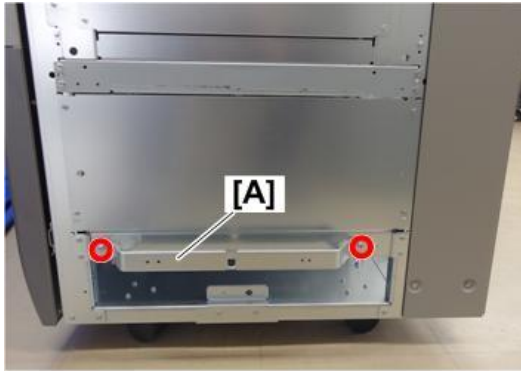
**9.** Re-attach the removed covers.

### Connecting to Upstream Vacuum Feed LCIT

---

**1.** Attach the joint bracket [A] provided with the upstream vacuum feed LCIT to the right side of the

bridge unit. (🔑 x2).

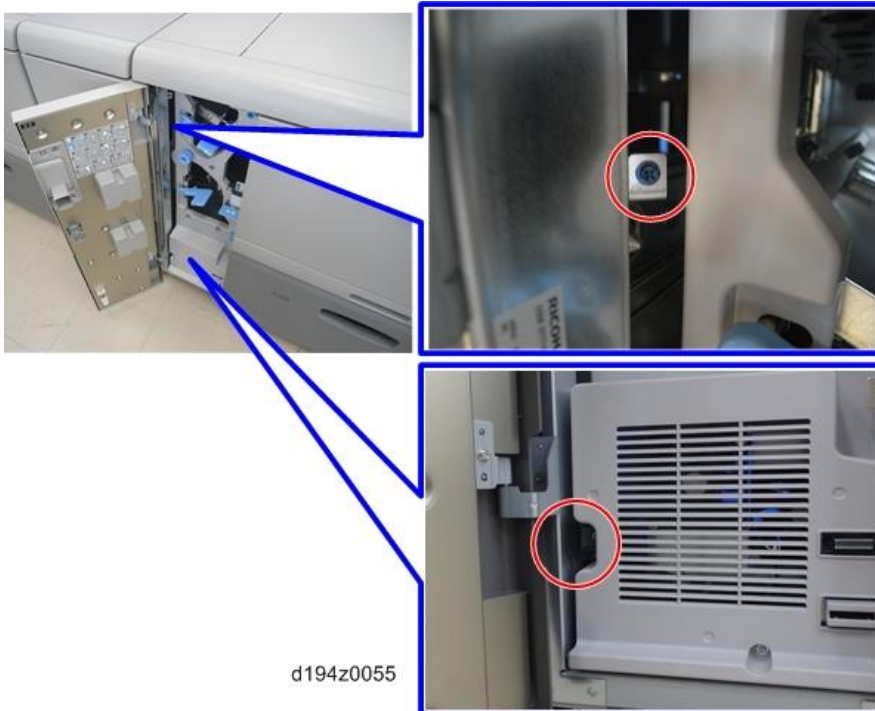


d194d9163

**2.** Dock the upstream vacuum feed LCIT.

To do this, insert the joint pin on the left side of the upstream vacuum feed LCIT into the hole in the joint bracket on the bridge unit.

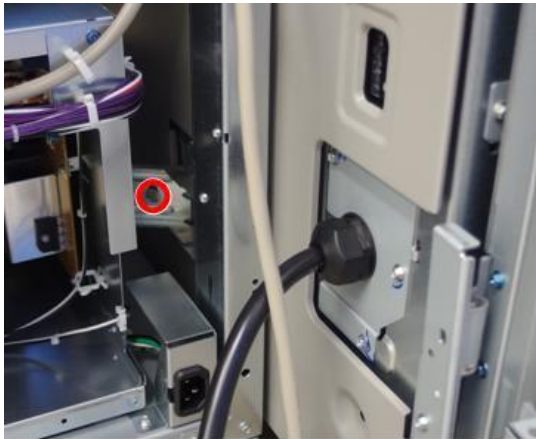
**3.** Open the front door of the upstream vacuum feed LCIT, and then fix the lock stay and joint bracket (🔑 x1 each).



d194z0055

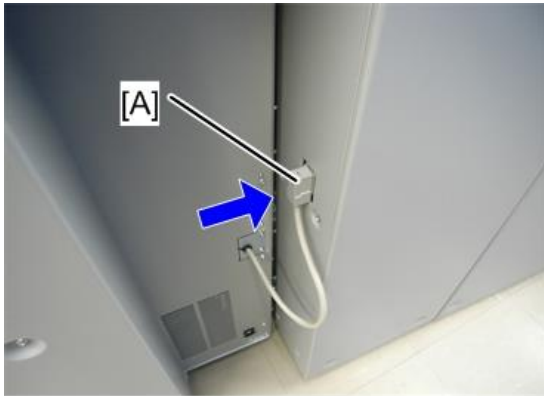
## 2. Installation

- 4.** Remove the rear cover of the upstream vacuum feed LCIT, and then fix the joint bracket (🔩 x1).



d194d9113

- 5.** Re-attach the rear cover of the upstream vacuum feed LCIT, and then connect the I/F cable [A] to the bridge unit (🔌 x1).



d778z0037

- 6.** When attaching the decals for paper feed trays [5 to 8] (provided with this option) to the upstream vacuum feed LCIT, attach them along the edge of the LED of the paper feed tray.

**Note**

- Upper paper feed tray: lower number
- T3,T4 is used with this machine

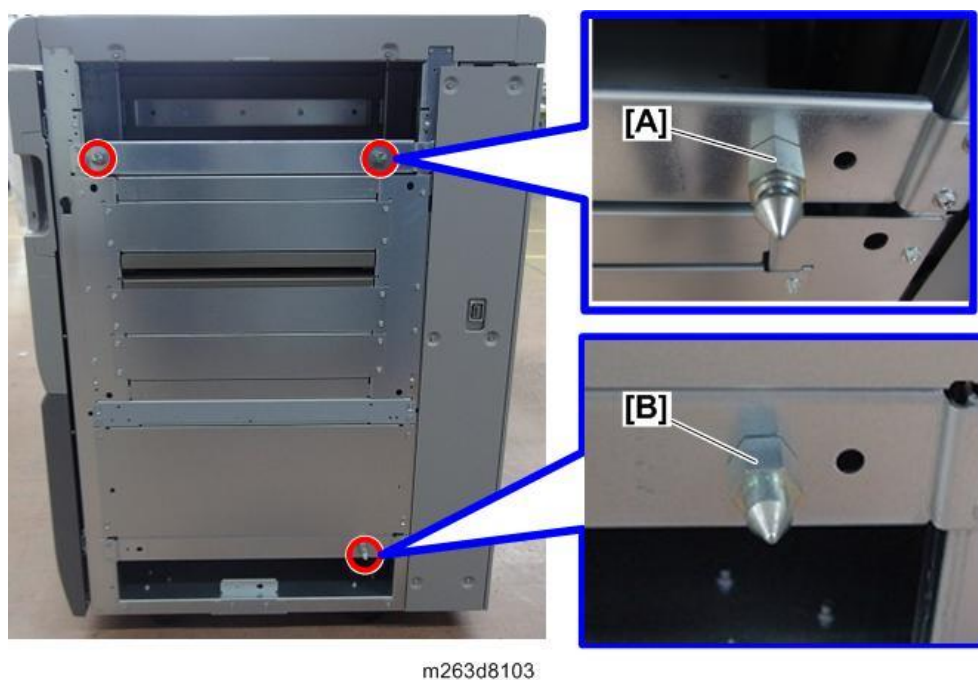


d194d9166

### Connecting to Upstream A3 LCT

1. On the right side of the bridge unit, attach joint pin [A] (x2 grooved) and joint pin [B] (x1 smooth).

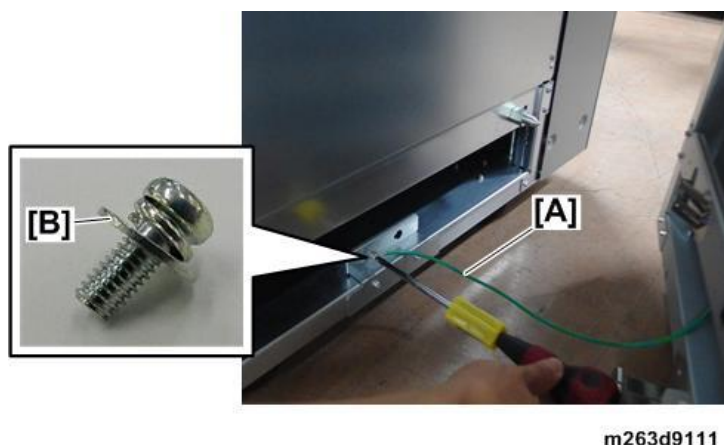
These joint pins are provided with the A3 LCT RT5110.



2. Push the upstream A3 LCT close to the side of the Bridge Unit.
3. Fasten the ground wire [A] from the A3 LCT to the Bridge Unit with the screw [B] provided with the A3 LCT (↗x1).

**★ Important**

- To avoid damage to this ground wire, before you separate these units, you must always remember to separate them slightly and then disconnect this ground wire before you separate the units completely.



4. Open the front door of the upstream A3 LCT, and then remove the lock screw (↗x1).

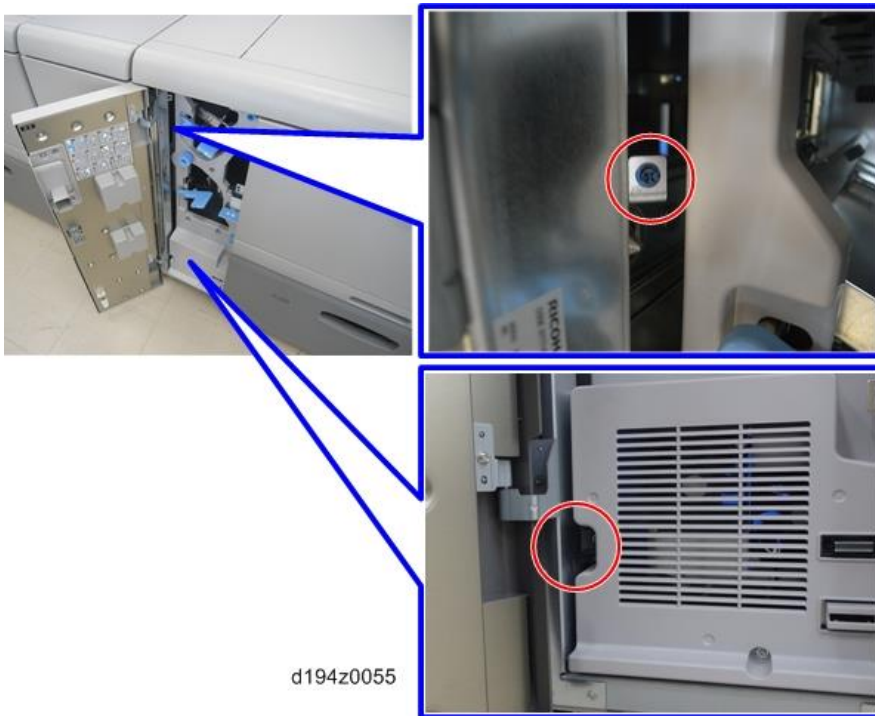
## 2. Installation

5. Release the lock bar [B] so that it slides freely from side to side.



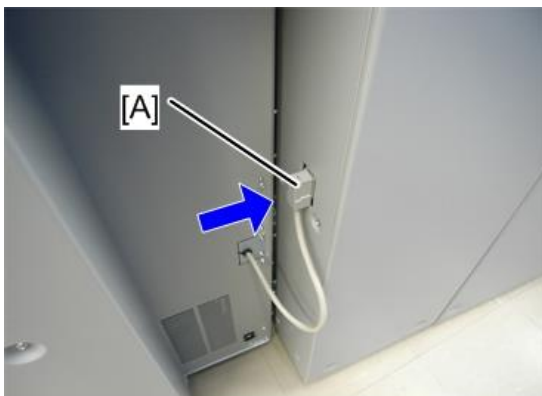
d7320008

6. Slowly, push the upstream A3 LCT against the side of the Bridge Unit.
7. With the front door of the A3 LCT open, fasten the lock bar above and the connection bracket below (⚙️x1, 🔑x1)



d194z0055

8. Connect the I/F cable [A] of the upstream A3 LCT to the Bridge Unit.



d778z0037

## Vacuum Feed Banner Sheet Tray Type S9 (D3EW)

### Note

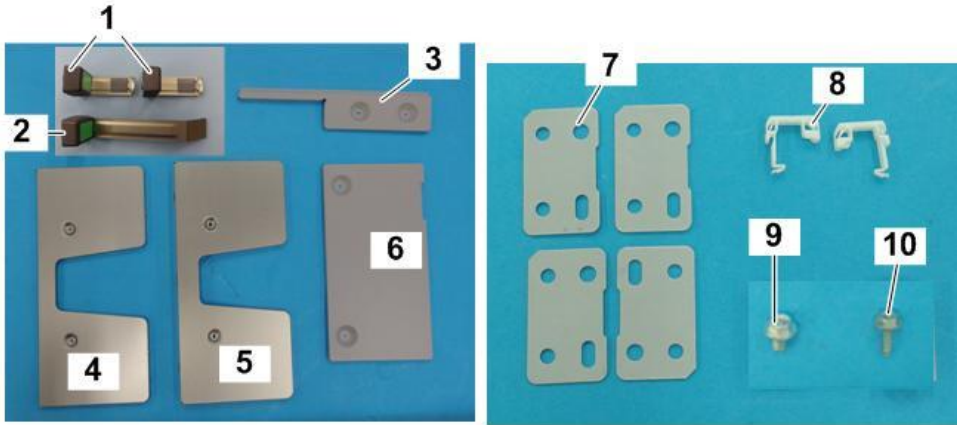
- Type S9 is an option for copier models (Pro 8320S/8310S/8300S).
- The vacuum feed banner sheet tray type S9 is connected to the vacuum feed LCIT.
- When two or more vacuum feed LCITs are connected, vacuum feed banner sheet tray type S9 can be connected only to the most upstream vacuum feed LCIT.
- When installing this option and Multi Bypass Tray BY5020 (D3EV) at the same time, install this option first.
- To facilitate banner paper supply, the top cover of the vacuum feed LCIT can open. When one vacuum feed LCIT is docked and the three options (the vacuum feed banner sheet tray type S9, the multi bypass tray (BY5020), and the multi bypass banner sheet tray) are installed, although the top cover contacts the multi bypass banner sheet tray, you can open the top cover and supply banner paper.

### Accessories

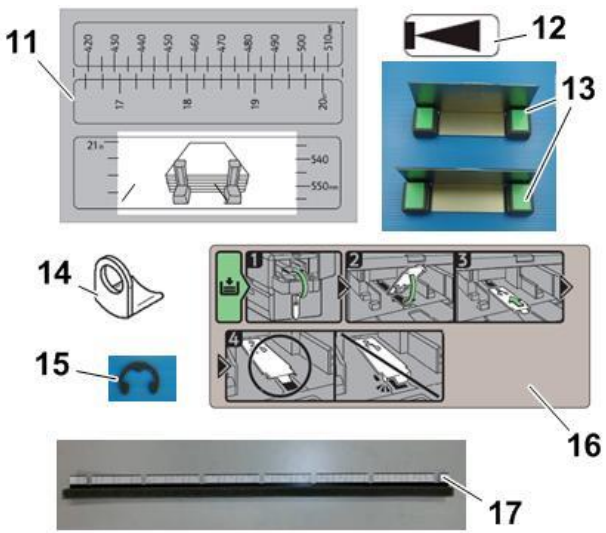
No.	Description	Q'ty
1	End Fence (Short)	2
2	End Fence (Long)	1
3	Front Cover	1
4	Upper Bottom Plate	1
5	Lower Bottom Plate	1
6	Rear Cover	1
7	Stopper Plate	4
8	Edge Saddle	2
9	Tapping Screw – M4×8	6
10	Tapping Screw – M3×10	2
11	Decal Sheet: Scale	1
12	Decal: Position Indicator	2
13	Side Fence	2
14	Wire Cover	4
15	E-ring	4
16	Decal Sheet: Raised Bottom Plate Set	1
17	Sponge Strip	1
18	Upper Cover	1
19	Securing Cover (Front)	1
20	Securing Cover (Rear)	1
21	Tray Cover (Front)	1
22	Tray Cover (Rear)	1

## 2. Installation

No.	Description	Q'ty
23	Raised Bottom Plate <b>(Not used with this machine)</b>	1
24	Shouldered Screw <b>(Not used with this machine)</b>	1
-	Tapping Screw – M4×12	7
-	Tapping Screw – M4×8	2

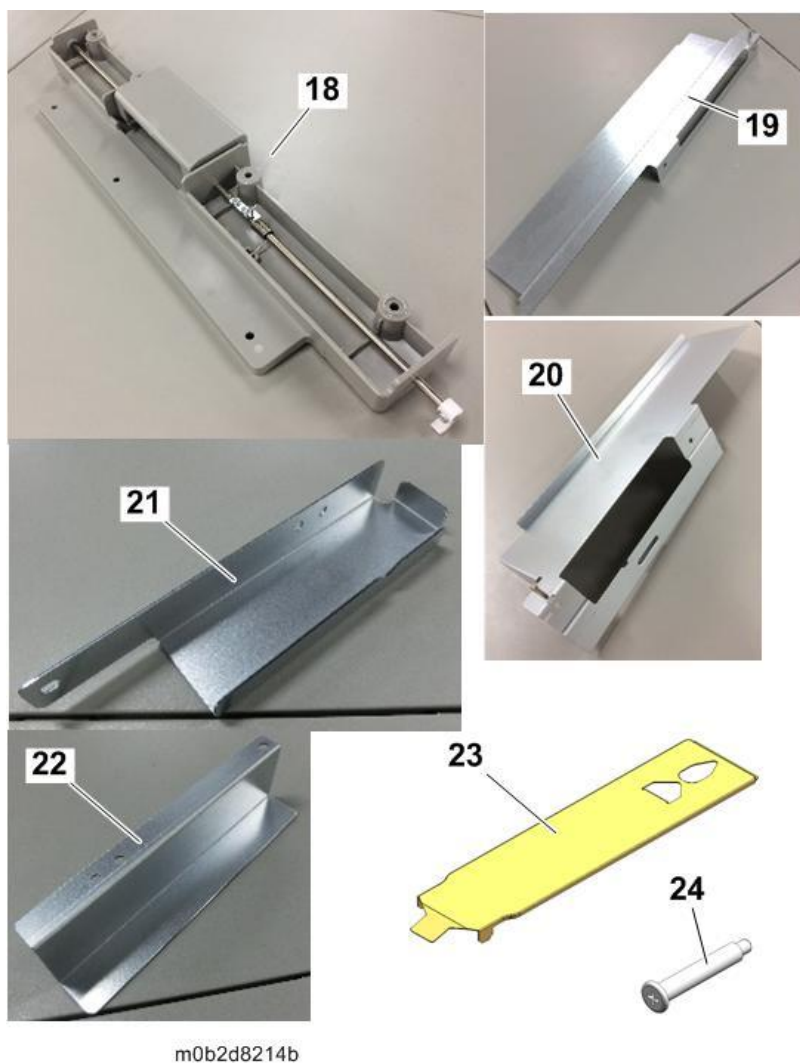


m0b2d8215



m0b2d8216b






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## Installation

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### Vacuum Feed Banner Sheet Tray

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#### **⚠ CAUTION**

- Make sure that the main power switch and AC power switch of the main machine are turned OFF and that its power cord is disconnected before doing the following procedure. Doing the following procedure in an energized state constitutes an electric shock hazard and could cause a malfunction.

- 1.** Remove all visible external tapes on the external surfaces of the vacuum feed banner sheet tray type S9.
- 2.** Lift the right top cover [A] of the vacuum feed LCIT and remove it. (🔩×4)

#### **↓ Note**

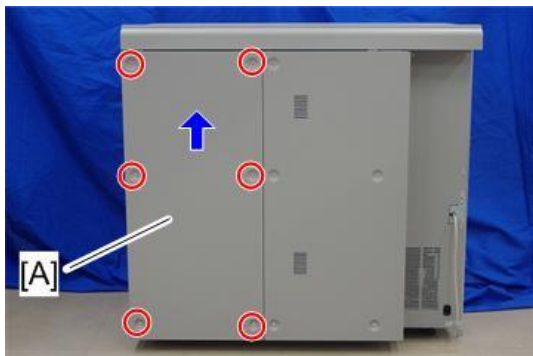
- Removed screws are used when attaching the front cover and rear cover provided with this option.

## 2. Installation



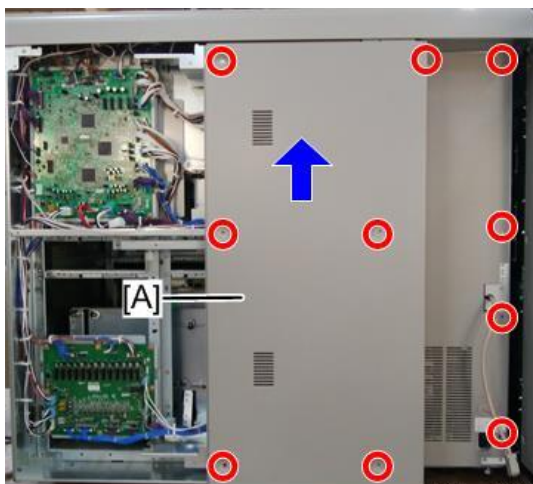
d777z0040

- 3.** Lift the rear right cover [A] of the vacuum feed LCIT and remove it. (🔩×6)



d777z5004

- 4.** Lift the rear left cover [A] of the vacuum feed LCIT and remove it. (🔩×10)

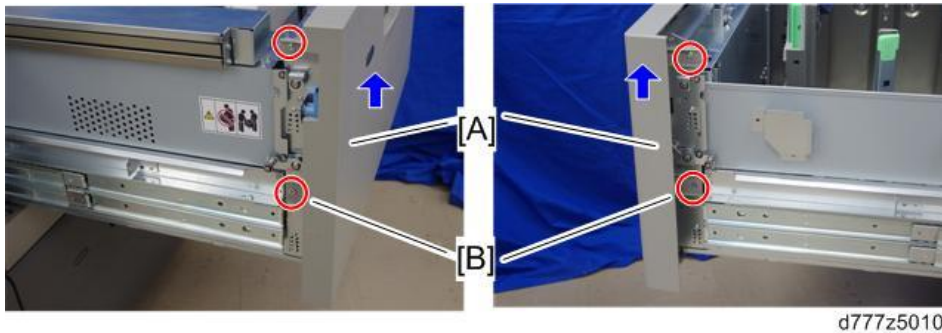


d0bxa2300

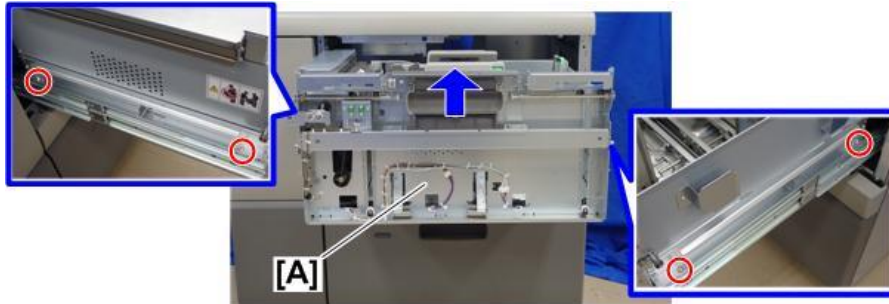
- 5.** Pull paper tray 1 from the vacuum feed LCIT.
- 6.** Lift the tray 1 front cover [A] and remove it. (🔩×4)
- Screws [B]: shoulder screws

### Note

- Remove the tray 1 front cover beforehand so that it does not hit the floor when putting paper tray 1 on the floor.



**7.** Remove paper tray 1 [A] (Ⓜ ×4)



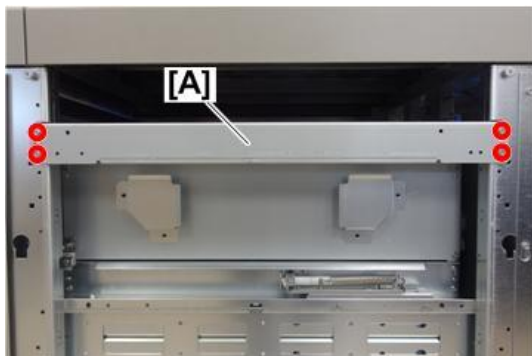
**★ Important**

- Two or more customer engineers are required to lift paper tray 1 off the rails because it is extremely heavy. Work carefully when lifting and moving it.

**8.** Remove the stay [A] on the right side of the vacuum feed LCIT. (Ⓜ ×4)

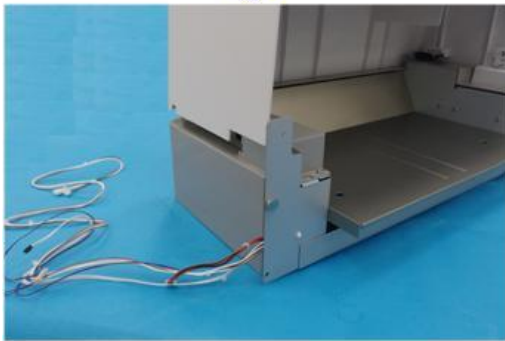
**↓ Note**

- After removing the stay, keep it in storage in case the vacuum feed banner sheet tray is removed at some point in the future.



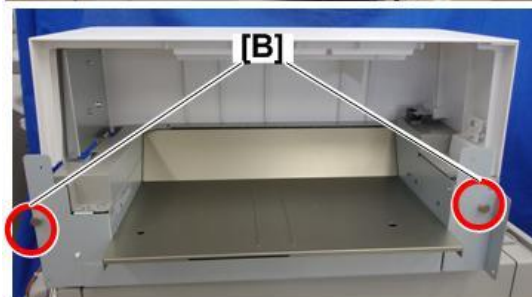
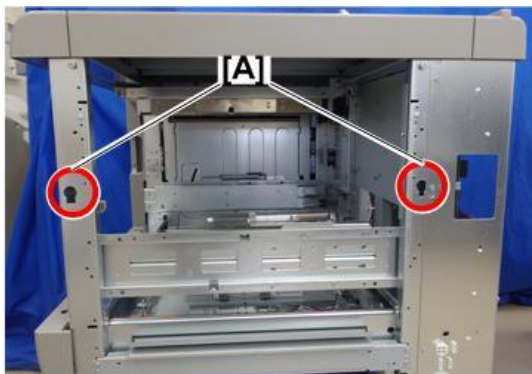
## 2. Installation

- 9.** Pull the harness of the vacuum feed banner sheet tray to the outside of the tray.



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- 10.** Mount the shoulder screws [B] on the front and rear of the vacuum feed banner sheet tray into the holes [A] that receive the shoulder screws on the vacuum feed LCIT.



d194d9506



d194d9507

**11.** Fix the vacuum feed banner sheet tray with the screws provided with this option.

Near side: (🔩×3: M4×8)



d777z0006

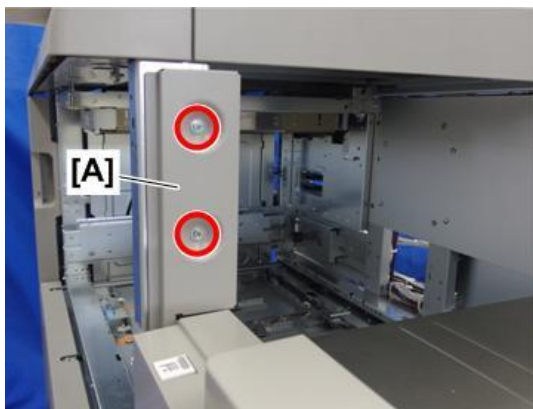
Far side: (🔩×2: M4×8)



d777z0007

## 2. Installation

**12.** Attach the front cover [A] provided with this option. (🔩×2)



d194d9508

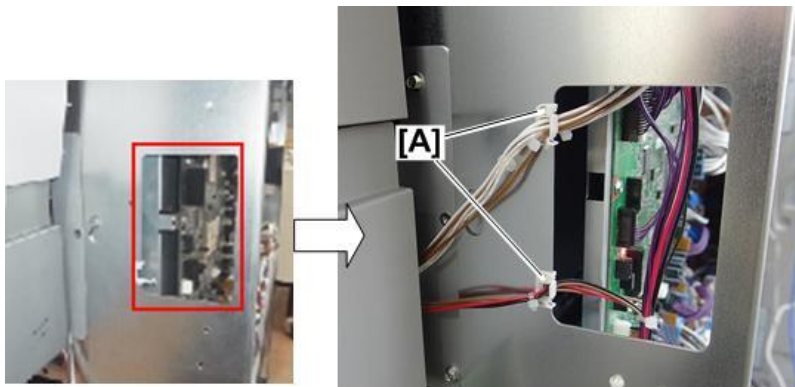
### Note

- Use the screws removed from the right top cover.

**13.** Attach the edge saddles [A] provided with this option, and pass the harnesses of the vacuum feed banner sheet tray through the rear side.

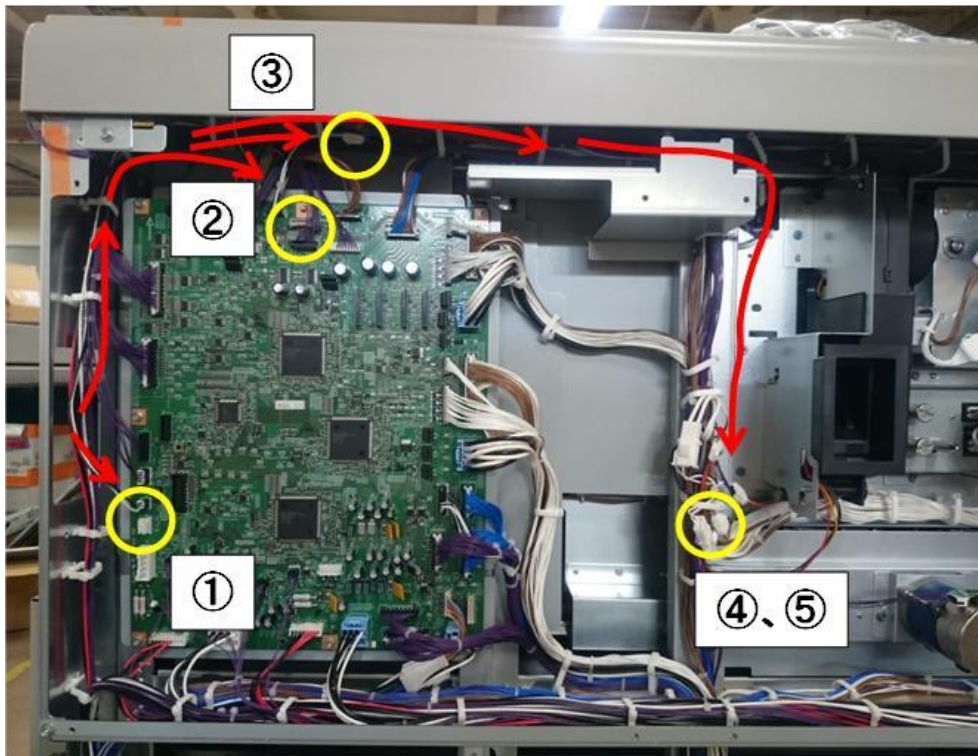
### Note

Pass the red/brown harnesses through the lower saddle, and the other harnesses through the upper saddle.



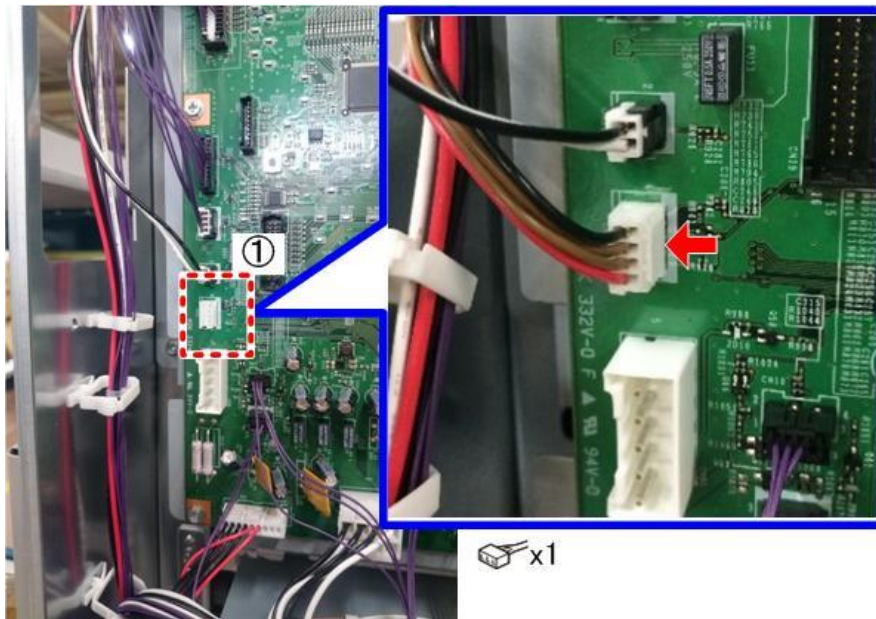
d194d9545a

**14.** Route the harnesses as shown below and connect them to the board of the vacuum feed LCIT as shown in the following steps.



m0b2d8285

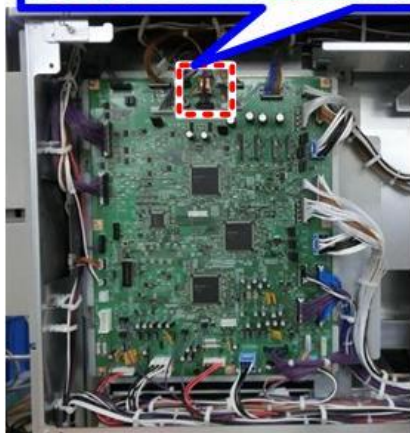
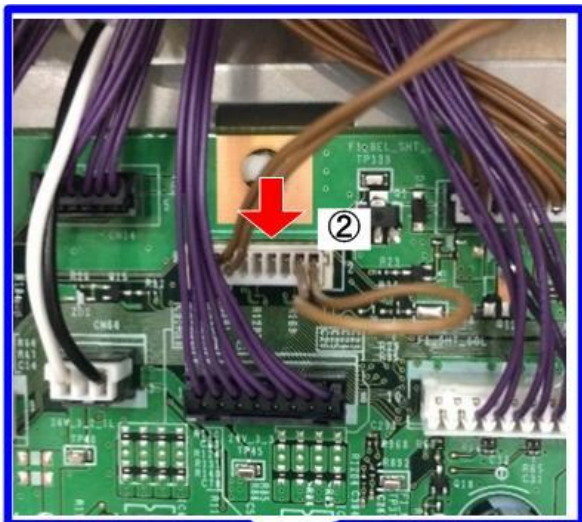
1. Connect the shortest harness to CN36 on the board.



m0b2d8286

2. Connect the harness that has a long slim connector to CN40 on the board.

## 2. Installation



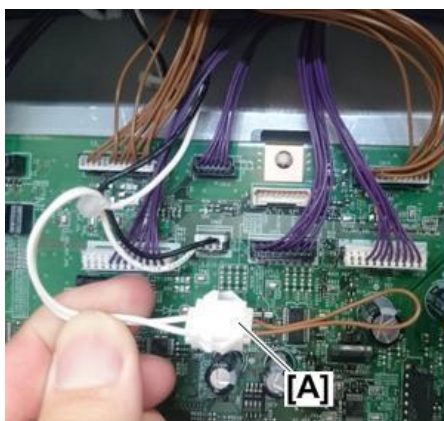
x1

m0b2d8287

3. Remove the routed connector [A] and connect it to the harness connector from the banner sheet tray.

Note

The routed connector removed here is not used any more in this procedure.

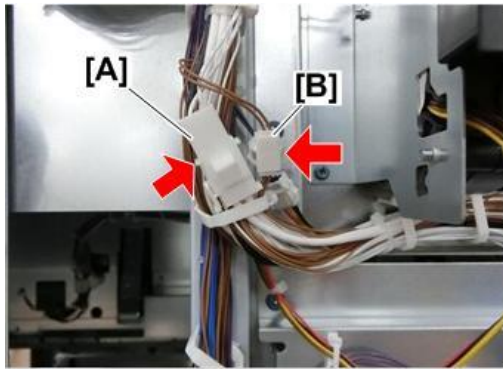


x1

m0b2d8288

4. Disconnect the connectors [A] [B].

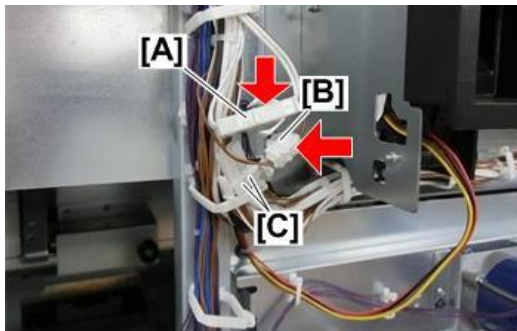




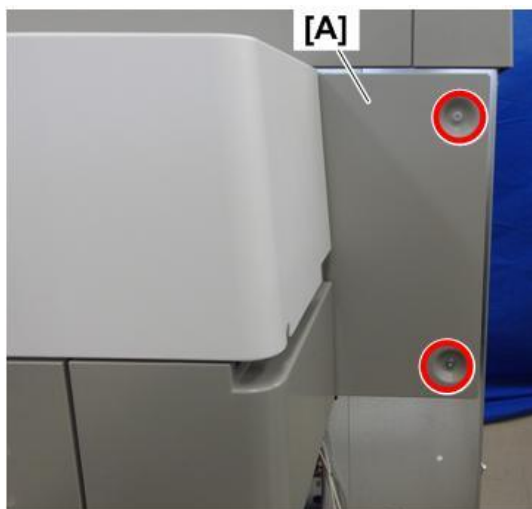
5. Connect the relay connectors, which were routed from above, to the connectors [A] [B] disconnected in the previous step.

**Note**

- With the clamps nearby, bundle up and secure the harnesses [C] disconnected in the previous step.



**15.** Attach the rear cover [A] provided with this option. (⚙️ x2)

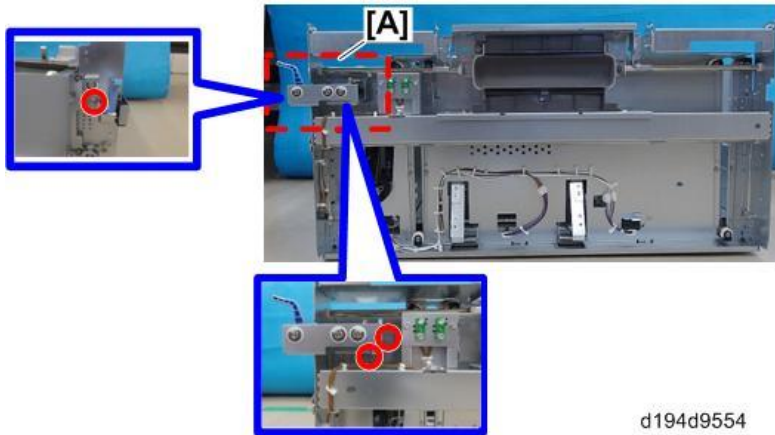


**Note**

- Use the screws removed from the right top cover.

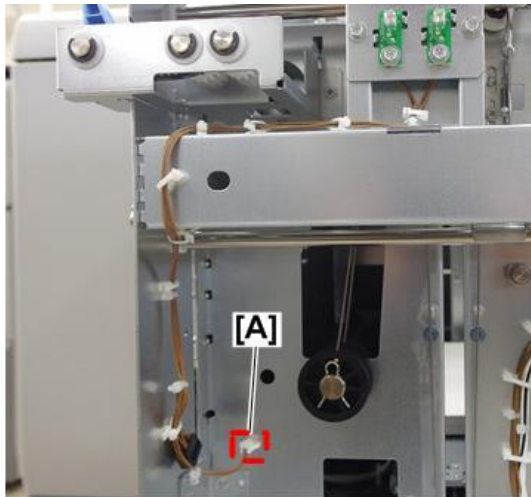
## 2. Installation

**16.** Remove the jam removal lever [A] on the front side of the tray. (🔧 x3)



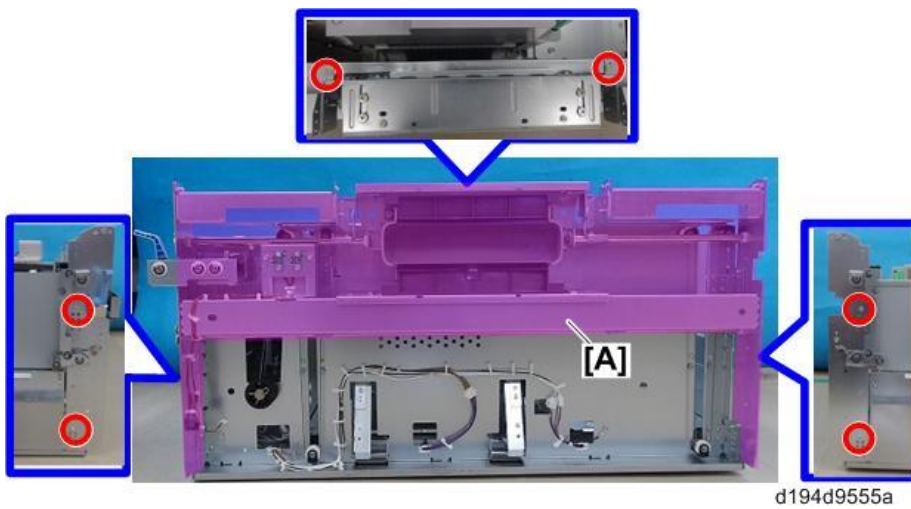
d194d9554

**17.** Disconnect the connector. (🔧 x1)



d194d9558

**18.** Remove the stay [A]. (🔧 x6)

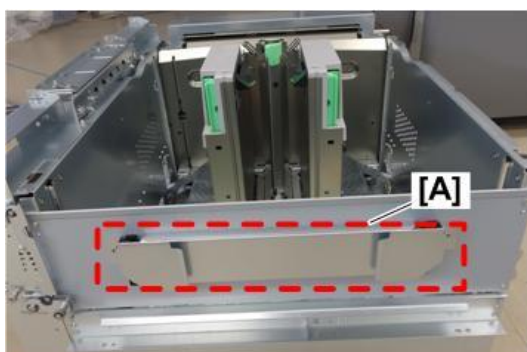


d194d9555a



d194d9568

**19.** Remove the support plates [A] on the side of the paper tray removed from the vacuum feed LCIT.



d194d9513



d194d9514

**20.** Widen the side fences of the paper tray and attach the support plates on the inside of the side fences.

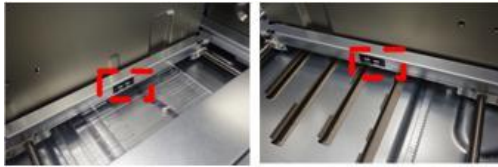


d194d9515

## 2. Installation

### Note

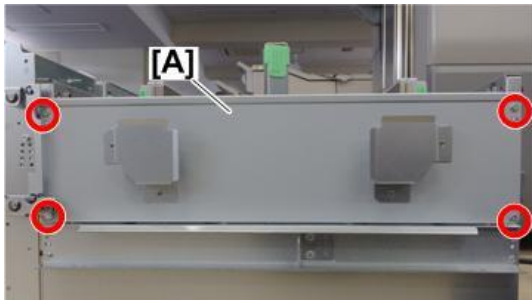
- The support plates are held in place by magnets on both sides of the paper tray.



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### 21. Remove the side plate [A] from the paper tray. (⚙️×4)

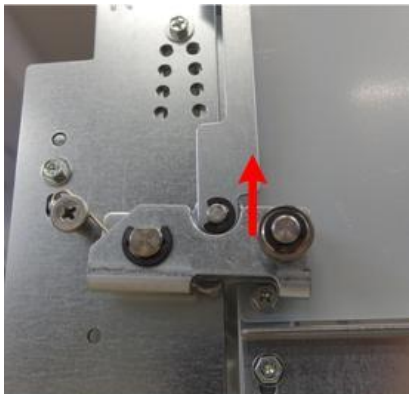
Keep the plate in storage in case the vacuum feed banner sheet tray is removed at some point in the future.



d194d9517

### Note

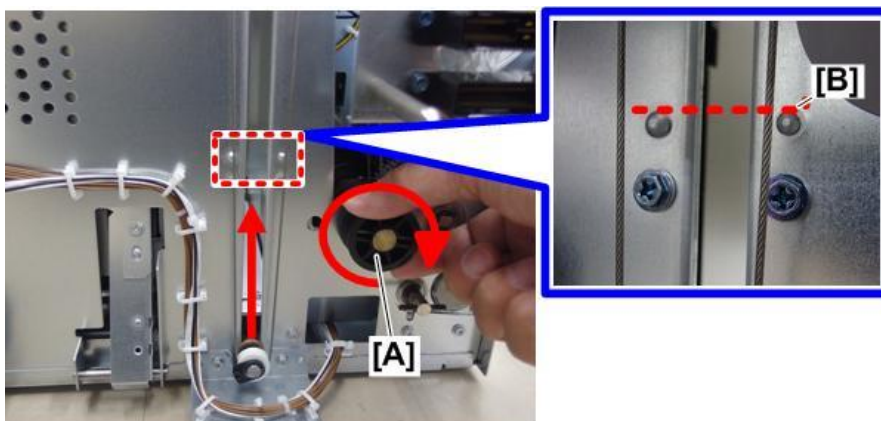
- Lift up the operating lever to remove the screws on the front.



d194d9518

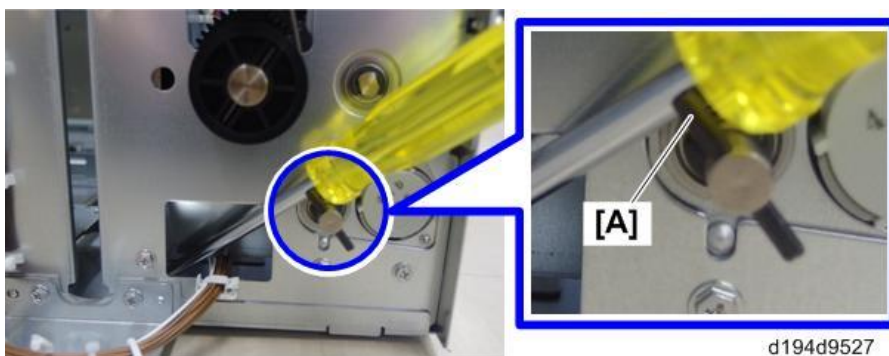
The screw removed here is used in the openable top cover installation.

**22.** Turn the roller [A] clockwise, and lift up the bottom plate above the embossed part [B].



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**23.** When the bottom plate has been lifted above the embossed part, insert an object such as a screwdriver into the hole in the sheet metal to hold the pin [A].



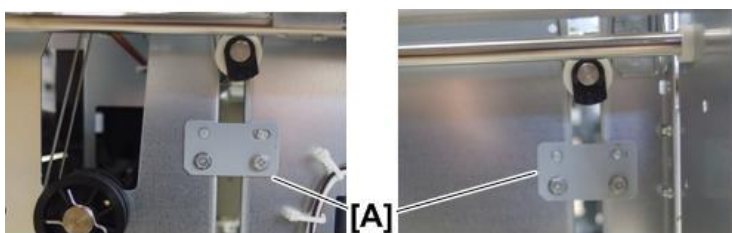
d194d9527

**24.** Attach the four stopper plates [A] provided with this option. (🔩×2 each)

**Note**

- Screws with washers are mounted in advance at the stopper mounting position.
- Remove the washers from the screws when attaching the four stopper plates.

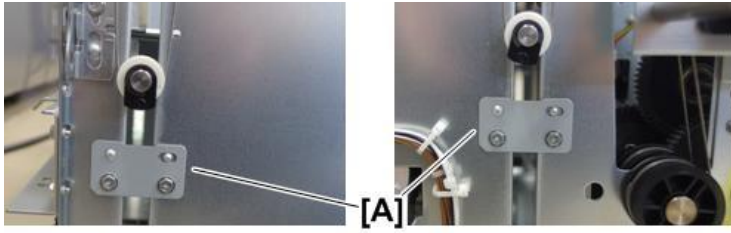
**Front left and front right**



d194d9528

## 2. Installation

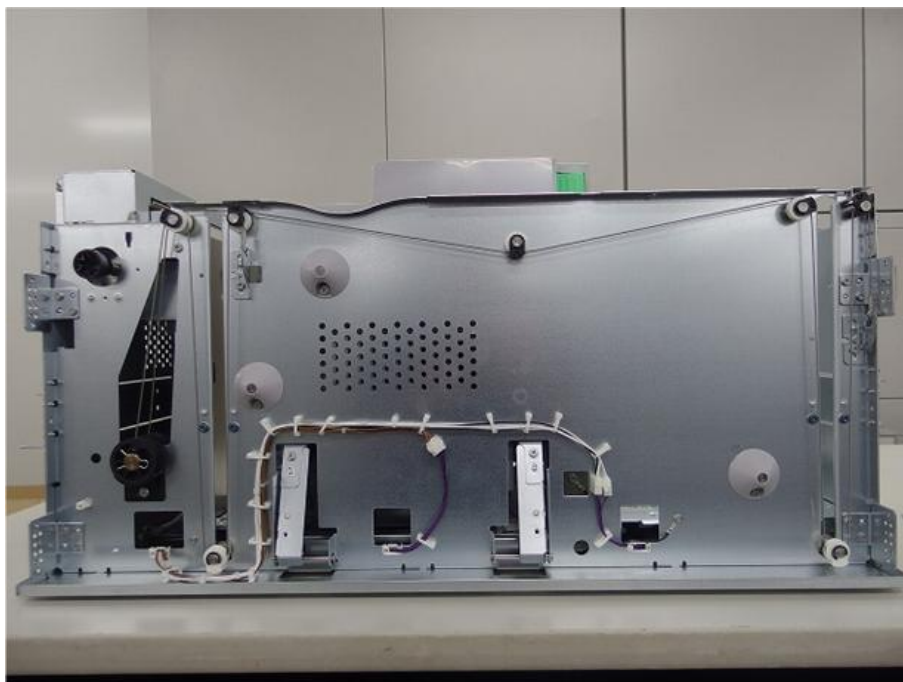
### Rear left and rear right



d194d9529

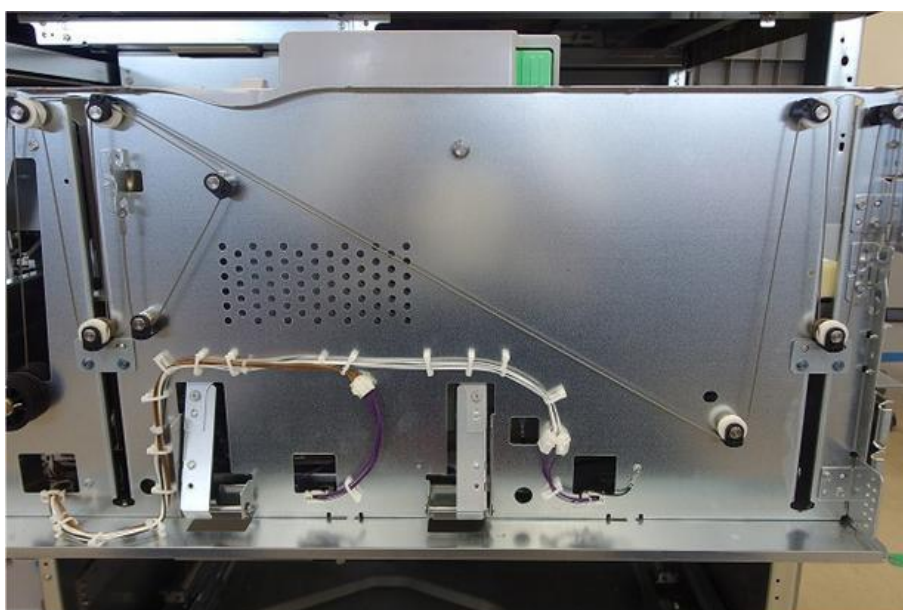
- 25.** Remove the screwdriver or other object inserted in the previous step. Then, do the following steps to re-hang the wire as shown below.

**Before**



m0b2d8294

**After**



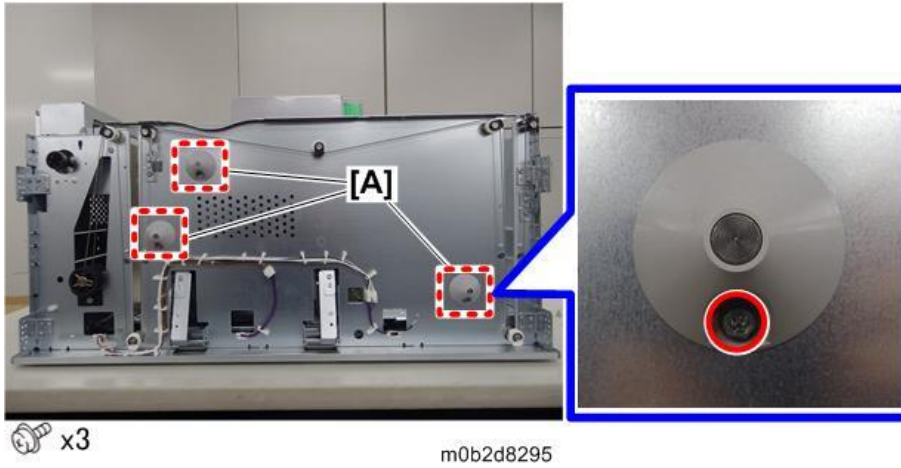
d194d9566

- 26.** Remove the three covers [A], which cover the pins.

**Note**


Discard the removed covers.

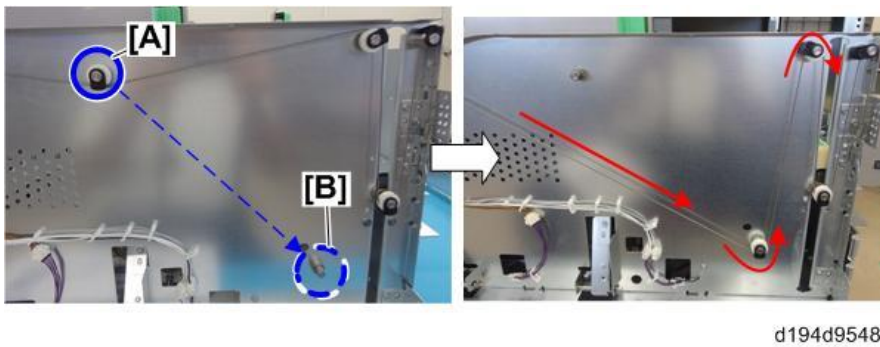
## 2. Installation



**27.** Turn the wire take-up roller clockwise and loosen the wire.

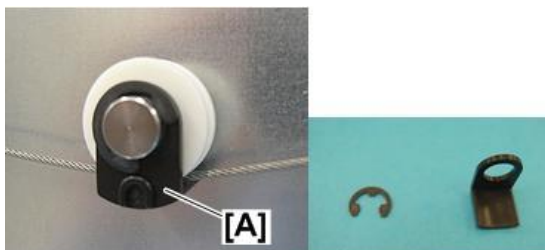


**28.** Remove the pulley [A] in the middle and then install it at [B]. (x1)  
Then, re-hang the long wire as shown below.



### Note

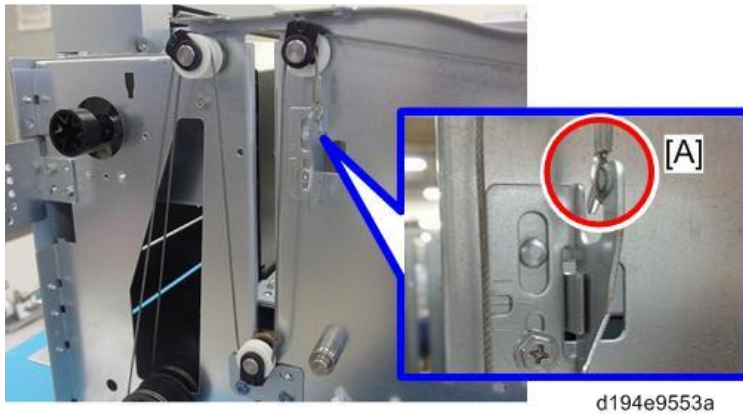
- Remove the pulley cover [A] and then remove the pulley.



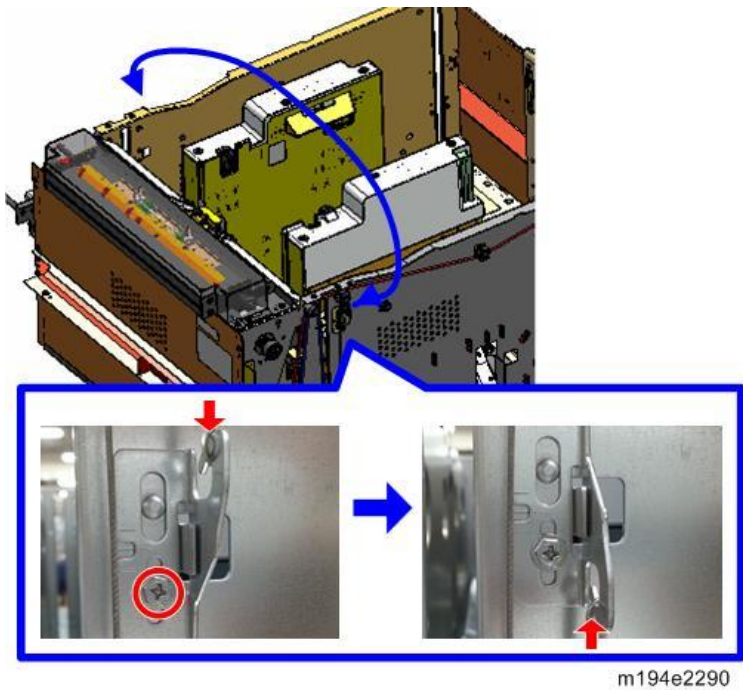


**29.** Re-attach the removed pulley cover. (🔩×1)

**30.** Unhook the wire [A] from the wire hook.



**31.** Replace the wire hook with the one on the rear side (first check the position of the graduations; see the note below this step), and then attach it so that the hook faces down. (🔩×1 each)

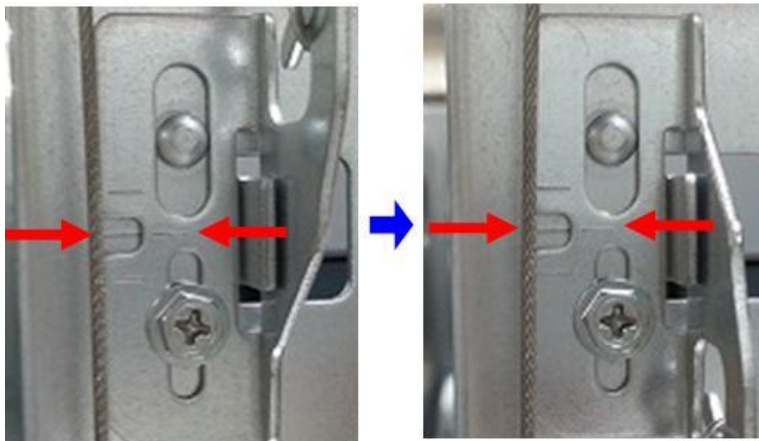


**Note**

- Before replacing the wire hook, check the position of the reference line and the graduation on both front and rear hooks. Make sure the hook retains the original position when

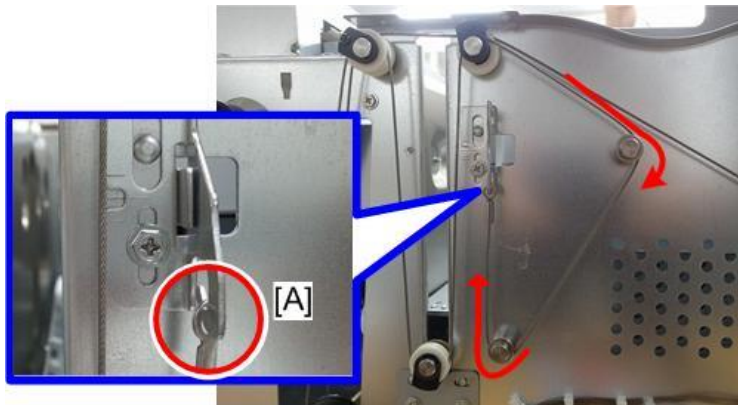
## 2. Installation

reattached.



m194e2291

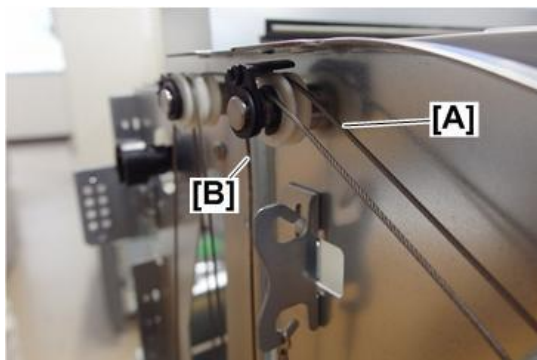
**32.** Re-hang the wire as shown below, and then hook the wire [A] on the wire hook.



d194e9553b

### Note

- At the upper pulley, pass the long wire [A] through the pulley and pass the short wire [B] between two E-rings.



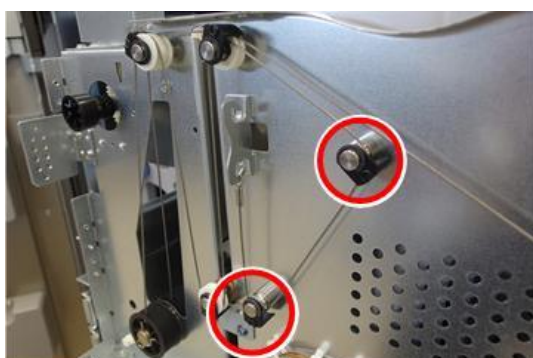
d194d9569

- Hang the wire into the groove of the pin on the frame.



d194d9551a

- 33.** Attach the pulley covers (provided with this option) to the 2 pulleys. (🌀×2)  
Two E-rings are also provided with this option.



d194d9570

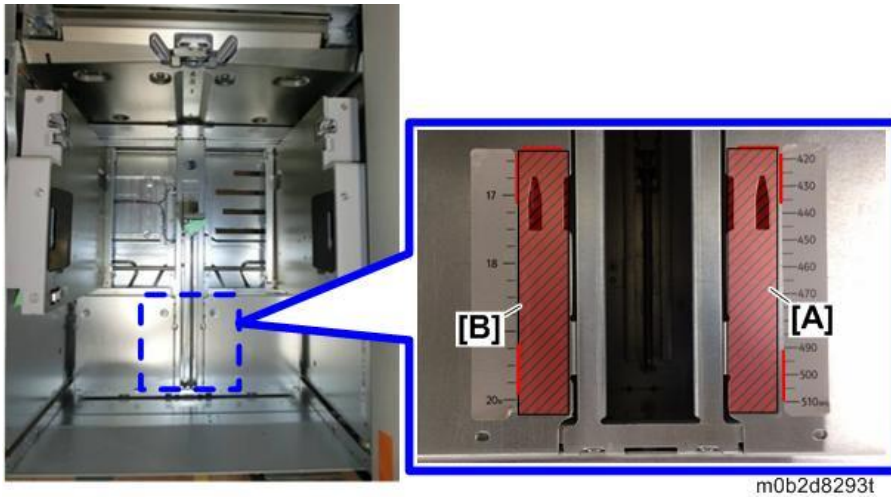
- 34.** Similarly to the front side, move and add pulleys on the rear side and re-hang the wires.



d194d9571

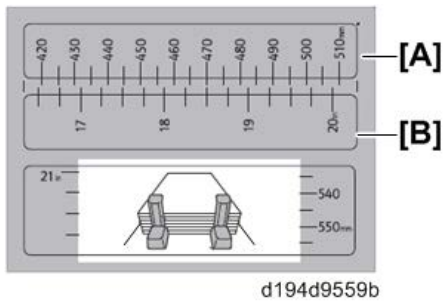
- 35.** Attach the decals [A] and [B] (provided with this option) to the bottom plate of the paper tray.  
Align the decals so that the bottom edge aligns with the bottom edge of the bottom plate (indicated with the red lines).  
In the photo below, the decals is attached on the outer side of the red squares, but in this machine, attach decals in the red squares.

## 2. Installation



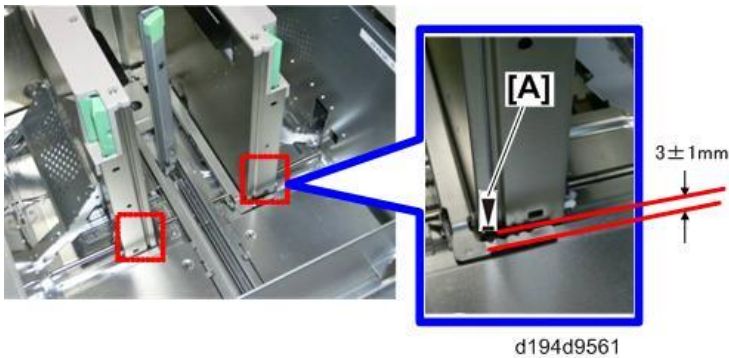
### Note

- Before attaching the decals, clean the area on which you will attach it.



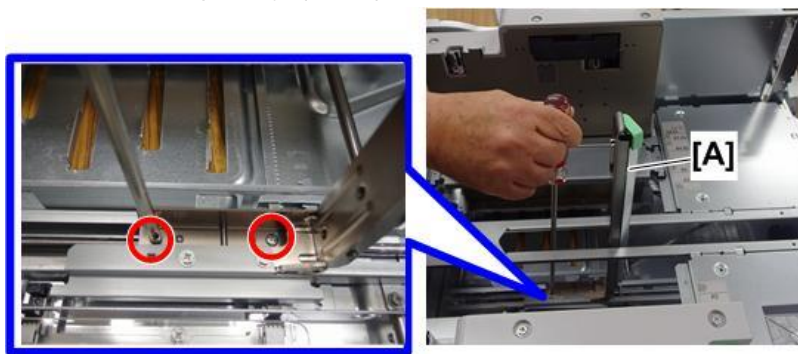
- The rest of the decal will be attached in the later step.

**36.** Attach the decals (position indicator) [A] (provided with this option) to both side fences.

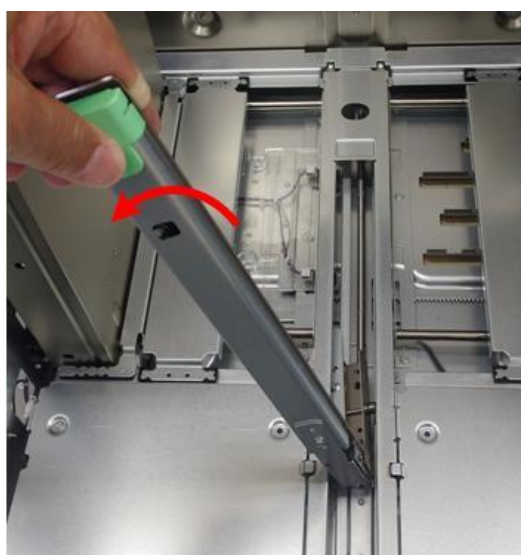


**37.** Remove the screws from the end fence [A], and then remove the end fence from the paper tray as

it falls down diagonally. (⚙️ x2)

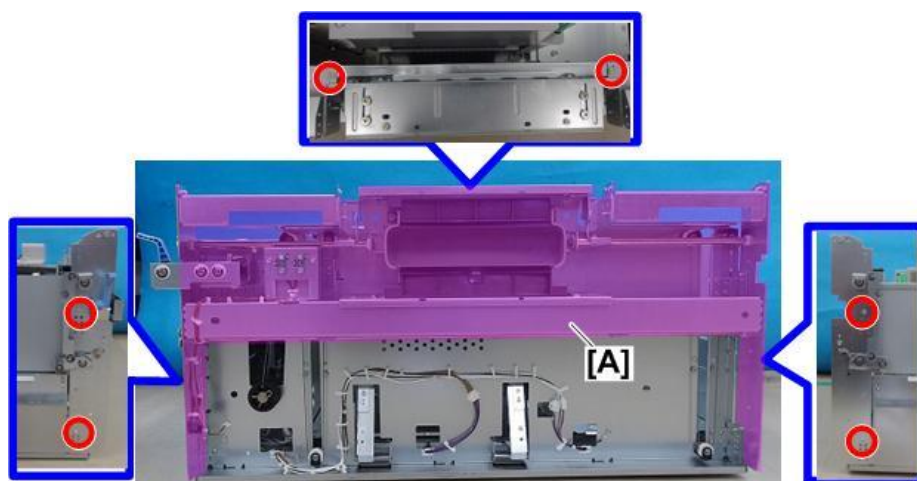


d194d9519



d194d9520

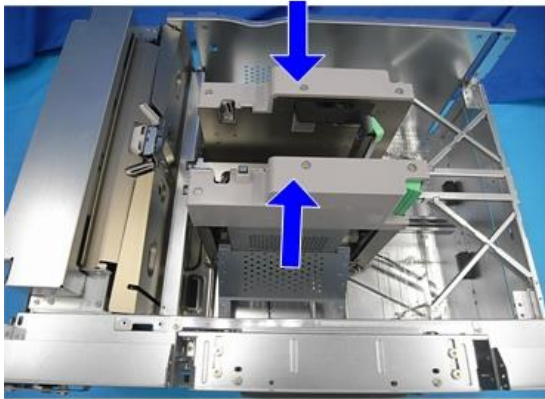
**38.** Attach the removed stay [A] and removed jam removal lever. (⚙️ x6)



d194d9555a

## 2. Installation

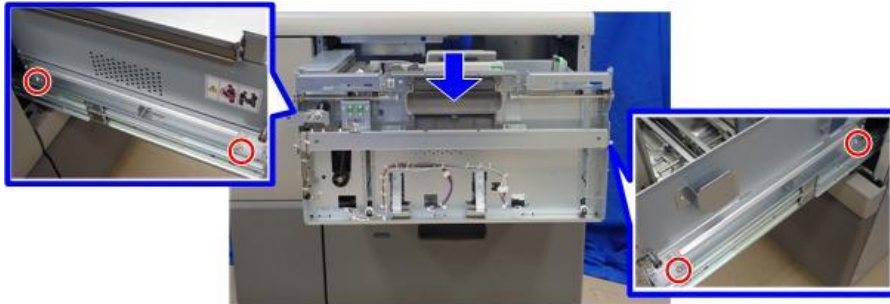
**39.** Move the side fences inner-ward until they stop.



d777z0070

**40.** Pull out the vacuum feed LCIT slide rails and mount the paper tray on them, and fasten it in place.

( x4)



d194d9530

### Important

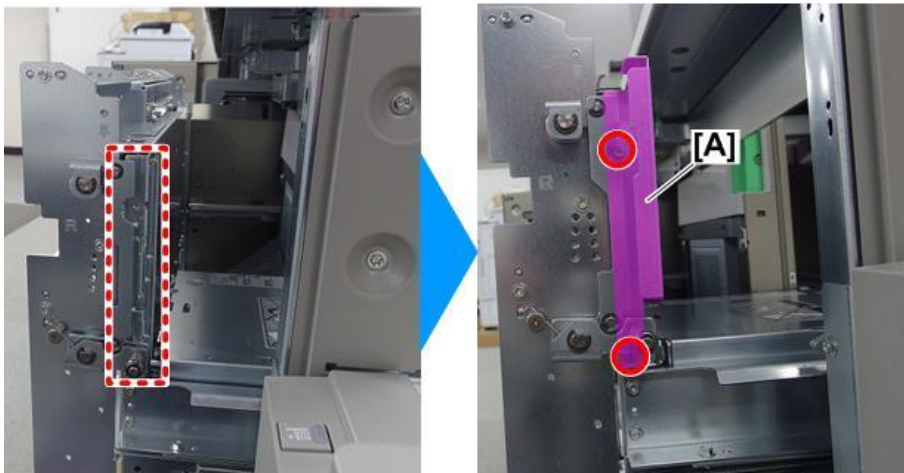
- Do not install the tray front cover in this step.
- Two or more customer engineers are required to mount paper tray 1 on the rails because paper tray 1 is extremely heavy. Work carefully when mounting it.

**41.** Pull the paper tray out about 5cm.

**42.** Attach the tray cover (front) [A], which is provided with this option, as shown below.

### Note

- Use the removed screws from the tray side cover.



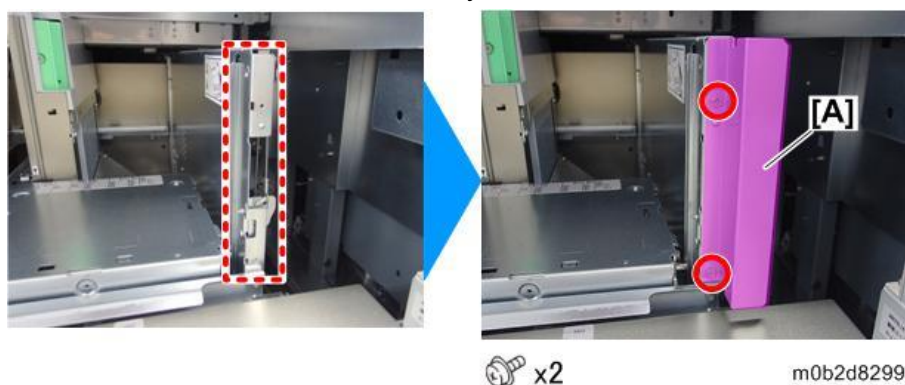
 x2

m0b2d8298

- 43.** Attach the tray cover (rear) [A], which is provided with this option, as shown below.

**Note**

Use the removed screws from the tray side cover.

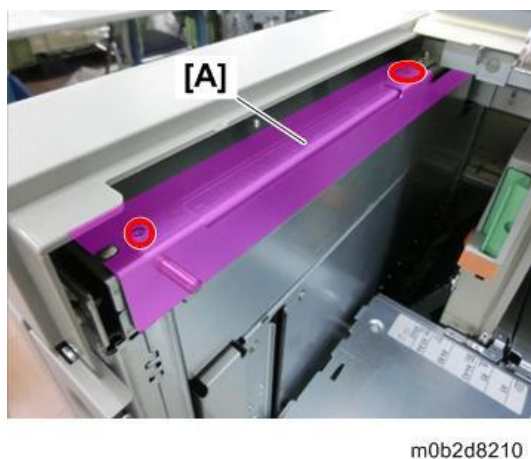


- 44.** Push the paper tray and close it.

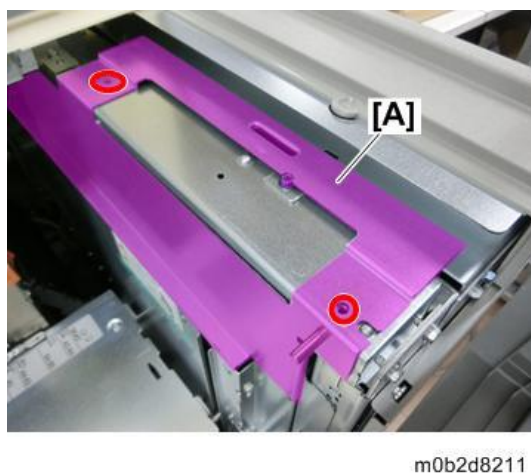
- 45.** Install the securing cover (front) [A] in the LCIT. (🔩 x2)

**Note**

To secure the cover, use the screws which were removed from the top cover.



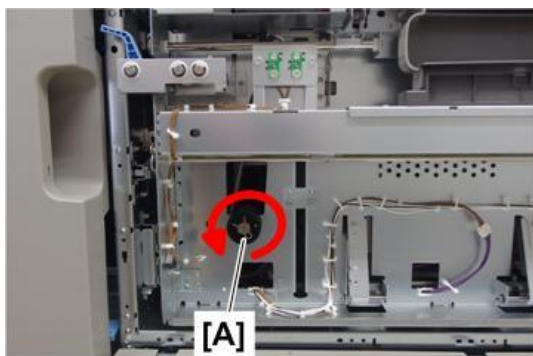
- 46.** Install the securing cover (rear) [A] in the LCIT. (🔩 x2 accessory M4x8)



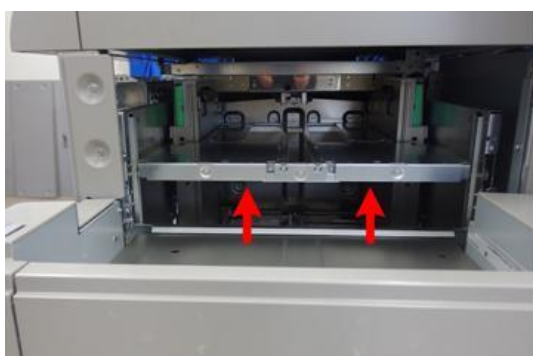
- 47.** Turn the wire take-up roller [A] at the front of the paper tray counter-clockwise to raise the bottom

## 2. Installation

plate until you can see it completely from the vacuum feed banner sheet tray.



d194d9531

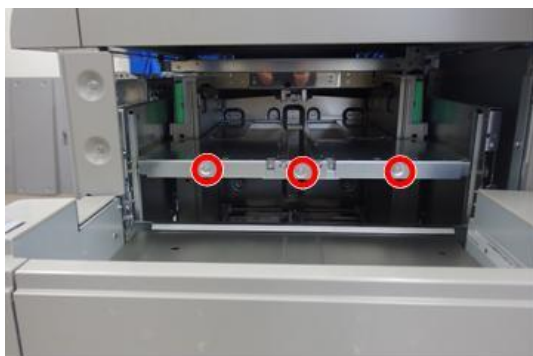


d194d9532

### Note

- The raised bottom plate will not lower even if the wire take-up roller is released. However, if the bottom plate is raised too high, pulling out the paper tray will cause it to lower.

**48.** Remove the screws on the bottom plate. (🔑×3)



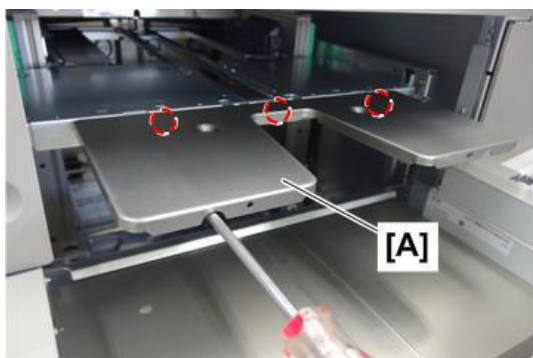
d194d9533

**49.** Attach the upper bottom plate [A] provided with this option. (🔑×3)

### Note

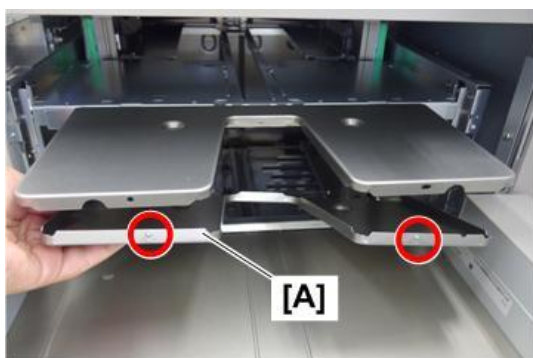
- Use the screws removed in the previous step.





d194d9534

**50.** Insert the lower bottom plate [A] (provided with this option) to attach it. (🔩×2: accessory M3×6)



d194d9535



d194d9536

**Note**

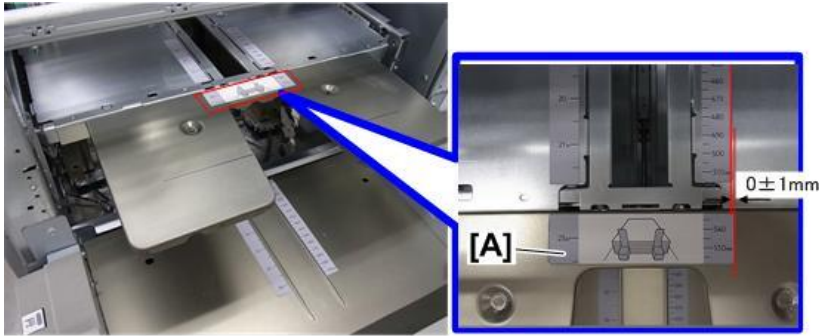
When you use a screw driver, open the top cover to facilitate the securing.

**⚠ CAUTION**

- If the bottom plate is lifted too far and a screwdriver cannot get in, pull the paper tray out slightly so it can be lowered. Please note that if you pull the tray out too far, it may come in contact with and deform the extension tray, so be very careful when doing this.

## 2. Installation

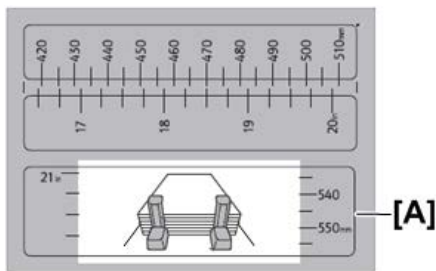
**51.** Attach the decal [A] (provided with this option) to the upper bottom plate.



d194d9562

### Note

- Before attaching the decal, clean the area on which you will attach it.



d194d9559c

**52.** Pull out the paper tray carefully so as not to let the installed parts be interfered. Then, re-attach the front tray cover.

**53.** Open the front door of the vacuum feed LCIT and lock paper tray 1. (🔑×1)  
After paper tray 1 is locked, it cannot be pulled out.

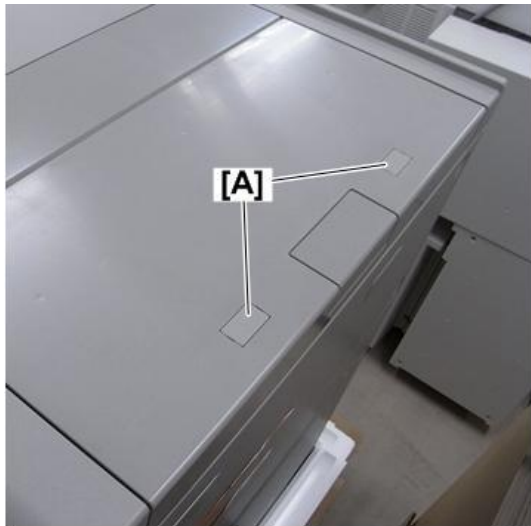


d777z0001

**54.** Remove the caps.

### Note

When one RT5120 is docked and the multi bypass tray (BY5020) is installed, the top cover cannot open. So you do not need to do the procedure for the openable top cover.



m0b2d8201

**55.** Remove the screws fastening the top cover. (🔩 x2)

**Note**

The removed screws will be used in the later step.



m0b2d8202

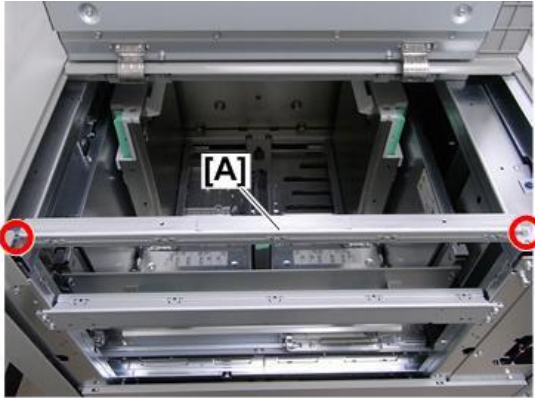
**56.** Open the top cover.



m0b2d8203

## 2. Installation

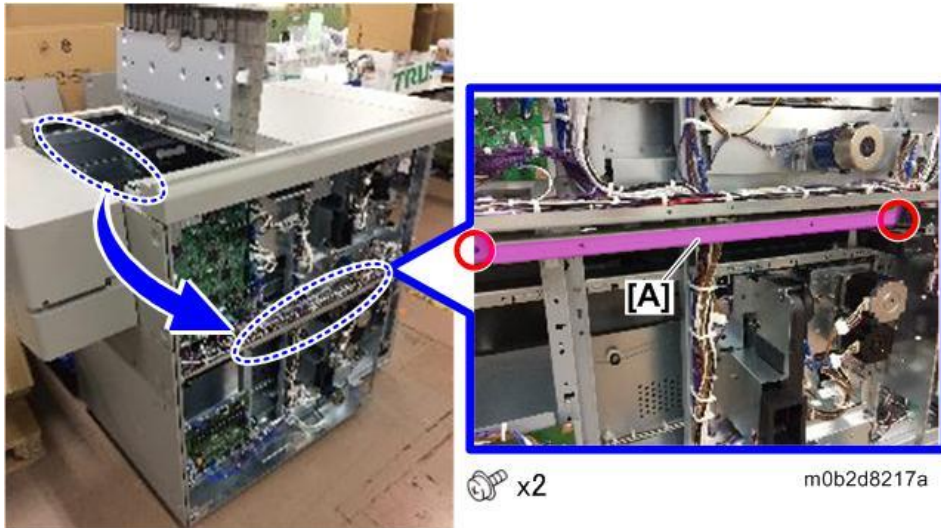
**57.** Remove the stay [A]. (🔩 x2)



m0b2d8204

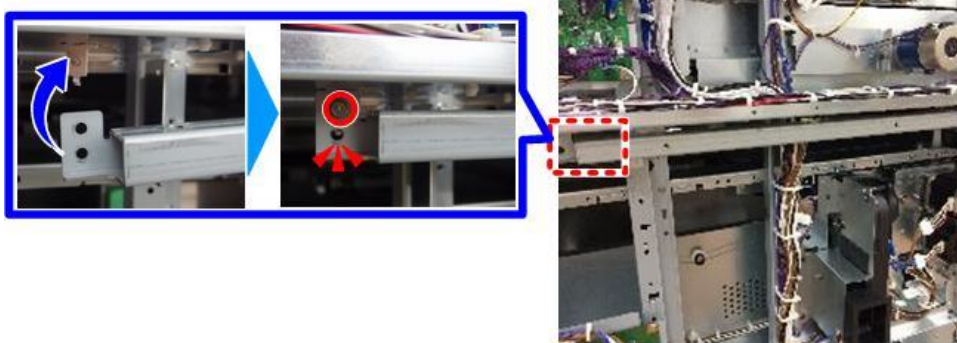
### ★ Important

Secure the removed stay [A] with the removed screws, in the rear of the LCIT.  
The stay is used when the LCIT needs moving a long distance.



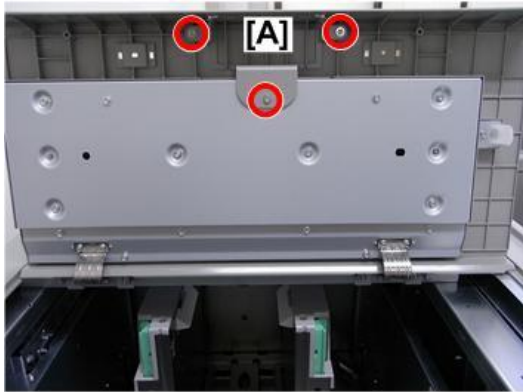
m0b2d8217a

Do not fail to hook the stay on the boss before securing it.



m0b2d8296

**58.** Remove the handle cover [A]. (🔩x3)

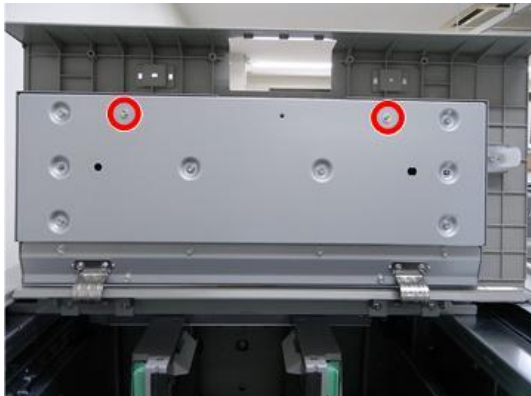


m0b2d8205



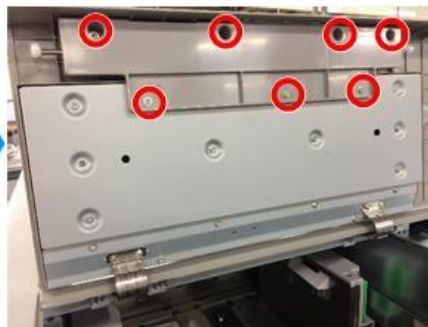
m0b2d8213

**59.** Remove the screws in the diagram below. (🔩x2)



m0b2d8206

**60.** Install the upper cover [A], which is an accessory of the kit. (🔩x7: accessory M4x12)

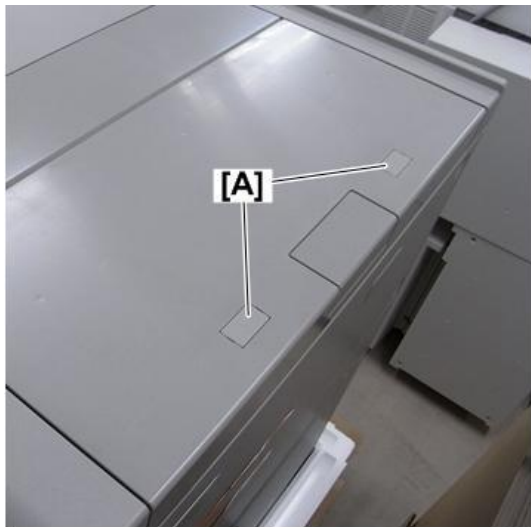


🔩 x7

m0b2d8207a

## 2. Installation

- 61.** Close the top cover and reattach the caps.



m0b2d8201

- 62.** Re-attach the rear covers.

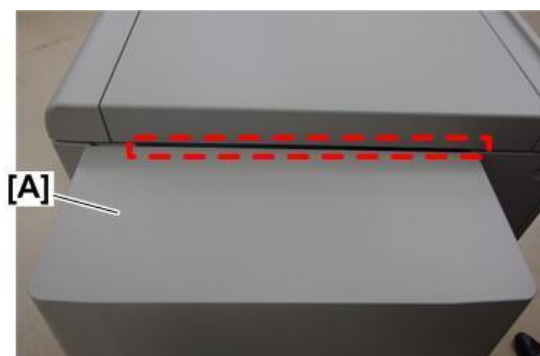
- 63.** Attach the sponge strip, which is an accessory of the kit, inside the top cover.



m0b2d8212

- 64.** Reinstall all removed covers.

- 65.** Close the cover [A] of the banner sheet tray. Then, make sure that there is no gap.



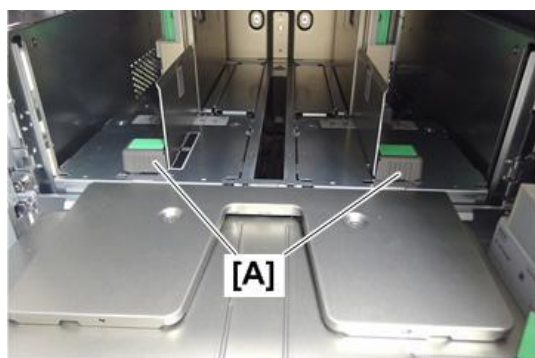
d194d9564

### Attaching the Side Fences and End Fences

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- 1.** Attach the side fences [A] provided with this option as shown below.

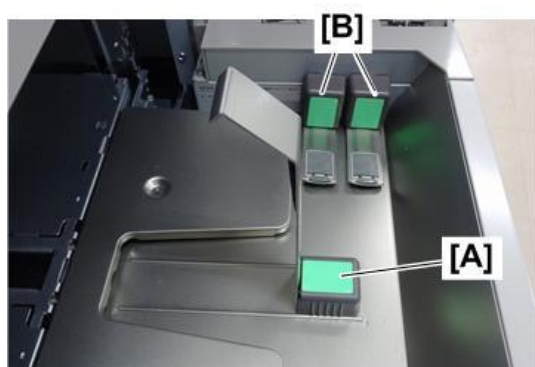
The side fences are held to the vacuum feed banner sheet tray by magnets.



d194d9572

- 2.** Stand the end fence (long) [A] provided with this option as shown below. Put the end fences (short) [B] (provided with this option) on the side of the tray.

The end fences are held to the vacuum feed banner sheet tray by magnets.



d194d9537

### SP Setting

After starting up the main machine, it is necessary to make sure the vacuum feed banner sheet tray is recognized by using the following SP.

- 1.** Enter the SP mode.
- 2.** Change SP5-150-002 from [0] to [1].
- 3.** Exit the SP mode.
- 4.** Restart the main machine.

Also, the default settings of two SPs are changed from the previous model as follows.

Ask the sales representative if there are any problems with these settings because they affect the counter method.

SP No.	Previous Model	This Model
SP5-104-101 (Banner Count Setting)	0	1
SP5-104-102 (Banner Count Threshold)	0	487

## 2. Installation

### Note

SP5-104 is not a normal SP but an SSP. Please contact your regional supervisor for how to enter SSP mode.

SP No.	Remarks	Range
SP5-104-101 (Banner Count Setting)	Sets banner count on/off. 0: OFF does not count banner size (over 488mm). 1: ON counts banner size (over 488mm)	Default: 1 [0 or 1 ]
SP5-104-102 (Banner Count Threshold)	Counts every size (mm) you specified as banner. Setting 0mm counts over 488mm as 1.	Default: 487 [0 or 65535]

### Attaching the Extension Tray to the Finisher

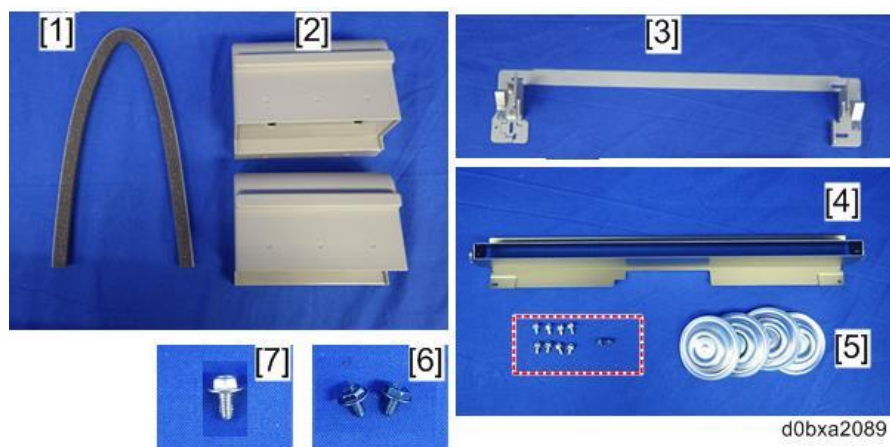
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To extend the output tray of the finisher for banner sheets, the optional extension tray “[SR5000 series Output Tray for Banner Sheet Type S6 \(D3CC\)](#)” is required.



## Cover Interposer Tray CI5040 (D3GA)

### Accessories



No.	Description	Q'ty	Remarks
1	Sponge Strip	1	
2	Upper Rear Cover	2	
3	Joint Bracket	1	
4	Entrance Guide Plate	1	
5	Leveling Shoes	4	
6	Tapping Screws M3x6	2	For attaching the entrance guide plate
7	Tapping Screws M4x8 (Round Point)	8	For attaching the auxiliary cover

### Installation

#### **⚠ CAUTION**

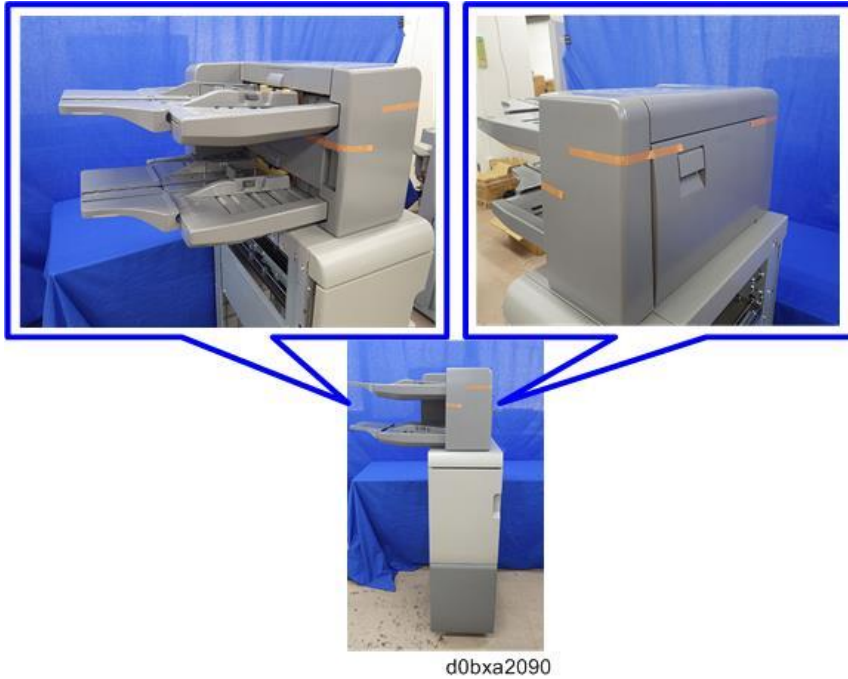
- The unit must be connected to a power source that is close to the unit and easily accessible. Make sure that the main machine is switched off and that its power cord and AC power source is disconnected before doing the following procedure.
- When moving the cover interposer tray to another installation site, move the cover interposer tray and the downstream unit together without disconnecting the cover interposer tray from the downstream unit. If they are disconnected, the cover interposer tray may be overturned, and then you may get injured.

## 2. Installation

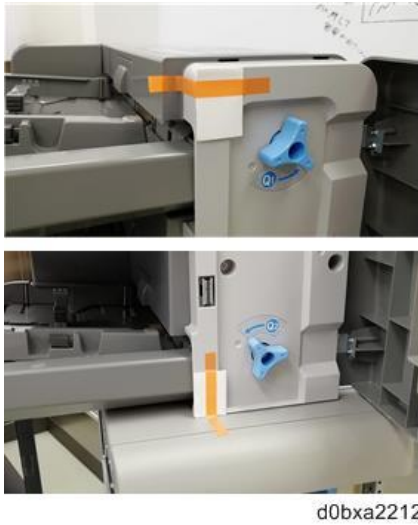
### Unpacking

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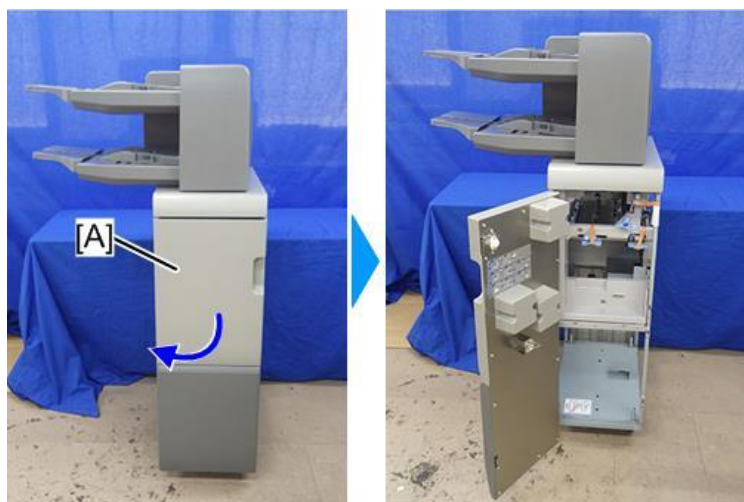
- 1.** Remove the tapes of the exterior part.



- 2.** Remove the papers and tapes inside the paper feed cover.



- 3.** Open the front cover [A].



d0bxa2091

- 4.** Remove the tapes inside the cover interposer tray.



d0bxa2092

### Attaching the Parts

---

- 1.** Attach the sponge strip [A].

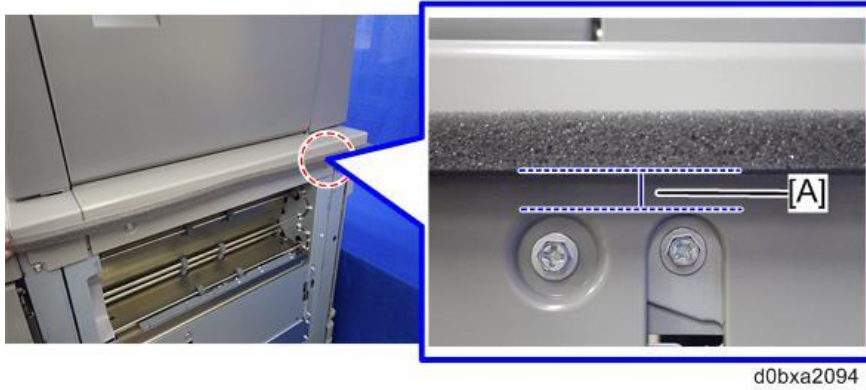


d0bxa2093

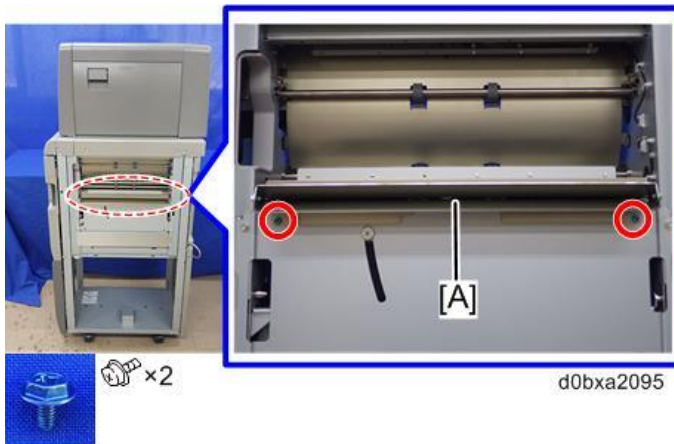
**Note**

- Attach the sponge strip to the position as shown below.  
[A]: from 0 to 5 mm

## 2. Installation

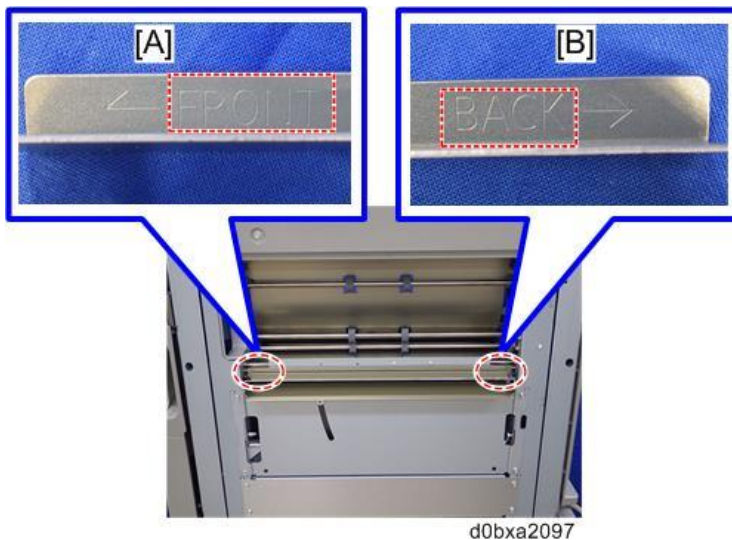


### 2. Attach the entrance guide plate [A]. (M3×6)



#### Note

- When attaching the entrance guide plate, refer to the mark "FRONT" [A] and "BACK" [B] for indicating direction.



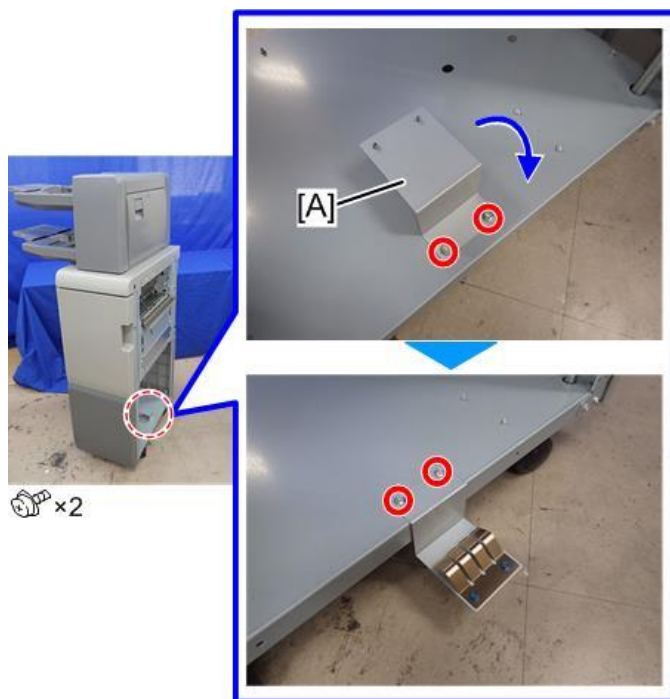
#### Important

- The types of the entrance guide plate and installation procedure depend on the upstream unit.
- If the upstream unit (main machine) is equipped with the decurl unit, refer to "When

Connecting to the Decurl Unit".

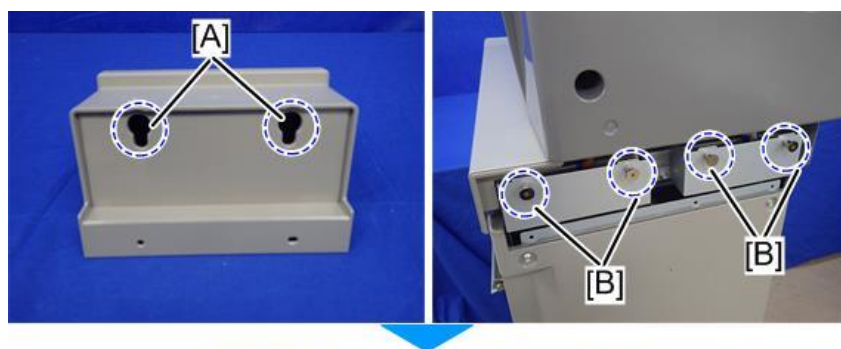
- If the upstream unit is the buffer pass unit, refer to "When Connecting to the Buffer Pass Unit".

**3.** Remove the ground plate [A] fixed to the bottom part. Make the ground plate upside down and reattach it.



d0bxa2096

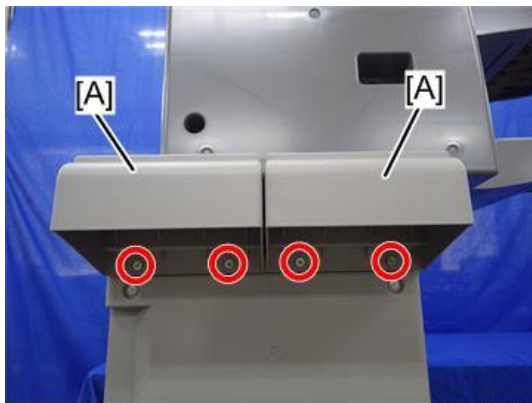
**4.** Hook the holes [A] of the auxiliary covers to the stepped screws [B].



d0bxa2102

## 2. Installation

5. Fix the auxiliary covers [A]. (M4×8 Round point)

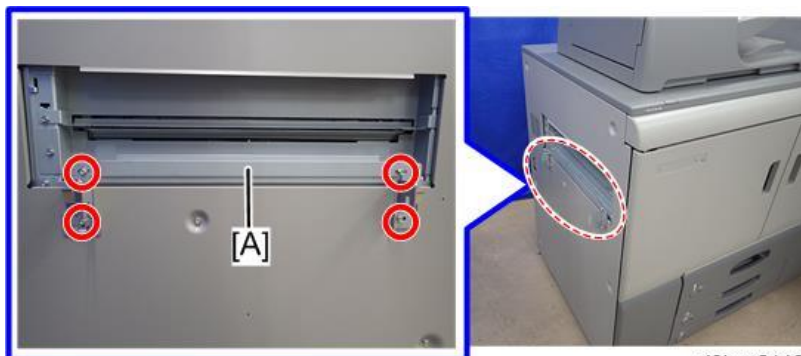


d0bxa2103

### Connecting the Unit to the Main Machine

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1. Attach the joint bracket [A] to the main machine. (M4×8 Round point)



 ×4

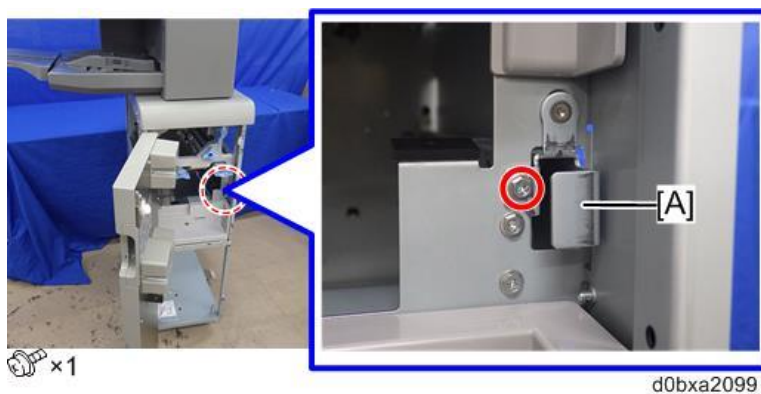
d0bxa2119

2. Open the front cover [A] of the cover interposer tray.

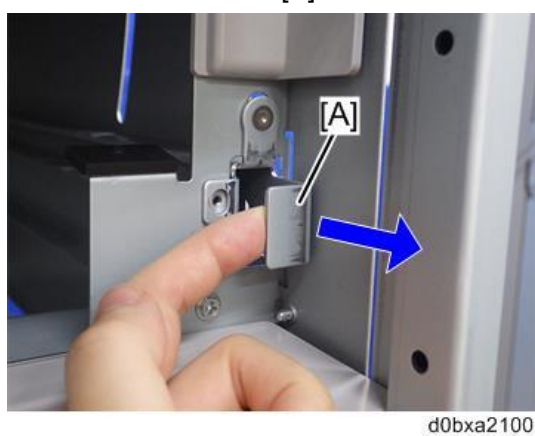


d0bxa2098

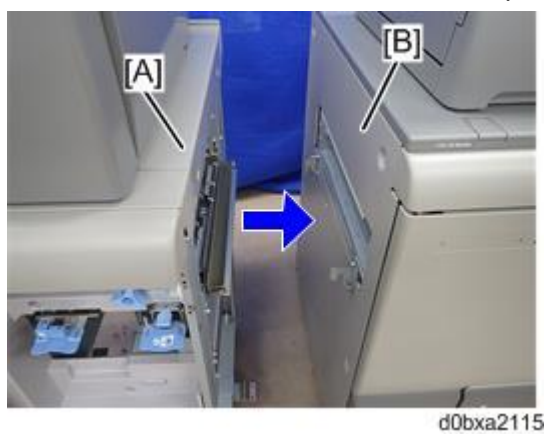
- 3.** Remove the screw [A] of the lock lever.



- 4.** Pull out the lock lever [A].

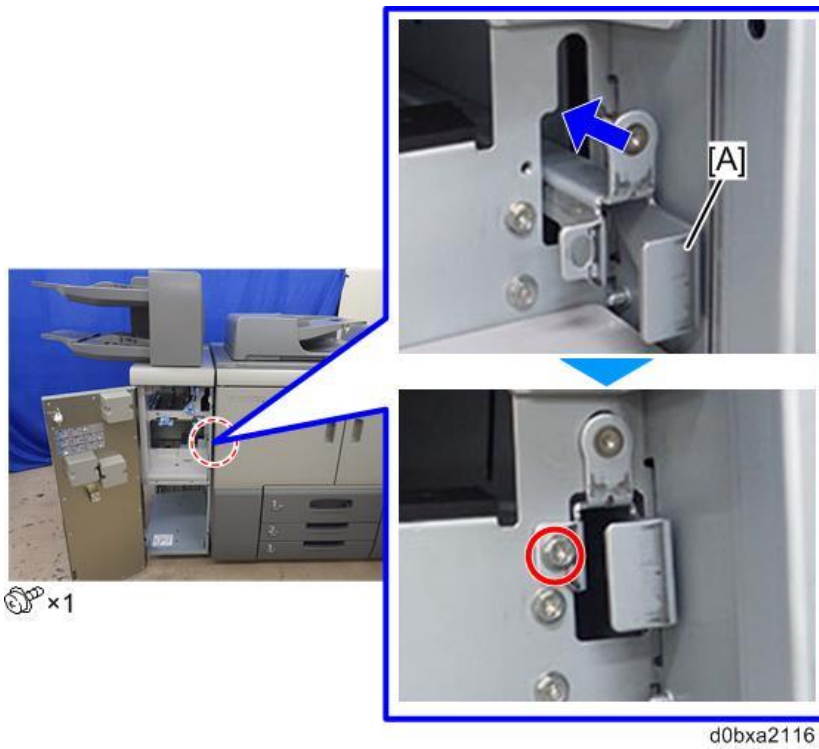


- 5.** Connect the connector of the cover interposer tray [A] to the main machine [B].

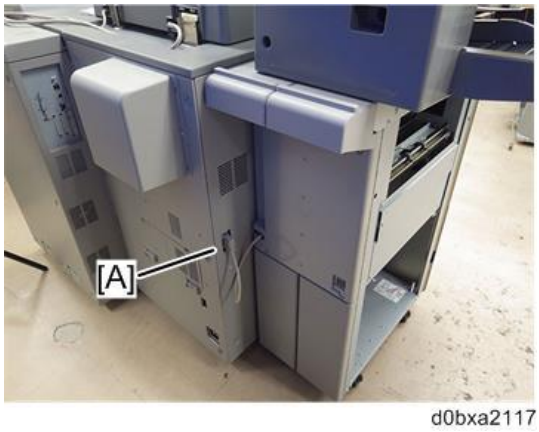


## 2. Installation

- 6.** Push in the lock lever [A], and then fix it with the screw that removed in step 3.

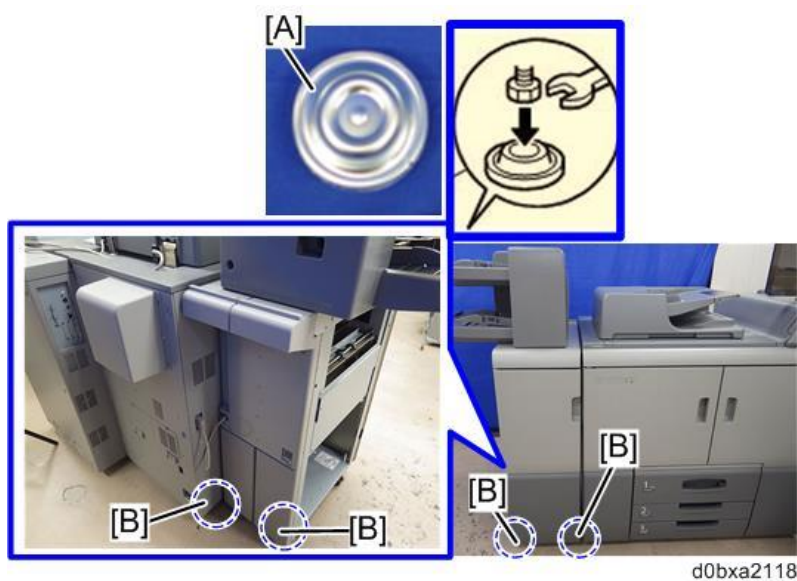


- 7.** Connect the connector [A] of the cover interposer tray.





- 8.** Set the holders (x4) [A] under the leveling bolts [B], and then adjust the level.



**Note**

- Measure the slant of the stands by the level, and then adjust the leveling bolts like you adjust the leveling bolts of the main machine. ([Height and Level Adjustment](#))

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## When Connecting to the Decurl Unit

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### Installing the Entrance Guide Plate

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**⚠ CAUTION**

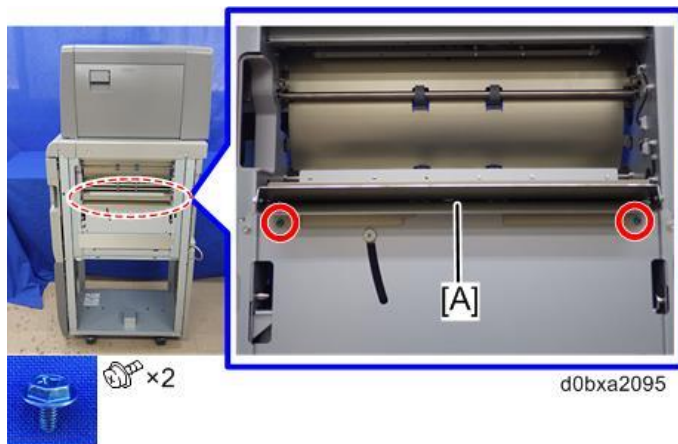
- Two entrance guide plates, which are used for the connection between the decurl unit and the entrance of the downstream unit, are provided with the decurl unit.
- The interposer tray uses the entrance guide plate [A] as shown below.



- 1.** Make sure that the entrance guide plate [A] is not attached to the cover interposer tray. If the

## 2. Installation

entrance guide plate is attached, remove it.



- 2.** Attach the entrance guide plate [A] to the cover interposer tray. (M3×6)



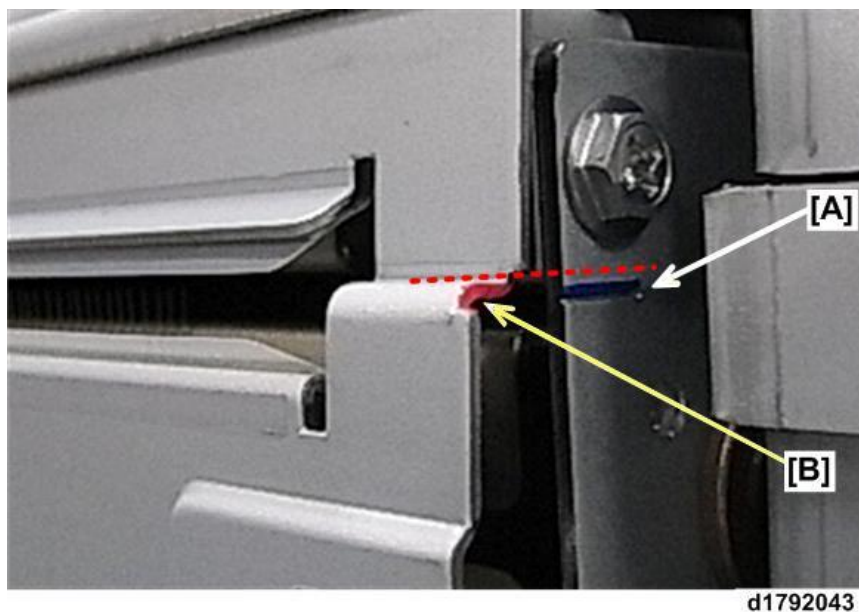
### Installing the Cover Interposer Tray

- 1.** Connect the I/F cable to the main machine.
- 2.** Connect the cover interposer tray to the main machine.
- 3.** Plug the main machine into its power source, and then switch the machine on.
- 4.** Enter the SP mode, and then do SP5-804-128 (Output Check De-curler Unit Move: Upper Default).
- 5.** Send a sheet of paper through the decurl unit (the upper path is the default).

#### ★ Important

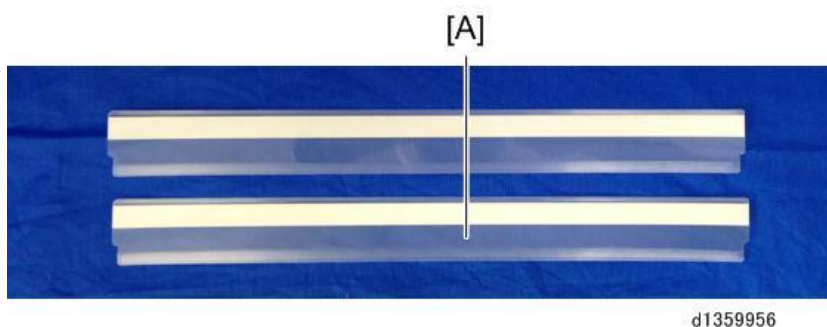
- If the software of output check operation is not supported, move the path of the decurl unit in the following way from step 4.
    - 1.** Do SP1-906-001 (De-curler Setting Tray 1: Paper Path Selection) to confirm that the upper path is selected as the default path.
    - 2.** Switch to the COPY WINDOW, select one-side copy from Tray 1, and then press [Start].
    - 3.** Make sure that the paper exits the machine through the default upper path of the decurl unit, and then open the front door to interrupt operation of the machine.
    - 4.** Turn the machine off, and then unplug it from its power source.
- 6.** Turn the machine off, and then unplug it from its power source.
  - 7.** Check the red and blue marks between the main machine and the cover interposer tray.
  - 8.** Remove the rear cover of the cover interposer tray.
  - 9.** Check to see if the blue mark [A] at the front and back of the decurl unit is at the same height as

the red mark [B] at the front and back of the cover interposer tray.



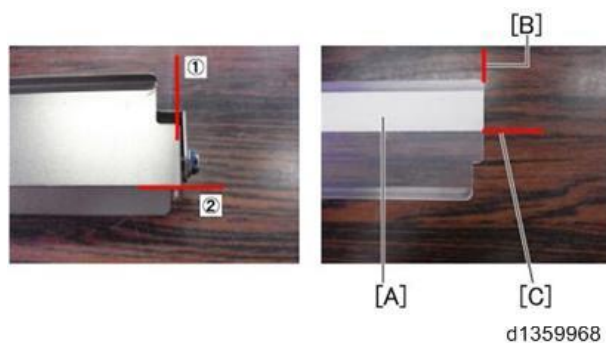
### When Connecting to the Buffer Pass Unit

1. Attach the finisher guide sheet [A] provided with the buffer pass unit to the entrance guide plate of the cover interposer tray.



2. Peel off the release paper from the double-sided tape [A] on the finisher guide sheet, attach the finisher guide sheet the entrance guide plate.

When attaching the entrance guide plate, align the edge [B] of the sheet with the position 1 and align the edge [C] of the double-sided tape with the position 2.



#### Note

- Confirm that the finisher guide sheet is attached correctly to the entrance guide plate as

## 2. Installation

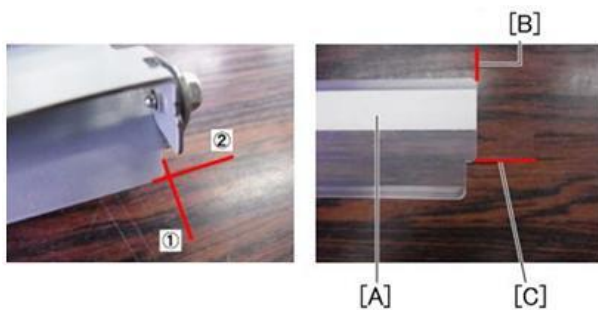
shown in the photo below.



d1359968-1

3. Peel off the release paper from the double-sided tape [A] on the finisher guide sheet, attach the finisher guide sheet the entrance guide plate.

When attaching the entrance guide plate, align the edge [B] of the sheet with the position 1 and align the edge [C] of the double-sided tape with the position 2.



d1359969

### Note

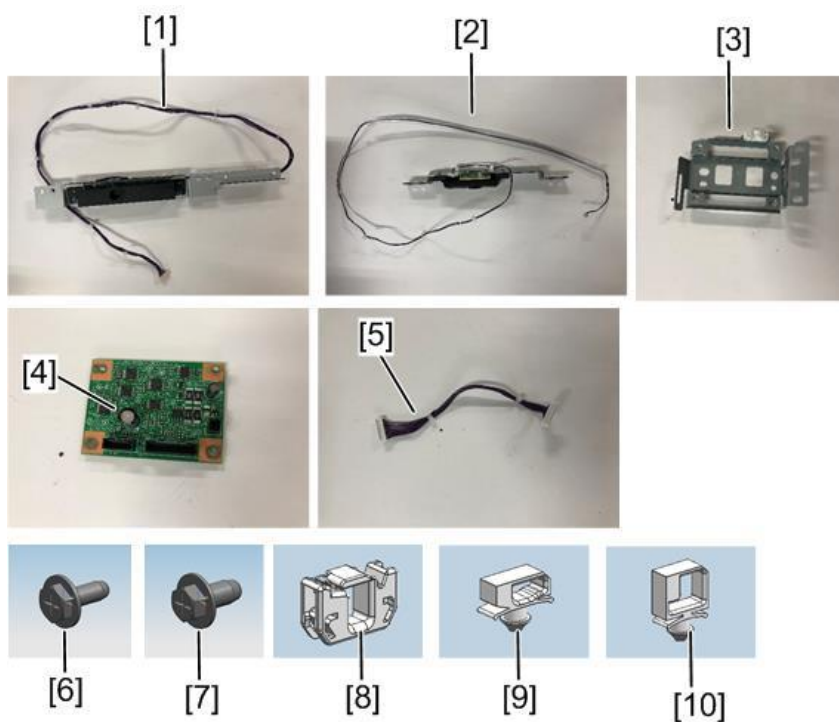
- Confirm that the finisher guide sheet is attached correctly to the entrance guide plate as shown in the photo below



d1359969-2

## Cover Interposer Tray Double-Feed Detection Kit Type S11 (D3GA)

### Accessories



d0bxa2192

No.	Description	Q'ty
1	Double-feed Sensor (Right)	1
2	Double-feed Sensor (Left)	1
3	Bracket	1
4	PCB	1
5	Harness	1
6	Screws M3x8 (Rounded end)	4
7	Screws M4x8 (Rounded end)	5
8	Locking Edge Saddle	2
9	Wire Saddle	4
10	Wire Saddle	6

## 2. Installation

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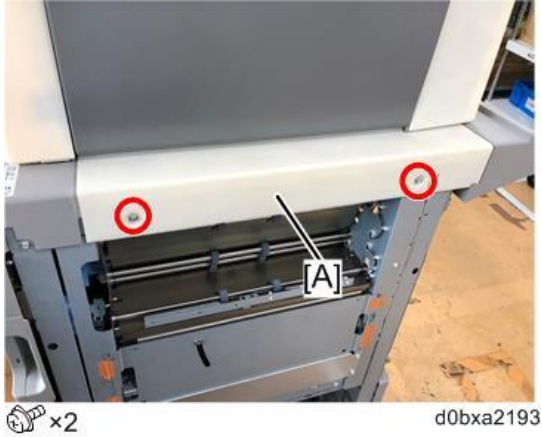
### Installation Procedure

---

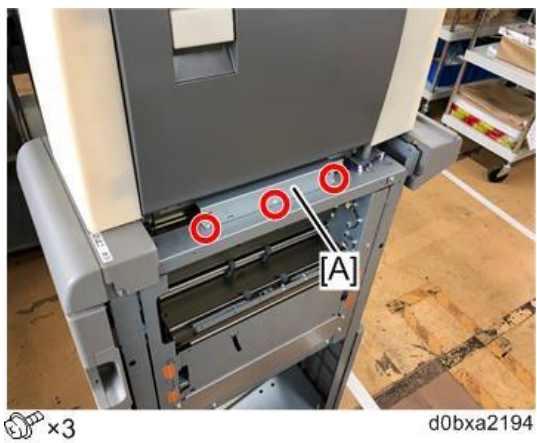
#### Removing the Exterior Parts

---

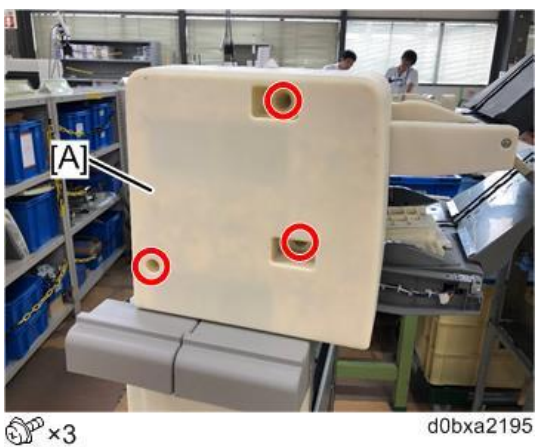
- 1.** Remove the cover [A]. (M4x8)



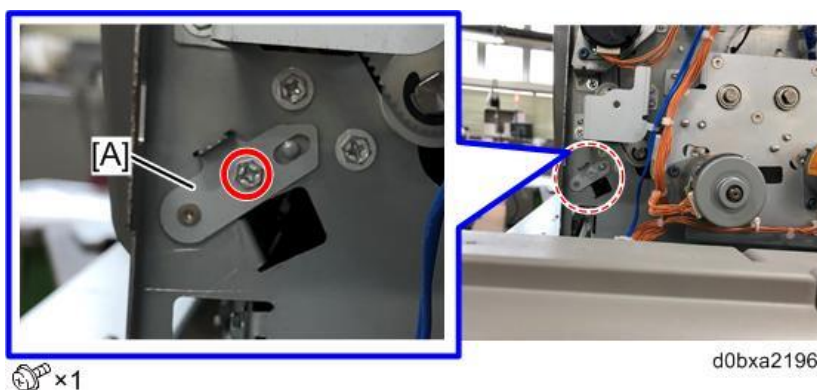
- 2.** Remove the shield plate [A]. (M4x8)



- 3.** Remove the cover [A]. (M4x8)



**4.** Remove the bracket [A]. (M4x8)



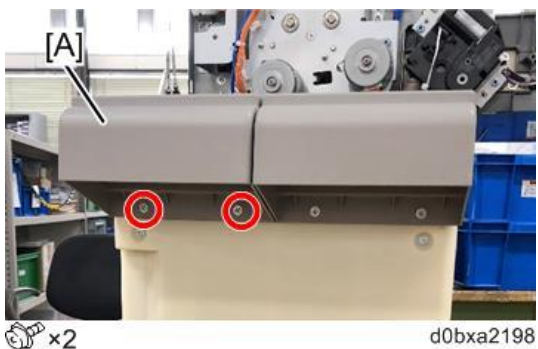
**5.** Remove the cover [A] by sliding it.



**Note**

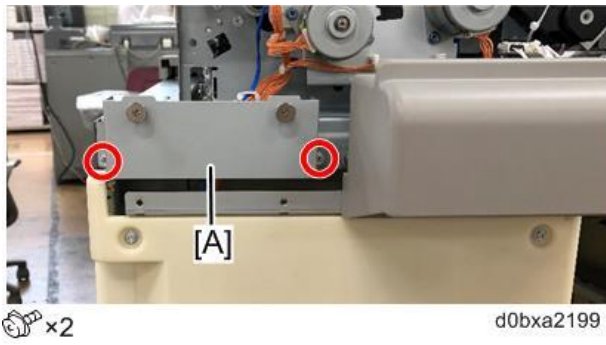
- Because the rear side of the cover is removed in the previous step, the cover is held only by the bracket of the front side.

**6.** Remove the cover [A]. (M4x8)

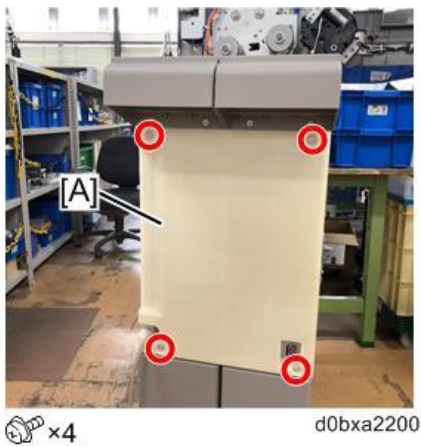


## 2. Installation

### 7. Remove the bracket [A]. (M4x8)



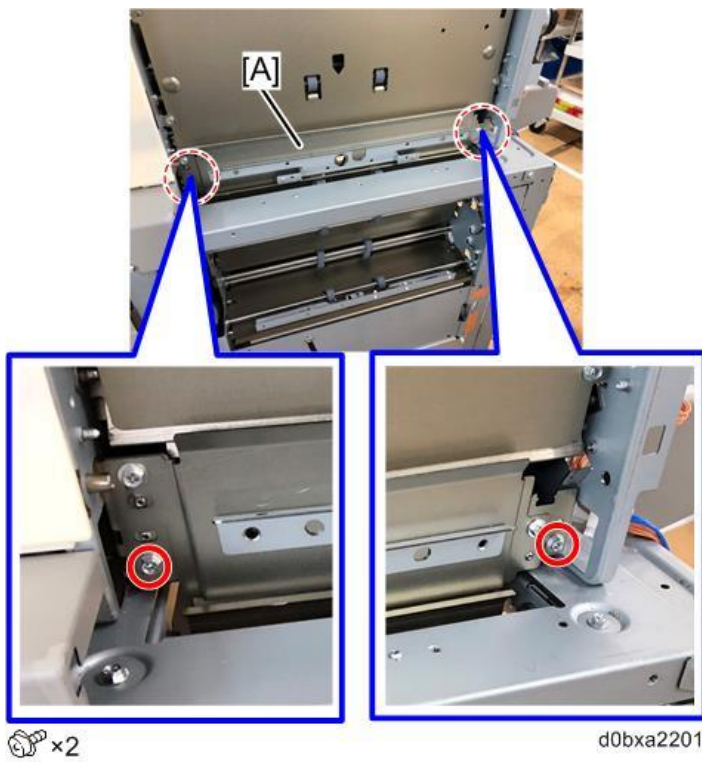
### 8. Remove the cover [A]. (M4x8)



## Installing the Double-Feed Detection Kit

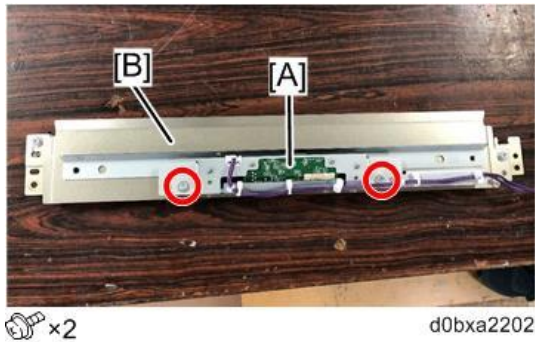
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### 1. Remove the guide plate [A] of the right side of the machine. (M4x8)





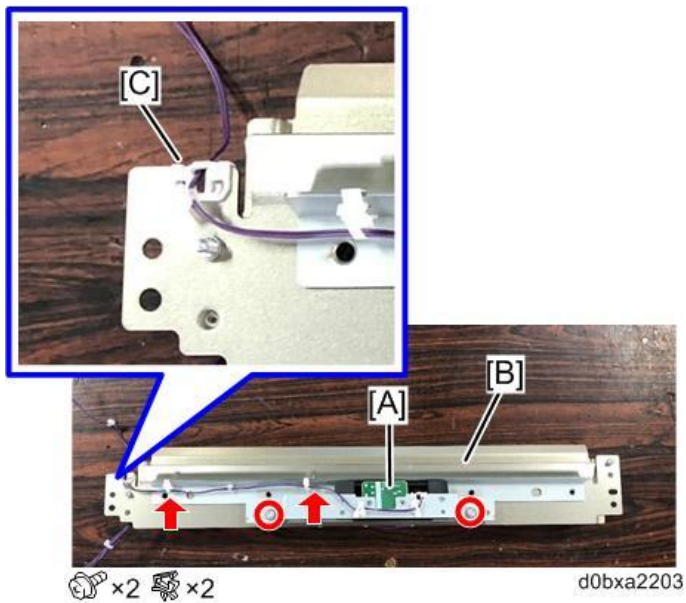
2. Attach the double-feed sensor (right) [A] to the guide plate [B] for the double-feed sensor (right). (M4x8)



**Note**

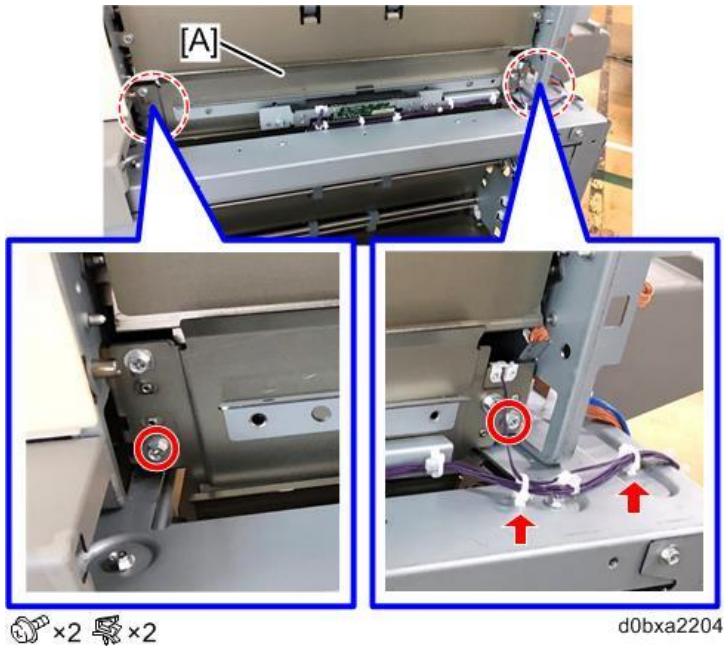
- When tightening the screw, make sure that the harness is not caught between the screw and the bracket.

3. Clamp the double-feed sensor (left) [A].
4. Attach the double-feed sensor (left) [A] to the guide plate for the double-feed sensor (left) [B]. (M4x8)
5. Attach the edge saddle to the position [C].



## 2.Installation

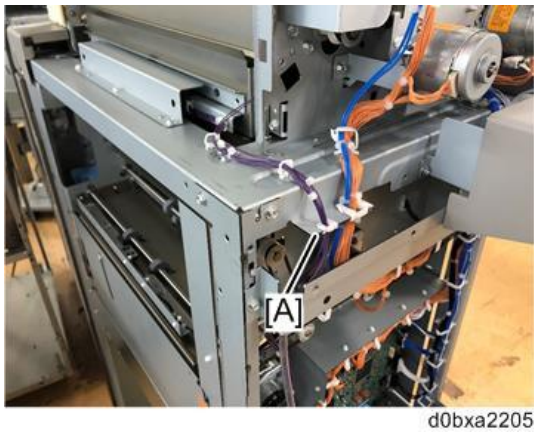
### **6.** Attach the guide plate [A]. (M4x8)



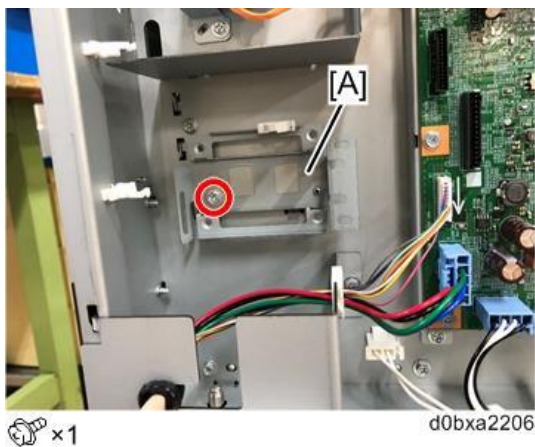
#### Note

- When tightening the screw, make sure that the harness is not caught between the screw and the bracket.

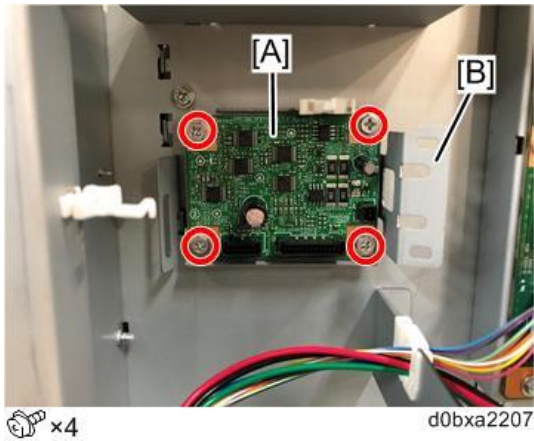
### **7.** Attach the edge saddle to the position [A].



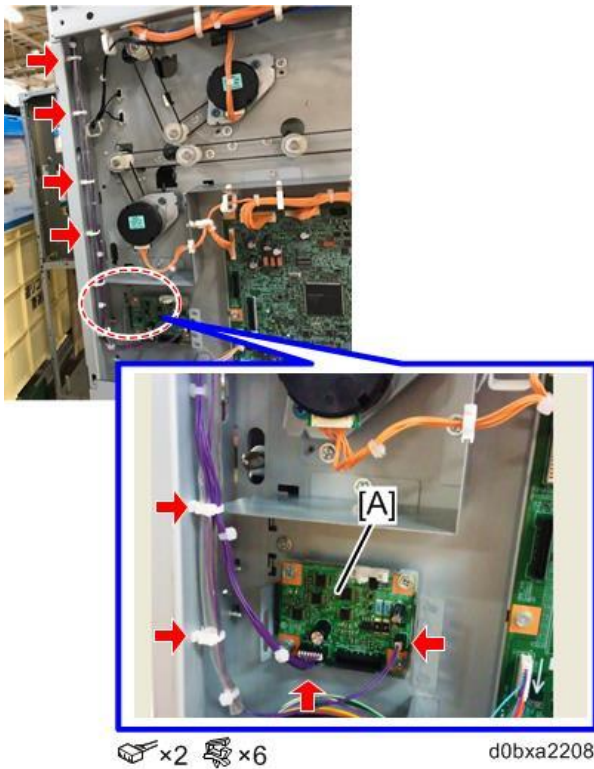
### **8.** Attach the bracket [A] to the rear side of the machine. (M4x8)



**9.** Install the PCB [A] to the bracket [B]. (M3x8)



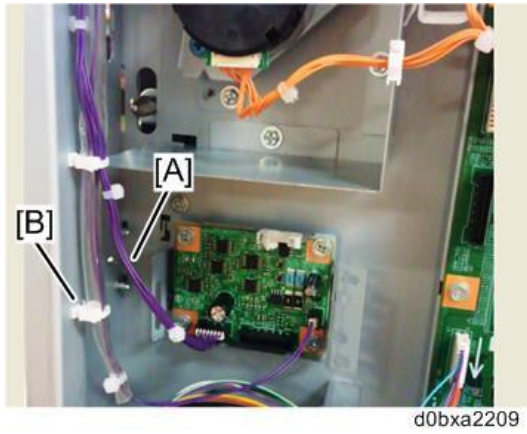
**10.** Connect the connectors of the double-feed sensor (right) and the double-feed sensor (left) to the PCB [A], and then fix the harnesses to the stay with the clamps.



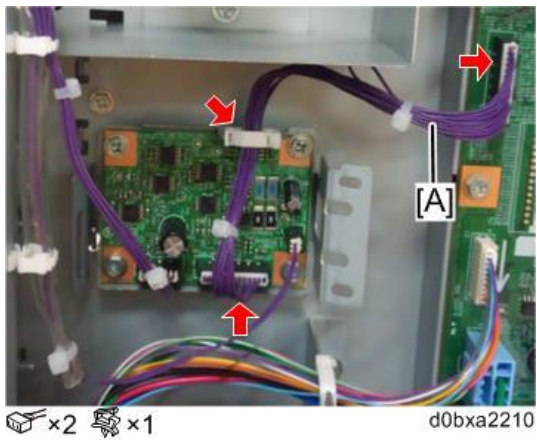
**Note**

- The clamp [B] does not fix the harness [A].

## 2. Installation



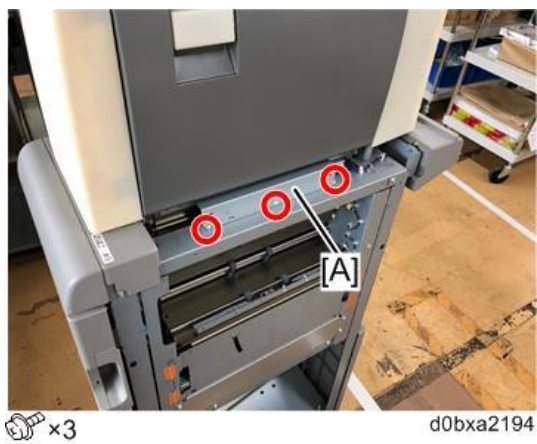
**11.** Attach the harness [A].



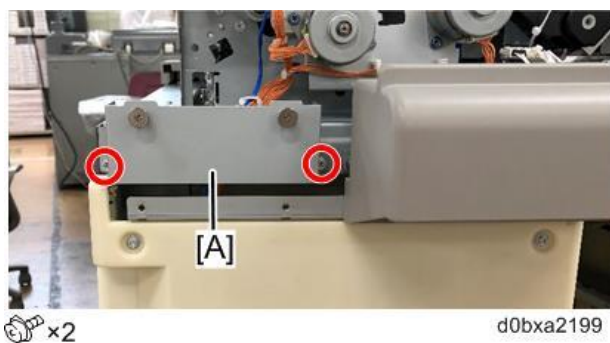
### Attaching the Exterior Parts

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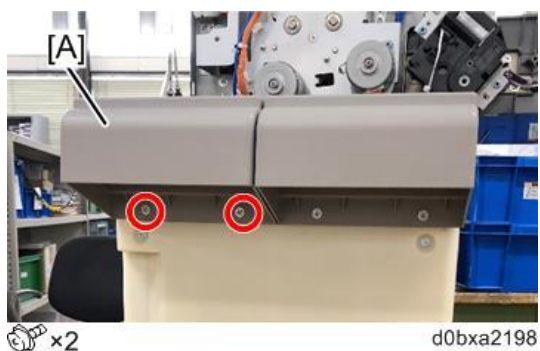
**1.** Attach the shield plate [A]. (M3x8)



**2.** Attach the bracket [A]. (M4x8)



**3.** Attach the cover [A]. (M4x8)

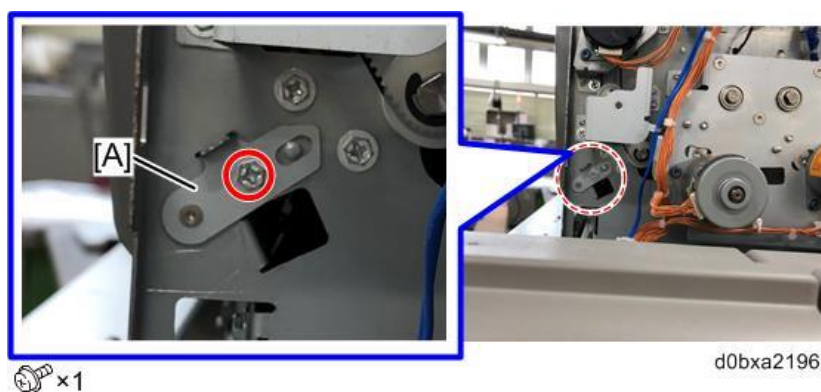


**4.** Attach the cover [A].



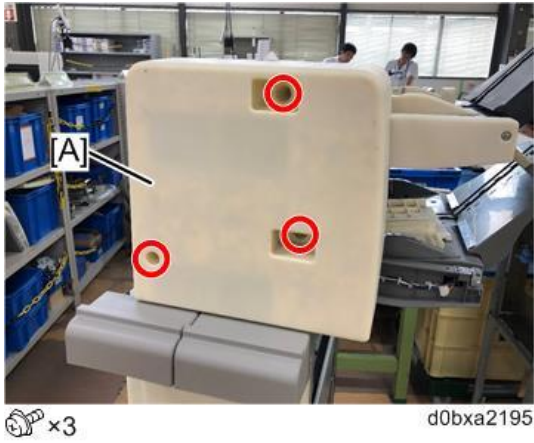
**5.** Attach the bracket [A]. (M4x8)

When attaching the bracket, align the hole of the bracket to the hole of the machine.

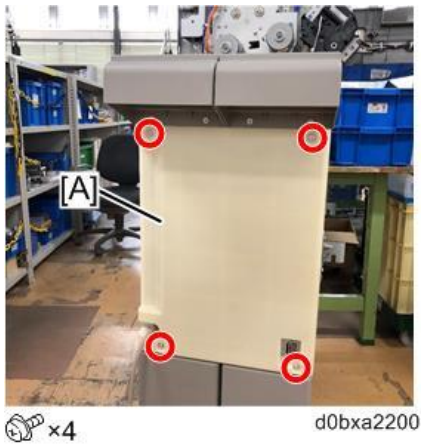


## 2. Installation

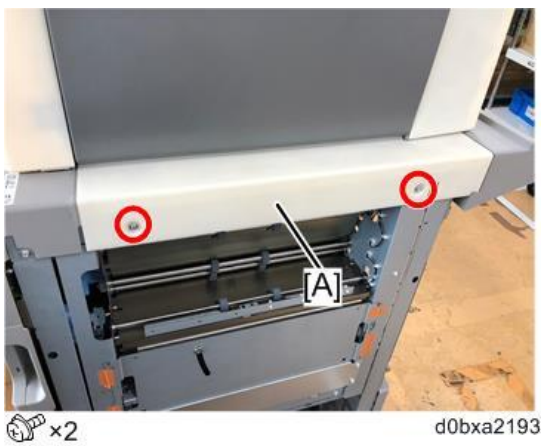
### **6.** Attach the cover [A]. (M4x8)



### **7.** Attach the cover [A]. (M4x8)



### **8.** Attach the cover [A]. (M4x8)

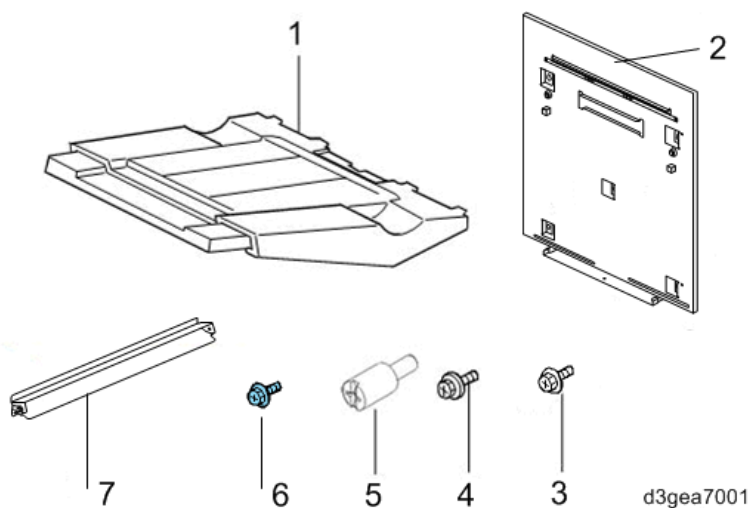


## Shift Sort Tray SH5000 (D3GE)

### ★ Important

- The shift sort tray and other optional units must be installed in the correct order, otherwise SC may occur
- Before installing, refer to [Options](#).

### Accessories



No.	Description	Q'ty
1	Upper Tray	1
2	Coupling Bracket (Main)	1
3	Screws M3x6	3
4	Screws M4x8	3
5	Knob Screw	1
6	Tapping Screws M3x6	2
7	Guide Plate (Use when not installing the decurl unit option.)	1

### Installation

#### ⚠ CAUTION

- Before installing, turn the power OFF and unplug the power plug from the outlet.
- Performing the procedure with the power on could result in an electric shock or could cause a malfunction.

## 2. Installation

### 1. Remove the filament tapes.

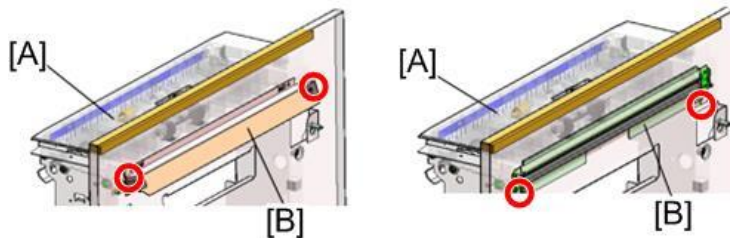


d0bxa2184

### 2. Install the guide plate [B] to the bracket [A] provided with the machine (M3×6: x2).

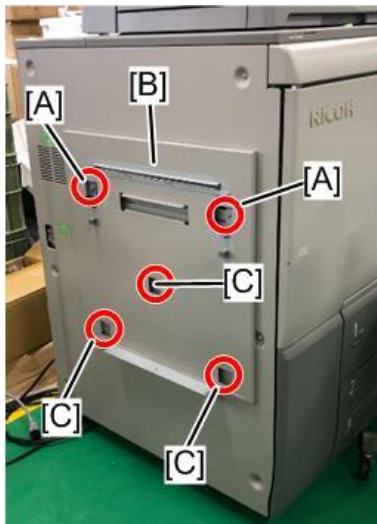
If the decurl unit is installed as shown in the picture on the right below, attach the guide plate provided with the decurl unit.

If the decurl unit is not installed as shown in the picture on the left below, attach the guide plate provided with the slide sort tray.



d0bxa2186

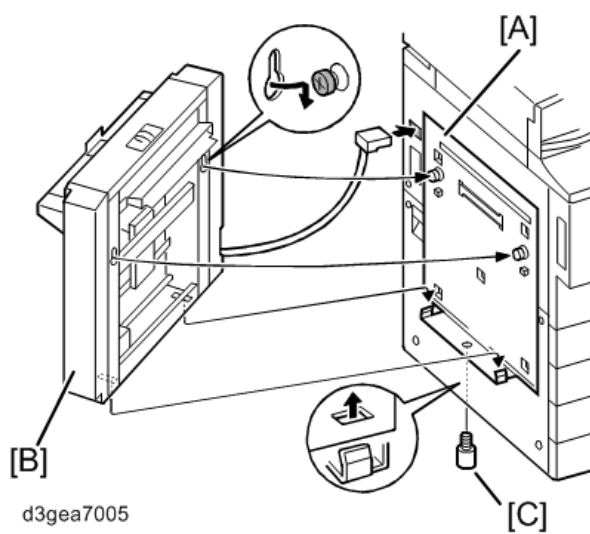
### 3. Attach the screws [A] (M4×8). Hook the bracket [B] onto the screws [A], and fix the bracket with the screws [C] (M3×6). (M4×8: x2, M3×6: x3)



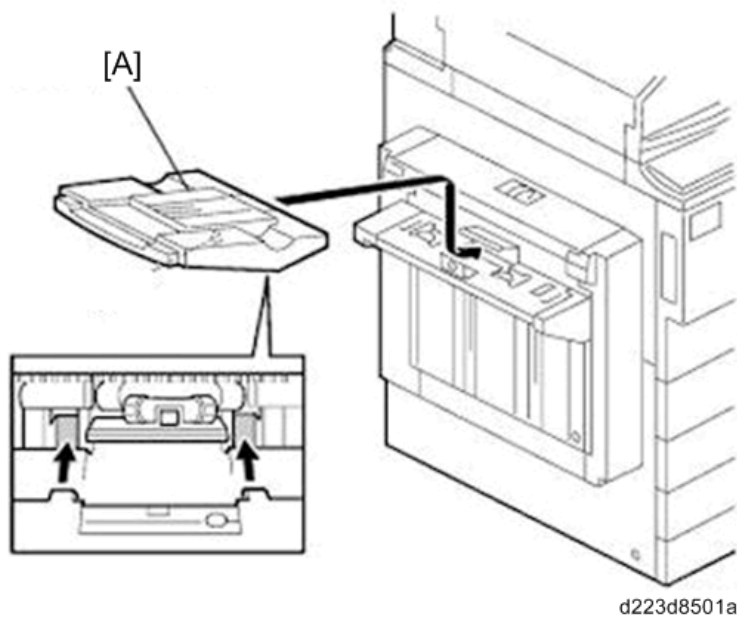
d0bxa2185



- 4.** Attach the shift sort tray [B] to the bracket [A] using the thumb screw [C] (🔩x1).



- 5.** Attach the shift tray [A] (M4×8:🔩x1).



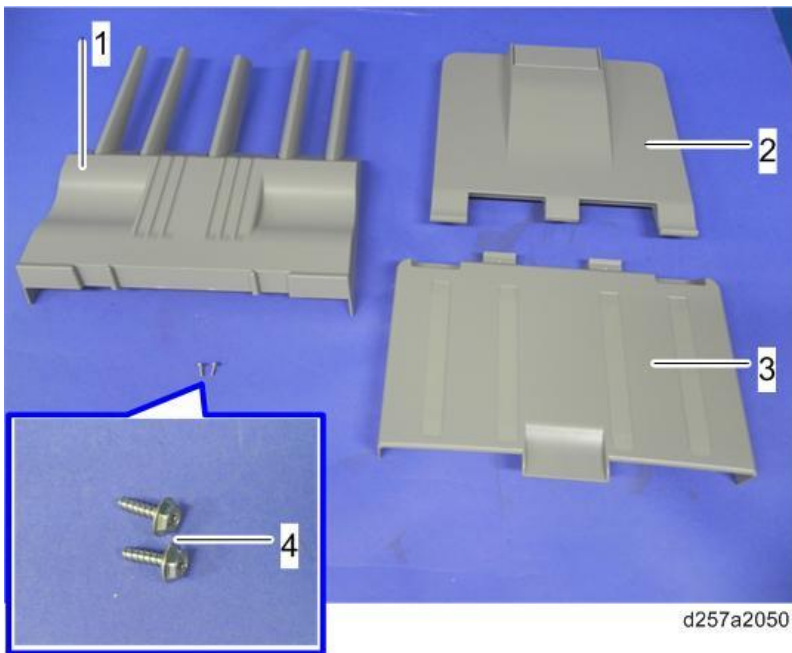
## 2. Installation

# SR5000 series Output Tray for Banner Sheet Type S6 (D3CC)

## Accessories

Check the quantity and condition of the accessories against the following list.

No	Description	Qty
1	Support Plate	1
2	Extension Tray	1
3	Relay Tray	1
4	Tapping Screw: 3 x 10	2



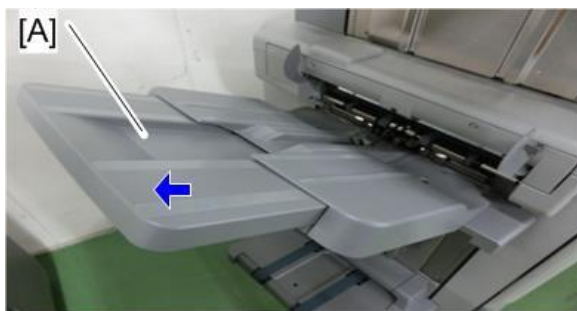
## Installation

### **⚠ CAUTION**

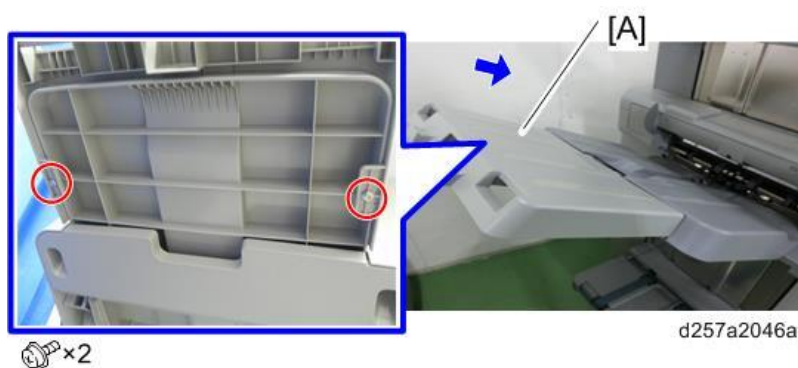
- Always switch the machine off and unplug the machine before doing the following procedure.

### Attaching the Banner Sheet Tray to the Finisher

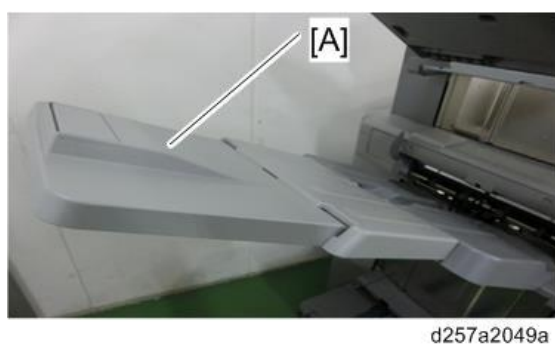
1. Pull out the extension [A] of the finisher's shift tray.



- 2.** Attach the relay tray [A].



- 3.** Attach the extension tray [A].



- 4.** Use the shift tray emergency stop switch of the finisher to lower the shift tray, and then attach the support plate [A] provided with this option.

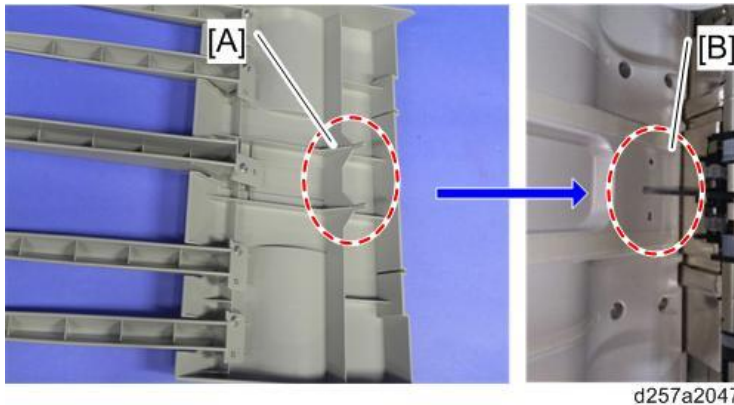
Raise the shift tray by using the shift tray emergency stop switch after attaching this support plate.



## 2. Installation

### Note

- Insert the pins [A] of the support plate into the holes [B] in the shift tray.



- The way of attaching the banner sheet tray to the shift tray 1 is same as to the shift tray 2.
- The procedure above is an example of shift tray 2.

### SP Setting

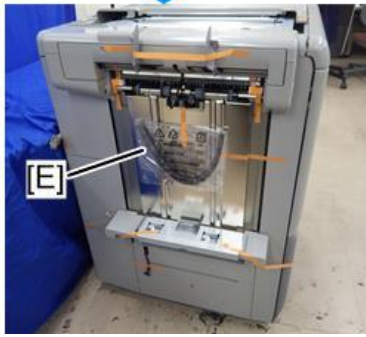
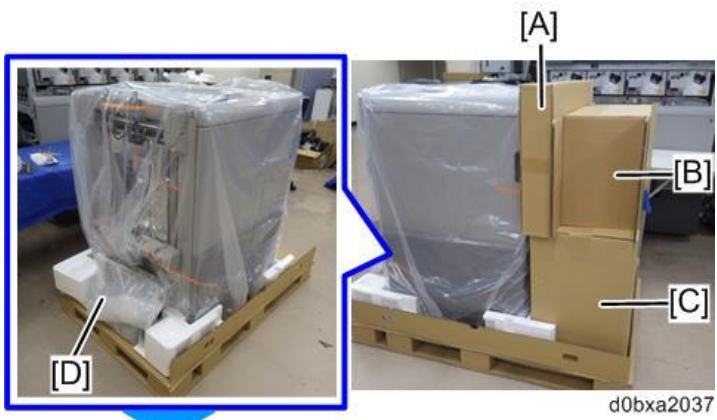
---

After starting up the main machine, change the SP setting to let the banner sheet tray be recognized.

- 1.** Enter the SP mode.
- 2.** Change SP5-150-002 from [0] to [1].
- 3.** Exit the SP mode.
- 4.** Restart the main machine.

## Finishers SR5110/SR5120 (D3G9/D3G8)

### Accessories



## 2. Installation

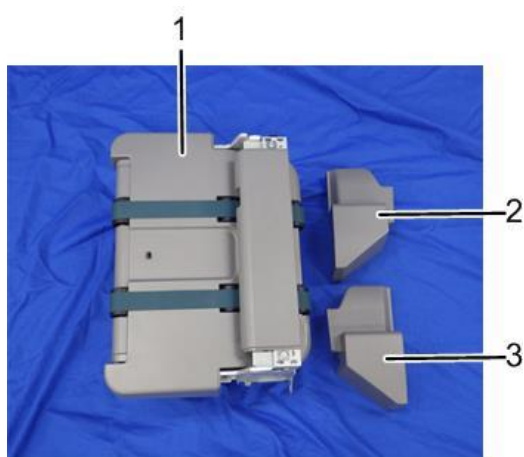
### Shift Tray/Other Parts [A]



No.	Description	Q'ty
1	Shift Tray	2
2	Entrance Guide Plate	1
3	Ground Plate	1
4	Screws M3x8	9
5	Screws M3x6 (Rounded End)	2
6	Screws M3x6	2
7	Screws M4x14	4
8	Cover for Overturning Prevention Stand	1
9	Bracket	1
10	Leveling Shoes	5
11	Power Cord	1
-	Tapping screw 3x8	1
-	Tapping screw 4x8 (Rounded End) *1	6

\*1: This screws are provided in another bag that differ from the bag containing No.4 to No.7 screws.

## Booklet Tray [B] (Booklet Finisher SR5120 Only)



d0bxa2039

No.	Description	Q'ty
1	Booklet Tray (SR5120)	1
2	Rear Cover	1
3	Front Cover	1
-	Screws M4x14	2
-	Screws M3x8	4

## Upper Shift Unit [C]

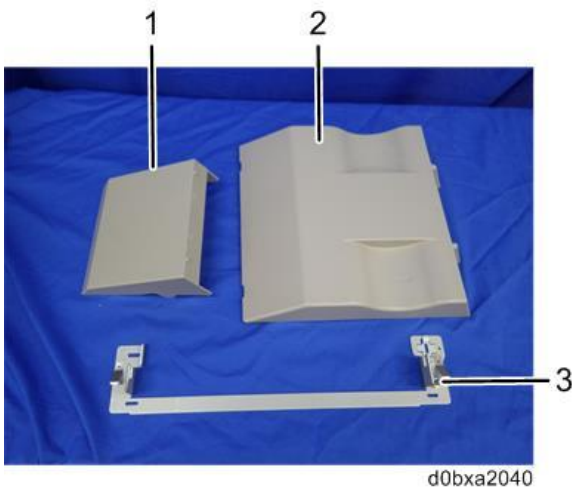


d0bxa2041

No.	Description	Q'ty
1	Upper Shift Unit	1

## 2. Installation

### Auxiliary Tray/Joint Bracket [D]



No.	Description	Q'ty
1	Auxiliary Tray – Z-Fold Paper	1
2	Shift Tray	1
3	Joint Bracket	1

### Sponge Strip [E]



No.	Description	Q'ty
1	Sponge Strip	1

## Installation

### **⚠ CAUTION**

- Make sure that the main machine is switched off and that its power cord is disconnected before doing the following procedure.
- Packing materials, fixing brackets, and others prevent the machine from moving during transport. When the machine is transported to another location, the materials should be reattached.



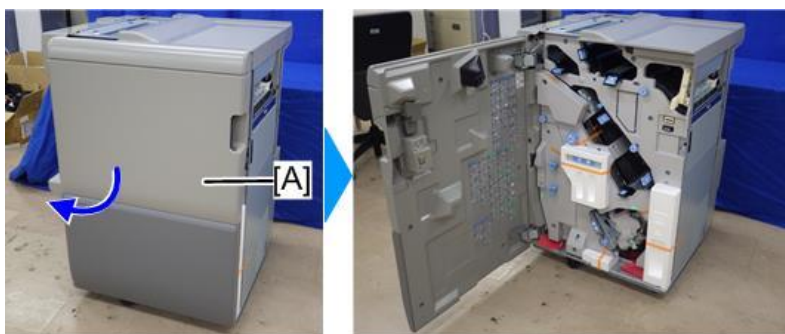
Unpacking

1. Remove the tapes from the exterior section.



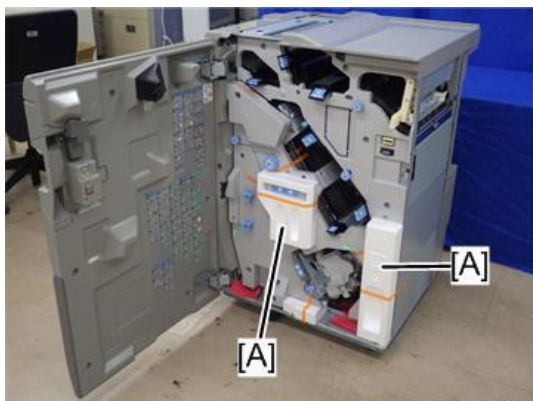
d0bxa2001

2. Open the front door [A].



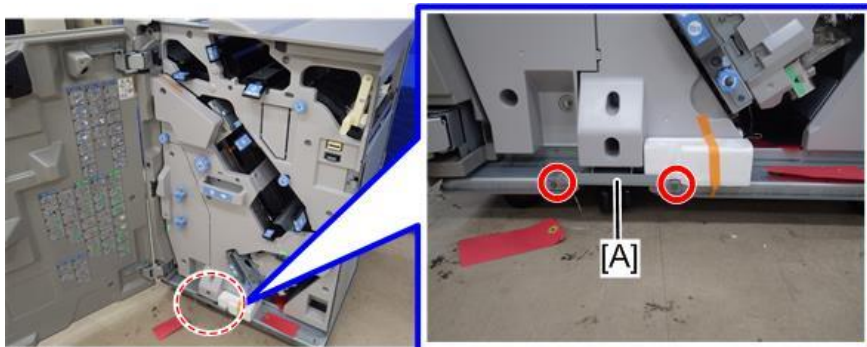
d0bxa2002

3. Remove the tapes and the cushions [A] inside the machine.



d0bxa2003

4. Remove the fixing bracket [A] with a tag.

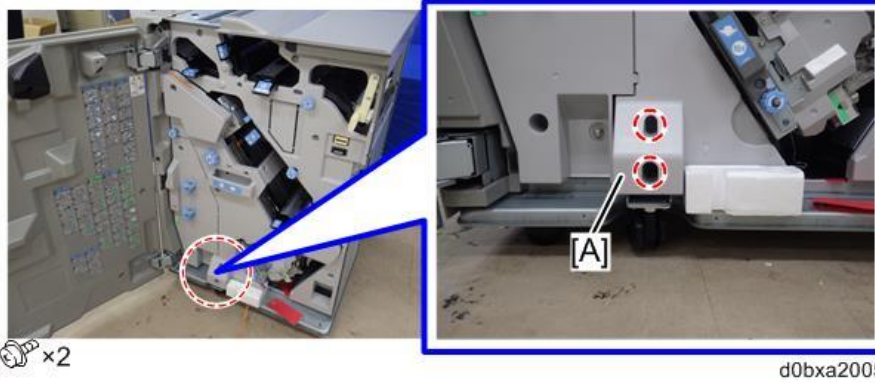


🔧 ×2

d0bxa2004

## 2. Installation

- 5.** Loosen the screws of the caster cover [A].



- 6.** Push the caster [A] down until it touches the floor.

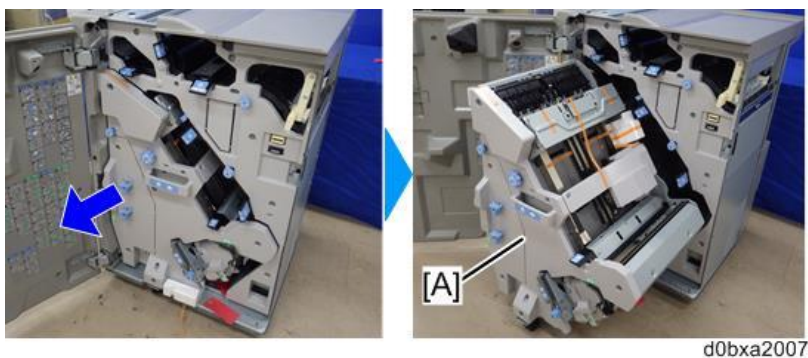


- 7.** With the caster touching the floor, tighten the caster cover screws.

**Note**

- This relieves stress on the rails of the stacker/stapler unit when it is pulled out of the machine.
- If the finisher is raised until the caster leaves the floor after you adjust the height of the finisher, adjust the caster position at the same time. Otherwise, the slide rails may be distorted when the stapler unit is pulled out.

- 8.** Pull the stacker/stapler unit [A] out until it stops.



- 9.** Remove the tapes and cushions.



d0bxa2008

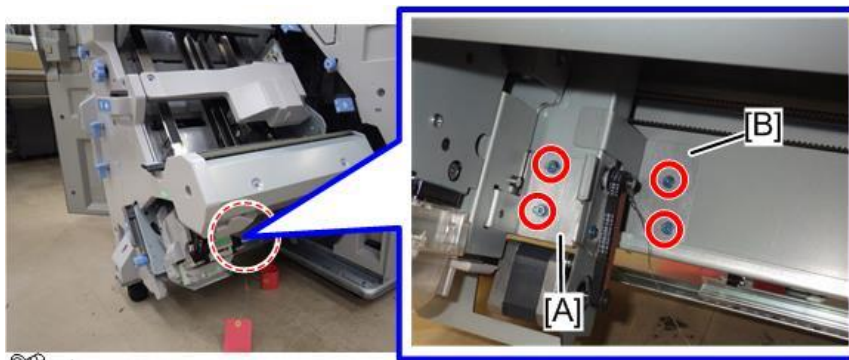
- 10.** Remove the fixing bracket [A] with a tag.



 x2

d0bxa2009

- 11.** Remove the fixing brackets [A] and [B] with tags.



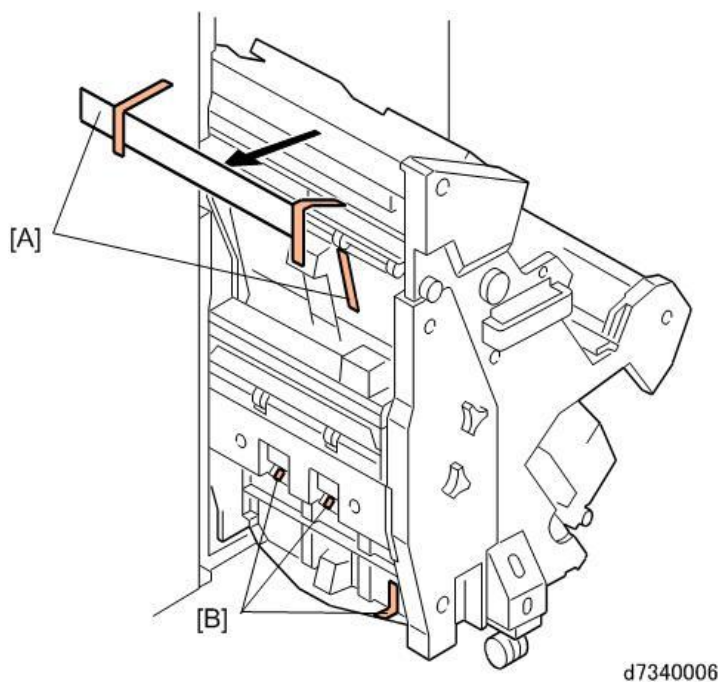
 x4

d0bxa2010

- 12.** Remove the tapes and the retainer [A] on the left upper side of the stacker/stapler unit and the

## 2. Installation

tapes [B] on the lower side of the unit.



**13.** Remove the tapes and cushions on the left side.



**14.** Remove the tapes from the power cord on the rear side.



## Installing the Upper Shift Unit

1. Remove the top middle cover [A].



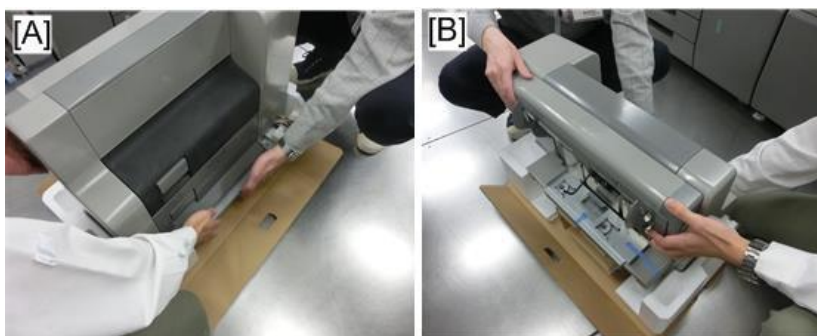
 x1

2. Open the cover of the box, and then remove the foaming agent to set the state below.



d0bxa2291

3. Take the upper shift unit out of the box by two persons.  
Grasp the base section [A] by one hand and support the exterior part by the other hand [B].

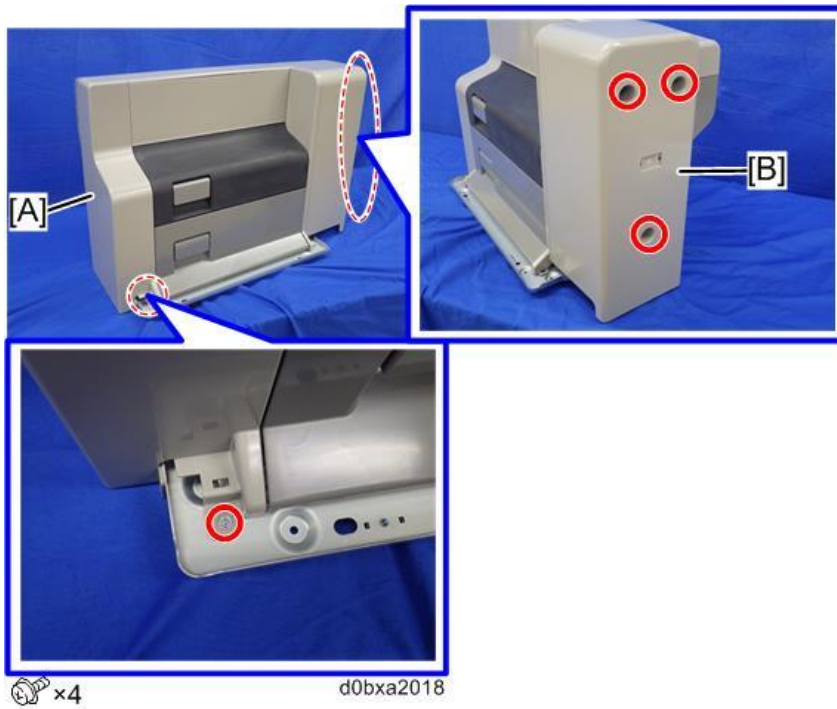


d0bxa2292

4. Lay the upper shift unit on the flat place, and then remove the front cover [A] and the rear cover [B]

## 2. Installation

from the upper shift unit.



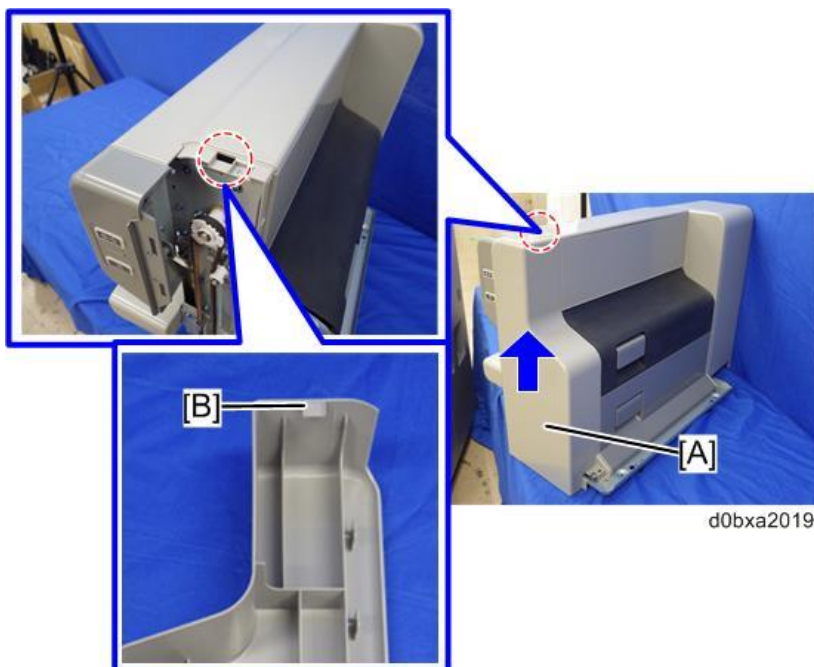
### Note

- When removing the cover of the upper shift unit, be careful not to overturn the unit. To prevent the unit from overturning, card boards are attached to the unit.

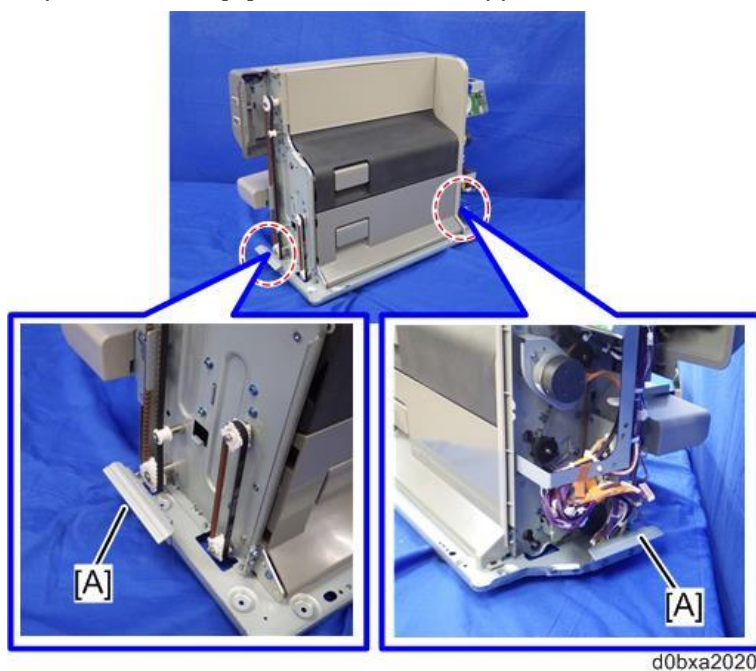


d0bxa2293

- Remove the front cover [A] by displacing it up to remove the hook [B].



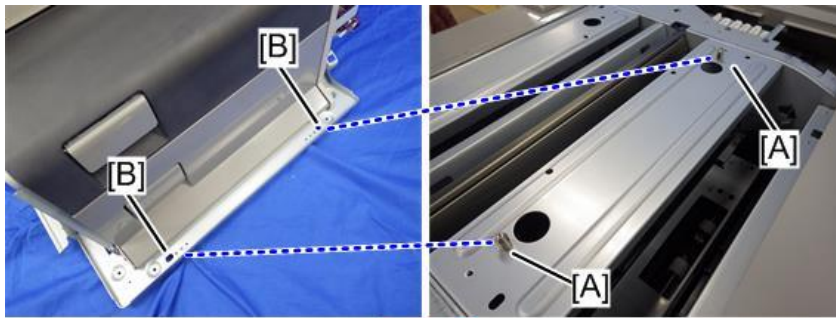
- 5.** Remove the card boards of the upper shift unit.
- 6.** Grip the handles [A], and then lift the upper shift unit.



- 7.** Align the cutouts [B] of the upper shift unit with the positioning pins [A] of the finisher to install the

## 2. Installation

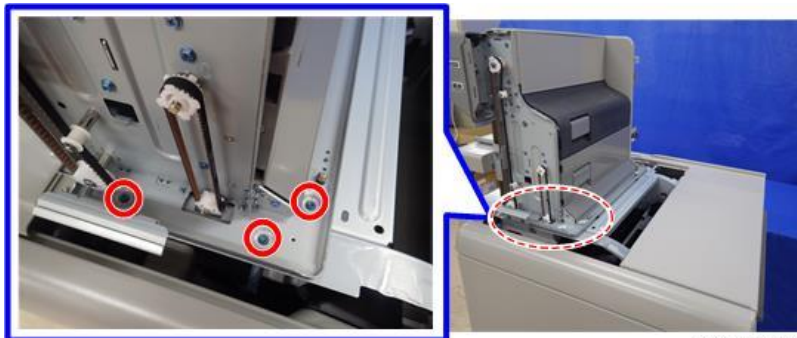
upper shift unit.



d0bxa2021

### 8. Fix the upper shift unit with screws. (M4×8)

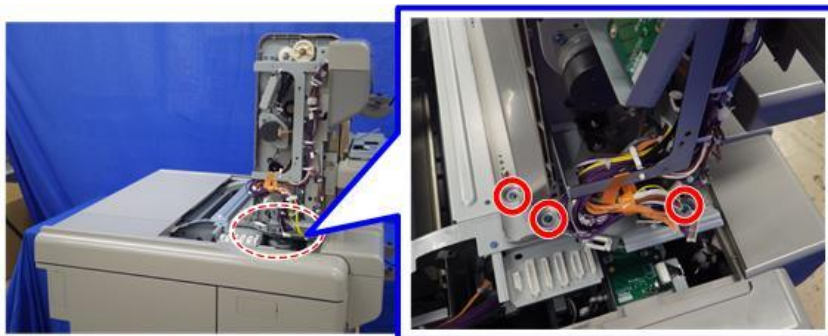
**Front Side**



 x3

d0bxa2022

**Rear Side**

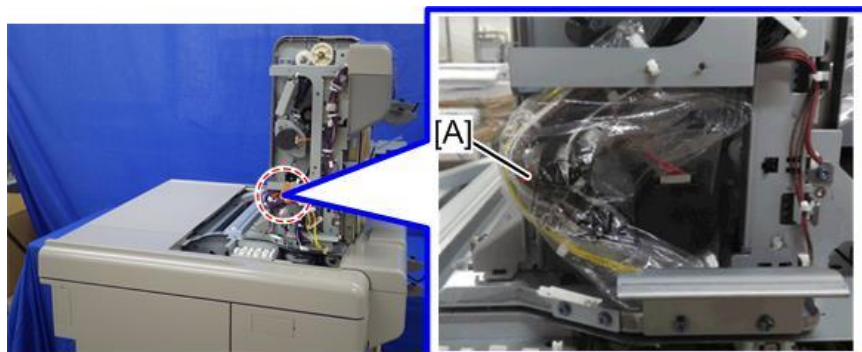


 x3

d0bxa2023

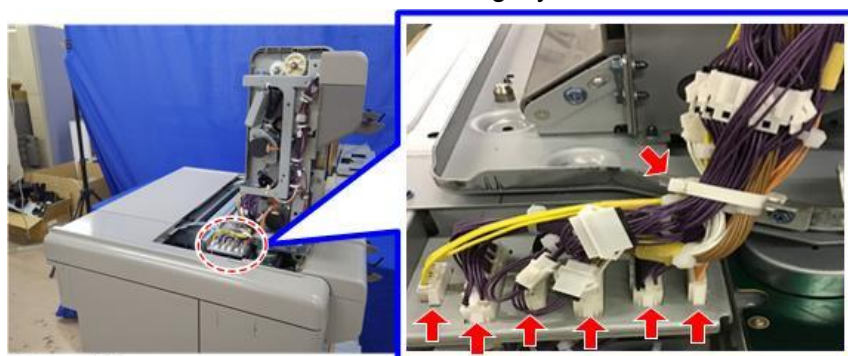


**9.** Remove the plastic bag [A] for the harness.



d0bxa2024

**10.** Connect the connectors and clamp them.  
Push the connectors to make them fit tightly.



d0bxa2025

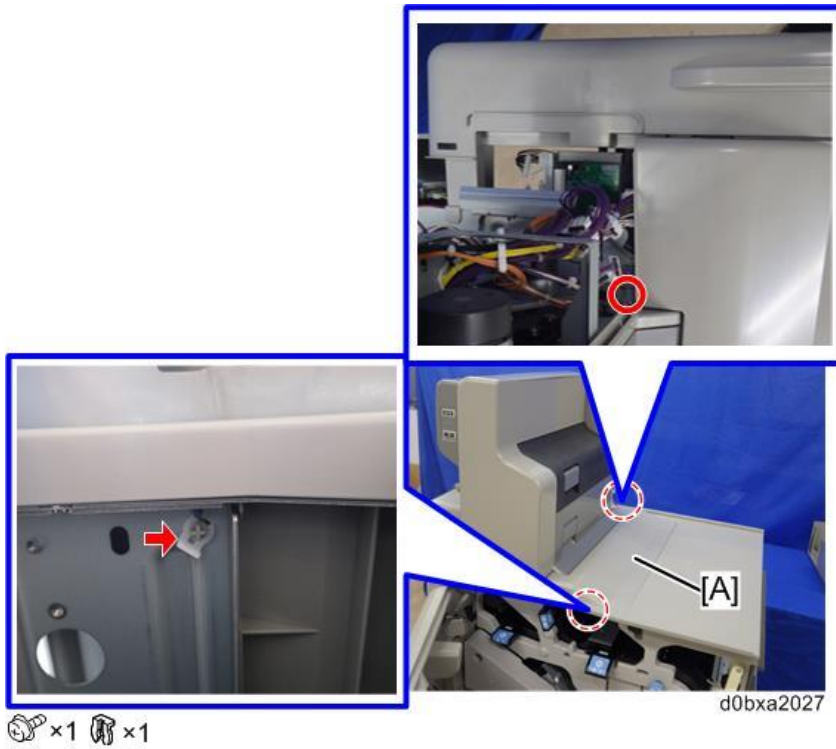
**11.** Attach the front cover [A].



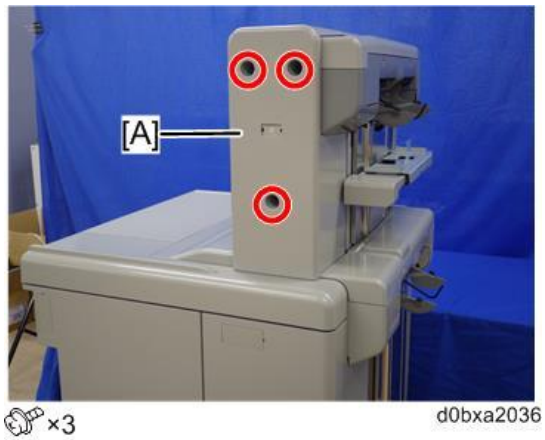
d0bxa2026

## 2. Installation

**12.** Attach the top middle cover [A]. (M3×8 Rounded End)

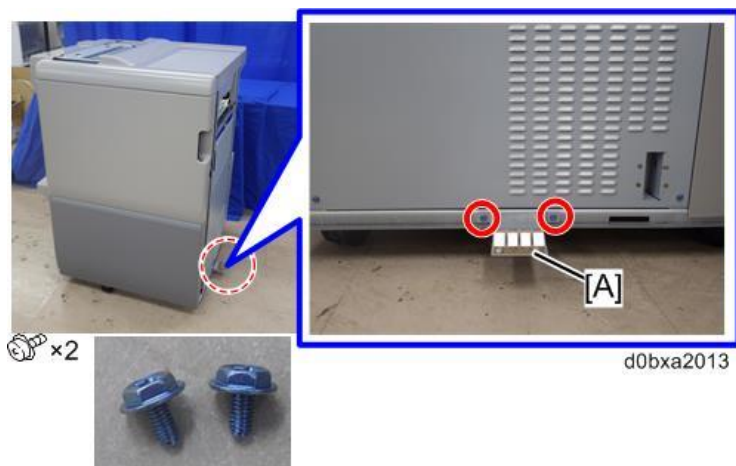


**13.** Attach the rear cover [A].



## Attaching the Parts

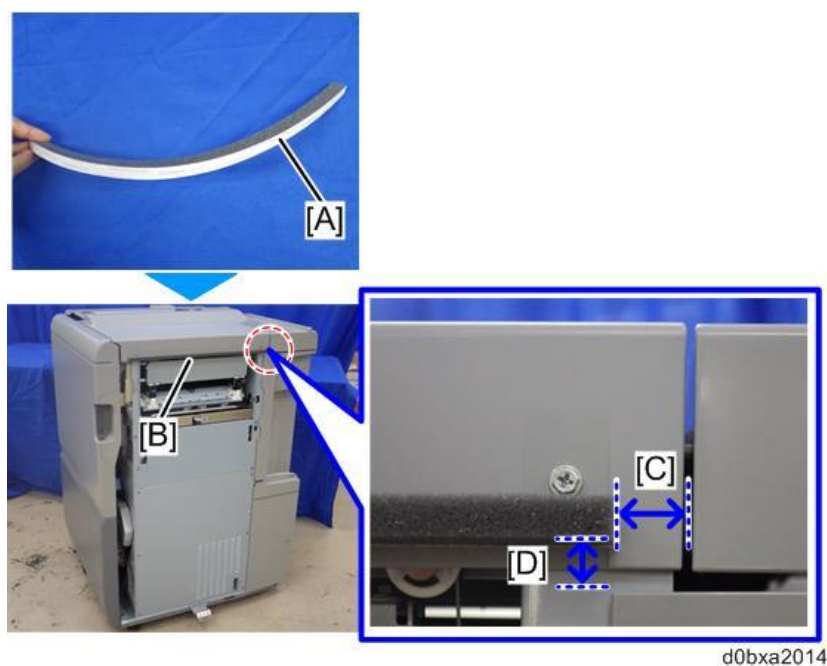
- 1.** Attach the ground plate [A]. (M3×6)



- 2.** Peel off the tape [A], and then attach the sponge strip [B] to the top right edge of the finisher.

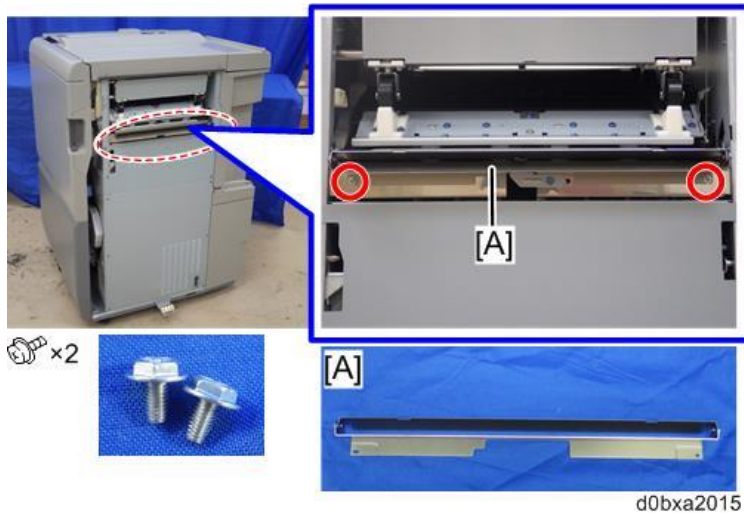
[C]: from 10 to 15 mm

[D]: from 0 to 5 mm



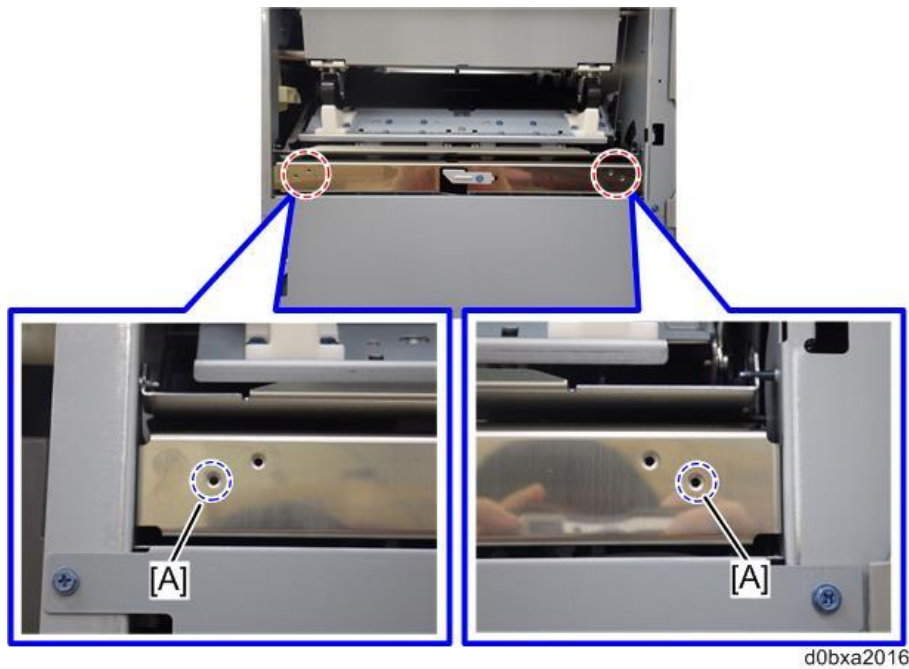
## 2. Installation

### 3. Attach the entrance guide plate [A]. (M3×6 Rounded End)

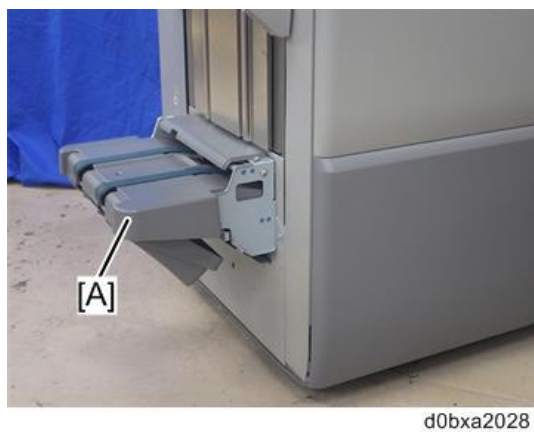


#### Note

- Use the holes [A] to fix the entrance guide plate.

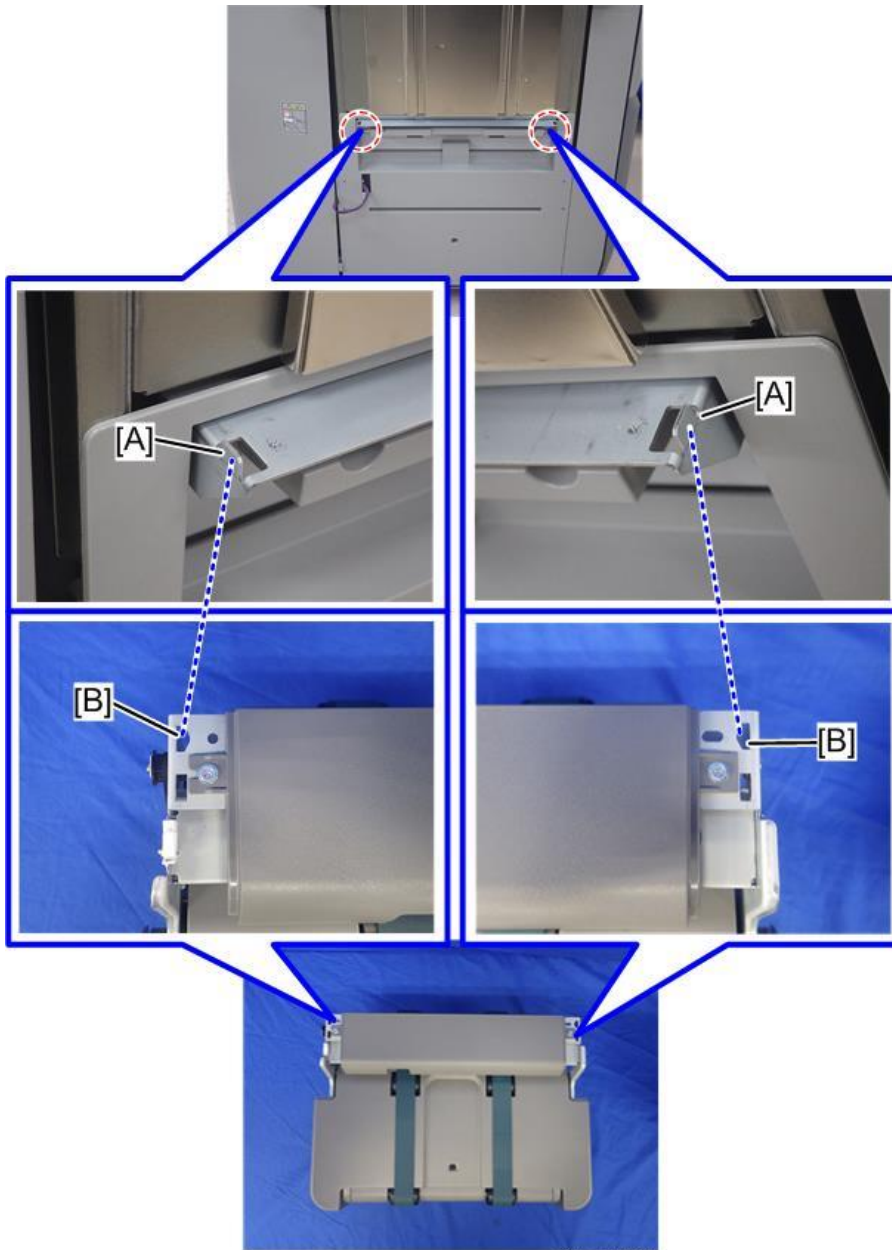


### 4. Set the booklet tray [A] to the finisher.



**Note**

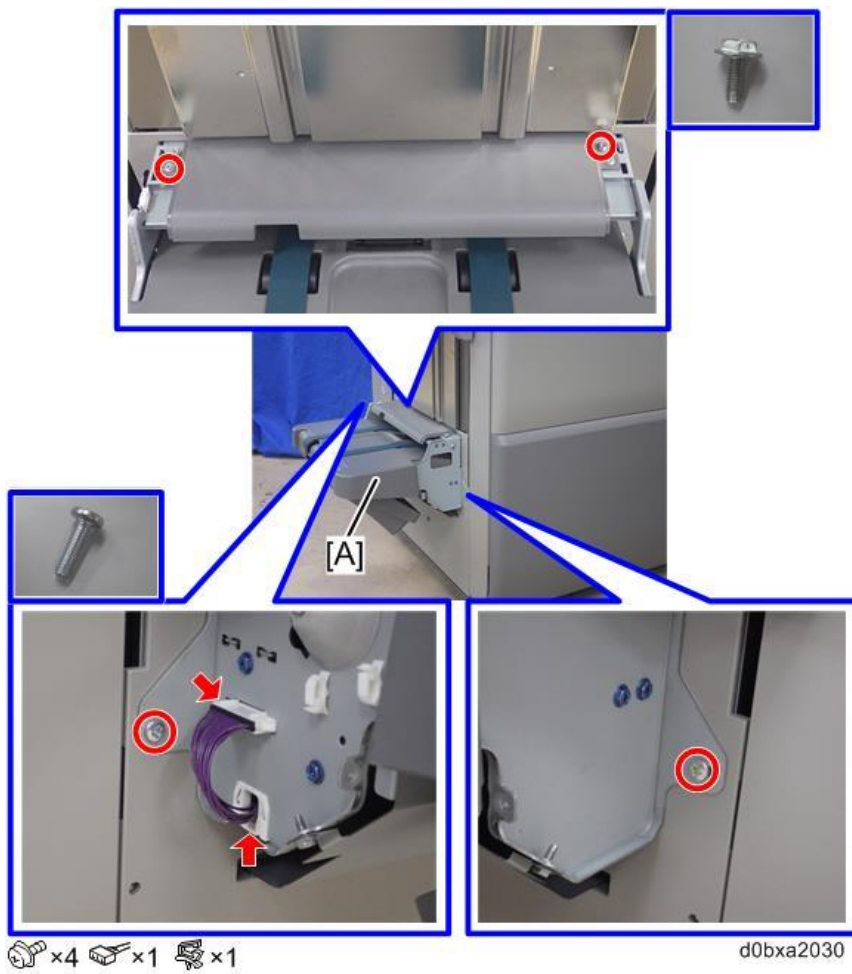
- Hook the hooks [A] of the finisher to the cutouts [B] of the booklet tray.



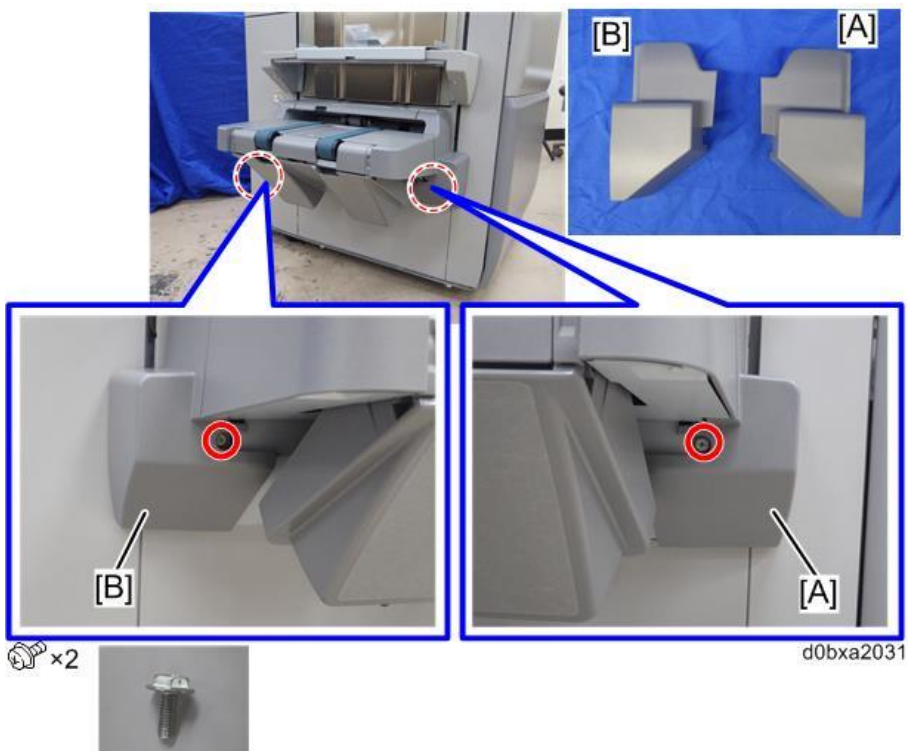
d0bxa2029

## 2. Installation

### 5. Fix the booklet tray [A]. (M3×8, M4×14)

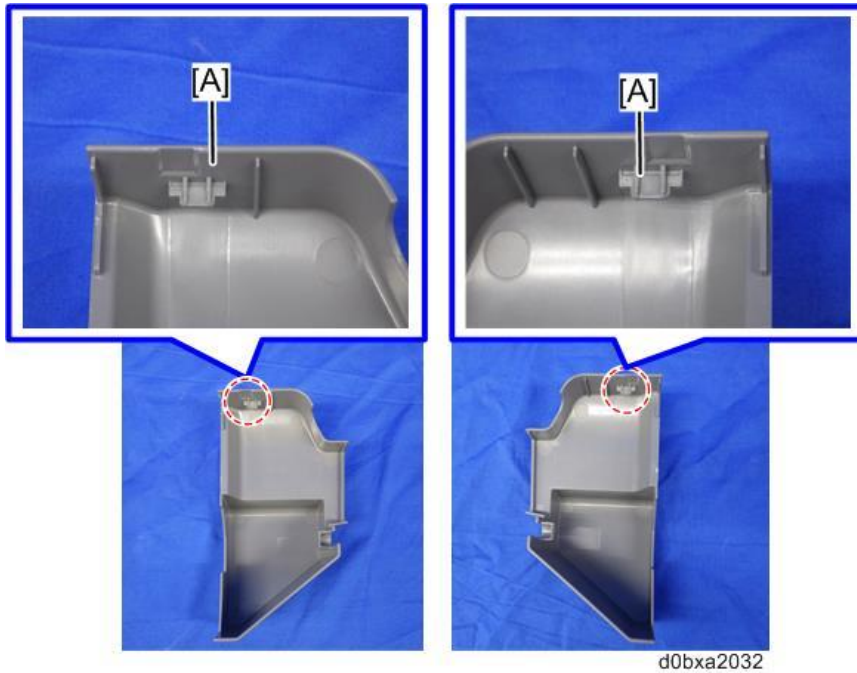


### 6. Attach the front cover [A] and the rear cover [B]. (M3×8)

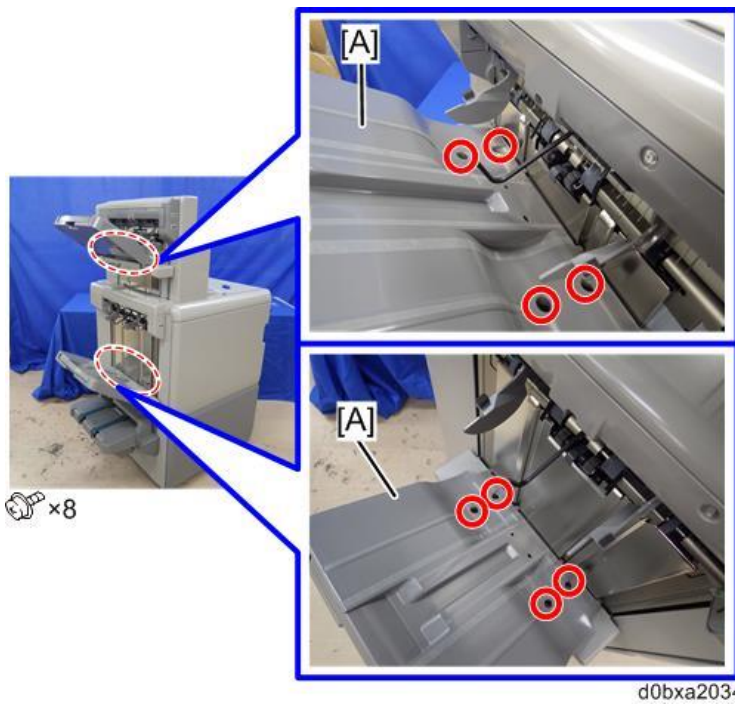


**Note**

- The Covers have hooks [A]. Attach them carefully.



**7.** Attach the shift trays [A]. (M3×8)



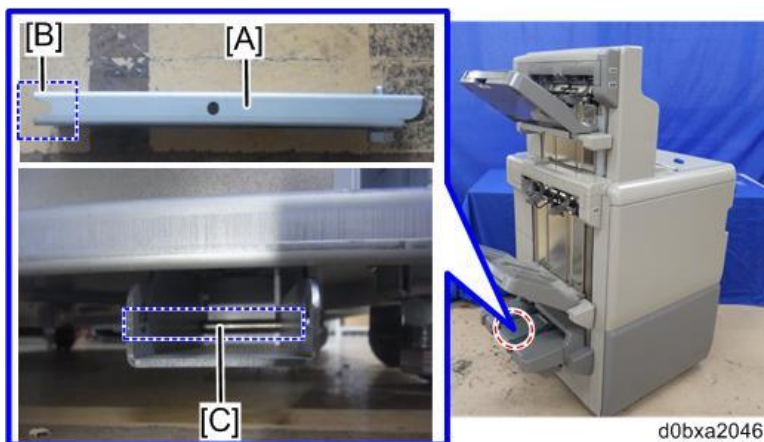
**Note**

- The tray base of the upper tray is higher than that of the lower tray.
- If tightening the screws is difficult, lower the tray base to the lowest position, and then attach the shift tray.

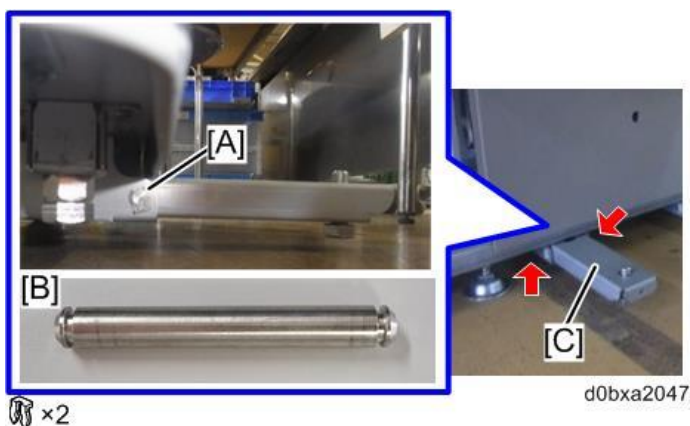
**8.** Attach the overturning prevention stand [A] so that the finisher pin [C] fits into the cutout [B] of the

## 2. Installation

overturning prevention stand.

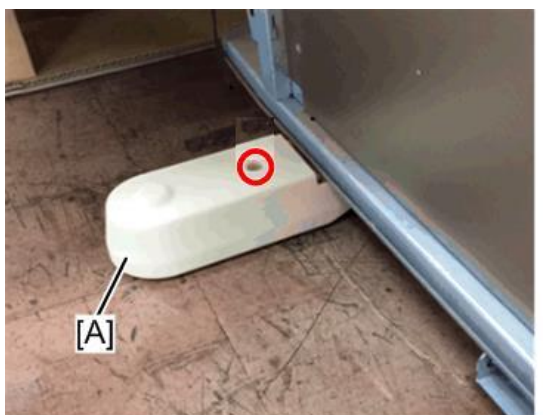


- 9.** Insert the pin [B] into the hole [A] that formed when the hole of the overturning prevention stand aligns with the hole of the finisher, and then fix the overturning prevention stand [C] with the clamps.



 x2

- 10.** Attach the stand cover [A] to the overturning prevention stand. (M3×8)



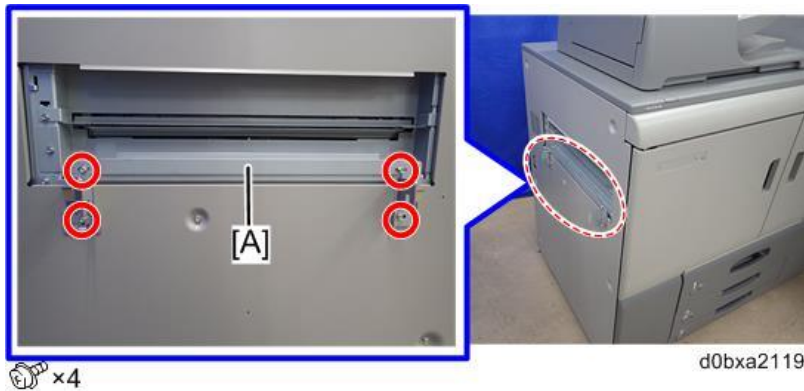
 x1

d0bxa2048



## Connection Procedure

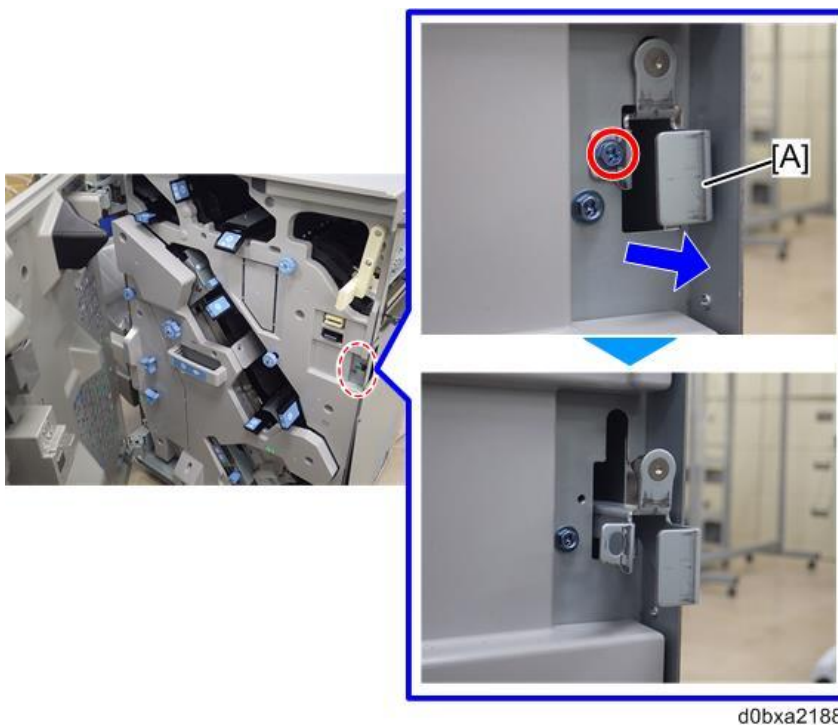
1. Fix the joint bracket [A] to the upstream unit. (M4×14)



**Note**

- To prevent interference with the Decurl Unit (if it is installed), remove and use the Decurl Unit screws to attach the upper left and right corners of the bracket. (Screw x2)

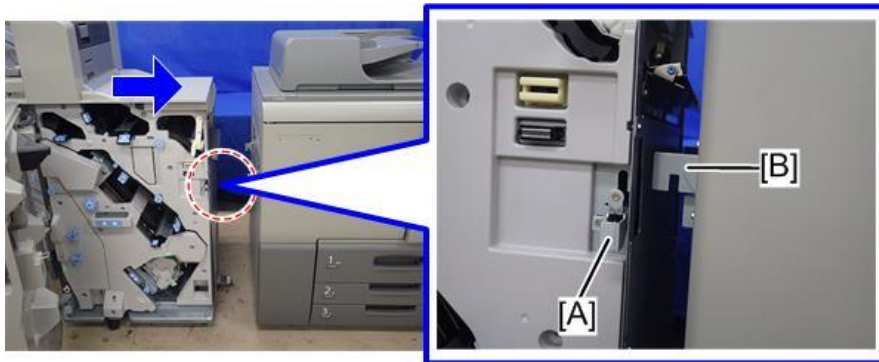
2. Open the front door of the unit.
3. At the front right corner, Pull the lock bar [A] toward you until it stops. (M3×6)  
Keep this screw.



4. Slowly push the unit towards the left side of the upstream unit (or main machine) so that the lock

## 2. Installation

bar [A] is directly and squarely under the arms of the joint bracket [B].



d0bxa2189

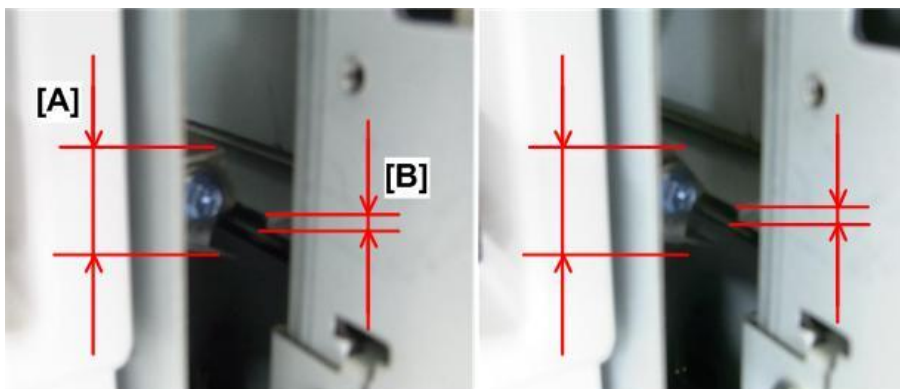
**5.** Attach the I/F cable [A] to the upstream unit.



d0bxa2191

**6.** Push the finisher close to the side of the upstream unit.

**7.** Make sure that the height of the finisher entrance [A] is at the same height as the upstream unit's paper exit [B].

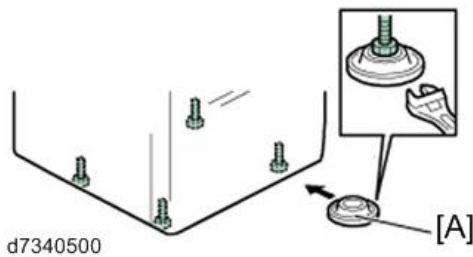


d7340013

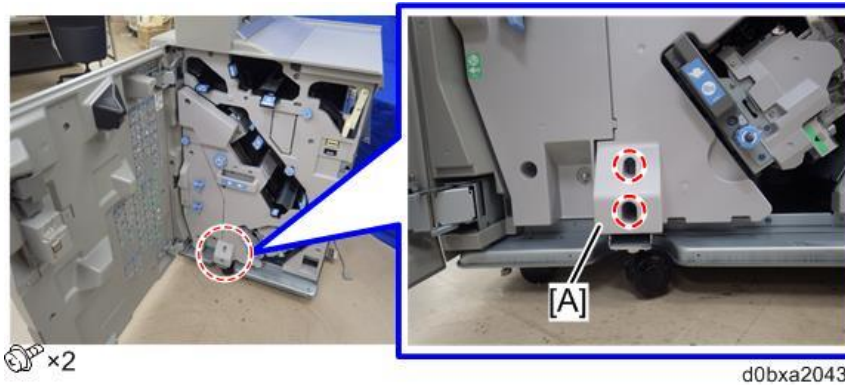
**8.** Push the finisher closer to the side of the upstream unit, and then once again confirm that the height of the finisher entrance still matches the height of the upstream unit exit.

**9.** If the exit and entrance are not at the same height, adjust the height of the finisher by adjusting the leveling bolts. First adjust the four legs of the finisher, attach the holder [A] to the overturning

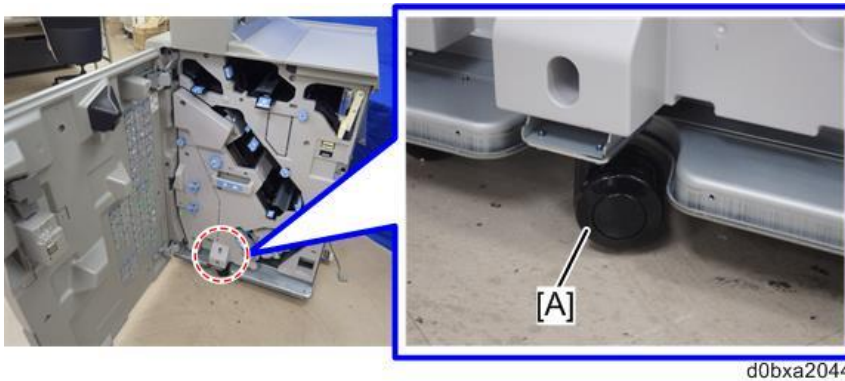
prevention stand, and then adjust the overturning prevention stand.



**10.** Loosen the screws of the castor cover [A].



**11.** Push the castor [A] down until it touches the floor.



**Note**

- This relieves stress on the rails of the stacker/stapler unit when it is pulled out of the machine.
- If the finisher is raised until the castor leaves the floor after you adjust the height of the finisher, adjust the castor position at the same time. Otherwise, the slide rails may be distorted when the stapler unit is pulled out.

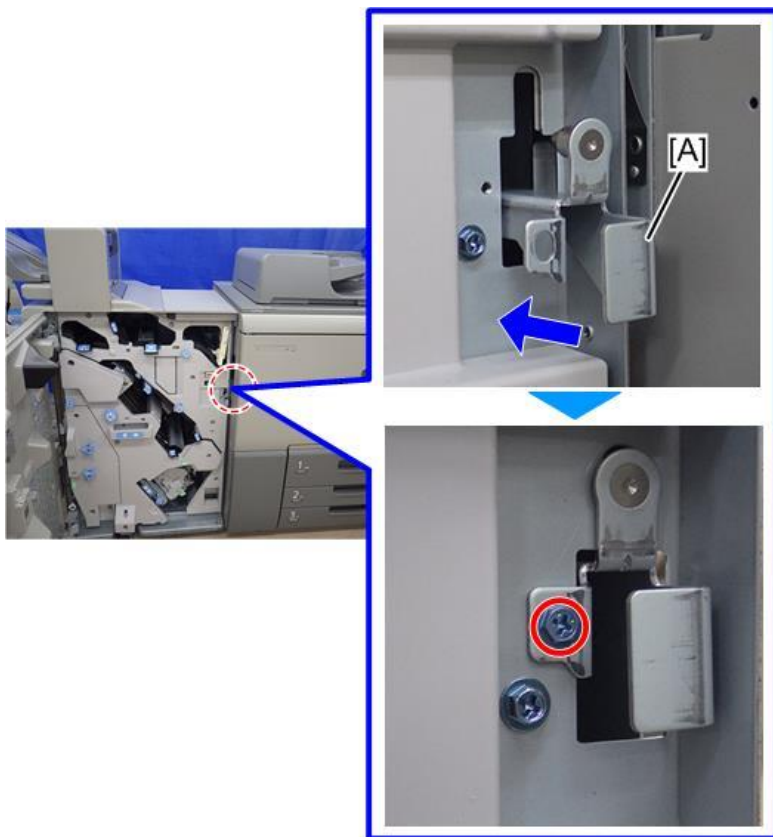
**12.** With the castor touching the floor, tighten the castor cover screws [A].

**13.** Push the finisher against the side of the upstream unit.

**14.** Push the lock bar [A] in completely so that it slides up into the notches in the arms on both ends of

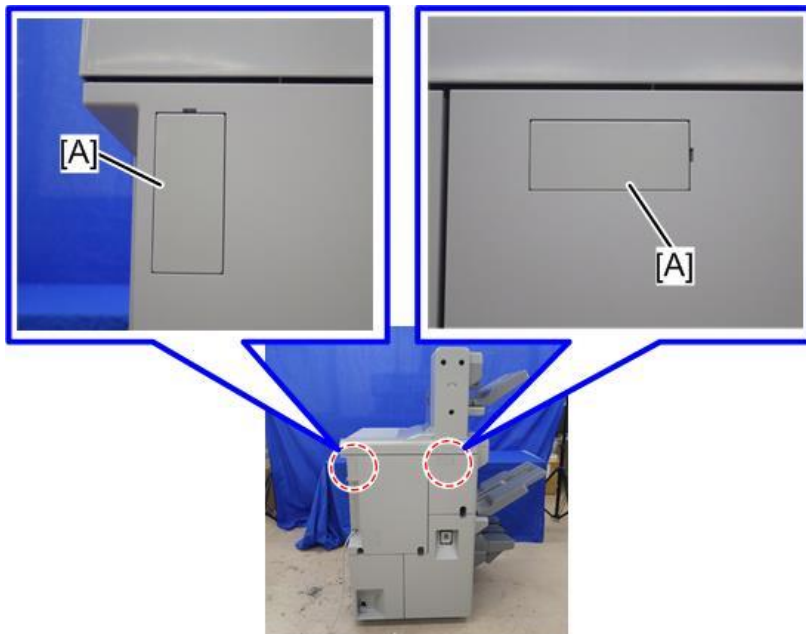
## 2. Installation

the joint bracket, and then fix it. (⚙️ x1)



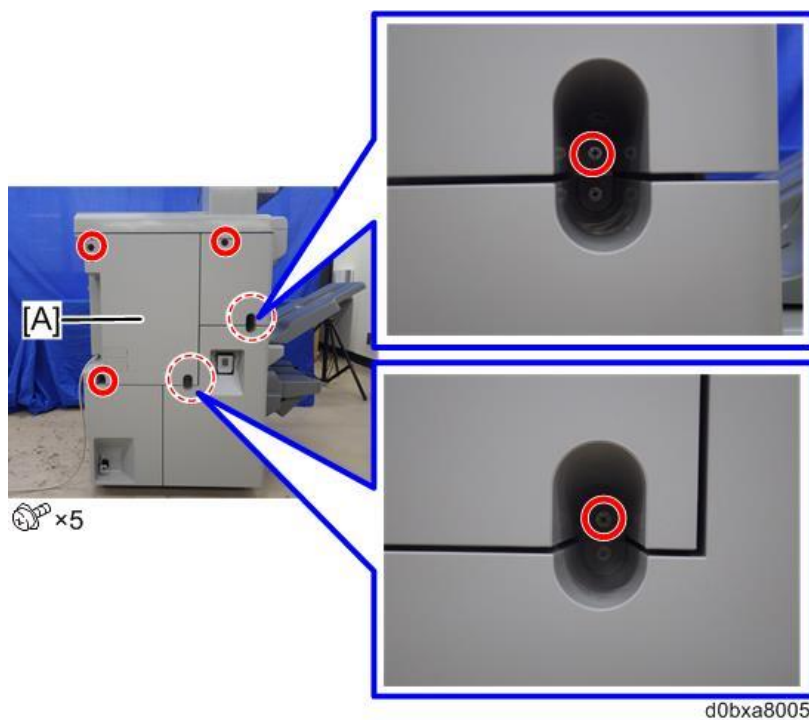
d0bxa2190

**15.** Remove the caps [A] of the rear upper cover of the finisher. (▼ x2)

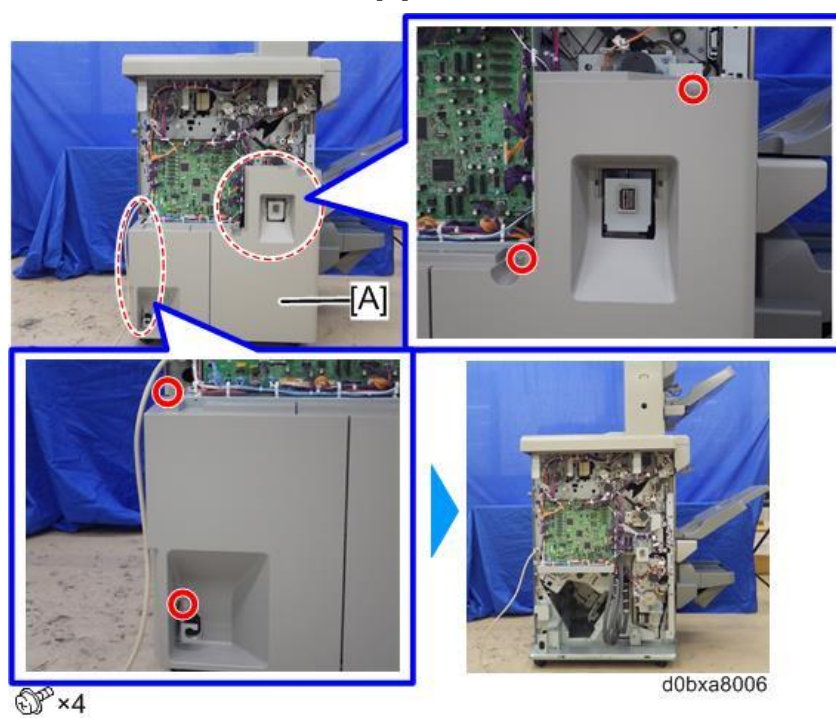


d0bxa8004

**16.** Remove the rear upper cover [A].



**17.** Remove the rear lower cover [A].

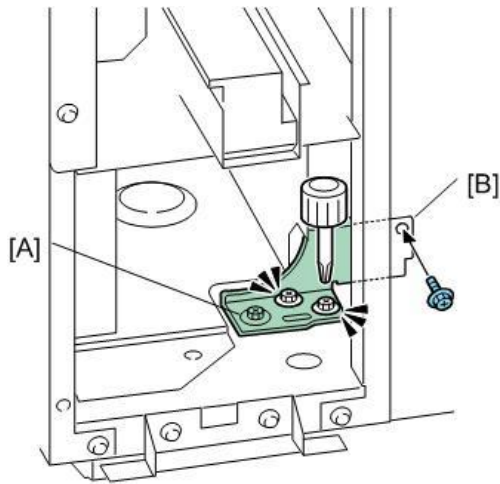


**18.** Loosen the screws of the bracket [A].

**19.** Fasten the bracket to the upstream unit at [B]. (🔩x1)

## 2. Installation

**20.** Tighten the screws. (⌀x3)



d7340015

**21.** Reattach the rear upper cover and the rear lower cover.

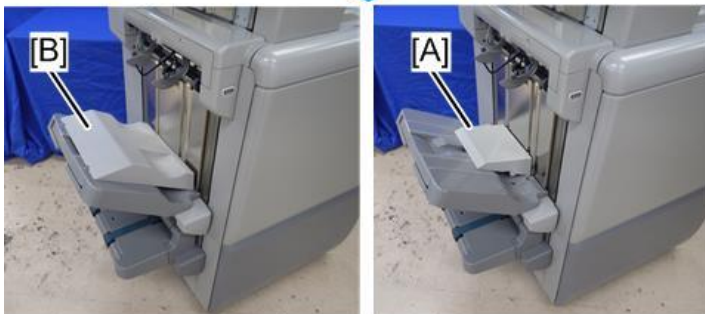
### Auxiliary Tray

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**1.** Attach an auxiliary tray [A] or [B] to the shift tray.

There are two types of the auxiliary tray. Use them in accordance to the use.

- Z-fold auxiliary tray [A]: If a Z-folded paper is supplied from the multi folding unit.
- Auxiliary tray for thin coated paper [B]: Paper size is 420.1 mm or more. Paper type is thin paper whose weight is 64g/m<sup>2</sup> or less or thin coated paper whose weight is 80g/m<sup>2</sup> or less.



d0bxa2033

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## Checking Skew

---

### Inspection You Perform After Installing the Finisher

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1. Remove the holding plate [A] attached to the inlet of the rear side. (⊖ x1)



2. Connect the power cord [B], and then attach the holding plate [A]. (⊕ x1)



3. Set A3/DLT papers to the second tray of the main machine, and then copy several times.
4. If there are skew in a paper, perform the adjustment when it is necessary. ([Skew and Side-to-Side Registration](#))

---

## Vertical Skew Adjustment

---

Do this adjustment only if the edges of folded booklets are not even.

Switch the main machine and do a test run for booklet folding with either A3 or DLT paper.

### Note

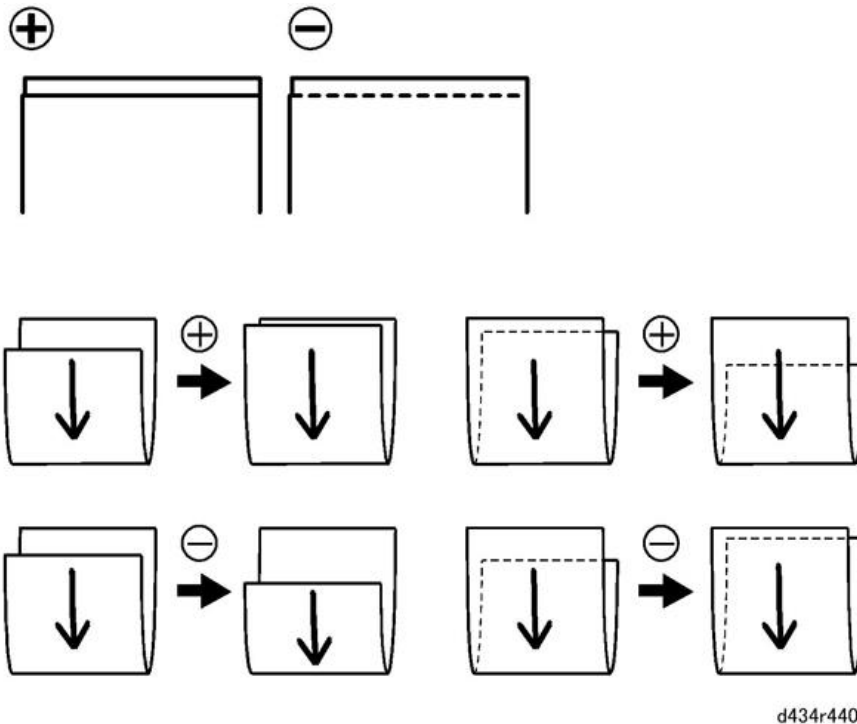
- This procedure shows you how to test and adjust the fold position for A3/DLT paper.
- This same adjustment can be done for other paper sizes as well with **SP6201**.

Look at the paper and determine what kind of skew (if any is present).

1. Look at the paper and refer to the diagram below to determine in which direction the fold position is

## 2. Installation

shifted.



**2.** Measure the amount of position shift.

**3.** Enter the SP mode

- Europe, Asia: Use **SP6201-8** (this is for A3 paper).
- North America: Use **SP 6201-15** (this is for DLT paper).

**Note**

- The illustration above shows the effects of +/- adjustment with **SP6201**.
- The vertical arrows show the direction of paper feed

**4.** Enter one-half the measured amount of position shift.

- Example: If the measure amount of position shift is -1.2 mm, enter -0.6 mm
- The range for measurement is -2.0 mm to +2.0 mm in 0.2 mm steps for every notch adjustment.

**5.** Exit the SP mode, do another test print and repeat the adjustment procedure if necessary.

**6.** When you have finished adjusting the fold position, next enter the adjustment value for the bind position using SP6202. Enter the same value as the fold position adjustment value for each paper size.

---

## The Adjustment of Rear Slant Binding Position

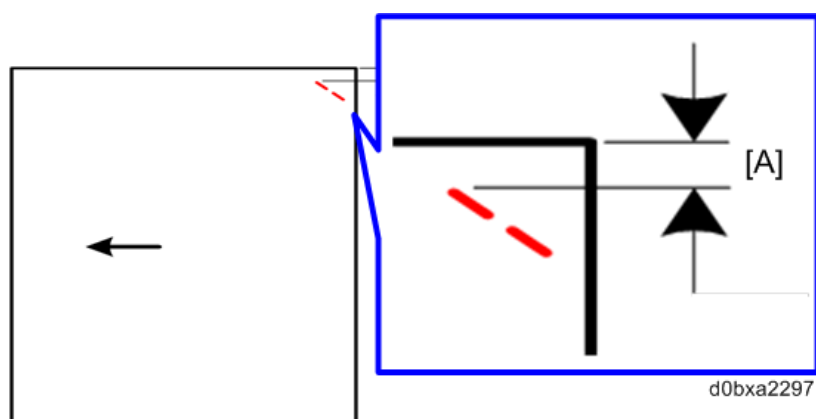
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With A4Y standard paper, perform the adjustment as shown below in the job of rear slant binding 2 copies.

1. Output some rear slant binding booklets. (one copy or more)
2. As the below image shows, measure the staple position [A] from the paper edge in the direction



that is at right angles to the transport direction. (main scan binding depth)



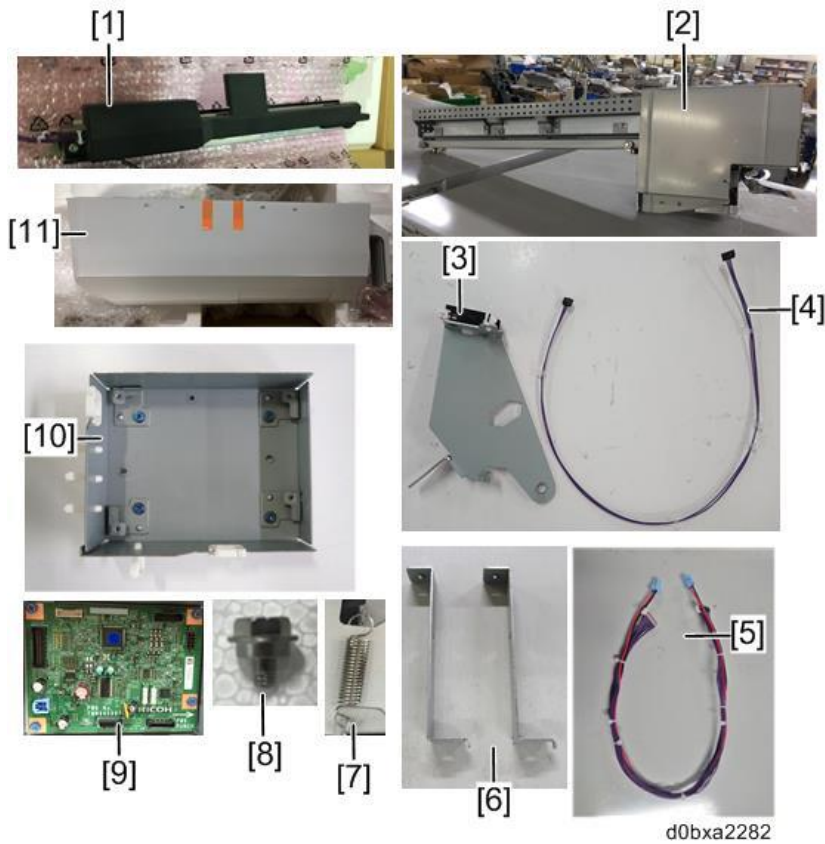
Designers designed the target value as 6 mm. When the measurement value is 6 mm, there is no need to perform the procedure after this step.

3. In SP6-281-001, adjust the binding depth so that it becomes 6 mm.  
 If you want to make the binding depth deeper, input a plus quantity.  
 If you want to make the binding depth shallower, input a minus quantity.  
 If the customer has a request for the binding depth, adjust the value to reflect the customer's request.
4. Output some rear slant binding booklets, and confirm that the staple position is at the target position.
5. If the staple position is at the target position, the adjustment has been completed.  
 If it isn't, perform the procedure from step 3 again.

2.Installation

Installing Punch Unit PU5030 NA, EU, SC (D3GJ)

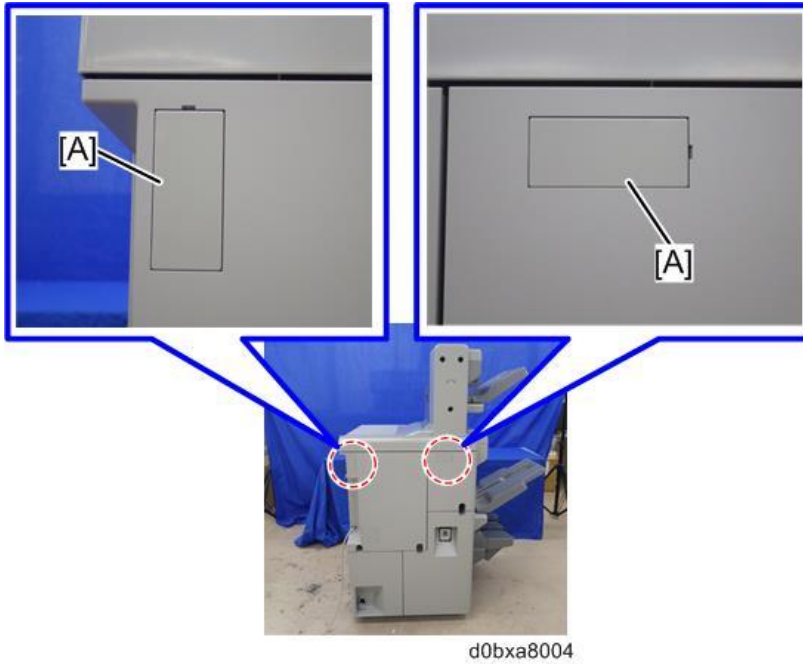
Accessories



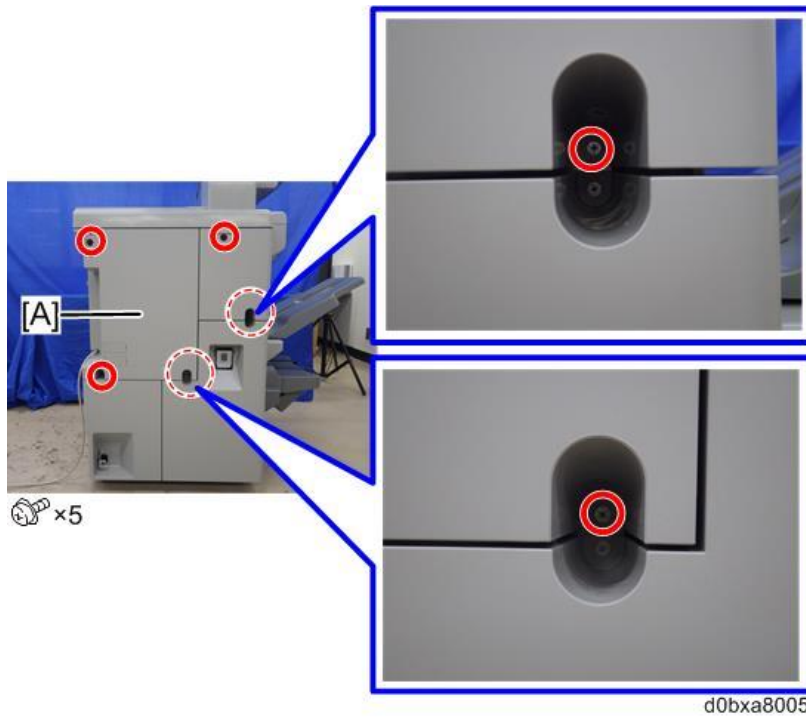
No.	Description	Q'ty
1	CIS	1
2	Punch Unit	1
3	Sensor Bracket	1
4	HARNESS:PUNCH:OVERFLOW:SENSOR:ASS'Y	1
5	HARNESS:MAIN:PUNCH:BASE:ASS'Y	1
6	BRACKET:FIX:PCB:PUNCH UNIT	2
7	LOCK SPRING	1
8	SCREW:CONTACT POINT	1
9	PCB:PUNCH	1
10	Controller Board Bracket	1
12	Punch Hopper	1
-	TAPPING SCREW - M3X6	16
-	HARNESS:PUNCH:PUNCH SECTION:MOTOR:ASS'Y	1

Installation

- 1.** Remove the caps [A]. (▼x2)

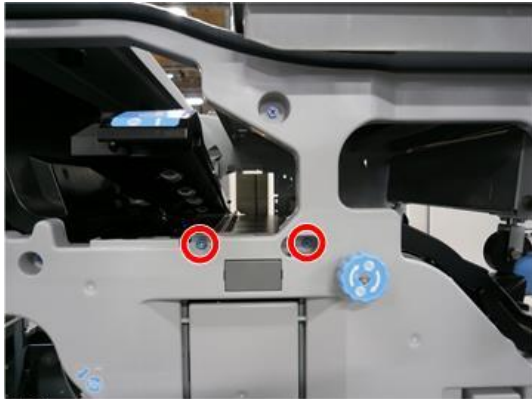


- 2.** Remove the rear cover [A].



- 3.** Open the front door.
  - 4.** Remove the guide plate [A].
- Front side**

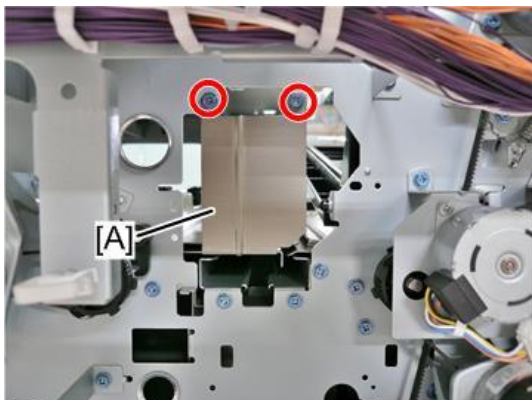
## 2. Installation



 x2

d0bxa2261

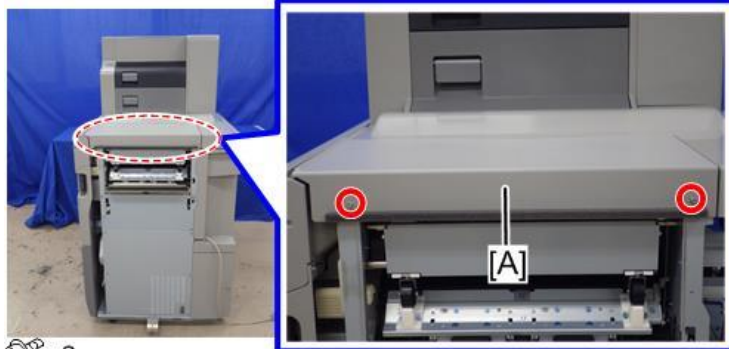
### Rear side



 x2

d0bxa2262

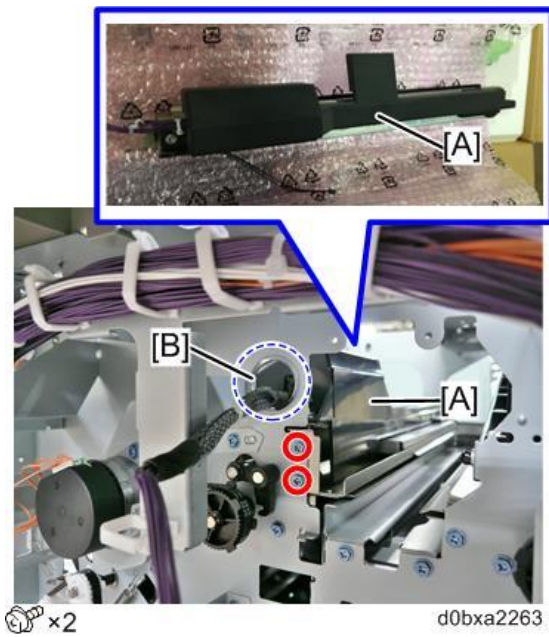
### 5. Remove the top right cover [A].



 x2

d0bxa8017

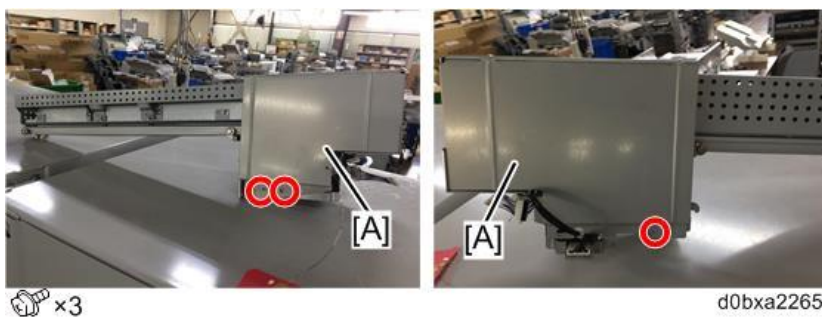
- 6.** Install the CIS [A], and then pass the harness through the hole [B] at the rear.



- 7.** Fix the CIS at the front side.

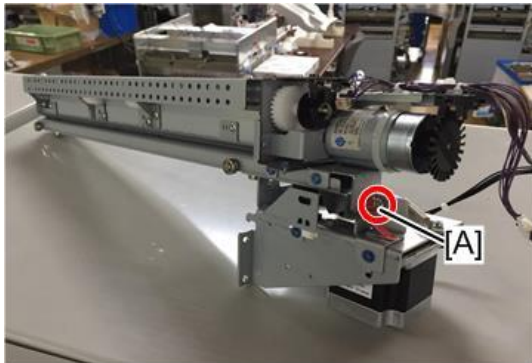


- 8.** Remove the punch unit cover [A].



## 2. Installation

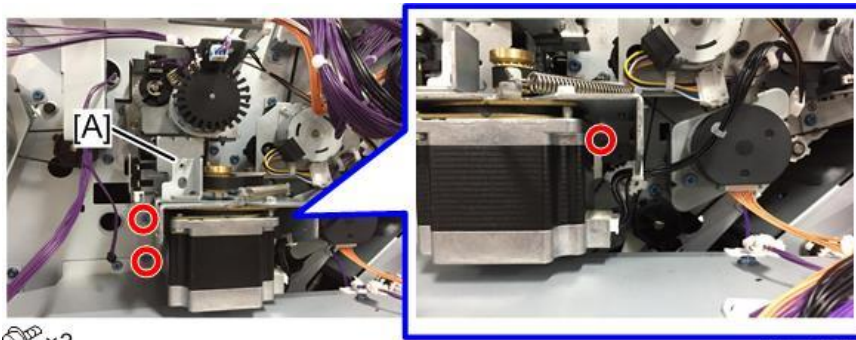
- 9.** Remove the fixing screw [A].



 x1

d0bxa2266

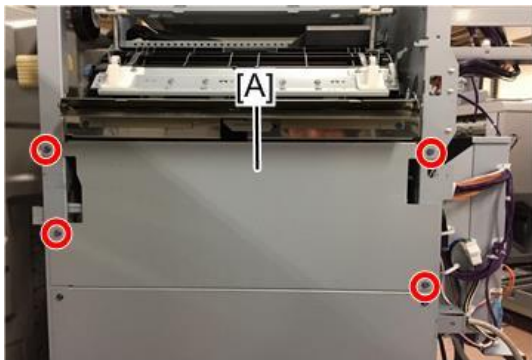
- 10.** Install the punch unit [A] into the finisher by sliding it from the rear side.



 x3

d0bxa2267

- 11.** Remove the right cover [A].

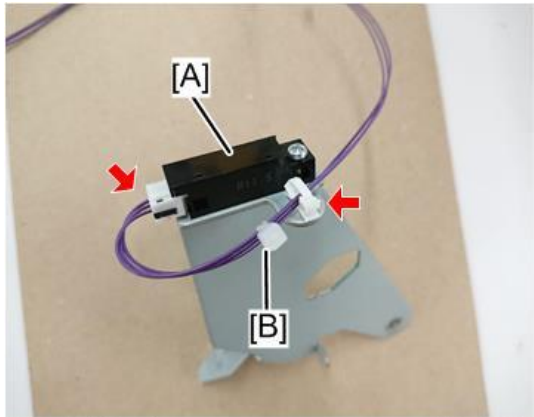


 x4

d0bxa2268

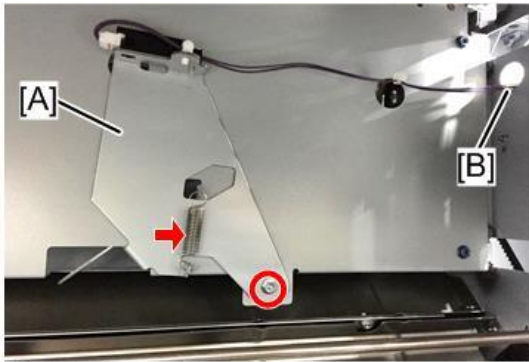
- 12.** Connect the three-pins connector of the harness to the punch chad full sensor [A] provided with the unit.

The bind [B] should be located at the following position.



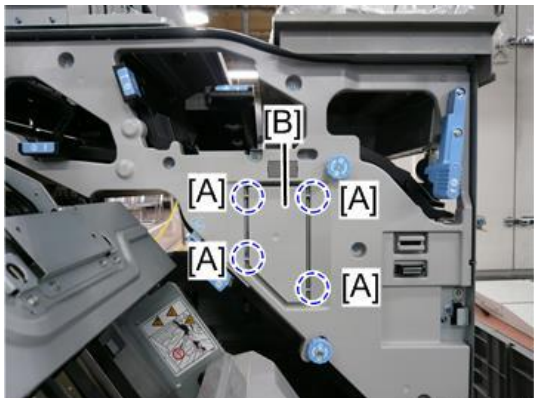
 x1  x1 d0bxa2269

- 13.** Attach the sensor bracket [A] using the spring and stepped screw provided with the unit, and then pass the harness through the hole [B].



 x1  x1 d0bxa2270

- 14.** Cut the four points [A] with a nipper, and then remove the cover [B].



d0bxa2271

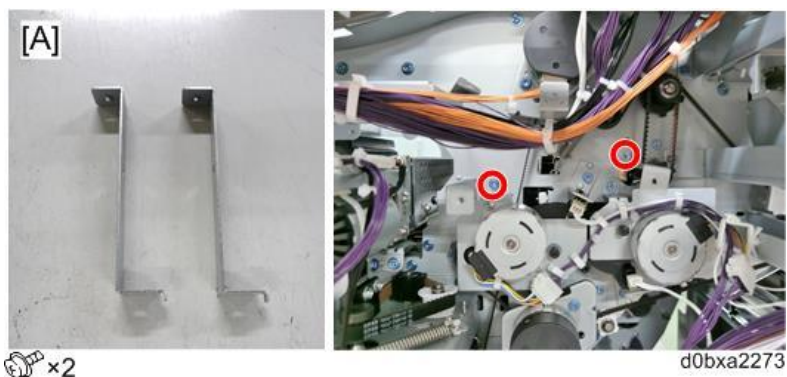
- 15.** Insert the punch hopper [A] into the space [B].



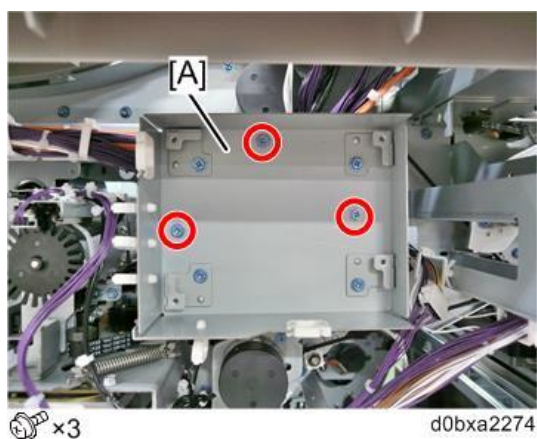
d0bxa2272

## 2. Installation

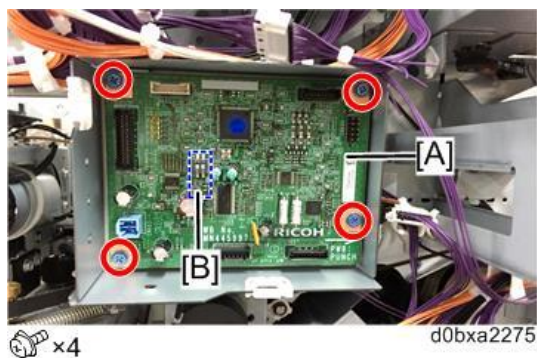
### 16. Attach the stays [A].



### 17. Attach the controller board bracket [A] to the stay for attaching the base.



### 18. Attach the controller board [A] to the controller board bracket.

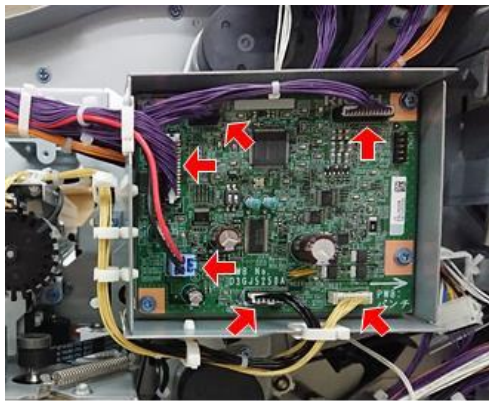


How to set the switch [B] is shown in the following table.

Destination	SW1	SW2
North America (-17)	OFF	ON
Europe (-27)	ON	OFF
North Europe (-28)	ON	ON



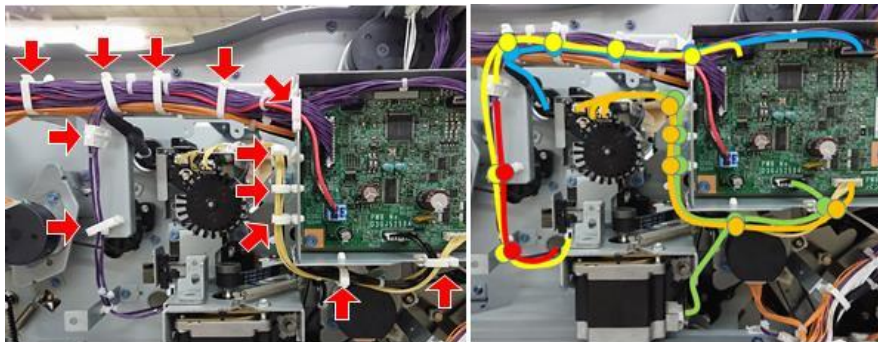
**19.** Connect the connectors to the controller board.



 x6

d0bxa2283

**20.** Route the harnesses between the punch unit and punch unit PCB as shown below.

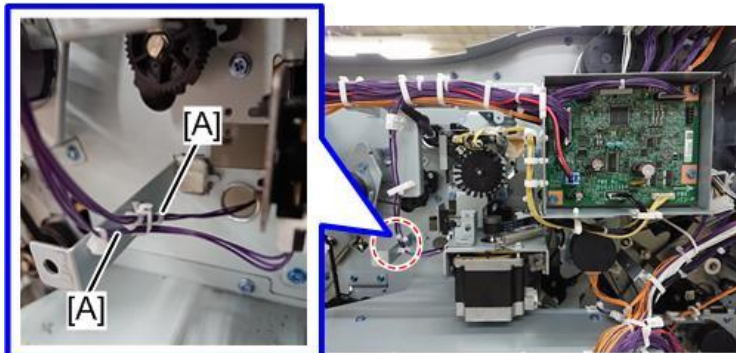


 x1  x11

d0bxa2276

**Note**

- Fix the clamp between the two binds [A].

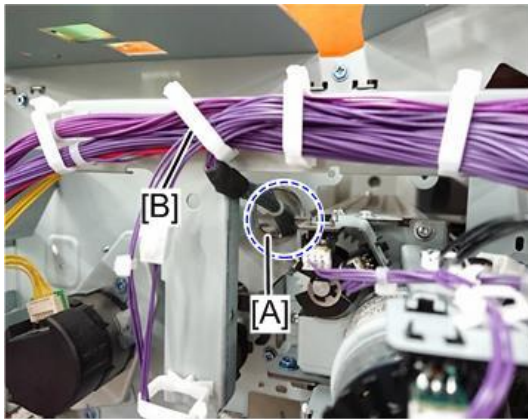


d0bxa2277

- Pass the CIS harness through the hole [A] of the side plate, and then fix the harness with

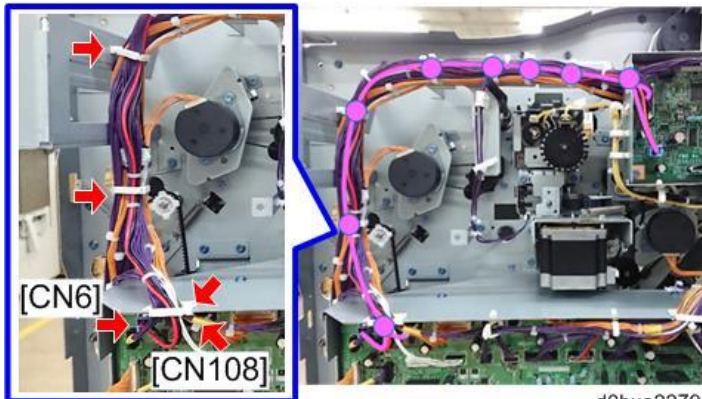
## 2. Installation

the clamp [B].



d0bxa2278

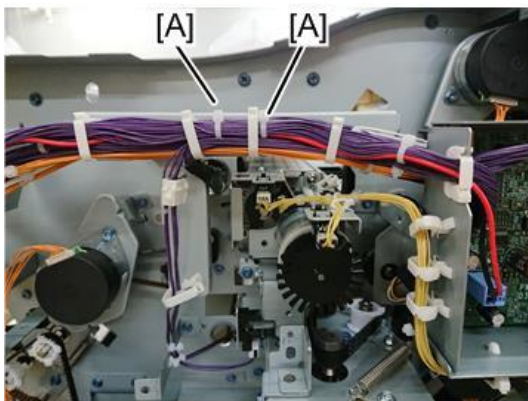
**21.** Route the harnesses between the punch unit PCB and main PCB as shown below.



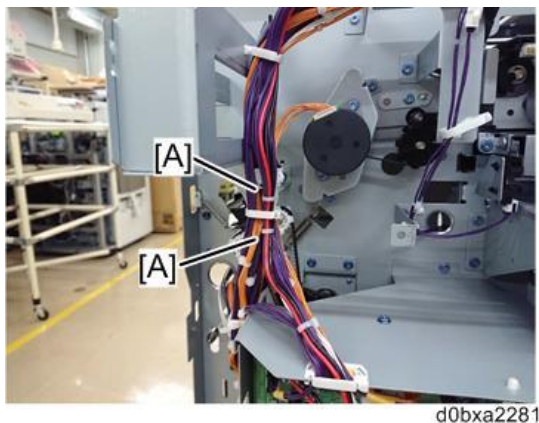
×2 ×3

### Note

- Fix each clamp between each two binds [A].



d0bxa2280



**22.** Reattach rear cover, top right cover, right cover, and inner cover.

**23.** If adjusting the punch hole position is necessary, perform the adjustment of the position of the main scan and sub scan in SP mode.

SP number depends on the SP specification of the connected main machine.

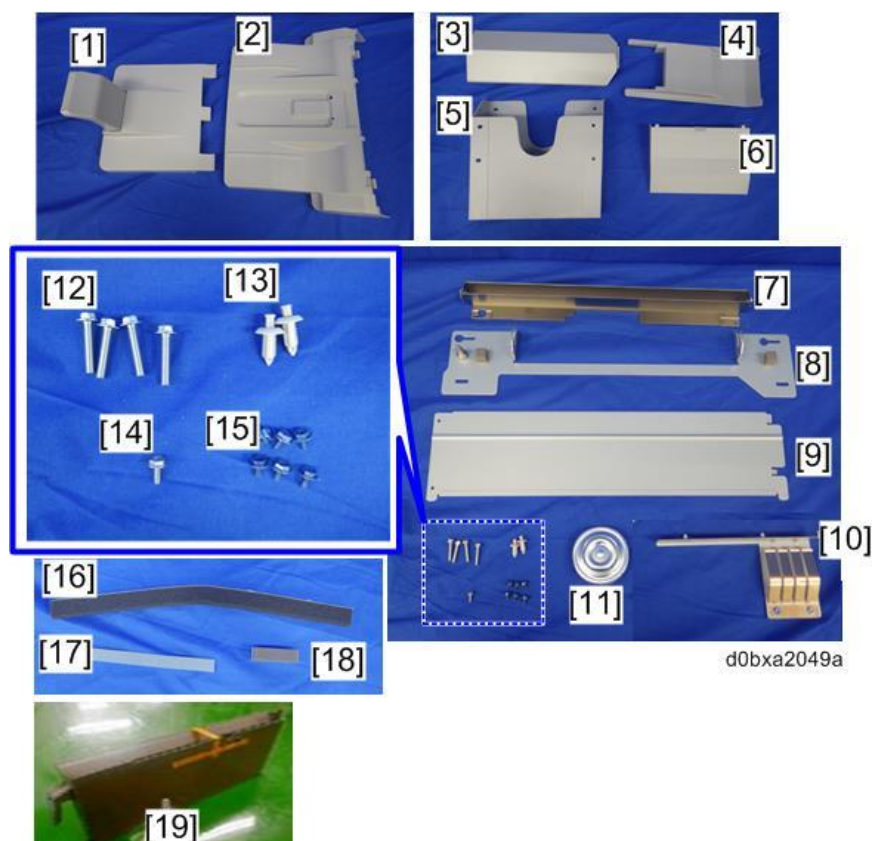
## Finishers SR5090/SR5100 (D3GD/D3GC)

### Note

- This finisher is for copier models only.

### Accessories

No.	Description	Q'ty	Remarks
1	Booklet Tray	1	Booklet Finisher SR5100 only
2	Shift Tray	1	
3	Proof Support Tray	1	
4	Proof Support Tray	1	
5	Tray Holder	1	
6	Shift Support Tray	1	
7	Relay Guide Plate	1	
8	Joint Bracket	1	
9	Right Upper Cover	1	
10	Ground Plate	1	
11	Leveling Shoes	4	
12	Screws (M4x20)	4	
13	Round Rivets	2	
14	Screw (M3x8)	1	
15	Screws (M3x6)	6	
16	Cushion	1	
17	Cushion for Staple Stand	1	Booklet Finisher SR5100 only
18	Finisher Coupling Seal	1	
19	Toner Hopper	1	



d0bxa2049a

## Installation Procedure

### ⚠ CAUTION

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

### ↓ Note

- If installing Bridge Unit BU3090, LCIT PB3290, or Paper Feed Unit PB3300/PB3280, install them before installing this finisher.
- Depending on the type of floor where this finisher is installed, attach the felt cushion to the staple stand to prevent scratches. For details about applying the cushion, see Step 20 and after.

Floor type	Felt cushion
Tile, steel, coated, flooring	Use
Carpet	Need not use

## 2. Installation

1. Remove the packing tape and retainers, and then remove the accessories (screws, etc.).

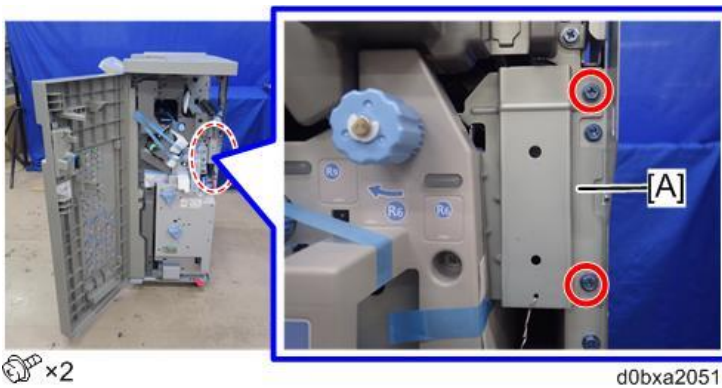


2. Open the front cover, and remove the packing tapes, shipping retainers.

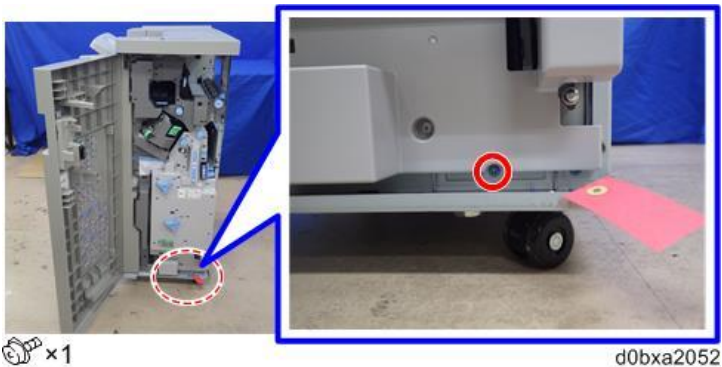
### Booklet Finisher

1. Remove the fixing bracket [A].

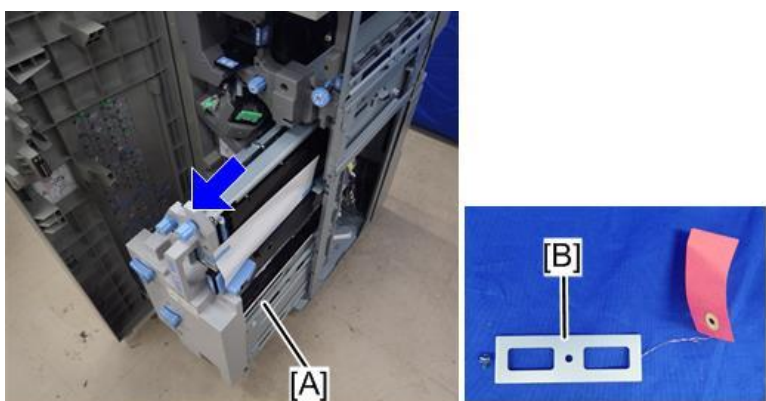
Keep the removed screws. They are needed for attaching the booklet stapler unit fixing cover [A] in Step 5.



2. Remove the screw at the bottom of the finisher (red circle).

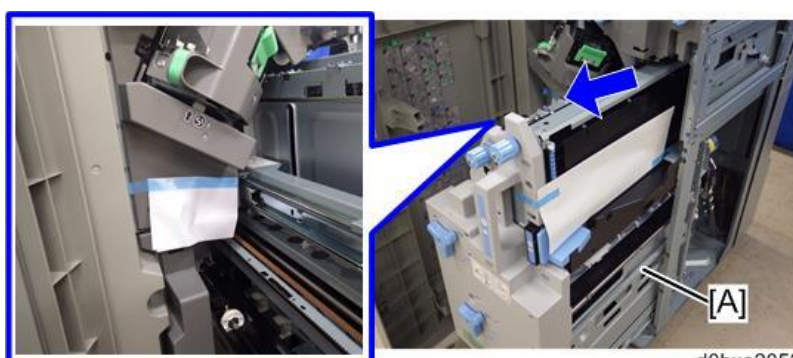


3. Pull out the saddle stitch unit [A], and remove the fixing bracket [B].



d0bxa2063

4. Remove the packing tapes and shipping retainers on the saddle stitch unit [A].

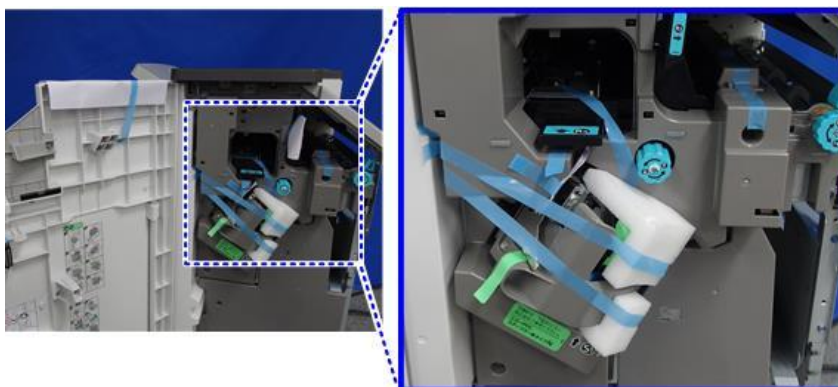


d0bxa2053

5. Push in the saddle stitch unit.

### Finisher

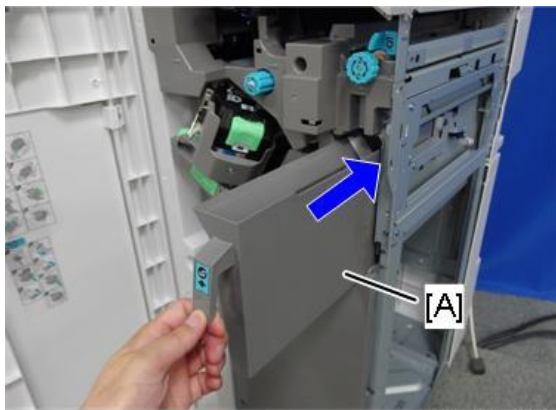
1. Remove the packing tapes and shipping retainers.



d0bqm0053a

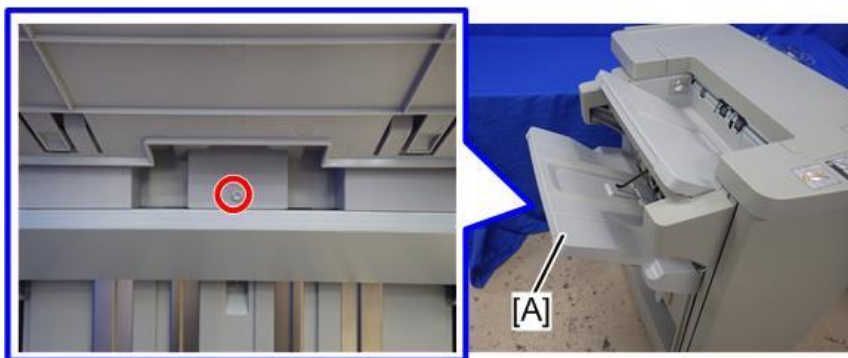
## 2. Installation

### 3. Attach the hopper [A].



d0bqrm0054

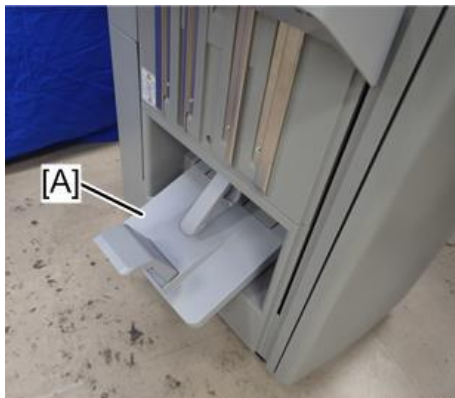
### 4. Attach the shift tray [A] (3x8).



d0bxa2054



### 5. Attach the booklet tray [A] (Booklet Finisher only).



d0bxa2055

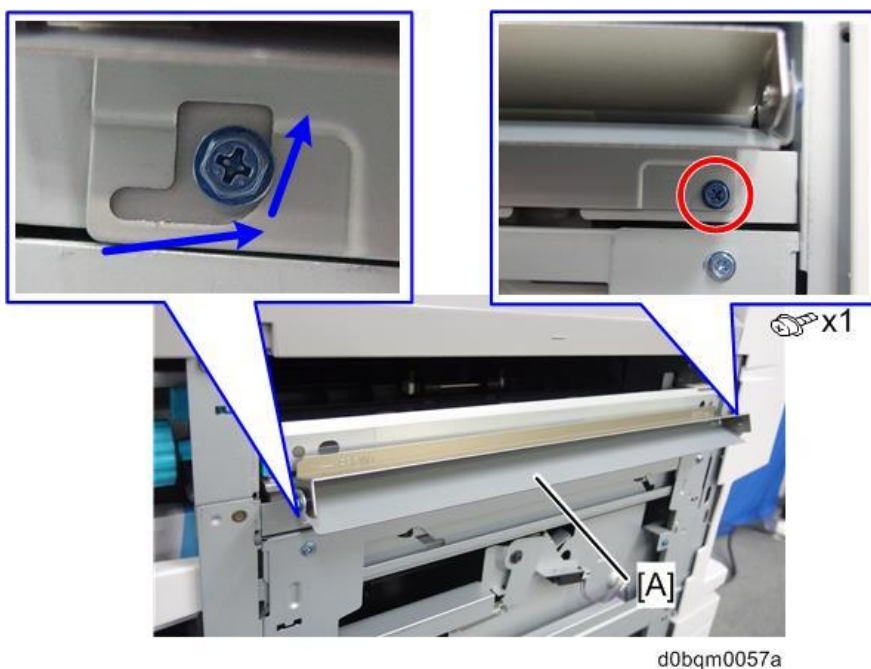
### 6. Attach the relay guide plate [A] by following the procedure below.



1. Temporarily attach the screw to the front side (3x6).



2. Hook the relay guide plate [A] on the screw attached in Step 1. Then, fully tighten the screw on the rear side (3x6).



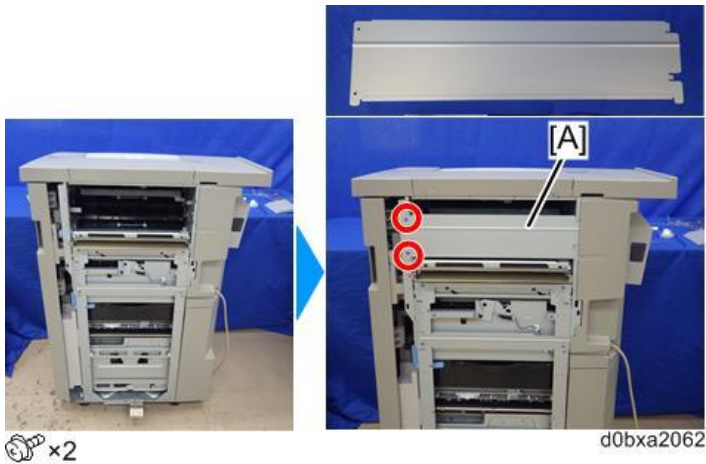
3. Fully tighten the screw on the front side.

- 7.** Attach the ground plate [A] (3x6).



## 2. Installation

### 8. Attach the bracket [A].



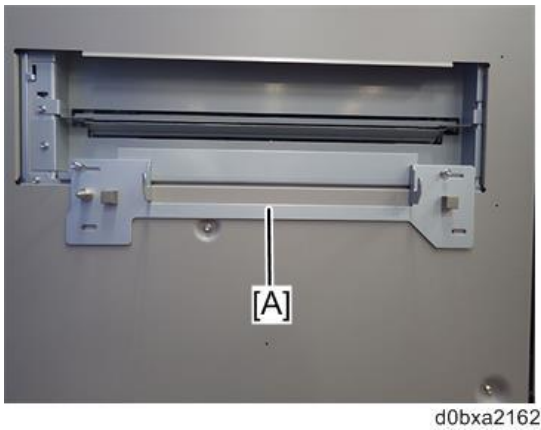
### 9. Attach the joint bracket [A] by following the procedure below.

#### 1. Temporarily attach the screws to the upper screw holes (M4x12).

If the decurl unit is installed, use the screws (M4x8) provided with the decurl unit.

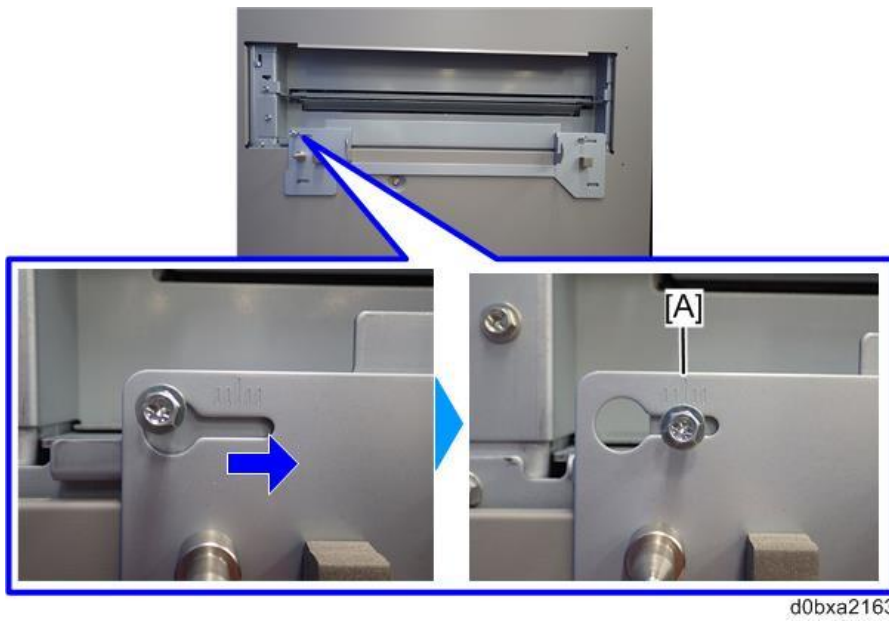


#### 2. Hook the cutouts of the joint bracket [A] onto the screws.

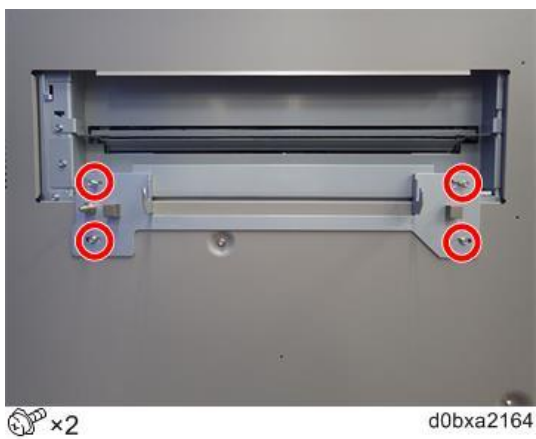


#### 3. Adjust the position so that the screw head comes to the center mark of the scale [A] of the joint

bracket.



4. Completely fix the joint bracket [A] (M4x12).



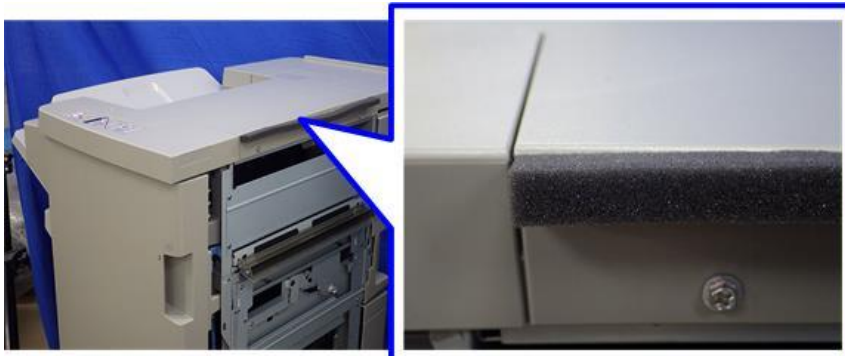
- 10.** Clean the right side of the upper cover with a cloth moistened with alcohol, and then attach the cushion [A] to the finisher.



## 2. Installation

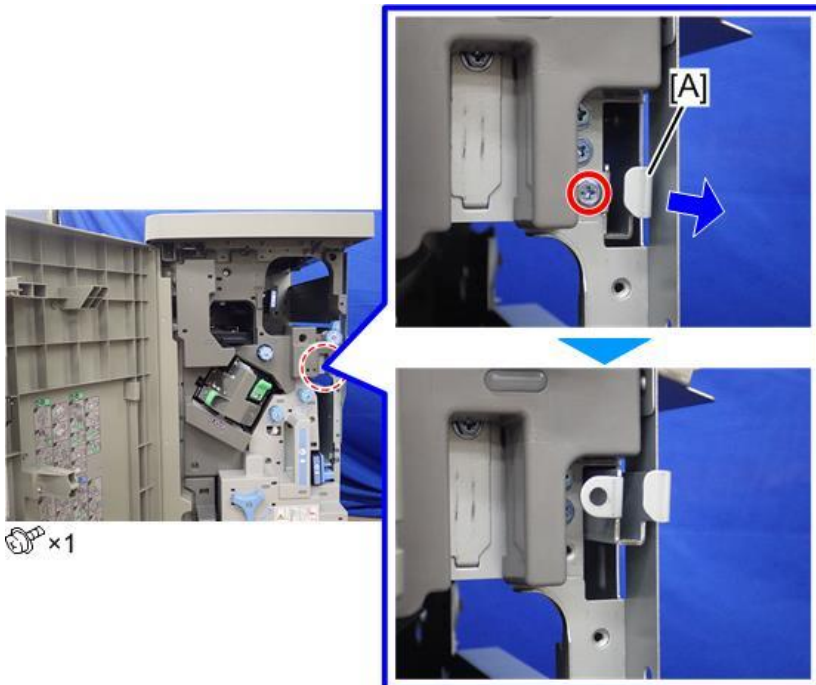
### Note

- Attach the cushion to the position shifted from 0 to 1 mm from the upper edge.



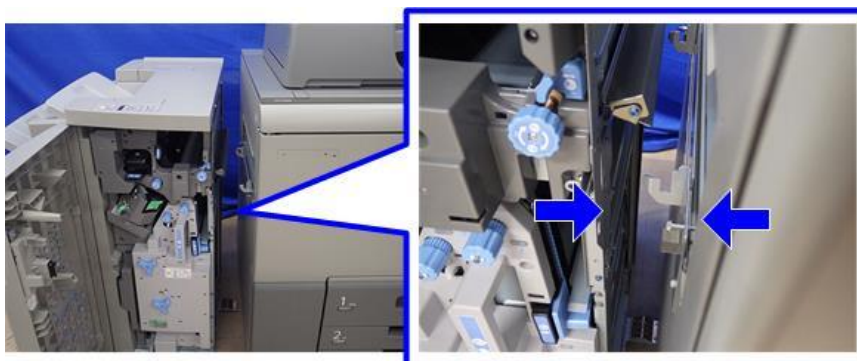
d0bxa2160

### 11. Pull out the connection lever [A].



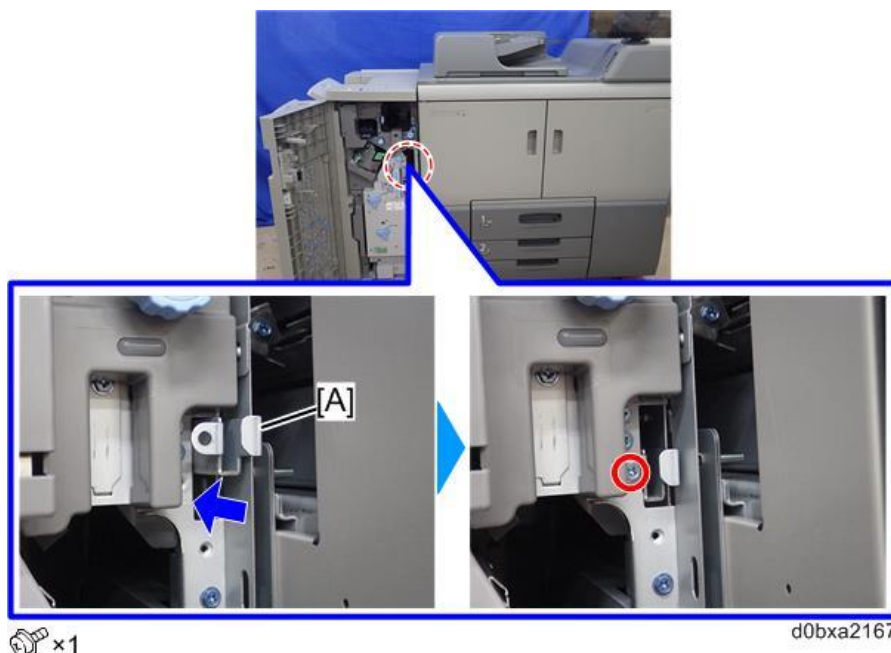
d0bxa2165

### 12. Connect the finisher to the main unit.



d0bxa2166

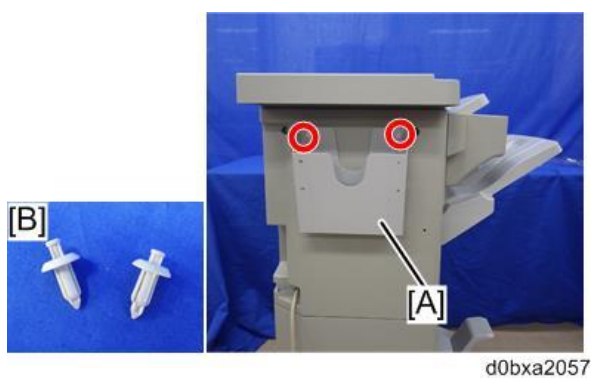
**13.** Push in the connection lever [A] to dock it to the main unit.



**14.** Connect the interface cable [A] to the machine.



**15.** Attach the tray holder [A] using the rivets [B].



## 2. Installation

**16.** If necessary, attach the holders to the finisher, and level the finisher.

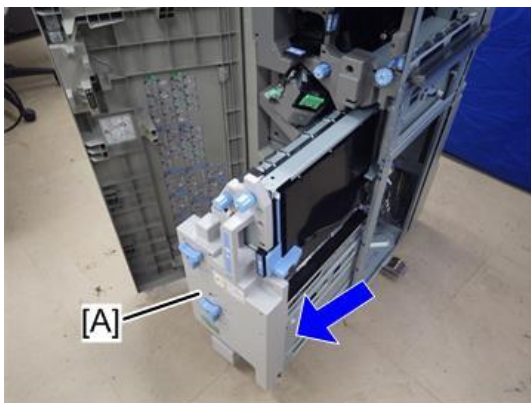


d3cgc1007

**17.** Turn ON the power of the main machine.

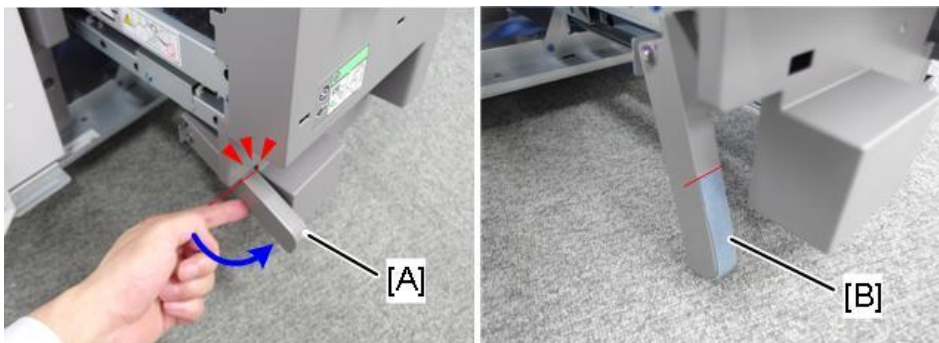
**18.** Check that the finisher can be selected on the operation panel. Also check that it can be operated.

**19.** Pull out the saddle stitch unit [A].



d0bxa2058

**20.** Lift the staple stand [A] until it comes into contact with the inner cover, and attach the felt cushion [B].



d0bqm0067

### Note

- Attach the cushion at the point where the staple stand comes into contact with the inner cover. Make sure that the cushion does not protrude from the stand.

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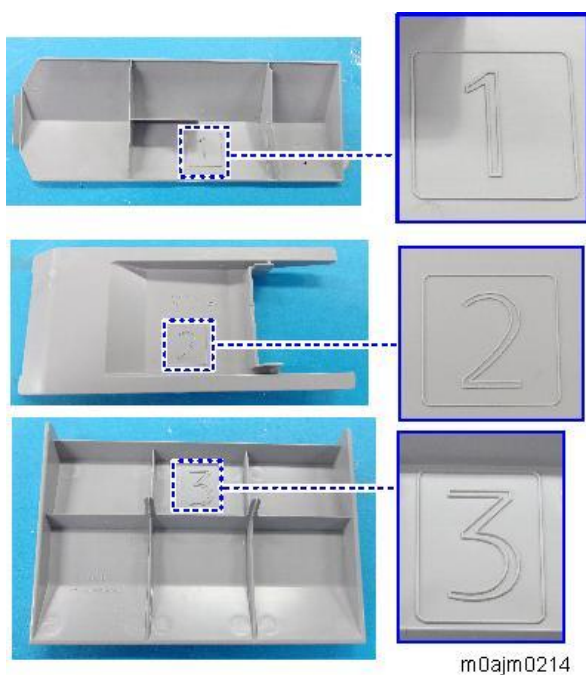
## Using the Support Trays for the Proof Tray

---

When delivering z-folded sheets, or the paper is curled, the sensor may prematurely detect exit tray. The job will be suspended until the paper is removed from the exit tray.

By using a support tray, you can prevent premature detection of tray full.

For Finisher SR5090/Booklet Finisher SR5100, use the support trays with "1", "2" marked on their rear side.



### Support Tray "1"

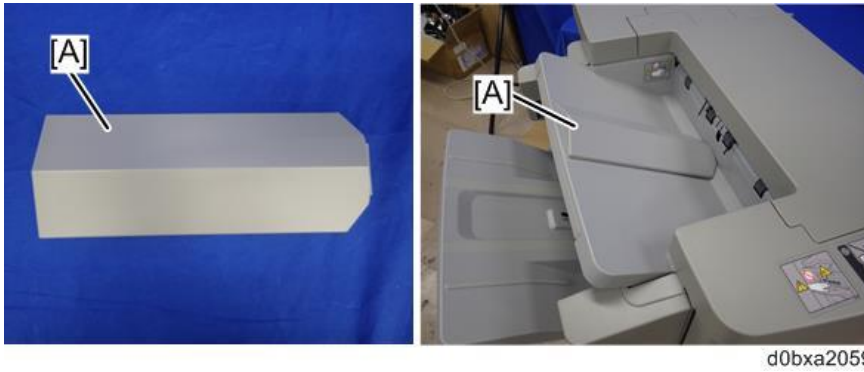
When using B4, LG or larger paper, or when using limp paper, the sheet may become bent, resulting in premature full detection.



d1826009

In such a case, attach the support tray [A] to the proof tray.

## 2. Installation

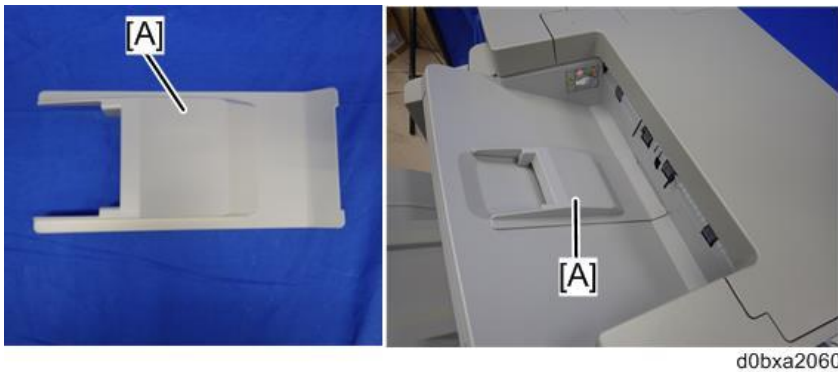


However, when this support tray is used, when printing with A4, LT or smaller paper, the machine can stack only 200 sheets (less than the specified stack capacity of 250 sheets).

When printing with B4, LG or larger paper, the machine stacks 50 sheets (specified stack capacity).

### Support Tray "2" (Comes With Multi-Folding Unit)

When delivering z-folded sheets, using the support tray can prevent premature full detection.



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## Connecting the Finisher to the Decurl Unit

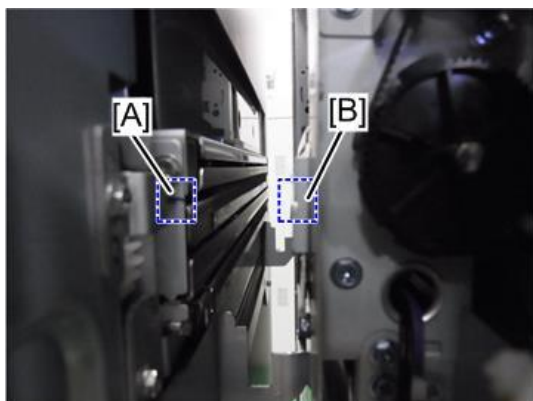
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### ★ Important

- The decurl unit comes with 2 entrance guide plates (different in shape) for connecting the unit to the main machine.
- Use Type C to connect the finisher with the decurl unit.

- 1.** Remove the rear upper cover of the finisher.
- 2.** Make sure that relay guide plate is removed from the finisher.
- 3.** Attach the entrance guide plate to the finisher.
- 4.** Connect the decurl unit to the finisher.
- 5.** Adjust the leveling bolt so that the point [A] of the decurl unit and the point [B] of the finisher at each front side and rear side are the same height.  
(The picture shows the rear side.)





d0bxa2172

- 6.** Attach the rear upper cover.

---

### Moving the Finisher

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**⚠ CAUTION**

- When moving the finisher, move it together with the main machine linked to it. If you try to move only the finisher, it may fall down, causing injury.

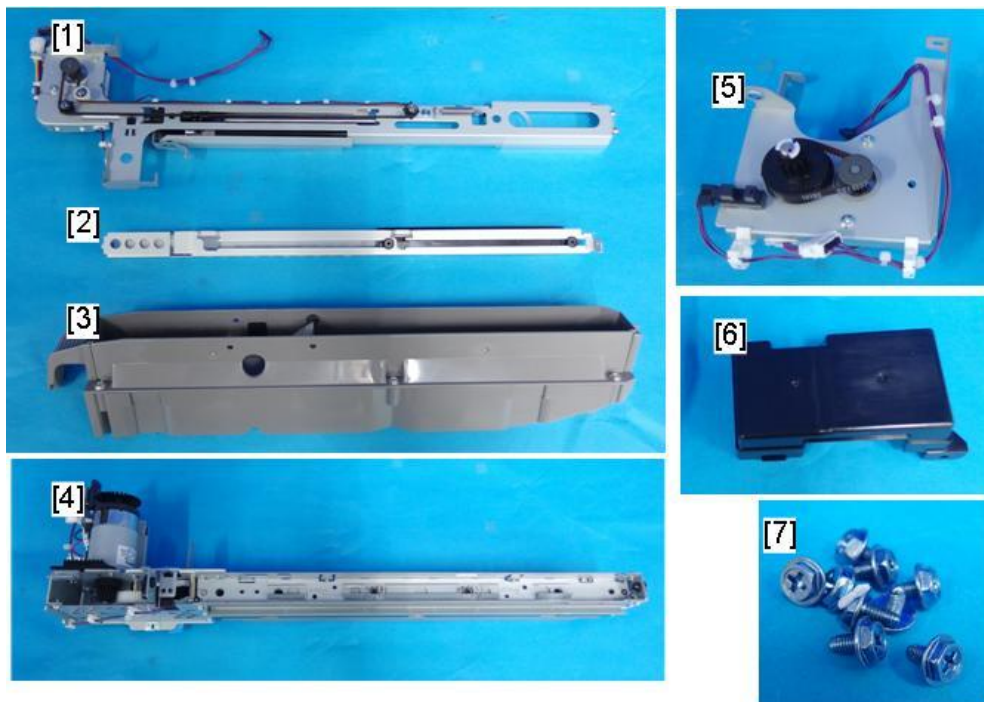
## Punch Unit PU3090 NA, EU, SC (D3FP)

**Note**

- This punch unit is for Booklet Finisher SR5100/Finisher SR5090.

### Accessories

No.	Description	Q'ty
1	Side-to-side detection unit	1
2	Guide plate	1
3	Hopper	1
4	Punch unit	1
5	Punch unit movement motor unit	1
6	Cover	1
7	Tapping screws - M3 × 6	9
-	EMC Address	1



d0bqm0095

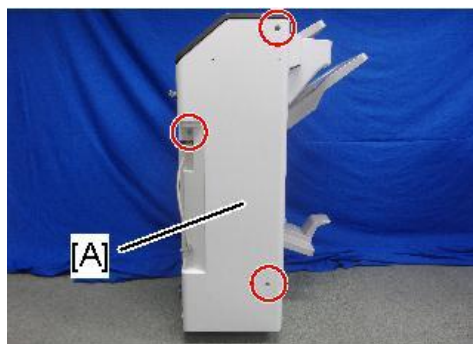
### Installation

**CAUTION**

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

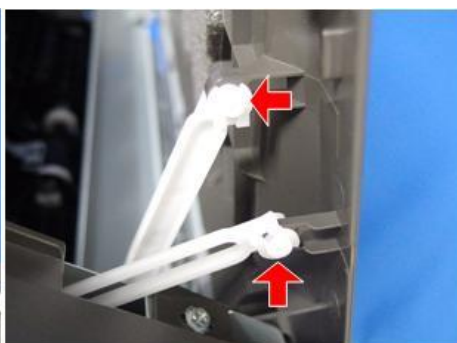
1. Remove all packing tapes and retainers from the punch unit.
2. Pull out the finisher interface cable, and move it away from the machine.

- 3.** Remove the finisher rear cover [A] (⚙️×3).



d238m0769

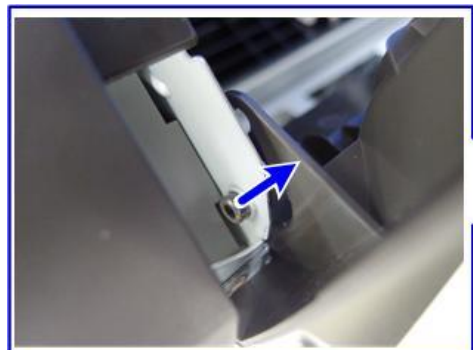
- 4.** Open the top cover, and then remove the arms.



⚙️ x2

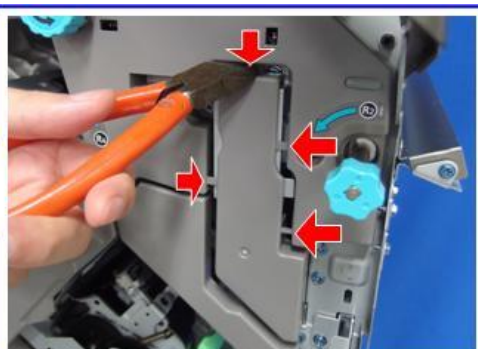
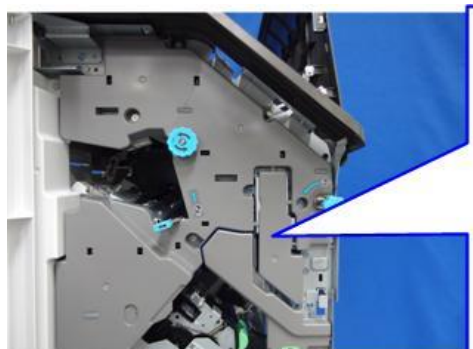
d0bqm0096

- 5.** Remove the top cover [A].



d0bqm0097

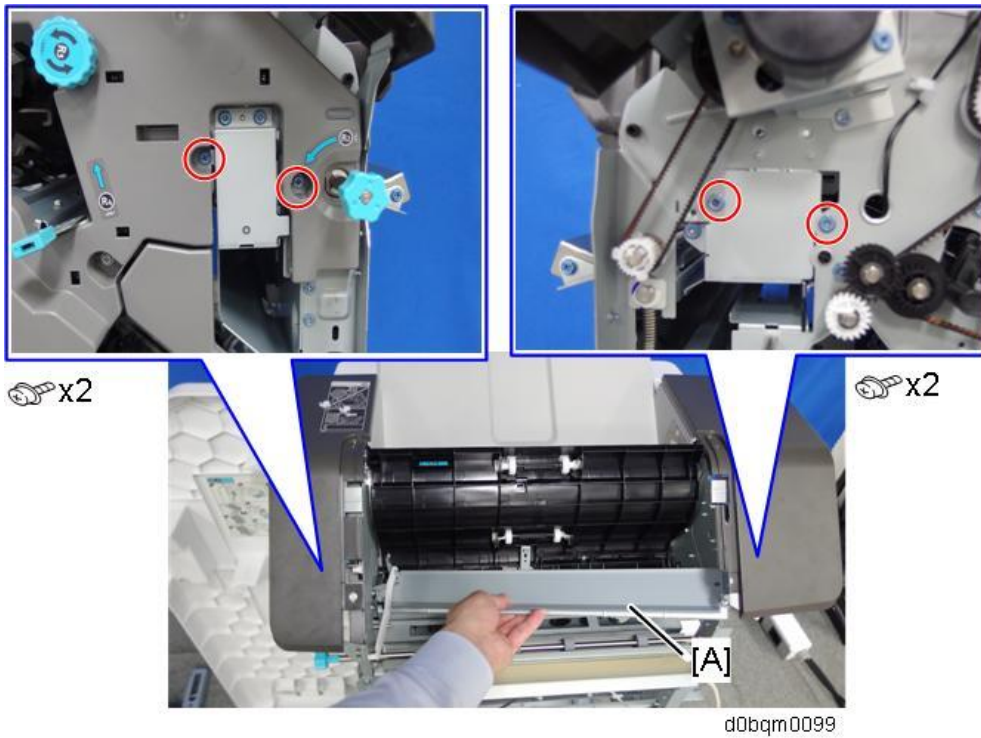
- 6.** Cut off part of the finisher inner cover.



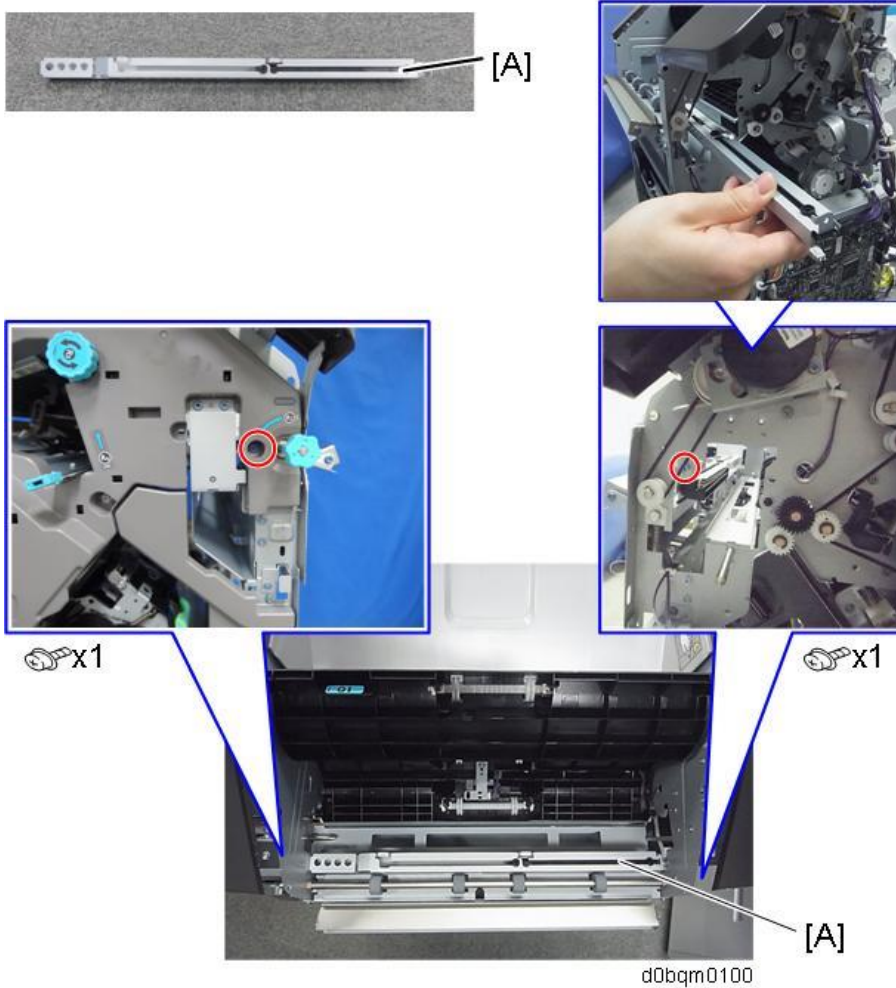
d0bqm0098

## 2. Installation

### 7. Remove the guide plate [A].



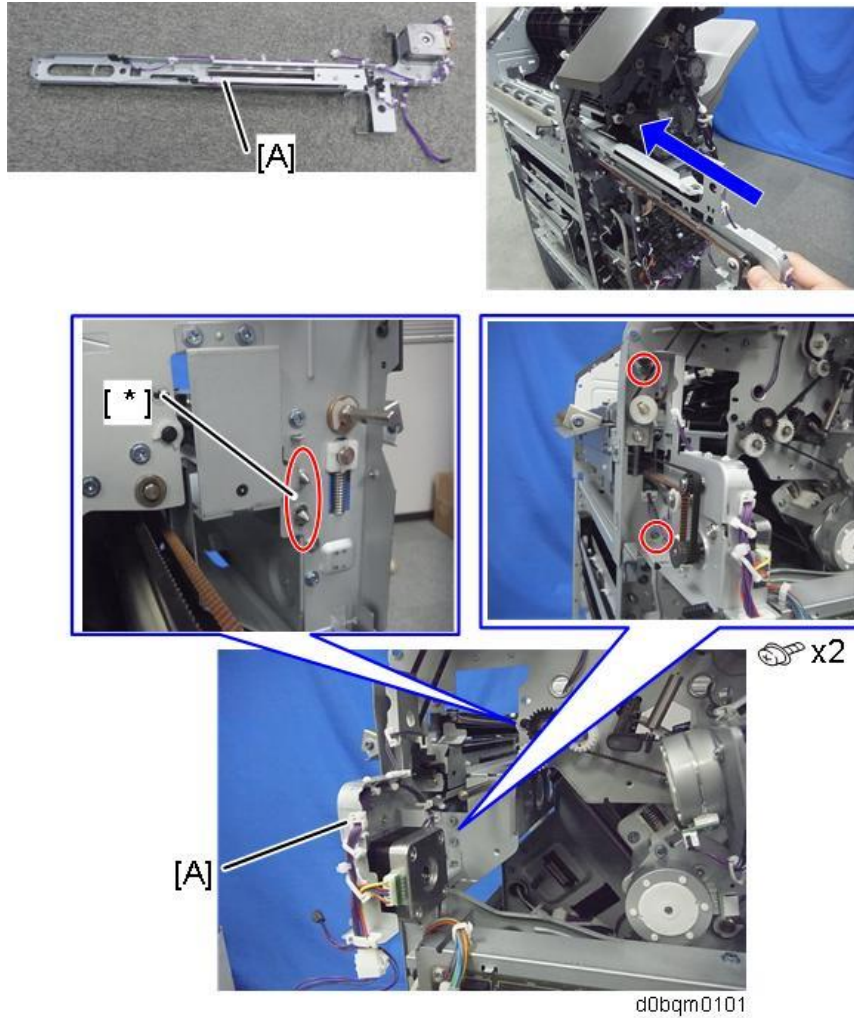
### 8. Insert and attach the guide plate [A] from the rear.



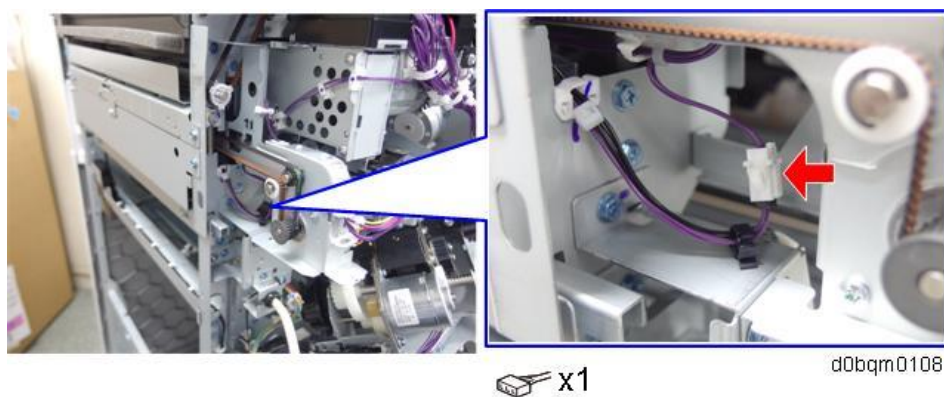
- 9.** Insert and attach the side-to-side detection unit [A] from the rear.

\*Front: The two shafts of the unit are passed through bearings in the finisher.

In the picture below, the inner cover has been removed to show the position of the bearings. In actual, the inner cover is not removed.

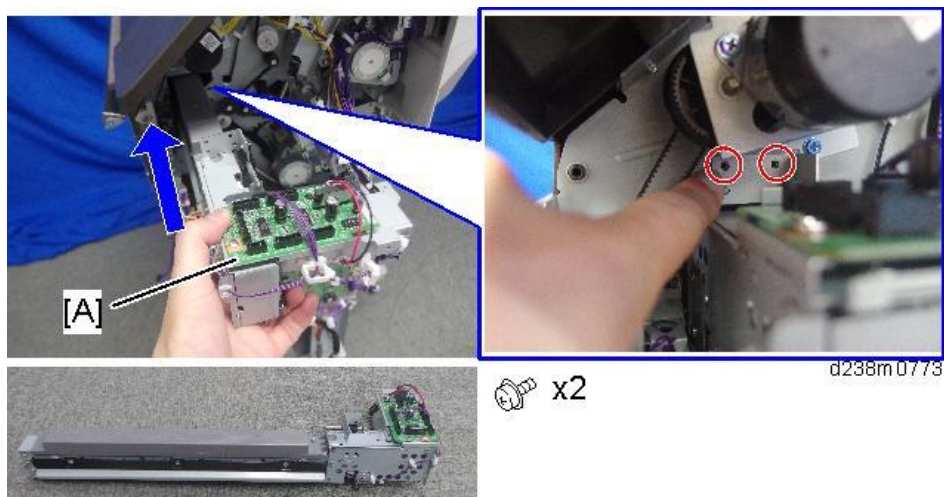


- 10.** Connect the harness at the bottom part of the side-to-side detection unit to the connector on the finisher.

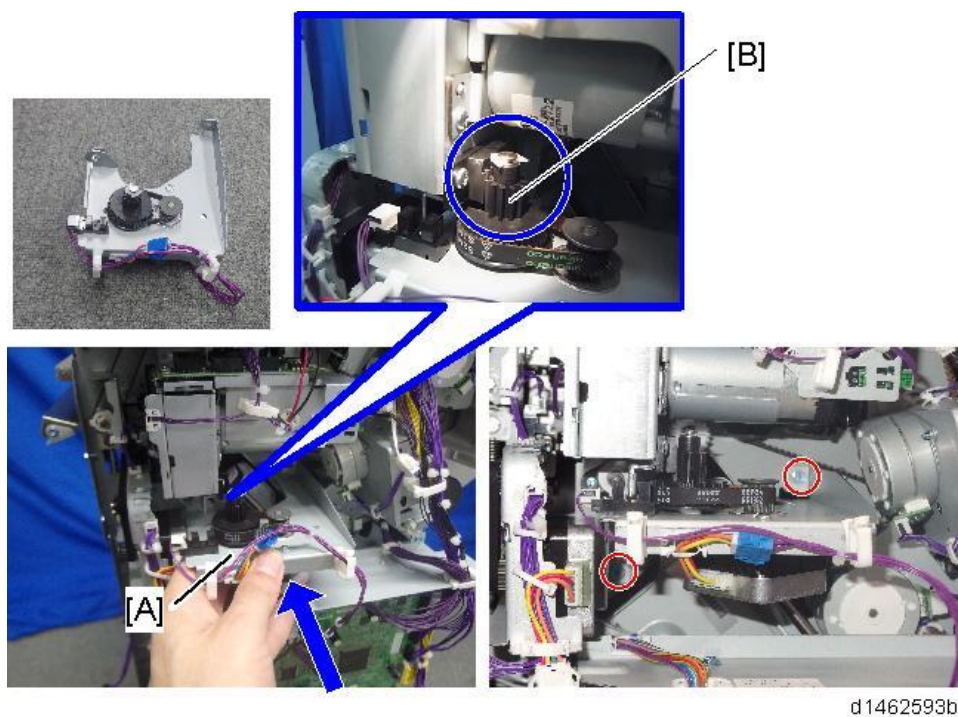


## 2. Installation

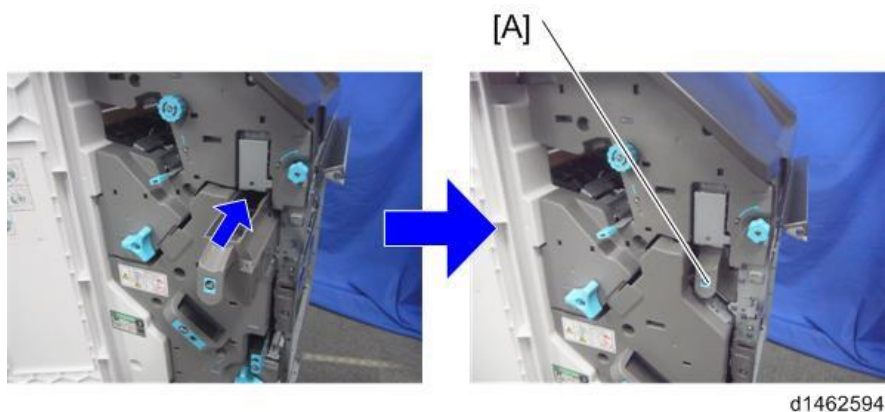
**11.** Insert and attach the punch unit [A] from the rear.



**12.** Attach the punch unit movement motor unit [A] so that the gear [B] meshes firmly (⚙️ x2).



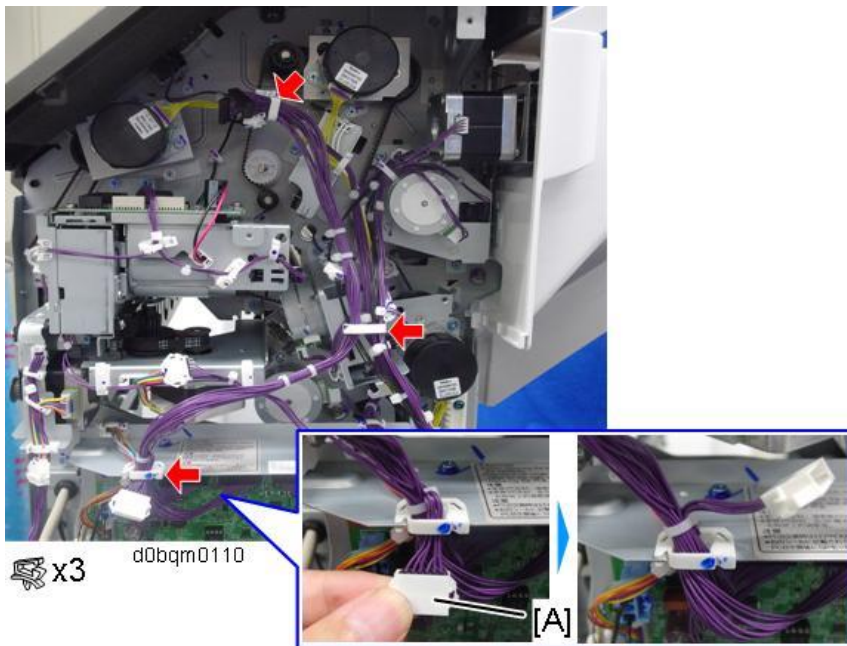
**13.** Insert the hopper [A].



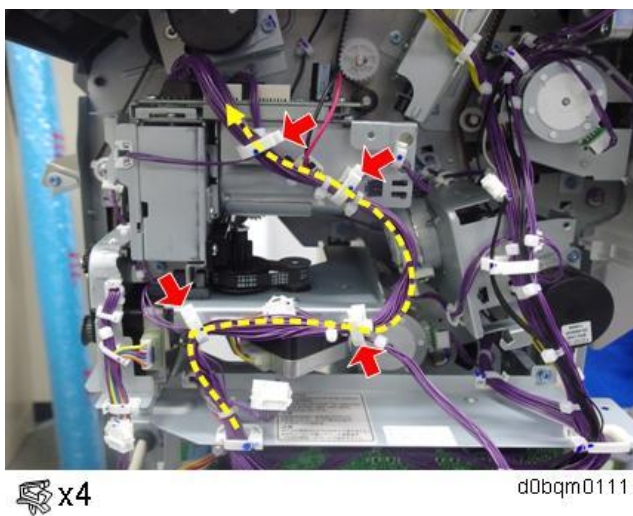
**14.** Connect the harnesses by following the procedure below.

**Booklet Finisher**

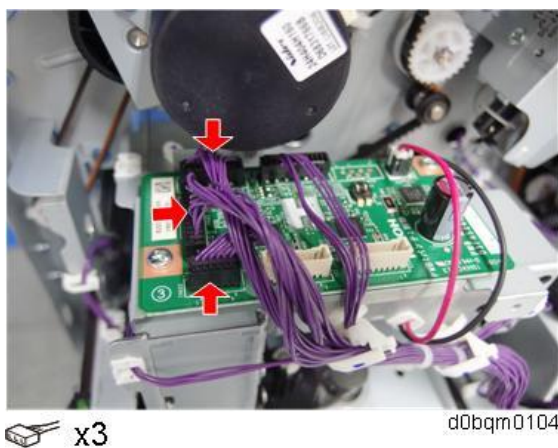
1. Unclamp the harness [A] at the rear. Route the connector through the top part, and clamp it.



2. Route the harness as shown below.

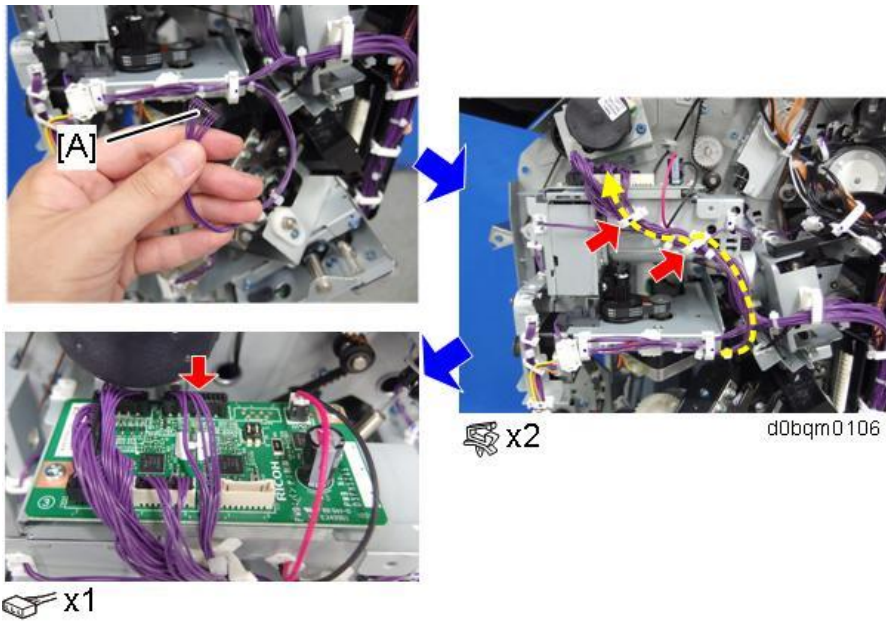


3. Connect the harness to the punch unit board.

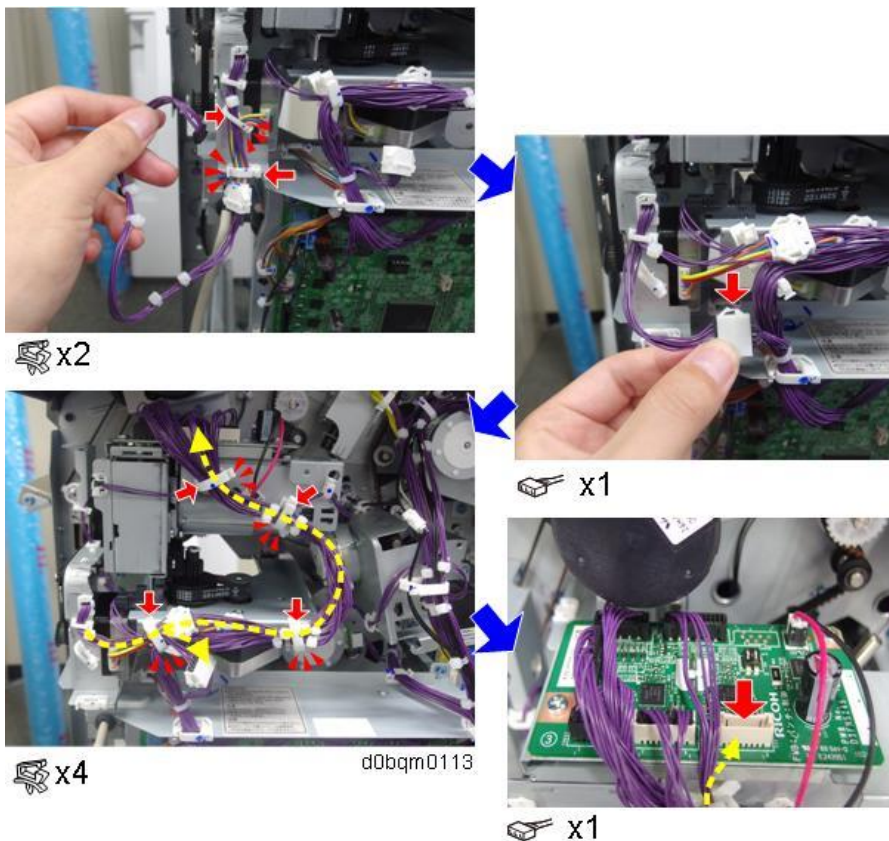


## 2. Installation

4. Route the harness [A] of the punch unit movement motor unit, and connect it to the punch unit board.



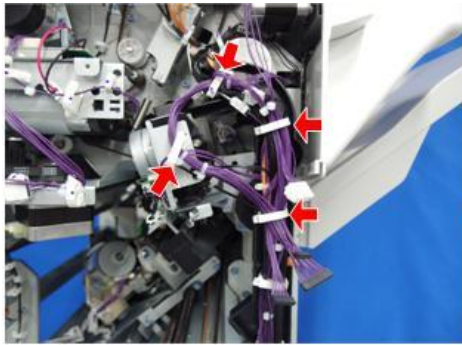
5. Release the harness of the side-to-side detection unit, and route it as shown below.



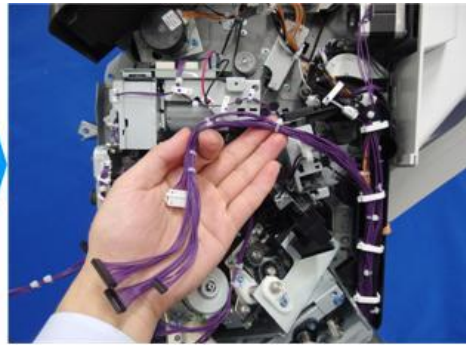
### Finisher

1. Release the harnesses clamped at the rear of the finisher.



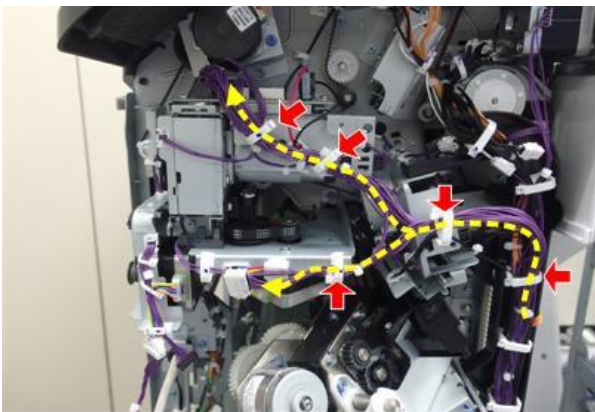


 x4



d0bqmq0102

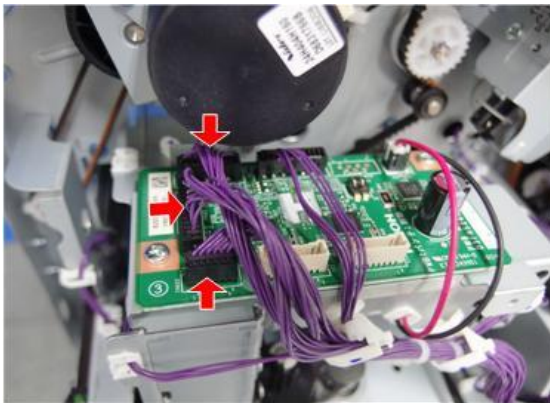
2. Route the harness as shown below.



 x5

d0bqmq0103

3. Connect the harness to the punch unit board.



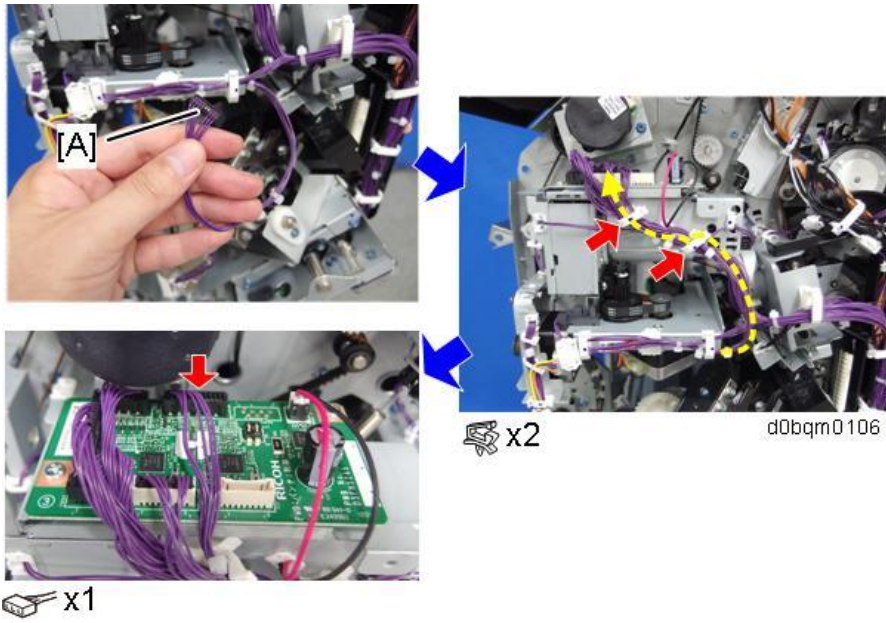
 x3

d0bqmq0104

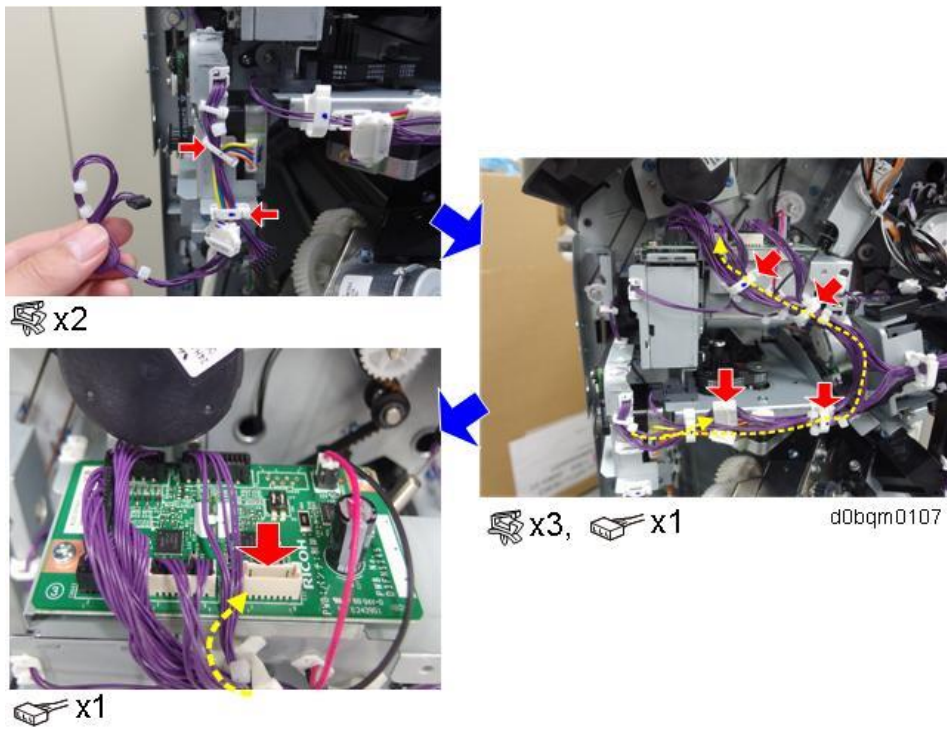
4. Route the harness [A] of the punch unit movement motor unit, and connect it to the punch unit

## 2.Installation

board.

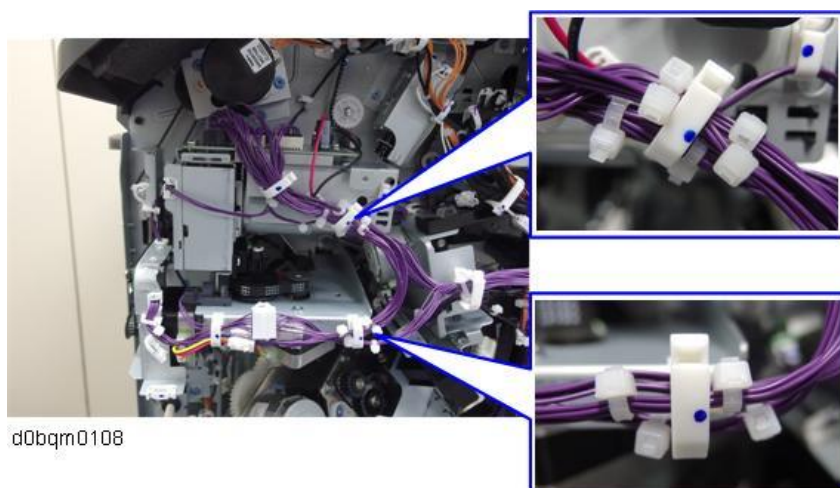


5. Release the harness of the side-to-side detection unit, and route it as shown below.

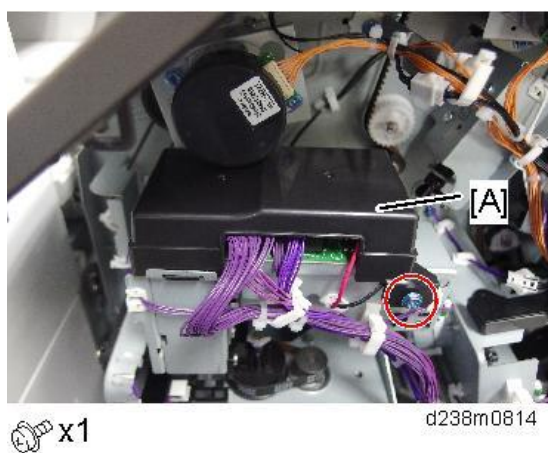


- 15.** After connecting all the harnesses, check that cable ties are attached at the following positions next

to the clamps.



**16.** Attach the supplied cover [A] to the punch unit board.



**17.** Reattach all the removed covers.

**18.** Close the front cover.

**19.** Reconnect the finisher to the machine, and connect the interface cable.

**20.** Turn ON the main power.

**21.** Check that the punch function can be specified from the operation panel, and check punch operations.

## 2. Installation

# Output Jogger Unit Type M25 (D3CJ)

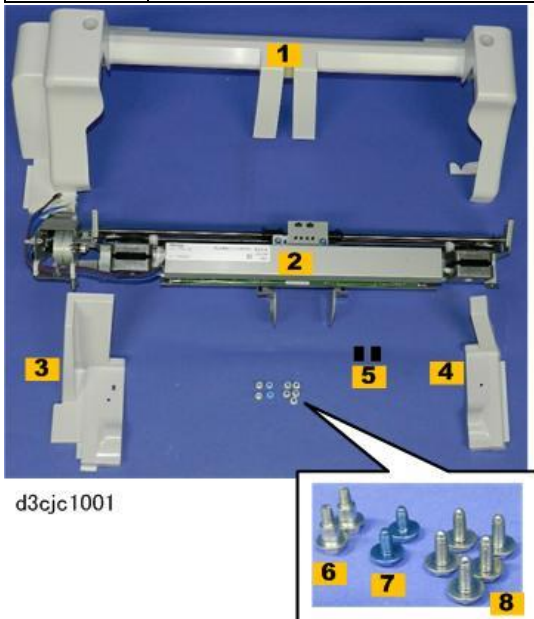
### ★ Important

- To use Output Jogger Unit Type M25, either Finisher SR5090 or Booklet Finisher SR5100 must be installed.

## Accessories

Check the quantity and condition of the accessories against the following list.

No	Description	Qty
1	Jogger Unit Cover	1
2	Jogger Unit	1
3	Rear End Cover	1
4	Front End Cover	1
5	Cushions	5
6	Shoulder Screws	2
7	Screws (Blue) M3x6	2
8	Tapping Screw: Round Point: 3x8	5
-	EMC Address	1



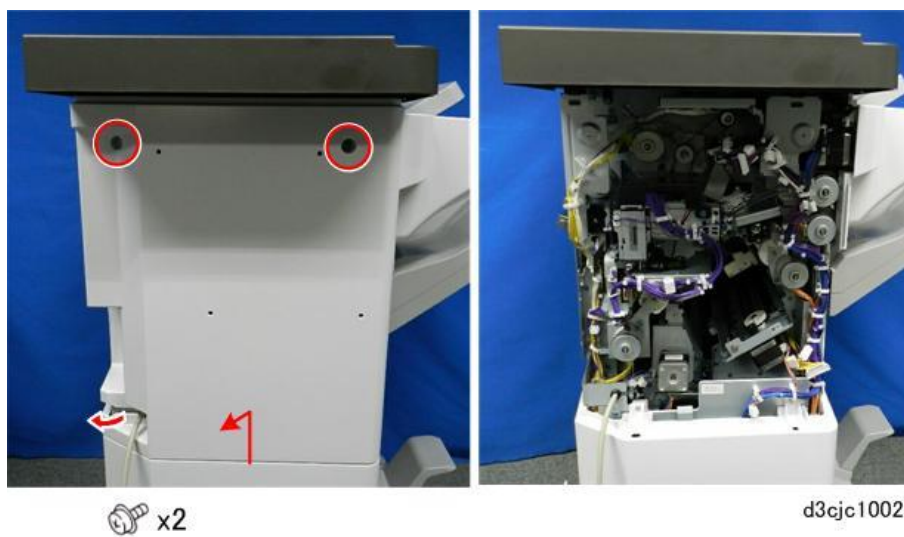
## Installation

### ⚠ CAUTION

- Before installing, turn the power OFF and unplug the power plug from the outlet.
- Performing the procedure with the power on could result in an electric shock or could cause a malfunction.

- 1.** Disconnect the finisher from the main frame.

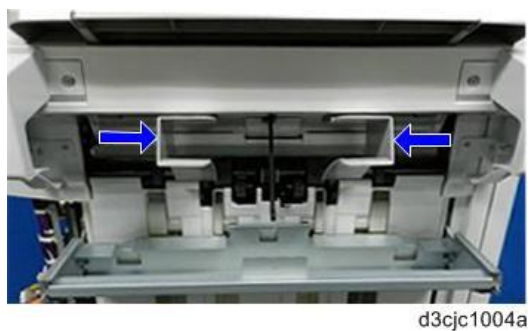
**2.** Remove the rear cover.



**3.** Remove the shift tray.

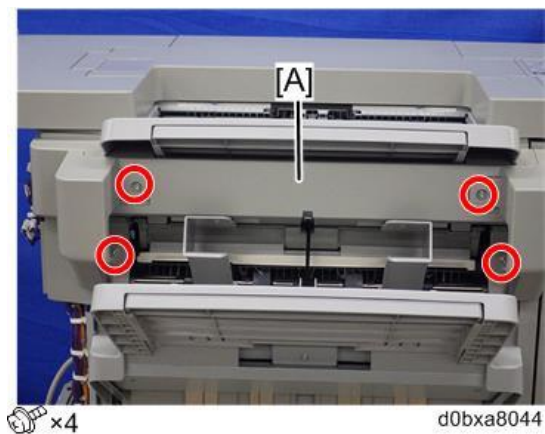


**4.** Push the paper guides to the center.



## 2. Installation

### 5. Remove the paper guide cover [A].



#### Note

- Remove the hook [A] on the right side.



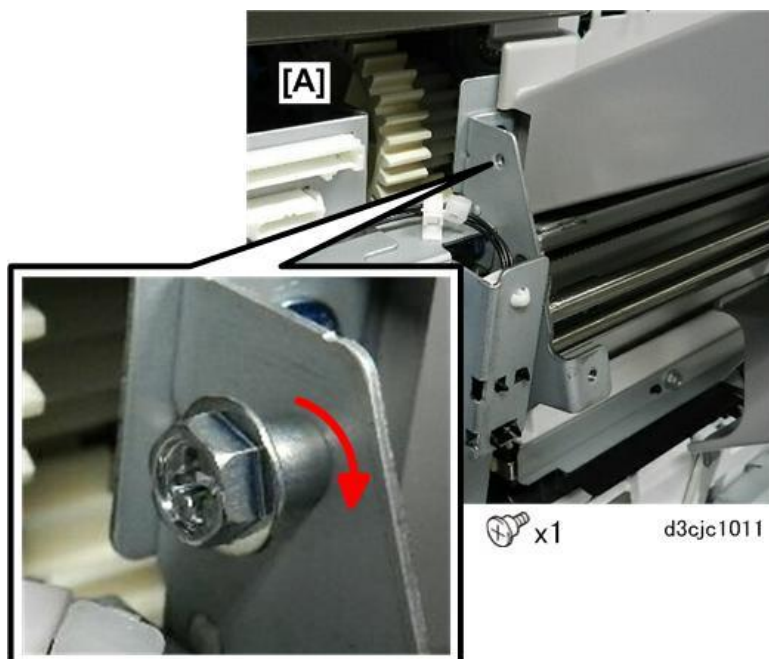
### 6. Disconnect the cover installation bracket.



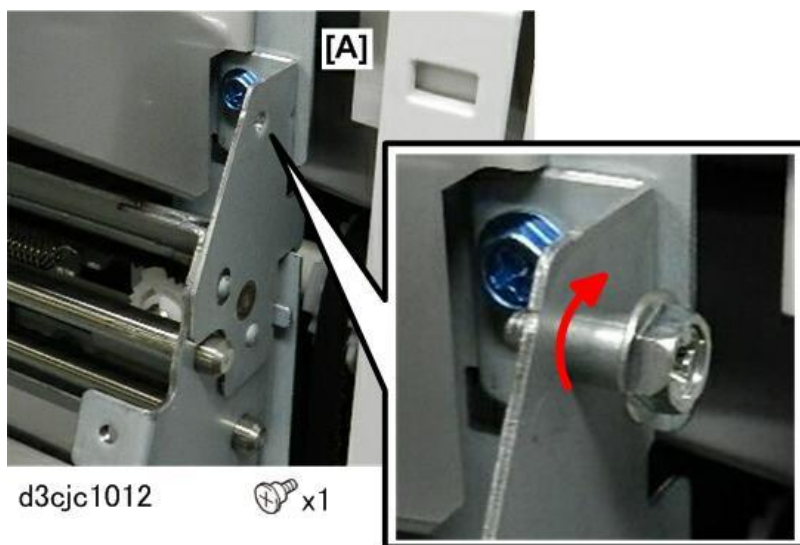
### 7. Slowly disconnect the bracket from the rail above, and then remove it.



**8.** At the rear, set one shoulder screw [A].



**9.** At the front, set the other shoulder screw [A].

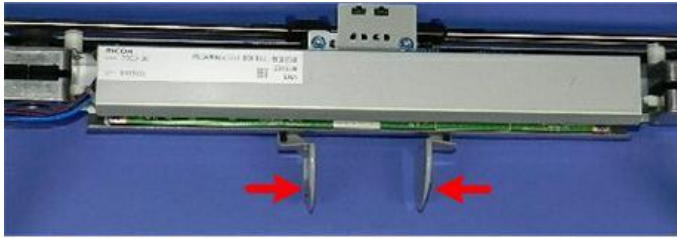


**10.** Expand the paper guides to their maximum width.



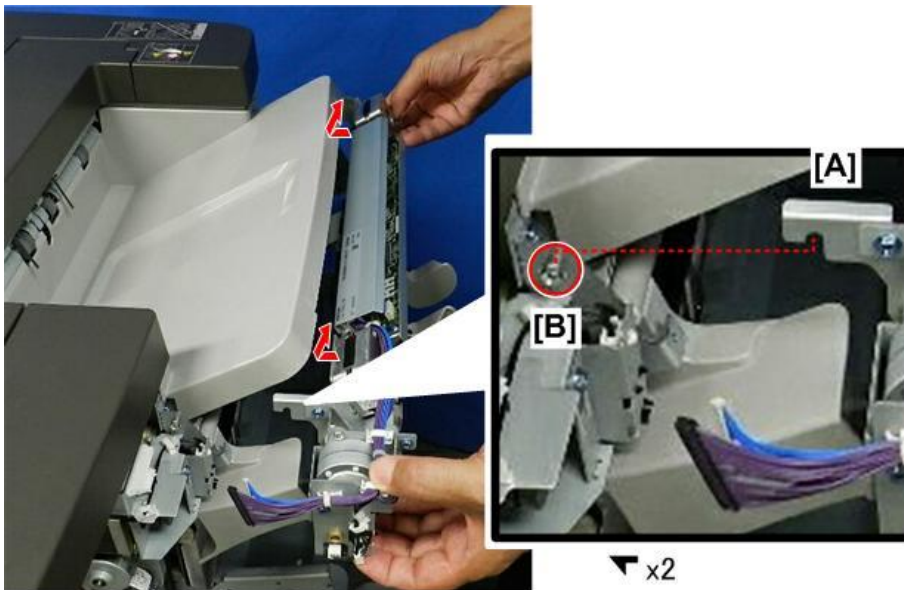
## 2. Installation

- 11.** Move the jogger arms on the jogger unit to the center.



d3cjc1014

- 12.** Hold the jogger unit so that the hooks [A] on both ends of the unit are in line with the shoulder screws already set [B].
- 13.** Rotate the jogger unit slightly so that the motors on both ends of the unit go under the tray, and then hang the hooks on the shoulder screws at the front and rear.



d3cjc1015

- 14.** Confirm that the rear bracket [A] is on the shoulder screw.
- 15.** Confirm that the rear motor [B] is up under the tray.

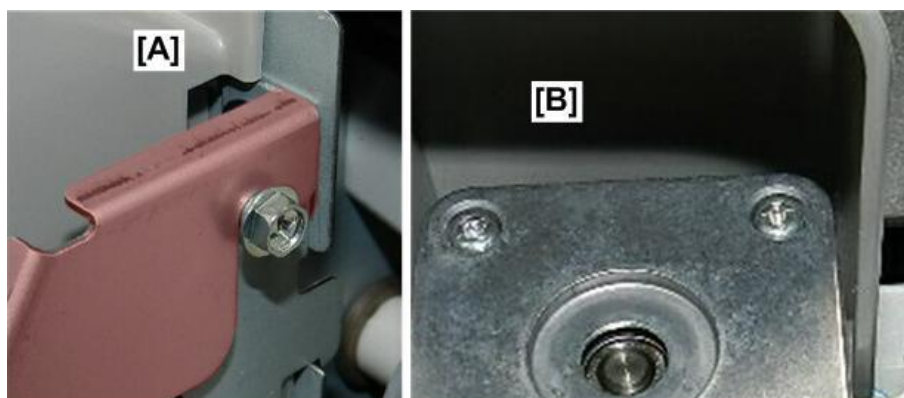


d3cjc1016

- 16.** Confirm that the front bracket [A] is on the shoulder screw.

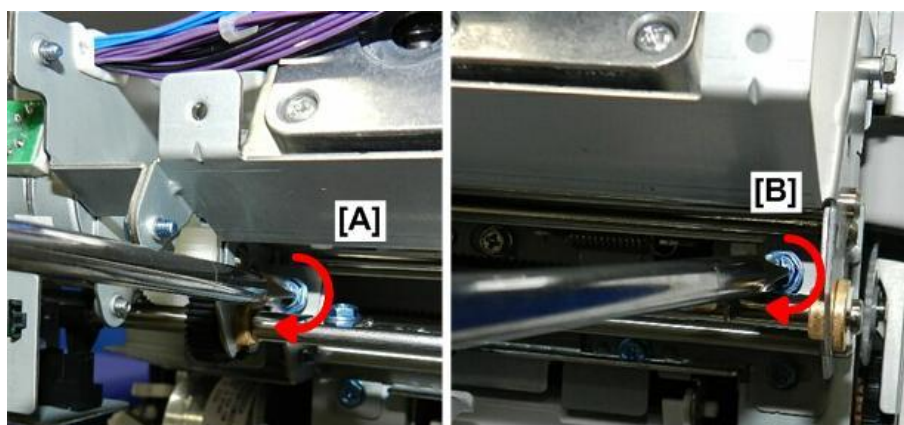


**17.** Confirm that the front motor [B] is up under the tray.



d3cjc1017

**18.** Fasten the jogger unit at the rear [A] and front [B].



 x2

d3cjc1018

**19.** Connect the jogger unit at the rear.



 x1

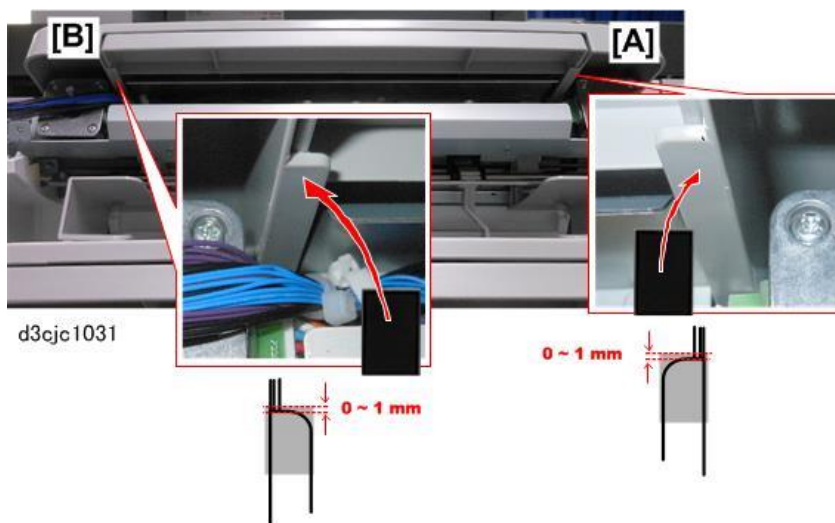
 x1

d3cjc1019

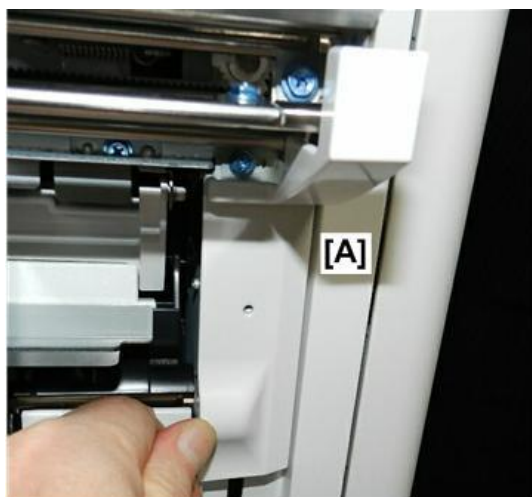
**20.** Peel the back off the two cushions strips.

## 2. Installation

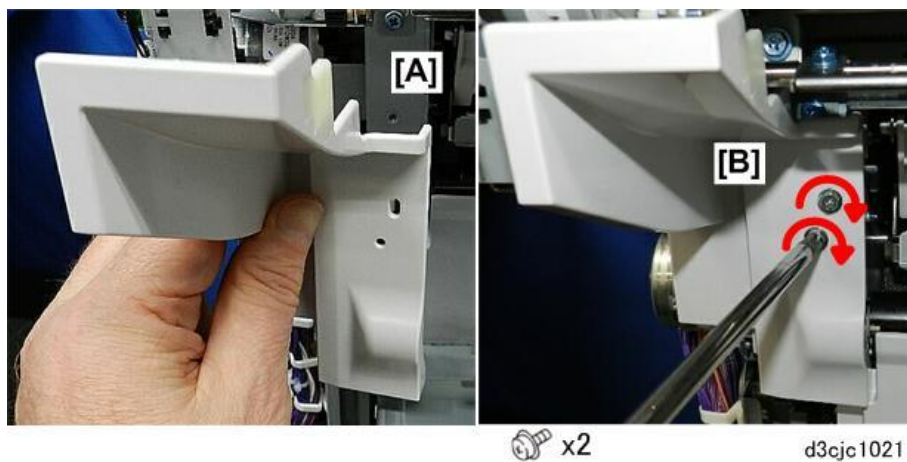
**21.** Attach the cushions to the front [A] and rear [B] of the lower arms of the output tray.



**22.** Set the front end cover [A]. Do not attach the screw yet.

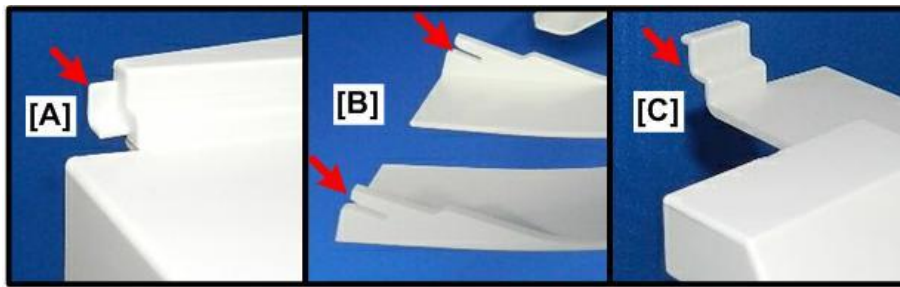


**23.** Set the rear end cover [A], and fasten it [B].



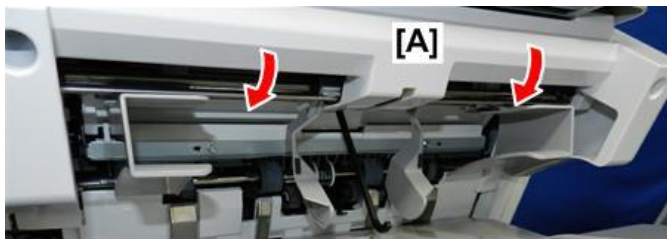
**24.** Check the jogger cover for the tabs and slots on the rear end [A], the center arm covers [B], and

the front end [C].



d3cjc1022

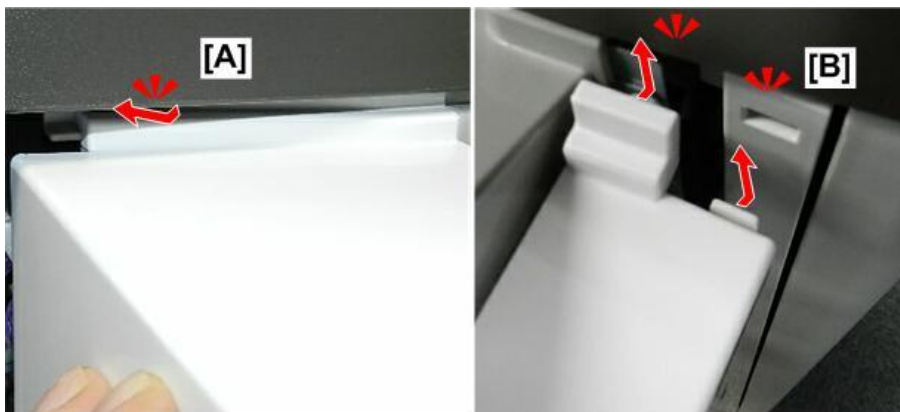
**25.** Slowly set the jogger cover [A] on the jogger unit.



d3cjc1023

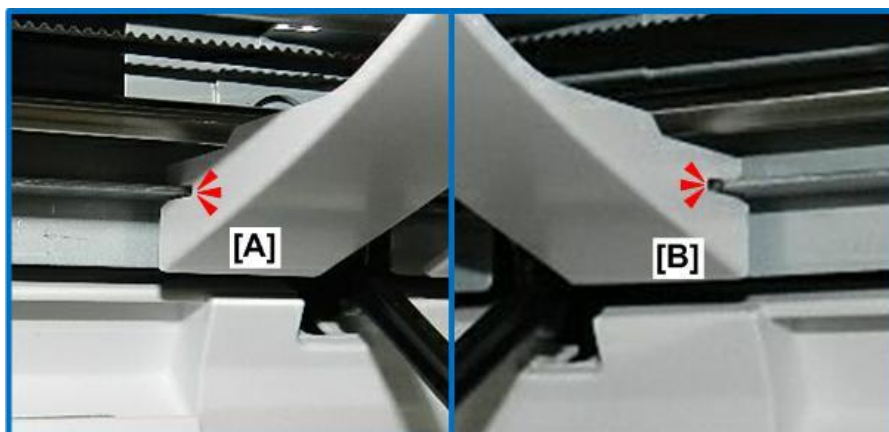
**26.** At the rear [A], confirm that the tab is inserted correctly.

**27.** At the front [B], confirm that both tabs are set correctly.



d3cjc1024

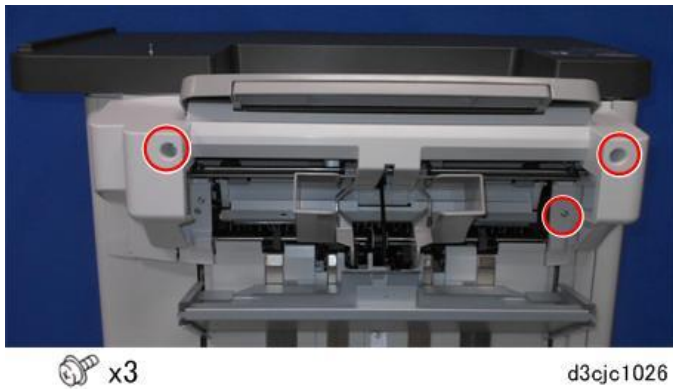
**28.** At the center under the jogger unit, make sure the rear arm cover [A] and front arm cover [B] fit over the edge of the plate, as shown below.



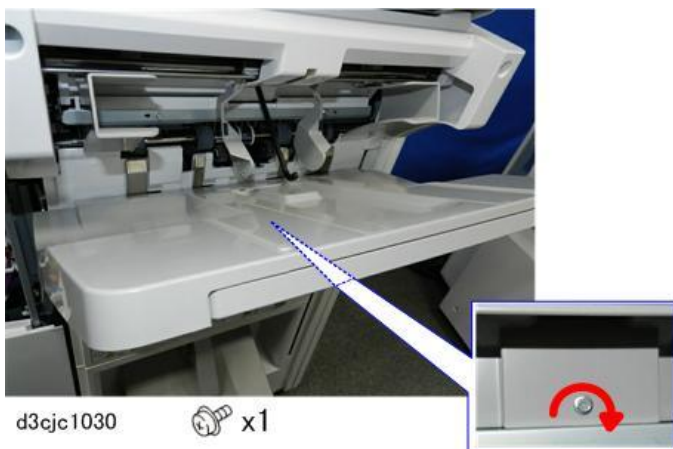
d3cjc1025

## 2. Installation

**29.** After making sure that all tabs are set correctly, fasten the cover to the jogger unit.

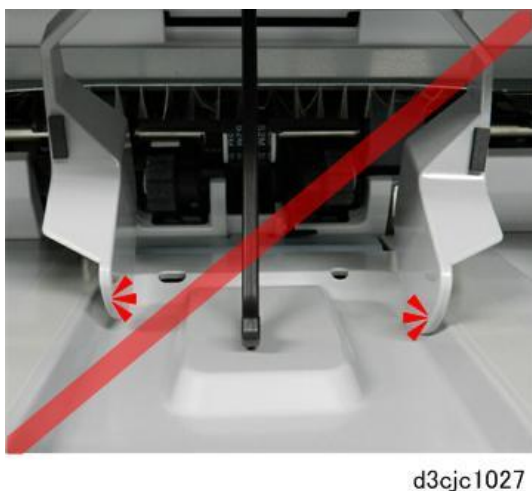


**30.** Re-install the shift tray.



**31.** Check the center of the shift tray.

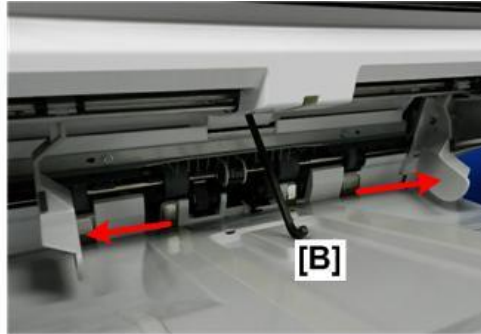
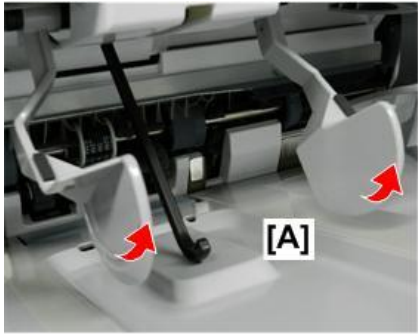
If the jogger arms are touching the surface of the shift tray as shown, this will cause a jam when the machine is turned on, because the arms will hit the tray when they move.



To avoid a jam, do either of the following before turning the power on:

1. Raise the jogger arms [A] slightly so that they do not touch the shift tray below.
2. Flip the jogger arms [B] away from the center so that they do not touch the tray.

## 2.Installation



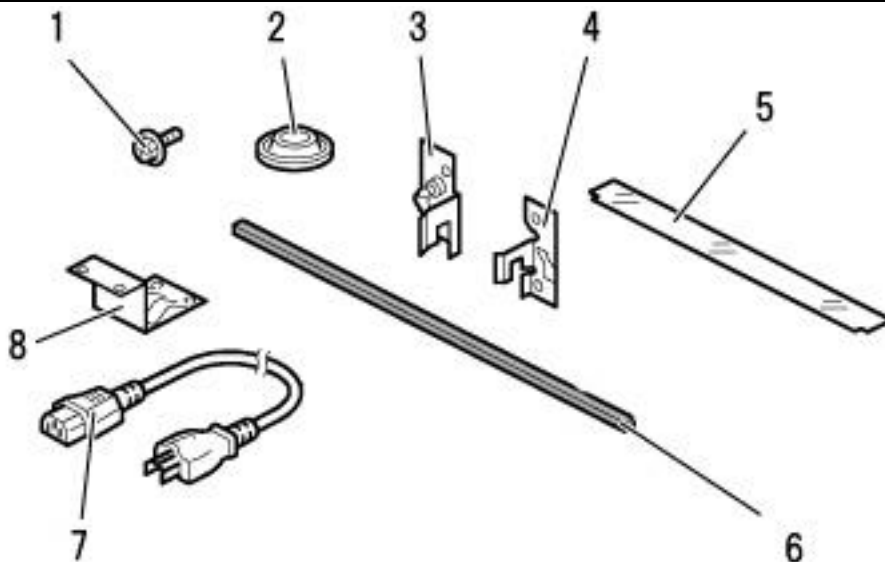
d3cjc1028

## Buffer Pass Unit Type S11 (D3FC)

### Accessories

Check the quantity and condition of the accessories in the box against the following list:

No.	Description	Q'ty
1	Tapping Screws - M4 x 8	6
2	Leveling Shoes	4
3	Joint Bracket (L)	1
4	Joint Bracket (R)	1
5	Sheets	4
6	Sponge Strip	1
7	Power Cord	1
8	Ground Plate	1



### Installation

#### **⚠ CAUTION**

- The unit must be connected to a power source that is close to the unit and easily accessible.
- Make sure that the main machine is switched off and that its power cord is disconnected before doing the following procedure.
- The buffer pass unit is unstable and can fall over easily. To avoid personal injury or damage to the unit, use caution when you pull out the buffer pass unit drawer until the unit has been docked to the main machine.
- The power cord that comes with the buffer pass unit is for use with this equipment only. Do not use it with other appliances. Doing so could result in fire or electric shock.
- Rated Voltage of Output Connector [A] for Accessories: Max. DC 24 V.



d194z0167

**Fuse Rating (DC5V, DC24V Fuse)**

**PCB: CTB**



d257a9001

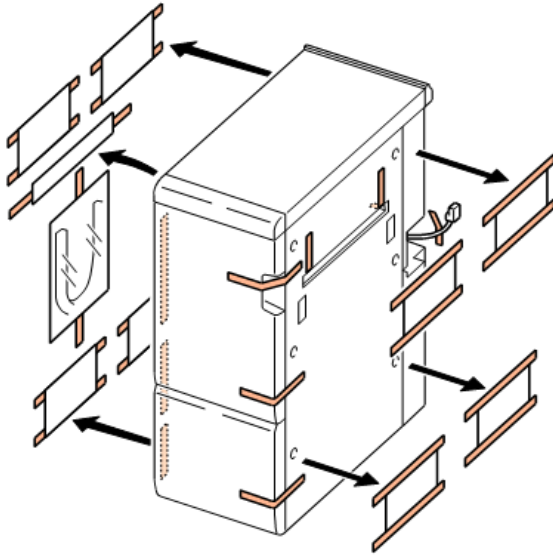
	ID	Rating	Manufacturer	Type No.
[A]	FU1	DC32V/5A	IDEC CORP	NRPS10-5A
[B]	FU2	DC6V/1.5A	TYCO ELECTRONICS CORP	MINISMDC150F

## 2. Installation

### Removing the Entrance Guide

---

1. Remove all visible external tapes on the external surfaces.



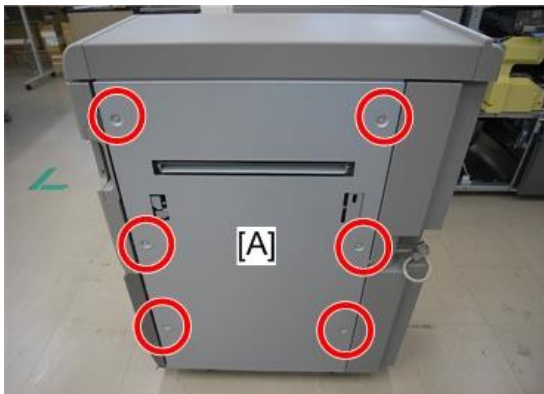
d548i101

2. Open the front door and remove all visible tapes.

#### **⚠ CAUTION**

- There are no tapes inside the unit.
- The unit is top heavy and unstable. Use caution when you pull out the buffer pass unit drawer until this unit has been connected to the main machine.

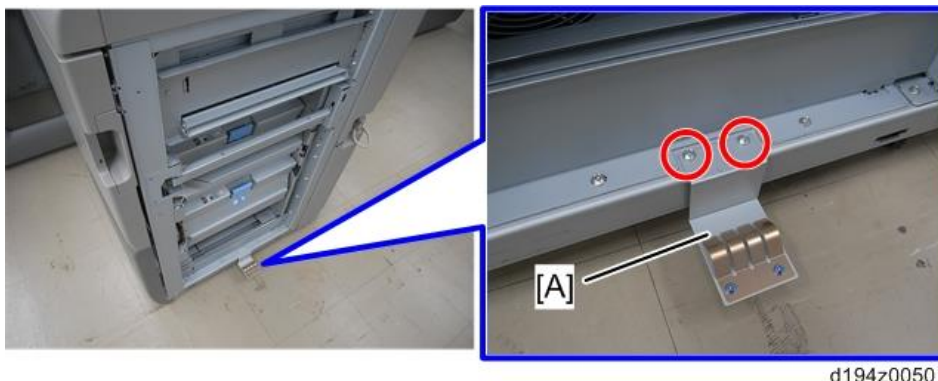
3. Remove the right cover [A] of the buffer pass unit. (🔩 x6)



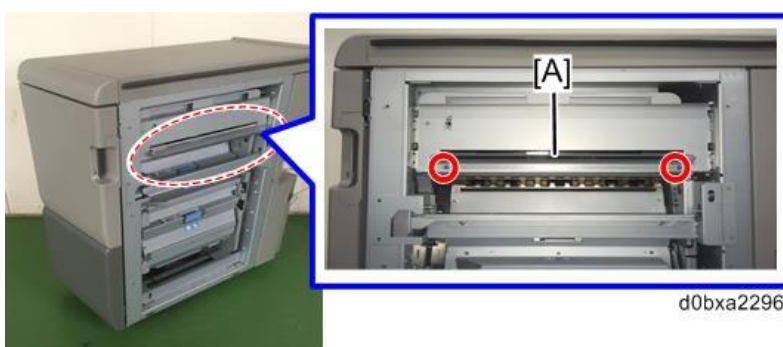
d194z0049



4. Attach the grounding plate [A]. (⚙️ x2)



5. If the buffer pass unit is connected to the main machine, remove the entrance guide [A].  
If the decurl unit is connected to the machine, do not remove the entrance guide.

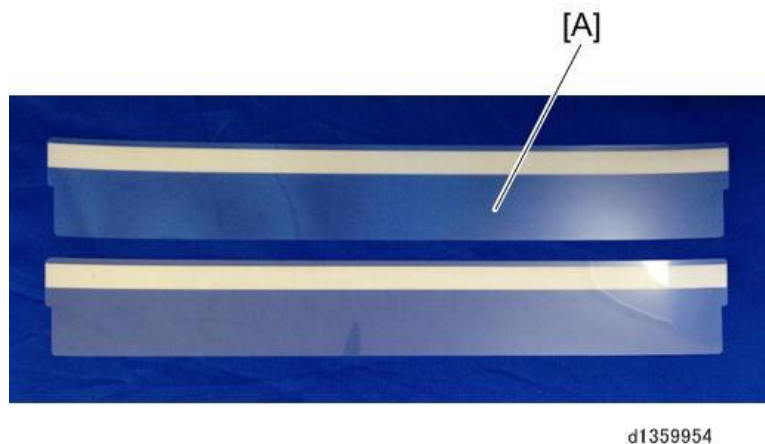


#### #01: When Connecting the Buffer Pass Unit with the Mainframe

##### ↓ Note

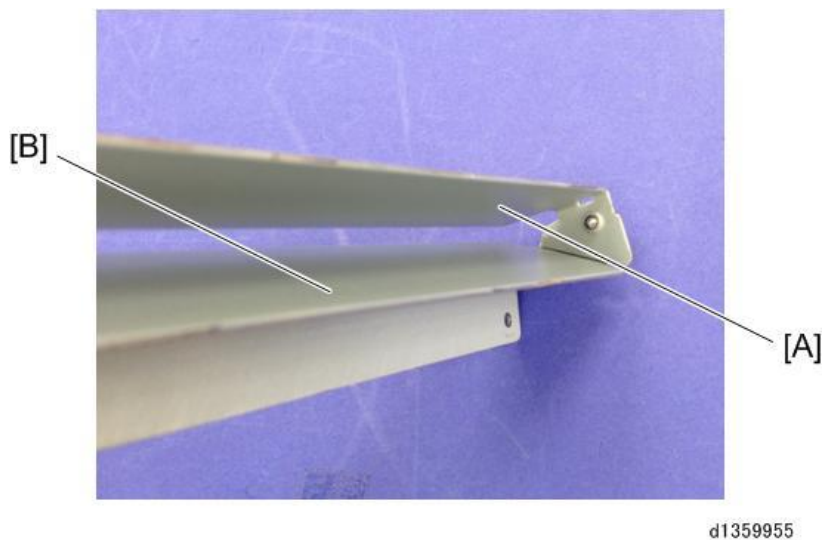
- If the Buffer Pass Unit is to be connected to the Decurl Unit DU5020 (D727), go to "[#02: When Connecting the Buffer Pass Unit with the Decurl Unit DU5020 \(D727\)](#)".

This section describes the procedure for attaching the Wide Guide Sheet to the entrance guide plate that was removed in step 5. ([Removing the Entrance Guide](#))



[A]: Wide Guide Sheet (50mm)

## 2. Installation

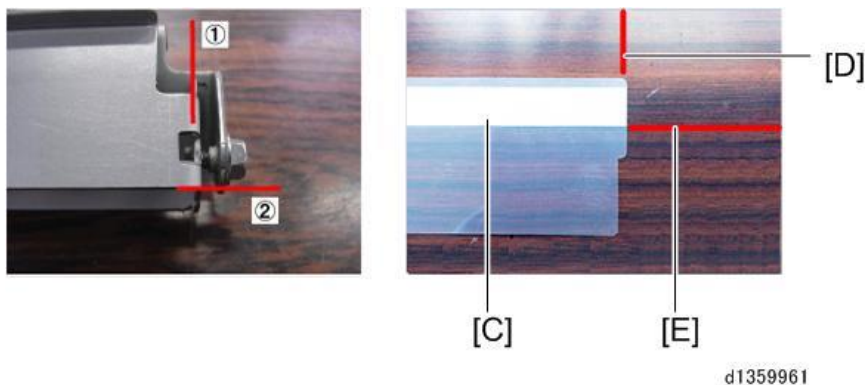


[A]: Upper entrance guide plate

[B]: Lower entrance guide plate

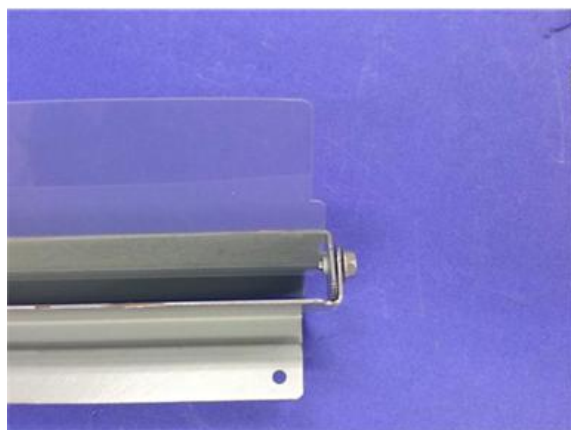
### Attaching the Wide Guide Sheet to the Upper Entrance Guide Plate

1. Peel off the release paper from the double-sided tape [C] on the Wide Guide Sheet.
2. Attach the Wide Guide Sheet to the upper entrance guide plate by aligning the edge [D] of the Guide Sheet with the edge (1) of the upper entrance guide plate, and edge [E] of the double-sided tape with the edge (2) of the upper entrance guide plate.



3. Confirm that the Wide Guide Sheet is attached correctly to the upper entrance guide plate as

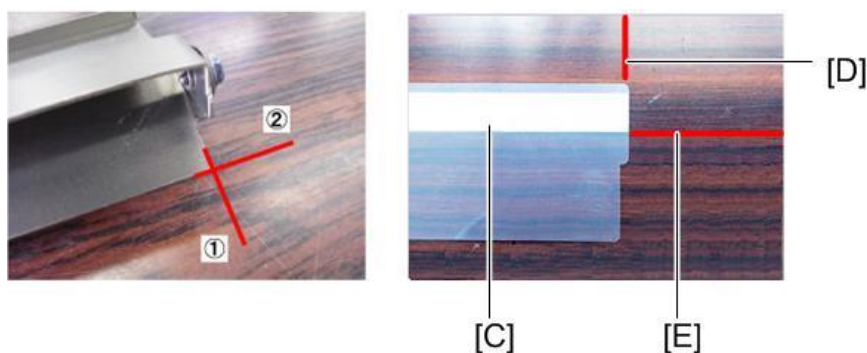
shown in the photo below.



d1359962a

### Attaching the Wide Guide Sheet to the Lower Entrance Guide Plate

- 1.** Peel off the release paper from the double-sided tape [C] on the Wide Guide Sheet.
- 2.** Attach the Wide Guide Sheet to the lower entrance guide plate by aligning the edge [D] of the Guide Sheet with the edge (1) of the lower entrance guide plate, and edge [E] of the double-sided tape with the edge (2) of the lower entrance guide plate.

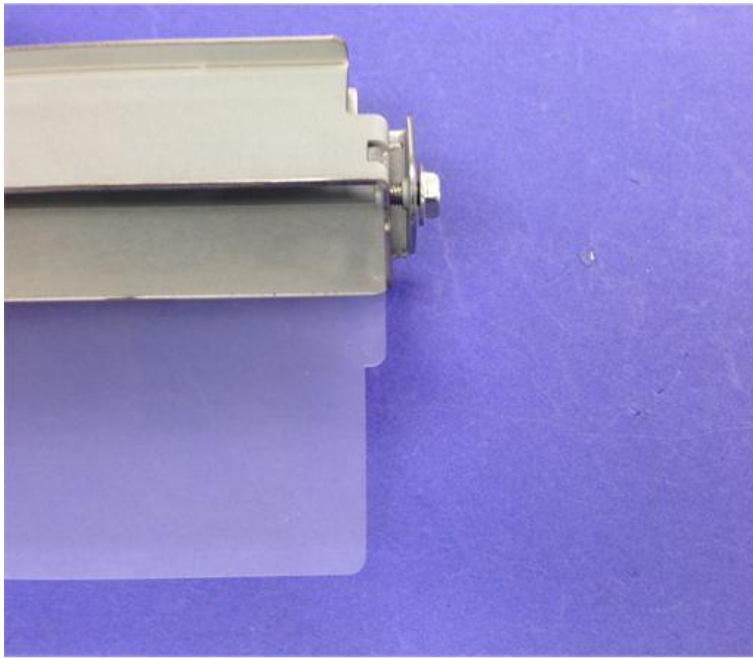


d1359963

- 3.** Confirm that the Wide Guide Sheet is attached correctly to the lower entrance guide plate as

## 2. Installation

shown in the photo below.

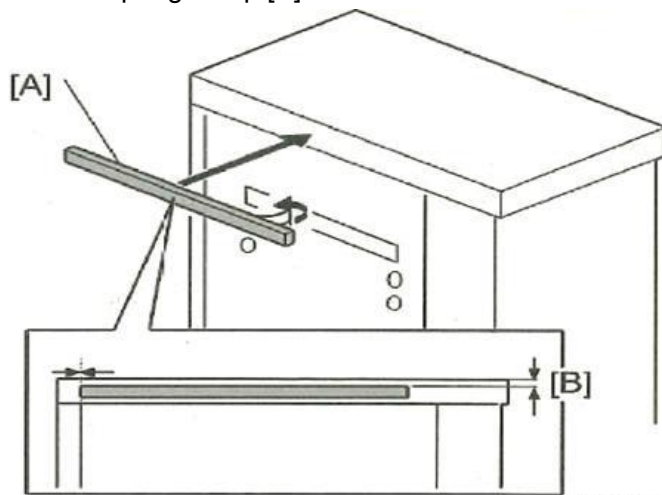


d1359965

4. Reattach the entrance guide plate to the buffer pass unit. (⚙️ x2)

### Connecting the Buffer Pass Unit

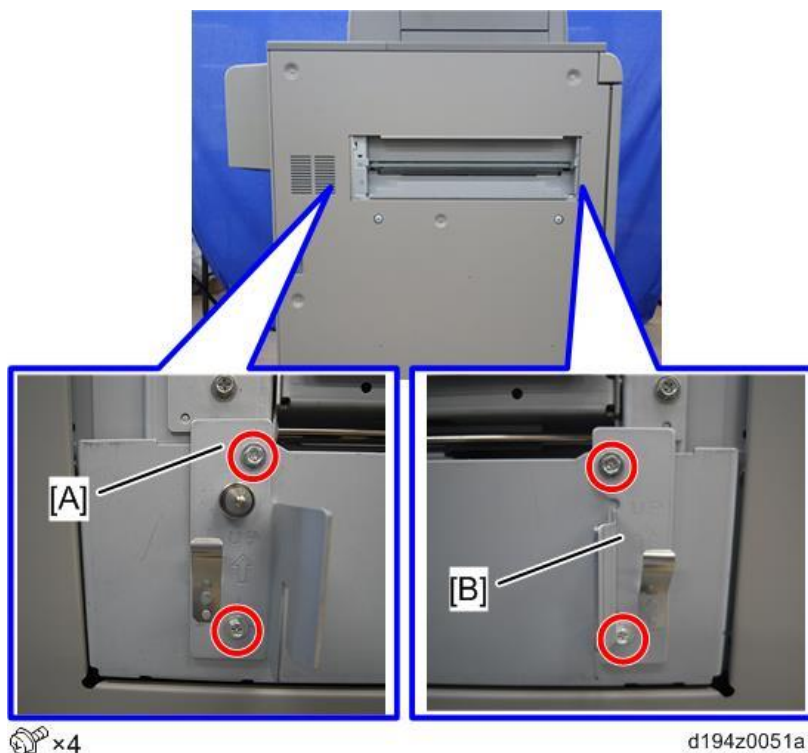
1. Reattach the right cover of the buffer pass unit. (⚙️ x2)
2. Attach the sponge strip [A] to the Buffer Pass Unit as shown in the illustration below.



d1351207a

[B]: 5mm

- 3.** Attach the right connecting bracket [A] and left connecting bracket [B] to the main frame. (M4×8)

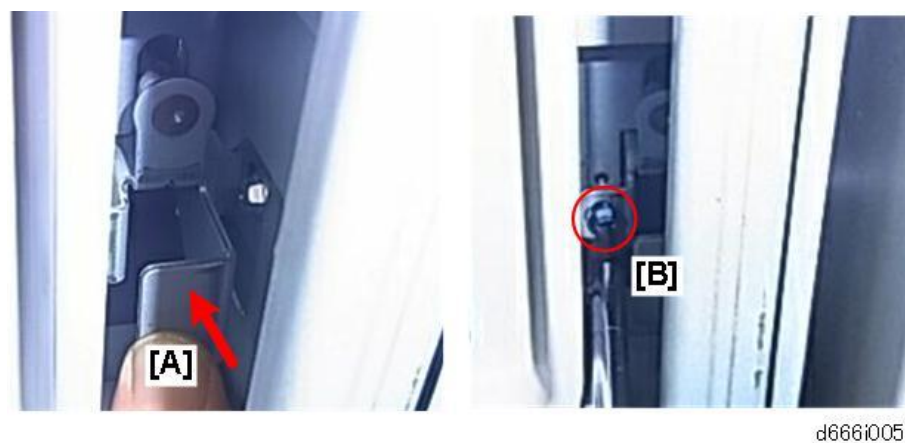


- 4.** Open the front door, then pull out the locking lever. (  x1)



- 5.** Push the buffer pass unit against the mainframe to dock the units.

- 6.** Push the lock lever [A] and fasten it with the screw [B] removed in step 7.



## 2. Installation

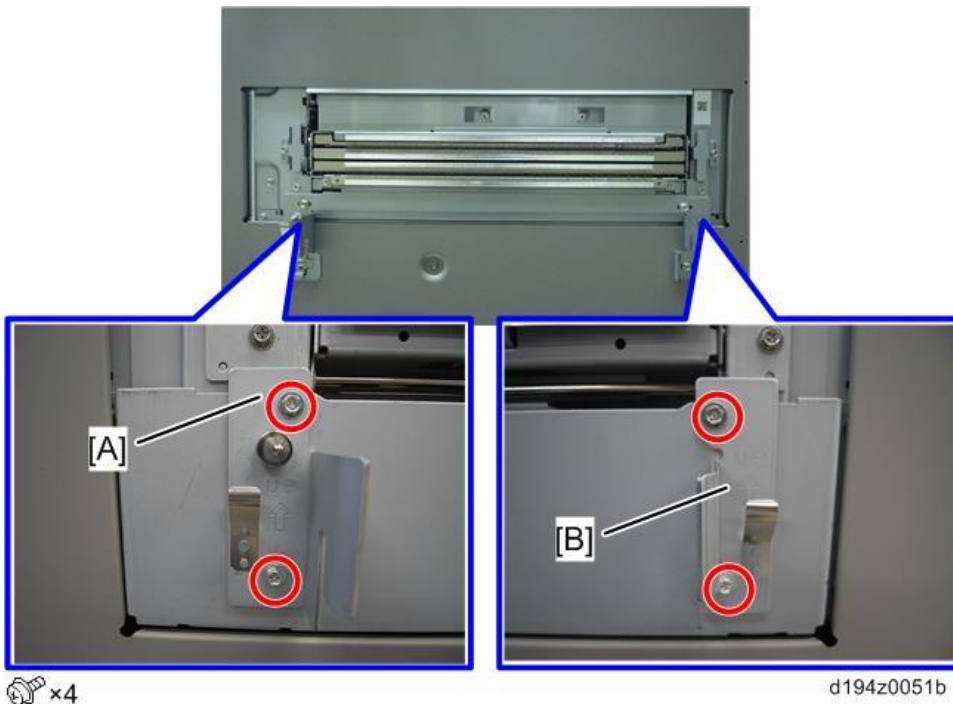
7. Connect the I/F cable [A] of the buffer pass unit to the socket on the mainframe.



8. Go to [Common Procedure](#).

### #02: When Connecting the Buffer Pass Unit with the Decurl Unit DU5020 (D727)

1. Attach the right connecting bracket [A] and left connecting bracket [B] to the paper exit side of the Decurl Unit. (M4×8)

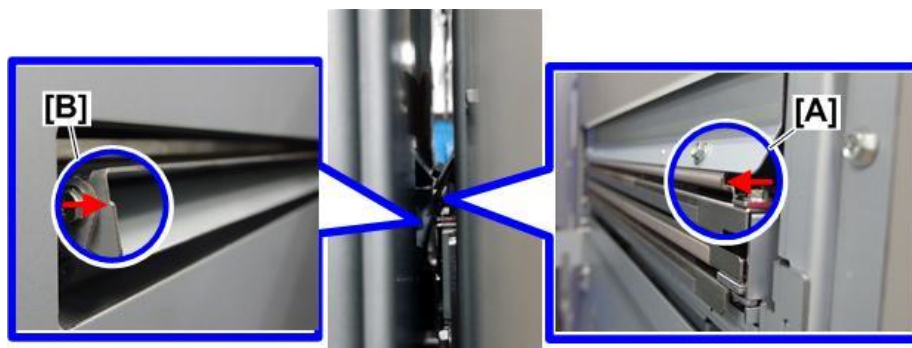


🔑 ×4

2. Open the front door.
3. Pull out the locking lever (🔑 × 1).



4. Set the four holders to of the leveling bolts of the main machine, and then push the buffer pass unit against the mainframe to dock the units.
5. Align the height [B] of the crank part of the buffer pass unit with the height [A] of the projection of the decurl unit.



d194d8301

6. Push the lock lever [A] and fasten it with the screw [B] removed in step 7.



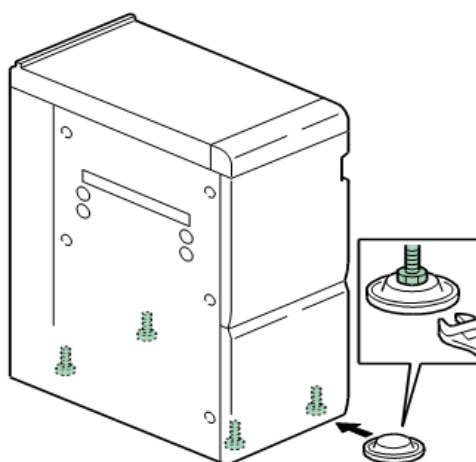
d666i005

7. Connect the I/F cable of the Decurl Unit to the socket of the mainframe.
8. Go to [Common Procedure](#).

### Common Procedure

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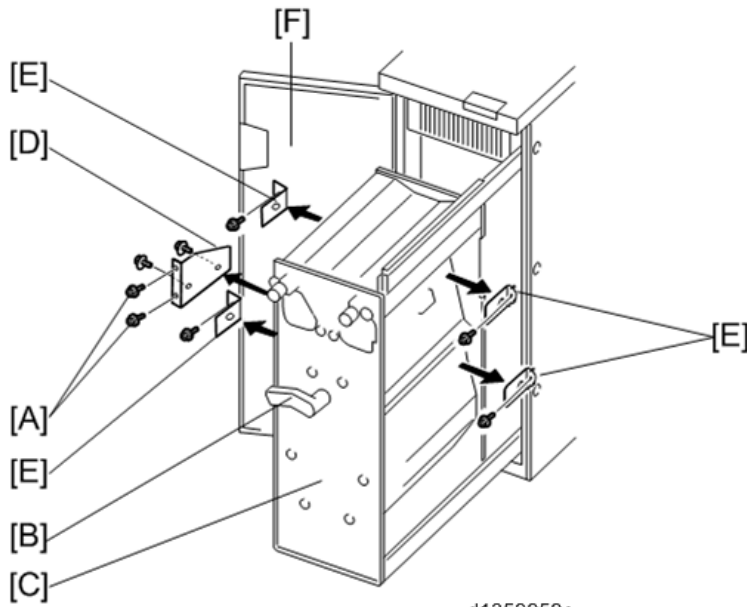
1. Set the holders to the leveling bolts and adjust the height of the unit.



d548i201

## 2. Installation

- 2.** Remove the 2 screws [A] on the front side of clamping bracket [D].
- 3.** Turn the Kc5 lever [B] counter clockwise and pull out the buffer pass unit drawer [C].
- 4.** Remove the clamping bracket [D]. (🔩x2)
- 5.** Remove the 4 shipping brackets [E]. (🔩x4)
- 6.** Slide in the buffer pass unit drawer [C].
- 7.** Close the front door [F].



🔩x8

- 8.** Attach the connecting bracket [A] of the downstream device to the left side [B] of the buffer pass unit. (The illustration below is an example showing the bracket for SR4110.

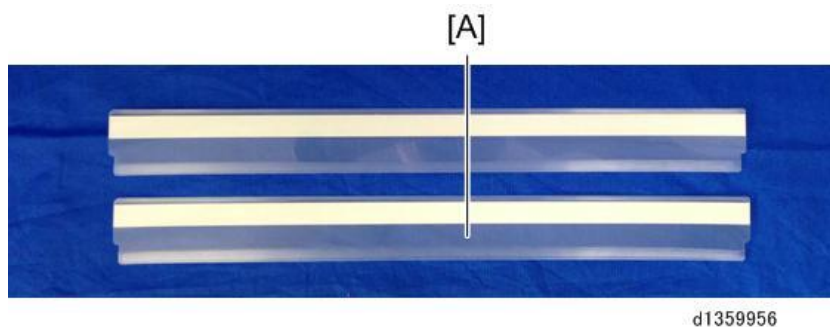


d194d8305

- 9.** Attach the Narrow Guide Sheet [A] (35.5mm, accessories item #7) to the entrance guide of the downstream device (for example, the SR4110) by referring to the procedure in the following



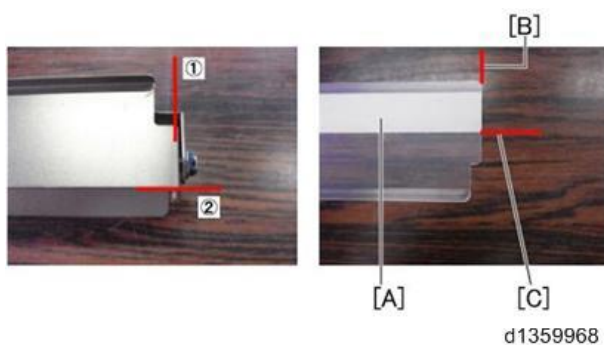
section.



d1359956

### Attaching the Narrow Guide Sheet to the Upper Entrance Guide

- 1.** Peel off the release paper from the double-sided tape [A] on the Narrow Guide Sheet.
- 2.** Attach the Narrow Guide Sheet to the upper entrance guide by aligning the edge [B] of the double-sided tape with the edge (1) of the guide plate, and the edge [C] of the double-sided tape with the edge (2) of the guide plate.



d1359968

- 3.** Confirm that the Narrow Guide Sheet is attached correctly to the upper entrance guide as shown in the photo below.



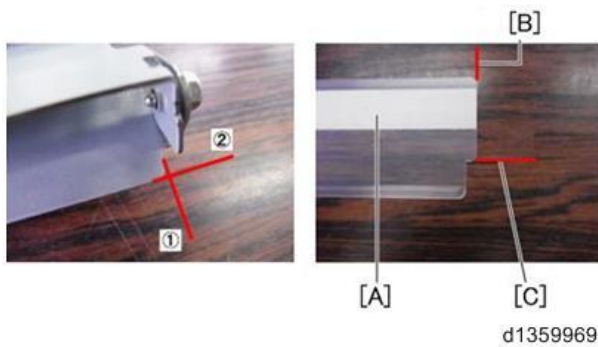
d1359968-1

### Attaching the Narrow Guide Sheet to the Lower Entrance Guide

- 1.** Peel off the release paper from the double-sided tape [A] on the Narrow Guide Sheet.
- 2.** Attach the Narrow Guide Sheet to the lower entrance guide by aligning the edge [B] of the Guide Sheet with the edge (1) of the guide plate, and edge [C] of the double-sided tape with the edge (2)

## 2. Installation

of the guide plate.

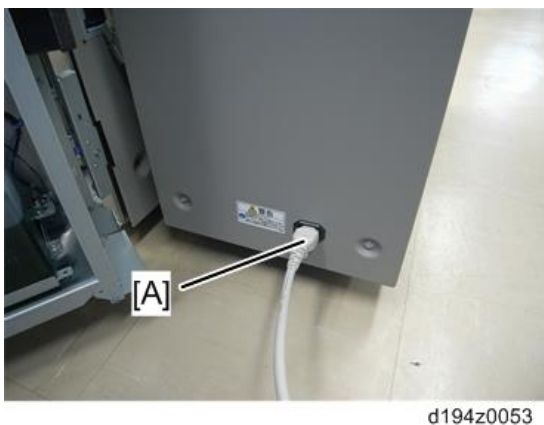


- 3.** Confirm that the Narrow Guide Sheet is attached correctly to the lower entrance guide as shown in the photo below.



## Completing the Installation

- 1.** Dock the downstream device to the buffer pass unit.
- 2.** Connect the power cord [A] provided with the buffer pass unit to the power inlet on the buffer pass unit.



- 3.** Connect the buffer pass unit power cord to the wall socket, and then connect the mainframe power cord to the wall socket.

### Note

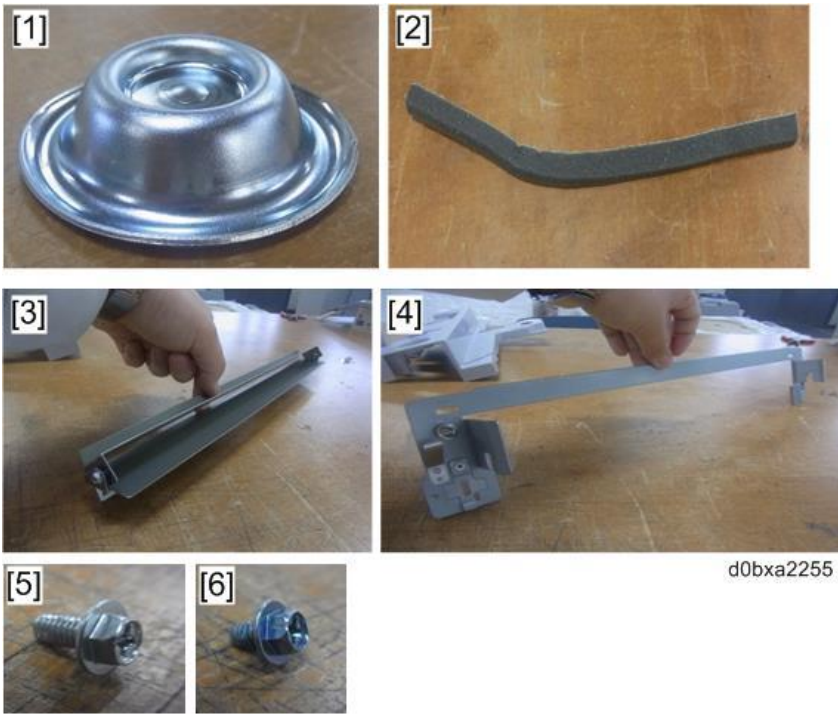
- Make sure the power cords are plugged into the wall sockets in the above order. Otherwise, the buffer pass unit will not be recognized by the mainframe when turning on the power in the following step, and this will cause a paper jam in the buffer pass unit.

- 4.** Turn ON the main power switch on the mainframe.

- 5.** Confirm proper function of the buffer pass unit to complete the procedure.

## Bridge Unit BU5020 (D3GN)

### Accessories



No.	Description	Q'ty	Remarks
1	Leveling Shoes	4	
2	Sponge Strip	1	
3	Entrance Guide Plate	1	
4	Joint Bracket	1	
5	Tapping Screws M3x6	2	For attaching the entrance guide plate
6	Tapping Screws M4x8 (Round Point)	4	For attaching the joint bracket
-	Tapping Screws 4x16	4	Not used for this machine
-	EMC Address	1	

### Installation

#### **⚠ CAUTION**

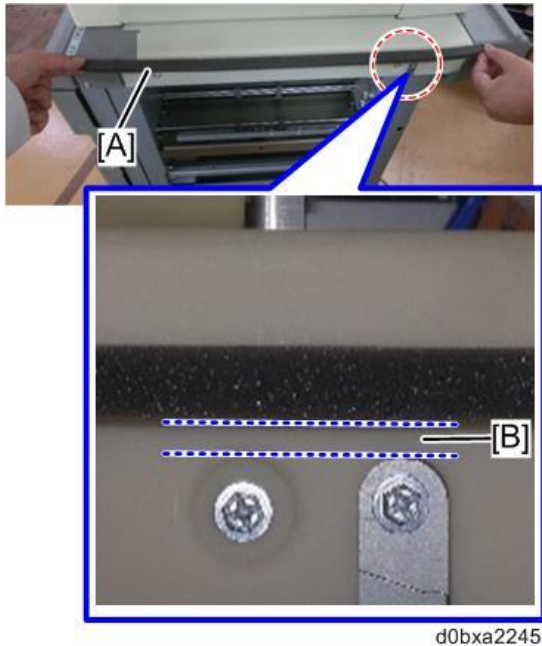
- The unit must be connected to a power source that is close to the unit and easily accessible. Make sure that the main machine is switched off and that its power cord and AC power source is disconnected before doing the following procedure.
- When moving the cover interposer tray to another installation site, move the cover interposer tray and the downstream unit together without disconnecting the cover interposer tray from the downstream unit. If they are disconnected, the bridge unit may be overturned, and then you may get injured.

## Unpacking

1. Remove the orange tapes.

## Attaching the Parts

1. Attach the sponge strip [A].  
[B]: 0 to 5 mm (0.2 inch)



2. Attach the entrance guide plate [A].



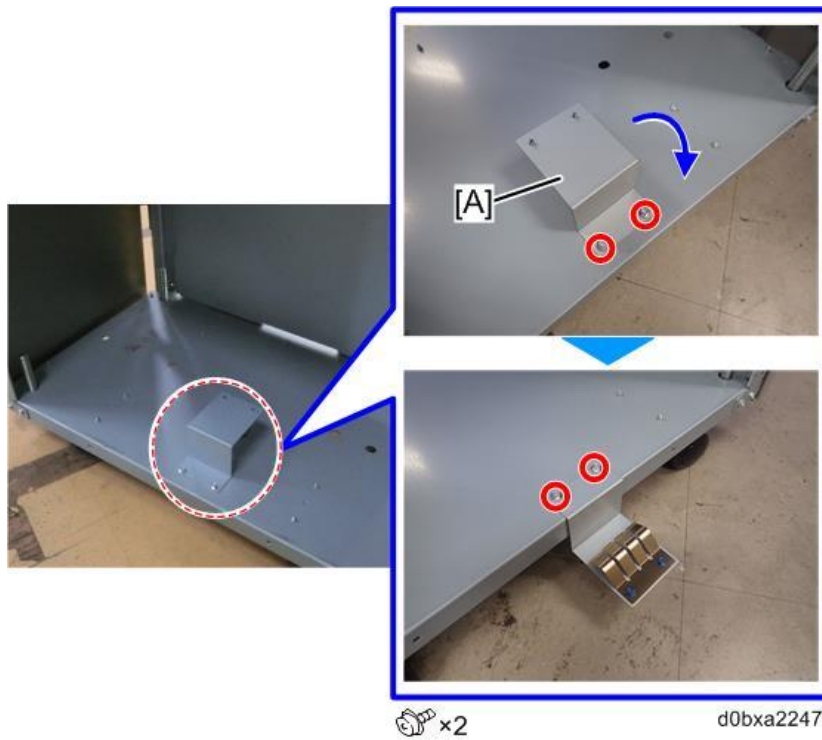
★ Important

- The types of the entrance guide plate and installation procedure depend on the upstream unit.
- If the upstream unit (main machine) is equipped with the decurl unit, refer to "[When Connecting to the Decurl Unit](#)".
- If the upstream unit is the buffer pass unit, refer to "[When Connecting to the Buffer Pass Unit](#)".

3. Remove the ground plate [A] fixed to the bottom part. Make the ground plate upside down and

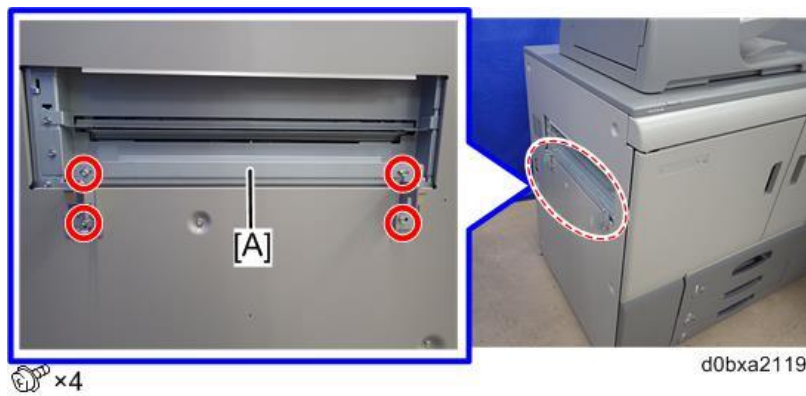
## 2. Installation

reattach it.

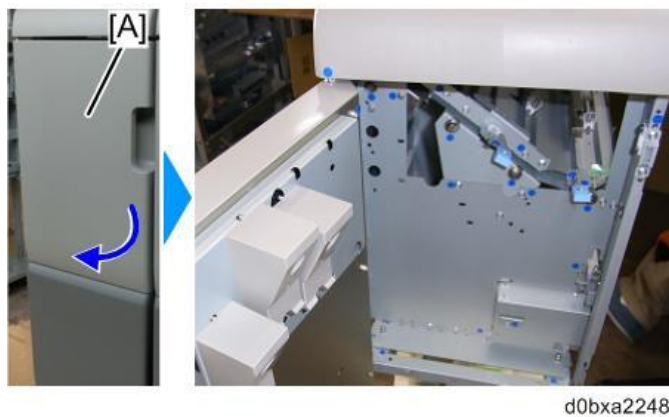


### Connecting the Unit to the Main Machine

1. Attach the joint bracket [A] to the main machine. (M4×8 Round point)



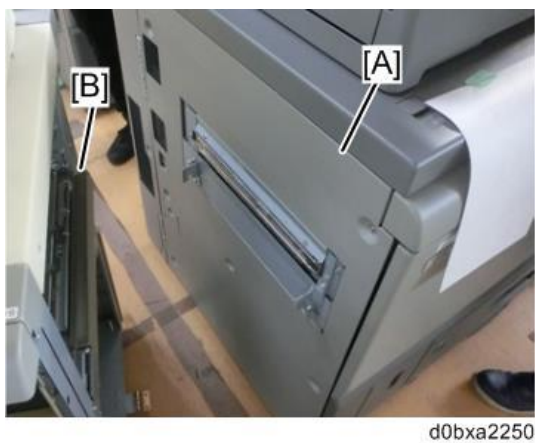
2. Open the front cover [A] of the cover interposer tray.



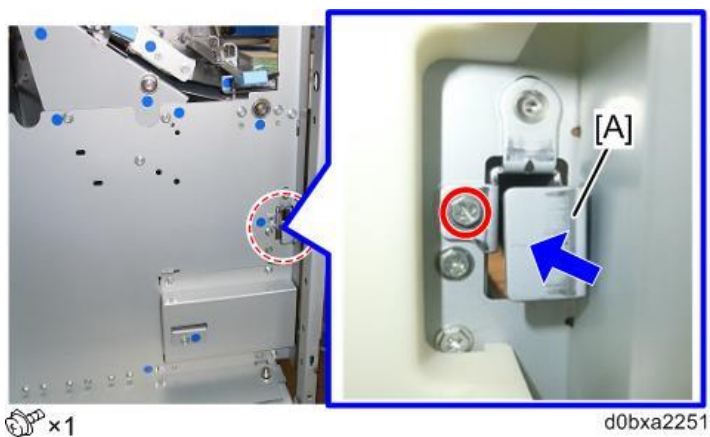
- 3.** Remove the screw of the lock lever, and pull out the lever [A].



- 4.** Connect the bridge unit [B] to the main machine [A].

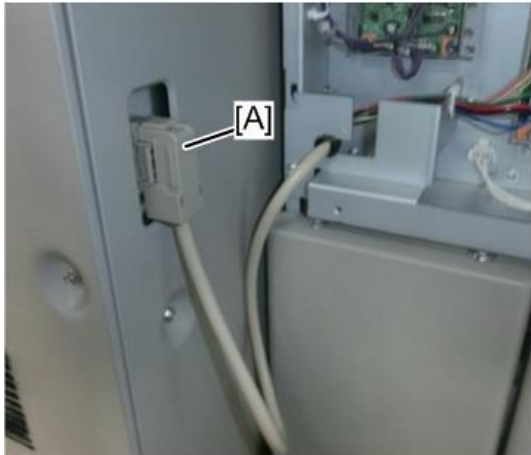


- 5.** Push in the lock lever [A], and then fix it with the screw that removed in step 3.



## 2. Installation

6. Connect the connector [A] of the bridge unit to the main machine.



d0bxa2252

7. Set the holders (x4) [A] under the four leveling bolts, and then adjust the level.



d0bxa2253

### Note

- Measure the slant of the stands by the level, and then adjust the stands like you adjust the leveling bolts of the main machine. ([Height and Level Adjustment](#))

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## When Connecting to the Decurl Unit

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### Installing the Entrance Guide Plate

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#### **CAUTION**

- Two entrance guide plates, which are used for the connection between the decurl unit and the entrance of the downstream unit, are provided with the decurl unit.
- The bridge unit uses the entrance guide plate [A] as shown below.



d0bxa2121



1. Make sure that the entrance guide plate [A] is not attached to the bridge unit. If the entrance guide plate is attached, remove it.



2. Attach the entrance guide plate [A] to the bridge unit. (M3×6)



### Installing the Bridge Unit

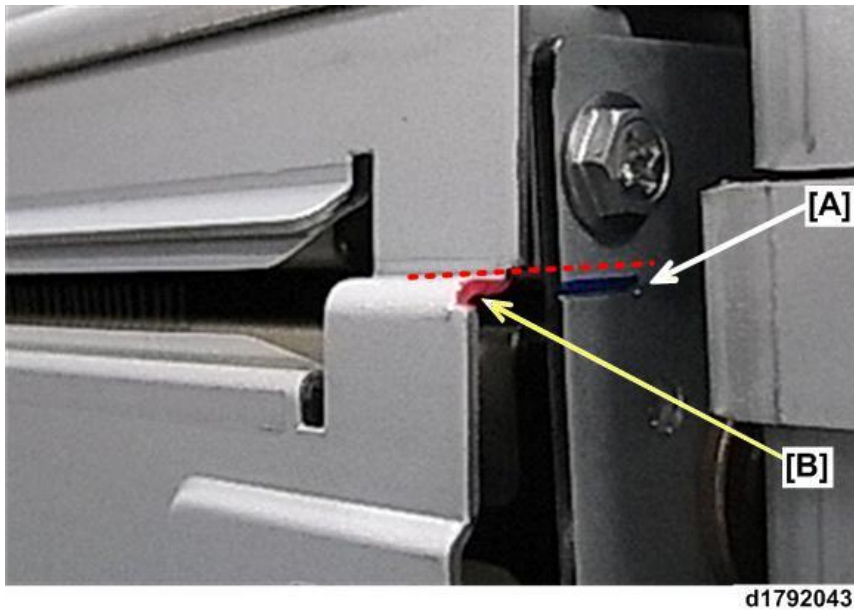
1. Connect the I/F cable to the main machine.
2. Connect the bridge unit to the main machine.
3. Plug the main machine into its power source, and then switch the machine on.
4. Enter the SP mode, and then do SP5-804-128 (Output Check De-curler Unit Move: Upper Default).
5. Send a sheet of paper through the decurl unit (the upper path is the default).

#### ★ Important

- If the software of output check operation is not supported, move the path of the decurl unit in the following way from step 4.
    1. Do SP1-906-001 (De-curler Setting Tray 1: Paper Path Selection) to confirm that the upper path is selected as the default path.
    2. Switch to the COPY WINDOW, select one-side copy from Tray 1, and then press [Start].
    3. Make sure that the paper exits the machine through the default upper path of the decurl unit, and then open the front door to interrupt operation of the machine.
    4. Turn the machine off, and then unplug it from its power source.
6. Turn the machine off, and then unplug it from its power source.
  7. Check the red and blue marks between the main machine and the bridge unit.
  8. Remove the rear cover of the bridge unit.
  9. Check to see if the blue mark [A] at the front and back of the decurl unit is at the same height as

## 2. Installation

the red mark [B] at the front and back of the bridge unit.

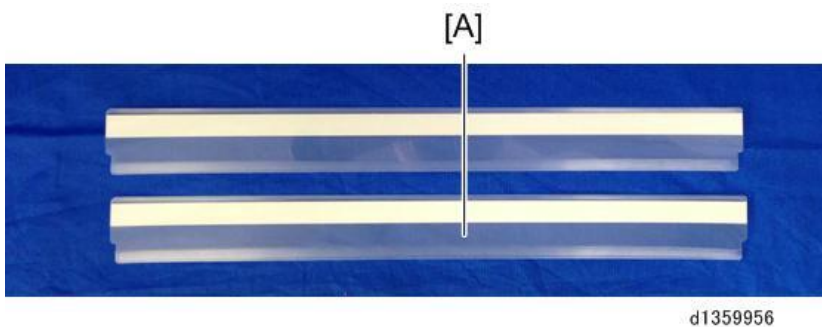


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### When Connecting to the Buffer Pass Unit

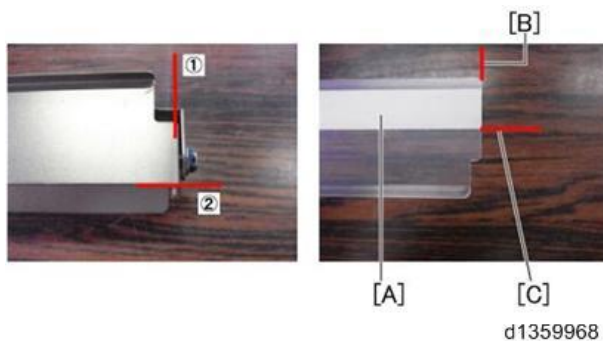
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1. Attach the finisher guide sheet [A] provided with the buffer pass unit to the entrance guide plate of the bridge unit.



2. Peel off the release paper from the double-sided tape [A] on the finisher guide sheet, attach the finisher guide sheet the entrance guide plate.

When attaching the entrance guide plate, align the edge [B] of the sheet with the position 1 and align the edge [C] of the double-sided tape with the position 2.



#### Note

- Confirm that the finisher guide sheet is attached correctly to the entrance guide plate as

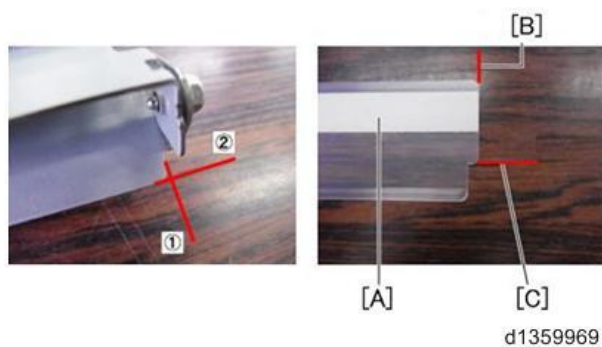
shown in the photo below.



d1359968-1

- 3.** Peel off the release paper from the double-sided tape [A] on the finisher guide sheet, attach the finisher guide sheet the entrance guide plate.

When attaching the entrance guide plate, align the edge [B] of the sheet with the position 1 and align the edge [C] of the double-sided tape with the position 2.



d1359969

**Note**

- Confirm that the finisher guide sheet is attached correctly to the entrance guide plate as shown in the photo below.



d1359969-2

## 2. Installation

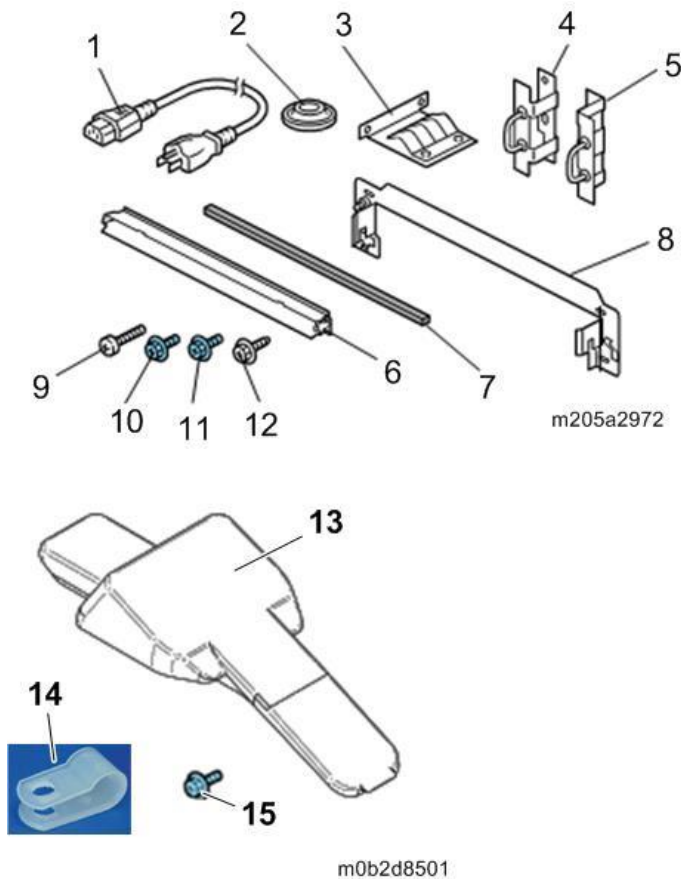
# High Capacity Stacker SK5040 (D3DK), Roll-Away Cart Type 5010 (D456)

### Note

- Up to two of the stackers can be docked.

## Accessories

### High Capacity Stacker SK5040 (D3DK)

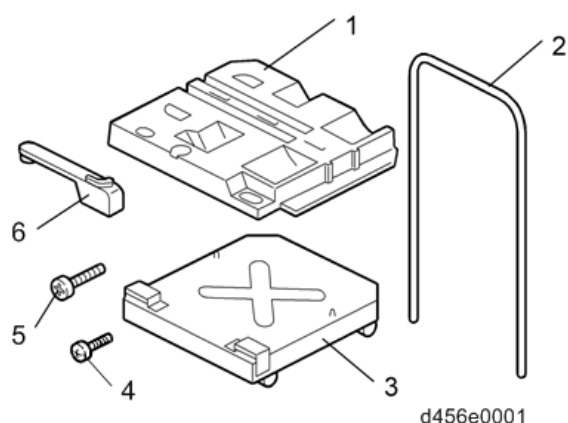


No.	Description	Q'ty
1	Power Cord*1	1
2	Leveling Shoes	4
3	Ground Plate	1
4	Lock Hasp – Left	1
5	Lock Hasp – Right	1
6	Entrance Guide	1
7	Sponge Strip	1
8	Joint Bracket	1
9	Screw M4x8	2
10	Screw M3x6	4

No.	Description	Q'ty
11	Screw M4x6	2
12	Screw M4x14	4
13	Support Tray	1
14	Clamp	1
15	Screw 3x8	1

\*1 In China, do not use this power cord provided with this option. Contact your supervisor and use the power cord specified for use in China.

### Roll-Away Cart Type 5010 (D456-17)



No.	Description	Q'ty
1	Paper Tray	1
2	Tray Cart Handle	1
3	Tray Cart Base	1
4	Screw M4x14	2
5	Screws M10x25	2
6	Paper Press Lever	1

## Installation

### **⚠ CAUTION**

- The unit must be connected to a power source that is close to the unit and easily accessible.
- Before performing the following procedure, make sure that the main power switch and AC power switch of the main machine are turned OFF and that the power cord is disconnected. Performing the procedure with the power on could result in an electric shock or could cause a malfunction.

## 2. Installation

- Rated voltage of output connector for accessory [A]: Max. DC24V.



d0a5m1025

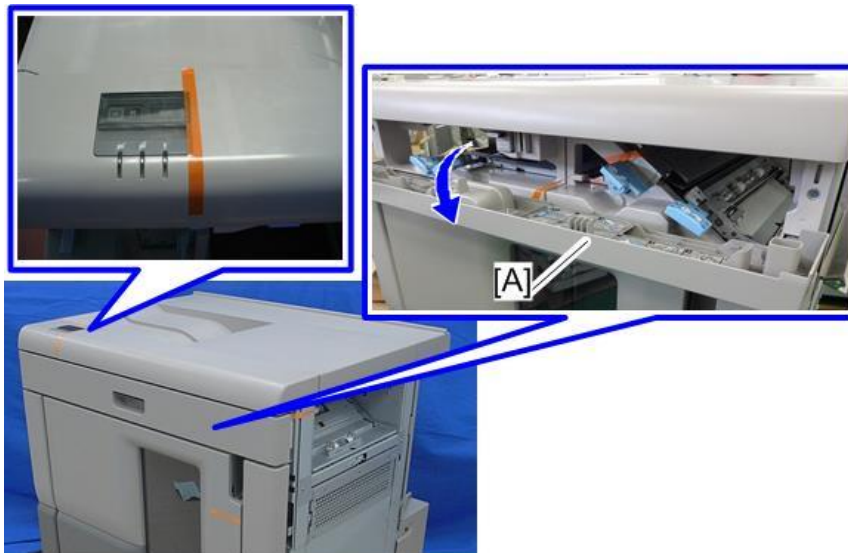
### ★ Important

- Make sure that no cables are sticking out on the floor inside the high capacity stacker.
- Install the high capacity stacker on a flat and level surface. This is to prevent problems during lifting and lowering operation of the paper tray.
- Do not move the high capacity stacker while the tray cart is installed inside the high capacity stacker.

### Docking to the Main Machine, or the Upstream Unit

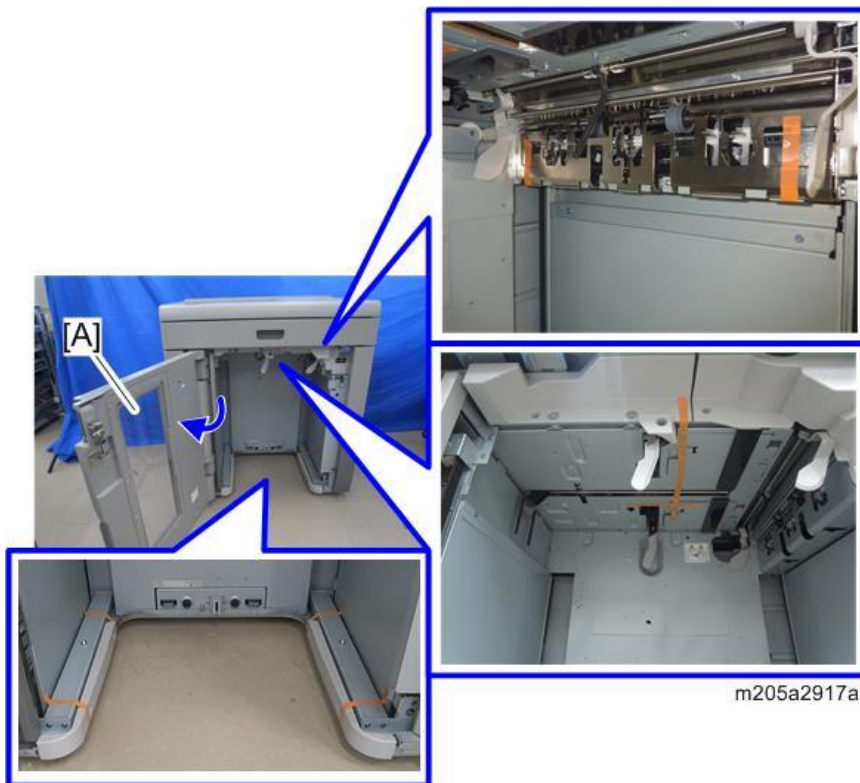
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- 1.** Remove all visible tapes from the external covers.
- 2.** Open the front upper cover [A], and then remove all visible tapes.



m205a2916b

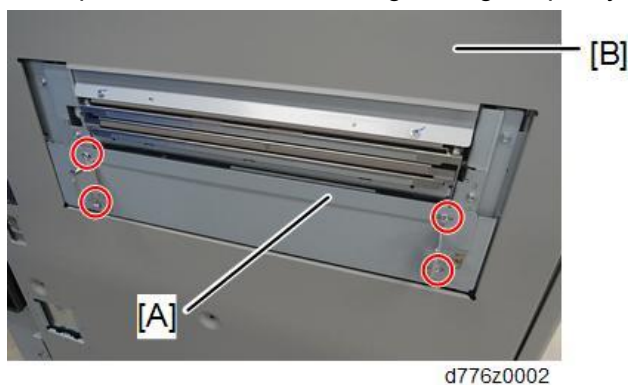
- 3.** Open the front door [A] and remove all visible tapes.



- 4.** Install the joint bracket [A] on the main machine or the upstream unit. (M4×14)

**★ Important**

- When installing the high capacity stacker immediately next to the main machine, use the screws (M4x8) provided with the main machine.
- Example below: When installing the high capacity stacker on the main machine [B].

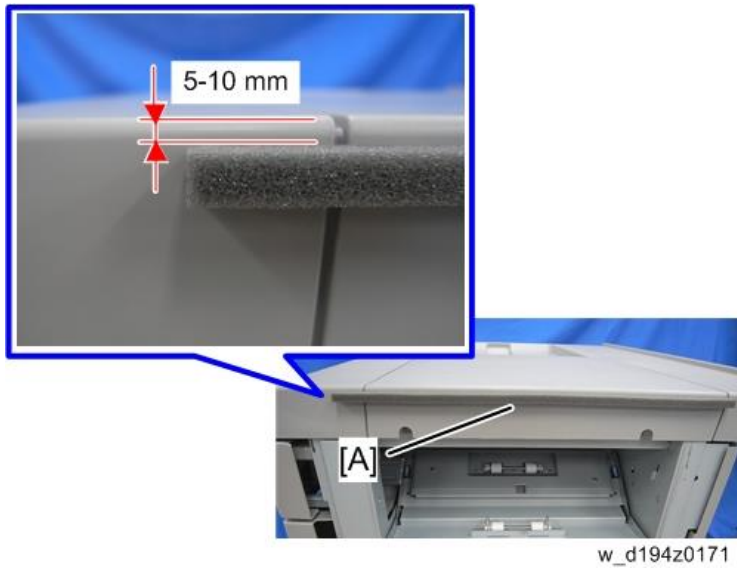


- 5.** Remove the tape from the sponge strip [A], and attach the strip to the top right edge of the high capacity stacker.

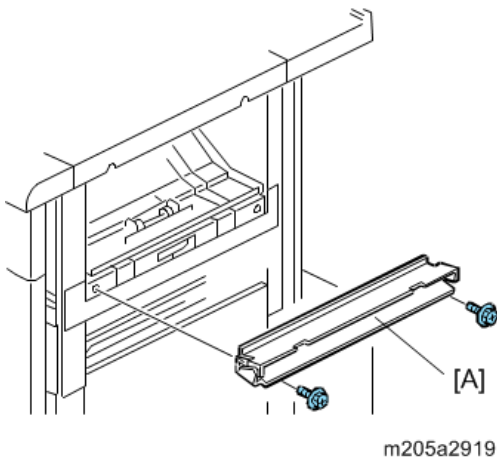
**↓ Note**

- The sponge strip closes the gap between the high capacity stacker and the upstream unit, to prevent paper or other objects from falling between the units.

## 2. Installation

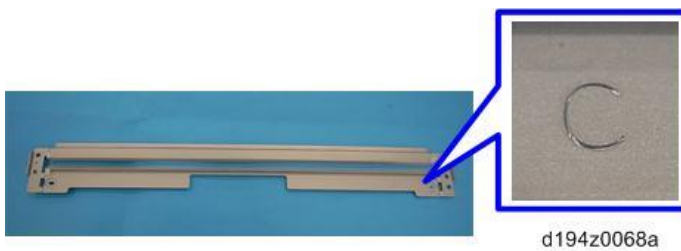


6. Install the entrance guide [A] on the right side of the high capacity stacker (Ⓜ x2: M3x6).



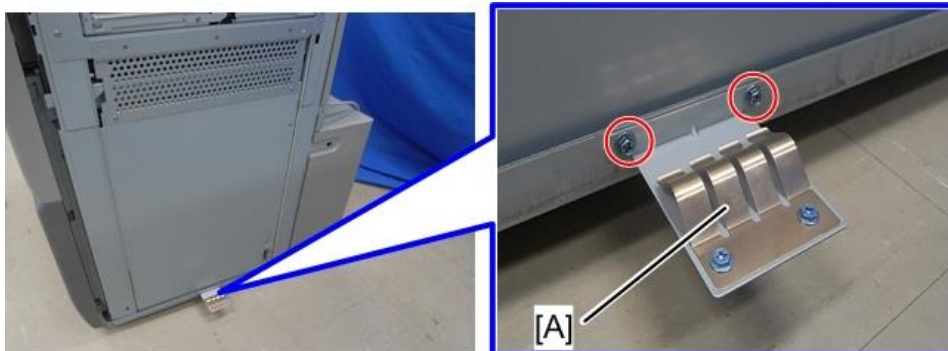
### ★ Important

- **When docking the high capacity stacker to the main machine:**
  - If the decurl unit is not installed in the main machine, attach the entrance guide provided with the high capacity stacker.
  - If the decurl unit is installed in the main machine, attach the guide plate marked "C" that is provided with the decurl unit. Do not attach the entrance guide provided with the high capacity stacker.



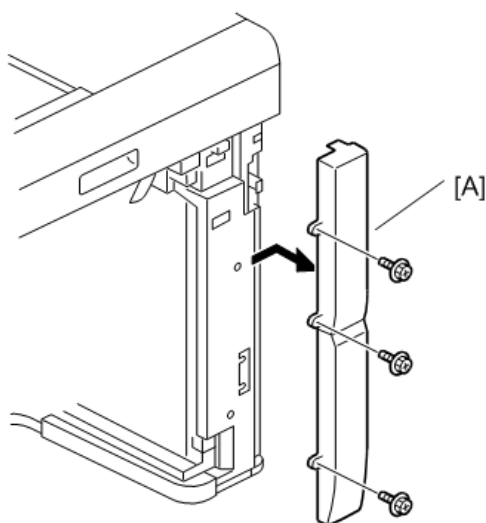


- 7.** Attach the ground plate [A] to the bottom right edge of the high capacity stacker (⚙️ x2: M4x6).



d776z0003

- 8.** Open the front door of the high capacity stacker.  
**9.** Remove the front right cover [A] (⚙️ x3).

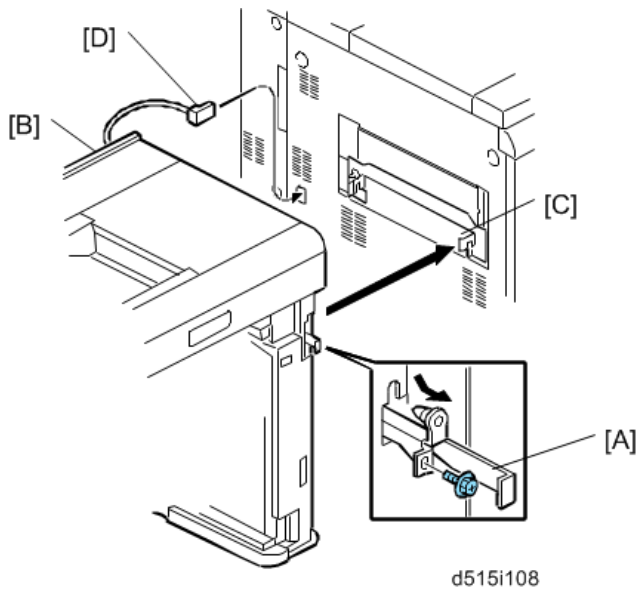


d515i107

- 10.** At the front right corner, remove the screw of the lock bar [A] (⚙️ x1), and pull the lock bar toward you until it stops.  
 Use this screw in Step 12.
- 11.** Slowly push the high capacity stacker [B] against the left side of the upstream unit (or main machine) so that the lock bar is directly and squarely under the arms of the joint bracket [C].
- 12.** Push the lock bar in completely so that it slides up into the notches in the arms on both ends of the joint bracket, and fasten the lock bar by re-attaching the screw removed in Step 10 (⚙️ x1).

## 2. Installation

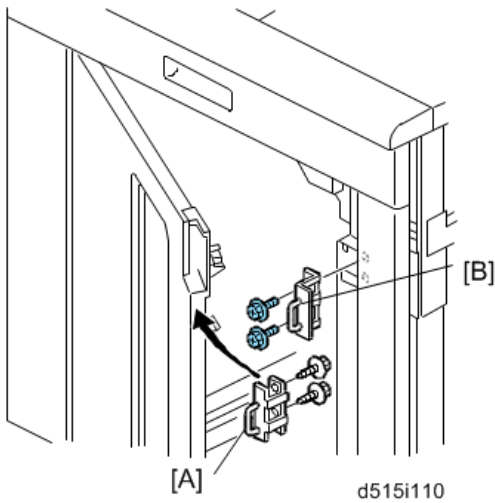
**13.** Attach the I/F cable [D] to the upstream unit (or main machine).



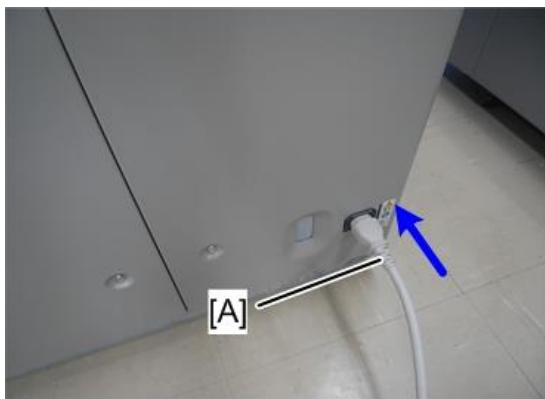
**14.** Re-attach the front right cover.

**15.** Fasten left lock hasp [A] (⌀x2: M4x8) to the door.

**16.** Fasten right lock hasp [B] to the door frame (⌀x2: M3x6).



**17.** Connect the power cord [A] to the right rear lower side of the unit.



**★ Important**

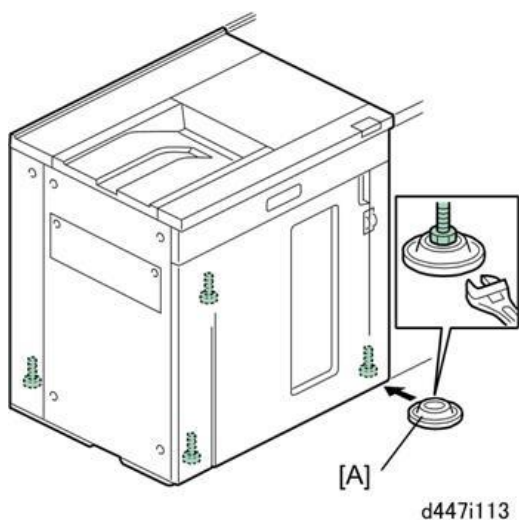
- In China, do not use the power cord provided with this option. Contact your supervisor and use the power cord specified for use in China.

**18.** Secure the power cord with the clamp [A]. (🔧x1, 🌀x1)



m0b2d8502

**19.** Set the four holders [A] to the leveling bolts.



**↓ Note**

- Place a level on the top of the unit and then adjust the height with leveling bolts so that the unit is level left-to-right and front-to-back.

**20.** If large media is used, install the accessory support tray [A] on the proof tray.

The support tray is used for thick paper or large envelopes (B4 / K2 (envelopes) or more), to prevent the trailing edge of paper stuck on the proof tray from getting lifted and the proof tray being detected as full too early.

## 2. Installation



m0b2d8503

### Finishing the Installation

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1. Load some B4 paper in the 2nd tray of the main machine, and make several copies/prints.
2. Check paper skew and side-to-side registration and correct if necessary. ([Skew and Side-to-Side Registration](#))

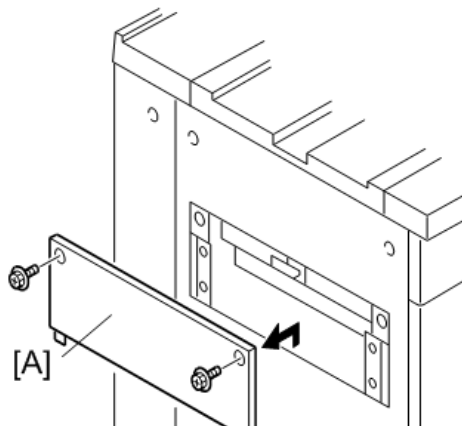
### Docking the Downstream Unit

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#### ★ Important

- Do this procedure only if another peripheral device will be installed downstream.

1. Remove the left exit cover [A] from the left side of the unit (⚙️ x2).



d515i112

2. Install the joint bracket of the downstream unit on the left side of the high capacity stacker, and then install the downstream unit.

Use the screw holes circled below.



m205a2921

3. Connect the interface cable of the downstream unit [A] to the high capacity stacker [B].



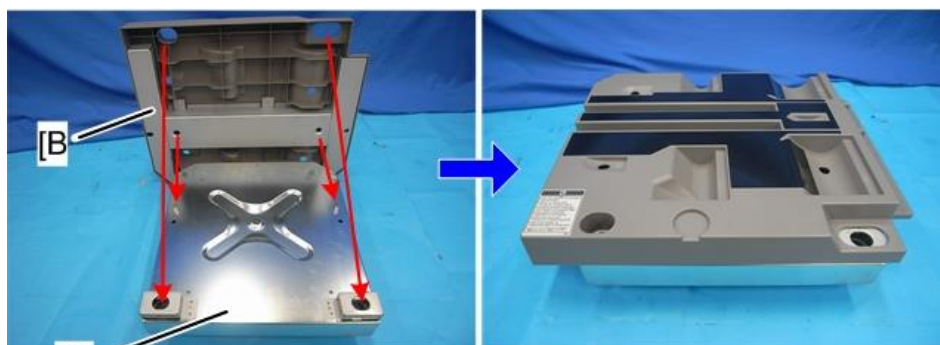
d0a5m1401

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### Roll-Away Cart (D456-17)

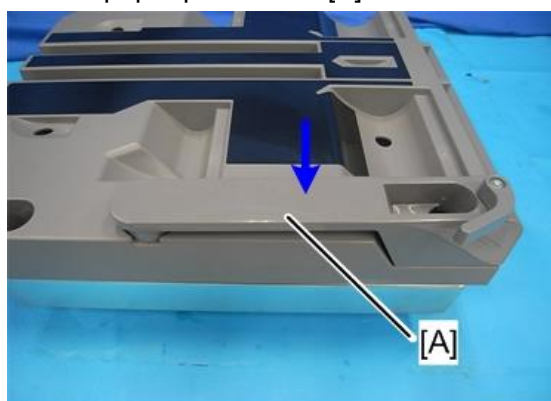
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1. Align the studs on the tray cart base [A] with the holes in the brackets of the paper tray [B].
2. Set the holes over the studs.



d194z0173

3. Set the paper press lever [A] into the recessed cut-out of the paper tray.

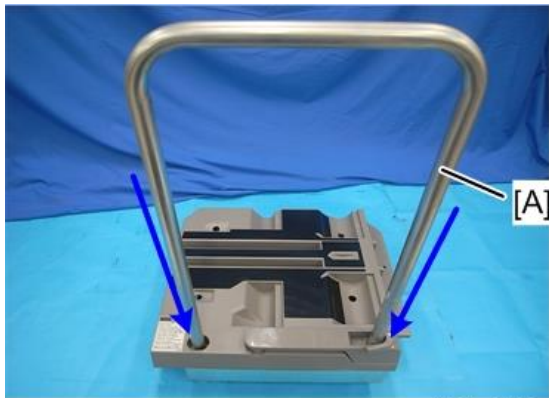


d194z0174

4. Insert the ends of the tray cart handle [A] into the handle holes. One end of the handle passes

## 2. Installation

through the paper press lever on the paper tray.



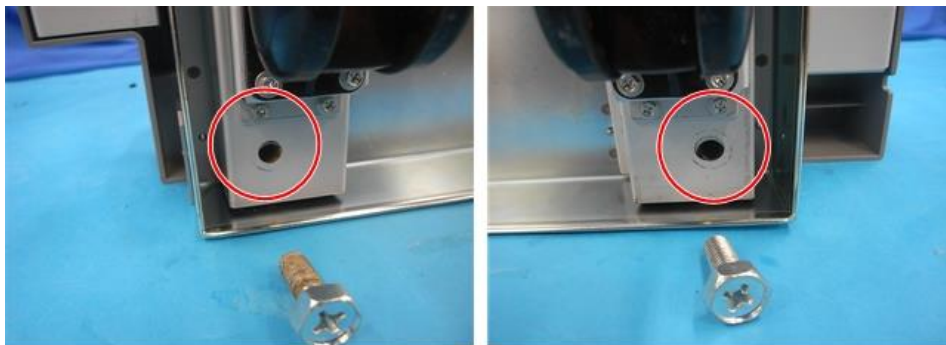
d194z0175

- 5.** Lay the assembly down with the handles on the floor.



