LCIT RT5020
Machine Code: D355

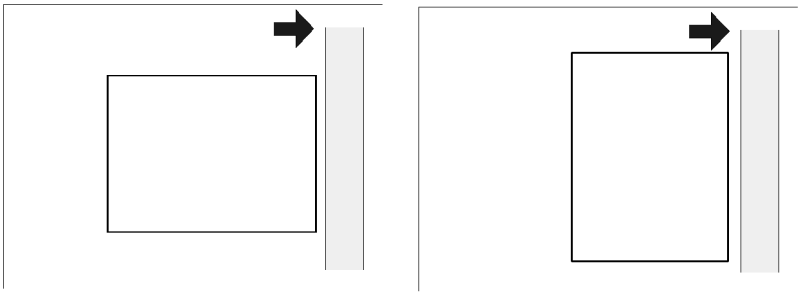
SERVICE MANUAL

May, 2008
Subject to change

Safety, Conventions, Trademarks

Conventions

Symbol	What it means
CT	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

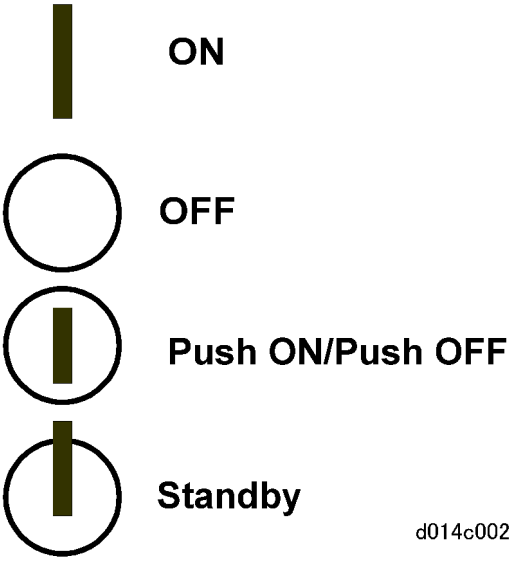
Always obey the following safety precautions when using this product.

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.



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 “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

⚠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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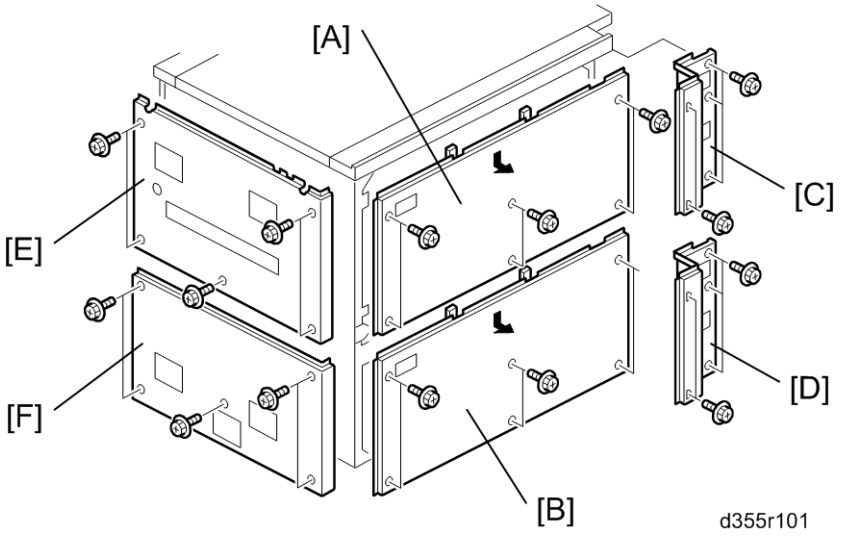
1. Replacement and Adjustment

Common Procedures

Covers



1. Remove:

   [A] Rear upper cover (x 6)

   [B] Rear lower cover (x 6)

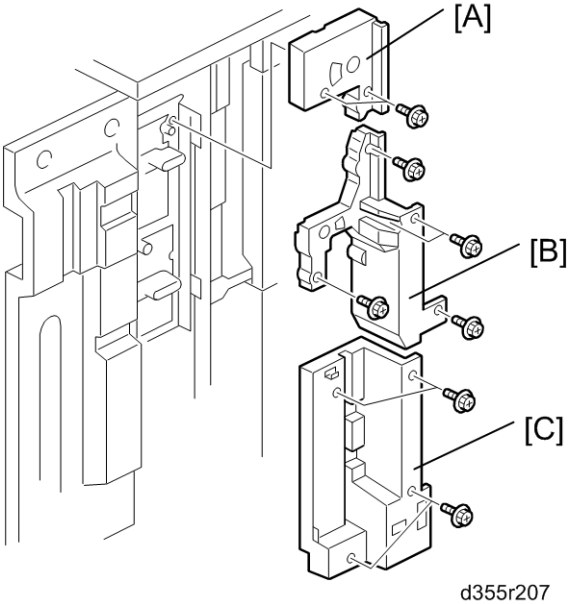
   [C] Left rear upper cover (x 5)

   [D] Left rear lower cover (x 5)

   [E] Right upper cover (x 5)

   [F] Right lower cover (x 5)

Inner Covers



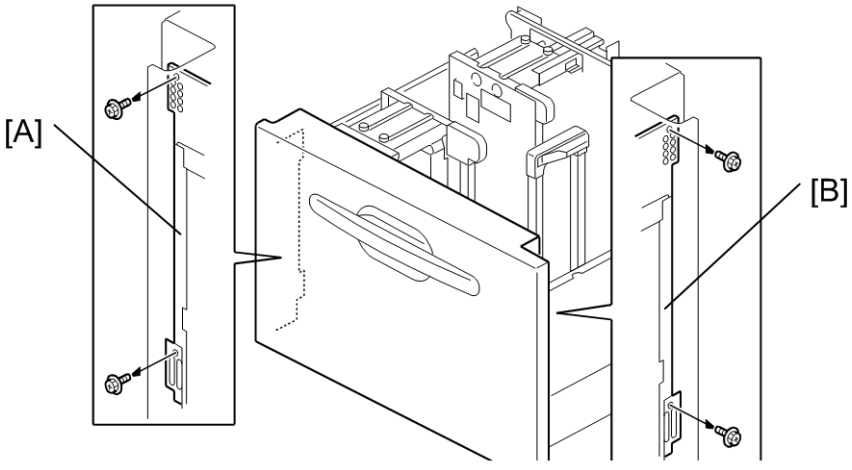
1. Remove the right upper and lower covers (☛ p.11).
2. Remove:

   [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.

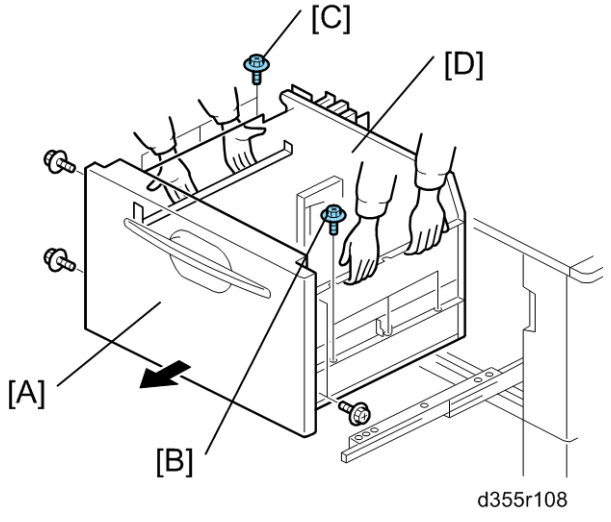
   Adjustment range: 0±2.0 mm, Step: 0.5 mm

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

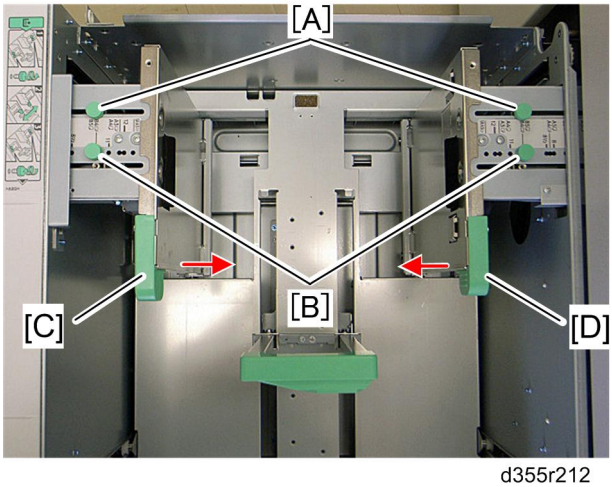
- You do not need to remove the screw for the stopper pin bracket at the back of the left rail.

