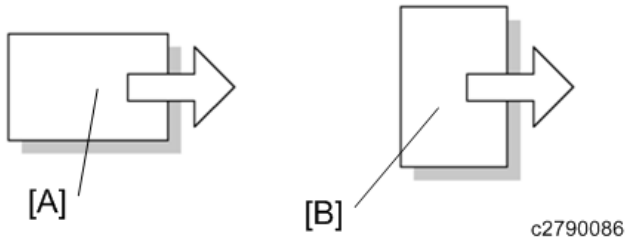
LCIT RT5110
Machine Code:D3ET
Field Service Manual
Ver 1.0

Latest Release: Feb, 2018
Initial Release: Feb, 2018

Symbols, Abbreviations

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

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



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

Table of Contents

1. Replacement and Adjustment

Removing Trays

⚠CAUTION

- The 1000-sheet tray weighs 27 kg (60 lb) empty. The 2000-sheet tray weighs 20 kg (44 lb) empty.
- To prevent damage to the tray and personal injury, never attempt to lift a tray alone or without attaching the carrying handles, especially if a tray is loaded with paper.
- Two people on each side of the tray should lift the carrying handles together to lift and move the tray.
- Never remove the tray if the LCT has not been docked to the copier. Removing the tray while the LCT is standing alone can unbalance the LCT and cause it to fall over.

Note

- Only one set of carrying handles is attached to the side of Tray 4. Follow the procedure below to attach and use these handles to move Tray 3, 4, or 5.

1. Pull the tray out of the LCT until it stops.
2. Remove the screws from the right rail (x3).
3. Remove the screws from the left rail (x3).

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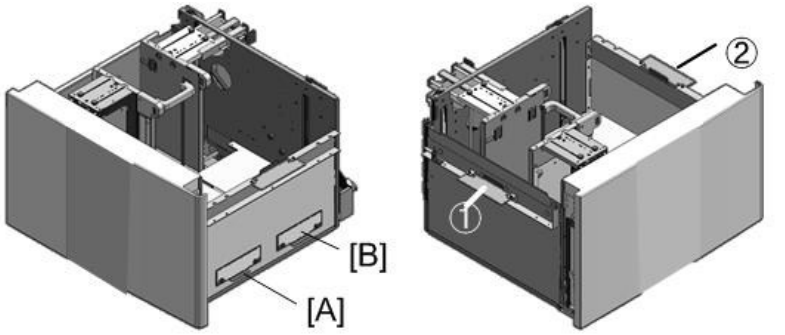
Note

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

4. Remove carrying handles [A] and [B] from the right side of the tray (x 2 ea.)
5. Use the same screws to attach the carrying handles at ① and②.

6. With one person on each side of the tray, lift it carefully and remove it from the rails.



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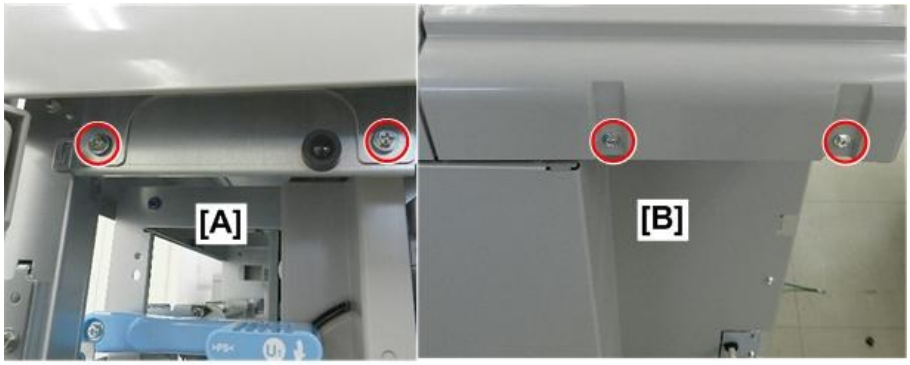
Doors and Covers

Top Covers

Note

- The top covers must be removed in order from left to right.

1. Open the front door.
2. Disconnect the front [A] and rear [B] (x4).



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3. Remove the top left cover.

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4. Remove the left flat cover (x2).

d7320044

5. Remove the center flat cover (x2).

d7320045

6. Remove the right flat cover (x2).

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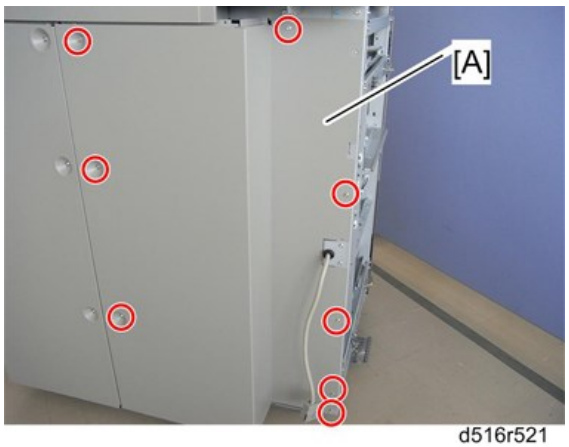
Left Rear Cover

1. Remove the left rear cover [A] (x8).



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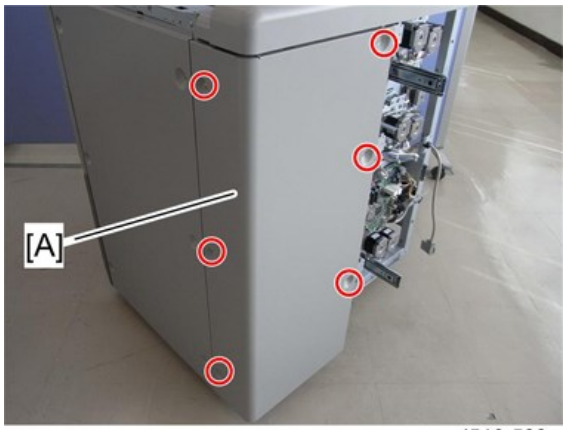
Right Rear Cover

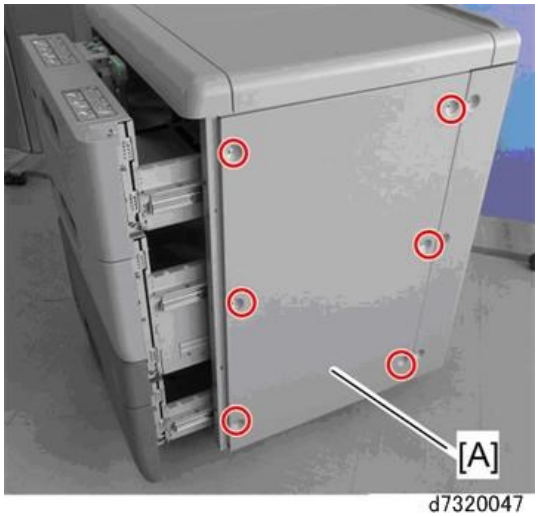
1. Remove the left rear cover. (Left Rear Cover)

2. Remove the right rear cover [A] (x6).



Right Cover

1. Pull all the LCT trays out a short distance.
2. Remove the right cover [A] (x6)



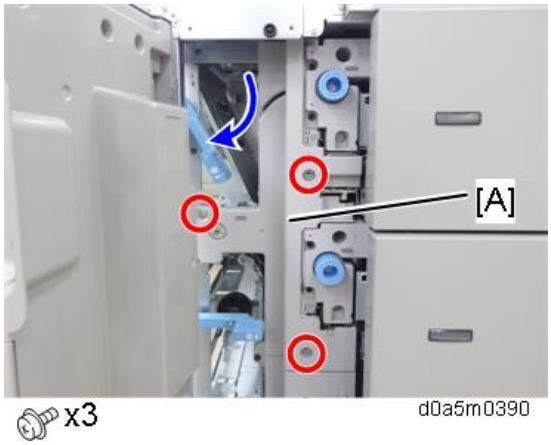
Inner Covers

Inner Upper Cover

1. Open the front door.

2. Remove the knob [A].

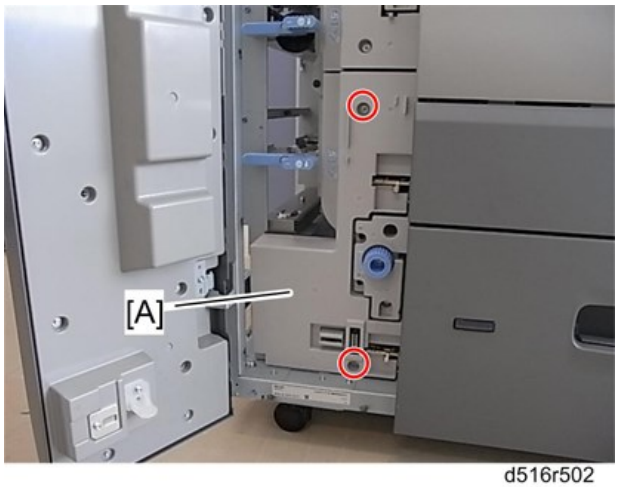
3. Lower the lever, and then remove the inner upper cover [A].



Inner Lower Cover

1. Open the front door.

2. Remove the inner lower cover [A] (x2)



Note

- Be careful not to interfere with the hook.

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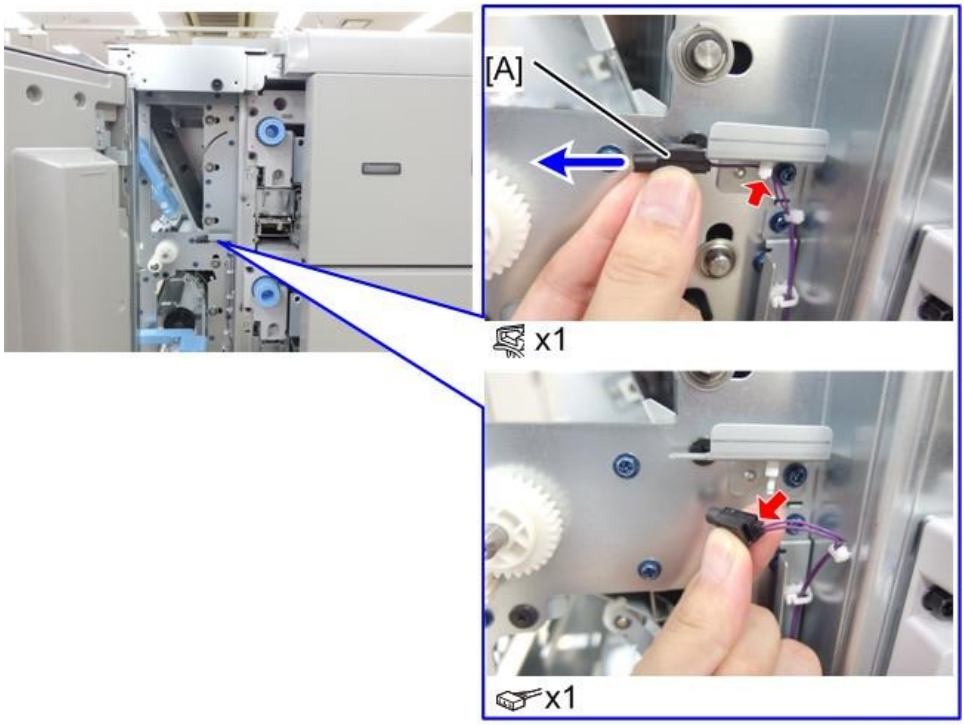
Jam LED

Jam LED (LCIT Exit)

1. Open the front door.
2. Remove the inner upper cover. (Inner Upper Cover)
3. Remove the jam LED (LCIT exit) [A].



Jam LED (1st to 3rd Tray Unit)

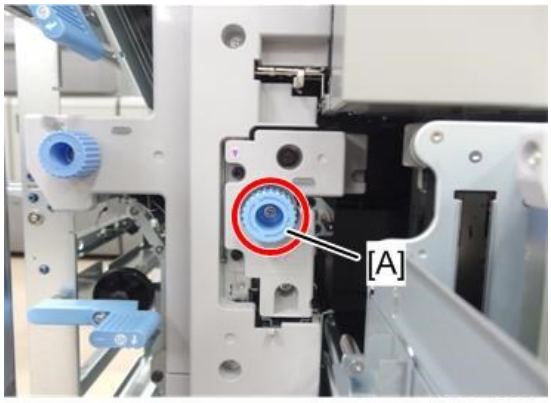
The 2nd tray LED is taken in the photos in the following replacement procedure as an example, but you can replace other jam detection LEDs in the same way.

1. Open the front door.
2. Remove the inner cover.

Note

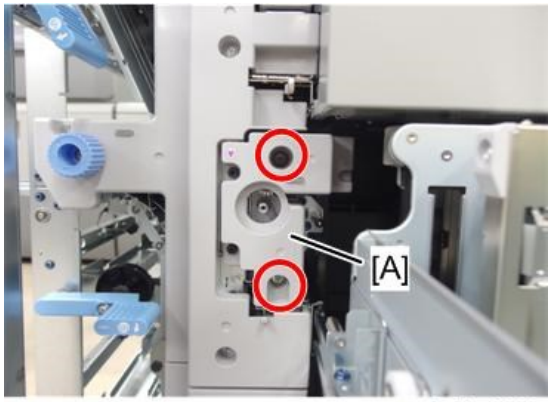
- For the 1st, and 2nd paper feed unit, remove the inner upper cover (Inner Upper Cover).
- For the 3rd paper feed unit, remove the inner lower cover (Inner Lower Cover).

3. Remove the knob [A] of the paper feed unit.



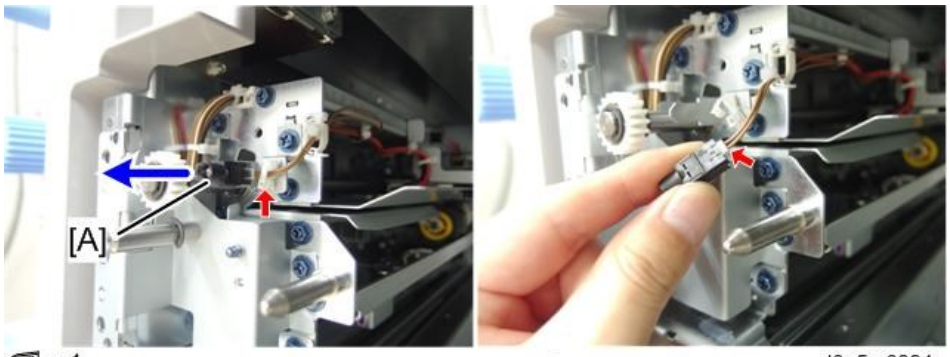
x1 d0a5m0392

4. Remove the cover [A] of the paper feed unit.



x2 d0a5m0393

5. Remove the jam LED [A].

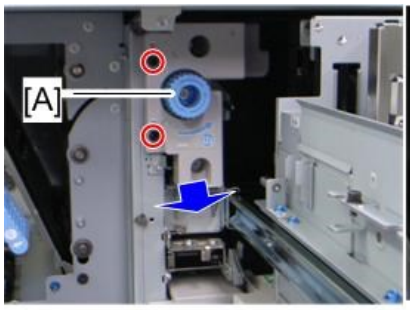


x1 x1 d0a5m0394

Paper Feed

Paper Feed Unit

1. Pull out the 1st, 2nd or 3rd tray.
2. Remove the Inner upper or lower cover. (Inner Covers
   - For the paper feed unit in the top tray or middle tray, remove the inner upper cover.
   - For the paper feed unit in the bottom tray, remove the inner lower cover.
3. Pull the paper feed unit [A] (x 2).
4. Remove the stopper bracket [B] (x 1).



