






**LCIT RT4030**  
**Machine Code: D710**  
**Field Service Manual**

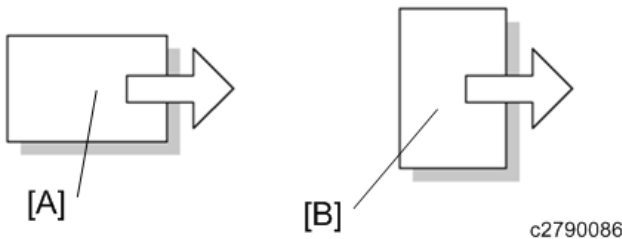
18 March, 2013



# Safety, Conventions, Trademarks

## Conventions

Symbol	What it means
	Screw
	Connector
	E-ring
	C-ring
	Harness clamp
FFC	Flexible Film Cable



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

## Warnings, Cautions, Notes

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.

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### ★ 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

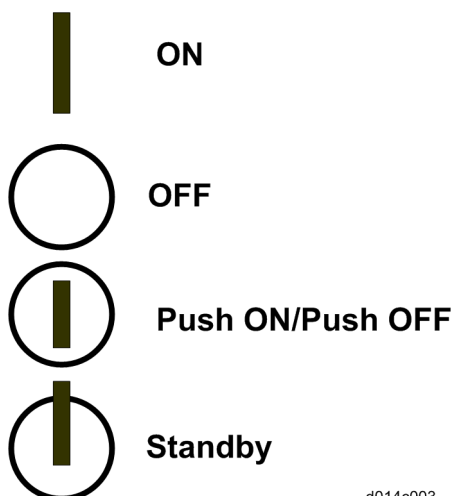
Always obey the following safety precautions when using this product.

### Safety During Operation

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

### 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.



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## Responsibilities of the Customer Engineer

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### Customer Engineer

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Maintenance shall be done only by trained customer engineers who have completed service training for the machine and all optional devices designed for use with the machine.

### Reference Material for Maintenance

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- Maintenance shall be done using the special tools and procedures prescribed for maintenance of the machine described in the reference materials (service manuals, technical bulletins, operating instructions, and safety guidelines for customer engineers).
- In regard to other safety issues not described in this document, all customer engineers shall strictly obey procedures and recommendations described the "CE Safety Guide".
- Use only consumable supplies and replacement parts designed for use of the machine.

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## Before Installation, Maintenance

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### Shipping and Moving the Machine

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#### CAUTION

- Work carefully when lifting or moving the machine. If the machine is heavy, two or more customer engineers may be required to prevent injuries (muscle strains, spinal injuries, etc.) or damage to the machine if it is dropped or tipped over.
- Personnel moving or working around the machine should always wear proper clothing and footwear. Never wear loose fitting clothing or accessories (neckties, loose sweaters, bracelets, etc. ) or casual footwear (slippers, sandals, etc.) when lifting or moving the machine.
- Always unplug the power cord from the power source before you move the product. Before you move the product, arrange the power cord so it will not fall under the product.

### Power

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#### WARNING

- Always disconnect the power cord from the inlet of the buffer pass unit and unplug the mainframe before doing any maintenance procedure.
- Before you do any checks or adjustments after turning the machine off, work carefully to avoid injury. After removing covers or opening the machine to do checks or adjustments, never touch electrical components or moving parts (gears, timing belts, etc.).

- 
- After turning the machine on with any cover removed, keep your hands away from electrical components and moving parts. Never touch the cover of the fusing unit, gears, timing belts, etc.

## Installation, Disassembly, and Adjustments

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### **CAUTION**

- After installation, maintenance, or adjustment, always check the operation of the machine to make sure that it is operating normally. This ensures that all shipping materials, protective materials, wires and tags, metal brackets, etc., removed for installation, have been removed and that no tools remain inside the machine. This also ensures that all release interlock switches have been restored to normal operation.
- Never use your fingers to check moving parts causing spurious noise. Never use your fingers to lubricate moving parts while the machine is operating.

## Special Tool

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### **CAUTION**

- Use only standard tools approved for machine maintenance.
- For special adjustments, use only the special tools and lubricants described in the service manual. Using tools incorrectly, or using tools that could damage parts, could damage the machine or cause injuries.

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## During Maintenance

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### General

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### **CAUTION**

- Before you begin a maintenance procedure: 1) Switch the machine off, 2) Disconnect the power plug from the power source, 3) Allow the machine to cool for at least 10 minutes.
- Avoid touching the components inside the machine that are labeled as hot surfaces.

## Safety Devices

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### **WARNING**

- Never remove any safety device unless it requires replacement. Always replace safety devices immediately.
- Never do any procedure that defeats the function of any safety device. Modification or removal of a safety device (fuse, switch, etc.) could lead to a fire and personal injury. Always test the

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operation of the machine to ensure that it is operating normally and safely after removal and replacement of any safety device.

- 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.

## Organic Cleaners

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### **CAUTION**

- During preventive maintenance, never use any organic cleaners (alcohol, etc.) other than those described in the service manual.
- Make sure the room is well ventilated before using any organic cleaner. Use organic solvents in small amounts to avoid breathing the fumes and becoming nauseous.
- Switch the machine off, unplug it, and allow it to cool before doing preventive maintenance. To avoid fire or explosion, never use an organic cleaner near any part that generates heat.
- Wash your hands thoroughly after cleaning parts with an organic cleaner to contamination of food, drinks, etc. which could cause illness.
- 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. Use "My Ace" Silicone Oil Remover (or dry rags) to soak up spills. For more details, please refer to Technical Bulletin "Silicone Oil Removal" (A024-50).

## Power Plug and Power Cord

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### **WARNING**

- Before serving the machine (especially when responding to a service call), always make sure that the power plug has been inserted completely into the power source. A partially inserted plug could lead to heat generation (due to a power surge caused by high resistance) and cause a fire or other problems.
- Always check the power plug and make sure that it is free of dust and lint. Clean it if necessary. A dirty plug can generate heat which could cause a fire.
- Inspect the length of the power cord for cuts or other damage. Replace the power cord if necessary. A frayed or otherwise damaged power cord can cause a short circuit which could lead to a fire or personal injury from electrical shock.
- Check the length of the power cord between the machine and power supply. Make sure the power cord is not coiled or wrapped around any object such as a table leg. Coiling the power cord can cause excessive heat to build up and could cause a fire.
- Make sure that the area around the power source is free of obstacles so the power cord can be removed quickly in case of an emergency.

- 
- Make sure that the power cord is grounded (earthed) at the power source with the ground wire on the plug.
  - Connect the power cord directly into the power source. Never use an extension cord.
  - When you disconnect the power plug from the power source, always pull on the plug, not the cable.

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## After Installation, Servicing

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### Disposal of Used Items

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#### **WARNING**

- Never incinerate used toner or toner cartridges.
- Toner or toner cartridges thrown into a fire can ignite or explode and cause serious injury. At the work site always carefully wrap used toner and toner cartridges with plastic bags to avoid spillage before disposal or removal.

#### **CAUTION**

- Always dispose of used items (developer, toner, toner cartridges, OPC drums, etc.) in accordance with the local laws and regulations regarding the disposal of such items.
- To protect the environment, never dispose of this product or any kind of waste from consumables at a household waste collection point. Dispose of these items at one of our dealers or at an authorized collection site.
- Return used selenium drums to the service center for handling in accordance with company policy regarding the recycling or disposal of such items.

