







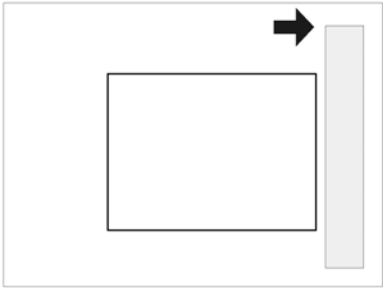
LCIT RT5050
Machine Code: D532
Field Service Manual

17 September, 2010

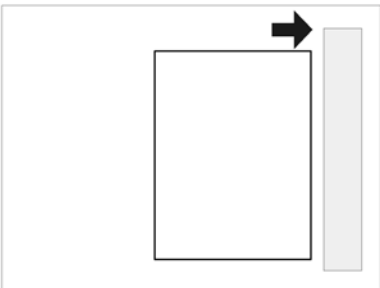
Safety, Conventions, Trademarks

Conventions

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



SEF (Short Edge Feed)



LEF (Long Edge Feed)

The notations "SEF" and "LEF" describe the direction of paper feed. The arrows indicate the direction of paper feed.

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.

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.

General Safety Instructions

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

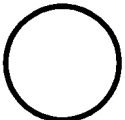
In this manual, the following important symbols and notations are used.

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.



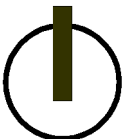
ON



OFF



Push ON/Push OFF



Standby

d014c002

Responsibilities of the Customer Engineer

Customer Engineer

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

- 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.

Before Installation, Maintenance

Shipping and Moving the Machine

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

WARNING

- Always disconnect the power plug before doing any maintenance procedure. After switching off the machine, power is still supplied to the main machine and other devices. To prevent electrical shock, switch the machine off, wait for a few seconds, then unplug the machine from the power source.

-
- 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

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

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.

During Maintenance

General

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

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 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

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 dry rags to soak up spills.

Power Plug and Power Cord

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.

After Installation, Servicing

Disposal of Used Items

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.

Safety Instructions for this Machine

Prevention of Physical Injury

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.
 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

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.

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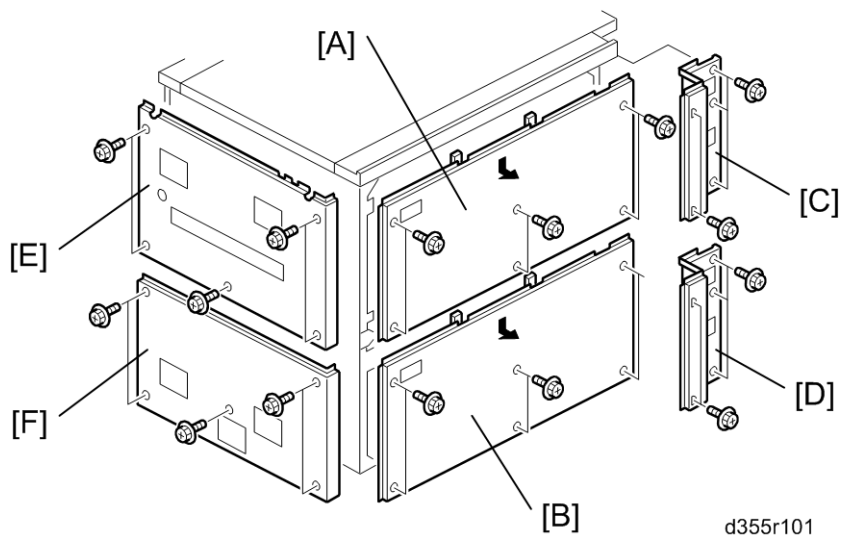


1. Replacement and Adjustment

Common Procedures

1

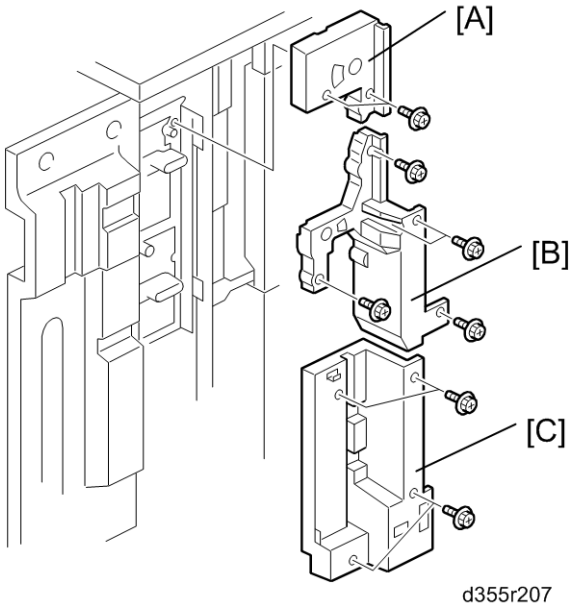
Covers



1. Remove:

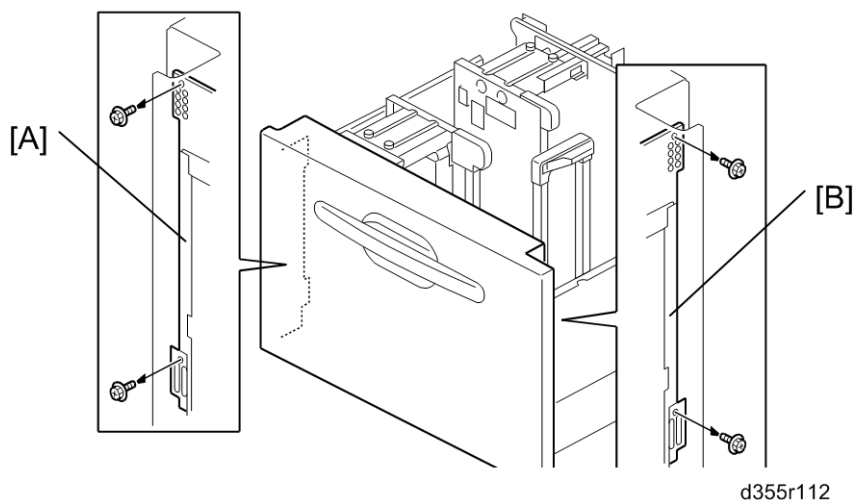
- [A] Rear upper cover ( x 6)
- [B] Rear lower cover ( x 6)
- [C] Left rear upper cover ( x 5)
- [D] Left rear lower cover ( x 5)
- [E] Right upper cover ( x 5)
- [F] Right lower cover ( x 5)

Inner Covers



1. Remove the right upper and lower covers (p. 11).
2. Remove:
 - [A] Inner top cover (x 2)
 - [B] Inner middle cover (x 5)
 - [C] Inner bottom cover (x 4)

Side Registration Adjustment



The side-to-side registration for this LCIT can be adjusted with Super User SP1711-008 for the upper tray and -009 for the lower tray.