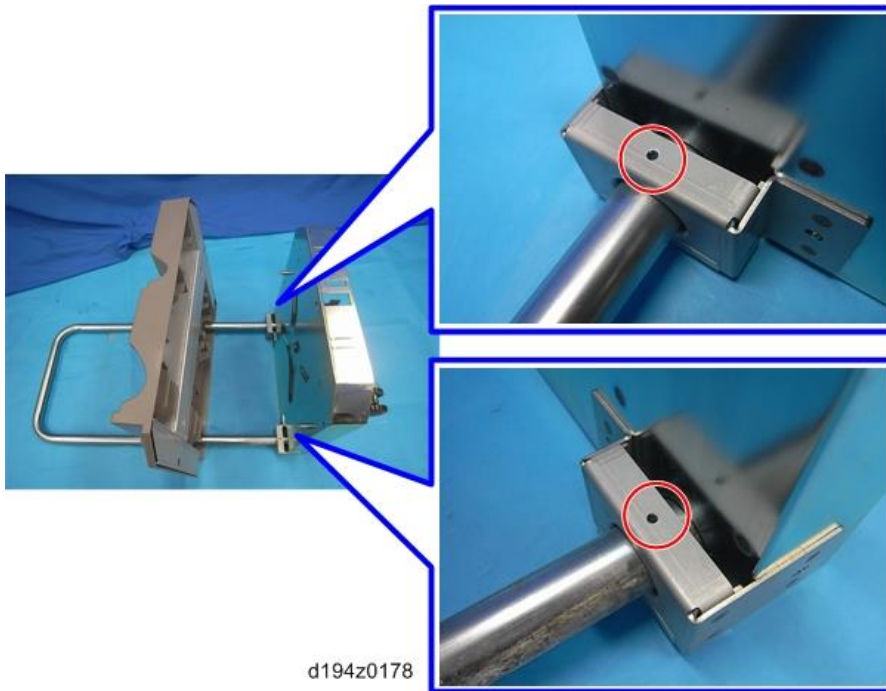
d194z0176

- 6.** Fasten the end of each handle (🔩 x 1 each, M10x25).

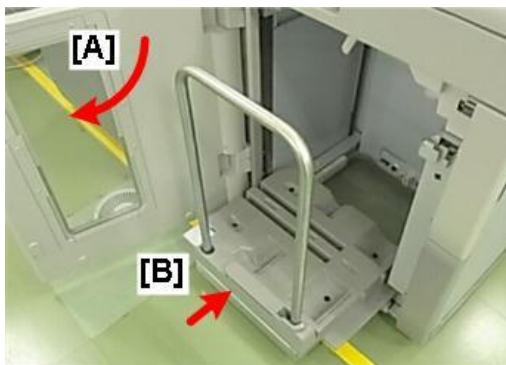


d194z0177

- 7.** Raise the paper tray and then tighten the screws on the handle bases (⌀ x 1 each, M4x14).



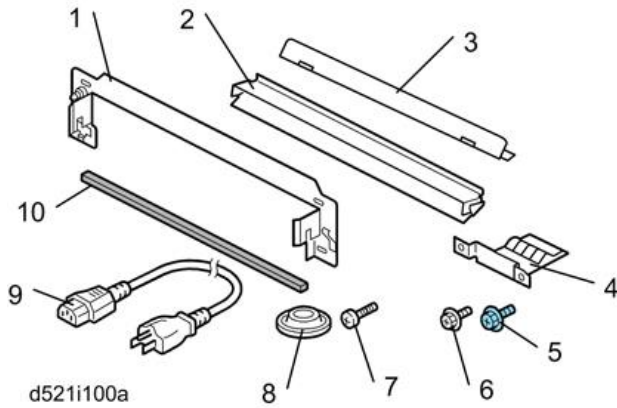
- 8.** Set the cart upright on its casters.  
**9.** Open the front door [A].  
**10.** Push the tray cart [B] into the unit and close the door.



## Multi-Folding Unit FD5020 (D740)

### Accessories

Check the quantity and condition of the accessories in the box against the following illustration and list.



No.	Description	Q'ty
1.	Joint Bracket	1
2.	Entrance Guide Plate	1
3.	Mylar (for the downstream unit)	1
4.	Ground Plate	1
5.	Screws M3x6	2
6.	Screws M3x6	2
7.	Screws M4x14	4
8.	Leveling Shoes	5
9.	Power Cord*1	1
10.	Sponge Strip	1
11.	Plate (Power Supply Cord Inlet)	1

\*1: In China, do not use the power cord provided with this unit. Contact your supervisor and use the power cord specified for use in China.

### Installation

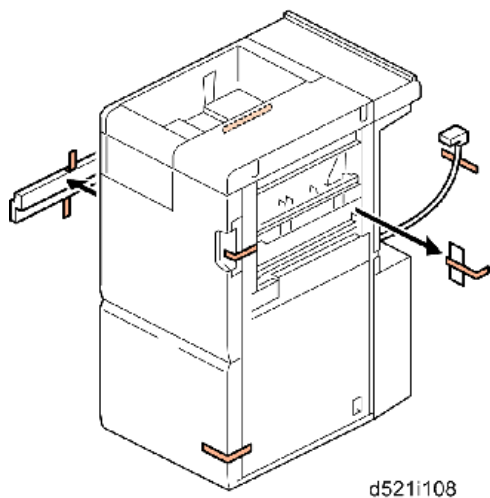
#### **⚠ CAUTION**

- The unit must be connected to a power source that is close to the unit and easily accessible.
- Make sure that the main machine is switched off and that its power cord is disconnected before doing the following procedures.

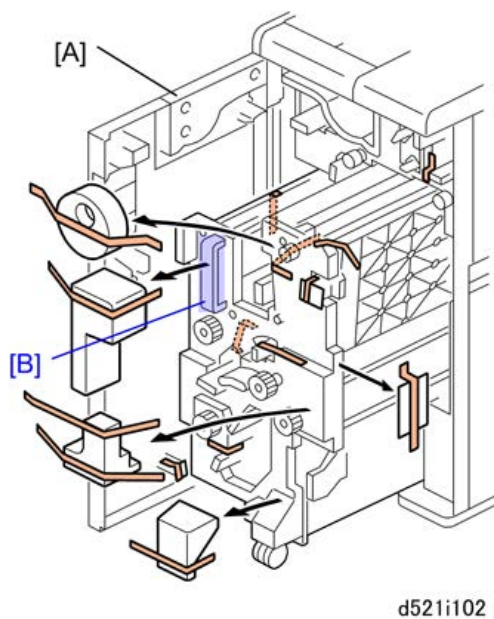


## Tapes

1. Remove all tape and packing material from the front, left, rear, and right sides.



2. Open the front door [A].
3. Grip the handle [B] and slowly pull the folding unit out of the machine.
4. Remove all tape and packing material from inside.

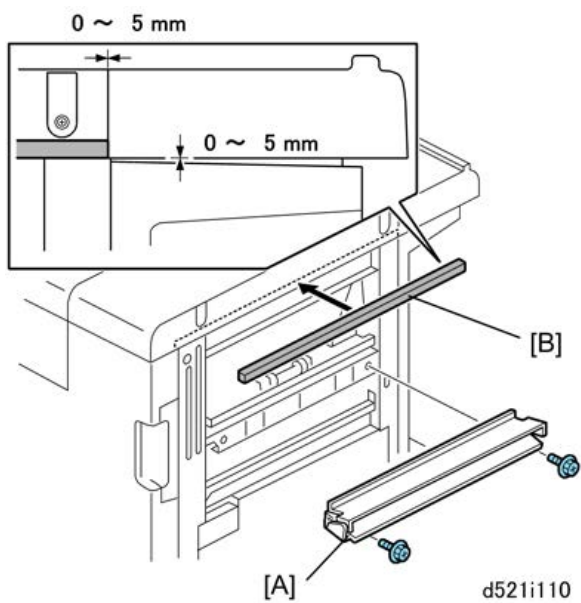


## Entrance Guide Plate, Sponge Strips

1. Attach the entrance guide plate [A] (⊗x2 M3x6).

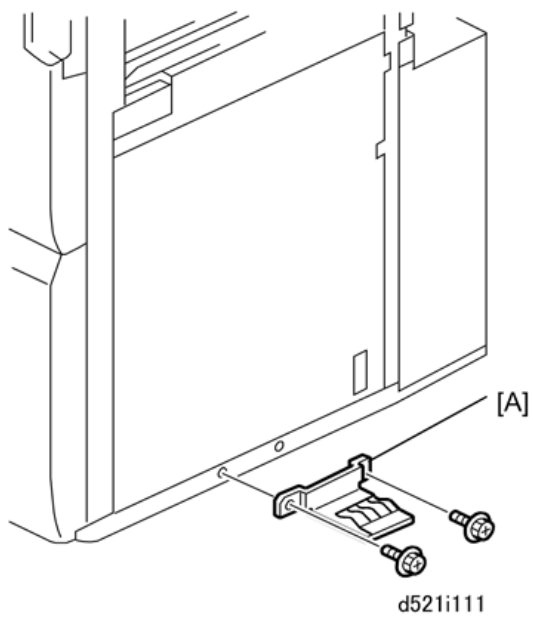
## 2. Installation

2. Peel the tape from the sponge strip [B] and attach the strip to the top right edge of the unit.



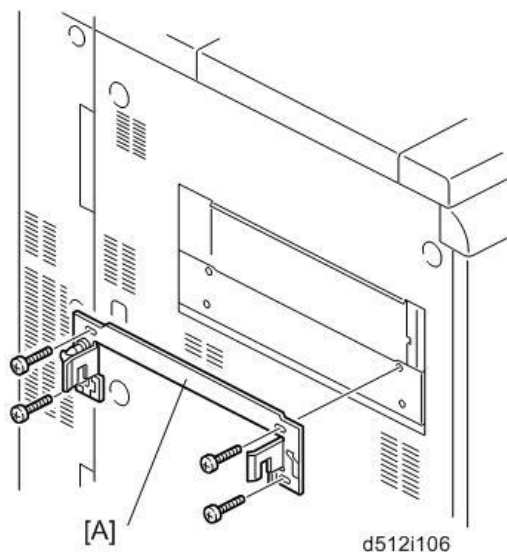
## Ground Plate

1. Attach the ground plate [A] to the lower right edge of the unit (⌀x2 M3x6).



## Docking

1. Fasten the joint bracket [A] to the left side of the upstream unit (⌀ x4 M4x14).



2. Open the front door [A].
3. At the front right corner, remove the screw of the lock bar [B] (⌀ x1 M3x6). **Keep this screw.**
4. Pull out the lock bar.
5. Slowly push the unit [C] against the left side of the upstream unit (or main machine) so that the lock bar is directly and squarely under the arms of the joint bracket.
6. Push in the lock bar so that it slides up into the notches in the arms on both ends of the joint bracket [D].
7. Fasten the lock bar by re-attaching the screw removed in **Step 3** (⌀ x1).
8. Connect the I/F cable [E] to the upstream unit (or main machine).

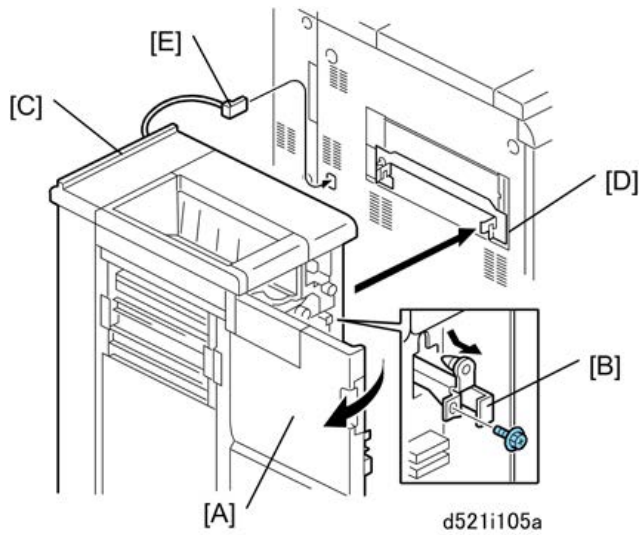
**Note**

- If you are docking to the main machine, you must first remove the plastic cap at the I/F cable connection point.

**Important**

- Do the remaining steps only if the Cover Interposer Tray will be installed.

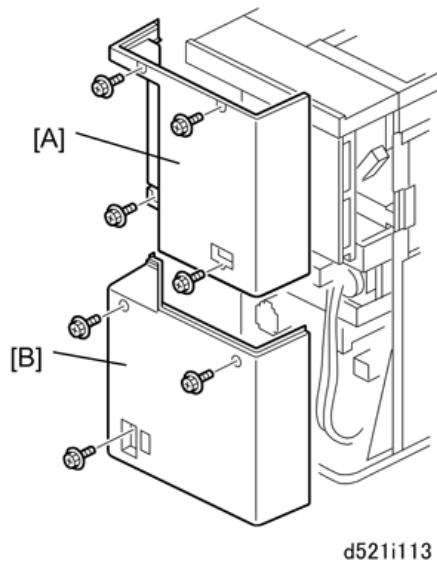
## 2. Installation



### 9. Remove:

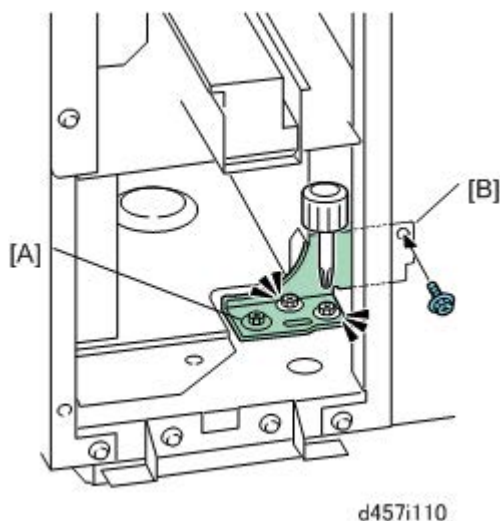
[A] Rear upper cover (⌀ x4)

[B] Rear lower cover (⌀ x3)



10. Use a short screwdriver to loosen the bracket [A] (⌀ x2).

11. Fasten the bracket to the upstream unit at [B] (⚙️ x1).



12. Tighten the screws (⚙️ x3).  
13. Re-attach the rear covers.

### Removing Parts for the Cover Interposer Tray

Three parts must be removed before the tray unit of the cover interposer tray can be mounted on top of the Multi Folding Unit.

1. Open the front door.

#### ★ Important

- The following parts require removal only if the upstream unit is the Cover Interposer Tray.
- These parts must be removed so that the tray unit of the Cover Interposer Tray will fit on top of the Multi Folding Unit.

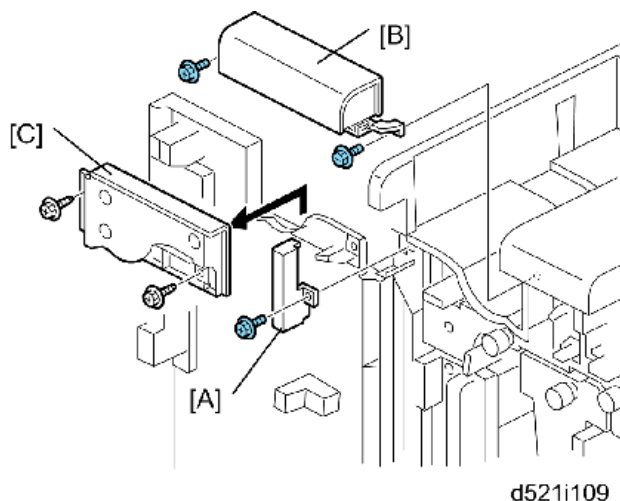
2. Remove:

[A] Bracket (⚙️ x1)

[B] Cross-piece (⚙️ x2)

[C] Metal plate from the door (⚙️ x2)

3. After removing [B] and [C], reattach [A].



## 2. Installation

### Power Cord

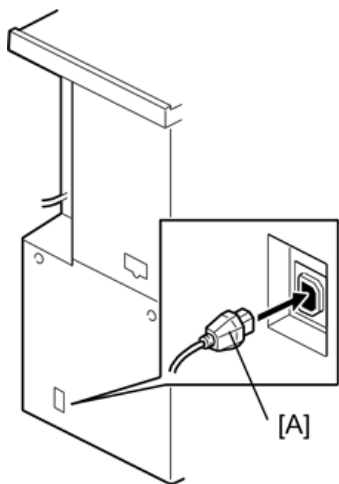
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1. Insert the power cord socket [A] into the power connection point.

**★ Important**

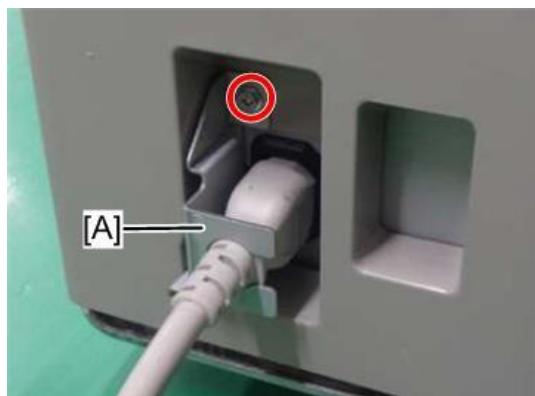
- In China, do not use the power cord provided with this unit. Contact your supervisor and use the power cord specified for use in China.

2. Connect the power supply cord plug to a power outlet.



d521i107

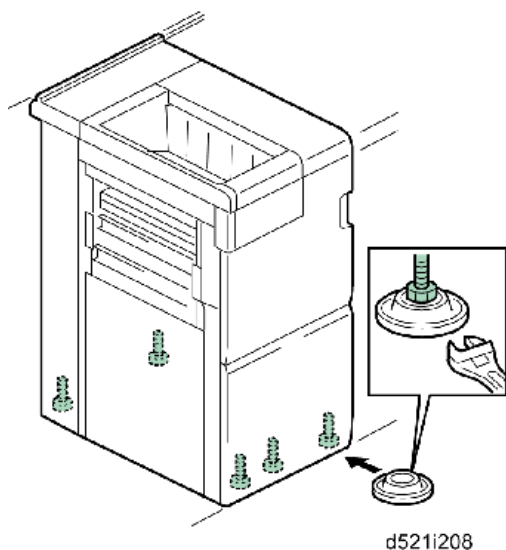
3. Attach the bracket [A] (⊗ x1).



d0bxa2173

## Finishing the Installation

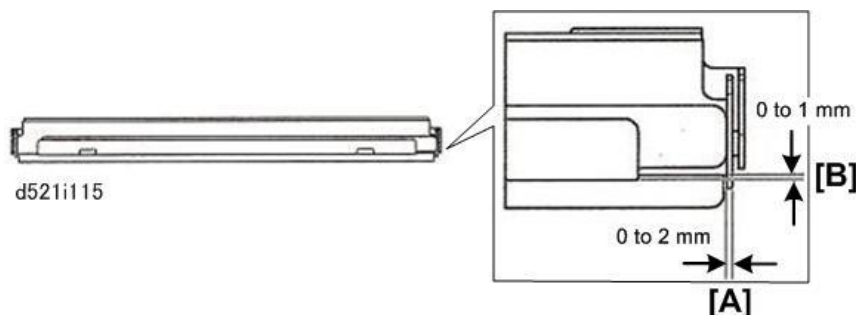
1. Set the holders to the leveling bolts and adjust the height of the unit.



2. Load some B4 paper in the 2nd tray of the main machine, and make several copies.
3. Check paper skew and side-to-side registration and correct if necessary.
4. Peel the tape from the accessory mylar strip.



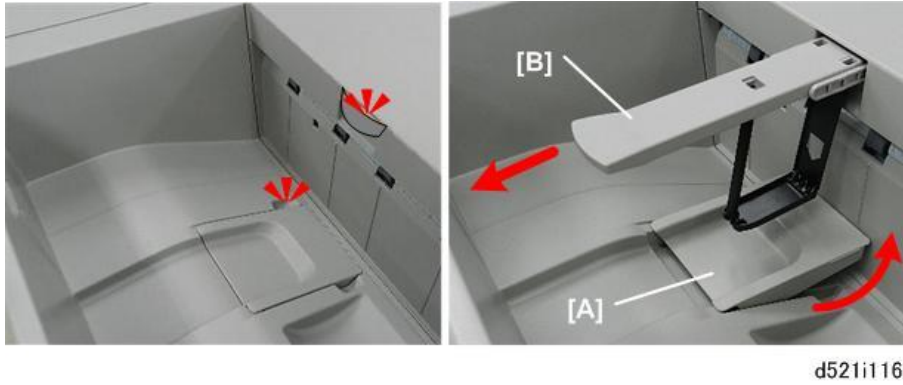
5. Attach the mylar aligned along the edge of the entrance guide plate of the downstream unit.
  - The gap between the mylar and the edge should be within 2 mm at [A].
  - The gap between the mylar and the edge should be within 1 mm at [B].



## Auxiliary Tray, Fold Depressor

1. Raise the auxiliary tray [A] or pull out the flexible page depressor [B] when required.
  - The auxiliary tray [A] keeps Z-folded paper (FM1) flat in the tray so that the trailing edges do not trigger an early tray full alert in the top tray.
  - The flexible page depressor [B] prevents folded paper (especially FM3 Letter Fold-out sheets) from opening out and triggering an early tray full alert in the top tray.

## 2. Installation



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### Moving the Multi-Folding Unit

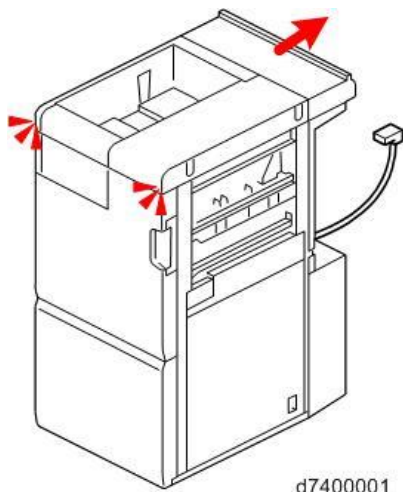
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Always observe the following points when moving the Multi-Folding unit.

**★ Important**

- To prevent damage to the connection brackets, never attempt to move or change the position of the system with the LCT, the Multi-Folding Unit, (or any other downstream peripheral) connected.
1. Turn the system off.
    - Press the main power switch on the left corner of the main machine to turn the machine off.
    - The power-down alert message appears on the operation panel. Wait for the operation panel to go off.
    - Switch off the AC power switch.
  2. Unplug the main machine from the power source.
    - Grip the head of the plug firmly, and then pull it out.
    - Never pull on the cord.
  3. Disconnect the unit I/F cord from the upstream unit (or main machine) and downstream unit.
  4. Make sure that the front door of the unit is closed.
  5. Disconnect the unit power plug.
    - Grip the head of the plug firmly, and then pull it out.
    - Never pull on the cord.
  6. When you move the unit:
    - Place your hands on the front left and right corners of the unit.
    - Push the unit in the direction of the arrow.
    - Pushing the unit front-to-rear prevents twisting the delicate frame of the unit.





d740001

## Perfect Binder GB5010 (D736)

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### Accessories

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There are no accessories provided in the bookbinder box. The required accessories are provided with the relay unit and inserter unit.

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### Installation

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#### Before You Begin

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The bookbinder contains many large moving parts. Braces, cushions, and orange tape are attached inside and outside the bookbinder to immobilize and protect the working parts during handling and shipping.

Large red warning tags are attached with ribbons to braces, cushions, and screws that must be removed at installation. However, these items must not be discarded. Some braces must be reinstalled if the machine needs to be moved to a new location. Due to the large number of braces that must be retained (there are over 20), they should be marked for future reference as they are removed.

Here are some simple rules to follow during removal of the braces, cushions, and screws:

- Use a marker with indelible ink to mark each item or its tag as instructed when it is removed from the bookbinder. This will make it easier for the service technician to identify the brace for reinstallation. This will also help you to confirm that everything has been removed from inside the machine.
- After removing a brace, set the screws in the correct holes and tape them in place. This will make it easier to find the correct screws for reinstallation.
- The red warning tags must remain attached by the ribbons to the braces, cushions, and screws. If they are reattached before moving the machine, they will serve as reminders of the items that must be removed after the machine has been moved to the new location.
- Remove the orange tape carefully and save as much of it as possible.

#### Note

- The actual color of the new Perfect Binder is much darker than the older Perfect Binder that appears in the photographs of this section. The installation instructions are the same.

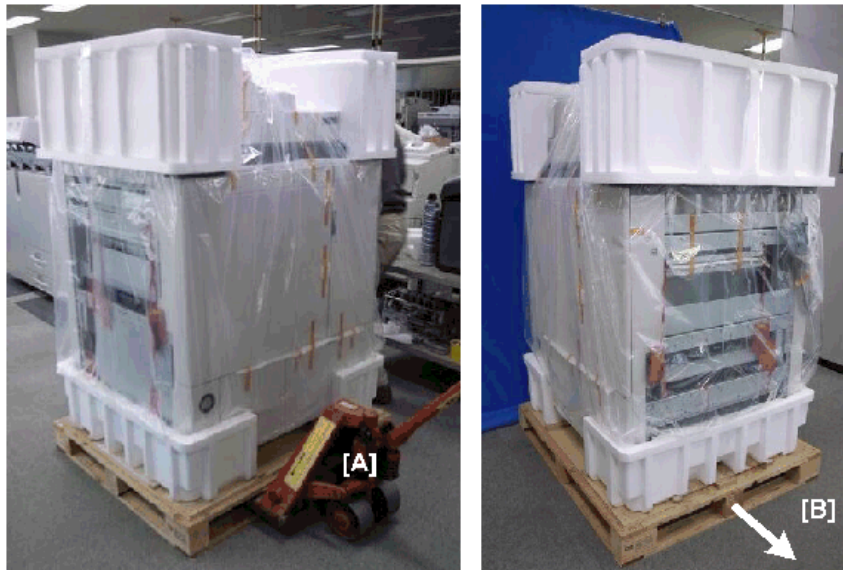
#### Unloading the Bookbinder

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#### CAUTION

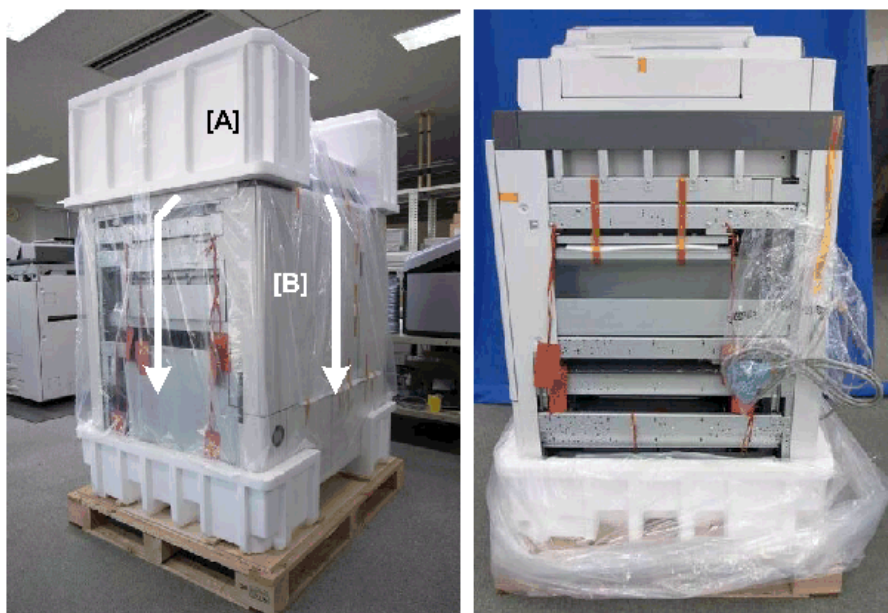
- The bookbinder weighs 316 kg (695 lb.). At least four service technicians are required to unload the bookbinder from its pallet.
  - You will need a manual forklift to position the pallet for unloading.
1. Remove the packing straps and cardboard cover.
  2. Use a manual forklift [A] to position the pallet so there is at least 2 meters (6.5 ft.) of free space to

the right side of the bookbinder [B].



d391i403

3. Remove the packing from the top of the machine [A].
4. Pull down the protective plastic cover [B] on all four sides.



d391i404

**★ Important**

- Collapsible metal handles are provided on the right and left side of the bookbinder.
- To avoid physical injury, always use these handles to lift either the right or the left side of the bookbinder.
- Never attempt to raise the left or right side of the bookbinder alone. Two people, one on each handle, should lift one side together.

## 2. Installation



d391i409

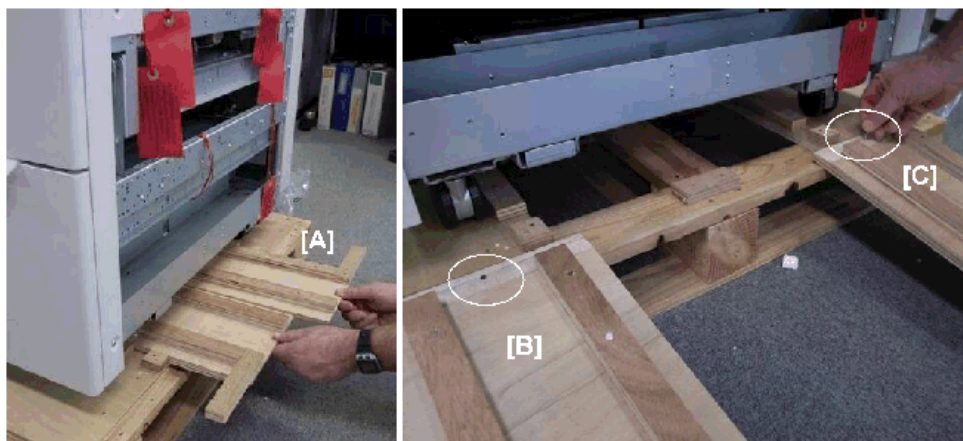
5. Position one person at the left to prevent the bookbinder from tipping over.
6. On the right [A], have two people use the handles to lift the machine, while another person removes the Styrofoam block and then pulls the plastic cover under the machine to the left as far as possible.
7. Position one person at the right to prevent the bookbinder from tipping over.
8. On the left [B], have two people use the handles to lift while another removes the Styrofoam block and the plastic cover together.



d391i405

9. Pull out the two ramps [A].
10. Two nails are taped to one of the ramps. Align the holes in the top of each ramp with the holes in the pallet, then insert the nails into the holes to fasten the left ramp [B] and right ramp [C] to the

edge of the pallet.



d391i406

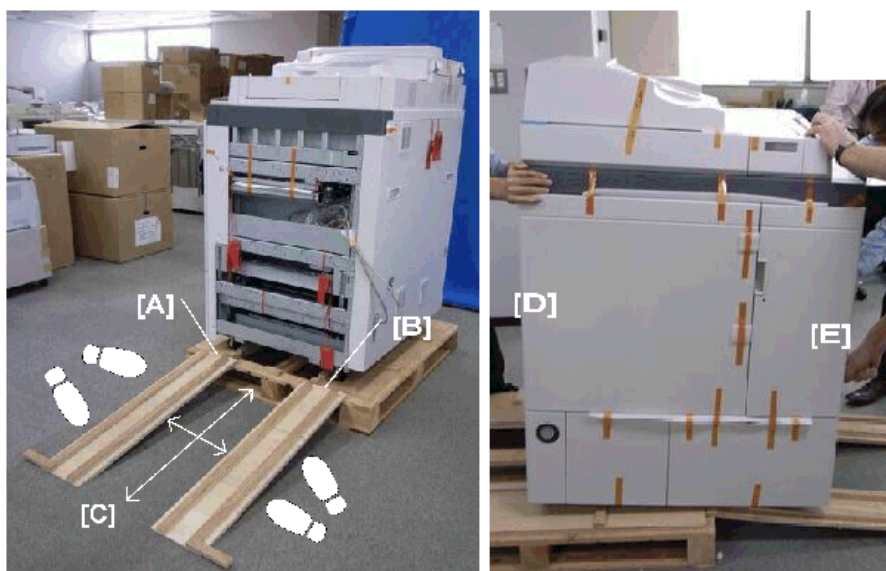
11. Confirm that:

- Both ramps are firmly attached to the edge of the pallet with nails [A] and [B].
- Both ramps extend straight out from the side of the pallet.
- Area [C] between the ramps is free of obstacles.

**⚠ WARNING**

- As the bookbinder is being pulled off the pallet, never step across either of the ramps and place your foot in the area between the ramps [C].

12. With one person [D] behind the bookbinder gently pushing, and two people in front pulling the bookbinder by the handles [E], slowly move the bookbinder down the ramps.



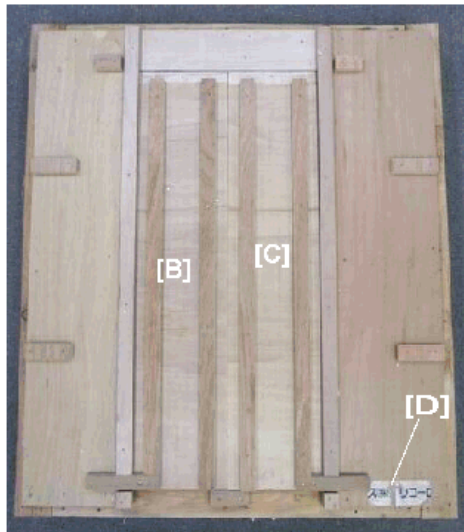
d391i407

13. Once the bookbinder [A] is off the pallet, it can be pushed or rotated on its casters.

14. Remove the nail from each ramp and reattach the ramps [B] and [C] to the pallet.

## 2. Installation

15. Tape the nails [D] to the pallet.



d391i408

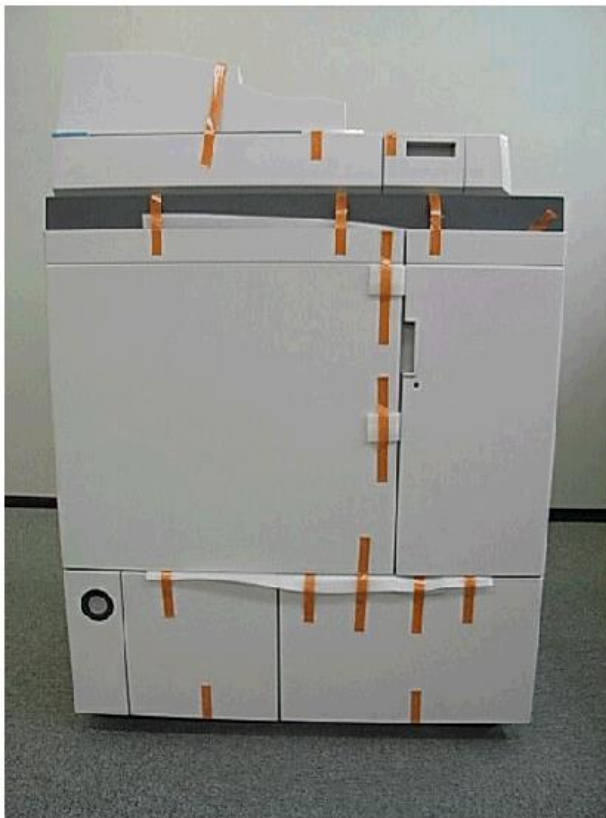
### Exterior Tape, Braces

---

#### ★ Important

- Braces, cushions, and screws removed from the machine for installation should be retained for reinstallation in the event that the bookbinder must be shipped to a new location.

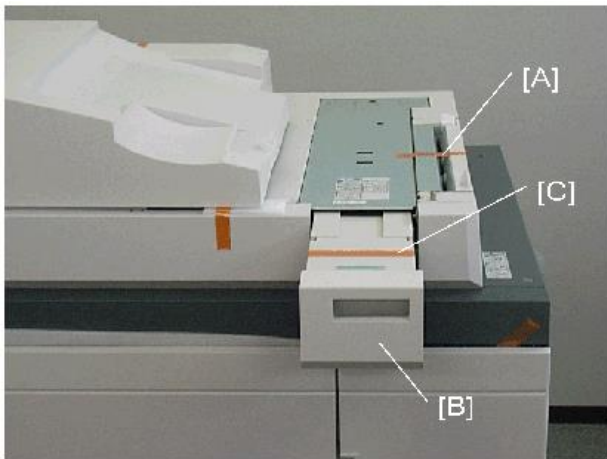
1. Remove all strips of tape and packing from the front and top.



d391i301

2. Remove the tape [A].

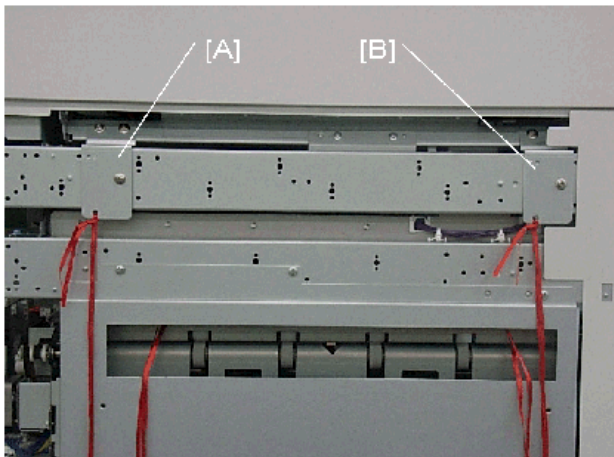
3. Pull out the glue supply drawer [B] and remove the long tape [C].



d391i302

**Left Side**

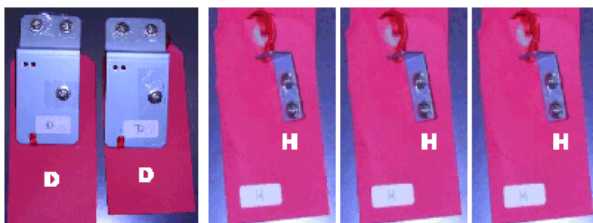
1. Remove the upper braces [A] and [B] (⊗x3 each)



d391i303

**Left Side**

1. Remove the lower braces [A], [B], [C] (⊗x2 each)

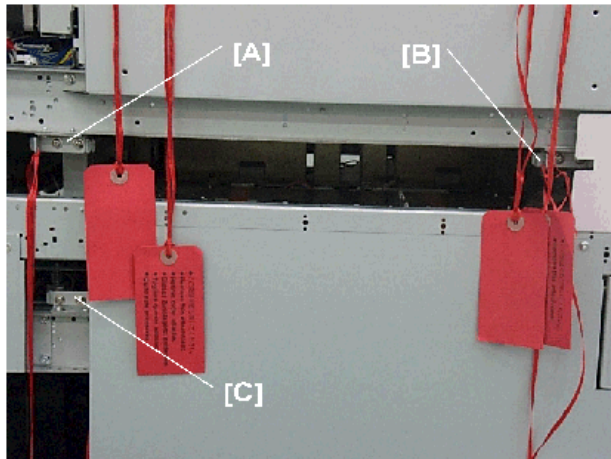


d391i006d

2. Mark the two (large) upper braces "D".

## 2. Installation

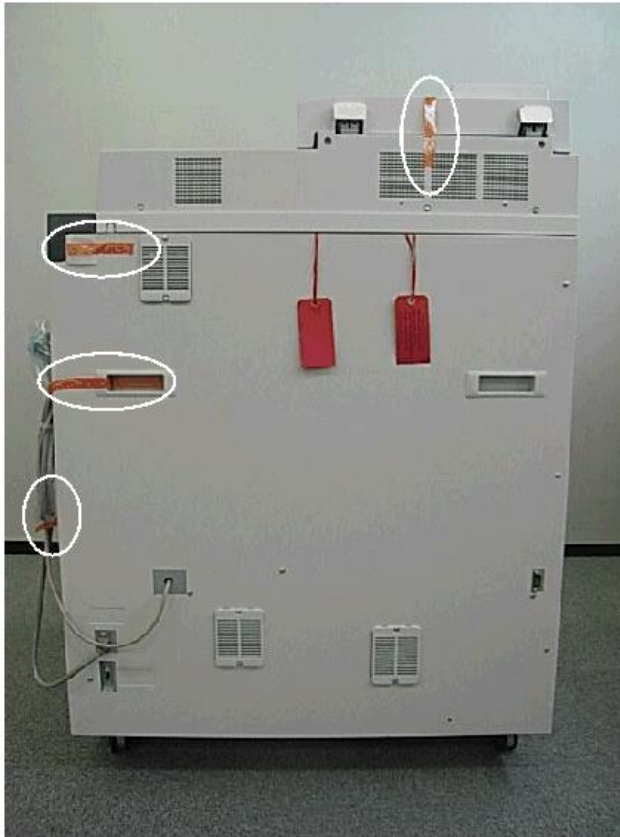
3. Mark the three (small) lower braces "H".



d391i304

## Rear

1. At the rear, remove all tape (as shown) from the back, top, power cord and interface cable.

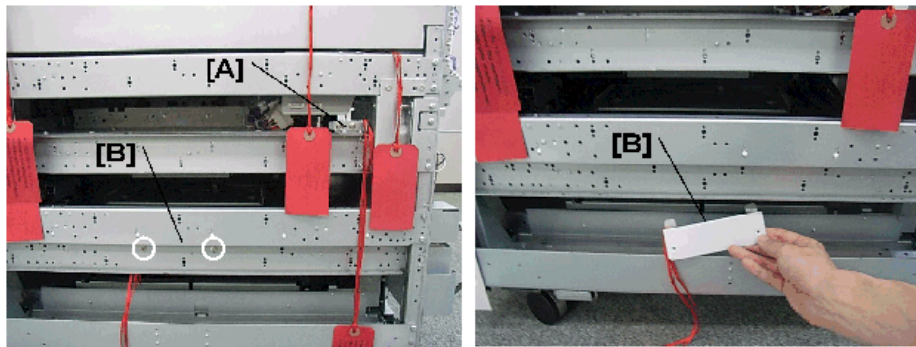


d391i305

## Right Side: Near Bottom

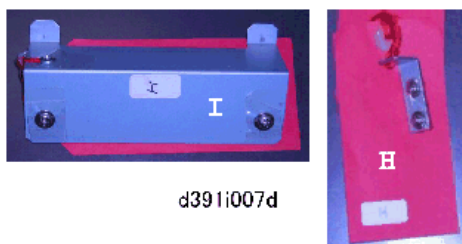


1. Remove brace x1 [A], brace [B] x1 and tags (🔗 x2 each)



d391i306

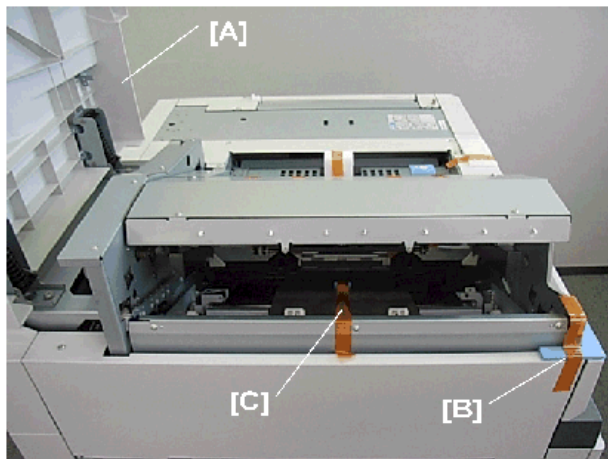
2. Mark the removed large brace "I" and mark the removed small brace "H".



d391i007d

### Left Side

1. Open the top cover [A].
2. Remove the tape and cushions [B] and [C]. Slide the cushion at [C] down to remove it.



d391i307

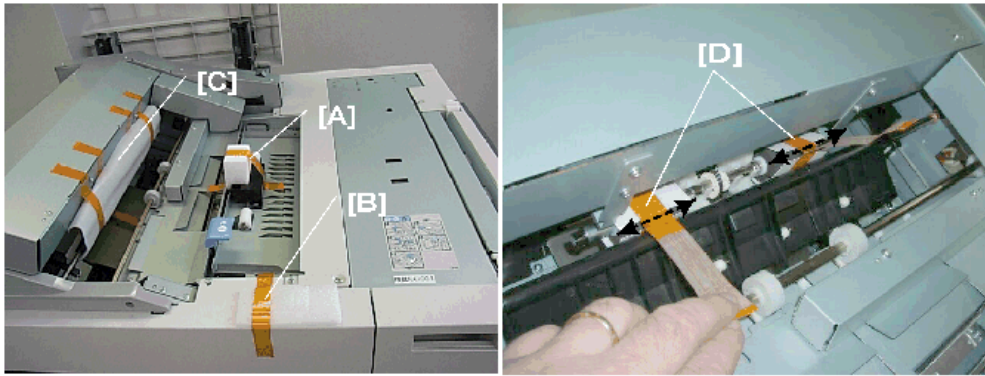
### Front: Top

1. Remove the tape and cushions [A], [B].
2. Disconnect the tape at [C] then lower lever **Mk4**.
3. Carefully cut the strips of tape at [D] then remove the strips of tape and the cushions.

#### ★ Important

- Pulling on the strips of tape without cutting them could damage the roller shaft.

## 2. Installation



d391i308

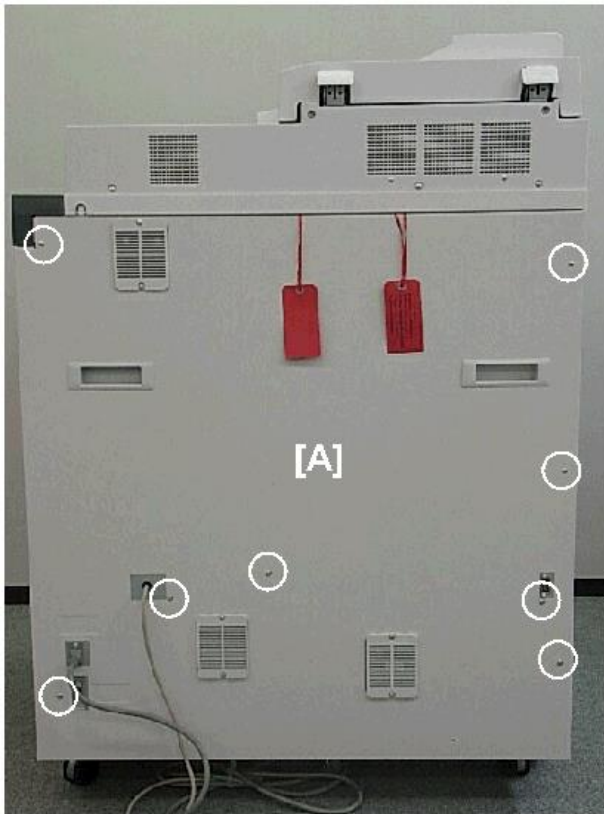
4. Lower the top cover.

### Interior Tape, Braces

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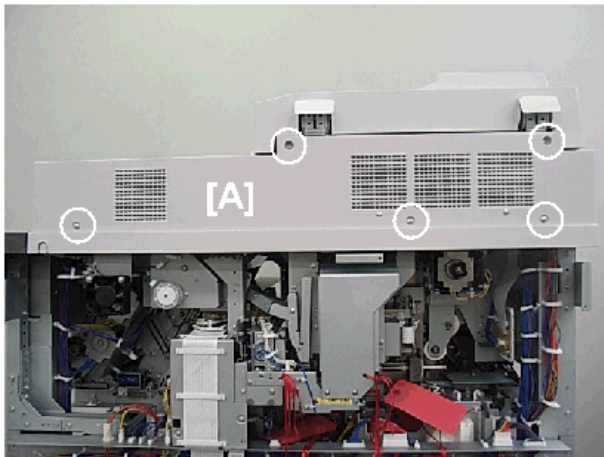
#### Rear

1. Remove the rear cover [A] (S x8)



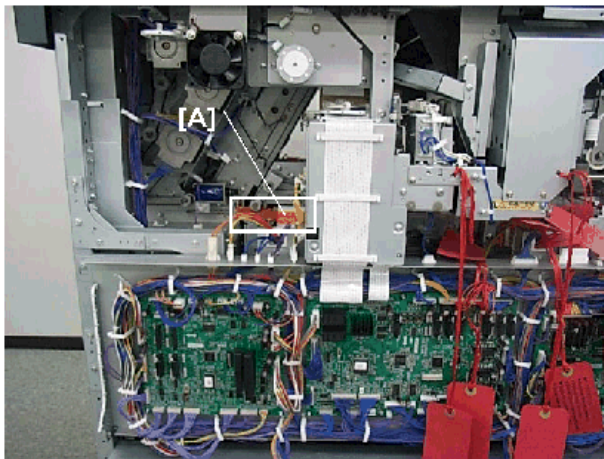
d391i309

2. Remove the rear upper cover [A] (🔩x5).



d391i310

3. Remove the tape and cushion [A].



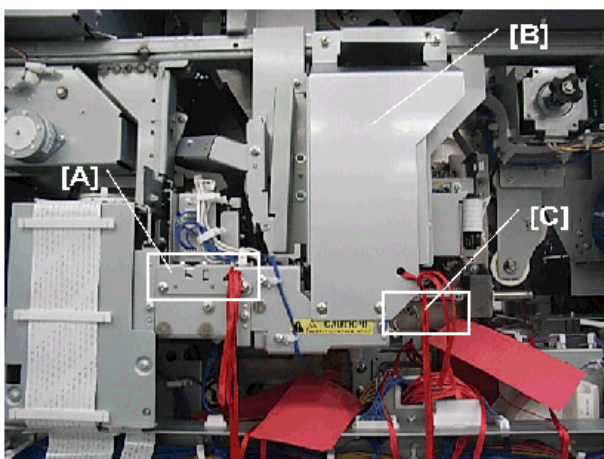
d391i311

4. Remove:

[A] Brace, tag (🔩x2)

[B] Brace, tag (🔩x4)

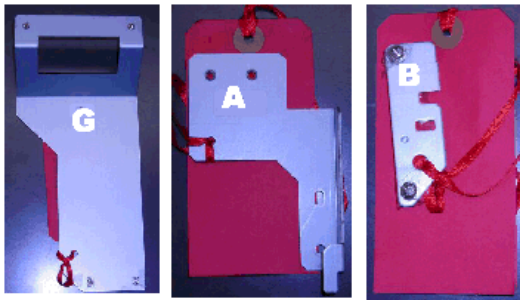
[C] Brace, tag (🔩x4). (These four screws are tagged with wire.)



d391i312

## 2. Installation

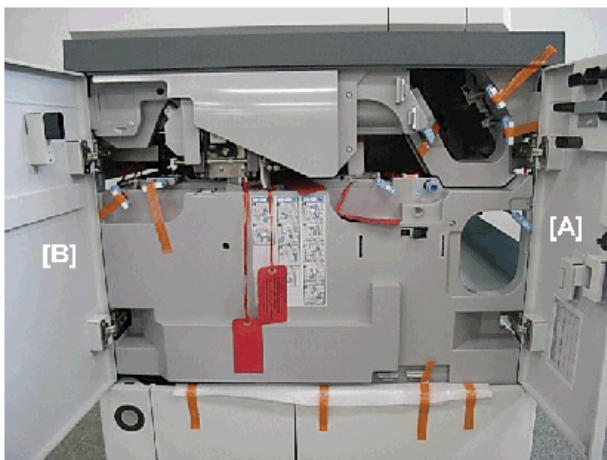
5. Mark the removed braces "G", "A", "B" as shown.



d391i008d

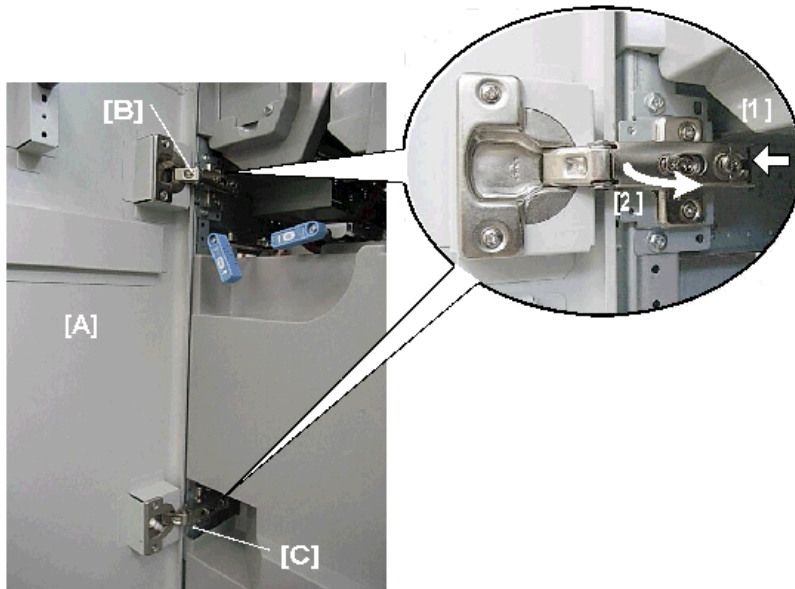
### Front

1. Open the right front door [A] then the left front door [B].



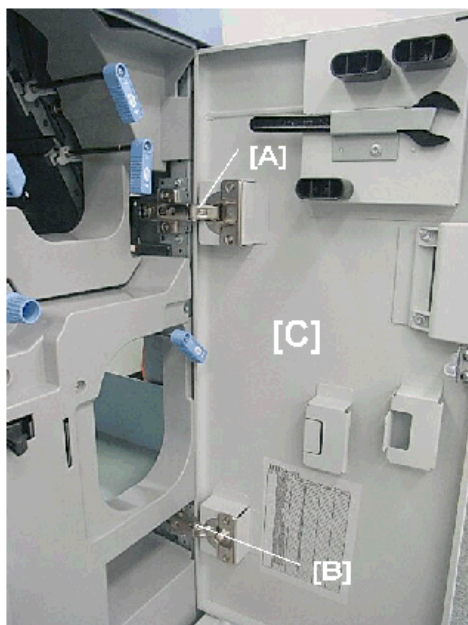
d391i313

1. On the left door [A], remove the top hinge [B] and the bottom hinge [C].
  - While holding the left front door with one hand, behind the top hinge [B], push the black lever [1] in the direction of the arrow to release the top hinge.
  - Swing the top hinge [2] out slightly.
  - While still supporting the left door with one hand, repeat the procedure to remove the bottom hinge [C].
  - Remove the left door [A].



d391i314

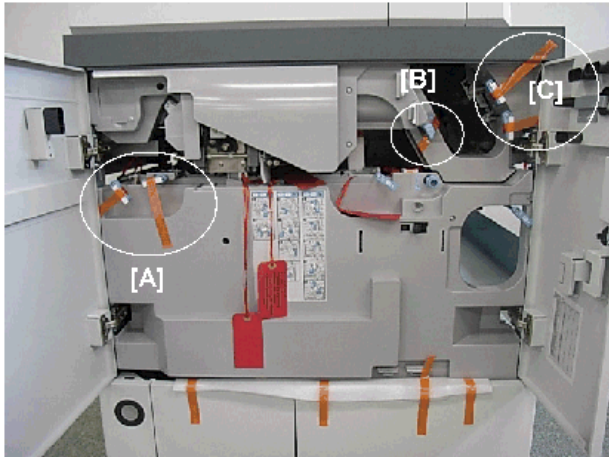
2. Repeat Step 2 to remove the top hinge [A] and the bottom hinge [B], then remove the right front door [C]. (You may have to lower lever **Mk11** so that you can remove the right door.)



d391i315

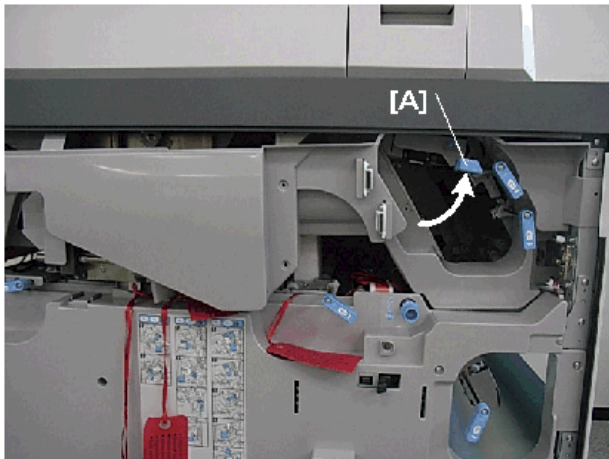
3. Remove the strips of tape and cushions from the jam release levers (x5):  
[A] **Mk7, Mk8**  
[B] **Mk12**  
[C] **Mk13, Mk14**

## 2. Installation



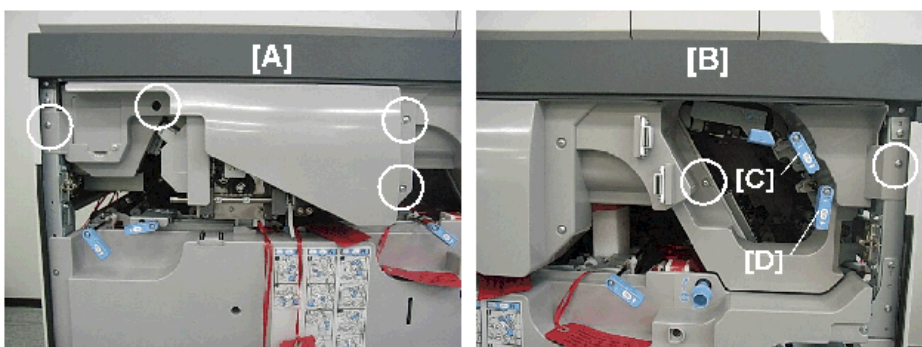
d391i316

4. Raise lever **Mk12** [A].



d391i317

5. Remove the screws of the upper inner cover on the left side [A] and the right side [B] (Ⓜ x6).
6. Release the jam release levers [C] and [D], then hold them in the released position as you remove the upper inner cover.

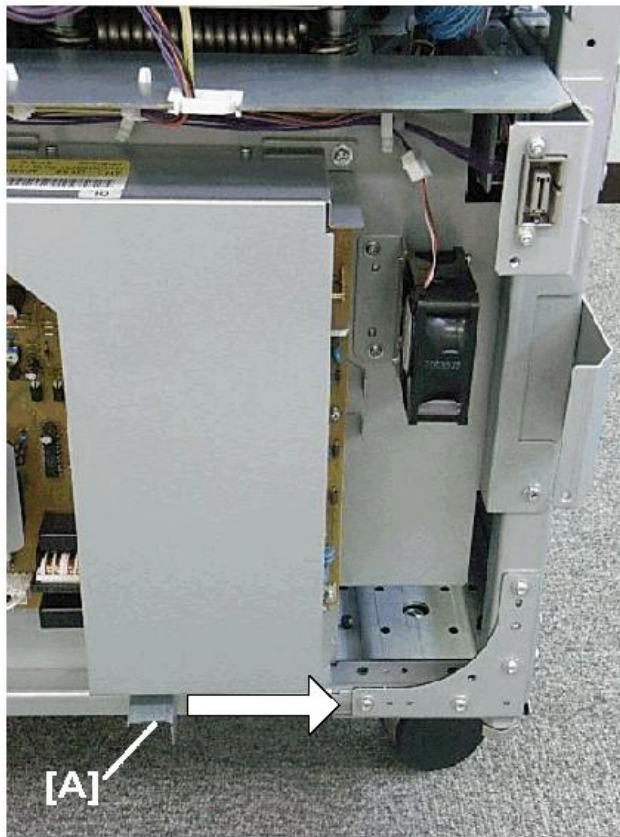


d391i318

## Rear

1. At the left rear corner, push the book stack release lever [A] completely to the right to release the

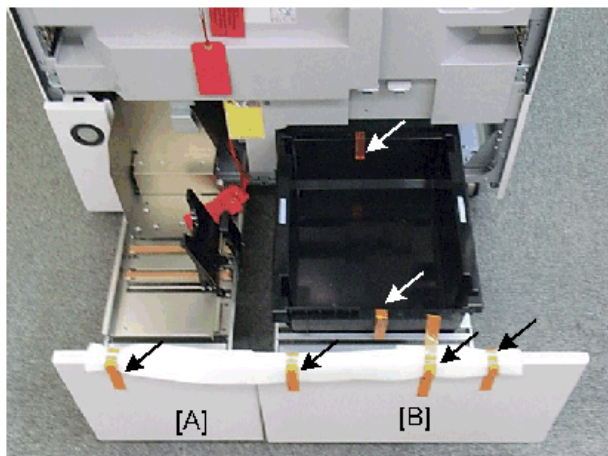
book stacking tray.



d391i319

**Front**

1. Pull out the book stacking tray [A] and trimmings box [B] together.
1. Remove the strips of tape and the cushions.



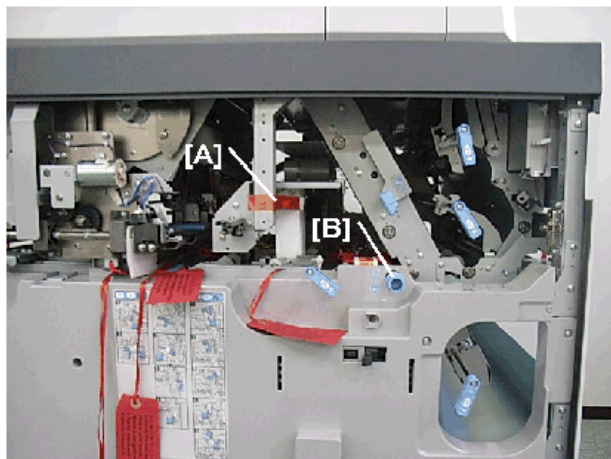
d391i320

2. Remove:  
[A] Tape, cushion  
[B] Jam clear knob **Mk10**.

**★ Important**

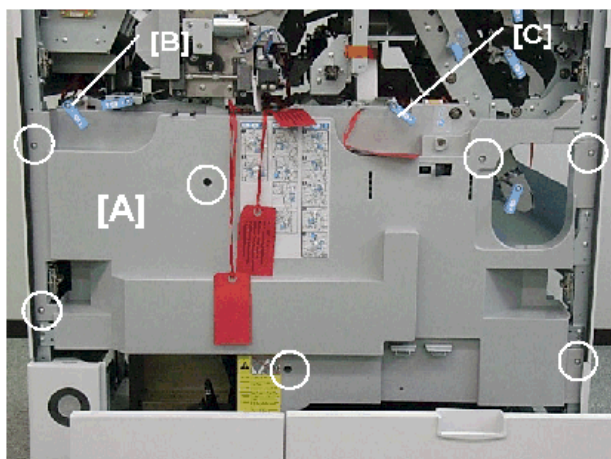
- Mk10 must be reattached at the end of installation.

## 2. Installation



d391i321

3. Remove the screws of the lower inner cover [A] (⌀x7).
4. Raise the jam clear levers [B] and [C] as you remove the cover [A].
5. Return the jam clear levers [B] and [C] to their original positions.



d391i322

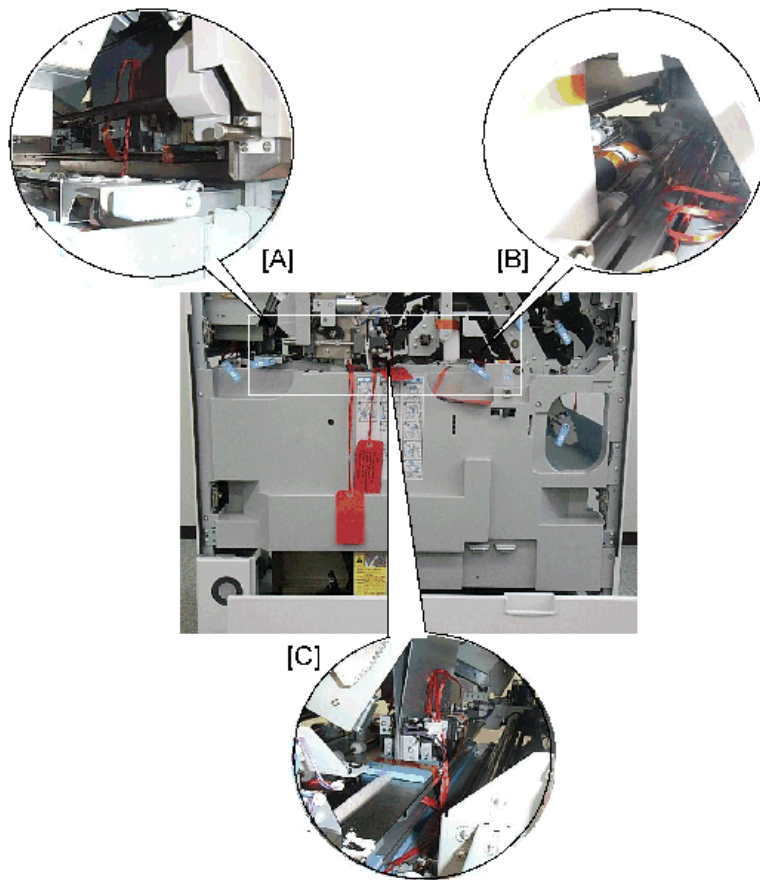
### Main Grip, Cover Transport Tape, Braces, and Others

#### **Front**

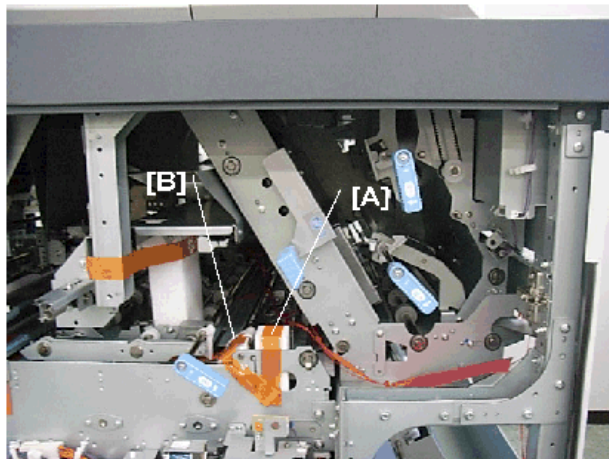
1. Remove the strips of tape and cushions from the horizontal transport unit at the left [A], right [B],



and center [C].



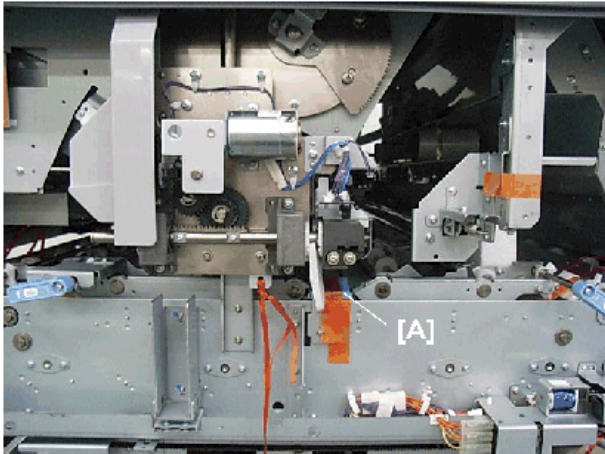
2. Remove the tape [A] with tag.
3. Slide the registration unit to the rear, then remove the tape and cushion [B].



d391i324

## 2. Installation

### 4. Remove the cushion [A].



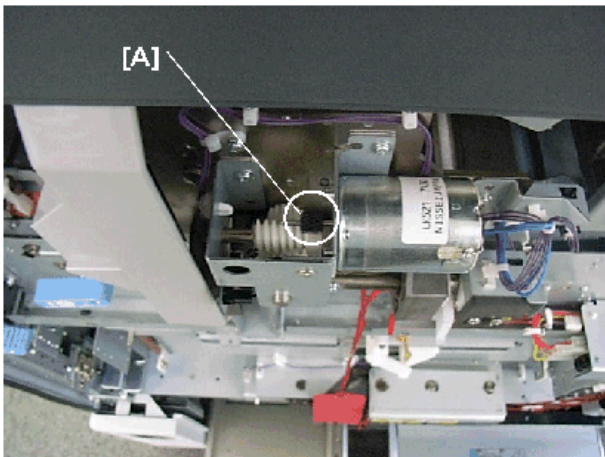
d391i325

### Front

1. First, at the front, rotate the grip motor pulley [A] counter-clockwise about 3 mm to release the pressure on the cushion.

#### ★ Important

- Rotate the pulley only enough to release the cushion.



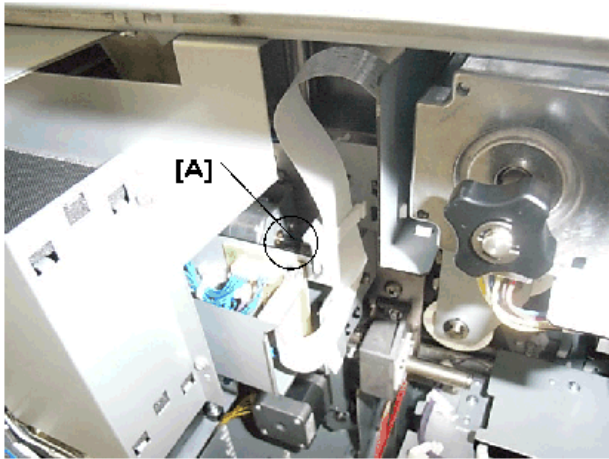
d391i326

### Rear

1. Second, at the rear, manually rotate the grip motor pulley [A] counter-clockwise about 3 mm to release the pressure on the cushion.

#### ★ Important

- Rotate the pulley until the gap is about 18 mm (no wider).
- To prevent changing the correct value (15 mm), do not make this gap wider than 18 mm.



d391i327

2. Remove the cushion at the front.

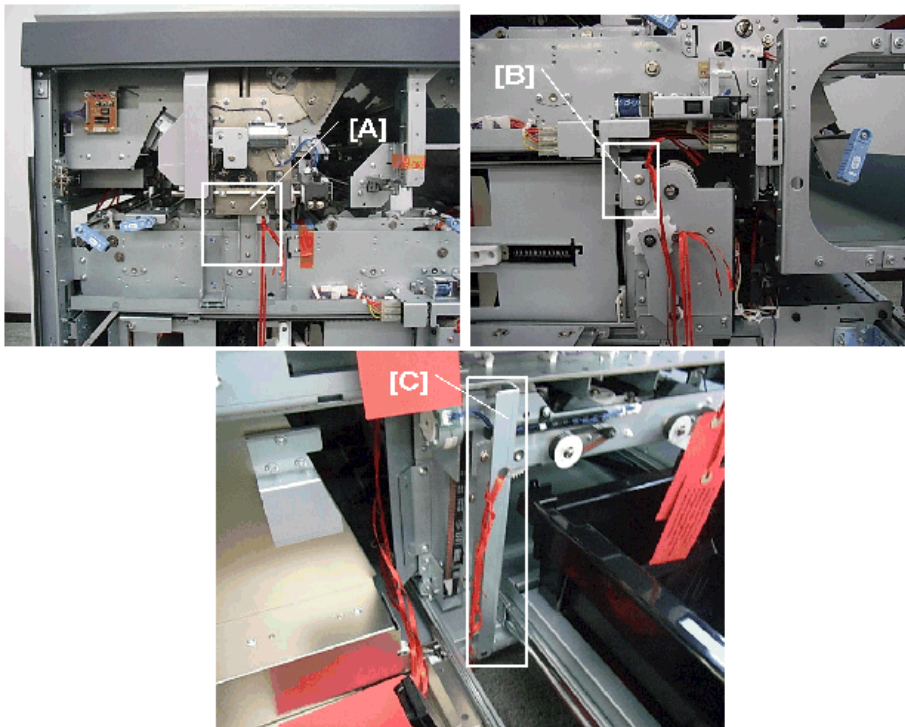
**Front**

1. Remove:

[A] Brace, tag (🔧x4)

[B] Brace, tag (🔧x3)

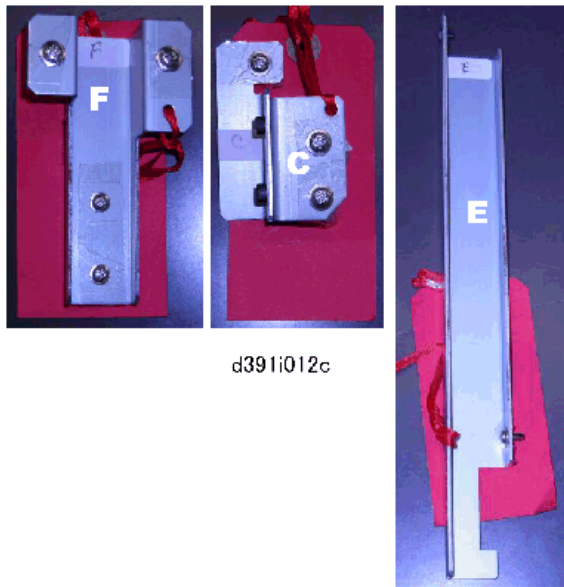
[C] Brace, tag (🔧x2)



d391i328

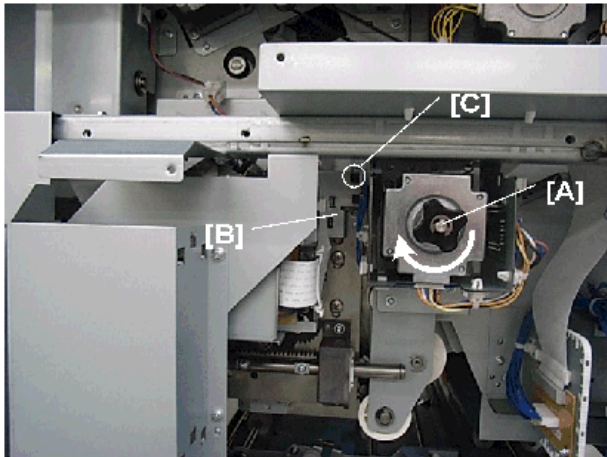
## 2. Installation

2. Mark the braces "F", "C", "E" as shown.



### Rear

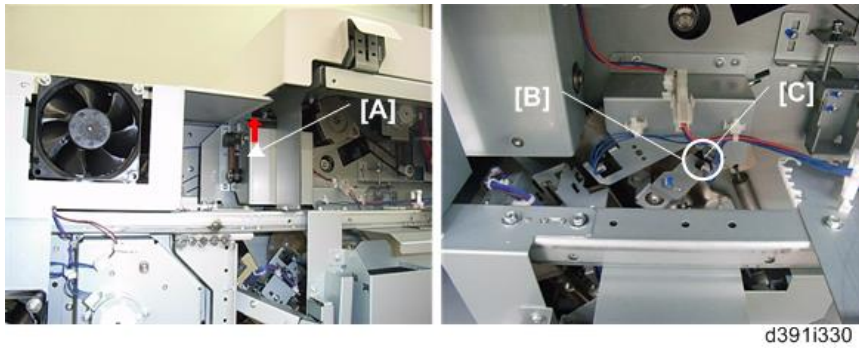
1. Rotate the knob [A] in the direction of the arrow to raise the grip unit until the actuator [B] reaches the sensor [C].



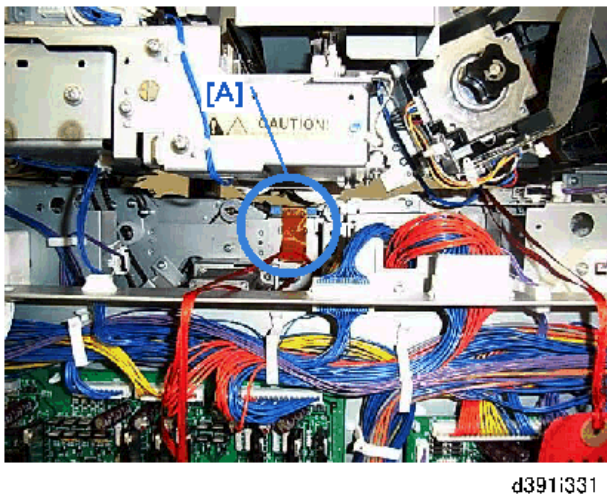
### Rear

1. Push up the right side of the timing belt [A] to rotate the gear counter-clockwise until the actuator

[B] reaches the sensor [C].

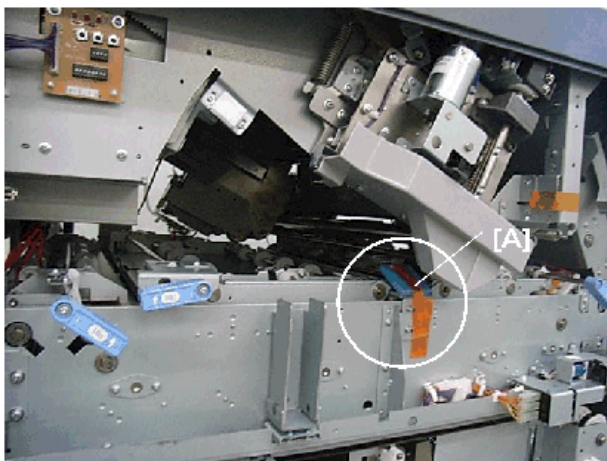


2. At the rear, remove the tape and cushions [A].



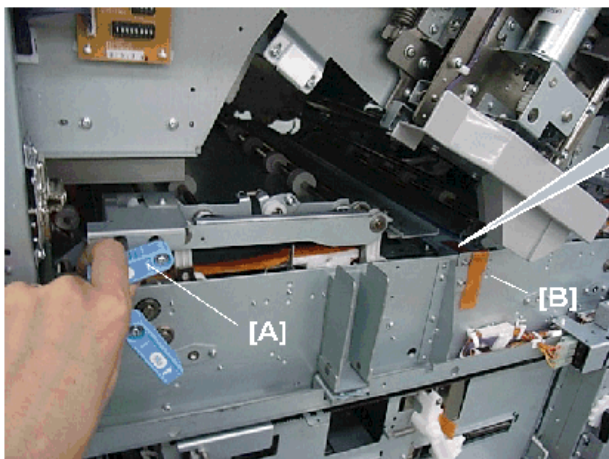
### Front

1. At the front, remove the tape and cushion [A].

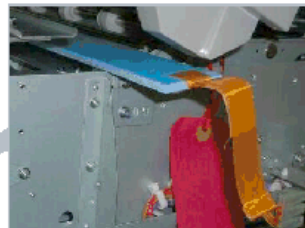


## 2. Installation

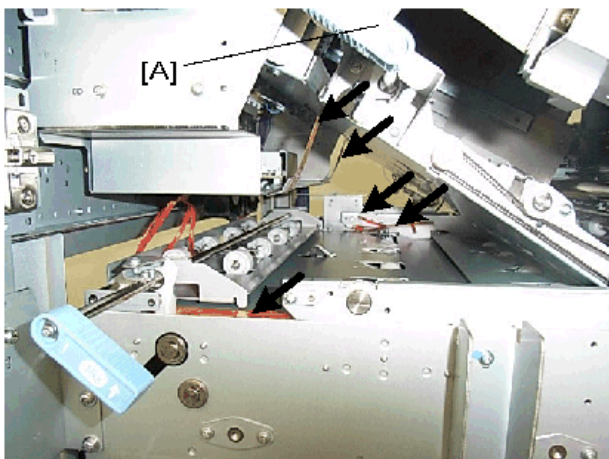
2. Lift and push **Mk7** [A] to the left and remove the tape and cushion [B].



d381i333

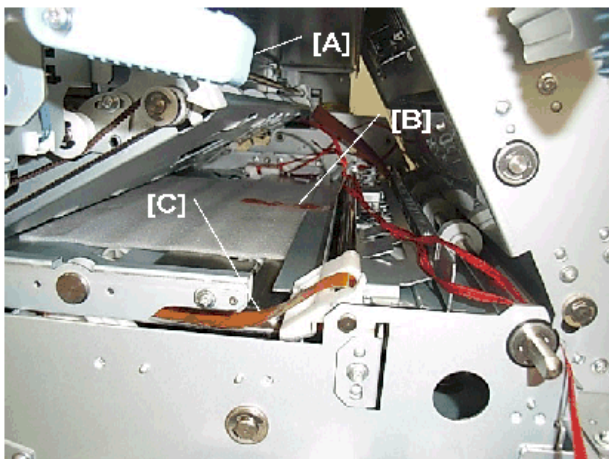


3. Raise lever **Mk7** [A].



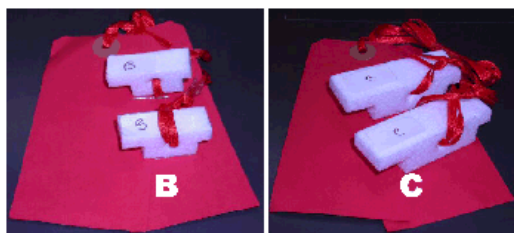
d391i334

4. Remove all strips of tape and cushions.
5. Return **Mk7** to its original position.
6. Raise **Mk9** [A].
7. Remove the long strips of tape [B] and [C].



d391i335

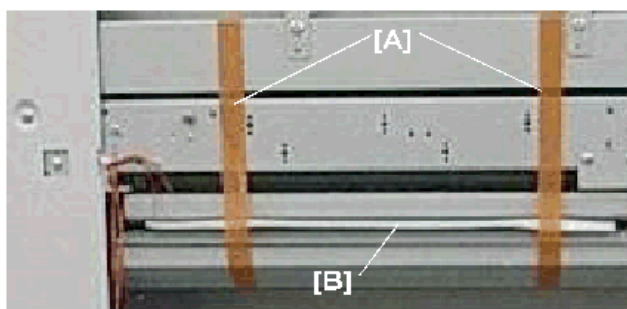
8. Label the small cushions "B" and the large cushions "C".



d391i014c

### Right Side

1. Remove the two strips of tape [A].
2. At the front, lower lever **Mk8**.
3. Remove the cushion [B].



d391i336

4. Return lever **Mk8** to its original position.

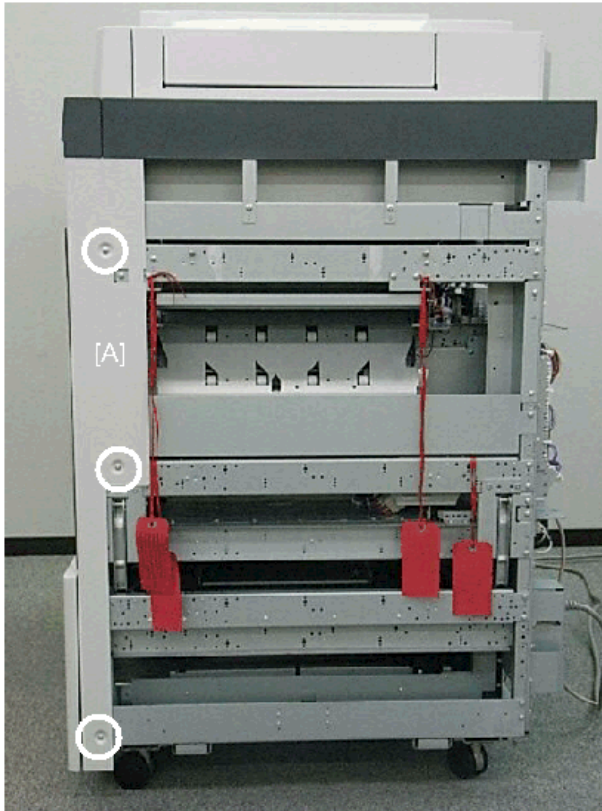
### Trimming Unit Tape

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### Right Side

## 2. Installation

1. Remove the front right corner cover (🔧 x3).

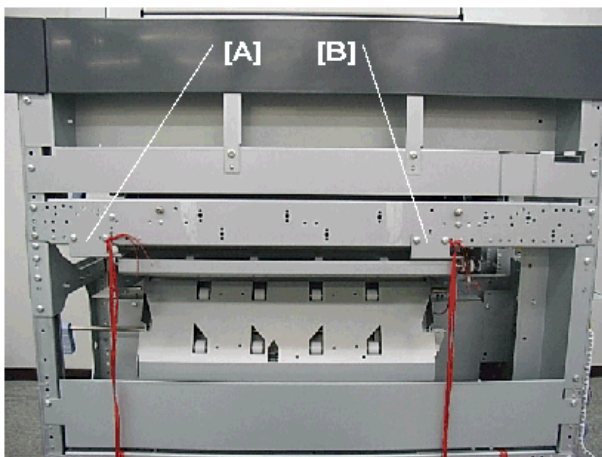


d391i337

2. Remove:

[A] Brace, tag (🔧 x3)

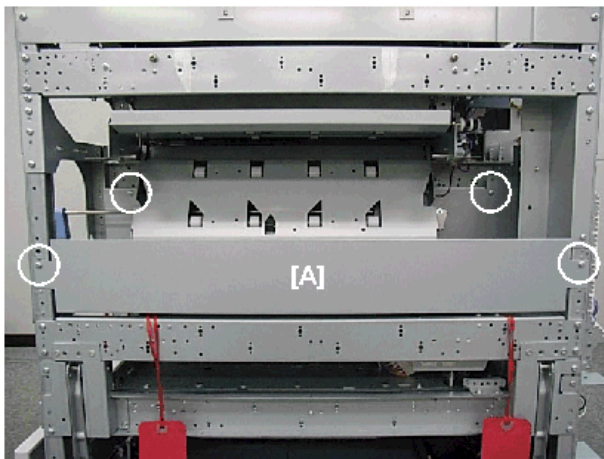
[B] Brace, tag (🔧 x3)



d391i338

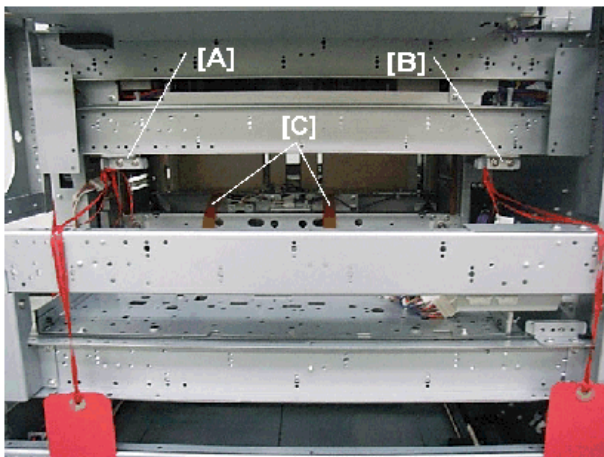


3. Remove the delivery bracket [A] (🔩x4).



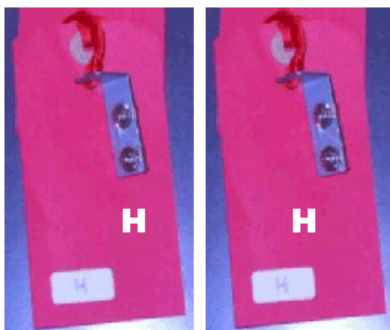
d391i339

4. Remove:  
[A] Brace, tag (🔩x2)  
[B] Brace, tag (🔩x2)  
[C] Long tapes (🔩x2)



d391i340

5. Label both braces "H".

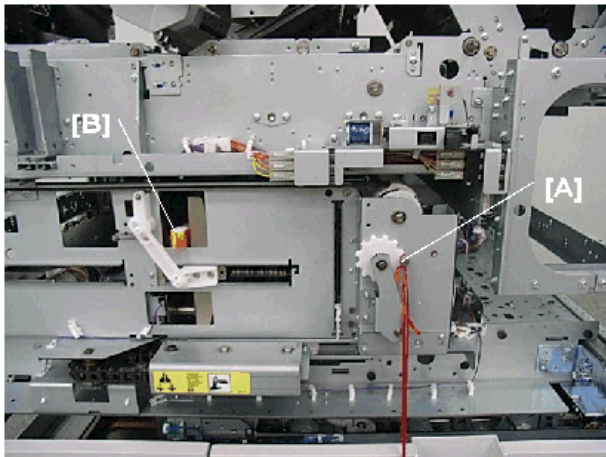


d391i015d

**Front**

## 2. Installation

1. Remove the stepped screw with tag [A] (🔑 x1).



d391i341

2. Mark the stepped screw "1".

### ★ Important

- Cushion [B] (shown in the previous illustration) is firmly clamped in place and must be released before it can be removed.



d391i015e

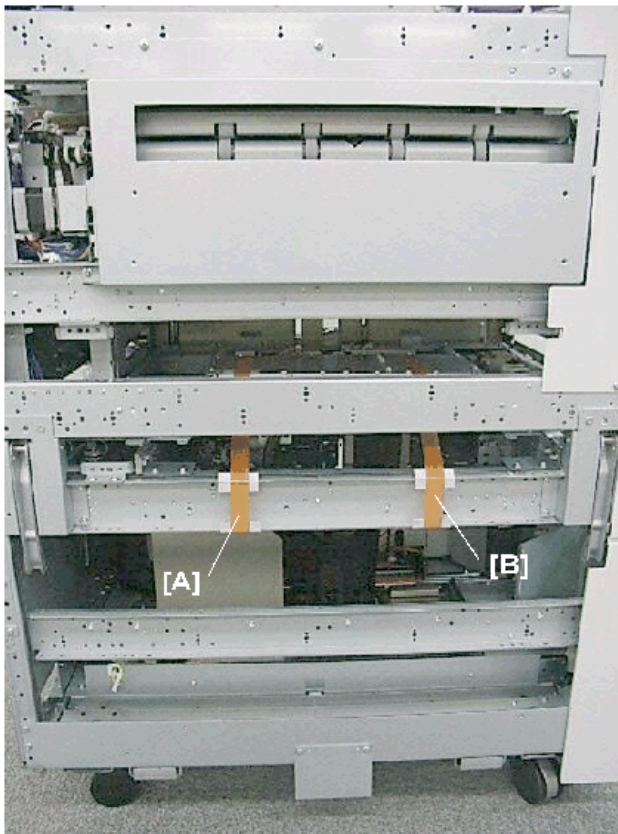
**Left Side**

1. Remove the left flat panel [A] (🔩x4).



d391i342

2. Remove the tape and cushions [A] and [B].

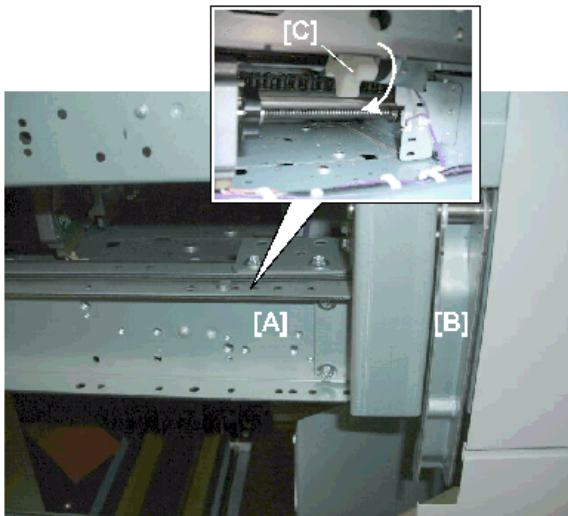


d391i343

## 2. Installation

### Front Left Corner

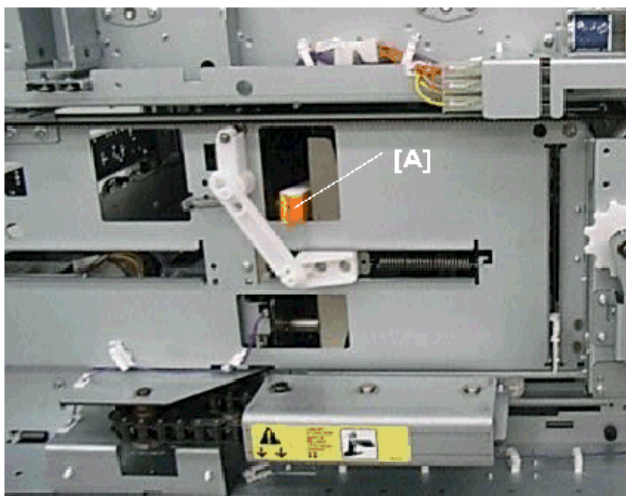
1. Behind the brace [A] near the carrying handle [B], rotate the white knob [C] to release the clamped cushion. (One full rotation should be enough to release the cushion.)



d391i344

### Front

1. Remove the cushion [A].



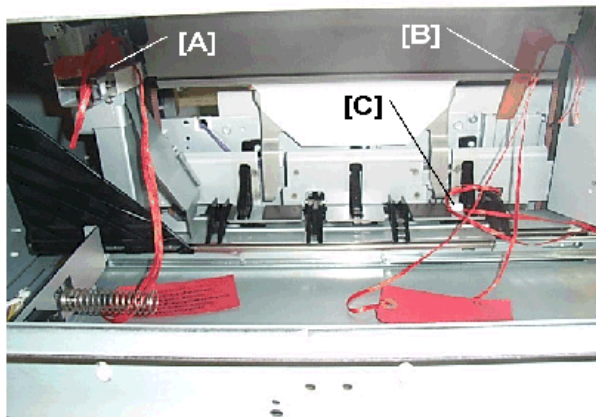
d391i345

## Book Stacking Tray Tape

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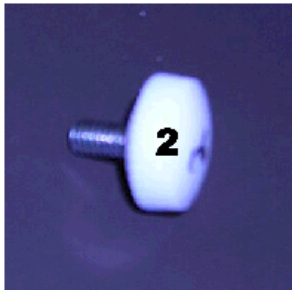
### Left Side: Book Stacking Delivery Tray Pulled Out

1. Pull out the book stacking delivery tray trimmings box drawer.
2. Remove:
  - [A] Tape, tag
  - [B] Tape tag
  - [C] Knurled head screw (🔩 x1). Remove with fingers.



d391i346

3. Label the screw "2".



d391i016d

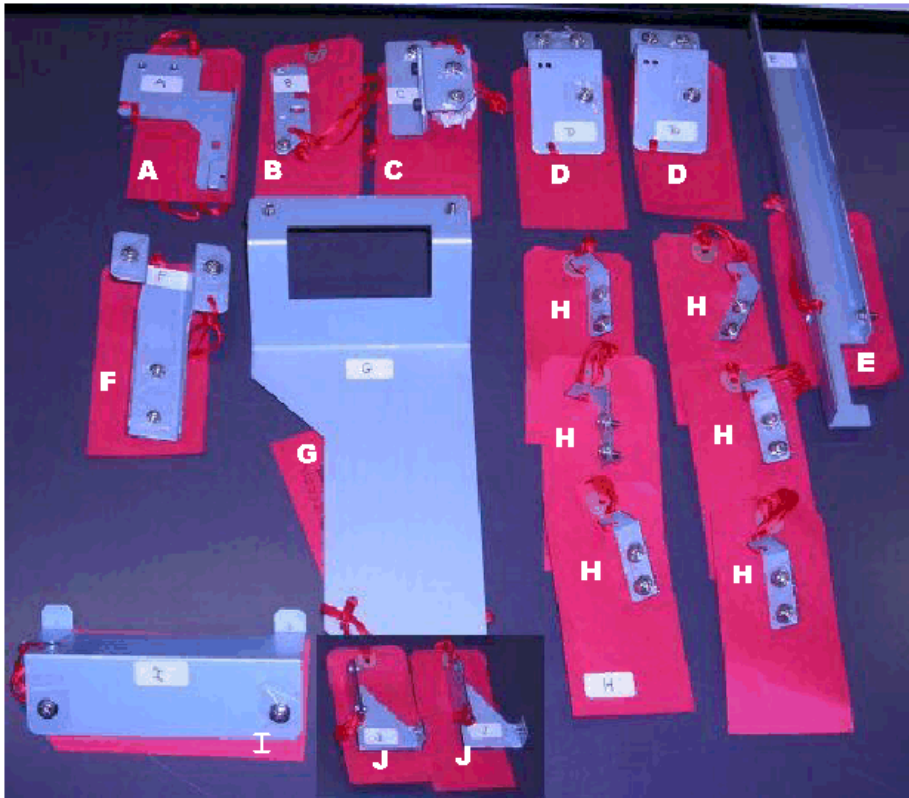
### Confirming Removal and Storing Braces, Cushions, and Screws

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1. Visually inspect the machine and confirm that all braces, screws, and cushions with red tags have been removed and marked for storage.

#### **Braces**

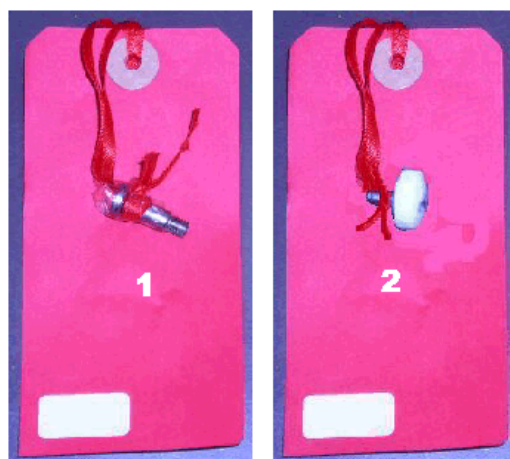
## 2. Installation



d391i016f

Mark	Item	Quantity
A	Brace A	1
B	Brace B	1
C	Brace C	1
D	Brace D	2
E	Brace E	1
F	Brace F	1
G	Brace G	1
H	Brace H	6
I	Brace I	1
J	Brace J	2

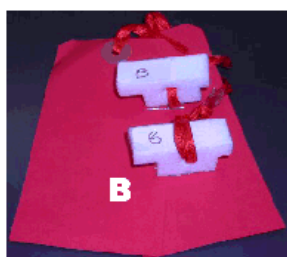
**Screws**



d391i016g

Mark	Item	Quantity
1	Step Screw	1
2	Plastic-head Screw	1

**Cushions**



d391i016f

Mark	Item	Quantity
A	Cushion A (Long)	1
B	Cushions B (Short)	2
C	Cushions C (Long)	2

- All of these items should be retained. Some of these items must be reattached if the bookbinder is moved to a new location. For more details, please refer to "Preparing the Bookbinder for Moving".

**Check List**

---

Confirm that the following parts have been reinstalled:

- [1] Left flat panel

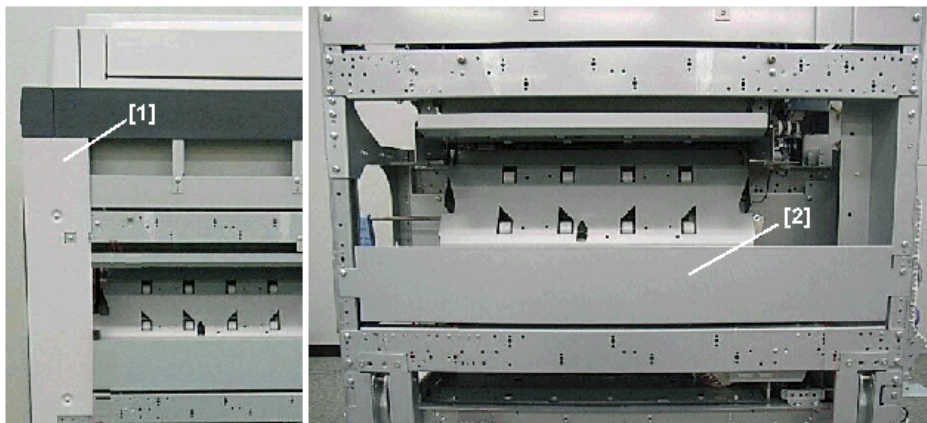
## 2. Installation



d391i820

[1] Right corner cover

[2] Delivery bracket

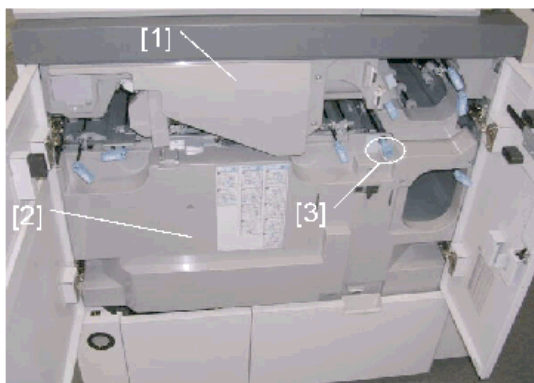


d391i821

[1] Front inner cover (upper)

[2] Front inner cover (lower)

[3] Knob Mk10



d391i822

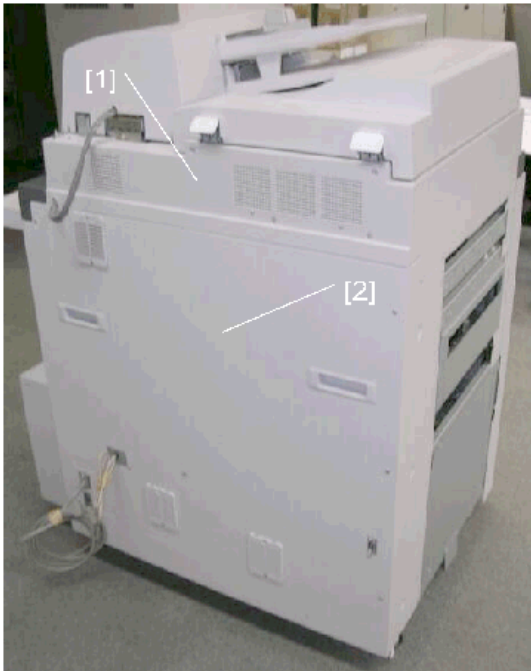
[1] Rear cover (upper)

[2] Rear cover (lower)

### ★ Important

- To protect the boards from damage due to accidental short circuiting as a result of contact with a metal tool, the rear lower cover should never remain off longer than necessary.





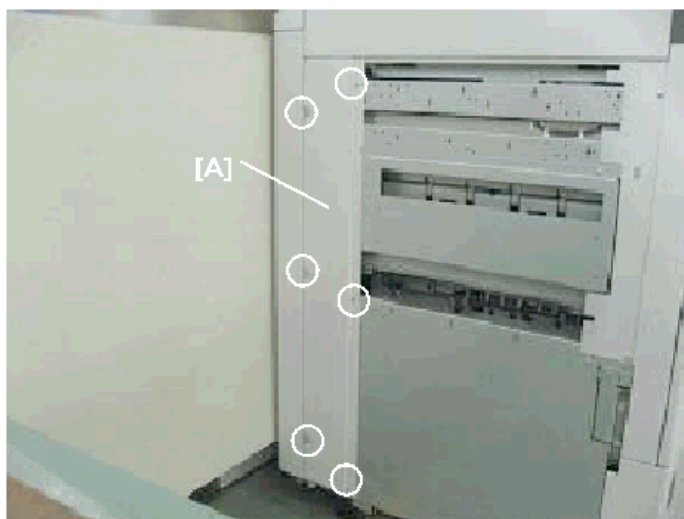
d391i823

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### Docking the Bookbinder

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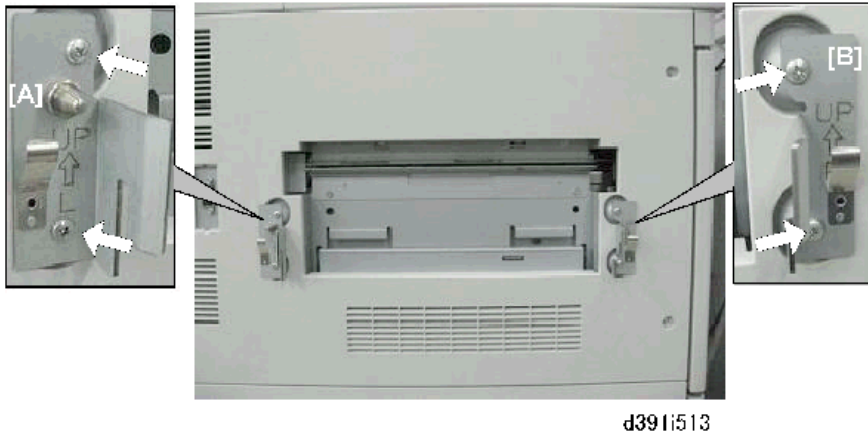
1. At the left rear corner of the host machine, confirm that cover [A] has been reattached (🔩 x6).



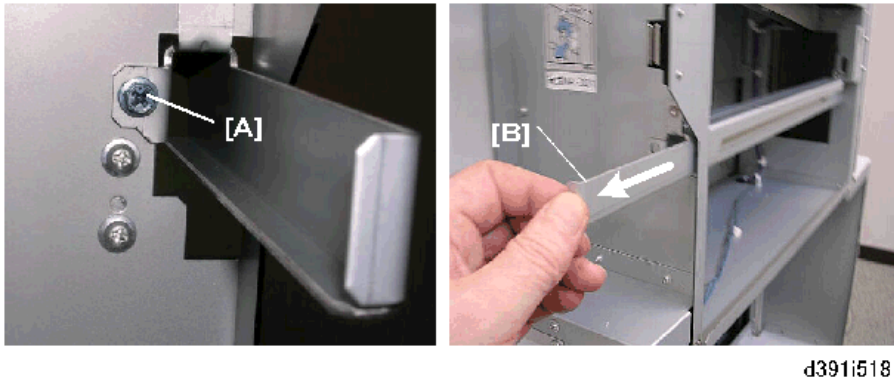
d391i510

2. On the right side of the host machine, attach:  
[A] Left joint bracket ("L") (🔩 x2)  
[B] Right joint bracket ("R") (🔩 x2)

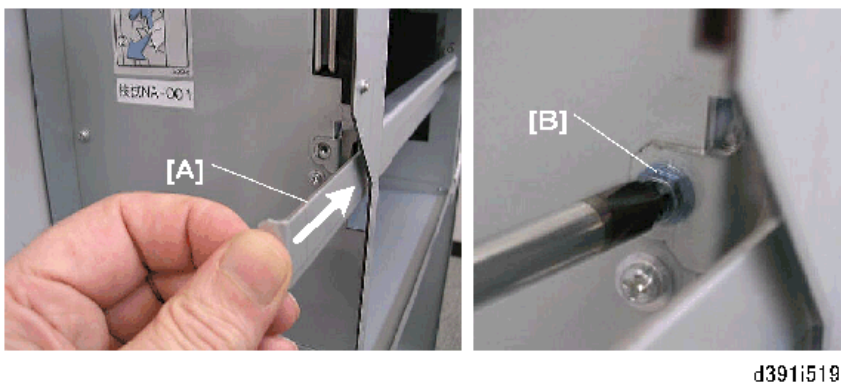
## 2. Installation



3. Open the front door of the relay unit.
4. Remove the screw [A].
5. Pull the lock bar [B] out to lower it.

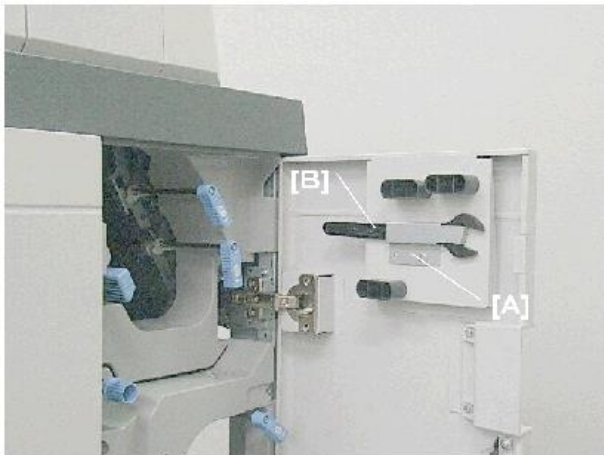


6. Slowly push the bookbinder against the side of the host machine.
7. Push in the lock bar [A] to raise it and lock it in the cutouts of the joint brackets attached to the host machine.
8. Reattach the screw [B] to fasten the lock bar in the raised position.



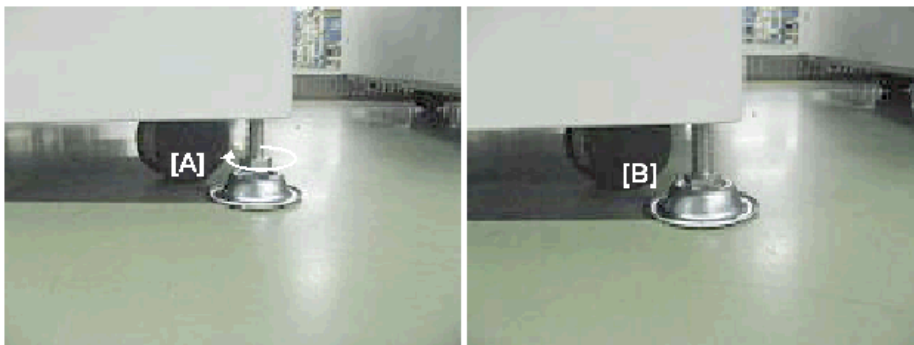
9. Remove the brace [A] from the right front door of the bookbinder. (🔑 x1)

10. Remove the wrench [B].



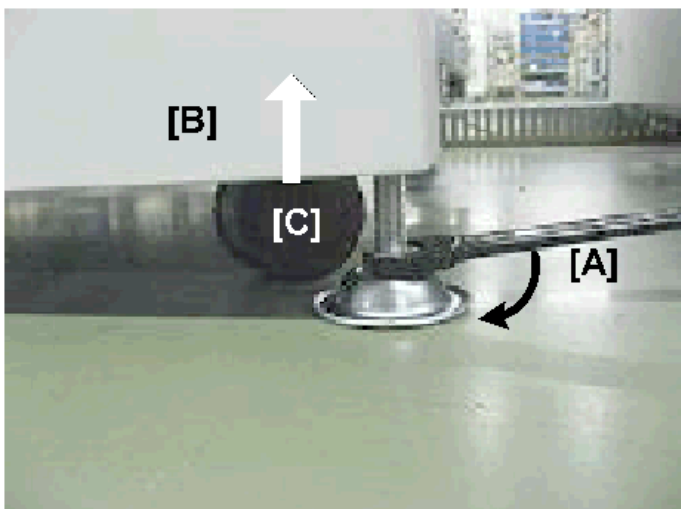
d391i361

11. Place the shoes [A] and [B] under the stoppers at each corner of the bookbinder.
12. Use your fingers (or the wrench) to turn the nut in the direction of the arrow until the nut stops on top of the shoe.



d391i511

13. At each corner, use the wrench [A] to turn the nut in the direction of the arrow to raise the bookbinder [B] until the caster [C] raises off the floor.



d391i512

14. Place a level on the top at the front and right edges of the machine to confirm that the bookbinder

## 2. Installation

is level.

15. Adjust the corner stoppers until the machine is level.
16. Connect the bookbinder interface cable to the host machine.

---

### Filling the Bookbinder Glue Supply Unit

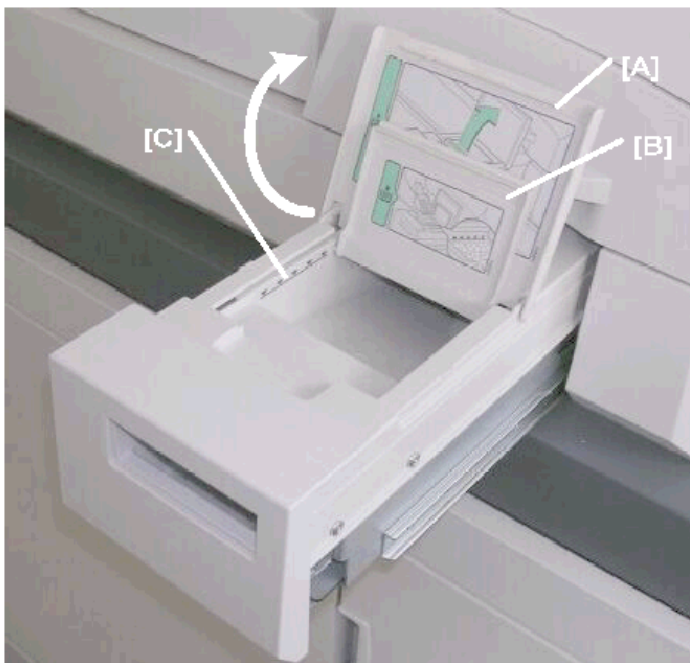
---

1. Pull out the glue supply drawer until it stops.



d391i514

2. Raise the two covers [A] and [B].
3. Note the load limit marks [C] inside the drawer on both sides.



d391i515

4. Use the scoop [A] to fill the bin with glue pellets as far as the load limit marks on both sides of the

drawer.

**★ Important**

- Two scoops (about 380 g each) should be sufficient.



d391i156

5. Close both covers.
6. Push in the glue supply drawer.

### Handling and Storing the Glue Pellet Supply

---

Exercise precaution when choosing a location for storing the glue pellets.

- Store the pellets where they will not be exposed to direct sunlight.
- The storage location should be within this temperature range: -20°C to 40°C.
- Never expose pellets to direct flame.
- Keep the pellets out of the reach of small children. If pellets are accidentally ingested, contact a physician immediately.
- Never dispose of pellets by incinerating them. Obey local laws and regulations that restrict disposal of such items.

When using the glue pellets:

- Use only glue pellets recommended for use with this bookbinder.
- Before the start of a job, press the glue warm-up button on the right front corner of the bookbinder to start heating the glue.
- Never fill the glue pellet supply drawer higher than the load limit marks shown on both sides of the drawer.

### Testing the Breaker Switch

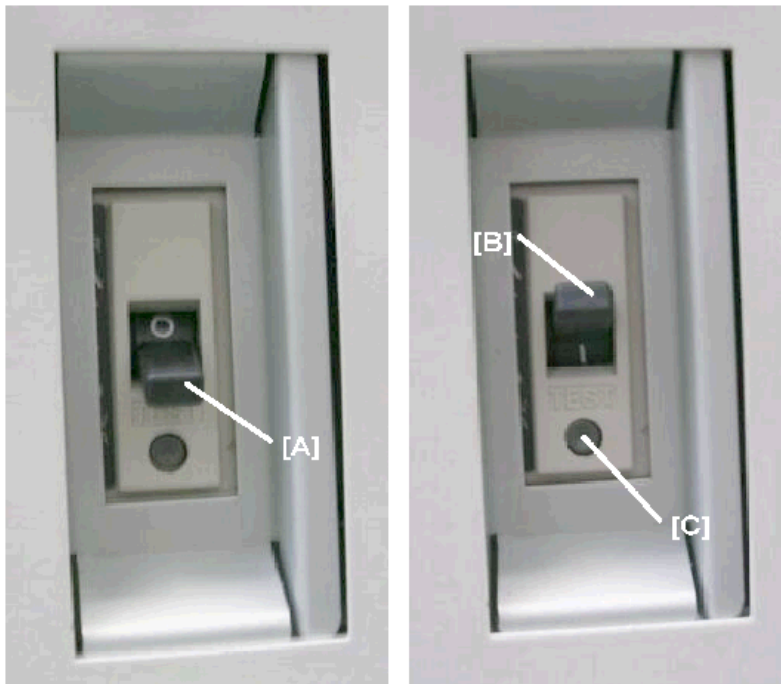
---

1. Turn off the host machine.

## 2. Installation

### ★ Important

- The power supply to the bookbinder must be off.
2. Plug the bookbinder power cord into its power source.
  3. Locate the breaker switch [A] at the right lower corner of the machine below the power cord.
  4. Raise the breaker switch [B] so you can see the "I" under the switch. This is the ON position. (Ignore this step if the breaker switch is already at the "I" position.)
  5. Use the tip of a small screwdriver to push the breaker test button [C].
    - The breaker switch should flip to the "O" (OFF) position. This indicates that the breaker switch is operating normally.
    - If the breaker switch does not flip to the "O" position, the switch must be replaced.



d391i517

6. Reset the switch to the "I" (ON) position for normal operation.

### ★ Important

- The bookbinder will not turn on if the breaker switch is not reset to the "I" position.

---

## Final Check

---

### ★ Important

Check with your supervisor to determine if the most recent firmware needs to be installed.

1. Connect the power cord of the copier to its power source.
2. Connect the power cord of the bookbinder to its power source.
3. Turn on the host machine.

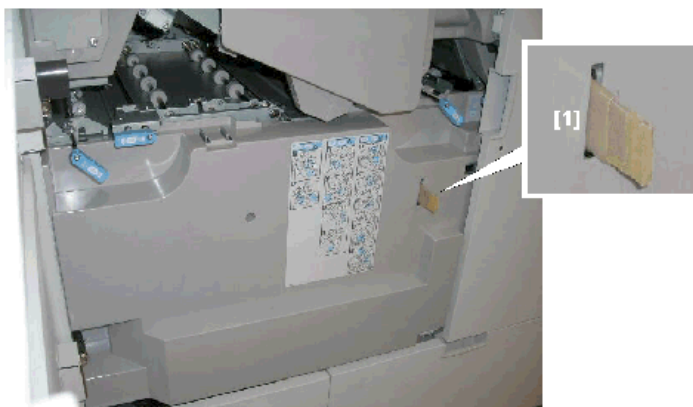
## Preparing the Bookbinder for Moving

Do this procedure to move the internal units to their home positions before moving the machine.

### ★ Important

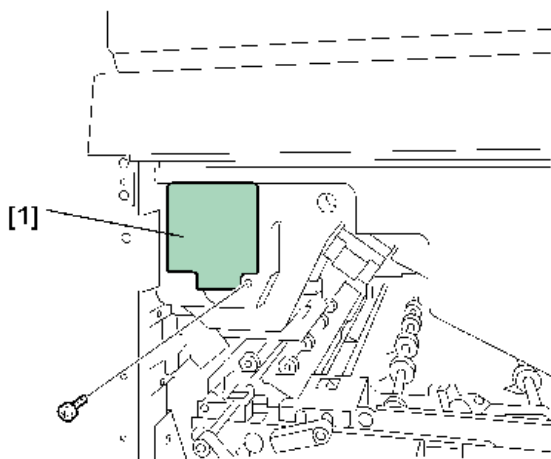
- This procedure must be done before reattaching any braces to the perfect binder.

1. Switch the host machine off.
2. Open the right and left front doors.
3. Close the right door.
4. Insert a piece of cardboard or folded piece of paper into the slot [1] in the left door switch.



d391r951

5. Remove the service board cover [1] (⚙️ x1).

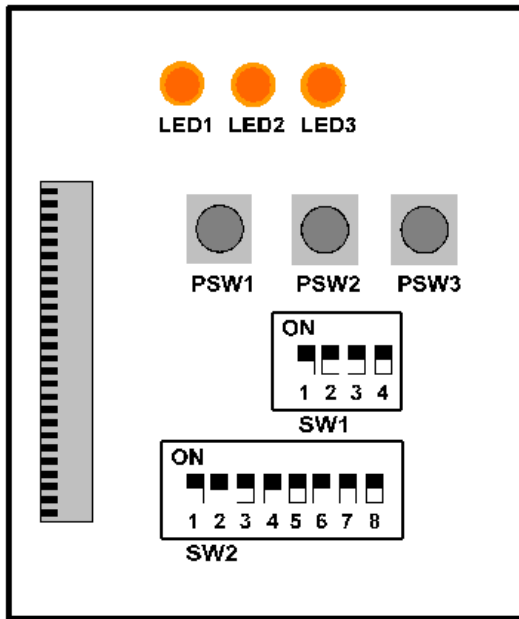


d391r107

6. On the SW1 bank, set DIP switch 1 to ON.

## 2. Installation

- On the SW2 bank, set DIP switches 1, 2, 4, 7 to ON.

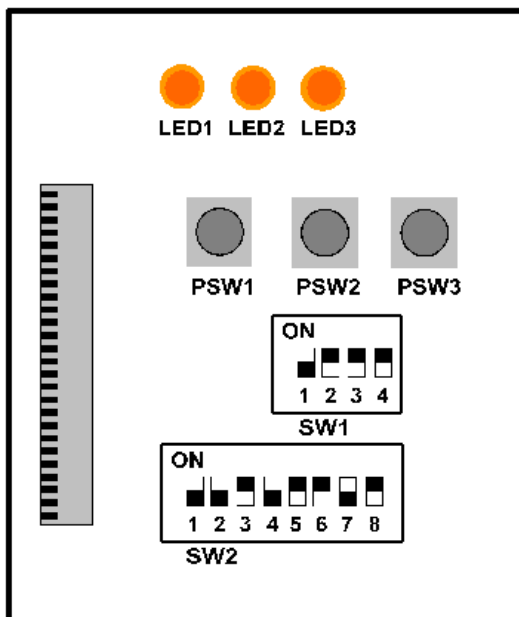


d391r952

- Turn the host machine on.

### **⚠ CAUTION**

- Wait about 30 sec.
- Make sure that your hands and tools are well clear of the parts inside the machine.



d391r953

- Slowly push [PSW1] 11 times.
  - Each push on the [PSW1] moves a unit to its shipping position (see the table below).
  - After each push, LED2 flashes until the task has been completed. Wait for LED2 to go off before you press [PSW1] again.

No.	Operation	Target Unit
1	<ul style="list-style-type: none"> <li>Moves the blade cradle to its</li> </ul>	Trimming Unit



No.	Operation	Target Unit
	initial position. <ul style="list-style-type: none"> <li>Moves the signature press blade to its END position.</li> <li>Moves inside the trimming unit.</li> <li>Opens the rotation guide plate.</li> <li>Lowers the slide to mechanical stopper.</li> </ul>	(This requires more time. Wait for LED2 to turn OFF before pressing [PSW1] again.)
2	Closes the rotation guide plate.	Cutter Rotation Unit
3	Moves the trimmings buffer into the machine.	Trimmings Unit Cutter
4	Lowers the sub gripper, signature gripper.	Sub Grip Unit
5	Lowers the stacking tray.	Stacking Tray
6	Retracts the right and left cover path guide plates.	Cover Unit
7	Opens the spine fold plate (movable side only)	Cover Unit
8	Closes the right and left cover path guide plates.	Cover Unit
9	Rotates the main gripper.	Main Grip Unit
10	Lowers the main gripper.	Main Grip Unit
11	Closes the main gripper.	Main Grip Unit

- All three LEDs on the Service Board light after all units have been moved to their shipping positions.
- Set all the SW1 and SW2 DIP switches to the down positions.
  - Switch off the host machine.
  - After moving the machine to its new location:
    - Remove any shipping brackets that have been reattached.
    - Connect and turn on the book binder. The internal units will automatically move to their start positions.

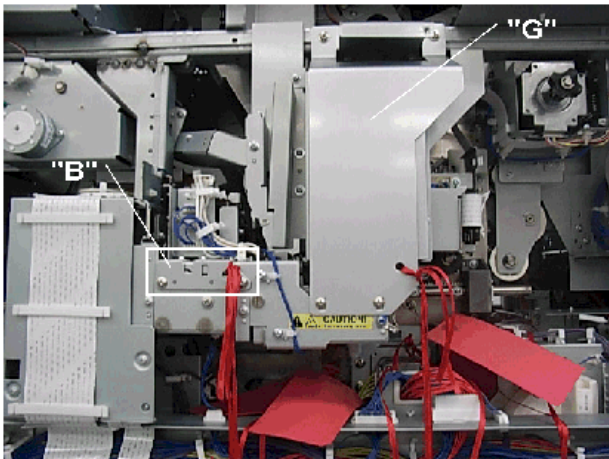
### Same Floor

---

If the bookbinder will be moved to another location on the same floor where there are few bumps or ridges (cable protectors, for example), reattach the braces at two locations to stabilize the gluing unit and sub grip unit.

## 2.Installation

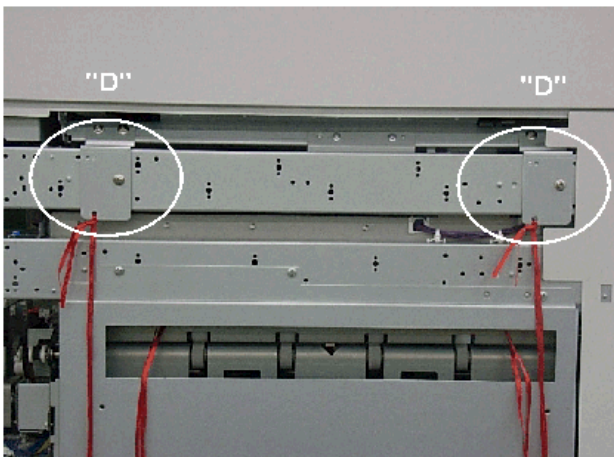
### Gluing Unit



d391i520

Brace	Quantity
Brace "B" (🔑 x4)	1
Brace "G" (🔑 x4)	1

### Sub Grip Unit



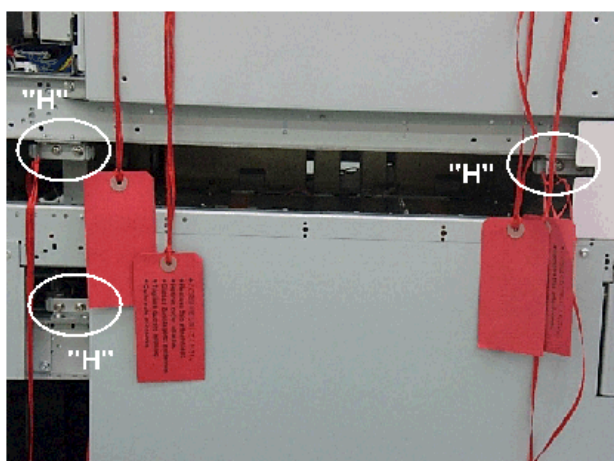
d391i521

Brace	Quantity
Braces "D" (🔑 x3 ea.)	2

### Another Floor (by Elevator)

If the bookbinder will be moved by elevator to a different floor in the same building attach the braces to stabilize the gluing unit, sub grip unit (described above) and the two additional locations described below.

Left Side (Paper Exit)



d391i522

Brace	Quantity
Braces "H" (🔩 x2 each)	3

Right Side (Paper Entrance)



d391i523

Brace	Quantity
Brace "H" (🔩 x2)	1

Shipping the Bookbinder

Follow the installation instructions in reverse and reattach as many of the braces and cushions as possible.

- Use the Service Board DIP SWs to set the components inside the machine to their correct moving

## 2. Installation

positions before you reattach any braces. (See the procedure above.)

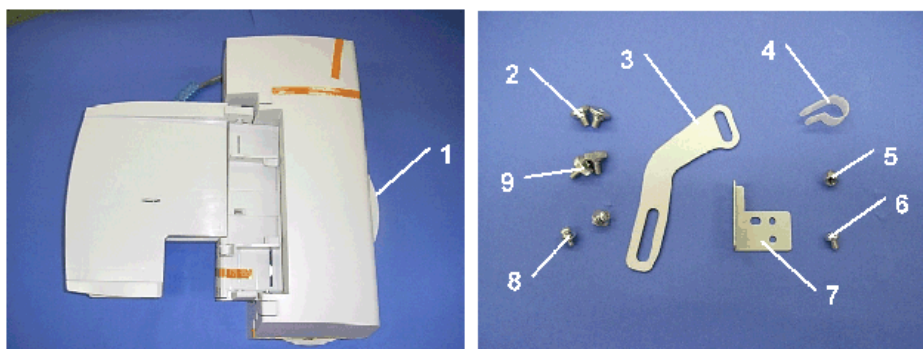
- Make sure the braces are fastened with their screws and clearly marked for removal with the original red tags (or improvised tags).
- Do not turn on the bookbinder until you have confirmed that all braces have been removed.
- The book binder is extremely heavy. At least four persons will be needed to move the bookbinder onto its pallet.

## Cover Interposer Tray for Perfect Binder Type S1 (D736)

### Interster Accessories

Check the accessories and their quantities against this list.

No.	Description	Q'ty
1.	Interster Unit	1
2.	Shoulder Screws (M5)	2
3.	Limiter Brace	1
4.	Clamp	1
5.	Cap Nut	1
6.	Screw (M4x7)	1
7.	Brace	1
8.	Screws (M4x8)	2
9.	Hinge Lock Screws (M4)	2

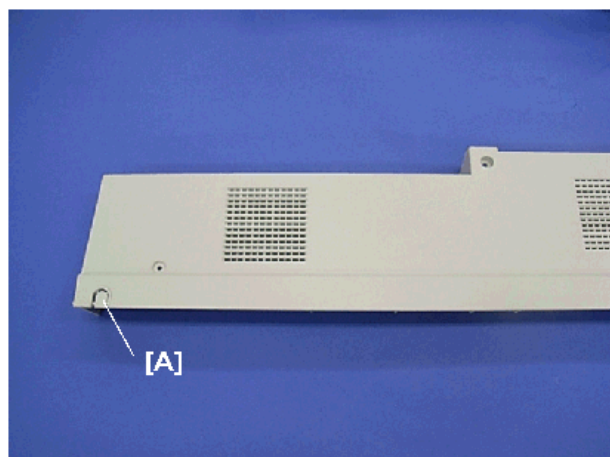


d391i300

### Interster Installation

#### Mounting the Interster

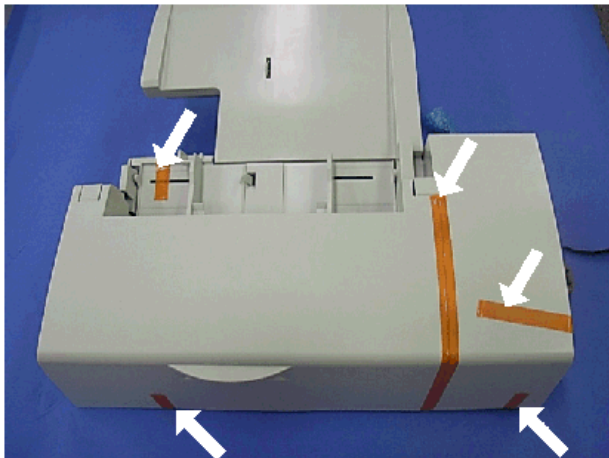
1. Use a pair of nippers to remove the knockout [A] covering the interface cable hole.



d391i347

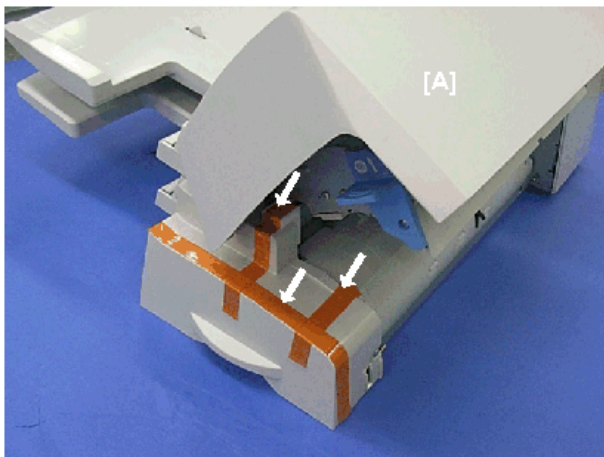
## 2. Installation

2. Smooth the edges of the hole with a knife or file to prevent damage to the interface cable.
3. Remove all visible strips of tape and cushions from the top and sides.



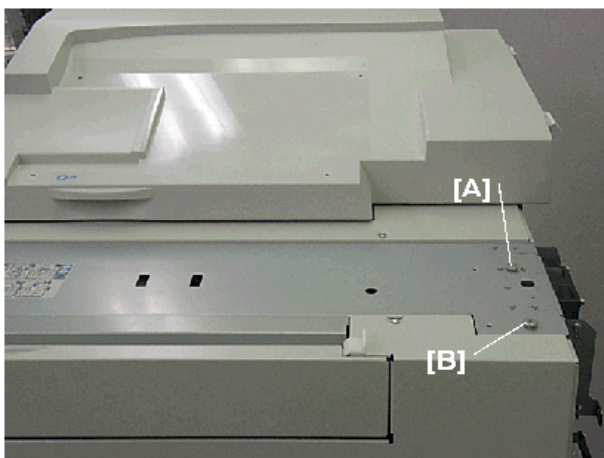
d391i348

4. Open the top cover [A], as well as strips of tape and cushion.



d391i349

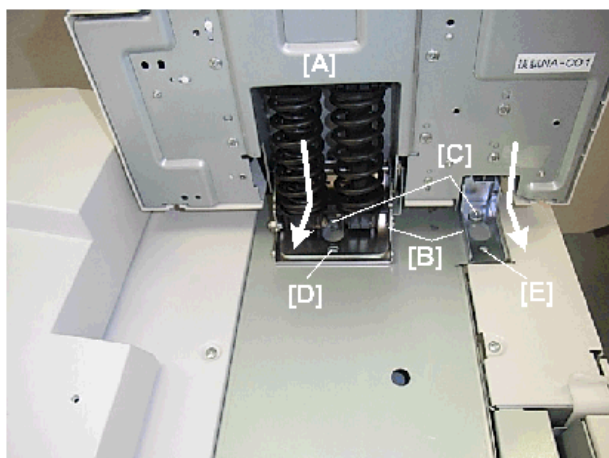
5. Attach the shoulder screws [A] and [B] (⌀x2: M4).



d391i350

6. Hold the inserter [A] at the back of the bookbinder.
7. Set the keyholes of the hinge plates [B] over the heads of the shoulder screws [C].

8. Slide the inserter forward so that the hinge plates slide under the heads of the shoulder screws.
9. Secure the hinges with the hinge screws [D] and [E] (🔩 x2: M4).



d391i351

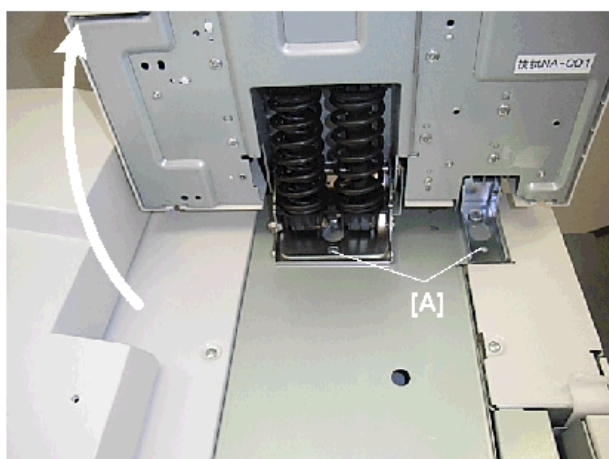
10. Slowly lower the inserter onto the top of the bookbinder.
11. Confirm that the positioning pins insert smoothly and completely into their holes.  
If the positioning pin fits snugly in the hole, no adjustment is necessary.  
-or-  
If the pin does not insert completely into the hole, do the adjustment procedure in the next section.

#### Adjusting the Position of the Hinge Plate

---

This procedure is not required if the positioning pin slides freely in and out of the hole when the inserter top cover is lowered and raised.

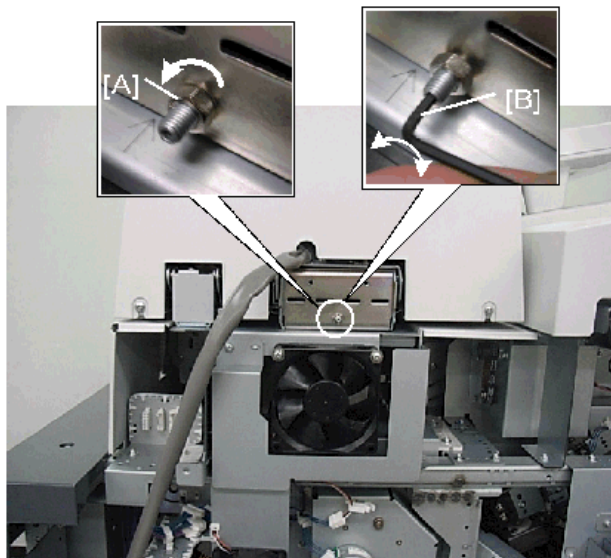
1. Raise the inserter.
2. Loosen (do not remove) the hinge screws [A] (🔩 x2: M4).



d391i353

3. Use a small wrench to loosen the adjustment screw [A] (Do not remove!).
4. Insert a hex wrench (Allen key) [B] into the tip of the adjustment screw.
  - Rotating the screw clockwise moves the inserter to the right.
  - Rotating the screw counter-clockwise moves the inserter to the left.

## 2. Installation



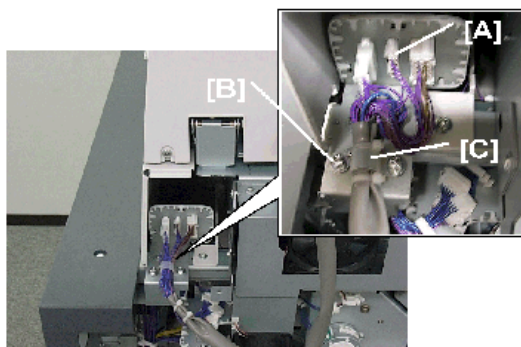
d391i354

5. Tighten the hinge screws (🔩 x2: M4).
6. Lower the inserter again to see if the positioning pin and hole fit snugly.
7. Repeat this procedure until the pin and hole engage and disengage completely and smoothly.

### Connecting the Inserter

---

1. Connect the inserter to the relay panel [A] (🔌 x3).
2. Fasten the ground wire [B] (🔩 x1: M4 x8).
3. Wrap the clamp [C] around the harnesses and the ground wire.



d391i355

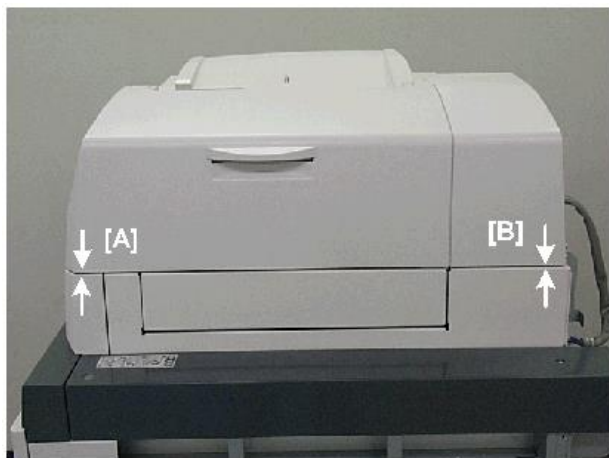
4. Fasten the clamp (🔩 x1: M4 x8).



### Inserter Gap Measurement

---

1. Measure the gap between the inserter and the bookbinder at [A] and [B].



2. Calculate the difference between the two measurements.  
If the difference between the gaps is less than 1 mm, no adjustment is necessary. Skip the next section.

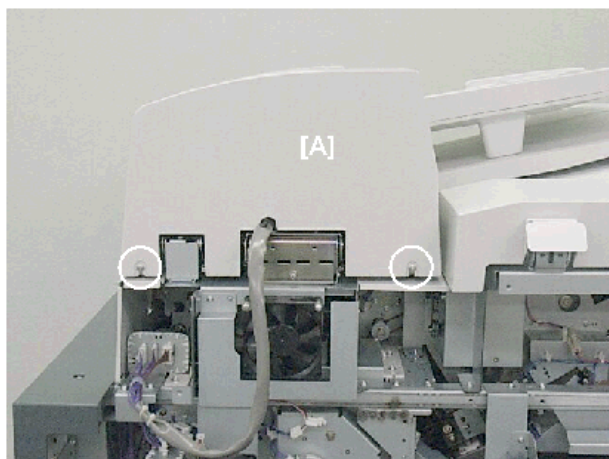
-or-

If the difference is more than 1 mm, you must go to the next section and adjust the height.

### Inserter Gap Adjustment

---

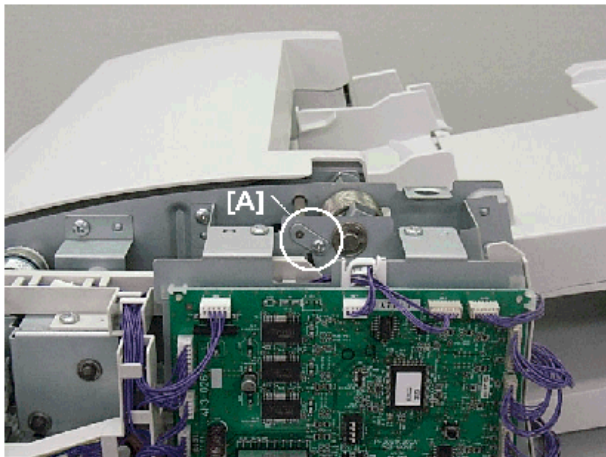
1. Remove the inserter rear cover [A] (⊖ x2).



d391i357

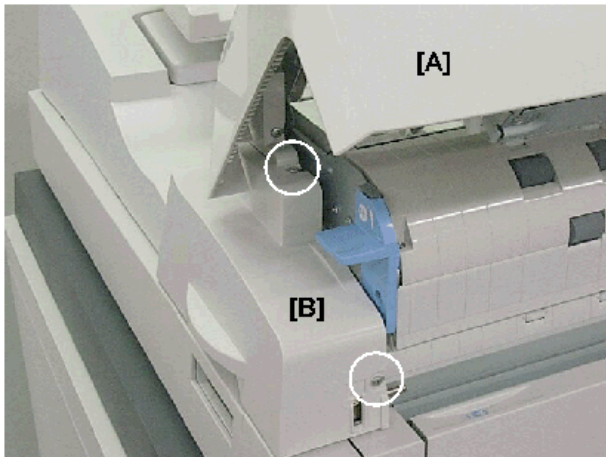
## 2. Installation

2. Remove the top cover angle adjustment shaft [A] (⊕x1).



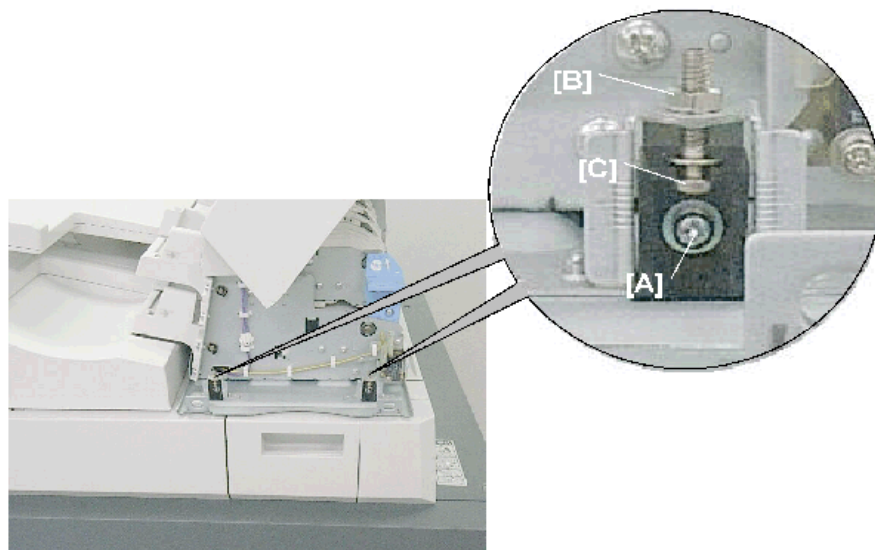
d391i358

3. Open the top cover [A].
4. Remove the front cover [B] (⊕x2).



d391i359

5. On the right side of the adjustment mechanism, loosen:
  - [A] Screw
  - [B] Hex nut
  - With a hex wrench, turn the adjustment screw [C] to adjust the gap by raising or lower the inserter.
  - Turning clockwise raises the inserter.
  - Turning counter-clockwise lowers the inserter



d3911360

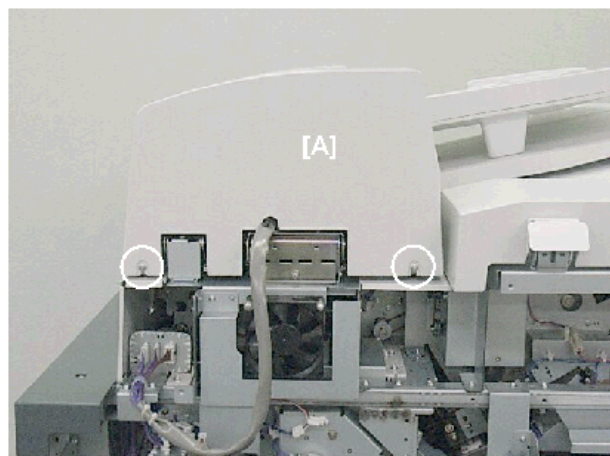
6. On the left side of the adjustment mechanism, adjust the height of the inserter on the left. (The procedure is the same as Step 5.)
7. Reattach:
  - Inserter front cover (⊗ x2)
  - Top cover angle adjustment shaft (⊗ x1)

#### Inserter Limiter Brace

---

The limiter brace limits the movement of the inserter unit when it is opened.

1. If the rear cover [A] is attached, remove it (⊗ x2)



d3911357

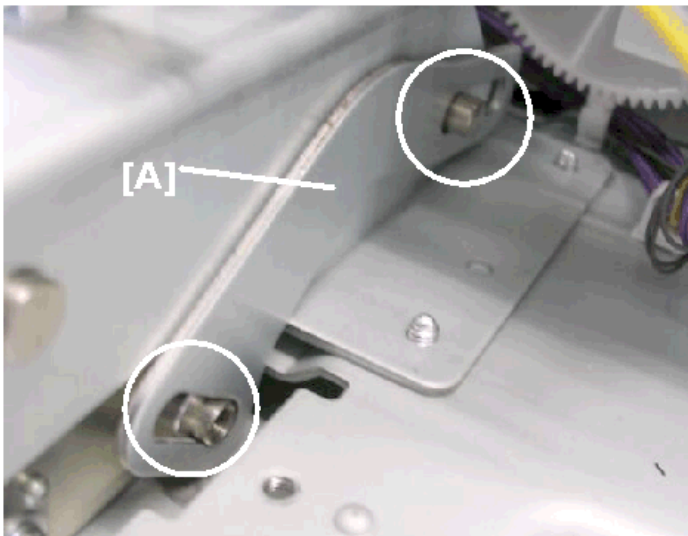
## 2. Installation

2. From the inserter accessories, retrieve the items shown below.



d391i524

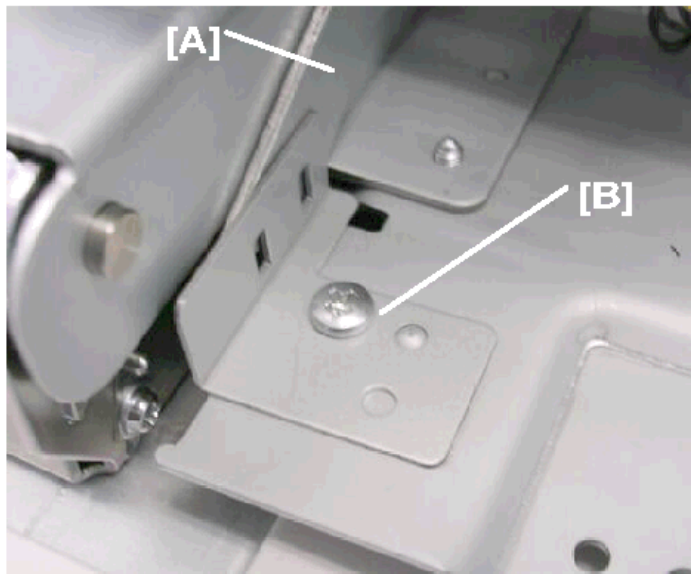
3. Set the limiter brace [A] on the two posts (front and back).



d391i525

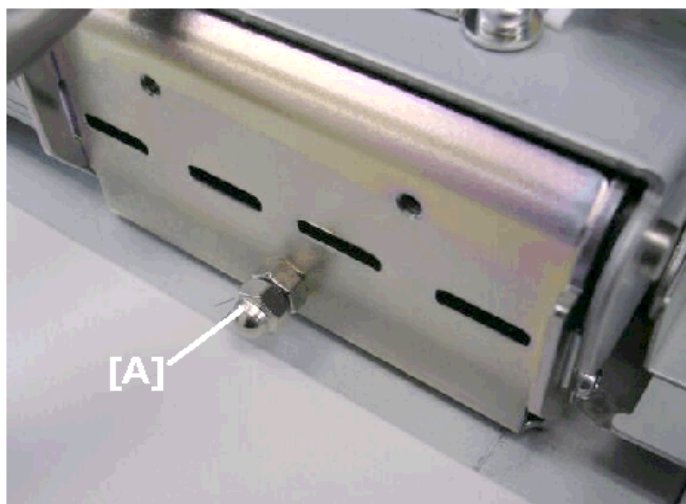
4. While holding the limiter brace [A] upright so that it does not slip off its posts, attach the brace [B]

(🔩 x1). (Make sure that this screw is tight.)



d391i526

5. Attach the cap nut [A] to the exposed threads of the screw.



d391i527

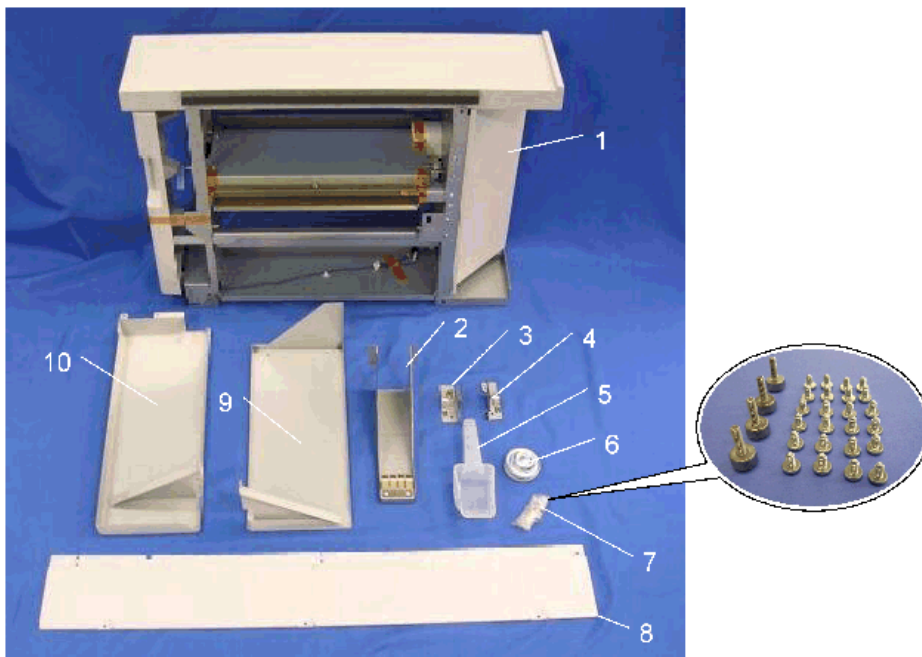
6. Reattach the rear cover of the inserter (🔩 x2)

## Transit Pass Unit for Perfect Binder Type S1 (D736)

### Relay Unit Accessories

Check the accessories and their quantities against this list.

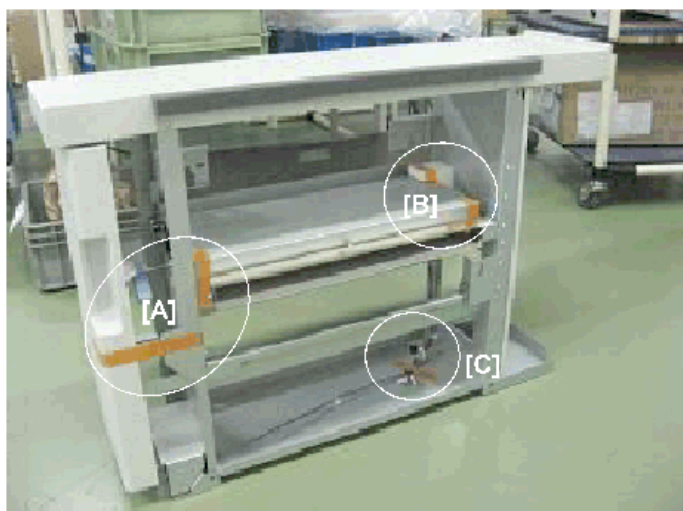
No.	Description	Q'ty
1.	Transit Pass Unit (Relay Unit)	1
2.	Ground Plate	1
3.	Joint Bracket (Left)	1
4.	Joint Bracket (Right)	1
5.	Scoop (for loading glue pellets)	1
6.	Shoe Plates (for host machine)	4
7.	Screws	28
8.	Cover (Left: Rear for host machine)	1
9.	Front Cover (for relay unit)	1
10.	Rear Cover (for relay unit)	1



d391i501

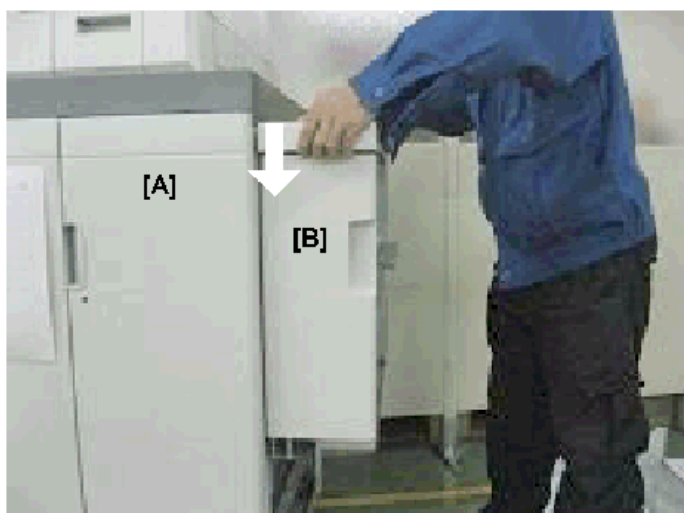
### Relay Unit Installation

- From the relay unit, remove:
  - [A] Strips of tape x2
  - [B] Strips of tape x3, cushion x1
  - [C] Tape x1



d391i502

2. On the right side of the host machine [A], lower the relay unit [B] onto the two shoulder screws (front and rear).

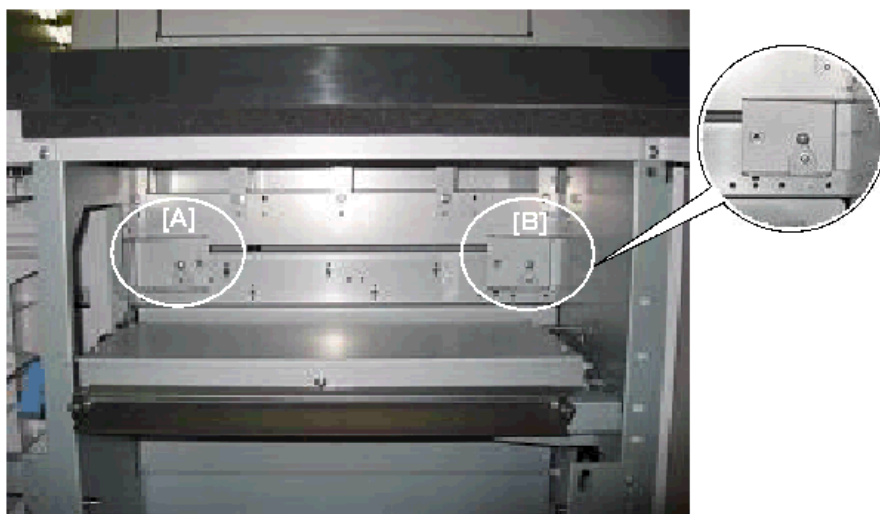


d391i503

3. Confirm that the slots on the left side of the relay unit are both hooked correctly on the heads of the

## 2. Installation

shoulder screws [A] and [B].



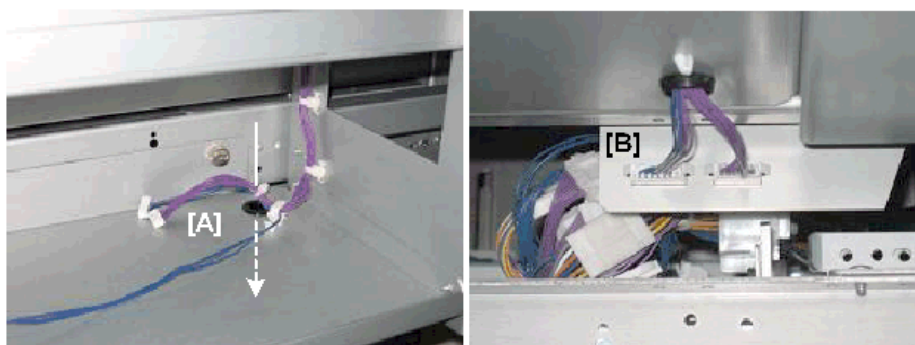
d391i504

4. Use the accessory screws (long, knurled heads) to fasten the relay unit to the side of the host machine (🔩x4).



d391i505

5. Route the two relay unit harnesses through the grommet and hole [A].
6. Attach the harnesses at [B] below.



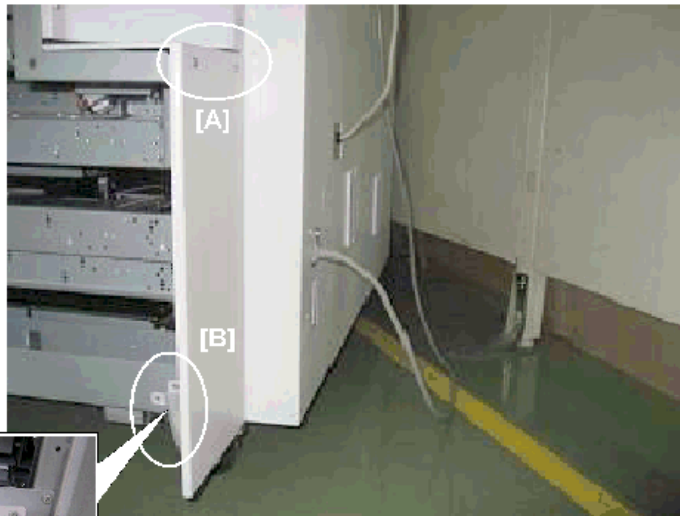
d391i506

7. Attach the rear cover to the relay unit.




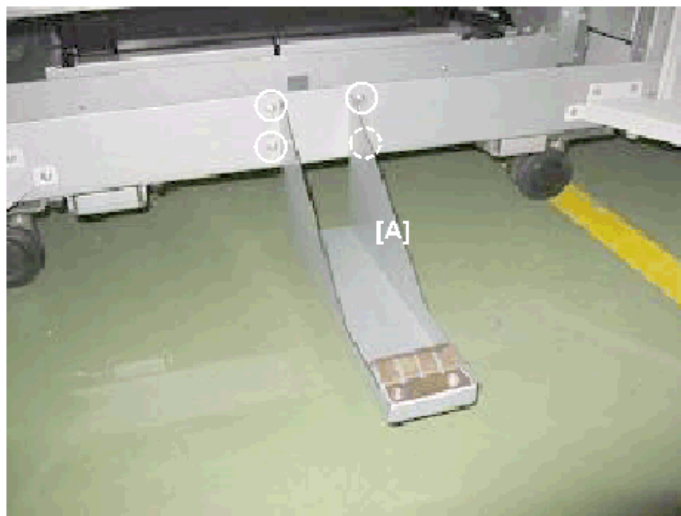
[A] x2

[B] x3



d391i507

8. Attach the ground plate [A] (x4).



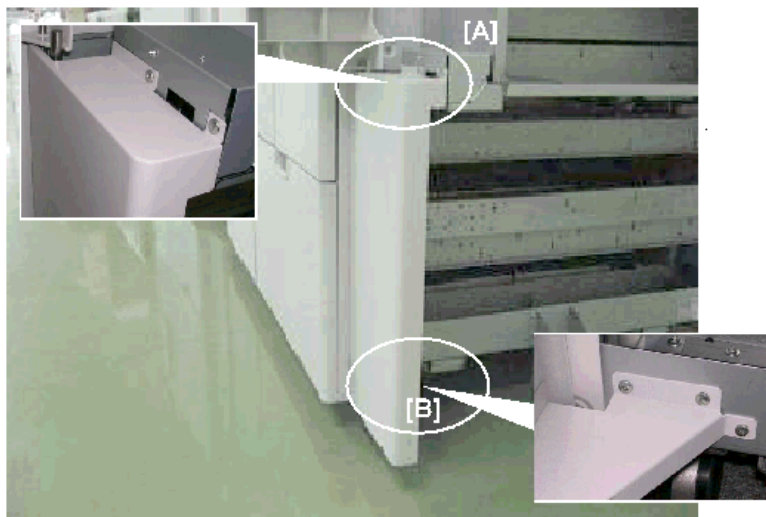
d391i509

9. Attach the front cover to the relay unit.

[A] x2

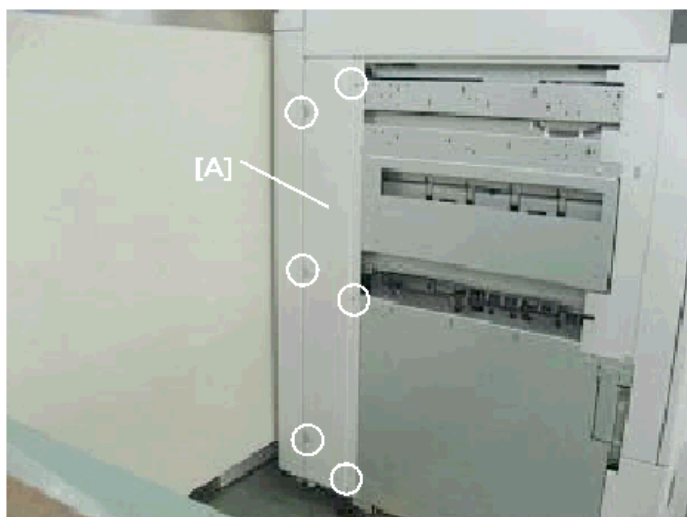
[B] x3

## 2. Installation



d391i508

10. At the left rear corner of the host machine, attach the cover [A] (⊙ x6).



d391i510

11. On the right side of the host machine, attach:

[A] Left joint bracket ("L") (⊙ x2)

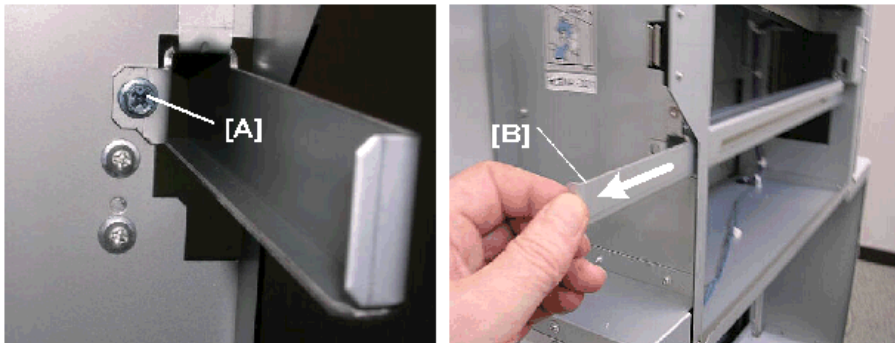
[B] Right joint bracket ("R") (⊙ x2)



d391i513

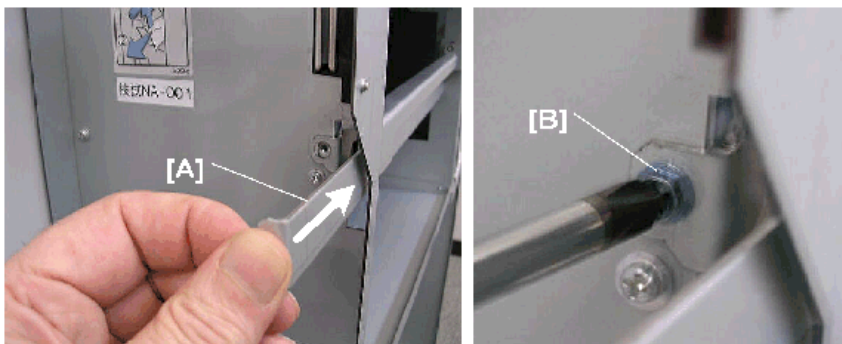
12. Open the front door of the relay unit.

13. Remove the screw [A].
14. Pull the lock bar [B] out to lower it.



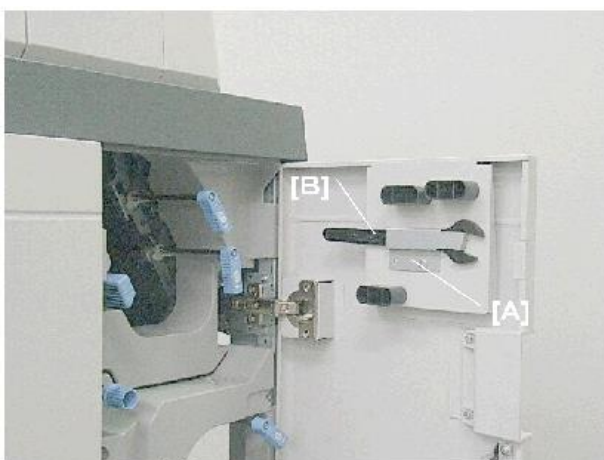
d391i518

15. Slowly push the bookbinder against the side of the host machine.
16. Push in the lock bar [A] to raise it and lock it in the cutouts of the joint brackets attached to the host machine.
17. Reattach the screw [B] to fasten the lock bar in the raised position.



d391i519

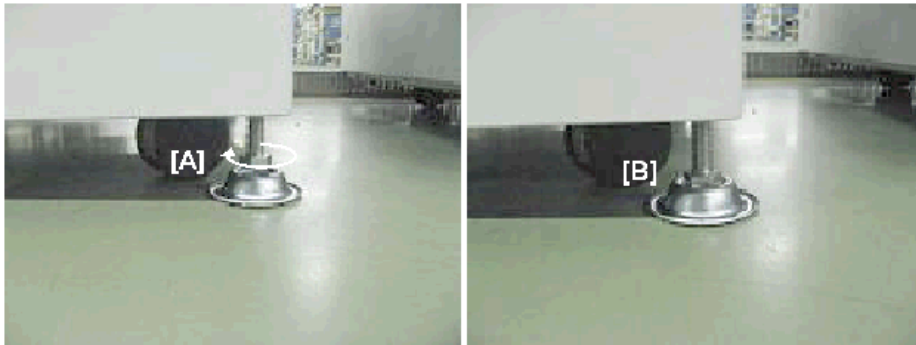
18. Remove the brace [A] from the right front door of the bookbinder. (🔑 x1)
19. Remove the wrench [B].



d391i361

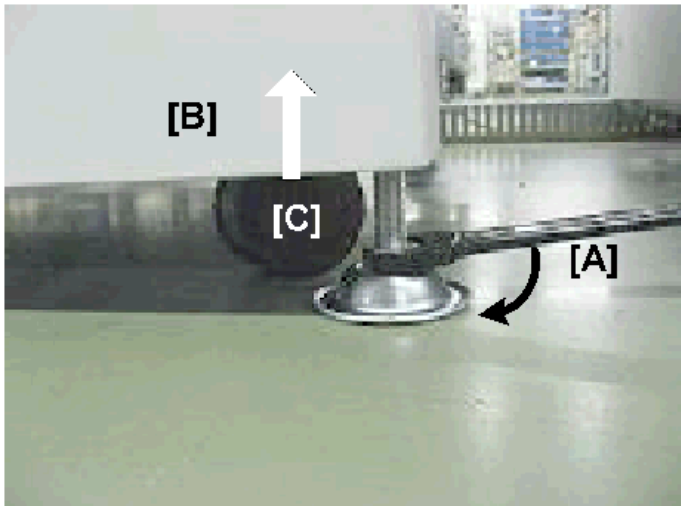
## 2. Installation

20. Place the shoes [A] and [B] under the stoppers at each corner of the bookbinder.



d391i511

21. Use your fingers (or the wrench) to turn the nut in the direction of the arrow until the nut stops on top of the shoe.
22. At each corner, use the wrench [A] to turn the nut in the direction of the arrow to raise the bookbinder [B] until the caster [C] raises off the floor.



d391i512

23. Place a level on the top at the front and right edges of the machine to confirm that the bookbinder is level.
24. Adjust the corner stoppers until the machine is level.
25. Connect the bookbinder interface cable to the host machine.

### Testing the Breaker Switch

---

1. Turn off the host machine.

#### ★ Important

- The power supply to the bookbinder must be off.
2. Plug the bookbinder power cord into its power source.
  3. Locate the breaker switch [A] at the right lower corner of the machine below the power cord.
  4. Raise the breaker switch [B] so that you can see the "I" under the switch. This is the ON position. (Ignore this step if the breaker switch is already at the "I" position.)

5. Use the tip of a small screwdriver to push the breaker test button [C].

The breaker switch should flip to the "O" (OFF) position. This indicates that the breaker switch is operating normally.

If the breaker switch does not flip to the "O" position, the switch must be replaced.

6. Reset the switch to the "I" (ON) position for normal operation.

**★ Important**

- The bookbinder will not turn on if the breaker switch is not reset to the "I" position.

## Ring Binder RB5030 (D3GH)

### Installation Procedure

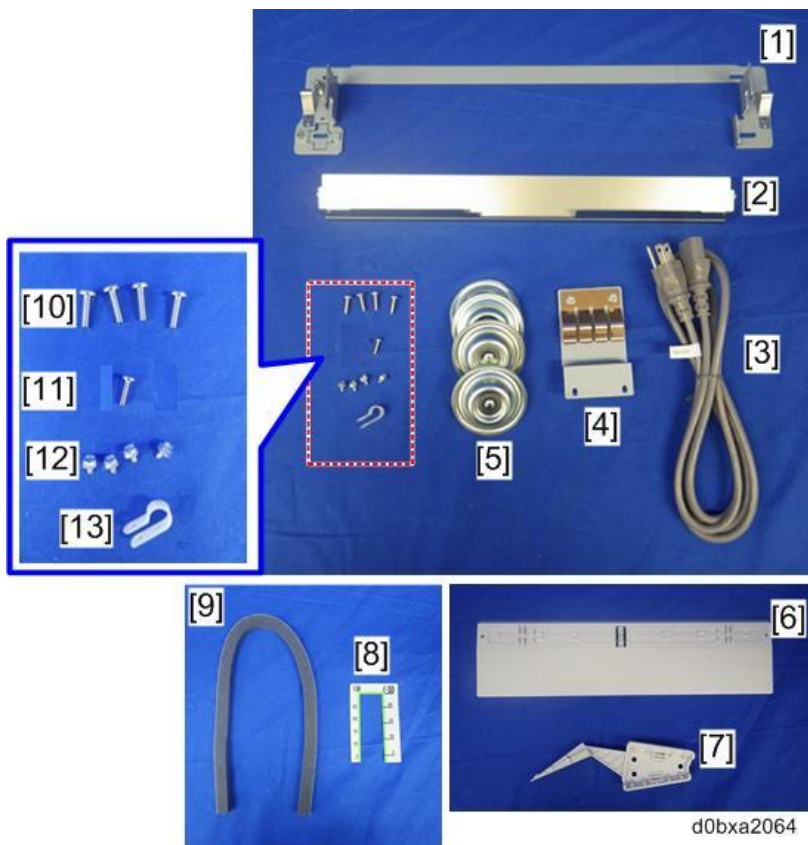
#### CAUTION

- The unit must be connected to a power source that is close to the unit and easily accessible.
- Connect the power cord provided to a power source that is properly grounded.
- Make sure that the main machine is switched off and that its power cord is disconnected before doing the following procedure.
- If this unit is to be installed to the left of the mainframe, the attachment procedure of additional sponge strip(s) is required. For details, refer to the Field Service Manual of the main machine.

#### Accessories

Check each accessory against the list below to make sure that you have everything.

No.	Item	Q'ty
1	Docking bracket	1
2	Entrance guide plate	1
3	Power cord	1
4	Ground (earth) plate	1
5	Leveling shoes	4
6	Ring stand (packed in the box)	1
7	Ring opener (packed in the box)	1
8	Ring supply level indicator	1
9	Sponge strip	1
10	Screws (M4 x 14)	4
11	Screws (M3 x 12)	1
12	Tapping screws (M3 x 6)	4
13	Nylon clip	1
-	CE Marking Traceability Information	1
-	Notes for Users	1
-	Installation Procedure (this manual)	1



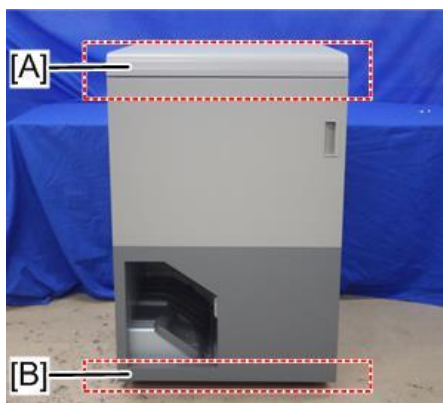
d0bxa2064

### Before You Begin

The ring binder weighs 120 kg (265 lb.).

#### ★ Important

- To prevent bending or breaking the top cover, never lift the unit by its top cover [A]. Always raise the unit from the base [B].



d0bxa2065

### Removing Shipping Materials

1. Remove all visible tapes, cushion, and wrapping material attached to the outside of the unit.

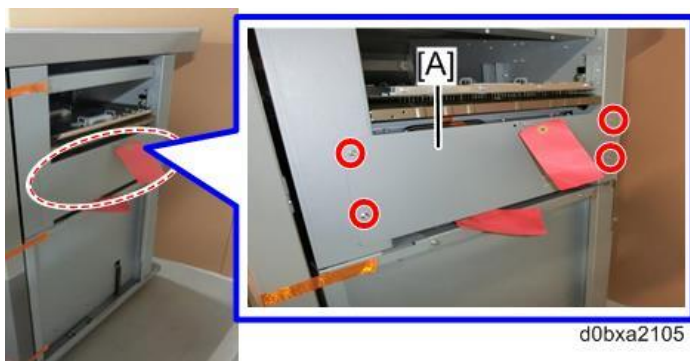
## 2. Installation

Remove the accessory box.



d0bxa2066

### 2. Remove the side cover [A].



d0bxa2105

 x4

#### Important

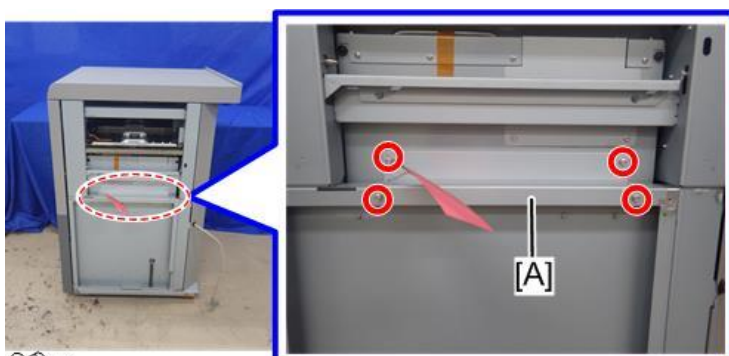
- After removing the side cover, attach the removed screws to their original positions on the machine.



 x4

d0bxa2152

### 3. Remove the brace [A].



 x4

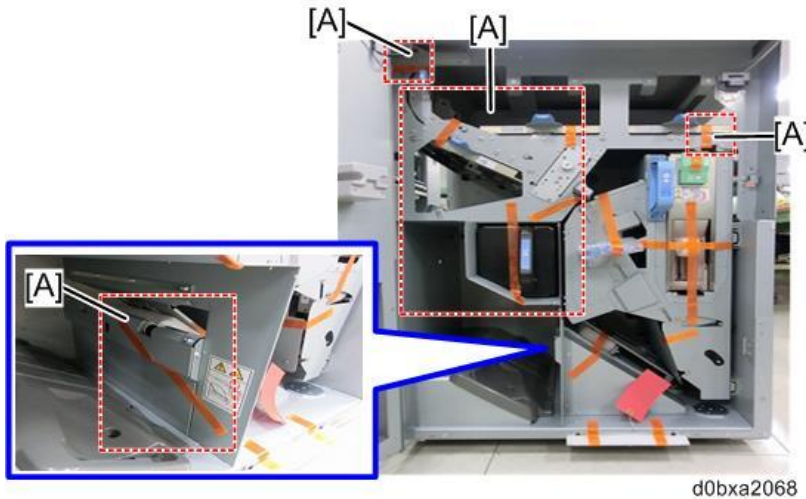
d0bxa2067



**★ Important**

- Do not discard the brace. It must be reattached to the unit before it is moved or shipped to another location.

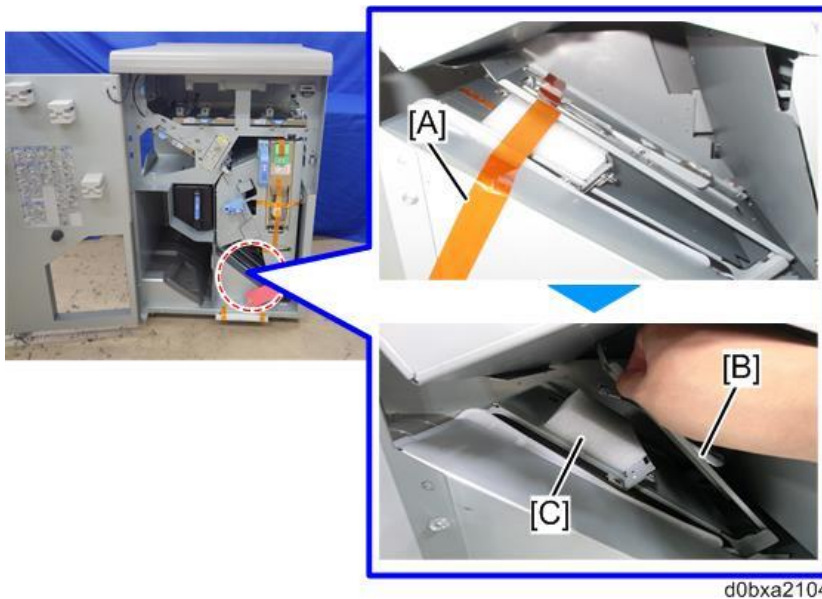
4. Open the door.
5. Remove all tapes and packing material [A].



6. Peel off the tape [A], raise the upper guide [B], and then remove the cushion [C].

**Note**

- The tape goes all the way to the inside of the unit. Make sure you remove all of it.



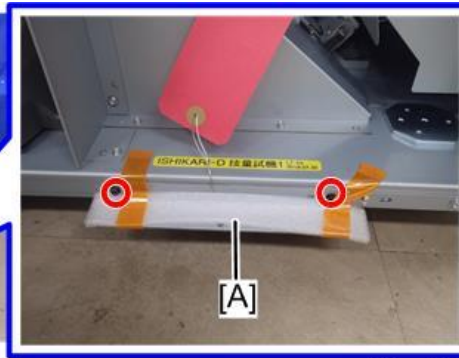
7. Peel off the tapes. Remove the brace with the red tag [A] near the bottom of the front side of the

## 2. Installation

machine.

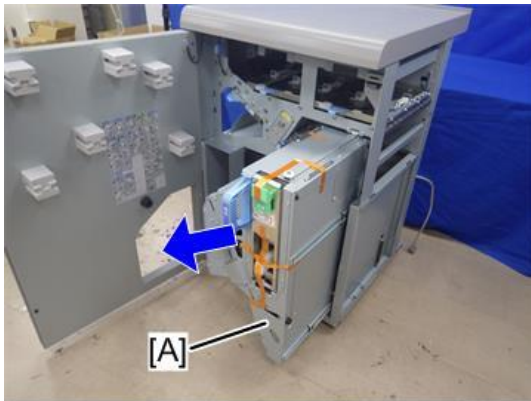


⚙️ ×2



d0bxa2069

- 8.** Pull the binder unit [A] out of the unit until it stops.



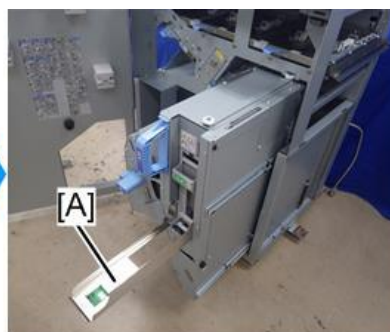
d0bxa2070

- 9.** Remove the tapes and the cushion.



d0bxa2071

- 10.** Lower the ring cartridge handle and cover [A].



d0bxa2072

**11.** Pull out the ring cartridge [A], and remove the cushion [B].



**12.** Push the ring cartridge in and close the cartridge cover.

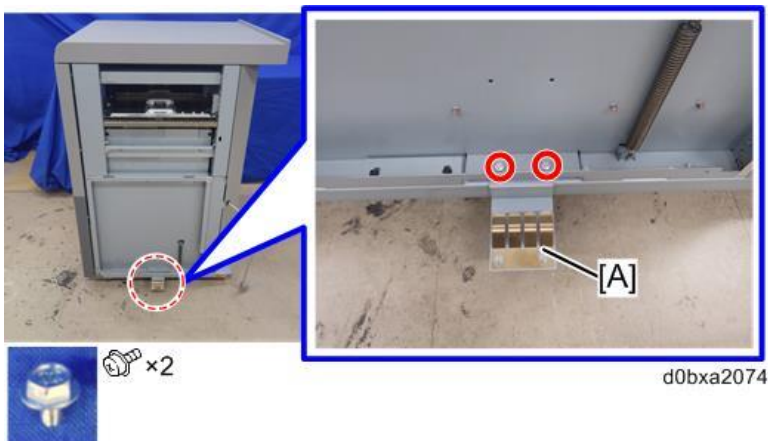
**13.** Push the binder unit into the unit.

**14.** Close the door.

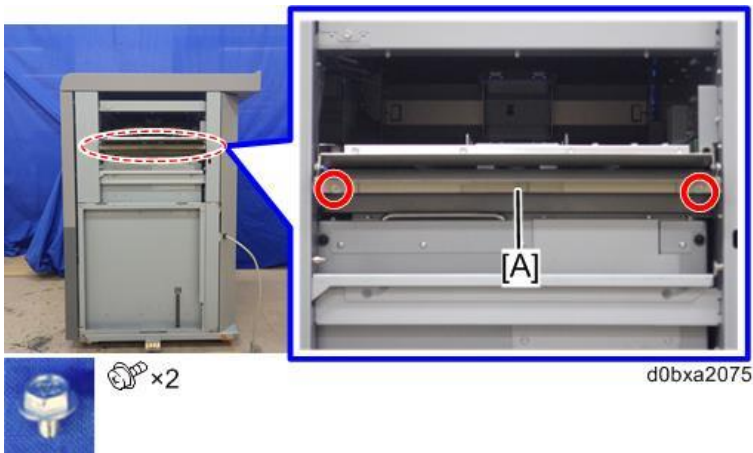
### Preparing the Unit for Docking

---

**1.** Attach the ground plate [A]. (M3x6).



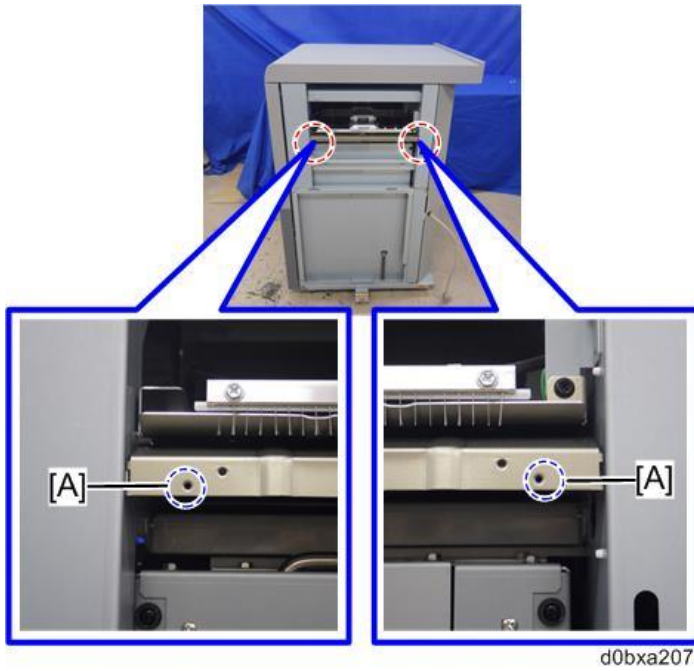
**2.** Attach the entrance guide plate [A]. (M3x6).



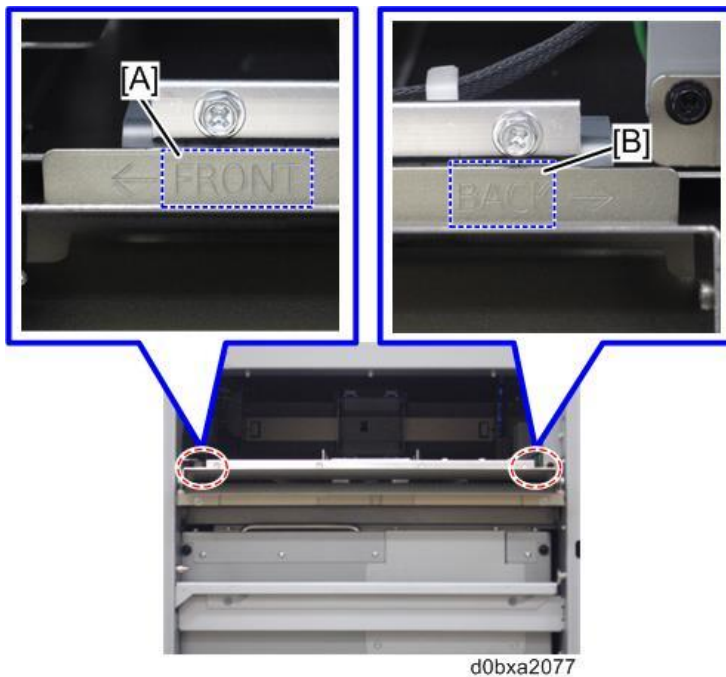
## 2. Installation

### Note

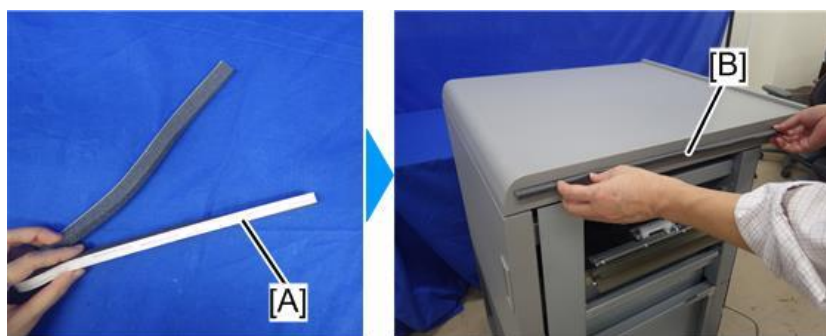
- Use the screw holes at the positions [A].



- When attaching the entrance guide plate, follow the [FRONT] [A] and [BACK] [B] markings on the plate.



3. Peel off the tape [A] from the sponge and then attach the sponge [B] to the machine.



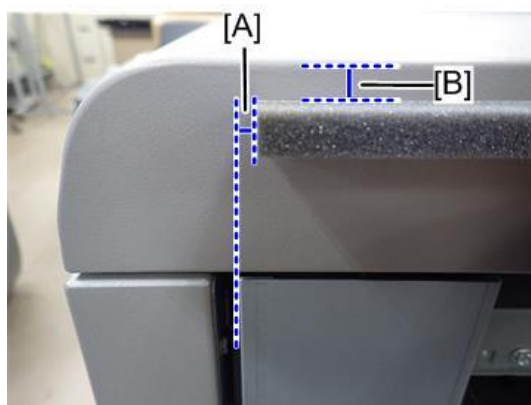
d0bxa2078

**Note**

- Attach the sponge to the following position.

[A]:0 to 5mm

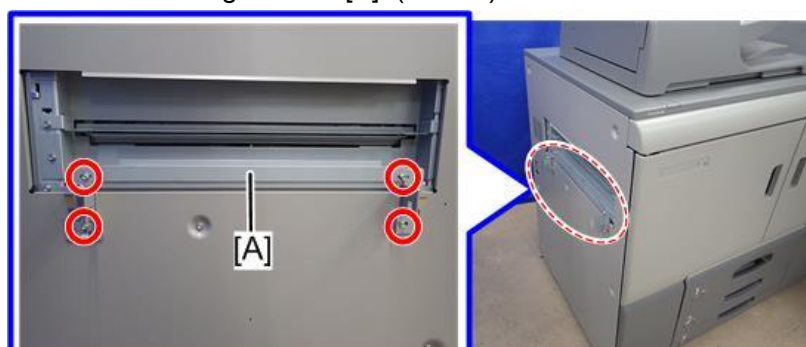
[B]:5 to 10mm



d0bxa2079

Preparing the Main Machine for Docking

1. Attach the docking bracket [A]. (M4x14)



d0bxa2111



Docking the Unit to the Main Machine

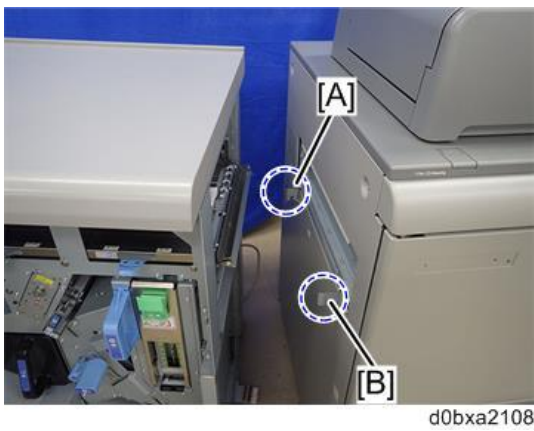
1. Open the door of the unit.

## 2. Installation

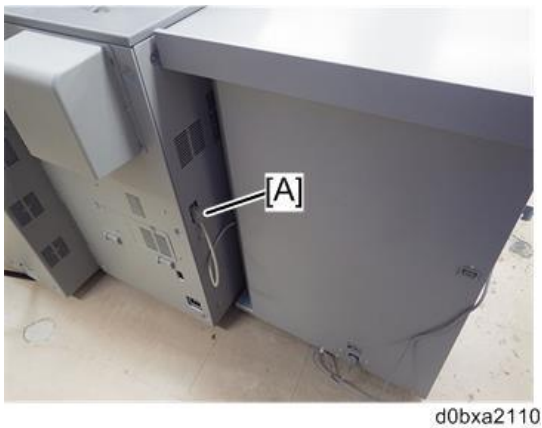
- 2.** Pull out the locking lever [A].



- 3.** Align the right side of the unit with the docking brackets [A] and [B] on the left side of the main machine, and then slowly push the unit towards the brackets.



- 4.** Connect the unit's I/F cable [A] to the main machine.



- 5.** Push in the locking lever [A]. Make sure that it slides into the slots on the docking brackets.



- 6.** Check that the top edge of the unit is parallel with the left edge of the main machine.
- 7.** Fix the locking lever [A] with the screw removed in Step 2.

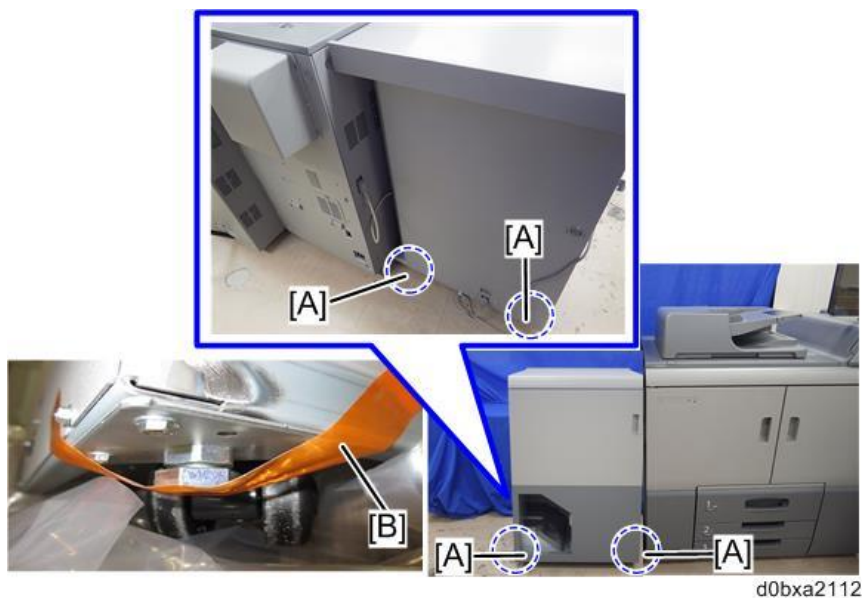


- 8.** Close the front door.

### Installing the Shoes and Leveling the Unit

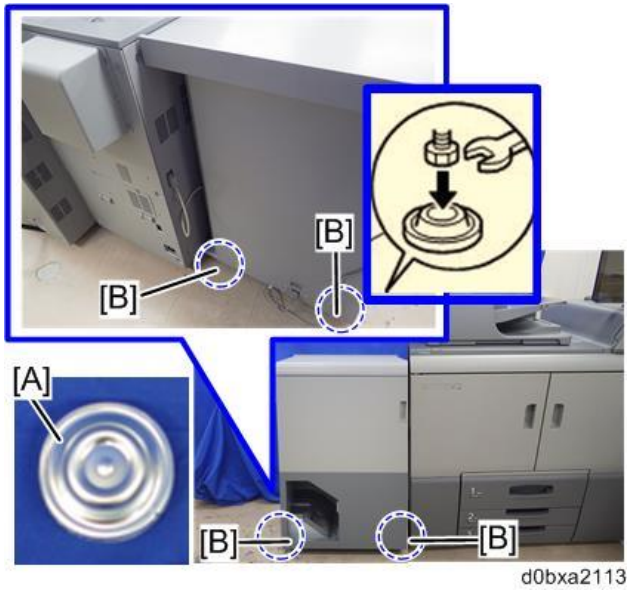
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- 1.** Peel off the tapes [B] from the leveling bolts [A] of the unit.



## 2. Installation

2. Set the four holders [A] under the leveling bolts [B] of the unit.

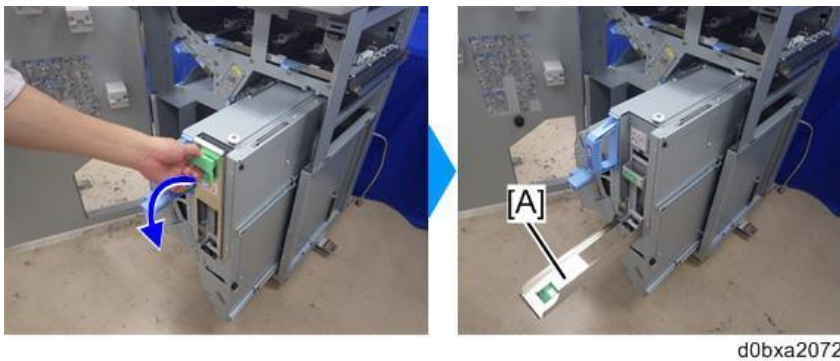


3. Open the door.
4. Place a level on the frame.
5. Use a wrench to turn the nut at each leveling bolt until the machine is level.

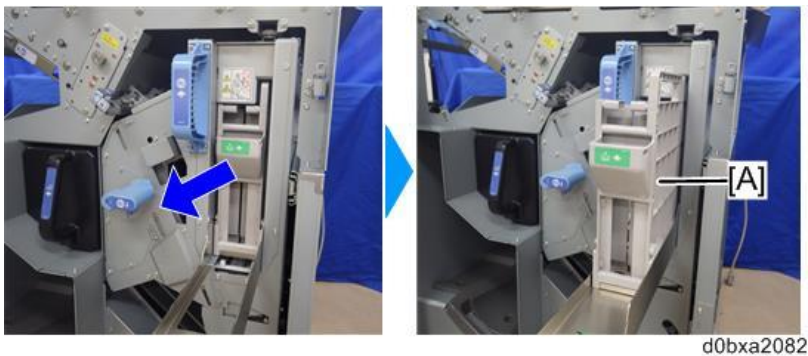
### Attaching the Ring Supply Level Indicator

---

1. Open the door.
2. Lower the ring cartridge handle to open the cover [A].

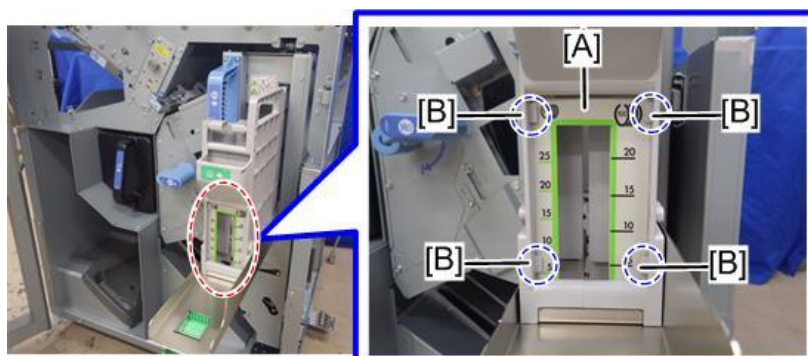


3. Pull out the ring cartridge [A].





- 4.** Set the ring supply level indicator [A] behind the tabs [B] on the side of the ring supply cartridge.



d0bxa2083

### Testing the Breaker Switch/Fixing the Power Cord

#### Testing the Breaker Switch

- 1.** Turn the main machine OFF.
- 2.** Confirm that the breaker switch [A] is set to the right.



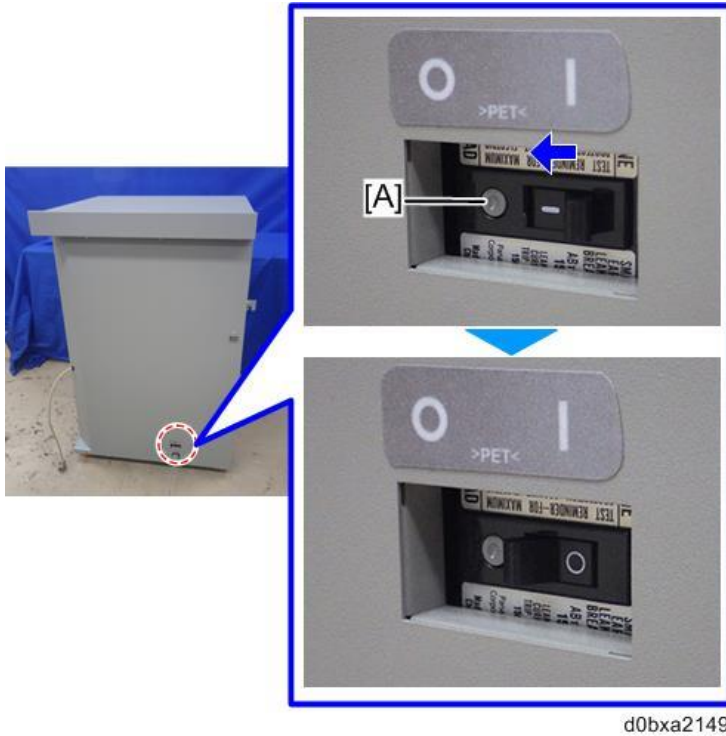
d0bxa2084

#### Note

- The breaker switch is at the bottom center of the rear side of the unit, just above the power plug. If it is set to the right, you will see a straight line (-) mark.

- 3.** Connect the power cord to the unit. Connect the other end to a power supply outlet.
- 4.** Use the sharp point of a pen or similar tool to push in the breaker switch [A] until it snaps to the OFF ("0") position.

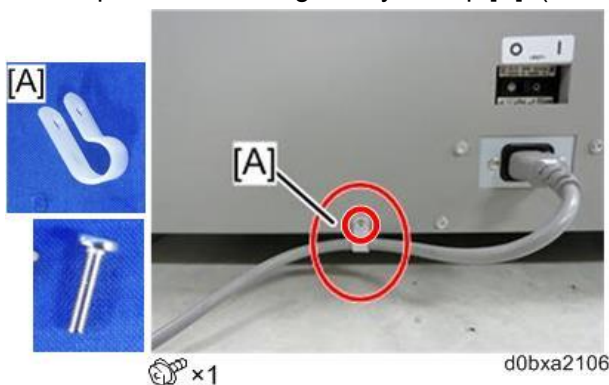
## 2. Installation



- 5.** If the breaker does not snap to the off position, do the following:
  - Check that the power cord is correctly connected to the unit and to the power supply.
  - Push the breaker switch again to see if it snaps to the OFF position.
  - If the breaker switch does not snap to the OFF position, it must be replaced.
- 6.** Be sure to reset the breaker switch to the ON (-) position.

### Fixing the Power Cord

- 1.** Fix the power cord using the nylon clip [A]. (M3×12).



---

### Centering Paper in the Paper Path

---

At installation, confirm that the paper is exiting the ring binder correctly. Perform the necessary correction if required. There are two checks:

- The paper should be centered in the paper path.
- The paper should feed straight out of the ring binder.

## Checking and Correcting Side-to-Side Registration

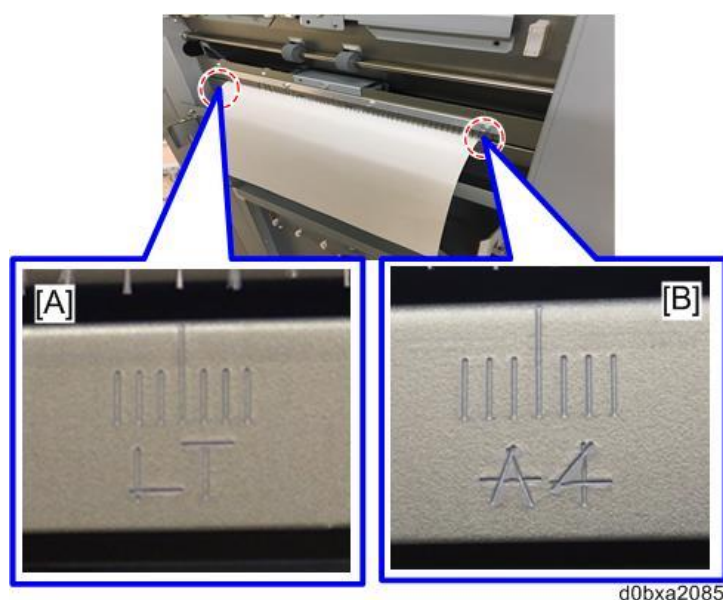
### Checking Side-to-Side Registration

Perform this check to confirm that the paper is centered in the paper path.

- 1.** Make sure the I/F cable of the ring binder unit is connected.
- 2.** If the finisher is connected to the left side of the ring binder, separate it and pull it away from the left side of the ring binder. **Do not disconnect the finisher.**
- 3.** Enter the SP mode and temporarily disable side-to-side registration control in the main machine (SP 1206-001).
- 4.** Execute a straight-through run (no ring binding, no punching) using one sheet of A3 or DLT size paper from Tray 2 of the main machine.

The sheet of paper comes out halfway from the ring binder exit, and stops when jam is detected.

- There are two scales on the left side of the ring binder below the paper exit.
- The rear scale marked "LT" [A] is for DLT-size paper and the front scale marked "A4" [B] is for A3-size paper. Be sure to read the correct scale for the paper size that you are using.



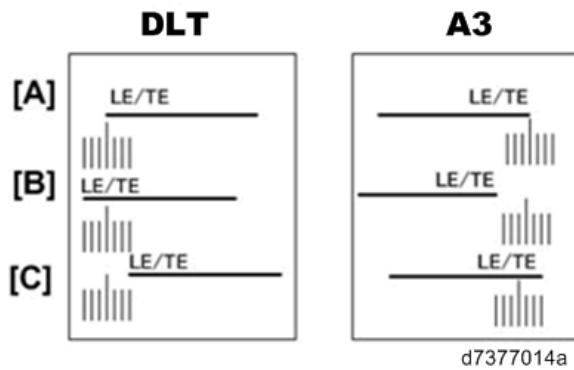
- 5.** Check the position of the paper using the scale to determine if the paper is centered.

#### ★ Important

- Read the rear scale for DLT-size paper and the front scale for A3-size paper.
- The scale lines are spaced 2 mm apart.
- The edges of the paper should be at the center line and not deviate more than  $\pm 2$  mm.

[A]	Leading/trailing edges centered. No adjustment necessary.
[B]	Leading/trailing edges offset to the rear more than 2 mm. Adjustment required.
[C]	Leading/trailing edges offset to the front more than 2 mm. Adjustment required.

## 2. Installation



If adjustment is not required, perform only Step 7 of "Correcting Side-to-Side Registration: Bracket Adjustment" below, and then proceed to [Checking and Correcting Skew](#).

If adjustment is required (if the edge of the paper is  $\pm 2$  mm off the center line on the scale), perform "Correcting Side-to-Side Registration: Bracket Adjustment" below, and then proceed to [Checking and Correcting Skew](#).

### Correcting Side-to-Side Registration: Bracket Adjustment

#### ★ Important

- Disconnect the ring binder from the upstream unit.

- 1.** On the docking bracket attached to the upstream unit, loosen screws ①, ②, ③, and ④.
- 2.** Remove the bracket [A] (⊗ x1), rotate it 90 degrees, and re-fasten the screw.

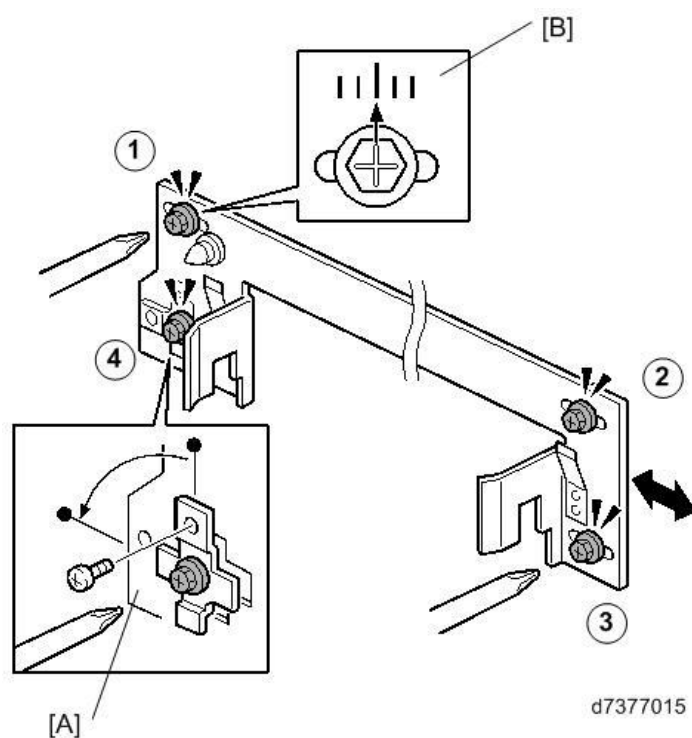
Changing the position of this bracket aligns the oval cut-out horizontally and frees the joint bracket so it can slide side-to-side.

- 3.** Look at the scale [B].
- 4.** Slide the bracket to the left or right and tighten the screw.

If the deviation from center was toward the front, slide the bracket to the rear and tighten screw ①.

If the deviation from center was toward the rear, slide the bracket to the front and tighten screw ①.

- 5.** Tighten screws ②, ③, and ④.



- 6.** Perform another test run to check the results of the adjustment.
- 7.** When you have finished checking and correcting side-to-side registration, restore SP1206-001 to its original setting.

### Checking and Correcting Skew

#### Checking for Paper Skew

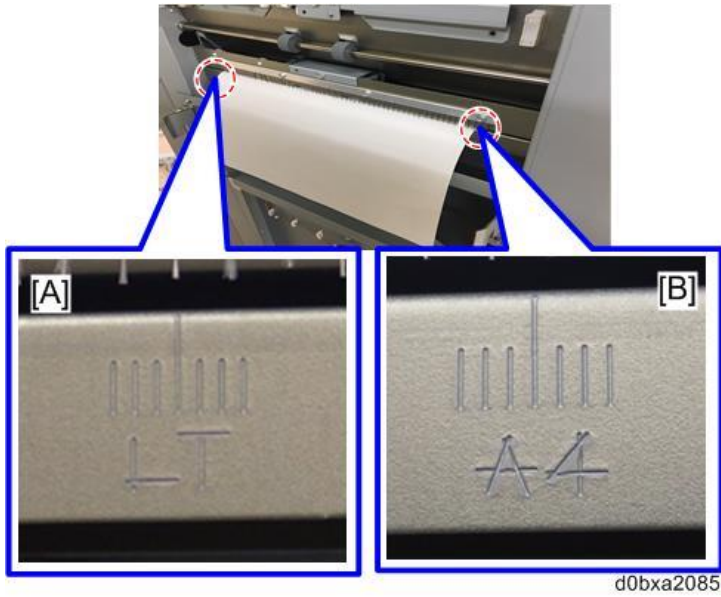
Perform this check to confirm that the paper is not skewed in the paper path.

- 1.** Make sure that the I/F cable of the ring binder unit is connected.
- 2.** If the finisher is connected to the left side of the ring binder, separate it and pull it away from the left side of the ring binder. **Do not disconnect the finisher.**
- 3.** Execute a straight-through run (no ring binding, no punching) using one sheet of A3 or DLT size paper from Tray 2 of the main machine.

The sheet of paper comes out halfway from the ring binder exit, and stops when jam is detected.

- There are two scales on the left side of the ring binder below the paper exit.
- The rear scale marked "LT" [A] is for DLT-size paper and the front scale marked "A4" [B] is for A3-size paper. Be sure to read the correct scale for the paper size that you are using.

2. Installation

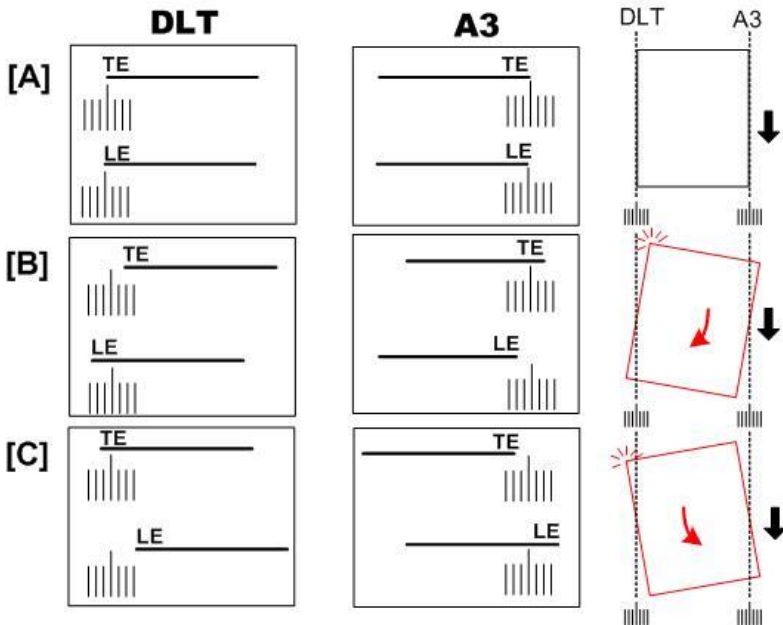


4. Check the position of the paper on the scale to determine if the paper skews as it exits.

★ Important

- Read the rear scale for DLT-size paper and the front scale for A3-size paper.
- The scale lines are spaced 2 mm apart.
- The paper must not deviate more than  $\pm 2$  mm on the scale.

[A]	Centered. No adjustment necessary.
[B]	Trailing edge skew to the front. Total skew more than $\pm 2$ mm. Adjustment required.
[C]	Trailing edge skew to the rear. Total skew more than $\pm 2$ mm. Adjustment required.

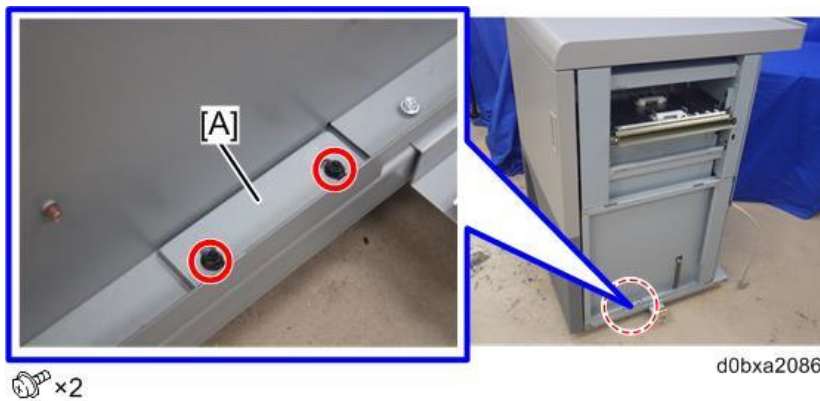


d7377017

Correcting Skew

1. Disconnect the ring binder from the upstream unit.

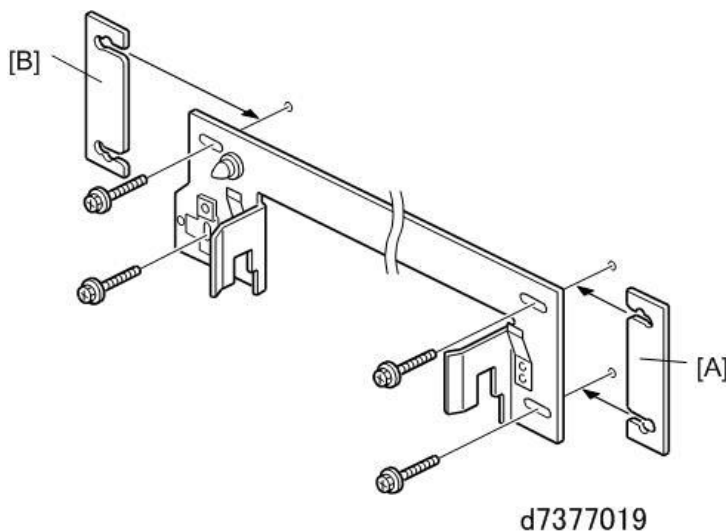
- 2.** Remove the spacers [A] from the right side of the ring binder at the base.



- 3.** On the docking bracket attached to the upstream unit, loosen the screws.  
**4.** Insert a spacer and tighten the screws.

If the trailing edge is skewing toward the **front** of the machine, insert a spacer [B] under the **rear** end of the bracket and tighten the screws.

If the trailing edge is skewing toward the **rear** of the machine, insert a spacer [A] under the **front** end of the bracket and tighten the screws.



- 5.** Perform another test run to check the adjustment. If skew persists, insert another spacer.

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## After Installation

---

### ★ Important

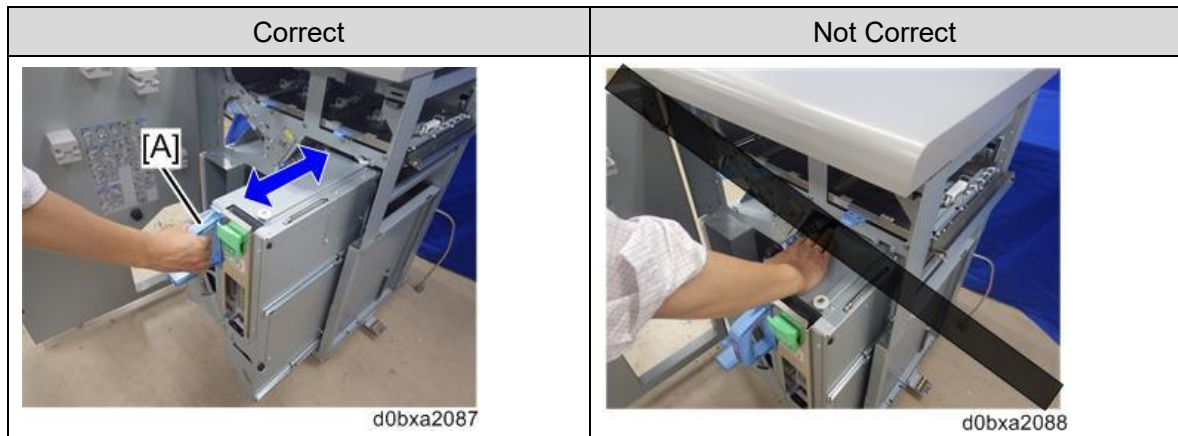
- Check with your supervisor to determine if the most recent firmware needs to be installed. Make sure that operators understand the following important points:
- Decals attached to the machine provide guidance for removing paper jams. Point out the decal locations.
- Detailed instructions on removing ring jams are provided in the operating instructions under "Removing Jammed Ring Combs".
- When pulling out and pushing in the binder unit on its rails, always grip the binder unit by its handle

## 2. Installation

(Mc8).

### CAUTION

- Always grip handle **Mc8** [A] when pulling out or pushing in the binder unit.
- Never touch any other surfaces on the binder unit when it is moving on its rails.
- To avoid injury to the fingers, never push on the top of the binder unit to slide it back into the machine as shown below.

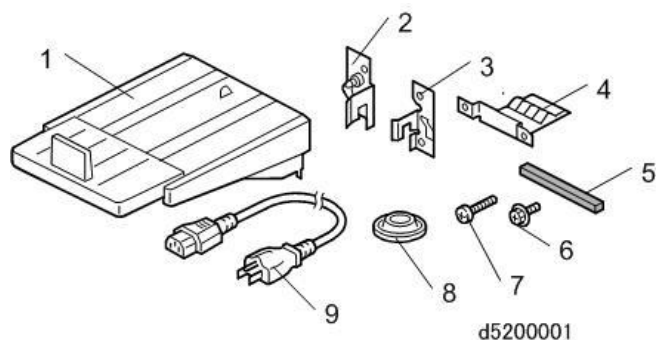




## Trimmer Unit TR5050 (D3GG)

### Accessories

Check the quantity and condition of the accessories in the box against the following illustration and list.



No.	Description	Q'ty
1.	Output Tray*1	1
2.	Joint Bracket – Left (Marked "L")	1
3.	Joint Bracket – Right (Marked "R")	1
4.	Ground Plate	1
5.	Sponges	2
6.	Screws (M3x6 for Ground Plate)	2
7.	Screws (M4x10 for Joint Bracket)	4
8.	Leveling Shoes	4
9.	Power Cord	1

\*1: Screws (x2) for the output tray are attached to the left side of the unit.

### Installation

#### **⚠ CAUTION**

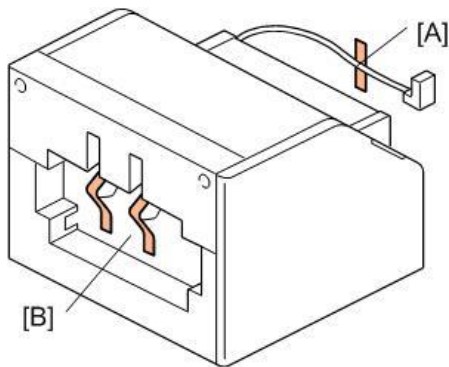
- Make sure that the main machine is switched off and that its power cord is disconnected before doing the following procedure.
- Connect the power cord provided to a power source that is properly grounded.

#### Tapes, Stopper Plate

1. Remove the tape on the right side to free the I/F cable [A].

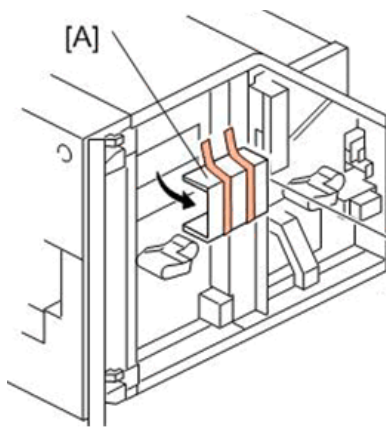
## 2. Installation

2. Remove the tape from the left side [B].



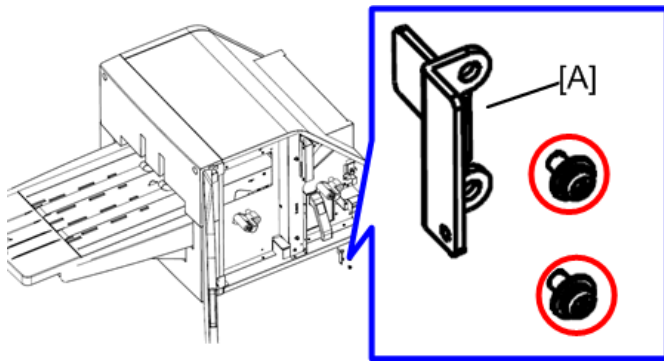
d5200002

3. Open the front door and remove the retainer [A].



d5200003a

4. Remove the stopper plate [A] (⌀x2).



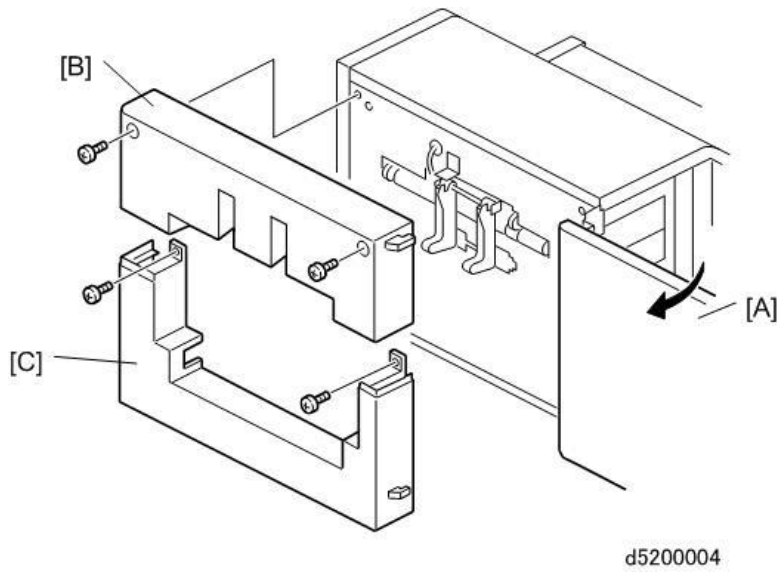
d0bxa2284

### Note

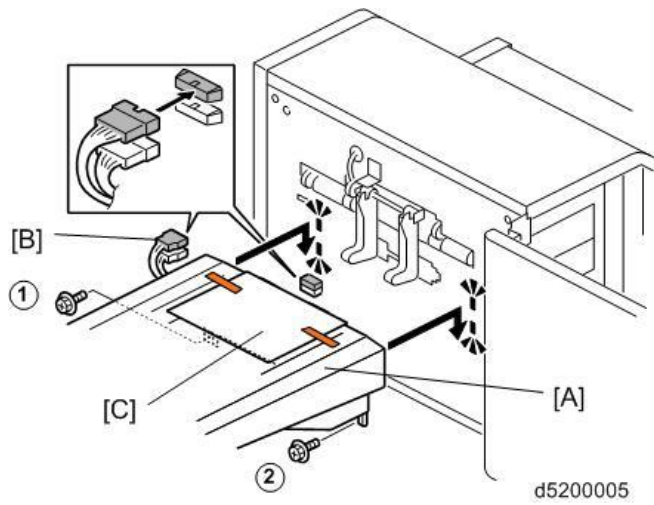
- Keep the stopper plate. It should be re-installed before transporting the unit to a new location.

## Output Tray

1. Make sure that the front door [A] is open.
2. Remove:
  - [B] Left upper cover (⌀x2)
  - [C] Left lower cover (⌀x2)



3. Remove the screws ① and ② from the left side.
4. Use the removed screws to attach the output tray [A].
5. Connect the output tray at [B].
6. Remove the sheet [C] of paper. **Do not remove this sheet [C] of paper before connecting the output tray to the trimmer unit.**



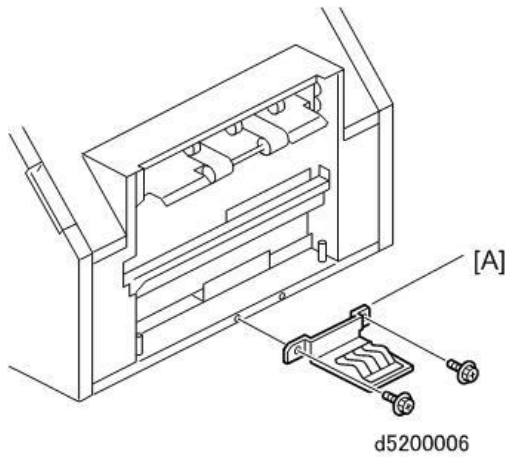
7. Reattach the left lower cover and left upper cover.

## 2. Installation

### Ground Plate

---

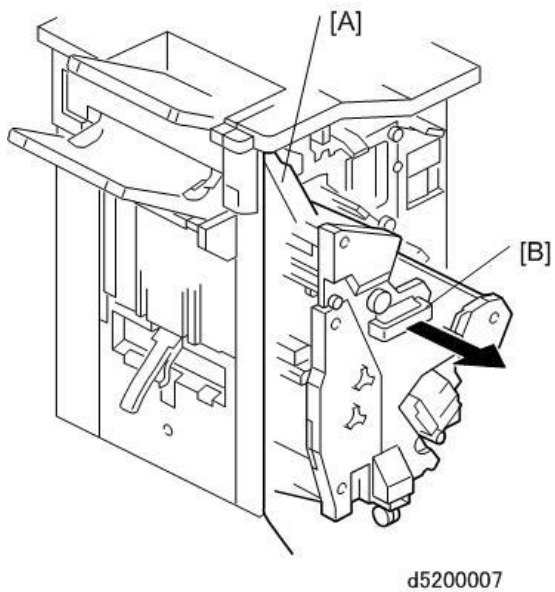
1. Attach the ground plate [A] to the right bottom edge (⊕ x2 M3x6).



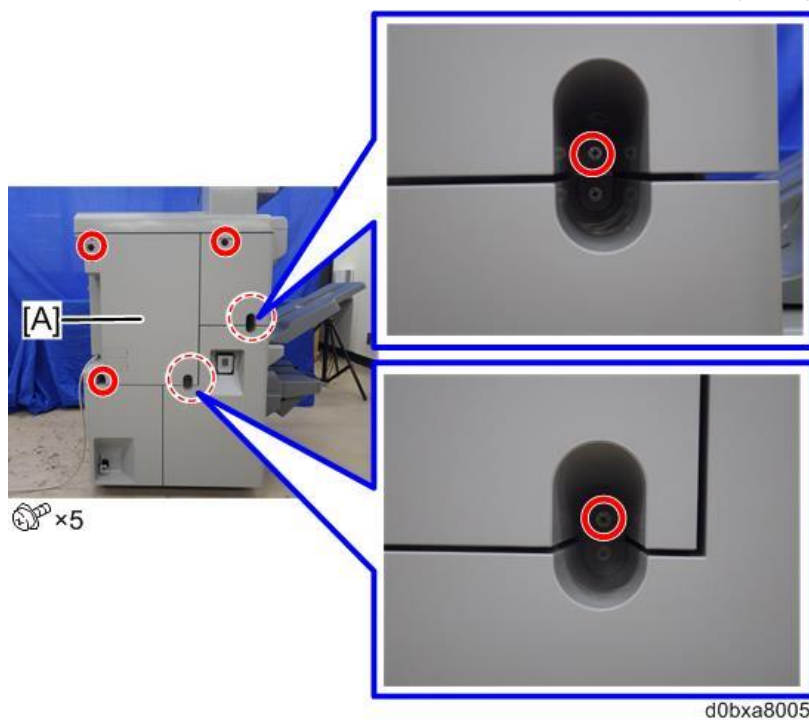
### Connecting to the Finisher

---

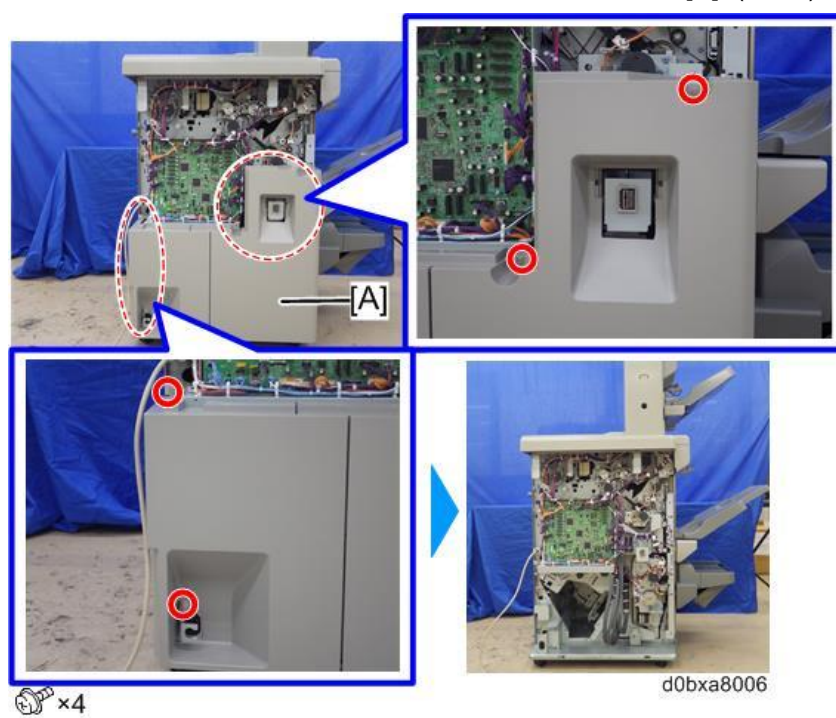
1. Open the front door [A] of the finisher.
2. Pull out the staple unit [B].



3. At the rear of the finisher, remove the rear upper cover [A] (⚙️ x5)

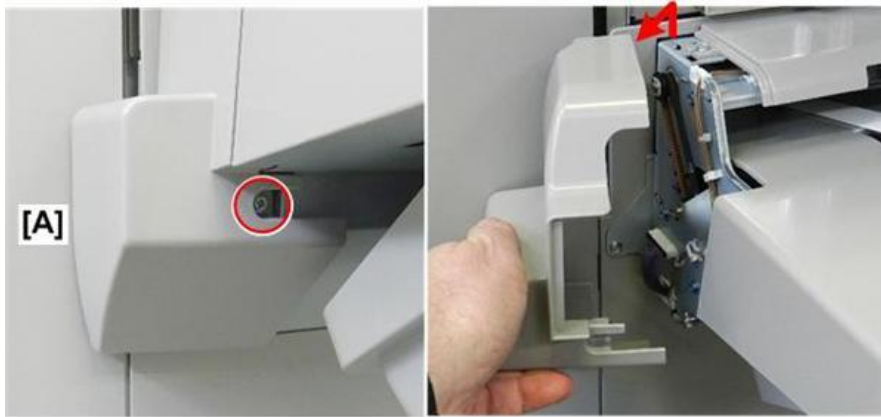


4. At the rear of the finisher, remove the rear lower cover [A]. (⚙️ x4)



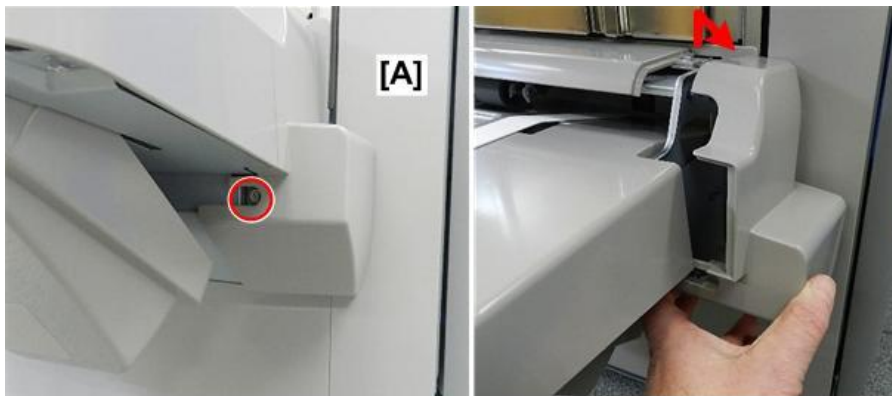
## 2. Installation

5. At the rear [A], remove the book tray rear cover. (⊖ x1)



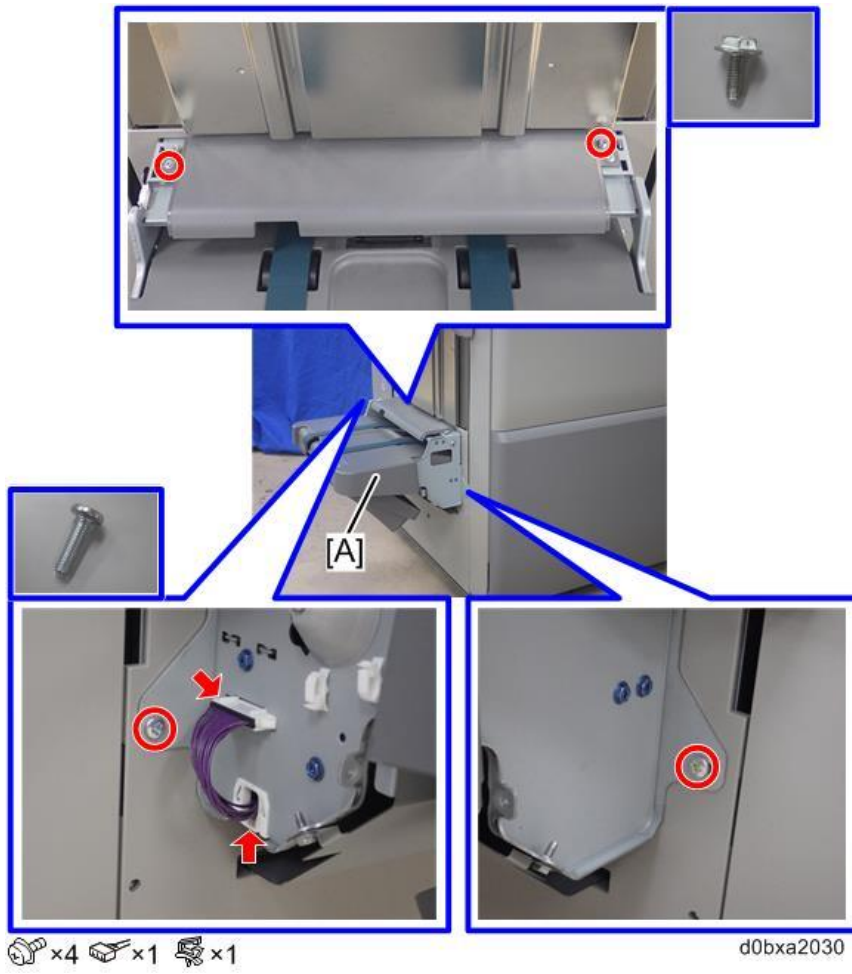
d7340052

6. At the front [A], remove the book tray front cover. (⊖ x1)



d7340054

7. Remove the retainers from the booklet tray [A].

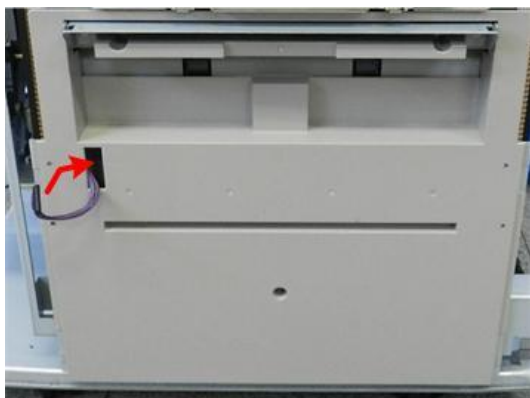


8. Raise the booklet tray, and then remove it.



## 2. Installation

9. Insert the tray harness into the finisher.

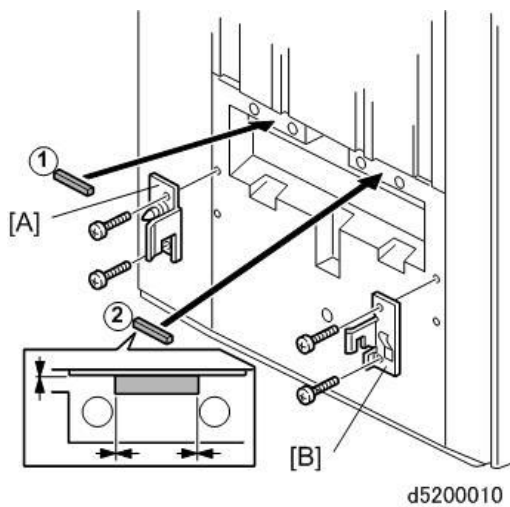


d5200013

## Docking

---

1. Attach:
  - [A] Left joint bracket, marked "L" (Ⓜ x2, M4x10)
  - [B] Right joint bracket, marked "R" (Ⓜ x2, M4x10)
2. Peel the tape from the back of the sponges and attach sponges ① and ②.

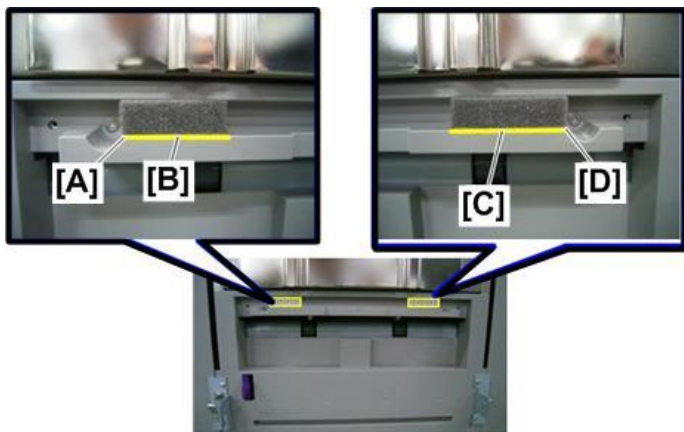


d5200010

3. Attach the sponge at the rear so that it is aligned at [A] and [B].

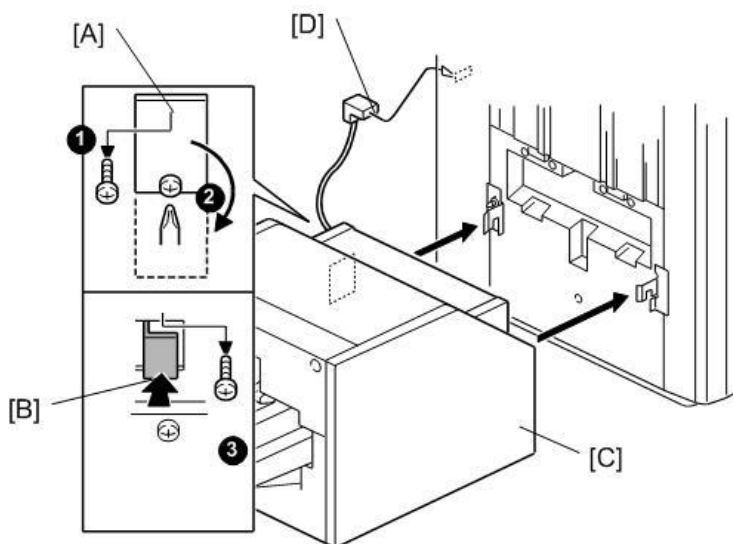


- Attach the sponge at the front so that it is aligned at [C] and [D].



d520b0001

- At the rear, remove screw ① from plate [A].
- Loosen screw ② and lower the plate so that you can see the lock bar [B].
- Remove the lock bar screw ③ (Ⓜx1 M3x6). **Keep this screw.**
- Push the lock bar [B] until it is unlocked.
- Slowly push the unit [C] against the left side of the finisher so that the lock bar is directly and squarely under the arms of the joint brackets.
- At the rear, pull the lock bar [B] toward you so that it slides up into the notches in the arms of the joint brackets.
- Fasten the lock bar by re-attaching the screw removed in Step 7. (Ⓜx1).
- Connect the unit I/F cable [D] to the finisher.

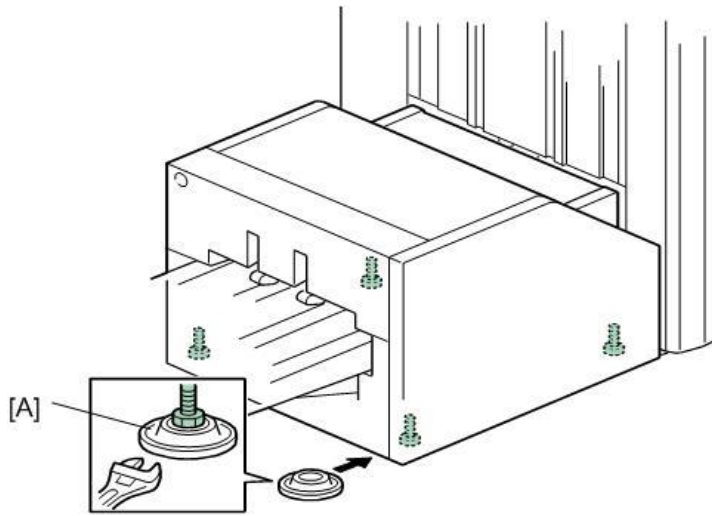


d5200011

- Connect the plug of the power cord to the power source.

## 2. Installation

1. Set a holder [A] under each corner of the unit.

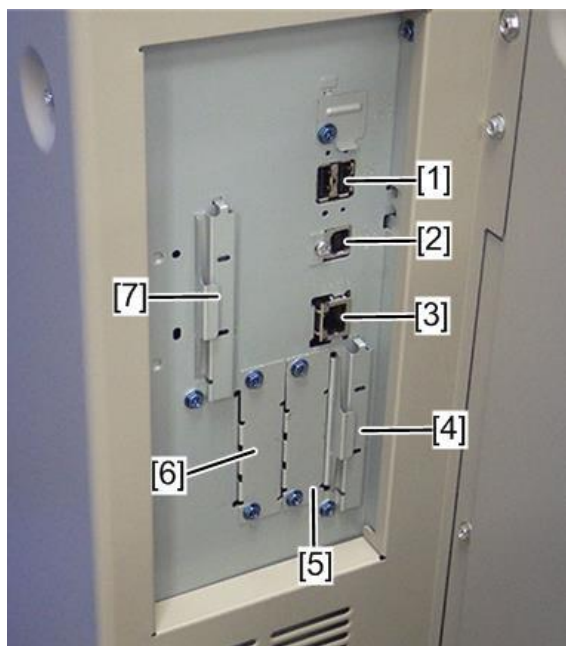


d5200012

2. At each corner, turn the leveling bolt to lower the bolt onto each holder.
3. Use a level to check each side of the unit.
4. Turn each leveling bolt to adjust the height of each corner until each side is level.

## Controller Options

### Overview



d0bxa2156

Slot		Description
1	USB A	Standard
2	USB B	-
3	Ethernet	Standard
4	SD Card Slot	IPDS Unit Type S11
		OCR Unit Type M13 (Pro 8320S/8310S/8300S only)
		PostScript3 Unit Type S11/S12
		Unicode Font Package for SAP(R) 1 License/10 License/100 License
		XPS Direct Print Option Type S11
		VM Card Type P18
5	I/F Slot B	IEEE 802.11a/g/n Interface Unit Type M19
6	I/F Slot A	File Format Converter Type M19 (Pro 8320S/8310S/8300S only)
7	SDCU slot	SDCU
-	IPU	

#### ★ Important

- The IEEE802.11 (Wireless LAN) and File Format Converter (5 in the table) are exclusive. Only one can be installed.

#### ⚠ WARNING

- **Always turn the machine off and unplug the main machine power cord before you do any procedure in this section.**

## 2. Installation

---

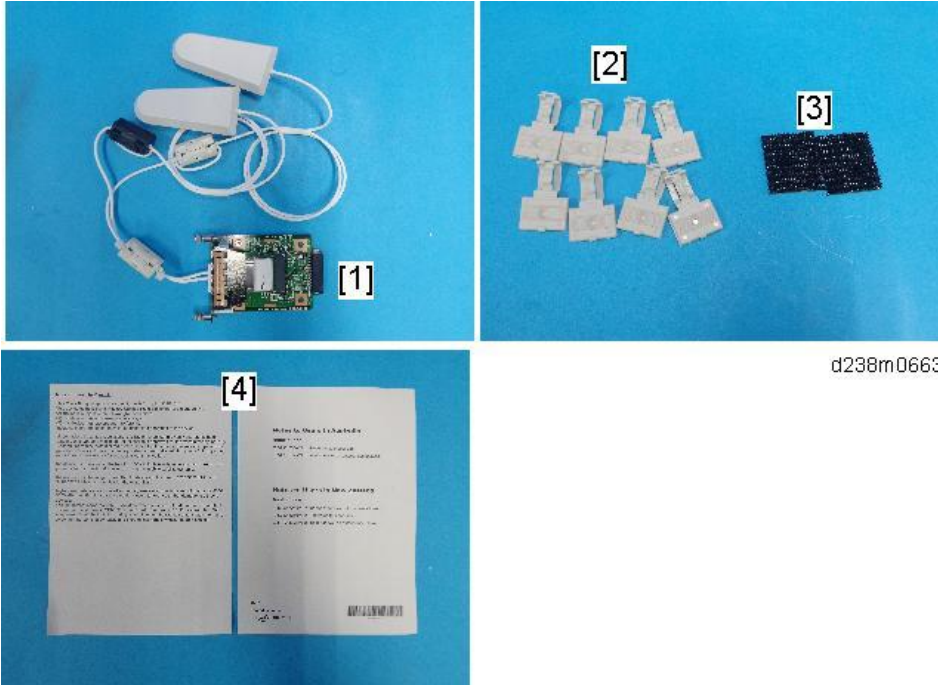
### IEEE 802.11a/g/n Interface Unit Type M19 (D3BR)

---

#### Accessories

---

Check the quantity and condition of the accessories in the box against the following list.



d238m0663

No	Description	Q'ty
1	IEEE802.11a/g/n Unit	1
2	Clamps	8
3	Velcro Fasteners	2
4	Notes for Users	2

#### ★ Important

- Since disassembly/alteration of a wireless LAN board is illegal, during service replacements, replace the whole PCB assembly.
- Be sure to give the provided leaflet to the customer.

#### Before You Begin

---

Observe the following points when installing and using this unit:

- Never attempt to disassemble the IEEE802.11a/g/n Unit.
- If you need to replace the unit, replace the entire unit.
- Give the Cautions chart to the customer.
- It is illegal to disassemble or modify this product. If illegal modifications are done to this product, we shall not assume any responsibility.
- Depending where you use this product, or the access point you select, restrictions may be imposed on the use of some usable channels. If wireless LAN communications are not possible, check the

environment or access point.

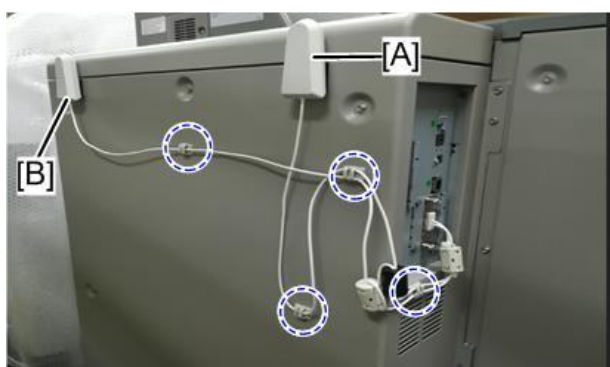
**★ Important**

- You cannot use this option if you use Ethernet.

Check the markings on the antenna brackets and the ferrite cores of the antenna cables.

- **ANT1.** Antenna 1 transmits and receives. It must be installed on the rear middle side of the main machine. The ferrite core on the Antenna 1 cable is **black**.
- **ANT2.** Antenna 2 only receives. It is installed on the rear right corner of the machine. The ferrite core on the Antenna 2 cable is **white**.

The illustration shows both antennas installed on the back of the machine with Antenna 1 (black ferrite core) on the rear cover and Antenna 2 (white ferrite core) on the controller box cover.



d0bxa2218

- The PCB is installed in the controller box.
- Both antennas [A] [B] are held in place by easily installed and removed Velcro fasteners. (The antennas and cables will need to be removed before the covers can be removed to service the machine.)
- The clamps are fastened by two-sided tapes. The clamps can be easily opened to free the cables and then closed to once again clamp the cables.

## Installation

---

### **⚠ WARNING**

- Unplug the main machine power cord before you do the following procedure.

### **⚠ CAUTION**

- To prevent damage to the controller box, always work carefully.
- Never put your hand or a tool into the box when you remove the controller box or install an option.
- To prevent damage to the circuits on the boards, always touch a metal surface to discharge static charge from your hands before you handle a board.
- The usable frequency range of this product may be used by products (industrial, scientific, or medical devices) of other companies.
- Outdoor use of wireless devices may be restricted. Pay attention to where you use this product.

## 2. Installation

1. Find the best location of the machine.
  - Make sure that the machine is not located near an appliance or any type of equipment that generates strong magnetic fields.
  - Put the machine as close as possible to the access point.
2. Make sure there is no board in Slot A.

**★ Important**

- This option cannot be installed if there is a board in Slot A.

3. Remove the slot cover [A] from the board Slot B. (🔧 x 2)



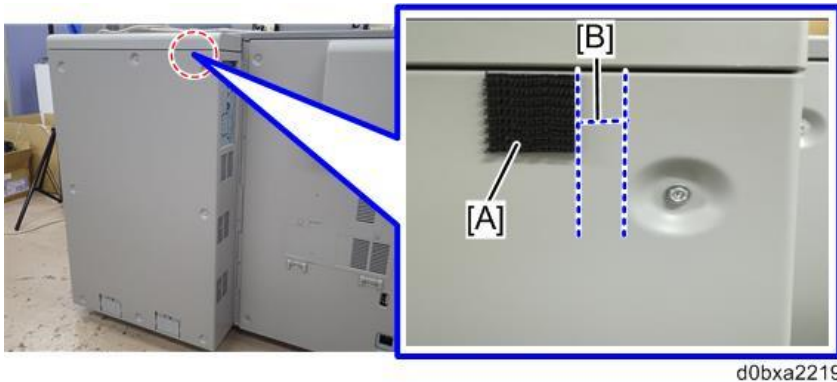
4. Insert the wireless LAN board into the slot and fasten it with the screws. (🔧 x 2).

**★ Important**

- Confirm that the interface board is firmly connected to the controller board.
- Never pull on either antenna where it is connected when you install the board.

5. Attach one Velcro fastener [A] to the position as shown below.

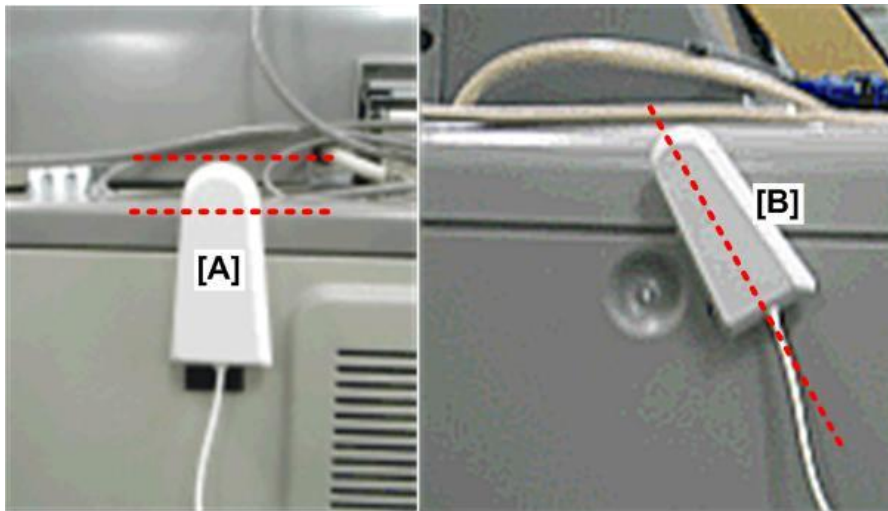
[B]: 10 mm



**★ Important**

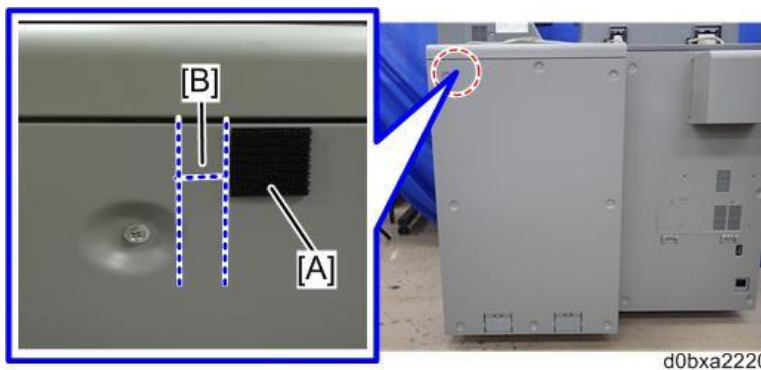
- Like the other antenna, the tip of this antenna [A] [B] should be perfectly vertical and not

above the rear edge of the cover.



d1680003

6. Peel the tape off the back of the antenna with the **black ferrite core**, and then attach it to the Velcro patch.
7. Attach one Velcro fastener [A] to the position as shown below.  
[B]:10 mm



d0bxa2220

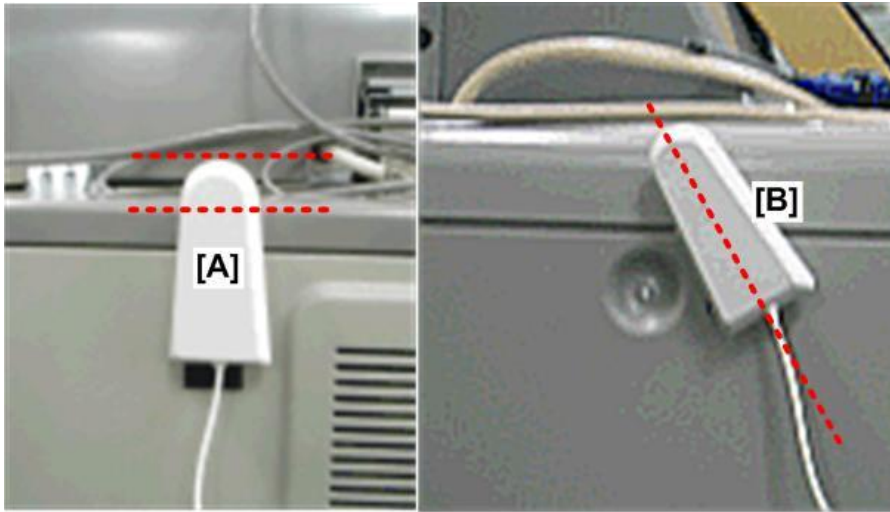
8. Peel the tape off the back of the antenna with the **white ferrite core**, and then attach it to the Velcro patch.

★ Important

- Like the other antenna, the tip of this antenna should be perfectly vertical and not above

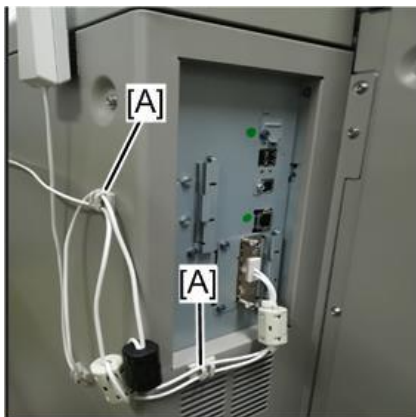
## 2. Installation

the rear edge of the cover.



d1680003

9. Fix the cable sticker [A] to the position as shown below, and then clamp the cables of both antennas. (🔧x2)

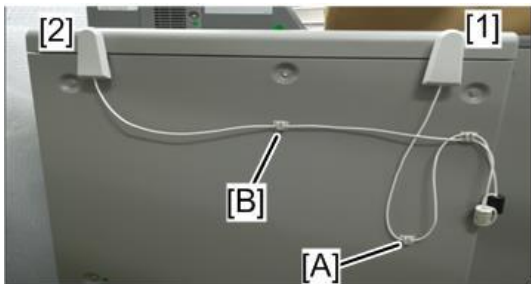


d0bxa2221

10. Fix the cable sticker [A] [B] to the position as shown below, and then clamp the cable of each antenna. (🔧x2).

[A]: Fixing the cable of the antenna 1.

[B]: Fixing the cable of the antenna 2.

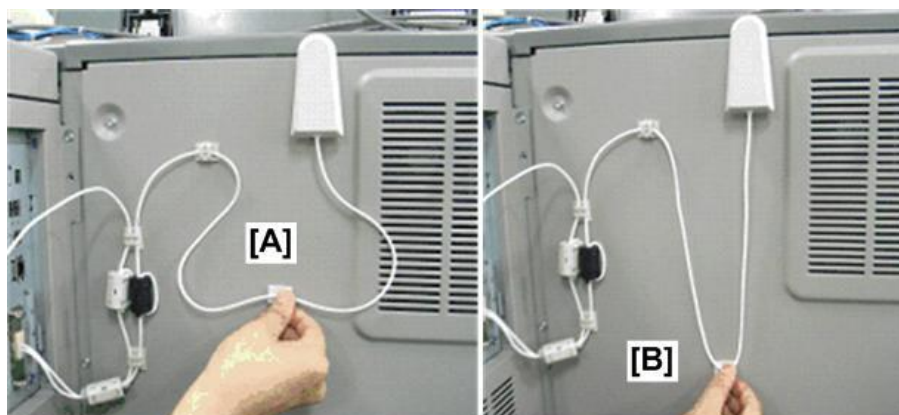


d0bxa2222

### ★ Important

- The harness should be neither too slack [A] nor too tight [B].





d1680010

11. Turn on the main machine.
12. Make sure that the machine can recognize the unit:  
User Tools > Printer Features > List/Test Print > Configuration Page
13. If reception is poor, you may need to move the machine.

### User Tool Settings

---

Press [User Tools] and then do the procedure below. These settings take effect every time the machine is turned on.

1. Press the [User Tools].
2. On the touch panel, touch "System Settings".
3. Select Interface Settings> Network > LAN Type.  
The "LAN Type" (default: Ethernet) must be set for "Wireless LAN".
4. Select Interface Settings> Wireless LAN.  
Only the wireless LAN options show.
5. Set the "Communication Mode".
  - Enter the "SSID setting". (The setting is case sensitive.)
6. Set the "Ad-hoc Channel".

You need this setting when Ad Hoc Mode is selected. The allowed range for the channel settings may vary for different countries.

- Region A (mainly Europe and Asia)  
2412 - 2462 MHz (1 - 11 channels)  
5180 - 5240 MHz (36, 40, 44 and 48 channels)  
(default: 11)

#### ↓ Note

- In some countries, the only channels available are: 2412 - 2462 MHz (1 - 11 channels)
- Region B (mainly North America)  
2412 - 2462 MHz (1 - 11 channels)  
5180 - 5240 MHz (36, 40, 44 and 48 channels)

## 2. Installation

(default: 11)

### 7. Set the "Security Method".

This specifies encryption for Wireless LAN.

- The "WEP" (Wired Equivalent Privacy) setting is designed to protect wireless data transmission.
- The same WEP key is required on the receiving side in order to unlock encoded data. There are 64 bit and 128 bit WEP keys.

#### **Range of Allowed Settings:**

64 bit: 10 characters

128 bit: 26 characters

- Specify "WPA2" when "Communication Mode" is set to "Infrastructure Mode". Set the "WPA2 Authent. Method".

- WPA2 Authent. Method:

Select either "WPA2-PSK" or "WPA2".

If you select "WPA2-PSK", enter the pre-shared key (PSK) of 8-63 characters in ASCII code.

When "WPA2" is selected, authentication settings and certificate installation settings are required.

### 8. Press "Wireless LAN Signal" to check the machine's radio wave status using the operation panel.

### 9. Press "Restore Factory Defaults" to initialize the wireless LAN settings.

## SP Mode, User Tool Settings

---

The following SP codes can be set for IEEE 802.11

SP	Name	Function
5840-006	Channel MAX	Sets the maximum range of the channel settings for the country.
5840-007	Channel MIN	Sets the minimum range of the channels settings allowed for your country.
5840-008	Transmission Speed	Sets the transmission speed. Auto, 54 Mbps, 48 Mbps, 36 Mbps, 24 Mbps, 18 Mbps, 12 Mbps, 9 Mbps, 6 Mbps, 11 Mbps, 5.5 Mbps, 2 Mbps, 1 Mbps (default: Auto).
5840-011	WEP Key Select	Used to select the WEP key (Default: 00).

The following settings can be done in User Tools

UP mode	Name	Function
	SSID	Used to confirm the current SSID setting.
	WEP Key	Used to confirm the current WEP key setting.
	WEP Mode	Used to show the maximum length of the string that can be used for the WEP Key entry.

	WPA2 Authent. Method	Used to confirm the current WPA authentication setting and preshared key.
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## PostScript3 Unit Type S11/S12 (D0C3)

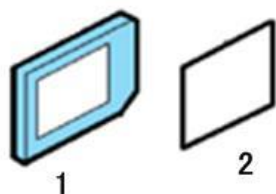
### ★ Important

- PostScript3 Unit Type S11 is for the copier models, and PostScript3 Type S12 is for the printer models.

### Accessories

Check the quantity and condition of the accessories in the box against the following list.

No.	Description	Q'ty
1	PostScript3 Emulation SD Card	1
2	Decal	1



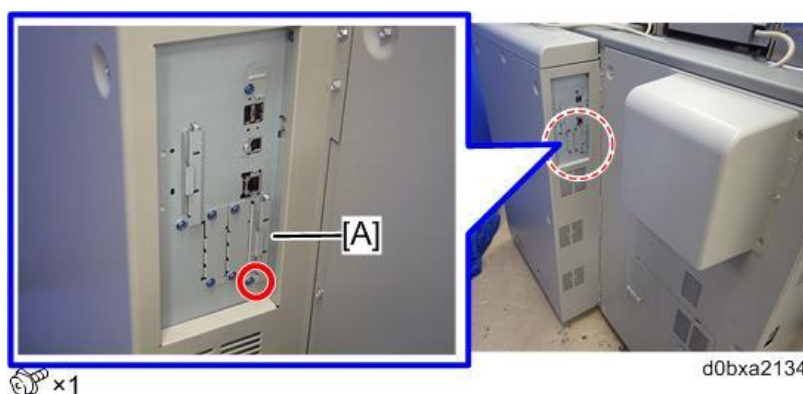
d1791212

### Installation

#### ⚠ WARNING

- Unplug the main machine power cord before you do the following procedure.

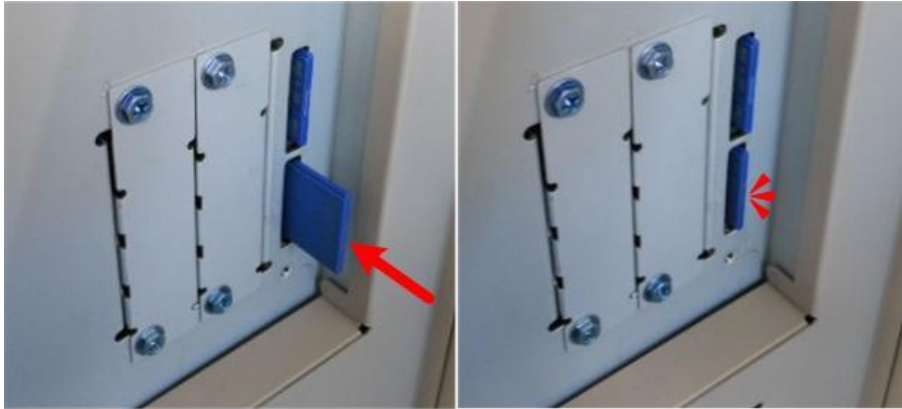
1. Remove the SD card slot cover [A].



2. Slowly, insert the SD card (PostScript3 Unit) in Slot 2 (lower) with its label face towards the front of

## 2. Installation

the machine.



d1791213

3. Perform the SD Card Appli Move. (See “SD Card Appli Move” at the end of this section.)
4. After the application move is finished, remove the SD card from Slot 2.
5. Turn on the machine (🔌 x 1)  
Make sure that the machine can recognize the option:  
[User Tools] > Printer Features > List/Test Print > Configuration Page
6. Attach the PostScript3 decal to the left side of the PDF decal on the right door.

---

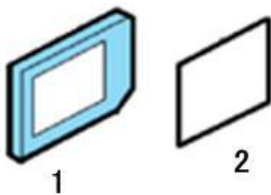
### IPDS Unit Type S11 (D0C3)

---

Check the quantity and condition of the accessories in the box against the following list and diagram.

#### Accessories

---



d1791212

No	Description	Q'ty
1	IPDS Emulation SD Card	1
2	Decal	1
-	IPDS CD-ROM	1

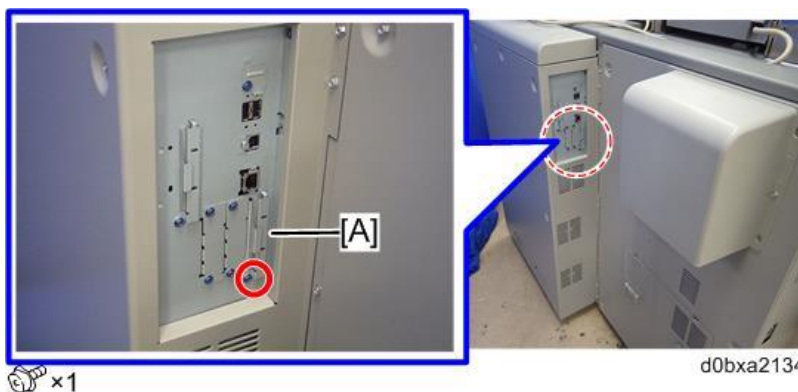
#### Installation

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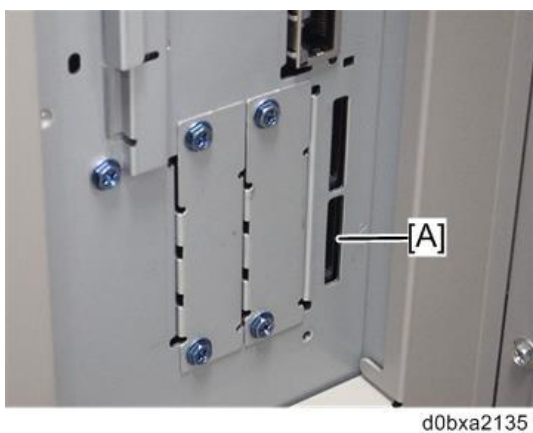
#### **⚠ WARNING**

- Unplug the main machine power cord before you do the following procedure.

1. Remove the SD card slot cover [A]. (✎ x 1)



2. Slowly, insert the IPDS SD card in Slot 2 [A] with its label face towards the front of the machine.



3. Perform the SD Card Appli Move. (See “[SD Card Appli Move](#)” at the end of this section.)
4. After the application move is finished, remove the SD card from Slot 2.
5. Turn on the machine (🔌 x 1)
6. Make sure that the machine recognizes the option.
7. Attach the decal to the left side of the Adobe PDF decal on the right door.

---

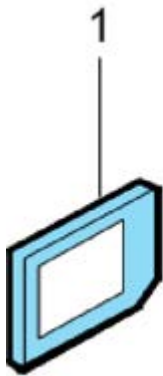
### XPS Direct Print Option Type S11 (D0C3)

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#### Accessories

No.	Description	Q'ty
1	SD Card	1

## 2. Installation

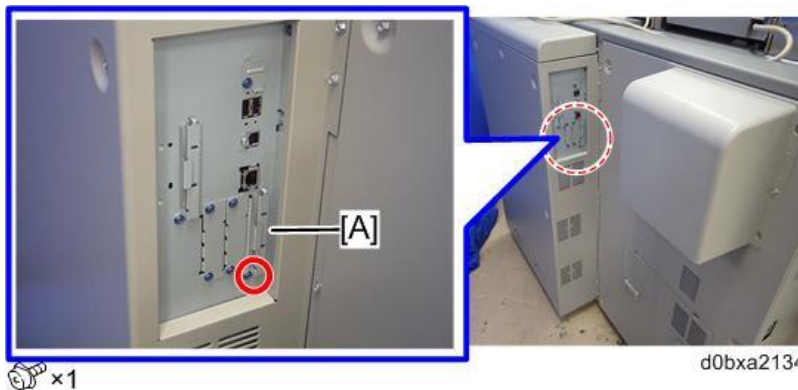


d595i900b

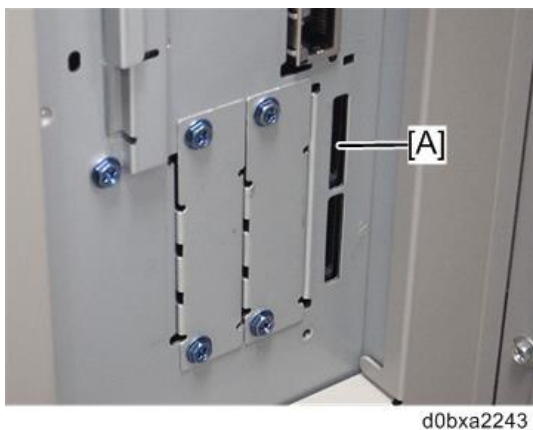
### Installation

---

1. Remove the SD card slot cover [A].



2. Insert the SD card in Slot 1 (the option slot: upper side) [A].



3. Reattach the SD card slot cover.
4. Turn on the main power switch.
5. Make sure that the machine recognizes the option by outputting the list of system setting.

#### Note

- When installing more than one SD card, perform the merge operation ([SD Card Appli Move](#)).

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## File Format Converter Type M19

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### Note

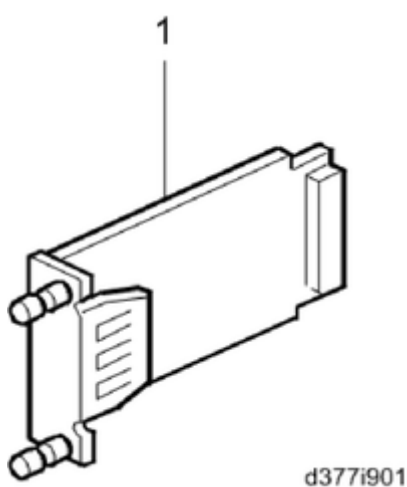
- You can only install one of the following units at the same time: Printer Controller EB-35, File Format Converter Type M19.

### Accessories

---

Check the quantity and condition of the accessories in the box against the following list.

No	Description	Q'ty
1	File Format Converter	1
2	Notes for Users	1



### Installation

---

#### **⚠ CAUTION**

- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.
- Do not put your hand into the controller box. It will result in a malfunction or injury.
- Before doing any work, touch a metal object to discharge static electricity from the body. There is a possibility that the board may malfunction due to static electricity.

## 2. Installation

1. Remove the slot cover [A] from the I/F slot A.



2. Insert the file format converter into the slot A and fasten it with the screws.
3. Check the system settings list is output, and that the option is recognized correctly.  
User Tools > Machine Features > Printer Features > List/Test Print > Configuration Page

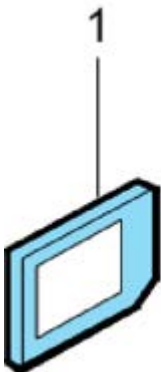
### Note

- The customer should keep the slot covers which were removed.

## VM Card Type P18 (D3EN)

### Accessories

No.	Description	Q'ty
1	SD Card	1



d595i900b

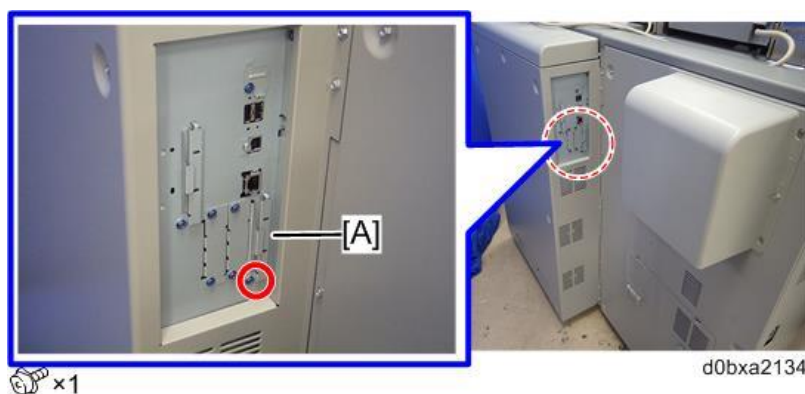
### Installation

#### ⚠ CAUTION

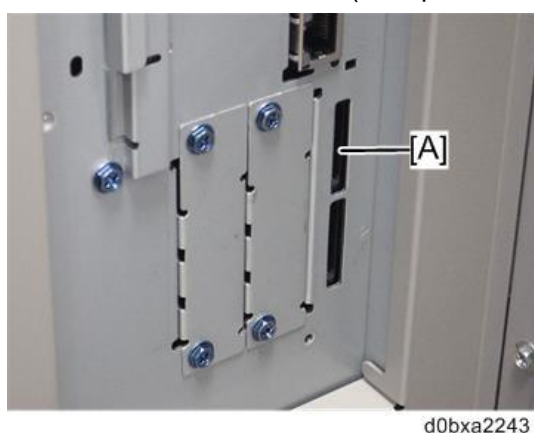
- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.



1. Remove the SD card slot cover [A].



2. Insert the SD card in Slot 1 (the option slot: upper side) [A].



3. Reattach the SD card slot cover.
4. Turn on the main power switch.
5. Make sure that the machine recognizes the option by outputting the list of system setting.

---

## OCR Unit Type M13 (D3AC)

---

### ★ Important

- This option is for the copier models (Pro 8320S/8310S/8300S) only.

### What is Searchable PDF?

---

- Searchable PDF embeds the text information in the scanned document without processing the data on a computer.
- If this option is installed:
  1. You can search the text in the scanned document.
  2. You can add extra text to the file name.
  3. The orientation of the originals is detected, and the document is automatically rotated.
- The OCR unit is provided on an SD card. By installing the SD card on the main machine, a function key is added to the operation panel. The OCR application does not need to be installed on the computer.
- After OCR installation, you can specify the settings of the searchable PDF function.

## 2. Installation

- The machine embeds the text information of the scanned document after scanning the originals (after the originals are ejected from the ADF). Therefore, you can remove the originals from the exposure glass or ADF.
- You can use other applications such as copy and printer while the machine embeds the text information of the scanned document.

### Accessories

---

Check the quantity and condition of the accessories in the box against the following list.



d1791230

No.	Description	Q'ty
1.	SD Card	1

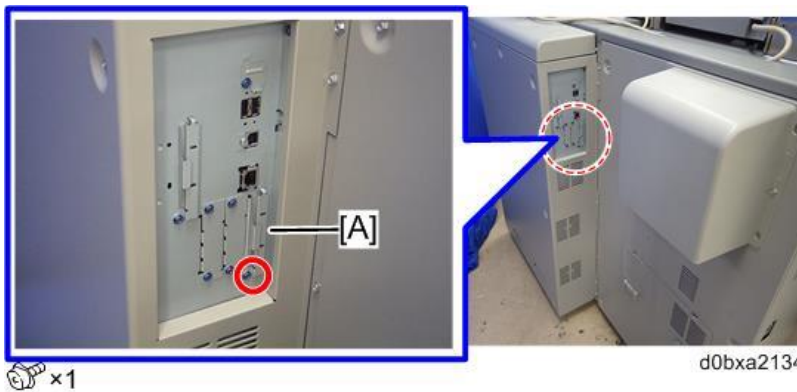
### Installation

---

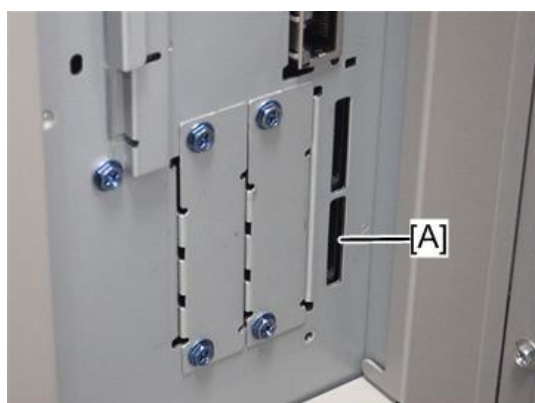
#### **⚠ WARNING**

- Unplug the main machine power cord before you do the following procedure.

1. Remove the SD card slot cover [A]. (✎ x 1)



- Insert the OCR SD card in Slot 2 [A] with its label facing the front of the machine.



d0bxa2135

- Turn on the machine.
- Go into the SP mode and do **SP5-878-004**.
  - This records the content of the SD card in NVRAM
  - The machine ID of the main machine is recorded on the SD card.
- When the display tells you that the execution is completed, touch [Exit].
  - If the machine returns the “Failed” alert, check the SD card to determine if it has already been used.
  - Turn off the machine and then steps 1 to 5 again.
- Cycle the machine off/on.
- Go in the SP mode and do **SP5-878-004** (Option Setup: OCR) and then press [EXECUTE]. The OCR dictionary is copied to the HDD from the SD card.
  - In the first execution, the SD card and the machine are linked.
  - In the second execution, the OCR dictionary is copied onto the HDD.
- Turn off the machine, and then remove the SD card.

**★ Important**

- Store the SD card in a safe location.
  - You will need the original SD card in case the HDD unit ever fails.
- Turn on the main power switch.
  - On the “Scanner” screen, touch [Send File Type / Name].



d1791220

## 2. Installation

11. Check to see if [OCR Settings] is displayed on the [Send File Type / Name] screen.



- The searchable PDF function can be switched on/off on the [OCR Settings] screen after installing the OCR unit.
- If you want to use the searchable PDF function, select [On] for [OCR Settings]. (Default: [Off])

### Restoration When the Original SD Card Exists

---

After installing the OCR Unit:

- The searchable PDF function is saved on the HDD and the SD card ID is saved in NVRAM.
- After replacing either the HDD unit or the NVRAM, OCR Unit Type M13 must be installed again.
- **If you replace the HDD.**  
Re-install the OCR Unit Type M13 from the original SD card.
- **If you replace the NVRAM.**  
If you upload / download the NVRAM data, re-install the OCR Unit Type M13 from the original SD card. If you don't upload / download the NVRAM data, order a new SD card (service part) of the OCR Unit Type M13. Then re-install the OCR Unit Type M13 from the new SD card.
- **When you replace the HDD and NVRAM at the same time.**  
Re-install the OCR Unit Type M13 from the original SD card.

### Restoration If Original SD Card is Lost

---

- Order a new SD card (service part) of the OCR Unit Type M13, and then re-install from the new SD card.
- When you re-install the OCR Unit Type M13, do the same procedure as the original installation procedure.

## SD Card Appli Move

---

### Overview

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The service program "SD Card Appli Move" (**SP5-873**) lets you move application programs from one SD card to another.

Always observe the following important points:

- The data necessary for authentication is transferred with the application program from an SD card

to another SD card.

- Authentication fails if you try to use the SD card after you move the application program from one card to another card.
- Never use SD card if it has been used before for other purposes. Normal operation is not guaranteed when such an SD card is used.
- The OCR Unit Type 2 option cannot be moved to another SD card. However, you can move other options onto the OCR SD card.

### Move Exec

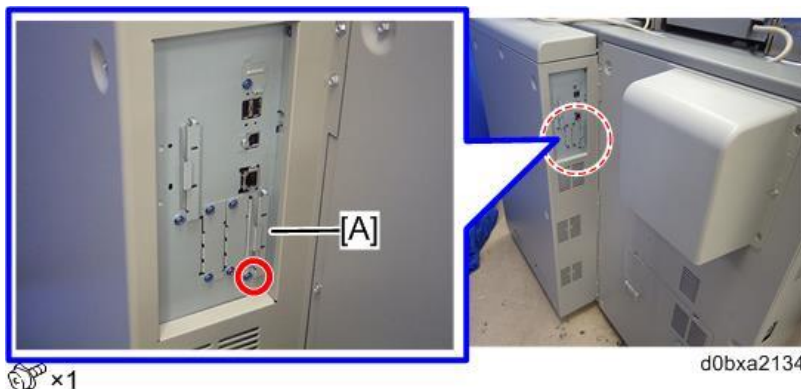
---

The menu "Move Exec" (**SP5-873-001**) lets you move application programs from the original SD card to another SD card.

#### ★ Important

- Do not set the write protect switch of the system SD card or application SD card on the machine.
- If the write protect switch is on, a download error, Error Code 44, for example will occur during a firmware upgrade or application merge.

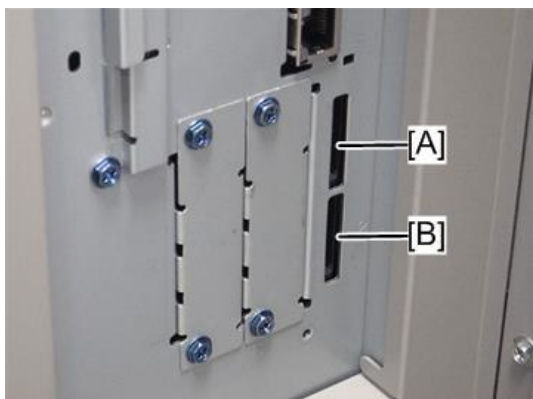
1. Turn the main switch off.
2. Remove the SD card slot cover [A].



🔍 x1

d0bxa2134

3. Make sure that a **target** SD card is in **Slot 1** [A]. The application program is moved to this SD card.
4. Insert the source SD card with the application program in **Slot 2** [B]. The application program is copied from this **source** SD card.



d0bxa2153

## 2. Installation

5. Turn the machine on.
6. Go into the SP mode.
7. Select **SP5-873-001** "Move Exec".
8. Follow the messages shown on the operation panel to complete the operation.
9. Turn the machine on.
10. Remove the source SD card from SD Card Slot 2.
11. Turn the machine off.
12. Check that the application programs run normally.

### Storing the SD Cards

---

1. Open the right front door, and remove the post (🔩 x2).
2. Store the original SD cards here after you move the application program from one card to another card.



d1791224

- The original SD cards are the only proof that the client is licensed to use the application program.
- You may need to check the SD card and its data to solve a problem in the future.

#### ★ Important

- Do not move OCR Unit Type M13 (optional) to another SD card.
- The contents in the VM card cannot be moved.

### Undo Exec

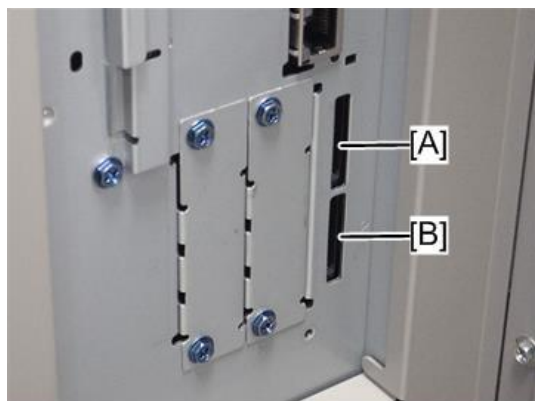
---

"Undo Exec" (**SP5-873-002**) lets you move back application programs from an SD card in SD Card Slot 1 to the original SD card in Slot 2. You can use this program when, for example, you have mistakenly copied some programs by using Move Exec (**SP5-873-001**).

#### ★ Important

- Do not set the write protect switch on the system SD card or application SD card on the machine.
- If the write protect switch is on, a download error, Error Code 44, for example will occur during a firmware upgrade or application merge.

1. Turn the machine off.
2. Insert the SD card with the application program in Slot 1. The application program is moved from this SD card.
3. Insert the original SD card in Slot 2. The application program is moved back to this card.



d0bxa2153

4. Turn the machine on.
5. Enter the SP mode.
6. Select **SP5-873-002** "Undo Exec."
7. Follow the messages on screen to complete the operation.
8. Turn the machine off.
9. Remove the SD card from Slot 2.
10. Turn the machine off.
11. Check that the application programs run normally.

## Key Counter Bracket Type 1027

**Note**

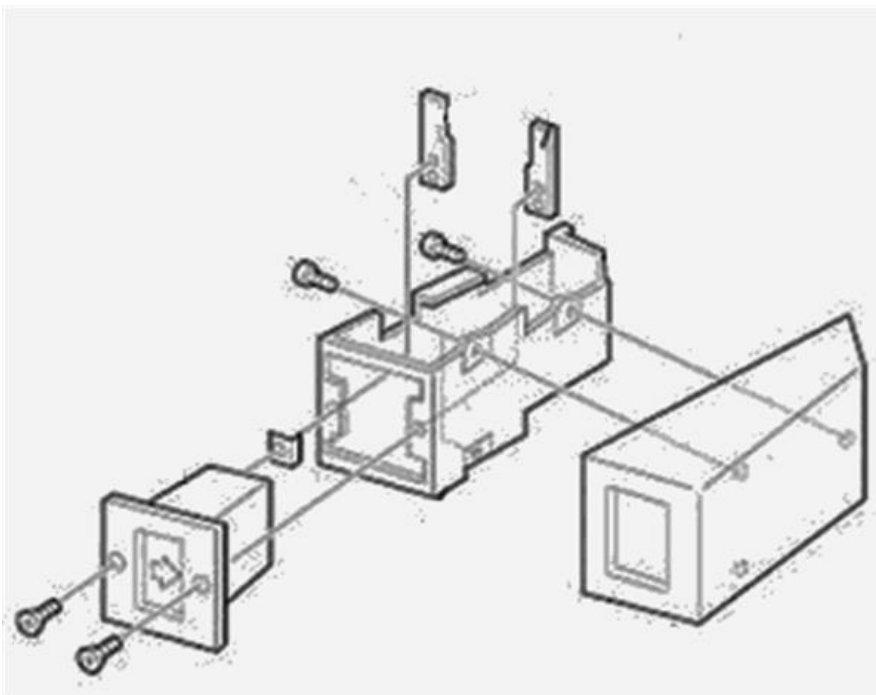
This option is for the copier models (Pro 8320S/8310S/8300S) only.

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### Installation

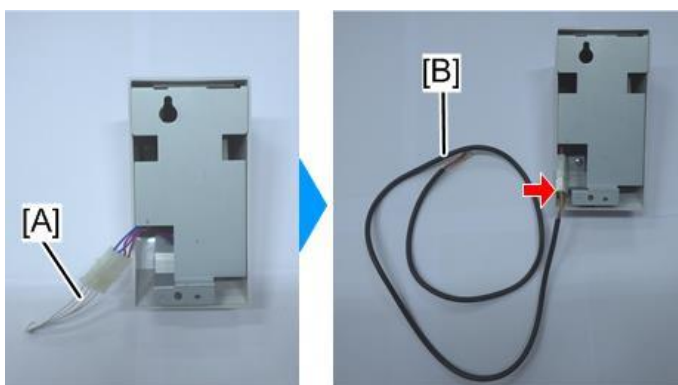
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1. Assemble the key counter and bracket.



d270b1277

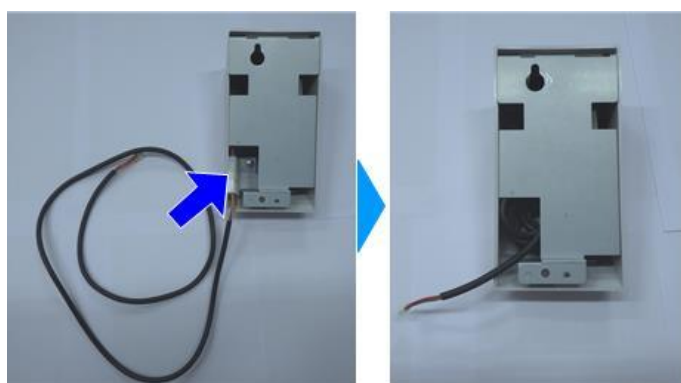
2. Replace the provided harness [A] with the harness (D7395404) [B]. The harness [B] needs to be prepared.



d0bxa2302

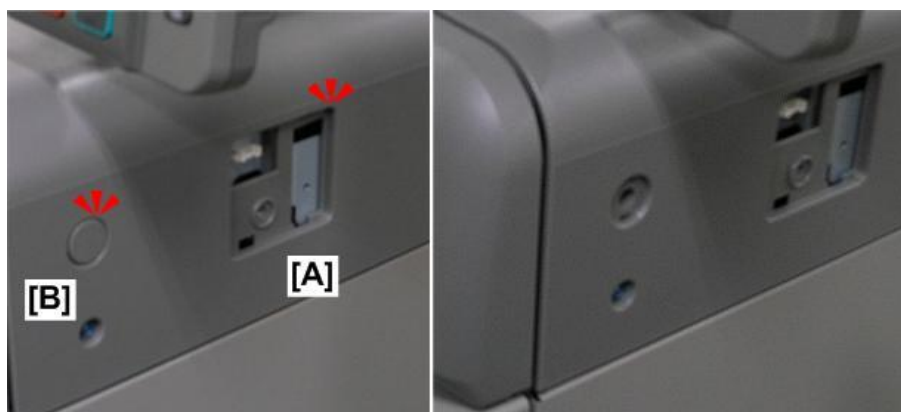


- Put the extra length of the harness into the cover.



d0bxa2303

- On the right side of the machine, use the tip of a small screwdriver to remove the square plate [A] and the round cap [B].



d1791250

- Attach the screw [A] (🔩 x1).
- Connect the device [B] (📦 x1).
- Hang the device on the attached screw [A], and then attach screw [B] (🔩 x1).



d0bxa2217

## 2. Installation

8. Insert the counter mechanism into the device.



d1791253

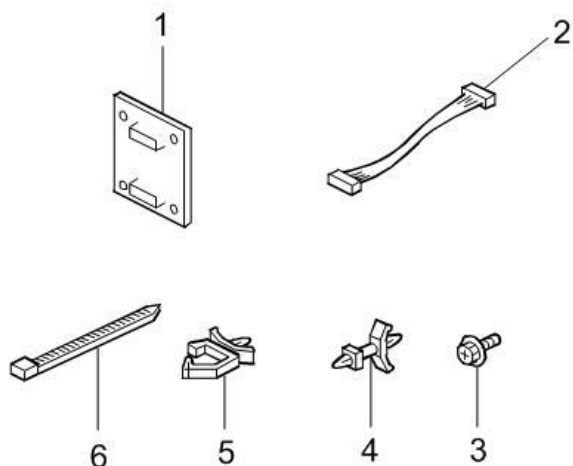
## Optional Counter Interface Unit Type M12

### Note

This option is for the copier models (Pro 8320S/8310S/8300S) only.

### Accessories

Check the quantity and condition of the accessories in the box against the following list.



d1351748

No.	Description	Q'ty
1	Key Counter Interface Board	1
2	Harness	1
3	Tapping Screw M3x6	4
4	Standoff	4
5	Harness Clamp	1
6	Band	1

## 2. Installation

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### Installation

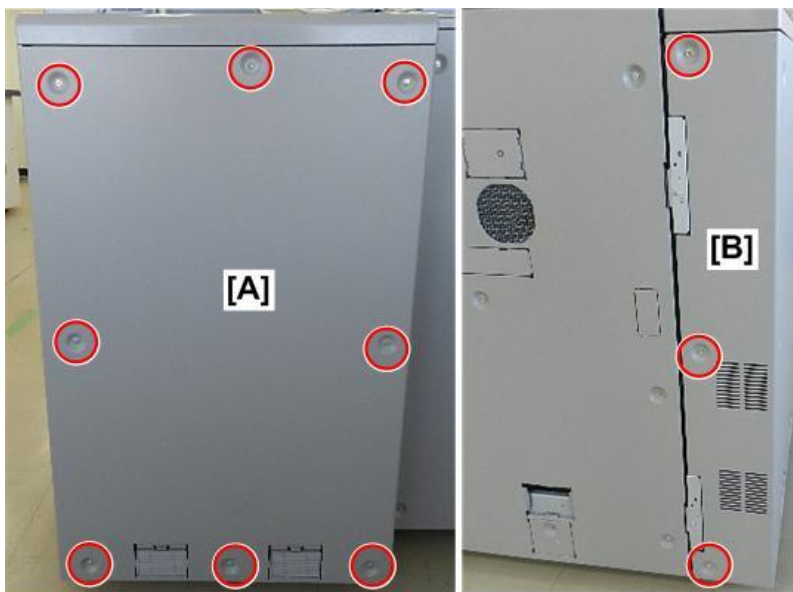
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1. Remove the screws from the cover of the left side of the controller box (🔩 x2).



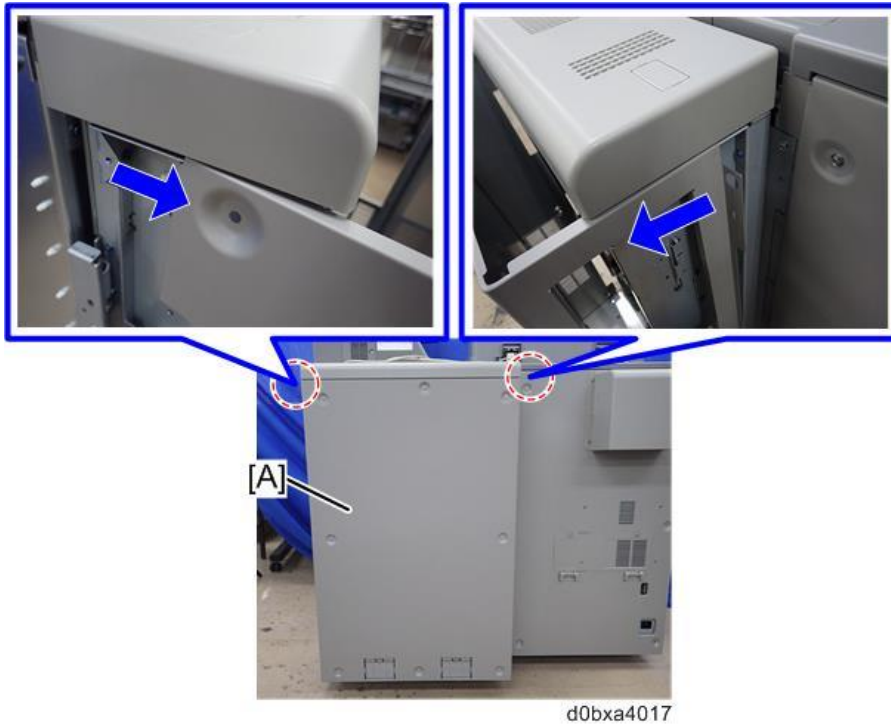
b3281289

2. Remove the screws from the cover [A] of the rear side of the controller box (🔩 x8).
3. Remove the screws from the cover [B] of the right side of the controller box (🔩 x3).

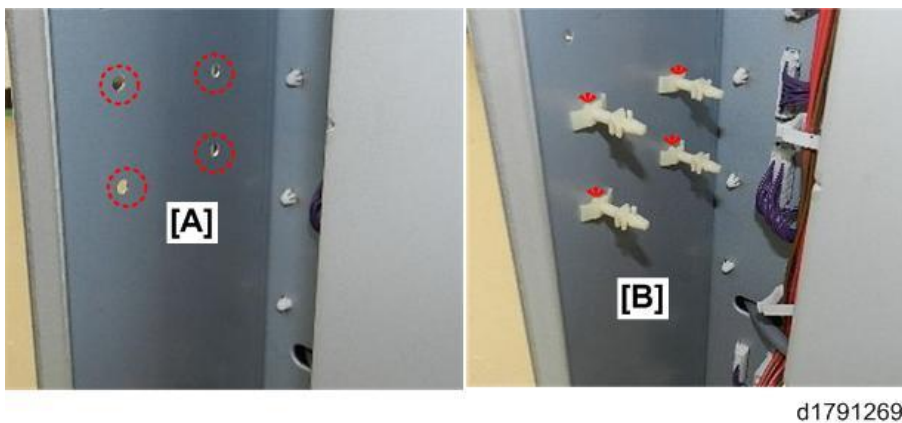


b3281290

4. Remove the controller box cover [A] from the both upper edges by sliding the cover.



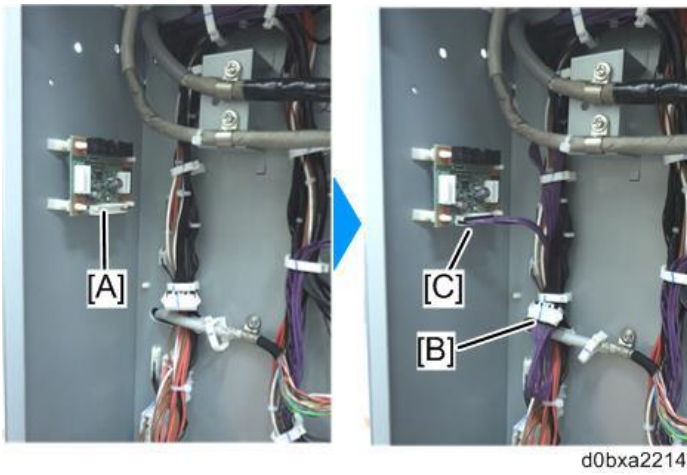
5. Locate the four holes [A] on the frame of the controller box.
6. Attach the standoffs [B] (⌘x4).



7. Attach the PCB [A] to the standoffs.
8. Connect the harness to the relay connector of the harness [B] (⌘x1).
9. Connect the connector [C] at the reverse side to the PCB (⌘ x1).

## 2.Installation

10. If the harness has the extra length, use the clamp near it to route the harness.



## NFC Card Reader Type S6 (D3DH)

### Accessories

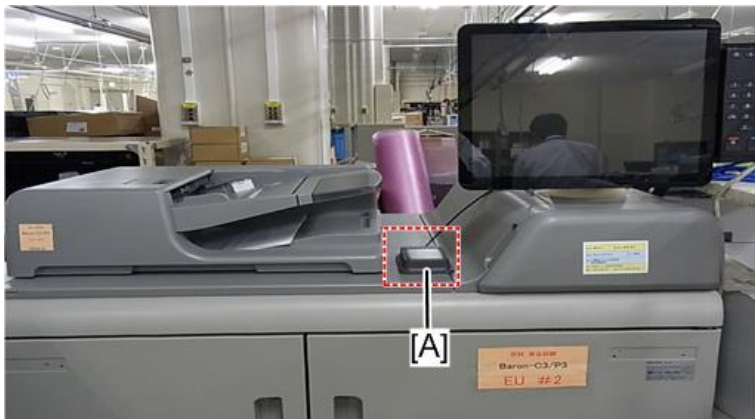
No.	Description	Q'ty
1	IC Card Reader Upper Cover	1
2	IC Card Reader Base Cover	1
3	IC Card Reader Spacer	1
4	Sponge	2
5	IC Card Reader	1
6	Interface Cable	1
7	WIRE BINDER 100MM	1
8	FERRITE CORE:K3 NFR-08BBK0	1
-	RoHS Decal	1
-	RoHS Label	1
-	EMC Address Decal	1
-	Caution Chart: JA	1
-	Caution Chart: 27 Languages	1



### Position to Attach

Attach the position [A].

## 2. Installation



d0bxa2285

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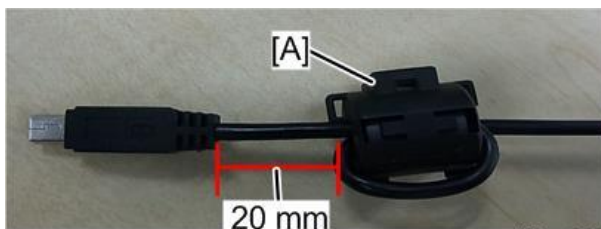
### Installation

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#### **⚠ WARNING**

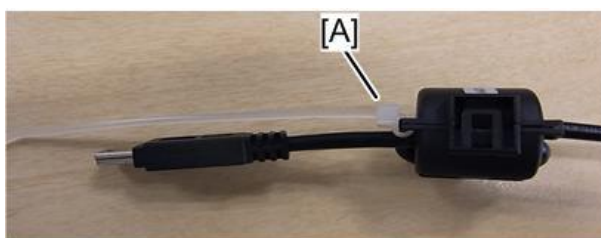
- When installing this option, turn OFF the main power and unplug the power cord from the wall socket. If installing without turning OFF the main power, an electric shock or a malfunction may occur.

- 1.** Attach the ferrite core [A] to the USB cable with its cable wound two times.



d0bxa2286

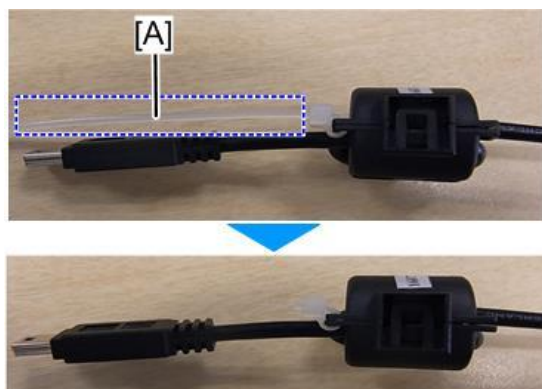
- 2.** Fix the ferrite core with the bind [A] to prevent the core from falling down.



d0bxa2287



- 3.** Cut the extra length of the bind [A].



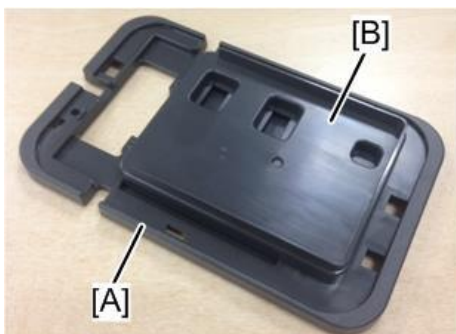
d0bxa2288

- 4.** Insert the USB cable into the media slot [A] of the operation panel.



d0bxa2289

- 5.** Attach the spacer [B] to the base cover [A].



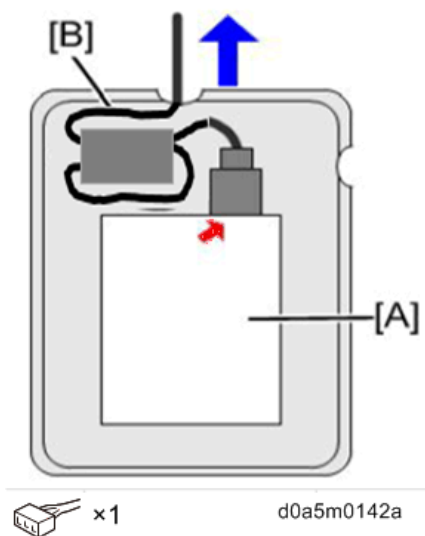
d257a4595

- 6.** Attach the NFC card reader [A] to the spacer.

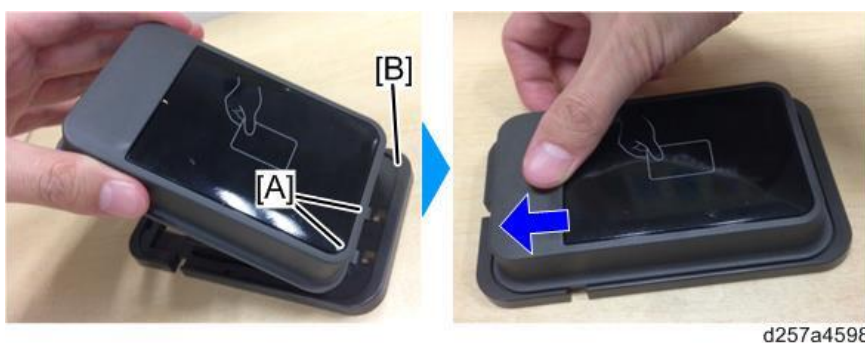
- 7.** Connect the USB cable [B] to the NFC card reader [A], and then route the USB cable as shown

## 2. Installation

below.



8. Insert the hooks [A] of the upper cover into the base cover [B], and then attach the upper cover to the base cover.



d257a4598

### Note

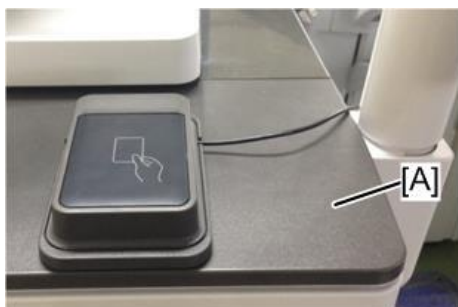
- When removing the upper cover from the base cover, release the hooks of the upper cover by pushing the upper cover [A] as shown below.



d257a4599

9. Peel off the tapes from the mounts on the back side of the base cover, and then attach the base

cover to the upper front cover [A] of the main machine.



d257a4602

## Common Adjustments

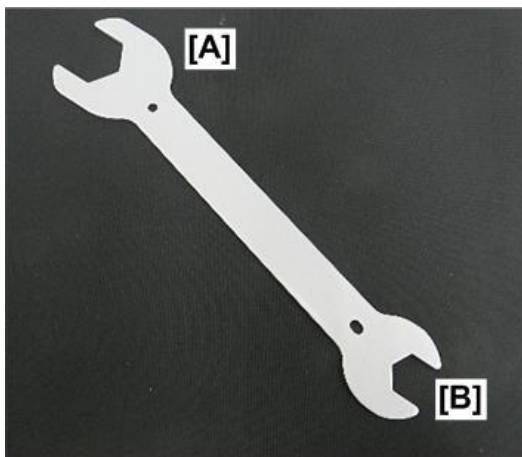
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### Height and Level Adjustment

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Before you begin:

- The main machine should be installed first and adjusted to level front-to-back, and side-to-side.
  - Note the settings on the leveling gauge. Due to the length of the paper path with optional peripheral units installed, it is extremely important that every unit be leveled to match the front-to-back and side-to-side measurements of the main machine.
  - The height and level of each peripheral unit must be adjusted at installation.
  - The height and level of each unit must be adjusted before testing for the presence of skew and checking that side-to-side registration is correct.
1. Use the wide end [A] of the accessory wrench provided with the machine to adjust the each leveling bolt of the main machine.
  2. The narrow end of the wrench [B] is for the leveling bolt of the peripheral units.



d1790999

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### Setting the Leveling Bolts

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**★ Important**

- Do this procedure near each caster where an adjustable leveling bolt is provided.
  - The number of leveling bolts will differ, depending on which unit you are leveling.
1. Turn the leveling bolt in the direction of the arrow.

**↓ Note**

- The upper nut is spot-welded to the frame and does not move.



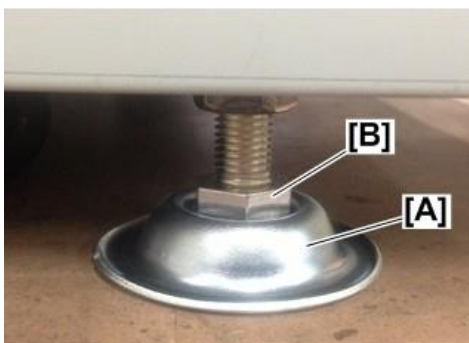
d1795700

2. Set a holder under the leveling bolt.
3. Continue to turn the leveling bolt until it stops against the holder.



d1795701

4. Set a level on the front, rear, and side edges to determine if the unit is level.
5. Adjust the height at each corner by turning the leveling bolt until the unit is level.
6. Slide one of the holders [A] with hand whether it can be moved.
7. If the holder move, adjust the leveling bolt [B] and make sure that the bolt stops against the holder [A] completely without a gap. When there are a gap between the bolt and the holder, the holder is moved.



d194e9107a

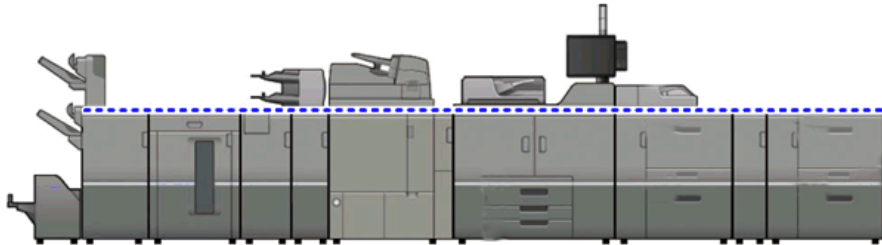
**Note**

If there are a gap between the leveling bolt and the holder, SC471 may occur.

## 2. Installation

### 8. Check the results of the adjustments.

- The top of the first peripheral unit on the left must be at the same height as the left side of the main machine.
- The tops of the other peripheral units on the left where the units are joined must be at the same height.
- The top of the LCIT on the right must be at the same height as the right side of the main machine.



d0bxa2294

- Make sure that the plate at the paper exit on the left side of the main machine [A] moves freely and is not bent. It must be able to move to handle thick paper.
- Between the right side [B] of the main machine and the LCIT, make sure that the LCIT guide plate moves freely and does not interfere with the main machine guide plate.



d1795703

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## Skew and Side-to-Side Registration

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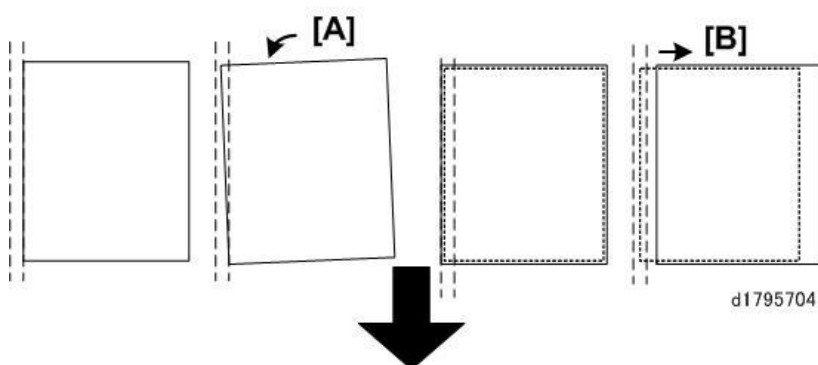
### Overview

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The paper feed path is extremely long when many peripheral units are installed. In such a long path, the cumulative effect of paper skew or deviation in side-to-side registration may require adjustment.

- Skew [A] occurs when the trailing edge of the paper rotates away from the direction of paper feed.
- If side-to-side registration shift [B] occurs, the sheet remains straight but shifts left or right away

from center of the paper path.

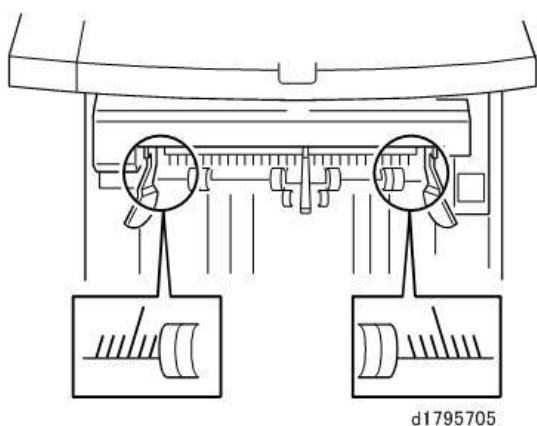


**★ Important**

- Before adjusting skew manually, be sure to enter the SP mode and set SP1206 to "2" (OFF). This disables side-to-side registration in the main machine's registration unit.

**Scales**

- Skew and side-to-side registration are checked with graduated scales (shown below) where paper exits the units.



- The scales are provided so that you can visually check and measure the amount of skew or deviation in side-to-side registration.
- A scale for detecting skew and checking side-to-side registration ("S-to-S") is provided on the following peripheral units.
- Correction for both skew and side-to-side registration are possible.

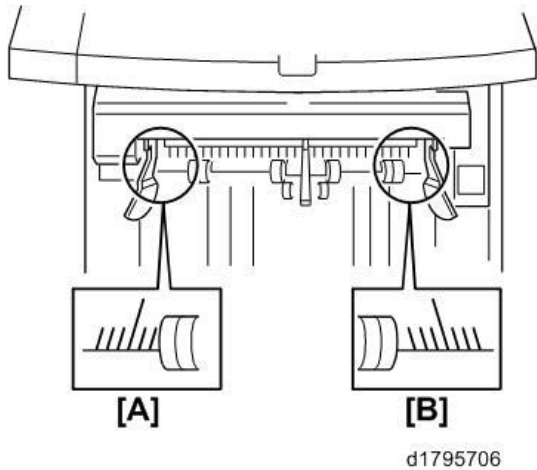
Name	Skew	S-to-S	Comment
LCIT	---	---	Correction is done in the registration unit of the main machine.
Other Peripheral Units	<b>Yes</b>	<b>Yes</b>	Correction for both skew and side-to-side registration are possible when the unit is attached to the upstream unit with the single bracket.

Use either the rear scale or front scale, depending on the type of paper used in your area:

- Rear [A]: **DLT SEF** (LT LEF for Ring Binder)

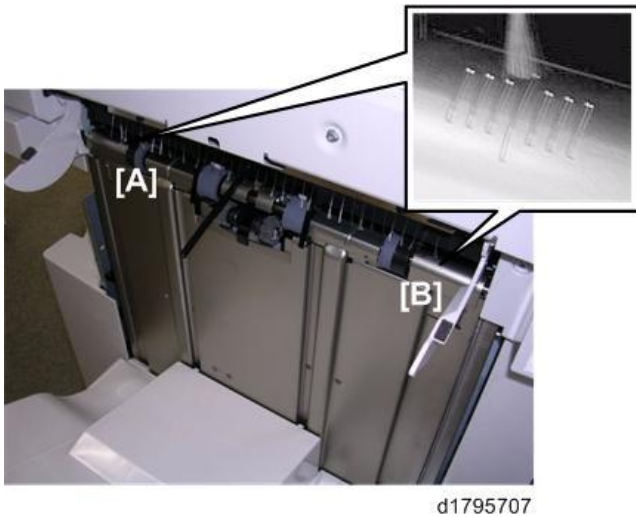
## 2. Installation

- Front [B]: **A3 SEF** (A4 LEF for Ring Binder)



The illustrations show where the scale for each peripheral unit is located:

- [A]: DLT/ [B]: A3



The illustration shows the scale on the left side of the Booklet Finisher tray. The same scale is at approximately the same position (paper exit) for the following units:

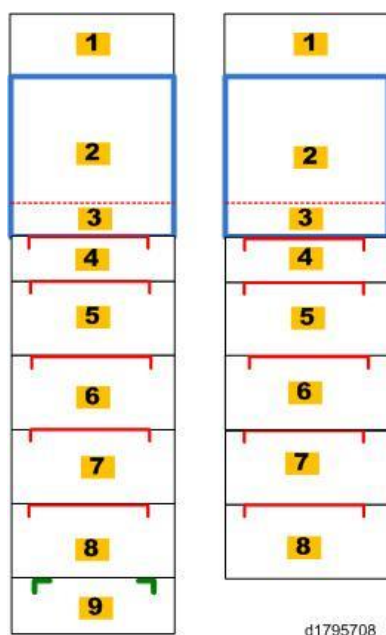
- Multi Folding Unit: Proof Tray, or Left Exit
- Ring Binder: Left Exit
- High Capacity Stacker: Proof Tray

In the illustration below:

- The RED lines indicate the single-piece brackets where adjustments can be done to eliminate skew and to correct side-to-side registration.
- The GREEN lines indicated 2-piece joint brackets where adjustment is not possible (between the



finisher and trimmer unit).



Unit	Name	Comment
[1]	LCIT	
[2]	Main Machine	
[3]	Decurl Unit (inside main machine)	Inside main machine
[4]	Cover Interposer Tray	
[5]	Multi Folding Unit	
[6]	Ring Binder	
[7]	High Capacity Stacker	
[8]	Finisher	Either finisher
[9]	Trimmer Unit (Joint Brackets x2)	Joint Brackets x2

**Note:** The Trimmer Unit [9] does not have the single bracket for the upstream unit that allows side-to-side adjustment with shims (described below).

Here are some general rules for testing and adjusting for paper skew or a shift in side-to-side registration.

1. After installation of each peripheral device, do some test prints and check for the presence of skew, and check that side-to-side registration is correct.
2. When you detect a problem with skew or side-to-side registration, do the adjustment on the joint bracket attached to the peripheral unit **upstream of the unit where the problem occurred**.
3. Side-to-side registration is corrected by shifting the upstream joint bracket left or right. (See the next procedure.)
4. Skew is eliminated by inserting spacers (shims) under the rear or front end of the joint bracket. These attached by screws to the peripheral units before they leave the factory.

## 2. Installation

### Checking Side-to-Side Registration

---

Do this procedure to confirm that the paper is centered in the paper path.

1. Make sure that the I/F cable of the unit is connected to the upstream unit.
2. Disconnect the unit to the left of the unit to be tested.
3. Execute a run by feeding paper from Tray 2 of the host machine.

**Note**

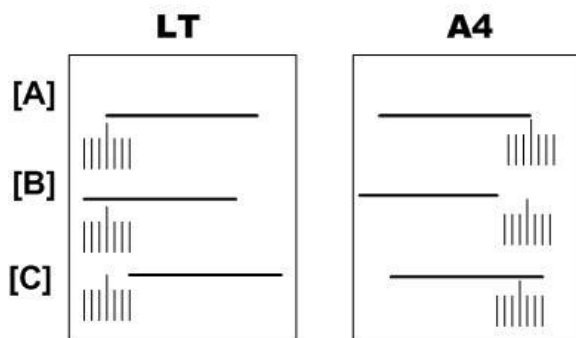
- If you are testing the Ring Binder, execute the run by feeding paper (A4 or LT LEF) from Tray 2 of the host machine (punching only, no ring binding). (The Ring Binder cannot accept a larger paper size.) Feed A3 SEF for other units.
4. When each sheet exits, check the position of the paper on the scale to see if the paper is centered.
    - Read the **rear scale** for **DLT**-size paper.
    - Read the **front scale** for **A3**-size paper.
    - If you are testing the ring binder, read the **rear scale** for **LT LEF** paper and the **front scale** for **A4 LEF** paper. With the Ring Binder, the paper does not exit. It will switch back and feed to the punch unit.
    - The scale lines are spaced 2 mm apart.
  5. The paper must not deviate more than  $\pm 2$  mm on the scale.

[A]	Leading/trailing edges centered. No adjustment necessary.
[B]	Leading/trailing edges offset to the rear by more than 2 mm. Adjustment required.
[C]	Leading/trailing edges offset to the front by more than 2 mm. Adjustment required.

If the edge of the paper is on the scale at the center [A], no adjustment is required.

-or-

If the edge of the paper is  $\pm 2$  mm off the center line on the scale, adjustment is required. Do the procedure in the next section.



d1795709

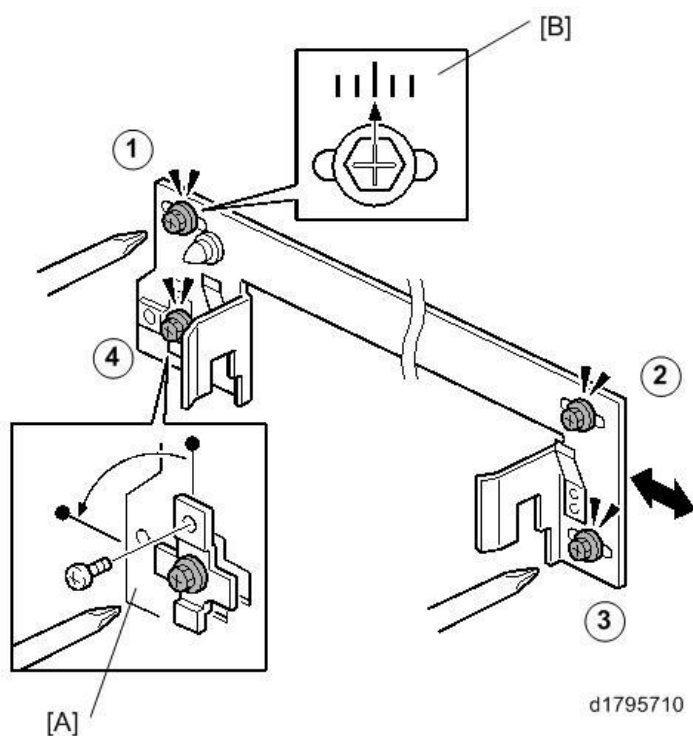
### Correcting Side-to-Side Registration

---

Each peripheral unit for this machine has the same single-piece connection bracket shown below. This adjustment can be done for every unit on the connection bracket attached to the upstream unit

1. Enter the SP mode and set SP1206 to "2" (OFF).
2. Disconnect the peripheral unit from the upstream unit.
3. On the joint bracket attached to the upstream unit, loosen screws ①, ②, ③, and ④.

4. Remove the bracket [A] (Ⓜ x1), rotate it 90 degrees, and re-fasten the screw. Changing the position of this bracket aligns the oval cut-out horizontally and frees the joint bracket so it can slide from side to side.
5. Look at the scale [B].
6. Slide the bracket to the left or right and tighten the screw.
7. If the deviation from center was toward the front, slide the bracket to the rear and tighten screw ①.  
-or-  
If the deviation from center was toward the rear, slide the bracket to the front and tighten screw ①.
8. Tighten screws ②, ③, and ④.



9. Do another test run, so that you can check the results of the adjustment.
10. When you are finished, enter the SP mode and re-set SP1206 to "1".

### Detecting Paper Skew

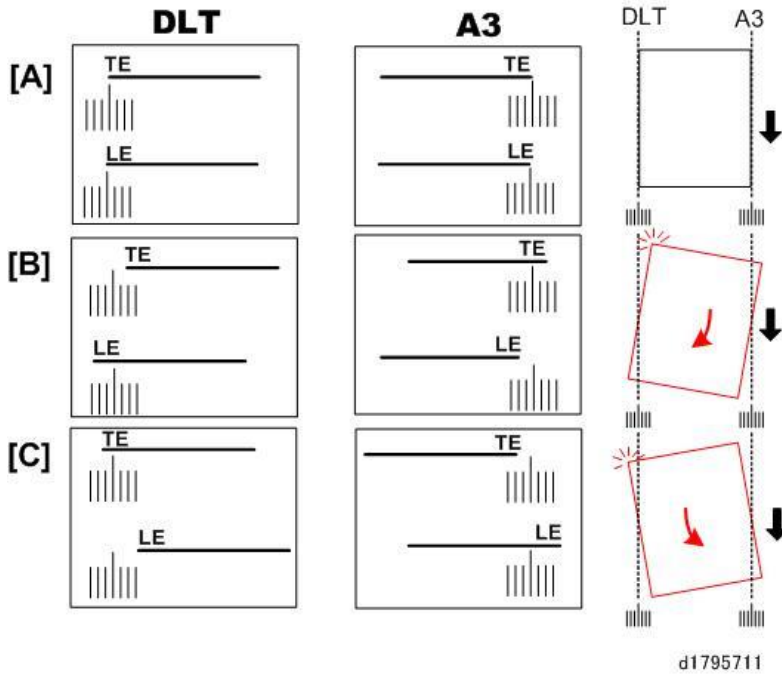
Do this check to detect the presence of skew in the paper path.

1. Make sure that the I/F cable of the unit is connected to the upstream unit.
2. If a peripheral unit is connected on the left side, disconnect it and pull it away.
3. Execute a straight-through run.
4. Check the scale where each sheet exits.
  - The **rear scale** is for **DLT**-size paper.
  - The **front scale** [2] is for **A3**-size paper.
  - Be sure to read the correct scale for the paper size in use.

[A]	Centered. No adjustment necessary.
[B]	Trailing edge skew to the front, total skew more than $\pm 2$ mm. Adjustment required.

## 2. Installation

[C] Trailing edge skew to the rear, total skew more than  $\pm 2$  mm. Adjustment required.



### Correcting Skew

1. Enter the SP mode and set SP1206 to "2" (OFF).
2. Disconnect the peripheral unit from the upstream unit.
3. Locate and remove the spacers from the peripheral unit where the problem occurred.

### Locating and Removing Spacers

The photos below show where you can find the spacers for each unit.

### Multi Folding Unit



## Finishers SR5110/SR5120



1. Open the front door (🔑x1).
2. Remove the spacers (🔑x1).

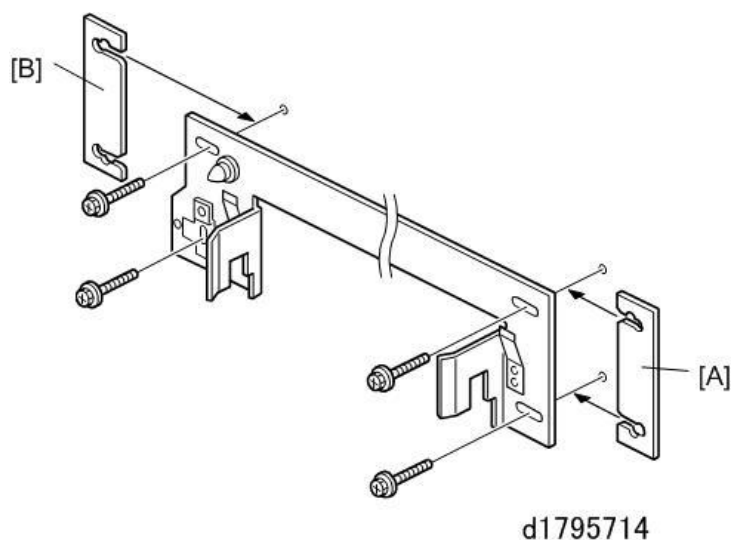
### Inserting Spacers

1. Loosen the screws (🔑x4) of the joint bracket attached to the peripheral upstream of the unit where the problem occurred.
2. Insert a spacer and tighten the screws.

If the trailing edge is **skewing toward the rear** of the machine, insert a spacer [A] under the **front end of the bracket** and tighten the screws.

-or-

If the trailing edge of the paper is **skewing toward the front** of the machine, insert a spacer [B] under the **rear end of the bracket** and tighten the screws.



3. Do another run to check the adjustment. If skew is still present, insert another spacer.
  - Each spacer is 2 mm thick.
  - Only two spacers are provided, so the maximum adjustment is 4 mm (using two spacers).
4. Enter the SP mode and re-set SP1206 to "1".

## 2. Installation

### **Fiery Controller Connection and Setup**

For details, refer to the installation guide for Printer Controller EB-35.

# 3. Preventive Maintenance

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## PM Parts Settings

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### PM Preparation

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#### Before You Begin

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Before you begin, you must release the main machine from the @Remote communication system.

1. Go into the SP mode.
2. Open SP5816-002 (CE Call), and then set it to "0".

Setting this SP to zero will switch off the built-in @Remote communication function.

#### Note

- If you attempt to service the machine with @Remote connected and switched on, the @Remote service center may issue a service call error (CE), or the machine could issue a jam alert and attempt to update the jam error count. Do the procedures described below to prevent this from occurring while the machine is being serviced.

#### After Servicing

---

1. Use one of these two methods to clear the PM counter:
  - Enter the SP mode, touch "PM Counter", touch "All PM Parts List", and then clear the counter for the PM part to be replaced.
  - Enter the SP mode, open SP7622, select the number of the part to be replaced (003 to 194), and then touch [EXECUTE].

#### Important

- Just clearing the counter in the SP mode does not clear the count. After the counts have been reset to zero from one or more PM parts, exit the SP mode, and then cycle the machine off/on.
- The machine must be cycled off/on for the count clear setting to take effect.
- After cycling the machine off/on, enter the SP mode again and then confirm that the counts have been cleared (reset to zero).

#### CAUTION

- After an emergency (EM) or scheduled servicing (PM), if a PM part is replaced in either case the PM count must always be reset to zero.
  - The counts must be reset to zero to prevent failure to update count data and inaccurate display of PM counts which could lead to parts damage or damage to the machine after PM parts have worn out.
2. If any SP count must be reset manually, check the "Initial Adjustment SP Lists" and confirm that the counts have been reset to zero.

### 3.Preventive Maintenance

3. When you are finished, enter the SP mode and reset SP5816-002 to "1" (End of Service). This allows @Remote service center to calculate the down time for servicing.

**★ Important**

- Do not forget to restore this setting to "1". If the machine continues to operate with this setting not reset to "1", the @Remove service firmware will reset it to "1" automatically four hours after it was set to "0".
- If servicing the machine requires more than four hours, be sure to reset SP5816-002 to zero again after four hours have elapsed.



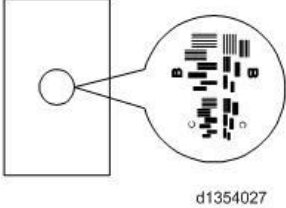
## **Preventive Maintenance Tables**

See "Appendices" for the Maintenance Tables.

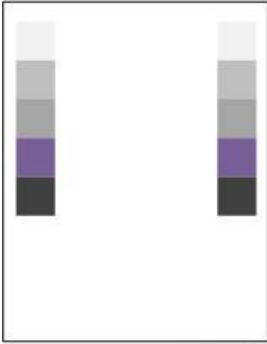
## Image Quality Standards

### Checking Image Quality

#### Resolution

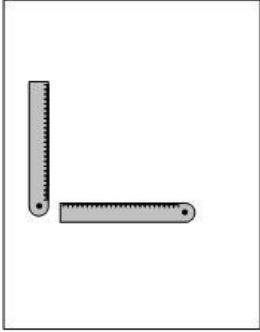
<b>Standard</b>	1:1/Enlargement:	4.5 lines/mm or more
	Reduction:	4.5 x M or more mag.
<b>What You Need</b>	S-2-1 Chart	
<b>Method</b>	 <p>d1354027</p> <p>Resolution measured after copying in Text Mode at AE5 notch with Normal Paper</p>	

#### Even Density

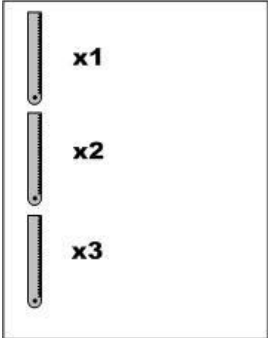
<b>Standard</b>	Left, right grayscale within 0.1 at 0.2 to 0.6	
<b>What You Need</b>	S-2-1 Chart	
<b>Method</b>	 <p>d1791422</p> <p>Right, left density measured after copying in Text Mode at AE5 notch with Normal Paper.</p>	

#### Magnification Errors

<b>Standards</b>	1:1	Main scan: $\leq \pm 0.5\%$ , Sub scan: $\leq \pm 0.8\%$
	Magnification	Main scan: $\leq \pm 1.0\%$ , Sub scan: $\leq \pm 1.0\%$
<b>What You Need</b>	150 mm scale	

<b>Method</b>	 <p style="text-align: center;">d1791423</p> <ol style="list-style-type: none"> <li>1. Set two scales on the exposure glass, and then copy them.</li> <li>2. Wait at least 10 min. after the paper exits.</li> <li>3. Measure 100 mm on the copied images with the actual scale.</li> </ol>
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Magnification Error Variation

<b>Standard</b>	1:1/Mag.: Sub scan (horizontal, vertical) less than 1.0%
<b>What You Need</b>	150 mm scale
<b>Method</b>	 <p style="text-align: center;">d1791424</p> <ol style="list-style-type: none"> <li>1. Place three 150 mm scales on the exposure glass, and then copy them.</li> <li>2. Wait at least 3 min. after the paper exits.</li> <li>3. Use a scale to measure 100 mm against each scale image (x1, x2, x3) on the paper.</li> <li>4. Determine the maximum and minimum deviation (%) from the standard.</li> <li>5. Calculate the difference between the maximum and minimum deviation.             <ul style="list-style-type: none"> <li>• For example, if the three measurements of the scales are 100.4 mm, 99.5 mm, 100.2 mm, then the difference between the maximum and minimum values is 0.9 mm (100.4 – 99.5).</li> <li>• Set the scales in the main scan direction (horizontal), copy them, and then use the same method to determine the variation</li> <li>• For best results, using at least three scales is recommended.</li> <li>• If you have only one scale, then you can make three copies with the scale at different positions.</li> <li>• Please remember that line speed may vary slightly depending on the number</li> </ul> </li> </ol>

### 3.Preventive Maintenance

	of copies in a job.
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# Paper Transfer

## Paper Transfer Quality Standards

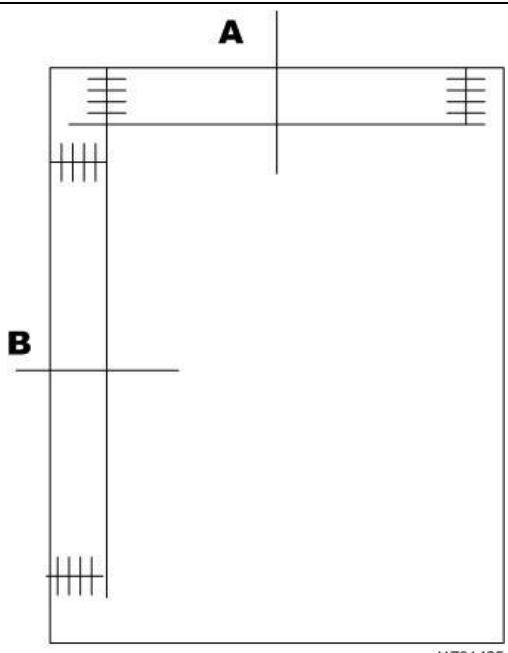
### Registration

#### Standard: Main Machine

<b>Simplex</b>	Engine	Sub scan 0±0.5 mm
	Copy	Sub scan 0±1.5 mm
<b>Duplex</b>	Engine	Sub scan 0±0.5 mm
	Copy	Sub scan 0±1.5 mm

#### Standard: Main Machine + ADF

		Copy Paper (40 to 128 g/m <sup>2</sup> )	
		Front Side	Reverse Side
<b>Plotter</b>		0±0.5 mm	0±0.5 mm
<b>With ADF</b>			
Front A3 to A5	Main scan 0±1.0 mm	0±2.5 mm	0±2.5 mm
	Sub scan 0±2.0 mm	0±1.5 mm	0±1.5 mm
Reverse A3 to A5	Main scan 0±3.0 mm	0±3.5 mm	0±3.5 mm
	Sub scan 0±1.0 mm	0±1.5 mm	0±1.5 mm

<b>What You Need</b>	S-2-1 Chart, 150 mm scale
<b>Method</b>	 <p>The diagram shows a rectangular chart with a vertical line labeled 'A' and a horizontal line labeled 'B'. At the top and bottom corners, there are registration marks consisting of three horizontal lines. At the left and right corners, there are registration marks consisting of three vertical lines. The chart is used to measure registration accuracy.</p> <p style="text-align: right; font-size: small;">d1791425</p> <ol style="list-style-type: none"> <li>1. Make a 1:1 copy of the S-2-1 chart with normal paper.</li> <li>2. Use the scale to measure the registration marks at the leading edge.</li> <li>3. The range is vertical registration A: 5 mm, and horizontal registration B: 4 mm</li> </ol>

### 3.Preventive Maintenance

	for the front side.
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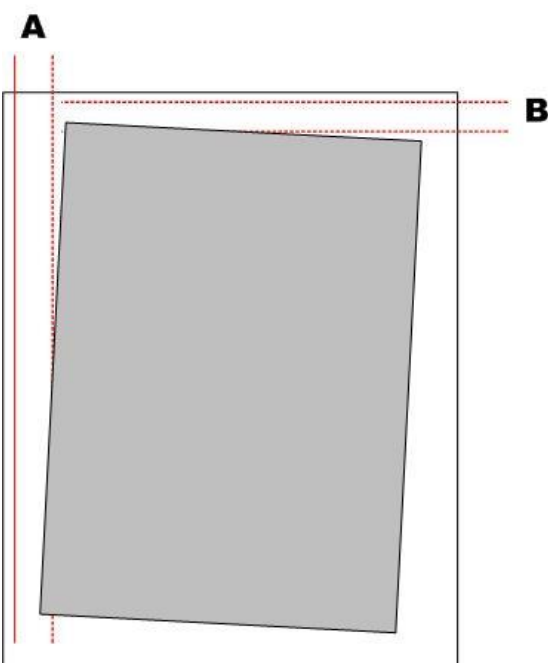
#### Skew

#### Standard: Main Machine

	Function	Specification	Feed Length
<b>Simplex</b>	Engine	Less than $0\pm 0.5$ mm/200 mm	More than 279 mm
		Less than $0\pm 0.5$ mm/100 mm	Up to 279 mm
	Copy	Less than $0\pm 1.0$ mm/200 mm	More than 279 mm
		Less than $0\pm 1.0$ mm/100 mm	Up to 279 mm
<b>Duplex</b>	Engine	Less than $0\pm 0.5$ mm/200 mm	More than 279 mm
		Less than $0\pm 0.5$ mm/100 mm	Up to 279 mm
	Copy	Less than $0\pm 1.0$ mm/200 mm	More than 279 mm
		Less than $0\pm 1.0$ mm/100 mm	Up to 279 mm

#### Standard: Main Machine + ADF

ADF: Copy Paper (40 to 128 g/m <sup>2</sup> )	Front Side (mm)			Reverse Side (mm)	
Front	Main scan: $\pm 1.5$ mm/200 mm	$\pm 2.0/200$	$\pm 2.5/200$	$\pm 2.0/200$	$\pm 2.5/200$
	Sub scan: $\pm 1.0$ mm/200 mm	$\pm 1.5/200$	$\pm 2.0/200$	$\pm 1.5/200$	$\pm 2.0/200$
Reverse	Main scan: $\pm 2.0$ mm/200 mm	2.5/200	3.0/200	2.5/200	3.0/200

<b>What You Need</b>	S-2-1 Chart, 150 mm scale
<b>Method</b>	 <p style="text-align: center;">d1791426</p>

### 3.Preventive Maintenance

	<ol style="list-style-type: none"> <li>1. Make a 1:1 copy of the S-2-1 chart with normal paper.</li> <li>2. Use the scale to measure the left and right registration marks at the leading edge.</li> </ol>
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#### LCIT RT5130/RT5110

Registration	Leading edge registration	0±2 mm (±1 mm variation per job)
	Horizontal registration	0±2 mm
Skew	A4 SEF, LT SEF and larger	0±1/200 mm
	B5 SEF and smaller	0±1/100 mm

#### Cover Interposer Tray CI5040

Horizontal registration	0±2 mm	
Skew	A4 LEF, B5 LEF	0±0.63/100 mm
	A3, B4	0±0.83/100 mm

## Cleaning Points

### Before You Begin

1. Turn off the machine and disconnect it from its power source.
2. Allow the machine to cool for at least 20 min.

#### **⚠ CAUTION**

- Make sure that the machine is switched off and disconnected from its power source before doing the following procedures.

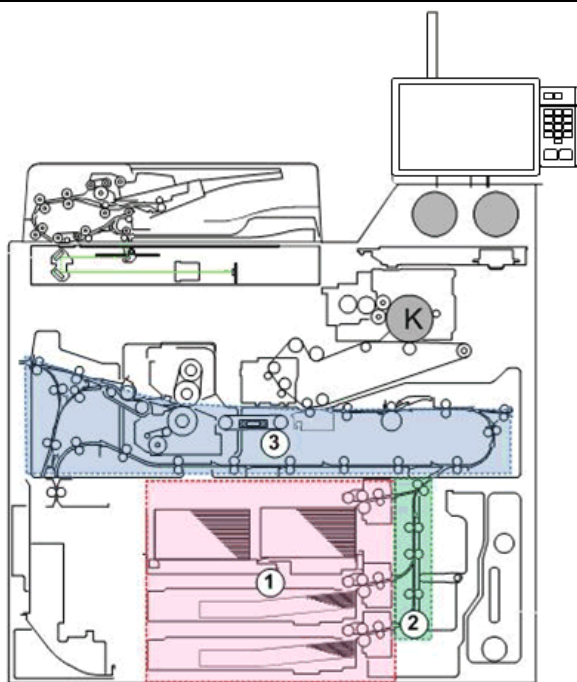
### Inspection and Cleaning

This section describes how to clean the rollers and sensors in the paper path with little or no disassembly. Three units comprise the paper path.

#### **↓ Note**

- This drawing shows copier version only, but description is the same for the printer version.

①	Paper Trays	Trays 1, 2 and 3
②	Vertical Transport Unit	Relays paper to the paper registration unit above.
③	Front Drawer	Paper registration, PTR unit, 2nd half of duplex path



d0bxa3301

Here are some rules to follow for cleaning rollers and sensors.

#### **Roller Cleaning**

- Clean rollers with a dry cloth.
- Try to avoid touching the surfaces of the rollers with bare hands.

#### **Sensor Cleaning**

- Clean sensors with a blower brush. Do not use cloth or tissue paper.



- Most of the sensors are below holes in plates, so you may not be able to see them.
- Insert the tip of the blower brush into the hole and squeeze it to blow any paper dust off the sensor.

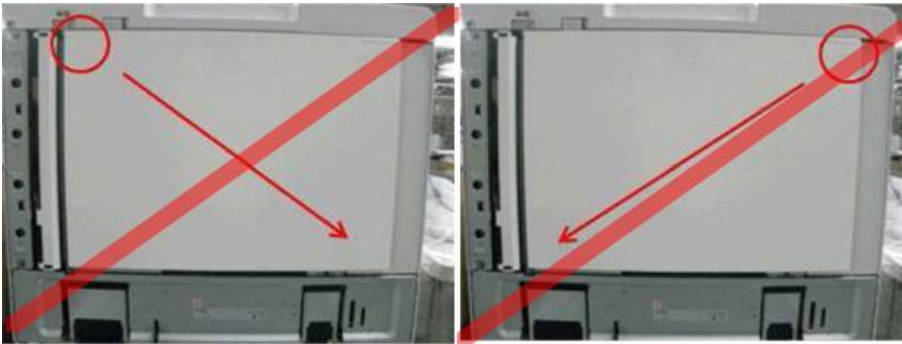
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## ADF Cleaning (Copier)

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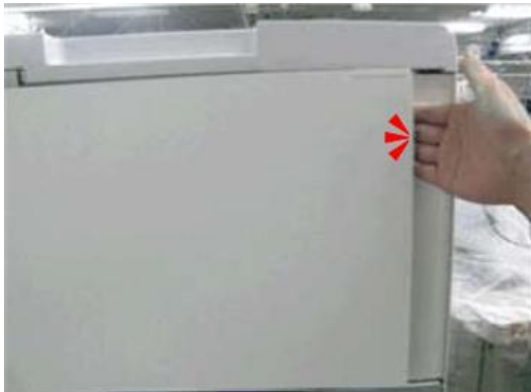
**★ Important**

- To avoid damaging the white plate, never try to peel the plate off from the upper right corner or upper left corner.



d1802510

1. Clean the white plate with a damp cloth.
2. To remove the white plate, first insert your hand under the upper right corner, about the width of your palm, to separate the plate.



d1802506

3. Insert your hand about palm-width at the lower right corner.



d1802507

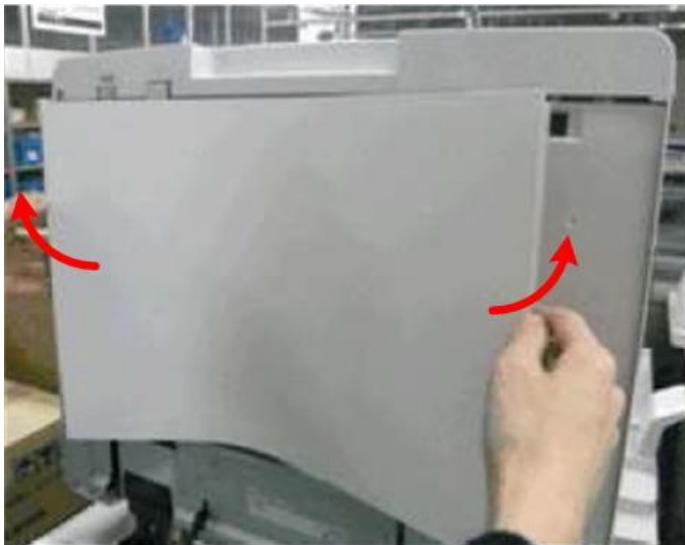
### 3.Preventive Maintenance

4. In the same way, separate the upper left corner [A] and lower left corner [B].



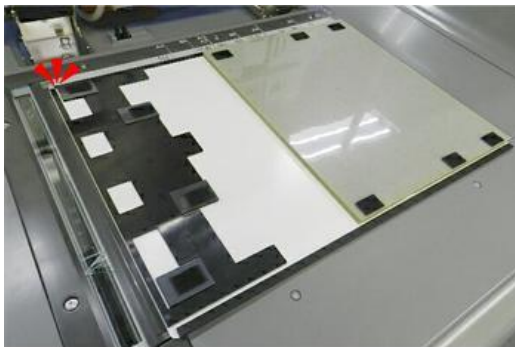
d1802508

5. Pull both sides of the plate straight off (insert your hand under the center to separate the center).



d1802509

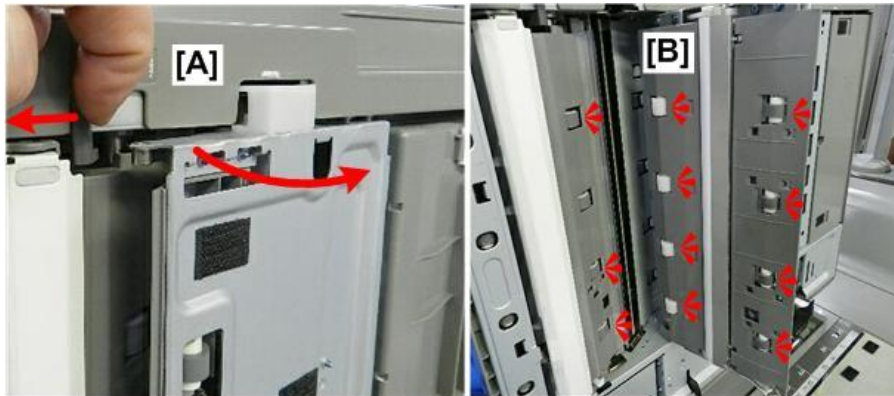
6. If you need to remove the white plate, pull it off the Velcro fasteners.
7. To re-attach the white plate, set the corner of the plate in the upper left corner, and then just lower the ADF.



d1802501

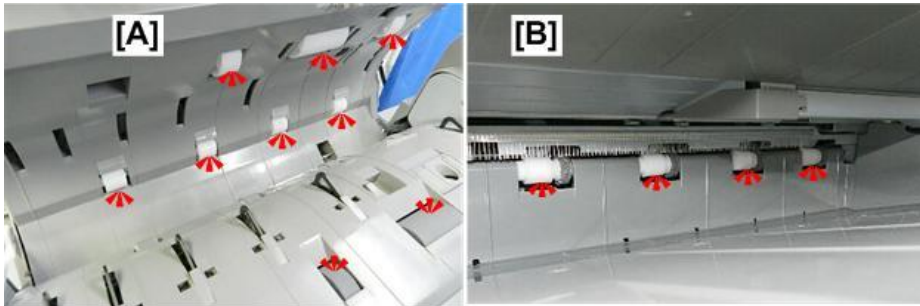
8. Push the release lever [A] to the left, and then open the plate [B].

9. Clean the lower rollers with a water or alcohol dampened cloth.



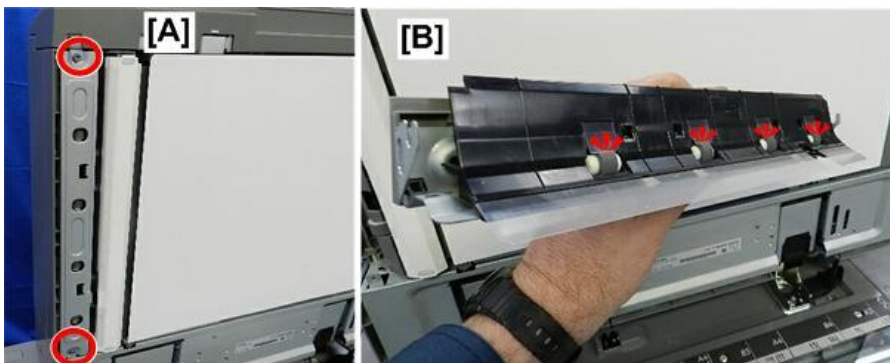
d1802502

10. Open the feed cover [A].
11. Clean the upper rollers with a water or alcohol dampened cloth.
12. Under the original tray [B], clean the rollers with a water or alcohol dampened cloth.



d1802503

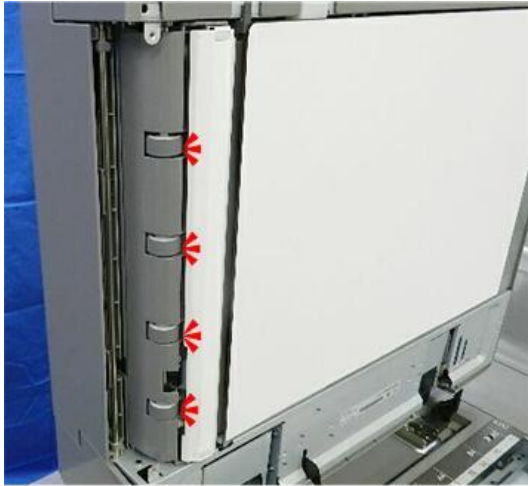
13. Raise the ADF [A].
14. Remove the left plate (🔑x2).
15. Clean the scanner rollers [B] attached to the plate.



d1802504

### 3.Preventive Maintenance

16. Clean the other rollers where the plate was removed.



d1802505

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### Scanner Unit (Copier)

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1. Remove the exposure glass.([Exposure Glass](#))
2. Use glass cleaner and a clean cloth to clean the scanner glass.



d1792626

3. Use glass cleaner and a clean cloth to clean the exposure glass.



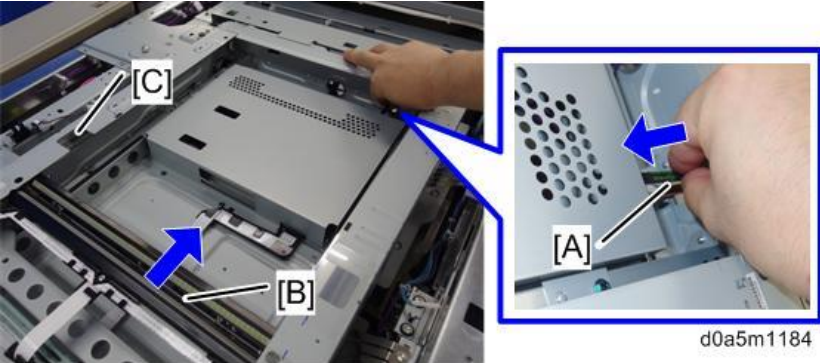
d1792627

4. Raise the sheet-through exposure glass [A] from the non-adhesive side (at the left end) and clean

both sides with a commercially available glass cleaner.



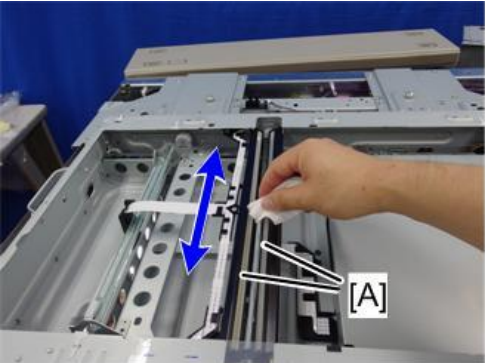
- 5. Turn the scanner motor belt [A] counter-clockwise until the scanner carriage [B] reaches the cut-out [C].



**Note**

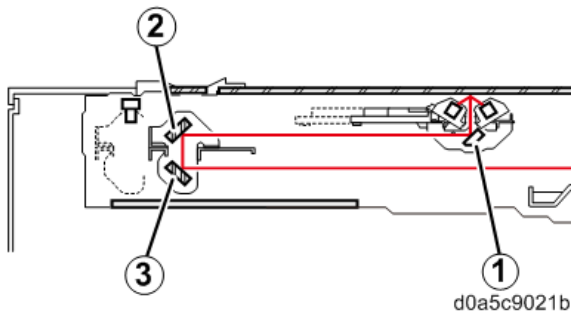
Do not touch the mirror, or light guide plates in the scanner carriage.

- 6. Use a lens cloth to clean the light guide plates [A].



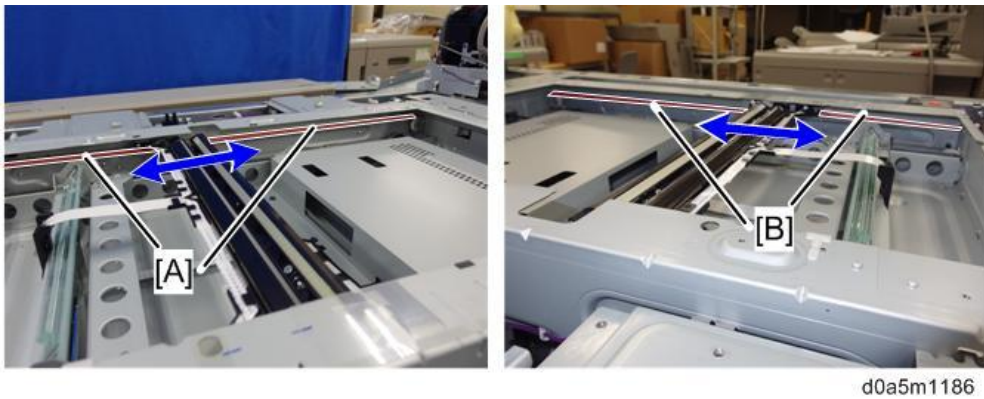
### 3.Preventive Maintenance

**7.** Use a lens cloth to clean the 1st mirror, 2nd mirror and 3rd mirror.

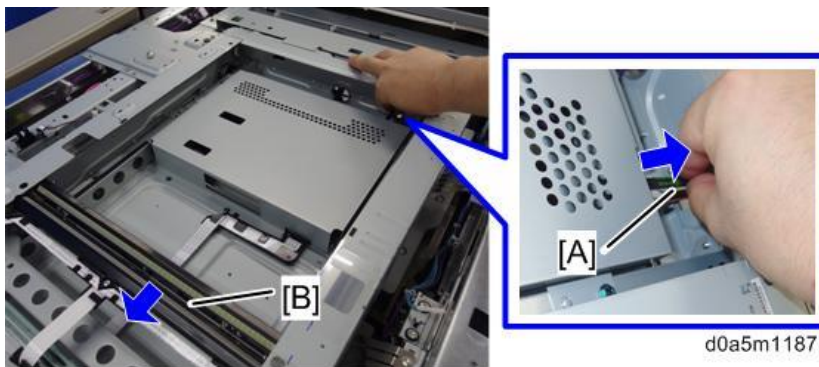


①	1st Mirror
②	2nd Mirror
③	3rd Mirror

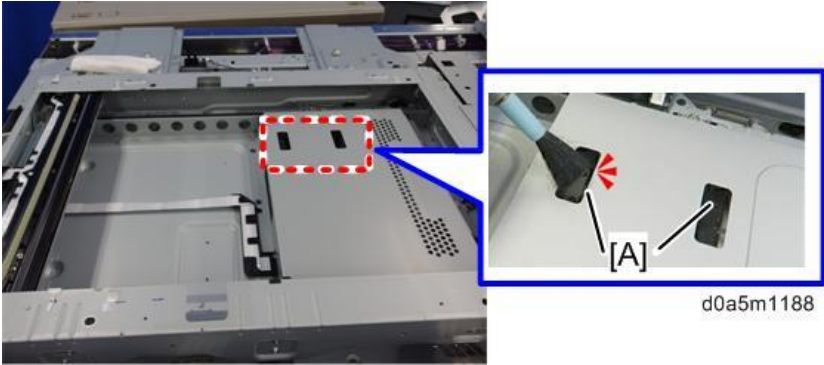
**8.** Use a clean cloth to clean the front guide rail [A] and rear guide rail [B].



**9.** When you are finished cleaning the optics, turn the scanner motor belt [A] until the exposure lamp unit [B] reaches the far left side of the exposure unit.



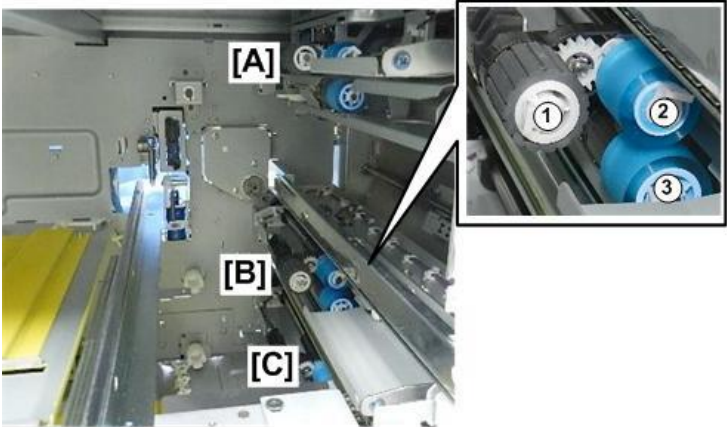
**10.** Clean the original size sensors [A] with a blower brush.



**PFU Rollers**

1. Remove the right half of Tray 1.
2. Remove Tray 2 and Tray 3.
3. Locate the paper feed units of each tray: [A] PFU 1, [B] PFU 2, [C] PFU 3. Each unit has an identical set of rollers.

①	Pickup Roller
②	Feed Roller
③	Separation Roller



4. Clean the rollers with a dry cloth.
5. Clean the sensors with a blower brush.

**Vertical Transport Unit (VTU) Rollers, Sensors**

1. Open the right front door.

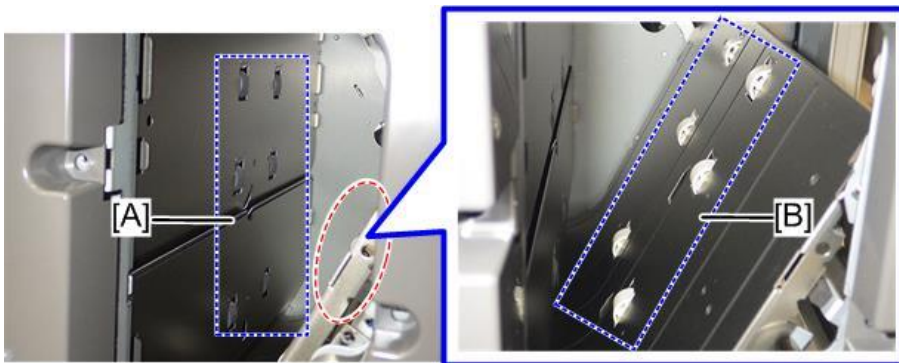
### 3.Preventive Maintenance

2. Lower the lever to release the transport plates.



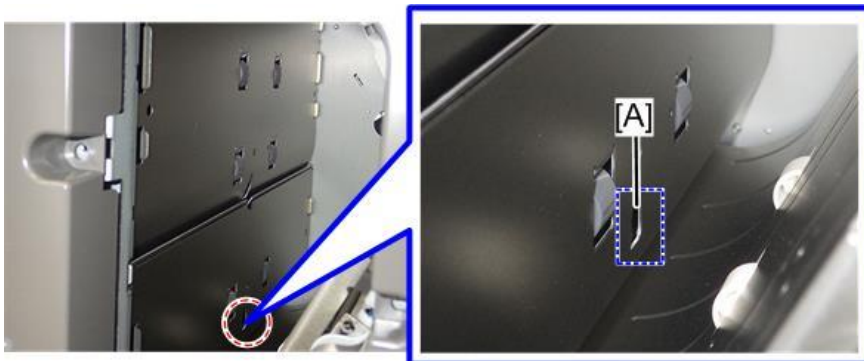
d1791702

3. Use a dry cloth to clean the rollers [A] and the idle rollers [B].



d0bxa3005

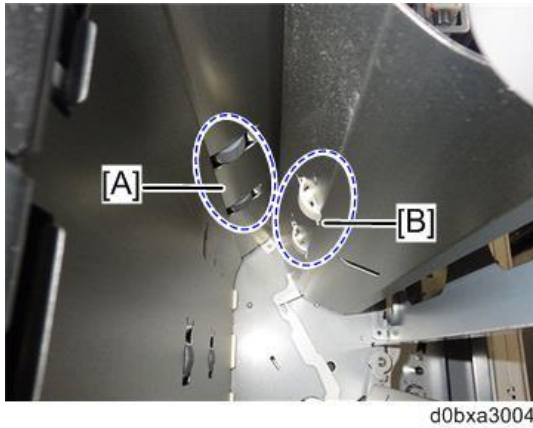
4. Use a blower brush to clean the sensor ports [A].



d0bxa3006

5. Use a dry cloth to clean the exit rollers [A] and idle rollers [B] at the top.



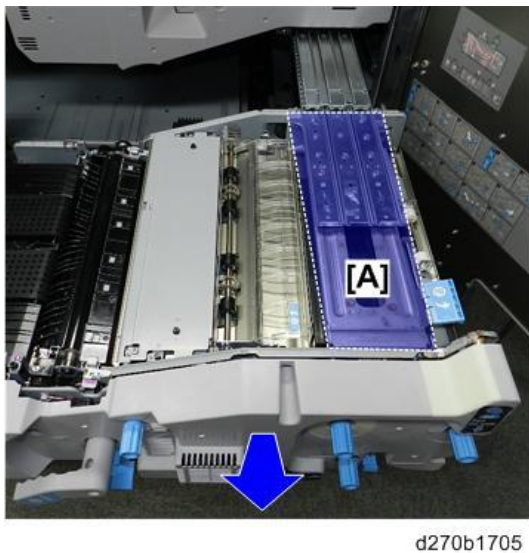


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### Drawer: Right Side

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1. Lower both handles and pull the drawer straight out until it stops.
2. You may need to remove the support rails, in order to do some of these procedures. ([Support Rails](#))



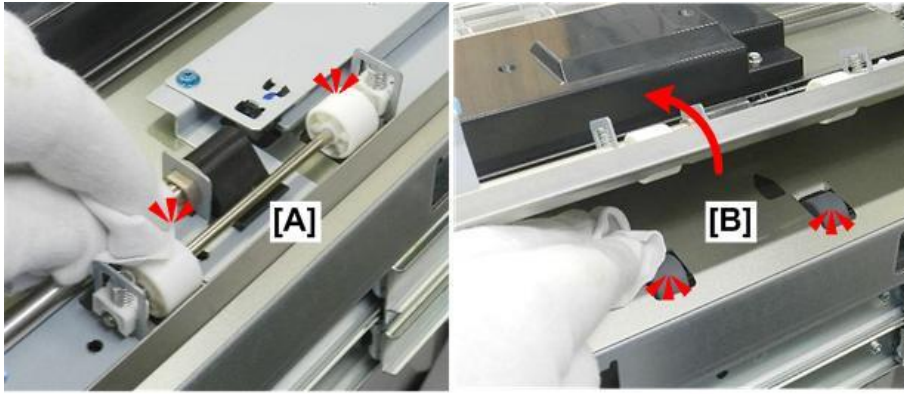
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### Entrance Rollers

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1. At the right edge of the drawer:  
[A] Dry cloth: Idle rollers  
[B] Dry cloth: Entrance rollers

### 3.Preventive Maintenance

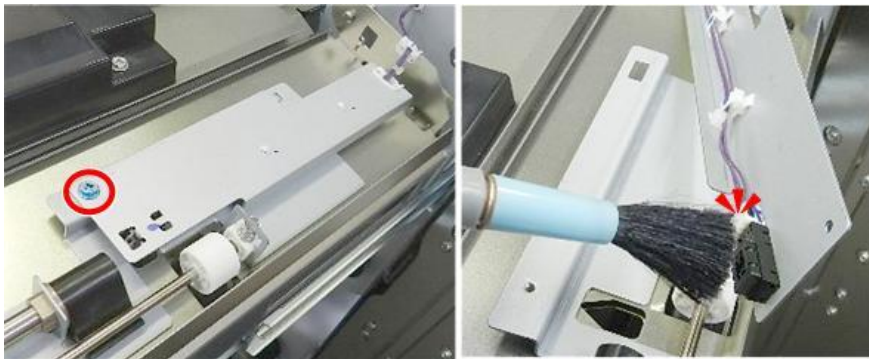


d1791711

#### LCIT Relay Sensor

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1. Remove the support rails. ([Support Rails](#))
2. Disconnect the cover (⚙️x1).
3. Blower brush: photosensor.

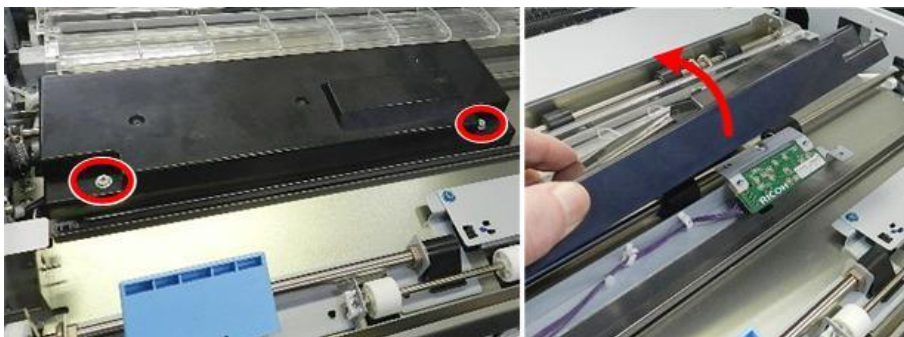


d1791706

#### Double-Feed Sensors, Registration Timing Sensor

---

1. Remove the support rails. ([Support Rails](#))
2. Remove the black cover (⚙️x2).
3. Disconnect the sensor bracket (⚙️x1).

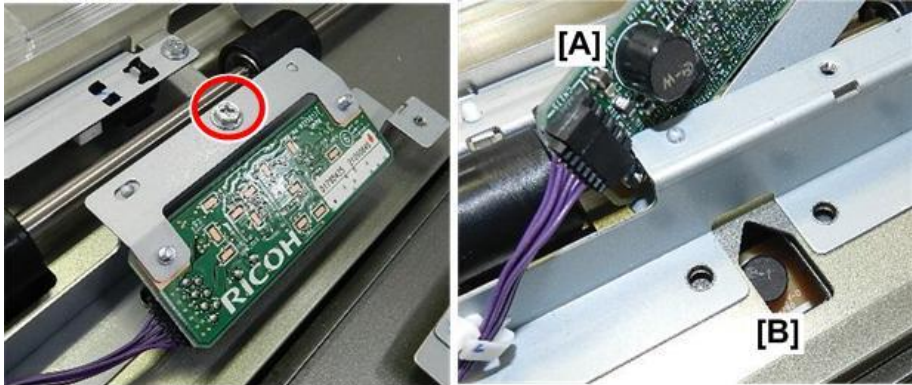


d1791707

#### Double-feed Sensors

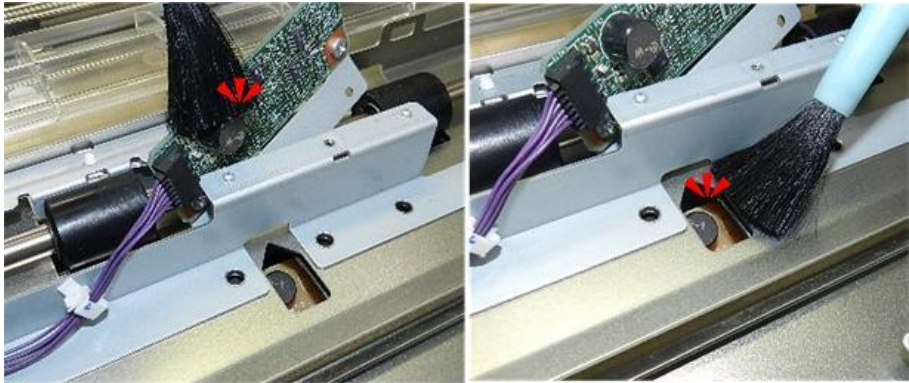
1. Lift the PCB so that you can see double-feed sensor 2 (receiver) [A] and double-feed sensor 1

(emitter) [B].



d1791708

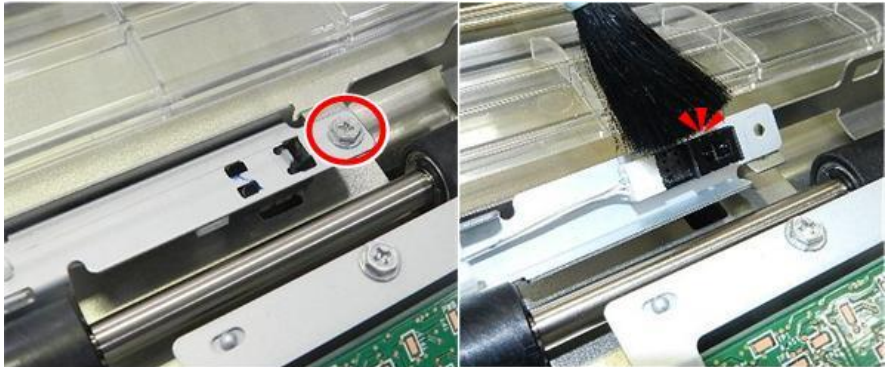
2. Blower brush: both sensors.



d1791709

**Registration Timing Sensor**

- 3. Disconnect the sensor bracket (🔧x1).
- 4. Blower brush: photosensor.



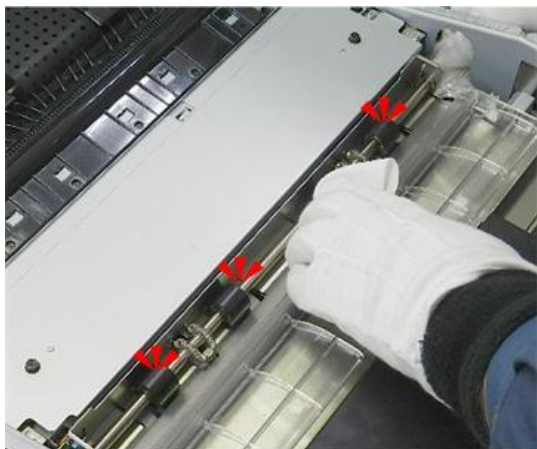
d1791710

### 3.Preventive Maintenance

#### Registration Timing Roller

---

1. Dry cloth: Rollers

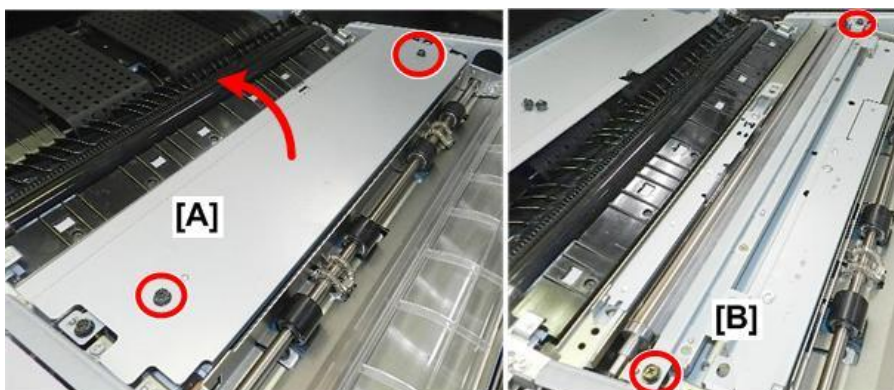


d1791717

#### Dust Collection Tray

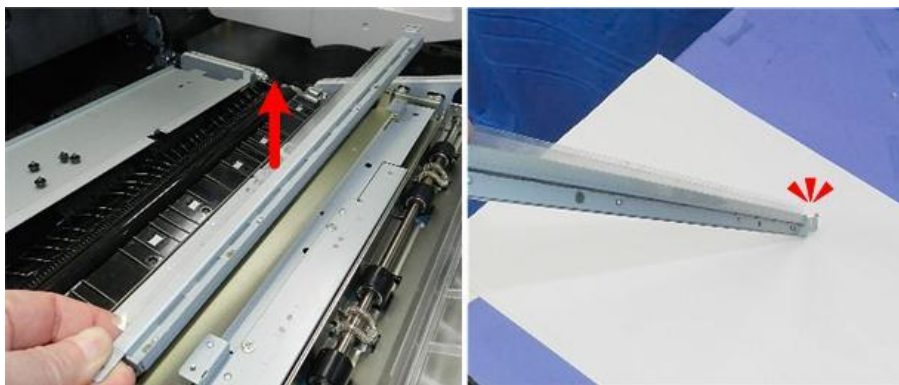
---

1. Remove the flat plate [A] (#x2).
2. Disconnect the dust tray [B] (#x2).



d1791712

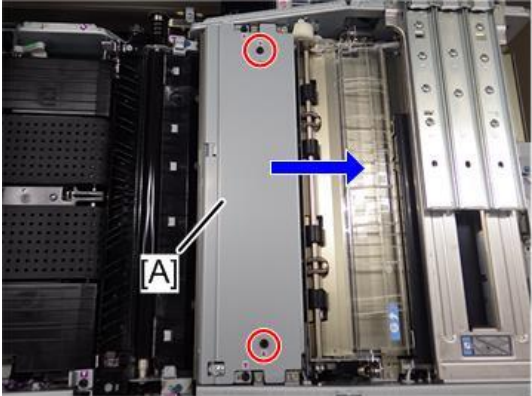
3. Tap the end of the tray on a piece of waste paper.
4. Dry cloth: wipe the tray clean.



d1791713

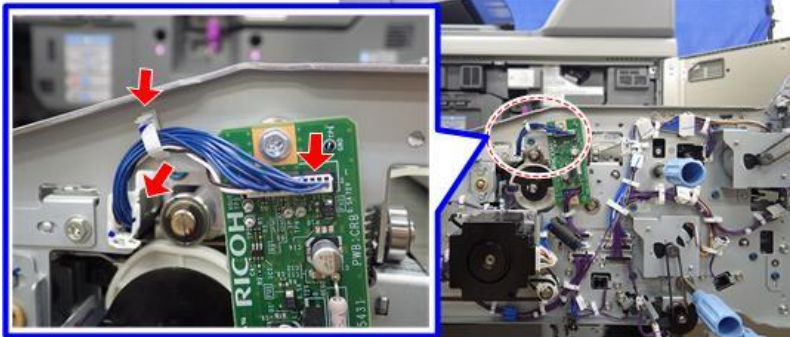
CIS

- 1. Remove the cover [A] (✂x2).



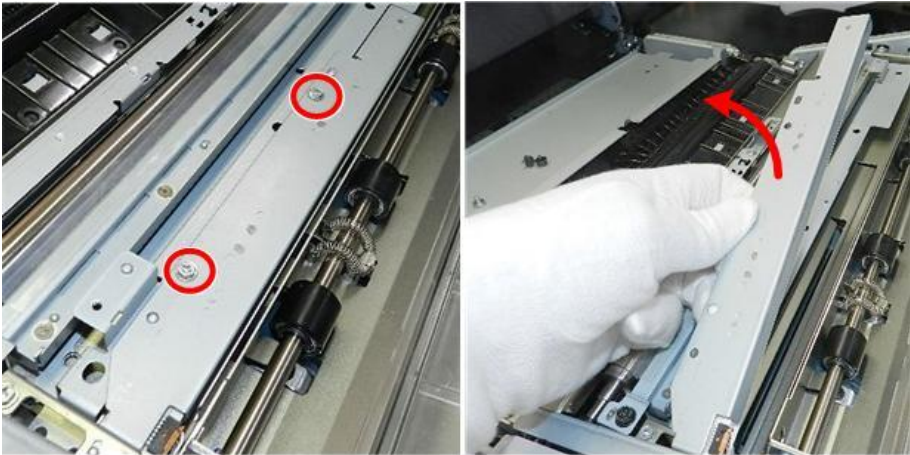
d0bxa4547

- 2. Disconnect the connector and open the clamps (✂x2, ✂x1).



d0bxa4548

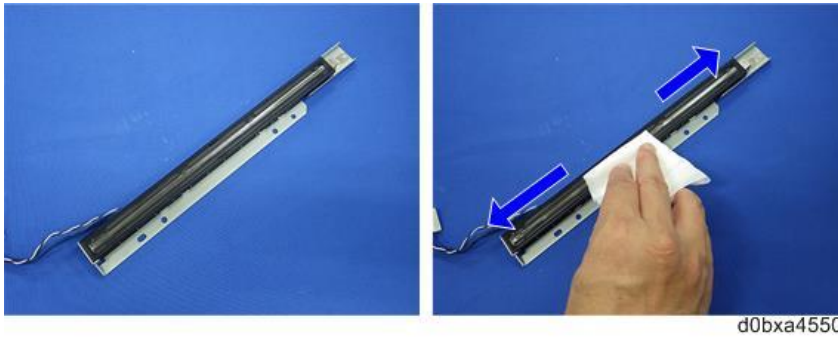
- 3. Disconnect the CIS (✂x2).



d1791714

### 3.Preventive Maintenance

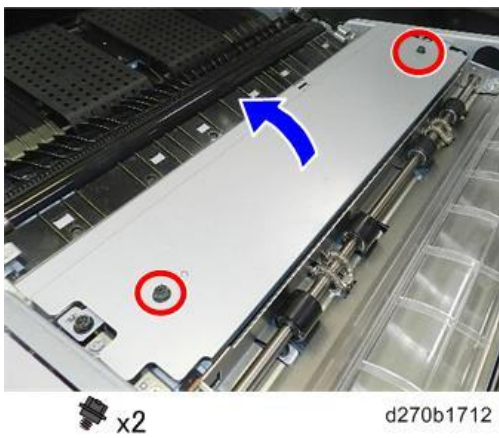
4. Lens cloth: Clean the glass.



### Transfer Timing Sensor

---

1. Remove the flat plate (#x2).



2. Disconnect the sensor bracket (⚙️x1).
3. Blower brush: Photosensor



---

### Drawer: Center

---

### Paper Transfer Roller

---

1. Turn the gear at the front.

- 2. Dry cloth: PTR



d1791718

Transfer Timing Roller: Upper

---

- 1. Turn the gear at the front.
- 2. Dry cloth: Roller

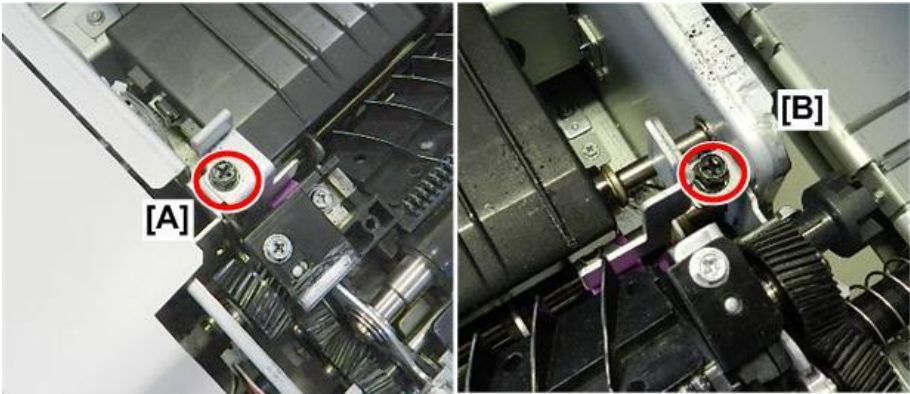


d1791719

Transfer Timing Roller: Lower

---

- 1. Disconnect the PTR unit:  
[A] Front (✖x1)  
[B] Rear (✖x1)



d1791720

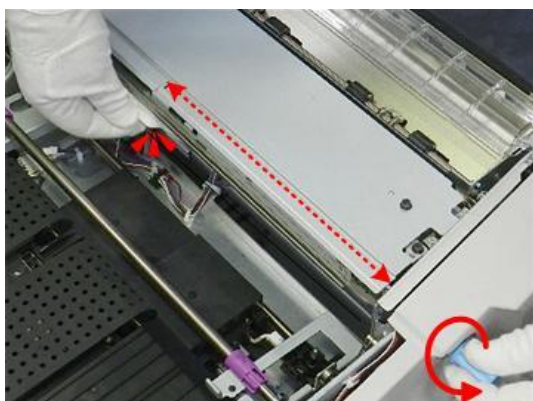
### 3.Preventive Maintenance

2. Push both levers in toward the center [A].
3. Remove the PTR unit [B].



d1791721

4. Dry cloth: Transfer timing roller. (The roller is up under the edge of the plate.)



d1791722

### PTB Sensor

---

1. Blower brush: Photosensor



d1791723



---

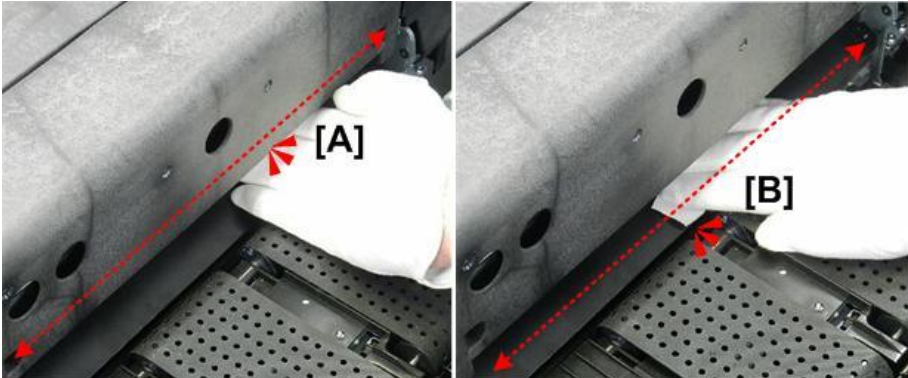
Fusing Unit

---

Entrance Plates

---

- 1. Dry cloth: Upper entrance plate [A]
- 2. Dry cloth: Lower entrance plate [B]



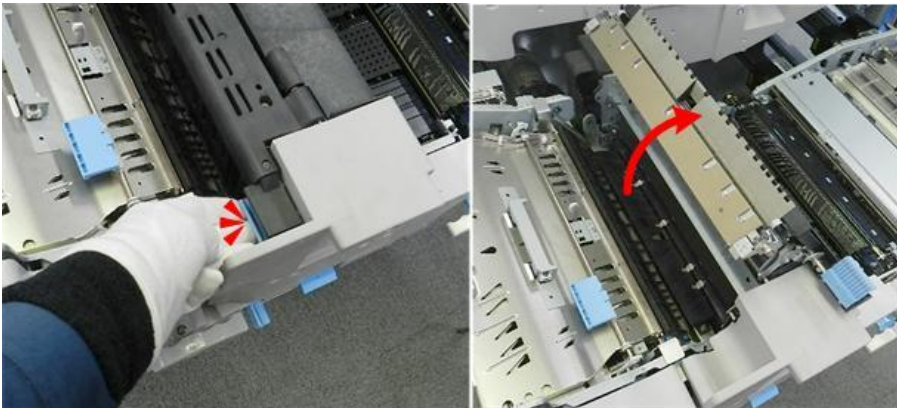
d1791724

---

Fusing Exit Sensor

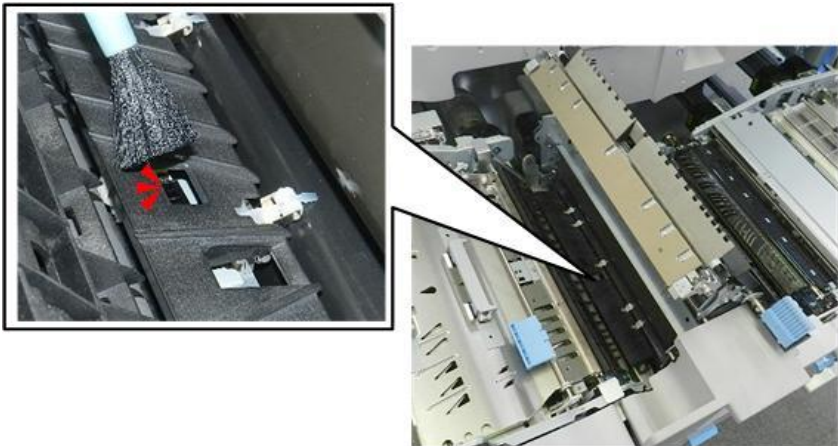
---

- 1. Open the fusing unit.



d1791725

- 2. Blower brush: Photosensor.



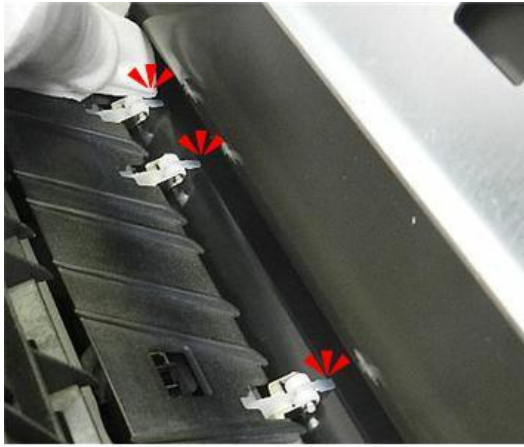
d1791726

### 3.Preventive Maintenance

#### Pressure Roller Strippers

---

1. Dry cloth: Point of each stripper.



d1791727

#### Fusing Belt, Pressure Roller

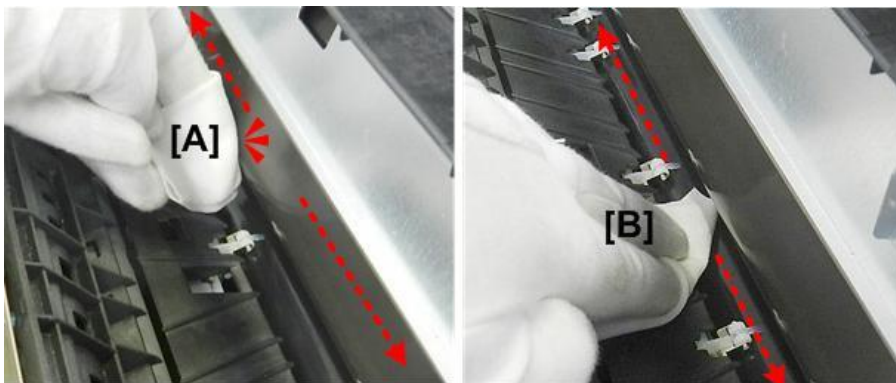
---

1. Remove the knob from the holder [A] on the inside of the left front door.
2. Insert the knob [B] into the front of the fusing unit and turn slowly.



d1791728

3. Dry cloth: Fusing belt [A]
4. Dry cloth: Pressure roller [B]



d1791729

### Cooling Pipe Roller

---

1. Turn the front knob.
2. Dry cloth: Roller

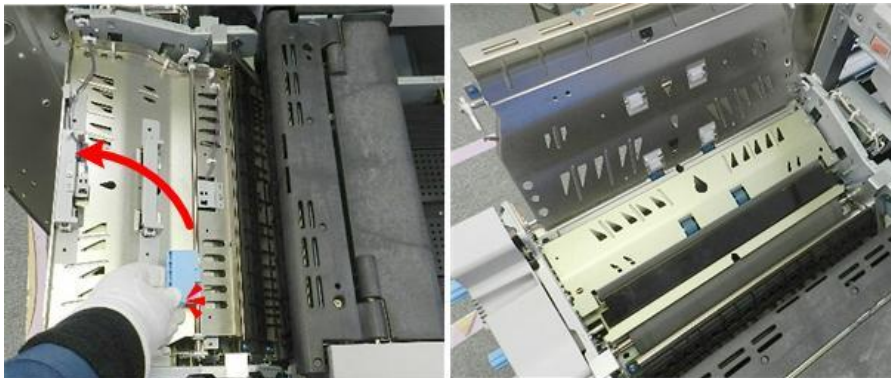


d1791730

### Drawer Left: Exit

---

1. Open the exit cover.



d1791731

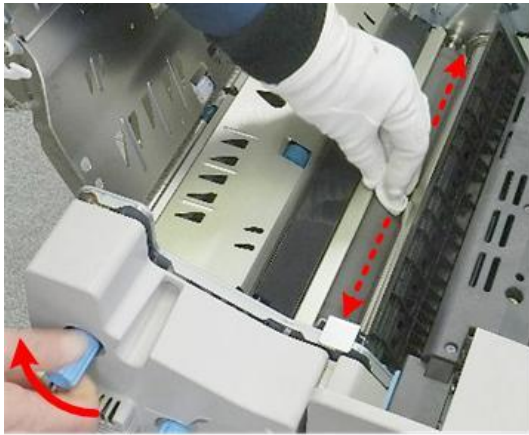
### Exit Cooling Belt

---

1. Turn the front knob.

### 3.Preventive Maintenance

#### 2. Dry cloth: Belt

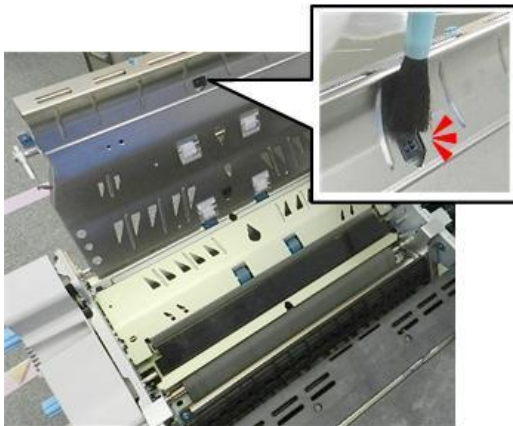


d1791737

#### Exit JG Sensor

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##### 1. Blower brush: Photosensor



d1791732

#### Exit Sensor

---

##### 1. Blower brush: Photosensor

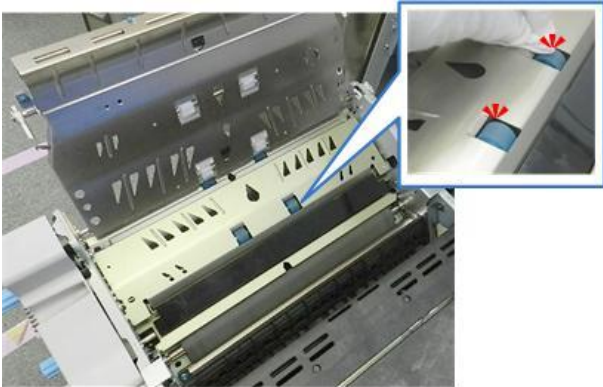


d1791733

Exit Relay Rollers

---

- 1. Dry cloth: rollers

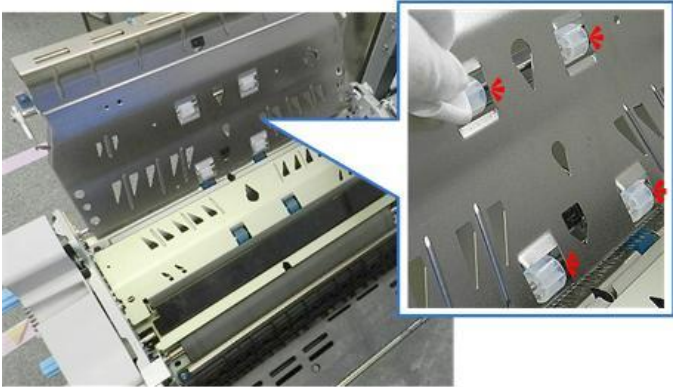


d1791734

Exit Idle Rollers, Exit Relay Idle Rollers

---

- 1. Dry cloth: Rollers.



d1791735

Exit Roller

---

- 1. Dry cloth: Rollers.



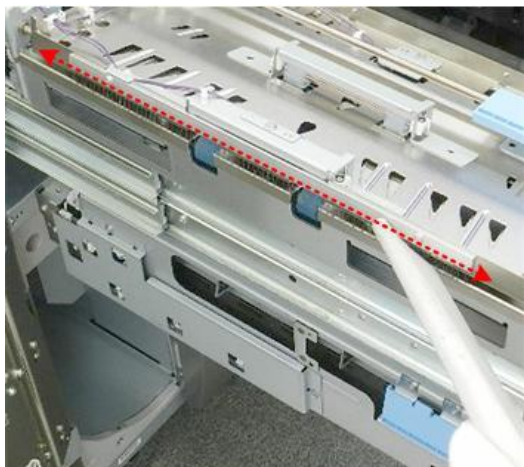
d1791736

### 3.Preventive Maintenance

#### Exit Anti-Static Brush

---

1. Vacuum cleaner (or blower bush) to the top edge of the exit.



d1791738

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#### Drawer Left: Invert Unit

---

1. Open the inverter unit on the left side of the drawer.



d1791739

#### Invert Rollers

---

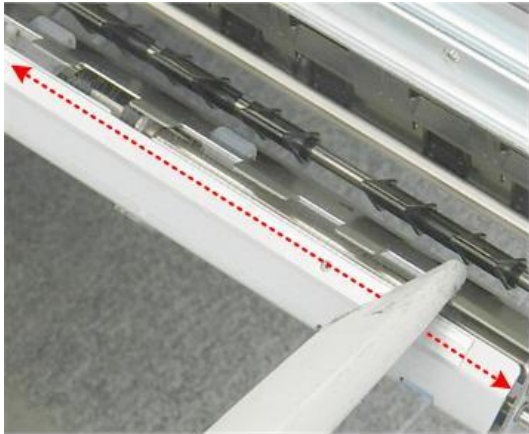
1. Dry cloth: Roller, idle rollers



d1791740

Inverter Anti-Static Brush

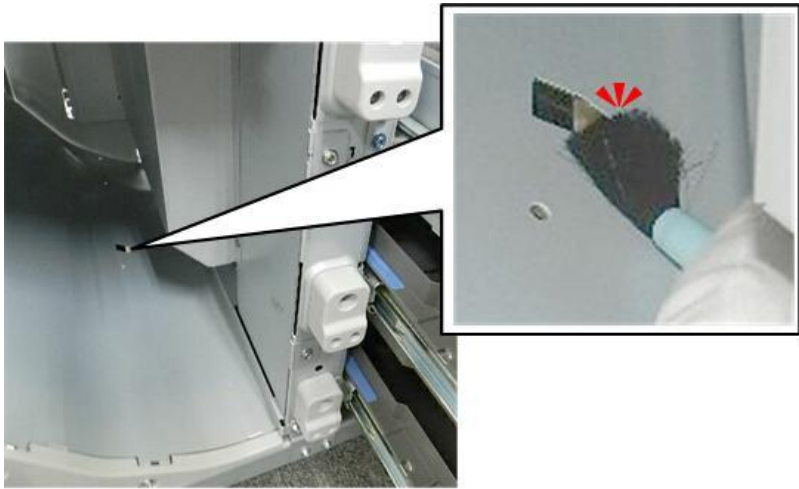
- 1. Vacuum cleaner (or blower bush): Edge.



d1791741

Purged Paper Sensor

- 1. Blower brush: Photosensor.



d1791742

Drawer: Front Covers Off

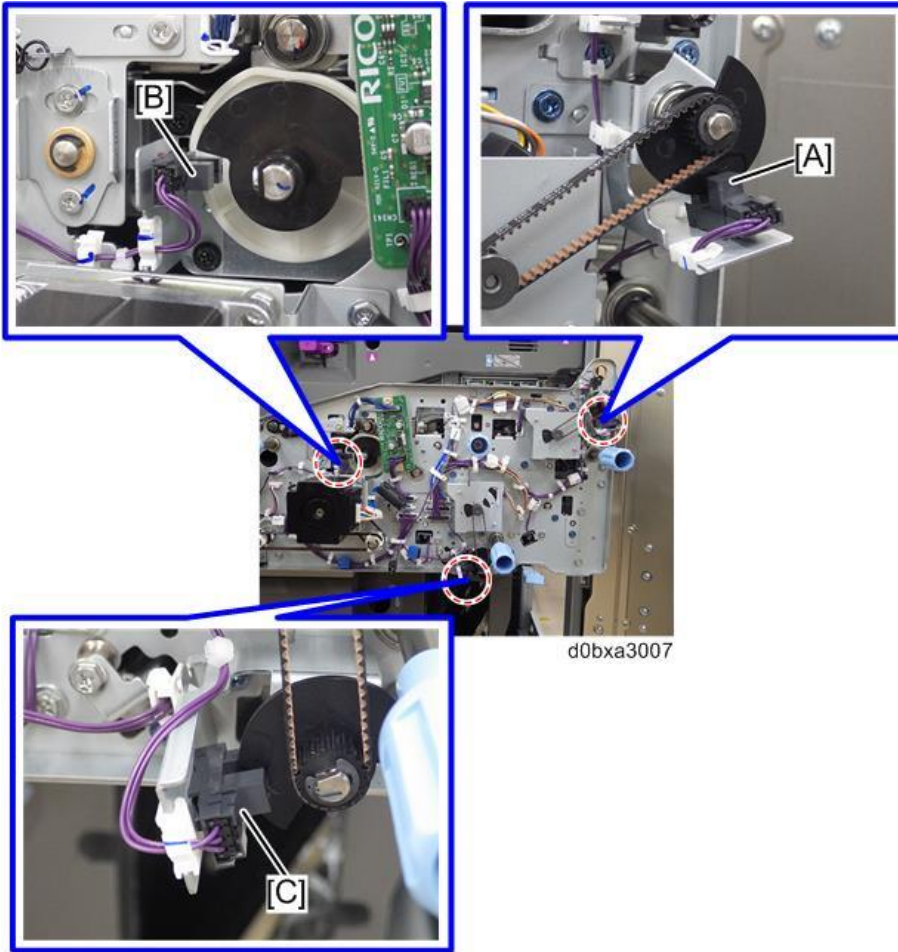
- 1. Disconnect the left front cover of the drawer, and then remove it (🔩 x2).
- 2. Disconnect the right front cover of the drawer, and then remove it (🔩 x4).

LCIT, Registration Roller, Main Relay HP Sensors

- 1. Blower brush: Each interrupt sensor

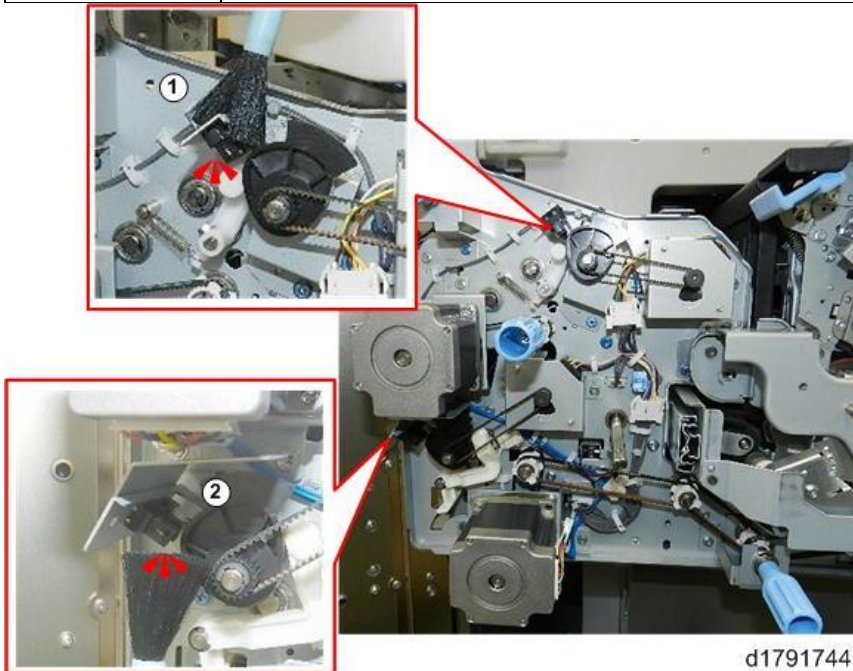
[A]	LCIT HP Relay Sensor
[B]	Registration Roller HP Sensor
[C]	Main Relay HP Sensor

### 3.Preventive Maintenance



#### Exit JG, Invert Exit HP Sensors

①	Exit JG HP Sensor
②	Invert Exit HP Sensor

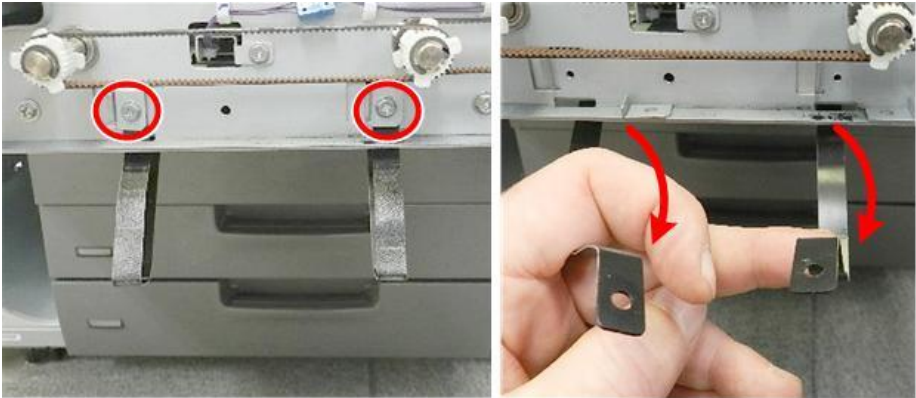


1. Blower brush: Each interrupt sensor



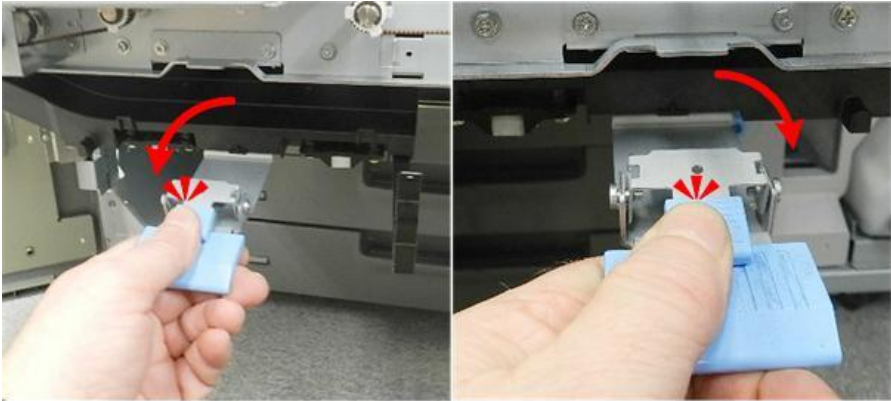
Transport Rollers, Sensors

- 1. At the front edge of the drawer, disconnect the strap clamps and straps (⊗ x2).



d1791745

- 2. Slowly, lower the bottom covers of the transport path.



d1791746

- 3. Allow both covers to hang vertically.



d1791747

### 3.Preventive Maintenance

4. There are exposed rollers and sensor ports on the right bottom cover.



d1791748

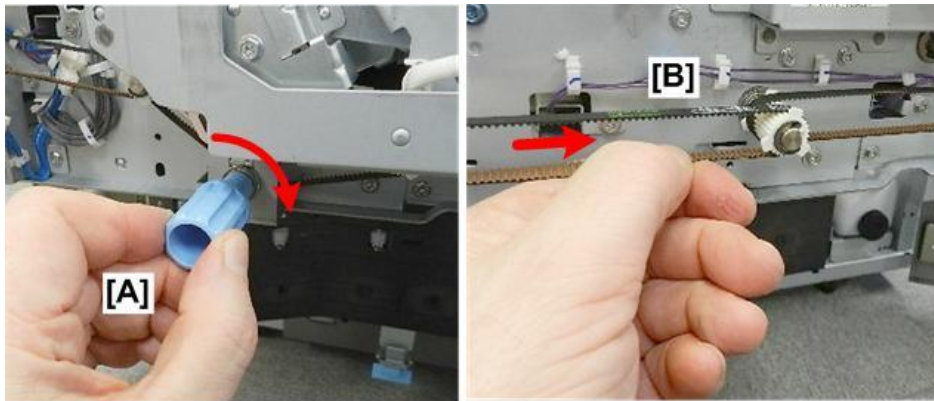
5. Dry cloth: Rollers
6. Blower brush: Photosensors (marked by arrows).
7. There are exposed rollers and sensor ports on the left bottom cover.



d1791749

8. Dry cloth: Rollers
9. Blower brush: Photosensors (marked by arrows).
10. Turn the knob [A] to rotate the rollers of the left bottom plate as you clean them.
11. Rotate the gears and belts [B] on the front of the drawer to rotate the rollers of the right bottom

plate as you clean them.

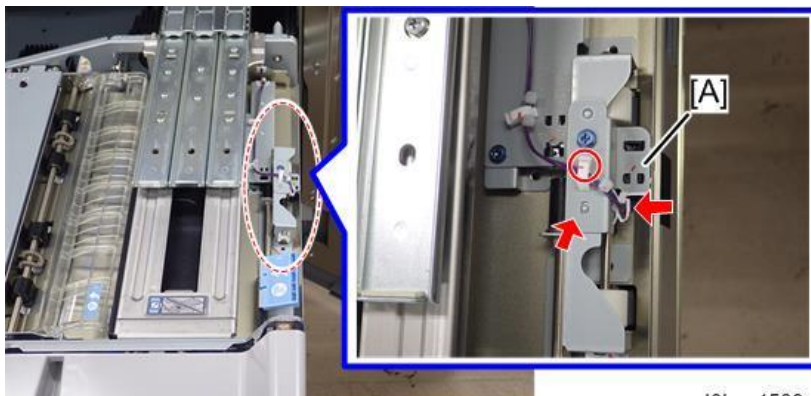


d1791750

## Paper Removal Sensor

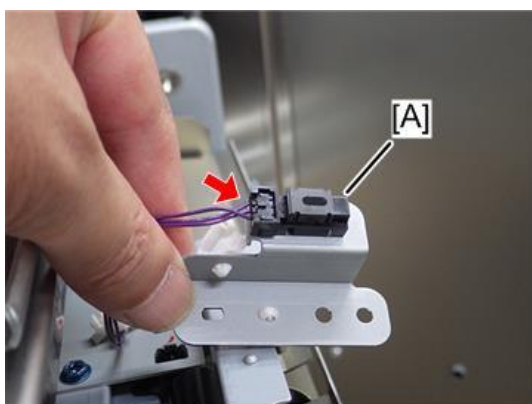
### LCT/Drawer Unit Paper Removal Sensor

1. Open the front doors and pull out the drawer ([Opening and Closing the Drawer](#)).
2. Remove the LCT/Drawer unit paper removal sensor [A] with the bracket (🔧x2, 🔩x1).



d0bxa4589

3. Remove the LCT/Drawer unit paper removal sensor [A] (🔧 x1, ▼ x4).



d0bxa4590

4. Remove paper dust from the sensor by a blower brush.

### 3.Preventive Maintenance

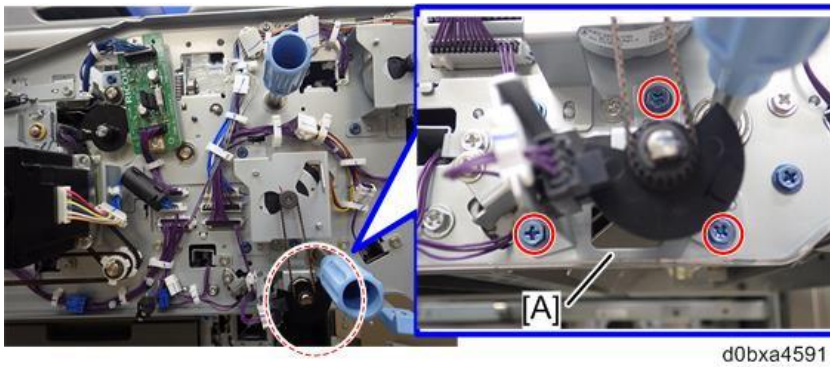
#### Tray/Drawer Unit Paper Removal Sensor

---

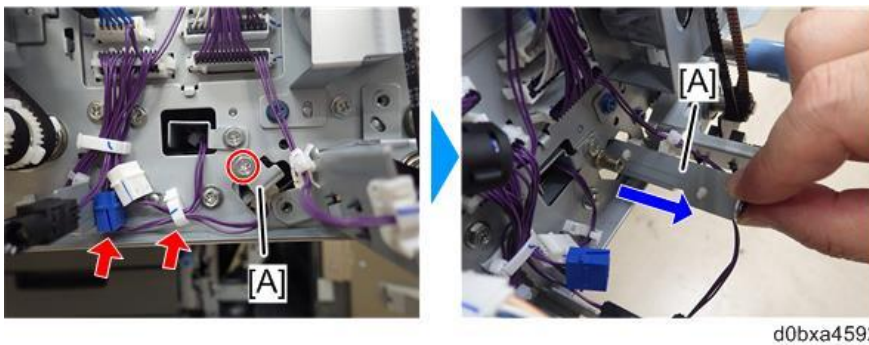
1. Open the front doors and pull out the drawer ([Opening and Closing the Drawer](#)).
2. Remove the drawer right cover (🔩 x5).



3. Remove the bracket [A] (🔩 x3).



4. Remove the tray/drawer unit paper removal sensor [A] with the bracket (🔩 x1, 📦 x1, 🔩 x1)



- 5.** Remove the LCT/drawer unit paper removal sensor [A] (📦 x1, ▼x4).



d0bxa4593

- 6.** Remove paper dust from the sensor by a blower brush.

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### Right Cover Air Intake Filters

---

- 1.** Remove the right front door. (Doors)  
**2.** Remove the right cover air intake filters [A].

The below picture shows the machine without the right cover but actually you need not remove the right cover in the work.



d0bxa4037

- 3.** Remove paper dust and other objects by a vacuum-cleaner.  
**4.** Attach the right cover air intake filters [A].

---

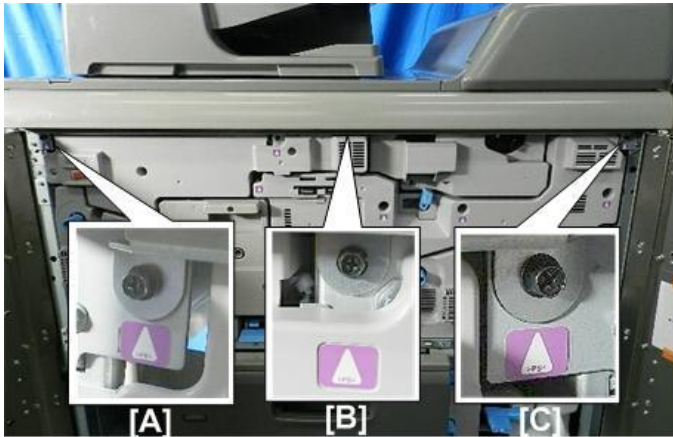
### Toner Shield Glass

---

The toner shield glass should be inspected and cleaned.

### 3.Preventive Maintenance

1. Disconnect the front edge cover at the three points [A], [B], [C] (#x3).



d1792750

2. Remove the front edge cover.



d1792751

3. Lower the image transfer belt.

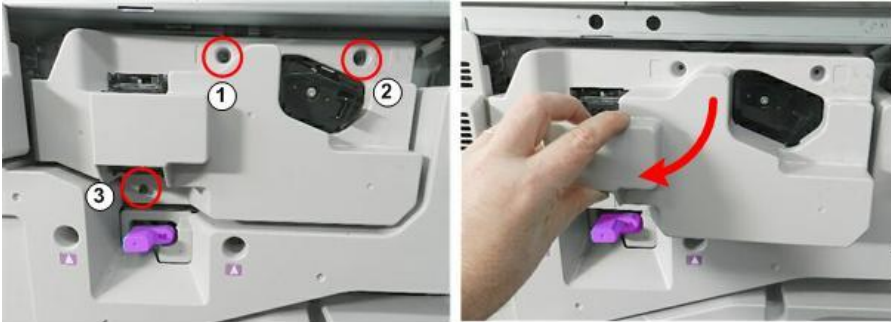


d1792752

4. Remove the PCDU cover (#x3).

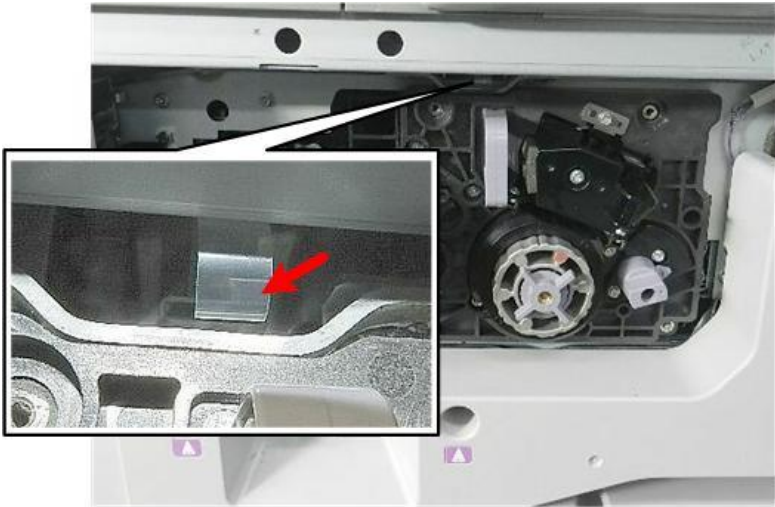
**★ Important**

- The screws can be removed in any order, but they must be re-installed in the order ① ② ③.



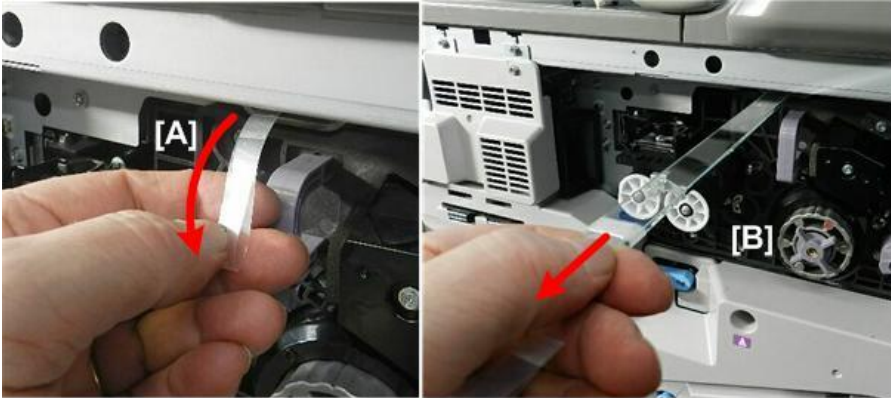
d1792753

5. Locate the plastic strip.



d1792754

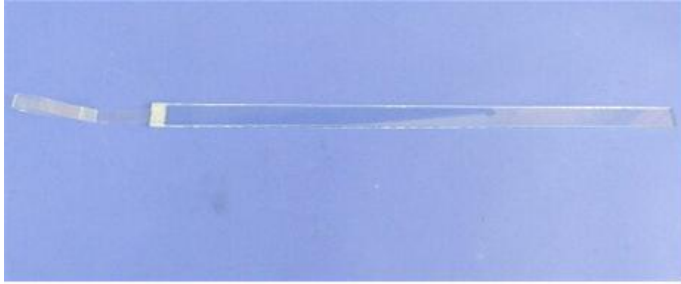
6. Pull out the strip [A], and then slowly pull it to remove the toner shield glass [B].



d1792755

### 3.Preventive Maintenance

7. Lay the toner shield glass on a flat clean surface for inspection and cleaning with a lens cloth.



d1792756

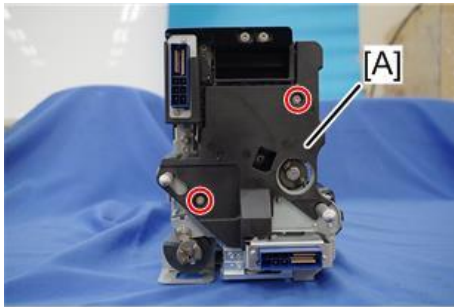


## Lubrication Points

### Fusing Unit

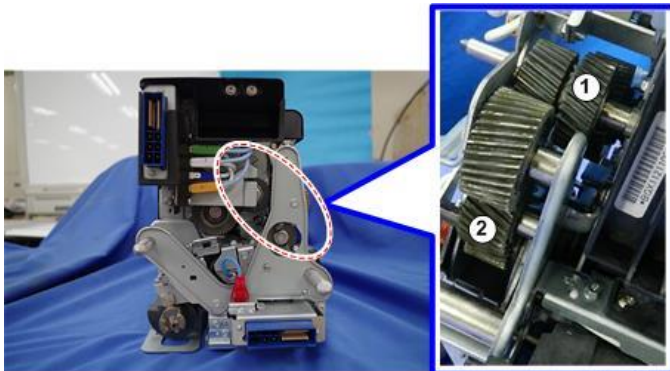
#### Drive Gears

1. Remove the fusing unit. ([Removing the Fusing Unit](#))
2. Remove the rear cover [A] (⊙ x2).



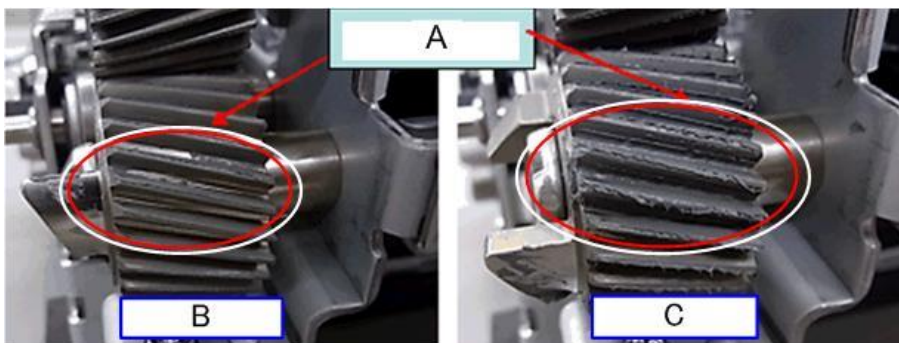
d0bxa4513

3. Apply Fluotribo MG Grease to the drive gears ①,②.
  - Apply  $1.5 \pm 0.3$  g to ①
  - Apply  $4 \pm 0.8$  g to ②



d0bxa4654

4. The gears [A] must be lubricated.
5. [B] shows the minimum application of grease and [C] the maximum application of grease.



d1803832

### 3.Preventive Maintenance

#### Heating Roller, Hot Roller Bearings

---

1. Separate the bearings and flanges.



d1803804

2. Use a small brush to apply Fluotribo MG Grease to the inner surfaces of the flanges and bearings.



d1803805

# Routine Cleaning at PM Visits

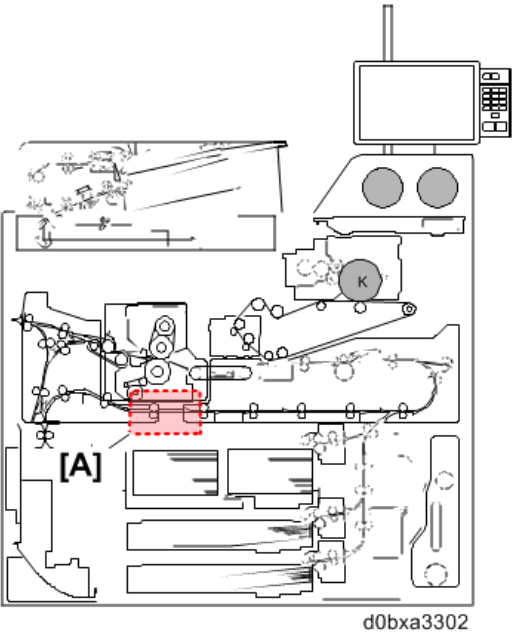
The following locations should be inspected and cleaned by the service technician at each PM visit to prevent toner scattering and other problems that could affect print quality.

---

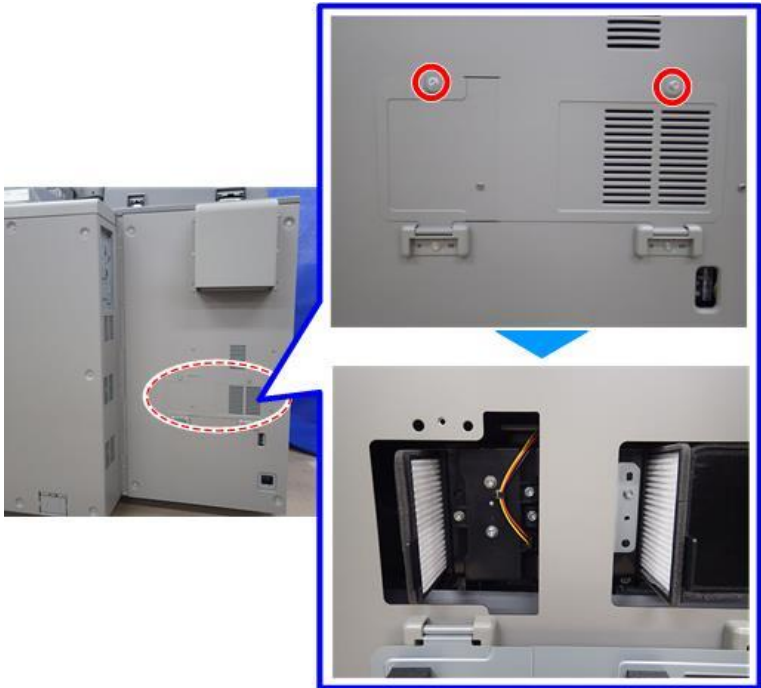
## Below the Fusing Unit

---

Inspect and clean at [A] to remove toner scattering and spillage which could affect the quality of image development.

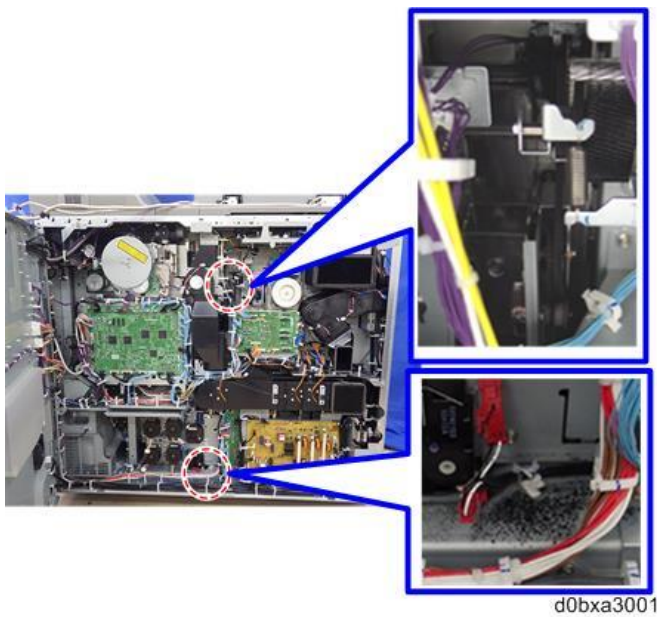


- 1. Use a vacuum cleaner to clean the dust filter. Replace if necessary.



### 3.Preventive Maintenance

2. Use a clean dry cloth, blower brush, or vacuum cleaner to remove any scattered toner.

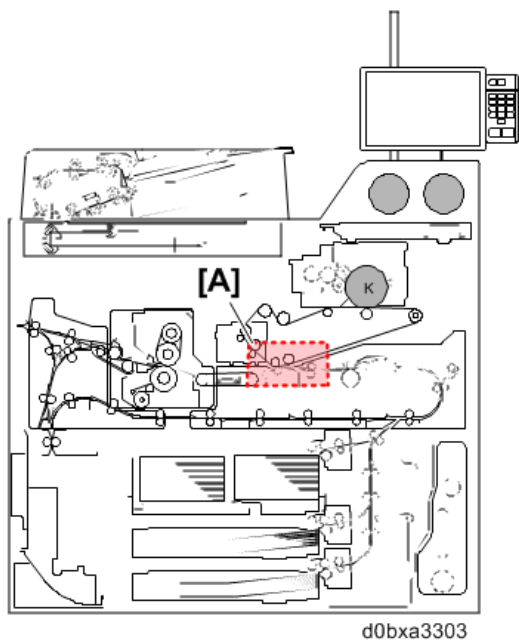


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### Registration Cover

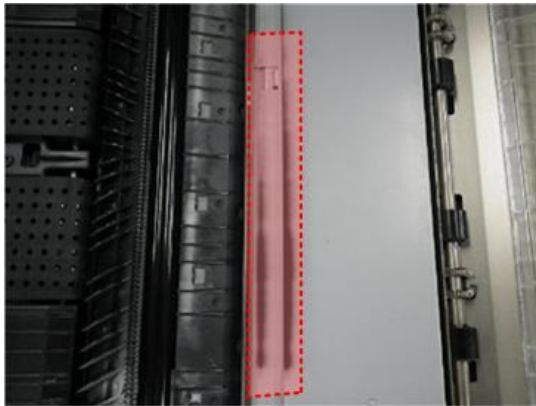
---

Inspect and clean at [A] around the registration cover.



### 3.Preventive Maintenance

1. Use a clean cloth or vacuum cleaner to clean away any loose toner, paper dust, etc.



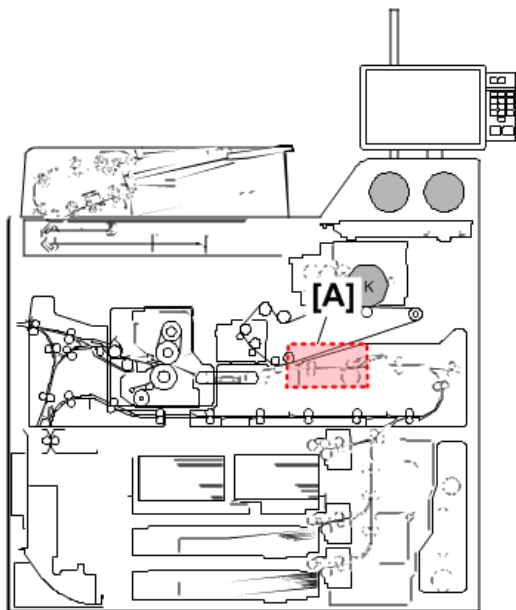
d270d3206

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#### CIS Area

---

Inspect and clean at [A] to prevent white spots and stains on the back sides of printed sheets. This will also prevent the following jam codes from occurring: J049, J050, J080.

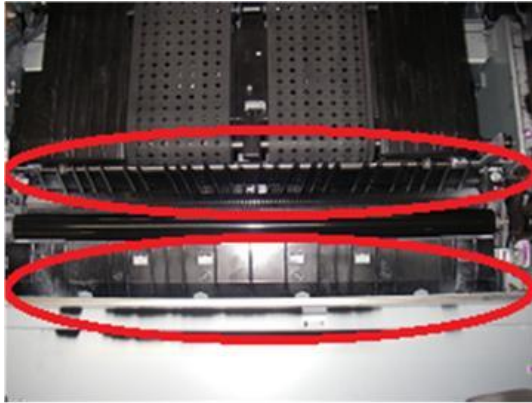


d0bxa3304

1. Use a clean cloth, blower brush, or vacuum cleaner, to carefully clean the area shown (transfer roller guide plate, paper transfer roller entrance, exit guide plate) to remove scattered toner, paper

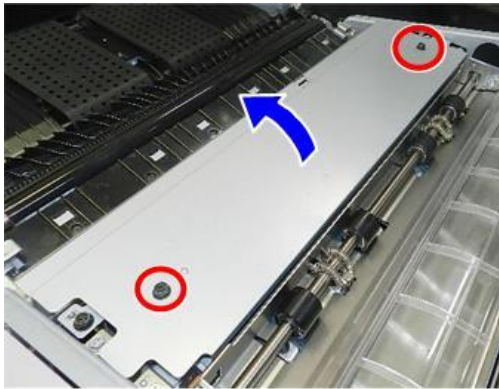
### 3.Preventive Maintenance

dust, etc.



d270d3207

2. Remove the plate (🔩 x2).



d270b1712a

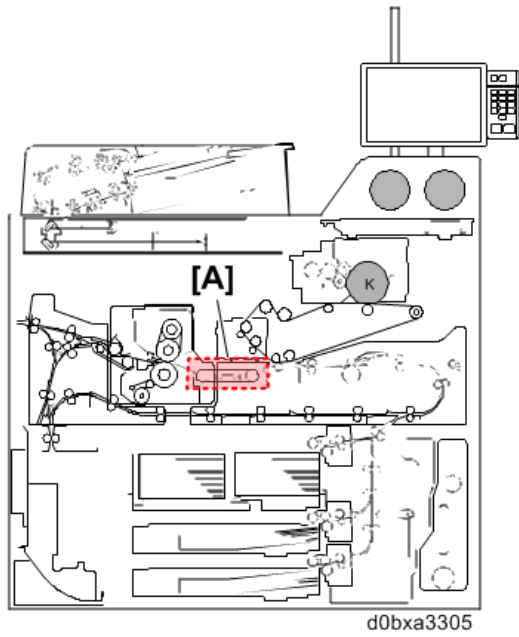
3. Empty the dust collect tray, clean the CIS, and then clean the transfer timing sensor.
  - (Dust Collection Tray)
  - (CIS)
  - (Transfer Timing Sensor)

---

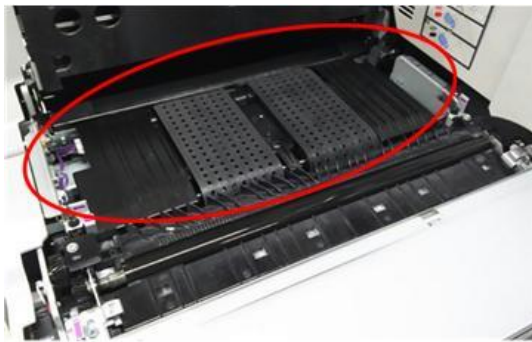
### PTB Unit Area

---

Inspect and clean [A] around the PTB unit to prevent poor image quality on the front surfaces and edges of printed sheets.



1. Use a clean cloth, blower brush, or vacuum cleaner to remove scattered toner, paper dust, etc. from around the fusing unit entrance guide, paper transfer belt, and guide ribs.



d270d3212

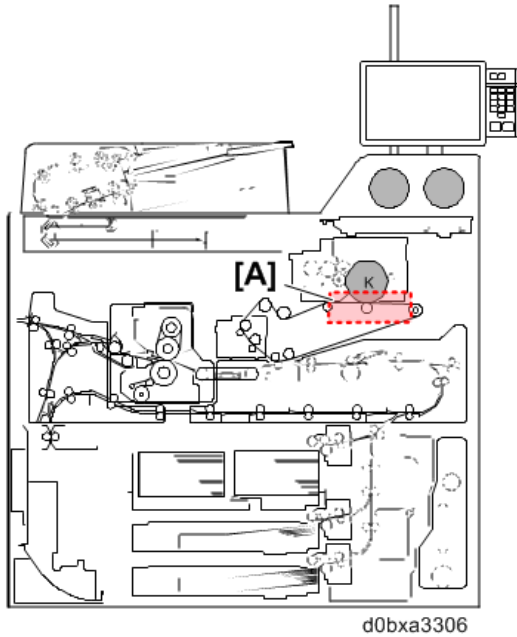
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### Development Unit Stay

---

Inspect and clean at [A] (the stay below the development unit).

### 3.Preventive Maintenance



1. Pull out the PCDU. You do not need to remove it. ([PCDU Removal](#))
2. Use a clean cloth, blower brush, or vacuum cleaner to clean the stay on the bottom of the development unit.



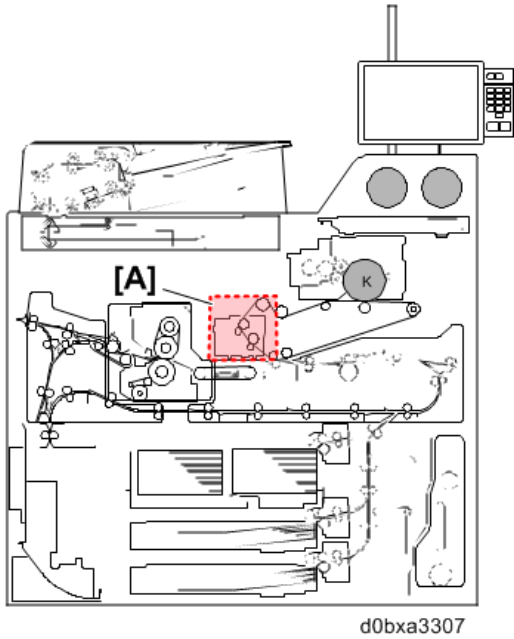
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### ITB Cleaning Unit Components

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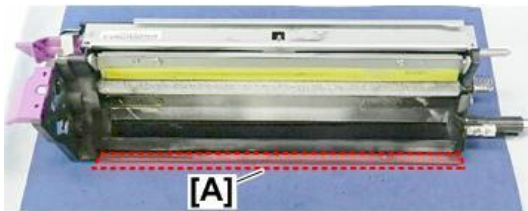
Remove, inspect, and clean the ITB unit [A].





d0bxa3307

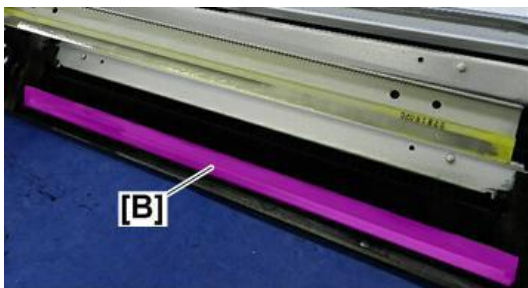
1. Remove the ITB cleaning unit. (ITB Cleaning Unit)
2. Clean the raised edge [A].



d270d3214

**Note**

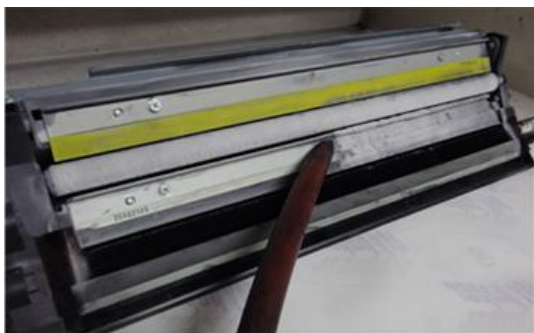
The entrance seals are fragile. Always work carefully to avoid damaging these seals. If the seals are damaged or become loose, this could cause toner scattering.



d270d3215

### 3.Preventive Maintenance

- 3. Use a vacuum cleaner to remove paper dust and toner from the edge of the cleaning blade.



d270d3216

**Note**

Work carefully to avoid nicking the edge of the cleaning blade.

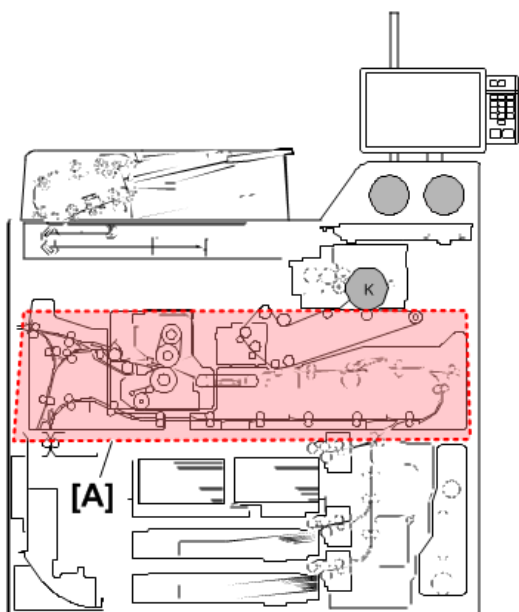
When you re-install the unit, check the side seals on each end of the unit. Confirm that they are tight and undamaged.

---

### Drawer Paper Path

---

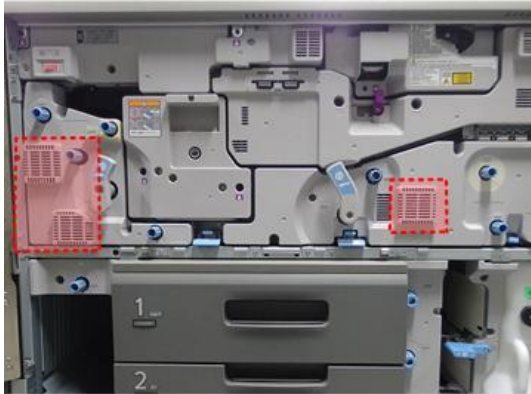
Inspect and clean [A] to prevent toner scattering in the paper path.



d0bxa3308

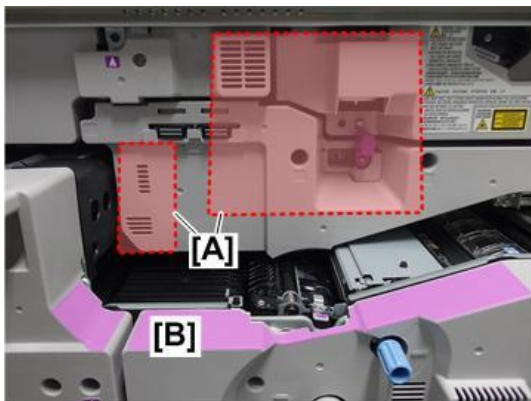
### 3.Preventive Maintenance

1. Clean the intake ducts near the left and right drawer release levers.



d270d3217

2. Lower the levers and open the drawer slightly.
3. Clean the ducts and surfaces [A] near the ITB lever, and the flat surfaces [B] next to the PTB unit.



d270d3218

4. Push the drawer into the machine when you are finished, but before you close the front doors, use a clean damp cloth to dust the front of the machine to discharge any accumulated static charge.

## 4. Replacement and Adjustment

---

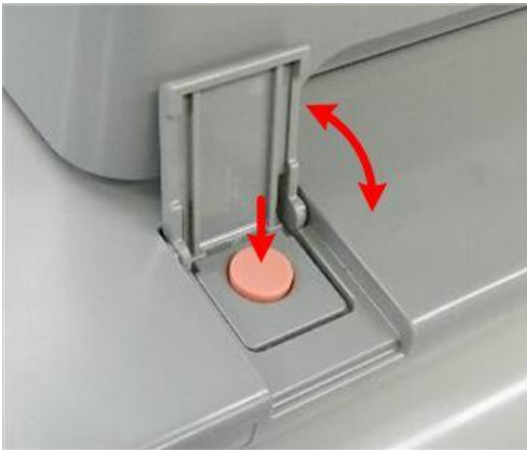
### Notes on the Main Power Switch

---

#### Push Switch

---

The main power switch of this machine is a push-button switch (push button), not the conventional rocker switch. The push switch has characteristics and specifications different from the rocker switch. Care must be taken when replacing and adjusting parts.



d1792202

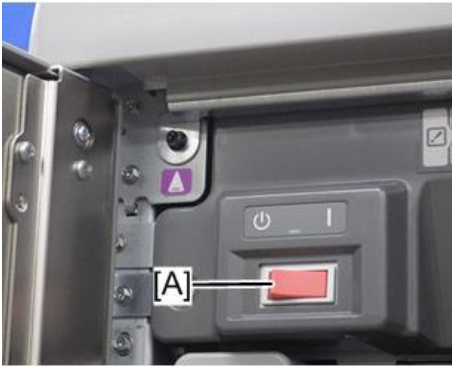
#### Characteristics of the Push Switch (DC Switch)

---

**Power is supplied to the machine even when the main power switch and AC power switch are turned OFF.**

The push switch in this machine uses DC (direct current). Therefore, if the AC power cord is connected to an electrical outlet, power is supplied to the controller board, the operation unit and other modules even when the main power switch and AC power switch are turned OFF. When replacing the controller board and the operation unit in this state, not only these boards, it will damage other electrical components.