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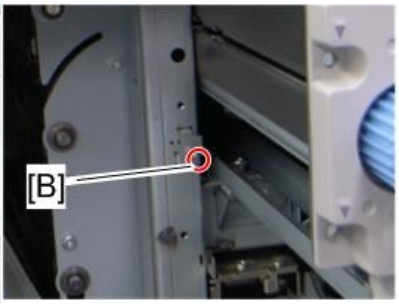

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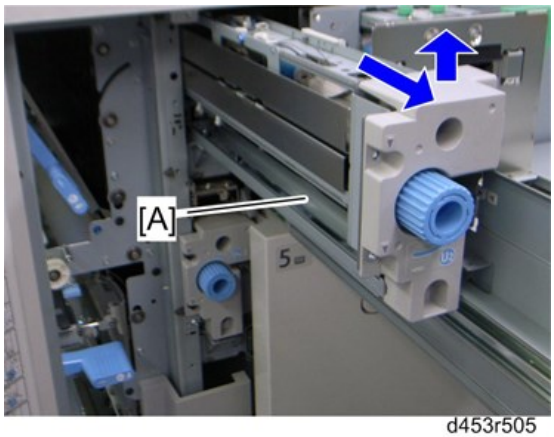
5. Pull the paper feed unit [A] out fully, and then lift it.



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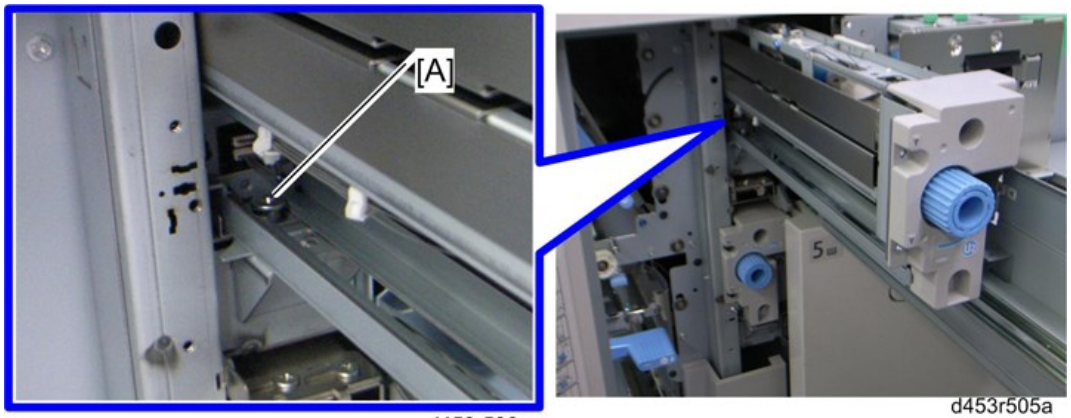
When reinstalling the paper feed unit

When reinstalling the paper feed unit, align the cutout in the slide rail with the stud screw, and then install the paper feed unit.



Paper Feed, Separation and Pickup Rollers

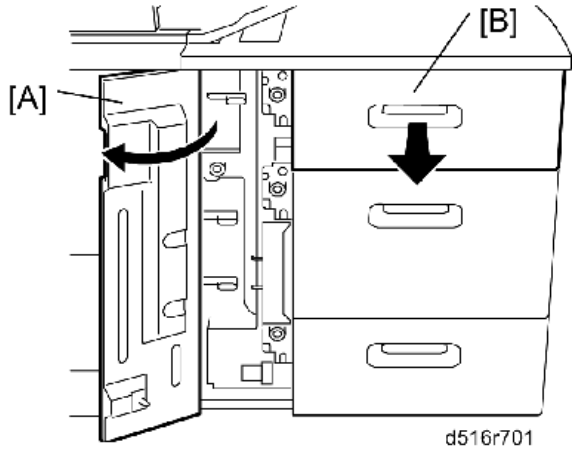
1st Tray (Top Tray)

⚠CAUTION

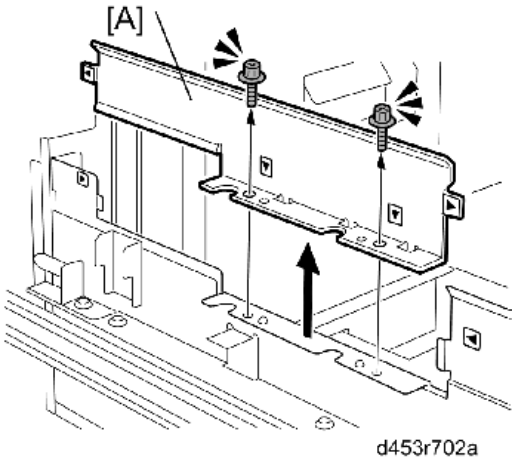
- Before doing this procedure, turn off the main machine and disconnect it from its power source.

1. Open the front door [A].

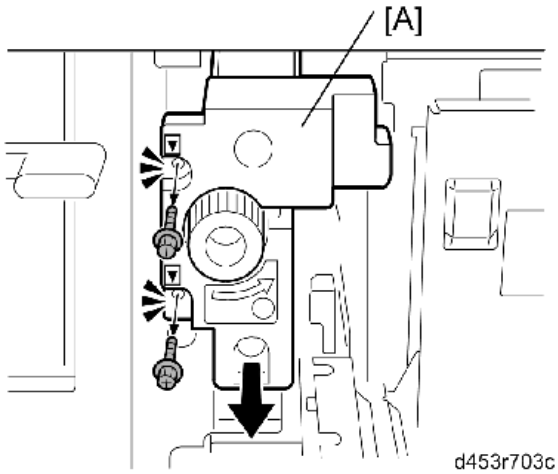
2. Pull out the top tray [B] until it stops.



3. Remove the side plate [A] (x 2).



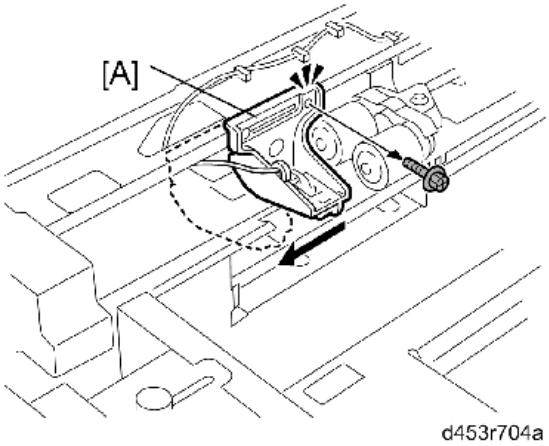
4. Pull the paper feed unit [A].



5. Slide the sensor bracket [A] to the front (x 1).

Important

- Note the original position of this bracket. It must be re-installed at its original position.

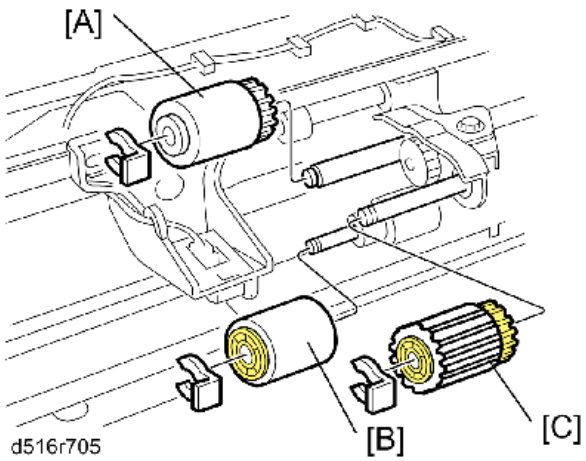


6. Remove:

[A]: Paper feed roller (x 1)

[B]: Separation roller (x 1)

[C]: Pickup roller (x 1)



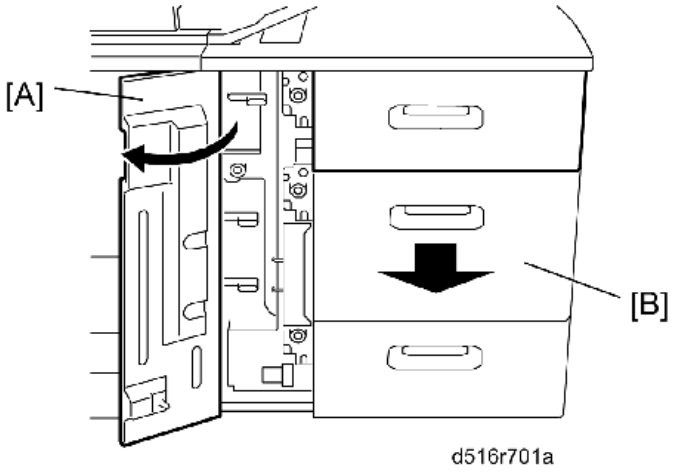
2nd Tray (Middle Tray)

⚠CAUTION

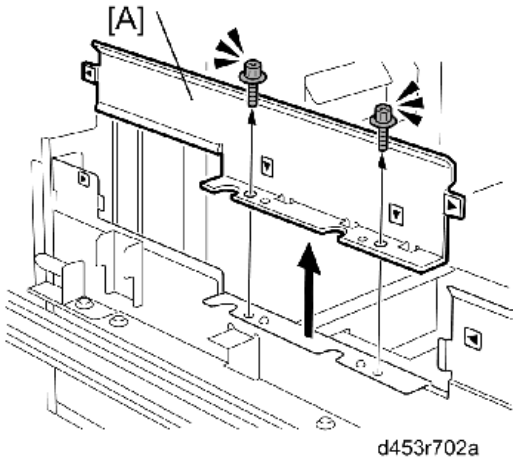
- Before doing this procedure, turn off the main machine and disconnect it from its power source.

1. Open the front door [A].

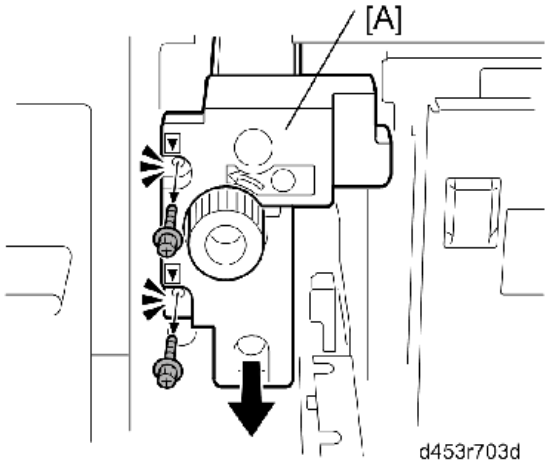
2. Pull out the middle tray [B].



3. Remove the side plate [A] (x 2).



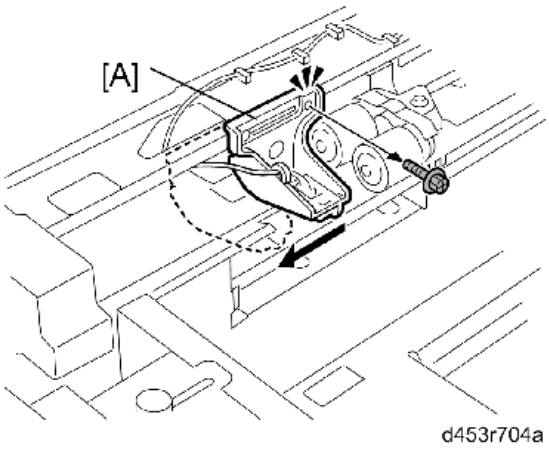
4. Pull the paper feed unit [A] (x 2).



5. Slide the sensor bracket [A] to the front (x 1).

Important

- Note the original position of this bracket. It must be re-installed at its original position.

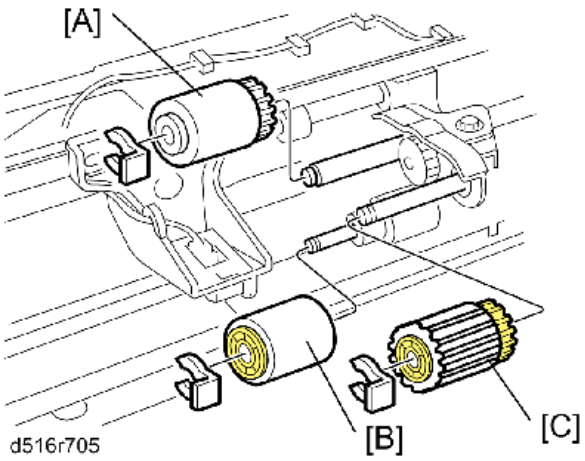


6. Remove:

[A]: Paper feed roller (x 1)

[B]: Separation roller (x 1)

[C]: Pickup roller (x 1)



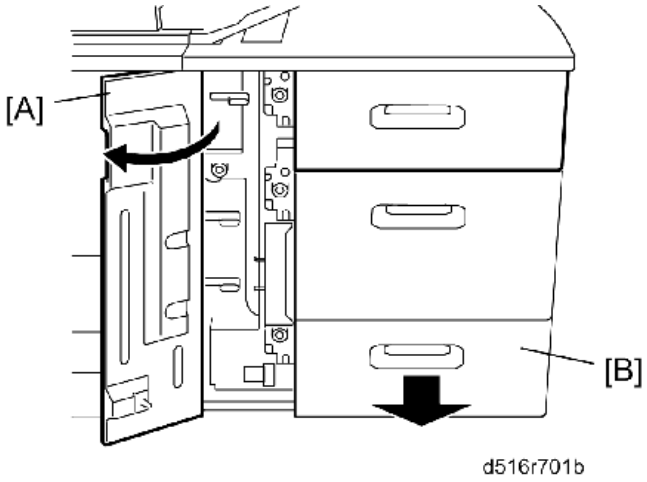
3rd Tray (Bottom Tray)

⚠CAUTION

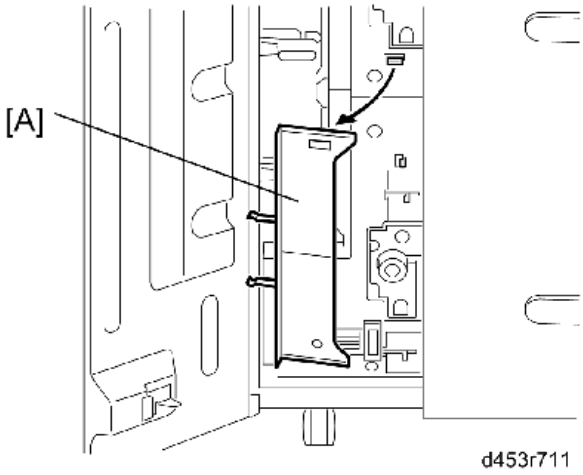
- Before doing this procedure, turn off the main machine and disconnect it from its power source.

1. Open the front door [A].

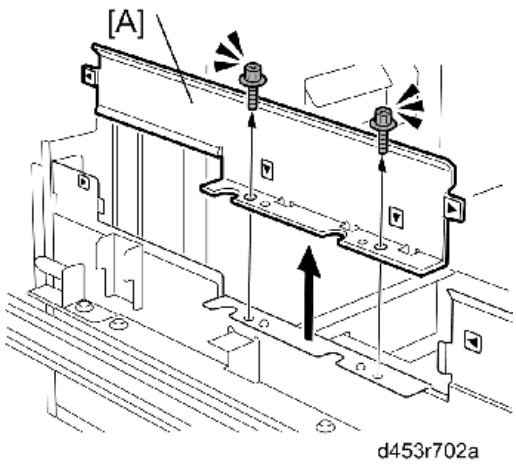
2. Pull out the bottom tray [B].



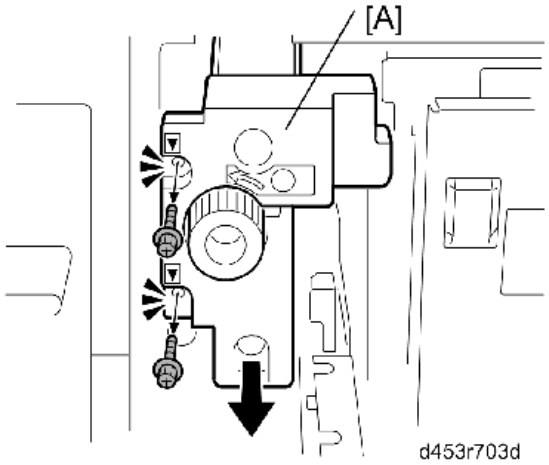
3. Take out the paper end fence [A] if it is stored here.