However, if punched hole positions are not aligned on paper fed from this LCIT, 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 Super User SP1711-008 and -009 (Side-to-Side Reg: WIDE LCT).

1. Pull out the tray.
2. Change the screw positions at both the right [A] and left [B] sides as shown.

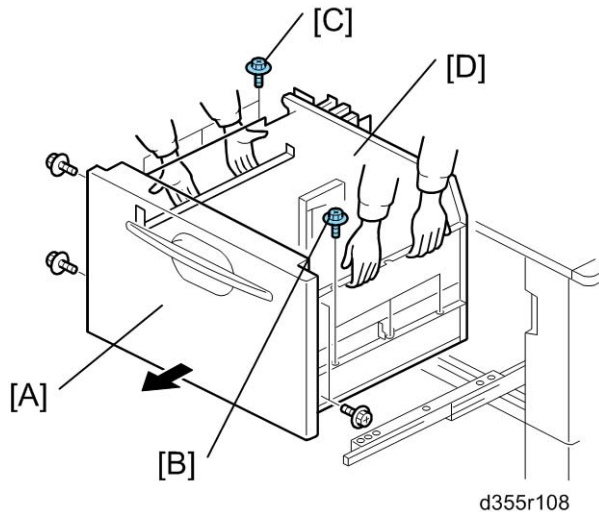
Adjustment range: 0 ± 2.0 mm, Step: 0.5 mm




Trays

CAUTION

- The tray weighs 25 kg (55.1 lb.) empty.
- To prevent damage to the tray and personal injury, never attempt to lift the tray alone, especially if it is loaded with paper.
- Two people are required to carry or move the tray.

1. Pull tray 1 or 2 out of the LCT until it stops.



2. Remove the tray cover [A] ( x 4).
3. Remove the screws [B] from the right rail ( x 3).
4. Remove the screws [C] from the left rail ( x 3).

Note

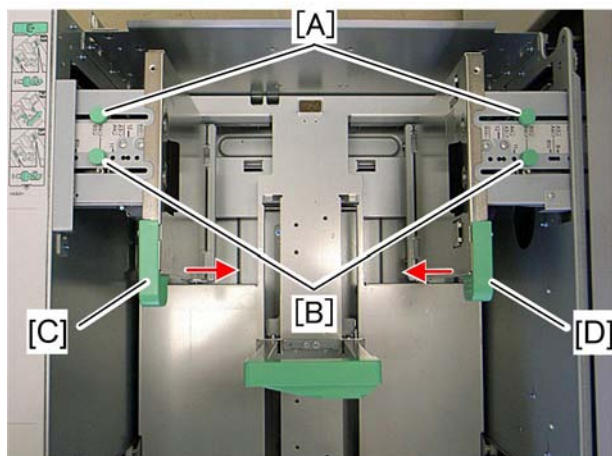
- You do not need to remove the screw for the stopper pin bracket at the back of the left rail.

5. Tray 1 or 2 [D]

Side Fence

Front Side Fence

1. Pull the tray unit out.



d355r212

2. Loosen the two fixed screws [A].
3. Remove the two fixed screws [B].
4. Move the front side fence [C] and the rear side fence [D] to loosen them.

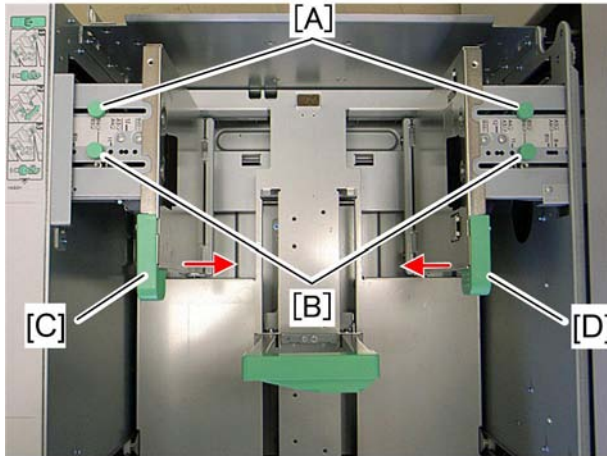


d355r213

5. Remove two screws (M4 x 8).
6. Carefully pull the front side fence [A] down and forward, and disconnect the harness.
7. Pull up the front side fence [A], and then remove it with the plate guide [B].

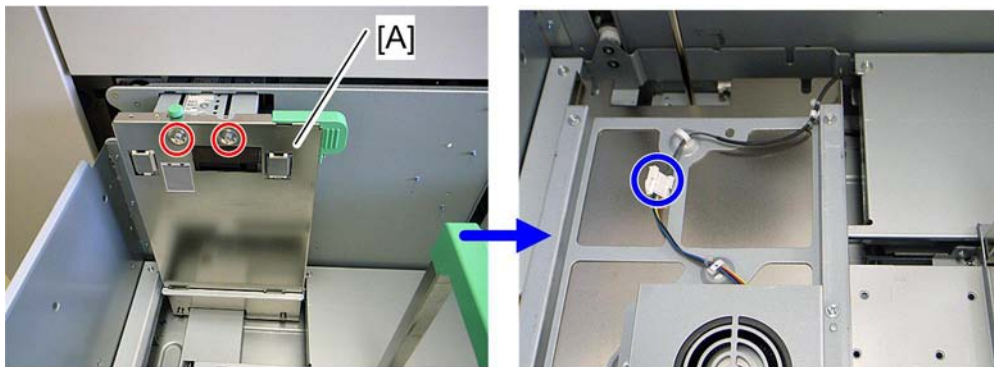
Rear Side Fence

1. Pull the tray unit out.



d355r212

2. Loosen the two fixed screws [A].
3. Remove the two fixed screws [B].
4. Move the front side fence [C] and the rear side fence [D] to loosen them.



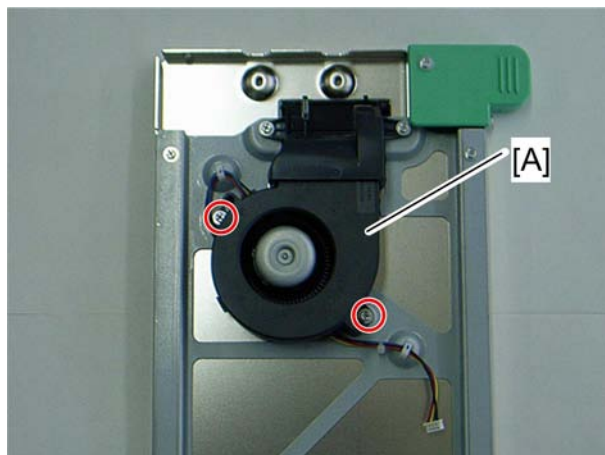
d355r215

5. Carefully pull the rear side fence [A] down and forward, and then disconnect the harness (⚡ x 2).
6. Pull up the front side fence [A], and then remove it with the tray plate guide [B].