5. Tray 1 or 2 [D]

Side Fence

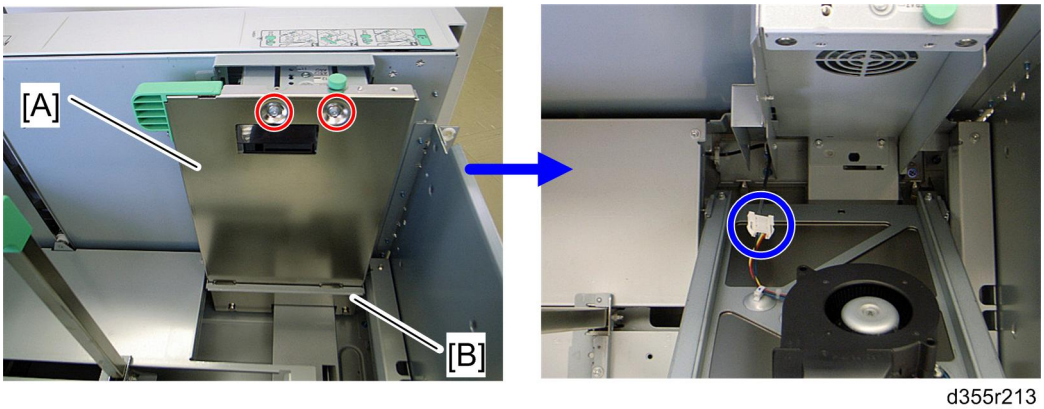
Front Side Fence

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.

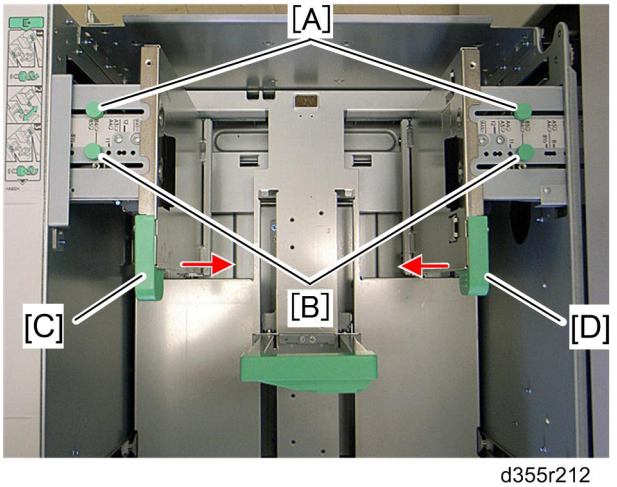


d355r213

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].

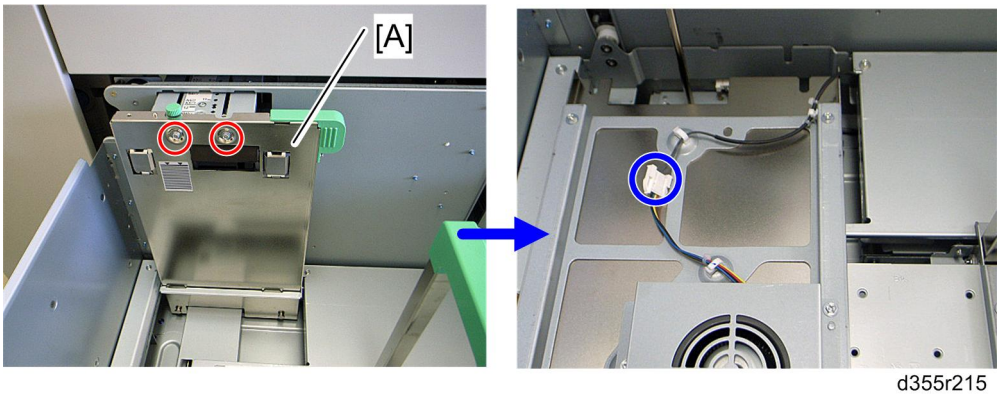
Rear Side Fence

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.



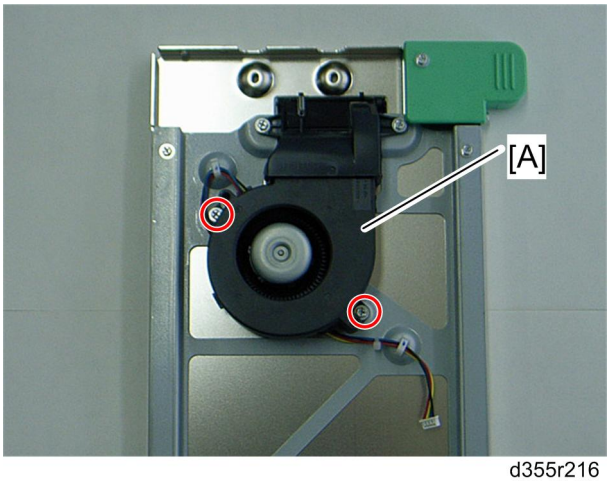
d355r215

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 (☛Front Side Fence)