When performing maintenance work such as replacing parts, in addition to turning off the main power with the push switch, always turn off the AC Power Switch [A] and then unplug the AC power cord. In the power supply boards (PSU), the place where there is a possibility of electric shock are described in this manual. Do not touch these place.



d0bxa4229

**When you disconnect the power cord from the AC wall outlet, inside the machine there is still residual voltage.**

When you disconnect the power cord from the AC wall outlet, inside the machine for a while there is still residual voltage. Therefore, if you remove boards in this state, it can cause a blown fuse or ICs failure.

- When you reconnect the AC power cord into an AC wall outlet and turn on the AC Power Switch, the machine will start automatically.

In order to remove the residual voltage, push the main power switch while you disconnect the AC power cord. At that time, the power ON flag inside the machine is set. Therefore, after you finish work on the machine and reconnect the power cord to the AC and turn on the AC Power Switch, even if you do not push the main power switch, the machine will start automatically and the moving parts will begin to move. **When working on moving parts, be careful that fingers or clothes do not get caught.**

### Note

- Automatic restart deals with cases when you accidentally unplugged the AC power cord or unexpected power outages. By keeping the power flag ON, after the resumption of power, the machine will start up automatically.

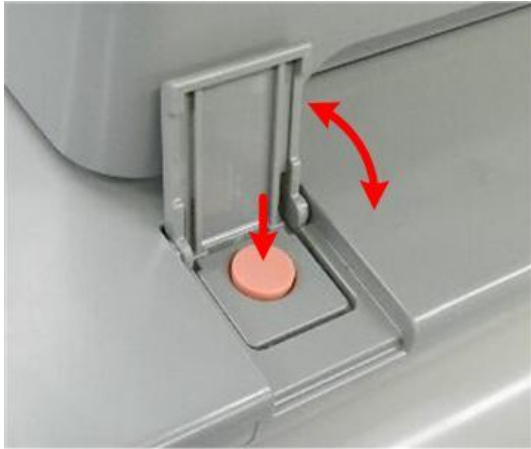
In rare cases, when you reconnect the AC power cord to a power outlet, the machine does not start automatically. In this case, the machine has not failed. The cause is due to the timing of releasing the residual voltage. If you press the main power switch while the residual voltage was already released, the power ON flag will not be set. At this time, start the machine manually by pressing the main power switch.

## 4.Replacement and Adjustment

### Shutdown Method

---

1. Push the main power switch on the top left of the machine to turn the power off.



d1792202

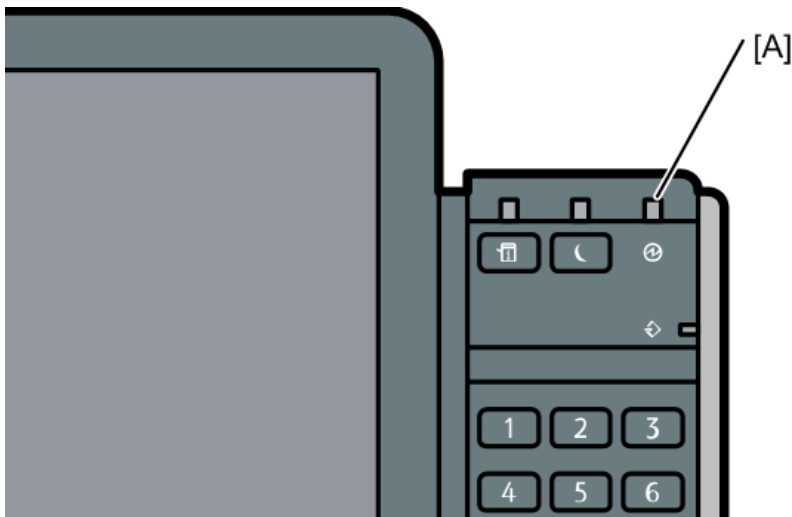
2. Take out the power cord.
3. Wait 5 minutes (this is the time required if you will remove the rear cover and access the interior of the machine, to take out the controller board for example)

#### ↓ Note

- If some LEDs on any of the boards are blinking or lit, current is still flowing.

After the shutdown process, the main power is turned off automatically.

When the shutdown is complete, the main power LED [A] goes off.



d0a5m0575

### How to Start from Shutdown

To start the machine, push the main power switch. However, if you push the main power switch between the beginning and the end of a shutdown, the machine will not start.

### Forced Shutdown

---

In case normal shutdown does not complete for some reason, the machine has a forced shutdown

function.

To make a forced shutdown, press and hold the main power switch for 6 seconds.

In general, do not use the forced shutdown.

 **Important**

- Forced shutdown may damage the hard disk and memory, and can cause damage to the machine. Use a forced shutdown only if it is unavoidable.

# General Precautions

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## Power ON/OFF

---

- Never turn off the power switch while the machine is operating.
  - Switching the machine off during operation could damage the transfer belt, drum, development unit, or other units when they are pulled out of or put back into the main machine.
- 

## Drum

---

An organic photoconductor (OPC) drum is sensitive to light. Follow the cautions below when handling an OPC drum.

1. Never expose the drum to direct sunlight.
  2. Never expose the drum to artificial light of more than 1,000 Lux for more than a minute.
  3. Never touch the drum surface with bare hands. When the drum surface is touched with a finger or becomes dirty, wipe it with a dry cloth or clean it with wet cotton. Wipe with a dry cloth after cleaning with wet cotton.
  4. Never use alcohol to clean the drum; alcohol dissolves the drum surface.
  5. Store the drum in a cool, dry place away from heat.
  6. Take care not to scratch the drum, because the drum layer is thin and is easily damaged.
  7. Never expose the drum to corrosive gases such as ammonia gas.
  8. Always keep the drum in the protective sheet when keeping the drum unit, or the drum itself, out of the main machine. This avoids exposing it to bright light or direct sunlight, and will protect it from light fatigue.
  9. Dispose of used drums in accordance with local regulations.
  10. When installing a new drum, execute **SP2962** (Auto Process Control Execution).
- 

## Drum Unit

---

1. Before pulling out the drum unit, place a sheet of paper under the drum unit to catch toner spill.
  2. Make sure that the drum unit is set in position and the drum stay is secured with a screw before the main switch is turned on. If the drum unit is loose, poor contact of the drum connectors may cause electrical noise, resulting in unexpected malfunctions (RAM data change is the worst case).
  3. To prevent drum scratches, remove the development unit before removing the drum unit.
- 

## Image Transfer Belt Unit

---

1. Never touch the ITB surface with bare hands.
2. Take care not to scratch the transfer belt, because the surface is easily damaged.
3. Before installing the new transfer belt, clean all the rollers and the inner part of the transfer belt with a dry cloth to prevent the belt from slipping.



---

### Scanner Unit

---

1. When installing the exposure glass, make sure that the guide mark at the rear left corner.
2. Clean the exposure glass with alcohol or glass cleaner to reduce the amount of static electricity on the glass surface.
3. Use a cotton pad or optical cloth to clean the mirrors and lens.
4. Do not bend or crease the exposure lamp flat cable.
5. Never disassemble the lens block unit. This will put the lens and the copy image out of focus.
6. Do not turn any of the CCD positioning screws. This will put the CCD out of position.

---

### Laser Unit

---

1. Never loosen the screws that secure the LD drive board to the laser diode casing. This will put the LD unit out of adjustment.
2. Never attempt to adjust the variable resistors on the LD unit. They are pre-adjusted at the factory.
3. The polygon mirror and F-theta lenses are very sensitive to dust. Never open the optical housing unit.
4. Never touch the glass surface of the polygon mirror motor unit with bare hands.
5. After replacing the LD unit, do the laser beam pitch adjustment. Otherwise, an SC condition will be generated.

---

### Charge Corona

---

1. Clean the corona wires with a dry cloth. Never use sandpaper or solvent.
2. Clean the charge corona casing with water first to remove NOx based compounds. Then clean it with alcohol if any toner still remains on the casing.
3. Clean the end block with a blower brush first to remove toner and paper dust. Then clean with alcohol if any toner still remains.
4. Never touch the corona wires with bare hands. Oil stains from fingers may cause uneven image density on copies.
5. Make sure that the wires are correctly between the cleaner pads and that there is no foreign material (iron filings, etc.) on the casing.
6. When installing new corona wires, do not bend or scratch the wire surface. Doing so may cause uneven charge. Also be sure that the corona wires are correctly positioned in the end blocks.
7. Clean the grid plate with a blower brush (not with a dry cloth).
8. Never touch the charge grid plate with bare hands. Also, do not bend the charge grid plate or make any dent in it. Doing so may cause uneven charge.

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### Development

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1. Always work carefully to avoid nicking or scratching the development roller.

## 4.Replacement and Adjustment

2. Place the development unit on a sheet of paper after removing it from the main machine.
3. Never disassemble the development roller assembly. The position of the doctor blade is set with special tools and instruments at the factory to ensure the proper gap between the doctor blade and the development roller.
4. Clean the drive gears after removing used developer.
5. Dispose of waste developer in accordance with local laws.
6. Never load types of developer and toner into the development unit other than specified for this model. Doing so will cause poor copy quality and toner scattering.
7. After the development unit has been completely filled with fresh developer and the counter has been reset to zero, the machine initializes the TD sensor automatically as soon as the front doors are closed. After the TD sensor has been initialized, the machine will automatically execute process control. If a problem occurs during either initialization phase, the machine will issue an SC code. Refer to the SC code table to solve the problem. After correcting the problem, execute SP3030-001 to initialize the TD sensor, and then do SP3011-002 to execute initial process control.
8. When using a vacuum cleaner to clean the development unit casing, always ground the casing with your fingers to avoid damaging the toner density sensor with static electricity.

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## Cleaning

---

1. When servicing the drum cleaning section, be careful not to damage the edges of the drum cleaning blade and 2nd cleaning blade.
2. Do not touch the cleaning blade with bare hands.
3. Before disassembling the cleaning section, place a sheet of paper under it to catch any toner falling from it.

---

## Fusing Unit

---

1. After installing the fusing thermistor, make sure that it is in contact with the hot roller and that it is movable.
2. Be careful not to damage the edges of the hot roller strippers or their tension springs.
3. Do not touch the fusing lamp and rollers with bare hands.
4. Make sure that the fusing lamp is positioned correctly and that it does not touch the inner surface of the hot roller.

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## Paper Feed

---

1. Do not touch the surface of the pick-up, feed, and separation rollers.
2. To avoid paper misfeeds, the side fences and end fence of the paper tray must be positioned correctly to align with the actual paper size.

---

## Waste Toner

---

1. We recommend checking the amount of waste toner at every EM.
2. Dispose of waste toner in accordance with local regulations. Never throw toner into an open flame, because toner dust may ignite.

## Precautions for This Machine

### ⚠️ WARNING

- Before servicing the machine turn it off and disconnect it from its power source.
- Always wait at least 10 minutes for residual charge on the PSU boards and the AC drive board to disperse before removing the rear cover of the machine.
- Residual charge can remain in the condensers of the PSU boards, even after the machine has been switched off and disconnected from its power source.
- When working around the PSU or AC drive boards with the back cover off the machine, take extra precautions to avoid the danger of electrical shock.
- Avoid touching the PSU or AC drive boards with your bare hands or metal tools.

### ⚠️ CAUTION

- To prevent damage to the ITB, drum, or development unit when removing them or putting them back into the machine, never switch off the AC power switch or main power switch while the machine is operating.

---

## General

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### Screws

---

There are two types of commonly used screws: blue and silver.

- Always remove and re-install **blue** screws at their original location.
- Always remove and re-install **silver** screws at their original location.
- Do not mix blue and silver screws.



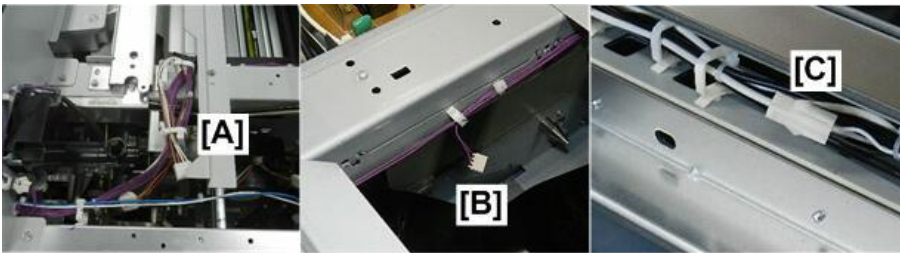
d1792101

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## Printer Models

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The printer has no ADF. However, the connectors and harnesses for the ADF have been left in the machine: SIOB harnesses at the rear [A], connector at the center [B], and connector on the left edge [C].

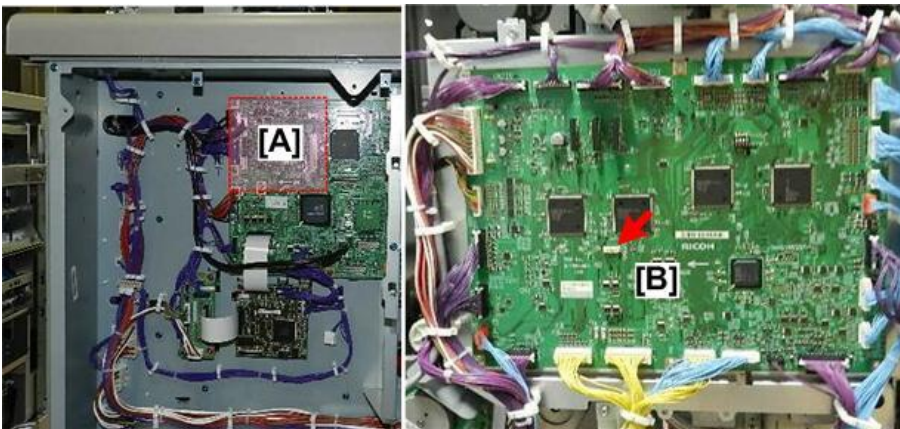


m263b0024

### ★ Important

- These harnesses should always remain clamped to the frame.
- Do not attempt to remove these harnesses.

There is no IPU sub board at [A] in the printer model. Also, service technicians should know that some of the connection points [B] on the boards are empty because they are for the copier model of this machine (these harnesses and connectors have been removed for the printer model).



m263b0025

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## Rear Controller Box

---

Exercise caution when operating the machine with the rear controller box open:

- This machine has many fans and ventilation ducts to expel ozone, paper dust, and hot air from around the PCDUs and other areas inside the machine.
- If you service the machine and then check printing operation with the rear controller box open, dust or gases may adhere to the drum and cause problems with image output (white block patterns for example).
- Normally, process control can handle such minor problems, but if you want to recover the print quality as soon as possible, print several sheets with solid images.

---

## PCDU

---

### ⚠ CAUTION

- The charge corona unit must always be removed before pulling out the PCDU.
- Never attempt to pull out the PCDU with the charge corona unit in the machine.
- Pulling out the PCDU without removing the charge corona unit will damage the cleaning pad

#### 4.Replacement and Adjustment

HP sensor and its harness.

1. Press the tab [A] to release the charge corona unit.
2. Pull the charge unit [B] out of the machine.



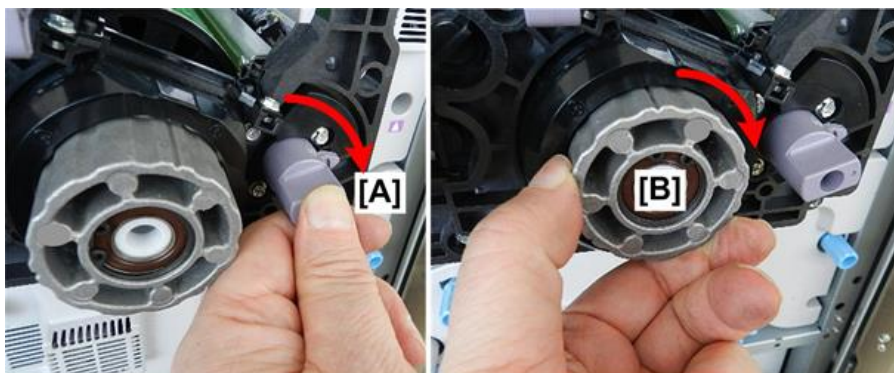
d1792902

3. To prevent scratching a drum or the ITB, always lower the ITB before you remove the PCDU or pull out the ITB unit.



d1793237

4. Before you push the PCU into the machine:
  - Rotate the cleaning unit lever [A] clockwise to lock it.
  - Rotate the drum wheel [B] clockwise to lock it.



d1792987

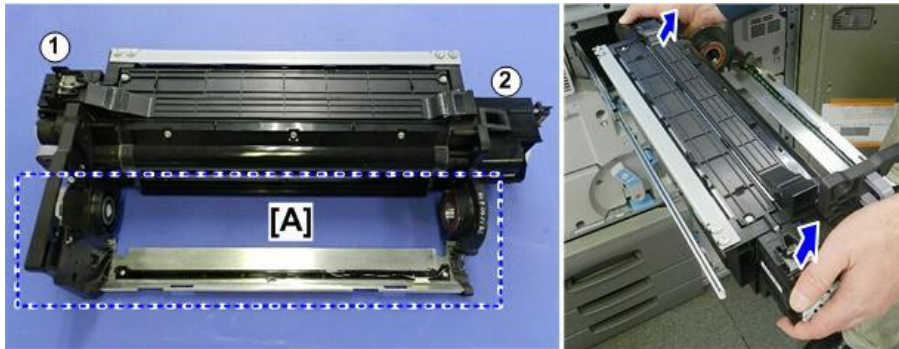
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## Development Unit

---

### ★ Important

- Never touch any part of the frame [A] when you lift the development unit off its rails. The drum cradle is fragile and can easily be bent.
1. Grip both ends of the unit at the orange tabs ① and ②.
  2. Lift the development unit off the rails.



d270b2915

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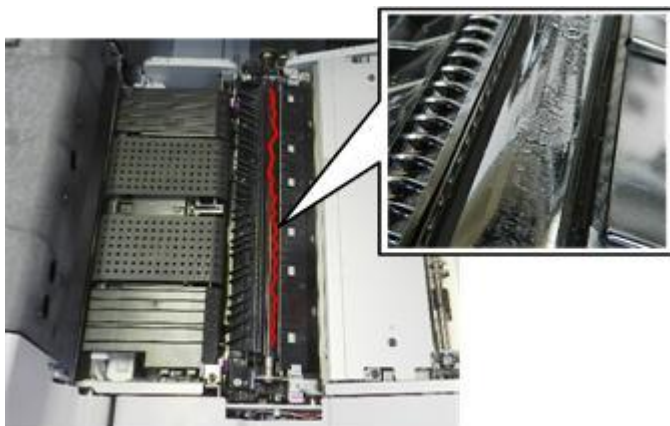
## ITB Unit

---

1. Never touch the surface of the ITB surface with bare hands.
2. The PTR unit must be removed before the ITB unit.

### ★ Important

- If the ITB unit is removed with the PTR unit in the drawer, the edge of the ITB unit will scour and ruin the surface of the PTR below when the ITB unit is pulled from the machine. This can permanently damage the PTR.



d1803101

3. Pull the ITB unit out of the machine only when it is absolutely necessary.
4. Always work carefully around the ITB (to avoid dropping tools, screws, etc.) when it is pulled out of the machine.
5. Before installing a new ITB, clean all the rollers and the inner surface of the ITB unit with a dry cloth to prevent the new belt from slipping.

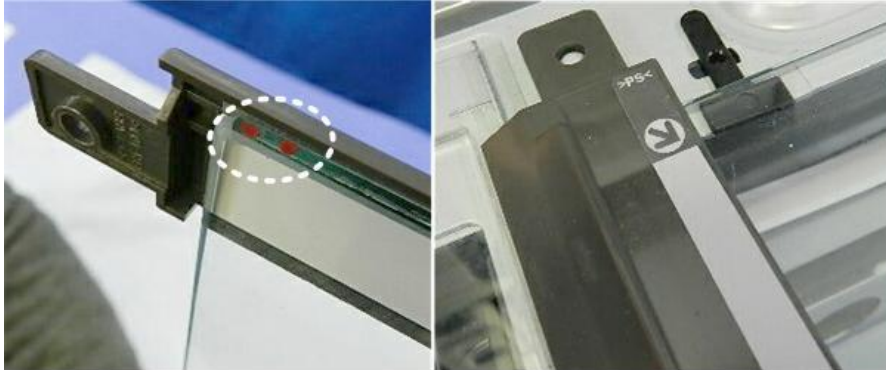
## 4.Replacement and Adjustment

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### Scanner Unit (Copier Models Only)

---

1. When installing a new exposure glass, always make sure that the paint mark is at the rear left corner.



d1792760

2. Clean the exposure glass with alcohol or glass cleaner to reduce the amount of static electricity on the glass surface.
3. Use a cotton pad dampened with water, or a blower brush, to clean the scanner optics.
4. Never bend or twist the exposure lamp cables.
5. Never disassemble a lens unit. Attempting to disassemble a lens unit will throw the lens and the copy image out of focus.
6. Never attempt to adjust a CCD positioning screw. Doing so will throw the CCD out of position.
7. When replacing or re-installing the scanner glass, always make sure that the paint mark is at the upper left corner.



d1792102

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### Development

---

1. Avoid nicking or scratching the development roller.
2. Place a development unit on a sheet of paper after removing it.
3. Always clean the drive gears after removing used developer.
4. Always dispose of used developer in accordance with local regulations.



## 4.Replacement and Adjustment

5. Never load any type of developer or toner into the development unit other than those specified for this machine. Doing so will cause poor print quality and toner scattering.
6. Immediately after replacing the developer, be sure to execute the SPs to initialize the developer/toner.
7. Never do SP3030 with used developer.
8. When using a vacuum cleaner to clean the development unit casing, always ground the casing with your fingers to avoid damaging the toner density sensor with static electricity.
9. The TD sensor must be initialized:
  - After replacing developer. (Initialize the TD sensor only for the PCU where the developer was replaced.)
  - Never initialize the TD sensor more than once. Initializing the TD sensor more than once can cause toner scattering inside the machine.

---

## Jam LEDs

---



There are new jam LEDs on the front of the machine. These fragile LEDs are mounted on metal tabs and project out, down, and up and are difficult to see.

### **⚠ CAUTION**

- Work carefully if you have removed the exit cover, purge tray cover, registration cover, or vertical path unit cover, to avoid damaging these sensors.
- The protruding edges of the LEDs are sharp and can cause minor cuts or scrapes if you are not careful.

---

## Cleaning

---

1. When servicing cleaning unit components, avoid nicking the edges of the cleaning blades.
2. Never touch the edges or surfaces of a cleaning blade with bare hands.
3. Before disassembling a cleaning unit, place a sheet of paper under it to catch stray toner or dry lubricant.

## 4.Replacement and Adjustment

---

### Fusing Unit

---

1. Never handle fusing lamps and rollers with bare hands.
  2. Make sure that the fusing lamps are positioned correctly and do not touch the inner surface of the rollers.
- 

### Paper Feed

---

When replacing the pick-up, feed, and separation rollers in tray 1 or 2 of the main machine, trays 3, 4, 5 of the LCIT, or tray 6 (bypass tray):

- Use only rollers specified for use with this machine or peripheral unit.
  - When handling the new rollers, avoid touching the surfaces of the rollers with bare hands.
- 

### Waste Toner

---

1. Check the level of the waste toner in the waste toner bottle at every service visit.
2. Always dispose of waste toner in accordance with local laws and regulations.
3. Never attempt to incinerate waste toner.

## Special Tools and Lubricants

### Special Tools

Part No.	Description
A0069104	Scanner Positioning Pin (4 pcs./set)
A0929503	Test Chart-C4 (3 pcs./set)
A0299387	Digital Multi-meter: FLUKE 87
B6455010	SD Card
C401 9503	20x Magnification Scope
D1793421	Development Unit Jig Handle
D1793420	Development Doctor Blade Jig Sheet
D1796191	ITB Positioning Jig (Driver Roller Side)
D1796192	ITB Positioning Jig (Belt Cleaning Side)

### Drum Knob Tool

This tool is used to tighten the drum knob completely.

Loose drum knob can cause the developer/toner mixture to collect on the magnetic roller and scratch the drum.

New P/N	Description	Q'ty
D1792445	KNOB:TORQUE LIMITER MECHANICAL CLUTCH:ASS'Y	1



d179b4029

#### ★ Important

- When you install a drum and tighten the drum knob with this tool, the drum cleaning unit should not be installed on the PCDU.
- If the drum knob is loosened with the drum cleaning unit installed, be sure to remove the drum cleaning unit, and then tighten the knob.
- Tightening the drum knob with the drum cleaning unit installed will cause the drum cleaning

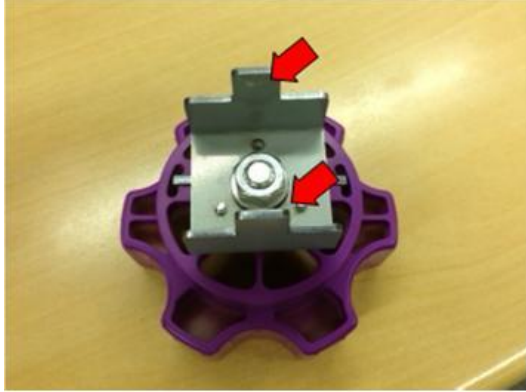
#### 4.Replacement and Adjustment

unit to apply pressure to the drum and narrow the gap at the front side.

To tighten the drum knob with the tool:

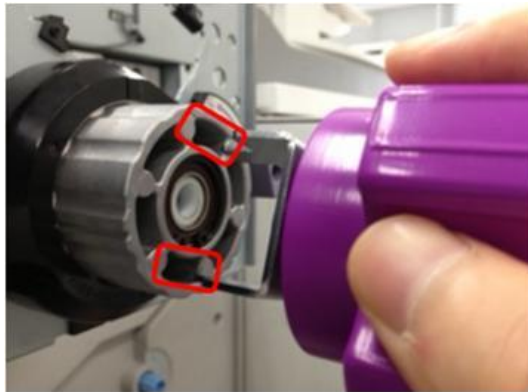
1. Insert the tool into the face of the drum knob.

These are the tabs inserted into the drum knob.



d179b4030

The tabs are aligned with the holes on the face of the knob.



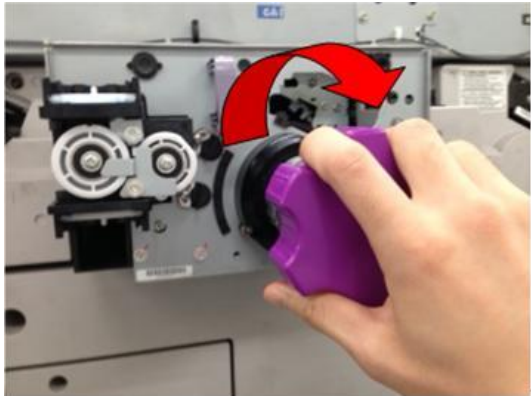
d179b4031

Press gently to insert the tabs.



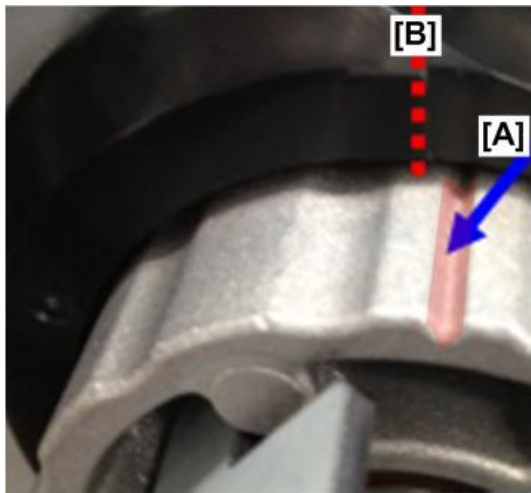
d179b4032

- Twist the drum knob clockwise until the tool runs idle.



d179b4033

- Check the drum knob position. The groove [A] should be slightly to the right of the vertical reference line [B] in the photo.



d179b4034

### Lubricants

Part No.	Description
A2579300	Grease Barrierta - S552R
52039502	Silicone Grease G-501
54479078	Heat Resisting Grease MT-78
B132 9700	Drum Setting Powder
VSSG 9002	FLUOTRIBO MG Grease
D0159501	Setting Powder
D0159500	Yellow Toner

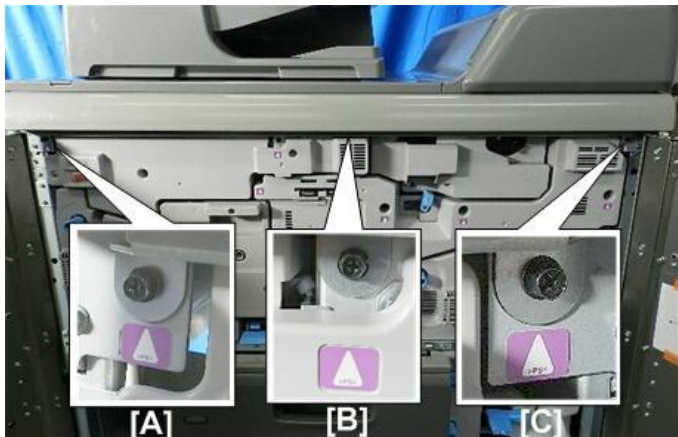
## External Covers, Doors

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### Front Edge Cover

---

1. Disconnect the front edge cover at [A], [B], and [C] (\*x1).



d1792750

2. Remove the front edge cover.



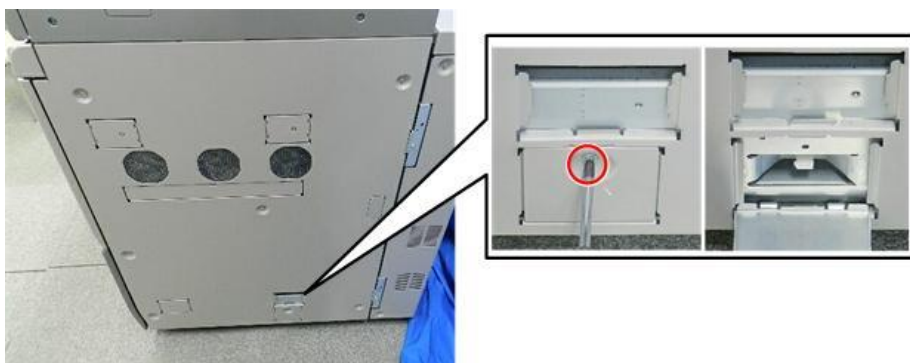
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### Right Cover

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1. Remove the LCIT heater connector cover (⊗x1).



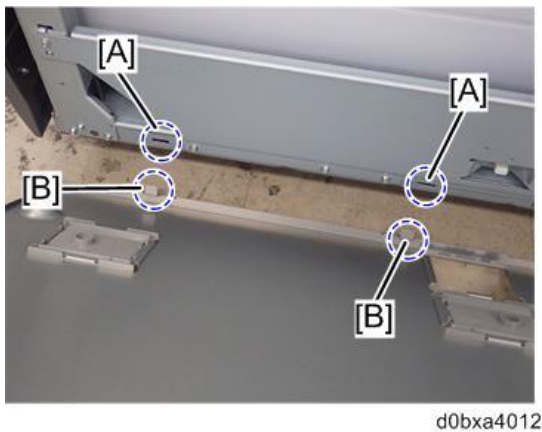
d1792204

2. Remove the right cover [A].



**Note**

- Remove the hooks [B] of the right cover from the holes [A] of the bottom side of the main machine.

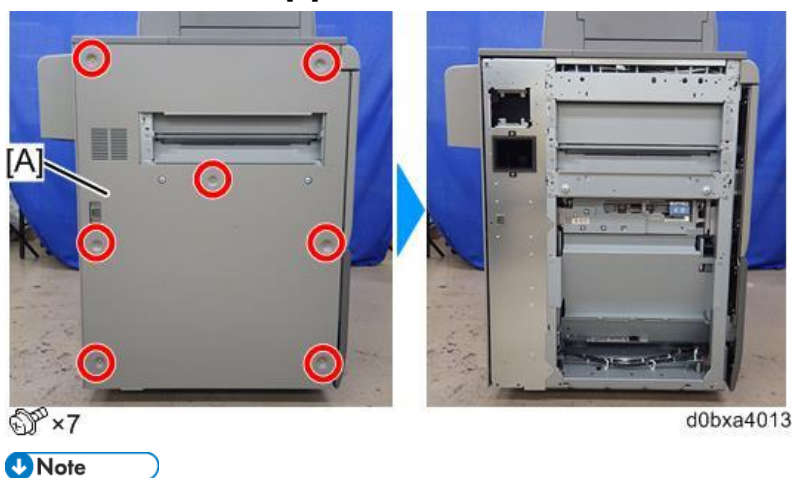


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## Left Cover

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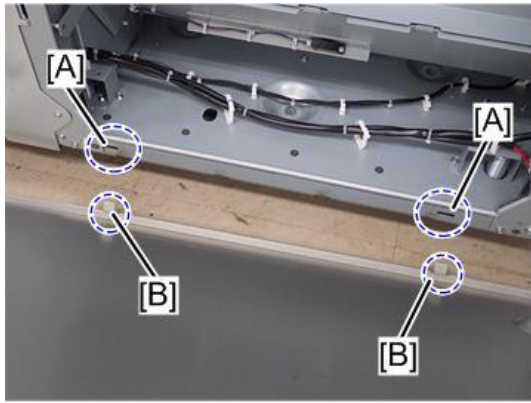
1. Remove the left cover [A].



**Note**

- Remove the hooks [B] of the left cover from the holes [A] of the bottom side of the main machine.

#### 4.Replacement and Adjustment



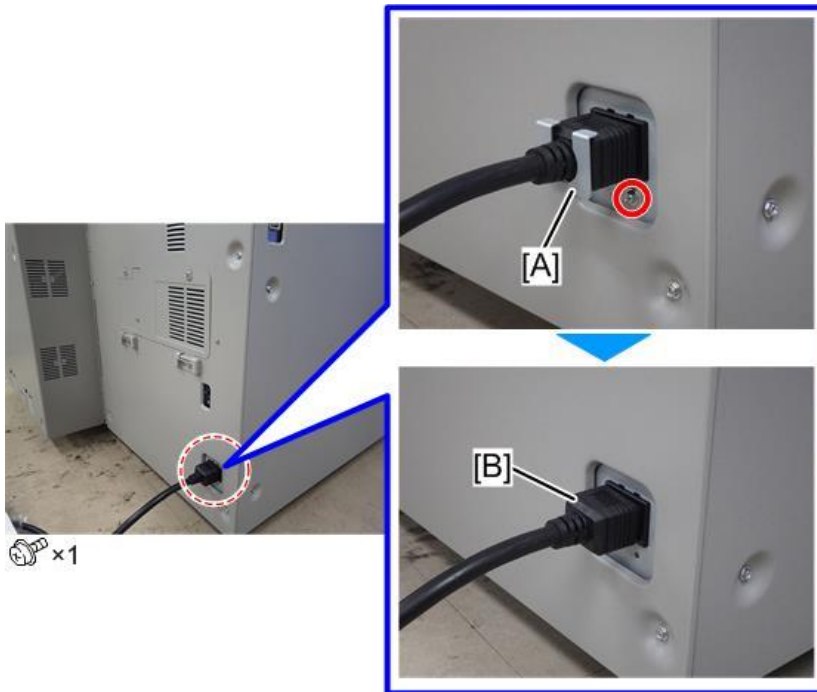
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#### Rear Cover

---

1. Remove the power cord bracket [A], and then pull out the power cord [B].

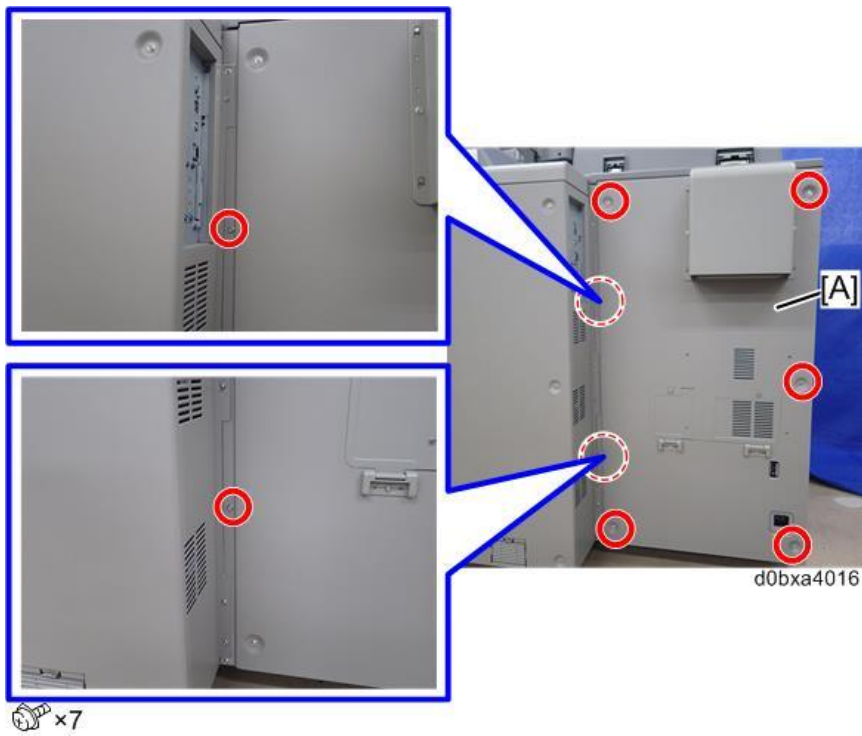


 ×1

d0bxa4015



2. Remove the left rear cover [A].



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## Doors

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This procedure is the same for both front doors.

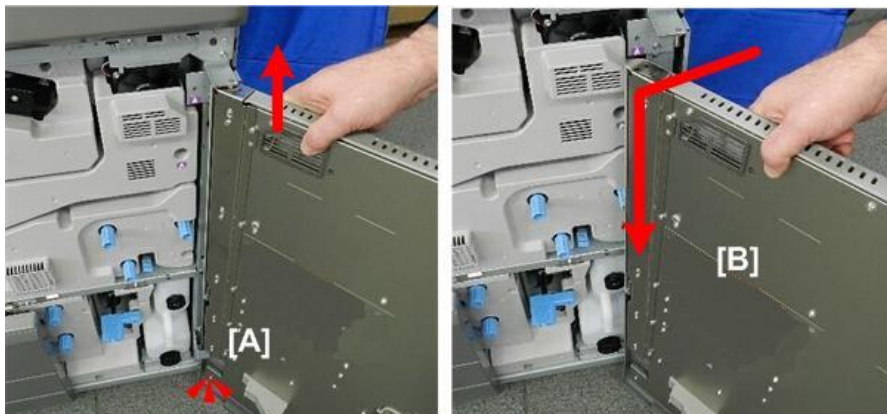
1. Open the left or right front door [A].
2. Disconnect the door at the top post [B] (⊗x1).



d1792209

#### 4.Replacement and Adjustment

3. Lift the door off the bottom post at [A], and then pull away the top of the door [B].



d1792210

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### Drawer

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#### Opening and Closing the Drawer

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1. The drawer is one piece and opens from the front.



d1792200

2. Open both front doors.
3. Grip both handles, and rotate them down.



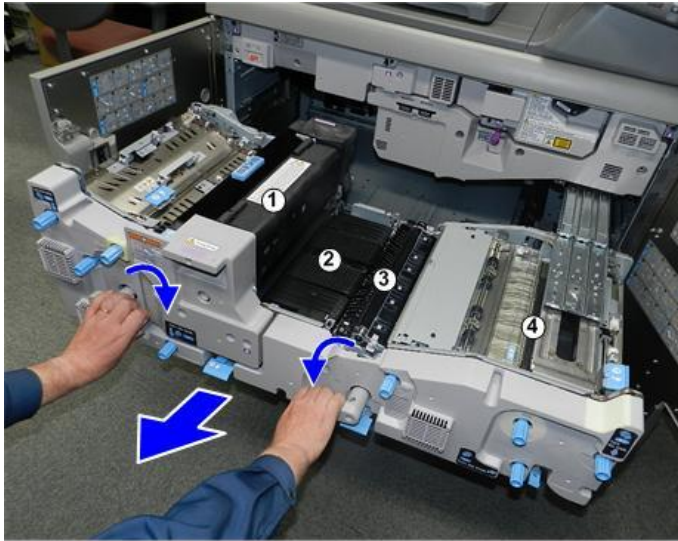
d1792211

Slowly, pull the drawer out until it stops.

- The drawer is one piece (it is not divided).

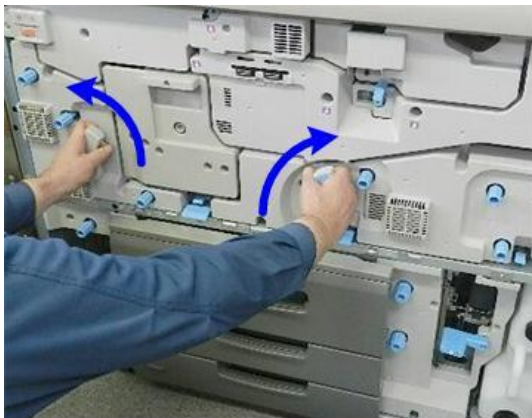
## 4.Replacement and Adjustment

- The fusing unit [1], PTB unit [2], and PTR unit [3] must be removed for servicing.
- Removing the registration unit [4] for servicing is not recommended. It should be serviced in the drawer.



d270b2212

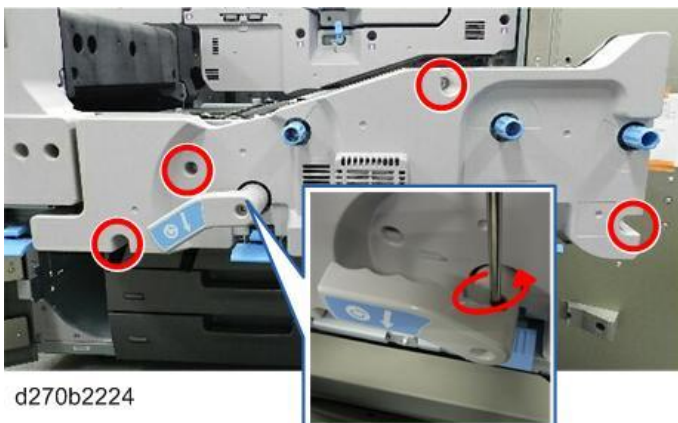
4. To close the drawer, push it in until it stops, and then raise the handles.



d1792213

### Drawer Right Cover

1. Disconnect the drawer right cover (⊖ x5).

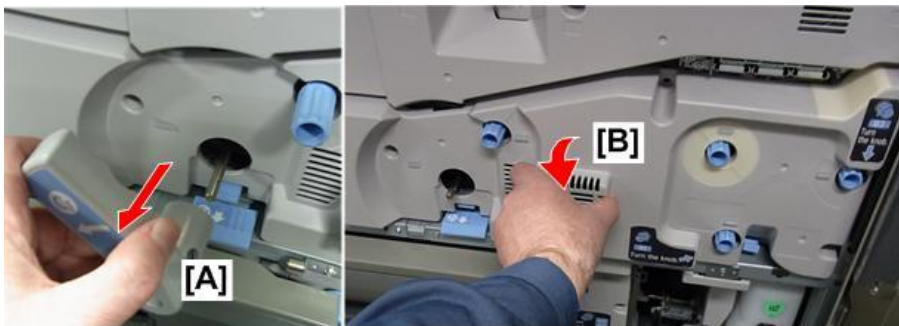


d270b2224

2. Remove the handle [A].

#### 4.Replacement and Adjustment

3. Pull the cover [B] over the knobs.



d270b2225

4. Remove the cover.

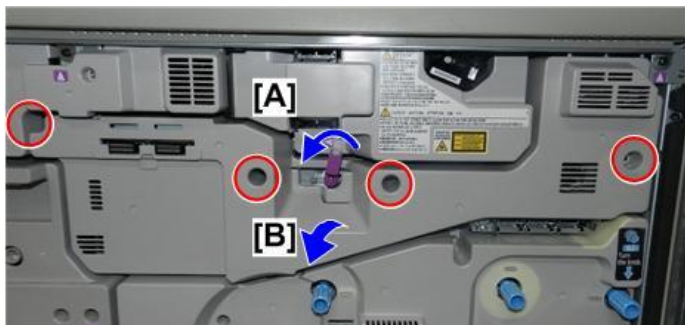


d1792225

#### Support Rails

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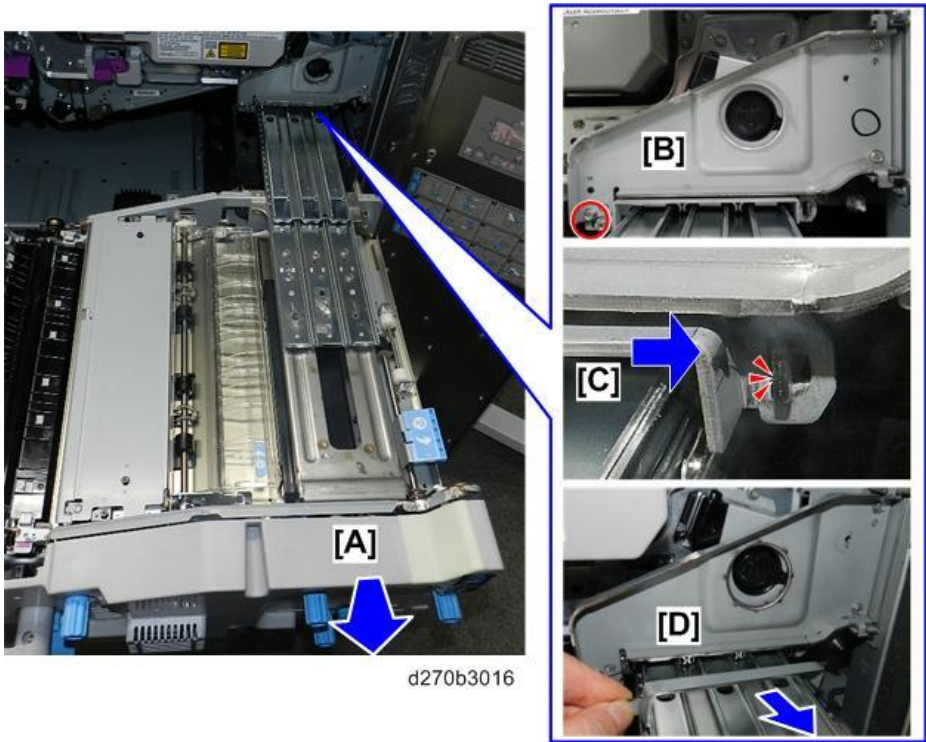
1. Open the front doors.
2. Lower lever [A], and then remove cover [B] (⚙️ x5).



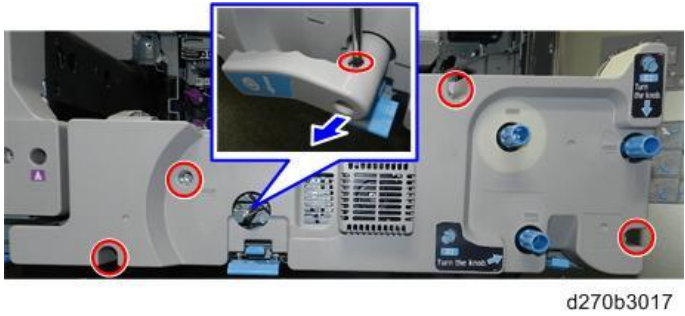
d270b3015

3. Pull out the drawer [A].
4. Disconnect the lock plate [B] on the left (⚙️ x1).
5. Push the lock plate [C] to the right to release it.

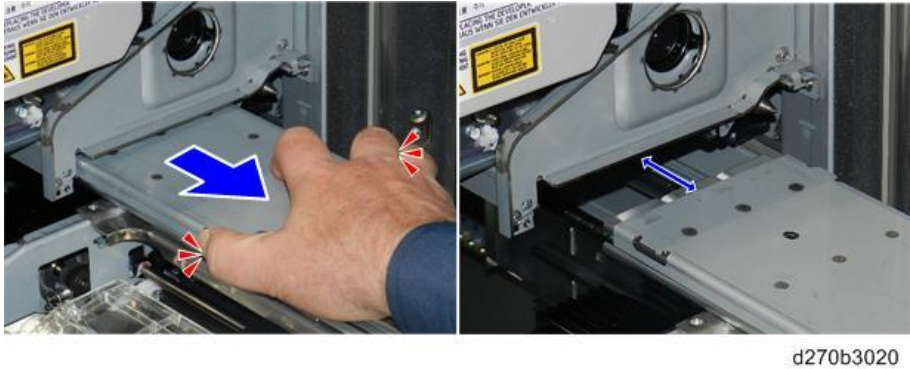
6. Remove the lock plate [D].



7. Remove the right front cover (⊖ x5).

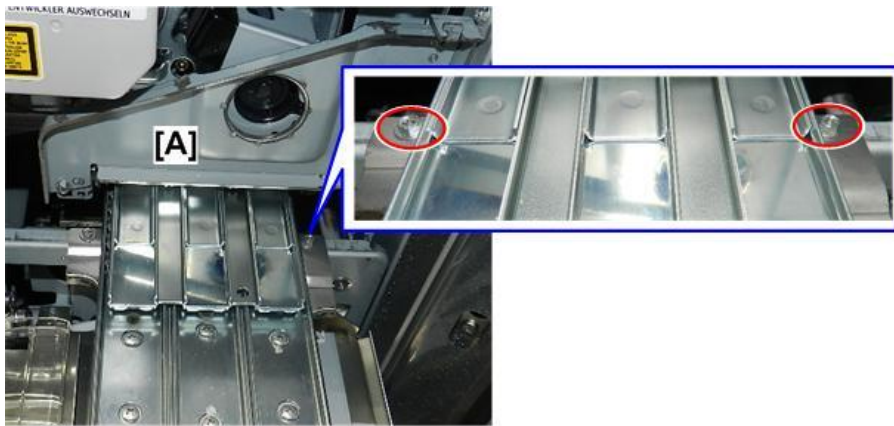


8. Pull out the upper sleeve. The sleeve may be tight and difficult to pull out the first time it is removed. Grip it firmly on both sides as shown, and then pull out firmly until the sleeve slides out.



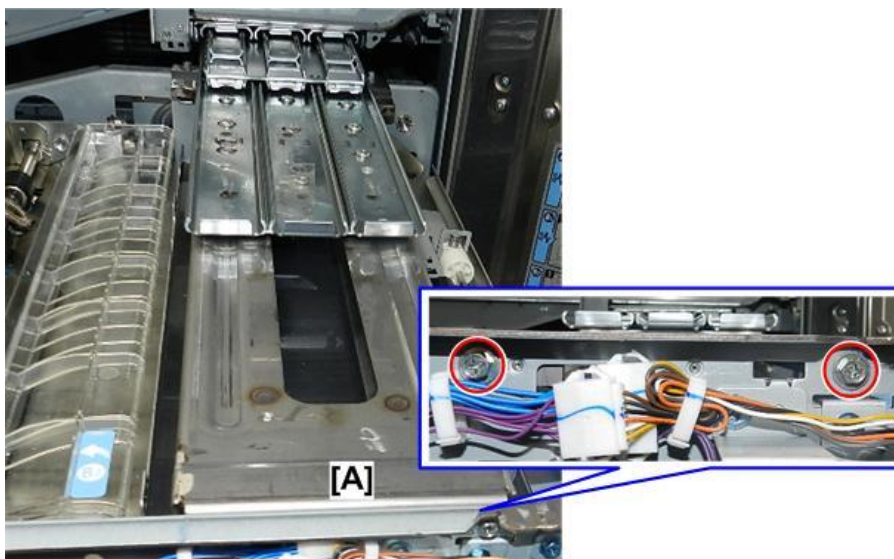
9. At the rear [A], disconnect the rear edge of the rail support plate (⊖ x2).

#### 4.Replacement and Adjustment



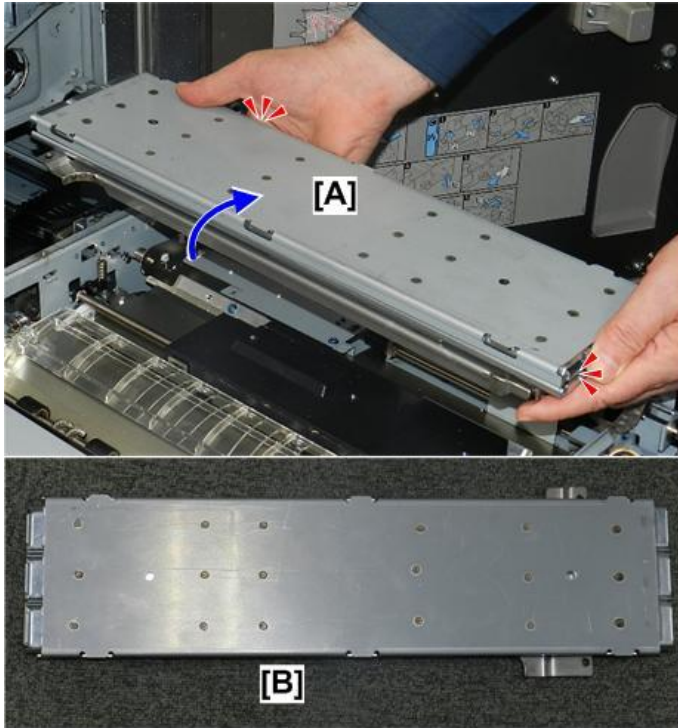
d270b3019

10. At the front [A], disconnect the front edge of the rail support plate (⊗x2).



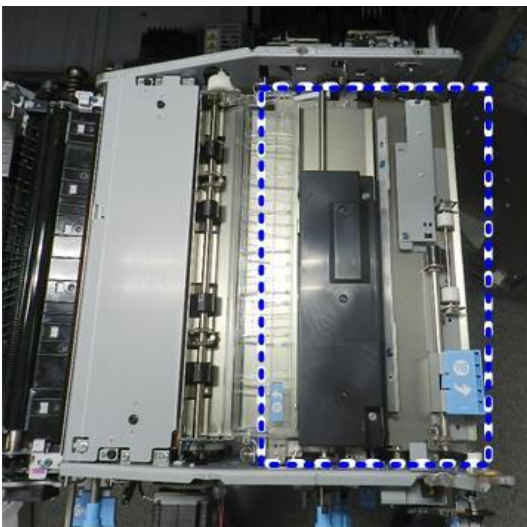
d270b3018

11. The rail assembly [A] is heavy. Use both hands to remove it from the machine.
12. Lay the rail assembly [B] on a flat surface as shown.



d270b3021

13. With the rail assembly removed, you can access components from the top of the registration unit.



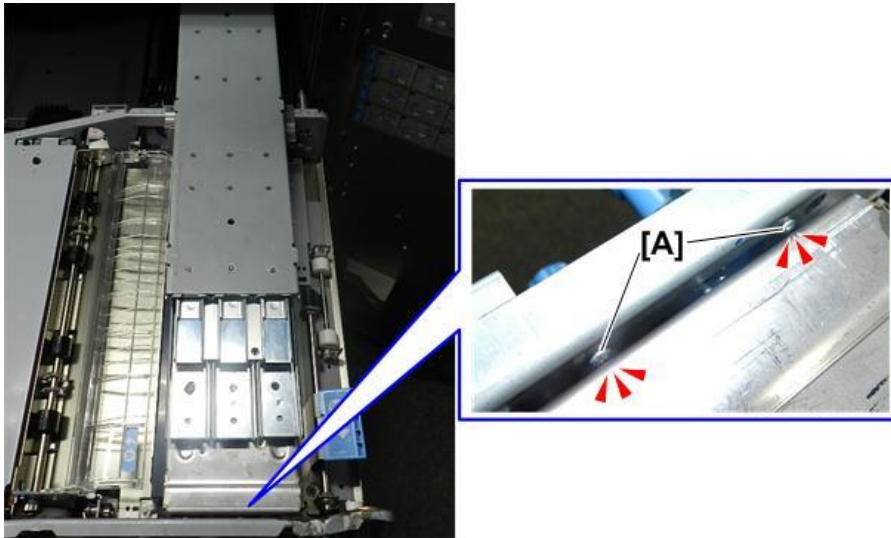
d270b3022

**Re-installation**

1. Set the rail assembly on the registration unit.

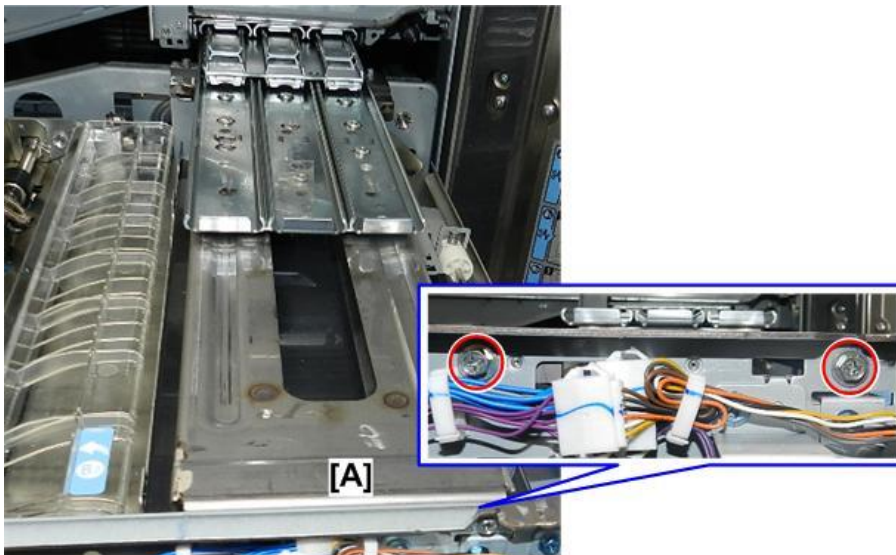
#### 4.Replacement and Adjustment

2. At the front edge [A], align the two bosses with the holes.



d270b3023a

3. At the front edge of the registration unit [A], fasten the front end of the rail assembly (🔩 x2).

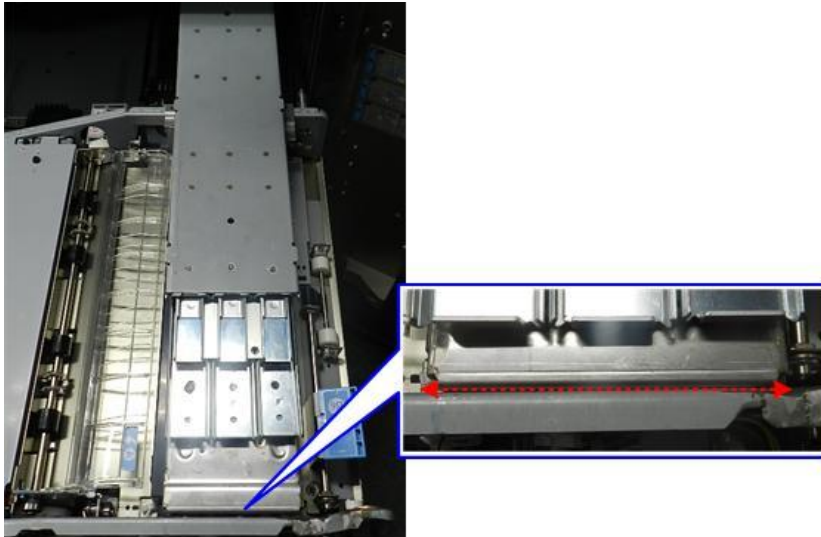


d270b3018

#### ★ Important

- Tighten down these screws completely. If they are not down, they can obstruct the rail assembly when it is re-inserted into the machine.



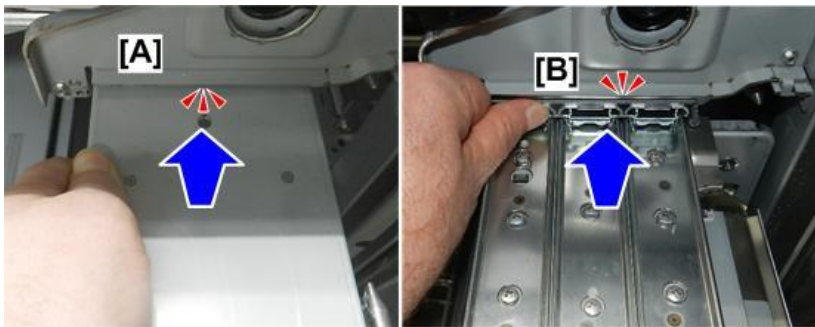


d270b3023b

4. Set the rear edge of the rail assembly at [A], and then push it into the machine until it stops [B].

★ Important

- If the sleeve does not slide in easily, pull it out and try again.
- Do not strike the edge of the assembly to drive it into the machine.



d270b3025

5. On the left, align the plate tab [A] with the hole.
6. On the right, align the plate keyhole [B] with the tab.

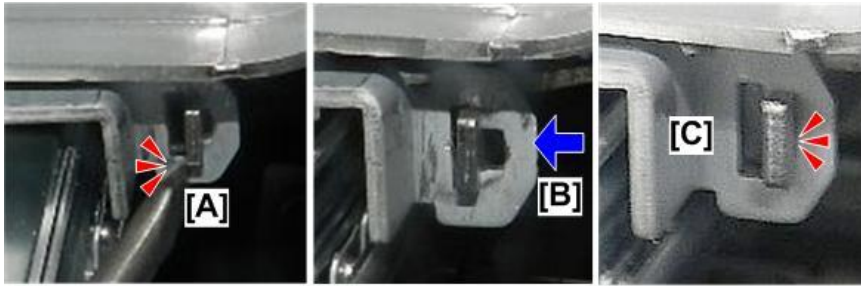


d270b3026

7. If the slot will not fit over the tab [A], use the tip of a screwdriver to push it in.

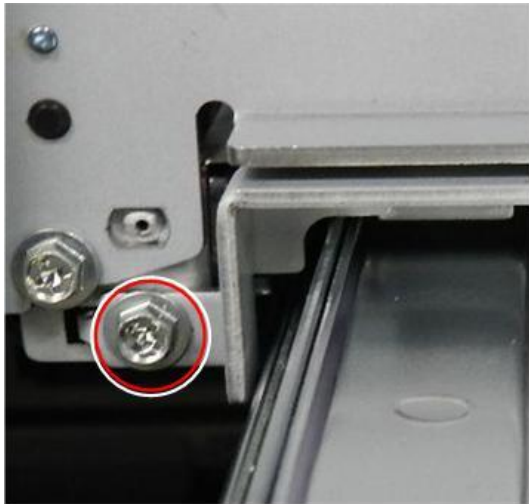
#### 4.Replacement and Adjustment

8. Slide the plate [B] to the left so that it locks in place [C].



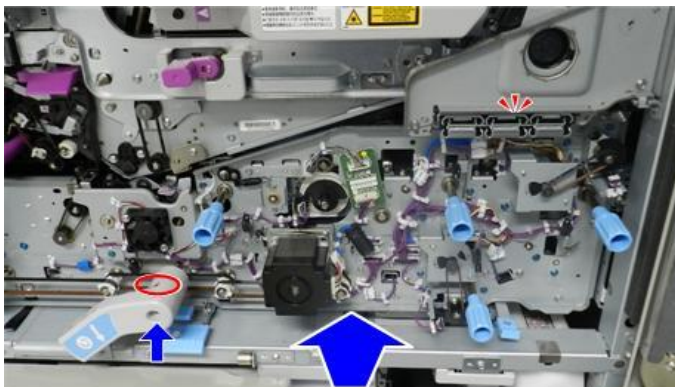
d270b3993

9. Fasten the plate on the left (⚙️ x1).



d270b3994

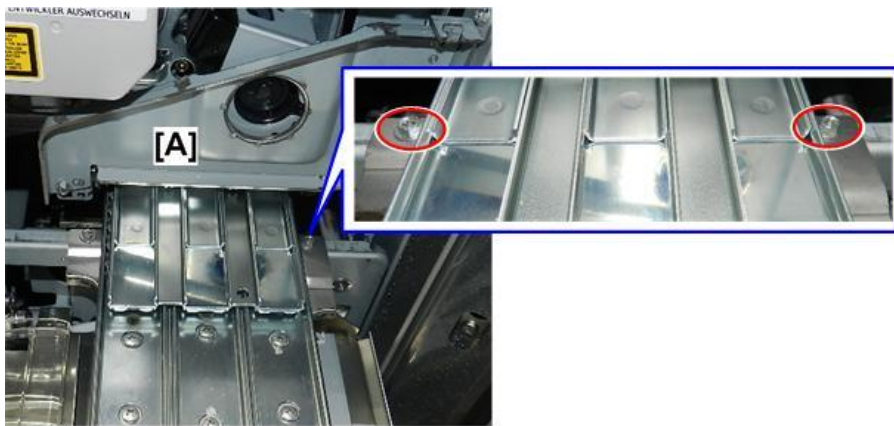
10. Re-attach lever C1, and then make sure that the drawer opens and closes smoothly (⚙️ x2).  
11. If the movement is not smooth, detach the rail and then re-attach it.



d270b3027

12. Pull out the drawer.

13. Fasten the plate at the rear [A] (🔩 x 2).



d270b3019

14. Before re-attaching the right front cover, once again make sure that the drawer slides in and out of the machine smoothly. If the movement is not smooth, detach the rail and then re-attach it.



d270b3027a

15. Re-attach the right front cover of the drawer.

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## Controller Box, Controller Box Cover

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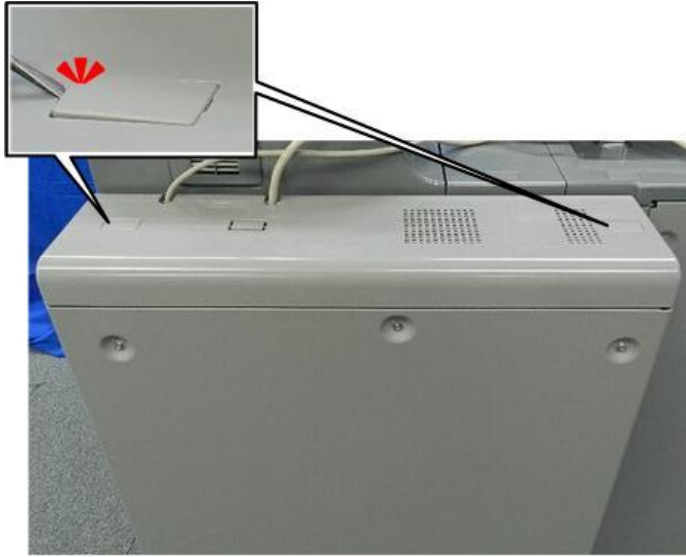
Many procedures require that you open the controller box and remove its cover.

## 4.Replacement and Adjustment

### Opening the Controller Box (Copier Models)

---

1. Remove the two caps.



d1792214

2. Disconnect the top cover (⊖ x2).



d1792215

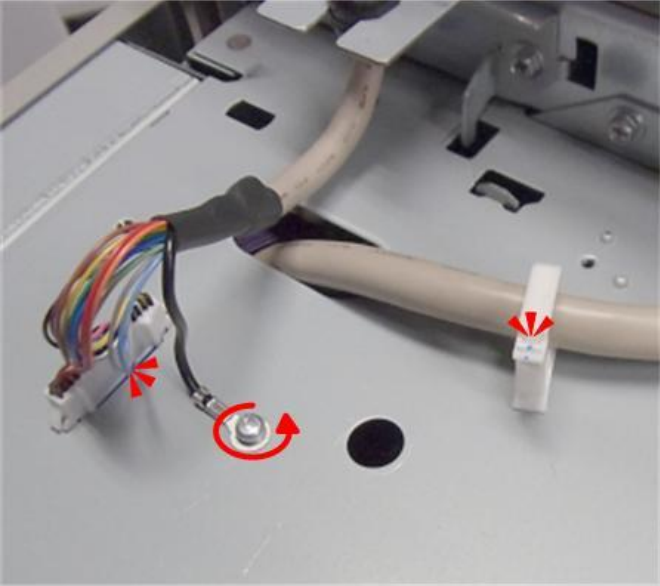
3. Remove the top cover.



d270b2216

4.Replacement and Adjustment

- 4. Disconnect the top of the controller box (🔌x1, 📡x1, 🌀x1).



d270b2217

- 5. Disconnect the harness plates (🔌x2).



d270b2218

- 6. Unhook and disconnect both harness plates.



d270b2219

#### 4.Replacement and Adjustment

7. Disconnect the edge of the controller box (Ⓜ x3).



d270b2220a

8. Swing the controller box [A] open.

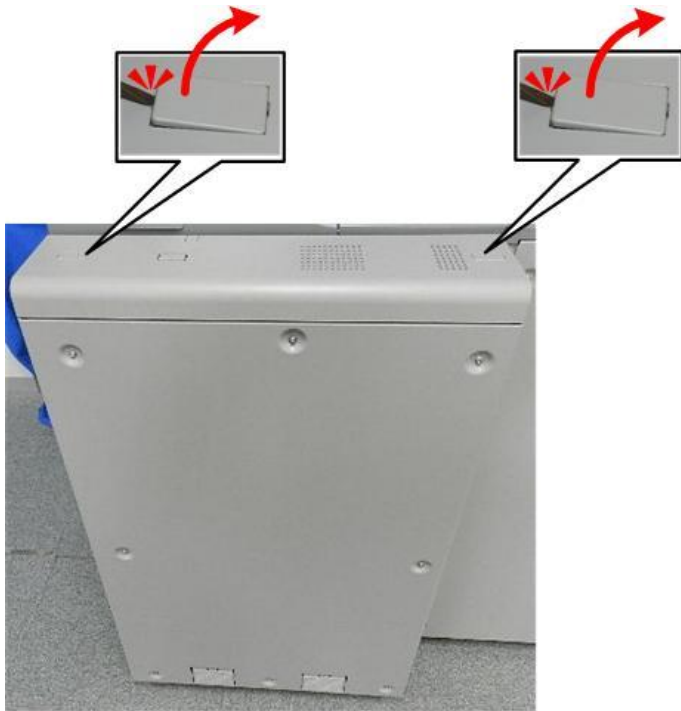


d0bxa4097

Opening the Controller Box (Printer Models)

---

1. Remove the two caps.



m263b3021

2. Disconnect the top cover (⊖ x2).



m263b3022

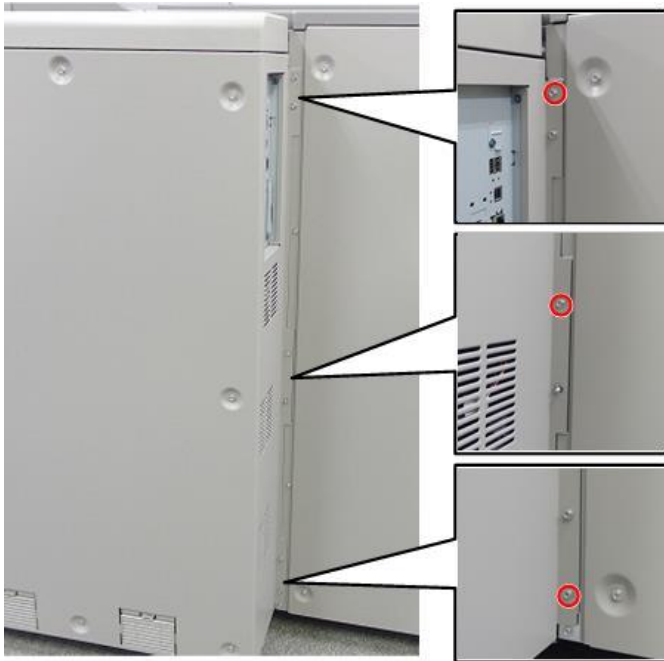
3. Remove the top cover.



m263b3023

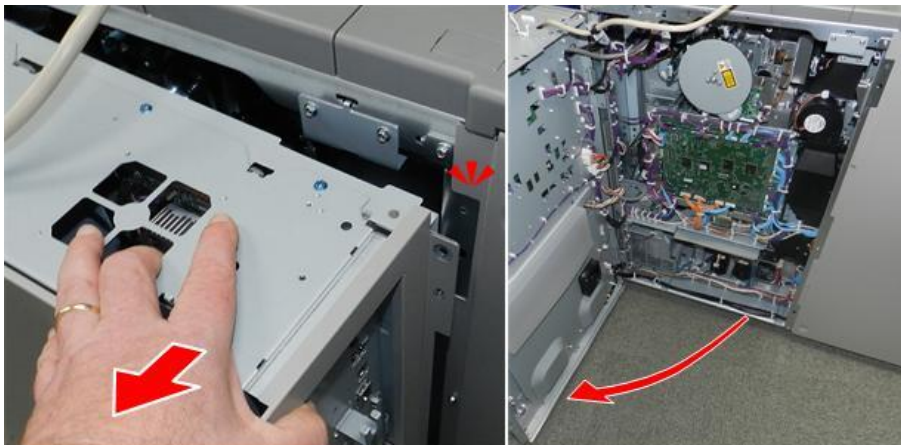
#### 4.Replacement and Adjustment

4. Disconnect the edge of the controller box (Ⓜ x3).



m263d4033a

5. Swing the controller box open.



d270b2221

#### Removing the Controller Box Cover, Inner Cover

---

1. Unfasten the left side of the controller box cover (Ⓜ x2).  
The second screw from the top and the second screw from the bottom should be removed.

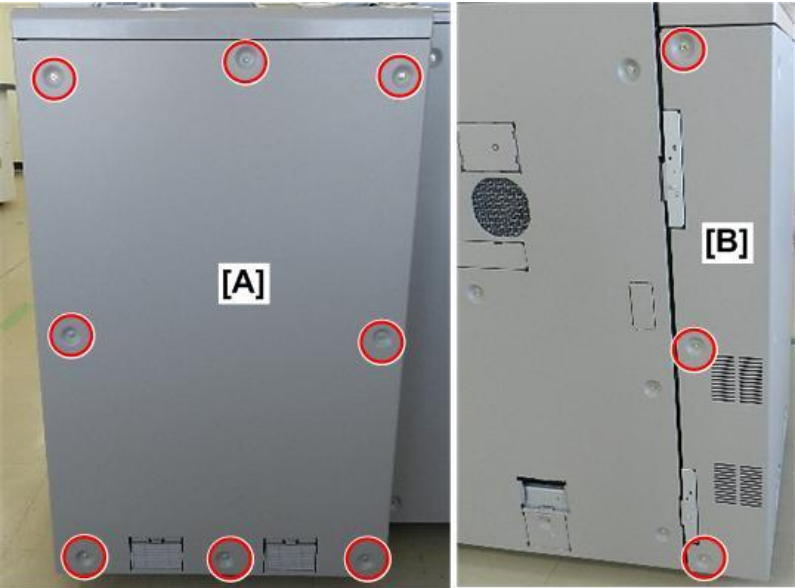


4.Replacement and Adjustment



b3281289a

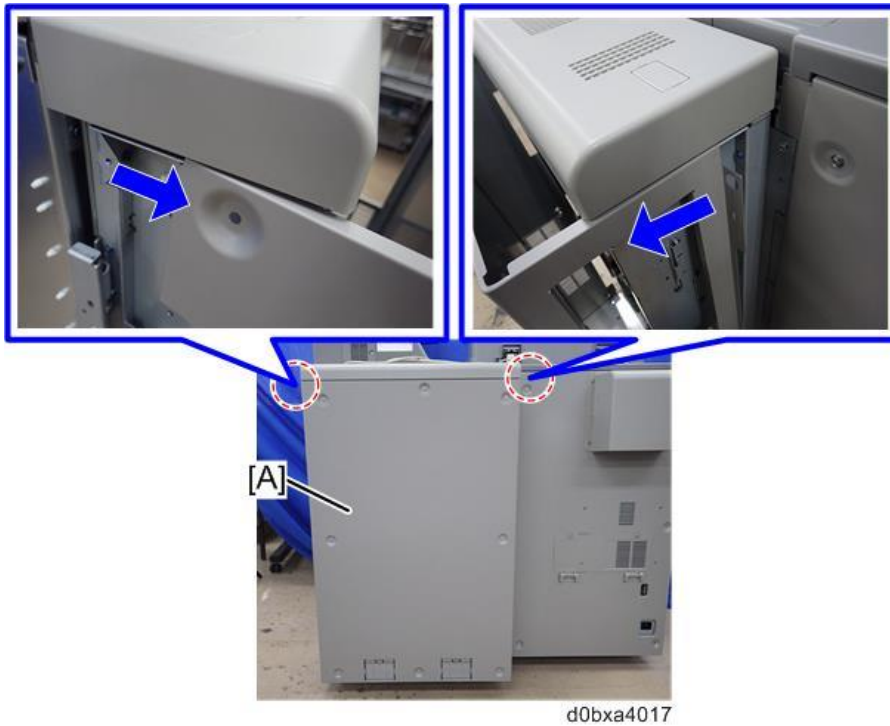
- 2. Unfasten the back of the controller box cover [A] (⚙️x8).
- 3. Unfasten the right side of the cover [B] (⚙️x3).



b3281290

#### 4.Replacement and Adjustment

4. Slide the cover [A] off the top edges of the controller box, and then remove it.

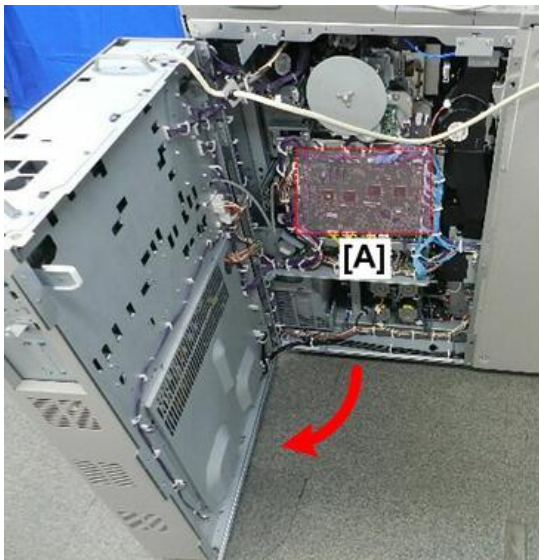


#### Lowering the IOB Bracket

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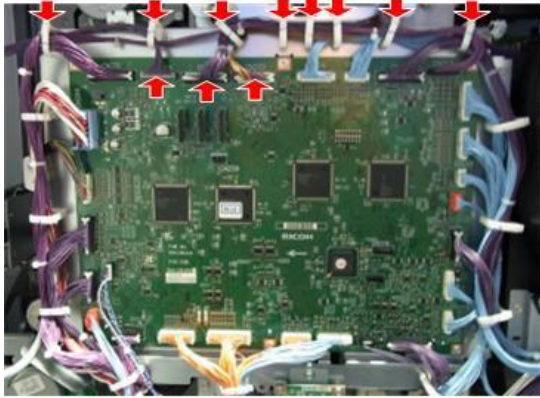
Many procedures require that you lower the IOB bracket without removing the IOB.

1. Open the controller box so that you can see the IOB [A]. ([Opening the Controller Box \(Copier Models\)](#))



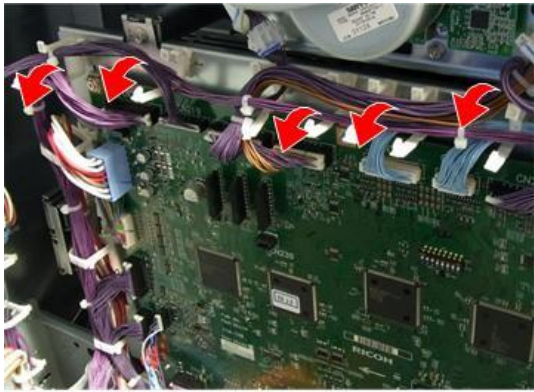
## 4.Replacement and Adjustment

2. Disconnect the top of the IOB (🔌x8, 📦x3).



d270b3009

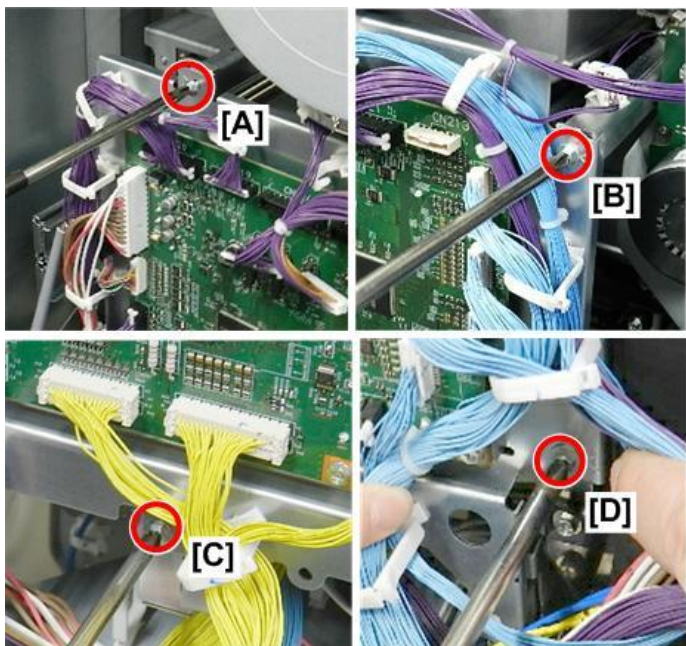
3. Free the harnesses along the top edge of the board.



d270b3010

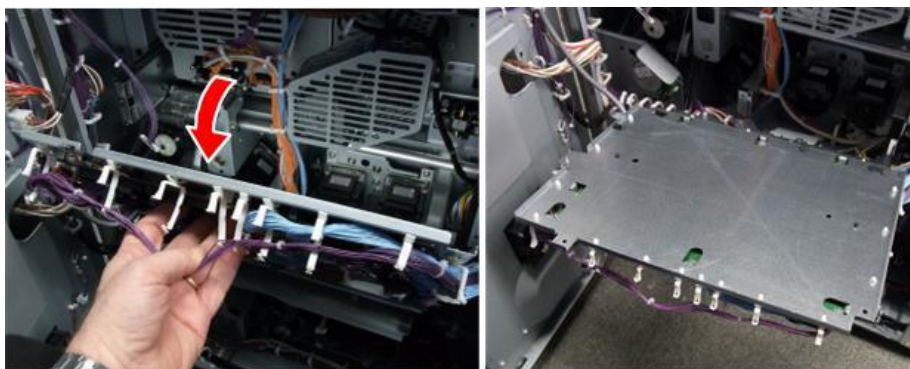
4. Disconnect the IOB:
- [A] Upper left (🔌x1)
  - [B] Upper right (🔌x1)
  - [C] Lower left (🔌x1)
  - [D] Lower right (🔌x1)

#### 4.Replacement and Adjustment



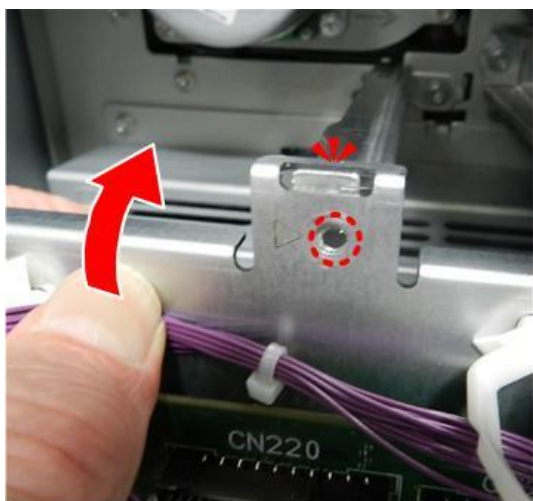
d1794008

5. Lower the IOB bracket (with PCB attached) until it stops.



d270b3011

6. When you raise the IOB bracket to re-install it, check the upper left corner and confirm that the tab and slot are engaged and that the holes are aligned as shown.

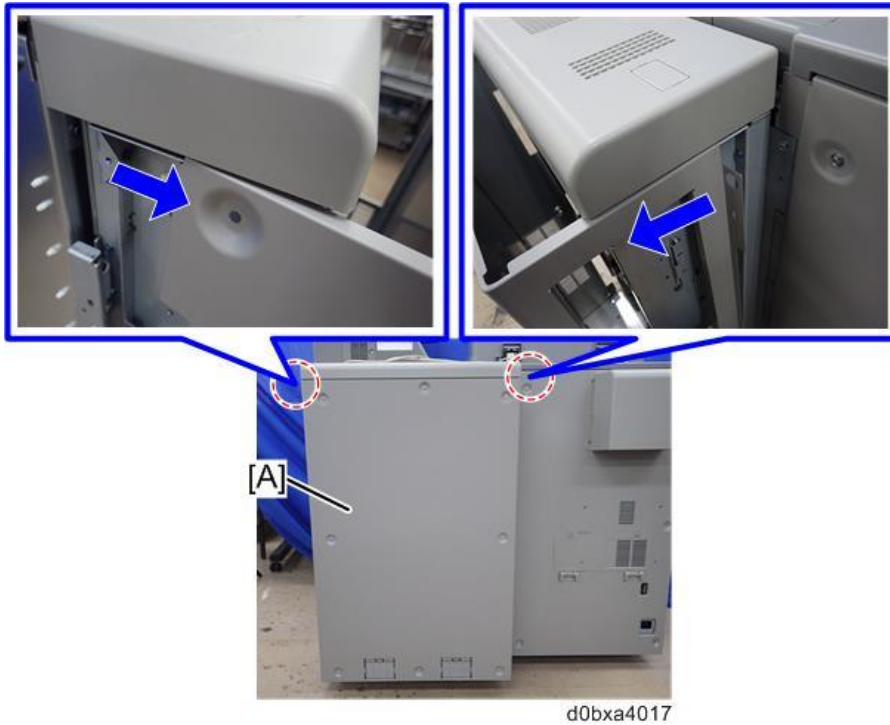


d270b3012

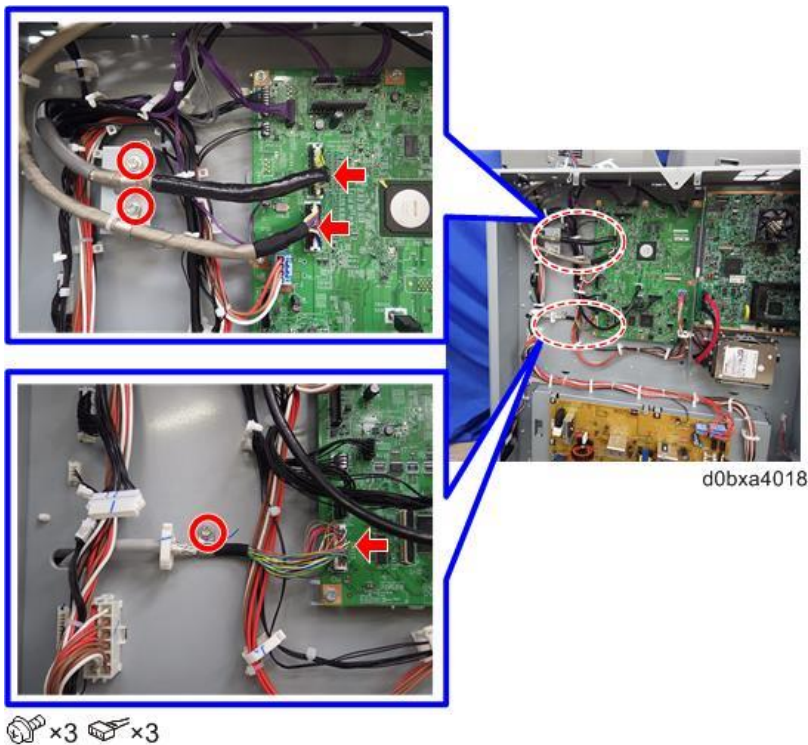
### Removing the Controller Box (Copier Models)

Follow this procedure to remove the controller box so that the machine can fit more easily through a door or onto a small elevator when it has to be moved.

1. Open the controller box. ([Opening the Controller Box \(Copier Models\)](#))
2. Slide the cover [A] off the top edges of the controller box, and then remove it.

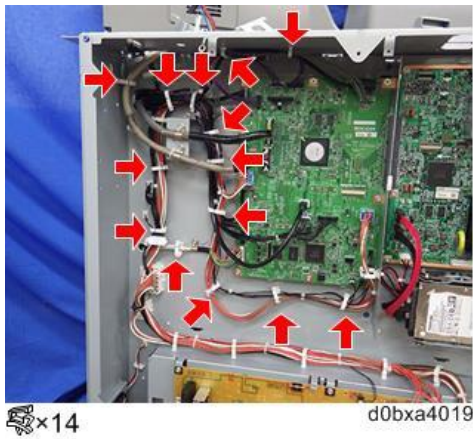


3. Free the shielded cables.

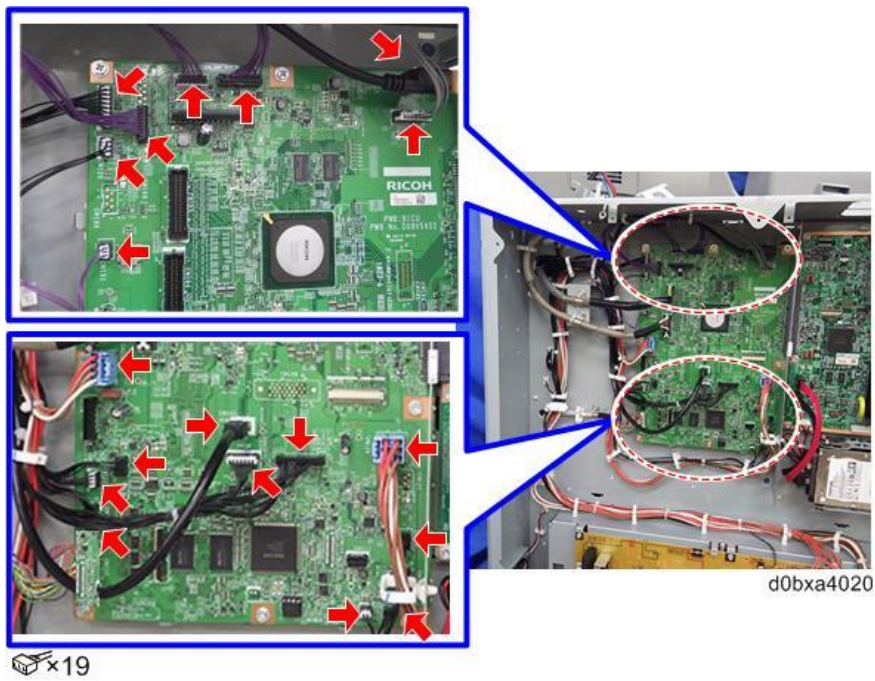


#### 4.Replacement and Adjustment

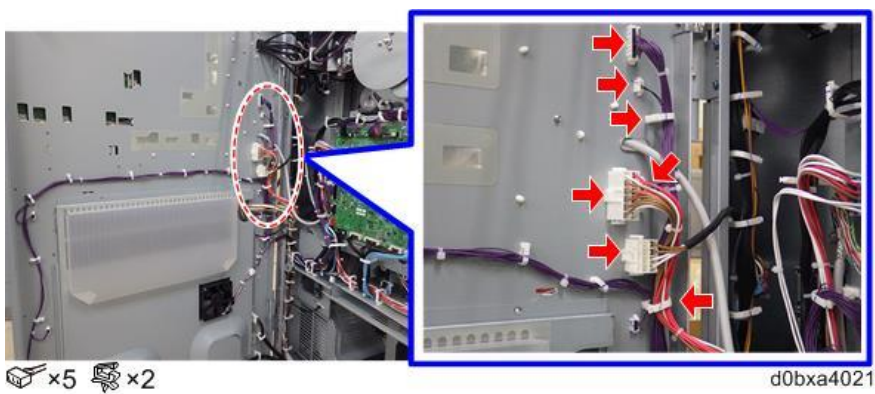
4. Free the harnesses.



5. Disconnect the harnesses from the BiCU.

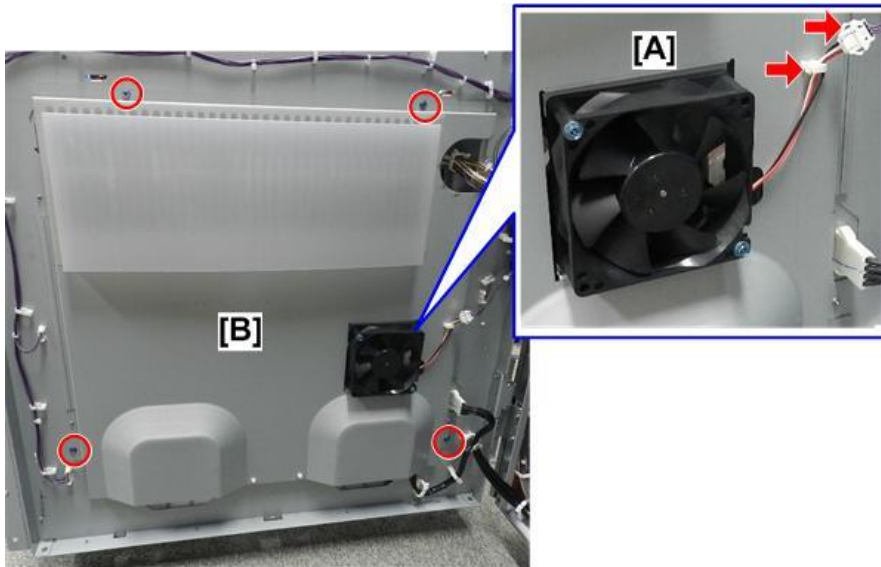


6. Disconnect harnesses on the back side of the controller box.



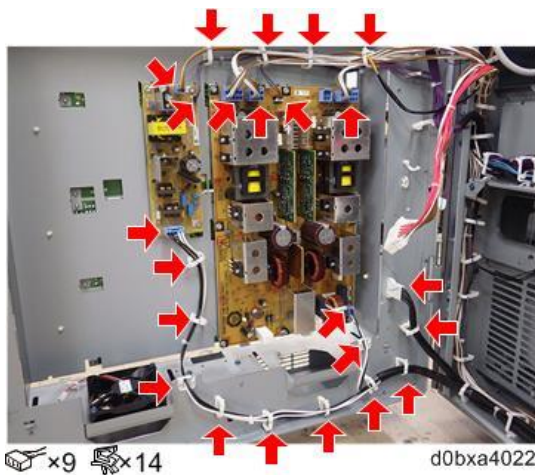
#### 4.Replacement and Adjustment

7. Disconnect the fan [A], and then remove the PSU cover [B] (🔧x1, 📦x1, 🌀x4).



d270b2241

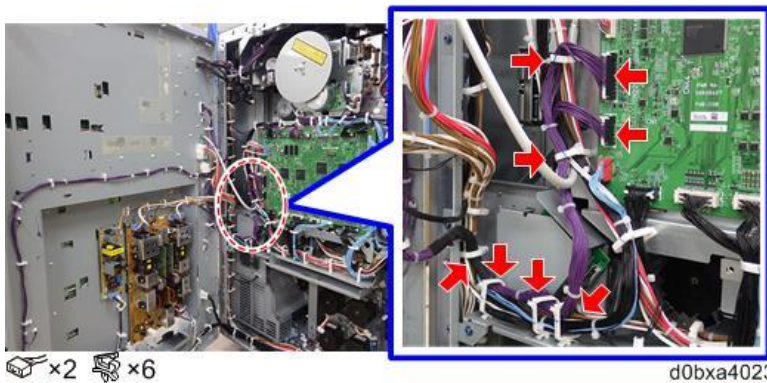
8. Disconnect the PSU-C and PSU-D.



📦x9 🌀x14

d0bxa4022

9. Free the harnesses.

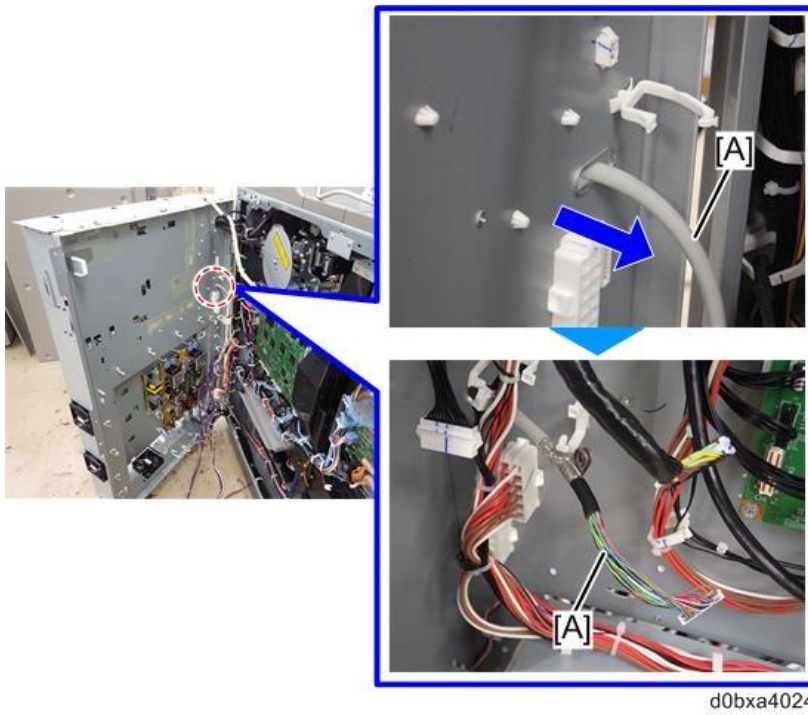


📦x2 🌀x6

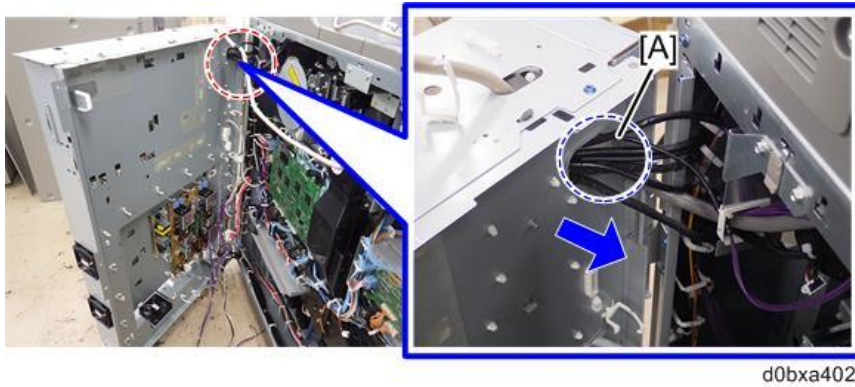
d0bxa4023

#### 4.Replacement and Adjustment

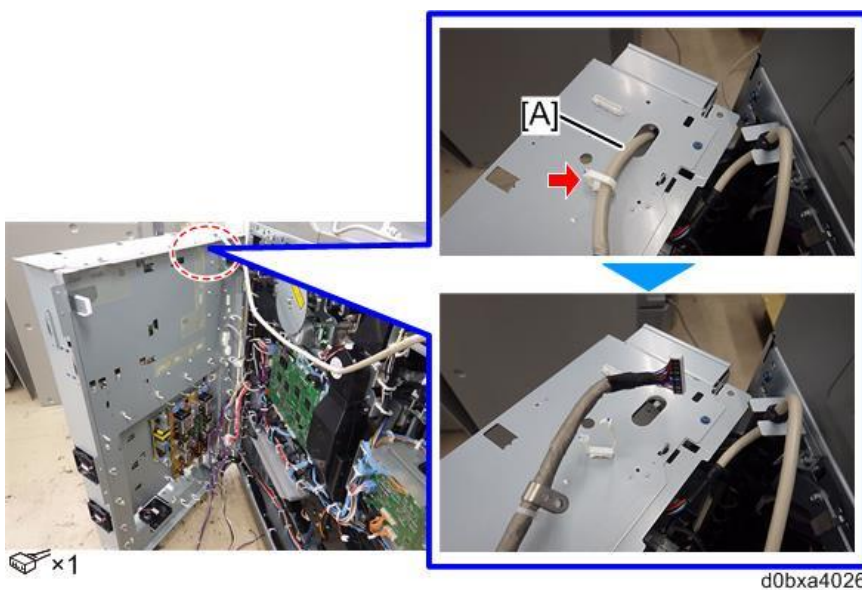
10. Pull the shielded cable [A] through the frame.



11. Next, pull the harnesses [A] through the frame.

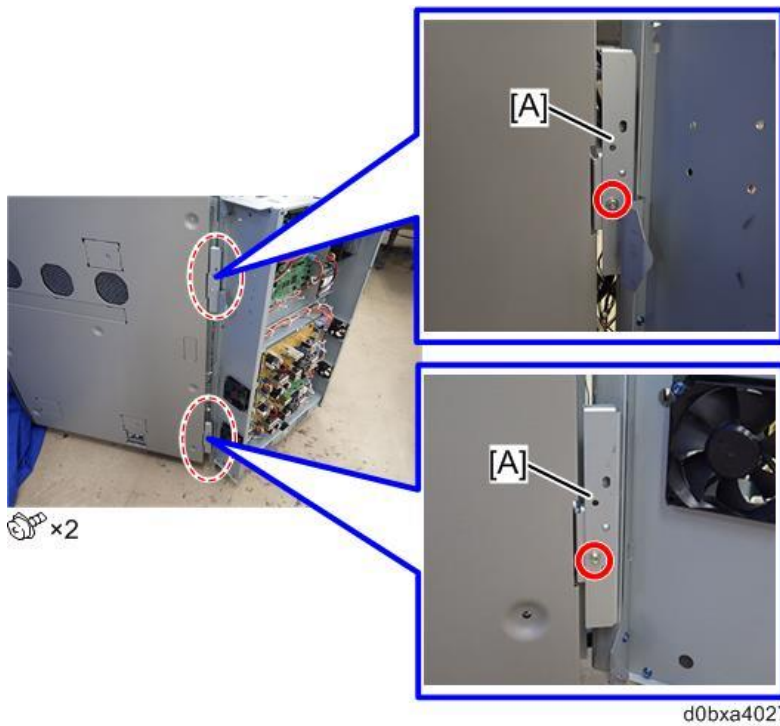


12. Pull the disconnected shield cable [A] from the top of the controller box.

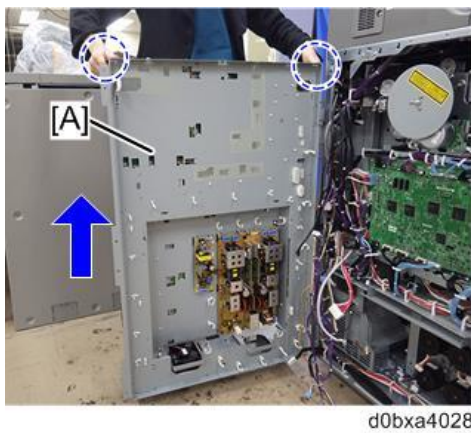




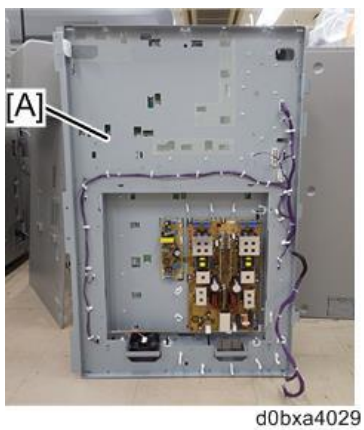
13. At the bottom of the box on the right rear corner of the machine, remove the lock bracket [A].



14. Grip both ends of the top of the box.  
15. Pull the box [A] up off its hinge pegs, and then pull it away from the machine.



16. Set the box [A] in a location where it will not fall over while you move the machine.



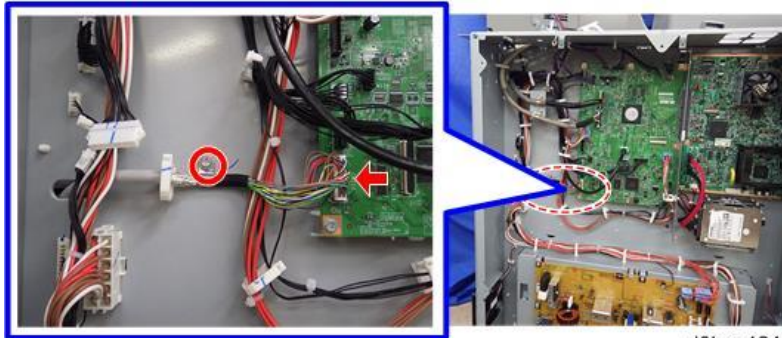
## 4.Replacement and Adjustment

### Removing the Controller Box (Printer Models)

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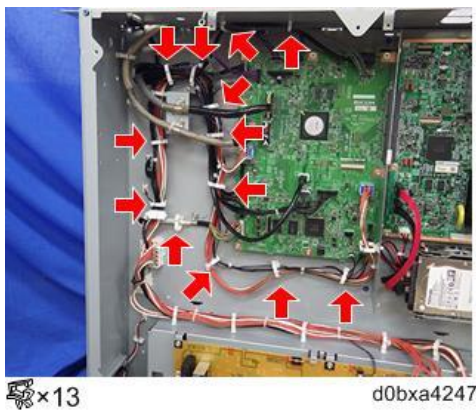
Follow this procedure to remove the controller box so that the machine can fit more easily through a door or onto a small elevator when it has to be moved.

1. Open the controller box. ([Opening the Controller Box \(Copier Models\)](#))
2. Remove the controller box cover. ([Removing the Controller Box Cover, Inner Cover](#))
3. Remove the shield cable.



 x1  x1

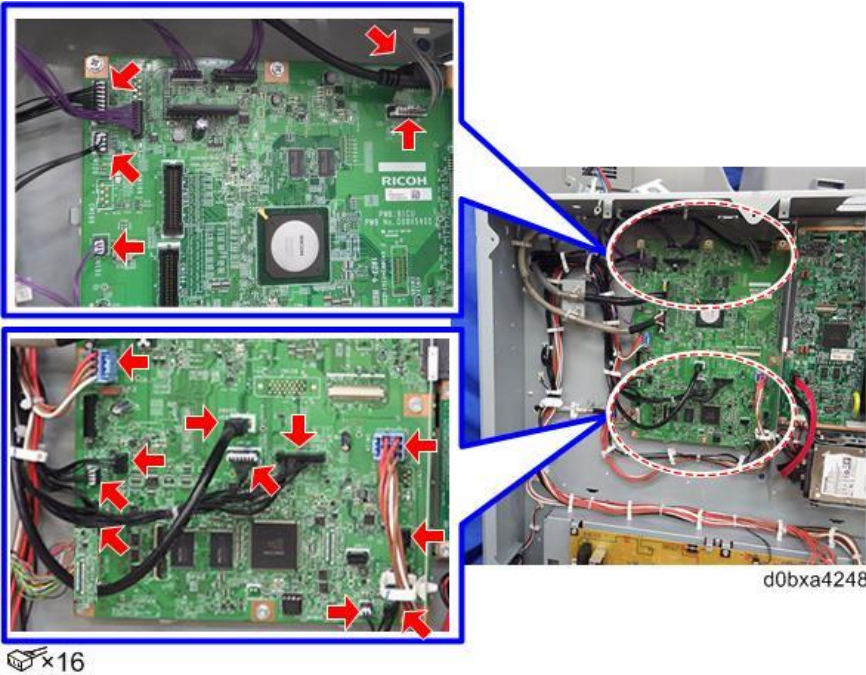
4. Remove the clamps.



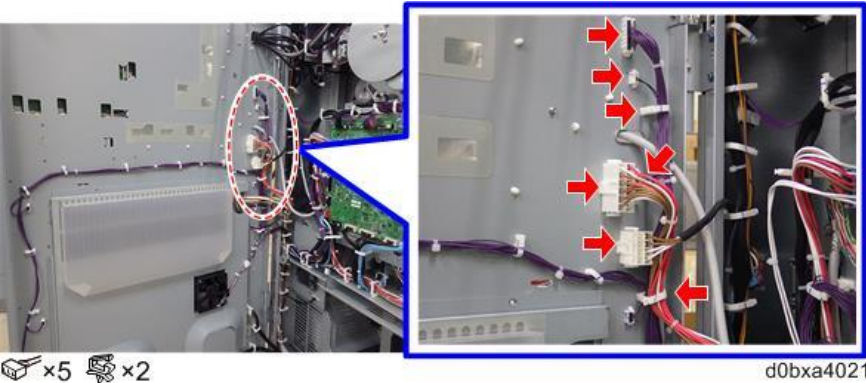
 x13

d0bxa4247

5. Disconnect the connectors of BiCU.

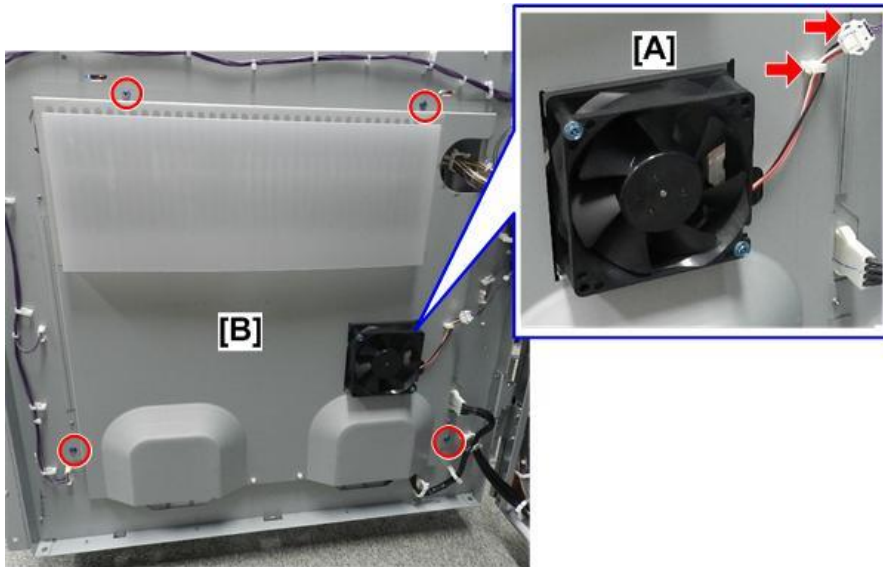


6. Remove the connectors and clamps inside the controller box.



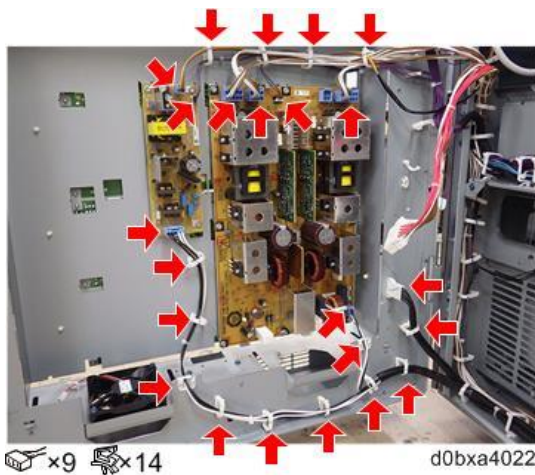
#### 4.Replacement and Adjustment

7. Disconnect the fan [A], and then remove the PSU cover [B] (🔧1x, 📦x1, ⚙️x4).



d270b2241

8. Disconnect the connectors and clamps of the PSU-C and PSU-D (📦x4).



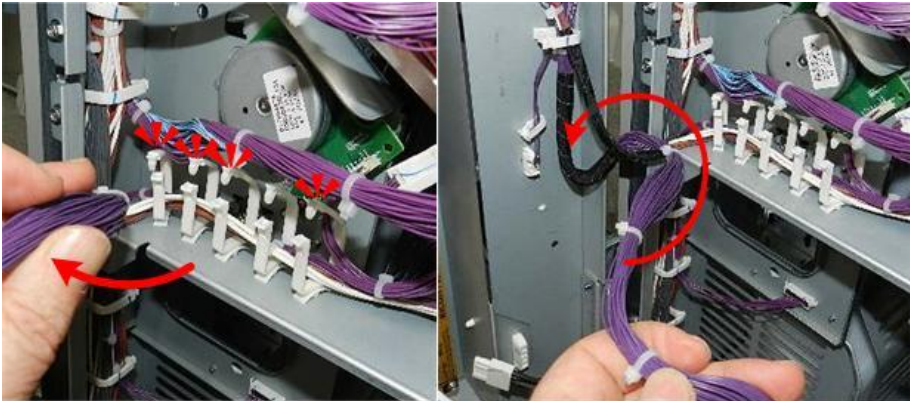
📦x9 🧰x14 d0bxa4022

9. Disconnect the IOB (📦x2, 🧰x2).



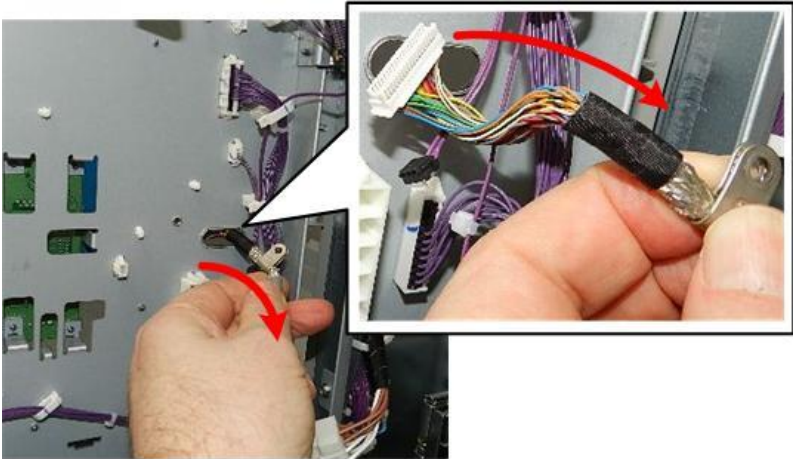
m263b3043

10. Free the IOB harness (x5).



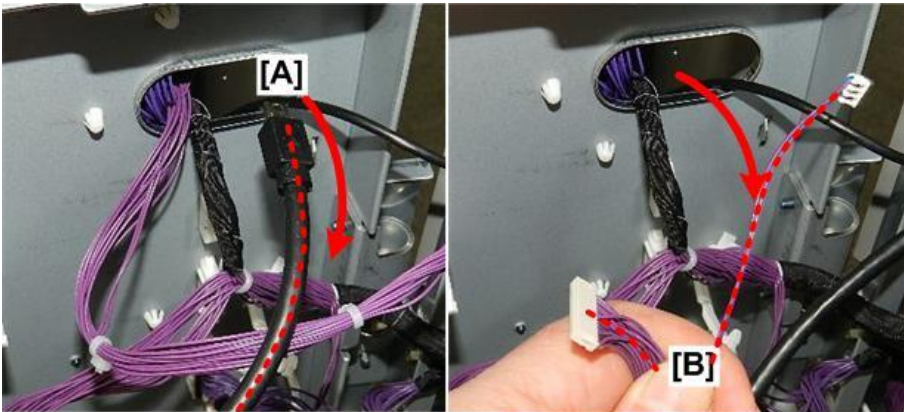
m263b3044

11. Pull the shielded harness through the frame.



m263b3046

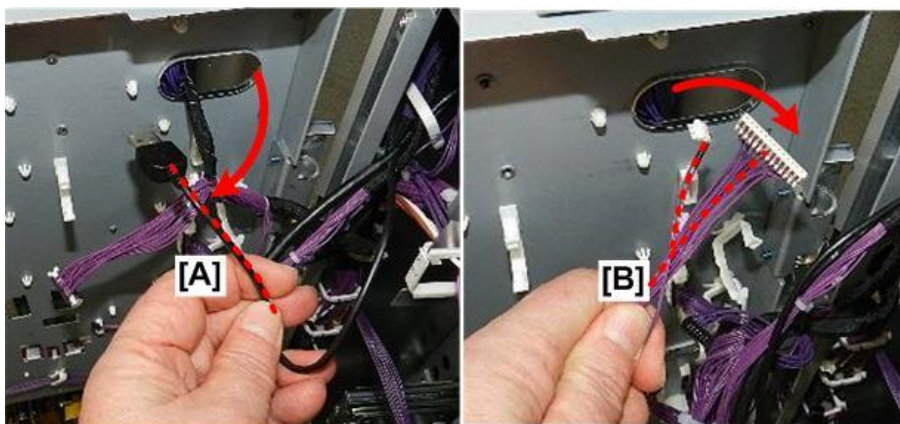
12. At the upper right corner, pull the first harness [A] and the second harness [B] through the frame.



m263b3047

#### 4.Replacement and Adjustment

13. At the same location, pull the third harness [A] and the fourth harness [B] through the frame.



m263b3048

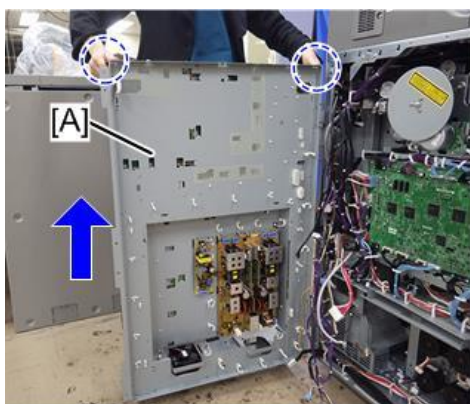
14. At the bottom of the box on the right rear corner of the machine, remove the lock bracket (🔑 x1).



d270b2238

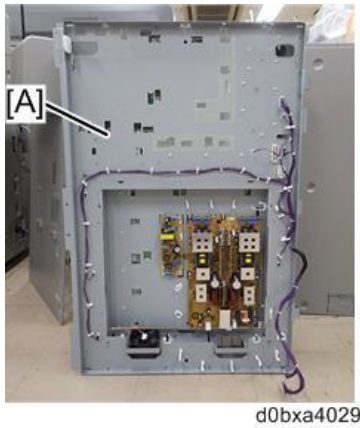
15. Grip both ends [A] of the top of the box.

16. Pull the box up off its hinge pegs, and then pull it away from the machine.



d0bxa4028

17. Set the box [A] in a location where it will not fall over while you move the machine.



d0bxa4029

---

## Canopy Cover



---

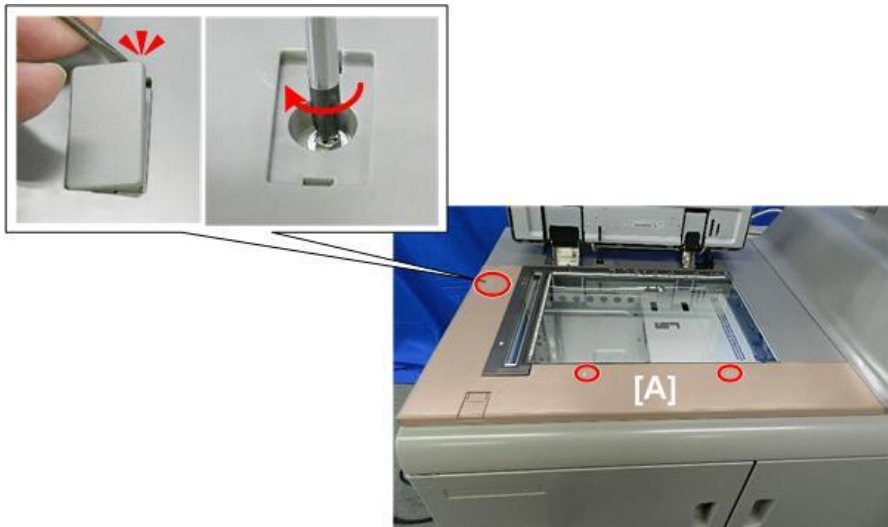
The beginning of this procedure for the copier model is different from the printer model.

- With the copier model, you must first remove the edge covers around the exposure glass.
- The printer model requires the removal of the top cover and edge covers.

### Canopy Cover (Copier Models)

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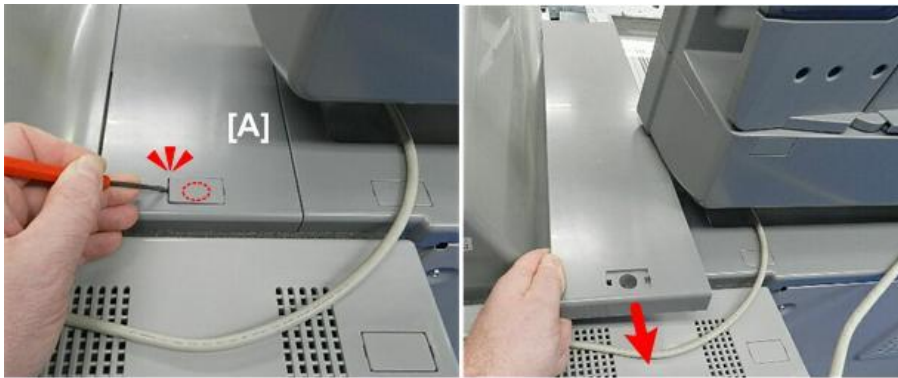
1. Raise the scanner unit.
2. Remove the scanner "L" cover [A] (cap x1,  x1,  x2).



d1792701

#### 4.Replacement and Adjustment

- At the rear, remove the exposure glass right cover [A] (cap x1, ⚙️x1).



d1792702

- Cover the exposure glass to protect it.



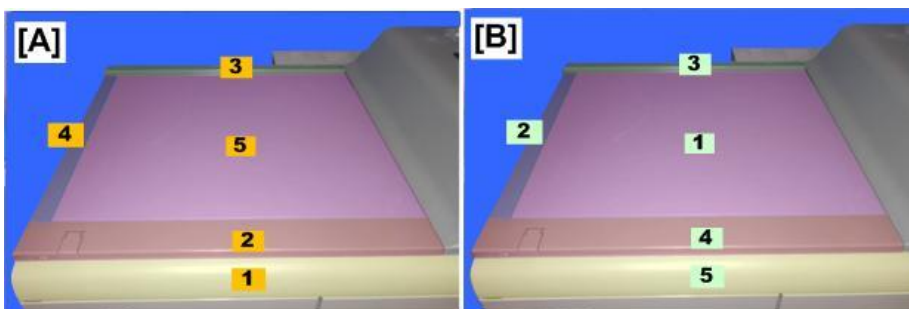
d1792703

#### Canopy Cover (Printer Models)

Follow this procedure to remove the top cover of the printer model.

- The covers are removed in order:

[A]	Removal Order	[B]	Re-installation Order
1	Front frame cover (⚙️x3)	1	Top cover (⚙️x9)
2	Front edge cover (⚙️x3)	2	Left edge cover (⚙️x2)
3	Rear edge cover (⚙️x3)	3	Rear edge cover (⚙️x3)
4	Left edge cover (⚙️x2)	4	Front edge cover (⚙️x3)
5	Top cover (⚙️x9)	5	Front frame cover (⚙️x3)



m263b0001



★ Important

- Remove them in order [A], and then be sure to re-install them in reverse order [B]

2. Open the front doors.



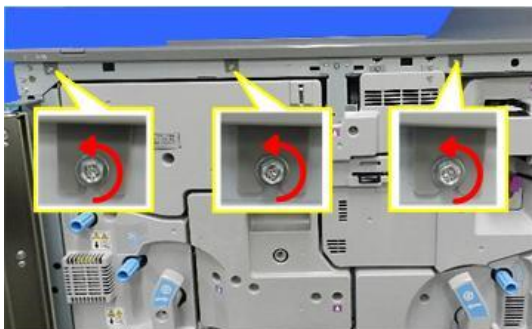
m263b0002

3. Disconnect and remove the front frame cover (⚙️ x3).



m263b0003

4. Disconnect the front edge cover (⚙️ x3).



m263b0005

5. Remove the front edge cover.

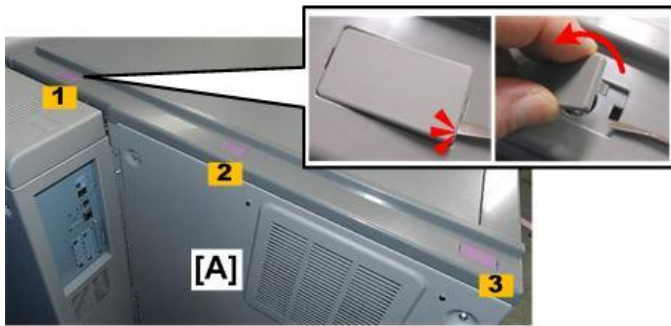


m263b0006

6. At the back of the machine, use the tip of a small driver to remove the three screw covers of the

#### 4.Replacement and Adjustment

rear edge cover.



m263b0007

7. Disconnect the rear edge cover (🔧 x3).



m263b0008

8. Slide the cover slightly to the right to unhook it, and then remove it.



m263b0009

9. Disconnect the left edge cover (⚙️x2).



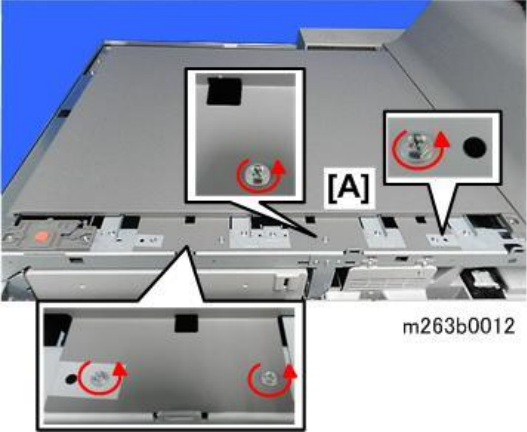
m263b0010

10. Slide the cover slightly to the right to unhook it, and then remove it.



m263b0011

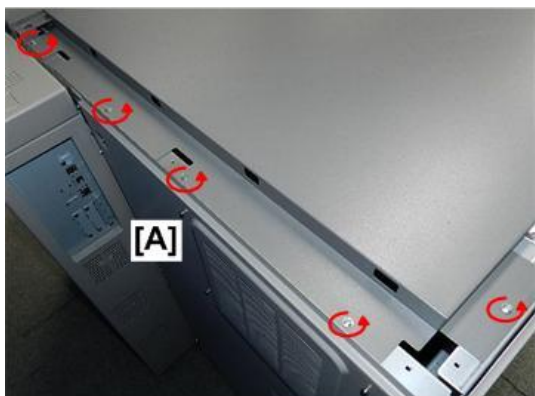
11. At the back of the machine [A], disconnect the edge of the top cover (⚙️x4).



m263b0012

#### 4.Replacement and Adjustment

12. At the back of the machine [A], disconnect the rear edge and corner of the top cover (🔩x5).



m263b0013

13. Remove the top cover.



m263b0014

14. Spread a drop cloth over the open top of the machine to prevent screws, tools, or other objects from falling into the machine.



m263b0016

15. This completes removal of the top and edge covers.

#### **Re-installation**

To make sure that the top cover is aligned correctly when you re-install it:

1. Insert a driver into the hole in the left [A].
2. Insert the driver into the hole in the right [B].



m263b3015

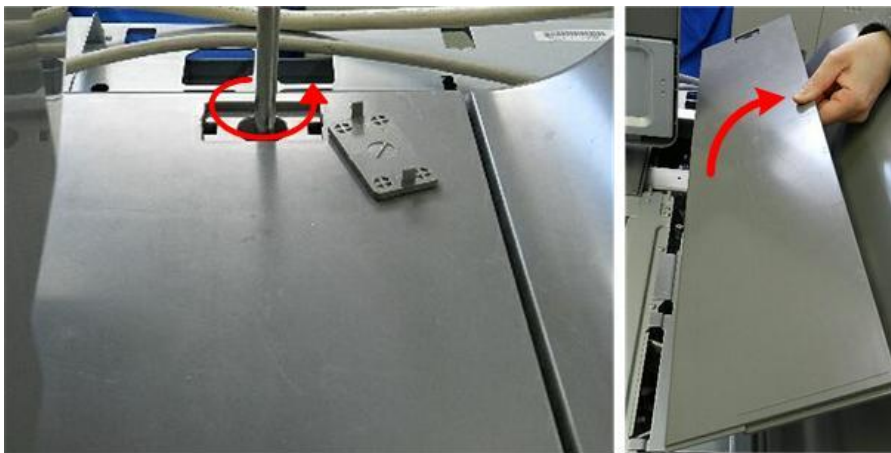
This ensures that the top cover is aligned correctly.

### Toner Supply Unit Upper Cover

---

The remaining procedures are the same for both the copier model and the printer model.

1. Remove the canopy cover. ([Canopy Cover](#))
2. Remove the exposure glass right cover (🔧 x1).



d1792649

3. Remove the right cover. ([Right Cover](#))

#### 4.Replacement and Adjustment

4. Remove the attention light [A] (⚙️ x3, 🛠️ x2, 📦 x1).



d0bxa4113

5. Remove the operation panel. (Operation Panel)  
6. Remove the arm stand. (Arm Stand)  
7. Open the toner cover.



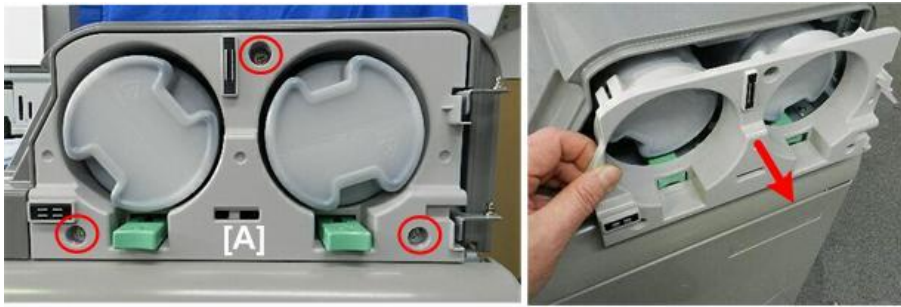
d1792713

8. Pull off the clip and remove the toner cover [A] (🔗 x1).



d1792714

9. Remove the toner inner cover [A] (⚙️x3).



d1792715

10. At the rear [A], remove the filter bracket and filter from the back of the canopy (✂️x1).

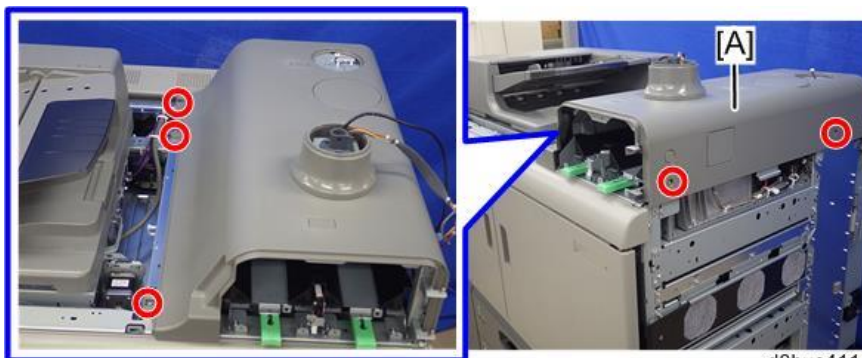
**Note**

- Note the position of the notch on the edge of the filter. It must be re-installed in the same way.



d1792718

11. Remove the screws of the toner supply unit upper cover [A] (⚙️x5).



d0bxa4114

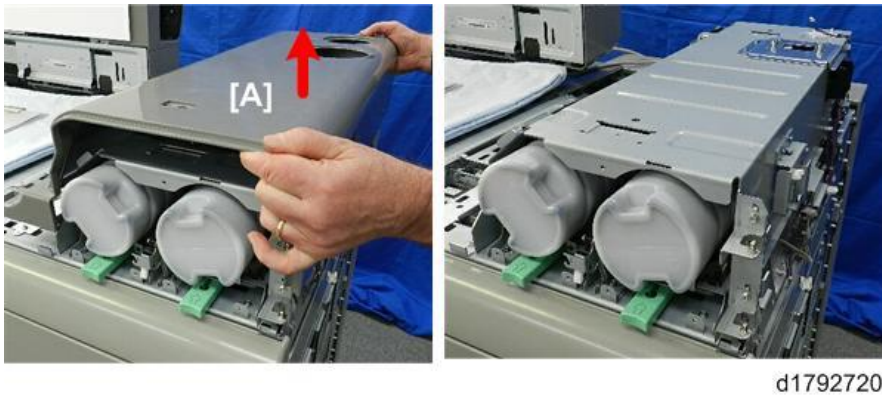
12. Remove the cap [A], and then remove the screws at the top of the toner supply unit upper cover

## 4.Replacement and Adjustment

(🔧x2).



13. Remove the toner supply unit upper cover [A].

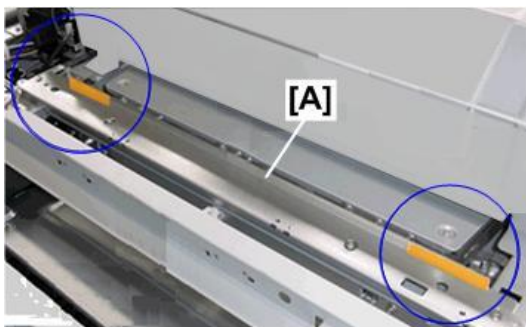


### Points to Note When Re-Attaching the Toner Supply Unit Upper Cover

#### ↓ Note

The procedures below are for the printer model only.

You need to be careful when you re-install the canopy cover to avoid damaging the cushions at the front and rear of the stay [A].

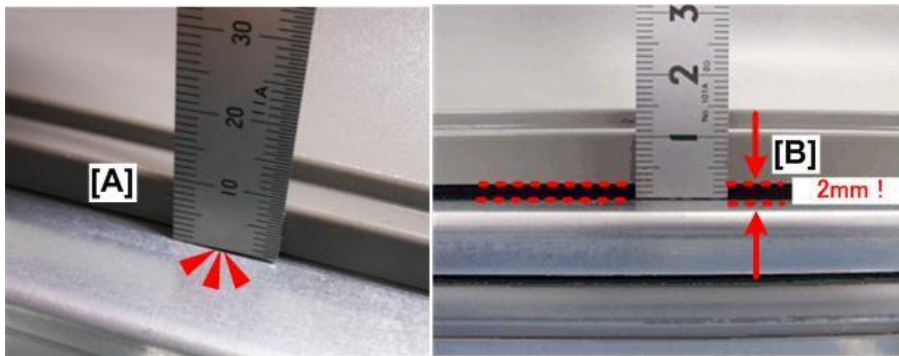


m263b3018

1. Slowly, set the canopy on top of the toner bottle unit.
2. At the front and rear, set a scale on the stay and confirm that there is no gap between the edge of the canopy [A] and the top of the stay below.
3. If you see a gap as shown at [B], this means that the left edge of the canopy is riding on one or



both cushions.



m263b3019

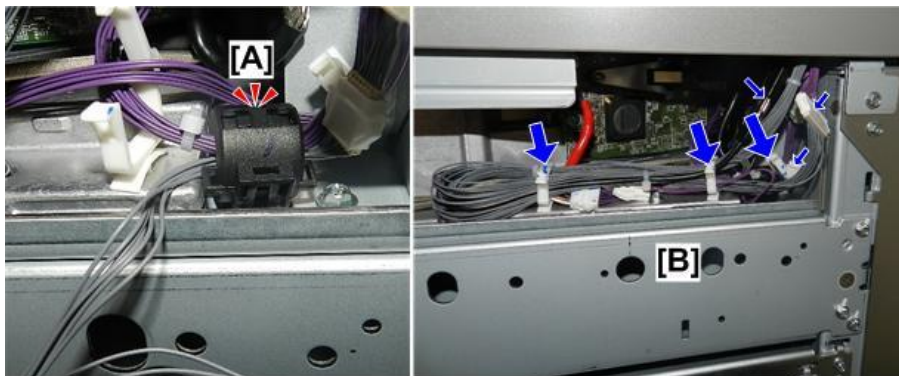
**Note**

- Be sure to check at both the front and the rear of the canopy cover for any gap.

4. If you see a gap, carefully remove the canopy and set it again, and then use the scale again to confirm that there is no gap.

**Ferrite Core**

1. Before you re-attach the right cover, re-attach the ferrite core [A].
2. Connect the harnesses and close the clamps [B] (🔌 x3, 🛠️ x3).



d271b1035

**Important**

To prevent noise interference, make sure that the ferrite core is re-attached correctly and securely locked.

## Operation Panel Unit

### Operation Panel

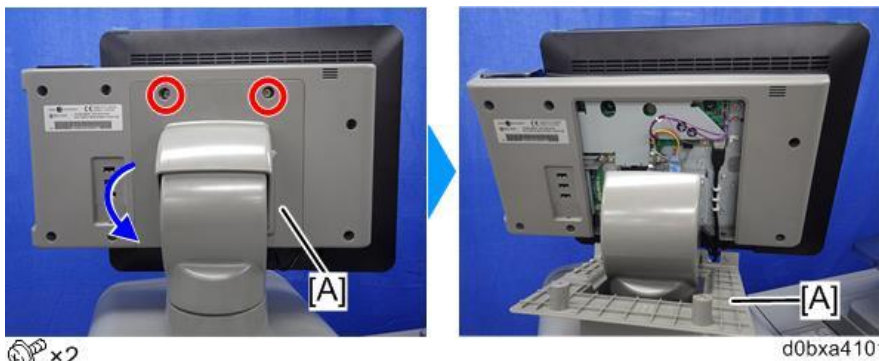
1. Tilt the panel to the maximum angle.
2. Remove the cover [A].



**Note**

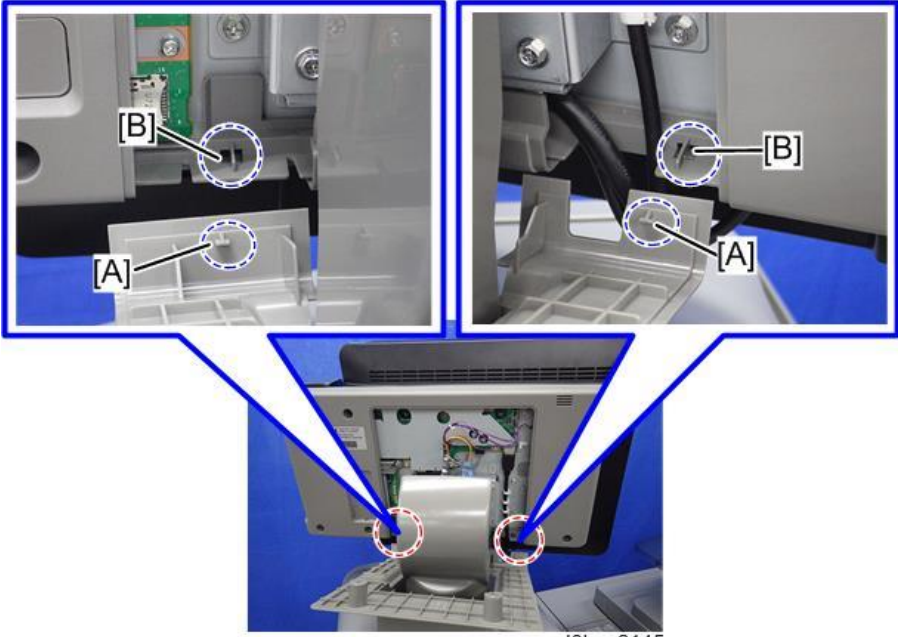
- After this procedure, work from the back side.

3. Remove the screws of the cover [A] from the rear.



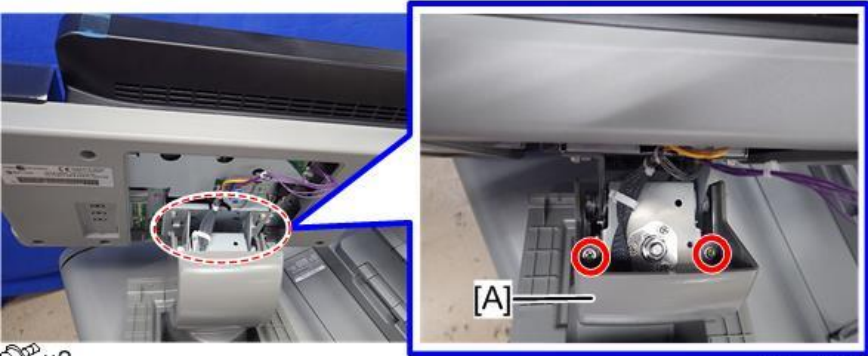
**Note**

- Remove the hooks [A] from the holes [B] of the operation panel.



d0bxa2145

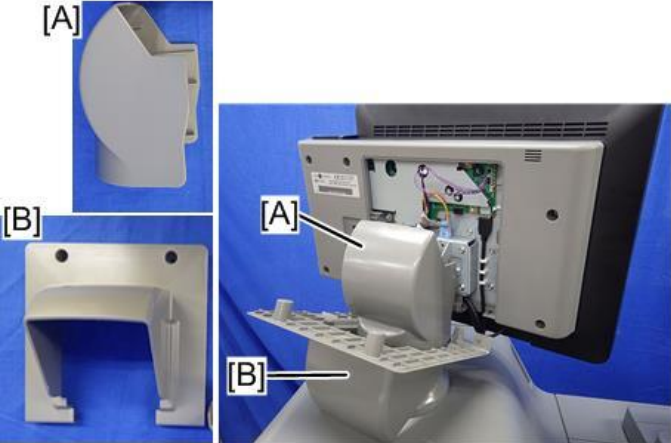
4. Remove the screws of the cover [A].



⚙️ x2

d0bxa2144

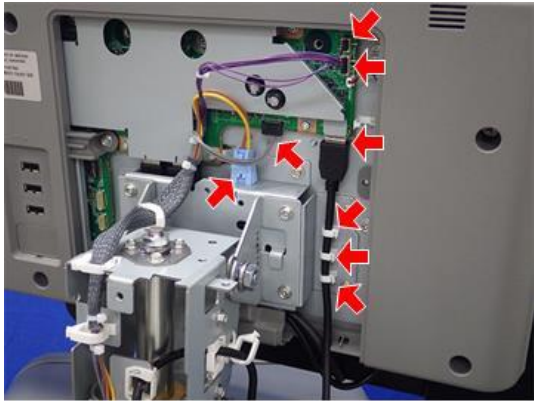
5. Remove the cover [A], [B].





d0bxa2143

#### 4.Replacement and Adjustment

#### 6. Disconnect the connectors and clamps.

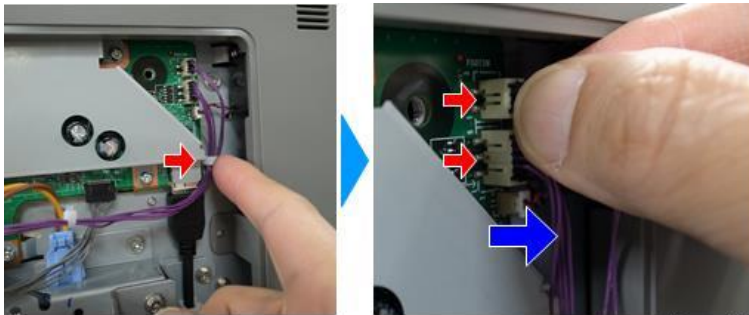


 x5  x3

d0bxa2142

#### Note

- After removing the clamps, pull out the connectors in a vertical direction from the board.



d0bxa4258

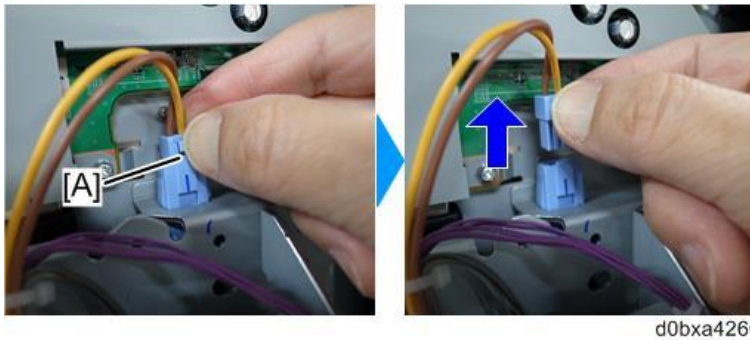
- Pull out the connector in a vertical direction. If the connector is slanted, it might be broken.



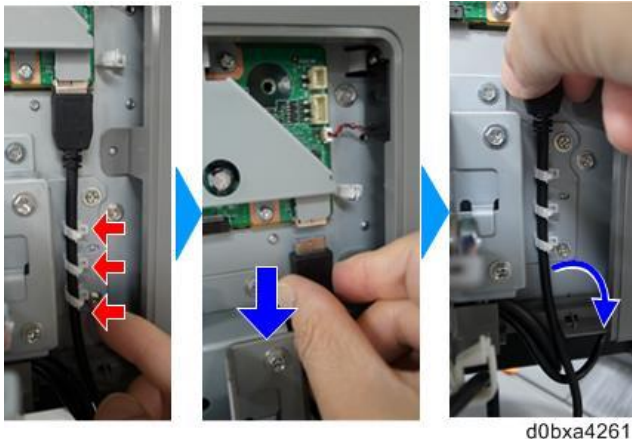
d0bxa4259

- Hold the connector upright pushing the locking part of it between the finger tips, and then

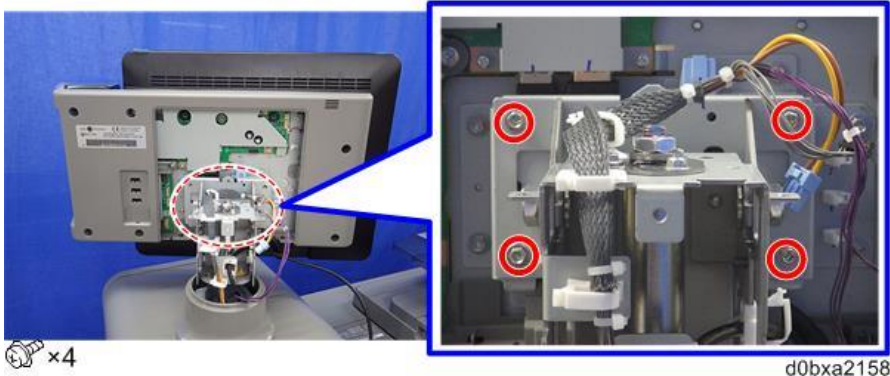
pull out it.



- Remove the clamps, and pull out the connector in the vertical direction holding the left and right side of it between the finger tips to remove the cable. If the connector is slanted during removal, it might be broken.

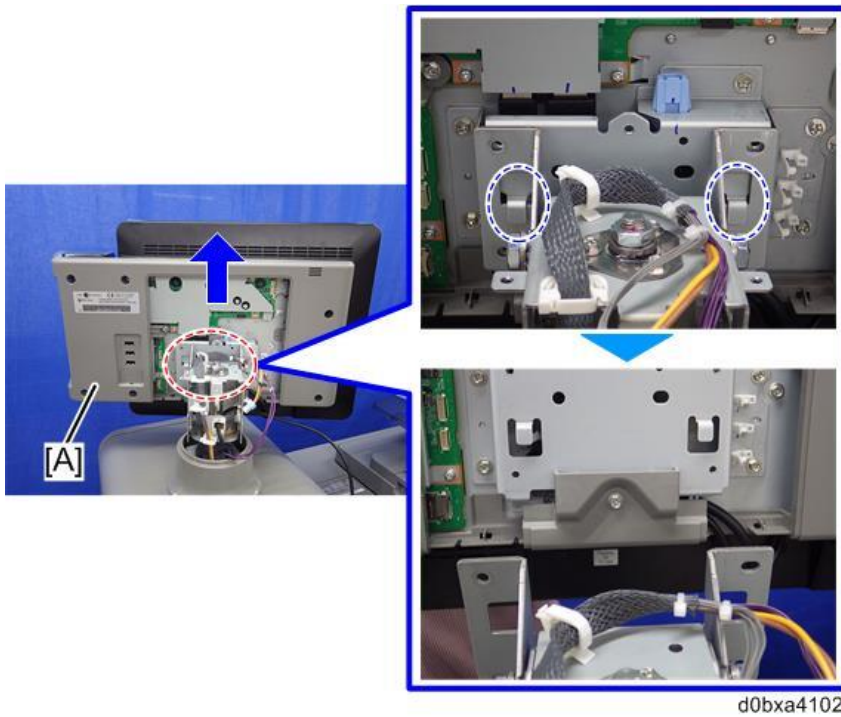


1. Remove the screws of the operation panel.



## 4.Replacement and Adjustment

1. Hold the operation panel [A] from the rear side, unhook the two hooks, and then lift it to detach.



### Note

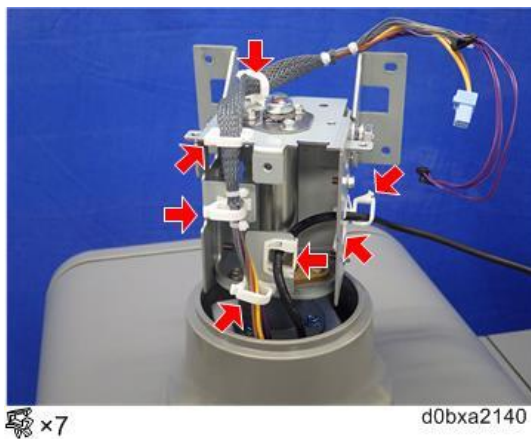
- When removing the operation panel, prevent the harness and connectors from being caught.

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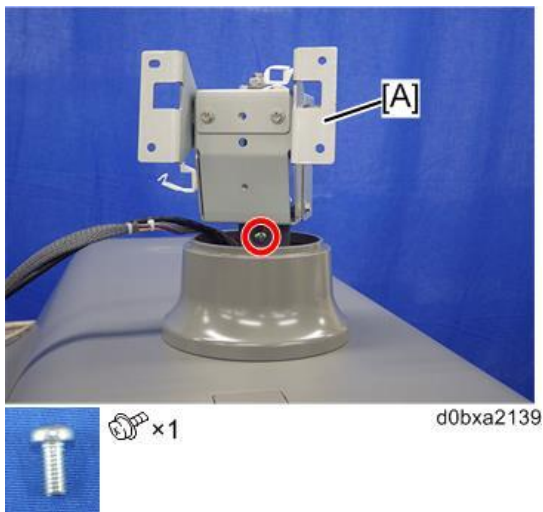
## Arm Stand

---

1. Remove the operation panel ([Operation Panel](#)).
2. Release the harnesses.

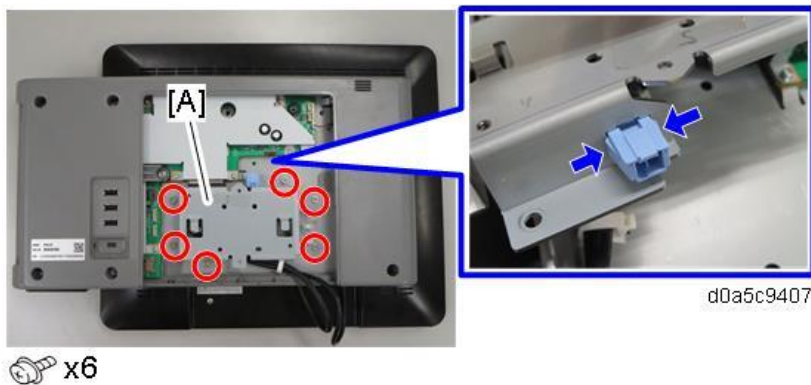


- 3.** Remove the arm stand [A].

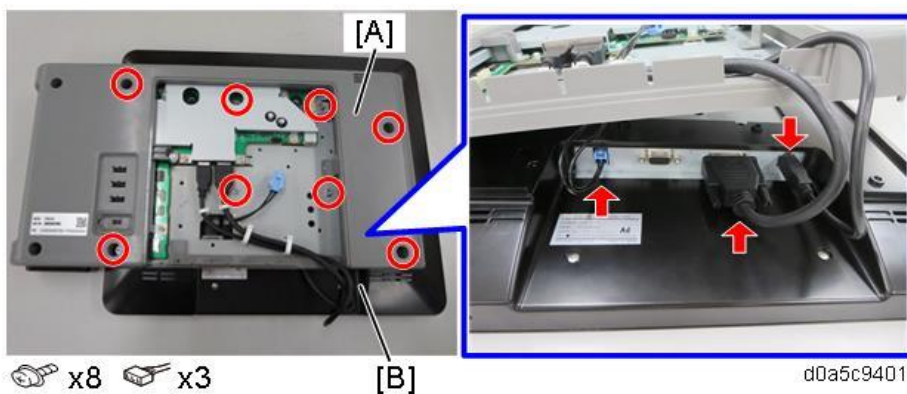


### Separating the Operation Panel and LCD Unit

- 1.** Remove the operation panel unit. (Operation Panel)
- 2.** Remove the six screws.
- 3.** Remove the hinge base bracket [A] by removing the connector on the hinge base bracket.



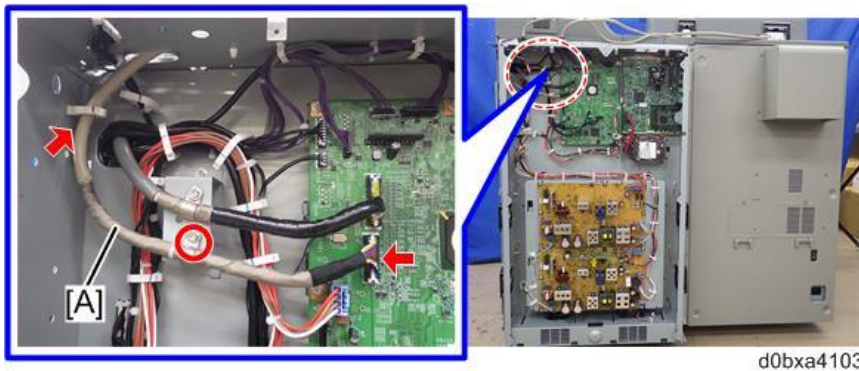
- 4.** Remove the eight screws.
- 5.** Disconnect the harnesses while lifting up the rear unit [A], then separate the rear unit from the LCD unit [B].



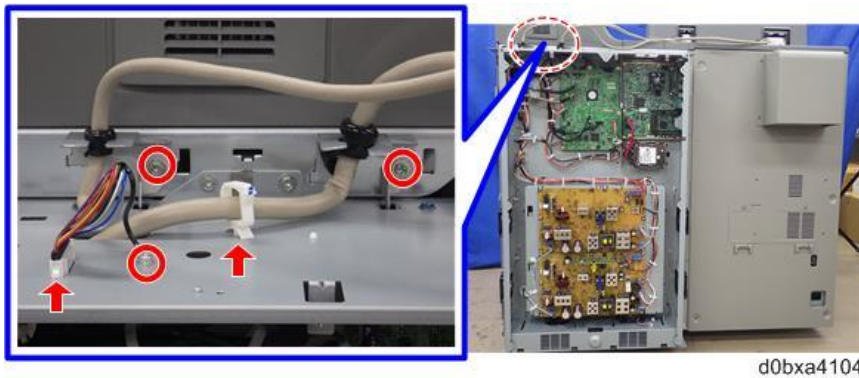
## ADF (Copier Models Only)

### Removing the ADF

1. Remove the controller box cover. ([Removing the Controller Box Cover, Inner Cover](#))
2. Release the harness [A]. (🔧 x1, 📦 x1, 🛠️ x1).



3. Release the harness at the upper side of the controller box.

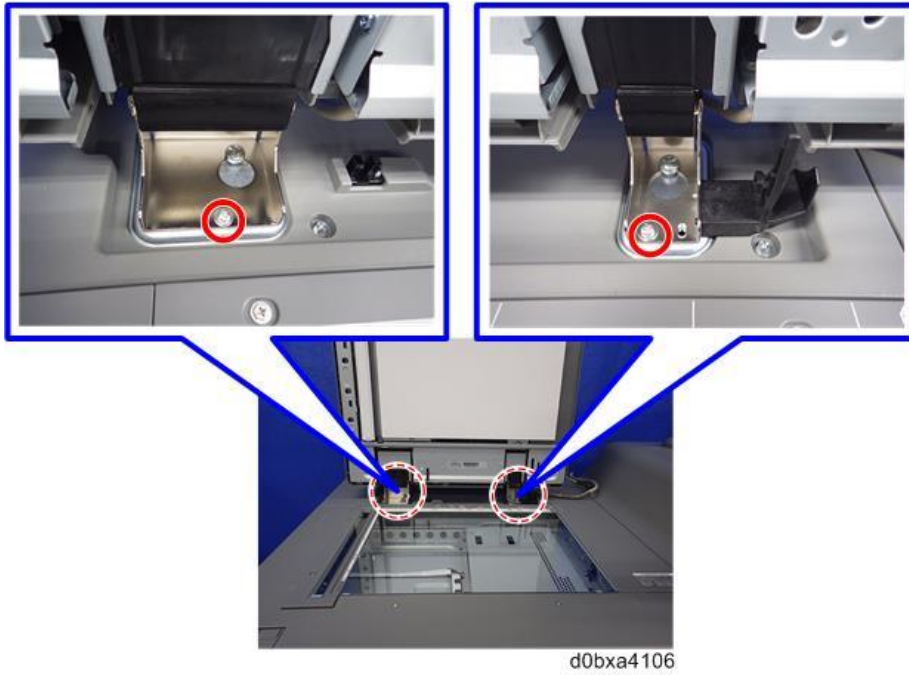


4. Pull the disconnected harness [B] from the hole [A] of the top of the controller box.



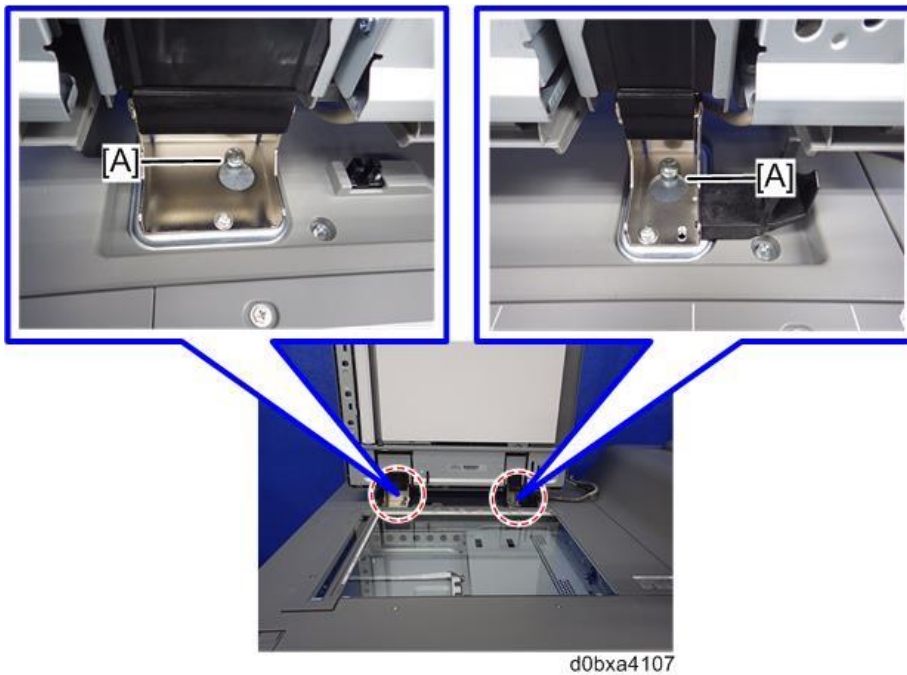


5. At the front, disconnect the ADF anchor plates (🔩x2).



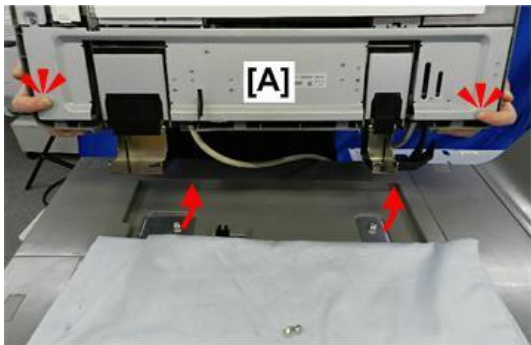
**★ Important**

- Never try to remove or loosen the large shoulder screws [A].



#### 4.Replacement and Adjustment

6. Grip the ADF [A] from the rear.



d1792505

7. Pull it to the rear, lift it straight up, and then set it on the floor behind the machine or on a large table. **Weight:** approx. 14 kg (31 lb.)



d1792661

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#### After ADF Replacement

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#### CIS RGB Adjustment

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When replacing the ADF, perform adjustment value copy of gray balance of the CIS.

Execute SP4-730-002 (FROM Main Factory Setting: Execution ON/OFF).

The parameters written in FROM (GB coefficient, pixel interpolation coefficient) are saved to the machine by executing these SP.

**★ Important**

The execution will be failed when a paper feed cover is opened or lifted up.

Close the paper feed cover and the ADF, and then execute the SP.

A data sheet is provided with a new ADF unit.

- The sheet lists the following SP codes and the values that must be entered for each SP.
- These SP codes must be set after ADF replacement.

SP	Name
4-712-001	CIS GB Adj Value: R
4-713-001	CIS GB Adj Value: G
4-714-001	CIS GB Adj Value: B

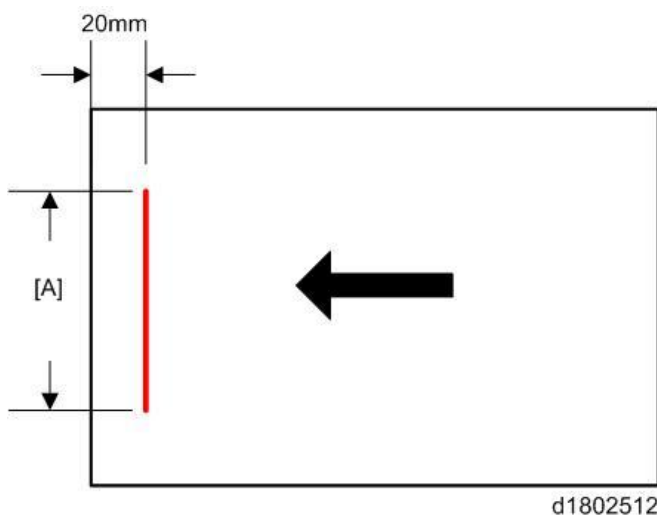
After setting all the SP codes, print an SMC report so you can have a record of the new values in case you need to replace the NVRAM at a later time.

### Checking for Skew

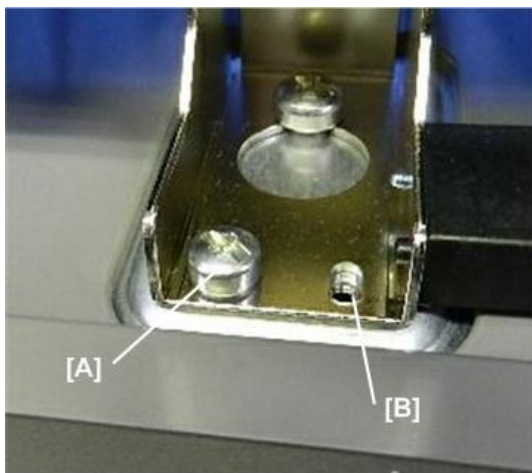
1. Use a blank piece of A3 paper to make an original like the one shown below.

#### Note

- The line should be 20 mm (0.8 in.) from the leading edge and centered.



2. Copy the original.
3. Measure the distances from the end points of the line and the edges of the paper.
4. The distances should be the same  $0\pm 2\text{mm}$  ( $0\pm 0.1$  in.).  
If the distances do not match, adjust the position of the ADF.
5. At the right hinge, loosen the fixing screw [A] and then shift it to the long hole [B].



d1802513

## 4.Replacement and Adjustment

### Platen Adjustment

---

1. Raise the ADF.
2. Insert your hand under the upper right corner, about the width of your palm, to separate the plate.



d1802506

3. Insert your hand about palm-width at the lower right corner.



d1802507

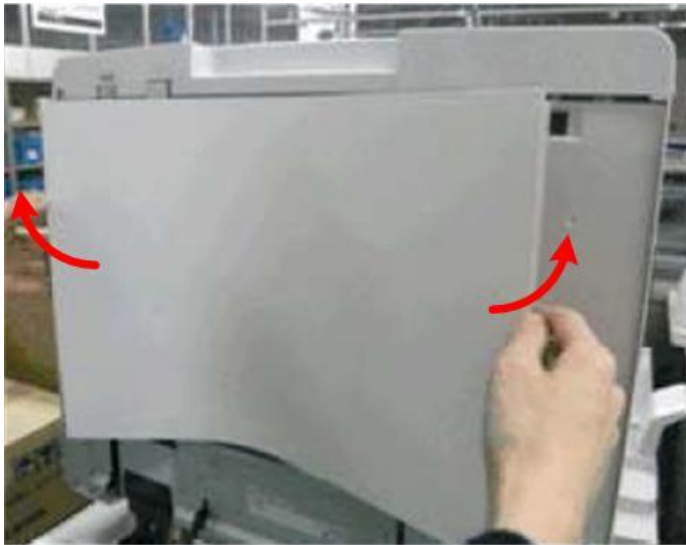
4. In the same way, separate the upper left corner [A] and lower left corner [B].



d1802508

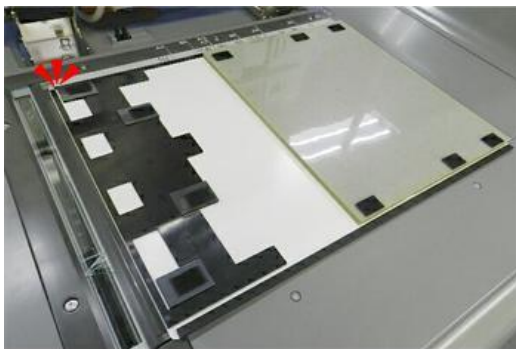
5. Pull both sides of the plate straight off (insert your hand under the center to separate the center).

6. Pull the white plate away from its Velcro fasteners.



d1802509

7. Position the corner of the white plate in the upper left corner, and then just lower the ADF onto the plate.



d1802501

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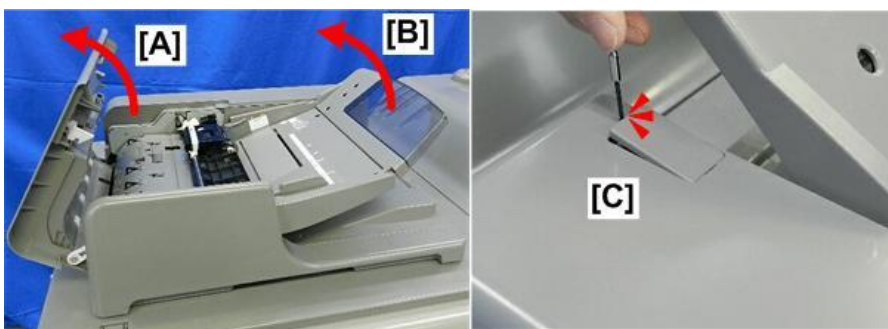
## ADF Covers

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### ADF Rear Cover

---

1. Open the feed cover [A].
2. Raise the original extension plate [B].
3. Remove the screw cap [C].



d1792506

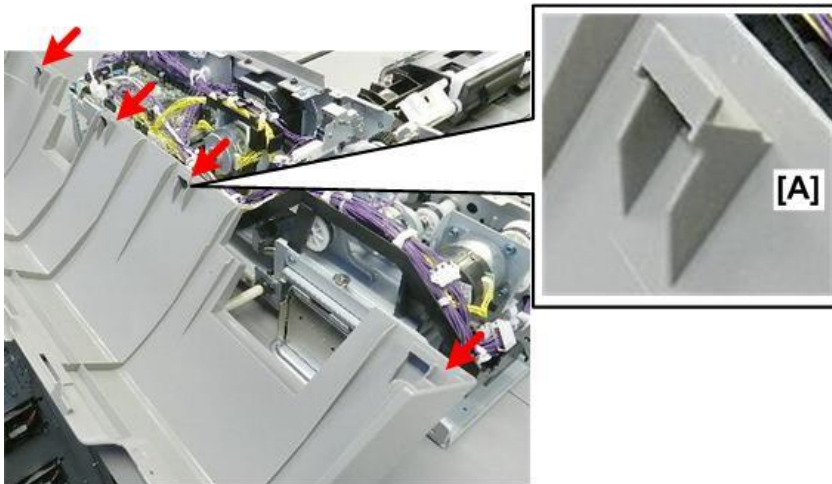
#### 4.Replacement and Adjustment

4. Disconnect the left side [A] and the right side [B] of the cover (↗x2).



d1792507

5. Remove the cover.
  - Note the tabs [A] and matching holes.
  - The tabs must be inserted in the holes correctly when the cover is re-attached.

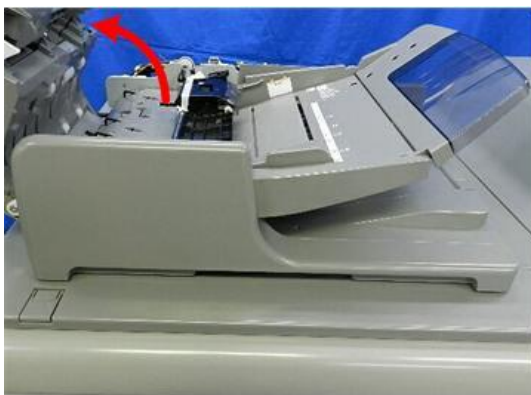


d1792509

#### ADF Front Cover

---

1. Open the feed cover.



d1792510

2. Remove screws [A] and [B] (各x2).



d1792511

3. Slide the cover to the left to disconnect it.



d1792512

4. Remove the cover.

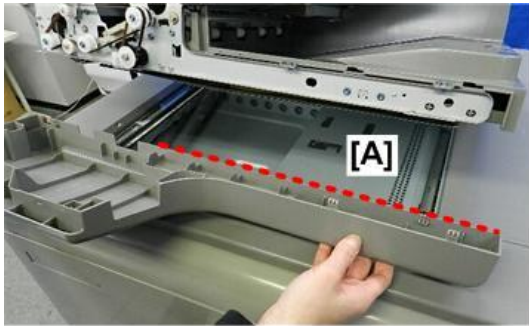


d1792513

5. Before you continue:

- Note the tabs [A] and matching holes.
- The tabs must be inserted in the holes correctly when the cover is re-attached.

## 4.Replacement and Adjustment



d1792514

### Feed Cover

1. Remove the ADF front cover ([ADF Front Cover](#))
2. Remove the ADF rear cover ([ADF Rear Cover](#))
3. Disconnect the harness [A] (🔧x2, 📦 x1).
4. Disconnect the ground wire [B] (🔧x1).



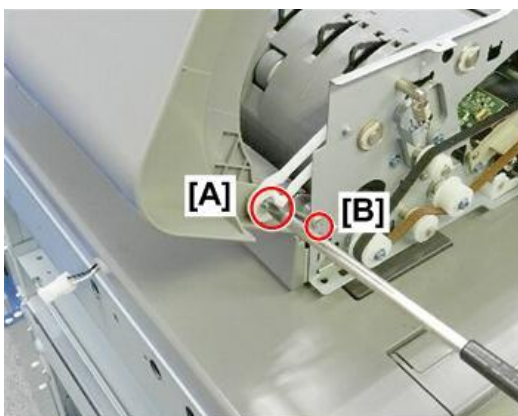
d1792515a

5. Disconnect the hinge arm [A] (🔧x1).

#### Note

- Screw [A] is a long pivot screw and it must be re-installed here.

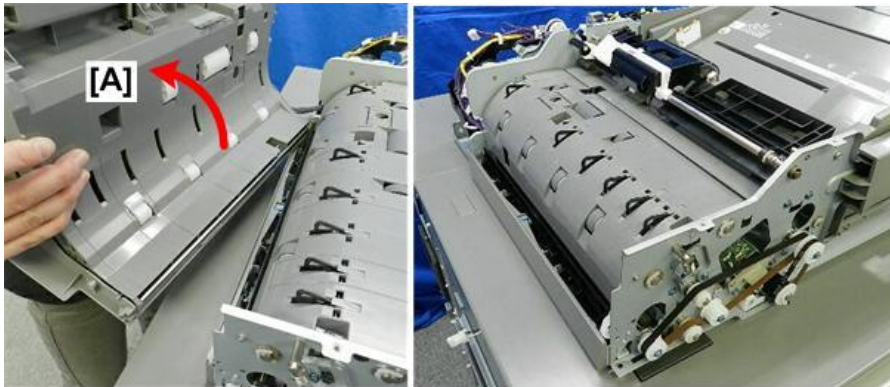
6. Remove the screw [B] (🔧x1).



d1792516



7. Remove the feed cover [A].

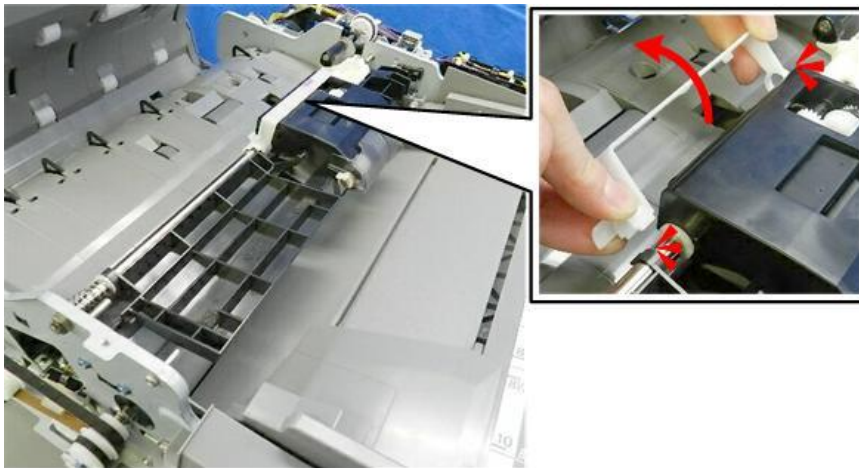


d1792517

#### Original Feed Unit

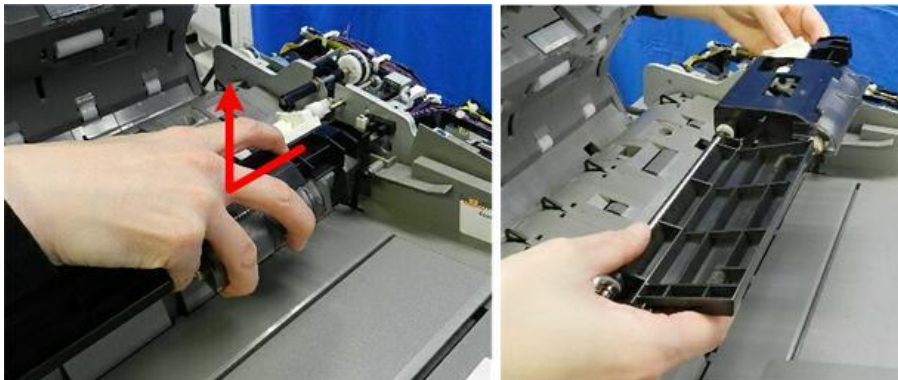
---

1. Open the feed cover
2. Remove the ADF front cover ([ADF Front Cover](#))
3. Remove the ADF rear cover ([ADF Rear Cover](#))
4. Pull the ends of the white bracket apart slightly, and remove the white bracket.



d1792518

5. Pull the unit to the front to disconnect it, and then remove it.



d1792519

## 4.Replacement and Adjustment

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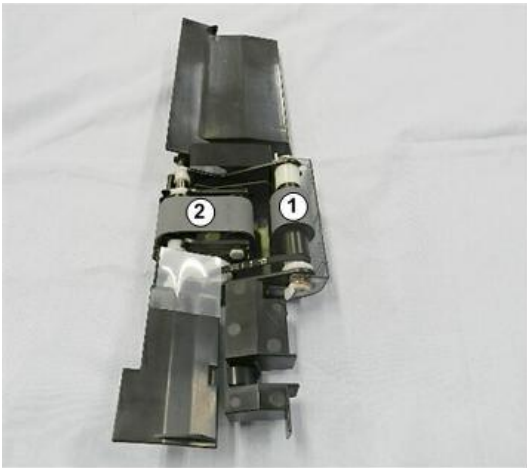
### Pickup Roller, Feed Belt

---

#### 1. Original feed unit (Original Feed Unit)

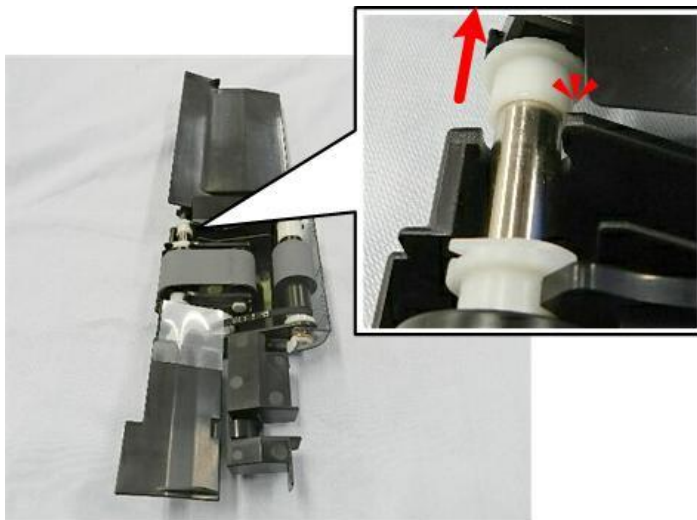
##### Pickup Roller

①	Pick-up Roller
②	Feed Belt



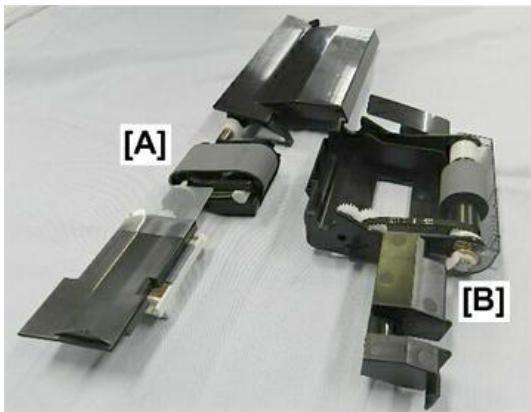
d1792520

#### 1. Slide out the white bushing.



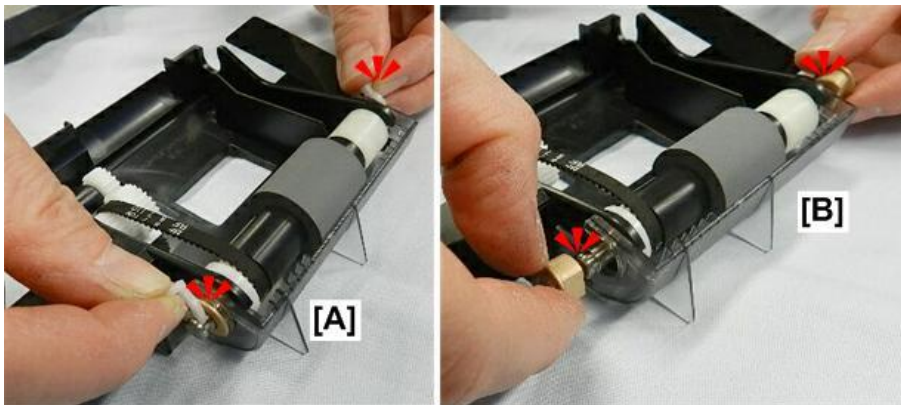
d1792521

2. Separate the belt feed holder [A] and the pick-up roller holder [B].



d1792522

3. Disconnect both ends of the pick-up roller shaft [A] (⌀x2).  
4. Remove the bushings from both ends [B] (■x2).

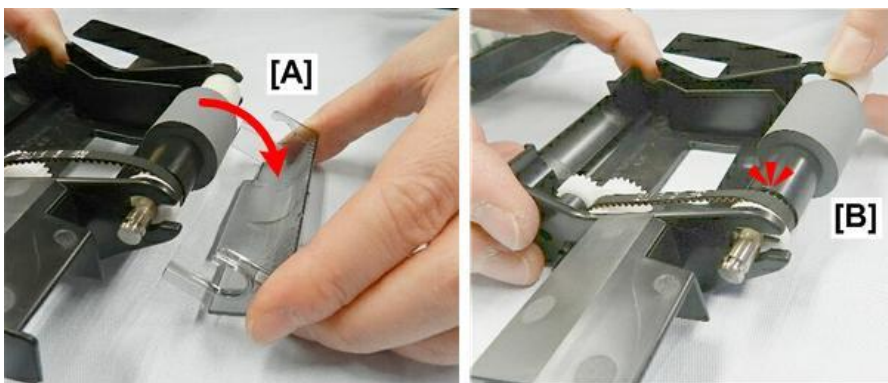


d1792523

5. Remove:  
[A] Plastic cover  
[B] Belt

★ Important

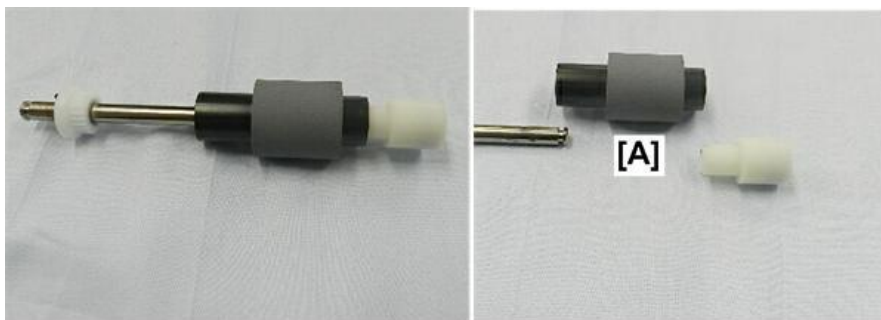
- Avoid touching the surface of the pick-up roller. Oil from your hands or fingertips could cause the roller to slip during original feed.



d1792524

#### 4.Replacement and Adjustment

6. Remove the pick-up roller [A] from the shaft.

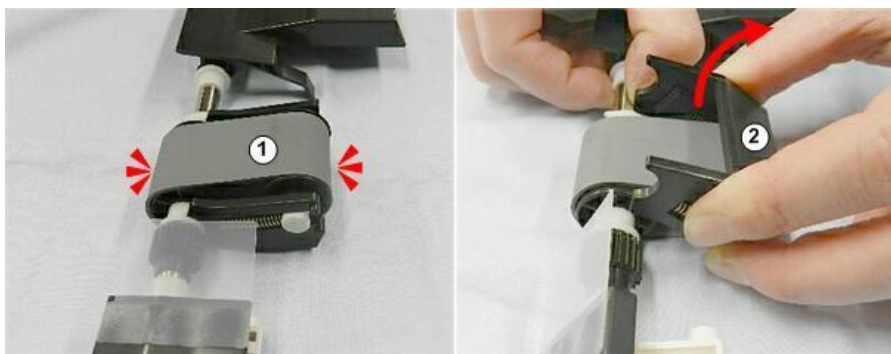


d1792525

#### Feed Belt

---

1. Compress the sides ① to release the spring tension, and then disconnect the belt frame ② from the shaft.

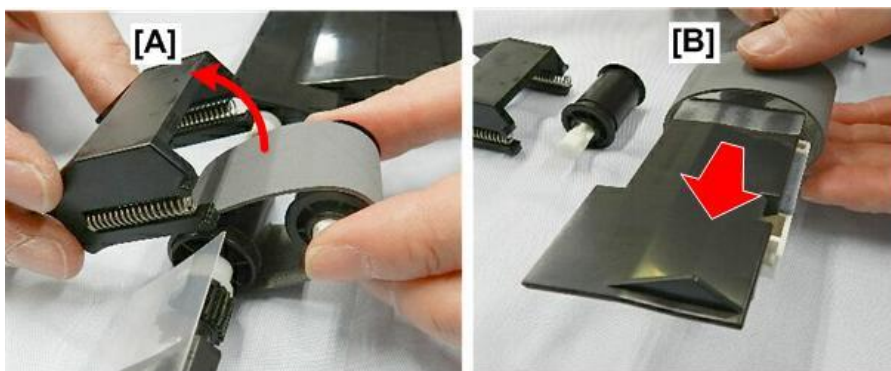


d1792526

#### ★ Important

- Avoid touching the surface of the belt. Oil from your hands or fingertips could cause the belt to slip during original feed.

2. Separate the belt frame [A] from the belt, then slide off the belt [B].



d1792527

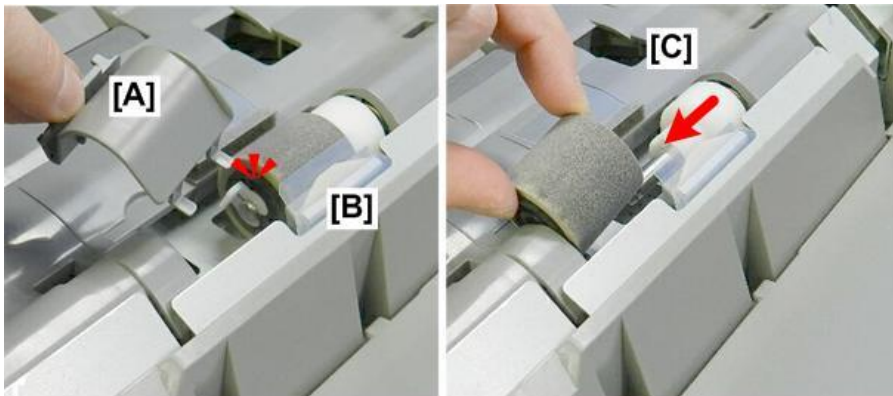
---

#### ADF Separation Roller

---

1. Open the feed cover ([Feed Cover](#))
2. Original feed unit ([Original Feed Unit](#))

3. Remove the cap [A].
4. Disconnect the roller [B] (⌀x1).
5. Remove the roller [C].



d1792529

---

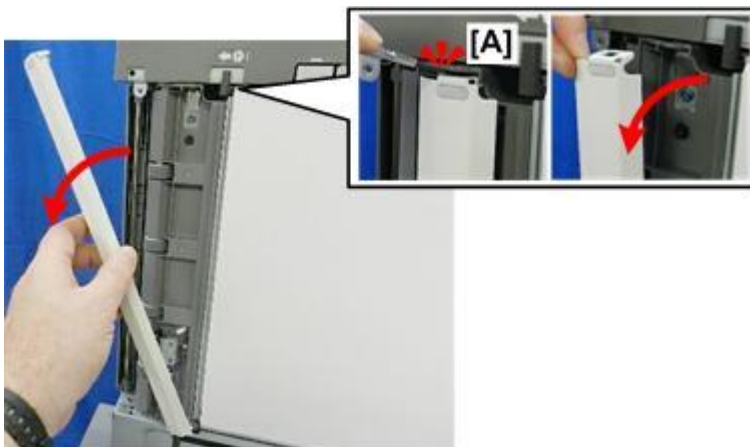
## ADF Sensors

---

### Original Registration Sensor

---

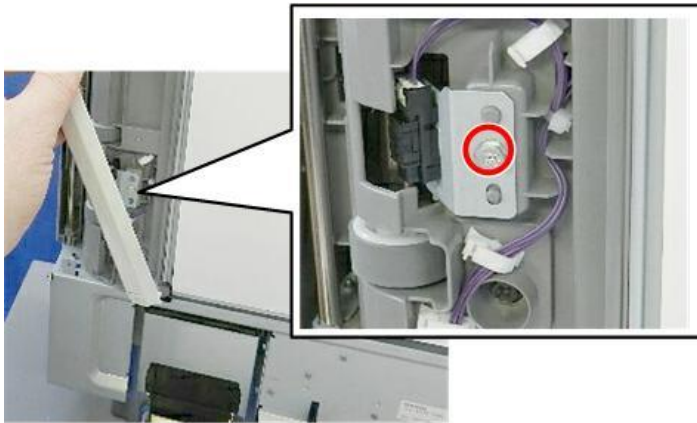
1. Raise the ADF
2. Disconnect the plate at [A], and then remove it.



d1792531

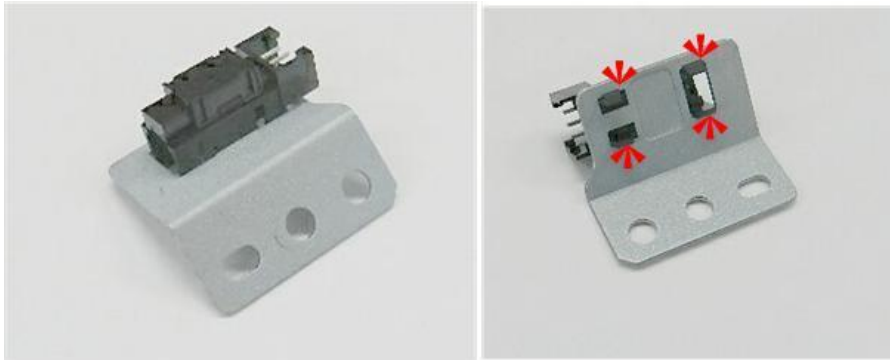
## 4.Replacement and Adjustment

3. Disconnect the sensor bracket (🔧x1).



d1792532

4. Remove the sensor from the bracket (▼x4).



d1792534

### Original Width Sensors

---

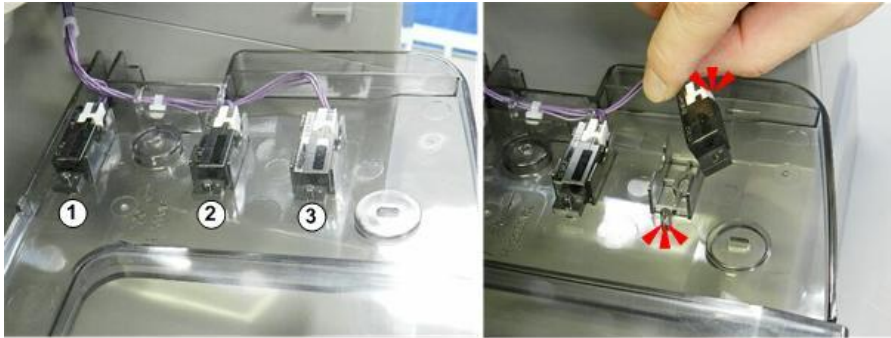
1. Raise the original extension plate [A].
2. Disconnect the plate [B] (🔧x4).



d1792535

3. The sensors are arrayed at the rear:
  - ① B5
  - ② A4
  - ③ LG

## 4.Replacement and Adjustment



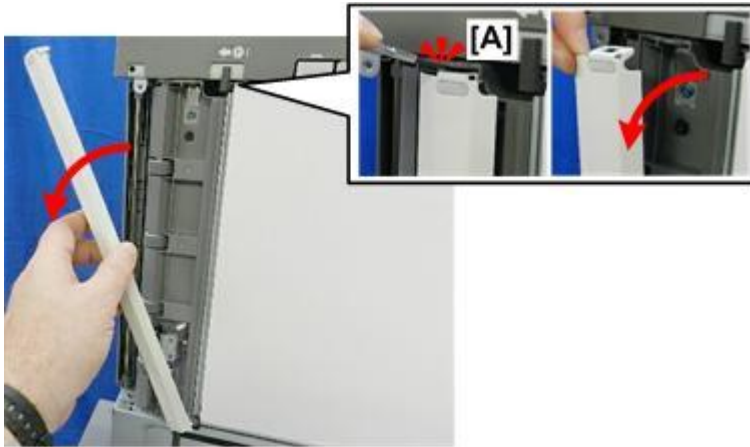
d1792536

4. Remove a sensor from its holder (no pawls, no hooks).
5. Disconnect the sensor (🔌 x1).

### Original Exit Sensor

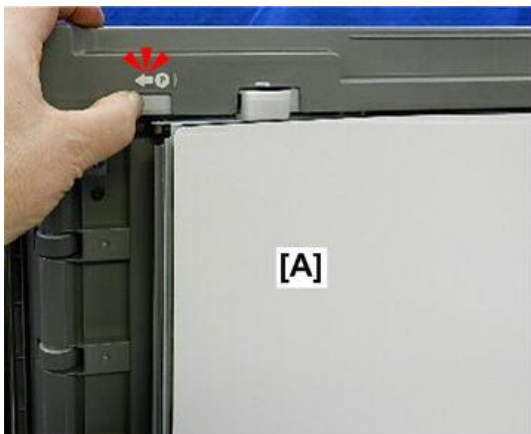
---

1. Disconnect the plate at [A], and then remove it.



d1792531

2. Release the white plate holder [A].



d1792537

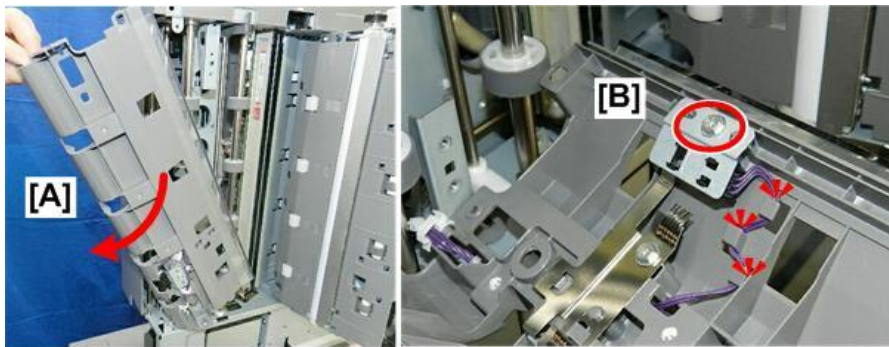
3. Disconnect the cover:  
[A] Top (🔩 x3)  
[B] Bottom (🔩 x3)

#### 4.Replacement and Adjustment



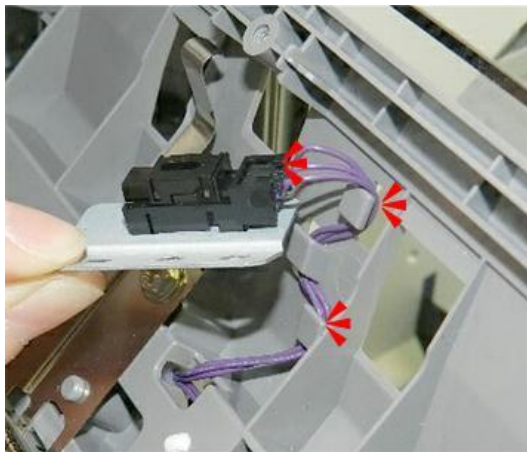
d1792538

4. Remove the cover [A].
5. Disconnect the sensor bracket [B] and the harness (🔌x3, 🛠️x1).



d1792539

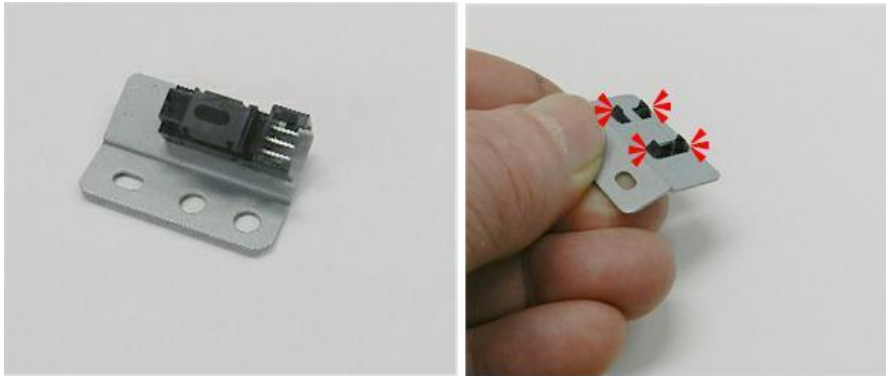
6. Disconnect the sensor (🔌 x1).



d1792540



7. Separate the sensor and the bracket (▼x4).



d1792541

---

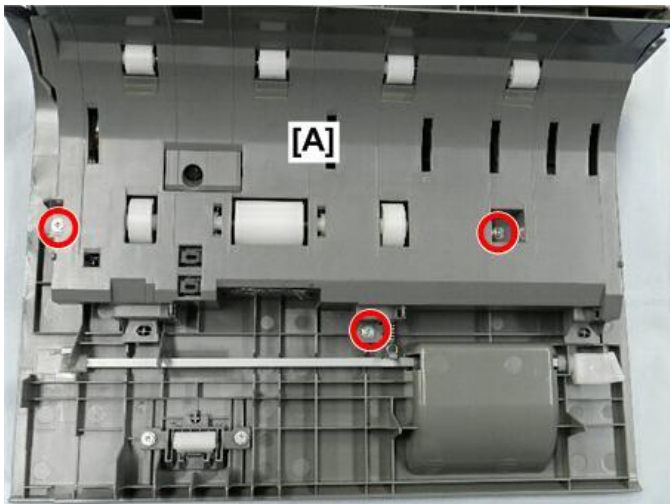
## Sensors, Switches

---

### Separation Sensor, Skew Correction Sensor, Double Feed Detect Sensor (Receptor) (Option)

---

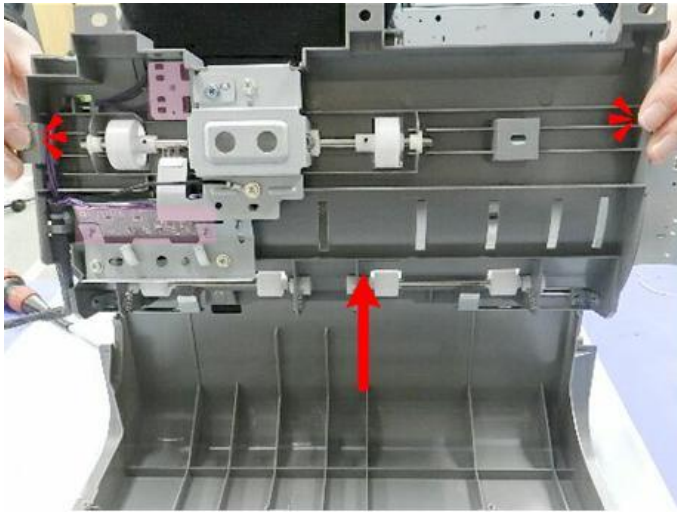
1. Remove the feed cover ([Feed Cover](#))
2. Remove the guide plate [A] (⌀x3).



d1792548

## 4.Replacement and Adjustment

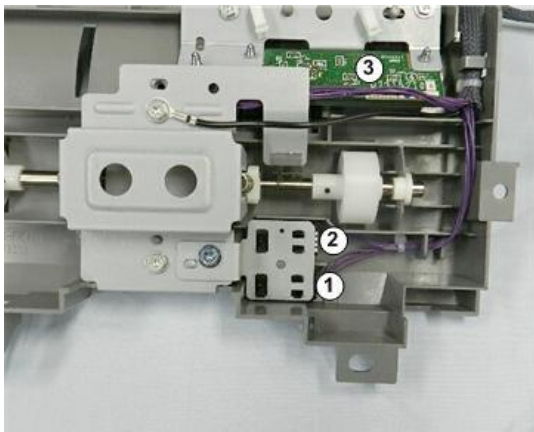
3. Separate the plates.



d1792549

4. Sensors:

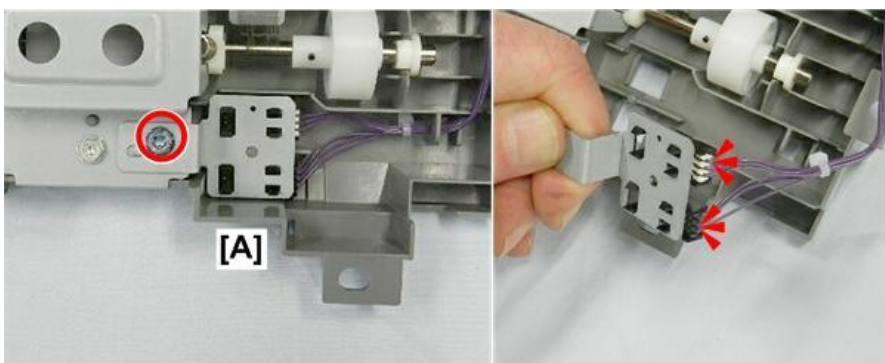
- ① Separation sensor
- ② Skew correction sensor
- ③ Double feed detect sensor (receptor) (Option)



d1792550

### Separation Sensor, Skew Correction Sensor

1. Disconnect the sensor bracket [A] (✂x1).
2. Disconnect the sensors (✂x2, ▼x8).



d1792551

### Double Feed Detect Sensor (Receptor) (Option)

**★ Important**

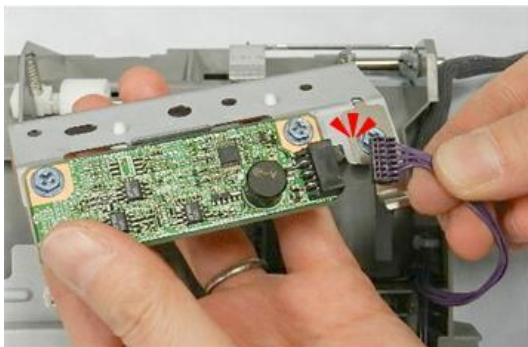
- This machine is not equipped with double-feed sensors before shipping. This feature is an option for this machine that must be purchased separately and installed by a trained service technician. This sensor will not be present unless the kit has been installed.

1. Disconnect the sensor bracket, and then remove it (🔩 x2).



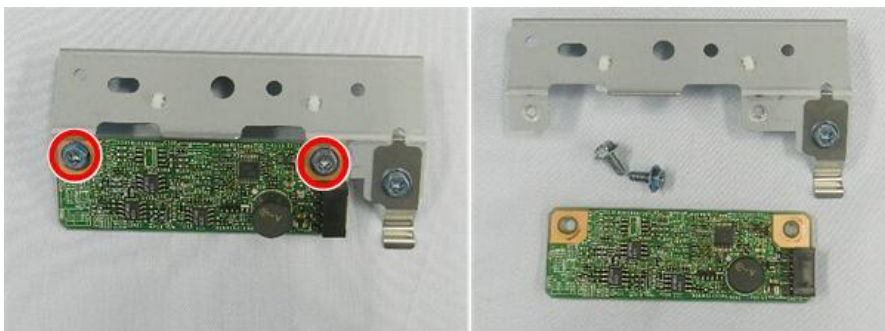
d1792552

2. Disconnect the sensor (🔌 x1).



d1792553

3. Separate the sensor board and the bracket (🔩 x2).



d1792554

### Double Feed Detect Sensor (Emitter) (Option), Interval Sensor, Original Width Sensors

1. Feed cover ([Feed Cover](#))
2. Disconnect the lower guide, in order from rear to front: ① A screw with a washer, ②,③ Black step screws (🔩 x1, 🛠️ x2).

**★ Important**

- These screws must be re-installed in the same order: the blue screw at the back and the

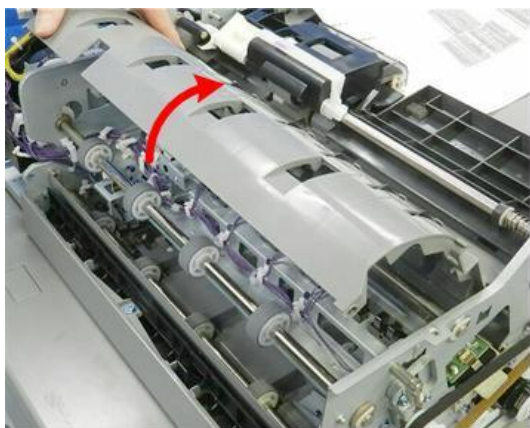
#### 4.Replacement and Adjustment

black screws at the center and front.



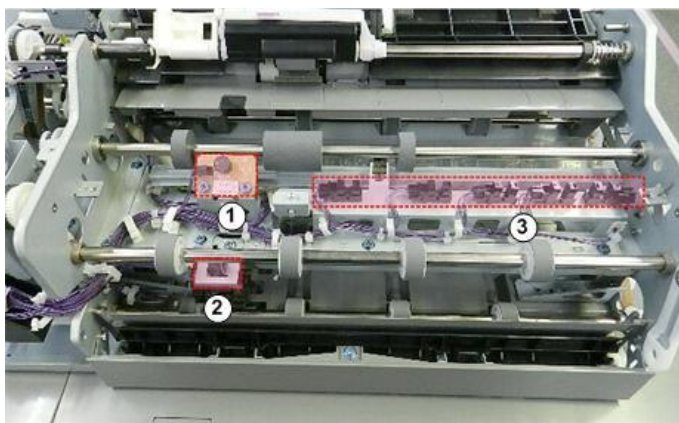
d1792555

3. Remove the guide.



d1792556

①	Double Feed Detect Sensor (Emitter) (Option)
②	Interval Sensor
③	Original Width Sensors



d1792557

#### Double Feed Detect Sensor (Emitter) (Option)

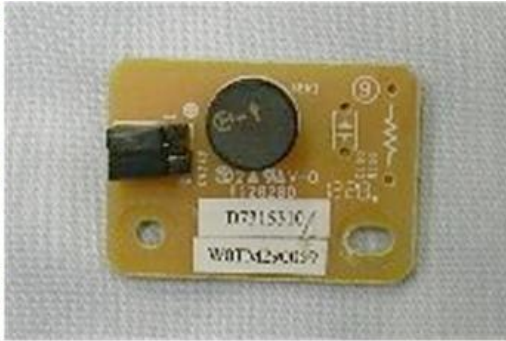
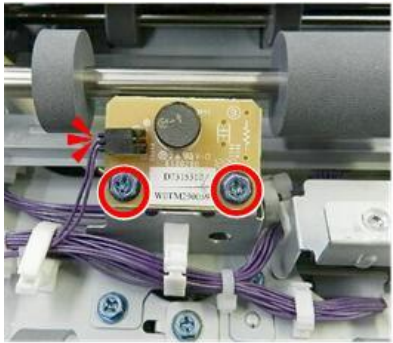
**★ Important**

- This machine is not equipped with double-feed sensors before shipping. This feature is an option for this machine. The double-feed sensor kit must be purchased and installed. This

## 4.Replacement and Adjustment

sensor will not be present unless the kit has been installed.

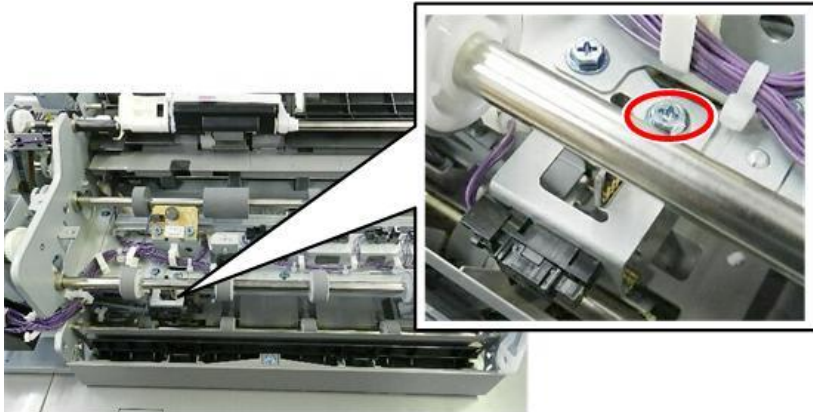
4. Disconnect the sensor board (📦 x1, ⚡x2).
5. Remove the sensor board.



d1792558

### Interval Sensor

1. Disconnect the sensor bracket (⚡x1).



d1792559

2. Disconnect the sensor (📦 x1, ⚡x4).

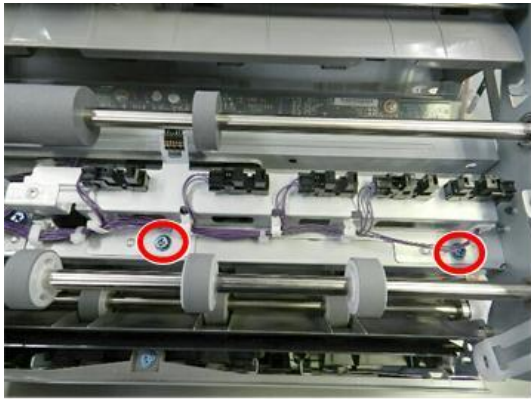


d1792560

### Original Width Sensors

#### 4.Replacement and Adjustment

1. Disconnect the sensor bracket (🔧x2).



d1792561

2. Disconnect the sensor bracket:

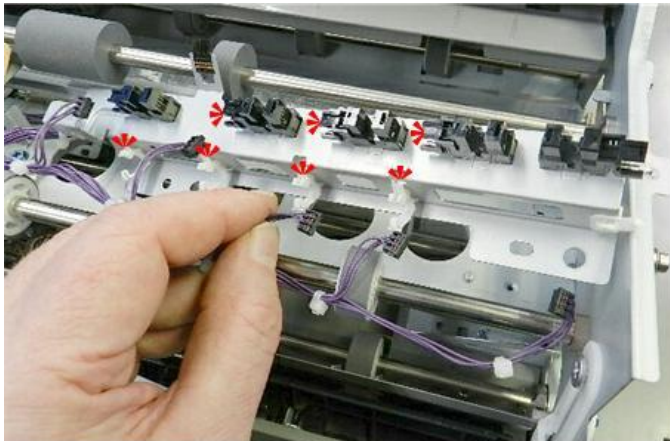
[A] Rear (🔧x1, 📦x1)

[B] Front (🔧x1, 📦x1)



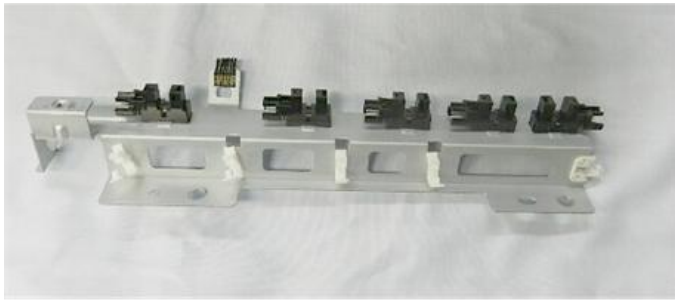
d1792562

3. Open and disconnect the remaining clamps and sensors (🔧x4, 📦x3).



d1792563

4. Remove the bracket.



d1792564

#### APS Feeler

---

1. Rear cover (ADF Rear Cover)
2. Disconnect the bracket (x1).
3. Remove the bracket with feeler attached.

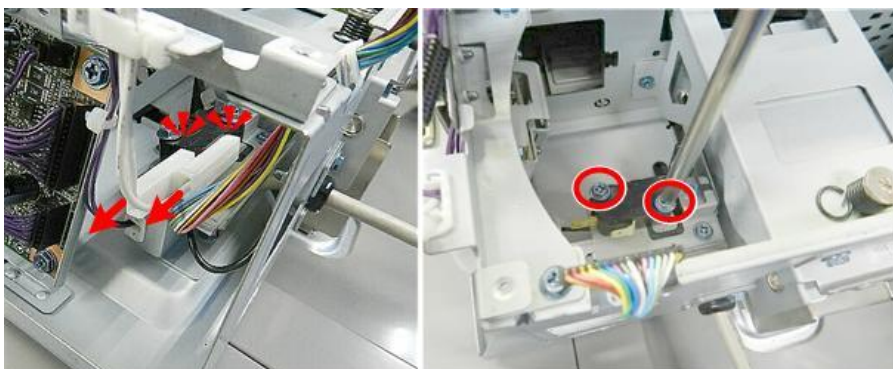


d1792565

#### Lift Up Interlock Switch

---

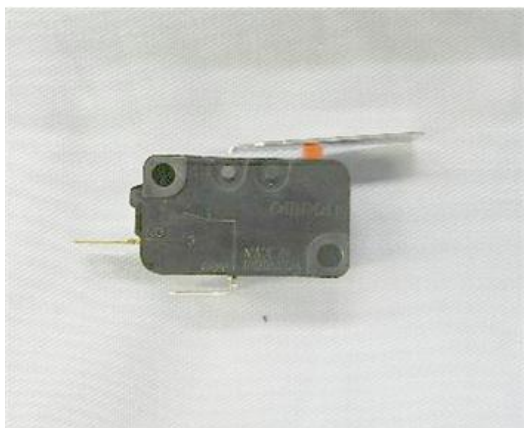
1. ADF control board (ADF Control Board)
2. Disconnect the switch (x2, x2).



d1792566

#### 4.Replacement and Adjustment

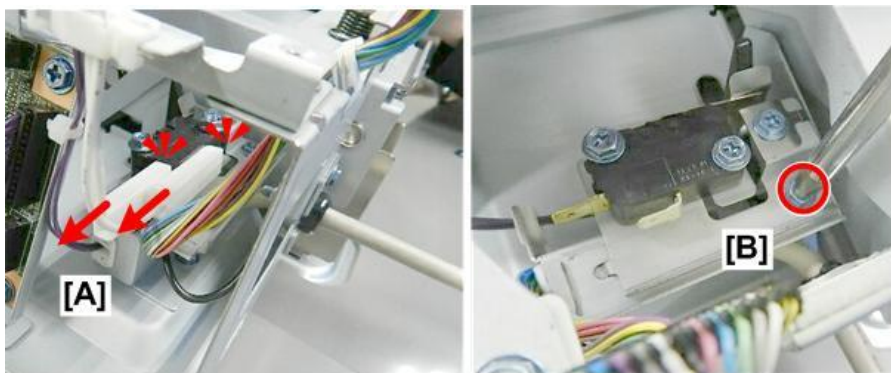
3. Remove the switch.



d1792567

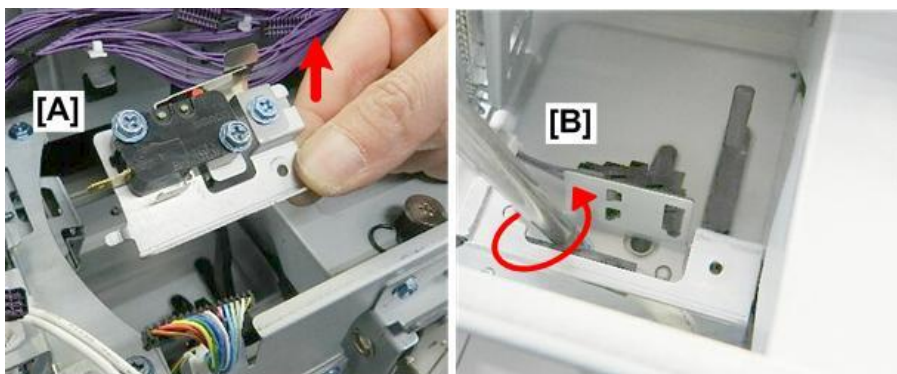
#### Lift-up Sensor

1. ADF control board ([ADF Control Board](#))
2. Disconnect the lift up interlock switch [A] (📦 x2).
3. Disconnect the switch bracket [B] (🔩 x1).



d1792568

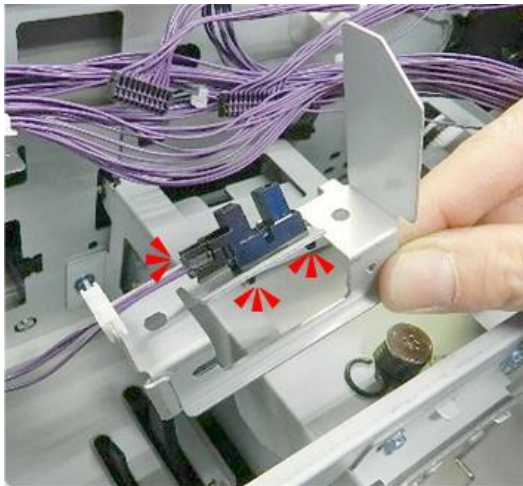
4. Lift out the interlock switch bracket [A].
5. Disconnect the lift-up sensor bracket [B] (🔩 x1).



d1792569



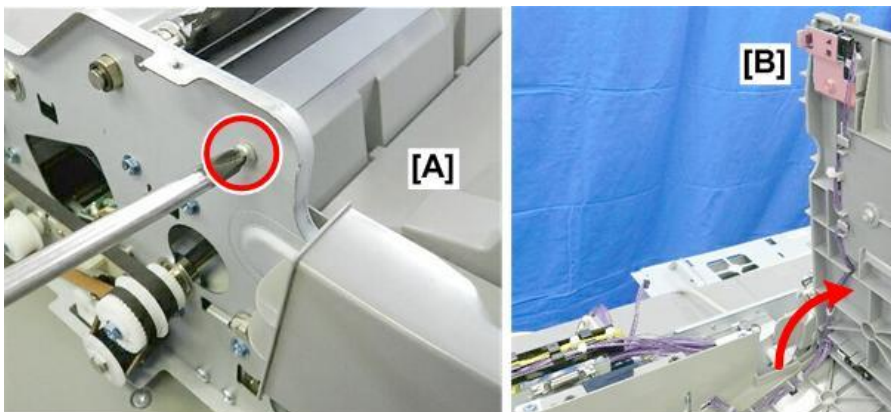
6. Separate the sensor and bracket (🔩 x1, ▼x4).



d1792570

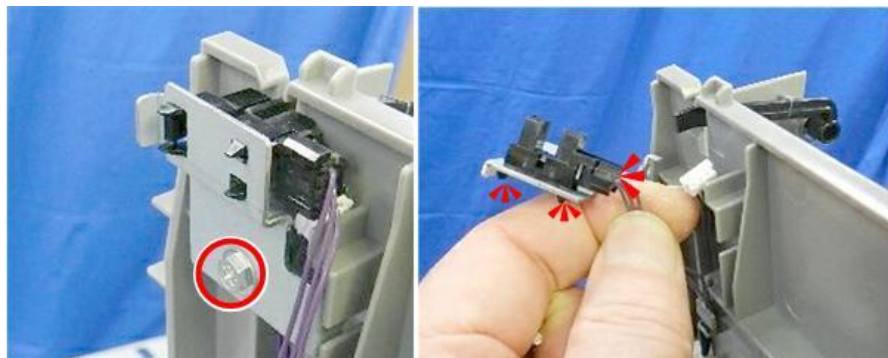
### Original Set Sensor

1. ADF front cover (ADF Control Board)
2. Remove the screw [A] (🔩x1).
3. Raise the plate to the right so that you can see the original set sensor [B].



d1792571

4. Remove the sensor bracket (🔩 x1).
5. Remove the sensor (🔩 x1, ▼x4).



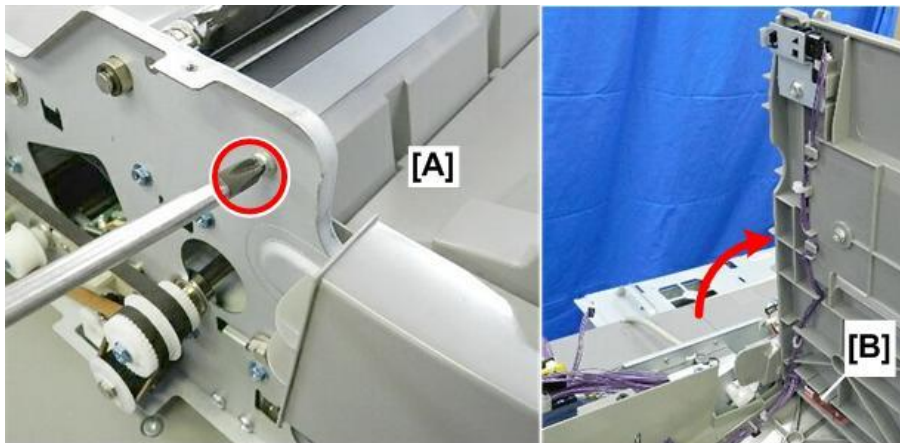
d1792572

## 4.Replacement and Adjustment

### A4/LT SEF Sensor

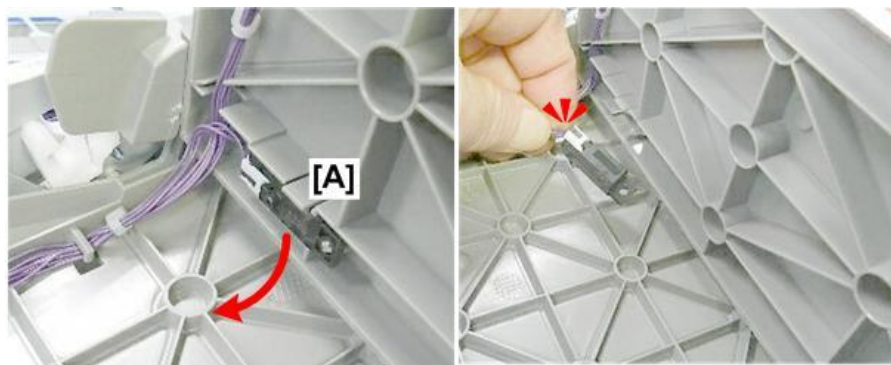
---

1. ADF front cover ([ADF Front Cover](#))
2. Remove the screw [A] (🔩 x1).
3. Raise the plate to the right so that you can see the A4/LT SEF sensor [B].



d1792573

4. Pull the sensor [A] out of its holder and disconnect it (📦 x1).



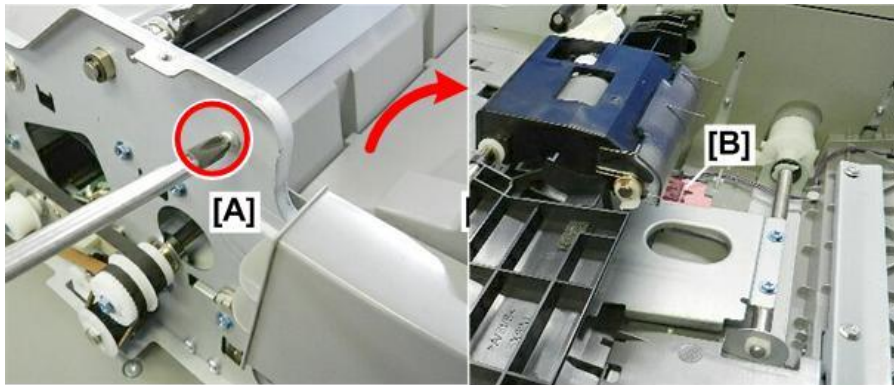
d1792574

### Bottom Plate HP Sensor

---

1. Original feed unit ([Original Feed Unit](#))
2. ADF front cover ([ADF Front Cover](#))
3. Remove the screw [A] (🔩 x1).

4. Raise the plate to the right so that you can see the bottom plate HP sensor [B].



d1792575

5. Remove the sensor (🔧 x1, ▼x4).

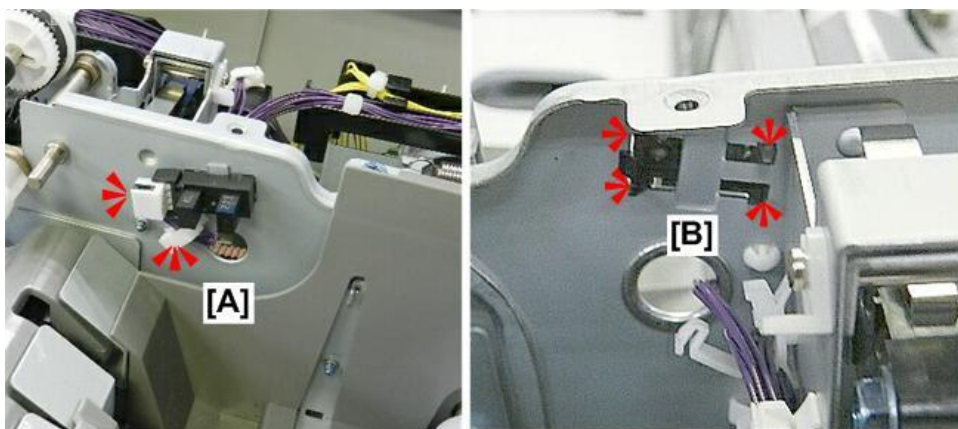


d1792616

#### Bottom Plate Position Sensor

---

1. ADF rear cover ([ADF Rear Cover](#))
2. Original feed unit ([Original Feed Unit](#))
3. Disconnect the sensor at the front side [A] (🔧x1, 📦x1).
4. Disconnect the sensor at the rear side [B] (▼x4).



d1792576

## 4.Replacement and Adjustment

### ADF Feed Cover Interlock Switch

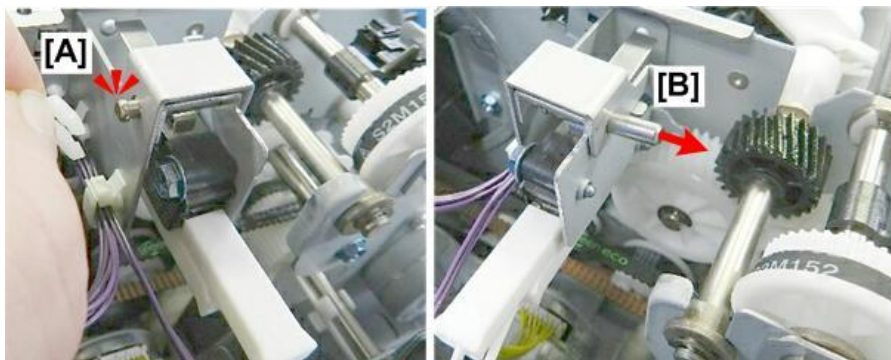
---

1. ADF rear cover ([ADF Rear Cover](#))
2. Locate the switch at [A].
3. Remove the spring [B] (🌀x1).



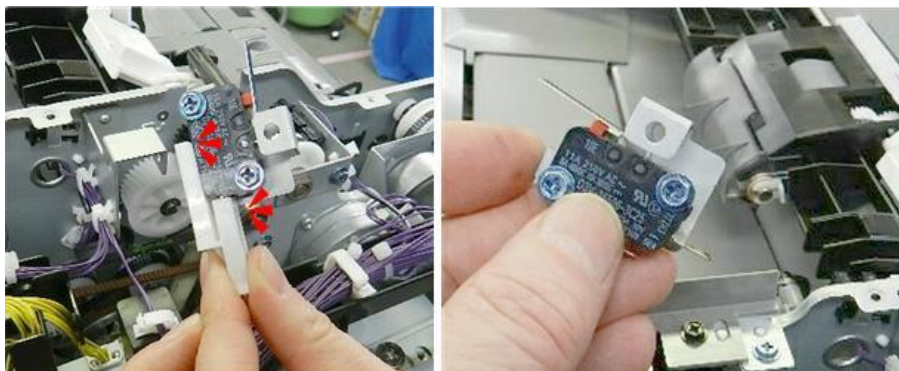
d1792577

4. Disconnect the pin [A] (🔌x1).
5. Pull the pin out of the bracket [B].



d1792578

6. Disconnect the switch (🔌x2).



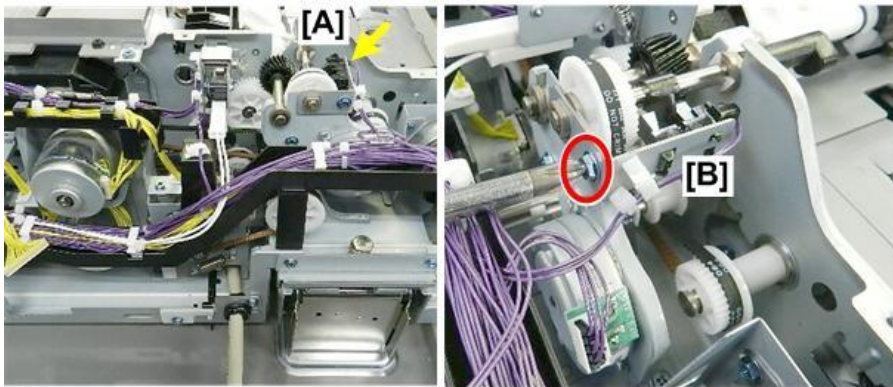
d1792579

### Pickup Roller HP Sensor

---

1. ADF rear cover ([ADF Rear Cover](#))
2. Locate the sensor [A] at the back of the machine.

3. Disconnect the sensor bracket [B] (⚙️x1).



d1792580

4. Disconnect the sensor (🔌x2, 📦x1, ▼x4).



d1792581

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## Motors

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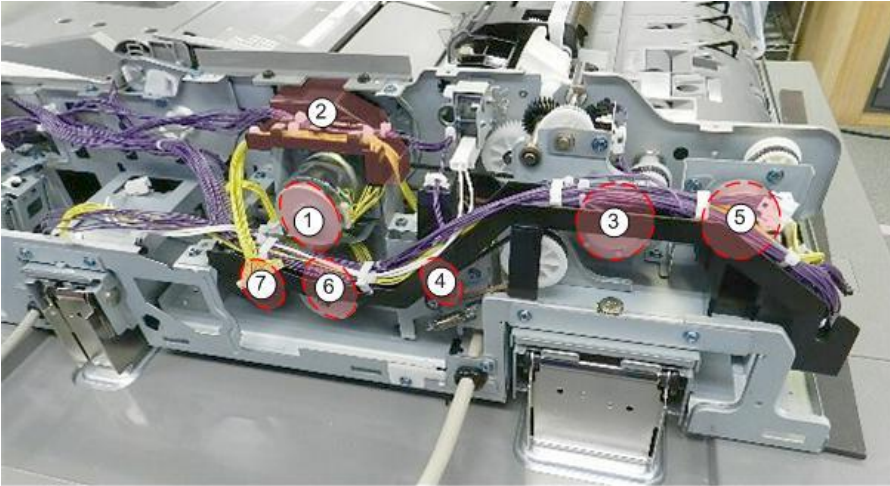
### Motor Layout

---

All of the ADF motors are at the rear.

①	Entrance motor
②	ADF bottom plate lift motor
③	Feed motor
④	Pick-up roller motor
⑤	Transport motor
⑥	Scan motor
⑦	Relay motor

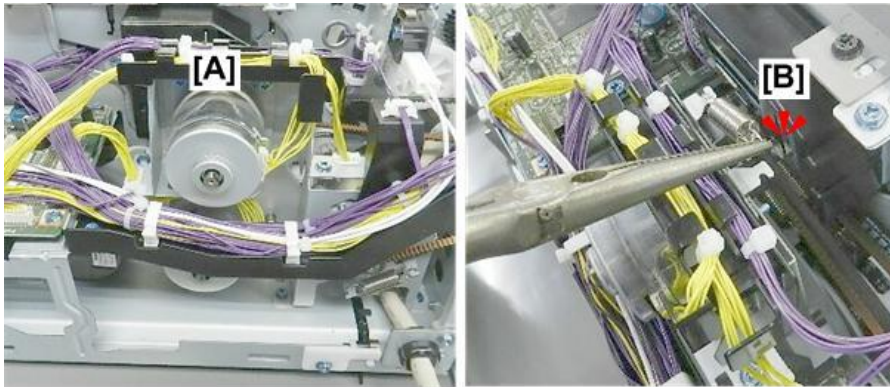
## 4.Replacement and Adjustment



d1792582

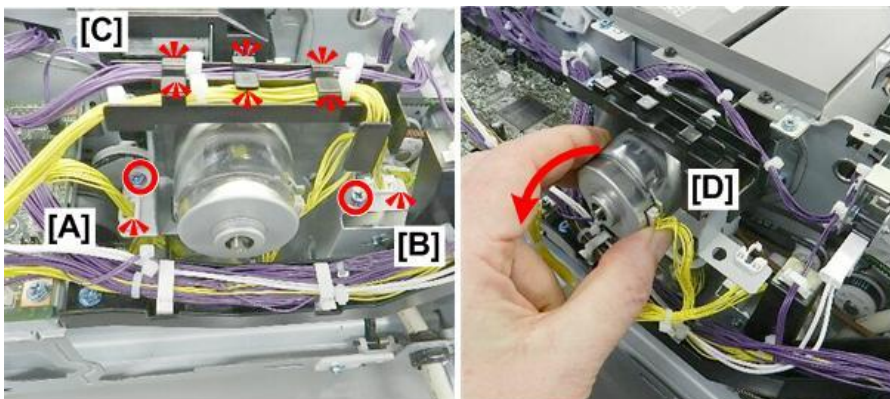
### ADF Feed Motor

1. ADF rear cover ([ADF Rear Cover](#))
2. Locate the motor below the harness bridge [A].
3. Remove the spring [B] (🌀x1).



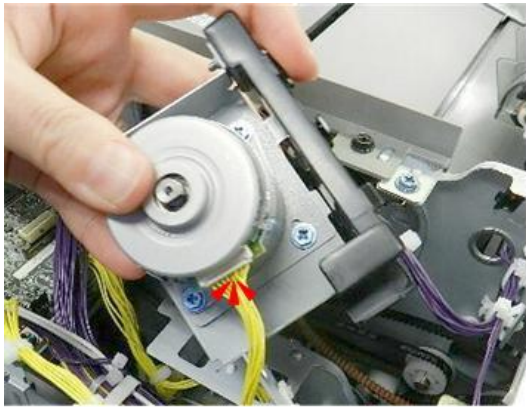
d1792586

4. Disconnect:
  - [A] Right side [🔌x1, 🔌x1]
  - [B] Left side [🔌x1, 🔌x1]
5. Free the harnesses [C] from the tuck clamps (x6).
6. Pull out the bracket [D] (with motor attached).



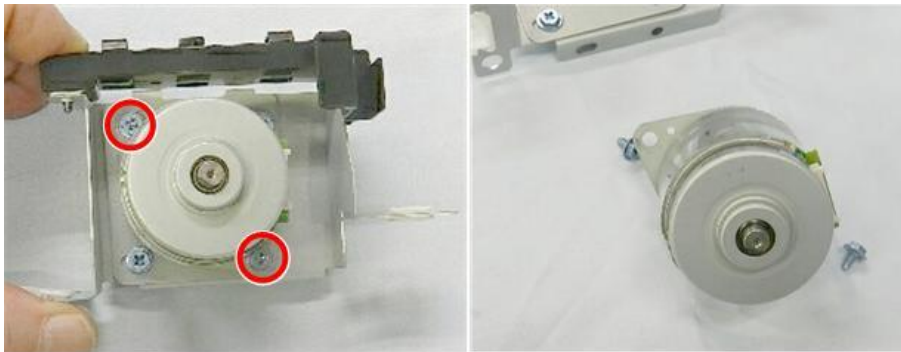
d1792587

7. Disconnect the motor (🔌 x1).



d1792588

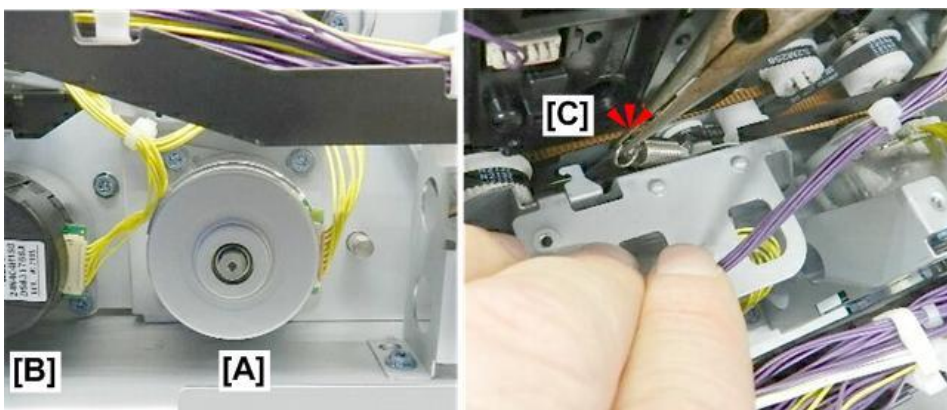
8. Separate the motor and the bracket (🔩 x1).



d1792589

#### ADF Scan Motor

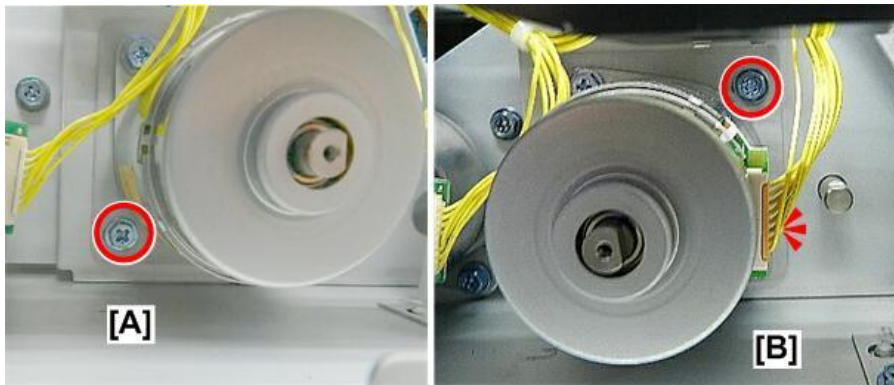
1. ADF feed motor bracket ([ADF Feed Motor](#))
2. Locate the ADF scan motor [A] at the bottom center, next to the ADF exit motor [B].
3. Disconnect at [C] (🔌 x1).



d1792590

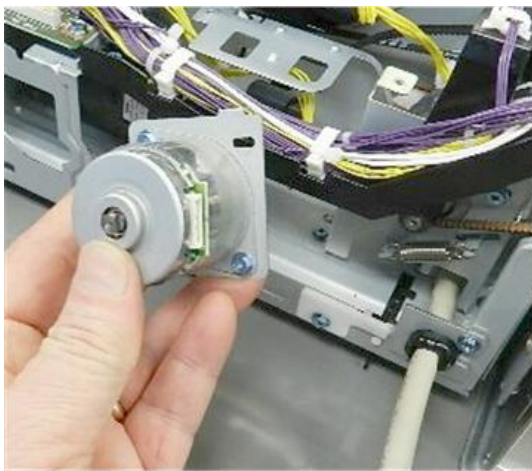
#### 4.Replacement and Adjustment

4. Disconnect the bracket [A] and the motor [B] (⚙️x2, 📦x1).



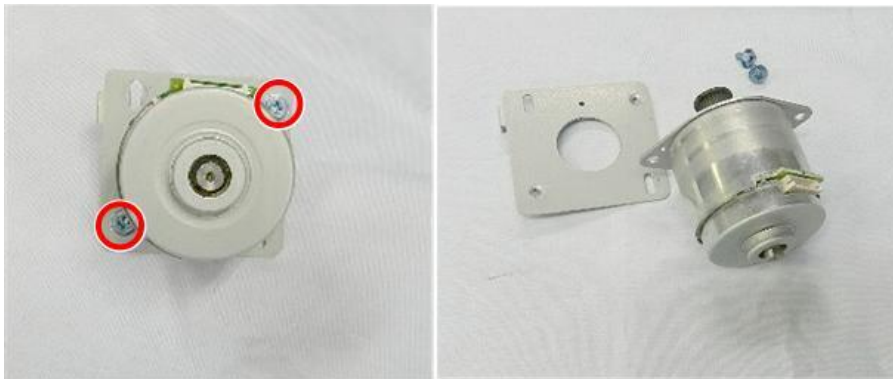
d1792591

5. Remove the bracket (with motor attached).



d1792592

6. Separate the bracket and the motor (⚙️x2).



d1792593

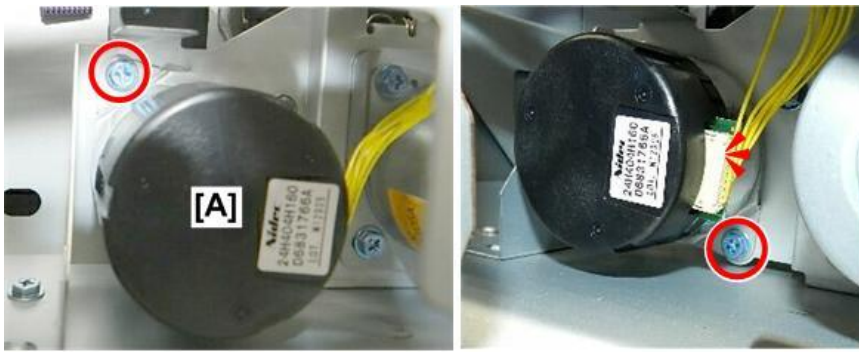
#### ADF Exit Motor

---

1. ADF control board ([ADF Control Board](#))

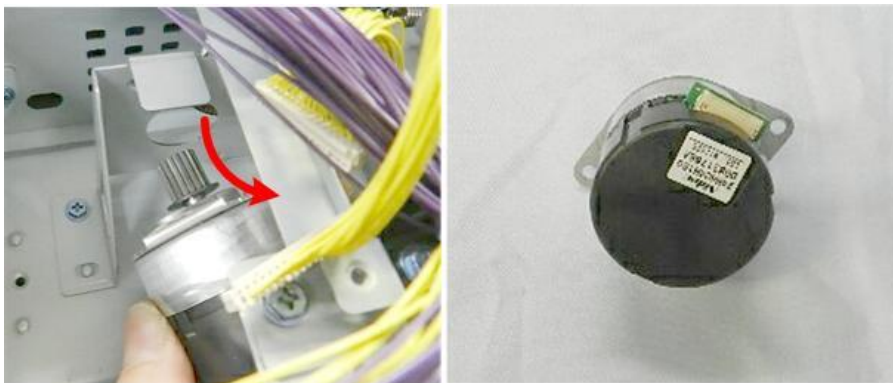


2. Disconnect the bracket and the motor (⚙️x2, 📦 x1).



d1792583

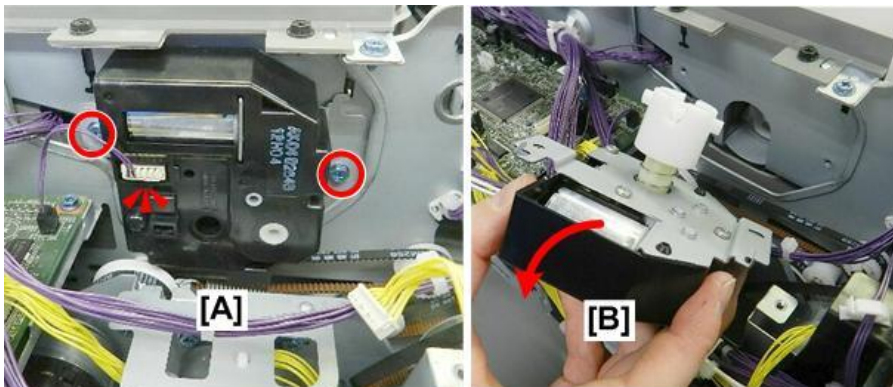
3. Disconnect at the back and remove the motor (🔌x1).



d1792584

#### ADF Bottom Plate Lift Motor

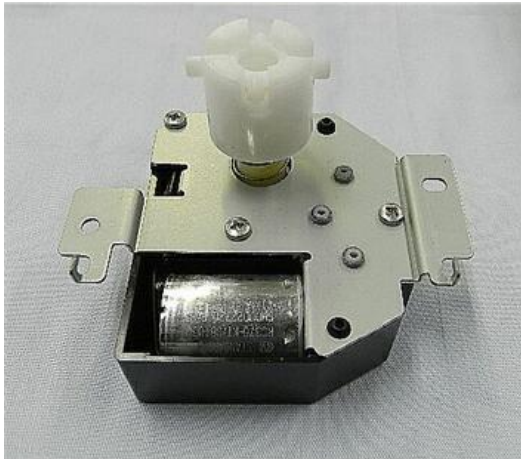
1. ADF feed motor bracket ([ADF Feed Motor](#))
2. Disconnect the motor [A] (⚙️x2, 📦 x1).
3. Pull the motor bracket [B] and coupling away from the back of the ADF.



d1792594

## 4.Replacement and Adjustment

4. Lay the bracket on a flat clean surface.

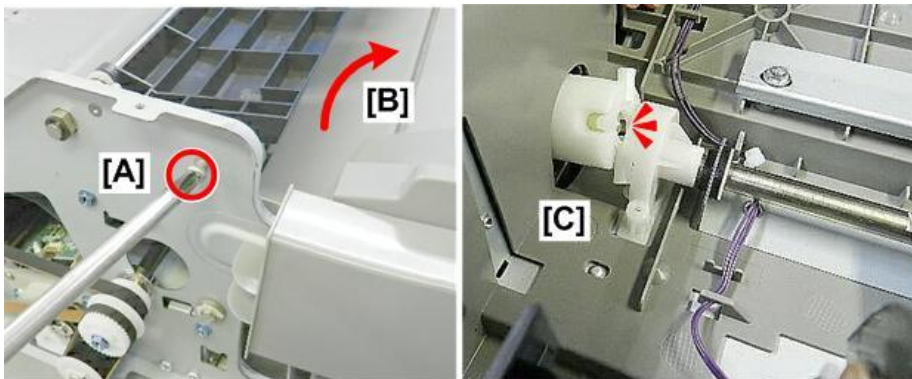


d1792595

### Re-installation

If it is difficult to re-install the ADF bottom plate lift motor:

- Remove the screw [A], and then raise the plate [B] to the right (🔩 x1).
- At the rear, you will be able to see and access the ADF lift motor coupling [C].



d1792596

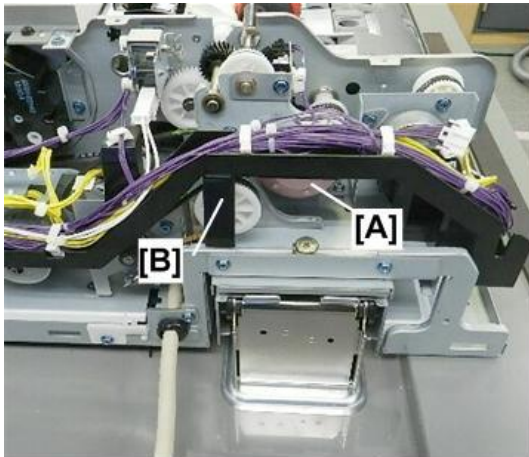
### ADF PickUp Motor

---

1. ADF rear cover ([ADF Rear Cover](#))

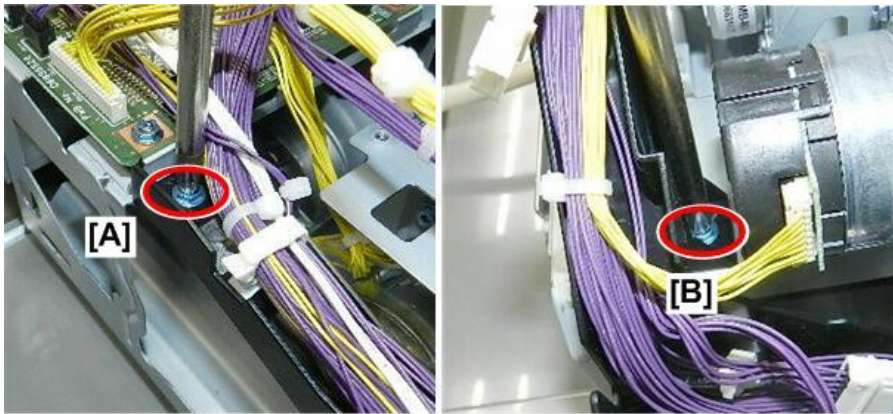
## 4.Replacement and Adjustment

2. The motor [A] is behind the stay [B] of the harness bridge.



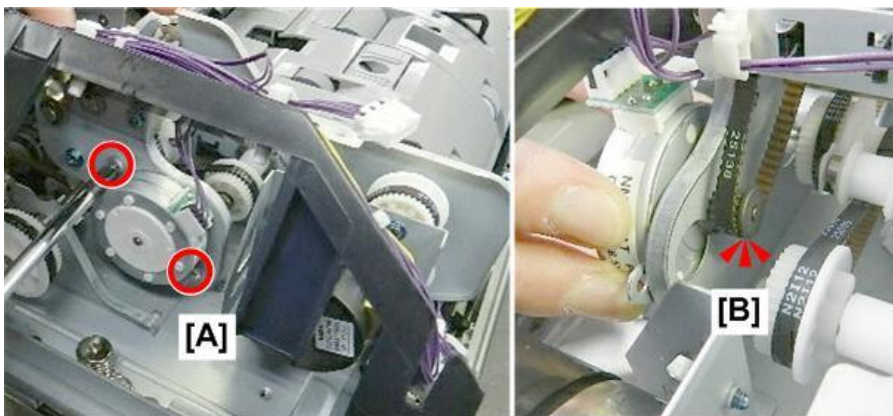
d1792603

3. Remove screws [A] and [B] (↻x2).



d1792598

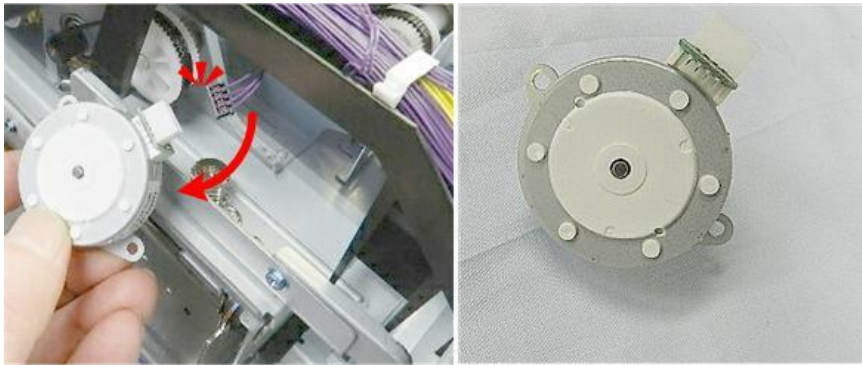
4. Disconnect the motor bracket [A] (🔧x1).
5. Disconnect the belt [B].



d1792604

#### 4.Replacement and Adjustment

6. Disconnect and remove the motor (📦 x1).

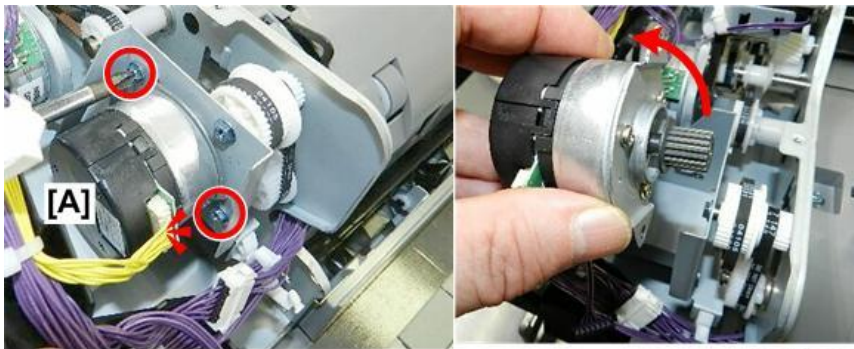


d1792605

#### ADF Middle Motor

---

1. ADF rear cover ([ADF Rear Cover](#))
2. The transport motor [A] is at the rear left corner of the machine frame.
3. Disconnect the motor bracket (🔧x2).

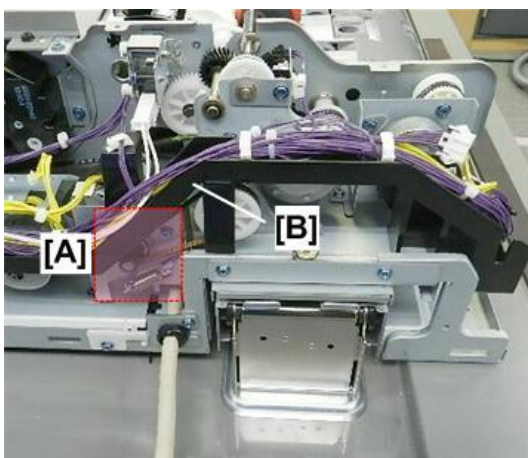


d1792606

#### ADF Pick-up Roller Motor

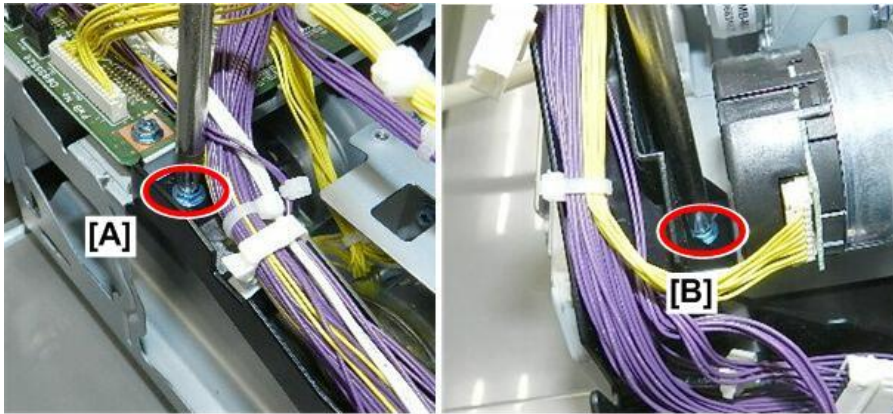
---

1. ADF rear cover ([ADF Rear Cover](#))
2. The motor [A] is behind the stay [B] of the harness bridge.



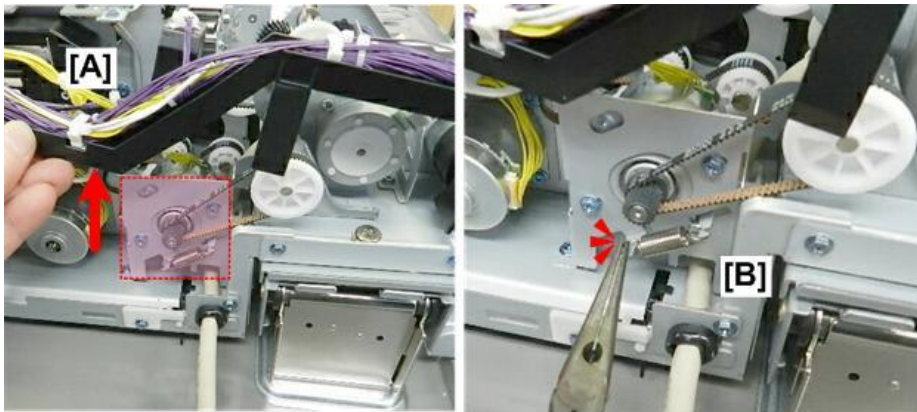
d1792597

3. Remove screws [A] and [B] (↻x2).



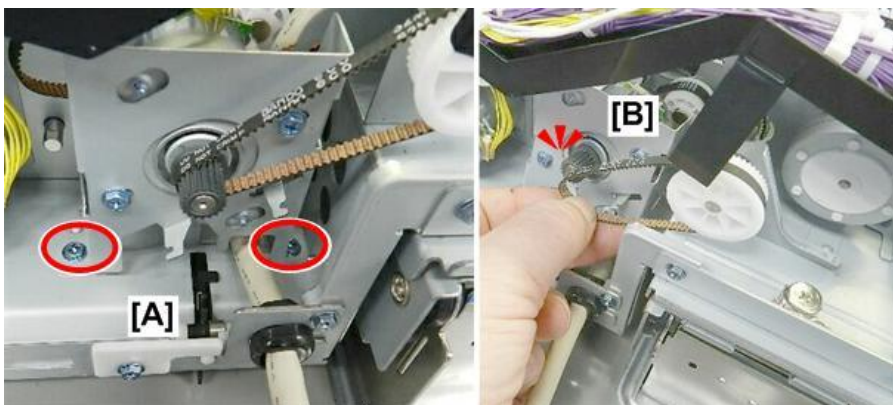
d1792598

4. Raise the harness bridge [A] so that you can access the motor.  
5. Remove the spring [B] (↻x1).



d1792599

6. Disconnect the base screws of the bracket [A] (↻x2).  
7. Disconnect the belt [B] (↻x1).



d1792600

#### 4.Replacement and Adjustment

8. Remove the bracket (with motor attached).



d1792601

9. Separate the motor and the bracket (⚙️ x2).



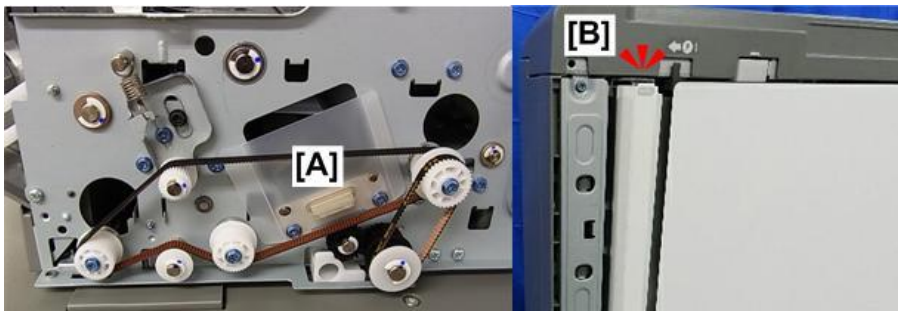
d1792602

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#### CIS Removal

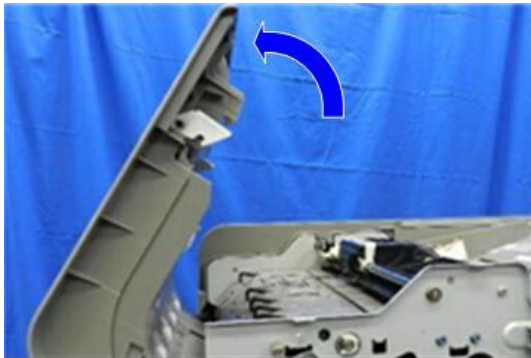
---

1. ADF front cover ([ADF Front Cover](#))
2. Original feed unit ([Original Feed Unit](#))
3. The CIS is inside the ADF and can be removed through [A].
4. First, open raise the platen cover, and then release the white plate [B].



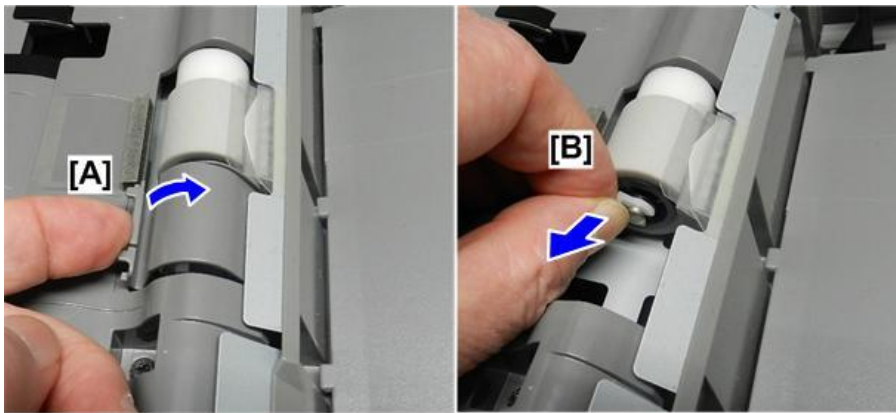
d270b2608

5. Raise the feeder cover.



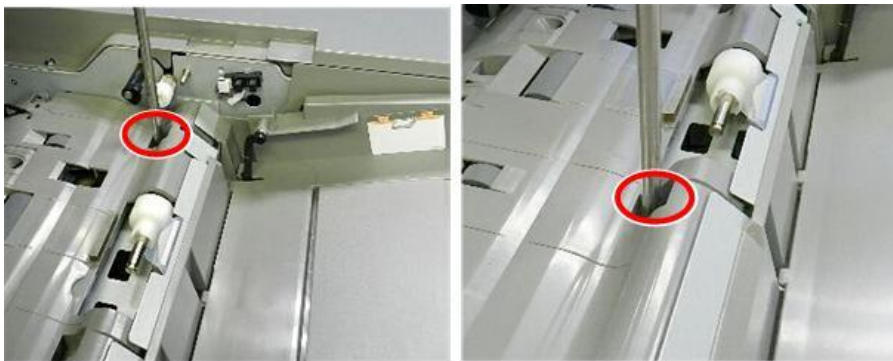
d270b2610

6. Remove the cover [A], and then remove the separation roller [B].



d270b2609

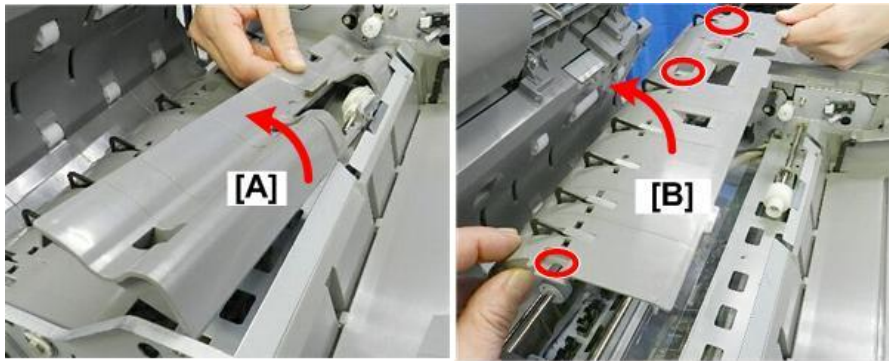
7. Disconnect the front guide (⚙️x1, 🔧x1).



d1792610

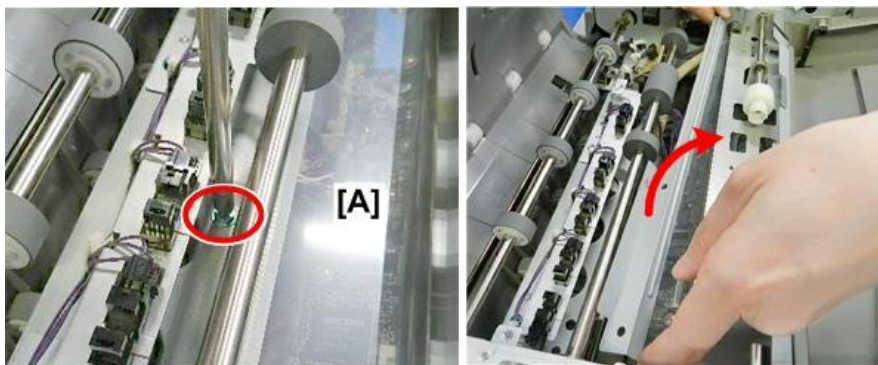
8. Remove:  
[A] Front guide  
[B] Guide (⚙️x1, 🔧x2)

#### 4.Replacement and Adjustment



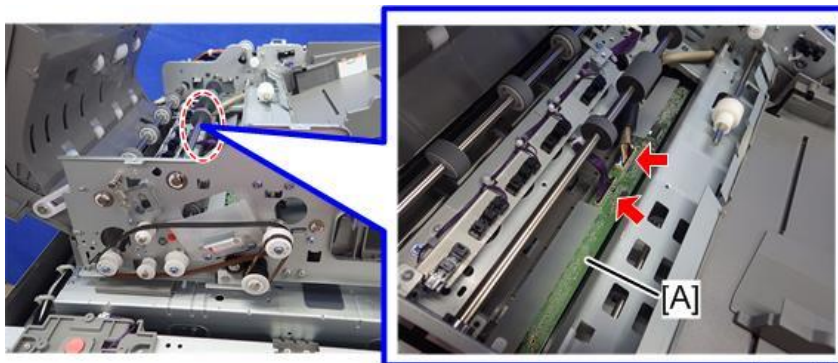
d17926111

9. Remove the mylar bracket [A] (↗x1).



d1792612

10. Disconnect the CIS [A] (📦x2).



d0bxa4135

11. Raise the ADF slightly and open the white cover. This will prevent scratching the CIS glass when

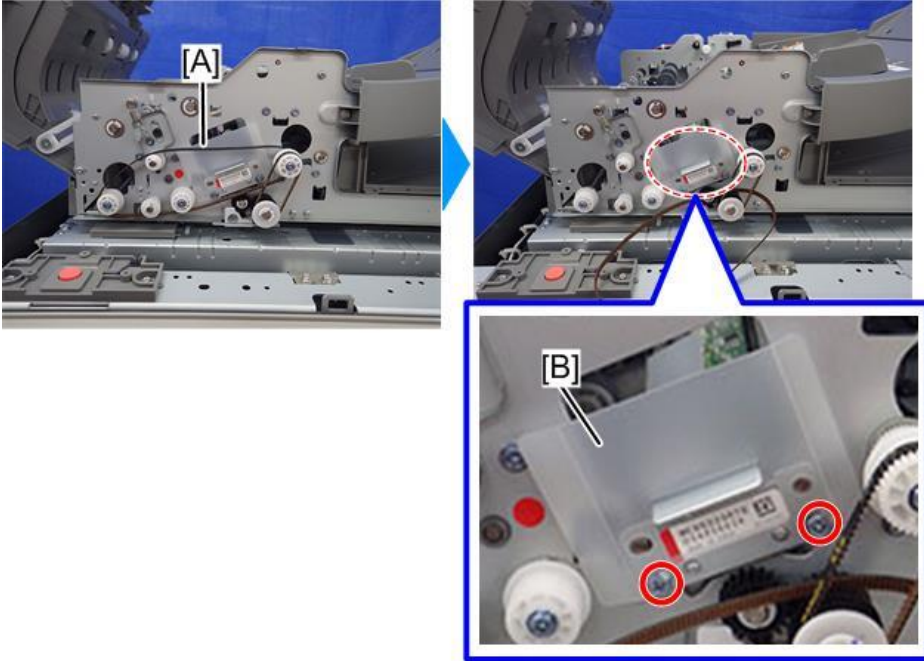


the unit is removed.



d1792618

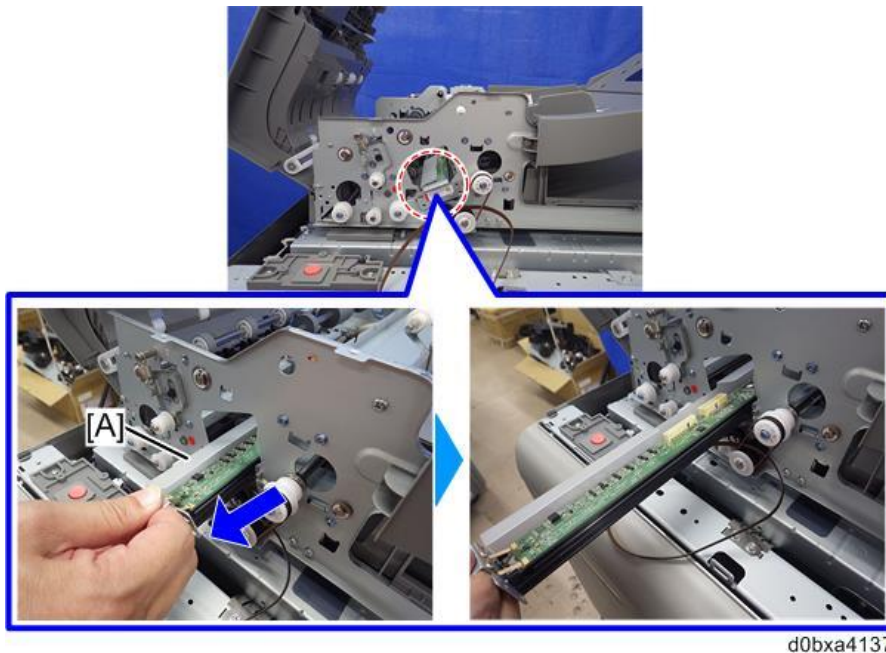
12. Release the timing belt [A], and then remove the screws that fixing the seat [B] (⌀ x2).



d0bxa4136

## 4.Replacement and Adjustment

13. Slowly and carefully, pull the CIS [A] out of the ADF.

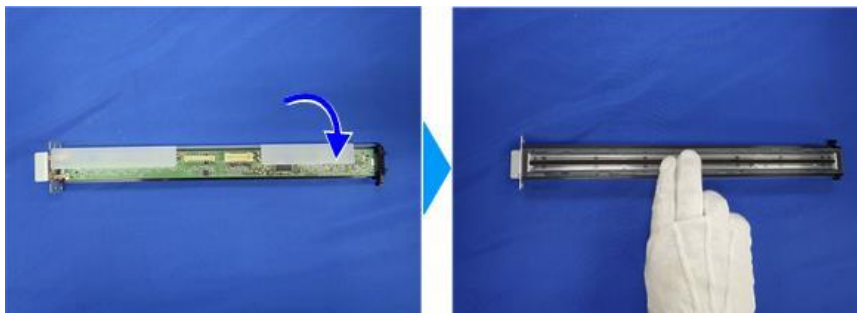


d0bxa4137

14. Clean the surface of the CIS lens with a lens cloth.

**★ Important**

- Never clean the surface of the CIS with tissue or any type of solvent.



d0bxa4138

### CIS Gray Balance Adjustment Value Copy

---

After replacing the CIS unit, perform the CIS gray balance adjustment as follows.

The parameters written in FROM (GB coefficient, pixel interpolation coefficient) are saved to the machine by executing these SPs.

1. Execute SP4-730-001 (FROM ADF Factory Setting: CIS Parameter).
2. Execute SP4-730-004 (FROM Data Update).
3. Execute SP4-730-002 (FROM Main Factory Setting: Execution ON/OFF).

**★ Important**

The execution will be failed when a paper feed cover is opened or lifted up.

Close the paper feed cover and the ADF, and then execute the SP.

---

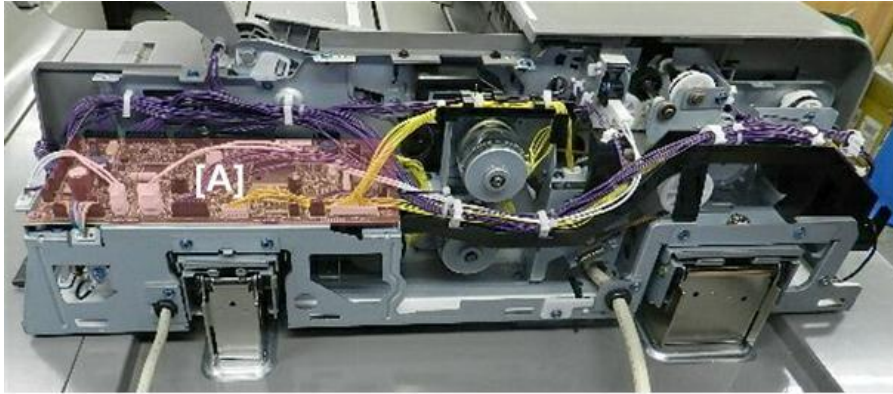
## Boards

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### ADF Control Board

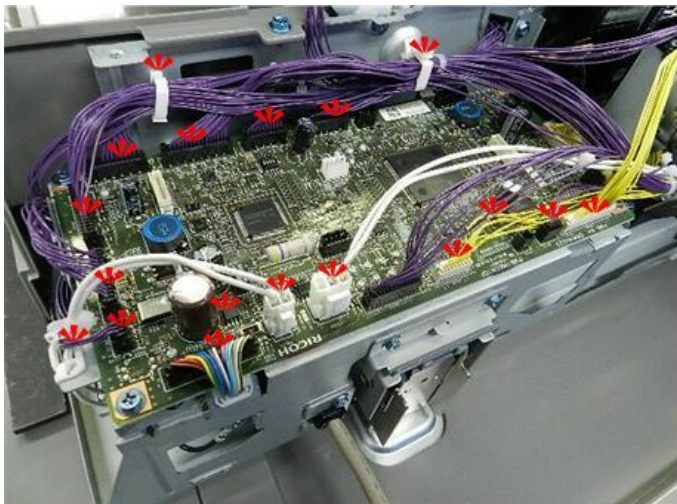
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1. ADF rear cover ([ADF Rear Cover](#))
2. Locate the ADF control board at [A].



d1792542

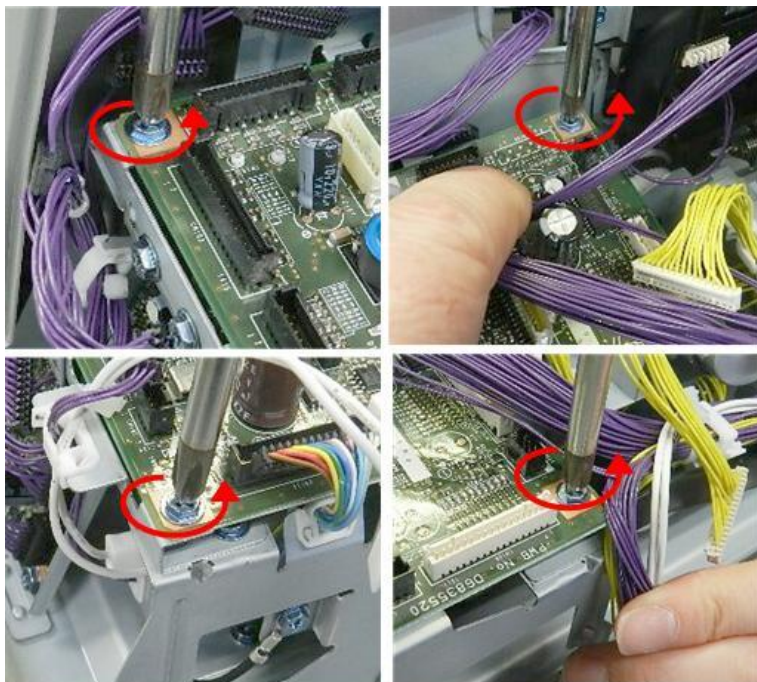
3. Disconnect the control board (📦 x17).



d1792543

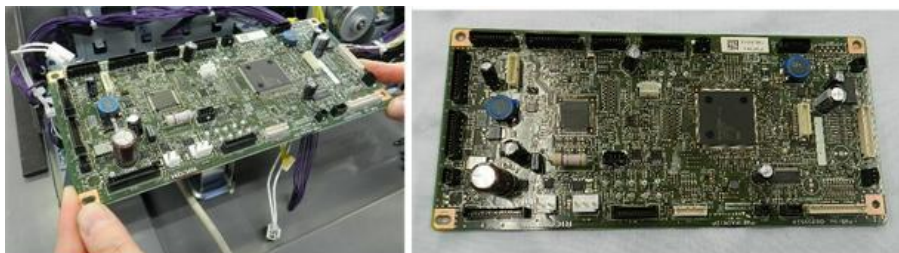
#### 4.Replacement and Adjustment

4. Disconnect each corner of the board (🔪 x4).



d1792544

5. Remove the board.



d1792545

#### Double-feed Sensor Board

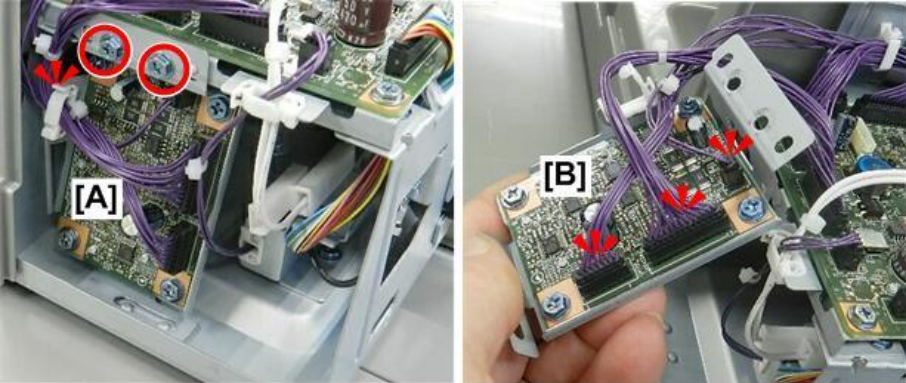
##### ★ Important

- This machine is not equipped with double-feed sensors before shipping. This feature is an option for this machine that must be purchased separately and installed by a trained service technician. This board will not be present unless the kit has been installed.

1. ADF rear cover ([ADF Rear Cover](#))
2. Disconnect the board bracket [A] (🔪x2).

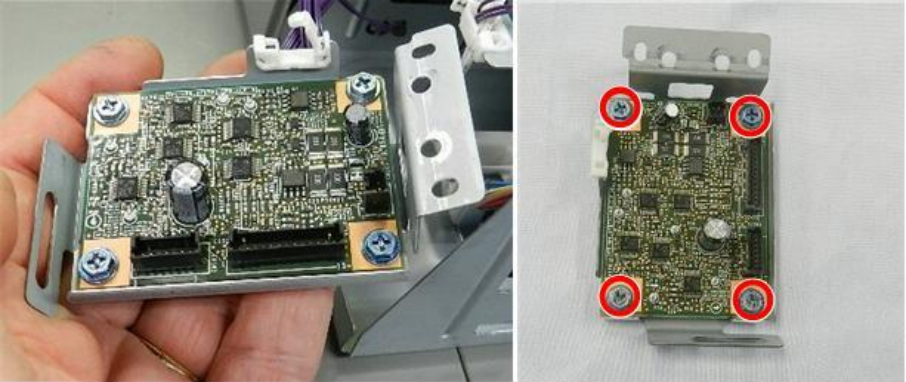
4.Replacement and Adjustment

3. Disconnect the harnesses [B] (🔌 x3).



d1792546

4. Separate the board and the bracket (🔩x4).



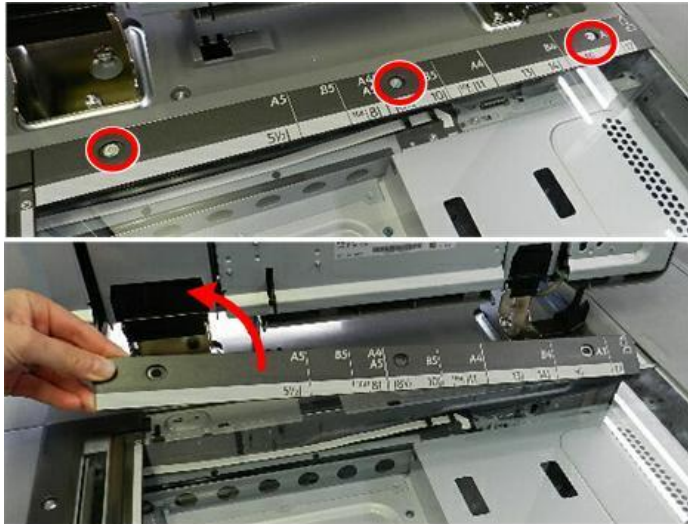
d1792547

## 4.Replacement and Adjustment

# Scanner Unit (Copier Models Only)

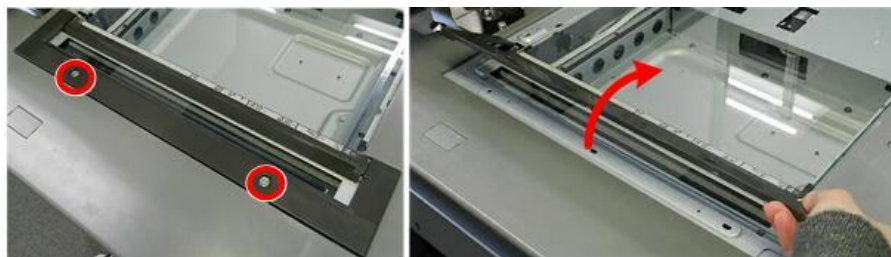
### Exposure Glass

1. Raise the ADF
2. Remove the rear scale (🔩 x3).



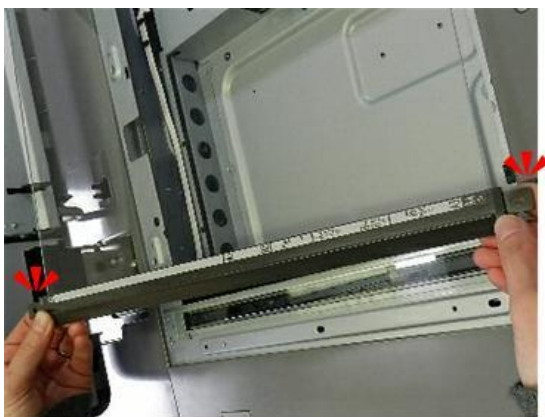
d1792621

3. Remove the left cover (🔩 x2).



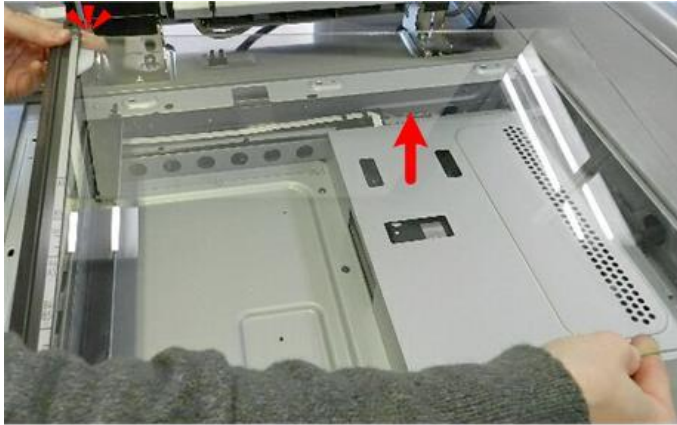
d1792622

4. Remove the left scale.



d1792623

5. Remove the exposure glass.



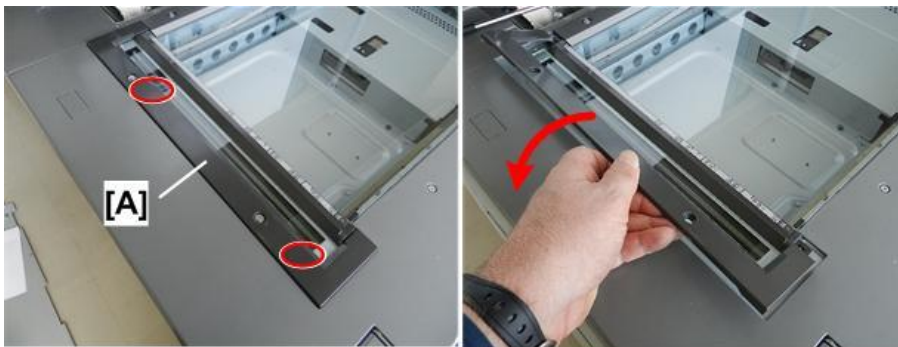
d1792624

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### Scanning Glass

---

1. Raise the ADF.
2. Remove the bracket [A] (x2).



d1802602

3. Remove the glass (it is fastened by sticky tape).



d1802603

#### 4.Replacement and Adjustment

4. When you re-install the glass, make sure that the paint dot is in the upper left corner.



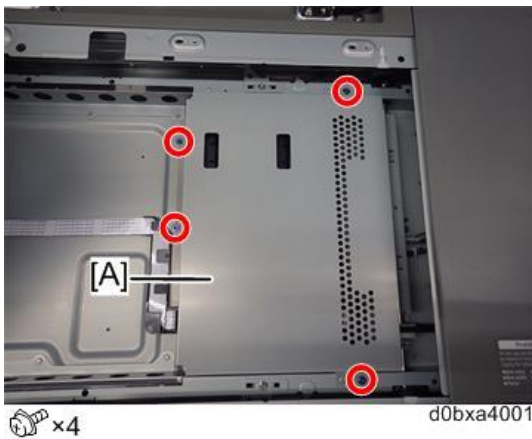
d1802604

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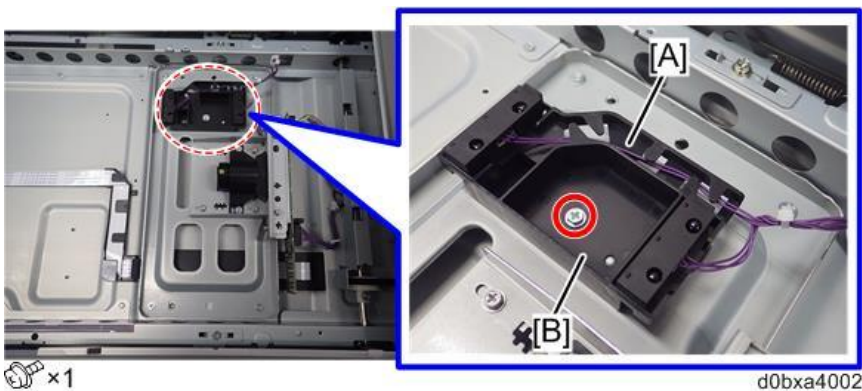
#### APS Sensor (Original Size Sensor)

---

1. Remove the exposure glass ([Exposure Glass](#))
2. Remove the lens block cover [A].

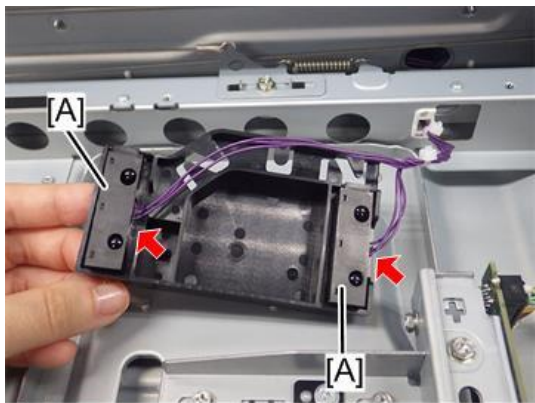


3. Free the harnesses [A], and then disconnect the sensor bracket [B].





4. Separate the sensors [A] from the bracket.



d0bxa4003



d1792637

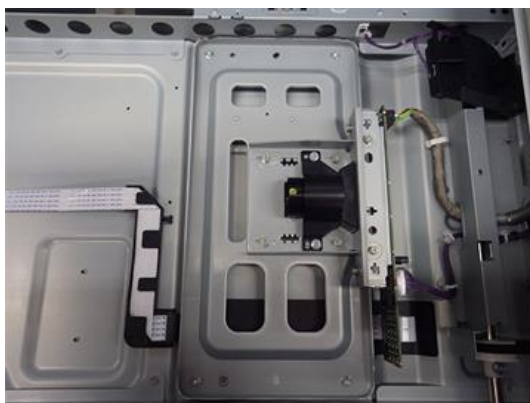
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## Lens Block

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**★ Important**

- The lens block is always removed and re-installed as a single unit.
- It is never disassembled. If any part fails, the lens block is replaced as a unit.

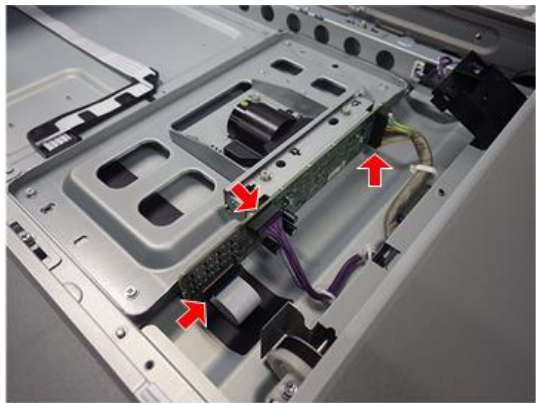


d0bxa4004

1. Remove the exposure glass ([Exposure Glass](#))
2. Remove the lens block cover ([APS Sensor \(Original Size Sensor\)](#))

#### 4.Replacement and Adjustment

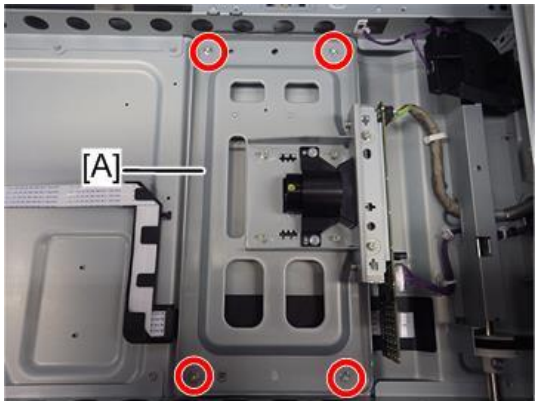
3. Disconnect the unit.



 x2  x1

d0bxa4005

4. Remove the lens block unit [A].



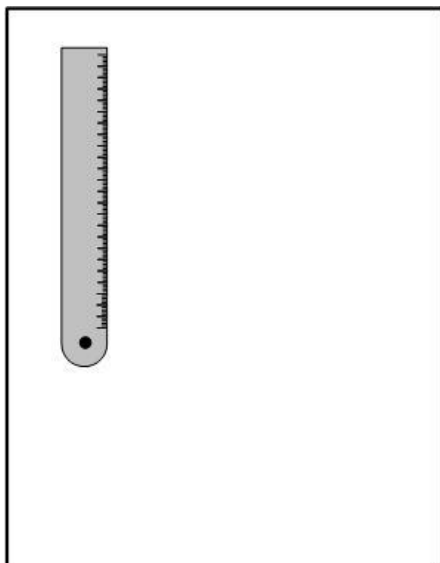
 x4

d0bxa4006

#### Sub Scan Magnification Adjustment

---

1. You need a 150 mm scale.



d1802601

2. Copy the scale, and then wait 10 min.

3. Check the length of the 100 mm scale on the copy and confirm that it is the same as the original within  $\pm 0.8\%$ .

If they are the same, you have finished.

-or-

If they are not the same, enter the SP mode.

4. Select SP4008.
  - If you decrease the adjustment value, this will increase the scanner speed, and the output image is compressed in the feed direction.
  - If you increase the adjustment value, this will decrease the scanner speed, and the output image is extended in the feed direction.

### Sub Scan Registration Adjustment

---

1. You need the C4 chart.
2. Copy the C4 chart.
3. Check to see if the image is centered in the vertical direction.

If the image is centered, you have finished.

-or-

If the image is not centered, enter the SP mode, open SP4010, and then adjust the value.

- The image is moved downward by increasing the adjustment value.
- The image is moved upward by decreasing the adjustment value.

### Main Scan Registration Adjustment

---

1. You need the C4 chart.
2. Copy the C4 chart.
3. Check to see if the image is centered in the horizontal direction.

If the image is centered, you have finished.

-or-

If the image is not centered, enter the SP mode, open SP4011, and then adjust the value.

- The image is moved to the right by increasing the adjustment value.
- The image is moved to the left by decreasing the adjustment value.


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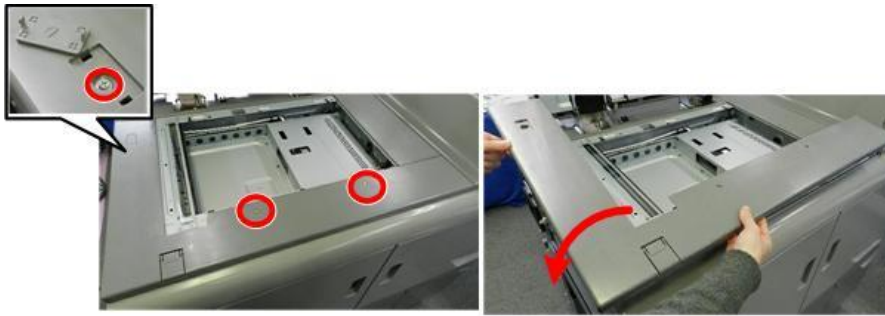
### Exposure Lamp

---

1. Remove the exposure glass ([Exposure Glass](#))

#### 4.Replacement and Adjustment

2. Remove the front "L" cover (cap x1,  x1,  x2).



d1792643

3. Move the 1st scanner carriage [A] to the notched section [B].

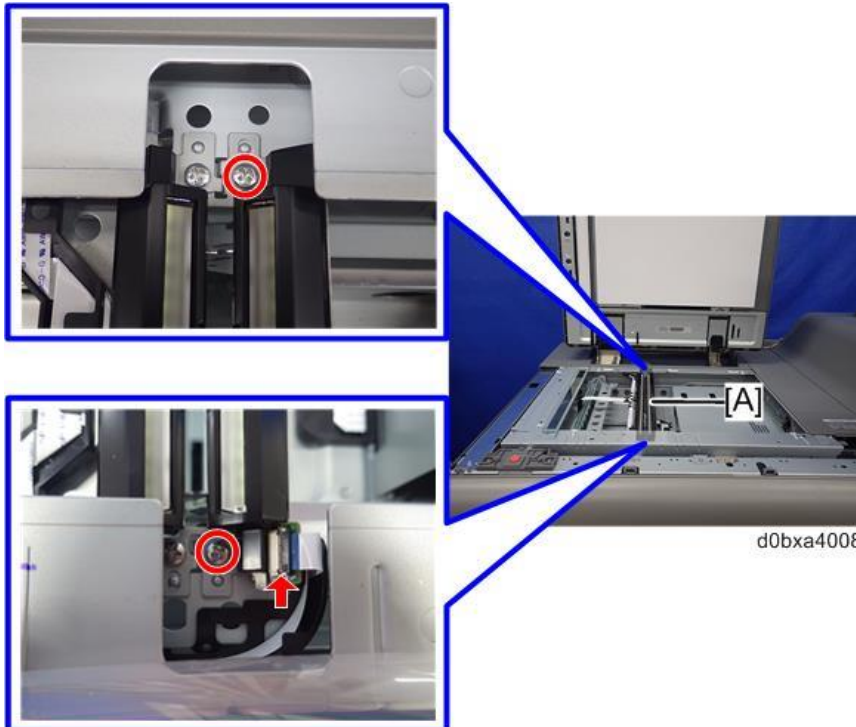


d0bxa4007

#### Note

- When moving the 1st scanner carriage, do not touch the mirror, reflector, or light guide plate in the scanner carriage.

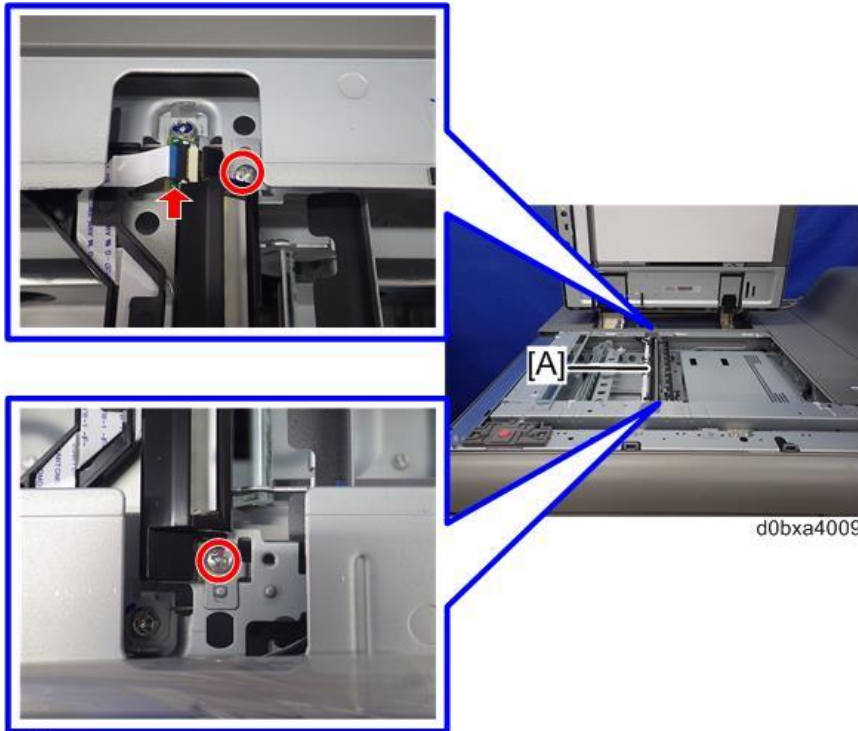
4. Remove the exposure lamp (LED) [A] on the right side.



d0bxa4008

 x2  x1

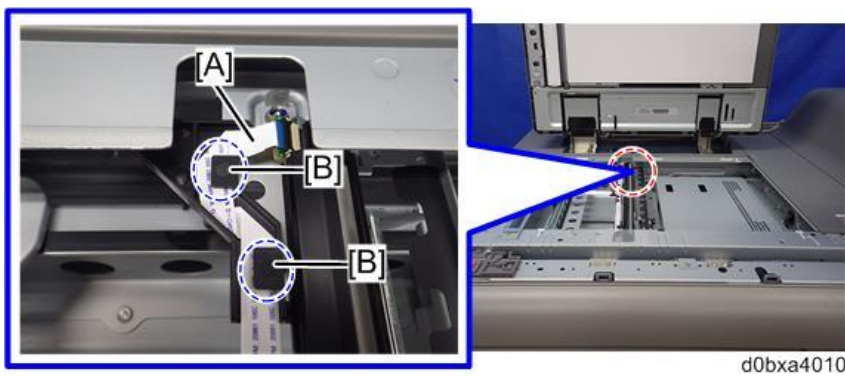
5. Remove the exposure lamp (LED) [A] on the left side.



 x2  x1

**Note**

- When attaching the exposure lamp, put the harness [A] under the hook [B].



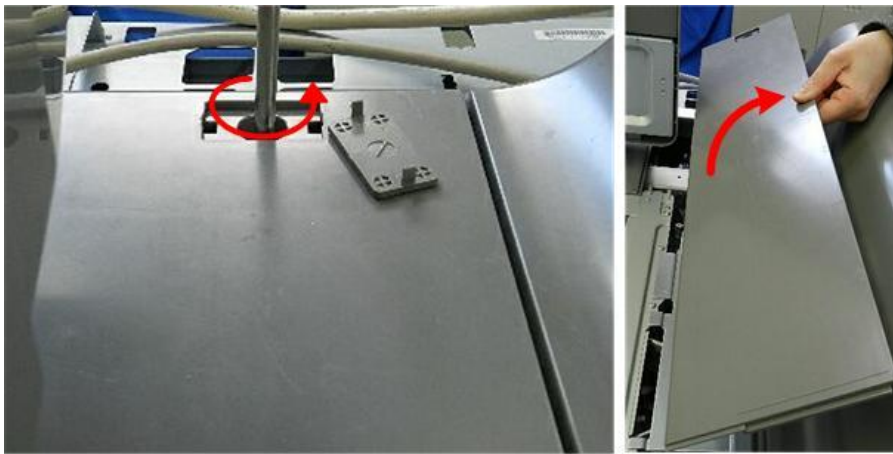
## 4.Replacement and Adjustment

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### Scanner Motor

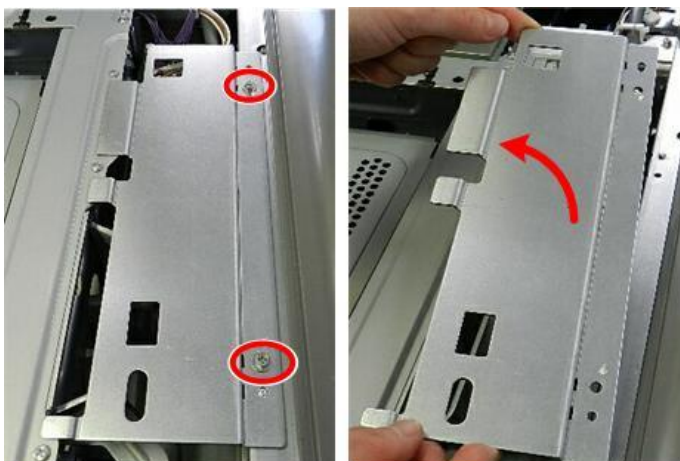
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1. Remove the right plate cover (Cap x1, #x1).



d1792649

2. Remove the bridge plate (⊗x2).



d1792650

3. Remove the front edge cover (#x3).

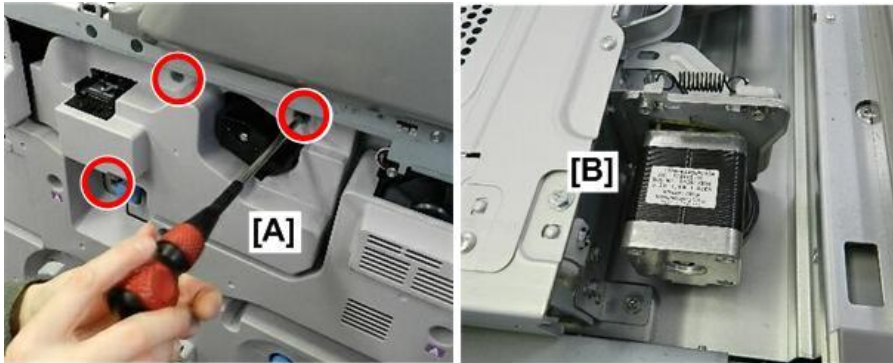


d1792651

4. Remove the PCDU cover [A] (#x3).

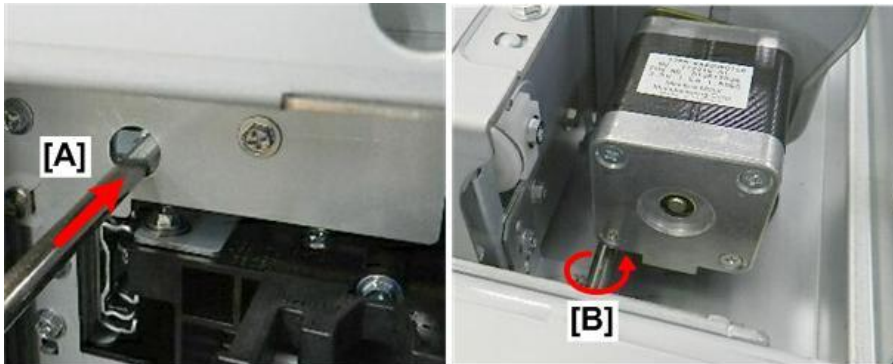
#### 4.Replacement and Adjustment

5. The scanner motor [B] is at the right front corner of the scanner unit.



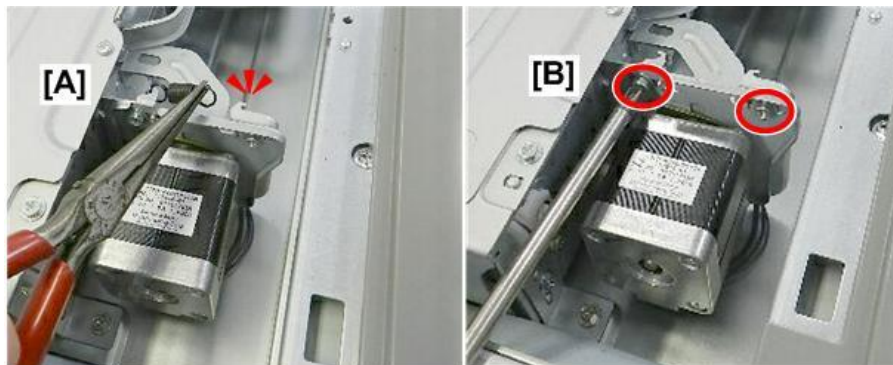
d1792652

6. Insert a long screwdriver through the hole [A] where you just removed the PCDU cover.  
7. Push the drive in until it reaches the back screw of the motor [B], and then remove the screw.



d1792653

8. Disconnect the spring at [A] (🔗x1).  
9. Disconnect the top of the bracket [B] (🔩x2).



d1792654

#### 4.Replacement and Adjustment

10. Pull out the motor slightly, and then disconnect it (🔌 x1).



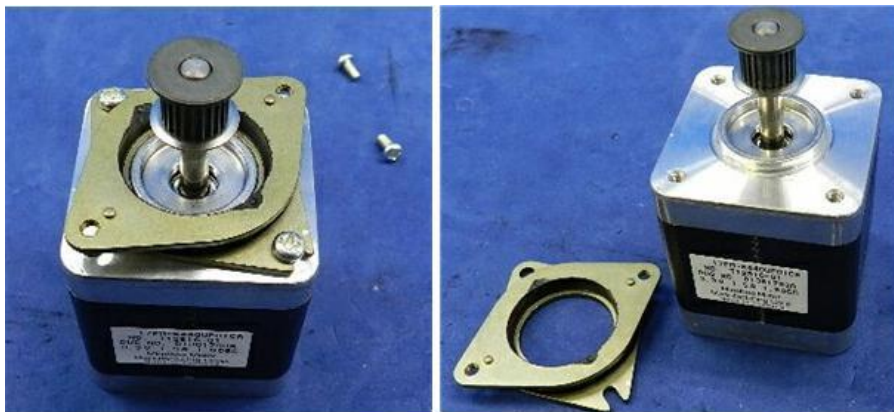
d1792655

11. Separate the motor and the flat bracket (⚙️x2).



d1792656

12. Remove the collar bracket (⚙️x2).



d1792657

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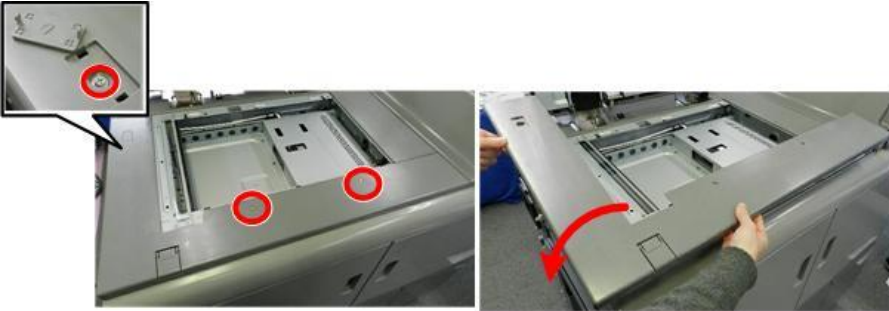
### Scanner Unit

---

1. Remove the ADF. ([Removing the ADF](#))
2. Open the controller box cover. (Copier models: [Opening the Controller Box \(Copier Models\)](#),  
Printer models: [Opening the Controller Box \(Printer Models\)](#))

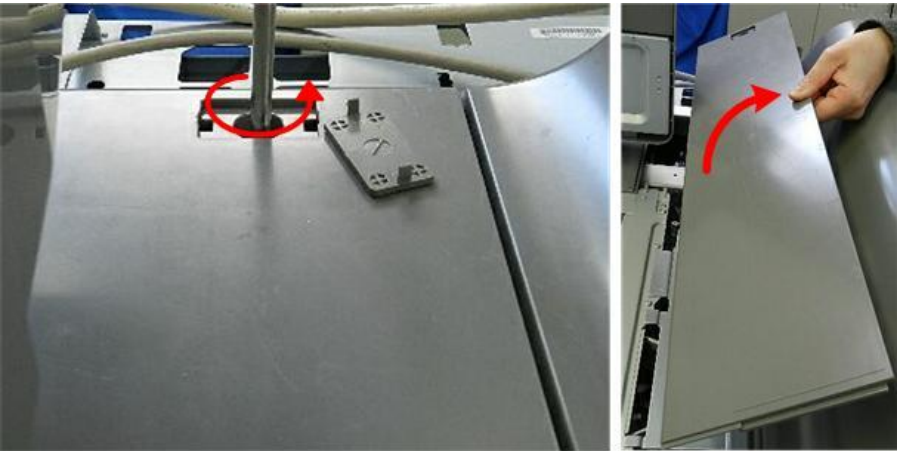


3. Remove the "L" cover (⊕x1, ⊕x2).



d1792643

4. Remove the right flat plate (➤x1).



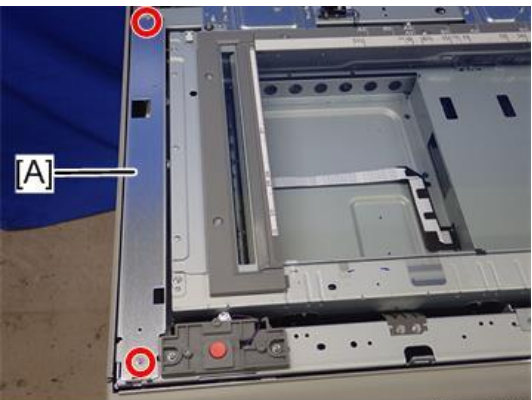
d1792649

5. Remove the rear flat plate (⊕x5).



d1792662

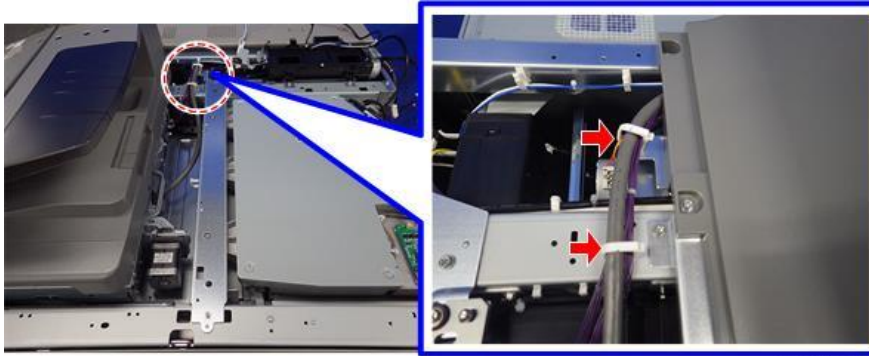
6. Remove the left stay [A] (⊕x2).



d0bxa4108

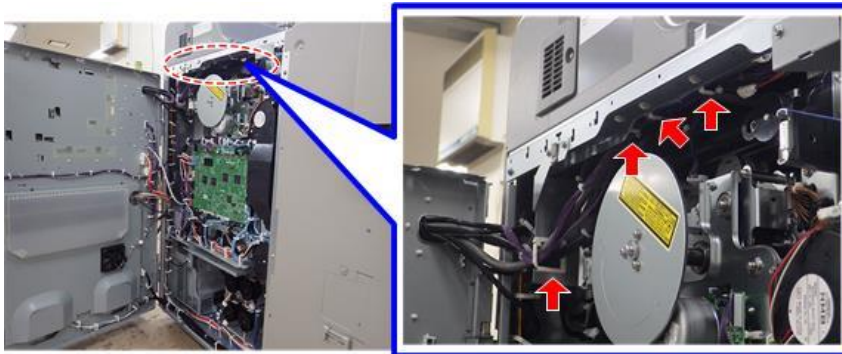
#### 4.Replacement and Adjustment

7. Free the harnesses (🔧x2).



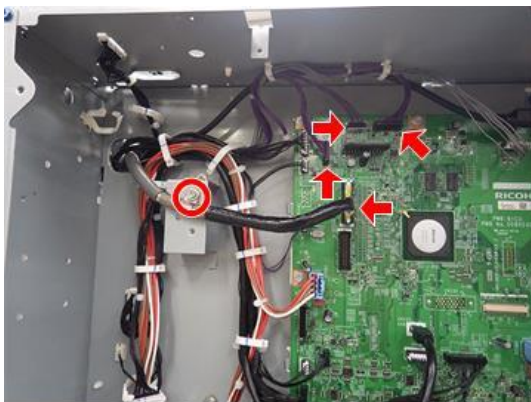
d0bxa4109

8. Free the ADF harnesses under the rear edge of the machine (🔧x4).



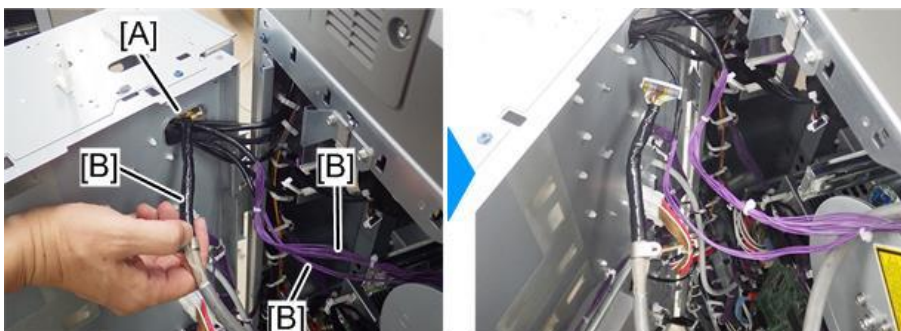
d0bxa4110

9. Disconnect the scanner connectors (🔧x1, 🗑️x4).



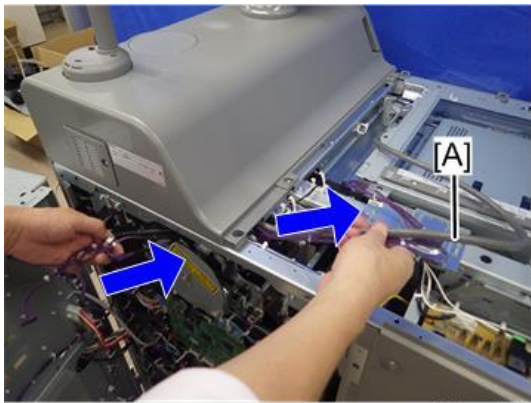
d0bxa4111

10. Pull the ADF harness [B] through the hole [A] and out of the controller box.



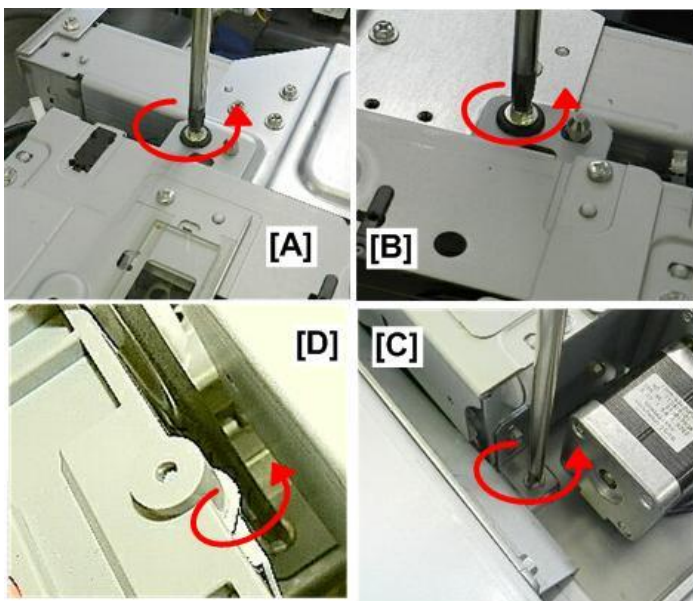
d0bxa4133

11. Push the ADF harness [A] up into the machine, and then pull it out.



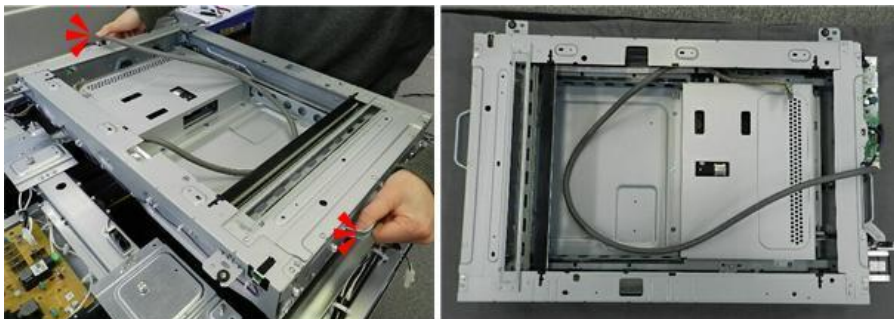
d0bxa4112

12. Remove the large screw from each corner of the scanner unit [A], [B], [C], [D] (⌀ x4).



d1792665

13. Lay the free harness in the center of the scanner unit.  
14. Lift the scanner unit by its handles on both sides, pull it out of the machine, and then lay it on a clean flat surface. **Weight:** 8 kg (17.6 lb.).



d1792671

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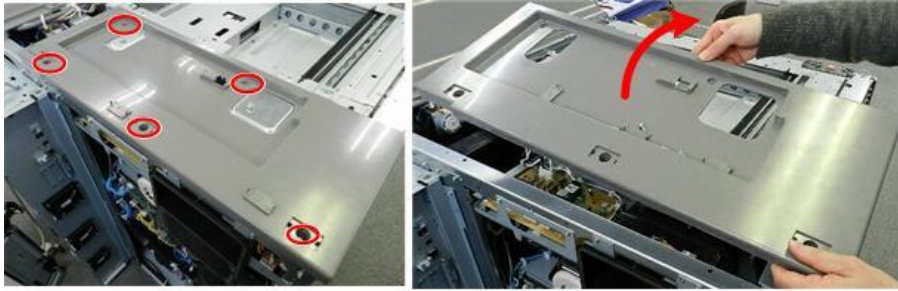
## ADF Position Sensor

---

1. Remove the ADF ([Removing the ADF](#))

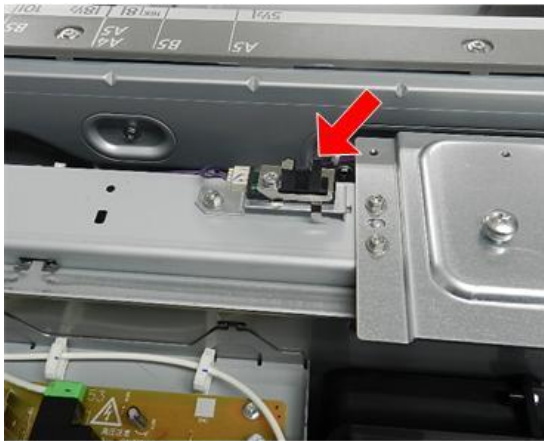
#### 4.Replacement and Adjustment

2. Remove the rear flat plate (🔩x5).



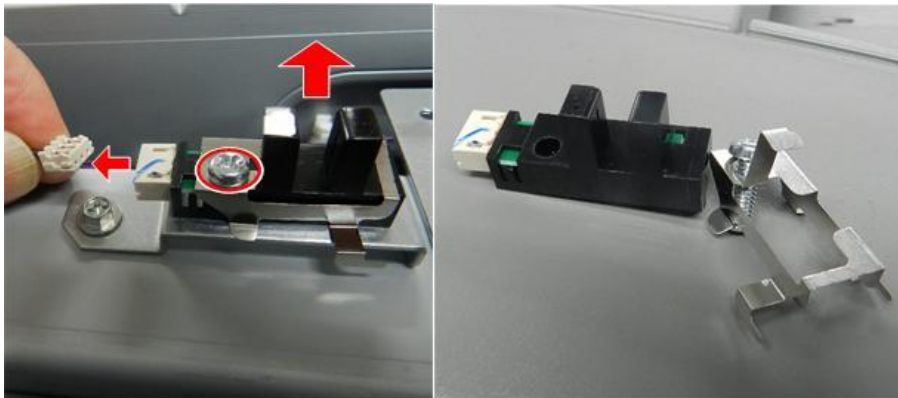
d1792662

3. The sensor is on the rear top rail.



d270b2605

4. Remove the sensor (🔩x1, 📦x1).



d270b2606

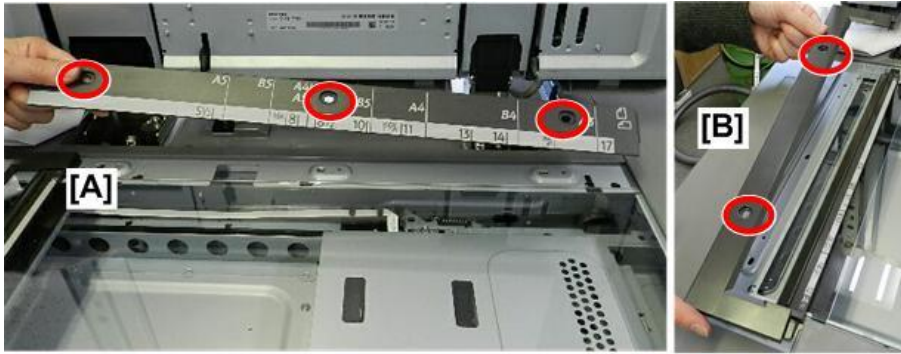
---

#### Exposure Lamp HP Sensor

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1. Remove:  
[A] Rear scale (🔩x3)  
[B] Left cover (🔩x2)

## 4.Replacement and Adjustment



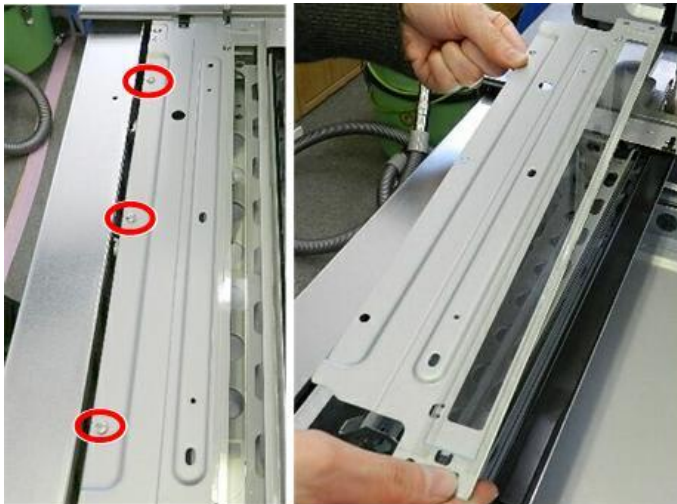
d1792682

2. Remove:  
[A] Exposure glass  
[B] Front "L" cover



d1792683

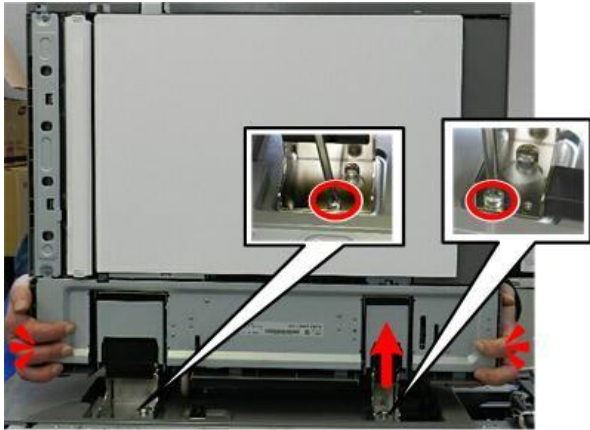
3. Remove the left stay (⊕ x3).



d1792684

#### 4.Replacement and Adjustment

4. Remove the ADF (🔧 x2).



d1792660

5. Lay the ADF on the floor.



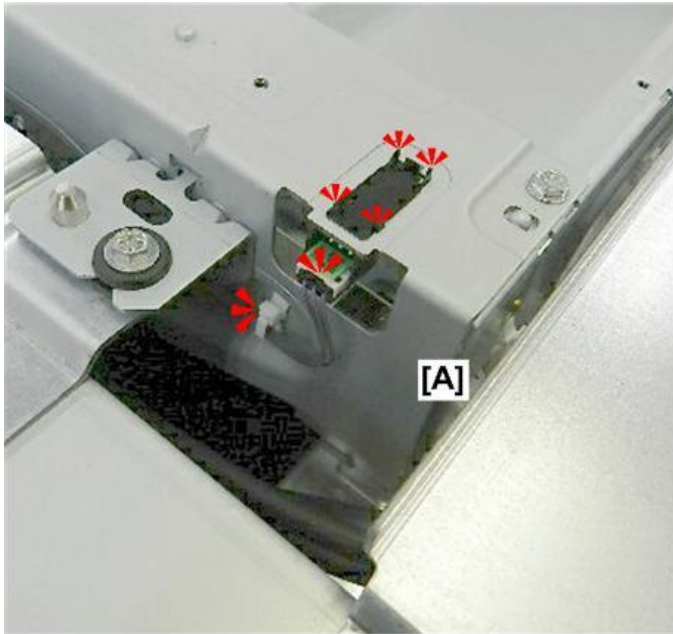
d1792661

6. Remove the rear flat plate (🔧 x5).



d1792662

7. Disconnect the sensor [A] (⚙️x1, 📏x1, ▼x4).



d1792685

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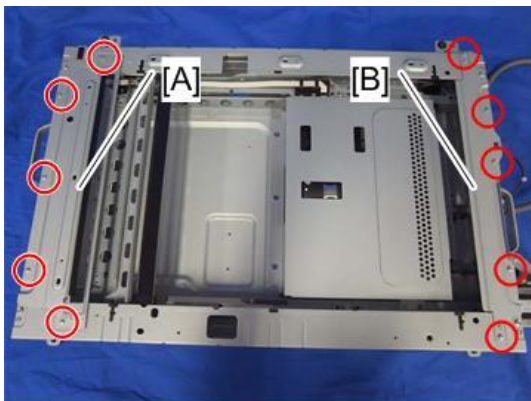
## Scanner Wire

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### Preparation

---

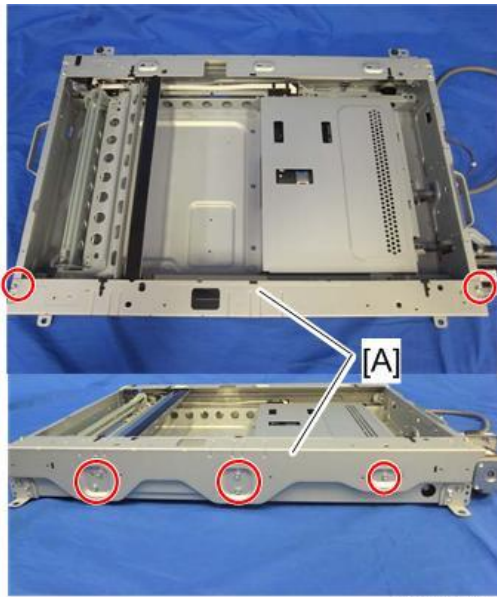
1. Remove the scanner unit ([Scanner Unit](#))
2. Remove the left stay [A] and the right stay [B] (⚙️x5 each).



d1792686

#### 4.Replacement and Adjustment

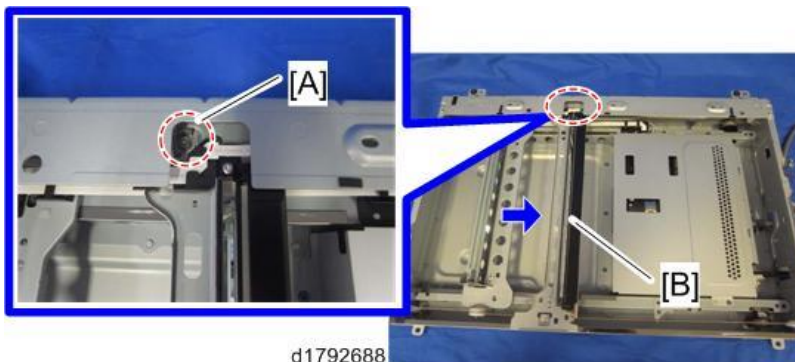
3. Disconnect the front frame [A] (⌀ x5).



d1792687

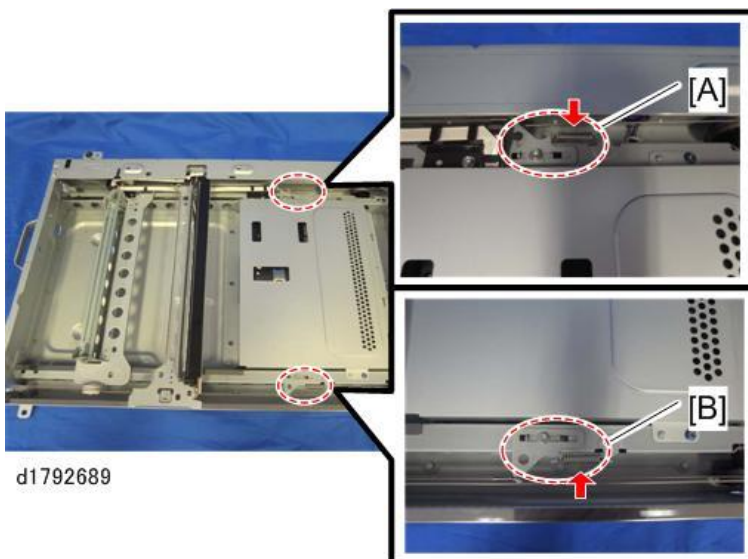
#### Wire Replacement

1. Move the 1st carriage so that screw [A] is visible at [B].



d1792688

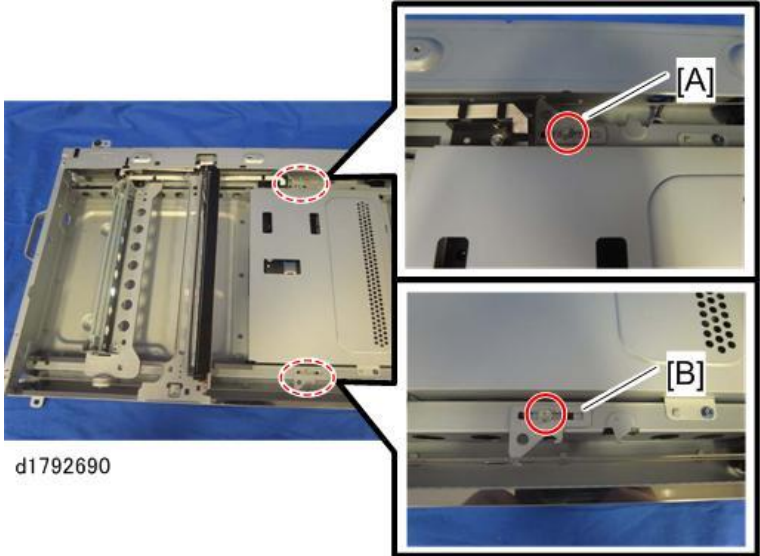
2. Remove front and rear springs [A] and [B] (⌀ x2).



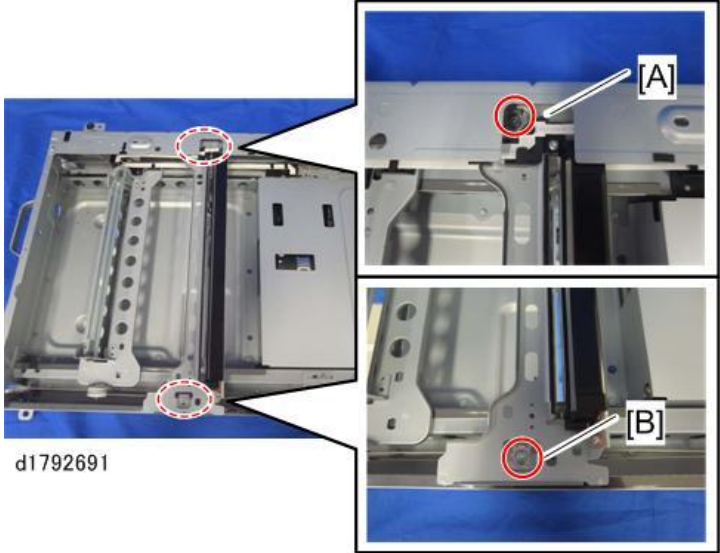
d1792689



3. Loosen tension bracket screws at front [A] and rear [B].



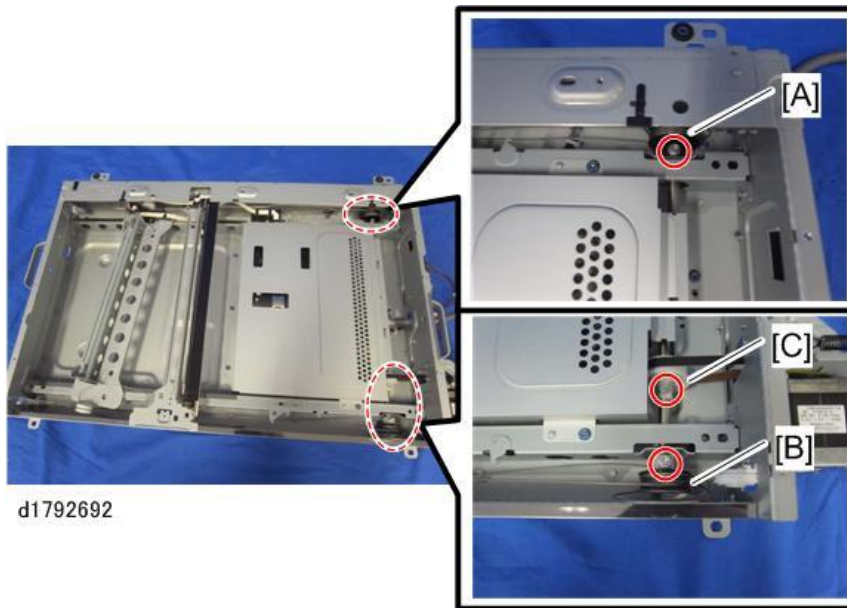
4. Remove rear and front retaining brackets [A] and [B] (⌀x2).



5. Remove the tip of the rear end of the wire (rear and front).

#### 4.Replacement and Adjustment

6. Unscrew wire pulleys at rear and front [A] and [B], and then the drive pulley [C].

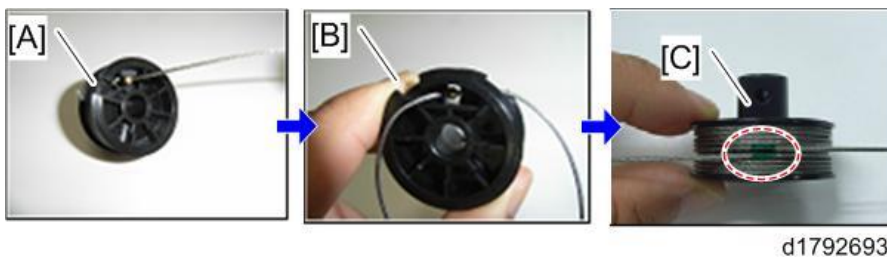


7. Remove the wire pulleys from the shaft.

#### Preparation for Re-assembly

---

1. Pass the wire from the side of the pulley with no projection [A].
2. Set the beads on the middle of the wire in the groove [B].
3. Attach tape across the pulley to hold the wires [C] in place.

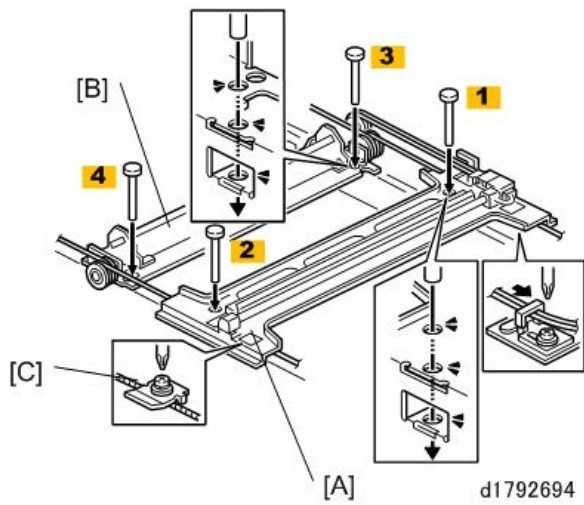


#### Re-assembly

---

1. Remove the 1st scanner carriage from the scanner unit.
2. Position the 2nd scanner carriage with the positioning pins (A1849501).
3. Insert the wire pulley through the shaft. Do not tighten the screw of the front side.
4. Turn the wire, and then remove the tape.
5. Set the spring.
6. Tighten the screw of the drive pulley.
7. Remove the positioning pins, and then move the 2nd carriage to fit into the wire.
8. Set the positioning pins again, and then tighten the screws of the front pulley and tension bracket.
9. Position the 1st scanner [A] so that the holes are aligned, and insert the positioning pins [1] and [2].
10. Position the 2nd scanner [B] so that its holes are aligned, and insert the positioning pins [3] and [4].

11. Attach the lock bracket [C] to fasten the wire to the 1st scanner.

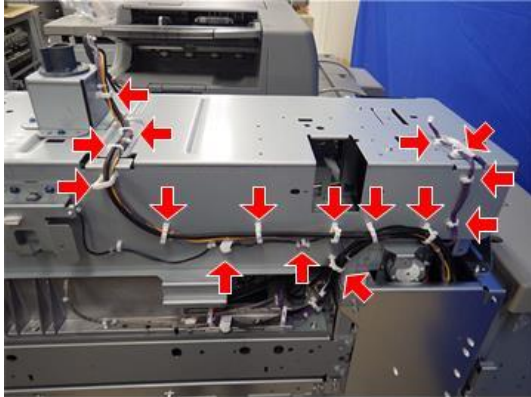


12. Tighten the screw of the tension bracket.
13. Attach the pulley and tighten the lock screw.
14. Remove the four positioning pins.
15. Remove the tape from the pulley.
16. Slowly push the scanner left and right to confirm that the wires are engaged correctly. The 1st and 2nd scanners should move smoothly.

## Toner Supply

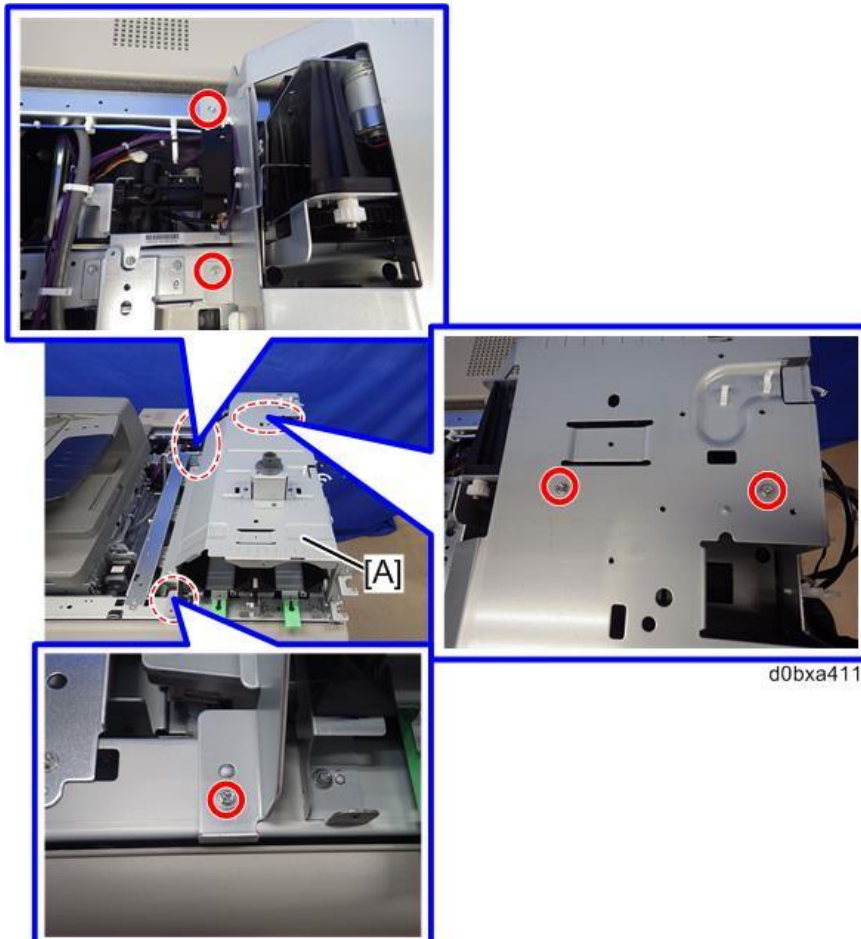
### Toner Cover

1. Disconnect the harness on the right side of the toner cover (🔌 x1, 🛠️ x15).



d0bxa4116

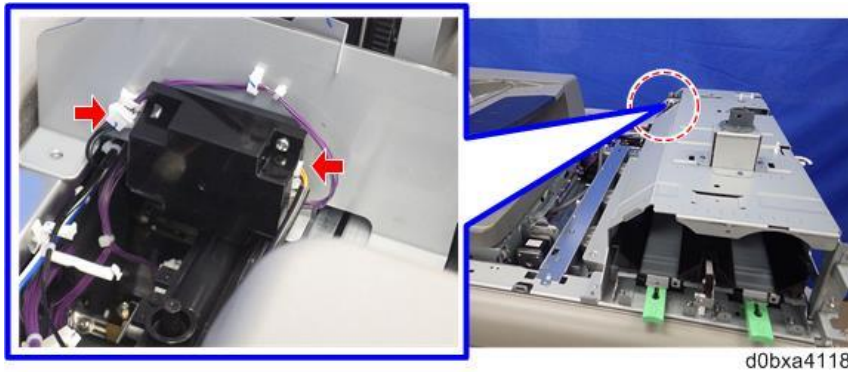
2. Remove the screws of the toner cover [A] (🔩 x5).



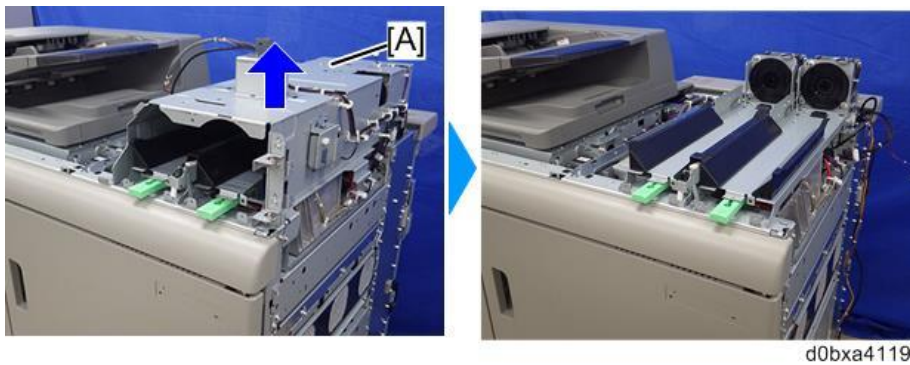
d0bxa4117

## 4.Replacement and Adjustment

3. At the left rear corner of the toner cover (viewed from the front), disconnect harnesses (🔌 x2).



4. Remove the toner cover [A].

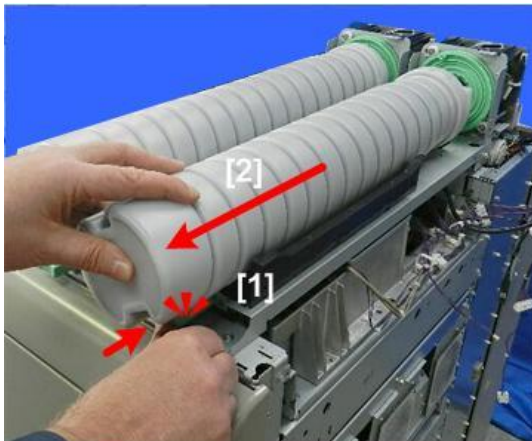


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## Toner Bottle Cradles

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1. Remove the toner bottles.
2. Press in the bottle release lever [1] of the toner bottle, and then remove the bottle [2].

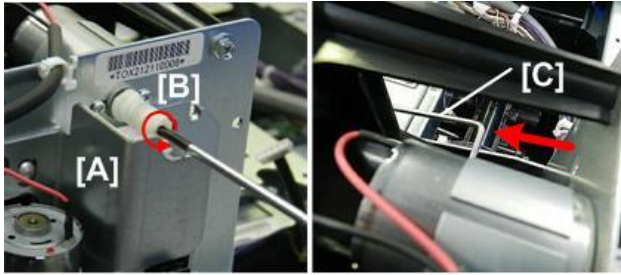


### ★ Important

- If either bottle is locked and cannot be released by pressing the lever, do the following steps to unlock the bottle.
3. At the back of the machine [A], insert a small screwdriver into the worm gear shaft [B] of the bottle cap motor of the toner bottle.

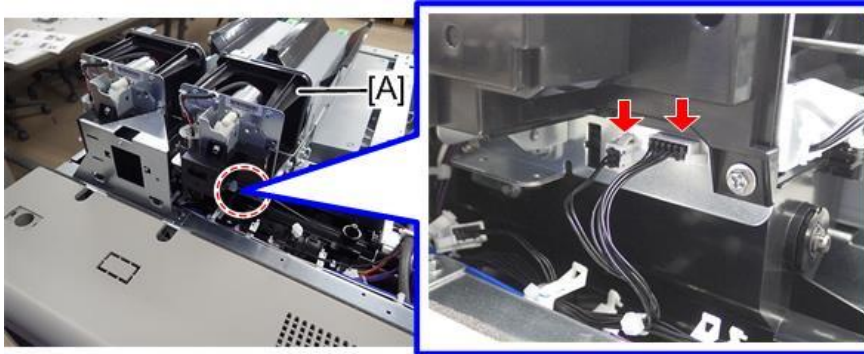
#### 4.Replacement and Adjustment

4. Turn the screwdriver counter-clockwise until the arm [C] moves forward.



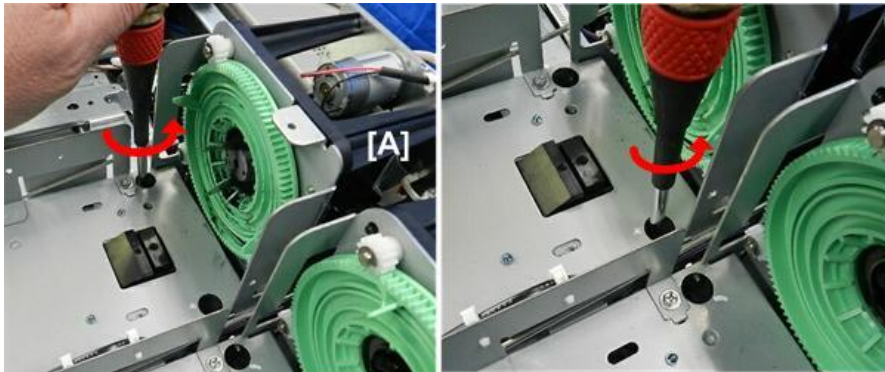
d1792728

5. Disconnect the connectors of the left toner bottle cradle [A] (📦 x2, 🛠️ x1).



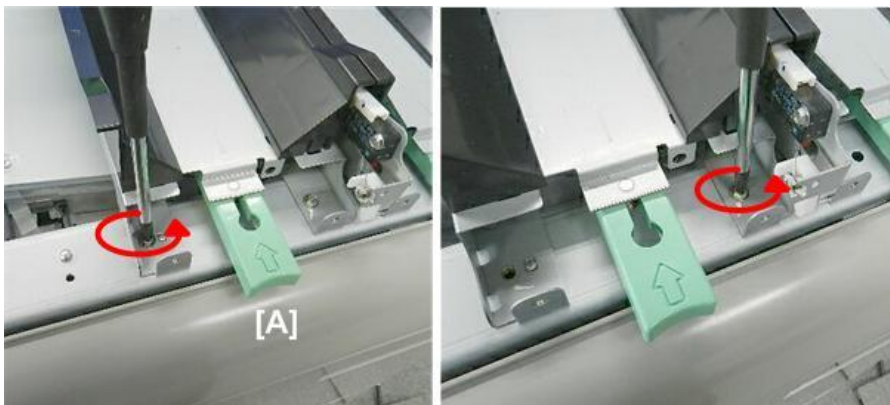
d0bxa4120

6. Disconnect the back of the left toner bottle cradle [A] (🛠️ x2).



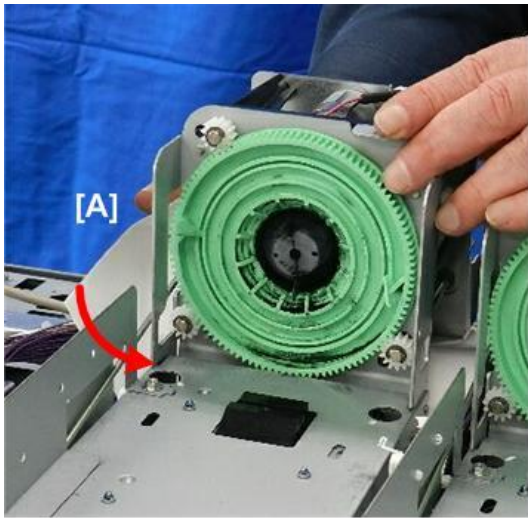
d1792731

7. Disconnect the front of the left toner bottle cradle [A] (🛠️ x2).



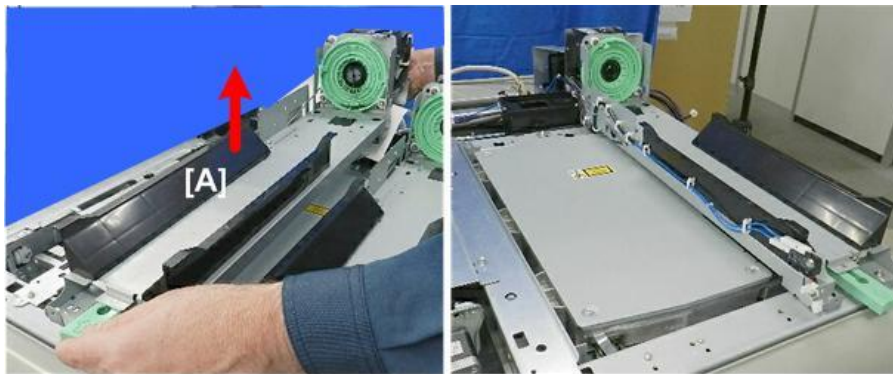
d1792732

8. Slide a sheet of paper under the back of the left toner bottle cradle [A].



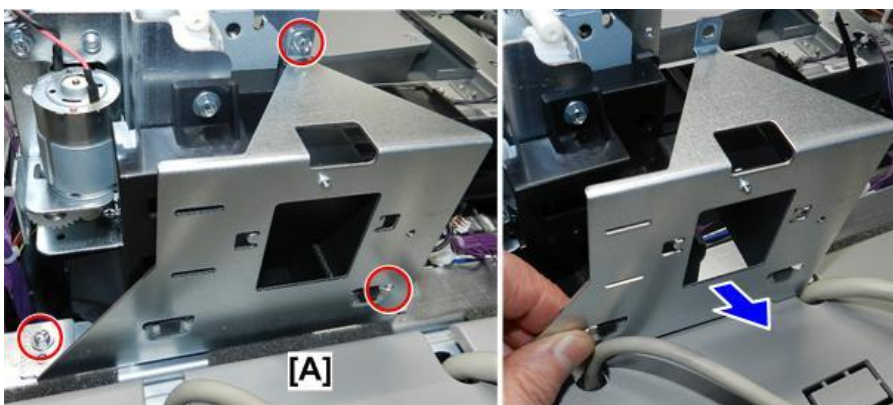
d1792733

9. While holding the paper under the rear end of the cradle, remove the left toner bottle cradle [A].



d179b2734

10. Remove the bracket [A] from the back of the right toner bottle cradle (⊗ x3).



d270b2735

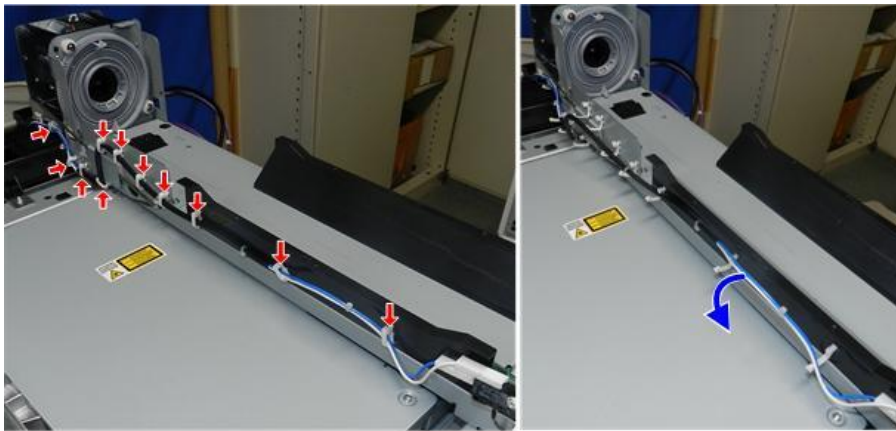
#### 4.Replacement and Adjustment

11. Disconnect the back of the right toner bottle cradle [A] (🔧x2).



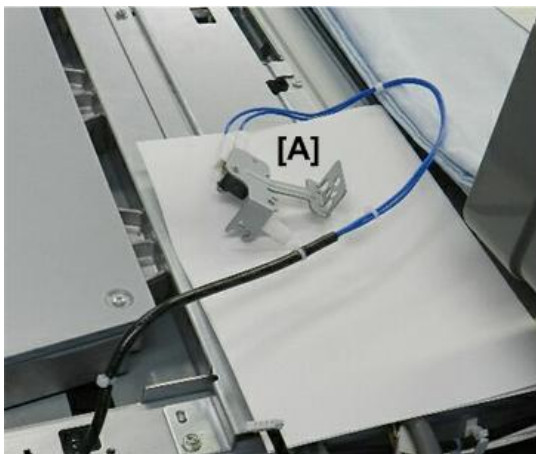
d0bxa4121

12. Disconnect the switch harness from the left side of the cradle [A] (🔧x11).



d270b2738

13. Pull the disconnected switch harness [A] to the rear.

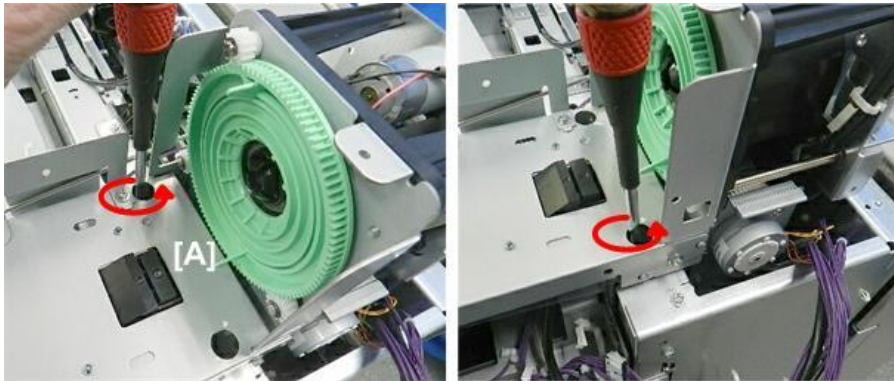


d1792738



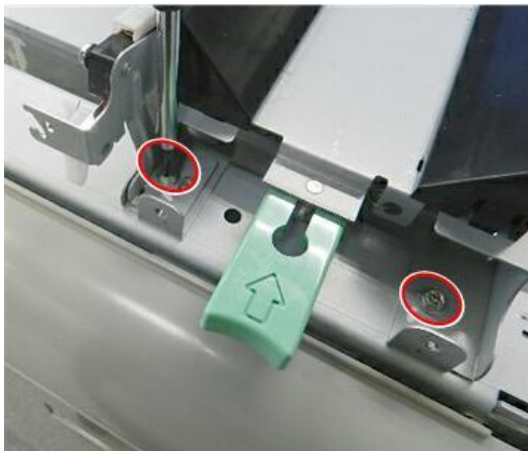
## 4.Replacement and Adjustment

14. Disconnect the back of the right cradle [A] (⚙️ x2).



d1792739

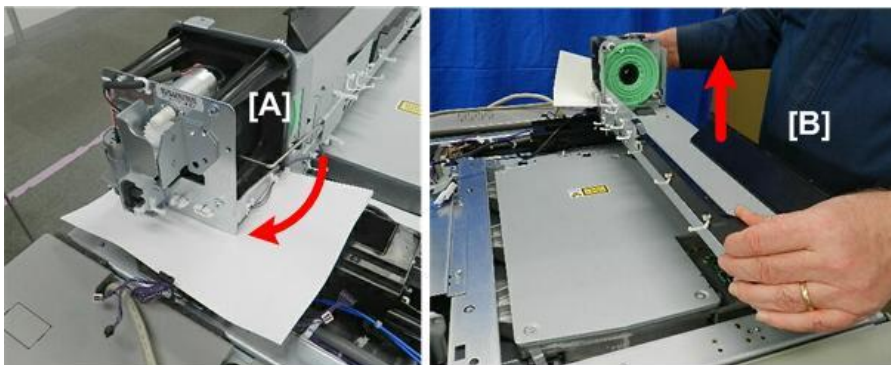
15. Disconnect the front of the right cradle (⚙️ x2).



d1792758

16. Slide a sheet of paper under the back of right toner bottle cradle [A].

17. While holding the paper under the rear end of the cradle, remove the right toner bottle cradle [B].

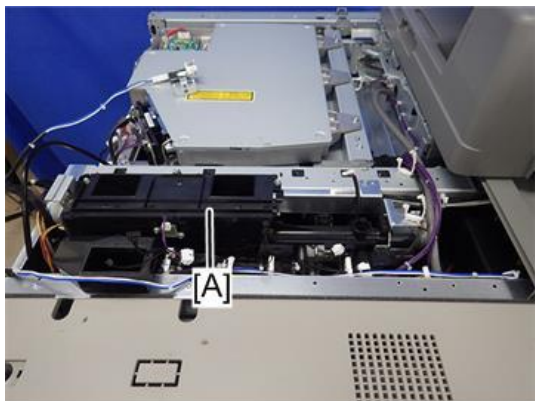


d1792740

## 4.Replacement and Adjustment

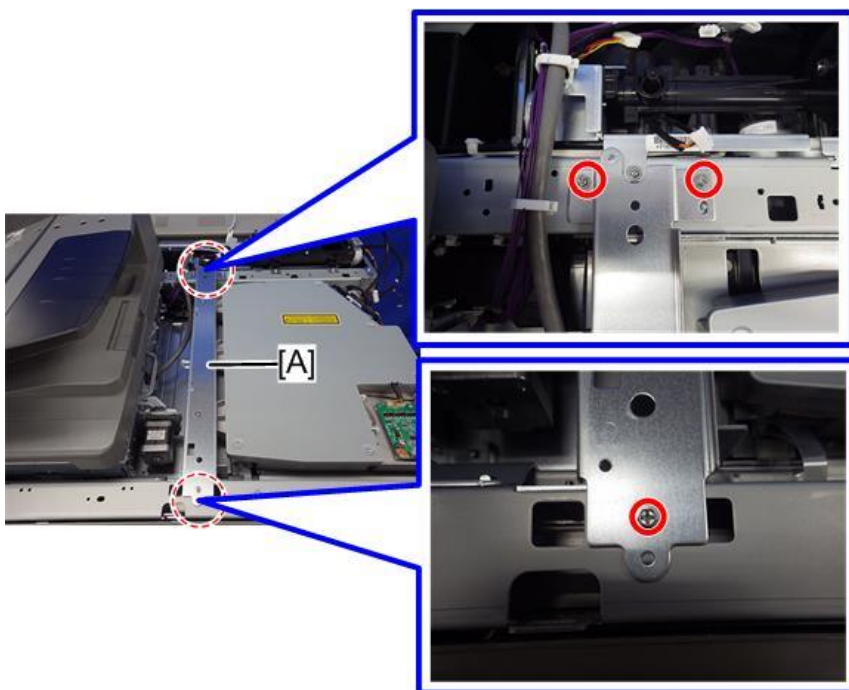
### Sub Hopper

1. The toner supply unit [A] is at the rear, behind the laser unit.



d0bxa4127

2. Remove the stay [A] (⊕ x3).



d0bxa4125

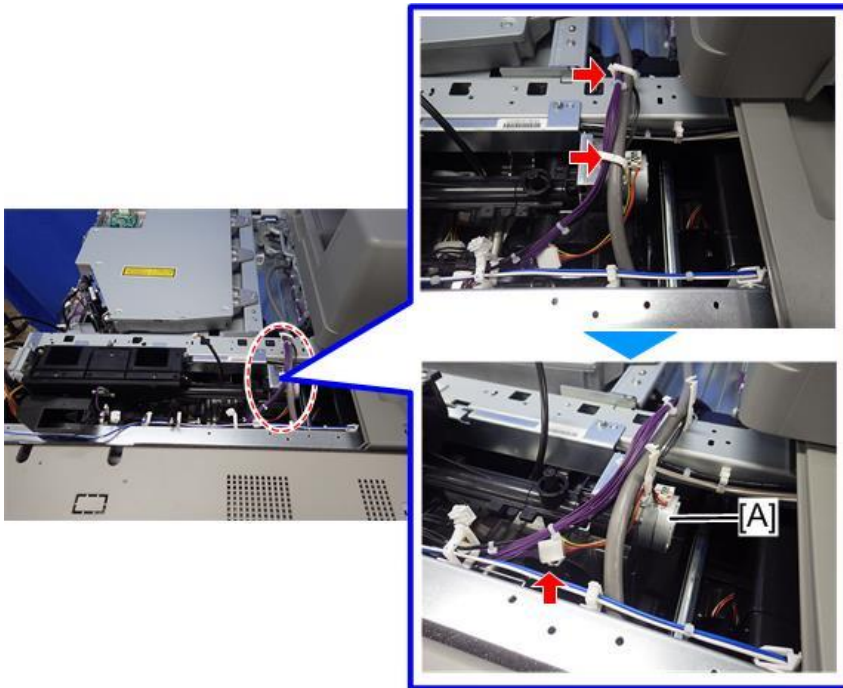
3. At the right corner of machine, disconnect the toner agitator motor [A] (⊞ x1).
4. Disconnect the TD sensor [B] (⊞ x1).



d1792802

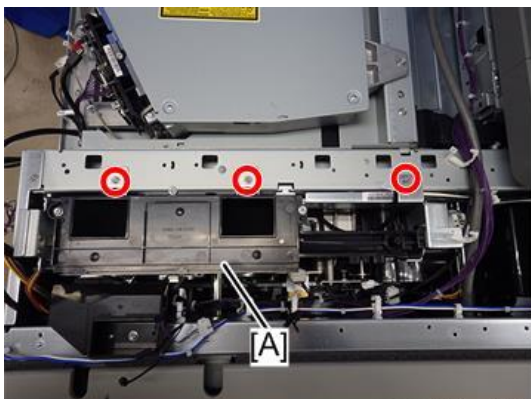
#### 4.Replacement and Adjustment

5. At the other end of the toner supply unit, disconnect the harness (🔧x2).
6. Disconnect the toner supply motor [A] (🔧x1).



d0bxa4128

7. Disconnect the toner supply unit [A] (🔧x3).



d0bxa4129

8. Pull the unit up slightly and then slip some paper under it to prevent toner spill.
9. Stand behind the machine, and then tilt the toner supply unit slightly toward the front of the machine as you remove it.



d1792807

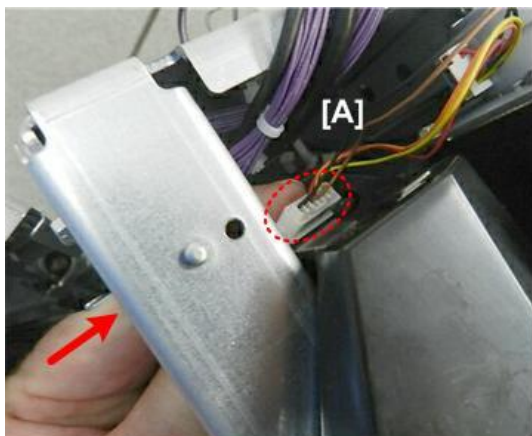
## 4.Replacement and Adjustment

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### Toner Supply Unit Re-installation

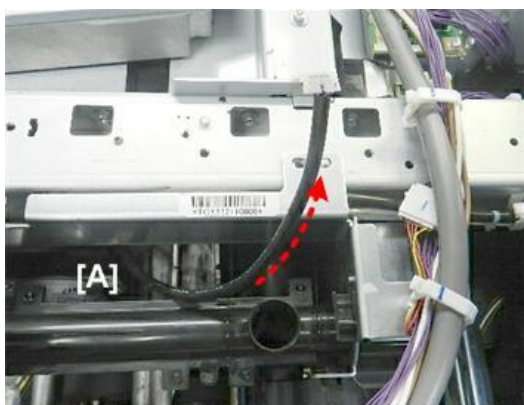
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1. If it is difficult to re-connect the agitator motor [A], open the controller box door, and then re-connect the harnesses.



d1792814

2. Make sure that the black harness [A] is between the edge of the machine and the duct.



d1792815

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### Toner Supply Motors

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#### Toner Feed Motor

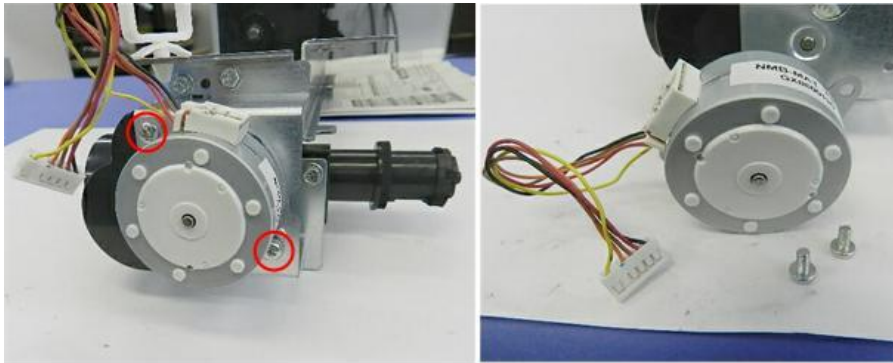
1. Remove the sub hopper ([Sub Hopper](#)).
2. The toner supply motor is on the left end of the unit.



d1792808

## 4.Replacement and Adjustment

3. Remove the motor (🔧 x2).



d1792809

### Toner Agitator Motor

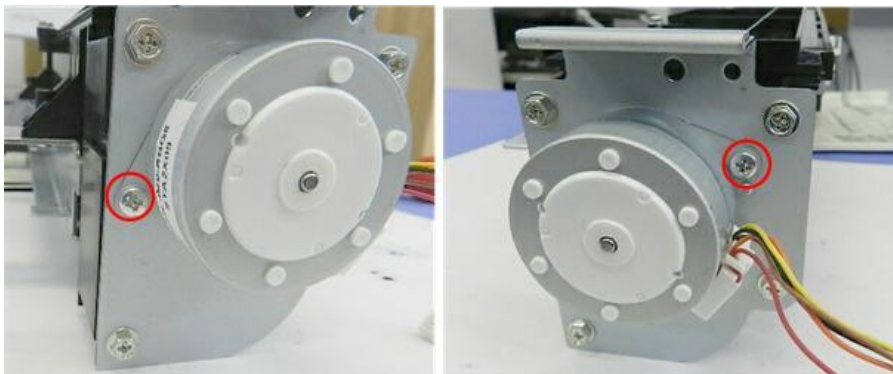
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1. Remove the sub hopper ([Sub Hopper](#)).
2. The toner agitator motor is on the right end of the unit.



d1792810

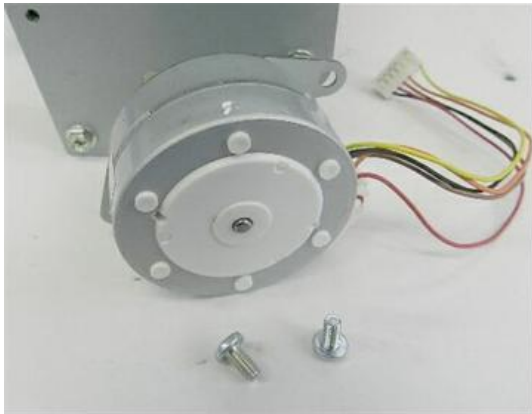
3. Disconnect the motor (🔧 x2).



d1792811

## 4.Replacement and Adjustment

4. Separate the motor from the bracket.



d1792812

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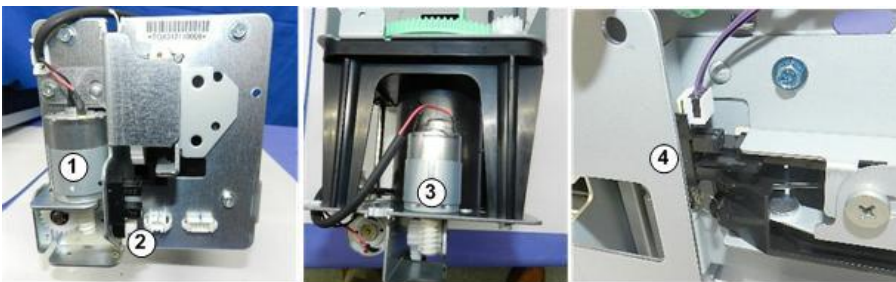
## Toner Bottle Unit

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Two toner bottles on separate cradles comprise the toner bottle unit. Each cradle contains:

- Toner bottle
- Toner bottle set sensor
- Toner bottle motor
- Toner bottle cap motor

①	Toner bottle motor (rear view)
②	-
③	Bottle cap motor (top view)
④	Bottle set sensor (bottom view)



d1792820

Before you begin:

- Each toner bottle is on a separate cradle where it rotates on a spiral groove to feed toner into the toner supply unit at the rear.
- Each cradle has two motors and two sensors.
- The removal of each motor and sensor is described once. The procedure for each bottle cradle is the same.

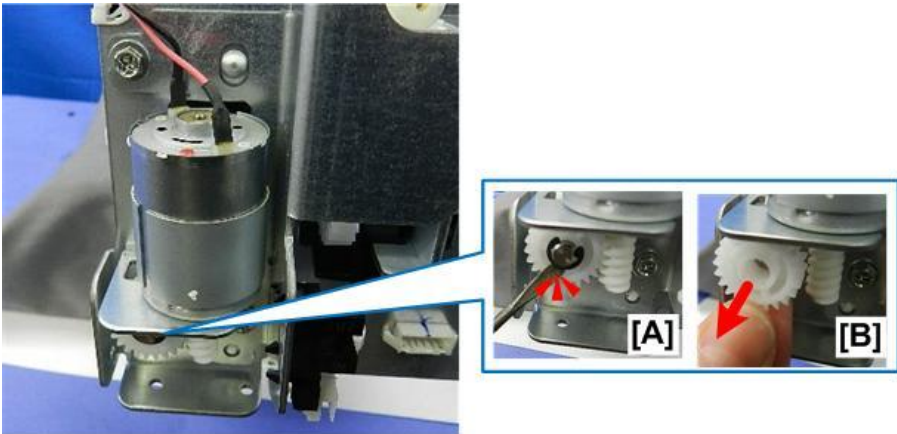
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## Toner Bottle Motor

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1. Remove the toner bottle cradles ([Toner Bottle Cradles](#)).
2. Remove gear [A] (⌀x1).

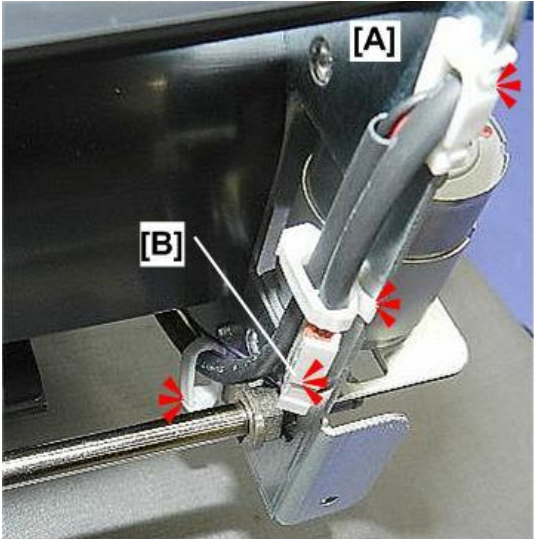
3. Remove gear [B].



d1792821

4. Free harness [A] (⚙️x3).

5. Disconnect the motor at [B] (🔌x1).



d1792822

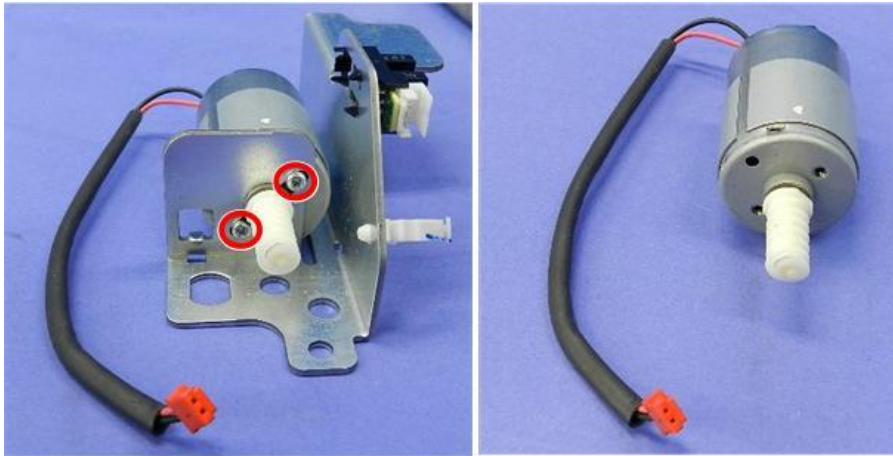
6. Remove the motor bracket (with motor attached) (🔩x2).



d1792823

#### 4.Replacement and Adjustment

7. Separate the motor from the bracket (⚙️x2).

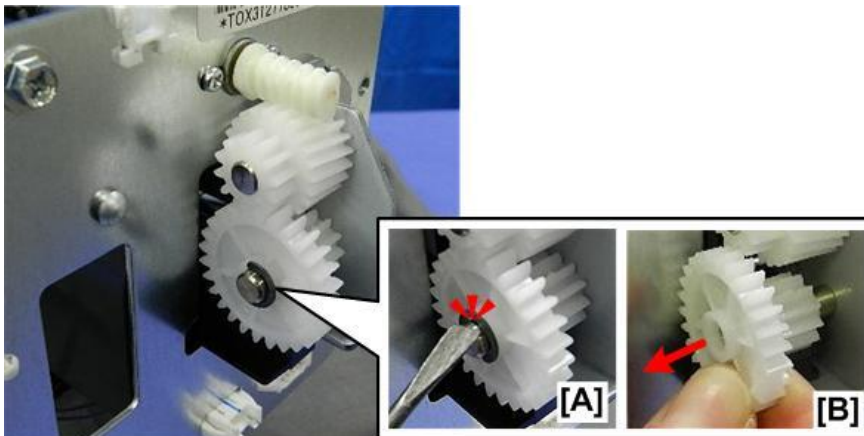


d1792824

#### Toner Bottle Cap Motor

---

1. Remove the toner bottle cradles ([Toner Bottle Cradles](#))
2. Remove the toner bottle motor bracket
3. Remove gear [A] (⚙️x1).
4. Remove gear [B].



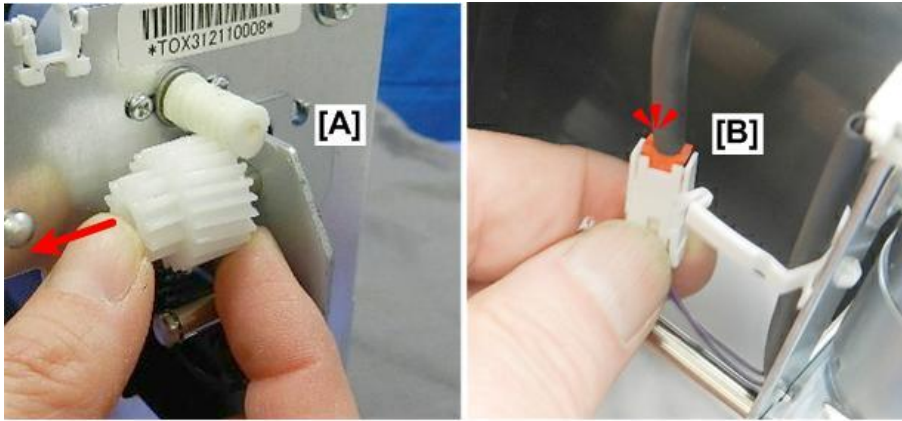
d1792825

5. Remove gear [A].



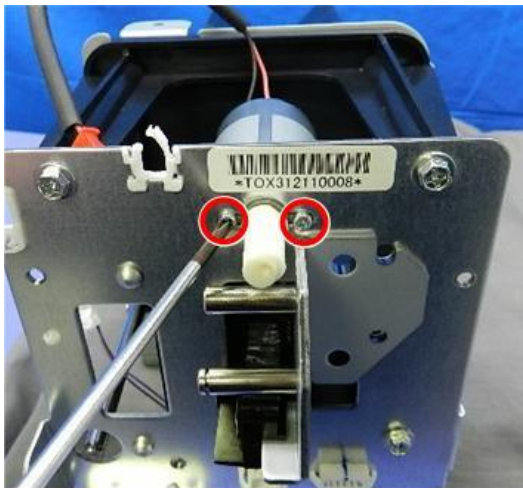
#### 4.Replacement and Adjustment

6. Disconnect the motor at [B] (🔌 x1).



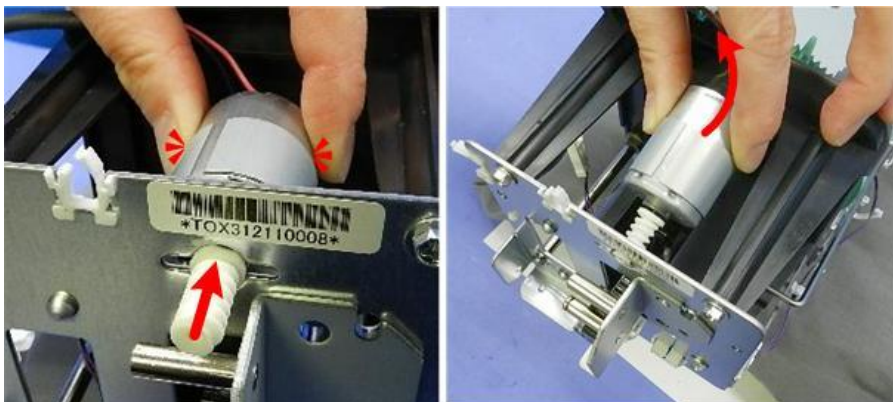
d1792826

7. Disconnect the motor (⚙️ x2).



d1792827

8. Pull the motor to the front as far as possible, then twist it up slightly to remove it.



d1792828

## 4.Replacement and Adjustment

9. Lay the motor on a flat clean surface.



d1792829

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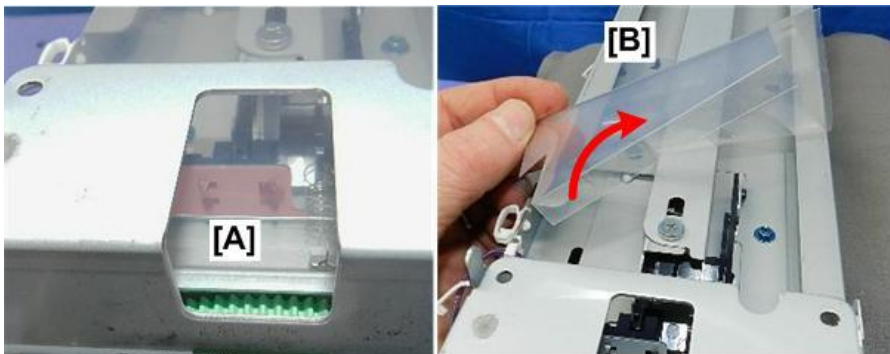
## Toner Supply Sensors

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### Toner Bottle Set Sensor

---

1. Remove the toner bottle cradles ([Toner Bottle Cradles](#)).
2. Turn the cradle upside down.
3. You can see the set sensor [A] behind the plastic sheet.
4. Pull out the plastic sheet [B] to uncover the sensor.

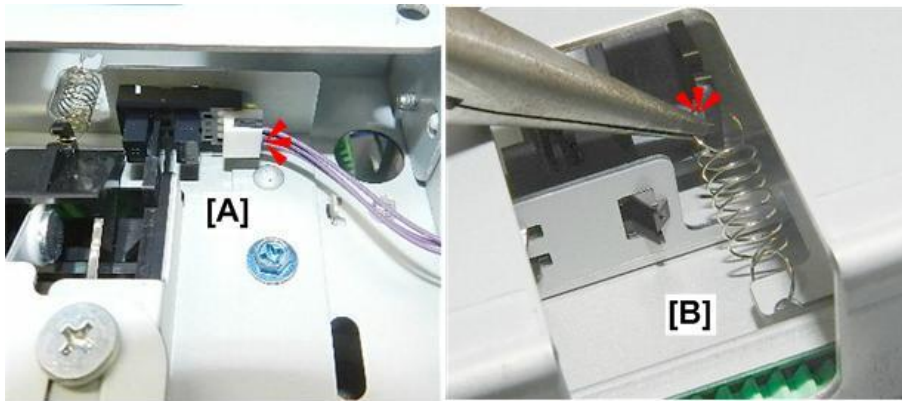


d1792831

5. At the front, disconnect the sensor [A] (x1).

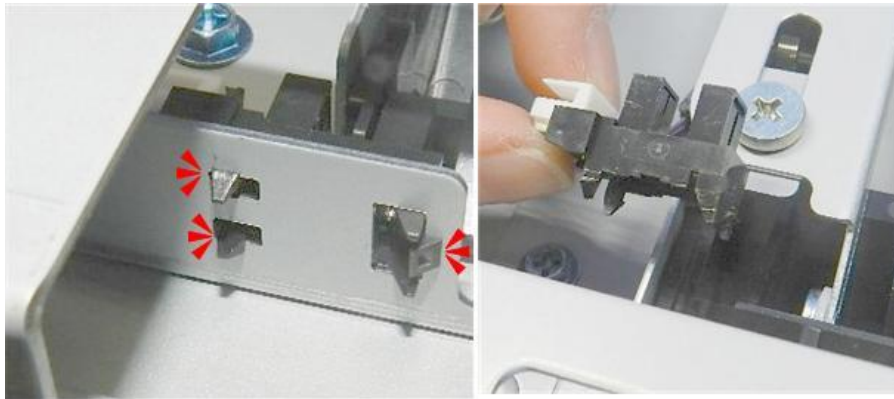
#### 4.Replacement and Adjustment

6. At the rear, remove the spring [B] (🌀x1).



d1792832

7. At the rear, remove the sensor (x3).



d1792833

## Laser Unit

### Precautions when Replacing the Laser Unit

#### ⚠️ WARNING

- Laser beams can seriously damage the eyes and cause permanent blindness.
- Make sure that the machine switched off and unplugged from the power source before performing any procedure in this section.
- Turn off the power switch on the left front corner of the machine. A message will prompt you to wait before you switch on the main switch.
- After the message goes off, switch off the main power switch.
- Unplug the machine and wait at least 10 min. before performing any procedure.

#### ⚠️ CAUTION

- An accidental static discharge could damage the laser diode board attached to the lens block unit. Touch a metal surface to discharge any static electricity from your hands.

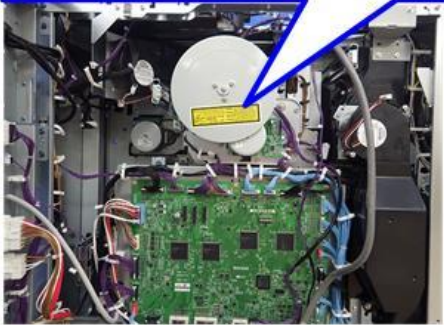
### Caution Decals

#### Top of the Laser Unit



d0bxa4122

## Flywheel



d0bxa4134



## Laser Unit

## Before You Begin

To remove the laser unit, do the procedures in the order described below.

1. Remove the Canopy Cover. (Copier models: [Canopy Cover \(Copier Models\)](#), Printer models: [Canopy Cover \(Printer Models\)](#))
2. Remove the Toner Supply Unit Upper Cover. ([Toner Supply Unit Upper Cover](#))
3. Remove the Toner Cover. ([Toner Cover](#))
4. Remove the Toner Bottle Cradles. ([Toner Bottle Cradles](#))
5. Remove the Laser Unit. ([Removing the Laser Unit](#))

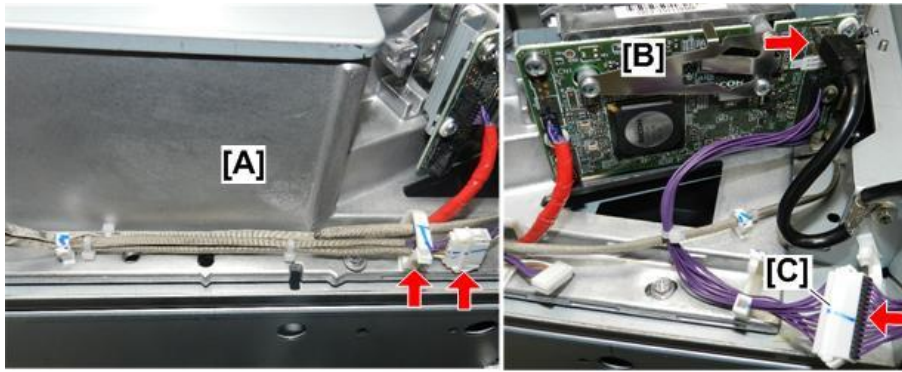
## Removing the Laser Unit

1. Disconnect the harnesses of the right side of the laser unit [A] and the board [B] ( x1,  x3)

**★ Important**

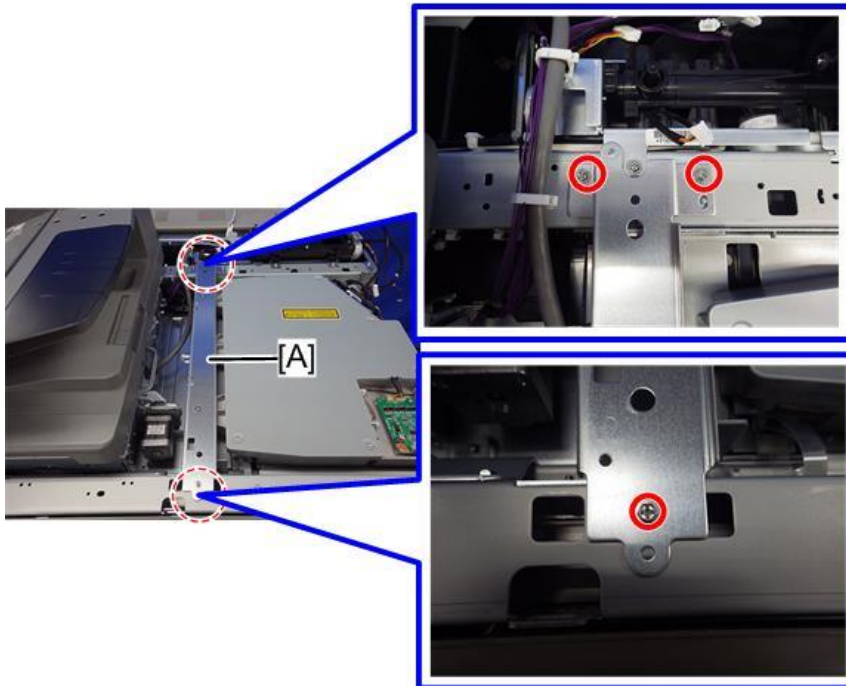
- To avoid damage to the connector or board, disconnect the flat cable harness at [C]. Do not disconnect it directly from the board at [B].

#### 4.Replacement and Adjustment



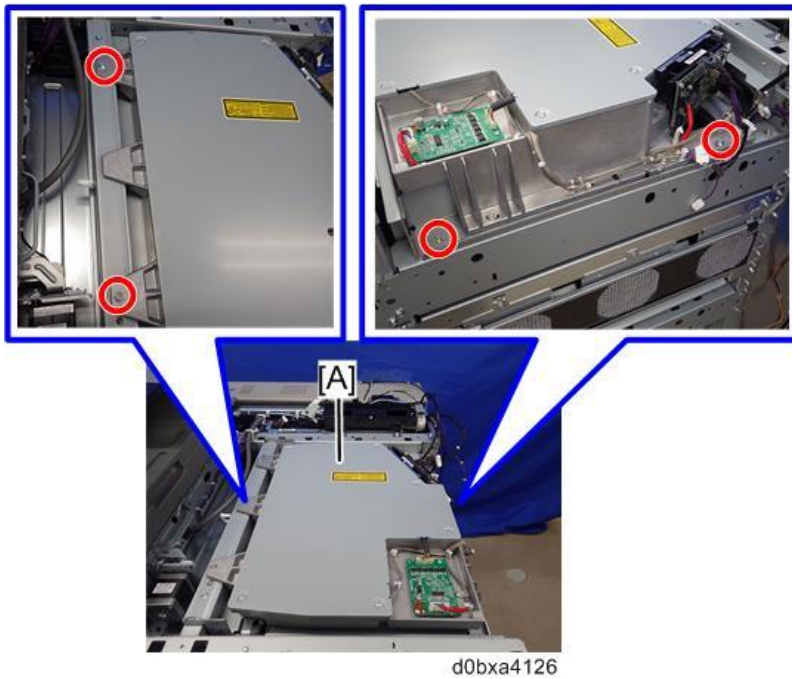
d270b2741a

2. Remove the stay [A] (⌀x3).

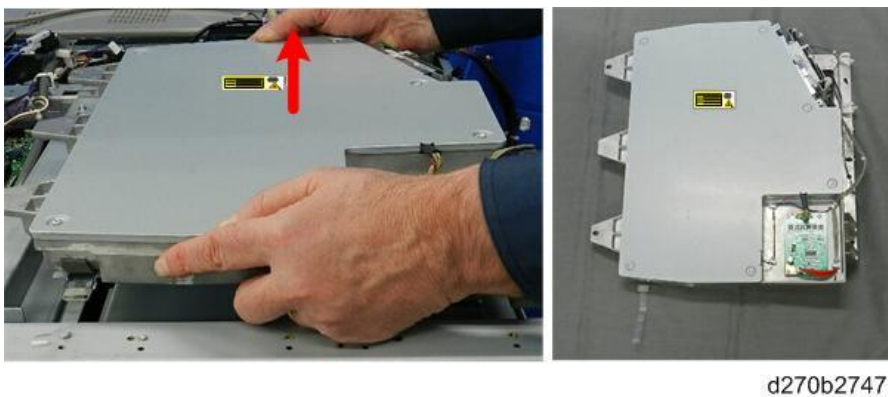


d0bxa4125

3. Disconnect the laser unit [A] (⊙x4).

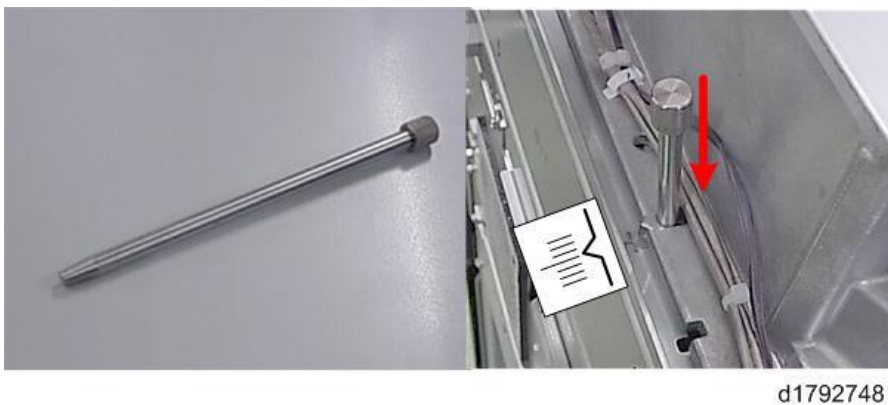


4. Lift the laser unit and lay it on a flat clean surface.



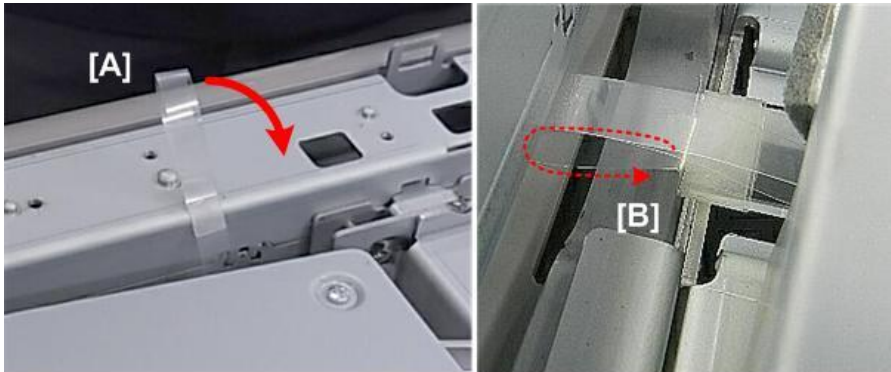
### Laser Unit Re-installation

1. Insert the positioning pin (scanner wire jig) into the hole by the scale to position the unit correctly at the longest vertical mark on the scale.



#### 4.Replacement and Adjustment

2. At the front of the laser unit [A], fold the plastic strip [B] under itself so that it can be pulled easily out of the machine from the front. (This strip is attached to the toner shield glass which must be removed for cleaning.)



d1792749

#### ★ Important

- After the laser unit is replaced, SP2108-001 must be executed for the new laser unit.
- This SP downloads the operation parameters for the laser unit (main scan registration, main scan magnification, shading, and bow skew adjustment).

#### After Laser Unit Replacement

---

1. Plug in the power cord, and then turn the machine on.
2. Enter the SP mode.
3. Do SP2108-001 to download the operation parameters for the laser unit.

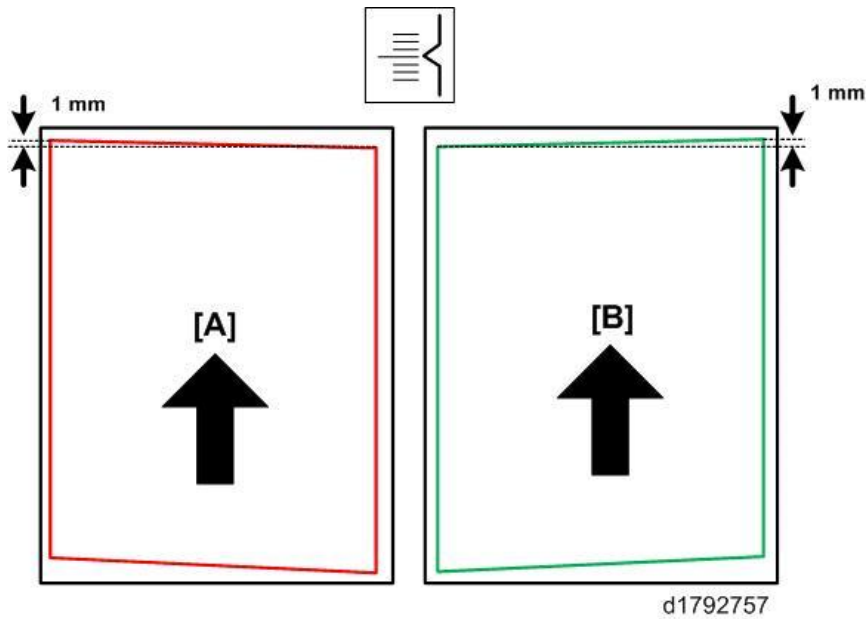
#### ★ Important

- Do not open the doors or switch the machine off while the machine is downloading the parameters.
  - If the machine returns an SC code or displays "Failure", cycle the machine off/on then execute SP2108-001 again.
4. Test for skew and magnification problems, and then correct them if necessary. (See the "Troubleshooting" section.)
  5. Do **SP2170-001** and select the number to print the Trimming Pattern.
  6. Check the borders on the sheet and check if the pattern is perfectly square.
  7. If the pattern is down on the right edge [A], the laser unit should be rotated **counter-clockwise** one notch.

-or-

If the pattern is up on the right edge [B], the laser unit should be rotated **clockwise** one notch.





8. Disassemble the machine again as far as the start of laser unit removal.
9. Loosen the screws of the laser unit, and then rotate it the number of notches necessary for the adjustment.

---

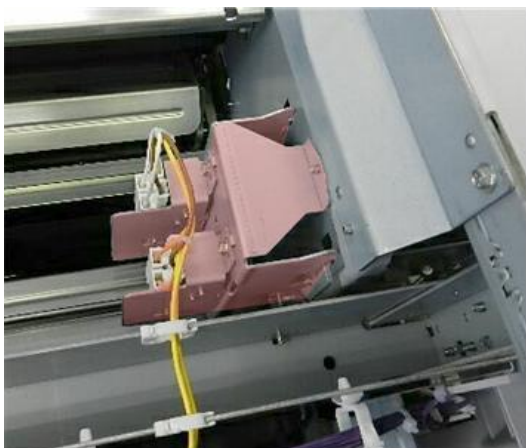
## LD Safety Switches

---

### Remove the Door Interlock Switches

---

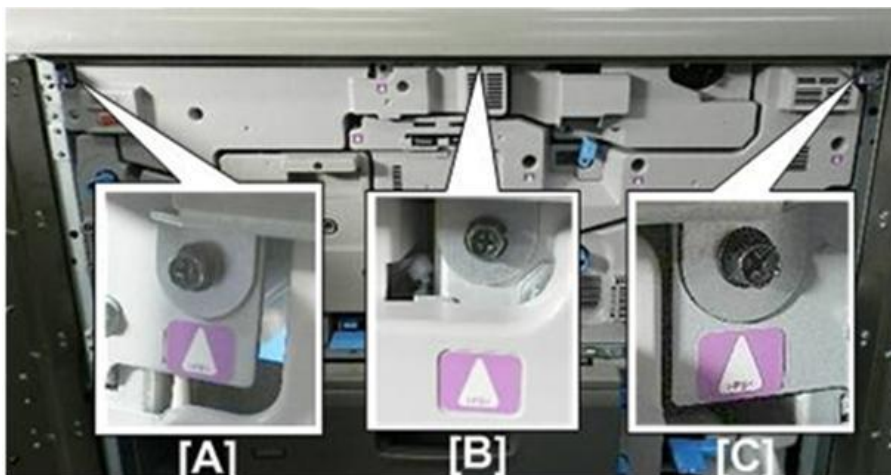
1. For the copier model, first remove the scanner unit. ([Scanner Unit](#))  
-or-  
For the printer model, first remove the top cover. ([Canopy Cover](#))
2. The safety interlock switches for the right door and the front door are behind the front plate of the main unit and under the scanner unit.



d1792672

#### 4.Replacement and Adjustment

3. Disconnect and remove the front edge cover at [A], [B], [C] (#x1).



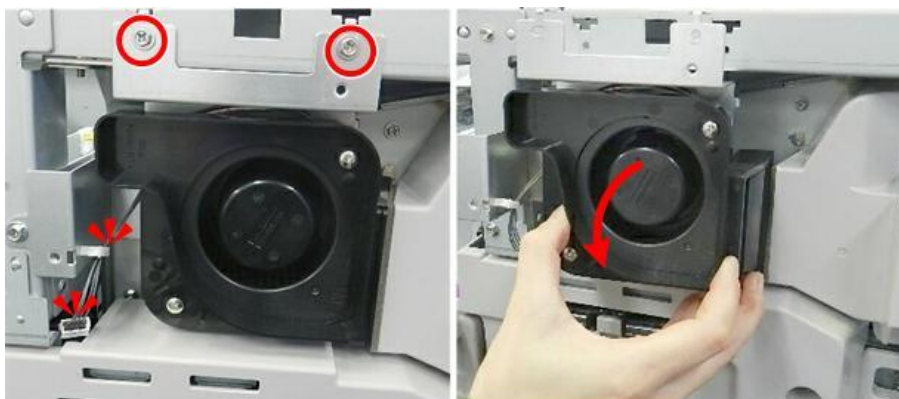
d1792761

4. At the front, remove the upper left cover (⚙️x4).



d1792673

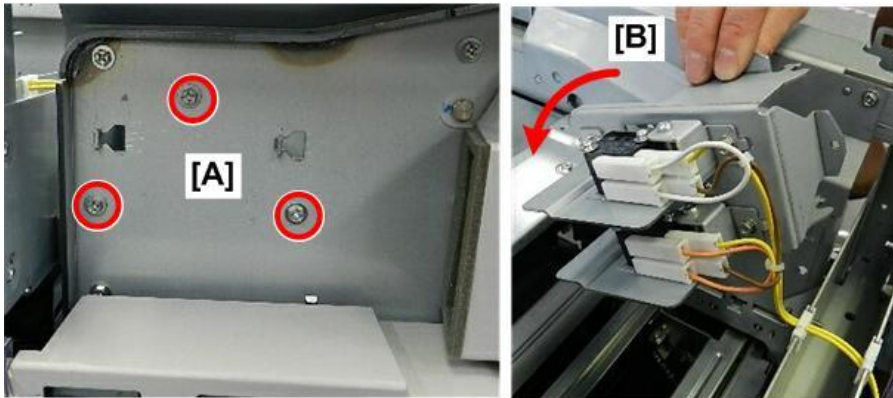
5. Disconnect the fan bracket and then pull away the fan (⚙️x2, ⚙️x2).



d1792674

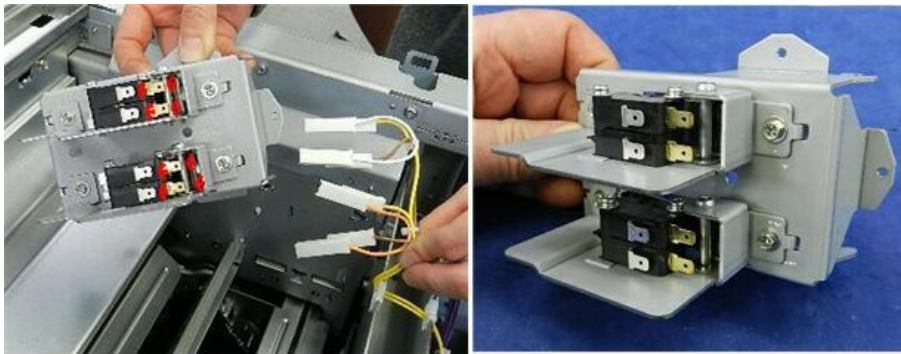
6. Remove the screws from the plate [A] behind the fan just removed (⚙️x3).

7. Behind the plate, pull the bracket [B] off its hook.



d1792675

8. Disconnect the switches (🔌 x8).



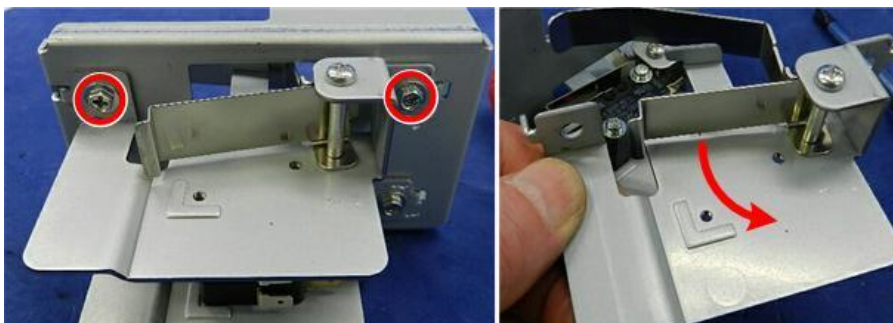
d1792676

9. Remove the first pair of switches (🔌 x2).



d1792677

10. Remove the spring bracket (🔌 x2).



d1792678

#### 4.Replacement and Adjustment

11. Remove the second pair of switches.



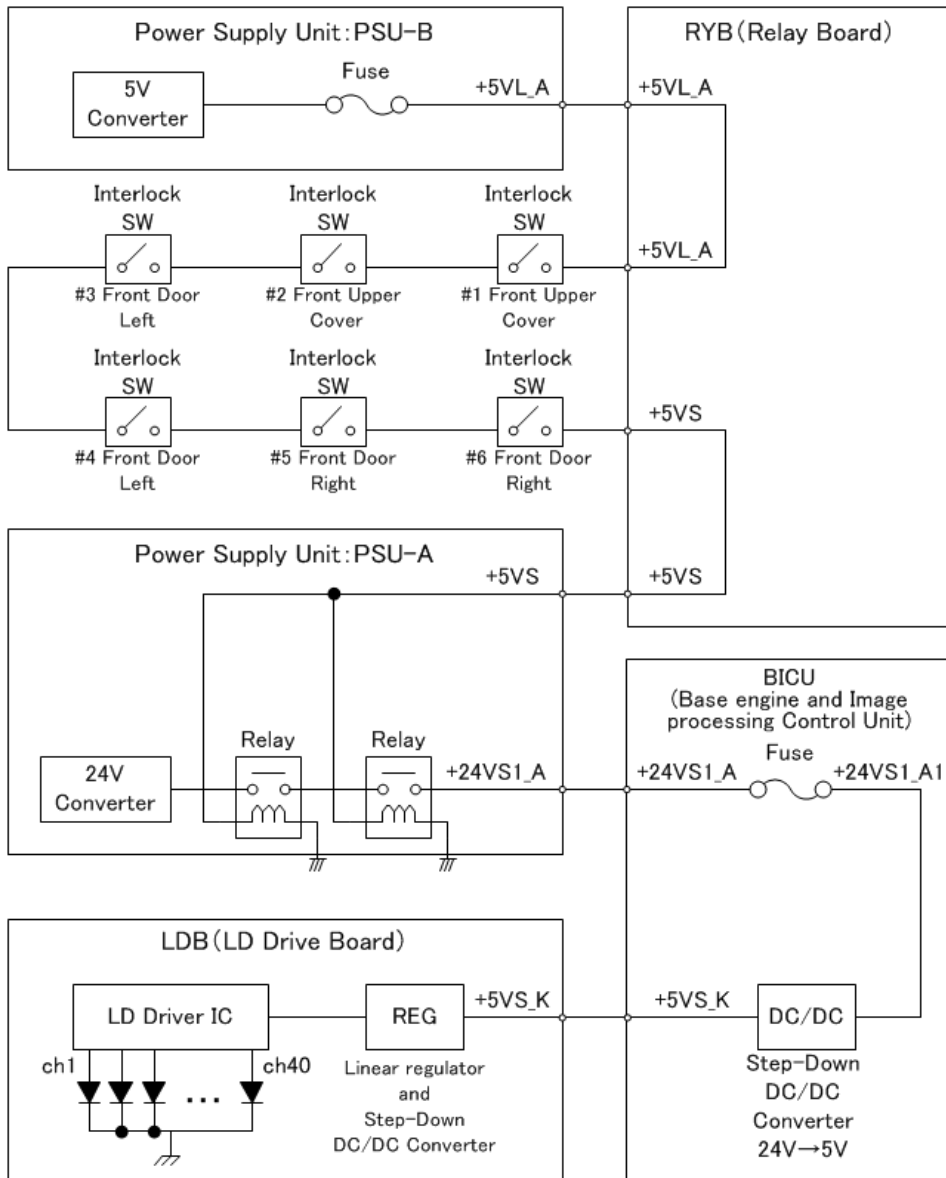
d1792679

#### LD Safety Switch Diagram

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In this machine, the mechanism that makes the laser unit operational is a 24V line interrupted using a 5V relay, and then 24V is dropped to +5V using a regulator. To ensure the safety of the machine operators and service technicians, six switches prevent the laser beams from switching on accidentally. When either the right door, left door, or front upper cover is opened, the +5V line connecting the LD driver on the LD control board is disconnected to disable the laser unit.

## 4.Replacement and Adjustment



w\_d0bxa4217\_en

## Around the Drum

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### PCDU Disassembly

---

#### PCDU Removal

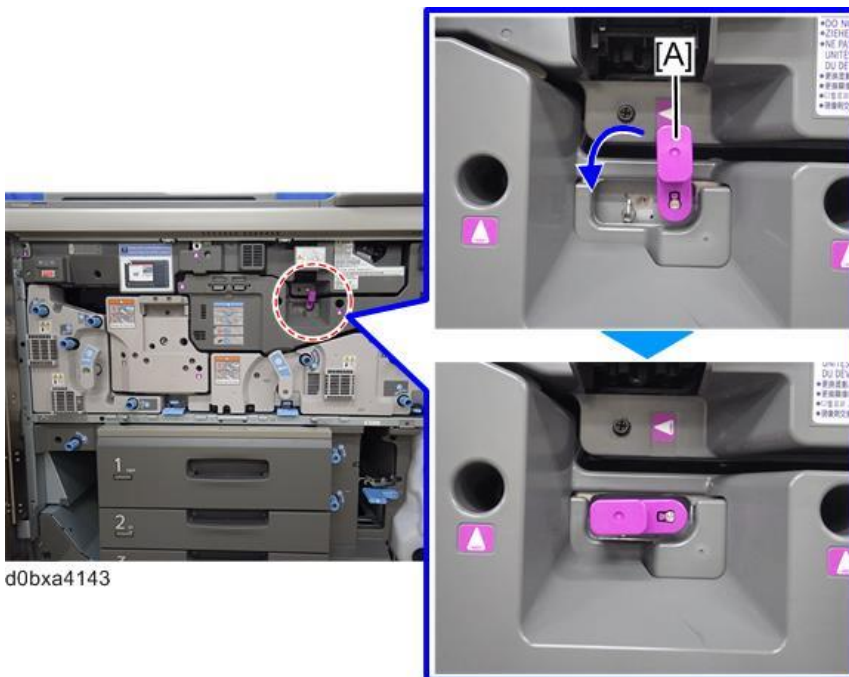
---

- 1.** Remove the front edge cover (#x1). ([Front Edge Cover](#))

The PCDU is on the upper right.



- 2.** Lower the ITB knob [A].

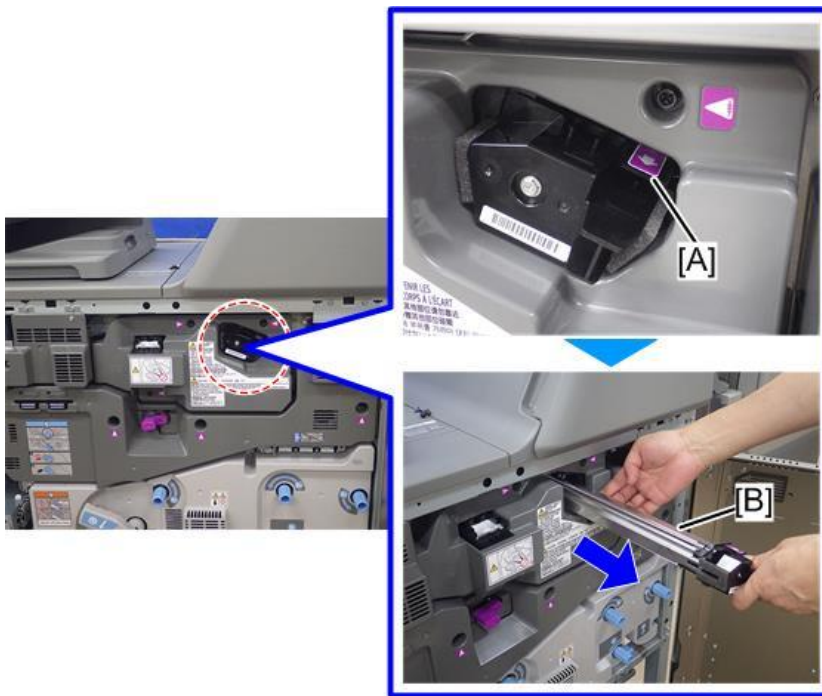


### **⚠ CAUTION**

- You must remove the charge corona unit.
- Never attempt to pull out the PCDU with the charge corona unit in the machine.
- Pulling out the PCDU without removing the charge corona unit will damage the cleaning pad HP sensor and its harness.

- 3.** Press the tab [A] to release the charge corona unit.

**4.** Pull the charge corona unit [B] out of the machine.



d0bxa4237

**5.** Lay the charge corona unit on a flat clean surface.

**★ Important**

- Always lay the charge corona unit down with the grid facing up. This prevents damage to the grid wires.



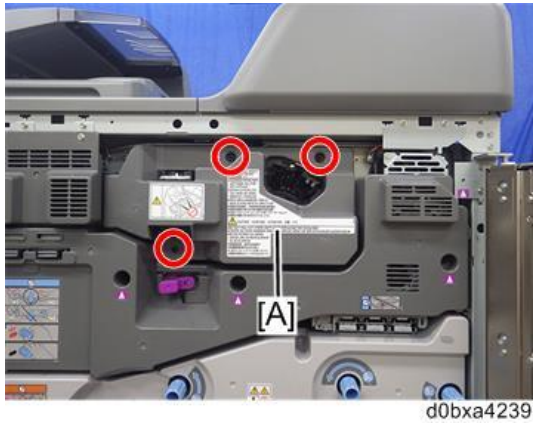
d0bxa4238

**6.** Remove the PCDU cover [A] (\*x3).

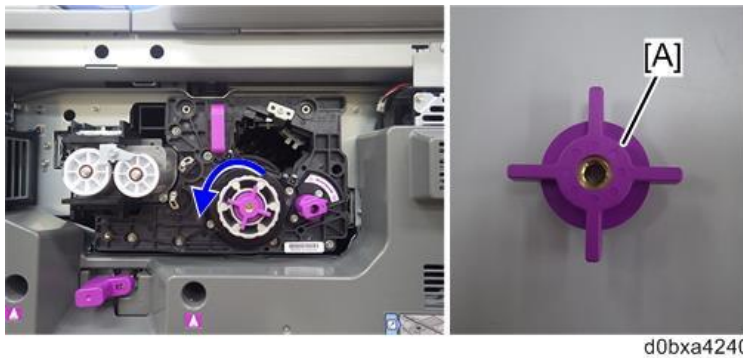
**★ Important**

- You can remove the screws in any order, but you should re-attach them in the order ① center, ② right side, ③ left side.

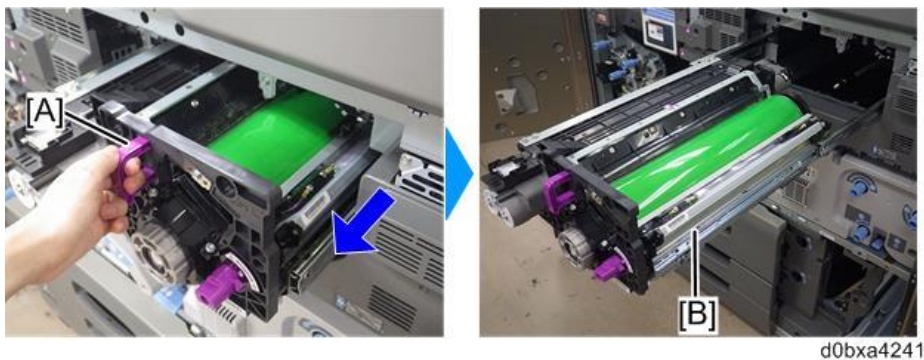
## 4.Replacement and Adjustment



7. Turn the spoke cap [A] counter-clockwise and then remove it.



8. Grip the PCDU [B] by its handle [A], and then pull it out of the machine until it stops.



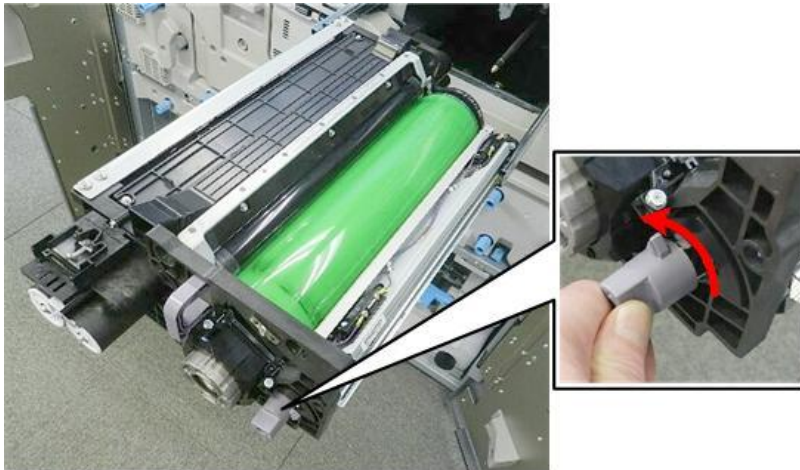
### Drum Cleaning Unit

---

1. With the PCDU out of the machine, twist the knob counter-clockwise to unlock the drum cleaning



unit.



d1792907

- 2.** Grip the drum cleaning unit in the center, and then lift it up and around the drum as you pull it out.



d1792908

- 3.** Lay the drum cleaning unit on a flat clean surface.



d1792909

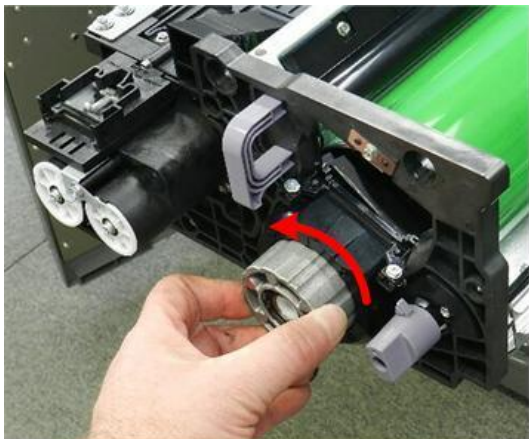
## Drum

---

1. Remove the drum cleaning unit ([Drum Cleaning Unit](#))

#### 4.Replacement and Adjustment

2. With the drum cleaning unit pulled out, twist the knob counter-clockwise to unlock the drum.



d1792910

3. Rotate the lock handle toward you to release the drum.



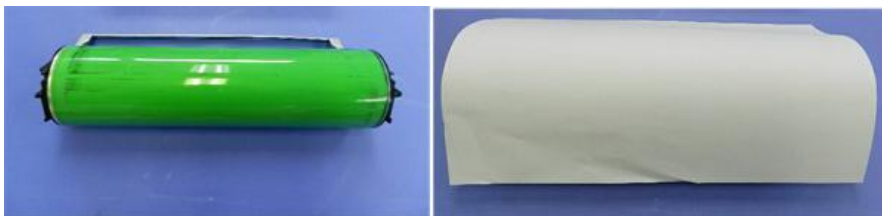
d1792911

4. Pull the drum toward you at a slight angle to remove it.



d1792912

5. Lay the drum on a flat clean surface.
6. Cover the drum with a piece of paper to protect it from the light.



d1792913

#### Re-installation

Be sure to use the new drum knob fastening tool when you re-install the drum.

#### ★ Important

- If the knob is not fastened completely, this can cause the developer/toner mixture to collect on

## 4.Replacement and Adjustment

the magnetic roller and scratch the drum.

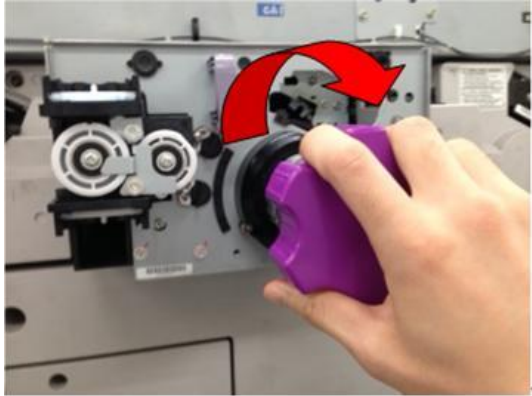
- When you install the drum and fasten the drum knob with this tool, the drum cleaning unit should not be installed on the PCDU.
- If the drum knob is loosened with the drum cleaning unit installed, be sure to remove the drum cleaning unit, and then fasten the knob.
- Fastening the drum knob with the drum cleaning unit installed will cause the drum cleaning unit to apply pressure to the drum and narrow the gap at the front side.

1. Press gently to insert the tabs into the knob.



d179b4032

2. Twist the drum knob clockwise until the tool runs idle.

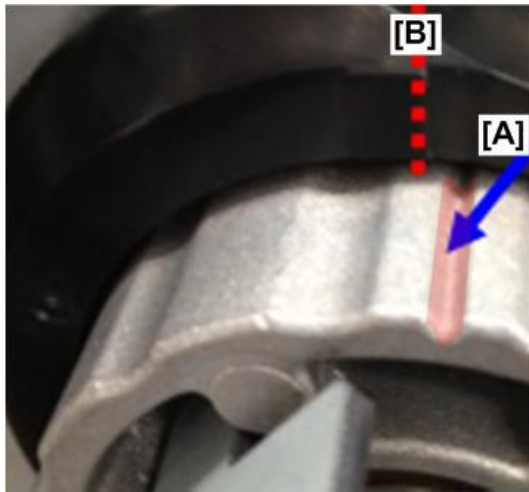


d179b4033

3. Check the drum knob position. The groove [A] should be slightly to the right of the vertical

#### 4.Replacement and Adjustment

reference line [B] in the photo.



d179b4034

#### Development Unit

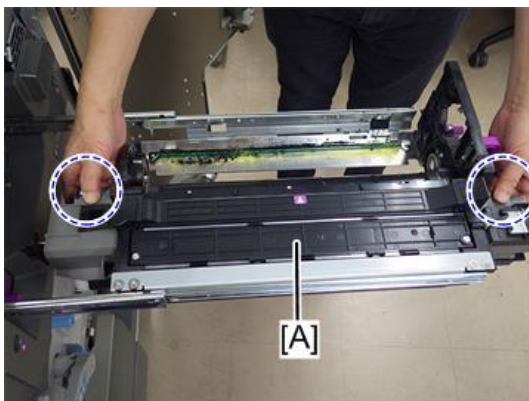
---

- 1.** Remove the PCDU. ([PCDU Removal](#))
- 2.** With the drum and cleaning unit out, remove the lock plate near the front of the right rail (↗x1).



d1792914

- 3.** Grip the unit [A] on both ends, and then lift it off both rails.



d0bxa4242

**★ Important**

- The drum cradle is fragile and can easily be bent out of alignment.
- Never touch any part of the frame except the prescribed part when you lift the development unit off its rails.

**4.** Lay the unit on a flat clean surface.



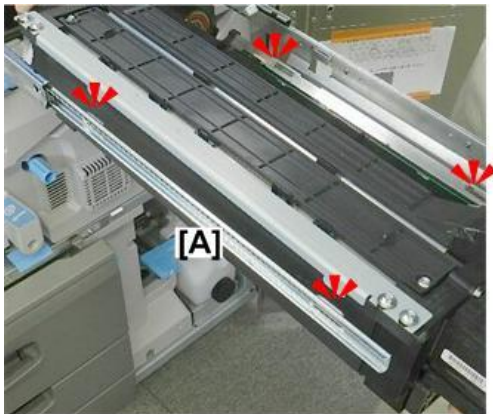
### Drum Cleaning Unit, Drum, PCDU Re-installation

---

**1.** Align the tabs of the PCDU frame with the holes [A] on the left rail.

**★ Important**

- Be sure to hold the unit with both hands to avoid tilting it.



Remember to re-attach the lock plate to the left rail (↗x1).

**2.** Set the drum, and then rotate the handle to the left.

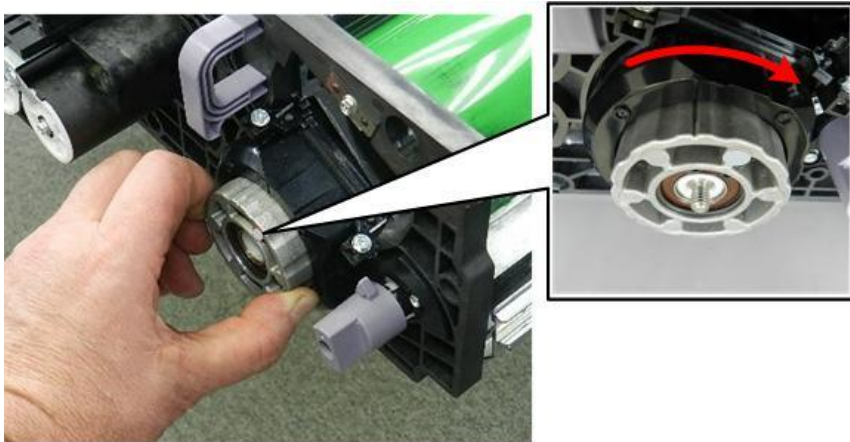
This aligns the drum in its cradle for re-installation of the drum cleaning unit.

#### 4.Replacement and Adjustment



d1792918

- 3.** To lock the drum, rotate the knob clockwise until it stops.



d1792919a

- 4.**

**Note**

- The drum must be securely locked in place before the drum cleaning unit is re-installed.

- 5.** Use the drum knob tool to tighten the drum. ([Special Tools and Lubricants](#))

- 6.** Check the drum knob position.

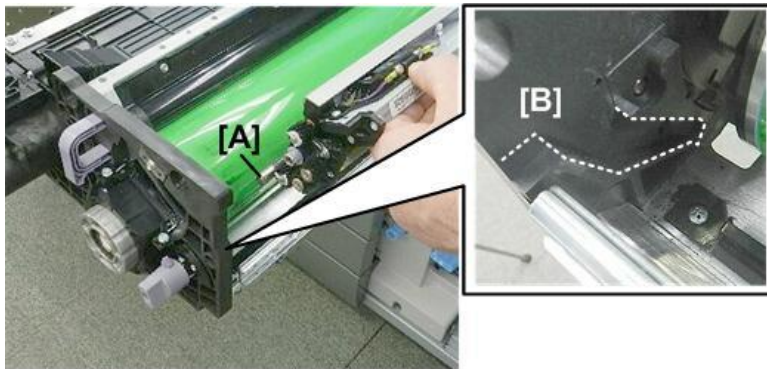
The groove [A] should be slightly to the right of the vertical reference line [B] in the photo.



d179b4041

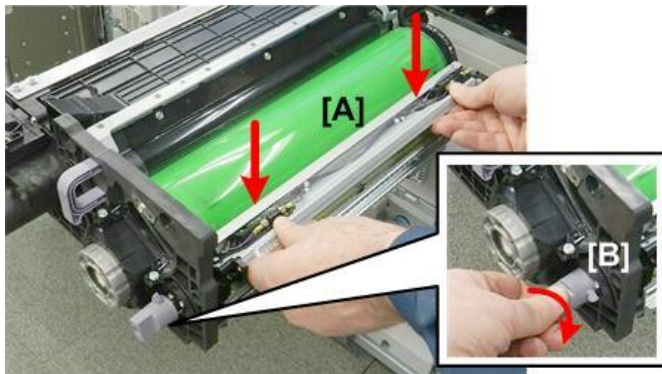
- 7.** To re-install the drum cleaning unit, align the pin [A] with the guide on the inside surface of the

cover at [B].



d1792920

- 8.** Lower the drum cleaning unit [A], and then make sure that it is straight, against the surface of the drum.
- 9.** Turn the knob [B] clockwise to lock the drum cleaning unit in position.
- 10.** Re-attach the spoke knob.



d1792921

- 11.** Align the charge unit on its left plate and rail [A] before you push it into the machine.
- 12.** Push the charge unit [B] into the machine until you hear it click and lock.



d1792923

## 4.Replacement and Adjustment

**13.** Raise the ITB lever. **The door will not close if this lever is down.**



d1792924

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## Drum Replacement

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### Drum Removal

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1. Turn off the machine and disconnect its power plug.
2. Pull out the PCDU ([PCDU Removal](#))
3. Remove: ([PCDU Disassembly](#))
  - Drum cleaning unit
  - Drum

### Installing a New Drum

---

1. Stand the old drum on its end with the drive gear (larger hole) up.
2. Disconnect the drum (⚙️ x1).

**Note**

- You need to remove only one screw.



## 4.Replacement and Adjustment

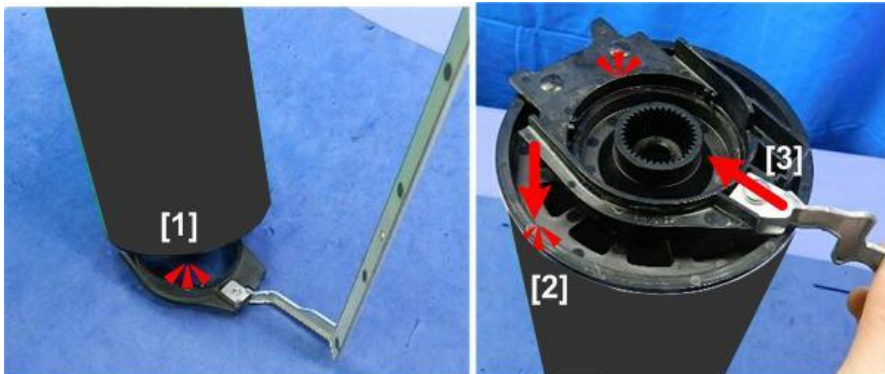


d1792929

3. While holding the frame steady, depress the drum slightly and separate it from the frame.

**★ Important**

- Always hold the drum steady by gripping it at the drum gear.
  - Never touch the surface of the drum.
4. With its protective cover on, set the rear end of the new drum in the frame [1].
  5. While pressing down slightly on the drum [2], move the frame bracket [3] over the front of the drum.



d1792932

6. Re-attach the screws (🔩 x2).

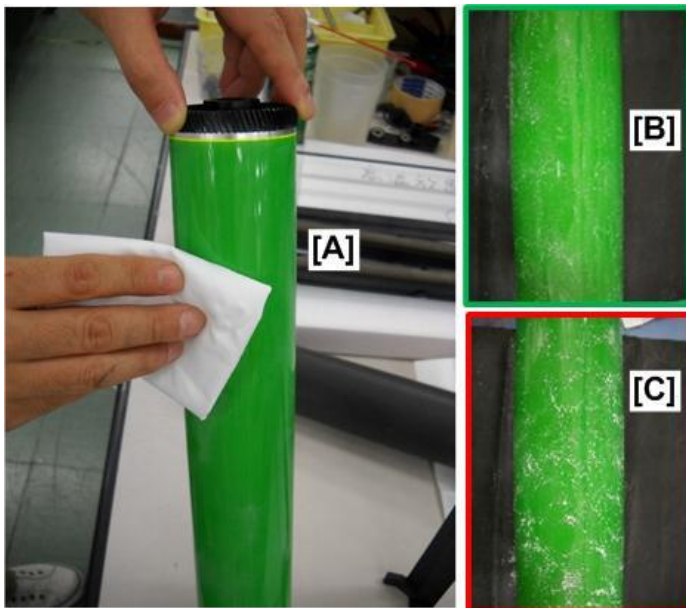
#### 4.Replacement and Adjustment

7. Remove the protective sheet from the new drum.



d1792930

8. While holding the drum upright by the drive gear, use the resin pad to dust the drum lightly about half way around the drum.
9. Do not apply too much powder to half the drum.
  - [B] shows the correct amount of powder.
  - [C] shows too much powder on the drum.
  - Remove excess powder with a clean dry cloth.

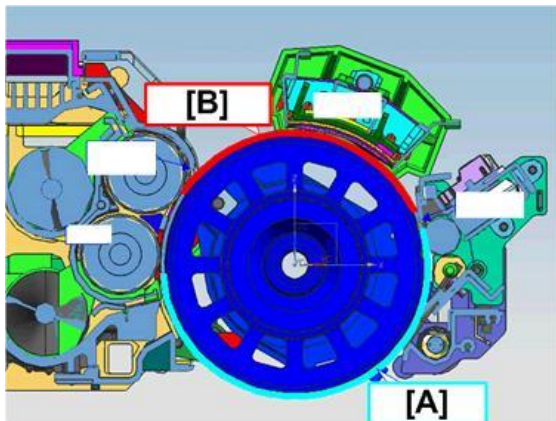


d1792931

10. Inspect the surface of the dusted drum and make sure that there are no scratches, dirt, etc. on the surface.
11. Set the drum with the dusted side [A] down with the bare side [B] up to prevent setting powder from collecting at the seal.

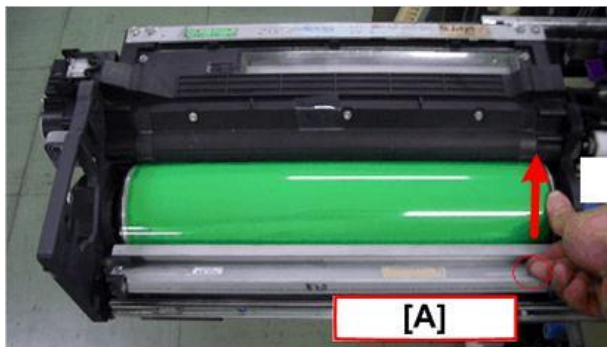
#### ★ Important

- If there is setting powder around the seal, this could cause vertical lines to appear in copies.



d1802906

12. Re-attach the drum cleaning unit.
13. While pressing lightly on the cleaning unit [A], rotate the drum about one-half turn in the direction of the arrow.



d1802907

#### After Drum Replacement

---

1. After re-assembling the machine, open the left and front doors.
  2. Turn the machine on.
  3. Enter the operator adjust mode.
  4. In the operator adjust mode, touch **[0515 Reset Replaceable Parts Counter]**, and then reset the counter to zero.
  5. Leave the operator adjust mode
- Note**
- For Steps 3, 4, 5 you can enter the SP mode, open SP7622-018 to set the counter to zero, and then leave the SP mode.
6. Close the left and right front doors.
  7. Process control executes automatically.
  8. After process control executes, the operation panel will display "Ready".
    - If process control fails, you will see "Fail" appear on the operation panel, and then the machine will issue an SC code.
    - Do the procedure recommended to resolve the problem that triggered the SC code.

## 4.Replacement and Adjustment

- You must then execute SP3011-002 to execute process control manually because it will not execute again automatically.

9. This completes the procedure.

### ★ Important

- If you used the SP mode, enter the SP mode, and then do SP3012-001 to confirm that process control executed successfully.

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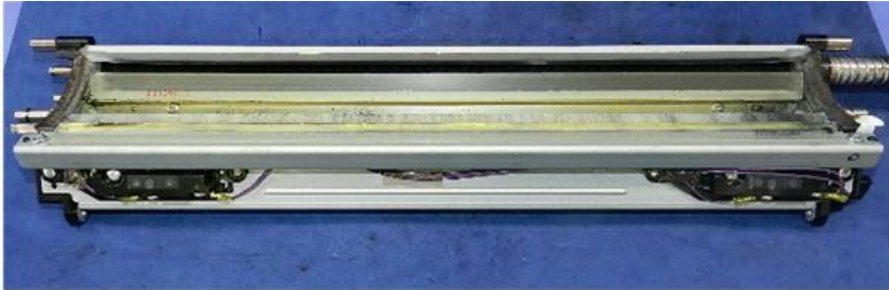
## Drum Cleaning Unit

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### Drum Cleaning Unit Gears

---

1. Remove the drum cleaning unit. ([Drum Cleaning Unit](#))
2. Set the drum cleaning unit on a flat clean surface.







d1792934

3. First, remove the five gears on the front end of the cleaning unit. Three gears are fastened by snap clips, and two by large screws.



d1792935

4. Remove gears:

- ①  x1
- ②  x1
- ③  x1
- ④  x1
- ⑤  x1

## 4.Replacement and Adjustment



d1792936

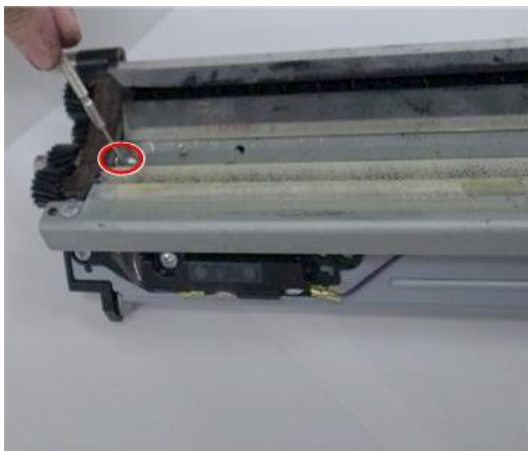
### Drum Cleaning Blade

1. At the rear, remove screw [A] (⌀x1).
2. Remove pin [B].



d1802911

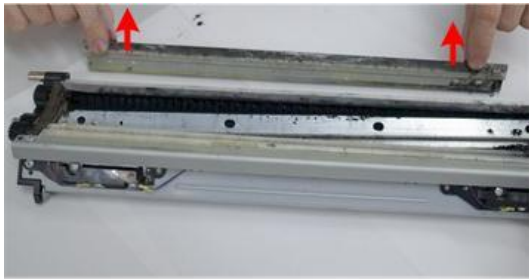
3. At the front, remove the snap ring (⌀x1).



d1802912

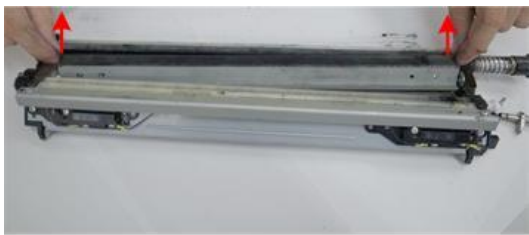
#### 4.Replacement and Adjustment

4. Remove the lubricant blade.



d1802913

5. Remove the cleaning blade.



d1802914

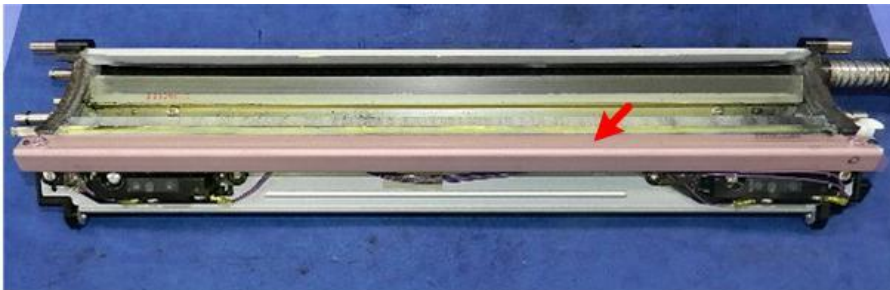
#### Drum Lubricant Blade

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##### ★ Important

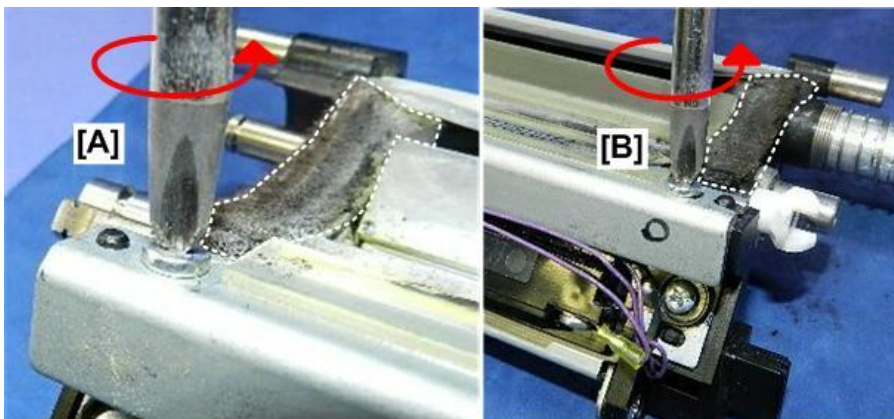
- The lubricant blade, lubricant bar, lubricant roller (brush roller), and cleaning blade are replaced together.

1. The lubricant blade is on the right edge of the unit.



d1792940

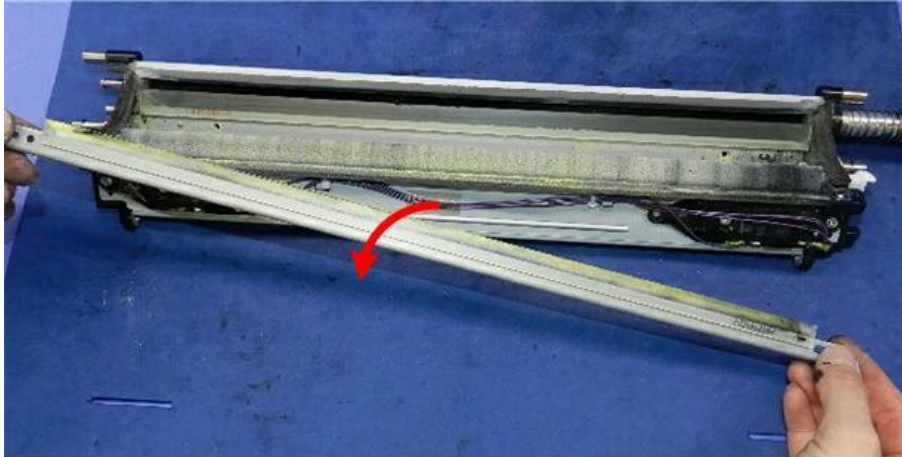
2. Disconnect the blade at [A] and [B] (⊗ x2)



d1792941

### ★ Important

- The white dotted lines in the photo mark the sponge seals.
- Work carefully around the edges of these sponge seals to avoid damaging them when removing and installing the blade.
- These seals are not service parts and they cannot be replaced.

