LCIT RT5070
Machine Code: D733

Field Service Manual
V1.1

March 2015

Revision History

This is the Revision History for the LCIT RT5070 (A4 LCT).

Version	Date	Changes
Ver. 1.1	31 Mar 2015	**Text, Illustrations**. In procedures the order of the text and illustrations has been reversed. For each step, the text description (action) is followed by the relevant illustration. The callouts [A], [B], [C] in text refer to the illustration below, not above.

Symbols, Abbreviations and Trademarks

Conventions

Symbol	What it means
	Binding screw (shoulder hexagonal head)
	Binding screw (round flathead)
	Black screw (heavy, fusing unit, TCRU)
	Bushing
	C-ring
	Clip
	Connector
	E-ring
	FFC (Flat Film Connector)
	FFC (Flat Film Connector)
	FFC (Flat Film Connector)
	Gear
	Harness clamp
	Harness clamp: metal: fusing unit
	Hook (or tab release: sensors)
	Knob screw (black)
	Knob screw (sliver)
	Pivot screw
	Screw: most common: silver
	Shoulder screw
	Shoulder screw (black)

Symbol	What it means
	Spring
	Standoff
	Stud screw
	Tapping screw (for plastic)
	Timing belt
	Washer

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

In this manual "Main Scan" means "Horizontal" and "Sub Scan" means "Vertical", both relative to 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.

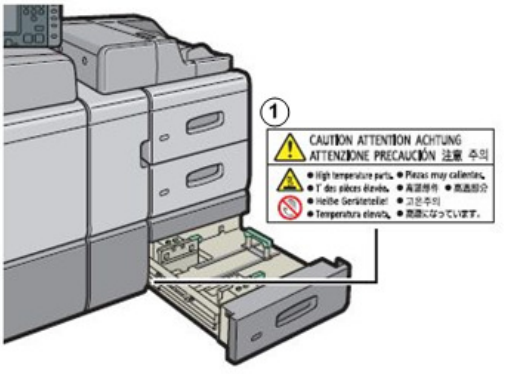
Important

- **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.

Safety Label



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①	This label indicates parts that reach high temperature during operation. To avoid personal injury, do not touch these parts.

Commonly Used Terms and Abbreviations

Here is a list of commonly used terms and abbreviations that are used throughout the Field Service Manual and Appendices.

Terms	Meaning
(ccw)	Counter-clockwise rotation of a drum, roller, gear, etc.
(cw)	Clockwise rotation of a drum, roller, gear, etc.
BF	Booklet Finisher SR5060 (D734)*1
BW	Black and white (monochrome) copying or printing
Bank	Paper Bank (1st, 2nd, 3rd Tray of the main machine)
CIT	Cover Interposer Tray CI5030 (D738)*1
CIT-PB	Cover Interposer Tray for Perfect Binder Type S1 (D736-2)*1
FIN	Finisher SR5050 (D735) (corner staple only, no booklets)*1
ITB	Image Transfer Belt
JG	Junction Gate

Terms	Meaning
LCIT	Large Capacity Input Tray. LCIT RT5080 (D732) or LCIT RT5070 (D733)*1
LD	Laser Diode (Laser Unit)
LE	Leading Edge
LSDB	Laser Synchronization Detection Board (Laser Unit)
MFU	Multi Folding Unit FD5020 (D740)*1
PCDU	Photoconductor Development Unit
PB	Perfect Binder GB5010 (D736)*1
PFU	Paper Feed Unit (Tray 1, Tray 2, Tray 3)
PTB	Paper Transport Belt (between PTR and fusing unit)
PTR	Paper Transfer Roller
RB	Ring Binder RB5020 (D737)
TCRU	Trained Customer Replacement Units
TE	Trailing Edge
TM/P	ID sensor. "ID sensor" is used in this manual. However, you may see "TM/P" in the SP codes on the operation panel.
TPU	Transit Path Unit for Perfect Binder Type S1 (D736)*1
TRM	Trimmer Unit 5040 (D520)*1
VTU	Vertical Transport Unit
*1	Optional peripheral devices.