Side Fence Blower

Front Side Fence Blower


1. Remove the front side fence (🔧 p.14)

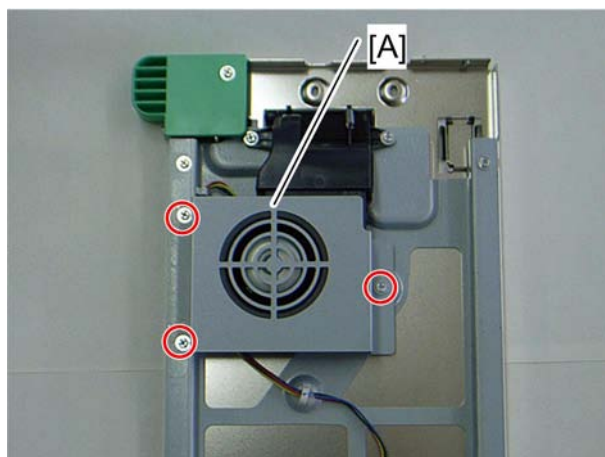


d355r216


2. Remove the front side fence blower [A] ( x 2: M4 x 8,  x 2).

Rear Side Fence Blower

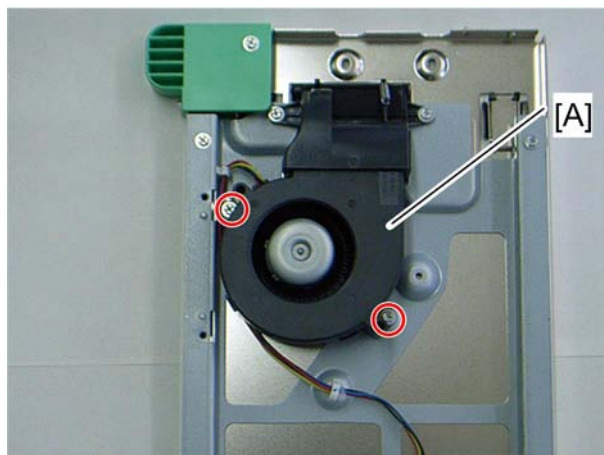
1. Remove the rear side fence ( p.14).



d355r217

2. Remove the guard bracket [A] ( x 3).


1

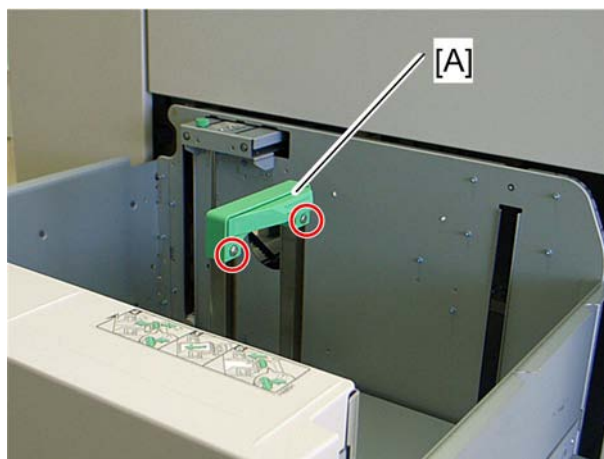


d355r218

3. Remove the rear side fence blower ( x 2,  x 2).

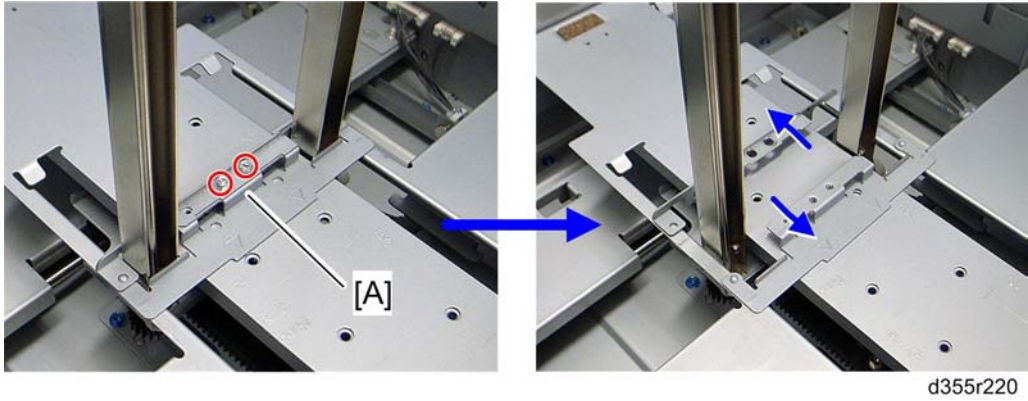
LCT Paper Length Sensor

1. Remove the front and rear side fences ( p.14).

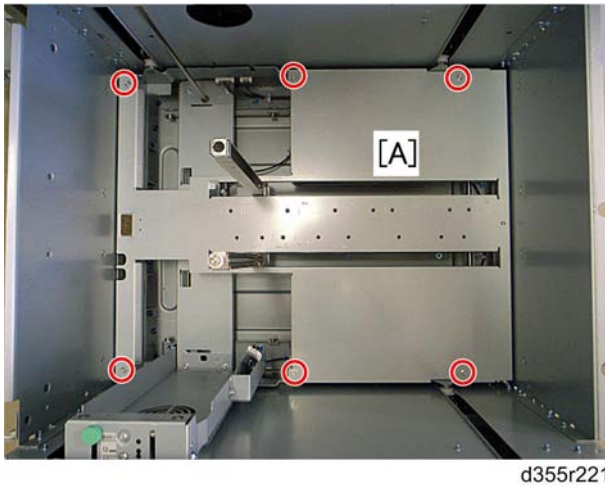


d355r219

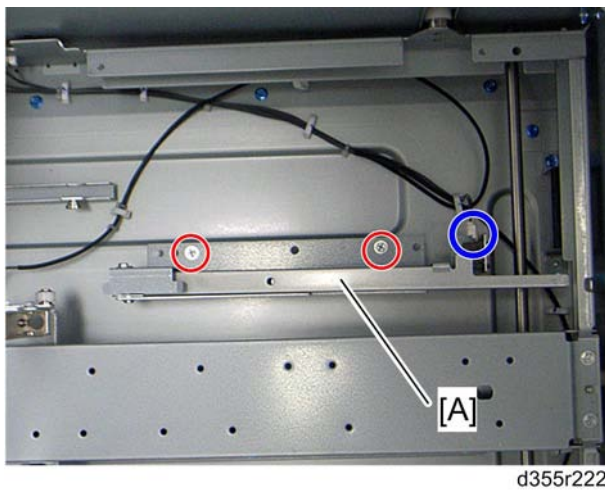
2. Remove the end fence grip [A] (Bind screw x 2: M4 x 8).