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## Safety Instructions for this Machine

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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. 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.



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5. If the [Start] key is pressed before the machine completes the warm-up period (the [Start] key starts blinking red and green ), keep hands away from the mechanical and the electrical components as the machine starts making copies as soon as the warm-up period is completed.
  6. 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.
  7. To prevent a fire or explosion, keep the machine away from flammable liquids, gases, and aerosols.

## **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.
2. The NVRAM on the system control board has a lithium battery which can explode if replaced incorrectly. Replace the NVRAM only with an identical one. The manufacturer recommends replacing the entire NVRAM. Do not recharge or burn this battery. Used NVRAM must be handled in accordance with local regulations.

## **Trademarks**

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# 1. Replacement and Adjustment



## Common Procedures

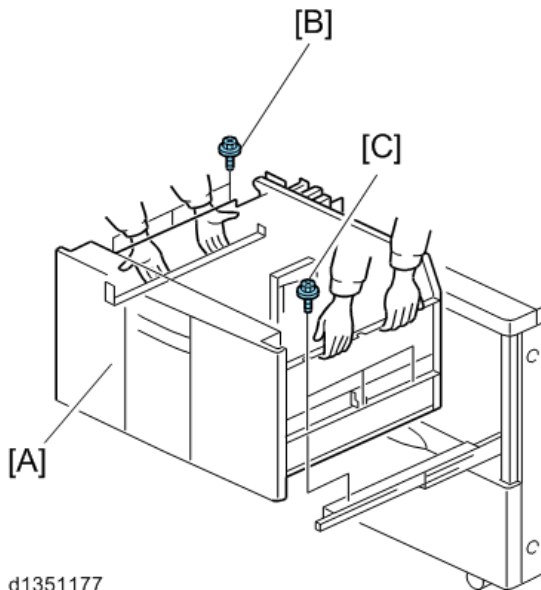
1

### Paper Tray

#### CAUTION

- The tray weighs 25 kg empty. To prevent damage to the tray and personal injury, never attempt to lift the tray alone. The tray must be lift by two or more persons.

1. Pull the tray [A] out of the LCT until it stops.
2. Remove the screws from the right rail [B] ( x3)
3. Remove the screws from the left rail [C] ( x3)
4. Lift and remove the tray [A].



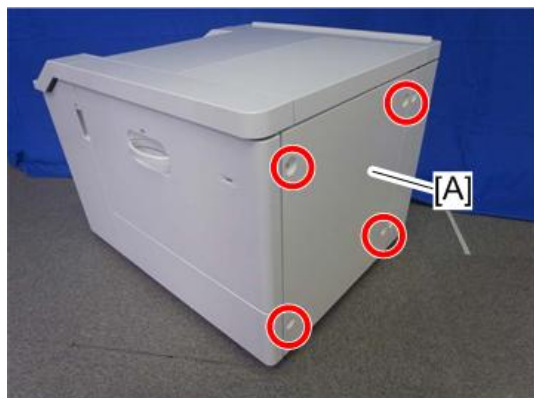
#### Note

- You do not need to remove the screw for the stopper pin bracket at the back of the left rail.

### External Covers

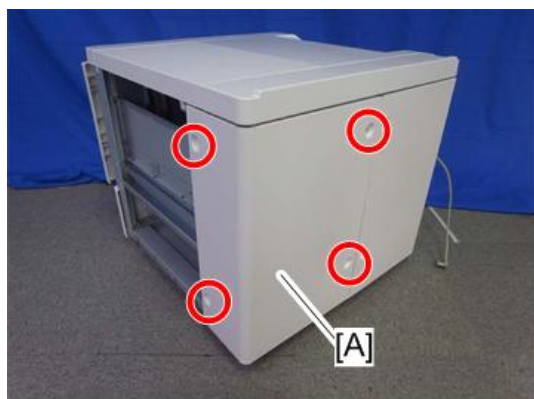
1. Right cover [A] ( x4)

1



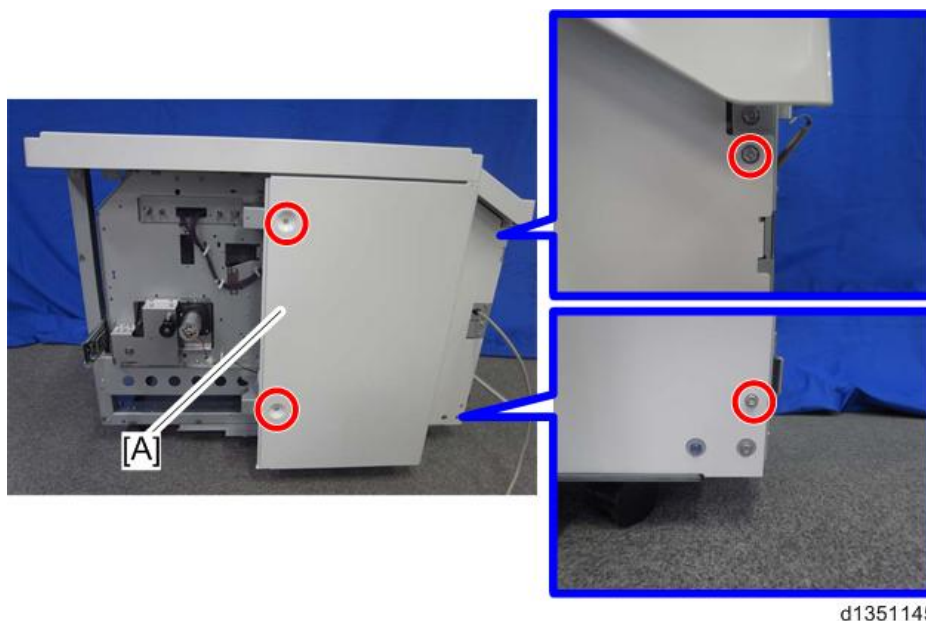
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2. Right rear cover [A] (⚙️ x4)



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3. Left rear cover [A]

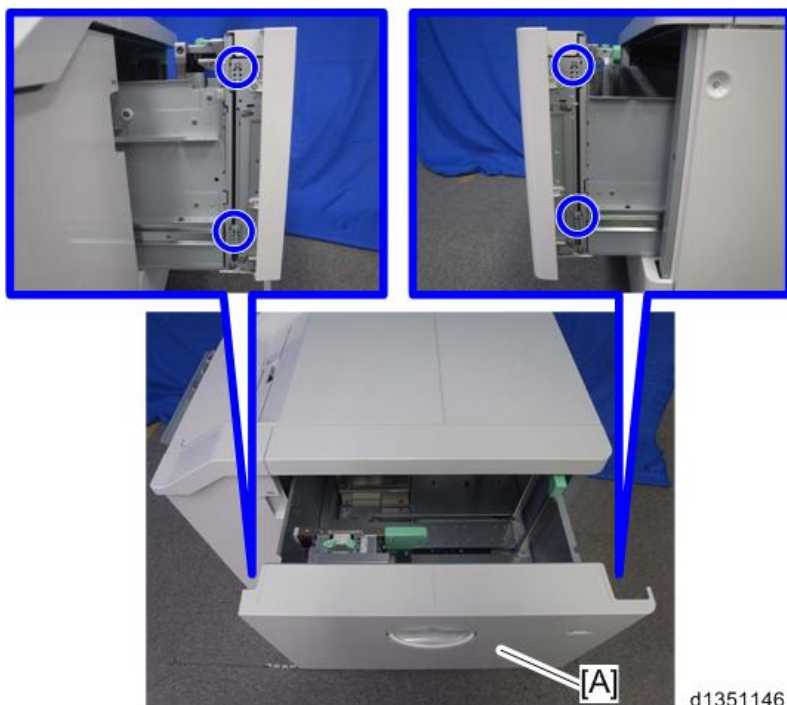


## Side Registration Adjustment

The side-to-side registration for this LCT can be adjusted with SP1-003-800 (Side-to-Side Reg: LCT). However, if punched hole positions are not aligned on paper fed from this LCT, you can first adjust the side registration by changing the tray cover position as described below, and then adjust the side registration of the image with SP1-003-800.