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TABLE OF CONTENTS

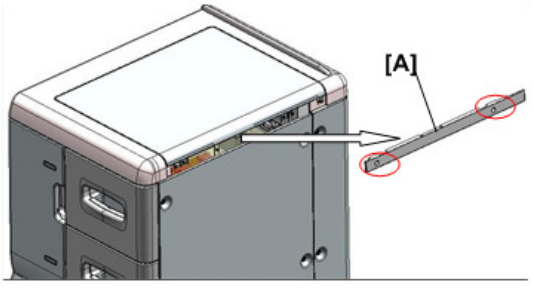
1. Replacement and Adjustment

Doors and Covers

Front Door and Covers

Top Covers, Rear Cover

1. Top right edge cover (x2).



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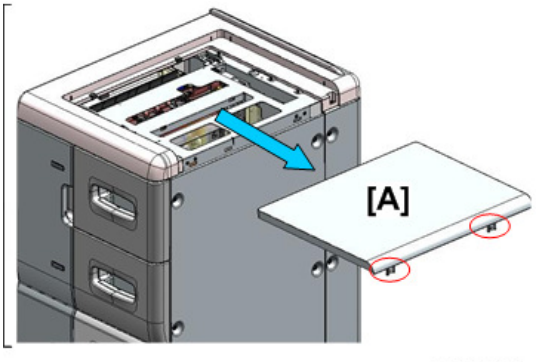
2. Disconnect top flat cover [A] and slide it in the direction of the arrow (x2).



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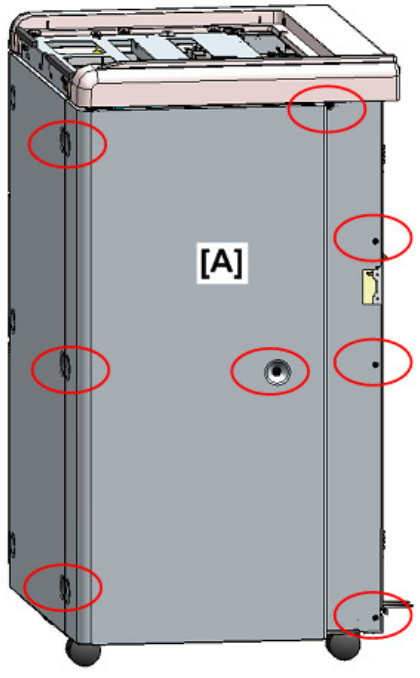
3. Remove rear cover [A] (x8).



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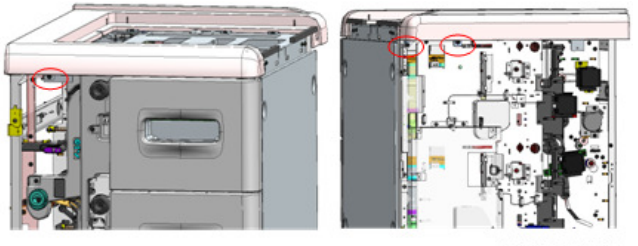
4. Remove left edge cover [A] (x11).



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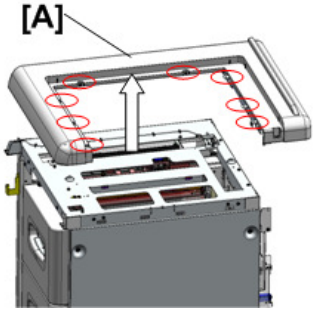
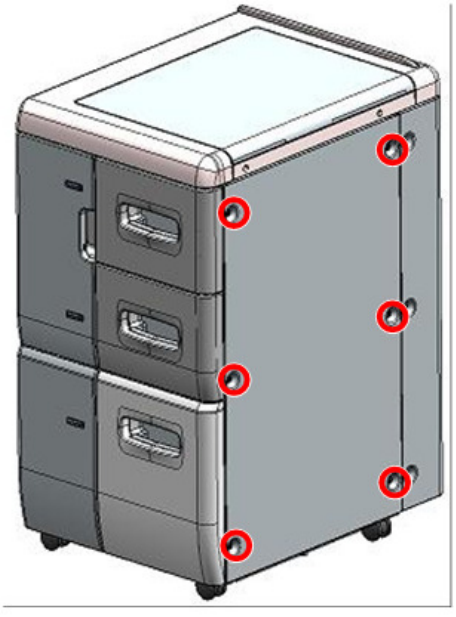


Right Cover

1. Remove right cover (x6)



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Door

1. Remove top covers. (See previous section.)
2. Free the harness, and then disconnect it (x2, x1).

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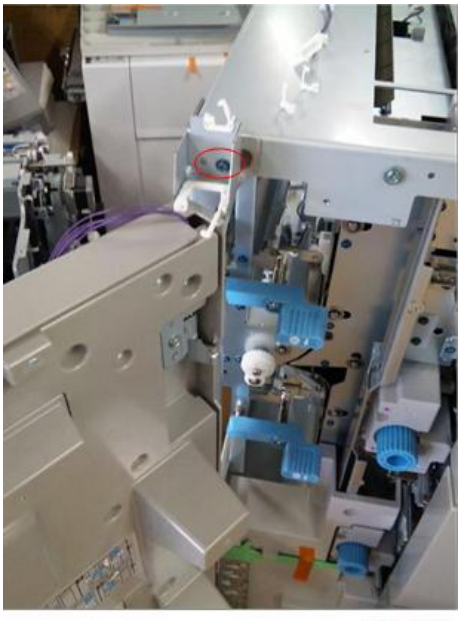
3. Remove bracket screw (x1).