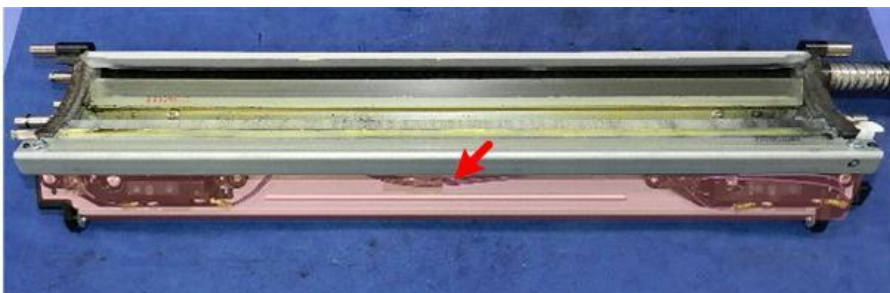


d1792942

### Drum Lubricant Bar

#### ★ Important

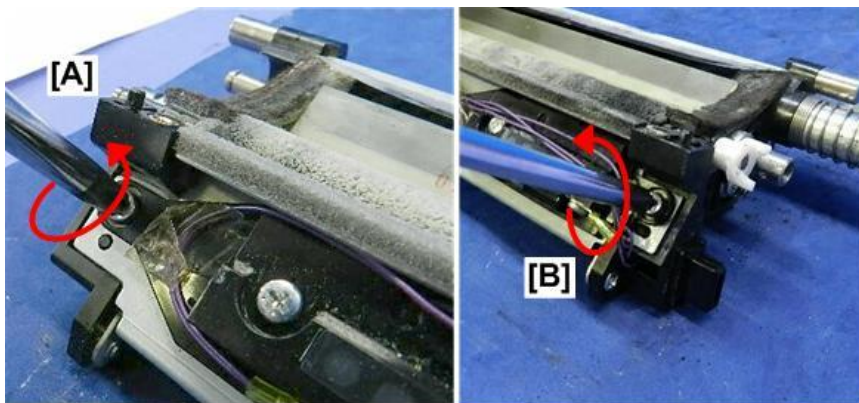
- The lubricant blade, lubricant bar, lubricant roller (brush roller), and cleaning blade are replaced together.
  - The lubricant bar must be removed before the lubricant roller, and then re-installed after the lubrication roller.
1. The lubricant bar is behind the bracket of the lubricant near-end sensors (these sensors are not removed).



d1792943

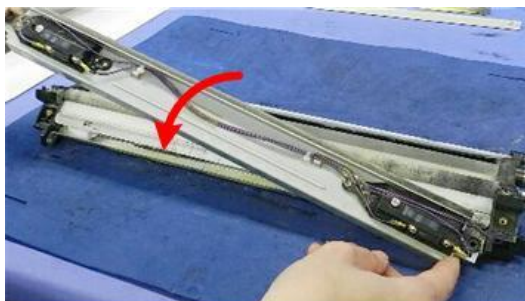
#### 4.Replacement and Adjustment

2. Disconnect the bracket at [A] and [B] (⚙️x2).



d1792944

3. Remove the bracket (with harnesses attached).



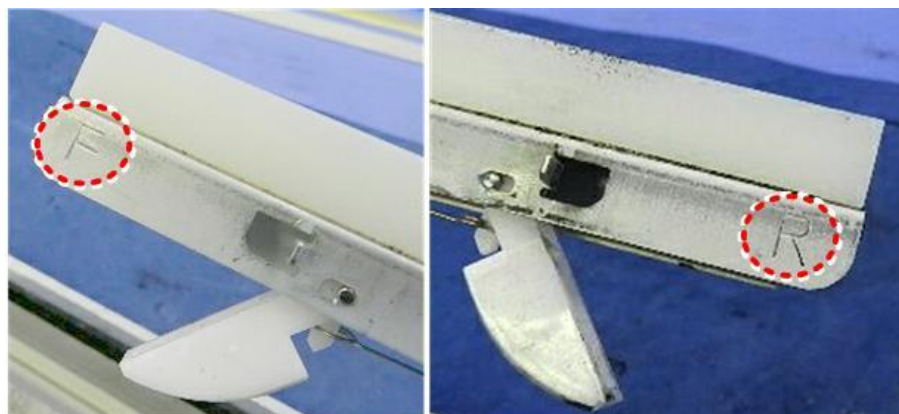
d1792945

4. Remove the bar and place it flat on the table.




d1792946

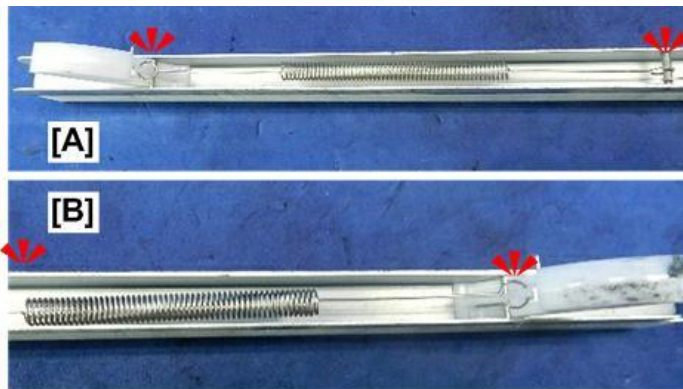
5. Note that the ends of the bar bracket are marked "F" (Front) and "R" (Rear).



d1792947



6. Disconnect the springs [A] and [B] (  x2).



d1792948

**★ Important**


- Do not discard these springs. They are not provided as service parts and must be re-attached to the new lubricant bar.

Drum Lubricant Roller

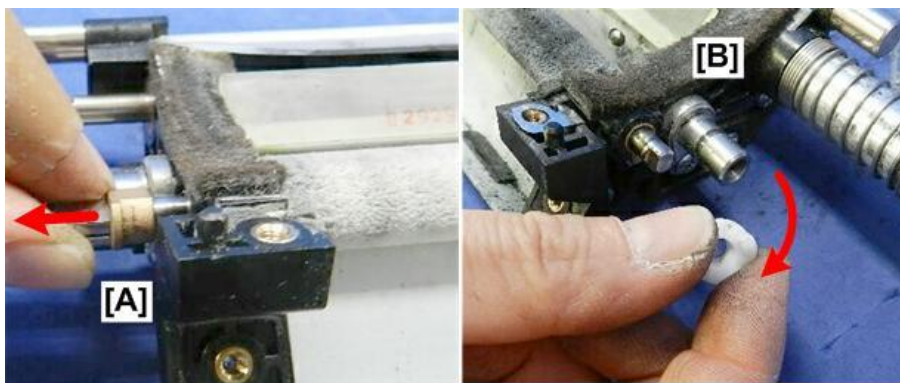
**★ Important**

- The lubricant blade, lubricant bar, lubricant roller (brush roller), and cleaning blade are replaced together.
- The lubricant bar must be removed before the lubricant roller, and then re-installed after the lubrication roller.

1. Remove the drum cleaning unit.
2. Remove the drive gears.
3. Disconnect the ends of the roller shaft:

[A] Bushing (  x1)

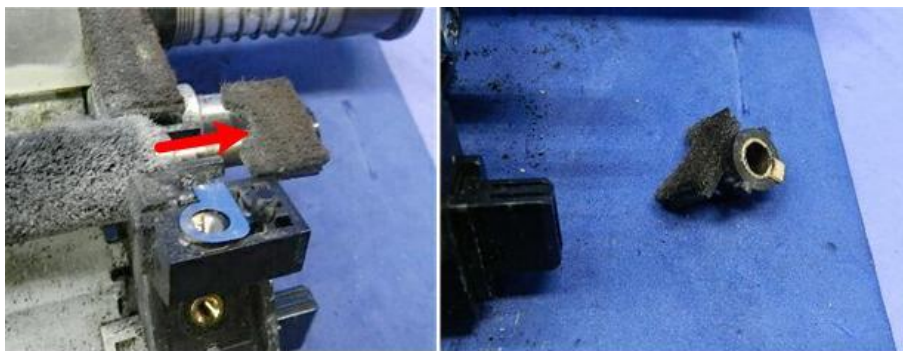
[B] Coupling (x1)



d1792949

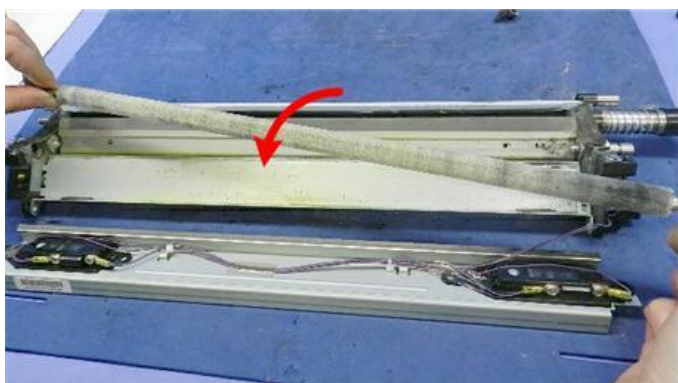
#### 4.Replacement and Adjustment

4. Remove the seal coupling.



d1792950

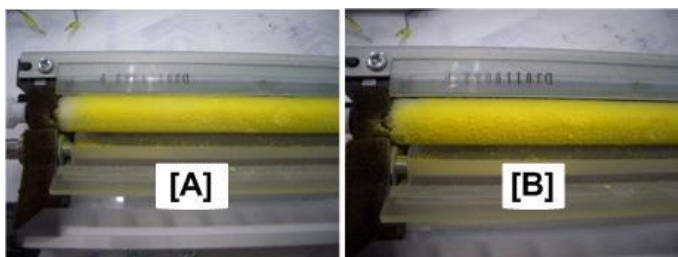
5. Remove the roller.



d1792951

#### Re-installation

1. Before reassembling the unit, apply a 1:1 mixture of yellow toner and setting powder to the brush roller.
2. [A] shows the minimum amount that should be applied, and [B] the maximum amount.



d1802908

#### After Replacement

---

1. After re-assembling the machine, open the left and front doors.
2. Turn the machine on.
3. Enter the SP mode, and then do SP7622-006 to 011 to reset the counters.

#### Drum Cleaning Unit Service Parts Lubrication Summary

---

The service parts of the drum cleaning unit are lubricated at the factory before shipping, so they require

no further lubrication at installation.

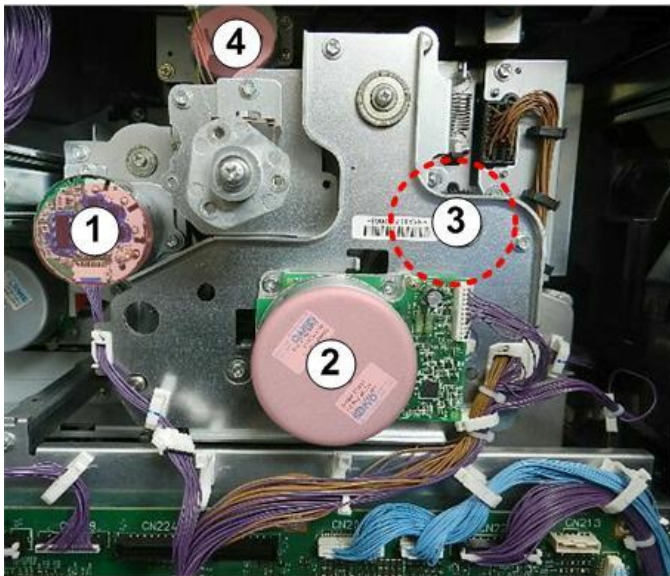
Service Part	Comments
Cleaning blade	Pre-lubricated at the factory with setting powder (zinc stearate). A new cleaning blade requires no lubrication.
Lubricant (brush) roller	Requires application of setting powder and yellow toner when the lubricant brush roller, lubricant blade, lubricant bar and cleaning blade are replaced.
Lubricant bar	Requires no lubrication.
Lubricant blade	Pre-lubricated at the factory with setting powder (zinc stearate). A new lubricant blade requires no lubrication.

**Note**

- The lubricant roller, lubricant bar, and lubricant blade are always replaced together as a set.

**Drum Motors**

①	Drum Cleaning Moor
②	Drum Motor
③	Development Motor (inside motor casement)
④	Cleaning Pad Motor (for Charge Corona Unit)



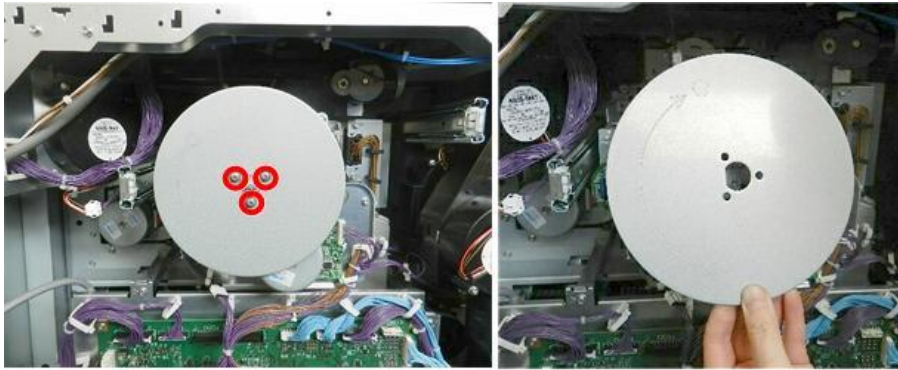
d1792953

**Drum Motor**

1. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))

#### 4.Replacement and Adjustment

2. Remove the flywheel (🔩 x3).



d1792952

3. Disconnect the motor:

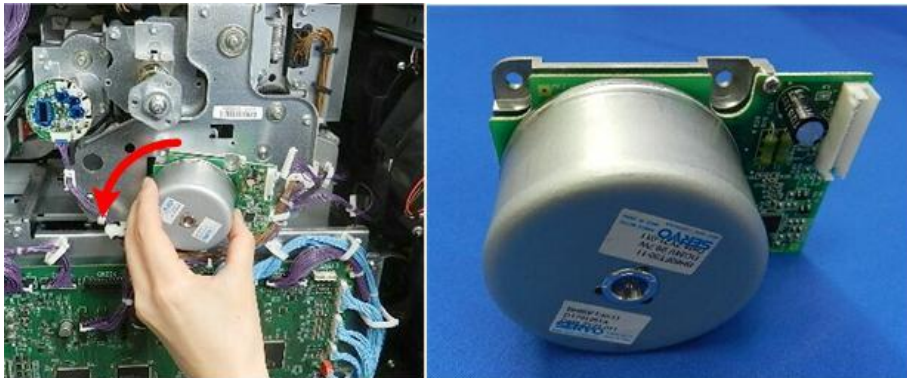
[A] Top (🔩 x1, 📦 x1)

[B] Bottom (🔩 x2)



d1792954

4. Remove the motor.



d1792955

#### Drum Cleaning Motor

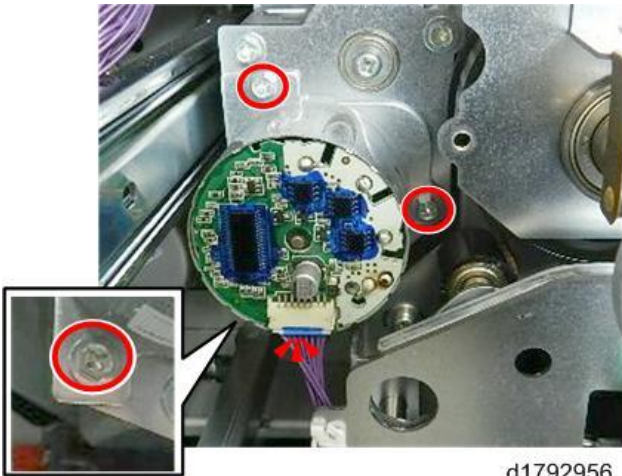
1. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))

2. Remove the flywheel (🔩 x3).



d1792952

3. Disconnect the motor bracket (🔧 x1, 🌀 x3).



d1792956

4. Remove the motor.



d1792957

#### 4.Replacement and Adjustment

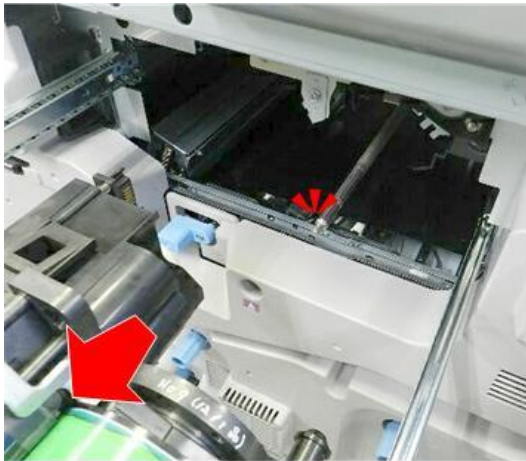
5. Separate the motor and the bracket (#x3).



d1792958

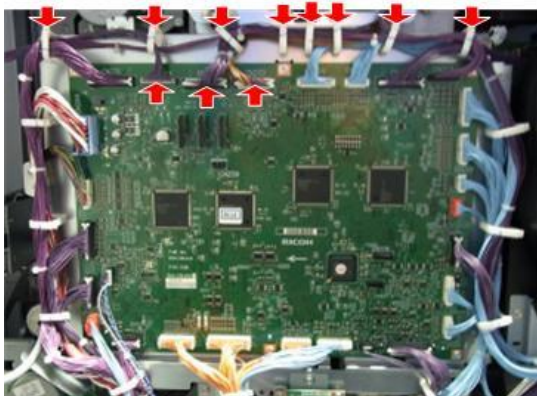
#### Development Motor

1. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))
2. At the front, remove the cover and pull out the PCDU. This separates the drive shaft from the drum.



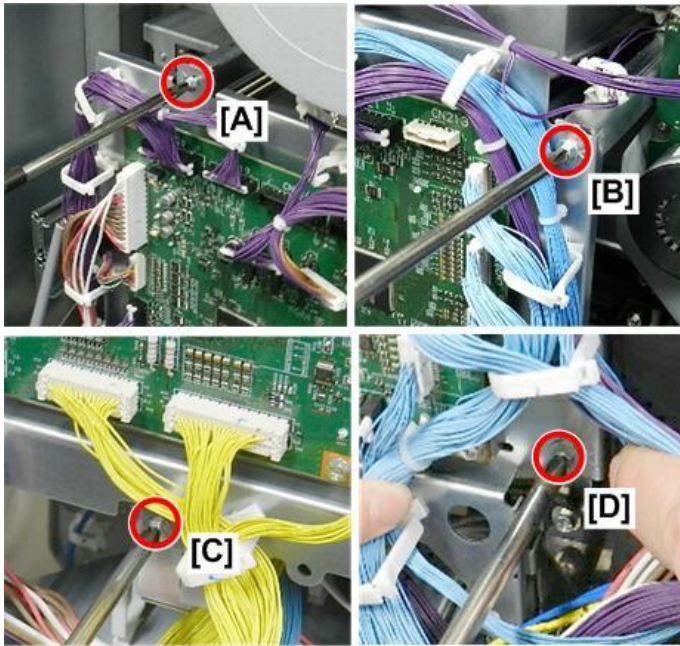
d1792959

3. Next, at the rear, disconnect the IOB (🔌x8, 📧x3).



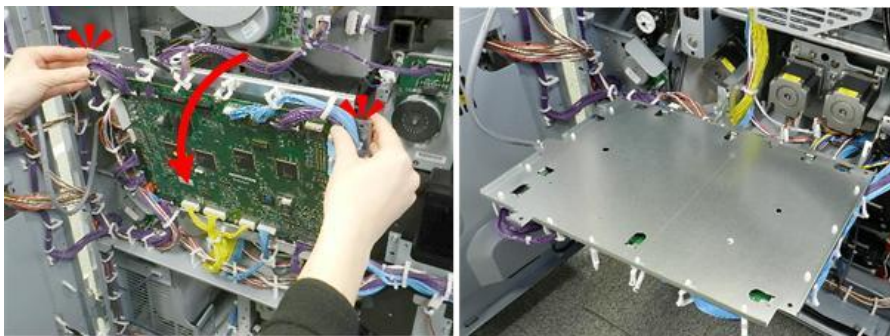
d270b3009

4. Disconnect the IOB [A], [B], [C], [D] (🔧 x4).



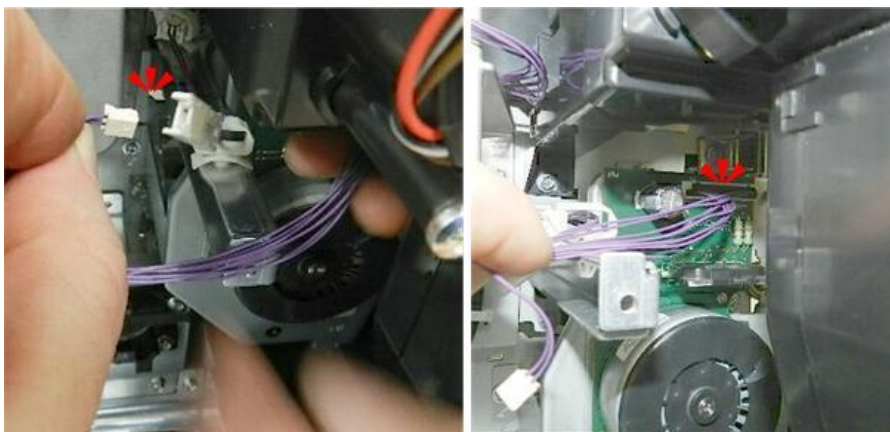
d1794008

5. Lower the IOB bracket (with PCB attached) until it stops.



d1794009

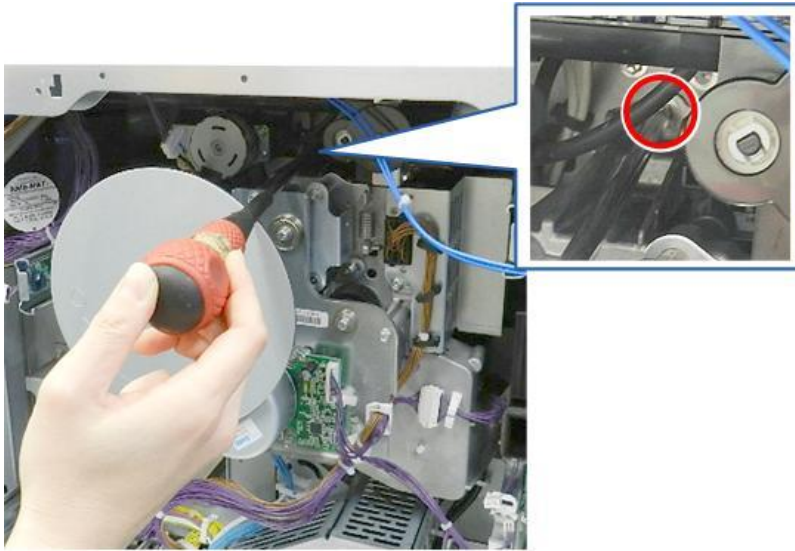
6. To the right of the flywheel, disconnect two harnesses (🔧 x2).



d1792960

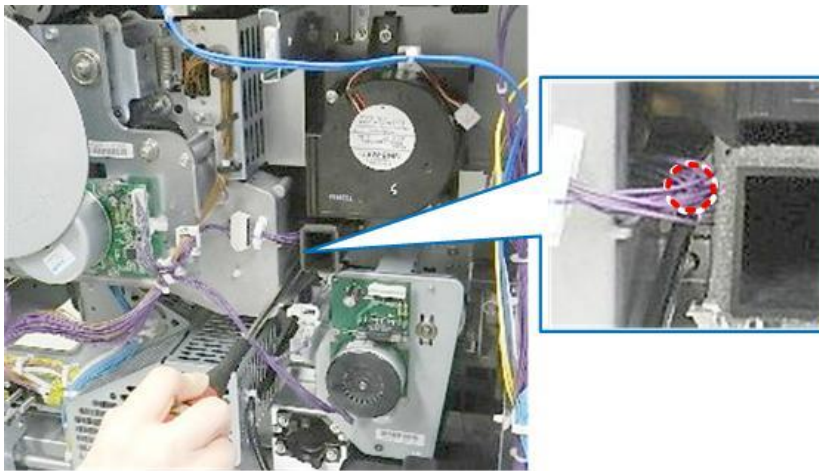
#### 4.Replacement and Adjustment

- 7. Upper right (🔧x1).



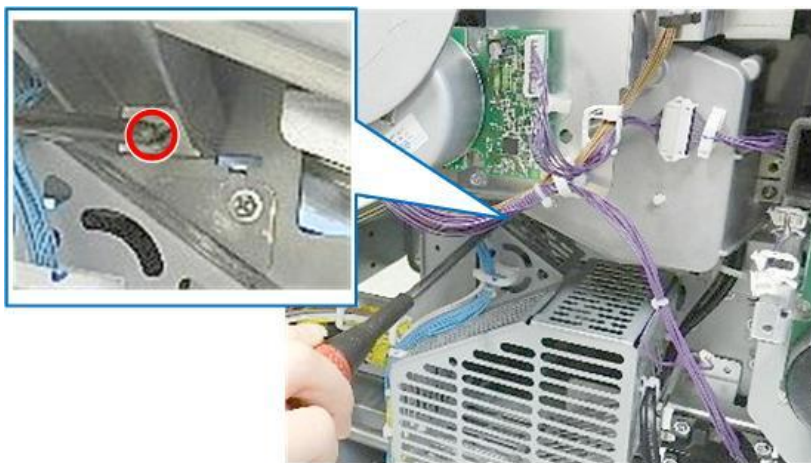
d1794011

- 8. Lower right (🔧x1).



d1794012

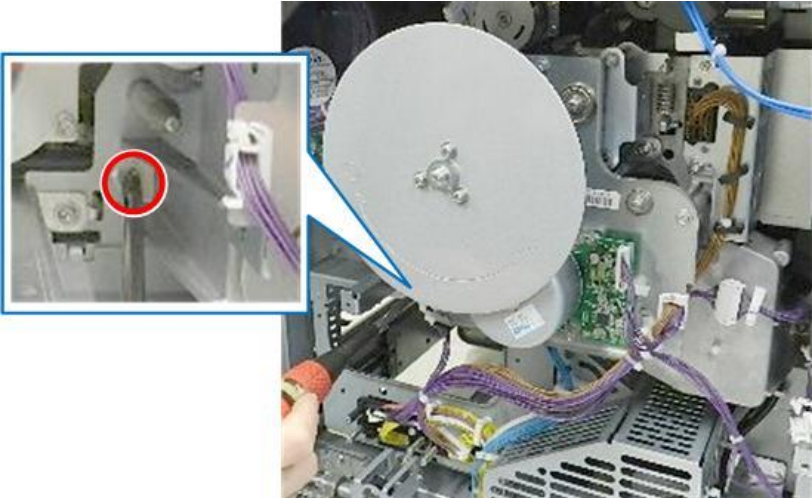
- 9. Bottom (🔧x1).



d1794013

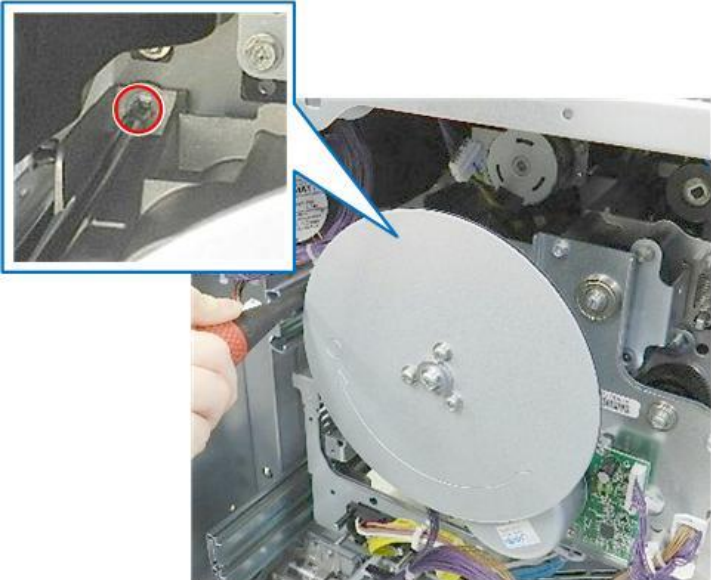


10. Bottom left (⚙️ x1).



d1794014

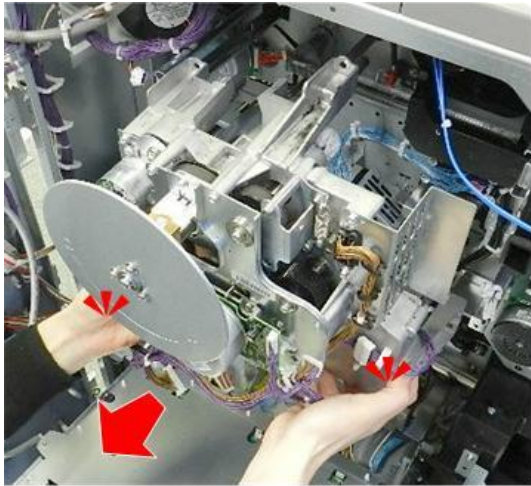
11. Left (⚙️ x1).



d1794015

#### 4.Replacement and Adjustment

12. Remove the main motor unit.



d1794016

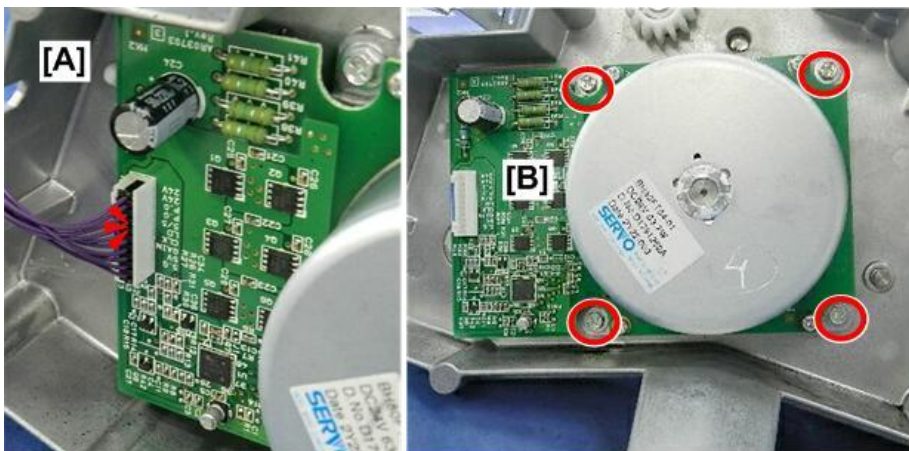
13. Lay the motor mount on a flat, clean surface.



d1792961

14. Disconnect the motor drive board [A] (🔌 x1).

15. Disconnect the motor [B] (🔩 x4).



d1792962

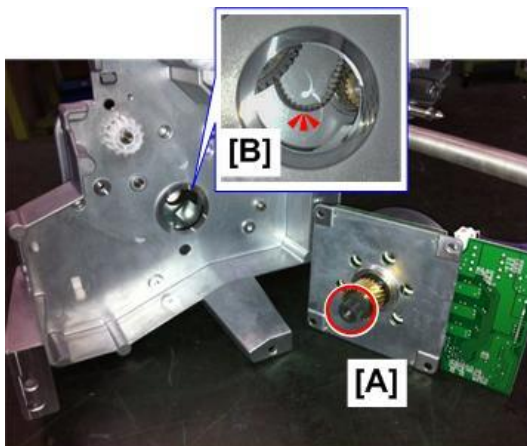
16. Lay the motor and attached drive board on a flat clean surface.



d1792963

### Re-installation

1. The development motor must be installed carefully to make sure that the drive gear of the motor [A] is correctly engaged with the belt [B].

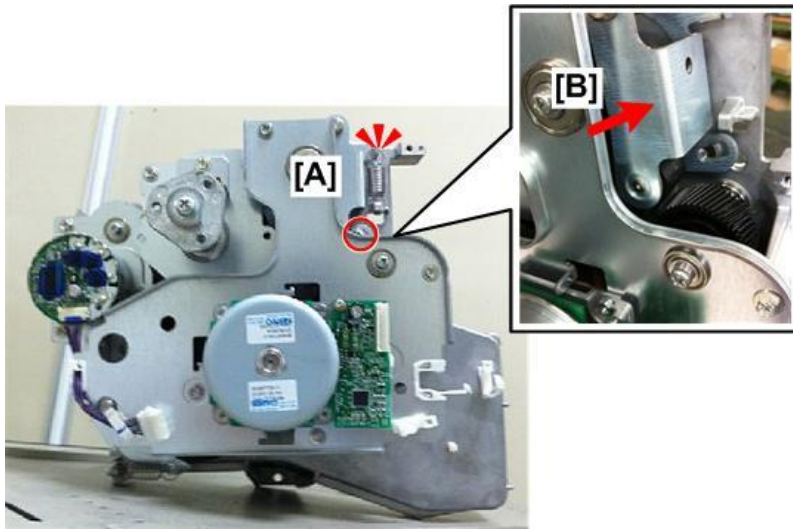


d1802902

2. Remove the screw and the spring at [A] (🔩x1, 🌀x1).
3. Behind the frame, push the tension bracket [B] in the direction of the arrow to release tension on

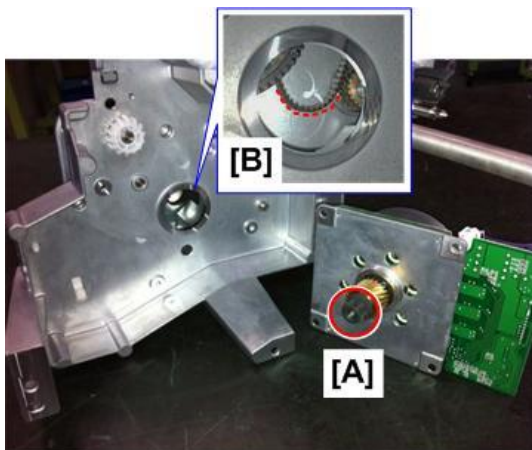
#### 4.Replacement and Adjustment

the belt.



d1802903

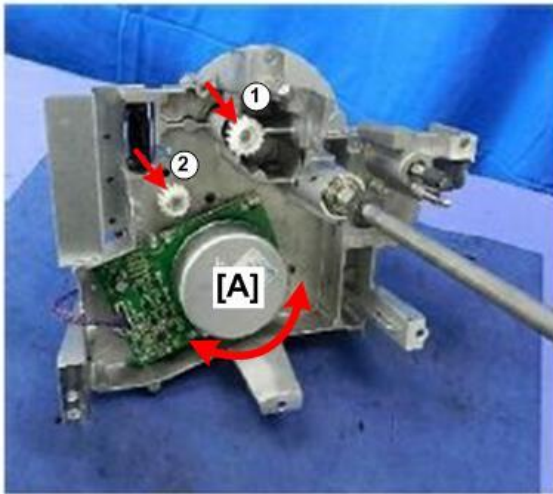
4. Mount the motor.
5. Be sure that the gear [A] engages correctly with the slackened belt [B], and then attach the motor screws.



d1802904

6. Rotate the motor [A] and make sure that gears ① and ② both rotate. If both gears rotate, the

motor is engaged with the belt.



d1802905

### Cleaning Pad Motor

---

1. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))
2. Disconnect the motor harness (x1).



d1792964

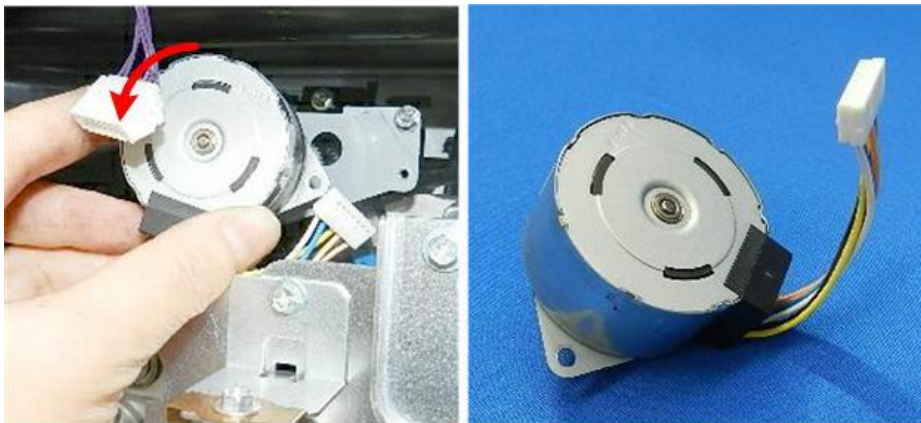
#### 4.Replacement and Adjustment

3. Disconnect the motor (🔧x2).



d1792965

4. Remove the motor.



d1792966

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### Quenching Lamp, Sensors

---

#### Quenching Lamp

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1. Pull out the PCDU. ([PCDU Removal](#))
2. Remove the drum cleaning unit ([Drum Cleaning Unit](#))
3. Remove the drum ([Drum](#))
4. The QL (Quenching Lamp) lies on the right bottom edge of the PCDU frame.

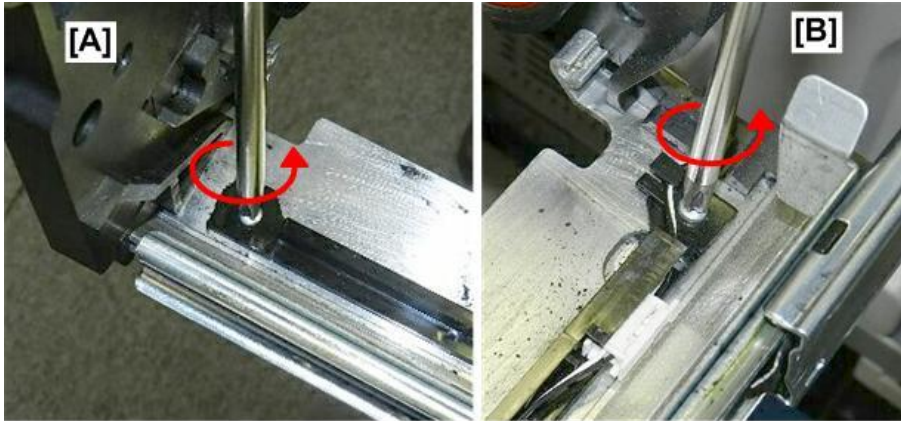


d1792967

5. Disconnect the QL at:

[A] Front (🔑 x1)

[B] Rear (🔑 x1)



d1792968

6. Disconnect the QL at the rear, and then remove it (🔑 x1).



d1792969

7. Lay the QL on a flat clean surface.



d1792970

### PCU Temperature/Humidity Sensor

---

1. Remove the PCDU ([PCDU Removal](#))

#### 4.Replacement and Adjustment

2. The temperature/humidity sensor is mounted on a bracket above the drum.



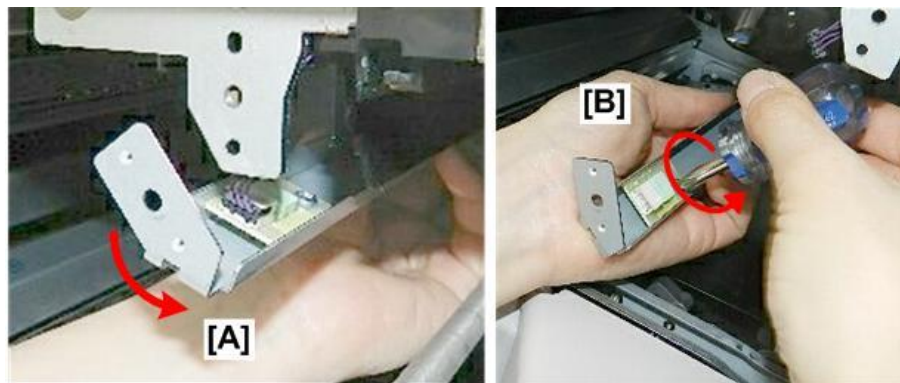
d1792971

3. Disconnect the front end of the bracket (⚙️ x1).



d1792972

4. Lower the bracket [A] (with sensor attached).
5. Disconnect the sensor [B] with a stubby driver, and then remove the sensor (⚙️ x1).

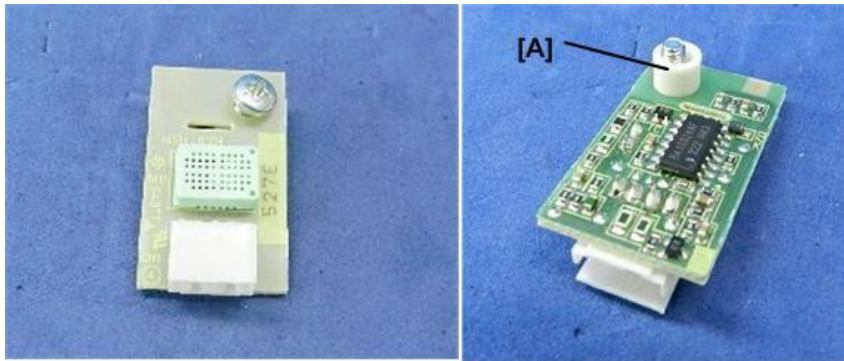


d1792973

6. Handle the temperature/humidity sensor carefully to prevent losing the small plastic spacer [A] on



the screw.

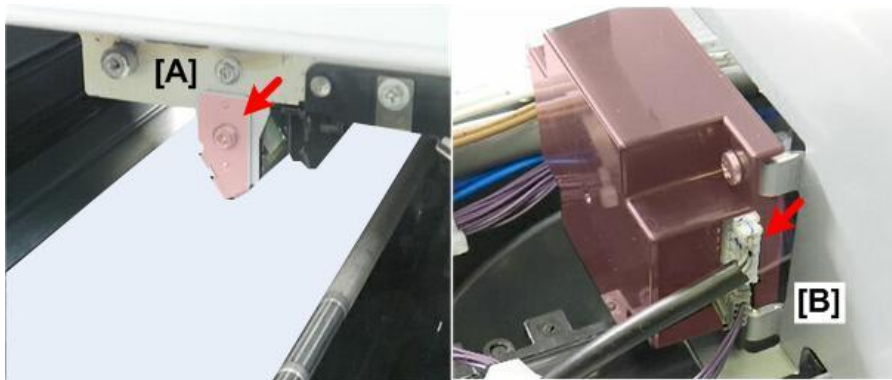


d1792974

### Potential Sensor

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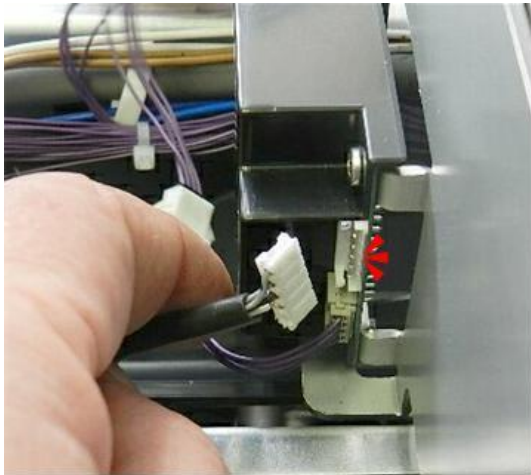
1. Remove the PCDU ([PCDU Removal](#)).
2. Remove the canopy cover ([Canopy Cover](#)).
3. Cover the ITB with a sheet of A3 paper to protect it while you are working.
  - The drum potential sensor is mounted on the same bracket [A] as the temperature/humidity sensor.
  - The drum potential sensor is connected to a small PCB protected by a plastic cover and mounted on the side of the toner cover [B]. (The photo below shows the toner cover and canopy removed.)



d1792979

#### 4.Replacement and Adjustment

4. Disconnect the sensor at the rear.



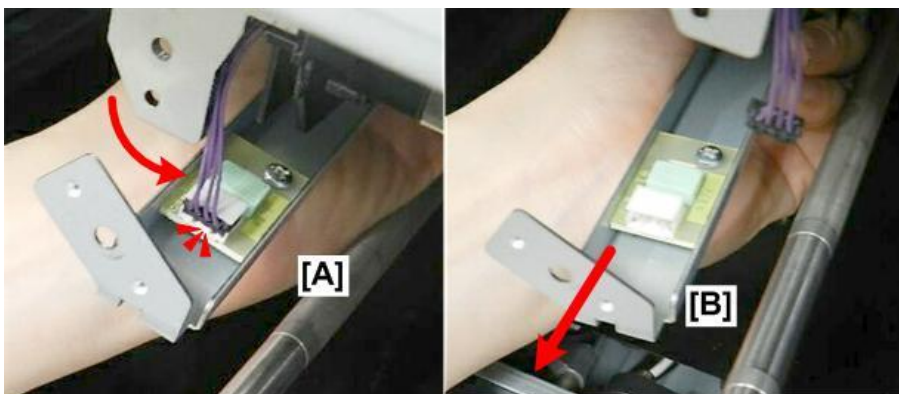
d1792980

5. Disconnect the front end of the bracket (⊗ x1).



d1792981

6. Lower the bracket [A], and then disconnect the temperature humidity sensor (⊗ x1).
7. Pull the bracket [B] out of the machine with the sensors still attached.



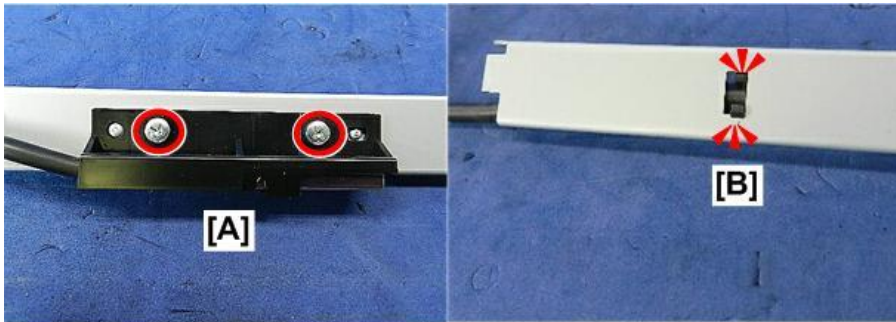
d1792982

8. Lay the sensor bracket on a clean, flat surface.



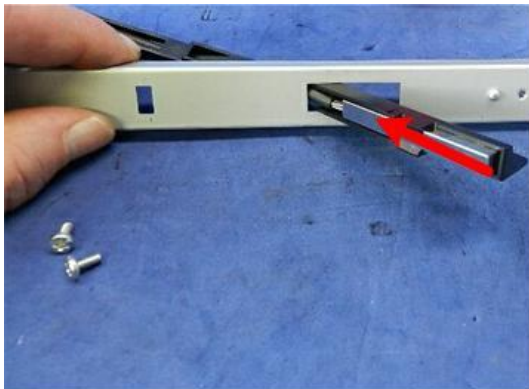
d1792983

9. Disconnect the sensor bracket [A] (⚙️x2).  
10. Separate the harness from the bracket [B] (⚡x2).



d1792984

11. Push the probe through the bracket.



d1792985

12. Spread the tabs and separate the sensor from the bracket, but only if the sensor needs to be replaced.



d1792986

13. The potential sensor probe and window should be cleaned with a blower brush and a clean dry

## 4.Replacement and Adjustment

cloth. (The sensor probe does not need to be separated from the bracket for cleaning.)

### Cleaning Pad HP Sensor

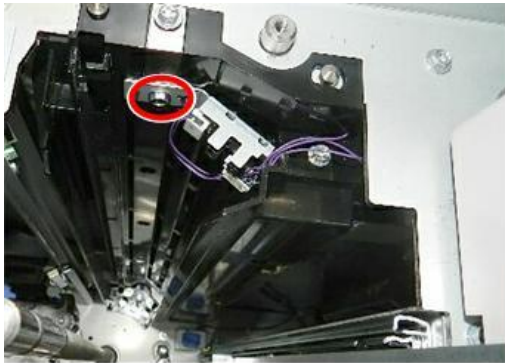
---

1. Remove the PCDU ([PCDU Removal](#))
2. The cleaning pad HP sensor is mounted on a bracket above the drum.



d1792975

3. Disconnect the bracket (with sensor still attached) with a stubby driver (🔧 x1).



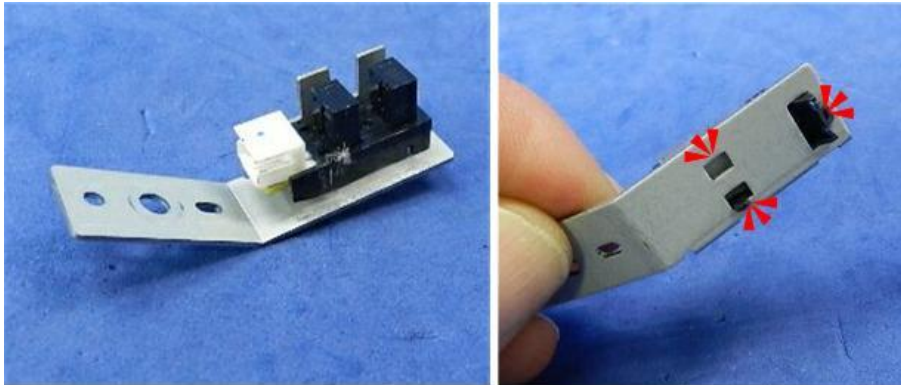
d1792976

4. Disconnect the sensor (🔧 x1).



d1792977

5. Separate the sensor from the bracket (▼x3).



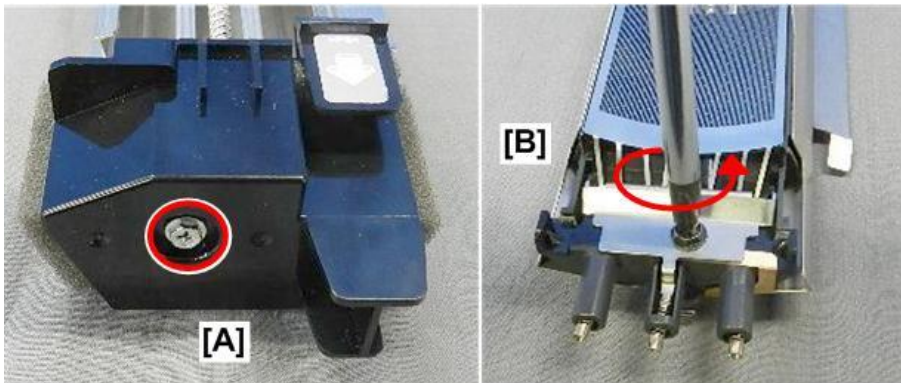
d1792978

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### Charge Corona Wires, Grid, Cushions, Wire Cleaner

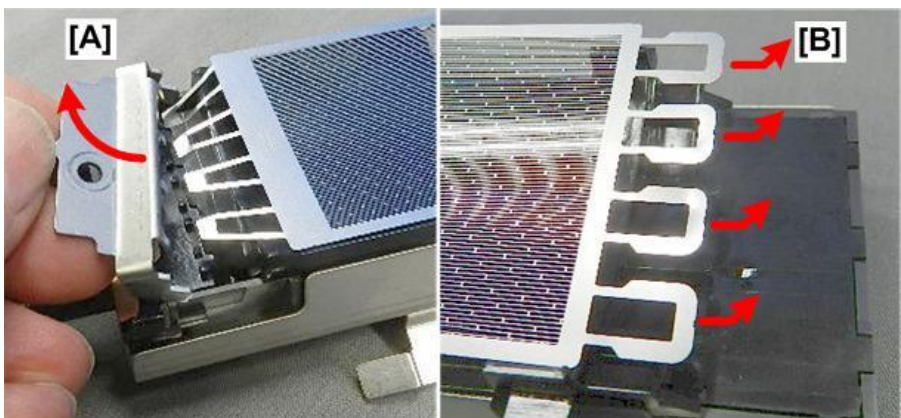
---

1. Remove the front edge cover (#x3).
2. Remove the charge corona unit. (PCDU Removal)
3. Remove the front cover plate [A] (⌀x1).
4. Disconnect the rear shield plate [B] (⌀x1).



d1792989

5. Slowly, remove the shield plate [A]. The tines of the plate are connected to the grid.
6. Disconnect the grid [B] on the other end of the unit.
7. Remove the grid.

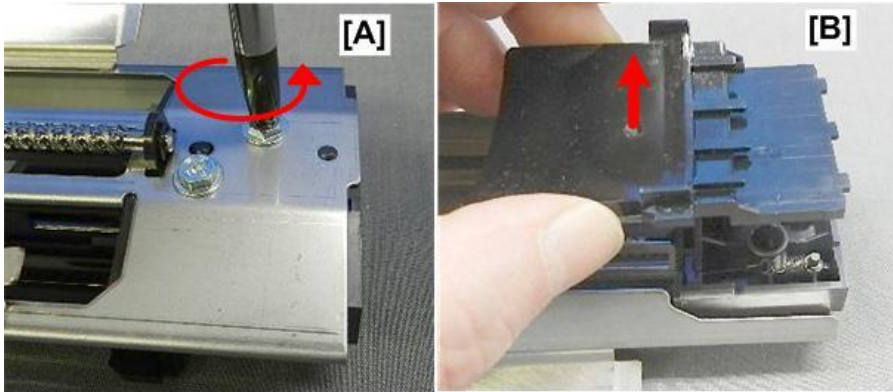


d1792990

8. Turn the unit over, and then remove screw [A] at the front (⌀x1).

#### 4.Replacement and Adjustment

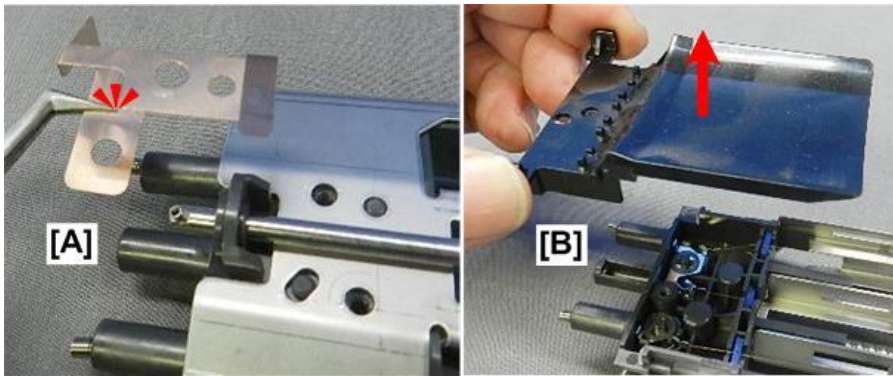
9. Turn the unit over again, and then remove the cap [B].



d1792991

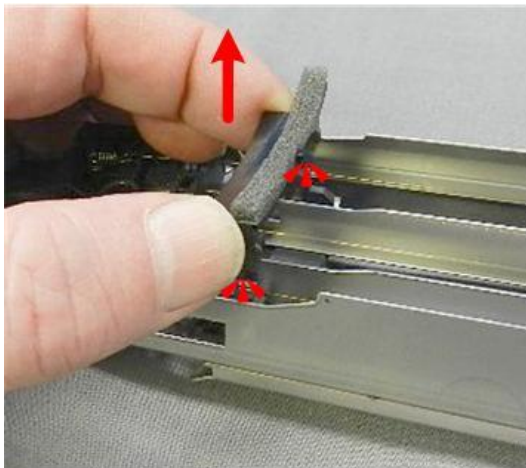
10. Turn the unit over and remove the ground plate [A] at the rear.

11. Turn the unit over again, and then remove the cap [B].




d1792992

12. Pull straight up to release, and then remove the sponge bracket.



d1792993

13. At the front, disconnect the charge corona wires [A] (  x3).

14. At the rear [B], disconnect the wires from the posts.

#### ★ Important

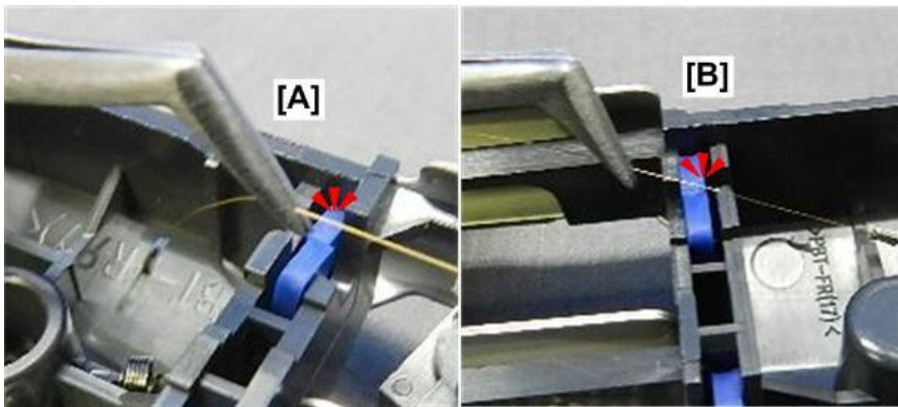
- The charge corona wires are very brittle and break easily.
- Remove and handle them carefully.
- Avoid touching the wires with bare hands.

#### 4.Replacement and Adjustment



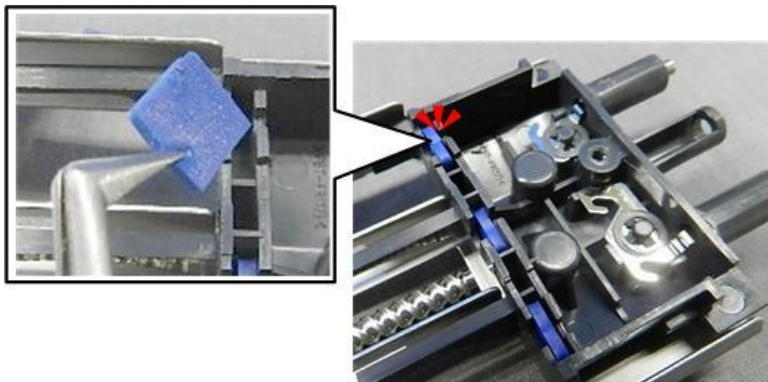
d1792994

15. Disconnect each wire from the rubber brackets [A] and [B].



d1792995

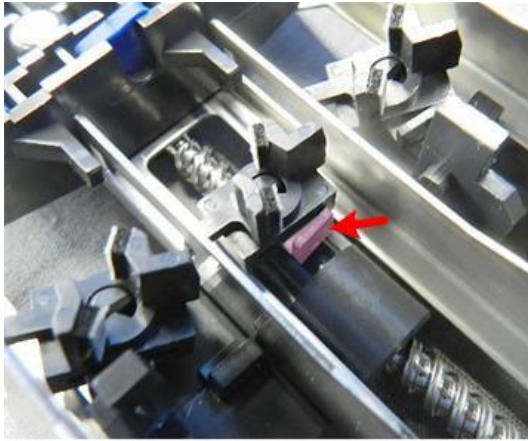
16. Remove each rubber bracket (x6).



d1792996

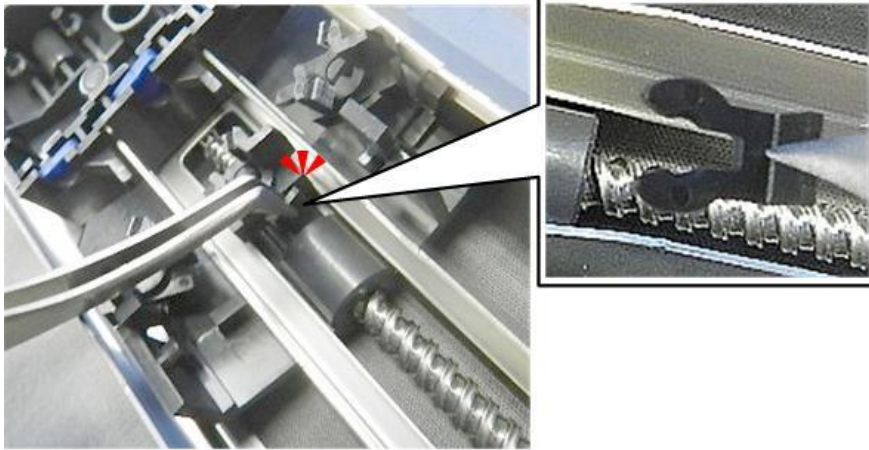
#### 4.Replacement and Adjustment

17. Each cleaning pad bracket is held in place by a snap ring.

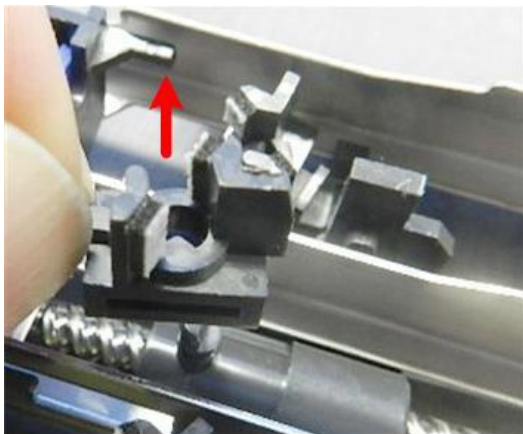


d1792997

18. Pull off a snap ring to disconnect each cleaning pad bracket (3x).



d1792998



d1792999

19. Remove each cleaning pad bracket.  
20. When you install the unit in the machine, be sure to align the charge corona unit on its left plate



and rail [A] before you push it into the machine [B].



d1792923

### After Charge Corona Wire Replacement

1. After re-assembling the machine, open the left and front doors.
2. Turn the machine on.
3. Enter the SP mode and do SP7622-013 to 017 to reset the counters.

---

## Development Unit Replacement

---

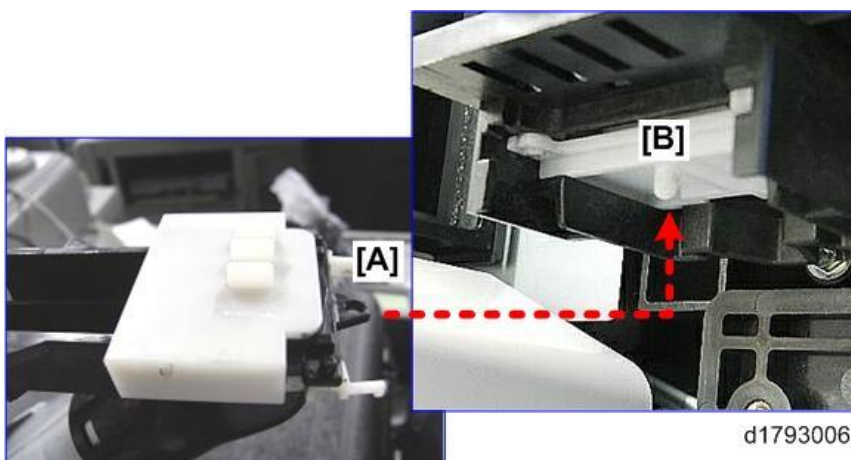
### Note

- This section describes how to replace the development unit. If you need to replace only the developer, see the next section. You will need the empty toner bottle provided with the machine for this procedure.

### Draining Developer

---

1. Switch the machine off.
2. Open the front doors.
3. Before replacing the developer, you must clean the doctor blade and the development roller.  
([Cleaning Doctor Blade, Development Roller Cleaning](#))
4. Set hole [A] of the toner bottle on the boss [B].



d1793006

#### 4.Replacement and Adjustment

5. Push the bottle in until you hear it click.



d1793008

6. With the front doors still open, turn the machine on.
7. Enter the SP mode and do SP3022-001 to start draining the developer.

#### Note

- The developer requires about 150 sec. to drain completely.
  - If the operation fails, the machine will alert you with a message. Do SP3023-001 to check the result, and then repeat from Step 3.
8. The machine will alert you when the operation is finished.
  9. Switch the machine off. Remove the bottle, and then re-attach its seal to prevent spillage.



d1793029

10. Remove the old development unit, and replace it with the new unit.

#### Note

- Do not re-attach the front edge cover.

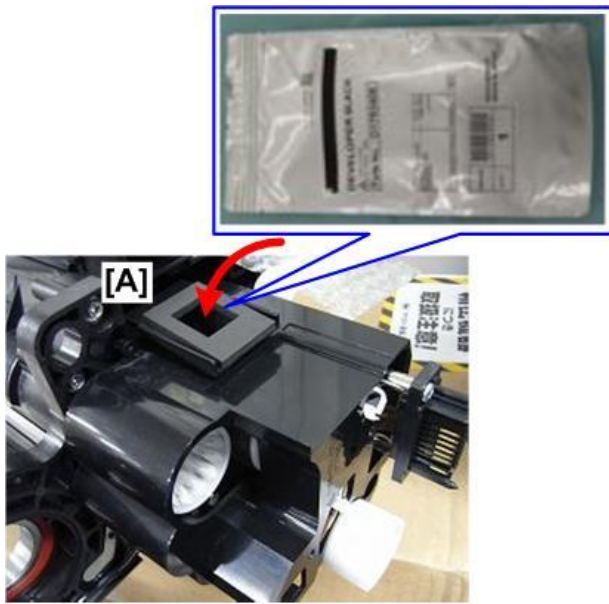
#### Filling the New Unit with Developer

---

1. Add the contents of the small (145 g) bag of developer that comes as an accessory with the new

## 4.Replacement and Adjustment

development unit through the open port [A] of the new development unit.



d1793021

2. Keep the front door open and turn the machine on.
3. Enter the SP mode, open SP3029-001 and make sure that it is set to the default value (400).

### Note

- This step prevents incorrect detection by the development unit TD sensor.
4. Remove the developer bottle from its package, and shake it from side to side 3 times, and then shake up and down about 3 times to loosen the developer.
  5. Attach the developer bottle to the machine. You will hear a click when it locks in place.



d1793027

#### 4.Replacement and Adjustment

6. Remove the bottle seal.



d1793028

7. Enter the SP mode and do **SP3024-001** to start filling.

**Note**

- Filling requires about 60 sec. The machine will alert you with a message after filling is completed. If the operation fails, first make sure that you have removed the seal. Do SP3025-001 to check the result, and then repeat from Step 7.

8. Remove the bottle.
9. Do SP7622-003 to reset the counter.
10. Close the doors.
11. The machine automatically initializes the development unit TD sensor.
12. After successful initialization of the TD sensor, the machine will automatically execute process control.

**Note**

- If a problem occurs, the machine will issue an SC code. Refer to the SC code tables, and then follow the procedure to correct the problem. First, do SP3030-001 to initialize the TD sensor. Second, do SP3011-002 to force process control to execute manually.

13. Do SP3012-001 to check the results of the process control execution.

---

## Developer Replacement

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### Draining Developer

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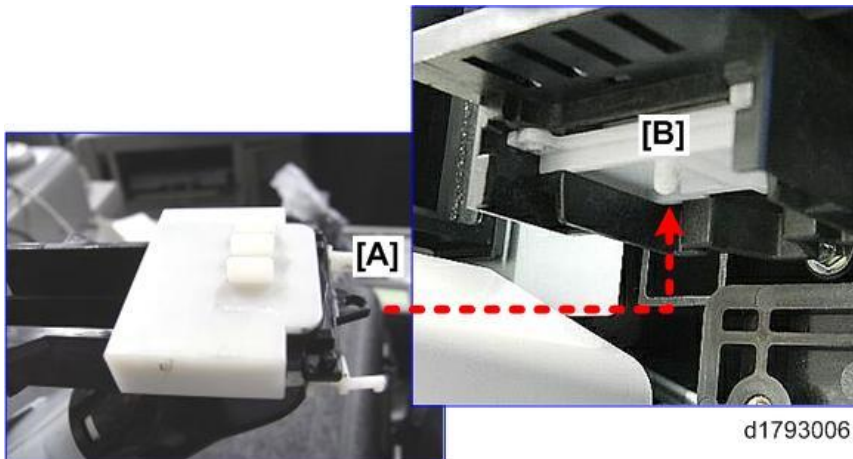
**Important**

Before you begin this procedure you must have an empty developer bottle identical to the one installed in the machine.

## 4.Replacement and Adjustment

The developer does not drain if the developer counter is reset before you try to drain the developer. Always drain the developer first, and then reset the developer counter.

1. Switch the machine off.
2. Open the front doors.
3. Before replacing the developer, you must clean the doctor blade and the development roller.  
([Cleaning Doctor Blade, Development Roller Cleaning](#))
4. Set hole [A] of the toner bottle on the boss [B].



5. Push the bottle in until you hear it click.



6. With the front doors still open, turn the machine on.
7. Enter the SP mode and do SP3022-001 to start draining the developer.

### Note

- The developer requires about 150 sec. to drain completely.
  - If the operation fails, the machine will alert you with a message. Do SP3023-001 to check the result, and then repeat from Step 3.
8. Turn the machine off after the machine alerts you when the operation is finished.

#### 4.Replacement and Adjustment

9. Remove the bottle, and then re-attach its seal to prevent spillage.



d1793029

10. Go into the SP mode and reset the developer counter with SP7-622-003.

#### Adding New Developer

---

##### ★ Important

You must reset the developer counter before you do this procedure. You will not be able to fill until the counter has been reset.

1. Make sure that the front doors are still open, and then turn the machine on.
2. Shake the new developer bottle up and down and then side to side about 3 times to loosen the developer.
3. Attach the developer bottle to the machine. You will hear a click when it locks in place.



d1793027

4. Remove the bottle seal.



d1793028

5. Enter the SP mode and do **SP3024-001** to start filling.

**Note**

- Filling requires about 60 sec. The machine will alert you with a message after filling is completed. If the operation fails, first make sure that you have removed the seal. Do SP3025-001 to check the result, and then repeat from Step 5.

6. Remove the bottle.
7. Do SP7622-003 to reset the counter.
8. Close the doors.
9. The machine automatically initializes the development unit TD sensor.
10. After successful initialization of the TD sensor, the machine will automatically execute process control.

**Note**

- If a problem occurs, the machine will issue an SC code. Refer to the SC code tables, and then follow the procedure to correct the problem.
- Next, do SP3030-001 to initialize the TD sensor.
- Do SP3011-002 to force process control to execute manually.

11. Do SP3012-001 to check the results of the process control execution.

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## Cleaning Doctor Blade, Development Roller Cleaning

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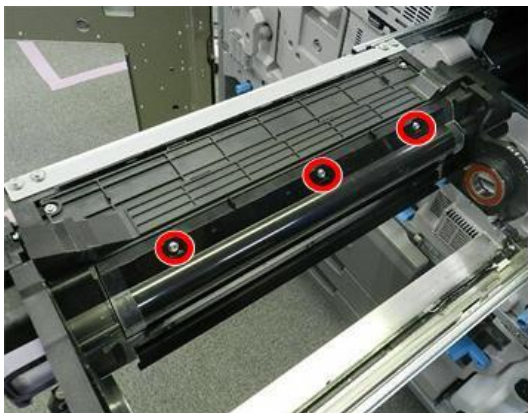
**Note**

- Do this procedure to clean the doctor blade every time the developer is replaced.

1. Place a large drop cloth in front of the machine to prevent toner from spilling on the floor.
2. Pull out the PCDU. ([PCDU Removal](#))

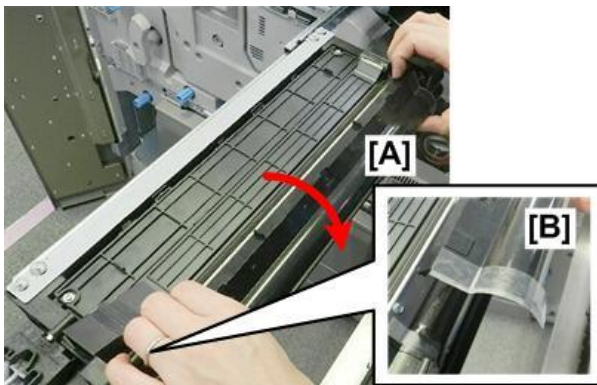
#### 4.Replacement and Adjustment

- 3. Remove the drum cleaning unit. ([Drum Cleaning Unit](#))
- 4. Remove the drum. ([Drum](#))
- 5. Disconnect the cover (🔧 x3).



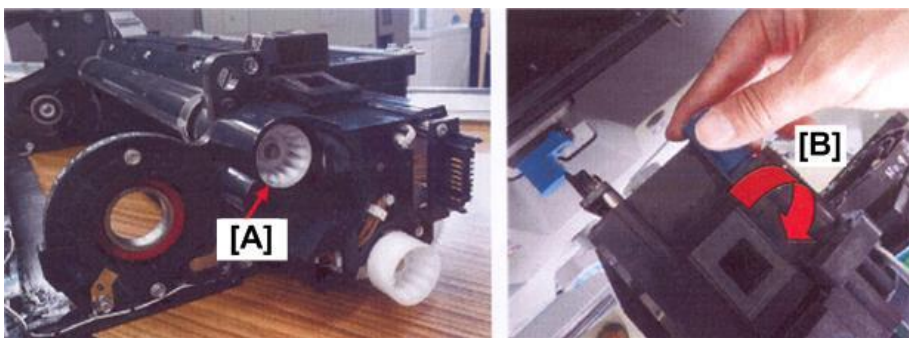
d1793009

- 6. Carefully remove the cover [A] to avoid damaging the tapes [B] on both ends of the cover.



d1793010

- 7. Use the accessory jig handle and rotate the development roller [A] in the direction of the arrow [B] (clockwise viewed from the front) until you see no loose developer on the roller.



d179b3020



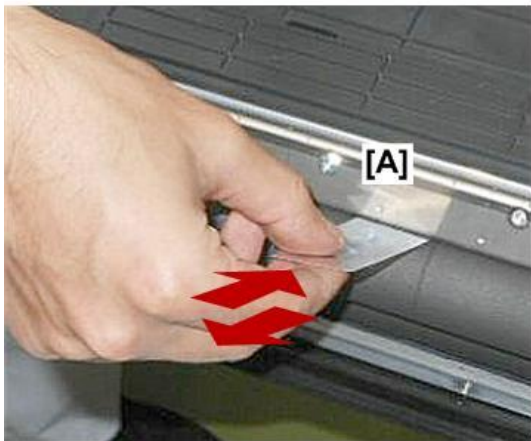
## 4.Replacement and Adjustment

8. Inspect the development roller and make sure that it is completely free of loose toner.

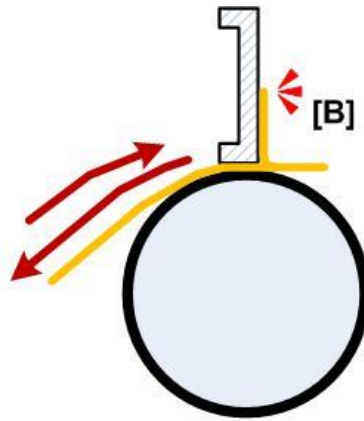


m263b3001

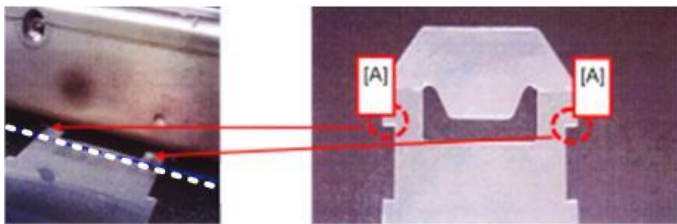
9. Insert the jig sheet [A] into the doctor gap.  
10. Pull the jig sheet back and downward at a 45 degree angle so the flap [B] of the jig catches on the blade.



m263b3012



11. Align the top corners [A] of the cutout with the edge of the doctor blade.



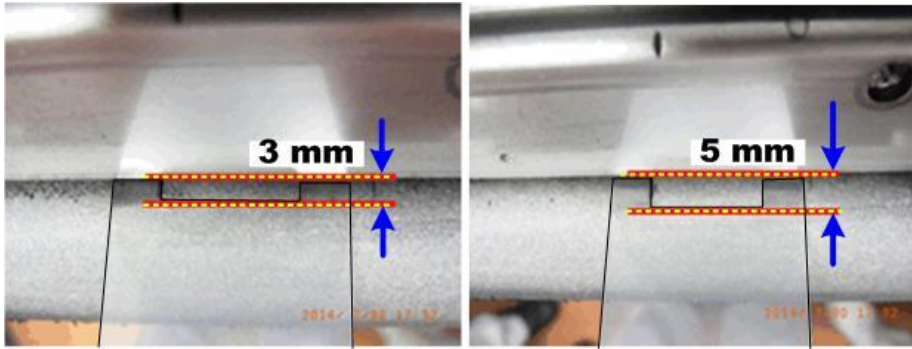
m263b3002

### ★ Important

- Keep this alignment while cleaning.

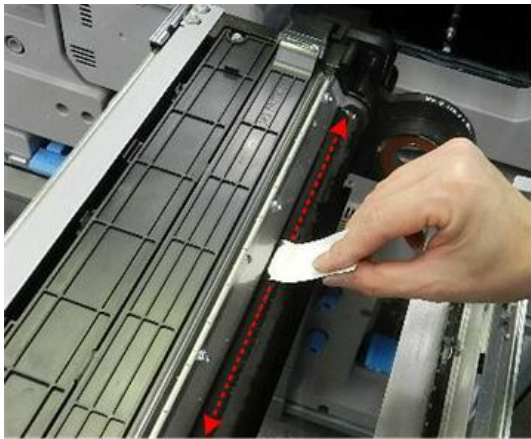
#### 4.Replacement and Adjustment

12. While cleaning, hold the jig so you can see a gap of about 3 mm. A gap of about 5 mm is too much.



d179b4040

13. Clean the doctor blade by sliding the jig gently across the entire length of the blade 5 times.



d1793013

#### ★ Important

- Pulling on the jig too hard could damage the jig, put stress on the doctor blade, and cause interference between the jig flap and the rivet at the rear of the blade.
- Do not attempt to clean the rivet. Any toner on the rivet will have no effect on images.

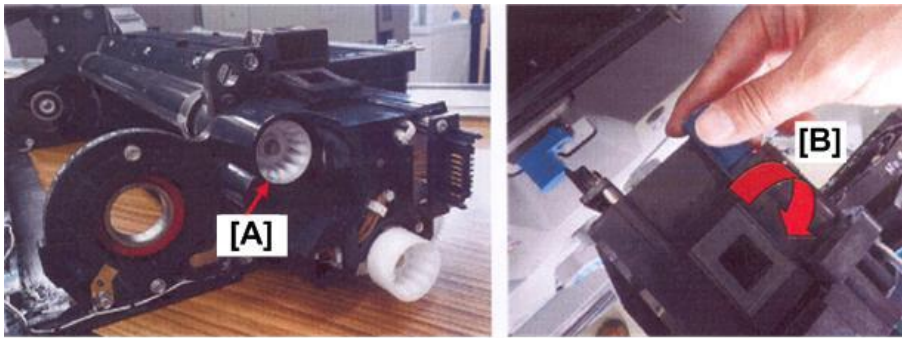
14. Remove the jig by sliding it sideways.



d179b3022

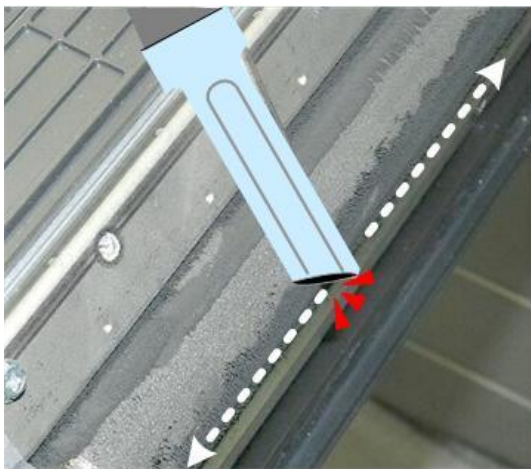
15. Set the jig handle again, and viewed from the front rotate the roller [A] about 1/4 turn in the

direction of the arrow [B].



d179b3020

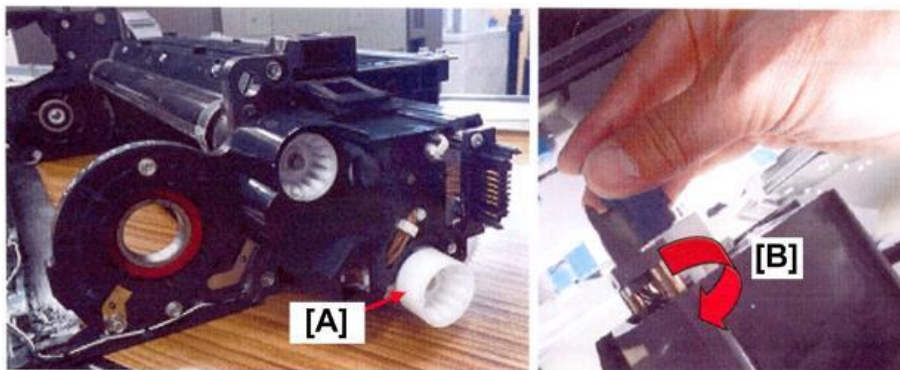
16. Vacuum any loose developer.



d1793015

17. Repeat Steps 7 to 16 three times.

18. Set the jig handle again and turn the roller transport gear [A] 10 full rotations in the direction of the arrow [B].



d179b3021

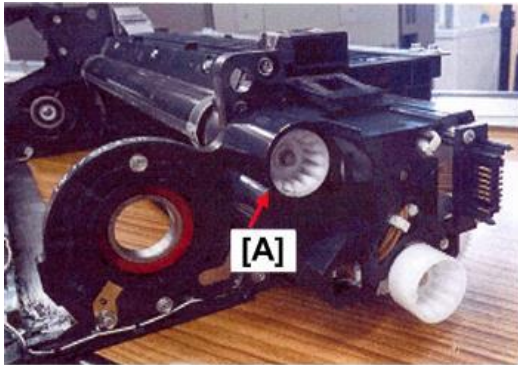
**Note**

- If you make a mistake and rotate it in the opposite direction, rotate the jig 20 times in the correct direction shown above. If you fail to correct the mistake, the developer and toner will not be mixed in the correct ratio.

19. Rotate the developer roller with the jig handle one more time. When you see the fresh developer

## 4.Replacement and Adjustment

on the development roller, you are finished.



d179b3023

### ★ Important

- With the vent filter removed, check inside the case for toner around the toner entrance port. If you see any toner in this area, tap the port lightly to dislodge any toner with the vibration so that it falls into the unit.

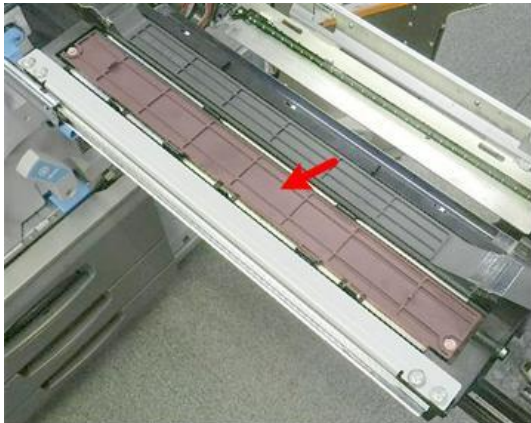
20. Clean the surface of the development unit if necessary.

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## Vent Filter

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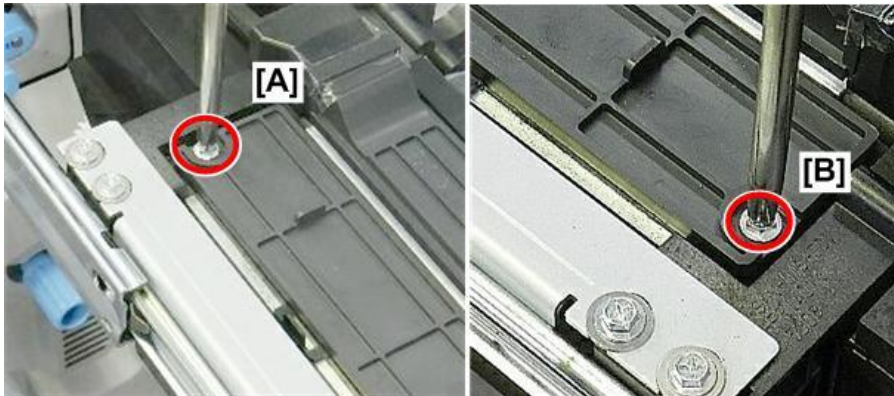
1. Pull out the PCDU. ([PCDU Removal](#))
2. The vent filter is under the flat cover on the left.



d1793001

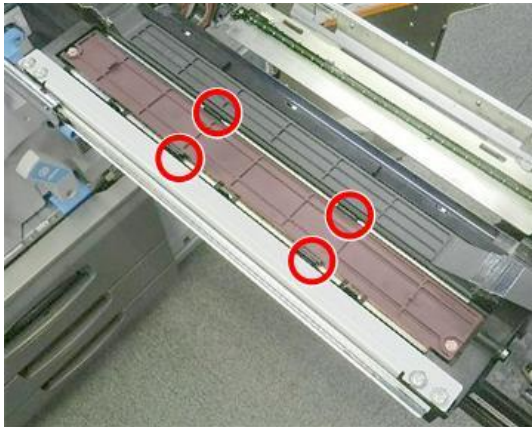
## 4.Replacement and Adjustment

3. Disconnect the cover at [A] and [B] (⊖ x2).



d1793002

4. Free the cover (▼ x4).



d1793023

5. Remove the cover.

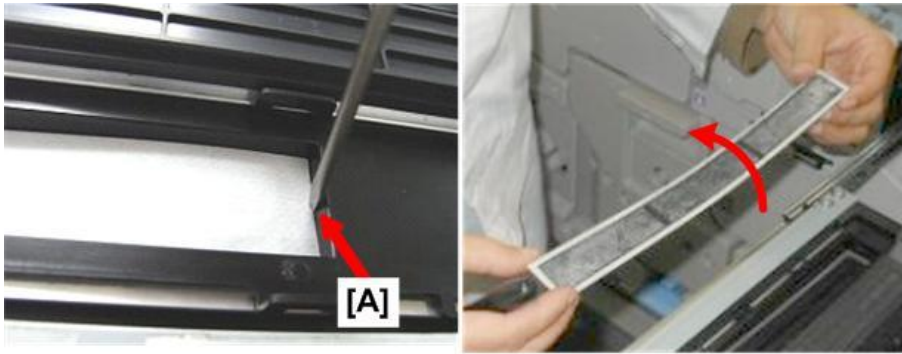


d1793003

6. Carefully, use the tip of a flat head screwdriver to free the filter [A] and then remove it. (See the

## 4.Replacement and Adjustment

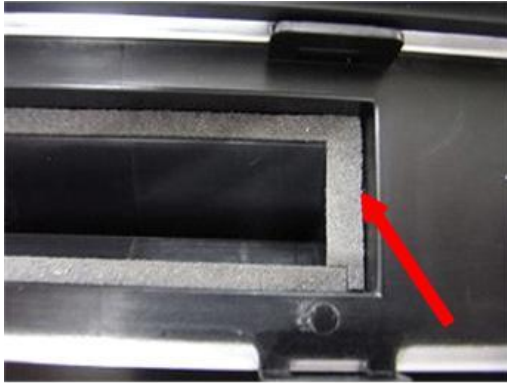
note below.)



d1793024

### ★ Important

- Work carefully to avoid damaging the sponge seal.



d1793025

7. Hold the filter over a waste bin and gently tap it with the tip of a screwdriver to remove loose developer.



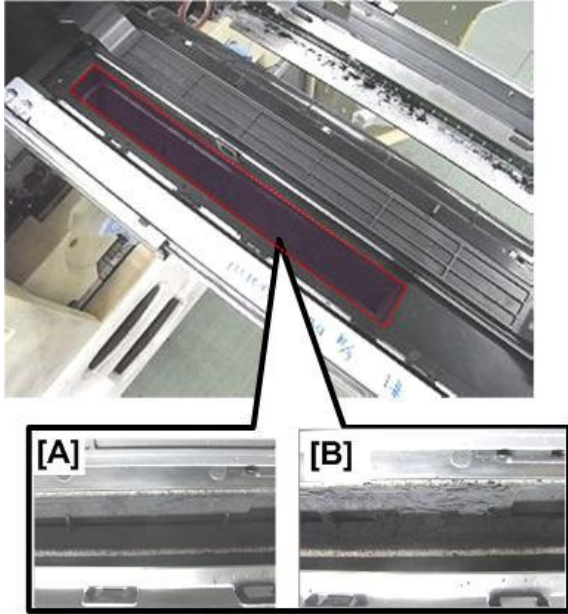
d1793026

### ★ Important

- To avoid damaging the filter mesh, never use a vacuum cleaner to clean the filter.

8. Before you re-install the filter, check the casing where the filter was removed:
  - The area should be free of toner [A].
  - There should be no excess toner as shown at [B].

#### 4.Replacement and Adjustment



d1793030

9. If you see excess toner, use the tip of a screwdriver to lightly tap the sides of the casing so that the excess will fall down into the unit.



d1793031

## 4.Replacement and Adjustment

# ITB Unit

## ITB Unit Removal

### ★ Important

- During removal and installation of the ITB cleaning unit, keep it straight and do not allow it to tip to the right.

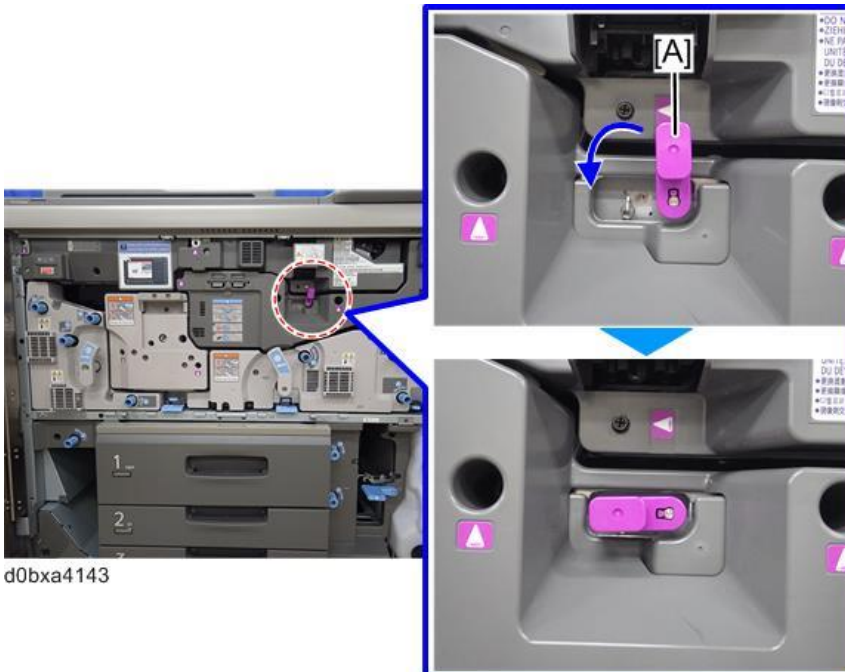
## ITB Cleaning Unit

1. Open the front doors.
2. The ITB cleaning unit and ITB unit (belt unit) comprise the ITB unit.



d1793200

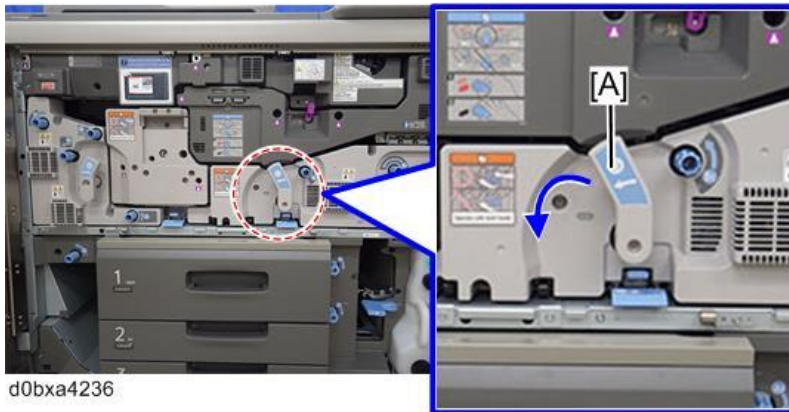
3. Lower the ITB lever [A]. This lowers the image transfer belt.



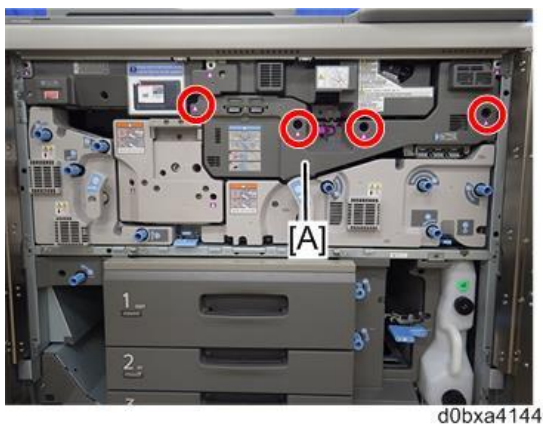
d0bxa4143



4. Lower lever **C1** [A].



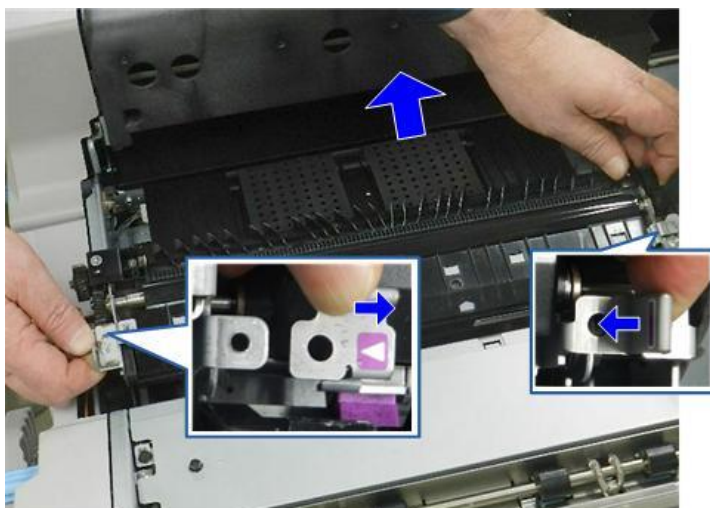
5. Remove the cover [A] (✖x4).



6. Pull out the drawer completely until it stops.  
7. Remove the PTR unit (✖x2). (PTR Unit Removal)

**Note**

- If you are removing only the ITB cleaning unit, you do not need to remove the PTR unit.



8. With the drawer out, lay a large sheet of A3 paper over the paper transport belts (where you just

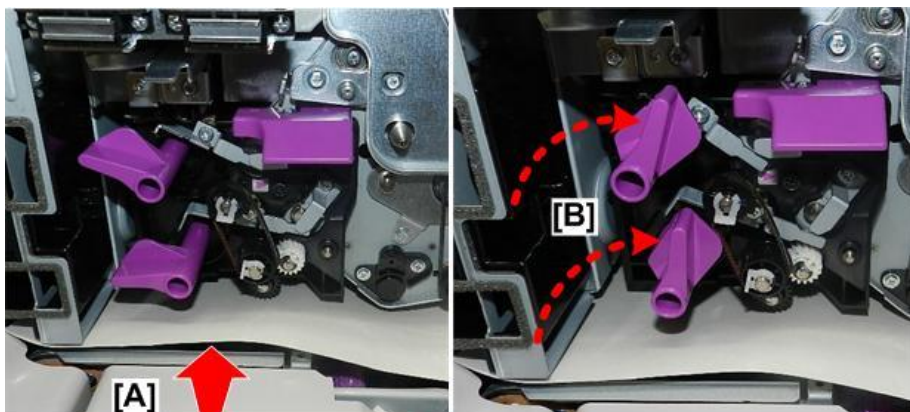
#### 4.Replacement and Adjustment

removed the PTR).



d1793215

- 9. Slowly, push the drawer into the machine as far as the front paper edge [A].
- 10. Rotate both levers up to the right [B]. This unlocks the ITB cleaning unit.



d270b3203

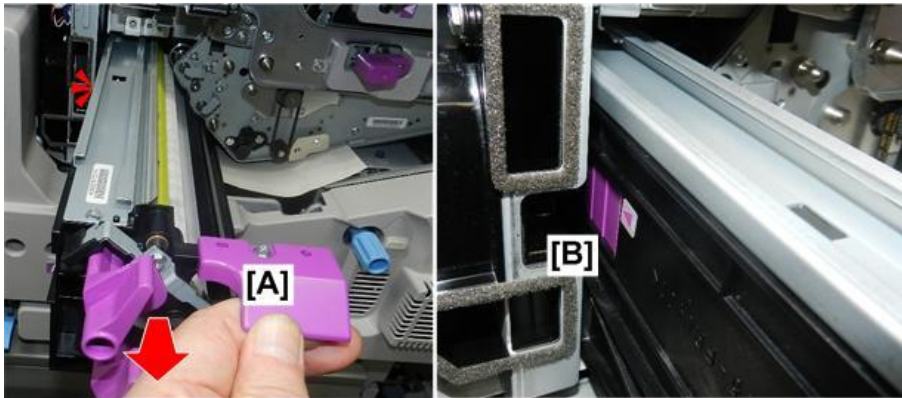
- 11. Disconnect the ITB cleaning unit (\*x1).



d1793204

- 12. Slowly, pull out the cleaning unit [A] until it catches on the left and stops.

13. The TCRU mark (triangle) marks the release lever [B].



d270b3205

14. Press in the release lever, and then remove the unit.



d270b3206

15. Lay the unit on a flat clean surface.



d1793207

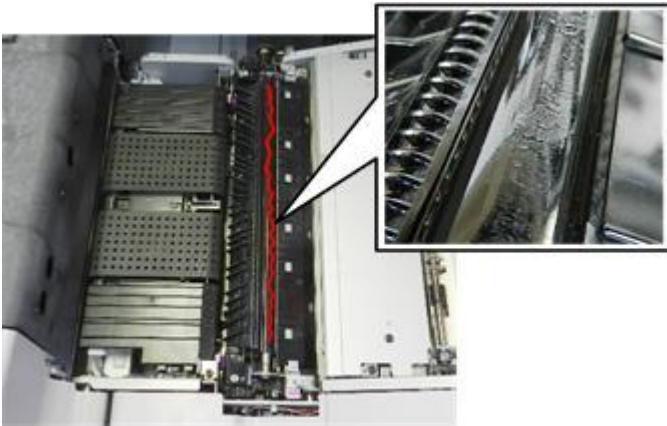
## ITB Unit

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### ★ Important

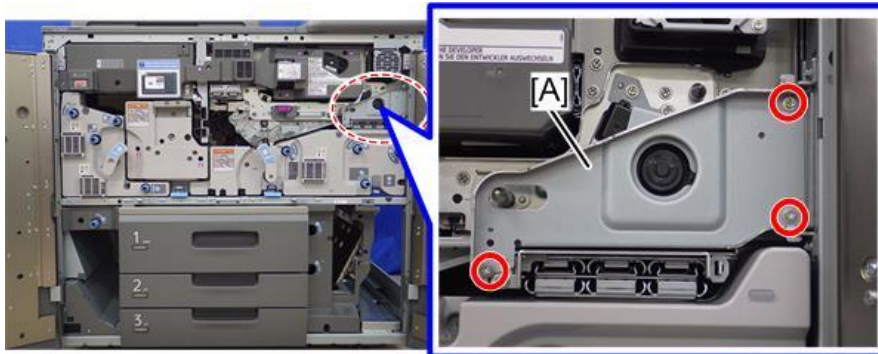
- Before removing the ITB unit, be sure to rotate both levers of the ITB cleaning unit and the belt release lever down to the left.
- The PTR unit must be removed before removal of the ITB unit.
- If the ITB unit is removed with the PTR unit in the drawer, the edge of the ITB unit will scour and ruin the surface of the PTR below as the ITB unit is pulled from the machine. This can permanently damage the PTR as shown below.

#### 4.Replacement and Adjustment



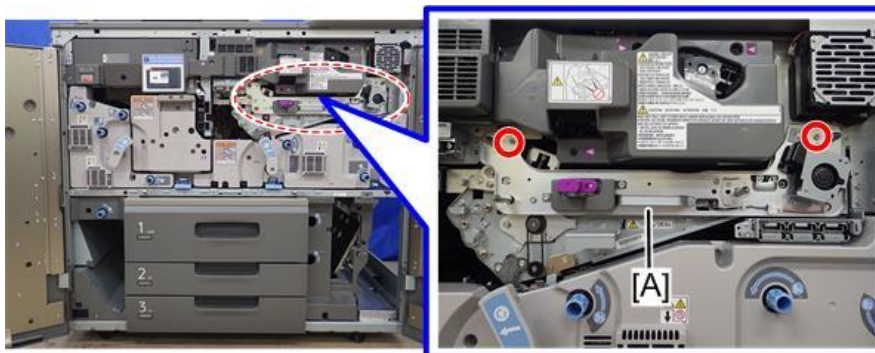
d1803101

1. Remove the ITB cleaning unit. (See previous section)
2. Prepare a clean place to lay the ITB unit. If you are going to lay it on the floor, cover the location with a clean drop cloth or paper.
3. Remove the plate [A] (⌚ x3).



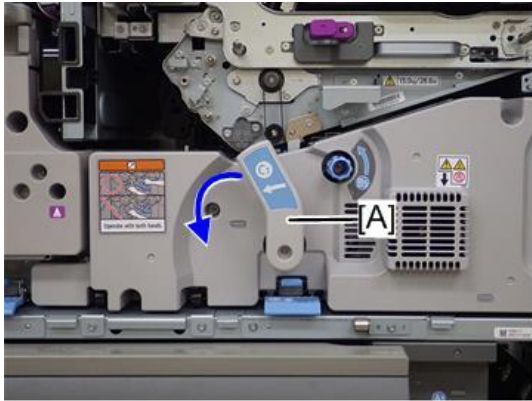
d0bxa4147

4. Remove the screws of the ITB unit [A] (⌚ x2).



d0bxa4149

5. When the PTR unit is not removed, lower the lever [A].



d0bxa4150

6. Grip the handle, and then pull the ITB unit out partially.

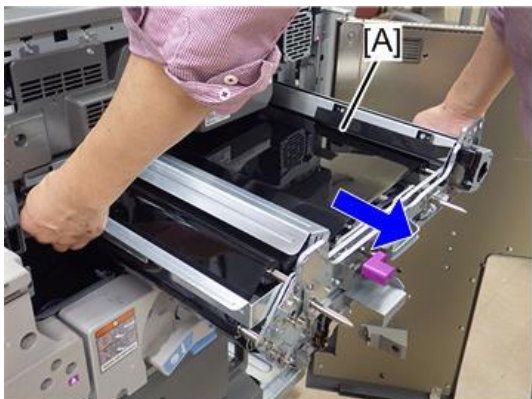
**⚠ CAUTION**

- The unit weighs about 12 kg (26 lb.).
- The unit is mounted on rails but there are no locks or releases to prevent it from falling after it leaves the rails.
- When it is difficult to pull out, push the leaf spring [A] on the left side, release the lock and pull out.



d0bxa4148

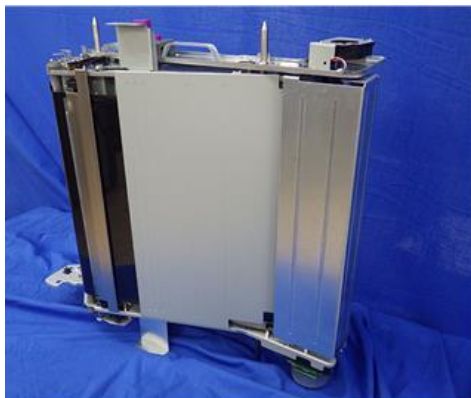
7. Grip the unit [A] firmly on both sides, and then slowly pull it completely out of the machine.



d0bxa4151

#### 4.Replacement and Adjustment

8. Set the ITB unit on a flat clean surface with the front side up.

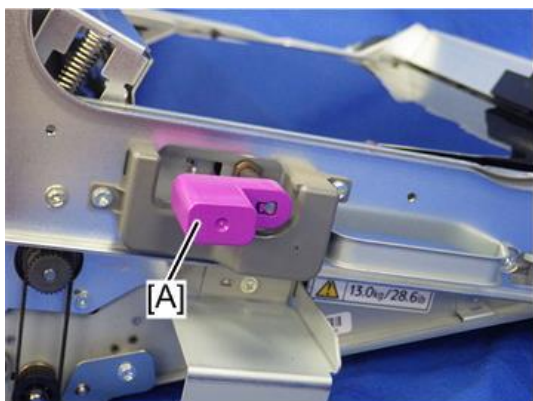


d0bxa4152

#### ITB Cleaning Unit, ITB Unit Re-installation

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1. Before you re-install the ITB unit in the machine, make sure that the lever [A] is down.



d0bxa4153

#### ★ Important

- Inserting the ITB unit into the machine with this lever up could damage the belt.

2. When you re-install the ITB unit, if the spring catches on the unit push the spring to allow the unit to slide in.

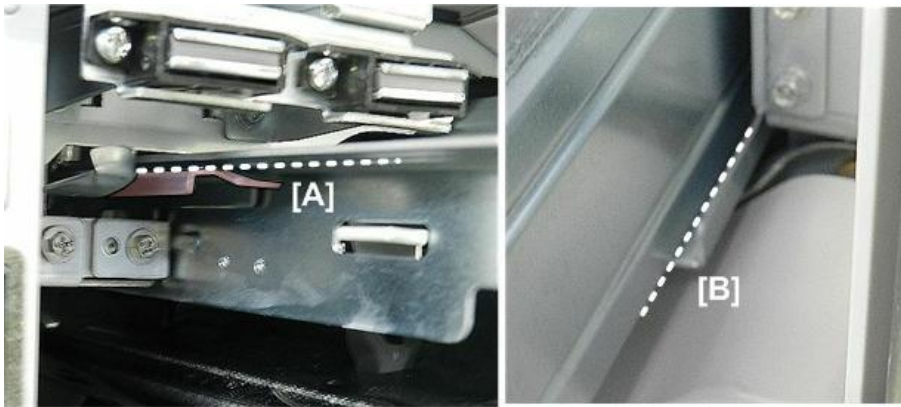


d1793238

3. When you re-install the ITB unit, make sure the rails on the left [A] and on the right [B] are aligned

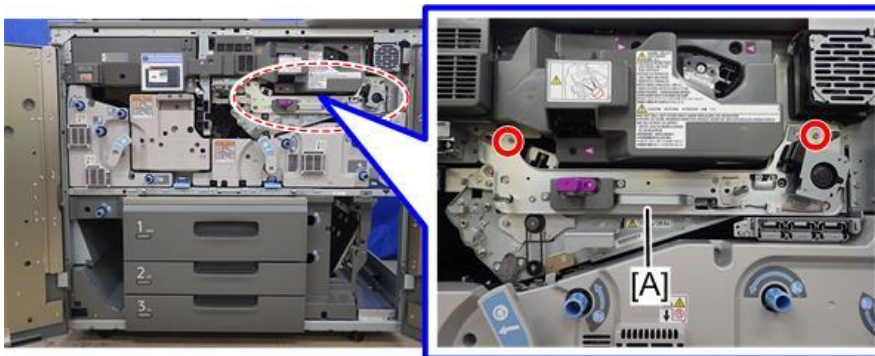
## 4.Replacement and Adjustment

correctly before you push the unit into the machine.



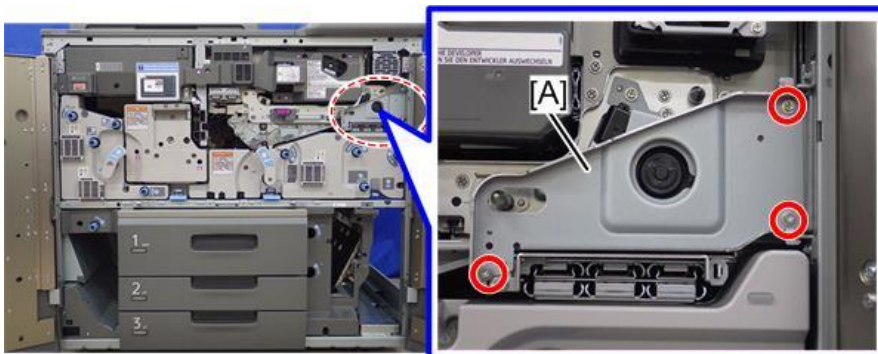
d1793212

4. Attach the ITB unit [A]. (🔧x2).



d0bxa4149

5. Do not forget to re-attach the plate [A] on the right end of the ITB unit. (This is a new part for this machine.) (🔧x3).

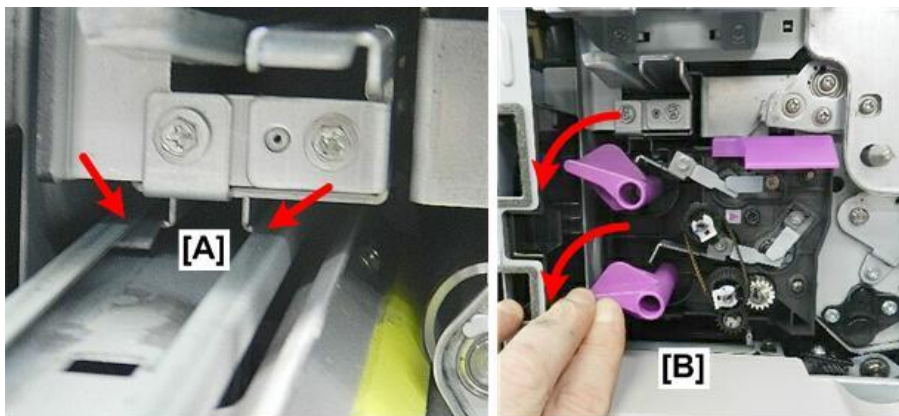


d0bxa4147

6. When you re-install the ITB cleaning unit, make sure that the arms on top of the unit are hung correctly onto the rails [A] before you push the unit into the machine.

#### 4.Replacement and Adjustment

7. After installing the cleaning unit, rotate both levers [B] down to lock them.



d1793213

8. Gently, rotate the ITB lever up. Do not twist!

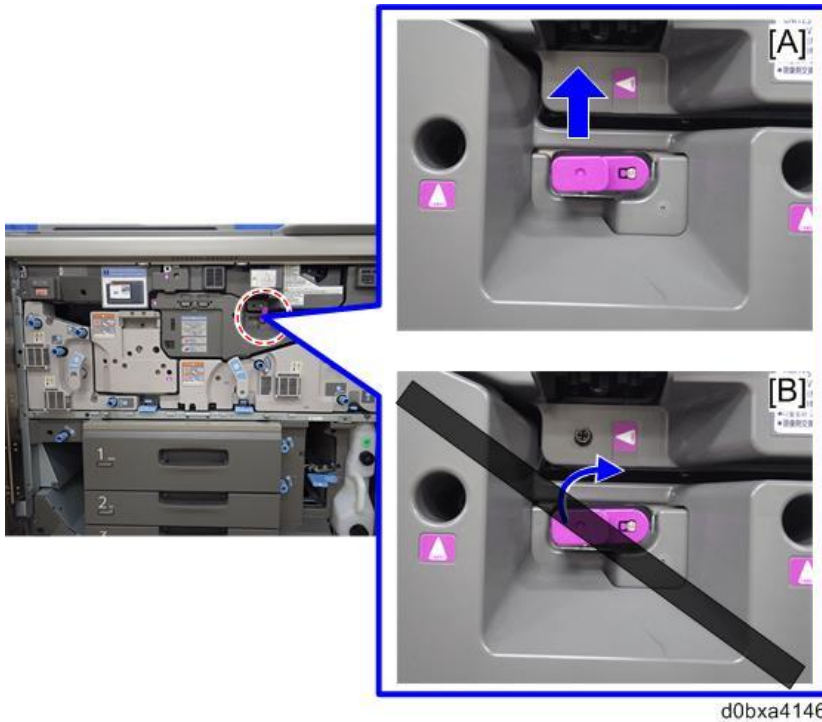


d270b3214

#### Note

- The right front door will not close if this lever is down.
- Raising this lever raises the image transfer belt up against the drum. Raise the lever slowly and gently with two fingers [A].
- Never twist the lever with force [B]. This could cause a problem with the position of the belt and trigger an SC error.





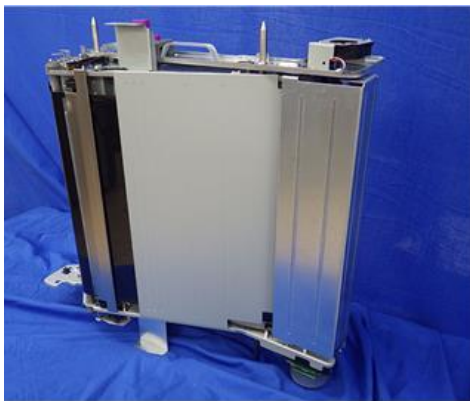
## Belt Replacement

### Belt Removal

**★ Important**

- Most procedures for the ITB unit require removing the transfer belt.
- Handle it carefully. Avoid touching the surface of the belt with bare hands.
- Store it carefully while the ITB unit is being serviced.

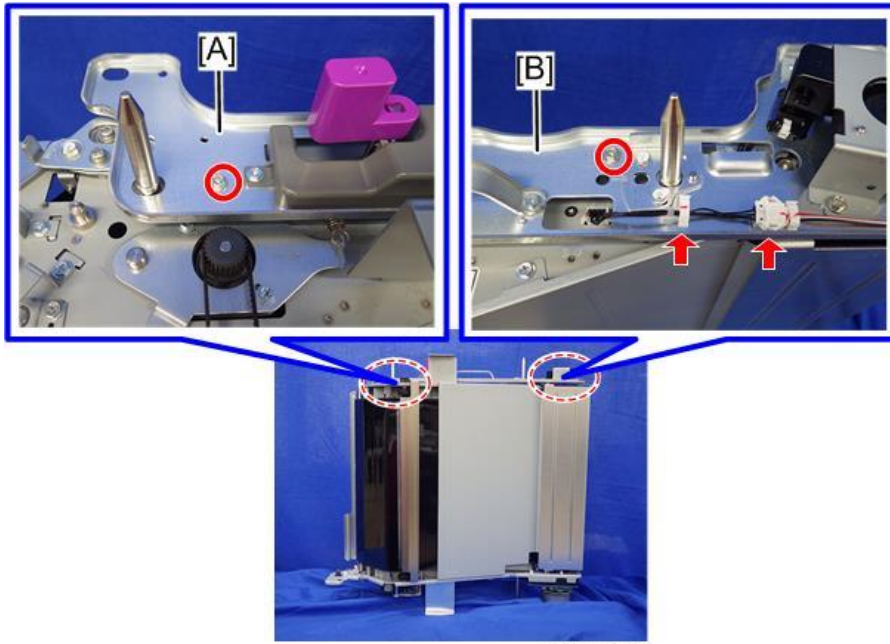
1. Remove the ITB unit ([ITB Unit Removal](#))
2. Set the ITB unit with the handle facing up.



3. Disconnect the handle plate on the left [A] (🔧 x1).

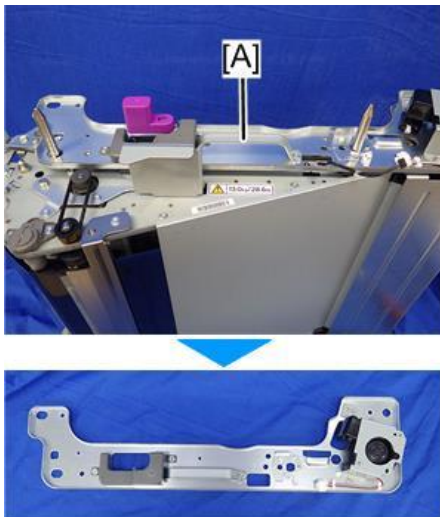
#### 4.Replacement and Adjustment

4. Disconnect the plate on the right [B] (🔩x1, 🛠️x2, 📦x1).



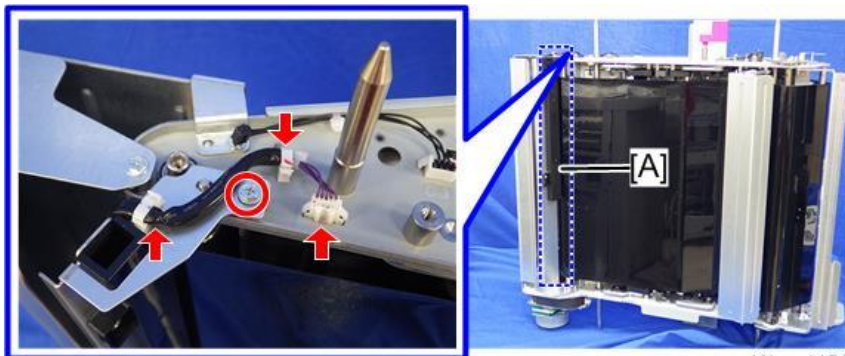
d0bxa4154

5. Remove the handle plate [A].



d0bxa4155

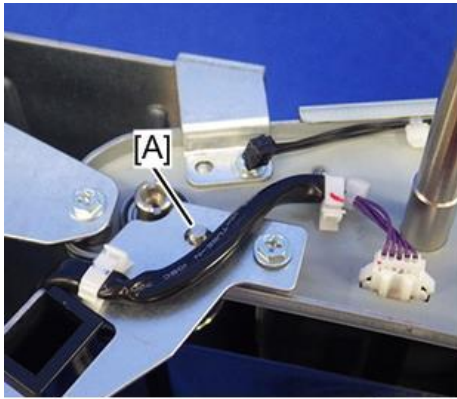
6. Disconnect the ID sensor plate at the front [A] (🛠️x2, 📦x1, 🔩x1).



d0bxa4156

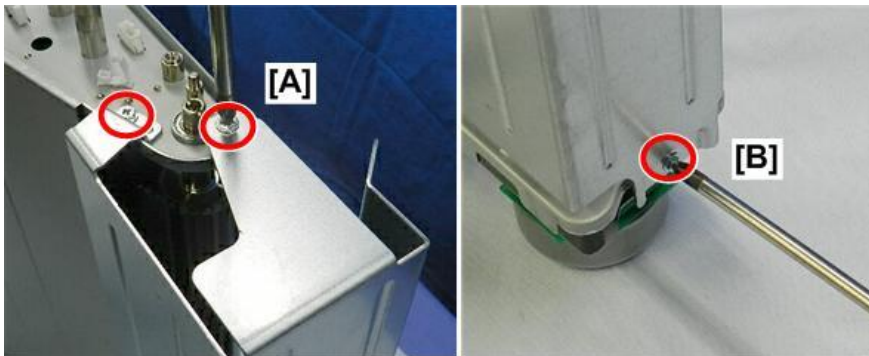
Note

- Make sure that the boss [A] is not hidden by the harness.



d0bxa4233

7. Disconnect the right end plate at the front [A] (⊙x2).
8. Disconnect the plate at the rear [B] (⊙x1).



d1793105

9. Remove the right end plate.



d1793106

#### 4.Replacement and Adjustment

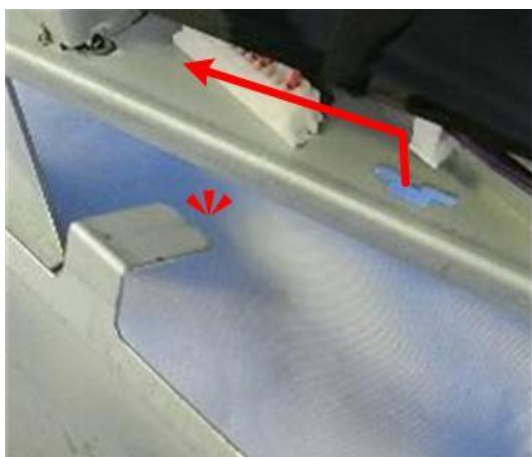
10. At the front, disconnect the bottom plate (🔩 x2).



d1793107

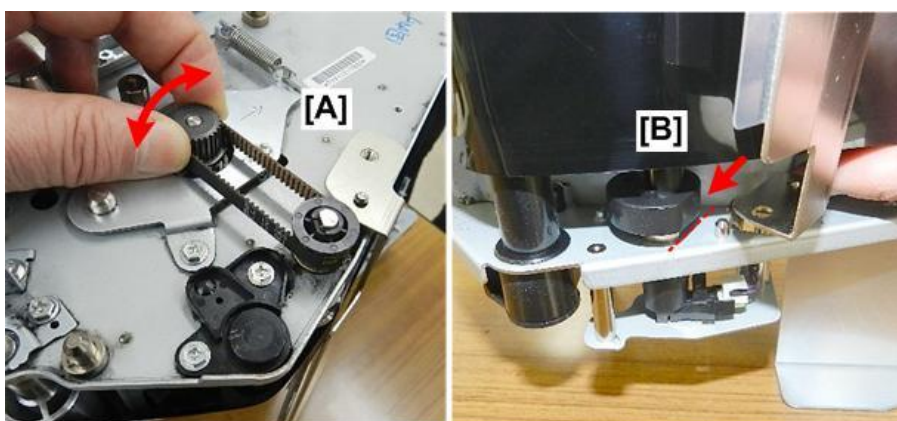
**★ Important**

- Note where the tabs must be inserted into the holes for re-assembly.



d1793108

11. Before removing the paper transfer bias roller plate, turn the timing belt [A] at the front so that the flat side of the cam [B] is visible on the right. This will make the plate easier to remove.

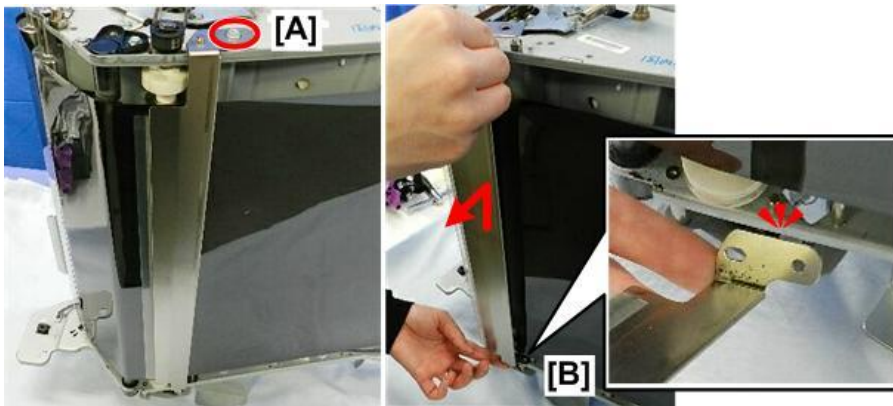


d1803102

12. At the bottom front, disconnect the paper transfer bias roller plate [A] (🔩 x1).

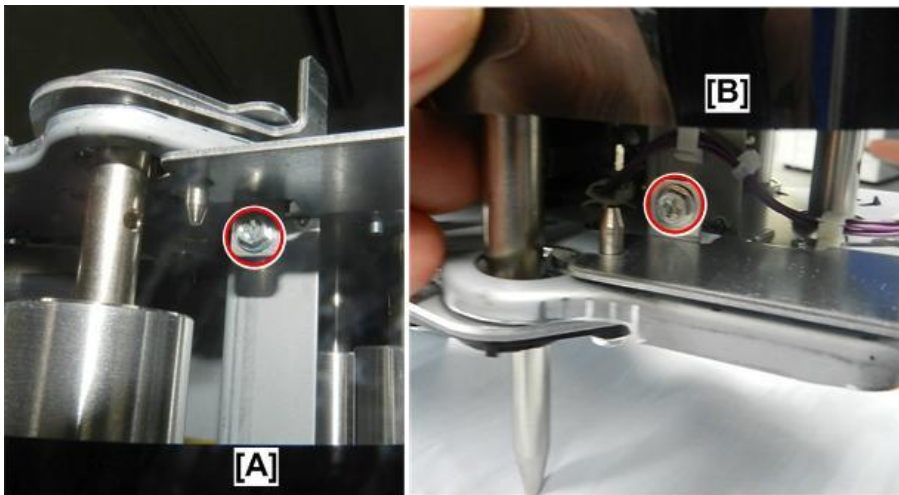
#### 4.Replacement and Adjustment

13. At the bottom rear, disconnect the plate holes from the pins [B].



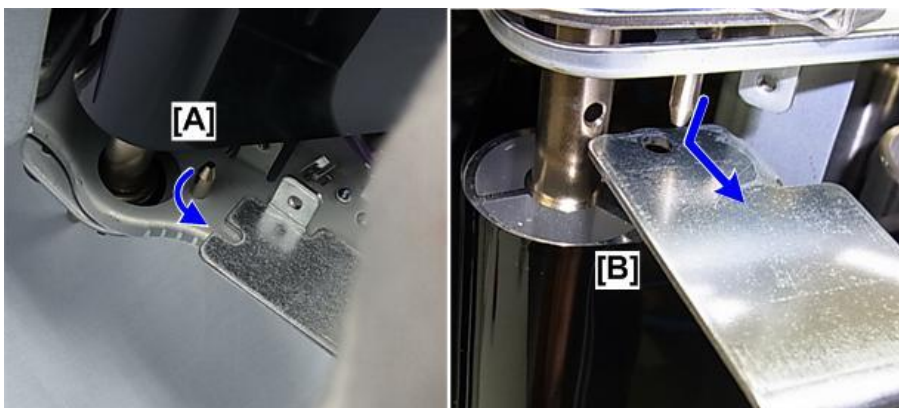
d1793109

14. Remove the screws at the top edge [A] and bottom edge [B] of the belt (Ⓜ x2).



d270b3111

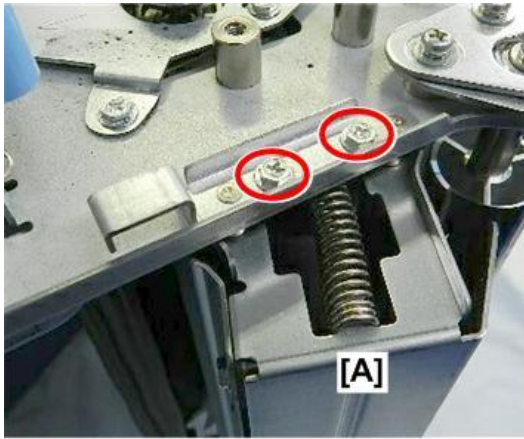
15. At the bottom [A], pull the brace away from the post.  
16. At the top [B], pull the brace down slightly off the post, and then remove the brace.



d270b3110

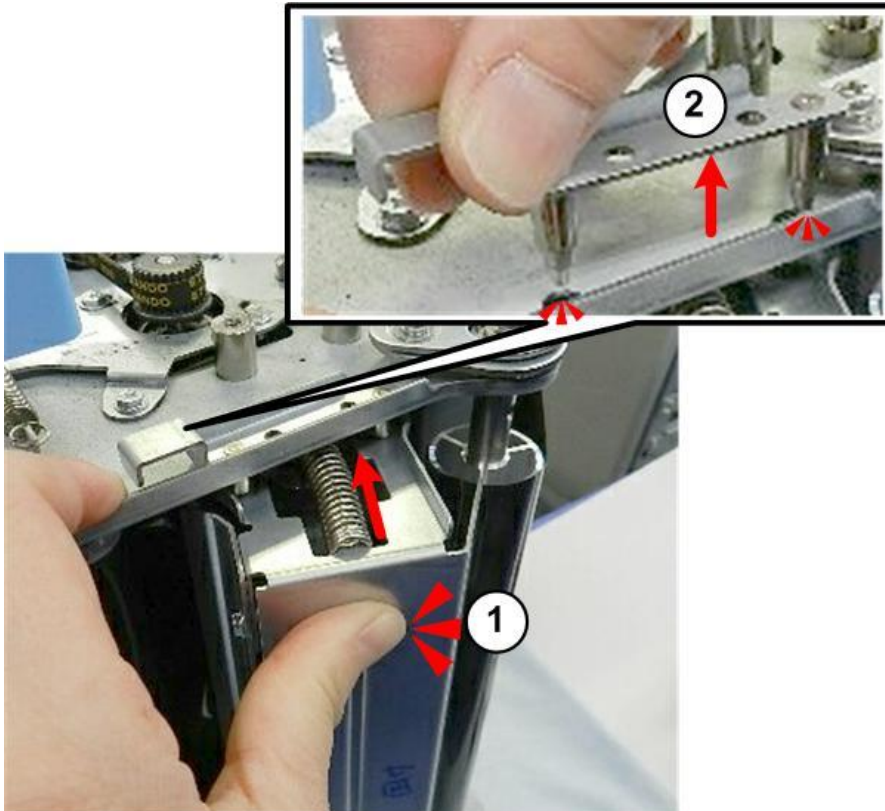
#### 4.Replacement and Adjustment

17. At the front, disconnect the belt tension plate [A] (⊗x2.)



d1793111

18. While pressing firmly down on the plate ①, remove the lock plate ②.



d1793112

19. Remove the tension plate unit.

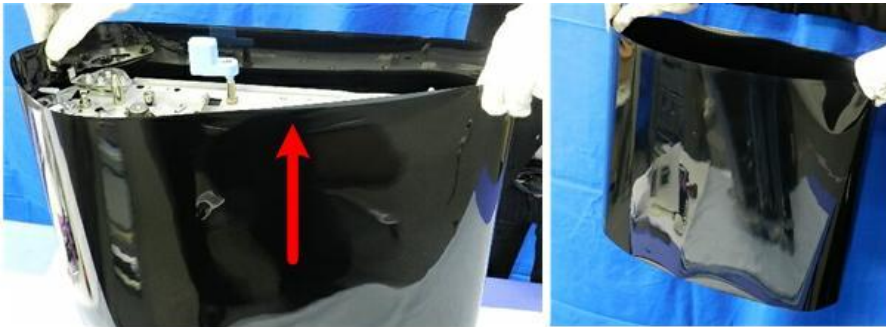


d1793113

20. Slowly, pull the transfer belt up and off the ITB unit.

★ Important

- If the belt is to be discarded, you do not have to be careful about touching the surface of the belt.

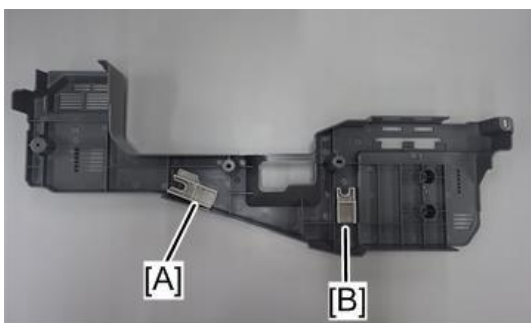


d1793114

21. Either edge of the belt can be installed facing forward.

Belt Re-installation

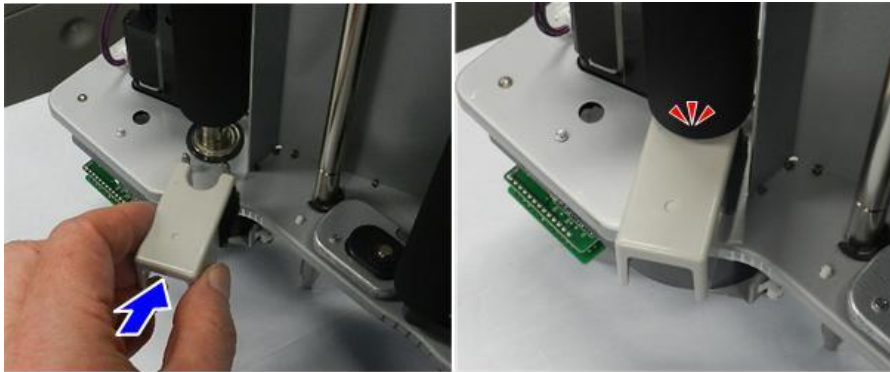
1. Remove the two belt jigs [A], [B] stored inside the ITB cover you removed earlier. You need these jigs to hold the belt in the correct position for re-installation.



d0bxa4232

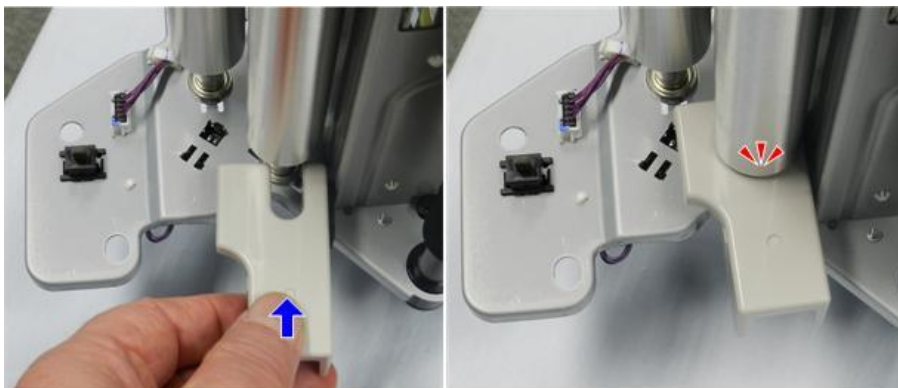
#### 4.Replacement and Adjustment

2. Set the short jig on the end of the drive roller on the motor side.



d270b3106

3. Set the long jig on the front shaft of the roller on the push-switch side.

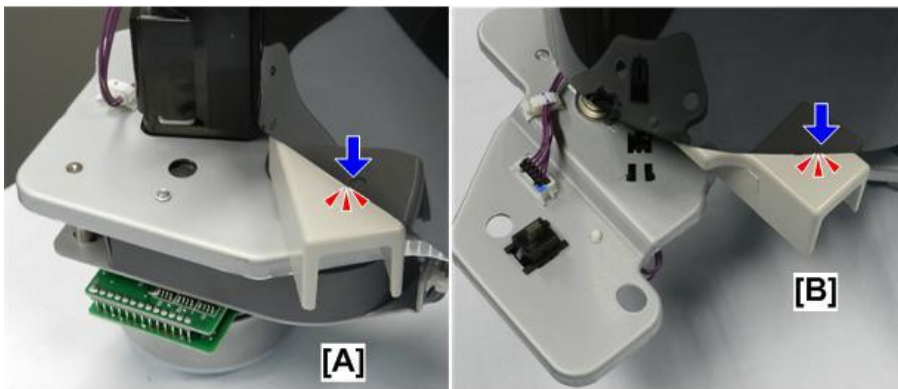


d270b3107

#### Note

- Either edge of the belt can be lowered over the ITB unit.

4. When you set the belt, the front edge of the belt will go down as far as the jigs on the left [A] and on the right [B]. This holds the belt at the correct position.

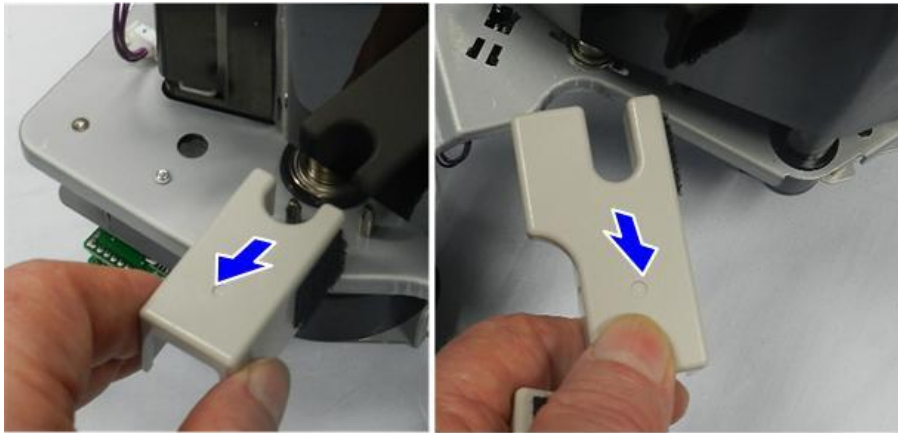


d270b3108

5. Re-attach the belt tension plate.

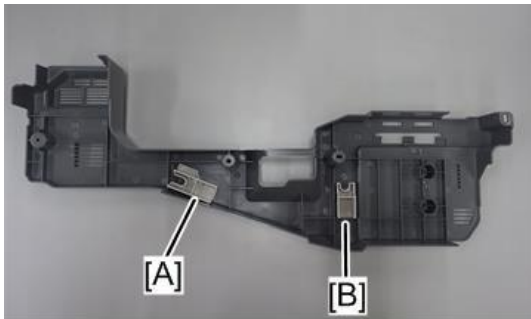


6. Be sure to remove both jigs.



d270b3109

7. Return the jigs [A] [B] to the inside of the ITB cover.



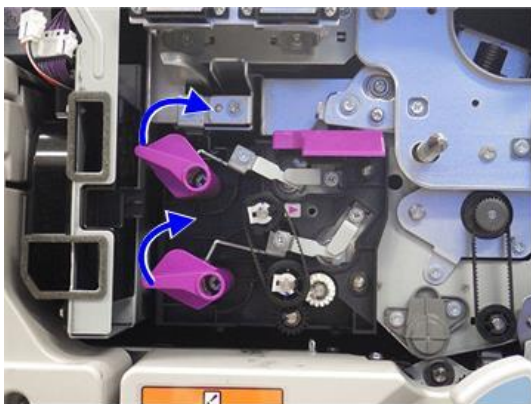
d0bxa4232

#### After Replacing the ITB

---

Do this procedure after installing a new ITB.

1. Make sure that the machine is turned off.
2. Open the front doors.
3. With the ITB unit and ITB cleaning unit both installed, make sure that the levers of the ITB cleaning unit are up so that the lubricant blade and cleaning blade are separated from the belt.



d0bxa4157

4. Remove the PTR. ([PTR Unit Removal](#))

#### 4.Replacement and Adjustment

#### 5. Remove the drum cleaning unit. ([Drum Cleaning Unit](#))

##### Note

- Normally the ITB and PTR rotate together because they are driven by the same motor. The PTR must be removed before switching on the belt lubrication mode to prevent the cleaning blade from hanging up and scouring the PTR during idle rotation.
  - Similarly, the drum cleaning unit must also be removed before switching on the belt lubrication mode to prevent the cleaning blades of the drum cleaning unit from hanging up and scouring the surface of the bare drum during idle rotation.
  - The drum cleaning unit and ITB cleaning unit both have lubricant bars, but toner also acts as a lubricant during normal operation. Due to the absence of toner in the belt lubrication mode, the lubricant alone is not enough to prevent the blades from hanging up on and scouring the drum, so the drum cleaning unit should also be removed.
6. Re-attach the front edge cover.
  7. Turn the main machine on.
  8. Enter the SP mode, and then do SP2310-001 to enter belt lubrication mode.
  9. After touching [EXECUTE] close the left and right doors of the machine.
  10. Wait about 5 min. for the machine to lubricate the ITB.
  11. A message on the operation panel will tell you when the procedure is finished.
  12. Once again, open the left and right door of the machine.
  13. Turn the main machine off.
  14. Re-install the PTR unit.
  15. Re-install the drum cleaning unit.
  16. Turn the levers to close the gap between the lubricant blade and the cleaning blade.
  17. Turn the main machine on.
  18. Enter the SP mode, and then reset the PM counters for all the replaced parts.
  19. Leave the SP mode, and then close the front doors.
  20. Process control will start automatically.
  21. The machine will display “Ready” after process control executes successfully.
  22. Enter the SP mode, and then do SP3012-001 to confirm successful completion of the process control execution.
  23. If process controls fails, correct the problem by following the steps recommended for releasing the SC code.
  24. After correcting the problem, service control will not execute automatically, so you will need to execute process control manually with SP3011-002.

---

#### PTR Separation Motor

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1. Remove the ITB unit ([ITB Unit Removal](#))
2. Remove the transfer belt ([Belt Removal](#))

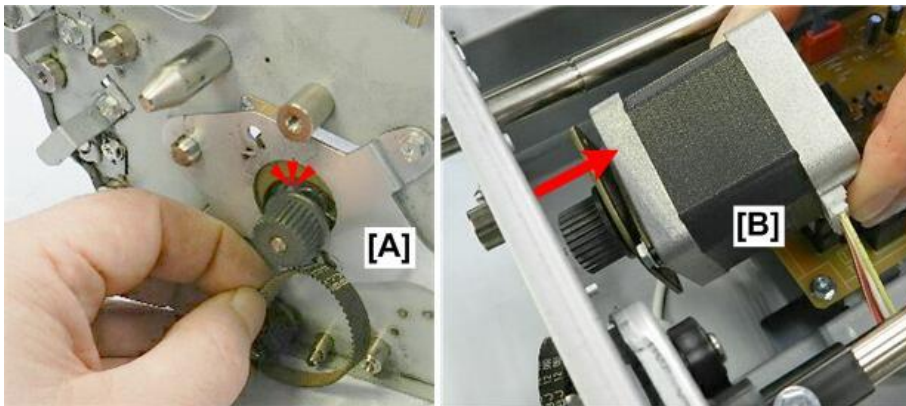
## 4.Replacement and Adjustment

3. Disconnect the motor bracket [A] (🔩x2).



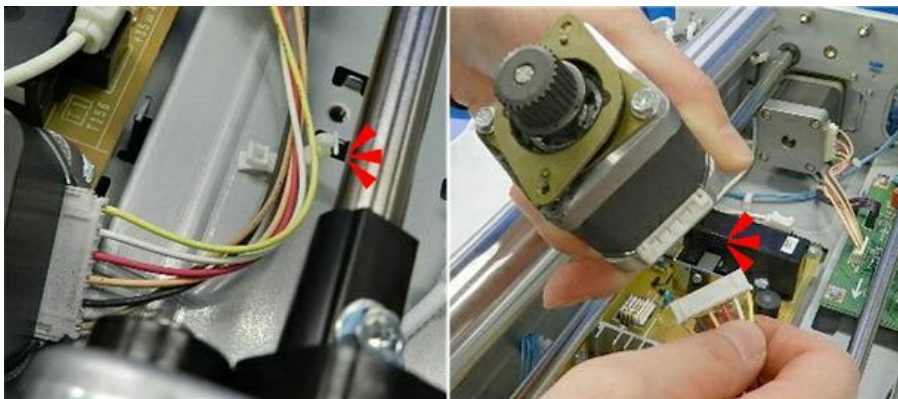
d0bxa4158

4. Disconnect the belt [A] at the front (🌀x1).  
5. Pull the motor [B] away from the frame.



d1793118

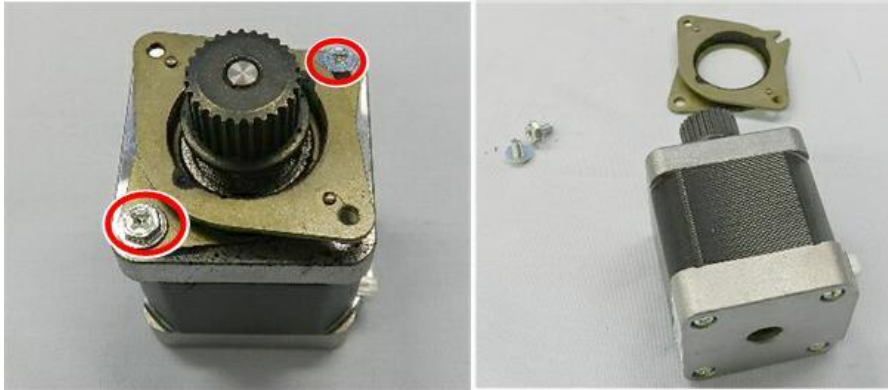
6. Disconnect the harness and the motor (🔌x1, 📦x1).



d1793119

#### 4.Replacement and Adjustment

7. Separate the motor and the collar bracket (🔩 x2).



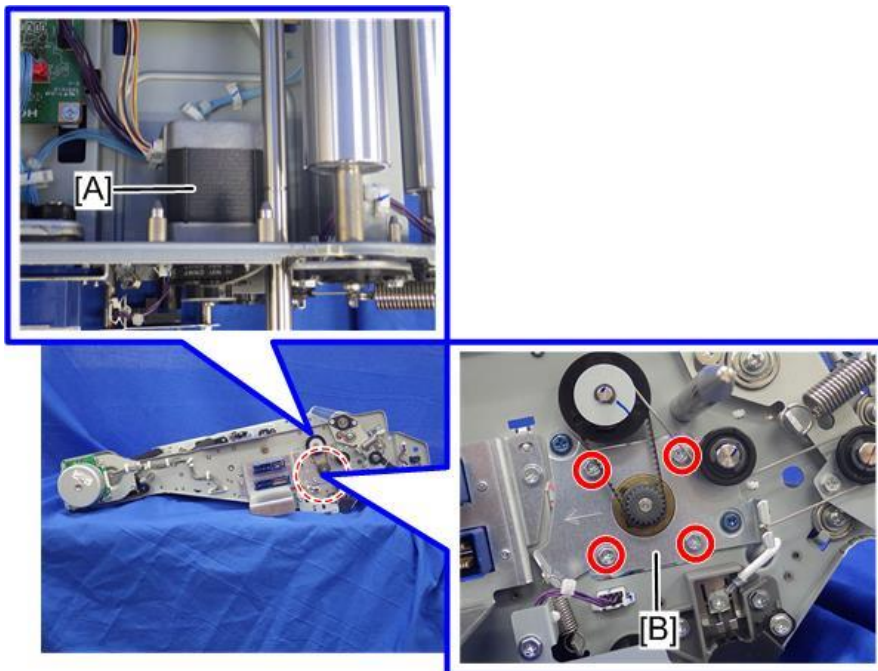
d1793120

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#### Belt Centering Motor

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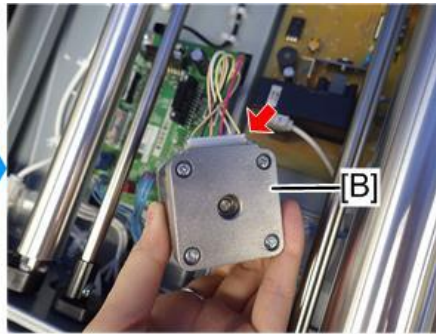
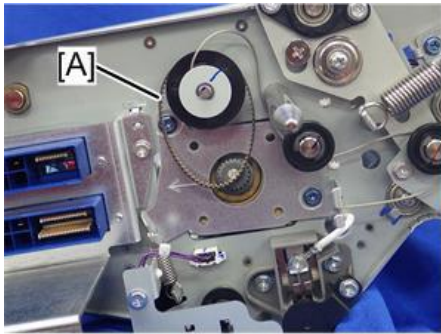
1. Remove the ITB unit ([ITB Unit Removal](#))
2. Remove the transfer belt ([Belt Removal](#))
3. The motor [A] is at the front right corner of the ITB unit.
4. On the front side, disconnect the motor [A] bracket [B] (🔩 x4).



d0bxa4159

## 4.Replacement and Adjustment

5. Disconnect the belt [A], and then remove the motor [B] (🔩x1, 📦x1).



d0bxa4160



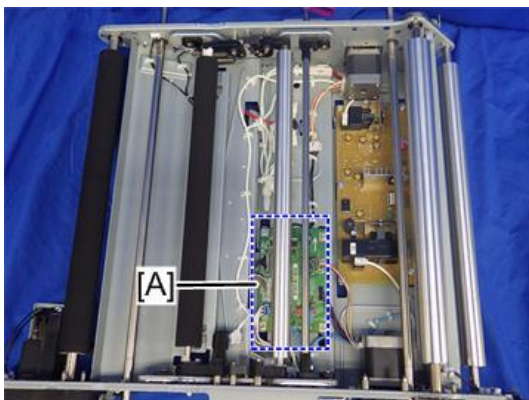
d1793123

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## TDRB (Transfer Drive Relay Board)

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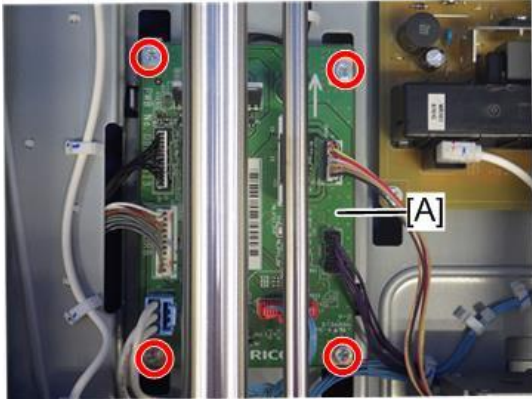
1. Remove the ITB unit ([ITB Unit Removal](#))
2. Remove the transfer belt ([Belt Removal](#))
3. The TDRB [A] is in the center of the unit.



d0bxa4161

## 4.Replacement and Adjustment

4. Remove the TDRB [A] (🔧 x all, 🌀 x4).

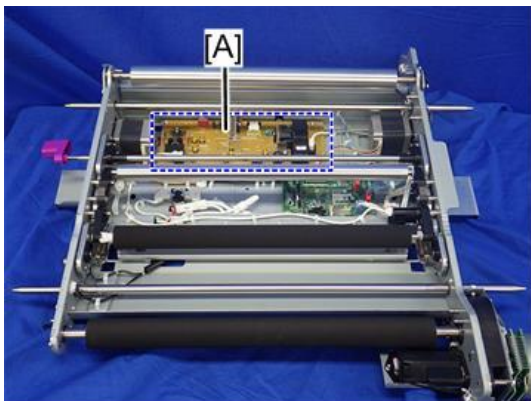


d0bxa4162

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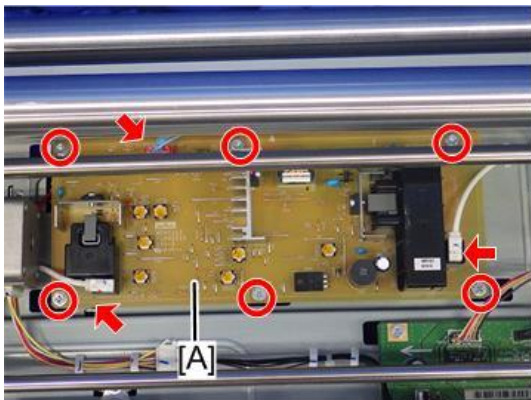
## Transfer Power Pack

1. Remove the ITB unit ([ITB Unit Removal](#))
2. Remove the transfer belt ([Belt Removal](#))
3. The power pack [A] is to the left of the TDRB.



d0bxa4163

4. Remove the board [A] (🔧 x3, 🌀 x6).



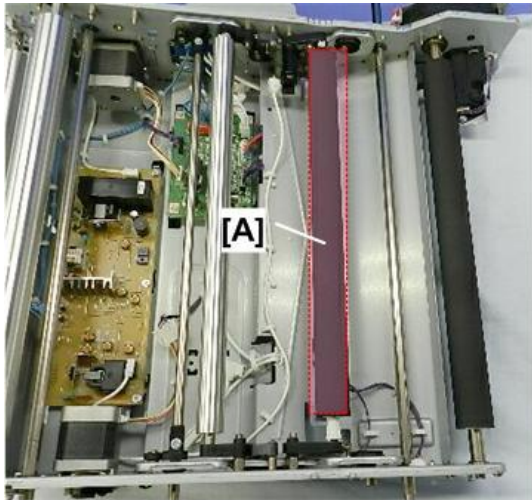
d0bxa4164

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## Transfer Roller

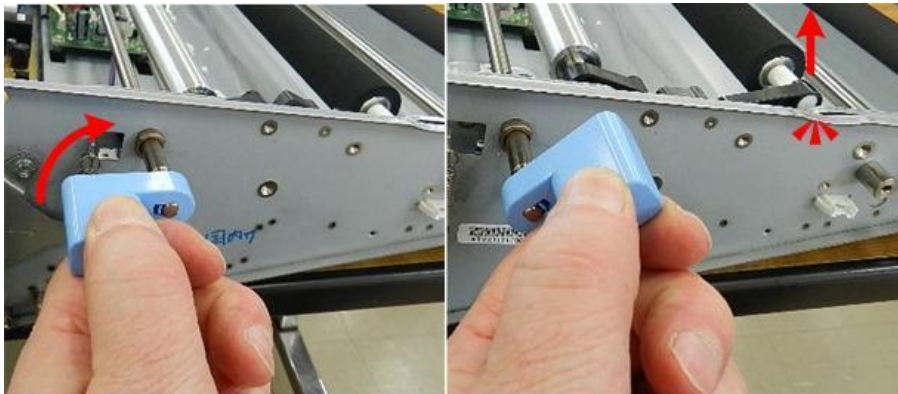
1. Remove the ITB unit ([ITB Unit Removal](#))
2. Remove the transfer belt ([Belt Removal](#))

3. [A] is the transfer roller.



d1793132

4. Turn the lever to raise the transfer roller. This will make the roller easier to remove.

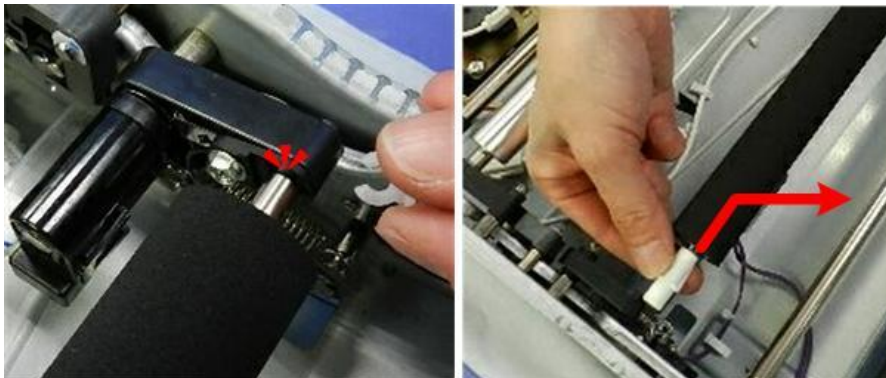


d1803104

**★ Important**

- To prevent poor image quality, never touch the surface of the transfer roller with bare hands.

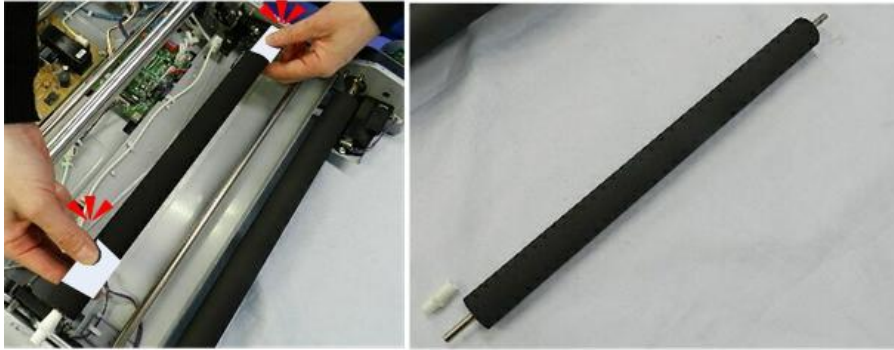
5. At the rear, disconnect the end of the roller (Ⓜx1).



d1793133

## 4.Replacement and Adjustment

6. Slide the roller to the rear to disconnect it at the front, and then remove it.



d1793134

### After Transfer Roller Replacement

---

#### Initiate Process Control

1. Make sure that the machine is off.
2. Open the left and right front doors of the machine.
3. Switch the machine on.
4. Enter the SP mode.
5. Reset the PM part counter for the transfer roller to zero.
6. Leave the SP mode.
7. Close the left door and right door of the machine.
8. Process control will start automatically.
9. A message on the operation panel will tell you that process control has completed.
10. Enter the SP mode.
11. Do **SP3012-001** to confirm that the process control execution completed successfully.
12. Leave the SP mode.
13. This completes the procedure.

#### If Process Control Fails

1. If process control did not end successfully, the machine will issue an SC code.
2. Correct the problem by following the steps recommended for releasing the SC code.
3. After correcting the problem, process control will not execute automatically, so you will need to execute process control manually with SP3011-002.

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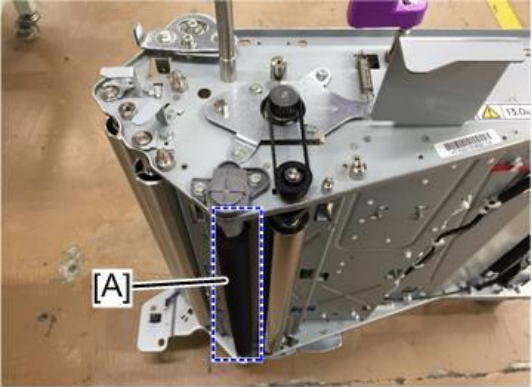
### Paper Transfer Bias Roller

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1. Remove the ITB unit ([ITB Unit Removal](#))
2. Remove the transfer belt ([Belt Removal](#))
3. The paper transfer bias roller [A] is at the bottom left side of the ITB unit. (The photo shows the ITB

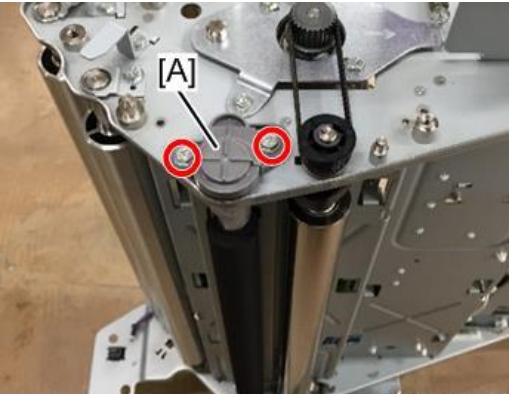


bottom side up.)



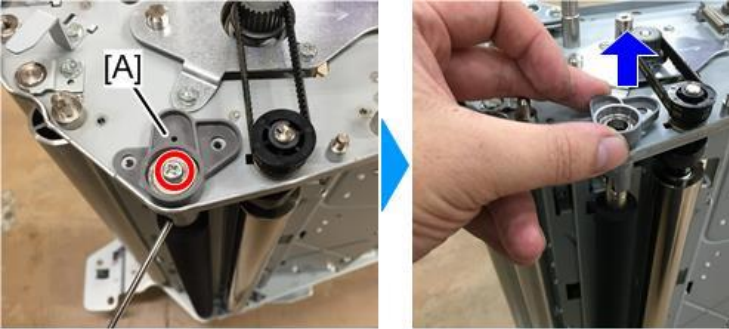
d0bxa4165

4. At the front, disconnect the cap [A] (⚙️x2).



d0bxa4166

5. Disconnect the roller [A] and the terminal contact (⚙️x1).



d0bxa4167

6. Remove the roller. Avoid touching the surface of the roller with bare hands.

**★ Important**

- To prevent poor image quality, never touch the surface of the transfer roller with bare hands.

## 4.Replacement and Adjustment



d0bxa4235

### ★ Important

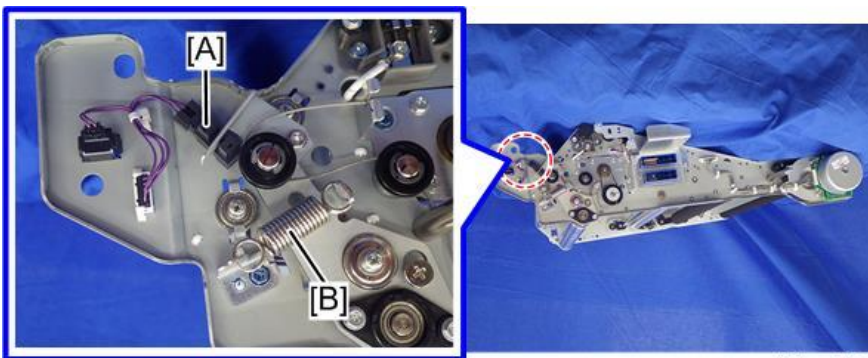
- When the banner display of the paper transfer bias roller replacement flag is switched to 0 (ON) in SP2-324-003, the machine determines the amount of wear in the roller by monitoring the resistance of the paper transfer bias roller. When the resistance level increases, the paper transfer bias roller replacement flag of SP2-324-001 switches to 1 and a banner message is displayed on the operation panel to alert the user that the paper transfer bias roller will need replacement soon and that they should call for service. After replacement and PM counter clear, the paper transfer bias roller replacement flag switches to 0 and the banner display disappears.

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## Belt Centering Roller HP Sensor

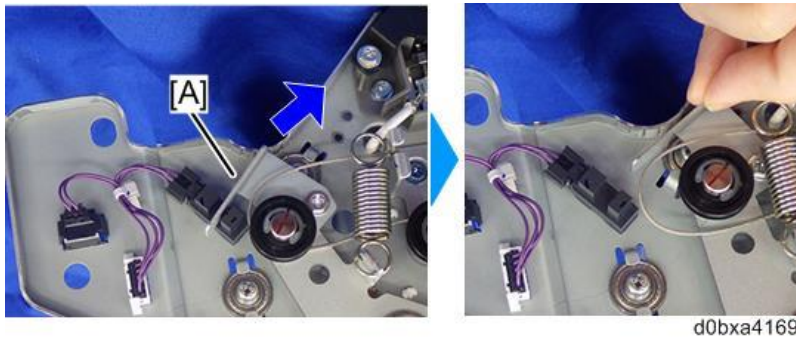
---

1. Remove the ITB unit ([ITB Unit Removal](#))
2. Remove the transfer belt ([Belt Removal](#))
3. The sensor [A] is located at the left rear corner of the ITB unit.
4. Disconnect the spring [B].




d0bxa4168

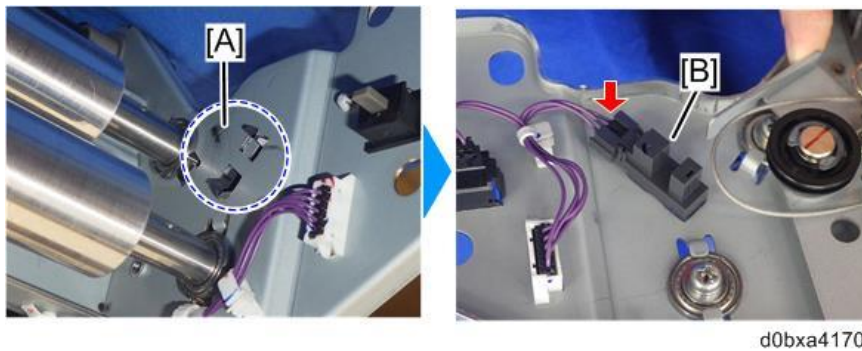
- Carefully move the lever [A] to make it easier to separate the sensor and its actuator.



**Note**

If moving the lever loosened the guide wire, restore it to its original position.


- On the inner side of the frame, disconnect the hook [A], and then remove the sensor [B] (▼x4,  x1)

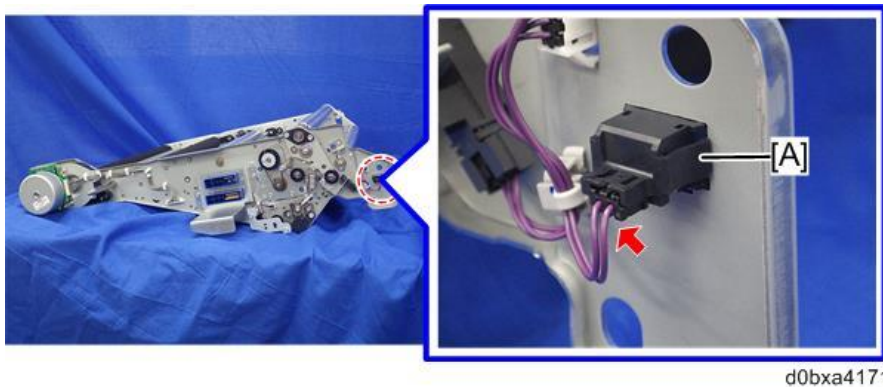


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## Cleaning Unit Set Switch

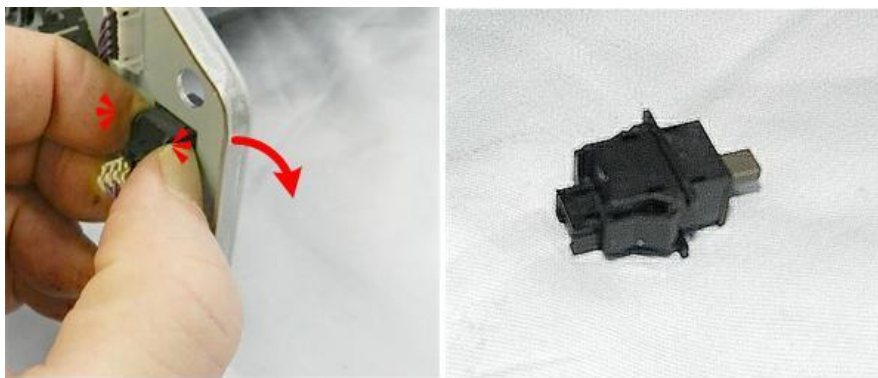
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- This switch [A] is on the far left side of the ITB unit. It can be removed after pulling out the front drawer.
- Disconnect the connector of the switch [A] ( x1).



#### 4.Replacement and Adjustment

3. Pinch the sides of the switch, and then push it through the frame.



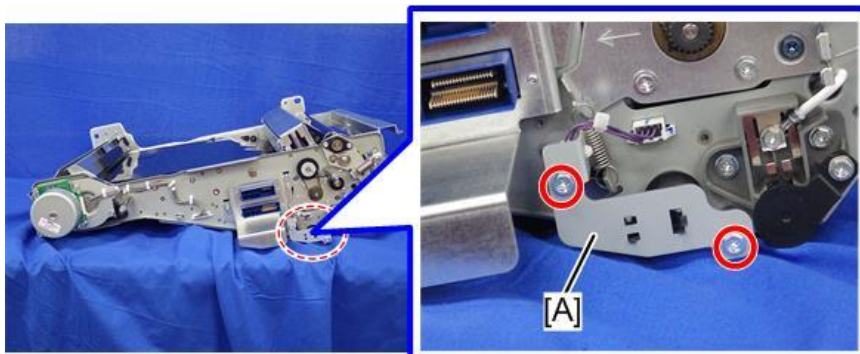
d1793144

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#### PTR Separation Sensor

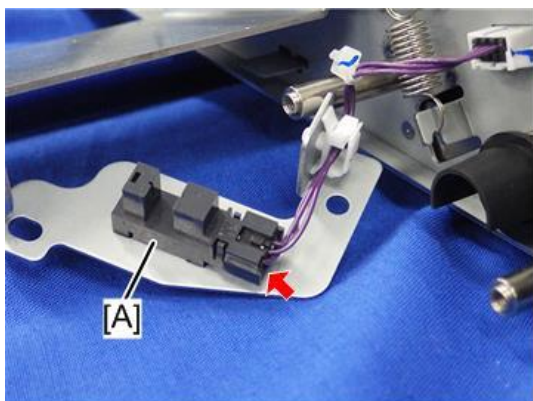
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1. Remove the ITB unit ([ITB Unit Removal](#))
2. Disconnect the bracket [A], and then pull it away (🔧 x2).



d0bxa4172

3. Disconnect the sensor (🔧 x1, ▼x4).



d0bxa4173

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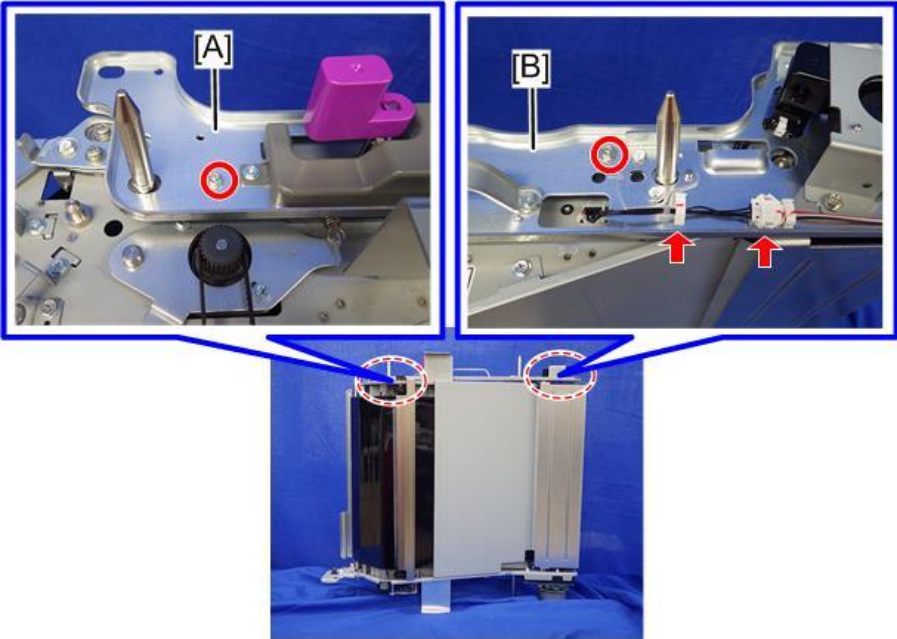
#### ID Sensor

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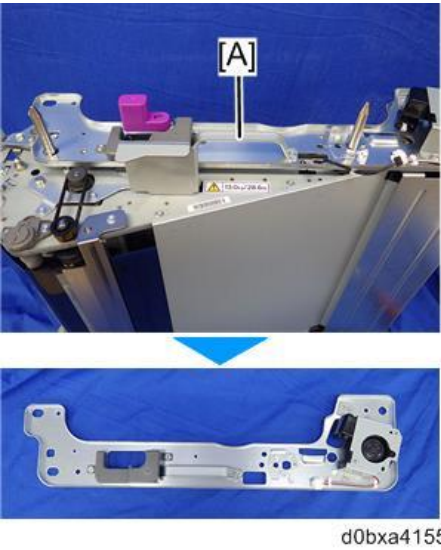
1. Remove the ITB unit ([ITB Unit Removal](#))
2. Disconnect the handle plate on the left [A] (🔧 x1).

4.Replacement and Adjustment

3. Disconnect the handle plate on the right [B] (⚙️x1, 📡x1, 🛠️x1).

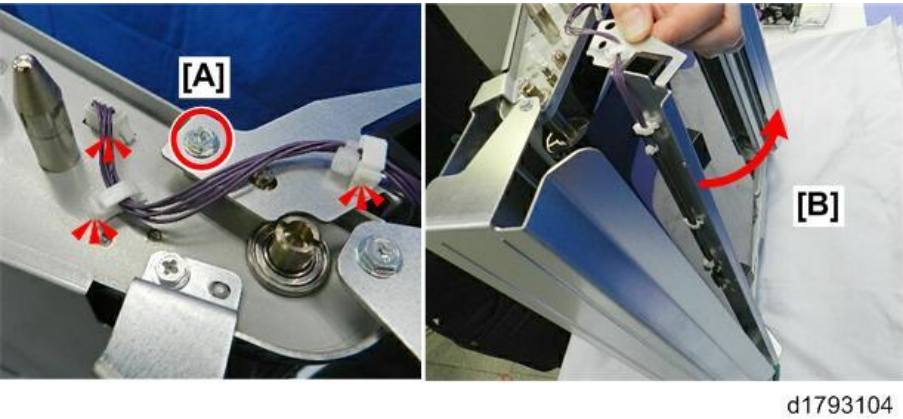


4. Remove the handle plate [A].



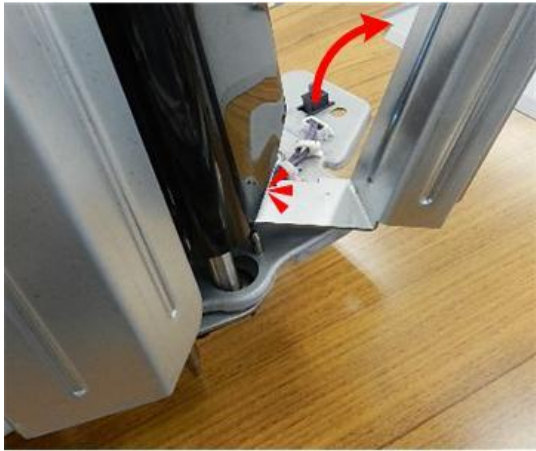
5. Disconnect the ID sensor plate at the front [A] (🛠️x2, 📡x1, ⚙️x1).

6. Disconnect at [B].



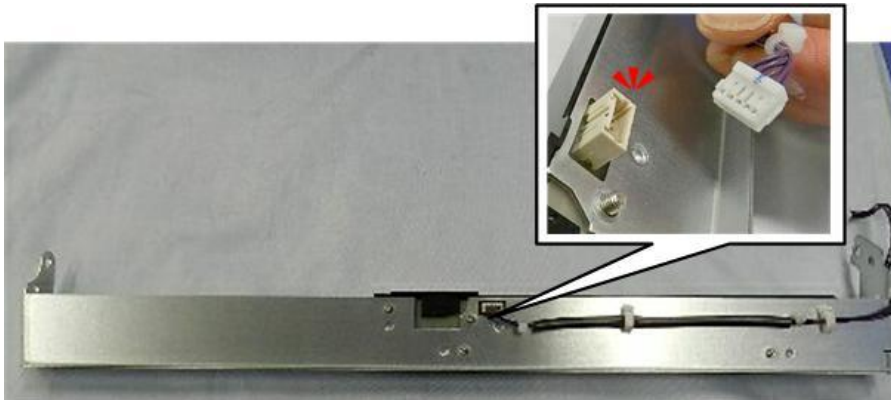
#### 4.Replacement and Adjustment

7. When you remove the plate (and at re-installation) work slowly and hold it to prevent it from falling and damaging the belt.



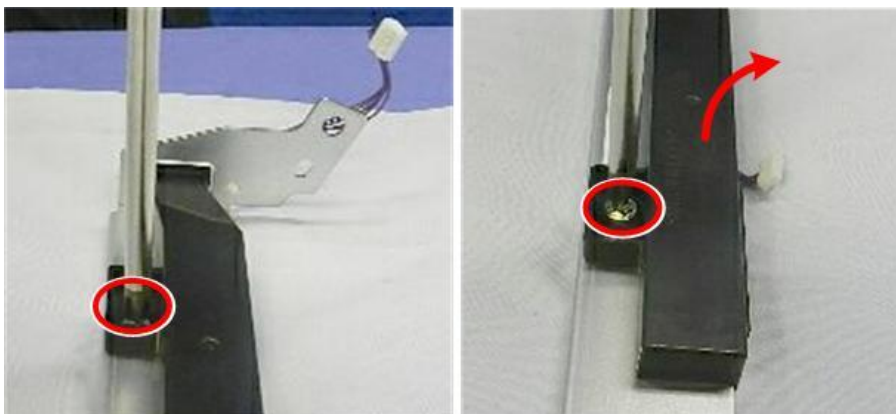
d1803103

8. Disconnect the sensor (🔌 x1).



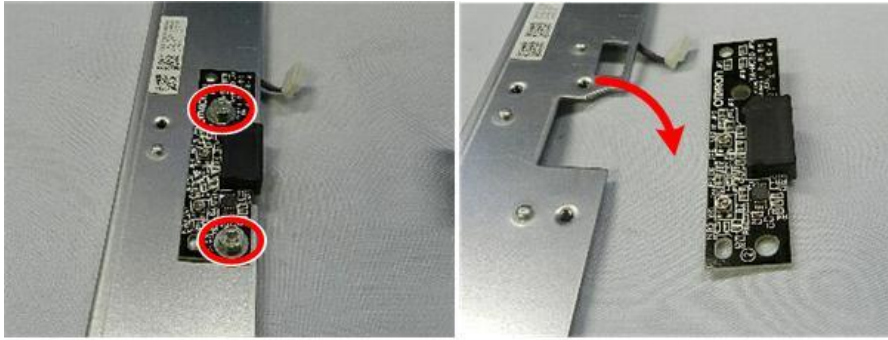
d1793147

9. Remove the sensor cover (🔩 x1).



d1793148

10. Remove the sensor (🔧 x2).



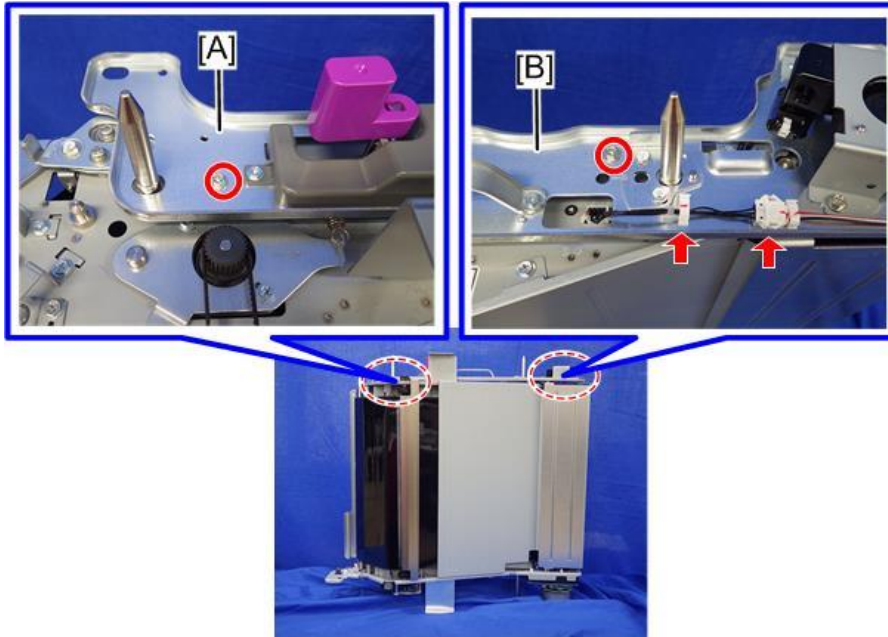
d1793149

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### Belt Centering Sensor

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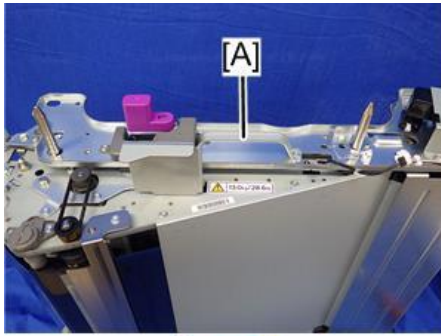
1. Remove the ITB unit ([ITB Unit Removal](#))
2. Disconnect the handle plate on the left [A] (🔧 x1).
3. Disconnect the handle plate on the right [B] (🔧 x1, 📡 x1, 📡 x1).



d0bxa4154

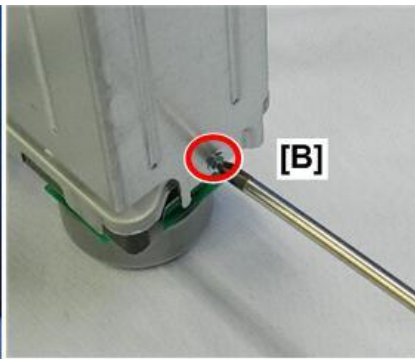
#### 4.Replacement and Adjustment

4. Remove the handle plate [A].



d0bxa4155

5. Disconnect the right end plate at the front [A] (⊙x2).
6. Disconnect the plate at the rear [B] (⊙x1).



d1793105



7. Remove the plate.



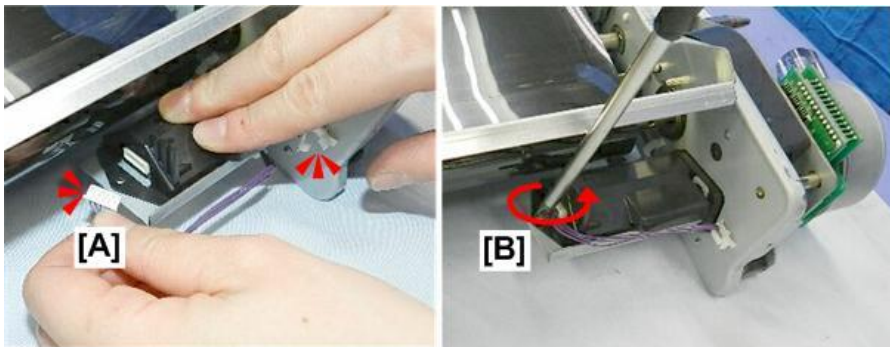
d1793106

8. Disconnect the harness [A] (🔧x1, 📦x1)

9. Remove the sensor cover [B] (🔧x1).

**★ Important**

- Work carefully without force to avoid damaging the bracket when you disconnect the harness and screw.



d1793150

10. Disconnect and remove the sensor bracket (🔧x1).



d1793151

#### 4.Replacement and Adjustment

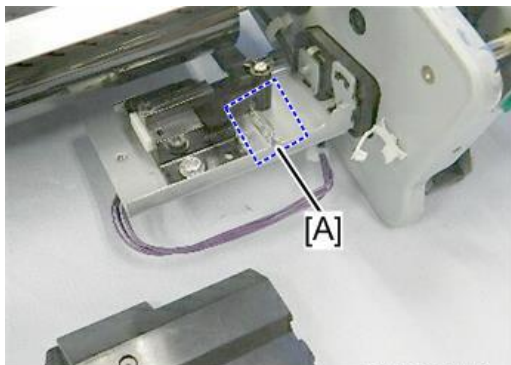
11. Remove the sensor.



d1793152

**Note**

- During removal of the belt centering sensor, do not apply the excessive power to the spring [A].



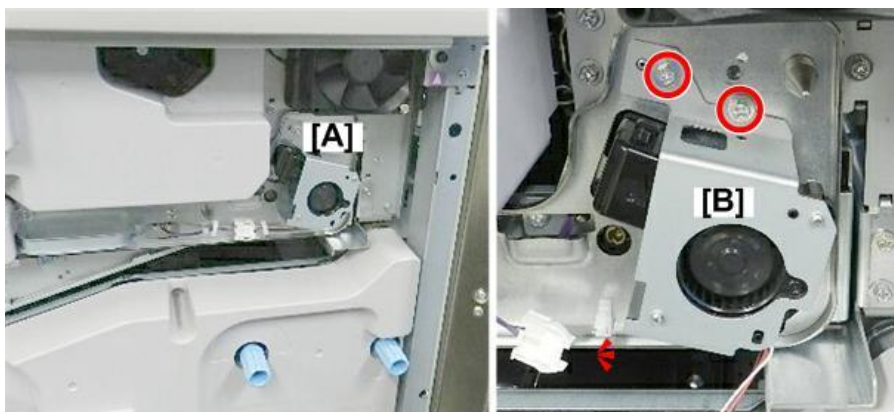
d1793151a

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#### ID Sensor Fan

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1. Remove the ITB unit ([ITB Unit Removal](#))
2. The fan [A] is on the front right side of the unit.
3. Disconnect the top of the fan bracket and the fan [B] (🔩x1, 📦x1).

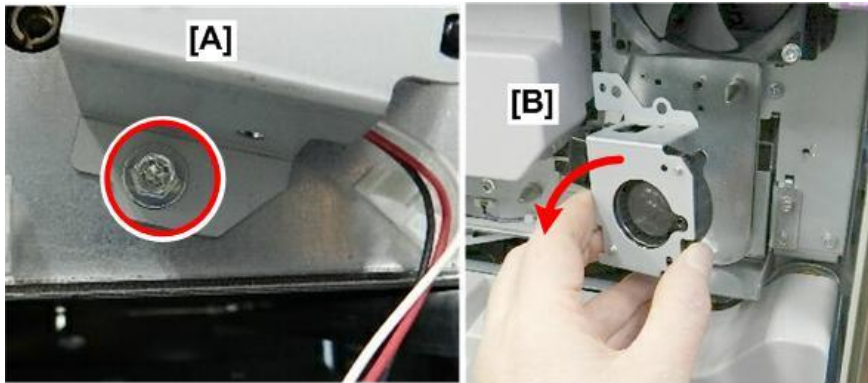


d1793153

4. Disconnect the bottom of the fan bracket [A] (🔩x1).

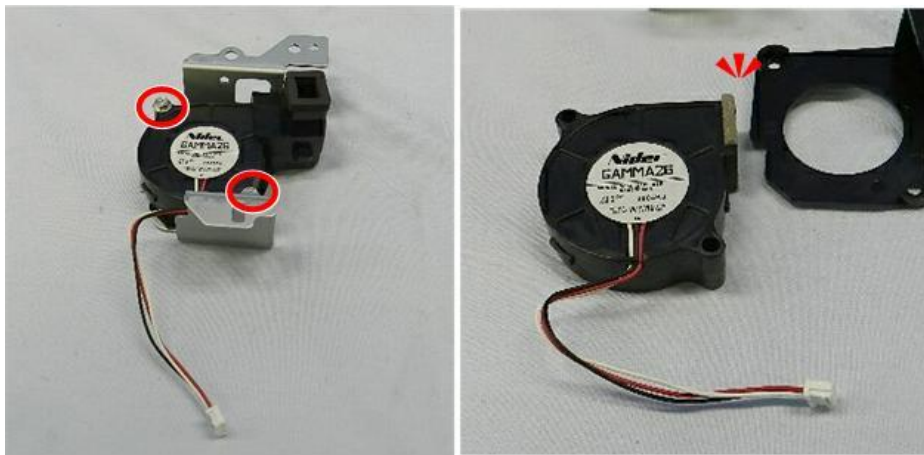
## 4.Replacement and Adjustment

5. Remove the fan bracket [B] (with fan attached).



d1793154

6. Separate fan and bracket (⚙️x2).
7. Disconnect the fan from the duct.



d1793155

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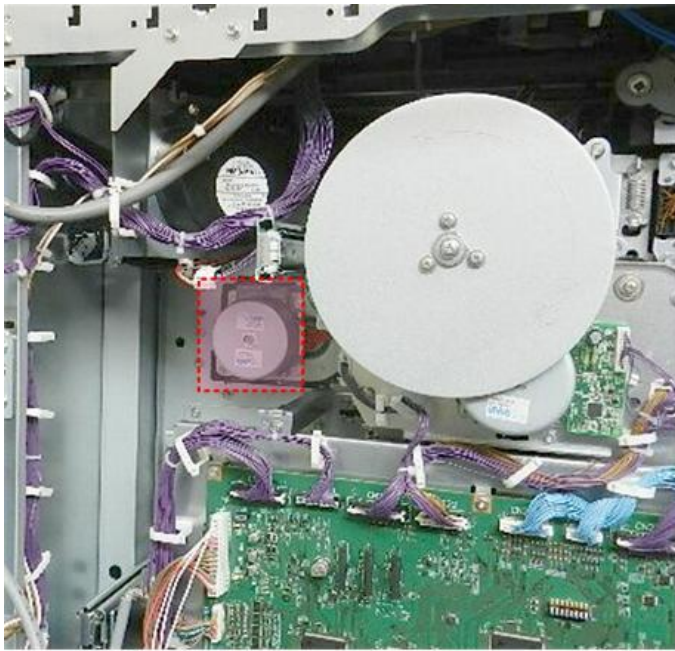
## Transport Belt Motor

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1. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))

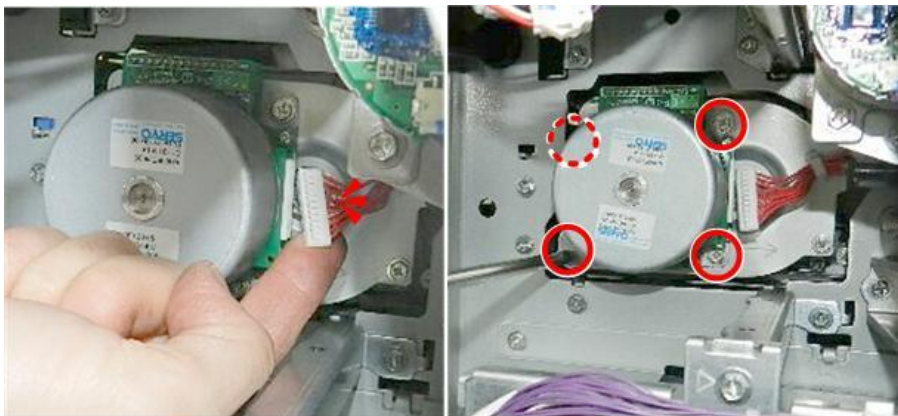
#### 4.Replacement and Adjustment

2. The motor is down and to the left of the flywheel.



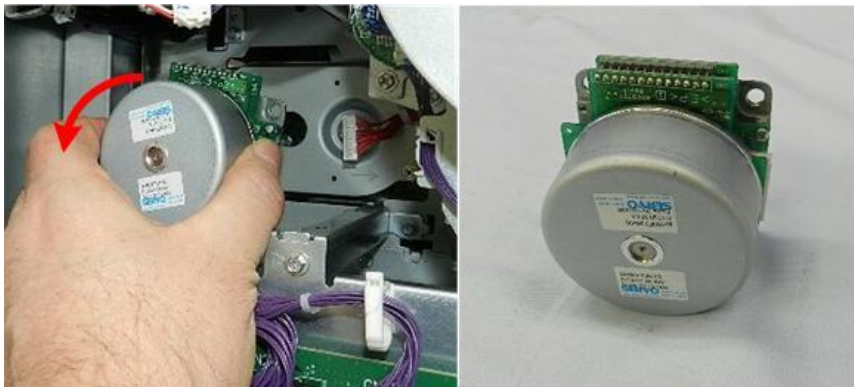
d1793156

3. Disconnect the motor (🔌 x1, 🛠️ x4).



d1793157

4. Remove the motor.



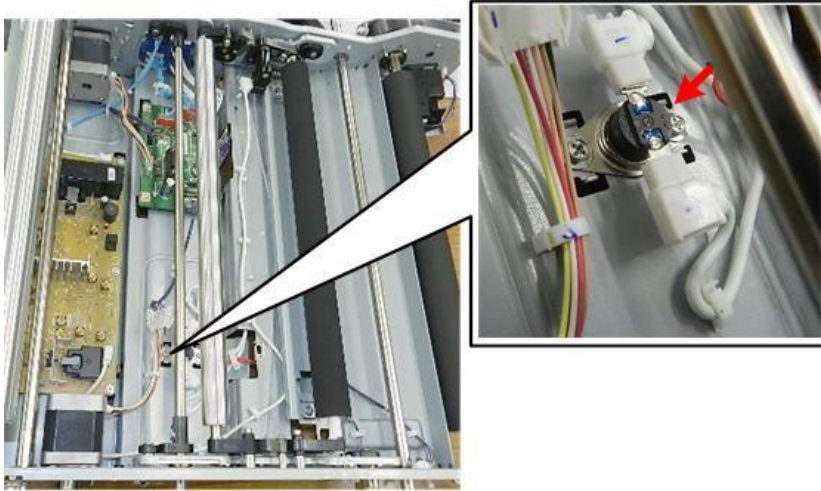
d1793158

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## ITB Unit Thermostat

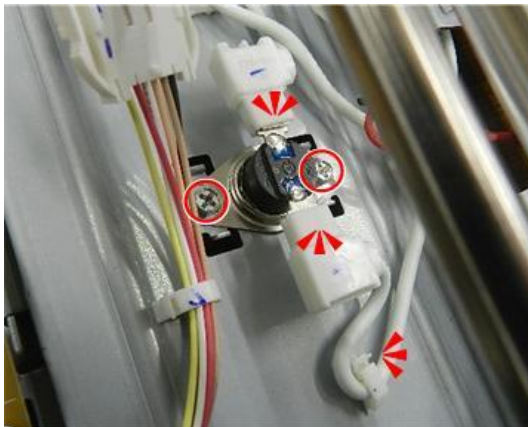
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1. Remove the ITB unit ([ITB Unit Removal](#))
2. The thermostat is located near the front of the unit.



d1803110

3. Remove the thermostat (🔧 x1, 🔩 x2, 🔧 x2).



d1803111

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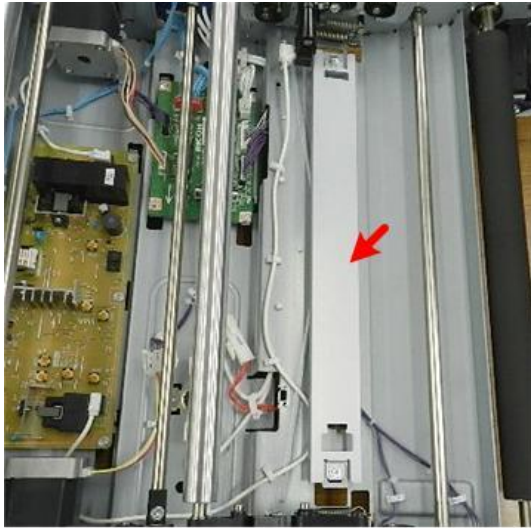
## Transfer Unit Heater

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1. Remove the ITB unit ([ITB Unit Removal](#))
2. Remove the transfer belt ([Belt Removal](#))
3. Remove the transfer roller ([Transfer Roller](#))

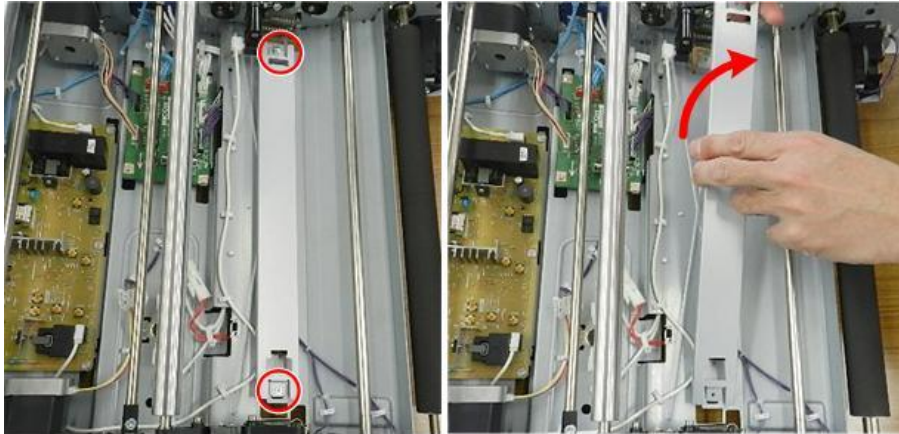
#### 4.Replacement and Adjustment

4. The heater is under the plate.



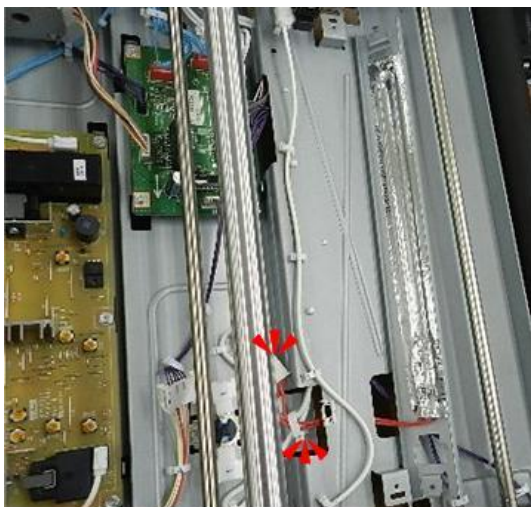
d1803112

5. Disconnect the plate (🔩x2).



d1803113

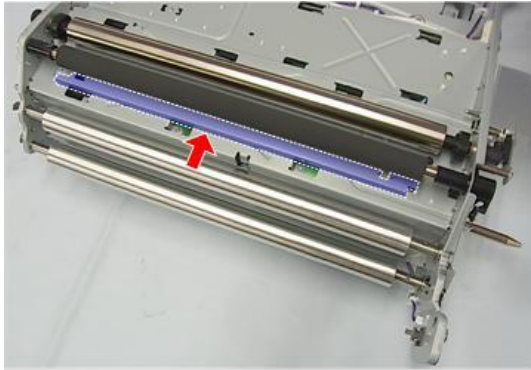
6. Disconnect the heater (🔧x1, 📦x1).



d1803114

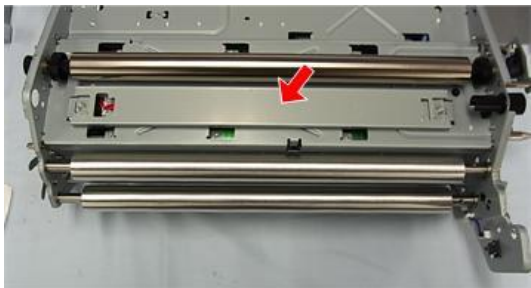
## Bias Roller Heater

1. Remove the ITB unit ([ITB Unit Removal](#))
2. Remove the transfer belt ([Belt Removal](#))
3. Remove the PTR separation motor ([PTR Separation Motor](#))
4. The heater is under the paper transfer bias roller.



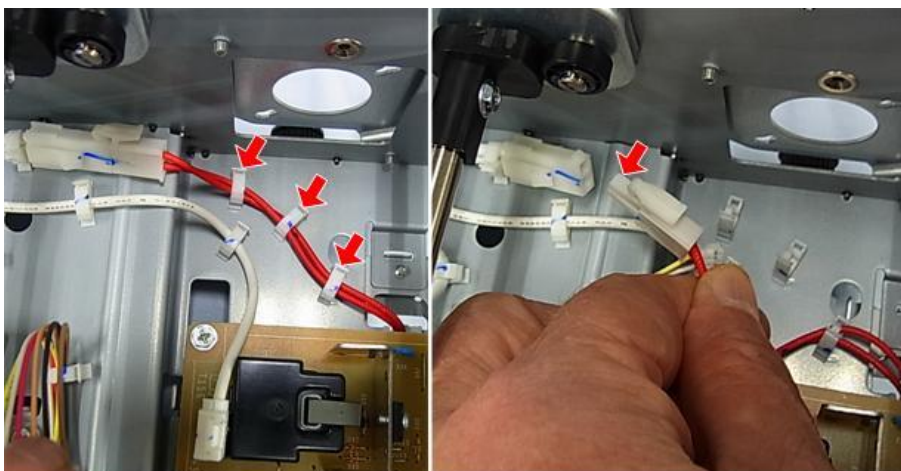
d270b3121

5. Remove the paper transfer bias roller. ([Paper Transfer Bias Roller](#))
6. The heater is under the plate.



d270b3115

7. Disconnect the harness where you removed the motor.



 x3

 x1

d270b3116

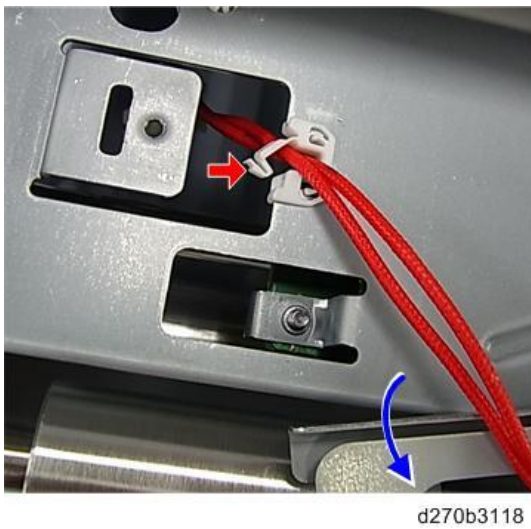
8. Turn the unit over.

#### 4.Replacement and Adjustment

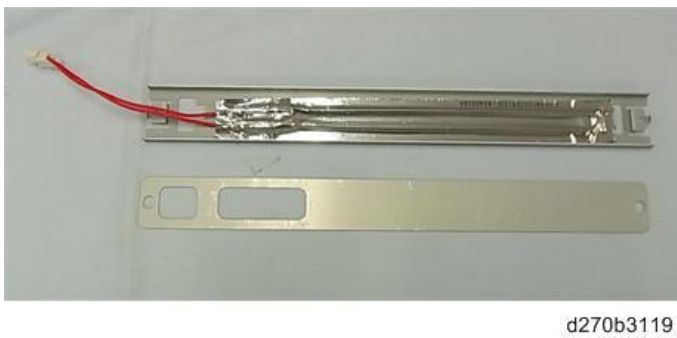
9. Remove the screws to free the plate (🔩 x2).



10. Open the harness clamp where you disconnected the front end of the plate (🔗 x1).



11. Remove the plate with heater attached, and the shield plate.





## ITB Cleaning Unit

### ITB Cleaning Unit Disassembly

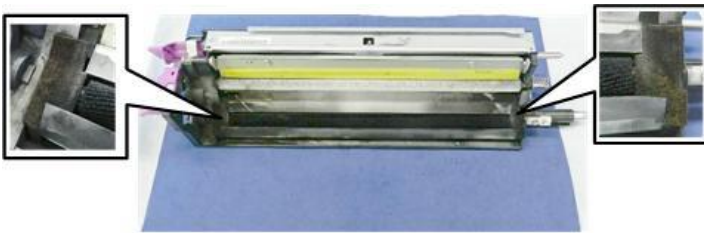
#### Before You Begin

##### Note

- The lubricant roller, lubricant bar, lubricant blade, and cleaning blade are always replaced as one set.

##### Important

- When removing and re-installing blades, work carefully to avoid damaging the sponge seals at the ends of the blade. These sponge seals cannot be replaced in the field.



d1793217

#### After Replacing the ITB Cleaning Unit

Do the procedure below with the belt cleaning mode operation, even if you are replacing only the ITB cleaning unit and not the belt.

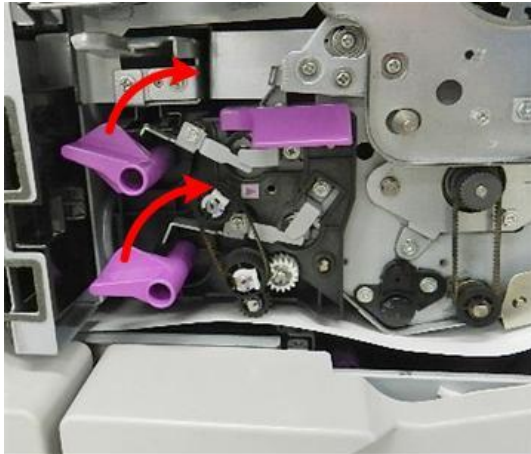
##### Note

- With long use the surface of the belt could deteriorate and become slightly rough, causing its coefficient of friction to increase slightly. Also, the edges of new blades could be sharp. These conditions could cause the blades to catch easily on the belt.
- For these reasons, you must execute the belt cleaning mode (SP2310-001) to reduce the friction between the belt and replaced blades of the ITB cleaning unit.

1. Make sure that the machine is off.
2. Open both front doors.

#### 4.Replacement and Adjustment

3. Open the lubricant blade and cleaning blade by rotating the two levers up.



d1793203

4. Remove the PTR. ([PTR Unit Removal](#))

##### Note

- Leave the PTR unit out of the machine.
5. Remove the drum cleaning unit. ([Drum Cleaning Unit](#))
  6. Remove the front edge cover (\*x2).
  7. Turn the machine on and enter the SP mode.
  8. Do SP2310-1 (Force Lubricant - Belt Cleaning).
  9. Touch [EXECUTE], and then close the front doors.
  10. Wait for about 5 minutes.
  11. The machine will display a message to alert you that the process is finished.
  12. Open the front doors.
  13. Turn the main machine off.
  14. Install the PTR unit.
  15. Install the drum cleaning unit.
  16. Lower and lock the levers that were opened in Step 3.
  17. Turn the main machine on.
  18. Reset the counters for the replaced unit or parts
    - SP 7-622-021 for ITB cleaning unit
    - SP 7-622-022 for ITB cleaning blade
    - SP 7-622-023 for ITB lubricant brush roller
    - SP 7-622-024 for ITB lubricant bar
    - SP 7-622-025 for ITB lubricant blade
  19. Exit the SP mode and close the front doors.

#### Cleaning Blade

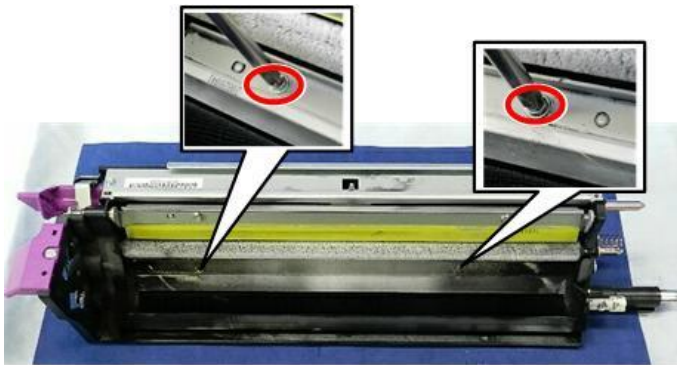
---

##### ★ Important

The cleaning blade, lubricant roller, lubricant bar, and lubricant blade are always replaced as one set.

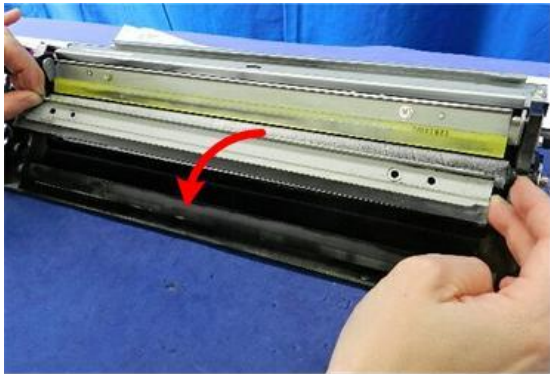
## 4.Replacement and Adjustment

1. Remove the ITB cleaning unit (ITB Cleaning Unit)
2. Disconnect the cleaning blade (🔧x2).



d1793218

3. Remove the blade.



d1793219

### Lubricant Roller

---

1. Remove the ITB cleaning unit (ITB Unit Removal)
2. Remove the cleaning blade (Cleaning Blade)

#### ↓ Note

- The cleaning blade, lubricant roller, lubricant bar, and lubricant blade are always replaced as one set.

3. At the front, remove:

[A] Clips (🔧x1)

[B] Belt (🔧x1)

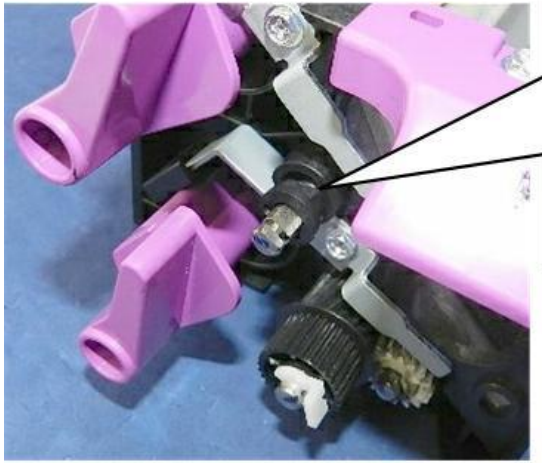
[C] Gear (x1)



d1793220

#### 4.Replacement and Adjustment

- Slide off the bushing.



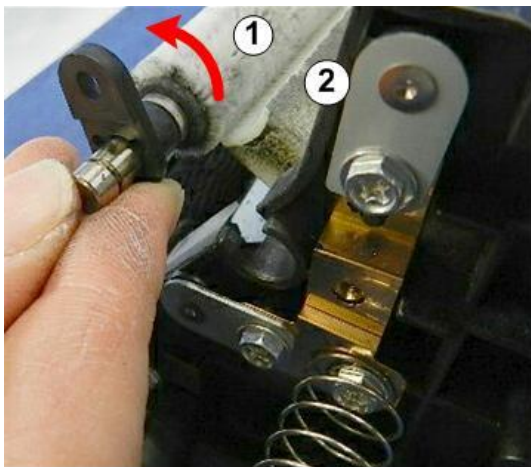
d1793221

- At rear, disconnect the end of the roller (Ⓜx1, Ⓝx1, Ⓞx1).



d1793222

- Remove the roller ①. After the roller is removed, you can see the lubricant bar ②.



d1793223

Lubricant Bar

1. Remove the ITB cleaning unit (ITB Unit Removal)

**Note**

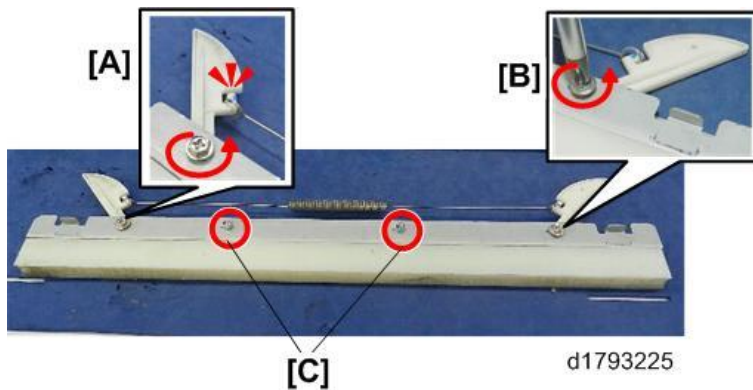
- The cleaning blade, lubricant roller, lubricant bar, and lubricant blade are always replaced as one set.

2. Remove the lubricant bar.



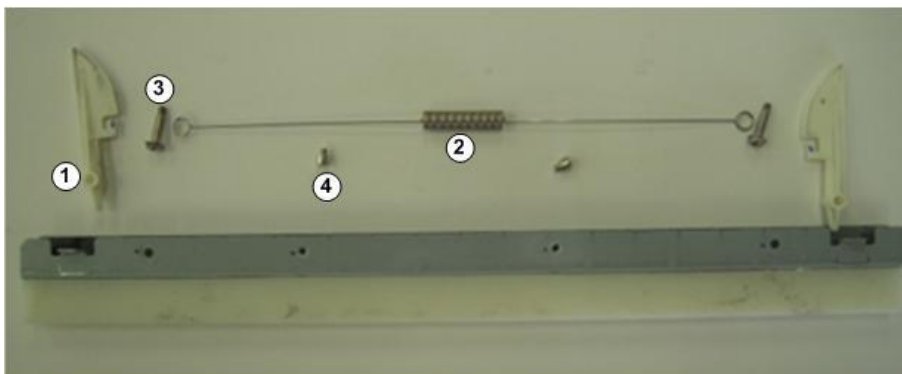
d1793224

3. Disconnect both arms [A] and [B] (Ⓚx1, Ⓛx2)
4. Remove both pins [C].



d1793225

5. Do not discard the arms (x2) ①, spring (x1) ②, screws (x2) ③, and pins (x2) ④. These must be re-attached to the new lubricant bar.



d1793226

## 4.Replacement and Adjustment

### Lubricant Blade

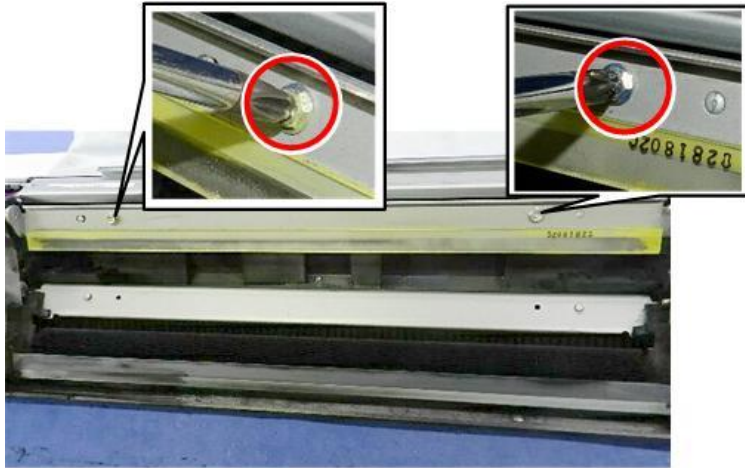
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#### 1. Remove the ITB cleaning unit (ITB Unit Removal)

##### Note

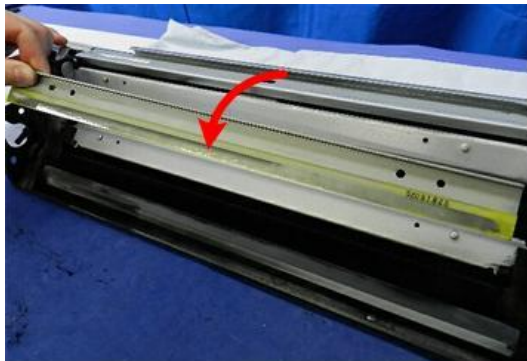
- The cleaning blade, lubricant roller, lubricant bar, and lubricant blade are always replaced as one set.

#### 2. Disconnect the lubricant blade (⚙️ x2).



d1793227

#### 3. Remove the blade.



d1793228

### Notes about Lubrication

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Lubricant is already applied to the following service parts at the factory, so they require no further lubrication (setting powder, yellow toner) before they are installed.

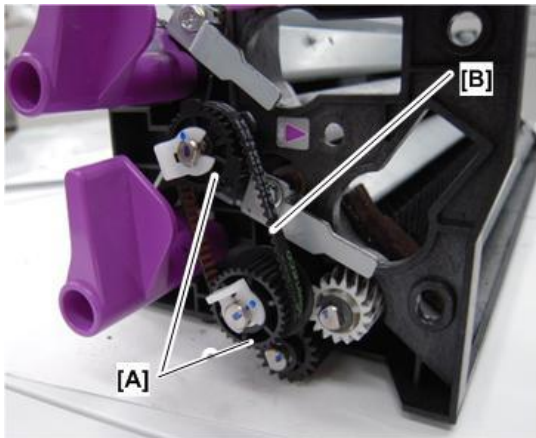
- However, you must execute SP2310-001 to force lubricant cleaning after they have been installed.
- The cleaning blade can be replaced separately. It requires no lubrication, but SP2310-001 still must be done.
- The lubricant brush roller, lubricant bar, and lubricant blade are always replaced together, not separately, but SP2310-001 must be done after they are replaced.
- When the ITB unit is replaced as a unit, SP2310-001 still must be done.

Part	When Replaced Individually	When ITB Unit Replaced as a Unit
Cleaning blade*1	SP2310-001*4	SP2310-001*4

Part	When Replaced Individually	When ITB Unit Replaced as a Unit
Lubricant brush roller*3	---	
Lubricant bar *3	---	
Lubricant blade*2 *3	SP2310-001*4	
*1	Setting power (zinc stearate) applied before shipping.	
*2	Yellow toner applied before shipping	
*3	Always replaced together as a set.	
*4	After replacing parts, be sure to execute force lubricant cleaning (SP2310-001).	

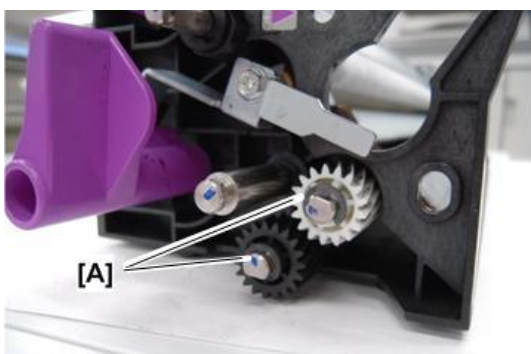
### Cleaning Roller

1. Remove the ITB cleaning unit ([ITB Unit Removal](#))
2. Remove the snap rings [A] and the timing belt [B] (⌀x2, ⌀x1).



d1793239

3. Remove the gears [A] (⌀x2, ⌀x2).

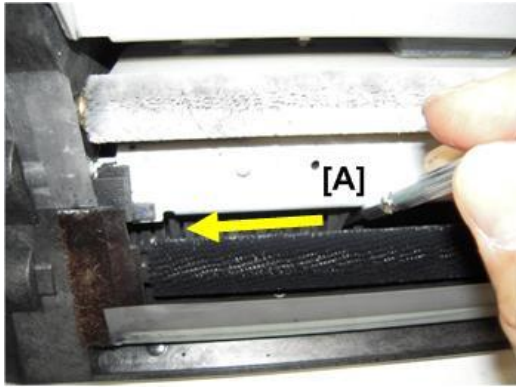


d1793240

#### ★ Important

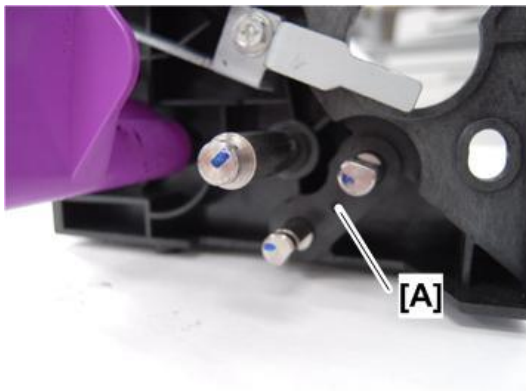
- When the black gear is re-attached to the end of the coil shaft [A], work carefully. When re-installing the coil shaft in the unit, apply very light pressure on the gear as shown above to avoid scratching the mylar with the projections on the coil.

#### 4.Replacement and Adjustment



d1793241

4. Remove the front bushing [A] while holding the collection coil and cleaning roller steady.

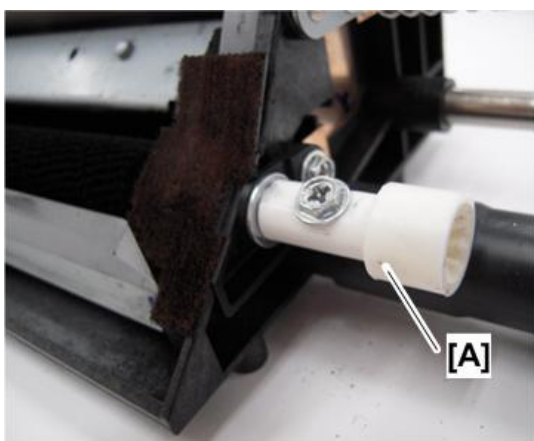


d1793242

#### ★ Important

- When you re-attach the front bushing, try to avoid the projection of the lower timing belt that you removed in Step 2.

5. At the rear, remove the coupling [A] and the washer (⊗x1, ⊙x1).

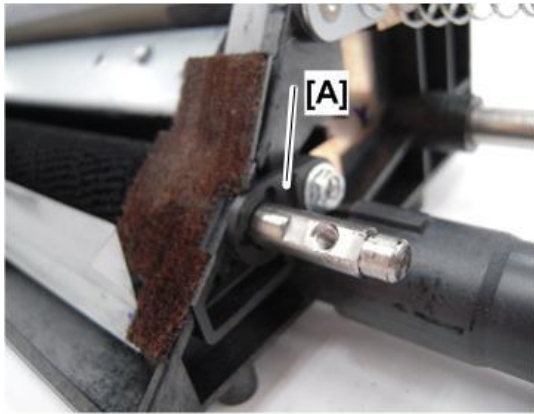


d1793243



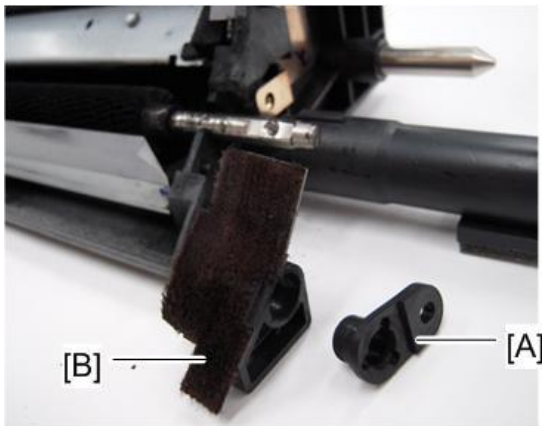
#### 4.Replacement and Adjustment

6. While holding the cleaning roller steady, disconnect the bushing [A] (⌀x1).



d1793244

7. Remove the bushing [A] and the holder [B].

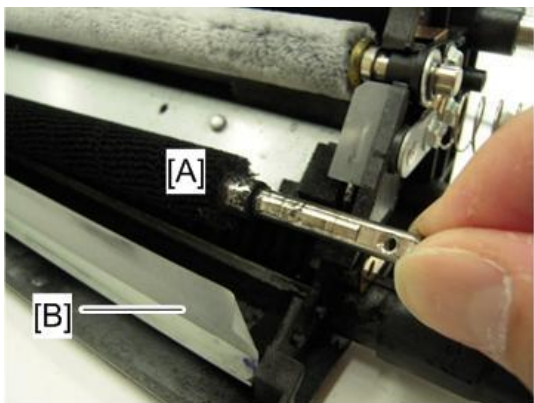


d1793245

8. Lift the cleaning roller [A] and remove it.

**★ Important**

- Work carefully to avoid damaging the fragile seal [B] near the roller.



d1793246

## 4.Replacement and Adjustment

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### ITB/PTR Cleaning Motor

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#### Removing the Vertical Duct

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1. Remove the rear cover ([Rear Cover](#))
2. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))



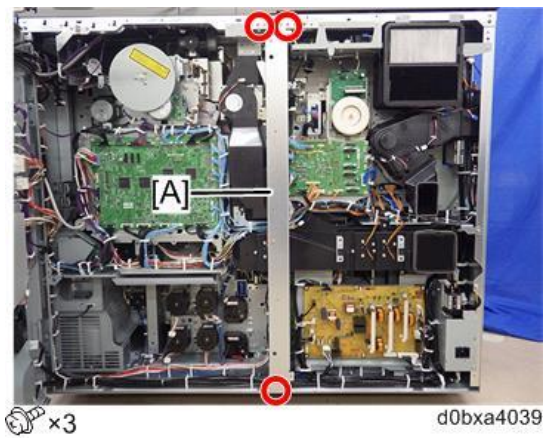
d270b2226

3. Remove the controller box rear cover.

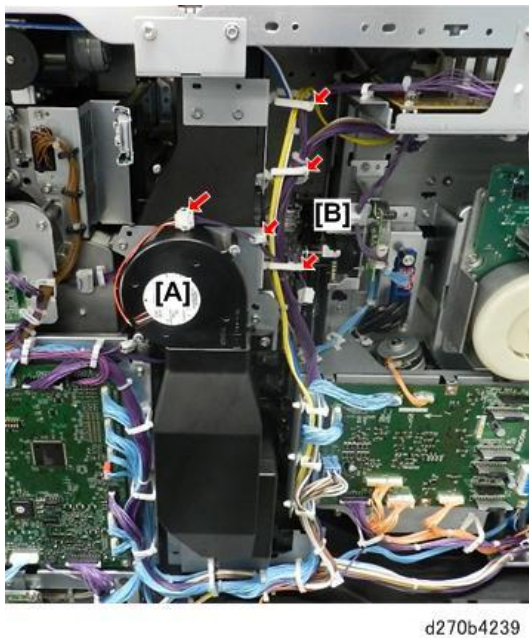


d270b2227

4. Remove the vertical stay [A].



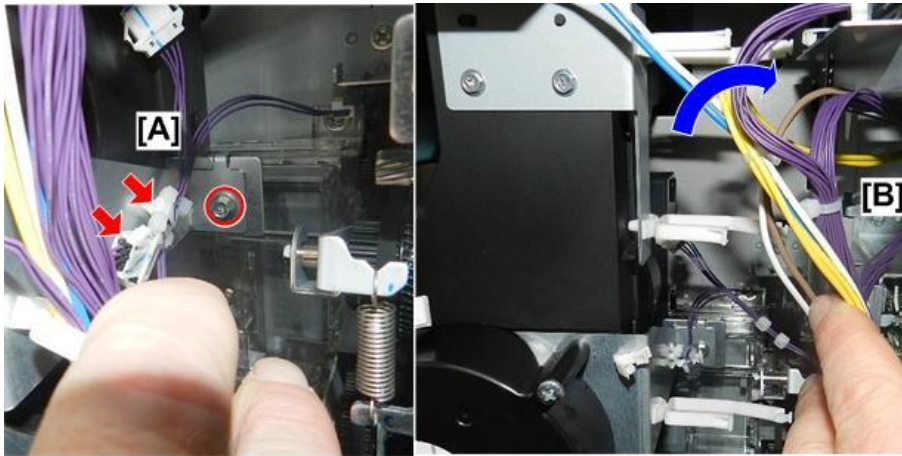
5. Disconnect the motor harness [A] (🔧x1, 📦x1).  
6. Open the clamps [B] (🔧x3).



7. Inside the machine, disconnect and free the harness, and then disconnect the motor bracket [A] (🔧x1, 📦x1, 🌀x1).

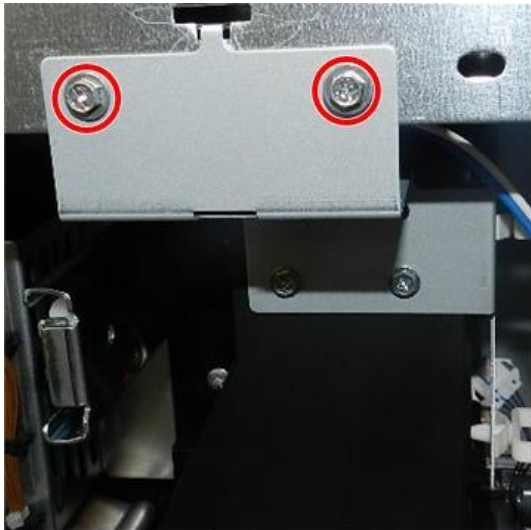
#### 4.Replacement and Adjustment

8. Carefully, pull the harnesses [B] away from the side of the duct.



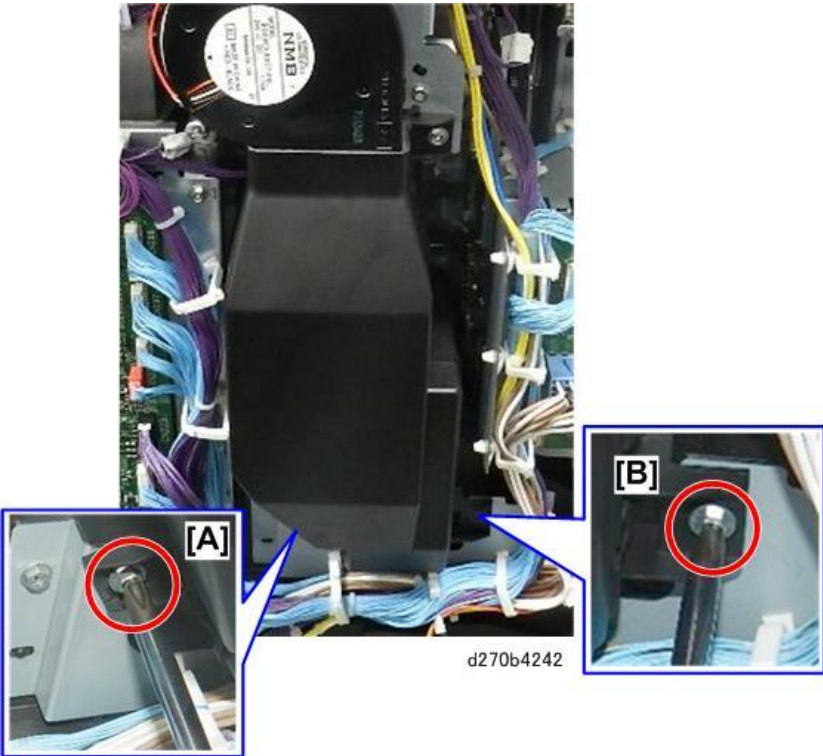
d270b4240

9. Disconnect the top of the duct bracket (⊖ x2).

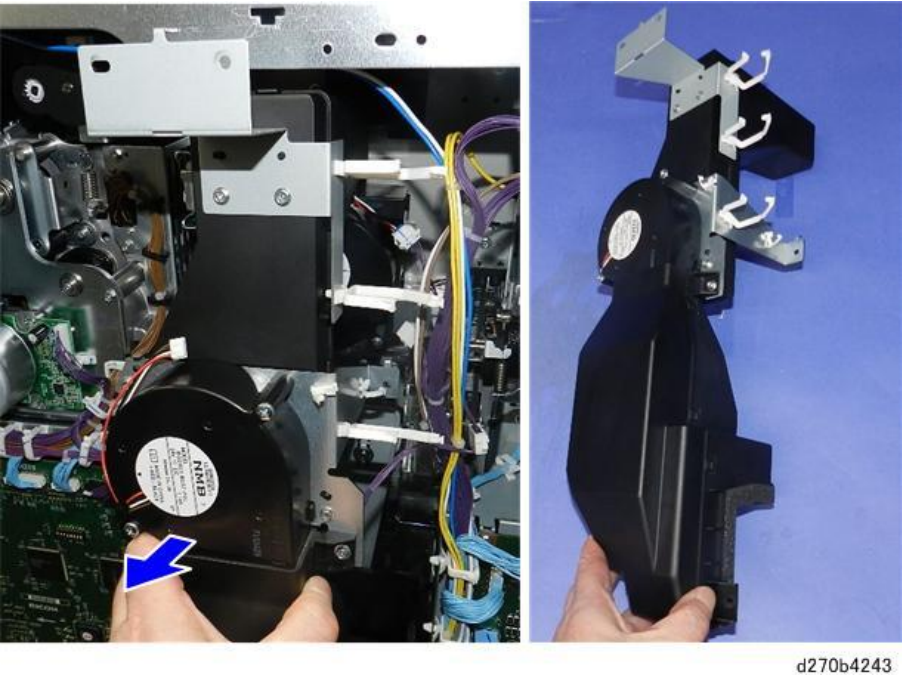


d270b4241

10. Disconnect the bottom of the duct at the left corner [A] and right corner [B] (🔧x2).



11. Remove the vertical duct.



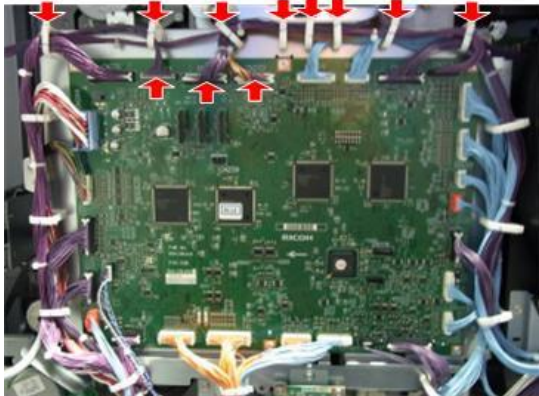
12. Start to disconnect the IOB at the lower left side of the machine (🔧x2, 🗑️x2).

## 4.Replacement and Adjustment

### Lowering the IOB

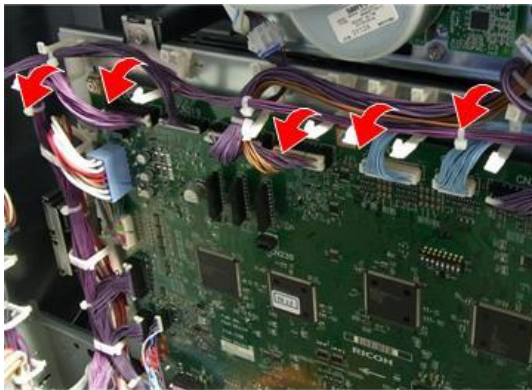
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1. Disconnect the top of the IOB (🌀x8, 🌀x3).



d270b3009

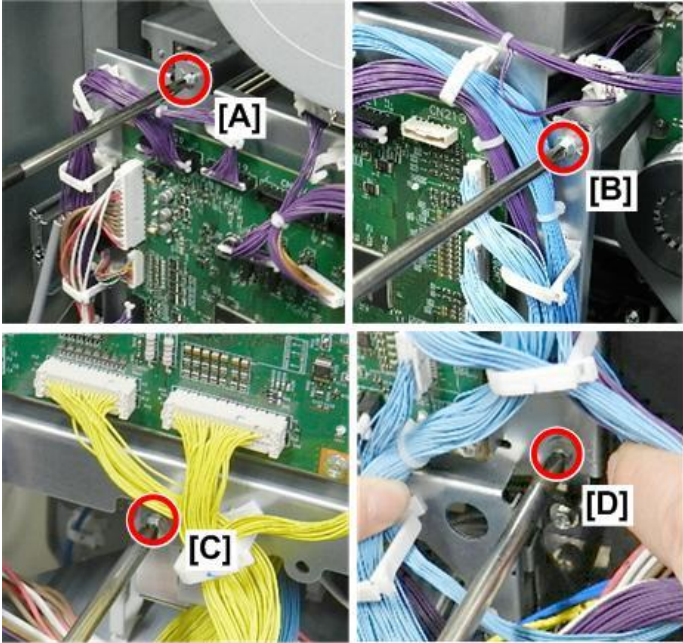
2. Free the harnesses along the top edge of the board.



d270b3010

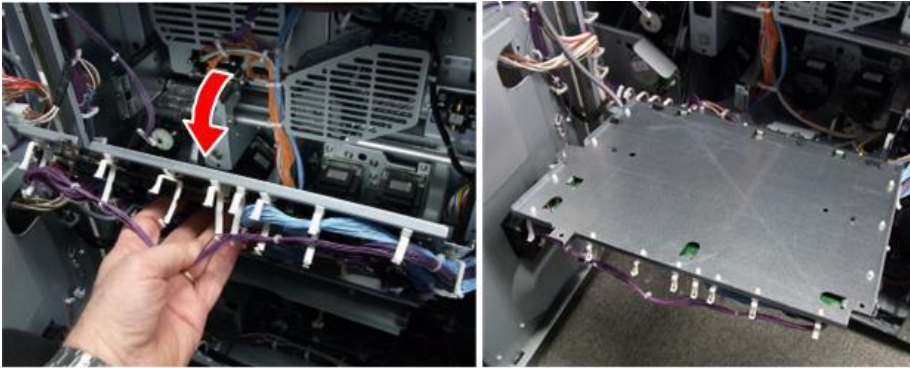
3. Disconnect the IOB:  
[A] Upper left (🌀x1)  
[B] Upper right (🌀x1)  
[C] Lower left (🌀x1)  
[D] Lower right (🌀x1)

4.Replacement and Adjustment



d1794008

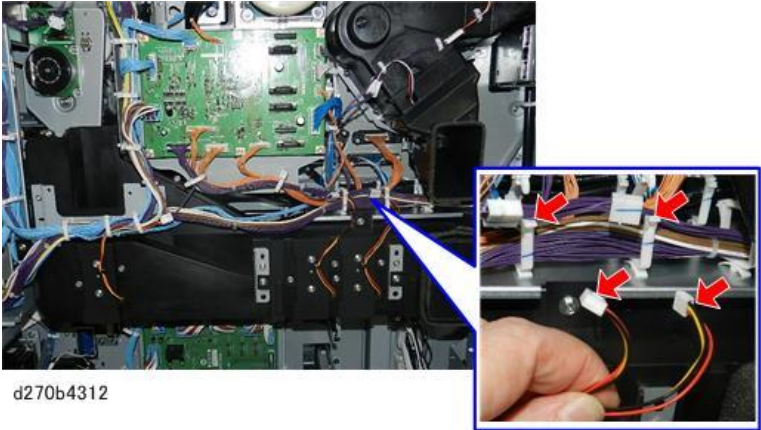
4. Lower the IOB bracket (with PCB attached) until it stops.



d270b3011

Removing the Large Horizontal Duct

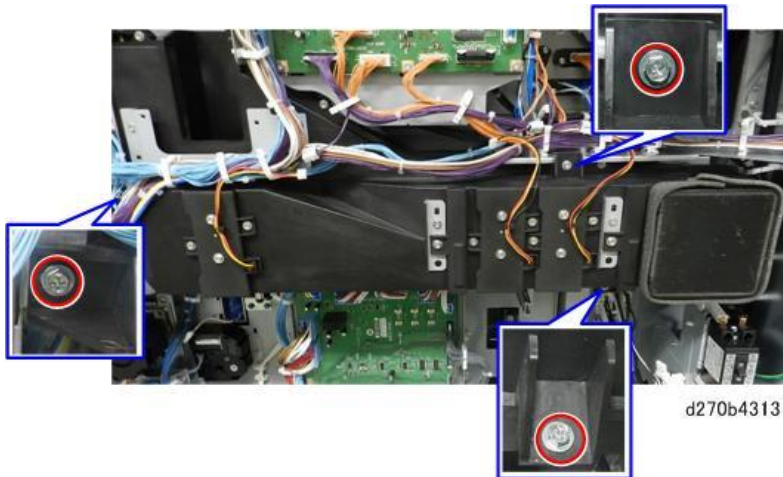
1. Disconnect the horizontal duct fans (🌀x2, 📦 x2).



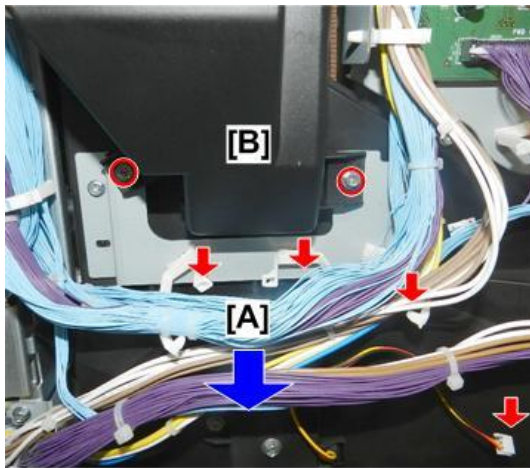
d270b4312

#### 4.Replacement and Adjustment

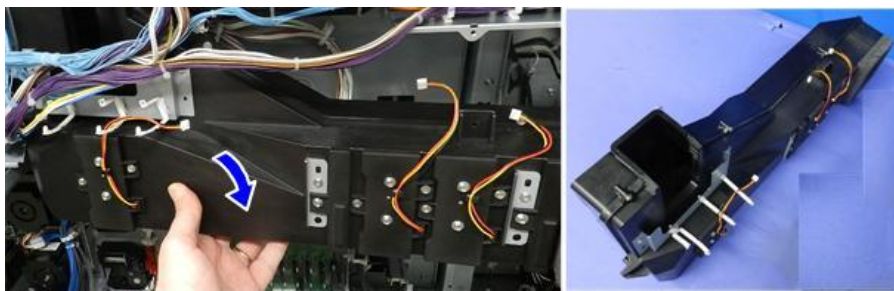
2. Disconnect the horizontal duct (🔧 x3).



3. Open the clamps and then disconnect the fusing transport exhaust fan (🔧 x3, 📦 x1).



4. Remove the horizontal duct.

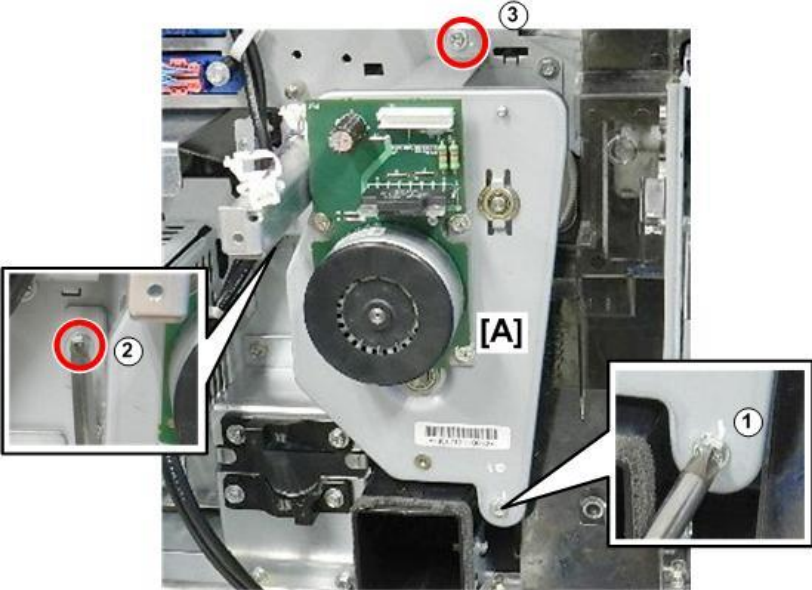


#### Removing the ITB/PTR Cleaning Motor

1. Next, remove the ITB/PTR cleaning motor bracket [A] (🔧 x3).
  - ① is a small screw.
  - ② and ③ are larger screws (the same size).

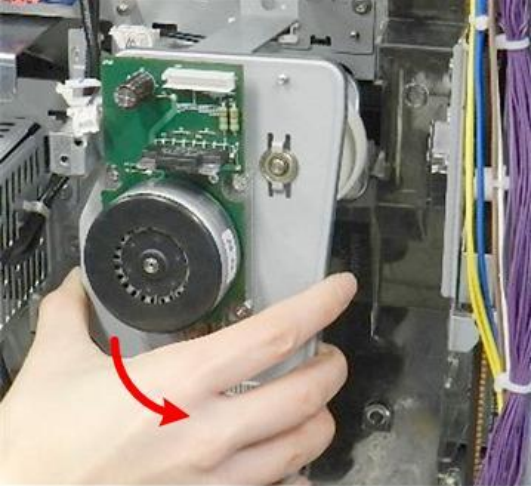


4.Replacement and Adjustment



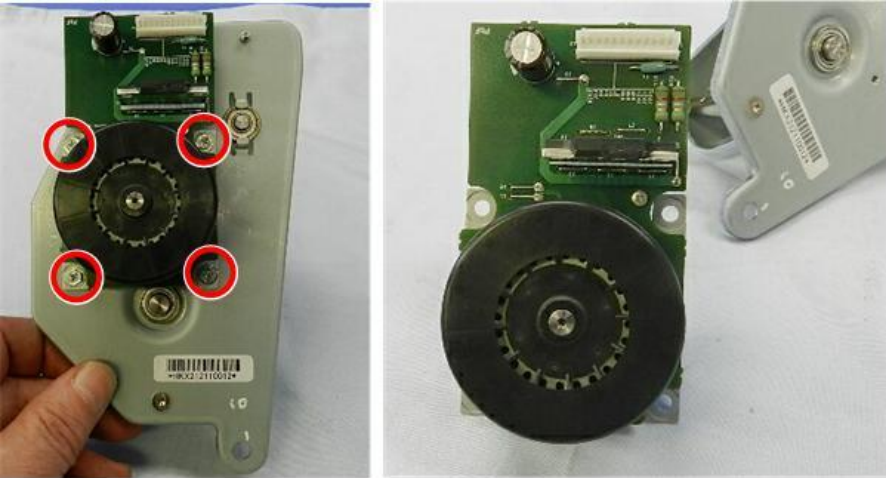
d1794031

2. Remove the bracket (with motor attached).



d1794032

3. Separate the motor and the bracket (⚙️x4).



d1793236

## Paper Trays 1, 2, 3

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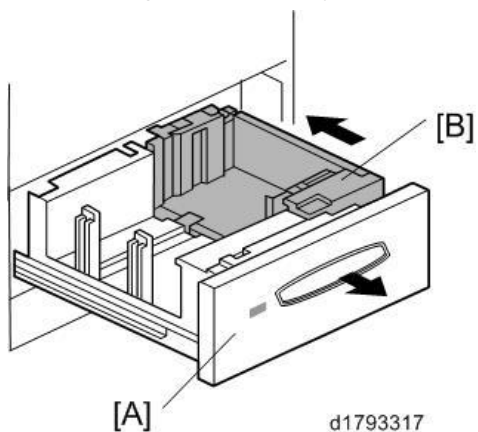
### Paper Trays

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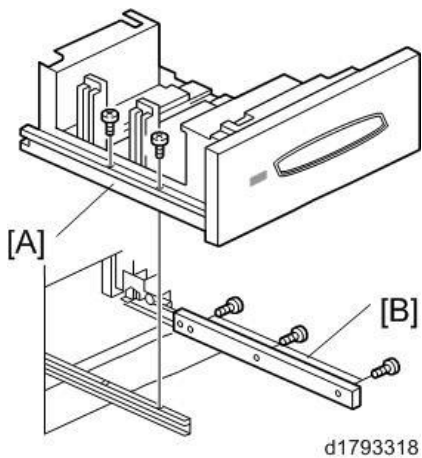
#### Removing Paper Tray 1

---

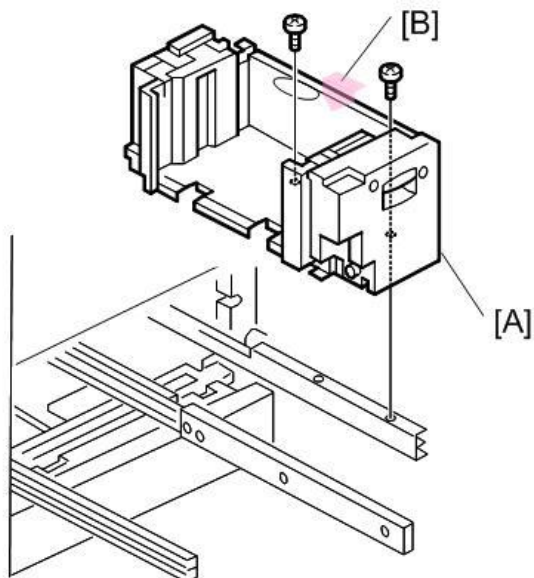
1. Pull out Tray 1 [A] completely so that the right tandem tray [B] separates from the left side.
2. Push the right tandem tray [B] into the machine.



3. Disconnect the left rail [A] (⌀ x2 M4x4)
4. Disconnect the right rail [B] and remove the tray (⌀ x3 M4x6).



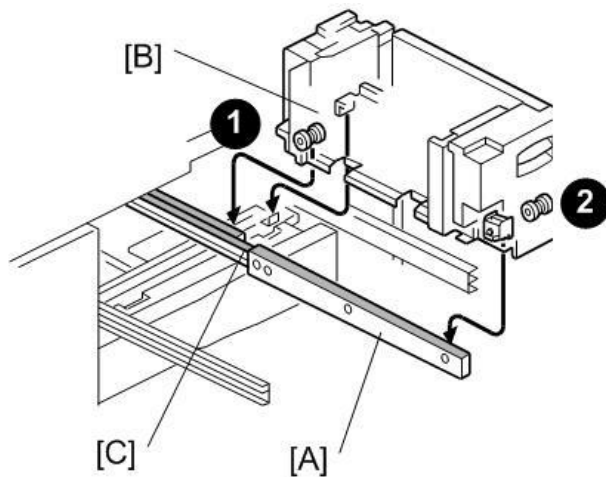
5. Pull out the right tandem tray [A] and remove it (⊖ x2).



d1793319

**★ Important**

- Work carefully to avoid bending or damaging the mylar [B] on the side plate of the tray. This mylar prevents paper in the tray from hitting the reverse roller before it is ready to feed.
- When you re-install the right tandem tray, make sure that the wheels ride on the slide rail [A].
- Also, make sure that the tandem tray stopper [B] is set behind the stopper [C] (inside the machine).



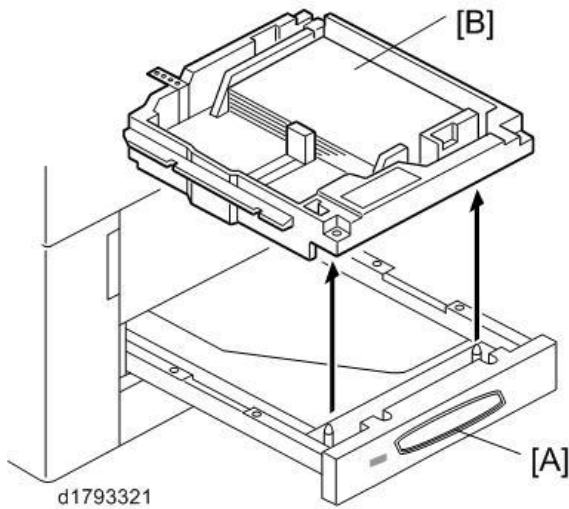
d1793320

**Removing Paper Tray 2, Tray 3**

1. Pull out Tray 2 [A].

#### 4.Replacement and Adjustment

2. Lift the inner tray [B] out of the tray.



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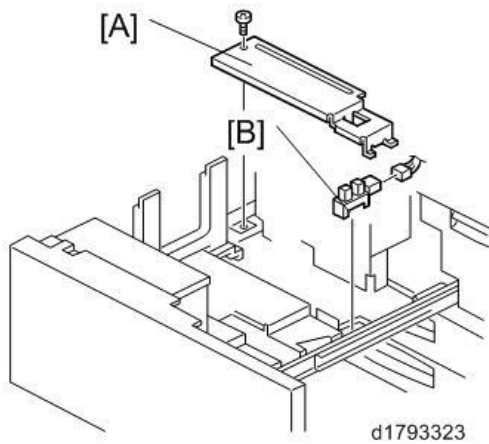
#### Tray 1 Sensors, Solenoids, Wire

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##### Rear Fence Return Sensor (Left Tandem Tray)

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1. Pull out Tray 2.
2. Lift the inner tray out of the tray.
3. Remove the plate [A]. (⚙️ x1)
4. Disconnect and remove the sensor [B] (🔌 x1).



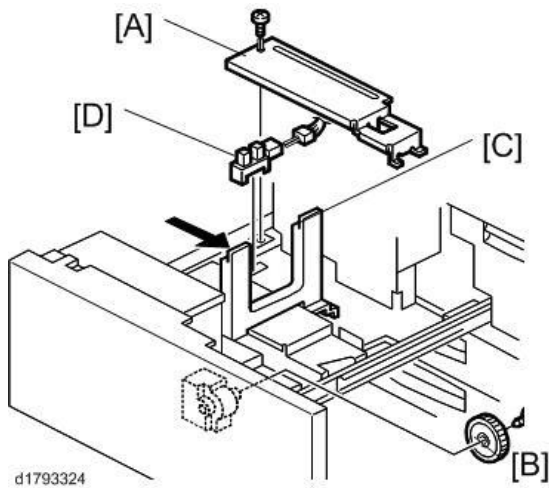
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##### Rear Fence HP Sensor (Left Tandem Tray)

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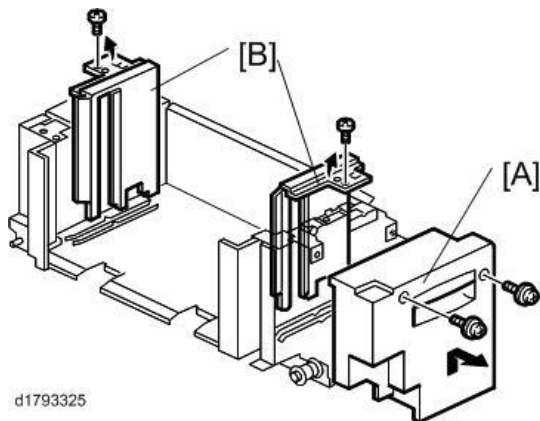
1. Pull out Tray 1.
2. Push the right tandem tray into the machine.
3. Remove:
  - [A] Rear bottom plate
  - [B] Rear fence transport gear
4. Push the left fence [C] to the right.

5. Remove the rear fence HP sensor [D] (🔌 x1).



### Right Tray Paper Sensor (Right Tandem Tray)

1. Remove the right tandem tray.
2. Remove:
  - [A] Cover (🔩 x2)
  - [B] Side fences (🔩 x2)

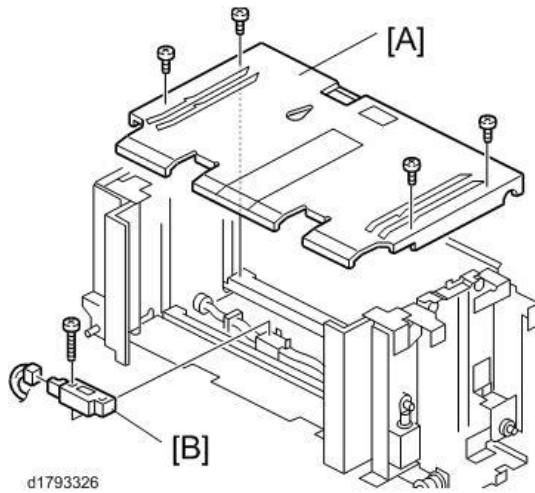


**Note**

- When re-installing the side fences, make sure that they are positioned correctly (A4: Outer, LT: Inner)

3. Remove:
  - [A] Bottom plate (🔩 x4)
  - [B] Right tray paper sensor (🔩 x1, 🔌 x1)

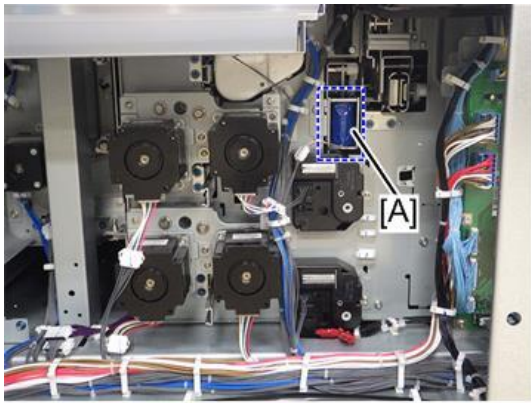
## 4.Replacement and Adjustment



### Right Tray Lock Solenoid

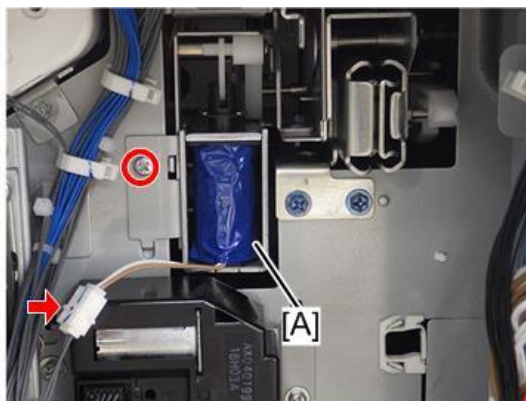
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1. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))
2. Remove the left rear cover ([Rear Cover](#))
3. Locate the solenoid [A].



d0bxa4094

4. Remove the solenoid [A].



⚙️ x1 🛡️ x1

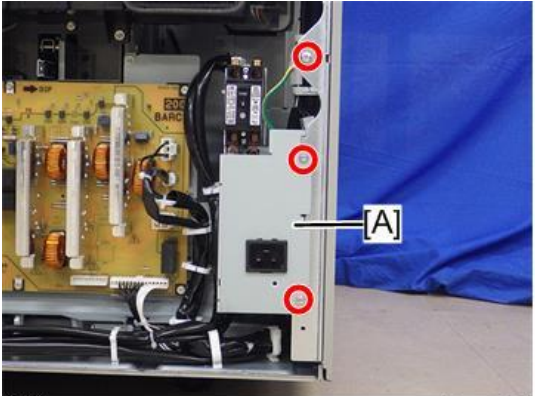
d0bxa4083

### Left Tray Lock Solenoid

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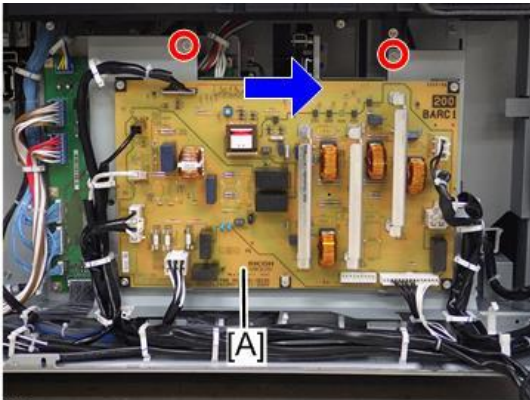
1. Remove the left rear cover ([Rear Cover](#))

2. Remove the circuit breaker bracket [A].



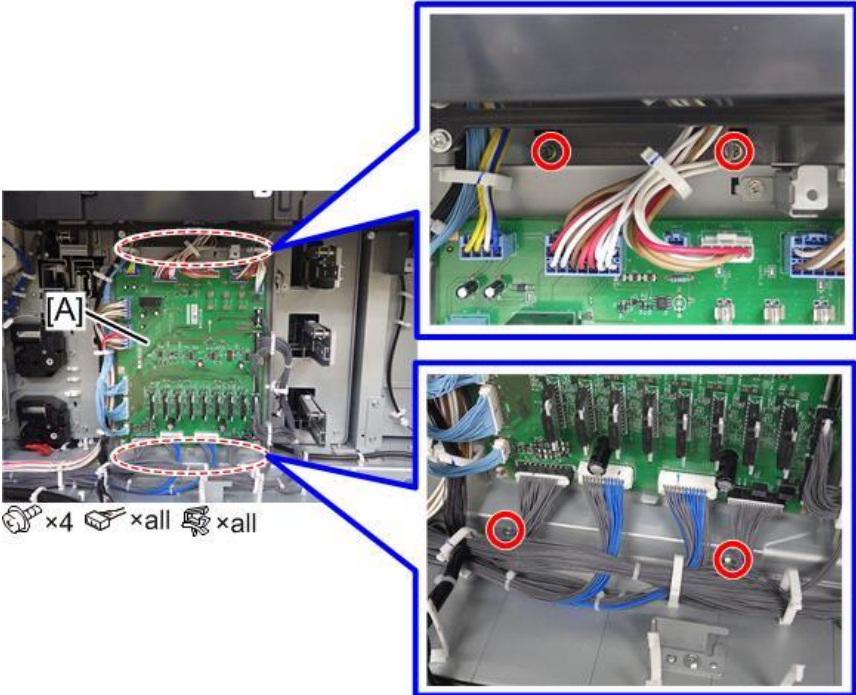
x3 d0bxa4079

3. Remove the AC drive [A] bracket.



x2 xall xall d0bxa4062

4. Remove the RYB [A] bracket.

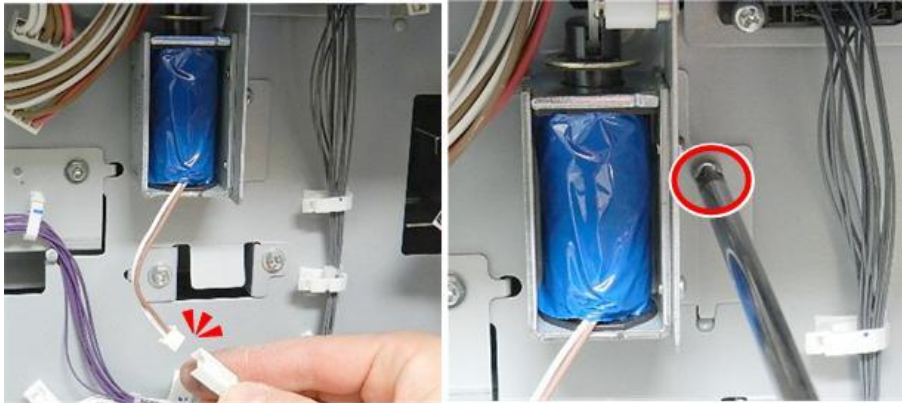


x4 xall xall

d0bxa4084

#### 4.Replacement and Adjustment

5. Disconnect the solenoid and bracket (🔧 x1, 🔧 x1).



d1793352

6. Remove the solenoid.



d1793353

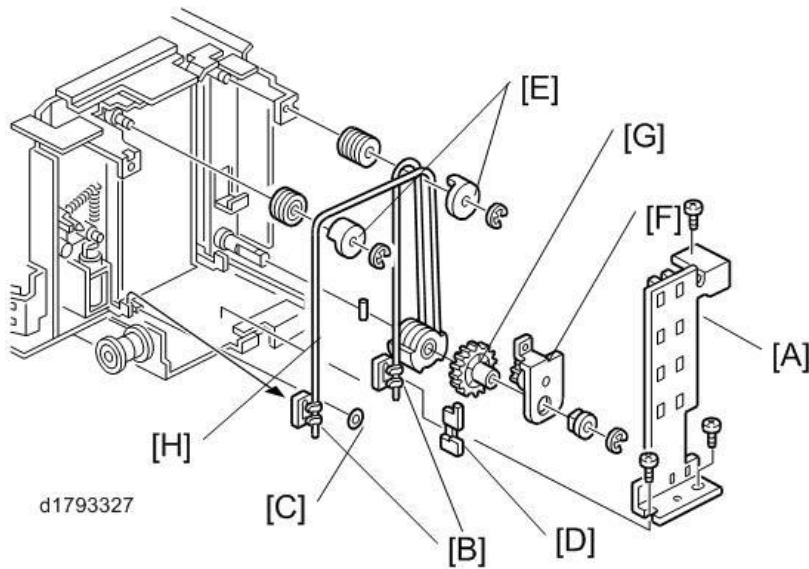
#### Bottom Plate Lift Wire

##### ↓ Note

- Before you remove the rear bottom plate lift wire, you must remove the front bottom plate lift wire. The removal procedure is the same for both wires.

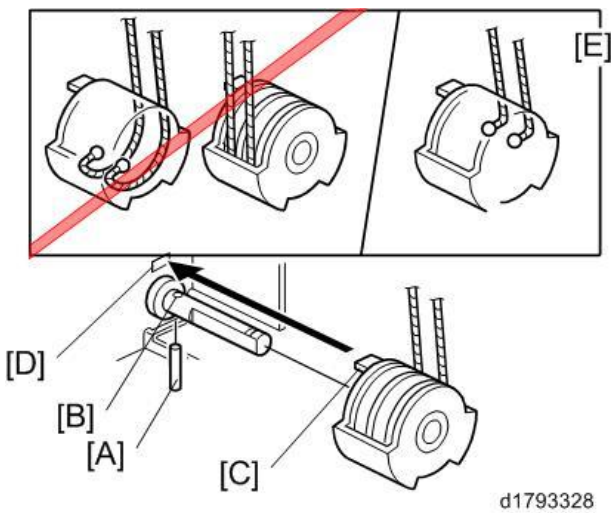
1. Remove the right tandem tray.
2. Remove the right tandem tray cover (🔧 x2).
3. At the front, remove the sensor assembly [A] (🔧 x3).
4. Lift the front bottom plate slightly, unhook the wire stoppers [B], and then remove the stopper [C] and the actuator [D].
5. Remove:
  - [E] Wire covers (🔧 x2).
  - [F] Bracket (front only) (🔧 x1, 🔧 x1, 📌 x1)
  - [G] Gear (front only)
  - [H] Bottom plate lift wire





**Re-installation (Bottom Plate Lift Wire)**

1. Set positioning pin [A] in hole [B].
2. Set projection [C] in hole [D].
3. Position the wire [E] correctly without crossing the wires.




---

**Tray 1 Motors**

---

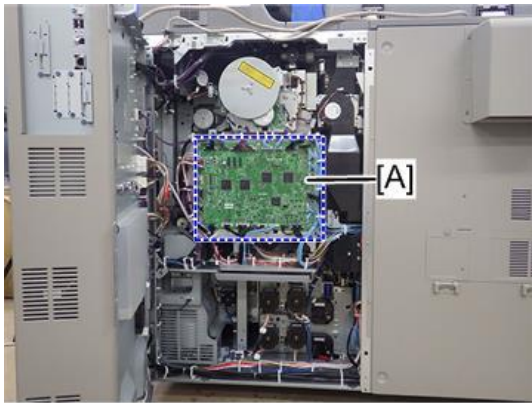
**Motor Layout**

---

1. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))
2. Remove the left rear cover ([Rear Cover](#))

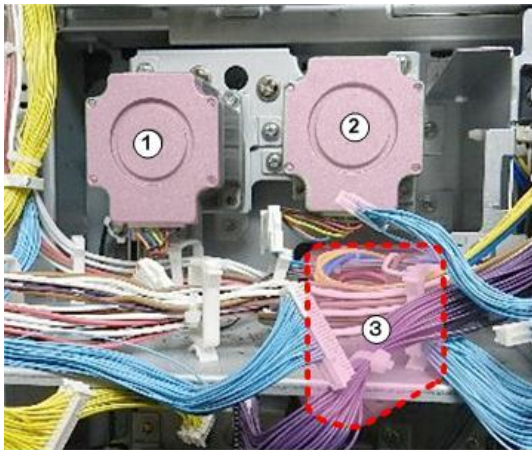
#### 4.Replacement and Adjustment

3. To access these motors, you must first remove the IOB [A]. (IOB)



d0bxa4085

①	Tray 1 Grip Motor
②	Tray 1 Feed Motor
③	Tray 1 Lift Motor

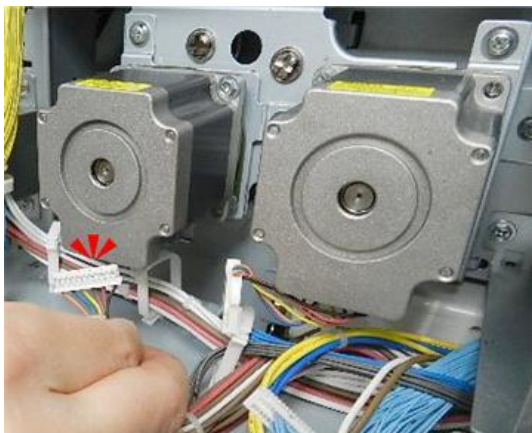


d1793355

#### Tray 1 Grip Motor

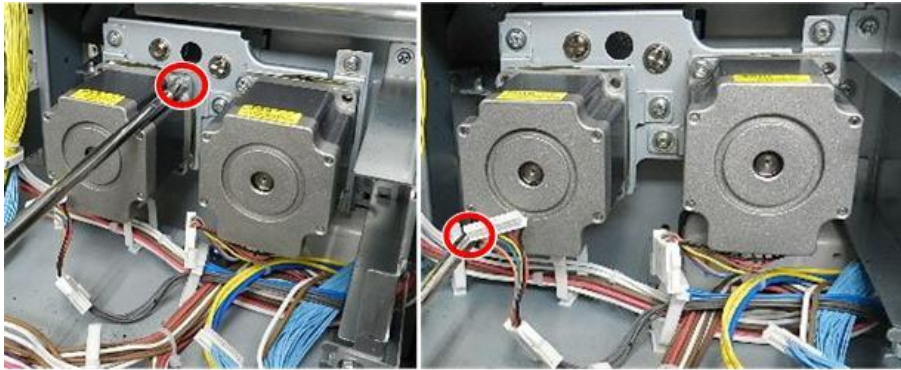
---

1. Disconnect the motor (🔌 x1).



d1793356

2. Disconnect the motor (🔌 x2).



d1793357

3. Remove the motor.



d1793358

### Tray 1 Feed Motor

---

1. Disconnect the motor (🔌 x1).



d1793359

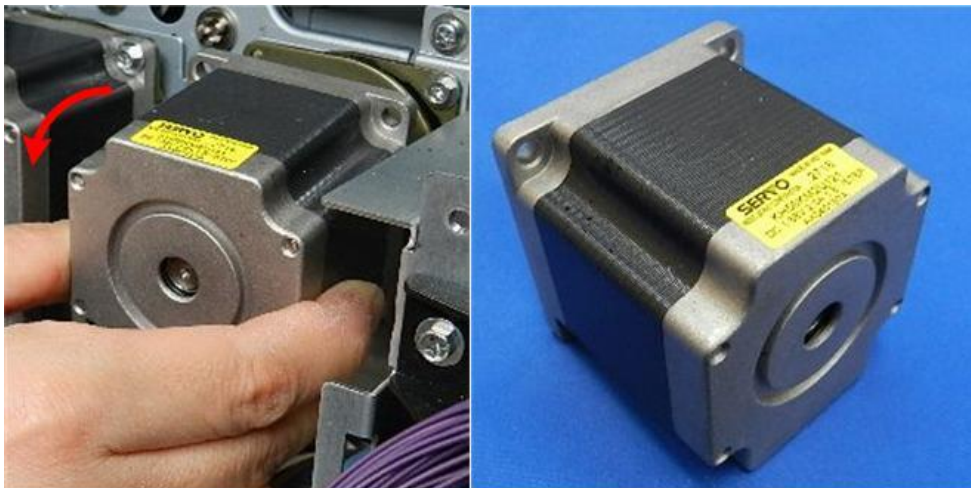
#### 4.Replacement and Adjustment

2. Disconnect the motor (🔧x2).



d1793360

3. Remove the motor.



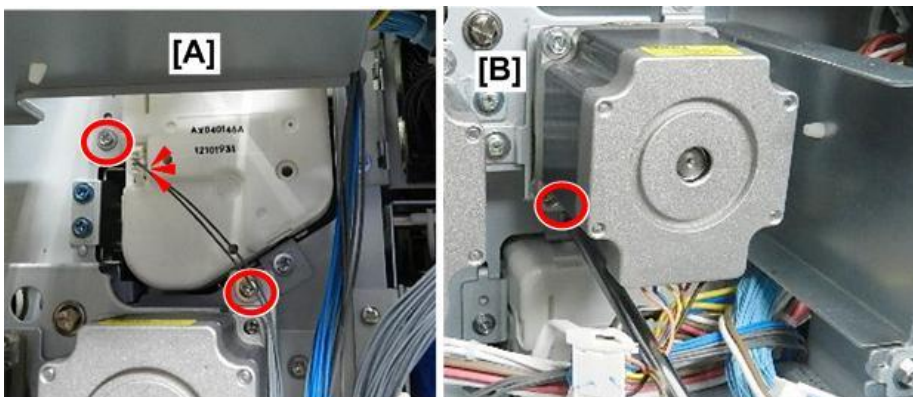
d1793361

#### Tray 1 Lift Motor

1. Disconnect the motor:

[A] (🔧 x1, 🛠️ x2)

[B] (🔧 x1)



d1793362

2. Grasp the motor from below the plate [A].
3. Remove the motor [B].



d1793363

4. Separate the motor from its bracket (🔧 x3).



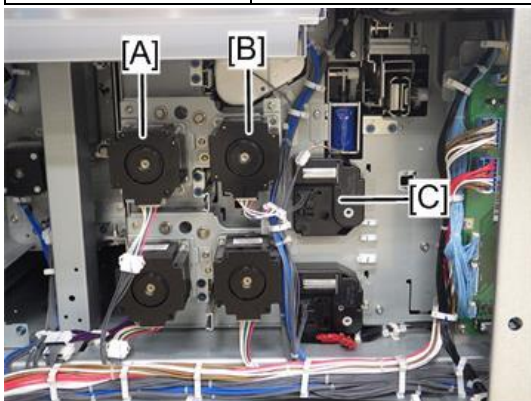
d1793365

## Tray 2 Motors

### Motor Layout

1. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))
2. Remove the left rear cover ([Rear Cover](#))

[A]	Tray 2 Grip Motor
[B]	Tray 2 Feed Motor
[C]	Tray 2 Lift Motor



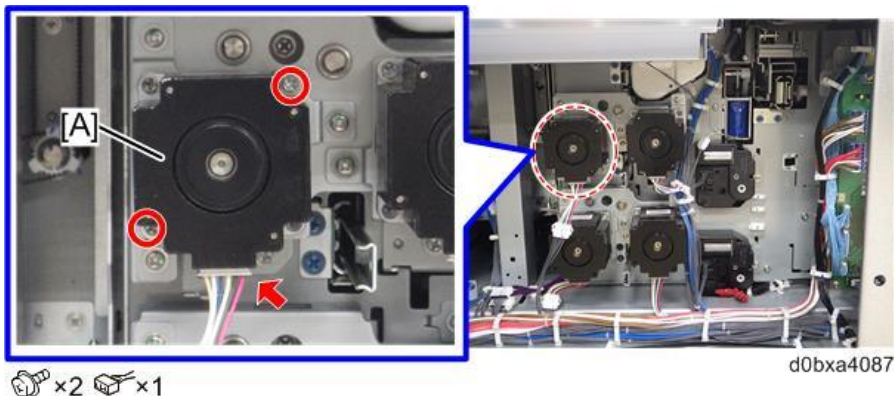
d0bxa4086

## 4.Replacement and Adjustment

### Tray 2 Grip Motor

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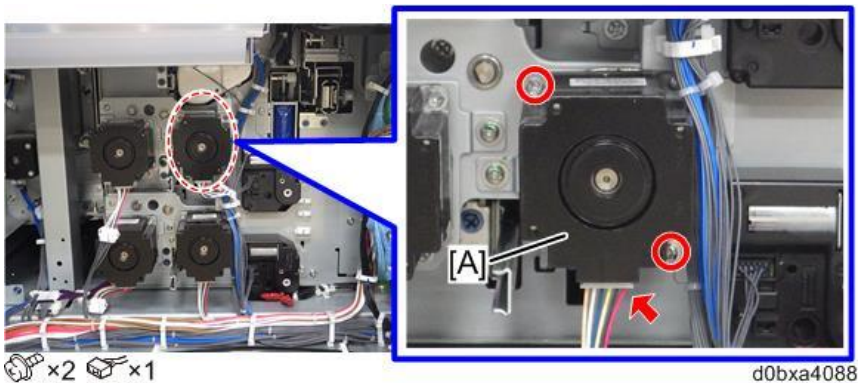
1. Remove the tray 2 grip motor [A].



### Tray 2 Feed Motor

---

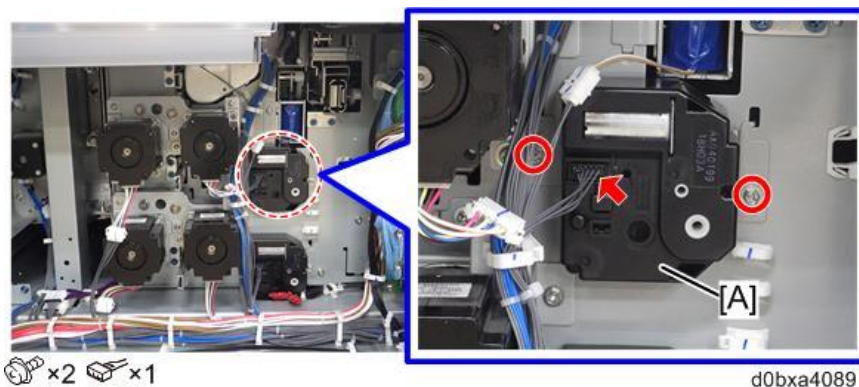
1. Remove the tray 2 feed motor [A].



### Tray 2 Lift Motor

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1. Remove the tray 2 lift motor [A].



---

## Tray 3 Motors

---

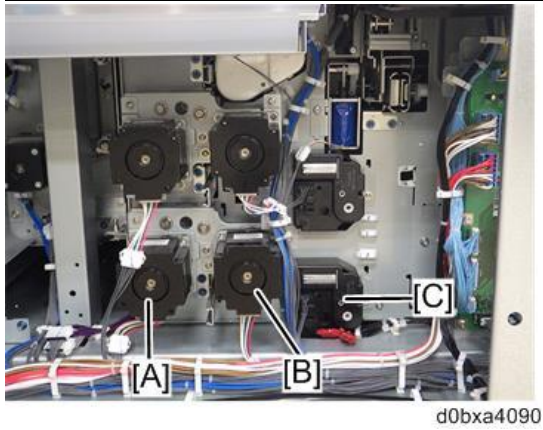
### Motor Layout

---

1. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))

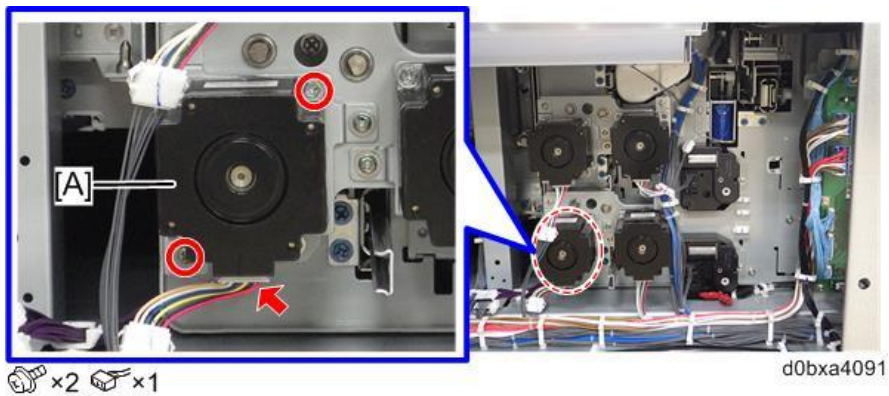
2. Remove the left rear cover (Rear Cover)

[A]	Tray 3 Grip Motor
[B]	Tray 3 Feed Motor
[C]	Tray 3 Lift Motor



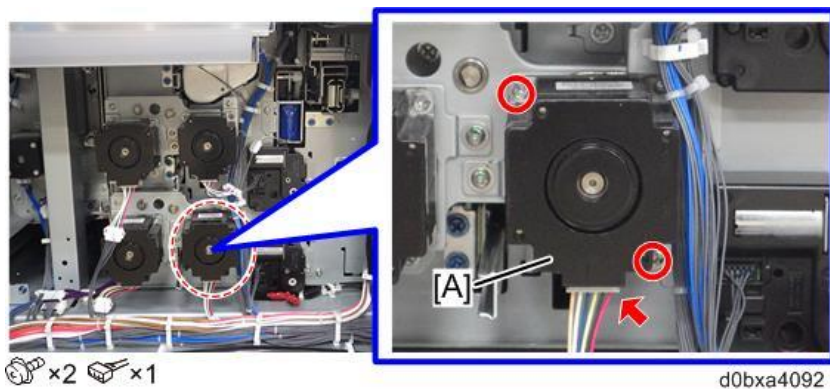
Tray 3 Grip Motor

1. Remove the tray 3 grip motor [A].



Tray 3 Feed Motor

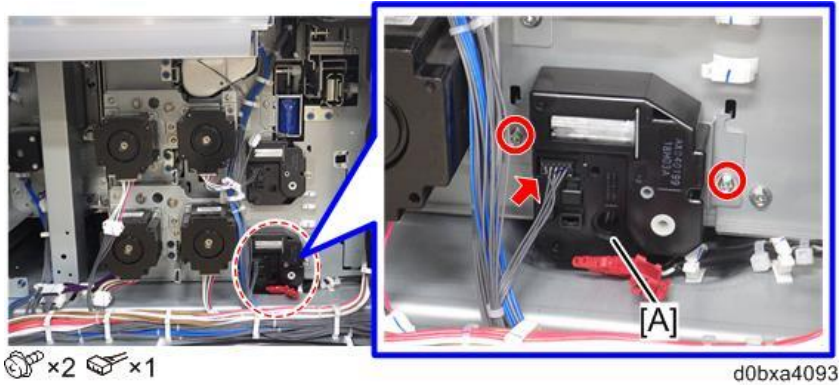
1. Remove the tray 3 feed motor [A].



## 4.Replacement and Adjustment

### Tray 3 Lift Motor

1. Remove the tray 3 lift motor [A].

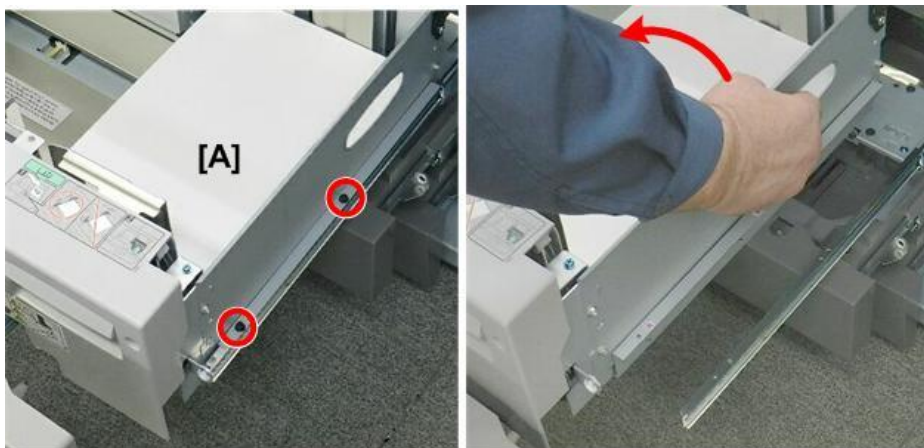


### PFU 1, 2, 3 Removal

#### Note

- Removal of the right and left trays of Tray 1 (tandem tray) is recommended.
- Removing these trays is not absolutely necessary, but this will make it easier to remove and re-install the PFUs.

1. Remove the right tray of Tray 1 (\*x2).



#### Important

- When removing and inserting the tray, work carefully to avoid bending the mylar sheet on the right side of the tray.

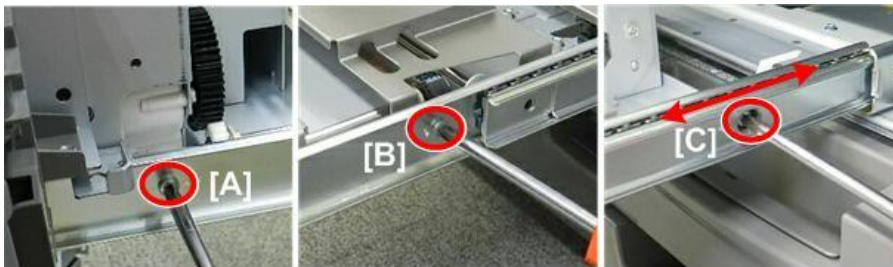


2. Disconnect the left tray of Tray 1 (✎x2).



d1793302

3. Disconnect the left tray from its right rail, and then remove it (✎x3).

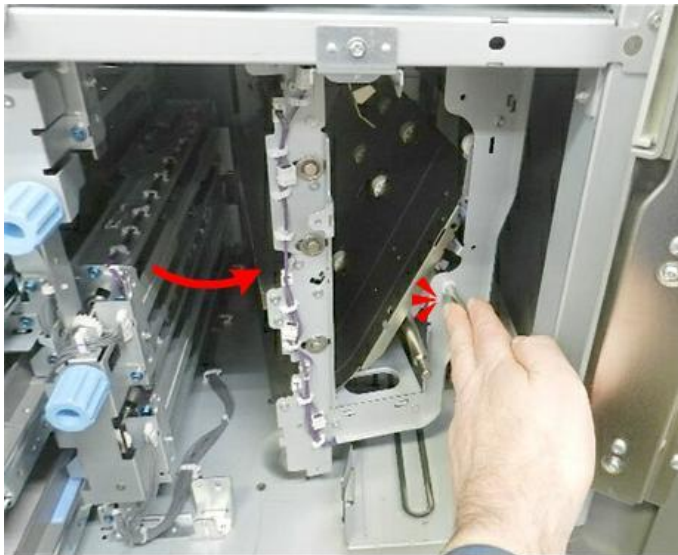


d1793303

### Tray 1 PFU

---

1. Open the VTU ([Opening the VTU](#))



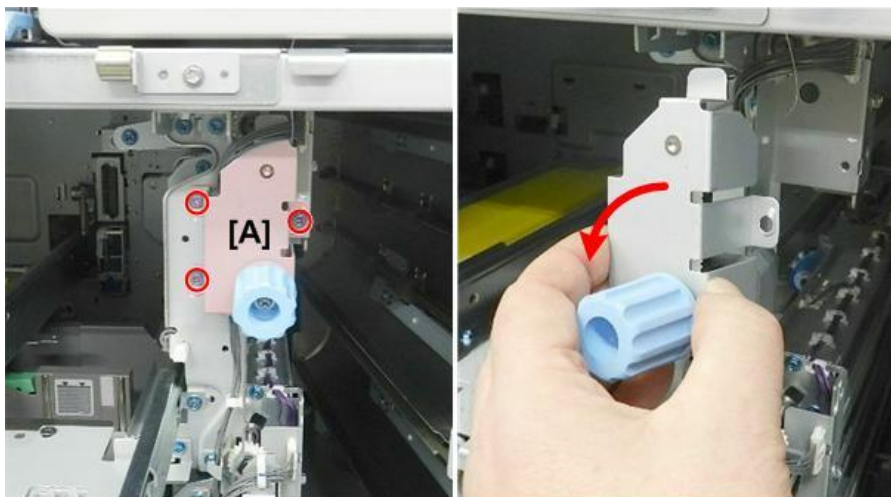
d1793445

**★ Important**

- If the VTU is not open, you will not be able to remove the PFU.

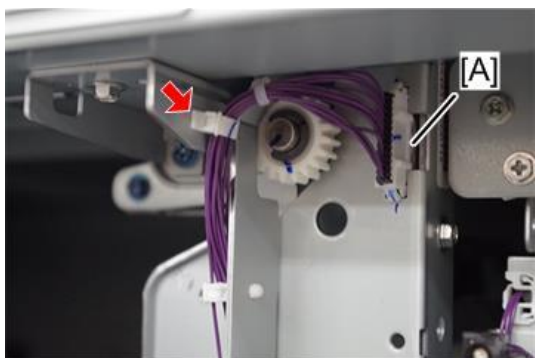
#### 4.Replacement and Adjustment

2. Remove the bracket [A] (✂x3).



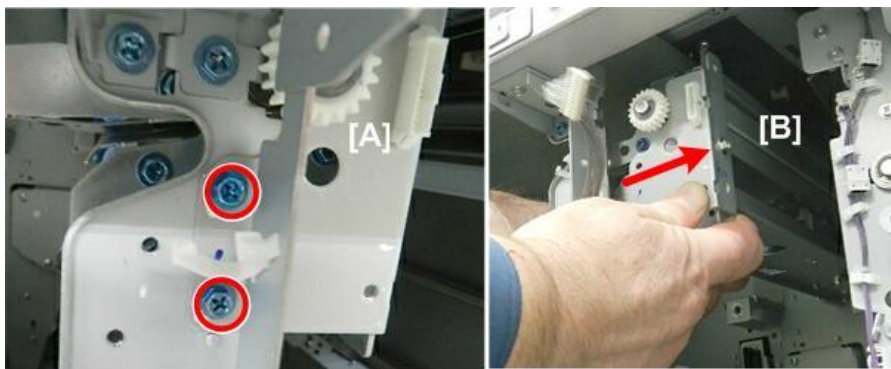
d1793304

3. Disconnect the PFU harness [A] (🔌x1, 🧰x1).



d0bxa4596

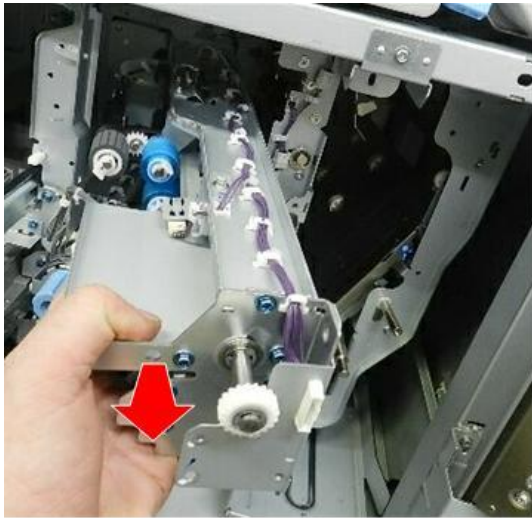
4. Disconnect the PFU at the front [A] (✂x2).
5. Swing the PFU to the right [B].



d1793306

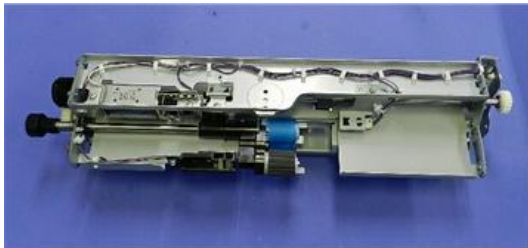
6. Pull the PFU to the front. This disengages the back of the PFU from the alignment pins and couplings at the rear.

7. Pull the PFU out of the machine.



d1793307

8. Lay the PFU on a flat clean surface.

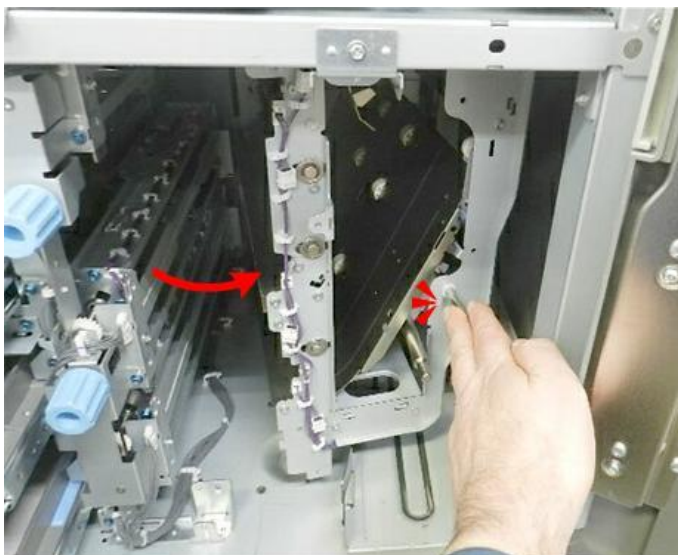


d1793308

#### Tray 2 PFU

---

1. Open the VTU ([Opening the VTU](#))



d1793445

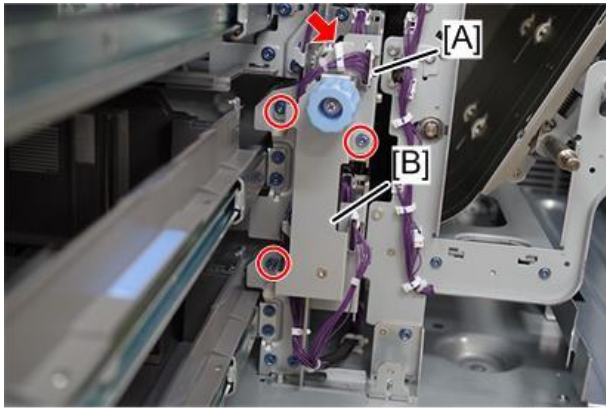
**★ Important**

- If the VTU is not open, you will not be able to remove the PFU.

2. Disconnect the PFU [A] (🔧x1, 📦x1).

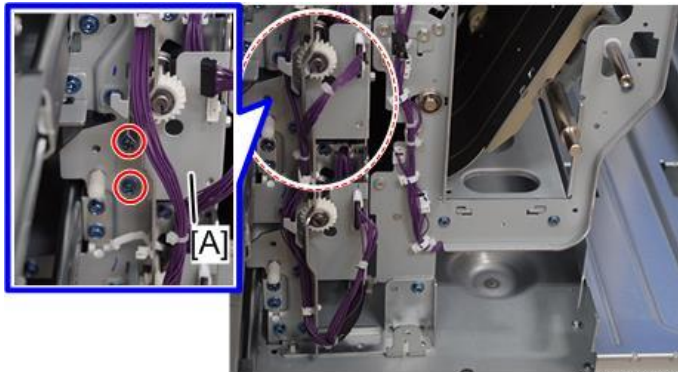
#### 4.Replacement and Adjustment

3. Remove the bracket [B] (✖3).



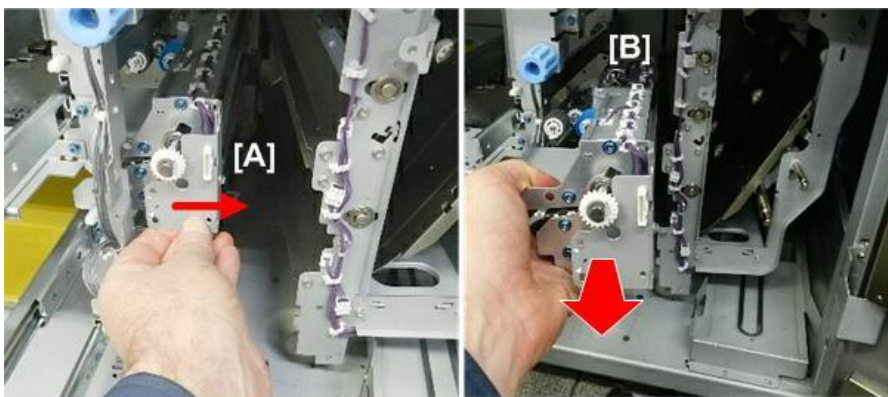
d0bxa4597

4. Disconnect the PFU [A] at the front (✖2).



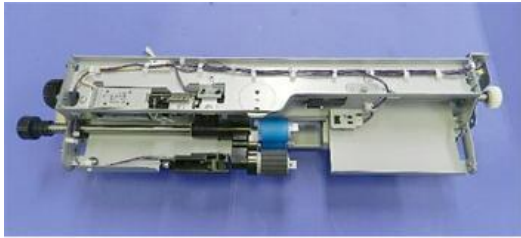
d0bxa4598

5. Swing the PFU to the right [A].
6. Pull the PFU [B] to the front. This disengages the back of the PFU from the alignment pins and couplings at the rear.
7. Pull the PFU out of the machine.



d1793311

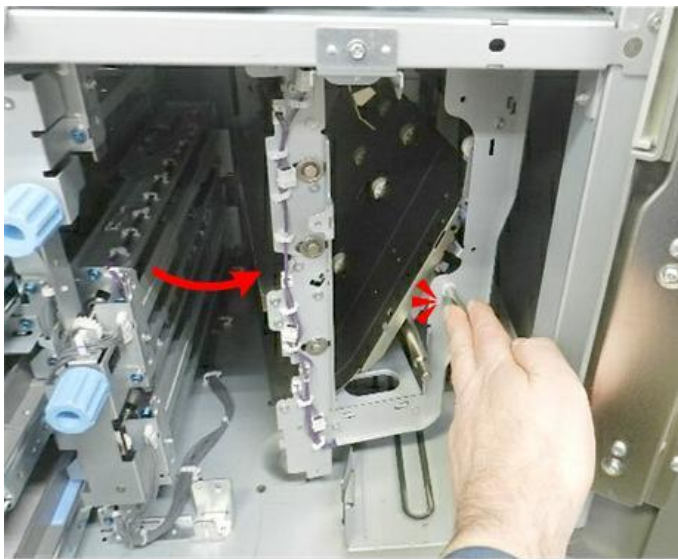
8. Lay the PFU on a flat clean surface.



d1793312

### Tray 3 PFU

1. Open the VTU ([Opening the VTU](#))

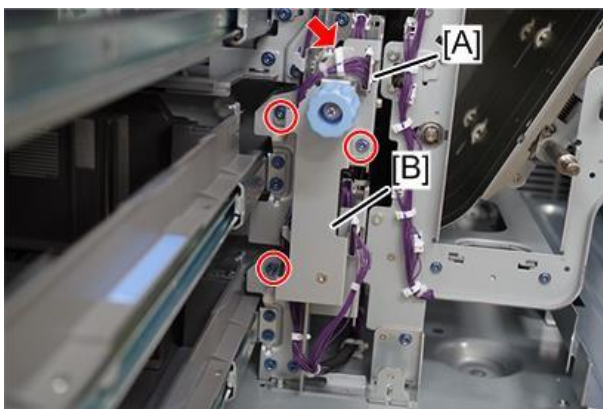


d1793445

#### ★ Important

- If the VTU is not open, you will not be able to remove the PFU.

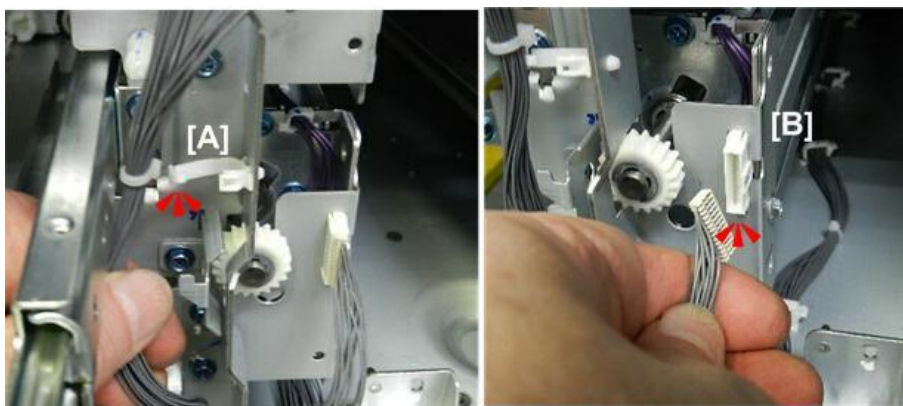
2. Disconnect the PFU [A] (🔌x1, 📦 x).
3. Remove the bracket [B] (➦x3).



d0bxa4597

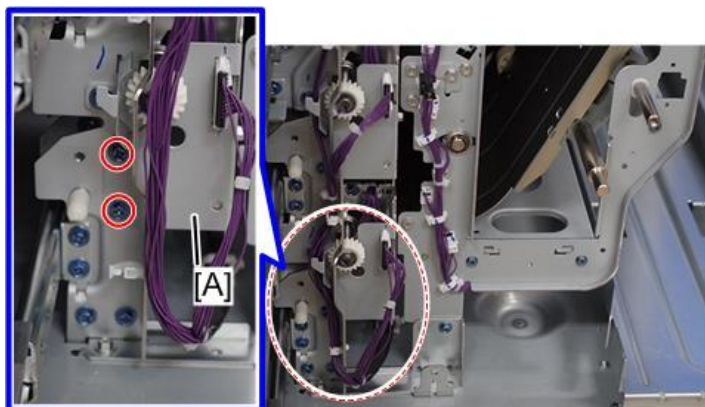
#### 4.Replacement and Adjustment

4. Disconnect the PFU at [A] and [B] (🔧x1, 📦x1).



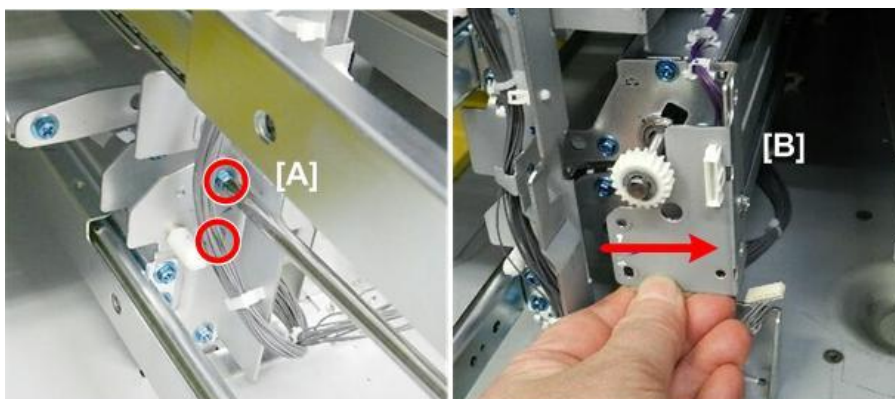
d1793313

5. Disconnect the PFU [A] at the front (🔧x2).



d0bxa4599

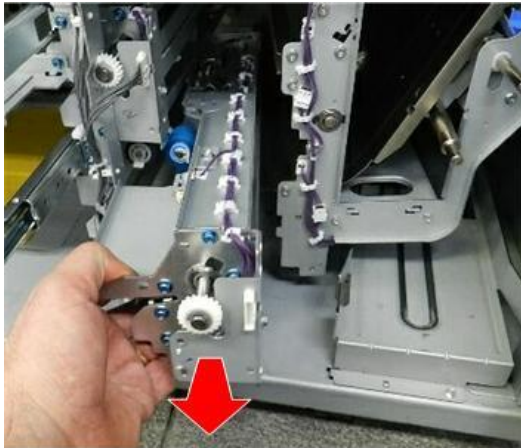
6. Swing the PFU to the right [B].



d1793314

7. Pull the PFU to the front. This disengages the back of the PFU from the alignment pins and couplings at the rear.

8. Pull the PFU out of the machine.



d1793315

### PFU Separation Roller Nip Adjustment

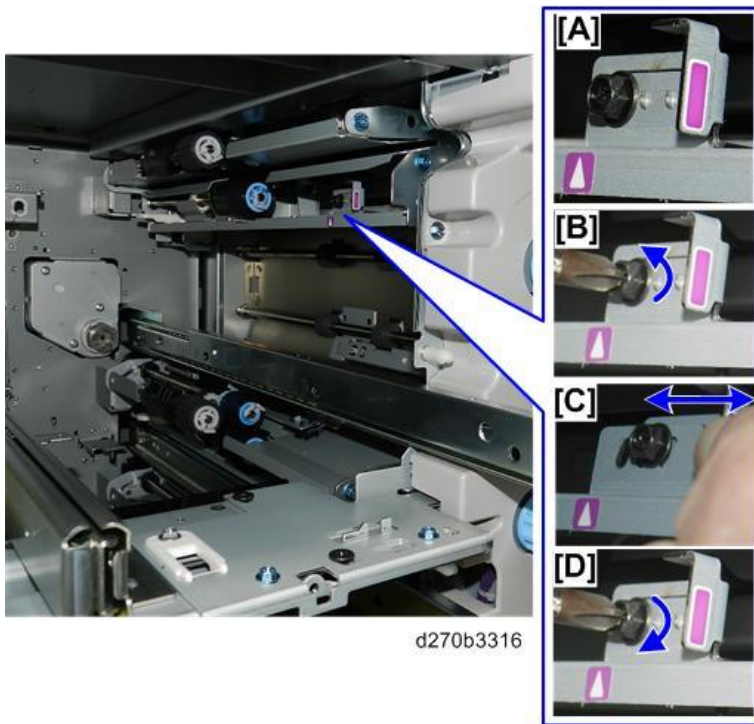
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Each PFU has a notch mechanism to adjust the pressure of the nip between the separation roller and the feed roller. This is a new feature.

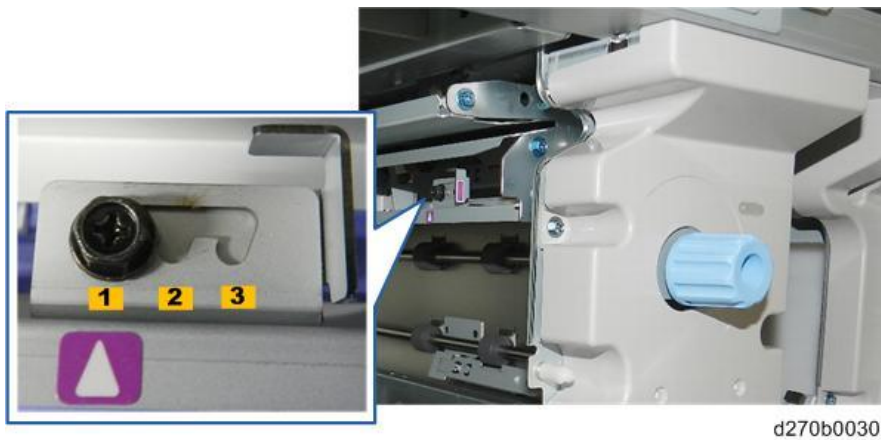
- Do this adjustment only if misfeeds and double-feeds become frequent due to slippage caused by the accumulation of paper dust on the separation roller when using coarse paper.
  - The purpose of this adjustment is to compensate for feed problems that can occur with low quality paper. It is not intended to extend the service life of the feed rollers. However, you can do this adjustment as a temporary measure to correct double-feeding due to worn rollers until replacement rollers become available.
  - This is a TCRU adjustment and can be done for each PFU without removing it. However, you must remove Paper Tray 1 (Tandem Tray) in order to access the adjustment screws.
  - You may want to do this adjustment if one or more of the following jam codes is occurring more than twice a day: J003, J004, J005, J010, J011, J012. Loosen the screw and move the slide to the center position.
  - If moving the slide to the center does not correct the problem, move it to the forward position.
  - Too much pressure at the nip with the slide completely forward can cause double-feeding.
  - If you know in advance that the operators are using low quality paper, set the lever to the center or forward position, and then change it later if necessary.
1. Remove Paper Tray 1. ([Removing Paper Tray 1](#))
  2. Locate the adjustment screw and slide [A] for the PFU that you want to adjust.

#### 4.Replacement and Adjustment

- Loosen the screw [B], slide the plate forward or back [C], and then tighten the screw [D].



- The rear position [1] is the default, the center position [2] forces more pressure at the nip, and the forward position [3] forces the most pressure at the nip.



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#### PFU Rollers, Sensors, Solenoid

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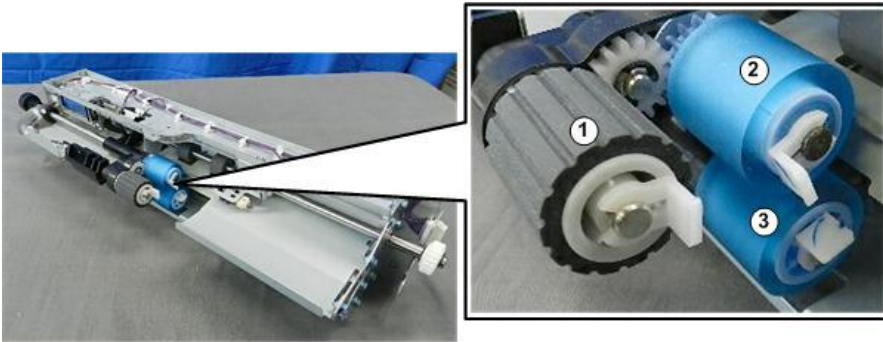
##### Roller Layout

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- Remove the required PFUs (Tray 1, Tray 2, Tray 3) ([Paper Trays](#))

①	Pickup Roller
②	Feed Roller
③	Separation Roller



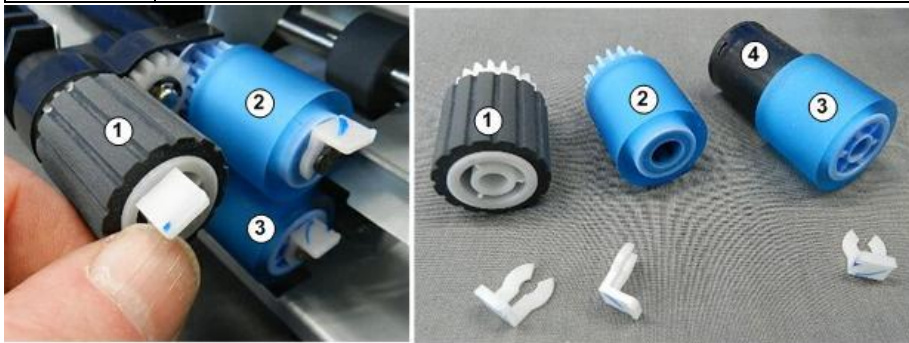


d1793366

Pick-up, Feed, Separation Rollers

1. Remove the snap ring of each roller.

①	Pickup Roller
②	Feed Roller
③	Separation Roller
④	Separation Roller Torque Limiter



d1793367

2. Reset the PM counter to zero for the replaced rollers.

**★ Important**

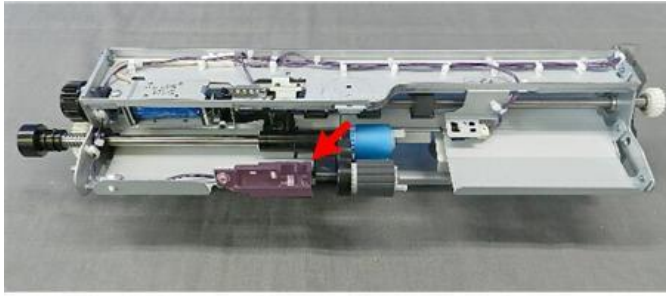
- The feed rollers of the main machine and the LCIT are not interchangeable because they turn in different directions.
- After replacing a feed roller in the main machine, make sure that it turns counter-clockwise in the direction of paper feed.
- Avoid touching the surfaces of these rollers with bare hands.

Paper End Sensor

1. Remove the PFU (PFU 1, 2, 3 Removal)

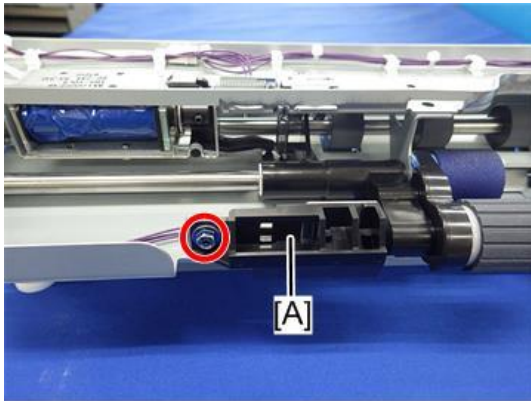
#### 4.Replacement and Adjustment

2. The paper end sensor is on the left edge of the unit.



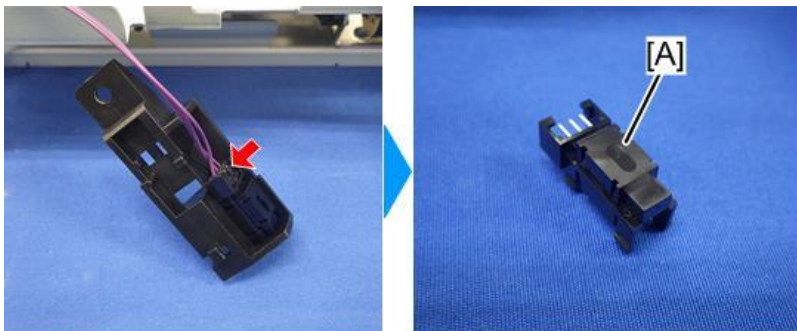
d1793368

3. Remove the paper end sensor bracket [A] (🔩 x1).



d0bxa4176

4. Remove the paper end sensor [A] from the bracket (📦 x1).

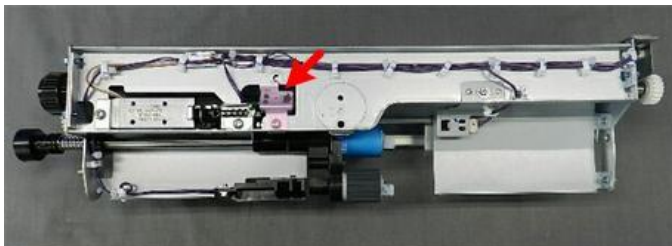


d0bxa4177

#### Pickup Roller Lift Sensor

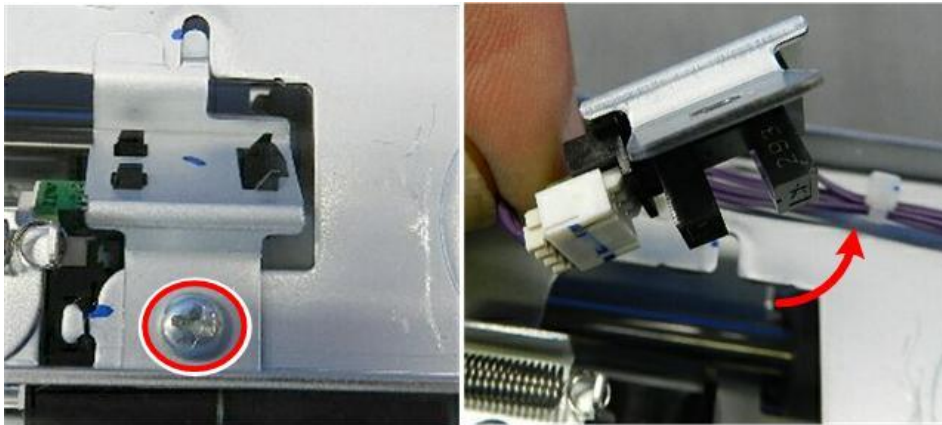
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1. Remove the PFU (PFU 1, 2, 3 Removal)
2. The lift sensor is on top of the unit.



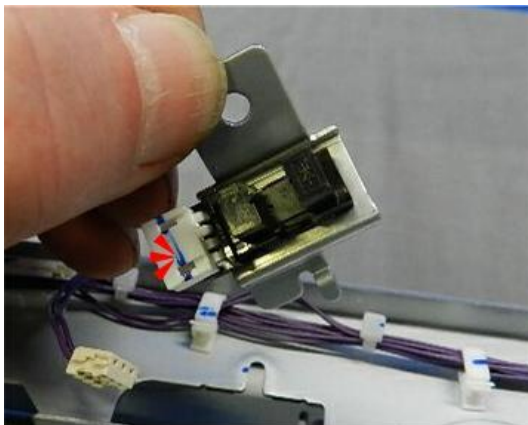
d1793371

3. Remove the bracket (with sensor attached) (🔩 x1).



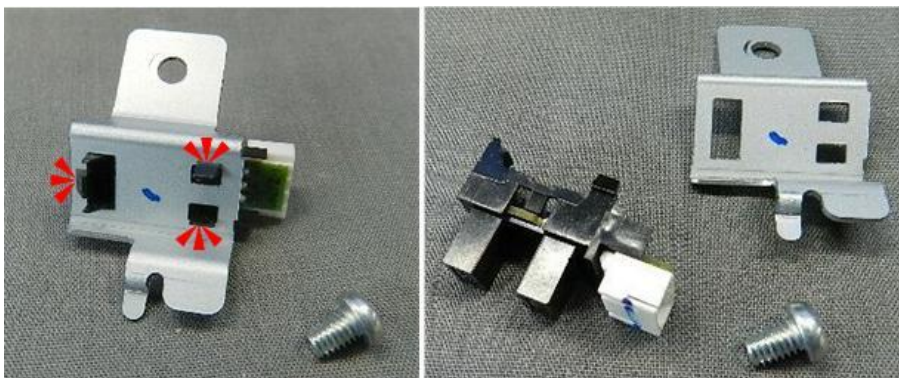
d1793372

4. Disconnect the sensor (🔌 x1).



d1793373

5. Separate sensor and bracket (🔩 x3).



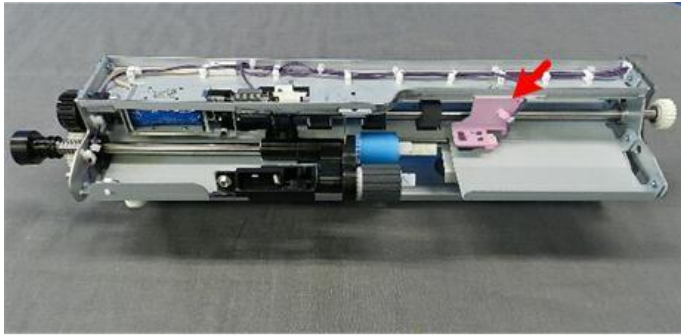
d1793374

## Paper Feed Sensor

1. Remove the PFU (PFU 1, 2, 3 Removal)

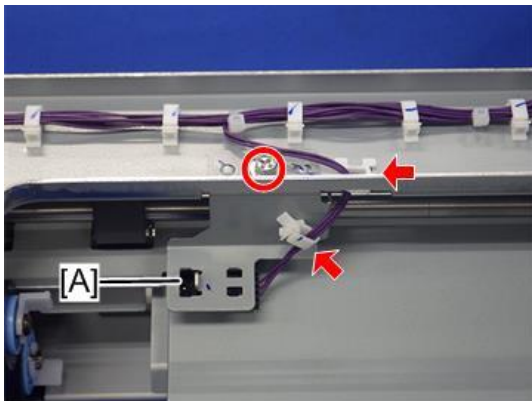
## 4.Replacement and Adjustment

2. The paper feed sensor is on the left, toward the front.



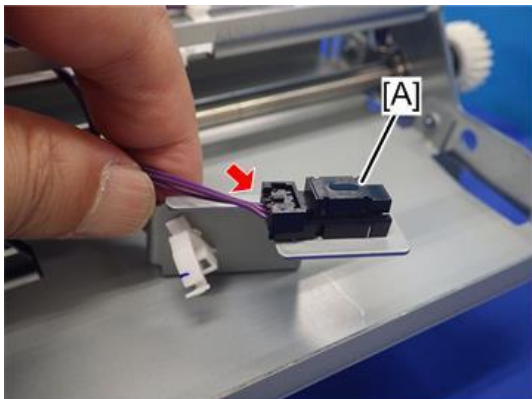
d1793375

3. Remove the paper feed sensor [A] bracket (⊙ x1, ⚙ x2).



d0bxa4178

4. Remove the paper feed sensor [A] (⊞ x1, ▼ x4).



d0bxa4179

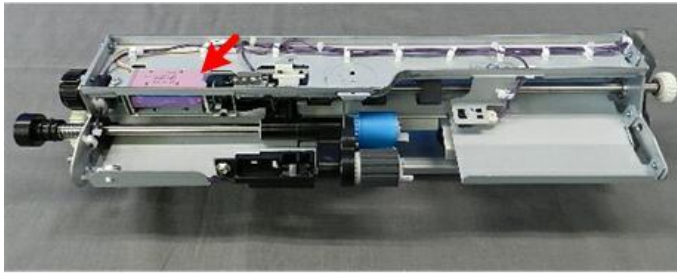
## Pickup Roller Solenoid

---

1. Remove the PFU (PFU 1, 2, 3 Removal)

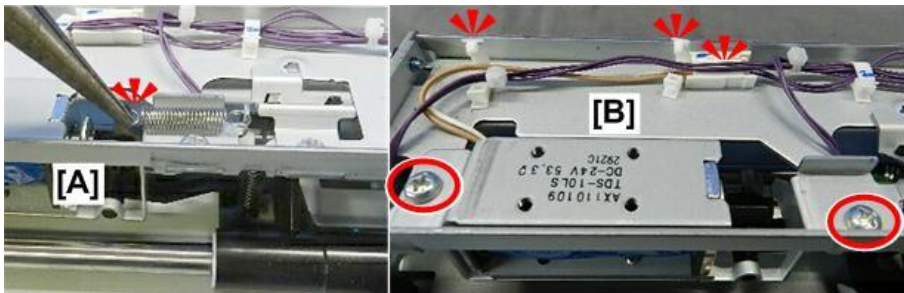
## 4.Replacement and Adjustment

2. The pickup roller solenoid is on top of the unit toward the rear.



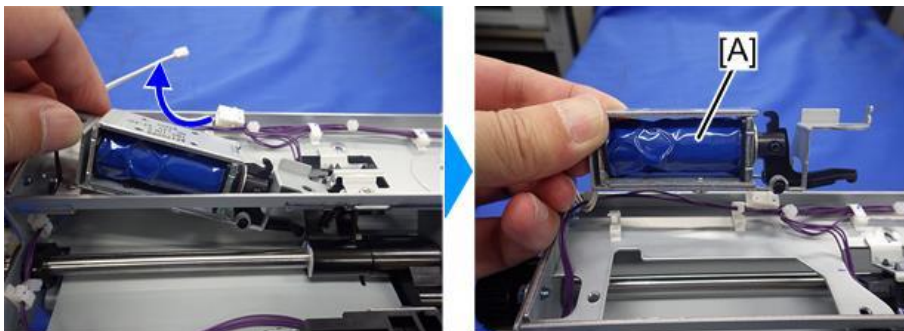
d1793379

3. Remove the spring [A] (🌀x1).
4. Disconnect the bracket [B] (🔩x2, 📦x1, 🛠️x2).



d1793380

5. Remove the solenoid [A].



d0bxa4180

6. Separate solenoid [A] and bracket (🔩x2).



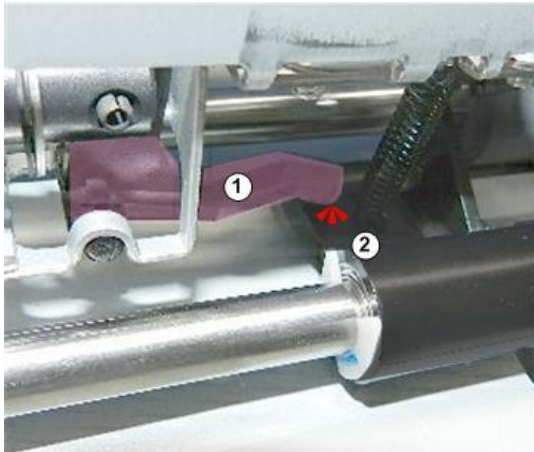
d0bxa4181

### Re-installation

1. When you re-install the pickup roller solenoid, make sure that the arm of the solenoid ① is on the

#### 4.Replacement and Adjustment

lift arm of the pick-up roller shaft ②.



d1793383

2. Depress the pickup roller and make sure that it bounces up and down.

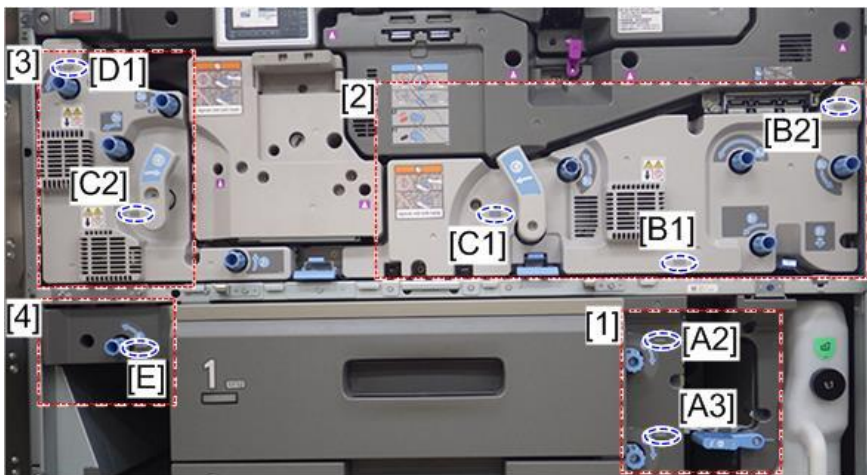
**★ Important**

- If the actuator of the solenoid is not positioned correctly, the pickup roller will catch on the frame and jam the right tandem tray when the PFU is re-installed.

#### Jam LEDs

#### Jam LED Locations

Eight new jam LEDs are provided on the front covers of the drawer. An LED lights if a jam occurs at its location. This makes it much easier to locate and remove sheets that jam in the paper path by manually rotating the jam removal knobs.



d0bxa4534

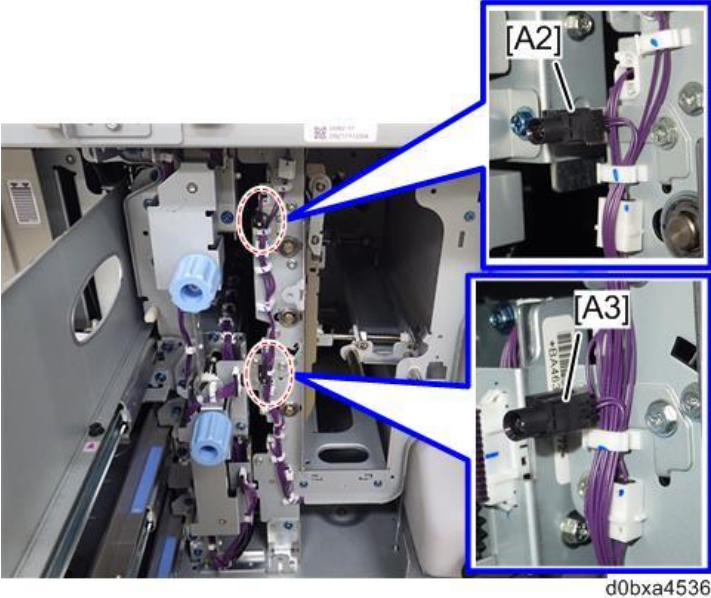
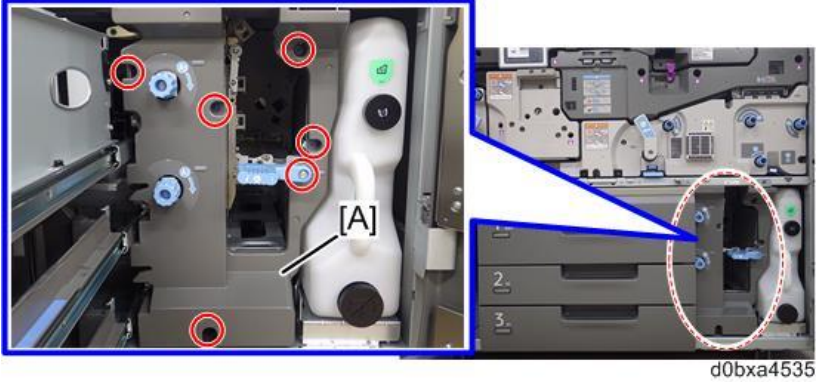
The 8 jam LEDs are behind four covers on the front of the machine.

No.	Cover	LED
1	Vertical transport unit	A2, A3
2	Registration unit	<b>B1, B2, C1</b>
3	Exit unit	<b>C2, D1</b>

No.	Cover	LED
4	Purge tray	E

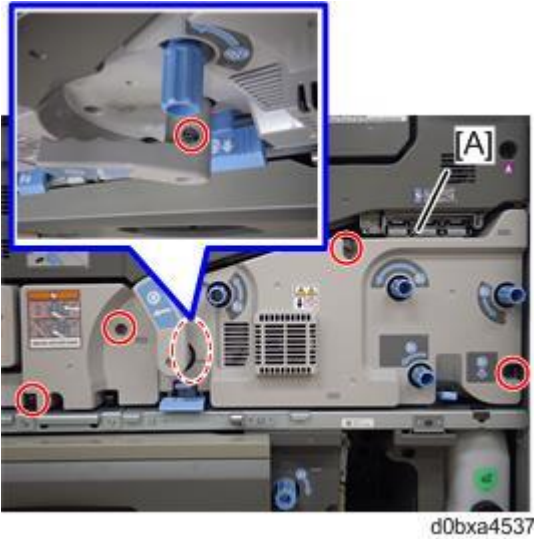
**Vertical transport unit: A2, A3**

Remove the inner cover [A].

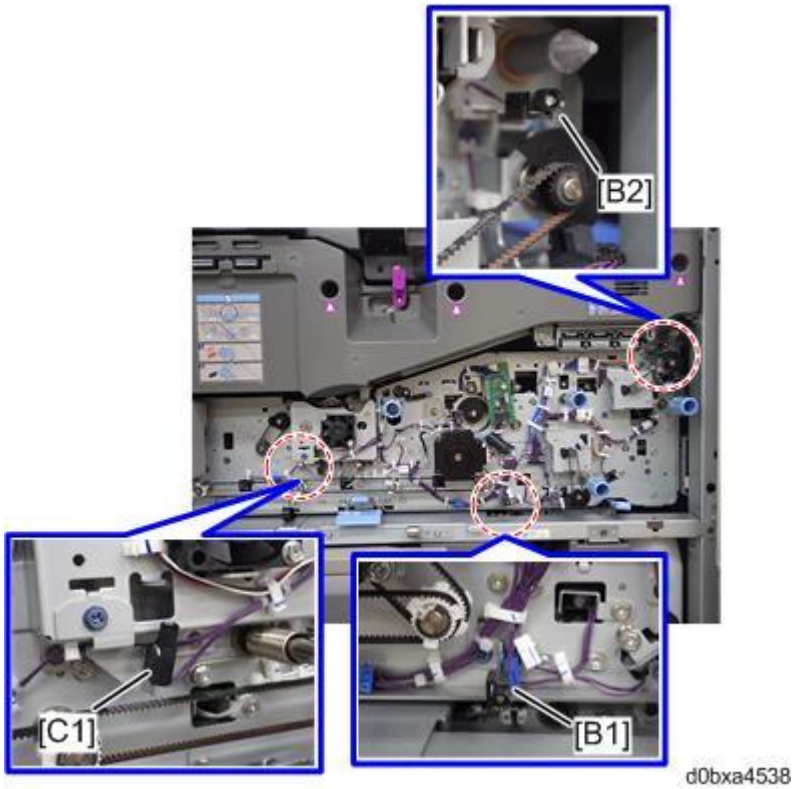


**Registration unit: C1, B2, B1**

Remove the inner cover [A].

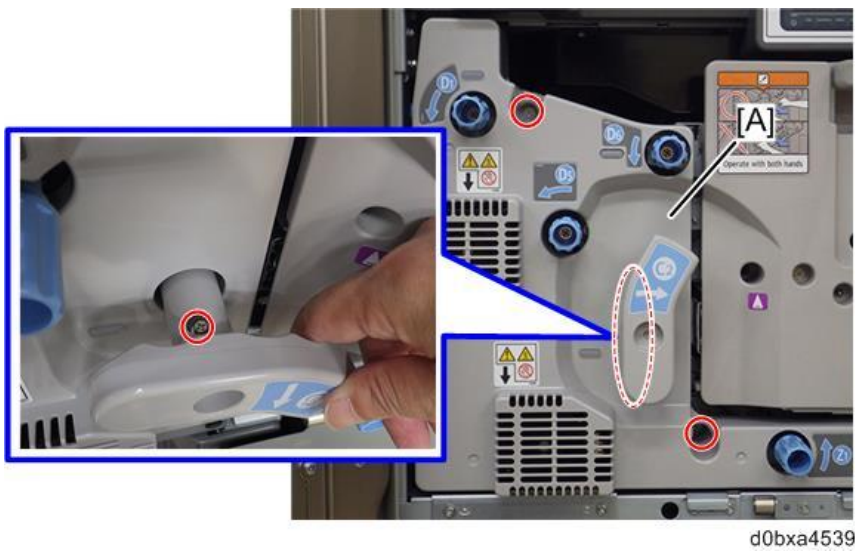


#### 4.Replacement and Adjustment

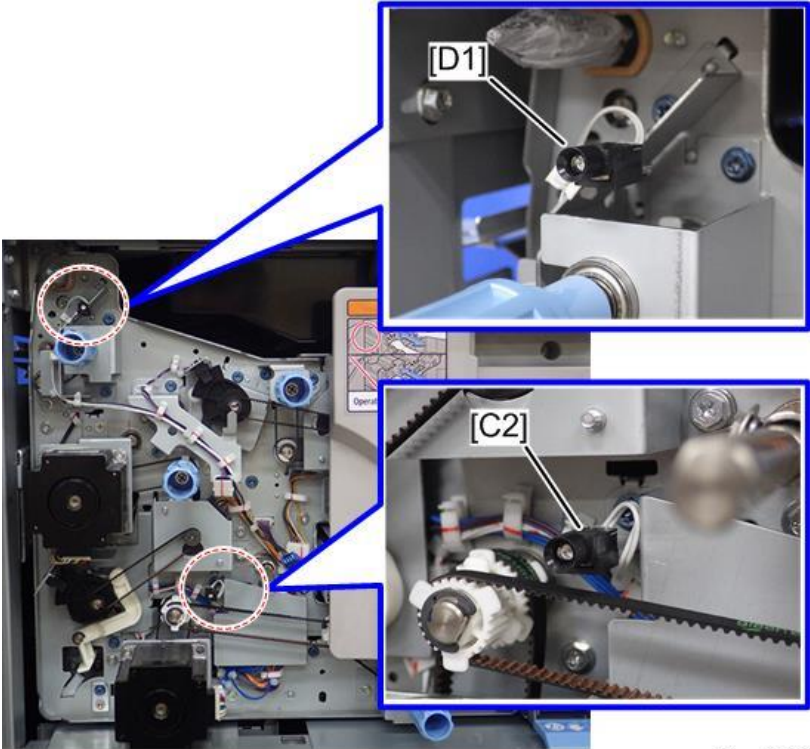


**Exit unit: C2, D1**

Remove the inner cover [A].

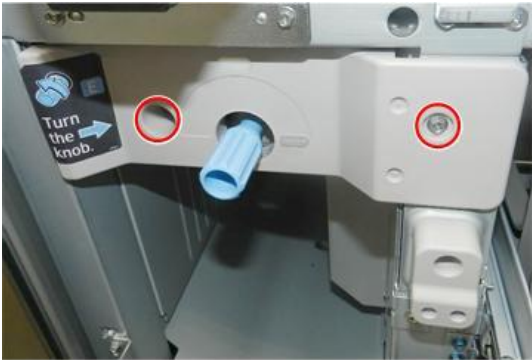






d0bxa4540

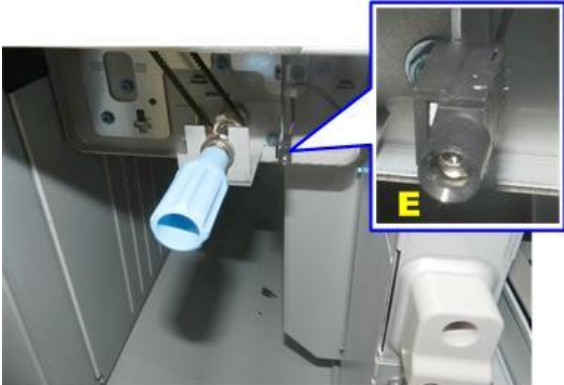
Purge Tray Cover: E



🔑 x2

d270b4003

There is one jam LED behind the purge tray cover.



d270b4004

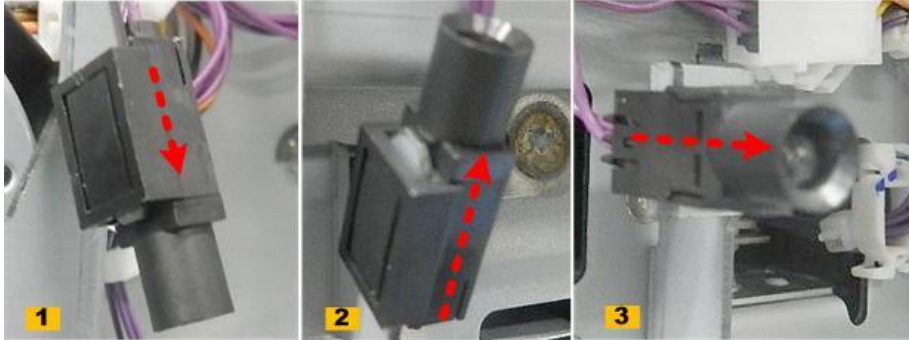
## 4.Replacement and Adjustment

### Removing a Jam LED and Lens

---

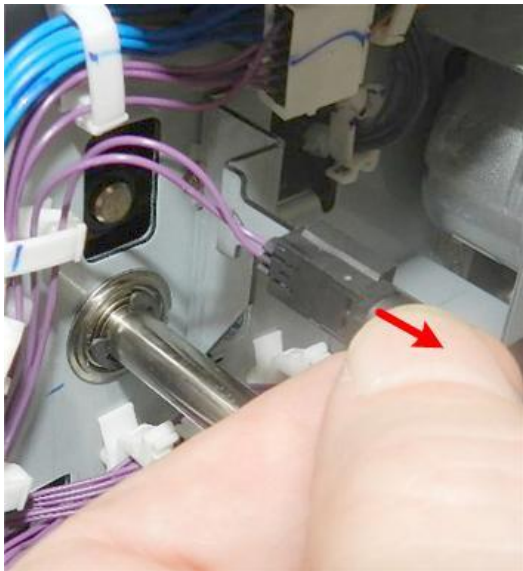
This is the basic procedure for replacing a jam LED. This procedure applies to every jam LED in the paper path.

1. First, note the orientation of the LED. Some point down [1], some point up [2], and others point straight out [3].



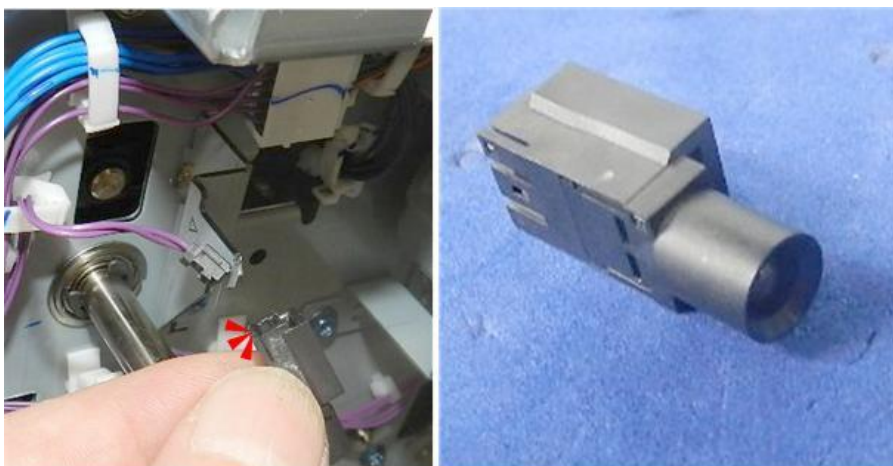
d270b4009

2. Slowly, pull the LED slowly off its base in the direction that it is pointing.



d270b4010

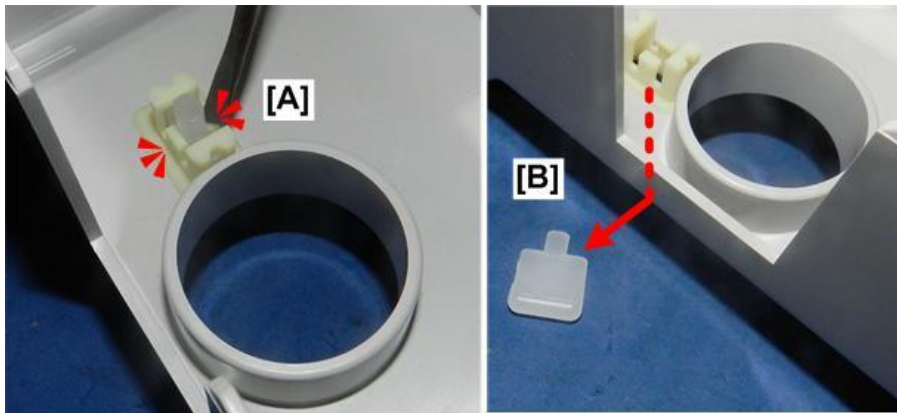
3. Disconnect the LED (📦 x1).



d270b4011

## 4.Replacement and Adjustment

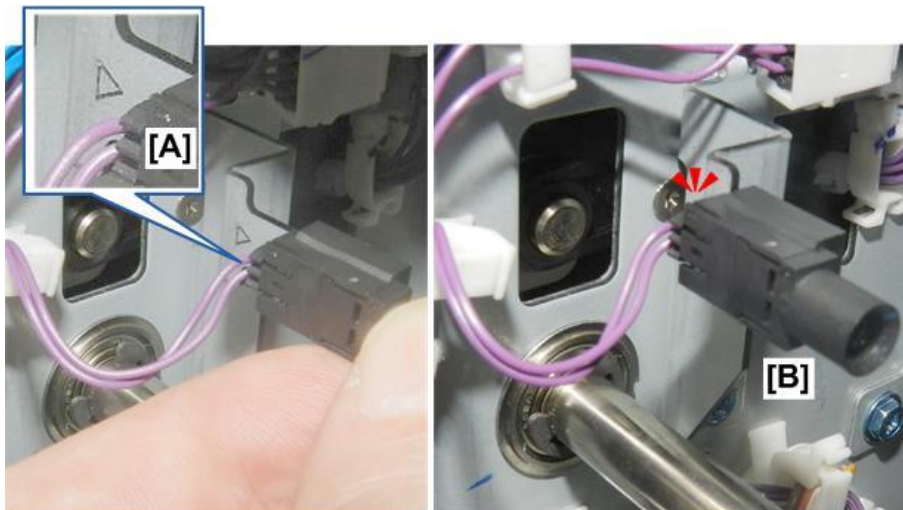
- Each jam LED is paired with one lens attached to the cover. To remove a lens, at the back side of the cover [A] release the tabs on either side of the lens.
- The lens will fall out of the front side of the cover [B].



d270b4014

### Re-installing a Jam LED and Lens

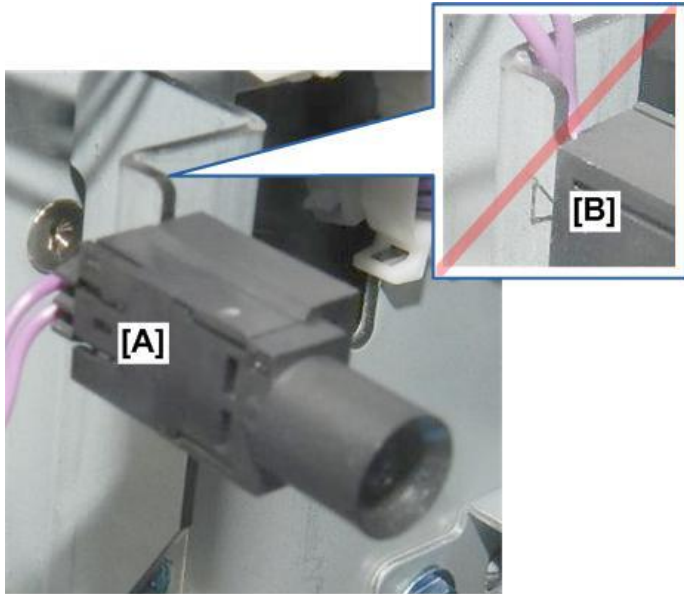
- Hold the LED so that its harness and connector [A] are on the same side as the triangle embossed on the base.
- Slowly, push the LED [B] onto its base.



d270b4012

- Check the base [A] and confirm that the embossed triangle is not visible. If the triangle is visible, the LED is installed incorrectly [B]. Remove the LED, turn it over and then push it onto the base again.

#### 4.Replacement and Adjustment



d270b4013

**★ Important**

- If the LED is installed incorrectly, the LED and lens will not be aligned correctly. This could damage the LED or lens when you try to re-attach the cover.

## Vertical Transport Unit

### Opening the VTU

1. Open the front doors.
2. Remove the toner bottle.



d1793401

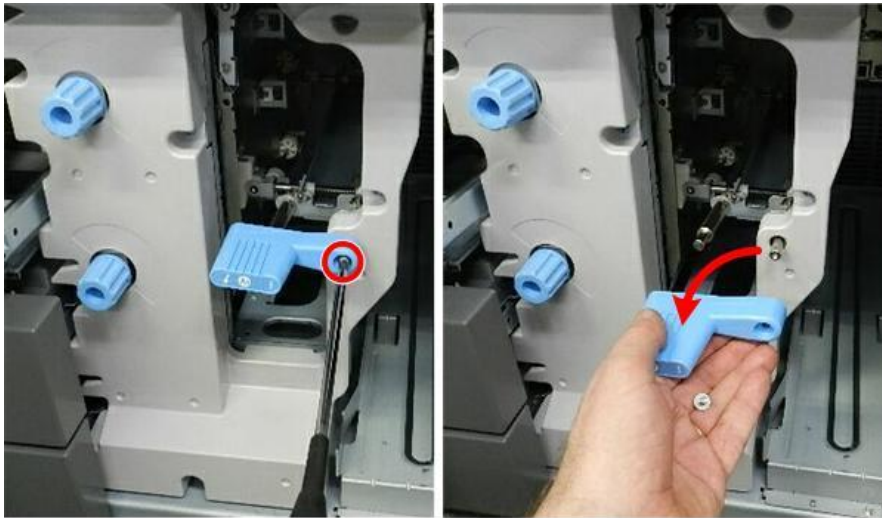
3. Pull out the paper trays.



d270b3402

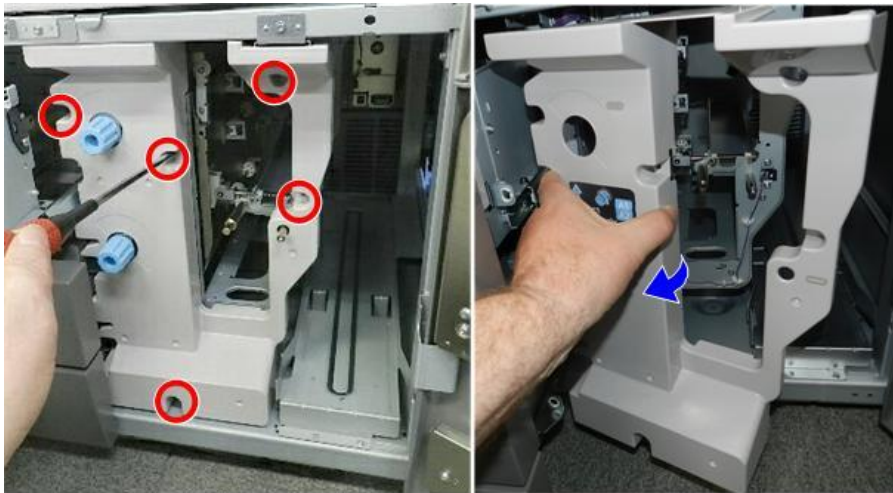
#### 4.Replacement and Adjustment

4. Remove the VTU handle (🔩x1).



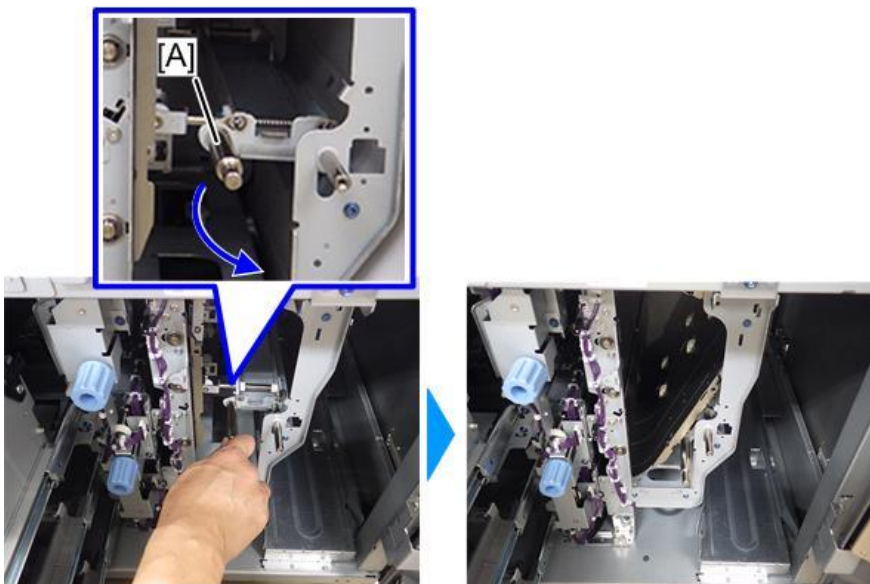
d1793403

5. Remove the VTU cover (🔩x5).



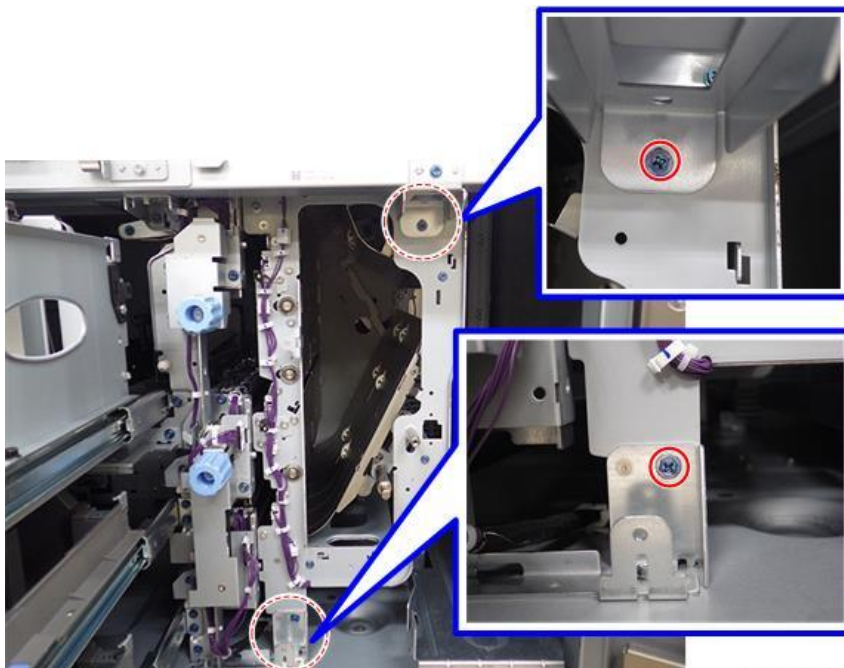
d270b3404

6. Lower the handle [A] to open the VTU paper path plate.



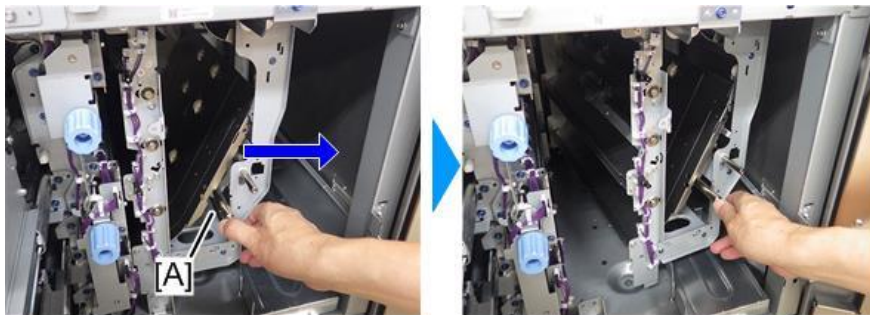
d0bxa4541

7. Remove the screws (🔩x2).



d0bxa4542

8. Grip the handle [A] and open the VTU by moving it to the right.



d0bxa4543

## Transport Sensors

The transport sensors can be removed without removing the VTU from the machine.

①	1st Transport sensor (F1)
②	2nd Transport sensor (F2)
③	3rd Transport sensor (F3)
④	Vertical transport sensor

### ★ Important

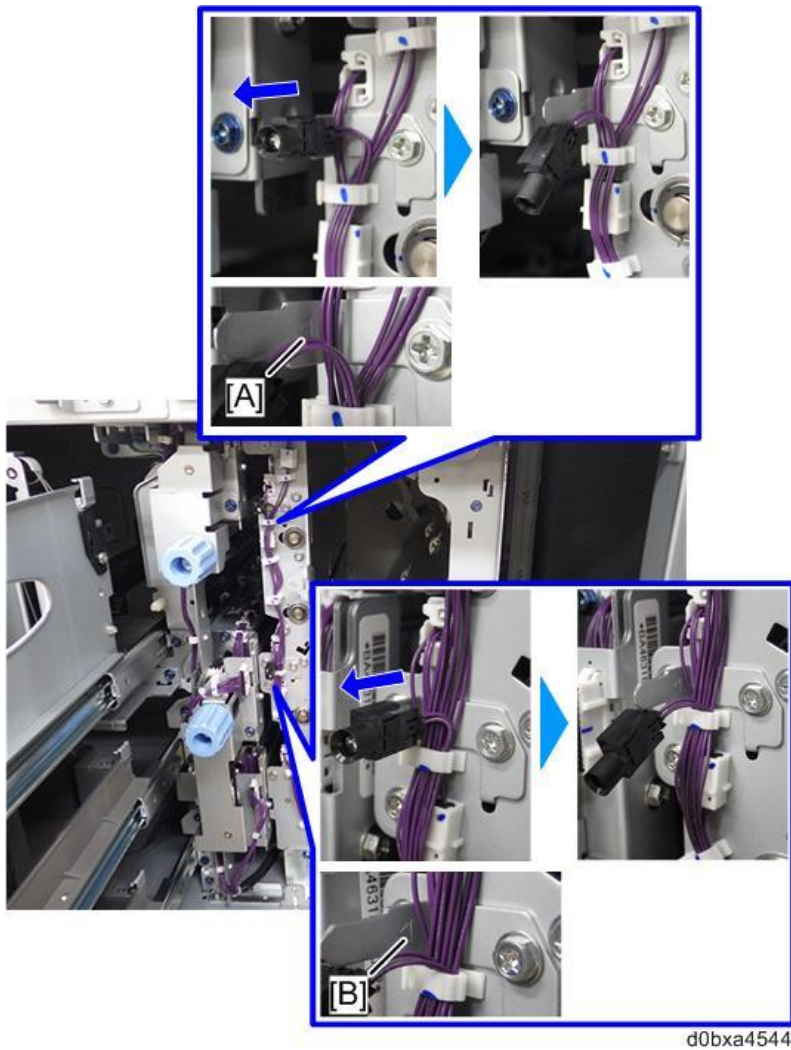
- There are two paper jam LEDs on the front of the VTU. Work carefully to avoid knocking these LEDs off their posts or cutting or scratching fingers on their sharp edges. To avoid problems during bracket removal, just pull them off their posts temporarily.

- Open the VTU ([Opening the VTU](#))
- At the front of the VTU, pull the two paper jam LEDs off their posts. You do not need to disconnect

#### 4.Replacement and Adjustment

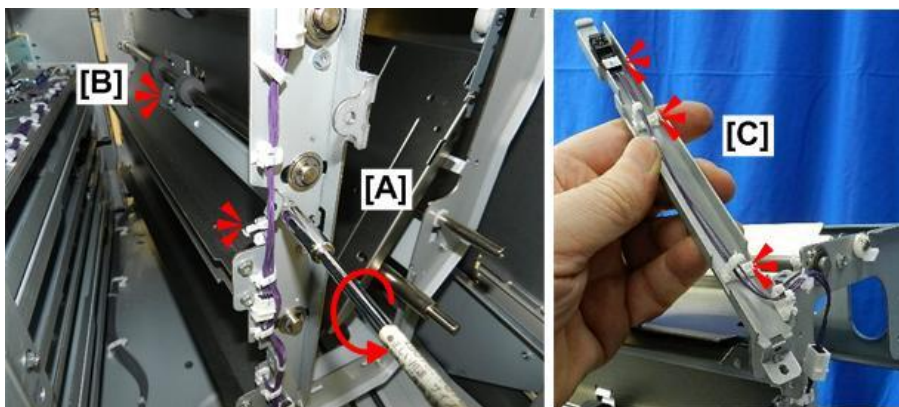
them.

3. When you set them again, be sure the LED connector is on the same side as the black triangles [A] and [B].



d0bxa4544

4. At the front [A], disconnect the sensor bracket (🔧x1, 🛠️x1).
5. Disconnect the bracket at the rear [B] (🔧x1).
6. Separate sensor and bracket [C] (🔧x2, 🛠️x1).



d1793447



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**VTU Removal**

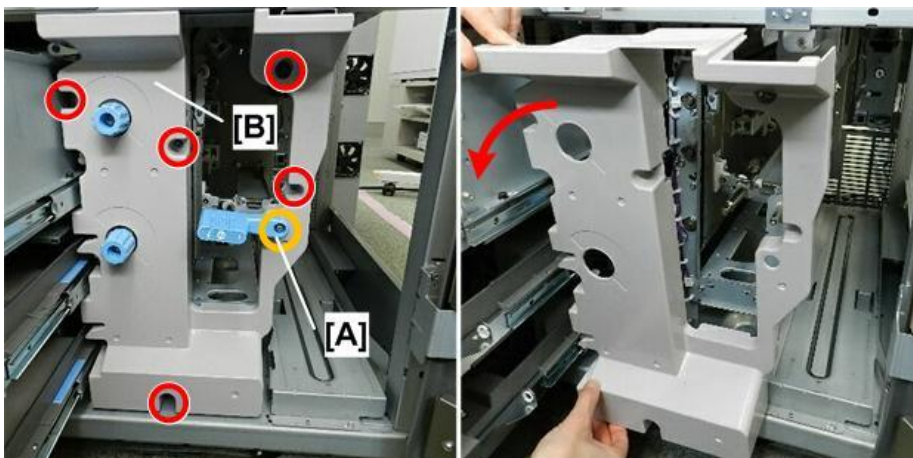

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1. Open the front doors
2. Pull out the paper trays
3. Pull out the front drawer
4. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))
5. Remove the right cover ([Right Cover](#))
6. Remove the toner bottle.



d1793421

7. Remove handle [A] and cover [B] (⚙️ x5).

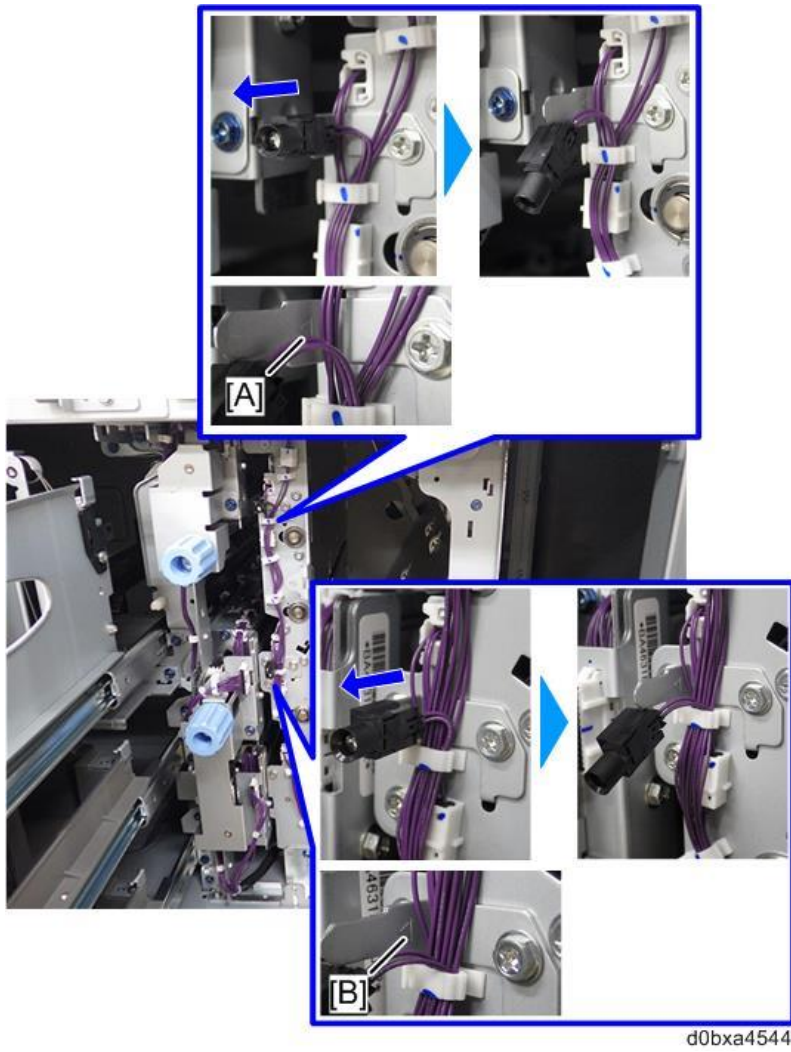


d1793422

**★ Important**

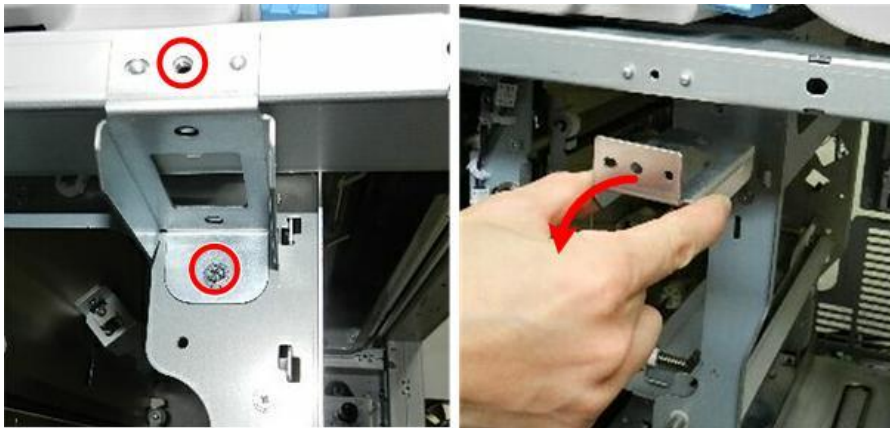
- There are two paper jam LEDs on the front of the VTU. Work carefully to avoid knocking these LEDs off their posts or cutting or scratching fingers on their sharp edges. To avoid problems during removal of the VTU, just pull them off their posts temporarily.
- At the front of the VTU, pull the two paper jam LEDs off their posts. You do not need to disconnect them.
- When you set them again, be sure the LED connector is on the same side as the black triangles [A] and [B].

#### 4.Replacement and Adjustment



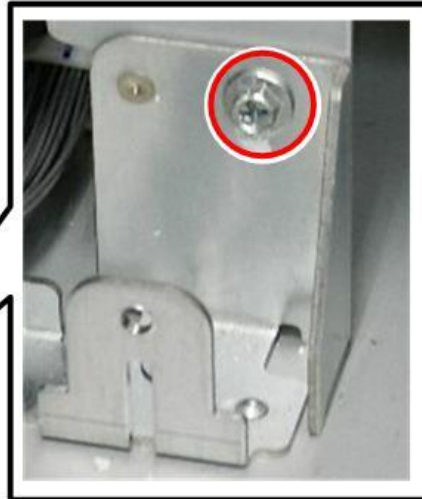
d0bxa4544

8. Remove a bracket (⊗ x2).



d1793423

9. Remove a screw (🔩x1).

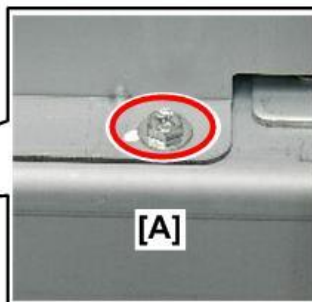
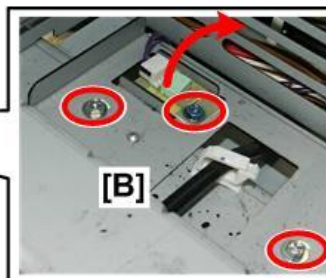
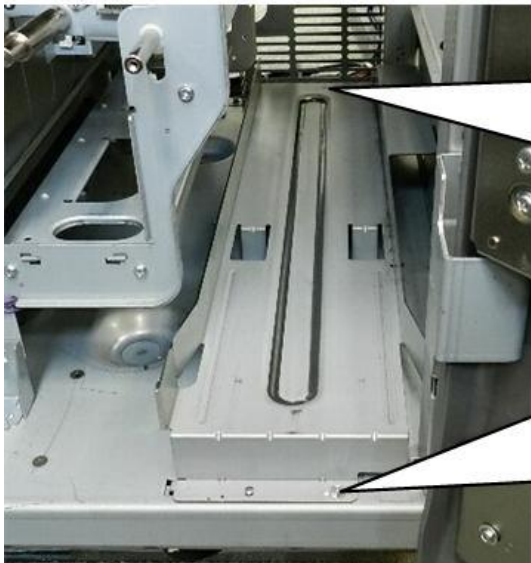


d1793424

10. Disconnect the toner bottle rail:

[A] Front (🔩x1)

[B] Rear (🔩x2, 🔩x1). When you remove the blue screw, pull out the temperature sensor. You do not need to disconnect the sensor.



d1793425

#### 4.Replacement and Adjustment

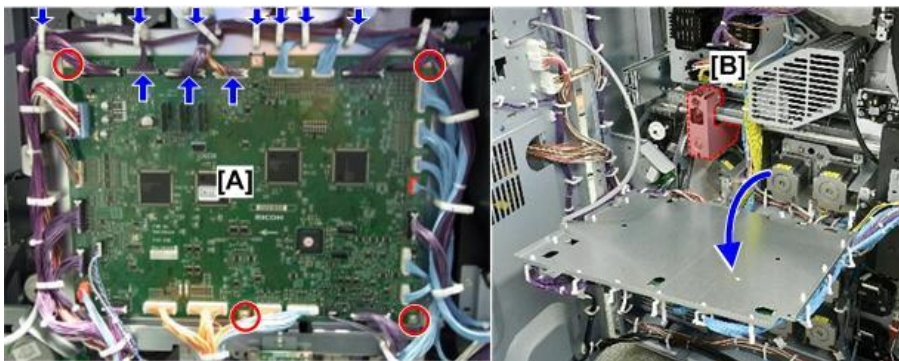
11. From the front, slide the toner bottle rail out of the machine.



d1793426

12. Lower the IOB [A] (🔧x8, 📦x3, ⚙️x4).

13. With the IOB lowered, you can see the bracket [B] that must be removed in the next step.

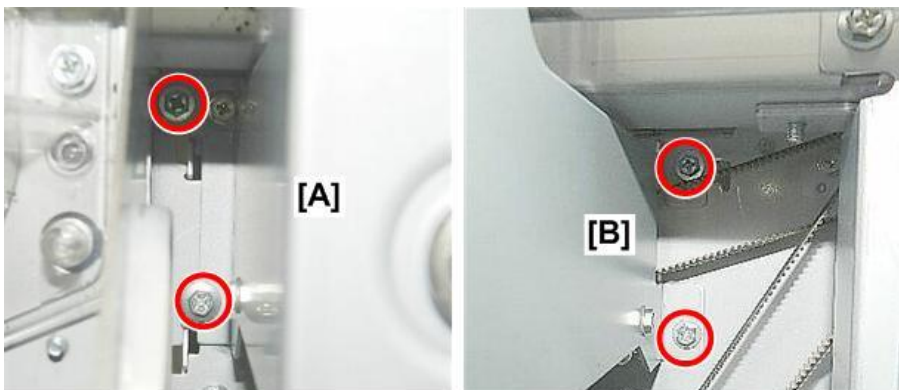


d270b3427

14. Disconnect:

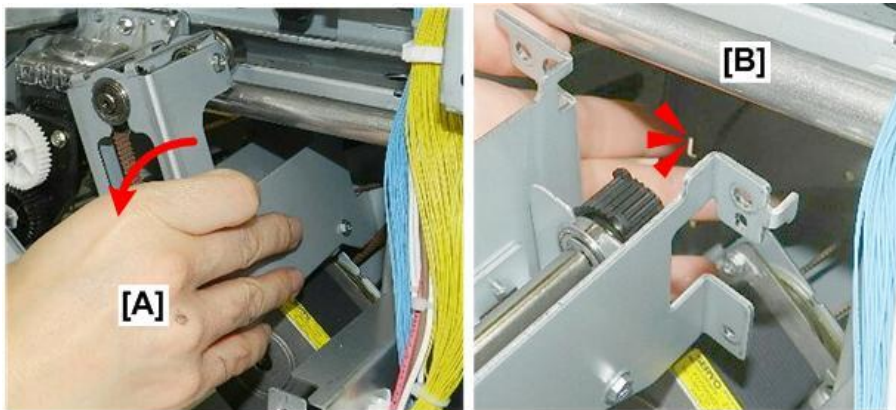
[A] Left side of the bracket (🔧x2)

[B] Right side of the bracket (🔧x2)



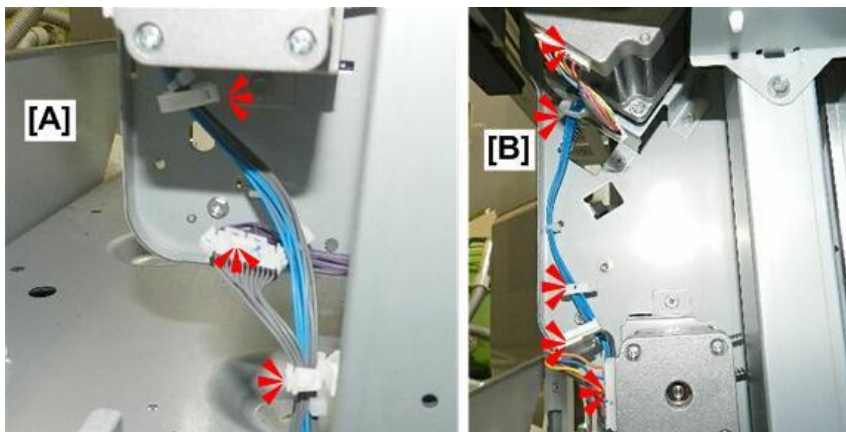
d1793428

15. As you remove the bracket [A], disconnect the belt [B].



d1793429

16. At the corner of the machine, below the lowered IOB, disconnect the VTU motor harnesses at [A] and [B] (🔌x5, 📦x2).



d1793430

17. The VTU unit is mounted on two pins ① and ② below the lowered IOB.



d1793431

18. Make sure that the front drawer is pulled out completely.

★ Important

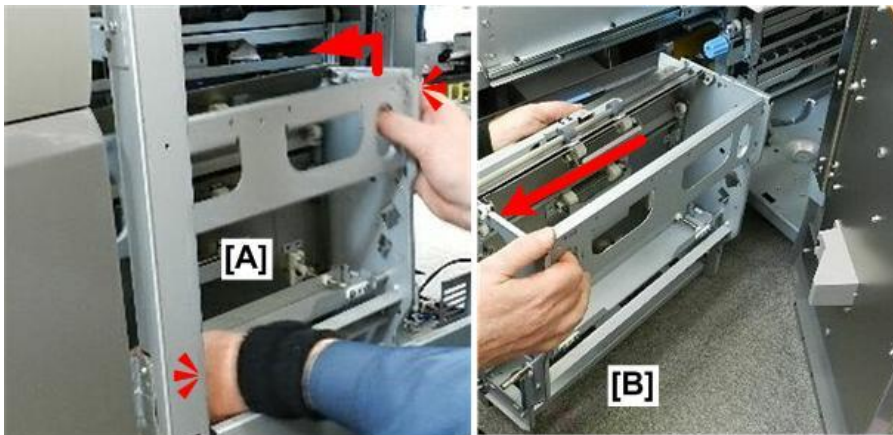
- The VTU cannot be removed with the front drawer inside the machine.

#### 4.Replacement and Adjustment



d270b3432

19. On the right side of the machine [A], lift the VTU [A] off its hooks.
20. At the front [B], pull the VTU out of the machine, and then lay it on a flat surface.



d1793433

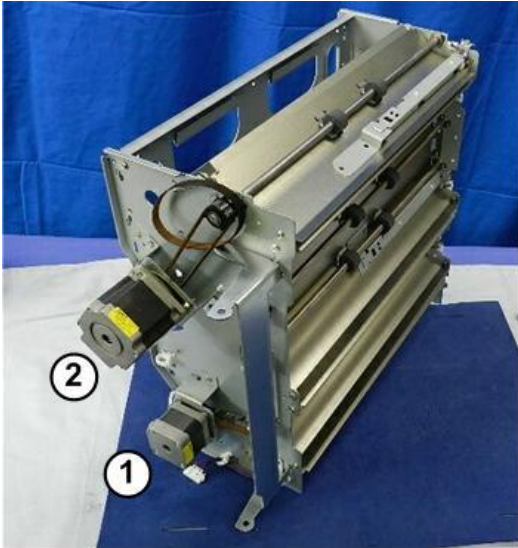
21. Set the VTU on a flat stable surface.



d1793434



## Exit Motor, Vertical Transport Motor

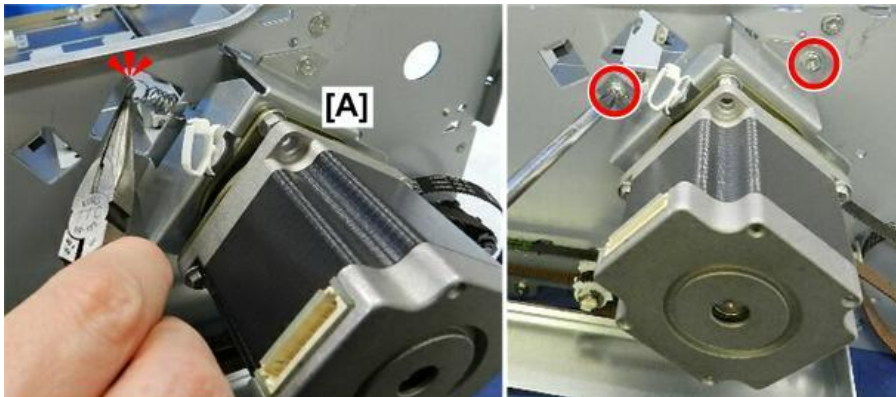
①	Vertical transport motor
②	Exit motor



d1793435

## Exit Motor

1. Remove the VTU ([Opening the VTU](#))
2. Disconnect the spring of the exit motor [A], and then disconnect the top of the motor bracket (  x1,  x2).

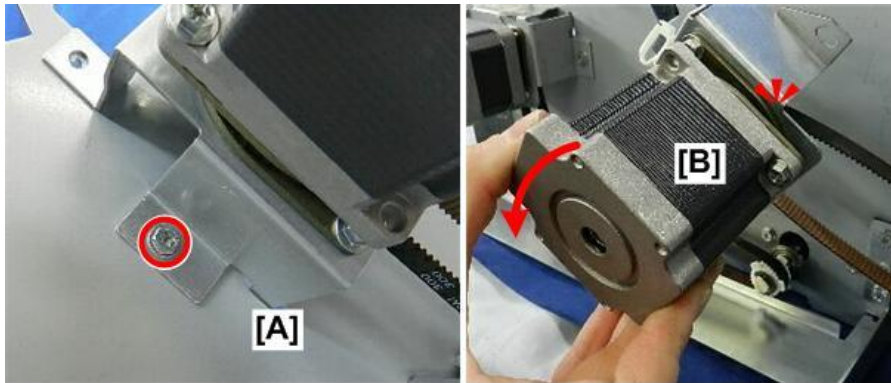


d1793436

3. Disconnect the bottom bracket [A], and then disconnect the belt as you remove the bracket [B]

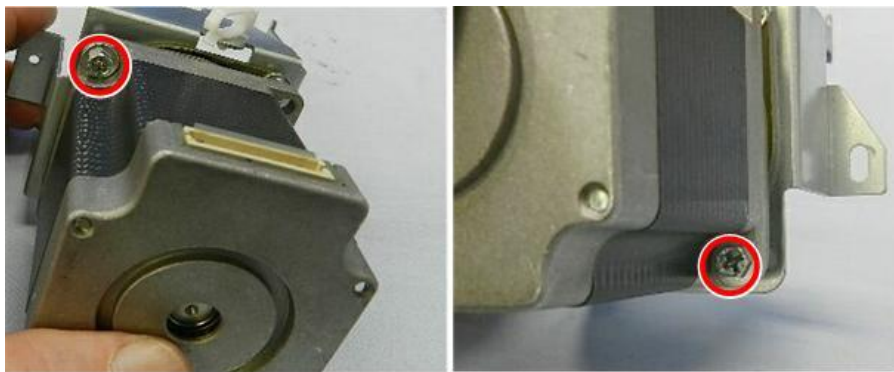
#### 4.Replacement and Adjustment

(with motor attached) (🔩x1, 🛠x1).



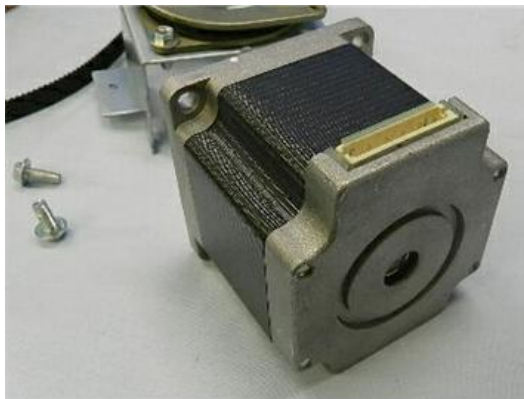
d1793437

4. Disconnect the motor from the bracket (🔩x2).



d1793438

5. Separate the motor and the bracket.



d1793439

#### Vertical Transport Motor

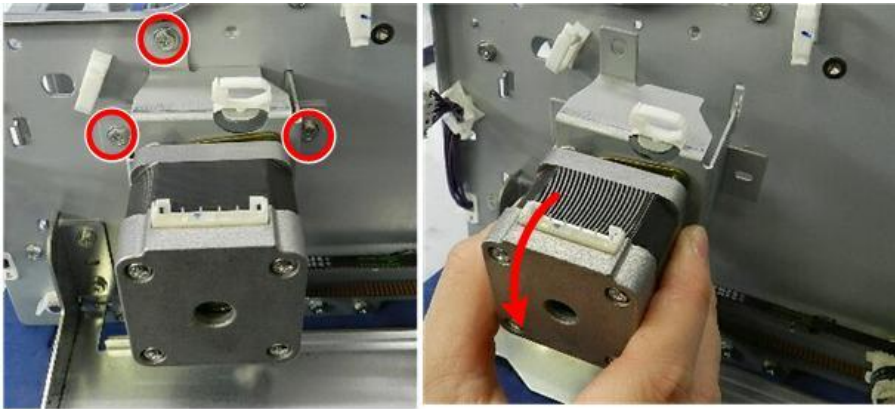
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1. Remove the VTU ([Opening the VTU](#))
2. Disconnect the motor bracket (🔩x3).



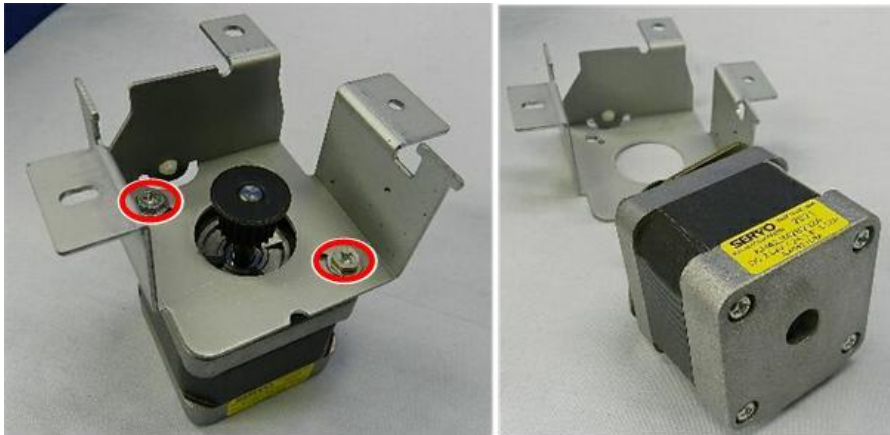
## 4.Replacement and Adjustment

3. As you remove the bracket (with motor attached), disconnect the belt behind the bracket (🔧x1).



d1793440

4. Remove the motor from the bracket (🔧x2).



d1793441

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### Vertical Transport Sensors

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①	1st transport sensor (F1)
②	2nd transport sensor (F2)
③	3rd transport sensor (F3)
④	Waste toner vertical transport sensor

## 4.Replacement and Adjustment



d1793442

### 1st Transport Sensor (F1)

#### 1. Open the VTU ([Opening the VTU](#))

##### ★ Important

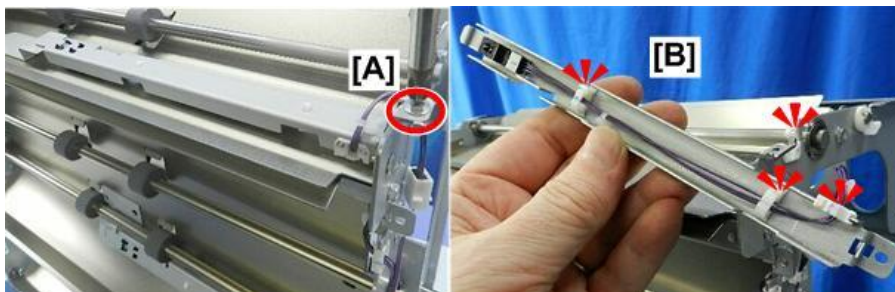
The sensors can be removed without removing the VTU.

Each sensor is removed in the same way:

- Screw (🔩 x1)
- Clamps (🔧 x4)
- Connector (🔌 x1)
- Pawls (🔧 x4)

The procedure below describes how to remove the 1st transport sensor. Follow the same procedure to remove any of the other VTU sensors.

1. Disconnect the sensor bracket at the front [A] (🔩 x1).
2. Disconnect the sensor harness inside the bracket [B] (🔧 x3).



d1793443

3. Remove the sensor (📦 x1, ▼4).



d1793444

## 4.Replacement and Adjustment

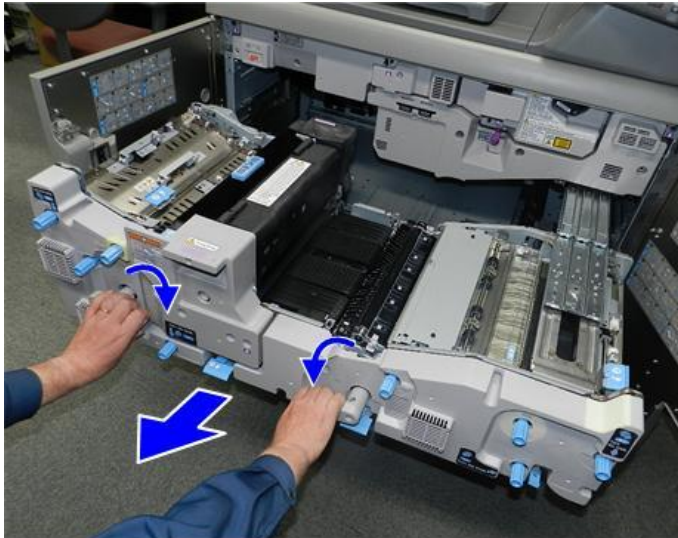
# Registration Unit

## Paper Dust Tray

---

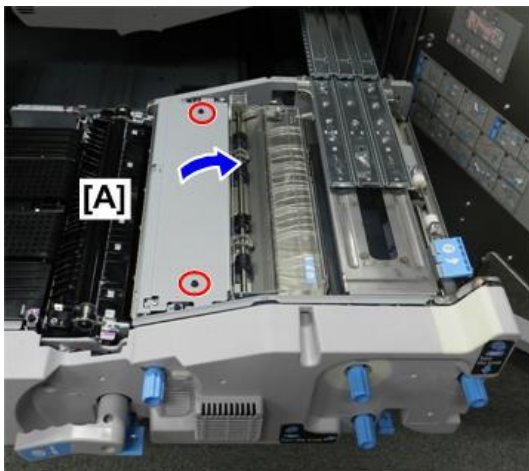
The dust collector should be opened and emptied very PM visit.

1. Open both front doors, and then pull out the drawer.



d270b2213

2. Remove the cover [A]

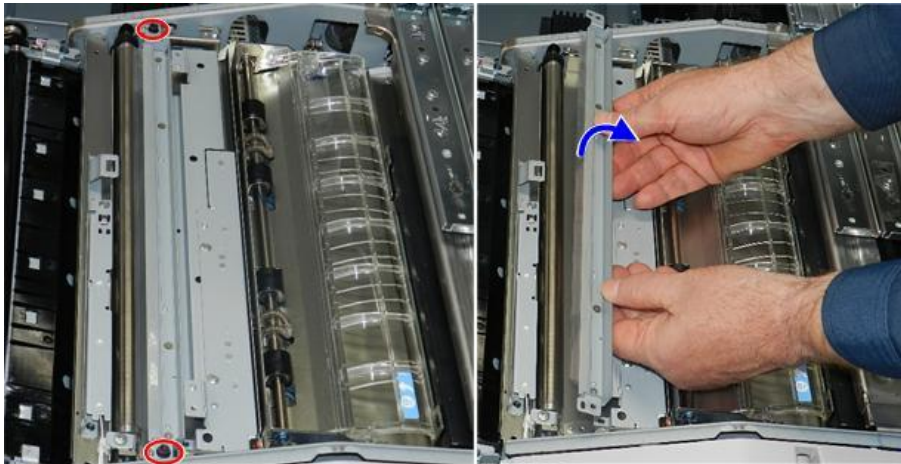


 x2

d270b3501

3. Remove the dust collector (\*x2).

4. Empty the collected paper dust into a trash bin.



d270b3502

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## Motors

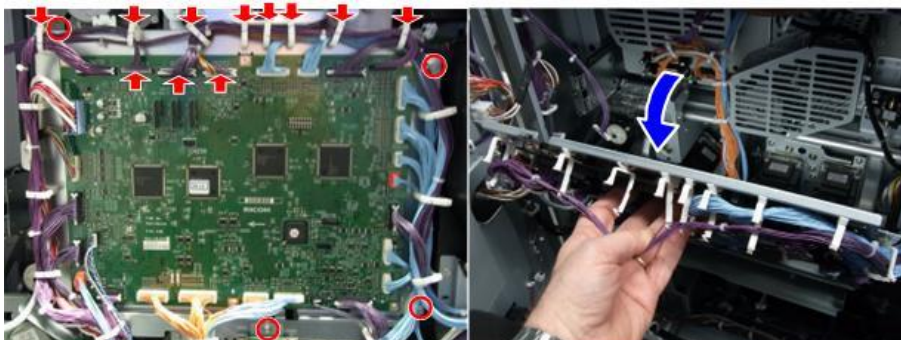
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1. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))



d270b2226

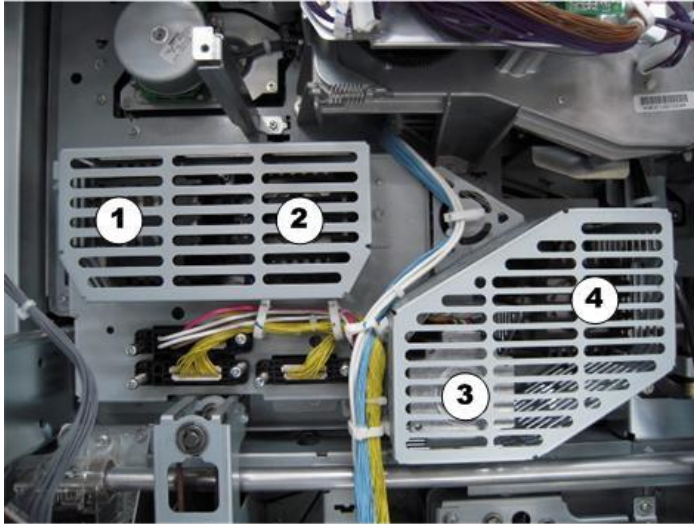
2. Lower the IOB (🔌x8, 📦x3, 🌀x4). ([Lowering the IOB](#))



d270b3029

## 4.Replacement and Adjustment

①	Registration Entrance Motor
②	Registration Timing Motor
③	Registration Gate Roller Motor
④	Transport Timing Motor



d1793503

These four motors can be accessed and are serviced from the back of the machine.

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### Registration Entrance Motor

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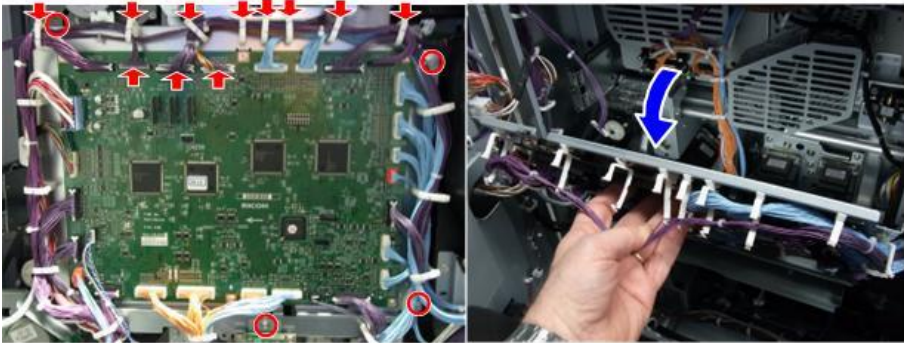
1. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))



d270b2226

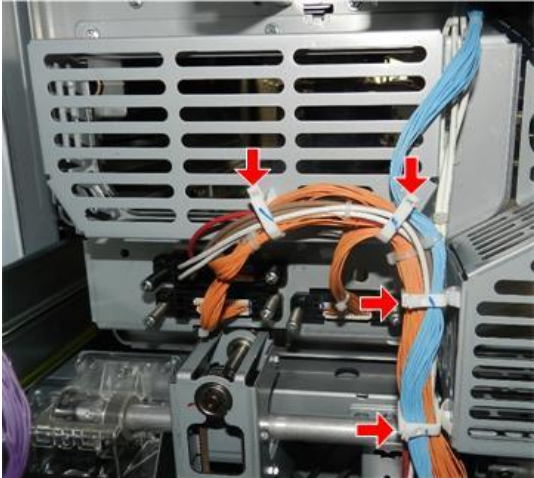
4.Replacement and Adjustment

2. Lower the IOB (🔧x8, 📦x3, 🛠️x4).(Lowering the IOB)



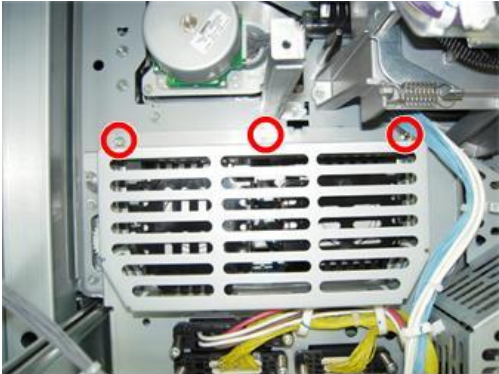
d270b3029

3. Free the harnesses (🔧x4).



d270b3505

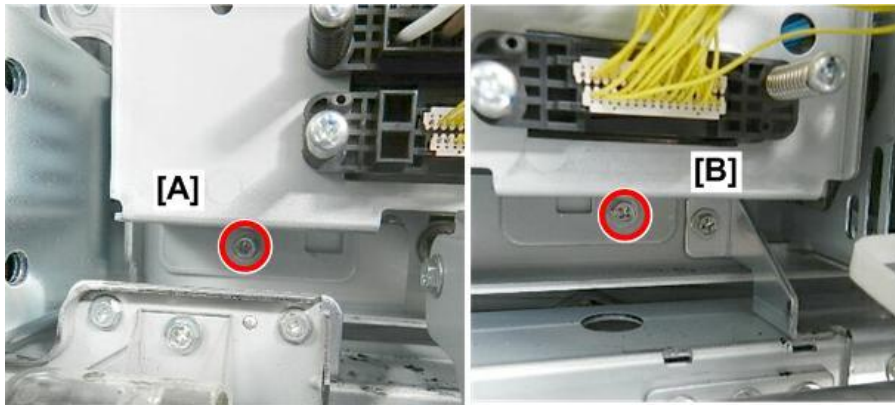
4. Disconnect the top of the plate (🛠️x3).



d1793506

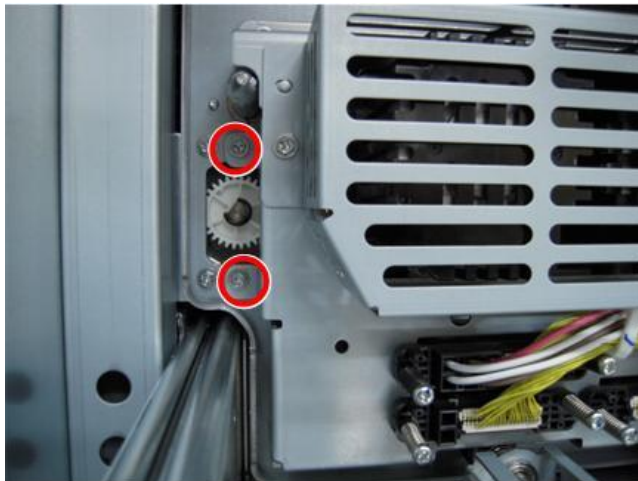
#### 4.Replacement and Adjustment

5. Disconnect the bottom of the plate at [A] and [B] (🔧 x2).



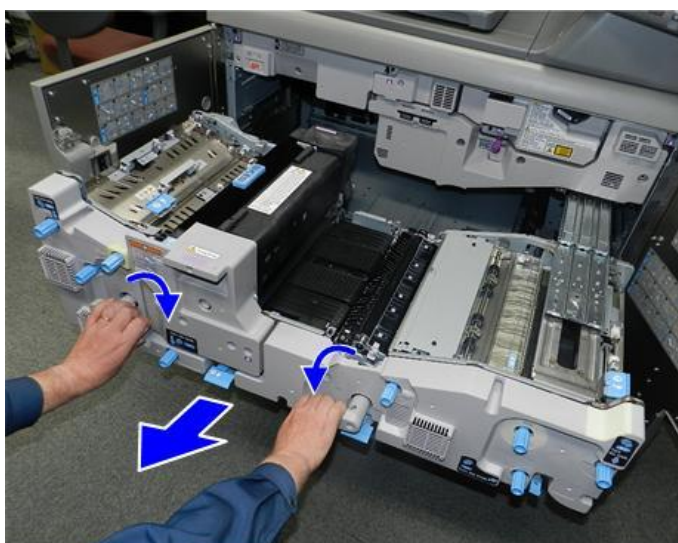
d1793507

6. Disconnect the side of the plate (🔧 x2).



d1793508

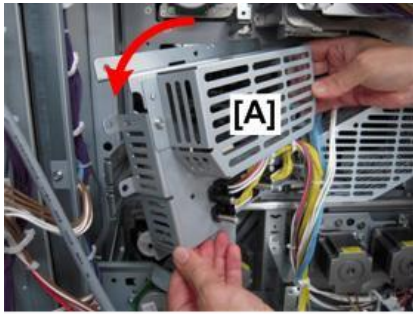
7. Pull out the front drawer.



d270b2213

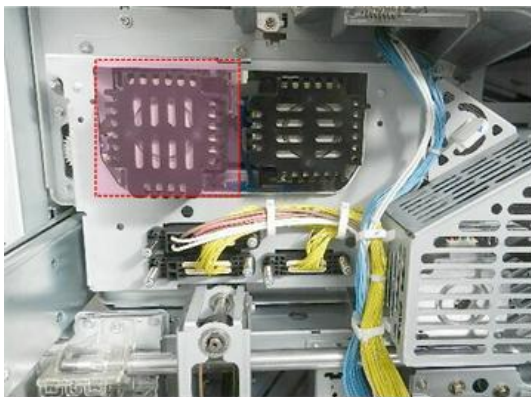


8. Remove plate [A].



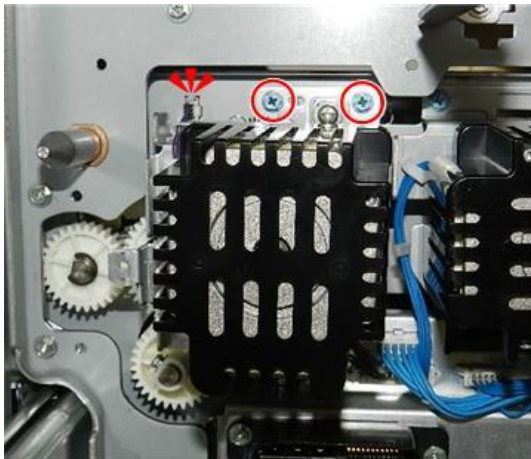
d1793510

9. Push the front drawer completely into the machine so that you can access the motors again.  
10. The registration entrance motor is on the left.



d1793504

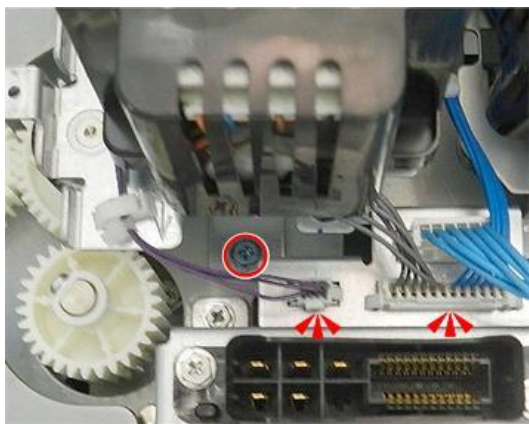
11. Disconnect the motor bracket at the top (🔧 x1, 🔧 x2).



d1803521

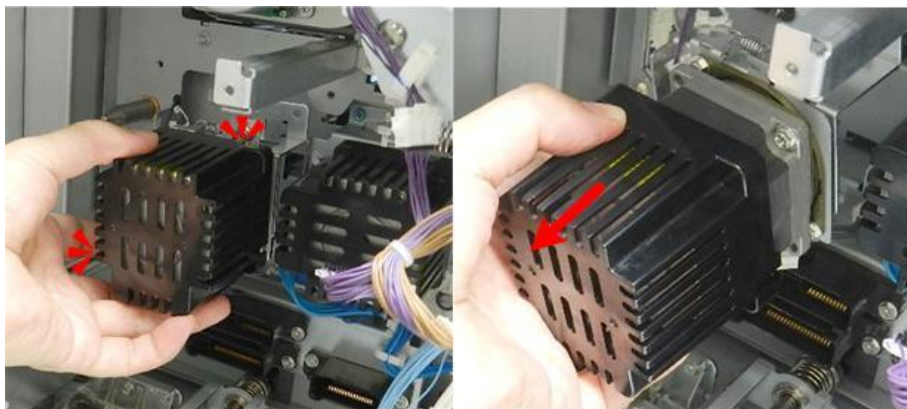
#### 4.Replacement and Adjustment

12. Disconnect the motor bracket at the bottom (🔧 x2, 🔄x1).



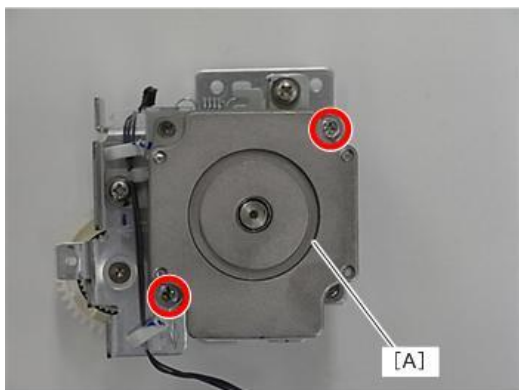
d1803522

13. Disconnect the cage and then remove the motor bracket with motor attached (🔧x2).



d1803523

14. Separate motor [A] and bracket (🔧 x2).

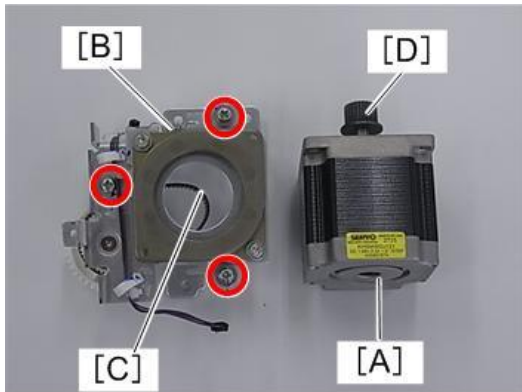


d1790118

#### Re-installation

1. When re-installing the motor [A], loosen the three screws to release the tension on the spring [B].

2. Set the belt [C] and the motor gear [D], and then fasten the motor and bracket together (🔩x2).



d1790119

3. Tighten the screws [B] to restore tension on the belt.

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### Registration Timing Motor

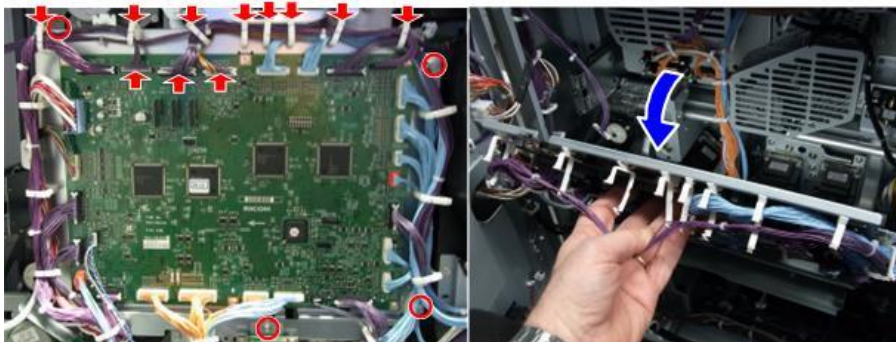
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1. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))



d270b2226

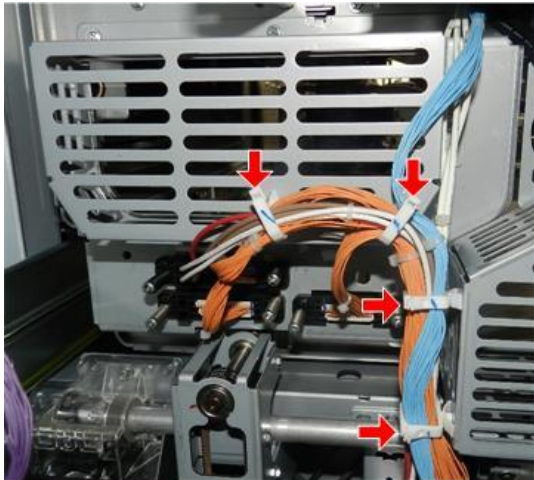
2. Lower the IOB (🔩x8, 📦x3, 🛠️x4). ([Lowering the IOB](#))



d270b3029

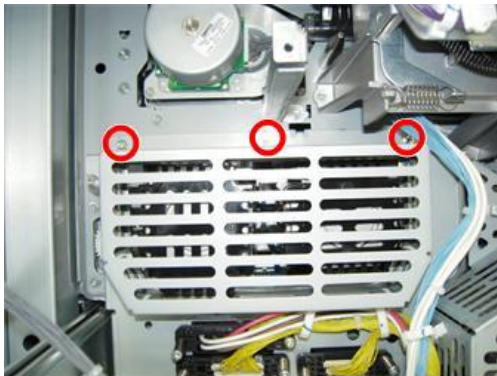
#### 4.Replacement and Adjustment

3. Free the harnesses (🔧x4).



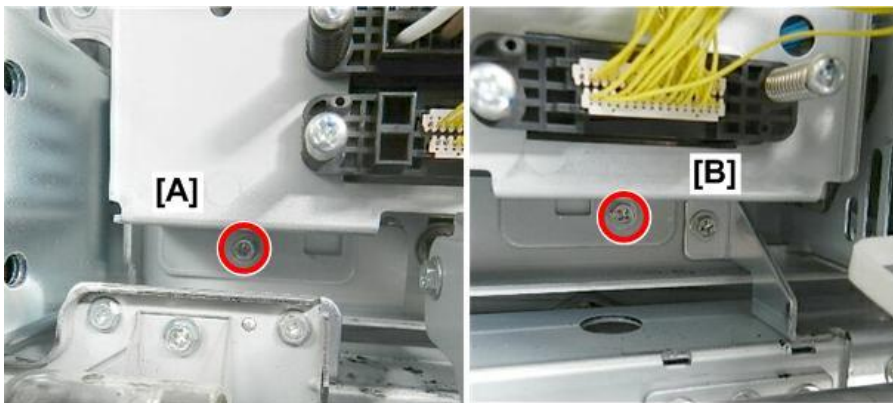
d270b3505

4. Disconnect the top of the plate (🔧x3).



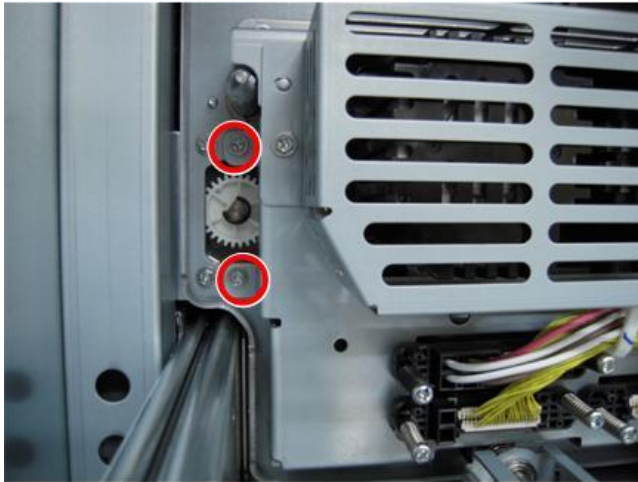
d1793506

5. Disconnect the bottom of the plate at [A] and [B] (🔧x2).



d1793507

6. Disconnect the side of the plate (🔩 x2).



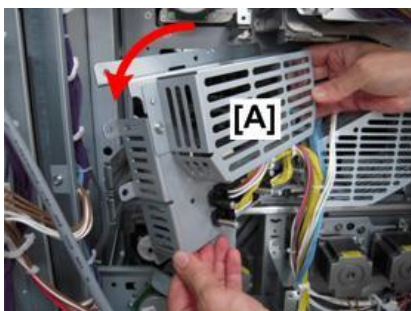
d1793508

7. Pull out the front drawer.



d270b2213

8. At the rear, remove plate [A].

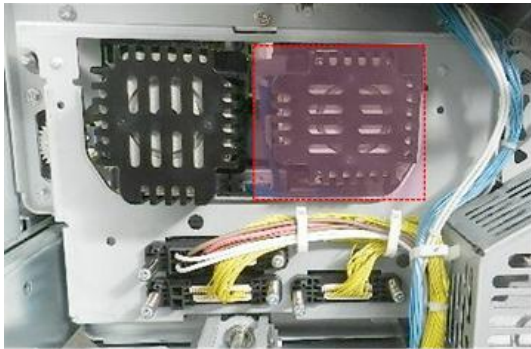


d1793510

9. Push the front drawer completely into the machine so that you can access the motors again.

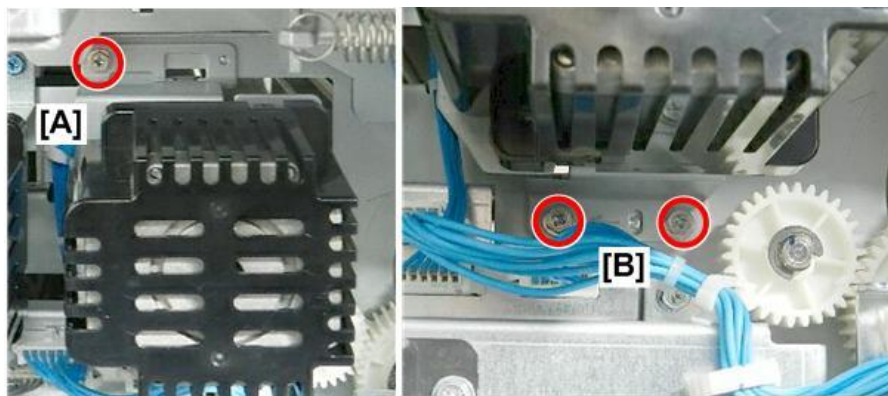
#### 4.Replacement and Adjustment

10. The registration timing motor is on the right.



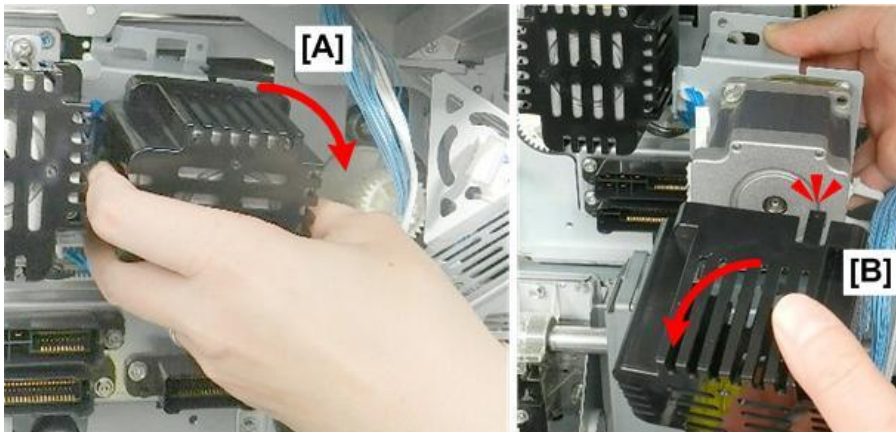
d1793515

11. Disconnect the motor bracket at top [A] and bottom [B] (⚙️ x2).



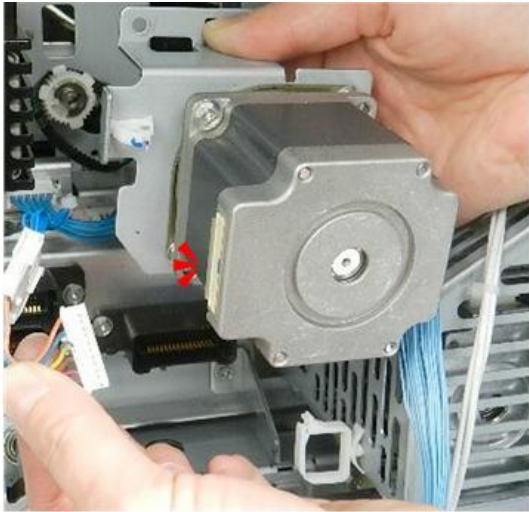
d1793516

12. Pull the motor [A] a small distance away from the back of the machine, and then release the tabs of the plastic motor cage [B] (⚙️ x2).



d1793517

13. Disconnect the motor (🔧 x1).



d1793518

14. Disconnect the motor (🔧 x2).



d1793519

15. Separate motor and bracket.



d1793520

**Note**

- After re-installing the motor, pull out the front drawer and confirm that the timing belt is set

## 4.Replacement and Adjustment

correctly.

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### Registration Gate Roller Motor

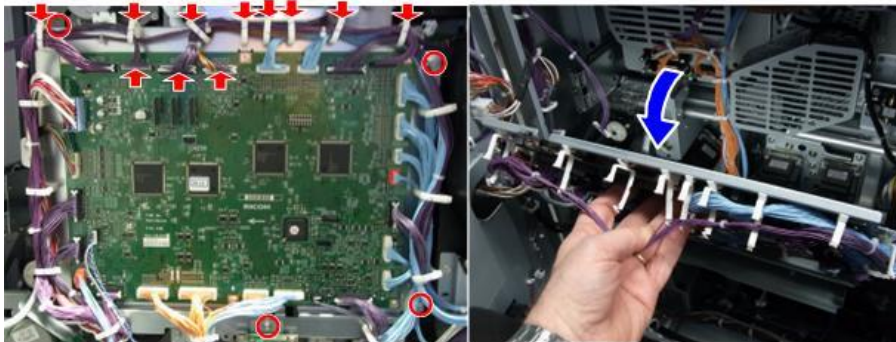
---

1. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))



d270b2226

2. Lower the IOB (🖱️ x8, 📦 x3, 🌀 x4). ([Lowering the IOB](#))

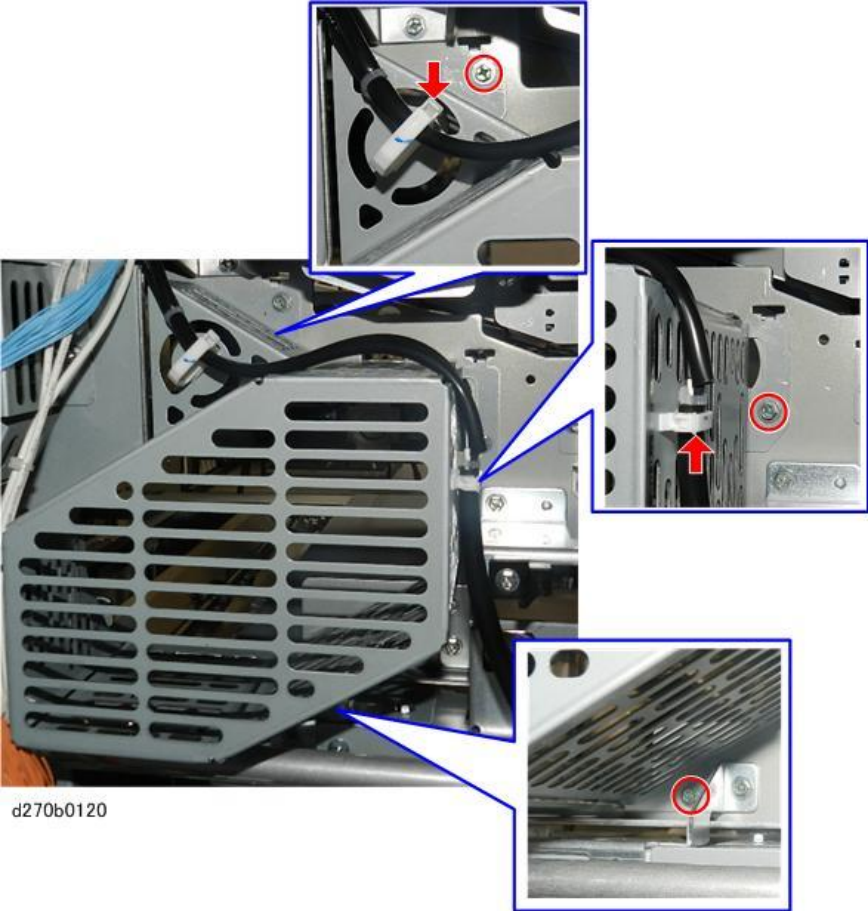


d270b3029

3. Remove the registration entrance motor bracket ([Registration Entrance Motor](#))

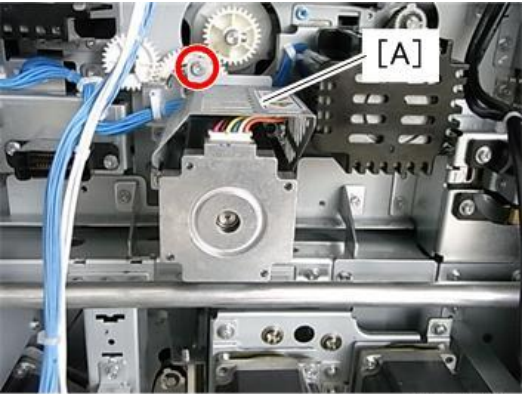


4. Remove the harness cage (⚙️x3, 🛠️x2).



d270b0120

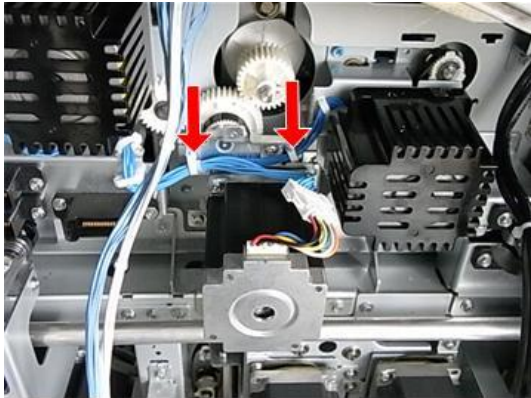
5. Remove the shield [A] (⚙️x1).



d1790123

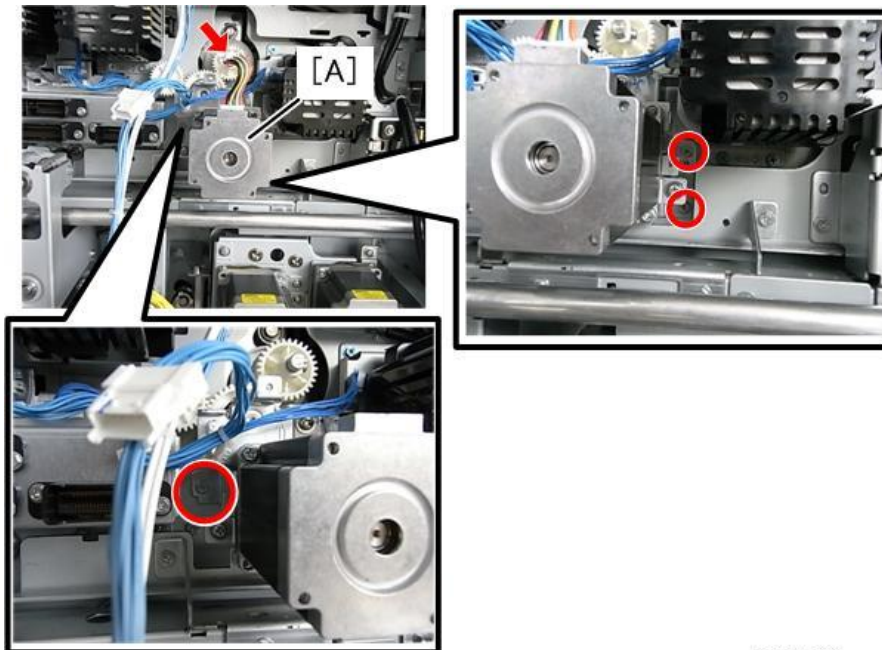
#### 4.Replacement and Adjustment

6. Disconnect the harness (🔌 x2).



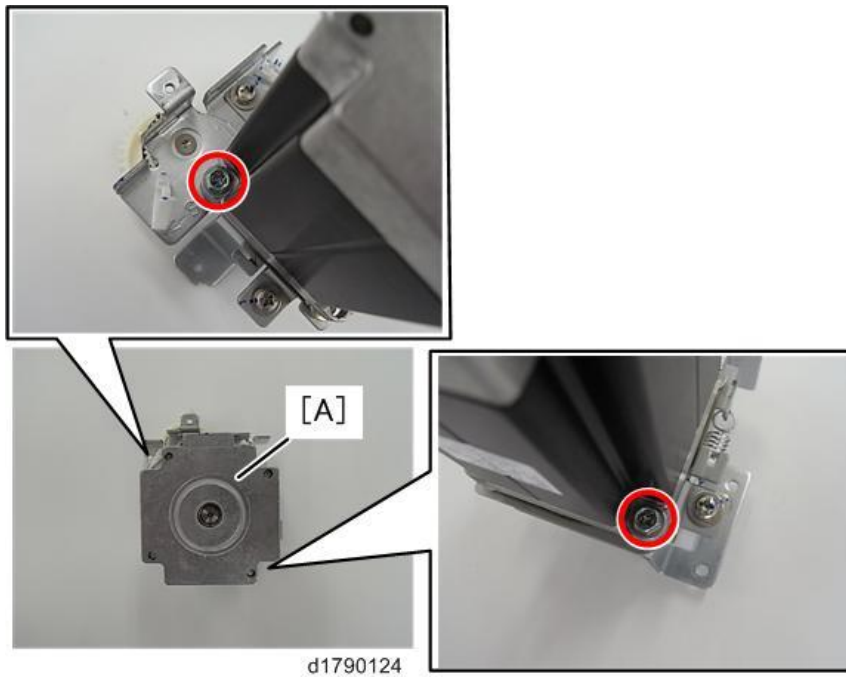
d1790121

7. Disconnect the bracket of the motor [A] (🔩 x3, 📦 x1)



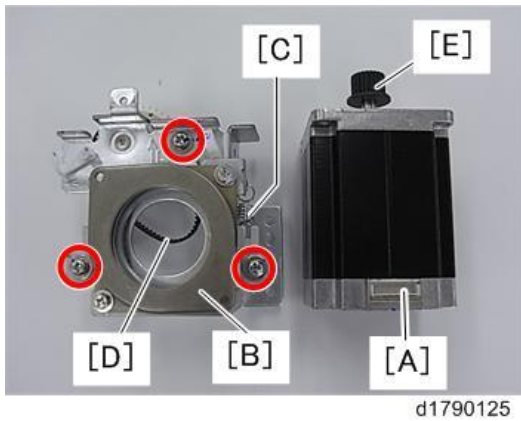
d1790122

8. Separate motor [A] and bracket (🔩 x2).



**Re-installation**

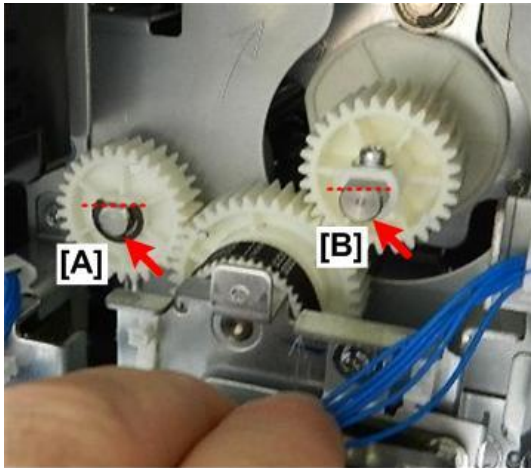
1. When re-assembling motor [A] and bracket [B], first loosen the three screws to release the tension on the spring [C].
2. Set the belt [D] and the motor gear [E], and then fasten the motor and bracket together (🔩 x2).



3. Tighten the three screws to restore tension on the belt.
4. Before you re-attach the motor, make sure that the flat sides [A] and [B] of both shafts are up and

## 4.Replacement and Adjustment

level with one another.



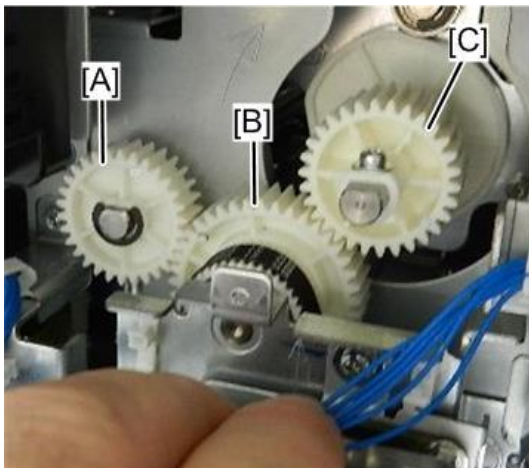
d1803524

### ★ Important

- You can turn either gear so the flat side is facing up. Make sure both flat sides are facing up after setting the motor.
- If these flat sides are not facing up and parallel, the gears will be out of alignment. This can cause paper jams in the registration unit.

### ↓ Note

- If JAM 31 (Transfer timing sensor) occurs twice or more per day and the number of printed sheets is over 15.000kp (A4 conversion), replace gears and apply grease to new gears.



d0bxa4249

- [A] :Gear (AB014243A)
- [B] :Gear (D1792758C)
- [C] :Gear (BB013040A)
- MOLYKOTE EM-50L or G-501 grease

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## Transfer Timing Motor

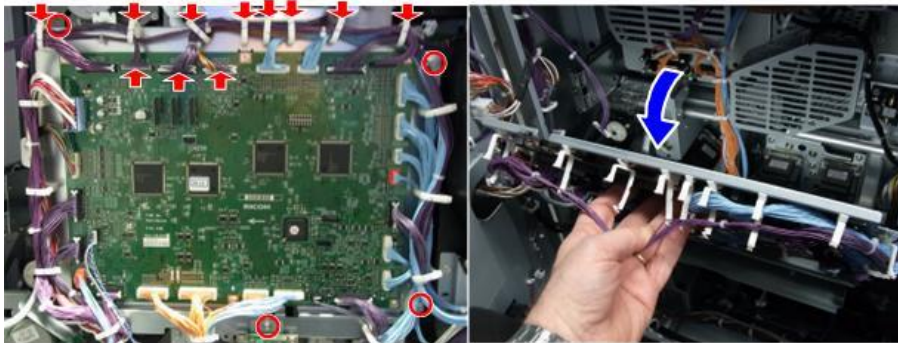
---

1. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))



d270b2226

2. Lower the IOB (🔑x8, 📦x3, 🌀x4). ([Lowering the IOB](#))



d270b3029

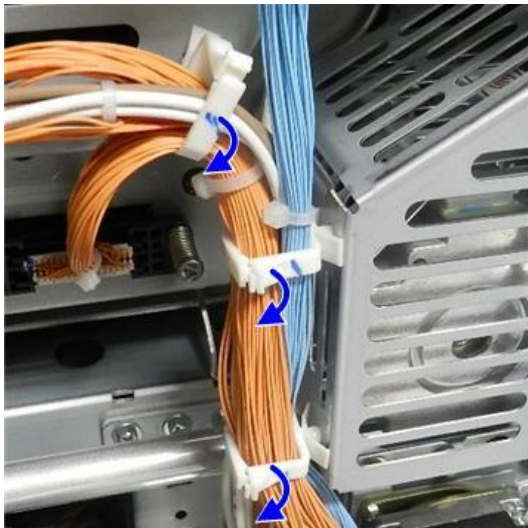
#### 4.Replacement and Adjustment

- Free the harness on the right side of the motor cage (🔧x1).



d270b4041

- Free the harnesses on the left side of the motor cage (🔧x3).



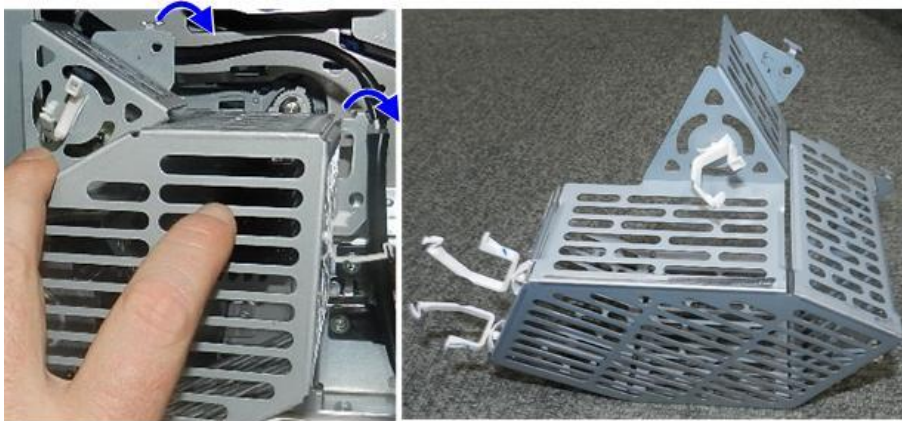
d270b4042

- Free the harness at the upper left corner of the motor cage (🔧x1).



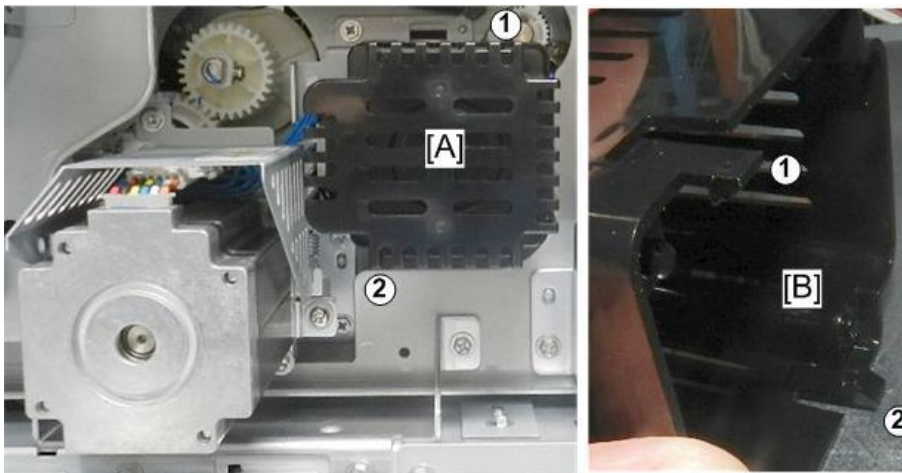
d270b4043

6. Unhook the top corners of the cage, and then remove it (▼x2).



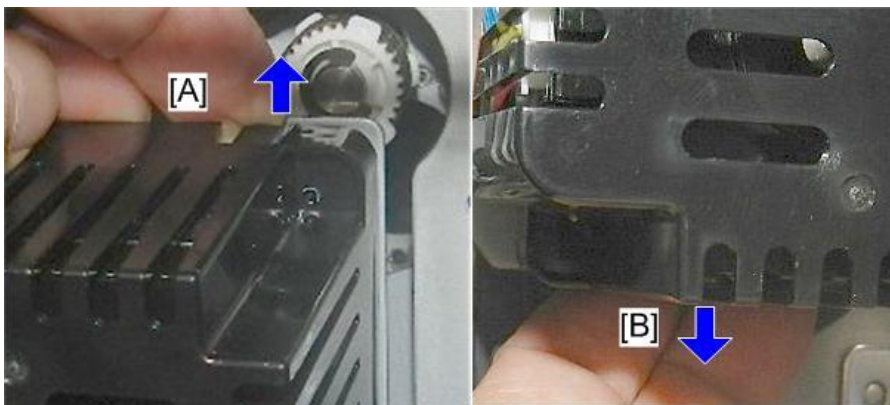
d270b4044

7. The plastic cage [A] on the transfer timing motor is attached by two pressure release tabs at opposite corners ① and ②. ([B] shows both tabs with the cage removed.)



d270b4045

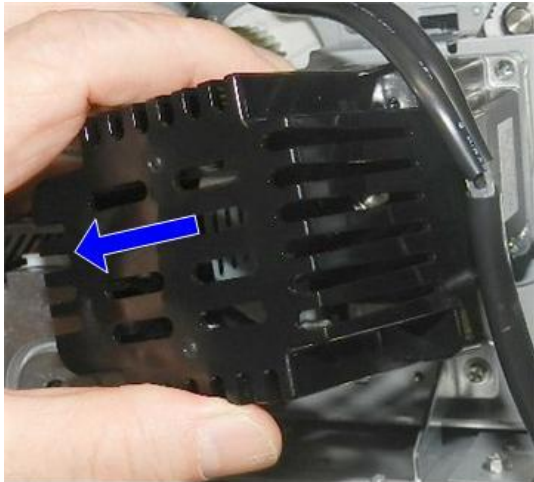
8. With the tip of a finger or a sharp tool, release the tab [A] at the upper right corner of the cage (▼x1).
9. Release the tab [B] at the lower left corner of the cage (▼x1).



d270b4046

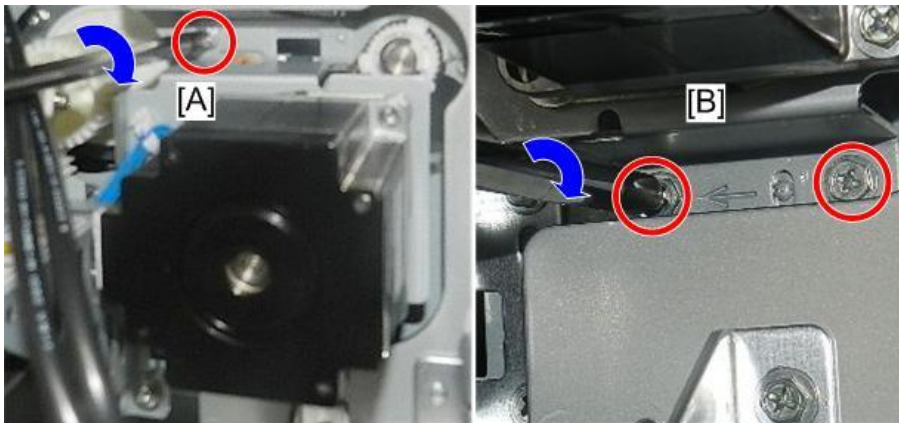
#### 4.Replacement and Adjustment

10. With the tabs released, pull the cage off the motor.



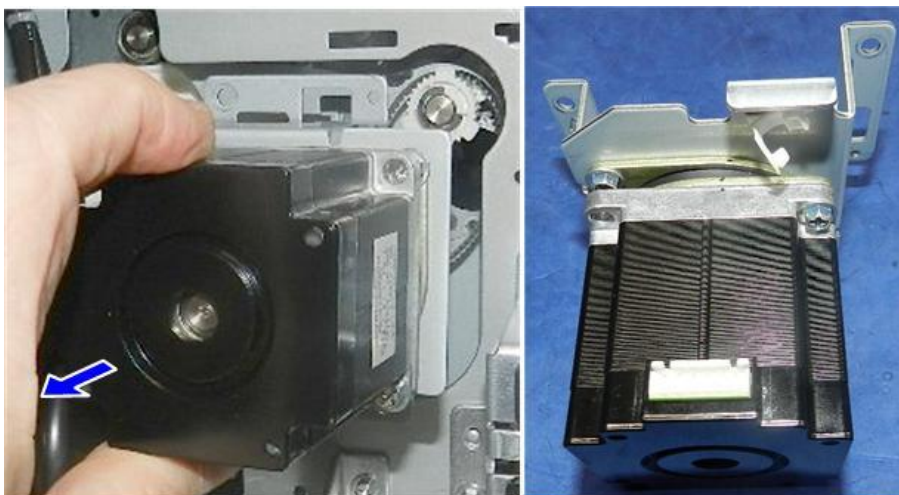
d270b4047

11. Unfasten the motor bracket (⊗x3).



d270b4048

12. Remove the bracket with the motor attached.

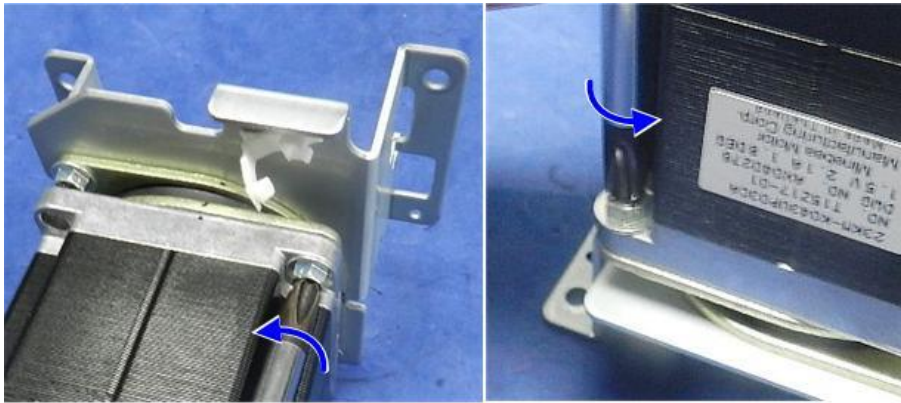


d270b4049



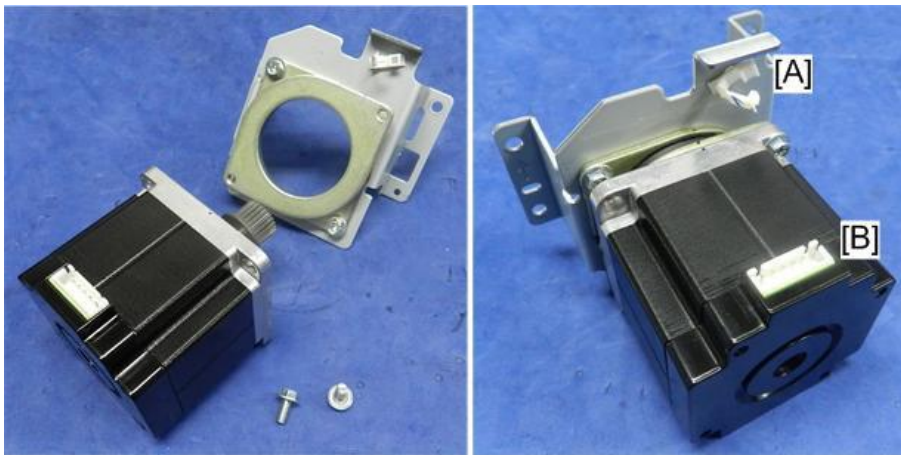
## 4.Replacement and Adjustment

13. Unfasten the motor, and then separate motor and bracket. (⊗ x2).



d270b4050

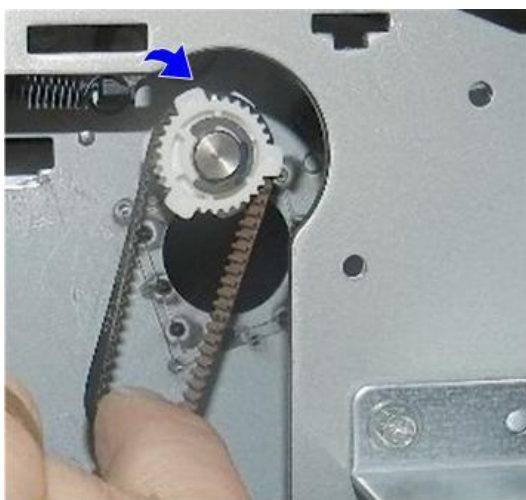
14. When you set the motor on the bracket, make sure that the clamp [A] and connector socket [B] are facing as shown below.



d270b4051

### Re-installation

1. From the back of the machine, hang the drive belt on the motor drive gear.

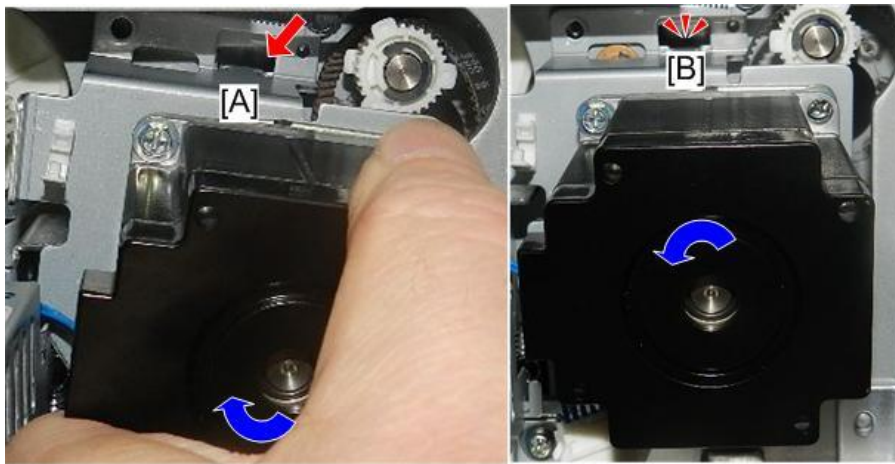


d270b4052

2. Hold the motor at a slight angle as shown, and then set the bracket tab [A] in its hole.

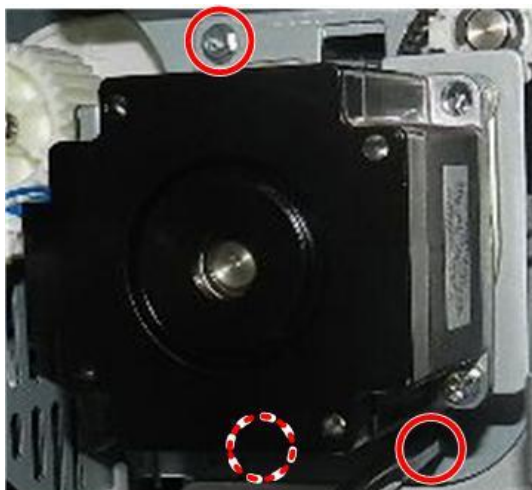
#### 4.Replacement and Adjustment

3. Twist the motor to the left, so that the tab [B] snaps into place.



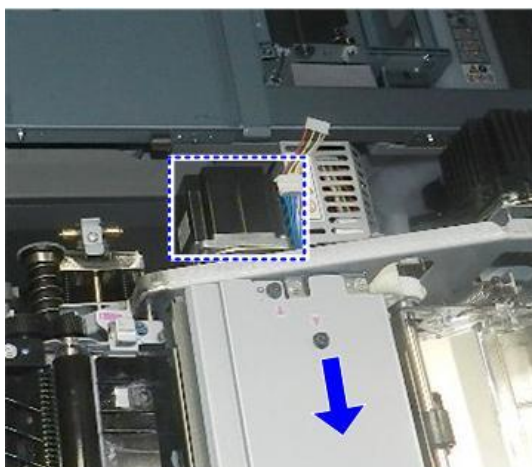
d270b4053

4. Fasten the bracket (⚙️ x3).



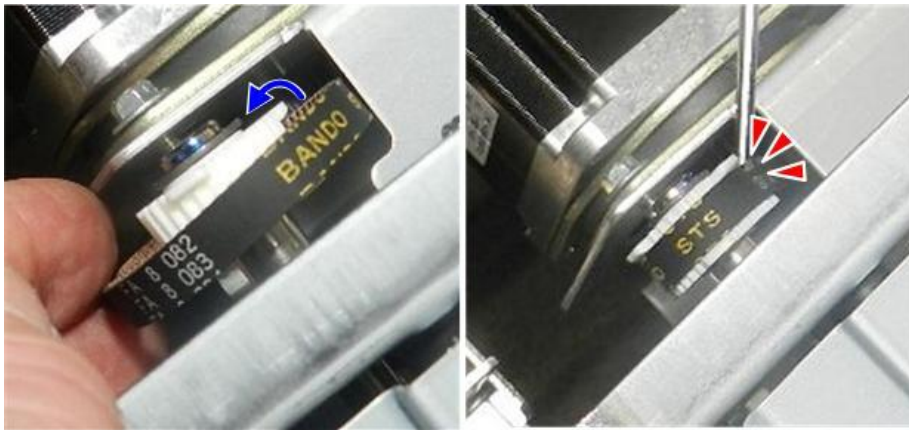
d270b4054

5. Open the front doors and pull the drawer out of the machine, so that you can see the transfer timing motor on the back of the registration unit.