1. Pull out the tray [A].
2. Change the screw positions at both the right and left sides as shown.
  - Adjustment range:  $0 \pm 3.0$  mm
  - Step: 0.1 mm

1



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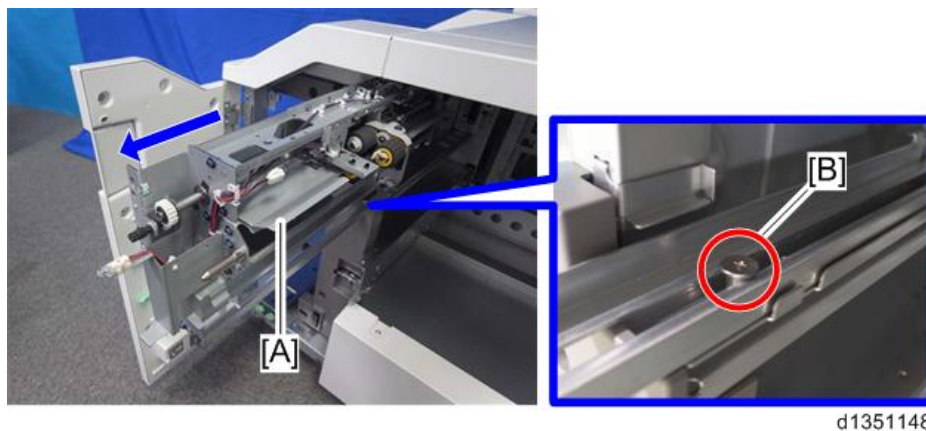


# Paper Feed Unit

1. Paper tray (▶ page 11)
2. Open the front door [A], and then remove the inner cover [B]. (⚙ x4)

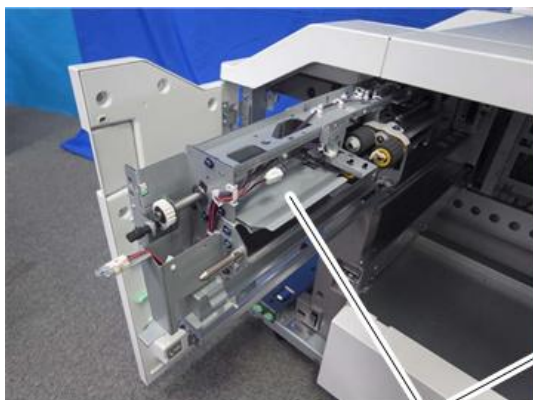


3. Pull out the paper feed unit [A], and then remove the screw [B]. (⚙ x1)



4. Paper feed unit [A]

1



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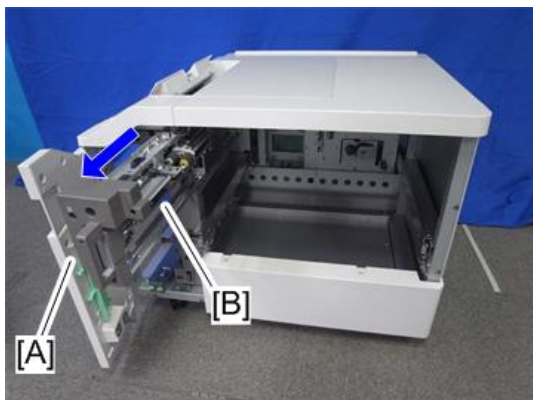
[A]

# Rollers

## Pick-Up Roller, Feed Roller, Separation Roller

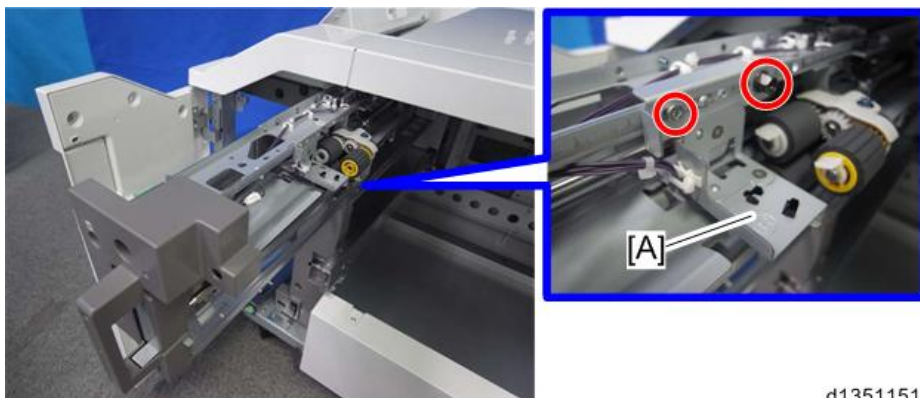
1

1. Paper feed unit (🔧 page 15)
2. Open the front door [A], and then pull out the paper feed unit [B].



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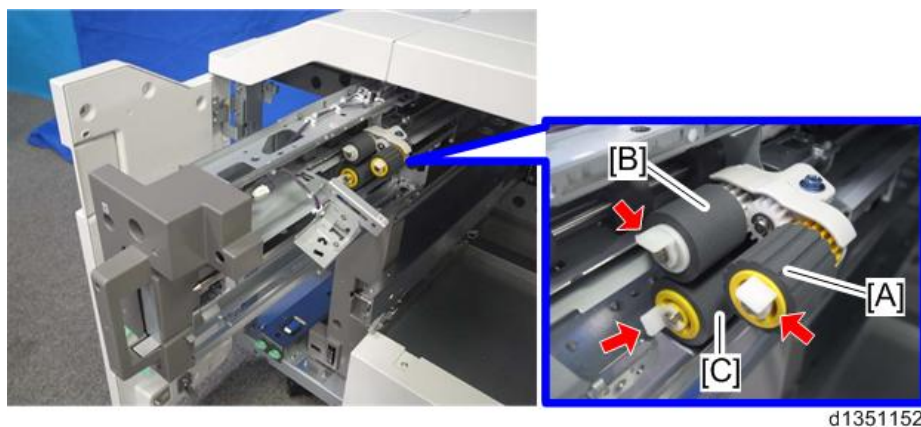
3. Paper feed tray bracket [A] (🔧 x2)



d1351151

4. Remove the pick-up roller [A], feed roller [B], and separation roller [C]

1



d1351152

**Note**

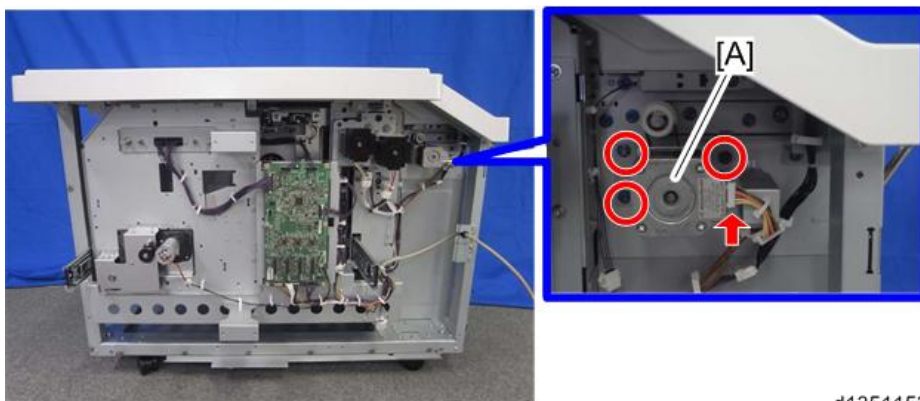
- Never touch the surface of the rollers with bare hands.