4. Remove the side plate [A] (x 2).



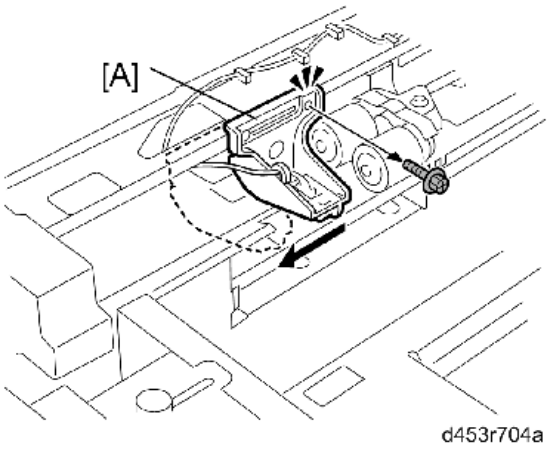
5. Pull the paper feed unit [A] (x 2).



6. Slide the sensor bracket [A] to the front (x 1).

Important

- Note the original position of this bracket. It must be re-installed at its original position.

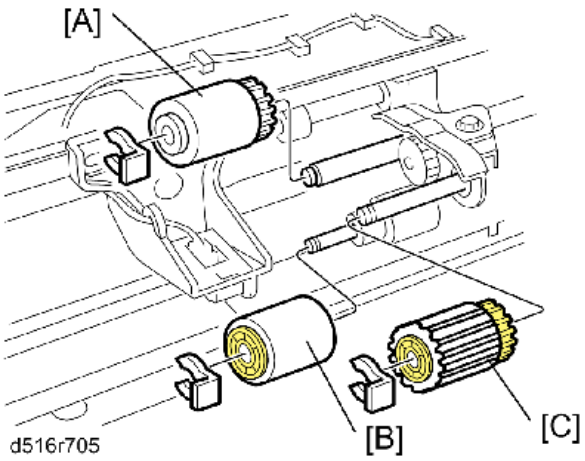


7. Remove:

[A]: Paper feed roller (x 1)

[B]: Separation roller (x 1)

[C]: Pickup roller (x 1)



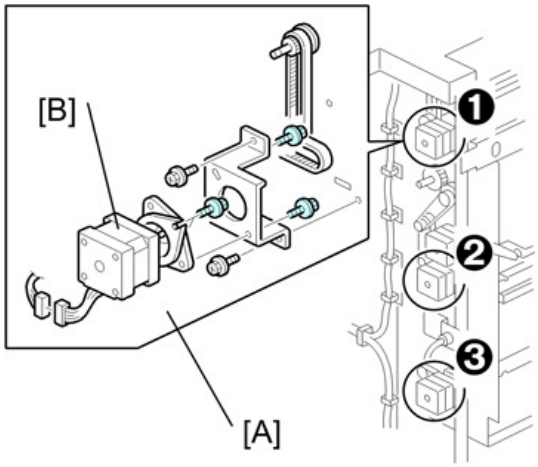
LCT Motors

Transport Motors, LCT Exit Motor

1st, 2nd, and 3rd Transport Motors

Remove:

- Left rear cover (Left Rear Cover
- [A] Motor unit (x1, x1, x2)
- [B] Motor (x2)



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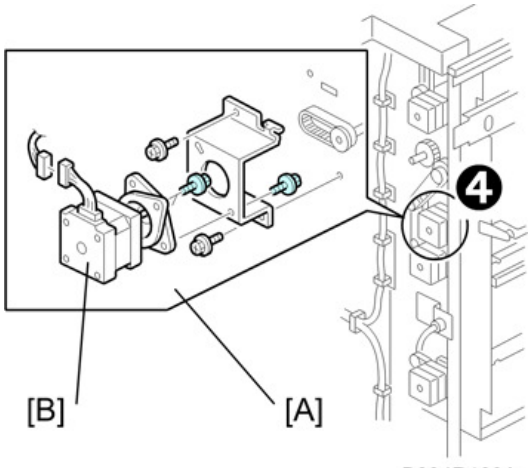
LCT Exit Motor

Remove:

- Left rear cover Left Rear Cover
- [A] Motor unit (x1, x1, x3)
- [B] Motor (x2)



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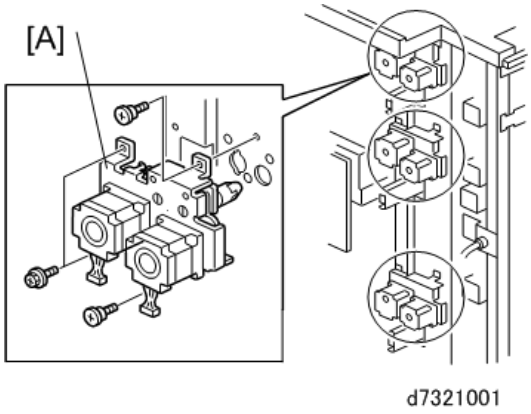
Feed Motors, Grip Motors

Each paper feed unit has a pick-up feed motor ① and a grip motor ②. The removal procedure is the

same for each feed tray.



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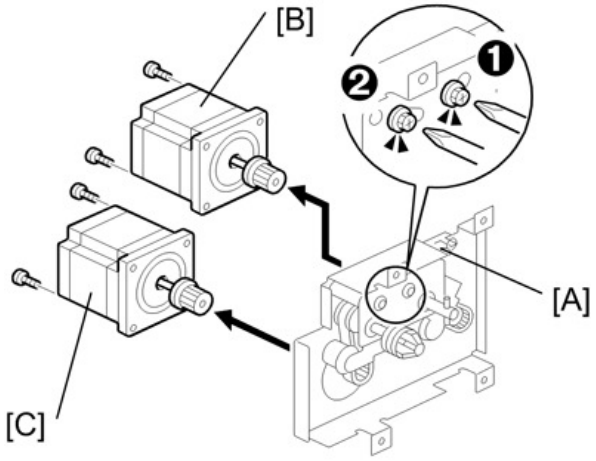
1. Remove the left rear cover. (Left Rear Cover)
2. Remove the motor unit [A] (x4, x2, x2)
3. Remove:
   [A]: Springs (x2) (First, loosen the screws (x2) ①, ②.)
   [B]: Paper feed motor (x2, x1)
   [C]: Grip motor (x2, x1)



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Reinstallation

Attach the tension spring, then tighten the screws to tighten the belts.

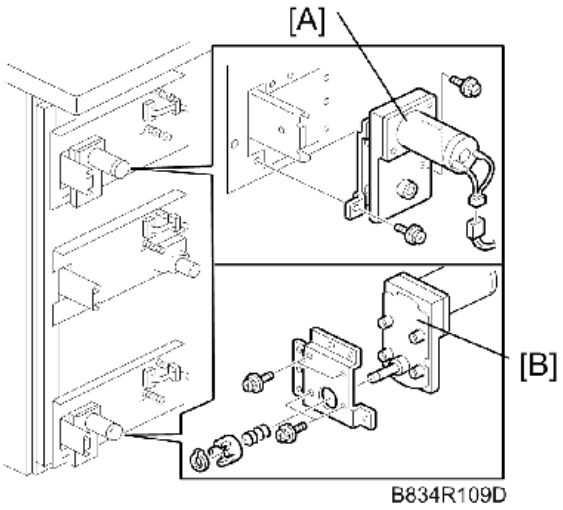
Lift Motors

1st, 3rd Lift Motors

The procedure for removing the 1st and 3rd lift motors is the same.

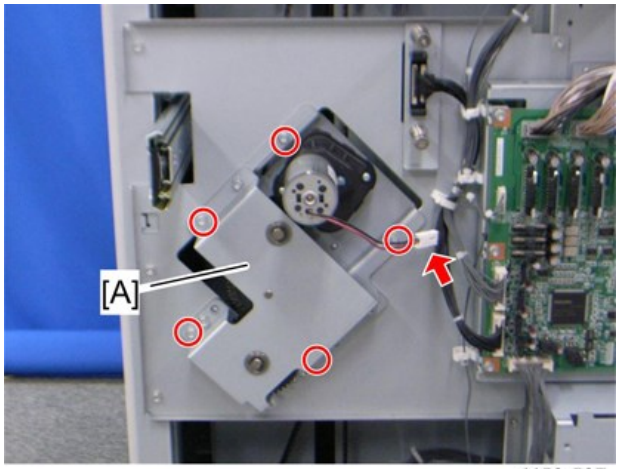
Remove:

- Right rear cover (Right Rear Cover)
- [A]: Motor unit (x 3, x1).
- [B]: 1st (or 3rd) lift motor (x4, x1, Coupling x1, x1)

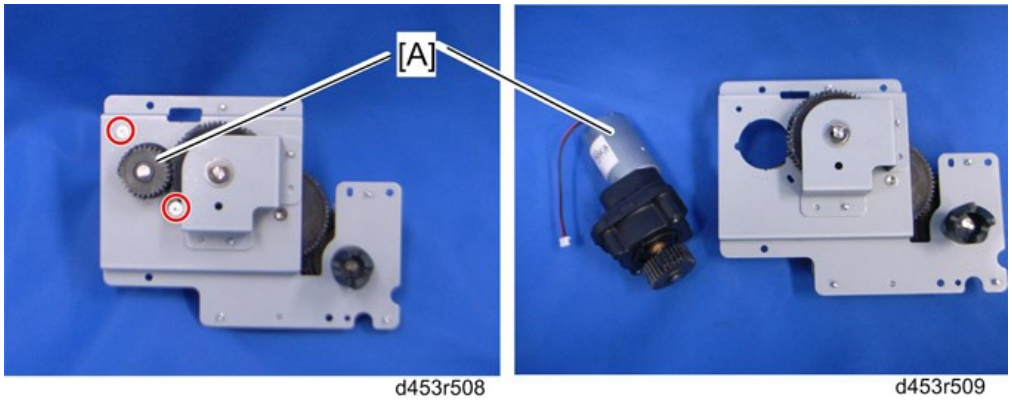


2nd Lift Motor

1. Remove the right rear cover.
2. Remove the motor unit [A] (x 5, x1).

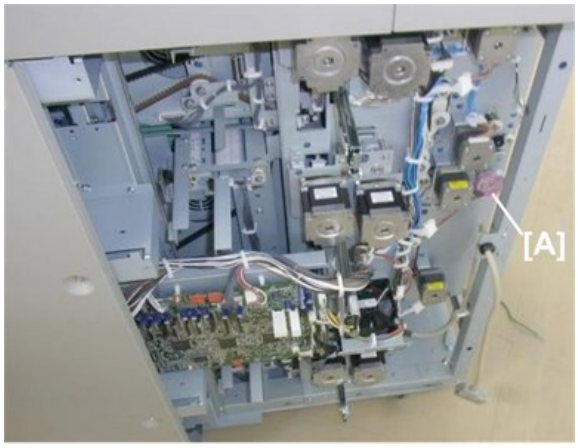


3. Remove the 2nd lift motor [A] (x 2).



Exit Roller Lift Motor

1. Remove the left rear cover. (Left Rear Cover)
   The motor is located at [A].



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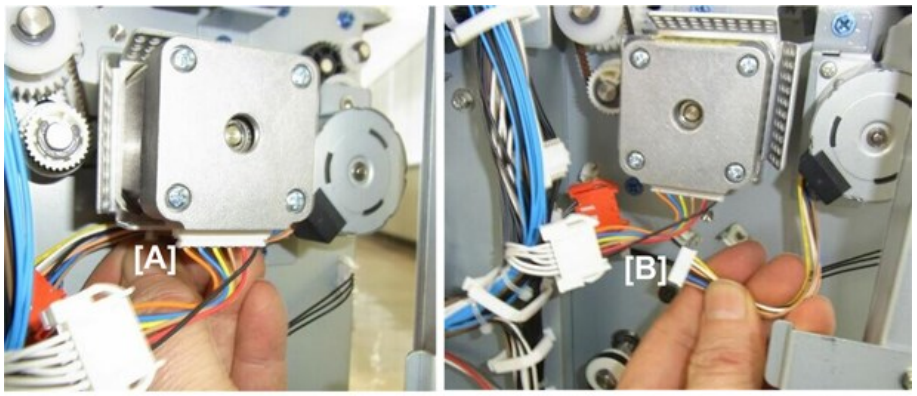
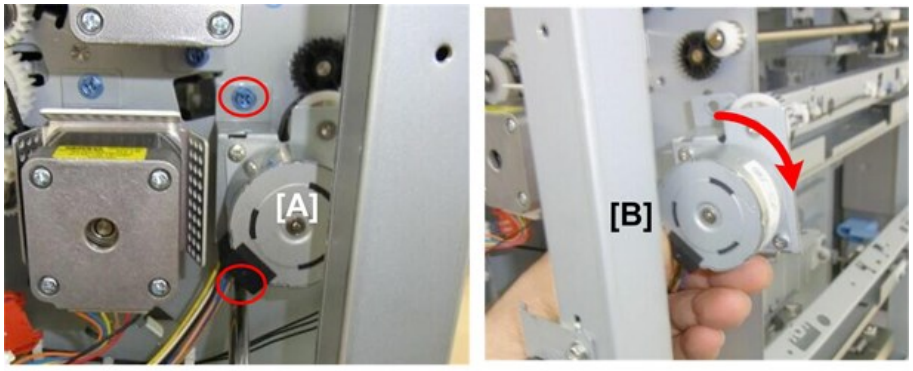
2. Disconnect the motor at [A] and [B] (x1, x1).



d516r002

3. Disconnect the motor mount [A] (x1).
4. Remove the motor [B].



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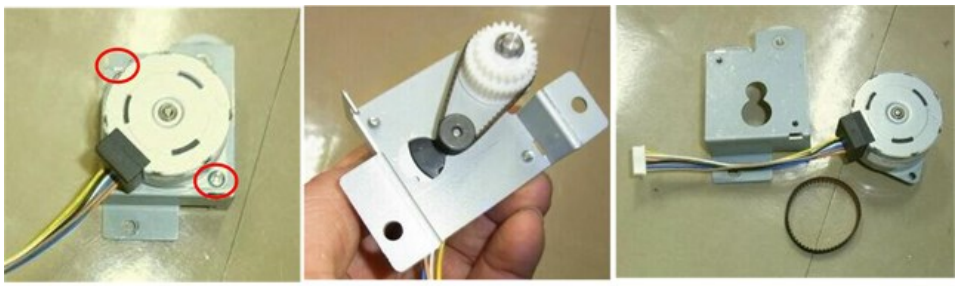
5. Separate the motor and bracket (x2, x1).