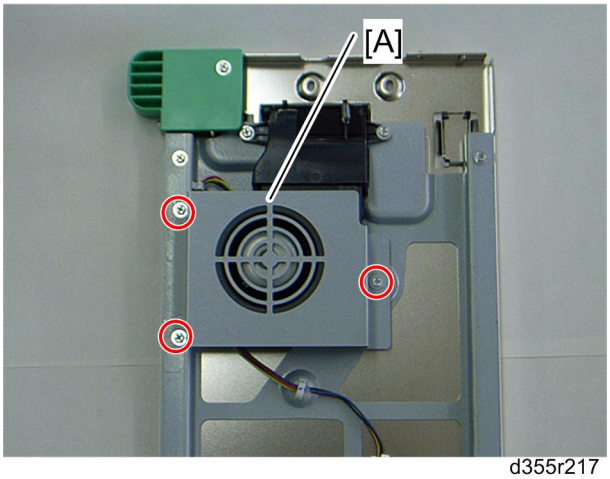


d355r216

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

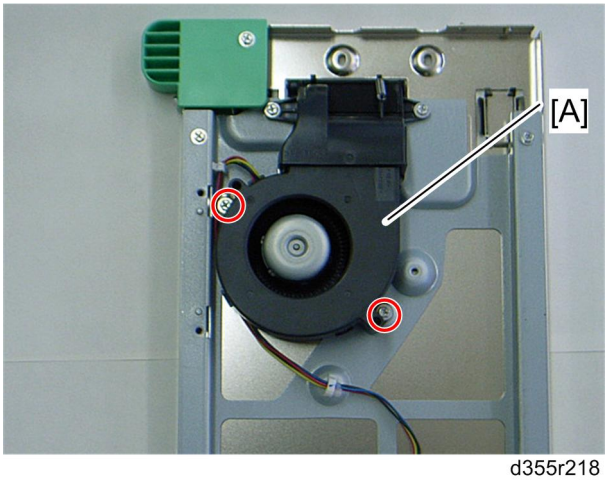
Rear Side Fence Blower

1. Remove the rear side fence (☛ Rear Side Fence).



d355r217

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

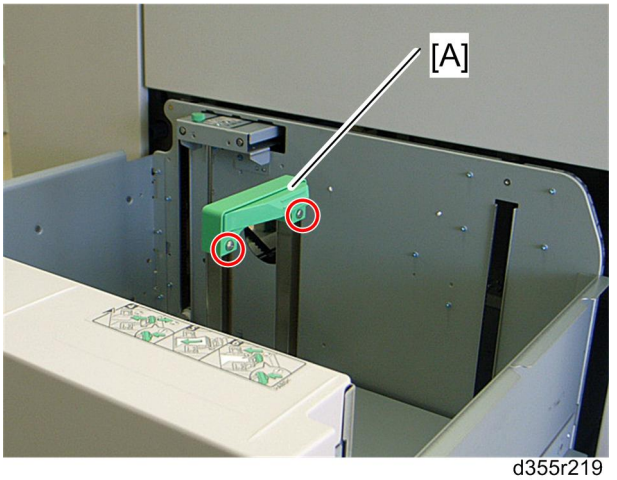


d355r218

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

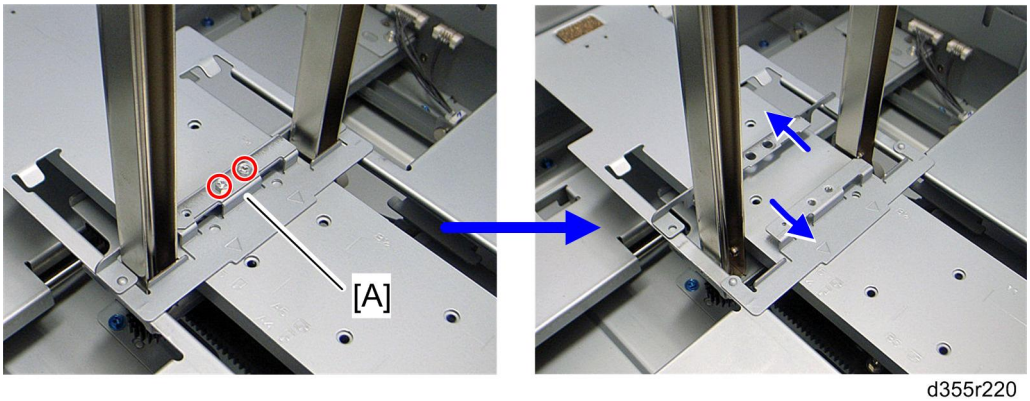
LCT Paper Length Sensor

1. Remove the front and rear side fences (☛ Side Fence Blower).



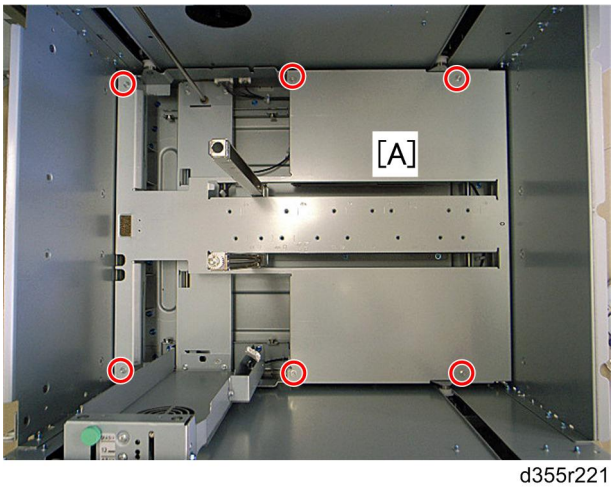
d355r219

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



d355r220

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



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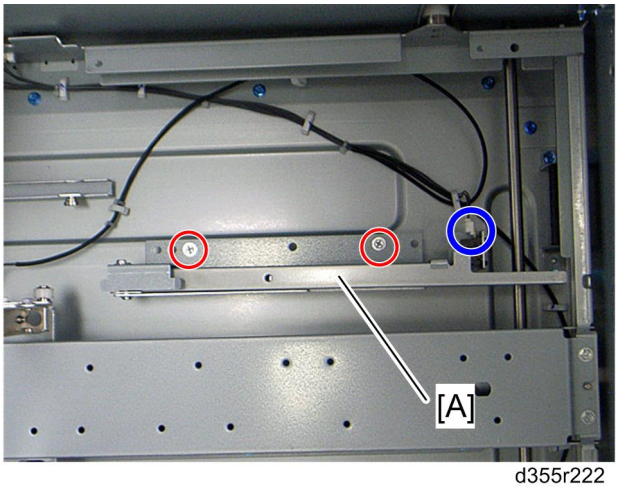
4. Remove the tray bottom plate [A].



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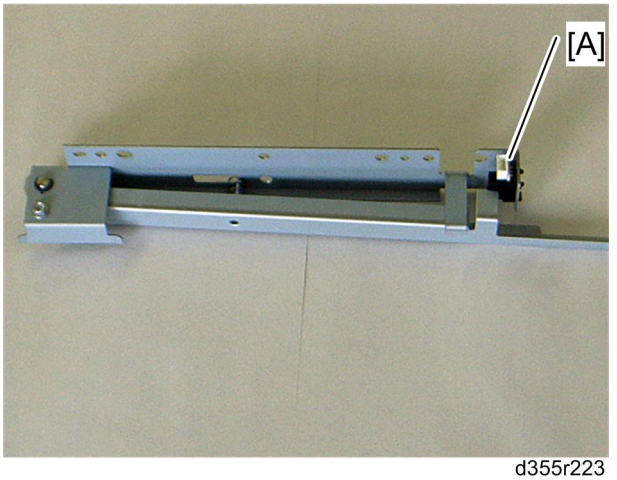
5. Remove the bracket [A] (x 2, x 1).



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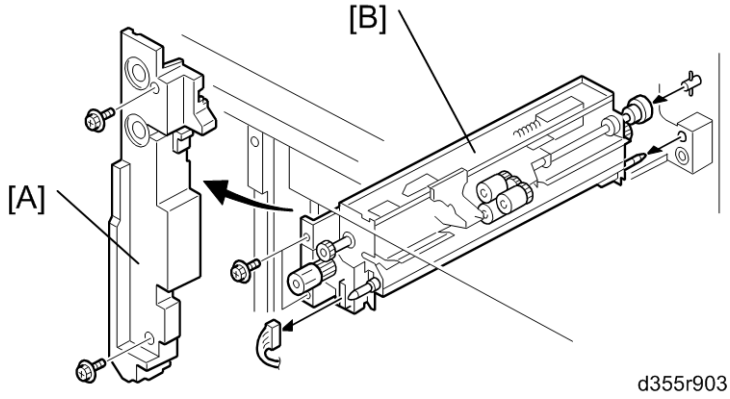
6. Remove the LCT paper length sensor [A] from the bracket.

Paper Feed

Paper Feed Unit

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

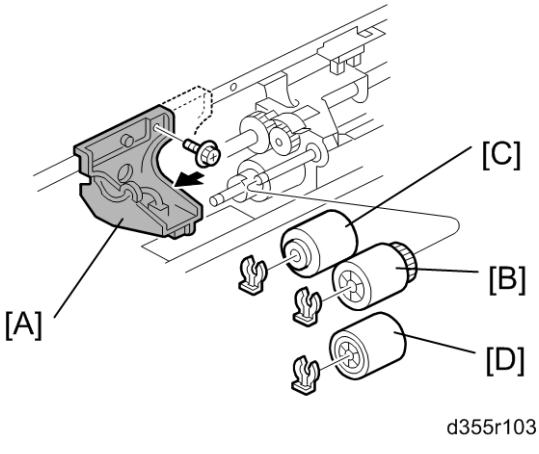


2. Remove:

   [A] Inner cover (x 2)

   [B] Paper feed unit (x 2, x 1)

Paper Feed Roller



1. Remove the paper feed unit (p.21)
2. Remove:

   [A] Bracket (x1)

[B] Pick-up roller (x 1).

[C] Feed roller (x 1).

[D] Separation roller (x 1).

1

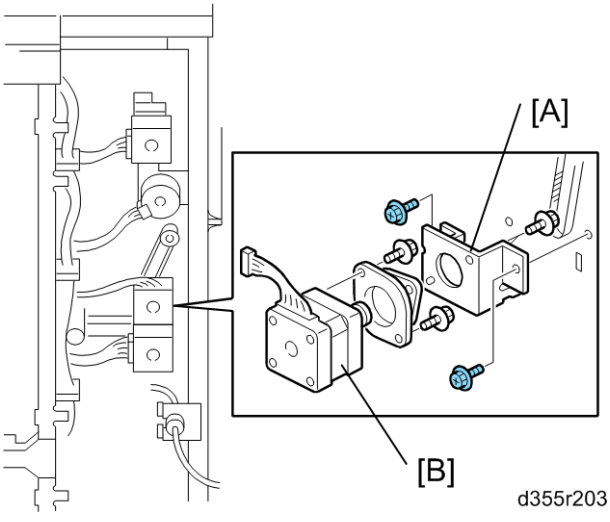
Note:

- 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.