# Motors

## LCT Exit Motor

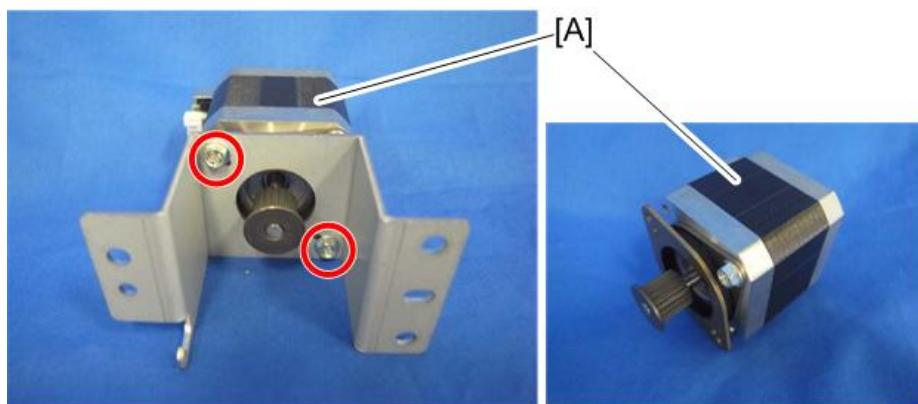
1

1. Left rear cover (🔧 page 11 "External Covers")
2. LCT exit motor bracket [A] (🔧 x3, 📏 x1, gear x 1, timing belt x 1)



d1351153

3. LCT exit motor [A] (🔧 x2)

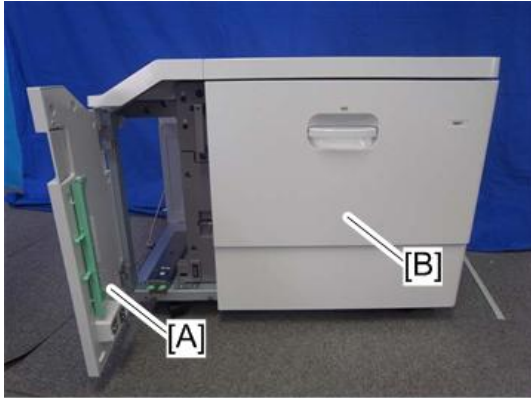


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## Feed Motor, Grip Motor

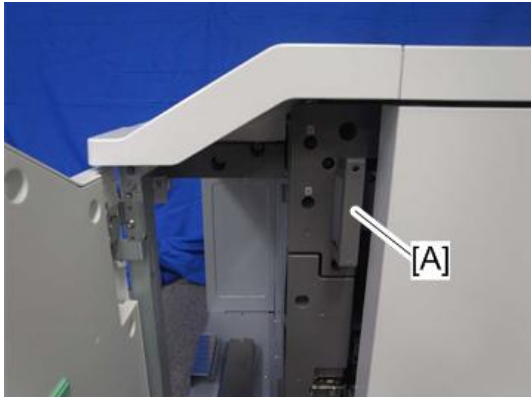
1. Open the front door [A], and then pull out the paper tray [B].

1



d1351336

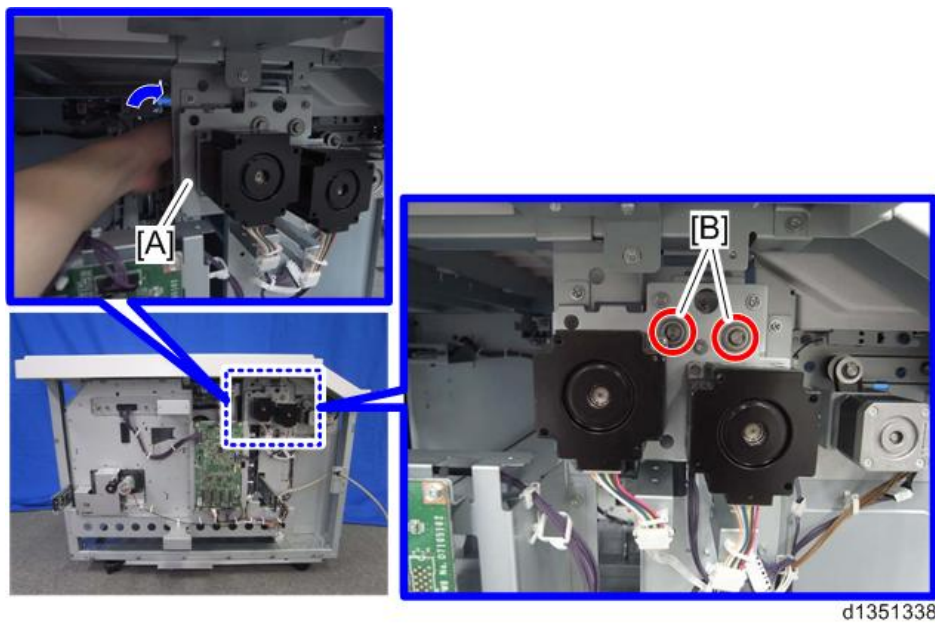
2. Pull out the paper feed unit [A]



d1351337

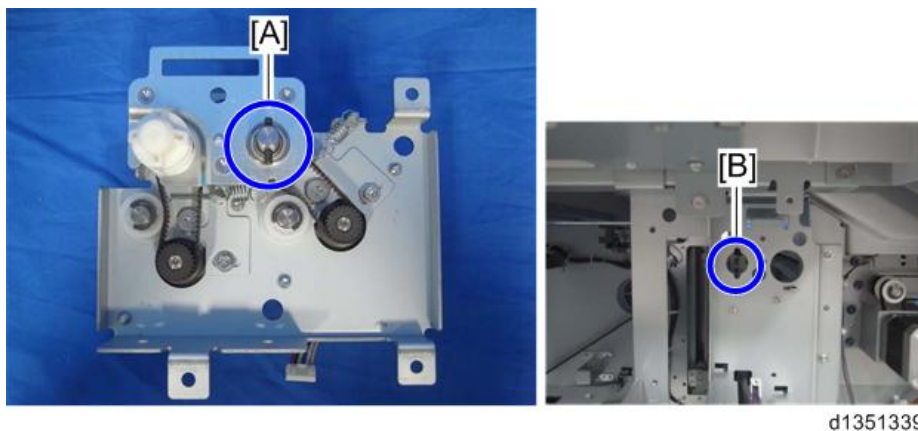
1. Left rear cover (see page 11 "External Covers")
2. Put a hand to the rear side of the Feed/Grip motor bracket [A], push the pin [B] towards the front side.
3. Remove the Feed/Grip motor bracket [A].