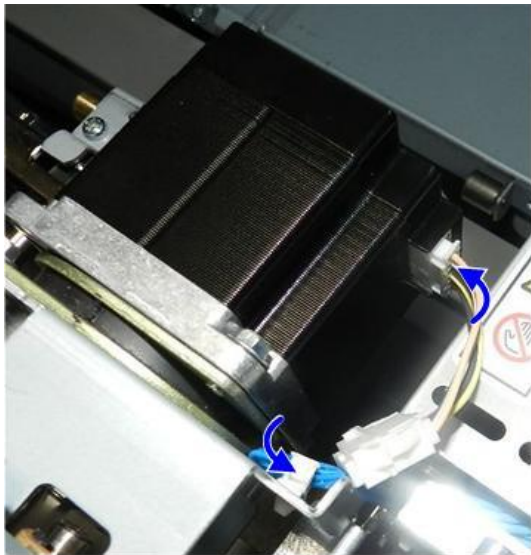
d270b4055

6. Set the drive belt.



d270b4056

7. Connect the motor and clamp the harness (🔌 x1, 🛠️ x1).

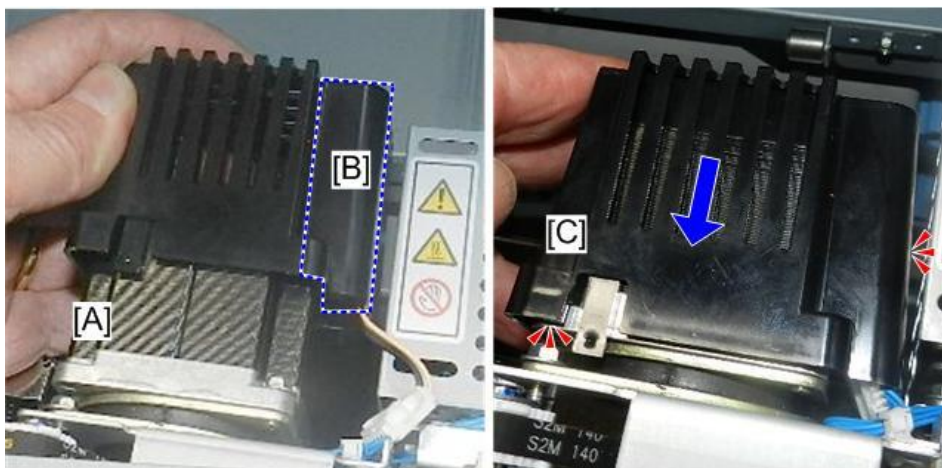


d270b4057

8. Hold the plastic motor cage as shown, with the tab [A] on the left and the wide section [B] on the right.
9. Slide the cage [C] to the front, and make sure that the tabs at the upper left and lower right corners

#### 4.Replacement and Adjustment

snap into place.



d270b4058

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#### Transfer Timing Rollers

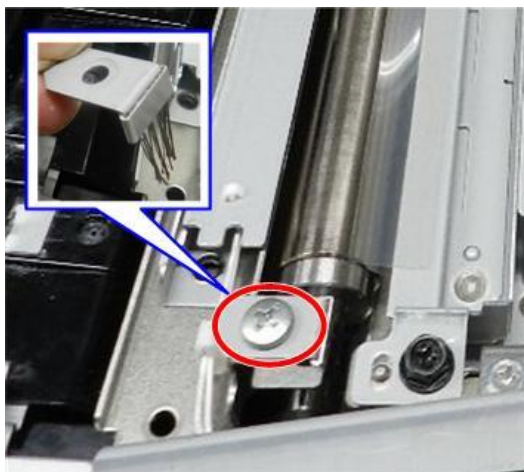
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1. Open the front doors, and then pull out the drawer.
2. The transfer timing rollers are under the plate and transfer timing sensor bracket at the left edge of the registration unit.



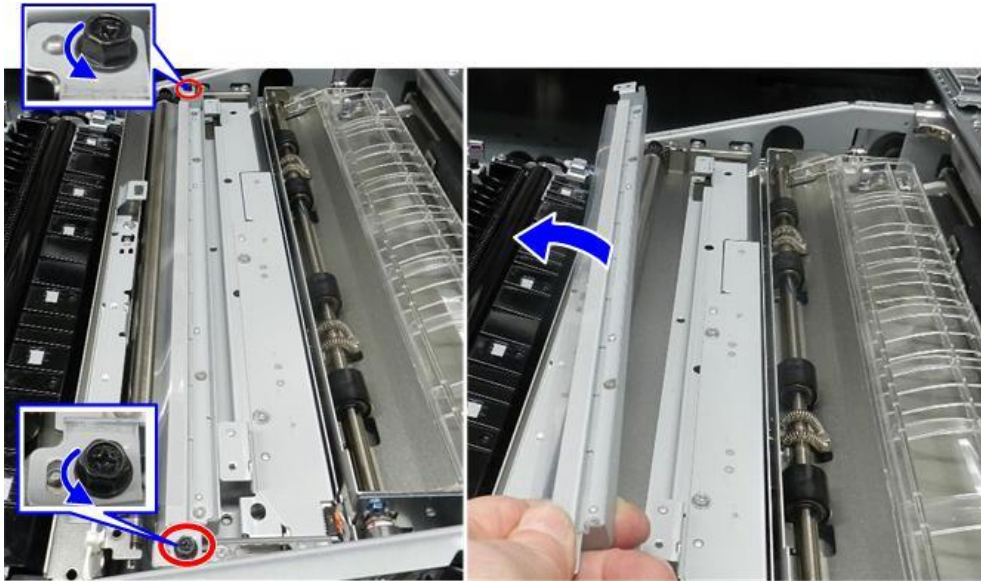
d270b4059

3. At the front corner of the registration unit, remove the anti-static brush (🌀x1).



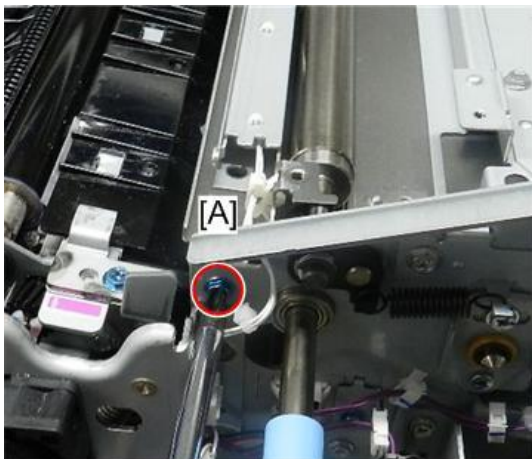
d270b4060

4. Remove the dust tray (⚙️ x2).



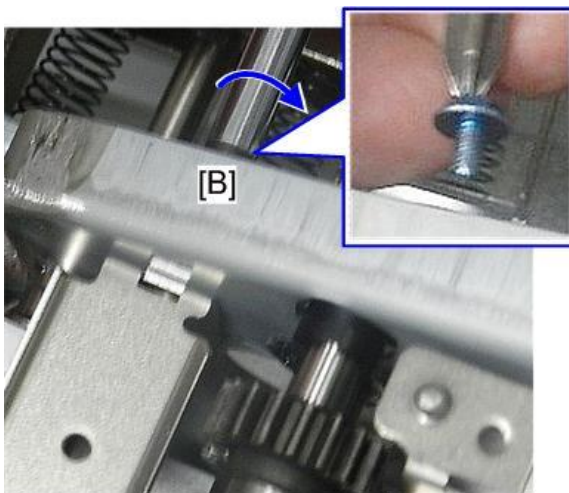
d270b4061

5. Unfasten the front end of the transfer timing sensor bracket [A] (⚙️ x1).



d270b4062

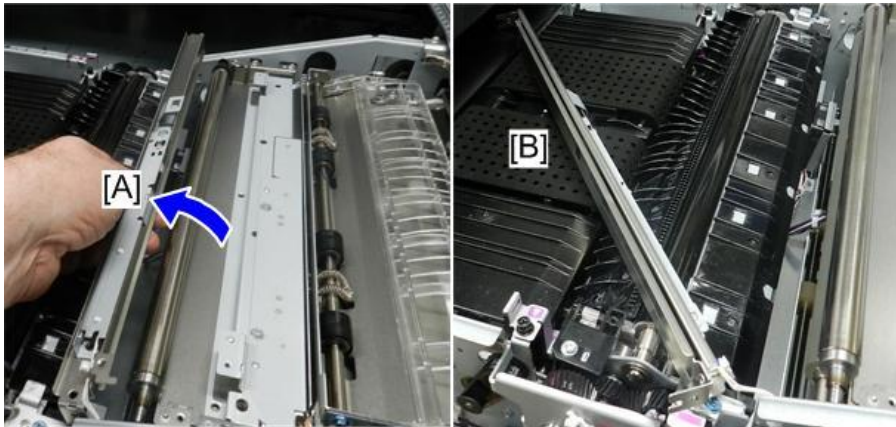
6. Unfasten the back end of the bracket [B] (⚙️ x1)



d270b4063

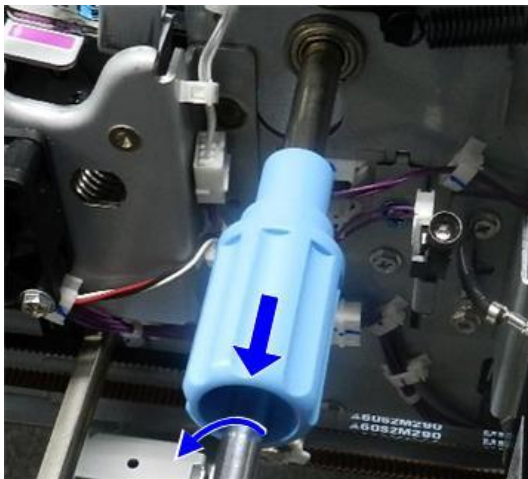
#### 4.Replacement and Adjustment

7. Pull the bracket [A] away from the unit, and then lay it across the paper transfer belts [B]. You do not need to disconnect the sensor.



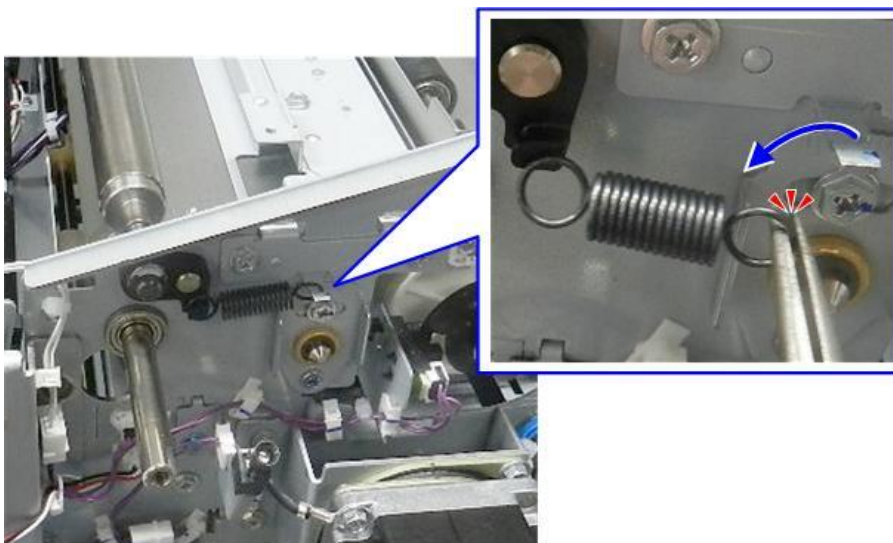
d270b4064

8. Remove the knob on the end of the roller (🔧x1).



d270b4065

9. At the front end of the upper roller, remove the spring (🔧x1).



d270b4066

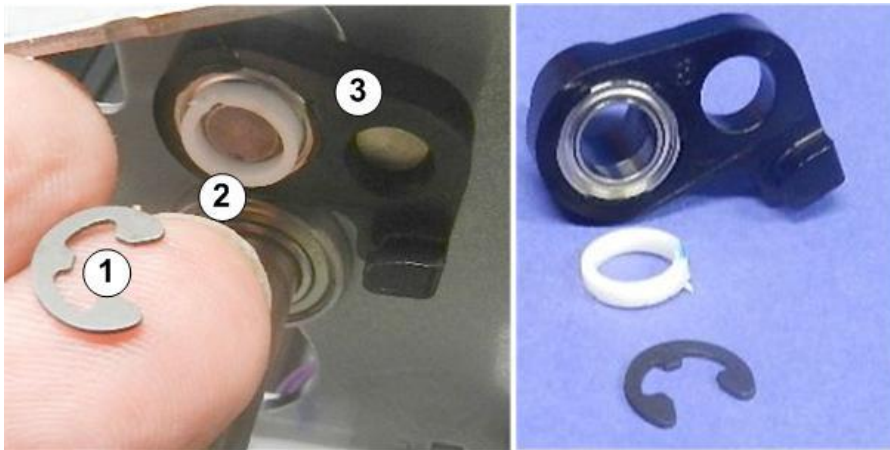
#### 4.Replacement and Adjustment

10. Locate the e-ring on the front end of the upper transfer timing roller.




d270b4067

11. Remove the e-ring ①, white spacer ②, and lock arm ③.



d270b4068

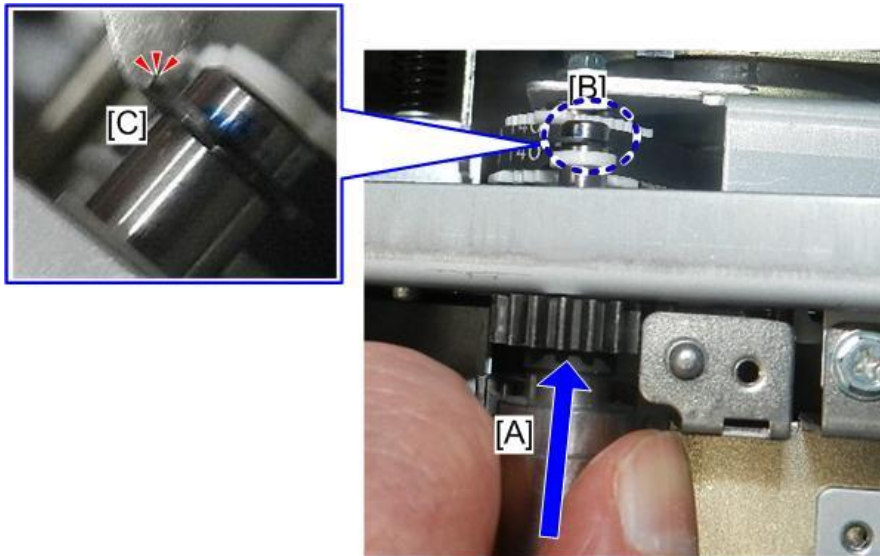
12. At the back end of the upper roller, remove the spring (  x1) from the end of the roller.



d270b4069

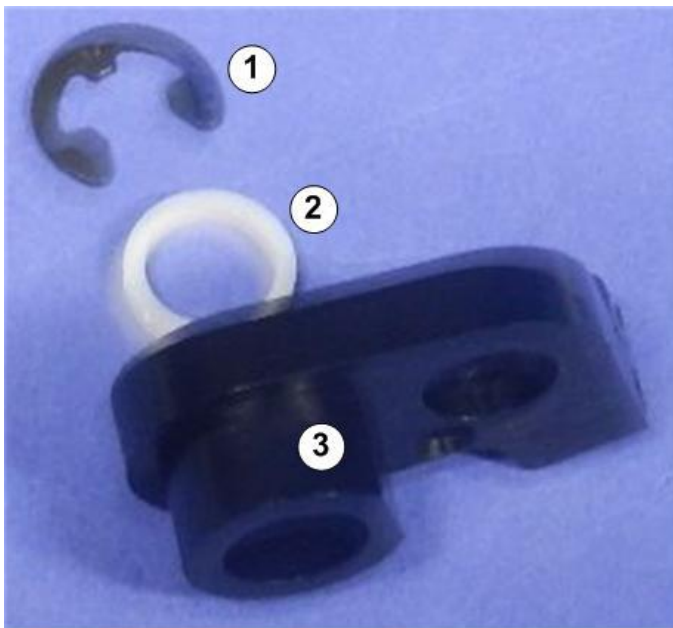
#### 4.Replacement and Adjustment

13. Push the upper roller [A] to the rear until it stops, so that you can see the e-ring on the end of the roller [B].
14. Disconnect the e-ring [C] (⊗x1).



d270b4070

15. Slowly, remove the e-ring ①, white spacer ②, and lock arm ③ from the end of the roller.

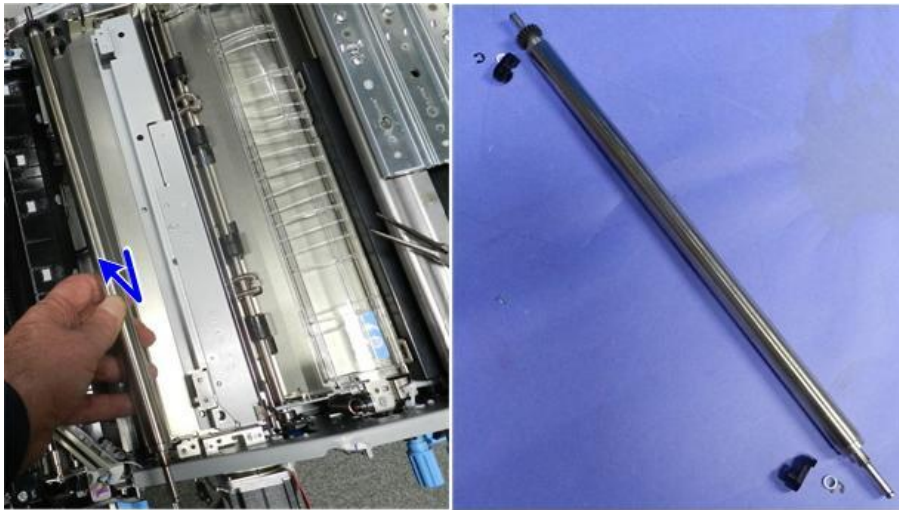


d270b4071




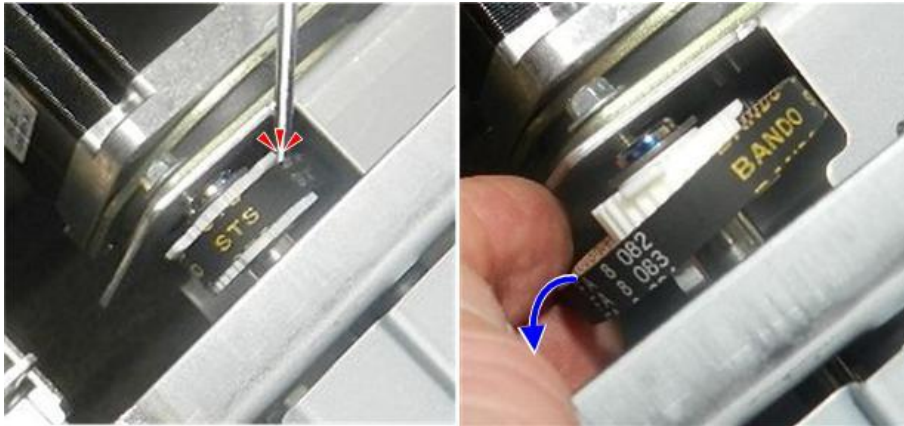
## 4.Replacement and Adjustment

16. Slide the roller slightly to the front, to the rear again, and then remove it.




d270b4072

17. Remove the drive belt (  x1).



d270b4073

18. At the front, remove the snap ring from the lower roller (  x1).

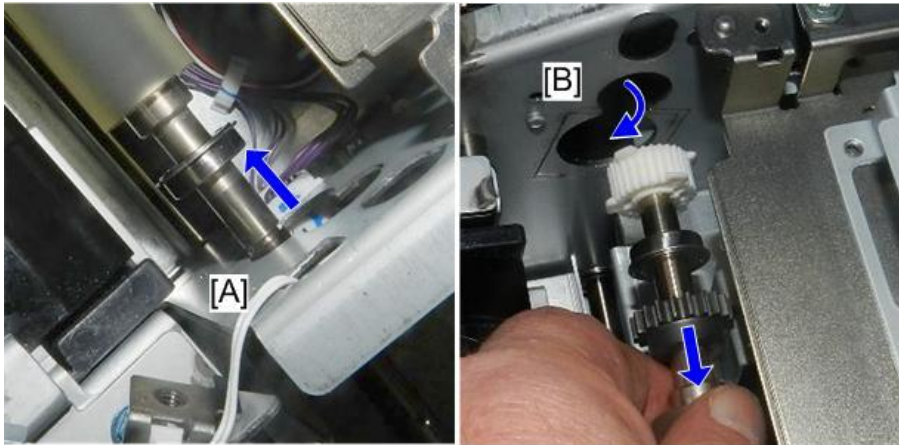


d270b4074

19. At the front, slide the bearing [A] out of the frame.

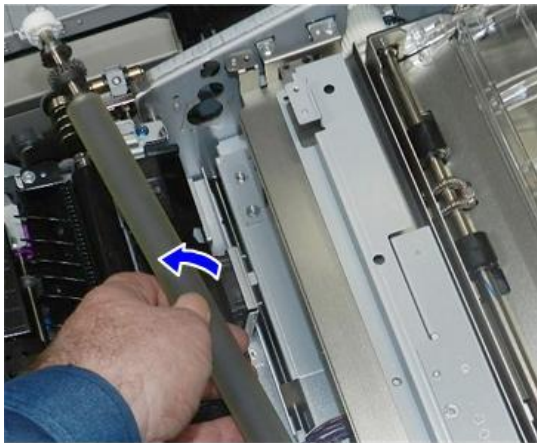
#### 4.Replacement and Adjustment

20. At the rear, slide the end of the roller [B] out of the frame.



d270b4075

21. Remove the lower roller.



d270b4076

22. Remove the bearing from the front end of the roller.



d270b4077

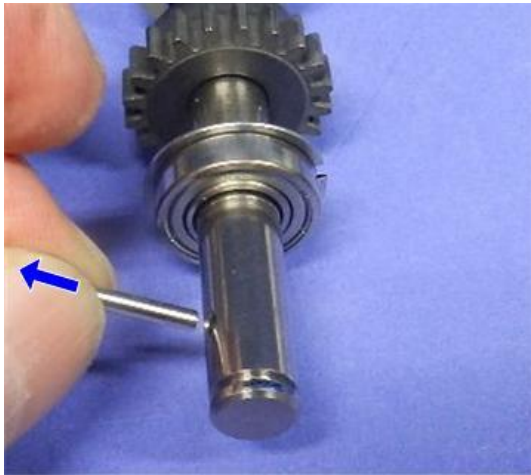
#### 4.Replacement and Adjustment

23. Remove the drive gear from the back end of the roller (⑤x1).



d270b4078

24. Remove the lock pin.



d270b4079

25. Clean the rollers with a damp cloth before you re-install them or replace them.



d270b4080

## 4.Replacement and Adjustment

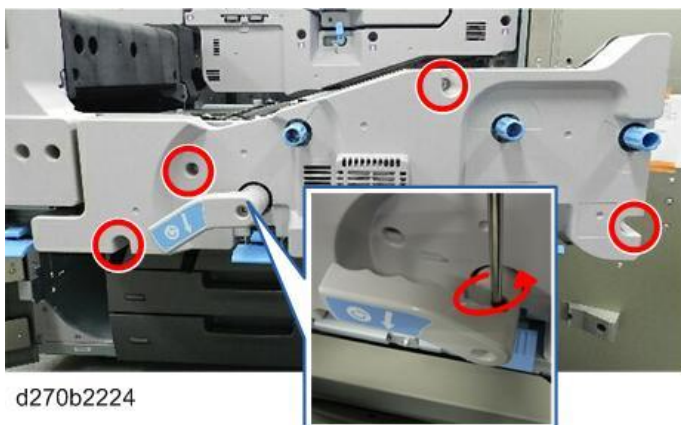
### Main Relay Motor

1. Open the front doors, and then pull out the drawer.



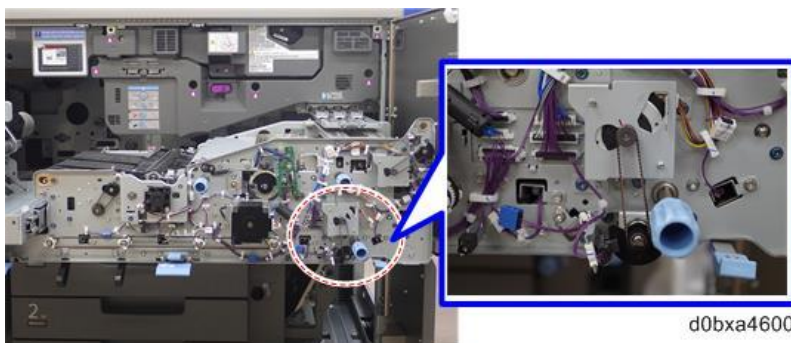
d270b2213

2. Remove the drawer right cover (⊖ x5).



d270b2224

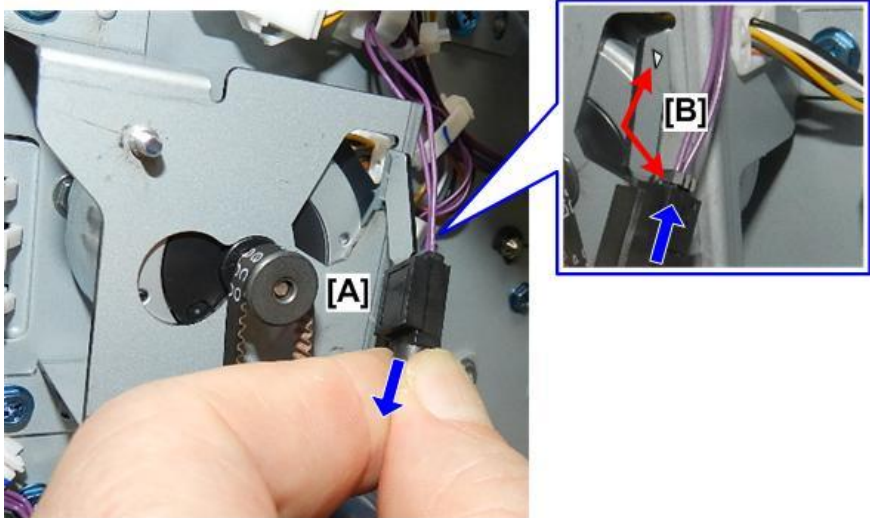
3. The main relay motor is on the front, right side of the drawer.



d0bxa4600

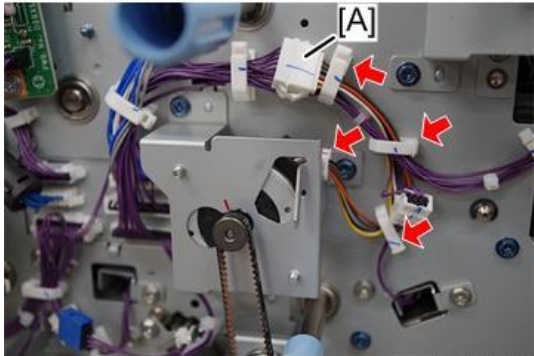
4. First, slide the jam LED [A] off its post and let it hang free. Do not disconnect it.
5. When you re-attach the LED, make sure that the harness and embossed triangle [B] are on the

same side.



d270b3536

- 6. Free the harness (🔧x4).
- 7. Disconnect the motor [A] (🔧 x1).



d0bxa4601

- 8. Disconnect the motor bracket:
  - [A] Left (🔧x2)
  - [B] Right (🔧x1)

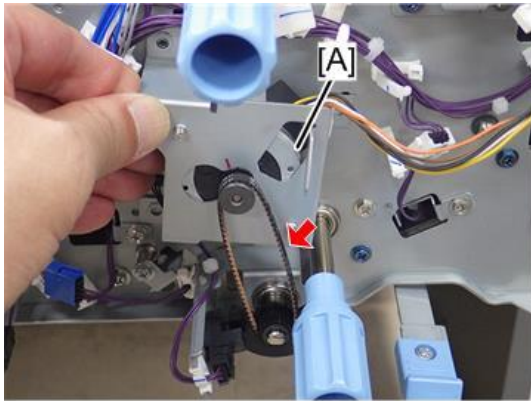


d1793537

- 9. Remove the belt [A] (🔧x1).

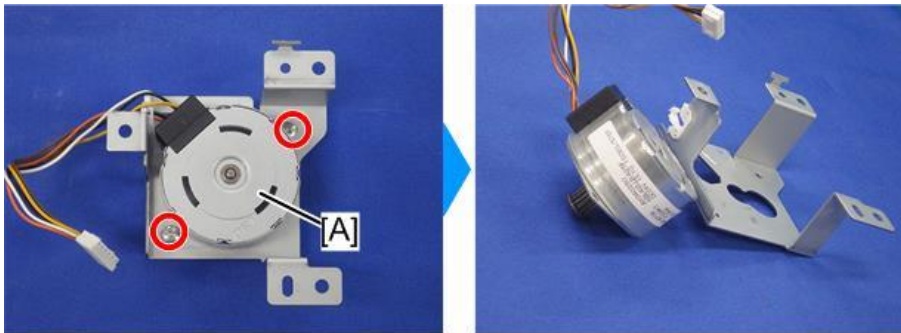
#### 4.Replacement and Adjustment

10. Remove the main relay motor [A] with the bracket.



d0bxa4182

11. Remove the main relay motor [A] from the bracket (Ⓜ x2).



d0bxa4183

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#### LCIT Relay Motor

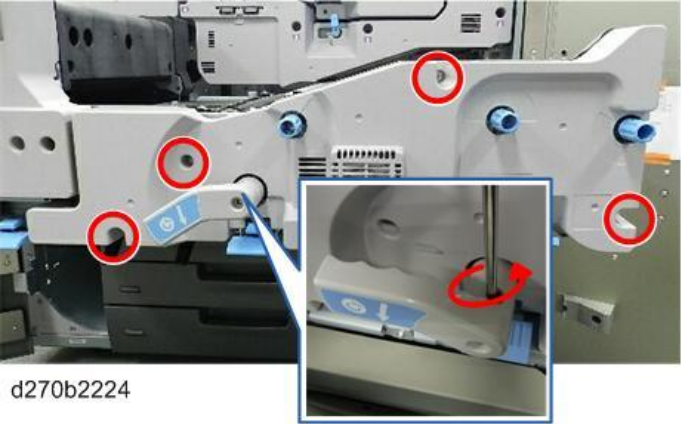
---

1. Open the front doors and pull out the drawer.



d270b2213

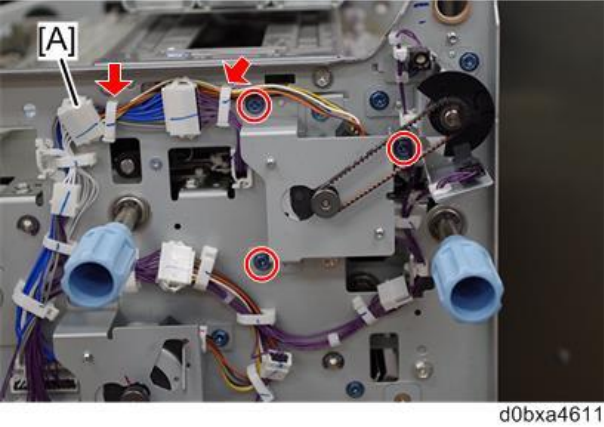
2. Remove the drawer right cover (🔩x5).



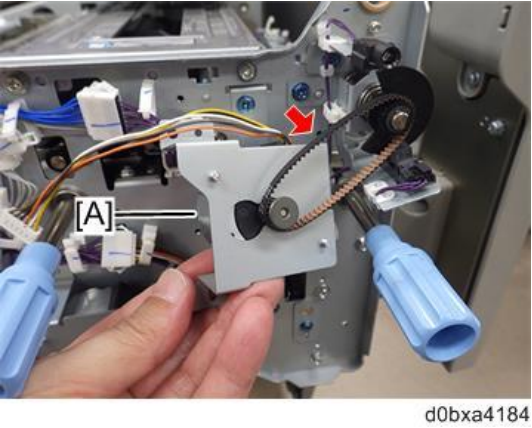
3. The LCIT relay motor is at the upper right cover of the drawer front.



4. Disconnect the connector [A], clamp, and screws (🔌x1, 🛠x2, 🔩x3).

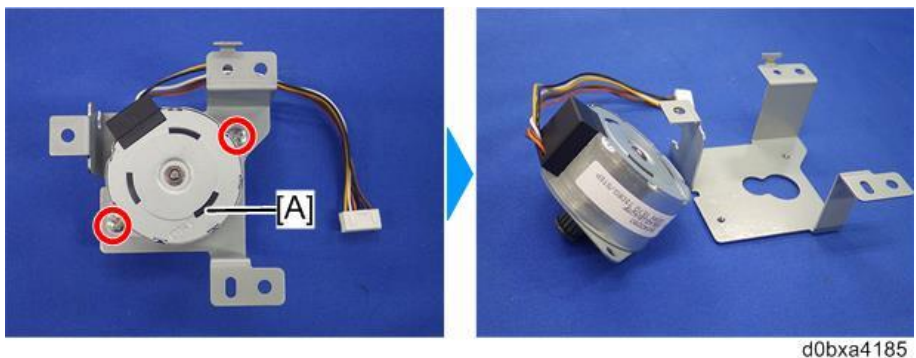


5. Remove the LCIT relay motor [A] with the bracket (🔩x1).



#### 4.Replacement and Adjustment

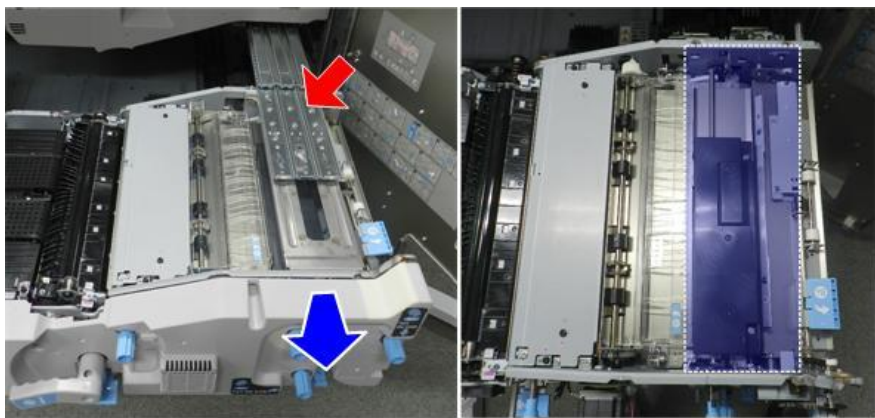
6. Separate the LCIT relay motor [A] from the bracket (※x2).



d0bxa4185

#### LE Shift Unit Motor, CIS Fan

1. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))
2. Remove the transfer timing motor ([Transfer Timing Motor](#))
3. Pull out the front drawer, and then remove the right front cover of the drawer. ([Drawer Right Cover](#))
4. Disconnect the support rails, and then remove the rail base. ([Support Rails](#))



d270b3552

①	CIS Fan
②	LE Shift Unit Motor

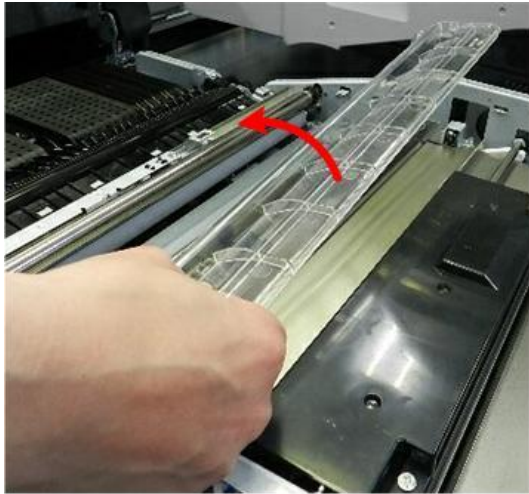


d1793588



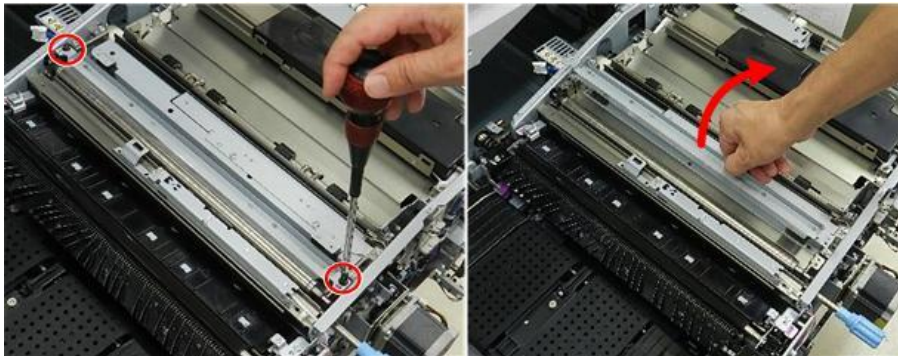
## 4.Replacement and Adjustment

5. The motor and fan are on the left. Several parts must be removed in order to access these components.
6. Remove the plastic cover.



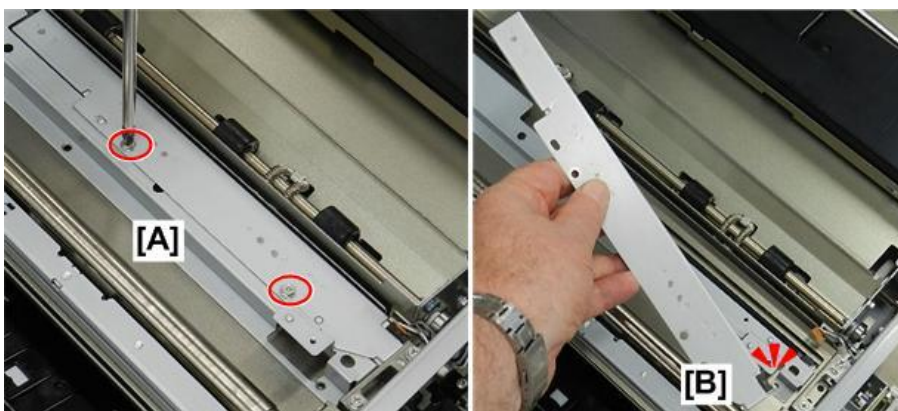
d1793594

7. Remove the paper dust tray (\*x2).



d1803532

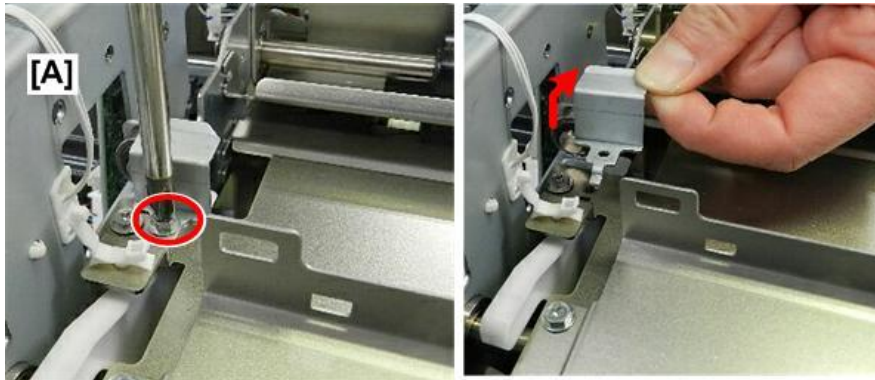
8. Remove the CIS bracket screws [A] (⊗x2).
9. Disconnect and remove the CIS bracket [B] (⊞x1).



d1803533

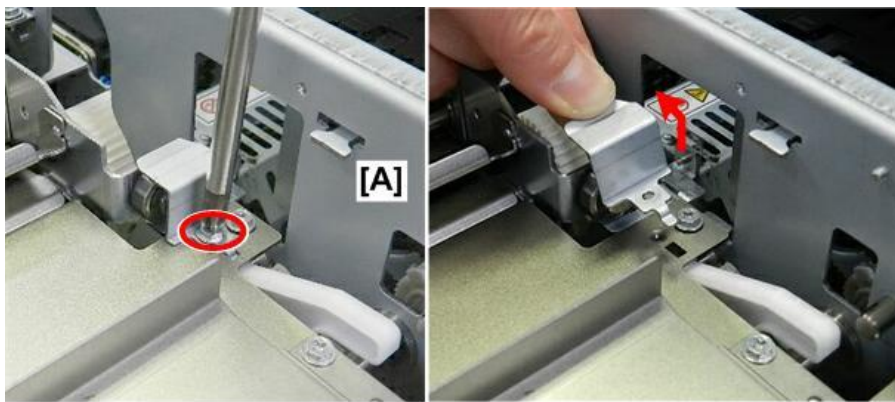
#### 4.Replacement and Adjustment

10. Remove the front lock plate [A] (⊙x1).



d1793571

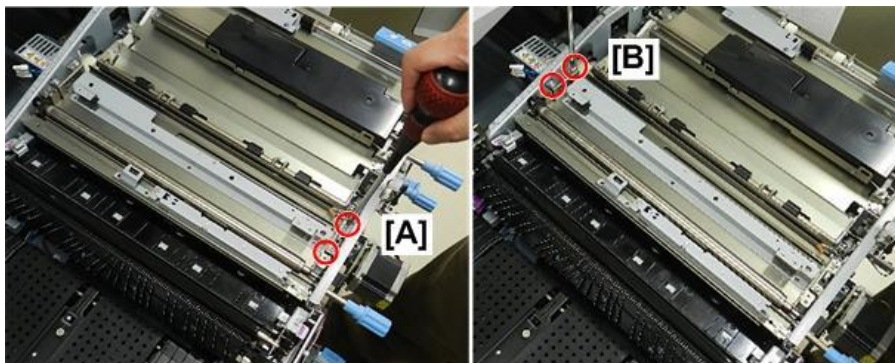
11. Remove the rear lock plate [A] (⊙x1).



d1793572

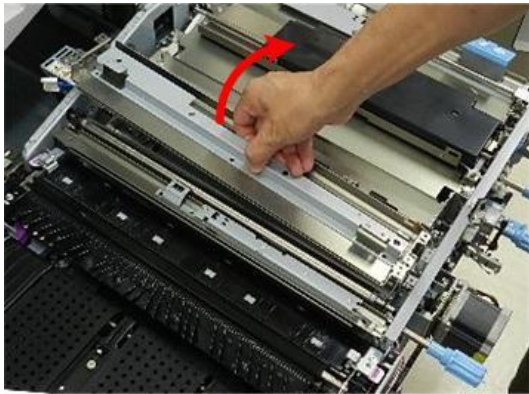
12. Disconnect the shift cover at the front [A] (⊙x2).

13. Disconnect it at the rear [B] (⊙x2).



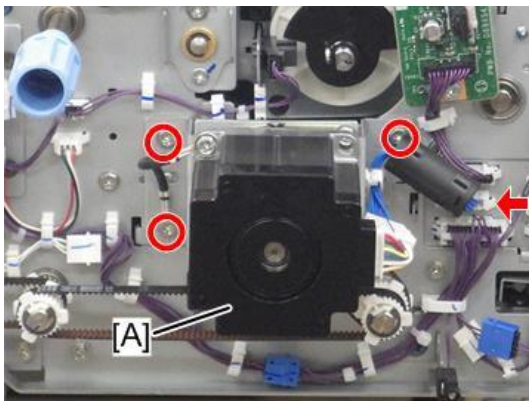
d1803534

14. Remove the cover.



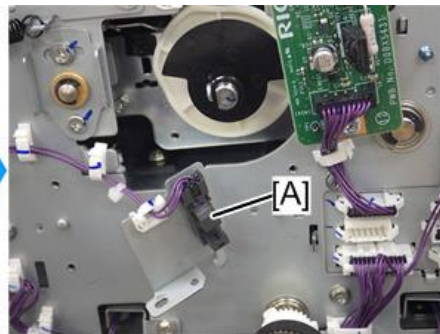
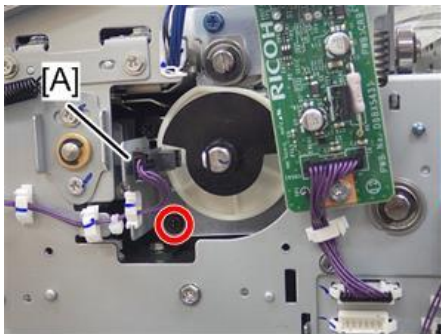
d1803535

15. Remove the motor [A] with the bracket (⚙️ x3, 📦 x1).



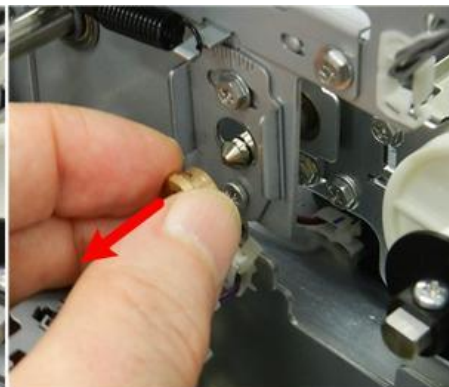
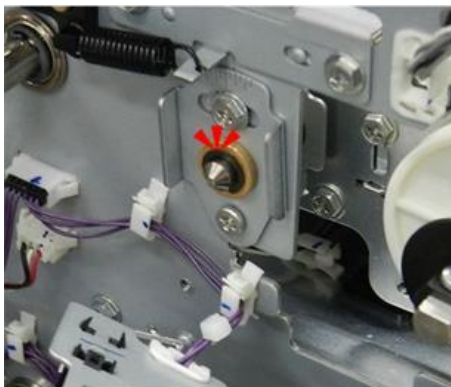
d0bxa4186

16. Remove the sensor [A] with the bracket (⚙️ x1).



d0bxa4187

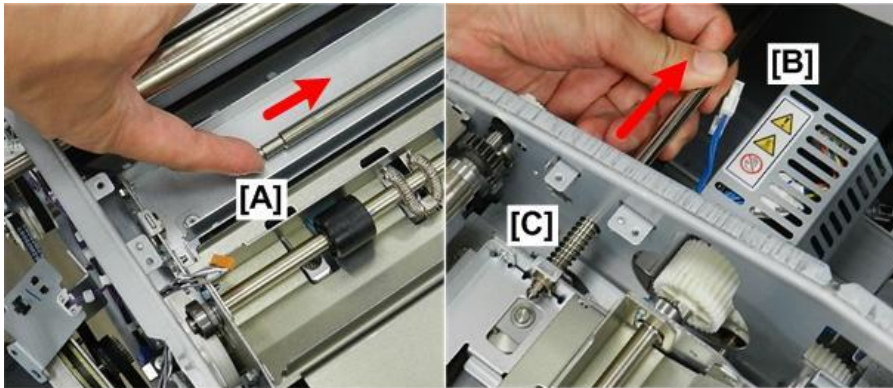
17. Disconnect the front end of the shaft (⚙️ x1, 📦 x1).



d1803538

#### 4.Replacement and Adjustment

18. Push the front end of the shaft [A] to the rear.
19. Pull out the shaft [B] and remove the spring [C].



d1803539

20. Remove the shaft.

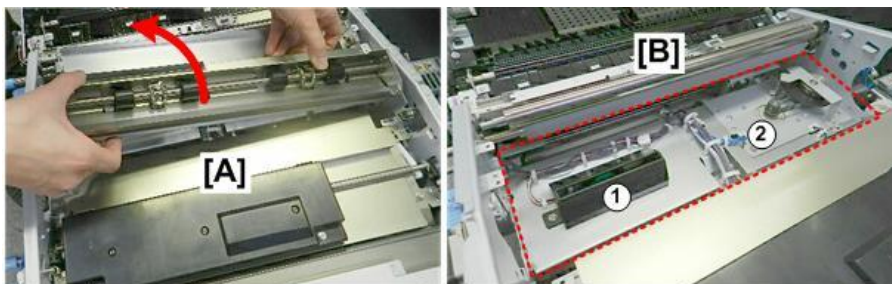


d1803540

21. Next, remove the LE shift unit [A].

#### Note

- The area below [B] is now clear, so you can see the CIS fan ① and the LE shift unit motor ②.

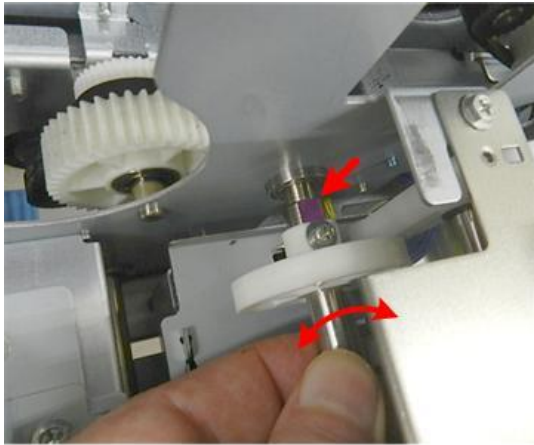


d1793651

#### Re-installation

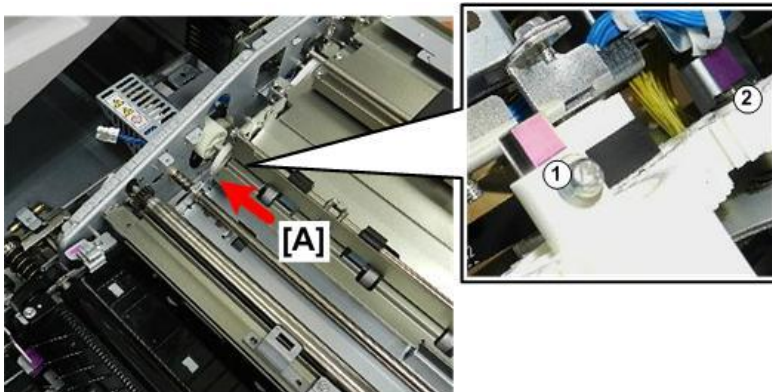
1. Before you re-install the shift unit, turn the cam shaft on the right until its flat edge is facing up and

level.



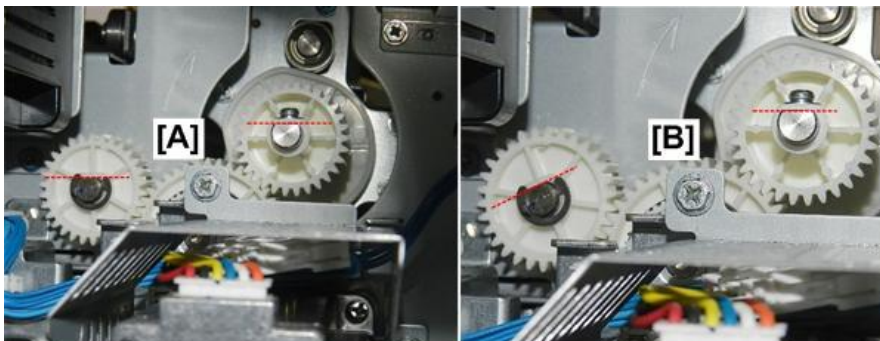
d1803541

2. Turn the shift unit gear so the flat end of its shaft ① is facing up and parallel with the end of the flat end of the cam shaft ②.
3. Slowly, set the shift unit [A] with the flat side of the shaft facing up.



d1803542

4. Slowly, push in the front drawer until it stops.
5. At the back of the machine, check the positions of the shaft ends.
6. If the flat sides of the shaft ends are facing up and parallel [A], they are positioned correctly.
7. If one or both are not aligned correctly [B], one or both must be adjusted.



d1803543

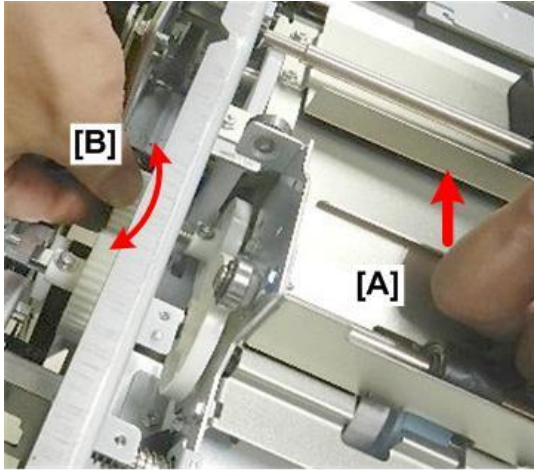
★ Important

- The flat sides of both of these shafts must face up and be parallel [A].
- If either or both are even slightly out of position, this will cause paper jams in the

#### 4.Replacement and Adjustment

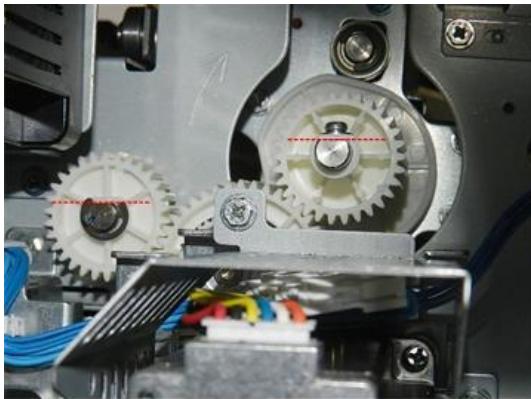
registration unit.

8. Pull out the front drawer again until it stops.
9. If you need to adjust the positions of the shaft ends, lift the shift unit [A] up slightly, and then turn the gears [B] until they are up and level.



d1803544

10. Slowly, push in the front drawer until it stops.
11. At the back of the machine, check the positions of the shaft ends and make sure the flat sides are facing up and parallel.



d1803545

12. Pull the drawer out again until it stops.
13. Re-install the removed shaft.
14. After re-installation of the shaft, once again push the drawer into the machine and then check the positions of the shaft ends to make sure that they have not slipped out of alignment.
15. Re-install the transfer timing motor, and then finish the re-installation.

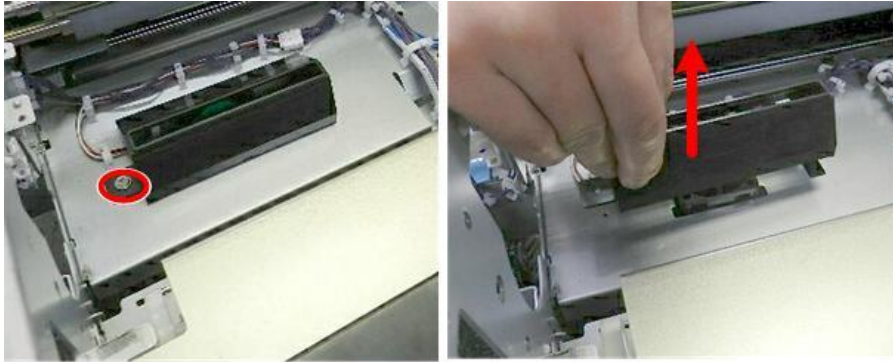
#### CIS Fan

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1. Remove the LE shift unit ([LE Shift Unit Motor](#), [CIS Fan](#))

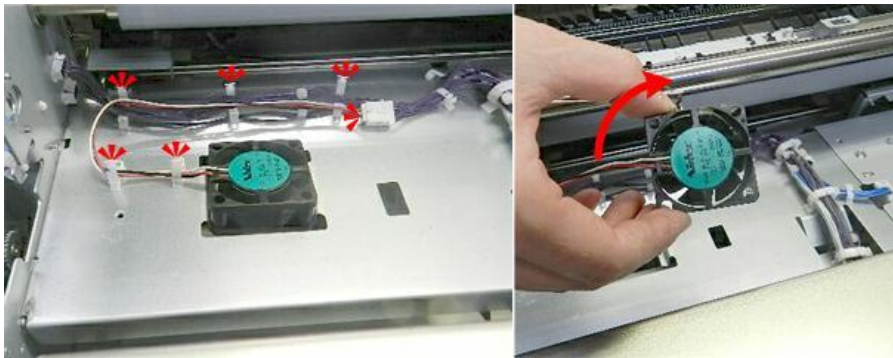
## 4.Replacement and Adjustment

2. Remove the sensor cover (🔩 x1).



d1793652

3. Remove the fan (🔩 x5, 📦 x1).



d1793653

4. Lay the fan on a flat clean surface.



d1793654

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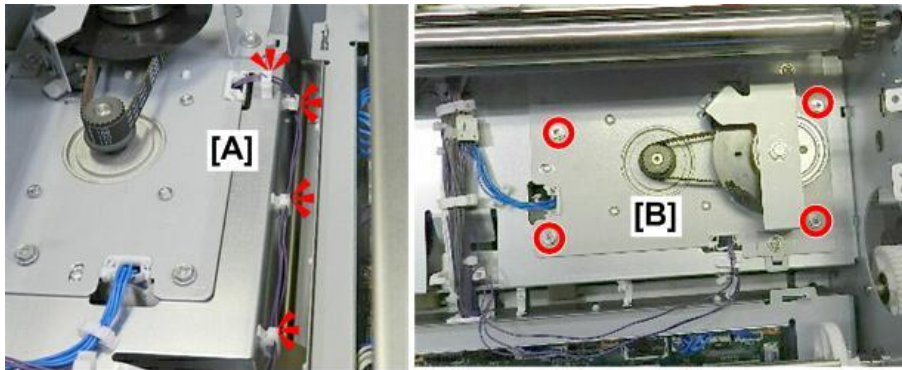
### LE Shift Unit Motor, LE Shift Unit HP Sensor

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1. Remove the LE shift unit (LE Shift Unit Motor, CIS Fan)
2. Free the motor harness [A] (🔩 x4).

#### 4.Replacement and Adjustment

3. Disconnect the motor bracket [B] (🔩 x4).



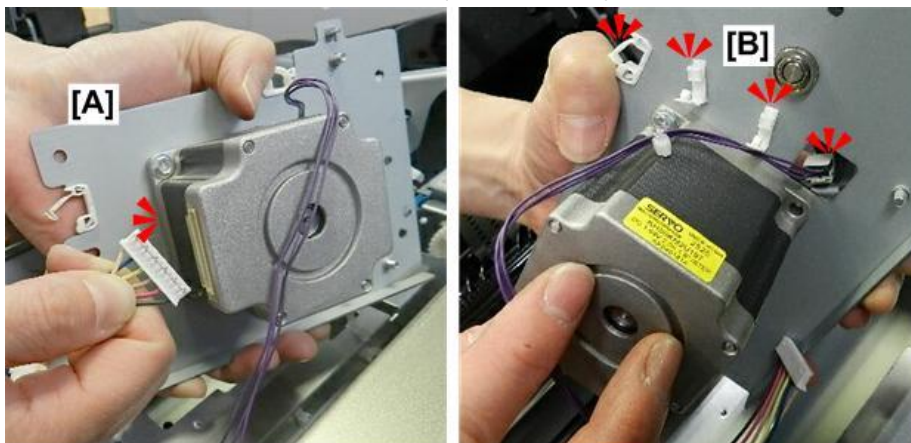
d1793655

4. Pull out the motor bracket (with motor attached) a short distance (the motor and sensor are still connected).



d1793656

5. Disconnect the motor [A] (🔌 x1).
6. Disconnect the sensor harness [B] (🔌 x3, 📦 x1).



d1793657



7. Disconnect motor and bracket (⚙️ x3).



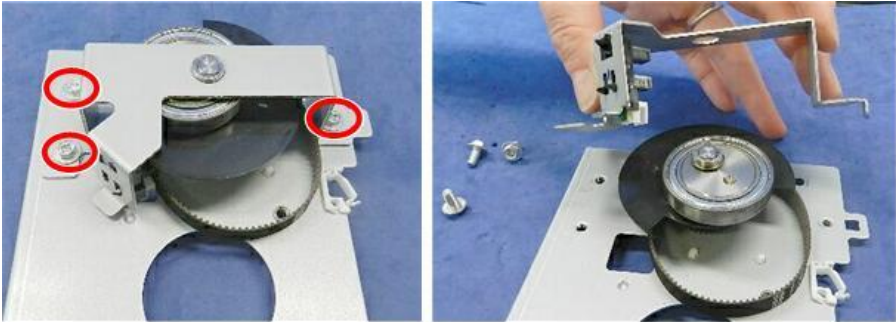
d1793658

8. Separate motor and bracket.



d1793659

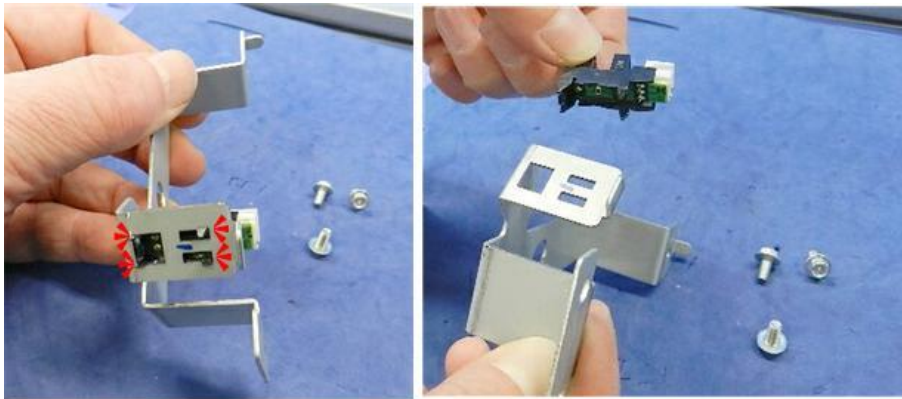
9. Remove the sensor bracket (⚙️ x3).



d1793660

#### 4.Replacement and Adjustment

10. Separate the sensor from the bracket.



d1793661

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#### Main Relay HP Sensor

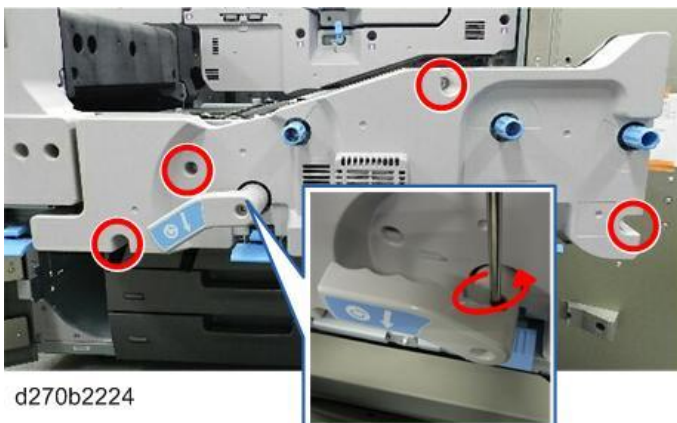
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1. Pull out the drawer.



d270b2213

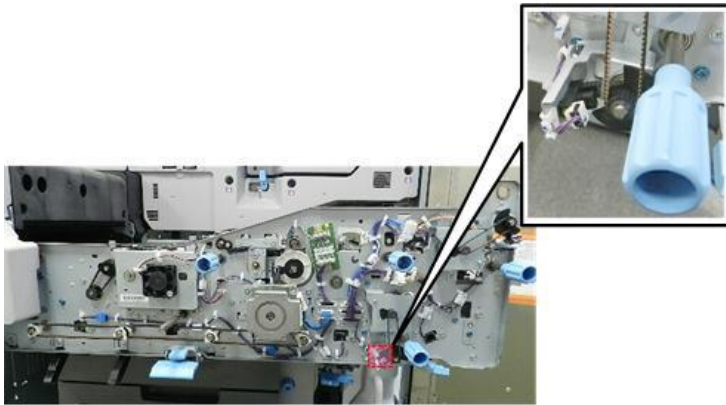
2. Remove the drawer right cover (⊖ x5).



d270b2224

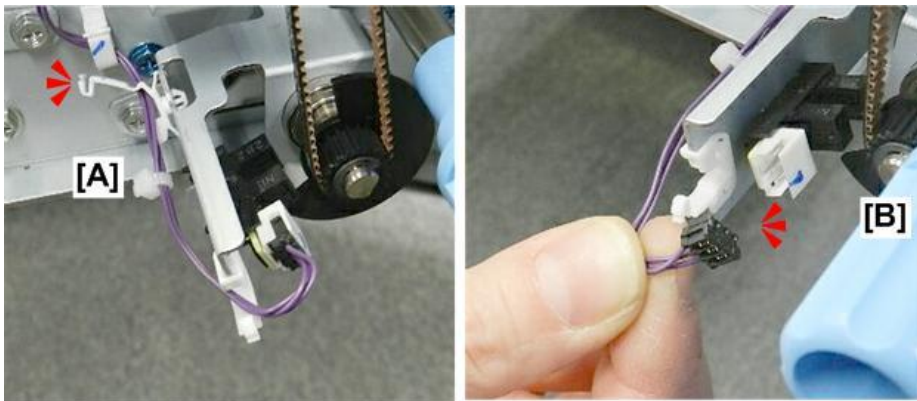
## 4.Replacement and Adjustment

3. The main relay HP sensor is at the right bottom edge of the drawer.



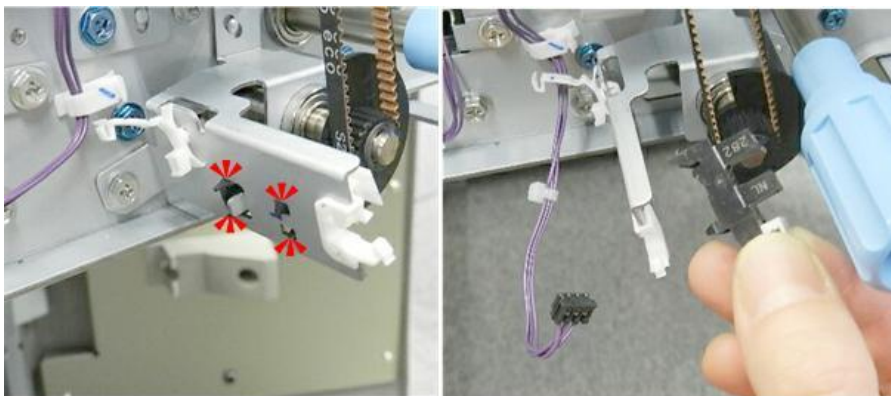
d1793540

4. Free and disconnect the harness at [A] and [B] (🔧x1, 📦x1).



d1793541

5. Disconnect the sensor (🔧x4).



d1793542

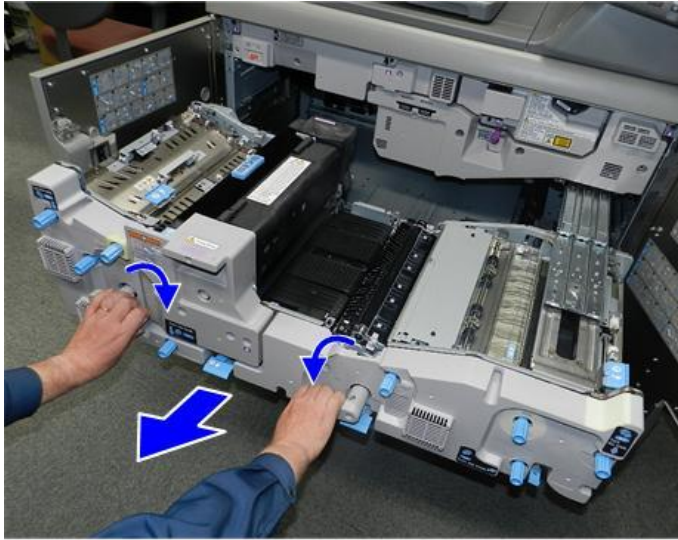
## 4.Replacement and Adjustment

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### Main Relay Sensor

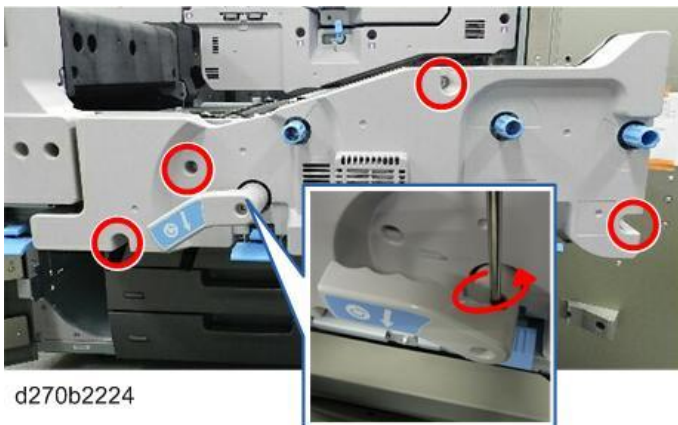
---

1. Pull out the drawer.



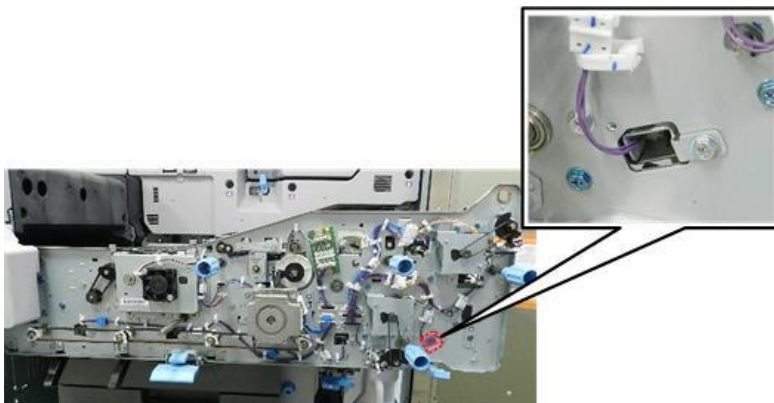
d270b2213

2. Remove the drawer right cover (⊖ x5).



d270b2224

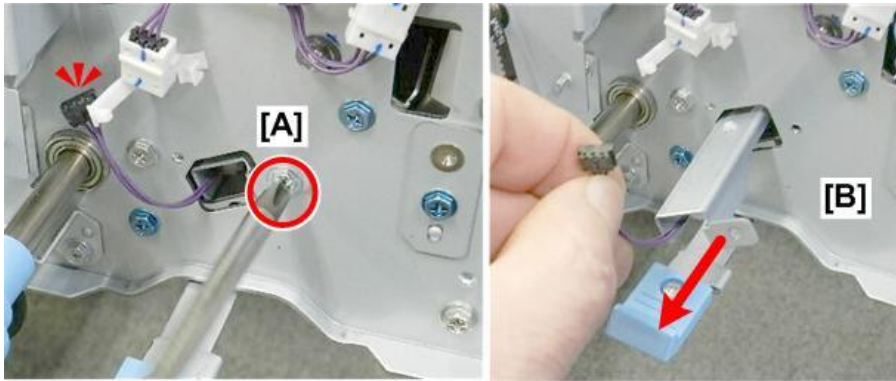
3. The main relay sensor is at the bottom right corner of the drawer.



d1793543

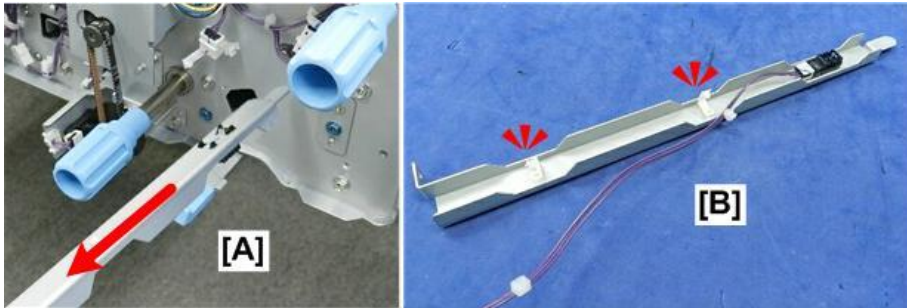
## 4.Replacement and Adjustment

4. Disconnect the sensor bracket [A], then pull out the bracket [B] (🔧 x1, 🌀 x1).



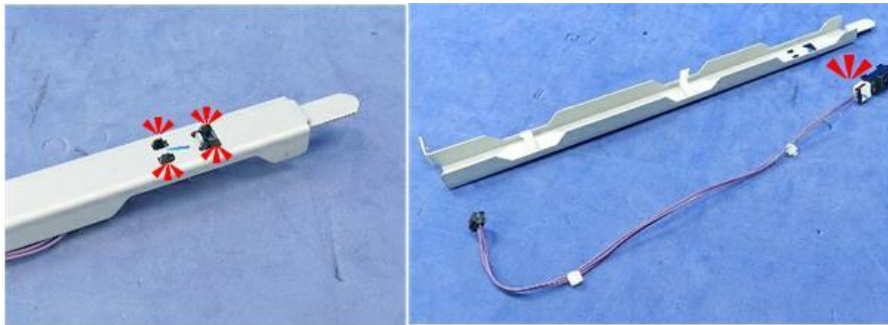
d1793544

5. Pull out the bracket [A] completely.  
6. Free the harness [B] (🔧 x2).



d1793545

7. Remove the sensor (🔧 x4, 📦 x1).



d1793546

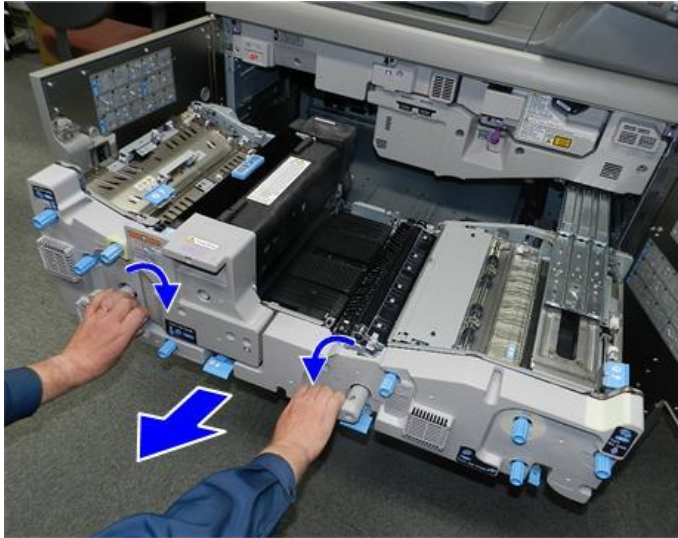
## 4.Replacement and Adjustment

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### LCT Relay HP Sensor

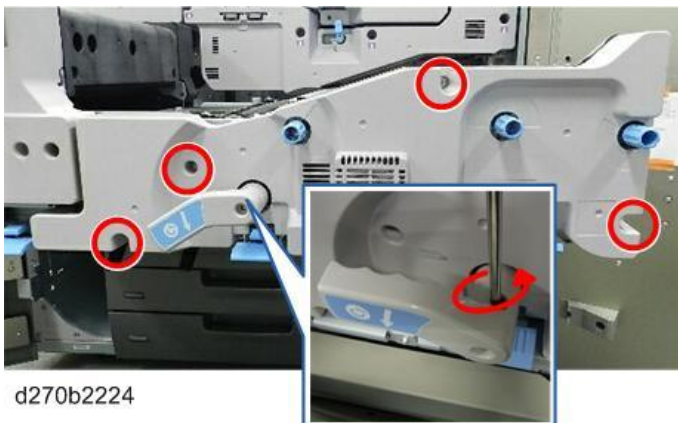
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1. Pull out the drawer.



d270b2213

2. Remove the drawer right cover (🔩 x5).



d270b2224

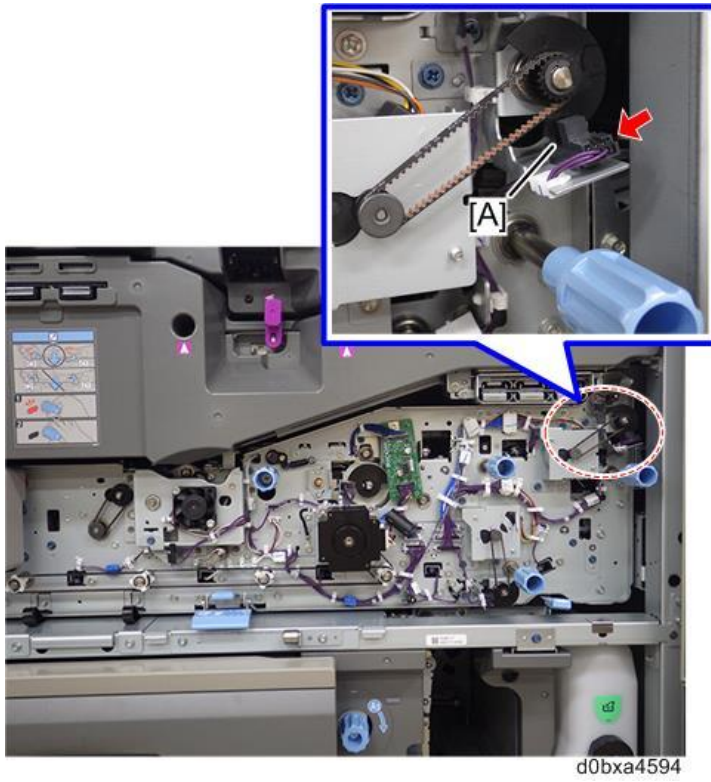
3. The LCT relay HP sensor is in the upper right corner of the drawer.



d0bxa4595

4. Disconnect the sensor (🔌 x1).

5. Remove the sensor [A] ▼x3).

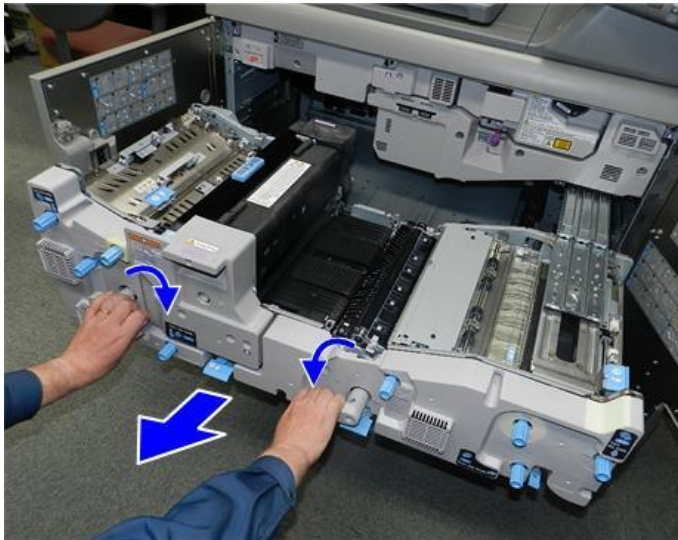


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### Positioning Roller HP Sensor

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1. Pull out the drawer.

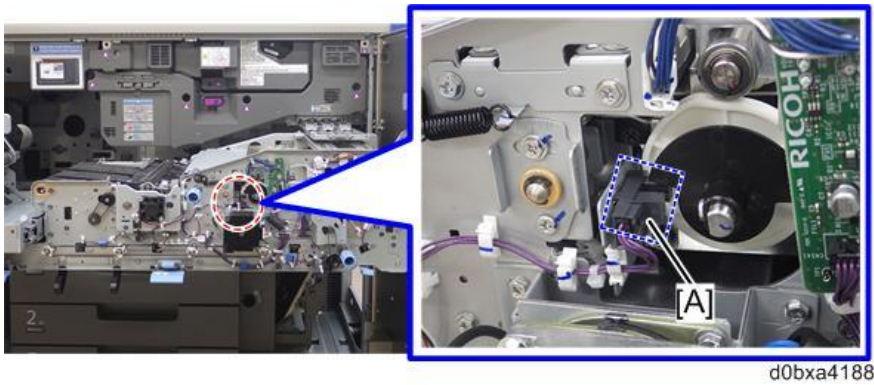


#### 4.Replacement and Adjustment

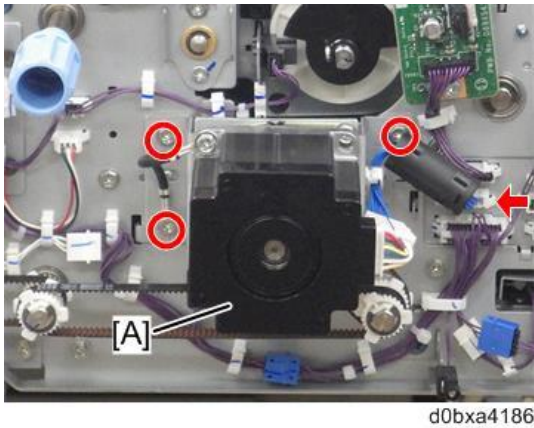
2. Remove the drawer right cover (🔩x5).



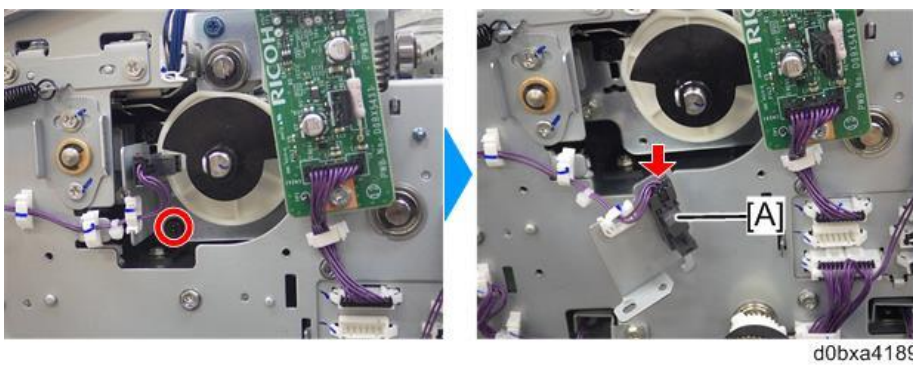
3. The positioning roller HP sensor [A] is at the top of the drawer unit, near the center.



4. Remove the motor [A] with the bracket. (🔩x3, 📦x1).



5. Remove the positioning roller HP sensor [A] with the bracket (🔩x1, 📦x1).



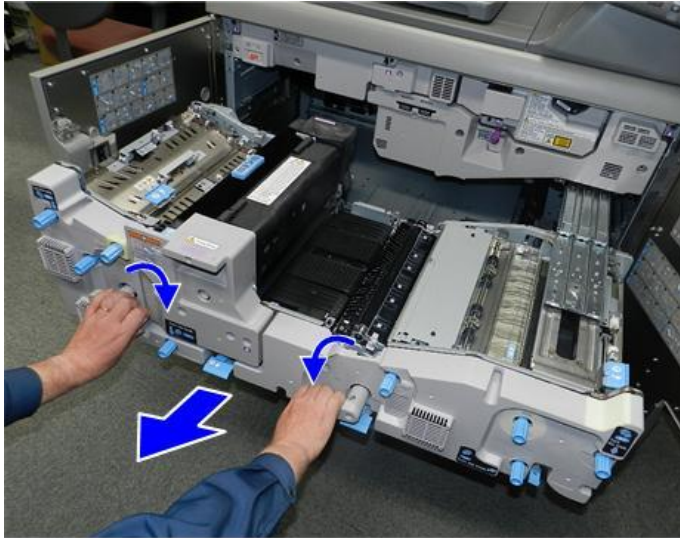


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## LCIT Relay Sensor

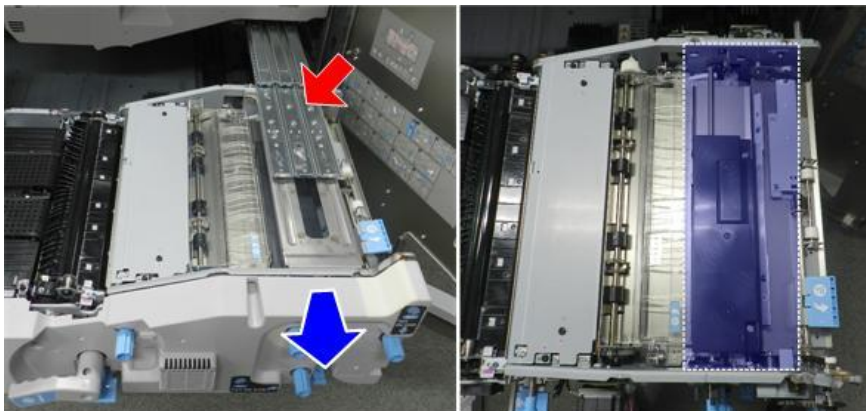
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1. Open the front doors and pull the drawer out.



d270b2213

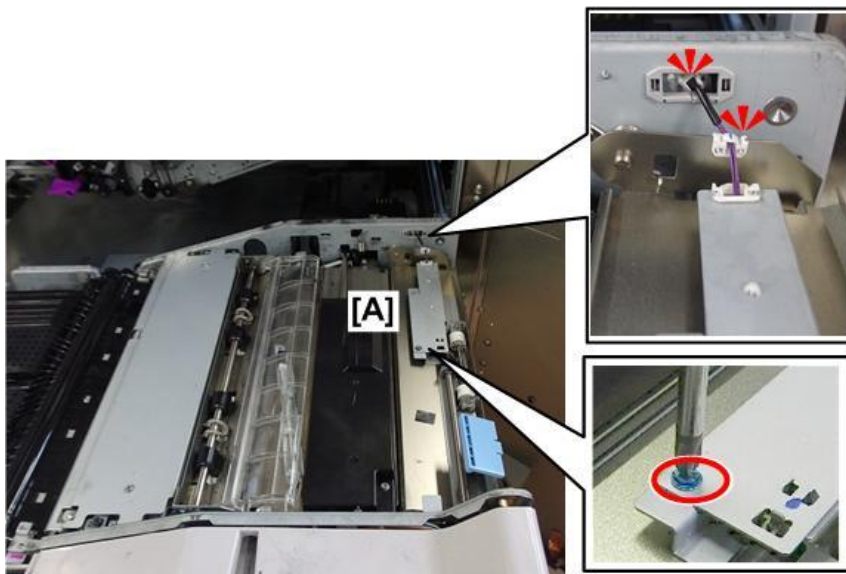
2. Disconnect the support rails, and then remove the rail base. ([Support Rails](#))



d270b3552

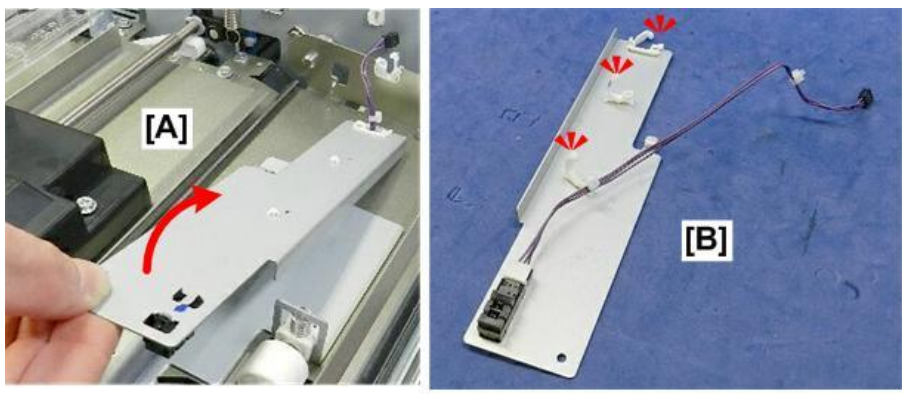
#### 4.Replacement and Adjustment

3. At the right edge of the drawer, disconnect the sensor at [A] (🔧x1, 📡x1, 🔩x1)



m263b4504

4. Remove the bracket [A].  
5. Free the sensor harness [B] (🔧x3).



d1793560

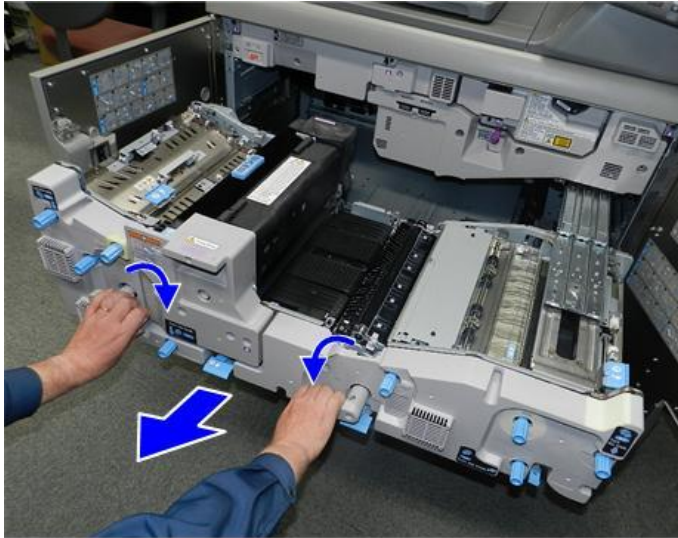
6. Remove the sensor (🔧x4).



d1793561

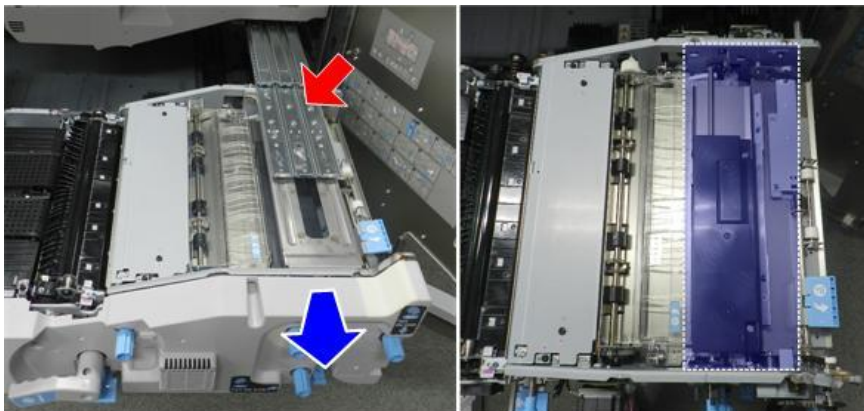
## Registration Timing Sensor

1. Open the front doors and pull the drawer out.



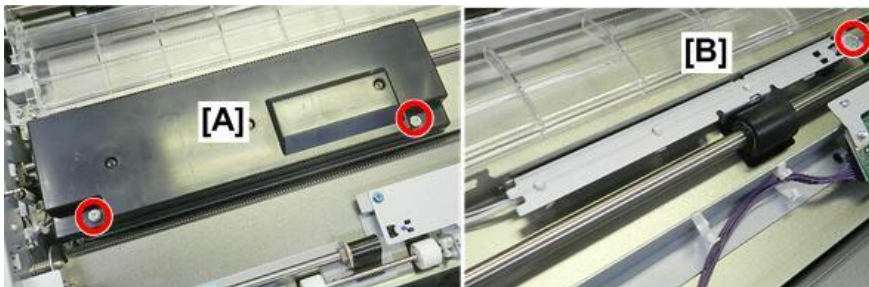
d270b2213

2. Disconnect the support rails, and then remove the rail base. (Support Rails)



d270b3552

3. Remove the cover [A] (⚙️ x2).
4. Disconnect the sensor bracket [B] (⚙️ x1).



d1793562

5. Disconnect the sensor [A] (⚙️ x1).

#### 4.Replacement and Adjustment

6. Remove the sensor [B] (▼x4).



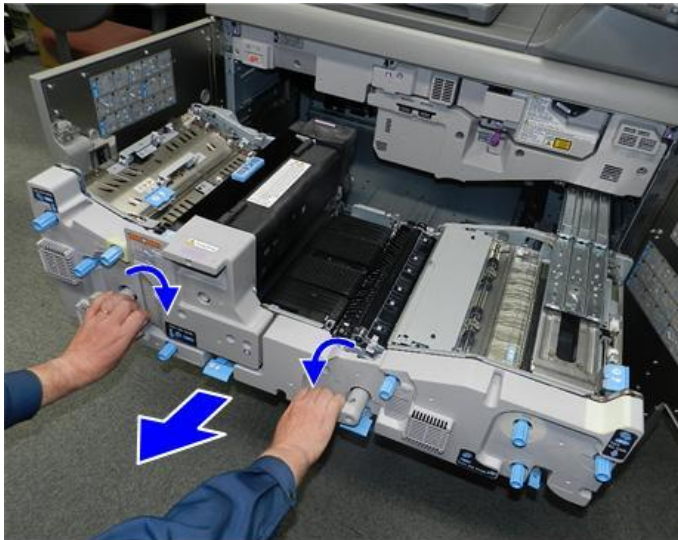
d1793563

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#### Double-feed Sensor 1, Double-feed Sensor 2

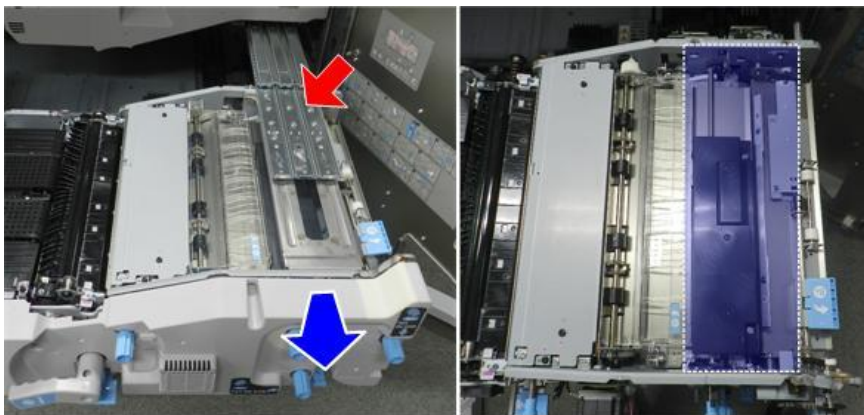
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1. Open the front doors and pull the drawer out.



d270b2213

2. Disconnect the support rails, and then remove the rail base. ([Support Rails](#))

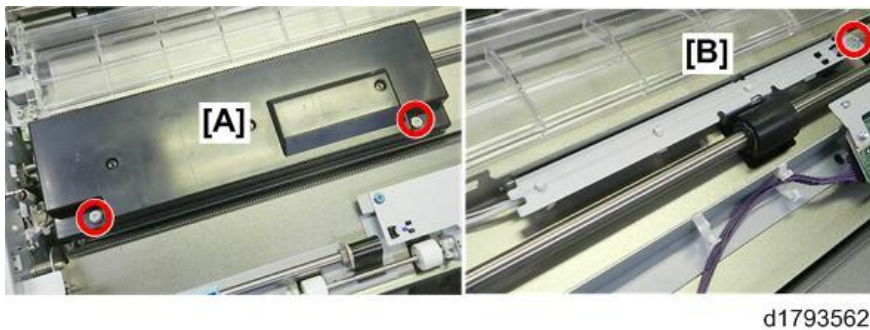


d270b3552

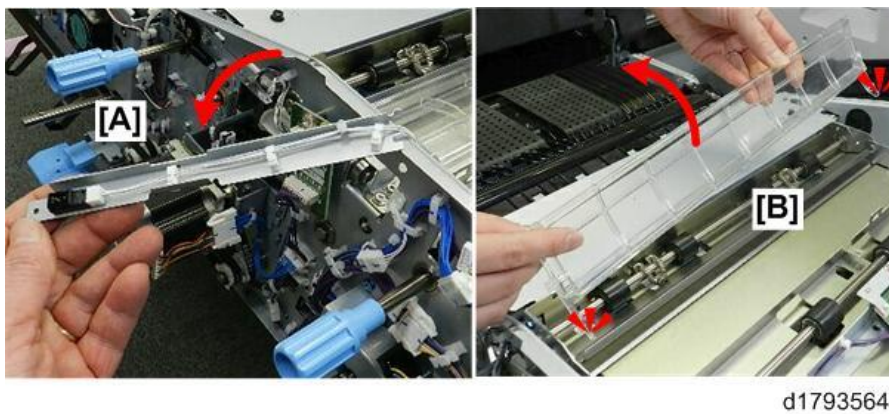
3. Remove the drawer right cover (⌚x5).



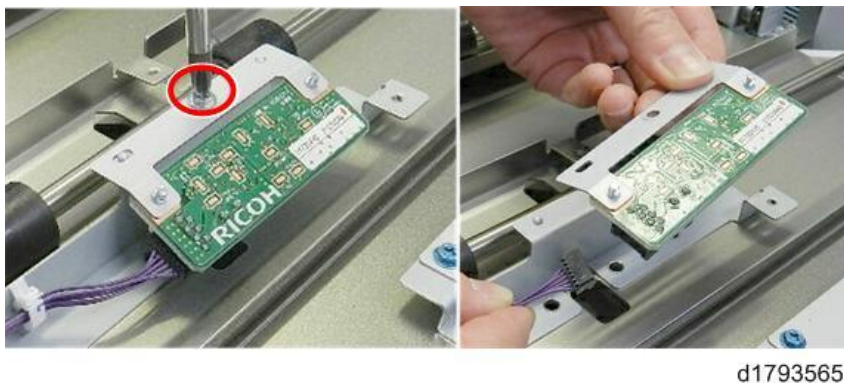
4. Remove the cover [A] (⌚x2).  
5. Disconnect the sensor bracket [B] (⌚x1).



6. Move the sensor bracket [A] aside.  
7. Remove the plastic cover [B].



8. Removed the double-feed sensor 2 bracket (with sensor attached) (⌚x1).



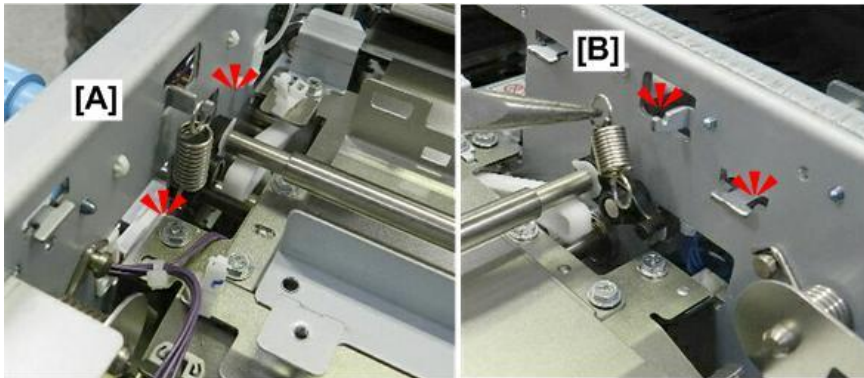
#### 4.Replacement and Adjustment

9. Remove the double-feed sensor 2 (receiver) with bracket attached (✎x2).



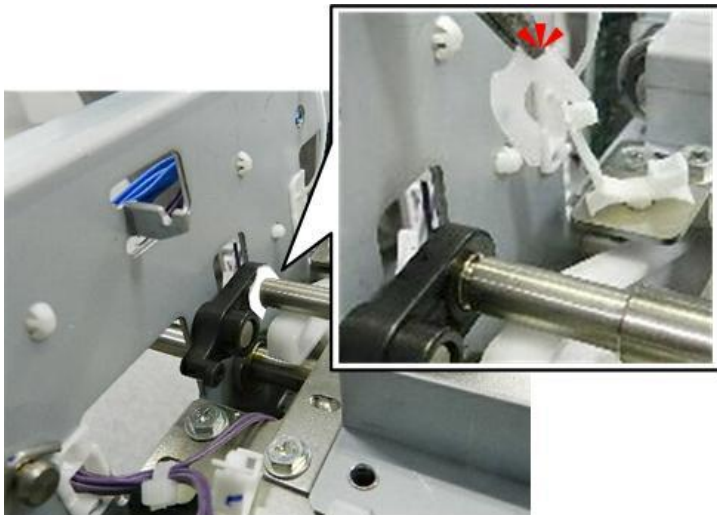
d1793566

10. Remove springs at front [A] and rear [B] (🌀x2).



d1793567

11. Disconnect the roller at the front (🌀x1).



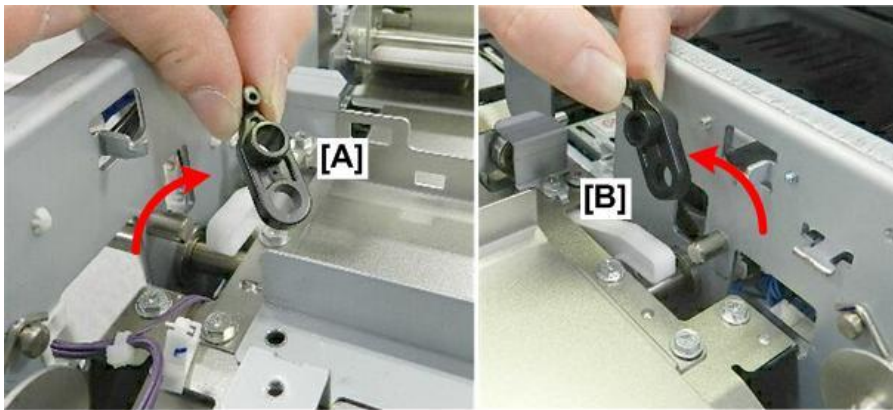
d1793568

12. Remove the roller.



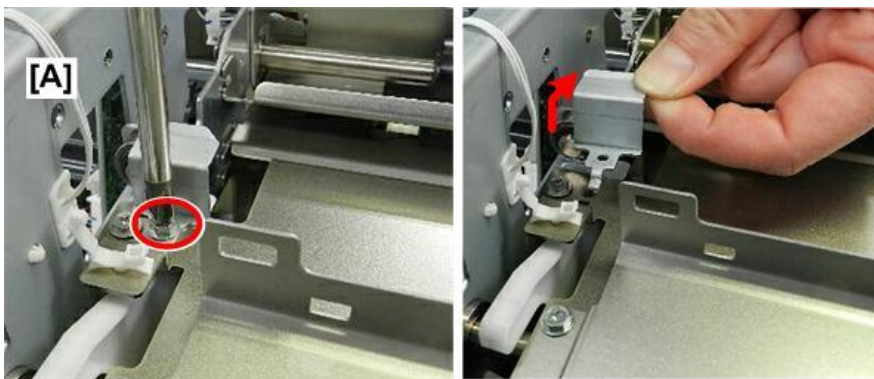
d1793569

13. Remove couplings from front [A] and rear [B] so that they do not become lost.



d1793570

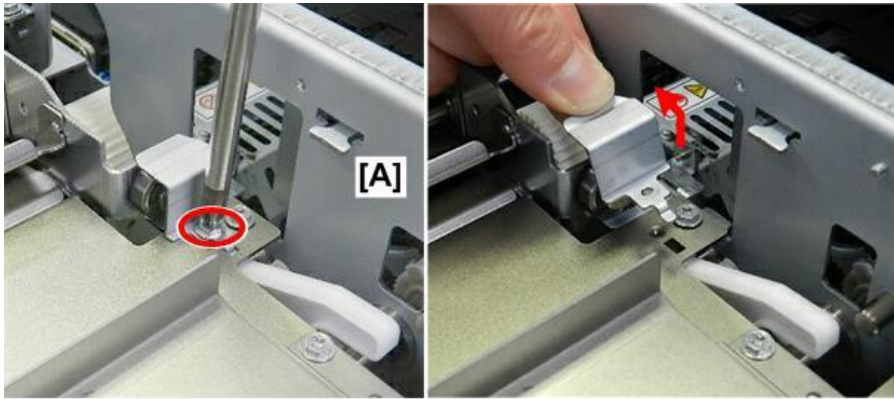
14. At the front [A], remove the lock plate (Ⓜ x1).



d1793571

#### 4.Replacement and Adjustment

15. At the rear, remove the lock plate [A] (🔧 x1).



d1793572

16. Disconnect the harness near the handle (🔧 x1).



d1793573

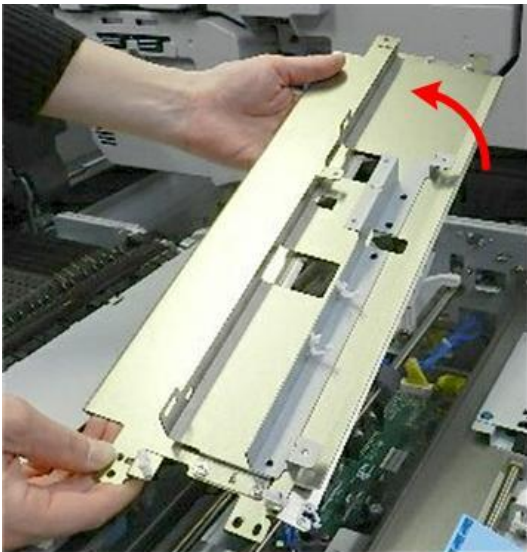
17. Disconnect the cover plate (🔧 x4).



d1793574

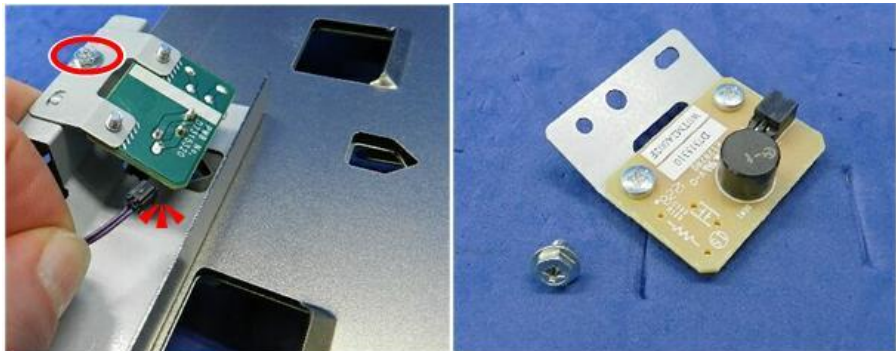


18. Remove the cover plate.



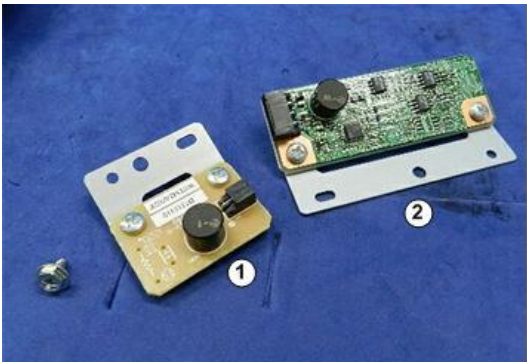
d1793575

19. Remove the sensor (📦 x1, 🛠️ x1).



d1793576

①	Double-feed Sensor 1 (Emitter)
②	Double-feed Sensor 2 (Receiver)



d1793577

## 4.Replacement and Adjustment

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### CIS

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#### CRB (CIS Relay Board)

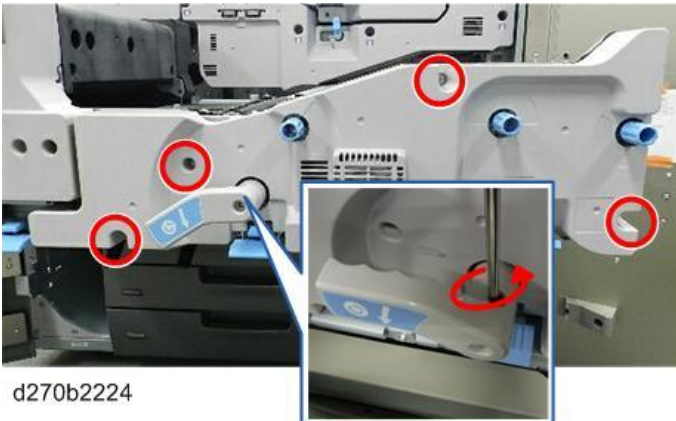
---

1. Pull out the drawer.



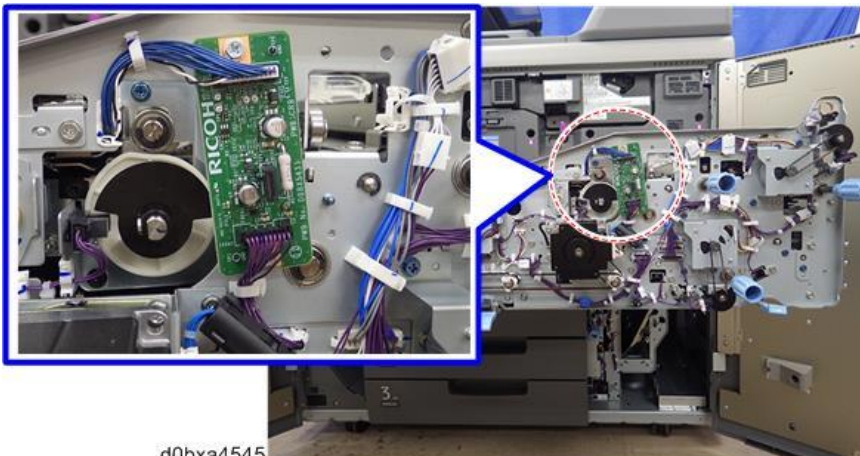
d270b2213

2. Remove the drawer right cover (⚙️ x5).



d270b2224

3. The CIS board is on the front side of the drawer, near center.



d0bxa4545

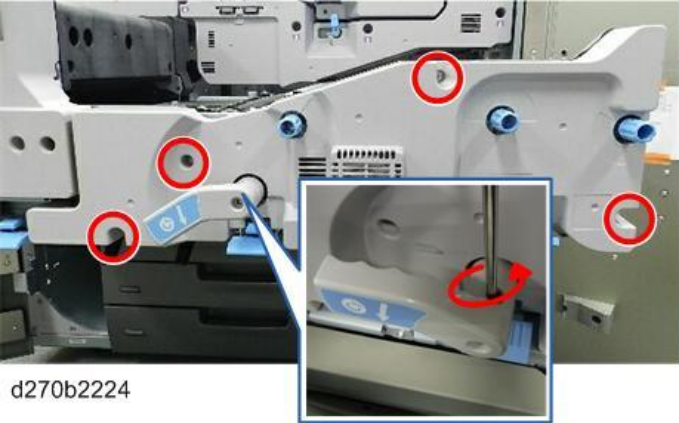
CIS Element Removal

- 1. Pull out the drawer.



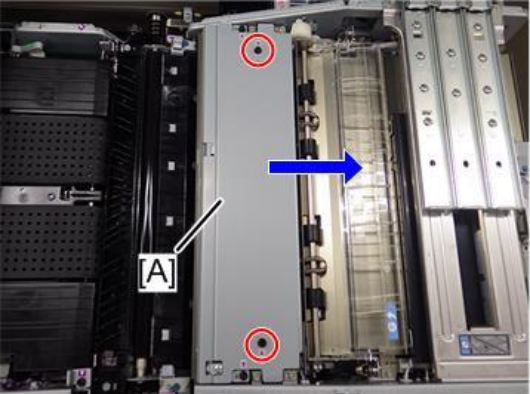
d270b2213

- 2. Remove the drawer right cover (⌀x5).



d270b2224

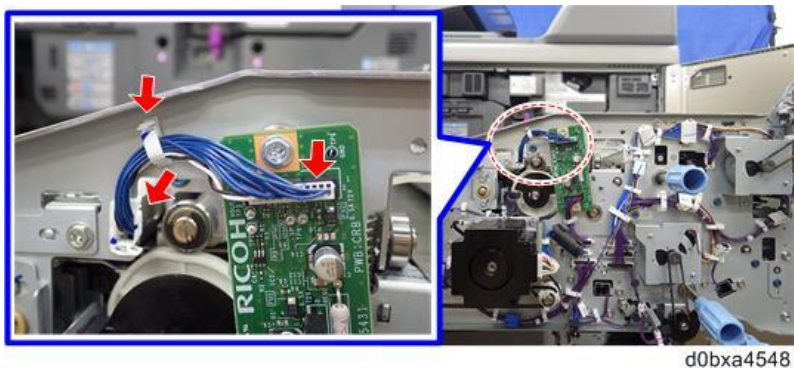
- 3. Remove the plate [A] (✖x2).



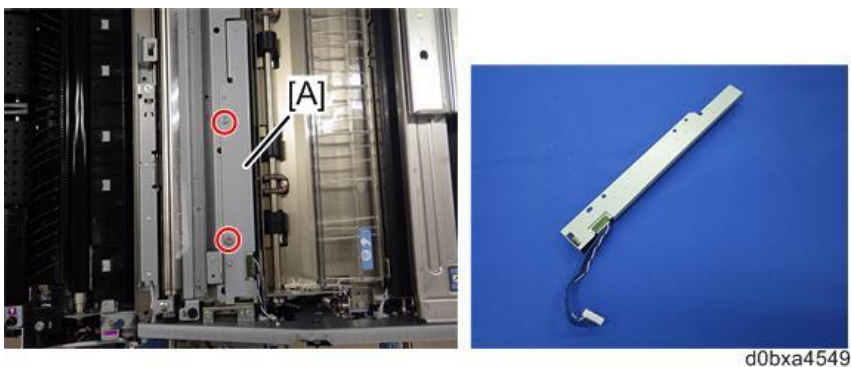
d0bxa4547

#### 4.Replacement and Adjustment

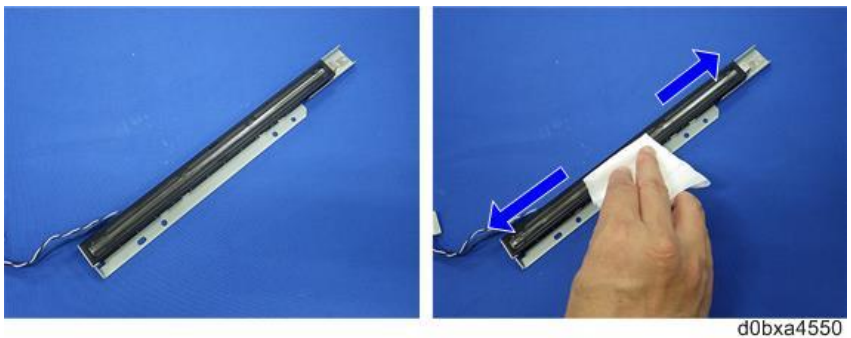
4. Disconnect the CIS (🔌x2, 📦x1).



5. The CIS element is encased by a bracket.  
6. Remove the CIS bracket [A] (🔌x2).



7. Lay the CIS bracket on a flat clean surface.  
8. Clean the surface of the CIS with a lens cloth.



9. Separate the CIS from the bracket (📦x1, ▼x5).



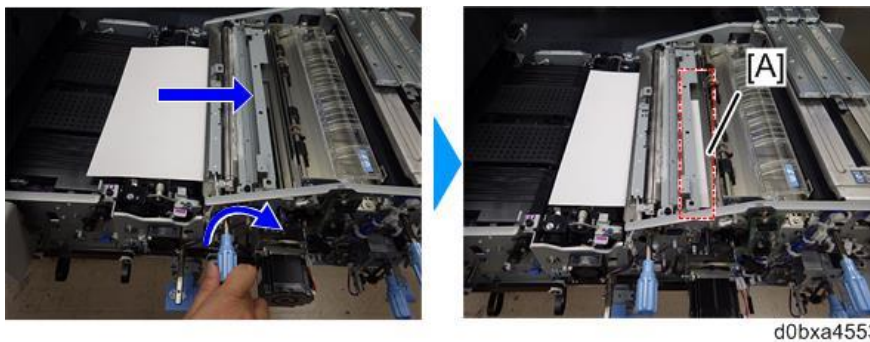
### Light Level Adjustment with CIS Replacement

For best results with this adjustment, use a sheet of T6000 (70W) paper. If this type of paper is not available, you can also use:

- Hammermill Fore MP White (20 lb) LT
  - Normal copy paper (80 g/m<sup>2</sup>) A4
1. Remove the CIS element (see the previous section).

#### Inserting the Paper: Procedure 1

1. From downstream (the transfer timing roller side), insert one clean sheet of white A4 paper into the registration unit as far where the CIS element has been removed [A].



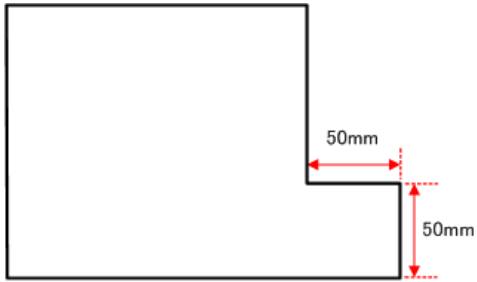
#### Note

- If you experience difficulty inserting the paper, do the procedure below.

#### Inserting the Paper: Procedure 2

#### 4.Replacement and Adjustment

1. Cut out a section of the paper using the dimensions shown.



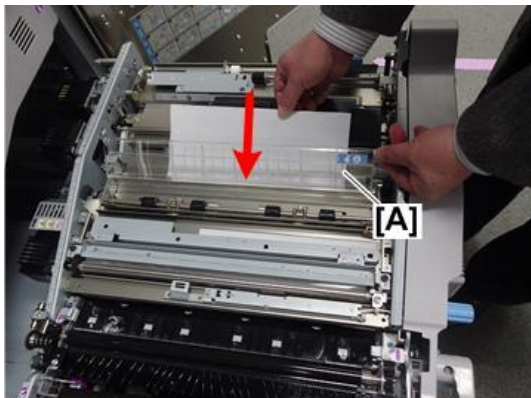
m263d4506

2. While standing to the right of the registration unit, rotate the rotary gate roller counter-clockwise with your fingers until you can see the cams (this releases pressure on the roller so that the paper can be inserted).



m263d4505

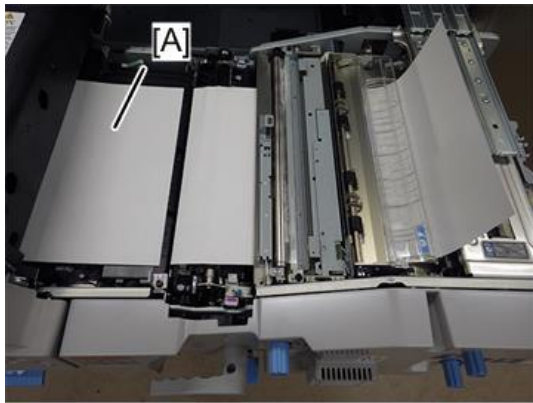
3. Raise the plastic cover, insert the prepared sheet [A] from upstream as shown, and then push it as far as where the CIS element was removed.



m263d4507

4. Insert another sheet of paper [A] into the entrance of the fusing unit to prevent a paper jam (JAM 1)

after you turn the machine on.



d0bxa4554

### Light Adjustment

1. Install the new CIS element.

#### Note

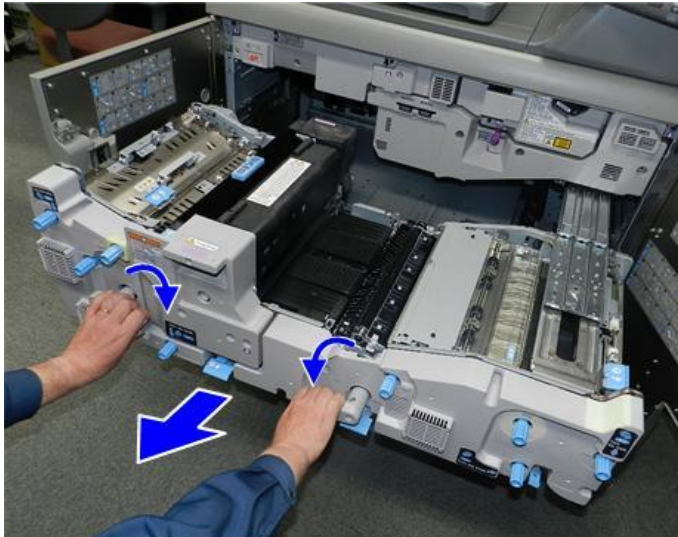
- If the machine issues a JAM001 alert, ignore it and continue with this procedure.
2. Enter the SP mode, and then execute **SP1912-001**.
  3. After the SP executes, remove the inserted paper.
  4. Re-attach the bracket. This completes the procedure.

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### Transfer Timing Sensor

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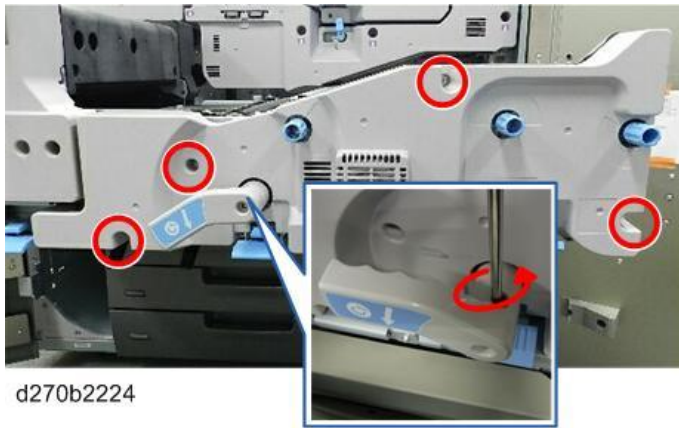
1. Open the front doors and pull the drawer out.



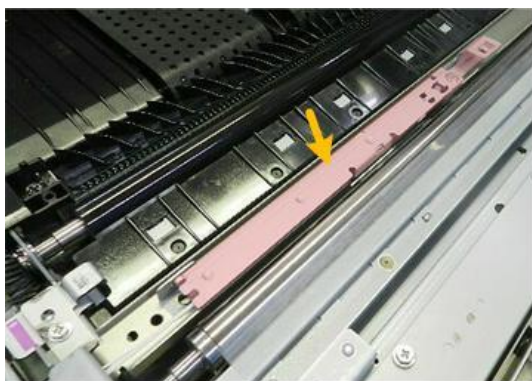
d270b2213

#### 4.Replacement and Adjustment

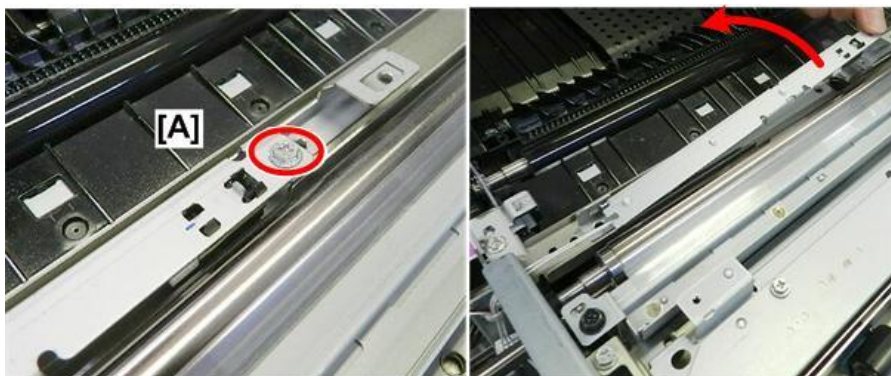
2. Remove the drawer right cover (🔩x5).



3. The transfer timing sensor is to the right of the PTR unit.



4. Disconnect the sensor bracket [A] and then raise it (🔩x1).



5. Remove the sensor (🔧x1, ▼x4).



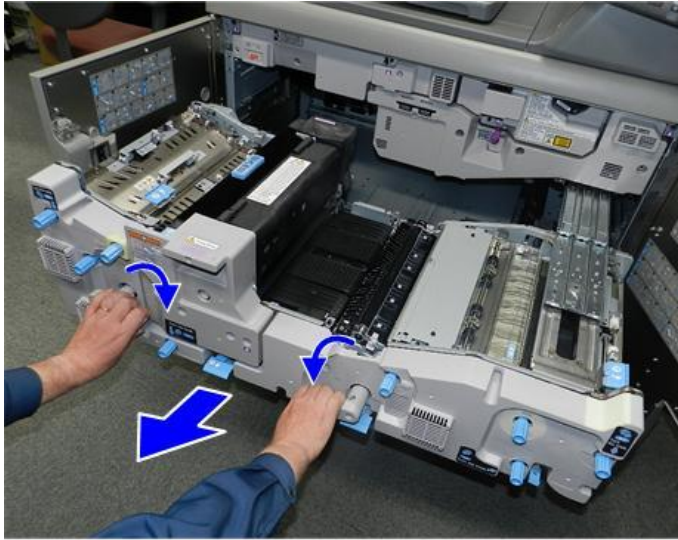


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## Registration Sensor

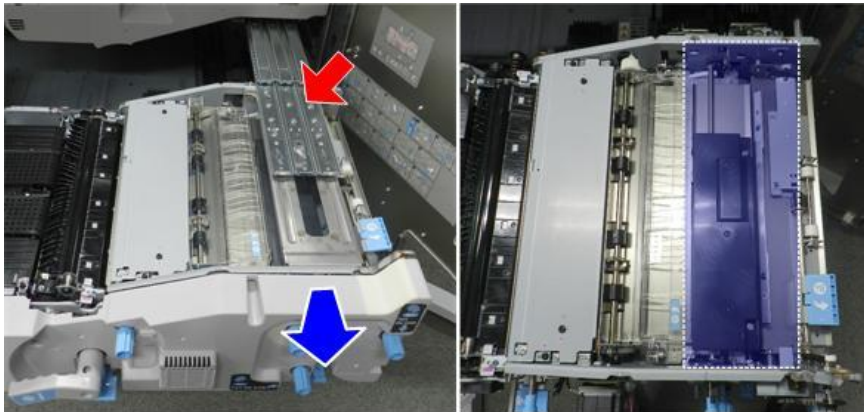
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1. Open the front doors and pull the drawer out.



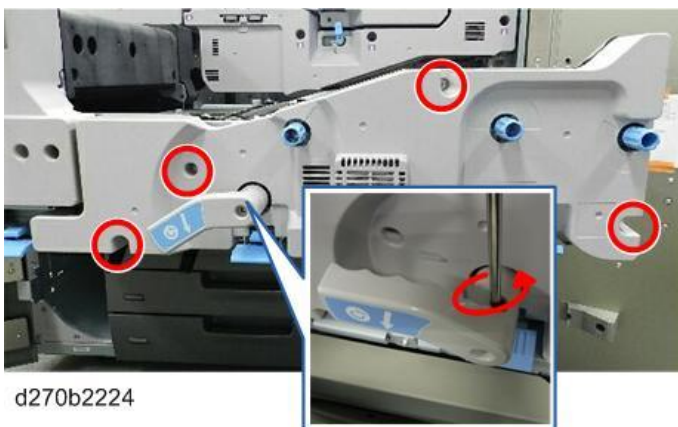
d270b2213

2. Disconnect the support rails, and then remove the rail base. ([Support Rails](#))



d270b3552

3. Remove the drawer right cover (⊗x5).

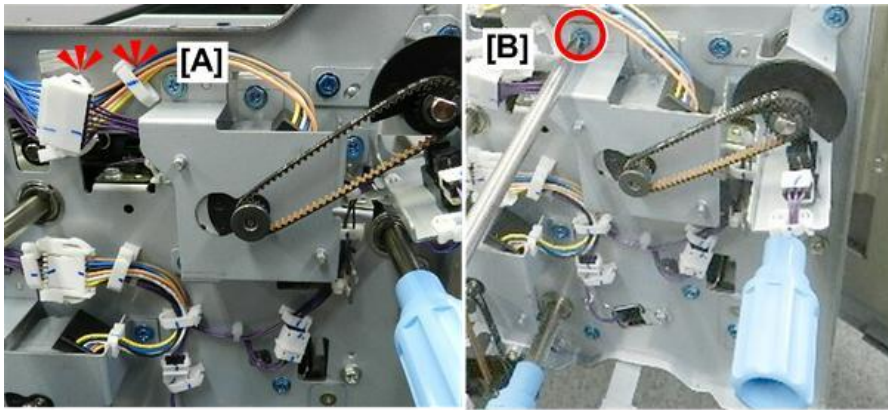


d270b2224

4. Disconnect the motor [A] (⊗x1, ⊞x1).

#### 4.Replacement and Adjustment

5. Disconnect the motor bracket at the top [B] (✖x1).

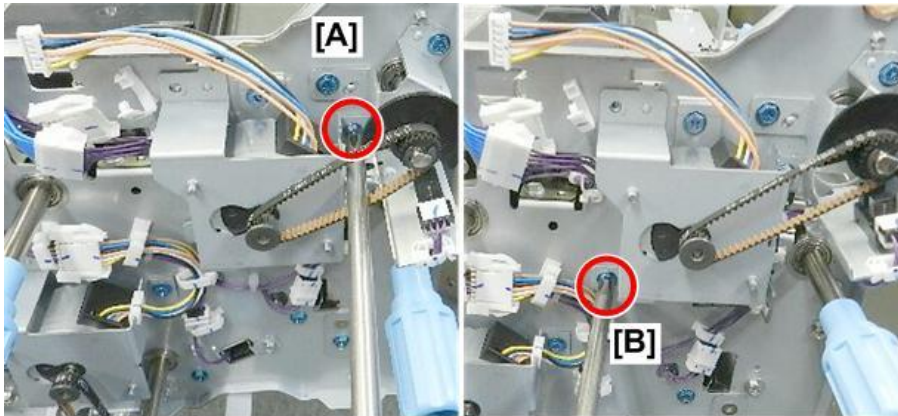


d1793548

6. Disconnect the bracket:

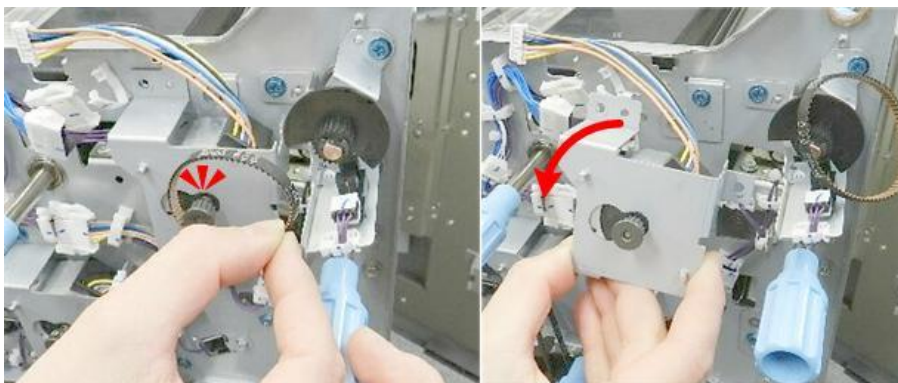
[A] Right (✖x1)

[B] Left (✖x1)



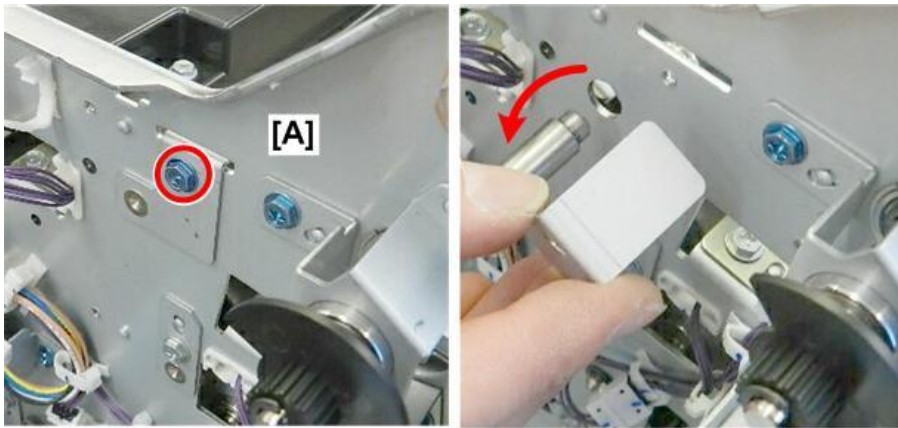
d1793549

7. Remove the belt and then remove the bracket (with motor attached) (✖x1).



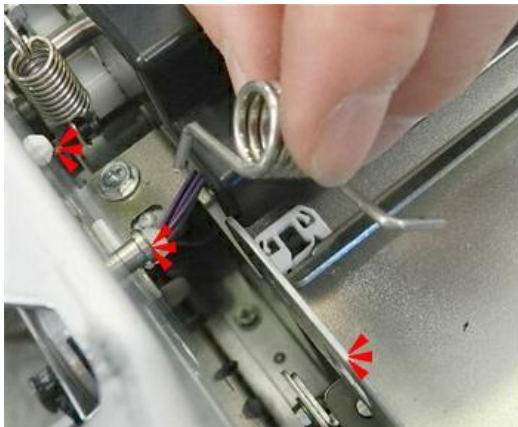
d1793550

8. Remove the lock plate [A] (🔑x1).



d1793680

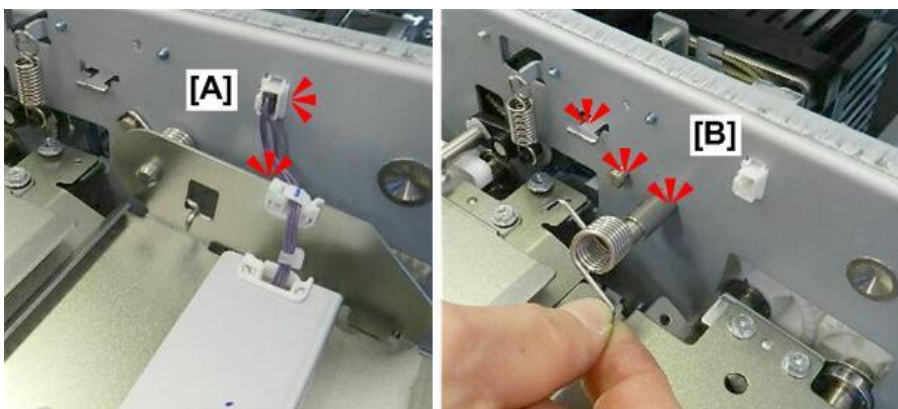
9. On the other side of the frame, remove the spring (🌀x1).



d1793681

10. At the rear [A], disconnect the sensor (🔌x1, 📦x1).

11. Remove the spring [B] (🌀x1).



d1793682

12. Disconnect the plate:

[A] Front (🔑x2)

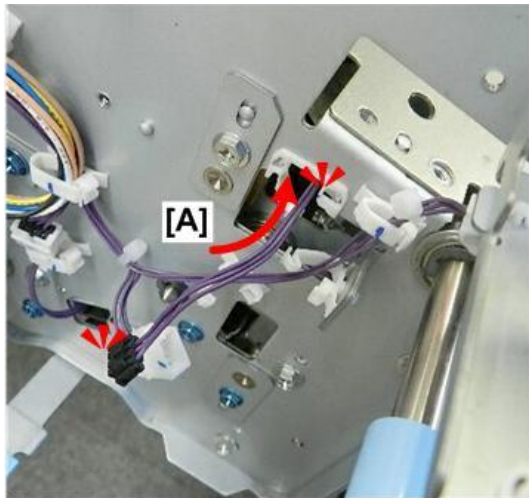
[B] Rear (🔑x2)

#### 4.Replacement and Adjustment



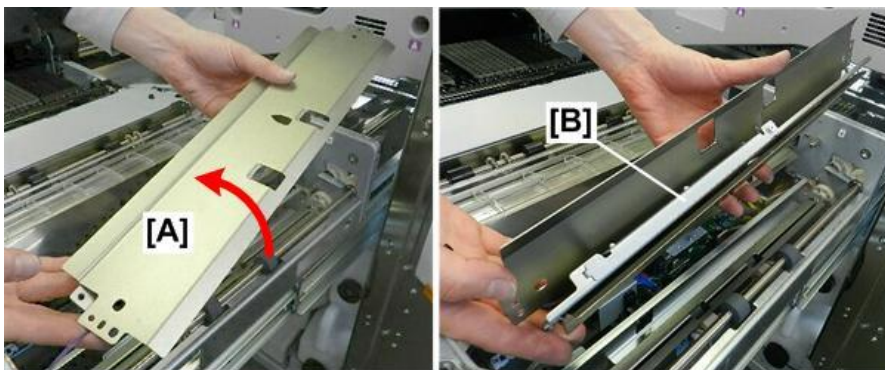
d1793683

13. At the front [A], disconnect the harness, and then pass the harness back through the hole (📦 x1).



d1793684

14. Remove the plate [A].  
15. The bracket [B] of the registration sensor is inside the plate.



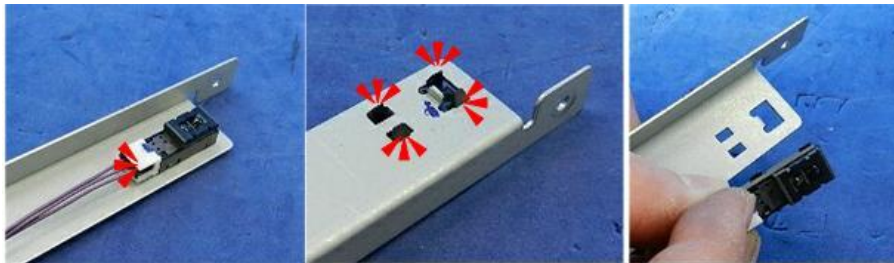
d1793685

16. Disconnect the sensor bracket (🔩 x1).



d1793686

17. Remove the sensor from the bracket (🔌 x1, ▼x4).



d1793687

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### DRB, TE Shift Unit Motor, Rear fence HP sensor

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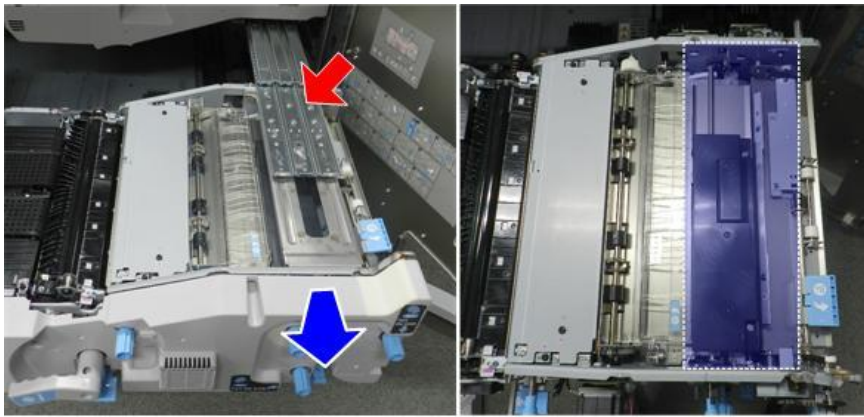
1. Pull out the drawer.



d270b2213

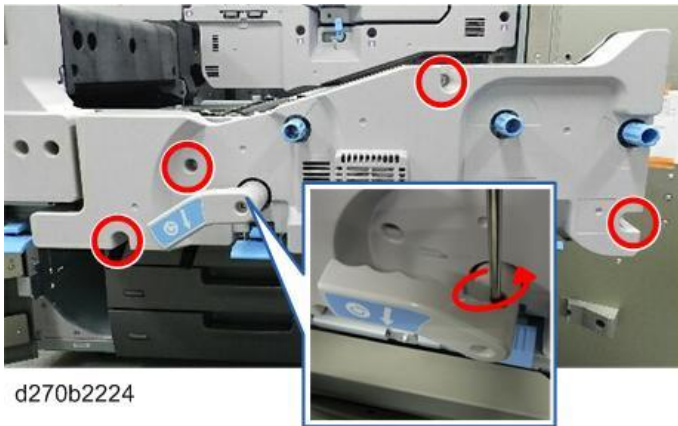
#### 4.Replacement and Adjustment

2. Disconnect the support rails, and then remove the rail base. ([Support Rails](#))



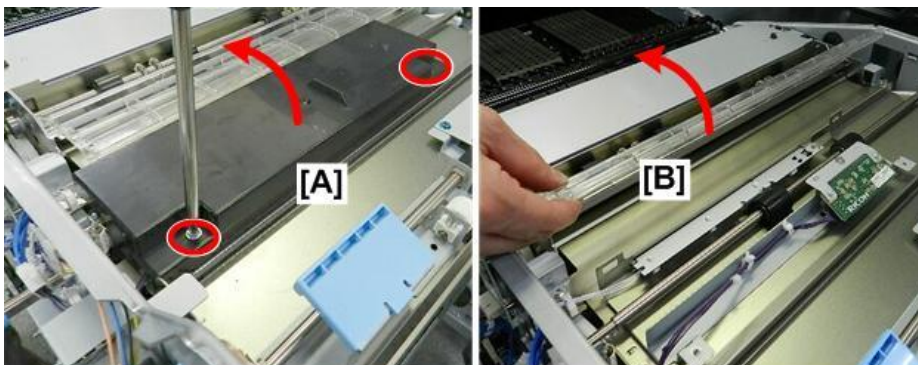
d270b3552

3. Remove the drawer right cover (🔩 x5).



d270b2224

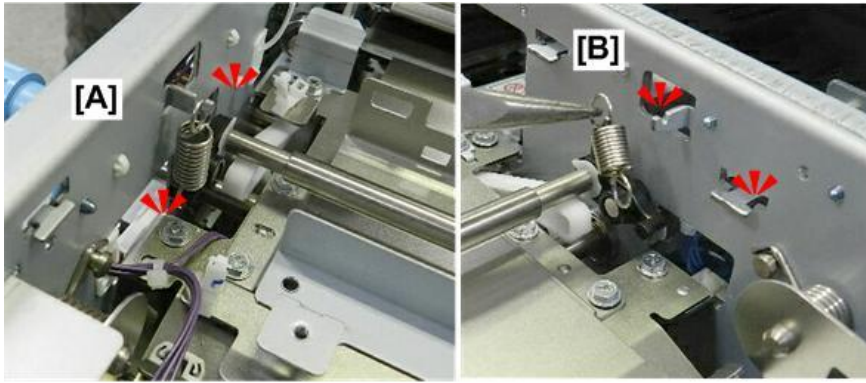
4. Remove:  
[A] Cover (🔩 x2).  
[B] Plastic cover



d1793662

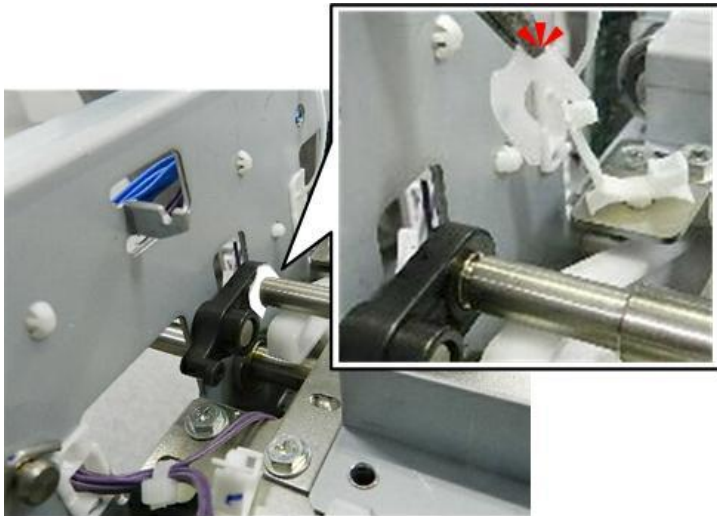
5. Remove springs:  
[A] Front (🔩 x1)  
[B] Rear (🔩 x1)

#### 4.Replacement and Adjustment



d1793567

6. Disconnect the roller at the front (Ⓞx1).



d1793568

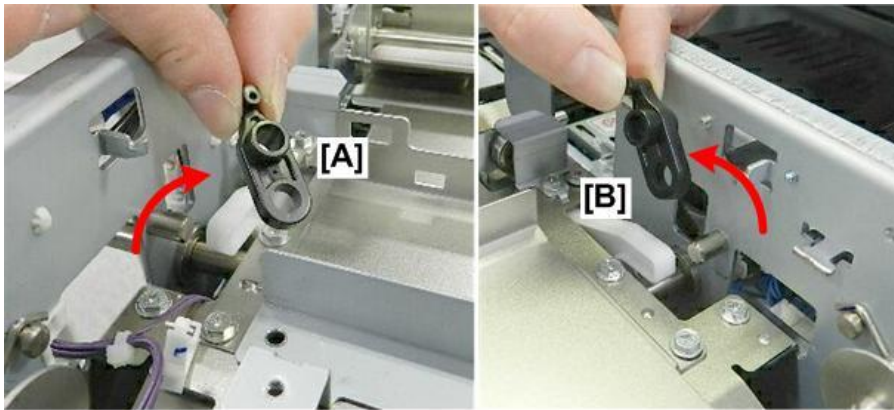
7. Remove the roller.



d1793569

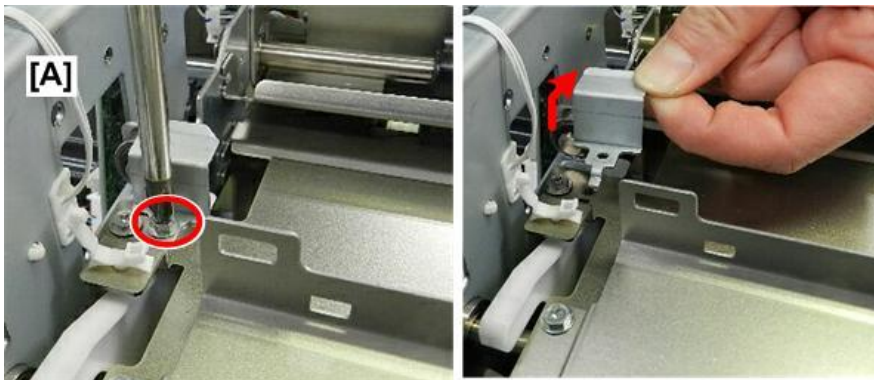
#### 4.Replacement and Adjustment

8. Remove couplings from front [A] and rear [B] so that they do not become lost.



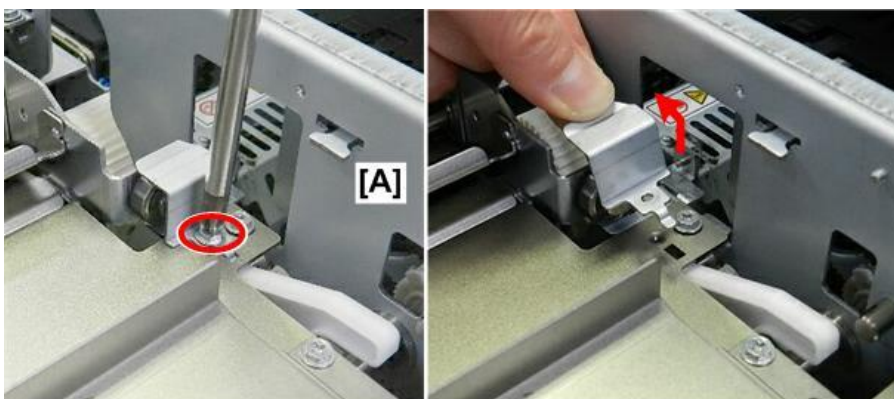
d1793570

9. At the front [A], remove the lock plate (⊗ x1).



d1793571

10. At the rear, remove the lock plate [A] (⊗ x1).



d1793572



11. Disconnect the harness near the handle (🔌 x1).



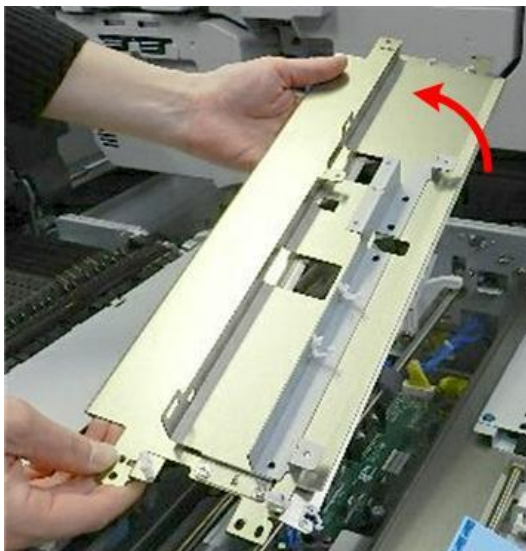
d1793573

12. Disconnect the cover plate (🔩 x4).



d1793574

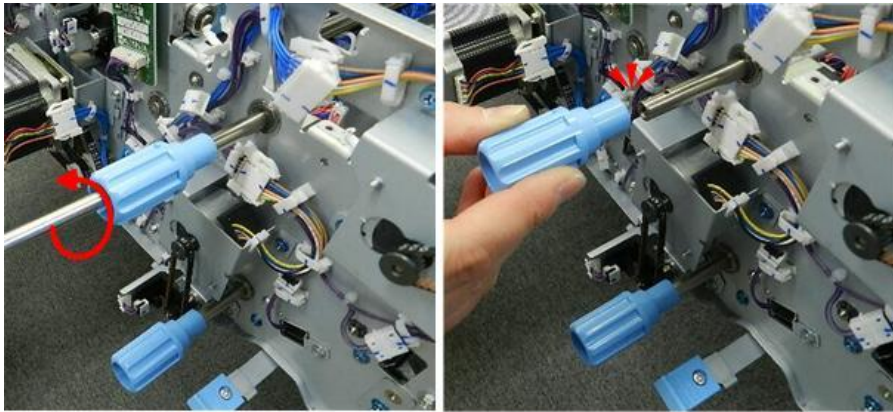
13. Remove the cover plate.



d1793575

#### 4.Replacement and Adjustment

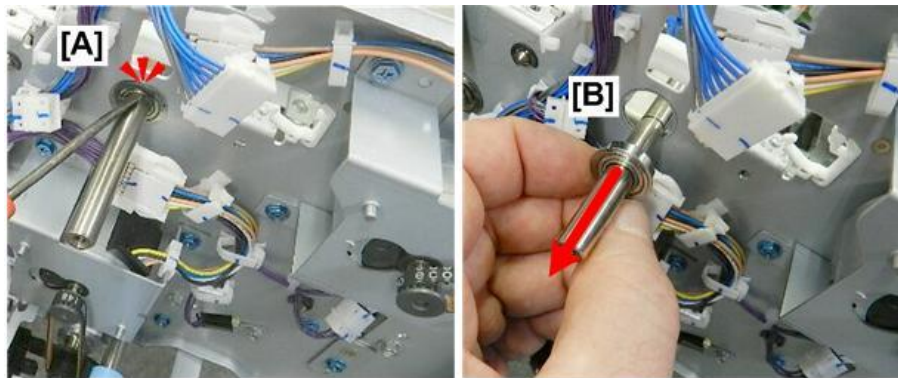
14. Remove the knob (🔩x1).



d1793665

15. Disconnect the end of the roller shaft [A] and then remove the bearing [B] (🔩x1, x1).

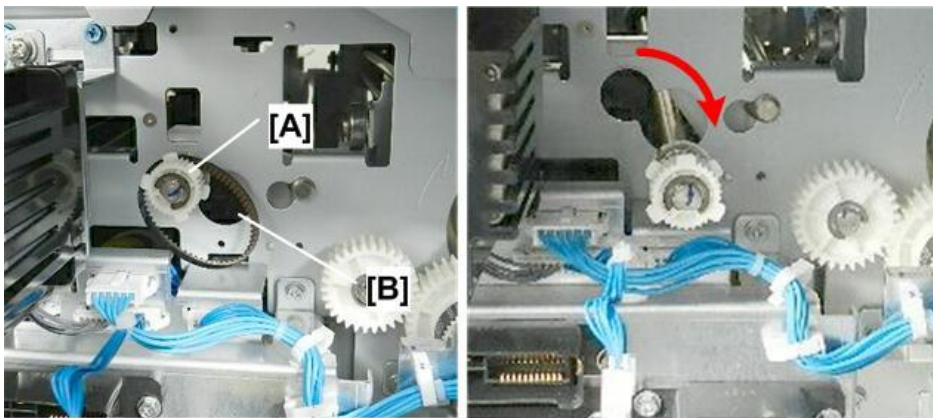
16. At the rear, remove the registration timing motor. ([Registration Timing Motor](#))



d1793666

17. Where the registration timing motor was removed, you can see the end of the roller shaft [A].

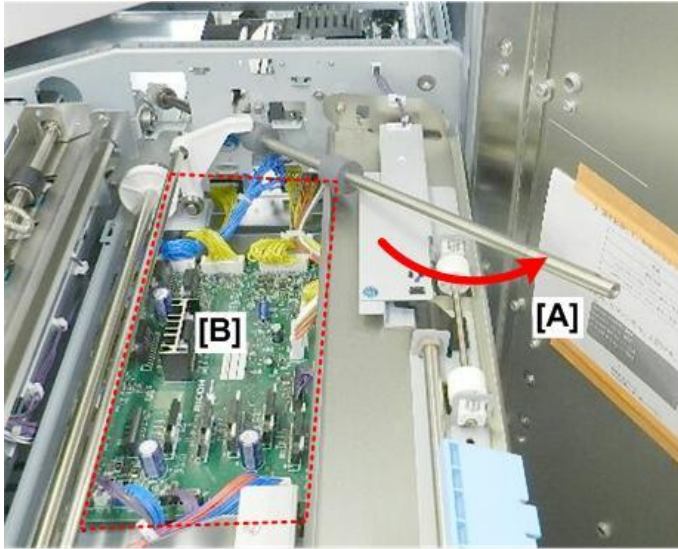
18. Move the end of the shaft down into the larger hole [B].



d1793667

19. At the front, push the roller [A] aside. This makes it possible to access the following parts [B]:

- DRB
- TE shift unit motor
- Rear fence HP sensor



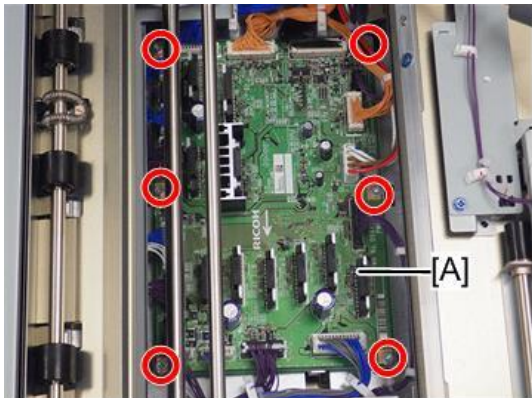
d1793668

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### DRB

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1. Remove the DRB [A] (📦 x all, 🛠️ x6)



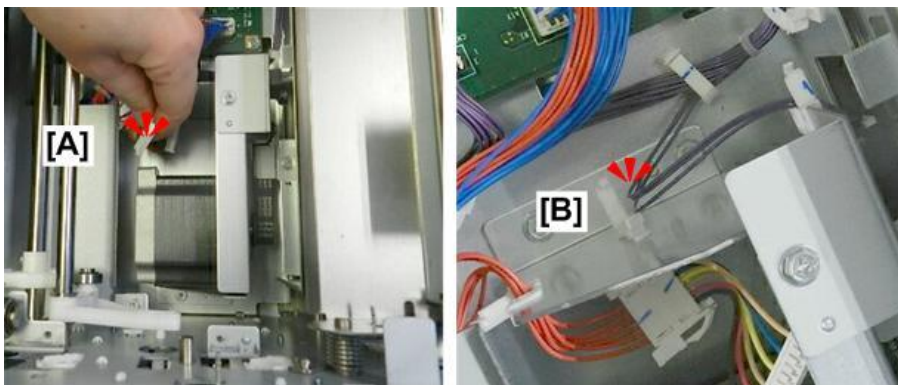
d0bxa4199

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### TE Shift Unit Motor

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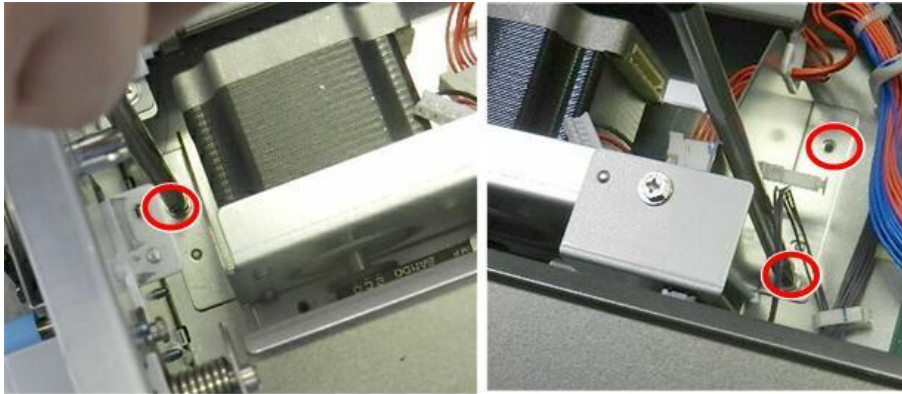
1. Disconnect the motor [A] (📦 x1).
2. Disconnect the sensor harness [B] (📦 x).



d1793671

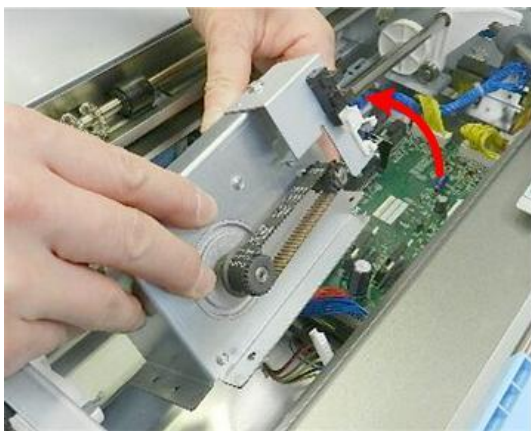
#### 4.Replacement and Adjustment

3. Disconnect the motor bracket (🔧x3).



d1793672

4. Remove the motor bracket (with motor attached).



d1793673

5. Disconnect the motor (🔧x1).



d1793674

6. Separate motor and bracket.



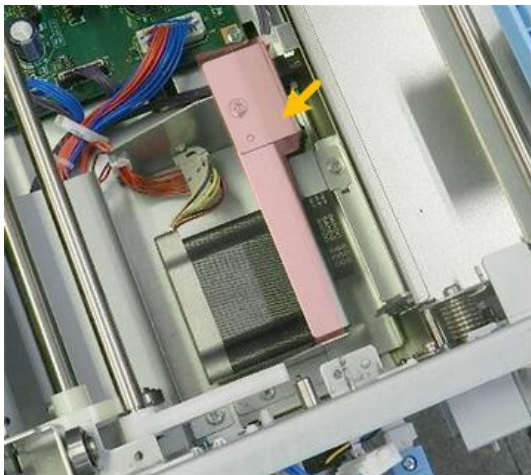
d1793675

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### Rear fence HP sensor

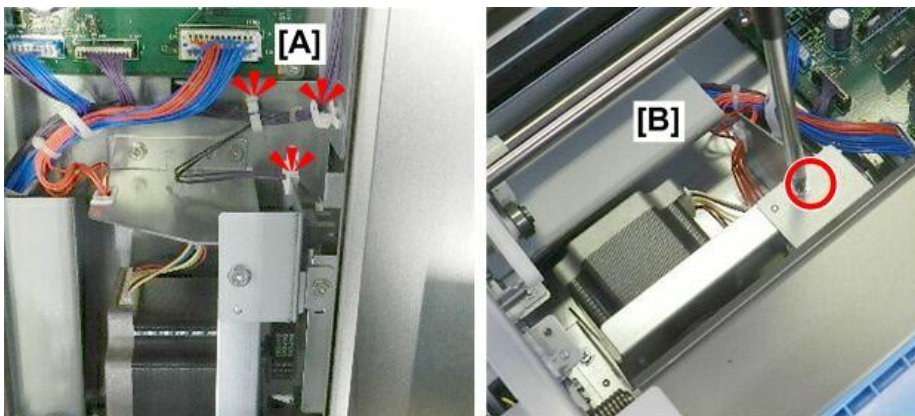
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1. The rear fence HP sensor is above the TE shift unit motor.



d1793676

2. Disconnect the sensor harness [A] (🔌x2, 📦 x1).
3. Disconnect the sensor bracket [B] (🔩x1).

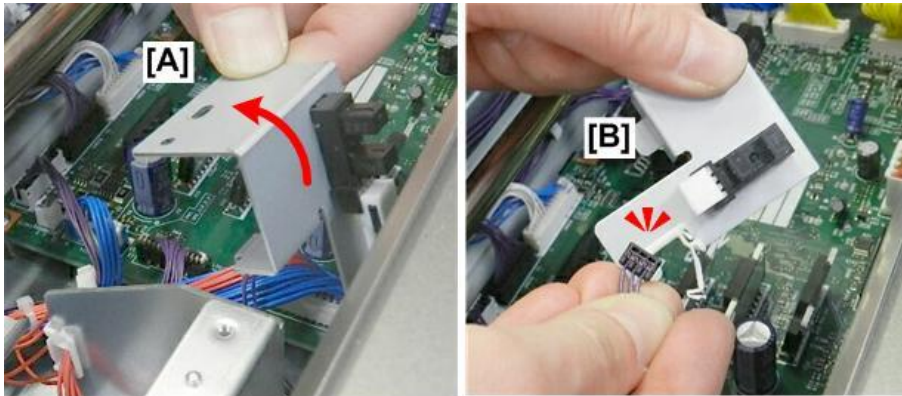


d1793677

4. Pull up the sensor bracket [A] (with sensor still connected).

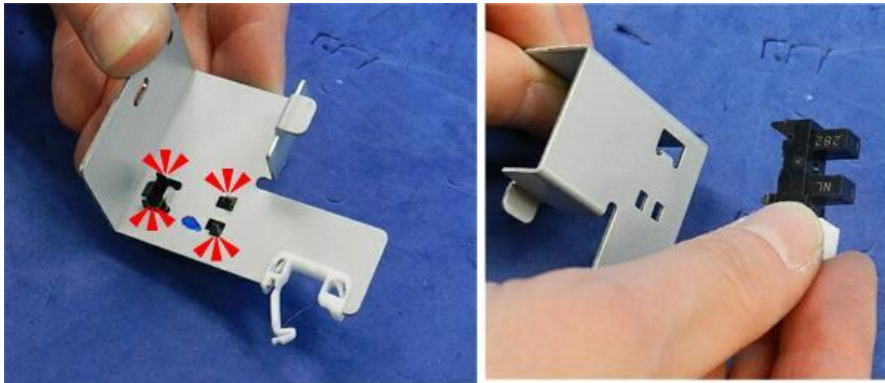
#### 4.Replacement and Adjustment

5. Disconnect the sensor [B] (🔩 x1).



d1793678

6. Remove the sensor (▼x4).



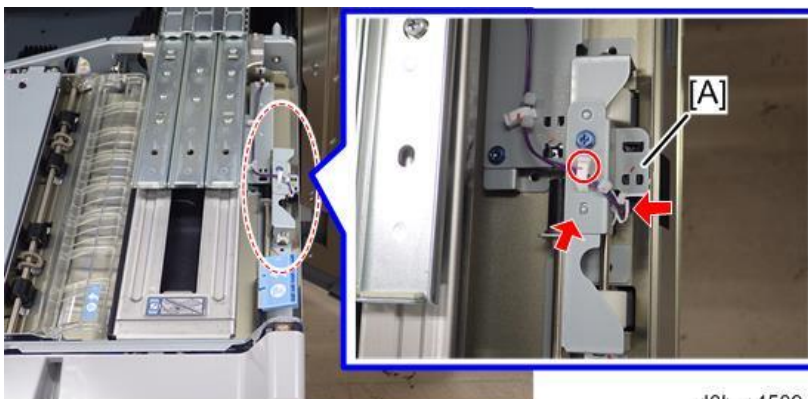
d1793679

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### LCT/Drawer Unit Paper Removal Sensor

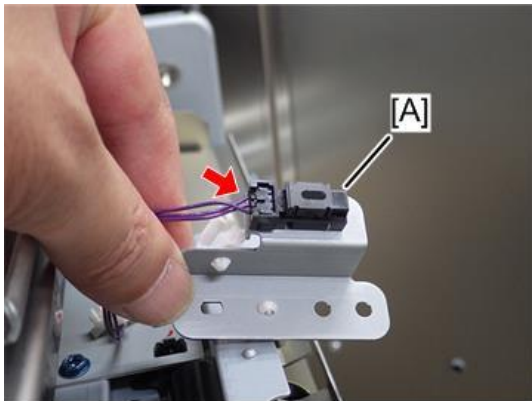
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1. Open the front doors and pull out the drawer ([Opening and Closing the Drawer](#)).
2. Remove the LCT/drawer unit paper removal sensor [A] with the bracket (🔩x2, 🛠️x1).



d0bxa4589

- 3.** Remove the LCT/drawer unit paper removal sensor [A] (📦 x1, ▼x4).



d0bxa4590

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### Tray/Drawer Unit Paper Removal Sensor

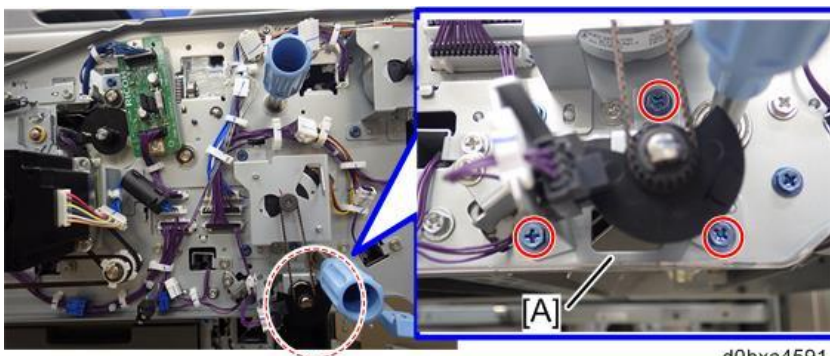
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- 1.** Open the front doors and pull out the drawer (Opening and Closing the Drawer).  
**2.** Remove the drawer right cover (🔩 x5).



d270b2224

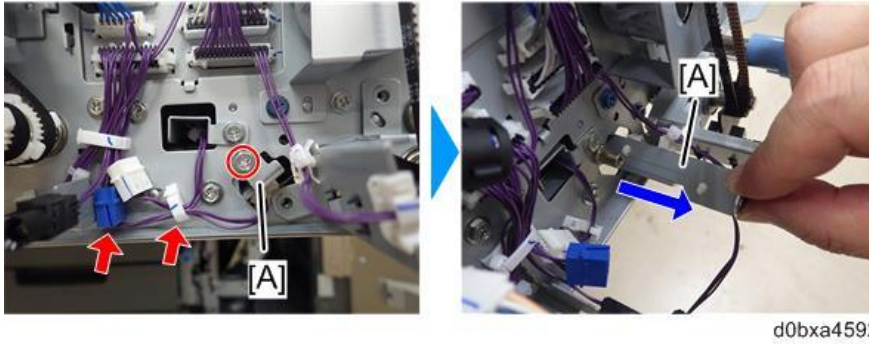
- 3.** Remove the bracket [A] (🔩 x3).



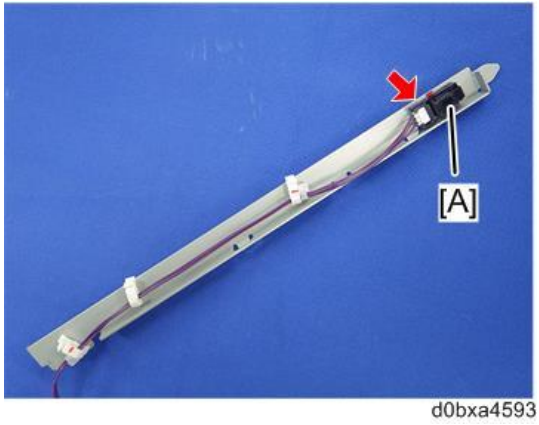
d0bxa4591

#### 4.Replacement and Adjustment

- 4.** Remove the tray/drawer unit paper removal sensor [A] with the bracket (🔧 x1, 📦 x1, ⚙️ x1).



- 5.** Remove the tray/drawer unit paper removal sensor [A] (📦 x1, ▼x4).





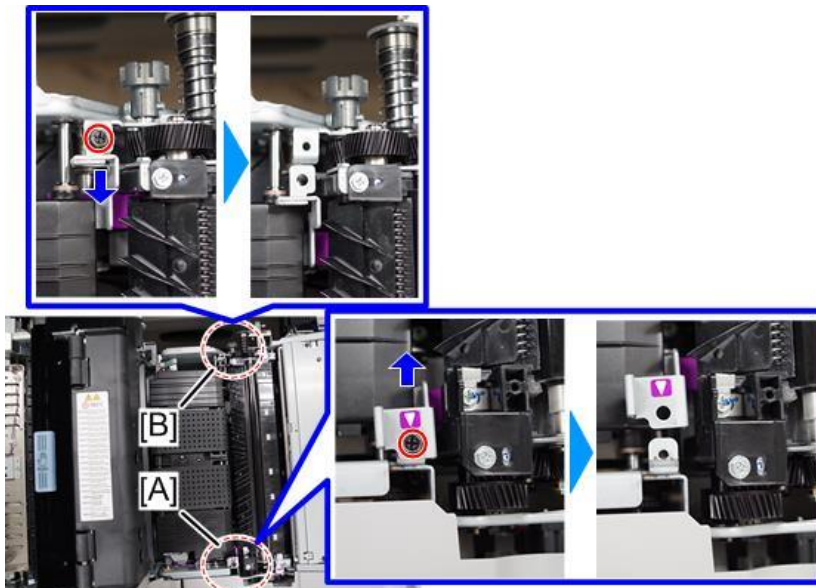
## Paper Transfer Roller (PTR) Unit

### PTR Unit Removal

1. Open both front doors.
2. Pull out the drawer.
3. At the front [A], disconnect the plate and push it to the rear (#x1).
4. At the rear [B], disconnect the plate and push it to the front (#x1).

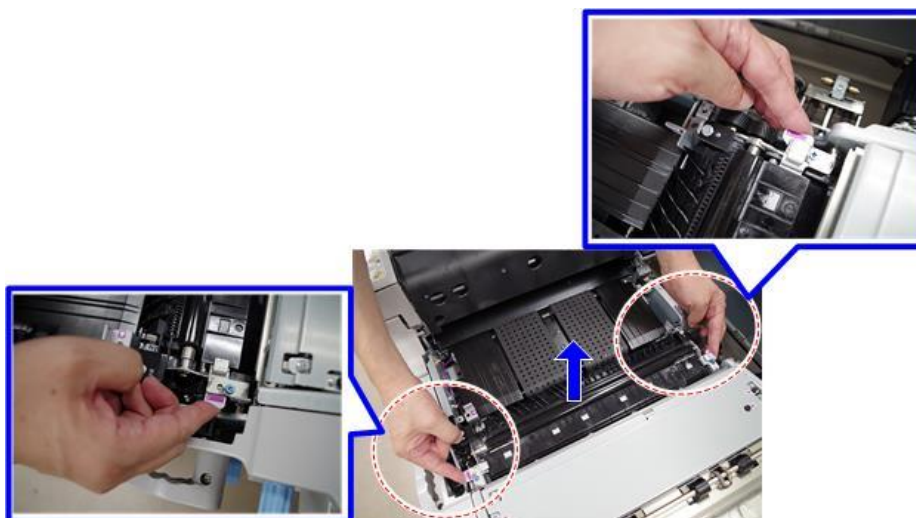
#### ★ Important

- Both plates must be pushed toward the center as far as possible. If they are not, the unit cannot be removed.



d0bxa4602

5. Using the plates as handles, remove the PTR unit.



d0bxa4603

#### 4.Replacement and Adjustment

6. Lay the PTR unit on a flat clean surface.



d0bxa4604

7. Before servicing the unit, place some paper or a drop cloth under the unit to catch stray toner and lubricant dust.

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#### PTR Disassembly

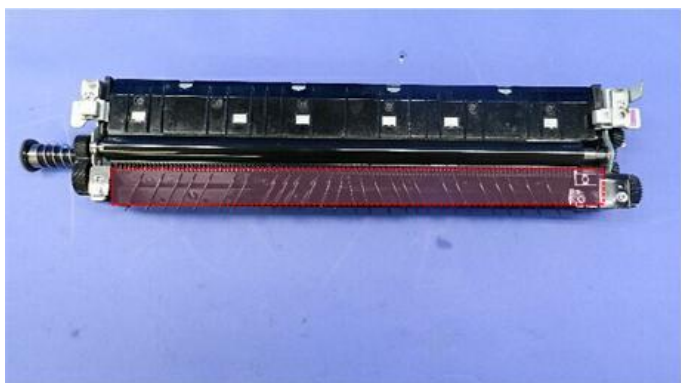
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1. Pull out the drawer
2. Remove the PTR unit ([PTR Unit Removal](#))
3. Follow the steps below in order to disassemble the PTR unit.

#### Separation Plate

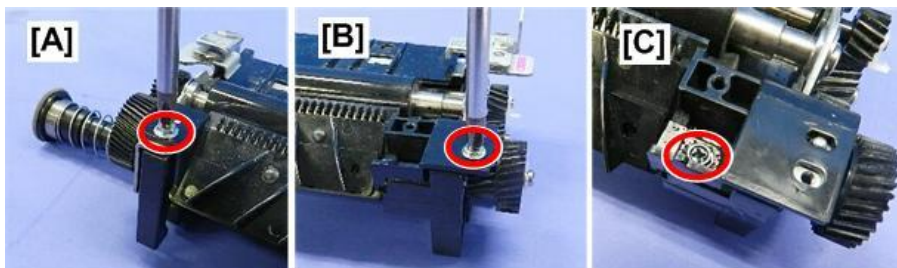
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1. The separation plate is on the left side of the PTR unit.



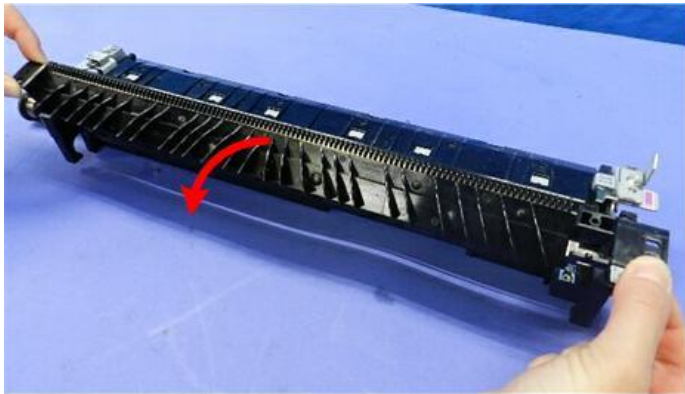
d1793710

2. Disconnect the separation plate at the rear ([A]) and at the front ([B] and [C]) (⌀x3).



d1793711

3. Remove the separation plate.

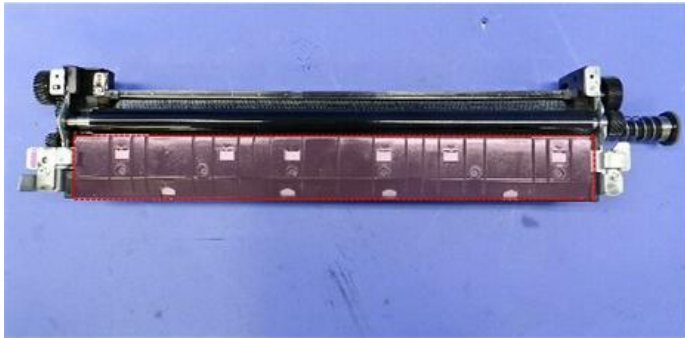


d1793712

### Entrance Guide Plate

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1. The entrance guide plate is on the right side of the PTR unit.

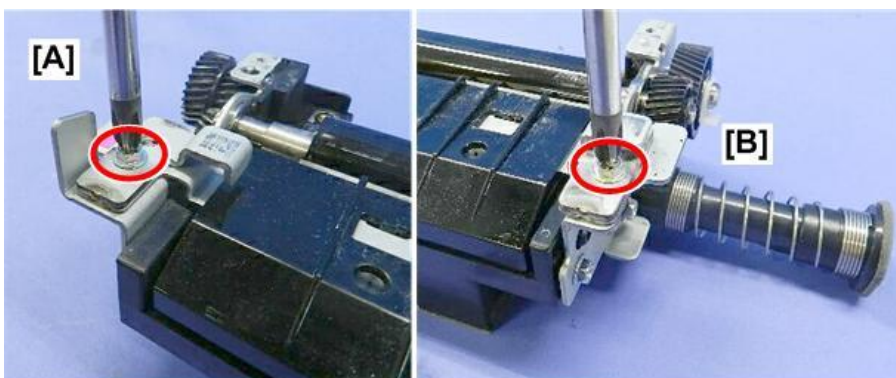


d1793713

2. Disconnect:

[A] Front (⌚ x1)

[B] Rear (⌚ x1)



d1793714

#### 4.Replacement and Adjustment

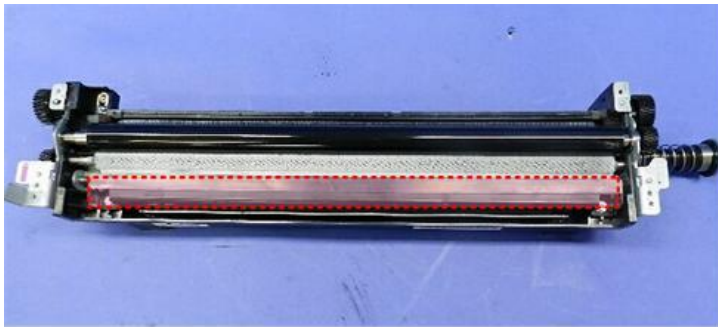
3. Remove the entrance guide plate.



d1793715

#### Lubricant Bar

1. The lubricant bar is on the right.

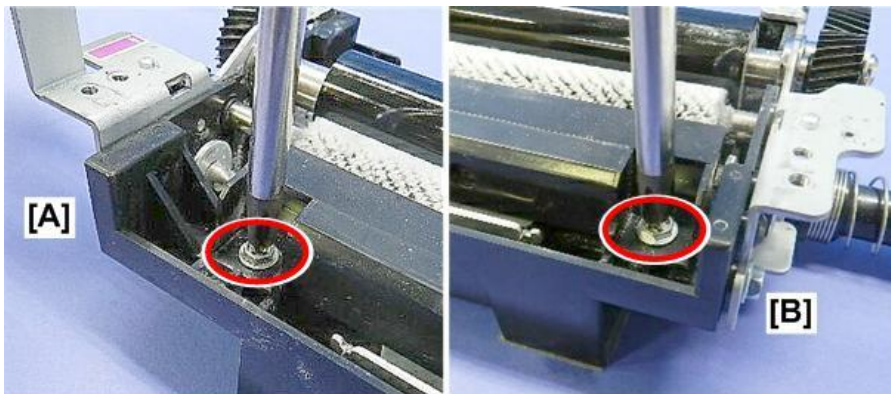


d1793716

2. Disconnect:

[A] Front (🔧 x1)

[B] Rear (🔧 x1)



d1793717

3. Remove the lubricant bar bracket (with bar attached).



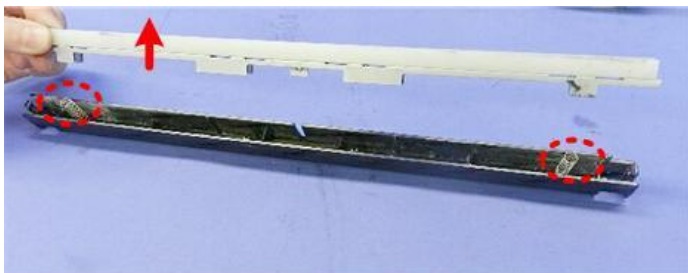
d1793718

4. Open the releases on each end of the bracket to release the bar from the bracket (▼x1).



d1793719

5. Separate the bar and bracket.



d1793720

**★ Important**

- Do not lose the springs inside the bracket.

### Cleaning Blade

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**★ Important**

- The following three items are always replaced as a set: lubricant bar, cleaning blade, and lubricant brush roller.

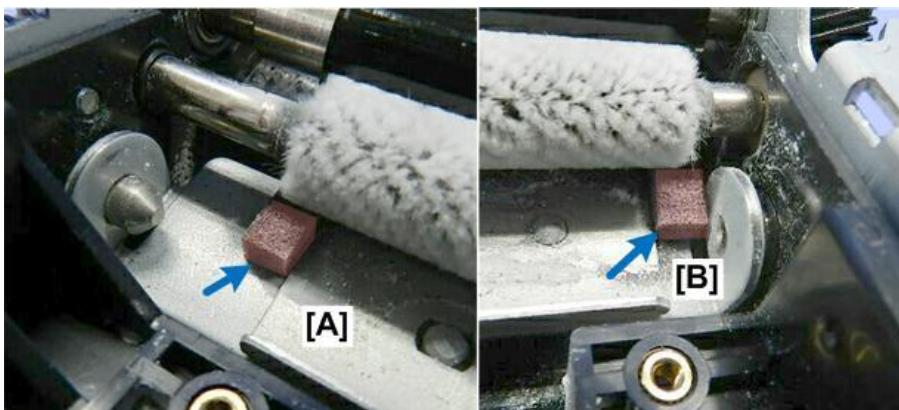
#### 4.Replacement and Adjustment

1. The cleaning blade is on the right side of the unit.



d1793721

2. Before you remove the blade, note the locations of the sponge seals [A] and [B] below each end of the roller.



d1793722

#### ★ Important

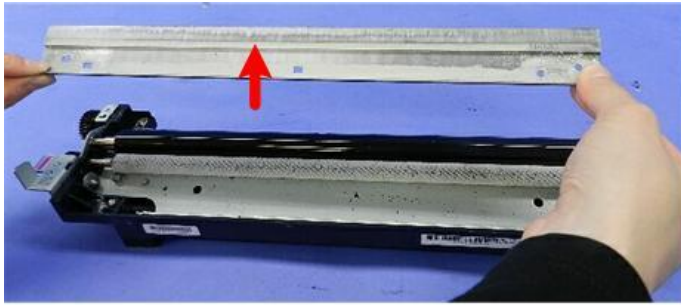
- These sponges are delicate and tear easily.
- Work carefully when during blade removal to avoid damaging these seals. The seals cannot be replaced in the field.

3. Disconnect the cleaning blade (🔧 x3).



d1793723

4. Remove the cleaning blade.



d1793724

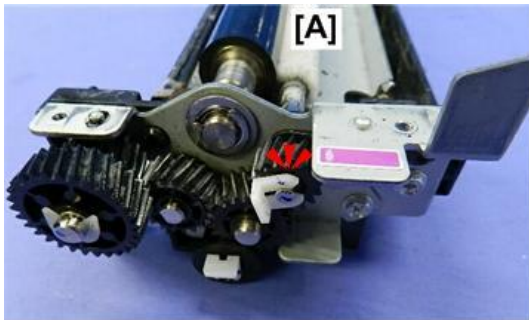
### Lubricant Roller

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**★ Important**

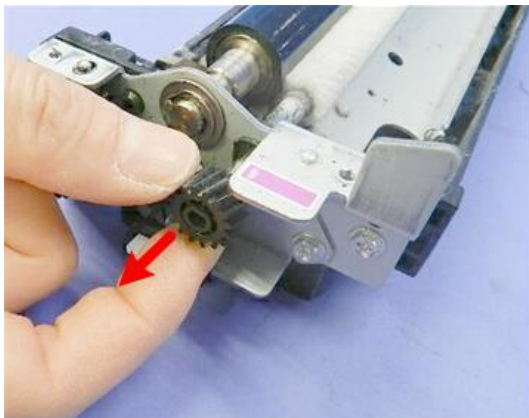
- The following three items are always replaced as a set: lubricant bar, cleaning blade, and lubricant brush roller.

1. At the front, disconnect the end of the lubricant roller [A] (⌀x1).



d1793725

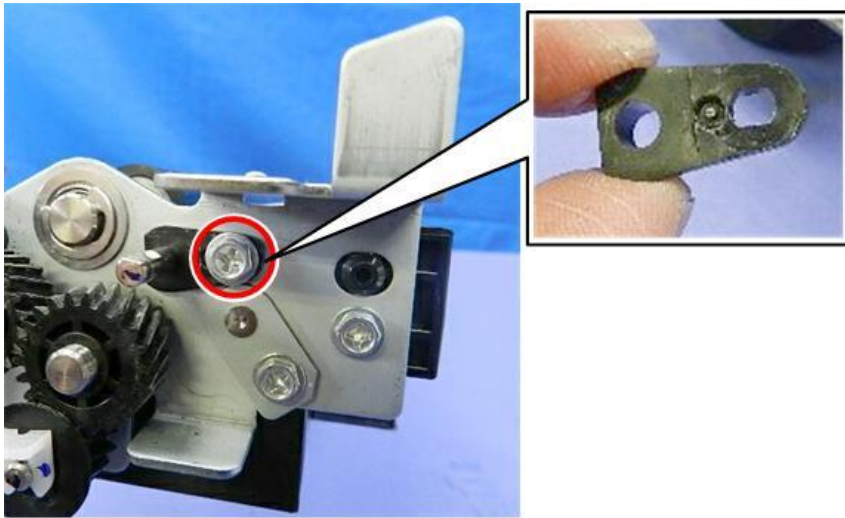
2. Remove the gear from the tip of the roller.



d1793726

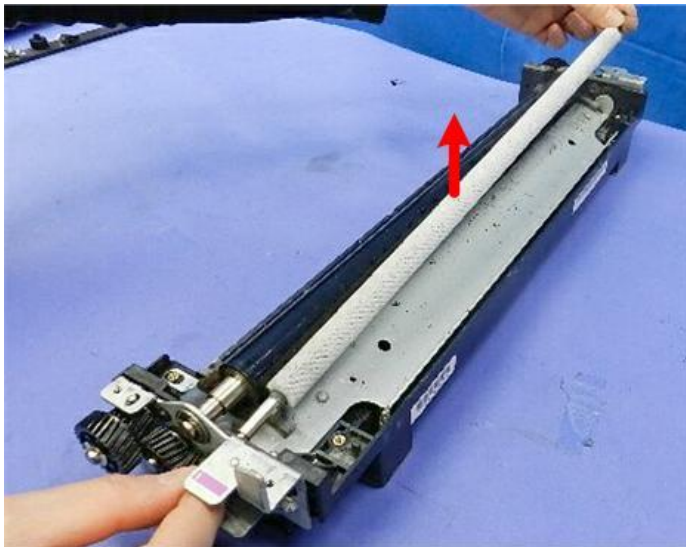
#### 4.Replacement and Adjustment

3. Remove the lock plate (🔑x1).



d1793727

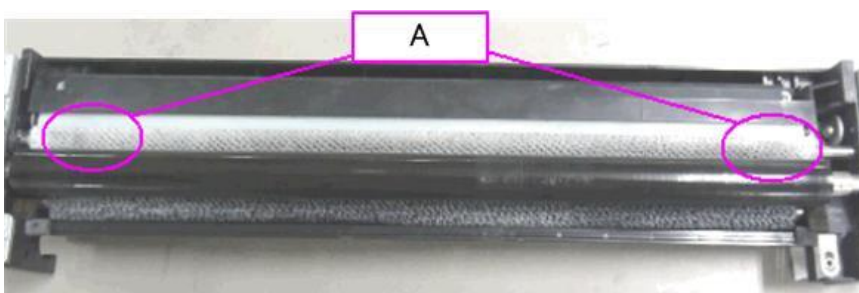
4. Remove the lubricant roller.



d1793728

#### Re-installation

1. Before replacing the lubricant brush roller, apply setting powder to both ends of the roller [A] (about 30 mm or 1 in. from each end). This prevents the roller from catching on the blade.

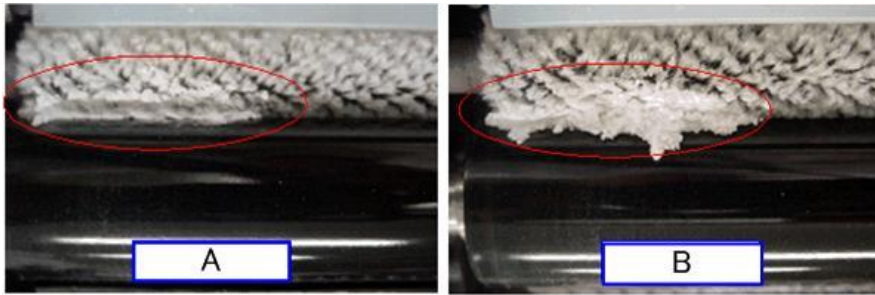


d1793757



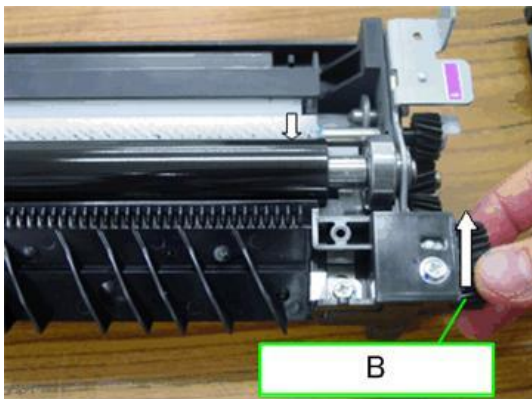
**Note**

- [A] shows the minimum amount applied and [B] the maximum amount applied.



d173763

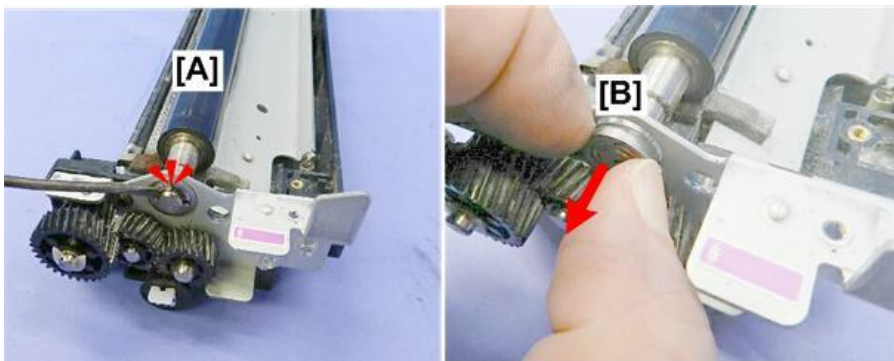
2. Turn gear [B] in the direction of the arrow 3 to 5 times to spread the powder evenly.



d1793758

Paper Transfer Roller (PTR)

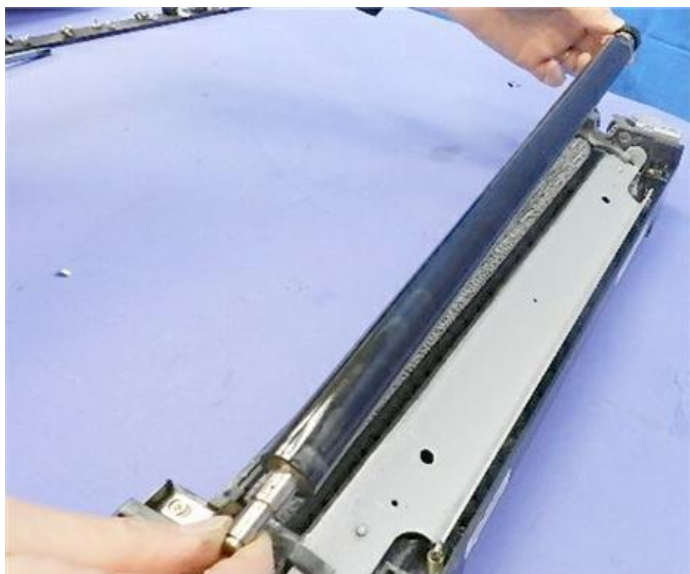
1. At the front [A], disconnect the end of the PTR [B] (⚙️x1, █x1).



d1793729

#### 4.Replacement and Adjustment

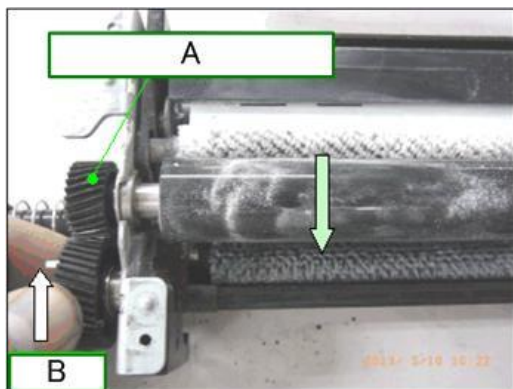
2. Remove the PTR.



d1793730

#### Re-installation

1. When replacing the PTR, turn gear [A] while applying setting powder to the surface of the roller [B]. This prevents the roller from catching on the blade.

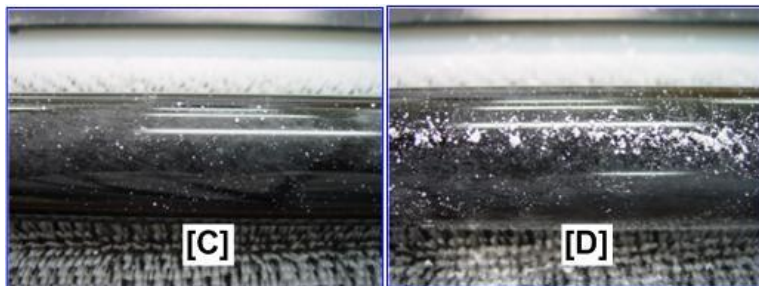


d1793760

2. Cover the entire surface of the roller.

#### Note

- [C] shows the minimum amount applied and [D] the maximum amount applied.



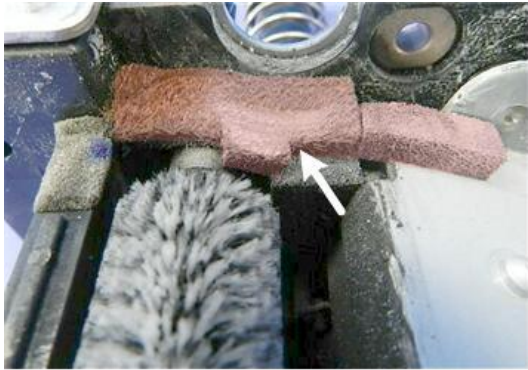
d1793764

## Cleaning Roller

1. Once again, note the position of the sponge seals at each end of the cleaning roller.

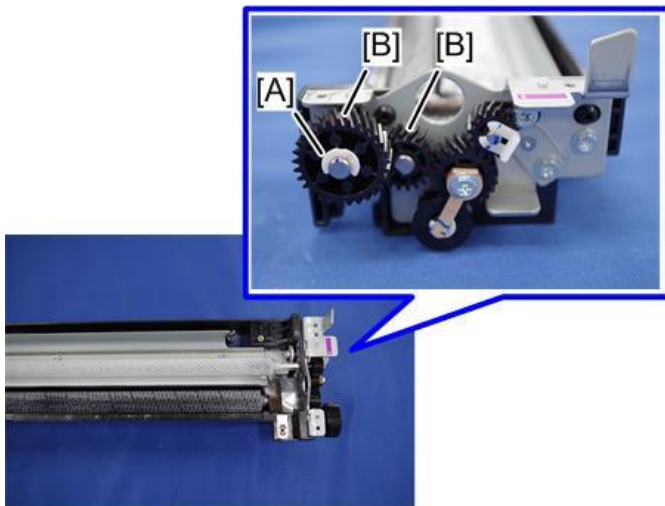
**★ Important**

- Work carefully to avoid damaging these seals. They cannot be replaced in the field.



d1793731

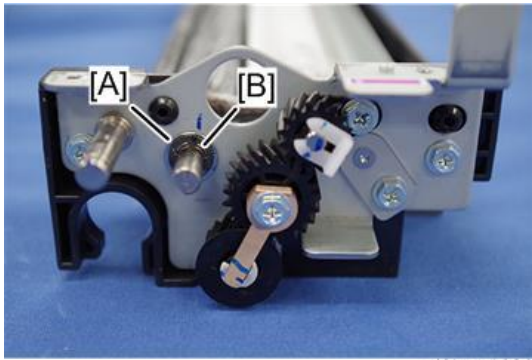
2. Remove the separation plate. ([Separation Plate](#))
3. Remove the entrance guide plate. ([Entrance Guide Plate](#))
4. Remove the lubricant bar. ([Lubricant Bar](#))
5. Remove the PTR. ([Paper Transfer Roller \(PTR\)](#))
6. At the front, disconnect the tip of gear [A] (⊗x1)
7. Remove gears [B] (⊗x2).



d0bxa4605

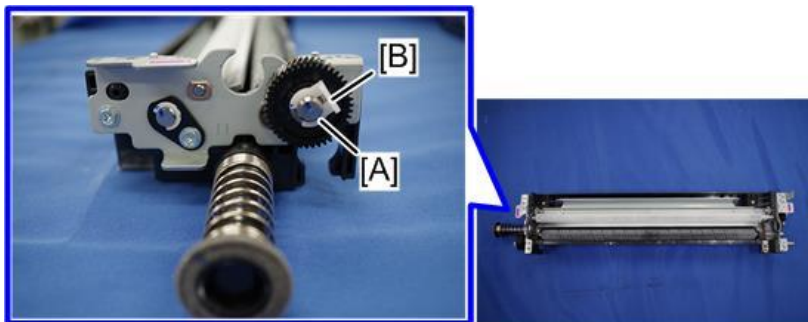
#### 4.Replacement and Adjustment

8. Remove the e-ring [A] and the bearing [B]. (⌀ x1, ■x1).



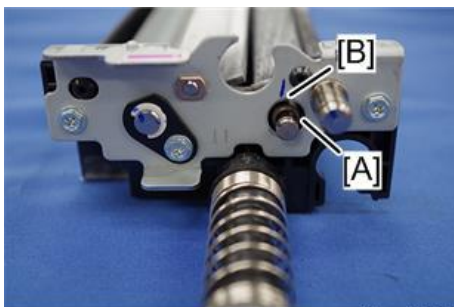
d0bxa4606

9. Remove the gear [A] and the snap-ring [B]. (⊙x1, ⌀x1)



d0bxa4607

10. Remove the e-ring [A] and the bearing [B]. (⌀ x1, ■x1).



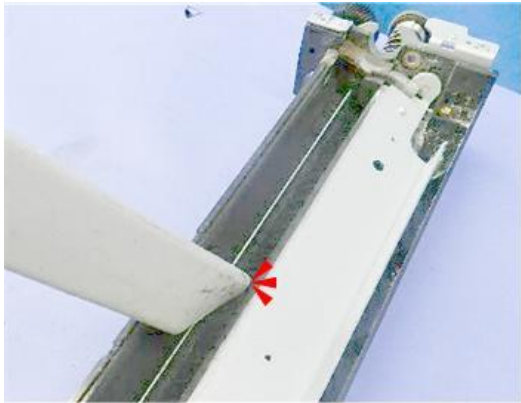
d0bxa4608

11. Remove the cleaning roller [A].



d0bxa4609

12. After removing the cleaning roller, you can vacuum inside the PTR unit.



d1793735

#### After Parts Replacement

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1. Re-assemble the machine and make sure that the machine is off.
2. Open the left and right front door of the machine.
3. Turn the machine on.
4. Enter the SP mode.
5. Do these SP codes to reset the counters for the following items:

Item	SP Code
PTR Unit	7621-026
PTR Cleaning Blade	7621-027
PTR Lubricant Bar	7621-028
Paper Transfer Discharge Unit	7621-029
Paper Transfer Roller (PTR)	7621-030

6. Close the left and right front doors.
7. Process control executes automatically.
8. After process control executes, the operation panel will display "Ready".
  - If process control fails, you will see "Fail" appear on the operation panel, and then the machine will issue an SC code.
  - Do the procedure recommended to resolve the problem that triggered the SC code.
  - You must then execute SP3011-002 to execute process control manually because it will not execute again automatically.
9. This completes the procedure.  
Do SP3012-001 to confirm that process control executed successfully.

#### Notes about Lubrication

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- The cleaning blade, lubricant roller, and lubricant bar are always replaced together.
- Setting powder (zinc stearate) is applied to the cleaning blade at the factory.
- Lubricant roller: When the set of parts is replaced, setting powder must be applied at the PTR roller

## 4.Replacement and Adjustment

nip on both ends of the roller while the PTR is rotated.

- Paper transfer roller (PTR): When the paper transfer roller (PTR) is replaced, the entire surface of the roller must be dusted with setting powder while the PTR is rotated.

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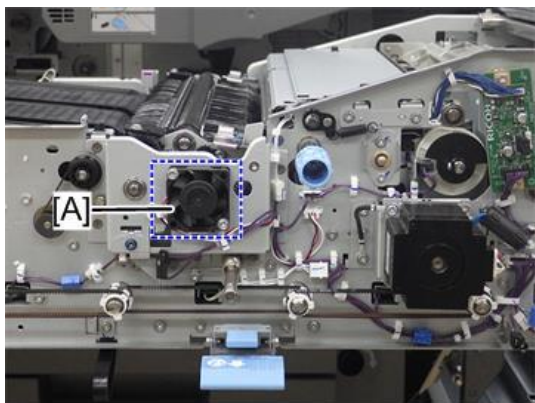
## Fans

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### PTR Fan (Front)

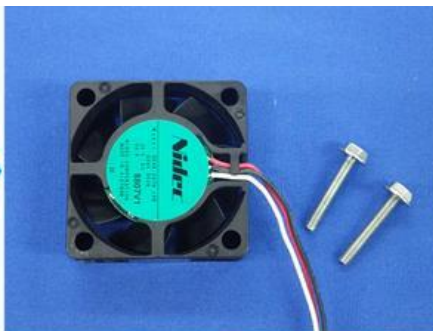
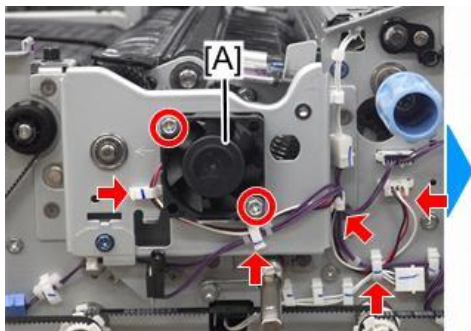
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1. Pull out the drawer
2. Remove the drawer right cover
3. The front fan [A] can be accessed without removing the PTR unit.



d0bxa4174

4. Remove the PTR Fan [A] (🔩 x2, 🛠️ x4, 📦 x1).



d0bxa4175

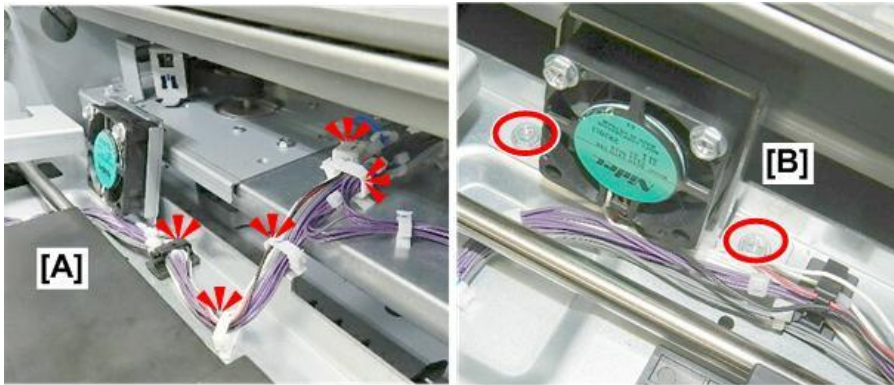
### PTR Fan (Rear)

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1. Pull out the drawer
2. Remove the drawer right cover
3. Remove the PTR unit ([PTR Unit Removal](#))

## 4.Replacement and Adjustment

4. Disconnect the fan harness [A] and the motor bracket [B] (🔧x4, 📌x1).



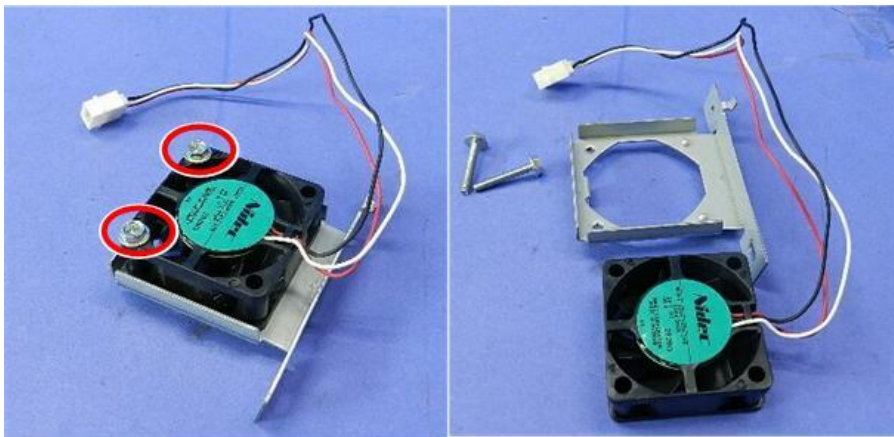
d1793739

5. Remove the fan.



d1793740

6. Separate the fan from the bracket (🔧x2).



d1793741

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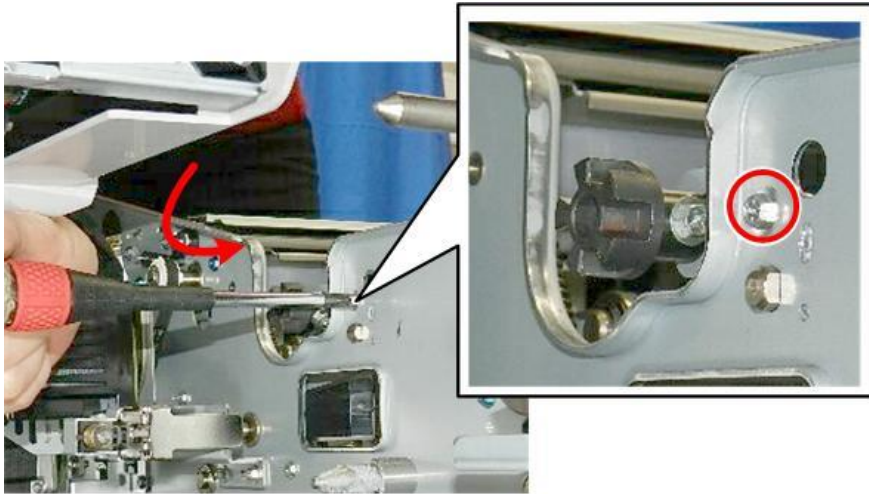
## Paper Separation Power Pack

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1. Remove the PTR unit ([PTR Unit Removal](#))
2. Remove the PTB unit ([PTB Unit Removal](#))

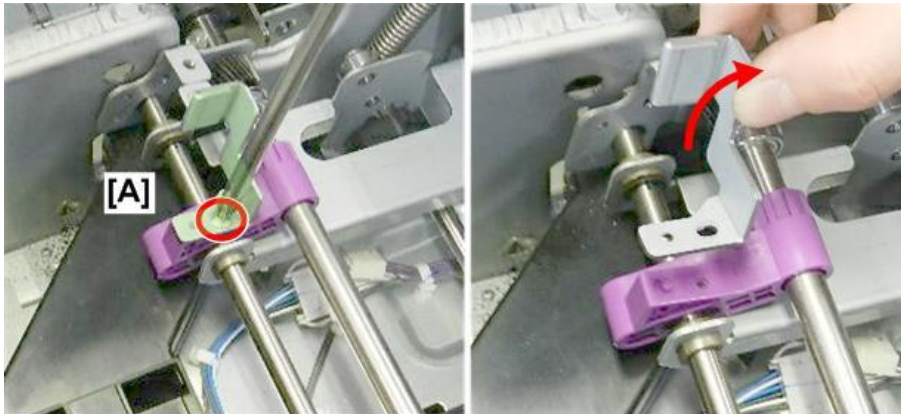
#### 4.Replacement and Adjustment

3. Reach into the machine at the back frame of the drawer, and then remove the screw.



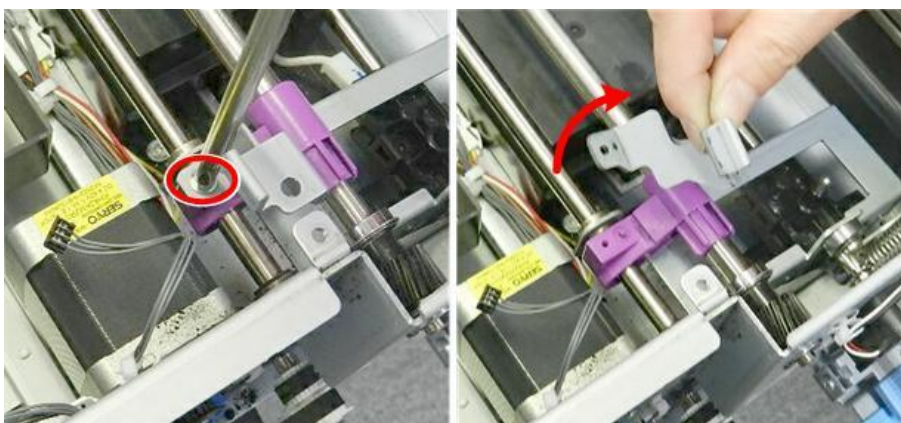
d1793742

4. At the rear of the open drawer [A], remove the bracket (① x1).



d1793743

5. At the front of the drawer, remove the bracket (① x1).



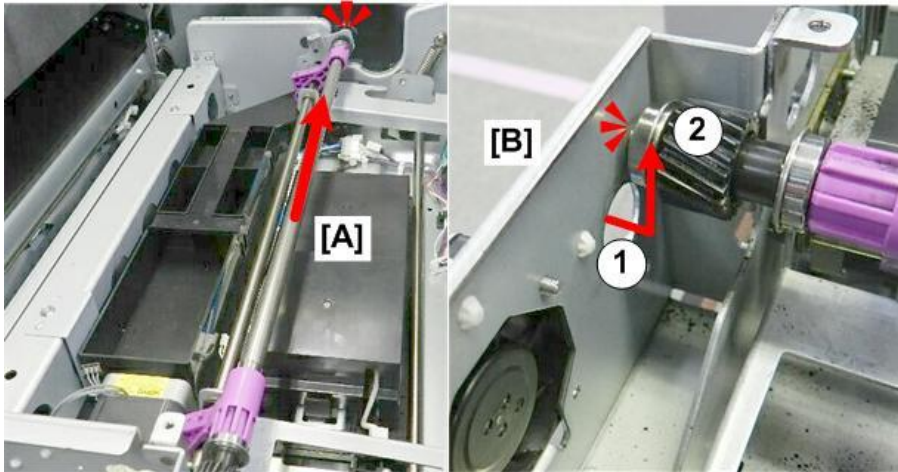
d1793744

6. While pushing the roller [A] as far to the rear as possible, pull the front end of the shaft ① through



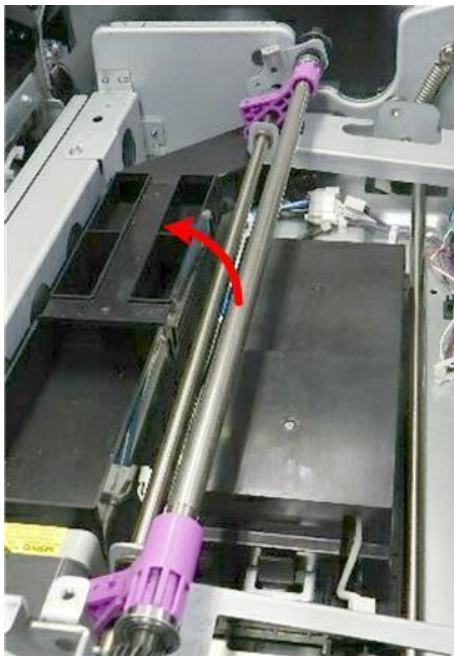
#### 4.Replacement and Adjustment

the hole and then pull up the end of the roller ② against the back of the plate [B].



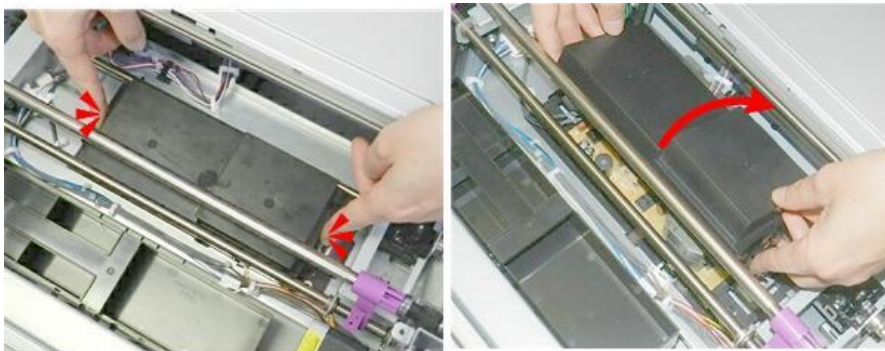
d1793745

7. Make sure that the roller is raised high as possible.



d1793746

8. Depress tab releases on both sides of the board cover, and then remove the cover.



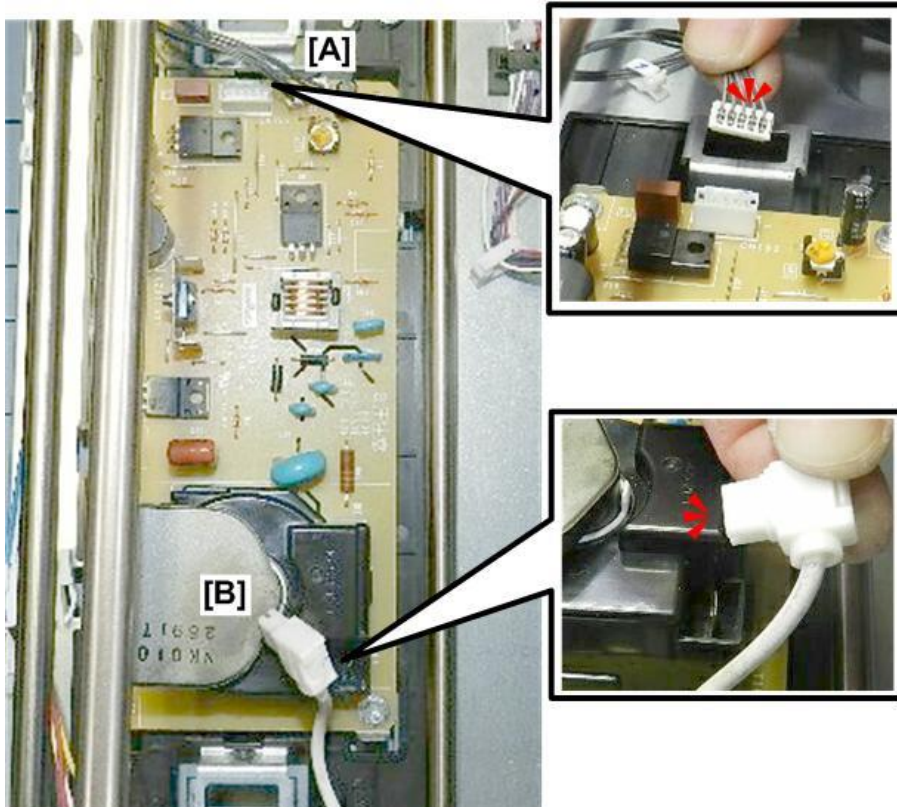
d1793747

9. Disconnect the board at:

#### 4.Replacement and Adjustment

[A] Rear (🔑 x1)

[B] Front (🔑 x1)

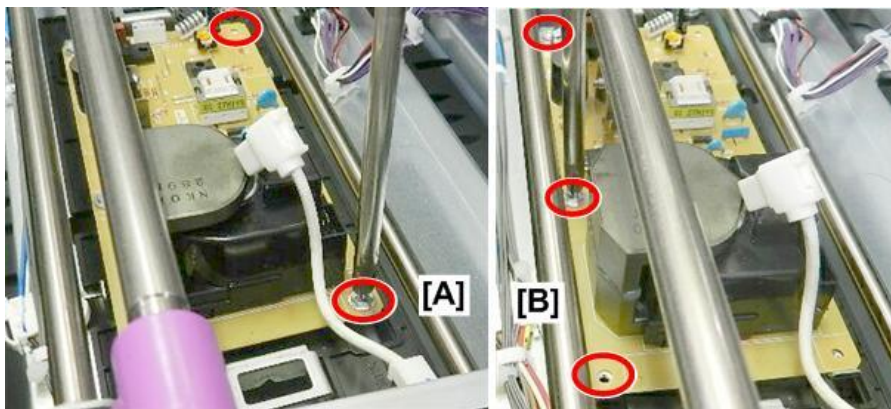


d1793748

10. Disconnect the board:

[A] Right (🔑 x2)

[B] Left (🔑 x3)



d1793749

11. Remove the board.



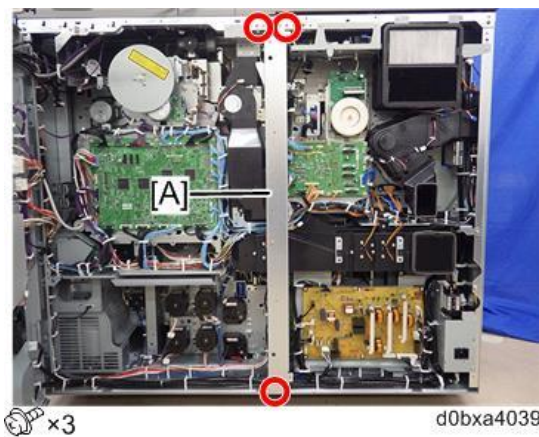
d1793750

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### ITB/PTR Cleaning Motor

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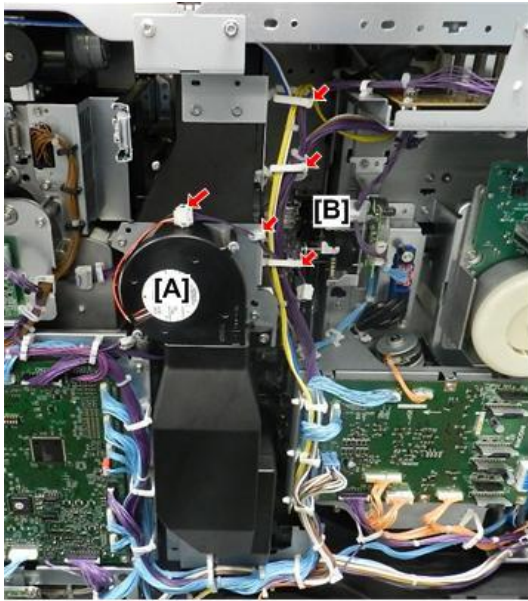
1. Open the front doors, and then pull out the drawer.
2. Remove the rear cover. ([Rear Cover](#))
3. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))
4. Remove the vertical stay [A].



5. Disconnect the motor harness [A] (🔧x1, 📦x1).

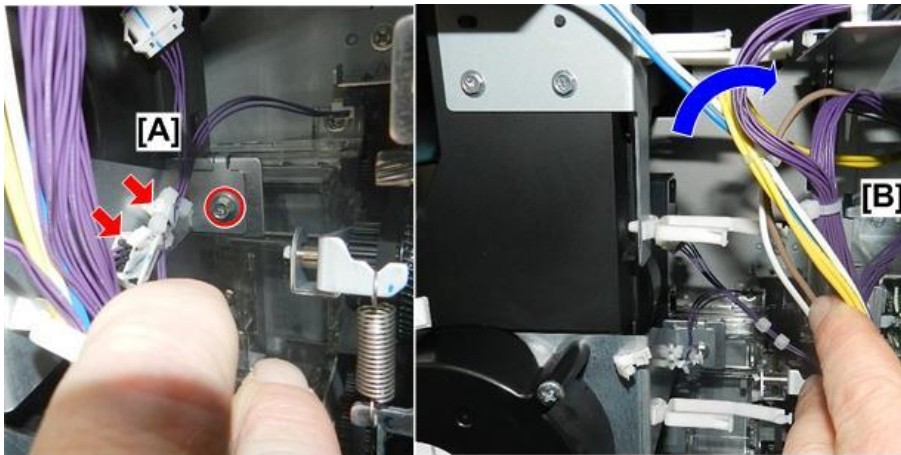
#### 4.Replacement and Adjustment

6. Open the clamps [B] (🔧x3).



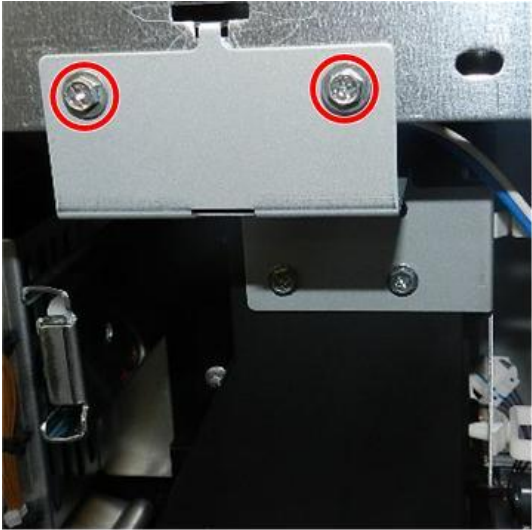
d270b4239

7. Inside the machine, disconnect and free the harness, and then disconnect the motor bracket [A] (🔧x1, 🗝️x1, 🌀x1).
8. Carefully, pull the harnesses [B] away from the side of the duct.



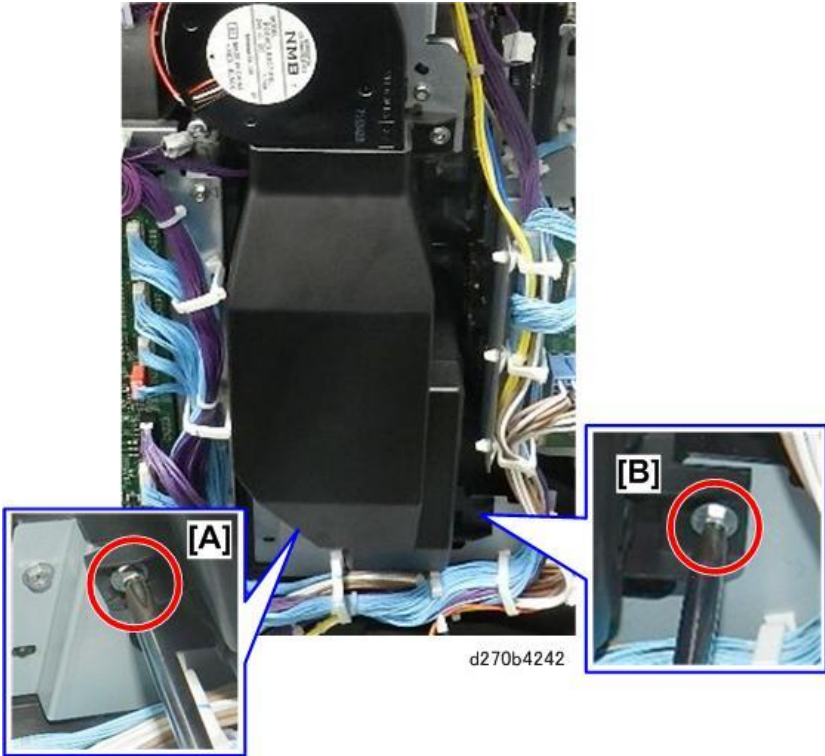
d270b4240

9. Disconnect the top of the duct bracket (🔧 x2).



d270b4241

10. Disconnect the bottom of the duct at the left corner [A] and the right corner [B] (🔧 x2).



d270b4242

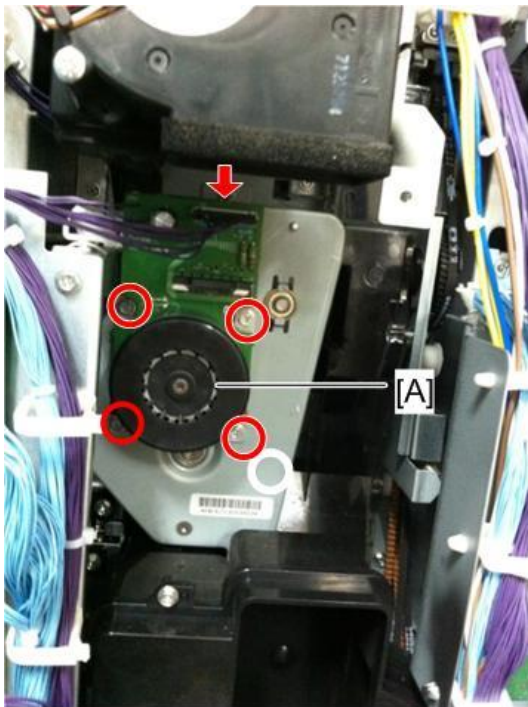
#### 4.Replacement and Adjustment

11. Remove the vertical duct.



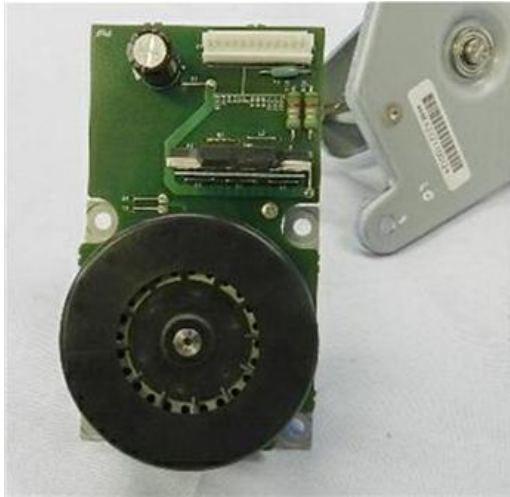
d270b4243

12. Disconnect the motor [A] (⊗ x4, ⊞ x1).



d7340526

13. Separate the motor and bracket.



d7340527

## Paper Transport Belt (PTB) Unit

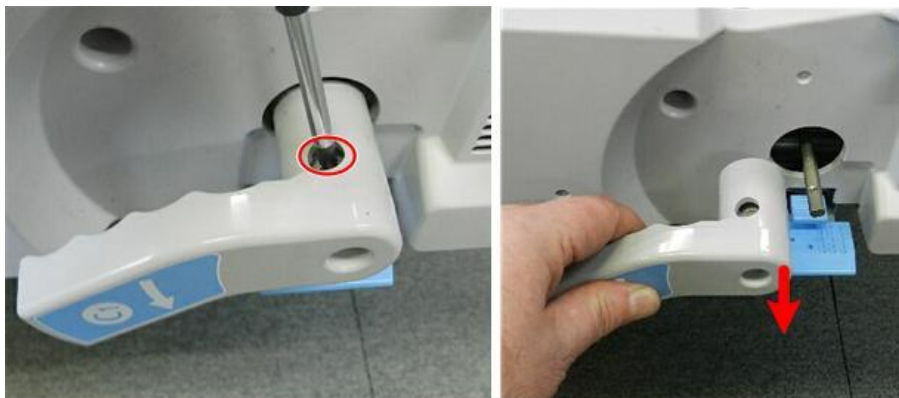
### PTB Unit Removal

1. Open both doors
2. Pull out the drawer
3. The PTB (Paper Transport Belt) unit [A] is between the fusing unit [B] and the PTR unit [C].



d0bxa4555

4. Remove handle C1 from the front of the drawer (⚙️ x1).



d1793602

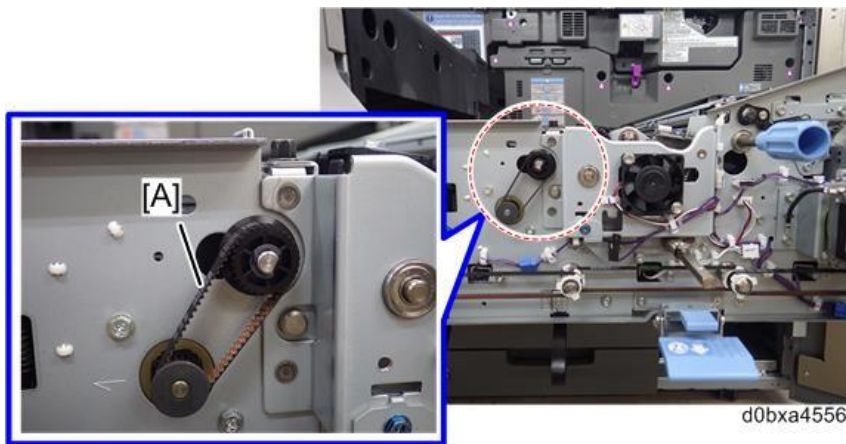
5. Remove the right front cover of the drawer (⚙️ x4).



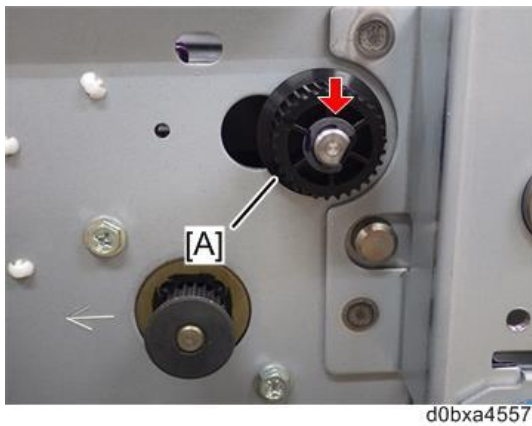
d1793603



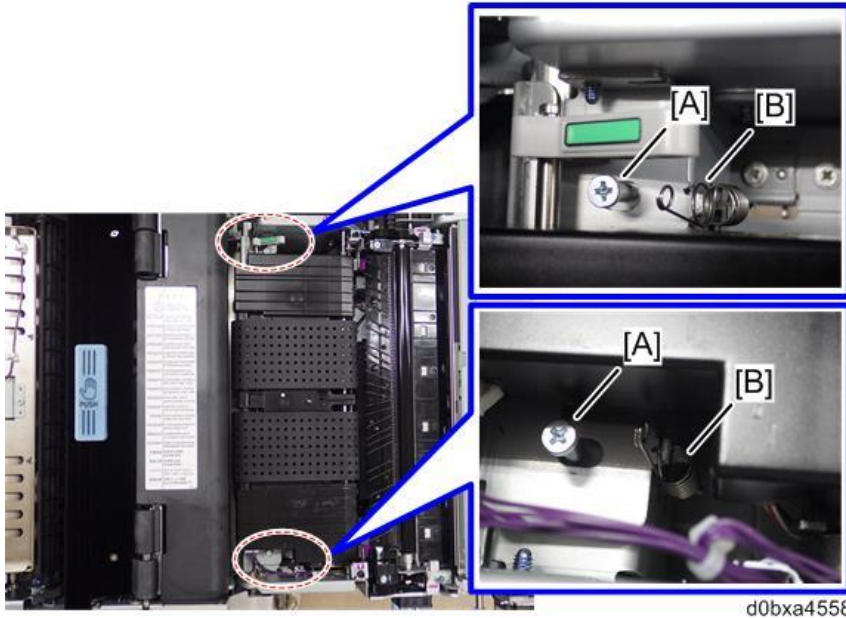
6. Remove the timing belt [A] (⊙x1).



7. Remove the gear [A] (⊙x1, ⚙x1).



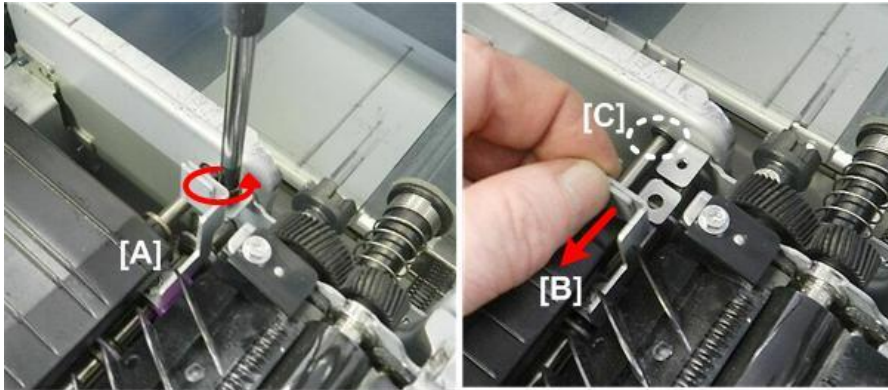
8. Disconnect the front [A] and back [B] of the PTB unit (⊙x2, ⚙x2).



9. At the rear [A], disconnect the rear lock plate of the adjacent PTR unit (✖x1).  
 10. Push the plate [B] toward the front. This will free the area around the end of the PTB unit shaft [C],

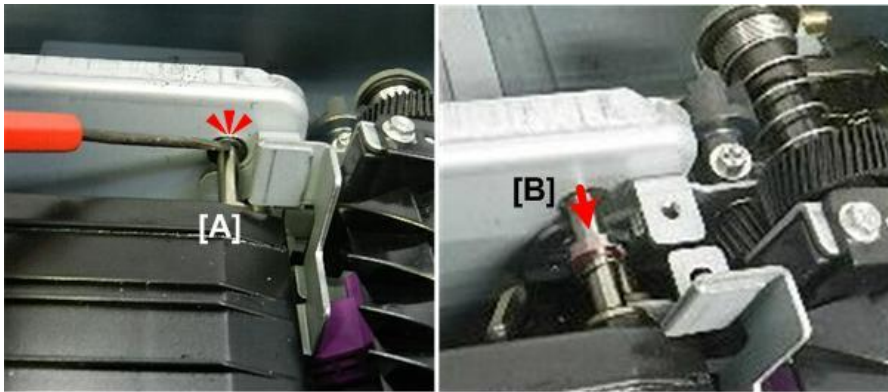
#### 4.Replacement and Adjustment

so that an e-ring can be removed.



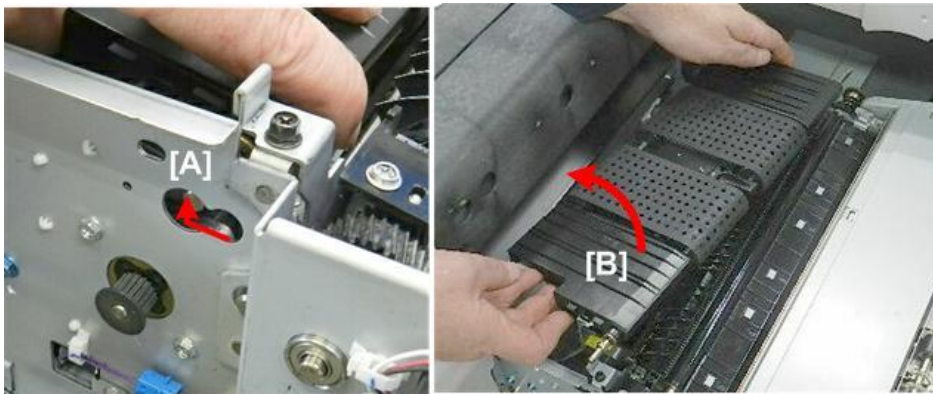
d1793607

11. Disconnect the end of the PTB unit shaft [A] (⌀x1).
12. Pull the bearing and ring [B] toward the front so that they will not be lost when the unit is removed.



d1793608

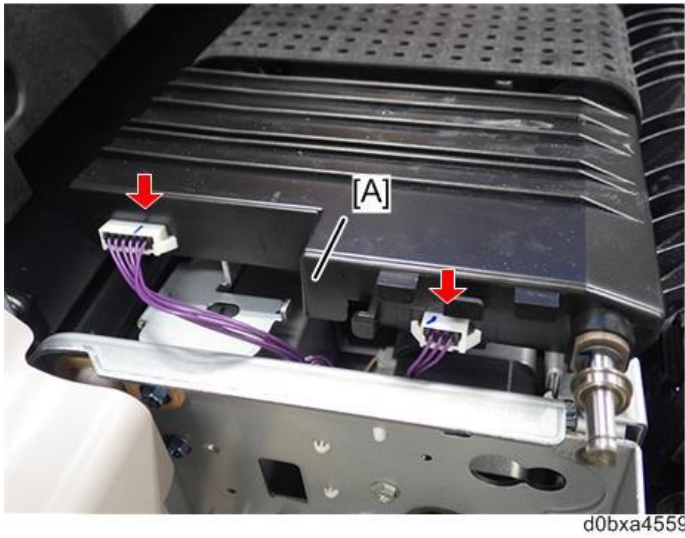
13. At the front, pull the end of the shaft [A] to the left, and then pull it away from the cut-out.
14. Lift the front of the unit [B] slightly.



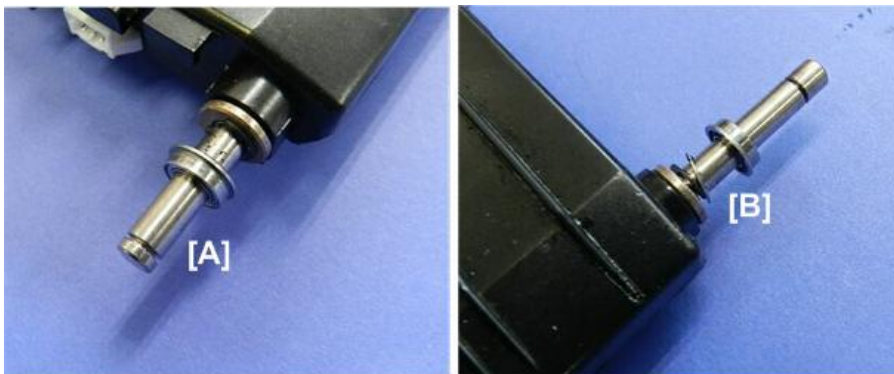
d1793609

## 4.Replacement and Adjustment

15. Disconnect the front of the unit [A] and then remove the unit from the machine (🔧 x2).



16. Handle the unit carefully to prevent losing the bearings on the front [A] and end [B] of the PTB unit guide shaft. (These can fall off easily)



d1793612

17. Lay the PTB unit on a flat clean surface.

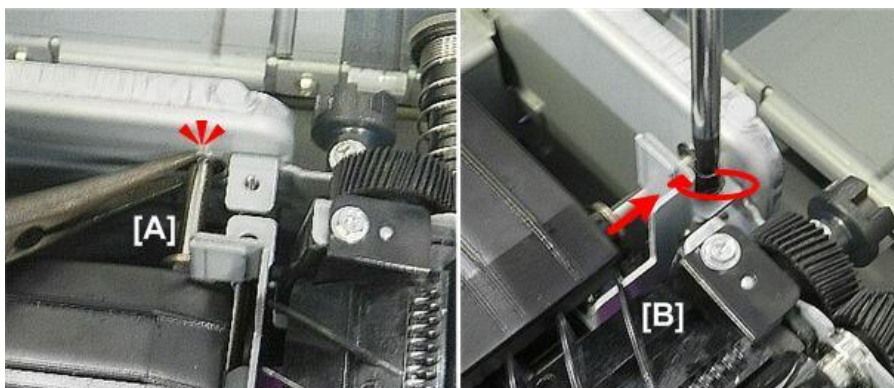


### Re-installation

1. Set the PTB unit with bearings to the drawer, connect the connectors, and then attach the springs (🔧 x2, 📦 x2).
2. Attach the stepped screws (🔧 x2).
3. After re-attaching the e-ring [A] at the rear, be sure to slide the unit plate [B] to the rear and fasten it

#### 4.Replacement and Adjustment

with the screw



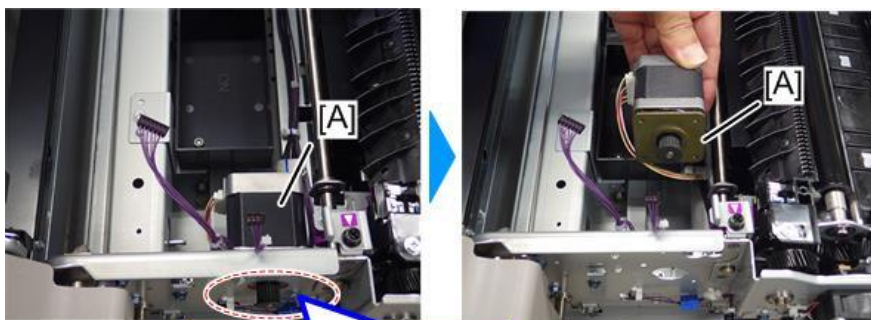
d1793613

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#### PTB Driving Motor

---

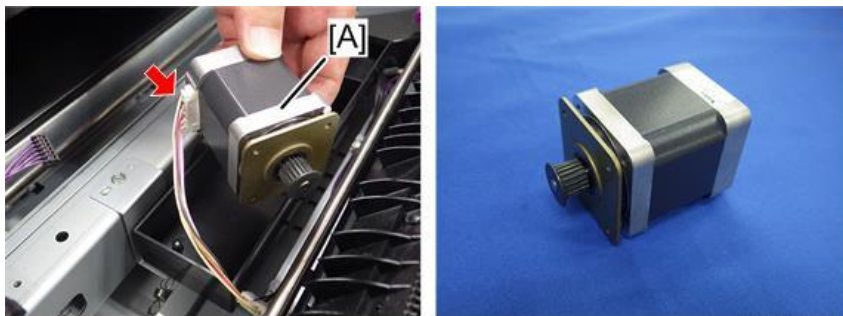
1. Pull out the drawer
2. Remove the PTB unit (PTB Unit Removal)
3. Remove the screws on the front side, and then raise the PTB driving motor [A] (🔩 x2).



d0bxa4561



4. Disconnect the connector while raising the PTB driving motor [A] to remove the motor (🔌 x1).



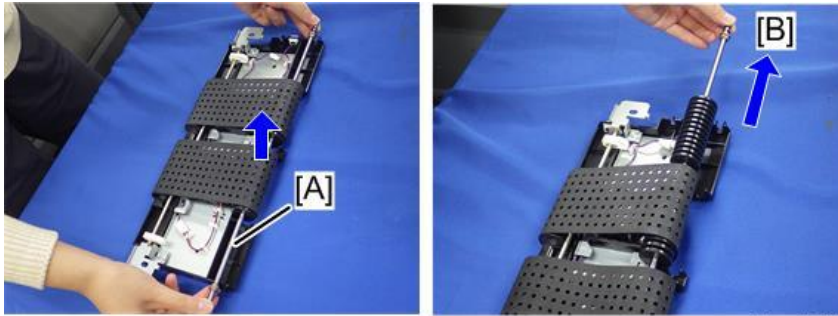
d0bxa4562

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Paper Transfer Belts (PTB)

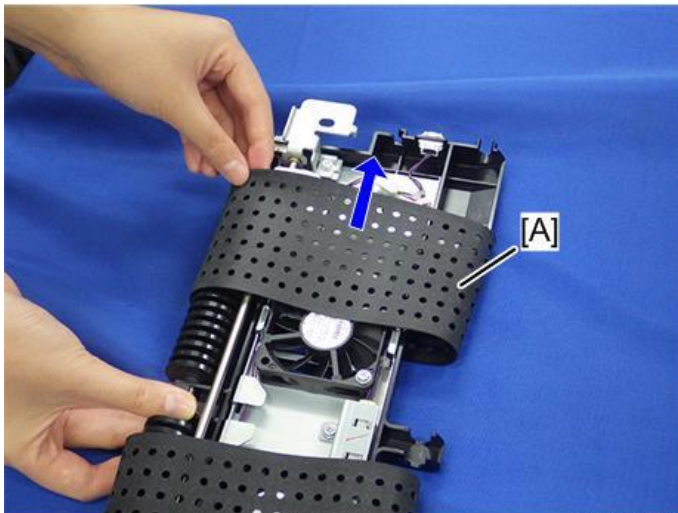
---

1. Remove the PTB unit ([PTB Unit Removal](#))
2. At the right rear corner of the unit [A], slide the bearing and washer off the end of the shaft.
3. Disconnect the end of the roller shaft [B] (⌀x1).
4. Lift both ends of the roller [A] out of its guides.
5. Slide the roller under the belts toward the front [B], and then remove the roller.



d0bxa4563

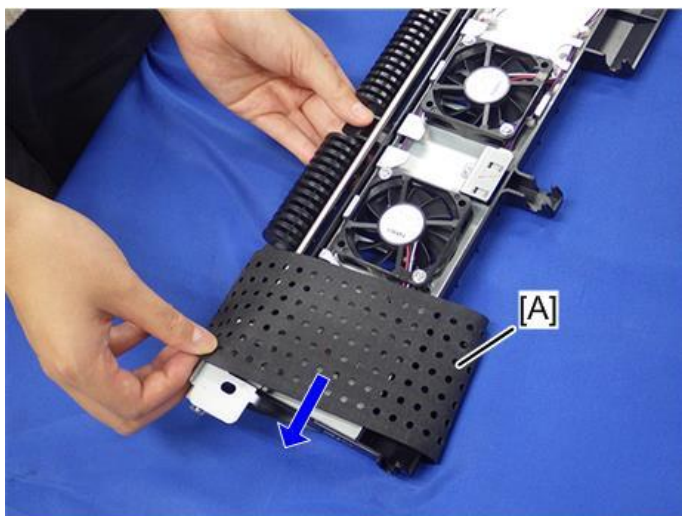
6. Slide off the front belt [A].



d0bxa4564

#### 4.Replacement and Adjustment

- Slide off the rear belt [A].

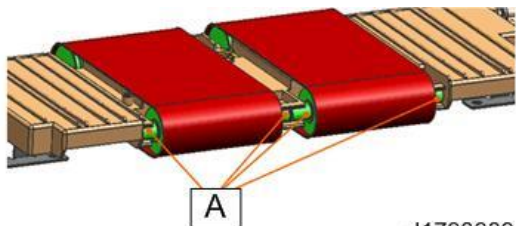


d0bxa4565

#### Re-installation

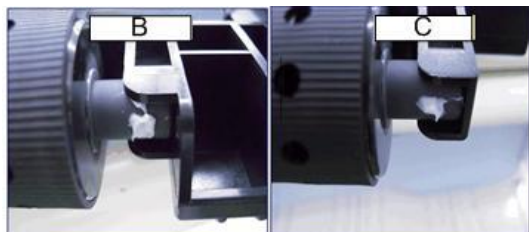
Before re-assembly, the following points should be lubricated with Barrierta S552R grease.

- [A] shows the points where grease should be applied.



d1793689

- [B] shows the minimum application of grease, and [C] the maximum.



d1793690

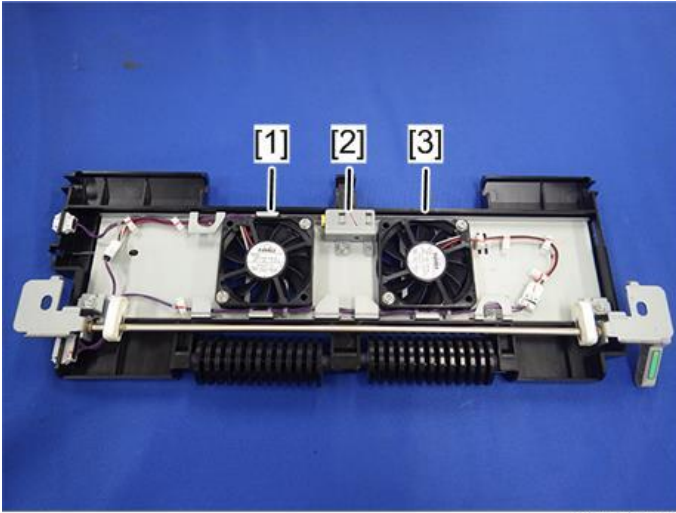
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#### PTB Sensor, Fans

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- Remove the PTB unit ([PTB Unit Removal](#))
- Remove both belts ([Paper Transfer Belts \(PTB\)](#))

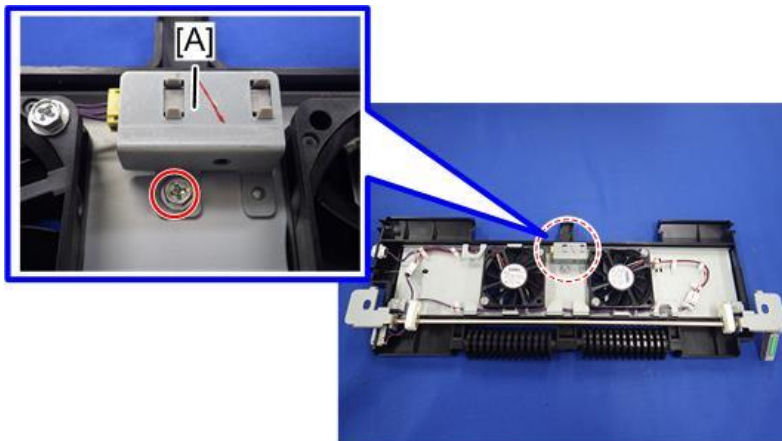
①	PTB Fan (Front)
②	PTB Sensor
③	PTB Fan (Rear)



d0bxa4566

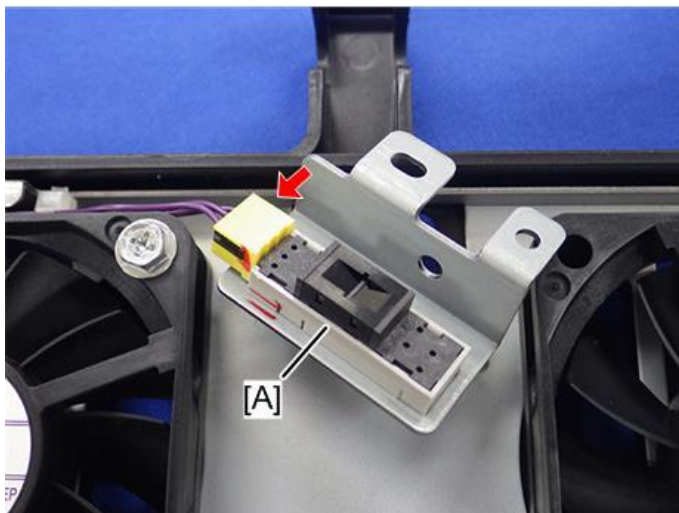
### PTB Sensor

1. Remove the PTB unit (PTB Unit Removal).
2. Remove the both paper transfer belts (Paper Transfer Belts (PTB))
3. Remove the sensor [A] with the bracket (⚙️ x1).



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4. Separate the sensor [A] from the bracket (📦 x1, ▼x4).



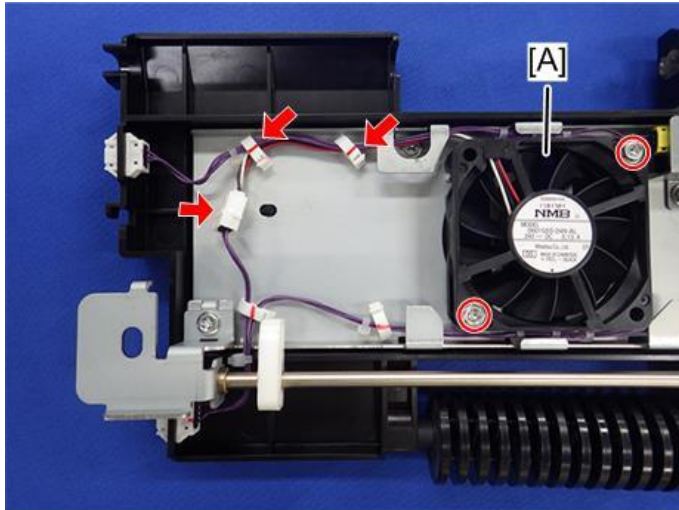
d0bxa4568

## 4.Replacement and Adjustment

### PTB Fan (Front)

---

1. Remove the PTB unit ([PTB Unit Removal](#)).
2. Remove the both paper transfer belts ([Paper Transfer Belts \(PTB\)](#)).
3. Remove the PTB Fan (Front) [A] (⚙️x2, 📦 x1, ⚙️x2).

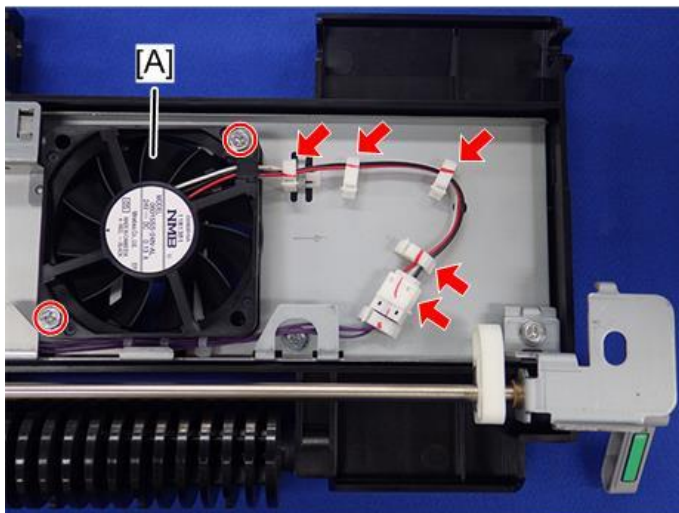


d0bxa4569

### PTB Fan (Rear)

---

1. Remove the PTB unit ([PTB Unit Removal](#)).
2. Remove the both paper transfer belts ([Paper Transfer Belts \(PTB\)](#)).
3. Remove the PTB Fan (Rear) [A] (⚙️x4, 📦 x1, ⚙️x2).



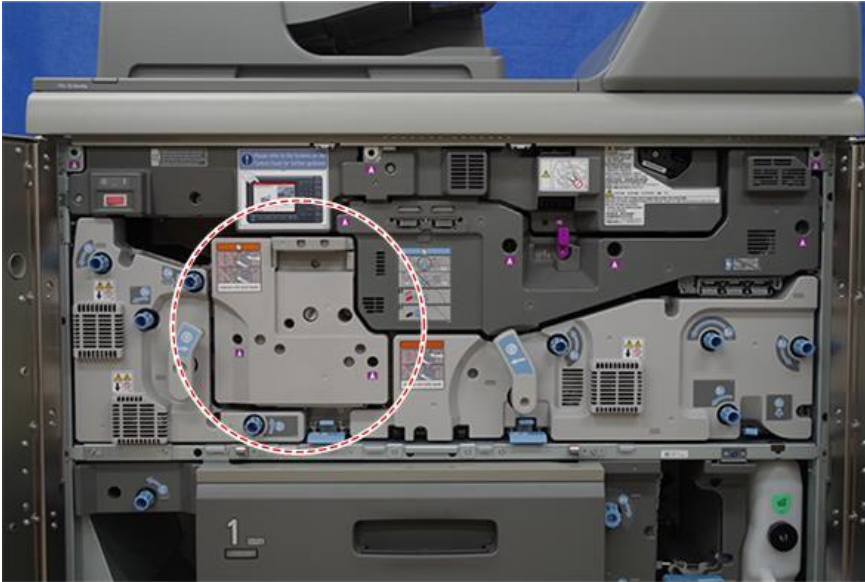
d0bxa4570



## Fusing Unit

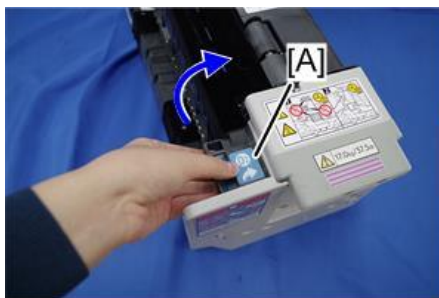
### Fusing Unit, Fusing Cleaning Unit Removal

#### Preparations

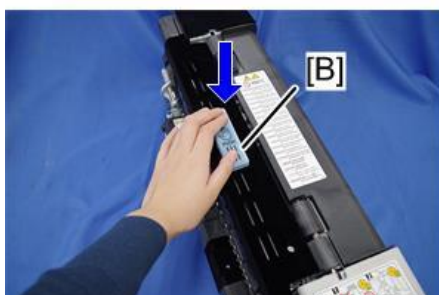


d0bxa4500

- Make sure that power is OFF, and check that the machine's power cord is disconnected from its power source.
- Spread a drop cloth or some paper in front of the machine.
- Prepare a flat clean surface where you can place the fusing unit after it has been removed.
- Open both front doors.
- Allow at least 10 minutes for the fusing unit to cool before you remove it.
- Raise lever **D2** [A] to release and open the fusing unit. To close the unit, press firmly on the hand decal [B] in the center of the cover and make sure that it locks.



d0bxa4501



## 4.Replacement and Adjustment

### Removing the Fusing Unit

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1. Remove the lock screws of the cover [A] (✖x2).

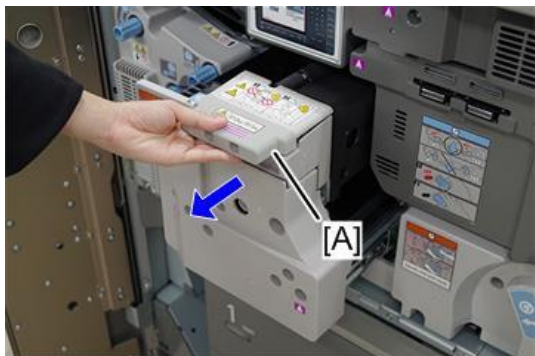


d0bxa4502

#### Note

- These are black screws.

2. Grip the unit by its handle [A], and then pull the unit out until it stops.



d0bxa4503

3. Grip the unit on both ends [A], and then lift it off its tray.

#### Important

- The unit is heavy. It weighs 17 kg (34.5 lb.).

4. Lay the unit on a flat clean surface that is firm enough to support the weight of the unit.



d0bxa4504

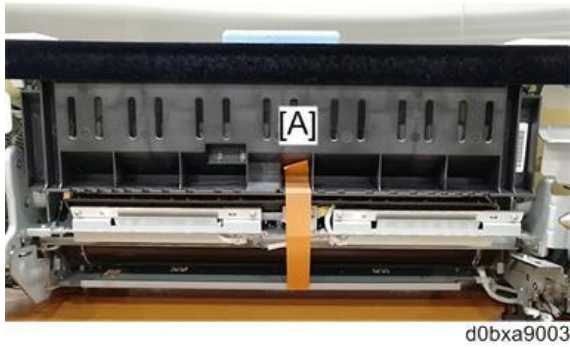
### New Fusing Unit

---

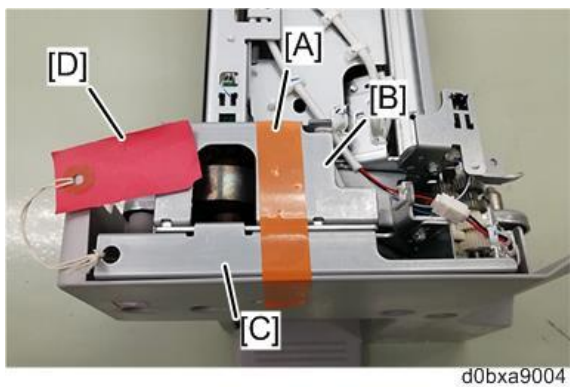
Remove the shipping brackets of the new fusing unit (TCRU Set B).

1. Open the TCRU Set B box. Remove the fusing unit.

2. Peel off the strip [A] attached to the side of the fusing unit.



3. From the top, pull off the strip [A] of the tape. Remove the shipping bracket [B] and the bracket [C] with the red tag [D].



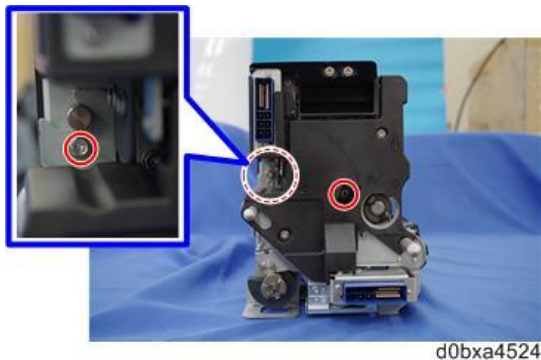
### Vertically Separating the Fusing Unit

---

1. Remove the screws of the front side. (🔩 x2)

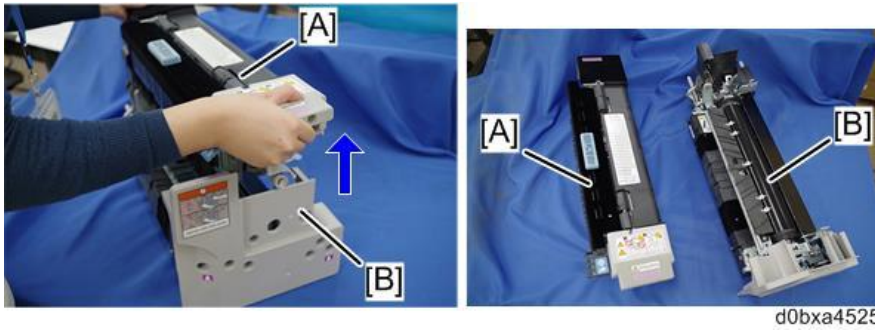


2. Remove the screws of the rear side. (🔩 x2)



#### 4.Replacement and Adjustment

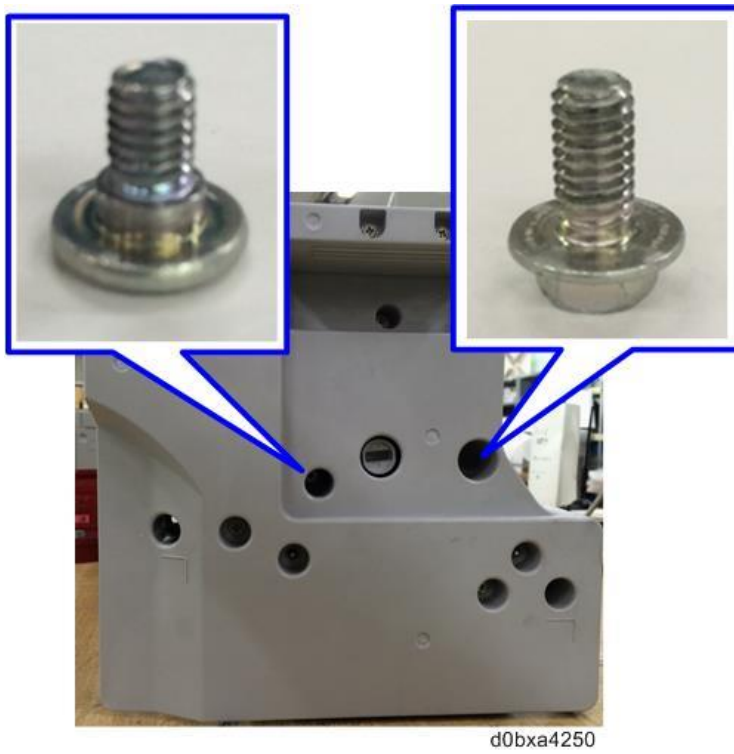
**3.** Raise the upper side [A], and then it will separate from the lower side [B].



#### Fusing Unit Installation

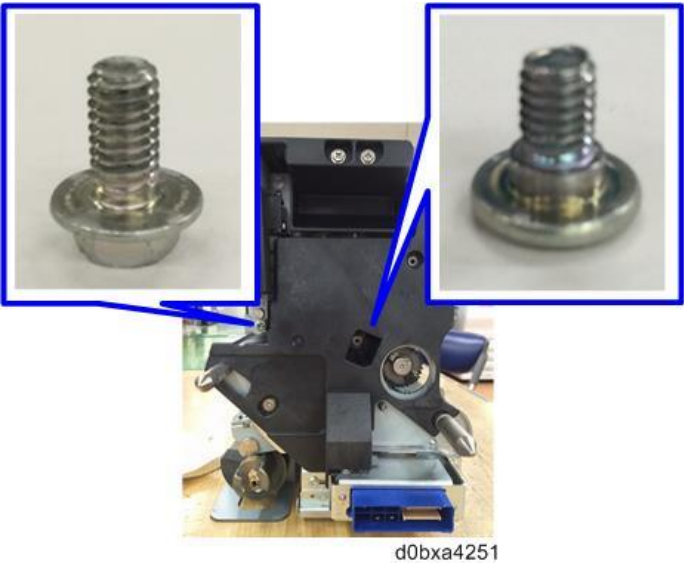
Note the different screws.

- Front:



4.Replacement and Adjustment

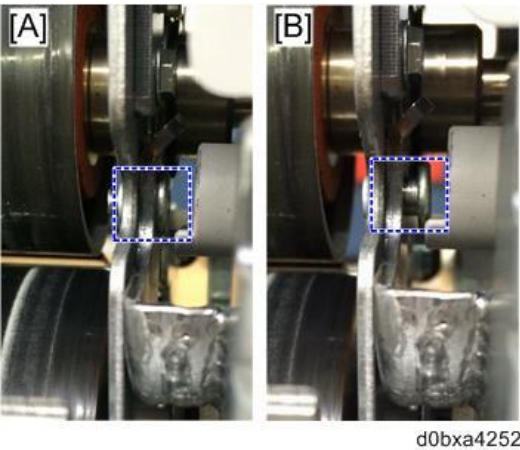
- Rear:



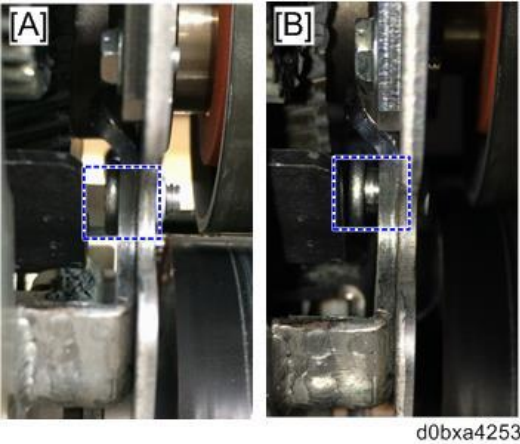
Attach the stepped screws and tighten them tightly.

- [A]: Acceptable
- [B]: Not acceptable

- Front:

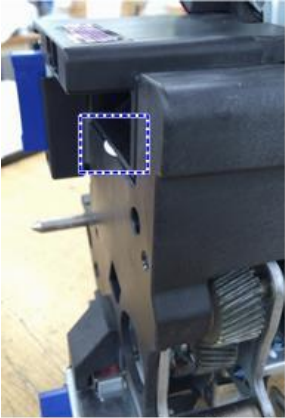


- Rear:



When joining the upper side to the lower side, make sure that the harness is not caught in between.

## 4.Replacement and Adjustment

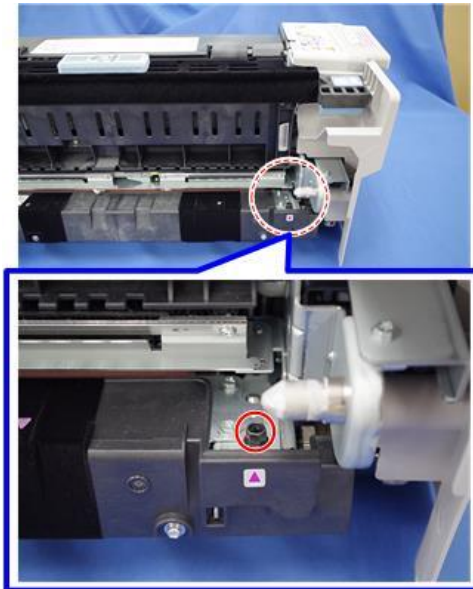


d0bxa4254

### Removing the Fusing Cleaning Unit

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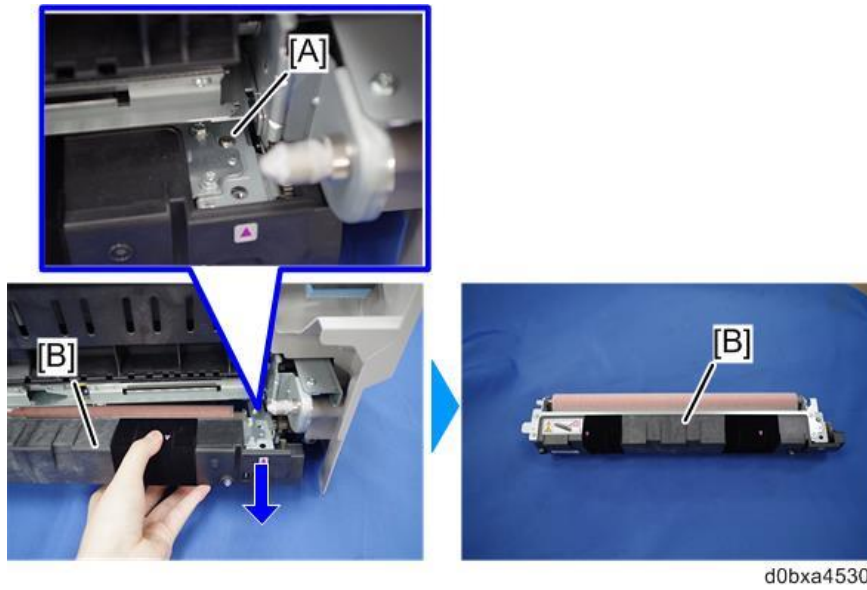
- 1.** Remove the fusing unit. ([Removing the Fusing Unit](#))
- 2.** Remove screw of the cleaning unit on the left side of the fusing unit(✖x1).



d0bxa4528

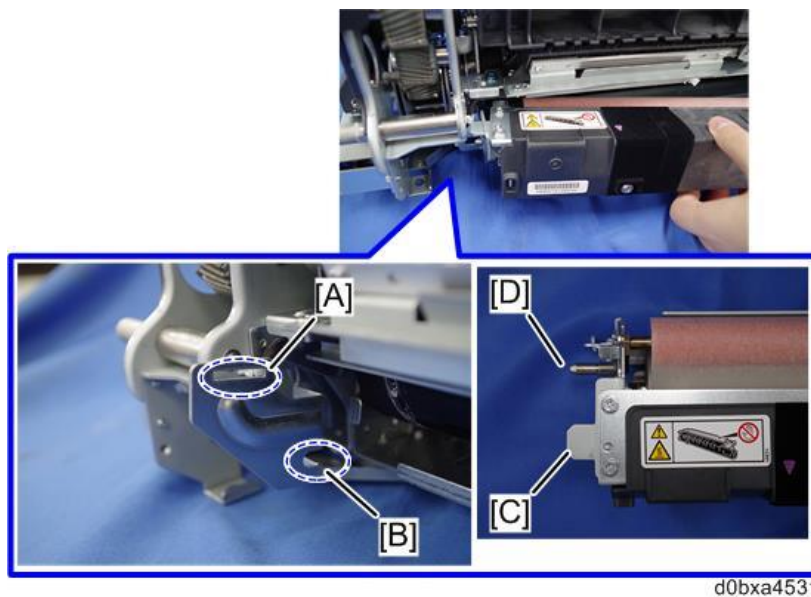
- 3.** Raise the front end of the cleaning unit [B] off the boss [A].

- 4.** Swing the cleaning unit [B] away from the side of the fusing unit and remove it.



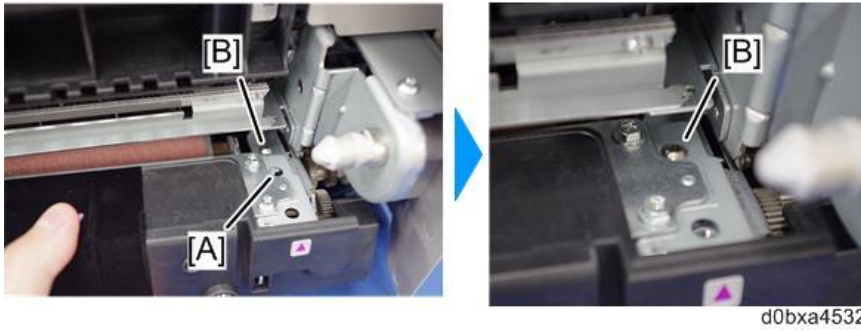
#### Reinstalling the Fusing Cleaning Unit

- 1.** Insert the tab [C] of the cleaning unit into the cutout [A] of the frame at the rear of the fusing unit, and insert the post [D] into the cutout [B] of the frame.

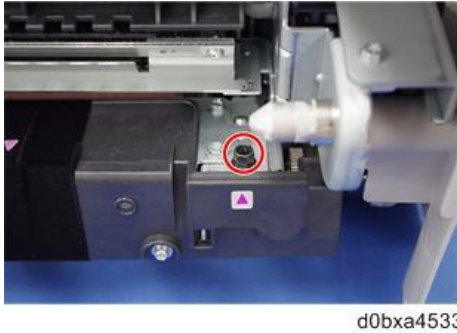


- 2.** Raise the front end of the cleaning unit and set the hole [A] over the boss [B].  
If the boss and screw hole do not align properly, make sure that the tab and post on the other end of the cleaning unit are inserted correctly. You may have to press in slightly on the right end of the unit to align the hole.

#### 4.Replacement and Adjustment

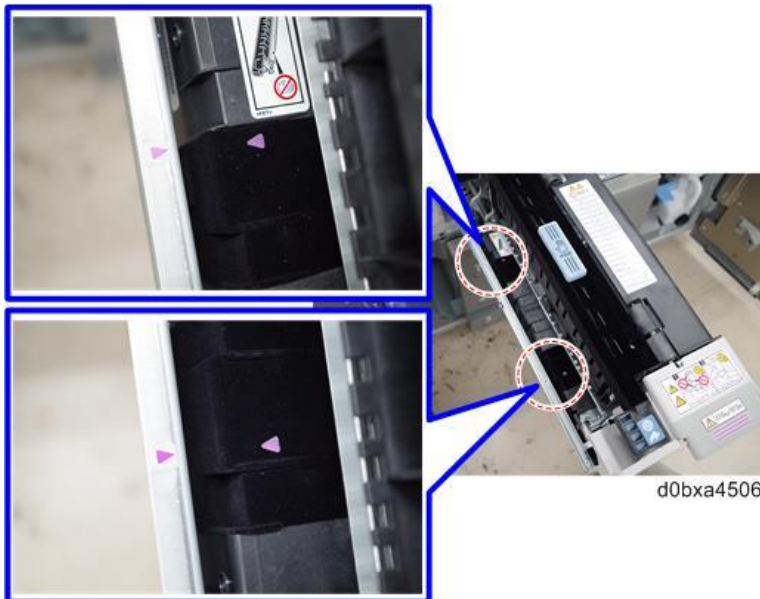


- 3.** Fasten the front end of the cleaning unit (\*x1).

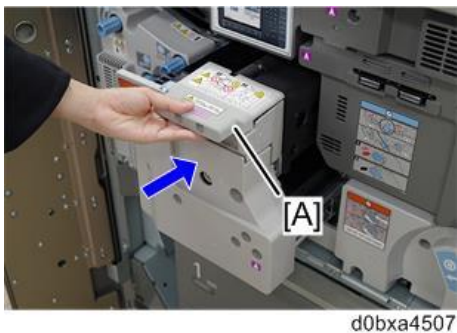


#### Fusing Unit Re-installation

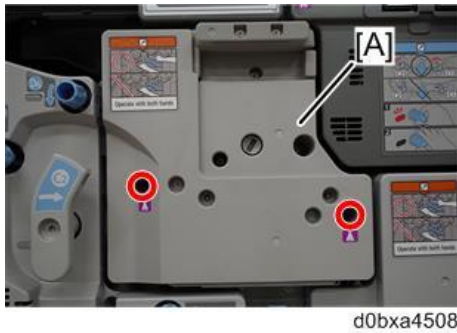
- 1.** Align the marks on the left side of the fusing unit with the marks on the edge of the tray.



- 2.** Push the fusing unit [A] on its tray into the machine, and then re-attach the cover (\*x2).





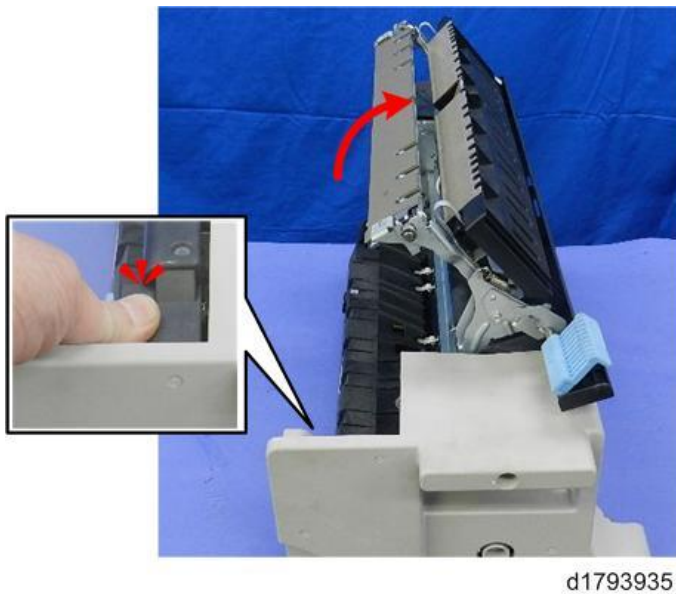


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## Periodic Cleaning

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- 1.** Remove the fusing unit (\*x2). ([Removing the Fusing Unit](#))
- 2.** Lay the fusing unit on a flat clean surface.
- 3.** Open the fusing unit.

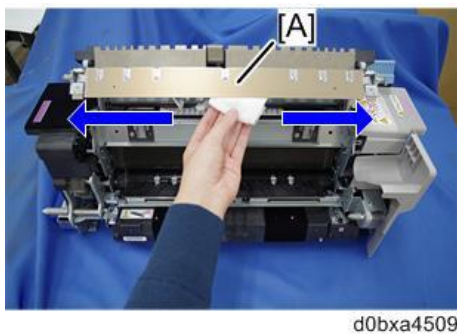


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## Fusing Belt Stripper Plate

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- 1.** Use a dry cloth to clean the fusing belt stripper plate [A].

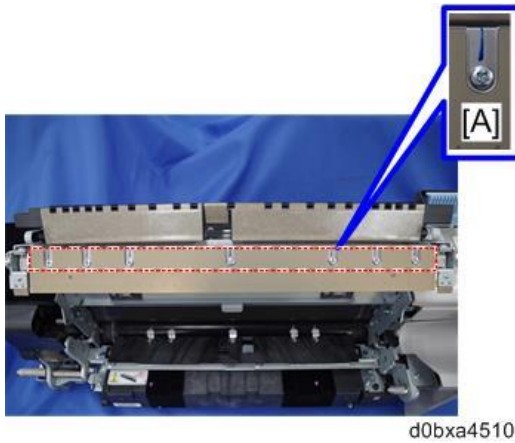


**★ Important**

- The paint-locked screws [A] on the separation plate have been adjusted at the factory.

## 4.Replacement and Adjustment

Never remove these screws.



### Pressure Roller Stripper Pawls

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1. Use a dry cloth to clean the cover of the pressure roller stripper pawls [A].



### Entrance Guide Plate

---

1. Use a dry cloth to clean the entrance guide plate.

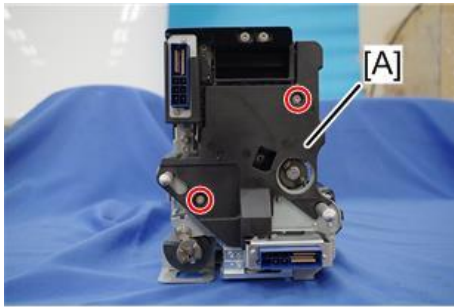


### Periodic Lubrication

---

1. Remove the fusing unit. ([Removing the Fusing Unit](#))

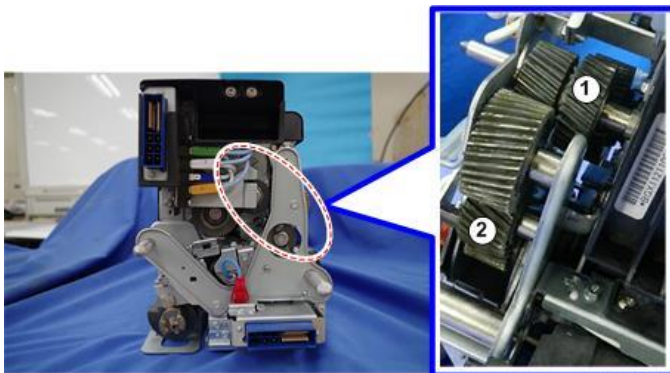
- 2.** Remove the rear cover [A] (⊖x2).



d0bxa4513

- 3.** Apply Fluotribo MG Grease to the drive gears ①,②.

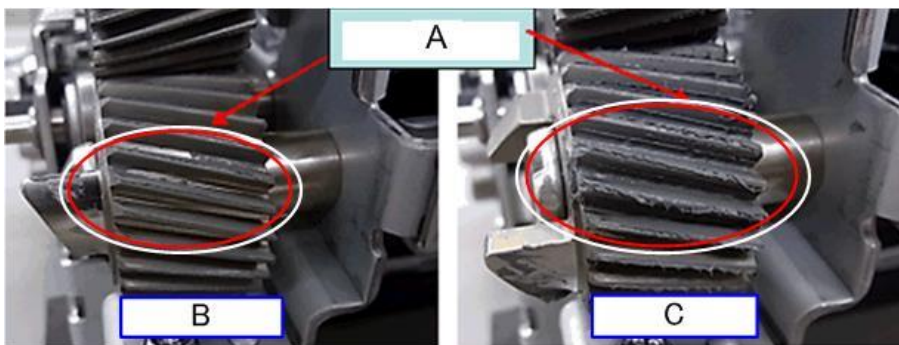
- Apply  $1.5 \pm 0.3$  g to ①
- Apply  $4 \pm 0.8$ g to ②



d0bxa4654

The gears [A] must be lubricated.

[B] shows the minimum application of grease and [C] the maximum application of grease.

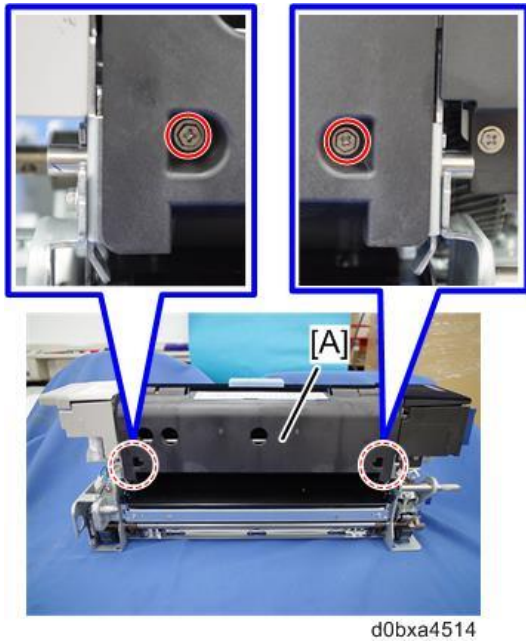


d1803832

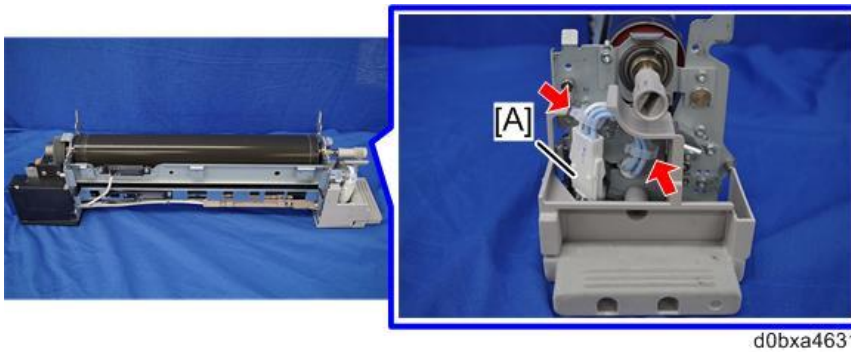
## 4.Replacement and Adjustment

### Heating Roller Fusing Lamps, Hot Roller, Heating Roller, Fusing Belt

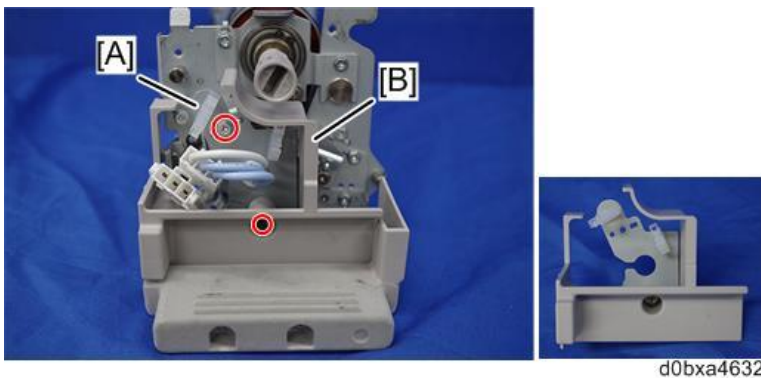
1. Remove the top cover [A] (🔩 x2).



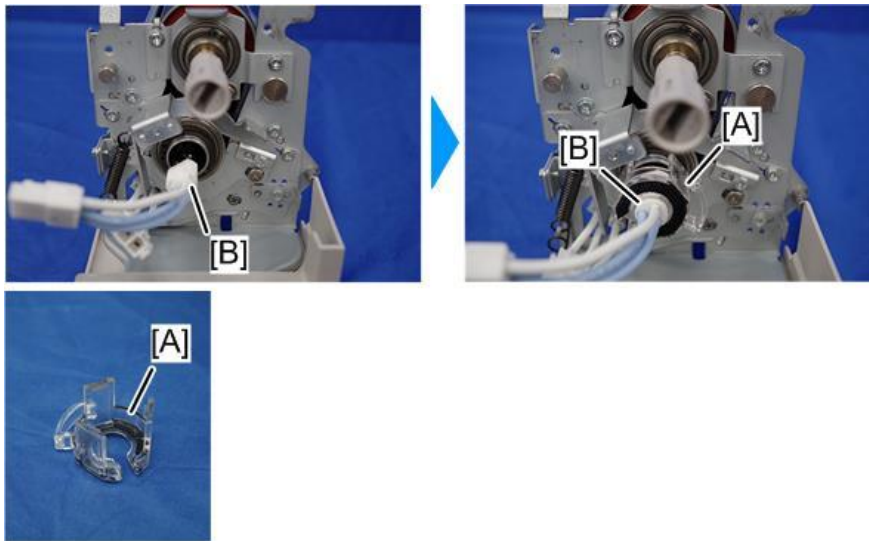
2. Remove the fusing belt stripper plate (Separation Plate).  
3. Separate the fusing unit vertically (Vertically Separating the Fusing Unit).  
4. Remove the connector [A] on the front side (🔩 x2, 📦 x1).



5. Remove the heating roller fusing lamps bracket [A] and the cover [B] on the front side (🔩 x2).

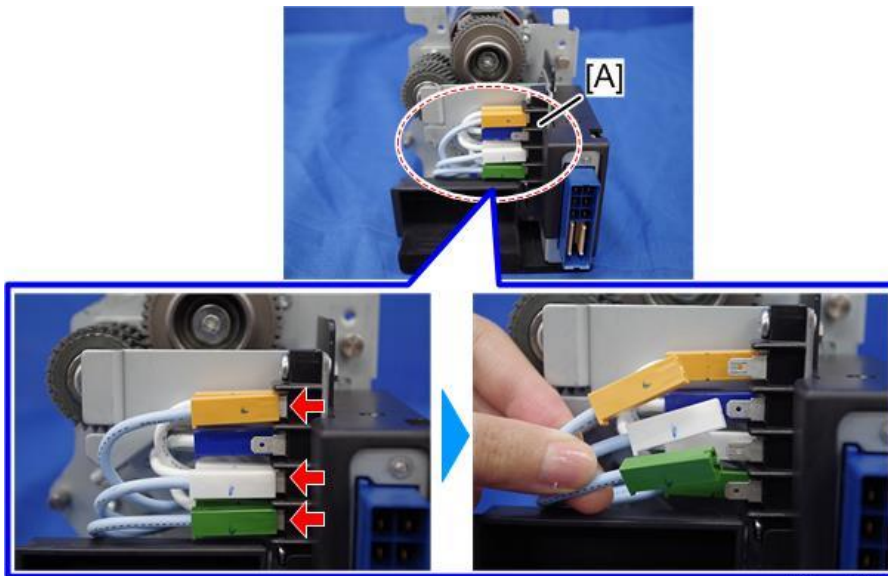


- 6.** Fix the heater [B] using the jig [A] for fixing.



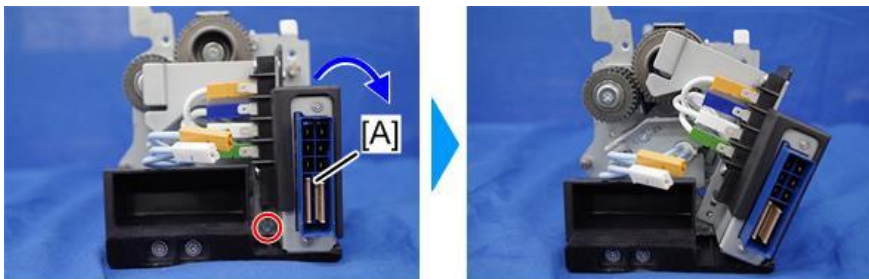
d0bxa4633

- 7.** Remove the heater lamp connectors [A] from the drawer connector on the rear side (🔧 x3).



d0bxa4634

- 8.** Turn the drawer connector [A] in the direction of the arrow (🔧 x1).

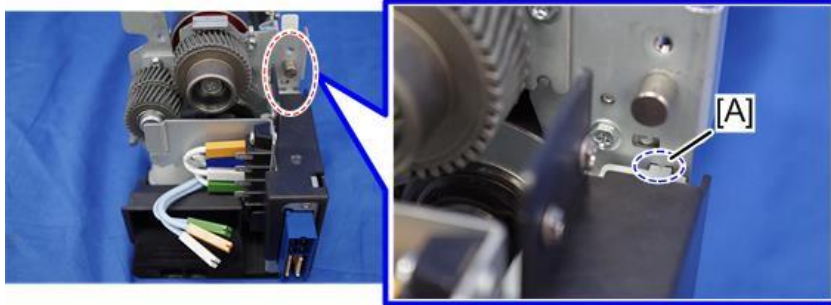


d0bxa4635

## 4.Replacement and Adjustment

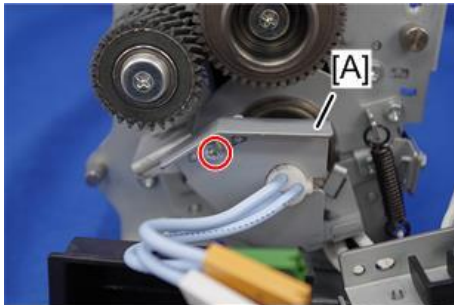
### Note

- When setting the drawer connector, insert the projection [A] into the cutout.



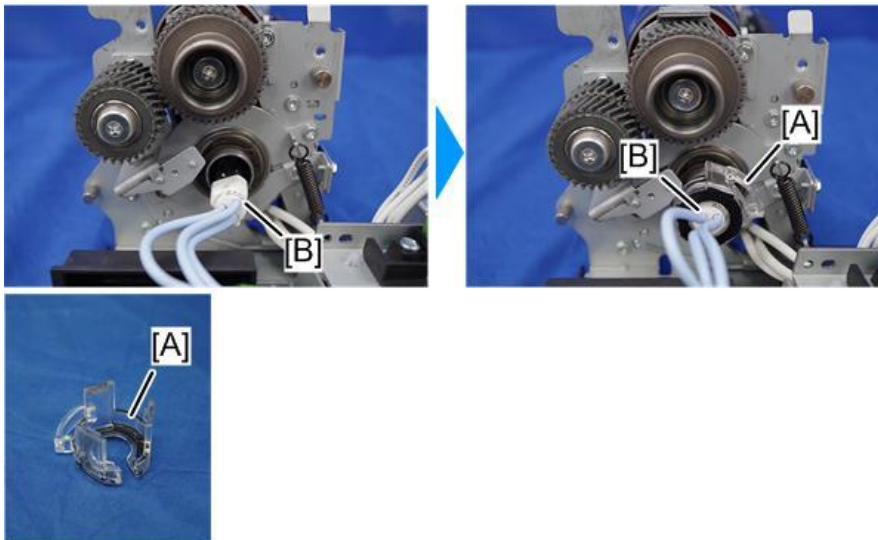
d0bxa4636

- 9.** Remove the heating roller fusing lamps bracket [A] on the rear side (⌀x1).



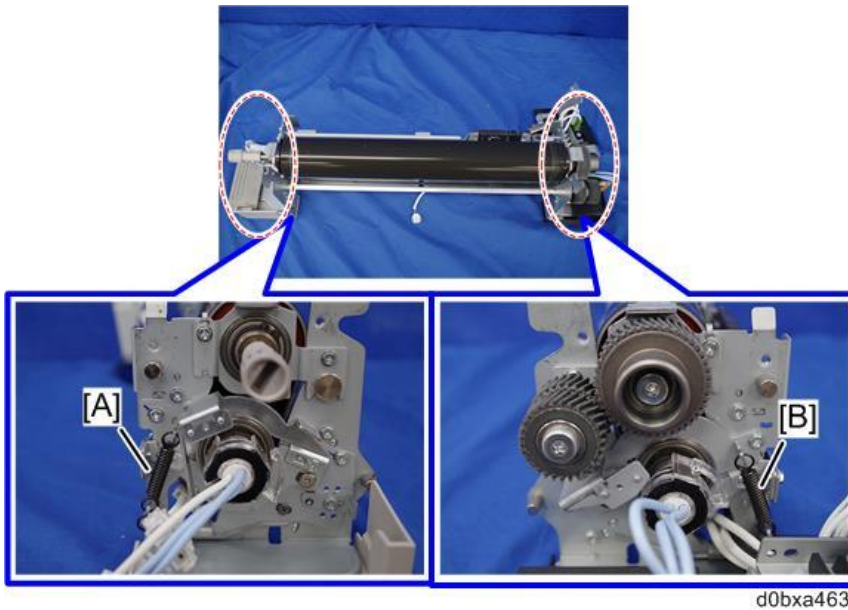
d0bxa4637

- 10.** Fix the heater [B] using the jig [A] for fixing.



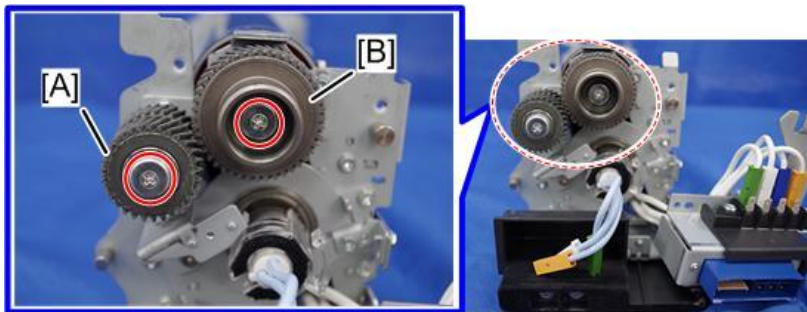
d0bxa4638

- 11.** Remove the springs [A] [B] from the front and rear sides (🔩x2).



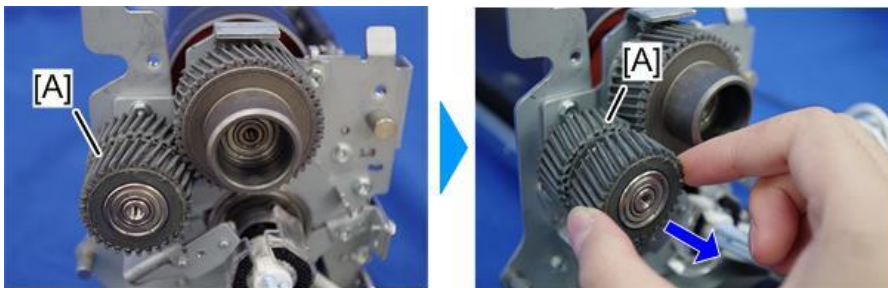
d0bxa4639

- 12.** Remove the screws [A] [B] of the coupling gears and the driving gear (🔩x2).



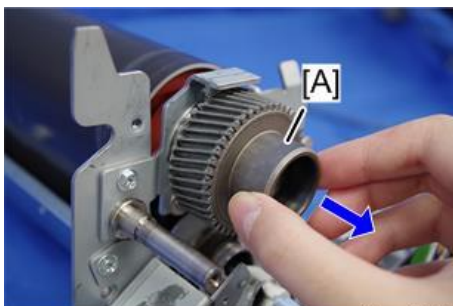
d0bxa4640

- 13.** Remove the coupling gears [A] (⊙x1).



d0bxa4641

- 14.** Remove the driving gear [A] (⊙x1).

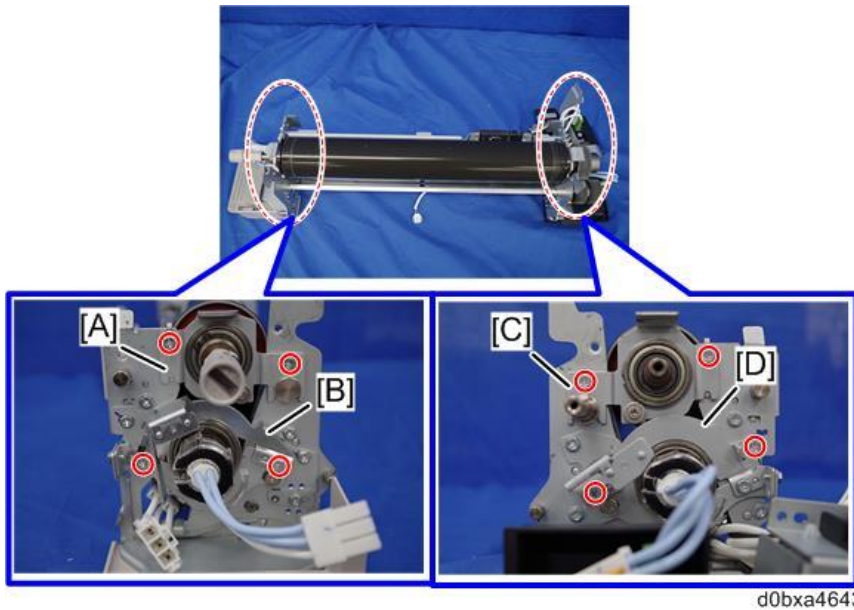


d0bxa4642

- 15.** Remove the screws of the fusing holders [A] [C] and the crescent-shaped holders [B] [D] on each

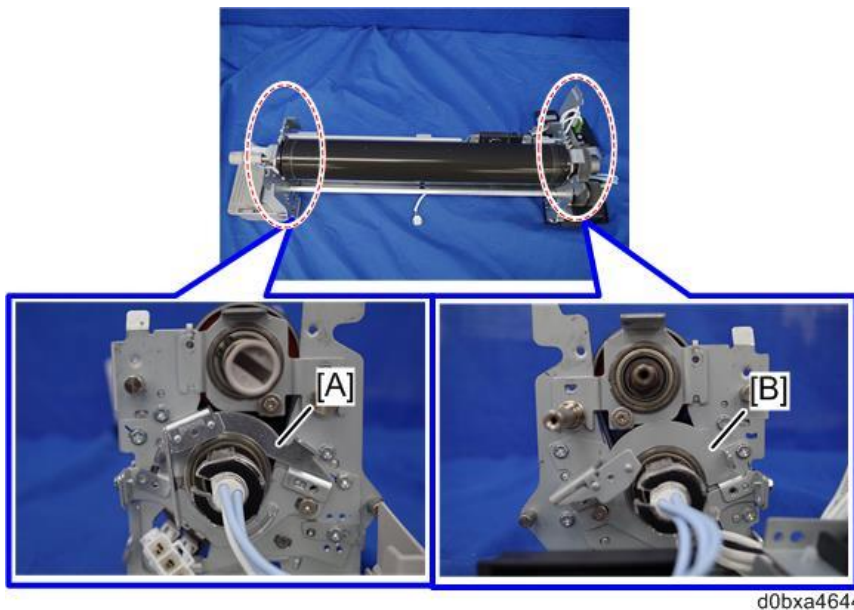
#### 4.Replacement and Adjustment

side (⊗x8).



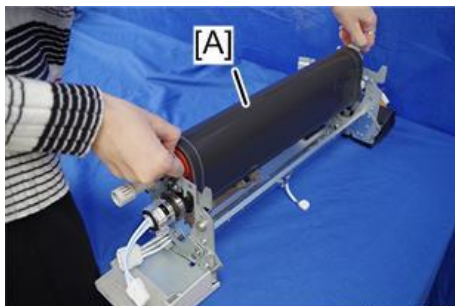
d0bxa4643

**16.** Remove the crescent-shaped holders [A] [B] on each side.



d0bxa4644

**17.** Hold the brackets on both sides of the heating roller, and then raise the fusing belt [A] with the hot roller and the heating roller fusing lamps to remove them.

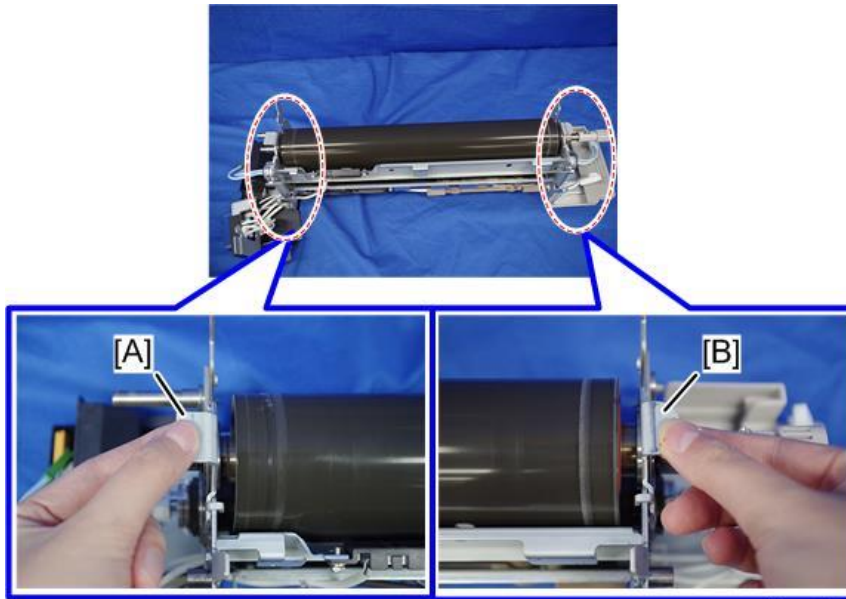


d0bxa4645



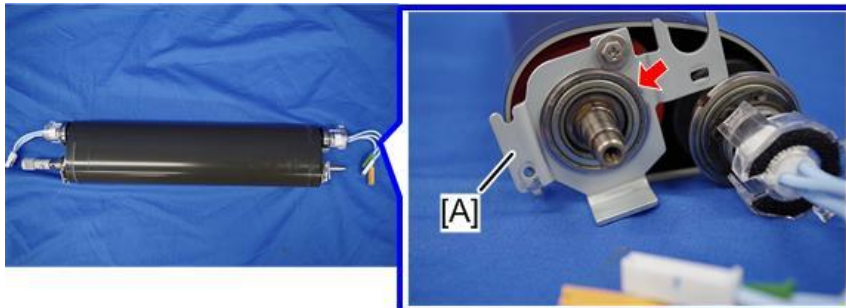
**Note**

- When raising the fusing belt [A], hold the tabs of the bracket [A] [B].



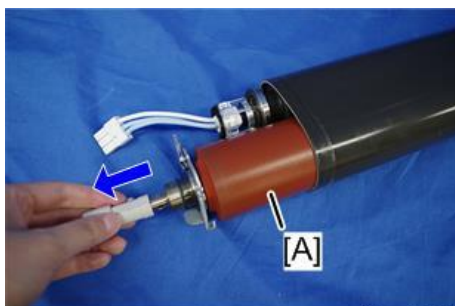
d0bxa4646

- 18.** Remove the fusing holder [A] and bearing from the rear side of the heating roller ( ■x1).



d0bxa4647

- 19.** Pull out the heating roller [A] from the fusing belt.



d0bxa4648

- 20.** Pull out the hot roller and heating roller fusing lamps [A].



d0bxa4649

## 4.Replacement and Adjustment

---

### Cleaning, Lubrication before Re-assembly

---

Perform the following procedures before re-assembling the fusing unit.

**★ Important**

- Work carefully and always avoid touching the surfaces of the hot roller, heating roller, and fusing belt with bare hands

#### Heating Roller

---

**1.** Always inspect and clean a heating roller for contamination by grease before re-installing it.

**★ Important**

- Grease contamination can cause uneven heating on the surface of the roller and cause problems during fusing.

**2.** Clean the entire surface of the heating roller with a dry cloth.

**3.** Clean the entire surface with a cloth dampened with water (not alcohol).

**4.** Clean the entire surface again with a dry cloth.



d0bxa4650

#### Hot Roller

---

**1.** Always inspect and clean a hot roller for contamination by grease before re-installing it. This is especially important for a used roller that is to be re-installed.

**★ Important**

- Grease on the surface of the hot roller can cause the surface of the roller to peel.
- Roller peel on the surface of the fusing belt can cause glossy patches or streaks to appear on prints.

**2.** Clean the entire surface of the hot roller with a dry cloth.

**3.** Clean the entire surface with a cloth dampened with water (not alcohol).

**4.** Clean the entire surface again with a dry cloth.

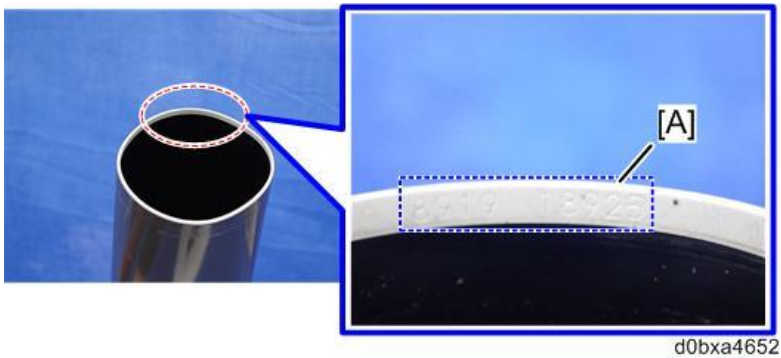


d0bxa4651

### Fusing Belt

---

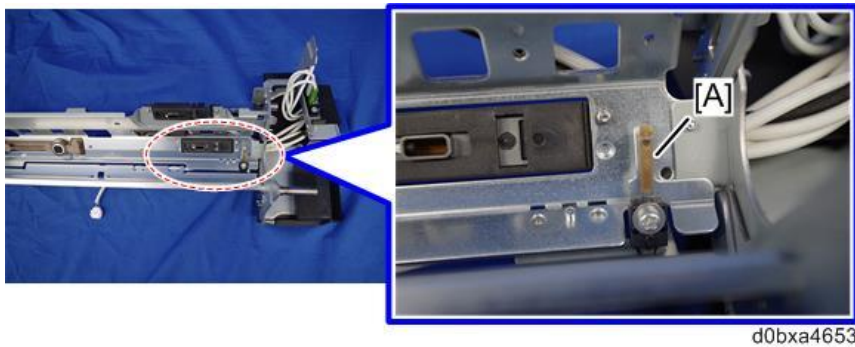
The front edge of the fusing belt [A] is marked with faint numbers, letters, and lines. This edge should always be installed at the front end of the unit.



### Heating Roller Thermistor

---

1. At the rear, inspect and clean the heating roller thermistor [A] with a clean cloth.



### Heating Roller, Hot Roller Bearings

---

1. Separate the bearings and flanges.



#### 4.Replacement and Adjustment

2. Apply Fluotribo MG Grease to the inner surfaces of the flanges and bearings.



d1803805

3. Set the lubricated flanges so that the ridge on each end of the fusing belt hangs over the rims of the flanges as shown below.



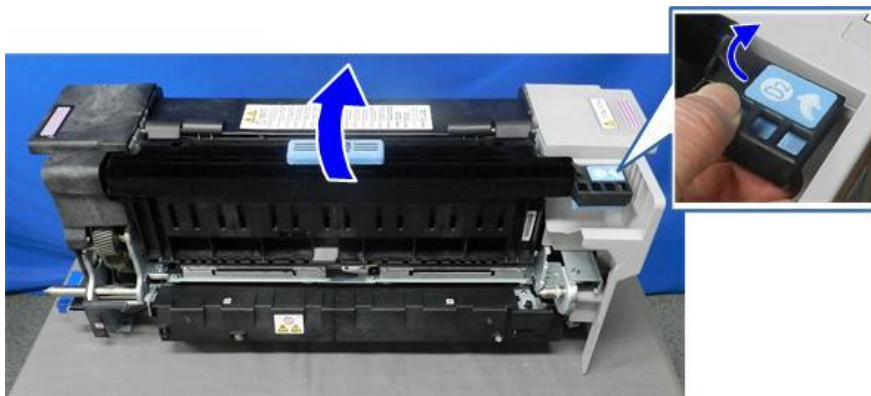
d1793861

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#### Pressure Roller Strippers, Fusing Path Sensors, Anti-static Brushes

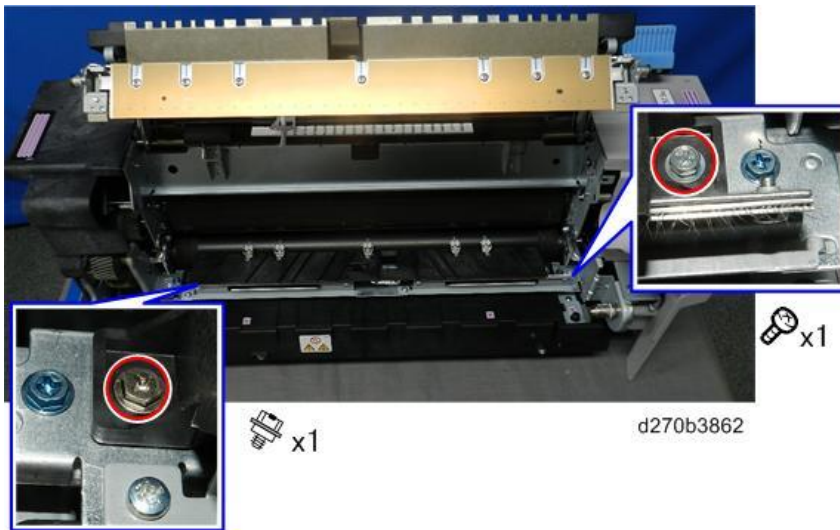
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1. Remove the fusing unit. ([Removing the Fusing Unit](#))
2. Release **D2** and then raise the separation unit.



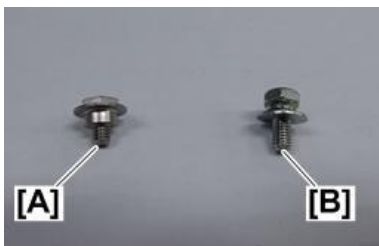
d270b3861

**3.** Disconnect both ends of the pressure roller stripper cover (🔩 x1, 🔑 x1).



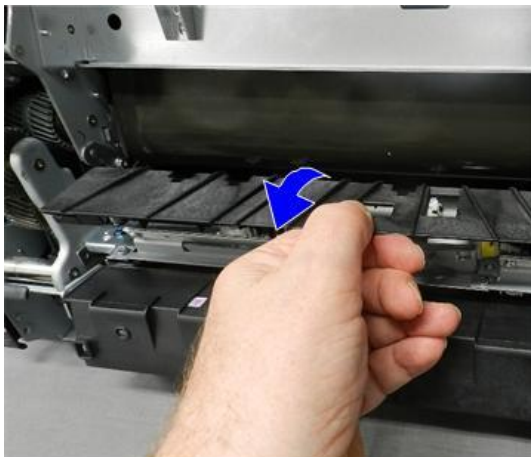
**Note**

- The rear screw [A] and front screw [B] are different and must be re-attached at the same locations.



m263d4601

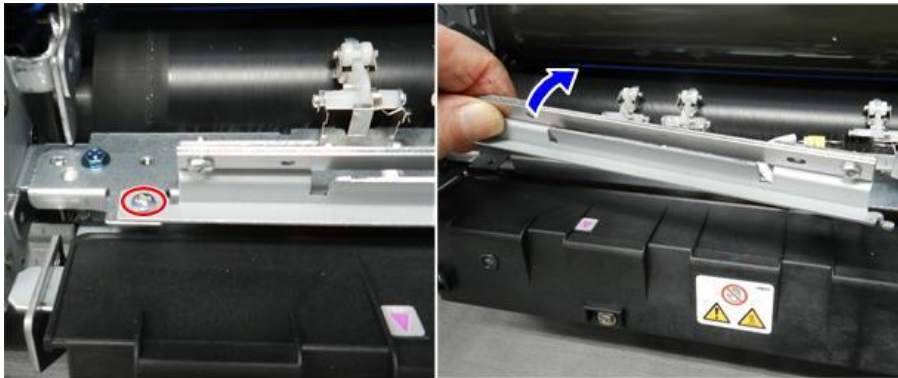
**4.** Remove the cover [A].



d270b3863

#### 4.Replacement and Adjustment

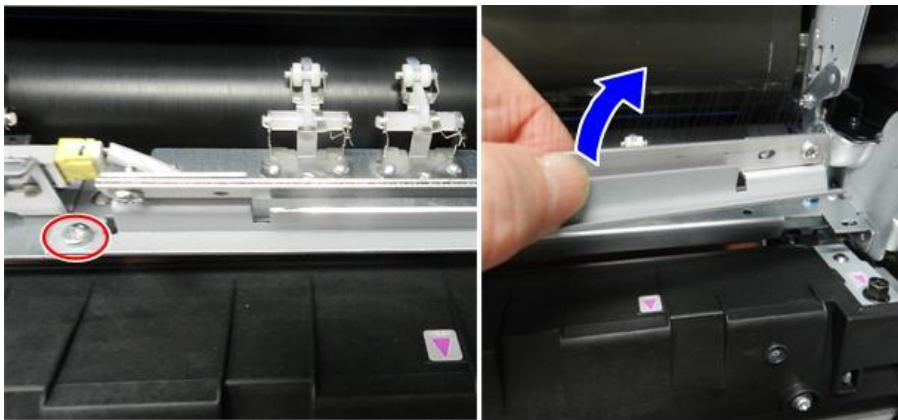
- 5.** Remove the rear anti-static brush bracket (🔑 x1).



🔑 x1

d270b3864

- 6.** Remove the front anti-static brush bracket (🔑 x1).



🔑 x1

d270b3865

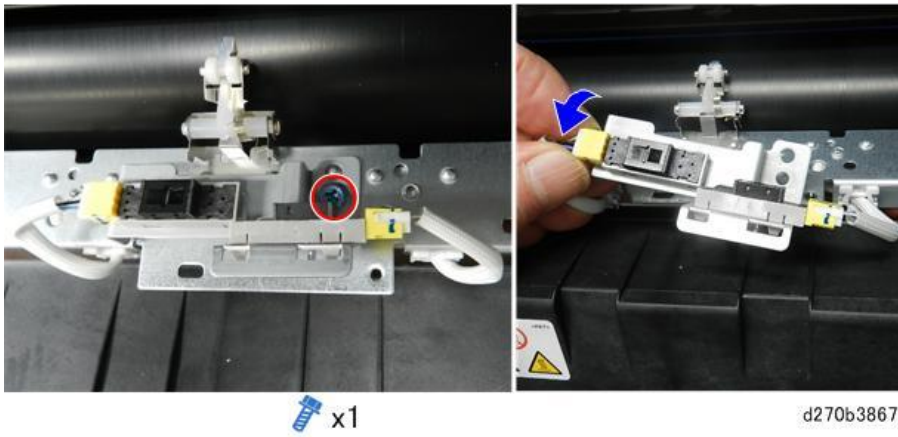
**Note**

- These static brushes are installed to scavenge stray toner. The brackets are identical.

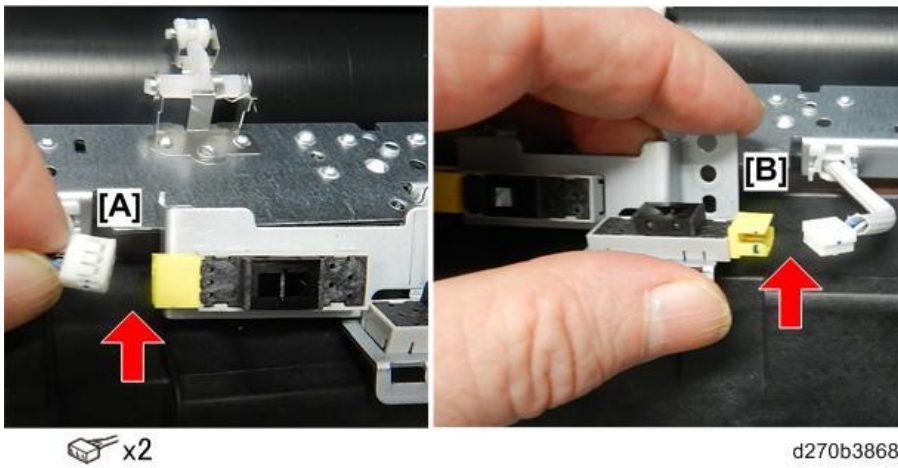


d270b3866

- 7.** Disconnect the sensor bracket (✂x1).



- 8.** Disconnect the exit sensor [A] and the fusing unit exit sensor [B] (✂x1).

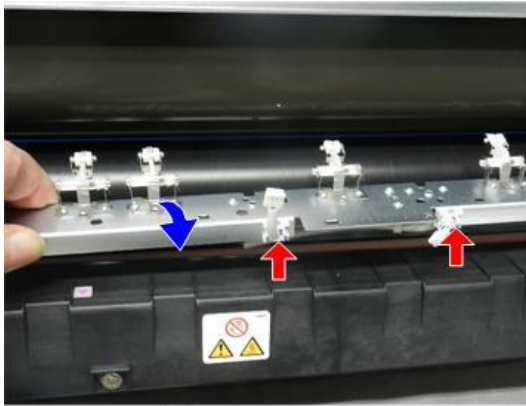


- 9.** Disconnect both ends of the pressure roller stripper bracket [B] (✂x2).



#### 4.Replacement and Adjustment

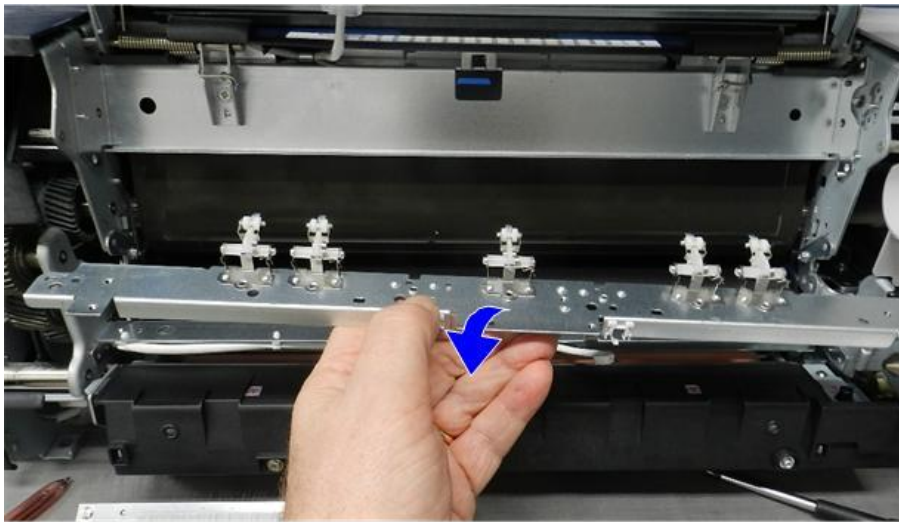
- 10.** Pull the stripper bracket away slightly from the unit, and then free the harnesses (🔧x2).



🔧 x2

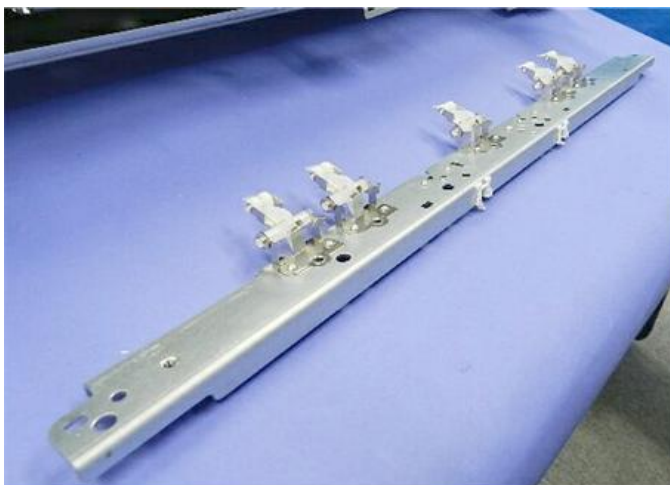
d270b3870

- 11.** Remove the pressure roller stripper bracket.



d270b3871

- 12.** Lay the bracket on a clean flat surface.



d1793867



## Pressure Roller Stripper Pawls

## ★ Important

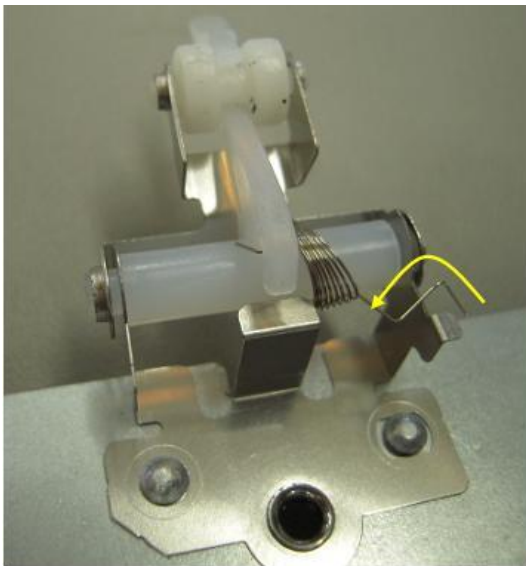
- Before re-assembly, check each pawl to see if any one is warped or broken.
- Check the tip of each pawl (circled below) to see if it is bent or damaged.



d1803824

- A damaged tip can cause pawl marks to appear on paper, and cause other problems like allowing paper to wrap around the pressure roller.

- 1.** Disconnect the coil spring from the bracket.



d1803825

## ↓ Note

- When you re-attach the long hook of the coil spring, wrap it under the rotating arm first, and then set the tension spring.

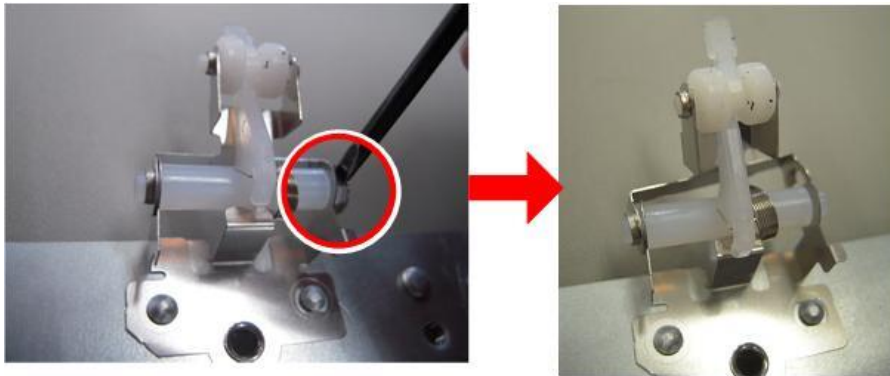


m263d4602

- 2.** Open the holder attached to the outside of the bracket, rotate the pawl, and then remove it from the

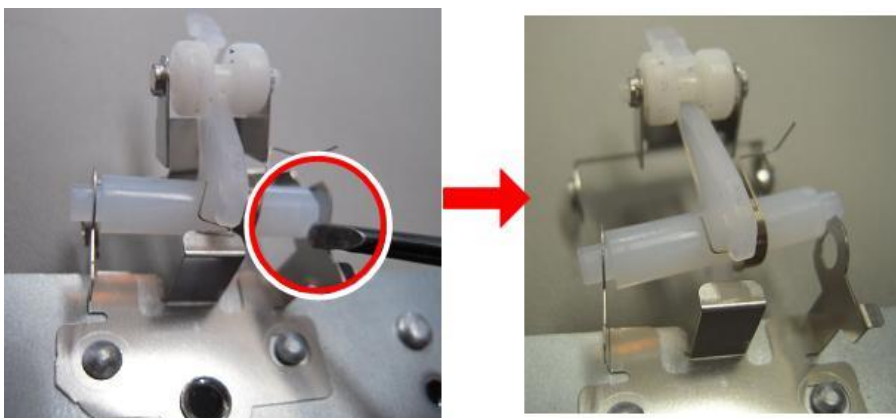
#### 4.Replacement and Adjustment

tip of the arm.



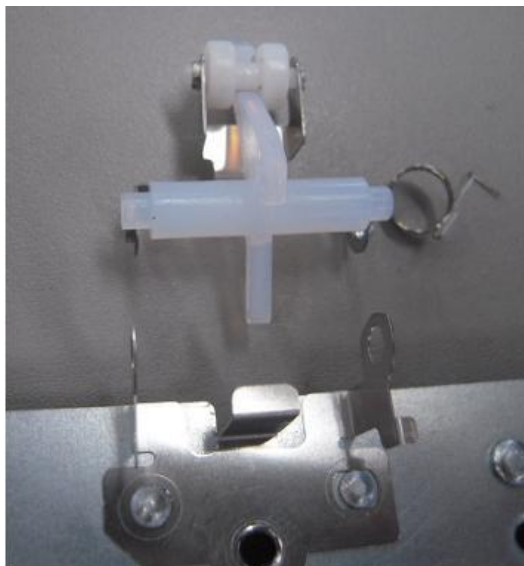
d1803827

**3.** Open the bracket and then remove the stripper pawl rotation arm.



d1803828

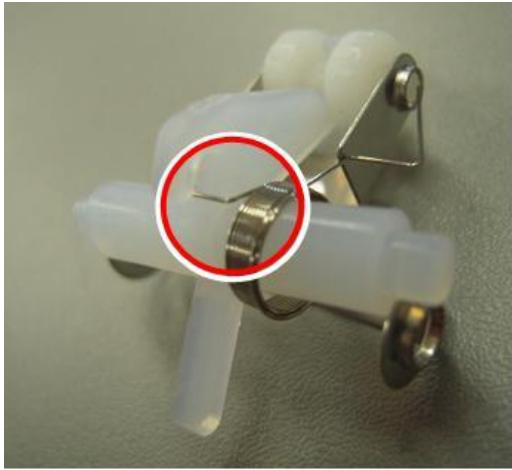
**4.** Remove the coil spring from the pawl rotation arm.



d1803829

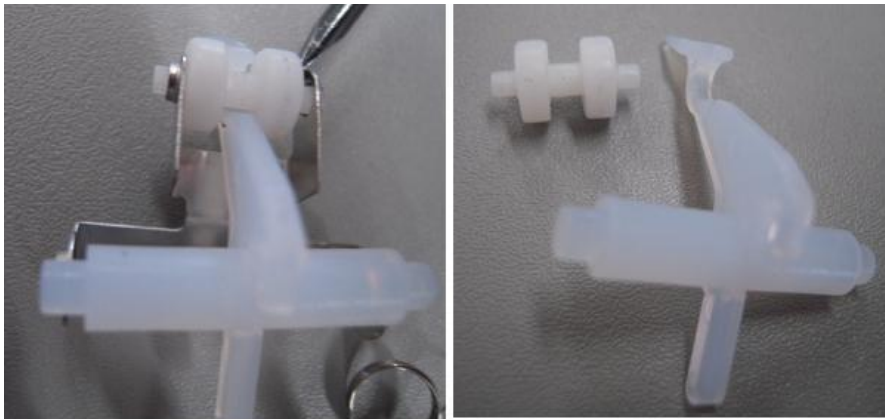
#### Note

- When you re-attach the coil spring, set the short hook (circled red) on the pawl first, and then set the pawl and spring.



d1803830

- 5.** Open the holder, and then separate the pawl and the arm shaft.



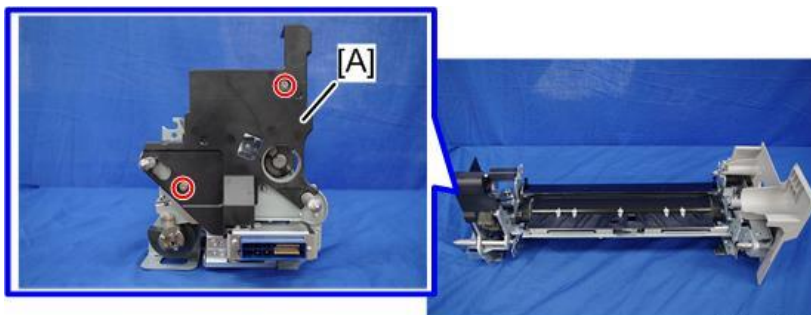
d1803831

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### Pressure Roller Fusing Lamp, Pressure Roller

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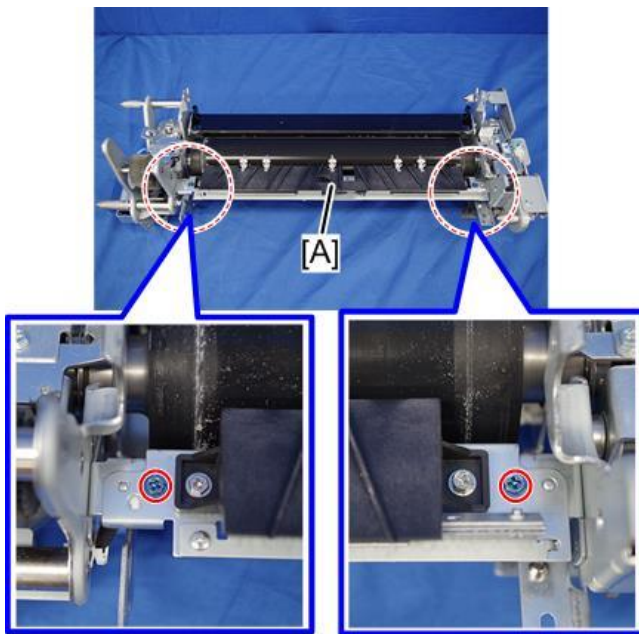
- 1.** Separate the fusing unit vertically ([Vertically Separating the Fusing Unit](#)).
- 2.** Remove the fusing cleaning unit ([Removing the Fusing Cleaning Unit](#)).
- 3.** Remove the rear cover [A] (🔩x2).



d0bxa4616

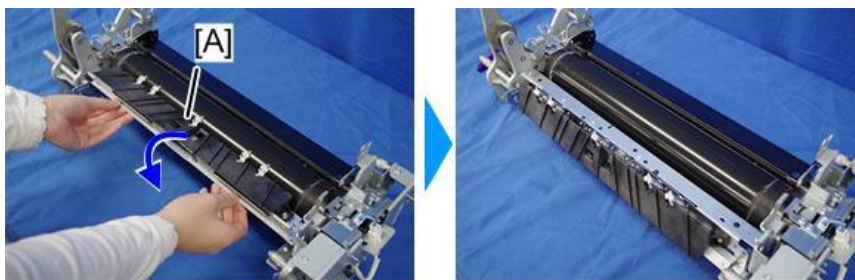
#### 4.Replacement and Adjustment

- 4.** Remove the screws on the bracket cover of the pressure roller stripper pawls [A] (🔩 x2).



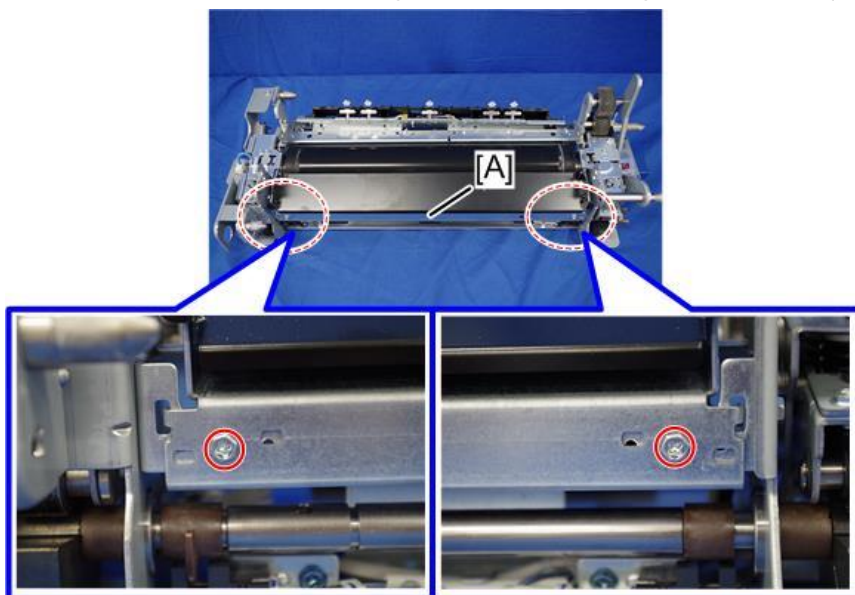
d0bxa4617

- 5.** Tilt the bracket [A] in the direction of the arrow.



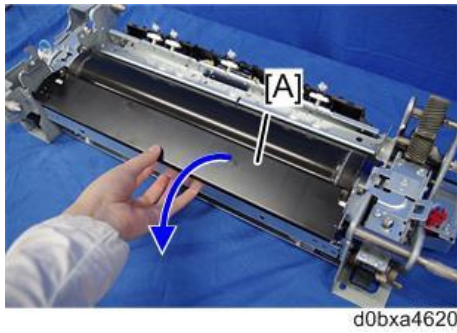
d0bxa4618

- 6.** Remove the screws on both edges of the entrance guide plate [A] (🔩 x2).

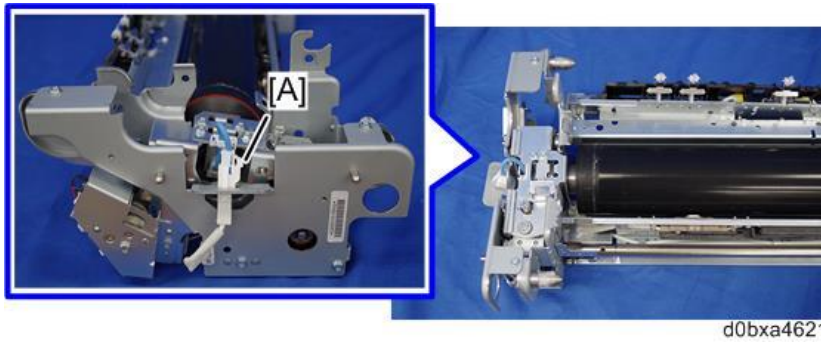


d0bxa4619

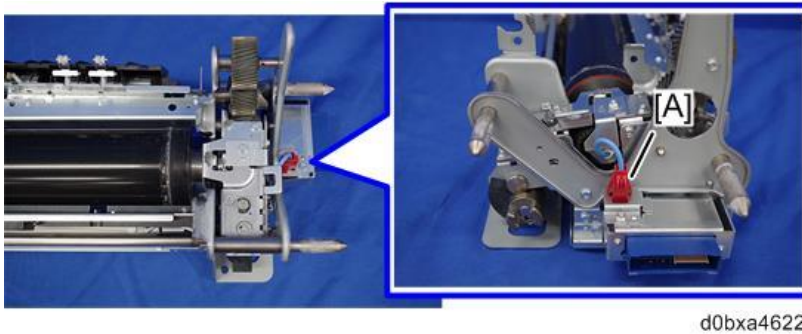
- 7.** Remove the entrance guide plate [A].



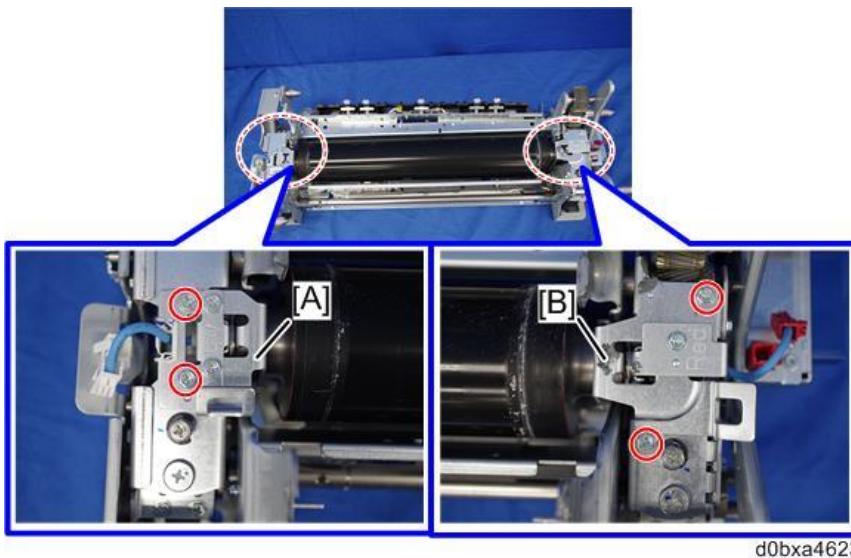
- 8.** Disconnect the connector [A] of the pressure roller fusing lamp at the front side (🔌 x1).



- 9.** Remove the connector [A] of the pressure roller fusing lamp on the front side (🔌 x1).

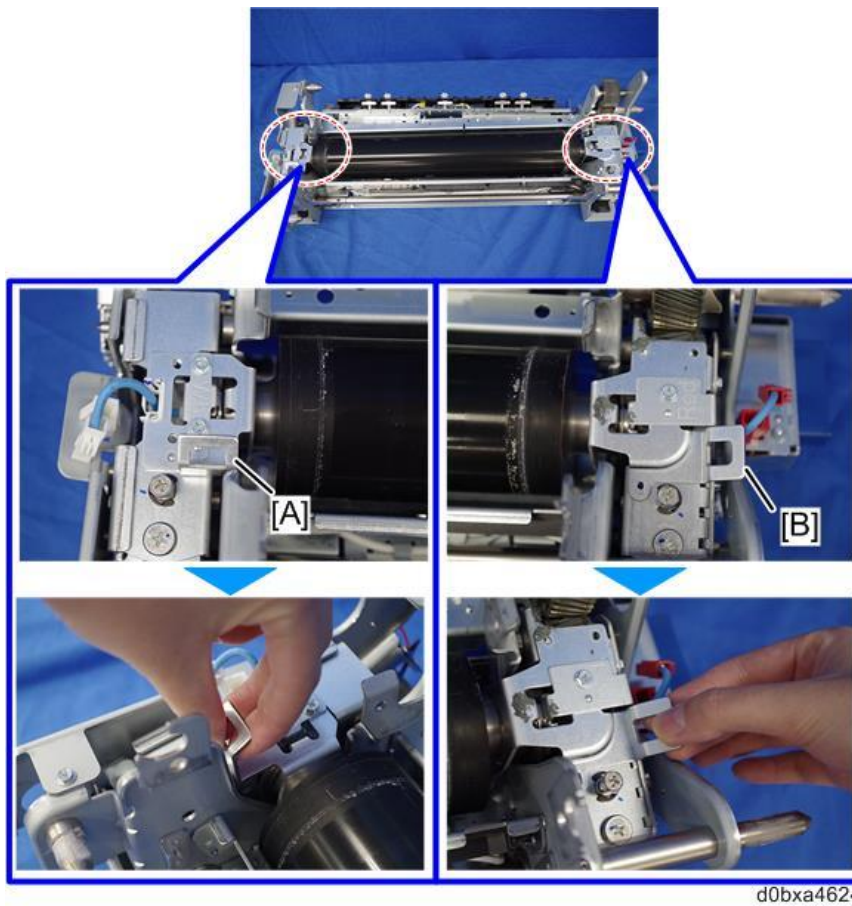


- 10.** Remove the screws of the pressure roller brackets [A] [B] (🔩 x4).



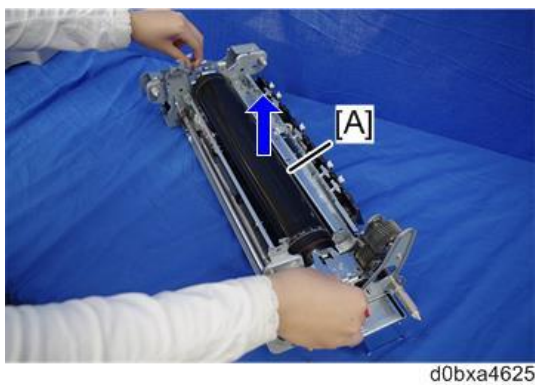
#### 4.Replacement and Adjustment

**11.** Grip the pressure roller brackets, raise the pressure roller [A], and then remove it.

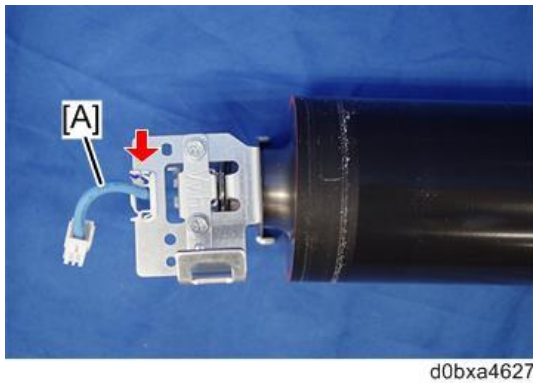


**12.** Grip the holding brackets, and then remove the pressure roller [A].

When attaching the pressure roller, be careful not to tilt the pressure roller brackets because the pressure roller fusing lamp may fall from it.

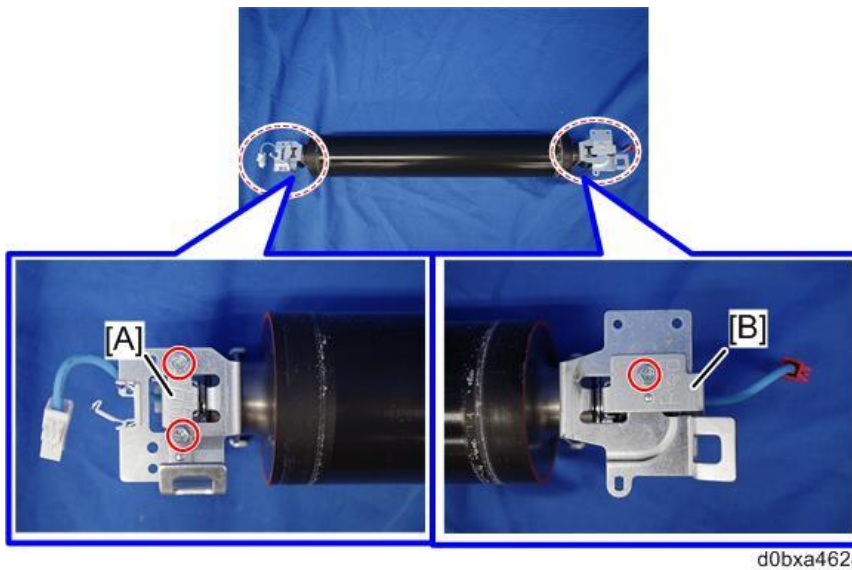


**13.** Release the clamp of the connector [A] on the front side (🔑x1).



d0bxa4627

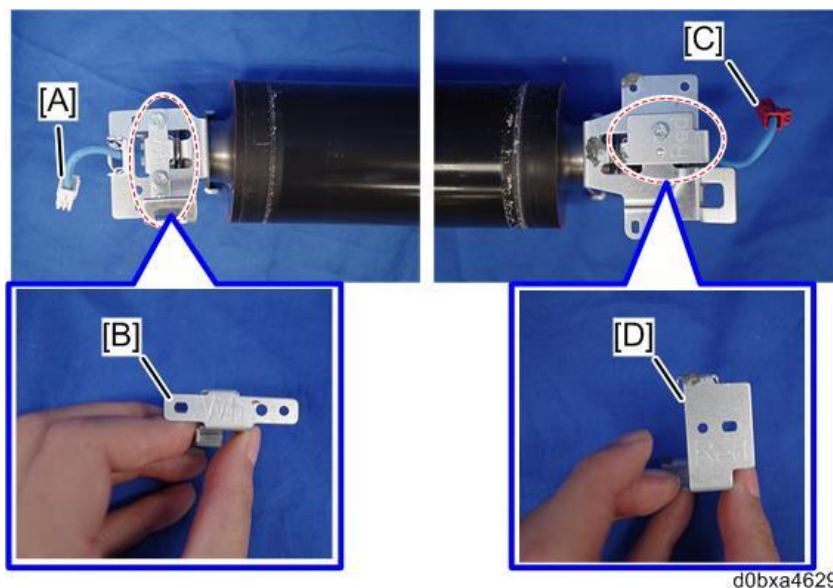
Remove the pressure roller fusing lamp brackets [A] [B] at the front side and rear side (🔑x3).



d0bxa4628

**Note**

- Connect the bracket [B] (with "Wh"engraved) to the white color connector [A].
- Connect the bracket [D] (with "Red" engraved) to the red color connector [C].

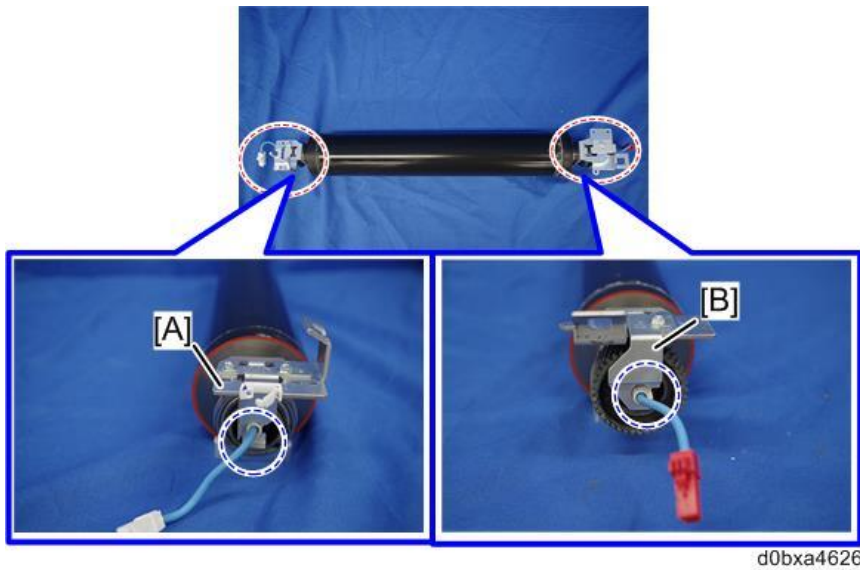


d0bxa4629

- When attaching the pressure roller fusing lamp, make sure that both connectors fit the

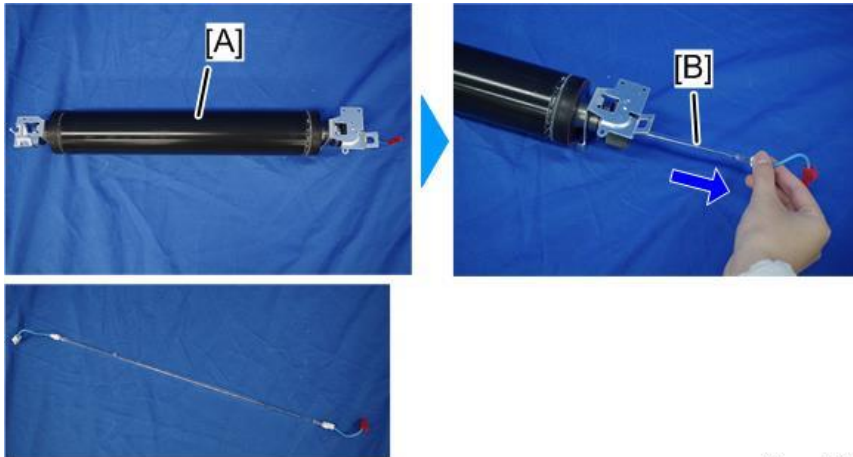
#### 4.Replacement and Adjustment

notch of the brackets [A] [B].



d0bxa4626

**14.** Pull out the pressure roller fusing lamp [B] from the pressure roller [A].



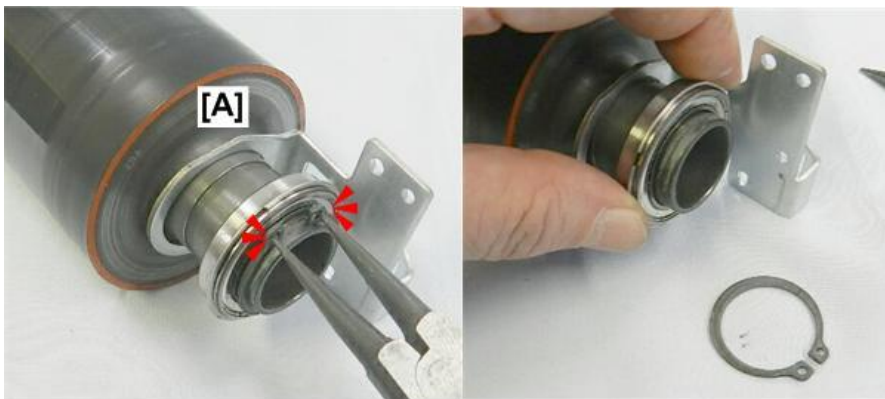
d0bxa4630

#### Note

- Do not touch the glass section of the pressure roller fusing lamp with bare hands.

#### Pressure Roller Cleaning, Lubrication

**1.** Use spreaders to disconnect the bearing from the front end of the pressure roller [A] (1x1).



d1793881

**2.** Pull the other bearing from the other end of the pressure roller (there is no fastener on the other



bearing).

- 3.** Spin the races of the bearings and make sure that they rotate easily.  
If they do not turn easily, they must be replaced.



d1793882

- 4.** Always inspect and clean the pressure roller for contamination by grease before re-installing it.

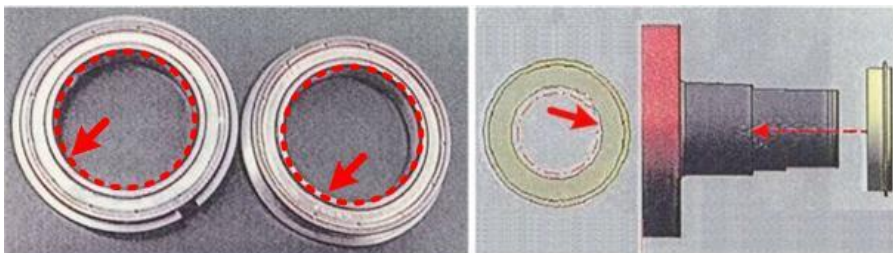
**★ Important**

- Grease contamination can cause uneven heating on the surface of the roller and cause problems during fusing.



d1793884

- 5.** Clean the entire surface of the roller with a dry cloth.  
**6.** Clean the entire surface with a cloth dampened with water (not alcohol).  
**7.** Clean the entire surface again with a dry cloth.  
**8.** Use a small brush, or the tip of a small flat-tip screwdriver, etc. to apply Fluotribo MG grease to the inside surfaces of the pressure roller races.

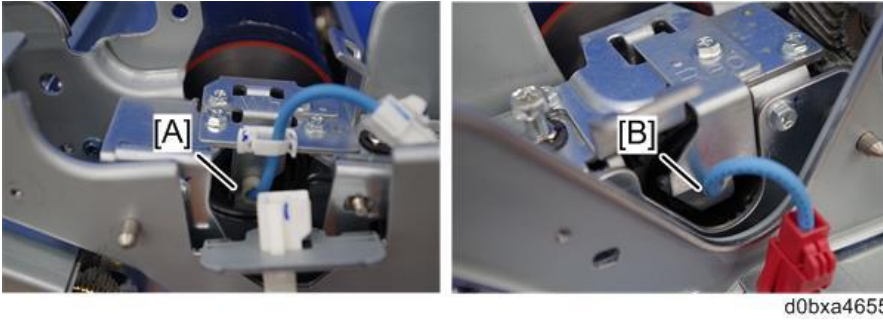


d1793885

## 4.Replacement and Adjustment

### Pressure Roller Re-installation

When installing the pressure roller, check the lamp harnesses at the front [A] and rear [B].

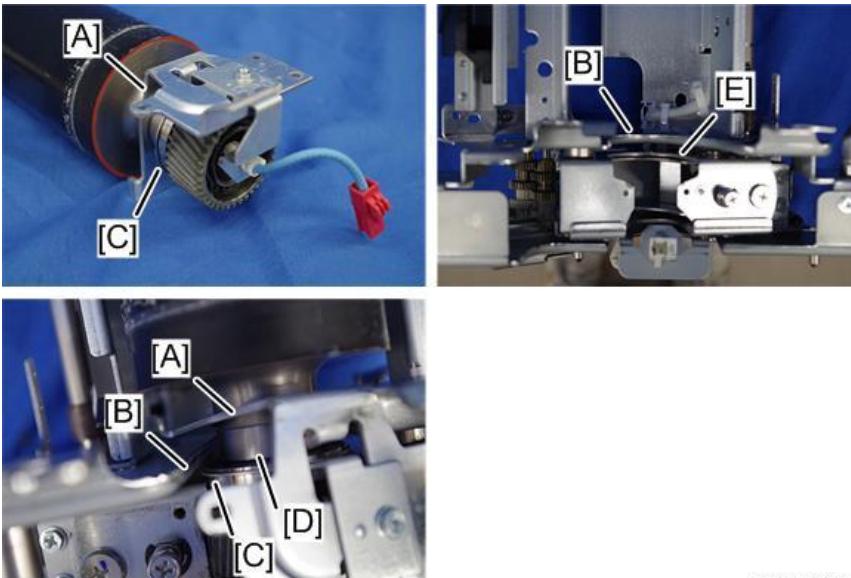


d0bxa4655

The ball bearing flange should be in front of the movable frame.

The front bracket should be behind the bend in the frame.

#### Front (Pressure Roller – Top View)



d0bxa4657

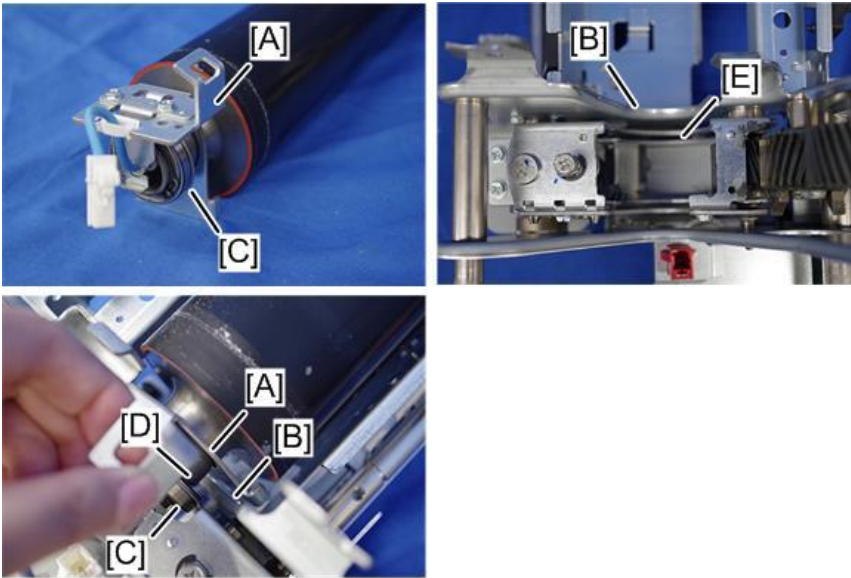
A	Front bracket
B	Front frame bend
C	Ball bearing race
D	Ball bearing flange
E	Front moving frame

The ball bearing flange should be in front of the rear movable frame.

The bracket should be behind the rear movable roller.

#### Rear (Pressure Roller – Top View)

## 4.Replacement and Adjustment



d0bxa4656

A	Rear bracket
B	Frame bend
C	Ball bearing race
D	Ball bearing flange
E	Moving frame rear

### Separation Plate

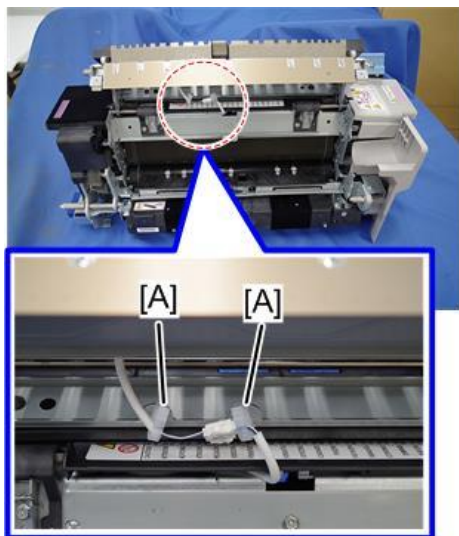
1. Remove the fusing unit. ([Removing the Fusing Unit](#))
2. Grip the lever [A], and then open the exit guide.



d0bxa4515

#### 4.Replacement and Adjustment

**3.** Release the clamps [A] (🔧 x2).



d0bxa4516

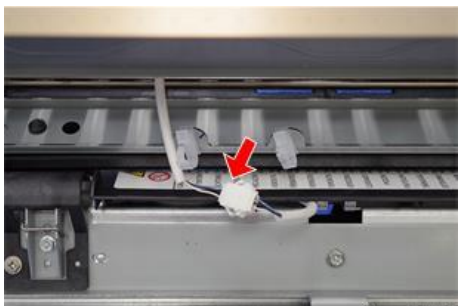
**Note**

- When clamping the harness of the winding sensor, make sure that the insertion part of the clamps is located at the top.



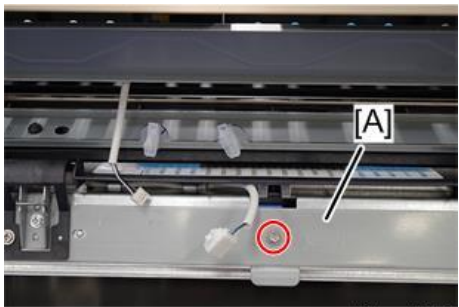
d0bxa4517

**4.** Disconnect the connector of the winding sensor (🔌 x1).



d0bxa4518

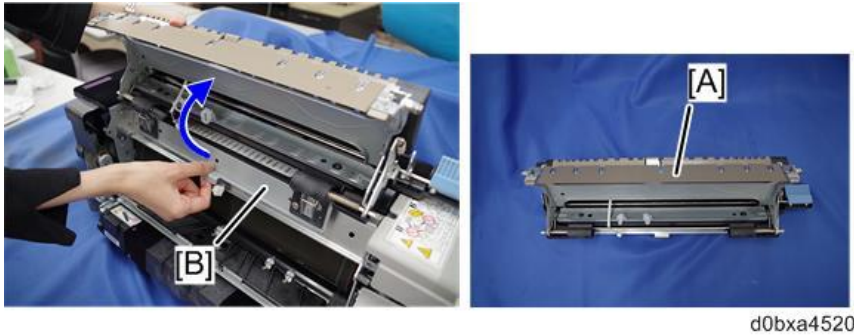
**5.** Remove the screw fixing the separation plate [A] (🔩 x1).



d0bxa4519

## 4.Replacement and Adjustment

1. Hold the separation plate [A]. Raise the entire plate by turning the metal plate [B] in the direction of the arrow, and remove it.



### Note

- When attaching the separation plate, set the axes of both sides of the separation plate on the cutouts.
- **Front side**



- **Rear side**



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## Thermostats, Thermistors, NC Sensors

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### Hot Roller Heating Roller Sensors, Heating Roller Thermistor

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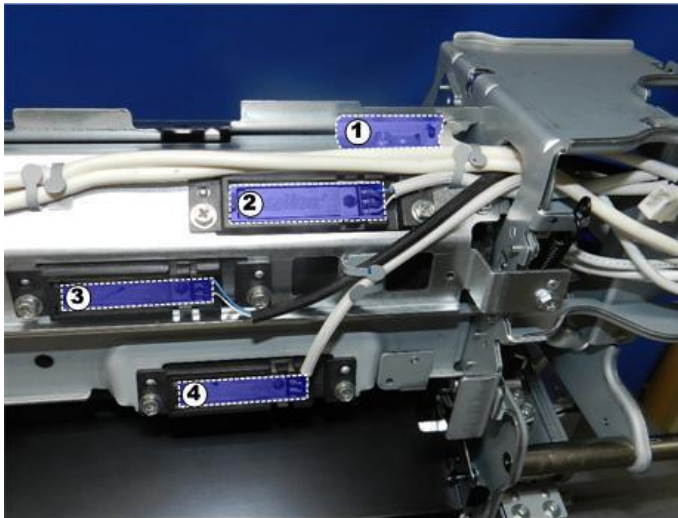
- 1.** Remove the separation unit.
- 2.** Remove the front and rear covers.
- 3.** Remove the right cover, and the separation unit cover.

The following components must be removed together:

①	Heating Roller Thermistor (Bracket)
②	Hot Roller NC Sensor (Short White Harness)
③	Heating Roller NC Sensor - Center (Black Harness)

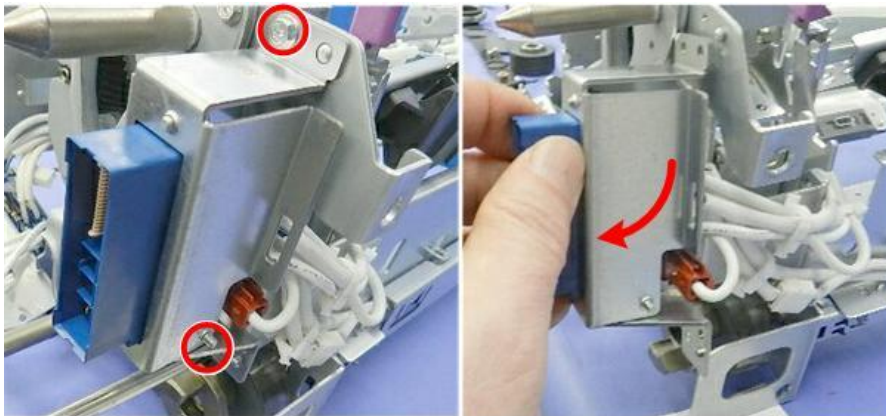
#### 4.Replacement and Adjustment

④	Heating Roller NC Sensor - End (Long White Harness)
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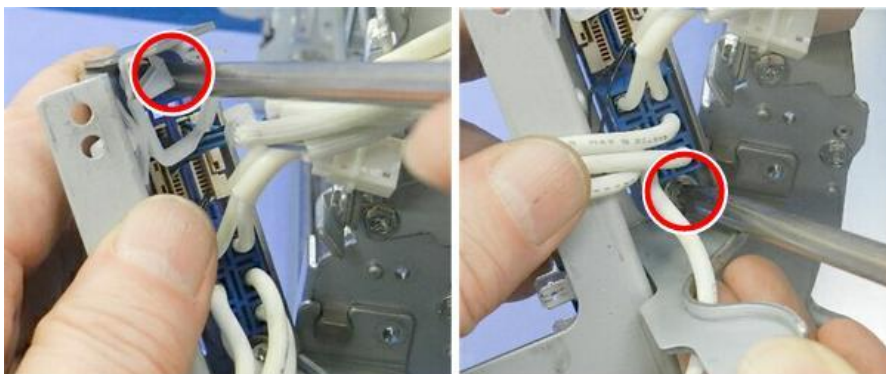
d270b3817

- 4.** At the rear, disconnect the connector bracket (🔧 x2).



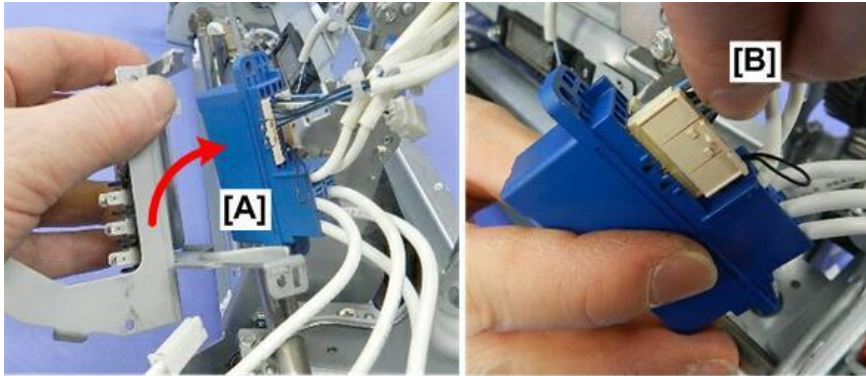
d1793888

- 5.** Inside the bracket, disconnect the top and bottom of the plastic connector cradle (🔧 x2).



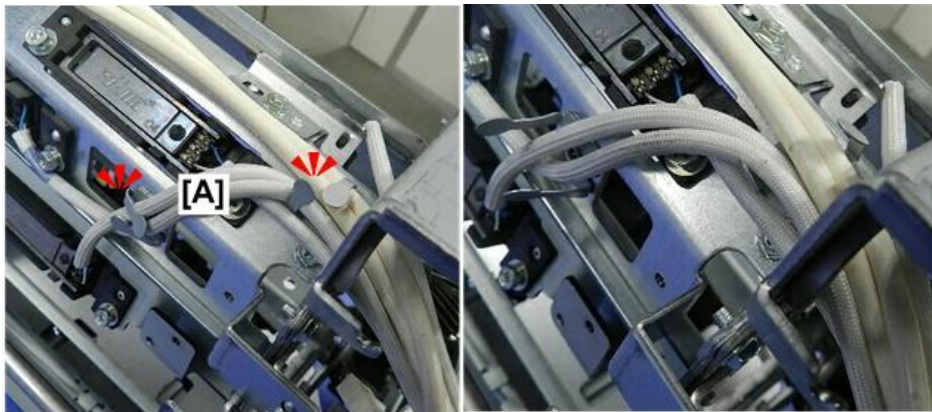
d1793889

- 6.** Pull out the connector cradle [A], and then disconnect the harnesses [B] (🔌 x1).



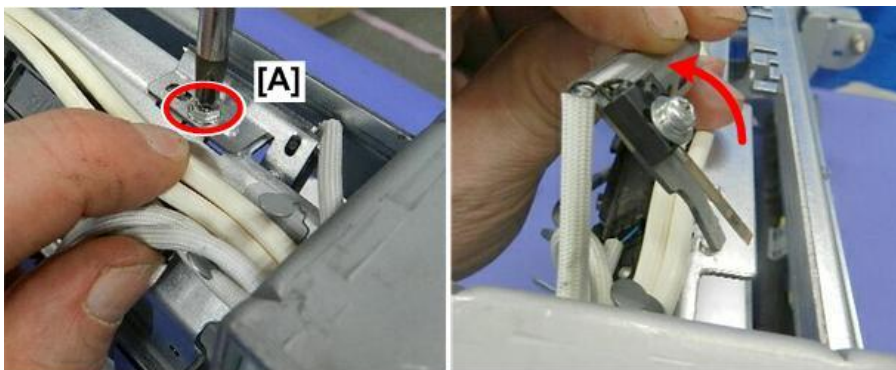
d1793890

- 7.** Open the metal clamps to free the harnesses [A] (🔧 x2).



d1793891

- 8.** Disconnect the heating roller thermistor [A] (🔌 x1).



d1793892

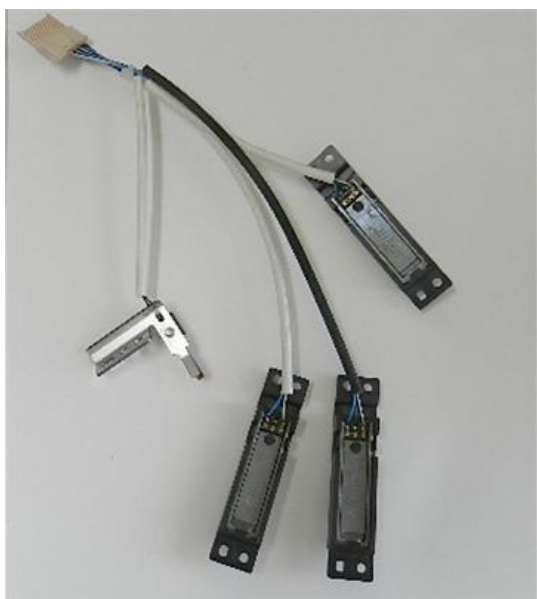
#### 4.Replacement and Adjustment

**9.** Disconnect the NC sensors on the right side of the unit [A] (⊙ x3).



d1793893

**10.** Remove the harnesses and connector together.



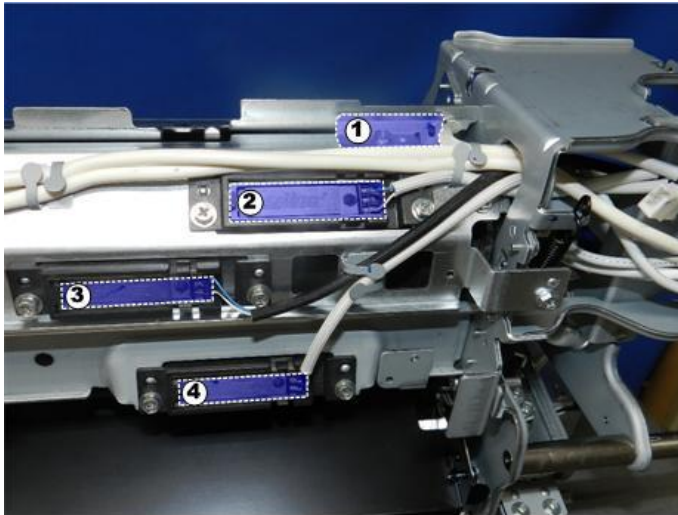
d1793894

**★ Important**

- At re-installation, re-connect the harnesses in the correct order and location.

①	Heating Roller Thermistor (Bracket)
②	Hot Roller NC Sensor (Short White Harness)
③	Heating Roller NC Sensor - Center (Black Harness)
④	Heating Roller NC Sensor - End (Long White Harness)

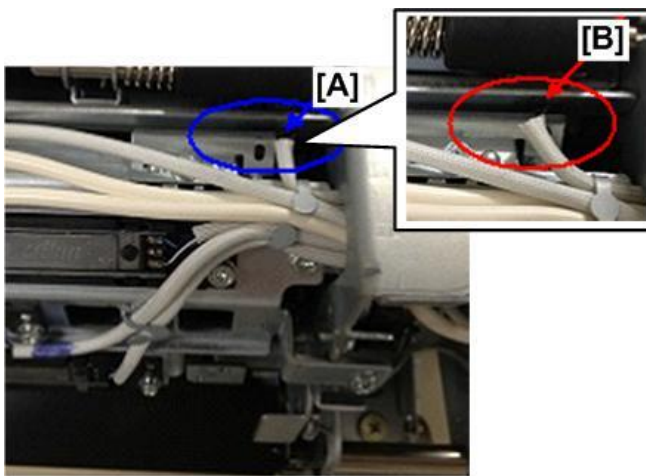




d270b3817

### Heating Roller Thermistor Re-installation

1. Check the position of the heating roller thermistor and make sure that it is positioned as shown at [A], not [B].



d270b3989

### Pressure Roller NC Sensor

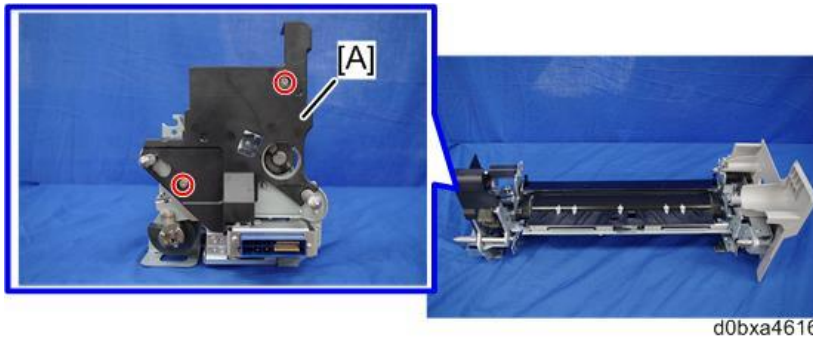
1. Separate the fusing unit vertically. ([Vertically Separating the Fusing Unit](#))
2. Remove the fusing unit front cover [A] (⌀ x2).



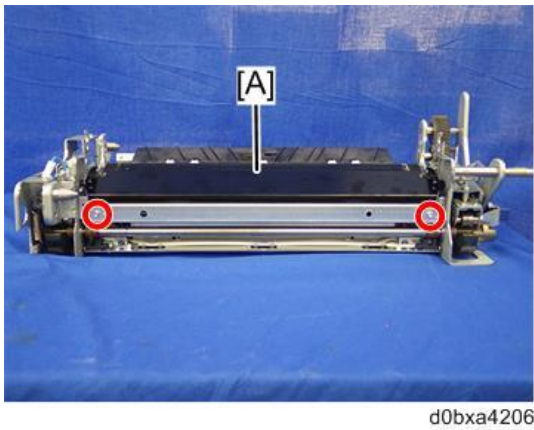
d0bxa4615

#### 4.Replacement and Adjustment

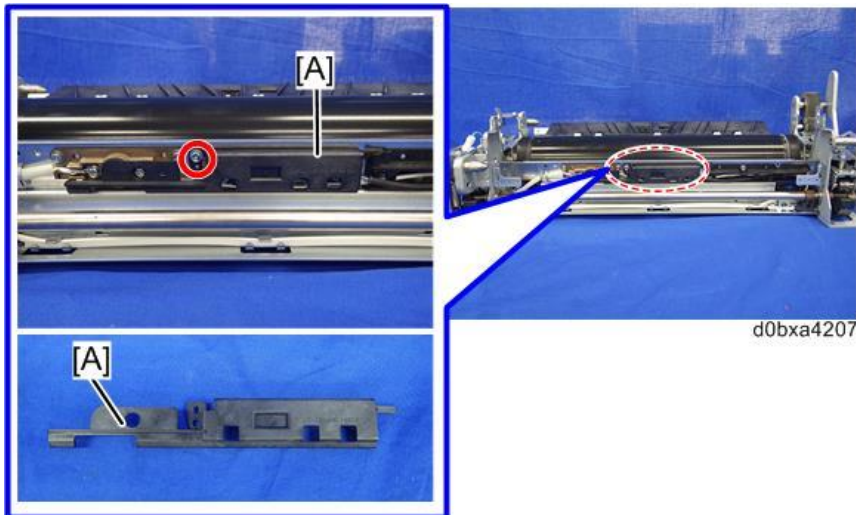
- 3.** Remove the fusing unit rear cover [A] (⊙x2).



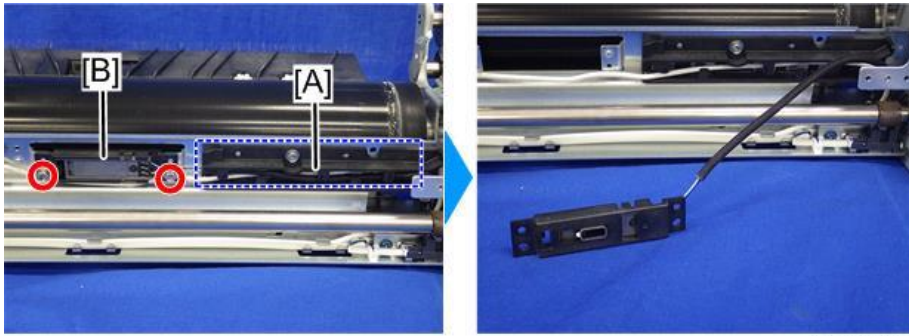
- 4.** Remove the side plate [A] (⊙x2).



- 5.** Remove the cover [A] (⊙x1).

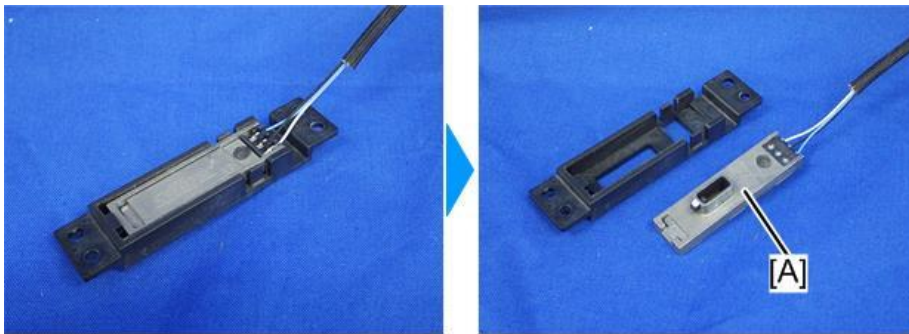


- 6.** Release the harness [A], and then pull out the NC sensor cover [B] (⊙x2).



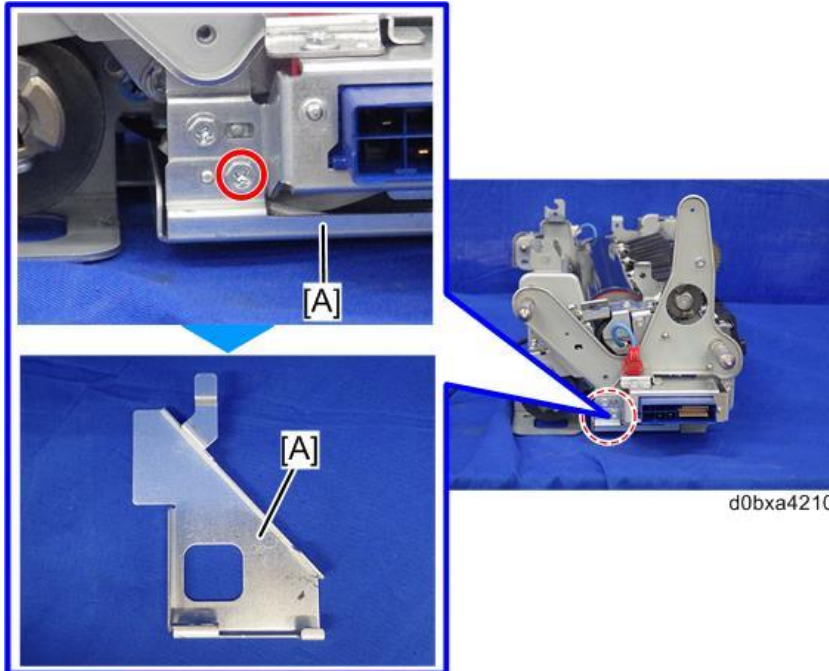
d0bxa4208

- 7.** Remove the pressure roller NC sensor [A].



d0bxa4209

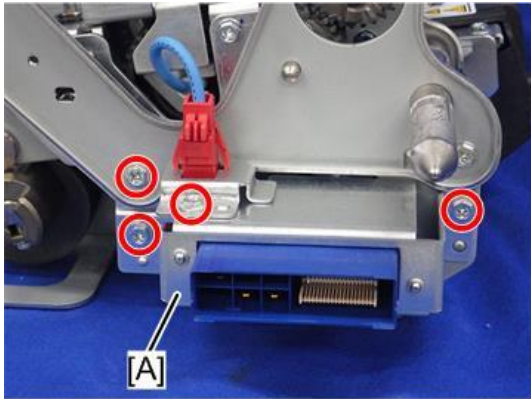
- 8.** At the rear, remove the bottom plate [A] (⊙x1).



d0bxa4210

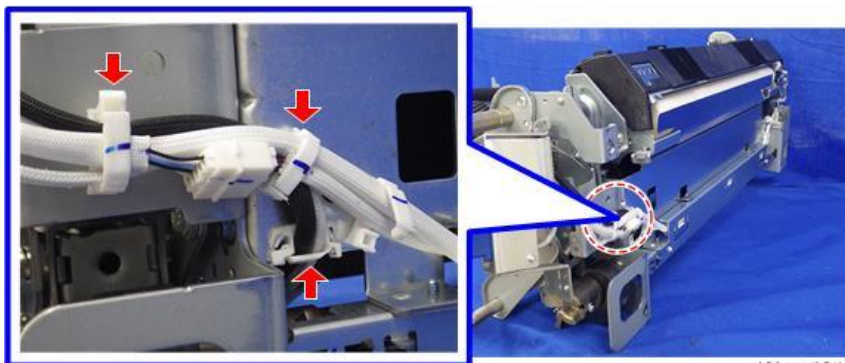
#### 4.Replacement and Adjustment

- 9.** Disconnect the rear connector bracket [A] (⚙️ x4).



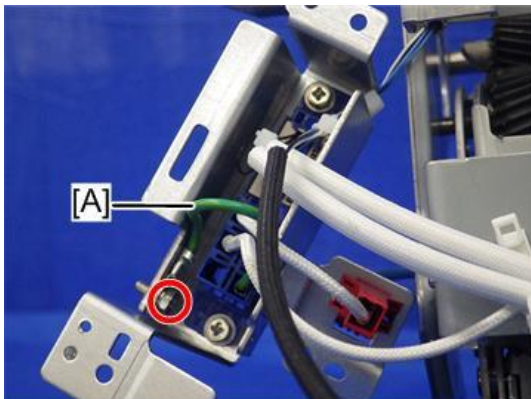
d0bxa4211

- 10.** At the rear corner, free the harnesses (⚙️ x3).



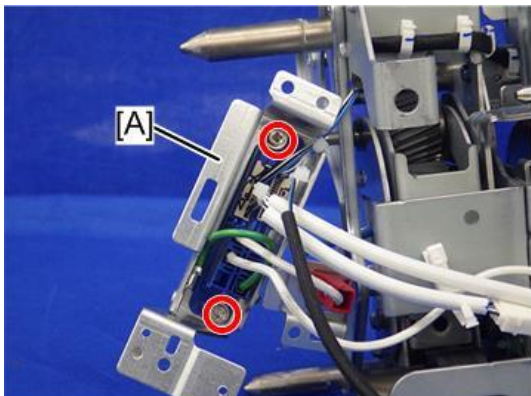
d0bxa4212

- 11.** Disconnect the ground wire [A] (⚙️ x1).



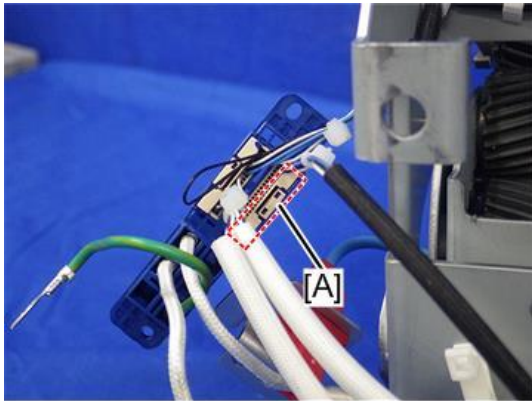
d0bxa4213

- 12.** Remove the screws on the connector bracket [A] (⚙️ x2).



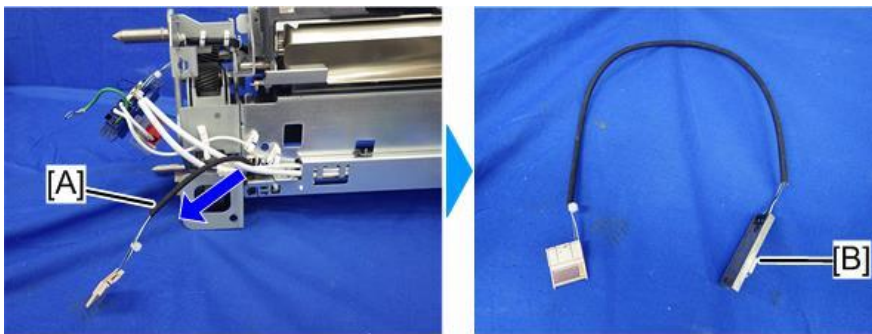
d0bxa4214

**13.** Disconnect the connector [A] (🔌 x1).



d0bxa4215

**14.** Pull the disconnected harness [A], and then remove the pressure roller NC sensor [B].

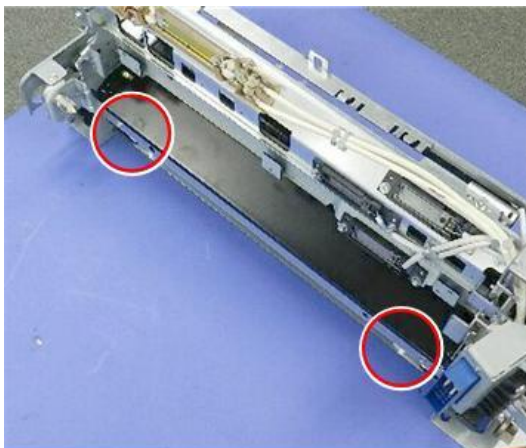


d0bxa4216

### Pressure Roller Thermostat

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**1.** Disconnect both ends of the side plate (🔩 x2).

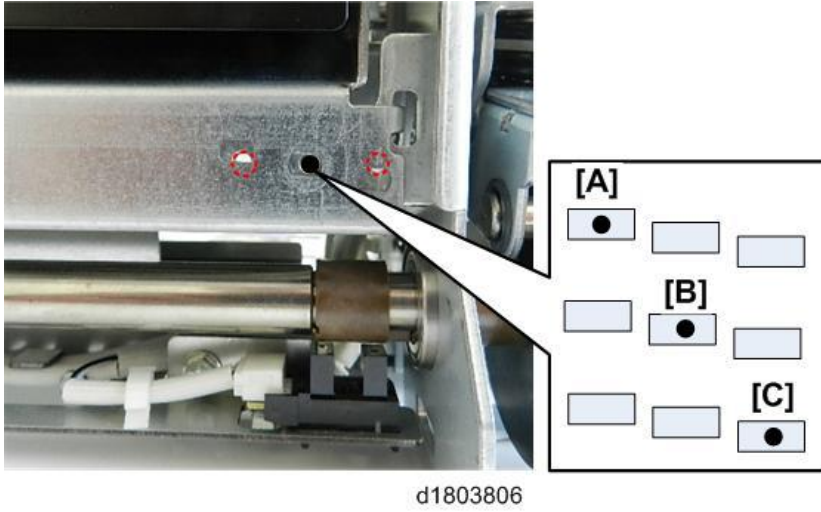


d1793870

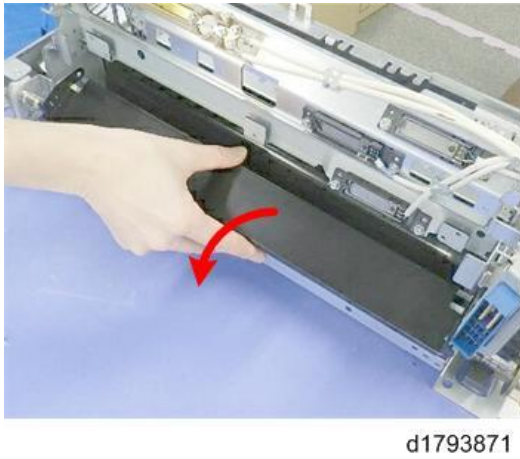
**★ Important**

- When re-installing this plate, the screw must be attached at the center hole [B]. This hole is the default position.
- The other off-set holes are used to adjust the height of the plate.

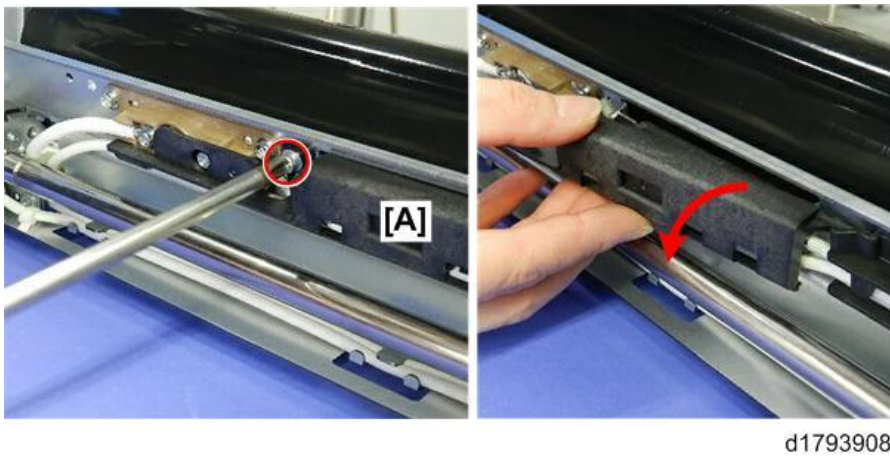
#### 4.Replacement and Adjustment



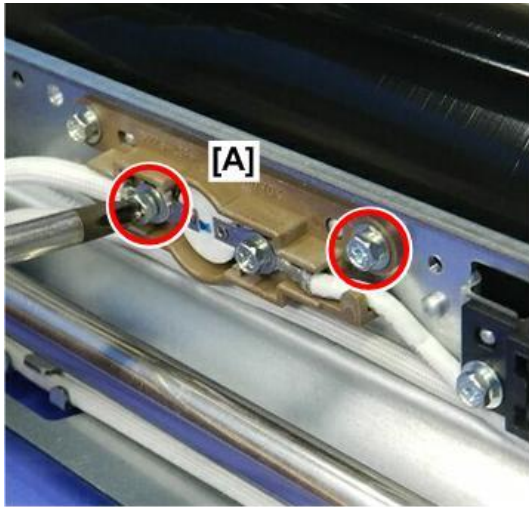
**2.** Remove the plate.



**3.** Remove the harness cover [A] (🔧x1).

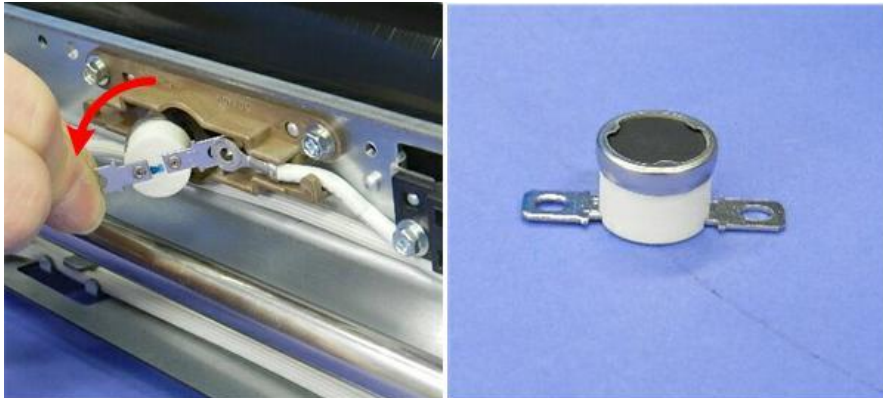


**4.** Disconnect the thermostat [A] (⊗x1).



d1793909

**5.** Remove the thermostat.



d1793910

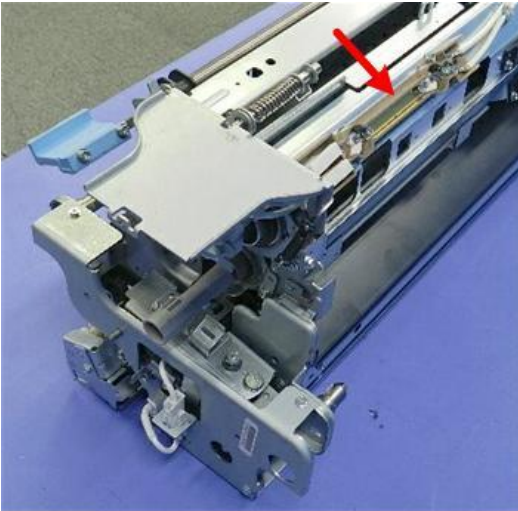
**⚠ WARNING**

- To prevent a fire, never attempt to reset a blown thermostat by manipulating the exposed edges of the black cover with a screwdriver, or by hitting it on a table.
- A thermostat that has been reset manually could fail and cause a fire.
- Always replace a blown thermostat with a new one

Heating Roller Thermostats

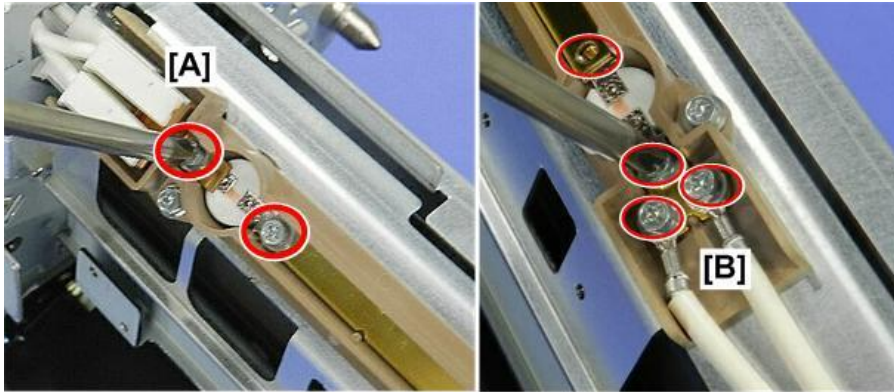
The heating roller thermostats are located on the right front side of the unit.

#### 4.Replacement and Adjustment



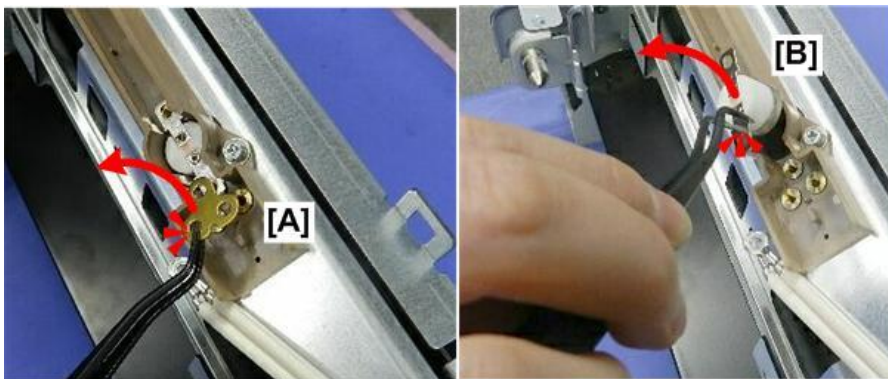
d1793911

1. Remove the thermostat and leaf screws [A] and [B] (⚙️ x6).



d1793912

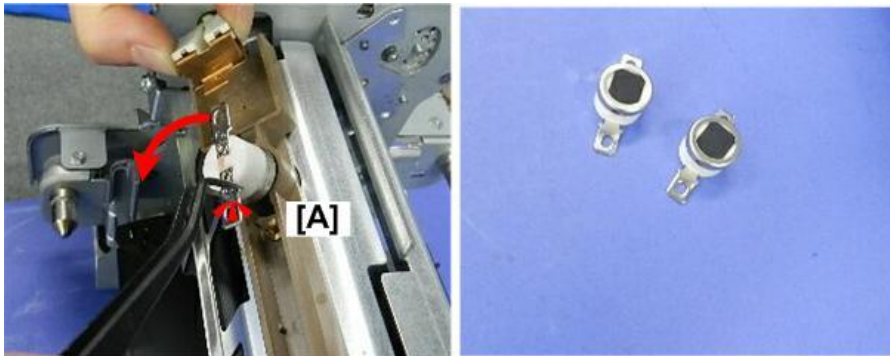
2. Remove the gold leaf [A], and then remove the center thermostat [B].



d1793913



**3.** Remove the front thermostat.



d1793914

**⚠ WARNING**

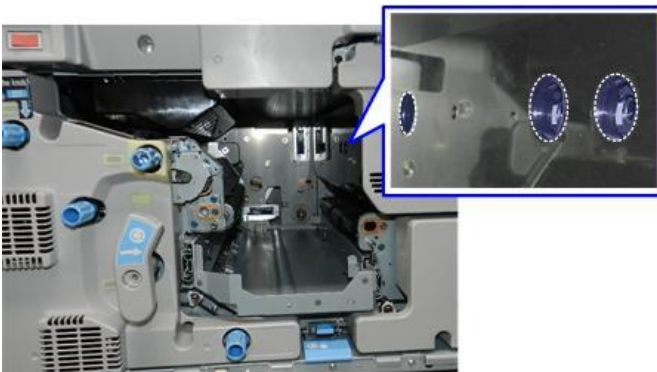
- To prevent a fire, never attempt to reset a blown thermostat by manipulating the exposed edges of the black cover with a screwdriver, or by hitting it on a table.
- A thermostat that has been reset manually could fail and cause a fire.
- Always replace a blown thermostat with a new one.

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## Thermopile

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The photo below shows the locations of the three thermopiles inside the machine with the fusing unit removed.

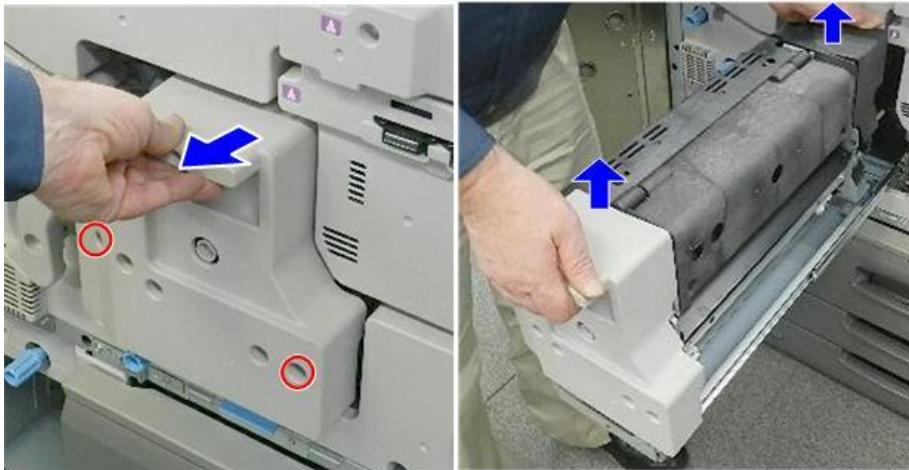


d270b3812

- 1.** Remove the rear cover. ([Rear Cover](#))
- 2.** Open the front doors.

#### 4.Replacement and Adjustment

- 3.** Remove the fusing unit (🔩 x2).



d270b4246

- 4.** Remove the power switch cover (🔩 x4).



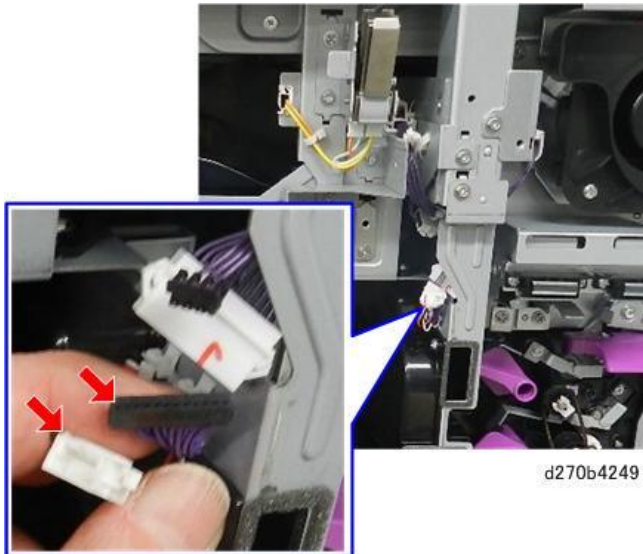
d270b4247

- 5.** Remove the ITB unit cover (🔩 x4).

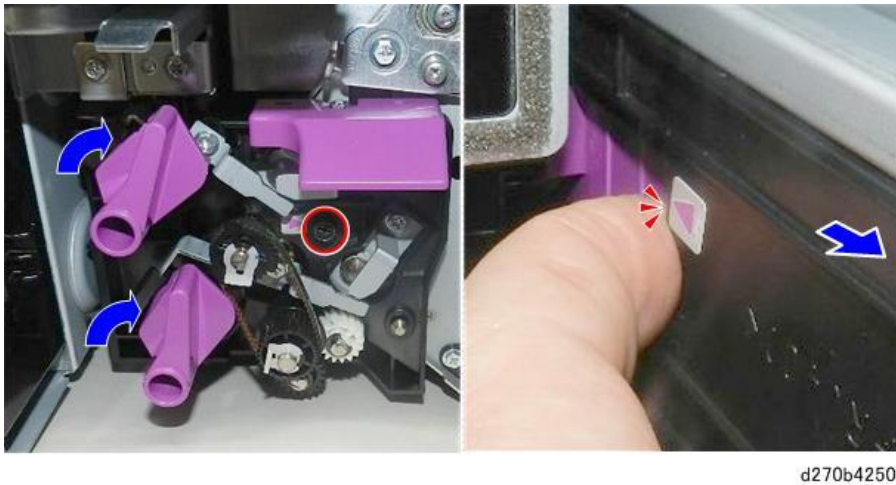


d270b4248

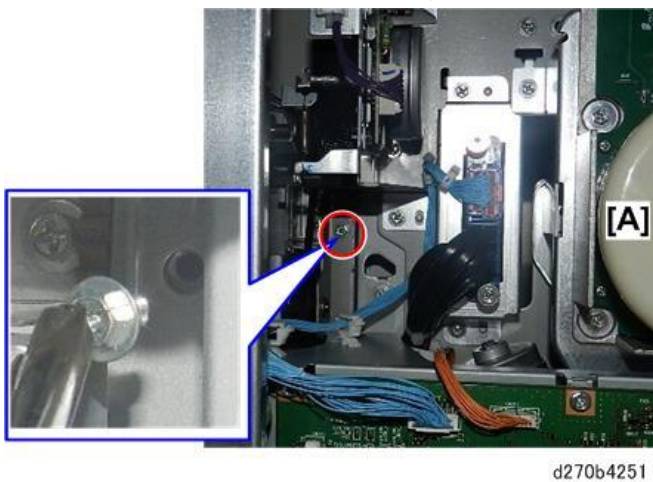
- 6.** Disconnect the thermopile unit (🔌 x2).



- 7.** Rotate the levers up, disconnect the ITB cleaning unit, and then remove it (🔌 x1).



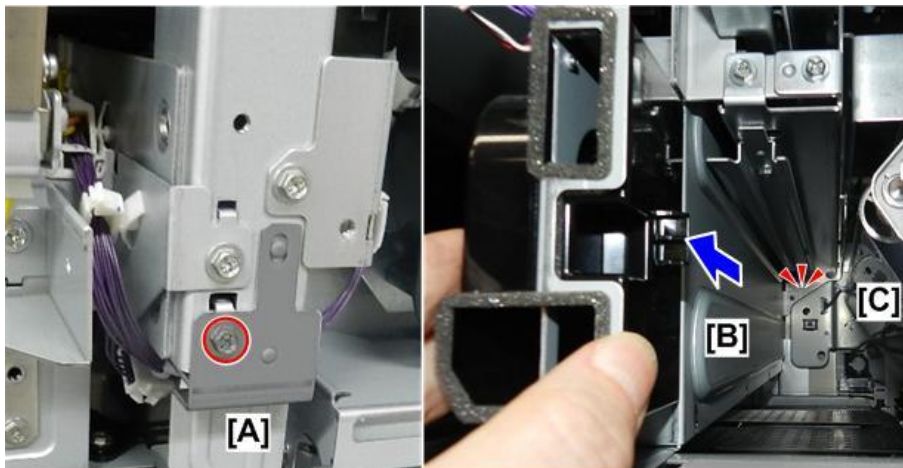
- 8.** At the back of the machine, to the left of the fusing motor [A], locate the screw holding the thermopile unit. Remove it carefully to prevent it from falling into the machine (🔧 x1).



- 9.** At the front, disconnect the bracket [A] (🔌 x1).

#### 4.Replacement and Adjustment

**10.** Pull the thermopile unit [B] forward until it is stopped by the frame of the ITB unit [C] on the right.



d270b4252

**11.** Disconnect the ITB unit [A] (⊖ x2).

**12.** Remove the lock plate [B] (⊖ x3).



d270b4253

**13.** Pull the ITB out slightly. You do not need to remove it.

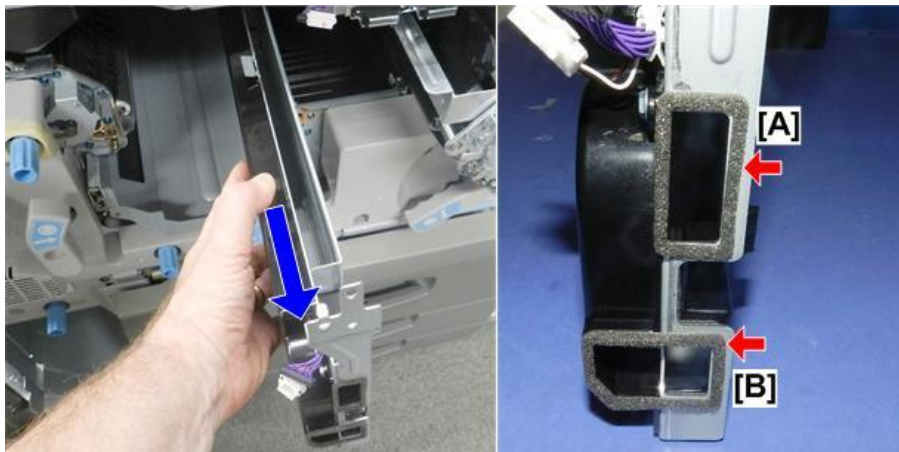


d270b4254

**14.** Pull the thermopile unit out of the machine, and then set it on a flat, clean surface.

**15.** On the front end of the unit, there are two cushion strips: one at the top [A] and one at the bottom

[B]

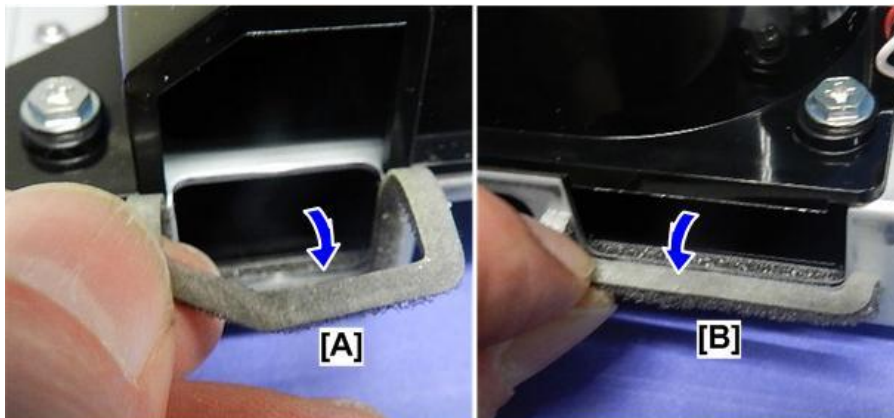


d270b4255

Carefully peel the top [A] and bottom [B] cushion strips away from the plastic cover, but do not detach them from the metal plate.

**Note**

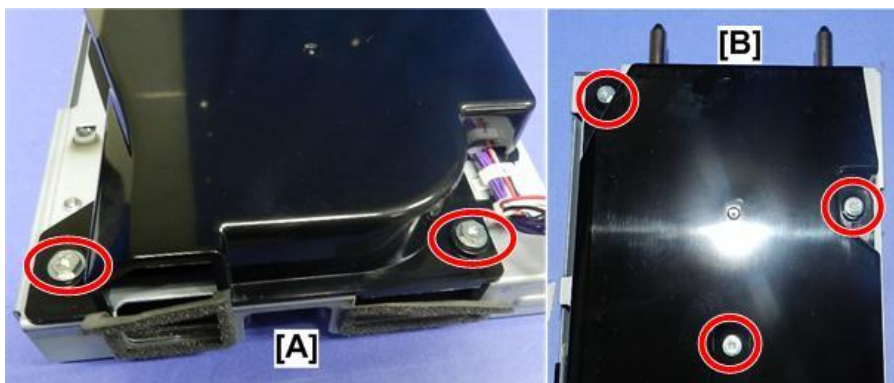
- If new cushions are available, they should be replaced.



d270b4256

**16.** Disconnect the cover at the front [A] (⊙x2).

**17.** Disconnect the cover at the rear [B] (⊙x3).

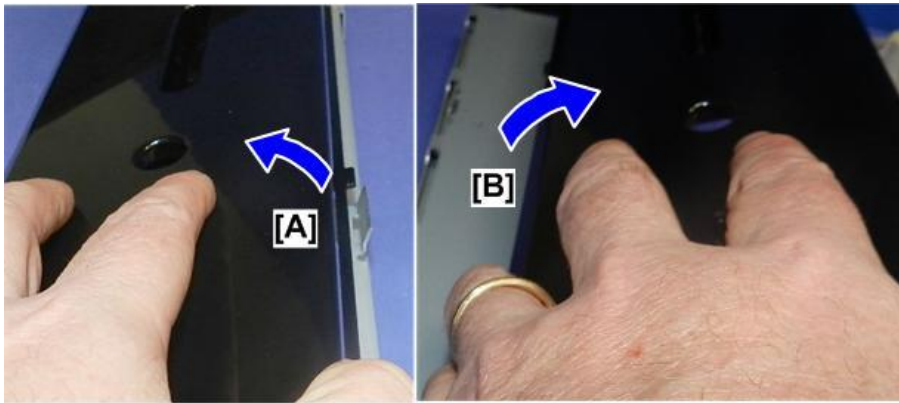


d270b4257

**18.** To remove the cover, first slide it to the left [A] to disconnect the tab on the right, and then slide it to

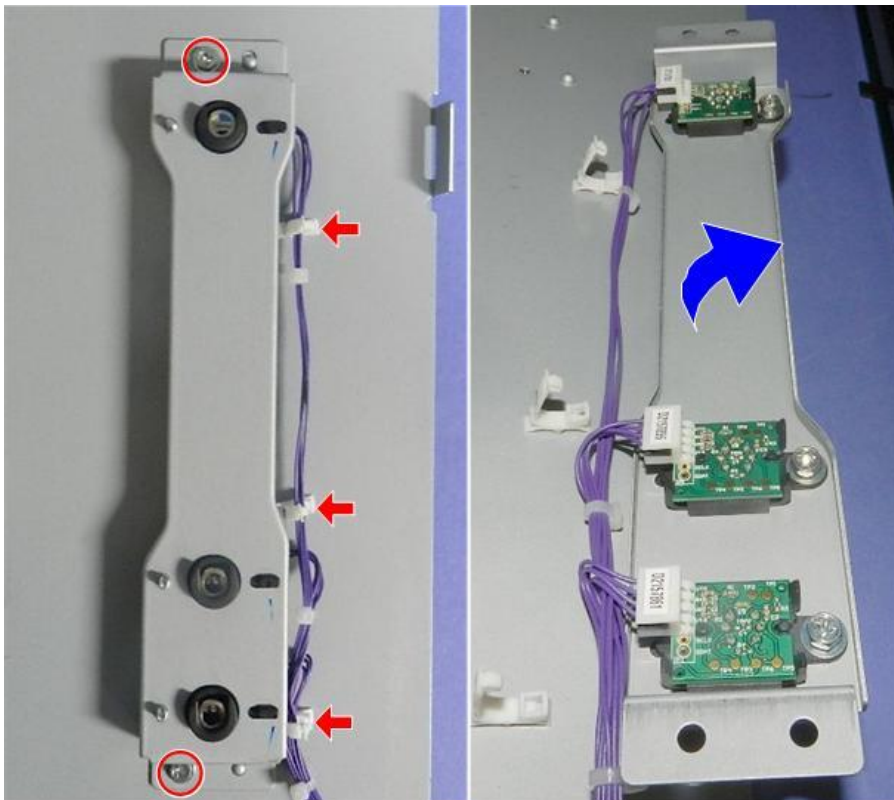
#### 4.Replacement and Adjustment

the right [B] to remove it.



d270b4258

**19.** Disconnect the harnesses and the cover plate, and then turn the plate over (🔧 x3, 🔩 x2).



🔧 x3 🔩 x2

d270b3815

**20.** Remove the thermopile (🔧 x, 🔩 x).

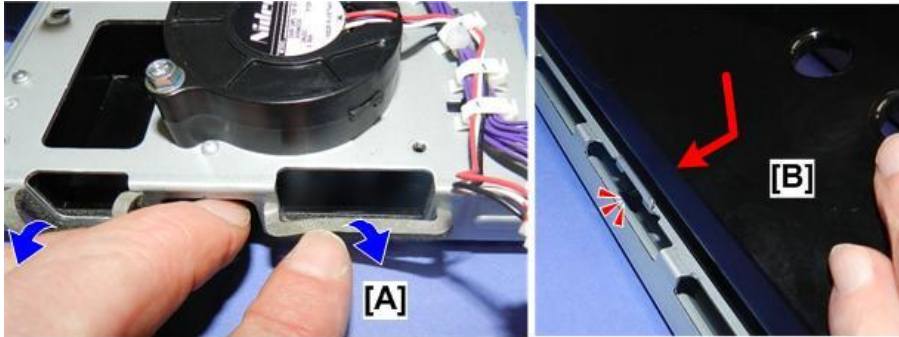


🔧 x1 🔩 x1

d270b3816

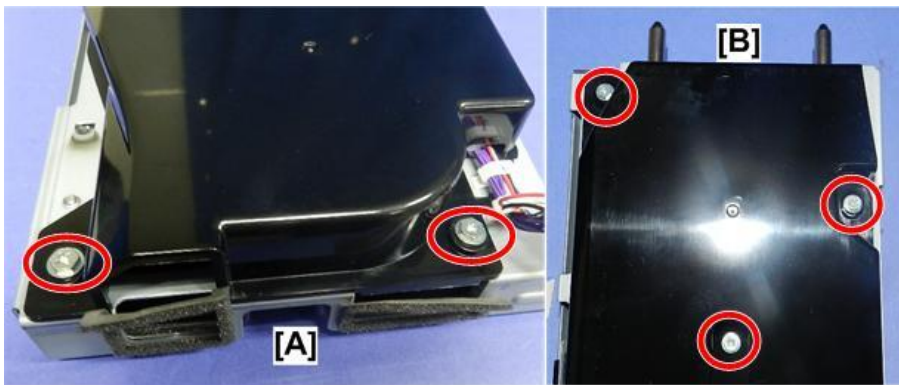
**Re-installation**

- 1.** At the front, make sure that the loose ends of the cushions [A] are down, so they will not be pinched by the cover when it is re-attached.
- 2.** Set the cover [B] on top of the unit.



d270b4260

- 3.** Fasten the cover at the front [A] and rear [B] (⌀ x5).

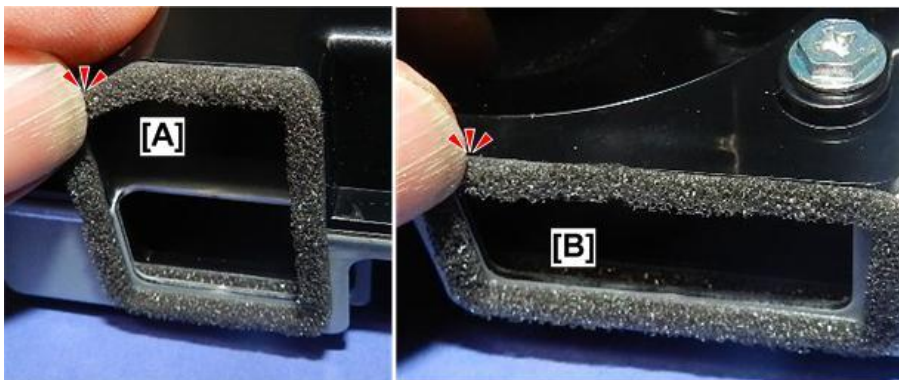


d270b4257

- 4.** Carefully press the partially detached top [A] and bottom [B] cushions onto the edge of the plastic cover.

**Note**

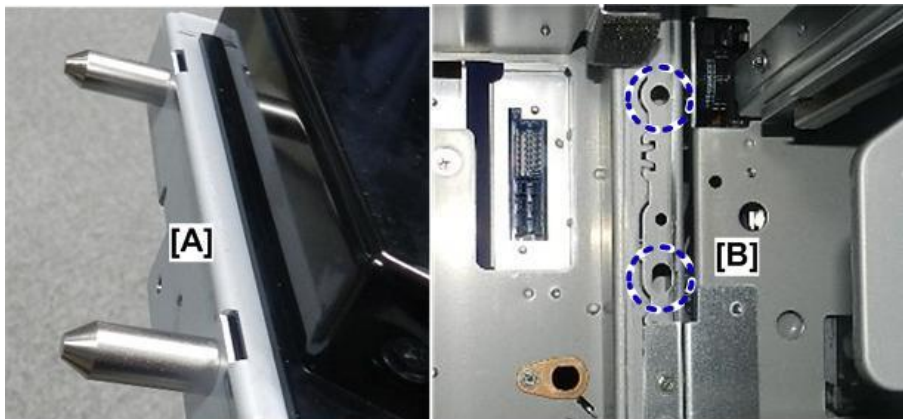
- If new cushions are available, they should be replaced.



d270b4262

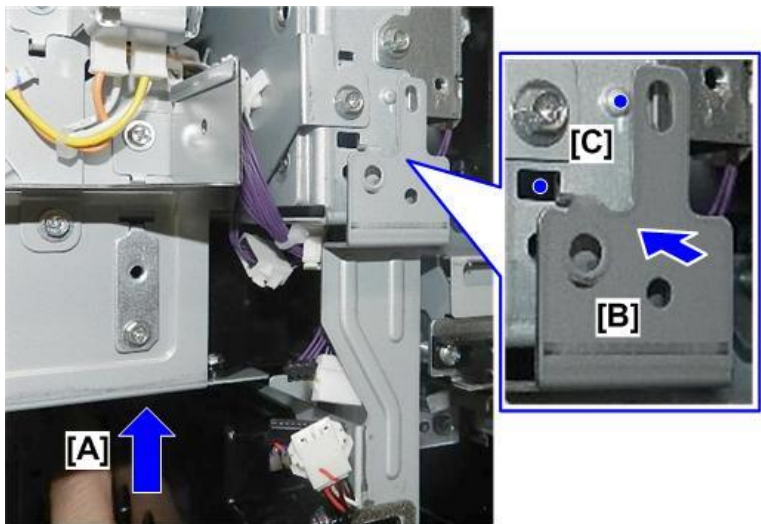
The pins on the back of the thermopile unit [A] fit into the holes [B] on the post inside the machine.

#### 4.Replacement and Adjustment



d270b4263

- 5.** To set the unit, support the bottom of the unit [A] with your left hand as you slide it slowly into the machine.
- 6.** Using your right hand, align the hook and hole of the bracket [B] with the hole and boss on the machine [C]. This should align the pins at holes at the back.
- 7.** Slowly push the unit into the machine until you feel the pins slide into the holes at the rear.

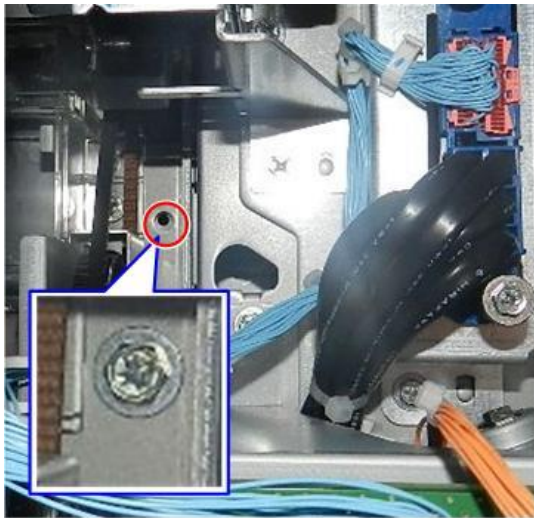


d270b4264

- 8.** At the back of the machine, make sure the unit and hole are aligned correctly, and then re-fasten

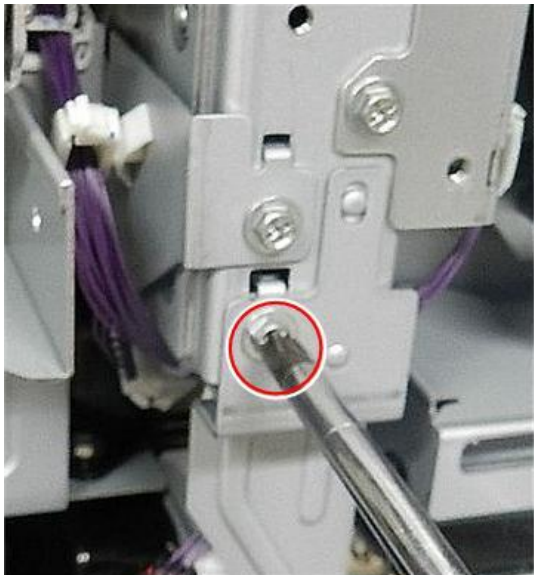


the screw (🔩x1).



d270b4265

**9.** At the front, fasten the bracket (🔩x1).



d270b4266

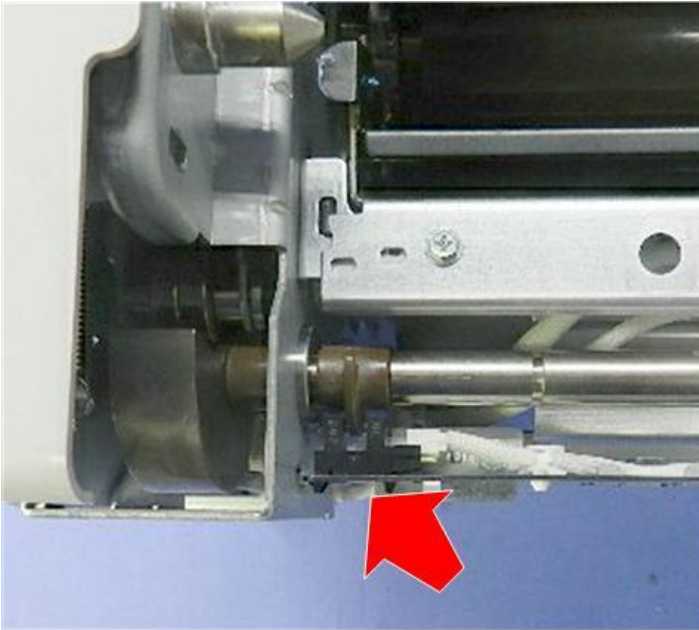
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## Pressure Roller Lift Sensors

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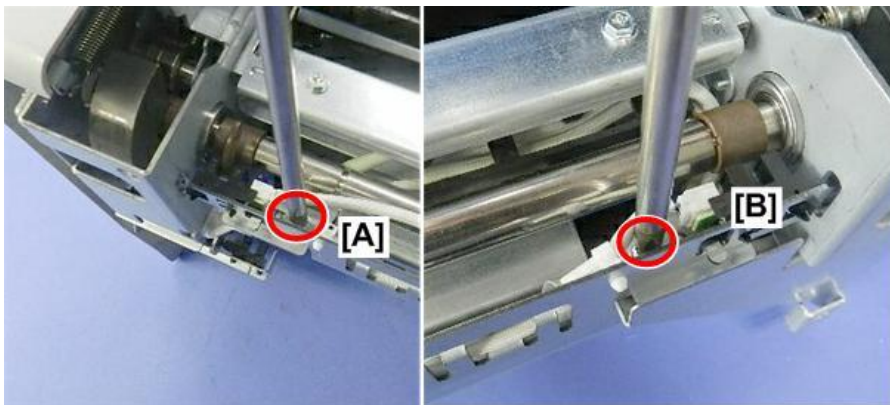
Both lift sensors are visible at the right bottom of the fusing unit.

#### 4.Replacement and Adjustment



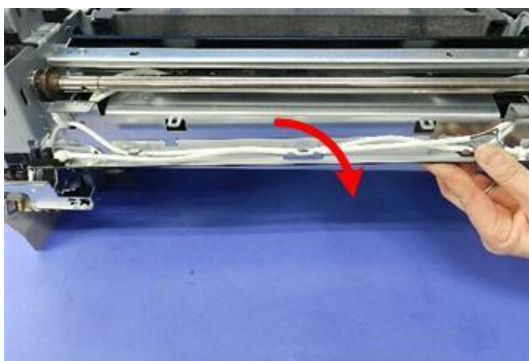
d1793915

- 1.** Disconnect both ends of the sensor bracket at the front [A] and rear [B] (⊗x2).



d1793916

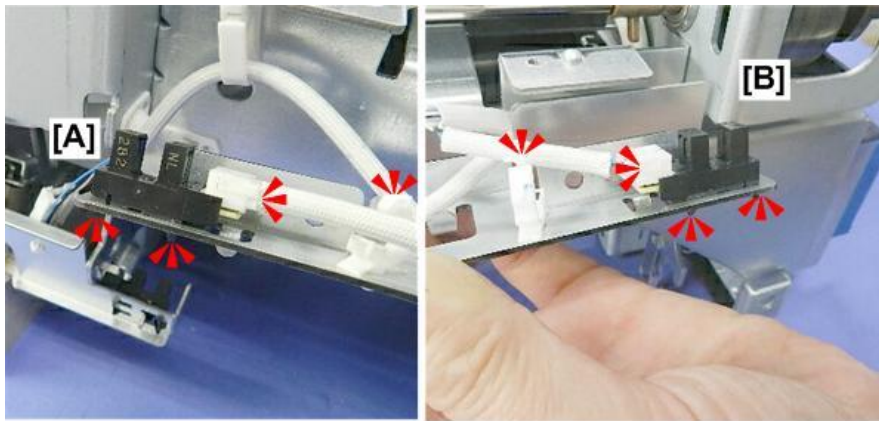
- 2.** Pull the sensor bracket away from the side of the unit.



d1793917

- 3.** Disconnect the front sensor [A] (⊗x1, ⊞x1, ▼x3).

- 4.** Disconnect the rear sensor [B] (🔧x1, 📦x1, ▼x3).



d1793918

### Fusing Motor, Pressure Roller Lift Motor

**★ Important**

- The fusing motor and pressure roller lift motor are together behind the EDRB bracket at the back of the machine.

### Remove the EDRB Bracket

- 1.** Open the controller box ([Opening the Controller Box \(Copier Models\)](#))
- 2.** Remove the left rear cover ([Rear Cover](#))
- 3.** Remove the vertical stay [A] (🔧x3).
- 4.** Free the harnesses on the right edge of the EDRB [B] (🔧x2).

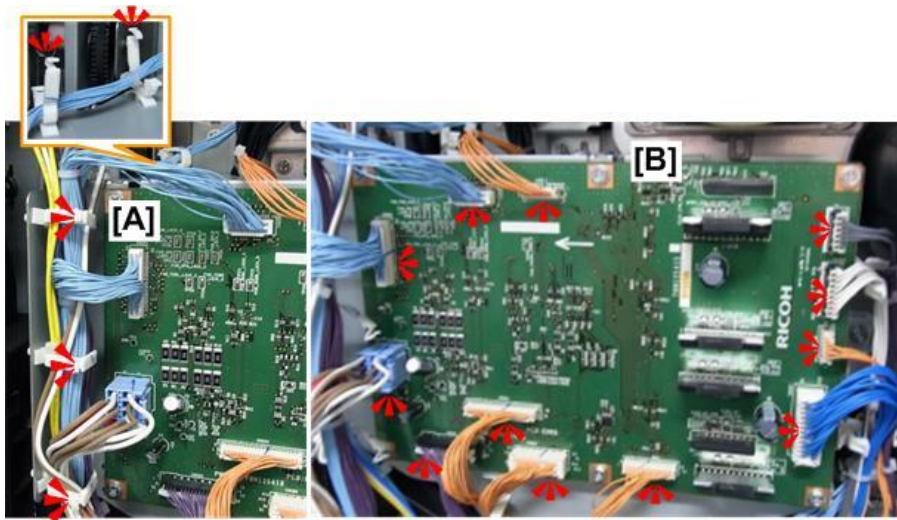


d270b3919

- 5.** Free the other harnesses on the left edge and top left corner of the EDRB [A] (🔧x5).

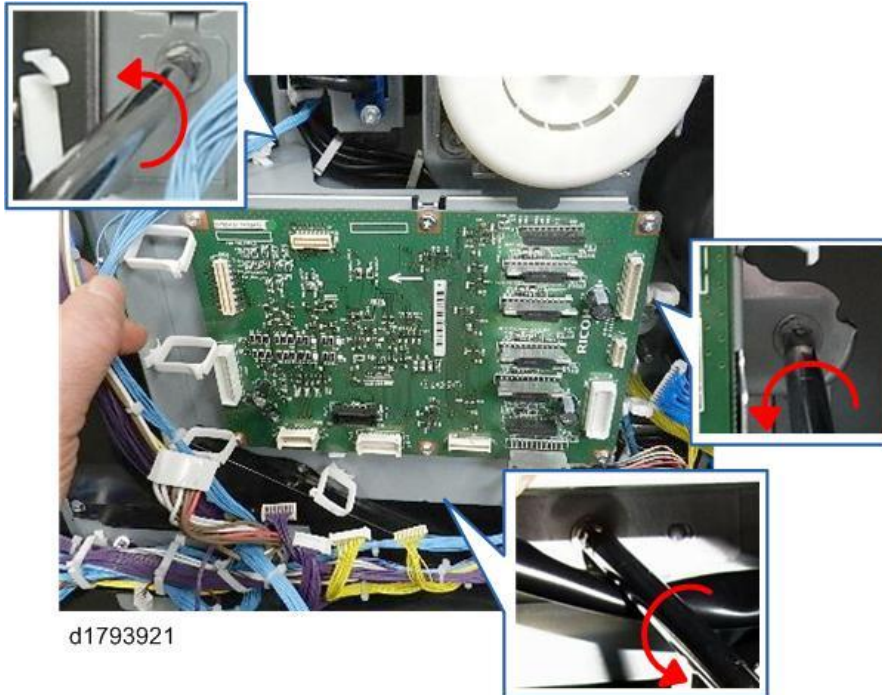
#### 4.Replacement and Adjustment

**6.** Disconnect the EDRB [B] (📦 x12).



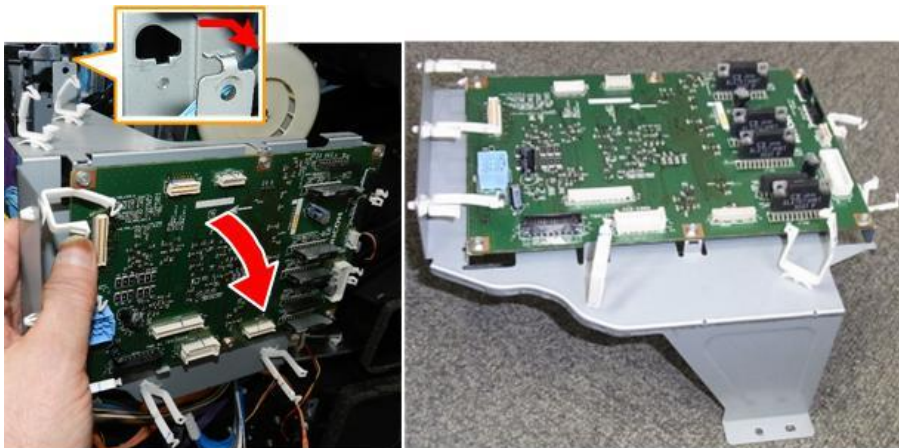
d270b3920

**7.** Unfasten the EDRB bracket (🔩 x3).



d1793921

- 8.** Unhook and remove the EDRB bracket (with PCB attached), and then lay it on a flat clean surface.

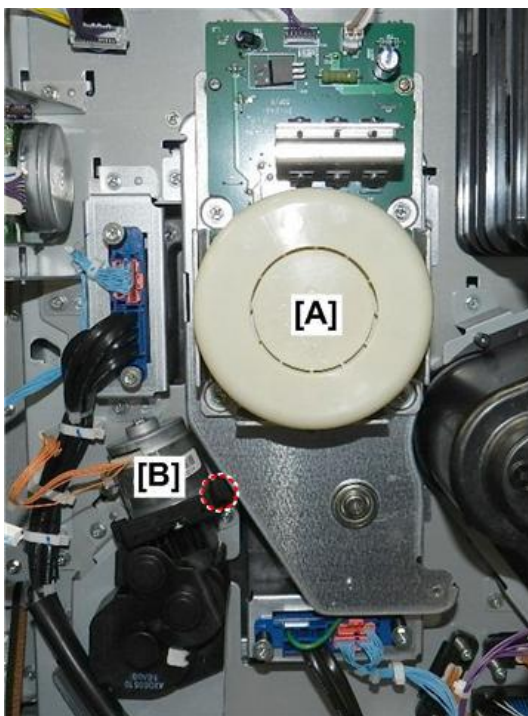


d270b3922

### Fusing Motor

- 1.** Remove the EDRB bracket (⌚ x4). ([Remove the EDRB Bracket](#))

One screw of the fusing motor [A] is blocked by the collar of the pressure roller lift motor [B] (which must be removed).

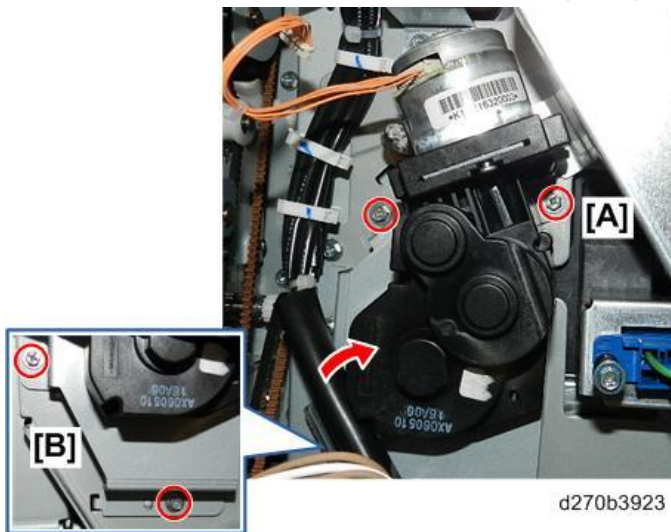


d270b3927

- 2.** Remove the upper screws [A] of the pressure roller lift motor bracket (⌚ x2).

#### 4.Replacement and Adjustment

- 3.** Remove the lower screws [B] on the bracket (🔩 x2).

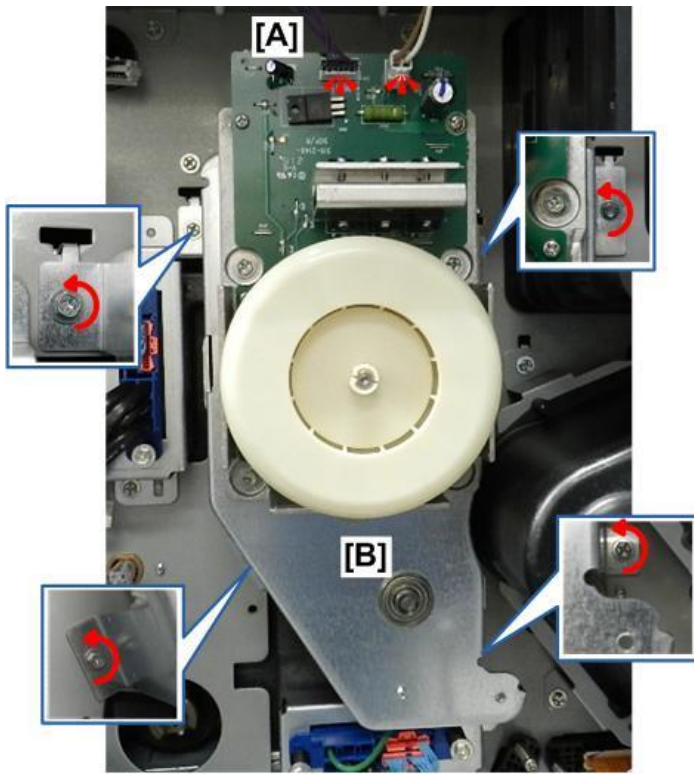


- 4.** Unhook the bracket at the upper left corner [A], and then remove the bracket with motor attached. (🔧 x1)



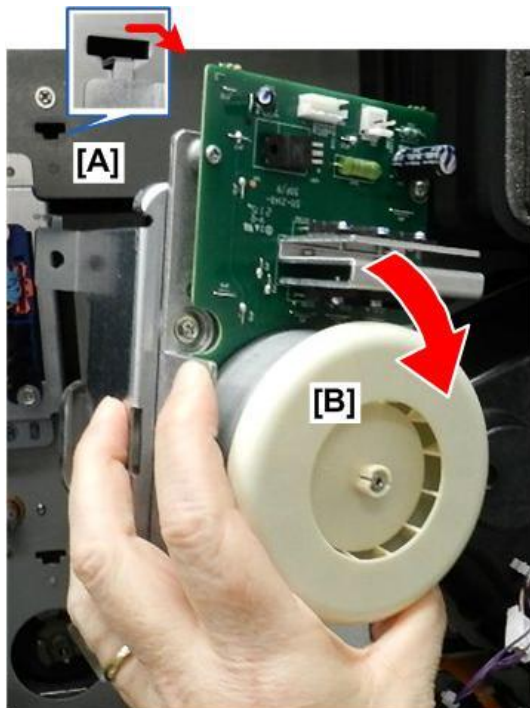
- 5.** Disconnect the top edge of the fusing motor drive board [A] (🔧 x2).

- 6.** Disconnect each corner of the fusing motor bracket [B] (⚙️x4).



d270b3925

- 7.** Unhook the bracket at the upper left corner [A], and then remove the bracket with motor attached (⤴️x1).



d270b3926

#### 4.Replacement and Adjustment

**8.** Unfasten the motor (🔩x4).



d1793926

**9.** Separate the motor and the bracket.



d1793927



- 10.** Before re-installation, lubricate the fusing motor drive gear.

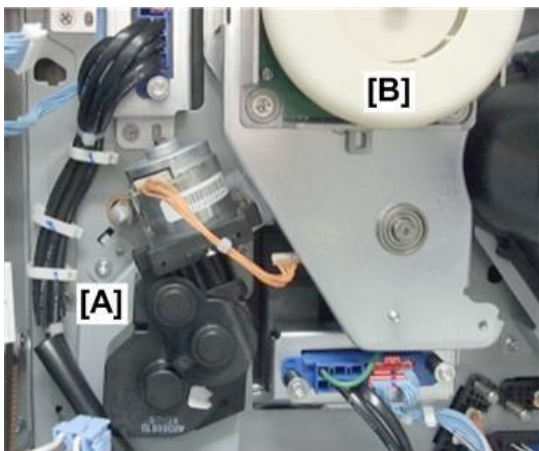


d1793928

#### Pressure Roller Lift Motor

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- 1.** Remove the EDRB ([Remove the EDRB Bracket](#))  
The pressure roller lift motor [A] is below the fusing motor [B].