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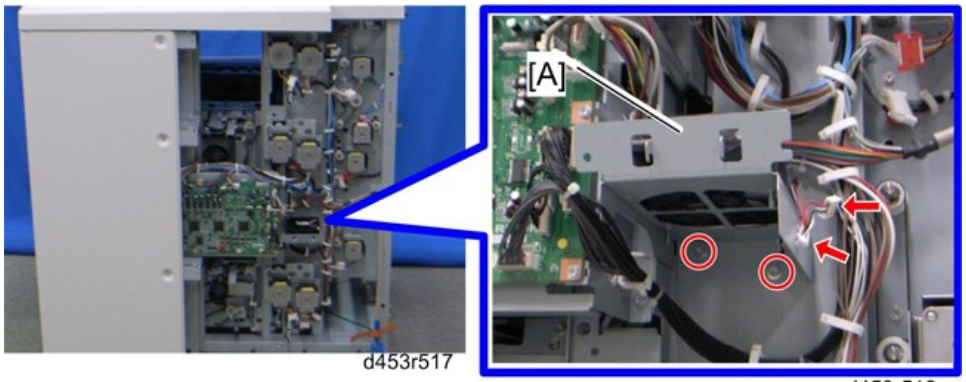
Cooling Fan

1. Remove the left rear cover. (Left Rear Cover)
2. Remove the fan bracket [A] (x 2, x 1, x 1).



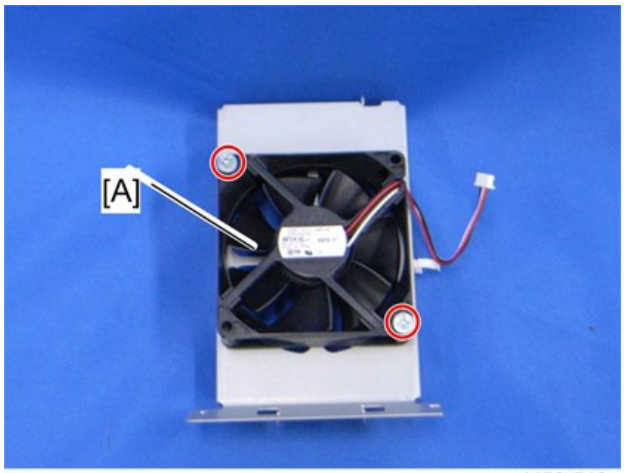
d453r517

d453r518

3. Remove the cooling fan [A] (x 2).

Important

- When reinstalling the cooling fan, make sure that the cooling fan is installed with its decals facing upward.

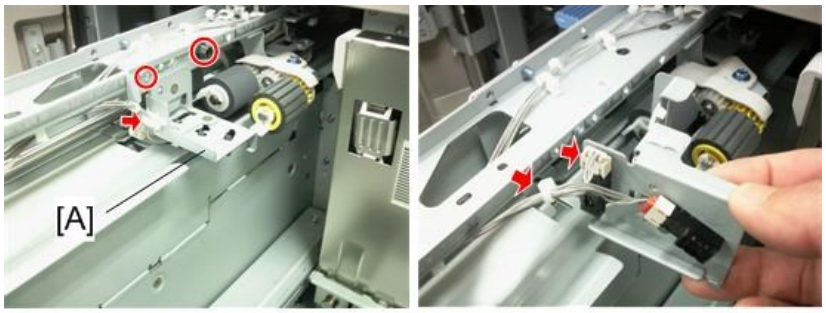


d453r519

Electrical Components

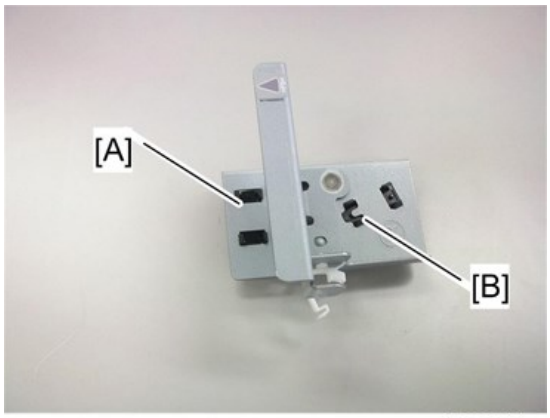
Paper Feed and End Sensors

1. Pull out the paper feed unit.
2. Remove the sensor bracket [A] (x1, black screw x1, x1, x 2).



d516r510

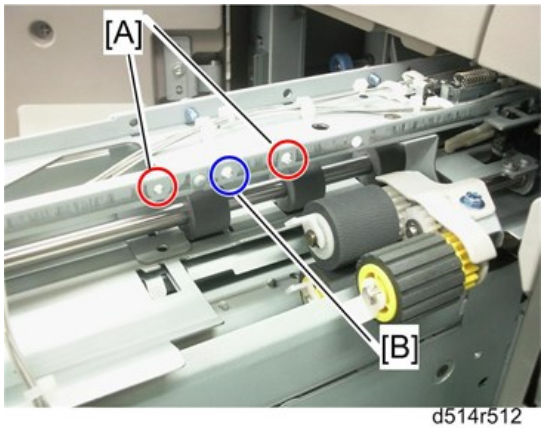
3. Remove:
   [A]: Paper feed sensor (hooks)
   [B]: Paper end sensor (hooks)



d516r511

When reinstalling the sensor bracket

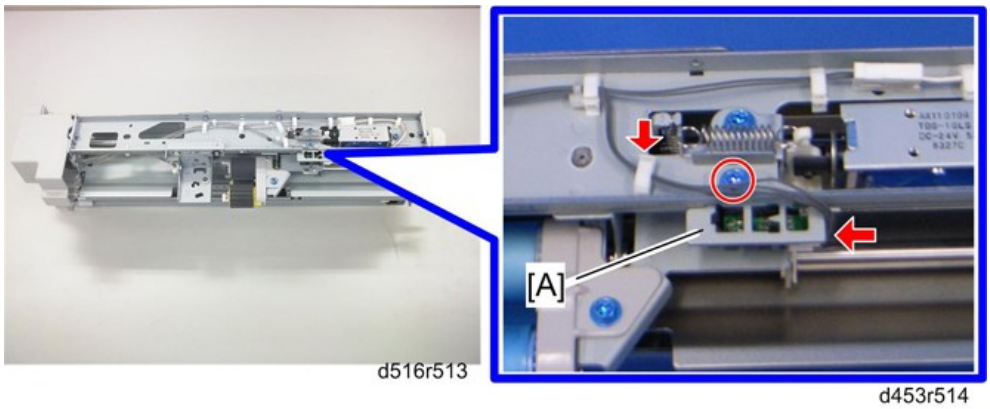
- Make sure that the white connector is connected to the paper feed sensor and the red connector is connected to the paper end sensor.
- Use the two holes [A] when attaching the sensor bracket. Do not use the hole [B].



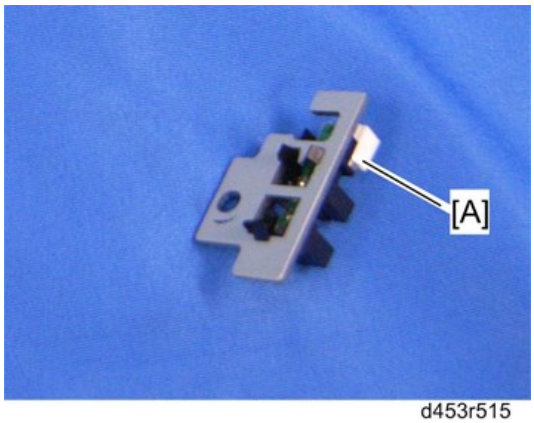
d514r512

Lift Sensor

1. Remove the paper feed unit. (Paper Feed Unit).
2. Remove the sensor bracket [A] (x1, x1, x1).

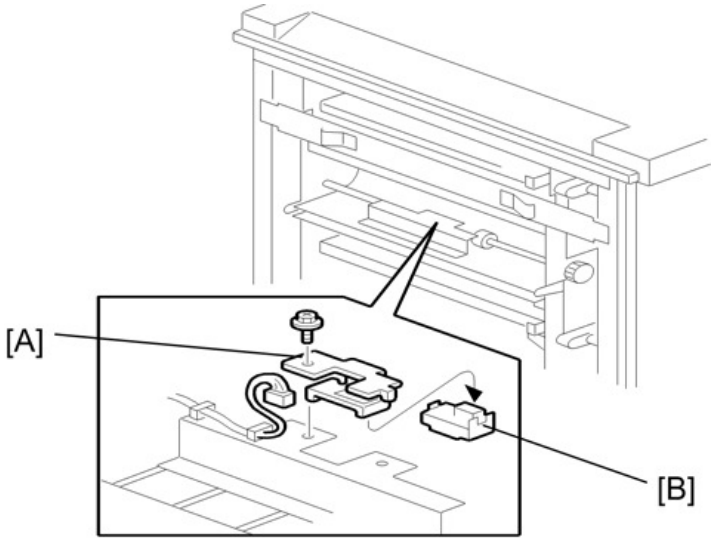


3. Remove the lift sensor [A] (x3).



LCT Exit Sensor

- Disconnect the LCT from the main machine.
  [A] Exit sensor unit (x1, x1)
  [B] Exit sensor

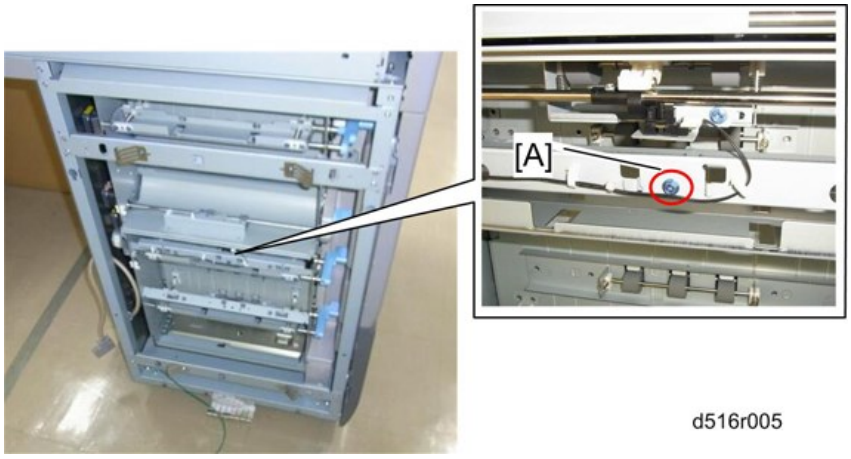


B834R105

Exit Roller Lift Sensor

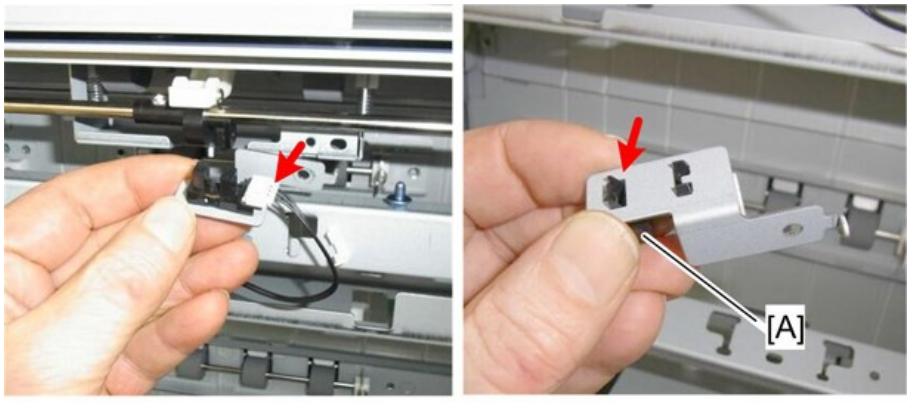
- Disconnect the LCT from the main machine.

1. Remove the sensor bracket [A] (x1).



d516r005

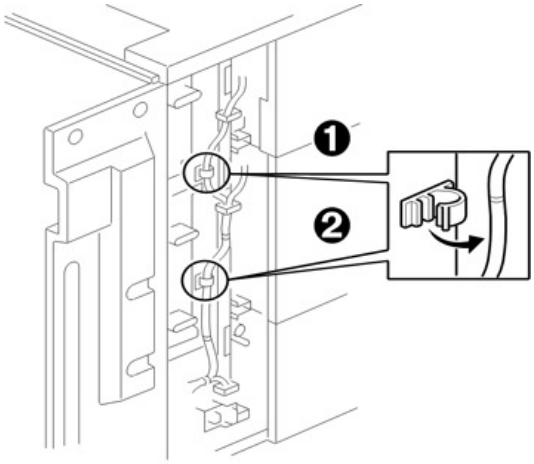
2. Remove the exit roller lift sensor [A] (x1, x4).



d516r006

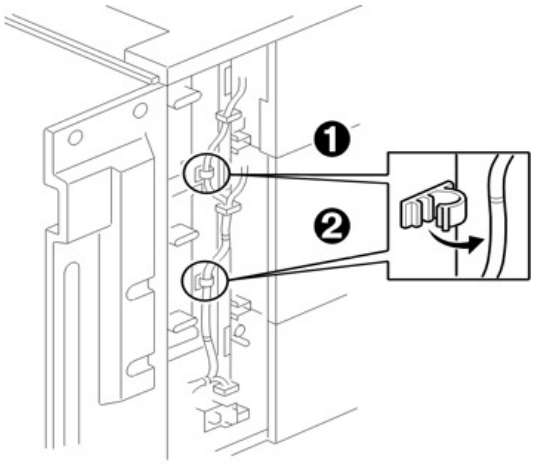
Removing the Vertical Feed Unit

1. Open the front door..
2. Remove:
   - Inner upper cover Inner Upper Cover
   - Inner lower cover Inner Lower Cover
   - Left rear cover Left Rear Cover



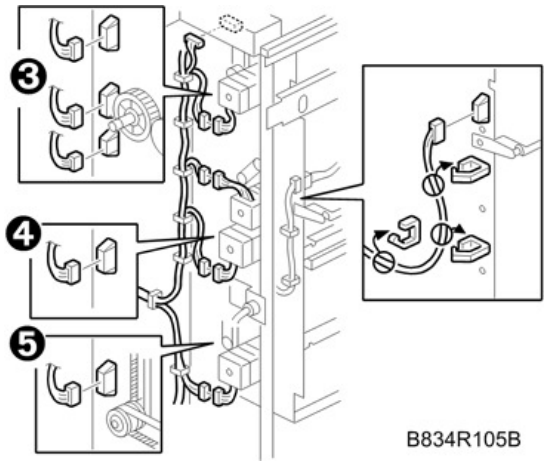
B834R105A

3. Disconnect the harness clamps ① and ② (x 2).



B834R105A

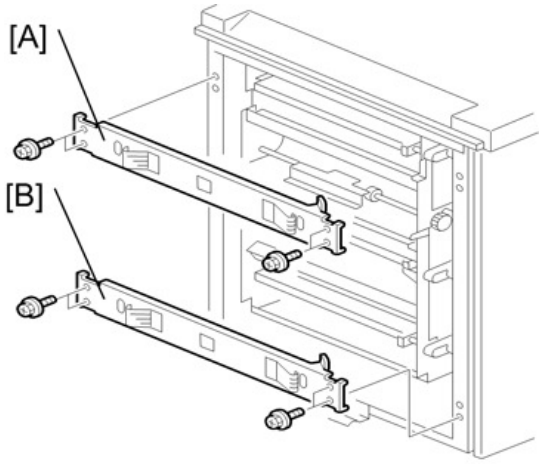
4. Disconnect the motor harnesses ③, ④, ⑤ (x 3, x11).