Motors

LCT Exit Motor

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



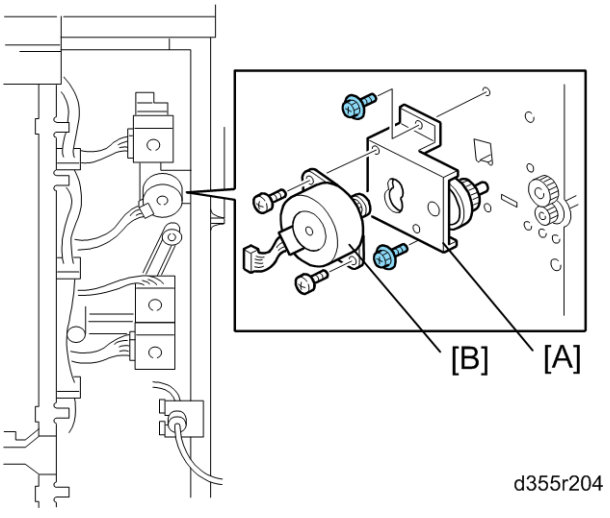
2. Remove:

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

   [B] LCT exit motor (x 4)

LCT Exit Roller Contact Motor

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



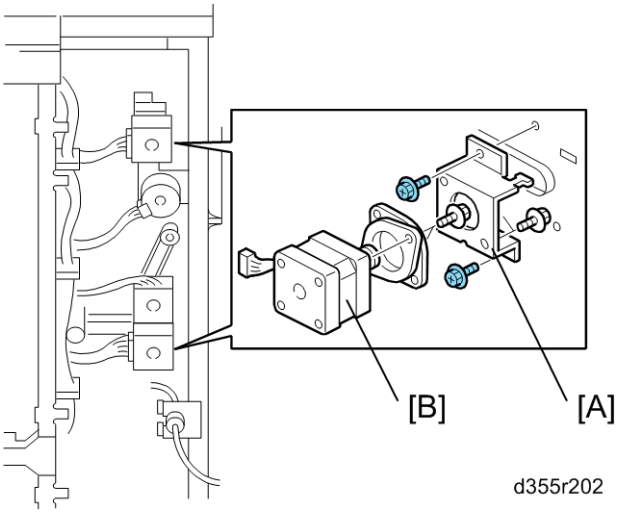
2. Remove:

   [A] Motor unit (x1, 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)



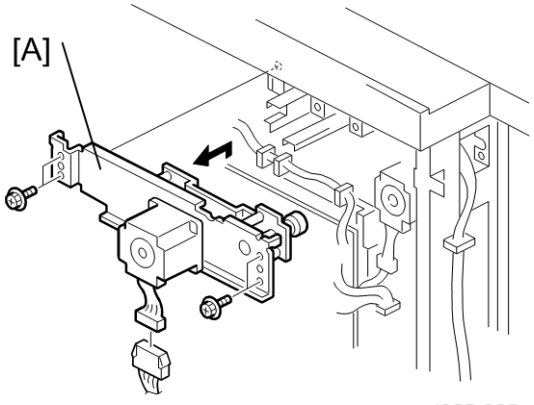
2. Remove:

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

   [B] LCT vertical transport motor (x 4)

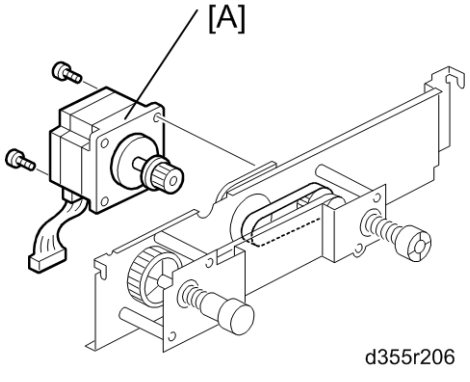
LCT Horizontal Relay Motor

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



2. Remove:

   [A] Motor unit [A] (x1, x 4).

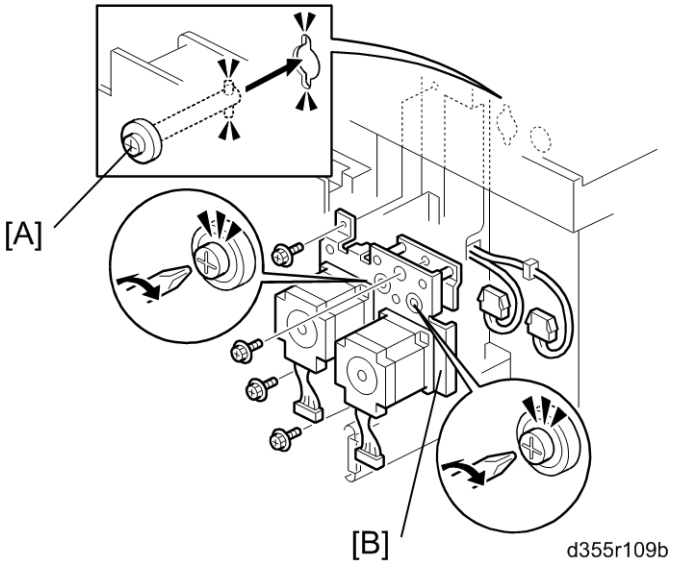


3. Remove:

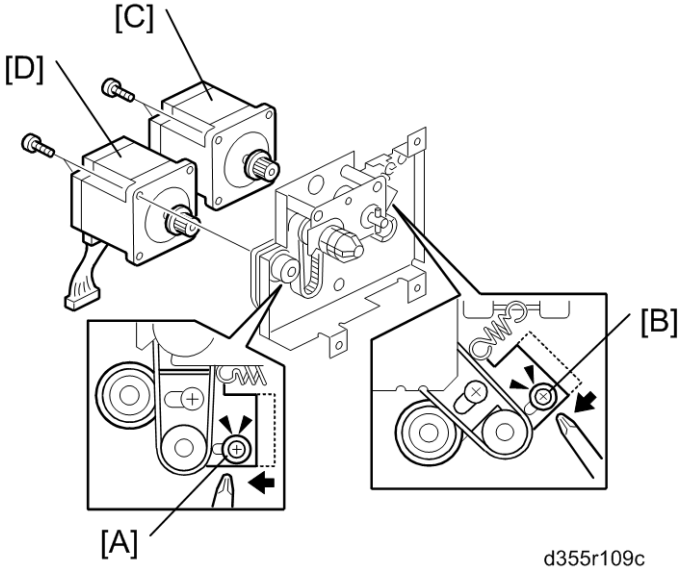
   [A] LCT horizontal relay motor [A] (x 2)

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, x2, x2)



4. Remove:

   [A] Spring x1. First, loosen the screw.

   [B] Spring x1. First, loosen the screw.

   [C] LCT paper feed motor (x2, Timing belt x1)

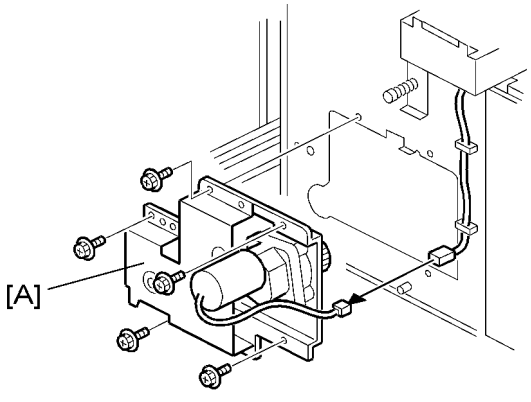
   [D] LCT grip motor (x2, Timing belt x1)

Reinstallation

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

LCT Lift Motor

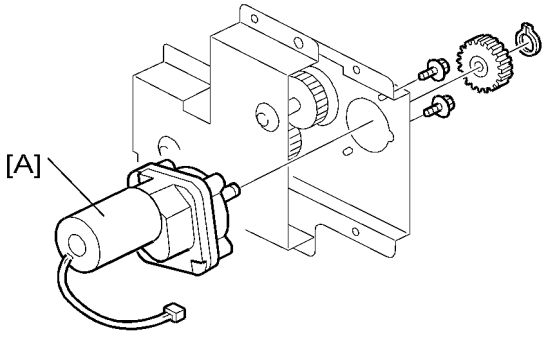
1. Remove the rear cover. (☛ p.11)



d350r109d

2. Remove:

   [A] Motor unit (x5, x1)



d350r109e

3. Remove:

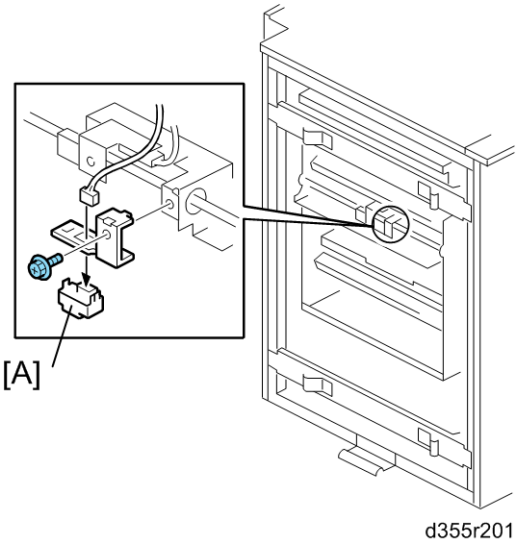
   [A] LCT lift motor (x 2, Clip x 1, Gear x 1)