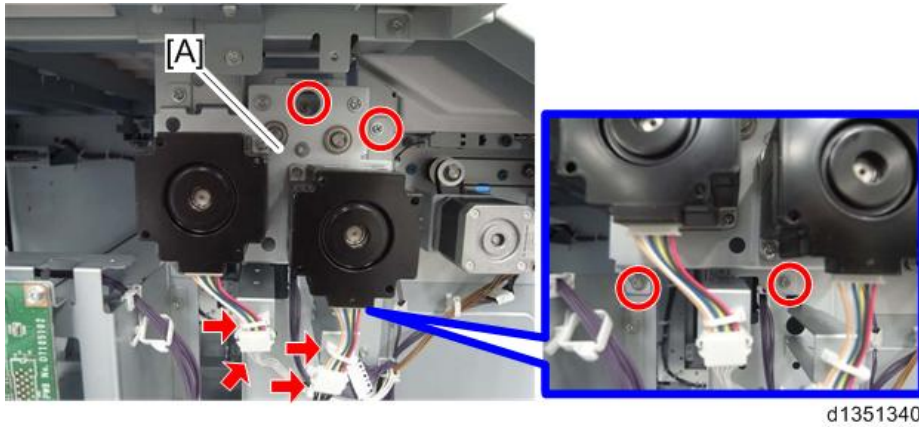


#### ↓ Note

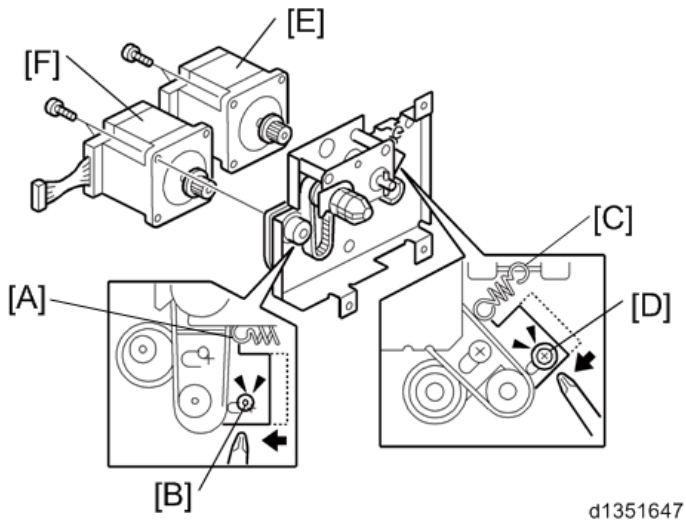
- When pushing the pin towards the front side, turn the shaft [A] so the pin can slip out from the keyhole [B].



4. Feed/Grip motor bracket [A] (🔩x4, 🛠x2, 📌x2)



5. Remove the spring [A], and then loosen screw [B].
6. Remove the spring [C], and then loosen screw [D].
7. Paper feed motor [E] (⚙️ x2, Timing belt x1)
8. Grip motor [F] (⚙️ x2, Timing belt x1)



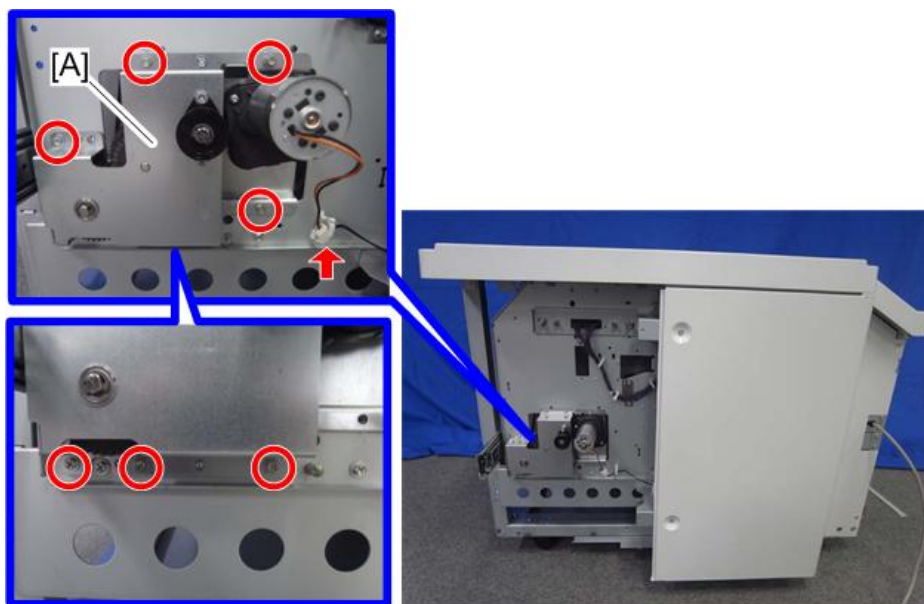
**Note**

- When you reinstall the motors, attach the tension springs, and then tighten the screws to tighten the belts.

## Lift Motor

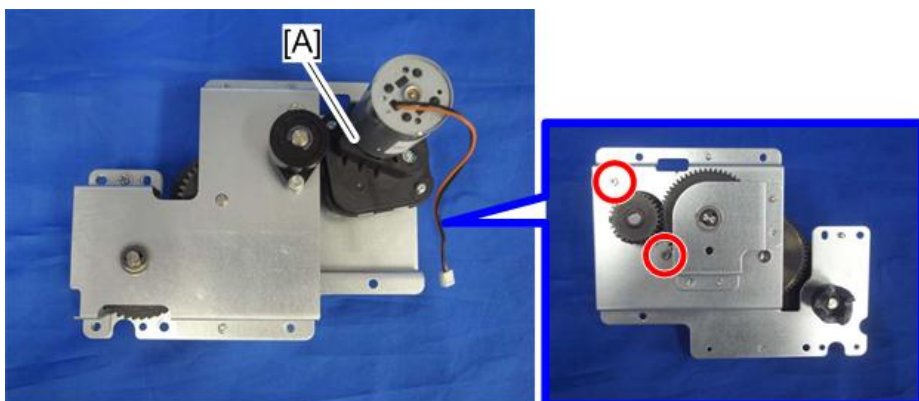
1. Left rear cover (📄 page 11 "External Covers")
2. Lift motor bracket [A] (⚙️ x7, 📦 x 1)





d1351155

3. Lift motor [A] (⚙️x2, gear x 1, ⚙️x1)



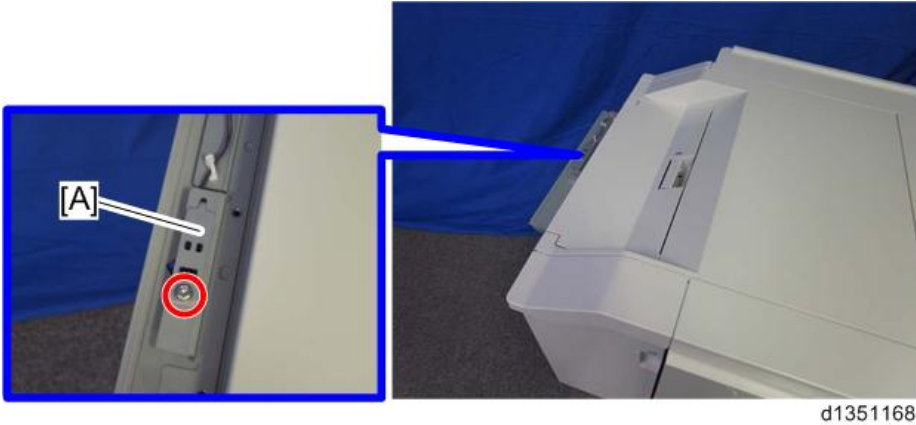
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## Sensors