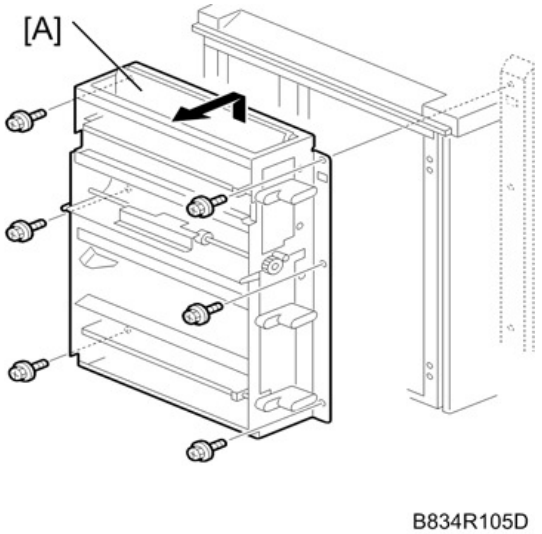
5. Remove:

[A]: Upper stay (x 2)

[B]: Lower stay (x 2)

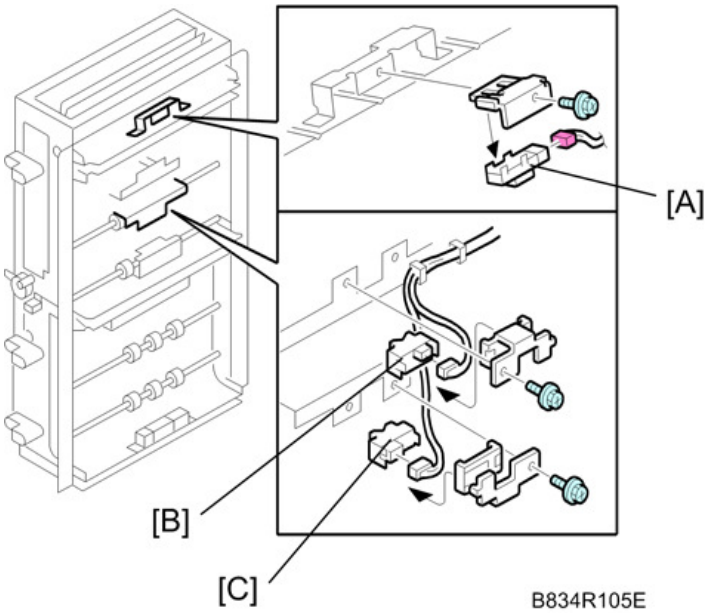


6. Remove the vertical feed unit [A] (x 6).



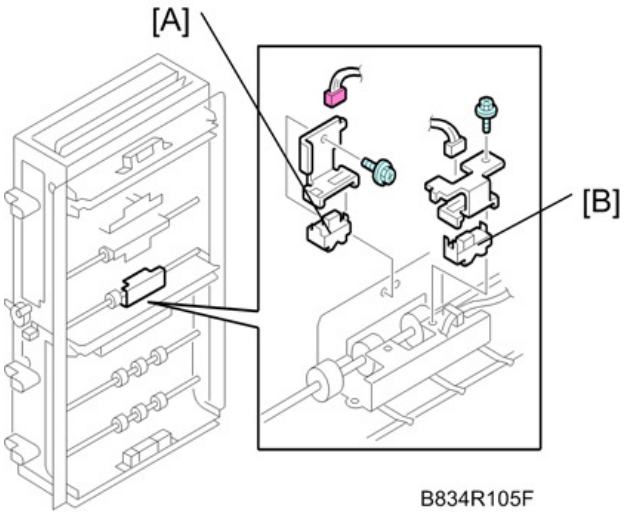
1st Transport, 1st Relay Upper, Lower Sensors

1. Remove the vertical feed unit. (Removing the Vertical Feed Unit)
2. Remove:
   [A]: 1st Transport sensor (x1, x1)
   [B]: 1st Relay sensor – upper (x1, x1)
   [C]: 1st Relay sensor – lower (x1, x1)



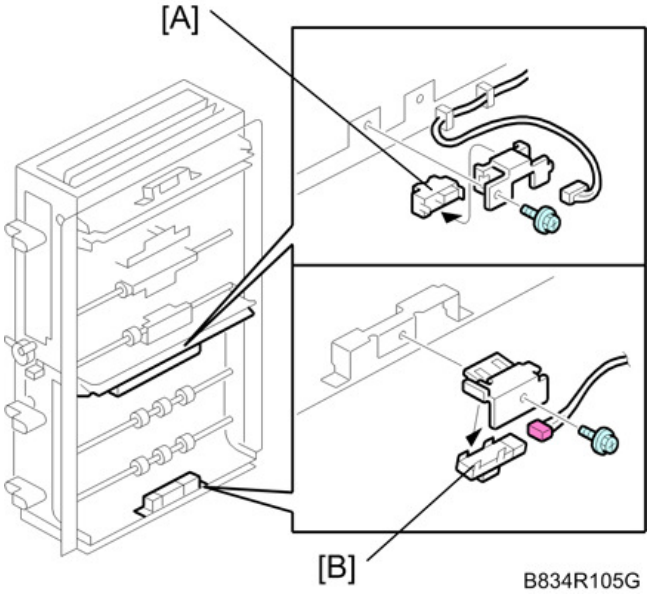
2nd Relay Sensor, 2nd Transport Sensor

1. Remove the vertical feed unit. (Removing the Vertical Feed Unit)
2. Remove:
   [A]: 2nd Relay sensor (x1, x1)
   [B]: 2nd Transport sensor (x1, x1)



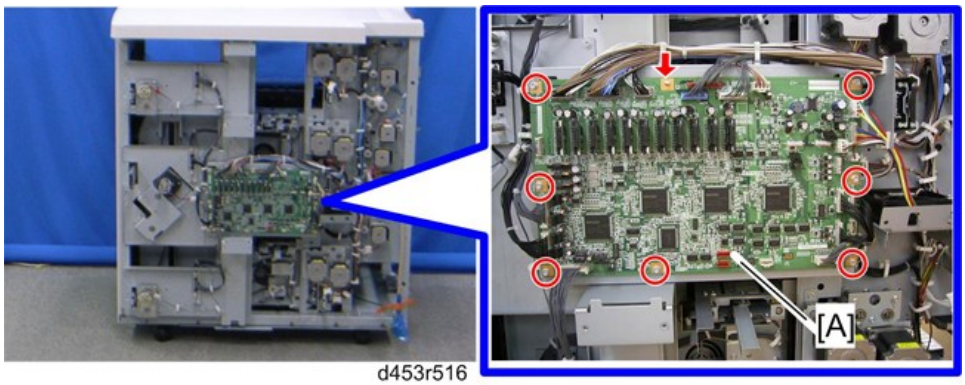
3rd Relay Sensor, 3rd Transport Sensor

1. Remove the vertical feed unit. (Removing the Vertical Feed Unit)
2. Remove:
   [A]: 3rd Relay sensor (x1, x1)
   [B]: 3rd Transport sensor (x1, x1)



Main Control Board

1. Remove the left rear cover. (Left Rear Cover)
2. Remove the right rear cover. (Right Rear Cover)
3. Remove the main control board [A] (x 7, x1, x All).



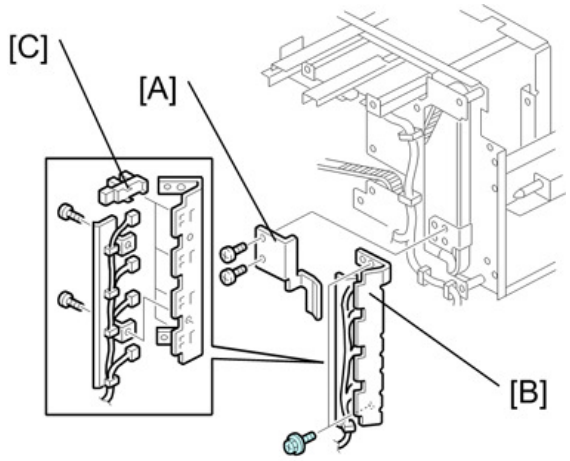
Paper Height, Paper Width Sensors

Paper Height Sensors

1. Remove the left rear cover. (Left Rear Cover)
2. Remove:
   [A]: Paper height sensor unit (x 2, x 4).

[B]: Clamp bracket (x 2)

[C]: Paper height sensors (x 4) (x3, x 2 each)



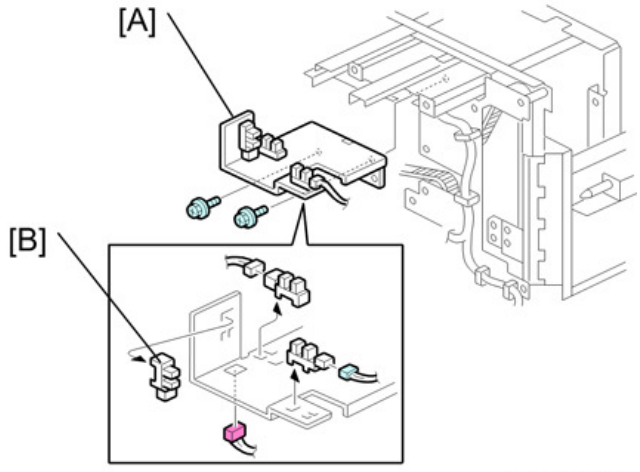
B834R106

Paper Width Sensors

1. Remove the left rear cover. (Left Rear Cover)
2. Remove:

[A]: Paper width sensor unit (x 2, x 3)

[B]: Paper width sensors (x 3) (x2 each)



B834R106A

Adjustment

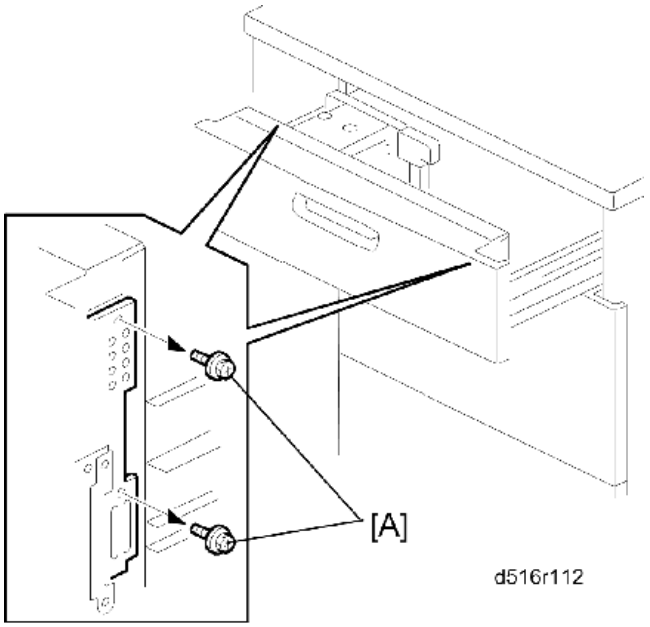
Side Registration Adjustment

Normally the side registration of the image can be adjusted with SP1-002-004 to -006 (Side-to-Side Reg (Shift: Off) : 3-Tray LCT Tray1, 2, 3).

But if the punch hole positions are not aligned from a particular feed tray, adjust the side registration by changing the tray cover position for the tray, as described below.

After changing the tray cover position, adjust the side registration of the image with the SP1-002-004 to -006.

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



3. After changing the tray cover position, adjust the side registration of the image with the SP1-002-004 to -006.

Note

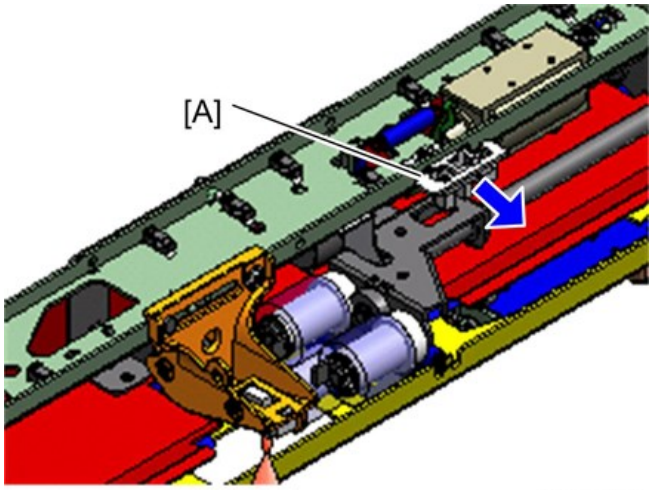
- Adjustment range: 0 ± 3.0 mm
- Adjustment step: 0.01 mm/step

2. Troubleshooting

Double Feed Problem from LCT

If double feed occurs several times when paper is fed from an LCT (1st, 2nd and 3rd), try to change the upper limit of the paper stack in the LCT tray. Changing the upper limit of the paper stack in the LCT tray can improve paper separation for the paper stack in the LCT tray.

1. Remove the paper feed unit of the LCT unit. (Removing the Vertical Feed Unit
2. Loosen the screw on the paper lift sensor bracket [A].
3. Move the bracket 0.5 mm in the arrow direction as shown above.
4. Tighten the screw on the paper lift sensor bracket [A].



g178t502

Important

- To return the upper limit position to the default position, move the paper lift sensor bracket 0.5 mm in the opposite direction.
- Return the upper limit position to the default if a paper jam occurs at the paper feed sensor in the LCT.

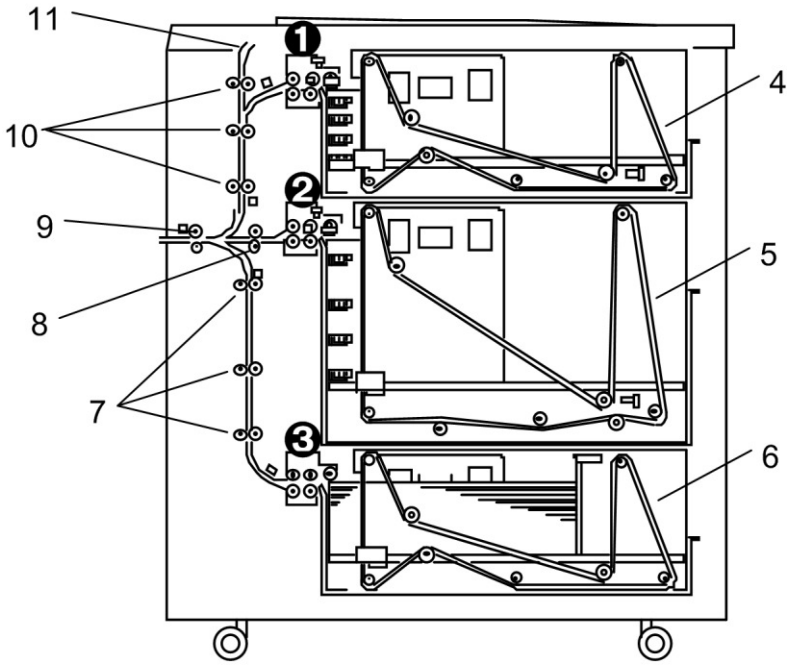
3. Detailed Descriptions

Specifications

Item	Specification
Dimensions (W x D x H)	865 x 730 x 1218 mm
Weight	Less than 185 kg
Configuration	Console Type
Power source	From the mainframe
Noise (Power level)	TBA
Paper size	A5 (LEF)/5.5” x8.5” (LEF) – 13” x 19.2” (LEF) - Custom Size Paper - Width: 100.0 to 330.2 mm (3.94 to 13.00 inches) Length: 139.7 to 487.7 mm (5.50 to 19.20 inches)
Paper weight	52.3-360 g/m2 14lb Bond -130lb Cover
Paper capacity	1st tray: 1,000 sheets 2nd tray: 2,000 sheets 3rd tray: 1,000 sheets
Paper weight	1st tray: 52.3-256 g/m2 14lb Bond - 95lb Cover 2nd tray: 52.3-360 g/m2 14lb Bond - 130lb Cover 3rd tray: 52.3-256 g/m2 14lb Bond - 95lb Cover
Air Assist Paper Pickup	Yes (all trays)

Mechanical Component Layout

Overview Layout

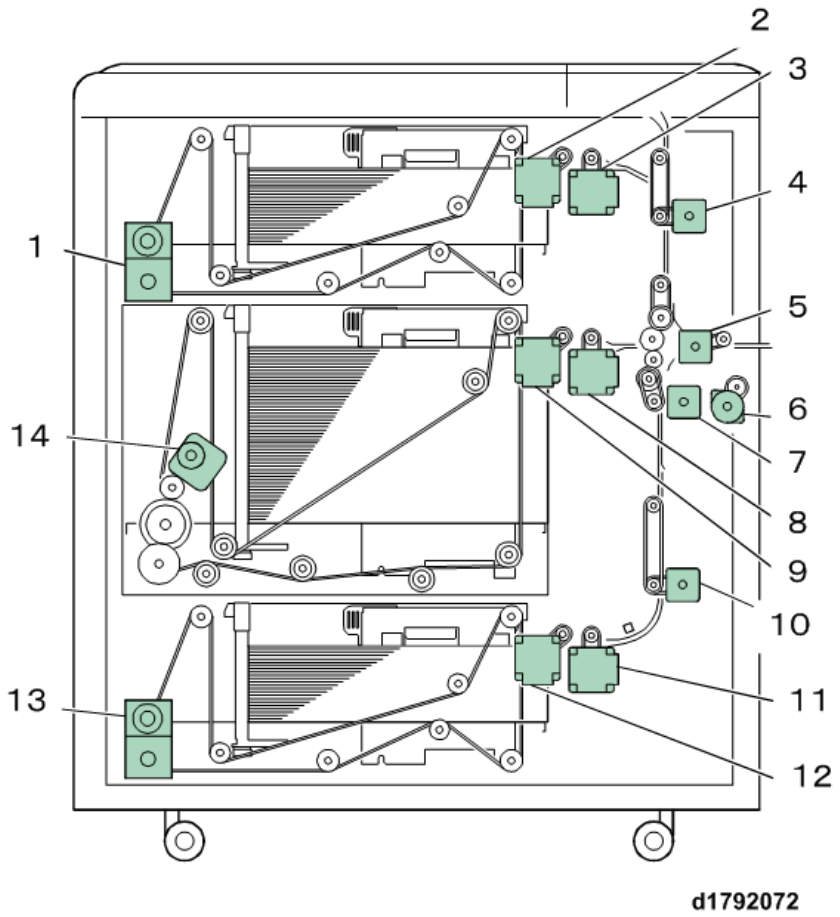


B834V101

No	Name	No	Name
1	1st Paper Feed Unit*	7	Lower Transport Rollers
2	2nd Paper Feed Unit	8	Horizontal Transport Roller
3	3rd Paper Feed Unit	9	LCT Exit roller
4	1st Tray Drive Belt	10	Upper Transport Rollers
5	2nd Tray Drive Belt	11	Feed Slot (from Bypass Tray)
6	3rd Tray Drive Belt	-	-

* Each feed unit has 1 paper feed motor that drives the pick-up roller and paper feed roller, and 1 grip motor that drives the separation roller and grip roller.