Electrical Components

1

LCT Exit Sensor

1. Rear upper cover (☛ Covers)
2. Inner Covers (☛ Inner Covers)



1. Remove:

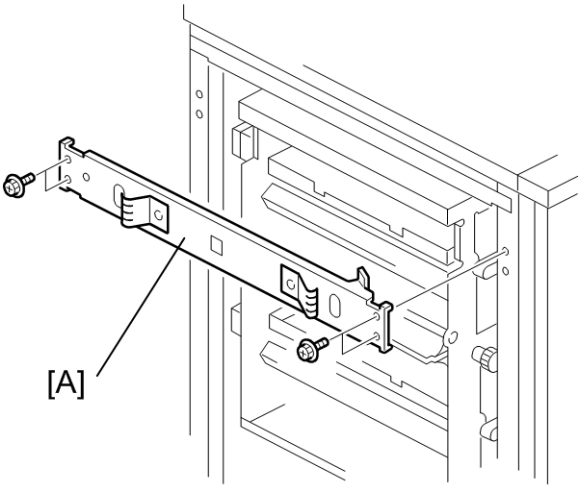
   [A] LCT exit sensor (x 1, x 1)

LCT Vertical Transport and Grip Sensors

Note

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

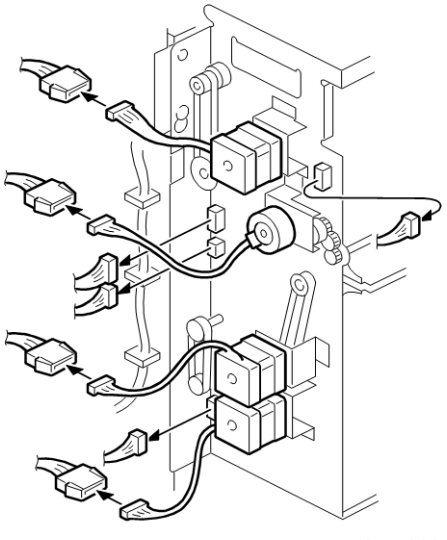
1. Rear upper cover (☛ Covers)
2. Inner Covers (☛ Inner Covers)



d355r208

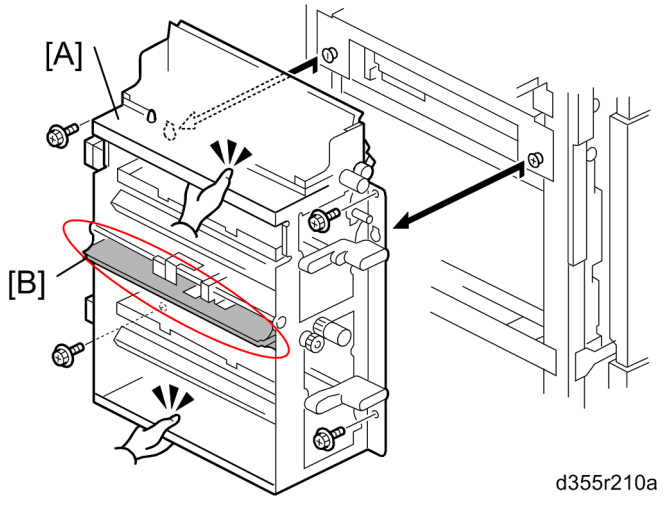
1. Remove:

   [A] Stay (x 4).



d355r209

2. Disconnect the harnesses (x All).

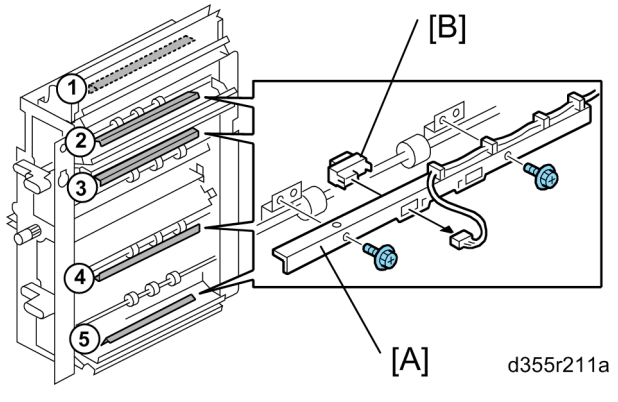


3. Remove:

   [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)

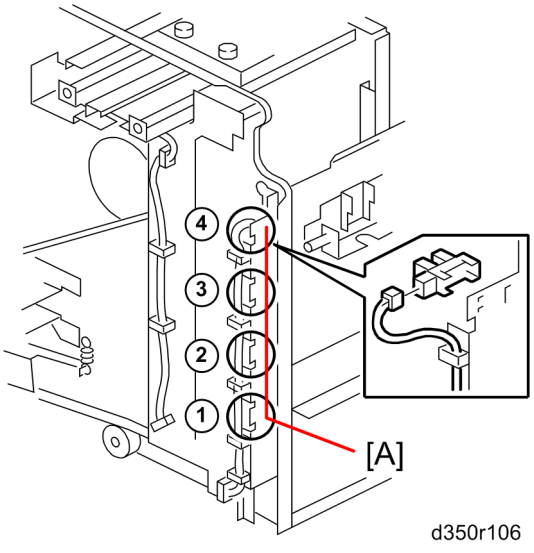
   [B] LCT sensors (hooks)

   - 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)

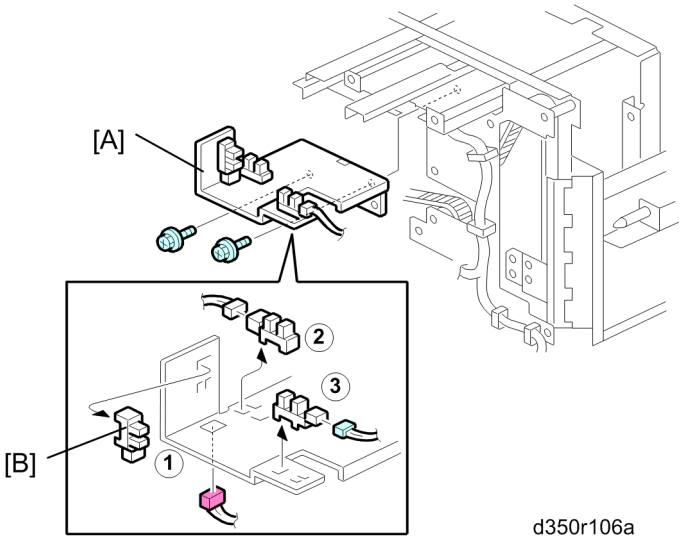


2. Remove the rear left upper and lower covers.
3. Remove:

   [A] Paper height sensors (x4) (☞ x1, pawls x 3 each)

Paper Width Sensors

1. Tray 1 or tray 2 (☛ p.13)



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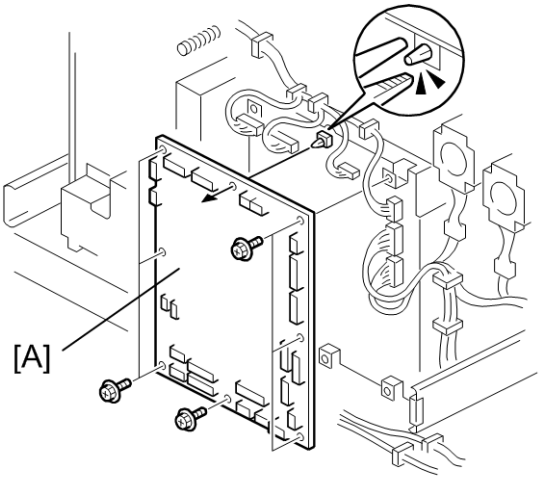
2. Remove the rear left cover.