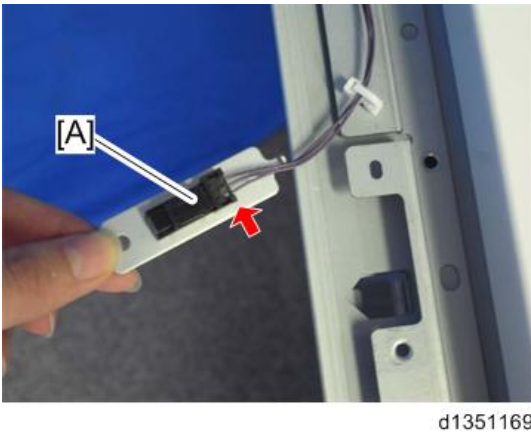
1

### LCT Connecting Sensor

1. LCT connecting sensor bracket [A] (🔩 x1)



2. LCT connecting sensor [A] (🔩 x1, hook x 3)



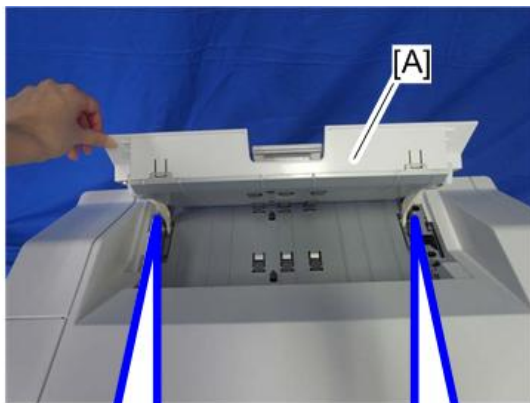
### LCT Exit Sensor, Relay Sensor

1. Open the exit cover [A].



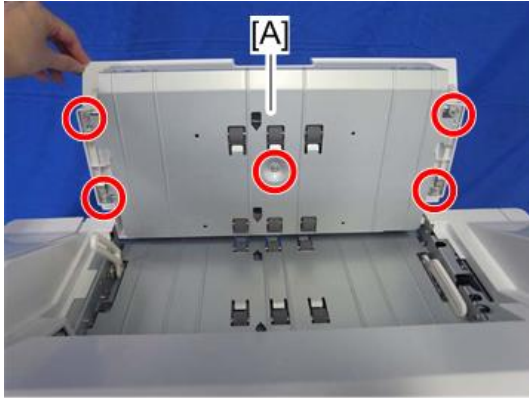
d1351157

2. Remove the screws of the exit cover [A]. (⚙️ x2)



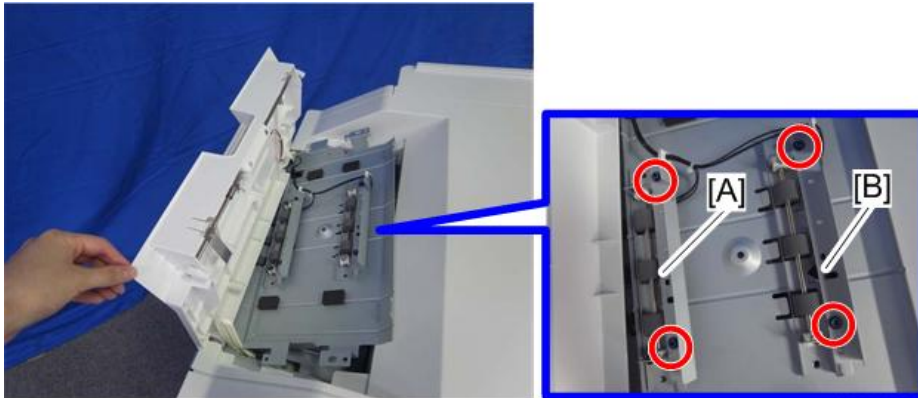
d1351158

3. Disconnect the bottom plate [A] from the exit cover. (⚙️ x5)



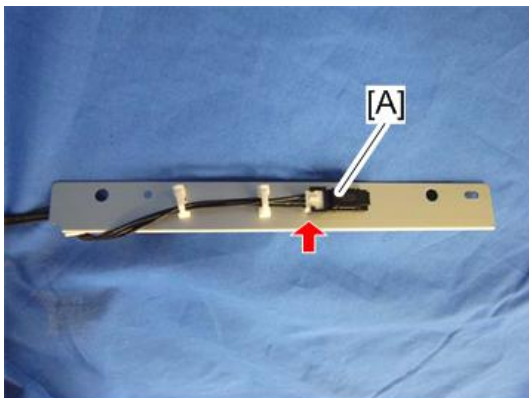
d1351159

4. Remove the LCT exit sensor bracket [A] and relay sensor bracket [B] from the bottom plate. (⚙️ x2 each)



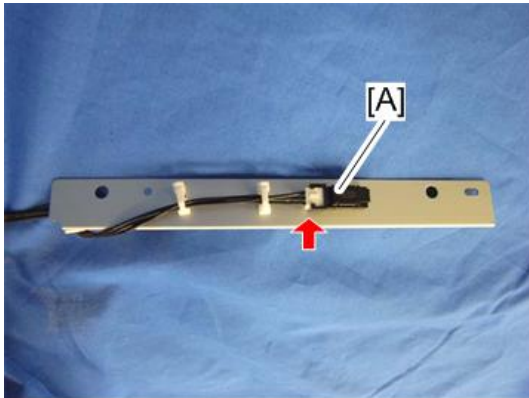
d1351160

5. Remove the LCT exit sensor [A] from the LCT exit sensor bracket. (⚙️ x1, hook x 4)



d1351161

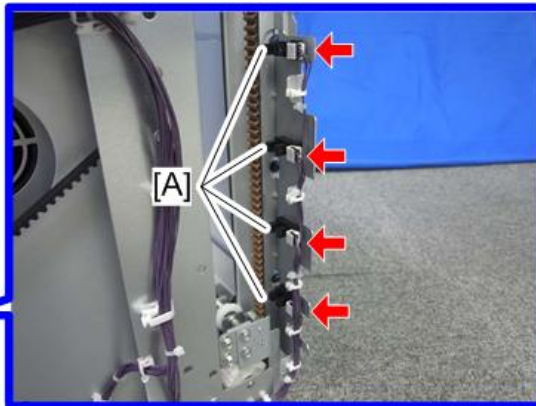
6. Remove the relay sensor [A] from the relay sensor bracket. (⚙️ x1, hook x 4)