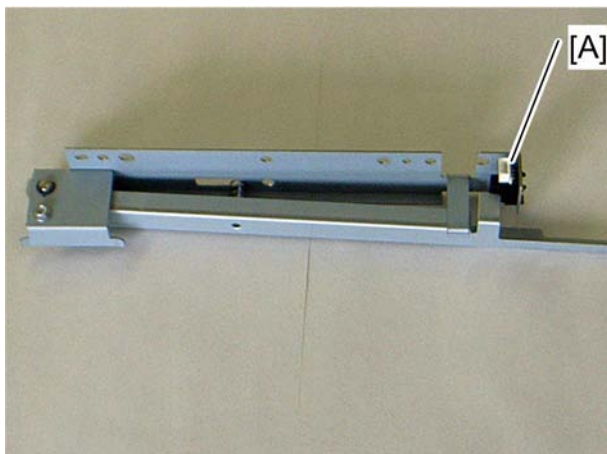
3. Remove the end fence plate [A] as shown above ( x 2).



4. Remove the tray bottom plate [A].



5. Remove the bracket [A] ( x 2,  x 1).



d355r223

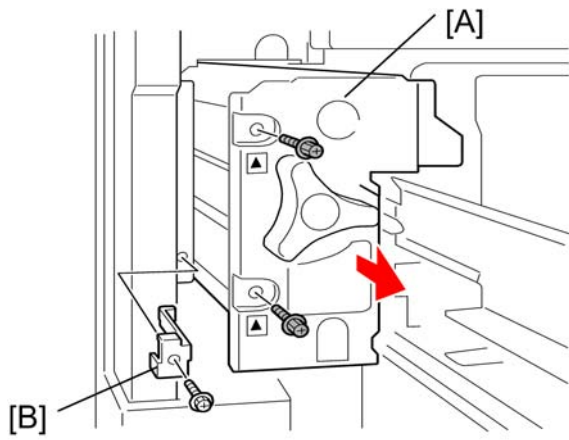
6. Remove the LCT paper length sensor [A] from the bracket.

Paper Feed


Paper Feed Unit

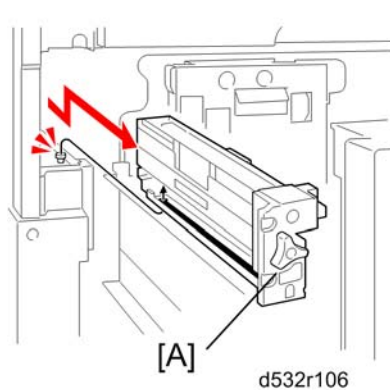
1

1. Open the front cover of the LCT-MF.
2. Pull tray 1 or 2 out of the LCT until it stops.

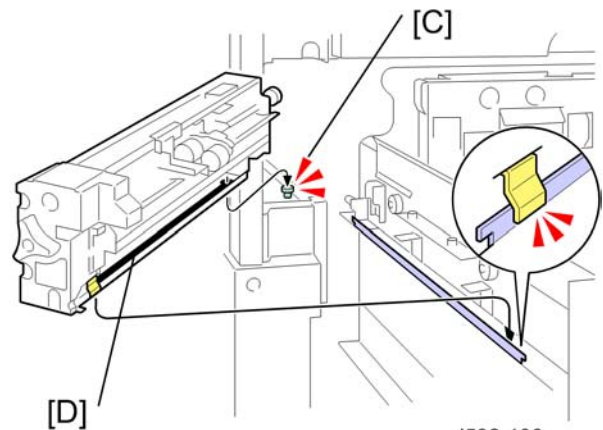


d532r105

3. Pull the paper feed unit [A].
4. Stopper [B] ( x 1)



d532r106

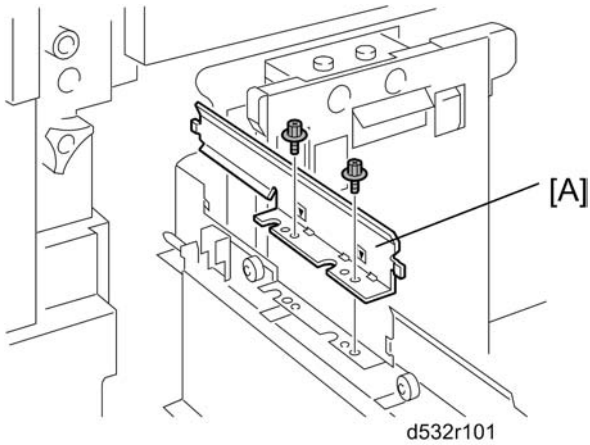


d532r106a

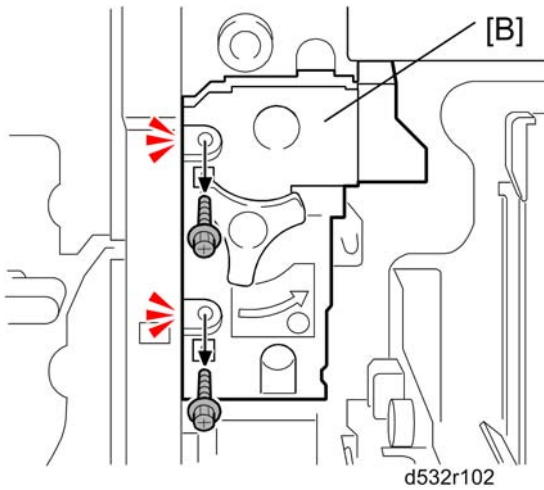
5. Paper feed unit [A]
 - When reinstalling the paper feed unit in the LCT-MF, set the paper feed unit so that the stud screw [C] on the LCT-MF is inserted in the rail [D] of the paper feed unit.