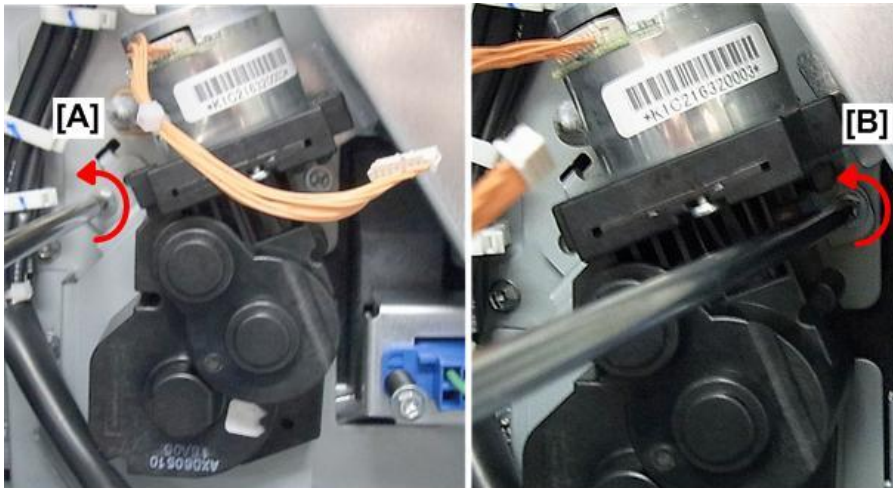


d270b3929

- 2.** Unfasten the bracket at the upper left corner [A] (Ⓜ x1).

#### 4.Replacement and Adjustment

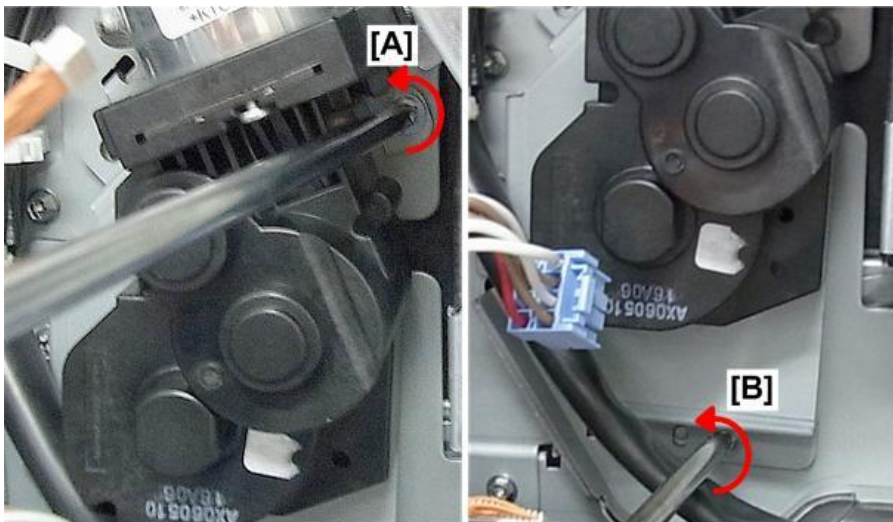
- 3.** Unfasten the bracket at the upper right corner [B] (⊙x1).



d270b3930

- 4.** Unfasten the bracket at the right edge [A] (⊙x1).

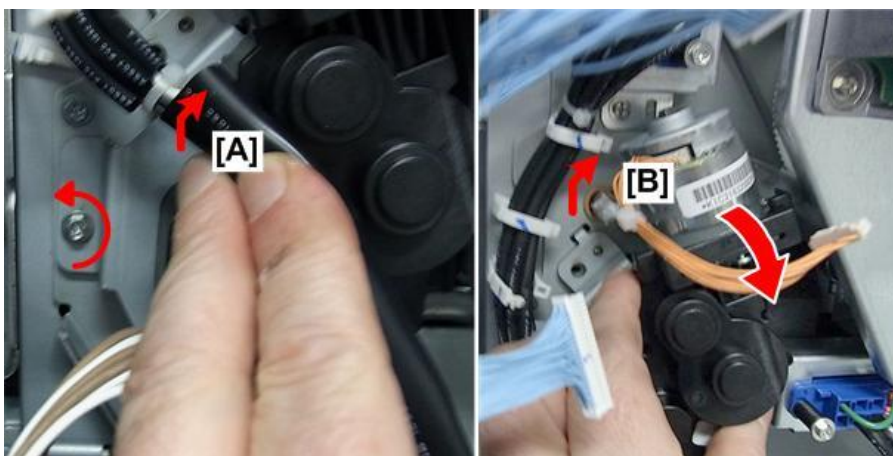
- 5.** Unfasten the bracket at the upper bottom edge [B] (⊙x1).



d270b3931

- 6.** Push aside the harness [A] and unfasten the bracket at the lower left corner (⊙x1).

- 7.** Unhook the motor bracket [B] and then remove the bracket with motor attached (▼x1).



d270b3932

### 8. Remove the motor (✎x2).



d270b3933

### Re-installation

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1. After reattaching the EDRB, pull the pressure roller lift motor harness out from behind the board, and then re-connect it to the board.



d270b3935

### Fusing Cleaning Unit

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#### ↓ Note

- Prepare a clean, flat surface to place the fusing cleaning unit after you remove it.
- To make servicing the unit easier, the rollers and web of the fusing unit can be removed independently. You do not need to remove the contact roller in order to replace the web, or vice versa.

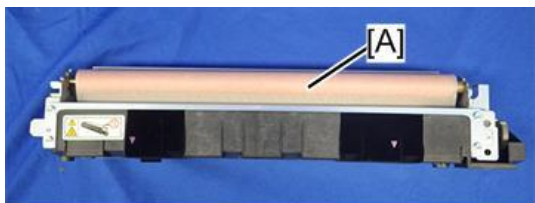
### Cleaning Unit Rollers

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This section describes how to remove the web take-up roller, sponge contact roller, and web supply roller.

#### 4.Replacement and Adjustment

1. Prepare a flat, clean surface where you can lay the rollers after removal.
2. Remove the fusing unit. ([Removing the Fusing Unit](#))
3. Remove the web cleaning unit [A] from the side of the fusing unit. ([Removing the Fusing Cleaning Unit](#))

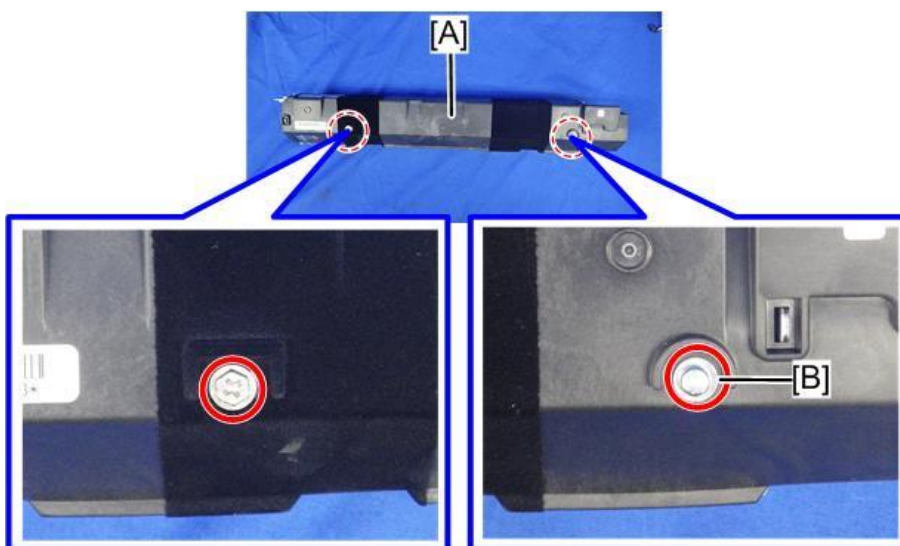


d0bxa4203

4. Remove the rear screws of the web cleaning unit [A] (⌀ x1, ⌀x).

**Note**

- Screw [B] is on the rear side, with the washer.



d0bxa4204

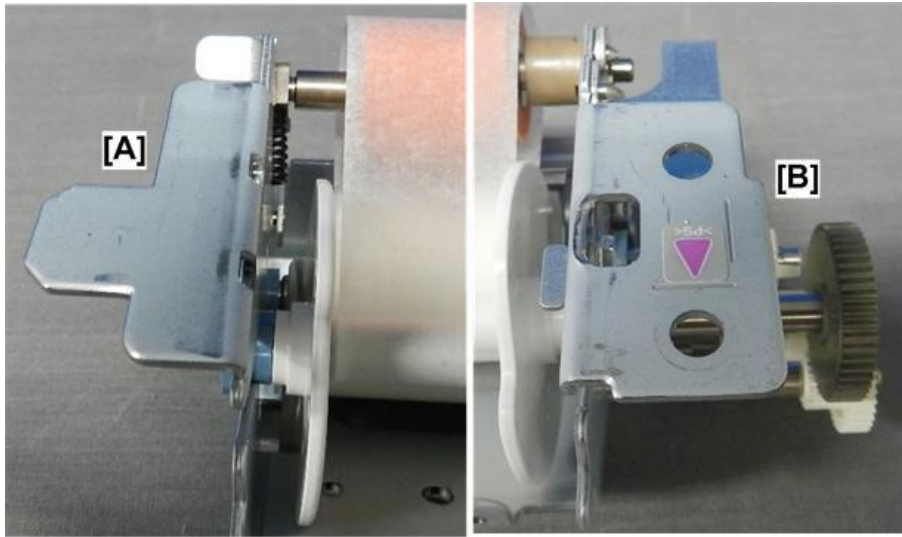
5. Remove the cover [A].



d0bxa4205

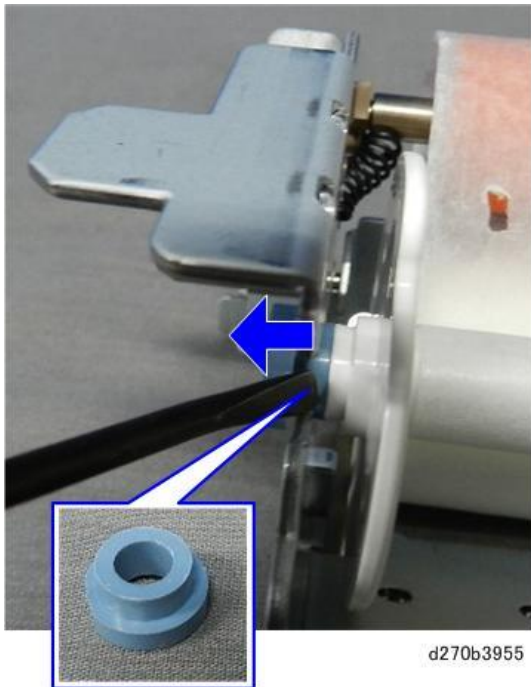
Note

- [A] is the rear of the cleaning unit, and [B] is the front of the cleaning unit.



d270b3954

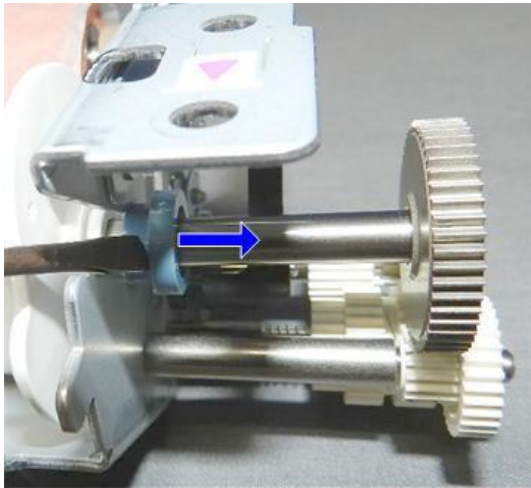
6. Remove the bushing from the rear end of the take-up roller.



d270b3955

#### 4.Replacement and Adjustment

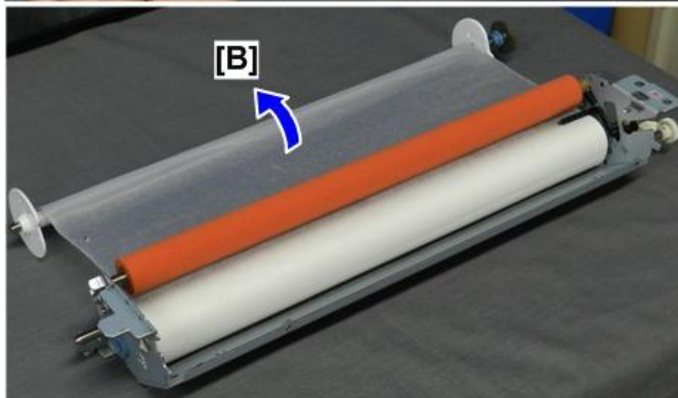
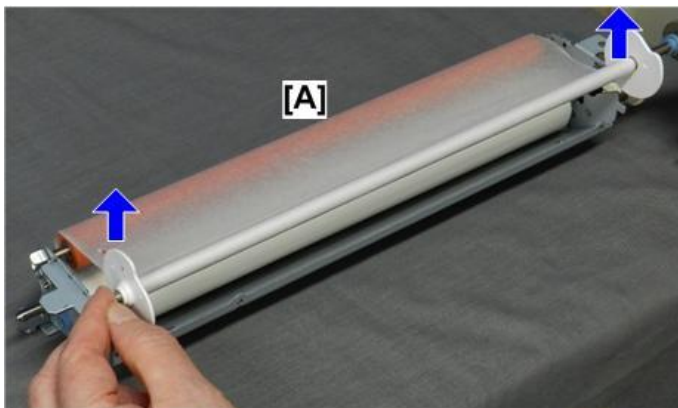
- 7.** Push out the bushing from the front end of the take-up roller.



d270b3956

- 8.** Lift the take-up roller [A] up.

- 9.** Rotate the roller and web [B] away from the top of the sponge contact roller, and then set it down.



d270b3957

- 10.** Remove the retaining ring from the rear end of the take-up roller.

**★ Important**

- The stepped flanges of the rear ring point outwards. The ring must be re-installed in the

same way.

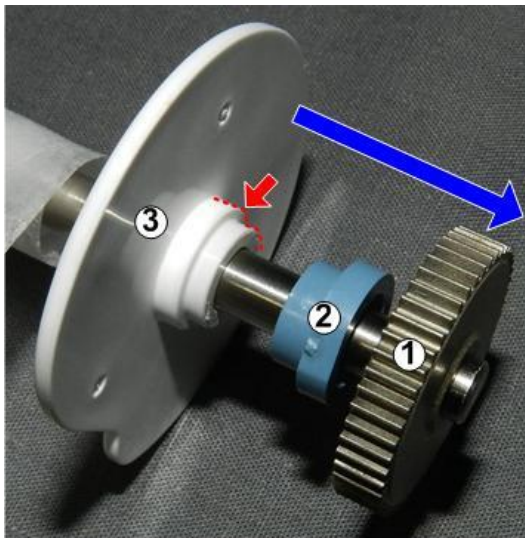


d270b3958

**11.** From the front end of the take-up roller, remove the gear (1), bushing (2), and retaining ring (3).

**★ Important**

- The stepped flanges of the front ring also point outwards. The ring must be re-installed in the same way.



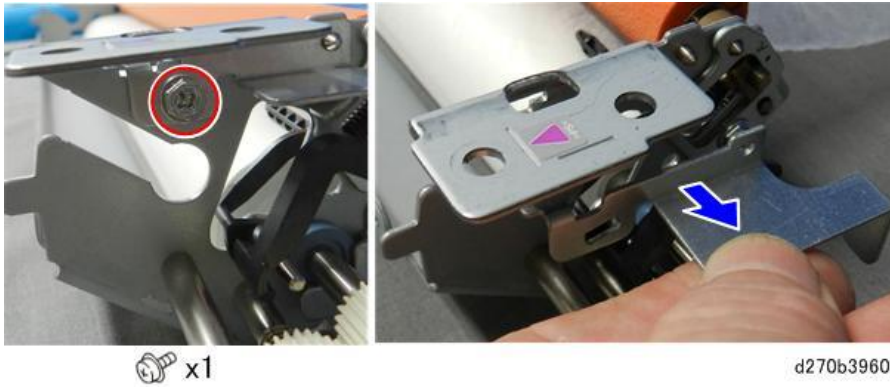
d270b3959

**↓ Note**

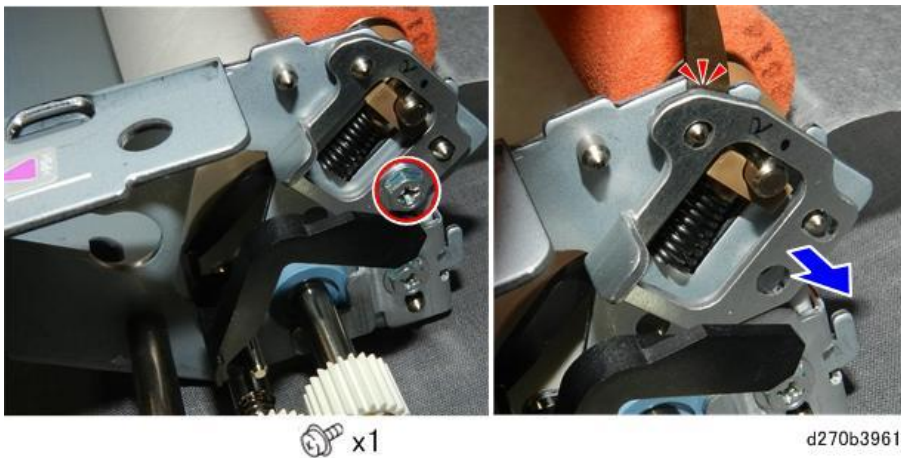
- The sponge contact roller does not need to be removed when you replace the cleaning web.

#### 4.Replacement and Adjustment

**12.** At the front, remove the retaining bracket (🔩x1).



**13.** Disconnect and remove the lock bracket from the front end of the contact roller (🔩x1).

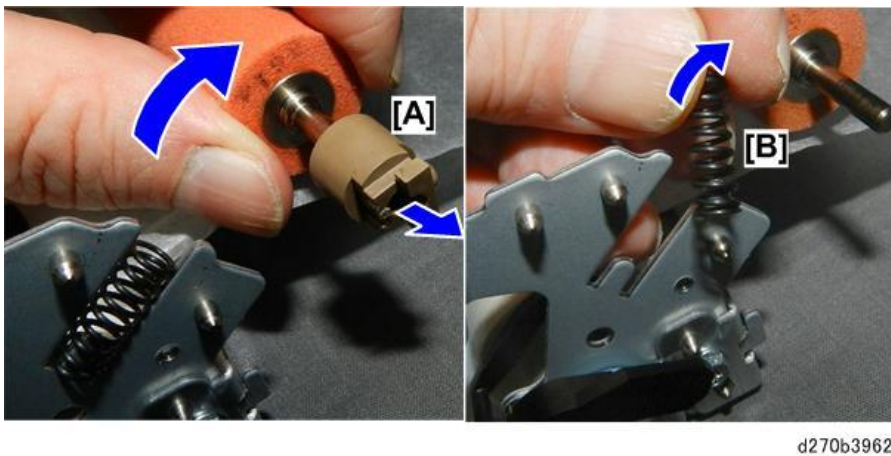


**14.** Disconnect the front end of the contact roller, and then remove the bushing [A] from the end of the roller.

**15.** Remove the spring [B].

**★ Important**

- When re-installing, the large bushing [A] must be re-attached to the front end of the contact roller.



**16.** Disconnect and remove the lock bracket [A] from the front end of the contact roller.

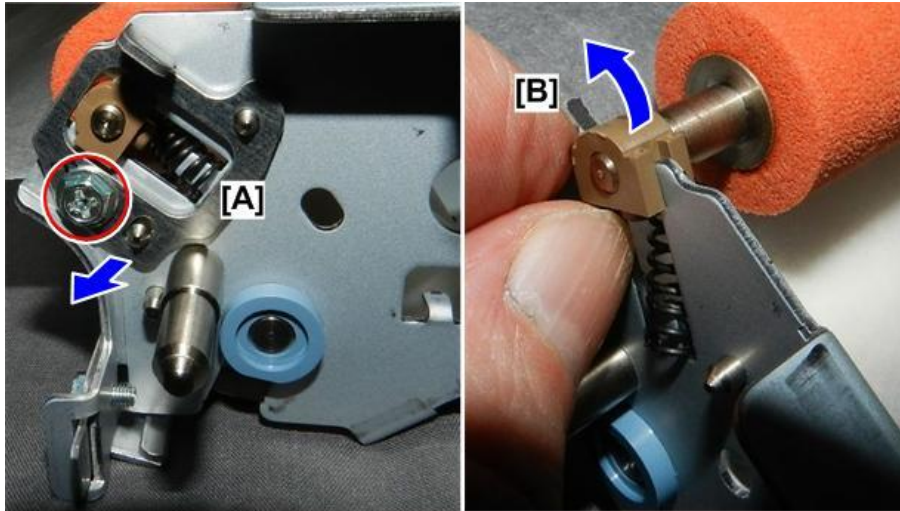
**17.** Disconnect the rear end of the contact roller, and then remove the bushing [B] from the end of the



roller (🔩x1).

★ Important

- When re-installing, the small bushing [B] must be re-attached to the rear end of the contact roller.



🔩 x1

d270b3963

**18.** Remove the spring.



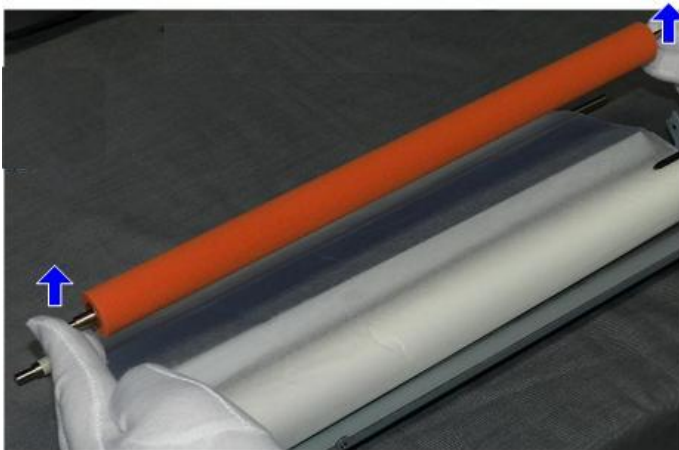
d270b3964

★ Important

- Avoid touching the surface of the sponge contact roller with bare hands.

#### 4.Replacement and Adjustment

**19.** Lift and remove the contact roller, and then lay it on a flat, clean surface.

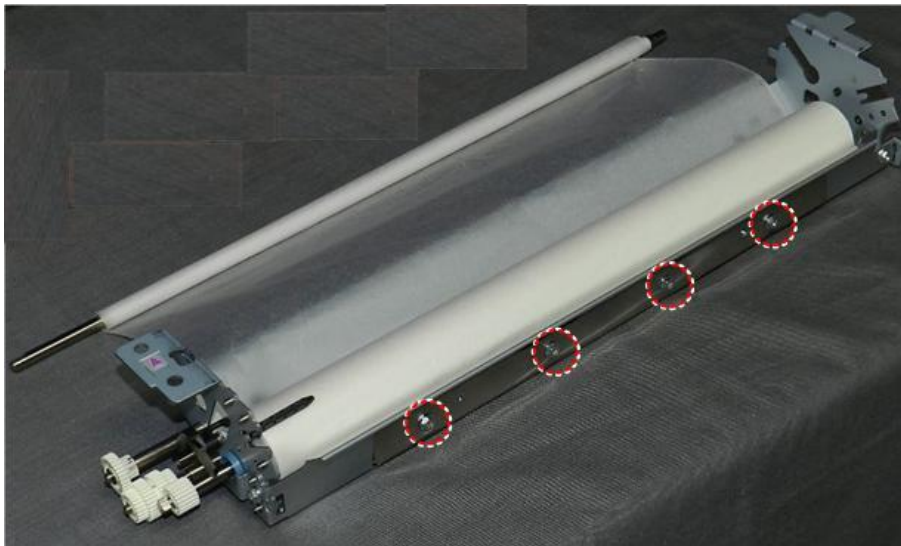


d270b3965

**20.** Loosen (do not remove) the screws of the web supply roller pressure plate.

**Note**

- Loosening these screws makes removal and re-attachment of the plate easier.



d270b3966

#### 4.Replacement and Adjustment

- 21.** At the rear end of the supply roller, disconnect the rear end of the pressure plate (🔩 x1).

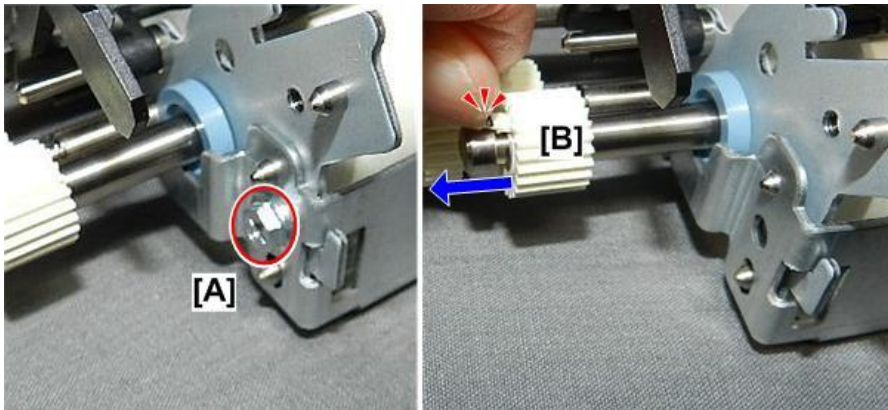


🔩 x1

d270b3967

- 22.** At the front end of the supply roller, disconnect the front end of the pressure plate [A] (🔩 x1).

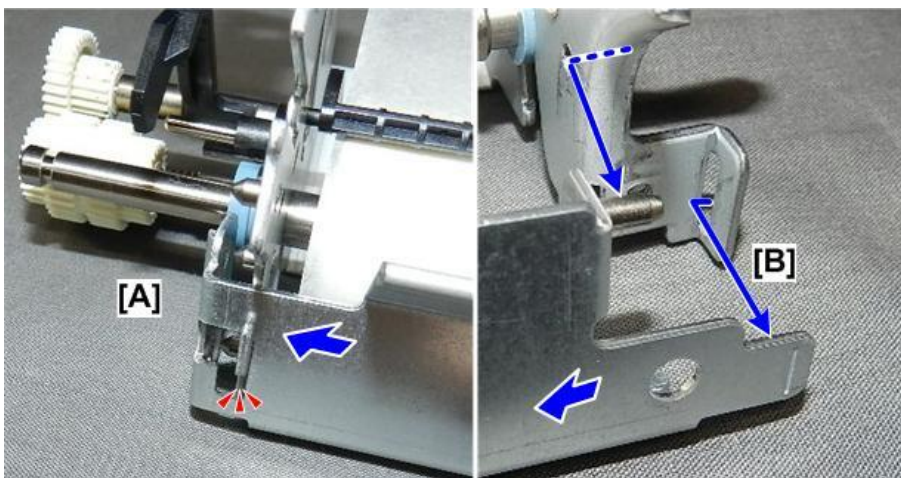
- 23.** Lift the release catch of gear [B], and then remove the gear from the front end of the supply roller shaft.



🔩 x1

d270b3968

- 24.** Push the pressure plate [A] to the left to release the pin and flat tab [B] on the rear end of the plate.



d270b3969

- 25.** Remove the bushing [A] from the front end of the supply roller.

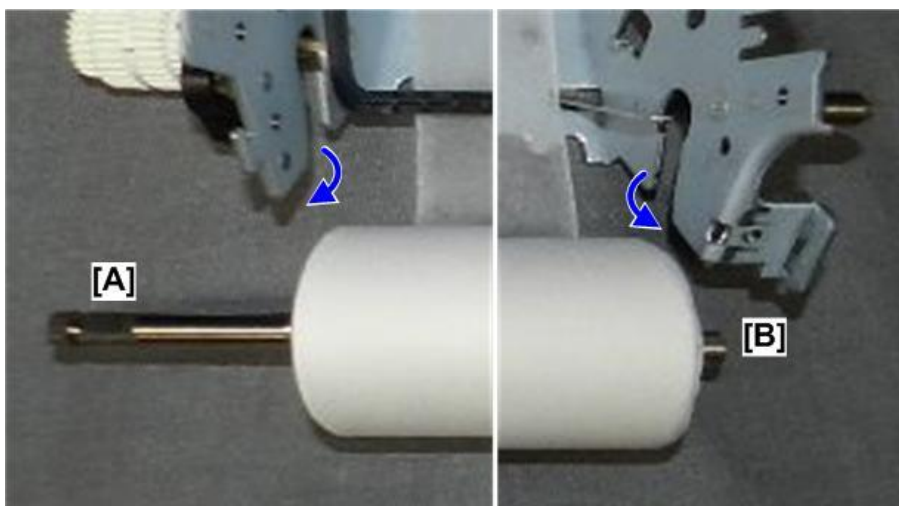
#### 4.Replacement and Adjustment

**26.** Remove the bushing [B] from the rear end of the supply roller.



d270b3970

**27.** Remove the front end [A] and rear end [B] of the supply roller from the cleaning unit.



d270b3971

#### Re-Installation Tips

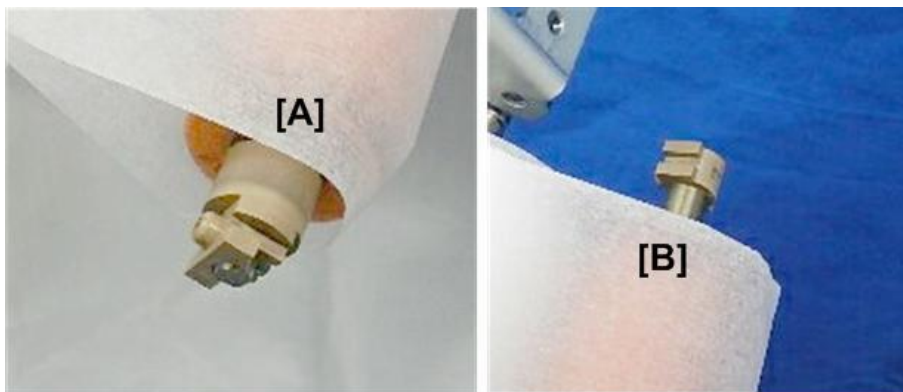
1. Arrange the front ends [A] and rear ends [B] of the rollers as shown below.



d270b3972

2. The bushings of the contact roller are not the same. The front bushing [A] is larger than the rear

bushing [B].



d1793969

3. After re-assembling the cleaning unit, be sure to tighten the screws of the supply roller pressure plate.



d270b3973

4. Before you re-attach the cleaning unit cover, check the bushings [A] and make sure that they are installed correctly.

**★ Important**

- The rear plate of the cover holds these bushings in place. If the bushings are not set correctly, the cover will not be aligned with the tabs and screw holes.
- If the cover is not straight, remove it and check the setting of these bushings on the rear ends of the roller shafts.



d270b3974

Web End Sensor

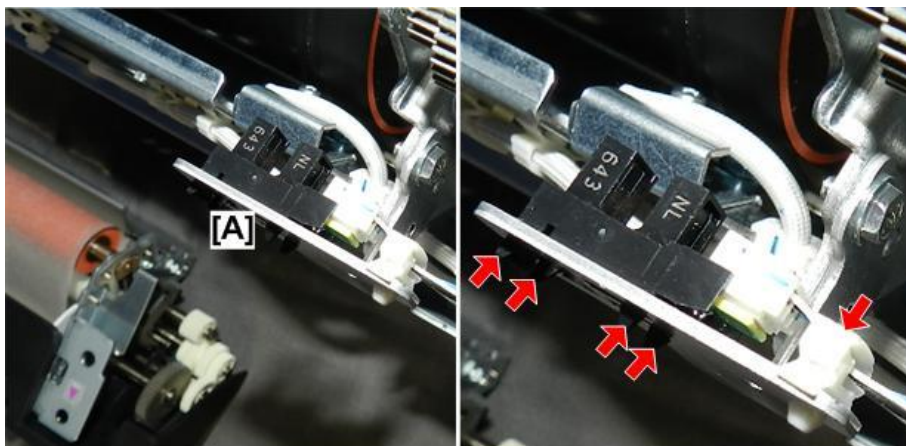
1. Remove the fusing unit. ([Removing the Fusing Unit](#))

#### 4.Replacement and Adjustment

2. Remove the web cleaning unit from the side of the fusing unit. ([Removing the Fusing Cleaning Unit](#))

The web end sensor is located at the left front corner of the fusing unit [A].

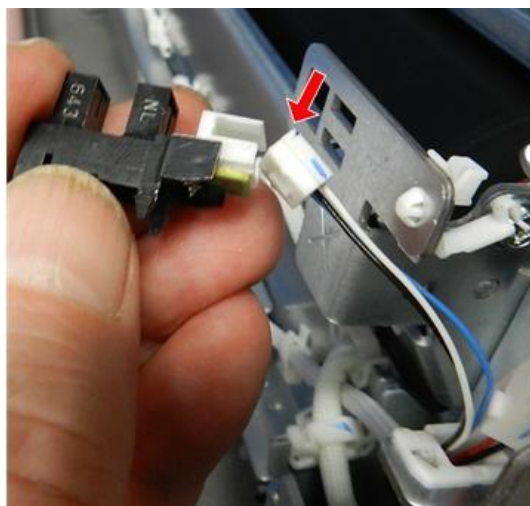
3. Disconnect the sensor from the bracket (🔧x4).



🔧 x1    ▶ x4

d270b3979

4. Disconnect the sensor (🔧 x).



🔧 x1

d270b3980

#### Web Motor

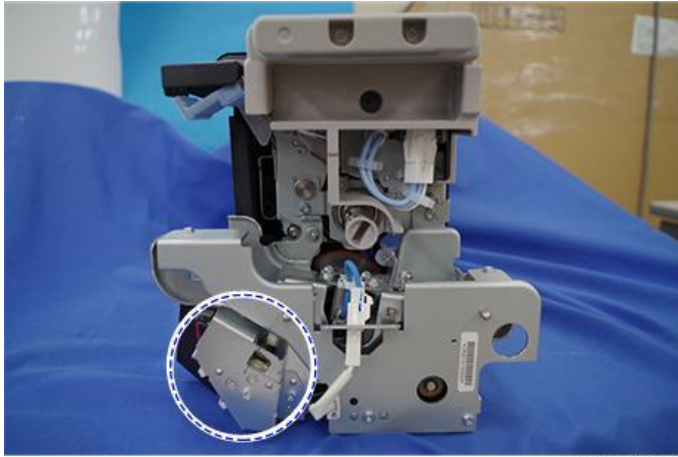
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1. Remove the fusing unit. ([Removing the Fusing Unit](#))
2. Remove the front cover. ([Vertically Separating the Fusing Unit](#))

#### Note

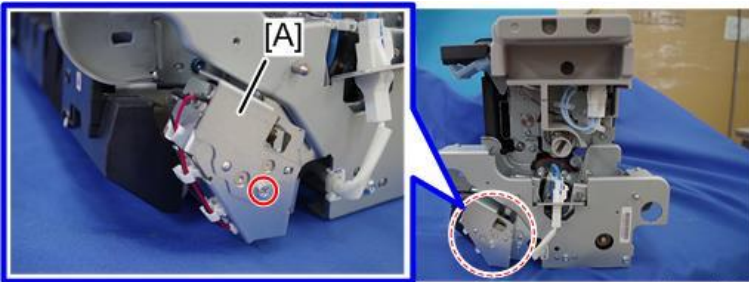
- The web is located at the left front corner of the fusing unit.

## 4.Replacement and Adjustment

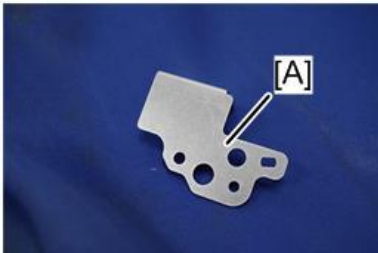


d0bxa4526

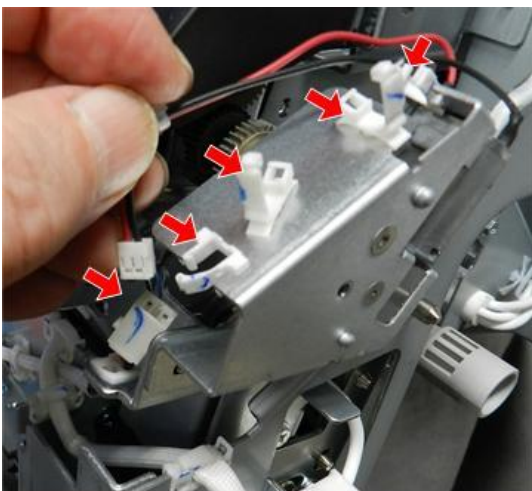
- 3.** Remove the retaining plate [A] (🔩 x1).



d0bxa4527



- 4.** Disconnect the motor harness (🔌 x4, 📦 x1).

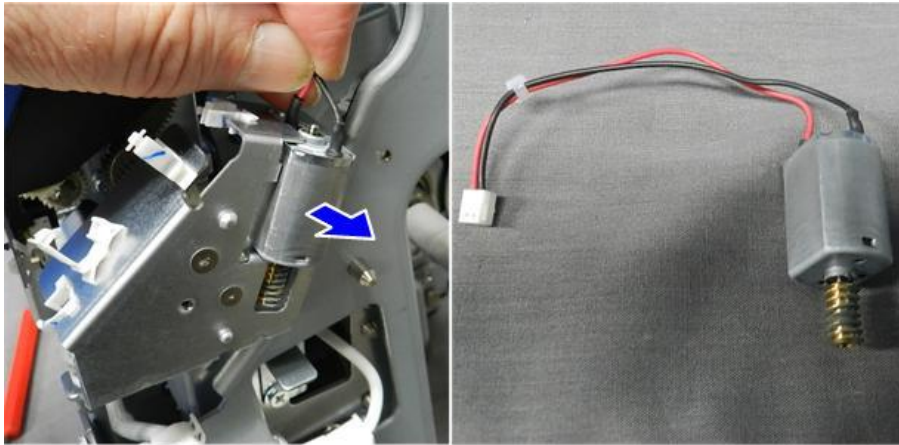


🔌 x4 📦 x1

d270b3977

#### 4.Replacement and Adjustment

- 5.** Remove the motor.



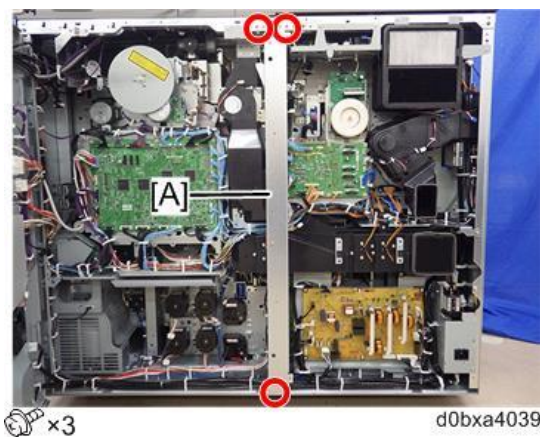
d270b3978

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#### Main Machine Thermistor

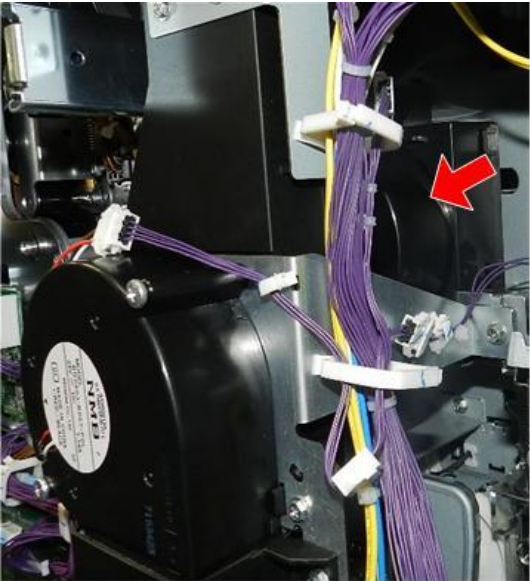
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- 1.** Open the controller box. ([Opening the Controller Box \(Copier Models\)](#))
- 2.** Remove the rear cover. ([Rear Cover](#))
- 3.** Remove the vertical stay [A].



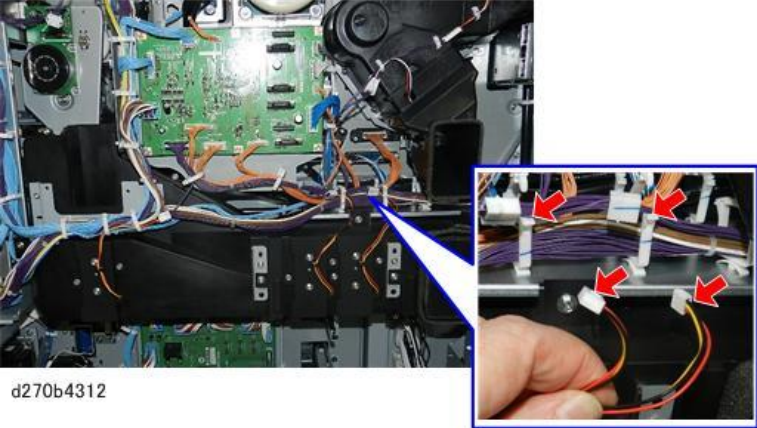


4. Remove the rear development unit cooling fan. (Development Unit Cooling Fan: Rear)



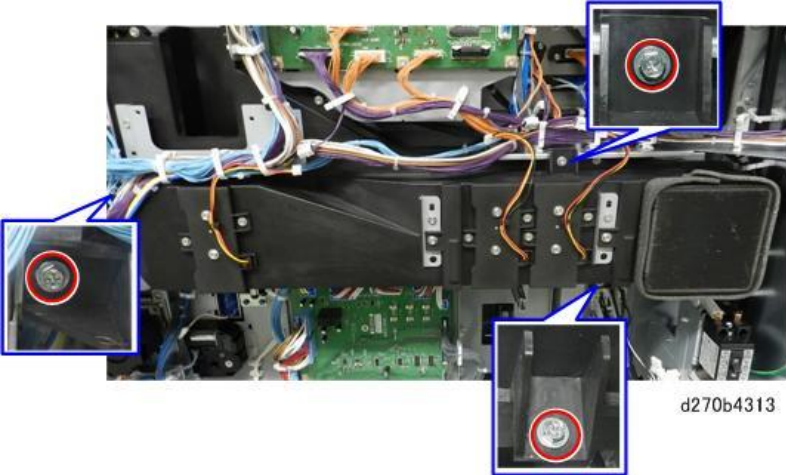
d270b4311

5. Disconnect the horizontal duct fans (🔌x2, 📦x2).



d270b4312

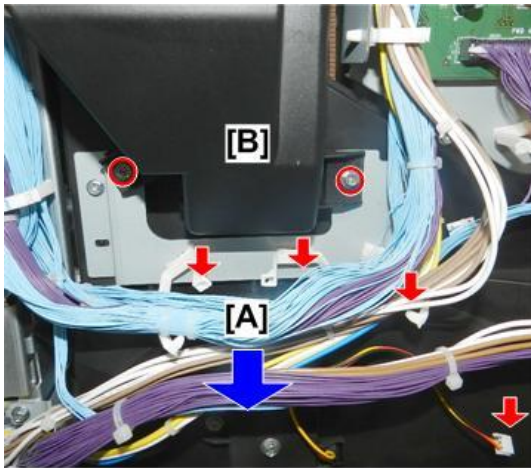
6. Disconnect the horizontal duct (🔌x3).



d270b4313

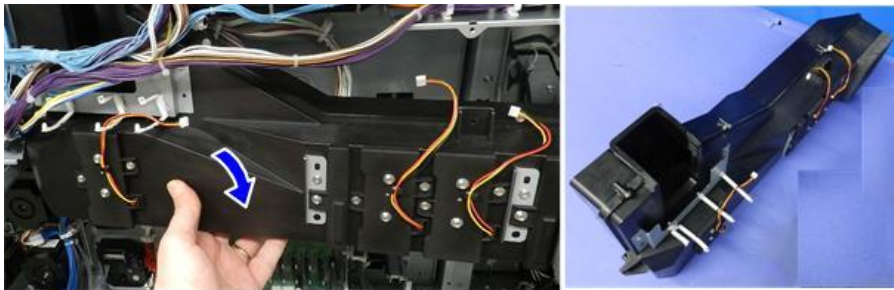
#### 4.Replacement and Adjustment

- 7.** Open the clamps, and disconnect the fusing transport exhaust fan (🔌x3, 📦x1).



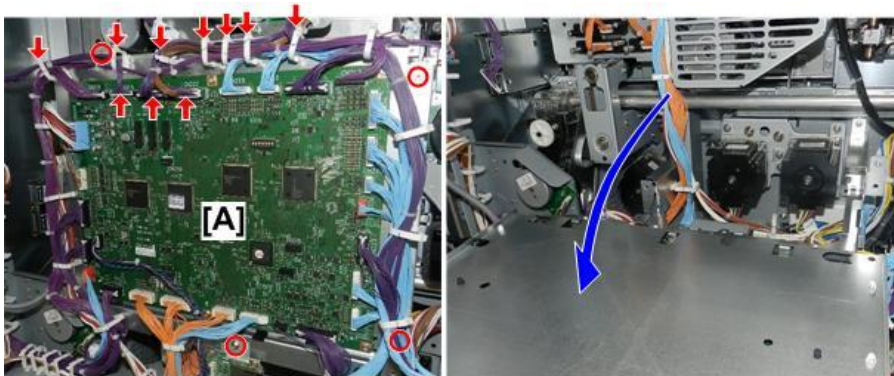
d270b4314

- 8.** Remove the horizontal duct.



d270b4315

- 9.** Lower the IOB (🔌x7, 📦x3, 🌀x4). (Lowering the IOB Bracket)



d270b4316

- 10.** At the front, remove the ITB unit cover (🌀x4).

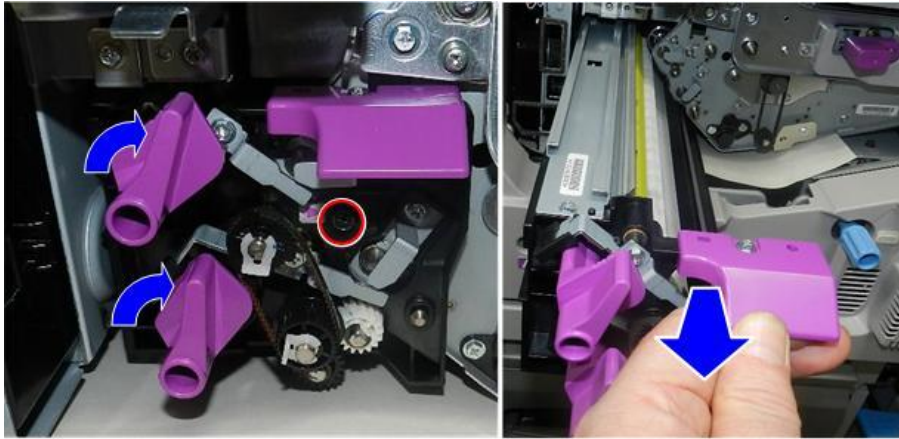


d270b4317

- 11.** Raise the levers, disconnect the ITB cleaning unit, and then pull the unit partially out of the

## 4.Replacement and Adjustment

machine (🔩x4). (This disengages the unit from the PTR/ITB cleaning motor at the rear.)

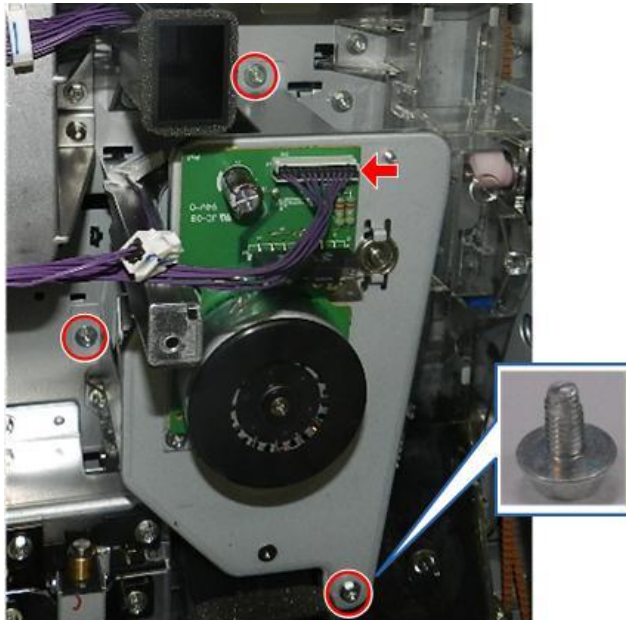


d270b4318

**12.** Disconnect the PTR/ITB cleaning motor bracket (🔩x3).

**★ Important**

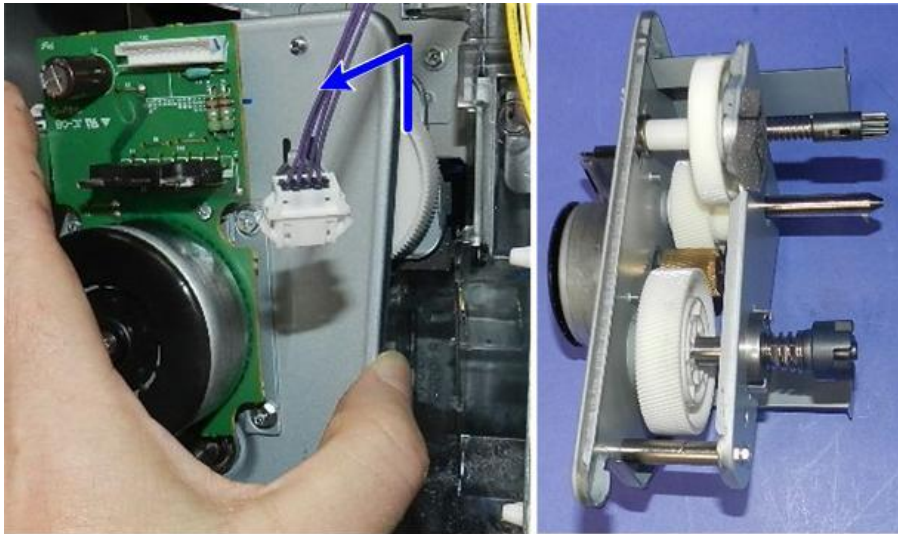
- The lower screw (M3x6) is smaller than the other two screws.



d270b4319

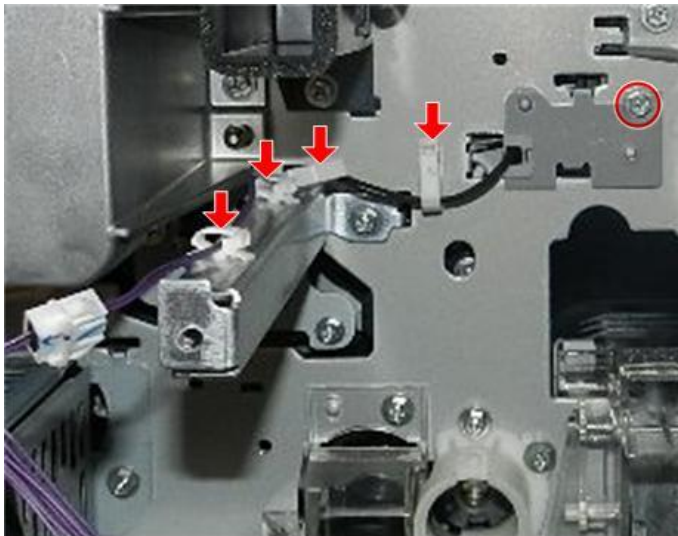
#### 4.Replacement and Adjustment

**13.** Unhook the motor bracket and then remove it with the motor attached.



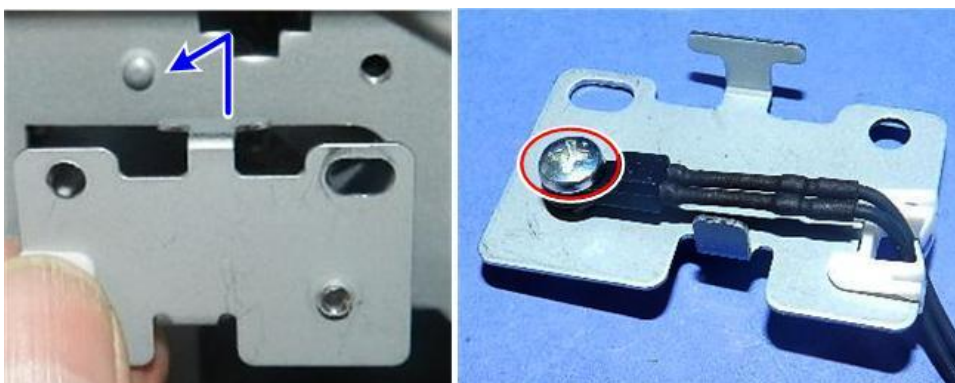
d270b4320

**14.** Disconnect the thermistor harness and bracket (🔩x3, 📦x1, 🌀x1).



d270b4321

**15.** Remove the thermistor bracket with the thermistor attached.

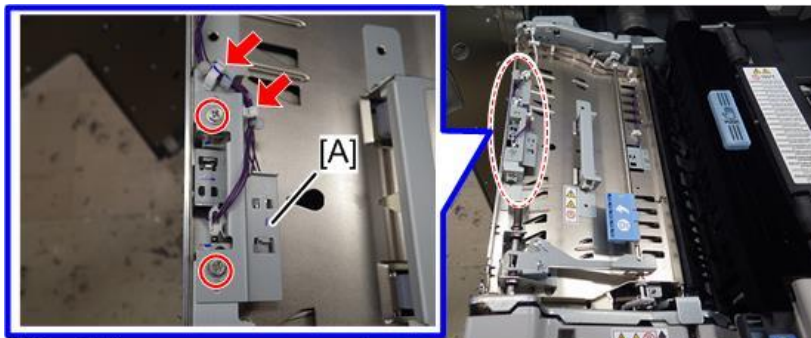


d270b4322

## Invert, Duplex, Exit Unit

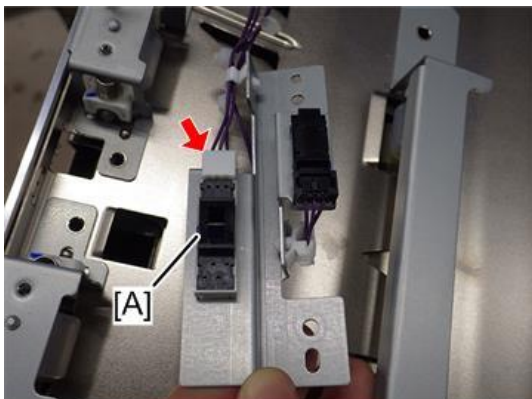
### Exit Sensor

1. Open the front drawer ([Opening and Closing the Drawer](#))
2. Remove the exit sensor [A] with the bracket. (⊙x2, ⚙x2)



d0bxa4571

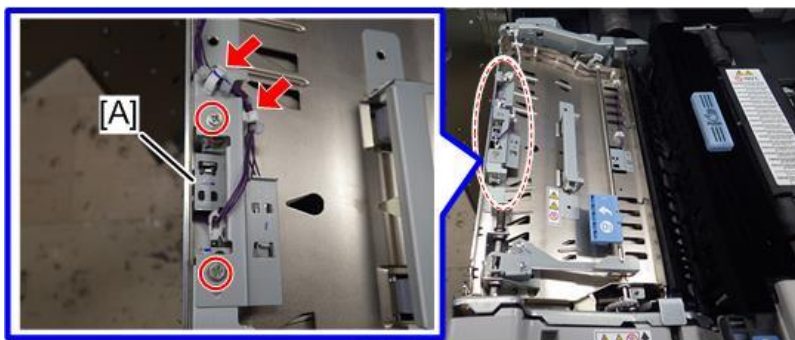
3. Remove the exit sensor [A] (⊙x1, ▼x4).



d0bxa4572

### Paper Exit/Peripheral Paper Removal Sensor

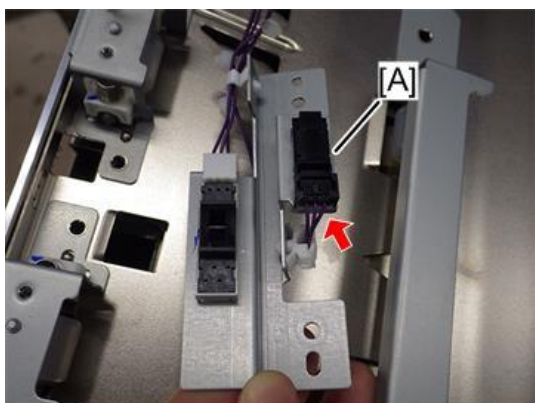
1. Open the front drawer ([Opening and Closing the Drawer](#))
2. Remove the paper exit/peripheral paper removal sensor [A] with the bracket (⊙x2, ⚙x2).



d0bxa4584

#### 4.Replacement and Adjustment

3. Remove the paper exit/peripheral paper removal sensor [A] (📦 x1, ▼x4).



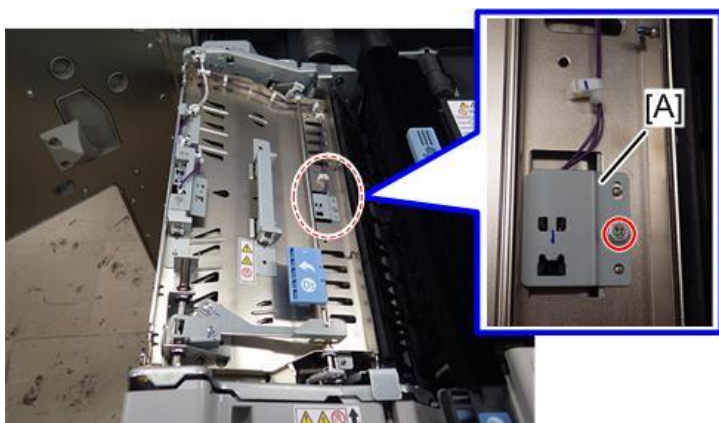
d0bxa4585

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#### Exit Junction Gate Sensor

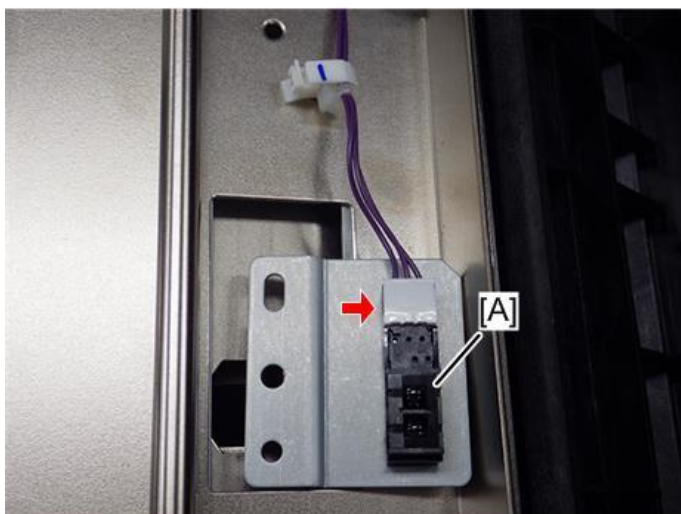
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1. Open the front drawer ([Opening and Closing the Drawer](#))
2. Remove the exit junction gate sensor [A] with the bracket. (🔩 x1)



d0bxa4573

3. Remove the exit junction gate sensor [A] (📦 x1, ▼x4).



d0bxa4574

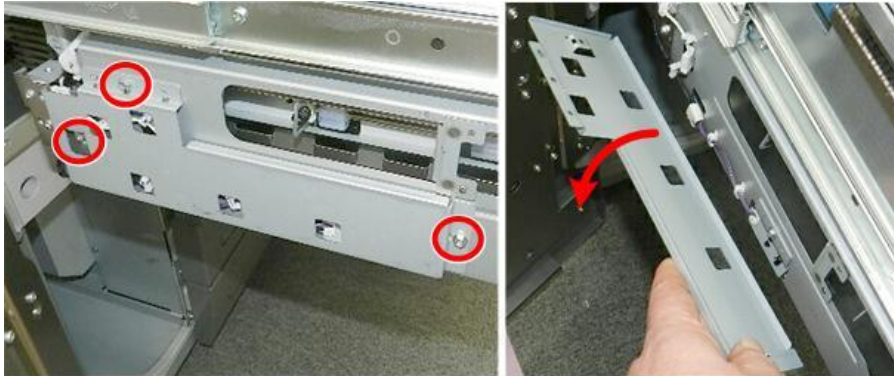
## Purge Relay Sensor

1. Open the front drawer ([Opening and Closing the Drawer](#))
2. The purge relay sensor is behind a plate on the left bottom edge of the front drawer.



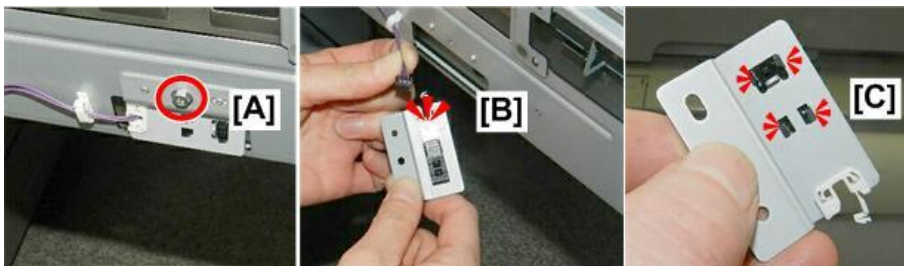
d1794105

3. Remove the plate (🔧 x3).



d1794106

4. Remove the sensor [A] > [B] > [C] (🔧 x1, 📦 x1, ▼ x4).

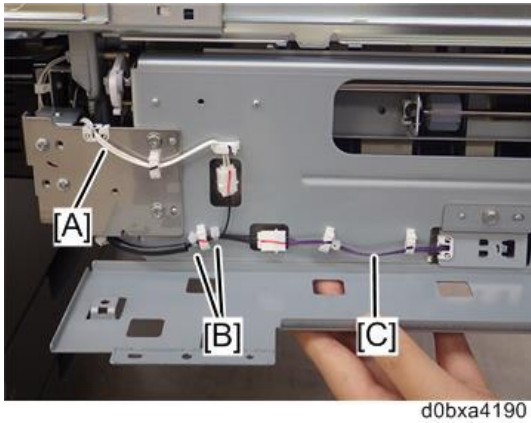


d1794107

### ★ Important

- At re-installation, make sure that the clamp is closed on the invert junction gate solenoid harness [A] and the purge relay sensor harness [B] between the bands [C]. This prevents the connectors disconnecting when the guide plate is opened and closed.

## 4.Replacement and Adjustment



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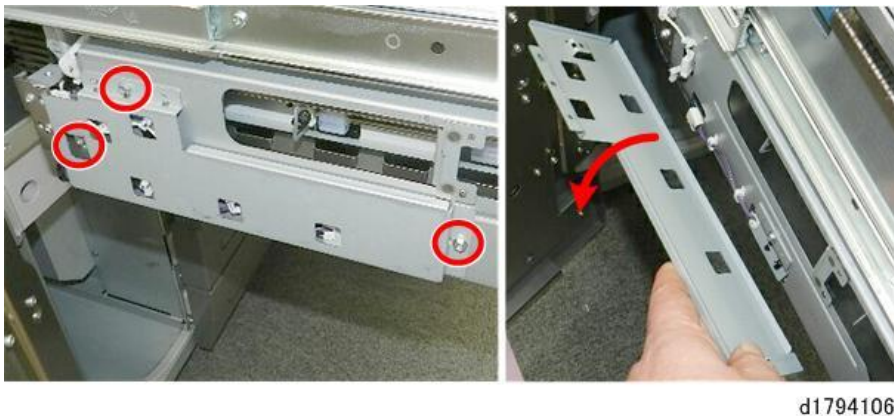
### Invert Junction Gate Solenoid

---

1. Open the front drawer ([Opening and Closing the Drawer](#))
2. The invert junction gate solenoid is behind a plate on the left bottom edge of the front drawer.



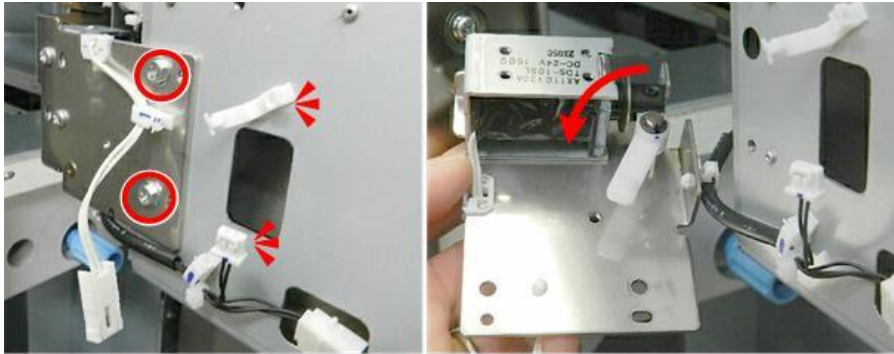
3. Remove the plate (🔩 x3).





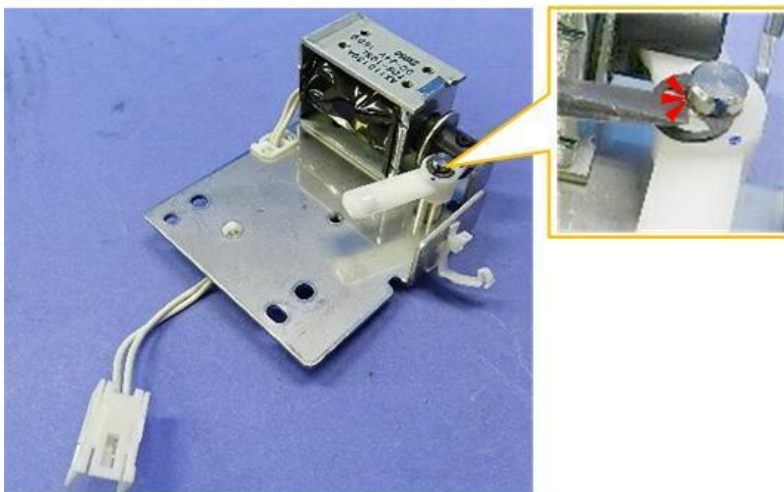
## 4.Replacement and Adjustment

4. Remove the bracket (with solenoid attached) (🔧x1, 📦x1, 🛠️x2).



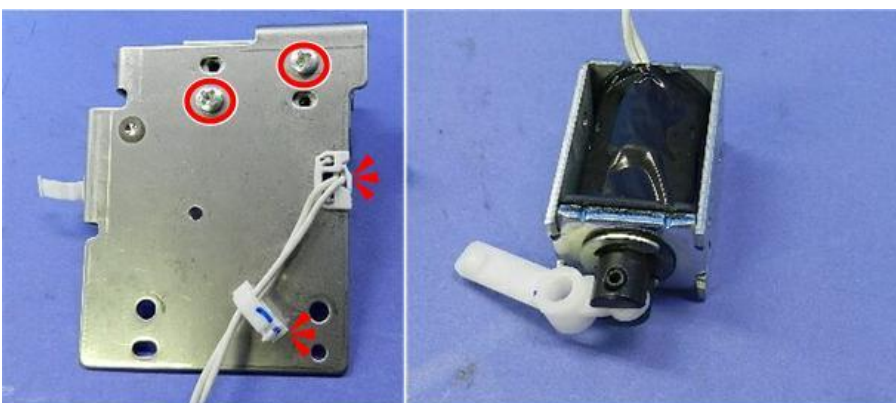
d1794109

5. Disconnect the plunger (🔧x1).



d1794110

6. Separate the solenoid from the bracket (🔧x2, 🛠️x2).

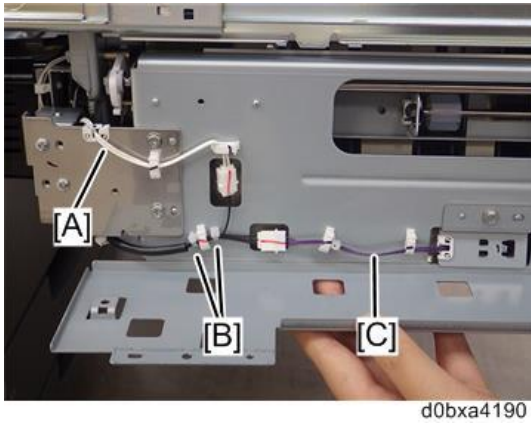


d1794111

### ★ Important

- At re-installation, make sure that the clamp is closed on the invert junction gate solenoid harness [A] and the purge relay sensor harness [B] between the bands [C]. This prevents the connectors disconnecting when the guide plate is opened and closed.

## 4.Replacement and Adjustment



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### Purged Paper Sensor

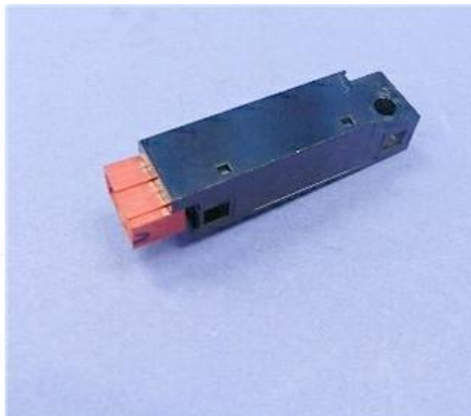
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1. Remove the left cover ([Left Cover](#))
2. The purged paper sensor is at the bottom left side of the machine.



d1794112

3. Pull the sensor out and disconnect it (🔧 x1).



d1794114

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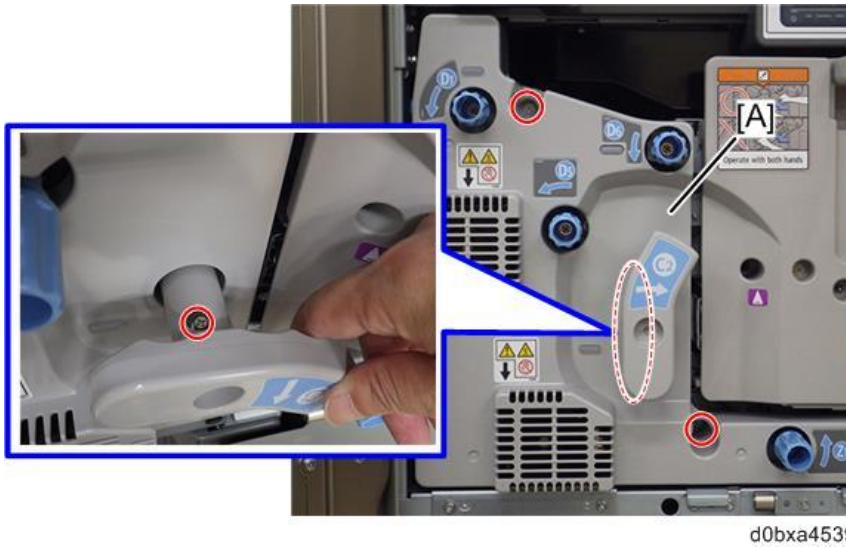
### Invert Exit Motor, Invert Exit HP Sensor

---

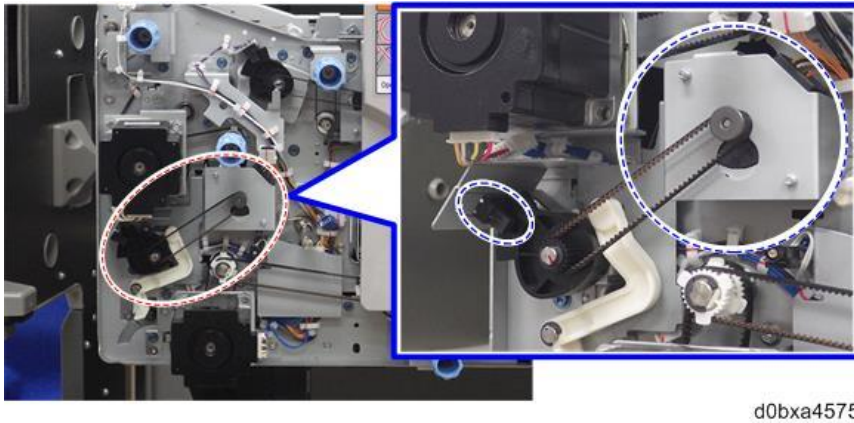
1. Pull out the drawer

## 4.Replacement and Adjustment

2. Remove the left front cover of the drawer [A] (⊖ x3).



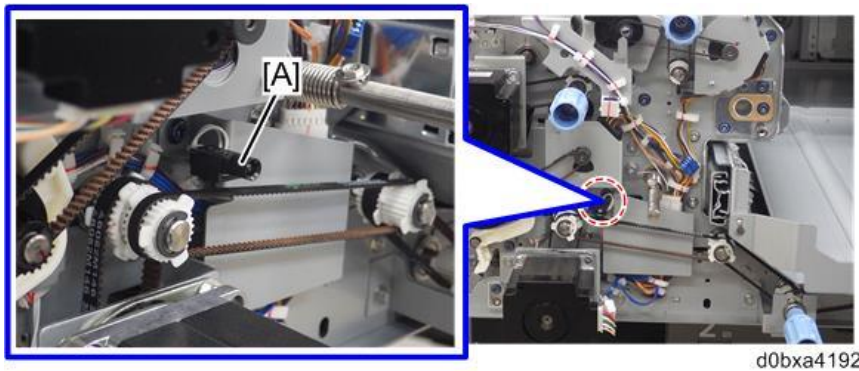
3. The invert exit motor and invert exit HP sensor are at the center.



### Invert Exit Motor

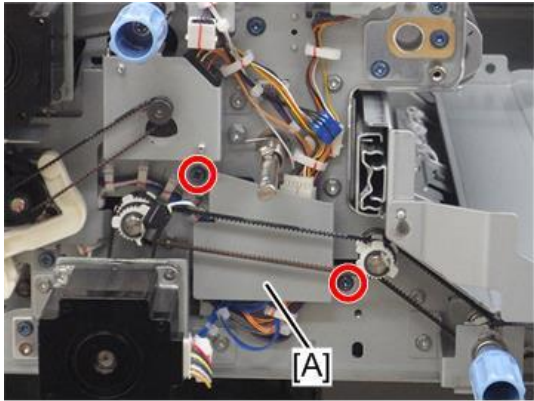
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1. Remove the LED [A].



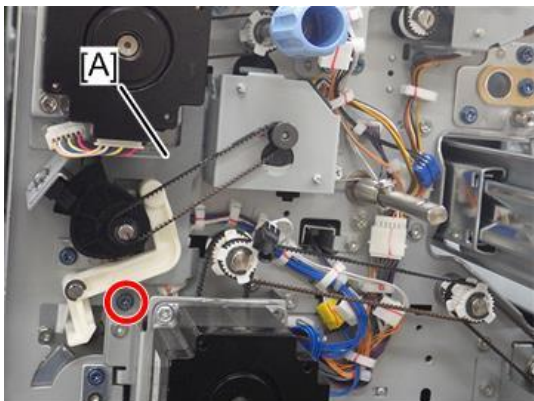
#### 4.Replacement and Adjustment

2. Remove the bracket [A] (🔩 x2).



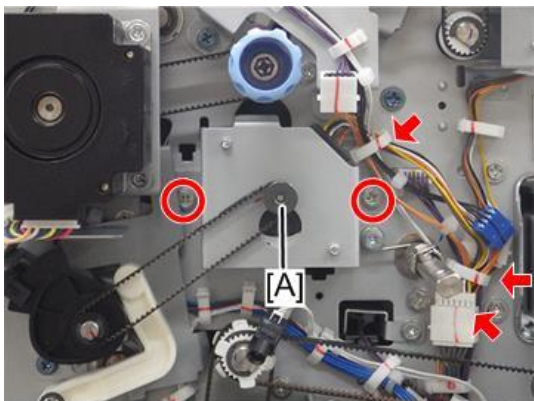
d0bxa4193

3. Remove the bracket [A] (🔩 x1).



d0bxa4901

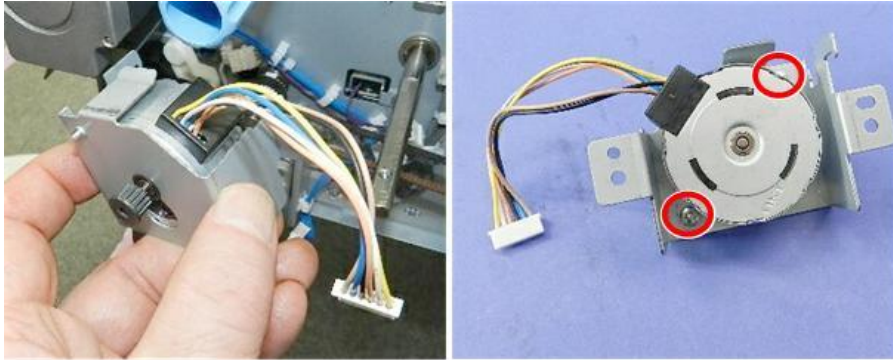
4. Remove the invert exit motor with the bracket [A]. (🔩 x2, 🛠️ x2, 📦 x1)



d0bxa4191

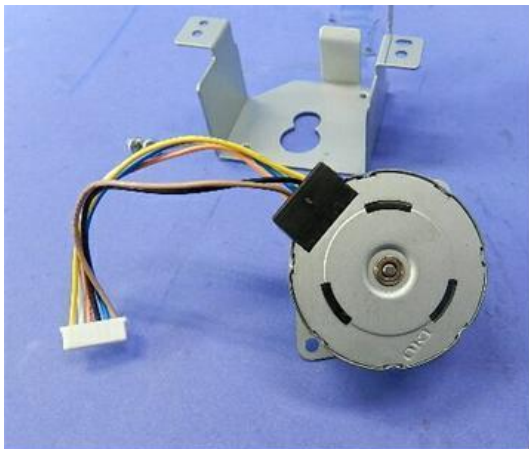
## 4.Replacement and Adjustment

5. Remove the motor from the bracket (⚙️ x2).



d1794118

6. Separate motor and bracket.

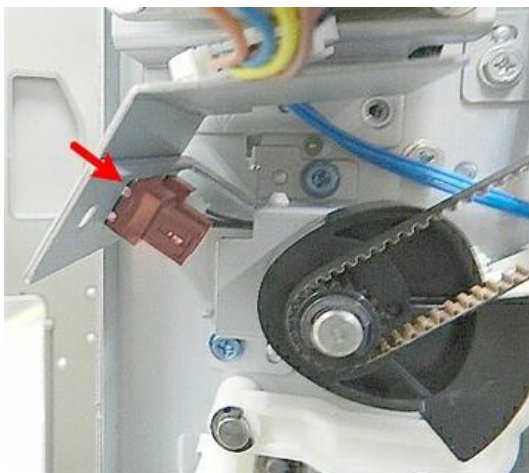


d1794119

### Invert Exit HP Sensor

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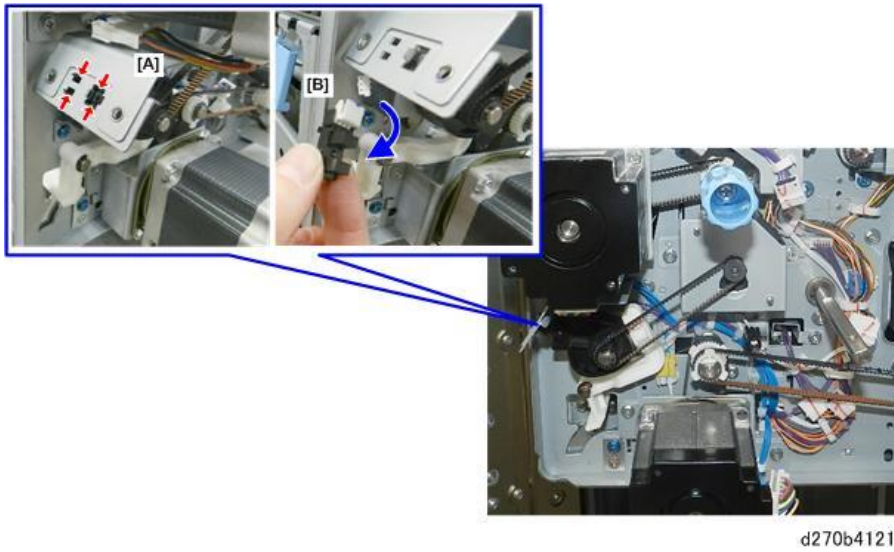
1. The invert exit HP sensor is mounted on a plate above the belt.



d1794120

#### 4.Replacement and Adjustment

2. Disconnect the sensor [A] and then remove it [B] (▼x4, 🗑️ x1).

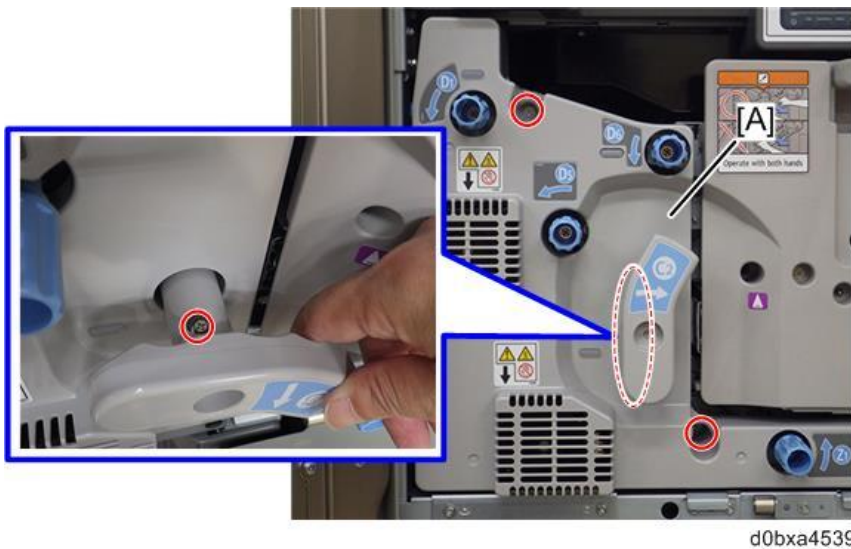


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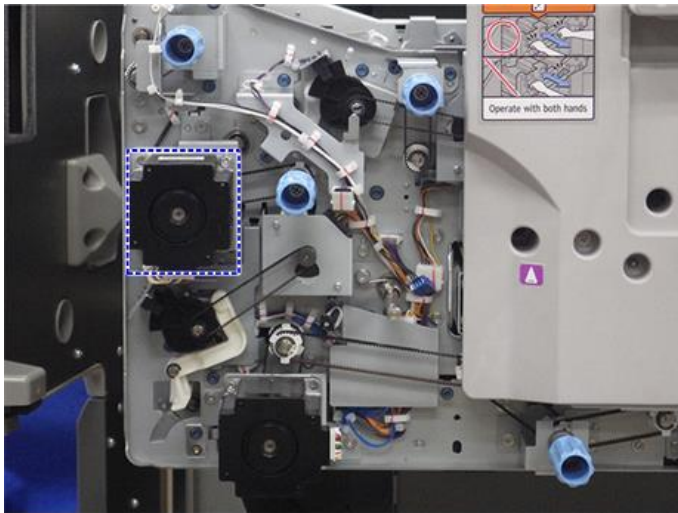
#### Invert Entrance Motor

---

1. Pull out the front drawer. ([Opening and Closing the Drawer](#))
2. Remove the left front cover [A] of the drawer (🔧 x3).

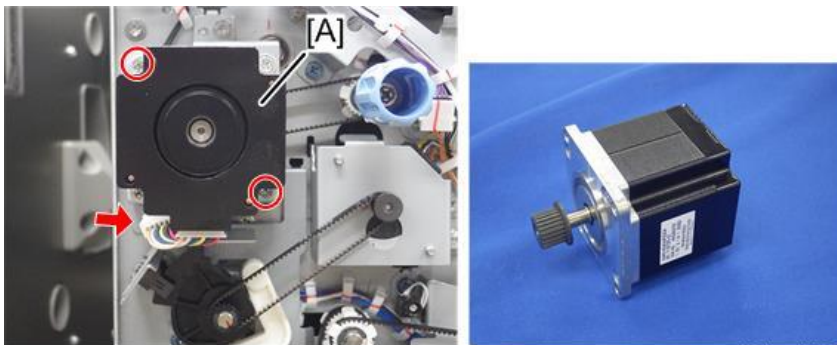


3. The invert entrance motor is on the left.



d0bxa4577

4. Remove the invert entrance motor [A] (⊖ x2, ⊞ x1).



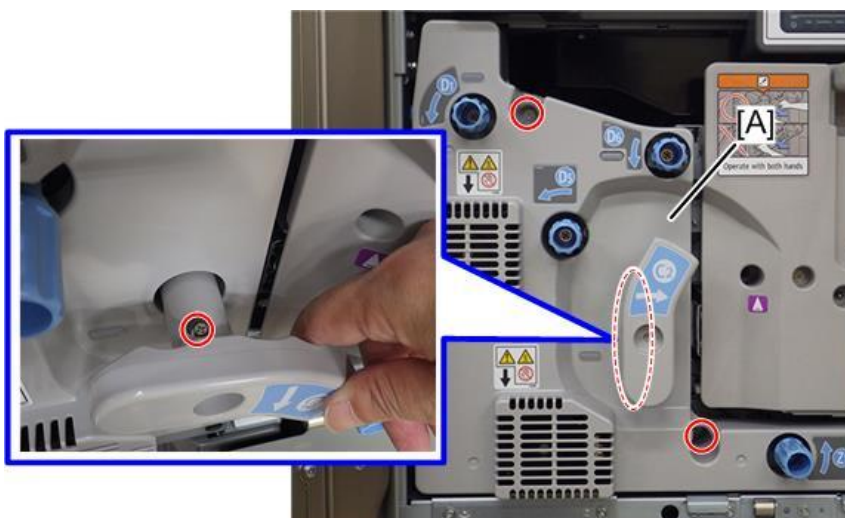
d0bxa4578

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### Exit Invert Sensor

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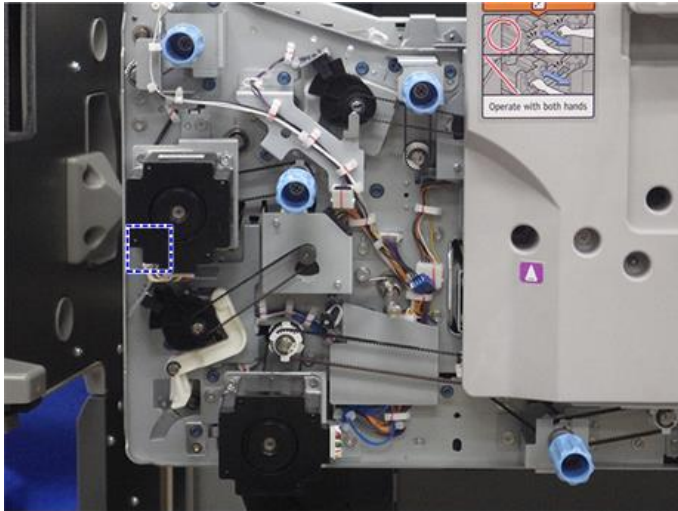
1. Pull out the front drawer ([Opening and Closing the Drawer](#))
2. Remove the left front cover [A] of the drawer (⊖ x3).



d0bxa4539

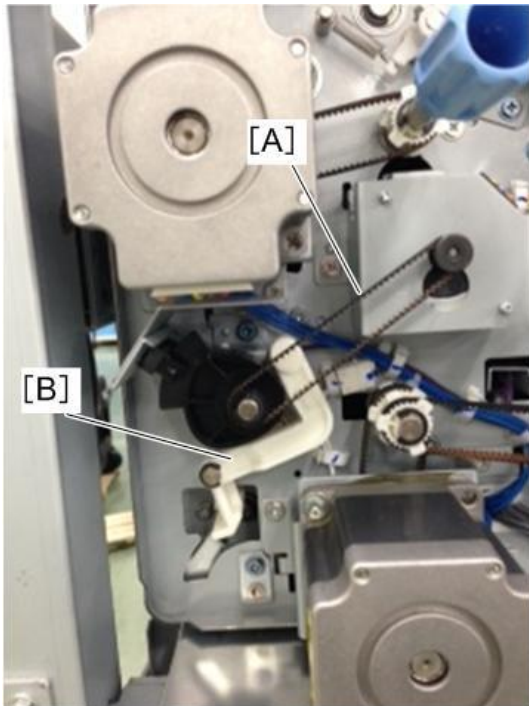
#### 4.Replacement and Adjustment

3. The exit invert sensor is behind the invert entrance motor.



d0bxa4197

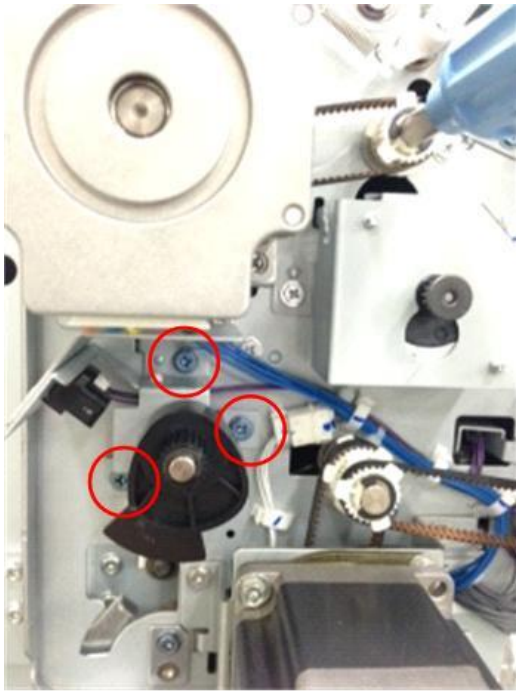
4. Remove the timing belt [A] and the link [B] (🌀x1, 🌀x1).



d1794186



5. Remove the cam bracket (✎x3).



d1794187

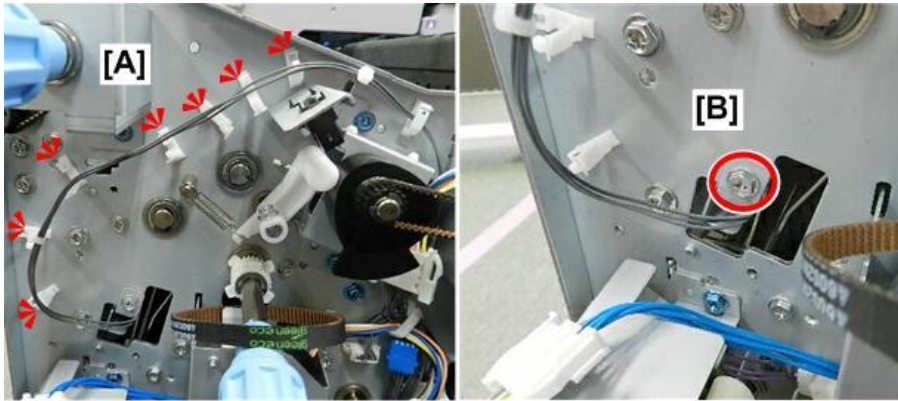
6. First, remove the motor (see the previous section).



d1794129

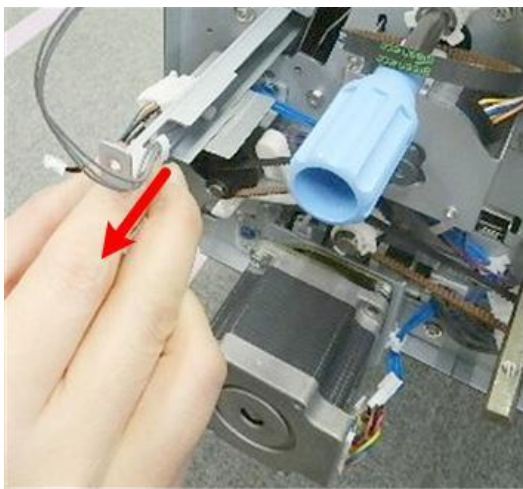
7. Disconnect:  
[A] Harness (✎x7)  
[B] Sensor bracket (✎x1).

#### 4.Replacement and Adjustment





d1794130

8. Pull out the sensor bracket.



d1794131

9. Disconnect the sensor (  x1,  x4).



d1794132

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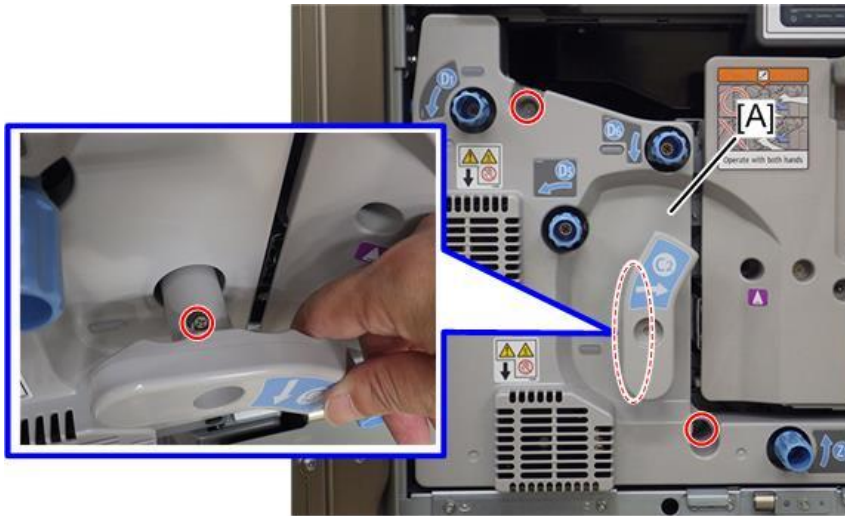
#### Duplex Transport Motor 1

---

1. Pull out the front drawer

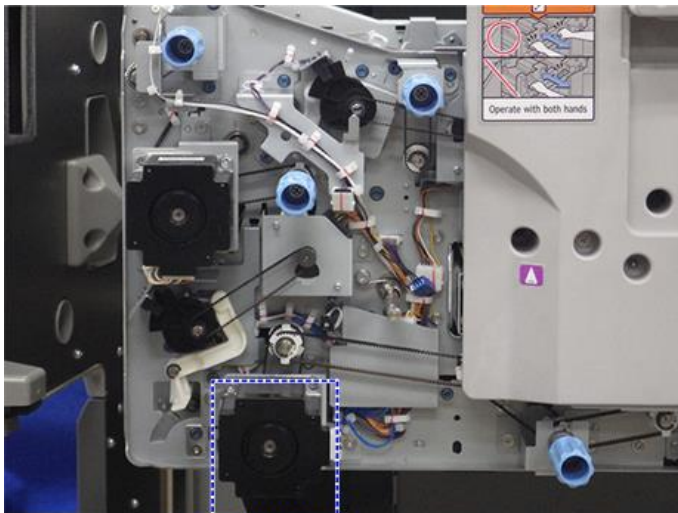
## 4.Replacement and Adjustment

2. Remove the left front cover [A] of the drawer (🔩 x3).



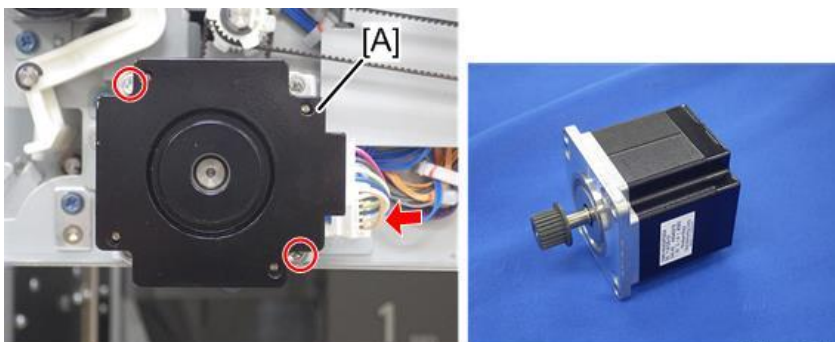
d0bxa4539

3. Duplex transport motor 1 is at the bottom.



d0bxa4579

4. Remove the duplex transport motor [A] (📦 x1, 🔩 x2).



d0bxa4580

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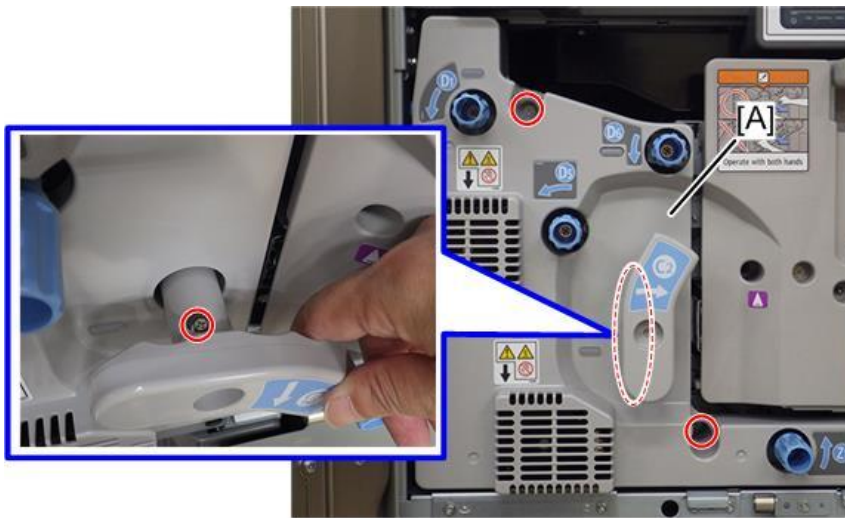
### Duplex Invert Sensor

---

1. Pull out the front drawer ([Opening and Closing the Drawer](#))

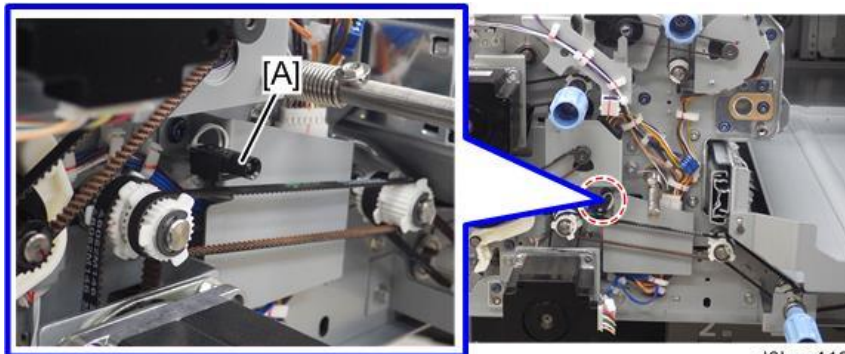
#### 4.Replacement and Adjustment

2. Remove the left front cover [A] of the drawer (⚙️ x3).



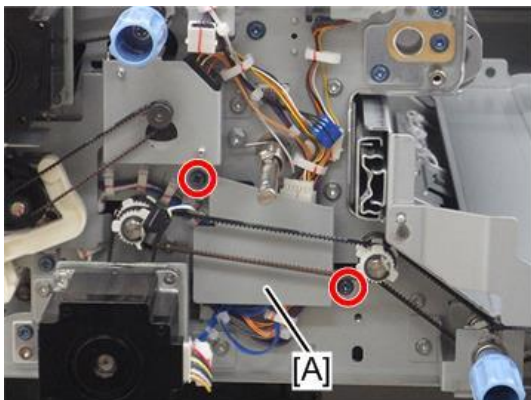
d0bxa4539

3. Remove the LED [A].



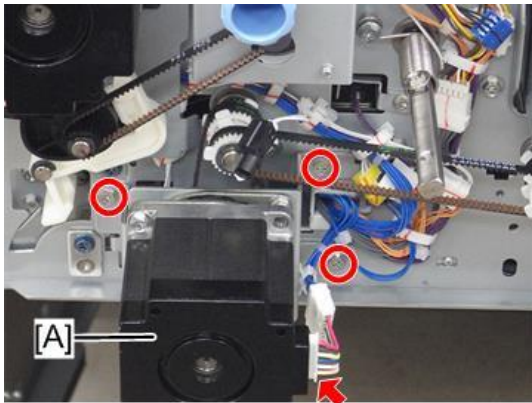
d0bxa4192

4. Remove the bracket [A] (⚙️ x2).



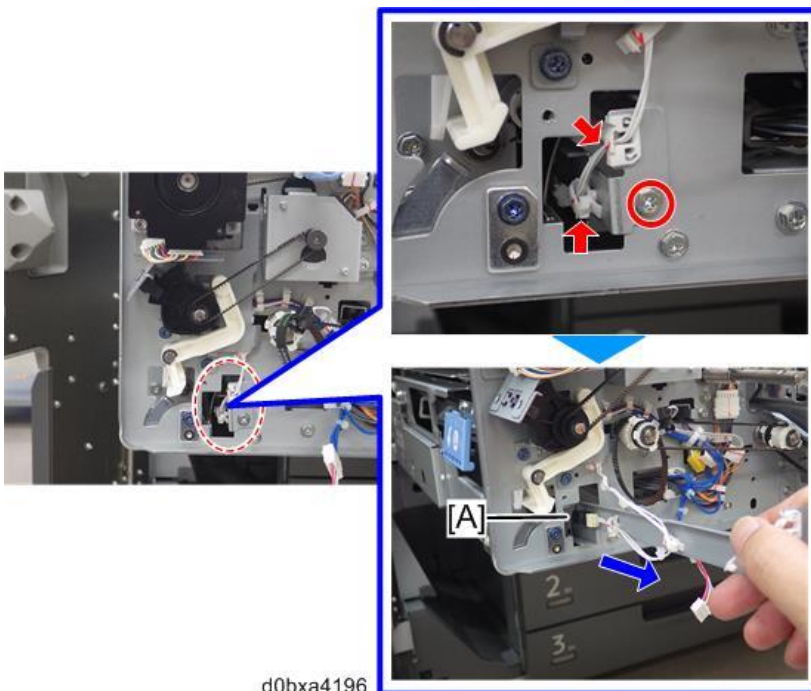
d0bxa4193

5. Remove the duplex invert sensor [A] with the bracket (🔩 x3, 📏 x1).



d0bxa4194

6. Pull out the duplex invert sensor [A] with the bracket (🔩 x1, 📏 x2).



d0bxa4196

7. Remove the sensor (📏 x1, ▼ x4).



d1794141

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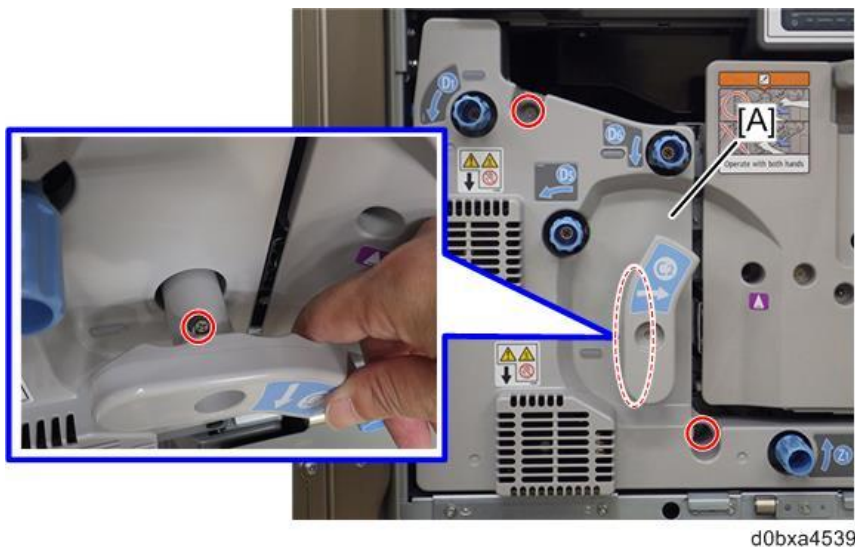
## Duplex Transport Sensor 1

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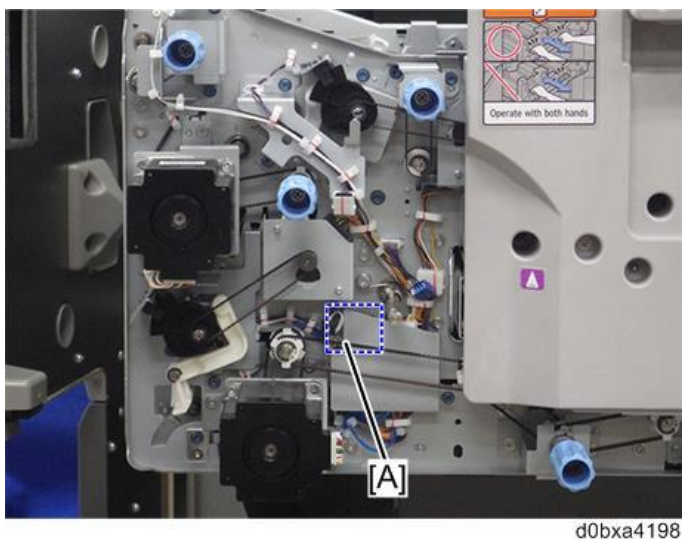
1. Pull out the front drawer ([Opening and Closing the Drawer](#))

#### 4.Replacement and Adjustment

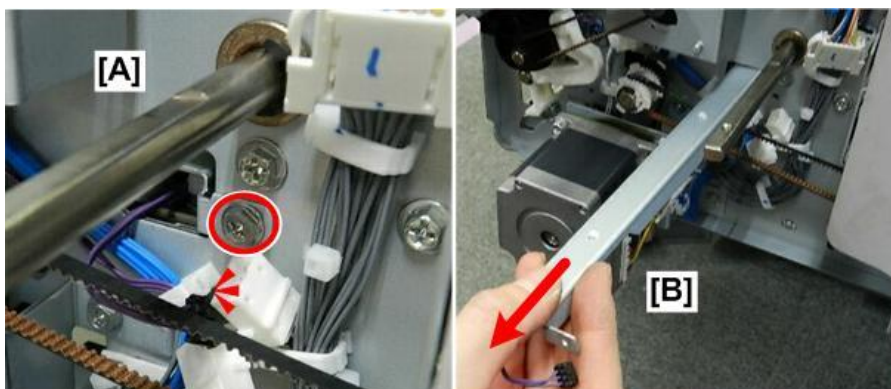
2. Remove the left front cover [A] of the drawer (🔩 x3).



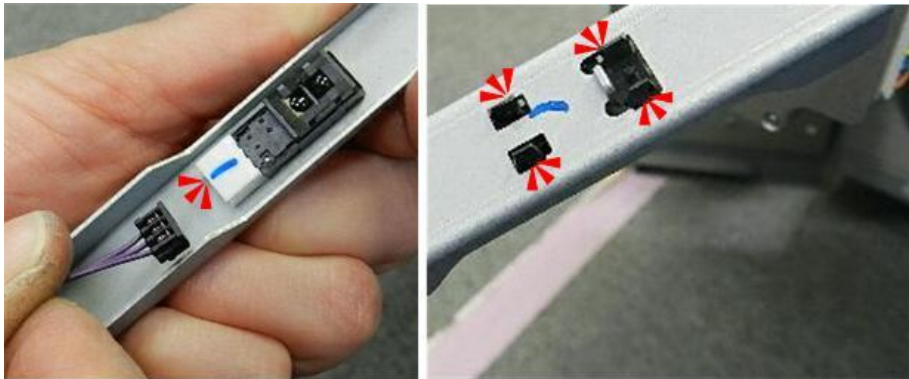
3. Duplex transport sensor 1 [A] is at the lower right.



4. Disconnect the harness and the sensor bracket [A] (🔩 x1, 📦 x1).
5. Pull out the bracket [B].



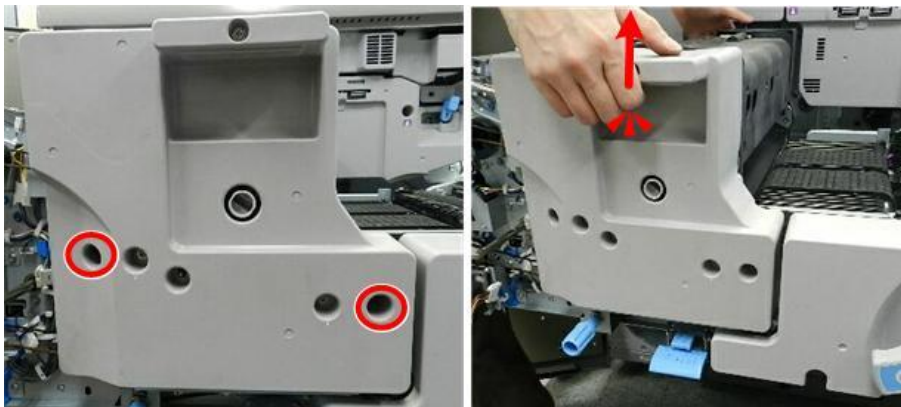
6. Remove the sensor (🔧 x1, ▼x4).



d1794144

### Duplex Transport Sensor 2, 3

1. Pull out the front drawer (Opening and Closing the Drawer)
2. Remove the fusing unit (🔧 x2).



d1794145

①	Duplex transport sensor 2
②	Duplex transport sensor 3



d1794146

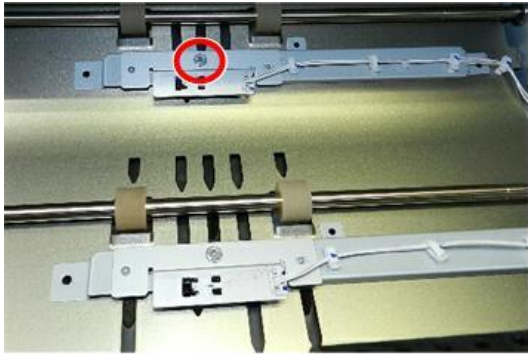
**Note**

- The removal procedure for both sensors is the same. Only the removal procedure for

#### 4.Replacement and Adjustment

duplex transport sensor 2 is described below.

3. Disconnect the sensor bracket (🔧x1).



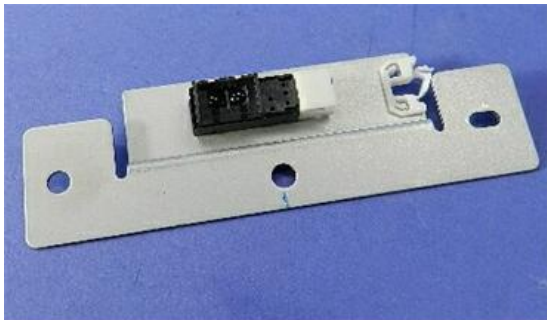
d1794147

4. Pull off the sensor bracket (with sensor attached), and then disconnect the sensor (🔧x1).



d1794148

5. Separate the sensor from the bracket (⚙️x4).



d1794149

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#### Exit Junction Gate Motor, Exit Junction Gate HP Sensor

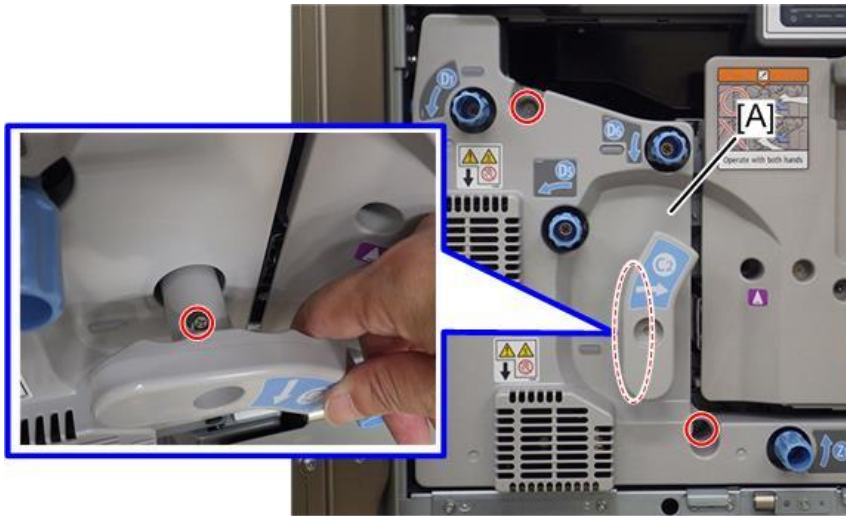
---

1. Pull out the front drawer ([Opening and Closing the Drawer](#))



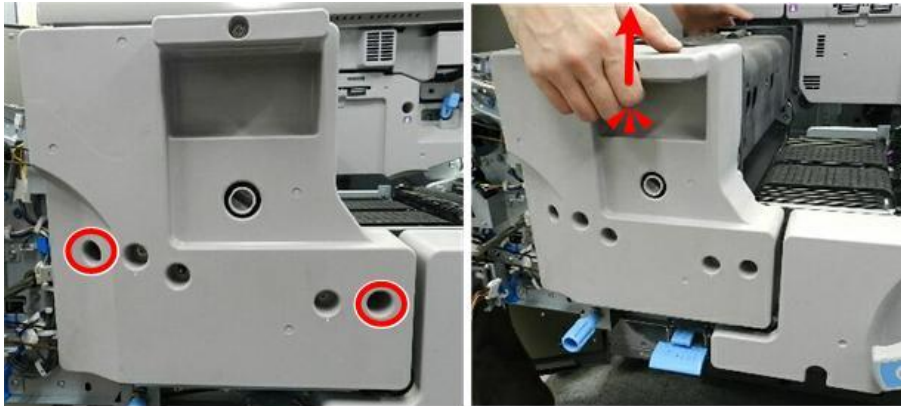
## 4.Replacement and Adjustment

2. Remove the left front cover [A] of the drawer (Ⓜ x3).



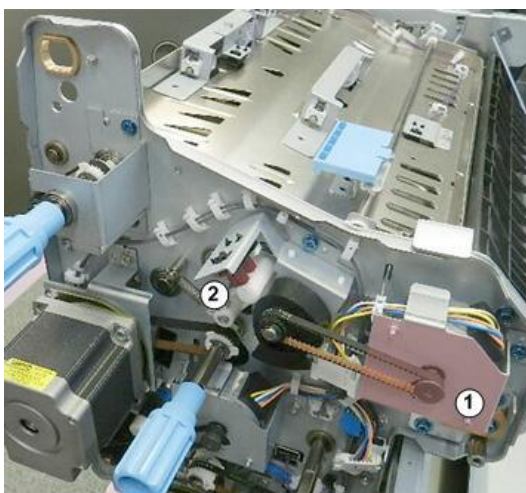
d0bxa4539

3. Remove the fusing unit (Ⓜ x2).



d1794145

4. The exit junction gate motor ① is on the right and the exit junction gate HP sensor ② is on the left.

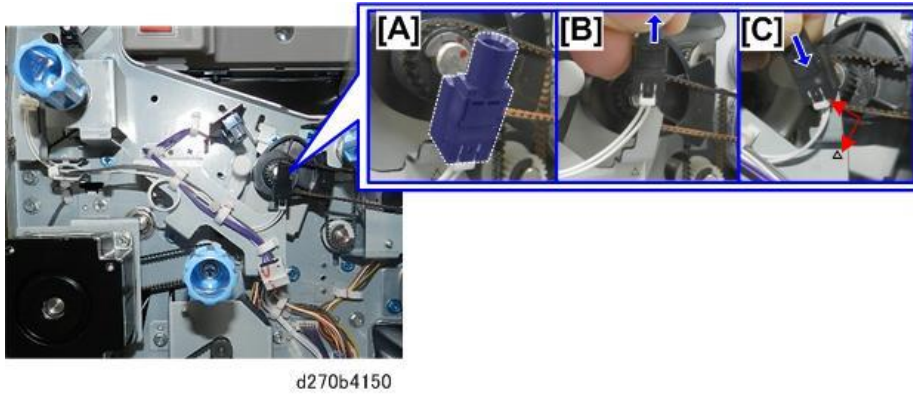


d1794150

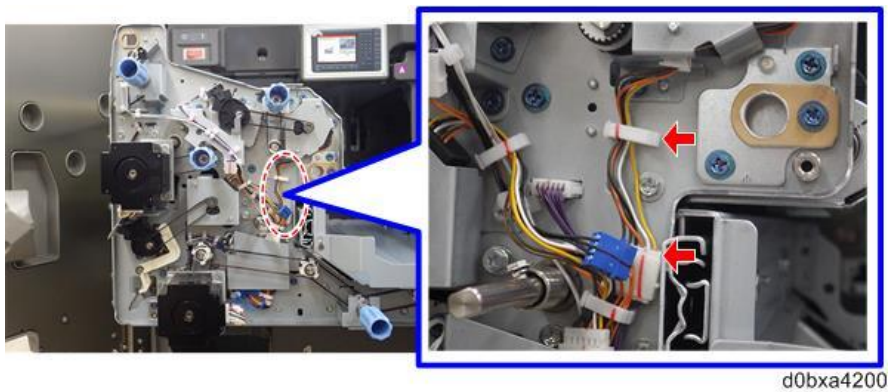
## 4.Replacement and Adjustment

### Exit Junction Gate Motor

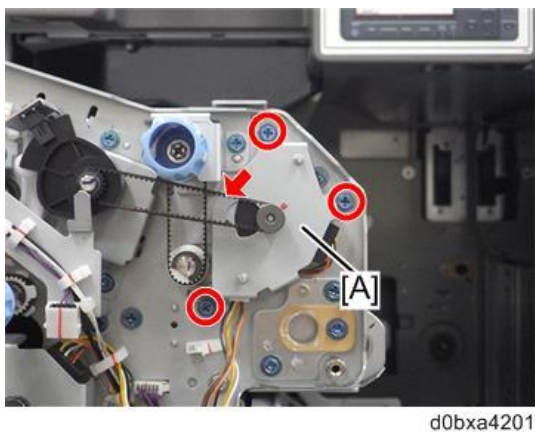
1. The jam LED [A] blocks the removal of the drive belt.
2. Pull the LED off its post [B] and let it hang free. Do not disconnect it.
3. When you set the LED on its post again [C], make sure that the connector and small black triangle are on the same side



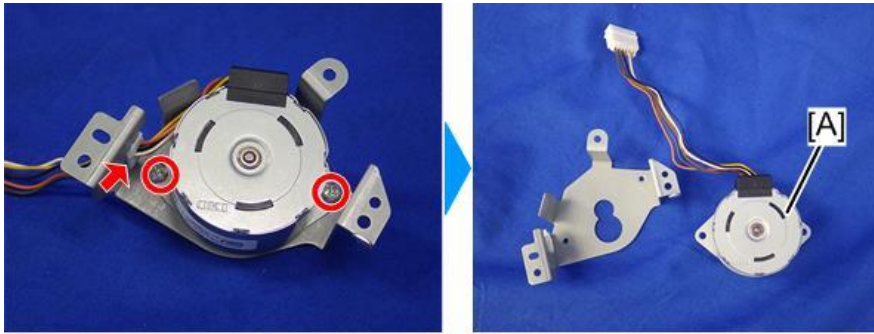
4. Remove the connector and the clamp (🔌 x1, 📎 x1).



5. Remove the exit junction gate motor [A] with the bracket (🔧 x3, 📎 x1).



6. Separate the exit junction gate motor [A] (🔧x2, 🛠️x1).

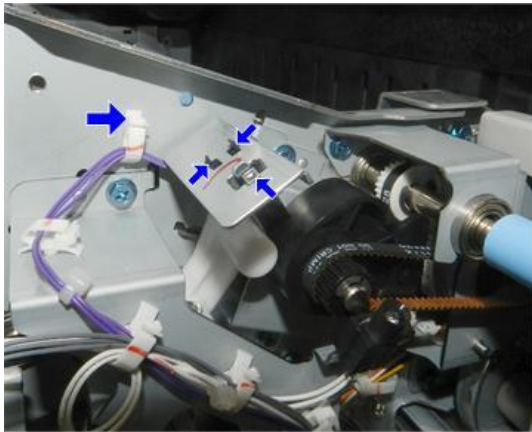


d0bxa4202

### Exit Junction Gate HP Sensor

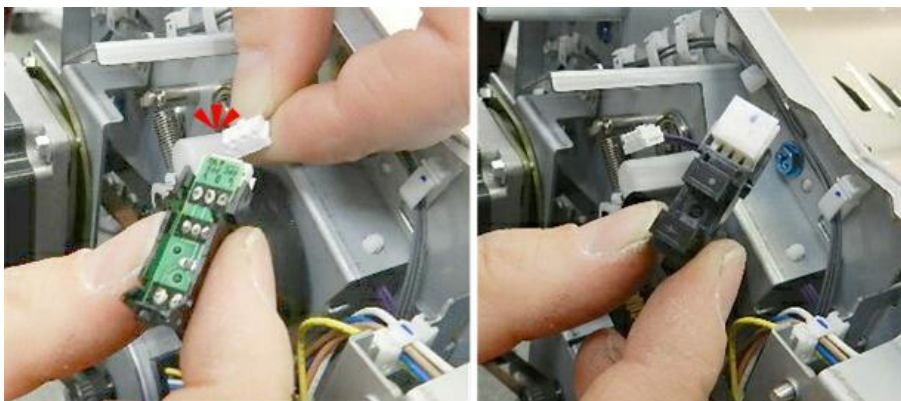
---

1. Disconnect the sensor from the bracket (🔧x1, ▼x3)



d270b4157

2. Disconnect the sensor (🔧 x1).



d1794158

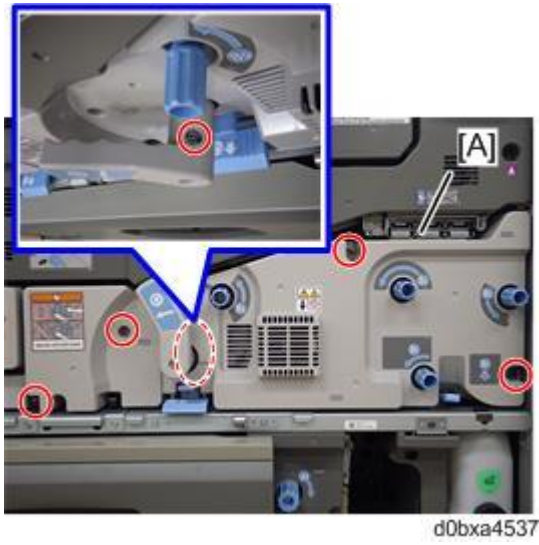
### Duplex Transport Motor 2

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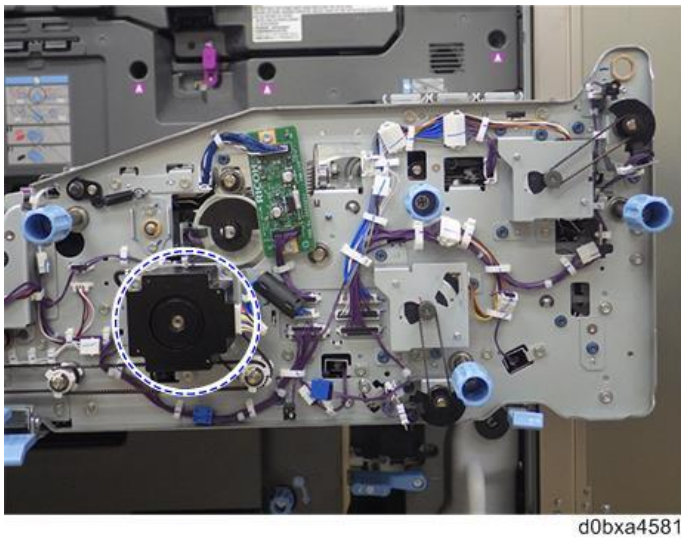
1. Pull out the front drawer ([Opening and Closing the Drawer](#))

#### 4.Replacement and Adjustment

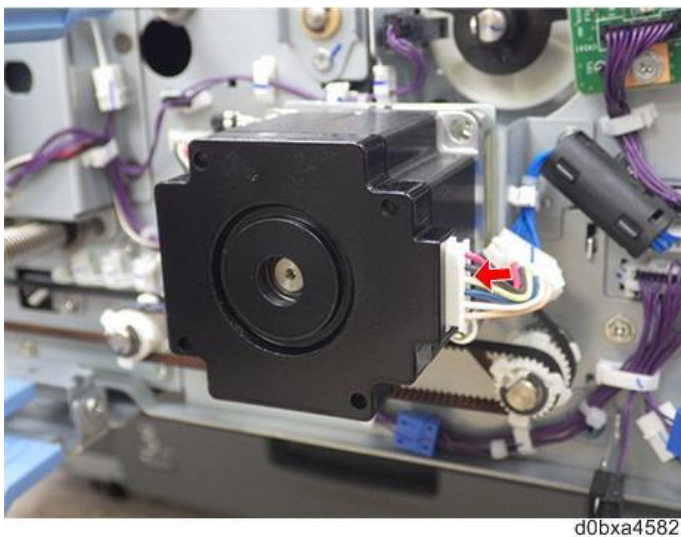
2. Remove the right front cover [A] (🔩 x5).



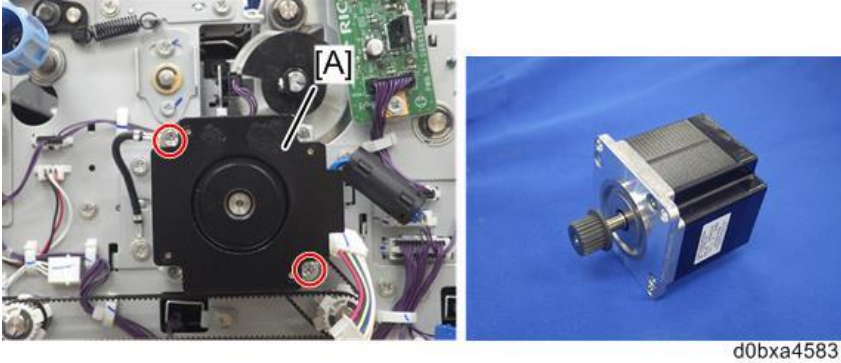
3. Duplex transport motor 2 is in the center.



4. Disconnect the connector (🔌 x1).



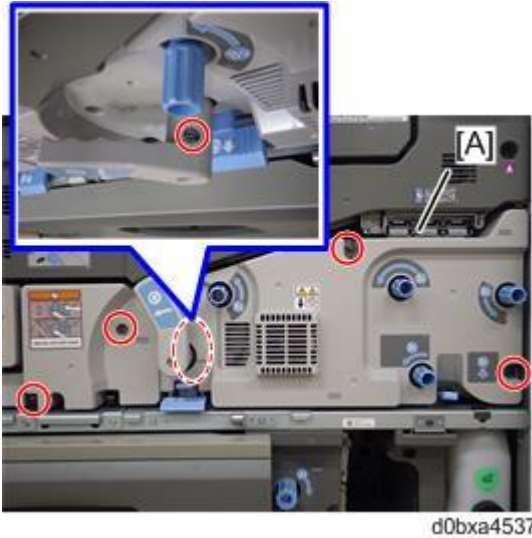
5. Remove the duplex transport motor [A]. (⚙️x2)



d0bxa4583

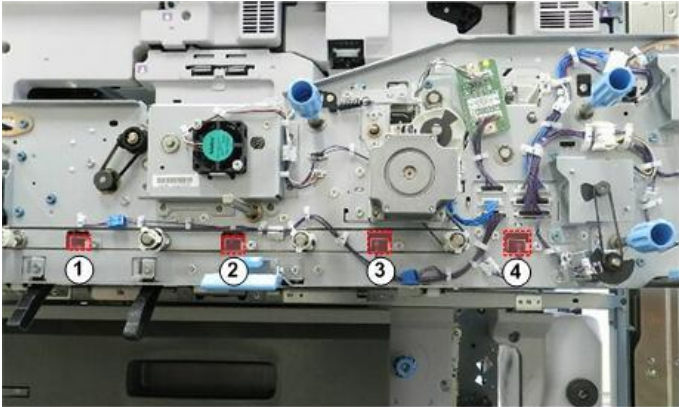
Duplex Transport Sensor 4, 5, 6, Duplex Exit Sensor

1. Pull out the front drawer ([Opening and Closing the Drawer](#))
2. Remove the right front cover [A] (⚙️x5).



d0bxa4537

①	Duplex transport sensor 4
②	Duplex transport sensor 5
③	Duplex transport sensor 6
④	Duplex exit sensor



d1794164

## 4.Replacement and Adjustment

### Note

- Only one removal is described below because the procedure is the same for each sensor.

### 3. Disconnect:

[A] Harness, sensor bracket (🔌x1, 📦x1, 🛠️x1)

[B] Pull out the sensor bracket



d1794165

### 4. Remove the sensor (📦x1, ▼x4).



d1794166

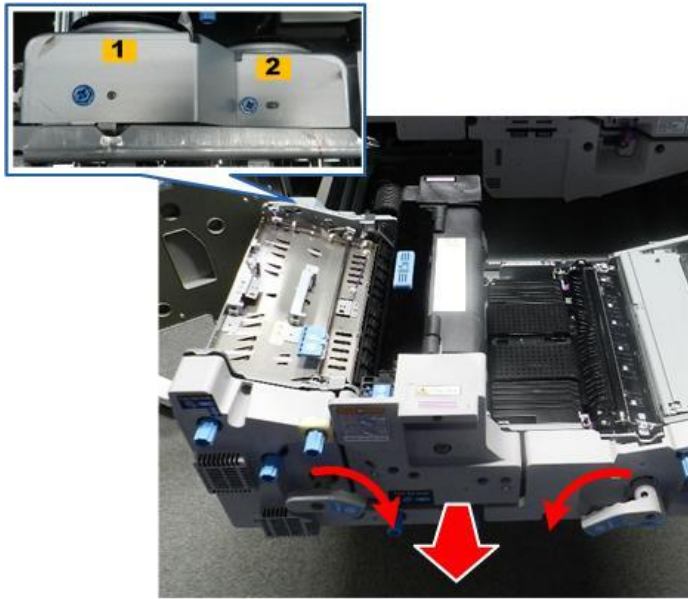
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## Exit Motor

---

1. Turn the machine off and then wait at least 15 minutes for it to cool.
2. Open both front doors, and then pull out the drawer.

3. The exit motor [1] and the heat pipe roller motor [2] are on the rear left corner of the exit unit.



d270b4025

**⚠ CAUTION**

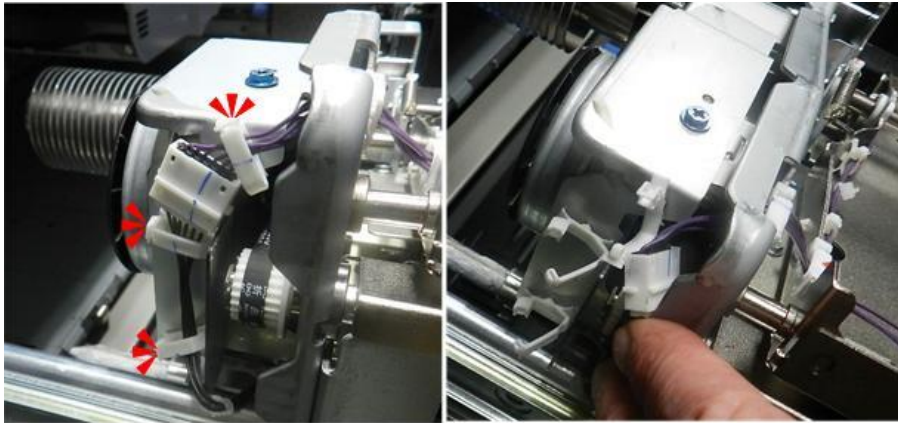
- The heat sink on the end of the heat pipe becomes hot during machine operation and has sharp edges.
- Allow the machine to cool for several minutes before you remove the motor.
- Avoid touching the heat sink [1] with bare hands while you work.



d270b4026

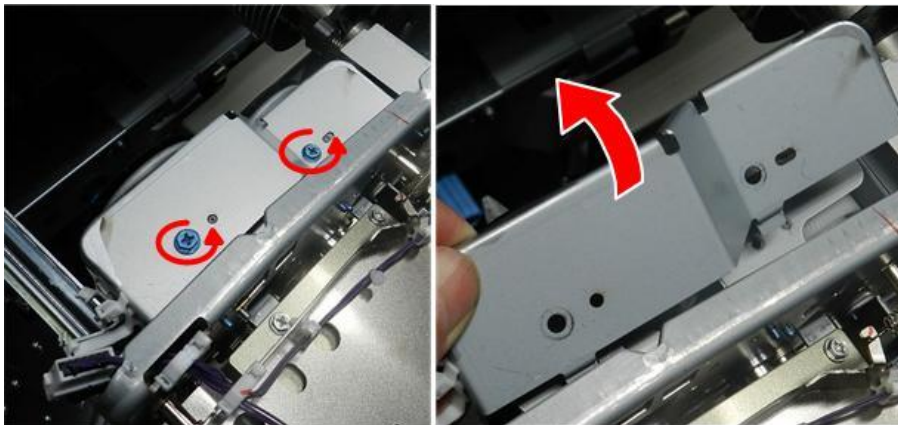
#### 4.Replacement and Adjustment

4. Free the harness at the corner (✂x3). You do not need to disconnect the harnesses.



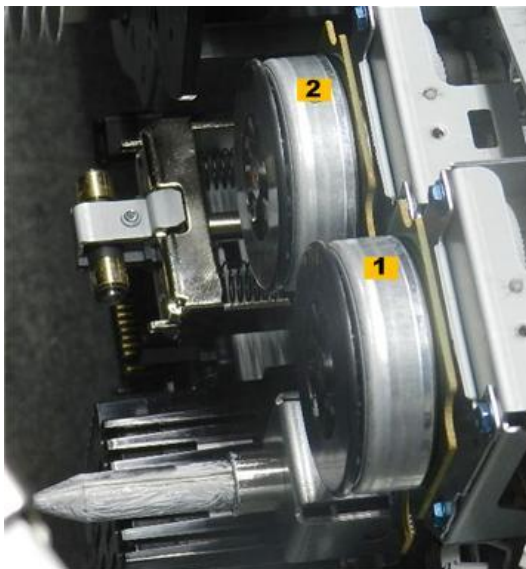
D270b4027

5. Remove the cover plate (✂x2).



D270b4028

6. [1] is the exit motor, and [2] is the heat pipe roller motor.



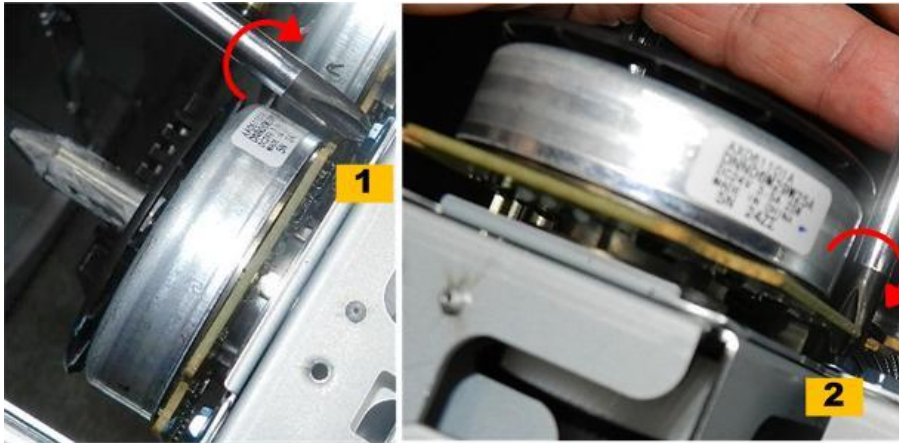
d270b4029

7. Use a short screwdriver to disconnect the top right corner [1] and bottom right corner [2] of the exit



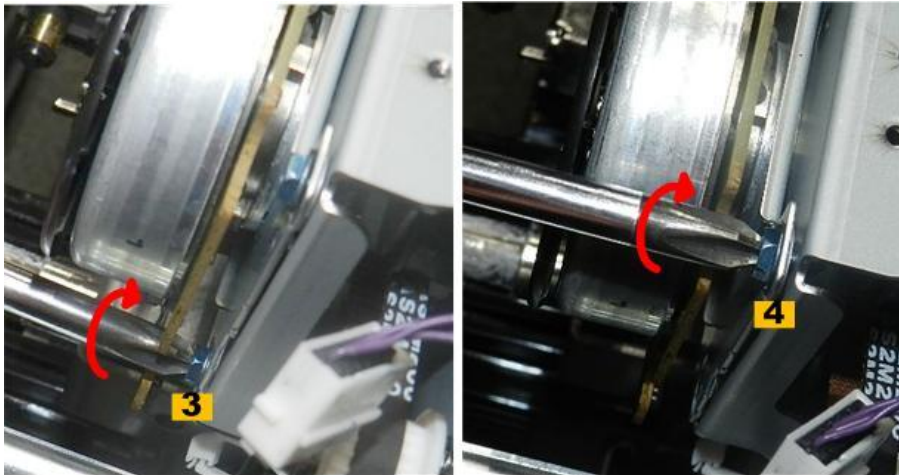
## 4.Replacement and Adjustment

motor



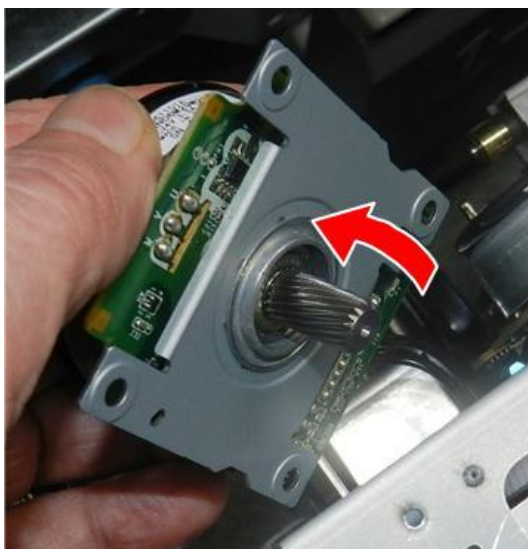
d270b4030

8. Disconnect the bottom left corner [3].
9. To prevent the motor from falling, hold the back of the motor with your other hand as you disconnect the top left corner [4].



d270b4031

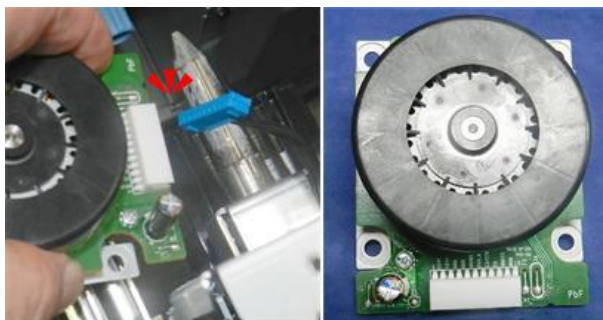
10. Pull the motor slightly away from the machine.



d270b4032

#### 4.Replacement and Adjustment

11. Disconnect the motor (📦 x1).



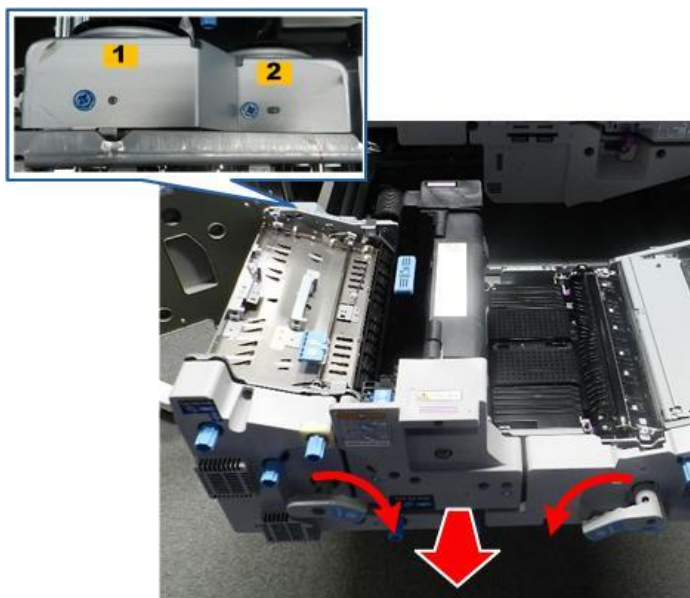
d270b4033

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#### Heat Pipe Motor

---

1. Turn the machine off and then wait at least 15 minutes for it to cool.
2. Open both front doors, and then pull out the drawer.
3. The exit motor [1] and the heat pipe roller motor [2] are on the rear left corner of the exit unit.



d270b4025

#### **⚠ CAUTION**

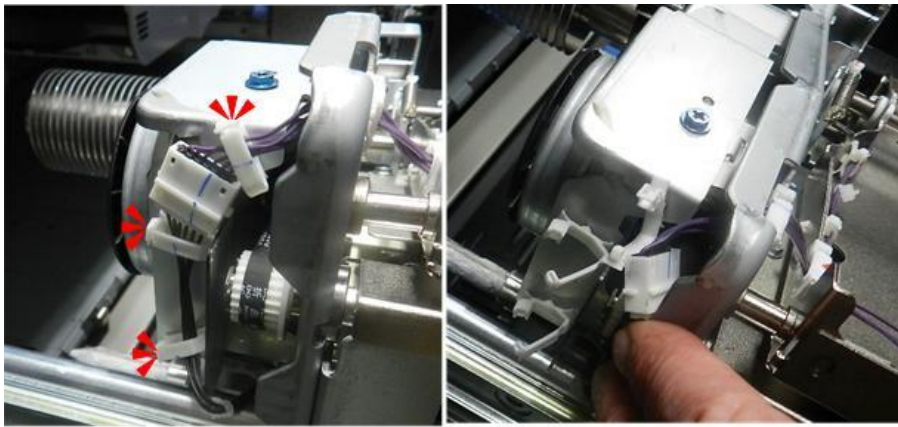
- The heat sink on the end of the heat pipe becomes hot during machine operation and has sharp edges.
- Allow the machine to cool for several minutes before you remove the motor.
- Avoid touching the heat sink [1] with bare hands while you work.

## 4.Replacement and Adjustment



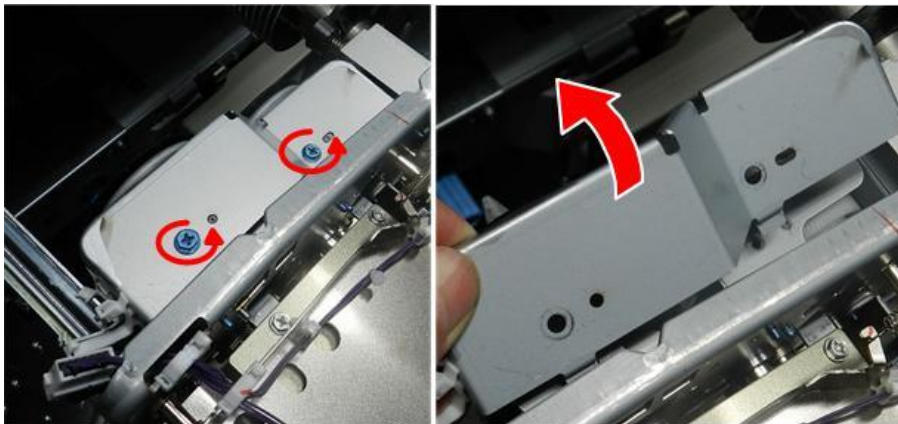
d270b4026

4. Free the harness at the corner (✎x3). You do not need to disconnect the harnesses.



D270b4027

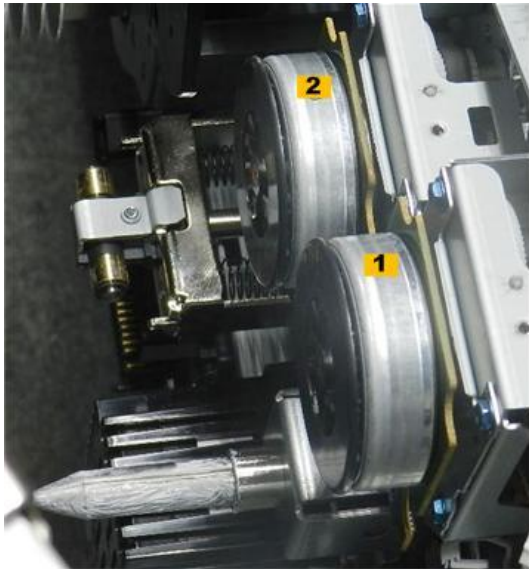
5. Remove the cover plate (↻x2).



D270b4028

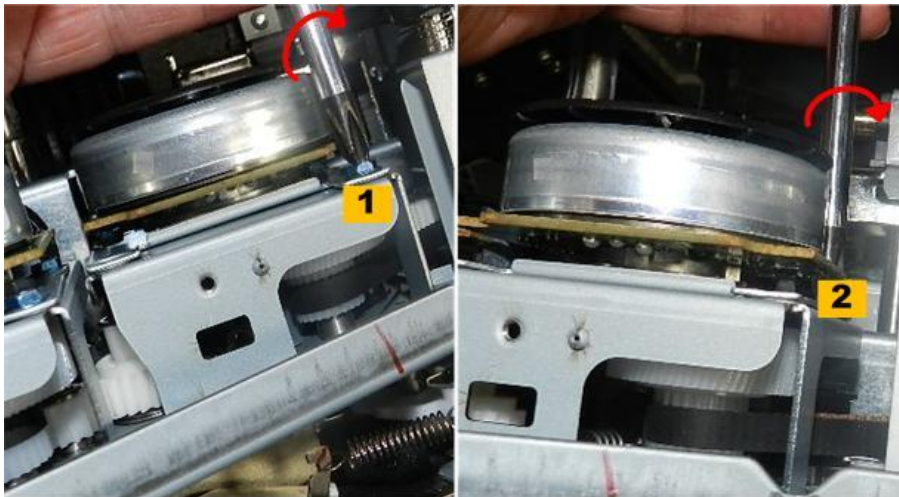
#### 4.Replacement and Adjustment

- [1] is the exit motor, and [2] is the heat pipe roller motor.



d270b4029

- Use a short screwdriver to disconnect the top right corner [1] and bottom right corner [2] of the heat pipe motor

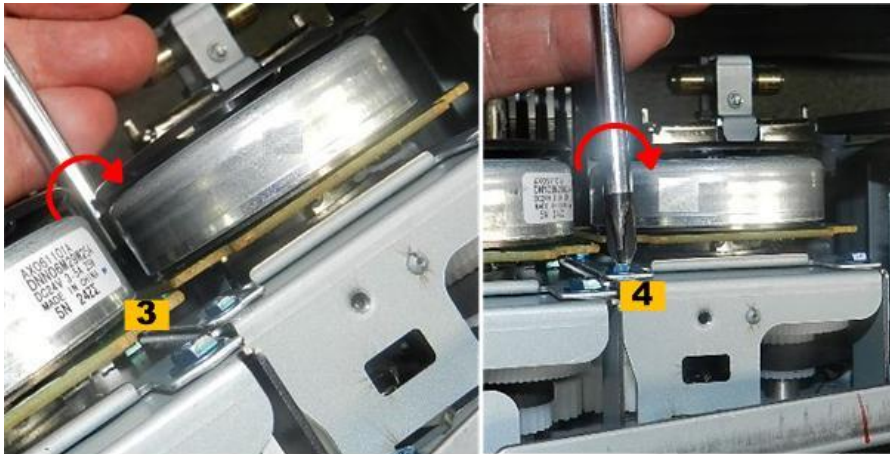


d270b4034

- Disconnect the bottom left corner [3].
- To prevent the motor from falling, hold the back of the motor with your other hand as you

## 4.Replacement and Adjustment

disconnect the top left corner [4].



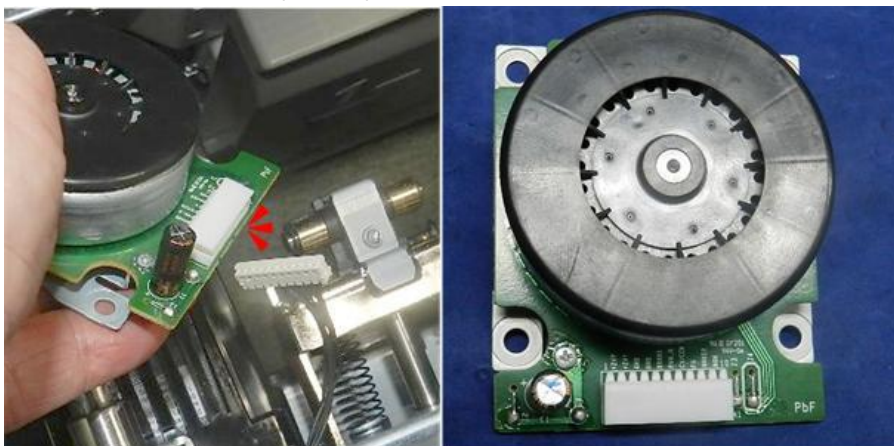
d270b4035

10. Pull the motor slightly away from the machine.



d270b4036

11. Disconnect the motor (🔌 x1).

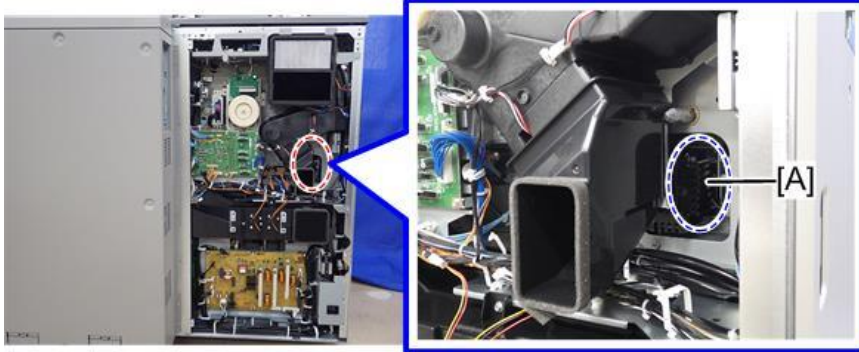


d270b4037

## 4.Replacement and Adjustment

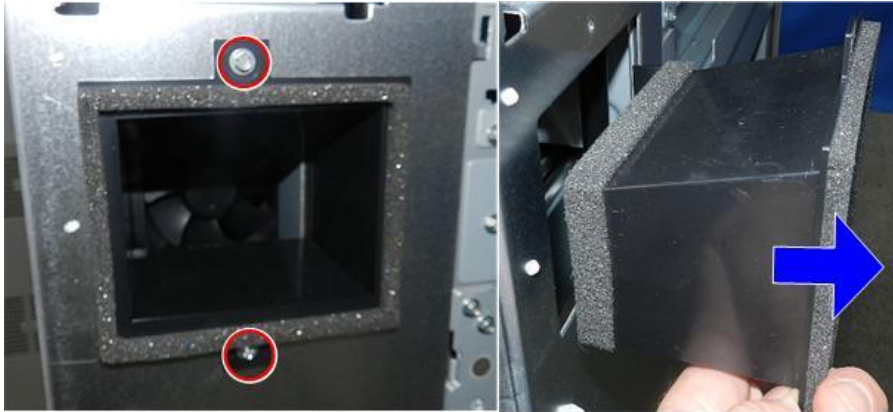
### Exit/Invert Motor

1. Remove the rear cover. ([Rear Cover](#))
2. Remove the left cover. ([Left Cover](#))
3. With the rear cover removed, the motor [A] is partially visible behind the heat pipe cooling fan duct.



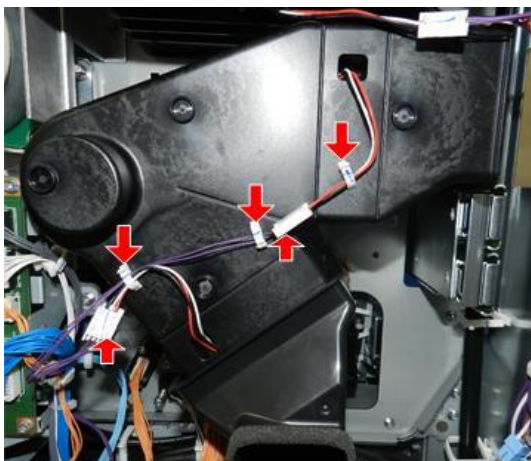
d0bxa4095

4. At the left rear edge, remove the duct (🔩 x2).



d270b4176

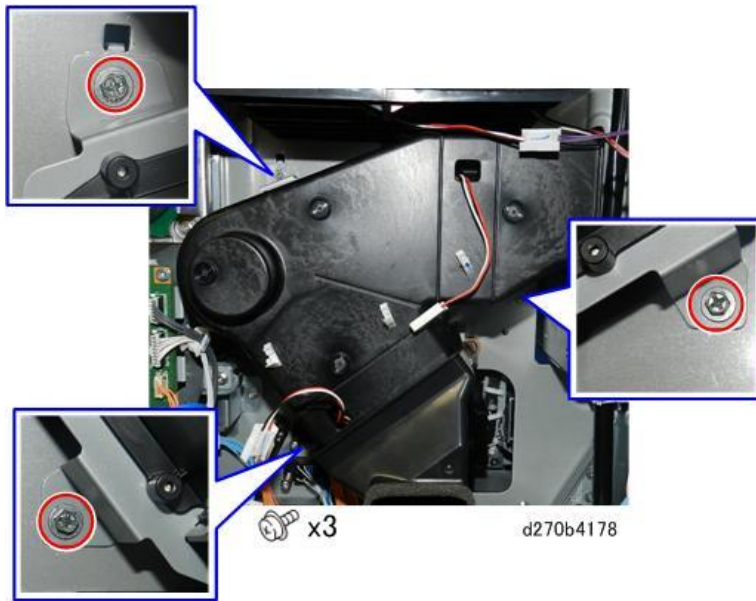
5. Disconnect the fan duct (🔌 x3, 📦 x2)



🔌 x3 📦 x2

d270b4177

6. Disconnect the duct (🔩 x3).



7. Remove the duct.



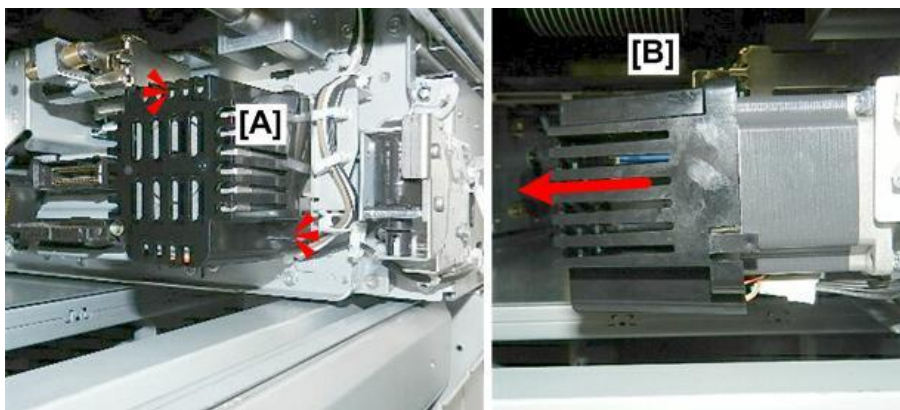
8. With the duct removed, you can see the motor.



9. Open both front doors and pull the front drawer far enough so that you can see the plastic cage from the open left side of the machine.

#### 4.Replacement and Adjustment

10. Release the plastic tabs [A], and then remove the cage [B].



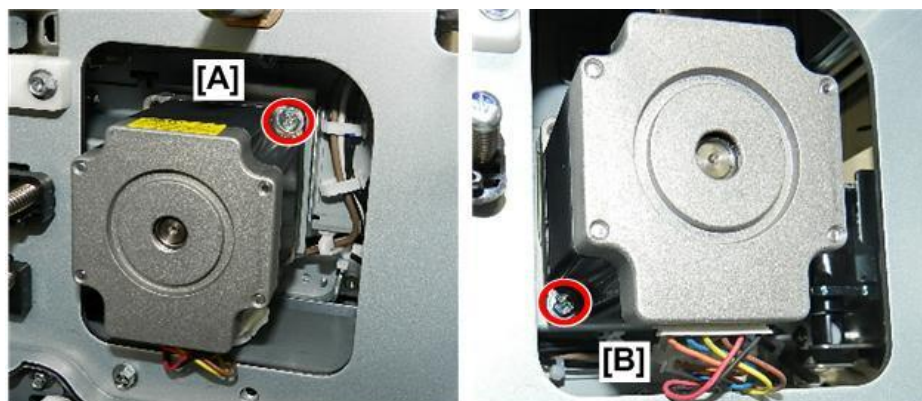
d1794176

11. Push in the front drawer completely so that you can see the motor at the rear.

12. Disconnect the motor:

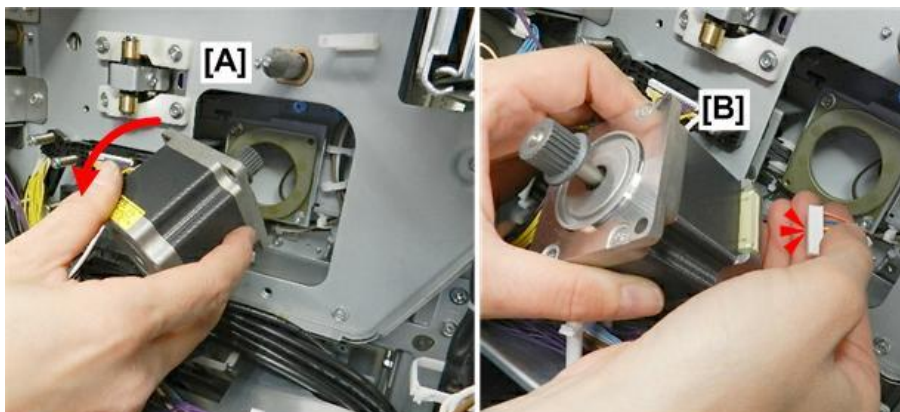
[A] Upper right (⚙️ x1)

[B] Lower left (⚙️ x1)



d1794177

13. Pull the motor out [A] partially, and then disconnect it [B] (🔌 x1).



d1794178



14. Remove the motor.



d1794179

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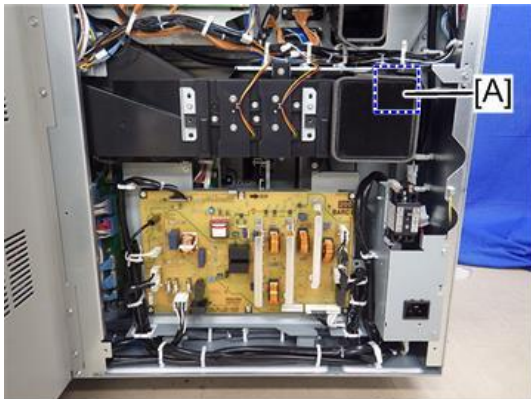
## Duplex/Invert Motor

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### Horizontal Duct

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1. Remove the rear cover ([Rear Cover](#)).
2. The duplex invert motor [A] is behind the large horizontal duct.

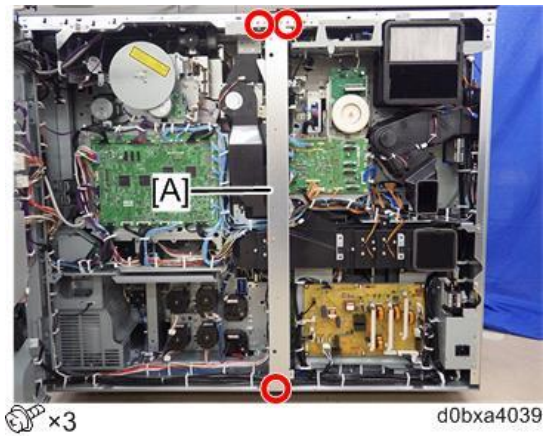


d0bxa4096

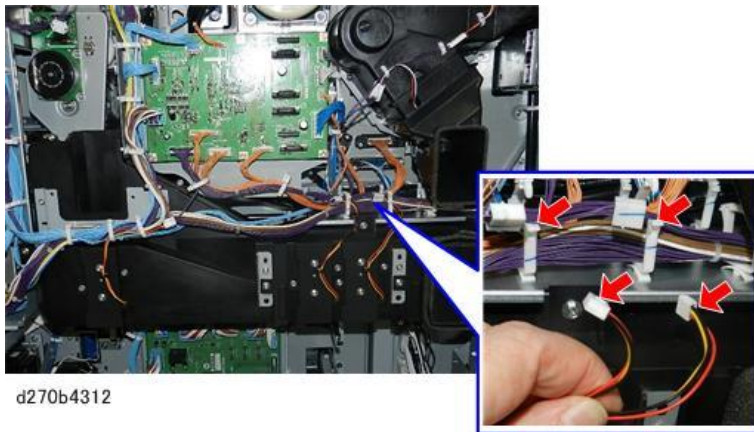
3. Open the controller box. (Copier models: [Opening the Controller Box \(Copier Models\)](#), Printer models: [Opening the Controller Box \(Printer Models\)](#))
4. Remove the rear cover. ([Rear Cover](#))

#### 4.Replacement and Adjustment

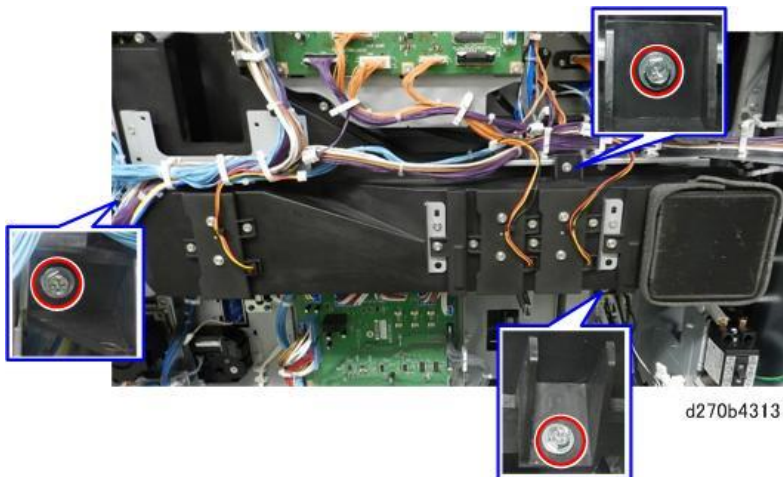
5. Remove the vertical stay [A].



6. Disconnect the horizontal duct fans (🔌x2, 📦x2).

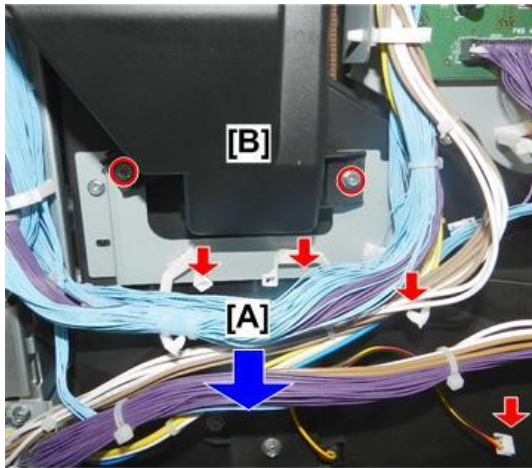


7. Disconnect the horizontal duct (🔩x3).



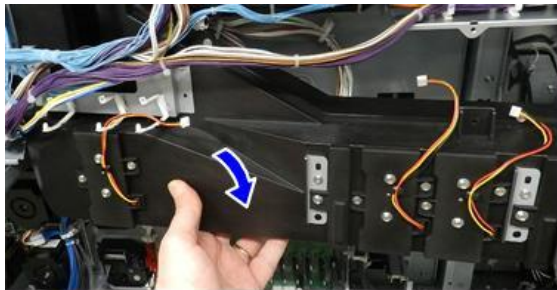
8. Open the clamps and then disconnect the horizontal duct [A] from the vertical duct [B] (🔩x3, 📦)

x1,  x2).



d270b4314


9. Remove the horizontal duct.

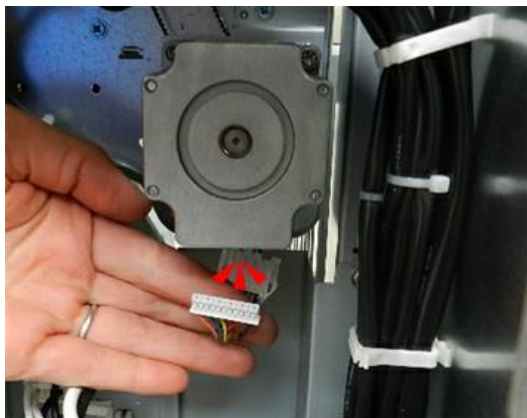


d270b4315

### Duplex/Invert Motor


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1. Disconnect the motor ( x1).



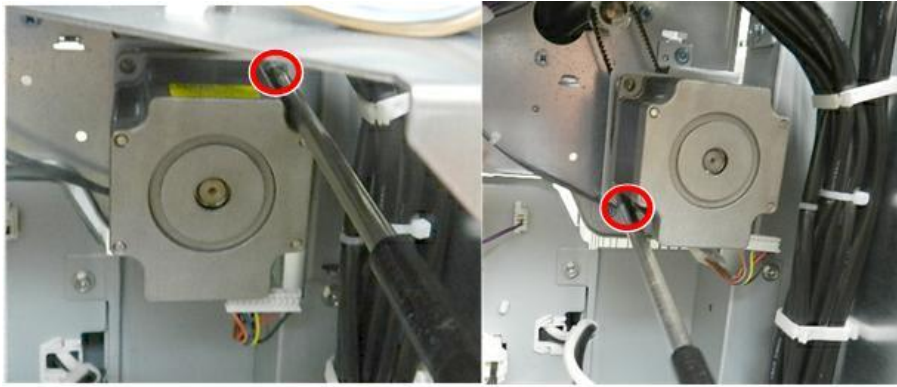
d1794181

2. Disconnect the motor:

[A] Upper right ( x1)

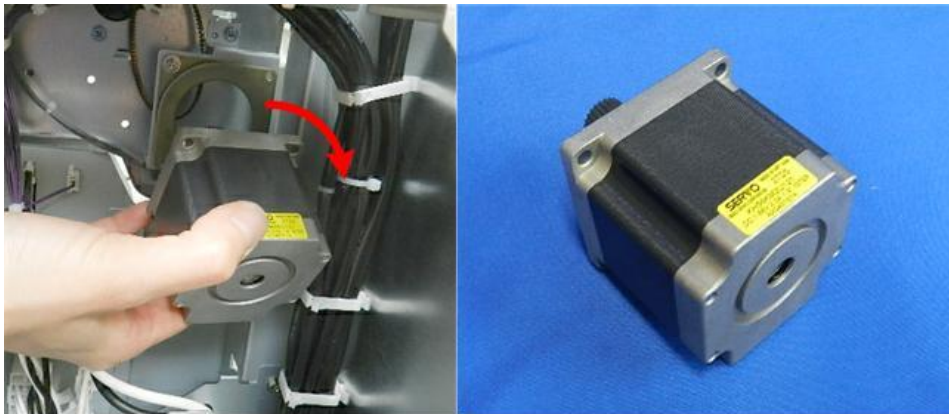
[B] Lower left ( x1)

#### 4.Replacement and Adjustment



d1794182

#### 3. Remove the motor.



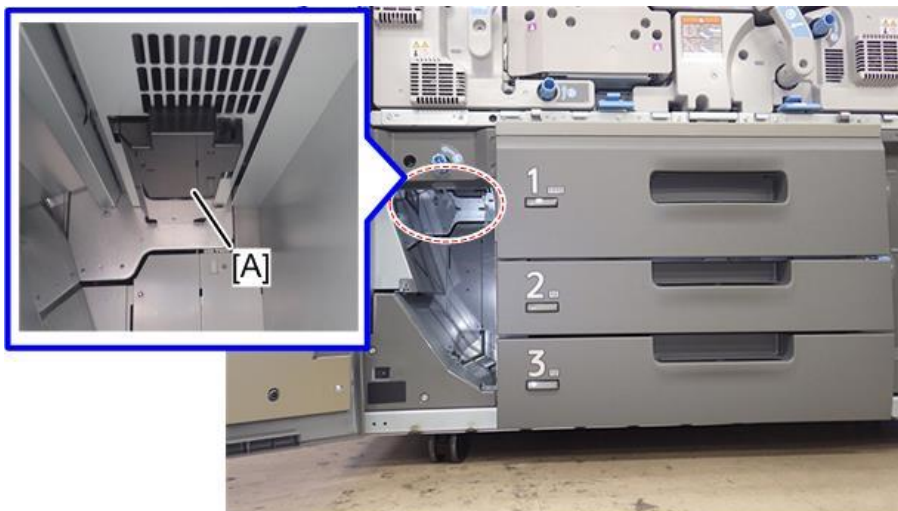
d1794183

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### Duplex/Inverter Path Paper Removal Sensor

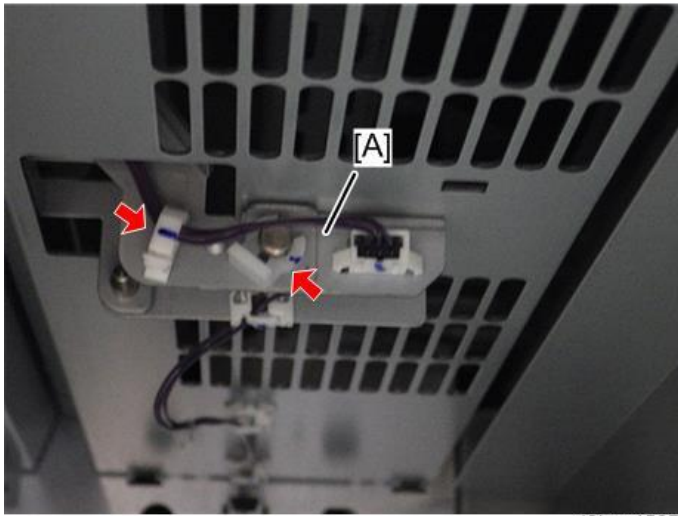
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#### 1. Remove the cover [A].



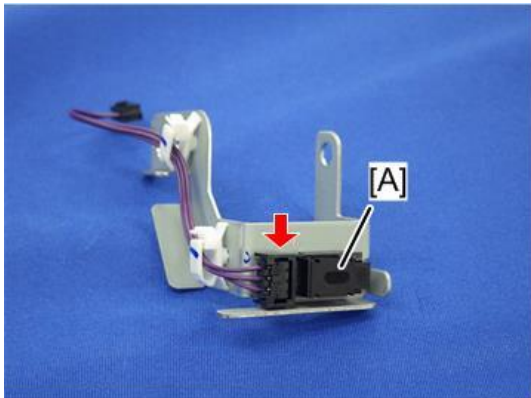
d0bxa4586

- 2.** Remove the bracket [A] (🔩x1, 📦x1).



d0bxa4587

- 3.** Remove the duplex/inverter path paper removal sensor [A] (📦x1, ▼x4).



d0bxa4588

## Waste Toner Path

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### Waste Toner Path, Waste Toner Transport Motor

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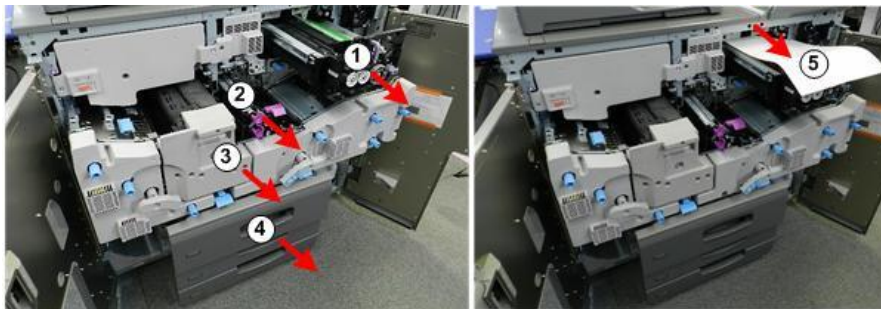
If a blockage occurs in either the upper or lower waste toner path, the machine will issue SC488.

- In this case, the mechanism must be disassembled to determine if the upper duct or lower pipe is jammed with clumped toner.
- The jammed duct or pipe must be replaced.

1. Open the controller box. (Copier models: [Opening the Controller Box \(Copier Models\)](#), Printer models: [Opening the Controller Box \(Printer Models\)](#))
2. Remove the rear cover. ([Rear Cover](#))
3. Remove the front edge cover. ([Front Edge Cover](#))
4. Pull these units out partially, to release pressure on the couplings of the motors that must be removed and re-installed during these procedures:

- ① PCDU
- ② ITB cleaning unit
- ③ Drawer
- ④ Paper trays

Be sure to cover the drum ⑤ to protect it from light.

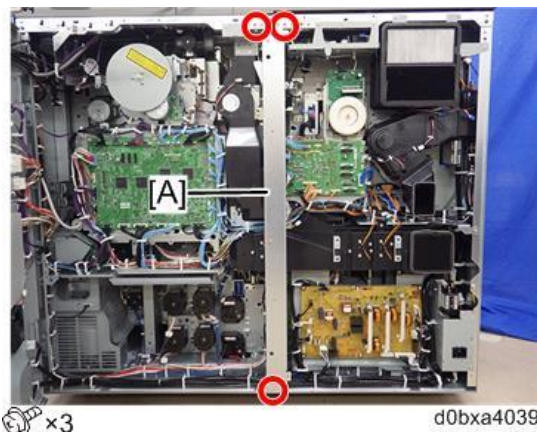


d1794001

### Vertical Duct

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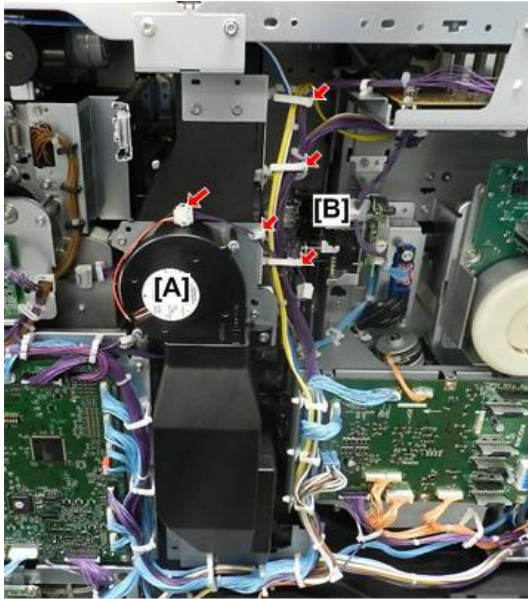
1. Remove the vertical stay [A].



d0bxa4039

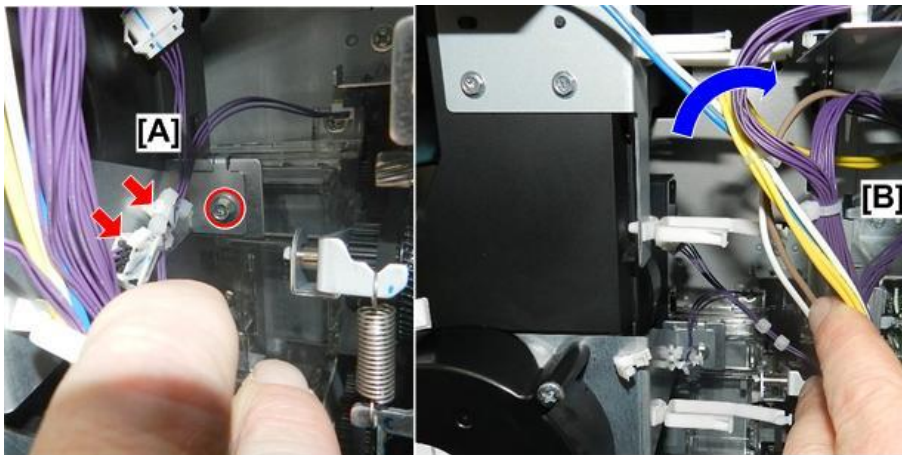
## 4.Replacement and Adjustment

2. Disconnect the motor harness [A] (🔧x1, 📦x1).
3. Open the clamps [B] (🔧x3).



d270b4239

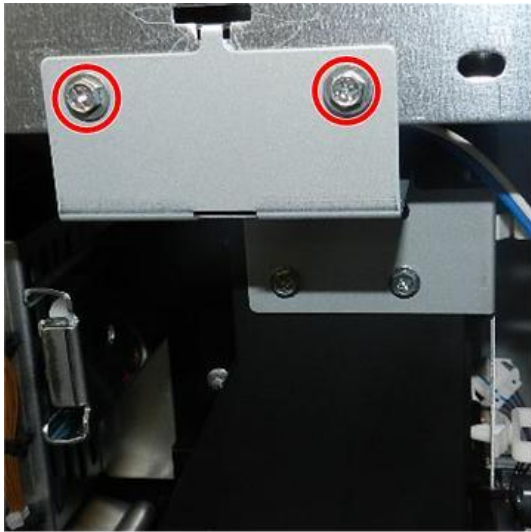
4. Inside the machine, disconnect and free the harness, and then disconnect the motor bracket [A] (🔧x1, 📦x1, 🌀x1).
5. Carefully, pull the harnesses [B] away from the side of the duct.



d270b4240

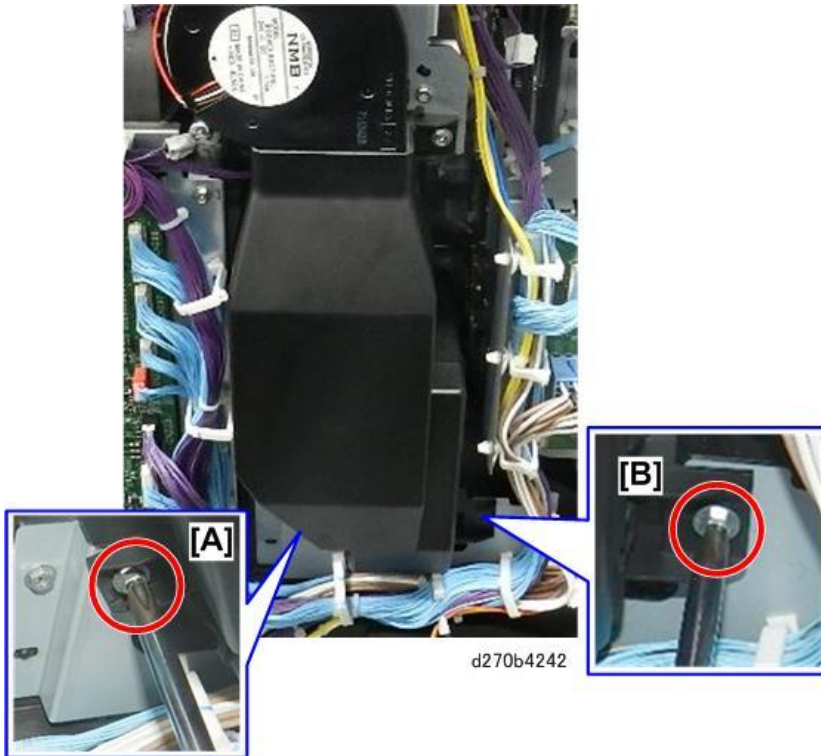
#### 4.Replacement and Adjustment

6. Disconnect the top of the duct bracket (🔧 x2).



d270b4241

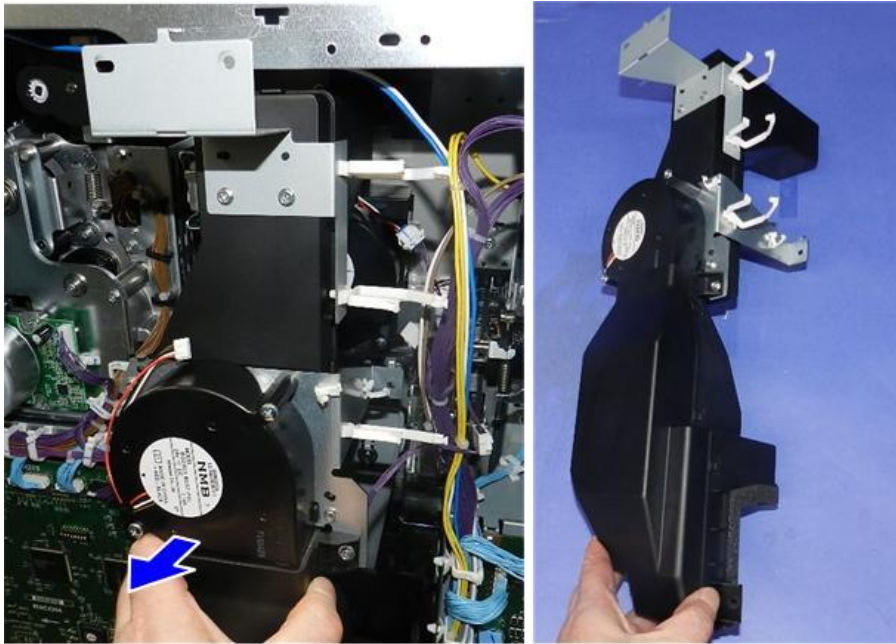
7. Disconnect the bottom of the duct at the left corner [A] and the right corner [B] (🔧 x2).



d270b4242



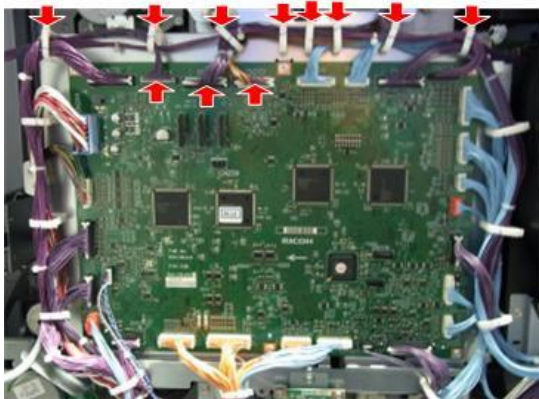
8. Remove the vertical duct.



d270b4243

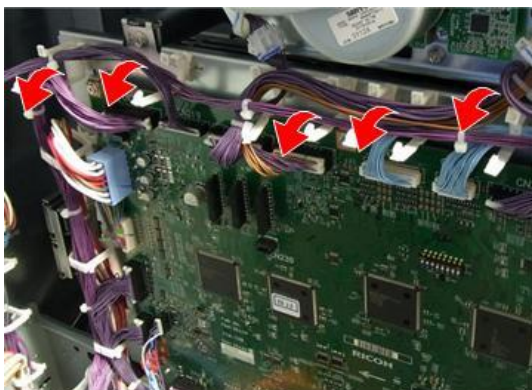
#### Lower the IOB Bracket

1. Disconnect the top of the IOB (🔌x8, 📦 x3).



d270b3009

2. Free the harnesses along the top edge of the board.



d270b3010

#### 4.Replacement and Adjustment

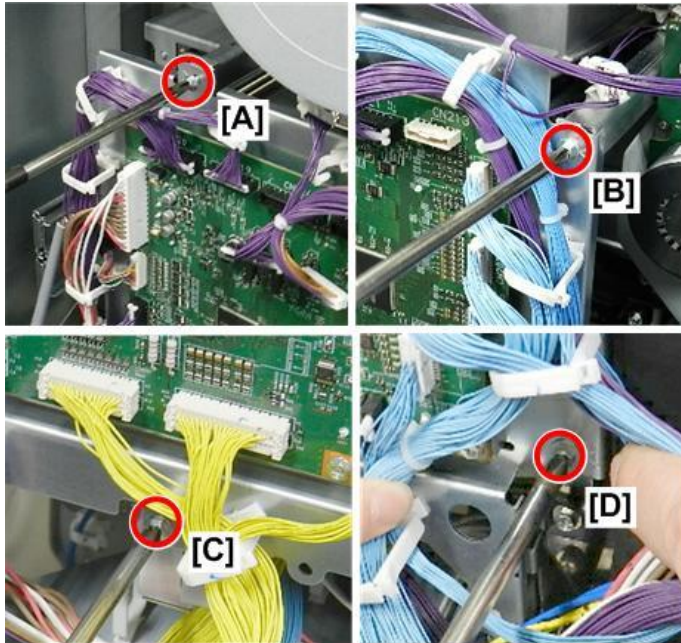
3. Disconnect the IOB:

[A] Upper left (🔧x1)

[B] Upper right (🔧x1)

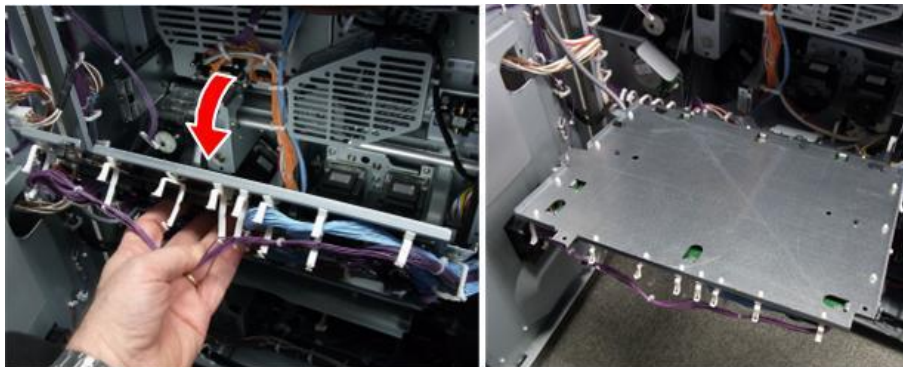
[C] Lower left (🔧x1)

[D] Lower right (🔧x1)



d1794008

4. Lower the IOB bracket (with PCB attached) until it stops.



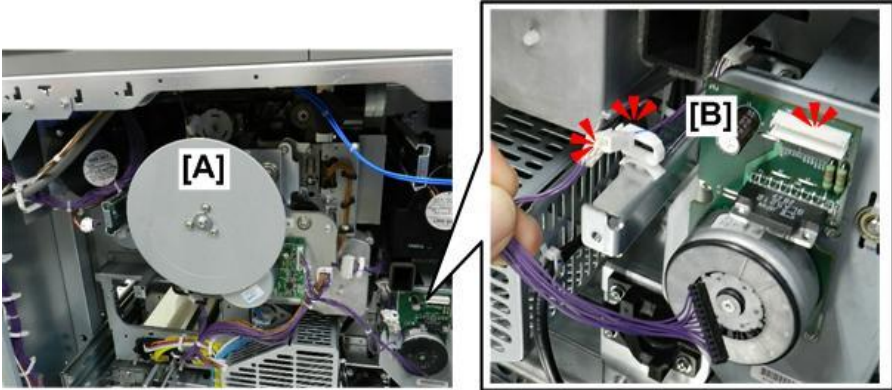
d270b3011

#### Main Motor Unit

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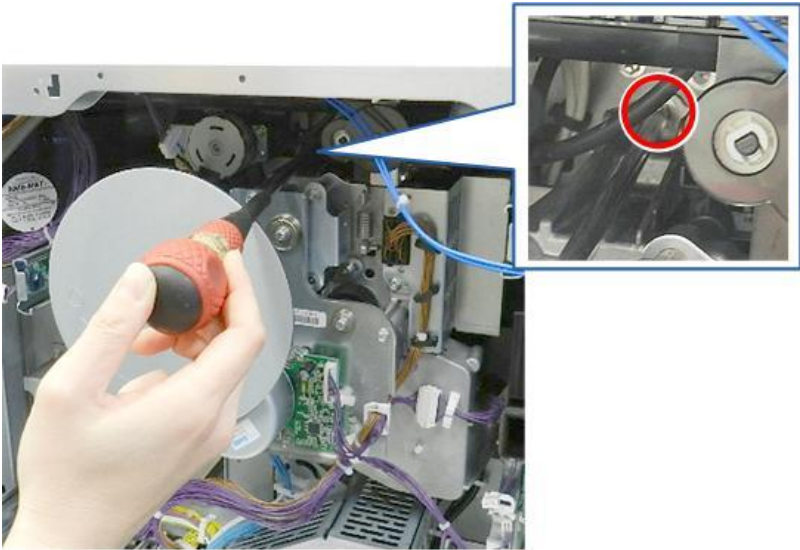
1. Next, remove the main motor unit [A] with drum, drum cleaning, and development motors attached.

2. Disconnect at [B] (🔌x1, 📡x2).



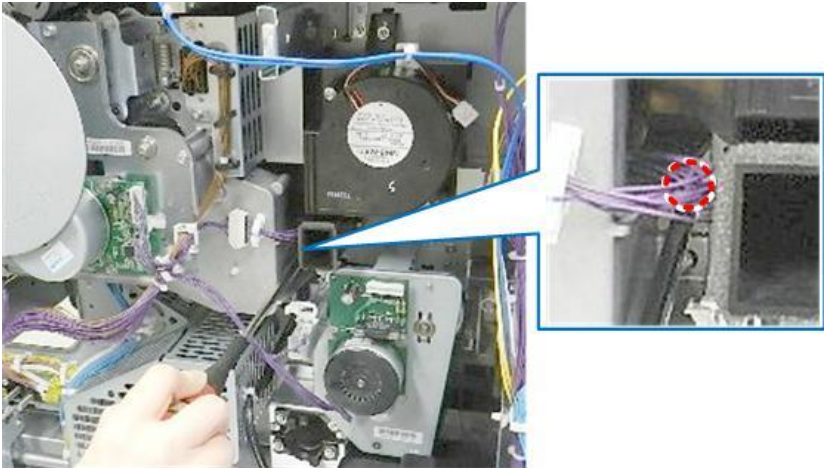
d1794010

3. Upper right (🔧x1).



d1794011

4. Lower right (🔧x1).



d1794012

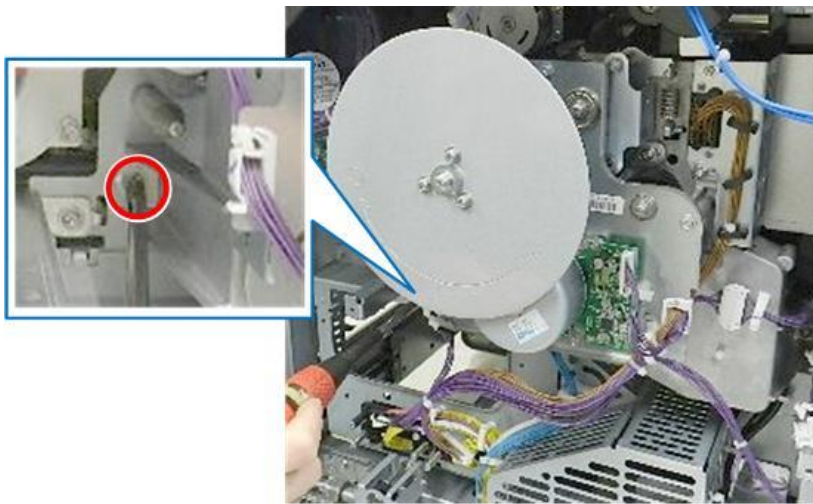
#### 4.Replacement and Adjustment

5. Bottom (🔩 x1).



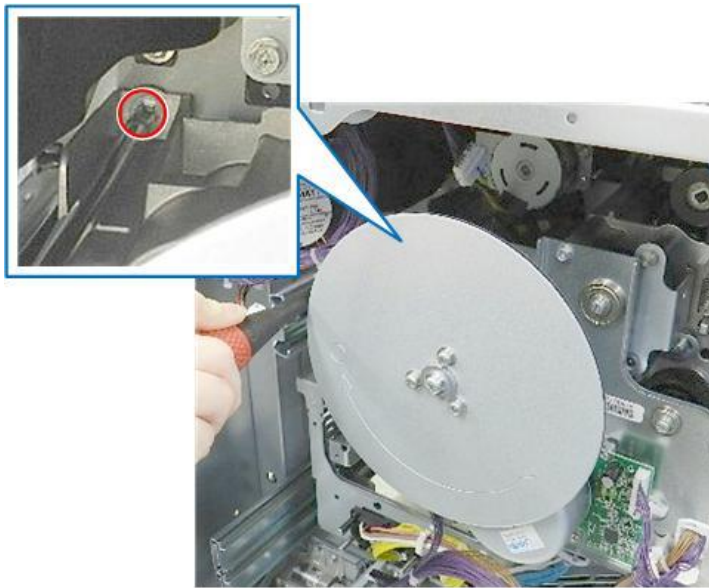
d1794013

6. Bottom left (🔩 x1).



d1794014

7. Left (🔩x1).

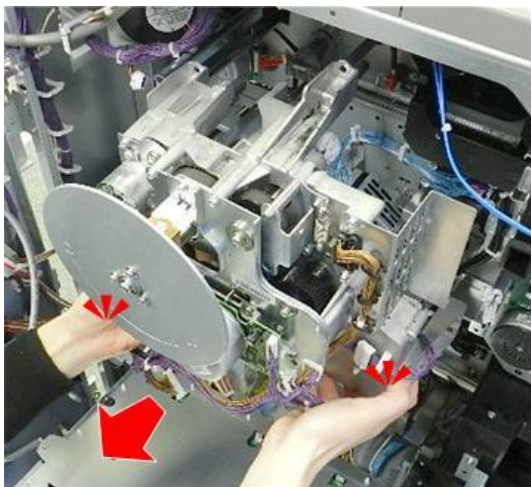


d1794015

★ Important

- Check the front of the machine and confirm that the PCDU is pulled partially out of the machine.

8. Remove the main motor unit.



d1794016

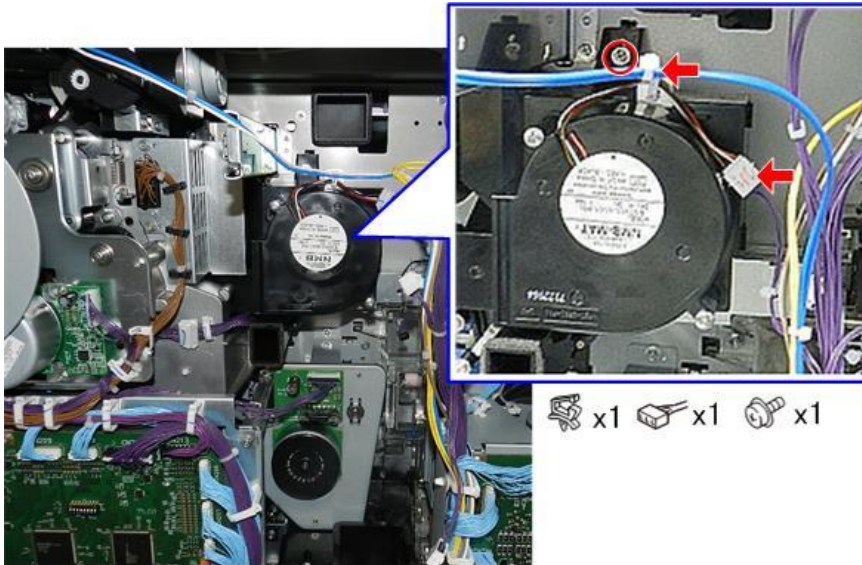
Developer Unit Rear Fan, Small Horizontal Duct

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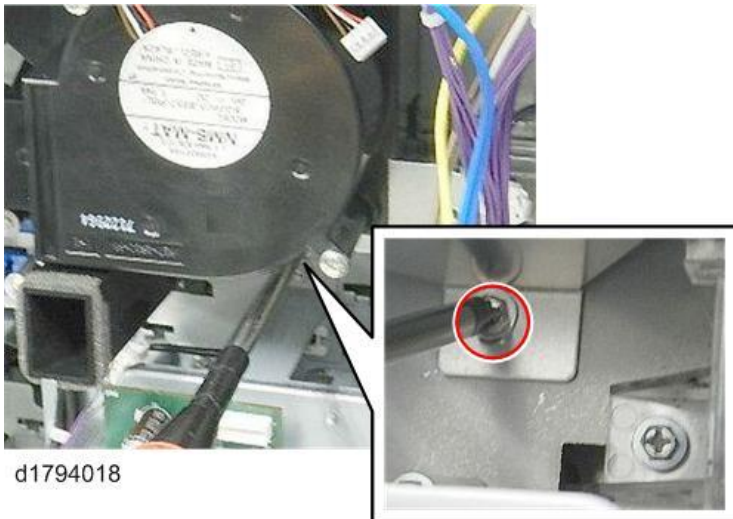
1. The fan is attached to the end of the small horizontal duct near the center of the machine.

#### 4.Replacement and Adjustment

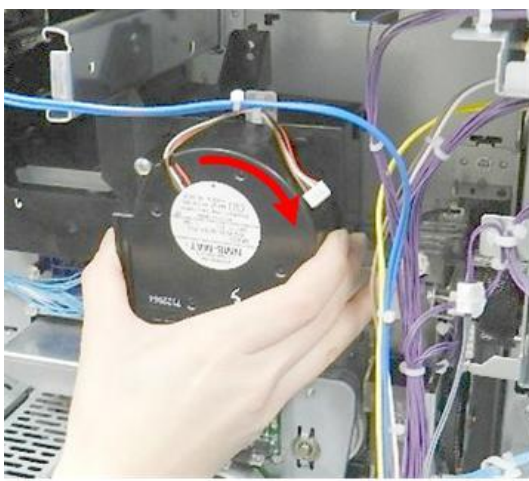
2. Disconnect the fan (🔧x1,🔌x1,🔩x1)



3. Lower right (🔩x1).



4. Remove the fan.



4.Replacement and Adjustment

5. Next, disconnect the duct where you just removed the fan (🔩x3).




6. Remove the duct.

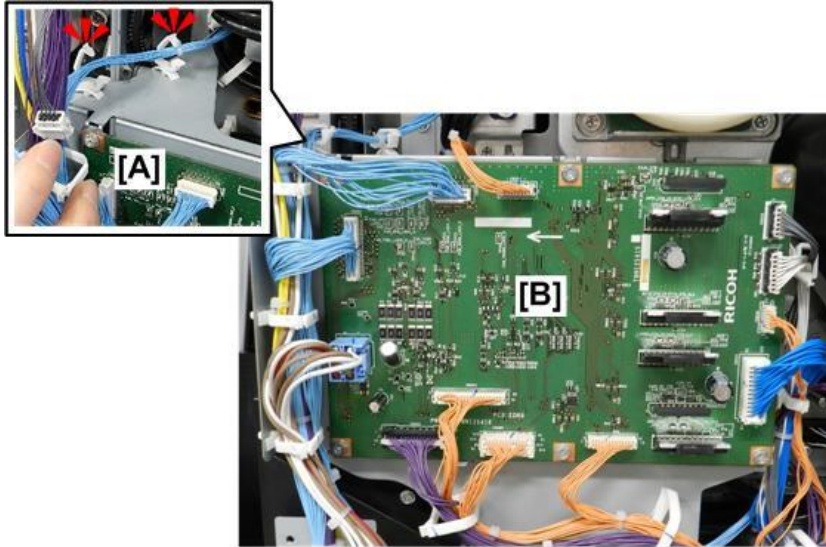


## 4.Replacement and Adjustment

### Remove the EDRB Bracket

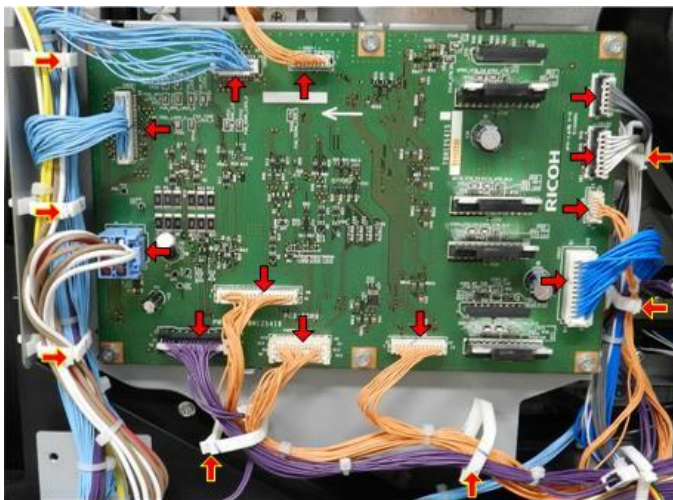
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1. At the upper right corner [A] of the EDRB [B], free the harness [x2].



d270b5022

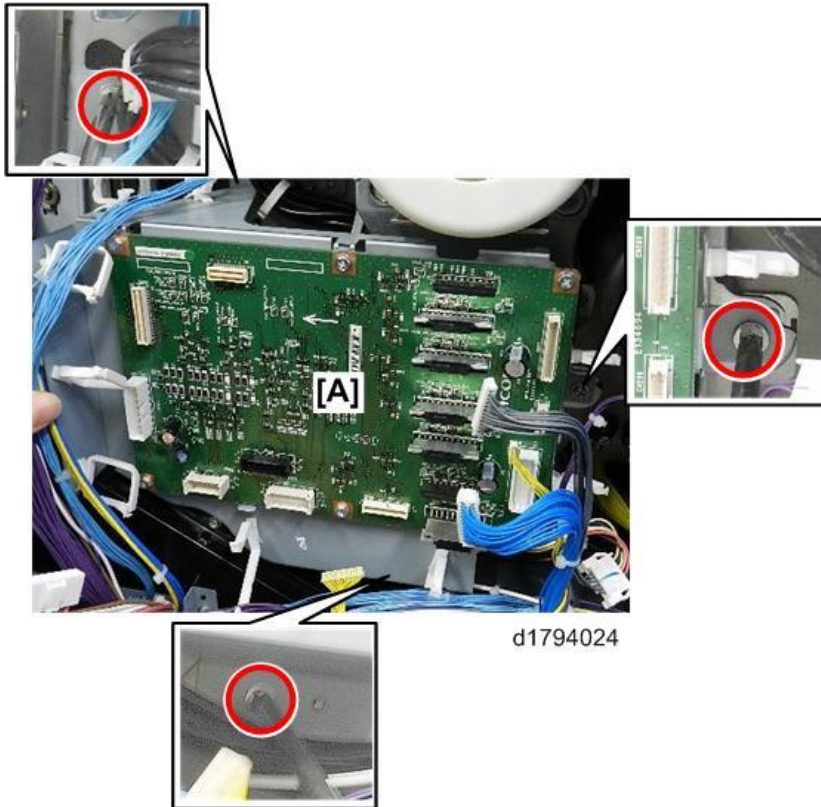
2. Disconnect the EDRB (x7, x12).



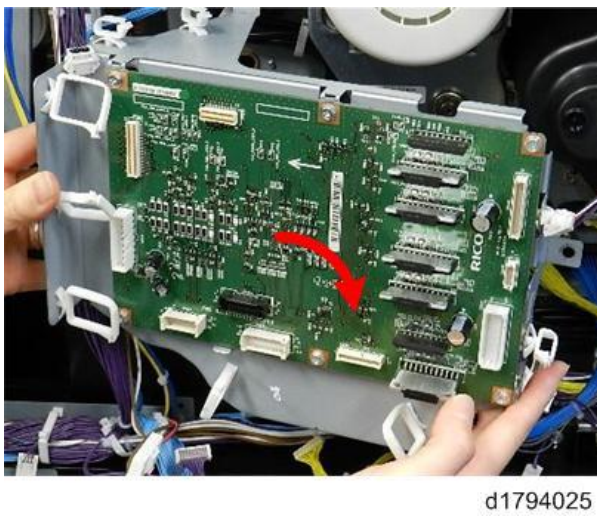
d270b5023



3. Disconnect the EDRB bracket [A] (⚙️ x3).



4. Remove the EDRB bracket (with PCB attached).



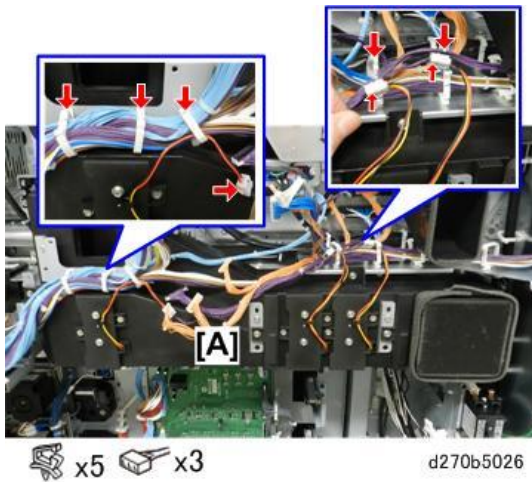
#### Horizontal Duct

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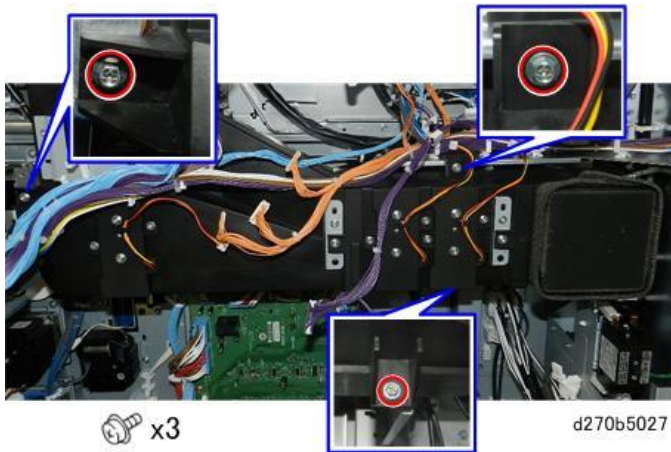
1. Next, remove the horizontal duct [A].

## 4.Replacement and Adjustment

- Free the top of the duct (🔧x5, 📦x3).



- Disconnect the duct (🔧x3).

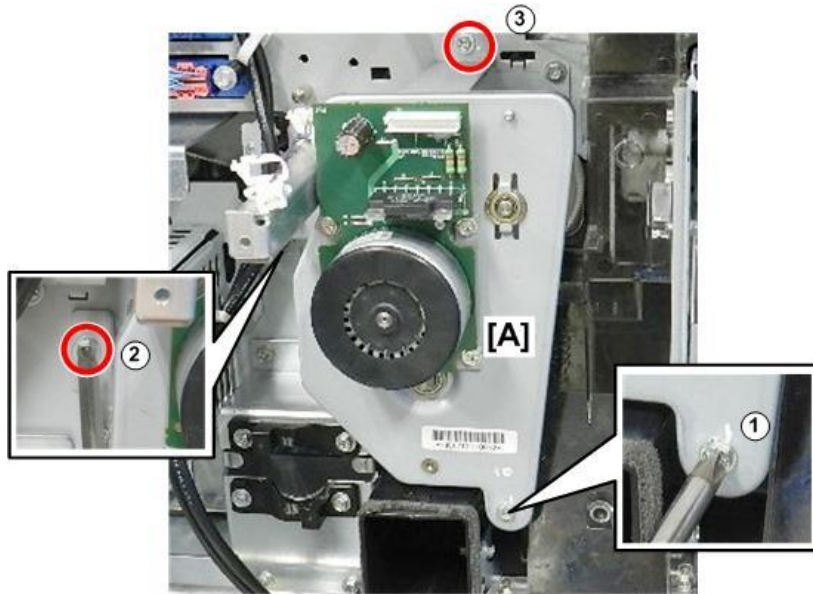


- Remove the duct.



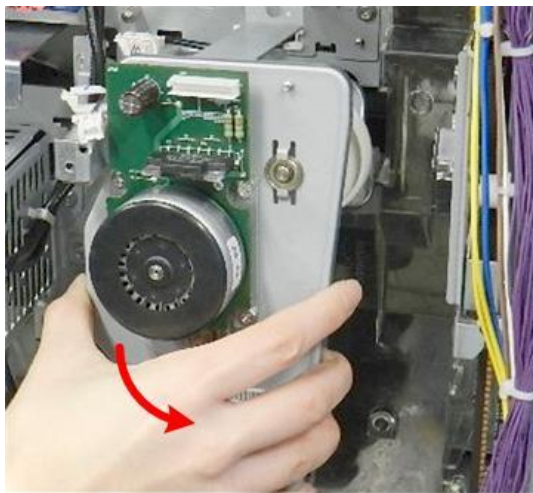
## ITB/PTR Motor

- Next, remove the ITB/PTR motor bracket [A] (🔧x3).
  - ① is a small screw.
  - ② and ③ are larger and the same size.



d1794031

2. Remove the bracket (with motor attached).



d1794032

### Waste Toner Transport Motor

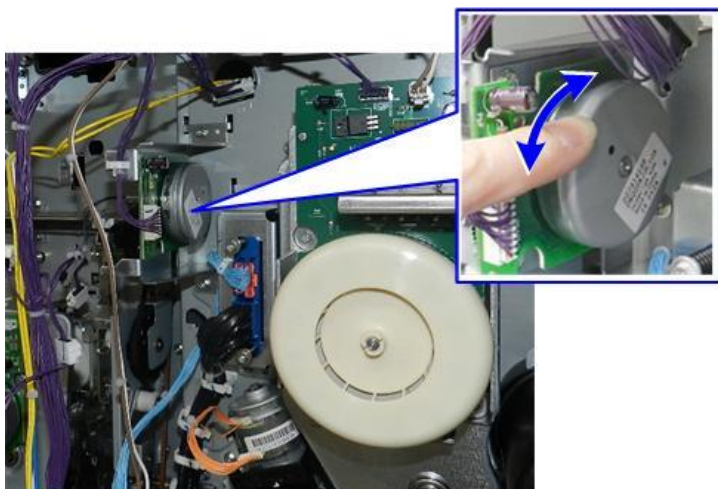
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**★ Important**

- This motor transports waste toner. If the motor does not rotate, the motor is defective, or the harness is broken or defective.

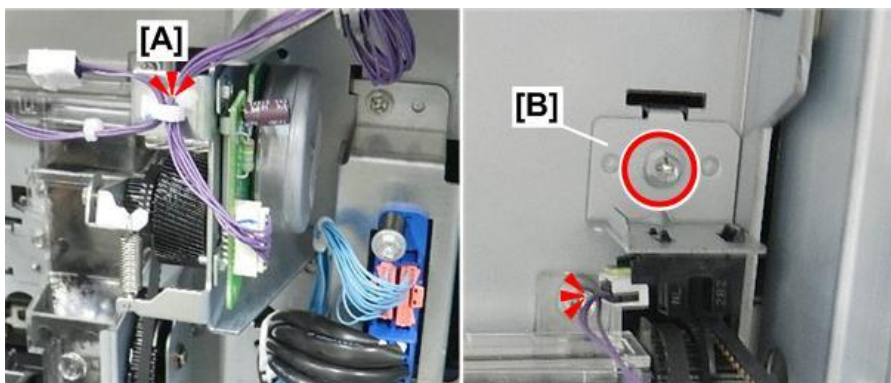
#### 4.Replacement and Adjustment

1. At the top, rotate the waste toner transport motor.



d270b5033

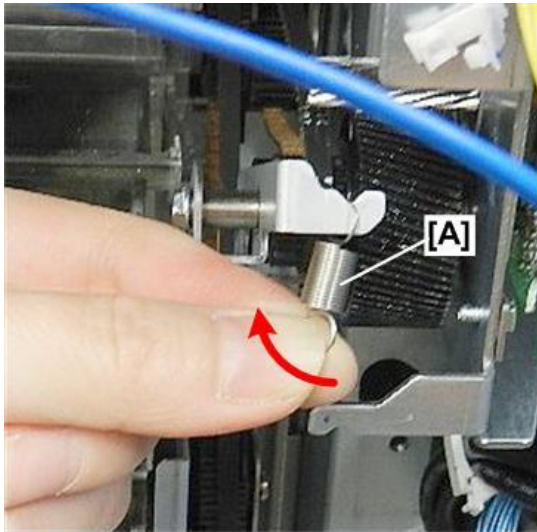
- If the motor does not turn easily, this means there is a block in the upper waste toner path, lower waste toner path, or both.
  - The motor drives the belts for both paths, so you will not be able to determine which path is blocked until they are disconnected from the belts.
2. Free the harness [A] (🔧x1).
  3. Disconnect the waste toner transport sensor bracket [B] (🔧x1).



d1794034

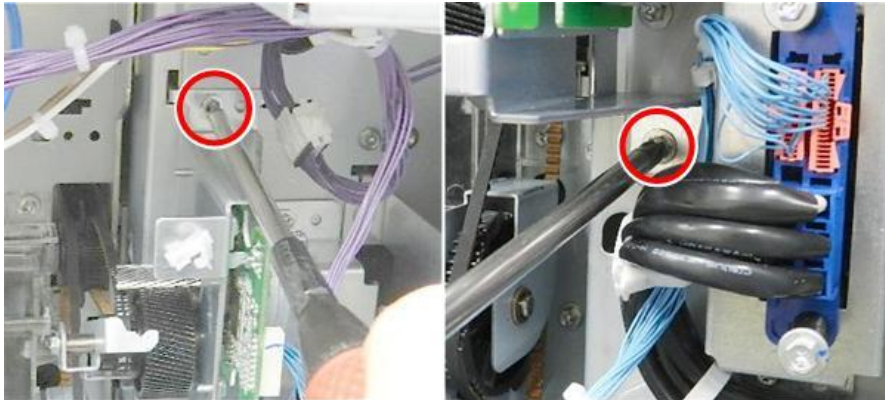
## 4.Replacement and Adjustment

4. Remove the spring [A] from the waste toner transport motor bracket (🔩x1).



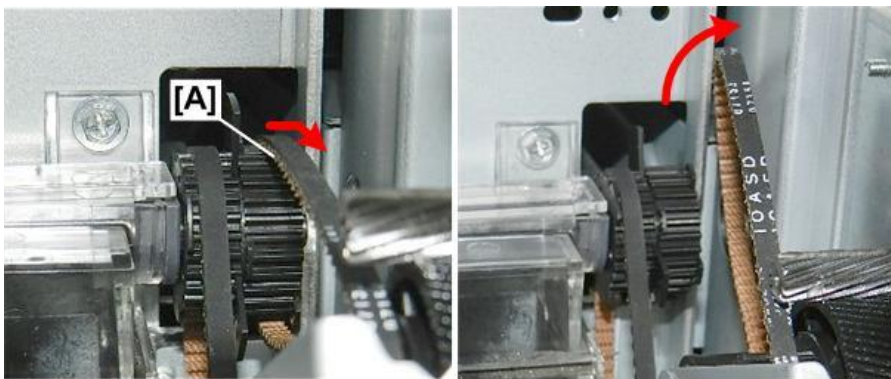
d1794035

5. Unfasten the waste toner transport motor bracket (🔩x2).



d1794036

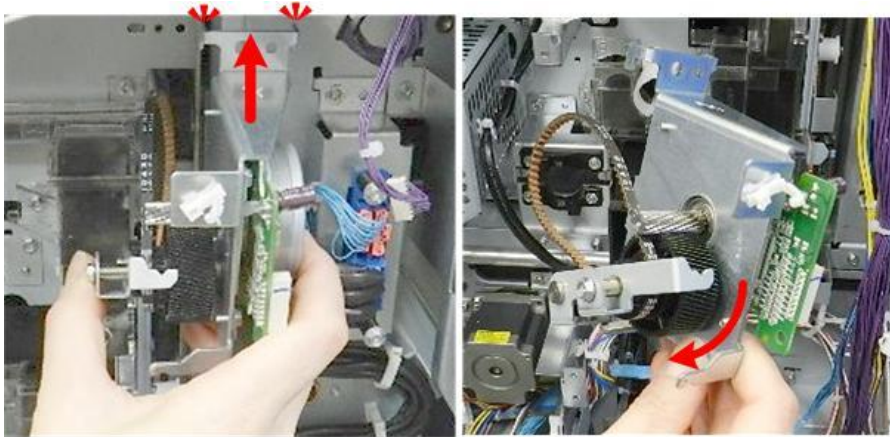
6. Disconnect the belt [A] (🔩x1.)



d1794037

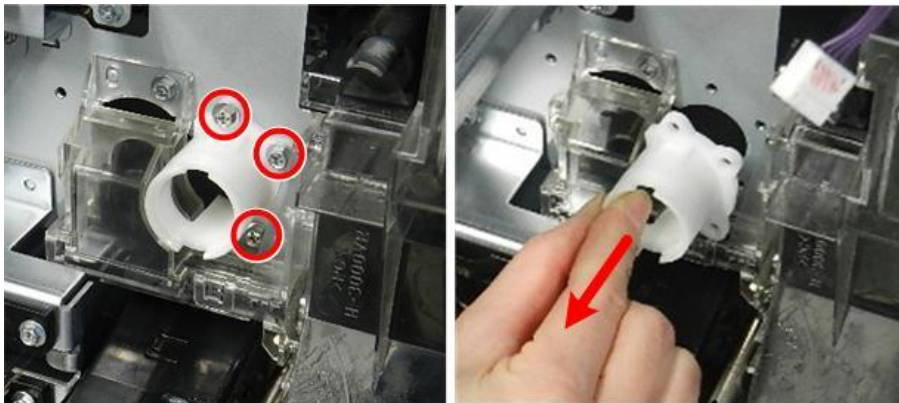
#### 4.Replacement and Adjustment

7. Lift the motor bracket off its hooks, then remove it (with motor attached).



d1794038

8. Remove the white collar (Ⓜ x3).



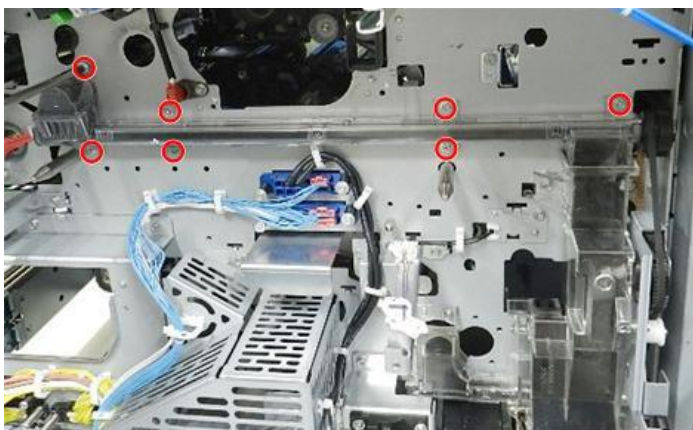
d1794039

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#### Waste Toner Path Upper Duct

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1. Disconnect the upper waste toner duct (Ⓜ x7).



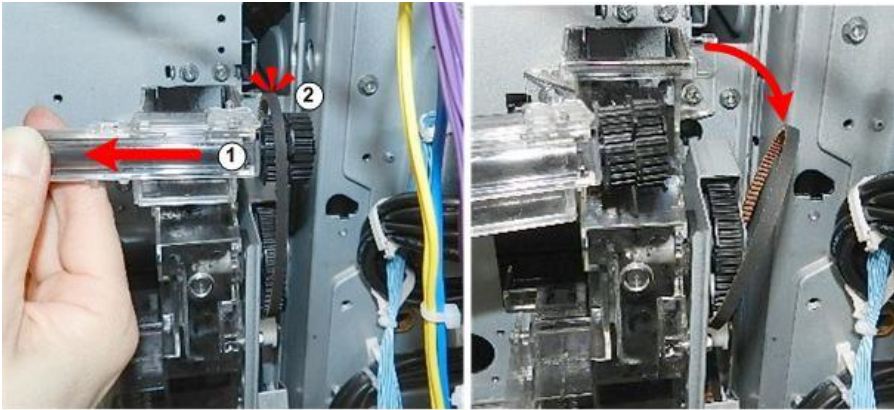
d1794040

2. Pull the duct out slightly.



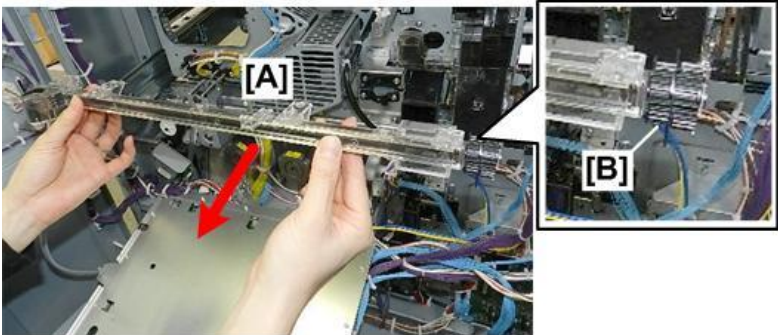
d1794041

3. Pull the duct slightly to the left ① to disconnect it from the belt ②.



d1794042

- 4. Remove the upper duct [A].
- 5. Turn the gear [B] on the end of the duct. If the gear does not turn easily, the duct is jammed or defective and must be replaced.

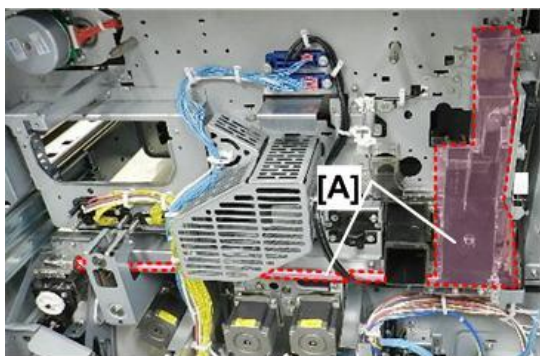


d1794043

## 4.Replacement and Adjustment

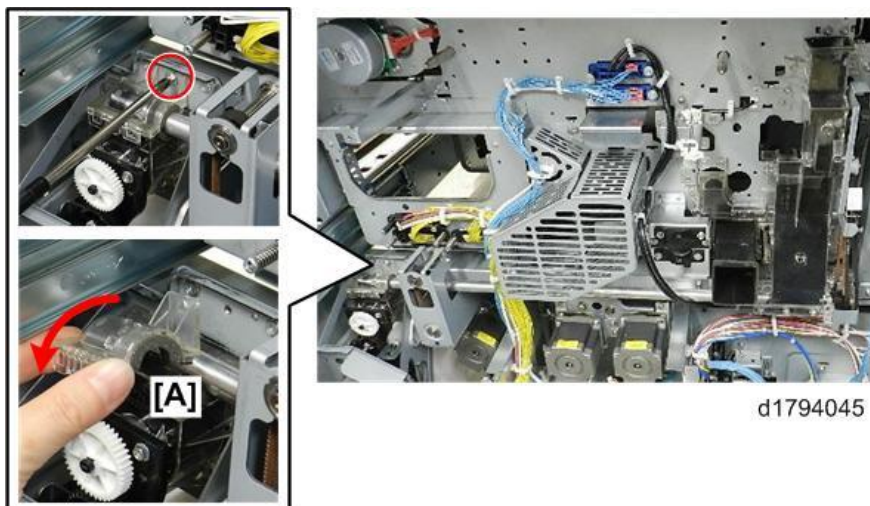
### Waste Toner Path Vertical Duct, Horizontal Pipe

1. Next, the vertical duct and lower duct [A] of the waste toner path must be removed.



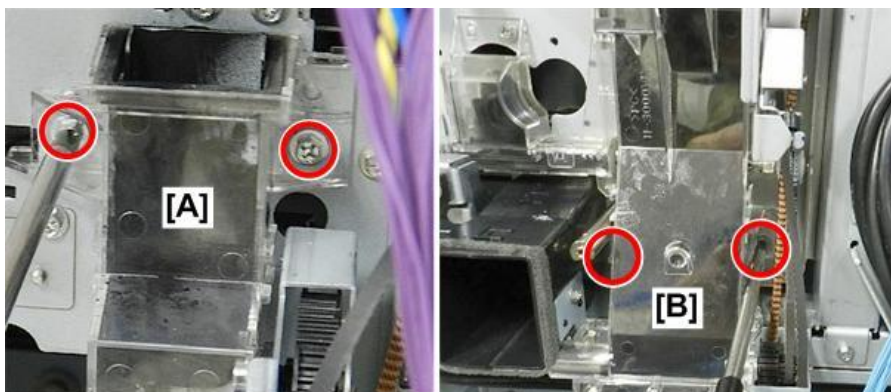
d1794044

2. Remove the cap [A] (⚙️ x1). This disconnects the left end of the pipe.



d1794045

3. On the right, disconnect the top of the vertical duct [A] (⚙️ x2).
4. Disconnect bottom [B] of the vertical duct [A] (⚙️ x2)

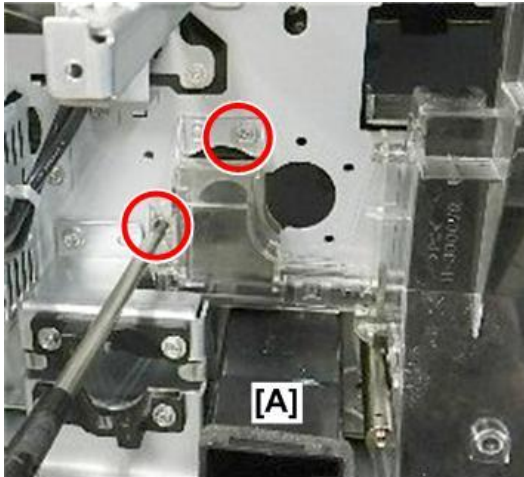


d1794064



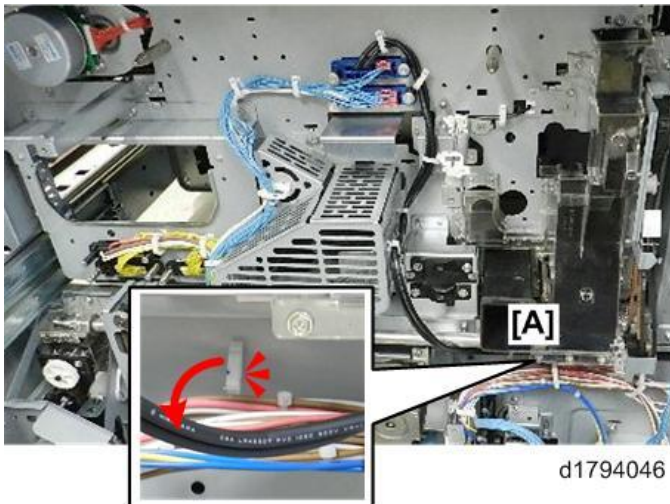
#### 4.Replacement and Adjustment

5. To the left, unfasten above the open air duct [A] (x2).



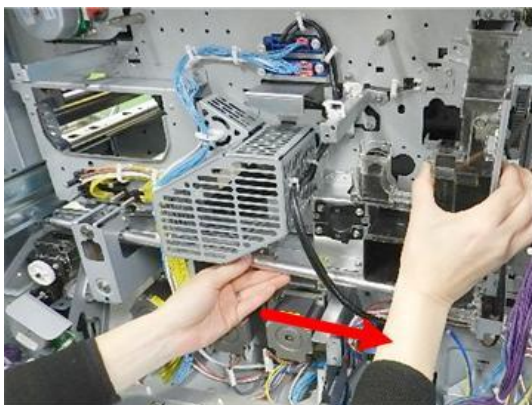
d1794065

6. Free the black harness at [A] (x1). (This will make removal easier.)



d1794046

7. Slide the pipe and the vertical duct to the right.

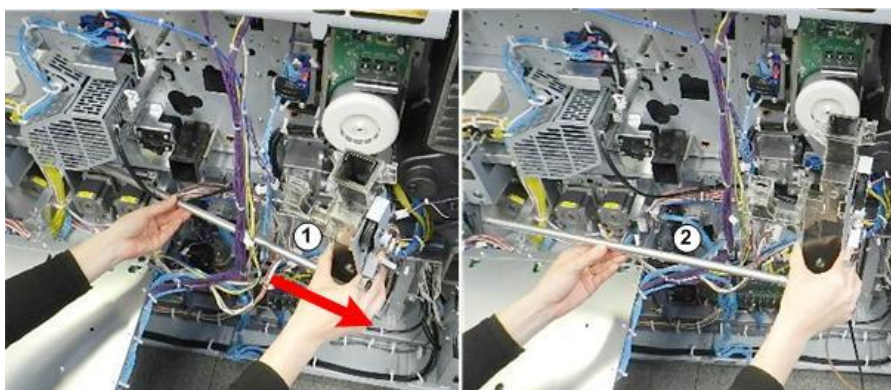


d1794047

8. Continue to move it to the right ① as you separate it from the harnesses until it is free ②.
9. Turn the gear on the right end of the pipe. If the gear does not rotate freely, the pipe is jammed or

## 4.Replacement and Adjustment

defective and must be replaced.



d1794048

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## Waste Toner Bottle Unit

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### Waste Toner Bottle Unit Removal

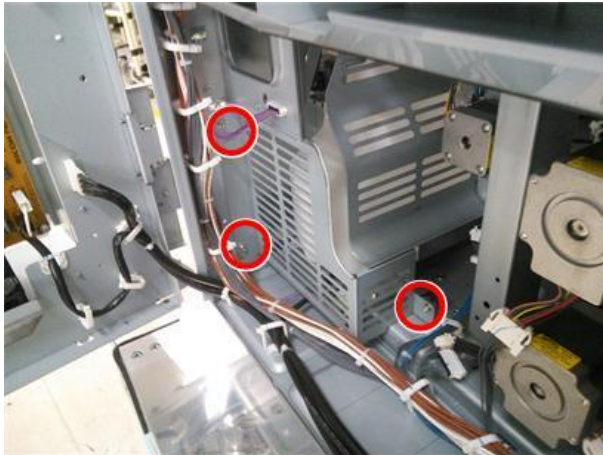
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1. Open the controller box door. ([Opening the Controller Box \(Copier Models\)](#))
2. Remove the rear cover. ([Rear Cover](#))
3. Remove the right cover. ([Right Cover](#))
4. Spread some paper to prepare a place to lay the waste toner bottle unit (the paper will catch loose toner)
5. Open the right front door, and then remove the toner bottle.



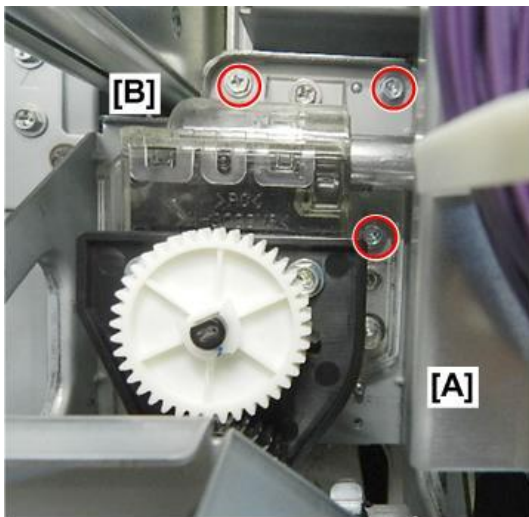
d1794049

6. Disconnect the corner of the ventilation grate (⚙️x3).



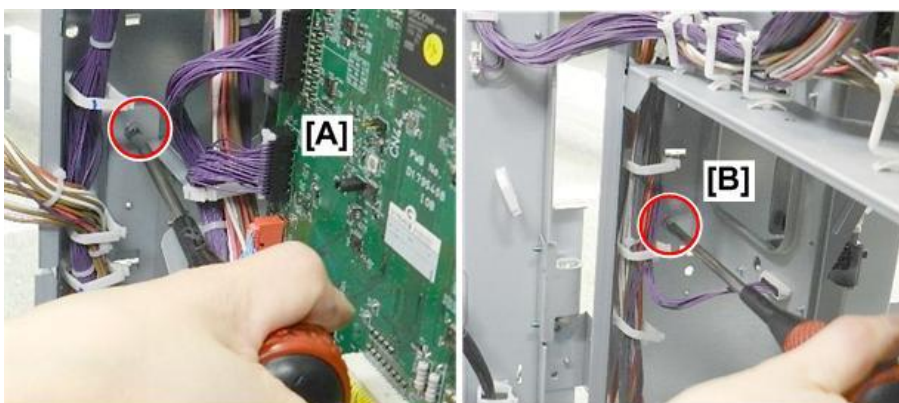
d1794068

7. Down and to the left of the IOB [A], remove screws [B] (⚙️x3).



d1794053

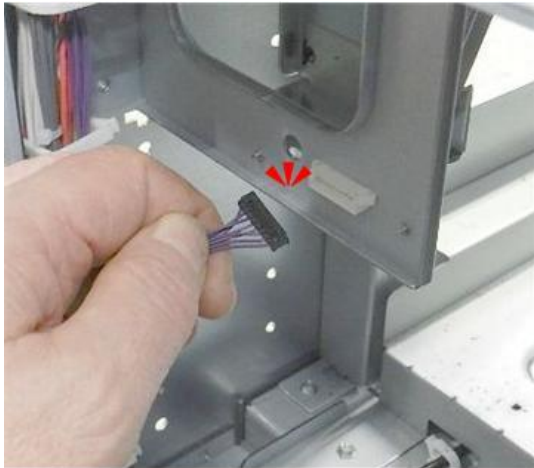
8. Down and to the left of IOB [A], disconnect the waste toner bottle transport unit [B] (⚙️x2).



d1794054

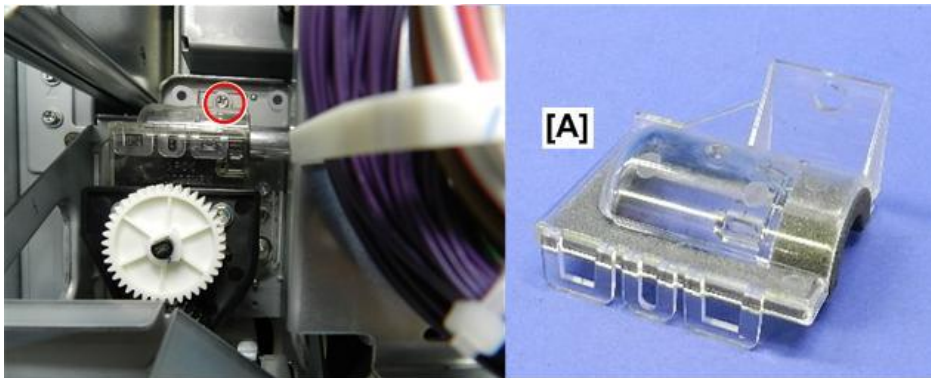
#### 4.Replacement and Adjustment

9. Disconnect the unit (🔌 x1).



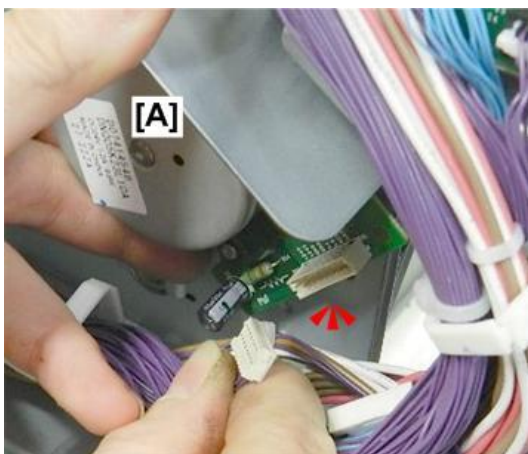
d1794056

10. Down and to the left of the IOB, remove the cap [A] (🔩 x1).



d1794057

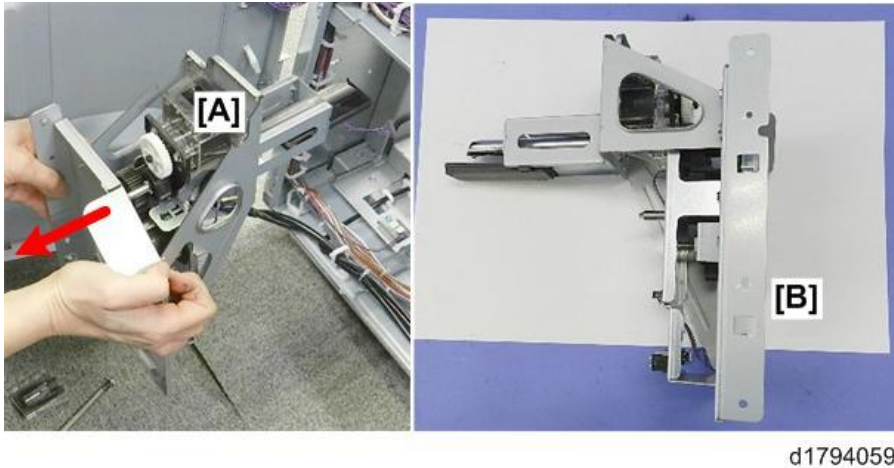
11. Disconnect the waste toner transport motor (🔌 x1).



d1794058

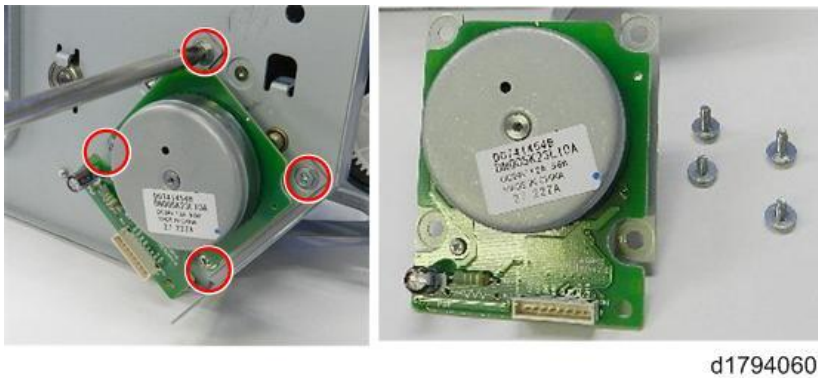
12. Remove the waste toner bottle unit [A]

13. Lay the unit on a clean flat surface, covered with paper [B].



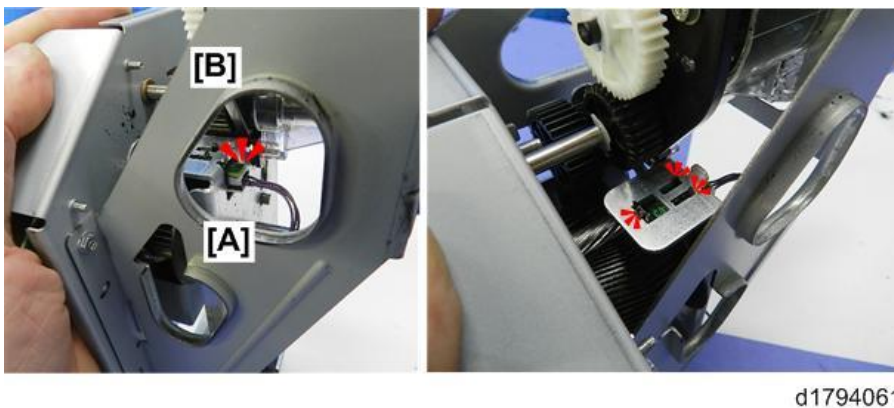
#### Waste Toner Transport Motor

1. Remove the waste toner bottle unit
2. Remove the motor from the bracket (⚙️ x4).



#### Waste Toner Bottle Full Sensor

1. Remove the waste toner bottle unit ([Waste Toner Bottle Unit Removal](#))
2. The waste toner bottle full sensor [A] is located at the top of the unit above the gear train [B].
3. Remove the sensor (🔧 x1, ⚙️ x3)

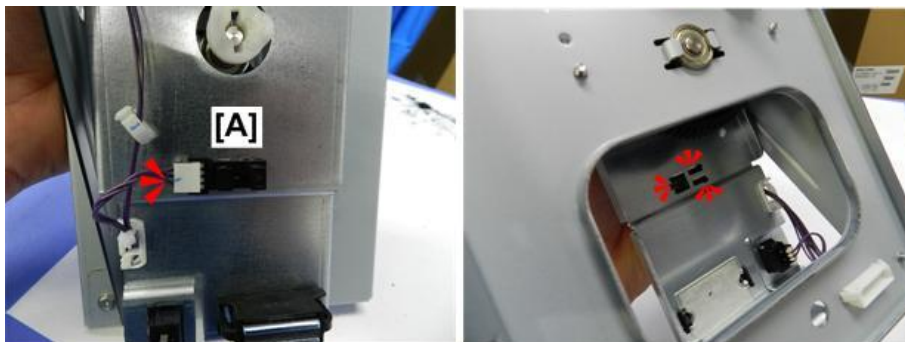


#### Waste Toner Bottle Near-Full Sensor

1. Remove the waste toner bottle unit ([Waste Toner Bottle Unit Removal](#))

#### 4.Replacement and Adjustment

2. The waste toner bottle near-full sensor [A] is on the outside surface of the unit plate.
3. Remove the sensor (📦 x1, ▼x3).

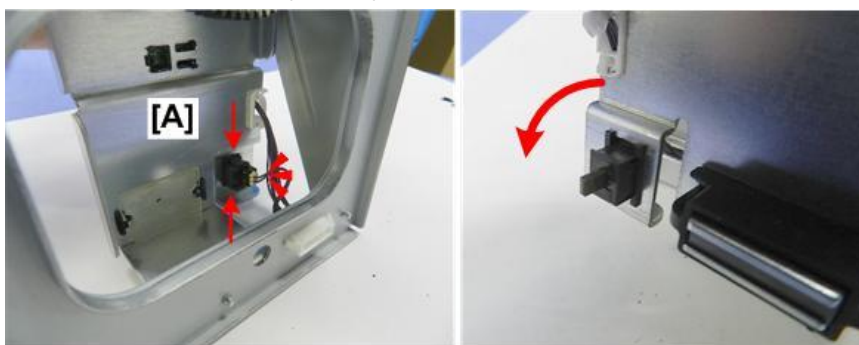


d1794062

#### Waste Toner Bottle Set Switch

---

1. Remove the waste toner bottle unit
2. The waste toner bottle set switch [A] is located at the base of the waste toner bottle unit.
3. Disconnect the switch (📦 x1).



d1794063

4. Depress the top and bottom of the switch together to release it, and then push it out the front.

## Filters

### Exhaust Unit Air Filters

#### ★ Important

- There is one visible air filter at the top and another filter below behind the black ozone filter.
- Replace the upper filter every 1200K. Inspect and clean the filter behind the ozone filter as needed.

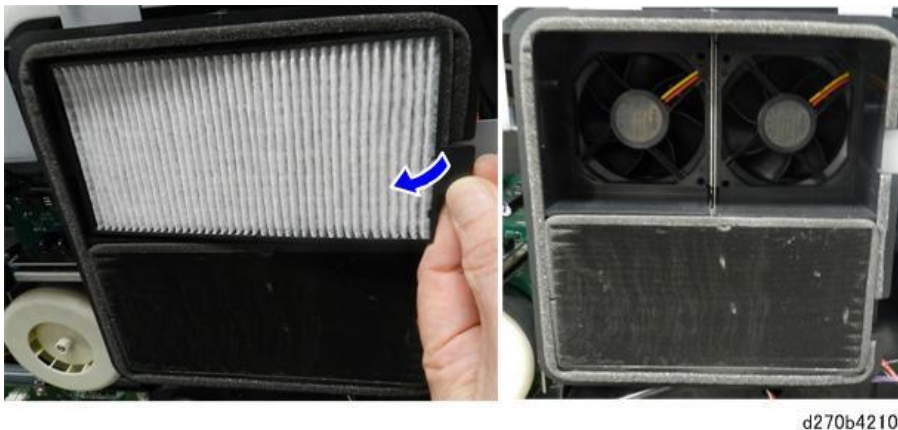
1. Remove the rear cover. ([Rear Cover](#))
2. There are two air filters [A], [B] in the exhaust unit.



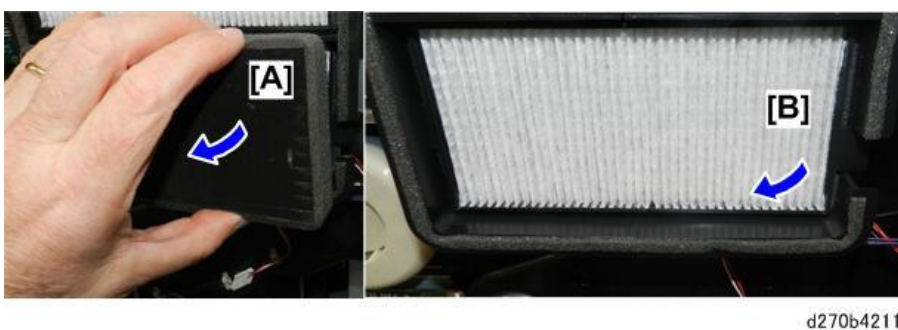
#### ★ Important

- These filters should be cleaned every 600K.

3. First, remove the visible filter from the top compartment.



4. Remove the ozone filter [A] from the bottom compartment, and then remove the second filter [B].



#### 4.Replacement and Adjustment

5. To install a filter, insert the left tab [A] first, and then press in the right tab [B].



d270b4212

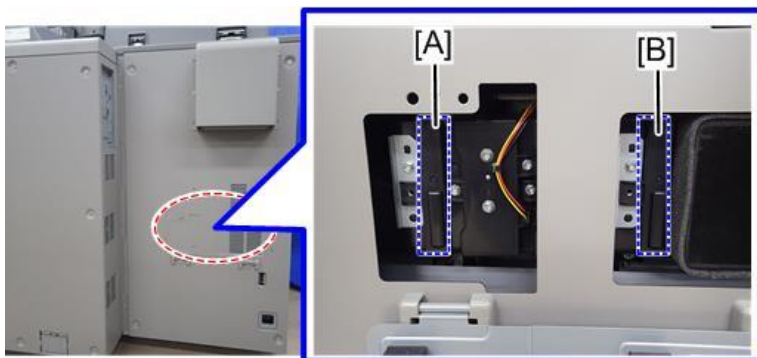
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### Fusing Exhaust Filters

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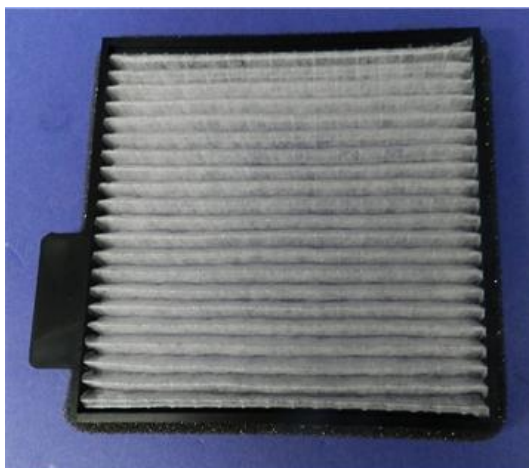
**★ Important**

- There are two filters in the horizontal duct. The following procedure should be done every 600K.
1. Remove the rear cover. ([Rear Cover](#))
  2. There are two exhaust filters [A], [B] in the horizontal duct.



d0bxa4030

3. You need one clean filter.



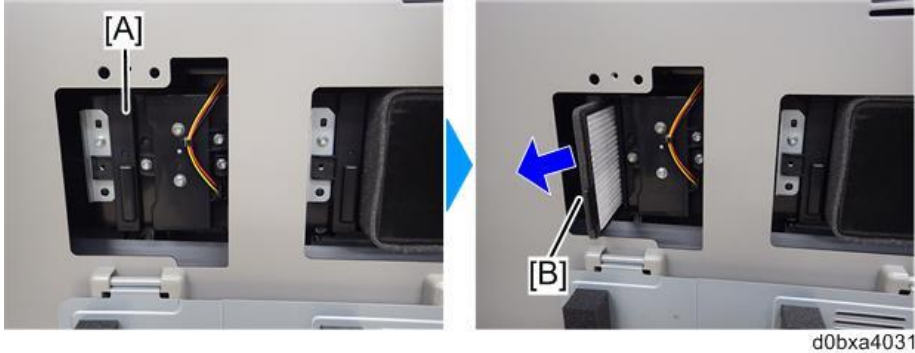
d270b4324



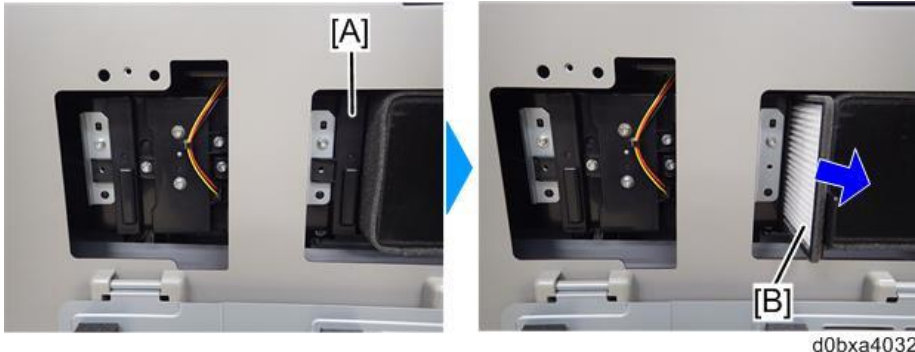
4. Open the cover [A] at the bottom of the rear cover.



5. Remove the cover [A] of the left filter, remove the filter [B], and then discard it.

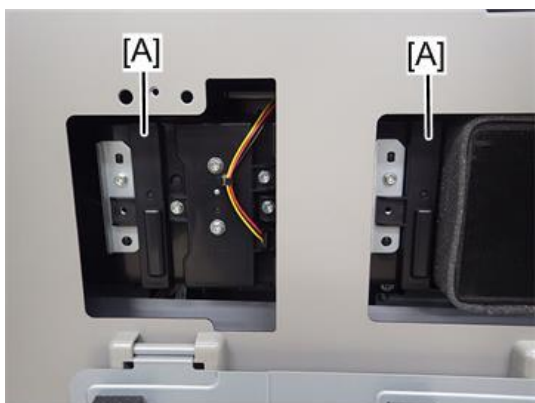


6. Remove the cover of the right filter [A], and then remove the filter [B].



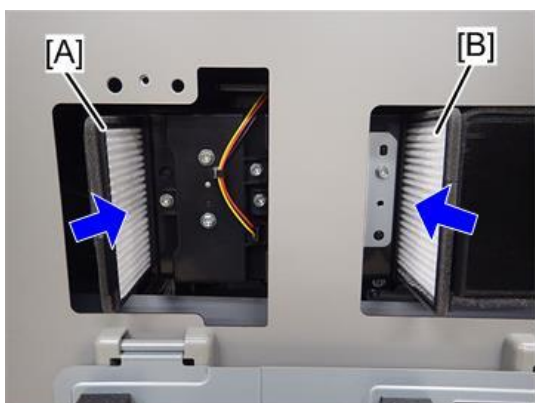
#### 4.Replacement and Adjustment

7. Take the filter you just removed from the right slot, and then insert it into the empty left slot [A].




d0bxa4132

8. Insert the new filter into the right slot [B].



d0bxa4131

9. Re-attach both filter covers [A]. 

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#### Ozone Filters

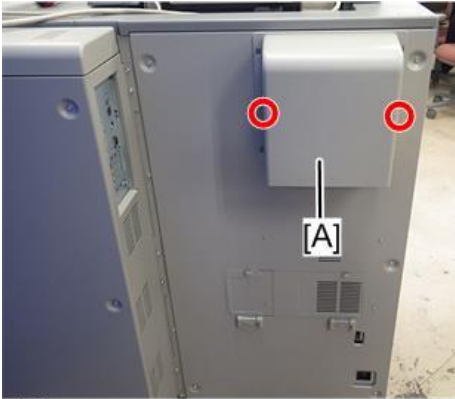
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1. There are two ozone filters at the back of the machine, one is in the exhaust fan unit [A] and the other is at the end of the horizontal duct [B].

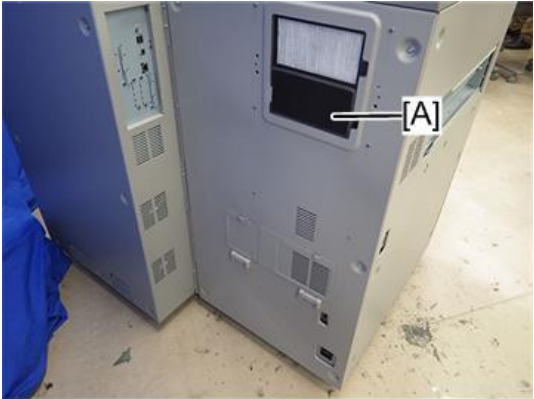


d0bxa4033

2. Remove the vent cover [A].



3. Remove the ozone filter [A] from the exhaust fan unit.

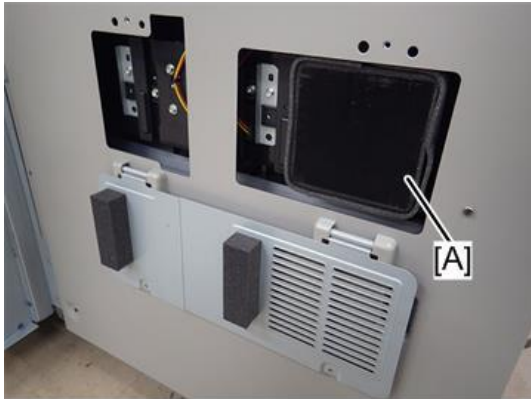


4. Open the cover [A] at the bottom of the rear cover.



#### 4.Replacement and Adjustment

5. Remove the ozone filter [A] from the end of the horizontal duct.



d0bxa4257

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#### Controller Box Base Filters

---

1. Locate the filter covers at the bottom edge of the controller box on the back of the main machine.



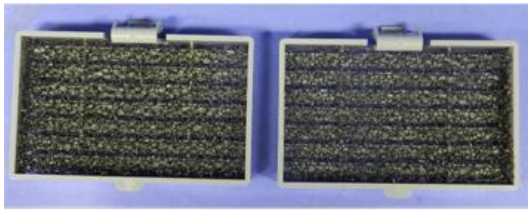
d270b4216

2. Remove each bracket with the filter in it.



d270b4217

3. Vacuum clean these filters.



d270b4218

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### Right Cover Air Intake Filters

---

1. Remove the right front door. ([Doors](#))
2. Remove the right cover air intake filters [A].

The below picture shows the machine without the right cover but actually you need not remove the right cover in the work.



d0bxa4037

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### Toner Supply Filter

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1. Locate this filter [A] on the back of the canopy that covers the toner bottle unit.
2. Remove the filter bracket [B] with filter attached (⚙️x1).

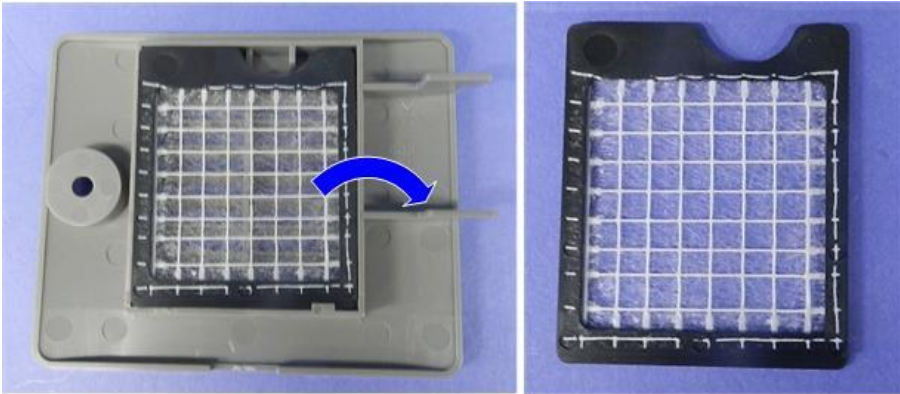


d270b4219

3. Separate filter and bracket.

4.Replacement and Adjustment

4. Vacuum clean the filter.



d270b4220

## Fans (Main Machine)

### Before You Begin

Here is a list of fans in this machine.

Name	SC	Ref.
PRT Cooling Fan Front NS	SC530-02	
CIS Cleaning Fan	SC532-11	(LE Shift Unit Motor, CIS Fan)
Control Board Air Intake Fan	---	
Development Unit Cooling Fan: Front	SC531-01	
Development Unit Cooling Fan: Rear	SC531-02	
Fusing Air Intake Fan: Lower Left	SC530-14	
Fusing Air Intake Fan: Lower Right	SC530-13	
Fusing Exhaust Fan: Lower	SC530-10	
Fusing Exhaust Fan: Upper	SC530-09	
Fusing Transport Exhaust Fan	SC530-08	
HP Cooling Exhaust Fan	SC530-18	
HP Cooling Suction Fan	SC530-17	
ID Sensor Cooling Fan	SC532-08	(ID Sensor Fan)
Laser Unit Cooling Fan	SC530-01	
Ozone Air Exhaust Fan	SC531-04	
Ozone Air Intake Fan	SC531-03	
PSU Exhaust Fan: M1 Left	SC532-04	
PSU Exhaust Fan: M2 Left	SC532-06	
PSU Intake Fan: M1 Right	SC532-03	
PSU Intake Fan: M2 Right	SC532-05	
PSU Cooling Fan: T Left	SC530-20	
Paper Transport Fan (Front)	SC532-09	
PRT Cooling Fan Front NS	SC530-21	(PRT Cooling Fan Front NS)
Paper Transport Fan (Rear)	SC532-10	
PRT Cooling Fan Rear NS	SC530-22	
Paper Exit Exhaust Fan: Lower Left	SC530-16	
Paper Exit Exhaust Fan: Lower Right	SC530-15	
Right Air Intake Fan: Center	SC531-07	
Right Air Intake Fan: Front	SC531-05	
Right Air Intake Fan: Rear	SC531-06	

- The "SC" column lists the corresponding SC code that the machine issues if there is a problem with the fan.
- Before you remove any fan, always check the direction of the label. The fan must be re-installed

## 4.Replacement and Adjustment

with the label facing the same direction as when it was removed. Air flows left to right with the label facing right. Air flows right to left with the label facing left.

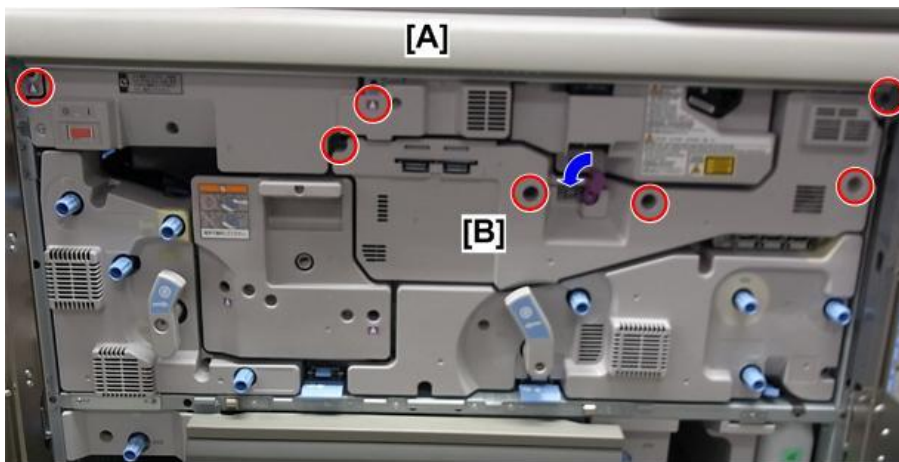
- In the above table, some components have cross references in the right-hand column to other sections of the manual. The removal procedures for these components are not described in this section. For more about removal of these fans, go to the referenced section.

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### Laser Unit Cooling Fan

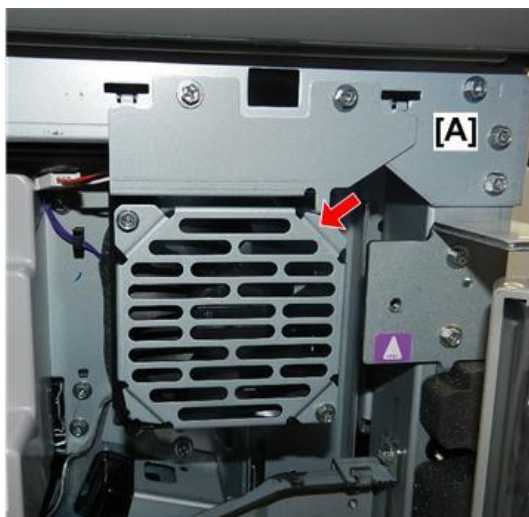
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1. Open the front doors.
2. Remove the front edge cover [A] (⚙️3).
3. Remove the ITB unit cover [B] (⚙️x4).



d270b4221

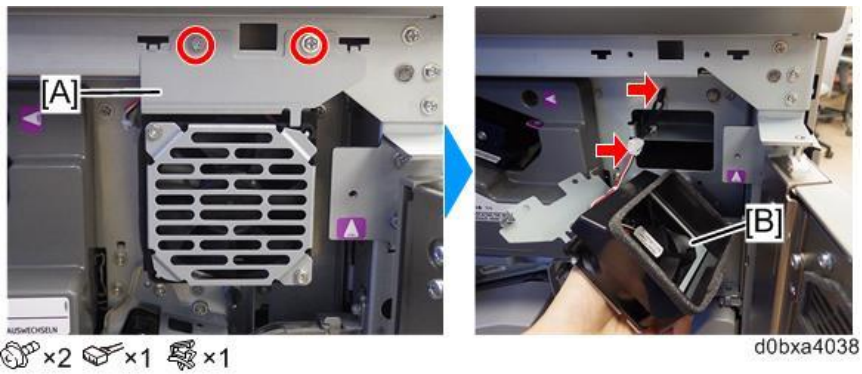
4. Locate the fan behind the cover at the upper right corner of the machine [A].



d270b4222



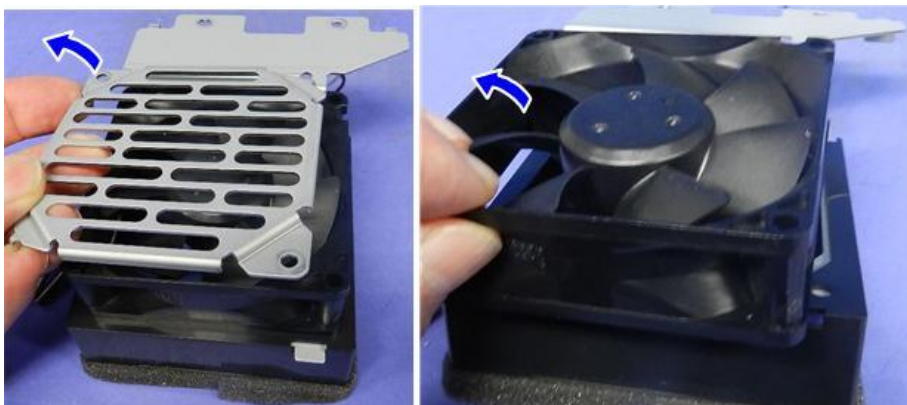
5. Remove the fan bracket [A] with fan [B] attached.



6. Free the fan harness, and then unfasten the cover (x2, x2).



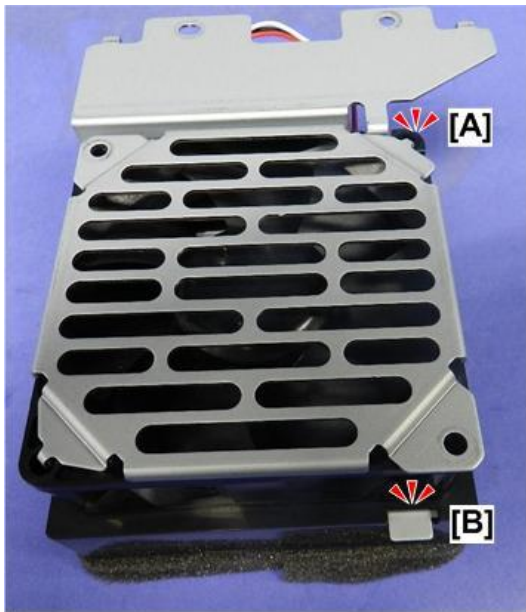
7. Remove the cover, and then remove the fan from the bracket.



8. When you re-assemble the fan and cover, set the tabs at [A] and [B].

#### 4.Replacement and Adjustment

9. Make sure the cover is perfectly flat against the fan.



d270b4227

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#### Development Unit Cooling Fan: Front

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1. Open the front doors.
2. Remove the front edge connector (⚙️ x3).



d270b4228

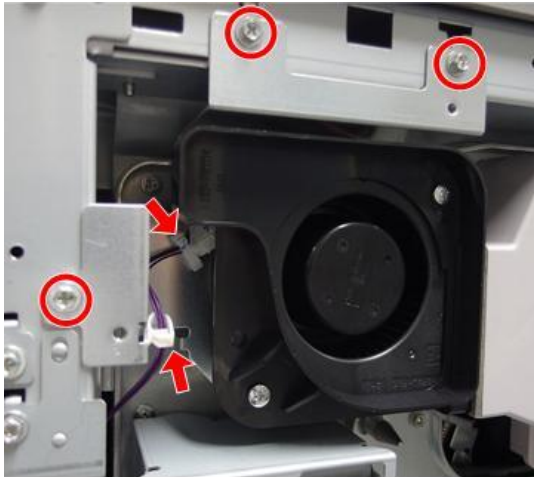
3. Remove the power switch cover (⚙️ x4).



d270b4229

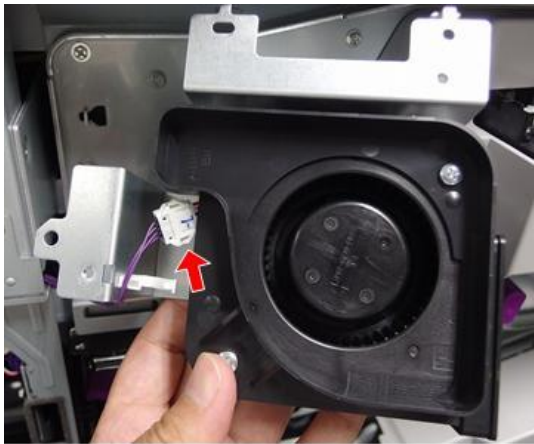
## 4.Replacement and Adjustment

4. Unfasten the motor harness and the bracket (🔧x2, 🛠️x2).



d270d4905

5. Disconnect the fan (🔌 x).



d270d4906

6. Separate bracket and fan (🛠️x2)

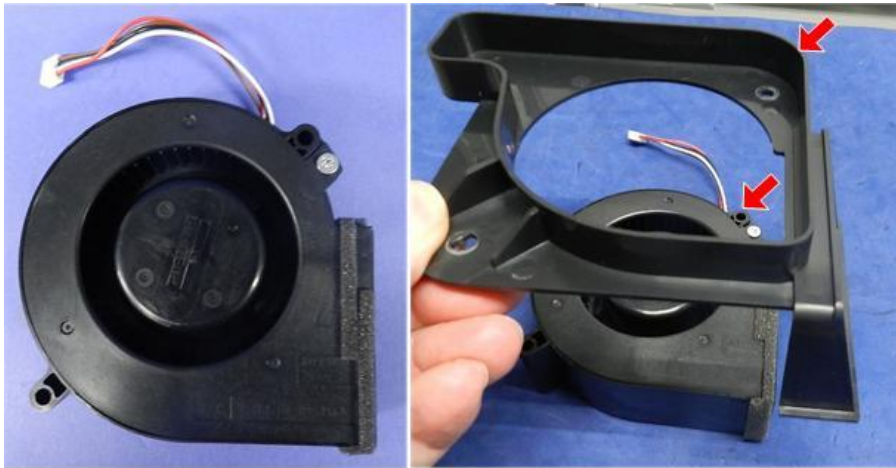


d270d4907

### Note

- Be sure to align the holes correctly when you re-install the fan.

## 4.Replacement and Adjustment



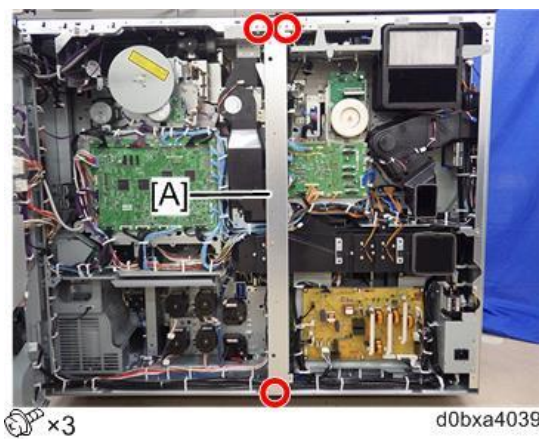
d270b42233

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### Development Unit Cooling Fan: Rear

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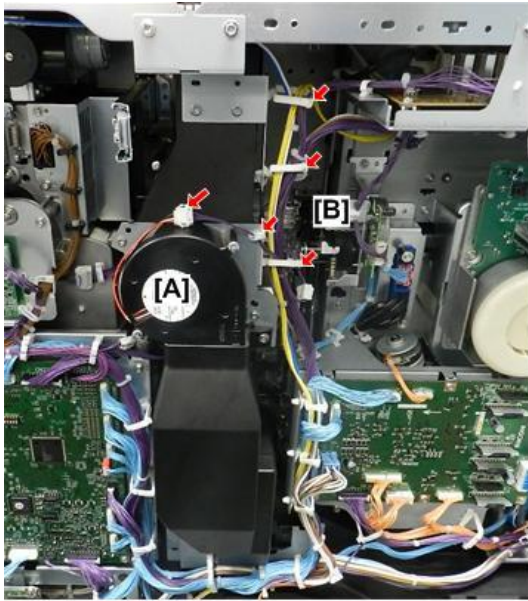
1. Open the controller box. ([Opening the Controller Box \(Copier Models\)](#))
2. Remove the rear cover. ([Rear Cover](#))
3. Remove the vertical stay [A].



4. Disconnect the motor harness [A] (🔧 x1, 📦 x1).

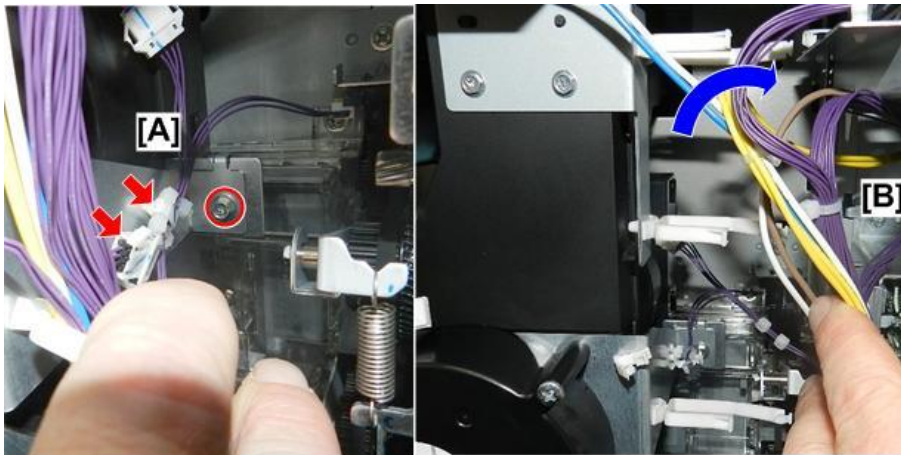
## 4.Replacement and Adjustment

5. Open the clamps [B] (🔧x3).



d270b4239

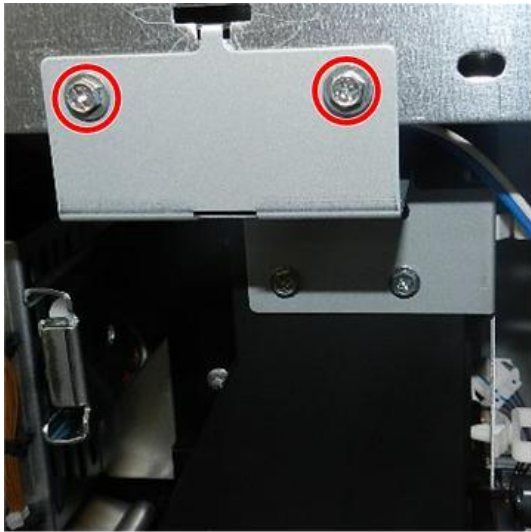
6. Inside the machine, disconnect and free the harness, and then disconnect the motor bracket [A] (🔧x1, 📦x1, 🌀x1).
7. Carefully, pull the harnesses [B] away from the side of the duct.



d270b4240

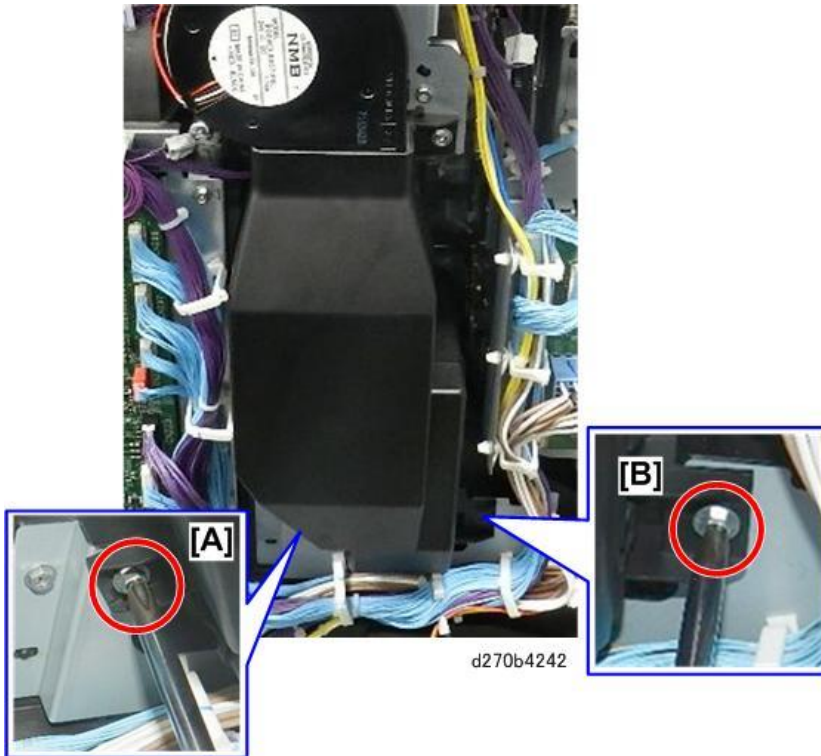
#### 4.Replacement and Adjustment

8. Disconnect the top of the duct bracket (🔧 x2).



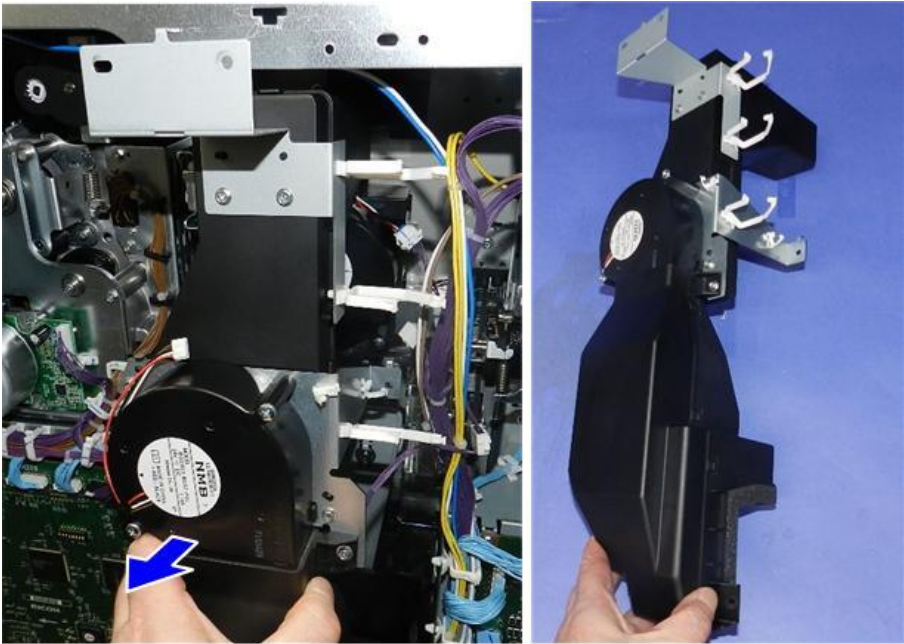
d270b4241

9. Disconnect the bottom of the duct at the left corner [A] and the right corner [B] (🔧 x2).



d270b4242

10. Remove the vertical duct.



d270b4243

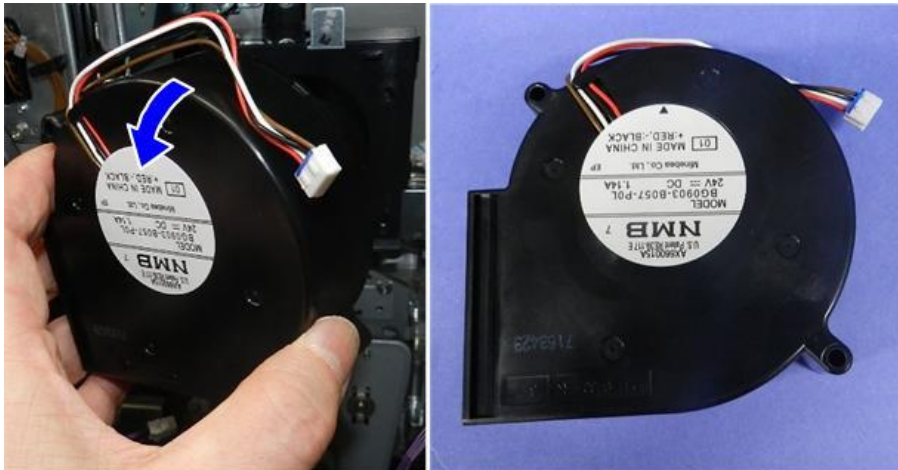
11. Disconnect the motor (🔌x1, 🛠️ x1, 🛠️ x2).



d270b4244

## 4.Replacement and Adjustment

### 12. Remove the motor.



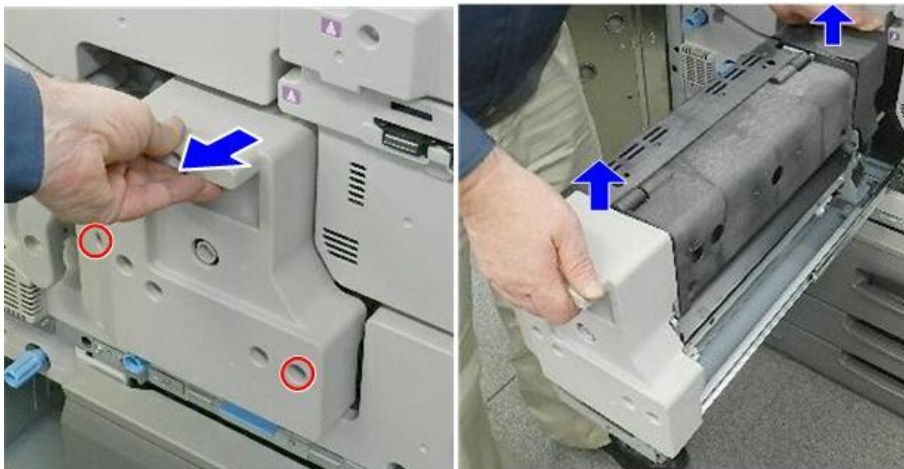
d270b4245

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## PRT Cooling Fan Front NS

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1. Remove the rear cover. (Rear Cover)
2. Open the front doors.
3. Remove the fusing unit (🔩 x2).



d270b4246

4. Remove the power switch cover (🔩 x4).



d270b4247



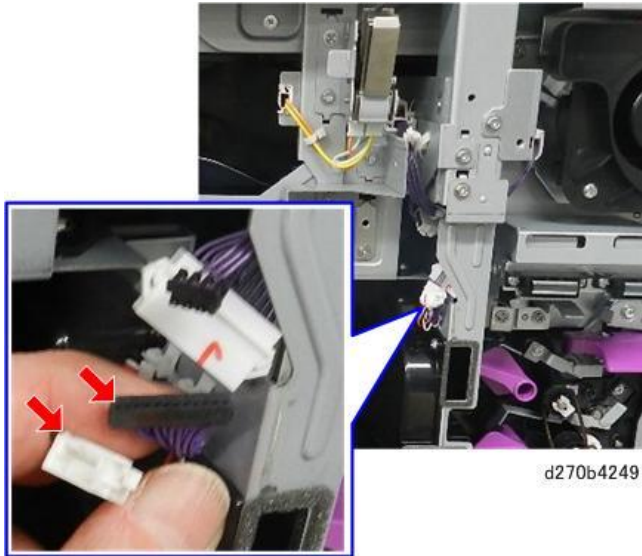
## 4.Replacement and Adjustment

- 5.** Remove the ITB unit cover (🔩 x4).



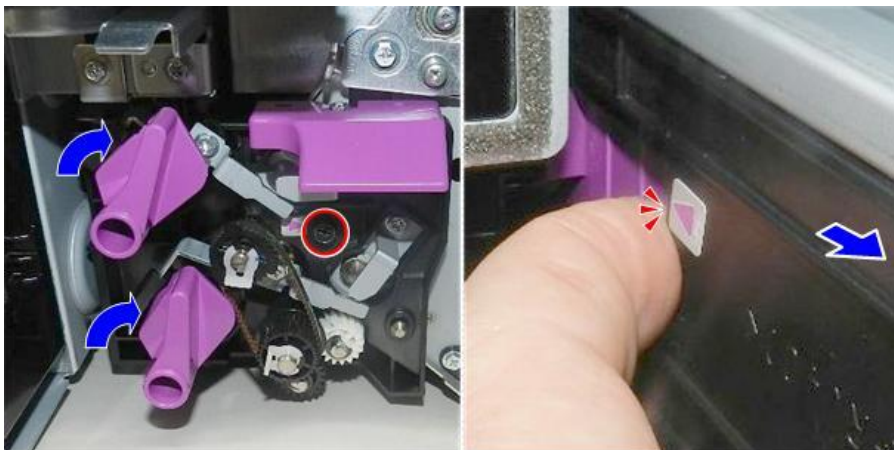
d270b4248

- 6.** Disconnect the thermopile unit (🔌 x2).



d270b4249

- 7.** Rotate the levers up, disconnect the ITB cleaning unit, and then remove it (🔩 x1).

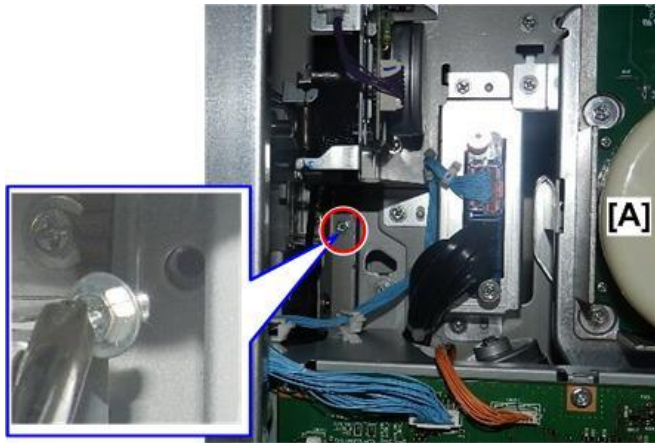


d270b4250

- 8.** At the back of the machine, to the left of the fusing motor [A] locate the screw holding the

#### 4.Replacement and Adjustment

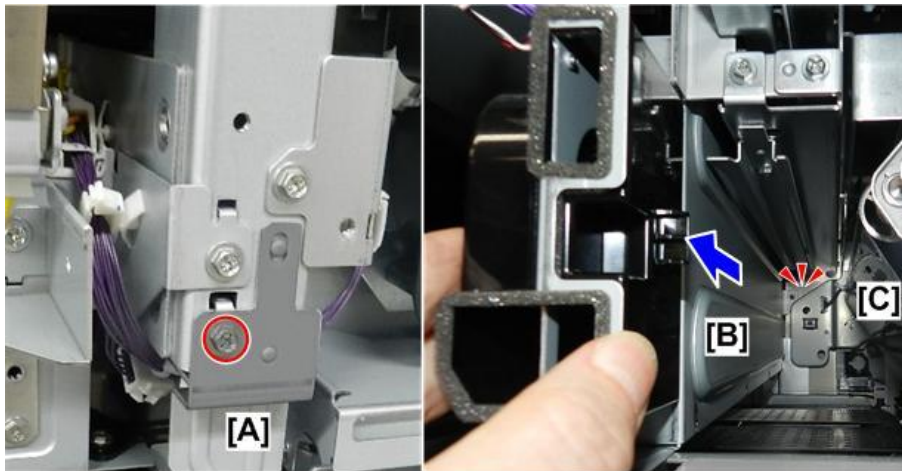
thermopile unit, and then remove it carefully to prevent it from falling into the machine (🔧 x1).



d270b4251

**9.** At the front, disconnect the bracket [A] (🔧 x1).

**10.** Pull the thermopile unit [B] forward until it is stopped by the frame of the ITB unit [C] on the right.



d270b4252

**11.** Disconnect the ITB unit [A] (🔧 x2).

**12.** Remove the lock plate [B] (🔧 x3).



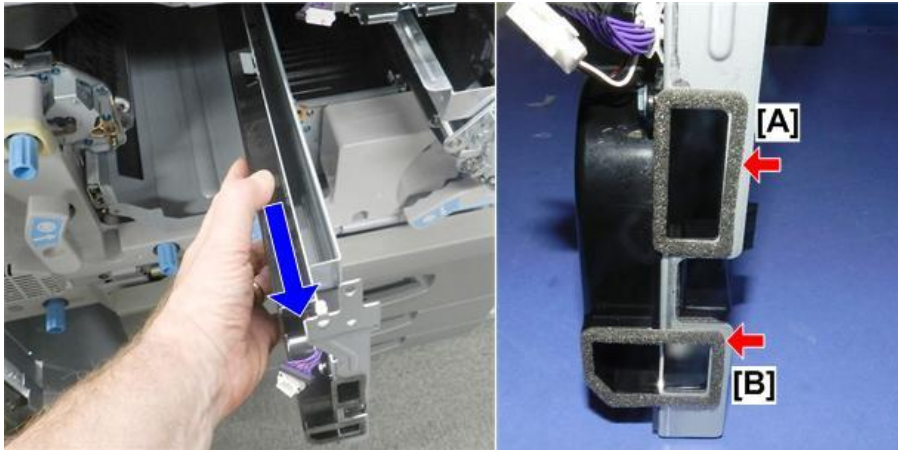
d270b4253

- 13.** Pull the ITB out slightly. You do not need to remove it.



d270b4254

- 14.** Pull the thermopile unit out of the machine, and then set it on a flat clean surface.  
**15.** On the front end of the unit, there are two thin seals, one at the top [A] and one at the bottom [B]

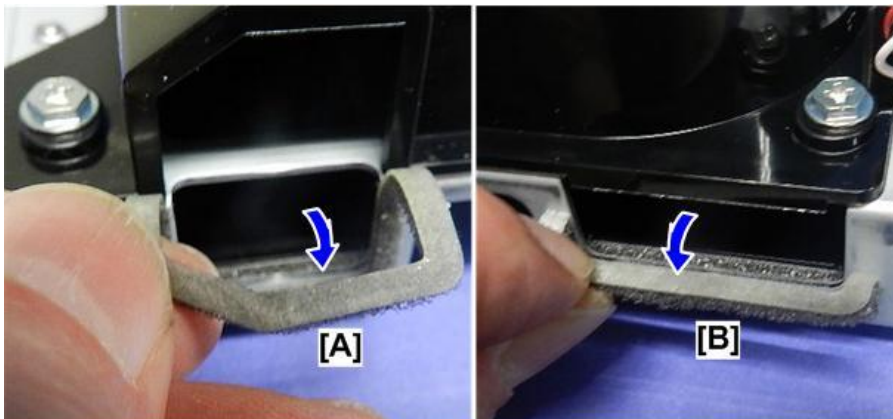


d270b4255

- 16.** Carefully, peel the top seal [A] and bottom seal [B] away from the plastic cover but **do not** detach them from the metal frame.

**Note**

- If new seals are available, they should be replaced.

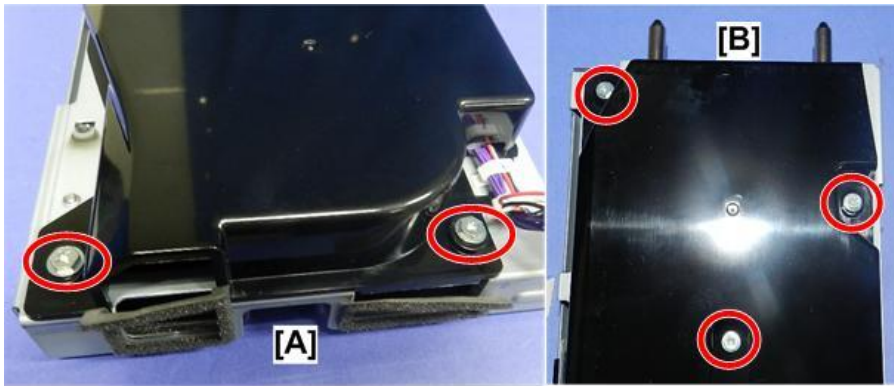


d270b4256

#### 4.Replacement and Adjustment

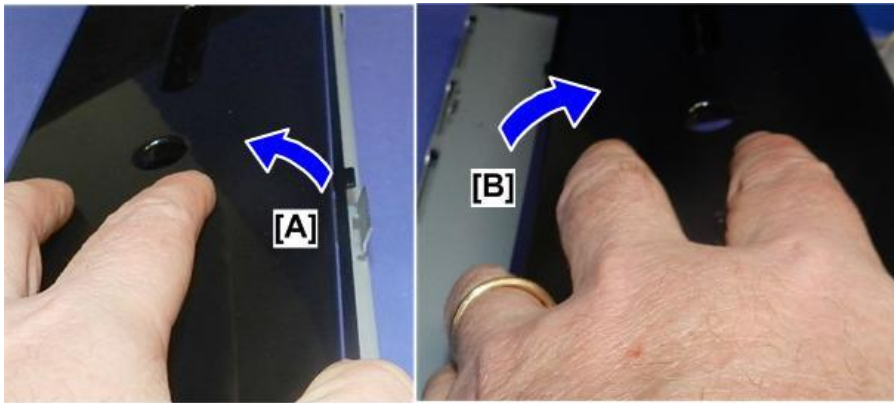
**17.** Disconnect the cover at the front [A] (🔩x2).

**18.** Disconnect the cover at the rear [B] (🔩x3).



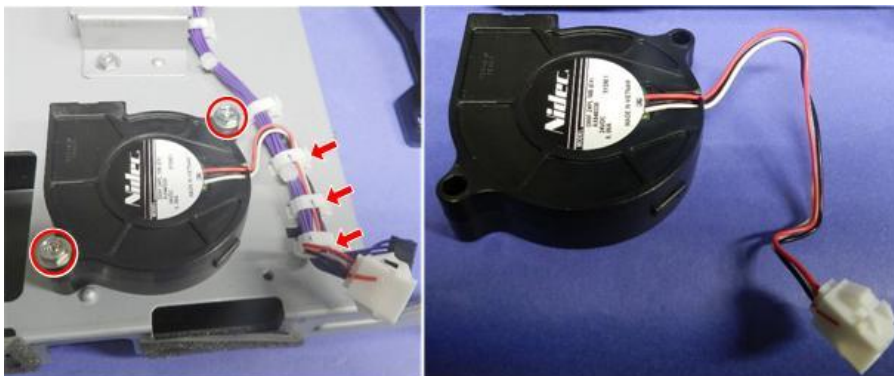
d270b4257

**19.** To remove the cover, first slide it to the left [A] to disconnect the tab on the right, and then slide it right [B] to remove it.



d270b4258

**20.** Disconnect the fan and then remove it (🔩x3, 🛠x2).

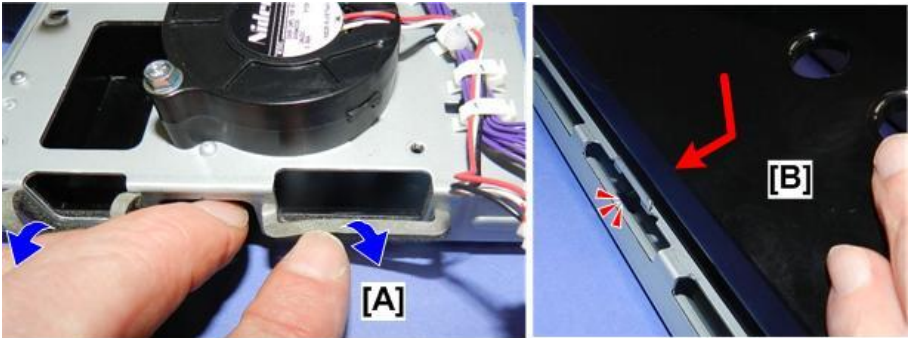


d270b4259

#### Re-installation

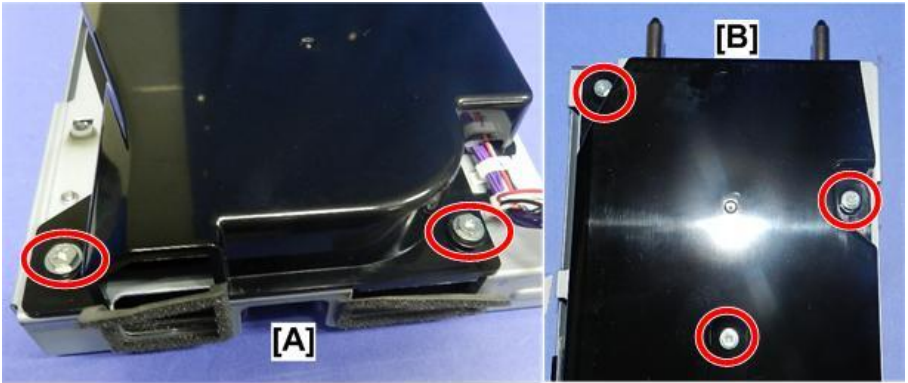
**1.** At the front, make sure that the loose halves of the seals [A] are down so that they will not be pinched by the cover when it is re-attached.

2. Set the cover [B] on top of the unit.



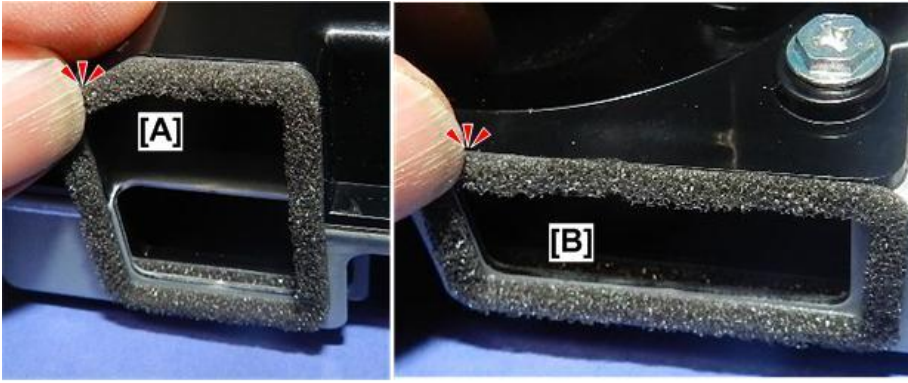
d270b4260

3. Fasten the cover at the front [A] and rear [B] (⌀ x5).



d270b4257

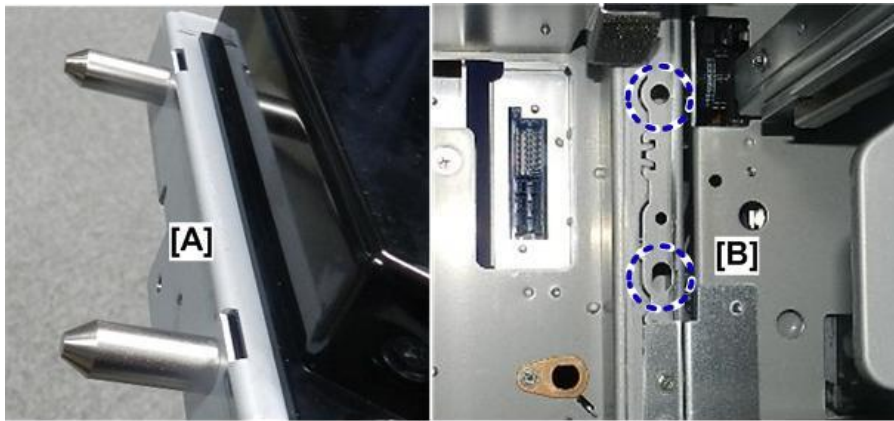
4. Carefully, press the detached top seal [A] and bottom seal [B] onto the edge of the plastic cover.



d270b4262

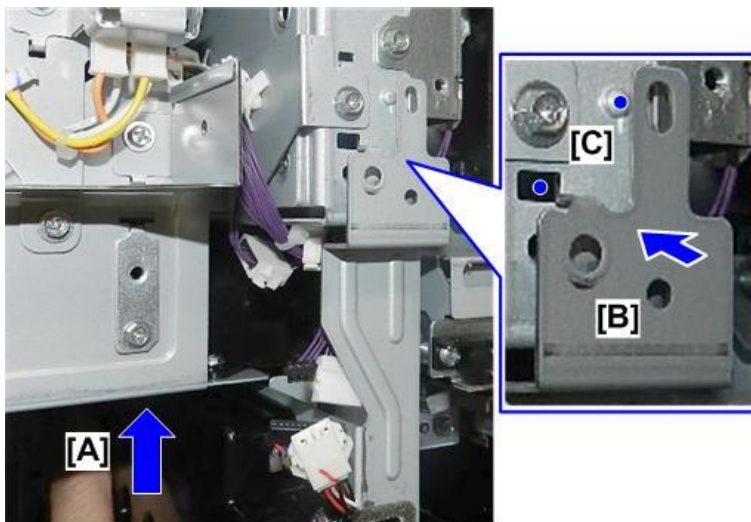
#### 4.Replacement and Adjustment

- 5.** The pins on the back of the thermopile unit [A] fit into the holes [B] on the post inside the machine.



d270b4263

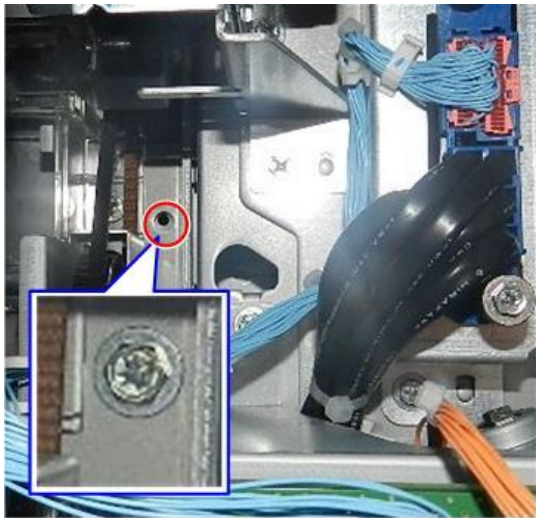
- 6.** To set the unit, support the bottom of the unit [A] with your left hand as you slide it slowly into the machine.
- 7.** Using your right hand, align the hook and hole of the bracket [B] with the hole and boss on the machine [C]. This should align the pins at holes at the back.
- 8.** Slowly, push the unit into the machine until you feel the pins slide into the holes at the rear.



d270b4264

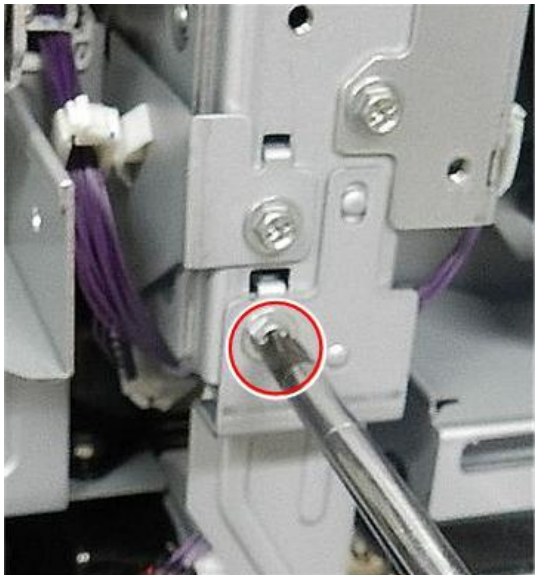
- 9.** At the back of the machine, make sure the unit and hole are aligned correctly, and then re-fasten

the screw (🔩 x1).



d270b4265

**10.** At the front, fasten the bracket (🔩 x1).



d270b4266

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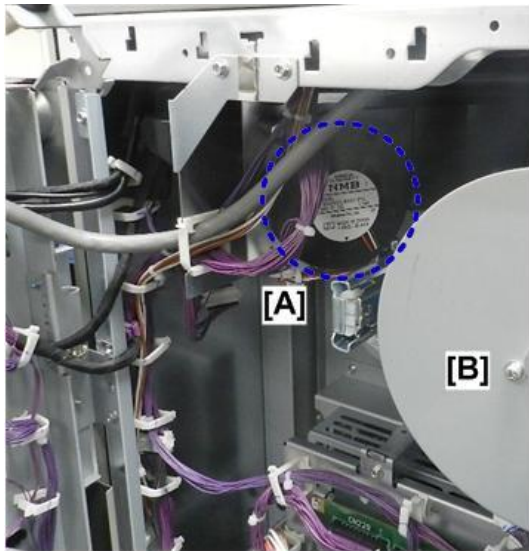
## Ozone Air Intake Fan

---

1. Open the controller box door. ([Opening the Controller Box \(Copier Models\)](#))

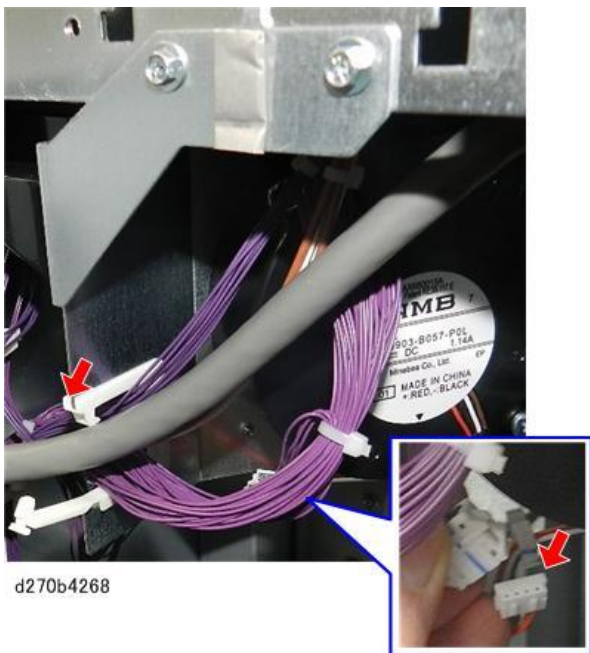
#### 4.Replacement and Adjustment

2. Locate the fan [A] at the right rear corner, to the left of the flywheel [B].



d270b4267

3. Free the harnesses and disconnect the motor (🔧x1, 📦x1).



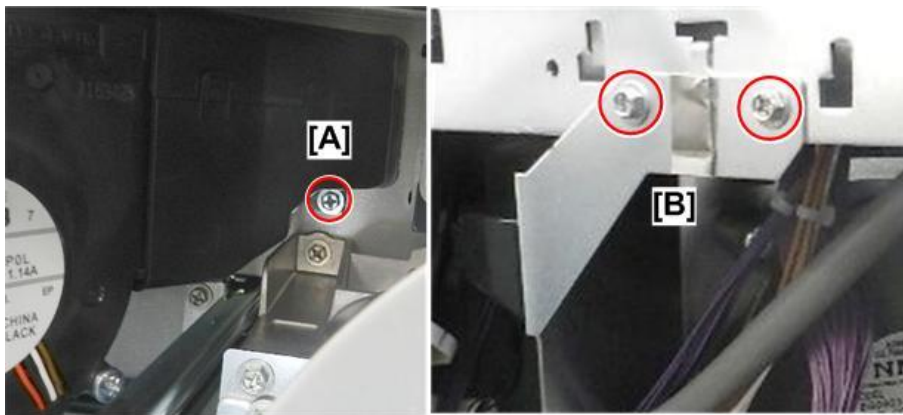
d270b4268

4. Inside the machine, disconnect the motor bracket (🔧x1).



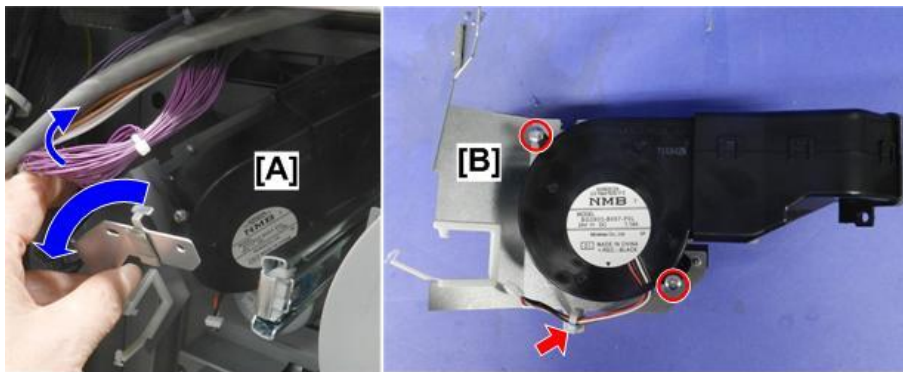
## 4.Replacement and Adjustment

5. Above the motor, disconnect the motor bracket [B] (⚙️ x2).



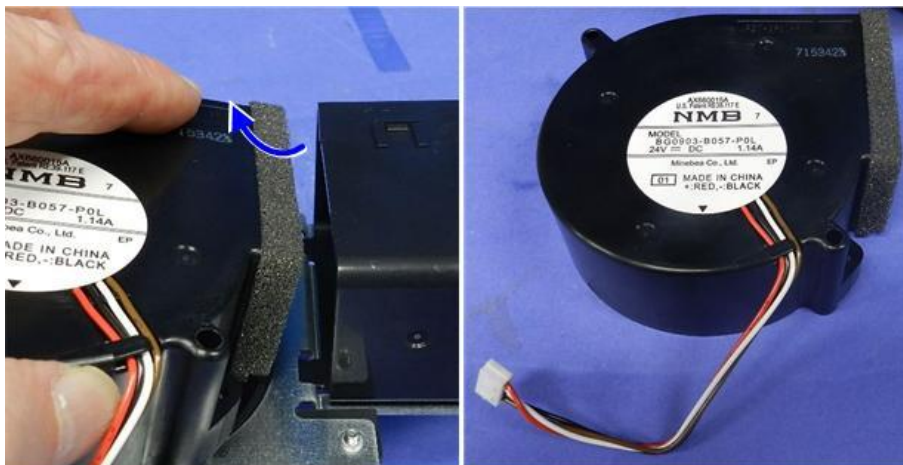
d270b4269

6. Slide the bracket with motor attached [A] out under the harnesses, and then disconnect the motor from the bracket [B] (⚙️ x1, ⚙️ x2).



d270b4270

7. Disconnect the motor from the duct.



d270b4271

---

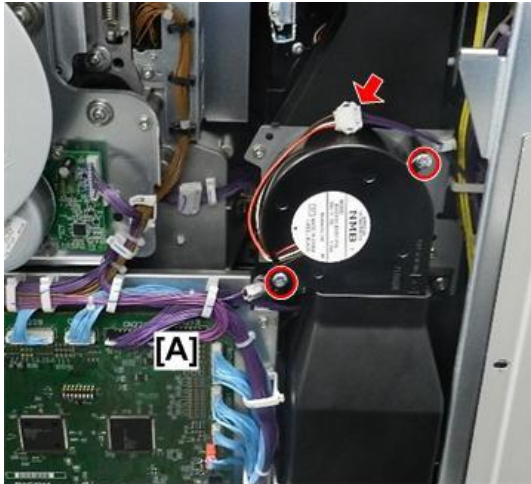
## Ozone Air Exhaust Fan

---

1. Open the controller box door. ([Opening the Controller Box \(Copier Models\)](#))

#### 4.Replacement and Adjustment

2. At the upper right corner of the IOB [A], disconnect the fan (🔌 x1, 🔩 x1).



d270b4272

3. Remove the fan.



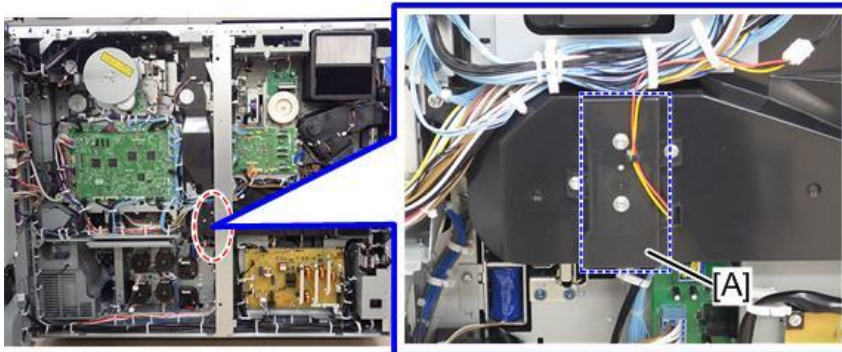
d270b4273

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#### Fusing Transport Exhaust Fan

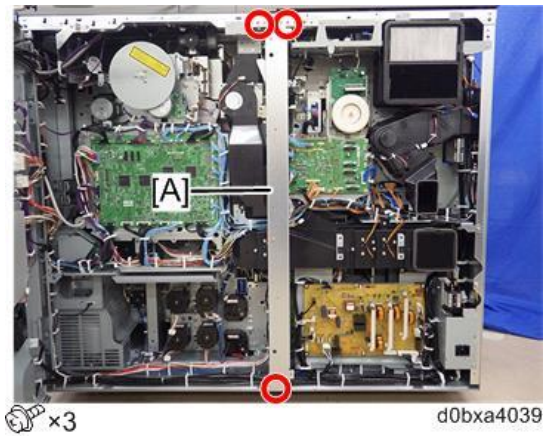
---

1. Open the controller box. ([Opening the Controller Box \(Copier Models\)](#))
2. Remove the rear cover. ([Rear Cover](#))
3. The fan [A] is behind the vertical stay.

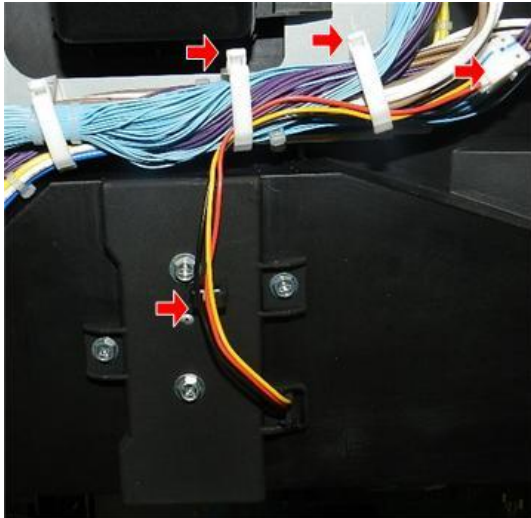


d0bxa4040

4. Remove the vertical stay [A].



5. Disconnect the fan harness (🔌x3, 📦x1).



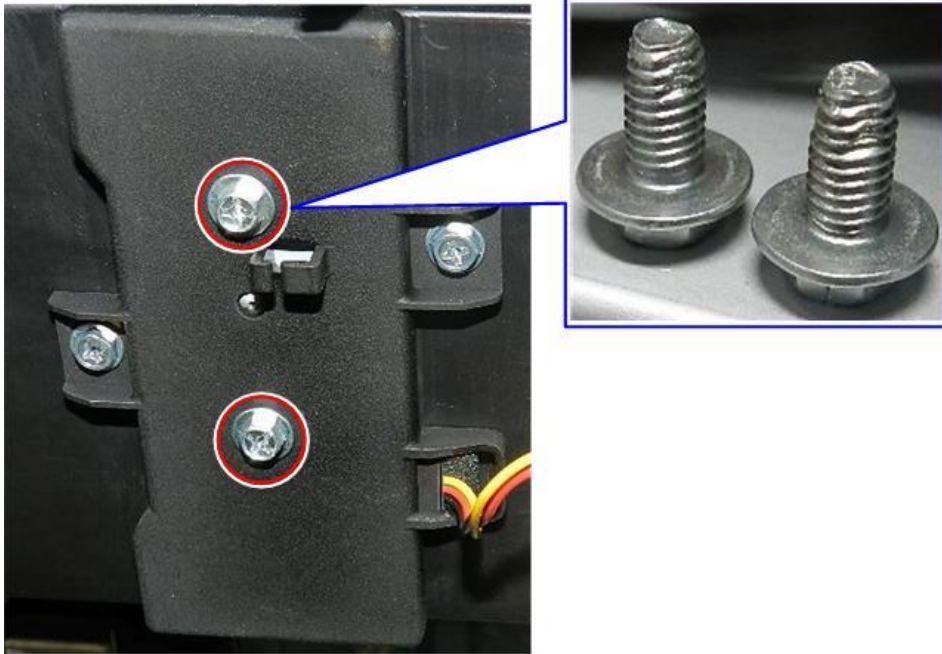
d270b4275

6. Remove the cover vertical screws (🔩x2).

★ Important

- These are narrow pitch machine screws. Be sure to re-install them at the same location.

#### 4.Replacement and Adjustment

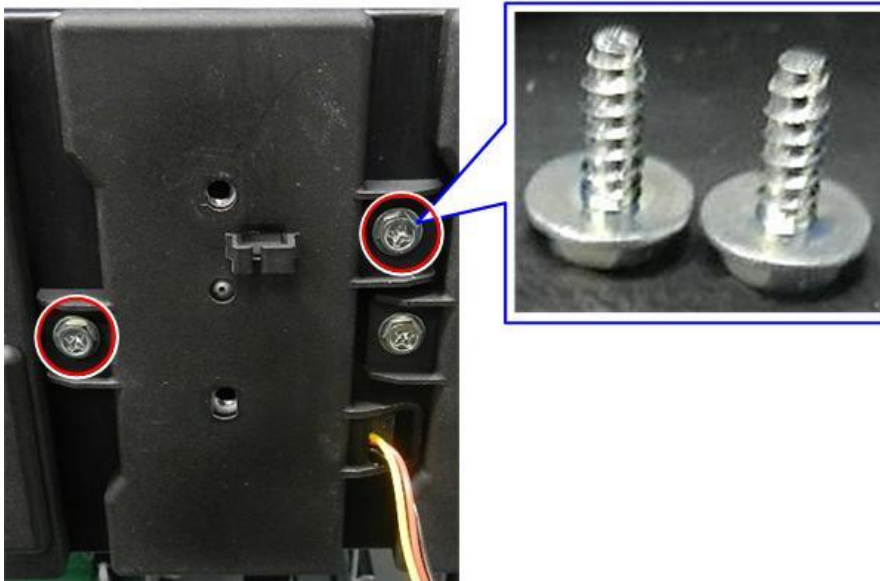


d270b4276

7. Remove the cover wing screws (🔩 x2).

★ Important

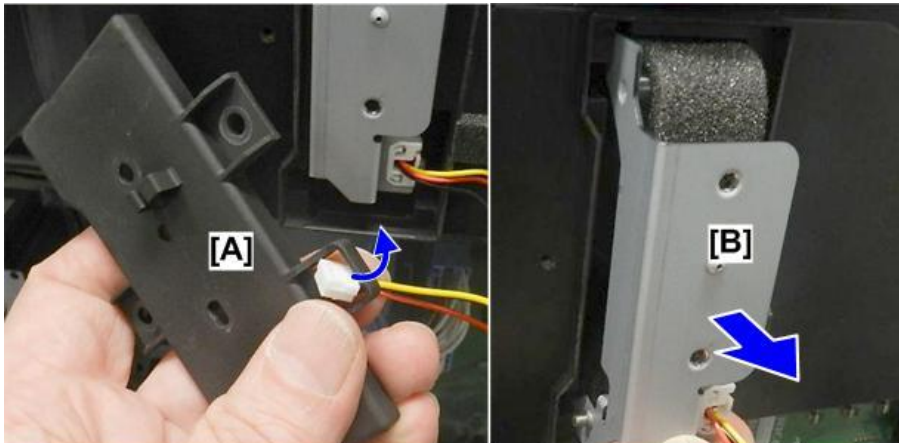
- These are wide pitch tapping screws. Be sure to re-install them at the same location.



d270b4283

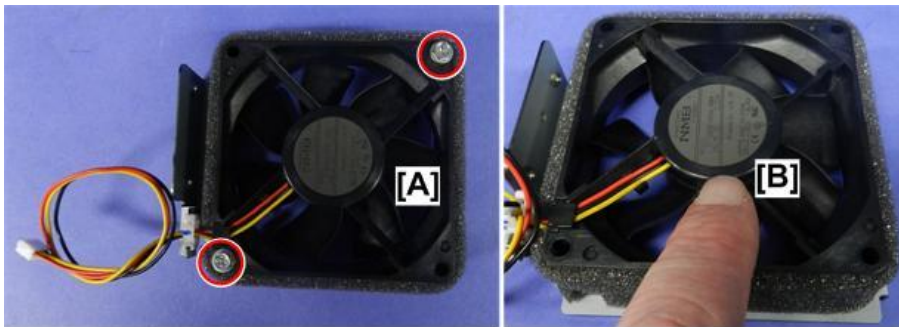
8. Separate the cover [A] and harness, and then remove the cover.

9. Slowly, slide the fan [B] out.



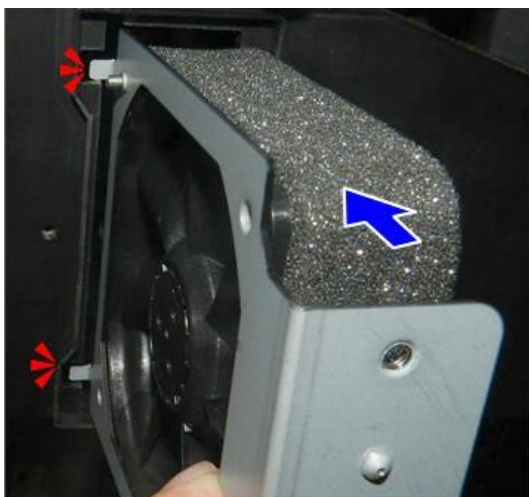
d270b4277

10. Separate fan [A] and bracket (⚙️ x2).
11. When you re-assemble the fan and bracket, position the fan as shown with its label [B] up.



d270b4278

12. Align the tabs and slots on the left, and then slowly insert the fan bracket.



d270b4279

---

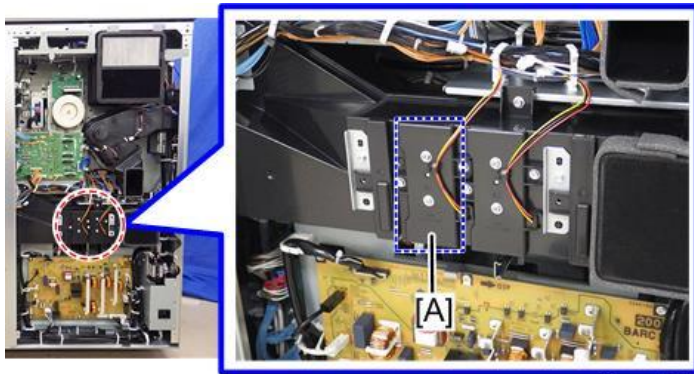
## Fusing Exhaust Fan: Upper

---

1. Remove the rear cover. ([Rear Cover](#))

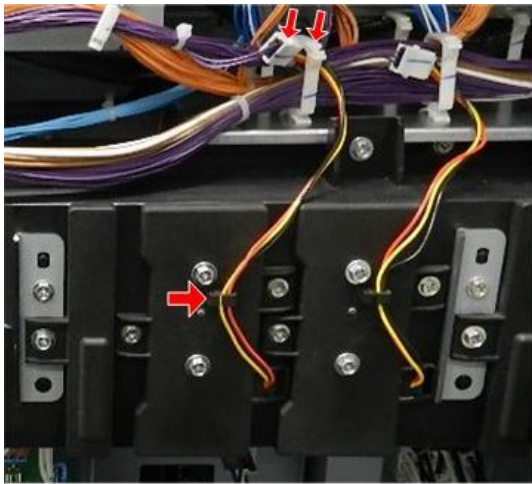
#### 4.Replacement and Adjustment

2. The fan [A] is located in the horizontal duct.



d0bxa4041

3. Disconnect the fan harness (🔌x2, 📦x1).

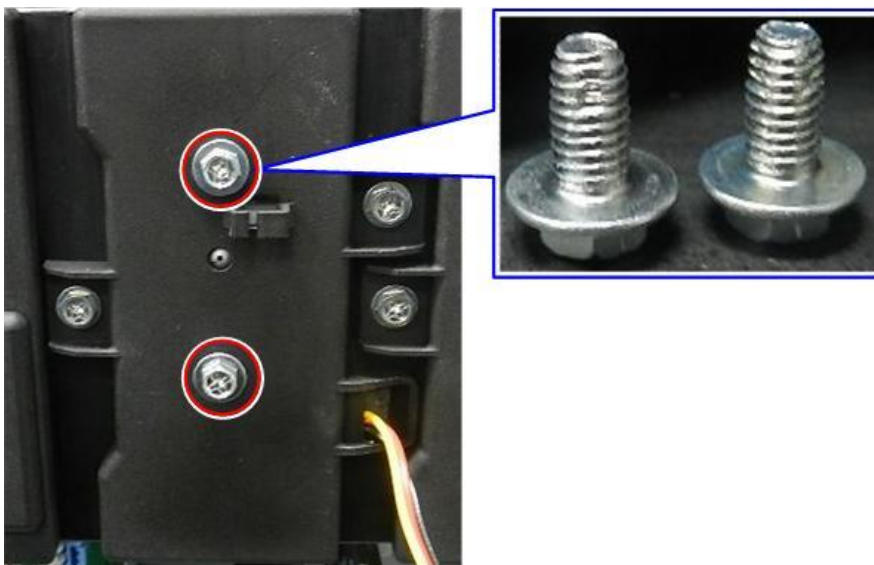


d270b4281

4. Remove the cover vertical screws (🔩x2).

**★ Important**

- These are narrow pitch machine screws. Be sure to re-install them at the same location.

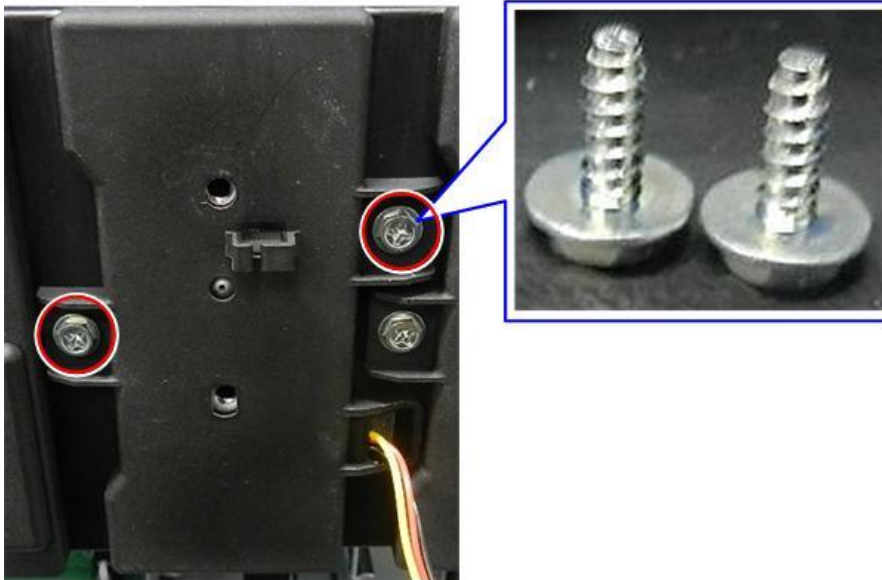


d270b4282

5. Remove the cover wing screws (🔩 x2).

★ Important

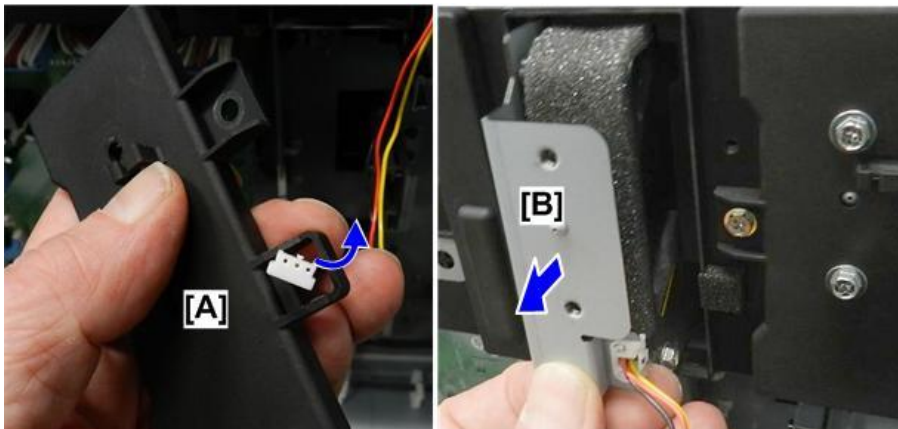
- These are wide pitch tapping screws. Be sure to re-install them at the same location.



d270b4283

6. Separate the cover [A] and harness, and then remove the cover.

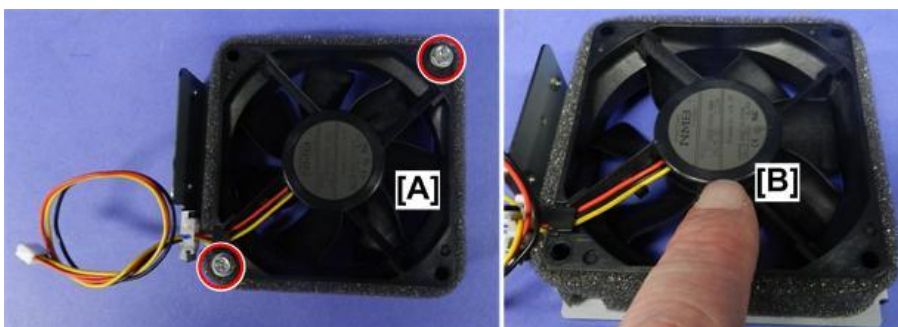
7. Slowly, slide the fan [B] out.



d270b4284

8. Separate fan [A] and bracket.

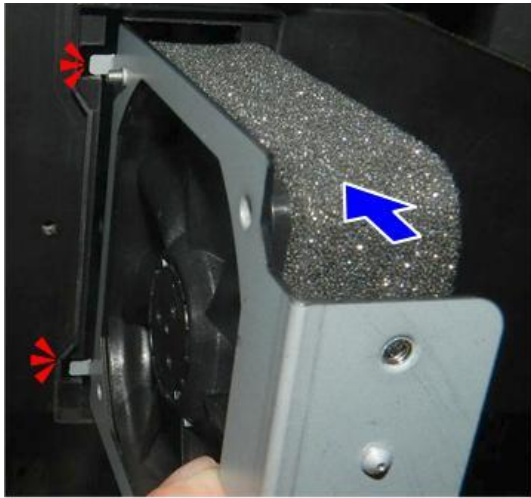
9. When you re-assemble the fan and bracket, position the fan as shown with its label [B] up (🔩 x2).



d270b4278

#### 4.Replacement and Adjustment

10. Align the tabs and slots on the left, and then slowly insert the fan bracket.



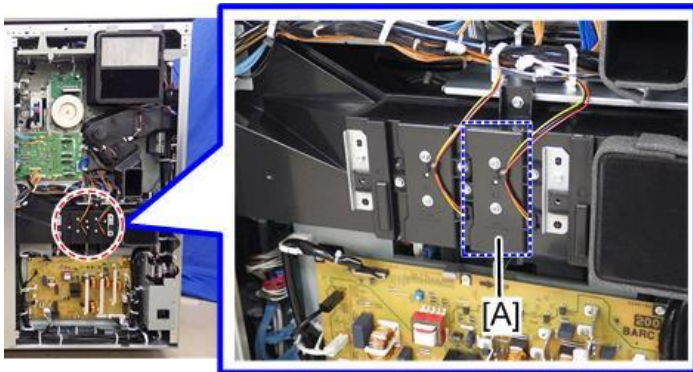
d270b4279

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#### Fusing Exhaust Fan: Lower

---

1. Remove the rear cover. ([Rear Cover](#))
2. The fan [A] is located in the horizontal duct.

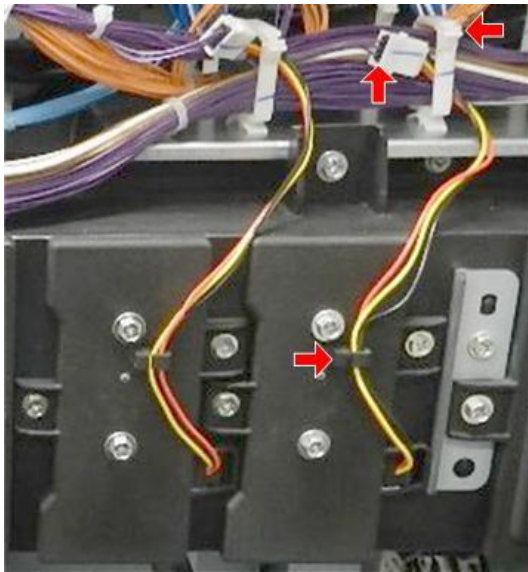


d0bxa4042



## 4.Replacement and Adjustment

3. Disconnect the fan harness (🔌x2, 📦 x1).

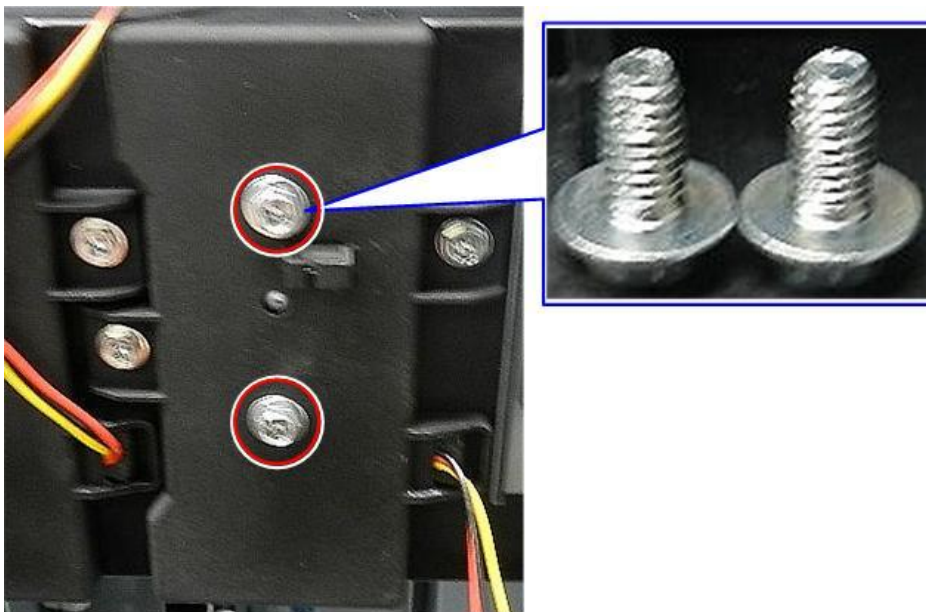


d270b4286

4. Remove the cover vertical screws (🔩 x2).

**★ Important**

- These are narrow pitch machine screws. Be sure to re-install them at the same location.



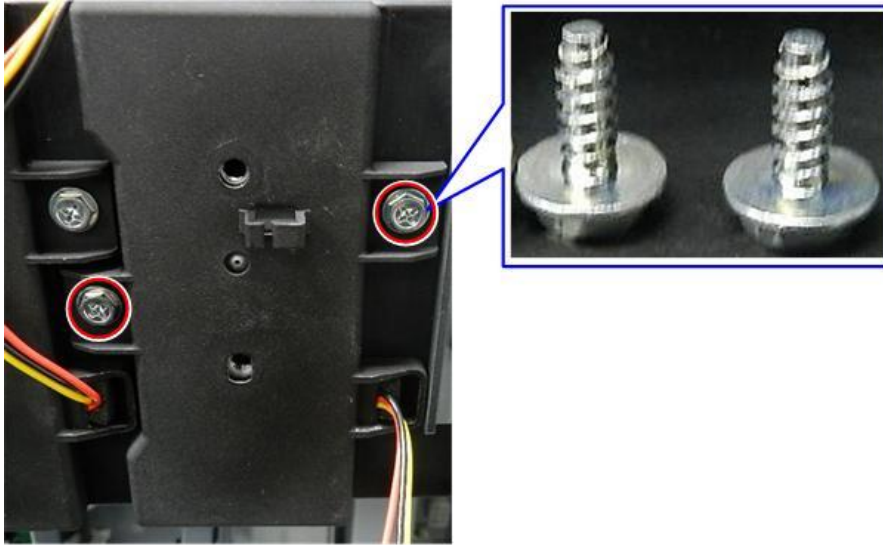
d270b4287

5. Remove the cover wing screws (🔩 x2).

**★ Important**

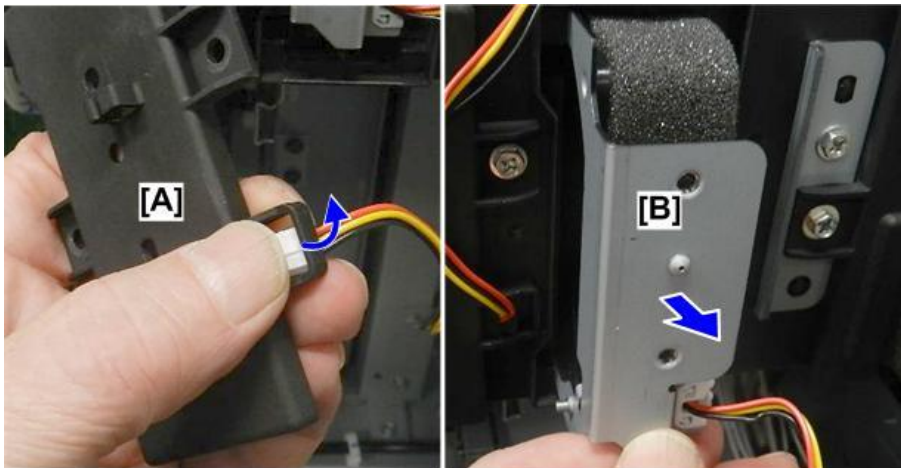
- These are wide pitch tapping screws. Be sure to re-install them at the same location.

#### 4.Replacement and Adjustment



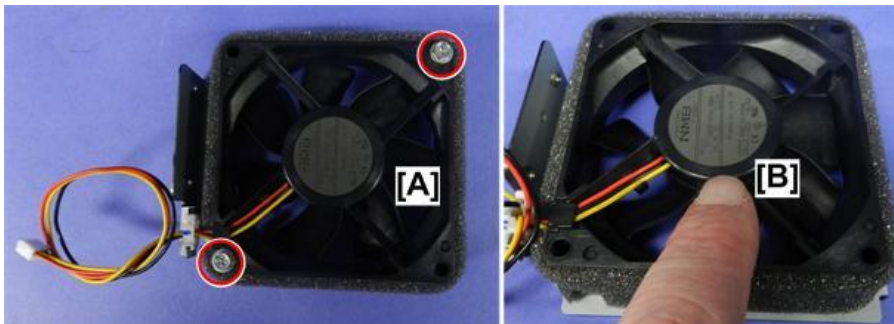
d270b4288

6. Separate the cover [A] and harness, and then remove the cover.
7. Slowly, slide the fan [B] out.



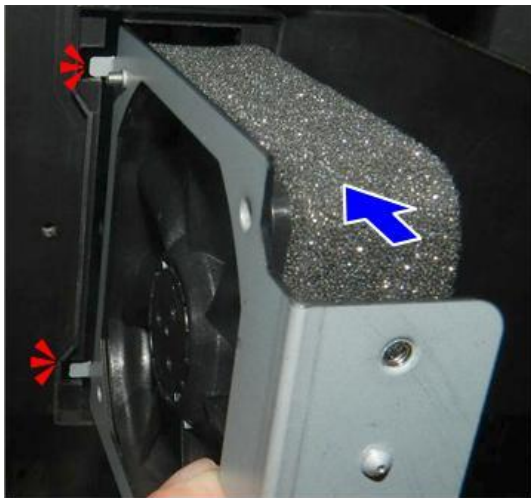
d270b4289

8. Separate fan [A] and bracket (🔪 x2).
9. When you re-assemble the fan and bracket, position the fan as shown with its label [B] up.



d270b4278

- Align the tabs and slots on the left, and then slowly insert the fan bracket.



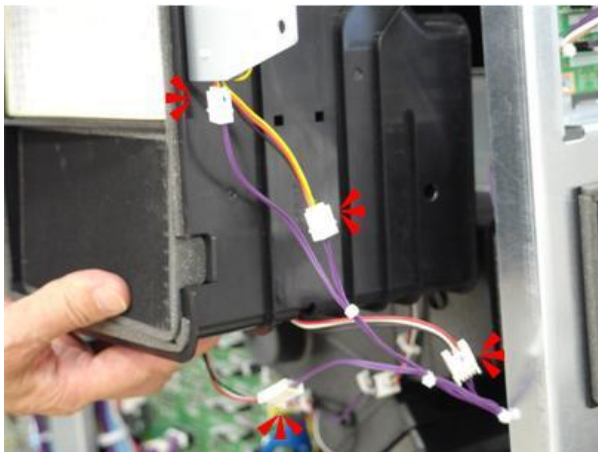
d270b4279

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## Rear Exhaust Fans

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- Remove the rear cover ([Rear Cover](#))
- Disconnect the fans (🔌 x4).

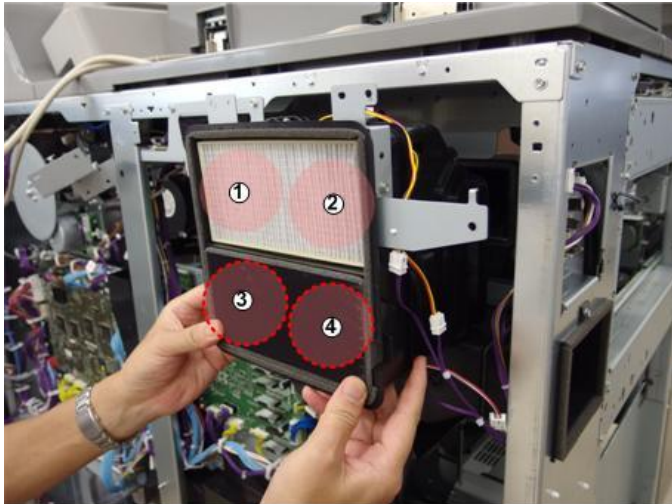


d1794244

- Remove the fan housing.

①	Fusing Air Intake Fan: Lower Right
②	Fusing Air Intake Fan: Lower Left
③	Paper Exit Exhaust Fan: Lower Right
④	Paper Exit Exhaust Fan: Lower Left

## 4.Replacement and Adjustment



d1794243

4. Remove the ozone filter and air filter from the housing.



d1794247

5. Free the harness and unfasten the housing (🔧x1, 🌀x4).

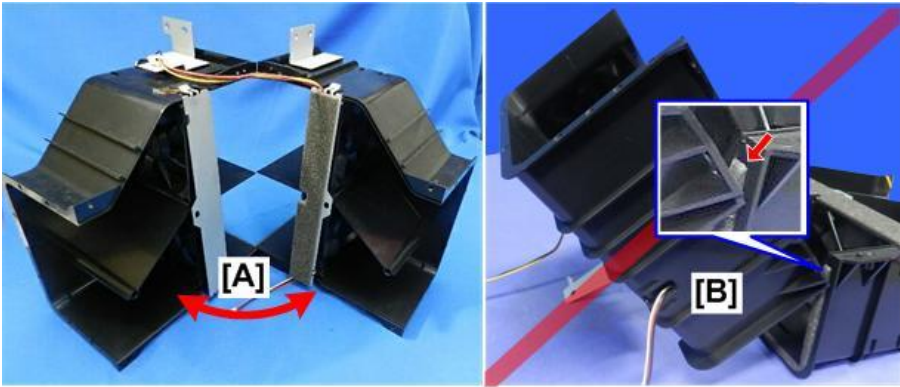


d1794246

6. Open the housing as shown [A].

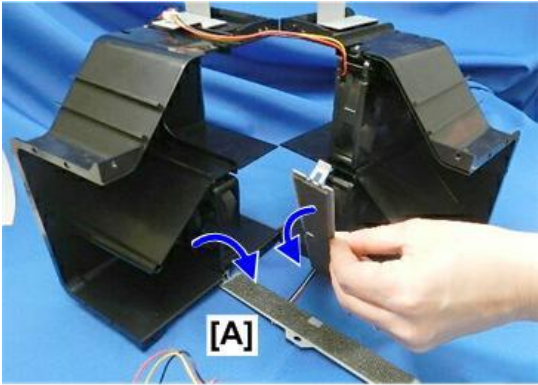
**★ Important**

- To prevent damaging the delicate seal strip, never break open the housing on its side as shown [B].



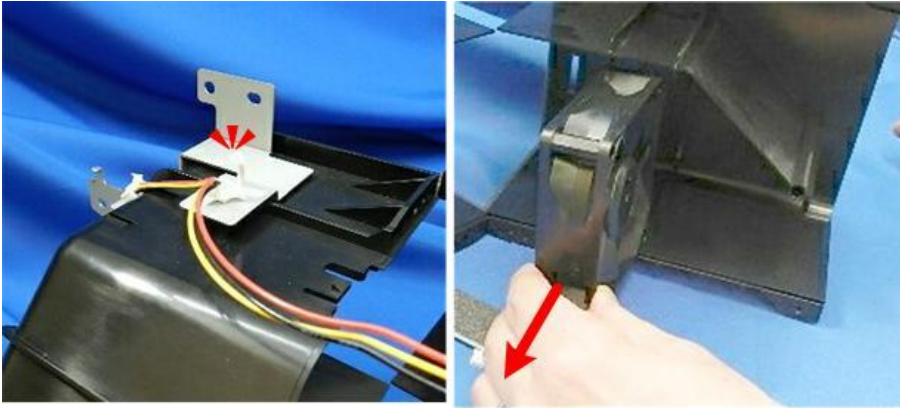
d270b4290

7. Remove the brackets [A].



d270b4291

8. Free the harness and remove the four fans.



d1794249

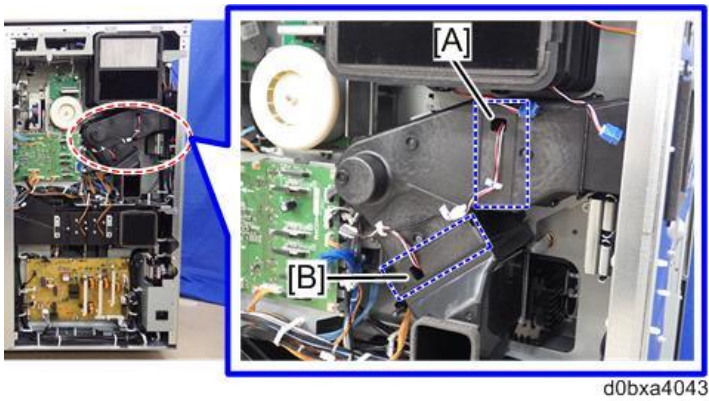
**★ Important**

- Pay attention to the direction of the labels as you remove each fan. They must be re-installed with the labels facing the same direction.

HP (Heat Pipe) Cooling Fans

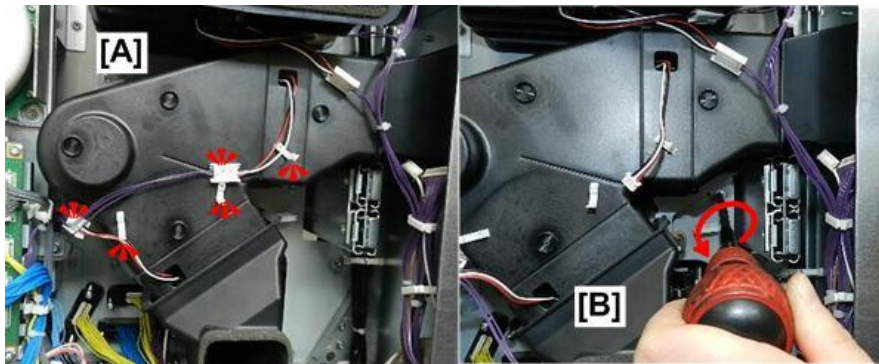
[A]	HP Cooling Suction Fan
[B]	HP Cooling Exhaust Fan

## 4.Replacement and Adjustment



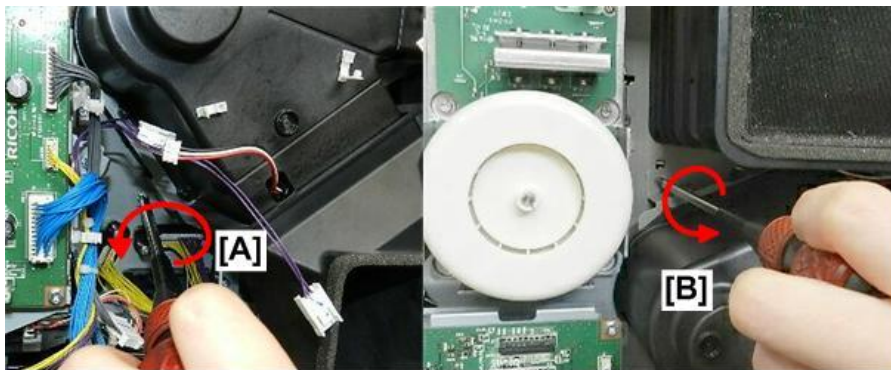
d0bxa4043

1. Remove the rear cover ([Rear Cover](#))
2. Free the harnesses [A] (🔧x3, 📦 x2).
3. Disconnect the duct at [B] (🔧x1).



d1794251

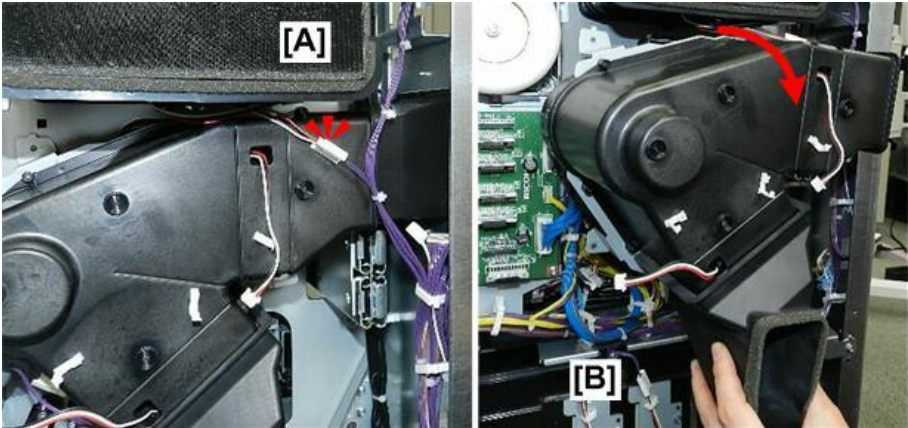
4. Disconnect the duct at [A] and [B] (🔧x2).



d1794252

5. Disconnect the harness [A] (📦 x1).

6. Remove the duct [B] with fans inside.



d1794253

①	HP Cooling Suction Fan
②	HP Cooling Exhaust Fan

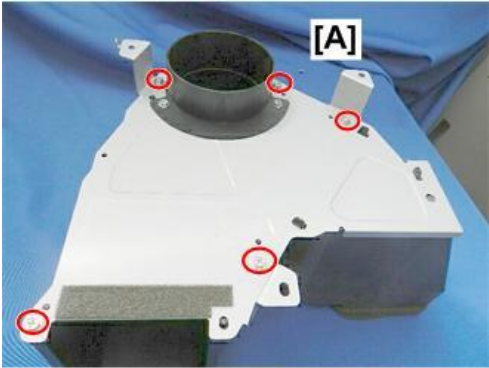


d1794254

7. Lay the duct on a flat clean surface.

8. Remove screws (⌀x5).

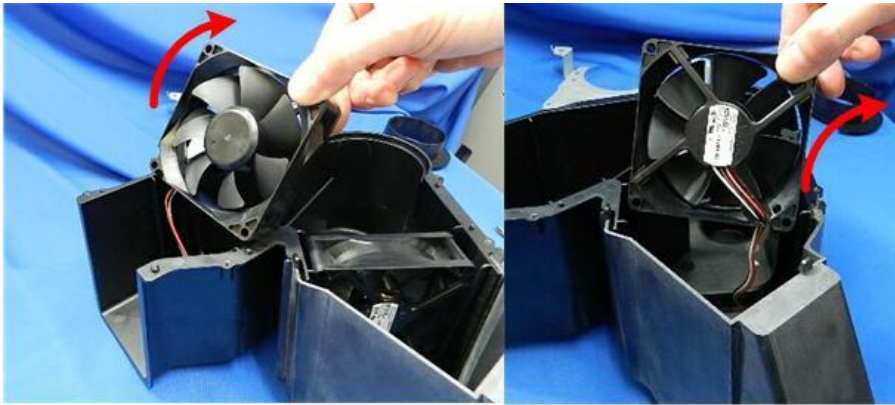
9. Remove the collar duct [A].



d1794255

#### 4.Replacement and Adjustment

10. Remove the fans.



d1794256

11. Lay the fans on a flat clean surface.



d1794257

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#### PSU Cooling Fan: T Left

---

1. Open the controller box. ([Opening the Controller Box \(Copier Models\)](#))
2. Remove the controller box cover and the inner cover. ([Removing the Controller Box Cover, Inner Cover](#))

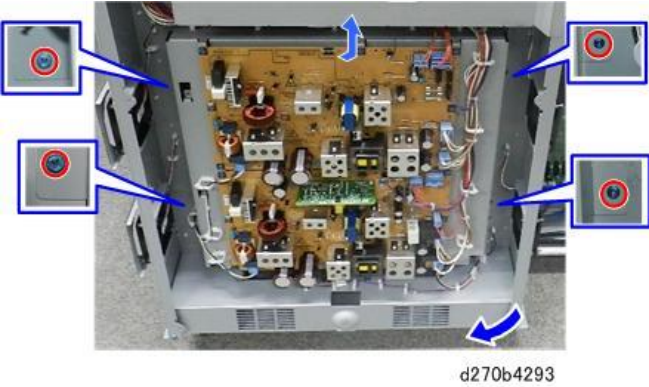


d270b4292

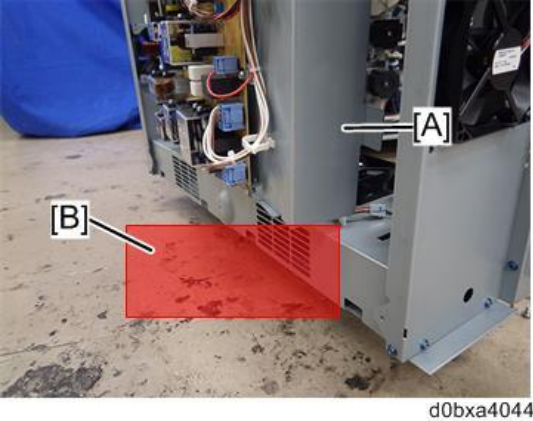
3. Disconnect the PSU mounting bracket (Ⓜx4).



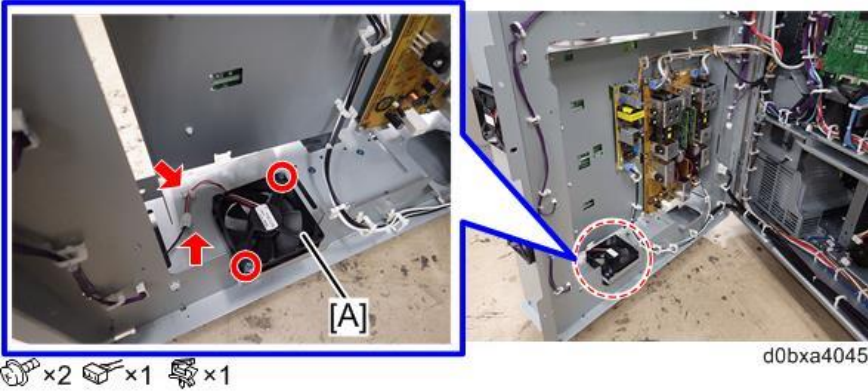
4.Replacement and Adjustment



- 4. Swing the bracket with PSU attached slightly to the left so that you can see the fans. You do not need to disconnect or remove the PSU.
- 5. Put the block [A] and so on under the bracket [B] to maintain the height of the bracket.



- 6. Remove the fan [A].



## 4.Replacement and Adjustment

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### PSU-C Cooling Fan

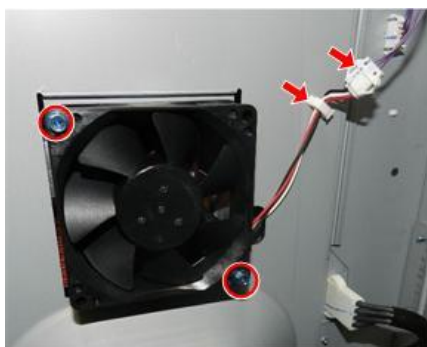
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1. Open the controller box. ([Opening the Controller Box \(Copier Models\)](#))



d270b4299

2. Disconnect the motor (🔧x1, 📦x1, 🔩x2).



d270b4300

3. Remove the motor.



d270b4301

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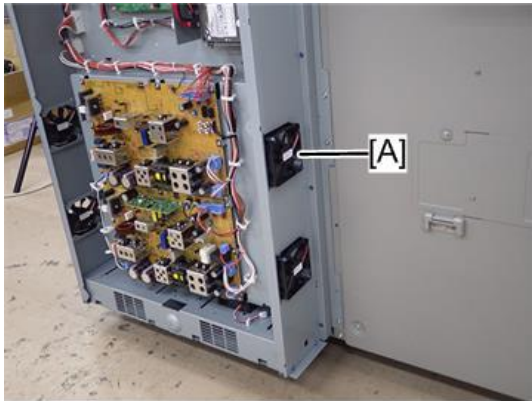
### PSU Exhaust Fan: M1 Left

---

1. Open the controller box. ([Opening the Controller Box \(Copier Models\)](#))
2. Remove the controller box cover and the inner cover. ([Removing the Controller Box Cover, Inner](#))

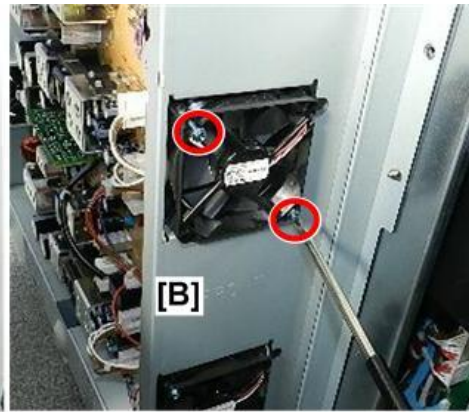
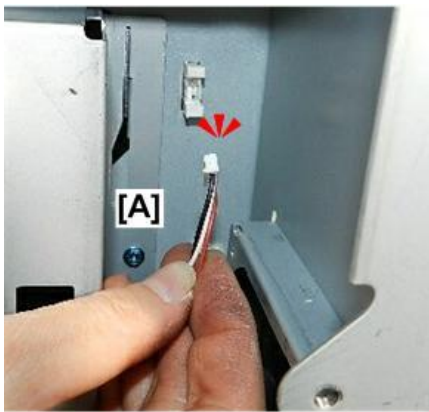
Cover)

3. Locate the fan [A].



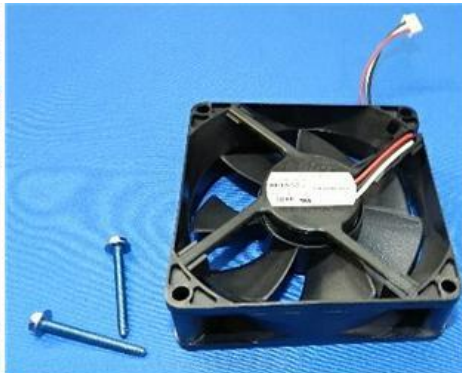
d0bxa4099

4. Disconnect the fan inside the controller box [A].
5. Disconnect the fan [B] (🔧 x1).



d1794270

6. Remove the fan.



d1794271

---

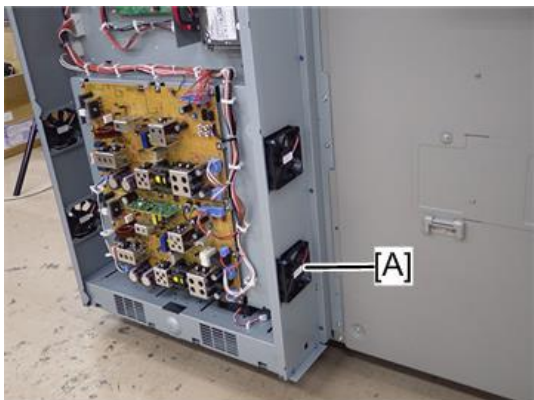
## PSU Exhaust Fan: M2 Left

---

1. Open the controller box. ([Opening the Controller Box \(Copier Models\)](#))
2. Remove the controller box cover and the inner cover. ([Removing the Controller Box Cover, Inner Cover](#))

#### 4.Replacement and Adjustment

3. Locate the fan [A].



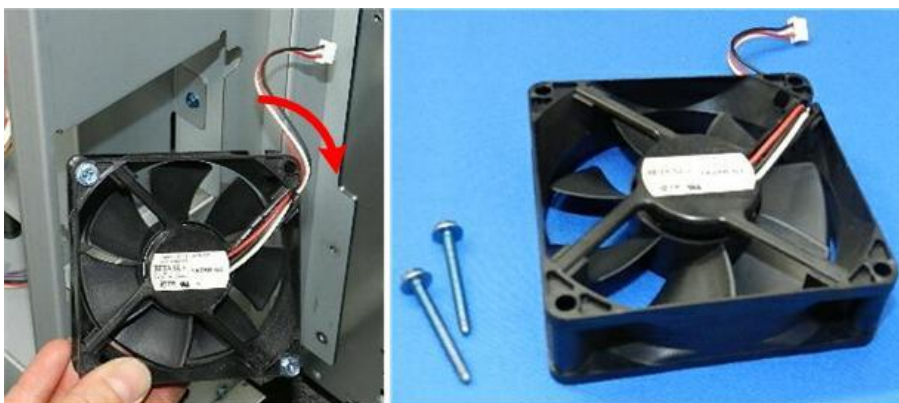
d0bxa4100

4. Disconnect the fan inside the controller box [A] (🔌 x1).
5. Disconnect the fan [B] (🔩 x2).



d270b4303

6. Remove the fan.



d1794274

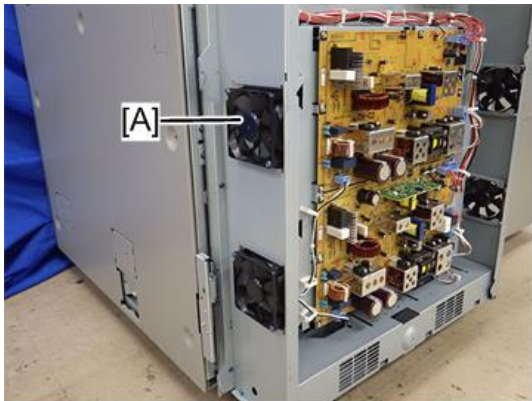
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#### PSU Intake Fan: M1 Right

---

1. Open the controller box. ([Opening the Controller Box \(Copier Models\)](#))
2. Remove the controller box cover. ([Removing the Controller Box Cover, Inner Cover](#))

3. Locate the fan [A].






d0bxa4046

4. Disconnect the fan inside the controller box.



d0bxa4047

  x1  x1

5. Remove the fan [A].



d0bxa4048

 x2

---

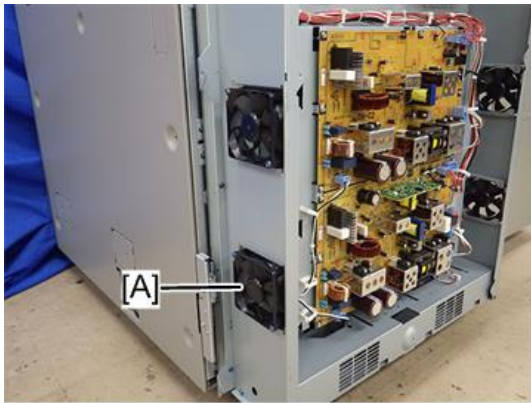
### PSU Intake Fan: M2 Right

---

1. Open the controller box. ([Opening the Controller Box \(Copier Models\)](#))
2. Remove the controller box cover. ([Removing the Controller Box Cover, Inner Cover](#))

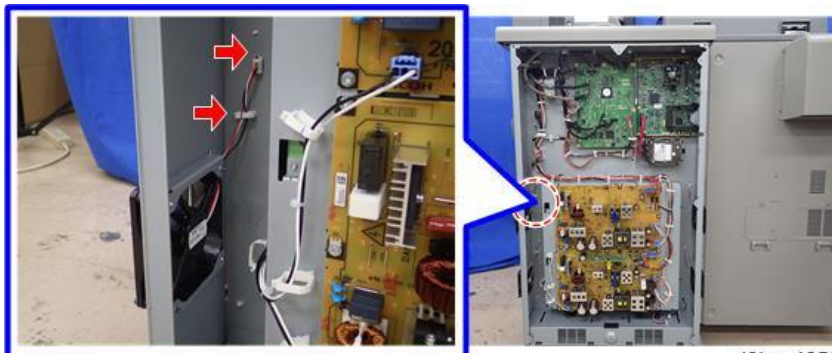
## 4.Replacement and Adjustment

3. Locate the fan [A].





d0bxa4049

4. Disconnect the fan inside the controller box.



d0bxa4050

 x1  x1

5. Remove the fan [A].



d0bxa4051

 x2

---

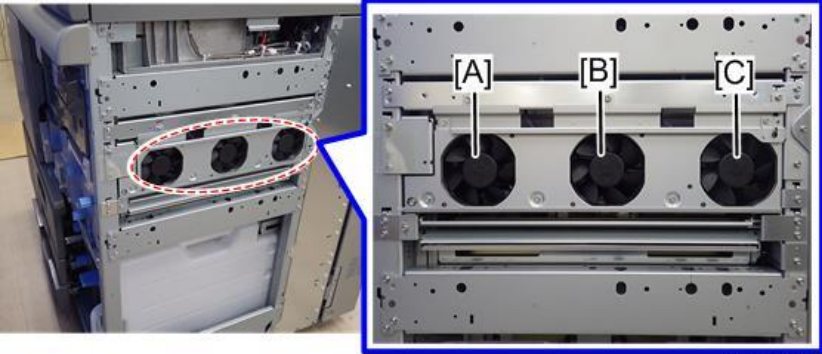
## Right Cover Fan Bracket

---

1. Remove the right front door. ([Doors](#))
2. Remove the right cover. ([Right Cover](#))

[A]	Right Air Intake Fan: Front
[B]	Right Air Intake Fan: Center
[C]	Right Air Intake Fan: Rear

4.Replacement and Adjustment



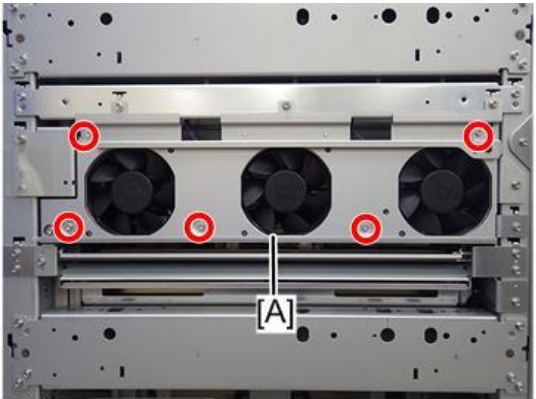
d0bxa4052

- 1. Remove the right cover air intake filters [A].



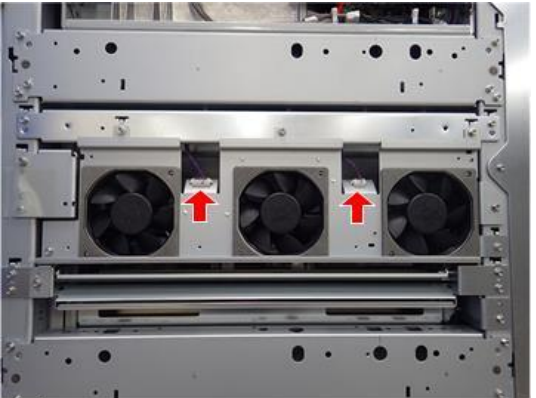
d0bxa4037

- 2. Remove the bracket [A].



d0bxa4054

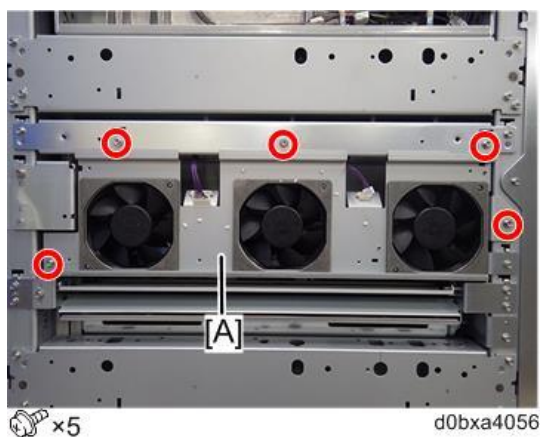
- 3. Disconnect the fans.



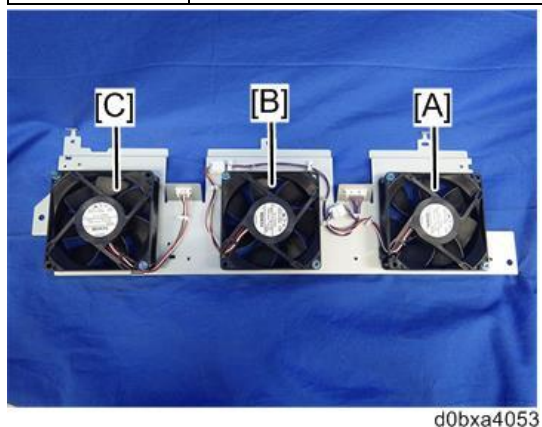
d0bxa4055

#### 4.Replacement and Adjustment

4. Remove the bracket [A] (with fans attached).



[A]	Right Air Intake Fan: Front
[B]	Right Air Intake Fan: Center
[C]	Right Air Intake Fan: Rear

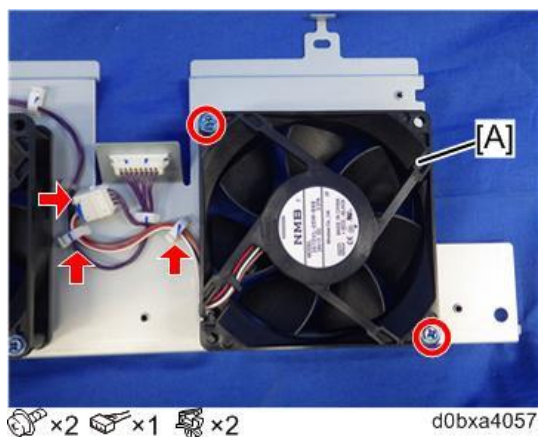



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#### Right Air Intake Fan: Front

---

1. Remove the right cover fan bracket. (See above.)
2. Remove the fan motor [A].



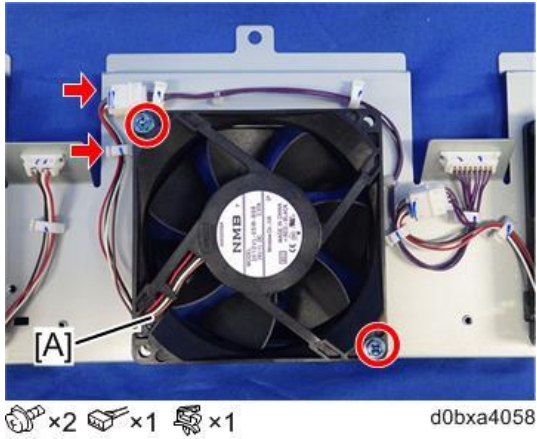


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### Right Air Intake Fan: Center

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1. Remove the right cover fan bracket. (See above.)
2. Disconnect the fan motor [A].

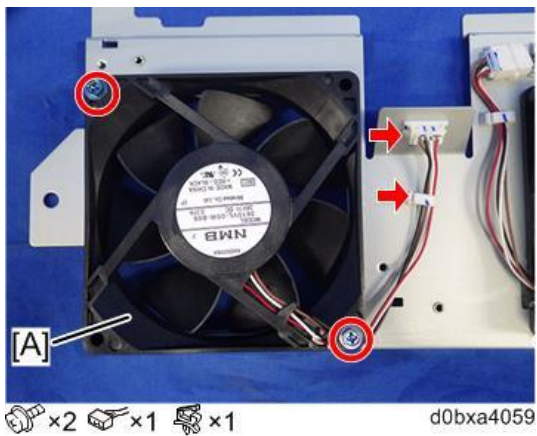


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### Right Air Intake Fan: Rear

---

1. Remove the right cover fan bracket. (See above.)
2. Remove the fan [A].



## 4.Replacement and Adjustment

### Boards, HDD, Circuit Breaker

Here is a list of the boards that can be replaced. Numbers 13 to 17 are difficult to access. Refer to the appropriate sections listed under "Comments".

No.	Board	Location	Comments
1	AC Drive Board	Main Left Side	
2	CGB Power Pack	Main Rear	
3	EDRB	Main Rear	
4	IOB	Main Rear	
5	RYB	Main Rear	
6	HDD	Controller Box	
7	BiCU (Base-engine & Image processing Control Unit)	Controller Box	
8	PSU-A	Controller Box	
9	PSU-B	Controller Box	
10	PSU-C	Controller Box	
11	PSU-D	Controller Box	
12	SDCU (SD card Control Unit)	Controller Box	
13	CRB	Registration Unit	(CIS Removal)
14	DRB	Registration Unit	(DRB, TE Shift Unit Motor, Rear fence HP sensor)
15	Paper Separation PP	PTR Unit	(Paper Separation Power Pack)
16	TDRB (Transfer DRiver Board)	ITB Unit	(TDRB (Transfer Drive Relay Board))
17	Transfer PP	ITB Unit	(Transfer Power Pack)

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#### Main Unit

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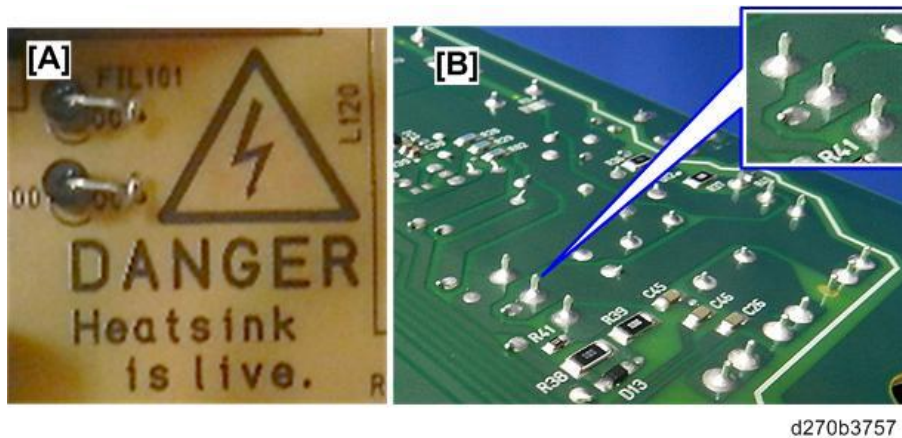
#### AC Drive

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A heat sink or condenser can retain a considerable electrical charge after the machine has been turned off and remained idle for hours and even days.

- Warnings are printed on the front of the boards [A] near components that can retain residual charge.
- Some of the soldered contacts on the backs of the boards [B] are extremely sharp and can cut or

puncture your fingers, as well as cause an electric shock.



d270b3757

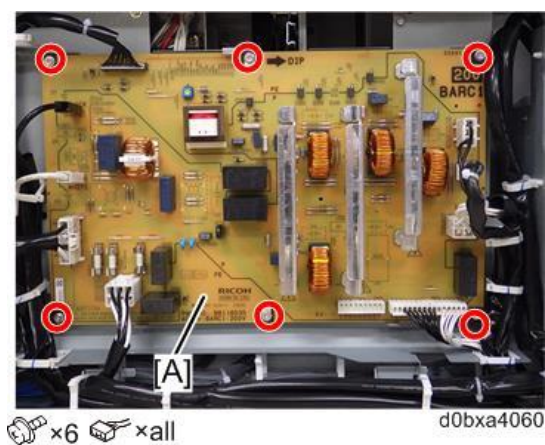
### **⚠ DANGER**

- To avoid electrical shocks, handle boards by their edges and never touch **any** component on the board with your bare hand or a tool, especially one of the heat sinks or capacitors.
- Always keep the rear covers on the machine. Never leave the covers off during machine testing, or while the machine is idle during servicing.

### **★ Important**

- Turn the machine off and allow it to cool for at least 10 min. before you remove the AC drive board.
- Avoid touching the heat shield of the board.
- The tube fuses on the board are the ceramic type. You cannot visually inspect a fuse to determine if it has blown.

1. Remove the rear cover
2. Remove the AC drive board [A].



⚙ x6 📦 xall

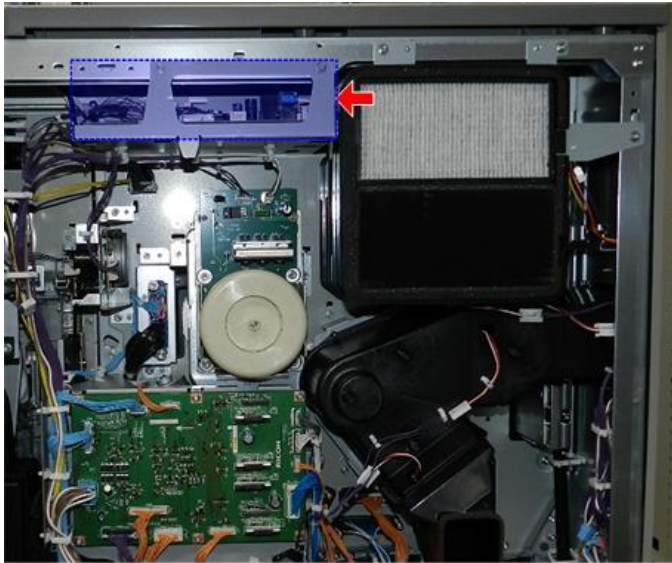
d0bxa4060

### CGB Power Pack

1. Remove the rear cover.

#### 4.Replacement and Adjustment

2. The CGB (Charge Grid Bias) power pack is located at the rear edge of the machine.

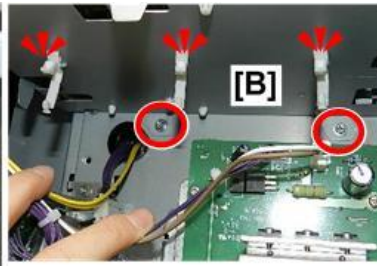


d270b5317

3. Disconnect:

[A] Top of the bracket (🔧x2)

[B] Bottom of the bracket (🔧x3, 🔧x3)

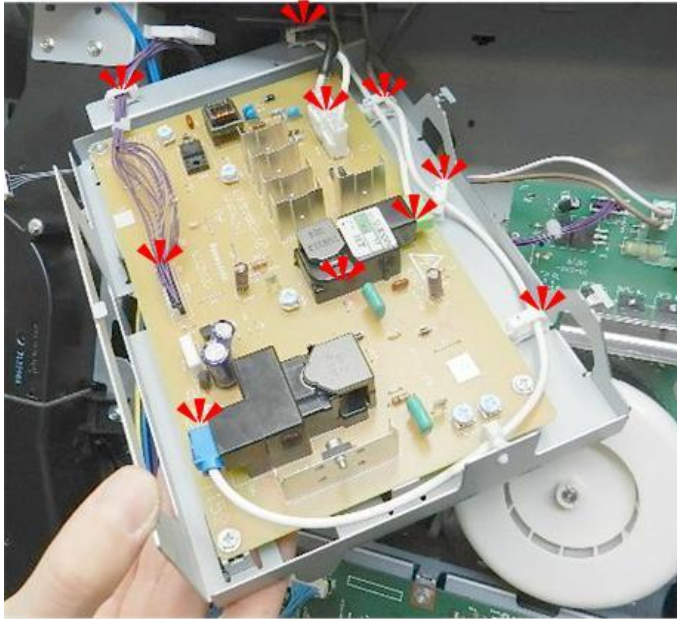


d1794318

4. Pull the bracket (with board attached) partially out of the machine.

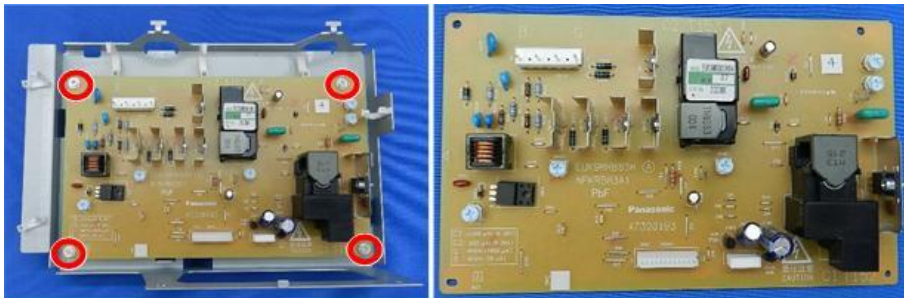
## 4.Replacement and Adjustment

5. Disconnect the board (🔧x6, 📦 x4).



d1794319

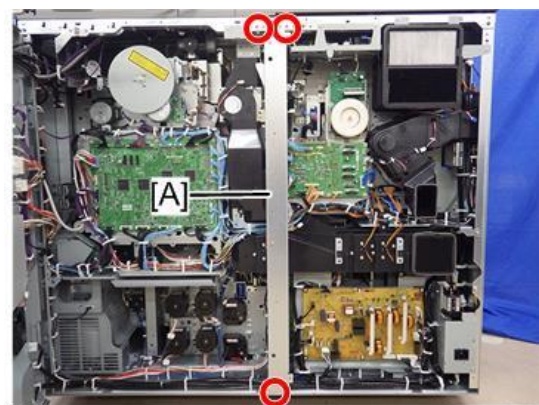
6. Separate board from bracket (🔧 x4).



d1794320

### EDRB

1. Open the controller box door. ([Opening the Controller Box \(Copier Models\)](#))
2. Remove the rear cover (🔧x7). ([Rear Cover](#))
3. Remove the rear vertical stay [A].

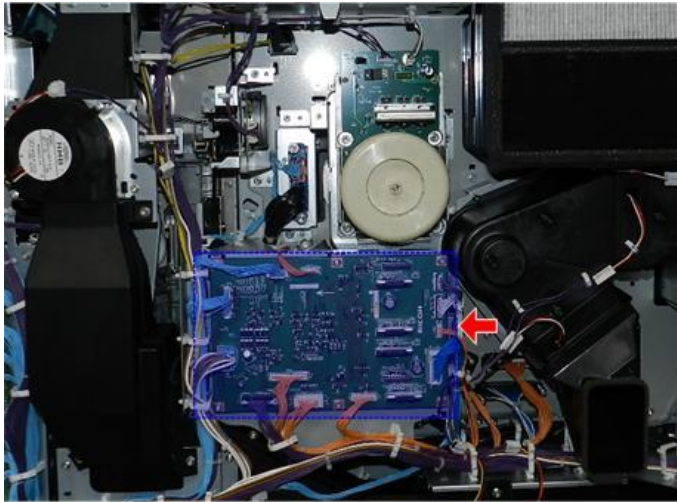


🔧 x3

d0bxa4039

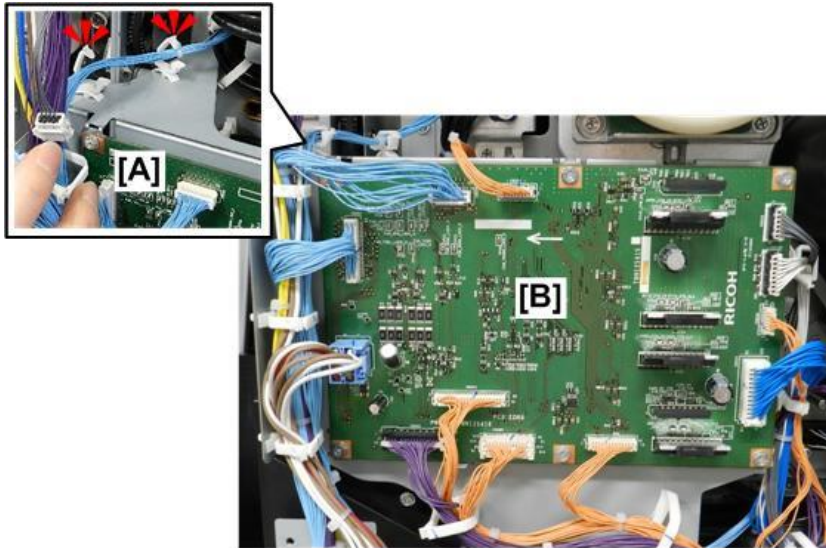
#### 4.Replacement and Adjustment

4. The EDRB is near the center of the back of the machine.



d270b5321

5. At the upper right corner [A] of the EDRB [B], free the harness [🔧x2].



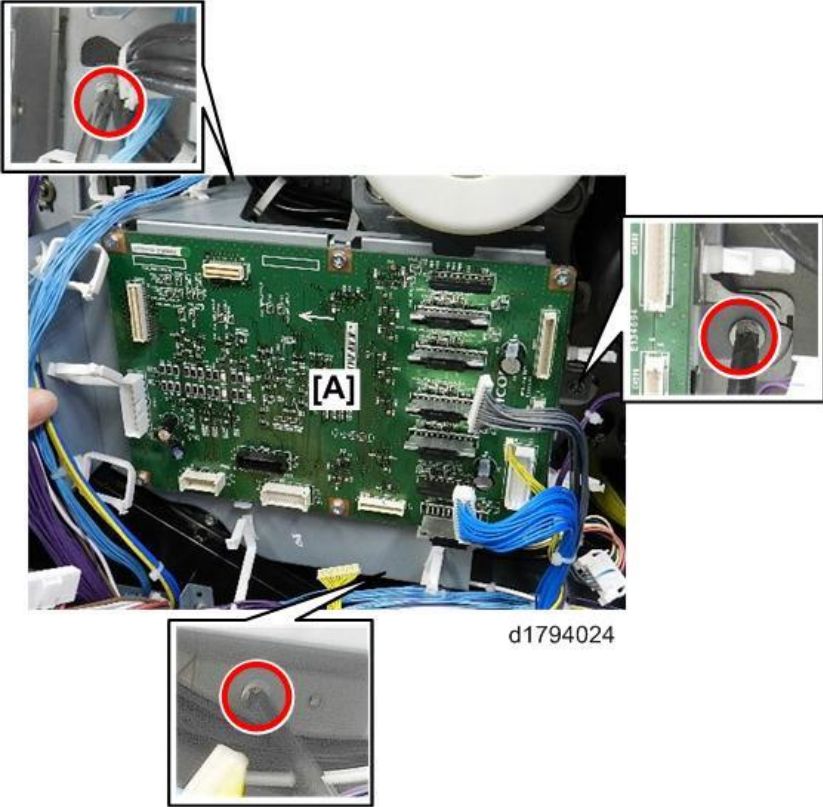
d270b5022

6. Disconnect the EDRB (🔌x7, 📡x12).



d270b5023

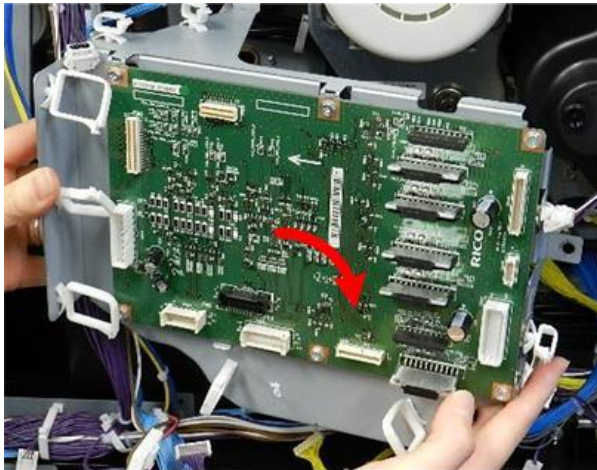
7. Disconnect the EDRB bracket [A] (🔩x3).



d1794024

#### 4.Replacement and Adjustment

8. Remove the EDRB bracket (with PCB attached).



d1794025

9. Remove the board from the bracket (🔩 x3).



🔩 x6

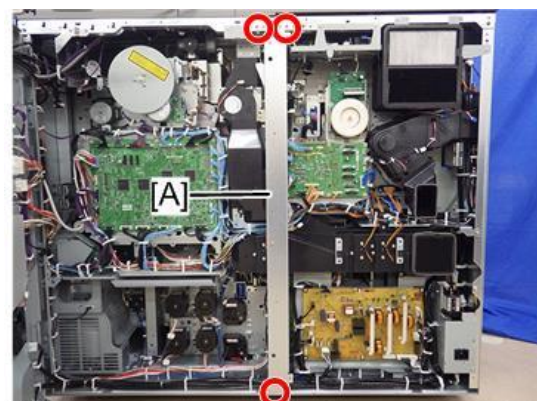


d270b5034

#### IOB

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1. Open the controller box ([Opening the Controller Box \(Copier Models\)](#))
2. Remove the rear cover ([Rear Cover](#))
3. Remove the vertical stay [A].



🔩 x3

d0bxa4039

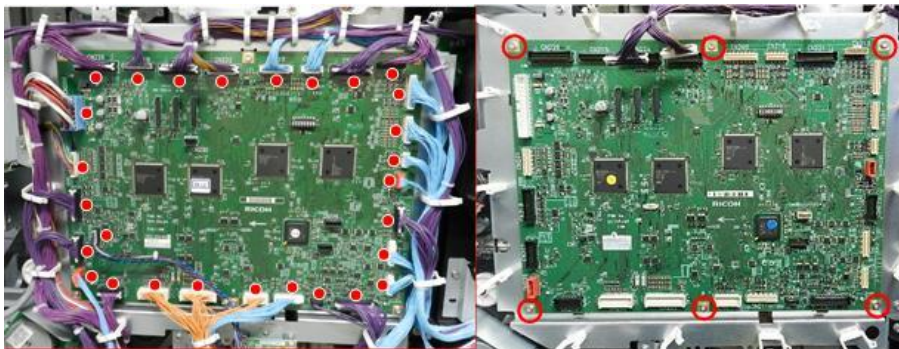


4. The IOB [A] is on the back of the machine below the flywheel.



d0bxa4061

5. Disconnect the board (🔌x17, 📦x28).
6. Disconnect the board from its bracket (🔩x6)



d270b5325

7. If you are replacing the IOB:
  - Note the positions of the DIP switches on the old board.
  - Set the DIP switches on the new board in the same way. (The switches may be different according to your geographical area.)



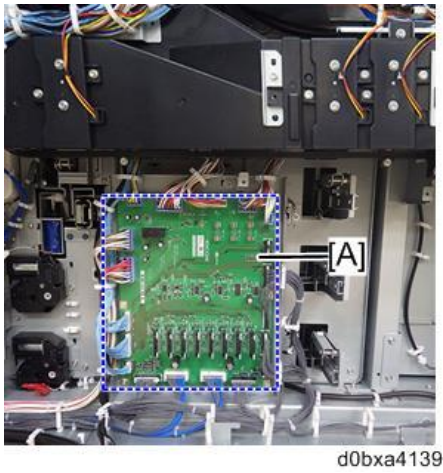
d1794293

#### RYB (Relay Board)

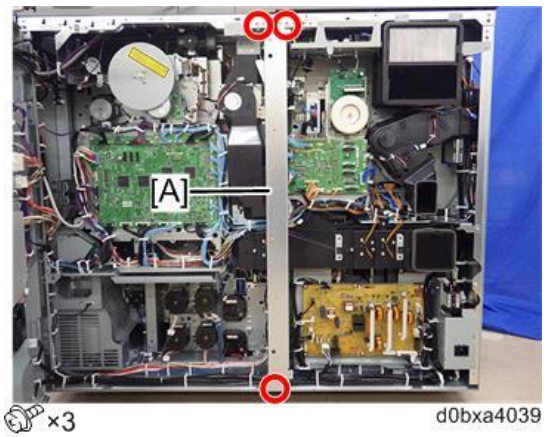
1. Open the controller box.
2. Remove the rear cover.

#### 4.Replacement and Adjustment

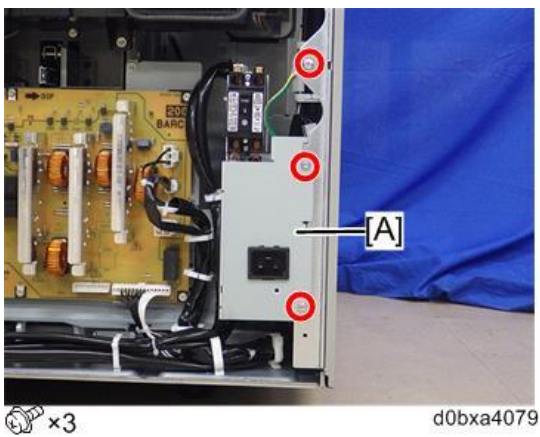
3. The RYB [A] is at the bottom of the back of the machine, below the horizontal duct.



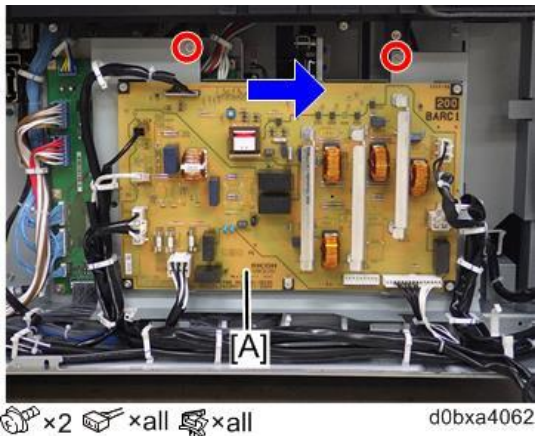
4. Remove the vertical stay [A].



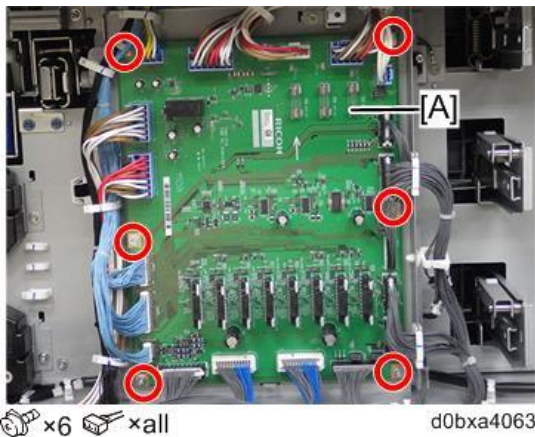
5. Remove the circuit breaker bracket [A].



6. Remove the AC drive board [A] bracket.



7. Remove the RYB [A].




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## PSU-A, B, C, D

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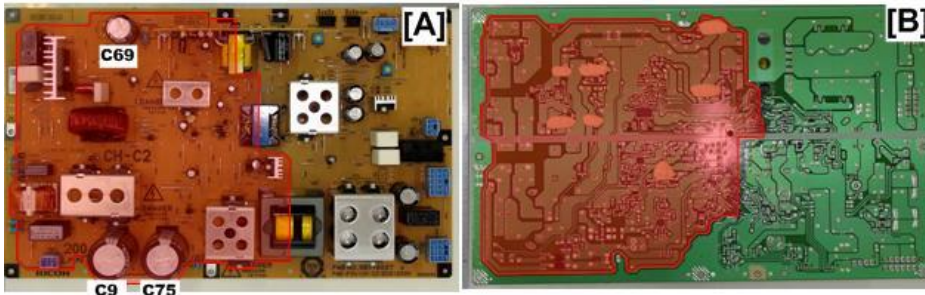
### PSU-A

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#### **⚠ CAUTION**

- To prevent electrical shock caused by residual voltage, never touch the areas outlined in red on the front [A] and back side [B] of the board.
- Residual charge of about 100 to 400V remains in the AC circuits on the PSU board for several months, even after the machine has been turned off and disconnected from the power source, or after the board has been removed from the machine.
- The procedure to discharge residual voltage from the boards by unplugging the power cord from the power source and pressing the main power switch works only for the DC circuits. Residual charge remains in the AC circuits.

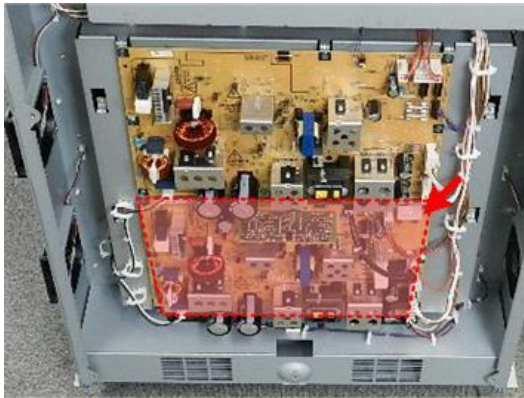
## 4.Replacement and Adjustment



d270b4801

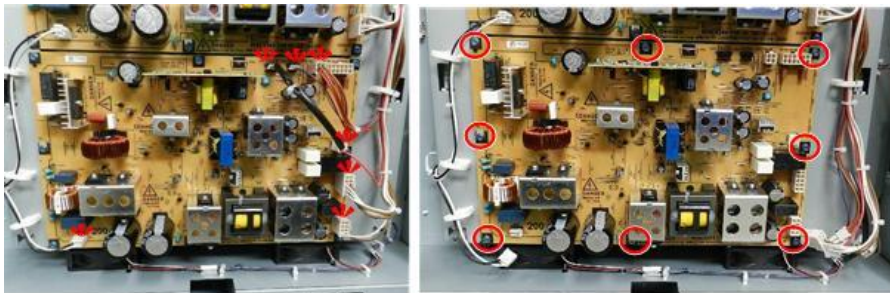
### Note

- A bracket is not attached to a replacement for PSU-A. The board is removed directly from the machine.
1. Remove the controller box cover ([Removing the Controller Box Cover, Inner Cover](#))
  2. PSU-A is the lower board.



d1794332

3. Remove the board (🔧 x7, 🛠️ x8)



d1794333

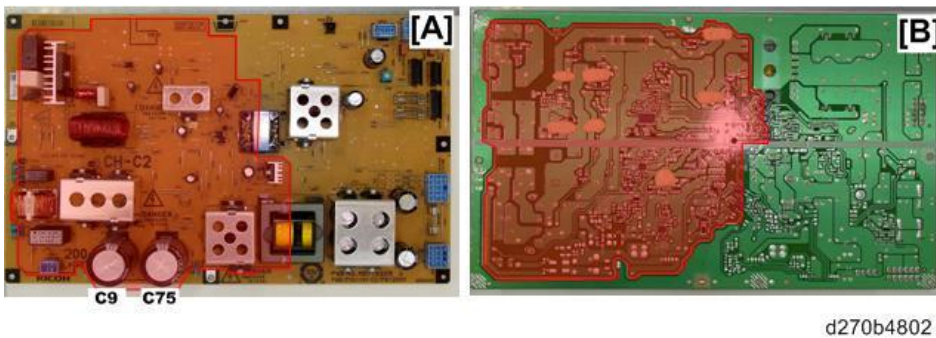
## PSU-B

### ⚠️ CAUTION

- To prevent electrical shock caused by residual voltage, never touch the areas outlined in red on the front [A] and back side [B] of the board.
- Residual charge of about 100 to 400V remains in the AC circuits on the PSU board for several months, even after the machine has been turned off and disconnected from the power source, or after the board has been removed from the machine.

## 4.Replacement and Adjustment

- The procedure to discharge residual voltage from the boards by unplugging the power cord from the power source and pressing the main power switch works only for the DC circuits. Residual charge remains in the AC circuits.



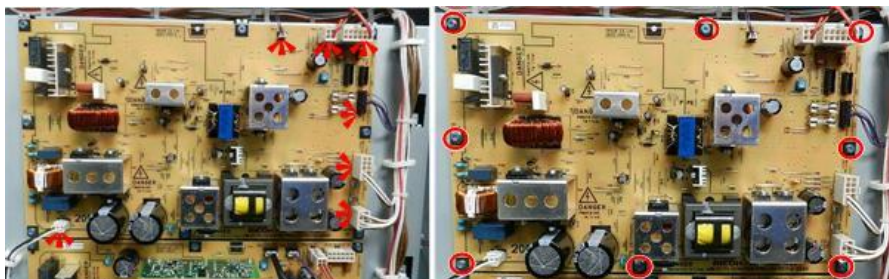
### Note

- A bracket is not attached to a replacement for PSU-B. The board is removed directly from the machine.
1. Remove the controller box cover ([Removing the Controller Box Cover, Inner Cover](#))
  2. PSU-B is the upper board.



d1794335

3. Remove the boards (🔧 x7, 🛠️ x8)



d1794336

## PSU-C, PSU-D

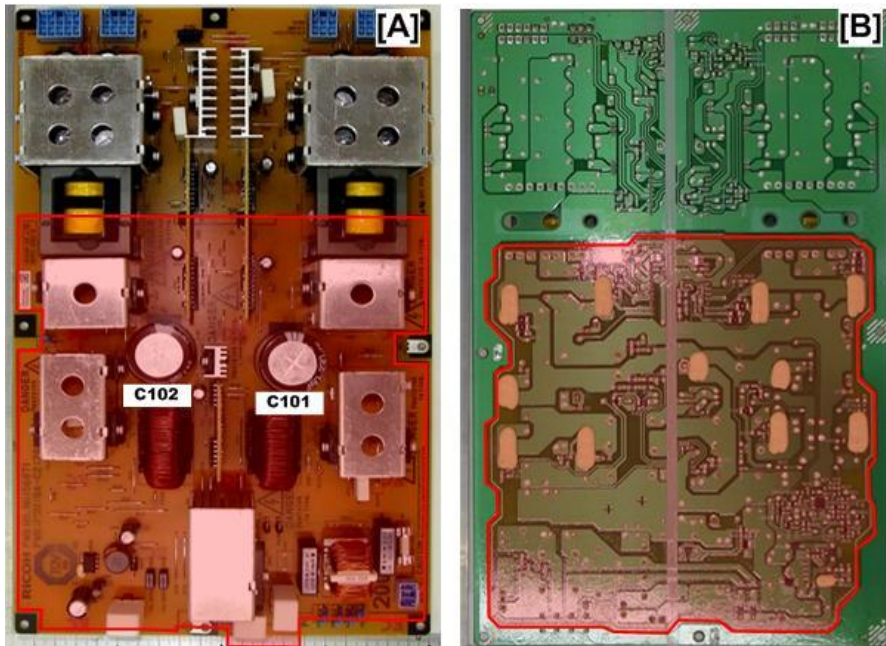
### ⚠️ CAUTION

- To prevent electrical shock caused by residual voltage, never touch the areas outlined in red on the front [A] and back side [B] of the board.
- Residual charge of about 100 to 400V remains in the AC circuits on the PSU board for several

#### 4.Replacement and Adjustment

months, even after the machine has been turned off and disconnected from the power source, or after the board has been removed from the machine.

- The procedure to discharge residual voltage from the boards by unplugging the power cord from the power source and pressing the main power switch works only for the DC circuits. Residual charge remains in the AC circuits.
- **PSU-C**



d270b4803

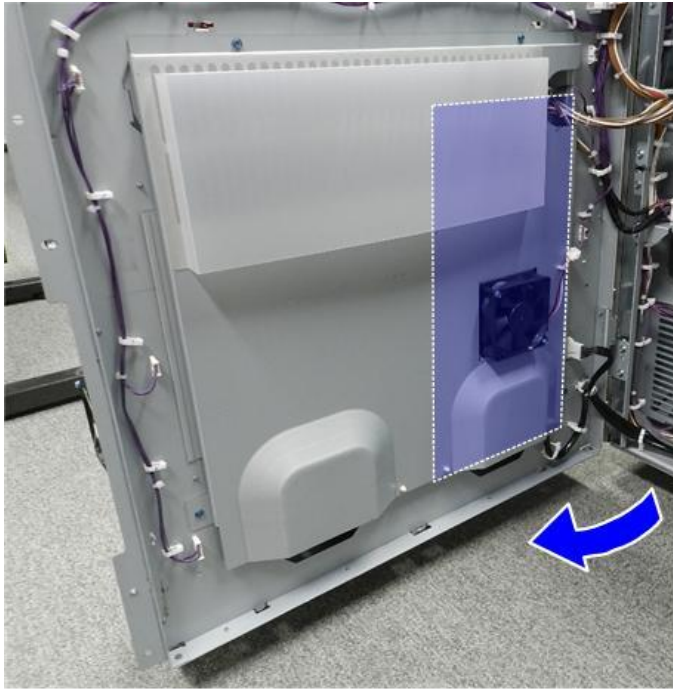
- PSU-D



d0bxa4244

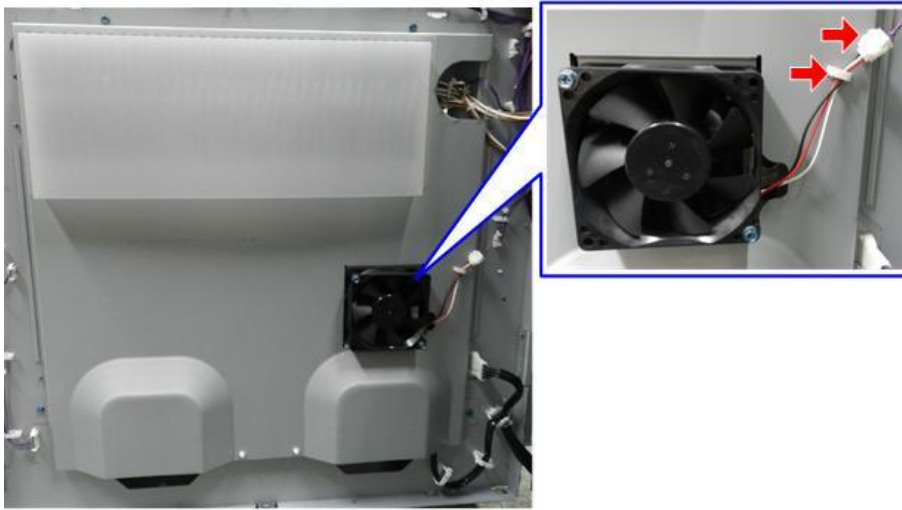
#### 4.Replacement and Adjustment

1. Open the controller box. ([Opening the Controller Box \(Copier Models\)](#))



d270b5338

2. Disconnect the fan (🔧 x1, 📦 x1)

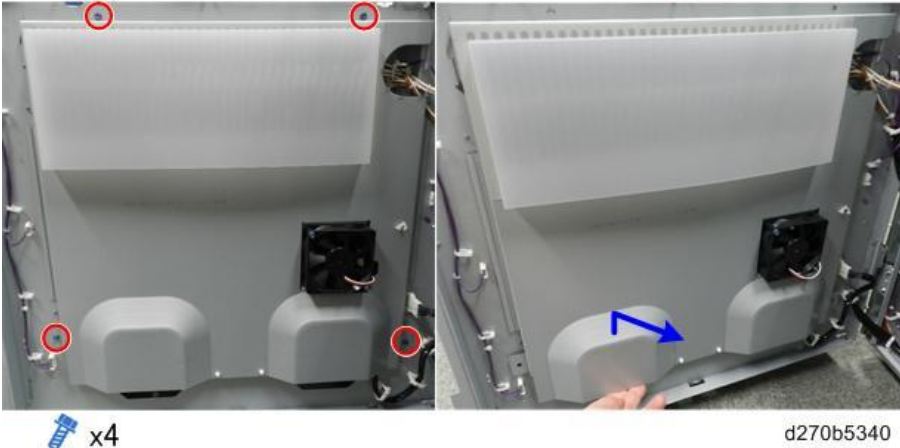


🔧 x1 📦 x1

d270b5339



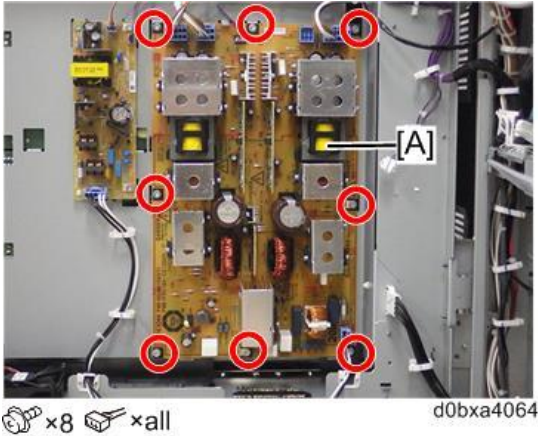
3. Remove the cover (🔩x4).



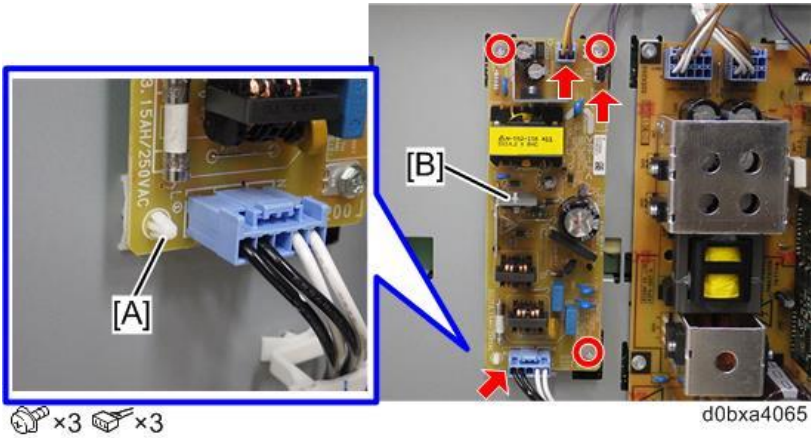
Note

- PSU-C, D has no mounting bracket. It is mounted directly to the frame of the controller box. Remove the board from the frame.

4. Remove the PSU-C [A].



5. Disconnect the rivet [A], and then remove the PSU-D [B].



## 4.Replacement and Adjustment

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### Around the Control Board

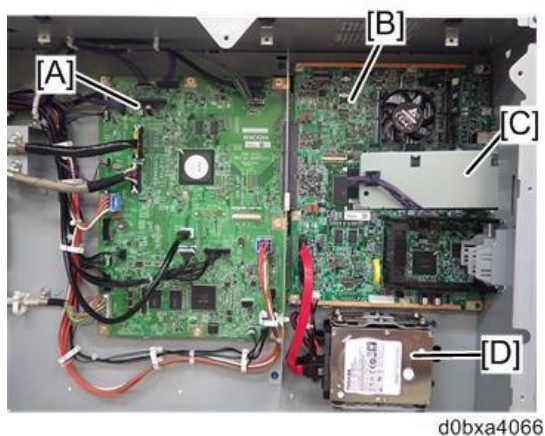
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#### Before You Begin

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1. Remove the controller box cover ([Removing the Controller Box Cover, Inner Cover](#))

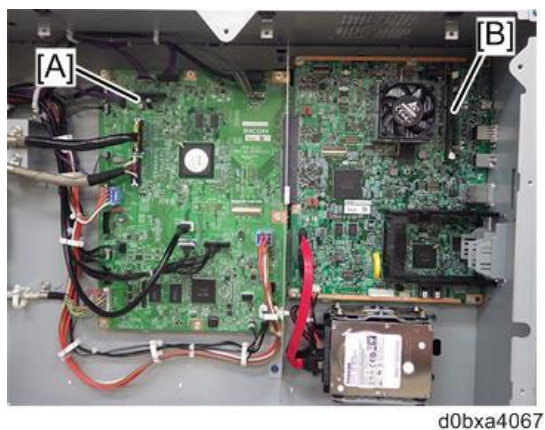
[A]	BiCU
[B]	Controller Board
[C]	SDCU
[D]	HDD



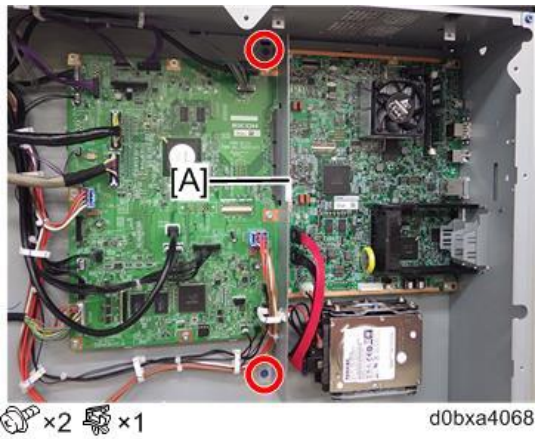
#### BiCU, Controller Board

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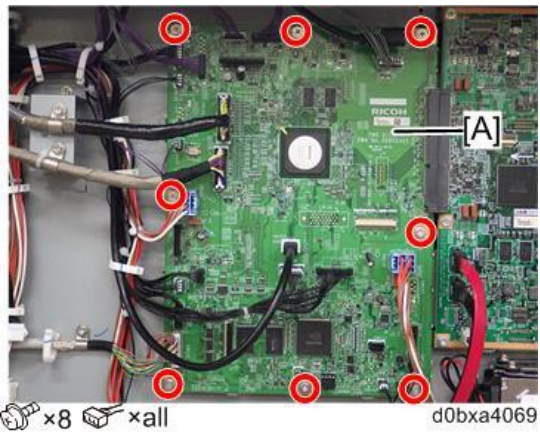
1. The BiCU [A] and controller board [B] are separate, connected boards. They are always removed together.



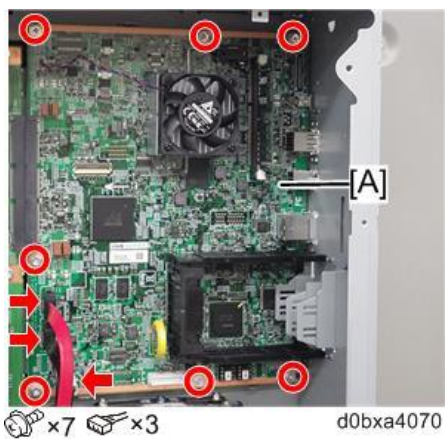
2. Remove the partition [A].



3. Remove the BiCU [A].



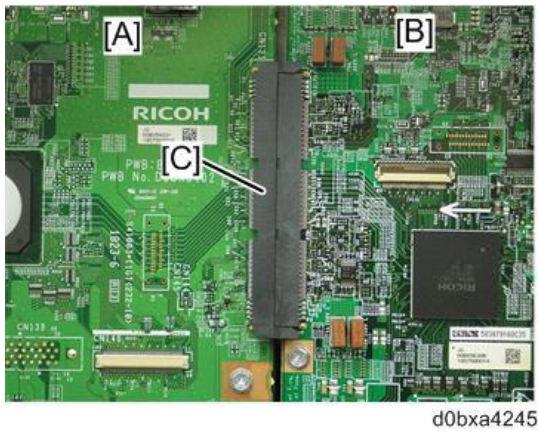
4. Remove the controller board [A].



5. Slowly, remove the connected BiCU [A] -Controller board [B]. Do not allow the edge connectors [C]

## 4.Replacement and Adjustment

(marked by the red arrow) to bend.



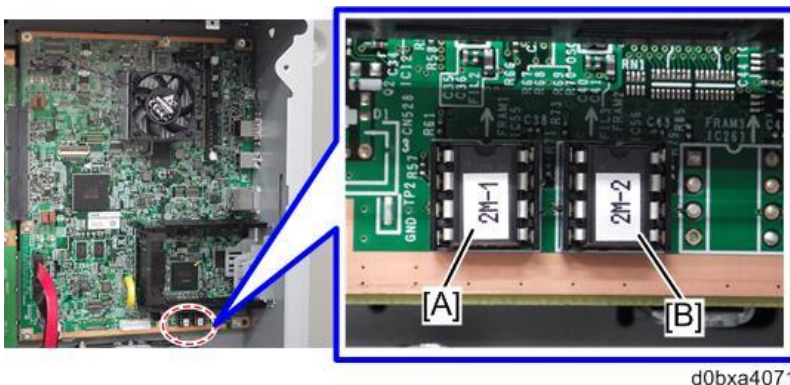
6. Lay the boards on a flat clean surface.
7. Separate the boards.

### Precautions When Replacing the Controller Board

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#### Controller Board

- Two NVRAMS on the controller board are labeled 2M-1 [A] and 2M-2 [B].
- These NVRAMs are a set. When replacing the controller board, remove both NVRAMs, 2M-1 [A] and 2M-2 [B], and then attach them to the new board at the same locations. If this is not done correctly, the machine will issue **SC195-00**.
- When you position the NVRAMs over the sockets, make sure that the circular notch is pointing in the direction embossed on the board as shown below.
- NVRAM 2M-1 [A] is inserted into socket FRAM-1, and 2M-2 [B] is inserted into the socket FRAM-2. Make sure that the circular notches on the NVRAMs point in the direction of arrows embossed on the board.



#### ★ Important

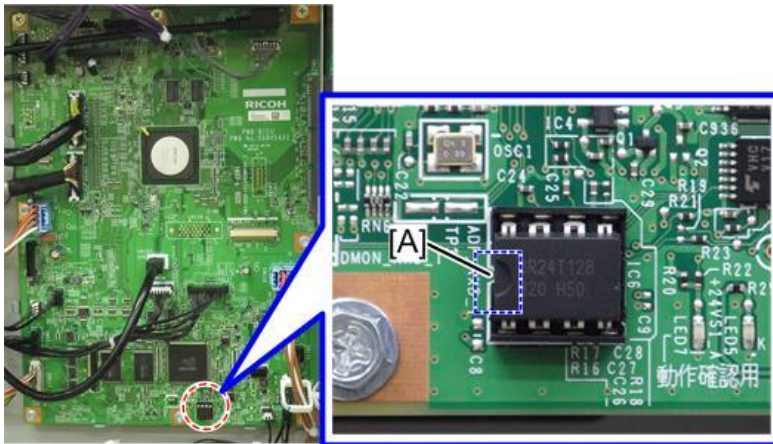
- If the NVRAMs are installed incorrectly, this could cause both the board and the NVRAMs to short out and permanently damage the board and NVRAMs.
- After the board is replaced, check which ESA applications have been installed, and then follow the installation procedures to re-install each application.

## BiCU

If you are replacing the BiCU, remove the NVRAM [A], and then install it on the new BiCU. Do SP5811-004 and enter the serial number of the main machine. If you fail to enter the correct number, the machine will issue SC995-01.

### ⚠ CAUTION

- Pay attention to the direction the circular notch is pointing when you install it.
- Attach the NVRAM so that the indentation [A] is on the left.



d0bxa4228

- If the NVRAM is installed incorrectly, the machine will display “Please Wait” and then freeze and not boot.

---

## NVRAM Replacement

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There are three NVRAMs. Two are on the controller board, and one is on the BiCU.

### ★ Important

- Always touch a metal surface before handling an NVRAM. Static electricity from your hands can damage an NVRAM.

### Controller Board NVRAM Replacement

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#### After Replacement of a Defective NVRAM

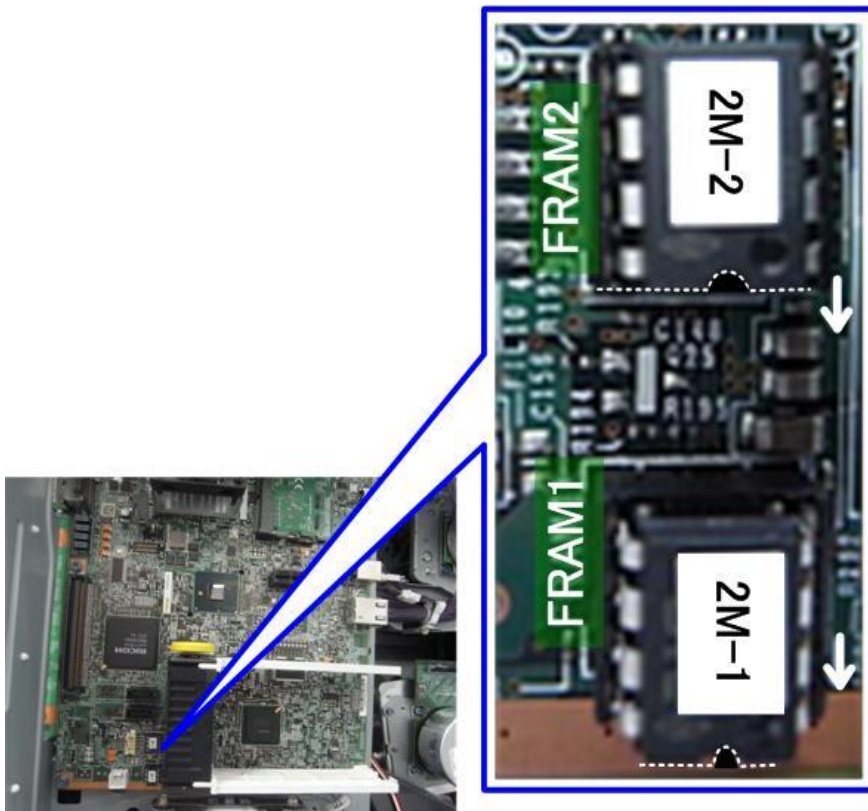
1. You will need the factory settings sheet provided with the machine.
2. Turn the power on, enter the SP mode, and then do the factory settings.
3. Re-install security settings as required.
4. Go into the SP mode and open **SP5104-001**.
  - This SP may automatically reset to "0" after NVRAM replacement.
  - This SP code should be reset to "1" (factory default), unless the operator needs it set to "0".

#### NVRAM Upload and Download

1. Make sure that you have the SMC report (factory settings). This report comes with the machine.
2. Output the SMC data (“ALL”) using SP5-990-001.
3. Turn off the main switch.
4. Insert a blank SD card into Slot 2, and then turn on the machine.

#### 4.Replacement and Adjustment

5. Upload the NVRAM data to the blank SD card using SP5-824-001 (NVRAM Data Upload).
6. Enter the SP mode, open SP5985-001 (Enable onboard NIC) and SP5985-002 (Enable onboard USB), and make a note of their settings. (It is necessary to enter these settings manually after the NVRAMs have been replaced).
7. Turn off the main power switch, and then unplug the power cord.
8. Remove the SD card from Slot 2.
9. Replace the NVRAM on the controller board with a new one, plug in the power cord, and then turn on the main power switch.
10. Do **SP5846-051** to copy all address data to the SD card.
11. Turn the machine off, and then unplug it.
12. Remove the SD card with the address book data from Slot 2.
13. Swap the old NVRAMs on the controller board with new ones.

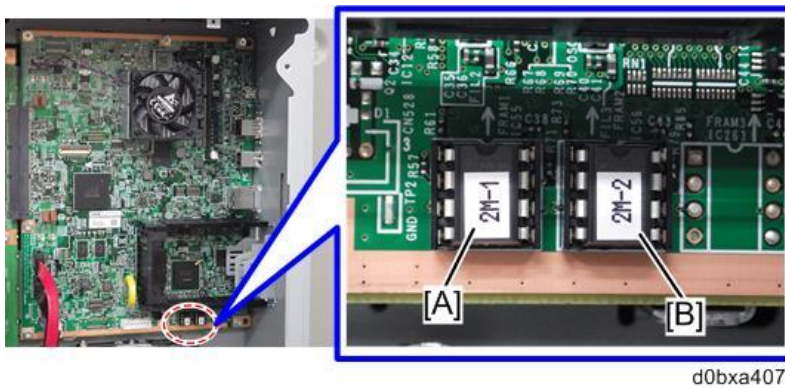


d270b2675

#### Note

- The two NVRAMS on the controller board are labeled 2M-1 [A] and 2M-2 [B].
- These NVRAMS are a set. When replacing the controller board, remove both NVRAMS, 2M-1 [A] and 2M-2 [B], and then attach them to the new board at the same locations. If this is not done correctly, the machine will issue SC195-00.
- When you position the NVRAMS over the sockets, make sure that the circular notch is

pointing in the direction embossed on the board as shown below.



d0bxa4071

- NVRAM 2M-1 [A] is inserted into socket FRAM-1, and 2M-2 [B] is inserted into the socket FRAM-2. Make sure that the circular notches on the NVRAMs point in the direction of arrows embossed on the board.
  - If the NVRAMs are installed incorrectly, this could cause both the board and the NVRAMs to short out and permanently damage the board and NVRAMs
14. After the board is replaced, check which ESA applications have been installed, and then follow the installation procedures to re-install each application.
  15. Make sure that there is no SD card in Slot 2, and then plug in the power cord and turn the machine on.
  16. If the machine returns SC995-02, cycle the machine off and try again.
  17. Insert the SD card with the copied NVRAM data in Slot 2.
  18. Do **SP5825-001** to download the data from the SD card. This requires two or three minutes to complete.
  19. When you see the “Finished!” message, cycle the machine off/on, and then touch [Exit]. Do not turn the machine off.
  20. If SC870-11 (Address Book Data Error) appears, ignore it.

**Note**

- After doing a setting, if the machine prompts you to cycle the machine off/on, ignore this message and continue until all the settings are done.

21. Enter the SP mode and manually enter the settings for the SP codes that you recorded above SP5985-001 (Enable onboard NIC) and SP5985-002 (Enable onboard USB).
22. Turn the machine off and remove the SD card from Slot 2.
23. Turn the machine on.
24. Insert the SD card with the address book data into Slot 2.
25. Do SP5846-052 to restore the address book data.

**Note**

- The execution will fail if the settings at Step 16 for SP5985-001 or SP5985-002 were not done correctly.
- If this execution succeeds, the machine will prompt you to cycle the machine off/on.

26. Switch the machine off, and then remove the SD card from Slot 2.

## 4.Replacement and Adjustment

27. Turn the machine on.
28. Enter the SP mode and print another SMC report with **SP5990-001**, compare it with the original SMC report that you printed earlier, and then correct any settings.
29. Reset the NVRAM counter (Total counter: 1000, other counters to zero).
30. Execute process control.
31. If you see the message “SD Card for Restoration is Required”, the data encryption key must be re-installed.

### BiCU NVRAM Replacement

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#### After Replacement of a Defective NVRAM

1. You will need the factory settings sheet provided with the machine.
2. Turn the machine on, enter the SP mode, and then enter the factory settings.

#### NVRAM Upload and Download

1. Make sure that you have the SMC report (factory settings). This report comes with the machine.
2. Output the SMC data (SP5-990-001) if possible.
3. Turn the main switch off.
4. Install an SD card into SD card in Slot 2, and then turn the machine on.
5. Copy the NVRAM data to an SD card (SP5-824-001) if possible.
6. Turn off the machine, and then unplug the power cord.
7. Replace the NVRAM on the BiCU and reassemble the machine.
8. Plug in the power cord, and then turn the main switch on.
9. Select a paper-size type (SP5-131-001), and then select your area with SP5807-001. The machine will return SC995-04 if the area is not set correctly.
10. Enter the serial number of the NVRAM (EEPROM).

#### Note

- The NVRAM (EEPROM) manufacturer number is different from that set with SP5811-004. For more details, contact your supervisor or support center. If the number is not entered, the machine will return SC195-00.

11. Cycle the machine off/on.
12. Copy the data from the SD card to the NVRAM (SP5-825-001) that you copied them to the SD card in Step 5.
13. Turn the main switch off, and then remove the SD card from Slot 2.
14. Turn the main switch on.
15. Specify the SP and UP mode settings.
16. Do the process control self-check.

---

## HDD

---

The HDD unit contains two separate disks.

- The HDD unit contains two disks that must always be replaced as a set.



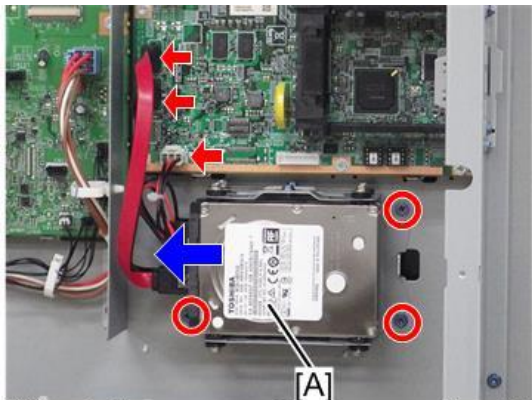
## 4.Replacement and Adjustment

- Never remove an HDD unit from a machine, or remove an old HDD from the work site without permission of the customer.
- Before replacing the HDD unit, if possible copy the address book data to an SD card with SP5846-051.

### ★ Important

- Information stored on the HDD (stamps, documents stored on HDD, etc.) will be lost after the HDD is replaced.
- Lost data may need to be replaced manually after HDD replacement.

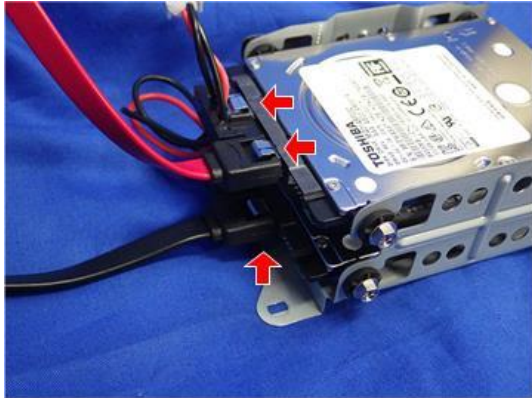
1. Remove the HDD bracket [A].



⚙️ x3 🛠️ x3

d0bxa4072

2. Disconnect the upper HDD.

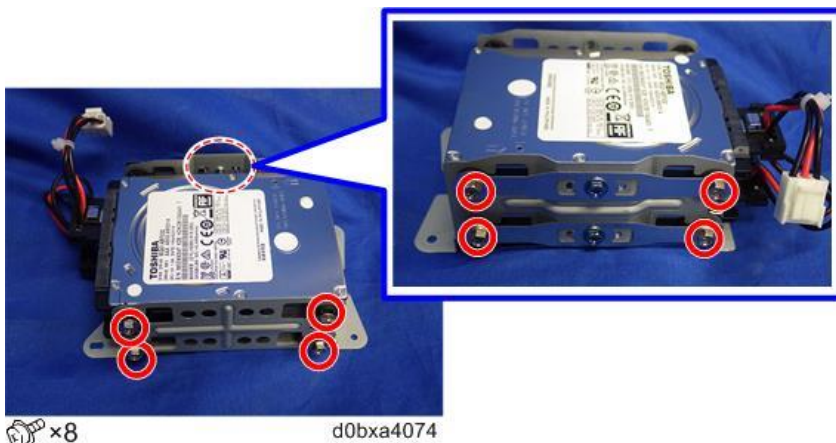


🛠️ x3

d0bxa4073

#### 4.Replacement and Adjustment

3. Disconnect the top and bottom sides of the upper HDD

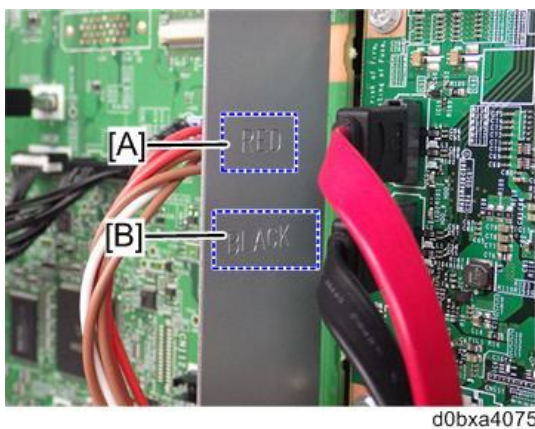


#### Re-installation

- There is a notation on the metal panel to remind you to re-connect the HDD cables correctly: **Red** over **Black**.
- Reconnecting these cables incorrectly will cause an error. If this occurs, just switch the machine off and connect them correctly. (The HDD will not be damaged.)

[A]: RED

[B]: BLACK



#### After Installing a New HDD Unit

---

1. Do SP5-832-001 to format the hard disk.

2. Do SP5-853-001 to copy the preset stamp data from the firmware to the hard disk
3. Do SP5-846-052 to copy back the address book to the hard disk from the SD card to which you have already copied the address book data if possible.
4. Turn the main power switch off/on.

### ★ Important

- Make sure the cables are correctly connected on the controller board: Red cable: Upper socket, Black cable: Lower socket.
- If the connections are reversed, the machine will issue an error at startup. If it occurs just reconnect the HDD correctly and start again. The HDD will not be damaged by such an incorrect startup.

### Disposal of HDD Unit

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If the customer has any concerns about the security of any information on the HDD, the HDD must remain with the customer for disposal or safe keeping.

### Reinstallation

---

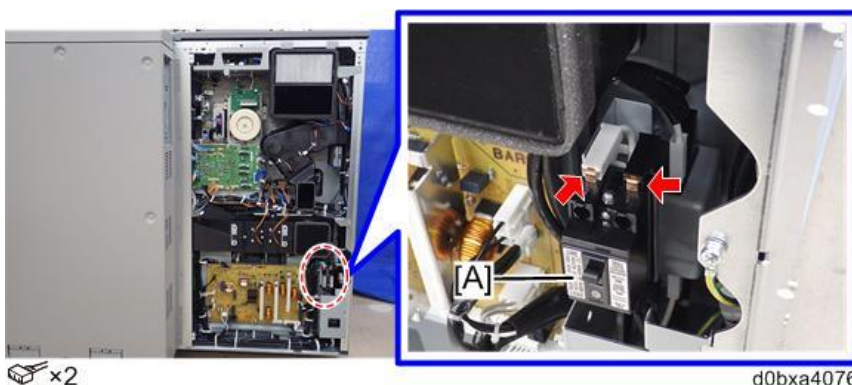
Explain to the customer that information stored on the HDD must be replaced. Information such as the address book and document server documents (if needed) must be replaced manually. Also, if the customer is using the Data Overwrite Security, or the Data Encryption feature, these applications must be installed again.

### Circuit Breaker

---

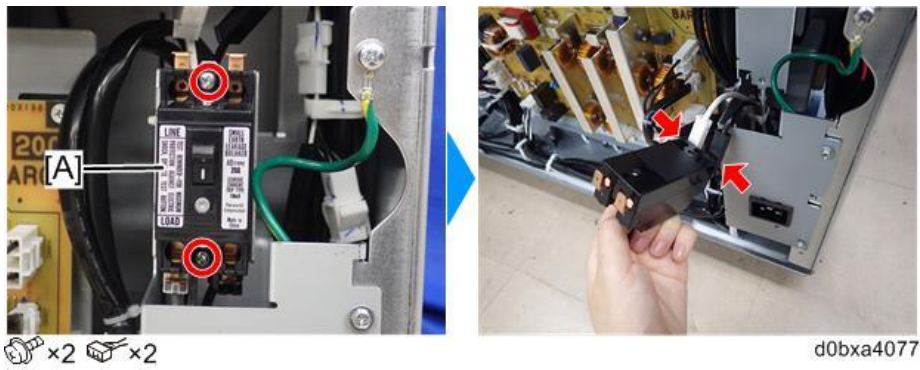
### ★ Important

- The voltage rating for the circuit breaker depend the location where the machine is installed and used.
    - North America
      - 208 to 240V, 50/60 Hz: More than 20 A
    - Europe/Asia
      - 220/230/240V, 50/60 Hz: More than 16 A
1. Disconnect at the top of the circuit breaker [A].



#### 4.Replacement and Adjustment

2. Disconnect the circuit breaker [A].

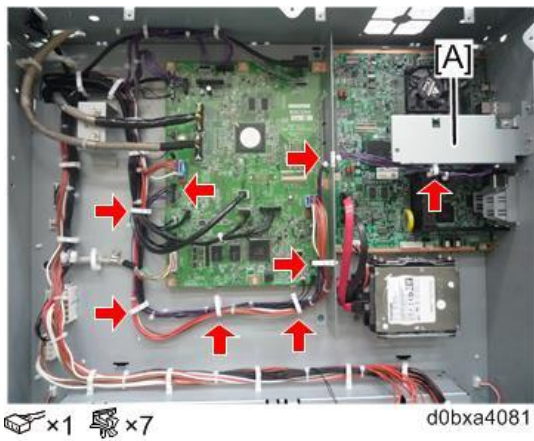


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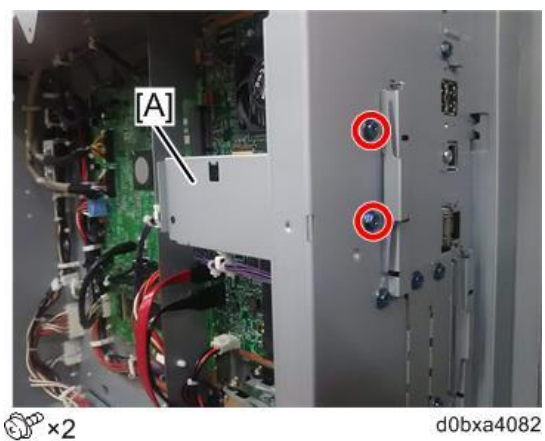
#### SDCU

---

1. Remove the controller box cover. ([Removing the Controller Box Cover, Inner Cover](#))
2. Free the harnesses near the SDCU [A].



3. Remove the SDCU [A].



## 5. System Maintenance Reference

### Types of SP Modes

There are nine broad categories of SP codes, identified by group numbers.

Group	Comment
<b>SP1000</b>	<b>Feed.</b> Paper feed SP codes: Image position adjustment, roller operation speeds, target fusing temperatures, etc.
<b>SP2000</b>	<b>Drum.</b> Drum operation related SP codes: Magnification adjustments, test pattern printing, etc.
<b>SP3000</b>	<b>Process.</b> Process control related SP codes, TD sensor initialization, toner draining and fill, process control setting adjustments, process control interval settings, etc.
<b>SP4000</b>	<b>Scanner.</b> Scanning operation related SP codes: Main and sub scan magnification adjustments, scanner free run, test pattern printing, LDAP certification, machine security, PM alarm, time setting, memory clear,
<b>SP5000</b>	<b>Mode.</b> Machine operation related SP codes: Display settings, counter settings, input and output checks for main machine, service telephone number setting, NVRAM data upload and download, network settings, HDD formatting, IEE802.11 setup, USB setup, UCS setting,
<b>SP6000</b>	<b>Peripherals.</b> Peripheral (options) related SP codes for peripheral units (including ADF): Finisher performance settings (folding, stapling, etc.), input and output checks for peripheral units, etc.
<b>SP7000</b>	<b>Data Logs.</b> Data log related SP codes: Counters, machine and peripheral PM parts displays, clear PM counters after part replacement, jam detection by location display (original and paper), consumable usage displays (toner),
<b>SP8000</b>	<b>@Remote.</b> A standard set of counters used to log more detailed information about machine operation that can be monitored from a remote location (service center).
<b>SP9000</b>	<b>DFU.</b> These SP codes are for "Design and Factory Use" only. These are used by designers for troubleshooting and machine testing and should never be used in the field by service technicians without specific instructions from design centers.

The following notations are used in the SP mode tables.

Notation	What it means
[range/step]	Example: [-9 to +9/0.1 mm] The default setting can be adjusted in 0.1 mm steps in the range $\pm 9$ . <b>Note:</b> The default setting for each SP mode is shown on the screen in the "Initial" box immediately below the entry box.
<b>DFU</b>	Denotes "Design or Factory Use". Do not change this value.
<b>Japan</b>	The feature or item is for Japan only. Do not change this value.

## 5. System Maintenance Reference

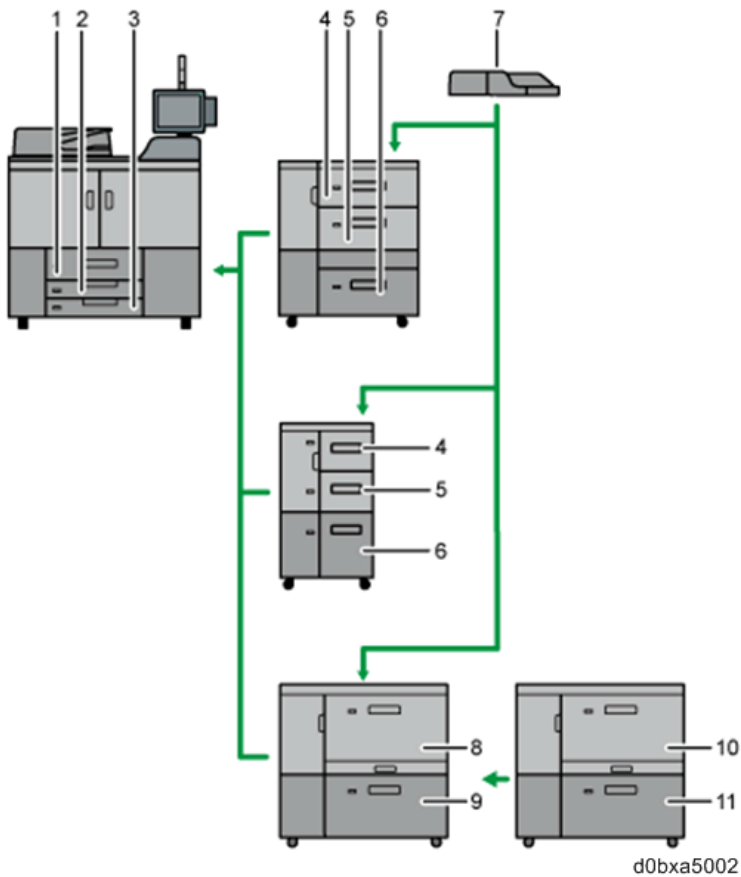
Notation	What it means
<b>Only</b>	
LEF	Long Edge Feed
SEF	Short Edge Feed

## Service Program Mode

### SP Table

See "Appendices" for service program tables.