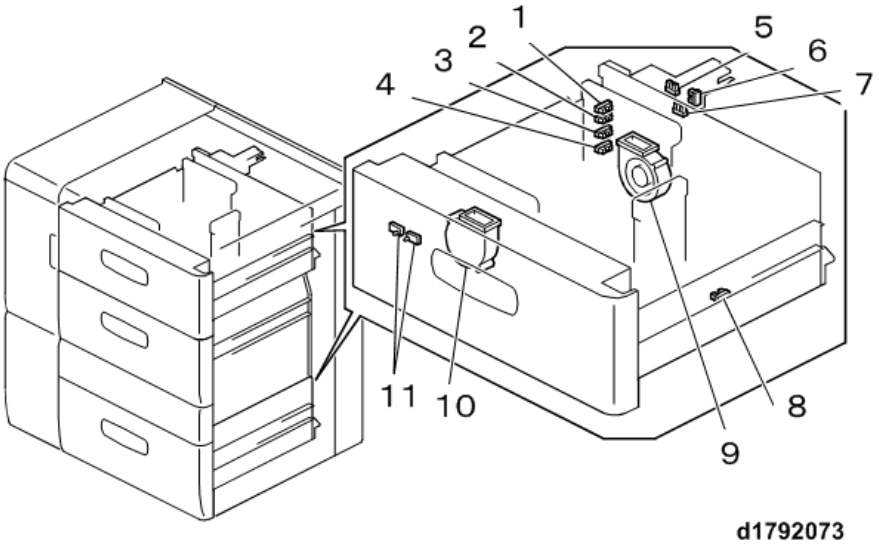
Drive Layout



No.	Name	No.	Name
1	1st Lift Motor	8	2nd Grip Motor
2	1st Paper Feed Motor	9	2nd Paper Feed Motor
3	1st Grip Motor	10	3rd Transport Motor
4	1st Transport Motor	11	3rd Grip Motor
5	LCT Exit Motor	12	3rd Paper Feed Motor
6	Exit Roller Lift Motor	13	3rd Lift Motor
7	2nd Transport Motor	14	2nd Lift Motor

Electrical Components

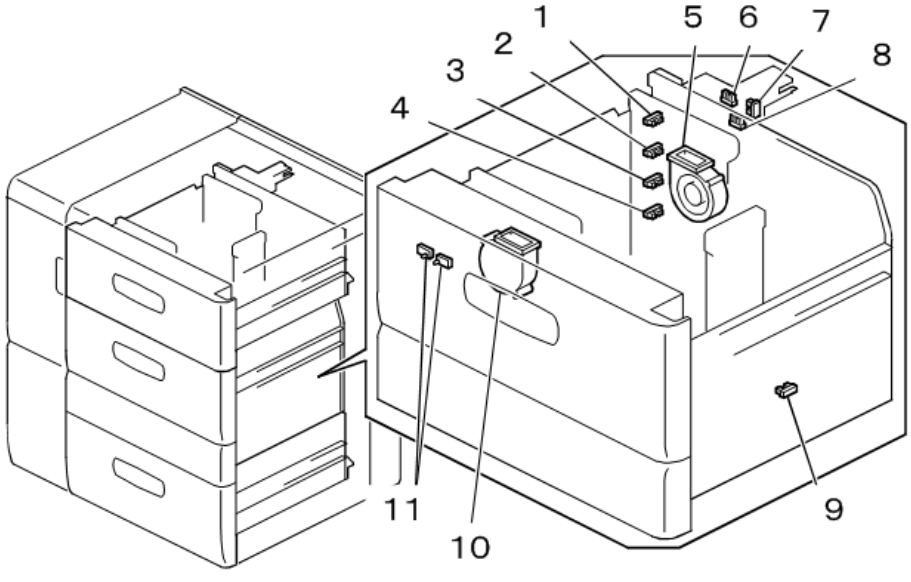
1st tray and 3rd tray



d1792073

No.	Name	No.	Name
1	Paper Height Sensor 1	7	Paper Width Sensor 2
2	Paper Height Sensor 2	8	Paper Length Sensor
3	Paper Height Sensor 3	9	Tray Rear Fan
4	Paper Height Sensor 4	10	Tray Front Fan
5	Paper Width Sensor 3	11	Paper LED
6	Paper Width Sensor 1	-	-

2nd tray

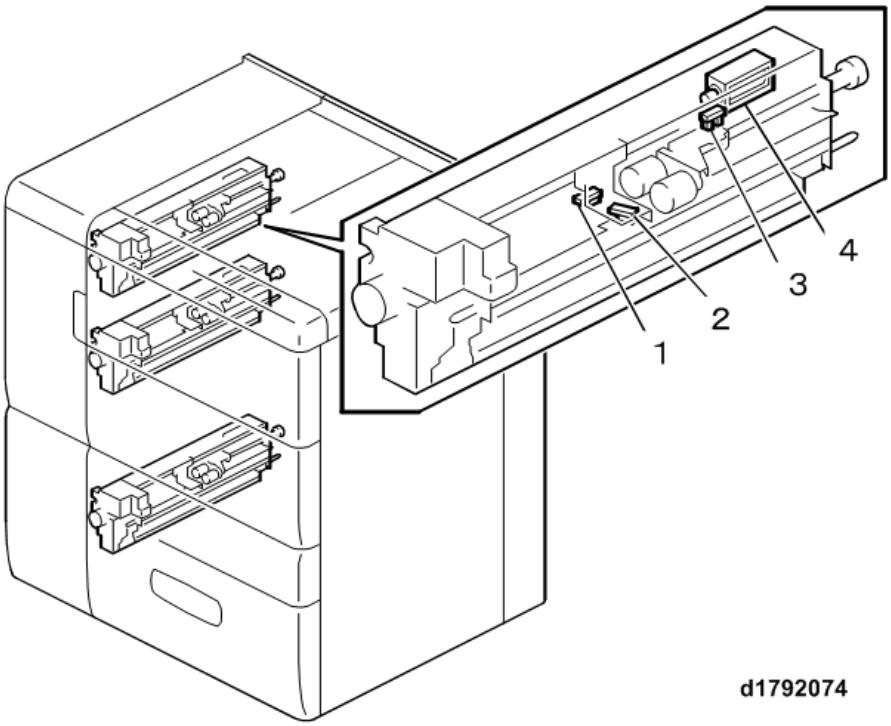


d1792076

No.	Name	No.	Name
1	Paper Height Sensor 1	7	Paper Width Sensor 1

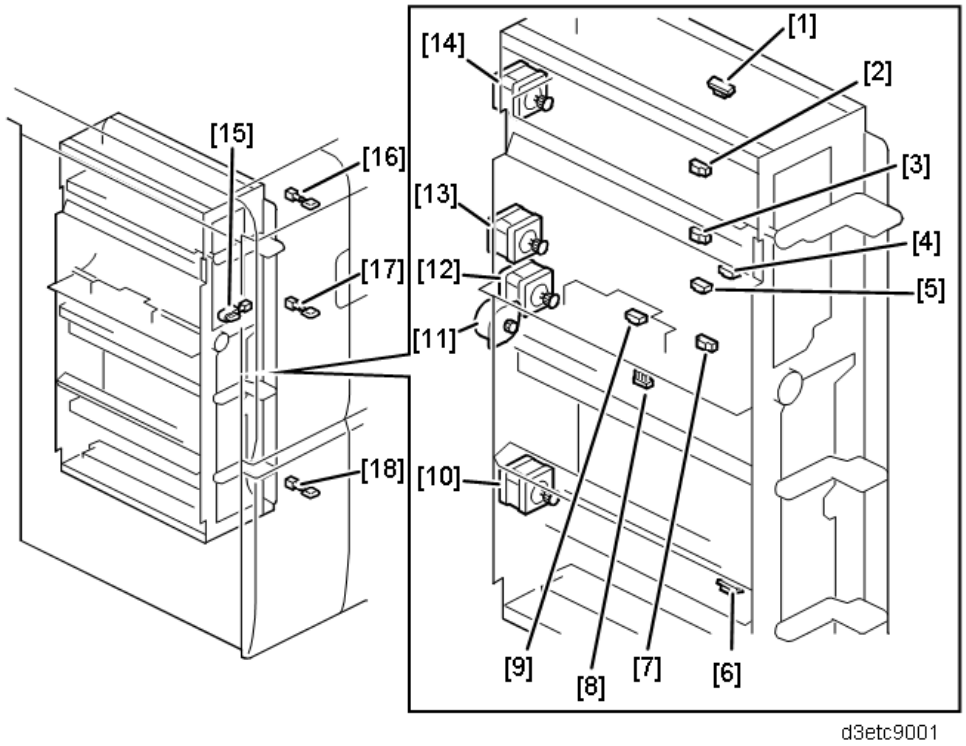
No.	Name	No.	Name
2	Paper Height Sensor 2	8	Paper Width Sensor 2
3	Paper Height Sensor 3	9	Paper Length Sensor
4	Paper Height Sensor 4	10	Tray Rear Fan
5	Tray Front Fan	11	LED
6	Paper Width Sensor 3	-	-

Paper Feed Unit



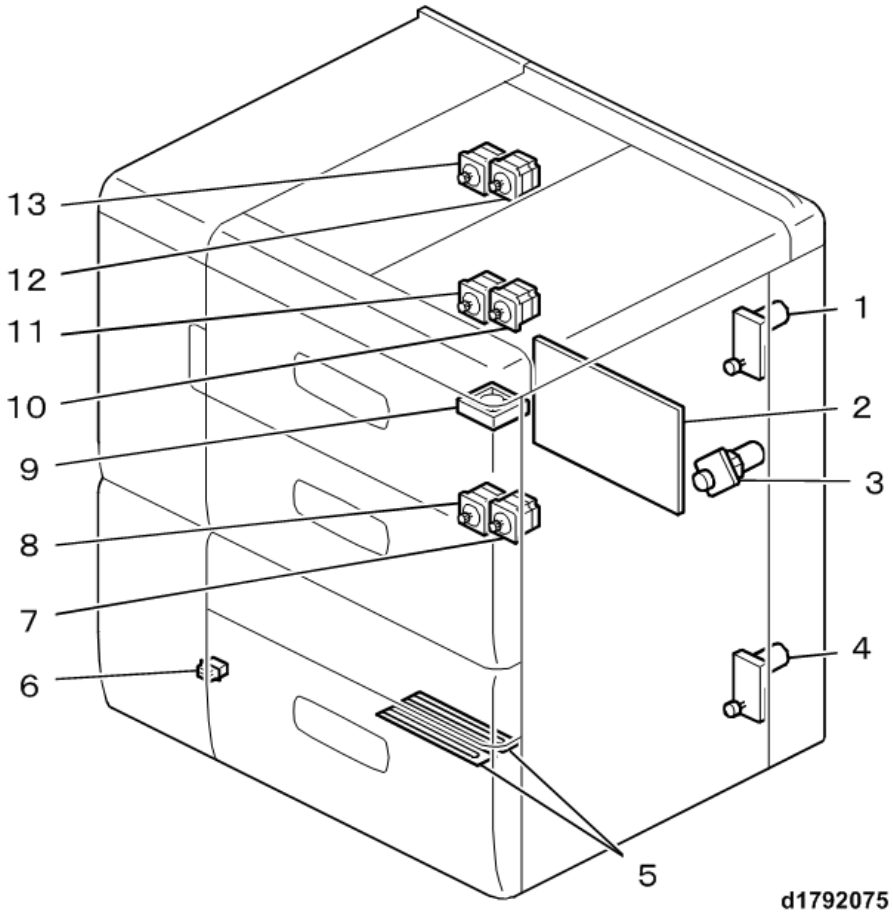
No.	Name
1	Paper Feed Sensor
2	Paper End Sensor
3	Lift Sensor
4	Pick-up Solenoid

Vertical Transport



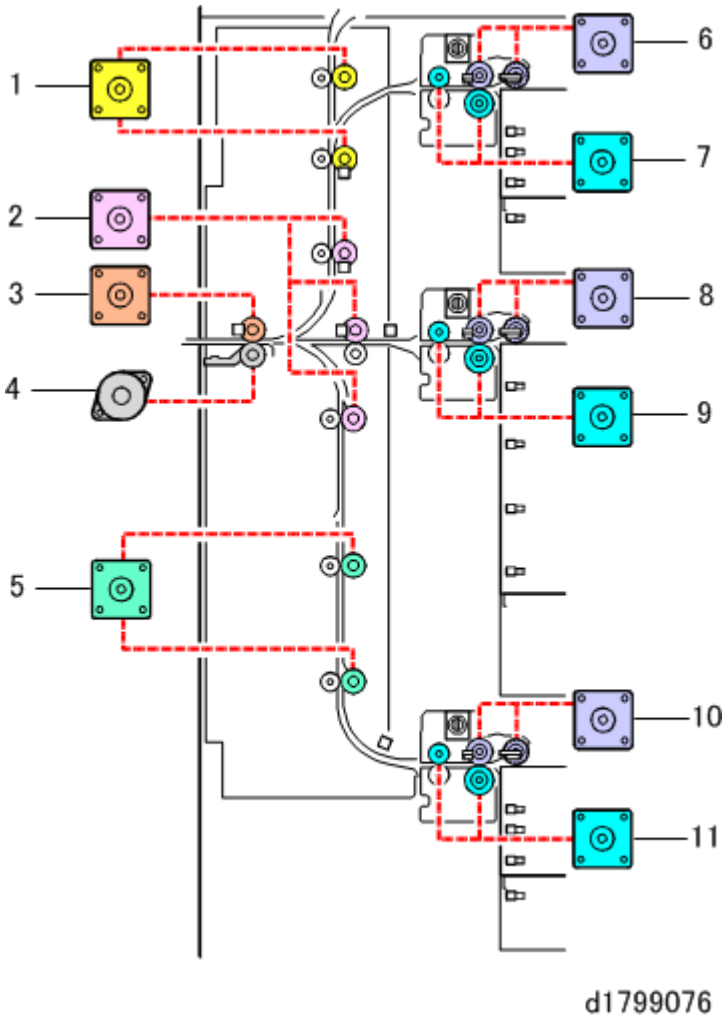
No.	Name	No.	Name
1	1st Transport Sensor	11	Exit Roller Lift Motor
2	1st Relay Sensor 1	12	2nd Transport Motor
3	1st Relay Sensor 2	13	LCT Exit Motor
4	2nd Transport Sensor	14	1st Transport Motor
5	2nd Relay Sensor	15	Paper exit jam LED
6	3rd Transport Sensor	16	1st tray jam LED
7	3rd Relay Sensor	17	2nd tray jam LED
8	Exit Roller Lift Sensor	18	3rd tray jam LED
9	LCT Exit Sensor	-	-
10	3rd Transport Motor	-	-