Paper Feed, Pick-up and Separation Rollers

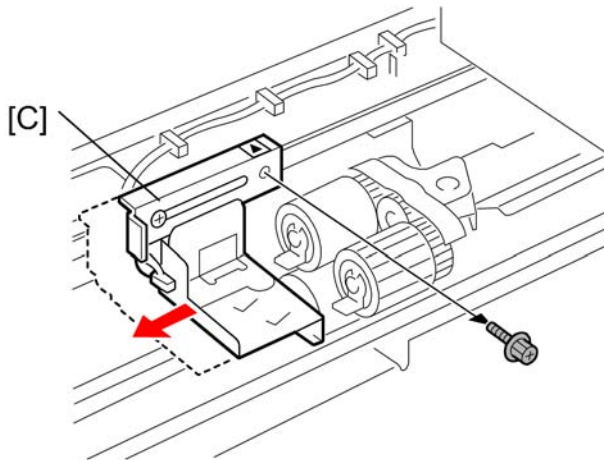
1. Pull tray 1 or 2 out of the LCT until it stops.



2. Paper tray side bracket [A] ( x 2)

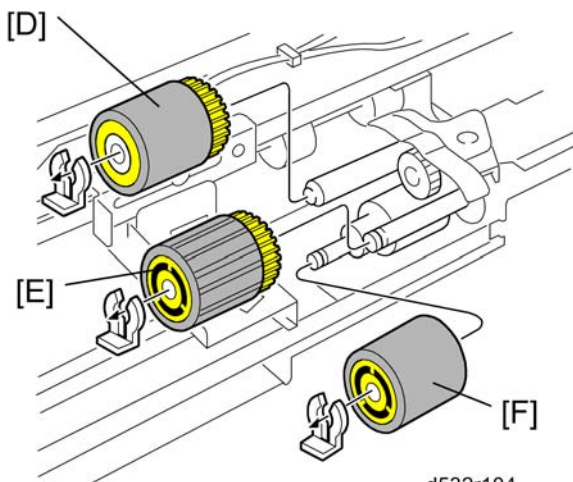


3. Pull the paper feed unit [B] ( x 2).




d532r103

4. Slide the sensor bracket [C] to the front side ( x 1).



d532r104

5. Remove:

[D] Paper feed roller ( x 1).

[E] Paper pick-up roller ( x 1).

[F] Paper separation roller ( x 1).

Note:

- Never touch the surface of the rollers with bare hands.
- The LCT pick-up and separation rollers are the same as the pick-up and separation rollers in the paper trays of the main machine. These rollers are interchangeable.
- The feed rollers of the LCT and main machine paper trays are different because they are designed to rotate in the opposite direction. The feed rollers of the LCT and main machine are not interchangeable.

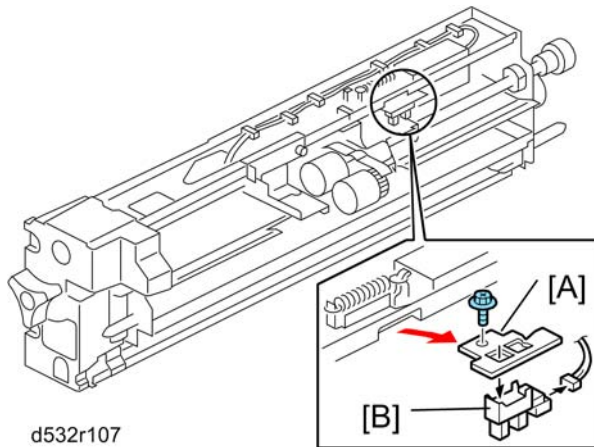
Paper Feed, Paper End and Paper Lift Sensors

Note

- The replacement procedure below for the upper tray and lower tray is identical.

Paper Lift Sensor

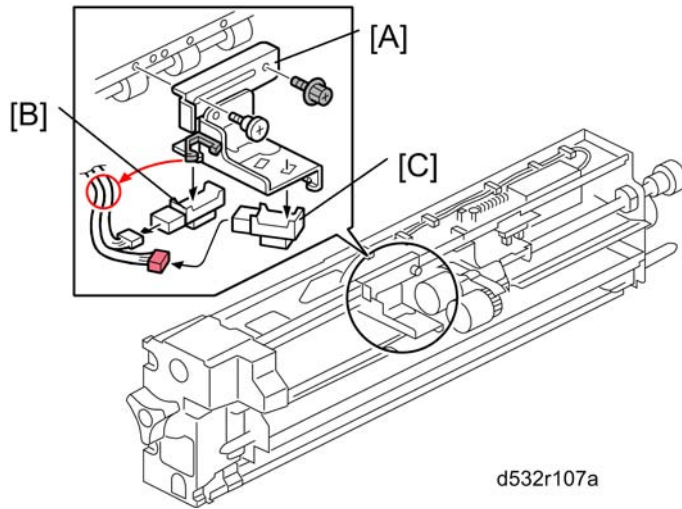
1. Paper feed unit (p.21)





2. Paper lift sensor bracket [A] (x 1, x 1)
3. Paper lift sensor [B] (hooks)

Paper Feed and Paper End Sensors

1. Paper feed unit (p.21)



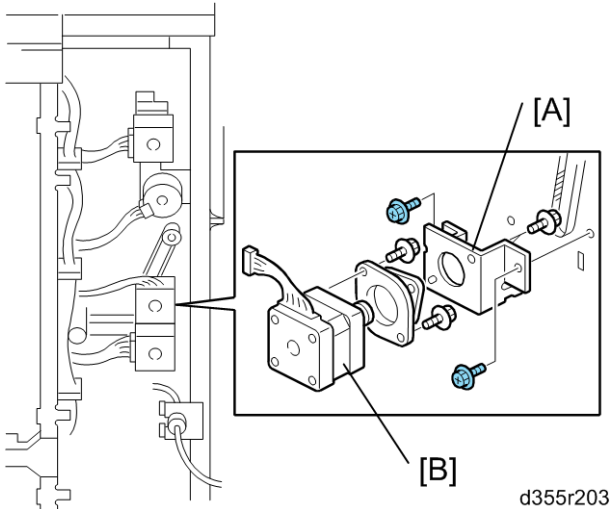
2. Sensor bracket [A] ( x 2,  x 2)
3. Paper feed sensor [B] (hooks)
4. Paper end sensor [B] (hooks)

Motors

1

LCT Exit Motor

1. Remove the left rear upper and lower covers. (p.11)



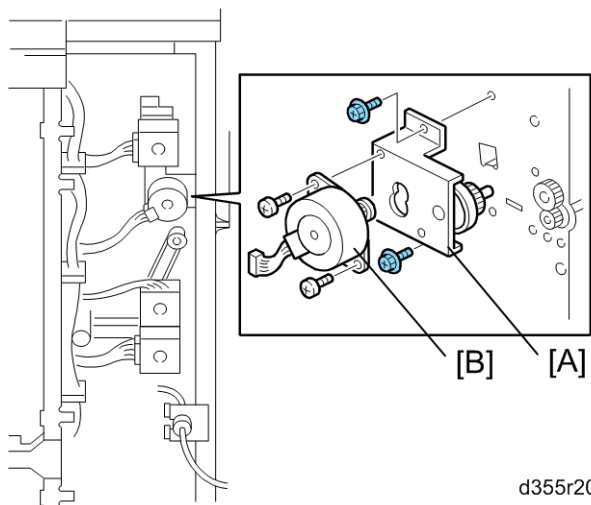
2. Remove:

[A] Motor unit (x 1, Timing belt x1, x 2)

[B] LCT exit motor (x 2)



LCT Exit Roller Contact Motor

1. Remove the left rear upper cover. (p.11)




d355r204

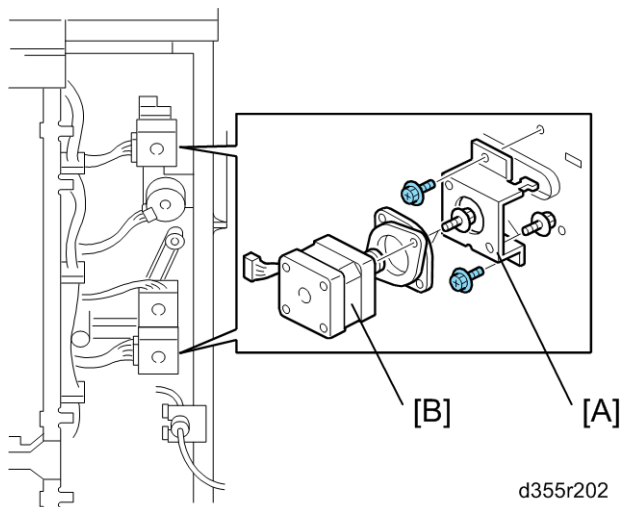
2. Remove:

[A] Motor unit ( x 1,  x 2)

[B] LCT exit roller contact motor ( x 2)



LCT Vertical Transport Motor

1. Remove the left rear upper and lower covers. ( p.11)



d355r202

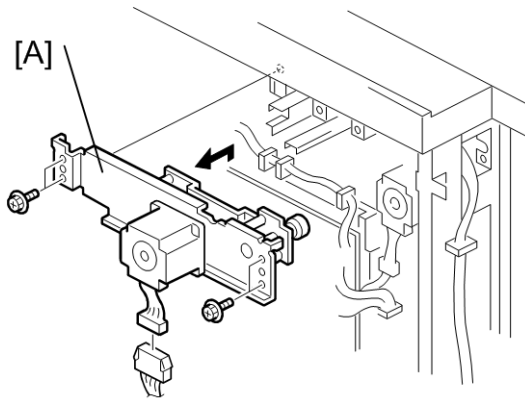
2. Remove:

[A] Motor unit ( x 1,  x 2, Timing belt x 1)

[B] LCT vertical transport motor ( x 4)

LCT Horizontal Relay Motor

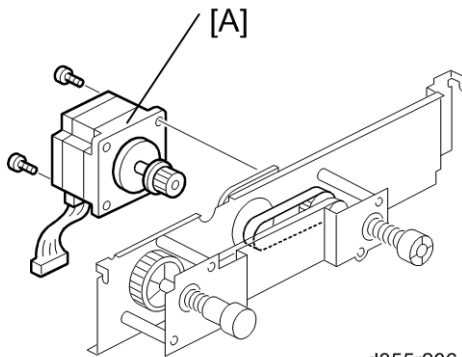
1. Remove the rear upper cover. (p.11)



d355r205

2. Remove:

[A] Motor unit [A] (x 1, x 4).



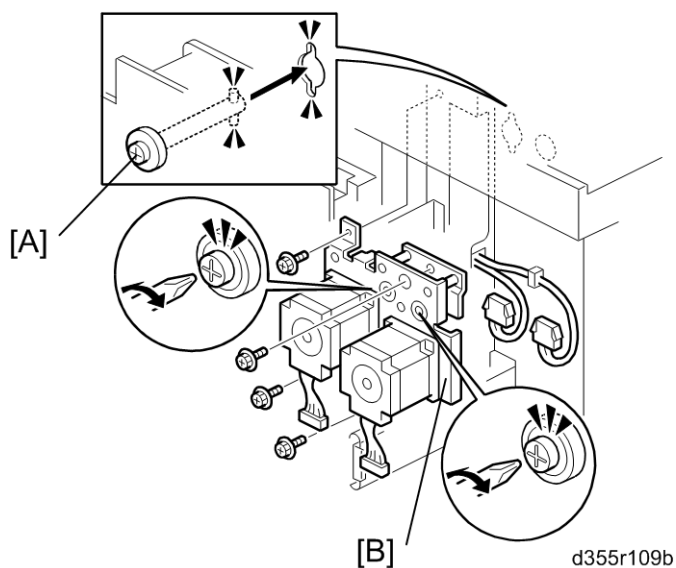
d355r206




3. Remove:

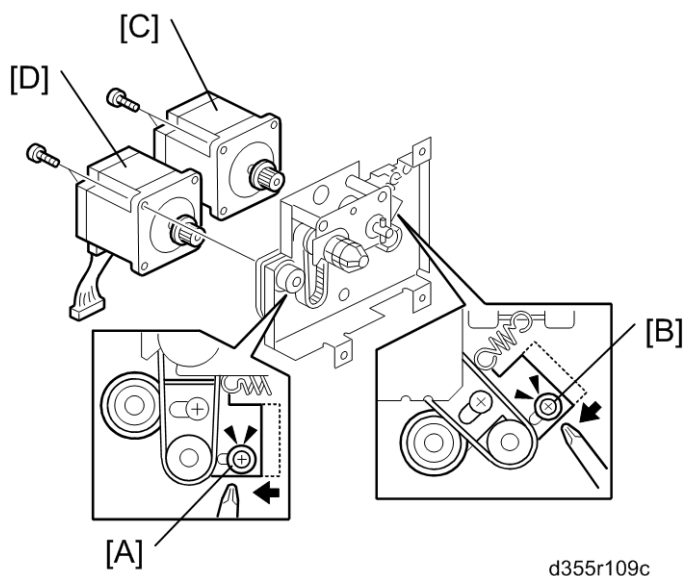
[A] LCT horizontal relay motor [A] (x 2)



LCT Paper Feed Motor, LCT Grip Motor

1. Remove the rear cover. (p.11)



2. Use a small screwdriver to turn the shaft [A] so that the pin can slip out of the keyhole.
3. Remove the motor unit [B] ( x 4,  x 2,  x 2)



4. Remove:
 - [A] Spring x1. First, loosen the screw.
 - [B] Spring x1. First, loosen the screw.
 - [C] LCT paper feed motor ( x 2, Timing belt x1)
 - [D] LCT grip motor ( x 2, Timing belt x1)

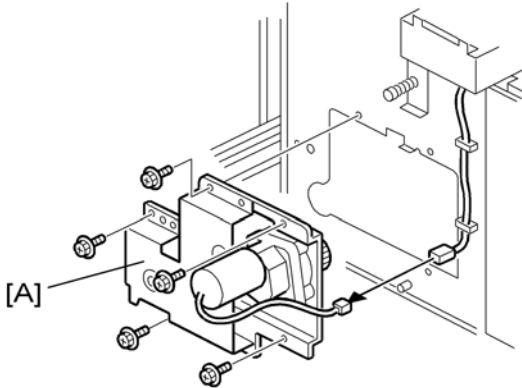
Reinstallation

- First, attach the tension springs.
- Second, tighten the screws to tighten the belts.