[A] Paper width sensor unit (x2, x3)

[B] Paper width sensors (x3) (x1 each, Pawls x 3 each)

Main Board



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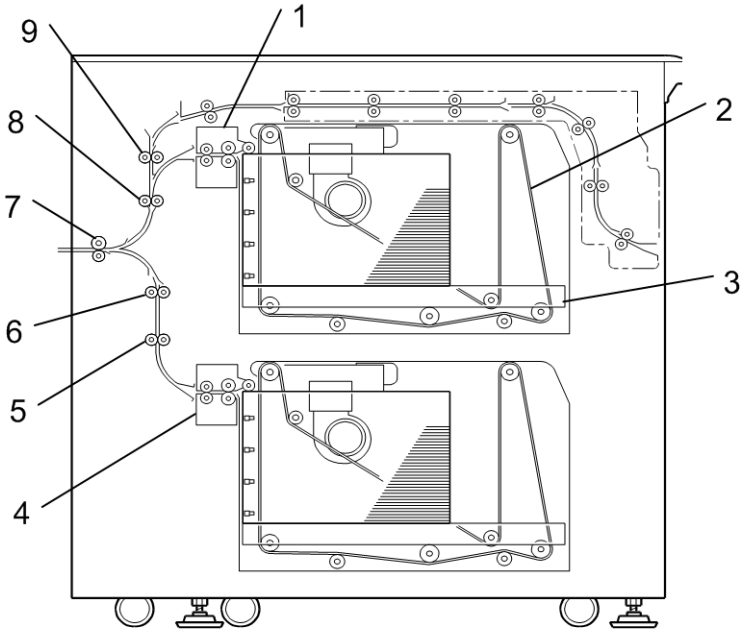
1. Remove:
   - Rear lower cover (p.11)

[A] Main board (x 7, Standoff x1, x All)

2. Details

Mechanical Layout

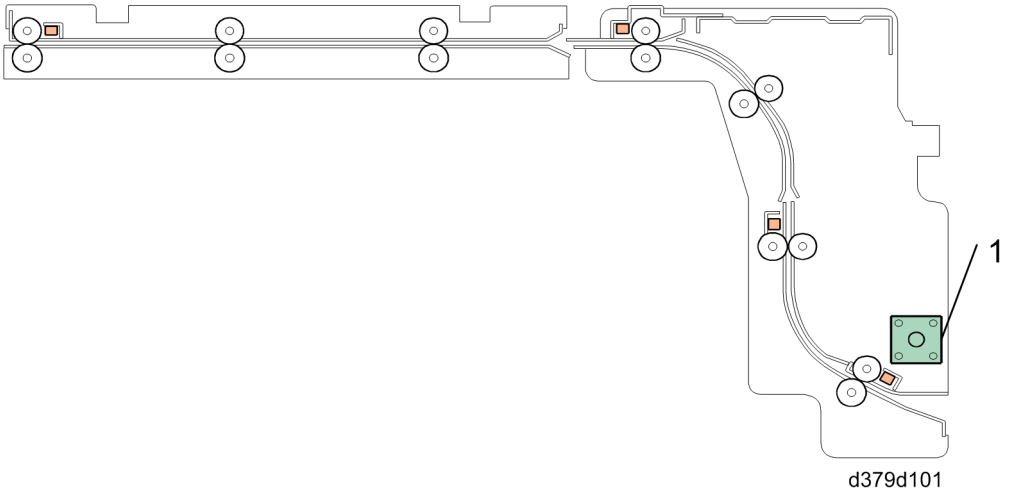
Overview



d355v101

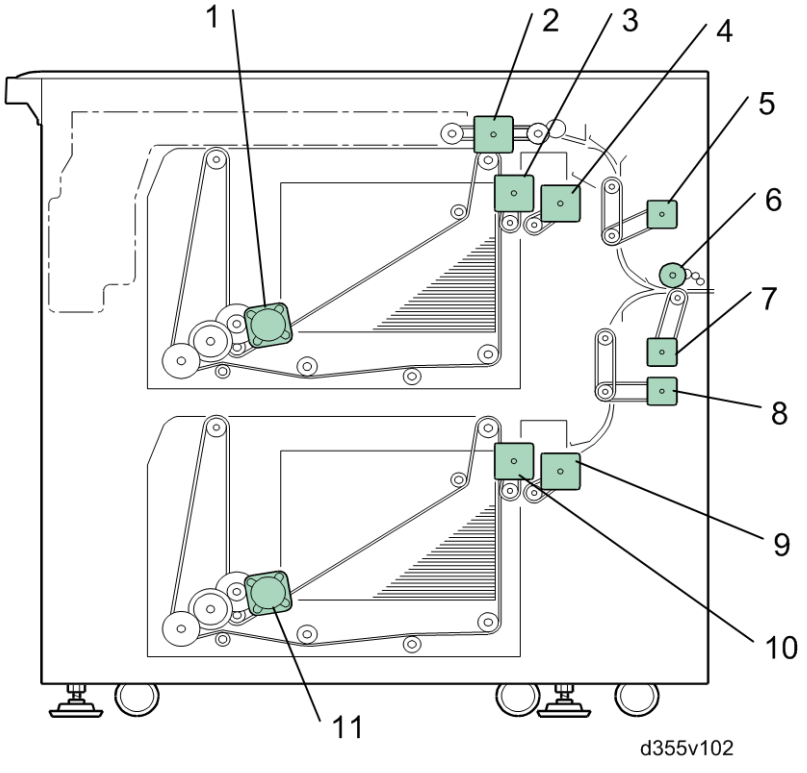
1.	LCT Paper Feed Unit 1
2.	Tray Drive Belt
3.	Tray Bottom Plate
4.	LCT Paper Feed Unit 2
5.	LCT Vertical Transport Roller 4
6.	LCT Vertical Transport Roller 3
7.	LCT Exit Roller
8.	LCT Vertical Transport Roller 2
9.	LCT Vertical Transport Roller 1

Bridge Unit



1.	Bridge Transport Mortor

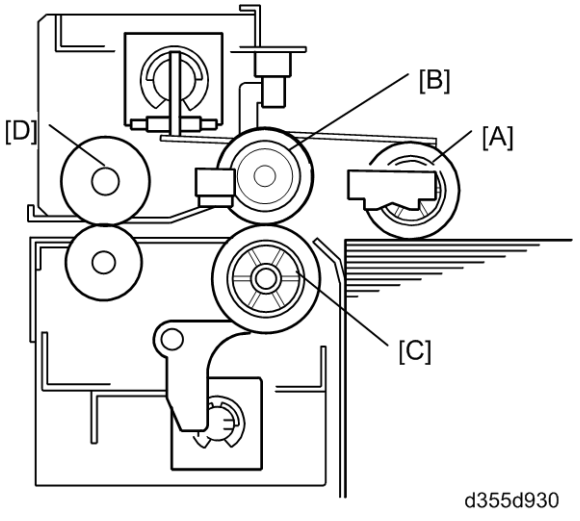
Drive Layout



1.	LCT Lift Motor 1
2.	LCT Horizontal Relay Motor
3.	LCT Paper Feed Motor 1
4.	LCT Grip Motor 1
5.	LCT Vertical Relay Motor 1
6.	LCT Exit Roller Contact Motor
7.	LCT Exit Motor
8.	LCT Vertical Relay Motor 2
9.	LCT Grip Motor 2
10.	LCT Paper Feed Motor 2
11.	LCT Lift Motor 2

Paper Handling

Paper Feed Rollers



This LCT has two paper trays. Capacity: 4,000 (2,000 x 2) sheets.

Each tray contains four rollers:

[A] Pick-up roller

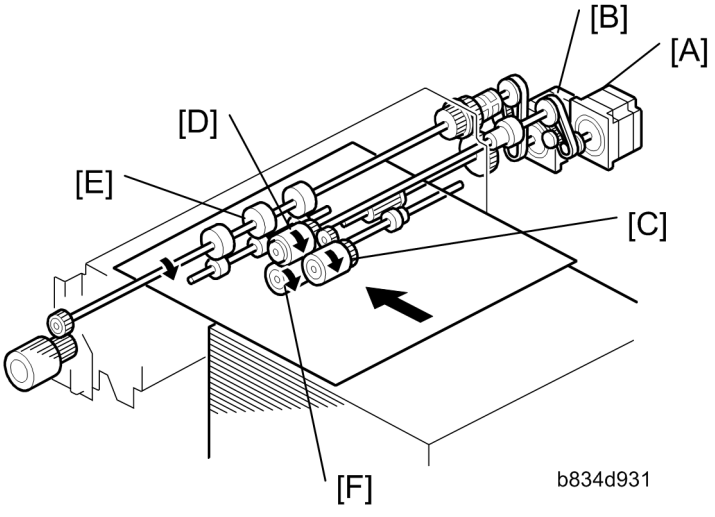
[B] Paper feed roller

[C] Separation roller

[D] Grip roller

The pick-up roller, paper feed roller, and separation roller use the standard FRR paper feed system.