Others



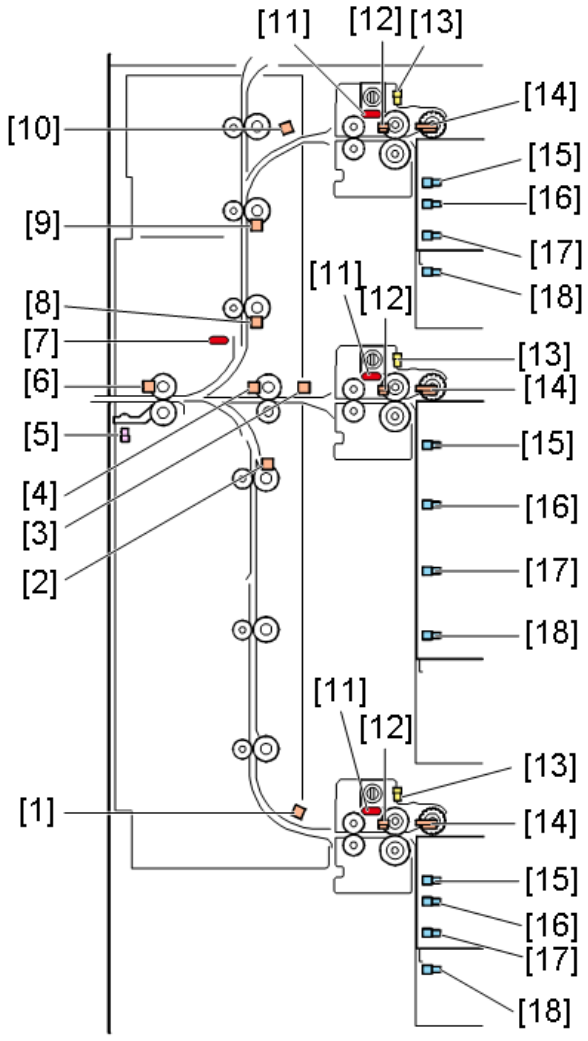
No.	Name	No.	Name
1	1st Lift Motor	8	3rd Grip Motor
2	Main Control Board	9	LCIT Cooling Fan
3	2nd Lift Motor	10	2nd Paper Feed Motor
4	3rd Lift Motor	11	2nd Grip Motor
5	Anti-Condensation Heaters	12	1st Paper Feed Motor
6	Door Safety Switch	13	1st Grip Motor
7	3rd Paper Feed Motor	-	-

Roller Drive Layout



No.	Name	No.	Name
1	1st Transport Motor	6	1st Paper Feed Motor
2	2nd Transport Motor	7	1st Grip Motor
3	LCT Exit Motor	8	2nd Paper Feed Motor
4	Exit Roller Lift Motor	9	2nd Grip Motor
5	3rd Transport Motor	10	3rd Paper Feed Motor
-	-	11	3rd Grip Motor

Paper Transport Layout



No.	Name	No.	Name
1	3rd Transport Sensor	10	1st Transport Sensor
2	3rd Relay Sensor	11	Paper Tray Jam LED
3	2nd Transport Sensor	12	Paper Feed Sensor
4	2nd Relay Sensor	13	Lift Sensor
5	Exit Roller Lift Sensor	14	Paper End Sensor
6	LCT Exit Sensor	15	Paper Height Sensor 1
7	Paper exit jam LED	16	Paper Height Sensor 2
8	1st Relay Sensor 2	17	Paper Height Sensor 3
9	1st Relay Sensor 1	18	Paper Height Sensor 4

Paper Handling

Paper Feed Rollers

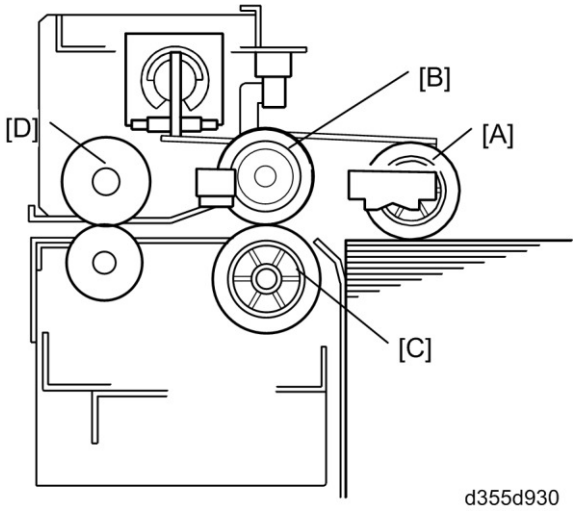
This LCT has three paper tray feed stations:

The 1st and 3rd tray each hold 1,000 sheets of paper. The 2nd tray holds 2,000 sheets of paper. Total: 4,000 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 are a standard FRR paper feed system.



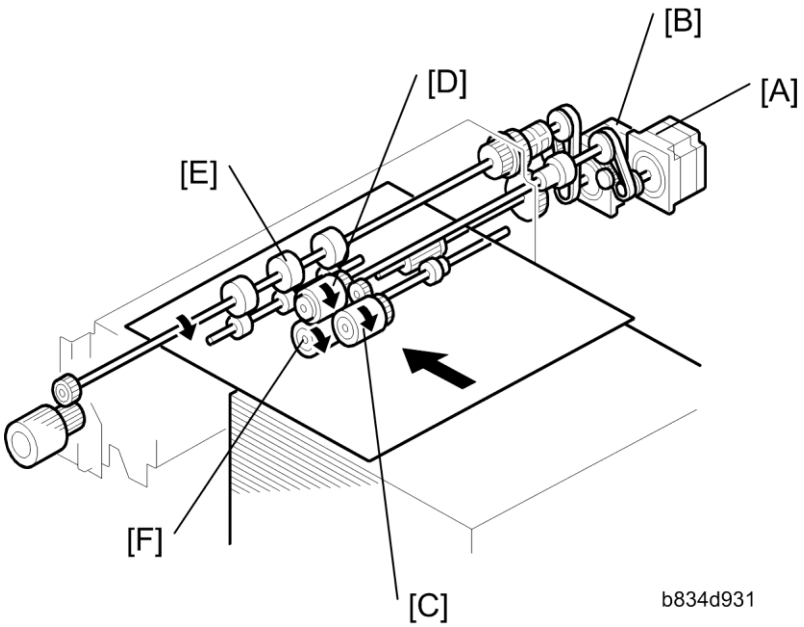
Paper Feed Motors

Two stepper motors control the paper feed drive:

- [A] Paper feed motor
- [B] Grip motor

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

The grip motor 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.

The pickup assist function is set for “Auto”. This means that it will switch on or off depending on for the type and thickness of paper selected. The pickup assist function can also be set with the following SP codes to remain on (or off) for a selected tray.

1-923-003	LCT Pickup Assist ON/OFF A3LCT Tray3
1-923-004	LCT Pickup Assist ON/OFF A3LCT Tray4
1-923-005	LCT Pickup Assist ON/OFF A3LCT Tray5
	[0 to 2/0/1] 0: Auto 1: Force ON 2: Force OFF

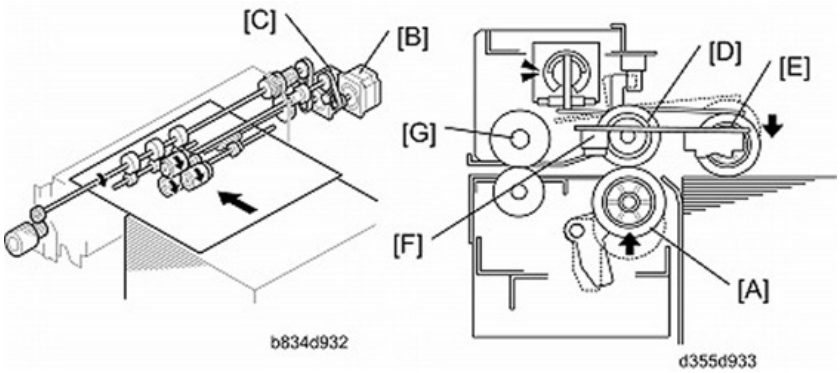
When the pick up assist function is on:

- When the paper feed sensor [F] detects the leading edge of the paper, the paper feed motor switches off to prevent double-feeds.
- The pick-up roller remains down.

- Next, the paper feed motor switches on again (with the pick-up roller rotating) to feed the paper to the grip rollers [G] which pull the paper out of the tray.

If the pick up assist function is off:

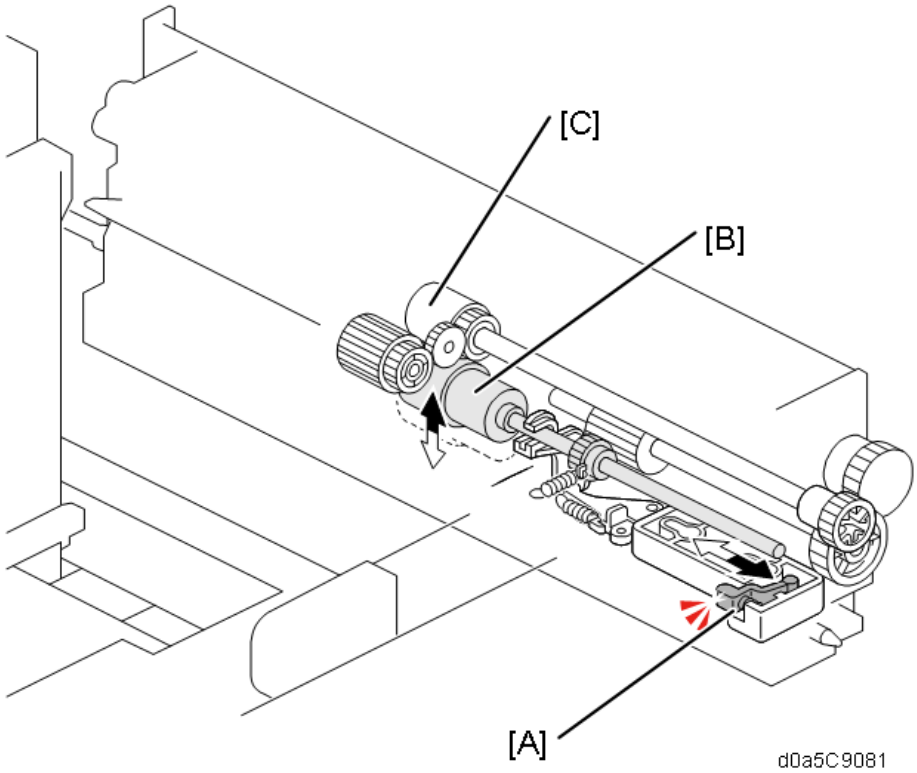
- When the paper feed sensor [F] detects the leading edge of the paper, the paper feed motor switches off to prevent double-feeds
- The pick-up roller raises.
- Next, the paper feed motor switches on to feed the paper to the grip rollers [G] which pull the paper out of the tray.



Separation Roller Pressure Release

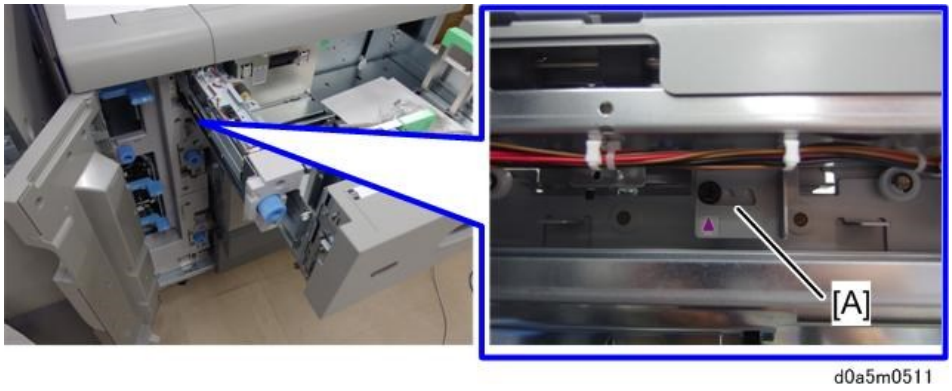
When a paper tray is pushed into the machine:

- The pressure slide arm [A] forces the separation roller [B] up to close the nip between the separation roller and feed roller [C].
- When the paper tray lift motor switches on and lifts the bottom plate and the stack, the tray is at the paper feed standby position and ready to feed paper after the paper feed and transport motors switch on.

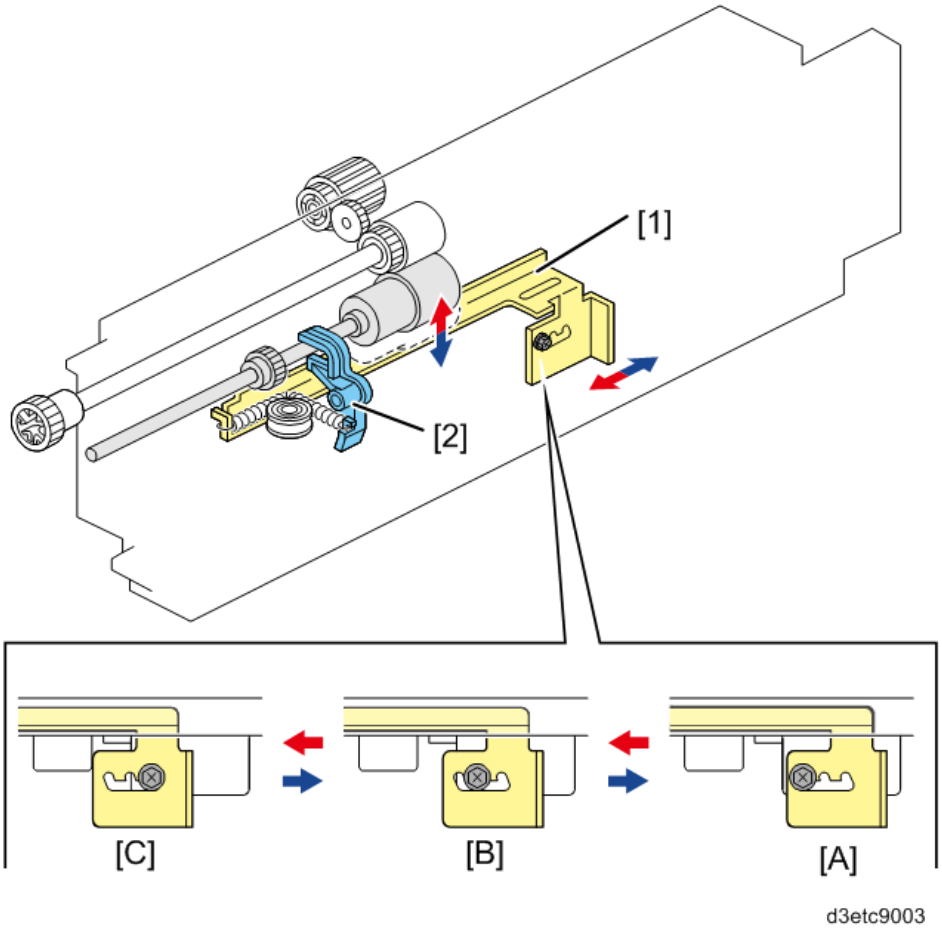


Separation Adjustment

The paper feed unit has a screw [A] for adjusting the separation pressure of the separation roller.