1



LCT Lift Motor

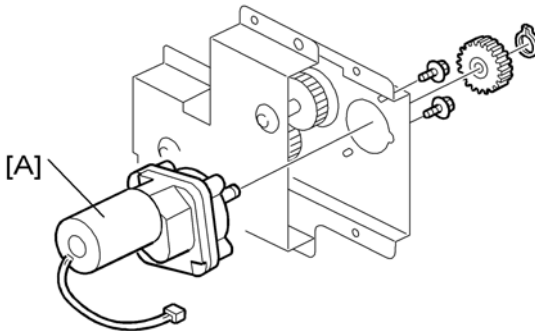
1. Remove the rear cover. (p.11)



d350r109d


2. Remove:

[A] Motor unit ( x 5,  x 1)



d350r109e

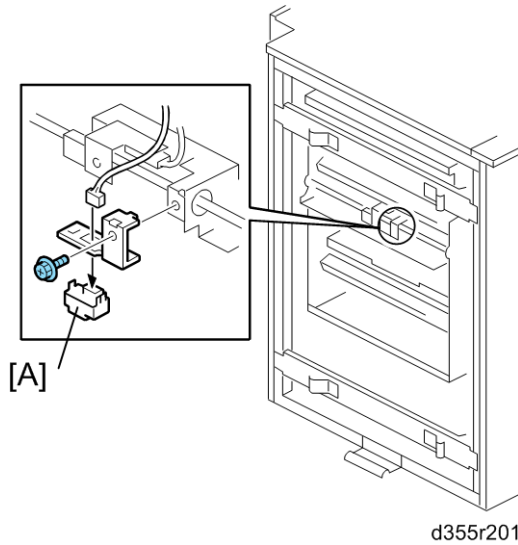
3. Remove:

[A] LCT lift motor ( x 2, Clip x 1, Gear x 1)

Electrical Components

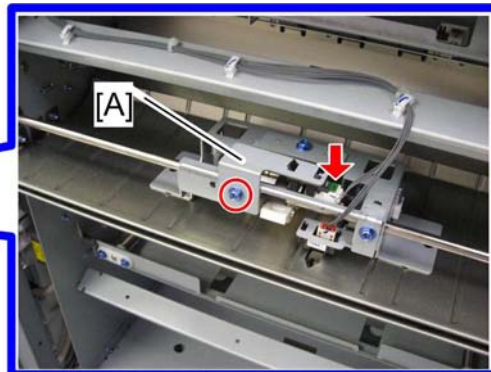
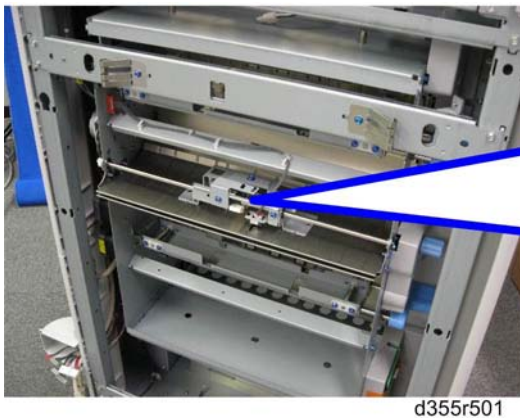
LCT Exit Sensor

1



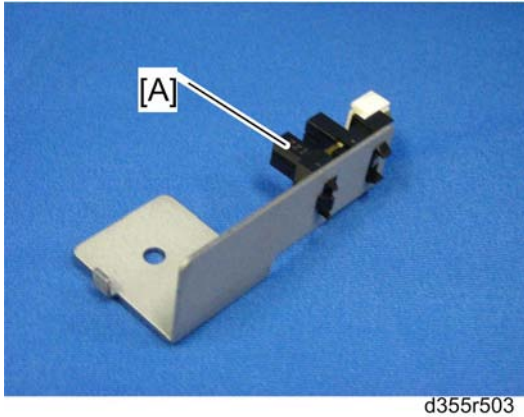
1. LCT exit sensor [A] ( x 1,  x 1)

LCT Paper Exit Roller Contact Sensor



1. Sensor bracket [A] ( x 1,  x 1)

1

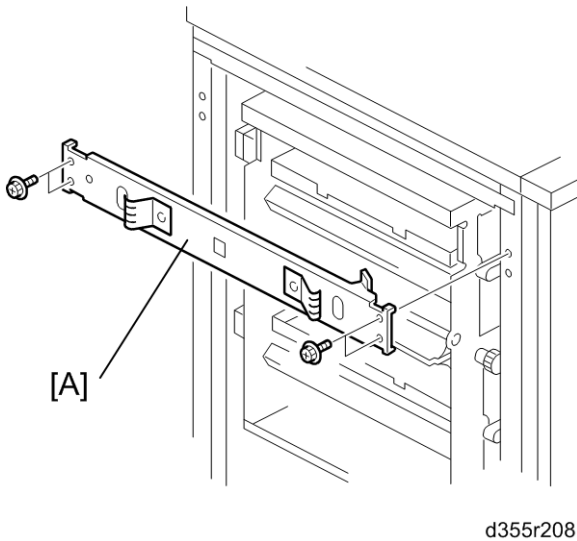



2. LCT paper exit roller contact sensor [A]: (hooks)

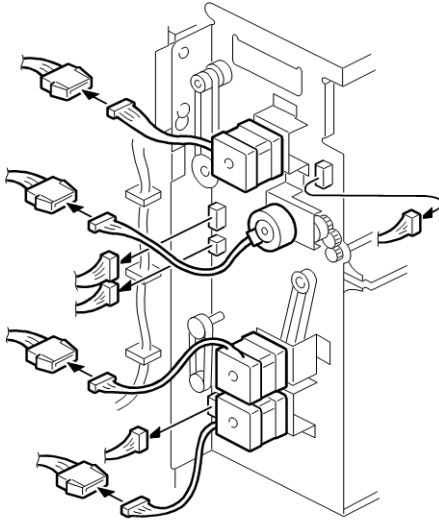
LCT Vertical Transport and Grip Sensors

↓ Note


- Remove the multi bypass tray first, if it is installed.