d1351161

## Paper Height Sensors

1. Paper tray (🔗 page 11)
2. Paper height sensors [A] (x 4) (🔗 x1, hook x 4 each)

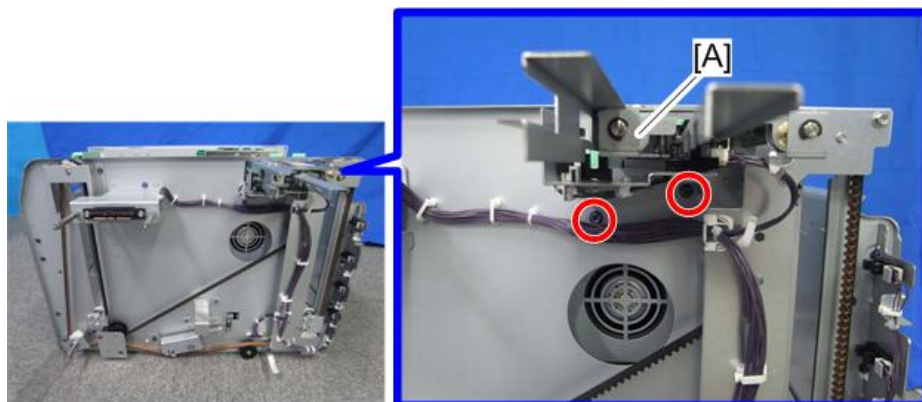


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## Paper Width Sensors

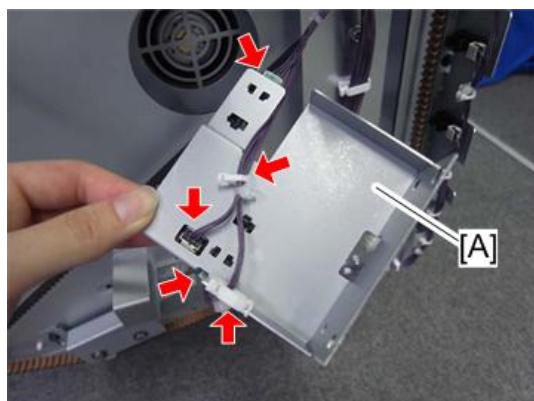
1. Paper tray (🔗 page 11)
2. Remove the screws of the paper width sensor bracket [A]. (🔗 x2)

1



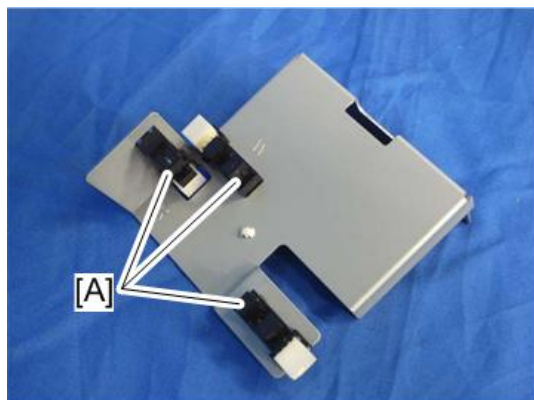
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3. Paper width sensor bracket [A] (hook x3, screw x 2 each)



d1351165

4. Paper width sensors [A] (x 3) (hook x 4 each)



d1351166

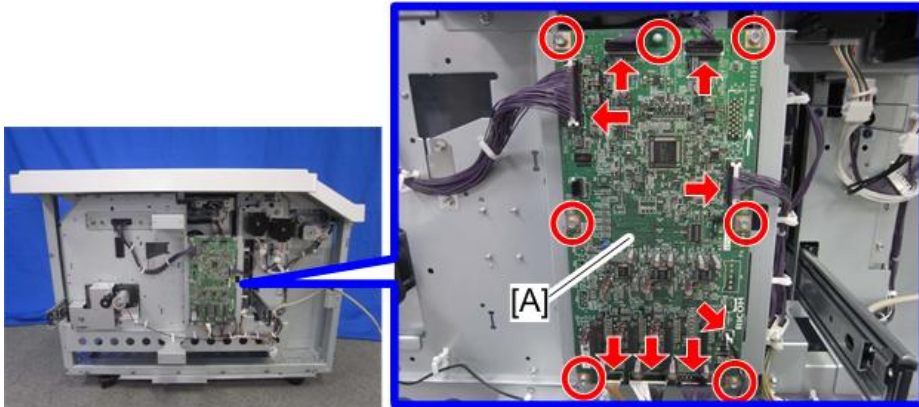


# Boards

## Main Board

1

1. Remove the right rear cover and left rear cover. (☛ page 11 "External Covers")
2. Main board [A] (☛ x8, ⚙ x6, Stand off x1)



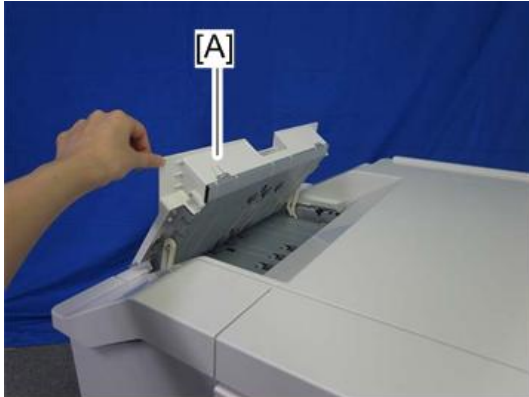
d1351167

## Others

1

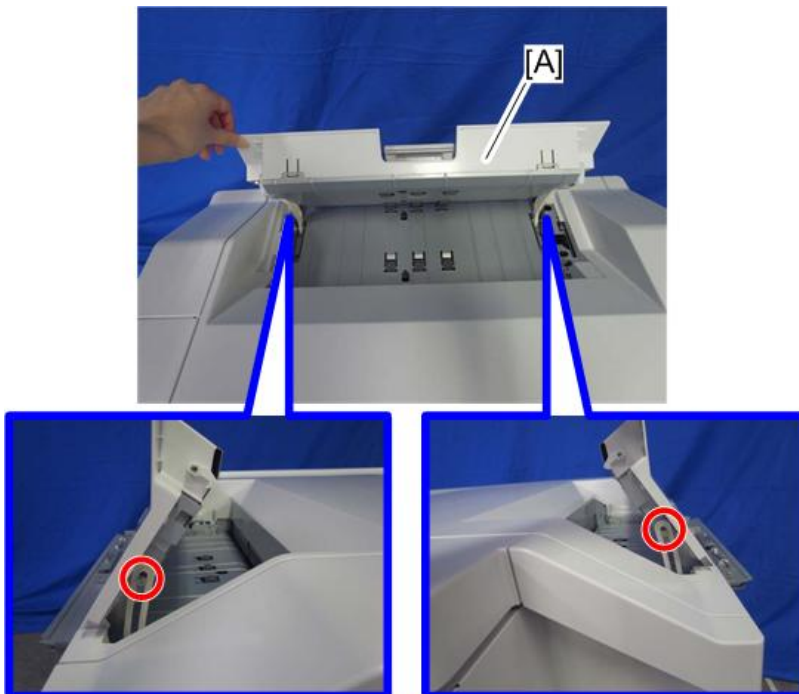
### LCT Exit LED

1. Open the exit cover [A].



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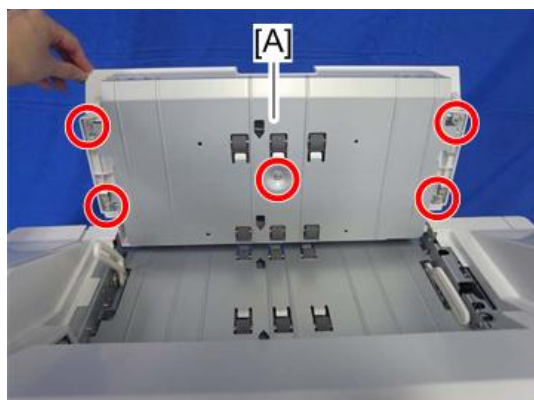
2. Remove the screws of the exit cover [A]. (⚙️ x2)