This is a mechanism to move the adjusting plate [1] and so change the spring force, allowing the force exerted by the arm [2] supporting the separation roller to be adjusted.



Adjustable between 3 levels as shown below.

[A]: Normal (Default)

[B]: Separation pressure (medium)

[C]: Separation pressure (strong)

If paper misfeeding occurs, increase the separation pressure to prevent it. However, this may cause double feeding to occur more frequently.

Paper Detection and 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

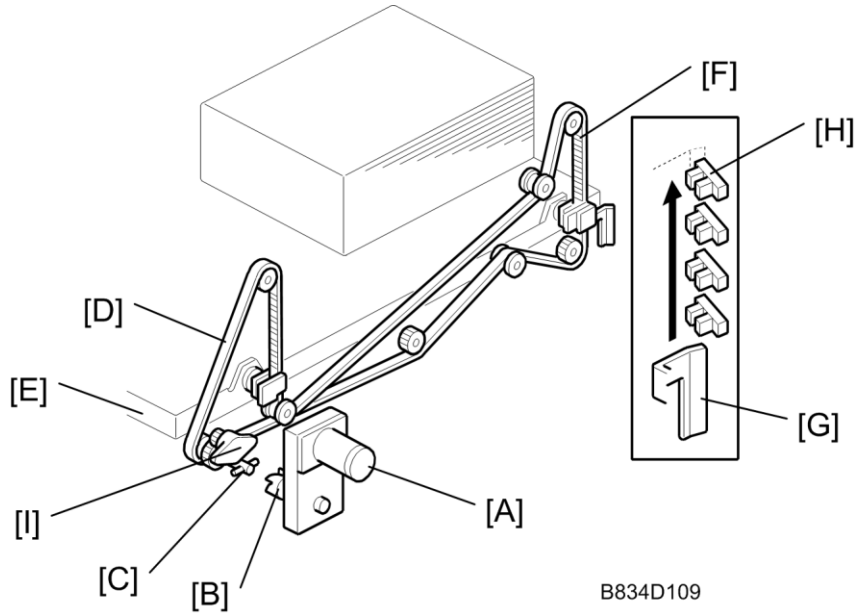
When the machine detects that the paper tray is set in the machine:

- 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.

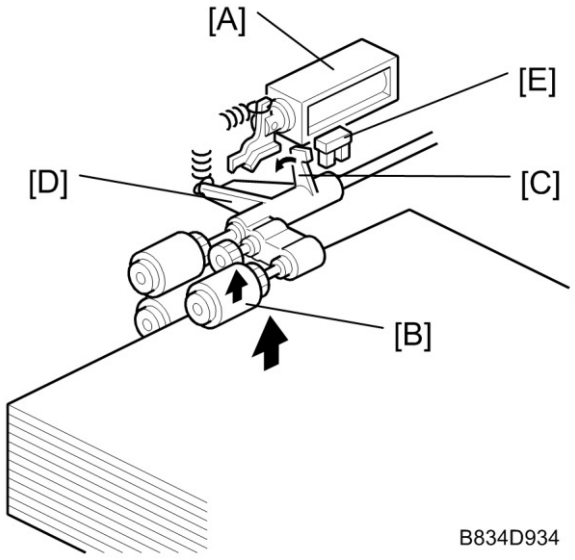
When the tray is pulled out:

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



Lift Sensor

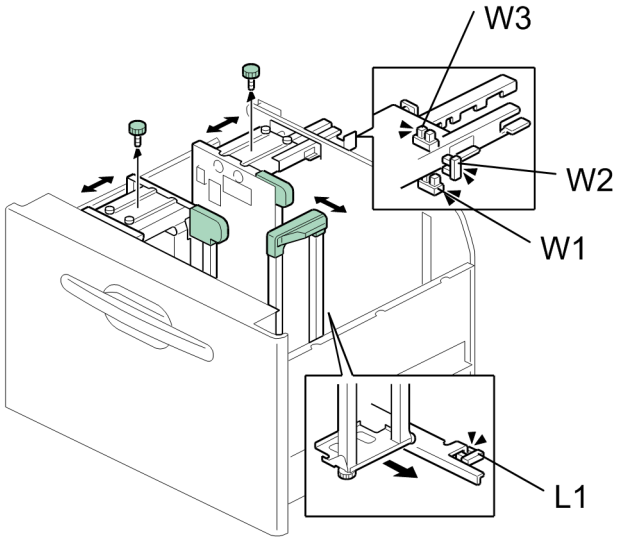
When the lift motor turns on, the pick-up solenoid [A] activates to lower the pick-up roller [B]. When the top sheet of paper reaches the proper paper feed level, the paper pushes up the pick-up roller and the actuator [C] on the pick-up roller supporter [D] de-activates the lift sensor [E] to stop the lift motor.
After several paper feeds, the paper level gradually lowers, then the lift sensor is activated and the lift motor turns on again until the lift sensor is de-activated again.



Paper Size Detection

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

The table shows how the three width sensors and one length sensor are used to determine the paper size in the 1st, 2nd, and 3rd paper trays.



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

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
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

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

Each tray has four paper height sensors. The illustration below shows the paper height sensors in the 1st tray. This arrangement is duplicated in the 2nd and 3rd trays.

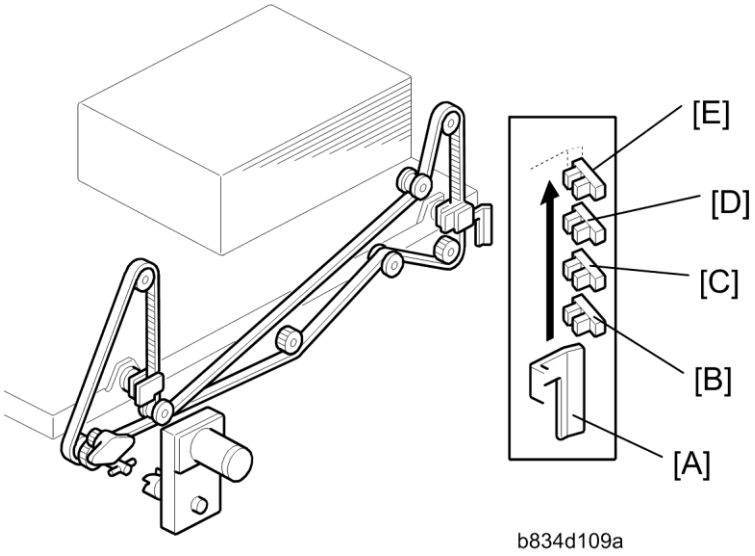
The amount of paper remaining in the tray is detected by the three paper height photo-interrupter sensors on the left rail as the bottom plate rises. Five states, determined by the position of the actuator [A] are possible.

1. With the actuator [A] below paper height sensor 4 [B], no sensor is actuated and the display indicates 100%.
2. When the actuator passes paper height sensor 4 [B] , the display indicates 75% of the paper supply remaining.
3. When the actuator passes paper height sensor 3 [C], the display indicates 50% of the paper supply remaining.
4. When the actuator passes paper height sensor 2 [D], the display indicates 25% of the paper supply remaining.

Note

- When the actuator enters the near end sensor [E] and the paper height sensor 2 [D] does not detect the actuator, the machine signals near end.

5. Finally, when the last sheet feeds, the paper end sensor signals that the tray is empty.



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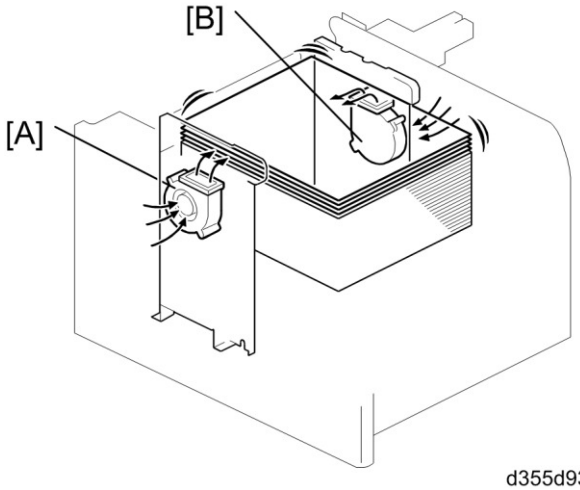
[A] Paper Height Sensor Actuator
[B] 1st Paper Height Sensor 4
[C] 1st Paper Height Sensor 3
[D] 1st Paper Height Sensor 2
[E] 1st Paper Height Sensor 1 (Near End)

Air Assist Feed Mechanism

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.



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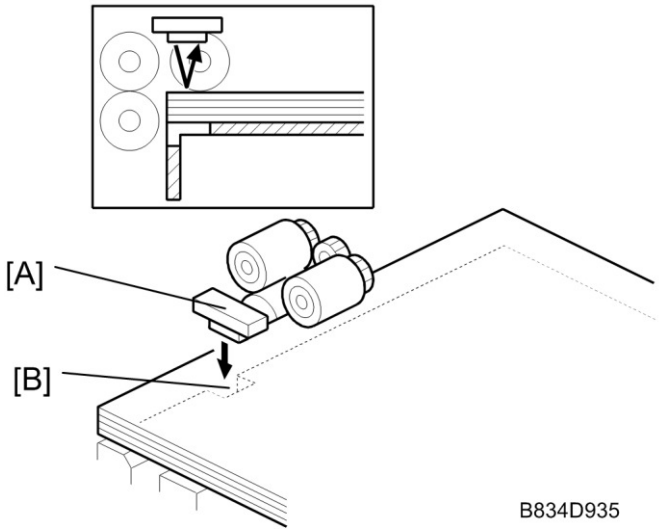
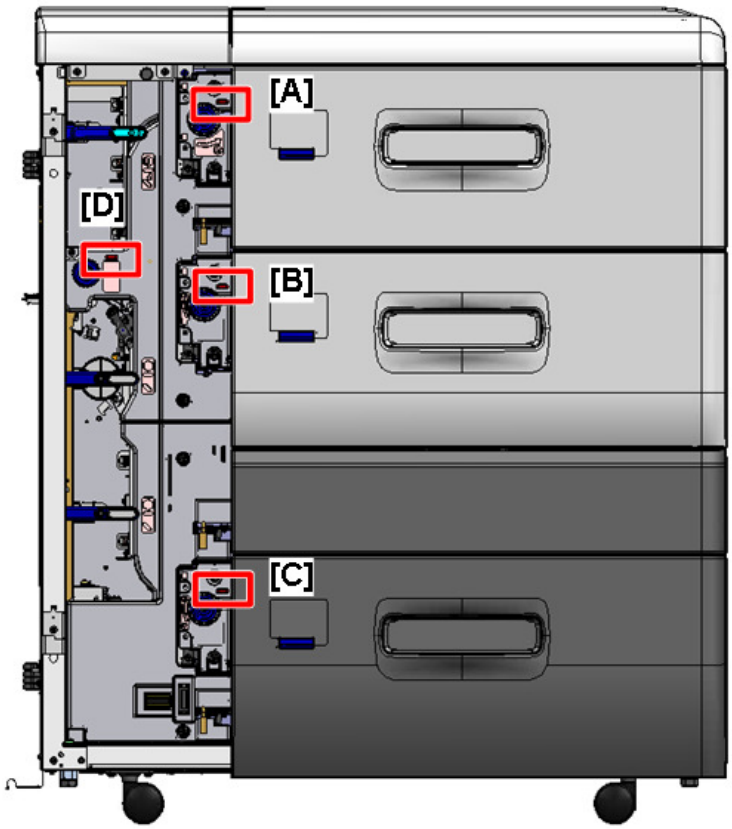
Paper End Detection

The paper end sensor [A] detects the top sheet of the paper in the tray by monitoring the reflected light. When the paper tray runs out of paper, the paper end sensor does not receive the reflected light due to the cutout [B]. Then, the tray lift motor rotates backwards 2 seconds to drop the tray bottom plate.



Jam Detection LED

An LED is installed on the inner cover where the front door is opened to indicate the position of a paper jam.



[A]: 1st tray jam LED

[B]: 2nd tray jam LED

[C]: 3rd tray jam LED

[D]: Paper exit jam LED

LED operation specifications

- The corresponding LED flashes when a jam occurs (also including initial jams) via the sensor that detects the position of remaining paper.
- Flahses when the front door is opened.
- If multiple jams occur in different locations, LEDs will flash simultaneously.

Sensor	1st tray jam LED	2nd tray jam LED	3rd tray jam LED	Paper eixt jam LED
1st Paper Feed Sensor	**F**	-	-	-
1st Transport Sensor	**F**	-	-	-
1st Relay Sensor 1	-	-	-	-
1st Relay Sensor 2	-	-	-	-
2nd Paper Feed Sensor	-	**F**	-	-
2nd Transport Sensor	-	**F**	-	-
2nd Relay Sensor	-	-	-	-

Sensor	1st tray jam LED	2nd tray jam LED	3rd tray jam LED	Paper eixt jam LED
3rd Paper Feed Sensor	-	-	**F**	-
3rd Transport Sensor	-	-	**F**	-
3rd Relay Sensor	-	-	-	-
LCT Exit Sensor	-	-	-	**F**

F: Flashing

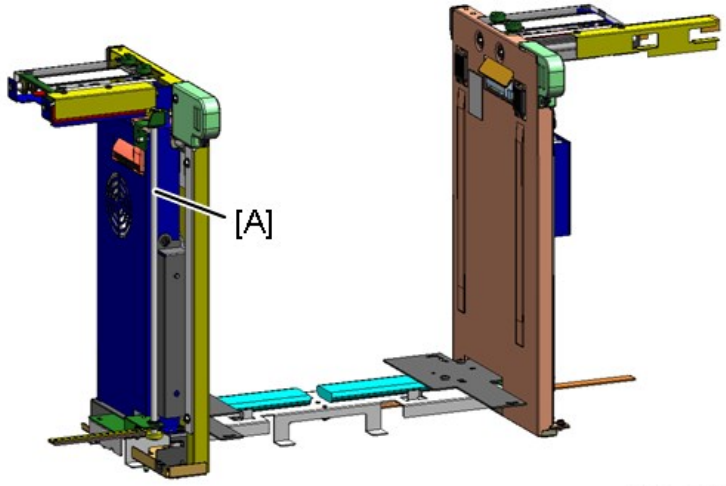
-:Not flashing

Increased the Rigidity of the Side Fence

A pole [A] is installed from the top to the bottom of the front side fence of the 2,000-sheet tray (2nd tray).

Consequently, rattling from the top part of the side fence is reduced, and it is easier to align the side fence with the width of the paper.

A pole is not installed in the 1,000-sheet tray (1st tray, or 3rd tray) because the side fence is short and little rattling occurs.



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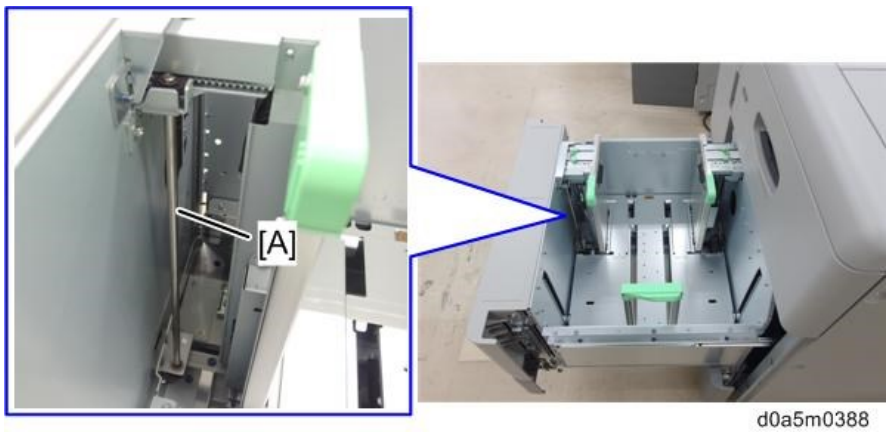

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