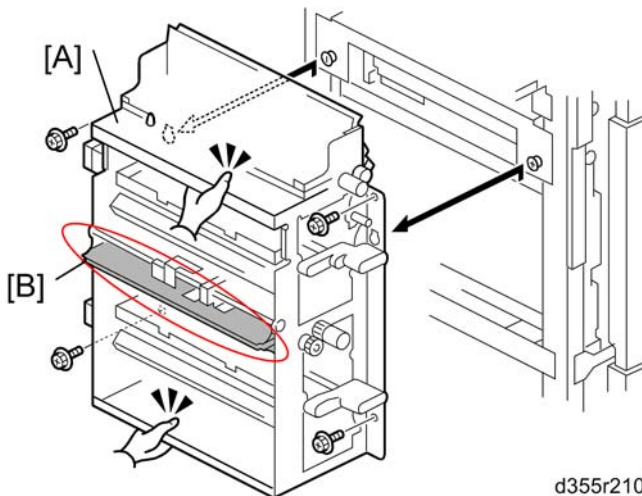


1. Remove:
[A] Stay ( x 4).



d355r209

2. Disconnect the harnesses ( x All).



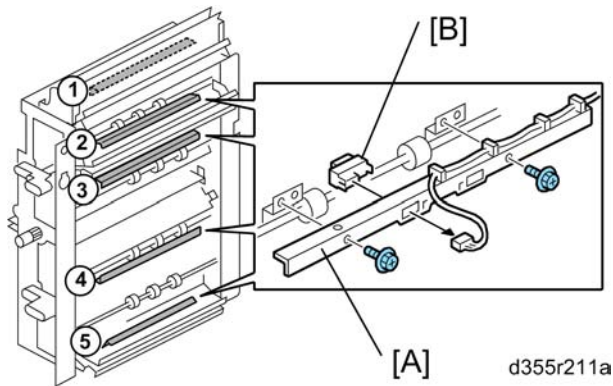
d355r210a

3. Remove:


[A] Vertical exit unit ( x 4)

★ Important

- Firmly grip the vertical exit unit as shown above, and then remove it from the LCT unit.
- Do not grip the guide [B], because it is easy to deform.



4. Remove:

[A] Sensor bracket ( x 2,  x 1)

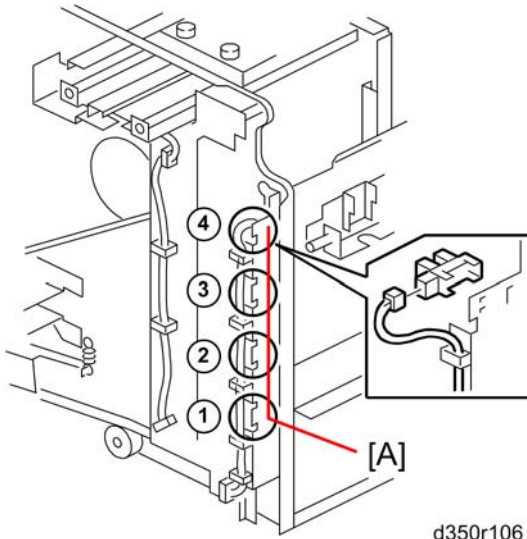
[B] LCT sensors (hooks)


- ① LCT Vertical transport sensor 3
- ② LCT grip sensor 1
- ③ LCT vertical transport sensor 1
- ④ LCT vertical transport sensor 2
- ⑤ LCT grip sensor 2

Paper Height, Paper Width Sensors

Paper Height Sensors

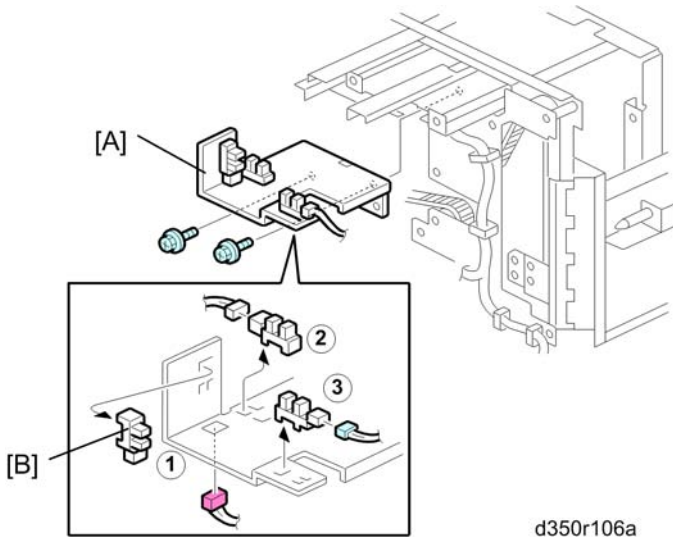
1. Tray 1 or tray 2 ( p.13)






2. Remove the rear left upper and lower covers.
3. Remove:
[A] Paper height sensors (x4) ( x1, pawls x 3 each)

Paper Width Sensors

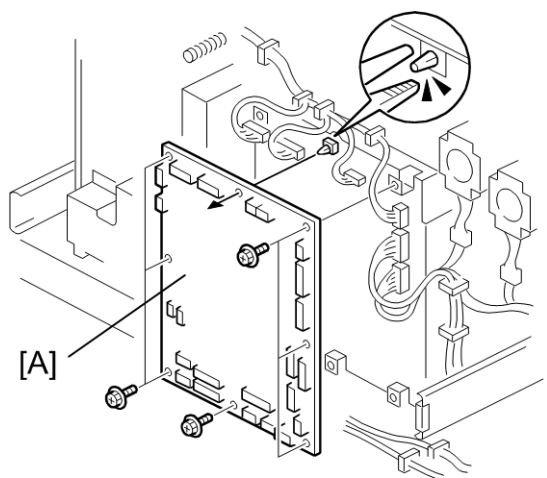
1. Tray 1 or tray 2 ( p.13)



2. Remove the rear left cover.
[A] Paper width sensor unit ( x 2,  x 3)
[B] Paper width sensors (x3) ( x 1 each, Pawls x 3 each)

Main Board

1. Rear lower cover (🔧 p.11)



d355r105h

2. Remove:

[A] Main board (🔧 x 7, Standoff x 1, 📦 x All)