### Tray notation of SP mode



No.	SP name	Description
1	Tray 1	Main machine trays
2	Tray 2	
3	Tray 3	
4	Tray 4	Enabled when LCIT RT5110 or LCIT RT5130 is installed.
5	Tray 5	
6	Tray 6	
7	Tray 7	Enabled when Multi Bypass Tray BY5020 is installed.
8	Tray T1	Enabled when Vacuum Feed LCIT RT5120 is installed.
9	Tray T2	
10	Tray T3	Enabled when the 2 <sup>nd</sup> Vacuum Feed LCIT is installed
11	Tray T4	

## Updating the Firmware

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### Software Update Procedure

---

SD cards are used to update the software and to back up important data. Here is a list of the firmware modules that can be updated or restored from an SD card:

- GW controller software
- BiCU software
- LCDC (operation panel) software
- Network Sys (network) software
- Web Sys (Web Image Monitor)
- Document Server software
- NFA (Net File) software
- Printer application software
- Scanner application software
- DESS (encryption module) software

#### ★ Important

- Never connect or remove an IC card or SD card with the machine power turned on.
- Never turn the power off while the machine is downloading data from an IC card or SD card.
- The IC cards and SD card are precision items. Use them carefully.
- Never store IC cards or SD cards in a location where they are exposed to high temperature, high humidity, or direct sunlight.
- Never bend an IC card or SD card, scratch it, or expose it to strong vibration.
- Before uploading data to an SD card, always confirm that its write-protect switch is off.

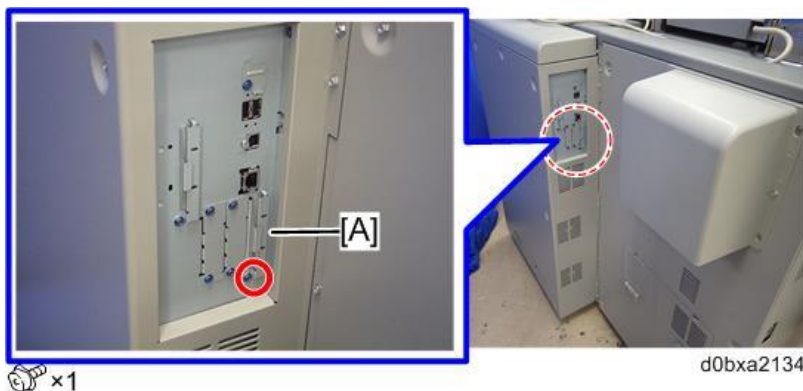
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### Performing the Software Update Procedure

---

An SD card with the software downloaded to it is necessary for this procedure.

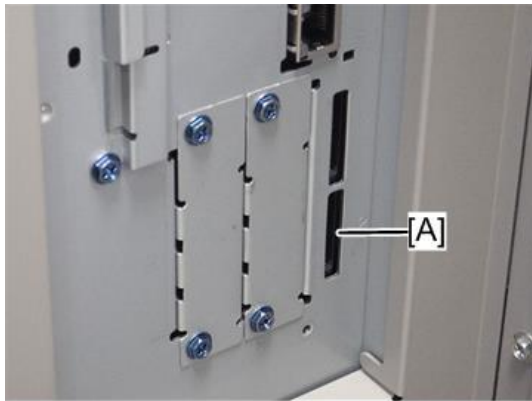
1. Turn the main switch off.
2. Remove the SD card slot cover [A].



3. Hold the SD card (the surface with printing must be away from the front of the machine), and insert

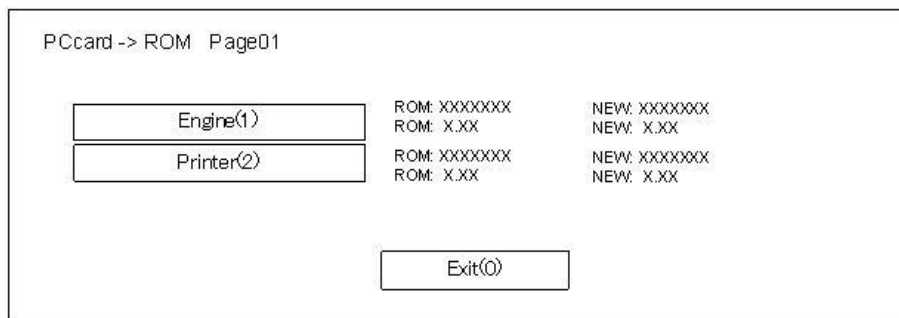


it into Slot 2 [A].



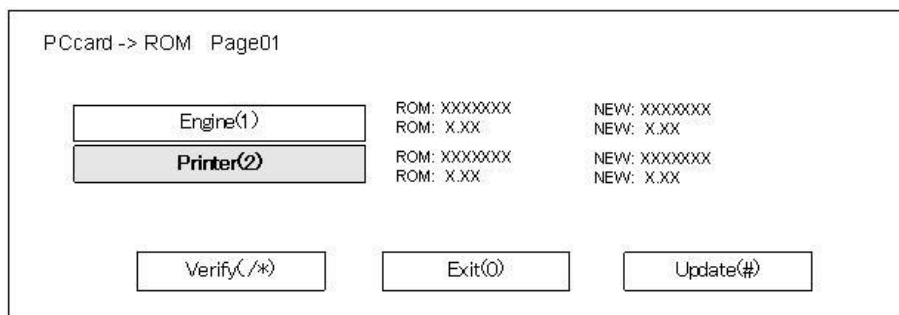
d0bxa2135

4. Turn the main power switch on.
5. If the SD card contains more than one software application, the screen will be almost the same. The screen above shows that the SC card contains two applications: "Engine" and "Printer".



d1791301

6. To select the item for upgrade, touch the selection on the touch panel, or push the corresponding key on the 10-key pad (1 to 5) of the operation panel. The number in parentheses tells you which key to push. When you make a selection, the [Verify(./\*)] and [Update(#)] buttons come on the screen.



d1791302

- If you push [Exit] (or the [0] key), you go back to the usual operation screen.
- Push the [Start] key on the operation panel to select and download all the options shown on the screen.
- Push the [Clear] key on the operation panel if you want to cancel your selections and make new ones.
- "ROM": This is the number and other version information of the ROM firmware installed in the

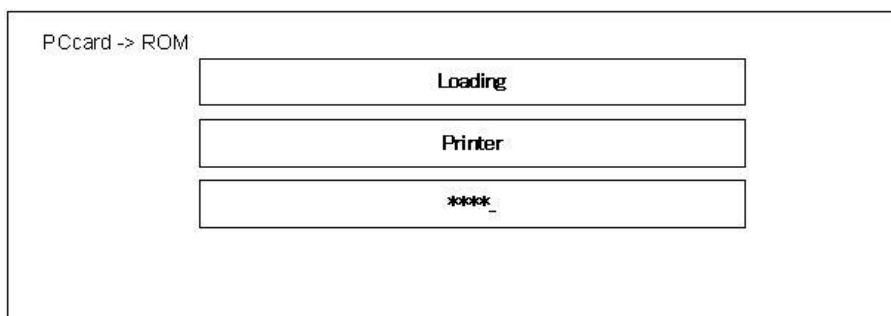
## 5. System Maintenance Reference

machine at this time.

- "NEW": This is the number and other version information of the firmware on the SD card.
7. With the selected items shown in reverse color, push the [Update] button or the [#] key on the operation panel to start the update.

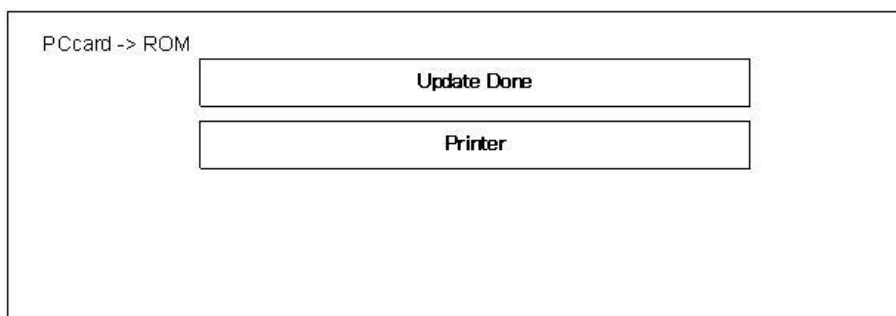
After you push [Update]:

- The middle bar shows the name of the module that the machine updates at this time. (The example above shows that the machine updates the "Printer" module at this time.)
- The bottom bar is a progress bar. The "\_" marks in the progress bar are replaced by "\*" marks. This progress bar cannot be displayed during the firmware update for the operation panel. But, the LED of the [Start] key on the operation panel changes from red to green to show that the update of the operation panel firmware continues.



d1791303

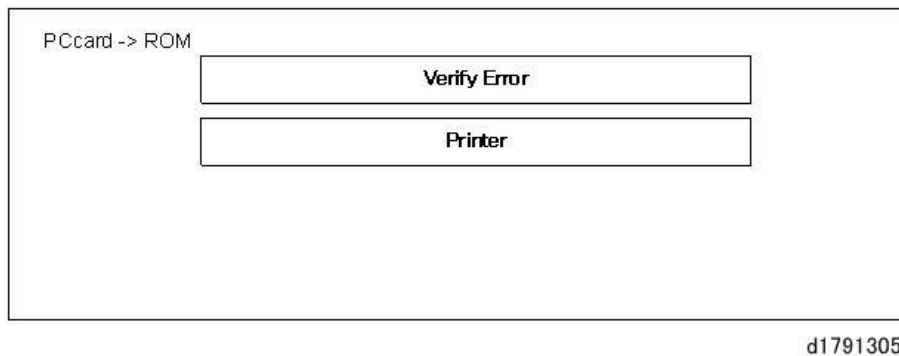
- When the update is completed, you will see this screen:
- After the firmware update, you will see "Update Done" in the first bar. The name of the module in the bottom bar is the name of the last module that was updated (only the name of the last module is shown, if several modules were been updated).



d1791304

8. Turn the power off and on. Then, select the items that you updated, and then push the [Verify] button. This is to check that the modules were updated correctly.
9. If you see "Verify Error" in the first bar on the screen, then you must do the procedure again for the

module shown in the bottom bar.



**Note**

- The "Verify" procedure is not necessary but it is strongly recommended.

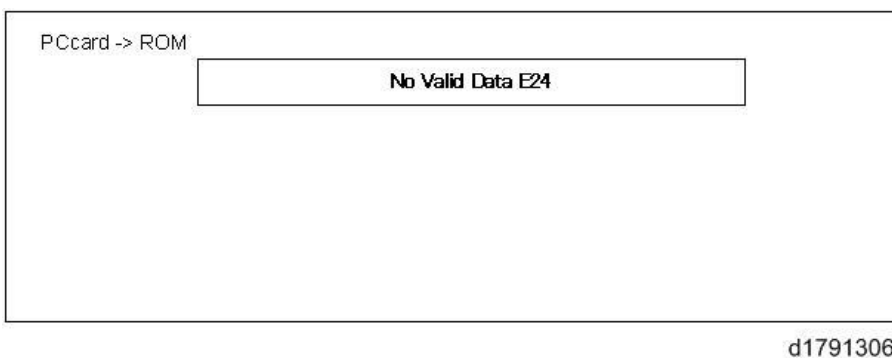
10. After the firmware is correctly updated, turn the main power switch off.
11. Push the SD card in a small distance to release it, then pull it out of the slot.
12. Turn the main power switch on, and check that the machine operates correctly.

---

## Errors During Firmware Update

---

If an error occurs during a download, an error message will appear. The error code consists of the letter "E" and a number ("E24", for example).



### Error Message Table

No.	Meaning	Solution
20	Cannot map logical address	Make sure the SD card is installed correctly, or use a different SD card.
21	Cannot access memory	HDD connection not correct, or replace hard disk.
22	Cannot decompress compressed data	The ROM data on the SD card is not correct, or data is damaged.
23	Error occurred when ROM update program started	Controller program defective. If the second attempt fails, replace the controller board.
24	SD card access error	Make sure the SD card is installed correctly, or use a different SD card.

## 5. System Maintenance Reference

No.	Meaning	Solution
30	No HDD available for stamp data download	HDD connection not correct or replace hard disks. Copier model only.
31	Data incorrect for continuous download	Install the SD card with the remaining data necessary for the download, then re-start the procedure.
32	The update was interrupted because the machine was switched off. When the machine was turned on again to resume the update, the SD card slot was empty, or the inserted SD card is for different firmware.	Repeat the procedure by inserting the SD card with the correct firmware update information files.
33	Incorrect SD card version	The ROM data on the SD card is not correct, or data is damaged.
34	Module mismatch - Correct module is not on the SD card	The data on the SD is not correct. Get the correct data (Japan, Overseas, OEM, etc.) then install again.
35	Module mismatch – Module on SD card is not for this machine	SD update data is not correct. The data on the SD card is for a different machine. Get the correct data then install again.
36	Cannot write module – Cause other than E34, E35	SD update data is not correct. The data on the SD card is for a different machine. Get the correct data then install again.
40	Engine module download failed	Replace the data for the module on the SD card and try again, or replace the BCU board.
42	Operation panel module download failed	Replace the data for the module on the SD card and try again, or replace the LCDC.
43	Stamp data module download failed	Replace the data for the module on the SD card and try again, or replace the hard disk. Copier model only.
44	Controller module download failed	Replace the data for the module on the SD card and try again, or replace the controller board.
50	Electronic confirmation check failed	SD update data is not correct. The data on the SD card is for a different machine. Get the correct data then install again.
57	@Remote is not connected at the date/time reserved for receiving the package firmware update from the network.	Check the @Remote connection.

## 5.System Maintenance Reference

No.	Meaning	Solution
58	Update cannot be done due to a reception route problem.	Check the @Remote connection.
59	HDD is not mounted.	Check the HDD connection.
60	HDD could not be used during the package firmware update.	<ul style="list-style-type: none"> <li>• Try again.</li> <li>• Replace the HDD if the download fails again.</li> </ul>
61	The module ID for the package firmware update is incorrect.	Prepare the correct package files.
62	The configuration of the package firmware update files is incorrect.	Prepare the correct package files.
63	Reception fails due to the power off at the reserved date/time of the remote firmware update from the network.	Update is to be done automatically when the next reception time has elapsed.
64	Reception fails due to the power off at the reserved date/time of the package firmware update from the network.	Reset the reservation date/time for the remote update.
65	Reception fails due to the status error of the machine at the reserved date/time of the remote firmware update from the network.	Update is to be done automatically when the next reception time has elapsed.
66	Reception failed due to the status error of the machine at the reserved date/time of the package firmware update from the network.	Reset the reservation date/time for the remote update.
67	Acquisition of the latest version information from the Gateway fails at the reserved date/time of the remote firmware update from the network.	Check that the network is connected correctly.
68	Acquisition of the latest version information from the Gateway fails.	Check that the network is connected correctly.
69	Download fails at the reserved date/time of the remote firmware update from the network.	Check that the network is connected correctly.
70	Package firmware download from the network fails.	Check that the network is connected correctly.
71	Network communication error occurs at the reserved date/time of the package firmware update from the network.	Check that the network is connected correctly.
72	The setting of @Remote is invalid at the reserved date/time of the package firmware	Set the setting of @Remote Service in the Administrator Tools to [Do not Prohibit].

## 5. System Maintenance Reference

No.	Meaning	Solution
	update from the network.	
74	Package file unzipping fails.	<ul style="list-style-type: none"> <li>• If this error is caused by SD card update, check if the SD card is broken, and then download the package again to update it.</li> <li>• If this error is caused by remote firmware update from local environment (WIM or utility), replace the package file in local environment with a new one, and then update it.</li> <li>• If this error is caused by other means except for the means above, or if this error occurs again after you update by performing the procedure above, replace the DIMM of the controller board.</li> </ul> <p>If this error occurs after all the procedure above, replace the HDD.</p>

### Note

- The PDF firmware installed as standard contains the program required to print PS3 data by default. However, this PS3 program is normally disabled.
- The PS3 firmware is a dongle (key) which enables PS3 data printing functions. When the PS3 firmware is installed, the PS3 program in the PDF firmware is enabled. Due to this specification, the self-diagnosis result report shows the ROM part number/software version of the PDF firmware contained in the PS3 program.

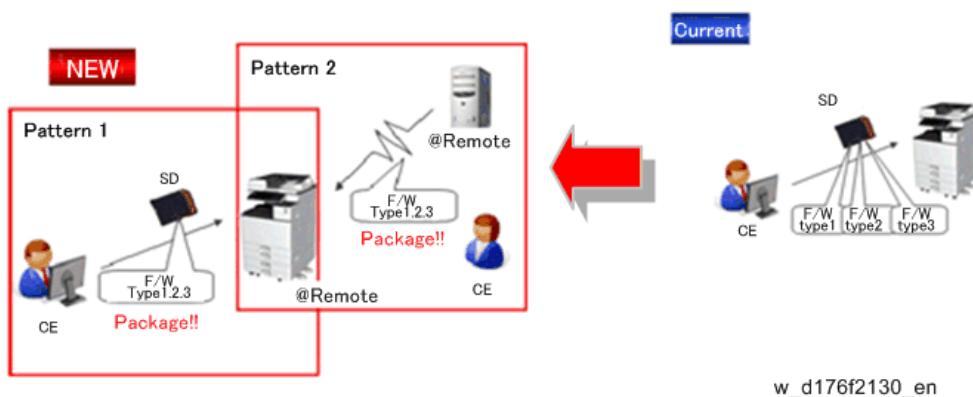
## Firmware Update (Smart Firmware Update)

### Overview

Each firmware module (such as System/Copy, Engine, etc.) used to be updated individually. However, an all-inclusive firmware package (package\_ALL) is now available.

There are two ways to update using the firmware package.

- Package Firmware Update via a network: SFU (Smart Firmware Update)
- Package Firmware Update with an SD card



### Package Firmware Update via a network: SFU (Smart Firmware Update)

- There are two methods for SFU.
  - Immediate Update: To update the firmware when visiting
  - Update at the next visit: To set the date and time for downloading. The firmware will be automatically downloaded beforehand and updated at the following visit.
- "Update at the next visit" is recommended since firmware download may take some minutes due to the network condition

### Package Firmware Update via an SD Card

Package firmware update can also be performed using the conventional SD card method by writing the package firmware directly to the SD card.

### Types of firmware update files, supported update methods:

	SFU	SD Card	RFU	ARFU
Individual firmware	N/A	Available	Available	N/A
Package firmware	Available	Available	Available	N/A

### Immediate Update

Enter the [Firmware Update] menu in the SP mode and update the package firmware.

#### ★ Important

- Do not open any of the machine's or peripheral's doors or turn the power off during the

## 5. System Maintenance Reference

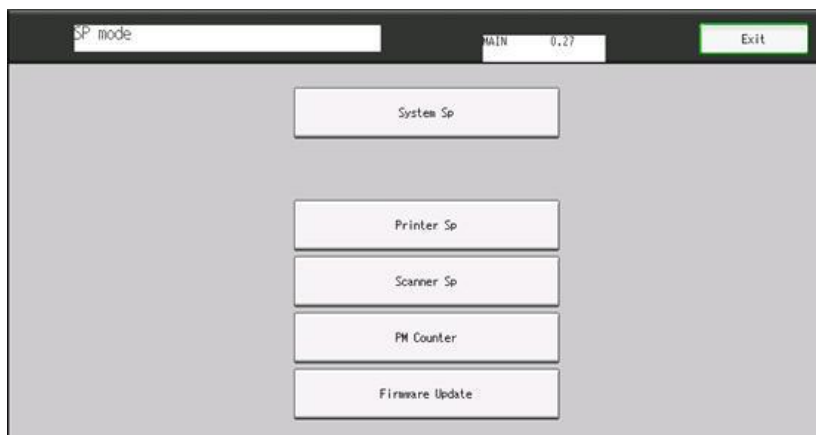
firmware update. Doing so (especially during the FPGA update of the right drawer unit CRB-R and the left drawer unit CRB-L) may damage the FDGA data, resulting in the need to replace the circuit board.

- Before updating the main machine's firmware, disconnect the machine from the Fiery Controller. (Be sure to properly shut down the Fiery Controller and then disconnect the interface cable before updating the main machine's firmware.) If you fail to do so, SC991 (logging-related SC) occurs and is logged.

### Note

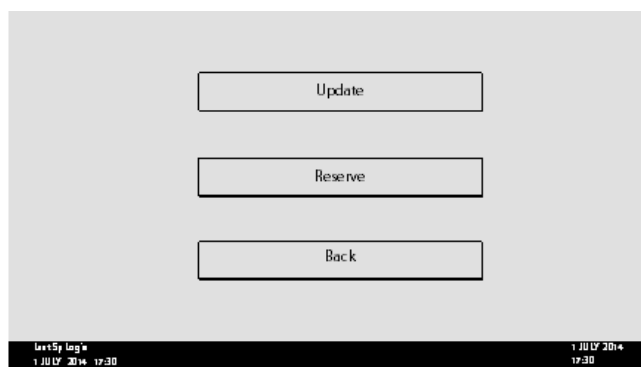
- The [Firmware Update] button will appear even when a machine is connected to @Remote with a device which does not have an embedded @Remote communicating function.
- If an error code is displayed, refer to [Errors During Firmware Update](#).

1. Enter the SP mode.
2. Touch [Firmware Update].



d194z0223a

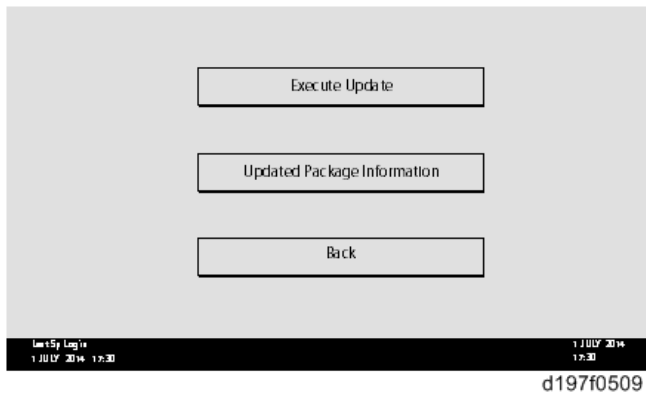
3. Touch [Update].



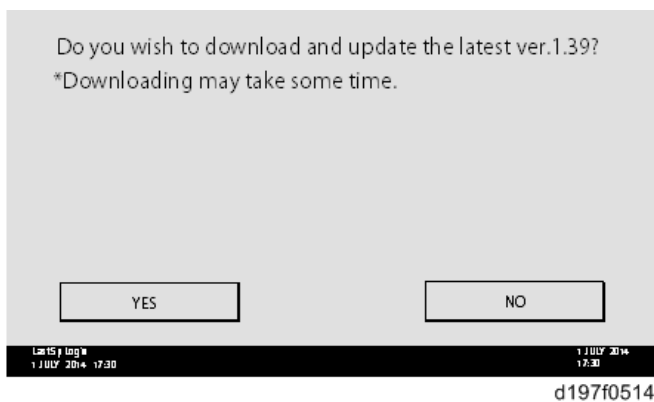
d197f0508



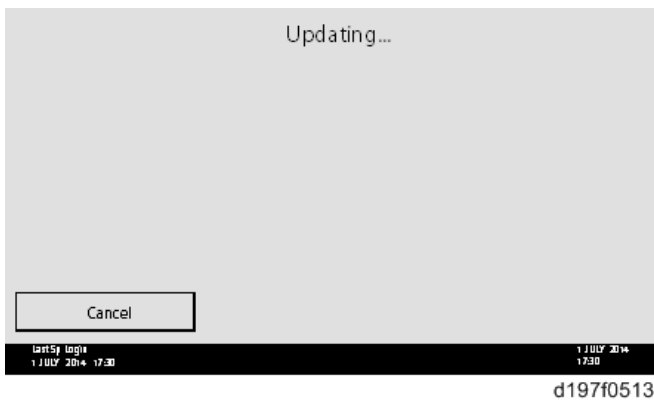
**4.** Touch [Execute Update].



**5.** Touch [YES].



**6.** The following will be displayed.

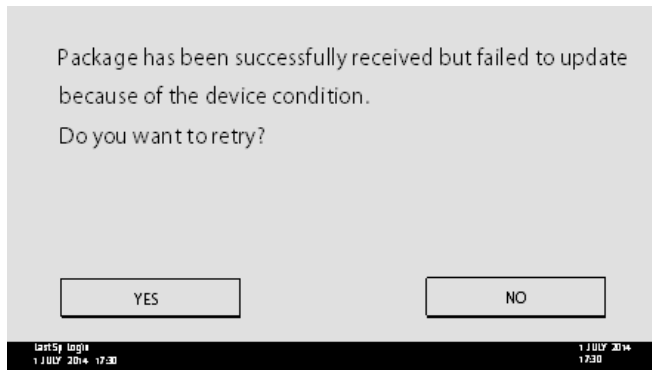


**Note**

- If the error code E66, which indicates that the download of the firmware has failed, is displayed, go back to step 1.
- Update will be started automatically after the download is finished.
- When the machine is in the update mode, the automatic update is suspended if a print job is started. After the print job is finished, touch [YES] on the display shown below to restart

## 5. System Maintenance Reference

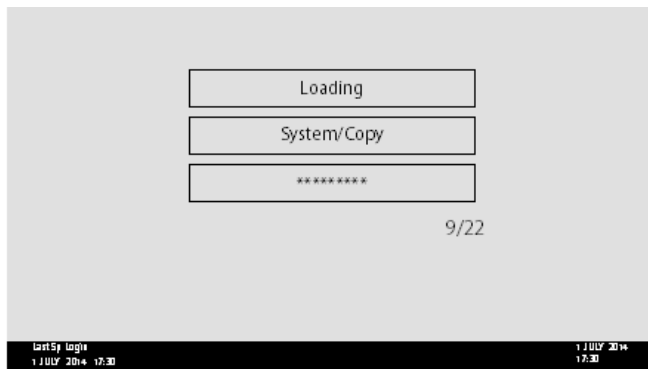
updating.



d197f0515

### 7. [Update done] is displayed.

- The machine will automatically reboot itself.



d197f0518

#### Note

- The figures at the lower right of the display indicate "Number of updated items/ All items to be updated".

---

### Update at the Next Visit (Reserve)

---

It is possible to set the machine to download the package firmware which is necessary for SFU in advance, and then perform the actual installation at the next service visit. This saves waiting time for the firmware to download at the service visit.

## How to Set the Machine to Download Firmware Later (Reserve)

Enter the [Firmware Update] menu in the SP mode and update the package firmware.

### Note

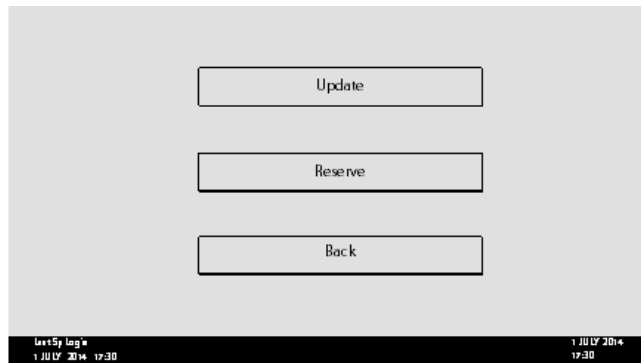
- The [Firmware Update] button will appear even when a machine is connected to @Remote with a device which does not have an embedded @Remote communicating function. If an error code is displayed, refer to [Errors During Firmware Update](#).

1. Enter the SP mode.
2. Touch [Firmware Update].



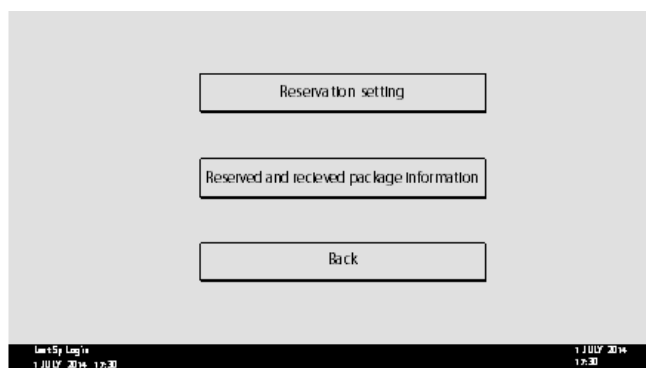
d194z0223a

3. Touch [Reserve].



d197f0508

4. Touch [Reservation setting].



d197f0510

5. Enter the dates and times of the next visit and the start of receiving data.

## 5. System Maintenance Reference

- "Next time to visit this customer": The package firmware will be automatically downloaded by this time/date.
- "When to receive? (1-7)": The download of the package firmware will begin this number of days before the next visit.

Next time to visit this customer

2013 / 05 / 22 15 : 00  
year month day hour minute

When to receive? (1-7) 1 day(s) before visit

Set Clear Cancel

Last Log In 1 JULY 2014 17:30 Log Out 1 JULY 2014 17:30

d197f0512

### Successful Download

In the two diagrams below, the firmware is set to be downloaded by the day before the next scheduled visit. In the first diagram, the download is successful on the first try. In the second diagram, the download fails three times and is successful on the fourth try.



w\_d197f0507\_en

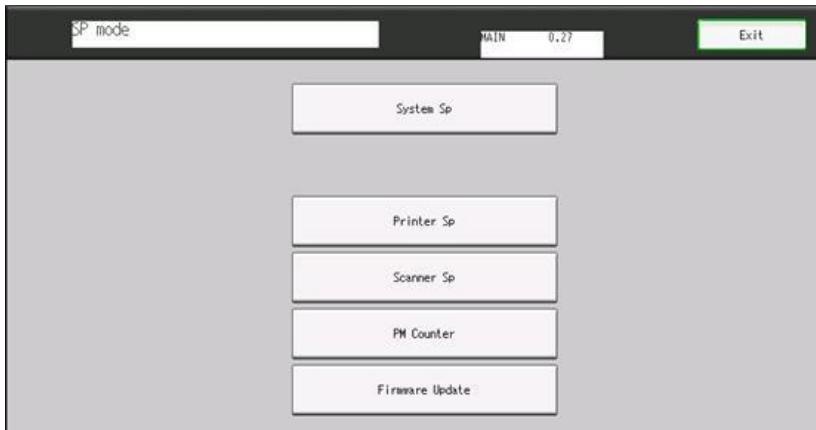
- If the firmware download fails or cannot be completed due to the network settings/condition, no power to the machine, or other reason, the machine will continue retrying every six hours until the scheduled deadline (up to a maximum of four tries). For example, if the download is set for the day before the next visit, the machine will attempt the download at 24 hours before the visit, and then continue trying every six hours (max. four tries total).
- The retry is only performed in cases when the firmware download has failed.
- If the machine is in Energy Saver mode when the download is scheduled to begin, the download will be performed in the background and the machine/panel will stay in Energy Saver mode.
- The download will continue uninterrupted even if the customer initiates a print job, copy job, or other operation while the download is in progress.
- The download will be terminated if the customer turns the power off while the download is in progress.

- If the download cannot be completed successfully by the time of the next scheduled visit, the machine will stop trying to download the firmware.

How to Check if the Firmware Downloaded with Reserve

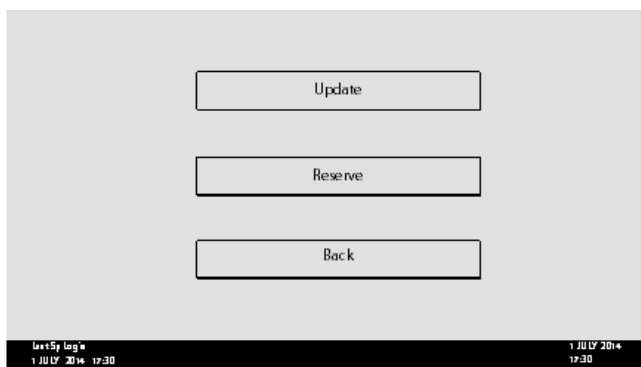
---

1. Enter the SP mode.
2. Touch [Firmware Update].



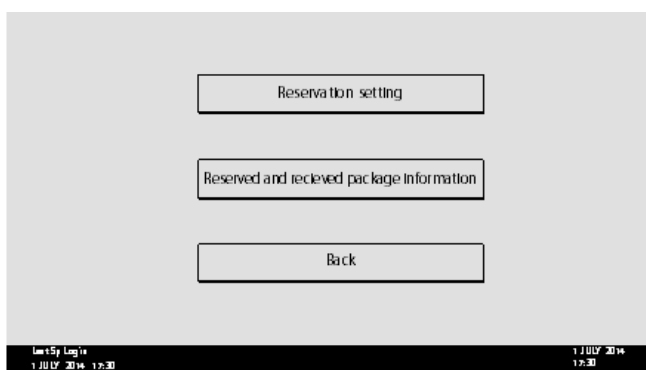
d194z0223a

3. Touch [Reserve].



d197f0508

4. Touch [Reserve and received package information].



d197f0510

5. Check the information displayed.

When the package firmware was downloaded successfully, the details of the download result are displayed as the following picture shows.

## 5. System Maintenance Reference

Reservation reception result	Success
Part number of reserved and received package	D1234567
Version of reserved and received package	1.35
Package received date	2014/05/22
Reservation reception has succeeded. You may start the update.	
	Back

1 JULY 2014 17:30 1 JULY 2014 17:30

d197f0511

### Note

- This information will only be displayed if the reserved firmware has already been downloaded. If not, all the data items are indicated with "-".

## How to Install Firmware Downloaded with Reserve

### Important

- Do not open any of the machine's or peripheral's doors or turn the power off during the firmware update. Doing so (especially during the FPGA update of the right drawer unit CRB-R and the left drawer unit CRB-L) may damage the FDGA data, resulting in the need to replace the circuit board.
- Before updating the main machine's firmware, disconnect the machine from the Fiery Controller. (Be sure to properly shut down the Fiery Controller and then disconnect the interface cable before updating the main machine's firmware.) If you fail to do so, SC991 (logging-related SC) occurs and is logged.

1. Enter the SP mode.
2. Touch [Firmware Update].

SP mode MAIN 0.27 Exit

System Sp

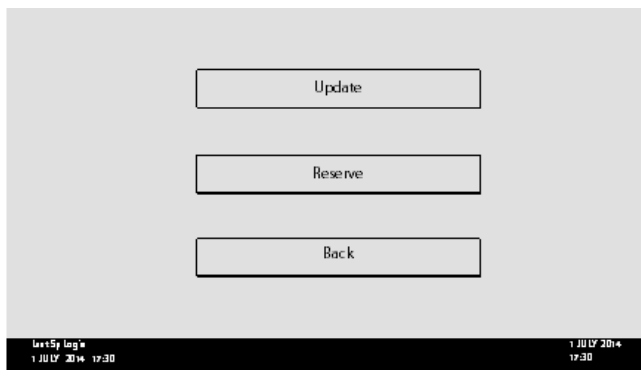
Printer Sp

Scanner Sp

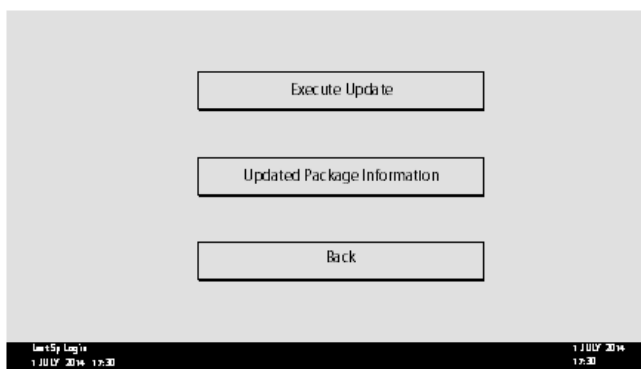
PM Counter

Firmware Update

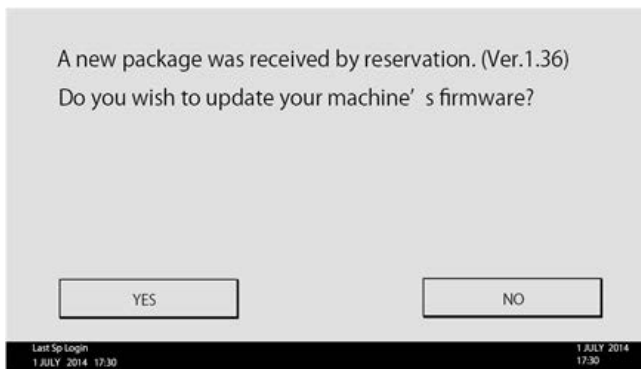
d194z0223a

**3.** Touch [Update].

d197f0508

**4.** Touch [Execute Update].

d197f0509

**5.** Check the version of the received package firmware, and then touch [YES].  
Update is started.

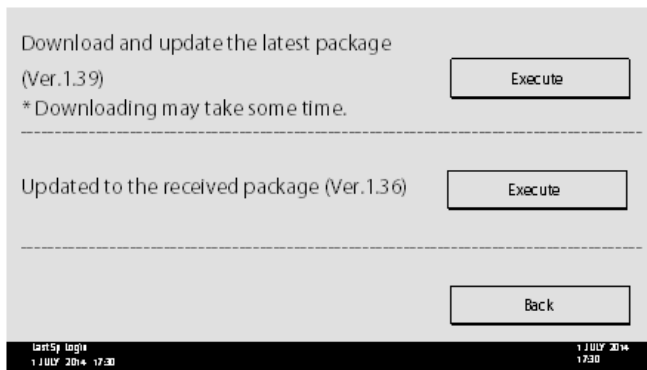
d197f0516

**Note**

- If the version of the reserved package in the HDD is older than the latest version, the

## 5. System Maintenance Reference

messages shown in the following picture are displayed.

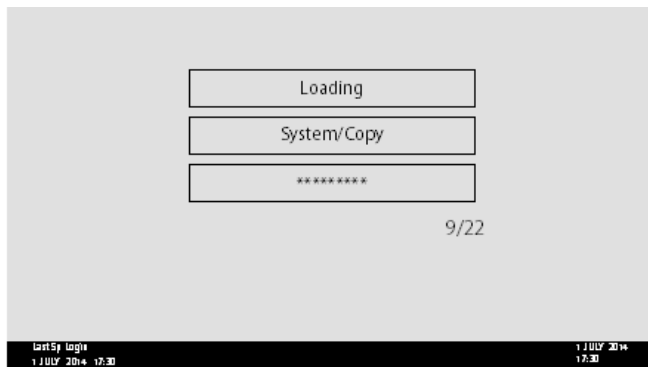


d197f0517

- If you wish to download the latest version, touch [Execute] beside the message "Download and update the latest package." Then update of the package firmware will be started.
- If you wish to update using the firmware in the HDD (old version), touch [Execute] beside the message "Update to the received package."

### 6. [Update done] is displayed.

The machine will automatically reboot itself.



d197f0518

#### Note

- The figures at the lower right of the display indicate "Number of updated items/ All items to be updated".



---

## Update via SD card

---

**Update with an SD card, which is the conventional method, is available if you write the package firmware to the SD card.**

### ★ Important

- Do not open any of the machine's or peripheral's doors or turn the power off during the firmware update. Doing so (especially during the FPGA update of the right drawer unit CRB-R and the left drawer unit CRB-L) may damage the FDGA data, resulting in the need to replace the circuit board.
- Before updating the main machine's firmware, disconnect the machine from the Fiery Controller. (Be sure to properly shut down the Fiery Controller and then disconnect the interface cable before updating the main machine's firmware.) If you fail to do so, SC991 (logging-related SC) occurs and is logged.

### ↓ Note

- If an error code is displayed, refer to [Errors During Firmware Update](#).

- 1.** Create a new folder in the SD card, and then name it "package".
- 2.** Copy the package firmware (xxxxxxx.pkg) to this folder.



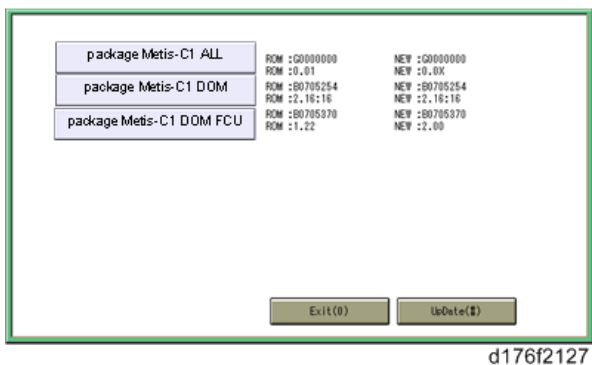
d197f0504

### ★ Important

- If you copy the package firmware into the conventional "romdata" folder, the update will not work.
  - Only one version of the package firmware should be copied into the folder. If you copy multiple versions of package firmware to the SD card, the machine will select only one version of the firmware randomly.
- 3.** Turn the power OFF.
  - 4.** Insert the SD card which contains the package into SD card slot 2 (for service).

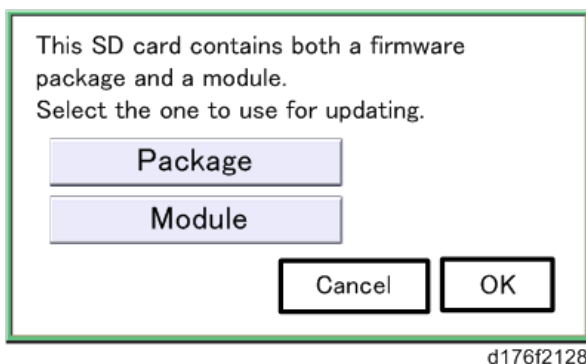
## 5. System Maintenance Reference

### 5. Turn the power ON and touch [Update].



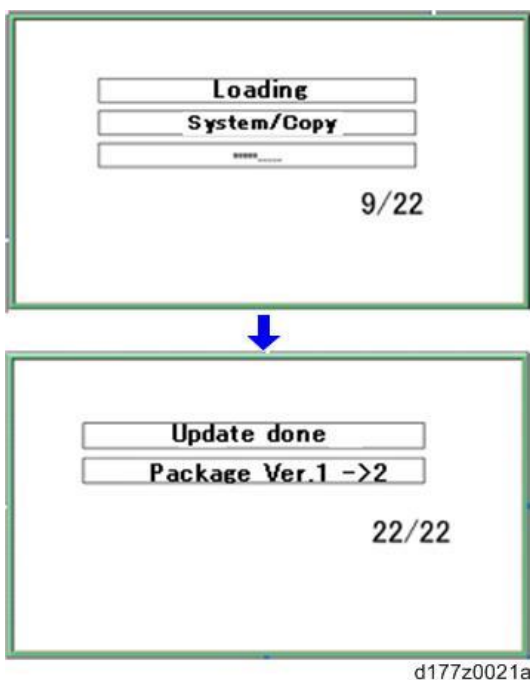
#### Note

- When the SD card contains both a firmware package and one or more modules, the following display may show up. Select [Package] and touch [OK] to move to step 5 above.



### 6. Update is started automatically after the package firmware download to the HDD has been completed.

### 7. When update is completed, "Update done" is displayed.



 Note

- The figures at the lower right of the display indicate "Number of updated items/ All items to be updated".

**8.** Turn the main power switch OFF, and then pull out the SD card from SD card slot 2.

**9.** Turn the power ON.

## System Maintenance for the Operation Panel

### Maintenance Modes

Service program (SP) modes for the Smart Operation Panel are as follows:

Mode	Use
SP Mode (Main machine)	SP modes for the main machine (controller, engine)
Service mode (Operation Panel)	SP modes for the Smart Operation Panel <ul style="list-style-type: none"> <li>• Changing SP mode settings in the Screen Features menu.</li> <li>• Installing and updating applications that can be installed</li> </ul>
Recovery mode	Maintenance modes for the Android OS <ul style="list-style-type: none"> <li>• Updating firmware</li> <li>• Initializing all data</li> </ul>

### Login to/Logout from Operation Panel Service Mode

#### Login

In the same way as you log in to the SP Mode on the machine, you use the soft keys to enter a combination of numbers in order to login to the service mode of the operation panel.

**Note**

Ask your manager for information on how to enter the service mode of the operation panel.

In order to display the number keyboard screen, press and hold the [Check Status] key and [#] key at the same time.



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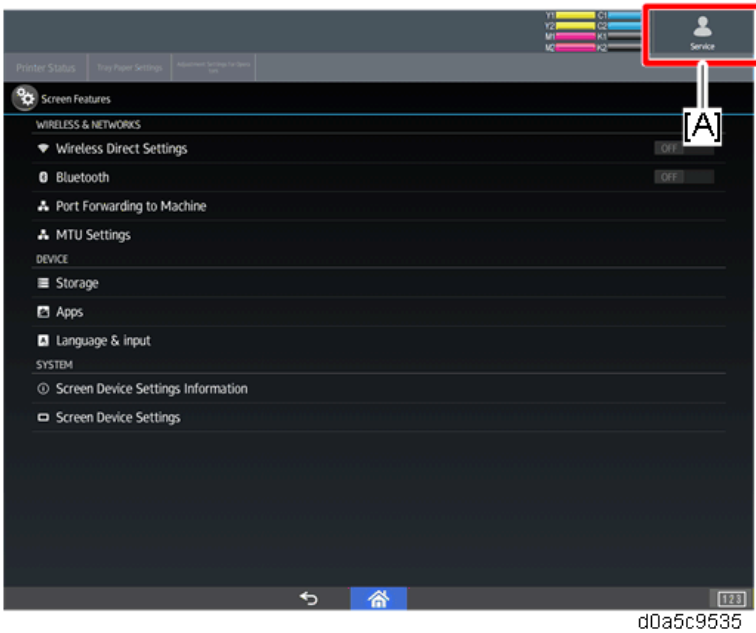
You cannot log in to the service mode of the operation panel when one of the following screens is displayed.

- Stop All Jobs
- User Tools
- Address Book Management

#### Login Status Indicator

When you log in to the operation panel's service mode, the Screen Features screen is displayed.

- "Service" is displayed in the login information area [A].



## Logout

Press [Service] to log out from the operation panel's service mode.

### Note

- You need to logout manually because the Auto Logout function does not work.

Depending on the authentication settings of the machine, the following screen is displayed after you log out.

Authentication settings		
Administrator authentication: OFF User authentication: OFF	Administrator authentication: ON User authentication: OFF	Administrator authentication: ON User authentication: ON
Screen of the function selected in [Function Priority]	Screen of the function selected in [Function Priority]	[Home] screen

## When Entry to Service Mode Is Prohibited by the Administrator

The administrator of the machine can prohibit entry into the operation panel's service mode by enabling [Service Mode Lock] in [System Settings].

When [Service Mode Lock] is enabled, the machine does not enter the service mode even if you enter the number combination for the operation panel's service mode. There will be no error messages or beeping sounds to indicate login failure.

### Note

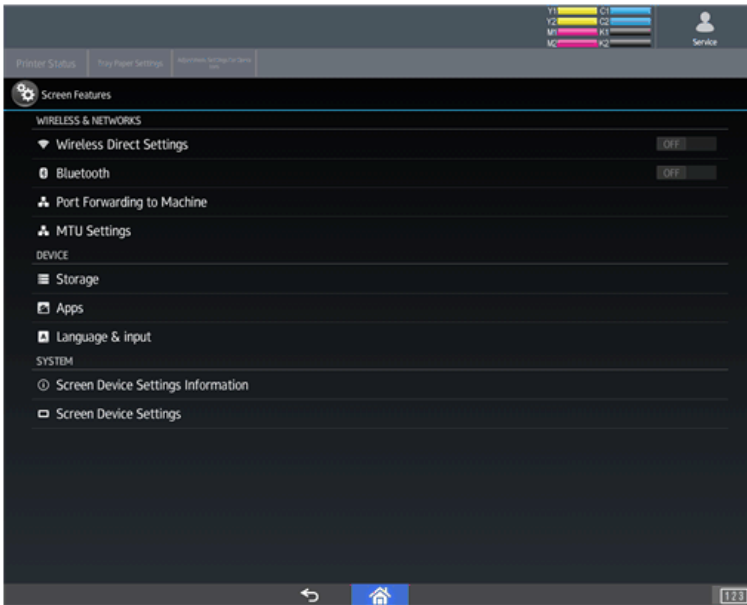
- The machine can enter the recovery mode even if [Service Mode Lock] is enabled.

## Operation Panel's Service Mode Menu

There are three menus of settings.

## 5. System Maintenance Reference

- WIRELESS & NETWORKS
- DEVICE
- SYSTEM



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### WIRELESS & NETWORKS

Menu level			Description
1st level	2nd level	3rd level	
Wireless Direct Settings	Group Owner Mode		You can only view the setting.
	Connection Password		You can only view the setting.
	DHCP Server IP Address		You can only view the setting.
	DHCP IP Address Range		You can only view the setting.
	Select Channel		You can only view the setting.
	PEER DEVICES		View and configure devices that can be connected.
	REMEMBERED GROUPS		Displays groups that have been previously connected.
Bluetooth	ON/OFF		You can only view the setting.
	SEARCH FOR DEVICES		Scans for Bluetooth devices in the vicinity.
	(name of this device)		You can only view the setting.
	PAIRED DEVICES		View and configure paired devices.
	AVAILABLE DEVICES		View and configure available devices.
Port Forwarding to Machine	Port Forwarding Settings	Port Forwarding Cinfo 1-20	Requests sent to the wireless LAN unit of the Smart Operation Panel can be forwarded to the controller of the

Menu level			Description
1st level	2nd level	3rd level	
			machine. You can enable or disable ports to forward these requests.
MTU Settings	PathMTU(Enable/Disable)		Enables/disables the PathMTU size set in [MTU Size]. When you change this setting, the operation panel restarts.
	MTU Size		Sets the size of PathMTU. Default: 1500.

## DEVICE

Menu level			Description
1st level	2nd level	3rd level	
Storage	INTERNAL STORAGE	Total space	Displays the total size of the internal storage.
		Available	Displays the available space of the internal storage.
		Apps (app data & media content)	Displays the size of applications in the internal storage.
	SD CARD *1	Total space	Displays the total size of the SD card.
		Available	Displays the available space of the SD card.
		Apps (app data & media content)	Displays the size of applications in the SD card.
		Erase SD card	Erase data written to the SD card.
	USB Memory*1	Total space	Displays the total size of the USB memory.
		Available	Displays the available space of the USB memory.
	Apps	Install	Install from SD Card
Install from Server			Enter a product key to install or update applications from the server.
Activate Applications			Activate applications that have been installed from the server.
Update Applications			Update applications that have been installed.
Uninstall			Uninstall applications.
Check Server Connect			Check if you can connect to the Server.

## 5. System Maintenance Reference

Menu level			Description
1st level	2nd level	3rd level	
Language & Input	Registering keyboard	-	Registers / deregisters an external keyboard and displays the connected keyboard.

\*1 Displayed only when an SD card or a USB memory are inserted into the slot of the operation panel.

## SYSTEM

Menu level			Description
1st level	2nd level	3rd level	
Screen Device Settings Information	Status	-	Displays the following: <ul style="list-style-type: none"> <li>• Wi-Fi MAC address</li> <li>• Bluetooth address</li> <li>• Interface Settings</li> <li>• Wi-Fi settings (ON/OFF)</li> </ul>
	Legal information	Open source licenses	Displays the open source license information.
	Software Version List	-	Displays the versions of operation panel firmware and installed applications. When saving the software version list on an SD card, insert an SD card into the SD card slot of the operation panel, and then press [Save to SD Card].
	Hardware Version	-	Displays a 4-digit code.
Screen Device Settings	Server Settings	Port number	Input a port number for communication with the import/export and RFU server. The input number is used for both HTTP and HTTPS connections. (Normally, input a number within 55101-55111.)
	Application Settings	-	Displays a list of installed applications. If you press [Settings] for an application, the setting screen for the CE is displayed. The screen does not change if the application has no setting items.
	Authentication	Authentication priority	This setting gives priority to the



Menu level			Description
1st level	2nd level	3rd level	
	priority mode	mode	recovery time from energy saving modes when an IC card authentication device is connected. When this setting is selected, the machine does not enter Engine OFF mode, and always recovers from Silent mode.
		Start time (hhmm)	You can specify the start time of Authentication priority mode. Note: This can be changed only when [Authentication priority mode] is deselected.
		Expiration time (hours)	You can specify the period of validity of Authentication priority mode. Note: This can be changed only when [Authentication priority mode] is deselected.
	Home key settings	Home key settings	You can change the transition destination except for the Home screen when pushing the [Home] icon.
		Home Key Assignment Mode	[Normal mode]: In addition to pressing the [Home] icon, in all status such as logout and restoring from lower power display mode, the screen transitions to the destination which users set with [Home Key Application]. [UI change mode]: The screen transitions to the destination which users set with [Home Key Application] only when you press the [Home] icon.
		Home Key Application	You can set the application of transition destination when pressing the [Home] icon.
		Show default Home for unauthenticated	You can specify whether the guest user can access the application

5.System Maintenance Reference

Menu level			Description
1st level	2nd level	3rd level	
		user	selected in [Home Key Application] when user authentication is set to ON.
		System Home Key Icon Settings	You can use this setting only when [Home Key Assignment Mode] is [ON] and [UI Change Mode] is selected in [Home Key Assignment Mode]. You cannot set other than the above because of high brightness.
	Screen device always-connection Setting	-	This setting prevents the operation panel from entering Sleep mode, so that Bluetooth and other communication devices remain connected.  When this setting is selected, the operation panel does not enter Sleep mode. Only the LCD (display panel) turns OFF.
	Screen Font Setting	Following Machine Setting/Taiwanese font preferred	You can change the default font settings on the operation panel. [Following Machine Setting]: The default font is used, following the machine settings. [Taiwanese font preferred]: The Taiwanese font is used regardless of the machine settings.
	Panel Self Check	-	Starts self-diagnosis of the operation panel.  <a href="#">(Panel Self Check)</a>

---

**Panel Self Check**

---

The following are available as self-diagnostics functions of the operation panel:

- LED Check
- Key Check
- LCD Check
- Bluetooth Check
- Speaker Check

- TouchPanel Check
- Wireless LAN Check



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**Note**

With some diagnostic items, press [Back] [A] at the bottom of the screen to return to the top menu of [Self Check].



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**LED Check**

Select the [All Light On] check box, and make sure the following LEDs light:

- [Check Status] indicator, [Check Status] rear indicator (flashes in red and orange alternately)
- [Start] indicator (flashes in red and blue alternately)
- Data In indicator (flashes in blue)
- Media access lamp (flashes in blue)
- Operator call light (only when the operator call light is installed)



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When the check is completed, press the [Back] key to return to the top menu of [Self Check].

**Key Check**

Check if the hard keys of the operation panel are functioning normally. If they are functioning normally, the key will turn green when pressed.

## 5. System Maintenance Reference

[FOOT SW] is only available when the foot switch is installed.



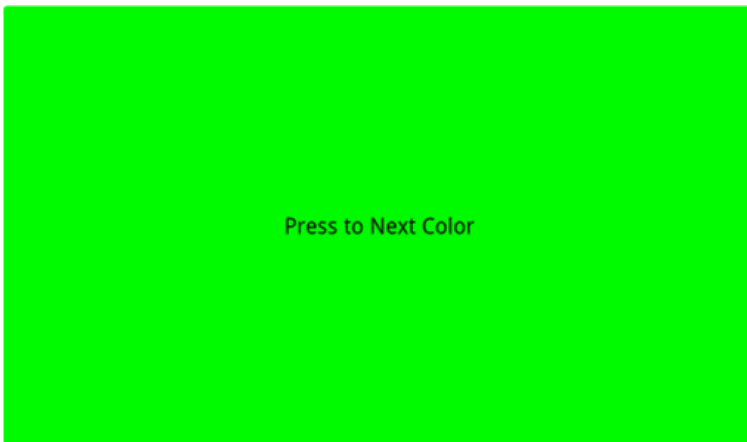
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When the check is completed, press [End] to return to the top menu of [Self Check].

### LCD Check

---

Visually inspect the color of the LCD. The displayed colors are white/black/red/green/blue. The LCD changes to the next color when you press it.



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The check is completed when all colors have been displayed. The screen returns to the top menu of [Self Check].

### Speaker Check

---

Tests the speaker by playing the reference sound.

- 1.** Select the frequency (220Hz, 440Hz, 880Hz, 1760Hz, or 2000Hz).
- 2.** Press [START/STOP] to play the sound.
- 3.** Touch the volume bar, and play the sound at minimum and maximum volumes.

4. Press [START/STOP] to stop the sound.

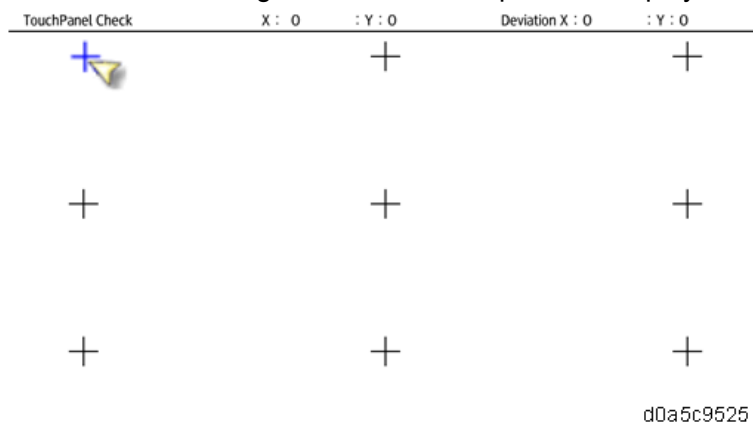


When the check is completed, press [Back] to return to the top menu of [Self Check].

#### TouchPanel Check

For each of the nine reference points on the screen, the distance between the detected position and the nearest reference point is displayed.

When there is no difference, the "+" sign of the reference points is displayed in blue. When there is a difference, the "+" sign of the reference points is displayed in red.



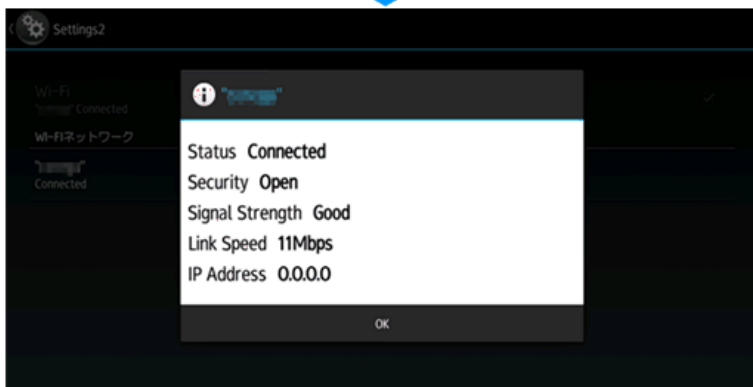
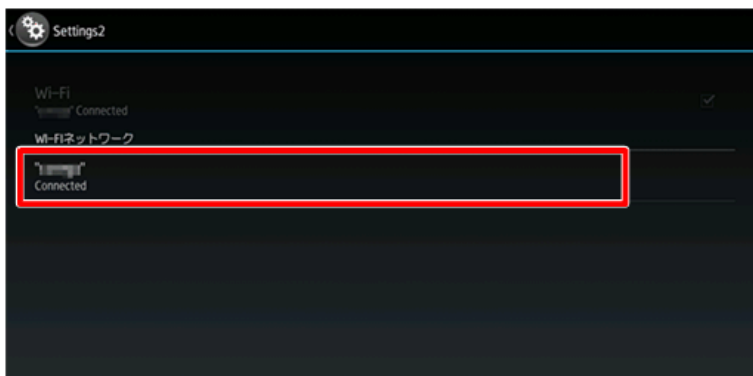
When the check is completed, press [Back] to return to the top menu of [Self Check].

#### Wireless LAN Check

Checks the condition of the wireless LAN connection.

When you select the connected access point, the signal strength, IP address and other information are displayed.

## 5. System Maintenance Reference



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When the check is completed, press [Back] to return to the top menu of [Self Check].

### Bluetooth Check

---

Check and configure the Bluetooth device connection.



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When the check is completed, press [Back] to return to the top menu of [Self Check].

#### Note

- You cannot switch Bluetooth to [ON] or [OFF] from the [Self Check] menu. Before checking the Bluetooth device connection, specify [ON] for [Bluetooth] in [Screen Features] > [WIRELESS & NETWORKS] > [Bluetooth].

### Recovery Mode

---

The recovery mode menu is as follows. For information on how to enter the recovery mode, contact the 1352

local supervisor in your branch office.

Menu	Description
reboot system now	Reboots the Android OS.
apply update from sdcard	Updates the Smart Operation Panel System firmware by specifying the folder path.
wipe data/factory reset	Deletes all installed applications and all settings on the operation panel.
wipe cache partition	Deletes all data that is stored on the cache partition. Currently, the operation panel does not use the cache partition, so nothing happens when this menu item is accessed.
wipe free area partition	Deletes all data that is stored on the free partition. The operation panel stores the version history on the free partition. When this menu item is selected, it will then disappear.
wipe LegacyUI area	Deletes Legacy UI.
micon update from sdcard	Updates Keymicon by specifying the folder path.

#### Note

- If [Update Firmware] is set to [Prohibit] in [System Settings] of the machine, the operation panel cannot enter the recovery mode.
- Ask your manager for information on how to enter the recovery Mode.

## Special Key Combinations

This section describes special key combinations for operations which required combinations of hardware keys.

Function	Operation
SSP (Super Service) mode login	Login to SP mode, and then press an SP mode item while holding down the [#] key.
Resetting User Tools	In the User Tools screen, press a User Tools category while holding down the [#] key. Available for: System Settings, Copier/Document Server Features, and Scanner Features.
System Reset	Hold down the [*] and [#] keys simultaneously for 10 seconds. Resets the controller software.
Application Reset	Hold down the [7] and [9] keys simultaneously for 10 seconds. Resets a single application.

## Updating the Operation Panel

### Type of Updating Method

There are four methods to update the Smart Operation Panel. The method is different depending on what you want to update.

1. Installation/update from an SD card
2. Package update
3. Installation/update from the eDC Server

Update method	Features	Operation panel firmware	Applications
Installation/update from an SD card	Update using an SD card. <ul style="list-style-type: none"> <li>• This is the only method to install an older version of currently installed software.</li> <li>• Enter the recovery mode to update the operation panel firmware.</li> <li>• Use the installation screen in the operation panel's service mode to update applications.</li> <li>• You can install or update multiple applications at once.</li> <li>• You can also uninstall an application.</li> </ul>	Yes	Yes
Package update	Uses the Package update function of the GW+ controller to update the software. <ul style="list-style-type: none"> <li>• The software is updated in the following order: controller firmware, the operation panel firmware, and then the applications.</li> <li>• The procedure for updating the operation panel firmware is the same as when updating from an SD card using Recovery mode.</li> </ul>	Yes	Yes
Installation/update from the eDC Server	Downloads applications from the eDC Server for installation or update. This method is mainly for paid applications. A product key is required when an application is installed for the first time.	No	Yes

\*1 Update can only be done by using a package file.



The following three methods can be used for updating the firmware.

- Update from an SD card (recovery mode)
- Package update

The following four methods can be used for updating an application.

- Installation/update from an SD card
- Package update
- Installation/update from the eDC Server

### When installation/update is prohibited

If [Prohibit] is selected for [Update Firmware] in [System Settings], the execution key is grayed out and installation/update cannot be executed.

---

## Installation/update from an SD card

---

### Updating the Smart Operation Panel Firmware

---

#### ★ Important

During the updating process, do not turn off the power.

If you turn off the power during the updating, the machine performance is not guaranteed.

Enter the recovery mode to update the firmware for the Smart Operation Panel.

#### ↓ Note

- When [Quick] is selected for [Screen Startup Mode], the operation panel cannot enter the recovery mode. Change the startup mode to [Normal]. When update is completed, restore the startup mode setting because the setting affects startup time.
- Shut down the main machine with [Normal] selected for [Screen Startup Mode], or shut it down using the special shutdown procedure used for maintenance.
- If [Prohibit] is selected for [Update Firmware] in [System Settings], the machine cannot enter Recovery mode. Ask the administrator of the machine to change the setting.

### Creating an SD card for firmware update

- 1.** Download the update module “Cheetah System” from the Firmware Download Center.
- 2.** Execute the downloaded file.

A file named “part number + suffix.zip” will be created.

#### ↓ Note

- Do not unzip the created file.

- 3.** Copy the “part number + suffix.zip” file to the root directory of the SD card.

## Updating the firmware for the Smart Operation Panel

1. Turn OFF the machine.

**Note**

- Shut down the machine with [Normal] selected for [Screen Startup Mode], or shut it down using the special shutdown procedure used for maintenance.

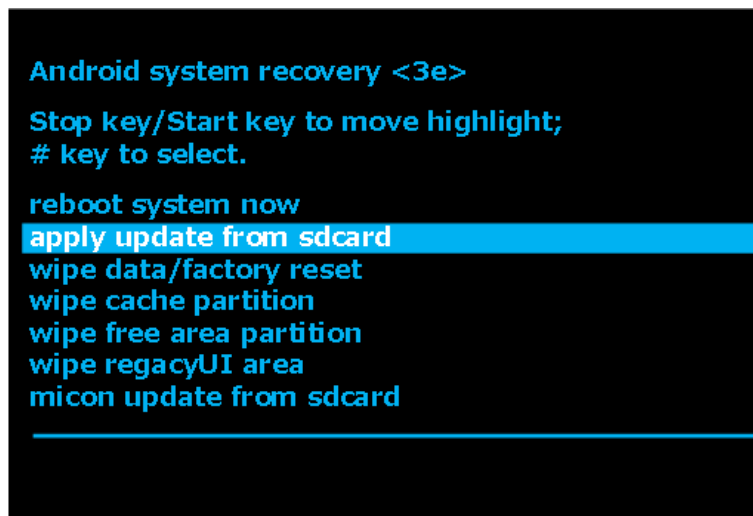
2. Insert the SD card into the SD card slot of the operation panel and start up the machine in Recovery mode.

**Note**

- Ask your manager for details on how to enter the Recovery mode.
- In the Recovery mode, key functions are shown on the screen. Check the key functions while operating.

Keys	Operating
[Stop] key	Moves the cursor up. Executes updating.
[Start] key	Moves the cursor down.
[#] key	Selects the item.

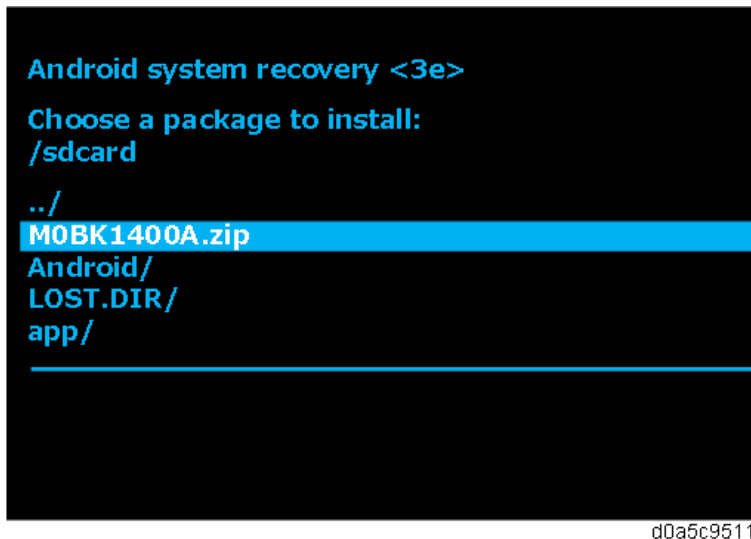
3. Select “apply update from sdcard” with the [Stop] or [Start] key, and then press the [#] key.



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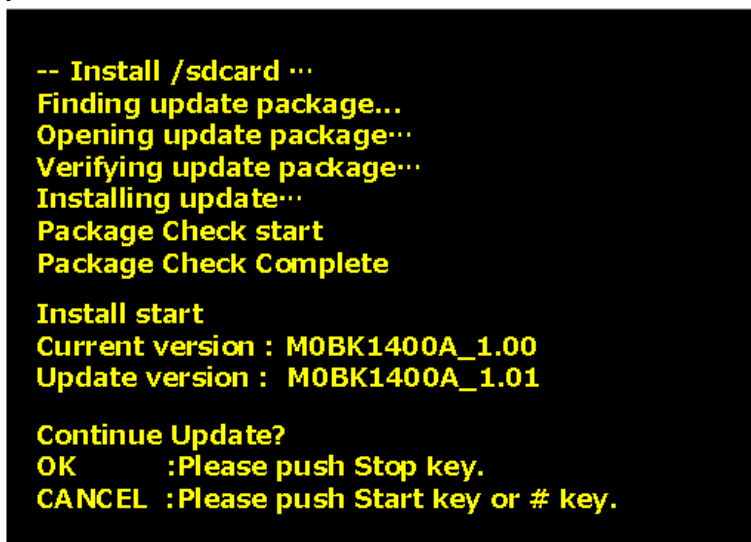
4. The contents of the SD card is displayed. Select “part number + suffix.zip” with the [Stop] or [Start] key, and then press the [#] key.

Example: “M0BK1400A.zip”



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5. The installation screen is displayed.
6. The version of the firmware installed in the operation panel is displayed as “Current version” and the version of the firmware saved on the SD card is displayed as “Update version”. Make sure that you have the correct version.



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7. When “Continue Update?” is displayed, select “OK” (press the [Stop] key).  
The update process starts.

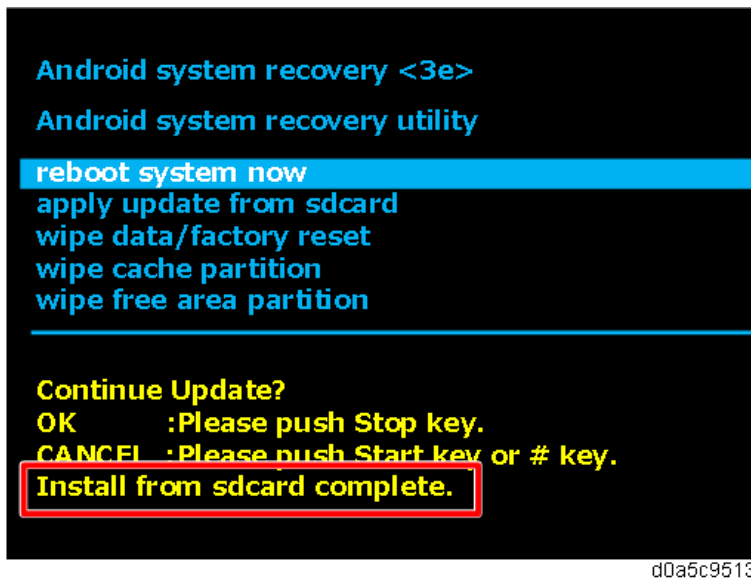
**Note**

- To cancel the firmware update, press the [Start] or [#] key.
- While updating, “Do not turn off the machine” is displayed.

8. When “Install from sdcard complete.” is displayed, select “reboot system now” with the [Stop] or

## 5. System Maintenance Reference

[Start] key, and then press the [#] key to reboot the system.



### Installing/Updating an Application

---

#### Creating an SD card for update

1. Download the update modules from the Firmware Download Center.
2. Unzip the downloaded file.
3. Create a folder named “app” in the root directory of the SD card.
4. Put the unzipped file in the “app” folder.

#### Note

Do not unzip the created file.

#### Update procedure

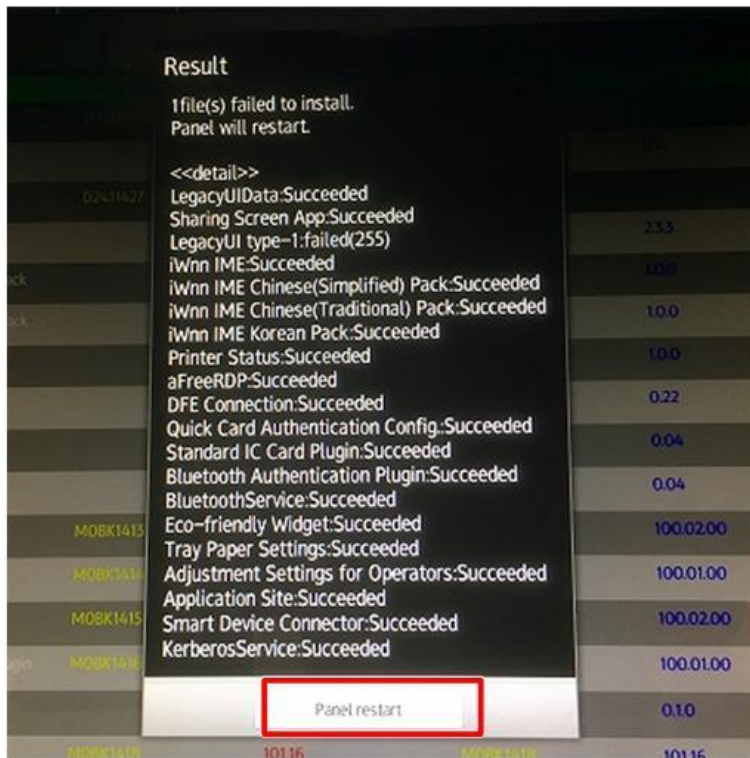
1. Log in to the operation panel in service mode.
2. Insert the SD card into the SD card slot of the operation panel.
3. Select [Apps] > [Install] > [Install from SD Card].

4. Select the application you want to install or update, and then press [Install] of the top of the screen.



d0a5c9514

5. The installation or update results are displayed.  
 6. Check that the application is correctly installed or updated, and then press [Panel restart].



d0a5c9515

## Package Update

This method uses the package update function to update the operation panel firmware and/or applications. The package update function is provided by the controller.

Update is done in the following order:

1. Controller firmware

## 5. System Maintenance Reference

2. Operation panel firmware
3. Applications

If the operation panel firmware has to be updated, the operation panel starts in the recovery mode and the firmware is automatically updated.

The operation panel restarts when updating is completed. The result notification is processed after the operation panel restarts.

---

### Installation/update from the eDC Server

---

Downloads applications from the eDC Server, and installs or updates them.

This method is mainly for paid applications. A product key is required when an application is installed for the first time.

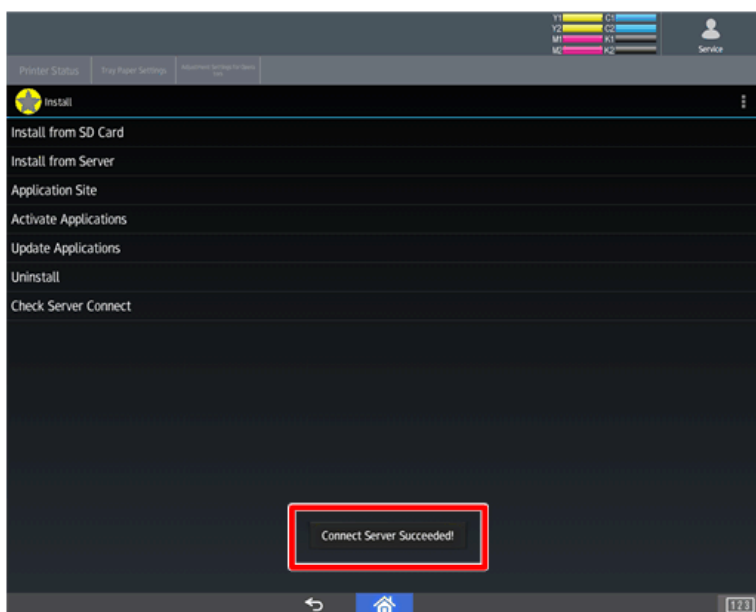
#### ↓ Note

- Installation/activation/update of applications from the server can only be done in the service mode.

#### Check Server Connect

---

- 1.** Log in to the operation panel's service mode.
- 2.** Select [Apps] > [Install].
- 3.** Press [Check Server Connect] and make sure that "Connect Server Succeeded!" is displayed.



d0a5c9541

#### ↓ Note

- The server address is stored in the firmware of the Smart Operation Panel.
- To connect to the server, the network settings of the machine must be configured correctly. For the required configuration, see the Field Service Manual of the machine.
- If the server connection fails, see Troubleshooting for error codes.

## Installation

---

- 1.** Log in to the operation panel's service mode.
- 2.** Select [Apps] > [Install].
- 3.** Select [Install from Server].
- 4.** Enter the product key and press [Execute].



- 5.** Follow the instructions shown on the screen.

### Note

- An application cannot be installed unless it is digitally signed by Ricoh.

## Activation

---

- 1.** Log in to the operation panel's service mode.
- 2.** Select [Apps] > [Install].
- 3.** Select [Activate Applications].

## 5. System Maintenance Reference

**4.** Select the application to be activated, and then enter the activation key and press [Execute].



**5.** Follow the instructions shown on the screen.

### Note

- Only charged applications have to be activated.

## Update

---

- 1.** Log in to the operation panel's service mode.
- 2.** Select [Apps] > [Install].
- 3.** Select [Update Applications].
- 4.** Select the application to be updated, and then press [Check Update Status].
- 5.** Follow the instructions shown on the screen.



## **Downloading Stamp Data (Copier Models Only)**

After you replace or format the HDD, download the stamp data from the controller firmware to the hard disk.

1. Go into the SP mode.
2. Select SP5853 then press "Execute".
3. Obey the instructions on the screen to complete the procedure.

## Uploading/Downloading NVRAM Data

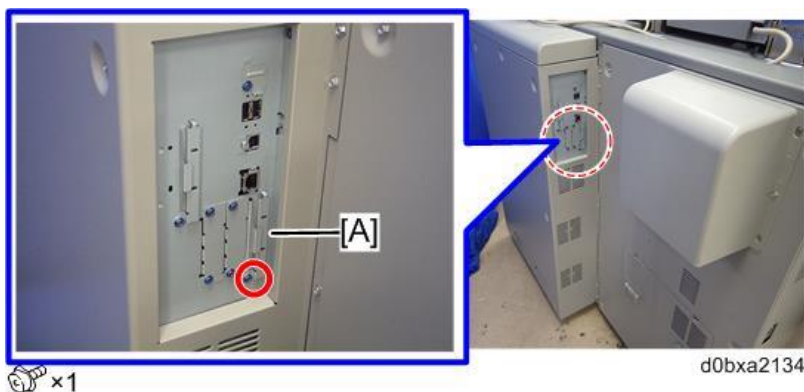
---

### Uploading NVRAM Data to an SD Card

---

Before you begin, please note:

- Uploading NVRAM contents to an SD card will fail if the machine serial number of the machine is not registered with **SP5811**.
  - The machine serial number is set at the factory before shipping.
  - NVRAM data can be uploaded from several machines and stored on the same SD card because a unique filename is created automatically for each machine.
1. Enter the SP mode and do **SP5990-2** to print an SMC report.
    - Always print an SMC report before uploading NVRAM data, just in case the download of the NVRAM data fails.
    - If the download fails, you can use the report to re-enter the SP and UP settings manually.
  2. Turn the machine off.
  3. Remove the SD slot cover [A].



4. Insert the SD card in Slot 2 [A].
5. Turn the machine on.
6. Enter the SP mode and do **SP5824** (NVRAM Data Upload).
7. Touch [EXECUTE] on the operation panel to start the upload.
  - Data uploaded from NVRAM is stored in a file in the NVRAM folder created on the on the card:  
NVRAM folder> D179\*.nv  
where D179\*.nv is the number of the machine entered at the factory before shipping. The number will be unique for each machine.
  - If this upload is done with the NVRAM folder and file from a previous upload is stored on the SD card, the folder and file will be overwritten. (A new directory and file are not created.)

---

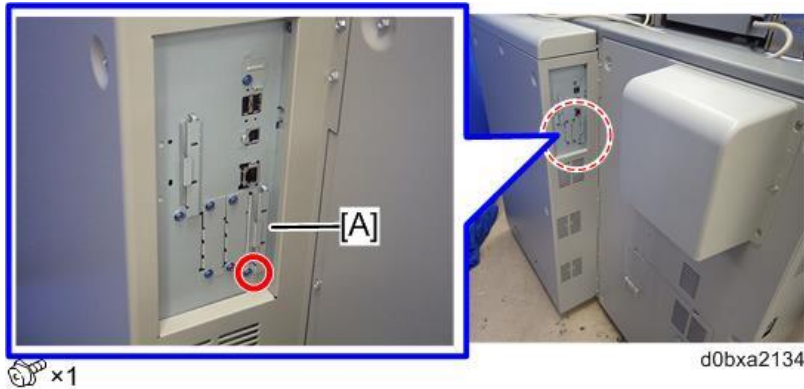
### Downloading NVRAM Data from an SD Card

---

Before you begin, please note:

- Downloading NVRAM data from an SD card may fail if the SD card is defective.

- If downloading NVRAM data from an SD card fails, just repeat the procedure.
  - If the second attempt to download from the SD card fails, then you must enter the SP and UP settings manually from the SMC report you printed before uploading the NVRAM data to the SD card.
1. Turn the machine off.
  2. Remove the SD slot cover [A].



3. Insert the SD card that holds the NVRAM data in Slot 2 [A].

**★ Important**

- The machine number included in the filename of the file on the SD card must match the number of the machine.
4. Turn the machine on.
  5. Enter the SP mode and open **SP5825**.
  6. Touch [EXECUTE]. The download executes.
  7. When the prompt that tells you that the operation has completed and that the machine must be re-booted, touch [Exit].
  8. Exit the SP mode and remove the SD card.
  9. Cycle the machine off/on.

## Address Book Upload/Download

---

### Information List

---

The following information is possible to be uploaded and downloaded.

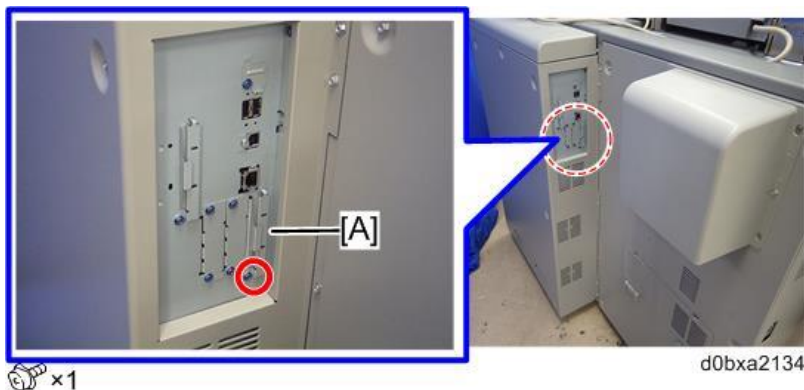
- Registration No.
- User Code
- E-mail
- Protection Code
- Group Name
- Key Display
- Select Title
- Folder
- Local Authentication
- Folder Authentication
- Account ACL
- New Document Initial ACL
- LDAP Authentication

---

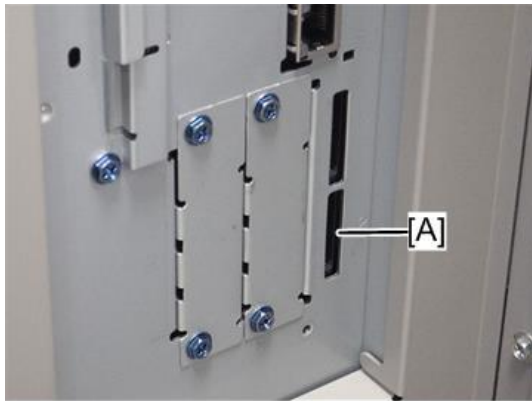
### Download Address Book

---

1. Prepare a formatted SD card.
2. Make sure that the write-protection on the SD card is off.
3. Turn off the main power switch of the main machine.
4. Remove the SD slot cover [A].



5. Insert an SD card into Slot 2 [A].



d0bxa2135

6. Turn the machine on.
7. Enter the SP mode.
8. Do **SP5846-051** (Backup All Addr Book).
9. Exit the SP mode, and then turn the machine off.
10. Remove the SD card form Slot 2.
11. Re-attach the SD card slot cover.

**Note**

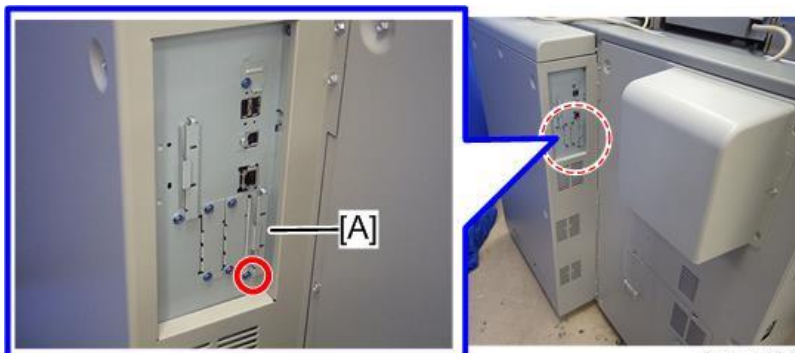
- If the capacity of SD card is not enough to store the address book data, an error message is displayed.
- Handle the SD with card.
- Never remove an SD card with address book information from the work site.

---

## Upload Address Book

---

1. Turn the machine off.
2. Remove the SD slot cover [A].

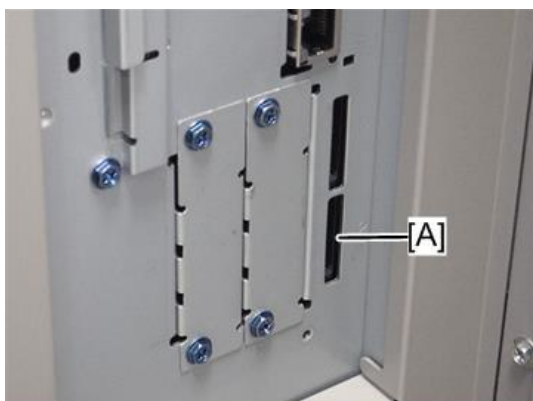


 x1

d0bxa2134

## 5. System Maintenance Reference

3. Insert the SD card that holds the address book data into Slot 2 [A].



4. Turn the machine on.
5. Enter the SP mode.
6. Do **SP5846-052** (Restore All Addr Book).
7. Exit the SP mode, and then turn the machine off.
8. Remove the SD card from Slot 2.
9. Re-attach the SD slot cover.

### Note

- The counter in the user code information is initialized after uploading.
- Administrator and supervisor related information can be neither downloaded nor uploaded.
- If there is no address book data on the SD card, the machine will return an error message.

## Capturing the Device Logs

### Overview

With this feature, you can save device logs that are stored in the machine (HDD or operation panel) on an SD card. It allows the Customer Engineer to save and retrieve error information for analysis.

The Capturing Log feature saves device logs for the following four.

- Controller device log including operation log
- Engine device log
- Operation panel log

#### ★ Important

- In older models, a technician enabled the logging tool after a problem occurred. After that, when the problem had been reproduced, the technician was able to retrieve the device log.
- However, this new feature saves the device logs at the time that problems occur. Then you can copy the logs to an SD card.
- You can retrieve the device logs using a SD card without a network.
- Analysis of the device log is effective for problems caused by the software. Analysis of the device log is not valid for the selection of defective parts or problems caused by hardware.
- Make sure to shut down and reboot the machine once before retrieving the Debug Logs. Otherwise, the latest settings may not be collected when the debug logs are retrieved.

### Types of device logs that can be saved

Type	Storage Timing	Destination (maximum storage capacity)
Controller device log including operation log	<ul style="list-style-type: none"> <li>• Saved at all times</li> </ul>	HDD (8 GB) or SD card connected to the service slot. When the data gets over 8.0 GB, the older data is deleted.
Engine device log	<ul style="list-style-type: none"> <li>• When an engine SC occurs</li> <li>• When paper feeding/output stop because of a jam</li> <li>• When the machine doors are opened during normal operation</li> </ul>	HDD or SD card connected to the service slot (Up to 300 times)
Operation panel log	<ul style="list-style-type: none"> <li>• When an error related to the operation panel occurs.</li> </ul>	Memory in the operation panel.

#### ↓ Note

- **Device logs are not saved in the following conditions:**
  - While erasing all memory
  - While data encryption equipment is installed
  - While changing the firmware configuration

## 5. System Maintenance Reference

- Forced power OFF (accidentally disconnecting the outlet)
- Engine device log while the machine is shutting down
- When the power supply to the HDD is off because of energy saving (engine OFF mode/STR mode)
- When one of the following SCs occurs: SC672, SC816, SC819, SC878, SC899, SC859, SC860, SC861, SC863, or SC864

### Note

- **The following logs are not saved:**
- Logs related to the energy saver mode (Engine-off, suspend-mode, or other cases)  
Network communication log  
Logs related to NRS  
Access log for unauthorized users (guests)
- HTTP session timeout log
- Auto log-out log
- IC card related log

### Security of the Operation Log

---

The following operation logs related to security are not saved.

- User ID
- Password
- IP address
- Telephone number
- Encryption key
- Transition to SP mode

### Retrieving the Device Logs via Operation Panel

---

#### ★ Important

- Retrieve device logs to identify the date of occurrence of the problems and to find details of the problems
- e.g.: At around 8:00 am on March 10, an engine stall occurred. The operation panel does not respond. Turn the main power supply off / on.
- Analysis of the device log is effective for problems caused by the software. Analysis of the device log is not valid for the selection of defective parts or problems caused by hardware.

### Procedure for Retrieving the Device Log with SD Card

---

**1.** Insert the SD card into the slot [A] on the side of the operation panel or the service slot.

#### ★ Important

- It is recommended to use the SD card (2 GBs\* or 8 GBs\*\*) provided as a service part. This is because the log data can be acquired much faster than when using commercially



available SD cards.

- Format the SD card by using SD Formatter from Panasonic before copying the logs: [https://www.sdcard.org/downloads/formatter\\_3/](https://www.sdcard.org/downloads/formatter_3/) (free software)
- Insert the SD card into the machine's service slot instead of the SD slot on the side of the operation panel.

\* The part number of the SD card with 2 GBs that is registered as a service part is "B6455030".

\*\* The part number of the SD card with 8 GBs that is registered as a service part is "B6455040".



2. Turn ON the main power.
3. Enter SP mode.
4. Specify the date that the problem occurred in SP5-858-101 (Start Date) by setting it to the year-month-day calendar format.
  - For example, if a problem occurred on February 1, 2015, the date should be set to "20150201", as shown above.
  - Be sure to confirm the date when the problem occurred before obtaining the logs.
5. Specify the number of days to collect the logs in SP5-858-102 (Days of Tracing).
  - "2" is set by default, which is the minimum needed for investigating the problem.
  - A value of "1" to "180" can be set.
6. Execute SP5-858-111 (Acquire All Info & Logs) to copy all of the log types to an SD card.

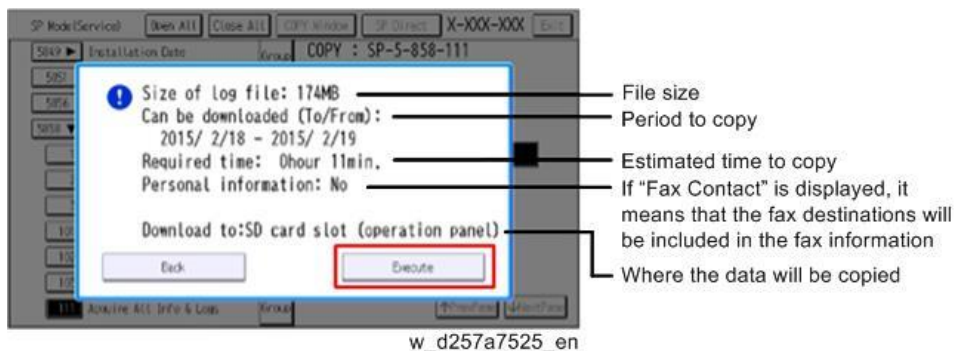
It is possible to obtain the logs separately by the following SPs.

SP	Collectable Information and/or Logs
SP5-858-111	All of the information and logs that are collected by executing the SPs from SP5-858-121 to SP5-858-145, and SMC.
SP5-858-121	Configuration page
SP5-858-122	Font page
SP5-858-123	Print settings list
SP5-858-124	Error log

## 5. System Maintenance Reference

SP	Collectable Information and/or Logs
SP5-858-141	Controller log, engine log, operation panel log, and SMC.
SP5-858-142	Controller log
SP5-858-143	Engine log
SP5-858-144	Operation panel log
SP5-992-001	SMC

- 7.** After executing the SP for copying the information and/or logs, a confirmation screen will appear. To proceed with obtaining the information and/or logs, tap "Execute"



### Note

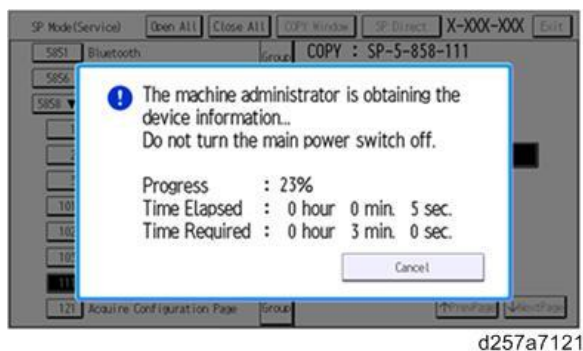
- The approximate time it takes to transfer the debug log is as follows. Transfer time may be affected by the type or format of the SD card.
  - Controller device log (GW device log): 2 - 20 minutes
  - Engine device log: 2 minutes
  - Operation panel device log: 2 - 20 minutes

If the estimated time is not calculated due to an error, an error code will be displayed.

Error Code	Description
-1	Other.
-2	No SD card is inserted in the service slot or in the SD slot on the side of the operation panel. In this case, insert an SD card into either of the SD slots.
-3	The SD card is locked. In this case, unlock the SD card, as shown below.

Error Code	Description
	 <p>[A]: Unlocked, [B]: Locked</p>

- 8.** Wait for the information and/or logs to be copied to the SD card.



- 9.** After a message stating that the process has completed appears on the operation panel, confirm that the LED light next to the SD card slot is not flashing and then remove the SD card.
- 10.** Make sure that the SD card access LED is off, then remove the SD card.

**Note**

- The process of obtaining logs fails in the following cases:
  - When the size of the logs to obtain exceeds the amount of space available on the SD card.
  - When the SD card is removed while the logs are being copied to it.
  - When the SD card is not formatted.
- If 'failed' appears on the touch panel display, turn the power off, and then recover from step 1 again.

---

## Retrieving the Device Logs via Web Image Monitor

---

The device logs can be retrieved via the Web Image Monitor.

- 1.** Access the following URL and logon as an administrator:

`http://[IP address or host name]/web/entry/df/websys/direct/getSysInfo.cgi`

## 5. System Maintenance Reference



The screenshot shows the RICOH Web Image Monitor login interface. At the top left is the RICOH logo. Below it is the title "Web Image Monitor". There are two input fields: "Login User Name" and "Login Password". A "Login" button is positioned below the password field. At the bottom left, there is a "Cancel" button.

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2. Specify the date that the problem occurred and the number of days to download the logs. Then click "Download".



The screenshot shows the "Obtain Device Information" screen in the RICOH Web Image Monitor. The page has a "Home" button at the top left and a "Refresh" button at the top right. The main content area contains the following settings:

- Date of fault: 02 month 06 day 2015 year
- Number of days, including date fault occurred, to obtain: 2 day(s)
- Obtain Fax Destination(s) Information:  On  Off

Below the settings, there is a message: "Obtaining device information has started. Click [Cancel] if the machine is obtaining device information." At the bottom, there are "Download" and "Cancel" buttons. The "Download" button is highlighted with a red box.

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### Note

- "3" is set by default for "Number of days, including date fault occurred, to obtain". However "2", which is the minimum needed for investigating the problems, is recommended for reducing the downloading time.

3. The confirmation screen will appear and the information and/or logs will start downloading. To proceed to download the information and/or logs, wait for the open-or-save dialog to appear.



The screenshot shows the confirmation screen for the "Obtain Device Information" process. It features an information icon and the following text:

Confirm  
Obtaining device information has started.  
To cancel obtaining device information, click [Cancel].  
Note that the screen does not change when obtaining device information is complete.

The settings from the previous screen are repeated:

- Date of fault: 02month06day2015year
- Number of days, including date fault occurred, to obtain: 2day(s)
- Obtain Fax Destination(s) Information: Off

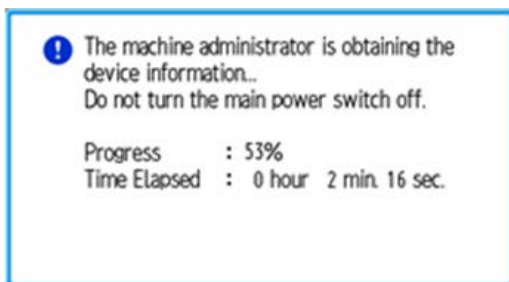
A "Cancel" button is located below the settings. At the bottom of the screen, there are "Home" and "Download again" buttons.

d238m0886

### Note

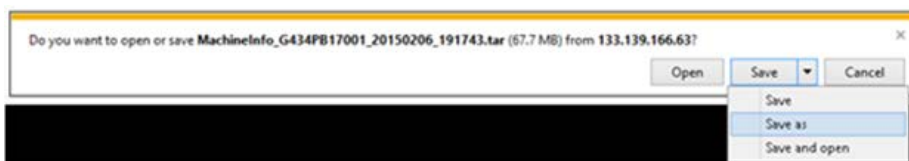
- To cancel downloading, click "Cancel".
- To reconfigure some settings, click "Download again".

- Operation panel when downloading the logs:



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4. After a while, the open-or-save dialog will appear. Specify where to download and save the file.



d238m0888

**Note**

- The debug logs are saved with the following file names. These names are the same as the files downloaded with SD card.

**The device logs are saved with the following file names.**

Controller log (mmsg)	/LogTrace/[the model number]/watching/[yyyymmdd_hhmmss]_[a unique value].gz
Engine device log	/LogTrace/[Machine Serial]/engine/[yyyymmdd_hhmmss].gz
Operation panel log	/LogTrace/[the model number]/opepanel/[yyyymmdd_hhmmss].tar.gz
SMC	/LogTrace/[the model number]/smc/[the model number]_[5992XXX]_[yyyymmdd]_[hhmmss].csv
Configuration page	/LogTrace/[the model number]/gps/ConfigurationPage/ConfigurationPage_[yyyymmdd_hhmmss].csv
Font page	<ul style="list-style-type: none"> <li>• /LogTrace/[the model number]/gps/FontPage/FontPage_PCL_[the page number]_[yyyymmdd_hhmmss].jpg</li> <li>• /LogTrace/[the model number]/gps/FontPage/FontPage_PDF_[the page number]_[yyyymmdd_hhmmss].jpg</li> <li>• /LogTrace/[the model number]/gps/FontPage/FontPage_PS_[the page number]_[yyyymmdd_hhmmss].jpg</li> </ul>
Print settings list	<ul style="list-style-type: none"> <li>• /LogTrace/[the model number]/gps/PrintSettingList/PrintSettingList_RPGL_[yyyymmdd_hhmmss].txt</li> <li>• /LogTrace/[the model number]/gps/PrintSettingList/PrintSettingList_RTIFFF_[yyyymmdd_hhmmss].csv</li> </ul>
Error log	/LogTrace/[the model number]/gps/ErrorLog/[yyyymmdd_hhmmss].csv

## Updating JavaVM

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### Overview

---


Updating Java VM is performed with PC using the update tool.


- Prepare the following items in advance.
  - SD memory card reader/writer
  - PC
- Updating flow is as follows.
  1. Deactivate the SDK applications with Web Image Monitor.
  2. Remove the VM CARD Type P8 from the main machine.
  3. Update Java VM with PC using the update tool.
  4. Install the VM CARD Type P8 to the main machine.
  5. Activate the SDK applications with Web Image Monitor.

### Deactivating SDK Applications

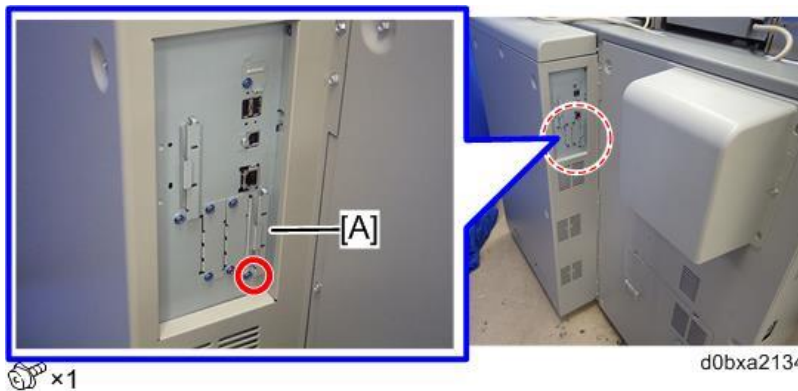
---

- 1.** Log in as the administrator from Web Image Monitor.
- 2.** Take a note of the current heap size setting in [Heap / Stack Size Settings].
  - [Device Management] -> [Configuration] -> [Extended Feature Settings] -> [Administrator Tools] -> [Heap / Stack Size Settings]
- 3.** Stop all SDK applications except for Java TM Platform.
  1. Display the [Startup Setting] menu.
    - [Device Management] -> [Configuration] -> [Extended Feature Settings] -> [Startup Setting]
  2. Check the radio button of the SDK application which status is "Starting Up".
  3. Click [Start Up/Stop] to stop the application.
  4. "Stop" is displayed in the status column.

 **Note**

  - Do not change the status of Java TM Platform to "Stop".
- 4.** Make sure that "Auto Start" is set to "Off" for each SDK application.
  1. Click the [Details] icon () for each SDK application in [Startup Setting].
  2. Make sure that "Auto Start" is set to "Off". (Default: On)
- 5.** Turn the main power OFF.

- 6.** Remove the SD card slot cover [A].



- 7.** Remove VM CARD Type P8 from the SD Card Slot 1 (Upper slot).

#### Updating JavaVM

---

- 1.** Insert VM CARD Type P8 into SD memory card reader/writer of your PC.
- 2.** Check that the SD memory card reader/writer is detected on your PC, and then write down the drive letter. (If the SD memory card reader/writer is detected as (F:), the drive letter is "f")
- 3.** Download the update modules from Firmware Download Center.
- 4.** Unzip the downloaded file, and then execute the .exe file.
- 5.** The folder is generated.
- 6.** Execute the .bat file in the folder.
- 7.** Input the drive letter following a message "Please input drive letter of SD card [a - x]: ". (If the SD memory card reader/writer is detected as (F:), input "f")



- 8.** Press the [Enter] key to start updating Java VM.  
It takes 3 minutes to update Java VM.
- 9.** After completing the update, remove VM CARD Type P8 from SD memory card reader/writer of your PC.
- 10.** Insert VM CARD Type P8 into SD Card Slot 1 (Upper slot) of the machine.
- 11.** Reassemble the machine.

#### Activating SDK Applications

---

- 1.** Turn the main power ON.
- 2.** Log in as the administrator from Web Image Monitor.

## 5. System Maintenance Reference

- 3.** Change the setting of "Auto Start" to "On" for each SDK application.
- 4.** Reconfigure the heap size setting in [Heap / Stack Size Settings].
  1. Display the [Startup Setting] menu.  
[Device Management] -> [Configuration] -> [Extended Feature Settings] -> [Startup Setting]etting]
  2. Click the [Details] icon (📄) for each SDK application.
  3. Make sure that "Auto Start" is set to "On". (Default: On)
- 5.** Reconfigure the heap size setting in [Heap / Stack Size Settings].
  - [Device Management] -> [Configuration] -> [Extended Feature Settings] -> [Administrator Tools] -> [Heap / Stack Size Settings]



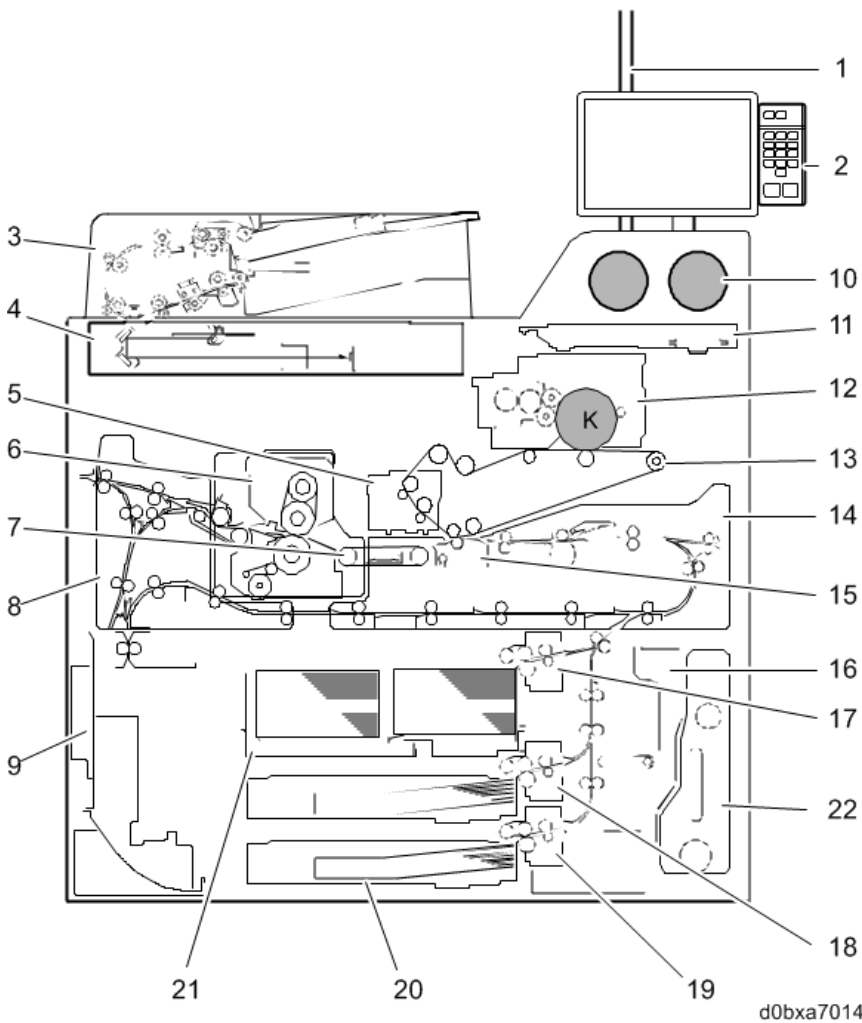
# 6. Detailed Descriptions

## Overview

### General Layout

#### ★ Important

- The shaded areas of the drawing are for the copier version only.



No.	Name	No.	Name
1	Status Light	12	PCDU
2	Operation Panel	13	ITB Unit
3	ADF	14	Registration Unit
4	Scanner	15	PTR (Paper Transfer Roller) Unit
5	ITB Cleaning Unit	16	Vertical Transfer Unit (VTU)
6	Fusing Unit	17	Tray 1 Paper Feed Unit
7	PTB (Paper Transport Belt)	18	Tray 2 Paper Feed Unit

## 6.Detailed Descriptions

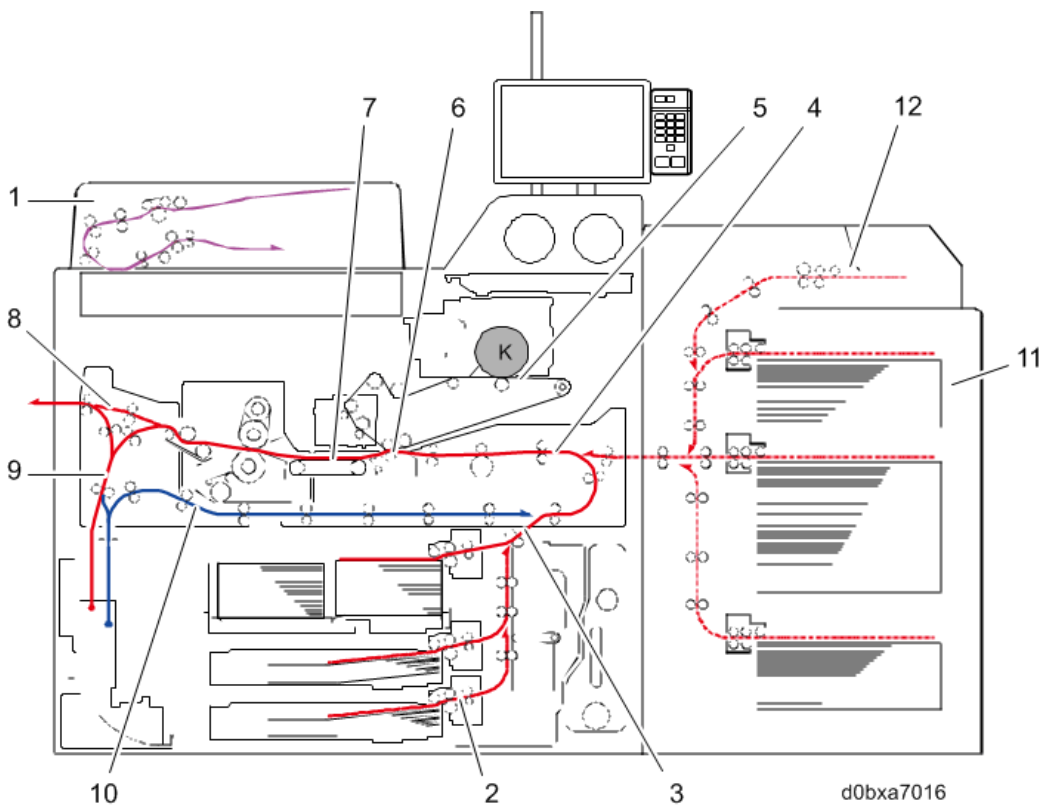
No.	Name	No.	Name
8	Invert/Exit Unit	19	Tray 3 Paper Feed Unit
9	Purge Path	20	Standard Paper Tray (x2)
10	Toner Supply Unit	21	Tandem Tray
11	Laser Unit	22	Waste Toner Bottle

### Paper Paths

#### Main Unit, LCIT

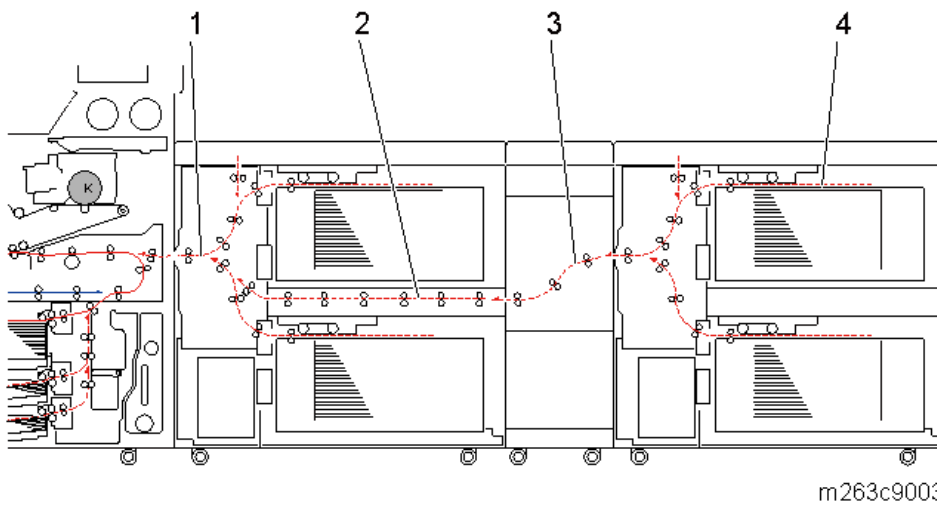
##### ★ Important

- The shaded areas of the drawing are for the copier version only.



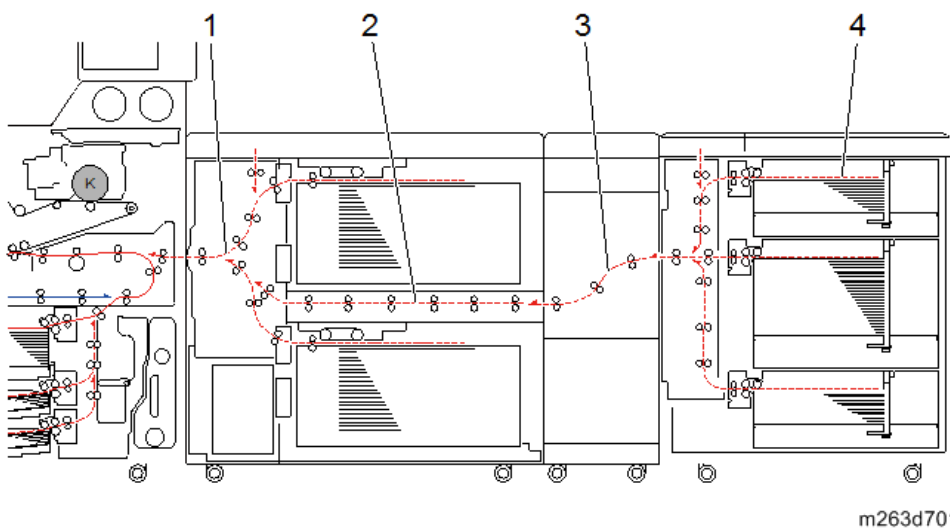
No.	Name	No.	Name
1	ADF	7	Paper Transport Belt
2	Paper Trays	8	Straight-through Path Exit
3	Vertical Transport Unit	9	Invert Exit
4	Registration Unit	10	Duplex Return Path
5	ITB (Image Transfer Belt) Unit	11	LCIT (Option)
6	PTR (Paper Transfer Roller) Unit	12	Multi Bypass Tray (Option)

## Main Unit + Vacuum Feed LCIT RT5120 + Vacuum Feed LCIT RT5120



No.	Name
1	Vacuum Feed LCIT RT5120
2	LCIT Straight-through Path
3	Bridge Unit Path
4	Vacuum Feed LCIT RT5120

## Main Unit + Vacuum Feed LCIT 5120 + LCIT RT5110



No.	Name
1	Vacuum Feed LCIT RT5120
2	LCIT Straight-through Path
3	Bridge Unit Path
4	LCIT RT5110

## Paper Path LEDs

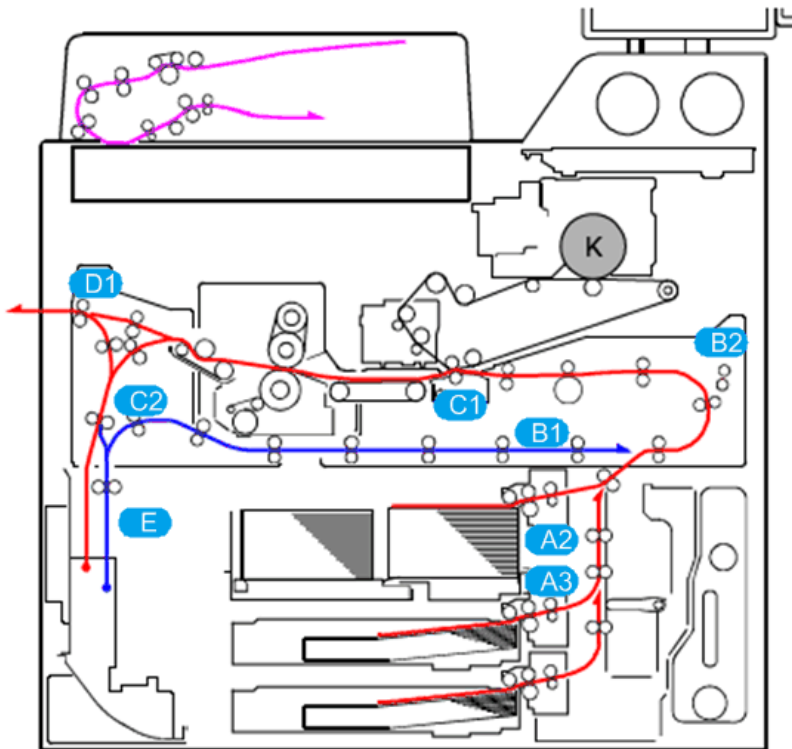
Eight new Jam LEDs are provided on the left and right drawer covers. An LED lights if a jam occurs at its location. This makes it much easier to locate and remove sheets that jam in the paper path by

## 6.Detailed Descriptions

manually rotating the jam removal knobs.

**Note**

At this time only 8 LEDs are used: A2, A3, B1, B2, D1, E, C1, C2.



d0bxa7012

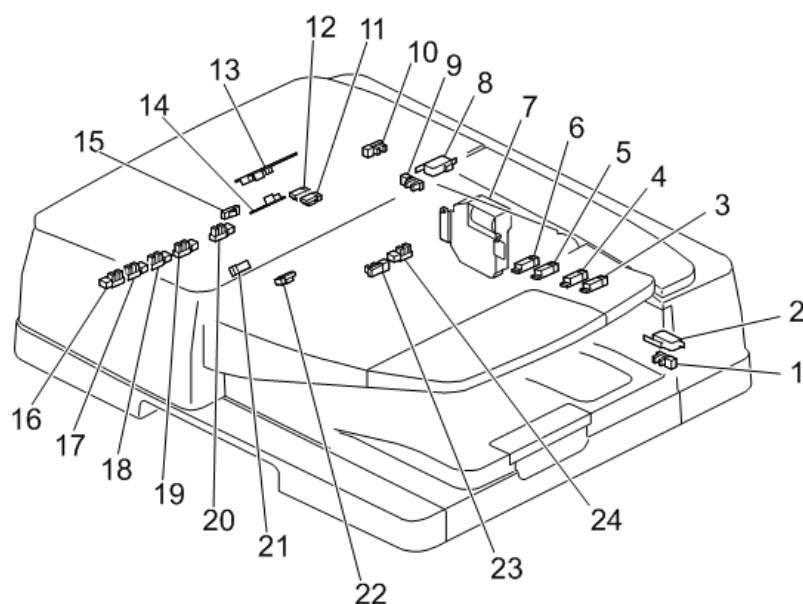
No.	Area	LED
1	Vertical Paper Path	A2, A3
2	Main Paper Path	C1, B2, B1
3	Exit/Invert Path	D1, C2
4	Paper Purge Tray	E

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 Electrical Component Layout
 

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## ADF (Copier Models Only)

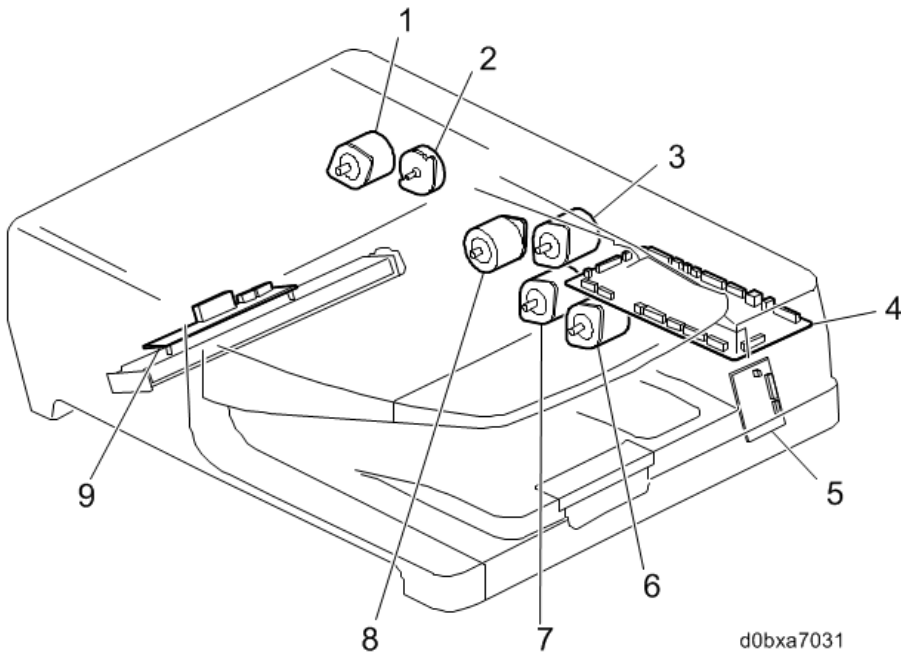


d1797901

No.	Name	No.	Name
1	Lift Sensor	13	Double Feed Detect Sensor (Receptor)*1
2	Lift Up Interlock Switch	14	Double Feed Detect Sensor (Emitter)*1
3	Original Length 3 (LG Sensor)	15	Scan Entrance Sensor
4	Original Length 2 (A4 Sensor)	16	Original Width 5 Sensor
5	Original Length 1 (B5 Sensor)	17	Original Width 4 Sensor
6	Original Length Sensor (A4/LT LEF)	18	Original Width 3 Sensor
7	ADF Bottom Plate Lift Motor	19	Original Width 2 Sensor
8	Feed Cover Interlock Switch	20	Original Width 1 Sensor
9	Bottom Plate Position Sensor	21	Registration Sensor
10	Pickup Roller HP Sensor	22	Exit Sensor
11	Separation Sensor	23	Bottom Plate HP Sensor
12	Skew Correction Sensor	24	Original Set Sensor

\*1 These sensors installed with the optional Double-Feed Kit S7.

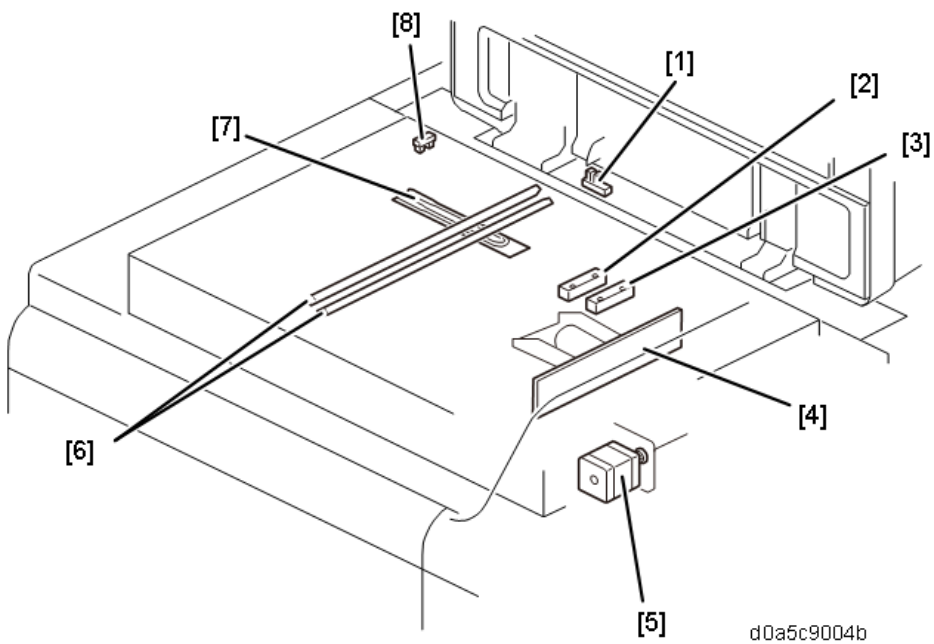
## 6.Detailed Descriptions



No.	Name	No.	Name
1	ADF Middle Motor	6	ADF Exit Motor
2	ADF PullOut Motor	7	ADF Scan Motor
3	ADF Feed Motor	8	ADF PickUp Motor
4	ADF Control Board	9	CIS
5	URB (Double-feed)*1		

\*1 These sensors installed with the optional Double-Feed Kit S7.

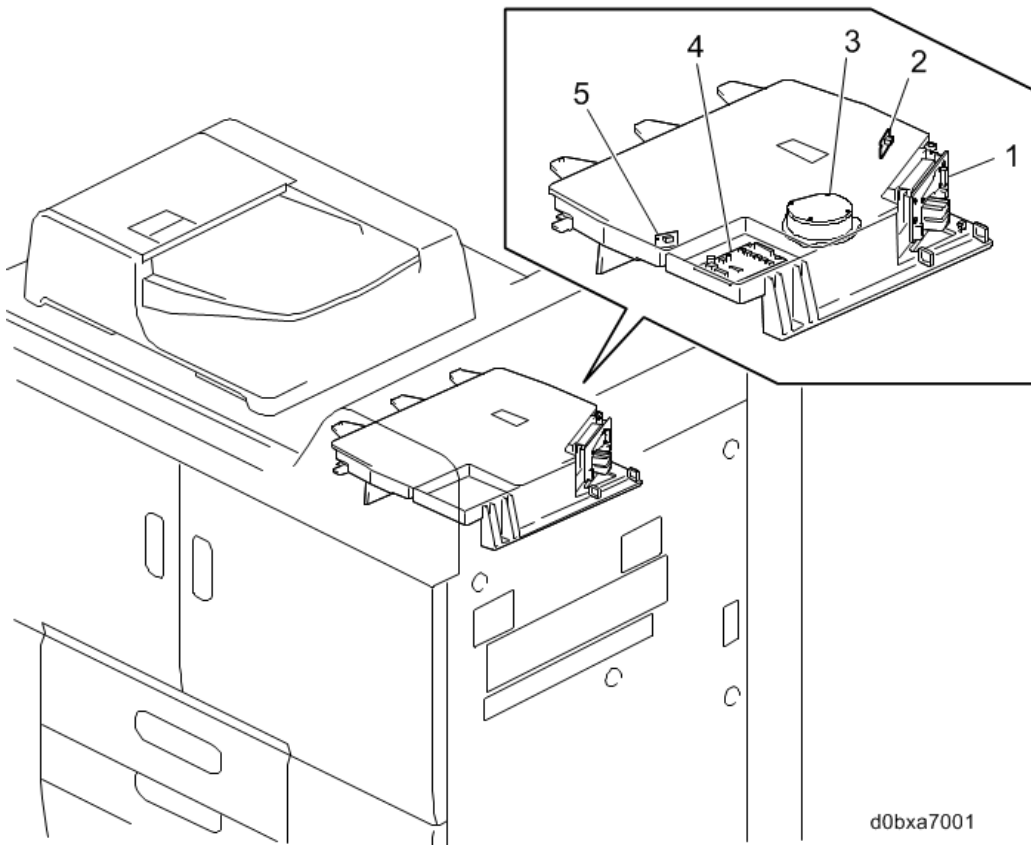
### Scanner (Copier Models Only)



No.	Name	No.	Name
1	DF Position Sensor	6	Exposure Lamp (LED)

No.	Name	No.	Name
2	APS Sensor(Original Size Sensor 1)	7	Scanner Heater (Service Option)
3	APS Sensor(Original Size Sensor 2)	8	Scanner HP Sensor
4	SBU	-	-
5	Scanner Motor	-	-

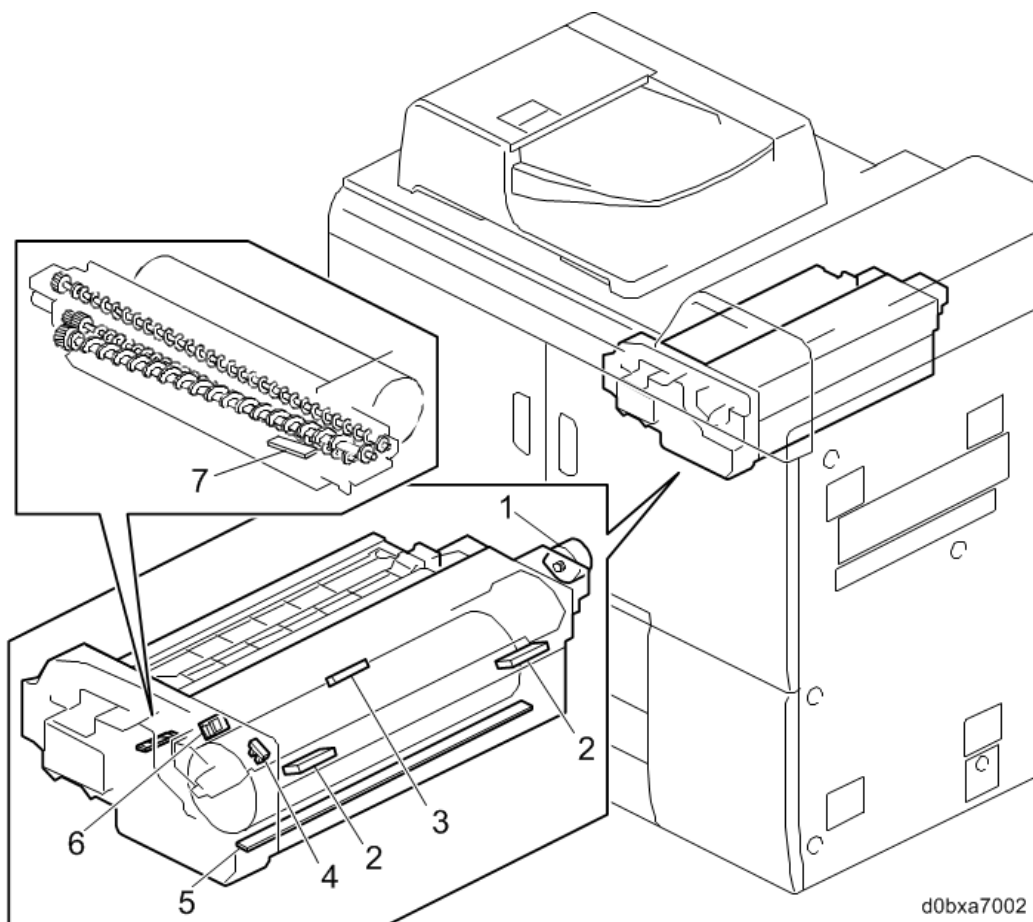
### Laser Unit



No.	Name	No.	Name
1	LD Control Board	4	Polygon Mirror Motor PCB
2	Synchronizing Detector Board (TE)	5	Synchronizing Detector Board (LE)
3	Polygon Mirror Motor	-	

## 6.Detailed Descriptions

### Around the Drum

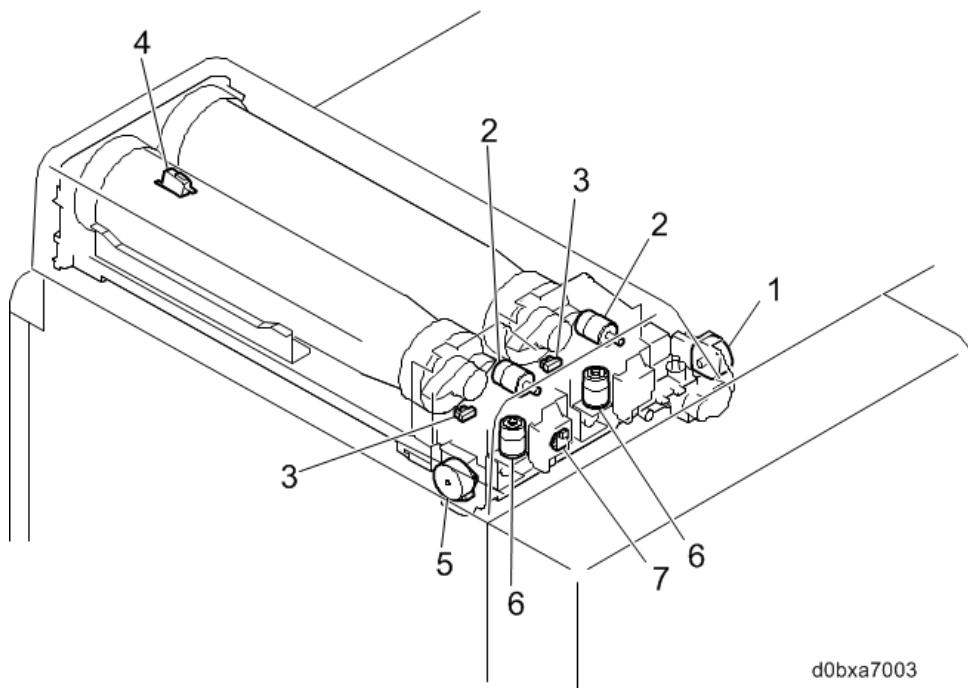


d0bxa7002

No.	Name	No.	Name
1	Charge Wire Cleaner Motor	5	Quenching Lamp
2	Lubricant End Sensor	6	PCU Temperature/Humidity Sensor
3	Potential Sensor	7	TD Sensor
4	Cleaning Pad HP Sensor	-	



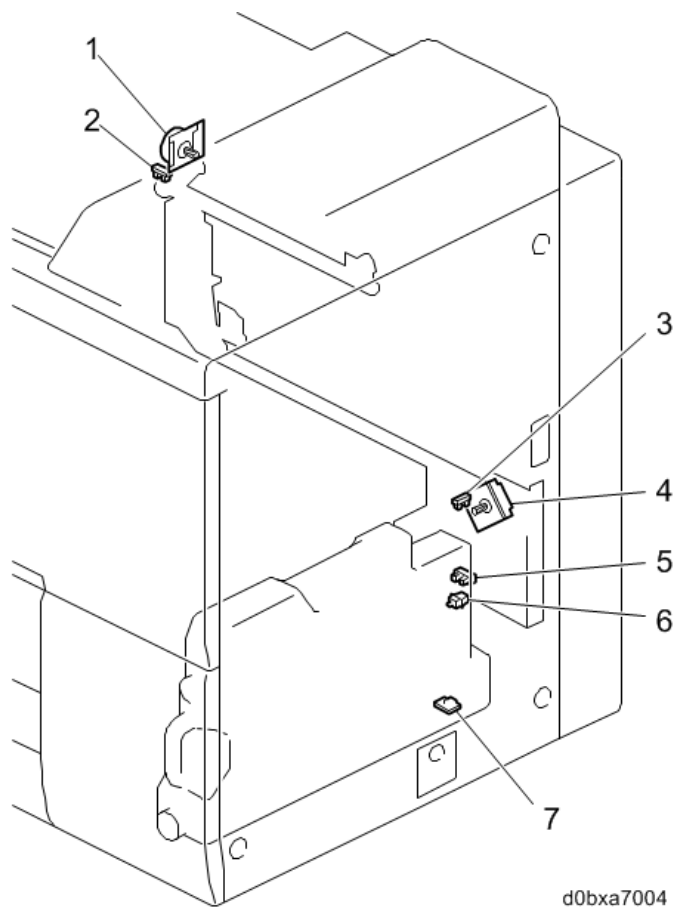
## Toner Supply Unit



No.	Name	No.	Name
1	Toner Feed Motor	5	Toner Agitator Motor
2	Bottle Cap Motors (Left/Right)	6	Bottle Motors (Left/Right)
3	Bottle Set Sensors	7	Toner End Sensor
4	Interlock Switch	-	-

## 6.Detailed Descriptions

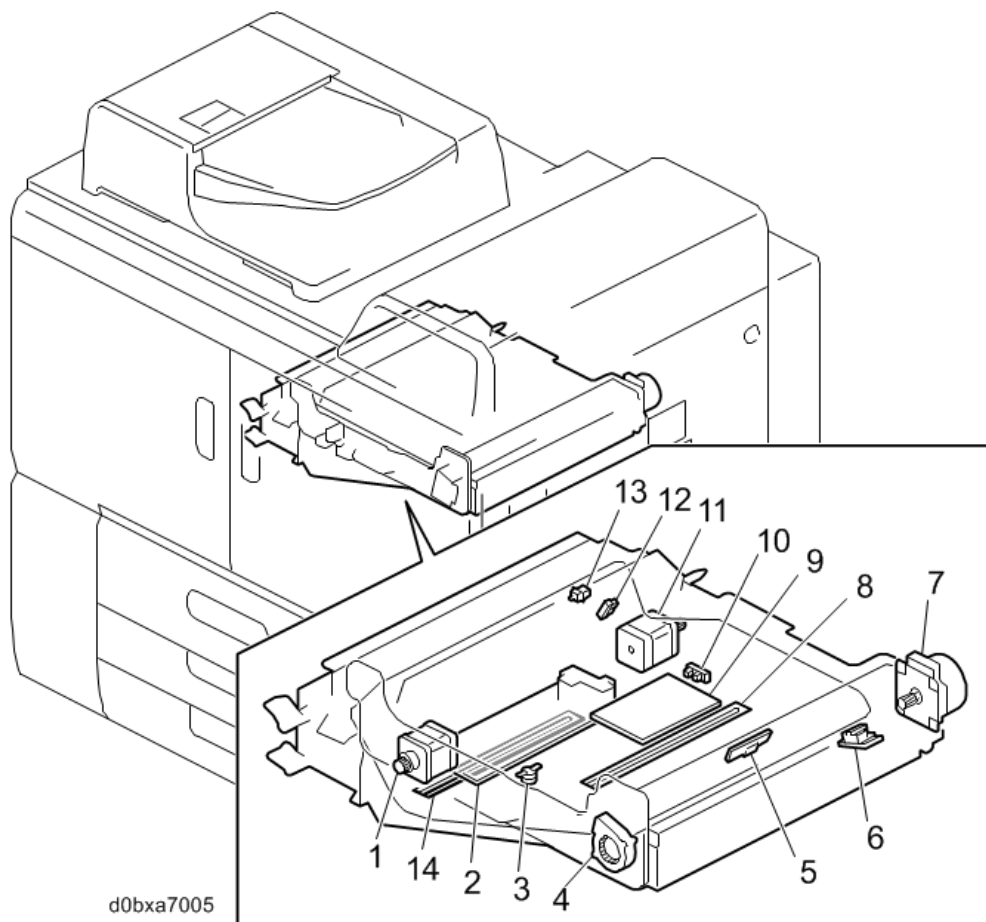
### Toner Collection Unit



d0bxa7004

No.	Name	No.	Name
1	Waste Toner Collection Motor	5	Waste Toner Bottle Near Full Sensor
2	Waste Toner Lock Sensor	6	Bottle Set Switch
3	Waste Toner Bottle Full Sensor	7	Temperature/Humidity Sensor
4	Waste Toner Bottle Motor	-	

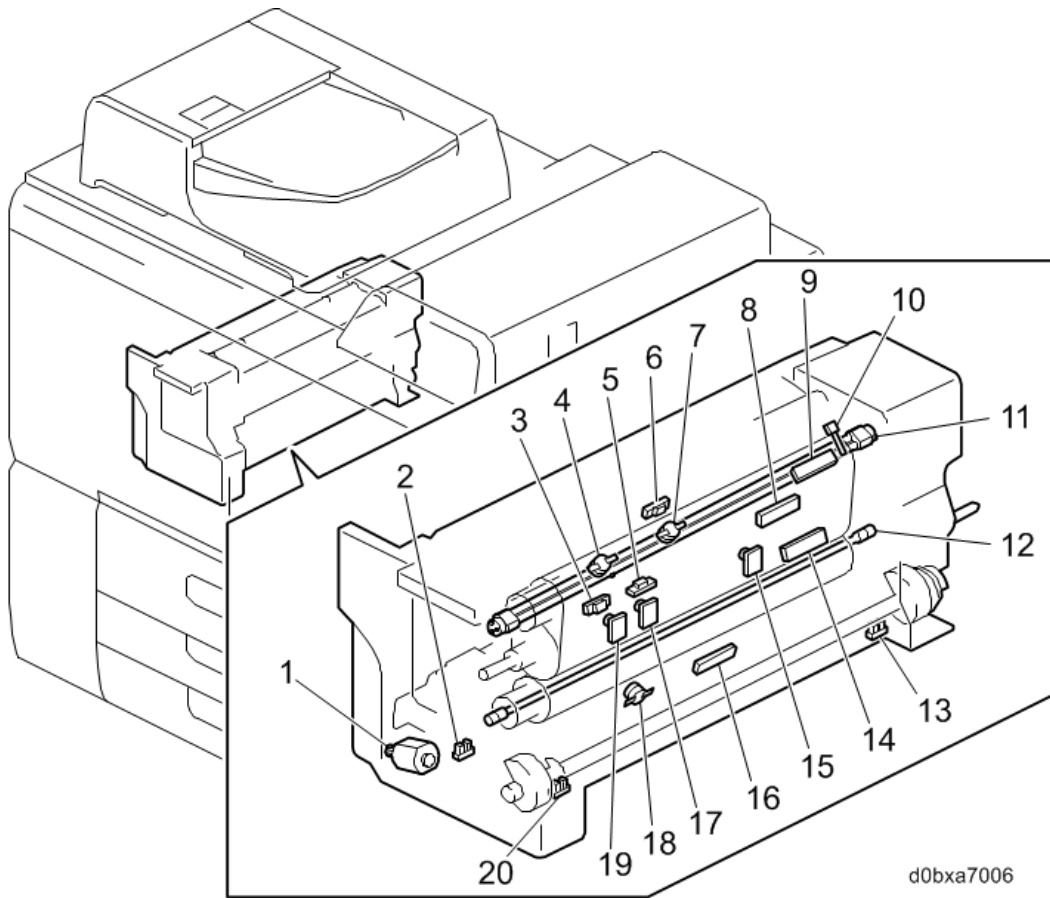
## ITB Unit



No.	Name	No.	Name
1	PTR Separation Motor	8	Transfer Unit Heater
2	Power Pack (T1/T2)	9	TDRB
3	Thermostat	10	PTR Separation Sensor
4	P-sensor Fan	11	Belt Centering Motor
5	ID Sensor	12	Belt Centering Roller HP Sensor
6	Belt Centering Sensor	13	Cleaning Unit Set Switch
7	Transport Belt Motor	14	Bias Roller Heater

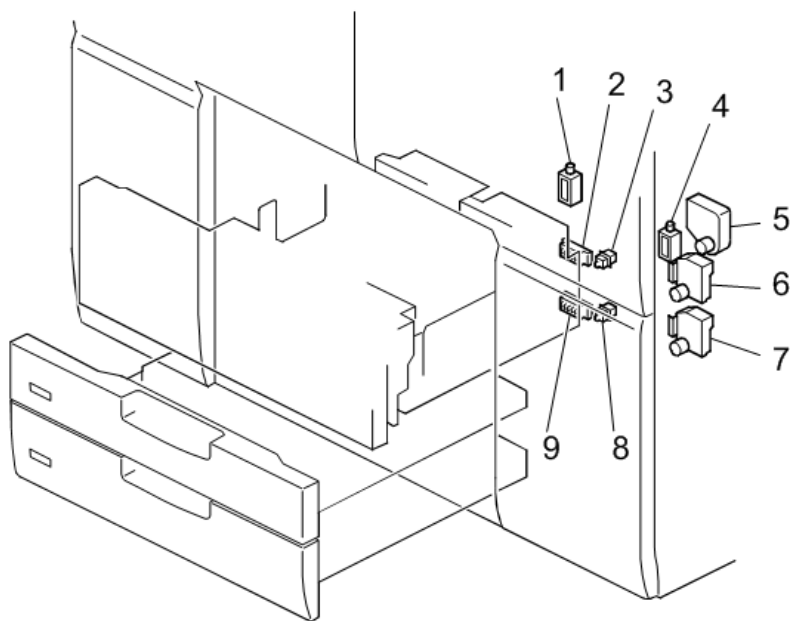
## 6.Detailed Descriptions

### Fusing Unit



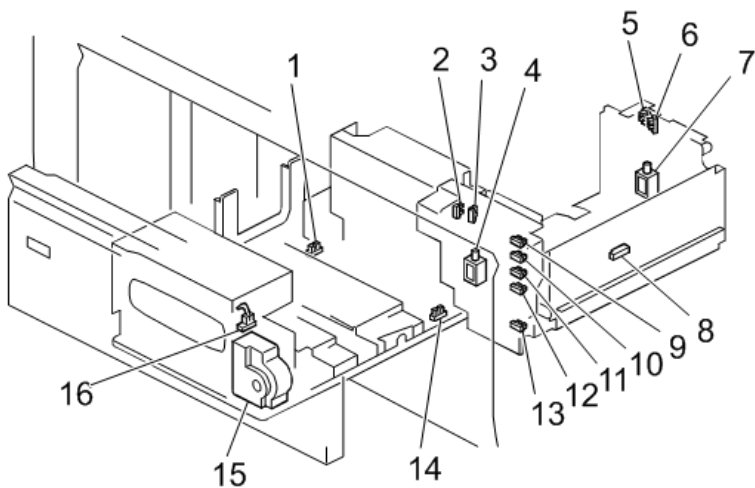
No.	Name	No.	Name
1	Web Motor	11	Fusing Lamps (NA: 997W×3, EU: 1070W×3)
2	Web End Sensor	12	Pressure Roller Fusing Lamp (800W)
3	Fusing Unit Paper Sensor	13	Pressure Roller Lift Sensor
4	Heating Roller Thermostat (End)	14	Fusing Temperature NC Sensor (Hot Roller Center)
5	Fusing Unit Exit Sensor	15	Thermopile (Heating Roller Center)
6	Fusing Belt Paper Sensor	16	Fusing Temperature Sensor (Pressure Roller)
7	Heating Roller Thermostat (Center)	17	Thermopile (Heating Roller Ends)
8	Fusing Temperature Sensor (Heating Roller Center)	18	Pressure Roller Thermostat
9	Fusing Temperature Sensor (Heating Roller End)	19	Thermopile (Heating Roller Full-Bd Ends)
10	Heating Roller Thermistor (Rear)	20	Pressure Roller Cam HP Sensor

Paper Feed Unit



d1797916

No.	Name	No.	Name
1	Left Tray Lock Solenoid	6	Tray Lift Motor (Tray 2)
2	Tray 2 Paper Size Sensor	7	Tray Lift Motor (Tray 3)
3	Tray 2 Set Switch	8	Tray 3 Paper Size Sensor
4	Lock Release Solenoid	9	Tray 3 Set Switch
5	Tray Lift Motor (Tray 1)	-	

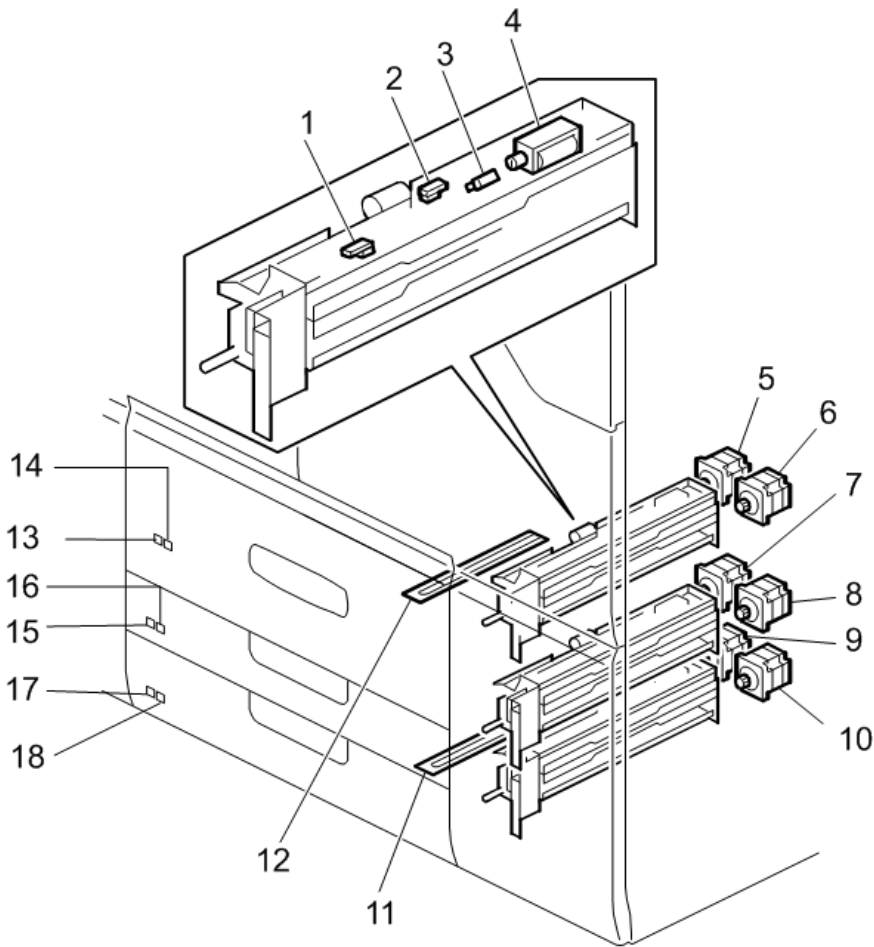


d1797917

No.	Name	No.	Name
1	Rear Fence HP Sensor	9	Paper Height Sensor 1
2	Rear Fence Closed Sensor (Front)	10	Paper Height Sensor 2

## 6.Detailed Descriptions

No.	Name	No.	Name
3	Rear Fence Open Sensor (Front)	11	Paper Height Sensor 3
4	Side Fence Solenoid (Front)	12	Paper Height Sensor 4
5	Rear Fence Closed Sensor (Rear)	13	Lower Limit Sensor
6	Rear Fence Open Sensor (Rear)	14	Left Tray Paper End Sensor
7	Rear Fence Closed Solenoid (Rear)	15	Rear Fence Motor
8	Paper End Sensor (Right Tray)	16	Left Tray Paper End Sensor

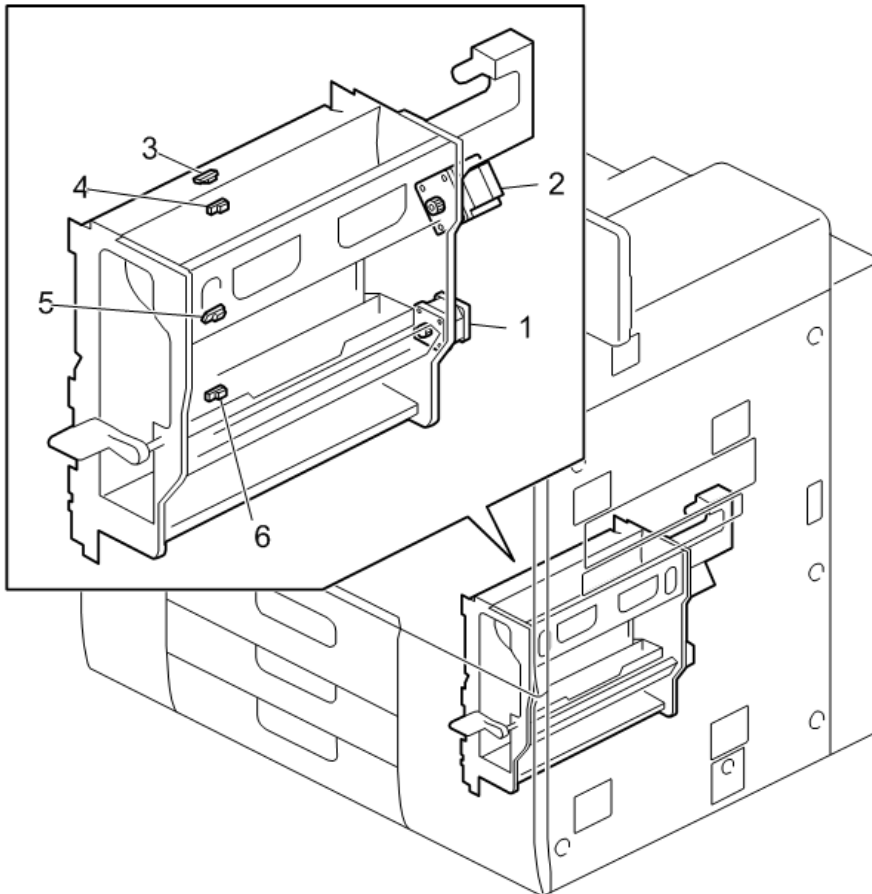


d1797918

No.	Name	No.	Name
1	Paper Feed Sensor (Tray 1, 2, 3)	10	3rd Grip Motor
2	Paper End Sensor (Tray 1, 2, 3)	11	Tray Anti-Condensation Heater 2
3	Pickup Roller Lift Sensor (Tray 1, 2, 3)	12	Tray Anti-Condensation Heater 1
4	Pickup Roller Solenoid (Tray 1, 2, 3)	13	Tray 1 LED 1
5	1st Paper Feed Motor	14	Tray 1 LED 2
6	1st Grip Motor	15	Tray 2 LED 1
7	2nd Paper Feed Motor	16	Tray 2 LED 2
8	2nd Grip Motor	17	Tray 3 LED 1

No.	Name	No.	Name
9	3rd Paper Feed Motor	18	Tray 3 LED 2

## Vertical Transport Unit

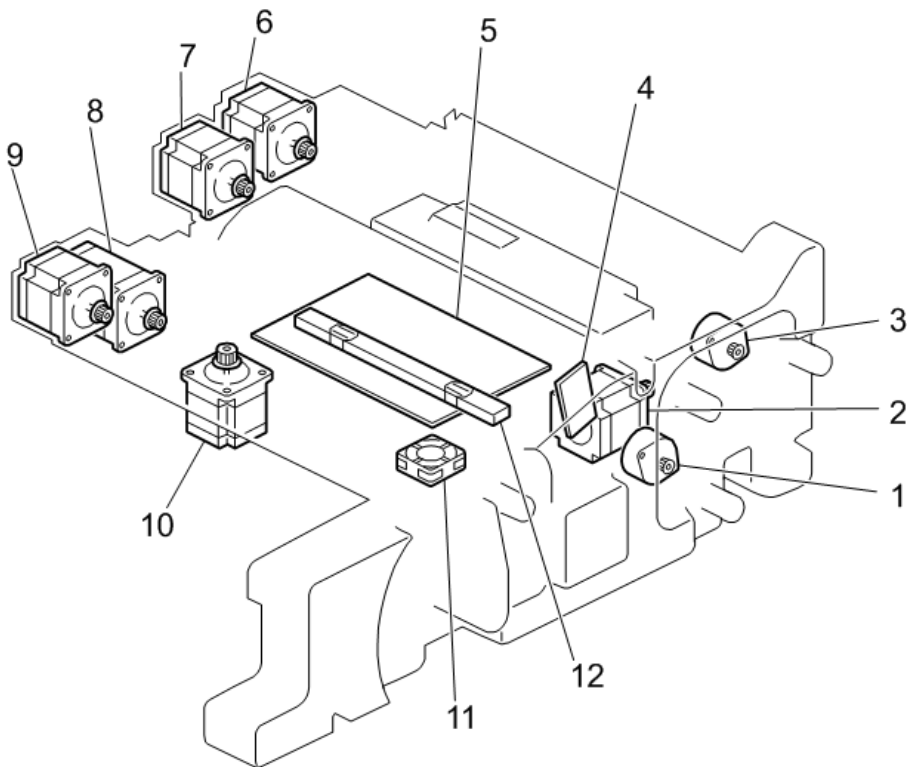


d1797910

No.	Name	No.	Name
1	Vertical Transport Motor	4	Waste Toner Vertical Transport Sensor
2	Exit Motor	5	2nd Transport Sensor
3	Transport Sensor	6	3rd Transport Sensor

## 6.Detailed Descriptions

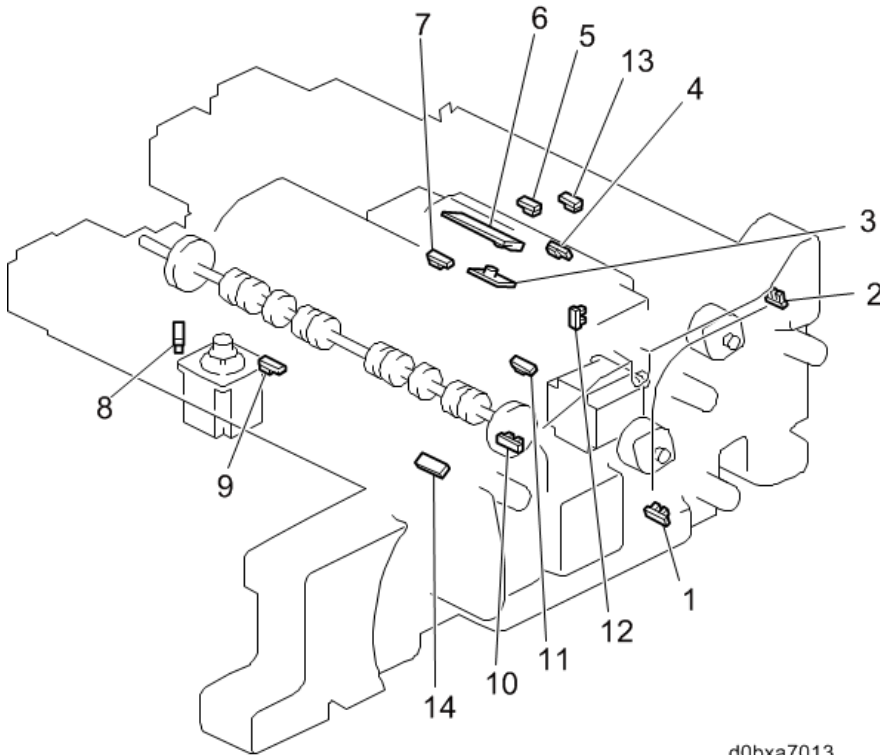
### Registration Unit (Main Paper Path)



d1797920

No.	Name	No.	Name
1	Main Relay Motor	7	Registration Timing Motor
2	Registration Shift Motor (TE)	8	Registration Gate Motor
3	LCT Relay Separation Motor	9	Transfer Timing Motor
4	CRB	10	Registration Shift Motor (LE)
5	DRB	11	CIS Cleaning Fan
6	Registration Entrance Motor	12	CIS



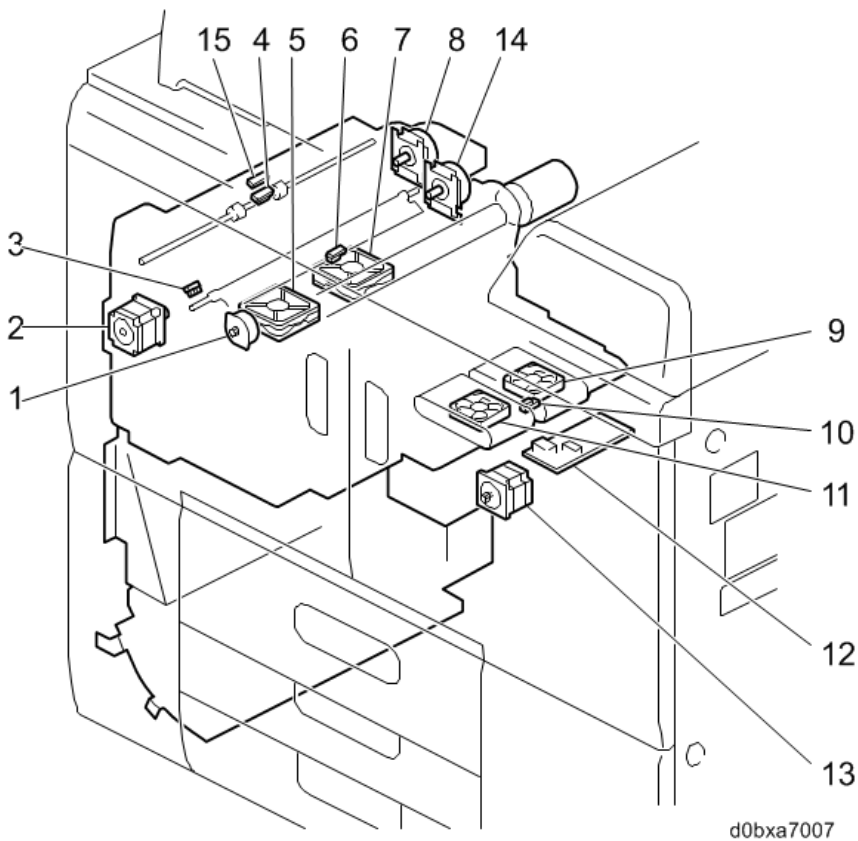


d0bxa7013

No.	Name	No.	Name
1	Main Unit Separation Sensor	8	Shift Unit HP Sensor (LE)
2	Transport Roller Separation Sensor	9	Transfer Timing Sensor
3	Double-feed Sensor (Emitter)	10	Registration Shift HP Sensor
4	Registration Sensor	11	Main Relay Separation HP Sensor
5	LCT Relay Sensor	12	Rear fence HP sensor
6	Double-feed Sensor (Receptor)	13	LCT/Drawer unit Paper Removal Sensor
7	Registration Timing Sensor	14	Tray/Drawer unit Paper Removal Sensor

## 6.Detailed Descriptions

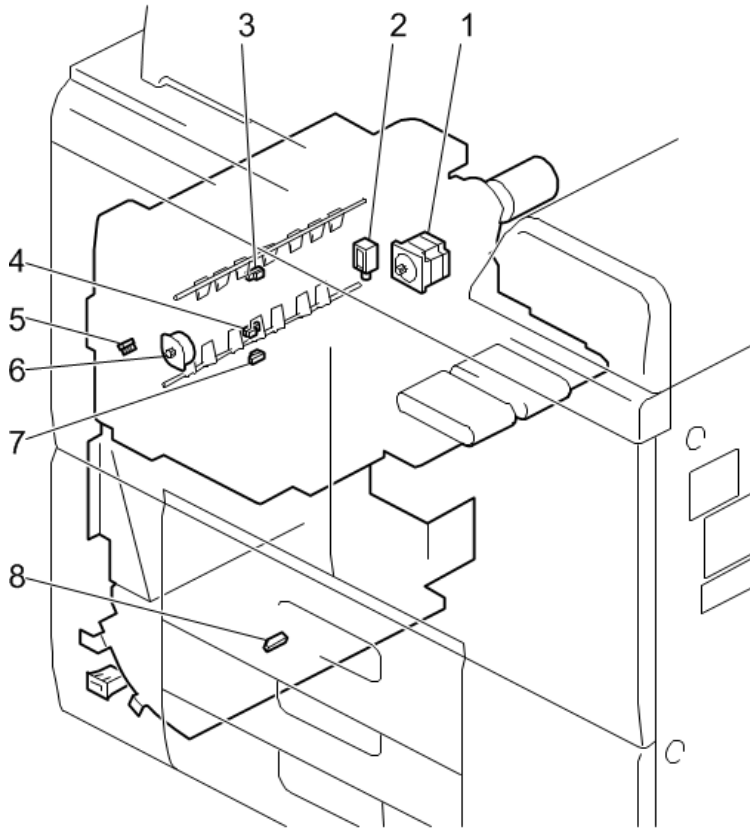
### Invert, Exit, Duplex Unit



d0bxa7007

No.	Name	No.	Name
1	Exit Junction Gate Motor	9	Paper Transport Fan (Rear)
2	Invert Entrance Motor	10	PTB Sensor
3	Exit Junction Gate HP Sensor	11	Paper Transport Fan (Front)
4	Exit Sensor	12	AC Power Pack (D)
5	Duplex Fan (Front)	13	PTB Motor
6	Exit Junction Gate Sensor	14	Heat Pipe Motor
7	Duplex Fan (Rear)	15	Paper Exit/Peripheral Paper Removal Sensor
8	Exit Motor	-	-

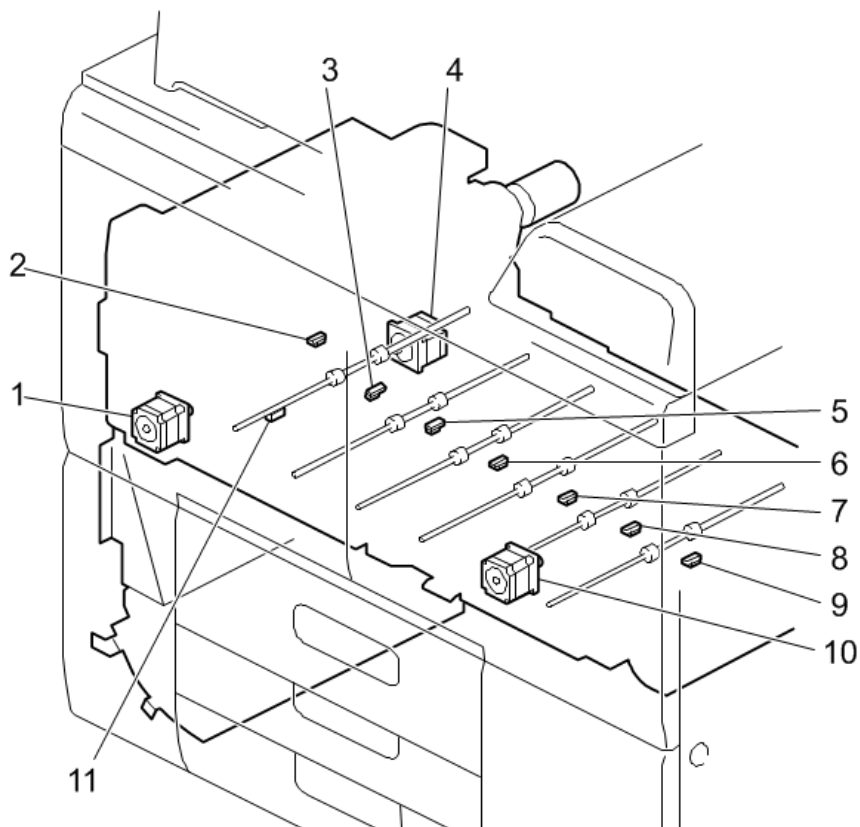
## 6.Detailed Descriptions



d0bxa7008

No.	Name	No.	Name
1	Exit/Invert Motor	5	Exit/Invert Separation Sensor
2	Invert Junction Gate Solenoid	6	Exit/Invert Separation Motor
3	Exit/Invert Sensor	7	Duplex/Invert Sensor
4	Purge Relay Sensor	8	Purged Paper Sensor

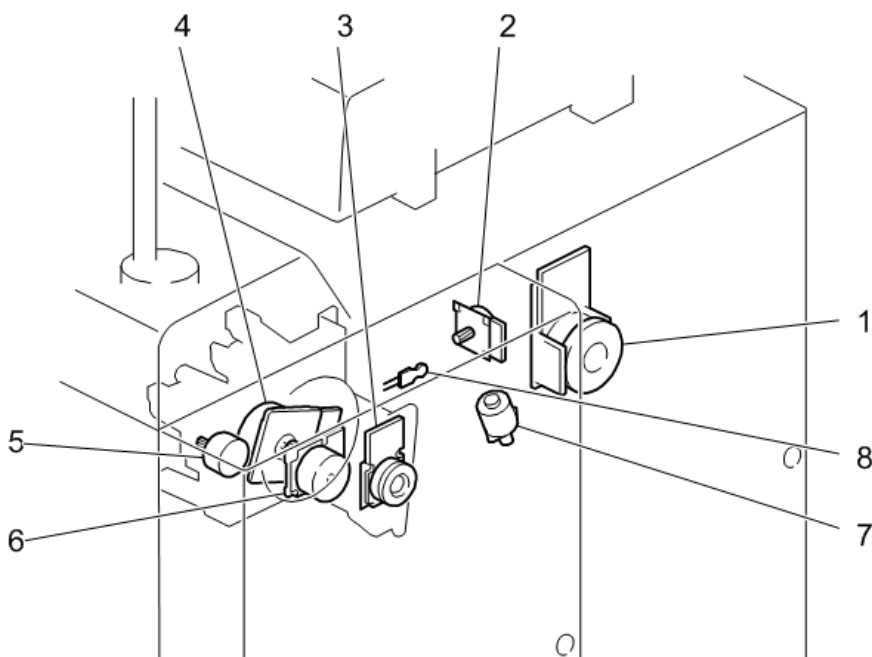
6.Detailed Descriptions



d0bxa7009

No.	Name	No.	Name
1	Duplex Transport Motor 1	7	Duplex Transport Sensor 5
2	Duplex Transport Sensor 1	8	Duplex Transport Sensor 6
3	Duplex Transport Sensor 2	9	Duplex Exit Sensor
4	Duplex/Invert Motor	10	Duplex Transport Motor 2
5	Duplex Transport Sensor 3	11	Duplex/Inverter Path Paper Removal Sensor
6	Duplex Transport Sensor 4	-	-

## Main Drive Motors

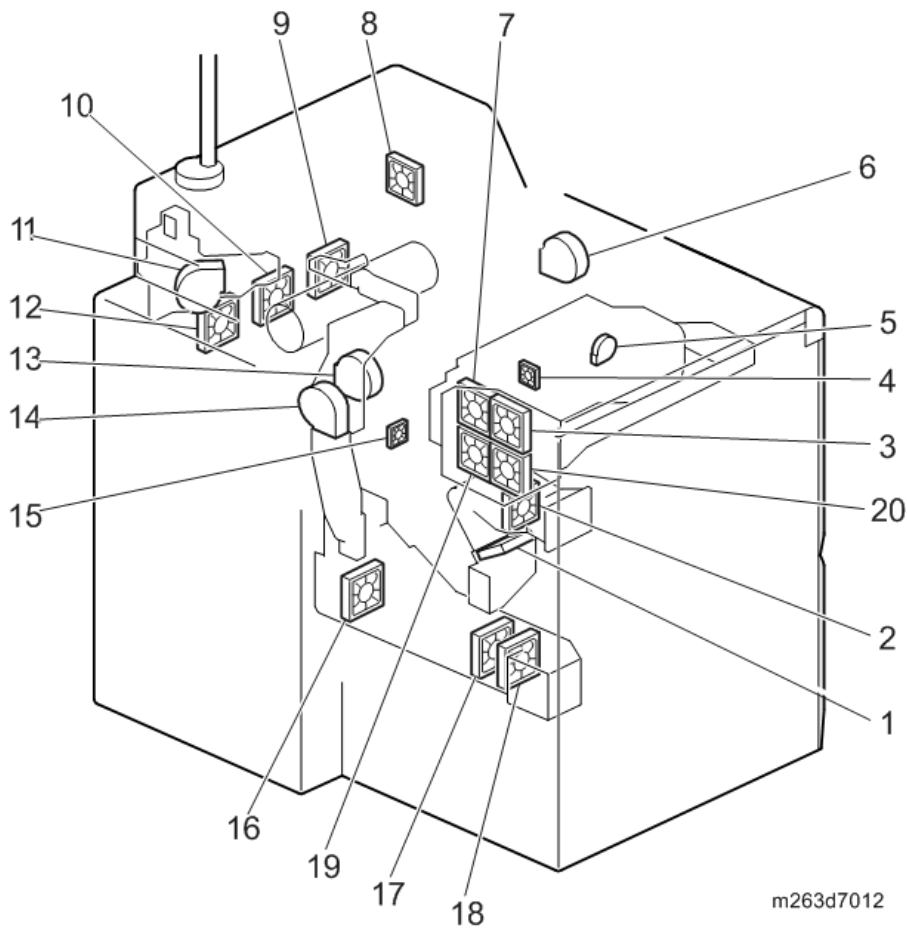


d270d7007

No.	Name	No.	Name
1	Fusing Motor	5	Drum Cleaning Motor
2	Waste Toner Transport Motor	6	Drum Motor
3	PTR Motor	7	Pressure Roller Lift Motor
4	Development Motor	8	Main Machine Thermistor

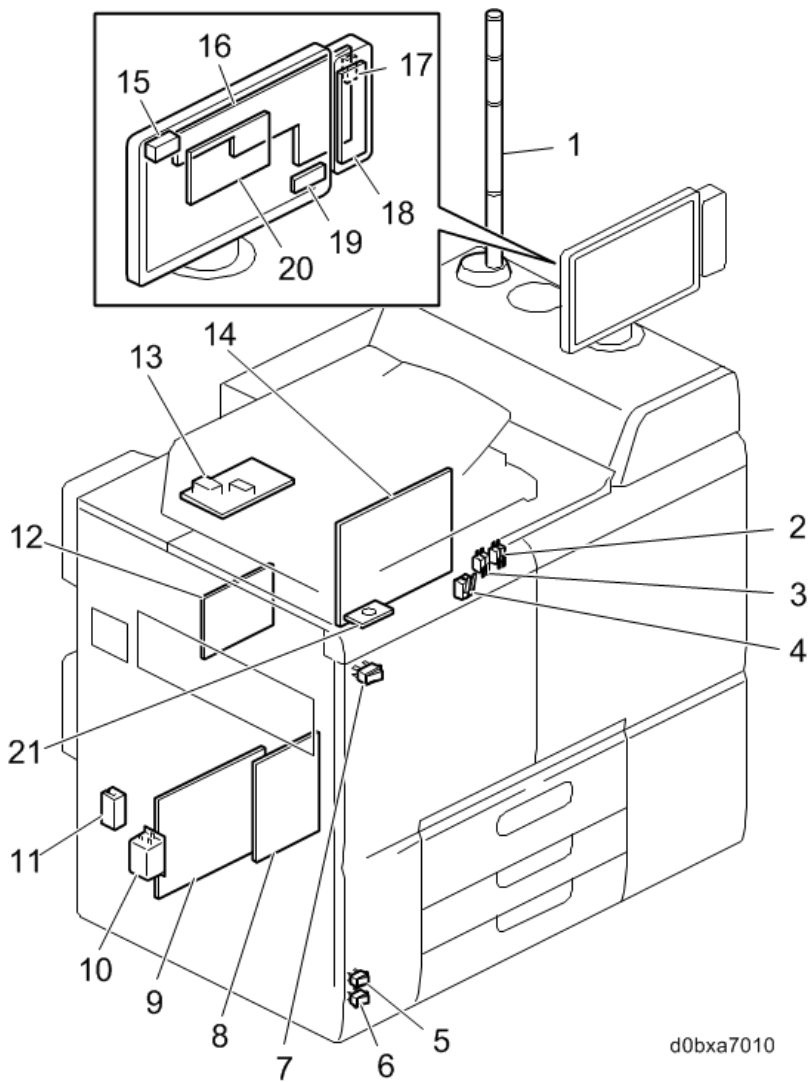
## 6.Detailed Descriptions

### Fans



No.	Name	No.	Name
1	HP Cooling Suction Fan	11	Ozone Air Intake Fan
2	HP Cooling Exhaust Fan	12	Right Air Intake Fan: Rear
3	Fusing Air Intake Fan: Lower Left	13	Development Unit Cooling Fan: Rear
4	PRT Cooling Fan Front NS	14	Ozone Air Exhaust Fan
5	Belt Cleaning Fan	15	PRT Cooling Fan Rear NS
6	Development Unit Cooling Fan: Front	16	Fusing Transport Exhaust Fan
7	Fusing Air Intake Fan: Lower Right	17	Fusing Exhaust Fan: Upper
8	Laser Unit Cooling Fan	18	Fusing Exhaust Fan: Lower
9	Right Air Intake Fan: Front	19	Paper Exit Exhaust Fan: Lower Right
10	Right Air Intake Fan: Center	20	Paper Exit Exhaust Fan: Lower Left

## Boards

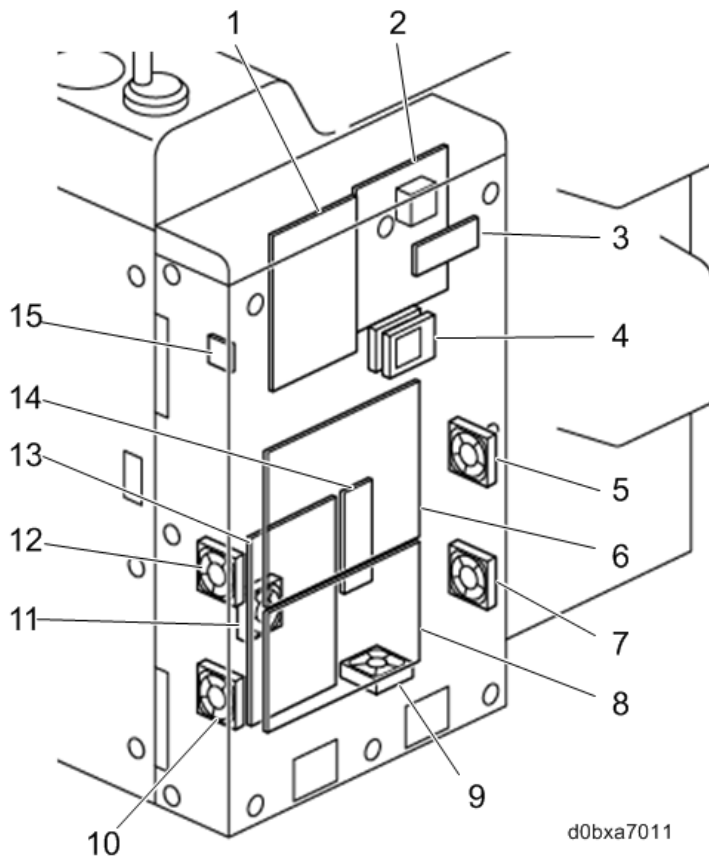


d0bxa7010

No.	Name	No.	Name
1	Attention Light	12	EDRB
2	Interlock Switch (Front Right)	13	CGB Power Pack
3	Interlock Switch (Front Left)	14	IOB
4	Interlock Switch	15	Speaker (Operation Panel)
5	Paper Transfer Bias Roller Heater Switch	16	Operation Panel Main Board (Operation Panel)
6	Bank LCT Heater SW	17	WLAN/BT board (Operation Panel)
7	AC Power Switch	18	Key/LED board (Operation Panel)
8	RYB	19	LCD Adjustment Board (Operation Panel)
9	AC Drive Board	20	LCDC (Operation Panel)
10	Noise Filter	21	Main Power Switch
11	Circuit Breaker		

## 6.Detailed Descriptions

### Controller Box



No.	Name	No.	Name
1	BiCU	9	PSU Cooling Fan T left
2	Control Board	10	PSU Intake Fan: M2 Right
3	SDCU	11	PSU-C Cooling Fan
4	HDD	12	PSU Intake Fan: M1 Right
5	PSU Exhaust Fan: M1 Left	13	PSU-C
6	PSU-B	14	PSU-D
7	PSU Exhaust Fan: M2 Left	15	MKB (Option)
8	PSU-A	-	-



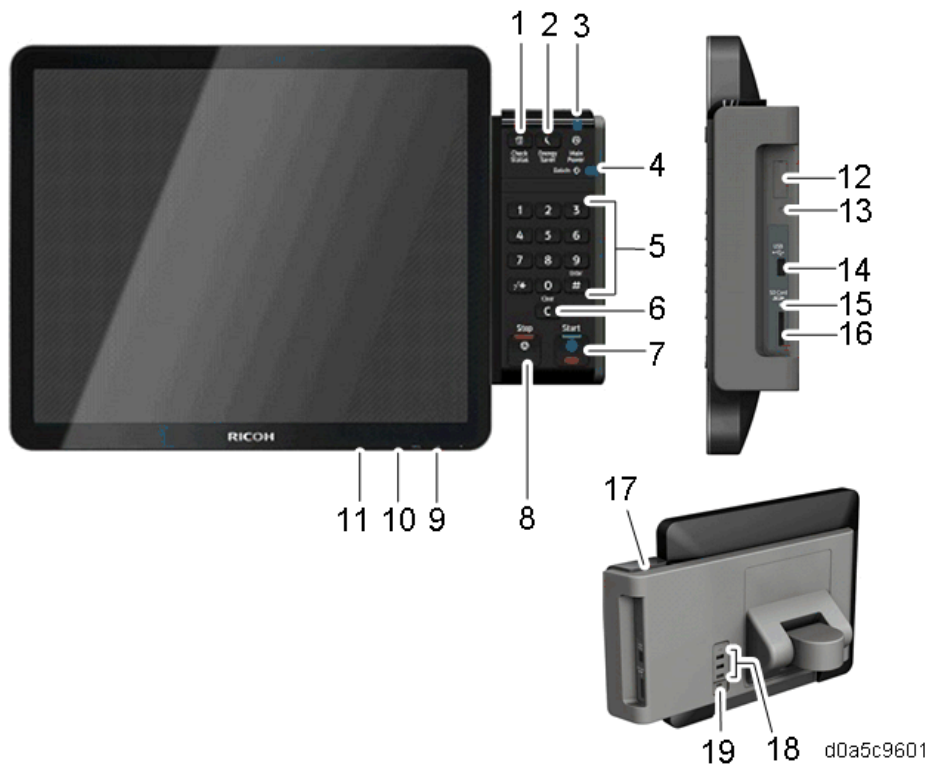
# Operation Panel

## Overview

## System Components


## Hardware Specifications

## Components





No.	Name	No.	Name
1	[Check Status] key/ [Check Status] indicator	11	LCD menu button
2	[Energy Saver] key/ [Energy Saver] indicator	12	Cover for maintenance
3	Main power indicator	13	Operation panel reboot key
4	Data In indicator	14	USB slot for USB memory
5	Numeric keys	15	Media access lamp
6	[Clear] key	16	SD card slot
7	[Start] key/ [Start] indicator	17	[Check Status] rear indicator
8	[Stop] key	18	USB slots Type-A for mouse and USB keyboard
9	LCD [Down] button	19	USB slot Type-miniB for NFC card readers
10	LCD [Up] button		

**Basic Specifications**

Category	Specification
LCD panel	<ul style="list-style-type: none"> <li>• Size 17 inch panel</li> <li>• Resolution SXGA (1280 x 1024)</li> <li>• Bit width 24 bit color (16,700,000 color)</li> <li>• Brightness 250 cd/m<sup>2</sup> (typ.)</li> <li>• Backlight LED Backlight (life: 30,000 hours)</li> </ul>
CPU	ARM Cortex-A9 Dual Core 1GHz (SoC: MCIMX6D5EYM10AD)
Touchscreen panel	Projected capacitive touch panel
Memory	<ul style="list-style-type: none"> <li>• Volatile Memory RAM (DDR3-1066), 2GB</li> <li>• Non-Volatile Memory eMMC NAND, 8GB</li> </ul> <p> <b>Note</b></p> <ul style="list-style-type: none"> <li>• Uses a 16GB product in SLC Mode.</li> <li>• Program area and data area for the operating system and applications.</li> </ul>
External interfaces	<ul style="list-style-type: none"> <li>• USB Memory USB2.0 Host Type-A</li> <li>• SD Card SD card slot 1ch (SD*1/SDHC*2) *1 Up to 2GB *2 Up to 32GB</li> <li>• USB expansion USB2.0 Host Type-A (for mouse, USB keyboard, and Media Identification Unit (Option)) USB2.0 Host Type-miniB (for NFC expansion)</li> </ul>
Internal interfaces	<ul style="list-style-type: none"> <li>• Extended Features microSD card slot</li> </ul>
Network	<ul style="list-style-type: none"> <li>• Wireless LAN 802.11b/g/n</li> <li>• Bluetooth Bluetooth 4.0</li> </ul>

Category	Specification
Audio input/output	Monaural speaker 1ch (output: 1 to 2 W), Microphone
RTC accuracy	±52.56 seconds per month (using external crystal oscillator, 20 ppm)
Hard keys	17 keys <ul style="list-style-type: none"> <li>• [Check Status] key</li> <li>• [Energy Saver] key</li> <li>• Numeric keys</li> <li>• [Clear] key</li> <li>• [Start] key</li> <li>• [Stop] key</li> </ul>
LED types	Seven types <ul style="list-style-type: none"> <li>• Main power indicator (blue) Lights when the power is on.</li> <li>• [Energy Saver] indicator (blue) Lights in Energy Save mode. Flashes slowly in Sleep mode.</li> <li>• [Check Status] indicator/ [Check Status] rear indicator (red/yellow) Lights when an error occurs. Two lamps perform the same action.</li> <li>• [Start] indicator (red/blue)</li> <li>• Data In indicator (blue) Flashes when the machine receives data from a printer driver.</li> <li>• Media access lamp (blue) Lights when there is an SD card inserted in the SD card slot.</li> </ul>
Maximum power consumption	14.546 W or less
Power consumption in Sleep mode	0.72 W or less

### Specification Comparison with the Previous Model

Item	This model	Previous model
Appearance	 <p>d0a5c9602</p>	 <p>d0a5c9603</p>
LCD panel size	17 inch	10.4 inch
LCD resolution	1280 x 1024 dot	800 x 600 dot
Hard keys	17 keys <ul style="list-style-type: none"> <li>• [Check Status] key</li> </ul>	32 keys

## 6.Detailed Descriptions

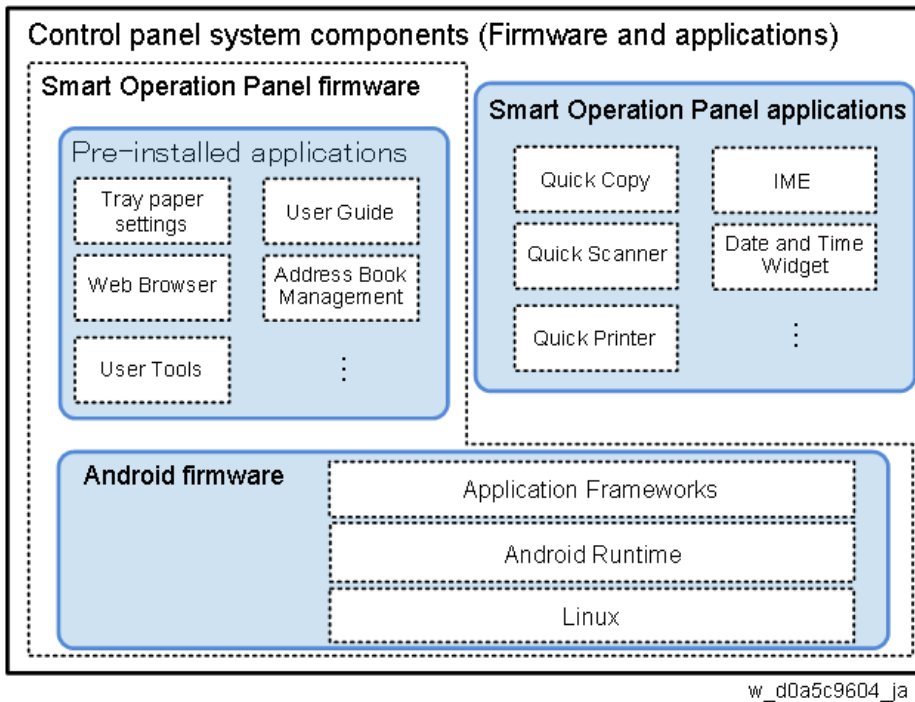
Item	This model	Previous model
	<ul style="list-style-type: none"> <li>• [Energy Saver] key</li> <li>• Numeric keys</li> <li>• [Clear] key</li> <li>• [Start] key</li> <li>• [Stop] key</li> </ul>	
LED types	Seven types <ul style="list-style-type: none"> <li>• Main power indicator</li> <li>• [Check Status] indicator</li> <li>• [Check Status] rear indicator</li> <li>• [Energy Saver] indicator</li> <li>• Data In indicator</li> <li>• Media access lamp</li> <li>• [Start] indicator</li> </ul>	Nine types
Touch panel	Projected capacitive touch panel	Resistive film type touch panel
Wireless LAN interface	IEEE802.11bgn	IEEE802.11bgn
Bluetooth	Available	Not available
Types of external interfaces	<ul style="list-style-type: none"> <li>• USB port (type A/mini)</li> <li>• USB media slot</li> <li>• SD card slot</li> </ul>	<ul style="list-style-type: none"> <li>• USB media slot</li> <li>• SD card slot</li> </ul>
Job list	Displays more than 12 jobs	Displays only four jobs
Tray list	Displays all tray	Displays by switching the tab windows

### Available Languages

Japanese, English, French, German, Italian, Spanish, Dutch, Norwegian, Danish, Swedish, Polish, Portuguese, Hungarian, Czech, Finnish, Simplified Chinese, Traditional Chinese, Russian, Greek, Korean, Catalan, Turkish, Brazilian Portuguese

### Software Specifications

A software package consisting of the Android Firmware and the manufacturer's own pre-installed applications is installed on the Smart Operation Panel.



The following three types of software are installed on the Smart Operation Panel.

1. Android Firmware (Android OS)
2. Pre-installed applications
3. Applications that can be installed additionally

### Android Firmware (Android OS)

The Android Firmware (Android OS) consists of the following modules that are called “stacks”.

- Linux kernel
- Android Runtime
- Application Framework

### Pre-installed applications

On the Smart Operation Panel, applications such as the GW applications (Copy/Printer/Document Server/Scanner), Operation Panel Browser, the standard keyboard, Installer, Gallery, Self Check are pre-installed. Unlike those installed on the controller board of the machine, GW applications that are installed on the Smart Operation Panel are for controlling operation and display of the Smart Operation Panel.

Pre-installed applications are provided as part of the operation panel firmware together with the Android firmware. When you update the operation panel firmware using the recovery mode or another method, the pre-installed applications will also be updated.

### Applications that can be installed

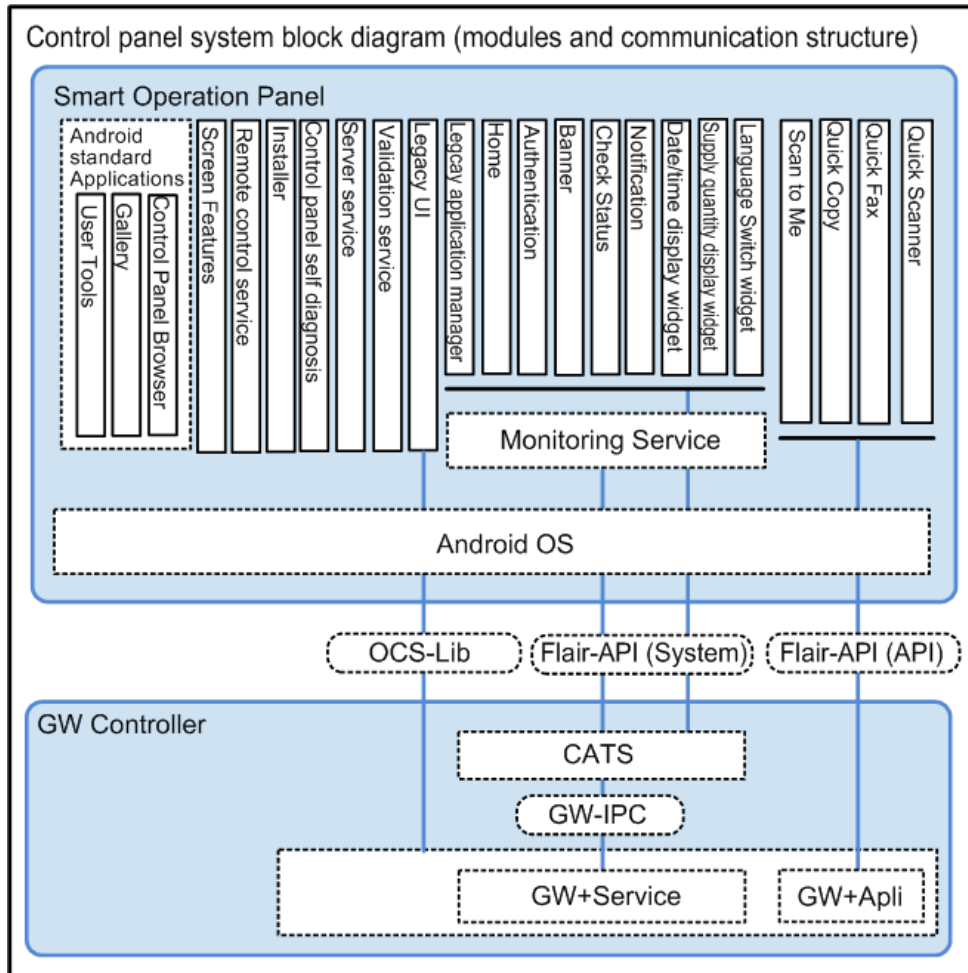
On the Smart Operation Panel, applications can be installed in addition to the pre-installed applications. Applications that can be installed include optional applications that customers can purchase, applications that are installed only on machines sold in specific regions, and custom-made applications.

## 6. Detailed Descriptions

### Communication Specifications

The Smart Operation Panel and the GW controller are connected by a USB 3.0 cable. They communicate with each other via the Android OS on the Smart Operation Panel, using protocols called “OCS Library” and “Flair-API (System/Application)”.

### System block diagram

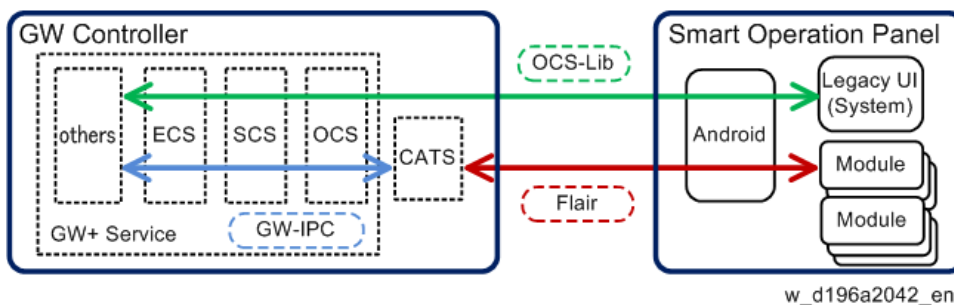


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### Overview of Components

Communication module/signal name	Details
OCS Library	<p>OSC stands for Operating Control Service. It is a module that controls the operation panel. The set of signals used by this module to control the operation panel are called the OCS Library.</p> <p>It is used during communication between the Legacy UI (system) module on the Smart Operation Panel and the GW module for the following processes.</p> <ul style="list-style-type: none"> <li>Deciding on the display format suitable for a particular model of the operation panel, so that the intended image data can be converted to</li> </ul>

Communication module/signal name	Details
	<p>actual image data.</p> <ul style="list-style-type: none"> <li>Converting touch panel operations to commands.</li> </ul>
Flair-API (System/Application)	<p>Flair is the manufacturer's own communication interface between software modules. The interface uses a generic WebAPI.</p> <p>It is divided into two parts: a part that communicates directly with applications such as the application manager, Home, Authentication, Banner, Check Status, and Widgets, and a part that monitors applications. It communicates with the GW controller via the CATS module.</p>
CATS	<p>CATS stands for Cheetah Application Total System. It is a module in the GW controller.</p> <p>Because the Smart Operation Panel uses the Android OS, the contents and protocols of communication are not the same as those of the conventional operation panel. CATS serves as an intermediary between the GW controller and the Smart Operation Panel.</p> <p>It also controls the power status of the operation panel.</p> <p>CATS communicates with the Smart Operation Panel using the Flair-API, and communicates with the GW module using the GW-API.</p>
GW-IPC	<p>The name of the interface used among modules in the GW controller. The role is the same as that of the Flair-API.</p>



#### Note

- API stands for Application Programming Interface. An API is an interface that software modules use in order to communicate with each other.

### Application Specifications

The pre-installed applications and applications that can be additionally installed on the Smart Operation Panel can be classified into the following three categories.

- System applications  
Applications that operate in conjunction with multiple functions (operating regardless of the application)
- Program applications

## 6. Detailed Descriptions

Applications that provide a single additional function

- Widget applications

Applications that provide a widget

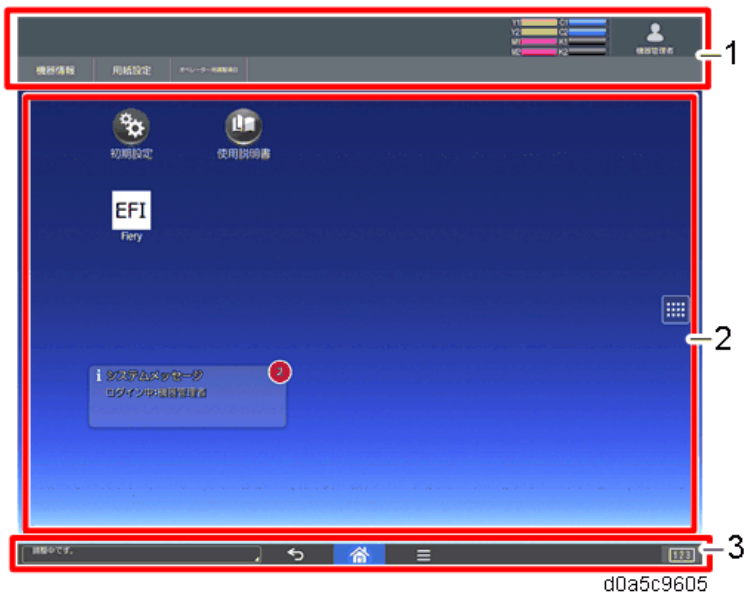
The following table explains the function of each application.

Application	Functions
Printer Status	Displays the connected options, toner status, tray list, and job list.
Remote Desktop	Operates the machine by displaying the screen of the RDP server connected to a network on the Smart Operation Panel.
Printer Server Console	
Fiery Console	
Copier (Classic)	This application provides an application switching function when there is no Home application.
Scanner (Classic)	
Printer (Classic)	
TotalFlow / Printer Server	
Fiery	
Web Browser	Android OS's standard Browser application.
User Tools	Displays the configuration.
User Guide	Provides connection to the server where user guides are stored (HTTP server). User guides are displayed using the Web Browser application.
Address Book Management	Manages the address book.
System Mes. Widget	Displays the system messages.
Supply Info Widget	Displays the toner status.
Change Langs. Widget	Provides the language switching function.
Web Browser NX	Provides an operating environment for solution application functions and configuration.
Quick Card Authentication Config.	Provides simple authentication using an IC card.
Stop Widget	Provides a [Stop] key on the application screen. Used by functions such as Quick Copy and Scan to Me.
Eco-friendly Widget	Displays detailed information about the eco functions.
Date and Time Widget	Displays the date and time.
Remote Panel Operation	Operates the machine by remote control by a PC or a tablet on the same network.
Tray paper settings	Provides the paper settings.
Adjustment Settings for Operators	Adjusts the printer engine.



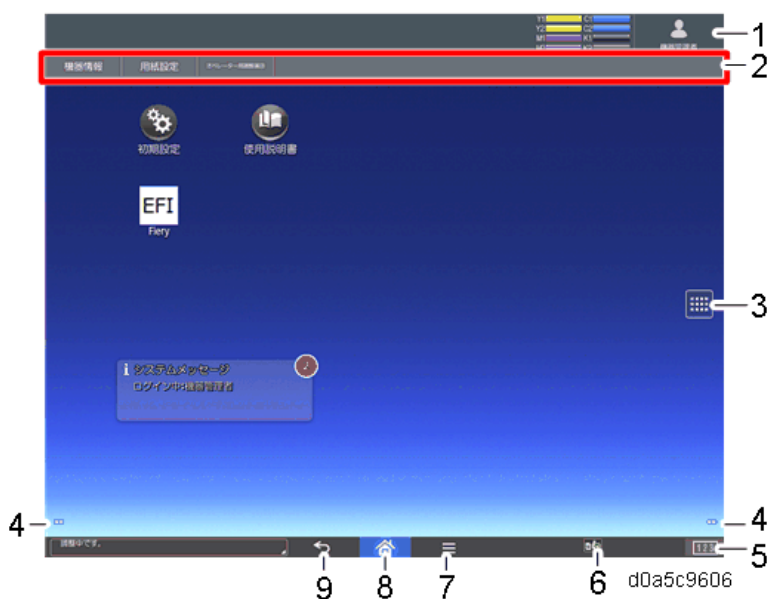
## Screen Layout

## Home screen






No.	Name	Description
1	Login banner	Job status, machine status, supply status, login information, and function keys are displayed.
2	Icon display area	Application icons and widgets are displayed.
3	System banner	System messages, system keys, security information, and counter key are displayed.

## Soft keys displayed on the Home screen

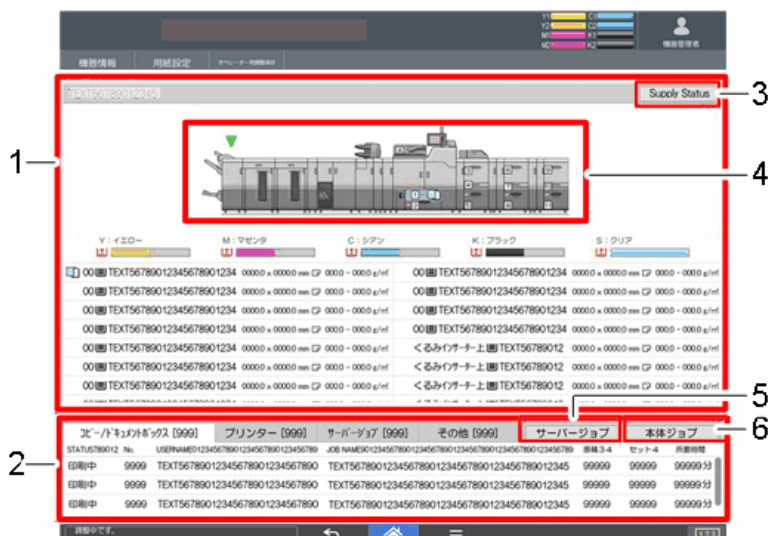


No.	Name	Description
1	Login key	Displayed when authentication is enabled. The login screen appears if you

## 6.Detailed Descriptions

No.	Name	Description
		press [Login]. User information is displayed if you have already logged in. You will be logged out when you press the user information key.
2	Function keys	Users can assign shortcuts for each application. [Machine information], [Paper Setting], [Adjustment Settings for Operators], and up to six applications can be assigned as shortcuts. When an application is assigned as a function key, users can call the application from any screen. The function keys are disabled by default. Users must enable this function to be able to allocate applications to function keys.
3	[Application List] key	Displays the list of installed applications, programs, and widgets.
4	Switching Home screen key	Goes to the next page.
5	Counter key	Displays the counter information screen.
6	[Media] key	Displayed when a USB memory or an SD card is installed. You can remove the USB memory or SD card by touching this icon. Depending on the kind of media, displayed as follows:  : When a USB memory is installed  : When an SD card is installed  : When a USB memory and a SD card are installed
7	[Menu] key	Displays the menu screen of the application in use. May not be available depending on the application.
8	[Home] key	Displays the Home screen.
9	[Back] key	Use this to go back to the previous screen when the Screen Features screen or the screen of an application is displayed.

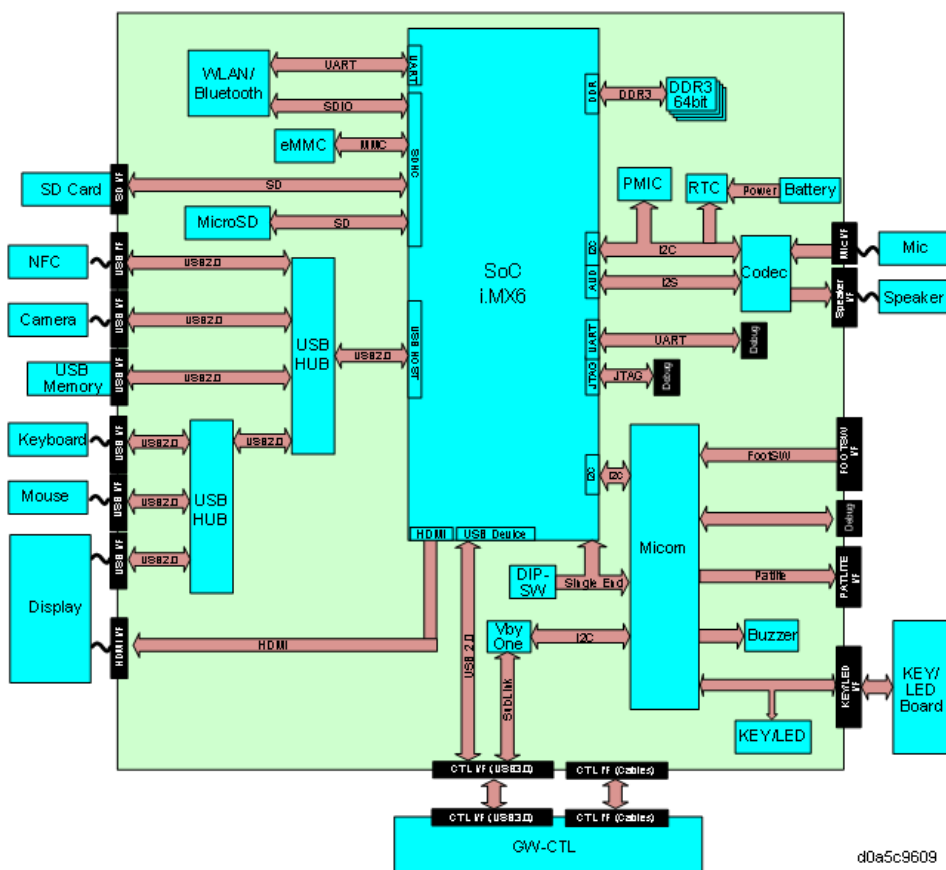
### [Printer Status] screen



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No.	Name	Description
1	Supply Information area	Job status, machine status, supply status, login information, and function keys are displayed.
2	Job list	Application icons and widgets are displayed.
3	[Supply Status] key	Displays the [Maintenance/Service/Machine Information] screen.
4	Peripherals configuration	This machine and the connected options are displayed.
5	[Server job] key	Displays the server job list. Displayed when the external controller is connected.
6	[Machine job] key	Displays the current job screen.

Electrical Components



Controlling the Power Supply

Exiting Energy Saving Mode

The main machine exits energy saving mode by specific key operation as follows:

Key	This model	Previous model (Reference)
[Check Status] key	Exits energy saving mode and displays the status screen.	
[Energy Server] key	Exits energy saving mode and displays the priority	

## 6.Detailed Descriptions

Key	This model	Previous model (Reference)
		application screen.
[Stop] key	Not restored	Exits energy saving mode and displays the Stop screen.
[Home] key	No keys	Not restored
[Login/Logout] key	No keys	Not restored
Touching the panel, Numeric key, [Start] key, [Clear] key	Not restored	

### Screen Startup Mode

#### Startup Modes

There are two screen startup modes. The factory default setting is Normal.

1. Normal

This is the standard startup mode. When the main power of the machine is turned ON, the operation panel starts up using less power compared to Quick mode.

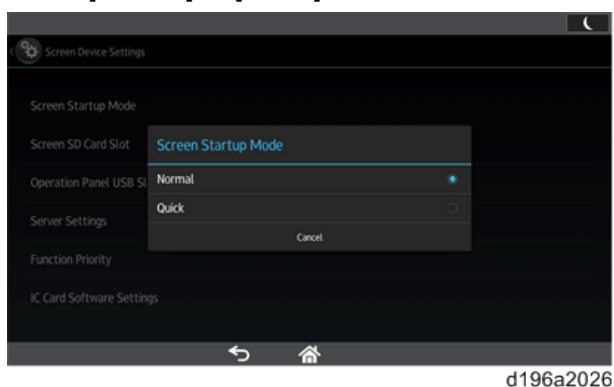
2. Quick

By preparing for the next startup when the machine shuts down, the operation panel starts up faster than in Normal mode.

#### Changing the Screen Startup Mode

Screen Startup Mode can be changed in Screen Features.

Select [Screen Features] > [SYSTEM] > [Screen Device Settings] > [Screen Startup Mode], and then select [Normal] or [Quick].



#### Note

- In the following cases, the operation panel starts up in Normal mode even if [Quick] is selected.
- The power cord has been disconnected from the power outlet after the last shutdown.
- The main machine is turned ON after being turned OFF due to reasons such as a power failure.
- The main machine was not properly shut down the last time it was turned OFF.

## How the Operation Panel Starts Up

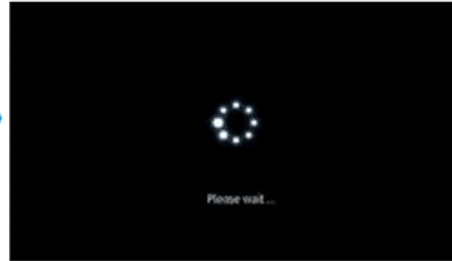
### In Normal mode

The startup screen is displayed on the display panel, followed by the startup animation.

Startup screen



Startup animation



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### In Quick mode

The [Home] screen is displayed immediately after the main power of the machine is turned ON. The startup screen displayed when starting in Normal mode is not displayed.

### How the Screen Shuts Down When Quick Mode Is Selected

When Quick mode is selected, the main machine prepares for the next startup when it shuts down. The main power indicator flashes during preparation for the next startup. The indicator turns off when preparation is completed.



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If the main machine is turned ON during shutdown, the preparation for the next startup continues. When preparation for the next startup is completed, the operation panel starts up in Quick mode.

#### Note

- When Quick mode is selected, the operation panel starts up faster than in Normal mode but shutdown takes longer than in Normal mode.

### Shutdown Functions

The shutdown functions and their uses are as follows.

Shutdown mode	Use	Operation
Normal Shutdown	Same as shutdown by users.	Turn the main power switch off.
Forced shutdown	When normal shutdown does not complete even	Hold the main power

## 6.Detailed Descriptions

Shutdown mode	Use	Operation
	though you waited a long time.	switch 6 seconds or longer.
Shutdown for parts replacement	<ul style="list-style-type: none"> <li>When you have to disconnect the power cord from the power outlet, such as when replacing parts.</li> <li>When you want to start the machine normally and then enter recovery mode, without changing the Startup mode in Screen Features. (For updating operation firmware)</li> </ul>	Turn the main power switch off while holding down [Stop].
Shutdown for software update	<p>When you are going to turn on the main machine within 5 minutes for updating the main machine firmware or package.</p> <p>(Use shutdown for parts replacement if you are updating the operation panel firmware.)</p>	Turn the main power switch off while holding down the [#] key.

### Normal Shutdown

The main machine is equipped with a function to shut down safely in order to:

- Prevent damage to the file systems in the HDD and the NAND flash memory.
- Prevent paper from being left inside the body of the machine (except when paper is jammed).

The shutdown process begins when the push switch is pressed. To make a forced shutdown, press and hold the push switch for 6 seconds. However, if you force a shutdown during the shutdown process, data being processed may be lost. Forced shutdown is to be used to shut down the main machine without disconnecting the power cord when the shutdown process cannot be completed.

### Other Shutdown Functions

This machine has two additional shutdown functions to facilitate maintenance.

#### Shutting down the machine for parts replacement (Starting up in Normal mode when Quick mode is selected)

When Quick mode is selected, the machine prepares for the next startup when it shuts down. This causes the shutdown process to take longer than when Normal mode is selected.

If you need to disconnect the power cord after shutdown in order to replace parts or for other reasons, you can use the following procedure to shut down the machine just like you do in Normal mode. This shortens the time it takes to shut down the machine.

- Procedure
  - Turn the main power switch OFF while holding down the [Stop] key on the operation panel.
  - Continue to hold down the [Stop] key until the shutdown screen is displayed.

#### Shutting down the machine for software updates (Shutting down the machine with the

**operation panel in Sleep mode)**

If you are going to turn ON the machine within 5 minutes, you can use the following procedure to shut down the machine with the operation panel in Sleep mode.

- Procedure

Turn the main power switch OFF while holding down the [#] key. Continue to hold down the [#] key until the shutdown screen is displayed.

 Note

- You must turn ON the machine within 5 minutes.
- If more than 5 minutes has elapsed after shutting down the machine using the above procedure, the machine starts up in Normal mode even if Quick mode is selected.

## ADF (Copier Models Only)

### Specifications

#### Basic Specifications

Type	Single/duplex automatic sheet through scanning (scans both sides with one pass)		
Originals			
Simplex	A3, A4, A5, B4, B5, B6, DLT, LG, LT, HLT, Long (up to 1260 mm), 40 to 128 g/m <sup>2</sup>		
Duplex	A3, A4, A5, B4, B5, (B6), DLT, LG, LT, HLT, 52 to 128 g/m <sup>2</sup> B6: Smallest size		
Mixed sizes	A3, A4, B4, B5, DLT, LG, LT, HLT 52 to 81.4 g/m <sup>2</sup>		
Original standard position	Rear left corner		
Original setting	Image side face up		
Original feed order	From top to bottom of stack		
Original feed separation	Friction with feed belt and original separation roller		
Original scanning methods	Sheet-through duplex (Front: white guide plate, Back: Color CIS + white roller)		
Original tray capacity	250 sheets (64g/m <sup>2</sup> ), Stack less than 25 mm, Normal paper		
Target Line Speed	500 mm/s (B&W)		
Scanning productivity			
Simplex	Copy/Scan	120 ipm (200/300 dpi) A4 LEF, 1:1 (B&W, Color)	
Duplex	Copy/Scan	220 ipm (200/300 dpi) A4 LEF, 1:1 (B&W, Color)	
ADF magnification (front/back)	System 25% to 400%		
Dimensions (w x d x h)	591 x 520 x 175 mm (23 x 21 x 7 in.)		
Weight	Less than 14 kg (31 lb.)		
Power supply	DC24 V, DC5 V (from main machine)		
Power consumption	Less than 82.5W		

#### Compatible Originals

Thickness	35 kg	40 kg	45 kg	55 kg
	40.7	46.5	52.3	64
	g/m <sup>2</sup>	g/m <sup>2</sup>	g/m <sup>2</sup>	g/m <sup>2</sup>
	250	250	250	250
Paper Size				
A3/A4	---	---	⊙	⊙



## 6.Detailed Descriptions

A5	○	○	⊙	⊙
B4/B5	○	○	⊙	⊙
B6	---	---	⊙	⊙
DLT/LG	○	○	⊙	⊙
LT	○	○	⊙	⊙
HLT	○	○	⊙	⊙
F	○	○	⊙	⊙

Thickness	70 kg	90 kg	110 kg	Translucent
	81.4	105	128	TA, TE, TC
	g/m <sup>2</sup>	g/m <sup>2</sup>	g/m <sup>2</sup>	
	220	190	150	1
Paper Size				
A3/A4	⊙	⊙	⊙	△
A5	⊙	⊙	⊙	---
B4/B5	⊙	⊙	⊙	△
B6	⊙	⊙	⊙	---
DLT/LG	⊙	⊙	⊙	---
LT	⊙	⊙	⊙	---
HLT	⊙	⊙	⊙	---
F	⊙	⊙	⊙	---

### Comments

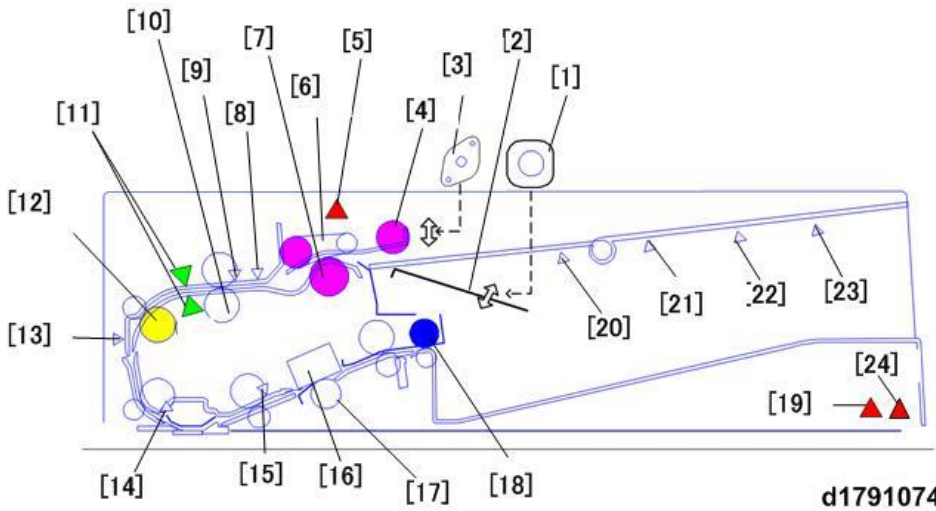
⊙: Simplex, duplex both possible

○: Simplex mode only

△: SADF simplex mode only

Layout

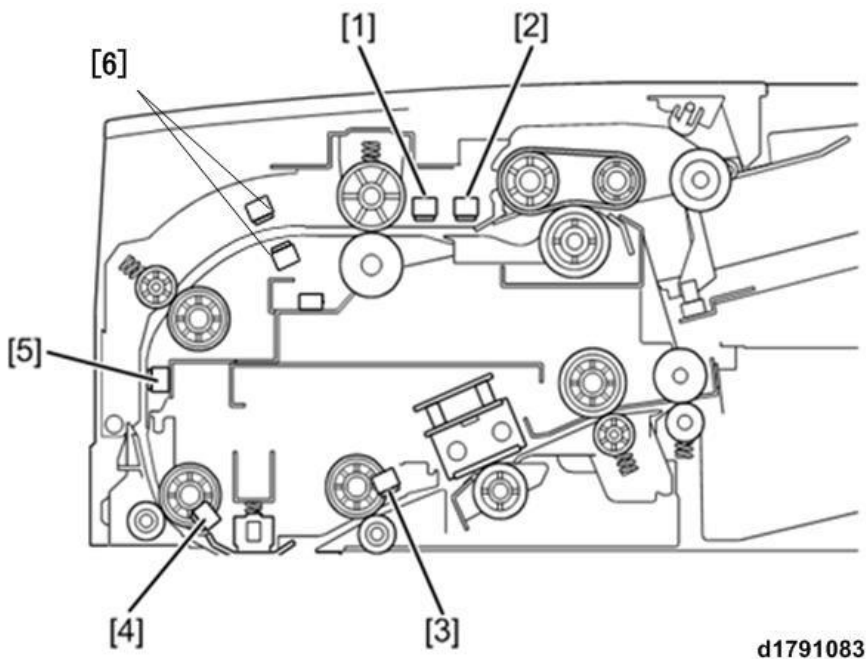
General Layout



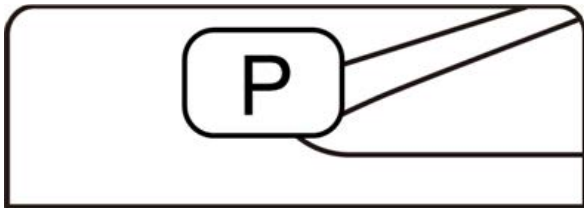
1	ADF Bottom Plate Lift Motor	13	Scan Entrance Sensor
2	Bottom Plate	14	Registration Sensor
3	ADF PullOut Motor	15	Exit Sensor
4	Pickup Roller	16	CIS
5	Feed Cover Interlock Switch	17	White Roller
6	Feed Belt	18	Exit Roller
7	Separation Roller	19	Open/Close Sensor
8	Separation Sensor	20	Original Length 4 (LT/A4 Tail Sensor)
9	Skew Correction Sensor	21	Original Length 1 (B5 Sensor)
10	Grip Roller	22	Original Length 2 (A4 Sensor)
11	Lower: Double Feed Detect Sensor (Emitter) *1 Upper: Double Feed Detect Sensor (Receptor) *1	23	Original Length 3 (LG Sensor)
12	Relay Roller	24	Lift Up Interlock Switch
*1	Option for this machine.		

1. **Original Pickup Mechanism.** The original is picked up by the pickup roller.
2. **Paper Feed and Separation.** A feed belt and separation roller comprise the paper feed and separation mechanism.
3. **Original Size Detection.** Five width sensors and four length sensors comprise the original size detection mechanism.
4. **Duplex Scanning.** Each original is scanned with color CIS elements, one mounted above and one below the original feed path so both sides are scanned at the same time.
5. **Original Double-Feed Detection.** A pair of ultra-sound sensors, one mounted above and one mounted below the original path detect double feeding. This feature is an option (it was a standard feature in the previous machine.)

## Jam Sensor Layout



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1	Skew Correction Sensor
2	Separation Sensor
3	Exit Sensor
4	Registration Sensor
5	Scanner Entrance Sensor
6	Lower: Double Feed Detect Sensor (Emitter) (Option) Upper: Double Feed Detect Sensor (Receptor) (Option)

The six sensors listed above are used in jam detection. The readings of their output are used as described in the table below.

Display	Jam Name	Jam Description
P	Separation sensor late jam	Leading edge did not arrive after paper feed motor started and operated long enough for 224 mm of feed.
P	Skew correction sensor late jam	Leading edge not detected within time for 46 mm of feed after detection by separation sensor.
P	Scanner entrance sensor late jam	Leading edge not detected after pull out started (grip motor) and enough time elapsed for 172 mm of feed.
P	Registration sensor	Leading edge not detected after skew correction sensor detected

## 6.Detailed Descriptions

Display	Jam Name	Jam Description
	late jam	leading edge and enough time elapsed for 96 mm of feed.
P	Exit sensor late jam	Leading edge not detected after registration sensor detected leading edge and enough time had elapsed for 130 mm of feed.
P	Separation sensor lag jam	This table shows how the amount of feed is calculated when the leading edge of the original is not detected after grip motor starts to pull out original. Standard value: $-35.3 \times 1.5$ However, if the operator changes the original length setting, the new specified value will be taken as standard.
P	Skew correction sensor lag jam	Trailing edge was not detected after separation sensor has detected trailing edge and enough time had elapsed for 46 mm of feed.
P	Scanner entrance sensor lag jam	Trailing edge not detected after relay motor stopped and enough time had elapsed for 82 mm of feed.
P	Registration sensor lag jam	Trailing edge not detected after skew correction sensor detected trailing edge and enough time had elapsed for 93 mm of feed.
P	Exit sensor lag jam	Trailing edge not detected after registration sensor detected trailing edge and enough time has elapsed for 130 mm of feed.
P	Double-feed jam*1	Double feed detect sensor (emitter) / (receptor) (ultrasound) detected a single weaker than that expected for the original is use and signaled double-feed.
*1 Detected by the double feed detect sensor (emitter) / (receptor) after this option is installed.		

### Abnormality Detection

Errors that occur twice in succession are treated as jams, three times in succession as SC errors.

Problem	Release	Cause
Bottom plate lift moor error	Cycle the machine off/on with main power switch	Bottom plate position sensor abnormal (output abnormal), Bottom plate HP sensor abnormal ), ADF bottom plate lift motor abnormal (not operating), ADF control board abnormal
Paper pickup operation abnormal	Cycle the machine off/on with main power switch	Pickup HP sensor abnormal (output abnormal), Pickup motor abnormal (not operating), ADF control board abnormal
Feed motor error	Cycle main power switch off/on	Feed motor defective, Harness disconnected, Harness broken or defective, Motor blocked
Transport motor error	Cycle main power switch off/on	Feed motor defective, Harness disconnected, Harness broken or defective, Motor blocked
Transport motor error	Cycle main power switch off/on	Feed motor defective, Harness disconnected, Harness broken or defective, Motor blocked

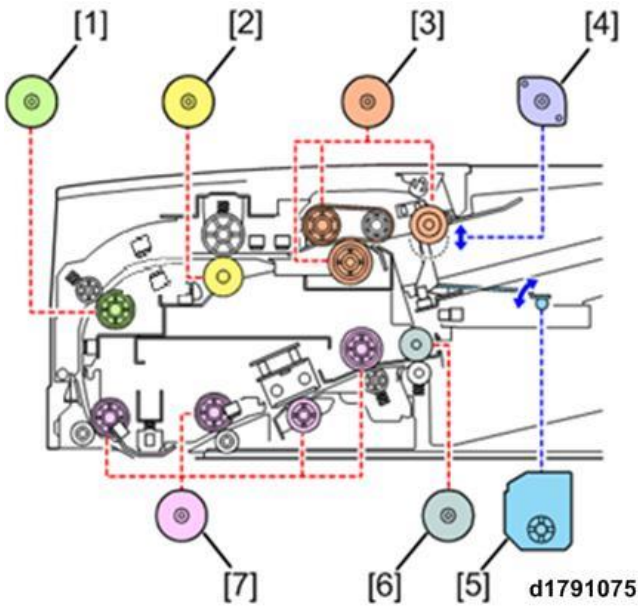
<b>Problem</b>	<b>Release</b>	<b>Cause</b>
Scan motor error	Cycle main power switch off/on	Feed motor defective, Harness disconnected, Harness broken or defective, Motor blocked
Exit motor error	Cycle main power switch off/on	Feed motor defective, Harness disconnected, Harness broken or defective, Motor blocked
ADF pullout motor drive board error	Cycle main power switch off/on	Motor drive IC abnormal
Double-feed detection not operating*1	Replace sensors	Double-feed circuit or double feed detect sensor (emitter) / (receptor) defective, Harness disconnected, broken, defective
CIS communication error	Cycle main power switch off/on	Communication harness between ADF and CIS loose, broken, defective. ASIC in CIS abnormal ASIC boot in CIS abnormal
CIS light element abnormal	Cycle main power switch off/on	At power on One or both connectors of CIS LED damaged During original feed Leads of CIS LED damaged ADF main control board defective
CIS black level confirmation error	Cycle main power switch off/on	CIS device abnormal
CIS white level confirmation error	Cycle main power switch off/on	CIS device abnormal CIS background white roller damaged, installed incorrectly
CIS gray balance adjustment error	Cycle main power switch off/on	CIS device abnormal Adjustment chart damaged, dirty, deteriorated
*1 Detected by the double feed detect sensor (emitter) / (receptor) after this option is installed.		

### ADF Drive Layout

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Rollers driven by DC motors comprise the ADF drive.

## 6.Detailed Descriptions



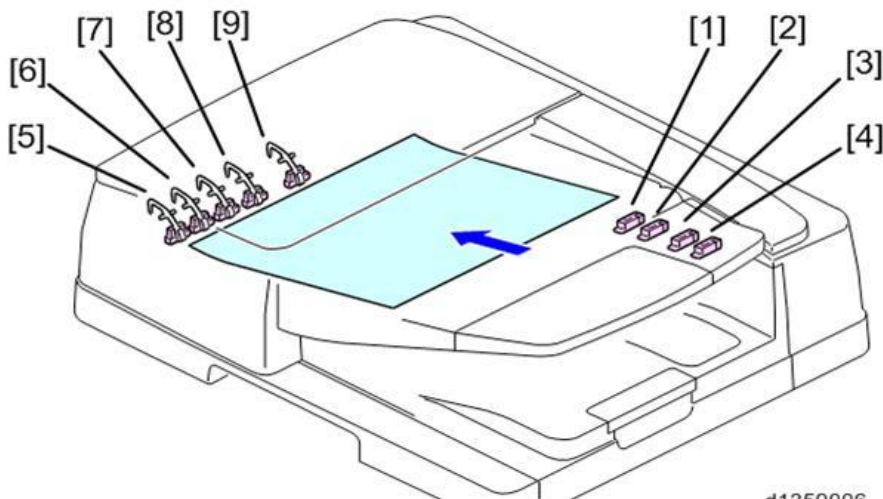
1	Transport Motor	5	ADF Bottom Plate Lift Motor
2	Entrance Motor	6	Exit Motor
3	Feed Motor	7	Scan Motor
4	Pickup Roller Lift Motor	-	-

### Details

#### Original Size Detection

Five sensors are used to detect original width when the skew correction sensor detects the leading edge of the original.

- The length is detected by three sensors under the original table, and one more sensor above the bottom plate.
- The machine uses the readings of width sensors and the length sensors to determine the size of the original being fed.



1	Original Length 4 (LT/A4 Tail Sensor)
2	Original Length 1 (B5 Sensor)
3	Original Length 2 (A4 Sensor)
4	Original Length 3 (LG Sensor)
5	Original Width 5 Sensor
6	Original Width 4 Sensor
7	Original Width 3 Sensor
8	Original Width 2 Sensor
9	Original Width 1 Sensor

Size	Width Sensor					Length Sensor			
	1	2	3	4	5	A4 LEF LT LEF	B5	A4	LG
A3(297×420)	ON	ON	ON	ON	ON	ON	ON	ON	ON
B4(257×364)	ON	ON	ON	-	-	ON	ON	ON	ON
A4 SEF (210×297)	ON	ON	-	-	-	ON	ON	ON	-
A4 LEF (297×210)	ON	ON	ON	ON	ON	-	-	-	-
B5 SEF (182×257)	ON	-	-	-	-	ON	ON	-	-
B5 LEF (257×182)	ON	ON	ON:	-	-	-	-	-	-
B6 SEF (128×182)	-	-	-	-	-	-	-	-	-
B6 LEF (182×128)	ON	-	-	-	-	-	-	-	-
11"×17" SEF (DLT)	ON	ON	ON	ON	-	ON	ON	ON	ON
11"×15"SEF	ON	ON	ON	ON	-	ON	ON	ON	ON
8 1/2"×11" SEF (LT)	ON	ON	-	-	-	ON	ON	-	-
11"×8 1/2" LEF (LT)	ON	ON	ON	ON	-	-	-	-	-

SP6016-001 can be used to choose size detection or either 11"x17" P or 11"x5"P,

#### Original Pickup Mechanism

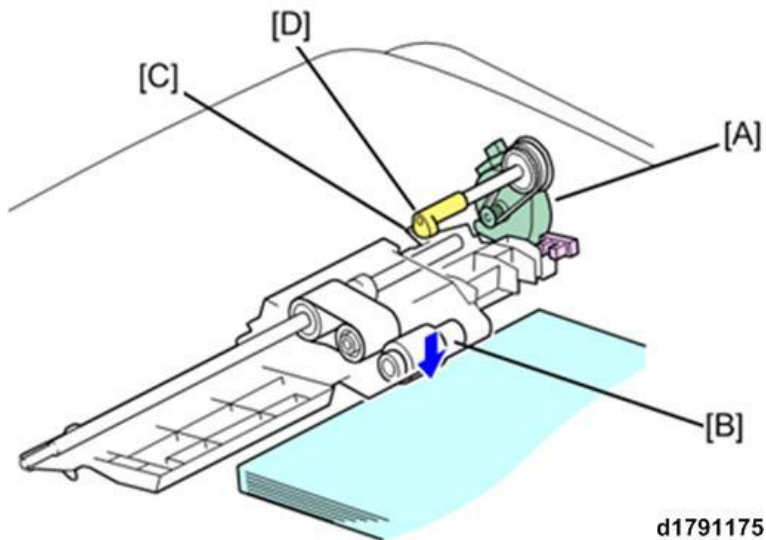
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##### Original Detection

- When the original is set in the original tray, the leading edge of the original pushes up the feeler of the original set sensor and the sensor detects the original.

##### Pickup Roller

## 6.Detailed Descriptions



The pickup roller alternates between the standby position (up) and operating position (down).

- Standby (up) position: Lift cam [D] pushes the pickup lever [C] and this raises the pickup roller [B] to the standby (up) position.
- Operating (down) position: The lift cam [D] releases the pickup lever [C] and the pickup roller [B] drops to the operating (down) position.

The pickup roller lift motor [A] turns on and rotates lift cam [D], so the rotating side of the cam alternately raises and lowers pickup lever [C] to the standby and operating positions.

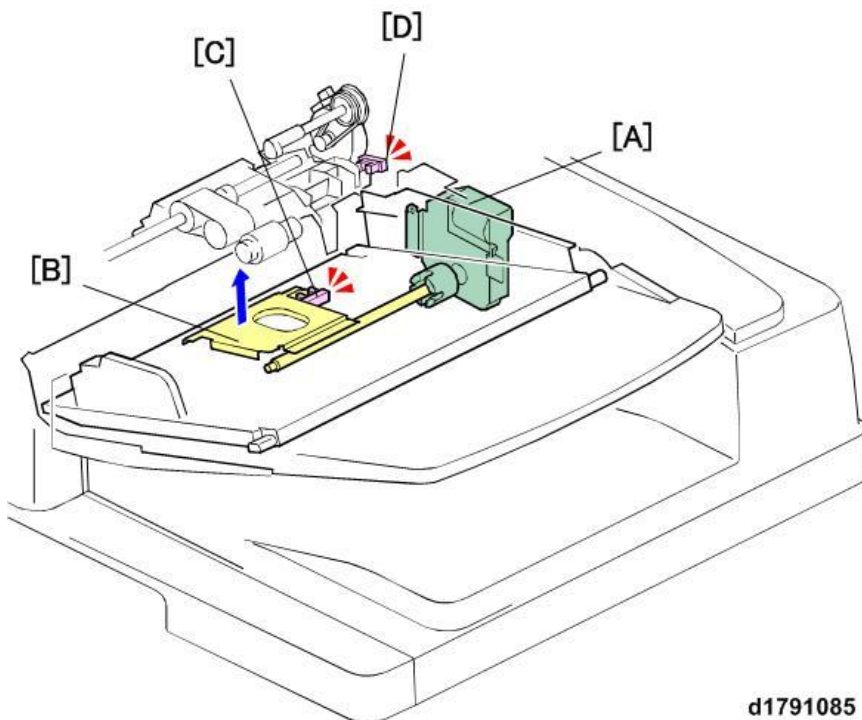
Pickup roller standby position (up) timing is triggered:

- When the original stack is set, and the edge of the stack raises the feeler of the original set sensor and switches the original set sensor on. (However, the roller does lower after the last original feeds.)
- When the trailing edge of the original passes the skew correction sensor.
- When the leading edge of either A4 SEF or A4 LEF arrive at the original registration sensor.

Pickup roller operating position (down) timing is triggered when the leading edge of the original is at the skew correction sensor at power on, or when paper feed cover is opened (this causes an original jam).



## Bottom Plate Mechanism



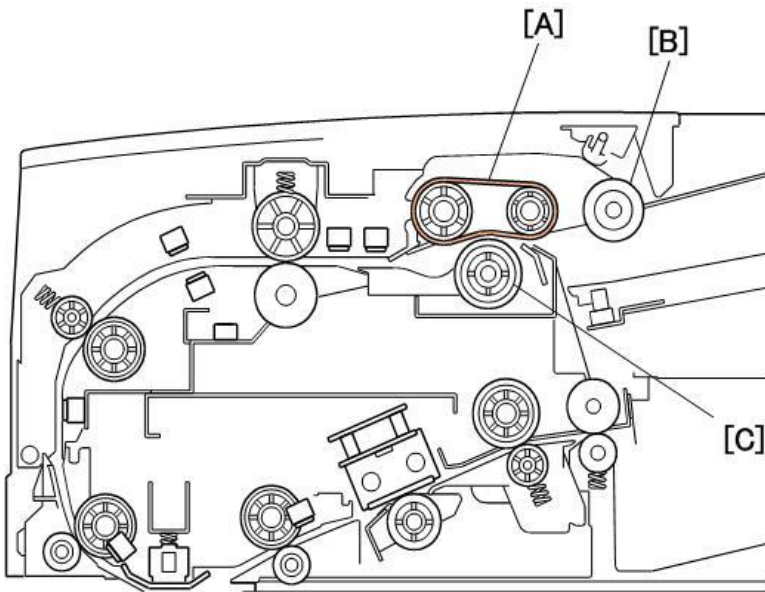
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- When an original is placed in the original tray, after the pickup roller drops and the bottom plate position sensor goes OFF, the ADF bottom plate lift motor [A] turns ON and pushes the lift lever [B] against the bottom plate to raise the bottom plate.
- When the bottom plate position sensor [D] goes ON, the ADF bottom plate lift motor [A] stops.
- When the height of the stack diminishes low enough during continuous original feed for the ADF bottom plate position sensor [D] to go OFF, this signals the machine to switch the bottom plate lift motor [A] ON again to raise the tray.
- This mechanism keeps the position of the top of the stack (up to 250 sheets) at the correct position for continuous original feeding.
- After the last original is fed, the bottom plate descends as far as the bottom plate HP sensor [C], and the motor turns off.

## 6.Detailed Descriptions

### Original Feed Mechanism

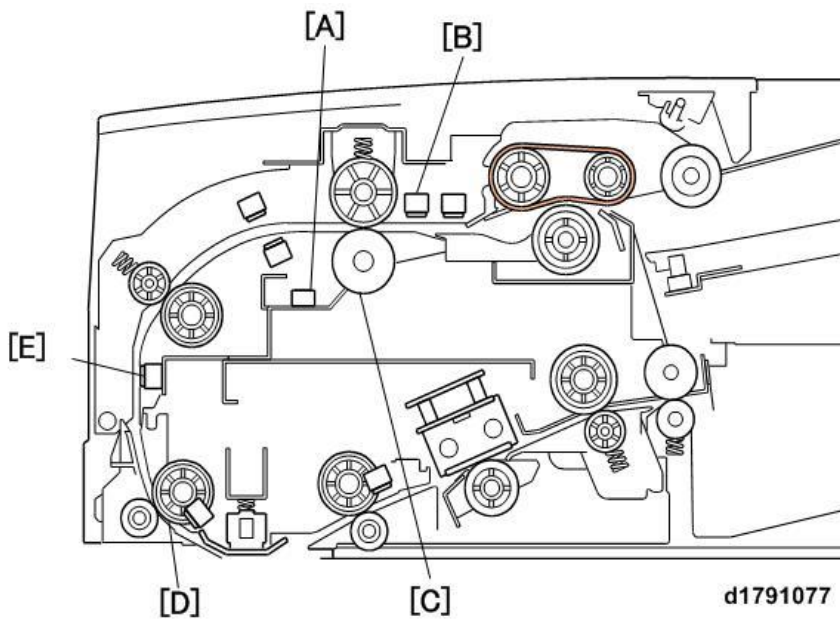
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- A standard FRR system with separation and feed belt [A] and separation roller [C] comprises the original feed mechanism.
- When the original picked up by the pickup roller [B] is fed between the feed belt and separation roller [C], if there is more than one sheet between the belt and roller, the separation roller will reverse feed and the sheets below the top sheet will be returned to the original tray..
- The thickness of the double-feed triggers creates a small torque that exceeds that of the torque limiter clutch of the separation roller, the clutch reverses the rotation of the separation roller briefly (to send the double fed sheets back to the tray), and then releases so the top sheet can continue to feed.

## Skew Correction Mechanism

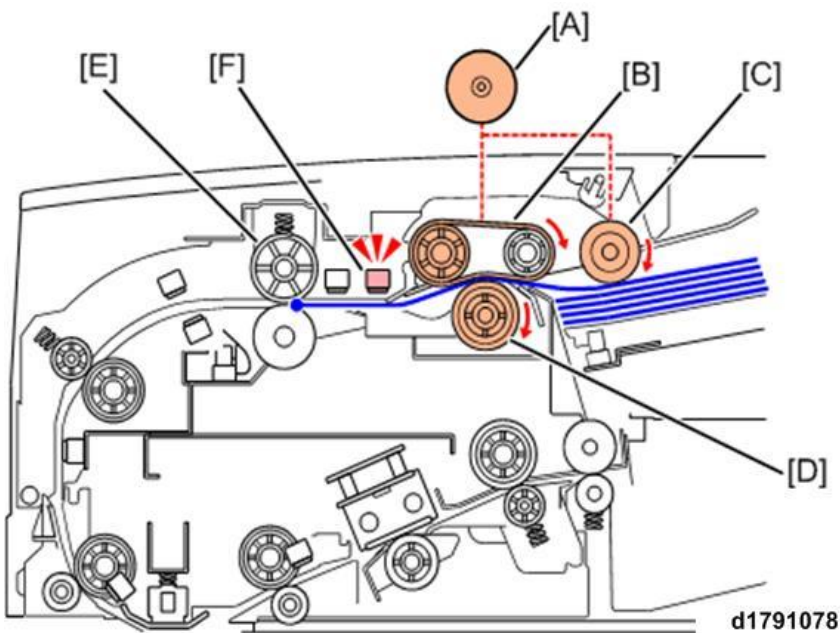


A	Original Width Sensors
B	Skew Correction Sensor
C	Grip Roller
D	Scan Entrance Roller
E	Scan Entrance Sensor

- The skew correction sensor [B] detects the leading edge of the original after it passes the nip of the feed belt and separation roller.
- After detection, the original continues to feed for the prescribed number of pulses, and then the leading edge strikes the grip roller [C] which has stopped momentarily to align the leading edge and correct any skew.
- If the original is small (B6, A5, B5, HLT) (or during duplex scanning) after the scanning entrance sensor [E] detects the leading edge of the original, the scanning entrance roller [D] is stopped for the prescribed number of pulses long enough to buckle the edge of the original for the second skew correction.
- You can use SP6020-001 to make the scanning entrance roller stop for the second skew adjustment of any size paper (not just small paper).

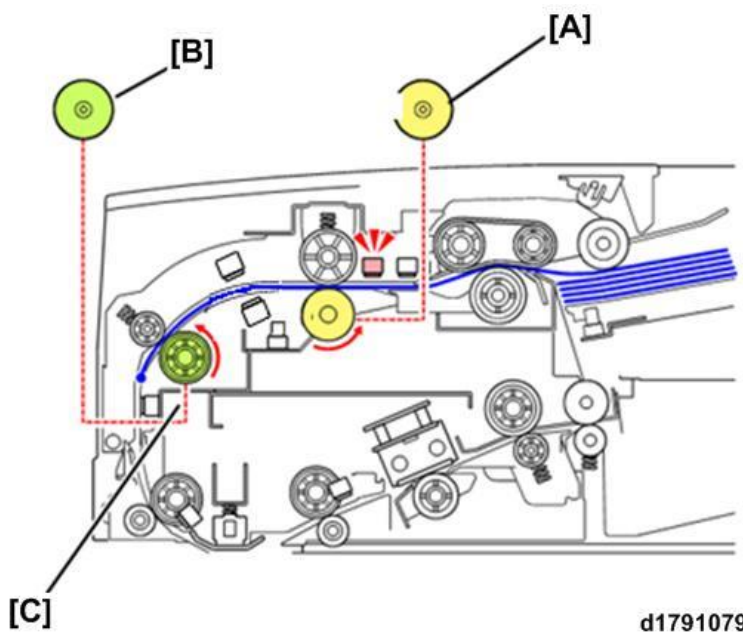
## 6.Detailed Descriptions

### Original Transport



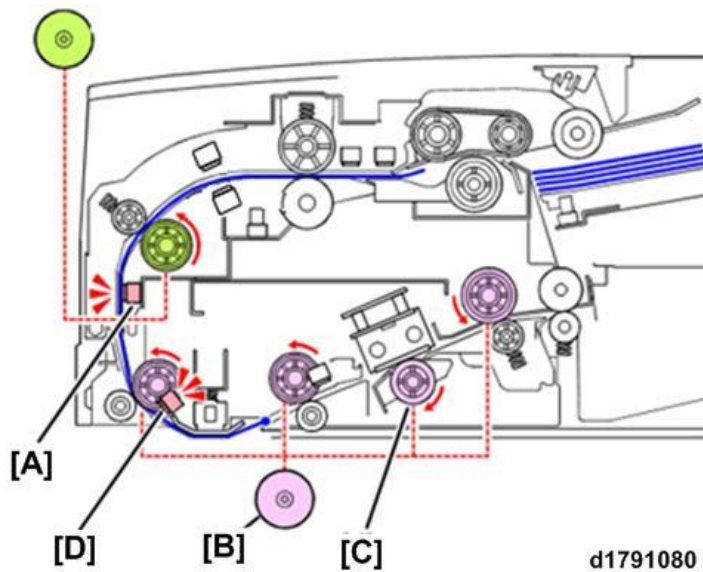
A	Feed Motor
B	Feed Belt
C	Pickup Roller
D	Separation Roller
E	Grip Roller
F	Separation Sensor

The feed motor [A] rotates the feed belt [B], pickup roller [C], and separation roller [D] to feed the original once the machine receives the command to feed. The fed original hits the grip roller. This prevents the paper from skewing diagonally in the original feed path.



After skew adjustment at the grip roller, grip motor [A] and relay motor [B] turn the rollers [C] that feed  
1430

the original to the scanner unit below.



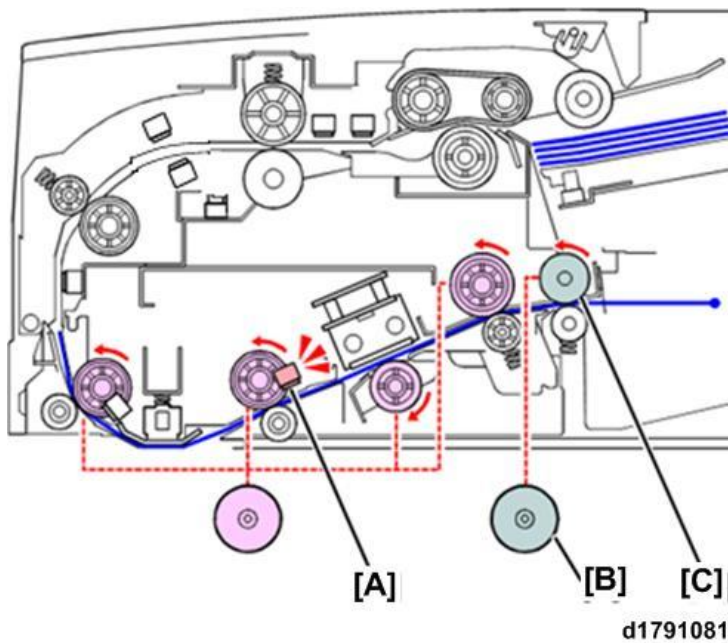
When the scanner entrance sensor [A] detects the original, the scanner motor [B] switches on and rotates the white roller [C] and feeds the original to the scanner unit. The registration sensor [D] detects the leading edge and trailing edge of the original, and the machine maintains a pulse count between these two events.

After the grip roller starts to rotate:

- The grip motor increases its rotation speed slightly in order to reduce the gap between the original and the downstream original being scanned.
- If this higher speed was maintained, the leading edge of the original would collide with the trailing edge of the downstream original.
- To compensate for the higher speed, when the leading edge is detected at the skew correction sensor, the speed of the feed belt is reduced, and the line speed slows as the leading edge of the

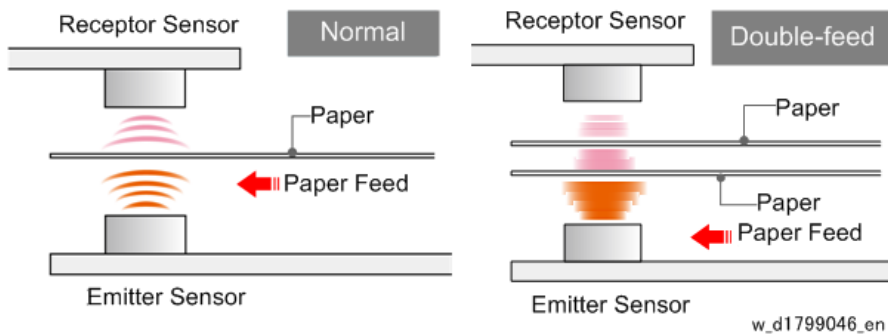
## 6.Detailed Descriptions

original reaches the nip of the pre-scanning roller.



When exit sensor [A] detects the original, exit motor [B] turns on and rotates exit rollers [C] which feed the original out onto the exit tray.

### Double-feed Detection (Option)



A pair of ultrasound sensors are mounted in the ADF, one below the original feed path (emitter) and the other above the path (receiver).

- When the original passes between the sensors, an ultra-sound wave from the emitter sensor below passes through the paper to the receiver above.
- The receiver converts the signal generated by the vibration of the signal against the paper to an electrical pulse and checks its level.
- If a double feed occurs, the space between the sheets will generate a lower signal. When the emitter detects this lower signal (lower than that of a single sheet) the machine issues Jam Code J099 (double-feed detected) and then original feed stops.

This double feed detection will not function with originals that have:

- Folds, wrinkles, tears
- Holes

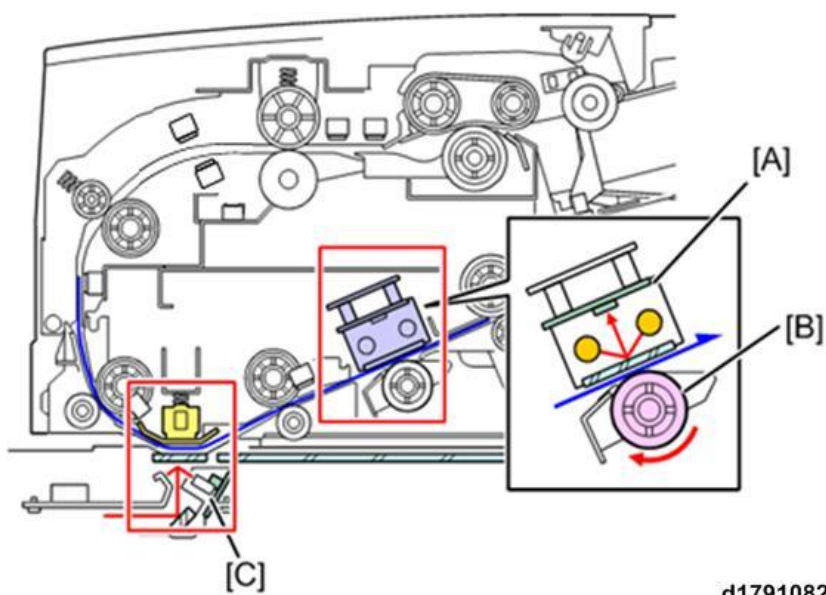
- Imperfectly fused images
- Perforations
- Taped connections
- Taped surfaces

Feeding such originals could cause false detection of double-feeds.

Double-feed detection can be switched by the operator with an operator setting: Operator Adjustment > 1. Main: Image Position Adjustment > 0108 ADF Double Feed Detection Operation (On (default), Off).

The service technician must switch double-feed detection off/on with SP6040-001 [0 to 1/1/1] (Default 1: On) after installing the optional double-feed kit.

### Duplex Scanning



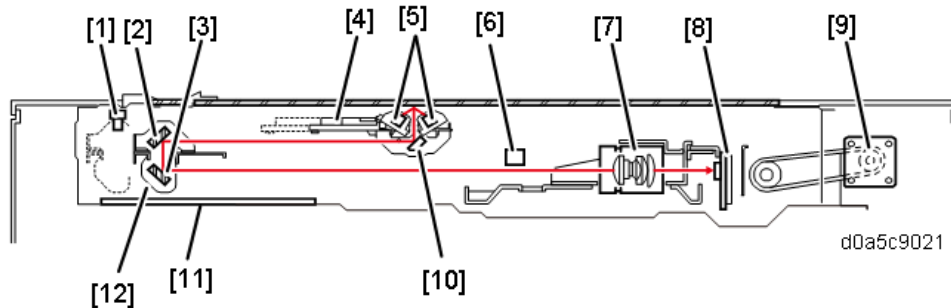
A	CIS
B	White Roller
C	Main Scanner LED

To improve productivity, this machine is equipped with a color CIS [A] to scan the back side of the original while the front side is being scanned.

## Scanner Unit (Copier Models Only)

### Mechanisms

### Layout



No.	Name	No.	Name
1	Scanner HP Sensor	7	Lens Block
2	2nd mirror	8	SBU
3	3rd mirror	9	Scanner Motor
4	1st Scanner Carriage	10	1st mirror
5	Scanner LED	11	Anti-condensation Heater (option)
6	Original Length Sensor	12	2nd Scanner Carriage

### Configuration

Scanner	Light source: Two LED lamps
	SBU (3-line CMOS sensor with 600 dpi resolution)
Scanning Mechanism	Scanner motor (dual-phase stepper motor)
	Wire pulleys
	Scanner HP sensor
Original Size Detection	APS (Length Sensor x1)
Miscellaneous	Anti-condensation heater (option)

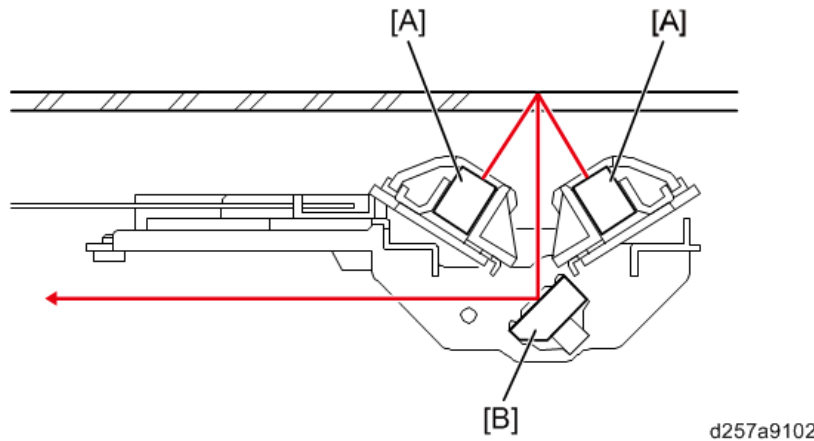
### Details

#### Scanner

Light from the LED lamps [A] passes to the sensor on the SBU board through the following route:

1st Mirror [B] > 2nd Mirror > 3rd Mirror > Lens Block > Sensor





- **LED Lamp**

LED lamps consume less power and provide better light at start-up so this machine employs LED lamps instead of xenon lamps. The power consumption is 30% of xenon lamps. To obtain the optimum light quantity, LED lamps are installed at an angle.

- **Sensor**

The sensor collects the light that was reflected from the original and converts it to three color digital signals (R, G, B).

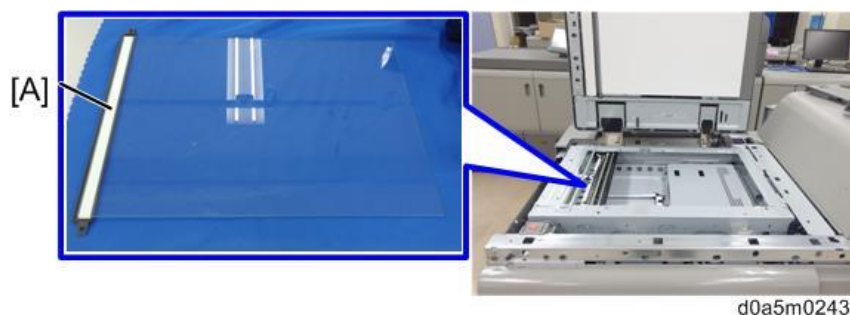
The resolution of this CMOS sensor is 600dpi.

- **Shading Correction**

A white plate for shading adjustment [A] is attached to the back of the scale [B]. Just after the power switch is turned on, the machine performs shading adjustment, during which the scanner unit moves to the white plate to emit LED light onto it in order to perform lamp modulation.

For normal (book mode) scanning, the machine performs shading every page regardless of BW or color.

For ADF scanning, the machine performs shading before the 1st sheet of the original is scanned regardless of BW or color, and then after that the machine performs shading for following sheets at regular intervals (one minute or more).

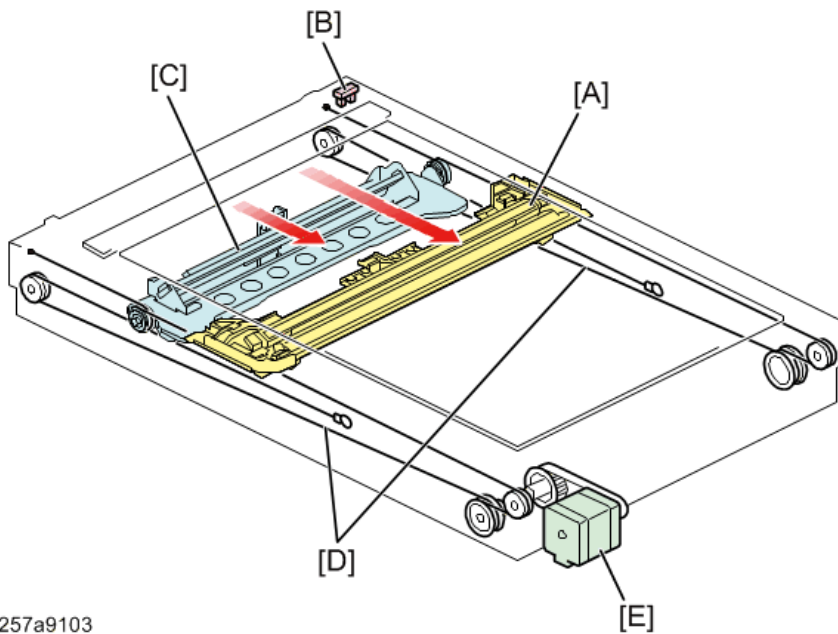


## Scanner Drive

The scanner is operated by wire pulleys [D] controlled by the scanner motor [E]. The position of the scanner (1st carriage) [A] is controlled by the scanner HP sensor [B]. The scanner HP sensor [B] is positioned at the sheet-through document feeder scanning position. Carriage operation is controlled by

## 6.Detailed Descriptions

BICU and light intensity is adjusted by SBU.



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No.	Name	No.	Name
A	1st Carriage	D	Scanner Wire
B	Scanner HP Sensor	E	Scanner Motor
C	2nd Carriage		

### Original Size Detection

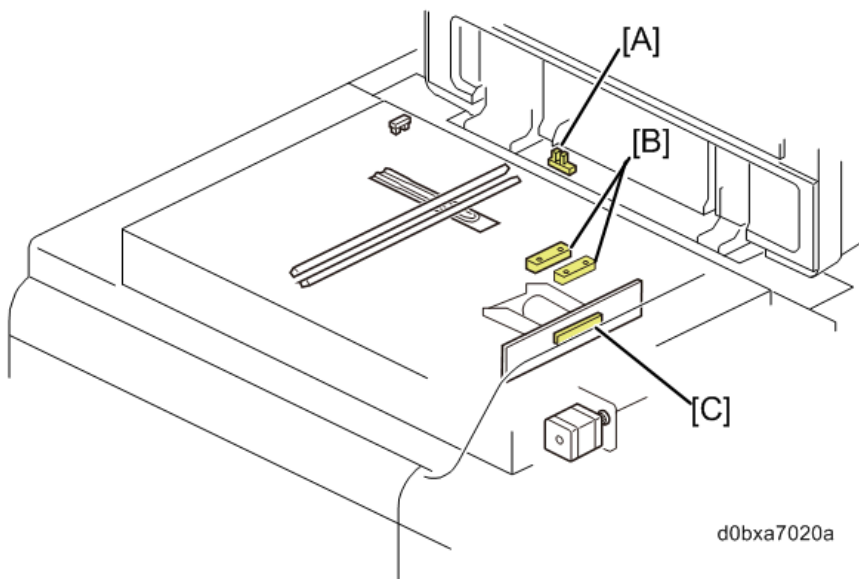
#### When the ADF is Closed

The DF position sensor [A] triggers original size detection when the platen cover is closed.

When the platen cover is closed the scanner lamp turns on and the document length sensor [B] (APS sensor) and the CCD [C] installed on the SBU are used to detect document length.

#### When the ADF is not Closed

When scanning without closing the platen cover, pressing the [Start] key turns on the scanner lamp and the size is detected with the APS sensors and CCD.



No.	Name
A	DF Position Sensor
B	APS sensor
C	CCD on the SBU

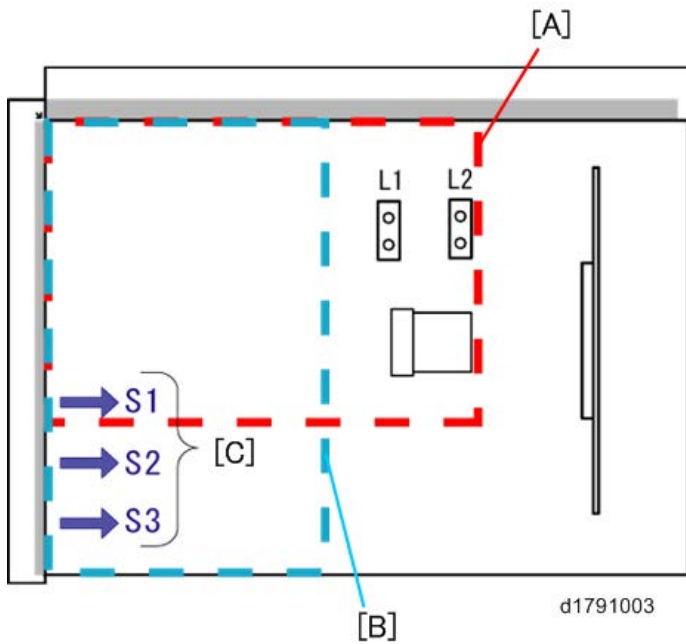
### Length Detection

The APS sensor detects original length. SP4301-001 (APS Confirm) can be used to confirm the status of each sensor used to detect original size. The displays for each original size viewed with SP4301-001 are described below.

#### ★ Important

- Due to the layout of the sensors, the sizes of originals smaller than B5 cannot be detected and the display shows only zeroes.

## 6.Detailed Descriptions



No.	Name
A	A4 SEF
B	A4 LEF
C	Original size detection area for pre-scanning

Size	L1 (APS)	L2 (APS)	SP4301-001 Display
A3/DLT	✓	✓	00000011
B4/LG	✓	✓	00000011
A4 SEF	✓	✓	00000011
LT SEF	✓	-	00000001
A4 /LT LEF	-	-	00000000
B5 SEF	✓	-	00000001
B5 LEF	-	-	00000000
A5/HLT SEF	-	-	00000000
A5/HLT LEF	-	-	00000000

### Width Detection

SP4310-001: Value of S1 position reading of R at CCD original scan	If the value is more than the value of SP-4-309-001 (default setting value: 28) , then there is an original at S1.
SP4310-002: Value of S1 position reading of G at CCD original scan	
SP4310-003: Value of S1 position reading of B at CCD original	
SP4310-004: Value of S2 position reading or R at CCD original scan	If the value is more than the value of SP-4-309-001 (default setting value: 28) , then there is an original at S2.

SP4310-005: Value of S2 position reading of G at CCD original scan	If the value is more than the value of SP-4-309-001 (default setting value: 28) , then there is an original at S3.
SP4310-006: Value of S2 position reading of B at CCD original scan	
SP4310-007: Value of S3 position reading of R at CCD original scan	
SP4310-008: Value of S3 position reading of G at CCD original scan	
SP4-310-009: Value of S1 position reading of B at CCD original scan	

Size	Orient	S1	S2	S3
A3/DLT	SEF	-	-	✓
B4/LG	SEF	-	✓	-
A4/LT	SEF	✓	-	-
A4/LT	LEF	-	-	✓
B5	SEF	-	-	-
B5	LEF	-	✓	-
A5/HLT	SEF	-	-	-
A5/HLT	LEF	✓	-	-
B6	SEF	-	-	-
B6	LEF	-	-	-

If the value detected by the CCD and displayed with SP4310-001 to 009 is greater than 18, then it is determined that an original is present in the width direction. The values that are displayed with these SP codes are always from the most recent detection.

#### Dust, Streak Detection

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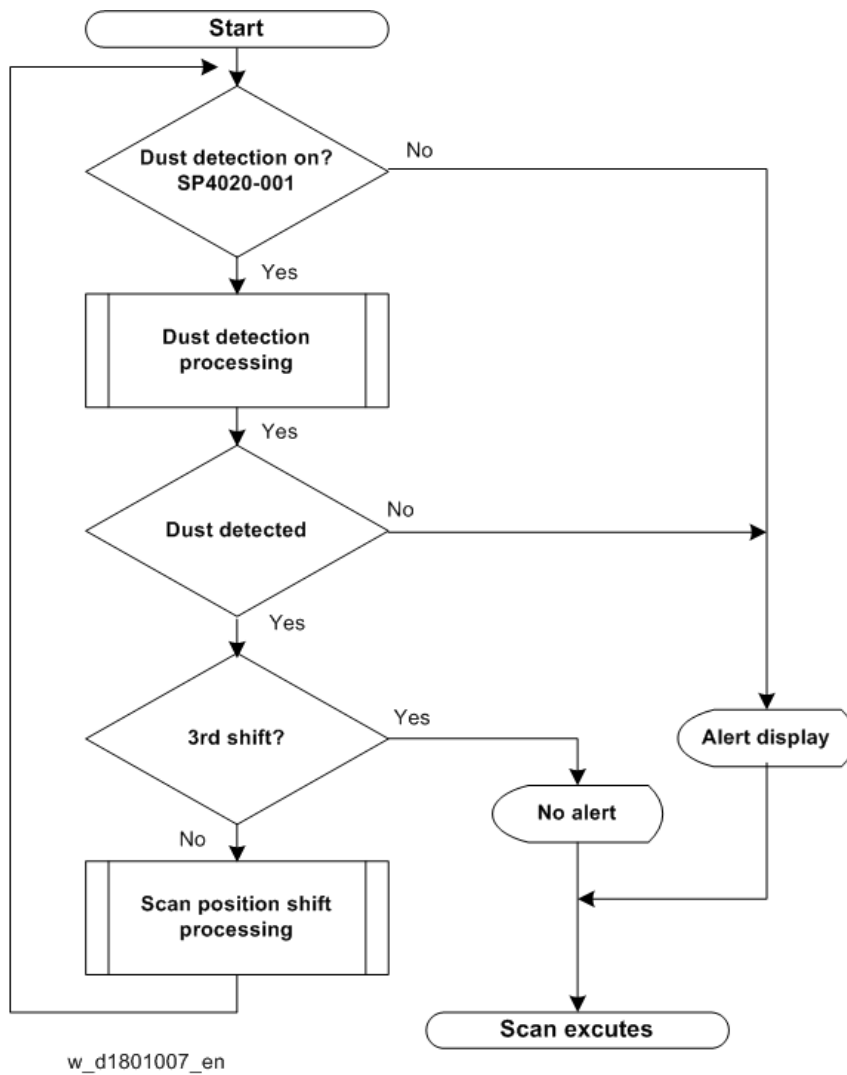
The machine checks for dust, streaking, and other matter at the ADF scan position after setting the original and pressing [Start]. Dust detection processing is done before starting feed for a job, and then it is determined if there are streaks in the image output. The operation flow is different, depending on how the following SP codes are set.

#### Related SP Codes

- **SP4020-001:** DF Dust Detection Setting. Select On/Off (Default: 0 DF dust detection OFF)
- **SP4020-002:** DF Dust Detection Setting Level Switching
- **SP4020-003:** DF Dust Detection Setting - Correction Level Switching
- **SP7852-001:** DF Scan Glass - Dust Detection Counter

## 6.Detailed Descriptions

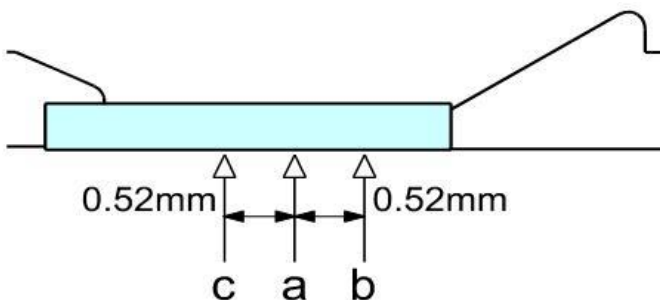
- **SP7852-002: DF Scan Glass - Dust Detection Counter**



### Scan Position Shift

If it is determined that dust or streaking is present, the scanning position can shift to avoid the streaked area. The scanning area in the DF scan mode can be shifted from HP (default) to the right 0.52 mm (b), and to the left 0.52 mm (c):

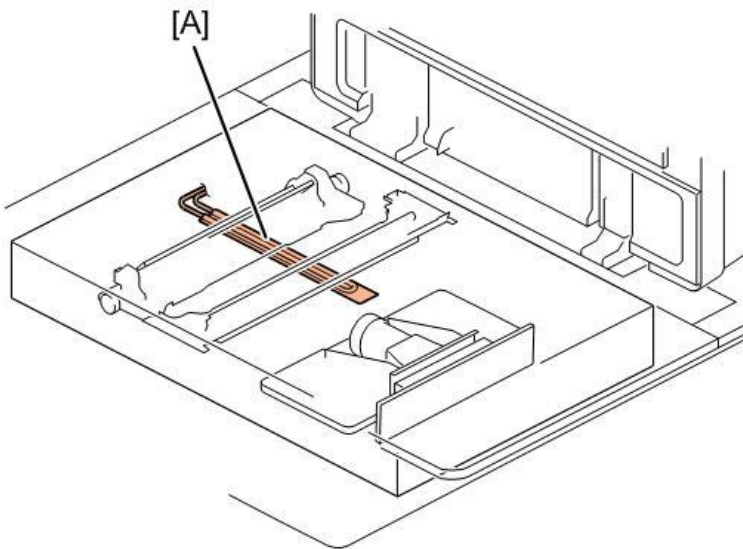
$a > b > c > a > b$ .



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Normally, the shift is done  $a > b > c > a > b$ .

## Anti-condensation Heater (Option)



d1359110

No.	Name
A	Anti-condensation Heater

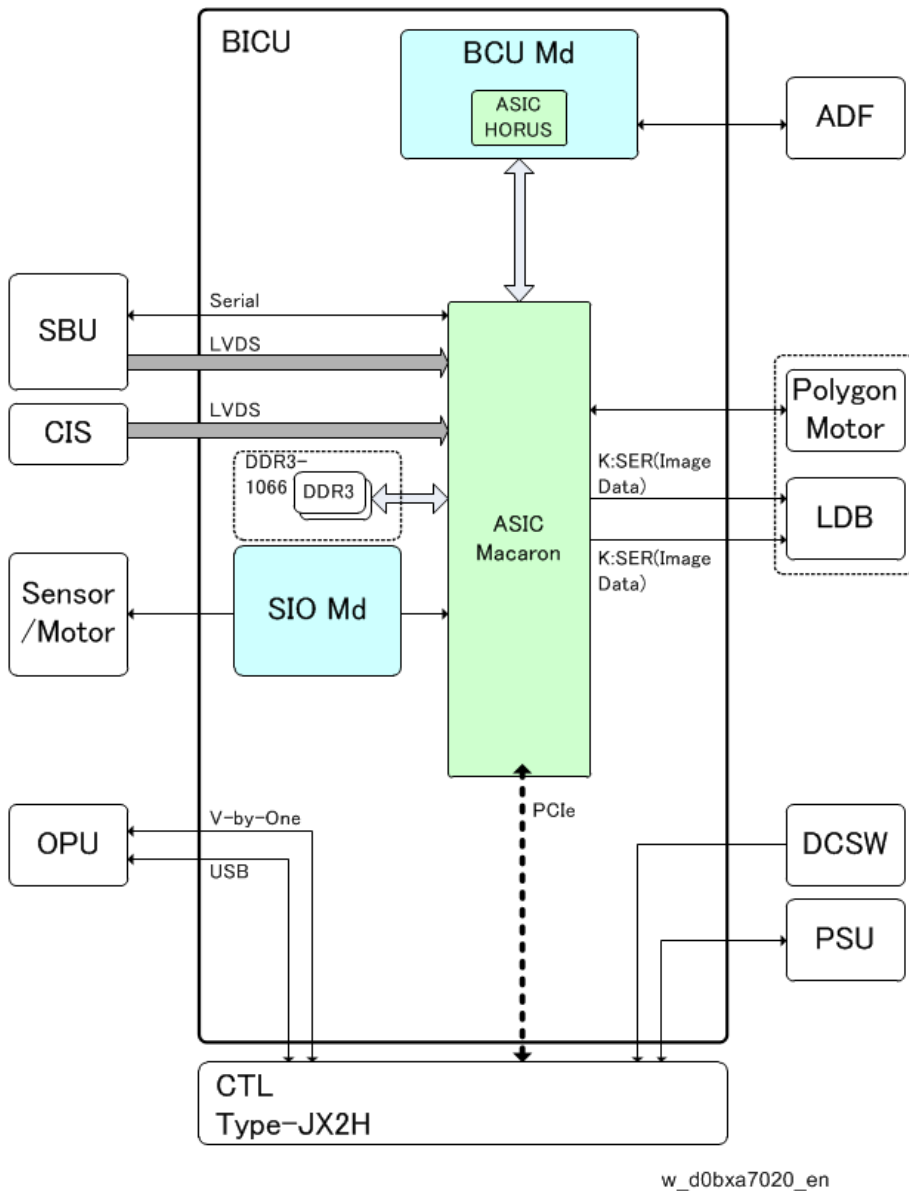
Condensation can form around the 1st, 2nd, and 3rd mirrors of the scanner after a cold start in areas where the ambient temperature is low or humidity is high. Both conditions can lead to streaking and other image quality problems.

- These problems can be solved by installation of a anti-condensation heater [A] directly under the scanner unit.
- When the machine is switched off or turned to the sleep mode with the operation switch at the end of the work day, the heater will switch on to prevent condensation from forming while the machine is idle.

# Image Processing

## Overview

### Block Diagram



## Details

### SBU (Sensor Board Unit)- Copier Model Only

The SBU converts CCD output to digital signals that are then sent to the IPU.

- **Scanner Data Processing**

Scanner data processing includes the following AE functions: black level correction, white level correction, and gray balance correction.

- **Operation**

C-MOS linear sensor (CLISTA) of SBU performs photoelectric conversion (600dpi/RGB has two



channel of each.), data division (ODD/EVEN), amplification and A/D convert.

The image data is transferred to BiCU by using LVDS.

- **Stored Special Settings**

The values of the SBU are stored in the BiCU. These special values require readjustment after the lens block converts them.

- SP4-008-001 Sub Scan Magnification Adjustment
- SP4-010-001 Sub Scan Registration Adjustment
- SP4-011-001 Main Scan Registration

- **Test Mode**

An SP code can create and self-diagnostic test pattern for the SBU. To output this pattern from the scanner, select the SP code and then press [Start]. You can then visually check the quality of the print.

**SP4-699-001 SBU Test Pattern Settings**

0	Default - Normal Image Output
1	Test pattern output, fixed pattern output (682 digit)
2	Test pattern output, main scan gradation pattern (10-bit level, 4-dot step)
3	Test pattern output, sub scan gradation pattern (10-bit level, 4-line step)
4	Test pattern output, matrix pattern (10 x 10 mm grid pattern)

**BiCU (Base Engine and Image Processing Control Unit) Functions - Copier/Printer Models**

- Receives image signals from the controller (memory) over the PCI bus, processes the signals, and then sends them to the LDB.
- Power and individual signal relay
- For more about image processing flow, please refer to the block diagram above.

**BiCU (Base Engine and Image Processing Control Unit) Functions - Copier Model Only**

- Scanner control
- Performs each type of processing required of the data signals from the SBU, and also outputs to the controller (memory) via the PCI bus.
- Outputs ADF control signals during ADF scanning.
- The digital signal data sent from the SBU to the BiCU board is processed for shading correction and line interval correction, and then the data is finally sent to the printer as 2-bit/pixel digital signals.
- For more about image processing flow, please refer to the block diagram above.

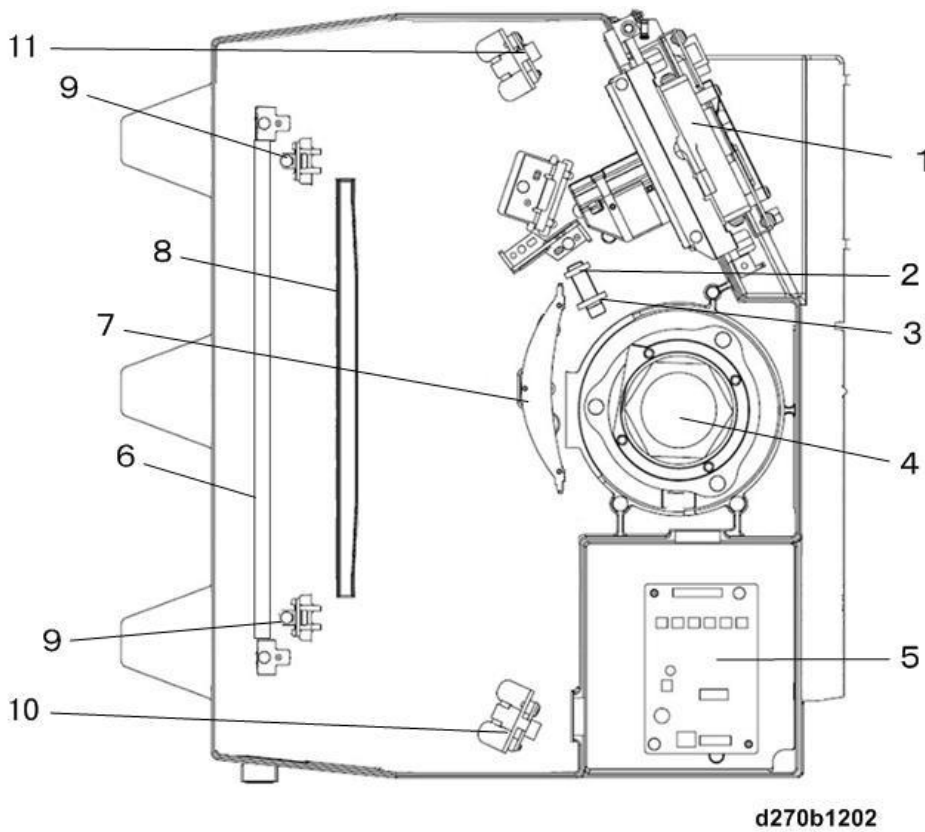
## Laser Unit

### Overview and Mechanism

#### Overview

A polygon mirror motor, LD unit, and laser synchronization detector (leading edge, trailing edge) comprise the laser unit of this machine.

#### LD unit Lenses, Motor, Sensors



1	LD Unit	7	Lens 1
2	Cylindrical Lens 1	8	Lens 2
3	Cylindrical Lens 2	9	Beam Detector Mirror
4	Polygon Mirror	10	Synchronizing Detector Board (Leading Edge)
5	Polygon Mirror Motor PCB	11	Synchronizing Detector Board (Trailing Edge)
6	1st Mirror		

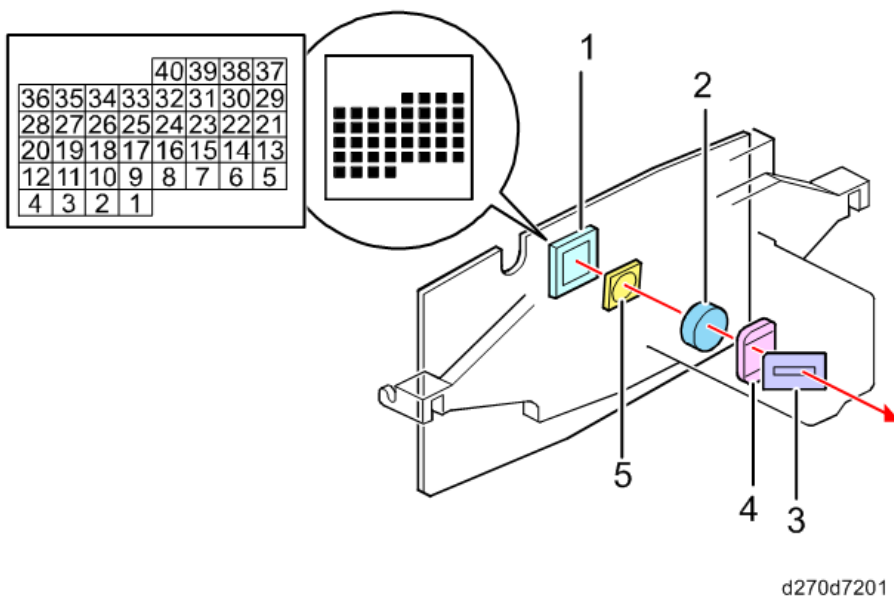
### Details

#### Laser Unit

LD Unit	
<ul style="list-style-type: none"> <li>40 Beam Exposure</li> </ul>	40-beam technology uses VCSEL (Vertical Cavity Surface Emitting Diode)

<ul style="list-style-type: none"> <li>LD Safety Switches</li> </ul>	Power circuit to the LD unit cuts whenever the front doors are opened, the toner cover is opened, or the front edge cover is removed
Line Scan Mechanism	
<ul style="list-style-type: none"> <li>Mirrors, Lenses</li> </ul>	Each mirror and lens reflects and guides the laser beams
<ul style="list-style-type: none"> <li>Polygon Mirror Motor</li> </ul>	Hexagonal mirror, rotates counter-clockwise

### LD Unit Mechanism



No.	Name	No.	Name
1	VCSEL	4	Lens (TCL)
2	Collimating Lens	5	1/4 Wavelength Board
3	Aperture		

- The LD unit employs VCSEL (Vertical Cavity Surface Emitting Laser) technology. 40 channels (ch1 to ch4) emit 40 laser beams.
- A photosensor, built into the VCSEL on the LD board, detects laser output.
- The laser diode (LD) fires the laser beams through the aperture of the collimating lens where photosensors detect the output.
- After the beams pass through the refraction grid, 1/4 wave length board, collimating lens, and aperture, the sides of the polygon mirror in the path of the beams reflect them onto the drum.
- VCSEL control also slows the rotation of the polygon mirror motor to suppress heat and electrical discharge.

### 40-Beam Laser Writing

The following points highlight the VCSEL system.

- Low threshold current, low power consumption

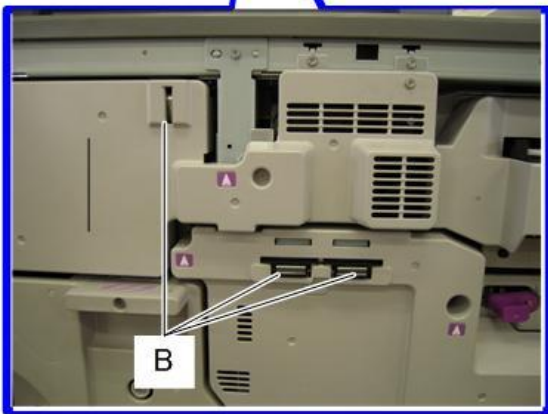
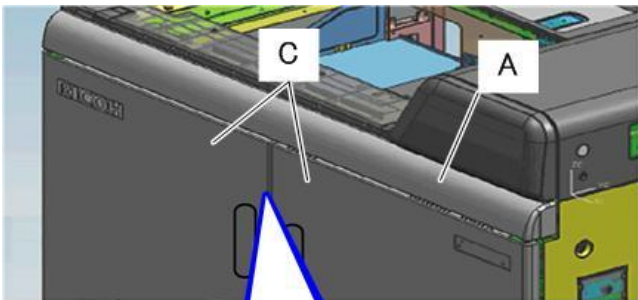
## 6.Detailed Descriptions

- High resolution, precision scanning in the sub scan direction (4800 dpi)
- Slowing the rotation of the polygon mirror motor for 40-beam exposure reduces heat and noise

### LD Safety Switches

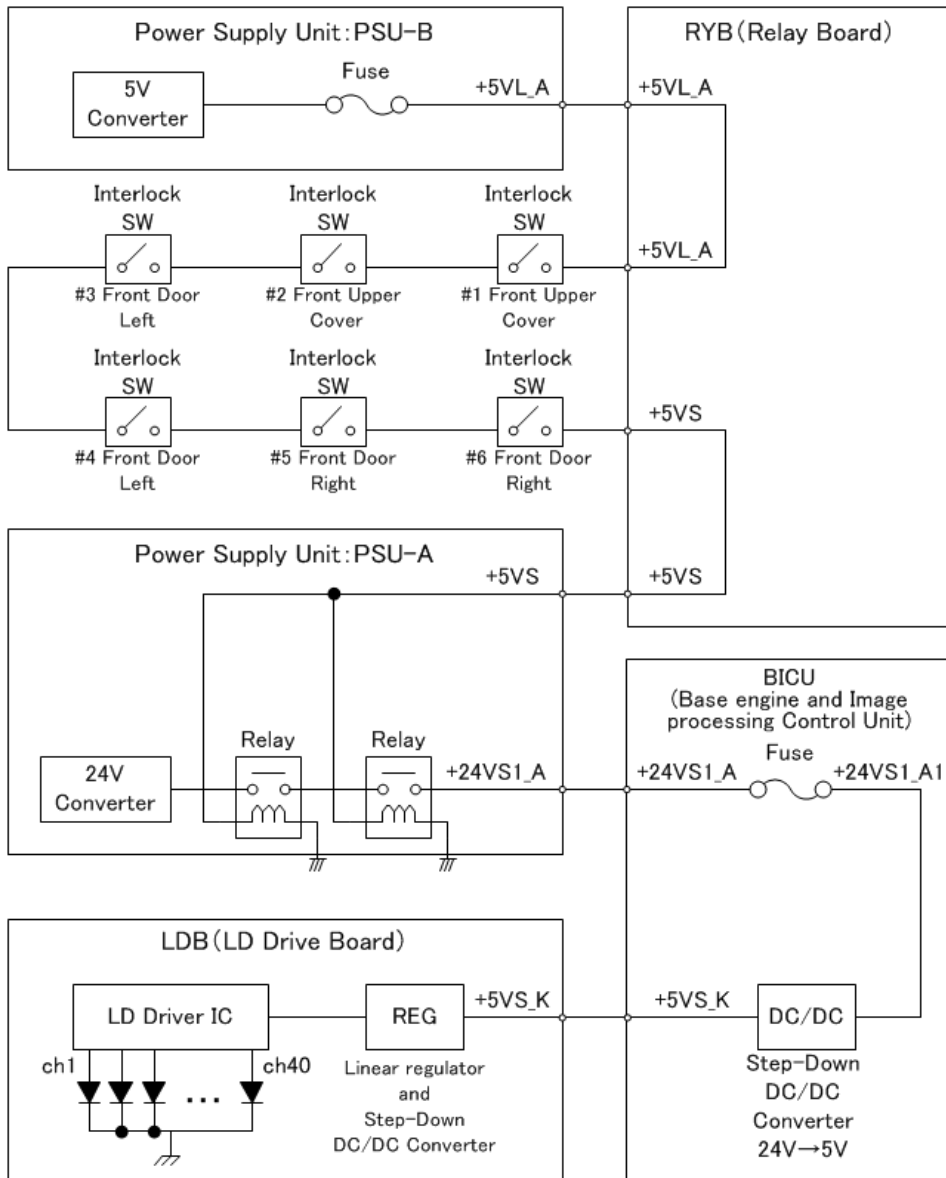
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When either of the front doors [C] are opened, or when the front edge cover [A] is removed, the safety switches [B] disable the laser unit to prevent it from accidentally firing. The safety switches are installed on the 5V power supply line.



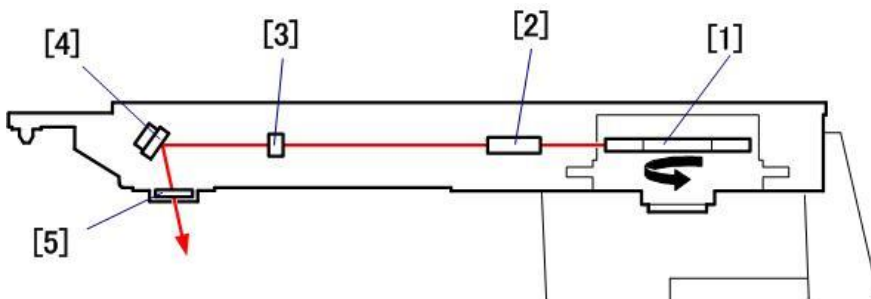
d1791084

In this machine, the mechanism that enables laser operation is a 24V line, interrupted using a 5V relay and then 24V is dropped to +5V by a regulator. To ensure the safety of the machine operators and service technicians, six switches prevent the laser beams from switching on accidentally. When either front door or the toner cover is opened, or when the front edge cover is removed, 24V power source that supplied from the PSU to the laser unit is interrupted by a relay to disable the laser units.



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Line Scanning (Mirrors, Lenses, Polygon Mirror Motor)



d1791031

No.	Name	No.	Name
1	Polygon Mirror	4	1st mirror
2	Lens 1	5	Dust Prevention Glass

## 6.Detailed Descriptions

No.	Name	No.	Name
3	Lens 2	-	-

The operation of the LD unit is synchronized with the paper feed timing. The laser beams fire through the cylindrical lens (where the beams are corrected), onto the facets of the polygon mirror (main scan writing), through lens 1 and lens 2, onto the 1st mirror, and finally through the dust protector glass onto the drum below.

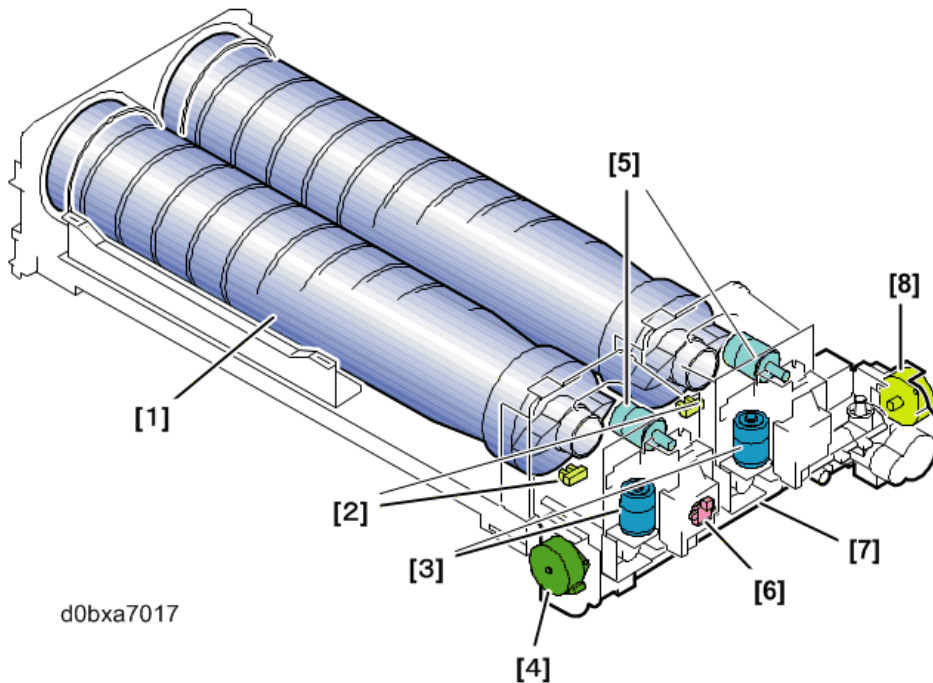
- The polygon mirror motor is the single motor that rotates the polygon mirror with 6 reflecting facets around its edge.
- Each facet on the edge of the rotating polygon mirror reflects 40 beams simultaneously onto the photo conductive surface of the drum.
- The speed of rotation of the polygon mirror motor for the models listed in the table below is the same for OHP transparency, thick paper, and normal paper.

Model	rpm
RICOH Pro 8300S	29156
RICOH Pro 8310S/8310	29528
RICOH Pro 8320S/8320	30236

# Toner Supply Unit

## Overview and Mechanisms

### Layout



No.	Name	No.	Name
1	Toner Bottles	5	Bottle Inner Cap Motors (x2)
2	Bottle Set Sensors	6	Toner End Sensors
3	Bottle Motors (x2)	7	Sub Hopper
4	Toner Agitator Motor	8	Toner Feed Motor

### Details

#### Toner Supply Unit

Toner Supply Mechanisms	
• Toner Bottle Drive	Bottle motors rotate toner bottles
• Sub Hopper	Toner agitator motor mixes toner in sub hopper
• Toner Transport	Toner feed motor supplies toner to development unit
• Toner Supply	Controlled with one of two methods: toner density active control method or pixel count method
• Bottle Lock Detection	Bottle set sensor detects when bottle is locked in place and ready for operation.

## 6.Detailed Descriptions

### Toner Bottle Drive

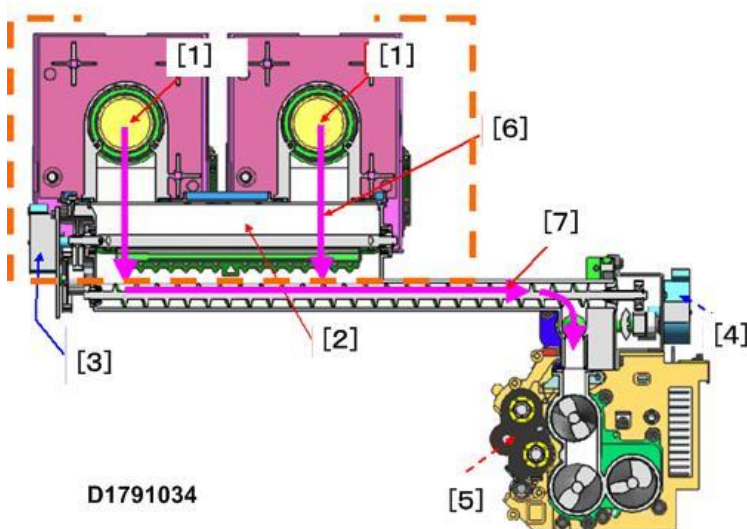
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When a toner bottle is set in its cradle:

- The toner set sensor detects the bottle as soon as it is locked in place. This signals the inner cap motor to switch on and open the inner cap of the bottle.
- Each of the two toner bottles has its own bottle motor that rotates the bottle to feed toner from the bottle into the toner hopper.

### Toner Transport

---



No.	Name	No.	Name
1	Toner Bottle	5	Development Unit
2	Sub Hopper	6	Toner filling from bottle to sub hopper
3	Toner Agitator Motor	7	From sub hopper to development unit
4	Toner Feed Motor		

The toner fed into the sub hopper is mixed by a coil driven by the toner agitator motor.

- The toner end sensor of the sub hopper detects when there is insufficient toner inside the sub hopper and signals the toner bottle motor to rotate the bottle and send more toner.
- The toner feed motor rotates the coil that feeds toner from the toner sub hopper to the development unit.

### Toner End, Near End Detection

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When the toner end sensor detects that there is no toner in the toner sub hopper:

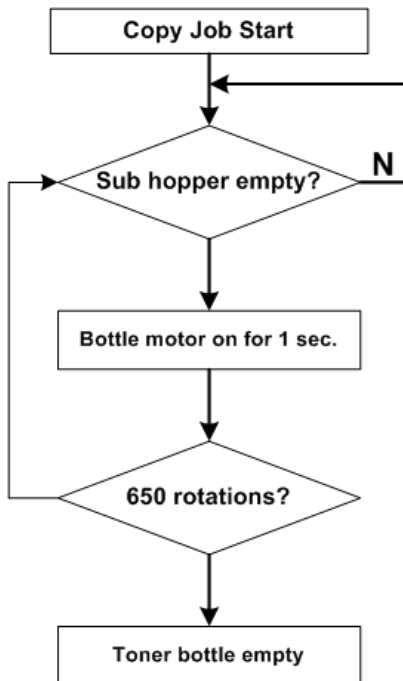
- The bottle motor switches on for 1 sec. and rotates the toner bottle. This dumps more toner into the sub hopper.
- If the toner end sensor cannot detect toner in the sub hopper after 650 continuous rotations of the toner bottle, then the bottle is judged to be empty. When the bottle on the right is judged empty, toner supply switches to the bottle on the left.
- When both bottles are judged to be empty, or if only one toner bottle is installed and it is judged to



be empty, the machine displays the near-end alert on the operation panel.

- Once the near-end alert appears, the machine can continue operating for approximately 1000 prints (A4 with 6% coverage), and then the toner end alert appears and the machine stops.

#### Toner Flow from Toner Bottle to Sub Hopper



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#### Bottle Lock Detection



d1791005

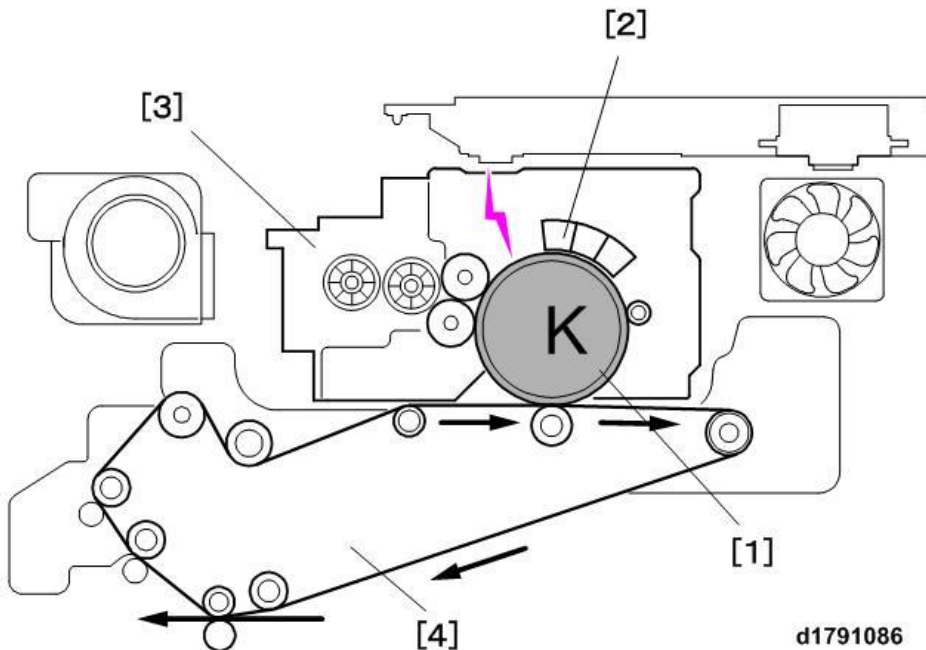
When the toner bottle is set, a lock mechanism locks it in place.

- Pressing release lever [A] unlocks the bottle so it can be removed.
- The interlock switch [B] detects when the toner cover is opened to stop the rotation of the bottles, and this is also a safety device.
- The machine will continue to operate without pause after the toner near-end alert has appeared and the toner cover is opened by the operator to replace the bottle.
- The operator should replace the bottle as quickly as possible because toner supply halts when the door is opened and will not resume until the door has been closed.

## Around the Drum

### Mechanisms

### Layout



No.	Name
1	OPC Drum
2	Charge Unit
3	Development Unit
4	Image Transfer Unit

### Unit Configuration

Drum method	Drum charge method
Drum charge method	Three Scorotron wires suspended above crescent shaped wire mesh grid
Charge quenching method	LED quenching light
Drum cleaning method	Counter cleaning blade Lubricant bar, blade, brush method

### Mechanical Configuration

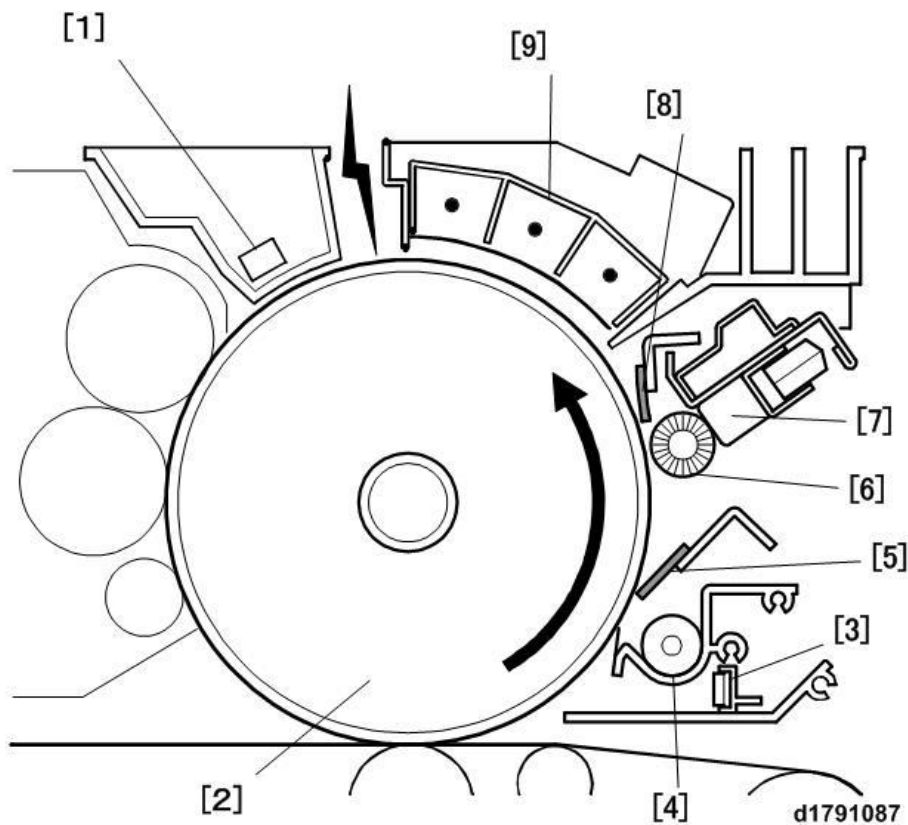
#### Around the Drum

Drum Charge Mechanism	
• Drum Charge, Quenching	Scorotron charge with drum charge quenching by LED
• Charge Wire Cleaning	Automatic cleaning of charge wire, electrical grid
Drum Drive	Drum motor drive

Drum Cleaning Unit	Counter blade method used in independent drum cleaning unit
Ventilation	Dust filter, fan provide clean ventilation for the unit
Development Unit	Ventilation with dust filter, ozone filter
• Toner	Pre-mixed developer, with replenishment at prescribed interval
• Toner Agitation Method	Three circulating augers transport toner to development unit
• Development Unit Drive	Development motor system
• Toner Density Control	TD sensor monitors toner density level
• Drum Ventilation	Cooling fans provide cooling
Lubricant End Detection	Two new lubricant end sensors on the ends of the cleaning unit

## Mechanisms Around the Drum

### Layout

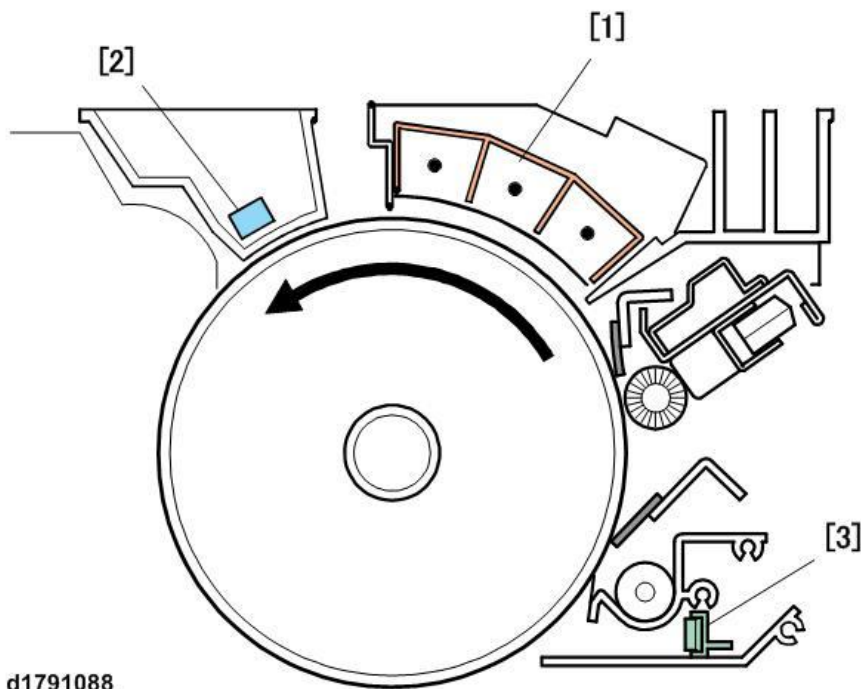


No.	Name	No.	Name
1	Drum Potential Sensor	6	Lubricant Brush Roller
2	Drum	7	Lubricant Bar
3	Quenching Lamp	8	Lubricant Blade
4	Toner Collection Coil	9	Drum Charge Unit
5	Cleaning Blade		

## 6.Detailed Descriptions

### Details

#### Drum Charge Unit



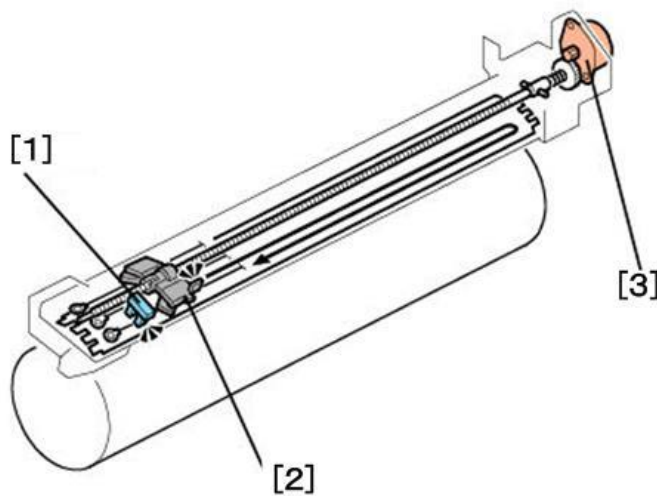
d1791088

No.	Name
1	Drum Charge Unit
2	Drum Potential Sensor
3	Quenching Lamp

The drum charge system employs the Scorotron method, comprised of a charge wire and grid, to apply an even charge across the surface of the drum.

- A drum potential sensor above the drum monitors the charge evenly applied to the drum by charge wires and grid. The surface potential of the drum is detected by the potential sensor.
- The quenching lamp (an LED) mounted below the drum quenches the charge on the drum after every drum rotation to prepare the drum for the next application of charge and image.

## Charge Wire Cleaning



D1791027

No.	Name
1	Cleaning Unit HP Sensor
2	Wire Cleaner
3	Charge Wire Cleaner Motor

The charge unit uses a wire cleaning system to keep the charge corona wires clean and free of dust that can cause uneven charging of the drum service and lead to poor image quality.

- When the wire cleaner motor switches on, the wire cleaning pads move from rear to front along the wires to clean the wires and grid.
- After cleaning, the cleaning pads move to the cleaning pad HP sensor and then stop.
- The charge corona wires are cleaned automatically after every 6,000 printed pages. Or, the operator can clean them manually at any time.

## Related SP Codes

- **SP2-220-001** Charger Cleaner Operation Start  
Executing this SP code cleans the charge wire automatically.
- **SP2-221-001** Charge Operation Mode

Allows selection of the timing for automatic cleaning of the charge corona wires.

0:	No cleaning, charge corona wires can be cleaned by execution of SP2-220 only.
1:	Cleaning done when process control is executed after the prescribed number of prints (p). Wire cleaning precedes process control execution. Executes based on the number of pages prescribed by SP2-221-002.
2:	Cleaning executes automatically after the count exceeds the prescribed number of pages, at the end of job in progress. Executes based on the number of pages prescribed by SP2-221-002. Default: 6,000 prints

- **SP2-221-002** Charger Cleaner Operation Interval  
This SP specifies the number of pages (p) for the charge wire cleaning interval.  
Default: 6,000 pages Range: 100 to 100,000 pages Step: 100 pages

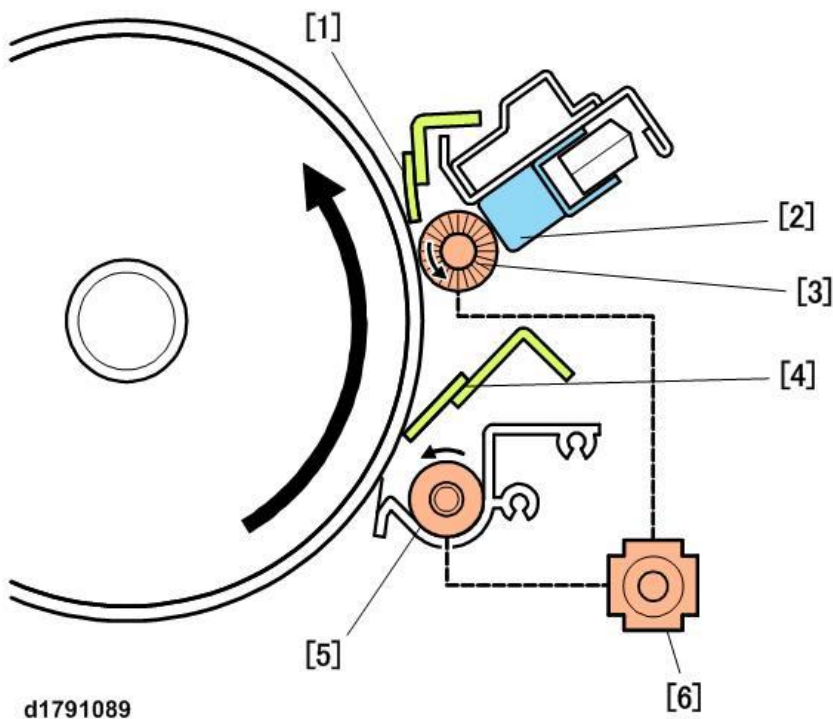
## 6.Detailed Descriptions

- **SP2-221-003** Charge Cleaner Count Display  
Displays the total number of cleanings, both automatic and those done with **SP2200-001**.
- **SP2-221-004** Charge Cleaner Count Clear  
This SP clears the charge cleaner count displayed by **SP2-221-003**. Clears the count for the number of cleanings performed after the charge cleaner unit is removed and then re-installed in the machine. This counter should be cleared immediately after charge unit or corona wire replacement.

### Drum Drive

The drum unit is driven by a dedicated drum motor. The same motor is not used to drive the development unit, in order to reduce load on the motor to ensure improvement of image quality.

### Drum Cleaning Unit



No.	Name	No.	Name
1	Lubricant Blade	4	Cleaning Blade
2	Lubricant Bar	5	Toner Collection Coil
3	Lubricant Brush Roller	6	Drum Cleaning Motor

- A cleaning counter blade cleans paper dust and toner from the surface of the drum.
- A lubricant bar and lubricant roller apply lubricant to the surface of the drum to improve the efficiency of drum surface cleaning.
- Paper dust and toner cleaned from the surface of the drum drop into a rotating toner collection coil for transport to the toner collection bottle.

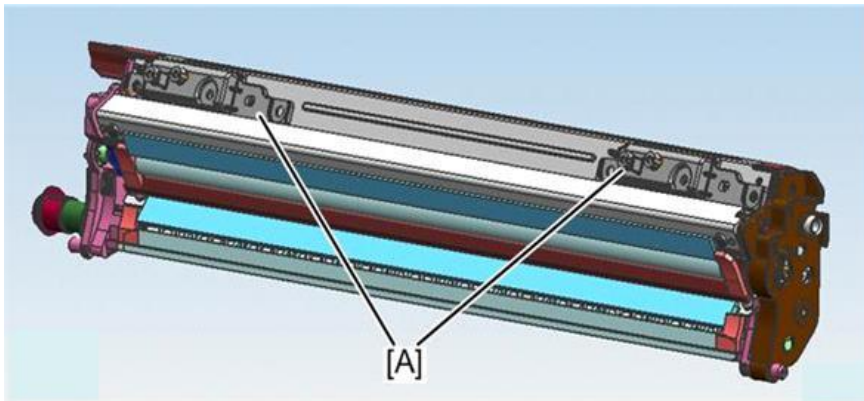
### Lubricant End Detection

The drum cleaning unit has two devices to detect when the drum lubricant (provided on the lubricant 1456

bar to prevent deterioration of drum surface) is depleted.

#### Lubricant End Detection Specifications

Status	Content
Lubricant mechanical detection	Detects a mechanical feeler pressing against the bar
Lubricant near-end	After the mechanical feeler is detected, another 10 km (A4 LEF or about 25 kP) of machine running is allowed, and then a message on the operation panel alerts the operator that the lubricant bar is nearly gone.
Lubricant end	The lubricant end alert is issued 40 km (A4 LEF or about 100 kP) of machine usage past the appearance of the near-end alert and the machine stops. The machine alerts the operator that the lubricant bar must be replaced.

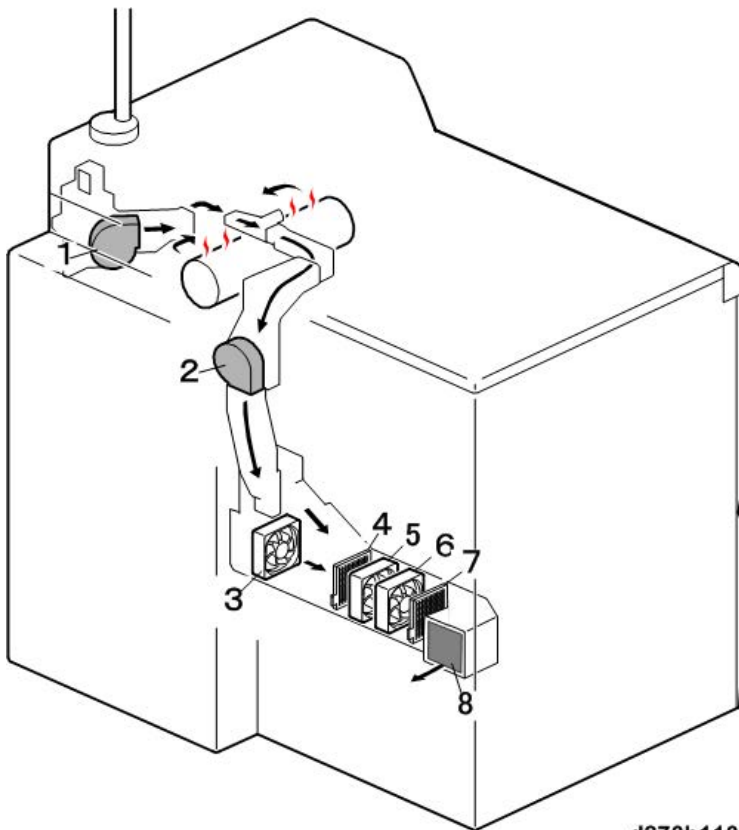


D1791030

- The lubricant end sensors [A] are mounted at the top of the unit behind the lubricant blade.
- One is mounted at the front, and another at the rear, and either one can trigger a near-end alert.

## 6.Detailed Descriptions

### Ventilation



No.	Name
1	Ozone Air Intake Fan
2	Ozone Air Exhaust Fan
3	Fusing Transport Exhaust Fan
4	Fusing Exhaust Filter 1
5	Fusing Exhaust Fan: Upper
6	Fusing Exhaust Fan: Lower
7	Fusing Exhaust Filter 2
8	Ozone Filter

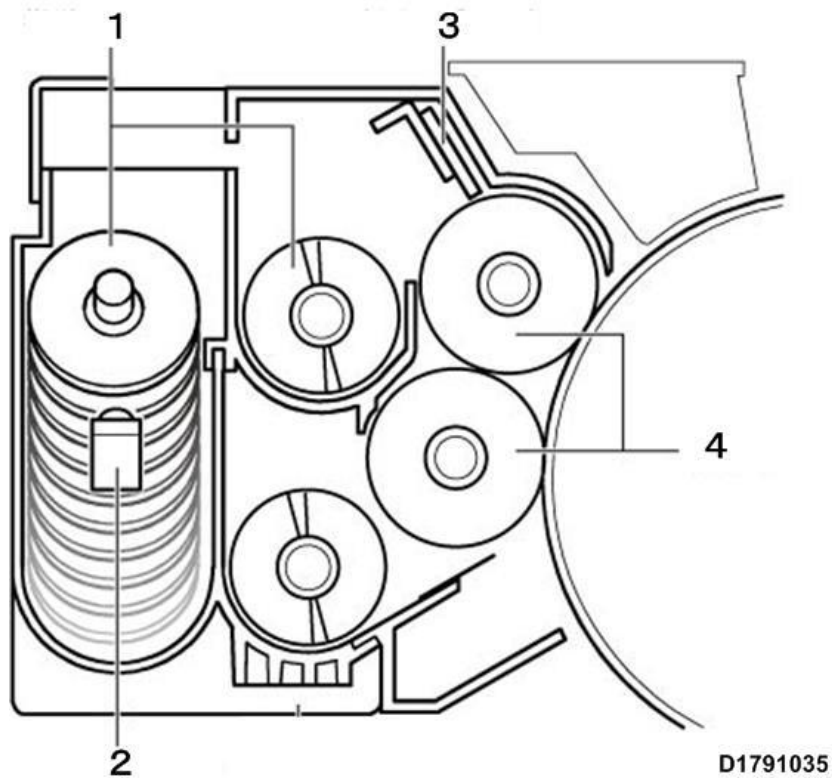
The drum cleaning unit has a fan and ozone filter to pick up heat and ozone generated by the charge corona unit and send it out of the machine. The ozone laden air is filtered through both an air filter to remove dust and an ozone filter to neutralize the ozone.



## Development Unit

### Development Unit Mechanism

#### Layout (Rollers, Motor, Sensors)



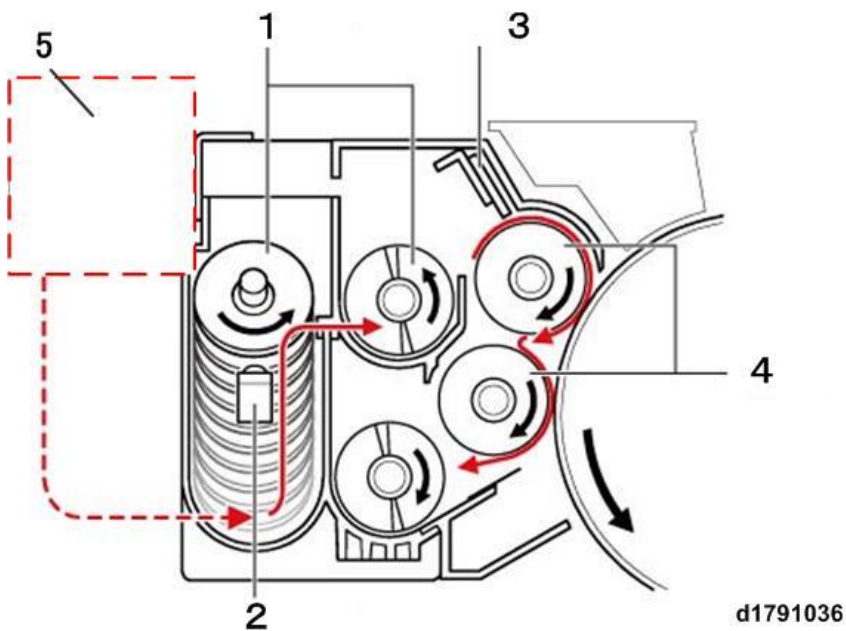
No.	Name	No.	Name
1	Transport Auger	3	Doctor Blade
2	TD Sensor	4	Development Sleeve

#### Unit Configuration

Development Method	Dual element, two-step development, circulating dry toner
Toner/developer mixing	Tri-axel auger method
Developer unit drive	Development motor comprises single, independent drive
Development bias	Applied with CGB power pack

## 6.Detailed Descriptions

### Toner and Developer Mixing

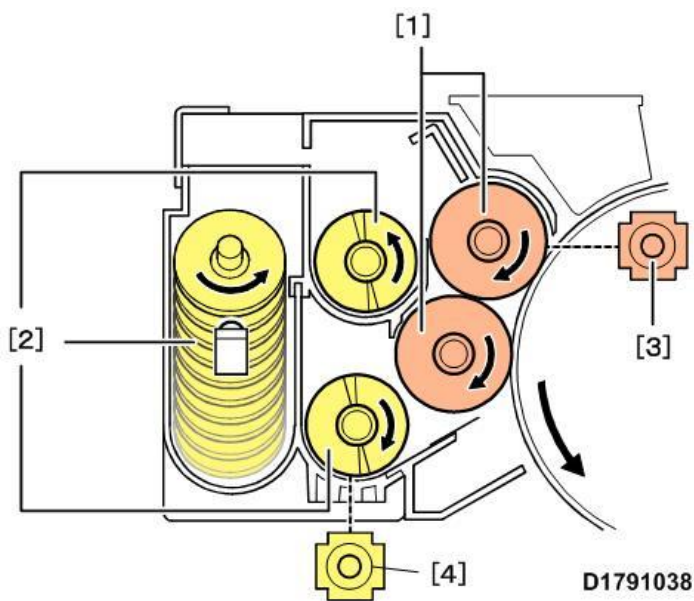


No.	Name	No.	Name
1	Transport Auger	4	Development Sleeve
2	TD Sensor	5	Sub Hopper
3	Doctor Blade		

Toner is moved from the toner bottle to the sub hopper, and then to the development unit. It is transported by two augers that mix the toner with the developer until the mixture reaches the development sleeve roller.

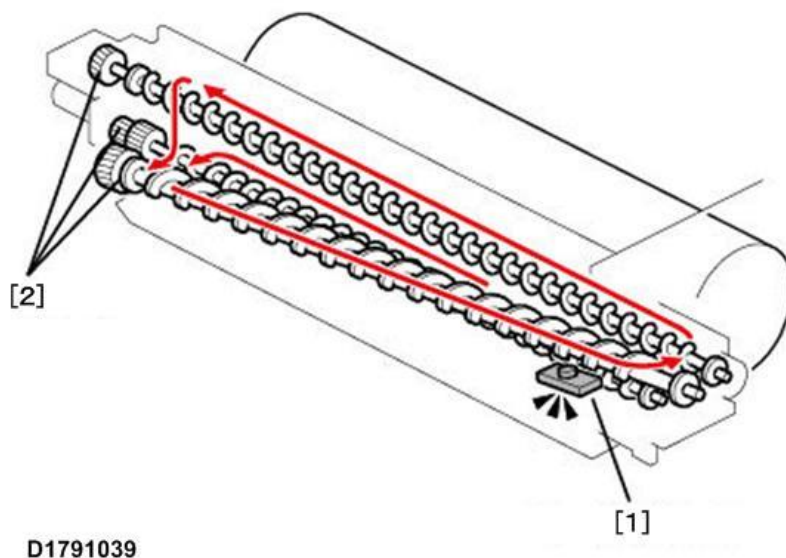
- The developer (toner/carrier mixture) is smoothed to an even thickness on the development sleeve by the doctor blade before the toner is passed onto the surface of the drum.
- There are two development sleeve rollers, if the adhesion of the toner to the drum from the development sleeve above is insufficient then the development sleeve below can make up for the deficiency.
- Any carrier from the developer that adheres to the drum is collected by the toner collection roller.
- The developer transported by the development sleeve roller and toner collection roller falls onto the transport auger below and is circulated.

## Developer Unit Drive



No.	Name	No.	Name
1	Development Rollers	3	Development Motor
2	Transport Augers	4	Toner Agitator Motor

This shows how the two development sleeves, three transport augers, and toner collection coil are driven.

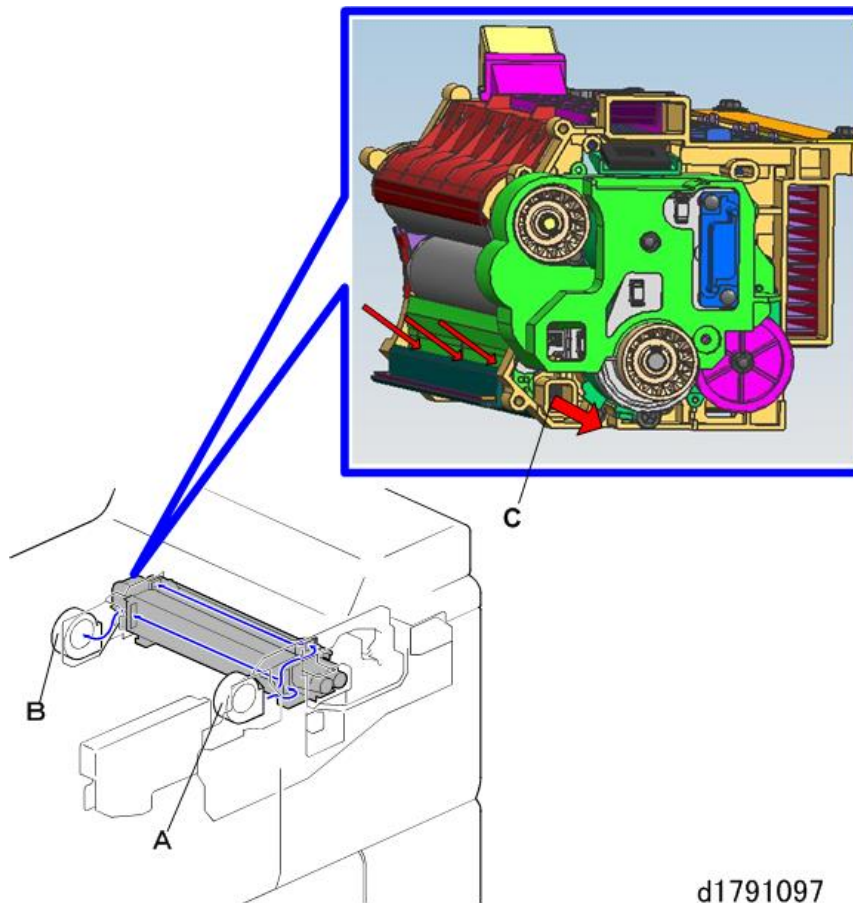


The toner density sensor [1] is located at the higher end of the tilted toner collection coil, opposite the driven gears [2]. An ID chip built-into the TD sensor monitors the density of the toner for toner density control for the appearance of text and images on paper.

## 6.Detailed Descriptions

### Ventilation

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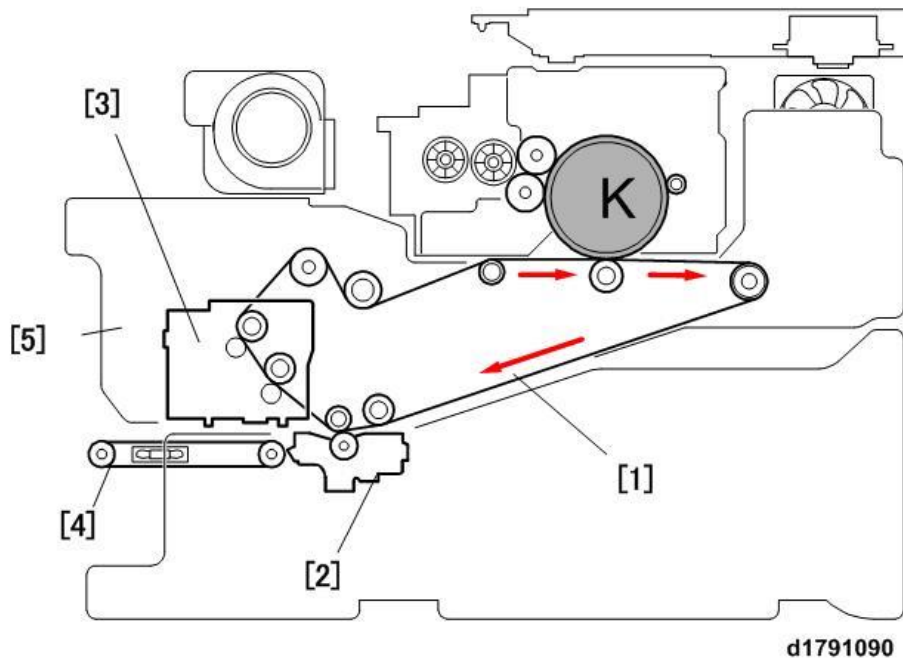
d1791097

Two fans cool the development unit, one at the front [A] and one at the rear [B]. Fan [B] also prevents toner scatter by suctioning toner from below the development unit.

## Image Transfer Unit

### Overview and Mechanism

#### Overview



No.	Name
1	ITB (Image Transfer Belt)
2	PTR (Paper Transfer Roller) Unit
3	ITB Cleaning Unit
4	PTB (Paper Transport Belt) Unit
5	ITB Unit

The image transfer belt (ITB) and ITB cleaning unit comprise the image transfer unit.

- The image is first transferred from the drum to the image transfer belt and then carried to the PTR unit. At the PTR unit the image is taken from the belt and transferred to paper.
- The paper is separated from the ITB and then transported over the PTB unit to the fusing unit.,

#### Mechanical Configuration

##### Image Transfer Unit

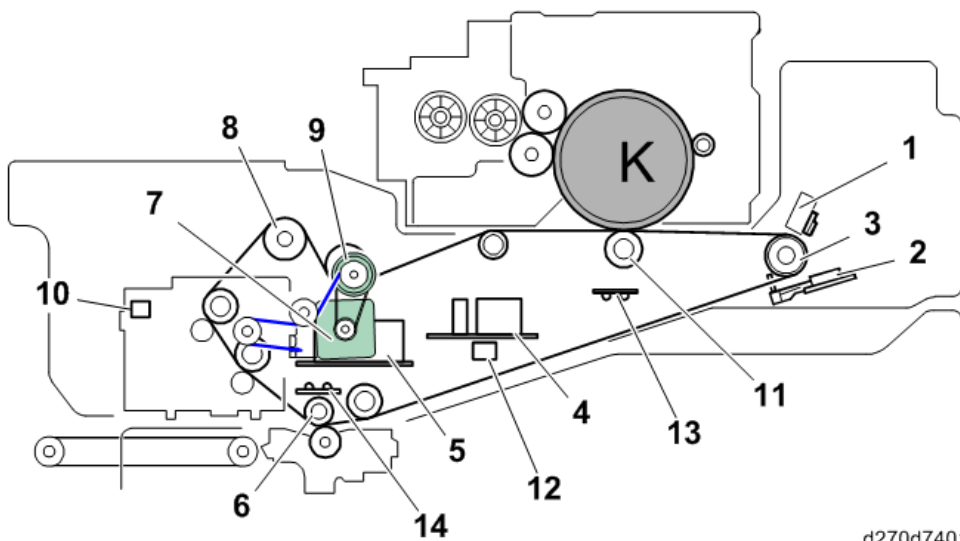
Image Transfer Mechanism	
• ITB Unit Drive	ITB is driven by the transfer belt motor
• Image Transfer Bias	Bias applied to the ITB
• Belt Position Correction	One motor to keep the belt centered
• Belt Ventilation	Cools the ITB unit
• ID Sensor Cleaning	A fan keeps the surface of ID sensor clean
Belt Cleaning Mechanism	

## 6.Detailed Descriptions

• ITB Cleaning	Counter blade system
• Belt Lubrication	Lubricant bar, lubricant brush roller, lubricant blade system
Paper Transfer Mechanism	
• Image to Paper Transfer	Bias applied to PTR pulls image from belt to paper
• Paper Separation from ITB	Applied quenching bias and curvature separation separate paper from ITB
• PTR Cleaning	Counter blade system
• PTR Lubrication	Lubricant bar, lubricant brush roller, lubricant blade system
• PTR Mechanism	Cam operated PTR separation
Transport to Fusing Unit	
• Transport Belts	Suction fans below the perforated belts keep the paper on the paper path.

### Details

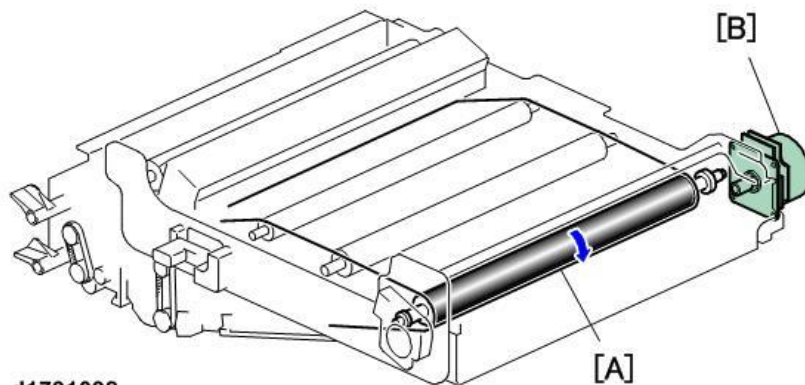
#### Layout (Belt, Motor, Sensors)



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No.	Name	No.	Name
1	ID Sensor	8	Centering Roller
2	Belt Centering Sensor	9	Tension Roller
3	ITB Drive Roller	10	ITB Unit Set Sensor
4	TDRB (Transfer Driver Board)	11	Image Transfer Roller
5	Power Pack (T1/T2)	12	Thermostat
6	Paper Transfer Bias Roller	13	ITB Transfer Unit Heater
7	Belt Centering Motor	14	ITB Bias Roller Heater

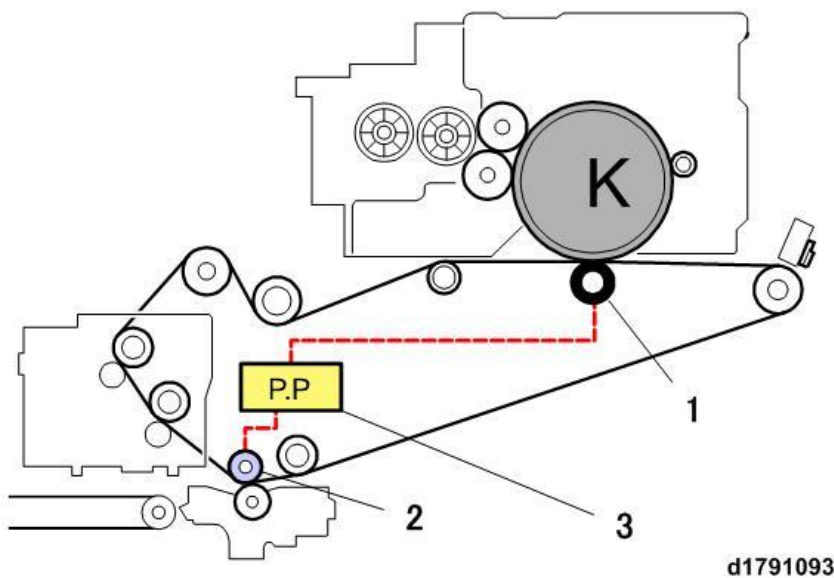
## Drive



d1791092

The ITB is driven by gears, transport belt roller [A] and the transfer belt motor [B]. The line speed of the belt is controlled by the drive board of the transfer belt motor.

## Transfer Bias



d1791093

No.	Name
1	Image Transfer Roller
2	Paper Transfer Bias Roller (ROLLER:OPPOSED:PAPER:ASS'Y)
3	Power Pack (T1/T2)

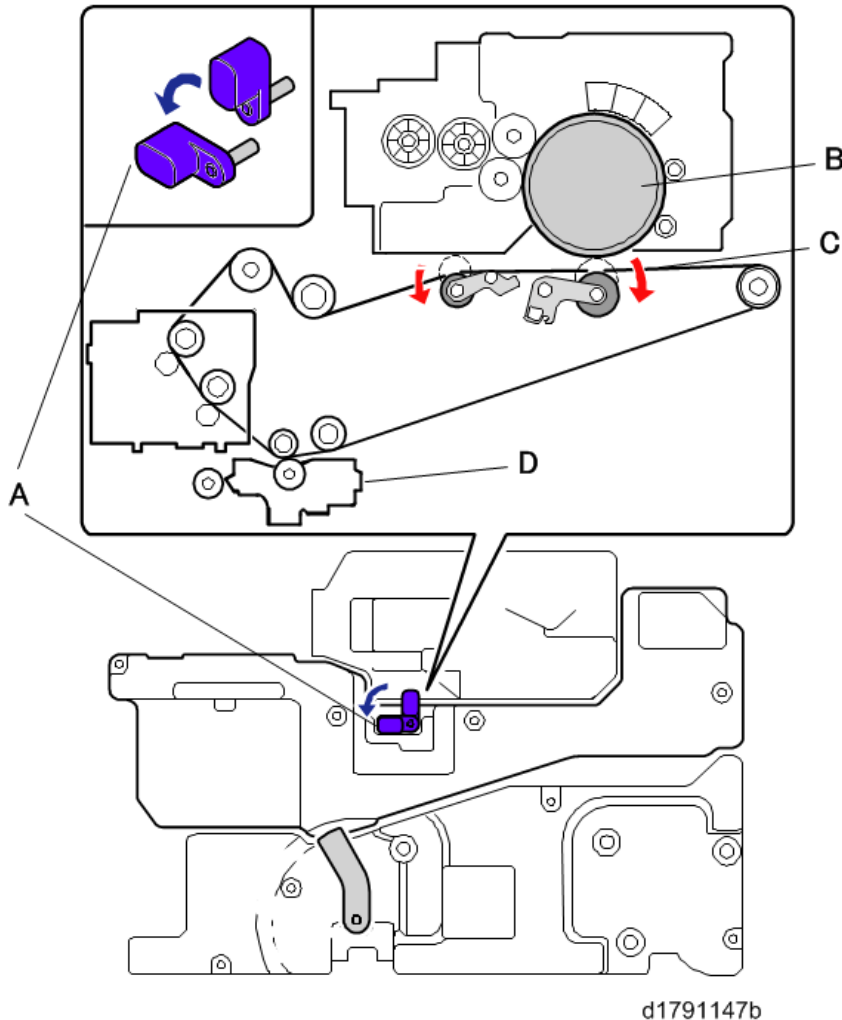
- A positive charge is applied to the image transfer roller to the underside of the ITB to pull the negatively charged image from the drum onto the belt.
- A negative bias is applied to the paper transfer bias roller opposing the paper transfer roller to transfer the image from the belt to the paper and to separate the paper from the belt (repulsive separation) in the PTR unit farther downstream.
- The bias at both points is supplied from the same power pack, the transfer power pack.
- When the banner display of the paper transfer bias roller replacement flag is switched to 0 (ON) in SP2-324-003, the machine determines the amount of wear in the roller by monitoring the

## 6.Detailed Descriptions

resistance of the paper transfer bias roller. When the resistance level increases, a message is displayed on the operation panel to alert the user that the paper transfer bias roller will need replacement soon and that they should call for service

### Locking/Unlocking the ITB

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Normally the image transfer belt is locked and in contact with the drum and PTR.

When pulling out the drawer unit, the belt needs to be unlocked and separated from the drum [B] and the image transfer belt [C] by lowering the pressure lever [A].

Normally the PTR unit is separated from the ITB unit. When a image is created, the PTR unit automatically contacts with the ITB unit.

### Belt Centering

---

This machine is equipped with a mechanism to keep the ITB and ITB roller straight and centered. The position of the belt is corrected by moving the far end of the belt centering roller when the ITB strays from the center. Viewed from the far end of the belt centering roller toward the back of the machine, the movement to correct positioning is as follows:

- When the slant of the belt centering roller is tilted left, the ITB moves to the front.

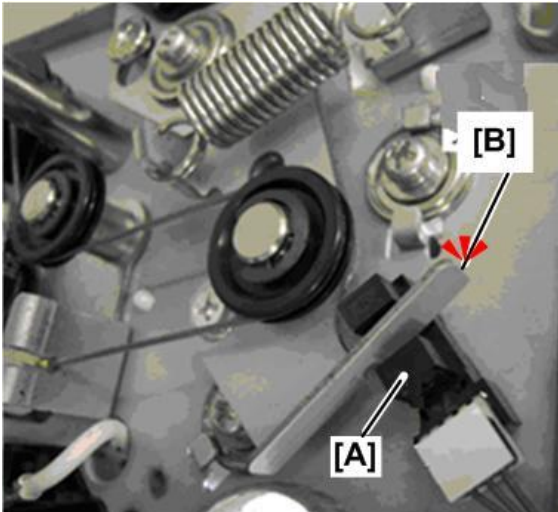


- When the slant of the belt centering roller is tilted right, the ITB moves to the rear.

After the ITB returns to the center position, the centering roller stops at the adjusted position, and then normal operation continues.

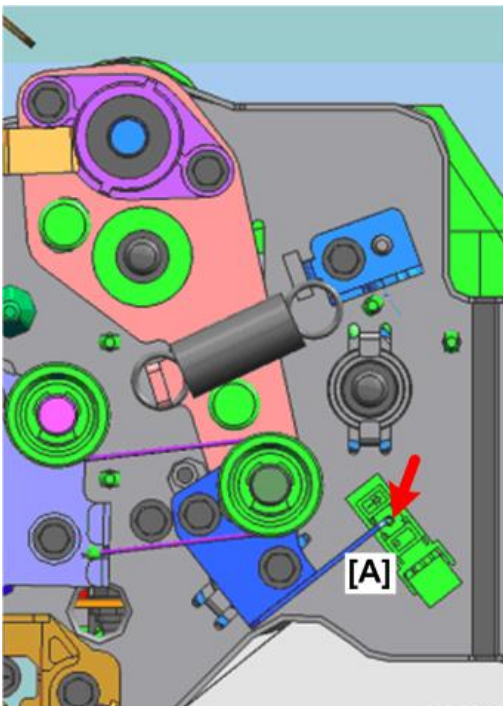
The centering roller is moved to its slanted position by the belt centering motor.

Just before the belt centering correction operation starts, the belt centering roller HP sensor [A] detects the arm [B] of the belt centering roller at its home position.



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After movement to home position [A] is completed:



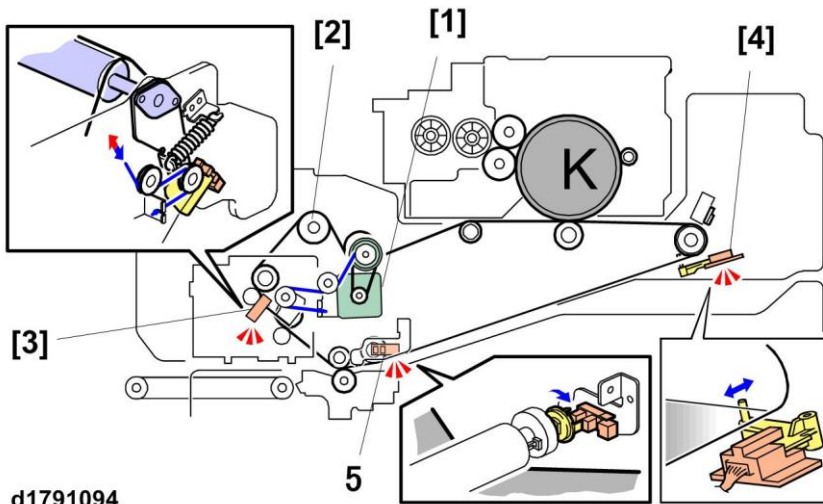
d1797014

If this home position detection operation (homing) fails, the machine will issue SC471-02. The home position sensor checks the belt centering roller to make sure that it is positioned correctly:

- At power on
- When the machine recovers from Energy Save mode

## 6.Detailed Descriptions

- When the front doors are closed
- After lubrication



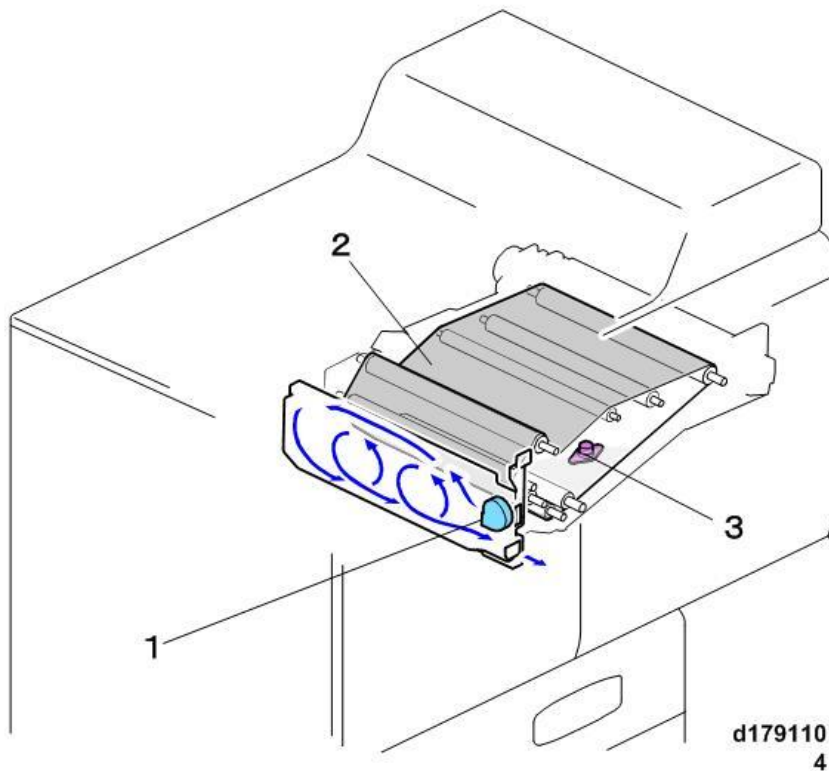
d1791094

No.	Name
1	Belt Centering Motor
2	Belt Centering Roller
3	Belt Centering Roller HP Sensor
4	Belt Centering Sensor
5	PTR Separation Sensor

In this belt transfer system:

- The ITB must remain centered over the image transfer roller, so the unit is provided with a mechanism to do this.
- The belt centering sensor [4] monitors the rear edge of the ITB to make sure that it is straight.
- The belt centering sensor [4] switches on the belt centering motor [1] to operate the pulley that can nudge the belt centering roller [2] to straighten the belt.
- A belt steering HP sensor [3] switches off the belt centering motor after adjustment is done.
- The position readings of belt centering sensor [4] are used to determine the slant of the steering controller adjusted at the end of the roller toward the back of the machine. These readings are used to correct ITB skew, but if centering roller has skewed too far out of position at either the front or back (readings of sensor [4] determined to be out of range), then the machine issues an SC code (ITB positioning error).
- SC471-04, 05 are ITB positioning error codes 2, 3, and SC471-06 is the belt centering sensor error. If there is no input from the belt centering roller HP sensor due to the belt centering sensor defective or dirty, the machine will issue SC 471-06 to prevent damage to the fragile ITB.

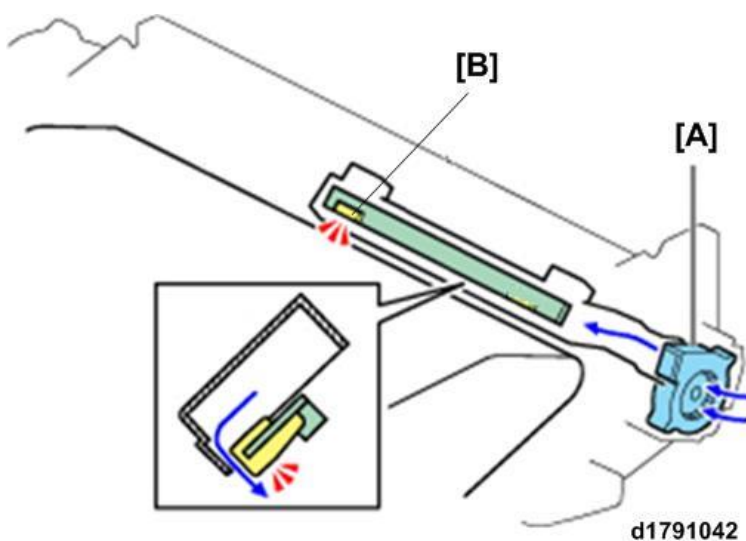
## Ventilation



1	Belt cleaning/cooling fan
2	ITB
3	Thermostat

A small fan both cleans and cools the area on the side of the ITB where the fusing unit generates heat. A thermostat [3] monitors the temperature around the ITB unit. This is a safety device. If the area around the ITB overheats, the thermostat will blow and shut down the system.

## ID Sensor Cleaning



A small fan [A] on the right side of the drawer keeps the detecting surface of the ID sensor [B] clean.

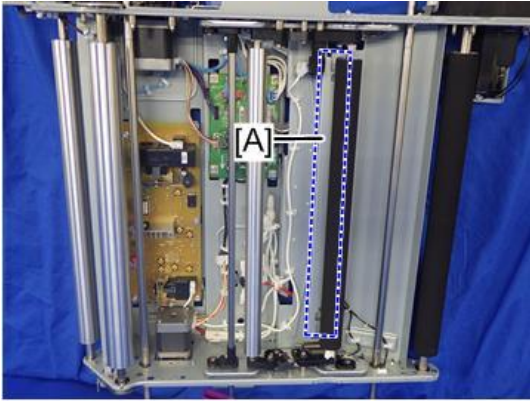
## 6.Detailed Descriptions

The air blown over the surface of the ID sensor where it reads patterns on the belt below keeps it free of paper dust and other matter.

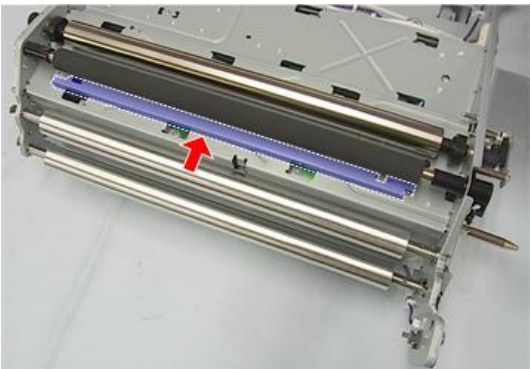
### ITB Heater, Thermostat

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The ITB unit is provided with two heaters, the ITB heater [A] near the image transfer roller and the paper transfer bias roller heater [B].



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These heaters share one thermostat.

When the machine leaves the factory, the paper transfer bias roller heater switches are off. You can turn it on, as needed. When the heater switches are on, heaters are turned on/off automatically, according to the state of main power switch.

When the heater switches are on, the heater turns on/off automatically, according to the state of main power switch, as shown below.

- When the main power switch is ON:  
Heaters are off.
- When the main power switch is OFF:  
A thermostat keeps a constant temperature inside the machine by turning the heaters on/off.

The heaters share a common connector plug which should be connected to the AC control board as necessary.

- White spots in prints indicate that condensation has formed in the machine, and in this case the ITB heaters should be connected.
- For example, this can occur when the machine is turned on in the morning after it has remained off

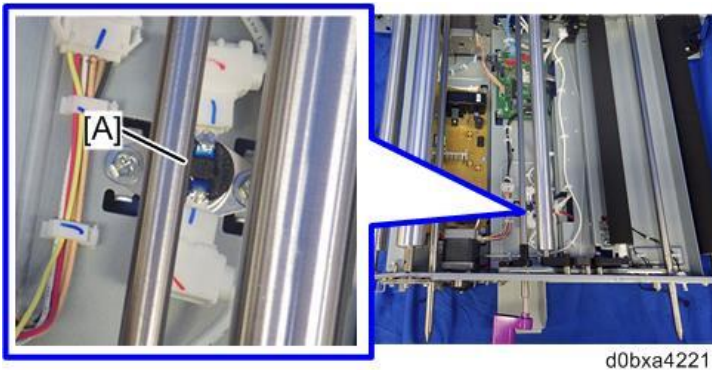
during the night in a cold environment.

- The heaters consume about 18W after they are connected.

Low temperature/humidity environment tends to increase the resistance level of the paper transfer bias roller and shorten its life (prescribed to 1200K). Then the message of replacing the roller may be shown. To prevent this, turn the heater on. The resistance level of the roller decreases and the message may not appear.

**Note**

When the banner display of the paper transfer bias roller replacement flag is switched to 0 (ON) in SP2-324-003, it is shown on the display.

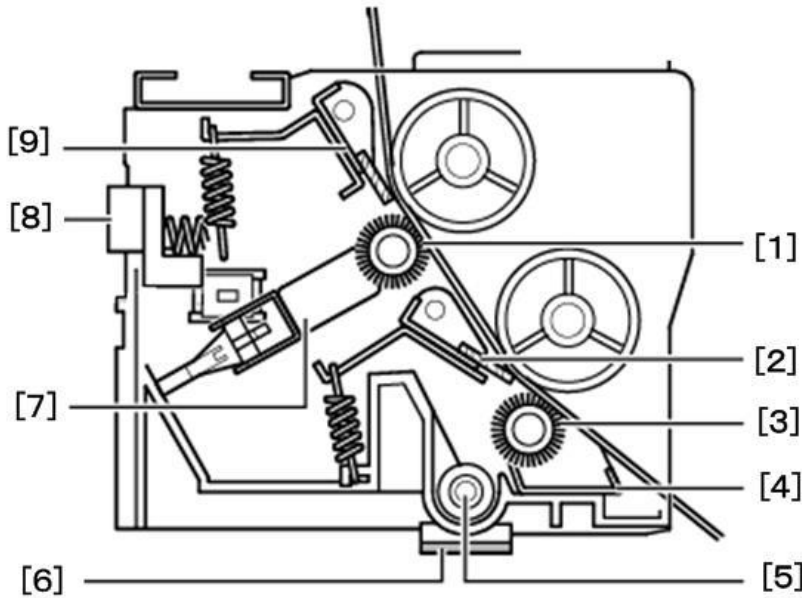


The thermostat [A] monitors the temperature inside the ITB unit to prevent the unit from overheating.

- If the heaters are OFF and machine temperature falls to  $22^{\circ}\text{C}\pm 5^{\circ}\text{C}$ , the ITB heaters will switch ON.
- If the heaters are ON and machine temperature rises to  $32^{\circ}\text{C}\pm 5^{\circ}\text{C}$ , the heaters will switch OFF.
- The thermostat performs no function when the heaters are not connected.

## ITB Cleaning Unit

### Layout



d1791056

No.	Name	No.	Name
1	Lubricant Brush Roller	6	Waste Toner Exit Port
2	Cleaning Blade	7	Lubricant Bar
3	Cleaning Roller	8	Stopper
4	Paper Dust Scraper	9	Lubricant Blade
5	Collection Coil		

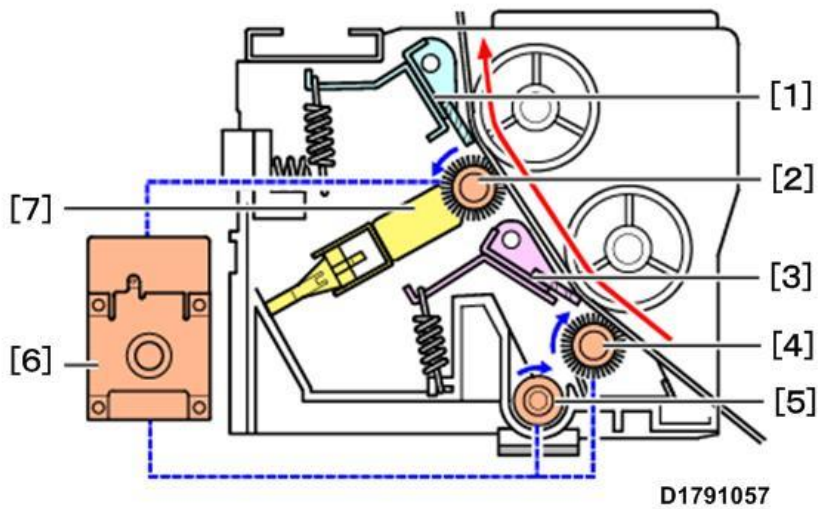
### Mechanism

#### ITB Cleaning

- In the belt cleaning mechanism, paper dust is cleaned from the ITB by the cleaning roller (a soft brush roller), and then the cleaning blade also cleans the surface of the roller.
- Paper dust and toner cleaned from the surface drop into a rotating collection coil for transport to the waste toner collection bottle.

The ITB/PTR cleaning motor drives gears that rotate the cleaning roller, lubricant roller, and collection coil.

## Lubricant Application



No.	Name	No.	Name
1	Lubricant Blade	5	Collection Coil
2	Lubricant Brush Roller	6	ITB/PTR Cleaning Motor
3	Cleaning Blade	7	Lubricant Bar
4	Cleaning Roller		

A cleaning blade and lubricant blade comprise the counter blade system. In order to improve cleaning, a light lubricant is applied evenly to the surface of the belt with the lubricant blade.

## Paper Transfer Roller Unit

### Mechanisms, Configuration

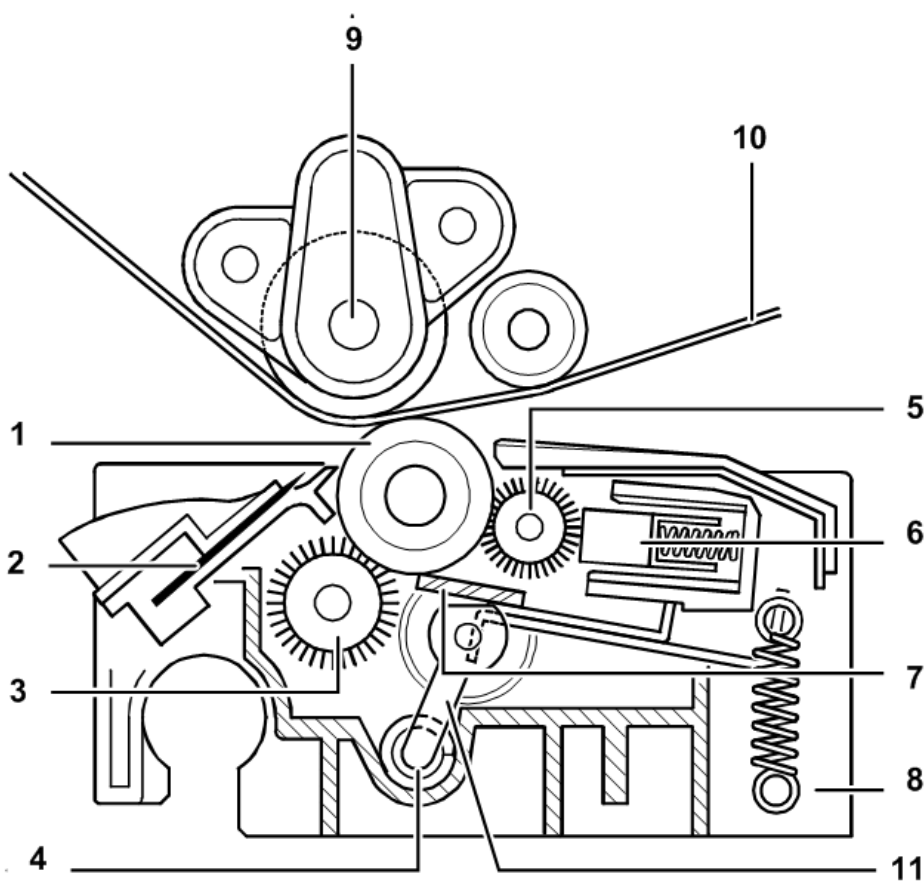
#### Overview

This mechanism applies a transfer electric field between the paper transfer bias roller [9] and the paper transfer roller [1]. Then transfers toner images onto the paper from the image transfer belt.

To create a transfer electric field, bias is applied to the paper transfer bias roller.

ITB unit is equipped with the paper transfer roller power pack that is used for this, inside itself.

#### Layout



d270d7402

No.	Name	No.	Name
1	Paper Transfer Roller (PTR)	7	Cleaning Blade
2	Anti-static Brush	8	Paper Transfer Roller Unit
3	Cleaning Roller	9	Paper Transfer Bias Roller
4	Waste Toner Collection Coil	10	Image Transfer Belt (ITB)
5	Lubricant Brush Roller	11	
6	Lubricant Bar		

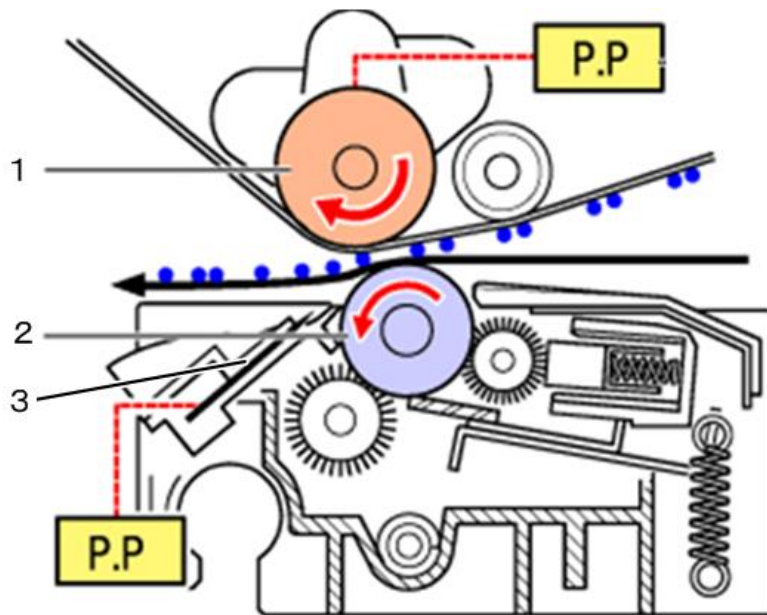


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 Details
 

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## Paper Separation Mechanism



D1791045

No.	Name
1	Paper Transfer Idle Roller
2	Paper Transfer Roller (PTR)
3	Paper Discharge Plate

In addition to the AC+DC bias applied to the back of the paper to neutralize the charge on the paper and belt, curvature separation helps the paper to separate from the belt when the ITB makes an abrupt turn toward the top of the machine at the point where the ITB and PTR are in contact in order to transfer the image.

After the image has been transferred to the paper, the paper discharge plate (connected to the separation power pack) applies AC and DC charge to neutralize the charge on the paper and the ITB.

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 PTR Cleaning
 

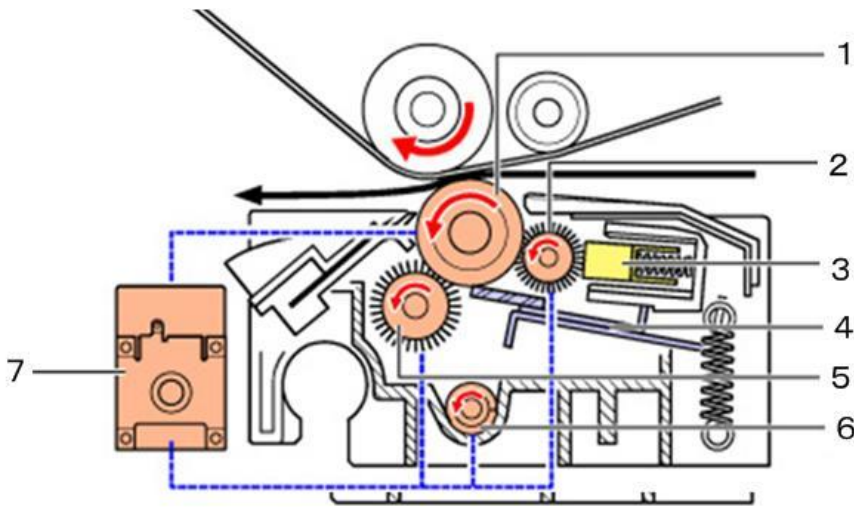
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- Paper dust is cleaned from the PTR by the cleaning roller (a soft brush roller), and then the cleaning blade cleans the surface of the roller.
- Paper dust and toner cleaned from the surface of the roller drop into a rotating toner collection coil for transport to the toner collection bottle. Also the PTR unit is provided with the cleaning mechanism.

The ITB/PTR cleaning motor drives the PTR roller, PTR cleaning roller, lubricant roller, and waste toner collection coil. The PTR unit (like the ITB unit) has its own cleaning unit.

## 6.Detailed Descriptions

### Lubricant Application

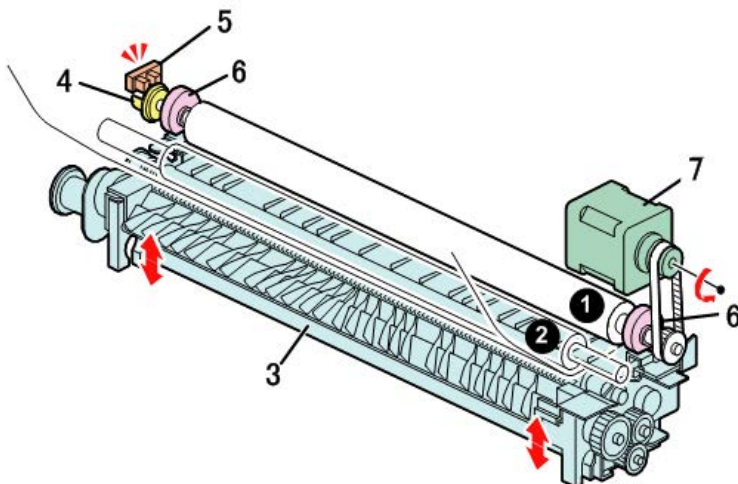


D1791046

No.	Name	No.	Name
1	Paper Transfer Roller (PTR)	5	Cleaning Roller
2	Lubricant Roller	6	Waste Toner Collection Coil
3	Lubricant Bar	7	ITB/PTR Cleaning Motor
4	Cleaning Blade	-	-

A lubricant roller (a soft brush roller) takes lubricant from the lubricant bar behind it and applies a very thin coat of the lubricant to the surface of the PTR. This ensures easier cleaning of the roller surface.

### PTR Lift and Separation



d270b1047

No.	Name
1	PTR Roller
2	PTR Idle Roller
3	PTR Unit
4	Actuator

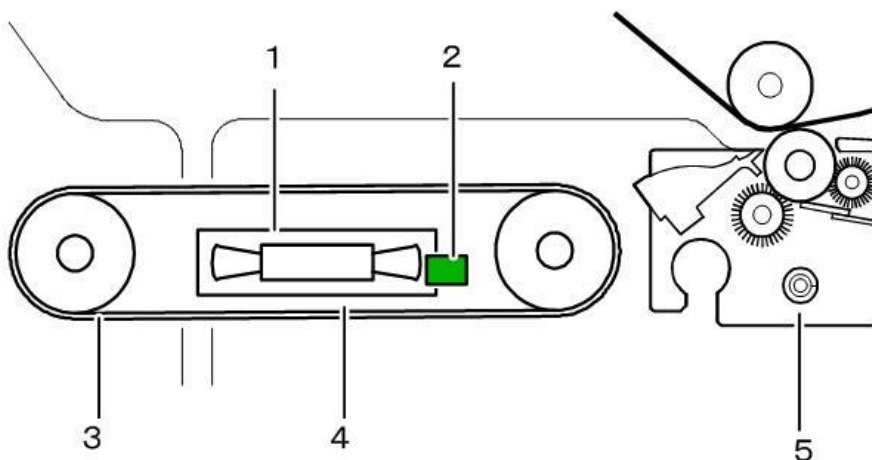
No.	Name
5	PTR Lift Sensor
6	Cams (front and rear)
7	PTR Separation Motor

The PTR separation motor in the ITB unit raises and lowers the PTR roller to open and close the nip between the PTR roller and the PTR idle roller inside the PTR unit. The image transfer belt (ITB) runs between these rollers.

- Cams on each end of the PTR roller shaft, rotated by the PTR separation motor, raise and lower the roller to open and close the nip.
- When the rotation of the PTR roller moves the actuator on the end of roller into the gap of the PTR lift sensor, this turns the motor off. This is the home position with the rollers separated.

# PTB Unit

## Layout

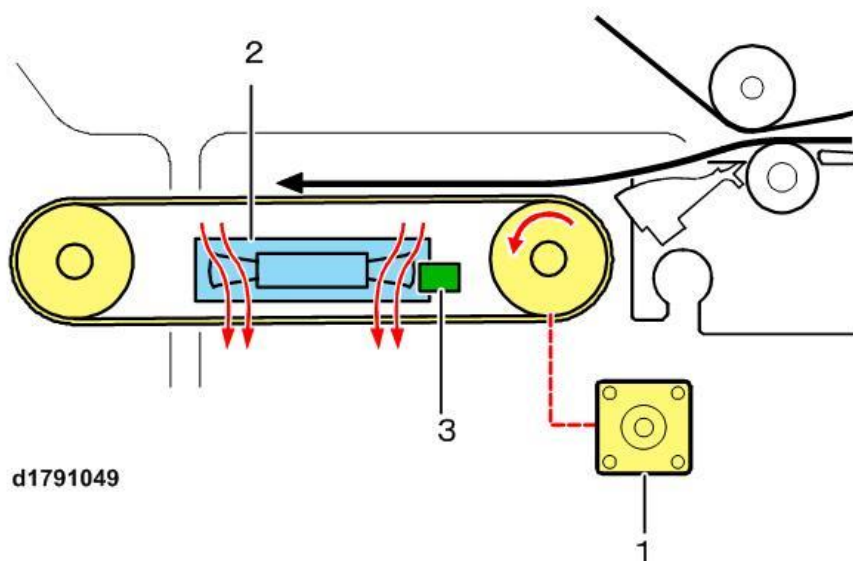


D1791048

No.	Name
1	Paper Transport Fans
2	PTB Sensor
3	Paper Transport Belt
4	PTB Unit
5	Paper Transfer Unit

## Details

### Air Suction Transport



No.	Name
1	PTB Motor
2	Paper Transport Fans
3	PTB Sensor

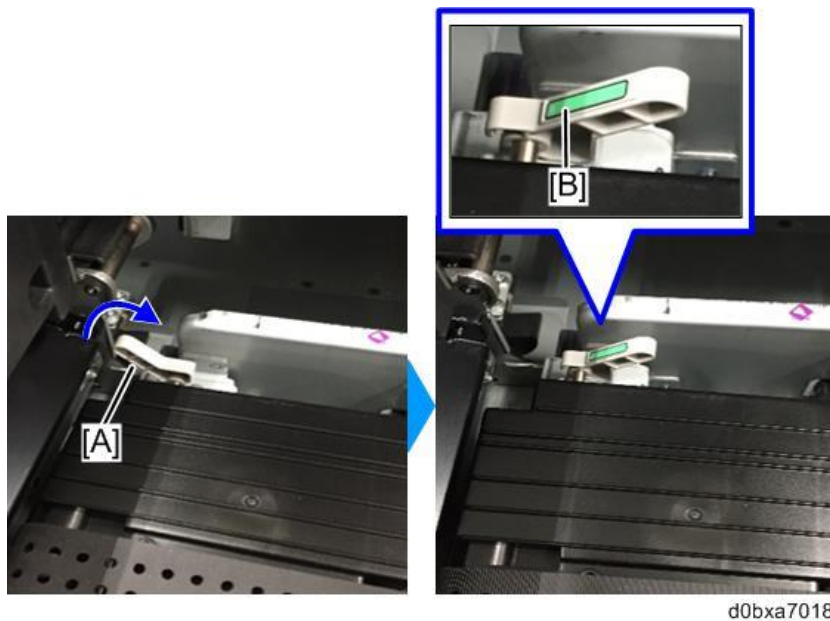
The PTB motor drives the gears that rotate the paper transport belts.

- The suction from two large transport fans below the transport belts holds the paper on the belt as it is transported from the ITB unit to the fusing unit.
- This system keeps the paper with the unfixed toner on the paper transport path so it can enter straight into the fusing unit.
- The PTB sensor monitors the passing of the leading and trailing edges of the paper to check for a paper jam.

#### New Lever to Prevent Jam 82 in the Bridge Unit

When using A4 LEF thick paper (200 gsm or heavier), the leading edge of the paper may not go into the fusing unit, then the paper curled downward between the fusing unit and PTR unit. This causes the paper jam. To prevent the paper jam, raise the height of the transport unit by the lever.

1. Open the front door, and then draw the drawer.
2. Pull up the lever [A], and check the green decal [B] as a mark.

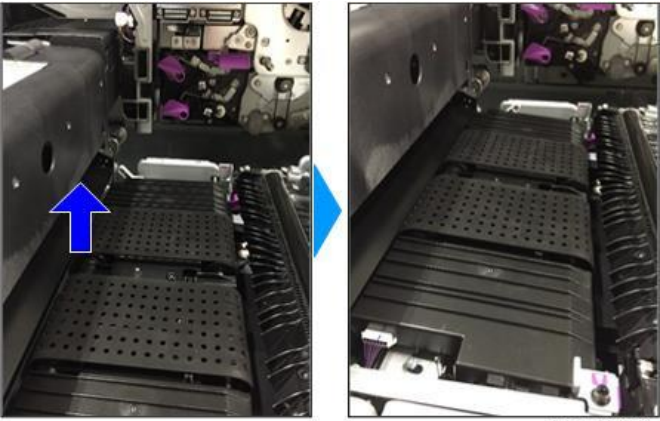


The height of the transport unit is changed and your paper can be feeded.

3. After feeding the paper, return the lever to the original position. Otherwise, a wrinkle or fusing unit

6.Detailed Descriptions

entrance JAM will occur.



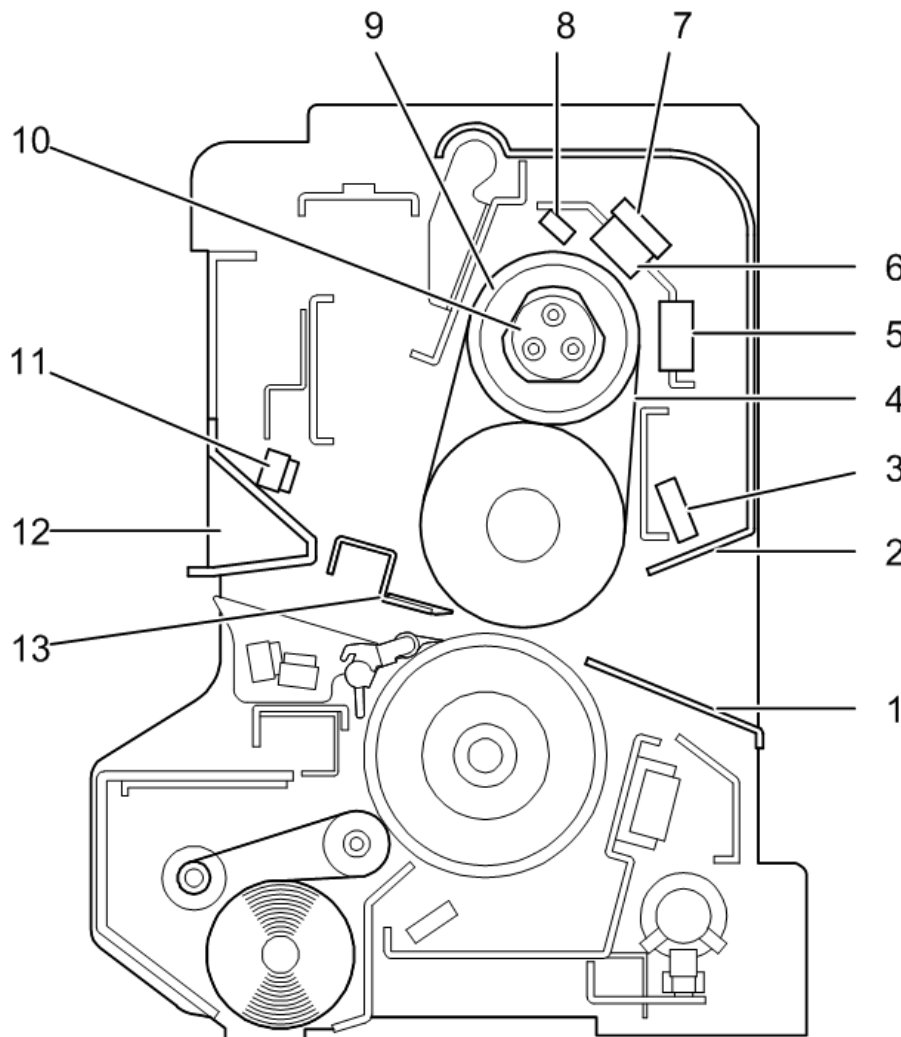
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## Fusing Unit

### Mechanisms, Configuration

#### Overview

Paper transported from the PTB unit enters the fusing unit where the paper is pressed between the pressure roller and hot roller to fuse the toner to the paper.

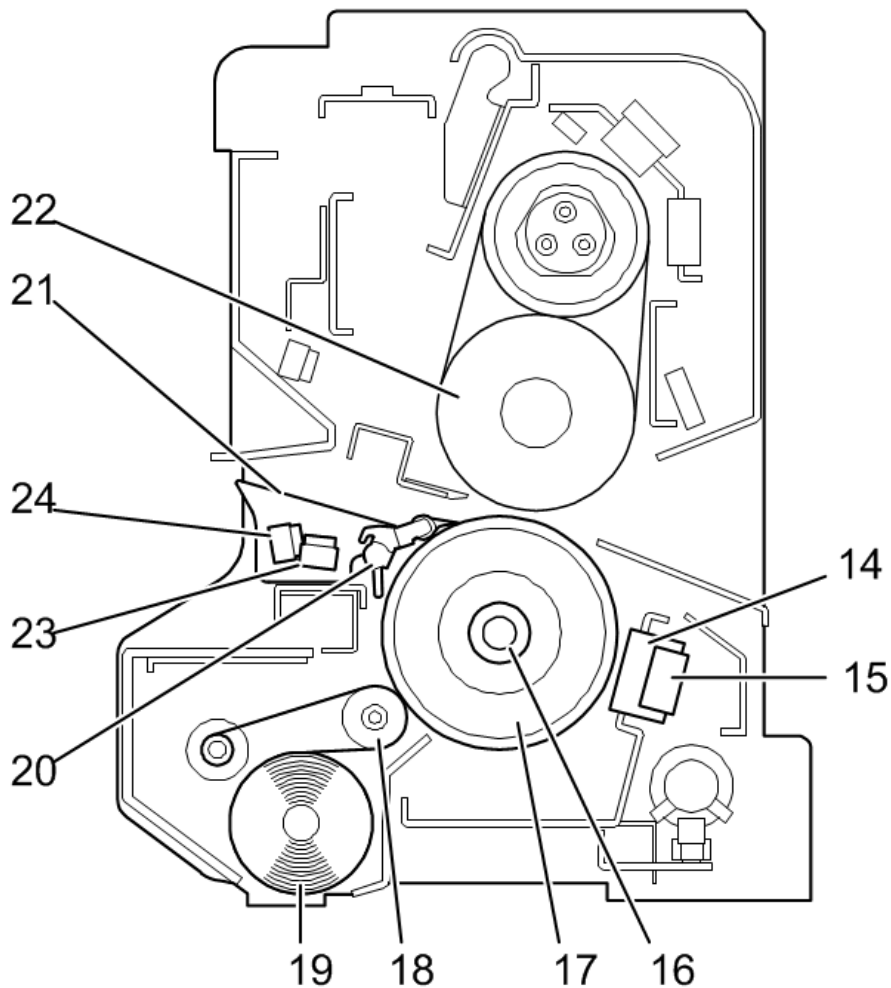


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No.	Name	No.	Name
1	Entrance Guide (Lower)	8	Fusing Heat Thermistor (Rear)
2	Entrance Guide (Upper)	9	Heating Roller
3	Fusing Temperature Sensor	10	Fusing Lamps (NA: 997W×3, EU: 1070W×3)
4	Fusing Belt	11	Fusing Belt Paper Sensor
5	Fusing Temperature Sensor	12	Fusing Exit Guide Plate (Relay)
6	Fusing Temperature Sensor	13	Separation plate

6.Detailed Descriptions

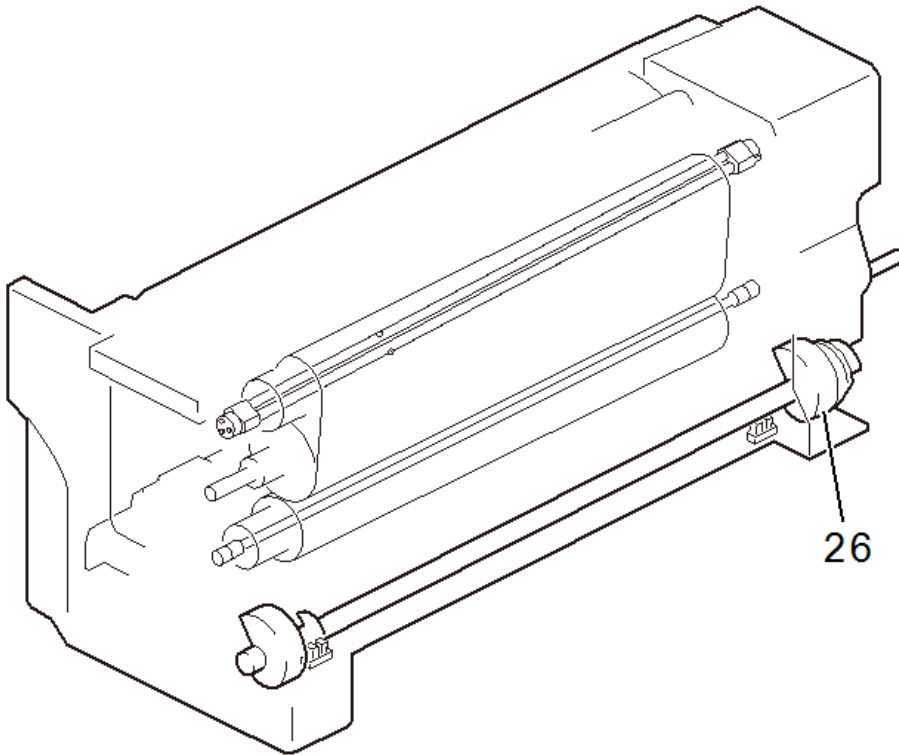
No.	Name	No.	Name
7	Heating Roller Thermostats (x2)	-	



d270d7602a

No.	Name	No.	Name
14	Fusing Temperature Sensor (Pressure Roller)	20	Pressure Roller Stripper Pawls
15	Pressure Roller Thermostat	21	Fusing Exit Lower Guide Plate
16	Pressure Roller Fusing Lamp (800W)	22	Hot Roller
17	Pressure Roller	23	Fusing Exit Sensor
18	Retention Roller	24	Fusing Paper Sensor
19	Cleaning Web	-	-





d270d7608

No.	Name
26	Fusing Pressure Cam

**Main Machine: Fusing Roller Removed**



d270b1142

No.	Name
27	Thermopile (Heating Roller Center) Thermopile (Heating Roller Ends) Thermopile (Heating Roller Full-Bd Ends)

**Details**

**Heating Roller and Pressure Roller Lamps**

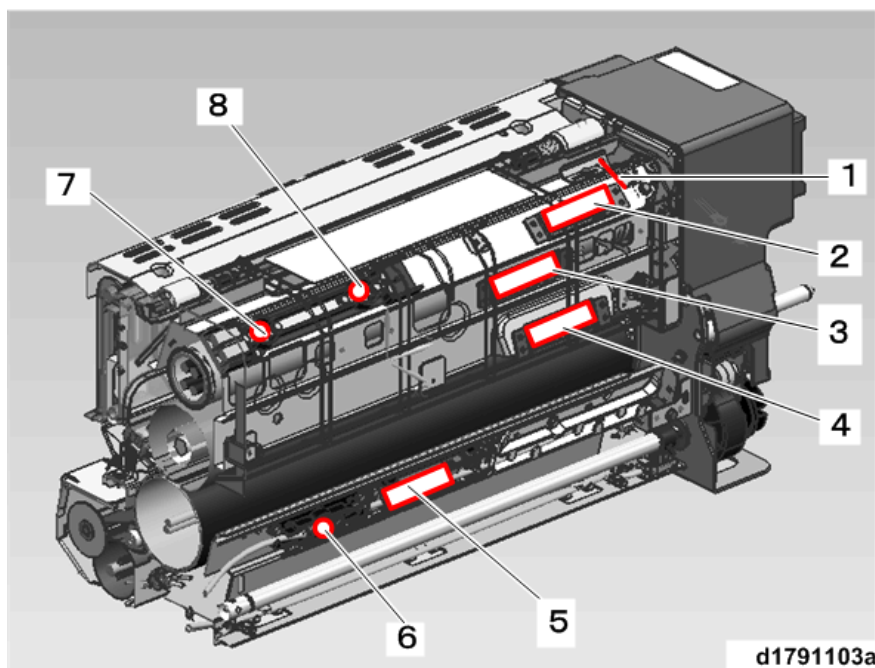
There are three heating lamps inside the heating roller of the fusing unit, and one lamp inside the pressure roller for a total of four lamps.

## 6.Detailed Descriptions

- The heating roller has three fusing lamps (NA: 997W×3, EU:1070W×3). The heat of this roller is transferred directly to the fusing belt.
- The pressure roller contains one fusing lamp (800W). The lamp inside the pressure roller keeps the pressure roller heated while the machine is in standby mode waiting for the next job.
- The heating elements are switched on and off at varied intervals for different paper sizes.
- The heating roller has heat pipes on its inner surface. This comprises a closed condenser system that keeps the heat evenly spread over the surface of the heating roller.

### Fusing Temperature Control

There are thermistors, fusing NC sensors, and thermopiles (inside the machine) on and around the fusing rollers that monitor and control temperature in the fusing unit.



No.	Name	No.	Name
1	Fusing Heat Thermistor (Rear)	5	Fusing Temperature NC Sensor (Pressure Roller - Center)
2	Fusing Temperature NC Sensor (Heating Roller End)	6	Pressure Roller Thermostat
3	Fusing Temperature NC Sensor (Heating Roller Center)	7	Heating Roller Thermostat (End)
4	Fusing Temperature NC Sensor (Hot Roller Center)	8	Heating Roller Thermostat (Center)

### Types and Number of Sensors

#### NC Sensors

Sensor Type	NC Sensor (Fusing Temperature Sensor)
-------------	---------------------------------------

Type	Infra-red, non-contact sensor	
Function	The machine controls the rotation of the fusing unit rollers at standby by reading the temperature of the fusing belt. The end and center of the fusing belt by are monitored by sensors to ensure that fusing unit temperature is always within a safe range. This sensor monitors the temperature of the pressure roller and controls the operation of the pressure roller lamp.	
Location, Function	Heating Roller	Two <ul style="list-style-type: none"> <li>• Fusing Temperature Sensor (Heating Roller End)</li> <li>• Fusing Temperature Sensor (Heating Roller Center)</li> </ul>
	Hot roller	One: Fusing Temperature NC Sensor (Hot Roller Center)
	Pressure Roller	One: Fusing Temperature Sensor (Pressure Roller Center)

**Thermistors**

Sensor Type	Thermistors	
Type	Contact sensor. A variation in temperature changes resistance which can be measured.	
Function	Monitors the temperature of the heating roller and pressure roller. These thermistors are also a safety device.	
Location, Function	Heating Roller	One: Fusing Heat Roller Thermistor (Rear)
	Hot roller	None
	Pressure Roller	None

**Thermostats**

Sensor Type	Thermostats	
Type	Two strips of metal of different conductivities are joined, heat warps the shape due to these differences and breaks the circuit.	
Function	These are provided as safety devices. If a high temperature trips either or both thermostats, power supply to the fusing lamps is shut down. This thermostat is also a safety device that monitors the temperature around the pressure roller.	
Location, Function	Heating Roller	Two: <ul style="list-style-type: none"> <li>• Heating Roller Thermostat (Center): Illust No.8</li> <li>• Heating Roller Thermostat (End): Illust No.7</li> </ul>
	Hot roller	None
	Pressure Roller	One: Pressure Roller Thermostat

**Thermopiles**

Sensor Type	Thermopiles (in main machine above fusing unit)	
Type	Infra-red, non-contact sensor	
Function	These thermopiles are inside the main machine located above and to the right of the fusing unit. These are also safety devices.	

## 6.Detailed Descriptions

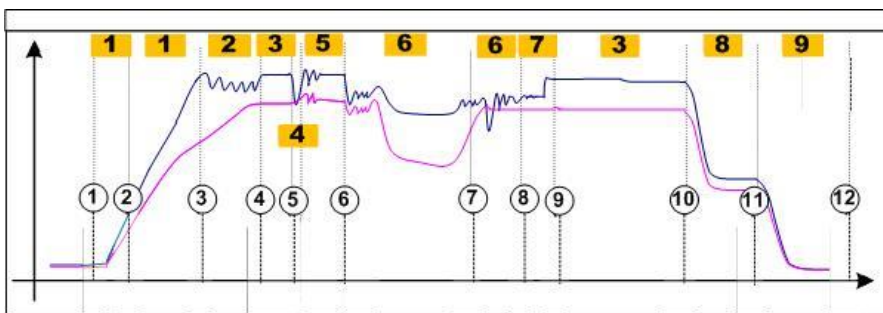
Number/Name	Fusing Unit	Three: <ul style="list-style-type: none"> <li>• Thermopile (Heating Roller Center)</li> <li>• Thermopile (Heating Roller Ends)</li> <li>• Thermopile (Heating Roller Full-Bd Ends)</li> </ul>
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### ★ Important

- The NC sensors in the fusing unit, and the thermopile attached to the main machine on the right side of the fusing unit, both employ infra-red.
- The thermopile, extremely sensitive to temperature change, resides apart from the fusing unit. The NC sensors, slightly less sensitive to temperature than the thermopile, are located inside the fusing unit to control the fusing temperature.

### Target Temperature (1/2)

The target fusing temperature is calculated based on the readings of themopiles above the fusing unit and other temperature sensors that monitor the temperatures of the heating roller and pressure roller. These readings are used to keep the heating roller and pressure roller at the correct temperatures for optimum performance.



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In the diagram above:

- Blue line: Heating roller Temperature
- Magenta line: Pressure roller temperature

#### Comments (Circled Numbers Above)

①	Power on
②	Fusing control switches on
③	Reload temperature
④	Fusing roller rotations stop
⑤	Job setup by user, preparing to print
⑥	Permission to start printing
⑦	Switching to job paper feed mode
⑧	Job paper feed ends
⑨	Fusing roller rotation ends
⑩	Shift to low power mode

⑪	Shift to sleep mode
⑫	End

The temperature of the fusing unit is measured in the following steps.

The target temperature is set for each roller depending on detected ambient temperature as described below.

Here is the key for the Environment and Machine Types referenced in the step-by-step descriptions below.

### Environments

- **Environment A:** Low temp.: Can adjust with SP1111-001 if Machine Temp.  $\leq 17^{\circ}\text{C}$
- **Environment B:** Normal Temp. Can adjust with SP1111-001-002 if normal temp.  $17^{\circ}\text{C} < \text{Machine Temp.} < 30^{\circ}\text{C}$
- **Environment C:** High temp.: Can adjust with SP1111-002 if  $30^{\circ}\text{C} \leq \text{Machine Temp.}$
- **Environment A-1:** Low temp.: Cannot adjust with SP if Machine temp.  $\leq 10^{\circ}\text{C}$
- **Environment B-1:** Normal temp.: Cannot adjust with SP if Machine Temp.  $\leq 10^{\circ}\text{C}$
- **Environment B-2:** Normal temp. 2: Cannot adjust with SP if  $23^{\circ}\text{C} < \text{Machine Temp.} \leq 32^{\circ}\text{C}$
- **Environment C-1:** High Temp.: Cannot adjust with SP if  $32^{\circ}\text{C} \leq \text{Machine Temp.}$

### Machine Type Key

		Copier/Printer Model
Type a:	96 ppm	Ricoh Pro 8300S
Type b:	111 ppm	Ricoh Pro 8310S/8310
Type c:	136 ppm	Ricoh Pro 8320S/8320

### 1 Warm-up Time

Machine start-up step after power on.

- Once the set temperature is reached, after the prescribed time the sequence shifts to next step: Reload Mode.
- The tables below describe the “Set Temperature” and “Adjust Temperature” for the heating roller and pressure roller for each environment.
- The Set Temperatures and Adjust Temperatures can be adjusted with the listed SP codes.

#### Environment A

Roller	Set Temp.				Adjust Temp.	
	Type a	Type b	Type c	SP	Default	SP
Heating	165°C	170°C	175°C	SP1101-002	+10°C	SP1111-003
Pressure	90°C	90°C	90°C	SP1101-003	+10°C	SP1111-003

#### Environment B

Roller	Set Temp.				Adjust Temp.	
	Type a	Type b	Type c	SP	Default	SP
Heating	165°C	170°C	175°C	SP1101-002	-	-
Pressure	90°C	90°C	90°C	SP1101-003	-	-

#### Environment C

## 6. Detailed Descriptions

Roller	Set Temp.				Adjust Temp.	
	Type a	Type b	Type c	SP	Default	SP
Heating	165°C	170°C	175°C	SP1101-002	-	-
Pressure	90°C	90°C	90°C	SP1101-003	-	-

### 2. Reload

After Step 1 is finished, the machine shifts to Reload mode. A message on the operation panel indicates that copying can begin, and then the machine immediately goes to the next step.

### 3. Roller Rotation After Reload

This step rotates the fusing belt so the heating roller can heat up the hot roller. The machine shifts to the next step Ready (Standby) mode after the time prescribed for rotation has elapsed. The tables below describe the "Set Temperature" and "Adjust Temperature" for the heating roller and pressure roller for each environment. The Set Temperatures and Adjust Temperatures can be adjusted with the listed SP codes.

#### Environment A

Roller	Set Temp.				Adjust Temp.	
	Type a	Type b	Type c	SP	Default	SP
Heating	165°C	170°C	175°C	SP1108-001	+10°C	SP1111-003
Pressure	90°C	90°C	90°C	SP1108-002	+10°C	SP1111-003

#### Environment B

Roller	Set Temp.				Adjust Temp.	
	Type a	Type b	Type c	SP	Default	SP
Heating	165°C	170°C	175°C	SP1108-001	-	-
Pressure	90°C	90°C	90°C	SP1108-002	-	-

#### Environment C

Roller	Set Temp.				Adjust Temp.	
	Type a	Type b	Type c	SP	Default	SP
Heating	165°C	170°C	175°C	SP1108-001	-5°C	SP1111-004
Pressure	90°C	90°C	90°C	SP1108-002	-5°C	SP1111-004

### 4. Standby

This step rotates the fusing belt so the heating roller can heat up the hot roller. The machine shifts to the next step Ready (Standby) mode after the time prescribed for rotation has elapsed. The tables below describe the "Set Temperature" and "Adjust Temperature" for the heating roller and pressure roller for each environment. The Set Temperatures and Adjust Temperatures can be adjusted with the listed SP codes.

#### Environment A

Roller	Set Temp.				Adjust Temp.	
	Type a	Type b	Type c	SP	Default	SP
Heating	150°C	155°C	160°C	SP1107-001	+10°C	SP1111-003

Pressure	90°C	90°C	90°C	SP1107-002	+10°C	SP1111-003
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**Environment B**

Roller	Set Temp.				Adjust Temp.	
	Type a	Type b	Type c	SP	Default	SP
Heating	150°C	155°C	160°C	SP1107-001	-	-
Pressure	90°C	90°C	90°C	SP1107-002	-	-

**Environment C**

Roller	Set Temp.				Adjust Temp.	
	Type a	Type b	Type c	SP	Default	SP
Heating	150°C	155°C	160°C	SP1107-001	-5°C	SP1111-004
Pressure	90°C	90°C	90°C	SP1107-002	-5°C	SP1111-004

**5. Print Preparation**

When a job is set up on the operation panel in the Ready mode, the machine goes to the Print Preparation step once the fusing unit is ready to begin the job.

The tables below describe the “Set Temperature” and “Adjust Temperature” for the heating roller and pressure roller for each environment. The Set Temperatures and Adjust Temperatures can be adjusted with the listed SP codes.

**Environment A**

Roller	Set Temp.				Adjust Temp.	
	Type a	Type b	Type c	SP	Default	SP
Heating	165°C	170°C	175°C	SP1107-007	+10°C	SP1111-003
Pressure	90°C	90°C	90°C	SP1107-008	+10°C	SP1111-003

**Environment B**

Roller	Set Temp.				Adjust Temp.	
	Type a	Type b	Type c	SP	Default	SP
Heating	165°C	170°C	175°C	SP1107-007	-	-
Pressure	90°C	90°C	90°C	SP1107-008	-	-

**Environment C**

Roller	Set Temp.				Adjust Temp.	
	Type a	Type b	Type c	SP	Default	SP
Heating	165°C	170°C	175°C	SP1107-007	-5°C	SP1111-004
Pressure	90°C	90°C	90°C	SP1107-008	-5°C	SP1111-004

**6. Before Paper Pass**

This is the step between the time after [Start] is pressed and the first sheet feeds from the paper tray to the nip of the fusing unit.

**Environment A-1**

## 6.Detailed Descriptions

[*A]	User setting for each type of paper. Actual temperatures are listed.
[*B]	Adjust Temperature. There is a default setting for each thickness, and the default can be adjusted with the SP code.
[*C]	Adjust Temperature 2. There is a default setting for each thickness, and the default can be adjusted with the SP code.

The target temperature for the environment is calculated  $[*A] + [*B] + [*C]$ . However,  $[*B]$  and  $[*C]$  can be calculated in the SP mode.

1. The paper temperature settings can be adjusted for each tray and paper of different thickness (Thick 1 to 8).
2. An SP can be selected to adjust temperature  $[*A]$  (user tool paper settings) assigned for different paper thickness beforehand (allocated with Ricoh IMSS software).

### Note

The target temperatures for “Adjust Temp. 1 ( $*B$ ) and “Adjust Temp. 2 ( $*C$ ) are different, so separate SP codes are provided so these adjustments can be switched on/off. For example “Adjust. Temp 2” ( $*C$ ) can be used to adjust the initial temperature at the start of paper feed.

- Adjusted temperature  $*B$ : Compensates for ambient temperature (paper temperature)
- Adjusted temperature  $*C$ : Compensates for a drop in temperature at initial paper feed.

### Environment B-1

The target temperatures for the heating roller and pressure roller are applied as  $[*A] + [*B] + [*C]$ . However,  $[*B]$  “Adjust Temp. 1” the default (including cases where the default has been changed in the SP mode) is calculated:

$$(23^{\circ}\text{C} - \text{Machine Temp.})/23^{\circ}\text{C} - 10^{\circ}\text{C}$$

### Note

The target temperatures for “Adjust Temp. 1 ( $*B$ ) and “Adjust Temp. 2 ( $*C$ ) are different so separate SP codes are provided so these adjustments can be switched on/off. For example “Adjust. Temp 2” ( $*C$ ) can be used to adjust the initial temperature at the start of paper feed.

- Adjusted temperature  $*B$ : Compensates for ambient temperature (paper temperature)
- Adjusted temperature  $*C$ : Compensates for a drop in temperature at initial paper feed.

### Environment B-2

The target temperatures for the heating roller and pressure roller are applied as  $[*A] + [*B] + [*C]$ . However,  $[*B]$  “Adjust Temp. 1” the default (including cases where the default has been changed in the SP mode) is calculated:

$$(\text{Machine Temp.} - 23^{\circ}\text{C})/32^{\circ}\text{C} - 23^{\circ}\text{C}$$

### Note

The target temperatures for “Adjust Temp. 1 ( $*B$ ) and “Adjust Temp. 2 ( $*C$ ) are different so separate SP



codes are provided so these adjustments can be switched on/off. For example “Adjust. Temp 2” (\*C) can be used to adjust the initial temperature at the start of paper feed.

- Adjusted temperature \*B: Compensates for ambient temperature (paper temperature)
- Adjusted temperature \*C: Compensates for a drop in temperature at initial paper feed.

### Environment C-1

The target temperatures for the heating roller and pressure roller are calculated as  $[\text{*A}] - [\text{*B}] + [\text{*C}]$ .

#### Note 1

Exercise caution in the adjustment of SP1111-006, SP1111-008. Adjusting these could affect other settings that could cause paper to curl. For example if you change SP1-111-006 to correct curl for Thk4, this change in setting could affect other paper (Thk1 to Thk4) that references this setting. For example, if you adjust Thk4 to correct curl by raising the setting of SP 1-111-006, this change will also affect the settings for Thk1 to Thk4.

#### Note 2

The target temperatures for “Adjust Temp. 1 (\*B) and “Adjust Temp. 2 (\*C) are different so separate SP codes are provided so these adjustments can be switched on/off. For example “Adjust. Temp 2” (\*C) can be used to adjust the initial temperature at the start of paper feed.

- Adjusted temperature \*B: Compensates for ambient temperature (paper temperature)
- Adjusted temperature \*C: Compensates for a drop in temperature at initial paper feed.

### Target Temperature (2/2)

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## 7. During Job Paper Feed

This step is the time after Step 6 described above until job end.

### Environment A-1

[*A]	User setting for each type of paper. Actual temperatures are listed.
[*B]	Adjust Temperature. There is a default setting for each thickness, and the default can be adjusted with the SP code.
[*C]	Adjust Temperature 2. There is a default setting for each thickness, and the default can be adjusted with the SP code.

The target temperature for the environment is calculated  $[\text{*A}] + [\text{*B}] + [\text{*C}]$ . However, [\*B] and [\*C] can be calculated in the SP mode.

1. The paper temperature settings can be adjusted for each tray and paper of different thickness (Thick 1 to 8).
2. An SP can be selected to adjust temperature [\*A] (user tool paper settings) assigned for different paper thickness beforehand (allocated with Ricoh IMSS software).

### Environment B-1

## 6. Detailed Descriptions

The target temperatures for the heating roller and pressure roller are applied as [\*A] + [\*B] + [\*C].

However, [\*B] "Adjust Temp. 1" the default (including cases where the default has been changed in the SP mode) is calculated:

$$(23^{\circ}\text{C} - \text{Machine Temp.}) / (23^{\circ}\text{C} - 10^{\circ}\text{C})$$

### Environment B-2

The target temperatures for the heating roller and pressure roller are applied as [\*A] - [\*B] + [\*C].

However, [\*B] "Adjust Temp. 1" the default (including cases where the default has been changed in the SP mode) is calculated:

$$\text{Machine Temp.} - 23^{\circ}\text{C} / (32^{\circ}\text{C} - 23^{\circ}\text{C})$$

### Environment C-1

The target temperatures for the heating roller and pressure roller are calculated as [\*A] - [\*B] + [\*C].

## 8. After Paper Passing

The target temperature is set for each roller depending on detected ambient temperature as described below. (See Step 3. Roller Rotation After Reload Temperature).

## 9 Lower Power Mode

### Heating Roller Target Temperature

Model	Temperature	SP
Type a	155°C	SP1-107-005
Type b	160°C	
Type c	165°C	

### Pressure Roller Target Temperature

Model	Temperature	SP
Type a	75°C	SP1-107-006
Type b	75°C	
Type c	75°C	

The power to the fusing motor switches off, and the pressure roller releases pressure on the hot roller.

### Low Power Mode Recovery Time

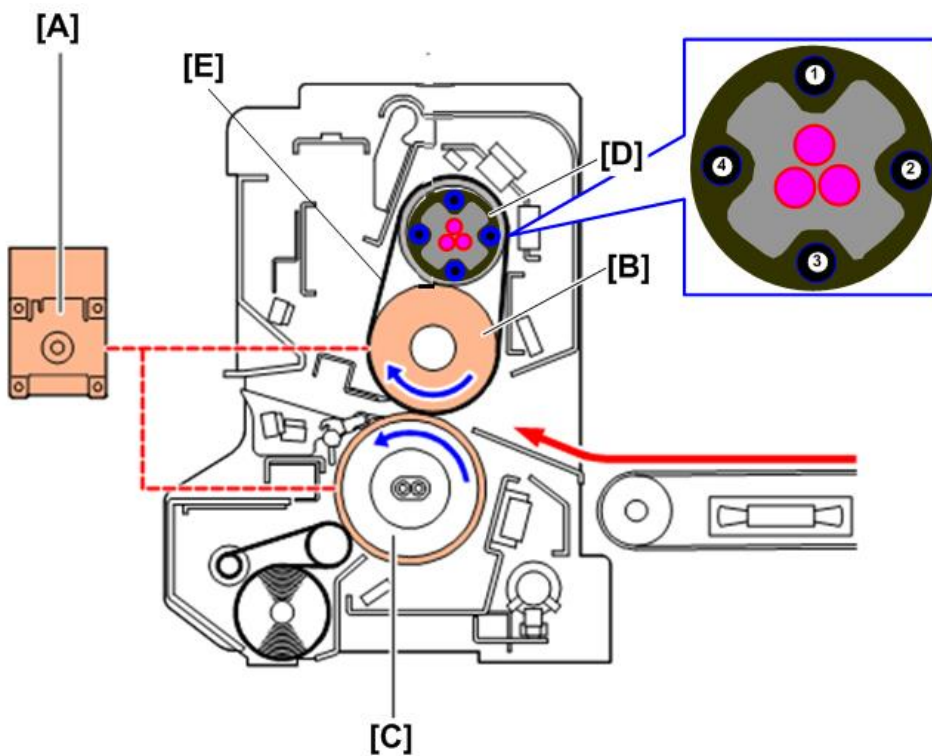
Model	Recovery Time
Type a	34 sec.
Type b	36 sec.
Type c	39 sec.

The low power mode temperature is fixed in order to minimize the recovery time.

## 10 Off/Sleep Modes

The heating roller lamps, pressure roller lamp, and fusing motor are shut down, and the pressure roller remains up against the fusing belt.

## Fusing Drive Layout



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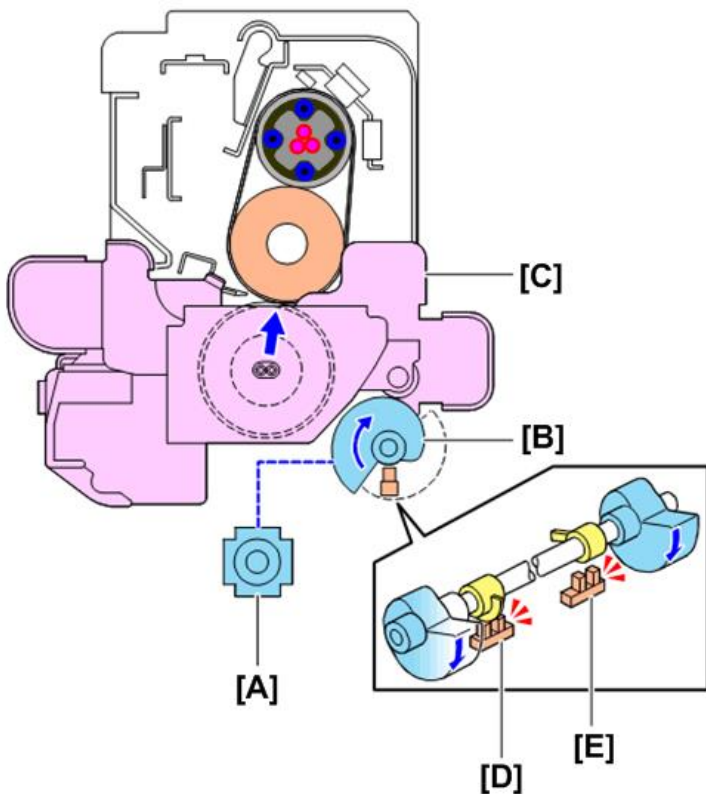
The fusing motor [A] drives the hot roller [B] and pressure roller [C], which in turn rotates the opposing heating roller [D] and fusing belt [E].

The heating roller [D] has four heat pipes on its inner surface. These heat pipes surround the fusing lamps at the center. The heat pipes are a closed condenser system. When the fusing lamps heat the pipes, fluid in the closed pipes heats up and evaporates. The evaporating fluid fills the center and capillaries of the pipes. This high temperature conductance maintains a near constant temperature on the surface of the heating roller, which in turn is transferred to the fusing belt.

## 6.Detailed Descriptions

### Pressure Mechanism

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The fusing unit is provided with a mechanism that can raise and lower the pressure roller, so the pressure roller can be pulled away slightly to widen the nip for thick paper and to prevent a rise in temperature.

- At the start of a job, the pressure roller lift motor [A] rotates two cams [B] under the pressure roller [C] to lift it up against the fusing belt and hot roller above.
- At the end of the job, the lift motor rotates the cams again to lower the pressure roller.

Two pressure roller lift sensors with actuators are mounted at each end of the pressure roller shaft to monitor the position of the pressure roller.

- Pressure roller cam HP sensor (front): This sensor detects the home position of the pressure cam.
- The lift sensor [E] at the rear detects if there is a problem with rotation of the cam. It detects when there is too much pressure on the pressure roller.

The following parts comprise the pressure roller unit.

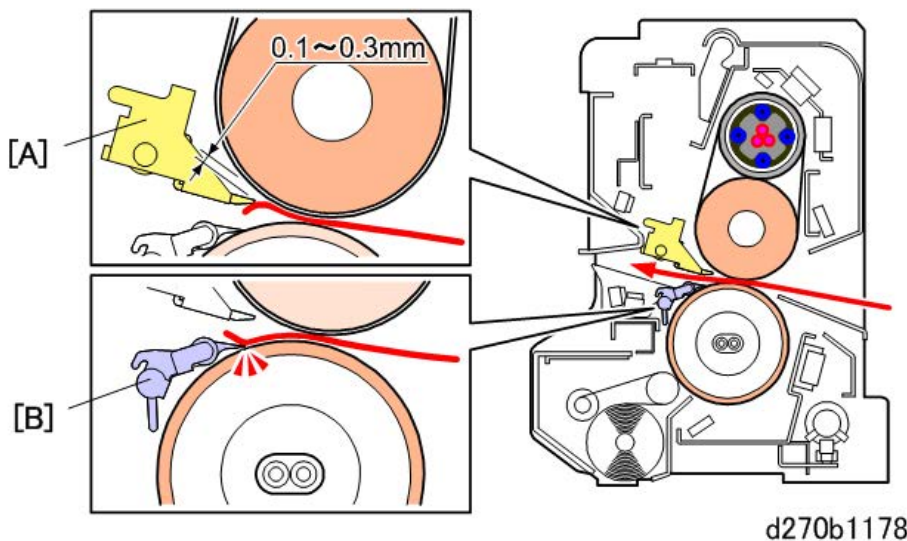
- Entrance Guide (Lower)
- Pressure roller temperature control components
- Pressure roller, separation plate (applied pressure)
- Fusing Exit Guide Plate (Center)
- Sensors (Hot Roller Exit, Jammed Paper)
- Fusing Cleaning Unit
- Pressure roller lift motor (raises and lowers the pressure roller)
- Press roller cam HP sensor (controls the raising and lowering the pressure roller by the pressure

roller lift motor)

The default width of the fusing unit nip between the heating roller and pressure roller is 15.9 mm. The width of this nip is usually not adjusted in the field. The fusing unit nip can be adjusted by using a screw driver to raise or lower the pressure roller. This task is the same as that for the Pro907EX Series.

### Paper Separation

The fusing unit is equipped with a separation plate and separation pawls that prevent paper from wrapping around the fusing belt and the pressure roller.

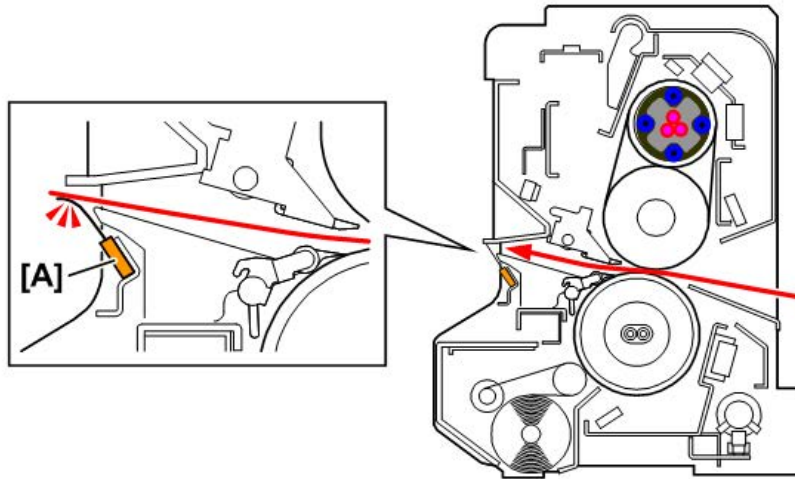


[A]	<b>Separation plate.</b> Separates paper that passes through the fusing nip from the surface of the fusing belt and guides it toward the fusing unit exit. The gap between the separation plate and the fusing belt is narrow enough (0.1 mm to 0.3 mm) to catch the leading edge of paper that floats up toward the fusing belt but wide enough to prevent contact and damage to the surface of the belt.
[B]	<b>Separation pawls.</b> Separate paper that passes through the fusing nip from the surface of the pressure roller and guide it toward the fusing unit exit. The tips of the pawls contact the surface of the pressure roller with very light pressure

### Paper Exit

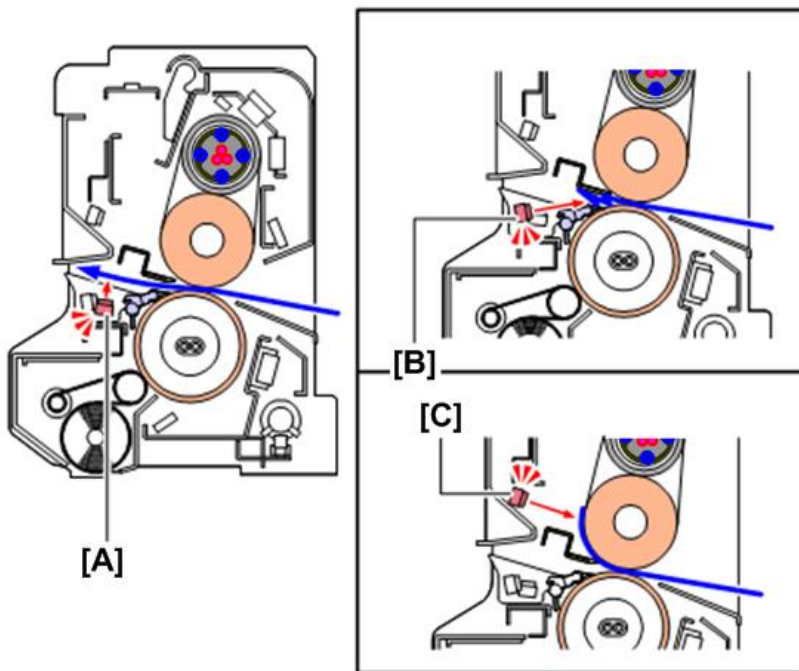
A row of anti-static brushes has been added at the fusing unit exit to remove any static charge on the paper. This prevents static cling in the remainder of the paper path.

## 6.Detailed Descriptions



d270b9016

### Jam Detection



d270b1131

### Fusing Unit Paper Sensors

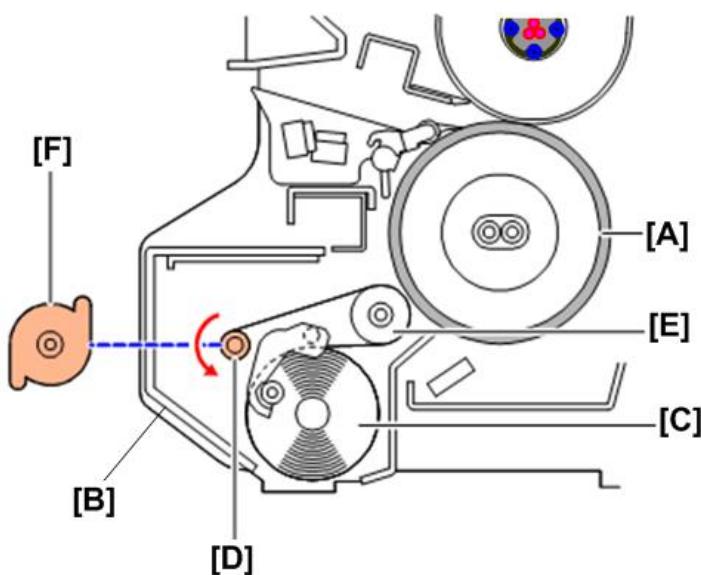
Sensor name	Fusing exit sensor [A]	Accordion jam sensor [B]	Fusing belt sensor [C]
Sensor type	Long distance type photo sensor	Long distance type photo sensor	Long distance type photo sensor
Location	Below paper path at fusing unit exit	Below paper path at fusing unit exit	Above paper path at fusing unit exit
Function	Times the arrival and exit of paper to detect	Detects paper remaining at the fusing nip that has	Detects paper by comparing the reflectivity of paper and

	late and lag paper jams during paper feed.	not separated at the separation plate.	belt to detect paper that wraps around the belt.
<b>Jam detection?</b>	Yes	No	No
<b>Paper remains detection?</b>	Yes	Yes	Yes
	Detects paper that fails to leave the fusing unit exit.	Detects accordion jams at the fusing unit nip.	Detects paper that wraps around the fusing belt.

**Note**

- The machine checks for paper remaining in the fusing unit when the machine is turned on and every time the front doors are closed.

### Fusing Cleaning Unit



d270b1132

- The fusing cleaning unit [B] cleans the surface of the fusing belt, removing dust picked up from paper and the pressure roller [A].
- The cleaning unit uses a heat-resistant web cleaner.
- The cleaning web [C] unrolls from its supply roller onto a take-up roller [D] as it is used to accumulate paper dust and other matter. The web is treated with a small amount of silicone oil that coats the surface of the fusing belt as it is cleaned.
- The web motor (a small DC motor) [F] attached to the left bottom corner of the fusing unit drives the web cleaning unit; every time this motor turns on the web feeds a prescribed distance.
- The portion of the web that has already been used for cleaning is rolled up onto a take-up roller to bring a fresh patch of the web into contact with the belt surface.

## 6.Detailed Descriptions

### Web Near End

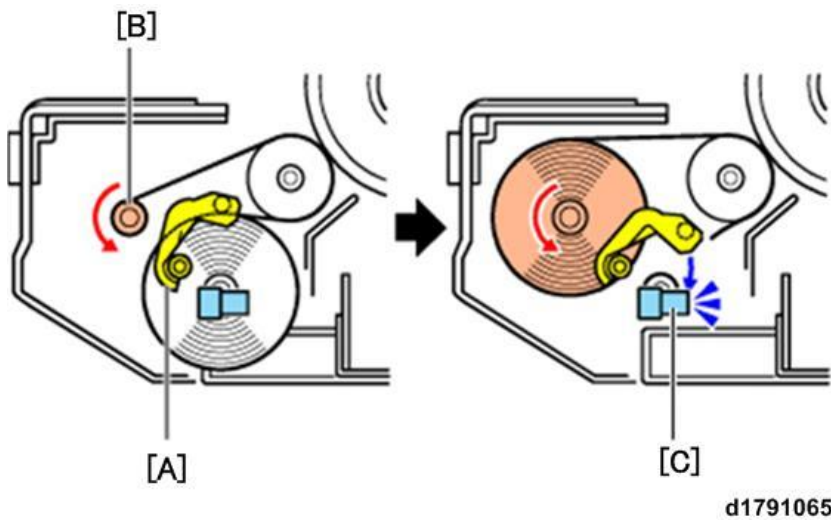
---

Detection mechanism like software determines that the web is near the end of its service life when the service life is about 800 K by calculating the consumption rate.

According to the setting of SP1902-004 that controls the web near-end alert, the machine signals the alert when the web is near the end of its service life.

### Web End

---



A feeler [A] remains suspended by the web stretched between the web supply roller [B] and web take-up roller. Once the web spools off the web supply roller, the feeler drops into the gap of the web end sensor [C]. The sensor signals the machine to issue the web end alert and the machine stops.

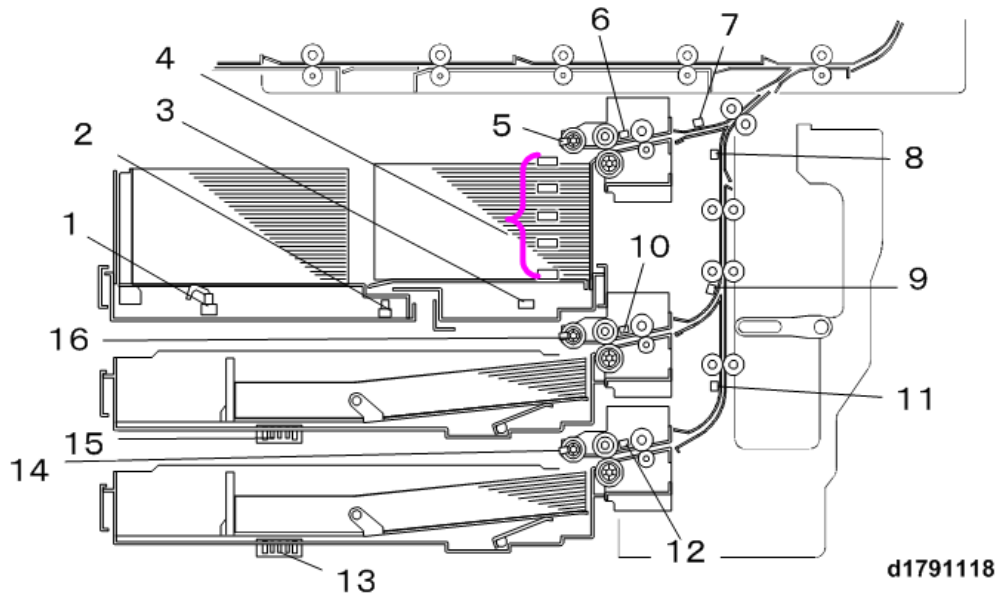


## Paper Feed

### Mechanism

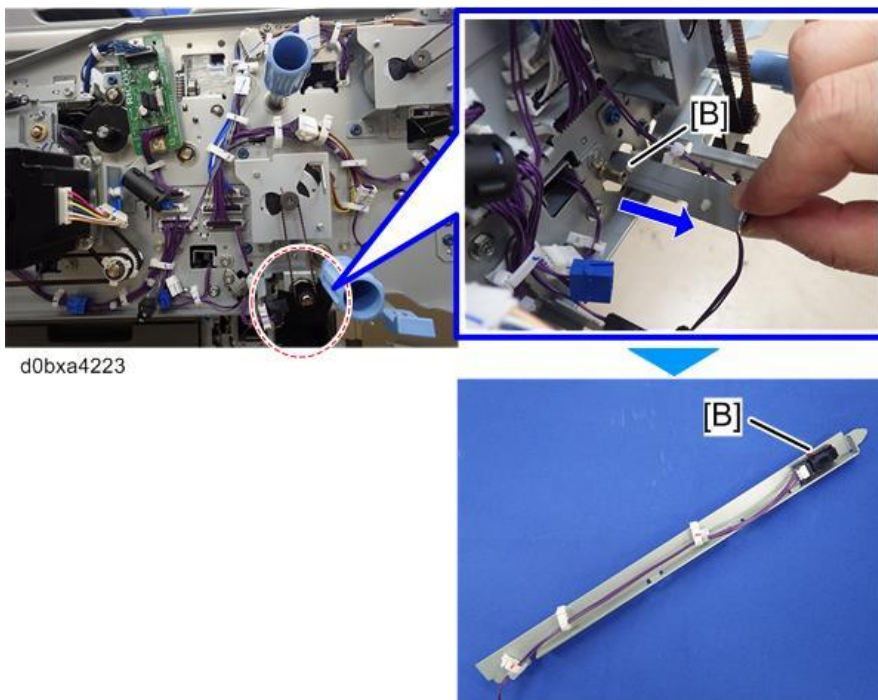
### Overview

The paper feed units feed paper from the paper trays in the main machine.



- Tray/drawer unit paper removal sensor [B]

When the paper is left between the paper trays and drawer unit, JAM LED is turned on.



d0bxa4223

## 6.Detailed Descriptions

### Layout

No.	Name	No.	Name
1	Left Tray Paper End Sensor	10	2nd Feed Sensor
2	Rear Fence Return Sensor	11	3rd Transport Sensor
3	Lower Limit Sensor	12	3rd Feed Sensor
4	Paper Sensors 1 to 5	13	3rd Paper Size Sensor
5	1st Paper End Sensor	14	3rd Paper End Sensor
6	1st Feed Sensor	15	2nd Paper Size Sensor
7	Exit Sensor	16	2nd Paper End Sensor
8	Vertical Transport Sensor	B	Tray/Drawer Unit Paper Removal Sensor
9	2nd Transport Sensor		

### Details

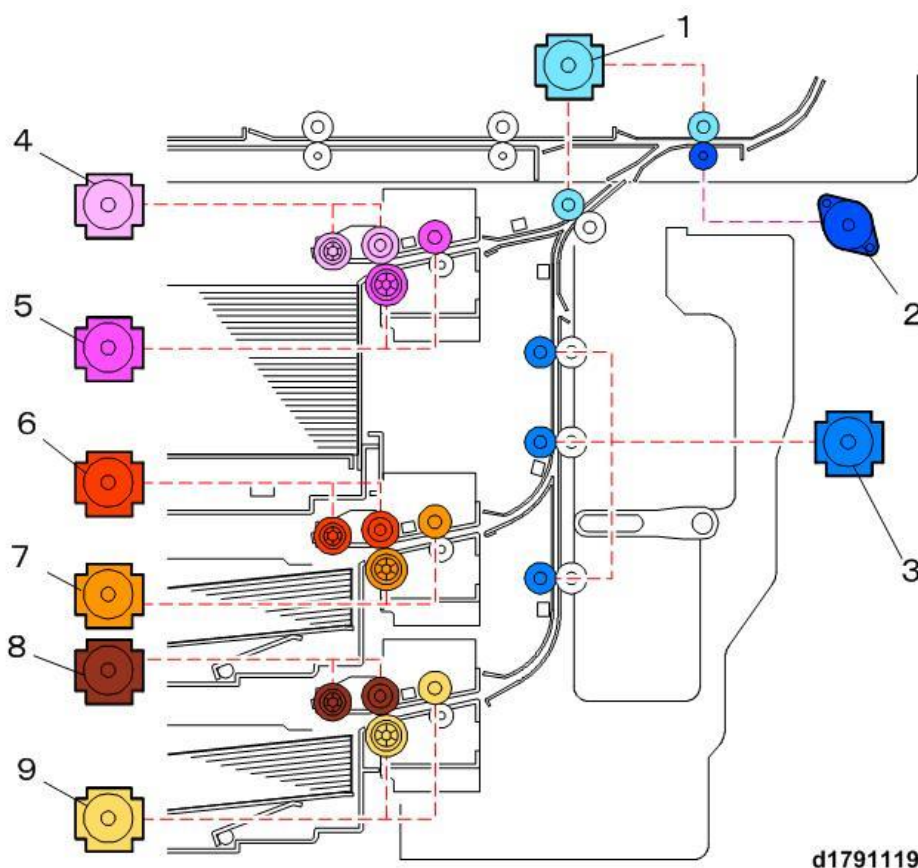
#### Paper Feed (Main Machine)

Paper Feed, Separation Mechanism	
<ul style="list-style-type: none"> <li>Paper Feed, Separation</li> </ul>	FRR paper separation system (pickup, feed, separation rollers)
<ul style="list-style-type: none"> <li>Separation Roller Pressure Release</li> </ul>	Taking the tray out and replacing it opens, closes nip of separation roller.
Tray 2, 3	Universal Trays
<ul style="list-style-type: none"> <li>Tray Raising and Lowering</li> </ul>	Bottom plates raised and lowered by tray lift motors.
<ul style="list-style-type: none"> <li>Upper Limit Detection</li> </ul>	Detecting the height of pickup roller
<ul style="list-style-type: none"> <li>Paper End Sensor</li> </ul>	Photosensor detects presence (and absence) of paper
<ul style="list-style-type: none"> <li>Paper Size Detection</li> </ul>	Automatic size detection system (5 connected hard switches)
Tandem Tray	
<ul style="list-style-type: none"> <li>Paper Size Detection</li> </ul>	SP mode settings
<ul style="list-style-type: none"> <li>Tray Raising and Lowering</li> </ul>	Bottom plate raised and lowered by tray lift motor
<ul style="list-style-type: none"> <li>Paper Remaining Detection</li> </ul>	4 interrupt sensors monitor paper height, 1 photosensor detects presence (and absence of paper)
<ul style="list-style-type: none"> <li>Right Tandem Tray Fence Operation</li> </ul>	Solenoid opens and closes front/rear fences
<ul style="list-style-type: none"> <li>Tandem Tray Side Fence Operation</li> </ul>	Rear fence motor operates front/rear fences
<ul style="list-style-type: none"> <li>Left Tray Rear Fence Operation</li> </ul>	Rear fence drive motor operates left tray rear fence
<ul style="list-style-type: none"> <li>Left Tray Lock</li> </ul>	Tray locking during paper stack shift from left to right to refill right tray
<ul style="list-style-type: none"> <li>Right Tray Lock</li> </ul>	Right tray locking when left tray is removed during machine

	operation for paper replenishment
• Tandem Tray Operation	General tray operation
• Humidity Elimination	Anti-condensation heaters
Tray LED Display During Operation	Tray LED displays during machine operation
Tray Heaters	Tray locks of Tray 1, Tray 2, Tray 3 when trays opened and closed
Tray Handle Lock Mechanisms	Manual release lock mechanisms for each tray.

## Drive Layout

This machine uses an independent paper feed unit (PFU) for each paper feed station.



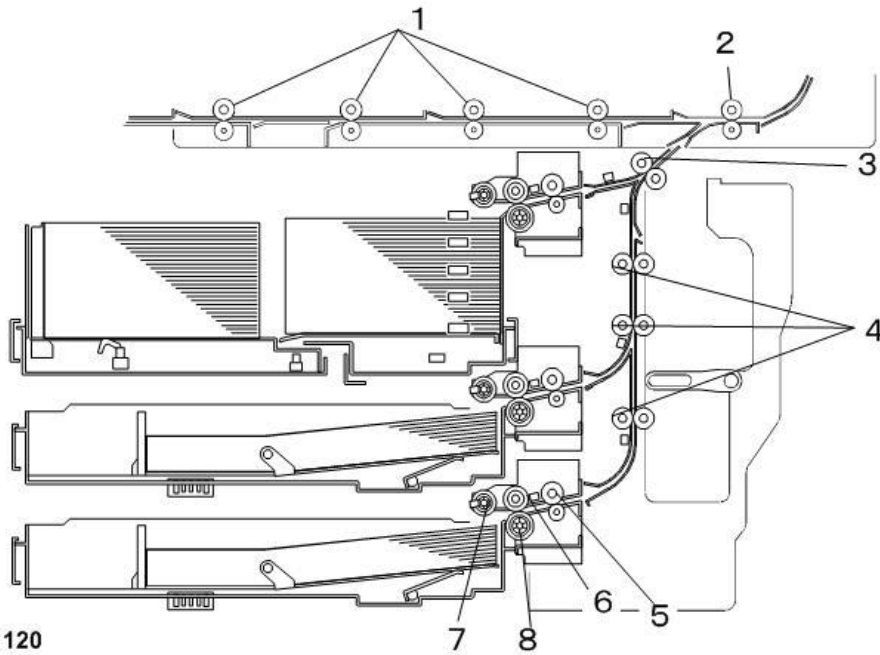
No.	Name	No.	Name
1	Exit Motor	6	2nd Feed Motor
2	Main Relay Separation Motor	7	2nd Grip Motor
3	Vertical Transport Motor	8	3rd Feed Motor
4	1st Paper Feed Motor	9	3rd Grip Motor
5	1st Grip Motor		

## Paper Transport Layout

Paper is fed and transported from Tray 1, 2, 3 (F1, F2, F3) for simplex and duplex printing. The machine

## 6.Detailed Descriptions

can feed thick paper quietly and smoothly from each paper feed unit to the vertical transport unit.



d1791120

No.	Name
1	Duplex Transport Rollers
2	Main Relay Rollers
3	Exit Rollers
4	Vertical Transport Rollers
5	3rd Transport Roller
6	3rd Feed Roller
7	3rd Pickup Roller
8	3rd Separation Roller

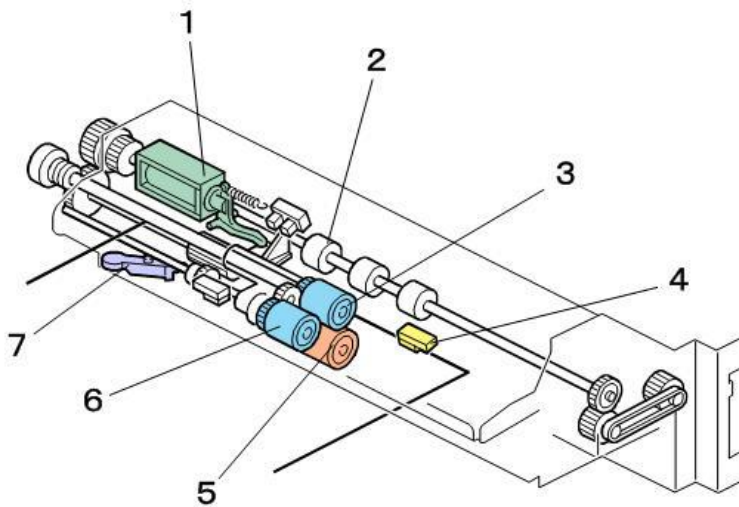
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**Paper Feed and Separation Mechanism**


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**Paper Feed and Separation**


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d1791105

No.	Name	No.	Name
1	Pickup Solenoid	5	Separation Roller
2	Transport Rollers	6	Pickup Roller
3	Feed Roller	7	Pressure Slide Arm
4	Feed Sensor		

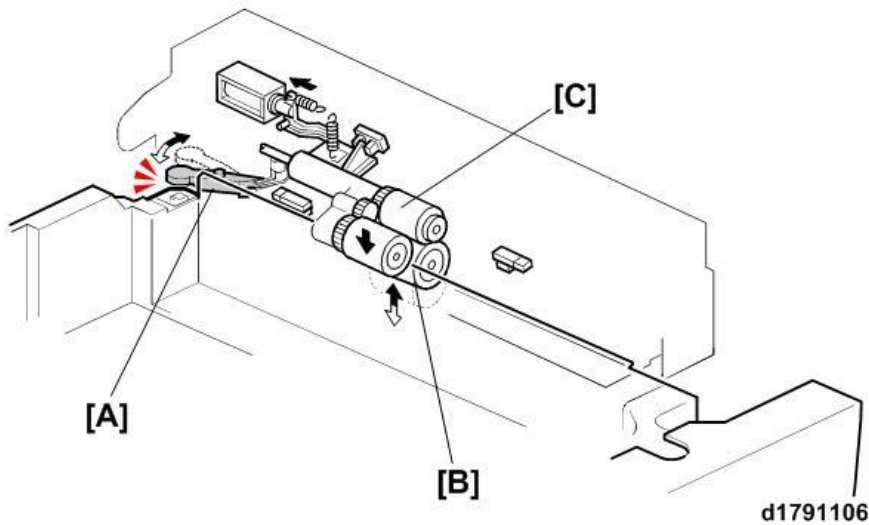
First, the paper transport motor switches on, and then the pickup solenoid switches on.

- The feed motor switches on and rotates the feed roller.
- The gear train rotates the pickup roller which feeds the first sheet from the top of the stack.
- The separation roller (equipped with a torque limiter) closes with the feed roller to form the nip where each sheet feeds.
- If more than one sheet of paper feeds, there will be no resistance between the extra sheet and the sheet above, and this lack of resistance will cause the separation roller to reverse slightly and flip the paper back into the paper tray.
- Next, the paper feed sensor (a photosensor) detects the paper, and then switches off the paper feed motor and pickup solenoid to raise the pickup roller and release the sheet of paper.
- The pressure slide arm lowers and raises the separation roller when the tray is removed and inserted so jammed paper can be removed easily.

## 6.Detailed Descriptions

### Separation Roller Pressure Release

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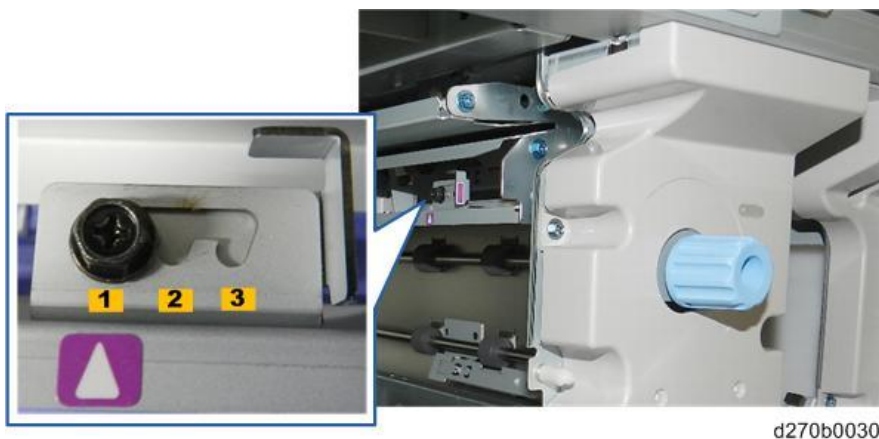


When a paper tray is pushed into the machine:

- The pressure slide arm [A] forces the separation roller [B] up to close the nip between the separation roller and feed roller [C].
- When the paper tray lift motor switches on and lifts the bottom plate and stack, the tray is at paper feed standby position and ready to feed paper after the paper feed and transport motors switch on.

Each PFU is equipped with a notch mechanism to adjust the pressure of the nip between the separation roller and feed roller. This is a new feature.

- The rear position [1] is the default, the center position [2] forces more pressure at the nip, and the forward position [3] forces the most pressure at the nip.



- This adjustment is done when misfeeds and double-feeds become frequent due to slippage caused by the accumulation of paper dust on the separation roller when using coarse paper.
- This adjustment can also be done to correct double-feeding due to worn rollers until replacement rollers become available.
- This is a TCRU adjustment and can be done independently for each PFU without removing it.
- However, Paper Tray 1 (Tandem Tray) must be removed in order to access the adjustment screws. ([PFU Separation Roller Nip Adjustment](#))

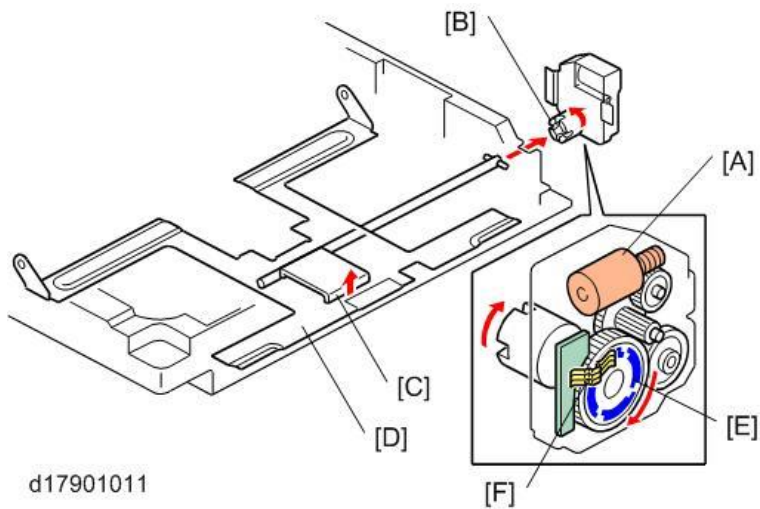
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 Tray 2, 3
 

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 Tray Raising and Lowering
 

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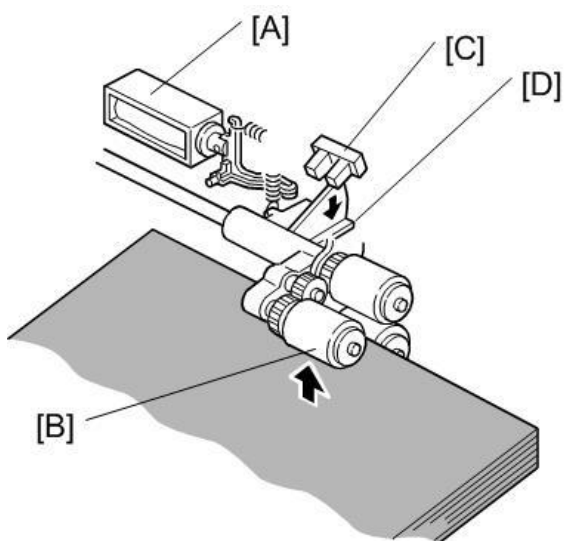


When the loaded tray is pushed into the machine:

- The tray lift motor [A] switches on and rotates a coupling [B] interlocked with a pin on the shaft of the arm [C] against the bottom of the tray [D] under the stack.
- The rotated shaft raises the arm and bottom plate.
- The tray motor coupling remains meshed and locked with the lift arm (to keep the stack raised), but disengages from the arm and automatically lowers the bottom plate and stack when the tray is opened.
- The amount of rotation to bring the stack to the optimum feed position is measured by a small metal plate [E] in contact with a gear [F] inside the motor mount (the amount of rotation tells the machine how much paper remains in the tray).

 Upper Limit Detection
 

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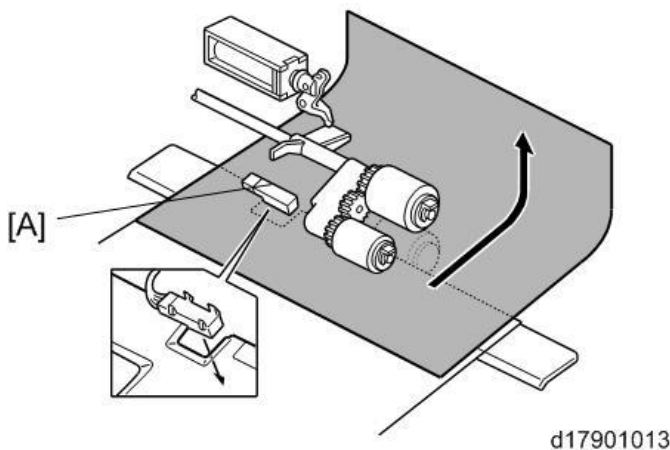
## 6.Detailed Descriptions

When the tray is pushed into the machine:

- The pickup solenoid [A] switches on and lowers the pickup arm and pickup roller [B]. With the pickup roller down on top of the paper stack, the machine raises the paper stack and roller.
- When the upper limit sensor [C] (an interrupt sensor) detects the actuator on the arm of the pickup roller, this switches the tray lift motor off with the top of the stack at the paper feed position.
- Next, in order to confirm that the top of the stack is at the optimum feed position, the lift motor reverses momentarily, the upper limit position sensor checks the position, and the lift motor reverses to correct raise the tray and correct the position.
- The tray lift sensor actuator [D] ascends gradually as sheets are fed for printing until it actuates the tray lift sensor and signals the machine to switch on the lift motor to raise the tray again to the correct paper feed position.