Paper Feed Motors



Two stepper motors control paper feed drive:

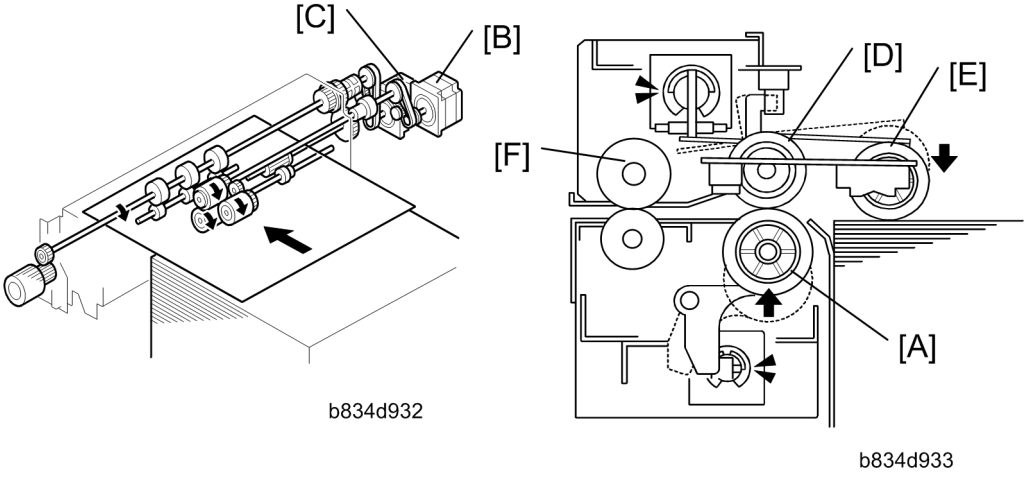
[A]: LCT paper feed motor

[B]: LCT grip motor

The paper feed motor [A] drives the pick-up roller [C] and the paper feed roller [D].

The grip motor [B] drives the grip roller [E] that feeds the paper out of the tray, and the separation roller [F].

Paper Separation



When the paper feed station is selected for a job, the paper feed motor [B] and grip motor [C] turn on.

- When the feed motor [B] turns on, it drives the feed roller [D]. It also drives the pick-up roller [E] because the pick-up roller is linked to the feed roller by an idle gear.
- When the paper feed station is set in the mainframe, the separation lift lever rises. As a result, the separation roller [A] contacts the paper feed roller [D] and turns with the feed roller, unless more than one sheet of paper is fed. The two trays of the LCT unit use the standard FRR mechanism.
- When the paper feed motor turns on after the pick-up solenoid has turned on, the pick-up roller [E] lowers until it contacts the top sheet of the paper stack and then sends it to the paper feed and separation rollers.

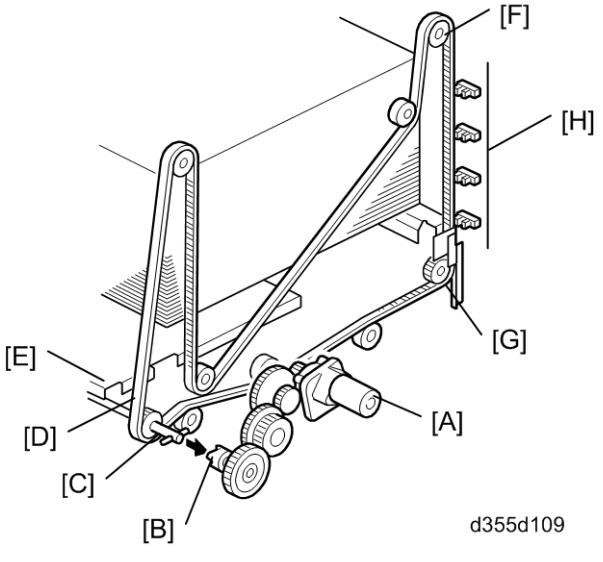
If the air assist fan is NOT used:

- When the paper feed sensor detects the leading edge of the paper, the paper feed motor switches off, the pick-up roller lifts, and the grip rollers [F] feed the paper out of the tray.

If the air assist fan is used:

- When the grip sensor detects the leading edge of the paper, the paper feed motor switches off, the pick-up roller lifts, and the grip rollers [F] feed the paper out of the tray.

Paper Detection/Lift



Detection

When the tray set in the machine, the tray is detected by the drawer connector on the back side of the tray.

Lift

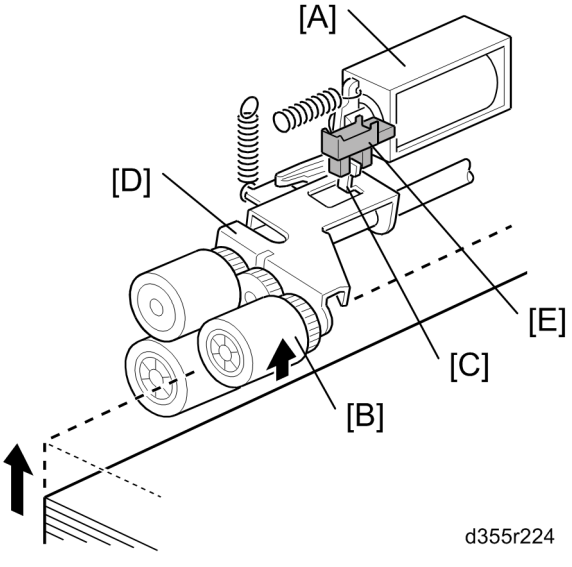
When the machine detects that the paper tray is set in the machine:

- The tray lift motor [A] rotates forward
- Coupling gear [B] on the tray lift motor engages pin [C] of the lift drive shaft.
- The tray drive belts [D], connected to the tray bottom plate [E], are driven by the tray lift motor via the lift drive shaft and tray lift pulleys [F].
- When the lift motor rotates forward, the tray bottom plate [E] rises. The tray rises until the top of the paper stack pushes up the pick-up roller and the lift sensor in the feed unit is de-activated.
- When the actuator [G] on the rear end of the bottom plate activates the paper height sensors [H], the remaining paper capacity is detected.

When the tray is pulled out:

- Coupling gear [B] separates from pin [C] and the tray bottom plate goes down.
- A damper slows the descent of the bottom plate.

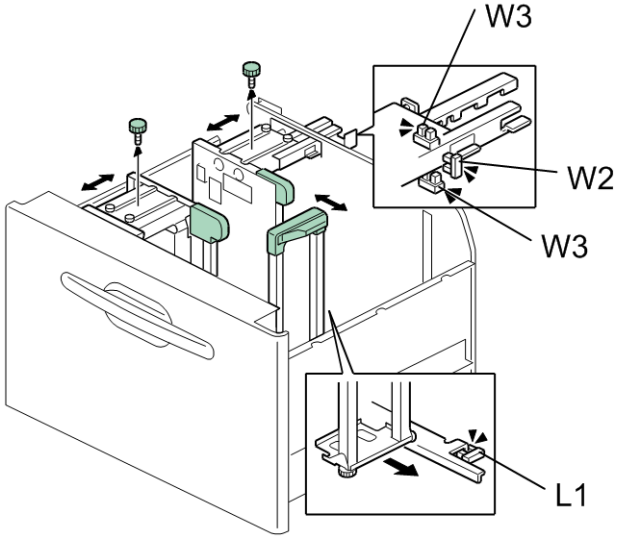
Lift Sensor



When the tray lift motor turns on, the pick-up solenoid [A] activates to lower the pick-up roller [B]. When the top sheet of paper reaches the proper paper feed level, the paper pushes up the pick-up roller and the actuator [C] on the pick-up roller supporter [D] de-activates the lift sensor [E] to stop the tray lift motor.

After several paper feeds, the paper level gradually lowers, then the lift sensor is activated and the tray lift motor turns on again until the lift sensor is de-activated again.

Paper Size Detection



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W3	Paper Width Sensor 3
W2	Paper Width Sensor 2
W1	Paper Width Sensor 1
L1	Paper Length Sensor

Each tray has three paper width sensors and one paper length sensor. The illustration above shows how four sensors are arranged in the tray.

This table below describes how the three width sensors and one length sensor are used to determine the paper size in the paper tray.