d1351158

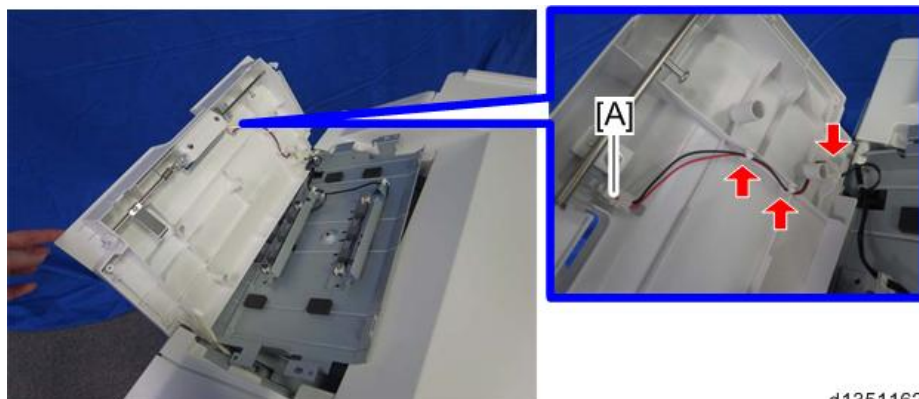
3. Disconnect the bottom plate [A] from the exit cover. (⚙️ x5)





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4. Remove the LCT Exit LED [A] from the back side of the exit cover. (□ x1, □ x 2)

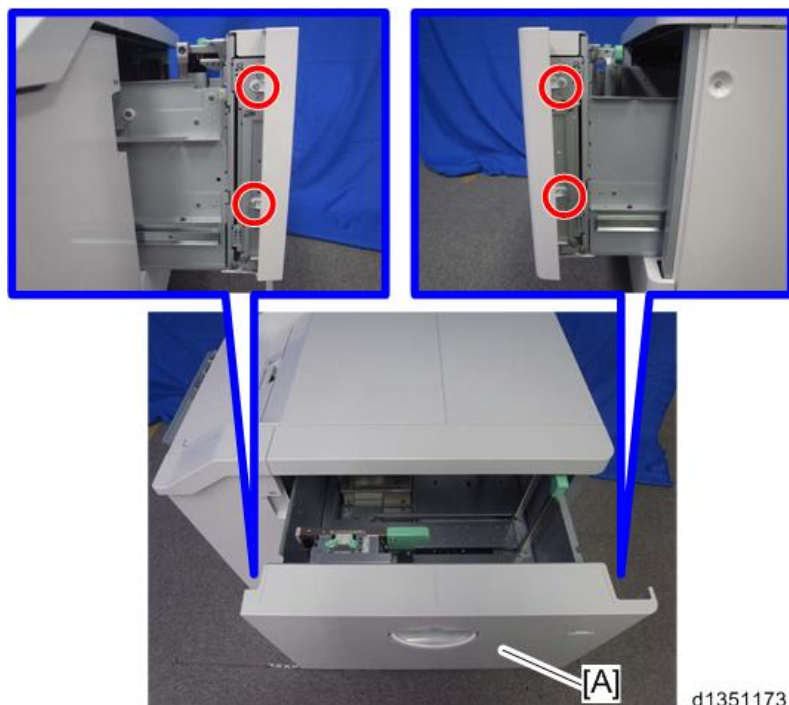


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## Tray Cover LED, Active LED

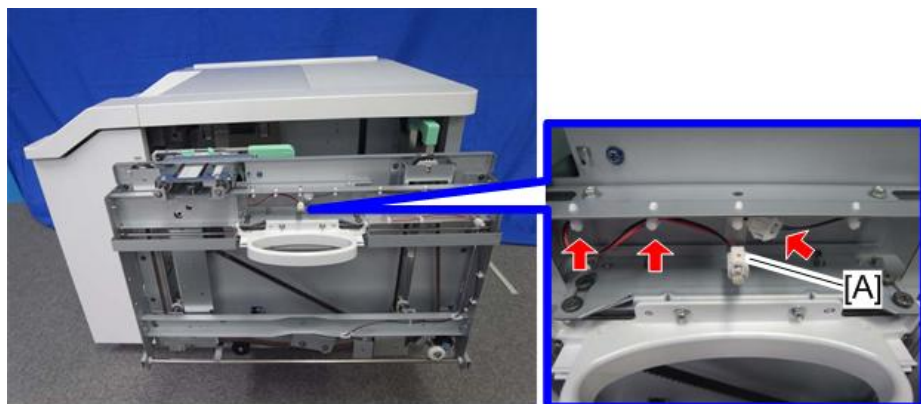
1. Pull out the tray.
2. Tray cover [A] (□ x4)

1



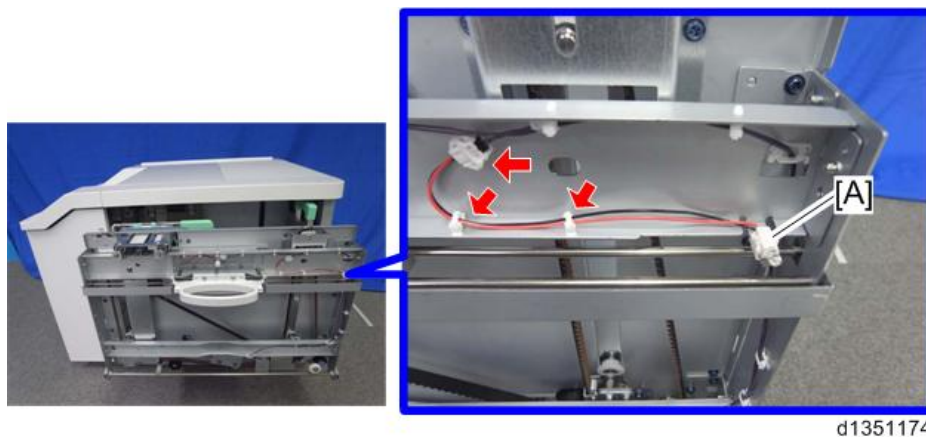
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3. Tray cover LED [A] (□ x 1, □ x 2)



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4. Active LED [A] (□ x 1, □ x 2)



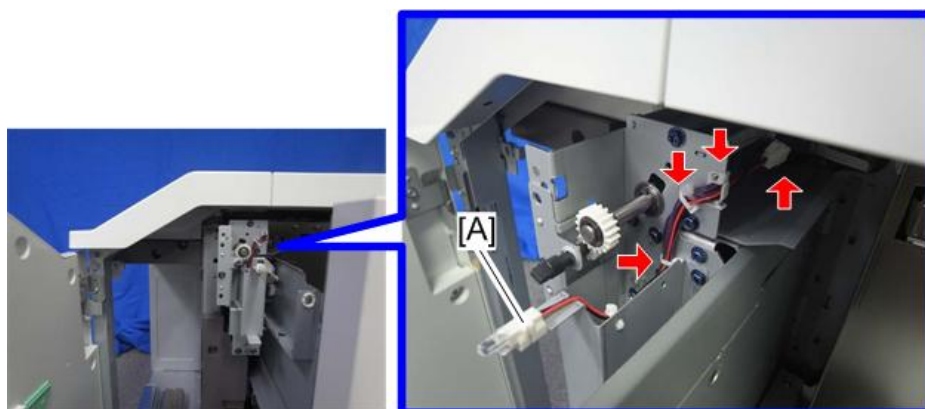
## Front Door LED

1. Open the front door [A].
2. Inner cover [B] (⚙️ x4)



3. Pull out the tray, and then remove the front door LED [A]. (🔌 x1, 🛠️ x 3)

1



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