### Paper End Sensor

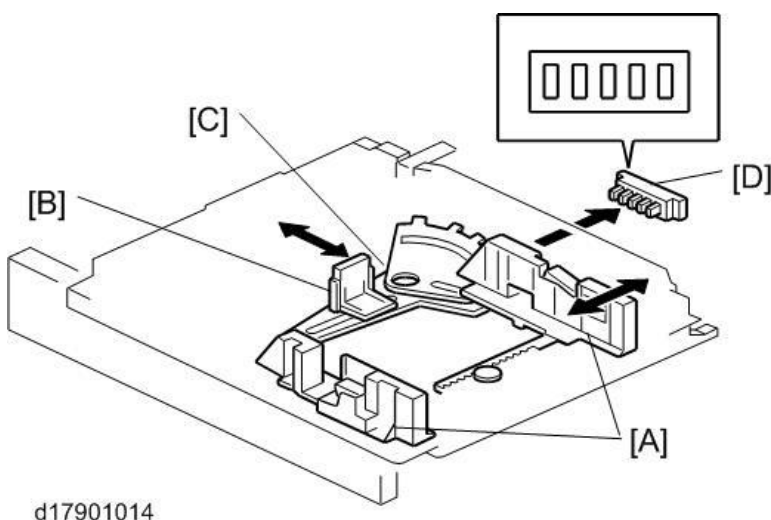
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Each PFU is equipped with a paper end sensor [A] (a photosensor) that signals when there is no more paper in the paper tray.

### Paper Size Detection

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The machine can automatically detect the size of the paper when the operator adjusts the positions of



the side fences and end fence to sides of the paper.

- Moving the side fences [A] and end fence [B] moves a metal wheel [C] that activates combinations of 5 micro-switches on a detection board [D] inside the tray.
- Each switch corresponds to a bit, and the readings of the detected positions (shown in the table below) detect the size is also and display it on the operation panel.

Paper Size	Sub Scan	Main Scan	A	B	C	D	E
12" x 18"	457.2	304.8	1	1	1	1	1
A3	420	297	1	1	0	0	1
B4	364	257	1	0	0	1	1
A4 SEF	297	210	0	1	0	0	1
A4 LEF	210	297	1	1	0	0	0
B5 SEF	257	182	1	0	1	0	1
B5 LEF	182	257	0	0	0	1	1
A5 SEF	210	148	1	1	1	0	1
A5 LEF	148	210	0	1	1	0	1
DLT (11" x 17")	431.8	279.4	1	1	1	0	0
LG (8.5" x 14")	355.6	215.9	1	0	1	1	0
LT SEF	279.4	215.9	1	1	0	1	0

Paper Size	Sub Scan	Main Scan	A	B	C	D	E
LT LEF	215.9	279.4	0	1	1	0	0
HLT SEF	215.9	139.7	0	1	1	1	0
HLT LEF	139.7	215.9	1	1	1	1	0
F4 (8.5 x 13")	330.2	215.9	1	1	0	1	1
Folio (8.25" x 13")	330.2	209.55	0	1	0	1	1
F (8" x 13")	330.2	203.2	0	1	1	1	1
Exec SEF (7.25" x 10.5")	266.7	184.2	1	0	1	0	0
Exec LEF (7.25" x 10.5")	184.2	266.7	0	0	1	1	1
8-Kai SEF	390	267	0	0	1	1	0
16-Kai SEF	267	195	1	0	0	1	0
16-Kai LEF	195	267	1	0	1	1	1

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## Tandem Tray

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### Paper Size Detection

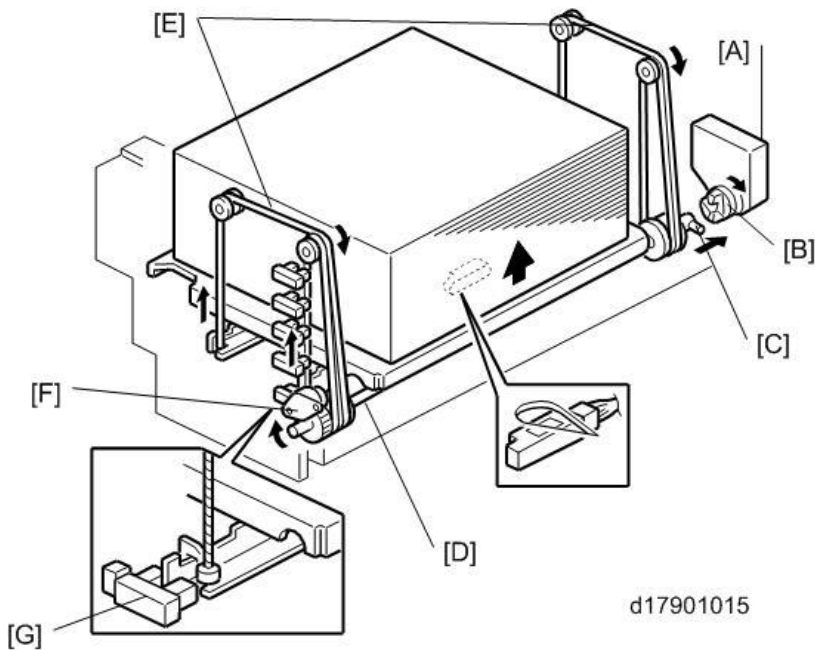
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The tandem tray is dedicated for use with A4 LEF paper and has no automatic paper size detection feature. The tandem tray can be set for LT LEF paper by adjusting the side fences and end fences, but this new paper size setting must be set with **SP5019-002**.

## 6.Detailed Descriptions

### Tray Raising and Lowering

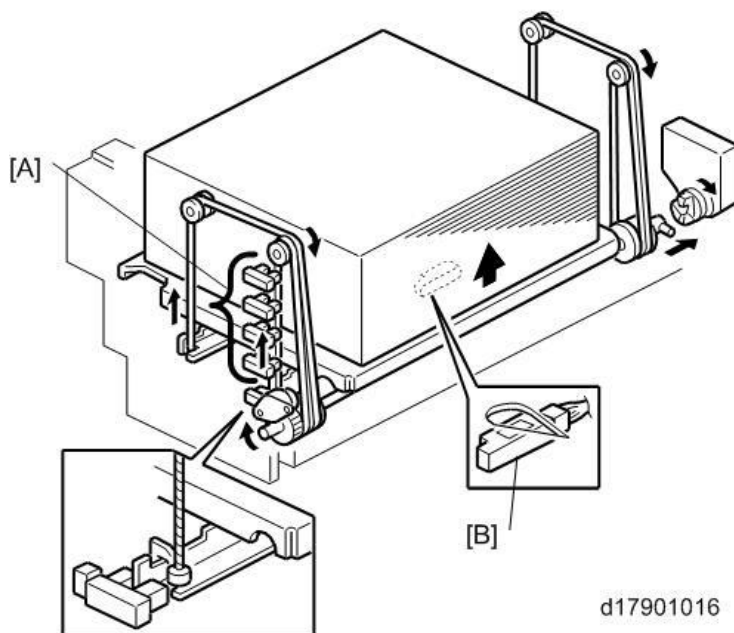
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When the loaded tray is pushed into the machine:

- The tray lift motor [A] switches on and rotates a coupling [B] interlocked with a pin [C] on the bottom of the tray.
- This rotates the lift shaft [D] and operates the wire pulleys [E] that raise the bottom the tray and paper stack.
- The lift motor coupling remains meshed and locked with the pin of the shaft (to keep the stack raised), but disengages from the arm and automatically lowers the bottom plate and stack when the tray is opened.
- A damper [F] slows the speed of the descent to prevent the tray from falling too fast.
- The lower limit sensor [G] detects the bottom position of the tray.

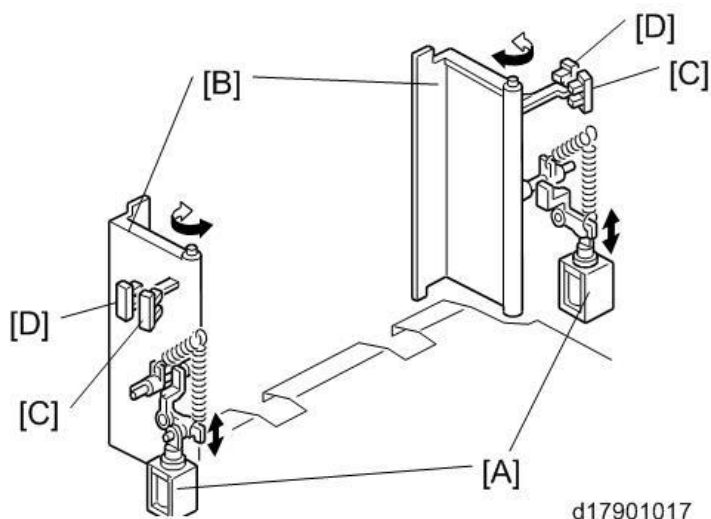
## Paper Remaining Detection



Four paper height sensors [A] attached to the front of the right tray monitor the amount of paper that remains in the tray.

- As the actuator on the right support rod rises, it de-activates each sensor in turn to trigger 5 levels of paper remaining alerts on the operation panel.
- When the tray is full no sensors are de-activated (100%).
- The paper end sensor [B] indicates when the tray is out of paper after the last sheet feeds from the tray.

## Tandem Tray Side Fence Operation



The right tray is provided with two solenoids [A] at the front and back. When paper in the right tray runs out:

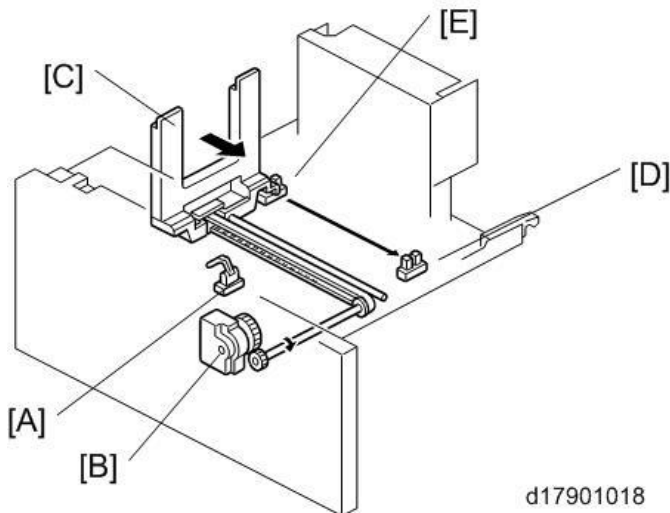
- The front and rear side fence solenoids switch on and open both fences [B] swing open until the front and back fence open sensors [C] switch on.

## 6.Detailed Descriptions

- When the rear fence of the left tray pushed paper into the right tray, the rear fence return sensor switches on and switches off the side fence solenoids and the side fences close.
- When the front and rear side fence closed sensors [D] activate after the side fences close, this triggers a message on the operation panel to tell the user to load paper into the left side of the tandem tray. If the fences do not close correctly, a message on the operation panel alerts the user to reset the tray.

### Left Tray Rear Fence Operation

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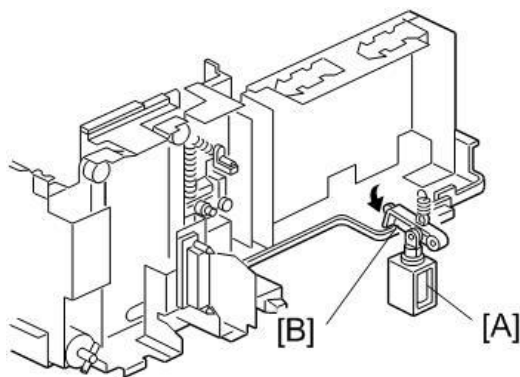


When the left tray paper end sensor [A] detects paper in the left tray and the right tray paper end sensor detects no paper in the right tray:

- The rear fence motor [B] switches on and pushes the rear fence [C] against the side of the paper stack to move it to the right tray.
- When the actuator on the rear fence activates the rear fence return sensor [D], the rear fence drive motor reverses to retract the rear fence.
- The motor switches off when rear fence HP sensor [E] detects the rear fence at its home position.

### Left Tray Lock

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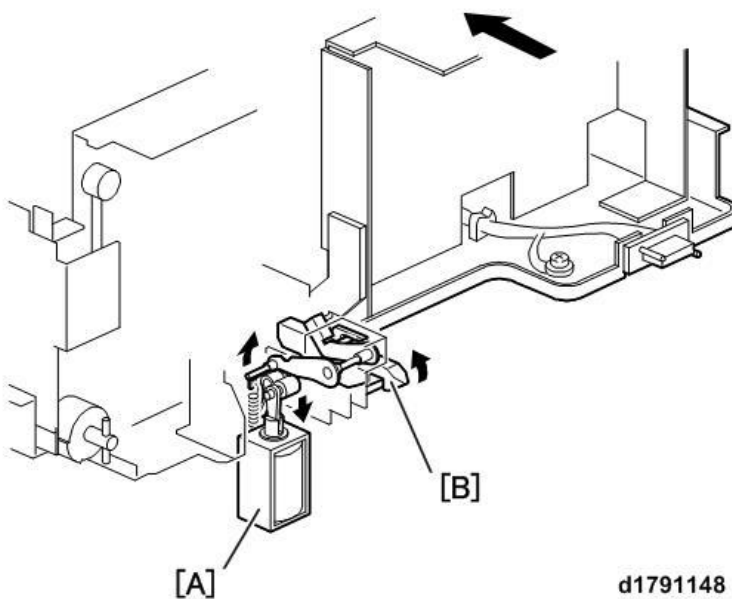


While the rear fence is in motion moving to the right:

- The left tray lock solenoid [A] is on to lock the tray and prevent the operator from opening the tray.
- When the paper stack starts to move from the left tray, the lock solenoid goes on and moves lever [B] to the lock position to lock the tray.
- After the stack has been moved to the right tray and the rear fence has returned to its home position of the left, the lock solenoid goes off and unlocks the tray.
- This mechanism prevents the tandem tray from being opened while the right tray is being re-supplied with paper.

#### Right Tray Lock

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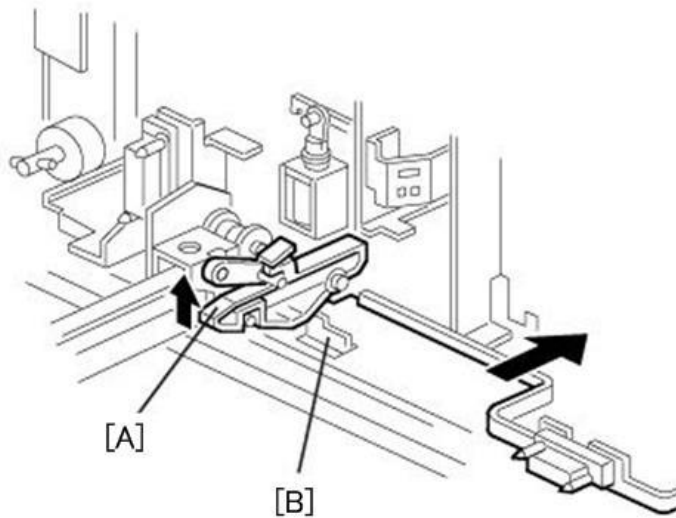


When lock release solenoid [A] goes on, lock lever [B] opens.

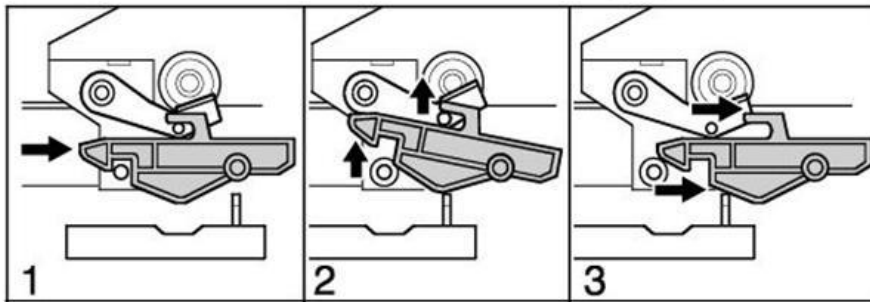
- The lock lever on the left tray catches on the pin of the right tray, so only the left tray is caught and opens.
- With the lock release solenoid off, the tip of the lock lever catches and both trays catch and open

## 6.Detailed Descriptions

together.



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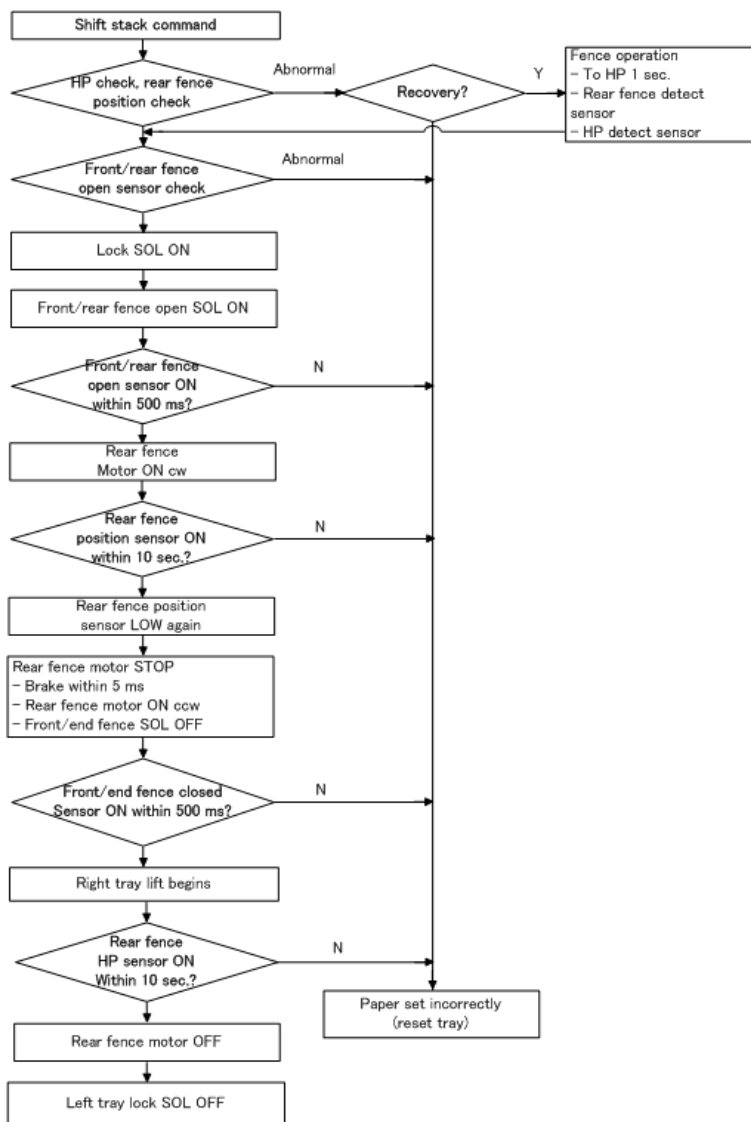


Normally, the left tray lock lever [A] catches pin [B] of the right tandem tray.

- If there is no paper in the left tray during printing, the right tray lock solenoid turns on to release the tray lock lever so the left and right trays can be separated.
- This allows the left tray to be pulled out to load more paper while paper is still feeding from the right tray.

### Tandem Tray Operation

After the tandem tray is closed and the bottom plate is raised, or when the right tray paper end sensor detects no paper, and there is paper in the left tray, after the bottom plate of the right tray is lowered, the following operation takes place.



w\_d270s1118\_en

### Tray Display During Operation

All trays are provided with LEDs. Each LED lights during copying and printing to alert the operator that the paper trays cannot be opened during machine operation.

- LED On Timing

The LED of the tray selected for paper feed switches on at the start of the job.

- LED Off Timing

The LED goes off once the trailing edge of the last sheet leaves the fusing unit paper sensor.

However, the LED does not go off during duplex printing until the last duplex printed sheet has left the fusing unit paper sensor.

- Paper End During Operation

**Tandem Tray.** The LED of the right paper tray goes off when the right tray paper end sensor detects no paper. The left tray LED remains on, and then the right tray LED goes on again once paper has been moved from the left tray to the right tray.

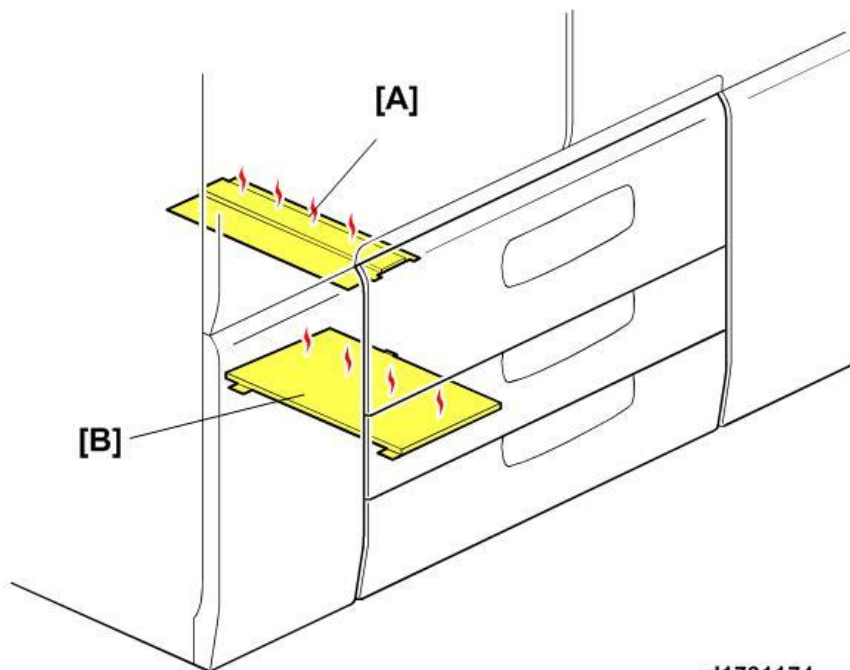
**Tray 2, Tray 3.** LED goes off at paper end.

## 6.Detailed Descriptions

- Paper Jam, Other Problem  
LED goes off when a paper jam or other problem occurs (SC codes other than logging SC codes).
- When Tray Is Removed  
LED on/off status continues even if tray is removed.

### Tray Heaters (Option)

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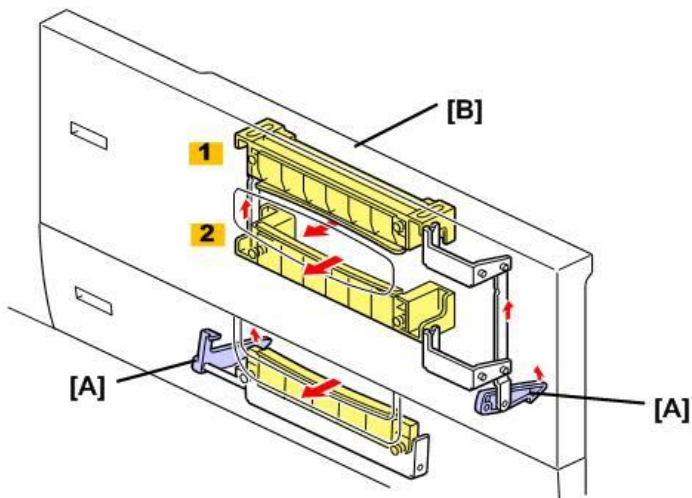


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There are two anti-condensation heaters available for the paper trays, one below Tray 1 [A] and one below Tray 3 [B]. Depending on how the trays are connected they can be set to remain on 24 hours a day, or they can be set to remain on only when the machine is switched off. For more details, please refer to "Installation". These heaters require installation. These heaters are turned on/ off by the anti-condensation heater switch.



## Tray Handle Lock Mechanism



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In order to open Tray 1, 2, or 3, the operator must grip the handle and squeeze to disengage a lock lever [A].

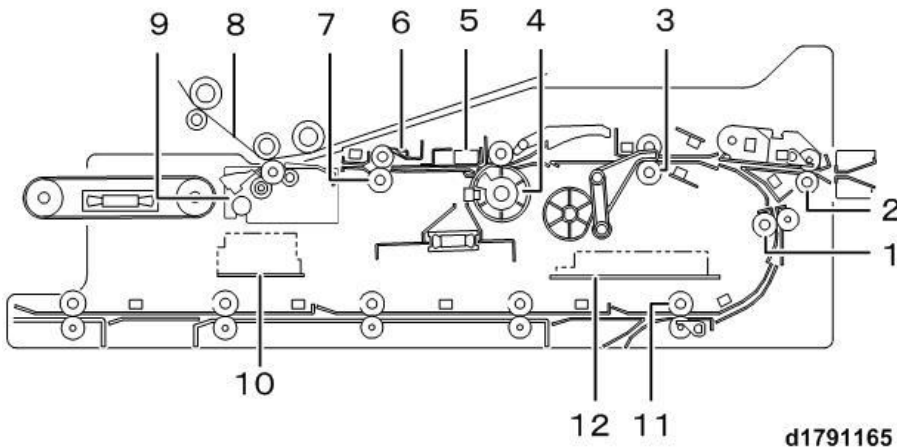
- Tray 1 [B] (the top tray) is provided with two handle releases.
- Squeezing and pulling either handle will it release for opening.

## Main Paper Path, Paper Registration

### Overview and Mechanism

#### Overview

The following functions occur in the main machine paper path after paper is fed from the paper trays or the LCT: Skew correction in both main scan and sub scan directions, image-to-paper transfer, and then duplex printing (if selected).



No.	Name	No.	Name
1	Registration Entrance Roller	7	Transfer Timing Roller
2	LCT Relay Roller	8	Image Transfer Belt (ITB)
3	Registration Timing Roller	9	PTR Unit
4	Registration Gate Roller	10	AC Power Pack (D)
5	CIS	11	Main Relay Roller
6	Paper Dust Tray	12	DRB

### Mechanical Configuration

#### Transport Unit

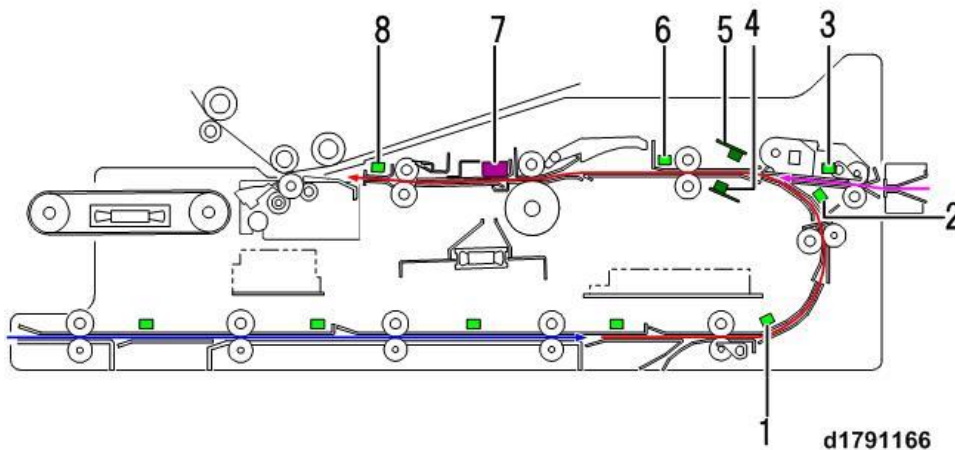
Double-Feed Detection	Ultrasound sensor method
Roller Release	Open roller nips to free paper for skew correction, paper registration
Skew Correction	Skew correction with registration gate roller
Main Scan Registration	Leading edge registration with the registration gate roller
Sub Scan Registration	Side-to-side registration with the dual shift rollers
Paper Dust Collection	Collection of dust from transfer timing roller with a mylar and into a tray
CIS Cleaning	Cleaning the CIS that reads the edges of sheets in the registration unit

#### Transport Path, Sensor Layout

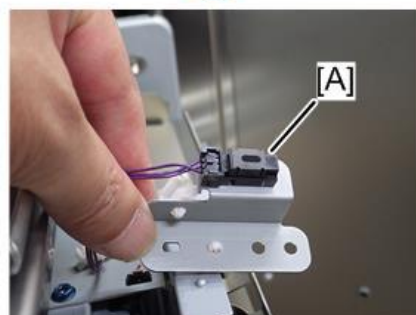
- The paper fed from each paper tray is first transported to the vertical feed unit (VTU) and then to the paper registration unit.

## 6.Detailed Descriptions

- After each sheet is tested for double-feeding, each sheet is corrected for skew, positioned correctly for paper registration in both main scan and sub scan directions, and then is sent to the PTR unit where the image is transferred from drum to paper.
- The two paper feed sources are the three paper trays of the main unit, or an optional large capacity tray (LCT) unit installed on the right side of the machine.
- During duplex printing, once the paper leaves the fusing unit (after the first side is printed) the paper is sent down into the inverter path and then reverse fed back across the machine to the junction of the VTU and then sent once more through the paper registration unit above.



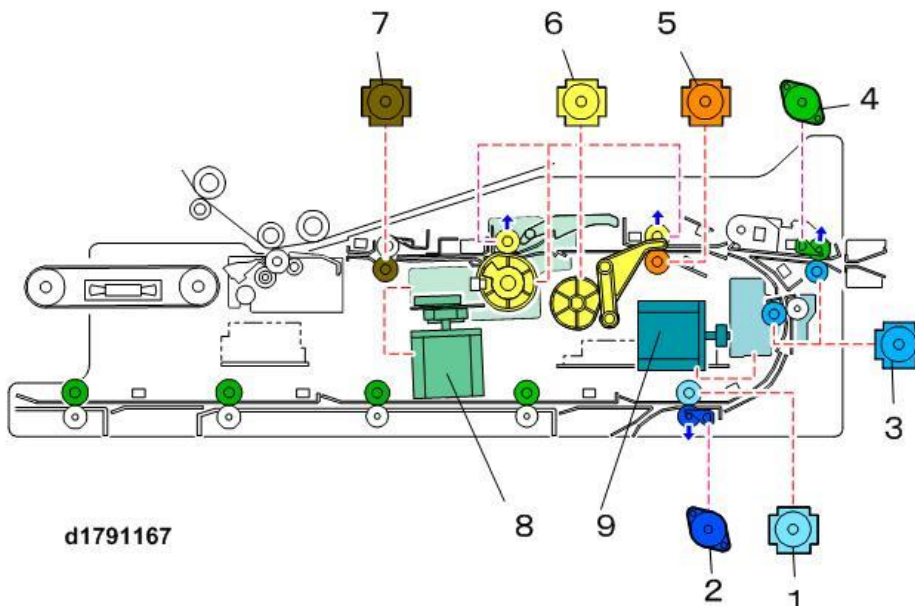
- LCT/drawer unit paper removal sensor [A]  
When the paper is left between the vertical transfer unit and registration unit, JAM LED is turned on.



## 6.Detailed Descriptions

No.	Name	Content
1	Main Relay Sensor	Monitors movement of paper to check for paper jams.
2	Registration Entrance Sensor	Monitors movement of paper to check for paper jams.
3	LCT Relay Sensor	Monitors movement of paper to check for paper jams.
4	Double-feed Sensor (Emitter)	Mounted below the double-feed sensor (receptor), the paper passes through the gap between these two sensors for the double-feed check.
5	Double-feed Sensor (Receptor)	Mounted above the double-feed sensor (emitter), the paper passes through the gap between these two sensors for the double-feed check.
6	Registration Timing Sensor	Determines the timing of the rotation of the registration gate roller to stop paper in the paper path, also checks for paper jams.
7	CIS	Checks paper position in the path to determine the amount of correction needed.
8	Transfer Timing Sensor	Monitors paper movement for jam detection and controls the timing of paper release to the PTR unit.
A	LCT/Drawer Unit Paper Removal Sensor	When the paper is left between the vertical transfer unit and registration unit, JAM LED is turned on.

### Drive Layout



No.	Name	No.	Name
1	Exit Motor	6	Registration Gate Motor
2	Main Relay Separation Motor	7	Transfer Timing Motor
3	Registration Entrance Motor	8	Registration Shift Motor (LE)

No.	Name	No.	Name
4	LCT Relay Separation Motor	9	Registration Shift Motor (TE)
5	Registration Timing Motor		

## Details

### New Paper Jam LEDs

Twelve new Jam LEDs are provided on the left and right drawer covers. An LED lights if a jam occurs at its location. This makes it much easier to locate and remove sheets that jam in the paper path by manually rotating the jam removal knobs.



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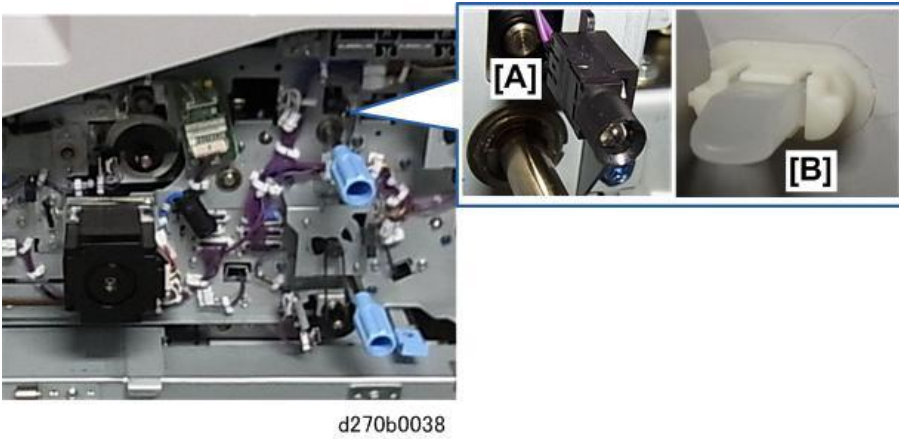
#### ★ Important

At the present time (Oct. 2016) LEDs A1, B1, B2 and D1 in the table below are not functional. Their function will be enabled in the near future.

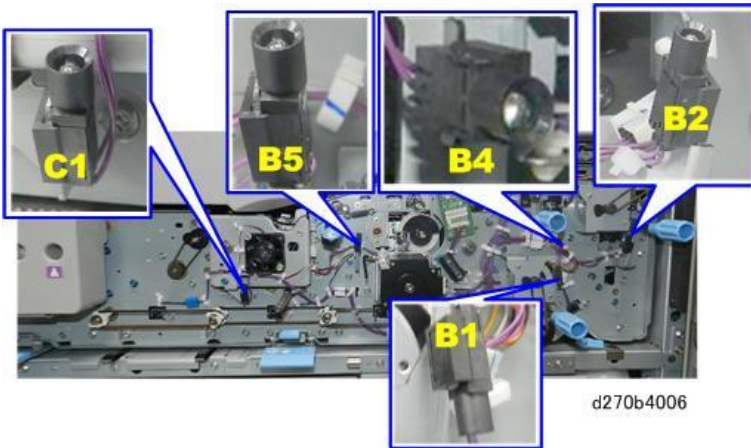
No.	Cover	LED
1	Exit unit	C2, <b>D1</b> , D6
2	Purge tray	E
3	Registration unit	<b>B1</b> , <b>B2</b> , B4, B5, C1
4	Vertical transport unit	<b>A1</b> , A2, A3

Each LED [A] is mounted on a peg opposite to a projection lens [B] mounted on the cover. When a jam occurs at its location, the LED lights and the light is magnified by the lens.

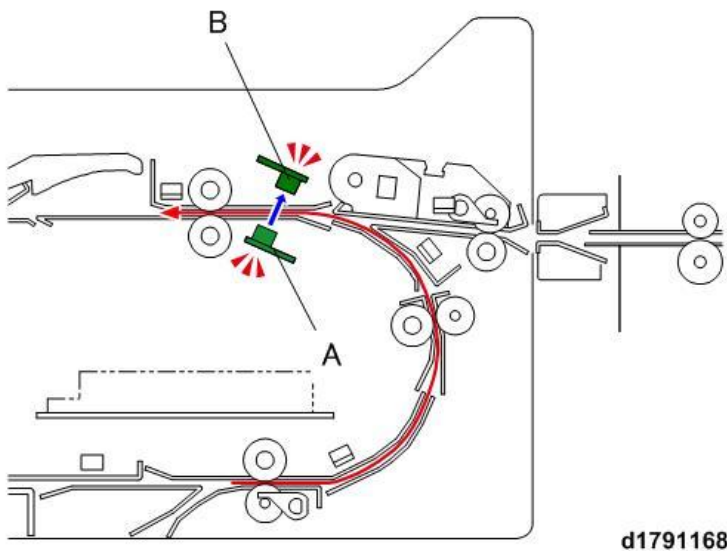
## 6.Detailed Descriptions



Each LED is mounted on a metal post on the front of the drawer unit. The LEDs are not connected to the front covers of the drawer unit, so their harnesses do not interfere with removal of the covers.



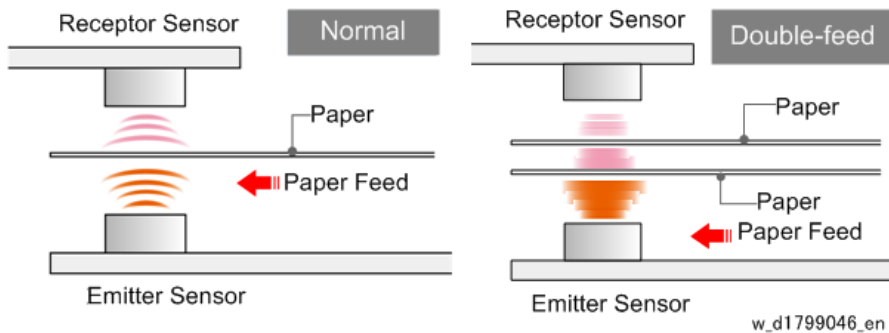
### Double-feed Detection



A pair of ultra-sound sensors are mounted in the paper registration unit, one below (emitter) [A] and one above (receiver) [B] the paper feed path.

When the paper passes through the gap between the sensors, the signal between them detects the

original with sound waves and converts the reading to voltage, and if the output level is determined to exceed threshold for the type of original being fed, paper feed stops.



- When the paper passes between the sensors, an ultra-sound wave from the emitter sensor below passes through the paper to the receiver above.
- The receiver converts the signal generated by the vibration of the signal against the paper to an electrical pulse and checks its level.
- If a double feed occurs, the space between the sheets will generate a lower signal. When the emitter detects this lower signal (lower than that of a single sheet) it causes the machine to issue Jam Code J099 (double-feed detected) and the paper is fed to the purged paper tray.

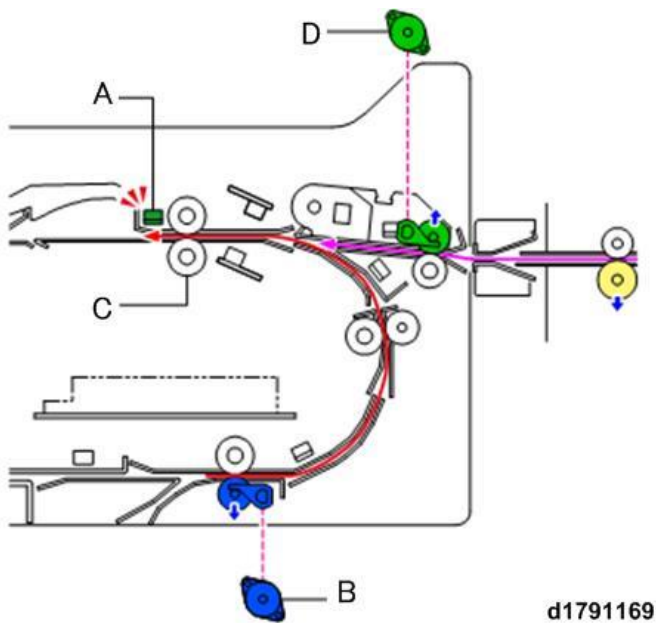
#### Double-feed Related SP Code

SP No.	Name	Range/Settings
SP1302-001 to 012	Double Feed Detect Trays 1 to T4	[0 to 1/1/1] 1: On 0: Off
SP1303-001	Dbl-Feed Detect After Dbl-Feed Detect	[0 to 2/1/1] 0: Jam alarm 1: Purge tray 2: Proof tray

## 6.Detailed Descriptions

### Roller Release

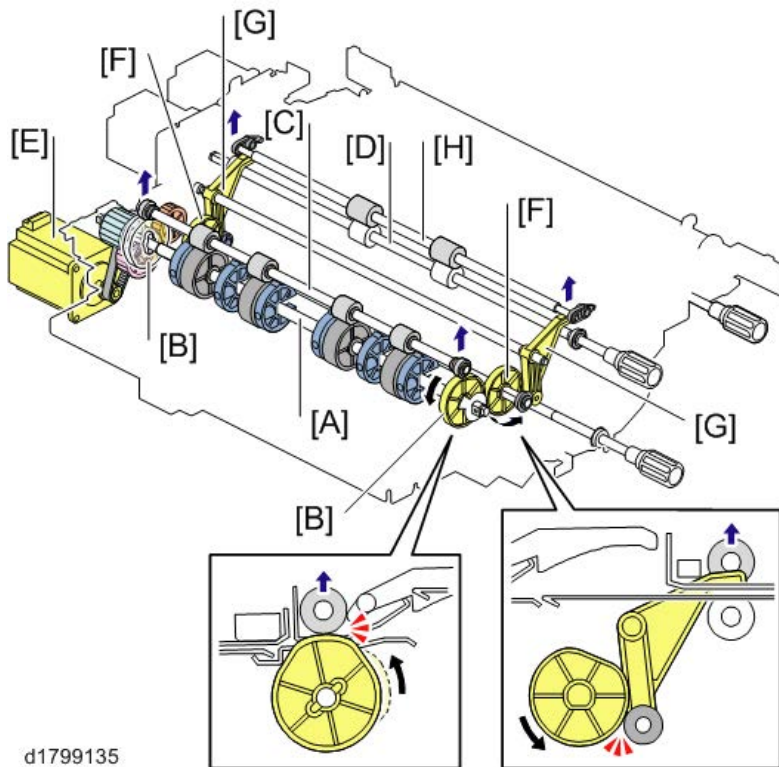
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#### **Main Machine Relay Roller and LCT Relay Roller**

When a sheet of paper is fed from one of the main machine paper trays, or when a sheet is fed on its second pass for printing on the second side during duplex printing, the registration timing sensor [A] detects the leading edge of the sheet. This signals the main relay separation motor [B] to turn on and open the nip between the relay drive and idle rollers. When a sheet of paper is fed from the LCT (option) on the right side of the machine, the registration timing sensor [A] detects the leading edge of the sheet and signals the LCT relay motor [D] to open the nip of the LCT relay rollers. In both cases the paper is released in front of the registration timing roller [C] so it is free to move for image registration in the main scan direction.





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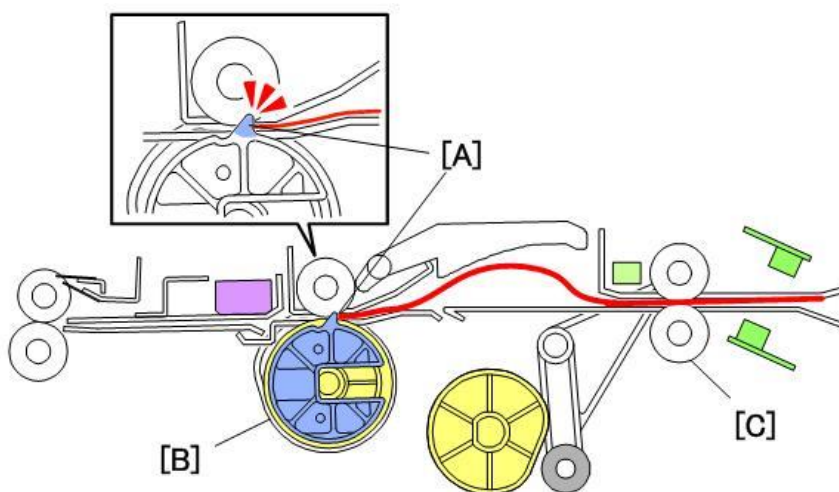
### Registration Gate Roller and Registration Timing Roller

The rotation and release of the registration gate roller, rotation of the registration timing roller, and release of the registration timing drive roller, are all controlled by the rotary gate motor [E].

The raising and lowering of the registration gate roller [A] is driven by a cam [B] attached to the shaft drive roller [C].

The raising and lowering of the registration timing roller [D] is controlled by three gears driven by the rotary gate motor [E] that rotate cam [F]. The lever [G] attached to the cam raises drive roller [H] to separate it

### Skew Correction

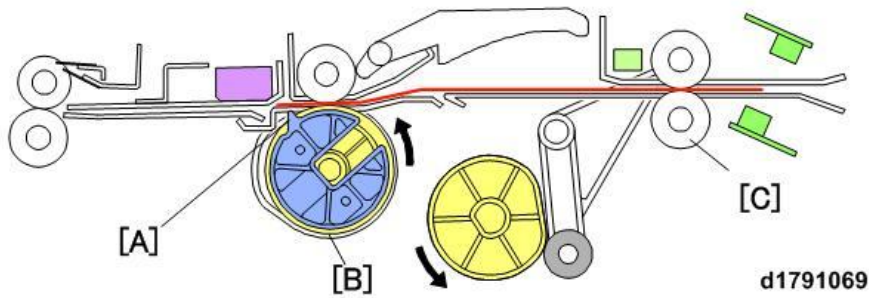


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The leading edge of the paper fed by the registration timing roller [C] strikes the raised gate [A] of the

## 6. Detailed Descriptions

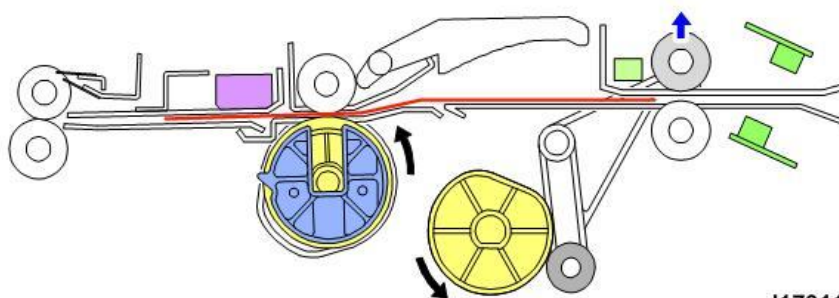
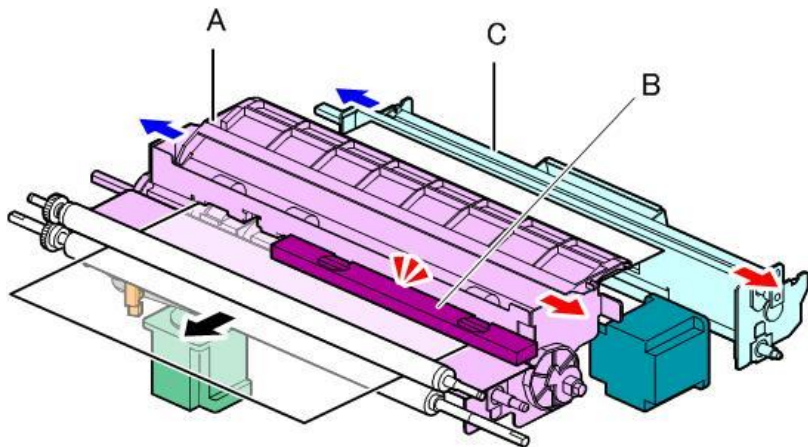
registration gate roller [B]. This buckles the paper slightly and aligns its leading edge with the gate and corrects any skew.



After skew correction the registration gate roller rotates, grips the paper, and then feeds it to the leading edge shift unit.

### Main Scan Registration (Image Vertical)

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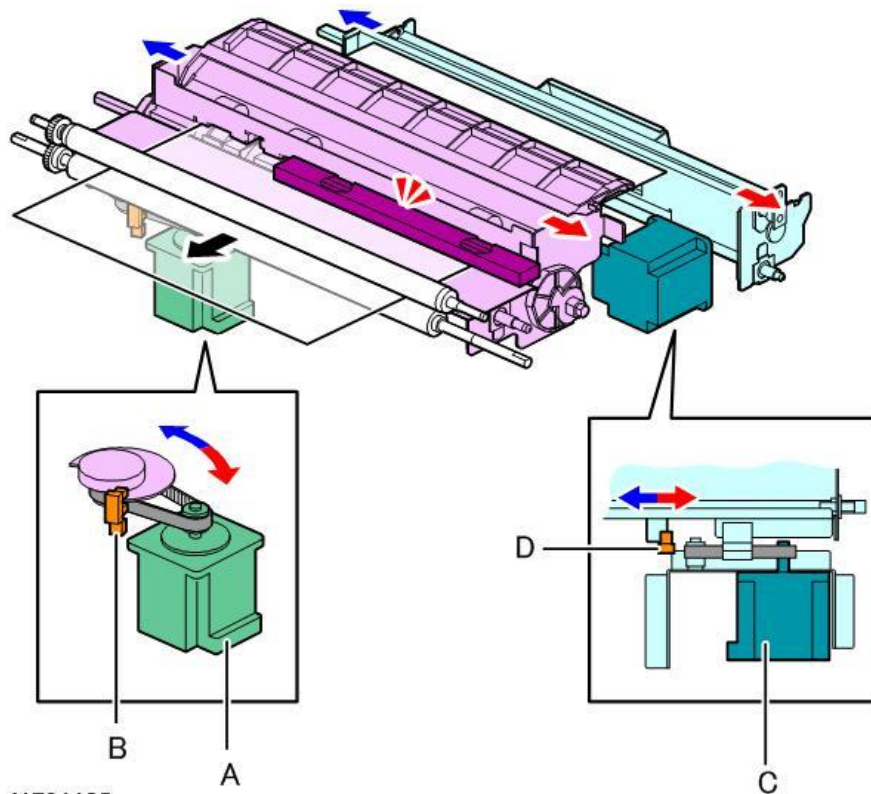


The paper that has been corrected for skew is fed to the LE (leading edge) shift unit [A] for image registration in the main scan direction.

The LE shift unit is equipped with a CIS (Contact Image Sensor) [B] that detects the position of the edge of the paper. The reading of the paper edge by the CIS is used to calculate the amount of deviation from the correct position, and then the amount of movement by the LE shift unit required to correct the position of the paper is calculated. The LE shift unit moves slightly to the front or rear so the image will be positioned correctly on the paper.

At this time the paper is held only by the LE shift unit. The paper is still free because the nip of the registration timing roller is open.

If paper longer than A4 SEF (297 mm) has been fed, the TE (trailing edge) shift unit [C] moves with the LE shift unit to correct paper registration in the main scan direction.



The LE registration shift motor [A] moves the LE shift unit to the front and rear. The LE shift unit HP sensor [B] determines the home position of the LE shift unit where the shift unit resides while it is idle. The TE registration shift motor [C] moves the TE shift unit to the front and rear. The rear fence HP sensor [D] determines the home position of the TE shift unit where the shift unit resides while it is idle. The CIS is changed to the color CIS of RGB from Pro 8300 series, which improved the ability to detect a paper in dark color like magellan-blue or wine red. Also the ability to detect a paper edge improved.

#### Related SP Codes

These SP codes are related to paper registration.

**SP1-917-001 to 012** - Side-to-Side Registration – Disable Tray 1 to T4, Duplex Unit 1 to 4

[0 to 2/0/1]

0: Enable – Image shift operates (not disabled)

1: Disable – No image shift operation

2: Disable only for jam detection

**SP1-957-001 to 100** - Side-to-Side Registration – Custom Paper

[0 to 2/0/1]

0: Enable – Image shift operates (not disabled)

1: Disable – No image shift operation

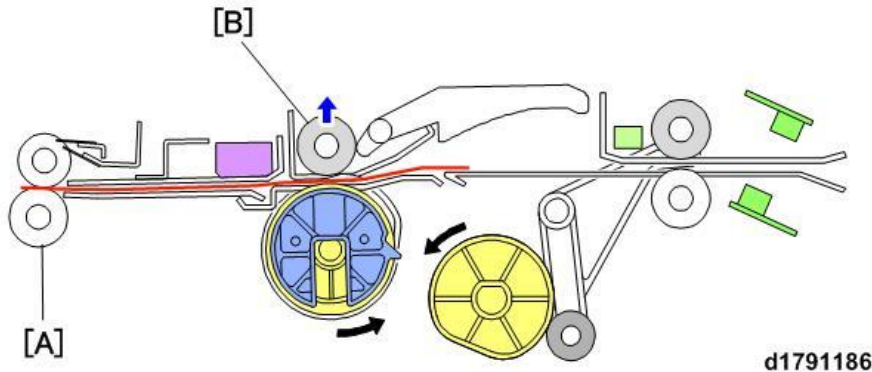
## 6.Detailed Descriptions

2: Disable only for jam detection

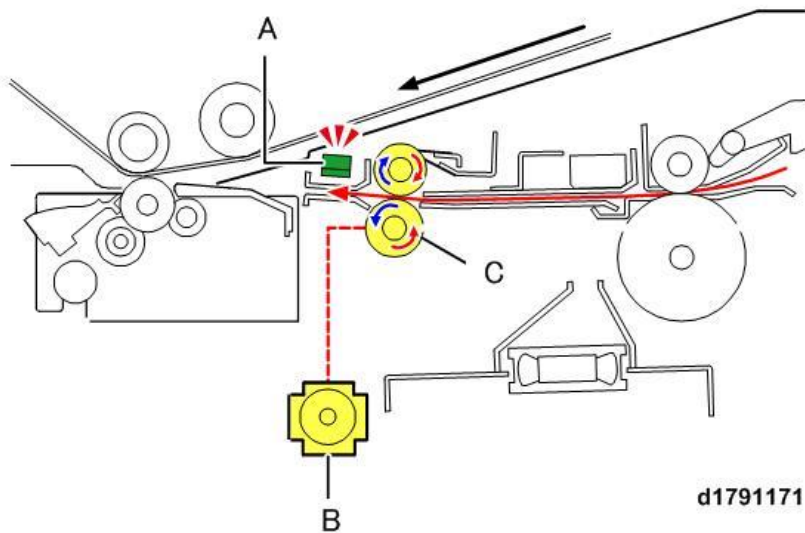
**Note:** The SP1-917 settings take priority over the SP1-957 settings

### Sub Scan Registration (Image Horizontal)

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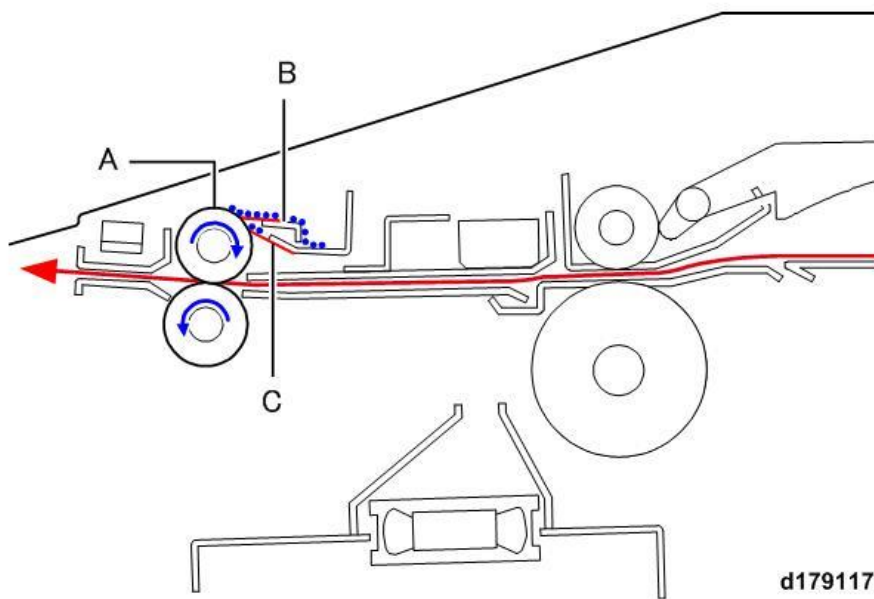


After image correction in the main scan direction by the shift units, the paper is fed to the transfer timing roller [A]. The nip of the registration gate roller [B] opens to free the paper.



The transfer timing sensor [A] detects the leading edge of the sheet to start the sub scan registration. In order to adjust feed of the leading edge so it aligns correctly with the start of image transfer, after the transfer timing sensor goes ON, machine will calculate the amount of time to start paper feed so the image will be positioned correctly on the sheet in the sub scan direction. Based on the results of these calculations, the speed of the transfer timing motor [B] is increased or decreased to adjust the rotation speed of the transfer timing rollers [C] for the ideal timing to feed the paper to the PTR unit.

## Paper Dust Collection

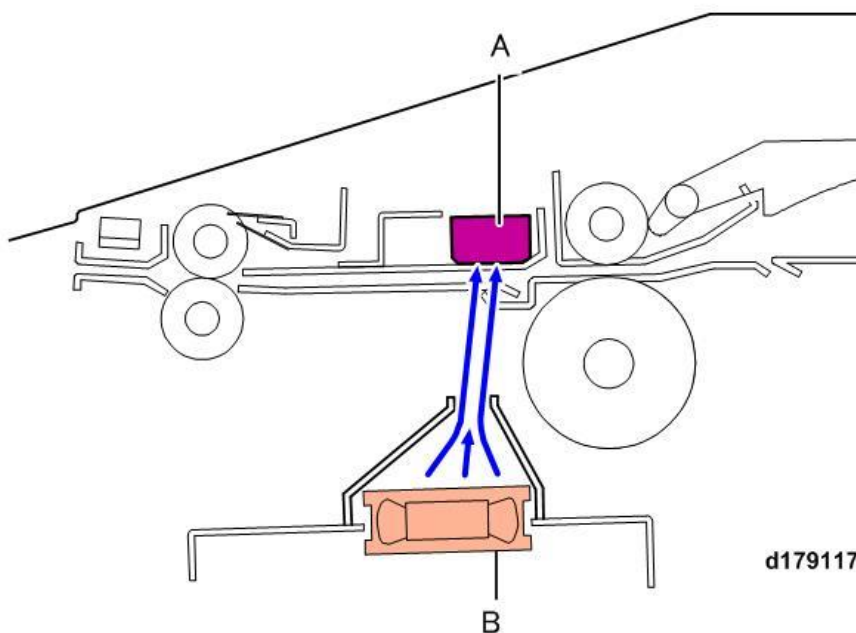


d1791172

A mechanism is provided to collect paper dust from the transfer timing idle roller [A].

- Two mylar scrapers are used on the surface of the idle roller.
- Scraper [A] cleans the surface of the idle roller.
- Scraper [B] picks up and removes any paper dust missed by the first scraper.
- The paper dust scraped away from the roller falls down into a tray.
- The tray can be easily removed and emptied.

## CIS Cleaning



d1791173

The CIS [A] is mounted above the paper path, so it can collect paper dust and other matter.

- In order to prevent paper dust from collecting, the bottom of the CIS is cleaned by the CIS cleaning fan [B] to keep it clear of dust.

## 6.Detailed Descriptions

- The cleaning fan blows air over the CIS to prevent dust from falling on the surface of the paper where the image will be written onto the paper.

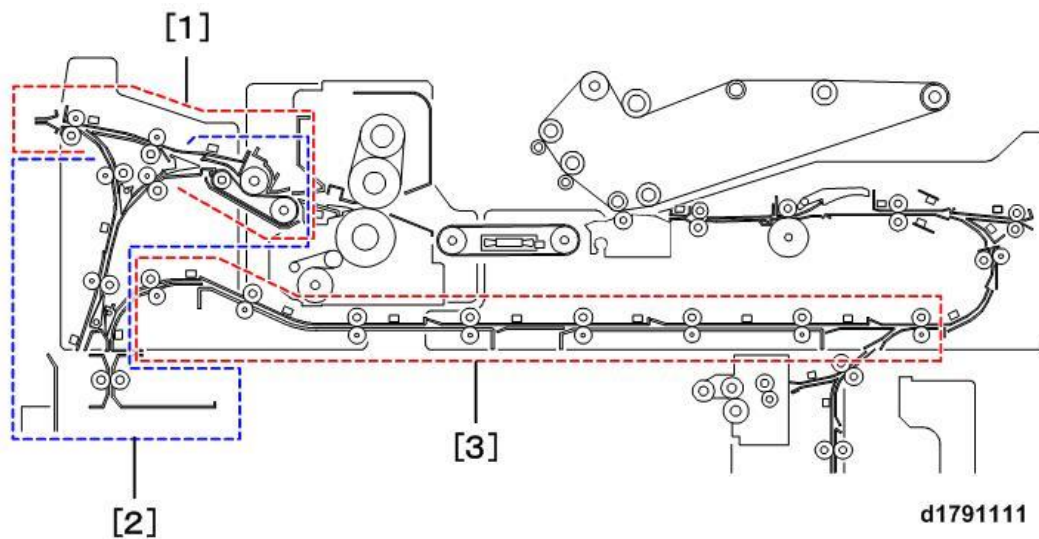
## Paper Invert, Exit, Duplex

### Overview and Mechanism

#### Overview

The following mechanisms comprise the invert, exit, and duplex section.

- PTB unit that transports the paper from the PTR unit to fusing unit
- Invert/exit mechanisms
- Duplex transport path

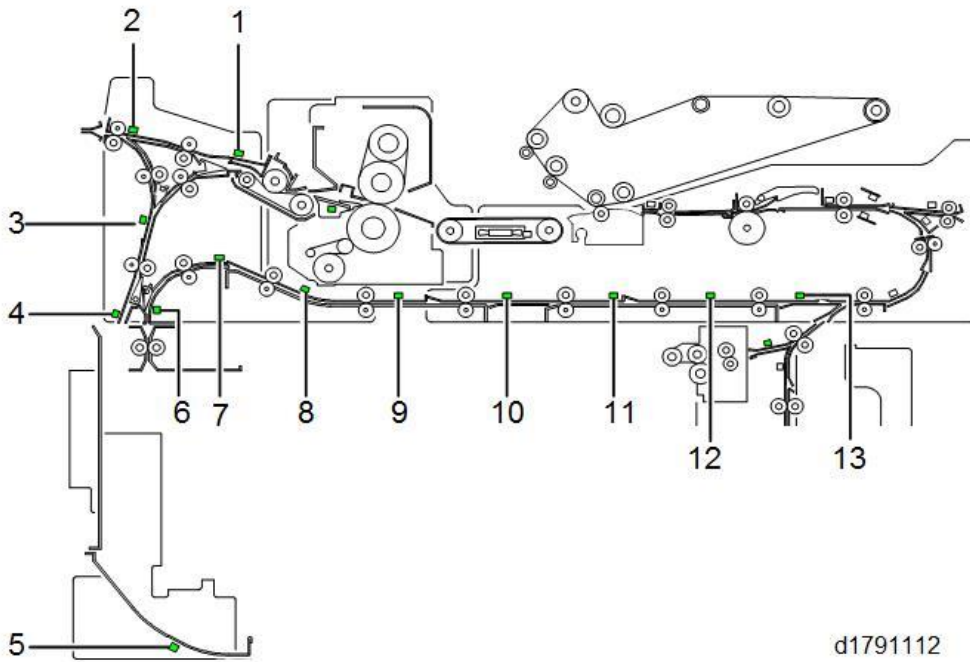


No.	Name
1	Straight-through Exit Unit
2	Invert/Exit Unit
3	Duplex Exit Unit

## 6.Detailed Descriptions

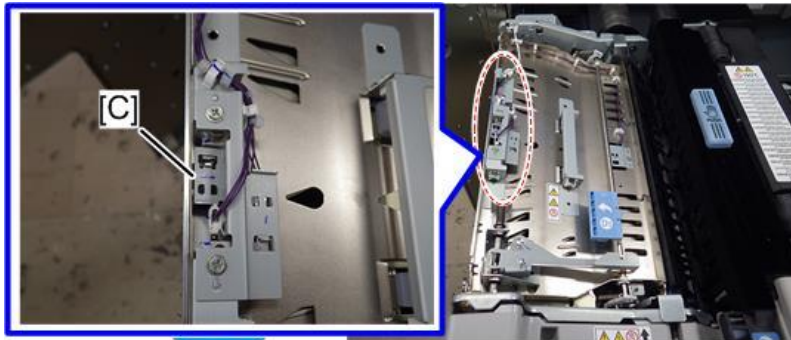
### Layout

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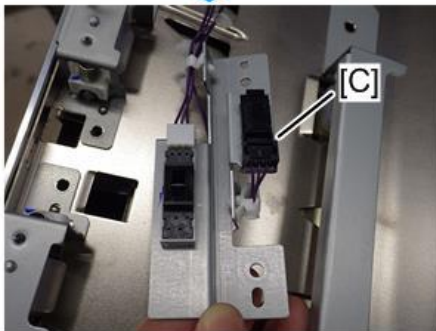


d1791112

- Paper exit/Peripheral paper removal sensor [C]  
When the paper is left between the paper exit section and peripherals, JAM LED is turned on.

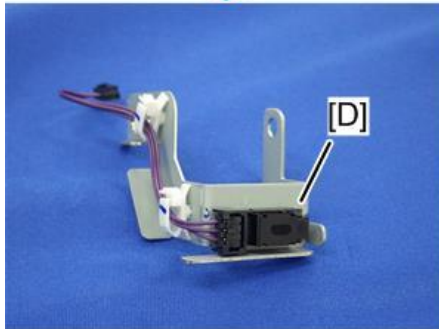


d0bxa4224



- Duplex/Inverter path paper removal sensor [D]  
When the paper is left between the duplex section and invert section, JAM LED is turned on.





No.	Name	No.	Name
1	Exit JG Sensor	9	Duplex Transport Sensor 3
2	Exit Sensor	10	Duplex Transport Sensor 4
3	Exit/Invert Sensor	11	Duplex Transport Sensor 5
4	Purge Relay Sensor	12	Duplex Transport Sensor 6
5	Purged Paper Sensor	13	Duplex Exit Sensor
6	Duplex Invert Sensor	C	Paper Exit/Peripheral Paper Removal Sensor
7	Duplex Transport Sensor 1	D	Duplex/Inverter Path Paper Removal Sensor
8	Duplex Transport Sensor 2		

## Details

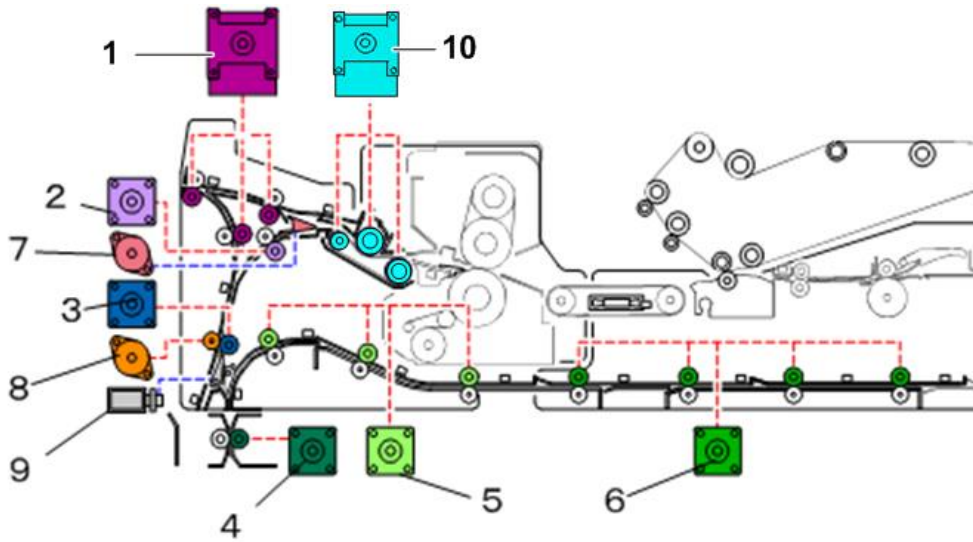
### Invert, Exit, Duplex Section

Invert Exit	Two paper paths: invert/exit, straight-through exit
<ul style="list-style-type: none"> <li>• Drive</li> </ul>	Exit motor, invert entrance motor, exit/invert motor, main relay release motor
<ul style="list-style-type: none"> <li>• Paper Cooling</li> </ul>	Heat pipe
<ul style="list-style-type: none"> <li>• Ventilation</li> </ul>	Paper cooling with heat pipe
<ul style="list-style-type: none"> <li>• Straight-through and exit</li> </ul>	Exit roller path with exit junction gate open
<ul style="list-style-type: none"> <li>• Invert/exit (face-down delivery)</li> </ul>	Invert paper path with exit motor, exit/invert motor
Paper Purge	Purging paper in main machine paper path when a jam occurs downstream
Duplex	

## 6.Detailed Descriptions

• Drive	Duplex/invert motor, duplex transport motor 1, 2
• Duplexing	Switchback system
Interleave	Interleave control system (5-sheet interleave with LT LEF and smaller paper sizes)

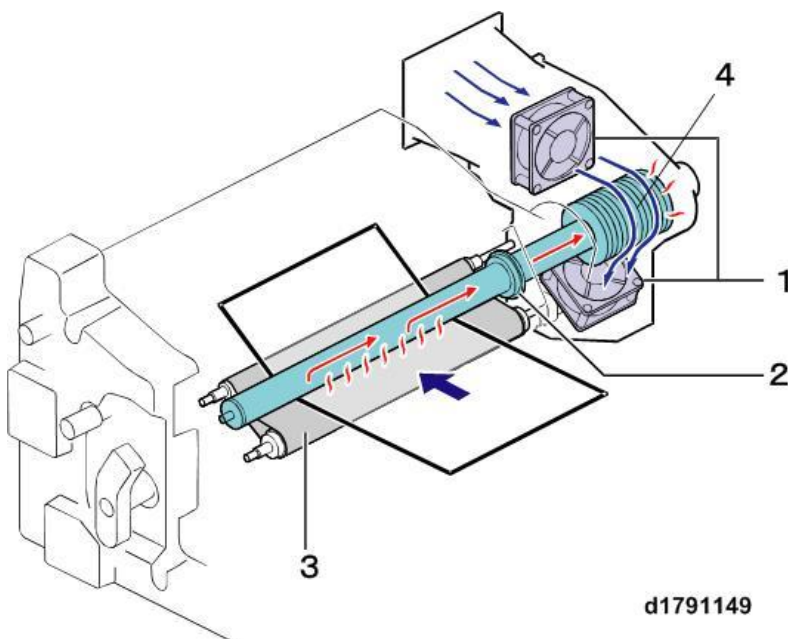
### Drive



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No.	Name	No.	Name
1	Exit Motor	6	Duplex Transport Motor 2
2	Invert Entrance Motor	7	Exit JG Motor
3	Exit/Invert Motor	8	Exit/Invert Separation Motor
4	Duplex/Invert Motor	9	Invert JG Solenoid
5	Duplex Transport Motor 1	10	Heat Pipe Motor

## Paper Cooling



No.	Name
1	Cooling Fan
2	Heat Pipe
3	Paper Transport Belt
4	Heat Sink Fins

A heat pipe cools the fused paper immediately after it exits the fusing unit.

Layered fins on the end of the heat pipe form a baffle exposed to air blown through them to dissipate heat absorbed from the paper.

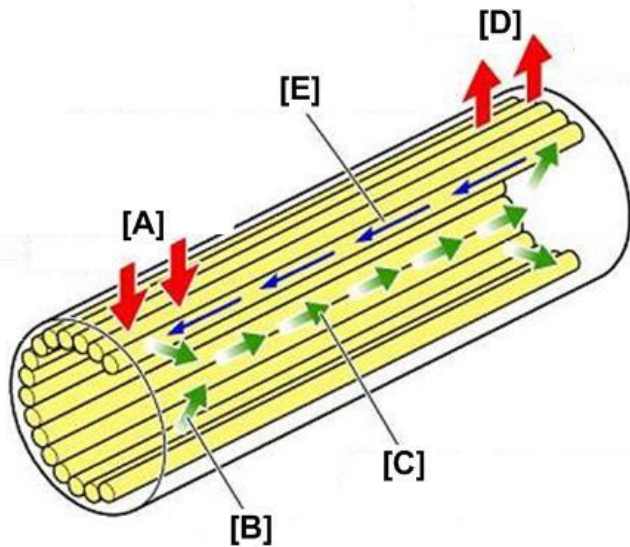
- The paper on the paper transport belt (3) passes under the heat pipe (2).
- The heat pipe has an intricate system of small capillary tubes filled with water running along the inside of the paper cooling pipe.
- The hot paper leaving the fusing unit heats the parts of the cooling pipe that it touches. This heats the water inside the tubes.
- The principle of heat transference moves the heated water to toward the cooler rear end of the cooling pipe where where a heat sink with fins (4) is attached.
- The fins of the baffle conduct heat away from the water in the pipe. Air moving around the fins dissipates the heat into the air.
- Paper cooling fans (1) in the duct dissipate the heat around the fins.

## Heat Pipe

The heat pipe is a metal pipe constructed of a lattice of sealed capillary tubes that contain a very small amount of water. When one end of the pipe is heated, the coolant moves to the cooler end of the pipe where the liquid cools and condenses. The condensation is pushed back to the heated end of the pipe by the super heated water behind it. This cycle from heating > evaporation > condensation and re-

## 6.Detailed Descriptions

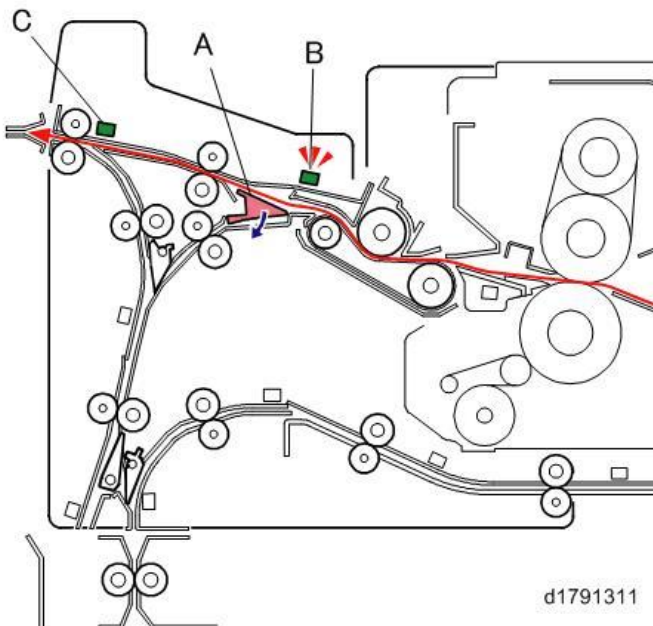
heating sets up a convection current from the front end of the pipe to the rear.



d1791060

[A]	The end of the pipe where hot paper touches it brings water to boil.
[B]	Because the small amount of water is sealed in vacuum, the boiling point is very low.
[C]	Due to the small difference in pressure caused by the heat at the front, the coolant flows from the front to the rear.
[D]	The coolant condenses and heat is lost through the surface of the pipe and into the fins at the back.
[E]	The coolant is pushed from rear to front by the super heated water and steam behind it and the cycle repeats.

## Straight-Through Output



d1791311

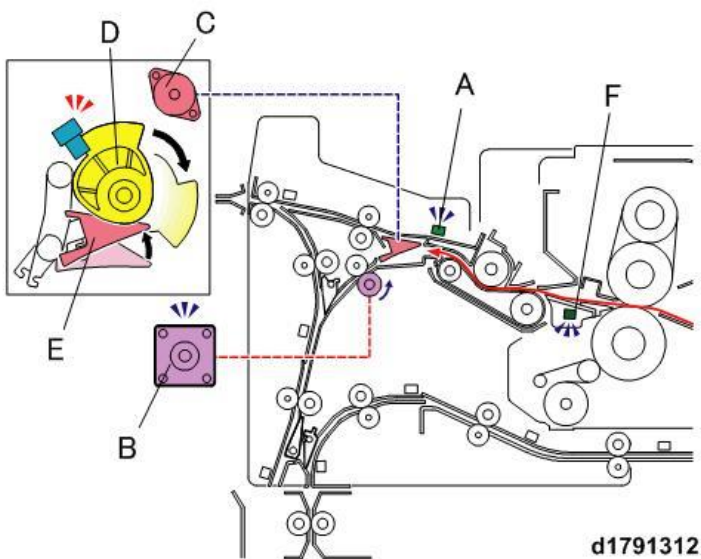
No.	Name
A	Exit Junction Gate

No.	Name
B	Exit JG Sensor
C	Exit Sensor

In straight-through output the paper leaves the fusing unit and then passes below the heat pipe.

- When the exit/invert motor goes on, a cam depresses the pawl of the exit junction gate [A] and the paper passes through to the exit roller.
- The exit JG sensor [B] in the exit path detects the arrival and passing of the paper.
- The exit sensor [C] detects the leading edge and trailing edge of the paper as it exits the machine.

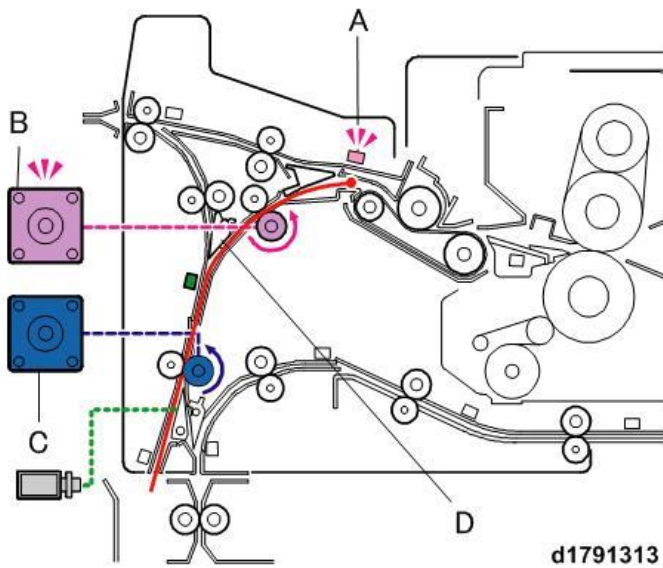
#### Invert/Exit (Face-down Delivery)



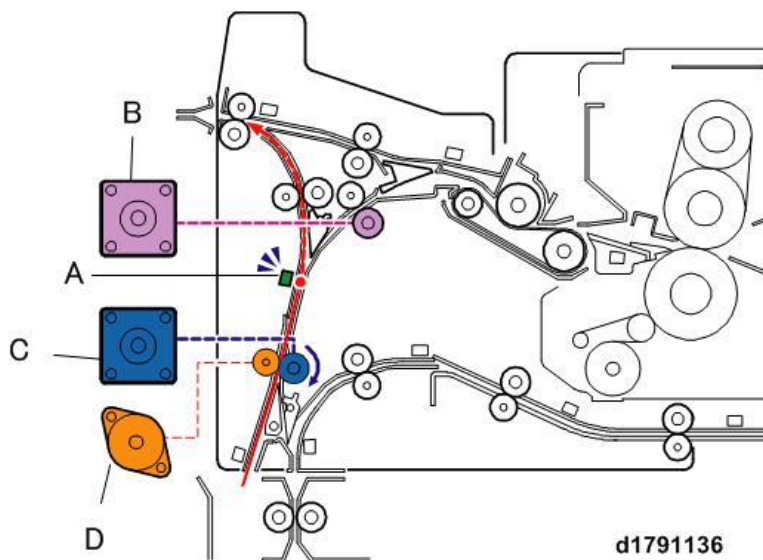
In invert/exit mode for face-down delivery:

- After the paper passes under the heat pipe, the exit junction guides the paper to the invert/exit path.
- When the leading edge of the paper passes the exit junction gate sensor [F], the exit junction gate motor [C] rotates cam [D] which opens exit junction gate [E] and opens the invert path
- When the exit JG sensor [A] detects the leading edge of the paper, the invert entrance motor [B] turns on and feeds the paper down into the inverter unit.

## 6.Detailed Descriptions



When the exit JG sensor [A] detects the trailing edge of the paper, the invert entrance motor [B] and exit invert motor [C] speed up slightly. The junction gate [D] normally closes the path but paper can move past it.

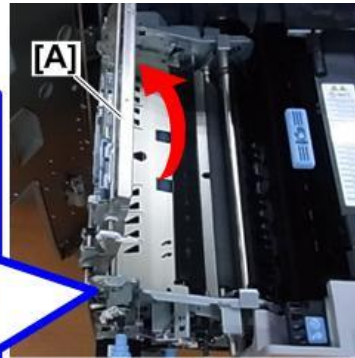
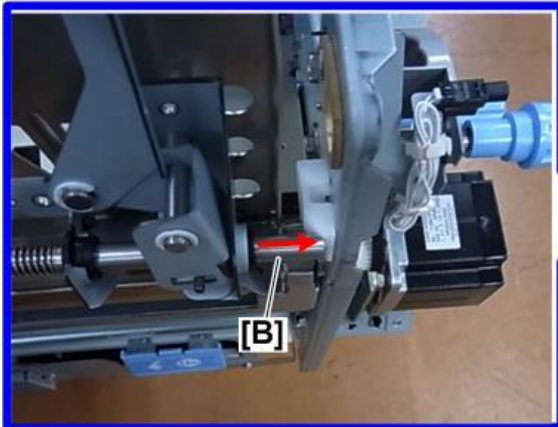


When the exit/invert separation sensor [A] detects the trailing edge of the paper:

- The invert entrance motor [B] stops
- The exit/invert motor [C] reverses, and then feeds the paper to the exit above.
- After the paper passes the invert/exit roller, the exit/invert separation motor [D] turns on and separates the exit/invert rollers so the sheet can feed to the exit and allows the next sheet to enter the invert unit.

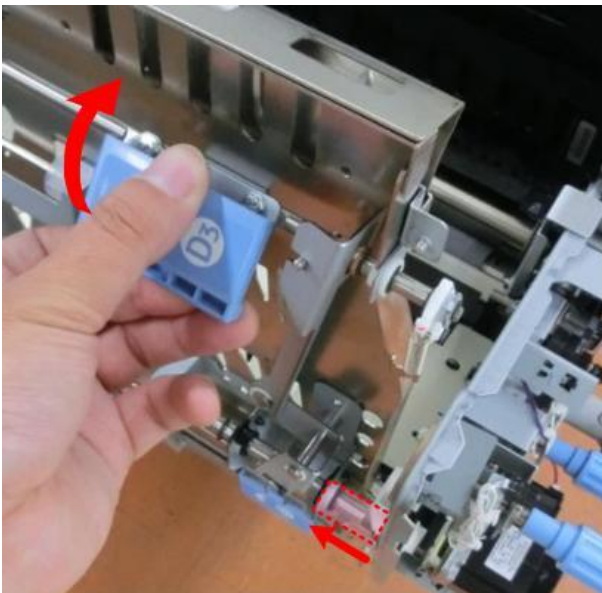
### Exit Guide Plate Lock Mechanism

The machine is provided with a new lock mechanism that prevents the exit guide plate from striking the front door when the plate is opened to remove a jammed sheet of paper. When the exit guide [A] is opened, this extends lock pin [B] which locks the plate in place.



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Raising lever [D3] to close the plate releases the lock.

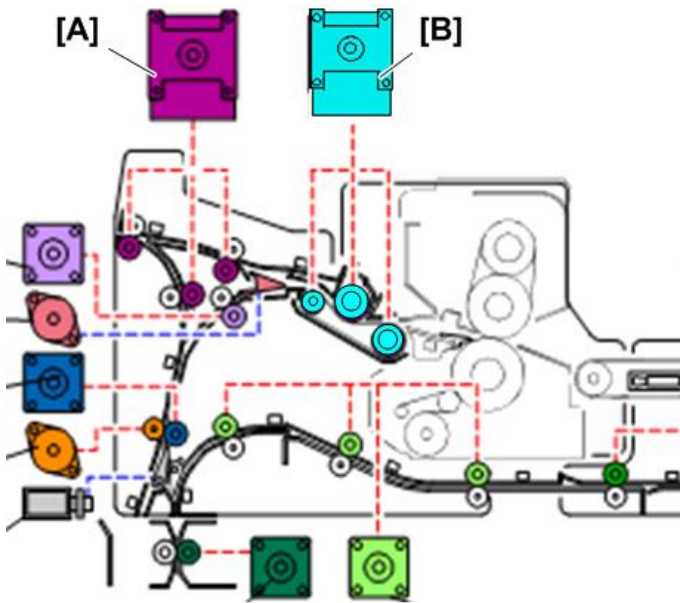


d270d7704

### Paper Purge

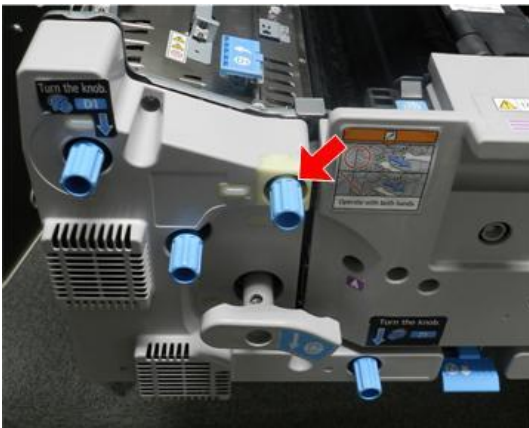
When a paper jam occurs downstream of the main machine, all the paper in the paper path of the main machine is immediately shunted into the purge unit. In the previous machine, paper exit was driven by only exit motor [A]. This machine, however, is equipped with the heat pipe motor [B] which also feeds paper to the exit. This additional motor ensures that paper will feed into the purge tray even if a downstream jam causes paper to jam in the exit and stop the exit motor.

## 6.Detailed Descriptions



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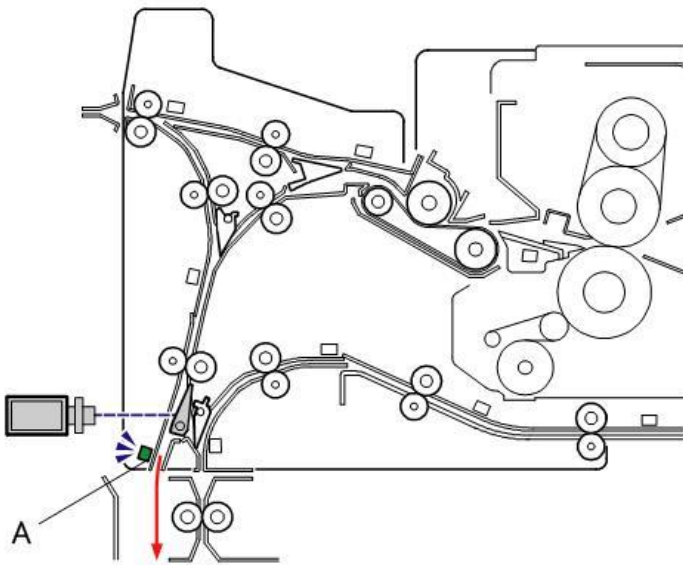
A knob can be rotated manually from the front to make paper jam removal easier. This knob is new. At least two full turns are required to remove long paper that has jammed in the paper path.



d270b0042

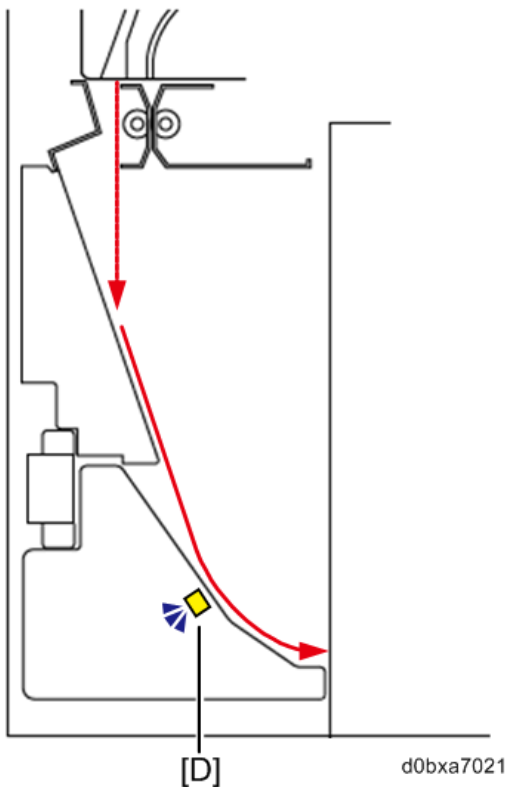
Purge relay sensor [C] detects the leading and trailing edge of each sheet that enters the purge unit.





d1791314

Purged paper sensor [D] detects when there is paper in the purge unit.



d0bxa7021

### Auto Recovery from Paper Jams

Pro 8300 Series is equipped with a new function that delivers jammed sheets to the purge tray particularly for double-feed and over-skew jams to resume the job automatically. However, this can be inconvenient if the purged sheets contain confidential information. For this reason, the automatic purge function can be disabled in SP1051 or from the Adjustment Settings for Skilled Operators menu.

## 6.Detailed Descriptions



	SP1051 setting		
	[0: Suspend]	[1: Continue until purge tray is full]	[2: Continue until present job completes]
Behavior when the purge tray contains jammed sheet(s)	Printing stops and does not resume.	Printing continues until the purge tray becomes full according to the capacity specified.	Printing continues until the present job completes unless the tray becomes full before completing the job.
Alert timing	Immediately after the jam occurs	When the purge tray becomes full according to the capacity specified	After completing the job if the tray contains any purged sheets or when the tray becomes full according to the capacity specified
Security level	High	Low	Middle

With the SPs below, you can specify when the purge tray detects full (SP1-051 set to '1').

1-054-001~009 (A4LEF Output posPage Thick0~Thick 8)

1-055-001~009 (LTLEF Output posPage Thick 0~Thick 8)

1-056-001~009 (A3 Output posPage Thick 0~Thick 8)

1-057-001~009 (DLT Output posPage Thick 0~Thick 8)

1-058-001~009 (SRA3 Output posPage Thick 0~Thick 8)

### Concrete example 1 when switching the SP1051 setting

The table below describes the number of the paper left at the purge section in time series on the assumption that particular jam occurs twice during printing one job:

- One job is printed.
- Particular jam occurs twice in a job.
- Three sheets are purged per jam.
- Purge tray capacity is set to '5.'

		Number of Sheets Present in the Purge Tray		
		SP1-051-001 [0: Suspend]	SP1-051-001 [1: Continue until purge tray is full]	SP1-051-001 [2: Continue until present job completes]
1st job	Starts printing.	0	0	0
	Double-feed or over-skew jam occurs.	3 Alert prompts the operator to clear the purge tray.	3	3
	Resumes printing.	0	3	3
	Double-feed or over-skew jam occurs.	3 Alert prompts the operator to clear the purge tray.	6 Purge tray reaches full. Alert prompts the operator to clear the purge tray.	6 Purge tray reaches full. Alert prompts the operator to clear the purge tray.
	Resumes printing.	0	0	0
	Job is complete, no waiting jobs in queue.	0	0	0

### Concrete example 2 when switching the SP1051 setting

The table below describes the number of the paper left at the purge section in time series on the assumption that the particular jam occurs once in each job during printing two jobs:

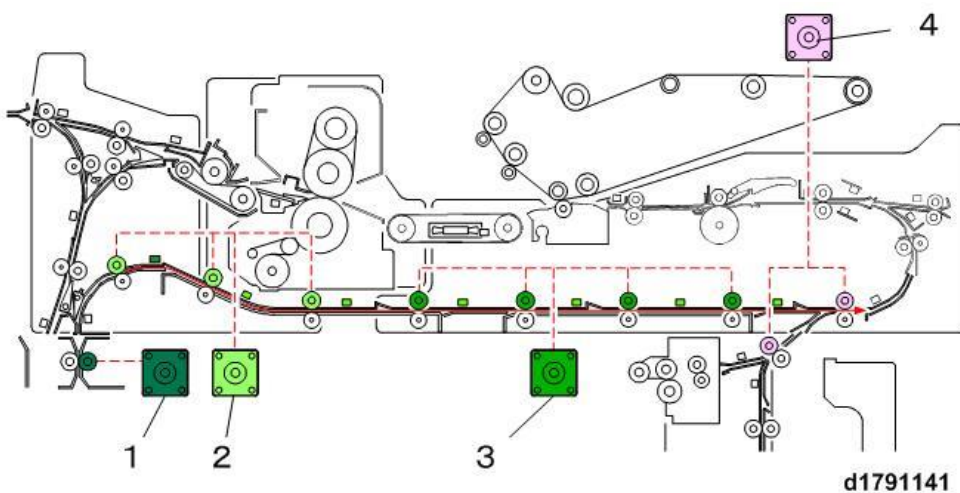
- Two jobs are printed.
- Particular jam occurs once in a job.
- Three sheets are purged per jam.
- Purge tray capacity is set to '5.'

		Number of Sheets Present in the Purge Tray		
		SP1-051-001 [0: Suspend]	SP1-051-001 [1: Continue until purge tray is full]	SP1-051-001 [2: Continue until present job completes]
1st job	Starts printing.	0	0	0
	Double-feed or over-skew jam occurs.	3 Alert prompts the operator to clear the purge tray.	3	3
	Resumes	0	3	3

## 6.Detailed Descriptions

		Number of Sheets Present in the Purge Tray		
		SP1-051-001 [0: Suspend]	SP1-051-001 [1: Continue until purge tray is full]	SP1-051-001 [2: Continue until present job completes]
	printing.			
	Job is complete, no waiting jobs in queue.	0	3	3 Job is complete, but alert prompts the operator to clear the purge tray because the tray contains purged sheets.
2nd job	Starts printing.	0	3	0
	Double-feed or over-skew jam occurs.	3 Alert prompts the operator to clear the purge tray.	6 Purge tray reaches full. Alert prompts the operator to clear the purge tray.	3
	Resumes printing.	0	0	3
	Job is complete, no waiting jobs in queue.	0	0	3 Job is complete, but alert prompts the operator to clear the purge tray because the tray contains purged sheets.

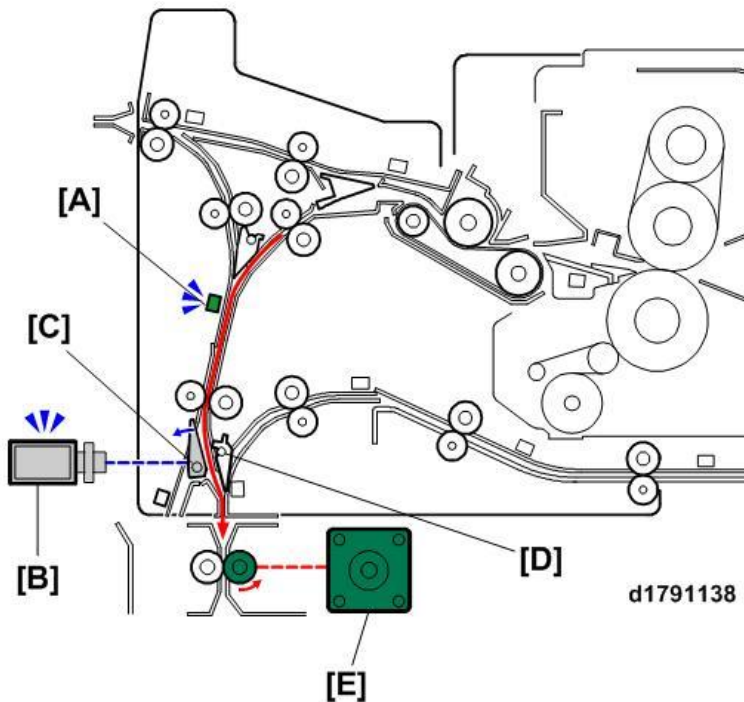
### Duplex Drive



No.	Name
1	Duplex/Invert Motor
2	Duplex Transport Motor 1

No.	Name
3	Duplex Transport Motor 2
4	Exit Motor (in VTU)

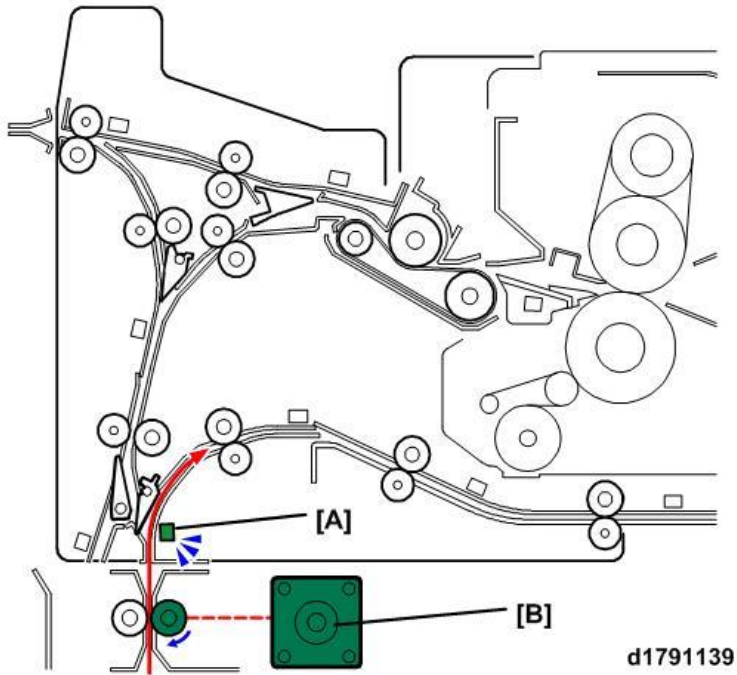
### Duplex Transport



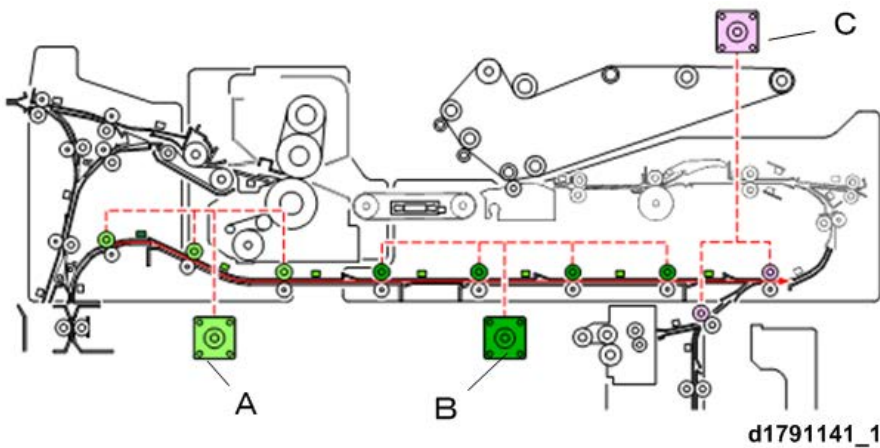
When the duplex/invert sensor [A] detects the trailing edge of the paper:

- The invert JG solenoid [B] goes on.
- The invert junction gate [C] opens.
- The paper brushes past transfer junction gate [D].
- The duplex invert motor [E] feeds the paper down.

## 6.Detailed Descriptions



When the duplex invert sensor [A] detects the trailing edge of the paper, the duplex inverter motor [B] reverses and feeds the paper up past the open junction gate above. This is the "switchback" operation. The duplex transport motor 1 [A] and duplex transport motor 2 [B] drive the seven duplex transport rollers that take the sheet that has just entered the duplex unit and feed it to the relay rollers. The sheet passes up into the main paper transport path of the machine for printing on the second side. The relay rollers are driven by the exit motor [C].



### Interleave

The interleave process during duplexing is slightly different, depending on the size of the paper as described below.

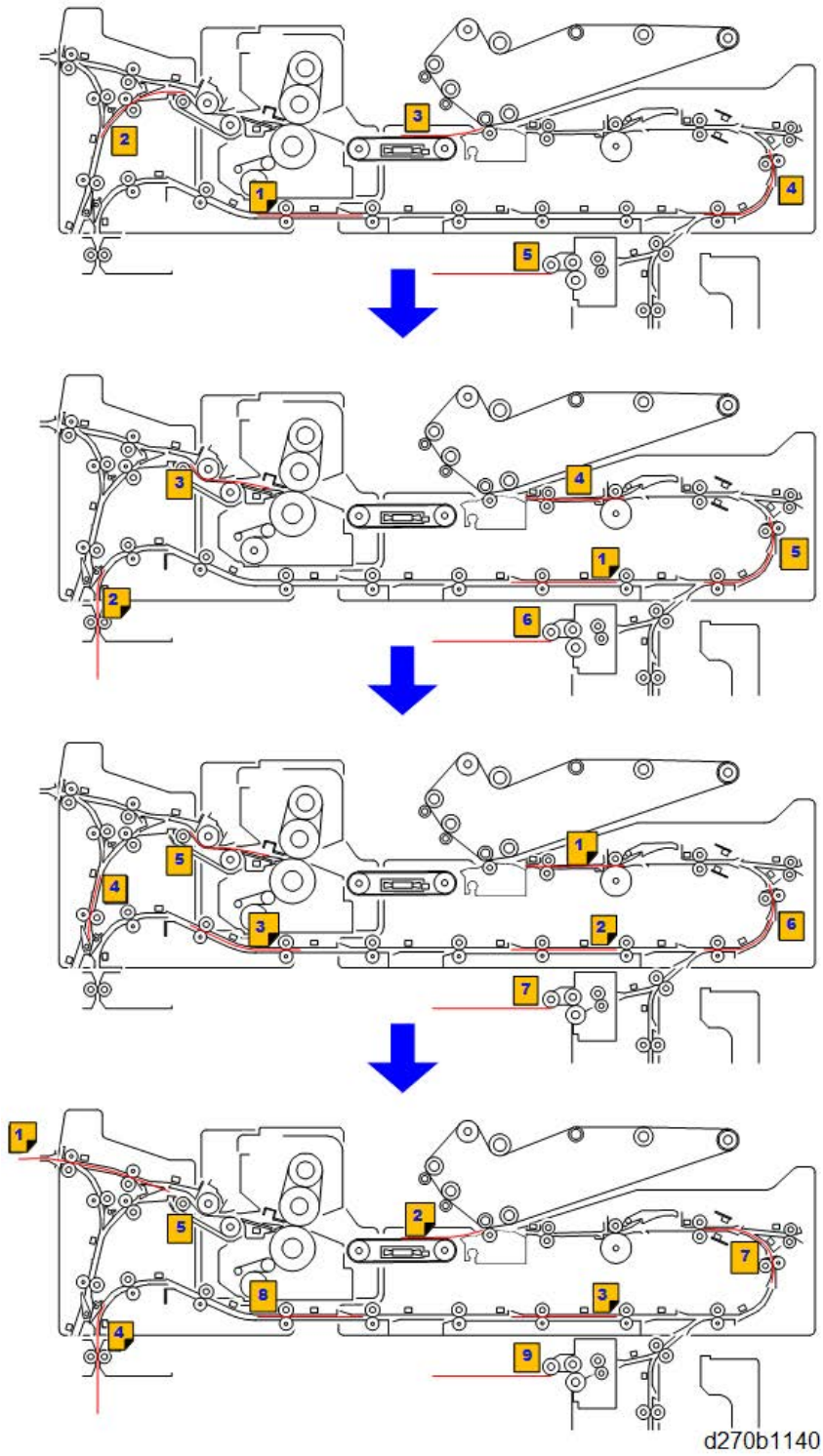
Paper Length (mm)	Interleaved Sheets
Longer than 139.7 (HLT LEF), shorter than 216 (LT LEF)	5
Longer than 216 (LT LEF), shorter than 297 (A4 SEF)	4
Longer than 297 (A4 SEF), shorter than 364 (B4 SEF)	3

Paper Length (mm)	Interleaved Sheets
Longer than 364 (B4 SEF), shorter than 432 (DLT SEF)	
Longer than 432 (DLT SEF), shorter than 457.2 (12"x18")	
Longer than 457.2 (12×18in), shorter than 487.7 (13"x19.2")	
Longer than 487.7 (13"x19.2"), shorter than 700	2

**Five Interleave Sheet Flow**

In this example, the flow follows this sequence: 1st front side > 2nd front side > 3rd front side > 4th front side > 5th front side > 6th back side > 2nd back side > 7th front side > 3rd back side > 8th front side > 4th back side > 9th front side, and so on. Refer to the illustration below.

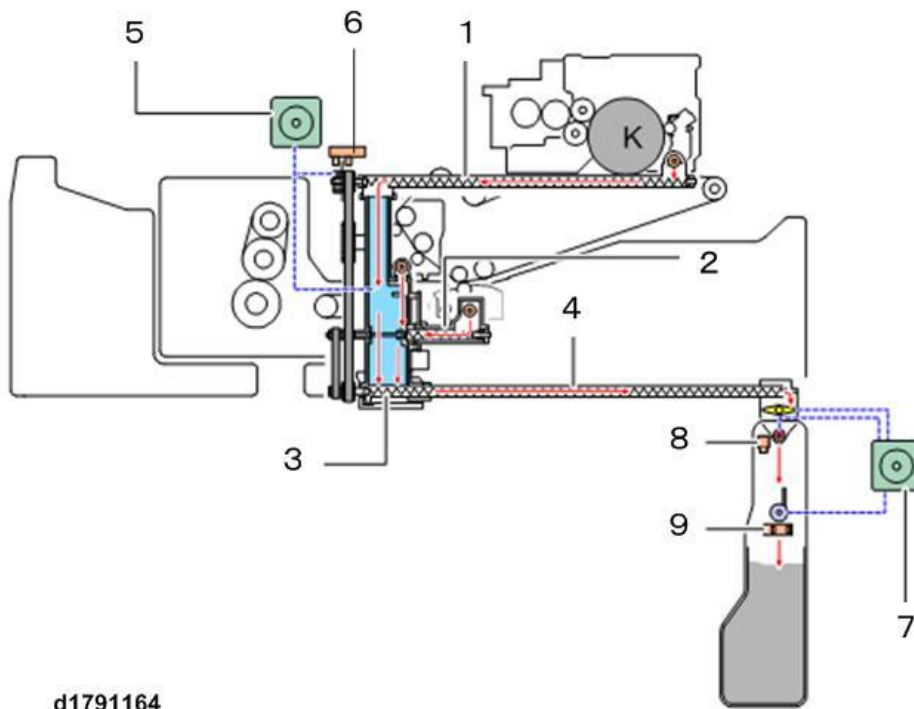
## 6.Detailed Descriptions





## Waste Toner Collection Unit

### Overview



d1791164

No.	Name	No.	Name
1	Upper Horizontal Path	6	Waste Toner Lock Sensor
2	PTR Path	7	Waste Toner Bottle Motor
3	Vertical Path	8	Waste Toner Bottle Full Sensor
4	Lower Horizontal Path	9	Waste Toner Bottle Near Full Sensor
5	Waste Toner Collection Motor		

Paper dust and excess toner from the drum, ITB unit, and PTR unit is collected and transported automatically to the waste toner bottle.

There are four sections in the waste toner path:

- Horizontal path
- PTR path
- Vertical path
- Lower path

### Mechanical Configuration: Waste Toner Collection

Waste Toner Transport	Waste toner transport paths: belt cleaning, vertical transport, lower transport
Waste Toner Bottle	Toner collection path coils, toner bottle coils
Sensors	Three sensors

## 6.Detailed Descriptions

Waste Toner Bottle Drive	Waste toner bottle motor
Waste Toner Bottle Near-Full, Full Detection	

### Waste Toner Transport Mechanism

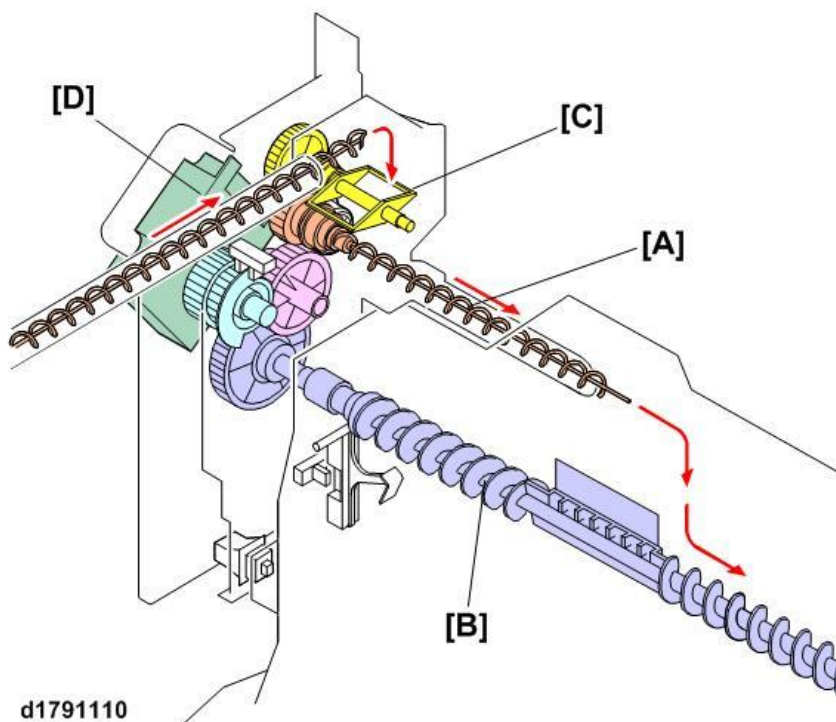
#### Waste Toner Path

The waste toner collection path can be divided into four parts:

- **Upper horizontal path.** Waste toner from the drum cleaning unit.
- **PTR cleaning unit path.** Waste toner from the PTR cleaning unit.
- **Vertical Path.** Waste toner and paper dust from the ITB cleaning unit, paper dust, upper path and PTR path also empty into this duct.
- **Lower horizontal path.** Collection point for all the sources of waste toner, paper dust from other paths for transport to the waste toner bottle.

If one of the transport coils becomes jammed in the waste toner path, the waste toner lock sensor will signal an alert and stop the waste toner transport motor, and the machine will issue SC488 (Waste toner transport abnormal).

#### Waste Toner Collection Bottle Transport

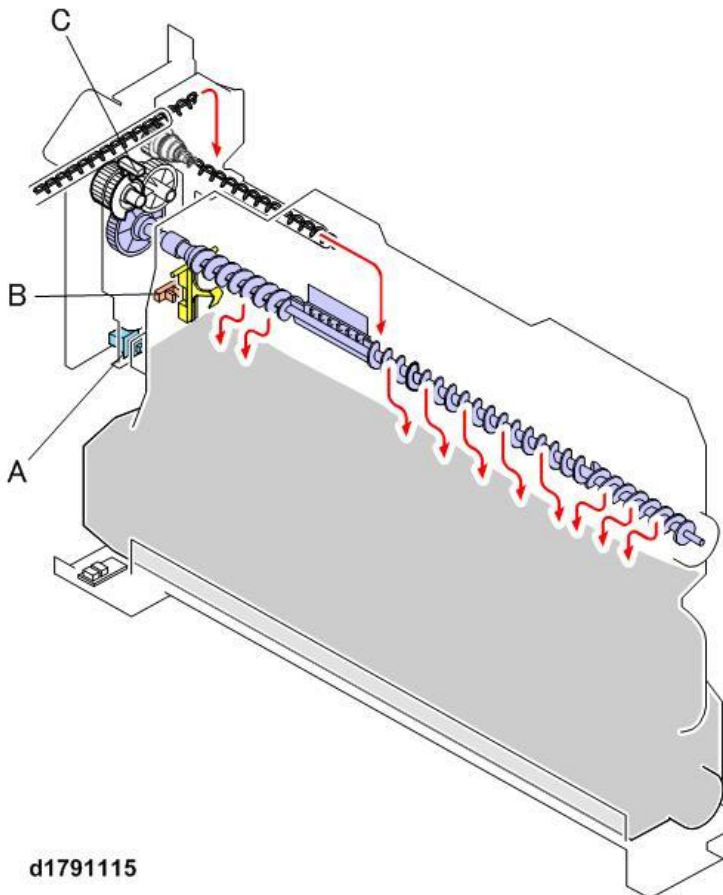


- Waste toner and paper dust transported from the lower path to the waste toner bottle by the waste toner unit transport coil [A] drops into the transport coil [B] of the waste toner bottle, and then falls into the waste toner bottle.
- An agitator [C] creates a mild vibration so the waste toner dumped into the bottle does not clump.

- The agitator, collection unit toner coil, and waste toner bottle coil are all driven by the waste toner bottle motor [D].

### Switches and Sensors

---



To ensure that the top of the waste toner in the bottle remains flat, the toner is dispersed evenly from rear to front. There is one switch and two sensors in the waste toner bottle.

- **Waste toner bottle set switch.** The waste toner bottle set switch [A] (a micro-switch) detects whether the bottle is set correctly or not.
- **Near-full sensor.** The near-full sensor [B] detects when the waste toner bottle is almost full and displays an alert on the operation panel so the operator can make preparation to replace the bottle. After the alert is issued, the machine can continue to be used for 290 K prints (A4 SEF 8% coverage).
- **Full sensor.** The full sensor [C] detects when the waste toner bottle comes full. Once the machine detects the full condition and issues the alert, the machine stops and cannot be used until the waste toner bottle has been replaced.

### Waste Toner Bottle Near-Full, Full Detection

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#### Waste toner bottle near-end detection

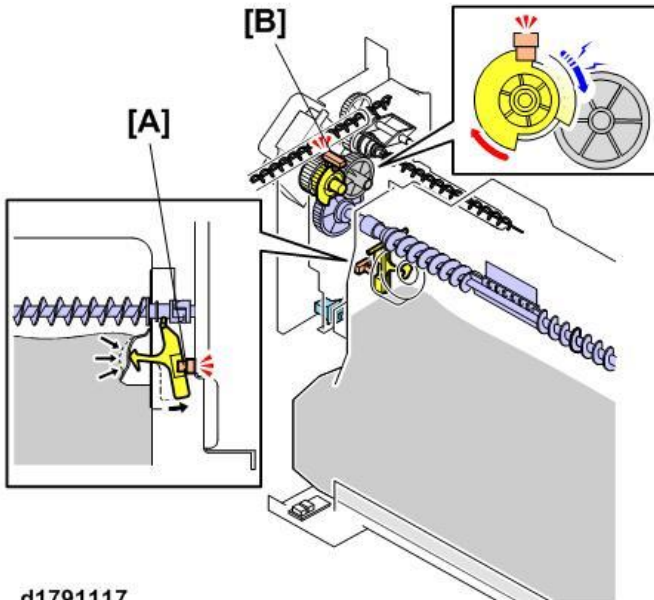
- When the level of the waste toner inside the bottles accumulates high enough to reach the actuator of the near-full sensor [A], this switches the near-full sensor on, and if it remains on for more than 3

## 6.Detailed Descriptions

sec., this will trigger the bottle near-full alert.

### Waste toner bottle full detection

- The full sensor [B] detects when the waste toner bottle is full by monitoring the rotation of the waste toner transport coil.



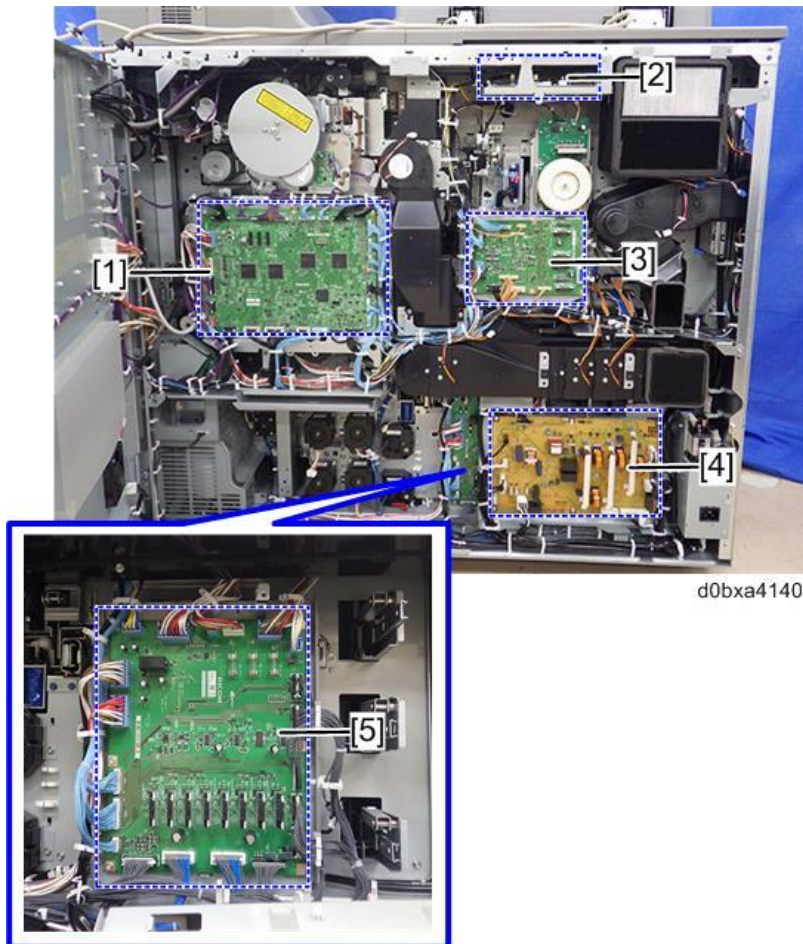
d1791117

- Normally, the waste toner bottle sensor switches on/off repeatedly during the rotation of the toner path and bottle transport coils.
- When the waste toner bottle becomes full this places a load on the transport coils. If the torque limiter of the drive gear can no longer turn (the signals no longer alternate on/off), and if this condition continues for longer than 3 sec., this signals that the waste toner bottle is full.
- As soon as the machine issues the bottle full alert, the machine stops.
- If there is a job in progress it will shut down immediately and an alert will appear on the operation panel.
- After the machine issues the user toner bottle near-full alert, approximately another 290K sheets can be printed (A4 LEF at 6% coverage) until the bottle becomes full.
- The capacity of the waste toner bottle is about 1200 K sheets.

## Boards

### Layout

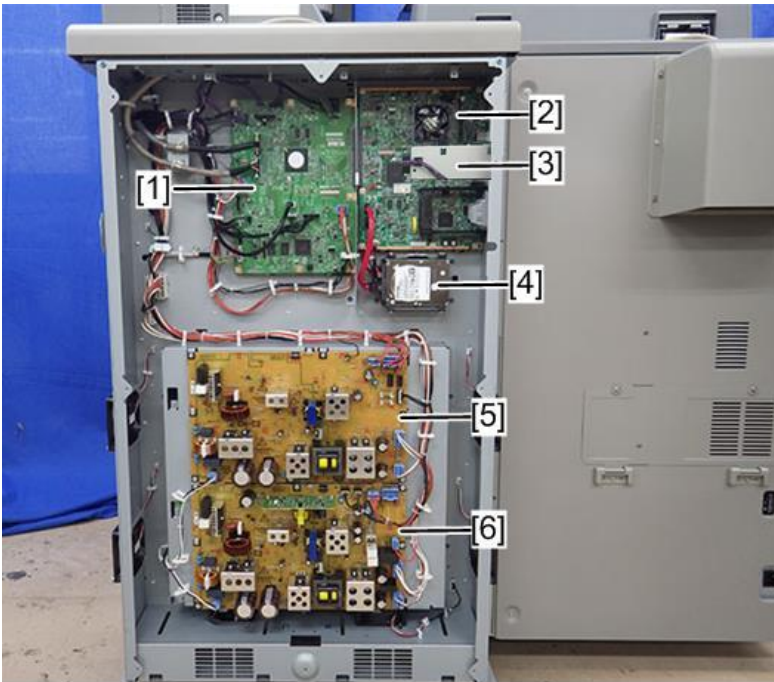
Main Machine: Rear



No.	Name
1	IOB
2	CGB Power Pack
3	EDRB
4	AC Drive Board
5	RYB

## 6.Detailed Descriptions

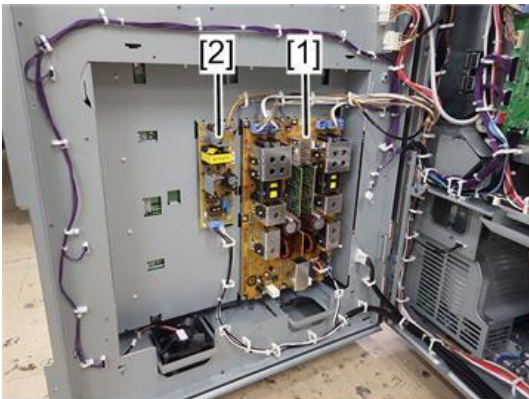
### Controller Box



d0bxa4141

No.	Name	No.	Name
1	BCU	4	HDD
2	Controller Board	5	PSU-B
3	SDCU (Option)	6	PSU-A

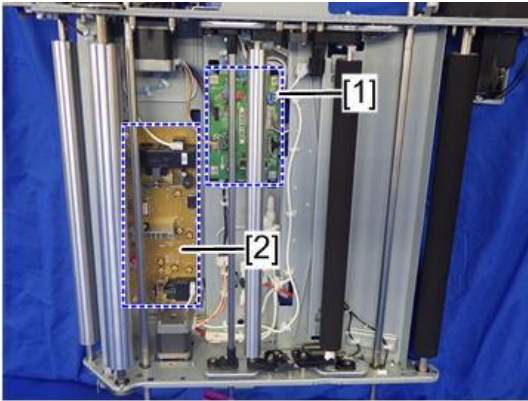
### Controller Box (Reverse Side)



d0bxa4142

No.	Name
1	PSU-C
2	PSU-D

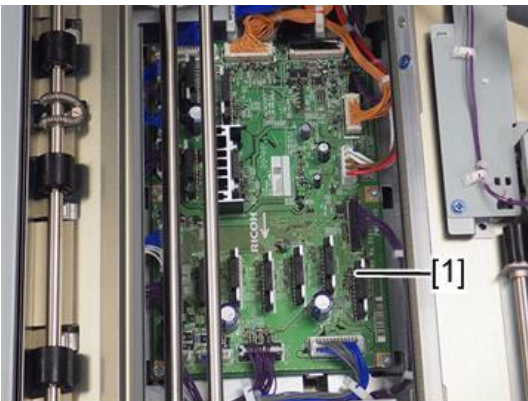
## ITB Unit



d0bxa4218

No.	Name
1	TDRB
2	Transfer Power pack

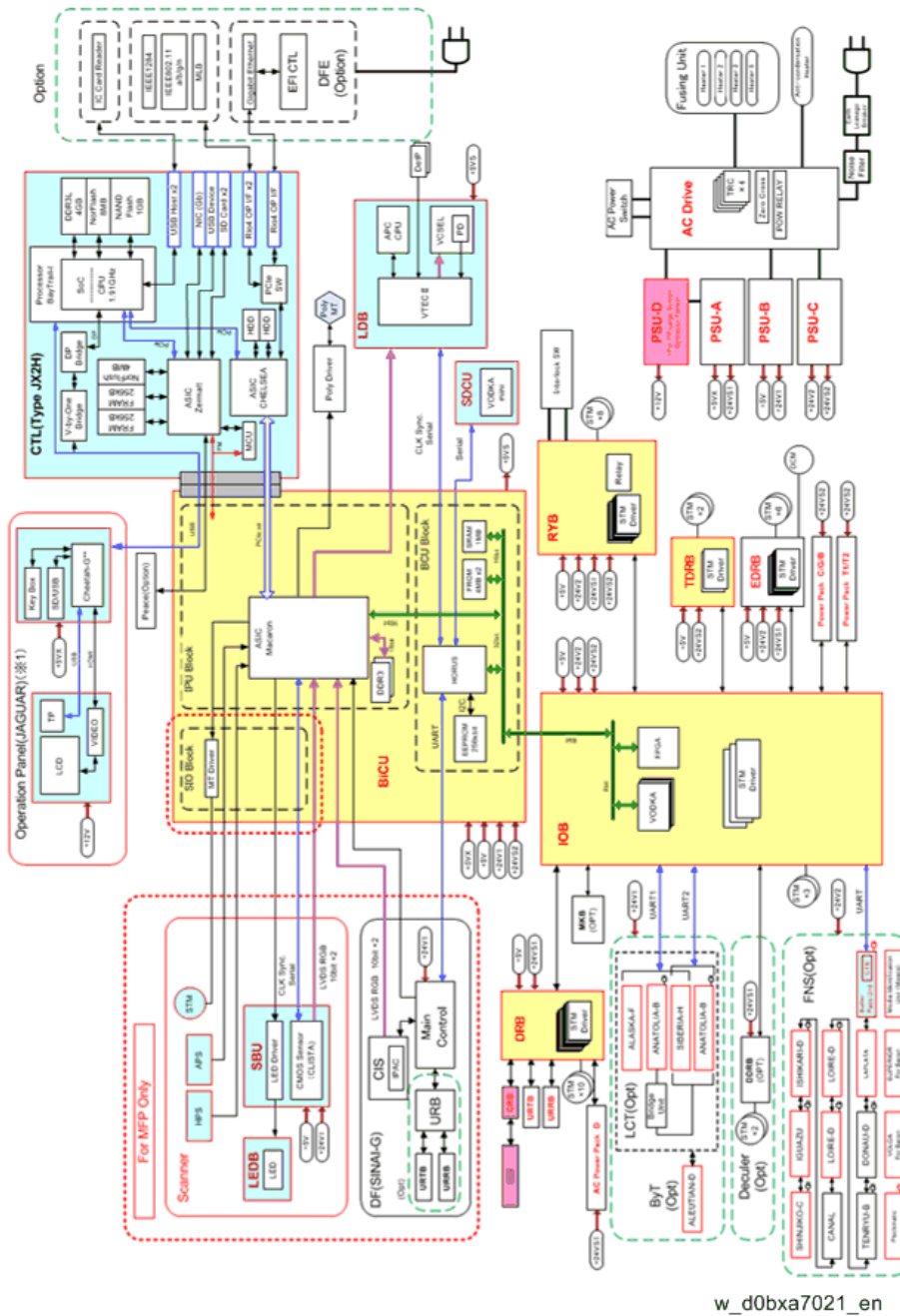
## Registration Unit



d0bxa4219

No.	Name
1	DRB

Board Circuit Diagram



Mechanism Details

Note

- The components inside the dotted lines in the drawing above are in the copier model only (these are scanner components).
- **IOB (Input/Output Board).** Contains the I/O ASIC and controls all the mechatronics in the machine.
- **BiCU (Base engine and Image processing Control Unit).** has function that it controls the main machine and image processing.



- **Controller Board.** Incorporates the GW architecture that controls the entire system.
- **TDRB (Transfer DRiver Board).** Controls ITB unit motors circuits.
- **RYB (Relay Board).** Controls power relay to DC electrical components and controls motors and circuits of the paper trays.

**RYB Fuses: Rating 200V to 240V**

- **SBU (Sensor Board Unit).** (Copier only) Processes analog signals of read images and performs AD convert.
- **CGB (Charge, Grid, Bias) Power Pack.** The high voltage power pack that takes DC24V and PWM signal input and generates the DC current for image creation.
- **Power Pack (T1/T2).** The high voltage power pack that takes DC24V and PWM signal input and generates DC current supply to the image transfer unit
- **AC Power Pack (D).** The high voltage power pack that takes DC24V and PWM signal input and generates the AC+DC output for the paper separation in the paper transfer unit.
- **DRB (Drive Board).** Controls the motors and circuits of the registration unit.
- **LDB (Laser Drive Board).** Performs VCSEL drive and controls operation of the LD unit.
- **OPU (Operation Panel Unit).** Controls the operation of the operation panel.
- **AC Drive Board.** Supplies AC power the PSU units, fusing lamps, and anti-condensation heaters.
- **PSU A, B, C, D (Power Supply Units).** Convert AC (AC 200V to 240V) to DC (5V, 24V).  
**PSU-A** supplies power (5V) for the operation panel, laser writing, paper transport drive mechanisms, and the fusing unit.  
**PSU-B** supplies power (5V) for the machine in low energy mode, and supplies power to the ADF and LCT (option).  
**PSU-C** supplies power for main machine paper trays, operation panel, downstream peripheral units.  
**PSU-D** supplies power for the operation panel.
- **HDD** Scanned image data is compressed and held here temporarily. Also, provides storage space required for: user data, font downloads, form downloads, electronic sorting, money charges, job history data, print job spooling, address book, sort output, job logs, etc.

Capacity	Approx. 320GB x2
Local storage	Printing: approx. 15,000
Temporary storage	Copying: electronic sorting: approx. 5,000 pages
	Scanning: approx. 2,200 pages
	Printing: electronic sorting: approx. 20,000 pages
	Copying: electronic sorting: approx. 5,000 pages)

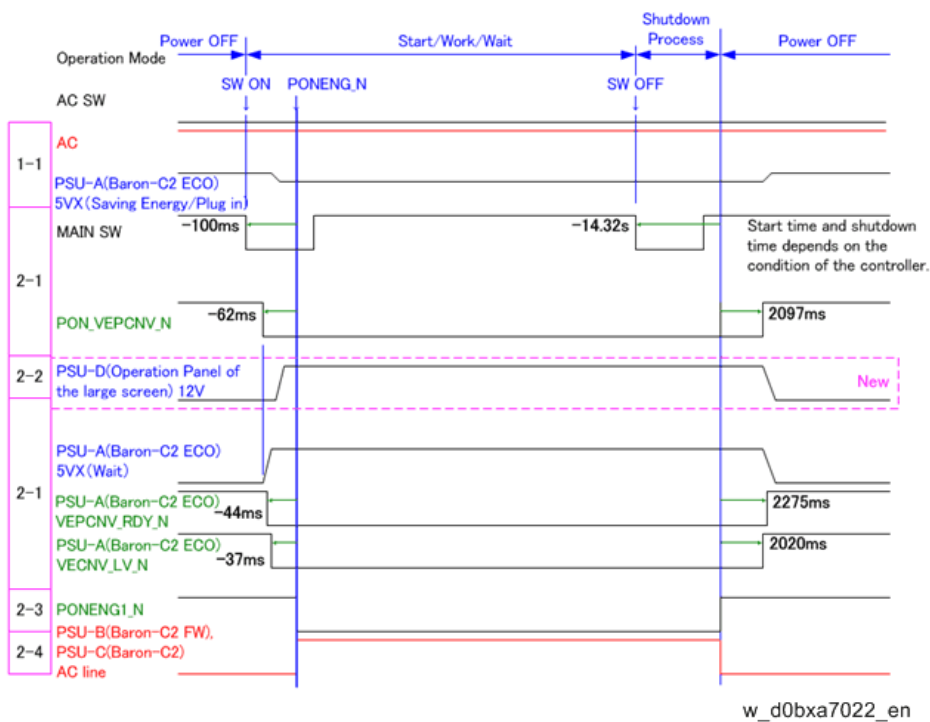
- **DDRB (Decurl Unit Drive Board).** Contains the circuits for the operation and control of the stepper motors in the decurl unit.
- **EDRB (Exit Drive Board).** Controls operation of the motors in the exit unit on the left side of the drawer.
- **URRB (Ultra-sonic Receive Board).** This is the small PCB on the double-feed sensor mounted

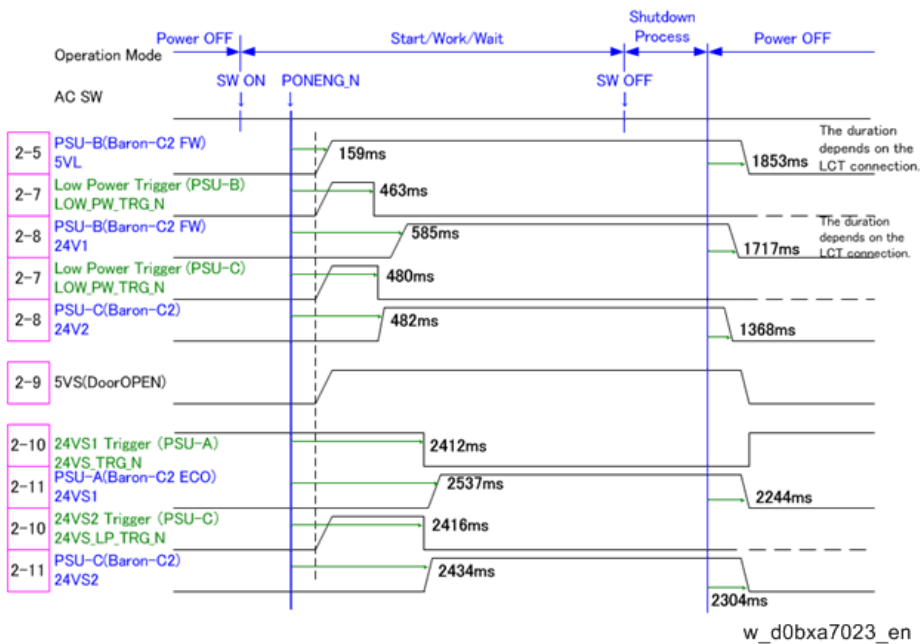
## 6. Detailed Descriptions

above the paper path in the registration unit. Receives the signal from the other double-feed sensor below the paper path in the registration unit.

- **URTB (Ultrasonic Transfer Board)**. This is the small PCB on the double feed sensor mounted below the paper path in the registration unit. It issues the signals received by the double-feed sensor above the paper path in the registration unit.
- **SDCU (SD card Control Unit)** Equipped with an SD card slot, this small board below the IOB logs operation sequences for testing and debugging.
- **CRB(CIS Relay Board)** Binarizes the analog data outputted from the CIS used for the main scan registration correction (Edge detection).

## PSU Startup Sequence





### 1. Plug in

PSU-A: 5VX energy save converter start up

### 2. Main power on

1. PSU-A: switches 5VX output from the converter used for energy save to the converter used for operation
2. PSU-D: 12V output start up
3. "PONENG\_N" assert: CTL -> AC controller board
4. AC controller board relay ON: supply AC to PSU-B, PSU-C
5. PSU-B: 5V output start up
6. BiCU, IOB start up
7. "LOW\_PW\_TRG\_N" assert: IOB -> PSU-B, PSU-C
8. PSU-B: 24V1, PSU-C: 24V2 start up
9. Front door close check
10. "24VS\_TRG\_N" assert, "24VS\_LP\_TRG\_N" assert
11. PSU-A: 24VS1 start up, PSU-C: 24VS2 start up

### 3. PSU start up completed

## Process Control

### Overview

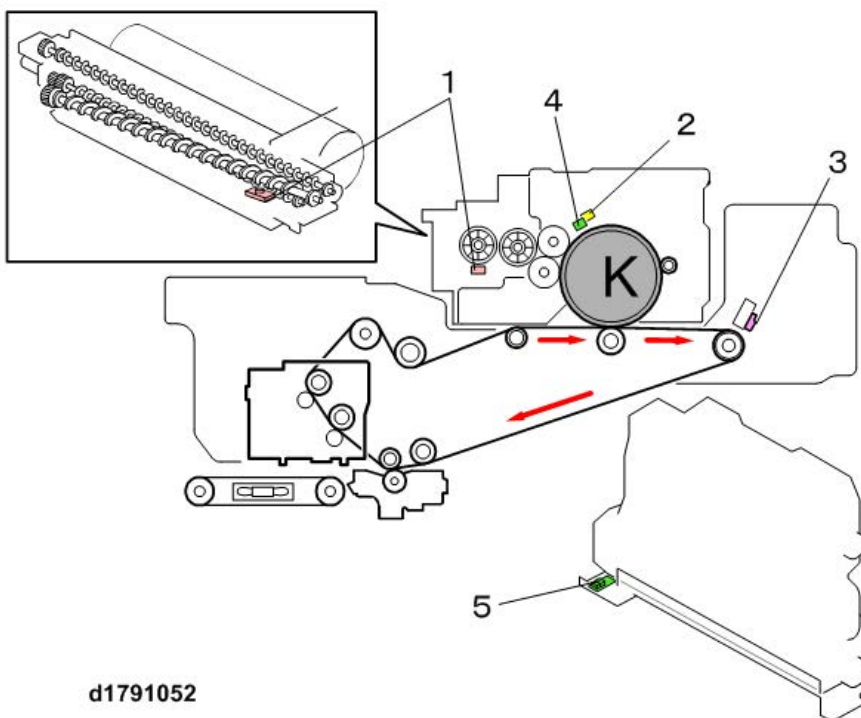
In the electrostatic copying process, many conditions such as changes in temperature, length of time the machine has remained idle, print mode selection (amount of toner on a page), etc., affect image quality, so the machine must frequently sample the machine's development ability (development gamma) at prescribed intervals, and then make adjustments based on these samplings in order to maintain optimum conditions for production of the best possible images.

This sampling of conditions around the drum, and then making adjustments in order to attain and maintain even, consistent image density is called process control. Process control can be divided into two separate phases:

- **Potential control.** Performs adjustments for development that affect basic image quality such as gradation levels, line width.
- **Toner supply control.** Standardizes the image density by controlling toner supply.

### Image Creation Components

The image creation engine of the machine employs an image-to-drum transfer system comprised of several elements working together.



d1791052

No.	Name
1	TD Sensor
2	Drum Potential Sensor
3	ID Sensor
4	PCU Temperature/Humidity Sensor

No.	Name
5	ITB Temperature/Humidity Sensor

The process control sensors are located around the drum. These sensors work together during potential control and toner supply control.

- **TD Sensor.** Mounted under the toner supply unit, measures the amount toner in the developer/toner mixture. This sensor has an embedded ID chip that records and stores information about the image density level.
- **Drum Potential Sensor.** A non-contact sensor above the drum that measures the surface electrical potential of the drum immediately after the drum has been charged by the charge unit.
- **ID Sensor.** A non-contact sensor above the ITB that reads a pattern projected onto the drum to determine the amount of toner on the drum (level of image density).
- **Temperature/Humidity Sensors.** Two temperature/humidity sensors, one above the PCDU and one below the waste toner bottle, monitor the temperature around the PCDU and the ambient temperature.



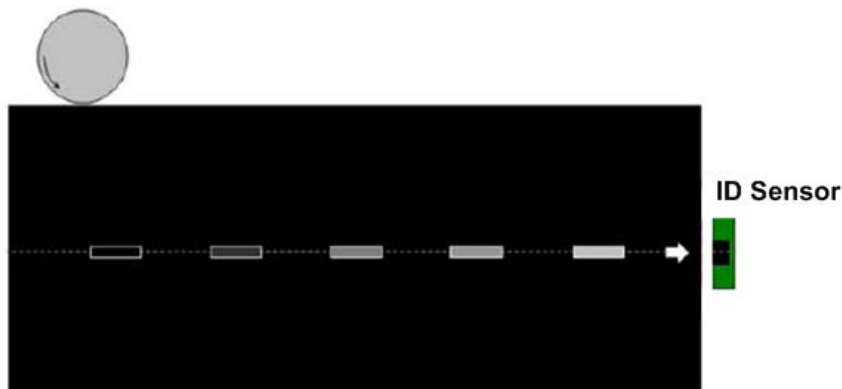
d1791050

- **ITB Temperature/Humidity Sensor.** Constantly measures temperature and humidity around the ITB. The machine uses these readings to adjust the amount of charge applied to the areas of the belt that contact the leading edge, center, and trailing edge of the paper.

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## Process Control Patterns

---



d1791051

Two image patterns projected onto the ITB are used in process control to sample the machine's current ability to create quality images. These are:

- **Gradation Pattern.** This pattern is used in the first adjustment for potential (Process Control 1: Potential Control) described later in this section.
- **Interval Patten.** This pattern is used in the second adjustment for potential (Process Control 2: Toner Supply Control) described later in this section. Process control is performed by projecting a

## 6. Detailed Descriptions

pattern onto the ITB at the unexposed intervals between sheets of paper on the belt during printing (Default: 1 pattern per 20 A4 LEF sheets).

These two phases of process control that project images onto the image transfer belt are exclusively for process control sampling; paper on the image transfer belt remains unaffected. After the ID sensor reads these image patterns projected onto the belt, they are removed by first the ITB cleaning unit and then the PTR cleaning unit and then discarded as waste toner.

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### Default Settings

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#### At Machine Installation

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The first time the machine is powered on after completion of installation, process control initializes automatically. There is no need to use an SP mode.

#### Developer Replacement

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After new developer has been installed and SP3024-001 successfully executed, closing the front door automatically triggers initialization of the ID sensor and process control executes. The results can be confirmed with the following SP codes.

- **SP3025-001:** Developer installation results display
- **SP3031-001:** ID sensor initialization results display (only needed if there was a problem with developer installation and it was necessary to initialize the ID sensor with SP3030-001)
- **SP3012-001:** Process control execution results display

#### ★ Important

- After the ID initial settings for new developer, the value for TD sensor setting is set automatically for standard toner density.
- This initial setting is done automatically only once for new developer. There is no SP code to initialize new developer automatically. The new developer is adjusted to constant toner density in the factory.
- If an error occurs, or in the absence of specific instructions (an SP code for example), do not try to correct the problem with the SP codes described below.

#### SP Code Execution

---

Here is a list of SP codes that can be used to adjust image quality.

- **SP3030-001** Toner density sensor (TD sensor) initial setting. Pressing [EXECUTE] turns on the developer/toner agitation augur and calibrates the TD sensor.
- **SP3050-001** Force Toner Supply. Pressing [EXECUTE] sends toner from the sub hopper of the toner unit to the development unit. The amount of toner sent can be set with SP3050-021. (Default: 0.5 wt%)
- **SP3051-001** Toner Filling. Pressing [EXECUTE] sends toner from the toner bottle to the sub hopper of the toner supply unit.
- **SP3011-001 to 002.** Pressing [EXECUTE] executes process control.

- **SP3011-001.** Manual Process Control Execution: Executes normal process control. \*1
- **SP3011-002** Manual Process Control Execution - Toner Density Adjustment Process Control sets the initial setting for toner density. \*1

\*1 These two SP codes indicate “Process Control 1: Potential Control” described below.

---

## Process Control 1: Potential Control

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### Overview

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Potential control adjusts important elements of the image creation process (drum charge, development bias, and laser output) in order to achieve optimum target image quality.

- Gradation patterns, created on the drum and ITB belt at prescribed times (described below) are read by the ID sensor,
- The potential sensor reads the image from the drum surface, and then these readings are used to determine the development capacity (development gamma)
- Based on these readings, the machine adjusts processing conditions around the drum to achieve the best image quality.

### Execution Timing

---

Potential control is timed to execute at the following times.

Execution Timing	Conditions
Power on, or recovery from Energy Save mode after the machine has been idle for more than 6 hours.	The machine checks for any variation in the ambient conditions since the machine was last powered off, or from the time of last print job: <ul style="list-style-type: none"> <li>• If the idle time is greater than or equal to the threshold value of SP3530-001, or if the page count of SP3530-007, -008 is greater than or equal to the interval setting of SP3530-005, -006 at power ON.</li> <li>• The temperature change is greater than or equal to the temperature threshold setting of SP3530-002.</li> <li>• The change in relative humidity is greater than or equal to the relative humidity threshold setting (%RH) of SP3530-003.</li> <li>• The change in absolute humidity is greater than or equal to the absolute humidity threshold setting (g/m<sup>3</sup>) of SP3530-004.</li> </ul>
After the machine issued an alert to close the front doors.	
During printing	The page count of SP3529-006 is greater than or equal to the interval setting of SP3533-002.
After the machine signals end of print job	The page count of SP3529-006 is greater than or equal to the job end interval setting of SP3534-002.

## 6.Detailed Descriptions

However, if SP3500-002, which switches image adjustment On/Off, is set to OFF, then image adjustment does not execute automatically.

Setting the following SP codes to OFF cancels image quality adjustment, so leave them set to their default ON settings.

- **SP3500-001** Image Quality Adjustment ON/OFF All
- **SP3500-002** Image Quality Adjustment ON/OFF Process Control
- **SP3500-004** Image Quality Adjustment ON/OFF - TD Sensor Initialization

### Image Creation Conditions at Engine Startup

---

When the engine starts up just before printing, the drum bias is set by the drum potential sensor.

Image create conditions	SP3600-001 Process, Potential Control	
	0: Fixed	1: Auto
DC bias	SP2-201	SP3-611
Development DC bias	SP2-212	SP3-612
LD power	SP2-211	SP3-613

- **SP3-600-001** sets process control potential control. Default: 1 (Auto).
- If **SP3-600-001** is set to "0", the conditions for each image creation can be set and controlled by individual SP codes.
- When **SP3-600-001** is set to "1", the conditions for each image creation are automatically set and adjusted to optimize the results.
- The results of process control execution can be displayed as a two-column code with **SP3-012-001**.

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## Process Control 2: Toner Supply Control

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### Overview

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Two methods of toner supply are used with this machine.

- Fixed supply
- PID (with Vtref correction)

SP3400-001 (Toner Supply Method Select) determines which method is used, where the settings are "0" (Fixed Supply) or "1" (Active).

During toner supply control it is very difficult to determine the ideal toner/image density based only on pixel count, because errors tend to accumulate due to changes in ambient temperature and humidity, deterioration of the sensitivity of the drum over time, and variation in development capacity (development gamma).

The "Active" setting (default) is used to control image density.

- ID sensor patterns are projected between pages at regular intervals (one pattern after every 20 pages of A4 LEF, for example).
- The ID sensor can read the reflectivity of the image (affected by how much toner is present), and



then the machine uses these readings to adjust toner supply.

## Results Codes

### Potential Control Result Codes

Action	Code	Result Name	Meaning	SC
00	0	No execution	SP default	---
10 Results normal	11	Succeeded		----
15 Potential sensor	15	Potential sensor Vd detection abnormal (above limit)	Detected Vd < -800 V	SC381-01
	16	Potential sensor Vd detection abnormal (below limit)	Detected Vd < -500 V	SC382-01
20 ID sensor	21	ID sensor calibration abnormal	Vsg_reg=4.0±0.5[V] out of range	SC370-00
	22	ID sensor LED current abnormal (too high)	Ifsg>27 mA	SC372-00
	23	ID sensor reflectivity output abnormal	Vsg_reg <0.5V	SC371-00
40 Potential sensor	41	TD sensor output too high	Vt > 4.7 V	SC361-01
	42	TD sensor output too low	Vt <0.5 V	SC362-01
	43	TD sensor abnormal	Development Gamma(0.5≦ Development Gamma≦2.0), and Vt>4.7V	These are internal errors, no SC code is issued. Machine continues to operate without interference.
	44	TD sensor abnormal	Development gamma(0.5≦ Development Gamma≦2.0), and Vt<0.5V	
50 ID pattern detection	50	Vmin_K (Max.)	K:Vmin_K	

## 6.Detailed Descriptions

Action	Code	Result Name	Meaning	SC
	51	Vmin_K	K:Vmin_K	
	55	Development gamma abnormal (upper limit)	Gamma development >3.0 mg/cm <sup>2</sup> /-kV	SC400-01
	56	Development gamma abnormal (lower limit)	Development Gamma <0.3mg/cm <sup>2</sup> /-kV	SC401-01
	57	Dev. start voltage: Vk abnormal (upper limit)	Dev. start voltage: Vk >-300 V	SC403-01
	58	Dev. start voltage: Vk abnormal (upper limit)	Dev. start voltage: Vk >-300 V	SC404-01
	59	Insufficient data enabled	At least 2 points are needed for gamma correction	SC402-51
60 Potential adjustment	61	LD inoperative	ID sensor patterns not created	SC402-61
	62	Vr: Residual voltage abnormal	Vr >-200 V	SC410-01
	63	Vd: Charge potential target voltage	Vd out of range, cannot adjust to Vd*±8V	SC411-01
	64	Vpl: LD power adjustment	Vpl out of range, cannot adjust to Vpl*±5V	SC412-01
90 Results end	90	No potential adjustment	Potential control method is set to "1:Fixed".	SP3-600-001 01 def. 1 Auto
	99	Forced end	Door open, machine OFF, or machine not ready	---

Result display examples.

- [00] No execution (SP default)
- [99] Adjustment start time
- [55] Development Gamma abnormal (High)
- [11] Succeeded
- [22] ID sensor LED current abnormal (too high)

## ID Sensor Calibration Results Codes

Code	Result Name	Meaning	Action
0	No execution	SP default	---
1	Succeeded		---
2	ID sensor calibration abnormal	Vsg_reg=4.0±0.5 V out of range	SC370-00
3	ID sensor offset voltage abnormal, ,	Voffset_reg > Max.	Internal error, no SC code is issued (machine continues to operate without interference)
4	ID sensor LED current abnormal (too high)	Ifsg > 27 mA	SC372-00
5	ID sensor reflectivity output abnormal	Vsg_reg < 0.5 V	SC371-00
9	Forced end	Door open, machine OFF, or machine not ready	---

Result display examples.

- [0] No execution (SP default)
- [9] Adjustment start time
- [2] ID sensor calibration abnormal
- [1] Succeeded

 Note

- For more details about SC code errors, refer to the "Troubleshooting" section of the Field Service Manual.

## TD Sensor

Code	Result Name	Meaning
0	No execution	SP default
1	Succeeded	
2	Developer set incorrectly	SC336-01
3	TD sensor calibration abnormal	SC336-01. Vtcnt cannot be adjusted to Vt target (2.89V±0.1V)
9	Forced end	Door open, machine OFF, or machine not ready

Result display examples. [0] No execution (SP default)

- [9] Adjustment start time
- [1] TD calibration at factory before shipping succeeded
- [3] TD calibration at factory before shipping failed
- [1] Next execution succeeded
- [0] NVRAM clear

## 6.Detailed Descriptions

### Developer Replacement Results Codes

Code	Result Name	Meaning
0	No execution	SP default
1	Succeeded	Finished
2	No developer output	TD sensor reading was > 1.5V before developer replaced, indicating developer present
3	No developer present	TD sensor reading was < 1.5V before developer replaced, indicating no developer present
4	Waste toner full	Used toner bottle is full
5	Development Motor lock	Development motor is locked
6	Used toner motor lock	The waste toner bottle motor in the main machine, or the motor inside the toner bottle is locked
9	Forced end	Forced end due to closing a door, switching power off

Result display examples.

- [0] No execution (SP default)
- [9] Developer installation after installation at the factory before shipping succeeded.
- [4] Developer replacement after installation at factory before shipping returned used toner full
- [1] Developer installation after installation at the factory before shipping succeeded.
- [3] Developer installation after installation at the factory before shipping failed (no developer).
- [1] Next execution succeeded

#### Note

- Whenever an SC (Service Call) error occurs, refer to the SC code tables in the "Troubleshooting" section of the Service Manual.

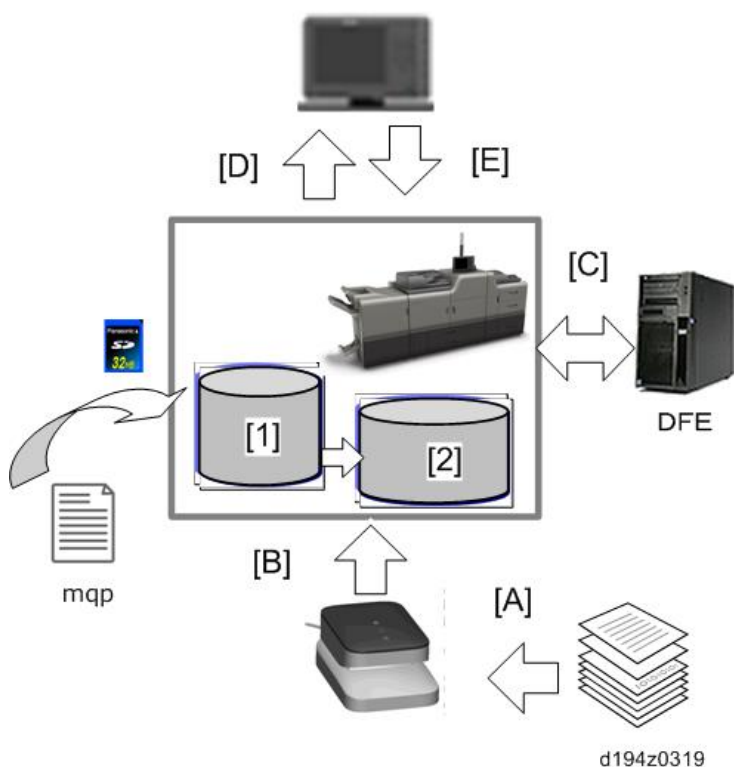
## Media Identification Unit Type S3

The Media Identification Unit makes it easy to identify the paper and facilitates settings via the Integrated Media Setting System (IMSS).

### Functions

1. The unit compares the scanned parameters with the Paper Library and displays the paper brand(s) with the closest characteristics in a list on the control panel.
2. The unit compares the scanned parameters with Custom Paper and displays the custom paper with the closest characteristics in a list on the control panel.
3. When the user registers a new custom paper, the scanned parameters are set in the advanced settings (paper weight, type, etc.) of “Custom Paper”.

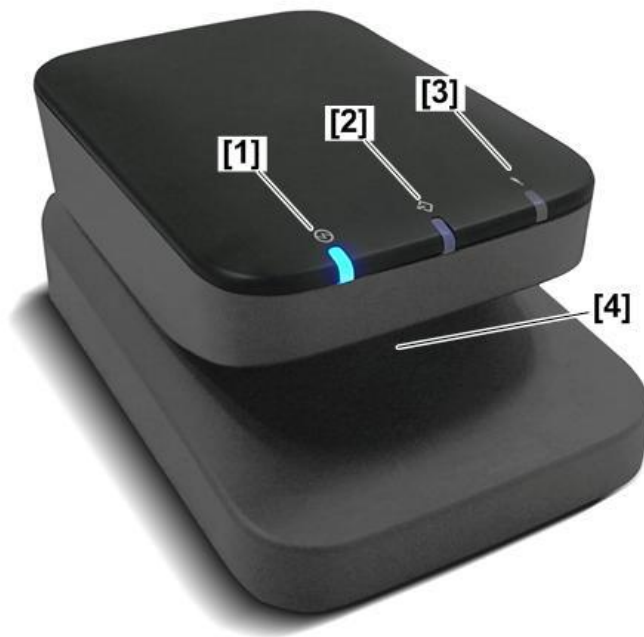
### System Configuration



	Action		Name
[A]:	Scans paper parameters	[1]	Paper DB (Engine) Control panel display: “Paper Library”, “Saved Paper Library”
[B]:	Compares	[2]	User-defined paper (controller) Control panel display: “Edit Custom Paper”
[C]:	Links to paper catalog		
[D]:	Displays determination results on the control panel		
[E]:	Reflects settings		

## 6.Detailed Descriptions

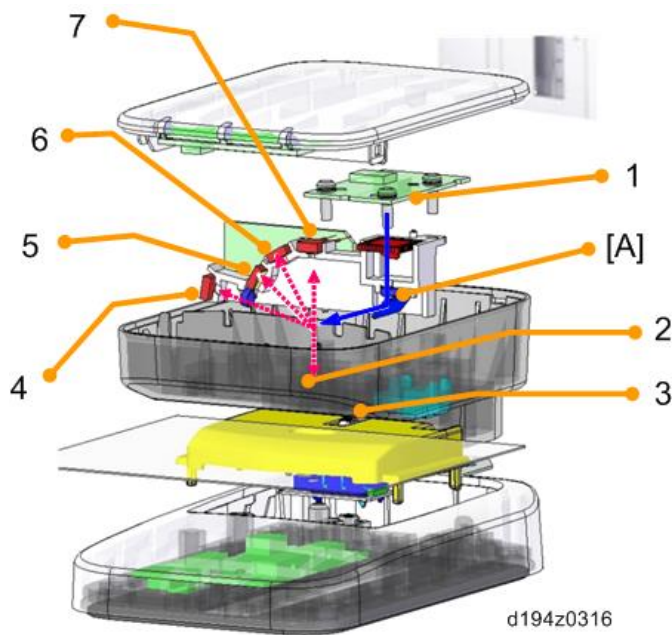
### Outline



d194d9202

	Name	Description
1	Power LED (blue)	Lit when power is ON
2	Scan LED (blue)	<ul style="list-style-type: none"><li>• Standby: Goes from OFF to lit when paper is detected</li><li>• During scan: blinks</li><li>• Scan complete: Goes from blinking to OFF</li></ul>
3	Error LED (red)	Lights when a scan error occurs
4	Paper scanner	-

## Components



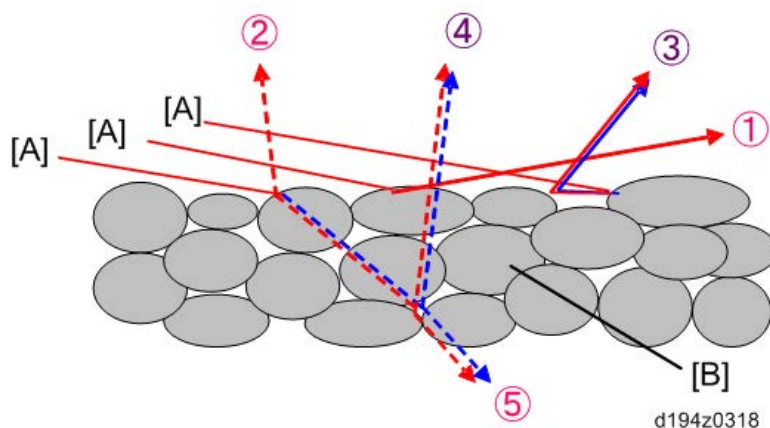
	Name		Name
1	VCSEL	5	PD (SP150) with polarization filter
2	PD (ST90)	6	PD (SN120)
3	Thickness Sensor	7	PD (SP90) with polarization filter
4	PD (SN170) Regular Reflected Light	[A]	Incidence angle: 80°

PD=Photodiode

VCSEL= Vertical Cavity Surface Emitting Laser

## Method of Determination

Uses a VCSEL (Vertical-Cavity Surface-Emitting Laser) system. The system shines laser light [A] on the paper and depending on its surface glossiness, surface roughness, paper structure (paper fiber [B]) and weight (thickness), the directional distribution and light intensity of the reflected light vary and are categorized into ① regular reflected light ② surface scattered light, ③ multiple scattered light, ④ internal scattered light, ⑤ transmitted light.

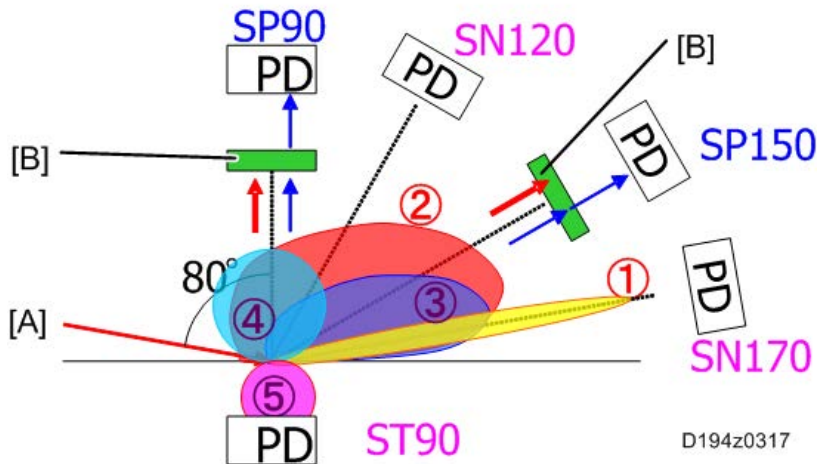


## 6.Detailed Descriptions

The photo diode (PD) detects the reflected light and identifies the paper from the characteristics of the reflected light's directional distribution, light intensity and polarization.

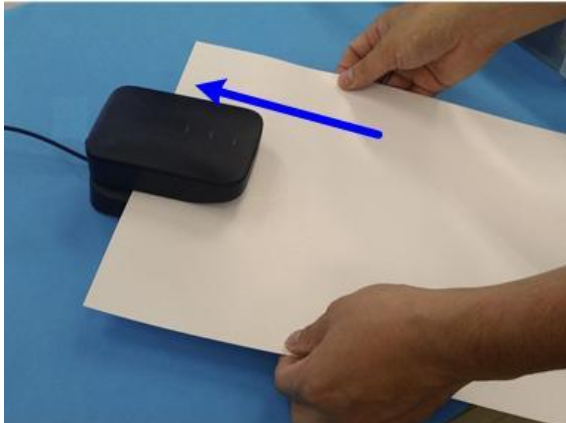
[A]: Irradiation Light (S-Polarization)

[B]: Polarization filter



### How to Scan

1. Insert paper horizontally, holding with both hands.
2. Align the inserting direction with the paper feed direction on the mainframe.
3. Insert the simplex side as the upper side.
4. Scanning will be done while pulling out the paper.



d194z0320

### Ability of Detection

The unit is capable of identifying both sides of the paper, independent of fiber direction.

- Coated Type: Non Coated, Coated Glossy, Coated Matt
- Weight: Wt.1 to Wt.8 (52.3 g/m<sup>2</sup> to 360.0 g/m<sup>2</sup>)

However, as a stand-alone unit, the Media Identification Unit Type S3 can handle paper from Wt.1 to Wt.9 (52.3 g/m<sup>2</sup> to 400.0 g/m<sup>2</sup>).

- Color: White only (as the unit does not have a color measurement function, if colored paper is



used, it may result in misidentification of the paper.)

 Note

- Do not leave paper out for long periods of time as doing so causes their characteristics to change and may result in misidentification.
- If paper that has been printed on is scanned, even if the paper brand is in the Paper Library, this may cause it to be misidentified, so use a part that has not been printed on when scanning.

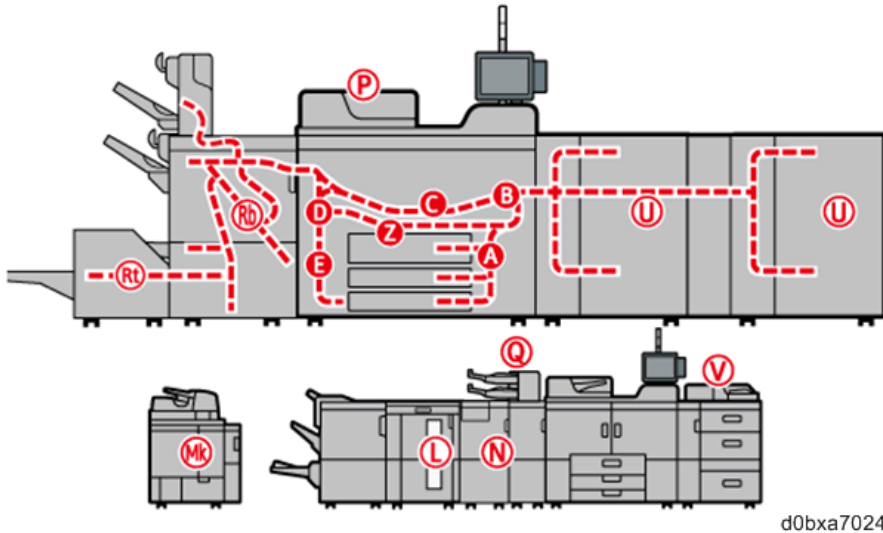
## Jam Detection/ Removal

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### Display

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When a jam occurs, a graphic display appears and shows you on the operation panel where the paper has stopped.



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### Jam Removal

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#### **⚠ CAUTION**

- When removing jammed paper, avoid touching components outside the area where the paper has stopped. Some parts inside the machine become very hot and can cause minor burns if they are touched.

#### **↓ Note**

- Do not turn the machine off when you remove a paper jam. If you turn the machine off, this will clear all the job settings.
- Always remove paper carefully to prevent it from tearing and leaving paper scraps in the machine. Paper scraps left behind can cause other paper jams or damage the machine.
- If jam displays keep occurring for the same location, carefully check around the location for obstacles in the paper path.

Always follow the instructions and procedures about paper jam removal described on the decals affixed to the machine, These decals are affixed to back of the the door of the main machine, and also provided on peripheral units.

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### Paper Jam Code Logs

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#### Checking Logs

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You can check the paper jam logs with SP7507.

- SP7-507-001 Plotter Jam History - Latest
- SP7-507-002 Plotter Jam History - Latest 1
- SP7-507-003 Plotter Jam History - Latest 2
- SP7-507-004 Plotter Jam History - Latest 3
- SP7-507-005 Plotter Jam History - Latest 4
- SP7-507-006 Plotter Jam History - Latest 5
- SP7-507-007 Plotter Jam History - Latest 6
- SP7-507-008 Plotter Jam History - Latest 7
- SP7-507-009 Plotter Jam History - Latest 8
- SP7-507-010 Plotter Jam History - Latest 9

### Jam Display

---

```

CODE : 011
SIZE : 005
TOTAL : 0000334
DATE : Mon Jan 21 11:44:50 2013

```

d1795482

- CODE: Jam code number
- SIZE: Paper size
- TOTAL: Total count for jams at this location (SP7-502-001)
- DATE: Date of jam occurrence

#### ↓ Note

- Information is displayed for the 10 most recent jams.
- Initial jams at power on are not displayed here.

### Jam Code Descriptions

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#### ↓ Note

- Code: This is the code number of the jam that is displayed in log data.
- Display Code: This is the letter/number code displayed in the on-line graphic help display that appears on the operation panel after a jam occurs.

### ADF (Copier Models Only)

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Code	Meaning	Display Code
1	Standby jam (initial)	P1
13	Separation sensor late error	
14	Skew correction sensor late error	
15	Scanner entrance sensor late error	
16	Registration sensor: late error	
17	Exit sensor late error	

## 6.Detailed Descriptions

Code	Meaning	Display Code
63	Separation sensor lag error	
64	Skew correction sensor lag error	
65	Scanner entrance sensor lag error	
66	Registration sensor lag error	
67	Exit sensor lag error	
099	Double feed error	
239	Original grip error	

### Main Machine

Code	Meaning	Display Code
0	Jam release	
1	Standby jam (initial)	J001
<b>Late jam.</b> The paper has failed to arrive within the prescribed time due to a jam that has occurred upstream of the referenced sensor.		
3	F1 Paper feed sensor	J003
4	F2 Paper feed sensor	J004
5	F3 Paper feed sensor	J005
6	LCT F1 Paper Feed Sensor	J006
7	LCT F2 Paper feed sensor	J007
8	LCT F3 Paper feed sensor	J008
9	LCT F4 Paper feed sensor	J009
10	F1 Transport sensor	J010
11	F2 Transport sensor	J011
12	F3 Transport sensor	J012
13	LCT F1 Transport Sensor	J013
14	LCT F2 Transport sensor	J014
15	LCT F3 Transport sensor	J015
16	LCT F4 Transport sensor	J016
17	Vertical transport sensor	J017
18	Main relays sensor (1st feed)	J018
19	Main relay sensor (duplex)	J019
20	Registration sensor	J020
21	LCT F1 Vertical transport sensor: A4 LCT	J021
22	LCT F1 Vertical transport sensor 1	J022
23	LCT F1 Vertical transport sensor 2	J023
24	LCT F2 Vertical transport sensor	J024
25	LCT F3 Vertical transport sensor	J025

## 6.Detailed Descriptions

Code	Meaning	Display Code
26	LCT exit sensor	J026
27	LCT relay sensor	J027
28	Registration timing sensor (Main)	J028
29	Registration timing sensor (LCT)	J029
30	Paper late jam	J030
31	Transfer timing sensor	J031
32	Paper transport sensor	J032
33	Fusing entrance sensor	J033
34	Fusing exit sensor	J034
35	Exit JG sensor	J035
36	Exit sensor	J036
37	-	J037
38	Invert/exit sensor (2nd pass)	J038
39	Invert/exit sensor (duplex)	J039
40	Duplex invert sensor (1st pass)	J040
41	Duplex Invert sensor (2nd pass)	J041
42	Duplex transport sensor 1	J042
43	Duplex transport sensor 2	J043
44	Duplex transport sensor 3	J044
45	Duplex transport sensor 4	J045
46	Duplex transport sensor 5	J046
47	Duplex transport sensor 6	J047
48	Duplex unit exit sensor	J048
49	Over skew	J049
50	Over shift	J050
51	-	-
52	-	-
<p><b>Lag jam.</b> The paper has failed to leave the location of the referenced sensor within the prescribed time due to a jam downstream of the referenced sensor.</p>		
53	F1 Paper feed sensor	J053
54	F2 Paper feed sensor	J054
55	F3 Paper feed sensor	J055
56	LCT F1 Paper feed sensor	J056
57	LCT F2 Paper feed sensor	J057
58	LCT F3 Paper feed sensor	J058
59	LCT F4 Paper feed sensor	J059
60	F1 Transport sensor	J060

## 6.Detailed Descriptions

Code	Meaning	Display Code
61	F2 Transport sensor	J061
62	F3 Transport sensor	J062
63	LCT F1 Transport sensor	J063
64	LCT F2 Transport sensor	J064
65	LCT F3 Transport sensor	J065
66	LCT F4 Transport sensor	J066
67	Vertical transport sensor	J067
68	Main relay sensor	J068
69	-	J069
70	Registration sensor	J070
71	LCT F1 Vertical transport sensor: A4 LCT	J071
72	LCT F1 Vertical transport sensor 1	J072
73	LCT F1 Vertical transport sensor 2	J073
74	LCT F2 Vertical transport sensor	J074
75	LCT F3 Vertical transport sensor	J075
76	LCT exit sensor	J076
77	LCT relay sensor	J077
78	Registration timing sensor	J078
79	-	J079
80	Sub scan registration correction	J080
81	Transfer timing sensor	J081
82	Paper transport sensor	J082
84	Fusing exit sensor	J084
85	Exit JG sensor	J085
86	Exit sensor	J086
87	Invert/exit sensor (1st pass)	J087
88	-	J088
89	Invert/exit sensor (duplex)	J089
90	Duplex invert sensor (1st pass)	J090
91	Duplex invert sensor (2nd pass)	J091
92	Duplex transport sensor 1	J092
93	Duplex transport sensor 2	J093
94	Duplex transport sensor 3	J094
95	Duplex transport sensor 4	J095
96	Duplex transport sensor 5	J096
97	Duplex transport sensor 6	J097
98	Duplex unit exit sensor	J098

Code	Meaning	Display Code
99	Double-feed	J099

## Finisher SR5110/ Booklet Finisher SR5120

Code	Meaning	Display Code
100	Door open jam	J100
101	Display non-performing jam	J101
102	Disable paper stop jam	J102
103	Software internal error	J103
104	Paper transport sensor late error	J104
105	Paper transport sensor lag error	J105
106	Upper tray exit sensor late error	J106
107	Upper tray exit sensor lag error	J107
108	Lower tray exit sensor (short) late error	J108
109	Lower tray exit sensor (short) lag error	J109
110	Pre-stacker transport sensor late error	J110
111	Pre stacker transport sensor lag error	J111
112	Staple entrance transport sensor late error	J112
113	Staple entrance transport sensor lag error	J113
114	Lower tray exit sensor (long) late error	J114
115	Lower tray exit sensor (long) lag error	J115
116	Booklet stapler late error	J116
117	Booklet stapler lag error	J117
118	Booklet stapler exit late error	J118
119	Booklet stapler exit lag error	J119
120	Branching pawl switching motor (upper tray-lower tray)	J120
121	Branching pawl switching motor (lower tray-staple)	J121
122	Pre-stack pressure release motor	J122
123	Exit guide plate open motor	J123
124	Punch unit drive motor	J124
125	Punch unit movement motor	J125
126	Jogger motor (front)	J126
127	Jogger motor (rear)	J127
128	Beat roller motor	J128
129	Shaking plate up/down motor	J129
130	Fence side movement motor	J130
131	Shaking plate side movement motor	J131
132	Tip stopper motor	J132

## 6.Detailed Descriptions

Code	Meaning	Display Code
133	Fence up/down motor	J133
134	Release pawl motor	J134
135	Staple movement motor	J135
136	Staple tilt motor	J136
137	Staple motor	J137
138	Booklet jogger motor	J138
139	Booklet pawl motor	J139
140	Fold blade motor	J140
141	Booklet rear edge fence movement motor	J141
142	Stack transport unit open motor	J142
143	Booklet pressure release motor	J143
144	Turn guide plate motor	J144
145	Booklet staple motor	J145
146	Booklet additional folding movement motor	J146
147	Booklet additional folding pressure release motor	J147
148	Lower tray lift motor	J148
149	Lower shift tray movement motor	J149
150	Lower Jogger movement motor	J150
151	Lower Jogger retraction motor	J151
152	Lower reverse roller motor	J152
153	Lower pressure lever motor	J153
154	Upper tray lifting motor	J154
155	Upper shift tray movement motor	J155
156	Upper jogger movement motor	J156
157	Upper jogger retraction motor	J157
158	Upper reverse roller motor	J158
159	Upper pressure lever motor	J159
160	Downstreaming machine communication error	J160
510	Finisher: No response of exit paper complete	J510

### Finisher SR5090/ Booklet Finisher SR5100

Code	Meaning	Display Code
454	Door open jam	J454
455	Display non-performing jam	J455
456	Disable paper stop jam	J456
457	Software internal error	J457
458	Entrance Sensor late jam	J458



## 6.Detailed Descriptions

Code	Meaning	Display Code
459	Entrance Sensor lag jam	J459
460	Horizontal Transport Sensor late jam	J460
461	Horizontal Transport Sensor lag jam	J461
462	Switchback Transport Sensor late jam	J462
463	Switchback Transport Sensor lag jam	J463
464	Proof exit unit late jam	J464
465	Proof exit unit lag jam	J465
466	Shift exit unit late jam	J466
467	Shift exit unit lag jam	J467
468	Booklet exit late jam	J468
469	Booklet exit lag jam	J469
470	Entrance Transport Motor Jam	J470
471	Horizontal Transport Motor Jam	J471
472	Pre-stack Transport Motor Jam	J472
473	Middle Transport Motor Jam	J473
474	Exit Motor Jam	J474
475	Trailing Edge Pressure Plate Motor Jam	J475
476	Paper Exit Gate Motor Jam	J476
477	Punch unit drive motor jam	J477
478	Punch unit movement motor jam	J478
479	Horizontal registration unit displace motor jam	J479
480	Lower Junction Gate Motor Jam	J480
481	Jogger Motor Jam	J481
482	Positioning Roller Motor Jam	J482
483	Paper release Motor Jam	J483
484	Corner Stapler Movement Motor Jam	J484
485	Corner Stapler Drive Motor Jam	J485
486	Booklet Jogger Motor Jam	J486
487	Booklet Jogger Plate Motor Jam	J487
488	Booklet Stapler reference fence Motor Jam	J488
489	Booklet Stapler Motor Jam	J489
490	Positioning Roller Transport Motor Jam	J490
491	Holding transport Motor Jam	J491
492	Square Fold Motor Jam	J492
493	Tray Lift Motor Jam	J493
494	Shift Motor Jam	J494
495	Shift Jogger Motor (Front) Jam	J495

## 6.Detailed Descriptions

Code	Meaning	Display Code
496	Shift Jogger Motor (Rear) Jam	J496
497	Shift Jogger Retraction Motor Jam	J497
498	Reverse Roller Motor Jam	J498
499	Leading Edge Guide Motor Jam	J499
500	Positioning Transport Motor Jam	J500
501	Paper Guide Drive Motor Jam	J501
510	Finisher: No response of paper exit complete	J510

### Cover Interposer Tray

Code	Meaning	Display Code
161	Door open jam	J161
162	Display non-performing jam	J162
163	Disable paper stop jam	J163
164	Software internal error	J164
165	1st Feed sensor late jam	J165
166	1st Feed sensor lag jam	J166
167	2nd Feed sensor late jam	J167
168	2nd Feed sensor lag jam	J168
169	1st Transport sensor late jam	J169
170	1st Transport sensor lag jam	J170
171	2nd Transport sensor late jam	J171
172	2nd Transport sensor lag jam	J172
173	1st Vertical transport sensor late jam	J173
174	1st Vertical transport sensor lag jam	J174
175	2nd Vertical transport sensor late jam	J175
176	2nd Vertical transport sensor lag jam	J176
177	3rd Vertical transport sensor late jam	J177
178	3rd Vertical transport sensor lag jam	J178
179	Entrance sensor late jam	J179
180	Entrance sensor lag jam	J180
181	Exit sensor late jam	J181
182	Exit sensor lag jam	J182
183	Insert timing late jam	J183
184	1st feed double-feed detection jam	J184
185	2nd feed double-feed detection jam	J185
510	Finisher: no response of paper exit complete	J510

## Trimmer

Code	Meaning	Display Code
201	Door open jam	J201
202	Display non-performing jam	J202
203	Disable paper stop jam	J203
204	Software internal error	J204
205	Entrance late jam	J205
206	Entrance lag jam	J206
207	Skew sensor late jam	J207
208	Skew sensor lag jam	J208
209	Exit sensor late jam	J209
210	Exit sensor lag jam	J210
211	Cutter motor lock	J211
212	Cut position motor	J212
213	Pressure roller	J213
214	Stopper/pressure roller	J214
215	Tray motor	J215
510	Finisher: No response of paper exit complete	J510

## RPIP Interface Box

Code	Meaning	Display Code
216	Display non-performing jam	Displayed by 3 <sup>rd</sup> party Peripheral
217	Disable paper stop jam	
218	Software internal error	
219	DFD jam	
220	Emergency stop jam	
221	DFD communication error	
222	Display non-performing jam	
223	EFD jam	
224	Emergency stop jam	
225	EFD communication error	

## Multi Fold Unit

Code	Meaning	Display Code
226	Door open jam	J226
227	Display non-performing jam	J227
228	Disable paper stop jam	J228
229	Software internal error	J229

## 6.Detailed Descriptions

Code	Meaning	Display Code
230	Entrance late jam	J230
231	Entrance lag jam	J231
232	Fold paper tray exit late jam	J232
233	Fold paper tray exit lag jam	J233
234	Straight-through exit late jam	J234
235	Straight-through exit lag jam	J235
236	Stopper 1 late jam	J236
237	Stopper 1 lag jam	J237
238	Stopper 2 late jam	J238
239	Stopper 2 lag jam	J239
240	Stopper 3 late jam	J240
241	Stopper 3 lag jam	J241
242	Registration correction jam	J242
243	Fold paper tray transport jam	J243
244	Entrance JG motor jam	J244
245	Stopper 1 motor jam	J245
246	Stopper 2 motor jam	J246
247	Stopper 3 motor jam	J247
248	Dynamic roller lift motor jam	J248
249	Registration roller release motor jam	J249
250	Fold blade motor jam	J250
251	Jogger fence motor jam	J251
252	Direct-send pawl drive motor jam	J252
253	Double pawl drive motor jam	J253
510	Finisher: No response of paper exit complete	J510

### Buffer Pass Unit

Code	Meaning	Display Code
254	Running sensor 1 late jam	J254
255	Running sensor 1 lag jam	J255
256	Running sensor 2 late jam	J256
257	Running sensor 2 lag jam	J257
258	Running sensor 3 late jam	J258
259	Running sensor 3 lag jam	J259
260	Running sensor 4 late jam	J260
261	Running sensor 4 lag jam	J261
262	Running sensor 5 late jam	J262

## 6.Detailed Descriptions

Code	Meaning	Display Code
263	Running sensor 5 lag jam	J263
264	Running sensor 6 late jam	J264
265	Running sensor 6 lag jam	J265
266	Running sensor 7 late jam	J266
267	Running sensor 7 lag jam	J267
268	Running sensor 8 late jam	J268
269	Running sensor 8 lag jam	J269
270	Door open jam	J270
271	Display non-performing jam	J271
272	Disable paper stop jam	J272
273	Software internal error	J273
510	Finisher: No response of paper exit complete	J510

## High Capacity Stacker 1

Code	Meaning	Display Code
274	Entrance path late jam	J274
275	Entrance path lag jam	J275
276	Proof tray exit late jam	J276
277	Proof tray exit lag jam	J277
278	Stacker tray exit late jam	J278
279	Stacker tray exit lag jam	J279
280	Paper relay path late jam	J280
281	Paper relay path lag jam	J281
282	Straight exit path late jam	J282
283	Straight exit path lag jam	J283
284	Shift Tray JG Motor	J284
285	Proof Tray JG Motor	J285
286	Shift Motor	J286
287	Main Jogger Front Fence Motor	J287
288	Main Jogger Rear Fence Motor	J288
289	Main Jogger Fence Retraction Motor	J289
290	Sub Jogger Motor	J290
291	LE Stopper Motor	J291
292	Tray Lift Motor	J292
293	Door open jam	J293
294	Display non-performing jam	J294
295	Disable paper stop jam	J295

## 6.Detailed Descriptions

Code	Meaning	Display Code
296	Software internal error	J296
297	Shutter drive motor	J297
510	Finisher: No response of paper exit complete	J510

### High Capacity Stacker 2

Code	Meaning	Display Code
298	Entrance path late jam	J298
299	Entrance path lag jam	J299
300	Proof tray exit late jam	J200
301	Proof tray exit lag jam	J201
302	Stacker tray exit late jam	J202
303	Stacker tray exit lag jam	J203
304	Paper relay path late jam	J204
305	Paper relay path lag jam	J205
306	Straight exit path late jam	J206
307	Straight exit path lag jam	J207
308	Shift Tray JG Motor	J208
309	Proof Tray JG Motor	J209
310	Shift Motor	J210
311	Main Jogger Front Fence Motor	J211
312	Main Jogger Rear Fence Motor	J212
313	Main Jogger Fence Retraction Motor	J213
314	Sub Jogger Motor	J214
315	LE Stopper Motor	J215
316	Tray Lift Motor	J216
317	Door open jam	J217
318	Display non-performing jam	J218
319	Disable paper stop jam	J219
320	Software internal error	J220
321	Shutter drive motor	J221
322	Finisher: No response of paper exit complete	J222

### Ring Binder

Code	Meaning	Display Code
322	Door open jam	J322
323	Display non-performing jam	J323
324	Disable paper stop jam	J324

## 6.Detailed Descriptions

Code	Meaning	Display Code
325	Software internal error	J325
326	Transport unit entrance late jam	J326
327	Transport unit entrance lag jam	J327
328	Transport unit relay late jam	J328
329	Transport unit relay lag jam	J329
330	Transport unit SWB late jam	J330
331	Transport unit SWB lag jam	J331
332	Transport unit exit late jam	J332
333	Transport unit exit lag jam	J333
334	Pre-punch jam	J334
335	Post-punch jam	J335
336	Binder paper leading edge jam	J336
337	Consumables separation jam	J337
338	Binder unit not detected jam	J338
339	Exit belt jam	J339
340	Punch motor jam	J340
341	Shutter motor jam	J341
342	Alignment pin motor jam	J342
343	Pre-punch jogger jam	J343
344	Alignment unit jam	J344
345	Punch motor jam	J345
346	50/100 Clamp adjust motor jam	J346
347	Swing motor jam	J347
510	Finisher: No response of paper exit complete	J510

## Perfect Binder

Code	Meaning	Display Code
348	Door open jam	J348
349	Display non-performing jam	J349
350	Disable paper stop jam	J350
351	Software internal error	J351
352	Straight-through exit sensor late jam	J352
353	Straight-through exit sensor lag jam	J353
354	Cover registration sensor late jam	J354
355	Cover registration sensor lag (switchback) jam	J355
356	Cover horizontal registration sensor (small) late jam	J356
357	Cover horizontal registration sensor (small) lag jam	J357

## 6.Detailed Descriptions

Code	Meaning	Display Code
358	Cover horizontal registration sensor (large) late jam	J358
359	Cover horizontal registration sensor (large) lag jam	J359
360	Entrance sensor late jam	J360
361	Entrance sensor lag jam	J361
362	Signature path sensor 1 late jam	J362
363	Signature path sensor 1 lag jam	J363
364	Signature path sensor 2 late jam	J364
365	Signature path sensor 2 lag jam	J365
366	Timing sensor late jam	J366
367	Timing sensor lag jam	J367
368	Stacking tray paper late jam	J368
369	Stacking tray paper lag jam	J369
370	Sub grip paper late jam	J370
371	Signature path 1 sensor late jam	J371
372	Signature path 1 sensor lag jam	J372
373	Signature path 2 sensor late jam	J373
374	Signature path 2 sensor lag jam	J374
375	Cover registration sensor late jam	J375
376	Cover registration sensor lag jam	J376
377	Paper size mismatch jam (length in paper feed direction)	J377
378	Cover size short jam	J378
379	Trimming width over jam	J379
380	Finishing height over jam	J380
381	Insert cover size mismatch jam	J381
382	Pre-junction sensor late jam	J382
383	Pre-junction sensor lag jam	J383
384	Upper tray separation sensor late jam	J384
385	Upper tray separation sensor lag jam	J385
386	Lower tray separation sensor late jam	J386
387	Lower tray separation sensor lag jam	J387
388	Transport path sensor 1 late jam	J388
389	Transport path sensor 1 lag jam	J389
390	Transport path sensor 2 late jam	J390
391	Transport path sensor 2 lag jam	J391
392	Transport sensor late jam	J392
393	Transport sensor lag jam	J393



## Vacuum Feed LCIT

Code	Meaning	Display Code
<b>Late jam.</b> The paper has failed to arrive within the prescribed time due to a jam that has occurred upstream of the referenced sensor.		
394	LCT1 1st Paper Feed Sensor	J394
395	LCT1 2nd Paper Feed Sensor	J395
396	LCT1 1st Transport Sensor	J396
397	LCT1 2nd Transport Sensor	J397
398	LCT1 1st Vertical Transport Exit Sensor	J398
399	LCT1 2nd Vertical Transport Exit Sensor	J399
400	LCT1 Bypass Vertical Transport Sensor	J400
401	LCT1 Exit Sensor	J401
402	LCT1 Connect Entrance Sensor	J402
403	LCT1 Connect Exit Sensor	J403
404	LCT1 Horizontal Transport Entrance Sensor	J404
405	LCT1 Horizontal Transport Middle Sensor	J405
406	LCT1 Horizontal Transport Exit Sensor	J406
407	LCT1 1st Vertical Transport Sensor	J407
408	LCT1 1st Vertical Transport Entrance Sensor	J408
409	LCT2 1st Paper Feed Sensor	J409
410	LCT2 2nd Paper Feed Sensor	J410
411	LCT2 1st Transport Sensor	J411
412	LCT2 2nd Transport Sensor	J412
413	LCT2 1st Vertical Transport Exit Sensor	J413
414	LCT2 2nd Vertical Transport Exit Sensor	J414
415	-	J415
416	LCT2 Exit Sensor	J416
422	LCT2 1st Vertical Transport Sensor	J422
<b>Lag jam.</b> The paper has failed to leave the location of the referenced sensor within the prescribed time due to a jam downstream of the referenced sensor.		
424	LCT1 1st Paper Feed Sensor	J424
425	LCT1 2nd Paper Feed Sensor	J425
426	LCT1 1st Transport Sensor	J426
427	LCT1 2nd Transport Sensor	J427
428	LCT1 1st Vertical Transport Exit Sensor	J428
429	LCT1 2nd Vertical Transport Exit Sensor	J429
430	LCT1 Bypass Vertical Transport Sensor	J430
431	LCT1 Exit Sensor	J431

## 6.Detailed Descriptions

Code	Meaning	Display Code
432	LCT1 Connect Entrance Sensor	J432
433	LCT1 Connect Exit Sensor	J433
434	LCT1 Horizontal Transport Entrance Sensor	J434
435	LCT1 Horizontal Transport Middle Sensor	J435
436	LCT1 Horizontal Transport Exit Sensor	J436
437	LCT1 1st Vertical Transport Sensor	J437
438	LCT1 1st Vertical Transport Entrance Sensor	J438
439	LCT2 1st Paper Feed Sensor	J439
440	LCT2 2nd Paper Feed Sensor	J440
441	LCT2 1st Transport Sensor	J441
442	LCT2 2nd Transport Sensor	J442
443	LCT2 1st Vertical Transport Exit Sensor	J443
444	LCT2 2nd Vertical Transport Exit Sensor	J444
445	-	J445
446	LCT2 Exit Sensor	J446
452	LCT2 1st Vertical Transport Sensor	J452
510	Finisher: No response of paper exit complete	J510

### Shift Sort Tray

Code	Meaning	Display Code
502	Door open jam	J502
503	Display non-performing jam	J503
504	Disable paper stop jam	J504
505	Software internal error	J505
506	Transport sensor late jam	J506
507	Transport sensor lag jam	J507
508	Tray lift motor late jam	J508
509	Tray shift motor lag jam	J509
510	Finisher: No response of paper exit complete	J510

### Bridge Unit

Code	Meaning	Display Code
417	Door open jam	J417
418	Display non-performing jam	J418
419	Disable paper stop jam	J419
420	Software internal error	J420
447	Entrance sensor late jam	J447

Code	Meaning	Display Code
448	Entrance sensor lag jam	J448
449	Exit sensor late jam	J449
450	Exit sensor lag jam	J450
510	Finisher: No response of paper exit complete	J510

### Paper Size Mismatch Codes

The paper size mismatch codes are listed in the tables below.

Paper sizes in the main scan and sub scan directions are units of 0.1 mm.

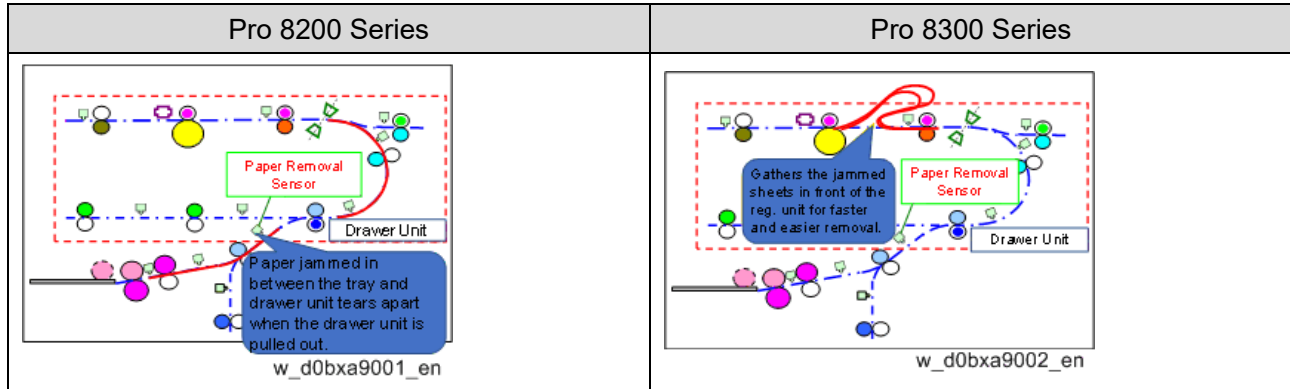
Size Code	Size Name	SEF/LEF	Main Scan	Sub Scan
132(84H)	A3	SEF	2970	4200
005(05H)	A4	LEF	2970	2100
133(85H)	A4	SEF	2100	2970
141(8DH)	B4	SEF	2570	3640
006(06H)	A5	LEF	2100	1480
134(86H)	A5	SEF	1480	2100
014(0EH)	B5	LEF	2570	1820
142(8EH)	B5	SEF	1820	2570
135(87H)	A6	SEF	1050	1480
143(8FH)	B6	SEF	1280	1820
160(A0H)	11"x17"(DLT)	SEF	2794	4318
164(A4H)	8 1/2"x14"(LG)	SEF	2159	3556
166(A6H)	8 1/2"x11"(LT)	SEF	2159	2794
038(26H)	8 1/2"x11"(LT)	LEF	2794	2159
172(ACH)	5 1/2"x8 1/2"(HLT)	SEF	1397	2159
175(AFH)	12"x18"	SEF	3048	4572
146(92H)	Postcard	SEF	1000	1480
017(11H)	Return postcard	LEF	2000	1480
145(91H)	Return postcard	SEF	1480	2000
113(71H)	EXP #2	LEF	1620	1140
241(F1H)	EXP #2	SEF	1140	1620
243(F3H)	Length #3	SEF	1200	2350
244(F4H)	Length #4	SEF	900	2050
242(F2H)	EXP #4	SEF	1050	2350
247(F7H)	Square #2	SEF	2400	3320

6.Detailed Descriptions

Easier Recovery from Paper Jams

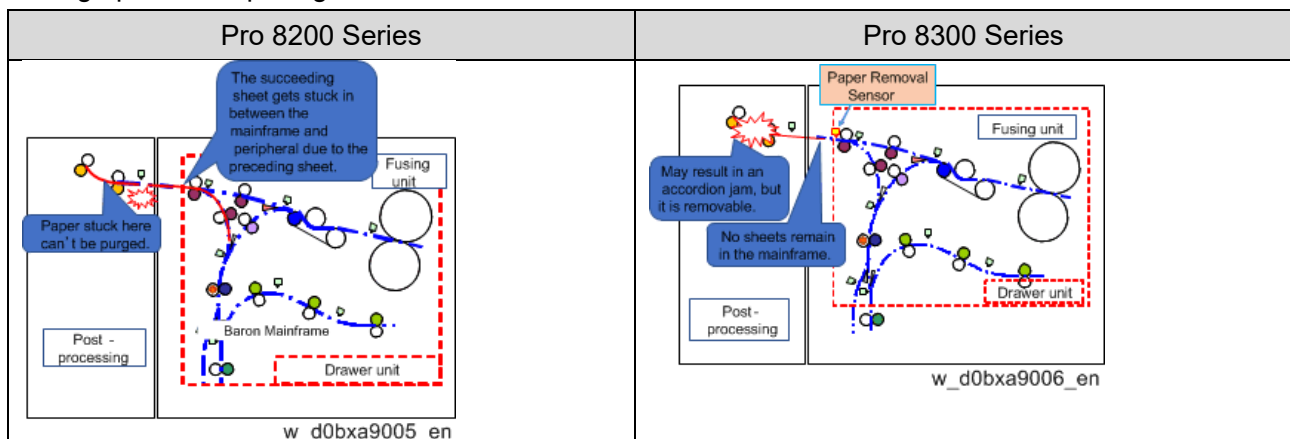
Jam Paper Purge

Jammed sheets are gathered to one location for easier removal.



Paper Exit

Jammed sheets are purged out from the main unit to prevent sheets from jamming in between units and tearing apart when pulling out the units.



Paper Removal Sensors (New)

There are four new paper removal sensors purposed to prevent sheets from jamming in between units.

**Pro 8300S/8310S/8320S/8310/8320**

**Copier Models:**

**D0BX/D0BY/D0BZ**

**Printer Models:**

**M0CL/M0CM**

**Appendices**

**Ver 1.0**

**Latest Release: March, 2019**

**Initial Release: March, 2019**

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# 1. Specifications

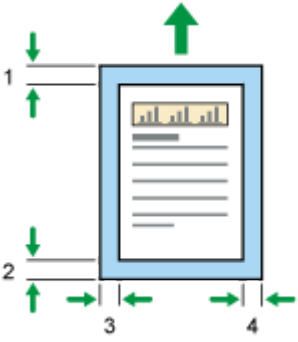
## Specifications

### Main Frame

Item	Specification
Configuration	Console
Hard disk	320 GB × 2
Photosensitivity type	OPC drum
Original scanning	One-dimensional solid scanning system through CMOS
Copy process	Dry electrostatic transfer system
Development	Dry two-component magnetic brush development system
Fusing	Oilless belt fusing
Scanning Resolution (CMOS)* <sup>1</sup>	600 dpi
Copying Resolution (VCSEL)	2,400 × 4,800 dpi * <sup>3</sup>
Exposure glass	Stationary original exposure type
Original reference position* <sup>1</sup>	Rear left corner
Warm-up time (23°C (73.4°F), rated voltage)	300 seconds or less
Originals	Sheet, book, three-dimensional object
Maximum original size (ADF, exposure glass)	<ul style="list-style-type: none"> <li>mainly Europe and Asia A3 SEF</li> <li>mainly North America 11 × 17 SEF</li> </ul>
Paper size	
Tray 1	<ul style="list-style-type: none"> <li>Mainly Europe and Asia A4 LEF</li> <li>Mainly North America 8½ × 11 LEF</li> </ul>
Trays 2 and 3	<ul style="list-style-type: none"> <li>Paper sizes that can be detected automatically: <ul style="list-style-type: none"> <li>Mainly Europe and Asia</li> </ul> </li> </ul>

## 1. Specifications

Item	Specification
	<p>A3 SEF, A4 SEF/LEF, A5 SEF/LEF, B4 JIS SEF, B5 JIS SEF/LEF, 11 × 17 SEF, 8<sup>1</sup>/<sub>2</sub> × 14 SEF, 8<sup>1</sup>/<sub>2</sub> × 13 SEF, 8<sup>1</sup>/<sub>2</sub> × 11 SEF/LEF, 8<sup>1</sup>/<sub>4</sub> × 13 SEF, 8 × 13 SEF, 7<sup>1</sup>/<sub>4</sub> × 10<sup>1</sup>/<sub>2</sub> SEF/LEF, 5<sup>1</sup>/<sub>2</sub> × 8<sup>1</sup>/<sub>2</sub> SEF/LEF, 8K SEF, 16K SEF/LEF, SRA3 SEF</p> <ul style="list-style-type: none"> <li>• Mainly North America A3 SEF, A4 SEF/LEF, A5 SEF/LEF, B4 JIS SEF, B5 JIS SEF/LEF, 11 × 17 SEF, 8<sup>1</sup>/<sub>2</sub> × 14 SEF, 8<sup>1</sup>/<sub>2</sub> × 13 SEF, 8<sup>1</sup>/<sub>2</sub> × 11 SEF/LEF, 8<sup>1</sup>/<sub>4</sub> × 13 SEF, 8 × 13 SEF, 7<sup>1</sup>/<sub>4</sub> × 10<sup>1</sup>/<sub>2</sub> SEF/LEF, 5<sup>1</sup>/<sub>2</sub> × 8<sup>1</sup>/<sub>2</sub> SEF/LEF, 8K SEF, 16K SEF/LEF, 12 × 18 SEF</li> <li>• Select the paper size using the Tray Paper Settings menu: <ul style="list-style-type: none"> <li>• Mainly Europe and Asia 8<sup>1</sup>/<sub>4</sub> × 14 SEF, 8 × 10 SEF, 11 × 15 SEF, 11 × 14 SEF, 10 × 15 SEF, 10 × 14 SEF, 13 × 18 SEF, 12 × 18 SEF, SRA4 SEF/LEF, 226 × 310 mm SEF/LEF, 310 × 432 mm SEF, 8<sup>1</sup>/<sub>2</sub> × 13<sup>2</sup>/<sub>5</sub> SEF</li> <li>• Mainly North America 8<sup>1</sup>/<sub>4</sub> × 14 SEF, 8 × 10 SEF, 11 × 15 SEF, 11 × 14 SEF, 10 × 15 SEF, 10 × 14 SEF, 13 × 18 SEF, SRA3 SEF, SRA4 SEF/LEF, 226 × 310 mm SEF/LEF, 310 × 432 mm SEF, 8<sup>1</sup>/<sub>2</sub> × 13<sup>2</sup>/<sub>5</sub> SEF</li> </ul> </li> <li>• Custom size: <ul style="list-style-type: none"> <li>• Mainly Europe and Asia Vertical: 139.7–330.2 mm Horizontal: 139.7–457.2 mm</li> <li>• Mainly North America Vertical: 5.50–13.00 inches Horizontal: 5.50–18.00 inches</li> </ul> </li> <li>• Translucent paper: A3 SEF, A4 SEF/LEF, B4 JIS SEF, B5 JIS SEF/LEF</li> <li>• Transparencies: A4 SEF/LEF</li> </ul>
Duplex	<p>A3 SEF, A4 SEF/LEF, A5 SEF/LEF, A6 SEF, B4 JIS SEF, B5 JIS SEF/LEF, 11 × 17 SEF, 8<sup>1</sup>/<sub>2</sub> × 14 SEF, 8<sup>1</sup>/<sub>2</sub> × 13 SEF, 8<sup>1</sup>/<sub>2</sub> × 11 SEF/LEF, 8<sup>1</sup>/<sub>4</sub> × 14 SEF, 8<sup>1</sup>/<sub>4</sub> × 13 SEF, 8 × 13 SEF, 8 × 10 SEF, 7<sup>1</sup>/<sub>4</sub> × 10<sup>1</sup>/<sub>2</sub> SEF/LEF, 5<sup>1</sup>/<sub>2</sub> × 8<sup>1</sup>/<sub>2</sub> SEF/LEF, 8K SEF, 16K SEF/LEF, 12 × 18 SEF, 11 × 15 SEF, 11 × 14 SEF, 10 × 15 SEF, 10 × 14 SEF, 13 × 19<sup>1</sup>/<sub>2</sub> SEF, 13 × 19 SEF, 13 × 18 SEF, 12<sup>3</sup>/<sub>5</sub> × 19<sup>1</sup>/<sub>5</sub> SEF, 12<sup>3</sup>/<sub>5</sub> × 18<sup>1</sup>/<sub>2</sub> SEF, SRA3 SEF, SRA4 SEF/LEF,</p>

Item	Specification
	226 × 310 mm SEF/LEF, 310 × 432 mm SEF, 8 <sup>1</sup> / <sub>2</sub> × 13 <sup>1</sup> / <sub>2</sub> SEF, 8 <sup>1</sup> / <sub>2</sub> × 13 <sup>2</sup> / <sub>5</sub> SEF
Duplex (custom size)	Vertical: 105.0–330.2 mm (4.14–13.00 inches) Horizontal: 139.7–487.7 mm (5.50–19.20 inches)
Paper weight	<ul style="list-style-type: none"> <li>• Trays 1–3: 52.3–256.0g/m<sup>2</sup> (14.0 lb. Bond–141.0 lb. Index)</li> <li>• Duplex: 52.3–300.0 g/m<sup>2</sup> (14.0 lb. Bond–165.0 lb. Index)</li> </ul>
Missing image area (Copier)	<div style="text-align: center;">  </div> <ol style="list-style-type: none"> <li>1. Leading edge When you use paper other than coated paper: 5.0 ± 0.5 mm (0.20 ± 0.02 inches) (Paper Weight 1–Paper Weight 3), 4.0 ± 0.5 mm (0.16 ± 0.02 inches) (Paper Weight 4–Paper Weight 8) When you use coated paper: 7.0 ± 0.5 mm (0.28 ± 0.02 inches) (Paper Weight 2), 5.0 ± 0.5mm (0.20 ± 0.02 inches) (Paper Weight 3), 4.0 ± 0.5 mm (0.16 ± 0.02 inches) (Paper Weight 4–Paper Weight 8)</li> <li>2. Trailing edge When you use paper other than coated paper: 5.0 ± 1.0 mm (0.20 ± 0.04inches) (Paper Weight 1–Paper Weight 3), 4.0 ± 1.0 mm (0.16 ± 0.04 inches) (Paper Weight 4–Paper Weight 8) When you use coated paper: 7.0 ± 1.0 mm (0.28 ± 0.04 inches) (Paper Weight 2), 5.0 ± 1.0mm (0.20 ± 0.04 inches) (Paper Weight 3), 4.0 ± 1.0 mm (0.16 ± 0.04 inches) (Paper Weight 4–Paper Weight 8)</li> <li>3. Left edge 2.0 ± 1.5 mm (0.08 ± 0.06 inches)</li> <li>4. Right edge 2.0 ± 1.5 mm (0.08 ± 0.06 inches)</li> </ol> <p>The missing image area can be changed. If plain paper that weighs less than 70 g/m<sup>2</sup> or coated paper that weighs less than 105 g/m<sup>2</sup> is registered as custom paper from the master library, the missing image area for the leading edge is set to approximately 5 mm. Depending on the paper's condition, the reverse side's missing image area and its registered values may be different.</p>

## 1. Specifications

Item	Specification
First copy/print time	<ul style="list-style-type: none"> <li>• Type 1: 6.3 seconds</li> <li>• Type 2: 5.6 seconds</li> <li>• Type 3: 4.6 seconds</li> </ul> (A4 LEF, 8½ × 11 LEF, delivered face down, feeding from tray 1, on the exposure glass) <ul style="list-style-type: none"> <li>• Type 4: 5.6 seconds</li> <li>• Type 5: 4.6 seconds</li> </ul> (A4 LEF, 8½ × 11 LEF, feeding from tray 1)
Copy/print speed	<ul style="list-style-type: none"> <li>• Type 1: 96 sheets/minute (A4 LEF, 8½ × 11 LEF)</li> <li>• Type 2: 111 sheets/minute (A4 LEF, 8½ × 11 LEF)</li> <li>• Type 3: 136 sheets/minute (A4 LEF, 8½ × 11 LEF)</li> <li>• Type 4: 111 sheets/minute (A4 LEF, 8½ × 11 LEF)</li> <li>• Type 5: 136 sheets/minute (A4 LEF, 8½ × 11 LEF)</li> </ul>
Reproduction ratio <sup>+1</sup>	<ul style="list-style-type: none"> <li>• Mainly Europe and Asia Preset reproduction ratios (%):               <ul style="list-style-type: none"> <li>• Enlargement: 400, 200, 141, 122, 115</li> <li>• Full size: 100</li> <li>• Reduction: 93, 82, 75, 71, 65, 50, 25</li> </ul> </li> <li>• Mainly North America Preset reproduction ratios (%):               <ul style="list-style-type: none"> <li>• Enlargement: 400, 200, 155, 129, 121</li> <li>• Full size: 100</li> <li>• Reduction: 93, 85, 78, 73, 65, 50, 25</li> </ul> </li> <li>• Zoom: From 25–400% in increments of 1%</li> </ul>
Maximum continuous copy/print run	9,999 sheets
Paper capacity (80 g/m <sup>2</sup> , 20 lb. Bond)	
Tray 1	1,000 sheets × 2
Trays 2 and 3	500 sheets
Translucent paper	Do not stack paper over the limit mark. The maximum number of sheets you can set at once depends on the paper's thickness and condition.
Transparencies	Do not stack paper over the limit mark. The maximum number of sheets you can set at once depends on the paper's thickness and condition. Transparencies can be fed only from Tray 2.
Power requirements	<ul style="list-style-type: none"> <li>• Mainly Europe and Asia 220–240 V, 16 A, 50/60 Hz</li> <li>• Mainly North America</li> </ul>

Item	Specification
	208–240 V, 20 A, 50/60 Hz
Power consumption	
mainly Europe and Asia	<ul style="list-style-type: none"> <li>• Main unit only <ul style="list-style-type: none"> <li>• Ready <ul style="list-style-type: none"> <li>Type 1: 420 W</li> <li>Type 2: 420 W</li> <li>Type 3: 420 W</li> <li>Type 4: 420 W</li> <li>Type 5: 420 W</li> </ul> </li> <li>• During printing <ul style="list-style-type: none"> <li>Type 1: 1,800 W</li> <li>Type 2: 2,000 W</li> <li>Type 3: 2,250 W</li> <li>Type 4: 1,900 W</li> <li>Type 5: 2,200 W</li> </ul> </li> <li>• Maximum <ul style="list-style-type: none"> <li>Type 1: 2,030 W</li> <li>Type 2: 2,240 W</li> <li>Type 3: 2,480 W</li> <li>Type 4: 2,280 W</li> <li>Type 5: 2,440 W</li> </ul> </li> </ul> </li> </ul> <p>The power level when the main switch is turned off and the power cord is plugged into an outlet: 1 W or less</p> <ul style="list-style-type: none"> <li>• Complete system <ul style="list-style-type: none"> <li>• Maximum <ul style="list-style-type: none"> <li>Type 1*<sup>1</sup>: 2,840 W or less</li> <li>Type 2*<sup>2</sup>: 3,010 W or less</li> <li>Type 3*<sup>2</sup>: 3,350 W or less</li> <li>Type 4*<sup>2</sup>: 2,810 W or less</li> <li>Type 5*<sup>2</sup>: 3,150 W or less</li> </ul> </li> </ul> </li> </ul> <p>*1 The complete system consists of the main unit, decurl unit, anti-humidity heater, three-tray wide LCT, multi bypass tray (Tray A), interposer, and Booklet Finisher SR5100.</p> <p>*2 The complete system consists of the main unit, decurl unit, anti-humidity heater, three-tray wide LCT, multi bypass tray (Tray A), interposer, and Booklet Finisher SR5120.</p>
mainly North America	<ul style="list-style-type: none"> <li>• Main unit only <ul style="list-style-type: none"> <li>• Ready</li> </ul> </li> </ul>

## 1. Specifications

Item	Specification
	<p>Type 1: 420 W            Type 2: 420 W            Type 3: 420 W            Type 4: 420 W            Type 5: 420 W</p> <ul style="list-style-type: none"> <li>• During printing               <ul style="list-style-type: none"> <li>Type 1: 1,800 W</li> <li>Type 2: 2,000 W</li> <li>Type 3: 2,250 W</li> <li>Type 4: 1,900 W</li> <li>Type 5: 2,200 W</li> </ul> </li> <li>• Maximum               <ul style="list-style-type: none"> <li>Type 1: 2,010 W</li> <li>Type 2: 2,180 W</li> <li>Type 3: 3,020 W</li> <li>Type 4: 2,100 W</li> <li>Type 5: 2,440 W</li> </ul> </li> </ul> <p>The power level when the main switch is turned off and the power cord is plugged into an outlet: 1 W or less</p> <ul style="list-style-type: none"> <li>• Complete system               <ul style="list-style-type: none"> <li>• Maximum                   <ul style="list-style-type: none"> <li>Type 1*1: 2,800 W or less</li> <li>Type 2*2: 3,020 W or less</li> <li>Type 3*2: 3,270 W or less</li> <li>Type 4*2: 2,820 W or less</li> <li>Type 5*2: 3,070 W or less</li> </ul> </li> </ul> </li> </ul> <p>*1 The complete system consists of the main unit, decurl unit, anti-humidity heater, three-tray wide LCT, multi bypass tray (Tray A), interposer, and Booklet Finisher SR5100.</p> <p>*2 The complete system consists of the main unit, decurl unit, anti-humidity heater, three-tray wide LCT, multi bypass tray (Tray A), interposer, and Booklet Finisher SR5120.</p>
Dimensions	<ul style="list-style-type: none"> <li>• Types 1, 2, and 3 (W × D × H up to the surface of the ADF exposure glass)            1,141 × 900 × 1,020 mm (45.0 × 35.5 × 40.2 inches)</li> <li>• Types 4, 5 (W × D × H up to the top board (excluding the control panel and the attention light)            1,141 × 900 × 1,020 mm (45.0 × 35.5 × 40.2 inches)</li> </ul>

Item	Specification
Space for main unit (W × D)	1,141 × 900 mm (45.0 × 35.5 inches)
Noise emission	
Sound power level	<ul style="list-style-type: none"> <li>• Main unit only <ul style="list-style-type: none"> <li>• Stand-by <ul style="list-style-type: none"> <li>Type 1: 61.5 dB (A)</li> <li>Type 2: 61.5 dB (A)</li> <li>Type 3: 61.5 dB (A)</li> <li>Type 4: 61.5 dB (A)</li> <li>Type 5: 61.5 dB (A)</li> </ul> </li> <li>• Copying/Printing <ul style="list-style-type: none"> <li>Type 1: 73.0 dB (A)</li> <li>Type 2: 73.0 dB (A)</li> <li>Type 3: 74.0 dB (A)</li> <li>Type 4: 73.0 dB (A)</li> <li>Type 5: 74.0 dB (A)</li> </ul> </li> </ul> </li> <li>• Complete system <ul style="list-style-type: none"> <li>• Stand-by <ul style="list-style-type: none"> <li>Type 1*<sup>1</sup>: 65.5 dB (A)</li> <li>Type 2*<sup>2</sup>: 65.5 dB (A)</li> <li>Type 3*<sup>3</sup>: 65.5 dB (A)</li> <li>Type 4*<sup>2</sup>: 65.5 dB (A)</li> <li>Type 5*<sup>3</sup>: 65.5 dB (A)</li> </ul> </li> <li>• Copying/Printing <ul style="list-style-type: none"> <li>Type 1*<sup>1</sup>: 77.0 dB (A)</li> <li>Type 2*<sup>2</sup>: 78.0 dB (A)</li> <li>Type 3*<sup>3</sup>: 78.0 dB (A)</li> <li>Type 4*<sup>2</sup>: 77.0 dB (A)</li> <li>Type 5*<sup>3</sup>: 78.0 dB (A)</li> </ul> </li> </ul> </li> </ul>
Sound pressure level	<ul style="list-style-type: none"> <li>• Main unit only <ul style="list-style-type: none"> <li>• Stand-by <ul style="list-style-type: none"> <li>Type 1: 55.5 dB (A)</li> <li>Type 2: 55.5 dB (A)</li> <li>Type 3: 55.5 dB (A)</li> <li>Type 4: 55.5 dB (A)</li> <li>Type 5: 55.5 dB (A)</li> </ul> </li> <li>• Copying/Printing <ul style="list-style-type: none"> <li>Type 1: 67.0 dB (A)</li> </ul> </li> </ul> </li> </ul>

1.Specifications

Item	Specification
	<p>Type 2: 67.0 dB (A)            Type 3: 68.0 dB (A)            Type 4: 67.0 dB (A)            Type 5: 68.0 dB (A)</p> <ul style="list-style-type: none"> <li>• Complete system               <ul style="list-style-type: none"> <li>• Stand-by                   <ul style="list-style-type: none"> <li>Type 1*4: 59.5 dB (A)</li> <li>Type 2*2: 59.5 dB (A)</li> <li>Type 3*5: 59.5 dB (A)</li> <li>Type 4*2: 59.5 dB (A)</li> <li>Type 5*5: 59.5 dB (A)</li> </ul> </li> <li>• Copying/Printing                   <ul style="list-style-type: none"> <li>Type 1*4: 71.0 dB (A)</li> <li>Type 2*2: 71.0 dB (A)</li> <li>Type 3*5: 72.0 dB (A)</li> <li>Type 4*2: 71.0 dB (A)</li> <li>Type 5*5: 72.0 dB (A)</li> </ul> </li> </ul> </li> <li>• Sound power level and sound pressure level are actual values measured in accordance with ISO 7779.</li> <li>• Sound pressure level is measured from the position of the bystander.</li> </ul> <p>*1 The complete system consists of the main unit, large capacity tray (LCT), and shift tray.            *2 The complete system consists of the main unit, three-tray wide LCT, and Booklet Finisher SR5120.            *3 The complete system consists of the main unit, two-tray wide LCT, interposer, and Booklet Finisher SR5120.            *4 The complete system consists of the main unit, three-tray wide LCT, and Booklet Finisher SR5100.            *5 The complete system consists of the main unit, two-tray wide LCT, buffer pass unit, interposer, high capacity stacker, and Booklet Finisher SR5120.</p>
Weight	<ul style="list-style-type: none"> <li>• Types 1, 2, and 3: 428 kg or less (943.7 lb.)</li> <li>• Types 4 and 5: 413 kg or less (910.7 lb.)</li> </ul> <p>*1 Type 1, 2, and 3            *2 Type 4 and 5            *3 When the main unit alone is installed, the width with the sound insulation</p>



Item	Specification
	cover attached is 1,199 mm. It is recommended to attach the sound insulation cover when the Large Capacity Tray is not attached.

\*1 Type 1, 2, and 3

\*2 Type 4 and 5

\*3 Depends on the resolution of the printer driver

## Printer

Item	Specification
Resolution	200 dpi, 300 dpi, 600 dpi, 1200 dpi
Printing speed	<ul style="list-style-type: none"> <li>• Type 1: 96 sheets/minute (A4 LEF, 8<sup>1</sup>/<sub>2</sub> × 11 LEF)</li> <li>• Type 2 and 4: 111 sheets/minute (A4 LEF, 8<sup>1</sup>/<sub>2</sub> × 11 LEF)</li> <li>• Type 3 and 5: 136 sheets/minute (A4 LEF, 8<sup>1</sup>/<sub>2</sub> × 11 LEF)</li> </ul> Printing speeds depend on the machine. Check which type of machine you have.
Interface	<ul style="list-style-type: none"> <li>• Standard               <ul style="list-style-type: none"> <li>• Ethernet interface (1000BASE-T/100BASE-TX/10BASE-T)</li> <li>• USB 2.0 (Type A) port (on the control panel)</li> <li>• USB 2.0 (Type B) port</li> <li>• SD card slot</li> </ul> </li> <li>• Option               <ul style="list-style-type: none"> <li>• IEEE 802.11a/b/g/n wireless LAN interface</li> <li>• File Format Converter</li> </ul> </li> </ul>
Network protocol	<ul style="list-style-type: none"> <li>• Standard: TCP/IP (IPv4, IPv6)</li> </ul>
Printer language	<ul style="list-style-type: none"> <li>• Standard: PCL 5e/XL, PCL, PostScript 3, PDF Direct</li> <li>• Option: Genuine Adobe PostScript 3, PDF Direct from Adobe, IPDS, XPS</li> </ul>
Fonts	<ul style="list-style-type: none"> <li>• PCL 5e/XL: 93 fonts</li> <li>• PDF: 93 fonts</li> <li>• Adobe PostScript: 136 fonts</li> <li>• IPDS: 108 fonts</li> </ul>
Memory	4 GB
USB interface (standard)	Supported operating system: <ul style="list-style-type: none"> <li>• Windows 7/8.1/10, Windows Server 2008/2008 R2/2012/2012 R2/2016, OS X 10.11 or later</li> </ul> Transmission spec:

## 1. Specifications

Item	Specification
	<ul style="list-style-type: none"> <li>USB 2.0 Standard</li> </ul> Connectable device: <ul style="list-style-type: none"> <li>Devices corresponding to USB 2.0 Standard</li> </ul>

### Note

- The maximum length for the cable connecting the machine to an Ethernet network is 100 meters.

## Scanner (Copier Models Only)

Item	Specification
Type	Full-color scanner
Scan method	Flatbed scanning
Image sensor type	CMOS Image Sensor
Scan type	Sheet, book, three-dimensional object
Original sizes that can be scanned	<ul style="list-style-type: none"> <li>Length 10–297 mm (0.4–11.6 inches)</li> <li>Width 10–432 mm (0.4–17.0 inches)</li> </ul>
Scan sizes automatically detectable from the exposure glass	<ul style="list-style-type: none"> <li>Mainly Europe and Asia A3 SEF, A4 SEF/LEF, A5 LEF, B4 JIS SEF, B5 JIS SEF/LEF, 8<sup>1</sup>/<sub>2</sub> × 13 SEF</li> <li>Mainly North America 11 × 17 SEF, 8<sup>1</sup>/<sub>2</sub> × 14 SEF, 8<sup>1</sup>/<sub>2</sub> × 11 SEF/LEF, 5<sup>1</sup>/<sub>2</sub> × 8<sup>1</sup>/<sub>2</sub> LEF</li> </ul>
Scan sizes automatically detectable from the ADF	<ul style="list-style-type: none"> <li>Mainly Europe and Asia A3 SEF, A4 SEF/LEF, A5 SEF/LEF, B4 JIS SEF, B5 JIS SEF/LEF, B6 JIS SEF/LEF, 11 × 17 SEF, 8<sup>1</sup>/<sub>2</sub> × 13 SEF, 8<sup>1</sup>/<sub>2</sub> × 11 SEF/LEF, 8.5"×14"(LG), 8.5"×5.5"(HLT)</li> <li>Mainly North America A3 SEF, A4 SEF/LEF, 11 × 17 SEF, 8<sup>1</sup>/<sub>2</sub> × 14 SEF, 8<sup>1</sup>/<sub>2</sub> × 11 SEF/LEF, 7<sup>1</sup>/<sub>4</sub> × 10<sup>1</sup>/<sub>2</sub> SEF, 5<sup>1</sup>/<sub>2</sub> × 8<sup>1</sup>/<sub>2</sub> SEF/LEF, 10 × 14 SEF, 8.5"×14"(LG), 8.5"×5.5"(HLT)</li> </ul>
Scan speed	When using E-mail, Scan to Folder, WSD (Push Type), or Scan to Removable device (Original size: A4 LEF/8 <sup>1</sup> / <sub>2</sub> × 11 LEF, Resolution: 200 dpi/300 dpi): <ul style="list-style-type: none"> <li>When scanning one-sided originals Black and white: 120 pages/minute</li> <li>When scanning two-sided originals Black and white: 220 pages/minute</li> </ul>

Item	Specification
	<p>(Original Type: B &amp; W: Text / Line Art, Compression (Black &amp; White): MMR, ITU-T No1 Chart)</p> <ul style="list-style-type: none"> <li>• When scanning one-sided originals Full Color: 120 pages/minute</li> <li>• When scanning two-sided originals Full Color: 220 pages/minute</li> </ul> <p>(Original Type: Full Color: Text / Photo, Compression (Gray Scale / Full Color): Default, Original Chart)</p> <p>Scanning speed differs depending on the following; operating environment of the machine and computer, scan settings, and the content of originals (denser images require more time).</p>
Tone	<p>Black and white: 2 tones</p> <p>Full color / Gray scale: 256 tones</p>
Basic scanning resolution	600 dpi
Image compression type for black and white (two-value)	TIFF (MH, MR, MMR, JBIG2)
Image compression type for gray scale/full color	JPEG
Interface	<p>Ethernet interface (100BASE-TX/10BASE-T)</p> <p>USB 2.0 (Type A) port (on the control panel)</p> <p>SD card slot (on the control panel)</p>
Network protocol	TCP/IP
Selectable scanning resolutions when using the E-mail function	100 dpi, 150 dpi, 200 dpi, 300 dpi, 400 dpi, 600 dpi
Protocol for sending e-mail	SMTP
Sendable file formats when using the E-mail function	<p>TIFF, JPEG, PDF, High Compression PDF, PDF/A</p> <p>When you select [PDF], [High Compression PDF], or [PDF/A] for the file format, you can attach a digital signature. You can also specify the security settings for [PDF] or [High Compression PDF]. For details, see "Specifying Digital Signature for PDF files" and "Security Settings for PDF Files", Basic Operation.</p>
Selectable scanning resolutions when using	100 dpi, 150 dpi, 200 dpi, 300 dpi, 400 dpi, 600 dpi

## 1. Specifications

Item	Specification
the Scan to Folder function	
Protocol for Scan to Folder	SMB, FTP
Sendable file formats when using the Scan to Folder function	TIFF, JPEG, PDF, High Compression PDF, PDF/A When you select [PDF], [High Compression PDF], or [PDF/A] for the file format, you can attach a digital signature. You can also specify the security settings for [PDF] or [High Compression PDF]. For details, see "Specifying Digital Signature for PDF files" and "Security Settings for PDF Files", Basic Operation.
WSD	Supported.
DSM	Supported.
Selectable scanning resolution when using TWAIN scanner	100–1,200 dpi
Protocol for TWAIN scanner	TCP/IP
Operating system for TWAIN scanner	Windows 7/8.1/10, Windows Server 2008/2008 R2/2012/2012 R2/2016 (TWAIN scanner runs in 32-bit compatible mode on a 64-bit operating system, so TWAIN scanner is not compatible with 64-bit applications. Use it with 32-bit applications.)

### Note

- The maximum length for the cable connecting the machine to an Ethernet network is 100 meters.

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## Options (Peripherals)

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Refer to the field service manual for the option (peripheral).

## Supported Paper Sizes

### Paper Feed

#### Trays 1 to 3, Multi Bypass Tray

A: Supported: the sensor detects the paper size.

M: Supported: the user specifies the paper size.

S: Supported: depends on a technician adjustment

-: Not supported

Size (W x L) [mm]	Tray 1 <sup>*1</sup>		Tray 2/3		Multi Bypass Tray <sup>*2</sup>	
	NA	EU/Asia/TW	NA	EU/Asia/TW	NA	EU/Asia/TW
A3 SEF (297 x 420)	S	A	A	A	A	A
A4 SEF (210 x 297)	S	S	A	A	M	A
A4 LEF (297 x 210)	S	S	A	A	A	A
A5 SEF (148 x 210)	-	-	A	A	A	A
A5 LEF (210 x 148)	-	-	A	A	M	A
A6 SEF (105 x 148)	-	-	-	-	A	A
B4 SEF (257 x 364)	S	S	A	A	A	A
B5 SEF (182 x 257)	-	-	A	A	M	M
B5 LEF (257 x 182)	-	-	A	A	A	A
B6 SEF (128 x 182)	-	-	-	-	M	M
DLT SEF (11" x 17")	A	S	A	A	A	A
Legal SEF (8 <sup>1</sup> / <sub>2</sub> " x 14")	S	S	A	A	M	M
Foolscap SEF (8 <sup>1</sup> / <sub>2</sub> " x 13")	-	-	A	A	M	M
LT SEF (8 <sup>1</sup> / <sub>2</sub> " x 11")	S	S	A	A	A	M
LT LEF (11" x 8 <sup>1</sup> / <sub>2</sub> "	S	S	A	A	A	A
Gov. LG SEF (8 <sup>1</sup> / <sub>4</sub> " x 14")	-	-	M	M	M	M
Folio SEF (8 <sup>1</sup> / <sub>4</sub> " x 13")	-	-	A	A	M	M
F/GL SEF (8" x 13")	-	-	A	A	A	A
Eng Quatro SEF (8" x 10")	-	-	M	M	M	M
Executive SEF (7 <sup>1</sup> / <sub>4</sub> " x 10 <sup>1</sup> / <sub>2</sub> "	-	-	A	A	M	M
Executive LEF (10 <sup>1</sup> / <sub>2</sub> " x 7 <sup>1</sup> / <sub>4</sub> "	-	-	A	A	M	M
HLT SEF (5 <sup>1</sup> / <sub>2</sub> " x 8 <sup>1</sup> / <sub>2</sub> "	-	-	A	A	A	A
HLT LEF (8 <sup>1</sup> / <sub>2</sub> " x 5 <sup>1</sup> / <sub>2</sub> "	-	-	A	A	A	M
8K SEF (267 x 390)	-	-	A	A	M	M
16K SEF (195 x 267)	-	-	A	A	M	M
16K LEF (267 x 195)	-	-	A	A	M	M
12" x 18" SEF	-	-	A	M	A	M <sup>*4</sup>

## 1.Specifications

Folio SEF (11" x 15")	-	-	M	M	M	M
Folio SEF (11" x 14")	-	-	M	M	M	M
Folio SEF (10" x 15")	-	-	M	M	M	M
Folio SEF (10" x 14")	-	-	M	M	M	M
13" x 19 <sup>1</sup> / <sub>5</sub> " SEF	-	-	-	-	M <sup>*3</sup>	M <sup>*3</sup>
13" x 19" SEF	-	-	-	-	M <sup>*3</sup>	M <sup>*3</sup>
12 <sup>3</sup> / <sub>5</sub> " x 19 <sup>1</sup> / <sub>5</sub> " SEF	-	-	-	-	M <sup>*3</sup>	M <sup>*3</sup>
12 <sup>3</sup> / <sub>5</sub> " x 18 <sup>1</sup> / <sub>2</sub> " SEF	-	-	-	-	M <sup>*3</sup>	M <sup>*3</sup>
13" x 18" SEF	-	-	M	M	M <sup>*3</sup>	M <sup>*3</sup>
SRA3 SEF (320 x 450)	-	-	M	A	M <sup>*3</sup>	A <sup>*3*4</sup>
SRA4 SEF (225 x 320)	-	-	M	M	M	M
SRA4 LEF (320 x 225)	-	-	M	M	M <sup>*3</sup>	M <sup>*3</sup>
226 x 310 SEF	-	-	M	M	M	M
310 x 226 LEF	-	-	M	M	M <sup>*3</sup>	M <sup>*3</sup>
310 x 432 SEF	-	-	M	M	M <sup>*3</sup>	M <sup>*3</sup>
8 <sup>1</sup> / <sub>2</sub> " x 13 <sup>2</sup> / <sub>5</sub> " SEF	-	-	M	M	M	M
F4a SEF (8 <sup>1</sup> / <sub>2</sub> " x 13 <sup>1</sup> / <sub>2</sub> ")	-	-	M	M	M	M

\*1: When using A3/11"x17" Tray Unit TK5020

\*2: When using Multi Bypass Tray BY5020

\*3: When LCIT RT5130 is installed, the maximum width of the paper passable through the path is 305 mm/12 inches. When LCIT RT5110 and Vacuum Feed LCIT RT5120 is installed, the maximum width of the paper passable through the path is 330.2 mm/13 inches.

\*4: If a paper of 12 x 18 inches is set to the machine of EU model when Multi Bypass Tray BY5020 is installed in LCIT RT5130, the machine detects 12 x 18 inches automatically. If a paper of SRA3 size is set to the machine of EU model, the machine detects 12 x 18 inches automatically.

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## Paper Exit

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### Main Frame (Copier/Printer)

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Name	Orientation
A3	SEF
A4	SEF
A4	LEF
A5	SEF
A5	LEF
A6	SEF
B4	SEF
B5	SEF

Name	Orientation
B5	LEF
B6	SEF
DLT	SEF
Legal	SEF
Foolscap	SEF
Letter	SEF
Letter	LEF
Government LG	SEF
Folio	SEF
F/GL	SEF
Eng Quatro	SEF
Executive	SEF
Executive	LEF
Half Letter	SEF
Half Letter	LEF
8-kai	SEF
16-kai	SEF
16-kai	LEF
12"x18"	SEF
11"x15"	SEF
11"x14"	SEF
10"x15"	SEF
10"x14"	SEF
13"x19 <sup>1</sup> / <sub>5</sub> "	SEF
13"x19"	SEF
12 <sup>3</sup> / <sub>5</sub> "x19 <sup>1</sup> / <sub>5</sub> "	SEF
12 <sup>3</sup> / <sub>5</sub> "x18 <sup>1</sup> / <sub>2</sub> "	SEF
13"x18"	SEF
SRA3"	SEF
SRA4"	SEF
SRA4"	LEF
226"x310"	SEF
226"x310"	LEF
310"x432"	SEF
8 <sup>1</sup> / <sub>2</sub> " x 13 <sup>2</sup> / <sub>5</sub> "	SEF
F4a (8 <sup>1</sup> / <sub>2</sub> " x 13 <sup>1</sup> / <sub>2</sub> "	SEF

Custom Sizes

## 1. Specifications

Custom Size (Std.) Width	Min.	100.0 mm
Custom Size (Std.) Width	Max.	330.2 mm
Custom Size (Std.) Length	Min.	139.7 mm
Custom Size (Std.) Length	Max.	487.7 mm
Custom Size (Std.) Width	Min.	3.94 in.
Custom Size (Std.) Width	Max.	13.00 in.
Custom Size (Std.) Length	Min.	5.50 in.
Custom Size (Std.) Length	Max.	19.20 in.

## Original Size Detection

Y: Supported

-: Not supported

Size (W x L) [mm]	NA		EU/Asia/Oceania/China	
	Platen	ADF	Platen	ADF
A3 SEF (297 x 420)	-	Y	Y <sup>*3</sup>	Y
B4 SEF (257 x 364)	-	-	Y <sup>*3</sup>	Y
A4 SEF (210 x 297)	Y <sup>*2</sup>	Y	Y <sup>*2*3</sup>	Y
A4 LEF (297 x 210)	Y <sup>*2</sup>	Y	Y <sup>*2*3</sup>	Y
B5 SEF (182 x 257)	-	-	Y <sup>*3</sup>	Y
B5 LEF (257 x 182)	-	-	Y <sup>*3</sup>	Y
A5 SEF (148 x 210)	-	-	Y <sup>*1*3</sup>	Y
A5 LEF (210 x 148)	-	-	Y <sup>*1*3</sup>	Y
B6 SEF (128 x 182)	-	-	-	Y
B6 LEF (182 x 128)	-	-	-	Y
DLT SEF (11" x 17")	Y	Y <sup>*4</sup>	-	Y <sup>*4</sup>
LG SEF (8 <sup>1/2</sup> " x 14")	Y	Y <sup>*4</sup>	-	-
oficio SEF (8 <sup>1/2</sup> " x 13 <sup>2/5</sup> ")	Y	Y	-	-
LT SEF (8 <sup>1/2</sup> " x 11")	Y <sup>*2</sup>	Y <sup>*4</sup>	Y <sup>*2</sup>	Y <sup>*4</sup>
LT LEF (11" x 8 <sup>1/2</sup> ")	Y <sup>*2</sup>	Y <sup>*4</sup>	Y <sup>*2</sup>	Y <sup>*4</sup>
HLT SEF (5 <sup>1/2</sup> " x 8 <sup>1/2</sup> ")	Y <sup>*6</sup>	Y	-	-
HLT LEF (8 <sup>1/2</sup> " x 5 <sup>1/2</sup> ")	Y	Y	-	-
US EXE SEF (7 1/4" x 10 1/2")	-	Y	-	-
US EXE LEF (10 1/2" x 7 1/4")	-	Y <sup>*4</sup>	-	-
F SEF (8" x 13")	-	-	Y <sup>*5</sup>	Y <sup>*5</sup>
Foolscap SEF (8 <sup>1/2</sup> " x 13")	-	Y <sup>*4</sup>	Y <sup>*5</sup>	Y <sup>*5</sup>
Folio SEF (8 <sup>1/4</sup> " x 13")	-	-	Y <sup>*5</sup>	Y <sup>*5</sup>
Folio SEF (11" x 15")	-	Y <sup>*4</sup>	-	-
Folio SEF (10" x 14")	-	Y	-	-



## 1. Specifications

Size (W x L) [mm]	NA		EU/Asia/Oceania/China	
	Platen	ADF	Platen	ADF
Folio SEF (8" x 10")	-	Y*4	-	-
8K SEF (267 x 390)	-	-	Y*3	Y*5
16K SEF (195 x 267)	-	-	Y*3	Y*5
16K LEF (267 x 195)	-	-	Y*3	Y*5
F4a SEF (216 x 343)	-	-	Y*5	Y*5*7

\*1: The machine can detect the paper size depending on the setting of SP4-303.

\*2: Selecting SP mode can set the either judgement when the size of A4 or LT is detected.

- When the paper is placed horizontally: A4 LEF  
When the paper is placed vertically: LT SEF
- When the paper is placed horizontally: LT LEF  
When the paper is placed vertically: A4 SEF

\*3: The machine can detect the paper size depending on the setting of SP4-305.

\*4: The machine can detect the paper size depending on the setting of SP6-016.

\*5: F size can be switched in the initial settings of the main machine.

\*6: The machine can detect the paper size if the judgement is set to HLT SEF in SP mode.

\*7: The machine cannot detect the paper size in consolidation mode.

## 2. Preventive Maintenance Tables

### PM Tables

#### PM Parts List Key

Column	Meaning
<b>Part</b>	Name of the component, unit, name of part
<b>By</b>	Person responsible
	<b>S</b> Service technician (CE)
	<b>U</b> User
	<b>T</b> TCRU trained user
<b>At</b>	Interval for checking, cleaning, replacement. Example: 860 K (309 Km) <ul style="list-style-type: none"> <li>You may see two notations for some parts.</li> <li>The K notation for the number of sheets (806 K) recorded by <b>SP7621</b></li> <li>The km (distance) notation (309 Km) is recorded by <b>SP7940</b>.</li> <li>Where these notations are used together, do the procedure for whichever count occurs first.</li> </ul>
<b>Action</b>	What is required'
	● Replace after total page count elapses
	◎ Replace according to machine log count (sheet count, distance count, whichever occurs first)
	▲ Must inspect, clean, lubricate (if applicable)
	△ Inspect, clean, lubricate (if applicable) as necessary
	<b>R</b> Must replace
	<b>C</b> Clean at PM, or as necessary
	<b>I</b> Inspect
	<b>L</b> Lubricate
<b>Comment</b>	Materials required for cleaning, lubrication, etc.

#### Optics

Part	By	At	Action	Comments
Light Guide Plate (under ADF)	S	1200K	▲	Lens cloth*1
1st Mirror	S	1200K	▲	Lens cloth*1
2nd Mirror	S	1200K	▲	Lens cloth*1
3rd Mirror	S	1200K	▲	Lens cloth*1

## 2.Preventive Maintenance Tables

Part	By	At	Action	Comments
Original Width Sensors (APS)	S	600K	▲	Wipe clean
Exposure Glass*2	S,U	600K	△	Glass cleaner
Guide Rail (2-level both ends)	S	1200K	▲	Dry cloth*3
Contact Glass	SU	600K	△	Glass cleaner
Toner Shield Glass*1*2	S	600K	△	Lens cloth*1

\*1: Lens cloth A0129111

\*2: Inspect, clean every PM visit

\*3: Never use alcohol

### Development Unit

Part	By	At	Action	Comments
Developer	ST	860K (309 Km)	◎	Stored empty developer bottle*1
Gears	S	600K	▲	Dry cloth
Toner Supply unit	S	600K	▲	Dry cloth
Doctor blade	S	600K	▲	Clean before developer replacement

\*1 The empty developer bottle should be stored with the machine after installation to hold old developer drained from the development unit.

### Around the Drum

Part	By	At	Action	Comments
<b>Drum Cleaning Unit*2</b>		---		
Cleaning Blade*1	S	600 K (235 Km)	◎	
Lubrication Brush Roller*1	S	600 K (235 Km)	◎	
Lubrication Bar*1	S	600 K (235 Km)	◎	
Lubrication Blade*1	S	600 K (235Km)	◎	
<b>Charge Corona Unit*2</b>		---		
Corona Wire	S	800 K	◎	
Grid	S	800 K	◎	
Wire Cleaner, Grid Cleaner		800 K	◎	
Drum*1	S, T	2400 K	◎	
Potential Sensor	S	1200 K	△	Dry cloth
Quenching Lamp	S	1200 K	△	
Used Toner Bottle	S, U	1200 K	R	

\*1: These parts must always be replaced together as a set.

\*2: TCRU operator can replace entire unit.

## 2.Preventive Maintenance Tables

### Image Transfer Unit and Paper Separation

Part	By	At	Action	Comments
Image Transfer Belt (ITB)	S	2400 K (939 Km)	⊙	
ID Sensor	S	600K	▲	Dry cloth
Belt Centering Sensor	S	1200K	▲	Blower brush
ITB Unit Internal Rollers	S	1200K	△	Dry cloth
Image Transfer Roller	S	1200K	⊙	
<b>ITB Cleaning Unit*1</b>	---	---		
ITB Cleaning Blade*2	S	600K (235 Km)	⊙	
ITB Lubricant Brush Roller*2	S	600K (235 Km)	⊙	
ITB Lubricant Bar*2	S	600K (235 Km)	⊙	
ITB Lubricant Blade*2	S	600K (235 Km)	⊙	
<b>PTR Cleaning Unit*1</b>	---	---		
PTR Cleaning Blade*2	S	600K (235 Km)	⊙	
PTR Lubricant Bar*2	S	600K (235 Km)	⊙	
Lubricant Brush Roller*2	S	600K (235 Km)	⊙	
Separation Unit	S	600K (235 Km)	⊙	
Paper Transfer Roller	S	800K (313 Km)	⊙	
Gears	S	3000K (1173 Km)	⊙	
PTB Paper Sensors	S	600K	▲	

\*1: TCRU operator can replace entire unit.

\*2: These parts must always be replaced together as a set.

### Fusing Unit

Part	By	At	Action	Comments
<b>Fusing Unit*1</b>				
Fusing Belt	S	1600K	⊙	
Hot Roller	S	1600K	⊙	
Pressure Roller	S	1200K	⊙	
Hot Roller Separation Plate	S	600K	▲	Dry cloth
Pressure Roller Pick-off Paws	S	600K	▲	
Fusing Unit Entrance Guide	S	600K	▲	
Heating Roller Thermistor	S	1600K	▲	Dry cloth, always clean at PM

## 2.Preventive Maintenance Tables

Part	By	At	Action	Comments
Main Gears*2	S	1200K	▲	
Heating Roller Bearings	S	1600K	▲	
Heating Roller Bushings	S	1600K		Always inspect at PM
<b>Web Cleaning Unit*1</b>		---		
Cleaning Web	S	800 K	◎	
Web Tension Roller	S	3200K	◎	
Fusing Thermopiles	S	600K	▲	Cloth dampened with alcohol to remove toner and paper dust

\*1 TCRU operator can replace entire unit.

\*2 Use Fluotribo MG grease, with about  $4\pm 0.8$  g on the pressure roller drive gear and  $1.5\pm 0.3$  g on the idle reduction gear.

### Others

Part	By	At	Action	Comments
Dust Filters (large)	S	1200K	◎	
Dust Filters (small)	S	600K	◎	
PCDU	S	10500K	◎	Target*1
Dust Filters (for three linked fans at the right side of the main machine)		600K	▲	Filter Cleaning (Vacuum-cleaner)

\*1 10500K is the target service life. Unit may require earlier replacement if it is not used correctly.

### Main Paper Trays (x3)

Part	By	At	1000K	Comments
1st Pick-up Roller	S,T	①	R	Wipe clean, dry cloth ③
1st Feed Roller	S,T	①	R	
1st Separation Roller	S,T	①	R	
2nd Pick-up Roller	S,T	①	R	Wipe clean, dry cloth ③
2nd Feed Roller	S,T	①	R	
2nd Separation Roller	S,T	①	R	
3rd Pick-up Roller	S,T	①	R	Wipe clean, dry cloth ③
3rd Feed Roller	S,T	①	R	
3rd Separation Roller	S,T	①	R	
1st Feed Guide Plate	S	②		Wipe clean, dry cloth
1st Feed Sensor	S,T	①		Blower brush for paper dust
1st Paper End Sensor	S,T	①		Blower brush for paper dust
1st Grip Drive Roller	S	②		Wipe clean, dry cloth

2.Preventive Maintenance Tables

Part	By	At	1000K	Comments
1st Grip Idle Roller	S	②		Wipe clean, dry cloth
2nd Feed Guide Plate	S	②		Wipe clean, dry cloth
2nd Feed Sensor	S,T	①		Blower brush for paper dust
2nd Paper End Sensor	S,T	①		Blower brush for paper dust
2nd Grip Drive Roller	S	②		Wipe clean, dry cloth
2nd Grip Idle Roller	S	②		Wipe clean, dry cloth
3rd Feed Guide Plate	S	②		Wipe clean, dry cloth
3rd Feed Sensor	S,T	①		Blower brush for paper dust
3rd Paper End Sensor	S,T	①		Blower brush for paper dust
3rd Grip Drive Roller	S	②		Wipe clean, dry cloth
3rd Grip Idle Roller	S	②		Wipe clean, dry cloth
Vertical Transport Guide Plate	S	②		Wipe clean, dry cloth
Vertical Transport Sensors	S	②		Blower brush for paper dust
Vertical Transport Drive Rollers	S	②		Wipe clean, dry cloth
Vertical Transport Idle Rollers	S	②		Wipe clean, dry cloth

①: Inspect every **100K** and clean if necessary.

②: Inspect after first **600K** and then every **300K** thereafter and clean if necessary.

③: Replace all three parts together if frequent jams, double feeds occur.

Main Paper Feed Path

Part	By	At	Comments
Transfer Timing Drive Roller	S	②	Wipe clean, dry cloth
Transfer Timing Idle Roller	S	②	Wipe clean, dry cloth
Registration Gate Driver Roller	S	②	Wipe clean, dry cloth
Registration Gate Idle Roller	S,T	①	Wipe clean, dry cloth
Registration Timing Drive Roller	S	②	Wipe clean, dry cloth
Registration Timing Idle Roller	S,T	①	Wipe clean, dry cloth
Registration Entrance Drive Roller	S	②	Wipe clean, dry cloth
Registration Entrance Idle Roller	S,T	①	Wipe clean, dry cloth
Main Relay Drive Roller	S	②	Wipe clean, dry cloth
Main Relay Idle Roller	S,T	①	Wipe clean, dry cloth
LCIT Entrance Drive Roller	S	②	Wipe clean, dry cloth
LCIT Entrance Idle Roller	S,T	①	Wipe clean, dry cloth
Dust Collection Unit	S	②	Wipe clean, dry cloth
Transfer Timing Sensor	S	②	Blower brush for paper dust
Registration Timing Sensor	S,T	①	Blower brush for paper dust
Main Relay Sensor	S	②	Blower brush for paper dust

2.Preventive Maintenance Tables

Part	By	At	Comments
LCIT Relay Sensor	S	②	Blower brush for paper dust
Double Feed Sensor Pair	S	②	Blower brush for paper dust
CIS	S	②	Blower brush for paper dust
Registration Gate Roller Drive Gear		15000K ③	Replace three gears and apply grease.
Tray/Drawer Unit Paper Removal Sensor	S	①	Blower brush for paper dust
LCT/Drawer Unit Paper Removal Sensor	S	①	Blower brush for paper dust
Paper Exit/Peripheral Paper Removal Sensor	S	①	Blower brush for paper dust
Duplex/Inverter Path Paper Removal Sensor	S	①	Blower brush for paper dust

①: Inspect every 100K and clean if necessary.

②: Inspect after first 600K and then every 300K thereafter and clean if necessary.

③: Clean if JAM 31 (Transfer timing sensor) occurs twice or more per day.

---

### Paper Exit

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Part	By	At	Comments
Cooling Roller	S	②	Wipe clean, dry cloth
Cooling Belt	S	②	Wipe clean, dry cloth
Exit Relay Drive Roller	S,T	①	Wipe clean, dry cloth
Exit Relay Idle Roller	S,T	①	Wipe clean, dry cloth
Exit Drive Roller	S,T	①	Wipe clean, dry cloth
Exit Idle Roller	S,T	①	Wipe clean, dry cloth
Inverter Entrance Drive Roller	S	②	Wipe clean, dry cloth
Inverter Entrance Idle Roller	S	②	Wipe clean, dry cloth
Inverter Exit Drive Roller	S	②	Wipe clean, dry cloth
Inverter Exit Idle Roller	S	②	Wipe clean, dry cloth
Exit/Invert Drive Roller	S,T	①	Wipe clean, dry cloth
Exit/Invert Idle Roller	S,T	①	Wipe clean, dry cloth
Exit Junction Gate Sensor	S,T	①	Blower brush for paper dust
Exit Sensor	S,T	①	Blower brush for paper dust
Exit/Invert Sensor	S	②	Blower brush for paper dust
Purge Relay Sensor	S,T	①	Blower brush for paper dust
Exit Anti-Static Brush	S,T	①	Wipe clean, dry cloth
Invert/Exit Anti-static Brush	S	②	Wipe clean, dry cloth

①: Inspect every **100K** and clean if necessary.

②: Inspect after first **600K** and then every **300K** thereafter and clean if necessary.

## 2.Preventive Maintenance Tables

### Duplex

Part	By	At	Comments
Duplex Switchback Drive Roller	S	②	Wipe clean, dry cloth
Duplex Switchback Idle Roller	S	②	Wipe clean, dry cloth
Duplex Invert Sensor	S	②	Blower brush for paper dust
Purged Paper Sensor	S,T	①	Blower brush for paper dust
Duplex Transport Drive Rollers	S	②	Wipe clean, dry cloth
Duplex Transport Idle Rollers	S,T	①	Wipe clean, dry cloth
Duplex Transport Sensors	S,T	①	Blower brush for paper dust
Tray/Drawer Unit Paper Removal Sensor	S	①	Blower brush for paper dust
LCT/Drawer Unit Paper Removal Sensor	S	①	Blower brush for paper dust
Exit/Peripheral Paper Removal Sensor	S	①	Blower brush for paper dust
Duplex/Invert Path Paper Removal Sensor	S	①	Blower brush for paper dust

①: Inspect every **100K** and clean if necessary.

②: Inspect after first **600K** and then every **300K** thereafter and clean if necessary.

### ADF

Part	By	PM	120K	Action
Feed Operation*1	S	I		See Note 1
Covers	S	I/C		Alcohol or water dampened cloth.
Safety*2	S	I		See Note 2
Feed Belt	S	C	R	Alcohol or water dampened cloth.
Pick-up Roller	S	C	R	
Separation Roller	S	C	R	
CIS glass	S,U	I/C		Glass cleaner
Sensors*3	S	C		Blower brush
Platen	S,U	C		Alcohol or water dampened cloth.
Feed Drive Gears	S	L		EM-50L Grease
Feed Rollers*4	S	C		Alcohol or water dampened cloth.
Idle Rollers	S	C		
White Roller	S	C		
White Plate	S	C		

\*1 Check basic feed operation for skew, incorrect image registration.

\*2 Check for spurious noise during ADF operation.

\*3 All sensors in the paper patch: original width sensors, double-feed sensors, exit sensors, etc.

\*4 All rollers in the feed unit and original feed path.



## PM Tables for Peripherals

Column	Meaning	
<b>Part</b>	Name of the component, unit	
<b>By</b>	Person Responsible	
	<b>S</b>	Service technician (CE)
	<b>U</b>	User
	<b>T</b>	TCRU trained user
<b>***K</b>	Interval for checking, cleaning, replacement	
	Example: 300K where K = 1000, or 300,000 printed sheets.	
	<b>I</b>	Inspect
	<b>C</b>	Clean at PM or as necessary
	<b>L</b>	Lubricate
	<b>R</b>	Replace after total count exceeded
<b>Note</b>	What to use, etc. Materials required for cleaning, lubrication, etc.	

## Decurl Unit DU5070

Item	S/U/T	Interval	Note
Transport guide plate	S	△500K	Water or alcohol dampened cloth
Decurl rollers (drive, idle roller)	S	△500K	Water or alcohol dampened cloth
Transport rollers (drive, idle roller)	S	△500K	Water or alcohol dampened cloth

## Multi Bypass Tray BY5020

Item	1000K	EM	Note
Pickup Roller	R	I/C	<ul style="list-style-type: none"> <li>Clean as necessary</li> <li>Water or alcohol dampened cloth</li> </ul>
Feed Roller	R	I/C	
Separation Roller	R	I/C	

## LCIT RT5110

Item	S/U/T	Interval	Note
Transport Guide Plate	S	△100K	<ul style="list-style-type: none"> <li>Clean as necessary</li> <li>Water or alcohol dampened cloth</li> </ul>
Grip Rollers (drive, idle rollers)	S	△100K	
Pickup Roller	S	△300K	
Feed Roller	S	△300K	
Separation Roller	S	△300K	
Sensors (Feed, Transport, Exit)	S	△100K	<ul style="list-style-type: none"> <li>Clean as necessary</li> <li>Remove paper dust with blower brush</li> </ul>

2.Preventive Maintenance Tables

LCIT RT5130

Part	By	100K	1000K	Note
Transport guide plate	S	I/C		Damp cloth
Grip rollers (drive, idle rollers)	S	I/C		
Transport rollers	S	I/C		
Pick-up rollers (4th, 5th, 6th tray)* <sup>1</sup>	S,T	I/C	R	
Paper feed roller (4th, 5th, 6th tray) * <sup>1</sup>	S,T	I/C	R	
Separation rollers (4th, 5th, 6th tray) * <sup>1</sup>	S,T	I/C	R	
Sensors (Feed, Transport, Exit)	S	I/C		Blower brush

\*1 Replace these rollers as soon as target service life has been exceeded. May require replacement earlier if double-feeds and jams are occurring frequently.

Vacuum Feed LCIT RT5120

Item	By	7000K	Interval	Note
Feed Belt (Tray1,2)	S	R	7000K	Replace 3 belts at the same time. Alcohol dampened cloth
Rollers	S		Replace many jams occurs and no-carbon papers are transported.	Alcohol dampened cloth
Sensors	S			Blower brush
Transport Guide Plate	S			Alcohol dampened cloth
Side Fence	S		If the side fence does not slide smoothly, perform this maintenance.	Side fence slide shaft cleaning and oiling Use engine oil for oiling. The oil should have viscosity 10W-30. Any brand can be used.

Cover Interposer Tray CI5040

The PM interval is for the number of sheets that have been fed.

Part	By	PM	300K	Note
Drive, Idle rollers	S	I/C		Waste cloth (Alcohol or water dampened cloth)
Feed Roller	S	I/C	R	
Reverse roller	S	I/C	R	
Pick-up roller	S	I/C	R	
Sensors	S	I/C		
Transport Guide Plate	S	I/C		

## 2.Preventive Maintenance Tables

### Finisher SR5110/ Booklet Finisher SR5120

Part	By	At	Action	Note
Paper Transport	S	500K	I/C	Paper wrinkled, creased, torn?
Operation	S	500K	I/C	Operation correct?
Display Check	S	500K	I/C	Correct messages displayed when door opened, etc.?
Covers	S	500K	I/C	Damp cloth, check for damage
Safety	S	500K	I/C	Spurious noise during operation?
Other	S	500K	I/C	Used within specifications?
Drive Rollers	S	500K	I/C	Alcohol damp cloth
Idle Rollers	S	500K	I/C	
Anti-static Brushes	S	500K	I/C	
Brush Roller* <sup>1</sup>	S	2500K	R* <sup>1</sup>	
Bearings	S	500K	I/C/L	Silicone oil if noisy
Sensors	S	500K	I/C	Blower brush
Jog Fences	S	500K	I/C	Make sure screws are tight
Corner Stapler	S	5000K	R* <sup>1</sup>	Empty hopper
Punch Unit* <sup>3</sup>	S	2000K	R* <sup>1</sup>	
Trimnings Hopper	S	500K	I/C	Empty hopper
Positioning Roller* <sup>4</sup>	S	2500K	R* <sup>1</sup>	
Shift Sponge Roller	S	3000K	R* <sup>1</sup>	
Booklet Stapler	S	20000K	R* <sup>1</sup>	
Shift Tray Worm Gear	S	500K	I/C	
Booklet Output Tray Belt	S	500K	I/C	Alcohol damp cloth

\*1 Separate counts are logged for the operation of these rollers because they will not be the same as the sheet counts for the main machine (the finisher will not be used for every job so the counts will be different). Be sure to replace these items after their individual counts have been exceeded.

\*2 Estimated service life: 1250K

\*3 Estimated service life: 1000K

\*4 Estimated service life: 1250K

### Finisher SR5090/ Booklet Finisher SR5100

Rollers (Drive/Driven)	<b>C</b> <b>500K</b>	✓	Wipe with a cloth dampened with alcohol.
Discharge Brush	<b>C</b> <b>500K</b>	✓	Wipe with a cloth dampened with alcohol.
Bearings	<b>C</b>	✓	Lubricate with silicone oils when noise occurred.

## 2.Preventive Maintenance Tables

	<b>500K</b>		
Sensors	<b>C</b> <b>500K</b>	✓	Clean with a blower brush.
Corner Stapler	<b>R</b> <b>3000K</b>	✓	Replace when the corner stapling counter in the logging data reached 3000K.
Booklet Stapler	<b>R</b> <b>1000K</b>	✓	Replace when the booklet stapling counter on logging data reached 1000K.
Item	Cycle	EM parts	Notes

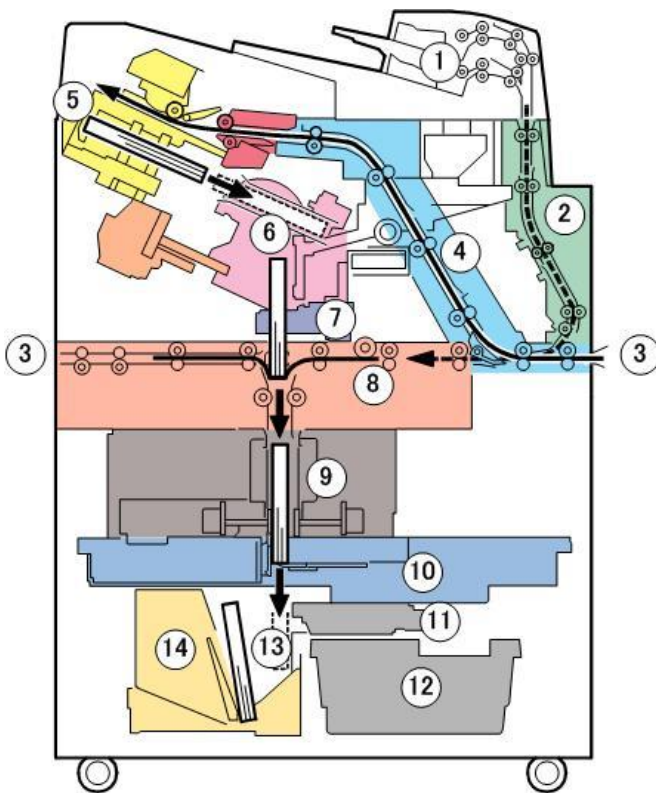
### Multi-Folding Unit FD5020

Part	By	At	Action	Note
Paper Transport	S	PM	I	Paper wrinkled, creased, torn?
Operation	S	PM	I	Operation correct?
Display Check	S	PM	I	Correct messages displayed for mode, door opened, etc.?
Covers	S	PM	I/C	Damp cloth, check for damage
Safety	S	PM	I	Spurious noise during operation?
Other	S	PM	I	Used within specifications?
Drive Rollers	S	PM	I/C	Alcohol dampened cloth
Idle Rollers	S	PM	I/C	
Anti-static Brush	S	PM	I/C	
Bearings	S	PM	I/C/L	Silicone oil if noisy
Sensors	S	PM	I/C	Blower brush
Fold Rollers (1st, 2nd, 3rd)	S	PM	I/C	Alcohol dampened cloth
Crease Rollers (drive, idle roller)	S	PM	I/C	
Fold Roller Drive Gears	S	PM	I/C/L	If lubrication insufficient, apply G501
Horizontal Transport Motor	S	60000K	R*1	
Horizontal Exit Motor	S	60000K	R*1	
Solenoid	S	20000K	R*2	

\*1 Replace after 51000K

\*2 Replace after 20000K

Perfect Binder GB5010



d7360001

No.	Area
1	Cover Interposer Tray for Perfect Binder Type S1
2	Vertical Path (Covers from Inserter)
3	Horizontal Paper Path
4	Signature Path
5	Stacking Tray
6	Main Grip Unit
7	Gluing Unit
8	Cover Registration Unit
9	Signature Rotation Unit
10	Trimming Unit
11	Trimming Buffer Unit
12	Trimmings Box
13	Book Buffer
14	Book Output

Part	By	At	Action	Note
Paper Transport	S	500K	I	Paper wrinkled, creased, torn?
Operation	S	500K	I	Operation correct?

## 2.Preventive Maintenance Tables

Part	By	At	Action	Note
Display Check	S	500K	I	Correct messages displayed for mode, door opened, etc.?
Covers	S	500K	I/C	Damp cloth, check for damage
Safety	S	500K	I	Spurious noise during operation?
Other	S	500K	I	Used within specifications?
Drive Rollers	S	500K	I/C	Alcohol damp cloth
Idle Rollers	S	500K	I/C	
Anti-static Brush	S	500K	I/C	
Bearings	S	500K	I/C/L	Silicone oil
Sensors	S	500K	I/C	Blower Brush
Blade	S	4000K	R*1	
Trimming Buffer Unit	S	4000K	R*2	
Blade Cradle	S	1000K	R*1	
Cover Unit Switchback Roller Torque Limiter	S	3000K	R*3	
Signature Thickness Sensor	S	14300K	R*3	
Gluing Unit	S	2000 hr.	R	2000 hours
Book Rotation Unit Diode	S	14300K	R*3	
Trimming Buffer Motor	S	14300K	R*3	
Main Grip Unit Gears	S	14300K	R*3	
Torque Limiter (Signature Rotation Unit for Trimming)	S	14300K	R*3	
Spine Fold Unit Harness (Left)	S	14300K	R*3	
Spine Fold Unit Harness (Right)	S	14300K	R*3	
Pickup Roller	S	286000K	R*3	
Separation Roller	S	286000K	R*3	
Feed Roller	S	286000K	R*3	
Magnetic Clutch	S	286000K	R*3	
Separation Roller Torque Limiter	S	286000K	R*3	

\*1 A message on the operation panel alerts the operator when it is time to replace this item.

\*2 This item should always be replaced with the blade.

\*3 Separate counts are logged for the operation of these items, because they will not be the same as the sheet counts for the main machine (the finisher will not be used for every job so the counts will be different). Be sure to replace these items after their individual counts have been exceeded.

2.Preventive Maintenance Tables

Ring Binder RB5030

Part	By	At	Action	Note
Paper Transport	S	Any time (if you need)	I	Check if a paper is wrinkled, scratched, or torn.
Operation	S	Any time (if you need)	I	Check the mode change key, jam and reset SW operate normally.
Display Check	S	Any time (if you need)	I	Correct messages displayed for mode, jam, door opened, etc.
Covers	S	Any time (if you need)	I/C	Check if the covers have abnormal dirt or a scratch.
Safety	S	Any time (if you need)	I	-
Other	S	Any time (if you need)	I	Used within specifications?
Drive Rollers	S	Any time (if you need)	I/C	When a roller is dirty, wipe out and clean it. Water damp cloth
Idle Rollers	S	Any time (if you need)	I/C	
Anti-static Brush	S	Any time (if you need)	I/C	
Paddle Roller	S	Any time (if you need)	I/C	
Bearings	S	Any time (if you need)	I/C/L	When an strange sound is heard, lubricate the bearings. Launa oil
Sensors	S	Any time (if you need)	I/C	-
Punch	S	Any time (if you need)	I/C/R	Replace at 1000K
Punch-outs	U	Any time (if you need)	C	Empty hopper

High Capacity Stacker SK5040

Item	500K	EM	Note
Drive Rollers	I/C	I/C	As occasion demands, clean with an alcohol.
Idle Rollers	I/C	I/C	
Anti-Static Brush	I/C	I/C	

## 2.Preventive Maintenance Tables

Item	500K	EM	Note
Bearings	I/C	I/C	Lubricate with the grease when error occurs. Apply silicone oil for resin bearings. Apply launa oil for metallic bearings.
Sensors	I/C	I/C	Blower brush
Jogger Fences	I/C	I/C	
Shift Tray Rail	I/C	I/C	Lubricate with the grease (Mobiltemp 78).
Paddles	I/C	I/C	As occasion demands, clean with damp cloth.
Exit Roller Shaft	I/C	I/C	

### Trimmer Unit TR5050

Part	By	PM Visit	
Rollers (drive, idle rollers)	S	IC	Water, clean cloth
Belts	S	IC	
Discharge brush	S	IC	Cloth, blower brush
Roller shafts	S	IL	Lubricate with silicone oil if noisy
Sensors	S	IC	Blower brush
Paper trimmings hopper	U	IC	Empty, make sure the user knows how to empty the hopper
Trimming Blade	S	R	Replace the blade after 400K. SP7989 (Trim Count) displays the total count.



## 3.SP Mode Tables

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### Engine and Controller SP Mode

In this machine, the SP tables are provided in PDF format.

Refer to the separate PDF:

"Engine SP: Copier Models"

"Engine SP: Printer Models"

"Controller SP: Copier Models"

"Controller SP: Printer Models"

## Input Check-01

Input Check: Main Machine, RT5110, RT5130, Bypass Tray (1/2)

<b>5803</b>	<b>[INPUT Check]</b>		
	Gets information of specified sensor.		
5-803-001	Paper Feed 1	E	
Bit	Component	0	1
Bit 0	Rear Fence HP Sensor	Not in HP	HP detected
Bit 1	Rear Fence Return Sensor	Not detected	Detected
Bit 2	Right Tray Paper End Sensor	Not detected	Detected
Bit 3	Left Tray Paper End Sensor	Not detected	Detected
Bit 4	Tandem Tray End Fence Open Sensor: Rear	Not Open	Open
Bit 5	Tandem Tray End Fence Closed Sensor: Rear	Not Closed	Closed
Bit 6	Tandem Tray End Fence Open Sensor: Front	Not open	Open
Bit 7	Tandem Tray End Fence Close Sensor: Front	Not closed	Closed

5-803-002	Paper Feed 2	E	
Bit	Component	0	1
Bit 0	Lower Limit Sensor (Right tandem tray)	Not lowest position	Lowest position
Bit 1	Paper Height Sensor 1	See table below	
Bit 2	Paper Height Sensor 2		
Bit 3	Paper Height Sensor 3		
Bit 4	Paper Height Sensor 4		
Bit 5	1st Paper End Sensor	Detected (Paper in tray)	Not detected (Paper end)
Bit 6	2nd Paper End Sensor	Detected (Paper in tray)	Not detected (Paper end)
Bit 7	3rd Paper End Sensor	Detected (Paper in tray)	Not detected (Paper end)

**Table for Paper Height Sensor**

Paper Height Sensor 1	0	0	0	0	0	0	1	1
Paper Height Sensor 2	0	0	0	0	1	1	1	0
Paper Height Sensor 3	0	0	1	1	1	0	0	0
Paper Height Sensor 4	0	1	1	0	0	0	0	0
Amount of Paper (%)	100	80	50		25		10	

5-803-003	Paper Feed 3	E	
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Bit	Component	0	1
Bit 0	Tray 2 Paper Height Detection 1	See table below	
Bit 1	Tray 2 Paper Height Detection 2		
Bit 2	Tray 2 Paper Size Sensor	See table below	
Bit 3			
Bit 4			
Bit 5			
Bit 6			
Bit 7	(Unused)	-	-

**Table for Tray 2 Paper Height Detection**

Tray 2 Height Detection 1	1	0	0	1
Tray 2 Height Detection 2	1	1	0	0
Amount of Paper (%)	100	50	30	10

**Table for Tray 2 Paper Size Sensor**

Paper size		bit 6	bit 5	bit 4	bit 3	bit 2
		SW1	SW2	SW3	SW4	SW5
12x18" (SRA3)	SEF	0	0	0	0	0
A3	SEF	0	0	1	1	0
B4	SEF	0	1	1	0	0
A4	SEF	1	0	1	1	0
	LEF	0	0	1	1	1
B5	SEF	0	1	0	1	0
	LEF	1	1	1	0	0
A5	SEF	0	0	0	1	0
	LEF	1	0	0	1	0
DLT	SEF	0	0	0	1	1
LG	SEF	0	1	0	0	1
LT	SEF	0	0	1	0	1
	LEF	1	0	0	1	1
HLT	SEF	1	0	0	0	1
	LEF	0	0	0	0	1
F4	SEF	0	0	1	0	0
Folio	SEF	1	0	1	0	0
F	SEF	1	0	0	0	0
Executive	SEF	0	1	0	1	1
	LEF	1	1	0	0	0

### 3.SP Mode Tables

8 Kai 267x388mm	SEF	1	1	0	0	1
16 Kai194x267mm	SEF	0	1	1	0	1
	LEF	0	1	0	0	0

5-803-004	Paper Feed 4	E	
Bit	Component	0	1
Bit 0	Tray 3 Paper Height Detection 1	See table below	
Bit 1	Tray 3 Paper Height Detection 2		
Bit 2	Tray 3 Paper Size Sensor	See table below	
Bit 3			
Bit 4			
Bit 5			
Bit 6			
Bit 7	(Unused)	-	-

**Table for Tray 3 Paper Height Detection**

Tray 3 Height Detection 1	1	0	0	1
Tray 3 Height Detection 2	1	1	0	0
Amount of Paper (%)	100	50	30	10

**Table for Tray 3 Paper Size Sensor**

Paper size		bit 6	bit 5	bit 4	bit 3	bit 2
		SW1	SW2	SW3	SW4	SW5
12x18" (SRA3)	SEF	0	0	0	0	0
A3	SEF	0	0	1	1	0
B4	SEF	0	1	1	0	0
A4	SEF	1	0	1	1	0
	LEF	0	0	1	1	1
B5	SEF	0	1	0	1	0
	LEF	1	1	1	0	0
A5	SEF	0	0	0	1	0
	LEF	1	0	0	1	0
DLT	SEF	0	0	0	1	1
LG	SEF	0	1	0	0	1
LT	SEF	0	0	1	0	1
	LEF	1	0	0	1	1
HLT	SEF	1	0	0	0	1
	LEF	0	0	0	0	1

## 3.SP Mode Tables

F4	SEF	0	0	1	0	0
Folio	SEF	1	0	1	0	0
F	SEF	1	0	0	0	0
Executive	SEF	0	1	0	1	1
	LEF	1	1	0	0	0
8 Kai 267x388mm	SEF	1	1	0	0	1
16 Kai 194x267mm	SEF	0	1	1	0	1
	LEF	0	1	0	0	0

5-803-005	Paper Feed 5	E	
Bit	Component	0	1
Bit 0	1st Paper Upper Limit Sensor	Not detected	Detected
Bit 1	2nd Paper Upper Limit Sensor	Not detected	Detected
Bit 2	3rd Paper Upper Limit Sensor	Not detected	Detected
Bit 3	(Unused)	-	-
Bit 4	(Unused)	-	-
Bit 5	1st Paper Feed Sensor	Detected	Not detected
Bit 6	2nd Paper Feed Sensor	Detected	Not detected
Bit 7	3rd Paper Feed Sensor	Detected	Not detected

5-803-006	Paper Feed 6	E	
Bit	Component	0	1
Bit 0	1st Transport Sensor	Detected	Not detected
Bit 1	2nd Transport Sensor	Detected	Not detected
Bit 2	3rd Transport Sensor	Detected	Not detected
Bit 3	Vertical Transport Sensor	Detected	Not detected
Bit 4	Main Relay Sensor	Detected	Not detected
Bit 5	Registration Entrance Sensor	Detected	Not detected
Bit 6	LCT Relay Sensor	Detected	Not detected
Bit 7	Registration Timing Sensor	Detected	Not detected

5-803-007	Paper Feed 7	E	
Bit	Component	0	1
Bit 0	Transfer Timing Sensor	Detected	Not detected
Bit 1	Transport Roller Separation Sensor	Detected	Not detected
Bit 2	Fusing Exit Sensor: Center	Detected	Not detected
Bit 3	Pressure Roller Paper Sensor	Not detected	Detected

### 3.SP Mode Tables

Bit 4	Fusing Belt Sensor	Not detected	Detected
Bit 5	Exit Junction Sensor	Detected	Not detected
Bit 6	Exit Sensor	Detected	Not detected
Bit 7	Exit Invert Sensor	Detected	Not detected

5-803-008	Paper Feed 8	E	
Bit	Component	0	1
Bit 0	Duplex Invert Sensor	Detected	Not detected
Bit 1	Duplex Transport Sensor 1	Detected	Not detected
Bit 2	Duplex Transport Sensor 2	Detected	Not detected
Bit 3	Duplex Transport Sensor 3	Detected	Not detected
Bit 4	Duplex Transport Sensor 4	Detected	Not detected
Bit 5	Duplex Transport Sensor 5	Detected	Not detected
Bit 6	Duplex Transport Sensor 6	Detected	Not detected
Bit 7	Duplex Unit Exit Sensor	Detected	Not detected

5-803-009	Paper Feed 9	E	
Bit	Component	0	1
Bit 0	Purge Relay Sensor	Detected	Not detected
Bit 1	Purged Paper Sensor	Not detected	Detected
Bit 2	(Unused)	-	-
Bit 3	(Unused)	-	-
Bit 4	(Unused)	-	-
Bit 5	Registration Gate Roller HP Sensor	Not in HP	HP detected
Bit 6	LE Shift Unit HP Sensor	Not in HP	HP detected
Bit 7	TE Shift Unit HP Sensor	Not in HP	HP detected

5-803-010	Paper Feed 10	E	
Bit	Component	0	1
Bit 0	Main Relay HP Sensor	Not in HP (Roller separated)	HP detected (Roller in contact)
Bit 1	LCT Relay HP Sensor	Not in HP (Roller separated)	HP detected (Roller in contact)
Bit 2	Exit Junction Gate HP Sensor	Invert path	Straight path
Bit 3	Invert Exit HP Sensor	HP detected (Roller in contact)	Not in HP (Roller separated)

Bit 4	Decurl Unit HP Sensor	Not in HP	HP detected
Bit 5	Decurl Unit Limit Sensor	Normal	Over limit
Bit 6	(Unused)	-	-
Bit 7	(Unused)	-	-

5-803-011	Paper Feed 11	E	
Bit	Component	0	1
Bit 0	Tray/drawer unit paper removal sensor	Detected	Not detected
Bit 1	LCT/drawer unit paper removal sensor	Detected	Not detected
Bit 2	Paper exit/Peripheral paper removal sensor	Detected	Not detected
Bit 3	Duplex/inverter path paper removal sensor	Detected	Not detected
Bit 4	Purged paper full sensor	Detected	Not detected
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

<b>5803</b>	<b>[INPUT Check]</b>		
	Gets information of specified sensor for RT5070, RT5080, and Bypass Tray.		
5-803-027	LCT-CPU-Port1	E	[0 to 255 / <b>0</b> / 1]
5-803-028	LCT-CPU-Port7	E	[0 to 255 / <b>0</b> / 1]
5-803-029	LCT-CPU-Port9	E	[0 to 255 / <b>0</b> / 1]
5-803-030	LCT-eIO1-PortB	E	[0 to 255 / <b>0</b> / 1]
5-803-031	LCT-eIO1-PortC	E	[0 to 255 / <b>0</b> / 1]
5-803-032	LCT-eIO1-PortD	E	[0 to 255 / <b>0</b> / 1]
5-803-033	LCT-eIO2-PortB	E	[0 to 255 / <b>0</b> / 1]
5-803-034	LCT-eIO2-PortC	E	[0 to 255 / <b>0</b> / 1]
5-803-035	LCT-eIO2-PortD	E	[0 to 255 / <b>0</b> / 1]
5-803-036	LCT-eIO3-PortB	E	[0 to 255 / <b>0</b> / 1]
5-803-037	LCT-eIO3-PortC	E	[0 to 255 / <b>0</b> / 1]
5-803-038	LCT-eIO3-PortD	E	[0 to 255 / <b>0</b> / 1]
5-803-039	LCT-eIO4-PortB	E	[0 to 255 / <b>0</b> / 1]
5-803-040	LCT-eIO4-PortC	E	[0 to 255 / <b>0</b> / 1]
5-803-041	LCT-eIO4-PortD	E	[0 to 255 / <b>0</b> / 1]

#### CPU-Port1 (5-803-027 / A4 LCT and A3 LCT) bit information

Bit	Component	0	1
bit0	-	-	-
bit1	-	-	-

### 3.SP Mode Tables

Bit	Component	0	1
bit2	-	-	-
bit3	-	-	-
bit4	-	-	-
bit5	-	-	-
bit6	-	-	-
bit7	Separation HP sensor	Not Detect	Detect

#### CPU-Port7 (5-803-028/ A4 LCT and A3 LCT) bit information

Bit	Component	0	1
bit0	-	-	-
bit1	-	-	-
bit2	-	-	-
bit3	-	-	-
bit4	-	-	-
bit5	Door Safety Switch	Close	Open
bit6	-	-	-
bit7	-	-	-

#### CPU-Port9 (5-803-029 /A4 LCT and A3 LCT) bit information

bit	Component	0	1
bit0	SW5_1	ON	OFF
bit1	SW5_2	ON	OFF
bit2	SW5_3	ON	OFF
bit3	SW5_4	ON	OFF
bit4	SW5_5	ON	OFF
bit5	SW5_6	ON	OFF
bit6	SW5_7	ON	OFF
bit7	SW5_8	ON	OFF

#### eIO1-PortB (5-803-030/ A4 LCT and A3 LCT) bit information

Bit	Component	0	1
bit0	1st tray Paper Height Sensor 1	Not Detect	Detect
bit1	1st tray Paper Height Sensor 2	Not Detect	Detect
bit2	1st tray Paper Height Sensor 3	Not Detect	Detect
bit3	1st tray Paper Height Sensor 4	Not Detect	Detect
bit4	1st tray Paper Width Sensor 1	Not Detect	Detect
bit5	1st tray Paper Width Sensor 2	Not Detect	Detect
bit6	1st tray Paper Width Sensor 3	Not Detect	Detect



Bit	Component	0	1
bit7	1st tray Paper Length Sensor (A3 LCT only)	Not Detect	Detect

**eIO1-PortC (5-803-031/ A4 LCT and A3 LCT) bit information**

bit	Component	0	1
bit0	1st tray Paper Feed Unit Set Detection (TCRU)	Set	Not Set
bit1	1st tray Paper End Sensor	Detect	Not Detect
bit2	1st tray Lift Sensor	Detect	Not Detect
bit3	1st tray Paper Feed Sensor	Detect	Not Detect
bit4	-	-	-
bit5	1st tray Air Assist Fan (Rear) Alarm (A3 LCT only)	Normal	Abnormal
bit6	1st tray Air Assist Fan (Front) Alarm (A3 LCT only)	Normal	Abnormal
bit7	1st tray Set Detection (A3 LCT only)	Set	Not Set

**eIO1-PortD (5-803-032 / A4 LCT and A3 LCT ) bit information**

bit	Component	0	1
bit0	SW1_4	ON	OFF
bit1	SW1_3	ON	OFF
bit2	SW1_2	ON	OFF
bit3	SW1_1	ON	OFF
bit4	LCT Exit Sensor	Detect	Not Detect
bit5	1st tray Relay Sensor 2 (Upper)	Detect	Not Detect
bit6	1st tray Relay Sensor 1 (Lower) (A3 LCT only)	Detect	Not Detect
bit7	1st tray Transport Sensor	Detect	Not Detect

**eIO2-PortB (5-803-033 / A4 LCT and A3 LCT) bit information**

bit	Component	0	1
bit0	2nd Tray Paper Height Sensor 1	Not Detect	Detect
bit1	2nd Tray Paper Height Sensor 2	Not Detect	Detect
bit2	2nd Tray Paper Height Sensor 3	Not Detect	Detect
bit3	2nd Tray Paper Height Sensor 4	Not Detect	Detect
bit4	2nd Tray Paper Width Sensor 1	Not Detect	Detect
bit5	2nd Tray Paper Width Sensor 2	Not Detect	Detect
bit6	2nd Tray Paper Width Sensor 3	Not Detect	Detect
bit7	2nd Tray Paper Length Sensor (A3 LCT only)	Not Detect	Detect

**eIO2-PortC (5-803-034 / A4 LCT and A3 LCT) bit information**

Bit	Component	0	1
bit0	2nd tray Paper Feed Unit Set Detection (TCRU)	Set	Not Set

### 3.SP Mode Tables

Bit	Component	0	1
bit1	2nd tray Paper End Sensor	Detect	Not Detect
bit2	2nd tray Lift Sensor	Detect	Not Detect
bit3	2nd tray Paper Feed Sensor	Detect	Not Detect
bit4	-	-	-
bit5	2nd tray Air Assist Fan (Rear) Alarm (A3 LCT only)	Normal	Abnormal
bit6	2nd tray Air Assist Fan (Front) Alarm (A3 LCT only)	Normal	Abnormal
bit7	2nd tray Set Detection (A3 LCT only)	Set	Not Set

#### eIO2-PortD (5-803-035 / A4 LCT and A3 LCT) bit information

bit	Component	0	1
bit0	SW2_4	ON	OFF
bit1	SW2_3	ON	OFF
bit2	SW2_2	ON	OFF
bit3	SW2_1	ON	OFF
bit4	-	-	-
bit5	-	-	-
bit6	2nd tray Relay Sensor (A3 LCT only)	Detect	Not Detect
bit7	2nd tray Transport Sensor	Detect	Not Detect

#### eIO3-PortB (5-803-036 / A4 LCT and A3 LCT) bit information

bit	Component	0	1
bit0	3rd tray Paper Height Sensor 1	Not Detect	Detect
bit1	3rd tray Paper Height Sensor 2	Not Detect	Detect
bit2	3rd tray Paper Height Sensor 3	Not Detect	Detect
bit3	3rd tray Paper Height Sensor 4	Not Detect	Detect
bit4	3rd tray Paper Width Sensor 1	ON	OFF
bit5	3rd tray Paper Width Sensor 2	ON	OFF
bit6	3rd tray Paper Width Sensor 3	ON	OFF
bit7	3rd tray Paper Length Sensor (A3 LCT only)	Not Detect	Detect

#### eIO3-PortC (5-803-037 / A4 LCT and A3 LCT) bit information

bit	Component	0	1
bit0	3rd tray Paper Feed Unit Set Detection (TCRU)	Set	Not Set
bit1	3rd tray Paper End Sensor	Detect	Not Detect
bit2	3rd tray Lift Sensor	Detect	Not Detect
bit3	3rd tray Paper Feed Sensor	Detect	Not Detect
bit4	-	-	-
bit5	3rd tray Air Assist Fan (Rear) Alarm (A3 LCT only)	Normal	Abnormal

bit	Component	0	1
bit6	3rd tray Air Assist Fan (Front) Alarm (A3 LCT only)	Normal	Abnormal
bit7	3rd tray Set Detection (A3 LCT only)	Set	Not Set

**eIO3-PortD (5-803-038 / A4 LCT and A3 LCT) bit information**

bit	Component	0	1
bit0	-	-	-
bit1	-	-	-
bit2	-	-	-
bit3	-	-	-
bit4	-	-	-
bit5	-	-	-
bit6	3rd tray Relay Sensor (A3 LCT only)	Detect	Not Detect
bit7	3rd tray Transport Sensor	Detect	Not Detect

**eIO4-PortB (5-803-039/ Multi Bypass Tray) bit information**

bit	Component	0	1
bit0	4th Bypass: Lift Sensor 1	Not Detect	Detect
bit1	4th Bypass: Lift Sensor 2	Not Detect	Detect
bit2	4th Bypass: Paper Width Switch 1	Detect	Not Detect
bit3	4th Bypass: Paper Width Switch 2	Detect	Not Detect
bit4	4th Bypass: Paper Width Switch 3	Detect	Not Detect
bit5	4th Bypass: Paper Width Switch 4	Detect	Not Detect
bit6	4th Bypass: Paper Width Switch 5	Detect	Not Detect
bit7	4th Bypass: Paper Length Sensor	Detect	Not Detect

**eIO4-PortC (5-803-040/ Multi Bypass Tray) bit information**

bit	Component	0	1
bit0	4th Bypass: Tray Lower Limit Sensor	Not Detect	Detect
bit1	4th Bypass: Paper End Sensor	Detect	Not Detect
bit2	4th Bypass: Paper Height Sensor 1	Detect	Not Detect
bit3	4th Bypass: Paper Feed Sensor	Detect	Not Detect
bit4	-	-	-
bit5	4th Bypass: Tray Lift Switch	ON	OFF
bit6	4th Multi Bypass Slide Detection	Close	Open
bit7	4th Multi Bypass Set Detection	Set	Not Set

## Input Check-02

Input Check: Main Machine, RT5110, RT5130, Bypass Tray (2/2)

### eIO4-PortD (5-803-041/ Multi Bypass Tray) bit information

bit	Component	0	1
bit0	-	-	-
bit1	-	-	-
bit2	-	-	-
bit3	4th Bypass: Paper Height Sensor 2	Detect	Not Detect
bit4	-	-	-
bit5	-	-	-
bit6	-	-	-
bit7	4th Bypass Transport Sensor 1	Detect	Not Detect

<b>5803</b>	<b>[INPUT Check]</b>		
	Gets information of specified sensor.		
5-803-051	VODKA1 GPIO1	E	
Bit	Component	0	1
Bit 0	-	-	-
Bit 1	-	-	-
Bit 2	-	-	-
Bit 3	-	-	-
Bit 4	-	-	-
Bit 5	ITB/PTR Drive Motor	Normal	Abnormal
Bit 6	Drum Motor	Normal	Abnormal
Bit 7	Drum Cleaning Unit Motor	Normal	Abnormal

5-803-053	VODKA1 GPIO3	E	
Bit	Component	0	1
Bit 0	-	-	-
Bit 1	-	-	-
Bit 2	-	-	-
Bit 3	-	-	-
Bit 4	IOB version 1	Mass production: Bit 4: 0, Bit 5: 1, bit 6: 0, bit 7: 0	
Bit 5	IOB version 2		
Bit 6	IOB version 3		
Bit 7	IOB version 4		

## 3.SP Mode Tables

5-803-057	VODKA1 GPIO7	E	
Bit	Component	0	1
Bit 0	Ozone Air Intake Fan	Normal	Abnormal
Bit 1	Right Air Intake Fan: Front	Normal	Abnormal
Bit 2	Right Air Intake Fan: Rear	Normal	Abnormal
Bit 3	Lubricant End Sensor	End	Remaining
Bit 4	Laser Unit Cooling Fan	Normal	Abnormal
Bit 5	Cleaning Pad HP Sensor	Not in HP	HP detected
Bit 6	Dev. Unit Cooling Fan :Rear	Normal	Abnormal
Bit 7	Drum Cleaning	Set	Not set

5-803-058	VODKA1 GPIO8	E	
Bit	Component	0	1
Bit 0	-	-	-
Bit 1	-	Key counter set: Bit 1: 1, Bit 2: 0	
Bit 2	-		
Bit 3	-	-	-
Bit 4	-	-	-
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-061	VODKA1 GPIO11	E	
Bit	Component	0	1
Bit 0	-	-	-
Bit 1	-	-	-
Bit 2	CIS Cleaning Fan	Normal	Abnormal
Bit 3	Paper Separation Power Pack	Normal	SC detected
Bit 4	-	-	-
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-062	VODKA1 GPIO12	E	
Bit	Component	0	1
Bit 0	Waste Toner Bottle Set	Set	Not set
Bit 1	Waste Toner Bottle Full	Detected	-

### 3.SP Mode Tables

		(Full status)	
Bit 2	Waste Toner Bottle Near Full	Detected (Near full states)	-
Bit 3	-	-	-
Bit 4	-	-	-
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-063	VODKA1 GPIO13	E	
Bit	Component	0	1
Bit 0	PSU Cooling Fan: Right	Abnormal	Normal
Bit 1	PSU Cooling Fan: Left	Abnormal	Normal
Bit 2	PSU Air Exhaust Fan: M2: Left	Abnormal	Normal
Bit 3	PSU Air Exhaust Fan: M1: Left	Abnormal	Normal
Bit 4	PSU Air Intake Fan: M2: Right	Abnormal	Normal
Bit 5	PSU Air Intake Fan: M1: Right	Abnormal	Normal
Bit 6	-	-	-
Bit 7	-	-	-

5-803-067	VODKA1 GPIO17	E	
Bit	Component	0	1
Bit 0	Right Air Intake Fan: Center	Normal	Abnormal
Bit 1	Charge Wire Cleaner Motor (driver)	Abnormal	Normal
Bit 2	Toner Feed Motor (driver)	Abnormal	Normal
Bit 3	Toner Agitator Motor (driver)	Abnormal	Normal
Bit 4	Toner Supply Bottle End Sensor	Empty	Remaining
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-082	VODKA2 GPIO1	E	
Bit	Component	0	1
Bit 0	Fusing Temperature Sensor (Heating Roller Center)	Abnormal	Normal
Bit 1	Heating Roller Thermistor (Rear)	Abnormal	Normal
Bit 2	Fusing Transport Exhaust Fan	Normal	Abnormal
Bit 3	Fusing Exhaust Fan: Lower	Normal	Abnormal
Bit 4	Fusing Exhaust Fan: Upper	Normal	Abnormal

## 3.SP Mode Tables

Bit 5	Paper Exit Exhaust Fan: Lower Right	Normal	Abnormal
Bit 6	Paper Exit Exhaust Fan: Lower Left	Normal	Abnormal
Bit 7	-	Normal	Abnormal

5-803-091	VODKA2 GPIO10	E	
Bit	Component	0	1
Bit 0	Dev. Roller Rotation Detect Signal	Detected	Not detected
Bit 1	Development Motor	Normal	Abnormal
Bit 2	Development Unit Set	Set	Not set
Bit 3	-	-	-
Bit 4	-	-	-
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-092	VODKA2 GPIO11	E	
Bit	Component	0	1
Bit 0	-	-	-
Bit 1	-	-	-
Bit 2	PTB Fan: Rear	Normal	Abnormal
Bit 3	PTB Fan: Front	Normal	Abnormal
Bit 4	-	-	-
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-093	VODKA2 GPIO12	E	
Bit	Component	0	1
Bit 0	Duplex Transport Sensor 5	Detected	Not detected
Bit 1	Duplex Transport Sensor 6	Detected	Not detected
Bit 2	Duplex Unit Exit Sensor	Detected	Not detected
Bit 3	Transport Roller Separation Sensor	Detected	Not detected
Bit 4	-	-	-
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-094	VODKA2 GPIO13	E	
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### 3.SP Mode Tables

Bit	Component	0	1
Bit 0	DRB set detection	Set	Not set
Bit 1	DRB Motor	Abnormal	Normal
Bit 2	-	-	-
Bit 3	-	-	-
Bit 4	-	-	-
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-098		VODKA2 GPIO17		E	
Bit	Component	0	1		
Bit 0	Paper exit/Peripheral paper removal sensor	Detected	Not detected		
Bit 1	Duplex/inverter path paper removal sensor	Detected	Not detected		
Bit 2	Purged paper full sensor	Detected	Not detected		
Bit 3	Tray lift motor	Abnormal	Normal		
Bit 4	-	-	-		
Bit 5	Double Feed Sensor Sensitivity	Low	High		
Bit 6	-	-	-		
Bit 7	-	-	-		

5-803-108		VODKA2 GPIO27		E	
Bit	Component	0	1		
Bit 0	Duplex Transport Sensor 4	Detected	Not detected		
Bit 1	PTR Fan: Front	Normal	Abnormal		
Bit 2	Registration Entrance Sensor	Detected	Not detected		
Bit 3	LCT Relay Sensor	Detected	Not detected		
Bit 4	Used Toner Bottle Motor	Normal	Abnormal		
Bit 5	-	-	-		
Bit 6	LCT/drawer unit paper removal sensor	Detected	Not detected		
Bit 7	Tray/drawer unit paper removal sensor	Detected	Not detected		

5-803-113		VODKA3 GPIO1		E	
Bit	Component	0	1		
Bit 0	DIPSW1 (IOB)	ON	OFF		
Bit 1	DIPSW2 (IOB)	ON	OFF		
Bit 2	DIPSW3 (IOB)	ON	OFF		
Bit 3	DIPSW4 (IOB)	ON	OFF		



## 3.SP Mode Tables

Bit 4	DIPSW5 (IOB)	ON	OFF
Bit 5	DIPSW6 (IOB)	ON	OFF
Bit 6	DIPSW7 (IOB)	ON	OFF
Bit 7	DIPSW8 (IOB)	ON	OFF

5-803-114	VODKA3 GPIO2	E	
Bit	Component	0	1
Bit 0	Tandem Tray End Fence Open Sensor: Rear	Not Open	Open
Bit 1	Tandem Tray End Fence Closed Sensor: Rear	Not Closed	Closed
Bit 2	-	-	-
Bit 3	-	-	-
Bit 4	-	-	-
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-119	VODKA3 GPIO7	E	
Bit	Component	0	1
Bit 0	Fusing Air Intake Fan: Lower Right	Abnormal	Normal
Bit 1	Fusing Air Intake Fan: Lower Left	Abnormal	Normal
Bit 2	Duplex Fan: Lower Rear	Normal	Abnormal
Bit 3	Duplex Fan: Lower Front	Normal	Abnormal
Bit 4	HP Cooling Exhaust Fan	Normal	Abnormal
Bit 5	PSU-C Cooling Fan	Abnormal	Normal
Bit 6	Vertical Transport Sensor	Detected	Not detected
Bit 7	F1 Transport Sensor	Detected	Not detected

5-803-120	VODKA3 GPIO8	E	
Bit	Component	0	1
Bit 0	-	-	-
Bit 1	Key Card Set	Set	Not set
Bit 2	-	-	-
Bit 3	-	-	-
Bit 4	Toner Bottle Set Sensor: Left	Set	Not set
Bit 5	Toner Bottle Set Sensor: Right	Set	Not set
Bit 6	-	-	-
Bit 7	-	-	-

### 3.SP Mode Tables

5-803-122	VODKA3 GPIO10	E	
Bit	Component	0	1
Bit 0	HP Cooling Suction Fan	Normal	Abnormal
Bit 1	Duplex/Exit drawer set	Set	Not set
Bit 2	Motor drivers on EDRB	Abnormal	Normal
Bit 3	Fusing Motor	Abnormal	Normal
Bit 4	-	-	-
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-123	VODKA3 GPIO11	E	
Bit	Component	0	1
Bit 0	Used Toner Collection Motor	Normal	Abnormal
Bit 1	Ozone Air Exhaust Fan	Normal	Abnormal
Bit 2	PTR Fan: Rear	Normal	Abnormal
Bit 3	-	-	-
Bit 4	-	-	-
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-125	VODKA3 GPIO13	E	
Bit	Component	0	1
Bit 0	Thermopile (Heating Roller Center)	Abnormal	Normal
Bit 1	Thermopile (Heating Roller Ends)	Abnormal	Normal
Bit 2	Thermopile (Heating Roller Full-Bd Ends)	Abnormal	Normal
Bit 3	Fusing Temperature Sensor (Heating Roller Center)	Abnormal	Normal
Bit 4	Fusing Temperature Sensor (Heating Roller End)	Abnormal	Normal
Bit 5	Heating Roller Thermistor (Rear)	Abnormal	Normal
Bit 6	-	-	-
Bit 7	-	-	-

5-803-129	VODKA3 GPIO17	E	
Bit	Component	0	1
Bit 0	Tray 3 Paper Size Sensor	See the table below	
Bit 1			
Bit 2			

Bit 3			
Bit 4			
Bit 5	Motor drivers on RYB	Abnormal	Normal
Bit 6	-	-	-
Bit 7	-	-	-

Table for Tray 3 Paper Size Sensor

Paper size		Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
		SW1	SW2	SW3	SW4	SW5
12x18" (DOM, NA)	SEF	0	0	0	0	0
SRA3 (Other than the above)	SEF					
A3	SEF	0	0	1	1	0
B4	SEF	0	1	1	0	0
A4	SEF	1	0	1	1	0
	LEF	0	0	1	1	1
B5	SEF	0	1	0	1	0
	LEF	1	1	1	0	0
A5	SEF	0	0	0	1	0
	LEF	1	0	0	1	0
DLT	SEF	0	0	0	1	1
LG	SEF	0	1	0	0	1
LT	SEF	0	0	1	0	1
	LEF	1	0	0	1	1
HLT	SEF	1	0	0	0	1
	LEF	0	0	0	0	1
F4	SEF	0	0	1	0	0
Folio	SEF	1	0	1	0	0
F	SEF	1	0	0	0	0
Executive	SEF	0	1	0	1	1
(7.25×10.5")	LEF	1	1	0	0	0
8 Kai 267x388mm	SEF	1	1	0	0	1
16 Kai 194x267mm	SEF	0	1	1	0	1
	LEF	0	1	0	0	0

5-803-134	VODKA3 GPIO22	E	
Bit	Component	0	1
Bit 0	Tray 3 Paper Height Detection 1	See table below	

### 3.SP Mode Tables

Bit 1	Tray 3 Paper Height Detection 2		
Bit 2	Tray 2 Paper Height Detection 1		
Bit 3	Tray 2 Paper Height Detection 2		
Bit 4	1st Paper Upper Limit Sensor	Not detected	Detected
Bit 5	2nd Paper Upper Limit Sensor	Not detected	Detected
Bit 6	3rd Paper Upper Limit Sensor	Not detected	Detected
Bit 7	Used toner collection lock detection	Detected	Not detected

**Table for Tray 2/3 Height Detection**

Tray 2/3 Height Detection 1	1	0	0	1
Tray 2/3 Height Detection 2	1	1	0	0
Amount of Paper (%)	100	50	30	10

5-803-140	VODKA3 GPIO28	E	
Bit	Component	0	1
Bit 0	Power Pack (T1/T2): T1 error	Normal	SC detected
Bit 1	Power Pack (T1/T2): T2 error	Normal	SC detected
Bit 2	Transport Belt Motor	Normal	Abnormal
Bit 3	Motor drivers on TDRB	Abnormal	Normal
Bit 4	PTR Separation Sensor	PTR in contact	PTR separated
Bit 5	ITB Cleaning Unit set	Set	Not set
Bit 6	ITB Unit set	Set	Not Set
Bit 7	-	-	-

5-803-142	VODKA3 GPIO30	E	
Bit	Component	0	1
Bit 0	3rd Paper Feed Sensor	Detected	Not detected
Bit 1	2nd Paper Feed Sensor	Detected	Not detected
Bit 2	1st Paper Feed Sensor	Detected	Not detected
Bit 3	2nd Transport Sensor	Detected	Not detected
Bit 4	3rd Transport Sensor	Detected	Not detected
Bit 5	Rear Fence Open Sensor (Front)	Closed	Open
Bit 6	Spare Fan	-	-
Bit 7	-	-	-

5-803-144	VODKA4 GPIO1	E	
Bit	Component	0	1
Bit 0	Exit Sensor	Detected	Not detected

### 3.SP Mode Tables

Bit 1	Purge Relay Sensor	Detected	Not detected
Bit 2	Duplex Transport Sensor 1	Detected	Not detected
Bit 3	Duplex Transport Sensor 2	Detected	Not detected
Bit 4	Duplex Transport Sensor 3	Detected	Not detected
Bit 5	Invert Exit HP Sensor	Separated	Contact
Bit 6	Exit Junction Gate HP Sensor	Straight path	Invert path
Bit 7	Left Tray Paper End Sensor	Detected	Not detected

5-803-145	VODKA4 GPIO2	E	
Bit	Component	0	1
Bit 0	Right Tray Paper End Sensor	Not detected	Detected
Bit 1	Exit Junction Sensor	Detected	Not detected
Bit 2	-	-	-
Bit 3	-	-	-
Bit 4	-	-	-
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-146	VODKA4 GPIO3	E	
Bit	Component	0	1
Bit 0	-	-	-
Bit 1	-	-	-
Bit 2	-	-	-
Bit 3	-	-	-
Bit 4	Fusing Exit Sensor: Center	Detected	Not detected
Bit 5	Fusing Unit Set	Set	Not set
Bit 6	Pressure Roller Lift Sensor B	-	Excess pressure
Bit 7	Pressure Roller Lift Sensor A	-	HP detected

5-803-150	VODKA4 GPIO7	E	
Bit	Component	0	1
Bit 0	Fusing Belt Sensor	Detected	Not detected
Bit 1	Fusing Unit Set (DOM)	Set	Not set
Bit 2	Fusing Unit Set (EU)	Set	Not set
Bit 3	Fusing Unit Set (NA)	Set	Not set
Bit 4	Fusing Exit Sensor: Rear	Detected	Not detected
Bit 5	Development Cooling Fan: Front	Normal	Abnormal

### 3.SP Mode Tables

Bit 6	Web End Sensor	-	End
Bit 7	-	-	-

5-803-151	VODKA4 GPIO8	E	
Bit	Component	0	1
Bit 0	-	-	-
Bit 1	Pressure Roller Paper Sensor	Detected	Not detected
Bit 2	-	-	-
Bit 3	Decurl Feed Motor	Normal	Abnormal
Bit 4	Decurl Unit Motor	Normal	Abnormal
Bit 5	Belt Cleaning Fan	Normal	Abnormal
Bit 6	-	-	-
Bit 7	-	-	-

5-803-153	VODKA4 GPIO10	E	
Bit	Component	0	1
Bit 0	Decurl Unit Limit Sensor	Normal	Over limit
Bit 1	Total Counter Set	Not set	Set
Bit 2	ID Sensor Fan	Normal	Abnormal
Bit 3	Decurl Unit Set	Set	Not set
Bit 4	-	-	-
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-154	VODKA4 GPIO11	E	
Bit	Component	0	1
Bit 0	Lower Limit Sensor (Right tandem tray)	Not lowest position	Lowest position
Bit 1	Tandem Tray End Fence Open Sensor: Front	Not open	Open
Bit 2	-	-	-
Bit 3	-	-	-
Bit 4	-	-	-
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-157	VODKA4 GPIO14	E	
Bit	Component	0	1

### 3.SP Mode Tables

Bit 0	-	-	-
Bit 1	-	-	-
Bit 2	Toner Bottle Cover Switch	Closed	Open
Bit 3	-	-	-
Bit 4	Tray 3 Set Switch	Set	Not set
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-158	VODKA4 GPIO15	E	
Bit	Component	0	1
Bit 0	-	-	-
Bit 1	-	-	-
Bit 2	Main unit front door open/closed	Closed	Open
Bit 3	+24VS1 supply detection (PSU-A)	ON	OFF
Bit 4	Tray 2 Set Switch	Set	Not set
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-160	VODKA4 GPIO17	E	
Bit	Component	0	1
Bit 0	Tray 2 Paper Size Sensor	See table below	
Bit 1			
Bit 2			
Bit 3			
Bit 4			
Bit 5	-	-	-
Bit 6	Duplex/Invert Sensor	Detected	Not detected
Bit 7	Exit/Invert Sensor	Detected	Not detected

**Table for Tray 2 Paper Size Sensor**

Paper size		bit 4	bit 3	bit 2	bit 1	bit 0
		SW5	SW4	SW3	SW2	SW1
12x18" (DOM, NA)	SEF	0	0	0	0	0
SRA3 (Other than the above)	SEF					
A3	SEF	0	0	1	1	0
B4	SEF	0	1	1	0	0

### 3.SP Mode Tables

A4	SEF	1	0	1	1	0
	LEF	0	0	1	1	1
B5	SEF	0	1	0	1	0
	LEF	1	1	1	0	0
A5	SEF	0	0	0	1	0
	LEF	1	0	0	1	0
DLT	SEF	0	0	0	1	1
LG	SEF	0	1	0	0	1
LT	SEF	0	0	1	0	1
	LEF	1	0	0	1	1
HLT	SEF	1	0	0	0	1
	LEF	0	0	0	0	1
F4	SEF	0	0	1	0	0
Folio	SEF	1	0	1	0	0
F	SEF	1	0	0	0	0
Executive	SEF	0	1	0	1	1
(7.25×10.5")	LEF	1	1	0	0	0
8 Kai 267x388mm	SEF	1	1	0	0	1
16 Kai 194x267mm	SEF	0	1	1	0	1
	LEF	0	1	0	0	0

5-803-162	VODKA4 GPIO19	E	
Bit	Component	0	1
Bit 0	+24V2 power detection (PSU-C)	ON	OFF
Bit 1	-	-	-
Bit 2	1st Paper End Sensor	Detected (Paper in tray)	Not detected (Paper end)
Bit 3	2nd Paper End Sensor	Detected (Paper in tray)	Not detected (Paper end)
Bit 4	3rd Paper End Sensor	Detected (Paper in tray)	Not detected (Paper end)
Bit 5	Purged Paper Sensor	Detected	Not detected
Bit 6	-	-	-
Bit 7	-	-	-

5-803-163	VODKA4 GPIO20	E	
Bit	Component	0	1



Bit 0	+24VS2 power detection (PSU-C)	ON	OFF
Bit 1	-	-	-
Bit 2	-	-	-
Bit 3	-	-	-
Bit 4	-	-	-
Bit 5	-	-	-
Bit 6	-	-	-
Bit 7	-	-	-

5-803-164	VODKA4 GPIO21	E	
Bit	Component	0	1
Bit 0	Rear Fence HP Sensor	Not in HP	HP detected
Bit 1	Rear Fence Return Sensor	Press position not detected	Press position detected
Bit 2	Paper Height Sensor 1	See table below.	
Bit 3	Paper Height Sensor 2		
Bit 4	Paper Height Sensor 3		
Bit 5	Paper Height Sensor 4		
Bit 6	Tandem Left Tray Set	Set	Not set
Bit 7	Tandem Right Tray Set	Set	Not set

### Paper Height Sensor for Paper Height Sensor

Paper Height Sensor 1	0	0	0	0	0	0	1	1
Paper Height Sensor 2	0	0	0	0	1	1	1	0
Paper Height Sensor 3	0	0	1	1	1	0	0	0
Paper Height Sensor 4	0	1	1	0	0	0	0	0
Amount of Paper (%)	100	80	50	25	10			

<b>5803</b>	<b>[INPUT Check]</b>		
	Gets information of specified sensor.		
5-803-175	Dev Unit Non Compatibility Detect	E	[0 or 1 / <b>0</b> / 1/step]
5-803-176	Toner Bottle Sensor 1	E	[0 or 1 / <b>0</b> / 1/step] 0:No bottle/1: Bottle present (Left, front bottle)
5-803-177	Toner Bottle Sensor 2	E	[0 or 1 / <b>0</b> / 1/step] 0:No bottle/1: Bottle present (Left, front bottle)
5-803-180	Toner Empty Sensor	E	[0 or 1 / <b>0</b> / 1/step] Toner in sub hopper 0: No toner/1: Toner present

### 3.SP Mode Tables

5-803-181	Toner Bottle Cover SW(On/Off)	E	[0 or 1 / <b>0</b> / 1/step] 0:Cover closed/1: Cover open
5-803-182	Toner Collection Bottle Full Sn	E	[0 or 1 / <b>0</b> / 1/step] Interrupt present: 1 Interrupt absent: 0
5-803-183	Toner Collection Bottle Near Full Sn	E	[0 or 1 / <b>0</b> / 1/step] Interrupt present: 0 (Near-full) Interrupt absent: 1 (Not near-full)
5-803-184	Toner Collection Set Sn	E	[0 or 1 / <b>0</b> / 1/step] Pressure present (set):1 None (not set)
5-803-185	Waste Toner Lock Sn	E	[0 or 1 / <b>0</b> / 1/step] Interrupt present: 1 Interrupt absent: 0
5-803-186	Drum Cleaning Unit Set Detect	E	[0 or 1 / <b>0</b> / 1/step] 0: OFF, 1: ON
5-803-187	Drum Cleaning Unit:Lubricant Bar End Detect	E	[0 or 1 / <b>0</b> / 1/step] 0: OFF, 1: ON
5-803-188	Belt Cleaning Unit Set Detect Sn	E	[0 or 1 / <b>0</b> / 1/step] 0: Set 1: Not set
5-803-189	Paper Transfer Contact Sn	E	[0 or 1 / <b>0</b> / 1/step] 0: Contact 1: Separation
5-803-190	Wire Cleaner Position Sn	E	[0 or 1 / <b>0</b> / 1/step]
5-803-200	HP Sensor (Copier Model Only)	E	[0 or 1 / <b>0</b> / 1/step]
5-803-201	Platen ADF Sensor (Copier Model Only)	E	[0 or 1 / <b>0</b> / 1/step]

## Input Check-03

Input Check: Vacuum Feed LCIT RT5120

5808	[INPUT Check]		
	Gets information of specified sensor for Vacuum Feed LCT, Bypass Tray.		
5-808-001	2-Tray LCT_1:Port1	ENG	[0 to 255 / 0 / 1]
5-808-002	2-Tray LCT_1:Port2	ENG	[0 to 255 / 0 / 1]
5-808-003	2-Tray LCT_1:Port3	ENG	[0 to 255 / 0 / 1]
5-808-004	2-Tray LCT_1:Port4	ENG	[0 to 255 / 0 / 1]
5-808-005	2-Tray LCT_1:Port5	ENG	[0 to 255 / 0 / 1]
5-808-006	2-Tray LCT_1:Port6	ENG	[0 to 255 / 0 / 1]
5-808-007	2-Tray LCT_1:Port7	ENG	[0 to 255 / 0 / 1]
5-808-008	2-Tray LCT_1:Port8	ENG	[0 to 255 / 0 / 1]
5-808-009	2-Tray LCT_1:Port9	ENG	[0 to 255 / 0 / 1]
5-808-010	2-Tray LCT_1:Port10	ENG	[0 to 255 / 0 / 1]
5-808-011	2-Tray LCT_1:Port11	ENG	[0 to 255 / 0 / 1]
5-808-012	2-Tray LCT_2:Port1	ENG	[0 to 255 / 0 / 1]
5-808-013	2-Tray LCT_2:Port2	ENG	[0 to 255 / 0 / 1]
5-808-014	2-Tray LCT_2:Port3	ENG	[0 to 255 / 0 / 1]
5-808-015	2-Tray LCT_2:Port4	ENG	[0 to 255 / 0 / 1]
5-808-016	2-Tray LCT_2:Port5	ENG	[0 to 255 / 0 / 1]
5-808-017	2-Tray LCT_2:Port6	ENG	[0 to 255 / 0 / 1]
5-808-018	2-Tray LCT_2:Port7	ENG	[0 to 255 / 0 / 1]
5-808-019	2-Tray LCT_2:Port8	ENG	[0 to 255 / 0 / 1]
5-808-020	2-Tray LCT_2:Port9	ENG	[0 to 255 / 0 / 1]
5-808-021	2-Tray LCT_2:Port10	ENG	[0 to 255 / 0 / 1]
5-808-022	2-Tray LCT_2:Port11	ENG	[0 to 255 / 0 / 1]

### Port1 bit information

bit	Component	0	1
bit0	LCIT Front Door Open/Closed Switch	Close	Open
bit1	Multi Bypass Slide Detection	Close	Open
bit2	LCIT Bridge Unit Cover Open Detection	Close	Open
bit3	Horizontal Transport Open Detection	Close	Open
bit4	Banner Sheet Tray Cover Open Detection Switch	Close	Open
bit5	Banner Sheet Tray Top Cover Open detection	Close	Open
bit6	Banner Sheet Tray Lowering Switch	Pushed	Not pushed
bit7	-	-	-

### 3.SP Mode Tables

#### Port2 bit information

Bit	Component	0	1
bit0	Multi Bypass Set Detection	Detect	Not detect
bit1	Bridge Unit Set Detection	Detect	Not detect
bit2	Banner Sheet Tray Set Detection Switch	Detect	Not detect
bit3	LCT Exit Roller Contact HP Detection Sensor	Not detect	Detect
Bit4	Tray 1 Vertical Transport Contact HP Detection Sensor	Not detect	Detect
Bit5	Tray 1 Vertical Transport Exit Contact HP Detection Sensor	Not detect	Detect
Bit6	Vertical Transport Entrance HP Sensor	Not detect	Detect
Bit7	Tray 2 Vertical Transport Exit Contact HP Sensor	Not detect	Detect

#### Port3 bit information

Bit	Component	0	1
bit0	Tray1 Paper Tray Set Detection	Set	Not set
bit1	Tray1 Paper Feed Belt Set Detection	Set	Not set
bit2	Tray1 Tray Upper Limit Sensor	Not detect	Detect
bit3	Tray1 Paper Upper Limit Sensor 1	Detect	Not detect
bit4	Tray1 Paper Upper Limit Sensor 2	Detect	Not detect
bit5	-	-	-
bit6	Tray1 Sub Paper Remaining Sensor	Not detect	Detect
bit7	Tray1 Paper Lower Limit Sensor	Detect	Not detect

#### Port4 bit information

Bit	Component	0	1
bit0	Tray1 Paper Size Sensor 1	Not detect	Detect
bit1	Tray1 Paper Size Sensor 2	Not detect	Detect
bit2	Tray1 Paper Size Sensor 3	Not detect	Detect
bit3	Tray1 Paper Size Sensor 4	Not detect	Detect
bit4	Tray1 LCIT Paper Length Sensor 1	Not detect	Detect
bit5	Tray1 LCIT Paper Length Sensor 2	Not detect	Detect
bit6	-	-	-
bit7	Tray1 Paper End Sensor	Detect	Not detect

#### Port5 bit information

Bit	Component	0	1
bit0	Tray2 Paper Tray Set Detection	Set	Not set
bit1	Tray2 Paper Feed Belt Set Detection	Set	Not set
bit2	Tray2 Tray Upper Limit Sensor	Not detect	Detect
bit3	Tray2 Paper Upper Limit Sensor 1	Detect	Not detect

Bit	Component	0	1
bit4	Tray2 Paper Upper Limit Sensor 2	Detect	Not detect
bit5	-	-	-
bit6	Tray2 Sub Paper Remaining Sensor	Detect	Not detect
bit7	Tray2 Paper Lower Limit Sensor	Detect	Not detect

**Port6 bit information**

Bit	Component	0	1
Bit0	Tray2 Paper Size Sensor 1	Not detect	Detect
bit1	Tray2 Paper Size Sensor 2	Not detect	Detect
bit2	Tray2 Paper Size Sensor 3	Not detect	Detect
bit3	Tray2 Paper Size Sensor 4	Not detect	Detect
bit4	Tray2 LCIT Paper Length Sensor 1	Not detect	Detect
bit5	Tray2 LCIT Paper Length Sensor 2	Not detect	Detect
bit6	-	-	-
bit7	Tray2 Paper End Sensor	Detect	Not detect

**Port7 bit information**

Bit	Component	0	1
bit0	Bypass: Tray Lift Switch	Detect	Not detect
bit1	Bypass: Upper Limit Detection Sensor 1	Detect	Not detect
bit2	Bypass: Upper Limit Detection Sensor 2	Detect	Not detect
bit3	Bypass: Paper Height Sensor 1	Not detect	Detect
bit4	Bypass: Paper Height Sensor 2	Not detect	Detect
bit5	Bypass: Tray Lower Limit Sensor	Not detect	Detect
bit6	Bypass: Paper End Sensor	Detect	Not detect
bit7	-	-	-

**Port8 bit information**

Bit	Component	0	1
bit0	Bypass: Paper Width Switch 1	Detect	Not detect
bit1	Bypass: Paper Width Switch 2	Detect	Not detect
bit2	Bypass: Paper Width Switch 3	Detect	Not detect
bit3	Bypass: Paper Width Switch 4	Detect	Not detect
bit4	Bypass: Paper Width Switch 5	Detect	Not detect
bit5	Bypass: Paper Length Sensor	Detect	Not detect
bit6	-	-	-
bit7	-	-	-

### 3.SP Mode Tables

#### Port9 bit information

Bit	Component	0	1
bit0	Tray1 Paper Feed Sensor	Detect	Not detect
bit1	Tray1 Transport Sensor	Detect	Not detect
bit2	Tray1 Vertical Transport Sensor	Detect	Not detect
bit3	Tray 1 Vertical Transport Exit Sensor	Detect	Not detect
bit4	Tray2 Paper Feed Sensor	Detect	Not detect
bit5	Tray2 Transport Sensor	Detect	Not detect
bit6	Tray 2 Vertical Transport Exit Sensor	Detect	Not detect
bit7	Vertical Transport Entrance Sensor	Detect	Not detect

#### Port10 bit information

Bit	Component	0	1
bit0	Bypass: Paper Feed Sensor	Detect	Not detect
bit1	Bypass Transport Sensor	Detect	Not detect
bit2	Bypass Vertical Transport Sensor	Detect	Not detect
bit3	-	-	-
bit4	-	-	-
bit5	-	-	-
bit6	-	-	-
bit7	-	-	-

#### Port11 bit information

Bit	Component	0	1
bit0	LCIT Exit Sensor	Detect	Not detect
bit1	LCIT Connect Entrance Sensor	Detect	Not detect
bit2	LCIT Connect Exit Sensor	Detect	Not detect
bit3	Horizontal Transport Entrance Sensor	Detect	Not detect
bit4	Horizontal Transport Middle Sensor	Detect	Not detect
bit5	Horizontal Transport Exit Sensor	Detect	Not detect
bit6	-	-	-
bit7	-	-	-

#### Input Check: Buffer Pass Unit

<b>5803</b>	<b>[Input Check(Buffer Pass Unit)]</b>		
	Gets information of specified sensor.		
5-803-220	Buffer Pass Unit:CTB_H8S-Port9	E	[0 to 255 / 0 / 1]
Bit	Component	0	1

## 3.SP Mode Tables

Bit 7	Cooling Fan 3	Normal	Abnormal
Bit 6	Cooling Fan 4	Normal	Abnormal
Bit 5	-	-	-
Bit 4	-	-	-
Bit 3	Exhaust Fan 3	Normal	Abnormal
Bit 2	Exhaust Fan 4	Normal	Abnormal
Bit 1	-	-	-
Bit 0	-	-	-

5-803-221	Buffer Pass Unit:CTB_H8S-PortA	E	[0 to 255 / 0 / 1]
Bit	Component	0	1
Bit 7	-	-	-
Bit 6	-	-	-
Bit 5	-	-	-
Bit 4	-	-	-
Bit 3	-	-	-
Bit 2	-	-	-
Bit 1	-	-	-
Bit 0	Front Door Interlock Switch	Closed	Open

5-803-222	Buffer Pass Unit:CTB_H8S-PortB	E	[0 to 255 / 0 / 1]
Bit	Component	0	1
Bit 7	-	-	-
Bit 6	-	-	-
Bit 5	-	-	-
Bit 4	-	-	-
Bit 3	-	-	-
Bit 2	-	-	-
Bit 1	Transport Motor 1	Normal	Abnormal
Bit 0	Transport Motor 2	Normal	Abnormal

5-803-223	Buffer Pass Unit:CTB_H8S-PortC	E	[0 to 255 / 0 / 1]
Bit	Component	0	1
Bit 7	Cooling Fan 1	Normal	Abnormal
Bit 6	Cooling Fan 2	Normal	Abnormal
Bit 5	-	-	-
Bit 4	-	-	-

### 3.SP Mode Tables

Bit 3	Exhaust Fan 1	Normal	Abnormal
Bit 2	Exhaust Fan 2	Normal	Abnormal
Bit 1	-	-	-
Bit 0	-	-	-

5-803-224	Buffer Pass Unit:CTB_H8S-PortD	E	[0 to 255 / 0 / 1]
Bit	Component	0	1
Bit 7	-	-	-
Bit 6	-	-	-
Bit 5	Pass Sensor 1	Detect	Not Detect
Bit 4	Pass Sensor 8	Detect	Not Detect
Bit 3	Pass Sensor 2	Detect	Not Detect
Bit 2	Pass Sensor 7	Detect	Not Detect
Bit 1	Pass Sensor 3	Detect	Not Detect
Bit 0	Pass Sensor 6	Detect	Not Detect

5-803-225	Buffer Pass Unit:CTB_H8S-PortE	E	[0 to 255 / 0 / 1]
Bit	Component	0	1
Bit 7	Pass Sensor 4	Detect	Not Detect
Bit 6	Pass Sensor 5	Detect	Not Detect
Bit 5	-	-	-
Bit 4	Transport Unit	Set	Not Set
Bit 3	+24V_INT Guard	+24VINT_ON	+24VINT_OFF
Bit 2	+24V Guard	+24V_ON	+24V_OFF
Bit 1	-	-	-
Bit 0	-	-	-

### Input Check: ADF (Copier Model Only)

<b>6011</b>	<b>[1-Pass ADF INPUT Check]</b> Gets information of specified sensor for ADF.		
6-011-001	Original Length 1 (B5 Sensor)	E	[0 or 1 / 0 / 1/step]
6-011-002	Original Length 2 (A4 Sensor)	E	[0 or 1 / 0 / 1/step]
6-011-003	Original Length 3 (LG Sensor)	E	[0 or 1 / 0 / 1/step]
6-011-004	Original Width 1	E	[0 or 1 / 0 / 1/step]
6-011-005	Original Width 2	E	[0 or 1 / 0 / 1/step]
6-011-006	Original Width 3	E	[0 or 1 / 0 / 1/step]
6-011-007	Original Width 4	E	[0 or 1 / 0 / 1/step]
6-011-008	Original Width 5	E	[0 or 1 / 0 / 1/step]



6-011-009	Original Detection	E	[0 or 1 / <b>0</b> / 1/step]
6-011-010	Separation Sensor	E	[0 or 1 / <b>0</b> / 1/step]
6-011-011	Skew Correction	E	[0 or 1 / <b>0</b> / 1/step]
6-011-012	Scan Entrance Sensor	E	[0 or 1 / <b>0</b> / 1/step]
6-011-013	Registration Sensor	E	[0 or 1 / <b>0</b> / 1/step]
6-011-014	Exit Sensor	E	[0 or 1 / <b>0</b> / 1/step]
6-011-015	Feed Cover Sensor	E	[0 or 1 / <b>0</b> / 1/step]
6-011-016	Lift Up Sensor	E	[0 or 1 / <b>0</b> / 1/step]
6-011-018	Pick-Up Roller HP Sensor	E	[0 or 1 / <b>0</b> / 1/step]
6-011-021	Bottom Plate HP Sensor	E	[0 or 1 / <b>0</b> / 1/step]
6-011-022	Bottom Plate Position Sensor	E	[0 or 1 / <b>0</b> / 1/step]
6-011-023	Original Length 4 (LT/A4 Tail Sensor)	E	[0 or 1 / <b>0</b> / 1/step]
6-011-024	Detect Sensor	E	[0 or 1 / <b>0</b> / 1/step] Displays "1" when double-feed detected.

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**Input Check: Finisher SR5090/ Booklet Finisher SR5100**


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<b>6123</b>	<b>[INPUT Check: 2K/3K FIN]</b> <b>Gets information of specified sensor for finisher.</b>		
6-123-001	Entrance Sensor	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-123-002	Horizontal Transport Sensor	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-123-003	Switchback Transport Sensor	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-123-004	Proof Tray Exit Sensor	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-123-005	Shift Tray Exit Sensor	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-123-006	Booklet Stapler Exit Sensor	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-123-007	Paper Exit Open/Close Guide HP Sensor	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-008	Punch HP Sensor	E	[0 to 1 / 0 / 1] 0: Home position, 1: Not home position
6-123-009	Punch Move HP Sensor	E	[0 to 1 / 0 / 1] 0: Home position, 1: Not home position
6-123-010	S-to-S Registration Detection HP Sensor	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position

### 3.SP Mode Tables

6-123-011	Lower Junction Solenoid HP Sensor	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-012	Jogger HP Sensor	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-013	Positioning Roller HP Sensor	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-014	Feed-out HP Sensor	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-015	Stapler Moving HP Sensor	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-016	Booklet Stapler HP Sensor	E	[0 to 1 / 0 / 1] 0: Home position, 1: Not home position
6-123-017	Booklet Jogger HP Sensor	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-018	Booklet Jog Solenoid HP Sensor	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-019	Booklet Standard Fence HP Sensor	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-020	Booklet Stapler HP Sensor	E	[0 to 1 / 0 / 1] 0: Home position, 1: Not home position
6-123-022	Folder Blade Cam HP Sensor	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-023	Folder Blade HP Sensor	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-024	Shift Roller HP Sensor	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-028	Shift Jogger HP Sensor: Front	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-029	Shift Jogger HP Sensor: Rear	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-030	Shift Jogger Retraction HP Sensor: Upper	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-031	Drag Roller Vibrating HP Sensor	E	[0 to 1 / 0 / 1] 0: Home position, 1: Not home position
6-123-032	LE Guide HP Sensor	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-033	TE Stack Plate HP Sensor	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position

## 3.SP Mode Tables

6-123-034	Staple Tray Paper Sensor	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-123-035	ITB Paper Sensor	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-123-036	Booklet Stapler Transport Paper Sn: Upper	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-123-037	Booklet Stapler Transport Paper Sn: Lower	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-123-038	Paper Height Sensor: Shift	E	[0 to 1 / 0 / 1] 0: Light Penetrating (paper), 1: Light Shielded
6-123-039	Corner Stapler Paper Height Sensor 1	E	[0 to 1 / 0 / 1] 0: Light Penetrating, 1: Light Shielded
6-123-040	Corner Stapler Paper Height Sensor 2	E	[0 to 1 / 0 / 1] 0: Light Penetrating, 1: Light Shielded
6-123-041	Proof Tray Full Sensor	E	[0 to 1 / 0 / 1] 0: Full, 1: Not full
6-123-042	Booklet Stapler Full Sensor 1	E	[0 to 1 / 0 / 1] 0: Light Penetrating, 1: Light Shielded
6-123-043	Booklet Stapler Full Sensor 2	E	[0 to 1 / 0 / 1] 0: Light Penetrating, 1: Light Shielded
6-123-044	S-to-S Registration Detection Sensor	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-123-045	Punch RPS Sensor	E	[0 to 1 / 0 / 1] 0: Light Penetrating, 1: Light Shielded
6-123-046	Corner Stapler Leading Edge Detection Sensor	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-123-047	Corner Stapler Staple End Sensor	E	[0 to 1 / 0 / 1] 0: Needle, 1: No Needle
6-123-048	Booklet Stapler Staple End Sensor: Front	E	[0 to 1 / 0 / 1] 0: Needle, 1: No Needle
6-123-049	Booklet Stapler Staple End Sensor: Rear	E	[0 to 1 / 0 / 1] 0: Needle, 1: No Needle
6-123-050	Shift Tray Lower Limit Sensor 1	E	[0 to 1 / 0 / 1] 0: Not Detected, 1: Detected
6-123-051	Shift Tray Lower Limit Sensor 2	E	[0 to 1 / 0 / 1] 0: Not Detected, 1: Detected
6-123-	Shift Tray Lower Limit Sensor 3	E	[0 to 1 / 0 / 1]

### 3.SP Mode Tables

052			0: Not Detected, 1: Detected
6-123-053	Shift Tray Lower Limit Sensor 4	E	[0 to 1 / 0 / 1] 0: Not Detected, 1: Detected
6-123-054	Shift Tray Lower Limit Sensor 5	E	[0 to 1 / 0 / 1] 0: Not Detected, 1: Detected
6-123-055	Punch Chad Full Sensor	E	[0 to 1 / 0 / 1] 0: Full, 1: Not full
6-123-056	Punch Set Detection	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-123-057	Shift Jogger Set Detection	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-123-058	Booklet Stapler Set Detection	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-123-059	Front Door SW	E	[0 to 1 / 0 / 1] 0: Closed, 1: Open
6-123-060	Dynamic Roller Open/Close Guide Plate Sensor	E	[0 to 1 / 0 / 1] 0: Open, 1: Closed
6-123-061	Tray Upper Limit SW	E	[0 to 1 / 0 / 1] 0: Normal, 1: Upper Limit
6-123-065	Paper Exit Open/Close Guide Plate Limit SW	E	[0 to 1 / 0 / 1] 0: Normal, 1: Upper Limit
6-123-066	Punch Selection DIPSW 1	E	[0 to 1 / 0 / 1] 0: On, 1: Off
6-123-067	Punch Selection DIPSW 2	E	[0 to 1 / 0 / 1] 0: On, 1: Off
6-123-068	Shift Jogger Retraction HP Sensor: Lower	E	[0 to 1 / 0 / 1] 0: Home position, 1: Not home position
6-123-069	Paper Guide HP Sensor	E	[0 to 1 / 0 / 1] 0: Not home position, 1: Home position
6-123-070	TE Height Front Detection	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-123-071	TE Height Rear Detection	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected

#### Input Check: Shift Sort Tray

<b>6170</b>	<b>[INPUT Check Slide Sort Tray]</b>		
6-170-001	Transport Sensor	E	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected

6-170-002	Shift Sensor	E	[0 to 1 / 0 / 1] 0: Home position, 1: Not home position
6-170-003	Tray Lower Limit Sensor	E	[0 to 1 / 0 / 1] 0: Full, 1: Not Full
6-170-004	Paper Sensor	E	[0 to 1 / 0 / 1] 0: Not Detected, 1: Detected
6-170-005	Cover Open/Close Switch	E	[0 to 1 / 0 / 1] 0: Closed, 1: Open
6-170-006	Tray Full Auxiliary Sensor	E	[0 to 1 / 0 / 1] 0: Full, 1: Not Full

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**Input Check: Finisher SR5110/ Booklet Finisher SR5120**


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<b>6261</b>	<b>[Finisher Input Check]</b> Gets information of specified sensor for finisher.		
6-261-001	Finisher Entrance Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-261-002	Pre-stack Paper Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-261-003	Pre-stack Roller HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Pressurized 1: Non-pressurized
6-261-004	Junction Gate Motor (Proof/Shift Tray)	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-005	Junction Gate Motor (Shift/Staple)	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-006	Upper Tray Transport Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-261-007	Upper Tray Exit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not full 1: Full
6-261-008	Punch Vertical Registration Sn	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected

### 3.SP Mode Tables

6-261-009	Punch Side-to-Side Regist Sn	E	[0 to 255 / <b>0</b> / 1/step] 0 to 255: CIS readings
6-261-010	Punch Blade HP Sensor 1	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-011	Punch Unit HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-012	Punch Blade HP Sensor 2	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-013	Punch Hopper Full Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not full 1: Full
6-261-014	Punch Set Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Unset 1: Set
6-261-015	Vibrating Plate Up-Down Moving HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-016	Corner Stapler HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-017	Stapler Rotation HP Sn: Front	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-018	Stapler Rotation HP Sn: Rear	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-019	Fence S-to-S Moving HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-020	Fence Up-Down Moving HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-021	Jogger Fence HP Sensor: Front	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position

## 3.SP Mode Tables

6-261-022	Jogger Fence HP Sensor: Rear	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-023	Positioning Roller Vibrating HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-024	Top Fence HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-025	Stack Feed-out Belt HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-026	Stapling Tray Paper Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-261-027	Corner Stapler HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-028	Staple End Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: No staple 1: Staple available
6-261-029	Self-Limit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: No staple 1: Staple available
6-261-030	Dust Box Full Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Set 1: Unset
6-261-031	Stapler Near End Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not near end 1: Near end
6-261-032	Vibrating Plate S-to-S Moving HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-033	Stapling Tray Entrance Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-261-034	Stack Transport Unit HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position

### 3.SP Mode Tables

6-261-035	Stack JG Vibrating HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-036	Bklet Top Fence HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-037	Bklet Stplr Clamp Roller HP Sn	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-038	Fold Plate Cam HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-039	Fold Blade HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-040	Bklet Side Fence HP Sn: Front	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-041	Bklet Side Fence HP Sn: Rear	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-042	Bklet Stplr Bottom Fence HP Sn	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-043	Fold Unit Entrance Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-261-044	Horizontal Fold Roller Release HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-045	Horizontal Fold Roller Movement HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-046	Bklet Stapler Exit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-261-047	Bklet Stapler HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position



## 3.SP Mode Tables

6-261-048	Bklet Stplr Stpl End Sn: Front	E	[0 or 1 / <b>0</b> / 1/step] 0: No staple 1: Staple available
6-261-049	Bklet Stplr Stpl End Sn: Rear	E	[0 or 1 / <b>0</b> / 1/step] 0: No staple 1: Staple available
6-261-051	Bklet Tray Paper Set Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-261-052	Bklet Tray Limit Switch Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Limit
6-261-053	Shift Tray Exit Sensor: Long: Lower Tray	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-261-054	Shift Tray Exit Sensor: Short: Lower Tray	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-261-055	Exit Guide HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-056	Drag Roller Vibrating HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-057	Shift Tray Press Lever HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-058	Shift Tray Upper Limit Switch	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-059	Shift Tray HP Sensor: Front	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-060	Shift Tray HP Sensor: Rear	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-061	Shift Tray Paper Height Sensor: Staple	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect

### 3.SP Mode Tables

6-261-062	Shift Tray Paper Height Sensor: Shift	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-063	Shift Tray Paper Height Sensor: Z-Fold	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-064	Shift Tray Paper Height Sensor: TE	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-065	Shift Tray Full Sensor: 500	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-066	Shift Tray Full Sensor: 1000	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-067	Shift Tray Full Sensor: 1500	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-068	Shift Full Sensor(L-Limit)	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-069	Shift Full Sensor(Reserve)	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-070	Paper Height Sensor(Stack)	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-071	Shift Tray Emergency Stop SW	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-072	Shift Tray Jogger Fence HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-073	Shift Tray Jog Fence Retra HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-074	Upper Tray Drag Roller Vibrating HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position

## 3.SP Mode Tables

6-261-075	Upper Tray Press Lever HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-076	Upper Tray Upper Limit Switch	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-077	Upper Tray HP Sensor: Front	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-078	Upper Tray HP Sensor: Rear	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-079	Upper Tray Paper Height Sensor: Staple	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-080	Upper Tray Paper Height Sensor: Shift	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-081	Upper Tray Paper Height Sensor: Z-Fold	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-082	Upper Tray Paper Height Sensor: TE	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-083	Upper Tray Full Sensor: 500	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-086	Upper Tray Full Sensor(L-Limit)	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-087	Upper Full Sensor(Reserve)	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-088	Upper Tray Emergency Stop SW	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-089	Upper Tray Jogger Fence HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position

### 3.SP Mode Tables

6-261-090	Upper Tray Jog Fence Retra HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-261-091	Front Door Switch1	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-092	Front Door Switch2	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-261-094	Punch Type 1	E	[0 or 1 / <b>0</b> / 1/step] JP: 071: 0, 072: 0 NA: 071: 0, 072: 1 EU: 071: 1, 072: 0 NE: 071: 1, 072: 1
6-261-095	Punch Type 2	E	
6-261-096	Staple Tray Set Sensor	E	[0 or 1 / <b>0</b> / 1/step] Not used
6-261-097	Reserved	E	[0 or 1 / <b>0</b> / 1/step] Not used
6-261-098	Upper Tray Paper Ejection SW	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect

## Input Check-04

### Input Check: Multi Folding Unit

6309	[Input Check: Folder]		
6-309-001	Entrance Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-309-002	Entrance JG HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-309-004	Registration Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-309-005	Dynamic Roller HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-309-006	Registration Roller HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-309-007	Fold Plate HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-309-008	Jogger Fence HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-309-010	1st Stopper Paper Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-309-011	1st Stopper HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-309-012	2nd Stopper Paper Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-309-013	2nd Stopper HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-309-014	3rd Stopper Paper Sensor	E	[0 or 1 / <b>0</b> / 1/step]

### 3.SP Mode Tables

			0: Paper detected 1: Paper not detected
6-309-015	3rd Stopper HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-309-016	Direct-Send JG HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not home position 1: Home position
6-309-017	FM6 Pawl HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home position 1: Not home position
6-309-018	Top Tray Paper Path Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-309-019	Top Tray Exit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-309-020	Horizontal Path Exit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-309-021	Top Tray Full Sensor (E)	E	[0 or 1 / <b>0</b> / 1/step] 0: Not full 1: Full
6-309-023	Front Door Switch (SW1)	E	[0 or 1 / <b>0</b> / 1/step] 0: Door closed 1: Door open
6-309-024	Horizontal Path Paper Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-309-025	Vertical Path Paper Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-309-026	Bypass Entrance Paper Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-309-027	Bypass Exit Paper Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected

## Input Check: Cover Interposer Tray

6410	[Cvr Inserter Input Check]		
6-410-001	1st Paper Feed Sensor	E	[0 or 1 / 0 / 1/step] 0:detect
6-410-002	2nd Paper Feed Sensor	E	
6-410-003	1st Transport Sensor	E	
6-410-004	2nd Transport Sensor	E	
6-410-005	1st Vertical Transport Sensor	E	
6-410-006	2nd Vertical Transport Sensor	E	
6-410-007	3rd Vertical Transport Sensor	E	
6-410-008	Entrance Sensor	E	
6-410-009	Exit Sensor	E	
6-410-010	1st Upper Limit Sensor	E	[0 or 1 / 0 / 1/step] 1:detect
6-410-011	2nd Upper Limit Sensor	E	
6-410-012	1st Lower Limit Sensor	E	
6-410-013	2nd Lower Limit Sensor	E	
6-410-014	1st Paper Near End Sensor 1	E	
6-410-015	2nd Paper Near End Sensor 1	E	
6-410-016	1st Paper End Sensor	E	
6-410-017	2nd Paper End Sensor	E	
6-410-	1st Paper Length Sensor	E	

### 3.SP Mode Tables

018			0:detect
6-410-019	2nd Paper Length Sensor	E	
6-410-020	1st Paper Width Sensor 1	E	
6-410-021	1st Paper Width Sensor 2	E	
6-410-022	1st Paper Width Sensor 3	E	
6-410-023	1st Paper Width Sensor 4	E	
6-410-024	1st Paper Width Sensor 5	E	
6-410-025	2nd Paper Width Sensor 1	E	
6-410-026	2nd Paper Width Sensor 2	E	
6-410-027	2nd Paper Width Sensor 3	E	
6-410-028	2nd Paper Width Sensor 4	E	
6-410-029	2nd Paper Width Sensor 5	E	
6-410-030	Vertical Transport Cover Switch	E	[0 or 1 / <b>0</b> / 1/step] 1: close
6-410-031	Front Door Open Switch	E	[0 or 1 / <b>0</b> / 1/step] 0:close
6-410-032	Double Feed Detect Sensor	E	[0 or 1 / <b>0</b> / 1/step] Check if the double feed detection works normally. 0:not detect 1:detect
6-410-033	Double Feed Detect Sensor Connection	E	[0 or 1 / <b>0</b> / 1/step] 1:detect
6-410-034	1st Paper Near End Sensor 2	E	[0 or 1 / <b>0</b> / 1/step] 1:detect
6-410-035	2nd Paper Near End Sensor 2	E	[0 or 1 / <b>0</b> / 1/step] 1:detect



## Input Check: Bridge Unit BU5020

6450	[Bridge Unit Input Check]		
6-450-001	Entrance Sensor	ENG	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-450-002	Exit Sensor	ENG	[0 to 1 / 0 / 1] 0: Detected, 1: Not Detected
6-450-003	Front Door Open Switch	ENG	[0 to 1 / 0 / 1] 0: Closed, 1: Open

## Input Check: Ring Binder

6508	[Input Check: Ring Binder]		
6-508-001	Entrance Sensor	E	[0 or 1 / 0 / 1/step] 0: Paper detected 1: Paper not detected
6-508-002	Middle Sensor	E	[0 or 1 / 0 / 1/step] 0: Paper detected 1: Paper not detected
6-508-003	Switch Back Sensor	E	[0 or 1 / 0 / 1/step] 0: Paper detected 1: Paper not detected
6-508-004	Exit Sensor	E	[0 or 1 / 0 / 1/step] 0: Paper detected 1: Paper not detected
6-508-005	Blade HP Sensor	E	[0 or 1 / 0 / 1/step] 0: Not Bound 1: Bound
6-508-006	Punch Process Sensor	E	[0 or 1 / 0 / 1/step] 0: Paper detected 1: Paper not detected
6-508-007	Punch Ent Roller Lift HP Sensor	E	[0 or 1 / 0 / 1/step] 0: Retracting roller 1: Pressing roller
6-508-008	Side Jog HP Sensor	E	[0 or 1 / 0 / 1/step] 0: Out of reference position (Pushing) 1: Reference position (retracting)
6-508-009	Punch Pre Roller Lift HP Sensor	E	[0 or 1 / 0 / 1/step] 0: Retracting roller

### 3.SP Mode Tables

			1: Pressing roller
6-508-010	Punch HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Standby Position (Home position) 1: During Punching (Not home position)
6-508-011	Punch Encoder Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Punch unit available 1: No punch unit
6-508-012	Punch Unit Detect 1 Sensor	E	Combinations show the type of the punch unit. LT Punch Unit: [3]:1 [2]:1 [1]:0 A4 Punch Unit: [3]:1 [2]:0 [1]:0
6-508-013	Punch Unit Detect 2 Sensor	E	
6-508-014	Punch Unit Detect 3 Sensor	E	
6-508-015	Binder Base Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-508-016	Binder Unit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Binder unit 1: No Binder unit
6-508-017	Booklet Pass Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Booklet detected 1: Booklet not detected
6-508-018	Swing HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Out of Standby position (Rise) 1: Standby position (Retract)
6-508-019	Output Belt 1 HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Out of reference position (Rise) 1: Reference position (Lower Edge)
6-508-020	Trash Full Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Trash box detected and Trash box is not full 1: Trash box not detected or Trash box is full
6-508-021	Stack Full Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Stacker is not full 1: Stacker is full
6-508-029	Width Align HP Sensor 1	E	[0 or 1 / <b>0</b> / 1/step] 0: LT position 1: A4 position

6-508-030	Paddle Roller HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paddle retracted position 1: Paddle pressed position
6-508-031	Clamp HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Clamp open position 1: Clamp pressed position
6-508-032	Alignment Pin HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Alignment in operation 1: Standby position
6-508-033	Shutter HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home position when Shutter Motor HP Sensor is "0". 1: Open position when Shutter Motor HP Sensor is "0".
6-508-034	50-Sheet Detect Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Above 50-sheet 1: Below 50-sheet
6-508-035	Paper Thickness Sensor	E	[0 or 1 / <b>0</b> / 1/step] Repeats "1" and "0" according to the paper thickness (Encoder)
6-508-037	Paper LE Detect Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-508-038	Alignment Pin Top Edge Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Standby position 1: The pin reaches the upper edge and alignment has been completed.
6-508-039	Width Align HP Sensor 2	E	[0 or 1 / <b>0</b> / 1/step] 0: Pushing position 1: Retracting position
6-508-040	De-curler Motor HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: In the middle of moving to holding position 1: Standby position (holding position)
6-508-041	Shutter Motor HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] Reads in combination with Shutter HP Sensor
6-508-042	Roller Lift Motor HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Open position 1: Pressed position
6-508-043	Binder HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: In binding operation 1: Standby position

### 3.SP Mode Tables

6-508-044	Bind Timing Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Repeats High / Low with the post process 1: Standby position (home position)
6-508-045	Ring Replace HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Position for 50 or 100 1: Initial position
6-508-046	Ring Replace Timing Sensor	E	[0 or 1 / <b>0</b> / 1/step] Moves position with repeating "0" and "1" (Encoder)
6-508-047	Ring Supply Detect Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: No cartridge 1: Cartridge available
6-508-048	Cartridge Reversed Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Normal attached 1: Reverse attached
6-508-049	Ring Near-End Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not near end 1: Near end
6-508-050	Ring 50/100 Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: 100 sheets 1: 50 sheets
6-508-051	Ring A4/LT Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: A4 1: LT

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### Input Check: Perfect Binder

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<b>6537</b>	<b>[Input Check: Perfect Binder]</b>		
6-537-001	Entrance sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-537-002	Timing Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-537-003	Jog Sensor HP: Front	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home position 1: Home Position
6-537-004	Jog Sensor HP: Rear	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home position 1: Home Position

## 3.SP Mode Tables

6-537-005	Jog Sensor HP: Front Large	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position
6-537-006	Jog Sensor HP: Rear Large	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position
6-537-007	Cover Path: Sensor 1	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-537-008	Cover Path: Sensor 2	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-537-009	Signature Path: Sensor 1	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-537-010	Signature Path: Sensor 2	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-537-011	Inserter Com Sn:Before Joining	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-537-012	Switchback Flapper HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not upper position 1: Upper position
6-537-013	Switchback Roller HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not upper position 1: Upper position
6-537-014	Cover Registration Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-537-015	Straight-Through Exit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-537-016	TE Press Lever HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Nip position 1: Not nip position
6-537-017	Stack Overflow Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Stack over position 1: Stackable position

### 3.SP Mode Tables

6-537-018	Tray Lower Limit Sensor	E	[0 or 1 / 0 / 1/step] 0: Not lower limit position 1: Lower limit position
6-537-019	Paper Detect Sensor: Front	E	[0 or 1 / 0 / 1/step] 0: Detection position 1: Not detection position
6-537-020	Paper Detect Sensor: Rear	E	[0 or 1 / 0 / 1/step] 0: Detection position 1: Not detection position
6-537-021	Cover Guide HP Sensor: Right	E	[0 or 1 / 0 / 1/step] 0: Not Home Position 1: Home Position
6-537-022	Cover Guide HP Sensor: Left	E	[0 or 1 / 0 / 1/step] 0: Not Home Position 1: Home Position
6-537-023	Cover Guide Open Sensor: Right	E	[0 or 1 / 0 / 1/step] 0: Not open position 1: Open position
6-537-024	Cover Guide Open Sensor: Left	E	[0 or 1 / 0 / 1/step] 0: Not open position 1: Open position
6-537-025	Stack Weight Move HP Sensor	E	[0 or 1 / 0 / 1/step] 0: Not Home Position 1: Home Position
6-537-026	Stack Tray HP Sensor	E	[0 or 1 / 0 / 1/step] 0: Not Home Position 1: Home Position
6-537-027	Front Door SW	E	[0 or 1 / 0 / 1/step] 0: Closed 1: Open
6-537-028	Top Cover Sensor	E	[0 or 1 / 0 / 1/step] 0: Open 1: Closed
6-537-029	Top Cover Switch	E	[0 or 1 / 0 / 1/step] 0: Closed 1: Open
6-537-030	Glue Tank Cover Sensor	E	[0 or 1 / 0 / 1/step] 0: Open 1: Closed

## 3.SP Mode Tables

6-537-031	Temperature Start Switch	E	[0 or 1 / 0 / 1/step] 0: Pressed 1: Not pressed
6-537-032	Inserter Connect Signal	E	[0 or 1 / 0 / 1/step] 0: Connected 1: Not connected
6-537-033	Glue Tank Empty Sensor	E	[0 or 1 / 0 / 1/step] 0: Glue available 1: No glue
6-537-034	Glue Tank Full Sensor	E	[0 or 1 / 0 / 1/step] 0: Glue available 1: No glue
6-537-035	24 V Guard 1	E	[0 or 1 / 0 / 1/step] 0: Normal 1: Defective
6-537-036	24 V Guard 2	E	[0 or 1 / 0 / 1/step] 0: Normal 1: Defective
6-537-037	Stack Tray Empty Sensor	E	[0 or 1 / 0 / 1/step] 0: Paper not detected 1: Paper detected
6-537-038	Front Door Lock Sensor	E	[0 or 1 / 0 / 1/step] 0: Locked 1: Unlocked
6-537-039	Power Supply Fan Lock: Left	E	[0 or 1 / 0 / 1/step] 0: Lock detected 1: Not detected
6-537-040	Sub Grip Upper HP Sensor	E	[0 or 1 / 0 / 1/step] 0: Not Home Position 1: Home Position
6-537-041	Signature Exit Sensor	E	[0 or 1 / 0 / 1/step] 0: Paper not detected 1: Paper detected
6-537-042	Size Move HP Sensor	E	[0 or 1 / 0 / 1/step] 0: Not Home Position 1: Home Position
6-537-043	Registration Unit HP Sensor	E	[0 or 1 / 0 / 1/step] 0: Not Home Position 1: Home Position

### 3.SP Mode Tables

6-537-044	Post Main Grip Encoder Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Blocked 1: Not blocked
6-537-045	24V 2 Check Signal	E	[0 or 1 / <b>0</b> / 1/step] 0: Normal 1: Defective
6-537-046	Spine Fold Press Sensor: Right	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position
6-537-047	Main Grip HP Sensor: Left	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-537-048	Cover Horizontal Registration Sensor: Small	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-537-049	Cover Horizontal Registration Sensor: Large	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-537-050	Glue Tank HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-537-051	Main Grip HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-537-052	Main Grip Front Encoder Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Blocked 1: Not blocked
6-537-053	24V 3 Check Signal	E	[0 or 1 / <b>0</b> / 1/step] 0: Normal 1: Defective
6-537-054	Main Grip Press Sensor: Left	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detected 1: Pressure detected
6-537-055	Main Grip Press Sensor: Small	E	[0 or 1 / <b>0</b> / 1/step] 0: Pressure detected 1: Not detected
6-537-056	Sub Grip Paper Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected



## 3.SP Mode Tables

6-537-057	Sub Grip Open Sensor	E	[0 or 1 / 0 / 1/step] 0: Closed 1: Open
6-537-058	Sub Grip Close Sensor	E	[0 or 1 / 0 / 1/step] 0: Open 1: Closed
6-537-059	Spine Fold Close Sensor: Left	E	[0 or 1 / 0 / 1/step] 0: Open 1: Closed
6-537-060	Spine Plate Open Sensor	E	[0 or 1 / 0 / 1/step] 0: Closed 1: Open
6-537-061	Spine Plate Close Sensor	E	[0 or 1 / 0 / 1/step] 0: Open 1: Closed
6-537-062	Spine Fold HP Sensor: Left	E	[0 or 1 / 0 / 1/step] 0: Not Home Position 1: Home Position
6-537-063	Spine Fold HP Sensor: Right	E	[0 or 1 / 0 / 1/step] 0: Not Home Position 1: Home Position
6-537-064	Cutter LE Detect Sensor	E	[0 or 1 / 0 / 1/step] 0: Paper not detected 1: Paper detected
6-537-065	Main Grip Rotate Enable Sensor	E	[0 or 1 / 0 / 1/step] 0: Not allowed 1: Allowed
6-537-066	Main Grip Rotate Bind Position Sensor	E	[0 or 1 / 0 / 1/step] 0: Not bind position 1: Bind position
6-537-067	Main Grip Rotate HP Sensor	E	[0 or 1 / 0 / 1/step] [0 or 1 / 0 / 1/step] 0: Not Home Position 1: Home Position
6-537-068	Rear Main Grip Open Sensor	E	[0 or 1 / 0 / 1/step] 0: Closed 1: Open
6-537-069	Rear Main Grip Close Sensor	E	[0 or 1 / 0 / 1/step] 0: Open

### 3.SP Mode Tables

			1: Closed
6-537-070	Front Main Grip Open Sensor	E	[0 or 1 / 0 / 1/step] 0: Closed 1: Open
6-537-071	Front Main Grip Close Sensor	E	[0 or 1 / 0 / 1/step] 0: Open 1: Closed
6-537-072	Main Grip Signature Sensor	E	[0 or 1 / 0 / 1/step] 0: Paper not detected 1: Paper detected
6-537-073	Thermostat Abnormal	E	[0 or 1 / 0 / 1/step] 0: Defective 1: Normal
6-537-074	Glue Heater Thermistor	E	[0 or 1 / 0 / 1/step] 0: Normal 1: Defective
6-537-075	Glue Unit HP Sensor	E	[0 or 1 / 0 / 1/step] 0: Not Home Position 1: Home Position
6-537-076	Book Output Path HP Sensor	E	[0 or 1 / 0 / 1/step] 0: Not Home Position 1: Home Position
6-537-077	Book Output Path Push Sensor	E	[0 or 1 / 0 / 1/step] 0: Not contact 1: Contact
6-537-078	Sub Grip HP Sensor	E	[0 or 1 / 0 / 1/step] 0: Not Home Position 1: Home Position
6-537-079	Signature Main Grip Position Sensor	E	[0 or 1 / 0 / 1/step] 0: Not main grip position 1: Main grip position
6-537-080	Signature Fan 2 Lock: Rear	E	[0 or 1 / 0 / 1/step] 0: Not detected 1: Lock detected
6-537-081	Signature Fan 2 Lock: Front	E	[0 or 1 / 0 / 1/step] 0: Not detected 1: Lock detected
6-537-082	Signature Fan 1 Lock: Rear	E	[0 or 1 / 0 / 1/step]

## 3.SP Mode Tables

			0: Not detected 1: Lock detected
6-537-083	Signature Fan 1 Lock: Front	E	[0 or 1 / 0 / 1/step] 0: Not detected 1: Lock detected
6-537-084	Power Supply Fan Lock: Center	E	[0 or 1 / 0 / 1/step] 0: Not detected 1: Lock detected
6-537-085	Power Supply Fan Lock: Rear	E	[0 or 1 / 0 / 1/step] 0: Not detected 1: Lock detected
6-537-086	Spine Plate Fan Lock: Upper Rear	E	[0 or 1 / 0 / 1/step] 0: Not detected 1: Lock detected
6-537-087	Spine Plate Fan Lock: Front	E	[0 or 1 / 0 / 1/step] 0: Not detected 1: Lock detected
6-537-088	Spine Plate Fan Lock: Lower Rear	E	[0 or 1 / 0 / 1/step] 0: Not detected 1: Lock detected
6-537-089	Spine Plate Fan Lock: Lower Front	E	[0 or 1 / 0 / 1/step] 0: Not detected 1: Lock detected
6-537-090	Glue Tank Roller: Rotate Detect Sensor	E	[0 or 1 / 0 / 1/step] 0: Not blocked 1: Blocked
6-537-091	Glue Supply Fan: Lock 1	E	[0 or 1 / 0 / 1/step] 0: Not detected 1: Lock detected
6-537-092	Glue Supply Fan Lock 2	E	[0 or 1 / 0 / 1/step] 0: Not detected 1: Lock detected
6-537-093	Book Catch Fence HP Sensor	E	[0 or 1 / 0 / 1/step] 0: Home Position 1: Not Home Position
6-537-094	Output Stack Door Sensor	E	[0 or 1 / 0 / 1/step] 0: Open 1: Closed

### 3.SP Mode Tables

6-537-095	Output Stack Door Switch	E	[0 or 1 / <b>0</b> / 1/step] 0: Not pressed 1: Pressed
6-537-096	Book Buffer Tray HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position
6-537-097	Trim Scrap Buffer HP Sensor: Right	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position
6-537-098	Press HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-537-099	Blade Cradle HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-537-100	Cutter Limit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Limit reached 1: Limit not reached
6-537-101	Cutter Area Sensor 1	E	[0 or 1 / <b>0</b> / 1/step] 0: Cutter retracting side 1: Blade receiving side
6-537-102	Entrance Path Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-537-103	Book Registration Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-537-104	Cutter Area Sensor 2	E	[0 or 1 / <b>0</b> / 1/step] 0: Front side 1: Far side
6-537-105	LE Detect Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-537-106	Grip End Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: End position 1: Not end position
6-537-107	Book Rotate HP Sensor 1: Right	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position

## 3.SP Mode Tables

6-537-108	Press End Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: End position 1: Not end position
6-537-109	Slide HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-537-110	Grip HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-537-111	Book Rotate HP Sensor 2: Left	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-537-112	Press Limit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Limit reached 1: Limit not reached
6-537-113	Trim Scrap Box Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Scrap box available 1: No scrap box
6-537-114	Book Arrival Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-537-115	Book Detect Sensor: Output Tray	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-537-116	Output Tray HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-537-117	Trim Scrap Buffer HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position
6-537-118	Trim Scrap Box Full Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Full 1: Not full
6-537-119	Front Door SW: Center	E	[0 or 1 / <b>0</b> / 1/step] 0: Closed 1: Open
6-537-120	Front Door SW: 36V	E	[0 or 1 / <b>0</b> / 1/step] 0: Closed 1: Open

### 3.SP Mode Tables

6-537-121	Thrust Plate Sensor	E	[0 or 1 / 0 / 1/step] 0: Home Position 1: Not Home Position
6-537-122	Upper Tray Empty Sensor	E	[0 or 1 / 0 / 1/step] 0: Paper detected 1: Paper not detected
6-537-123	Lower Tray Empty Sensor	E	[0 or 1 / 0 / 1/step] 0: Paper detected 1: Paper not detected
6-537-124	Upper Tray Pickup Sensor	E	[0 or 1 / 0 / 1/step] 0: Not pickup position 1: Pickup position
6-537-125	Lower Tray Pickup Sensor	E	[0 or 1 / 0 / 1/step] 0: Not pickup position 1: Pickup position
6-537-126	Inserter Cover Sensor	E	[0 or 1 / 0 / 1/step] 0: Closed 1: Open
6-537-127	Lower Tray Paper Out Sensor	E	[0 or 1 / 0 / 1/step] 0: Paper not detected 1: Paper detected
6-537-128	Lower Tray Registration Sensor	E	[0 or 1 / 0 / 1/step] 0: Paper not detected 1: Paper detected
6-537-129	Upper Tray Registration Sensor	E	[0 or 1 / 0 / 1/step] 0: Paper not detected 1: Paper detected
6-537-130	Upper Tray: Large Paper Sensor	E	[0 or 1 / 0 / 1/step] 0: Paper detected 1: Paper not detected
6-537-131	Upper Tray: Small Paper Sensor	E	[0 or 1 / 0 / 1/step] 0: Paper detected 1: Paper not detected
6-537-132	Lower Tray Lower Limit Sensor	E	[0 or 1 / 0 / 1/step] 0: Lower limit position 1: Not lower limit position
6-537-133	Transport Sensor: Midway	E	[0 or 1 / 0 / 1/step] 0: Paper not detected 1: Paper detected

6-537-134	Inserter Unit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Closed 1: Open
6-537-135	Upper Tray Lower Limit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Lower limit position 1: Not lower limit position
6-537-136	Drive Gear Switching Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Upper tray drive 1: Lower tray drive
6-537-137	Transport Sensor 1	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-537-138	Transport Sensor 2	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-537-139	Relay Unit Transport Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-537-140	Relay Unit Front Door Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Closed 1: Open

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**Input Check: Stacker 1 Upstream**


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<b>6600</b>	<b>[Stacker1 Input Check]</b>		
	Gets information of specified sensor.		
6-600-001	Entrance Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-600-002	Shift Tray Exit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-600-003	Proof Tray Exit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-600-004	Exit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-600-005	Transport Sensor	E	[0 or 1 / <b>0</b> / 1/step]

### 3.SP Mode Tables

			0: Paper detected 1: Paper not detected
6-600-006	Proof Tray Full Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Full 1: Not full
6-600-007	Shift Tray JG HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-600-008	Proof Tray JG HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-600-009	Shift Roller HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-600-010	Front Jogger Fence HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position
6-600-011	Rear Jogger Fence HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position
6-600-012	Jog Fence Retraction HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position
6-600-013	LE Stopper HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position
6-600-014	Height Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-600-015	Shift Tray Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-600-016	Tray Full Sensor 1: 25%	E	[0 or 1 / <b>0</b> / 1/step] 0: No tray 1: Tray available
6-600-017	Tray Full Sensor 2: 50%	E	[0 or 1 / <b>0</b> / 1/step] 0: No tray 1: Tray available



## 3.SP Mode Tables

6-600-018	Tray Full Sensor 3: 75%	E	[0 or 1 / <b>0</b> / 1/step] 0: No tray 1: Tray available
6-600-019	Tray Full Sensor 4: 100%	E	[0 or 1 / <b>0</b> / 1/step] 0: No tray 1: Tray available
6-600-020	Tray Low Limit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: No tray 1: Tray available
6-600-021	Roll Away Cart Set SW	E	[0 or 1 / <b>0</b> / 1/step] 0: Roll-away cart available 1: No roll-away cart
6-600-022	Tray Guard Sensor 1	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect obstacle
6-600-023	Tray Guard Sensor 2	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect obstacle
6-600-024	Sub Jogger HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position
6-600-025	Down Button	E	[0 or 1 / <b>0</b> / 1/step] 0: On 1: Off
6-600-026	Jam Button	E	[0 or 1 / <b>0</b> / 1/step] 0: On 1: Off
6-600-027	Top Door SW	E	[0 or 1 / <b>0</b> / 1/step] 0: Top door closed 1: Top door open
6-600-028	Front Door SW	E	[0 or 1 / <b>0</b> / 1/step] 0: Front door closed 1: Front door open
6-600-029	Shutter HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position

3.SP Mode Tables

Input Check: Stacker 2 Downstream

6606	<b>[Stacker2 Input Check]</b>		
Gets information of specified sensor.			
6-606-001	Entrance Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-606-002	Shift Tray Exit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-606-003	Proof Tray Exit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-606-004	Exit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-606-005	Transport Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-606-006	Proof Tray Full Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Full 1: Not full
6-606-007	Shift Tray JG HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-606-008	Proof Tray JG HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-606-009	Shift Roller HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-606-010	Front Jogger Fence HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position
6-606-011	Rear Jogger Fence HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position
6-606-012	Jog Fence Retraction HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position

## 3.SP Mode Tables

			1: Home Position
6-606-013	LE Stopper HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position
6-606-014	Height Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect
6-606-015	Shift Tray Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-606-016	Tray Full Sensor 1: 25%	E	[0 or 1 / <b>0</b> / 1/step] 0: No tray 1: Tray available
6-606-017	Tray Full Sensor 2: 50%	E	[0 or 1 / <b>0</b> / 1/step] 0: No tray 1: Tray available
6-606-018	Tray Full Sensor 3: 75%	E	[0 or 1 / <b>0</b> / 1/step] 0: No tray 1: Tray available
6-606-019	Tray Full Sensor 4: 100%	E	[0 or 1 / <b>0</b> / 1/step] 0: No tray 1: Tray available
6-606-020	Tray Low Limit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: No tray 1: Tray available
6-606-021	Roll Away Cart Set SW	E	[0 or 1 / <b>0</b> / 1/step] 0: Roll-away cart available 1: No roll-away cart
6-606-022	Tray Guard Sensor 1	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect obstacle
6-606-023	Tray Guard Sensor 2	E	[0 or 1 / <b>0</b> / 1/step] 0: Not detect 1: Detect obstacle
6-606-024	Sub Jogger HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position
6-606-025	Down Button	E	[0 or 1 / <b>0</b> / 1/step]

### 3.SP Mode Tables

			0: On 1: Off
6-606-026	Jam Button	E	[0 or 1 / <b>0</b> / 1/step] 0: On 1: Off
6-606-027	Top Door SW	E	[0 or 1 / <b>0</b> / 1/step] 0: Top door closed 1: Top door open
6-606-028	Front Door SW	E	[0 or 1 / <b>0</b> / 1/step] 0: Front door closed 1: Front door open
6-606-029	Shutter HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position

### Input Check: Trimmer

<b>6650</b>	<b>[Input Check: Trimmer]</b>		
6-650-001	Entrance Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-650-002	Stopper Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-650-003	Exit Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-650-004	Booklet Sensor 1	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper detected 1: Paper not detected
6-650-005	Booklet Sensor 2	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-650-006	Booklet Sensor 3	E	[0 or 1 / <b>0</b> / 1/step] 0: Paper not detected 1: Paper detected
6-650-007	Trimming Blade HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position

## 3.SP Mode Tables

6-650-008	Cut Position HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-650-009	Press Roller HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-650-010	Press Stopper HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Home Position 1: Not Home Position
6-650-011	Scrap Hopper Full HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Full 1: Not full
6-650-012	Scrap Hopper HP Sensor	E	[0 or 1 / <b>0</b> / 1/step] 0: Not Home Position 1: Home Position
6-650-013	Door Switch	E	[0 or 1 / <b>0</b> / 1/step] 0: Open 1: Closed

## Output Check

Output Check: Main Machine, RT5110, RT5130, Bypass Tray

5804	[Output Check]		
5-804-001	Feed Mtr 1 (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-002	Feed Mtr 1 (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-003	Feed Mtr 1 (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-004	Feed Mtr 1 (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-005	Feed Mtr 2 (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-006	Feed Mtr 2 (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-007	Feed Mtr 2 (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-008	Feed Mtr 2 (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-009	Feed Mtr 3 (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-010	Feed Mtr 3 (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-011	Feed Mtr 3 (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-012	Feed Mtr 3 (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-013	Bypass Grip Mtr 1 (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-014	Bypass Grip Mtr 1 (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-015	Bypass Grip Mtr 1 (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-016	Bypass Grip Mtr 1 (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-017	Bypass Grip Mtr 1 (Speed 5)	E	[0 to 1 / 0 / 1]
5-804-018	Bypass Grip Mtr 1 (Speed 6)	E	[0 to 1 / 0 / 1]
5-804-019	Bypass Grip Mtr 2 (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-020	Bypass Grip Mtr 2 (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-021	Bypass Grip Mtr 2 (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-022	Bypass Grip Mtr 2 (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-023	Bypass Grip Mtr 2 (Speed 5)	E	[0 to 1 / 0 / 1]
5-804-024	Bypass Grip Mtr 2 (Speed 6)	E	[0 to 1 / 0 / 1]
5-804-025	Bypass Grip Mtr 3 (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-026	Bypass Grip Mtr 3 (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-027	Bypass Grip Mtr 3 (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-028	Bypass Grip Mtr 3 (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-029	Bypass Grip Mtr 3 (Speed 5)	E	[0 to 1 / 0 / 1]
5-804-030	Bypass Grip Mtr 3 (Speed 6)	E	[0 to 1 / 0 / 1]
5-804-031	Bypass V-Transport (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-032	Bypass V-Transport (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-033	Bypass V-Transport (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-034	Bypass V-Transport (Speed 4)	E	[0 to 1 / 0 / 1]

## 3.SP Mode Tables

5-804-035	Bank Exit Mtr (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-036	Bank Exit Mtr (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-037	Bank Exit Mtr (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-038	Bank Exit Mtr (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-039	Bank Exit Mtr (Speed 5)	E	[0 to 1 / 0 / 1]
5-804-040	Bank Exit Mtr (Speed 6)	E	[0 to 1 / 0 / 1]
5-804-041	Registration Entrance Mtr (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-042	Registration Entrance Mtr (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-043	Registration Entrance Mtr (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-044	Registration Entrance Mtr (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-045	Registration Entrance Mtr (Speed 5)	E	[0 to 1 / 0 / 1]
5-804-046	Registration Entrance Mtr (Speed 6)	E	[0 to 1 / 0 / 1]
5-804-047	Registration Timing Mtr (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-048	Registration Timing Mtr (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-049	Registration Timing Mtr (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-050	Registration Timing Mtr (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-051	Registration Timing Mtr (Speed 5)	E	[0 to 1 / 0 / 1]
5-804-052	Registration Timing Mtr (Speed 6)	E	[0 to 1 / 0 / 1]
5-804-053	Transfer Timing Motor (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-054	Transfer Timing Motor (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-055	Transfer Timing Motor (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-056	Transfer Timing Motor (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-057	Inverter/Entrance Mtr (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-058	Inverter/Entrance Mtr (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-059	Inverter/Entrance Mtr (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-060	Inverter/Entrance Mtr (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-061	Inverter/Entrance Mtr (Speed 5)	E	[0 to 1 / 0 / 1]
5-804-062	Inverter/Entrance Mtr (Speed 6)	E	[0 to 1 / 0 / 1]
5-804-063	Exit/Inverter Mtr (Fwd:Speed 1)	E	[0 to 1 / 0 / 1]
5-804-064	Exit/Inverter Mtr (Fwd:Speed 2)	E	[0 to 1 / 0 / 1]
5-804-065	Exit/Inverter Mtr (Fwd:Speed 3)	E	[0 to 1 / 0 / 1]
5-804-066	Exit/Inverter Mtr (Fwd:Speed 4)	E	[0 to 1 / 0 / 1]
5-804-067	Exit/Inverter Mtr (Fwd:Speed 5)	E	[0 to 1 / 0 / 1]
5-804-068	Exit/Inverter Mtr (Fwd:Speed 6)	E	[0 to 1 / 0 / 1]
5-804-069	Exit/Inverter Mtr (Rev:Speed 1)	E	[0 to 1 / 0 / 1]
5-804-070	Exit/Inverter Mtr (Rev:Speed 2)	E	[0 to 1 / 0 / 1]
5-804-071	Exit/Inverter Mtr (Rev:Speed 3)	E	[0 to 1 / 0 / 1]
5-804-072	Exit/Inverter Mtr (Rev:Speed 4)	E	[0 to 1 / 0 / 1]

### 3.SP Mode Tables

5-804-073	Exit/Inverter Mtr (Rev:Speed 5)	E	[0 to 1 / 0 / 1]
5-804-074	Exit/Inverter Mtr (Rev:Speed 6)	E	[0 to 1 / 0 / 1]
5-804-075	Duplex/Inverter Mtr (Fwd:Speed 1)	E	[0 to 1 / 0 / 1]
5-804-076	Duplex/Inverter Mtr (Fwd:Speed 2)	E	[0 to 1 / 0 / 1]
5-804-077	Duplex/Inverter Mtr (Fwd:Speed 3)	E	[0 to 1 / 0 / 1]
5-804-078	Duplex/Inverter Mtr (Fwd:Speed 4)	E	[0 to 1 / 0 / 1]
5-804-079	Duplex/Inverter Mtr (Fwd:Speed 5)	E	[0 to 1 / 0 / 1]
5-804-080	Duplex/Inverter Mtr (Rev:Speed 1)	E	[0 to 1 / 0 / 1]
5-804-081	Duplex/Inverter Mtr (Rev:Speed 2)	E	[0 to 1 / 0 / 1]
5-804-082	Dup Trans Mtr1 (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-083	Dup Trans Mtr1 (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-084	Dup Trans Mtr2 (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-085	Dup Trans Mtr2 (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-086	Paper Ejection Motor (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-087	Paper Ejection Motor (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-088	Paper Ejection Motor (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-089	Paper Ejection Motor (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-090	Rotary Gate Motor (HP)	E	[0 to 1 / 0 / 1]
5-804-091	Rotary Gate Motor (pos1)	E	[0 to 1 / 0 / 1]
5-804-092	Rotary Gate Motor (pos2)	E	[0 to 1 / 0 / 1]
5-804-093	Rotary Gate Motor (Drive:Speed 1)	E	[0 to 1 / 0 / 1]
5-804-094	Rotary Gate Motor (Drive:Speed 2)	E	[0 to 1 / 0 / 1]
5-804-095	Rotary Gate Motor (Drive:Speed 3)	E	[0 to 1 / 0 / 1]
5-804-096	Unit Shift Motor (HP)	E	[0 to 1 / 0 / 1]
5-804-097	Unit Shift Motor (Drive)	E	[0 to 1 / 0 / 1]
5-804-098	Rear Shift Motor (HP)	E	[0 to 1 / 0 / 1]
5-804-099	Rear Shift Motor (Drive)	E	[0 to 1 / 0 / 1]
5-804-100	Relay Separate Motor (HP)	E	[0 to 1 / 0 / 1]
5-804-101	Relay Separate Motor (Drive)	E	[0 to 1 / 0 / 1]
5-804-102	LCT Relay Separate Motor (HP)	E	[0 to 1 / 0 / 1]
5-804-103	LCT Relay Separate Motor (Drive)	E	[0 to 1 / 0 / 1]
5-804-104	Exit/Inverter Separate Motor (HP)	E	[0 to 1 / 0 / 1]
5-804-105	Exit/Inverter Separate Motor (Drive)	E	[0 to 1 / 0 / 1]
5-804-106	1st Tray: Bottom Plate (Lift: 1 s)	E	[0 to 1 / 0 / 1]
5-804-107	1st Tray: Bottom Plate (Lower: 1 s)	E	[0 to 1 / 0 / 1]
5-804-108	2nd Tray: Bottom Plate (Lift: 1 s)	E	[0 to 1 / 0 / 1]
5-804-109	2nd Tray: Bottom Plate (Lower: 1 s)	E	[0 to 1 / 0 / 1]
5-804-110	3rd Tray: Bottom Plate (Lift: 1 s)	E	[0 to 1 / 0 / 1]



## 3.SP Mode Tables

5-804-111	3rd Tray: Bottom Plate (Lower: 1 s)	E	[0 to 1 / 0 / 1]
5-804-112	Rear Fence Motor (Fwd: 1 s)	E	[0 to 1 / 0 / 1]
5-804-113	Rear Fence Motor (Rev: 1 s)	E	[0 to 1 / 0 / 1]
5-804-116	1st Tray: PickUp SOL	E	[0 to 1 / 0 / 1]
5-804-117	2nd Tray: PickUp SOL	E	[0 to 1 / 0 / 1]
5-804-118	3rd Tray: PickUp SOL	E	[0 to 1 / 0 / 1]
5-804-119	Inverter JG SOL	E	[0 to 1 / 0 / 1]
5-804-120	Lock SOL	E	[0 to 1 / 0 / 1]
5-804-121	Connect SOL	E	[0 to 1 / 0 / 1]
5-804-122	Rear Side Fence SOL	E	[0 to 1 / 0 / 1]
5-804-123	Front Side Fence SOL	E	[0 to 1 / 0 / 1]
5-804-124	Bank LED: 1st Tray	E	[0 to 1 / 0 / 1]
5-804-125	Bank LED: 2nd Tray	E	[0 to 1 / 0 / 1]
5-804-126	Bank LED: 3rd Tray	E	[0 to 1 / 0 / 1]
5-804-127	De-curler Unit Move:Lower Default	E	[0 to 1 / 0 / 1]
5-804-128	De-curler Unit Move:Upper Default	E	[0 to 1 / 0 / 1]
5-804-129	De-curl Trans Mtr (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-130	De-curl Trans Mtr (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-131	De-curl Trans Mtr (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-132	De-curl Trans Mtr (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-133	De-curl Trans Mtr (Reverse)	E	[0 to 1 / 0 / 1]
5-804-134	Exit JG Motor (HP)	E	[0 to 1 / 0 / 1]
5-804-135	Exit JG Motor (Drive)	E	[0 to 1 / 0 / 1]
5-804-144	Dev Motor (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-145	Dev Motor (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-146	Dev Motor (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-147	Dev Motor (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-148	Drum CL Mtr (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-149	Drum CL Mtr (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-150	Drum CL Mtr (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-151	Drum CL Mtr (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-160	TH Paper Feed Motor (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-161	TH Paper Feed Motor (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-162	TH Paper Feed Motor (Speed 3)	E	[0 to 1 / 0 / 1]
5-804-163	TH Paper Feed Motor (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-164	Fusing Motor (Speed 1)	E	[0 to 1 / 0 / 1]
5-804-165	Fusing Motor (Speed 2)	E	[0 to 1 / 0 / 1]
5-804-166	Fusing Motor (Speed 3)	E	[0 to 1 / 0 / 1]

### 3.SP Mode Tables

5-804-167	Fusing Motor (Speed 4)	E	[0 to 1 / 0 / 1]
5-804-168	Waste Toner Transport Motor	E	[0 to 1 / 0 / 1]
5-804-169	ITB:Steering Control Mtr(HP)	E	[0 to 1 / 0 / 1]
5-804-175	Scanner Lamp	E	[0 to 1 / 0 / 1]
5-804-180	A4LCT Tray4 Paper Feed STM High	E	[0 to 1 / 0 / 1]
5-804-181	A4LCT Tray4 Paper Feed STM Low	E	[0 to 1 / 0 / 1]
5-804-182	A4LCT Tray5 Paper Feed STM High	E	[0 to 1 / 0 / 1]
5-804-183	A4LCT Tray5 Paper Feed STM Low	E	[0 to 1 / 0 / 1]
5-804-184	A4LCT Tray6 Paper Feed STM High	E	[0 to 1 / 0 / 1]
5-804-185	A4LCT Tray6 Paper Feed STM Low	E	[0 to 1 / 0 / 1]
5-804-186	A4LCT Tray4 Grip STM High	E	[0 to 1 / 0 / 1]
5-804-187	A4LCT Tray4 Grip STM Low	E	[0 to 1 / 0 / 1]
5-804-188	A4LCT Tray5 Grip STM High	E	[0 to 1 / 0 / 1]
5-804-189	A4LCT Tray5 Grip STM Low	E	[0 to 1 / 0 / 1]
5-804-190	A4LCT Tray6 Grip STM High	E	[0 to 1 / 0 / 1]
5-804-191	A4LCT Tray6 Grip STM Low	E	[0 to 1 / 0 / 1]
5-804-192	A4LCT V-Transport 1 STM High	E	[0 to 1 / 0 / 1]
5-804-193	A4LCT V-Transport 1 STM Low	E	[0 to 1 / 0 / 1]
5-804-194	A4LCT V-Transport 2 STM High	E	[0 to 1 / 0 / 1]
5-804-195	A4LCT V-Transport 2 STM Low	E	[0 to 1 / 0 / 1]
5-804-196	A4LCT V-Transport 3 STM High	E	[0 to 1 / 0 / 1]
5-804-197	A4LCT V-Transport 3 STM Low	E	[0 to 1 / 0 / 1]
5-804-198	A4LCT Exit STM High	E	[0 to 1 / 0 / 1]
5-804-199	A4LCT Exit STM Low	E	[0 to 1 / 0 / 1]
5-804-200	A4LCT Exit Roller Contact STM	E	[0 to 1 / 0 / 1]
5-804-201	A4LCT Tray4 Pickup SOL	E	[0 to 1 / 0 / 1]
5-804-202	A4LCT Tray5 Pickup SOL	E	[0 to 1 / 0 / 1]
5-804-203	A4LCT Tray6 Pickup SOL	E	[0 to 1 / 0 / 1]
5-804-204	A3LCT Tray4 Paper Feed STM High	E	[0 to 1 / 0 / 1]
5-804-205	A3LCT Tray4 Paper Feed STM Low	E	[0 to 1 / 0 / 1]
5-804-206	A3LCT Tray5 Paper Feed STM High	E	[0 to 1 / 0 / 1]
5-804-207	A3LCT Tray5 Paper Feed STM Low	E	[0 to 1 / 0 / 1]
5-804-208	A3LCT Tray6 Paper Feed STM High	E	[0 to 1 / 0 / 1]
5-804-209	A3LCT Tray6 Paper Feed STM Low	E	[0 to 1 / 0 / 1]
5-804-210	A3LCT Tray4 Grip STM High	E	[0 to 1 / 0 / 1]
5-804-211	A3LCT Tray4 Grip STM Low	E	[0 to 1 / 0 / 1]
5-804-212	A3LCT Tray5 Grip STM High	E	[0 to 1 / 0 / 1]
5-804-213	A3LCT Tray5 Grip STM Low	E	[0 to 1 / 0 / 1]

## 3.SP Mode Tables

5-804-214	A3LCT Tray6 Grip STM High	E	[0 to 1 / 0 / 1]
5-804-215	A3LCT Tray6 Grip STM Low	E	[0 to 1 / 0 / 1]
5-804-216	A3LCT V-Transport 1 STM High	E	[0 to 1 / 0 / 1]
5-804-217	A3LCT V-Transport 1 STM Low	E	[0 to 1 / 0 / 1]
5-804-218	A3LCT V-Transport 2 STM High	E	[0 to 1 / 0 / 1]
5-804-219	A3LCT V-Transport 2 STM Low	E	[0 to 1 / 0 / 1]
5-804-220	A3LCT V-Transport 3 STM High	E	[0 to 1 / 0 / 1]
5-804-221	A3LCT V-Transport 3 STM Low	E	[0 to 1 / 0 / 1]
5-804-222	A3LCT Exit STM High	E	[0 to 1 / 0 / 1]
5-804-223	A3LCT Exit STM Low	E	[0 to 1 / 0 / 1]
5-804-224	A3LCT Exit Roller Contact STM	E	[0 to 1 / 0 / 1]
5-804-225	A3LCT Tray4 Pickup SOL	E	[0 to 1 / 0 / 1]
5-804-226	A3LCT Tray5 Pickup SOL	E	[0 to 1 / 0 / 1]
5-804-227	A3LCT Tray6 Pickup SOL	E	[0 to 1 / 0 / 1]
5-804-228	A3LCT Tray4 Front Fan	E	[0 to 1 / 0 / 1]
5-804-229	A3LCT Tray4 Rear Fan	E	[0 to 1 / 0 / 1]
5-804-230	A3LCT Tray5 Front Fan	E	[0 to 1 / 0 / 1]
5-804-231	A3LCT Tray5 Rear Fan	E	[0 to 1 / 0 / 1]
5-804-232	A3LCT Tray6 Front Fan	E	[0 to 1 / 0 / 1]
5-804-233	A3LCT Tray6 Rear Fan	E	[0 to 1 / 0 / 1]
5-804-234	Bypass Feed STM High	E	[0 to 1 / 0 / 1]
5-804-235	Bypass Feed STM Low	E	[0 to 1 / 0 / 1]
5-804-236	Bypass Grip STM High	E	[0 to 1 / 0 / 1]
5-804-237	Bypass Grip STM Low	E	[0 to 1 / 0 / 1]
5-804-238	Bypass V-Transport STM High	E	[0 to 1 / 0 / 1]
5-804-239	Bypass V-Transport STM Low	E	[0 to 1 / 0 / 1]
5-804-240	Bypass Pickup SOL	E	[0 to 1 / 0 / 1]
5-804-241	A4LCT Tray4 LED	E	[0 to 1 / 0 / 1]
5-804-242	A4LCT Tray5 LED	E	[0 to 1 / 0 / 1]
5-804-243	A4LCT Tray6 LED	E	[0 to 1 / 0 / 1]
5-804-244	A3LCT Tray4 LED	E	[0 to 1 / 0 / 1]
5-804-245	A3LCT Tray5 LED	E	[0 to 1 / 0 / 1]
5-804-246	A3LCT Tray6 LED	E	[0 to 1 / 0 / 1]
5-804-247	HP Drive Motor(Speed1)	E	[0 to 1 / 0 / 1]
5-804-248	HP Drive Motor(Speed2)	E	[0 to 1 / 0 / 1]
5-804-249	HP Drive Motor(Speed3)	E	[0 to 1 / 0 / 1]
5-804-250	HP Drive Motor(Speed4)	E	[0 to 1 / 0 / 1]

3.SP Mode Tables

<b>5805</b>	<b>[Output Check]</b>		
5-805-001	Opt. Cooling Fan NS	E	[0 to 1 / 0 / 1]
5-805-002	Opt. Cooling Fan HS	E	[0 to 1 / 0 / 1]
5-805-003	Dev. Cooling Fan Front NS	E	[0 to 1 / 0 / 1]
5-805-004	Dev. Cooling Fan Front HS	E	[0 to 1 / 0 / 1]
5-805-005	Dev. Cooling Fan Rear NS	E	[0 to 1 / 0 / 1]
5-805-006	Dev. Cooling Fan Rear HS	E	[0 to 1 / 0 / 1]
5-805-007	Belt Cleaning Fan NS	E	[0 to 1 / 0 / 1]
5-805-009	Duplex Low Cooling Fan Front NS	E	[0 to 1 / 0 / 1]
5-805-010	Duplex Low Cooling Fan Rear NS	E	[0 to 1 / 0 / 1]
5-805-017	Ozone Blower Suction	E	[0 to 1 / 0 / 1]
5-805-018	Ozone Blower Exhaust	E	[0 to 1 / 0 / 1]
5-805-019	Fuse Trans Exhaust Fan NS	E	[0 to 1 / 0 / 1]
5-805-020	Fuse Exhaust Fan Upper NS	E	[0 to 1 / 0 / 1]
5-805-021	Fuse Exhaust Fan Lower NS	E	[0 to 1 / 0 / 1]
5-805-026	Fuse Insulate Fan Rear Right NS	E	[0 to 1 / 0 / 1]
5-805-027	Fuse Insulate Fan Rear Right HS	E	[0 to 1 / 0 / 1]
5-805-028	Fuse Insulate Fan Rear Left NS	E	[0 to 1 / 0 / 1]
5-805-029	Fuse Insulate Fan Rear Left HS	E	[0 to 1 / 0 / 1]
5-805-	Paper Exit Exhaust Fan Rear	E	[0 to 1 / 0 / 1]

030	Right NS		
5-805-032	Paper Exit Exhaust Fan Rear Left NS	E	[0 to 1 / 0 / 1]
5-805-034	HP Suction Fan NS	E	[0 to 1 / 0 / 1]
5-805-035	HP Exhaust Fan NS	E	[0 to 1 / 0 / 1]
5-805-038	Psu Fan T Left NS	E	[0 to 1 / 0 / 1]
5-805-039	Psu Fan T Left HS	E	[0 to 1 / 0 / 1]
5-805-040	Psu Fan M1 Right NS	E	[0 to 1 / 0 / 1]
5-805-041	Psu Fan M1 Left NS	E	[0 to 1 / 0 / 1]
5-805-042	Psu Fan M2 Right NS	E	[0 to 1 / 0 / 1]
5-805-043	Psu Fan M2 Left NS	E	[0 to 1 / 0 / 1]
5-805-044	Psu-C Cooling Fan NS	E	[0 to 1 / 0 / 1]
5-805-046	P-sensor Fan NS	E	[0 to 1 / 0 / 1]
5-805-047	Paper Transfer Fan Front NS	E	[0 to 1 / 0 / 1]
5-805-048	Paper Transfer Fan Rear NS	E	[0 to 1 / 0 / 1]
5-805-049	CIS Cleaning Fan NS	E	[0 to 1 / 0 / 1]
5-805-051	PRT Cooling Fan Front NS	E	[0 to 1 / 0 / 1]
5-805-052	PRT Cooling Fan Rear NS	E	[0 to 1 / 0 / 1]
5-805-053	Right Side Cooling Fan Front NS	E	[0 to 1 / 0 / 1]
5-805-054	Right Side Cooling Fan Front HS	E	[0 to 1 / 0 / 1]
5-805-	Right Side Cooling Fan Rear	E	[0 to 1 / 0 / 1]

### 3.SP Mode Tables

055	NS		
5-805-056	Right Side Cooling Fan Rear HS	E	[0 to 1 / 0 / 1]
5-805-057	Ozone Blower Suction HS	E	[0 to 1 / 0 / 1]
5-805-058	Ozone Blower Exhaust HS	E	[0 to 1 / 0 / 1]
5-805-059	Right Side Cooling Fan Center NS	E	[0 to 1 / 0 / 1]
5-805-060	Right Side Cooling Fan Center HS	E	[0 to 1 / 0 / 1]
5-805-061	Toner Bottle Motor1	E	[0 to 1 / 0 / 1]
5-805-062	Toner Bottle Motor2	E	[0 to 1 / 0 / 1]
5-805-063	Toner Bottle Chuck Motor1	E	[0 to 1 / 0 / 1]
5-805-064	Toner Bottle Chuck Motor2	E	[0 to 1 / 0 / 1]
5-805-065	Toner Agitator Motor	E	[0 to 1 / 0 / 1]
5-805-066	Toner Feed Motor	E	[0 to 1 / 0 / 1]
5-805-067	Toner Collection Bottle Motor	E	[0 to 1 / 0 / 1]
5-805-068	PCL	E	[0 to 1 / 0 / 1]
5-805-069	Fusing Pressure Release Motor(HP)	E	[0 to 1 / 0 / 1] Operates for fusing de-pressure motor home position.
5-805-070	Fusing Pressure Release Motor(Up)	E	[0 to 1 / 0 / 1] Operates for fusing de-pressure motor pressurization2 position.
5-805-071	Web Motor	E	[0 to 1 / 0 / 1] Rewind the web cleaning motor twice.
5-805-072	Trans T1 Output	E	[0 to 1 / 0 / 1]
5-805-	Trans T2- Output	E	[0 to 1 / 0 / 1]

073			
5-805-074	Trans T2+ Output	E	[0 to 1 / 0 / 1]
5-805-075	Sep AC Output	E	[0 to 1 / 0 / 1]
5-805-076	Sep DC Output	E	[0 to 1 / 0 / 1]
5-805-077	Paper Transfer Contact Motor	E	[0 to 1 / 0 / 1]
5-805-078	Charge C1 Output	E	[0 to 1 / 0 / 1]
5-805-079	Charge C2 Output	E	[0 to 1 / 0 / 1]
5-805-080	Charge G Output	E	[0 to 1 / 0 / 1]
5-805-081	Vertical Trans. LED	E	[0 to 1 / 0 / 1]
5-805-082	Paper Feed A2 LED	E	[0 to 1 / 0 / 1]
5-805-083	Paper Feed A3 LED	E	[0 to 1 / 0 / 1]
5-805-084	Main Relay LED	E	[0 to 1 / 0 / 1]
5-805-085	LCT Relay LED	E	[0 to 1 / 0 / 1]
5-805-086	Regist. Timing LED	E	[0 to 1 / 0 / 1]
5-805-087	Transfer Timing LED	E	[0 to 1 / 0 / 1]
5-805-088	Drawer Lever: Right LED	E	[0 to 1 / 0 / 1]
5-805-089	Paper Exit LED	E	[0 to 1 / 0 / 1]
5-805-090	HP Belt LED	E	[0 to 1 / 0 / 1]
5-805-091	Drawer Lever: Left LED	E	[0 to 1 / 0 / 1]
5-805-	Duplex Inverter LED	E	[0 to 1 / 0 / 1]

### 3.SP Mode Tables

092			
5-805-103	A3LCT 4th Feed Unit LED	E	[0 to 1 / 0 / 1]
5-805-104	A3LCT 5th Feed Unit LED	E	[0 to 1 / 0 / 1]
5-805-105	A3LCT 6th Feed Unit LED	E	[0 to 1 / 0 / 1]
5-805-106	A3LCT Exit LED	E	[0 to 1 / 0 / 1]
5-805-110	A4LCT 4th Feed Unit LED	E	[0 to 1 / 0 / 1]
5-805-111	A4LCT 5th Feed Unit LED	E	[0 to 1 / 0 / 1]
5-805-112	A4LCT 6th Feed Unit LED	E	[0 to 1 / 0 / 1]
5-805-113	A4LCT Exit LED	E	[0 to 1 / 0 / 1]

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### Output Check: Vacuum Feed LCIT RT5120

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<b>5809</b>	<b>[Output Check]</b>		
5-809-100	Twin LCT1 F1 Belt M	E	[ON/OFF]
5-809-101	Twin LCT1 F1 Trans M	E	[ON/OFF]
5-809-102	Twin LCT1 F1 V-Trans M1	E	[ON/OFF]
5-809-103	Twin LCT1 F1 V-Trans M2	E	[ON/OFF]
5-809-104	Twin LCT1 F1 Float Fan	E	[ON/OFF]
5-809-105	Twin LCT1 F1 Separate Fan	E	[ON/OFF]
5-809-106	Twin LCT1 F1 Fr Side Fan	E	[ON/OFF]
5-809-107	Twin LCT1 F1 Rr Side Fan	E	[ON/OFF]
5-809-108	Twin LCT1 F1 Suction Fan1	E	[ON/OFF]
5-809-109	Twin LCT1 F1 Suction Fan2	E	[ON/OFF]
5-809-110	Twin LCT1 F1 Float Fan Shut SOL	E	[ON/OFF]
5-809-111	Twin LCT1 F1 Fr Side Fan Shut SOL	E	[ON/OFF]
5-809-112	Twin LCT1 F1 Rr Side Fan Shut SOL	E	[ON/OFF]
5-809-113	Twin LCT1 F1 LED	E	[ON/OFF]
5-809-114	Twin LCT1 F2 Belt M	E	[ON/OFF]
5-809-115	Twin LCT1 F2 Trans M	E	[ON/OFF]
5-809-116	Twin LCT1 F2 V-Trans M1	E	[ON/OFF]
5-809-117	Twin LCT1 F2 V-Trans M2	E	[ON/OFF]



## 3.SP Mode Tables

5-809-118	Twin LCT1 F2 Float Fan	E	[ON/OFF]
5-809-119	Twin LCT1 F2 Separate Fan	E	[ON/OFF]
5-809-120	Twin LCT1 F2 Fr Side Fan	E	[ON/OFF]
5-809-121	Twin LCT1 F2 Rr Side Fan	E	[ON/OFF]
5-809-122	Twin LCT1 F2 Suction Fan1	E	[ON/OFF]
5-809-123	Twin LCT1 F2 Suction Fan2	E	[ON/OFF]
5-809-124	Twin LCT1 F2 Float Fan Shut SOL	E	[ON/OFF]
5-809-125	Twin LCT1 F2 Fr Side Fan Shut SOL	E	[ON/OFF]
5-809-126	Twin LCT1 F2 Rr Side Fan Shut SOL	E	[ON/OFF]
5-809-127	Twin LCT1 F2 LED	E	[ON/OFF]
5-809-128	Twin LCT1 V-Trans Exit M	E	[ON/OFF]
5-809-129	Twin LCT1 Exit M	E	[ON/OFF]
5-809-130	Twin LCT1 Exit Roller Retract M	E	[ON/OFF]
5-809-131	Twin LCT2 F1 Belt M	E	[ON/OFF]
5-809-132	Twin LCT2 F1 Trans M	E	[ON/OFF]
5-809-133	Twin LCT2 F1 V-Trans M1	E	[ON/OFF]
5-809-134	Twin LCT2 F1 V-Trans M2	E	[ON/OFF]
5-809-135	Twin LCT2 F1 Float Fan	E	[ON/OFF]
5-809-136	Twin LCT2 F1 Separate Fan	E	[ON/OFF]
5-809-137	Twin LCT2 F1 Fr Side Fan	E	[ON/OFF]
5-809-138	Twin LCT2 F1 Rr Side Fan	E	[ON/OFF]
5-809-139	Twin LCT2 F1 Suction Fan1	E	[ON/OFF]
5-809-140	Twin LCT2 F1 Suction Fan2	E	[ON/OFF]
5-809-141	Twin LCT2 F1 Float Fan Shut SOL	E	[ON/OFF]
5-809-142	Twin LCT2 F1 Fr Side Fan Shut SOL	E	[ON/OFF]
5-809-143	Twin LCT2 F1 Rr Side Fan Shut SOL	E	[ON/OFF]
5-809-144	Twin LCT2 F1 LED	E	[ON/OFF]
5-809-145	Twin LCT2 F2 Belt M	E	[ON/OFF]
5-809-146	Twin LCT2 F2 Trans M	E	[ON/OFF]
5-809-147	Twin LCT2 F2 V-Trans M1	E	[ON/OFF]
5-809-148	Twin LCT2 F2 V-Trans M2	E	[ON/OFF]
5-809-149	Twin LCT2 F2 Float Fan	E	[ON/OFF]
5-809-150	Twin LCT2 F2 Separate Fan	E	[ON/OFF]
5-809-151	Twin LCT2 F2 Fr Side Fan	E	[ON/OFF]
5-809-152	Twin LCT2 F2 Rr Side Fan	E	[ON/OFF]
5-809-153	Twin LCT2 F2 Suction Fan1	E	[ON/OFF]
5-809-154	Twin LCT2 F2 Suction Fan2	E	[ON/OFF]
5-809-155	Twin LCT2 F2 Float Fan Shut SOL	E	[ON/OFF]

### 3.SP Mode Tables

5-809-156	Twin LCT2 F2 Fr Side Fan Shut SOL	E	[ON/OFF]
5-809-157	Twin LCT2 F2 Rr Side Fan Shut SOL	E	[ON/OFF]
5-809-158	Twin LCT2 F2 LED	E	[ON/OFF]
5-809-159	Twin LCT2 V-Trans Exit M	E	[ON/OFF]
5-809-160	Twin LCT2 Exit M	E	[ON/OFF]
5-809-161	Twin LCT2 Exit Roller Retract M	E	[ON/OFF]
5-809-193	Twin LCT1 H-Trans Entrance M	E	[ON/OFF]
5-809-194	Twin LCT1 H-Trans Exit M	E	[ON/OFF]
5-809-195	Twin LCT1 Connection M	E	[ON/OFF]
5-809-196	Twin LCT1 F1 Return Fan	E	[ON/OFF]
5-809-197	Twin LCT1 F1 Return Fan Shut SOL	E	[ON/OFF]
5-809-198	Twin LCT1 F1 Suction Fan Shut SOL	E	[ON/OFF]
5-809-199	Twin LCT1 F2 Return Fan	E	[ON/OFF]
5-809-200	Twin LCT1 F2 Return Fan Shut SOL	E	[ON/OFF]
5-809-201	Twin LCT1 F2 Suction Fan Shut SOL	E	[ON/OFF]
5-809-202	Twin LCT1 F1 V-Trans Roller Retract M	E	[ON/OFF]
5-809-203	Twin LCT1 F1 V-Trans Exit Roller Retract M	E	[ON/OFF]
5-809-204	Twin LCT1 V-Trans Entrance Roller Retract M	E	[ON/OFF]
5-809-205	Twin LCT1 F2 V-Trans Exit Roller Retract M	E	[ON/OFF]
5-809-206	Twin LCT2 F1 Return Fan	E	[ON/OFF]
5-809-207	Twin LCT2 F1 Return Fan Shut SOL	E	[ON/OFF]
5-809-208	Twin LCT2 F1 Suction Fan Shut SOL	E	[ON/OFF]
5-809-209	Twin LCT2 F2 Return Fan	E	[ON/OFF]
5-809-210	Twin LCT2 F2 Return Fan Shut SOL	E	[ON/OFF]
5-809-211	Twin LCT2 F2 Suction Fan Shut SOL	E	[ON/OFF]
5-809-212	Twin LCT2 F1 V-Trans Roller Retract M	E	[ON/OFF]
5-809-213	Twin LCT2 F1 V-Trans Exit Roller Retract M	E	[ON/OFF]
5-809-214	Twin LCT2 V-Trans Entrance Roller Retract M	E	[ON/OFF]
5-809-215	Twin LCT2 F2 V-Trans Exit Roller Retract M	E	[ON/OFF]
5-809-216	Twin LCT1 F1 V-Trans LED	E	[ON/OFF]
5-809-217	Twin LCT1 F2 V-Trans LED	E	[ON/OFF]
5-809-218	Twin LCT1 H-Trans LED	E	[ON/OFF]
5-809-219	Twin LCT1 LCT Exit LED	E	[ON/OFF]
5-809-220	Twin LCT2 F1 V-Trans LED	E	[ON/OFF]
5-809-221	Twin LCT2 F2 V-Trans LED	E	[ON/OFF]
5-809-222	Twin LCT2 H-Trans LED	E	[ON/OFF]
5-809-223	Twin LCT2 LCT Exit LED	E	[ON/OFF]
5-809-224	Twin LCT Bypass V-Trans M2	E	[ON/OFF]

## Output Check: ADF (Copier Model Only)

<b>6012</b>	<b>[1-Pass ADF OUTPUT Check]</b>		
6-012-001	Pick-Up Motor Forward	E	[ON/OFF]
6-012-003	Feed Motor Forward	E	[ON/OFF]
6-012-005	Relay Motor Forward	E	[ON/OFF]
6-012-009	Exit Motor Forward	E	[ON/OFF]
6-012-010	Bottom Plate Motor For/Rev	E	[ON/OFF]
6-012-012	Stamp	E	[ON/OFF]
6-012-015	Pull-Out Motor Forward	E	[ON/OFF]
6-012-016	Middle Motor Forward	E	[ON/OFF]

## Output Check: Finisher SR5090/ Booklet Finisher SR5100

<b>6124</b>	<b>[OUTPUT Check: 2K/3K FIN]</b>		
6-124-001	Entrance Transport Motor	E	[ON/OFF]
6-124-002	Horizontal Transport Motor	E	[ON/OFF]
6-124-003	Pre-Stack Transport Motor	E	[ON/OFF]
6-124-004	ITB Transport Motor	E	[ON/OFF]
6-124-005	Paper Exit Motor	E	[ON/OFF]
6-124-006	Upper Junction Solenoid	E	[ON/OFF]
6-124-007	Paper Exit Open/Close Guide Plate Motor	E	[ON/OFF]
6-124-008	Punching Motor	E	[ON/OFF]
6-124-009	Punch Move Motor	E	[ON/OFF]
6-124-010	S-to-S Registration Detection Move Motor	E	[ON/OFF]
6-124-011	Lower Junction Solenoid Motor	E	[ON/OFF]
6-124-012	Jogger Motor	E	[ON/OFF]
6-124-013	Positioning Roller Rotation Motor	E	[ON/OFF]
6-124-014	Feed-out Motor	E	[ON/OFF]
6-124-015	Booklet Stapler Move Motor	E	[ON/OFF]
6-124-016	Corner Stapler Motor	E	[ON/OFF]
6-124-017	Booklet Stapler Jogger Motor	E	[ON/OFF]
6-124-018	Booklet Stapler Jog Solenoid Move Motor	E	[ON/OFF]
6-124-019	Booklet Stapler Standard Fence Motor	E	[ON/OFF]
6-124-020	Booklet Stapler Motor	E	[ON/OFF]
6-124-021	Dynamic Roller Transport Motor	E	[ON/OFF]
6-124-022	Folder Transport Motor	E	[ON/OFF]
6-124-023	Square-fold Motor	E	[ON/OFF]
6-124-025	Tray Lift Motor	E	[ON/OFF]

### 3.SP Mode Tables

6-124-026	Shift Motor	E	[ON/OFF]
6-124-027	Front Shift Jogger Motor	E	[ON/OFF]
6-124-028	Rear Shift Jogger Motor	E	[ON/OFF]
6-124-029	Shift Jogger Retraction Motor	E	[ON/OFF]
6-124-030	Drag Roller Vibrating Motor	E	[ON/OFF]
6-124-031	LE Guide Motor	E	[ON/OFF]
6-124-032	TE Stack Plate Motor	E	[ON/OFF]
6-124-033	Navigation LED (All)	E	[ON/OFF]
6-124-037	Positioning Roller Transport Motor	E	[ON/OFF]
6-124-038	Paper Guide Motor	E	[ON/OFF]

### Output Check: Shift Sort Tray

<b>6171</b>	<b>[OUTPUT Check Slide Sort Tray]</b>		
6-171-001	Transport Motor:Continuous	E	[ON/OFF] ON: Driving start OFF: Driving stop
6-171-002	Transport Motor:1 Op	E	[ON/OFF] ON: Driving for a constant time OFF: Driving stop
6-171-003	Shift Motor:1 Op	E	[ON/OFF]
6-171-004	Tray Lift Motor:Up	E	[ON/OFF] ON: The tray shift motor lowers until the sensor turns off. Then the tray shift motor rises until the sensor turns on. OFF: Driving stop
6-171-005	Tray Lift Motor:Down	E	[ON/OFF] ON: Rising until the sensor turns on. OFF: Driving stop
6-171-006	Tray Lift Motor:1 Op	E	[ON/OFF] ON: Rising until the sensor turns on. OFF: Driving stop
6-171-007	Fan Motor:Continuous	E	[ON/OFF] No cooling fan. This SP does not work.

### Output Check: Finisher SR5110/ Booklet Finisher SR5120

<b>6262</b>	<b>[Finisher Output Check]</b>		
6-262-001	Entrance Motor	E	[ON/OFF]
6-262-002	Registration Motor	E	[ON/OFF]

## 3.SP Mode Tables

6-262-003	Junction Vertical Trans Motor	E	[ON/OFF]
6-262-004	Upper Tray Vertical Trans Motor	E	[ON/OFF]
6-262-005	Pre-stack Release Motor	E	[ON/OFF]
6-262-006	Pre-stack Motor	E	[ON/OFF]
6-262-007	Junction Gate Motor (Proof/Shift Tray)	E	[ON/OFF]
6-262-008	Junction Gate Motor (Shift/Staple)	E	[ON/OFF]
6-262-009	Upper Tray Exit Motor	E	[ON/OFF]
6-262-010	Horizontal Transport Motor	E	[ON/OFF]
6-262-011	Punch Movement Motor	E	[ON/OFF]
6-262-012	Exit Guide Motor	E	[ON/OFF]
6-262-013	Punch Drive Motor	E	[ON/OFF]
6-262-014	Stapling Tray Entrance Motor	E	[ON/OFF]
6-262-015	Vibrating Plate Up-Down Moving Motor	E	[ON/OFF]
6-262-016	Punch S-to-S Regist: CIS Lamp	E	[ON/OFF]
6-262-017	Stapler Rotation Motor	E	[ON/OFF]
6-262-018	Stapler Movement Motor	E	[ON/OFF]
6-262-019	Fence Up-Down Moving Motor	E	[ON/OFF]
6-262-020	Fence S-to-S Moving Motor	E	[ON/OFF]
6-262-021	Front Jogger Fence Motor	E	[ON/OFF]
6-262-022	Rear Jogger Fence Motor	E	[ON/OFF]
6-262-023	Positioning Roller Vibrating Motor	E	[ON/OFF]
6-262-024	Positioning Roller Motor	E	[ON/OFF]
6-262-025	Feed Out Belt Motor	E	[ON/OFF]
6-262-026	Top Fence Motor	E	[ON/OFF]
6-262-027	Vibrating Plate S-to-S Moving Motor	E	[ON/OFF]
6-262-028	Staple Motor	E	[ON/OFF]
6-262-029	Stack Transport Open/Close Motor	E	[ON/OFF]
6-262-030	Stack JG Vibrating Motor	E	[ON/OFF]
6-262-031	Stack Transport Motor	E	[ON/OFF]
6-262-032	Reserved	E	[ON/OFF]
6-262-033	Bklet Stplr Clamp Roller Motor	E	[ON/OFF]
6-262-034	Bklet Stplr Bottom Fence Motor	E	[ON/OFF]
6-262-035	Bklet Stplr Side Fence Motor	E	[ON/OFF]
6-262-036	Bklet Stplr Top Fence Motor	E	[ON/OFF]
6-262-037	Horizontal Fold Roller Release Motor	E	[ON/OFF]
6-262-038	Horizontal Fold Roller Movement HP Motor	E	[ON/OFF]
6-262-039	Bklet Stplr Mt	E	[ON/OFF]
6-262-040	Booklet Tray Motor	E	[ON/OFF]

### 3.SP Mode Tables

6-262-041	Fold Roller Motor	E	[ON/OFF]
6-262-042	Fold Blade Motor	E	[ON/OFF]
6-262-043	Shift Transport Motor: Lower Tray	E	[ON/OFF]
6-262-044	Drag Drive Motor: Lower Tray	E	[ON/OFF]
6-262-045	Drag Roller Motor: Lower Tray	E	[ON/OFF]
6-262-046	Shift Tray Lift Motor: Lower Tray	E	[ON/OFF]
6-262-047	Shift Tray Jogger Fence Mt: Lower Tray	E	[ON/OFF]
6-262-048	Shift Tray Jog Fence Retra Mt: Lower Tray	E	[ON/OFF]
6-262-049	Exit Fan Motor: Lower Tray	E	[ON/OFF]
6-262-050	Press Lever: Lower Tray	E	[ON/OFF]
6-262-051	Shift Transport Motor: Upper Tray	E	[ON/OFF]
6-262-052	Drag Drive Motor: Upper Tray	E	[ON/OFF]
6-262-053	Drag Roller Motor: Upper Tray	E	[ON/OFF]
6-262-054	Shift Tray Lift Motor: Upper Tray	E	[ON/OFF]
6-262-055	Shift Tray Jogger Fence Mt: Upper Tray	E	[ON/OFF]
6-262-056	Shift Tray Jog Fence Retra Mt: Upper Tray	E	[ON/OFF]
6-262-057	Exit Fan Motor: Upper Tray	E	[ON/OFF]
6-262-058	Press Lever: Upper Tray	E	[ON/OFF]
6-262-059	Jam LED	E	[ON/OFF]
6-262-060	Lower Tray Exit Motor	E	[ON/OFF]
6-262-061	Booklet Stack Transport Motor	E	[ON/OFF]

### Output Check: Multi Folding Unit

<b>6310</b>	<b>[Output Check: Folder]</b>		
6-310-001	Horizontal Transport Motor	E	[ON/OFF]
6-310-002	Top Tray Transport Motor	E	[ON/OFF]
6-310-003	Top Tray Exit Motor	E	[ON/OFF]
6-310-004	Dynamic Roller Transport Motor	E	[ON/OFF]
6-310-005	Registration Roller Transport Motor	E	[ON/OFF]
6-310-007	Entrance JG Motor	E	[ON/OFF]
6-310-008	1st Stopper Motor	E	[ON/OFF]
6-310-009	2nd Stopper Motor	E	[ON/OFF]
6-310-010	3rd Stopper Motor	E	[ON/OFF]
6-310-011	Dynamic Roller Lift Motor	E	[ON/OFF]
6-310-012	Registration Roller Release Motor	E	[ON/OFF]
6-310-013	Fold Plate Motor	E	[ON/OFF]
6-310-014	Jogger Fence Motor	E	[ON/OFF]

6-310-016	Direct-Send JG Motor	E	[ON/OFF]
6-310-017	FM6 Pawl Motor	E	[ON/OFF]
6-310-018	1st Fold Motor	E	[ON/OFF]
6-310-019	2nd Fold Motor	E	[ON/OFF]
6-310-020	Crease Motor	E	[ON/OFF]
6-310-021	Bypass JG Solenoid	E	[ON/OFF]
6-310-022	Exit JG Solenoid	E	[ON/OFF]
6-310-023	Top Tray JG Solenoid	E	[ON/OFF]
6-310-024	LE Stop Pawl Solenoid	E	[ON/OFF]
6-310-025	Reverse JG Solenoid	E	[ON/OFF]
6-310-026	Horizontal Exit Motor	E	[ON/OFF]

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**Output Check: Cover Interposer Tray**


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<b>6411</b>	<b>[Cvr Inserter Output Check]</b>		
6-411-001	1st Pickup Solenoid	E	[ON/OFF]
6-411-002	2nd Pickup Solenoid	E	[ON/OFF]
6-411-003	1st Paper Feed Motor	E	[ON/OFF]
6-411-004	2nd Paper Feed Motor	E	[ON/OFF]
6-411-005	1st Transport Motor	E	[ON/OFF]
6-411-006	2nd Transport Motor	E	[ON/OFF]
6-411-007	1st Vertical Transport Motor	E	[ON/OFF]
6-411-008	2nd Vertical Transport Motor	E	[ON/OFF]
6-411-009	3rd Vertical Transport Motor	E	[ON/OFF]
6-411-010	Horizontal Transport Motor	E	[ON/OFF]
6-411-011	1st Blower Fan	E	[ON/OFF]
6-411-012	2nd Blower Fan	E	[ON/OFF]

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**Output Check: Bridge Unit BU5020**


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<b>6451</b>	<b>[Bridge Unit Output Check]</b>		
6-451-001	Transport Motor	E	[ON/OFF]

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**Output Check: Ring Binder**


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<b>6509</b>	<b>[Output Check: Ring Binder]</b>		
6-509-001	Entrance Motor	E	[ON/OFF]
6-509-002	Middle Motor	E	[ON/OFF]
6-509-003	Switch Back Motor	E	[ON/OFF]
6-509-004	Exit Motor	E	[ON/OFF]

### 3.SP Mode Tables

6-509-005	Blade Motor	E	[ON/OFF]
6-509-006	Punch Ent Roller Lift Motor	E	[ON/OFF]
6-509-007	Punch Pre Roller Lift Motor	E	[ON/OFF]
6-509-008	Punch Transport Motor	E	[ON/OFF]
6-509-009	Side Jogger Motor	E	[ON/OFF]
6-509-010	Swing Motor	E	[ON/OFF]
6-509-011	Output Belt Motor	E	[ON/OFF]
6-509-012	Punch Motor	E	[ON/OFF]
6-509-013	Stopper SOL	E	[ON/OFF]
6-509-015	De-curler Motor	E	[ON/OFF]
6-509-016	Shutter Motor	E	[ON/OFF]
6-509-017	Paddle Roller Motor	E	[ON/OFF]
6-509-018	Alignment Pin Motor	E	[ON/OFF]
6-509-019	Paddle Roller Lift Motor	E	[ON/OFF]
6-509-020	Width Align Motor 1	E	[ON/OFF]
6-509-021	Clamp Motor	E	[ON/OFF]
6-509-022	Width Align Motor 2	E	[ON/OFF]
6-509-023	Roller Motor	E	[ON/OFF]
6-509-024	Roller Lift Motor	E	[ON/OFF]
6-509-025	Main Lift Motor	E	[ON/OFF]
6-509-026	50/100 Adjustment Motor	E	[ON/OFF]

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### Output Check: Stacker 1 Upstream

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<b>6601</b>	<b>[Stacker1 Output Check]</b>		
	Execute the movement check of the specified part.		
6-601-001	Entrance Motor/Fan2	E	[ON/OFF]
6-601-002	Proof Tray Exit Motor	E	[ON/OFF]
6-601-003	Shift Exit Motor	E	[ON/OFF]
6-601-004	Transport Motor	E	[ON/OFF]
6-601-005	Shift JG Motor	E	[ON/OFF]
6-601-006	Proof Tray JG Motor	E	[ON/OFF]
6-601-007	Shift Motor	E	[ON/OFF]
6-601-008	Front Jogger Fence Motor	E	[ON/OFF]
6-601-009	Rear Jogger Fence Motor	E	[ON/OFF]
6-601-010	Jogger Fence Retraction Motor	E	[ON/OFF]
6-601-011	LE Stopper Motor	E	[ON/OFF]
6-601-012	Sub Jogger Motor	E	[ON/OFF]



6-601-013	Tray Lift Motor	E	[ON/OFF]
6-601-014	Front Door Lock SOL	E	[ON/OFF]
6-601-015	Fan1	E	[ON/OFF]
6-601-016	Tray Full LED	E	[ON/OFF]
6-601-017	Jam LED	E	[ON/OFF]
6-601-018	Jog In Progress LED	E	[ON/OFF]
6-601-019	Tray Lift LED	E	[ON/OFF]
6-601-020	Error LED	E	[ON/OFF]
6-601-021	Shutter Motor	E	[ON/OFF]
6-601-022	Exit Fan Motor	E	[ON/OFF]

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### Output Check: Stacker 2 Downstream

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<b>6607</b>	<b>[Stacker2 Output Check]</b>		
	Execute the movement check of the specified part.		
6-607-001	Entrance Motor/Fan2	E	[ON/OFF]
6-607-002	Proof Tray Exit Motor	E	[ON/OFF]
6-607-003	Shift Exit Motor	E	[ON/OFF]
6-607-004	Transport Motor	E	[ON/OFF]
6-607-005	Shift JG Motor	E	[ON/OFF]
6-607-006	Proof Tray JG Motor	E	[ON/OFF]
6-607-007	Shift Motor	E	[ON/OFF]
6-607-008	Front Jogger Fence Motor	E	[ON/OFF]
6-607-009	Rear Jogger Fence Motor	E	[ON/OFF]
6-607-010	Jogger Fence Retraction Motor	E	[ON/OFF]
6-607-011	LE Stopper Motor	E	[ON/OFF]
6-607-012	Sub Jogger Motor	E	[ON/OFF]
6-607-013	Tray Lift Motor	E	[ON/OFF]
6-607-014	Front Door Lock SOL	E	[ON/OFF]
6-607-015	Fan1	E	[ON/OFF]
6-607-016	Tray Full LED	E	[ON/OFF]
6-607-017	Jam LED	E	[ON/OFF]
6-607-018	Jog In Progress LED	E	[ON/OFF]
6-607-019	Tray Lift LED	E	[ON/OFF]
6-607-020	Error LED	E	[ON/OFF]
6-607-021	Shutter Motor	E	[ON/OFF]
6-607-022	Exit Fan Motor	E	[ON/OFF]

3.SP Mode Tables

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Output Check: Trimmer

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6651	[Output Check: Trimmer]		
6-651-001	Entrance Motor	E	[ON/OFF]
6-651-002	Exit Motor	E	[ON/OFF]
6-651-003	Press Roller Motor	E	[ON/OFF]
6-651-004	Cut Position Motor	E	[ON/OFF]
6-651-005	Press Stopper Motor	E	[ON/OFF]
6-651-006	Tray Motor	E	[ON/OFF]
6-651-007	Trimming Blade Motor	E	[ON/OFF]

## Printer SP Table

### Bit Switch

1001	[Bit Switch]			
001	Bit Switch 1		0	1
bit 0	DFU		-	-
bit 1	<b>Responding with the hostname as the sysName (Copier Model)</b>		<b>Model name (PnP name)</b>	Hostname
	This BitSwitch can change the value of the sysName.			
bit 2	DFU		-	-
bit 3	<b>No I/O Timeout</b>		<b>Disabled</b>	Enabled
	Enables/Disables MFP I/O Timeouts. If enabled, the MFP I/O Timeout setting will have no affect. I/O Timeouts will never occur.			
bit 4	<b>SD Card Save Mode</b>		<b>Disabled</b>	Enabled
	If this bit switch is enabled, print jobs will be saved to the GW SD slot and not output to paper.			
bit 5	DFU		-	-
bit 6	DFU		-	-
bit 7	<b>[RPCS,PCL]: Printable area frame border</b>		<b>Disabled</b>	Enabled
	Prints all RPCS and PCL jobs with a border around the printable area.			

1001	[Bit Switch]			
002	Bit Switch 2		0	1
bit 0	DFU		-	-
bit 1	DFU		-	-
bit 2	<b>Applying a Collate Type</b>		<b>Shift Collate</b>	Normal Collate
	A collate type (shift or normal) will be applied to all jobs that do not explicitly define a collate type. <b>Note:</b> If #5-0 is enabled, this BitSwitch has no effect.			
bit 3	<b>[PCL5e/c,PS]: PDL Auto Switching</b>		<b>Enabled</b>	Disabled
	Enables/Disables the MFPs ability to change the PDL processor mid-job. Some host systems submit jobs that contain both PS and PCL5e/c. If Auto PDL			

### 3.SP Mode Tables

	switching is disabled, these jobs will not be printed properly.		
bit 4	DFU	-	-
bit 5	DFU	-	-
bit 5	DFU	-	-
bit 7	DFU	-	-

<b>1001</b>	<b>[Bit Switch]</b>		
003	Bit Switch 3	0	1
bit 0	DFU	-	-
bit 1	DFU	-	-
bit 2	<b>[PCL5e/c]: Legacy HP compatibility</b> Uses the same left margin as older HP models such as HP4000/HP8000. In other words, the left margin defined in the job (usually "<ESC>*r0A") will be changed to "<ESC>*r1A".	<b>Disabled</b>	Enabled
bit 3	DFU	-	-
bit 4	DFU	-	-
bit 5	DFU	-	-
bit 6	DFU	-	-
bit 7	DFU	-	-

<b>1001</b>	<b>[Bit Switch]</b>		
004	Bit Switch 4	0	1
bit 0	DFU	-	-
bit 1	DFU	-	-
bit 2	DFU	-	-
bit 2	DFU	-	-
bit 4	DFU	-	-

	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

<b>1001</b>	<b>[Bit Switch]</b>			
005	Bit Switch 5		0	1
	bit 0	<b>Show "Collate Type", "Staple Type" and "Punch Type" buttons on the operation panel.</b>	<b>Disabled</b>	Enabled
		If enabled, users will be able to configure a Collate Type, Staple Type, and Punch Type from the operation panel. The available Types will depend on the device and configured options. After enabling this BitSw, the settings will appear under: "User Tools > Printer Features > System"		
	bit 1	<b>Multiple copies if a paper size or type mismatch occurs</b>	<b>Disabled (single copy)</b>	Enabled (multiple)
		If a paper size or type mismatch occurs during the printing of multiple copies, only a single copy is output by default. Using this BitSw, the device can be configured to print all copies even if a paper mismatch occurs.		
	bit 2	<b>Prevent SDK applications from altering the contents of a job.</b>	<b>Disabled</b>	Enabled
		If this BitSw is enabled, SDK applications will not be able to alter print data. This is achieved by preventing SDK applications from accessing a module called the "GPS Filter". Note: The main purpose of this BitSw is for troubleshooting the effects of SDK applications on data.		
	bit 3	<b>[PS] PS Criteria</b>	<b>Pattern3</b>	Pattern1
		Change the number of PS criterion used by the PS interpreter to determine whether a job is PS data or not.		
	bit 4	<b>Increase max. number of stored jobs.</b>	<b>Disabled (100)</b>	Enabled (750)
		Changes the maximum number of jobs that can be stored on the HDD. The default (disabled) is 100. If this is enabled, the max. will be raised to 750 or 1000 depending on the model.		
	bit 5	<b>Face-up output</b>	Disabled	Enabled (Face-up)
		All print jobs will be output face-up in the destination tray.		
	bit 6	<b>Method for determining the image rotation for the edge to bind on.</b>	<b>Disabled</b>	Enabled

### 3.SP Mode Tables

		<p>If enabled, the image rotation will be performed as they were in the specifications of older models for the binding of pages of mixed orientation jobs.</p> <p>The old models are below:</p> <ul style="list-style-type: none"> <li>- PCL: Pre-04A models</li> <li>- PS/PDF/RPCS:Pre-05S models</li> </ul>		
	bit 7	DFU	-	-

1001		[Bit Switch]		
006	Bit Switch 6		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001		[Bit Switch]		
007	Bit Switch 7		0	1
	bit	<b>Print path</b>	<b>Disable</b>	Enable
	0	<p>If enabled, simplex pages (in mixed simplex/duplex PS/PCL5 jobs only) and the last page of an odd paged duplex job (PS, PCL5, PCL6), are always routed through the duplex unit. Not having to switch paper paths increases the print speed slightly.</p>		
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
bit	DFU	-	-	

7			
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1001	[Bit Switch]			
008	Bit Switch 8		0	1
	bit	DFU	-	-
	0			
	bit	DFU	-	-
	1			
	bit	DFU	-	-
	2			
	bit	DFU	-	-
	3			
	bit	DFU	-	-
	4			
	bit	DFU	-	-
	5			
	bit	DFU	-	-
	6			
	bit	<b>[PDF]: Orientation Auto Detect Function</b>	<b>Enabled</b>	Disabled
	7	Automatically chooses page orientations of PDF jobs (Landscape or Portrait) based on the content.		

1001	[Bit Switch]			
009	Bit Switch 9		0	1
	bit	<b>PDL Auto Detection timeout of jobs submitted via USB or Parallel Port (IEEE 1284).</b>	<b>Disabled (Immediately)</b>	Enabled (10 seconds)
	0	To be used if PDL auto-detection fails. A failure of PDL autodetection doesn't necessarily mean that the job can't be printed. This bit switch tells the device whether to time-out immediately (default) upon failure or to wait 10 seconds.		
	bit	DFU	-	-
	1			
	bit	<b>Job Cancel</b>	<b>Disabled (Not cancelled)</b>	Enabled (Cancelled)
	2	If this bit switch, all jobs will be cancelled after a jam occurs. <b>Note:</b> If this bitsw is enabled, printing under the following conditions might result in problems: - Job submission via USB or Parallel Port - Spool printing (WIM >Configuration > Device Settings > System)		

3.SP Mode Tables

	bit 3	DFU	-	-
	bit 4	<b>Timing of the PjL Status ReadBack (JOB END) when printing multiple collated copies.</b>	<b>Disabled</b>	Enabled
		<p>This bitsw determines the timing of the PjL USTATUS JOB END sent when multiple collated copies are being printed.</p> <p>0 (default): JOB END is sent by the device to the client after the first copy has completed printing. This causes the page counter to be incremented after the first copy and then again at the end of the job.</p> <p>1: JOB END is sent by the device to the client after the last copy has finished printing. This causes the page counter to be incremented at the end of each job.</p>		
	bit 5	<b>Display UTF-8 text in the operation panel</b>	<b>Enabled</b>	Disabled
		<p>Enabled (=0): Text composed of UTF-8 characters can be displayed in the operation panel.</p> <p>Disabled (=1): UTF-8 characters cannot be displayed in the operation panel.</p> <p>For example, job names are sometimes stored in the MIB using UTF-8 encoded characters. When these are displayed on the operation panel, they will be garbled unless this BitSw is enabled (=0).</p>		
	bit 6	<b>Disable super option</b>	<b>Enabled</b>	Disabled
		<p>Switches super option disable on / off. If this is On, multiple jobs are grouped at LPR port. PjL settings are enabled even jobs that are specified queue names are sent.</p>		
	bit 7	<b>Enable/Disable Print from USB/SD's Preview function</b>	Enabled	<b>Disabled</b>
		<p>Determines whether Print from USB/SD will have the Preview function.</p> <p>Enabled (=0): Print from USB/SD will have the Preview function.</p> <p>Disabled (=1): Print from USB/SD will not have the Preview function.</p>		

<b>1001</b>	<b>[Bit Switch]</b>			
010	Bit Switch A		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit	DFU	-	-



	3			
	bit 4	DFU	-	-
	bit 5	<b>Store and Skip Errored Job locks the queue</b>	<b>Queue is not locked after SSEJ</b>	Queue locked after SSEJ
		If this is 1, then after a job is stored using Store and Skip Errored Job (SSEJ), new jobs cannot be added to the queue until the stored job has been completely printed.		
	bit 6	<b>Allow use of Store and Skip Errored Job if connected to an external charge device.</b>	<b>Does not allow SSEJ with ECD</b>	Allows SSEJ with ECD
		If this is 0, Store and Skip Errored Job (SSEJ) will be automatically disabled if an external charge device is connected. <b>Note:</b> We do not officially support enabling this bitsw (1). Use it at your own risk.		
	bit 7	<b>Job cancels remaining pages when the paid-for pages have been printed on an external charge device</b>	<b>Job does not cancel</b>	Job cancels
		When setting 1 is enabled, after printing the paid-for pages on an external charge device, the job that includes any remaining pages will be canceled. This setting will prevent the next user from printing the unnecessary pages from the previous user's print job.		

<b>1001</b>	<b>[Bit Switch]</b>			
011	Bit Switch B	0	1	
	bit 0	<b>Show Menu List</b>	<b>Hide Menu List</b>	Show Menu List
		If this is 0, the Menu List button will be removed from Printer Features.		
	bit 1	<b>Print job interruption</b>	<b>Does not allow interruption</b>	Allow interruption
		0 (default): Print jobs are not interrupted. If a job is promoted to the top of the print queue, it will wait for the currently printing job to finish. 1: If a job is promoted to the top of the queue, it will interrupt the currently printing job and start printing immediately.		
	bit 2	<b>Switch for enabling or disabling Limitless Paper Feeding for the Bypass Tray (Copier Model)</b>	<b>Enabled</b>	Disabled
		When the Bypass Tray is the target of the Auto Tray Select and Any Size/Type is configured for the Tray Setting Priority setting of the Bypass Tray, this BitSwitch can switch the behavior whether or not Limitless Paper Feeding is applied to the Bypass		

### 3.SP Mode Tables

	<p>Tray.* The default is Enabled (=0).</p> <p>*Limitless Paper Feeding will try a matching tray of the next highest priority if a job specified to Auto Tray Select as the tray setting is submitted and the tray runs out of paper.</p> <p>Enabled (=0: Default): Limitless Paper Feeding is applied to the Bypass Tray. If a tray other than the Bypass Tray matches the job's paper size and type but has run out of paper, printing will occur from the Bypass Tray.</p> <p>Disabled (=1): Limitless Paper Feeding is not applied to the Bypass Tray. If a tray other than the Bypass Tray matches the job's paper size and type but has run out of paper, printing will stop and an alert will appear on the LCD screen, stating that the tray has run out of paper. This prevents unexpected use of the Bypass Tray.</p> <p>Limitations when this BitSwitch is set to "1":</p> <ul style="list-style-type: none"> <li>- The "Paper Tray Priority: Printer" setting must be configured to a tray other than the Bypass Tray.</li> <li>- Jobs that contain more than one paper size cannot be printed.</li> </ul>
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bit 3	<b>Change the behavior of the center staple</b>	<b>Cancel the job</b>	Continue to print
	<p>This Bit Switch can change the behavior of the center staple when the maximum number of sheets for stapling is exceeded.</p> <p>0 (default): The job is canceled and an error is recorded in the log.</p> <p>1: The job is not canceled and is produced. How the job is produced in any behavior depends on the type of finisher.</p>		
bit 4	<b>Add "Apply Auto Paper Select" is the condition that decides if the device's paper size or paper type should be overwritten.</b>	Disabled	Enabled
	<p>If this BitSwitch is set to "1" (enabled), the "Apply Auto Paper Select" setting will decide if the paper size or paper type that is specified in the device settings should be overwritten by the job's commands when "Tray Setting Priority" is set to "Driver/Command" or "Any Type".</p> <ul style="list-style-type: none"> <li>- Apply Auto Paper Select = OFF: Overwritten (priority is given to the job's commands)</li> <li>- Apply Auto Paper Select = ON: Not overwritten (priority is given to the device settings)</li> </ul>		
bit 5	DFU	-	-
bit 6	DFU	-	-

bit	DFU	-	-
7			

<b>1001</b>	<b>[Bit Switch]</b>			
012	Bit Switch C		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

<b>1001</b>	<b>[Bit Switch]</b>			
013	Bit Switch D		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

<b>1001</b>	<b>[Bit Switch]</b>			
014	Bit Switch E		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

<b>1001</b>	<b>[Bit Switch]</b>		
015	Bit Switch F	0	1

### 3.SP Mode Tables

	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

<b>1001</b>	<b>[Bit Switch]</b>			
016	Bit Switch G		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

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### SP1-XXX

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<b>1002</b>	<b>[Bit Switch2]</b>			
1-002-001	Bit Switch (2) 1 Settings		0	1
	bit 0	Paper size mismatch display	<b>Enabled</b>	Disabled
		Display warning screen (40909) of paper size mismatch.		
	bit 1 to 7	DFU	-	-

<b>1002</b>	<b>[Bit Switch2]</b>			
1-002-002	Bit Switch (2) 2 Settings		0	1
	bit 0 to 7	DFU	-	-

<b>1002</b>	<b>[Bit Switch2]</b>			
1-002-003	Bit Switch (2) 3 Settings		0	1
	bit 0 to 7	DFU	-	-

<b>1002</b>	<b>[Bit Switch2]</b>			
1-002-004	Bit Switch (2) 4 Settings		0	1

	bit 0 to 7	DFU	-	-
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<b>1002</b>	<b>[Bit Switch2]</b>			
1-002-005	Bit Switch (2) 5 Settings		0	1
	bit 0 to 7	DFU	-	-

<b>1002</b>	<b>[Bit Switch2]</b>			
1-002-006	Bit Switch (2) 6 Settings		0	1
	bit 0 to 7	DFU	-	-

<b>1002</b>	<b>[Bit Switch2]</b>			
1-002-007	Bit Switch (2) 7 Settings		0	1
	bit 0 to 7	DFU	-	-

<b>1002</b>	<b>[Bit Switch2]</b>			
1-002-008	Bit Switch (2) 8 Settings		0	1
	bit 0 to 7	DFU	-	-

<b>1002</b>	<b>[Bit Switch2]</b>			
1-002-009	Bit Switch (2) 9 Settings		0	1
	bit 0 to 7	DFU	-	-

<b>1002</b>	<b>[Bit Switch2]</b>			
1-002-010	Bit Switch (2) A Settings		0	1
	bit 0 to 7	DFU	-	-

<b>1002</b>	<b>[Bit Switch2]</b>			
1-002-011	Bit Switch (2) B Settings		0	1
	bit 0 to 7	DFU	-	-

<b>1002</b>	<b>[Bit Switch2]</b>			
1-002-012	Bit Switch (2) C Settings		0	1
	bit 0 to 7	DFU	-	-

<b>1003</b>	<b>[Clear setting]</b>			
	-			
1-003-001	Initialize Printer System	C*	[- / - / -]	
1-003-002	Clear CSS Counter	C*	[- / - / -]	

### 3.SP Mode Tables

1-003-003	Delete Program	C*	[- / - / -]
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<b>1004</b>	<b>[Print Summary]</b> Prints the service summary sheet (a summary of all the controller settings).		
1-004-001	Print Printer Summary	C	[- / - / -]
1-004-002	Service Summary 2	C	[- / - / -]

<b>1005</b>	<b>[Display Version]</b> Displays the version of the controller firmware.		
1-005-002	-	C	[- / - / -]

<b>1006</b>	<b>[Sample/Locked Print]</b> -		
1-006-001	0:Link with Doc. Srv 1:Enable	C*	[0 or 1 / 0 / 1/step] 0: Linked, 1: On Enables and disables the document server. When you select "0," the document server is enabled or disabled in accordance with Copy Service Mode SP5-967. When you select "1," the document server is enabled regardless of Copy Service Mode SP5-967.

<b>1008</b>	<b>[Twin Color Support]</b> Enables, Disables Twin Color Support		
1-008-001	-	C	[0 to 1 / 0 / 1] 0: Disable 1: Enable

<b>1009</b>	<b>[Tone Ctl Set]</b>		
1-009-001	I/O Timeout	C	Interface timeout switch
1-009-002	Minus Counter	C	0: Disable 1: Enable

<b>1111</b>	<b>[Tone Ctl Set]</b>		
1-111-001	Tone (Factory)	C	Fetches the coefficient for half-tone gradation adjustment used at factory.
1-111-002	Tone (Prev.)	C	Fetches the coefficient for half-tone gradation adjustment used previously.

## Scanner SP Table (Copier Model Only)

### SP1-XXX (System and Others)

<b>1001</b>	<b>[Scan Nv Version]</b>		
	Displays the scanner firmware version stored in NVRAM in a 9-digit format: Func. Name_Model Name_History No.		
1-001-005	-	C*	<p>Operates following two operation simultaneously to prevent initialization when initialization of scanner NV is required.</p> <ul style="list-style-type: none"> <li>Automatic initialization by individual version control.</li> <li>Writes the message "initialization is required" at history, and then instructs initialization by release notification. (Only operates this way in current situation.)</li> </ul>

<b>1005</b>	<b>[Erase Margin(Remote scan)]</b>		
1-005-001	Range from 0 to 5 mm	C*	<p>[0 to 5 / 0 / 1/step]</p> <p>Creates an erase margin for all edges of the scanned image. If the machine has scanned the edge of the original, create a margin. This SP is activated only when the machine uses TWAIN scanning.</p>

<b>1009</b>	<b>[Remote scan disable]</b>		
1-009-001	-	C*	<p>[0 or 1 / 0 / 1 /step]</p> <p>This SP switches the TWAIN scanner function on/off. This is one of the scanner application functions.</p> <p>0: ON (enabled) 1: OFF (disabled)</p>

<b>1010</b>	<b>[Non Display Clear Light PDF]</b>		
1-010-001	-	C*	<p>[0 or 1 / 0 / 1 /step]</p> <p>Display or Non display remote scan.</p> <p>0: Display, 1: No display</p>

<b>1011</b>	<b>[Org Count Display]</b>		
1-011-001	-	C*	<p>[0 or 1 / 0 / 1 /step]</p> <p>0: OFF (no display) 1: ON (count displays)</p> <p>This SP codes switches the original count display on/off.</p>

<b>1012</b>	<b>[User Info Release]</b>		
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### 3.SP Mode Tables

1-012-001	-	C*	<p>[0 or 1 / 1 / 1 /step]</p> <p>1: Release</p> <p>0: Do not release</p> <p>This SP code sets the machine to release or not release the following items at job end.</p> <ul style="list-style-type: none"> <li>• Destination (E-mail/Folder/CS)</li> <li>• Sender name</li> <li>• Mail Text</li> <li>• Subject line</li> <li>• File name</li> </ul>
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<b>1013</b>	<b>[Scan to Media Device Setting]</b>		
1-013-002	-	C*	<p>0 or 1 / 1 / 1 /step]</p> <p>0: Disable</p> <p>1: Enable</p> <p>This SP code enables/disables the multi-media function option (USB 2.0/SD Slot) mounted on the front of the machine. Operators can scan documents to either an SD card or a USB memory device inserted into this unit. This SP must be enabled (set to "1") in order for the device to function.</p>

<b>1014</b>	<b>[Scan to Folder Pass Input Set]</b>		
1-014-001	-	C*	<p>[0 or 1 / 0 / 1 /step]</p> <p>0: Disable</p> <p>1: Enable</p> <p>Enables / Disables to input password for Scan To Folder.</p>

<b>1016</b>	<b>[Scan To Email Sender Address]</b>		
Specify the Scan To Email sender address.			
1-016-001	-	C*	<p>[0 or 1 / 0 / 1 /step]</p> <p>0: Login user address</p> <p>1: POP before SMTP address</p>

<b>1041</b>	<b>[Scan : Flair API Setting]</b>		
1-041-001	-	C*	<p>[0 or 255 / 0 / 1 /step]</p> <p>0: Disable</p> <p>1: Enable</p>

<b>1042</b>	<b>[Email Date Setting]</b>		
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1-042-001	Setting Range:0-3	C*	[0 to 3 / <b>0</b> / 1 /step] Specify the format to display the date when sending files by Scan To Email. 0: Pursuant to the language setting (Default) 1: MM/DD/YYYY 2: DD/MM/YYYY 3: YYYY/MM/DD
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<b>1043</b>	<b>[Result Screen Doc Name Display]</b>		
1-043-001	-	C*	[0 or 1/ <b>0</b> / 1 /step] Specify whether or not to display the document name (for security purposes) on the screen displaying the Scan To Email transmission result. 0:Nondisplay 1:Display

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**SP2-XXX (Scanning-image quality)**


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<b>2021</b>	<b>[Compression Level (Grayscale)]</b> Selects the compression ratio for grayscale processing mode (JPEG) for the five settings that can be selected at the operation panel.		
2-021-001	Comp1:5-95	C*	[5 to 95 / <b>20</b> / 1 /step] Sets compression ratio when "Comp1" was selected when using multi-level compression. Comp1 of 5grades notch. 5"low: low image quality" -> ->95(high: high quality)
2-021-002	Comp2:5-95	C*	[5 to 95 / <b>40</b> / 1 /step] Sets compression ratio when "Comp2" was selected when using multi-level compression. Comp2 of 5grades notch.
2-021-003	Comp3:5-95	C*	[5 to 95 / <b>65</b> / 1 /step] Sets compression ratio when "Comp3" was selected when using multi-level compression. Comp3 of 5grades notch.
2-021-004	Comp4:5-95	C*	[5 to 95 / <b>80</b> / 1 /step] Sets compression ratio when "Comp4" was selected when using multi-level compression. Comp4 of 5grades notch.
2-021-005	Comp5:5-95	C*	[5 to 95 / <b>95</b> / 1 /step] Sets compression ratio when "Comp55" was selected when using

3.SP Mode Tables

			multi-level compression. Comp55 of 5grades notch.
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<b>2023</b>	<b>[ClearLightPDF:ACS Setting]</b> This SP code enables/disables the ACS function.		
2-023-001	-	C*	[0 or 1 / <b>1</b> / 1/step] 0:OFF 1:ON

<b>2024</b>	<b>[Compression ratio of Clear Light PDF]</b> Selects the compression ratio for clearlight PDF for the two settings that can be selected at the operation panel.		
2-024-001	Compression Ratio (Normal image)	C*	[5 to 95 / <b>25</b> / 1/step] Sets the compression rate when you select "normal" clear light when using PDF. 5"low: low image quality" ->->95"high: high image".
2-024-002	Compression Ratio (High)	C*	[5 to 95 / <b>20</b> / 1/step] Set the compression rate when you select "High" clear light when using PDF.

<b>2025</b>	<b>[Compression ratio of Clear Light PDF JPEG2000]</b>		
2-025-001	Compression Ratio (Normal) JPEG2000	C*	[5 to 95 / <b>25</b> / 1/step] Sets the compression rate when you select "normal" clear light when using clear right PDF JPEG2000. 5"low: low image quality" ->->95"high: high image".
2-025-002	Compression Ratio (High) JPEG2000	C*	[5 to 95 / <b>20</b> / 1/step] Sets the compression rate when you select "high" clear light when using clear right PDF JPEG2000.

<b>2030</b>	<b>[OCR PDF Detect Sens]</b>		
2-030-001	-	C*	[0 to 255 / <b>250</b> / 1/step] Sets brightness that consider a white: Information of detection level 5 at white paper detection enable of PDF setting with OCR "Transparent text". 1 (low: low sensitivity) <-->4(high: high sensitivity) Sensitive 5 can be set fine setting sensitive information by user.
2-030-002	-	C*	[0 to 100 / <b>80</b> / 1/step] Sets part 2: Information of detection level 5 at white paper detection enable of PDF setting with OCR "Transparent text".

2-030-003	-	C*	[0 to 100 / <b>80</b> / 1/step] Sets part 3: Information of detection level 5 at white paper detection enable of PDF setting with OCR "Transparent text".
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<b>2031</b>		<b>[Vertical Judgment Setting]</b>	
2-031-001	Function Setting: 0 - 1	C*	[0 or 1 / <b>1</b> / 1/step] 0:Enable 1:Disable When the image does not become upright state due to the vertical judgment error, set this SP to "0: Disable". After changing the setting, turn OFF/ON the main power.
2-031-002	Algorithm Setting: 0 - 2	C*	[0 to 2 / <b>0</b> / 1/step] 0: Normal Algorithm 1: Simple Algorithm 2: Composite Algorithm Set the identification algorithm when SP2-031-001 is "1: Enable". Change the setting when the vertical judgment error occur frequently. After changing the setting, turn OFF/ON the main power.