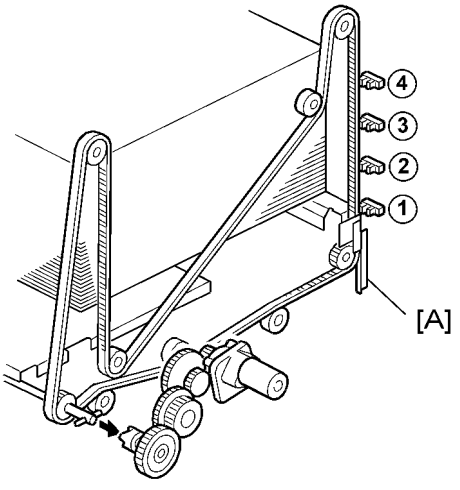
Paper Size		Width Sensors			Length Sensor	Area	
		W1	W2	W3	L1	NA	EU
Large Size	12"×18"	L	L	L	H	YES	YES
	13"×19"					NO	NO
	320×450 mm					NO	NO
A3 SEF	297×420 mm	L	L	H	H	YES	YES

Paper Size		Width Sensors			Length Sensor	Area	
		W1	W2	W3	L1	NA	EU
A4 LEF	297×210 mm	L	L	H	L	YES	YES
DLT SEF	11"×17"	L	H	L	H	YES	YES
LT LEF	11"×$8_{1/2}$"	L	H	L	L	YES	YES
B4 SEF	257×364 mm	L	H	H	H	YES	YES
B5 LEF	257×182 mm	L	H	H	L	YES	YES
A4 SEF	210×297 mm	H	L	L	H	NO	YES
LT SEF	$8_{1/2}$"×11"	H	L	L	H	YES	NO
A5 LEF	210×148 mm	H	L	L	L	NO	YES
HLT LEF	$8_{1/2}$"×$5_{1/2}$"	H	L	L	L	YES	NO
B5 SEF	182×257 mm	H	L	H	H	NO	NO
F SEF	8"×13"	H	L	H	H	YES	YES
A5 SEF	148×210 mm	H	H	L	L	YES	YES
HLT SEF	$5_{1/2}$"×$8_{1/2}$"	H	H	H	L	YES	YES

Table Key

YES:	Detected automatically
NO:	Not detected automatically. Requires size setting change with the "Tray Paper Setting" key on the copier operation panel to detect the desired paper size.
H:	Sensor OFF
L:	Sensor ON

Remaining Paper Detection



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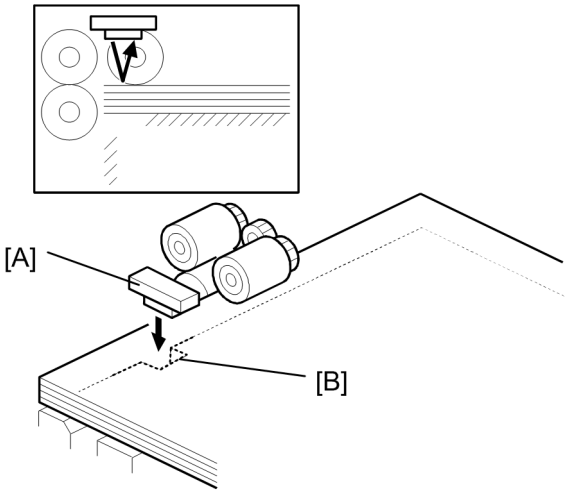
[A]	Paper Height Sensor Actuator
①	Paper Height Sensor 1
②	Paper Height Sensor 2
③	Paper Height Sensor 3
④	Paper Height Sensor 4 (Near End)

Each tray has four paper height sensors. The amount of paper remaining in the tray is detected by the four paper height photo-interrupter sensors on the left rail as the bottom plate rises. Five states, determined by the position of the actuator [A] are possible.

1. With the actuator [A] below paper height sensor ①, no sensor is actuated and the display indicates 100%.
2. When the actuator passes paper height sensor ①, the display indicates 75% of the paper supply remaining.
3. When the actuator passes paper height sensor ②, the display indicates 50% of the paper supply remaining.
4. When the actuator passes paper height sensor ③, the display indicates 25% of the paper supply remaining.
5. When the actuator enters the gap of the near end sensor ④, and then passes paper height sensor ③, the machine signals near end.
6. Finally, when the last sheet feeds, the paper end sensor (a photosensor) signals that the tray is empty.

Paper End Detection



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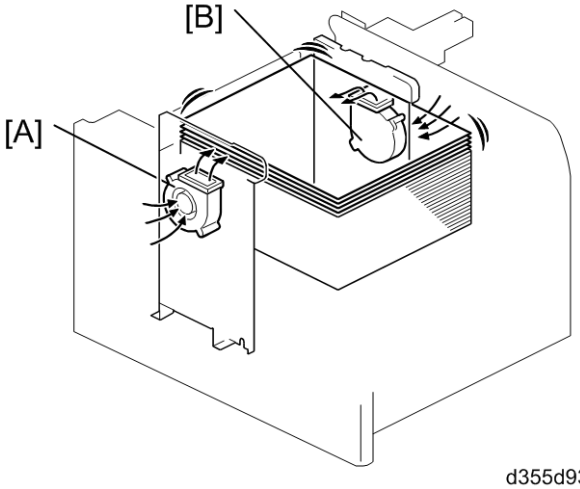
The paper end sensor [A] (a photosensor) detects the top sheet of the paper in the tray by monitoring the reflected light. After the last sheet in the tray leaves the tray, the paper end sensor does not receive the reflected light due to cutout [B]. This causes the tray lift motor to reverse and lower the tray bottom plate until the bottom plate reaches the lower limit.

Air-assisted Feed Mechanism



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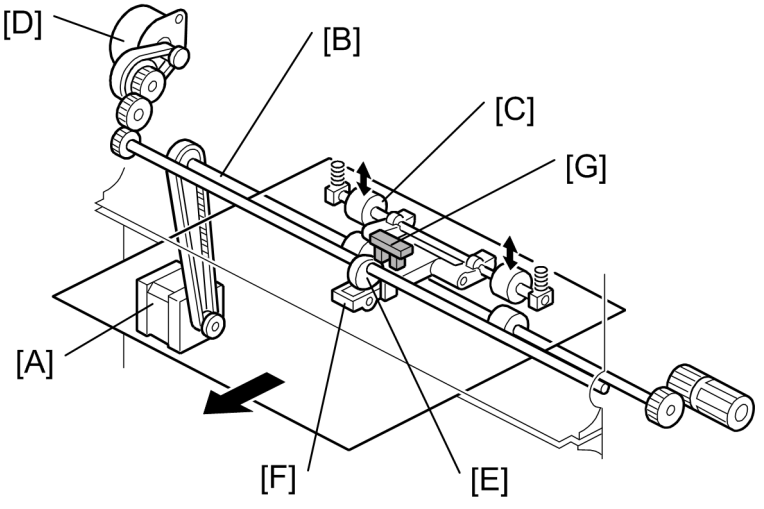
Two air assist fans [A] and [B] comprise the air assist mechanism.

The air flow created by the opposing fans floats the first sheet off the top of the stack. This assists in the separation of the top sheet from the sheet below and prevents double-feeding.

This only works when feeding the following paper types: Thick 2, Thick 3, Special 2, coated paper 1, coated paper 2 and coated paper 3.

Paper Exit



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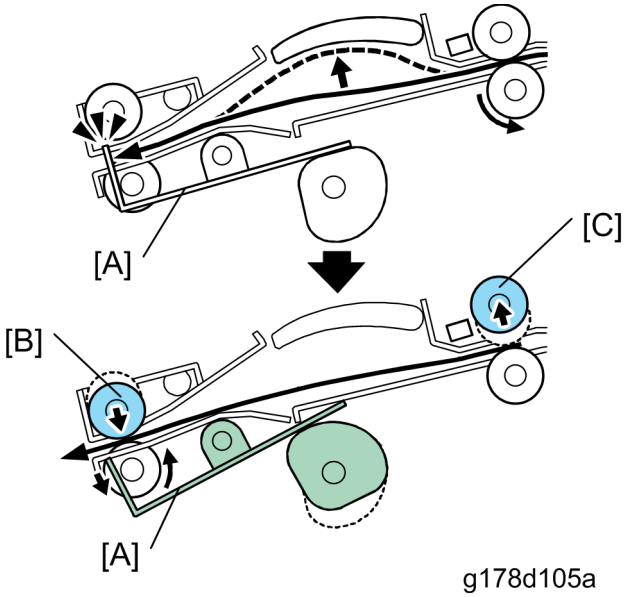
The LCT exit motor [A] normally drives the LCT exit roller [B] to feed paper to the LCT entrance roller in the main machine. However, if LT SEF paper or longer is selected for printing, the LCT exit idle roller [C] keeps away from the LCT exit roller, corresponding with the registration timing roller in the main machine for the skew adjustment in the main machine. For details, see the following section "LCT Exit Roller Movement".

The LCT exit roller contact motor drives the contact cam [E] to move the roller contact lever [F]. As a result, the LCT exit idle roller moves between the contact position and non-contact position. The LCT exit contact sensor [G] detects whether the LCT exit idle roller is in contact with the LCT exit roller.

LCT Exit Roller Movement



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In the registration unit of the main machine, the skew adjustment is done by the registration gate [A], shift idle roller [B] and registration timing roller [C]. After correcting paper skew, the registration gate lowers.

When paper reaches the registration gate, if LT SEF paper or longer is selected for printing, the trailing edge of paper is still between the LCT exit rollers. To do the skew adjustment correctly, the paper must be released and free from the LCT exit rollers as well as the registration timing roller.

The LCT exit idle roller returns to the contact position after the paper has passed the registration gate.

MEMO

MEMO

MEMO