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4. Lift door off its hinges, and then remove it.

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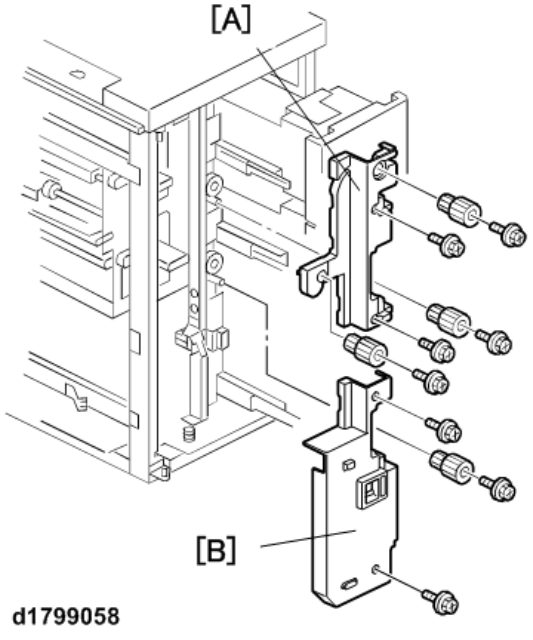
Inner Covers

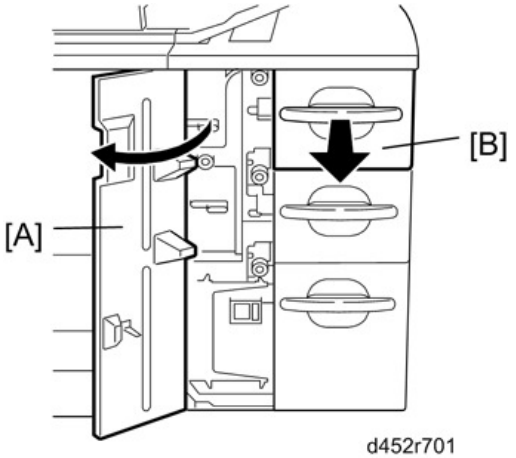
1. Remove inner cover [A] (x3, Knobs x3).
2. Remove inner cover [B] (x2, Knob x1).



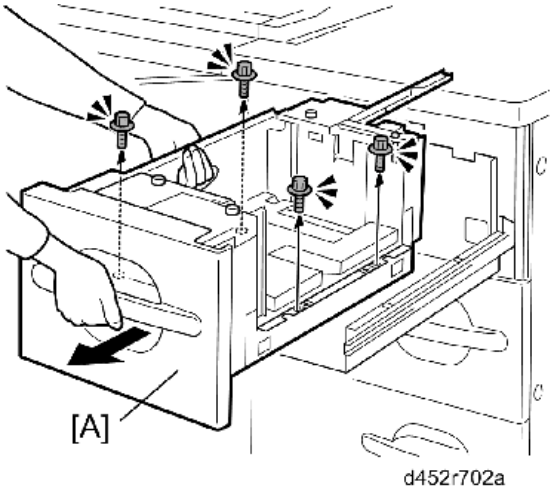
Trays

Top Tray (Tray 4)

1. Open the front door [A].
2. Pull open the top tray [B] until it stops.

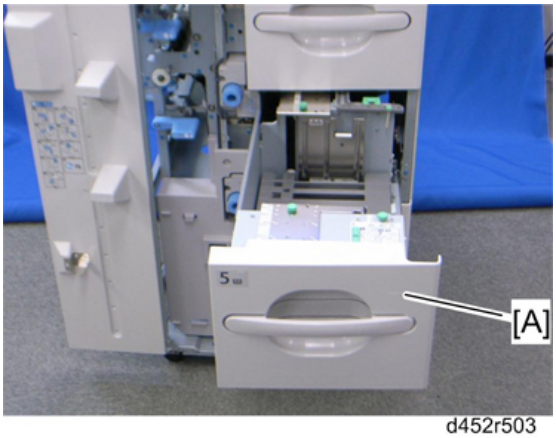


3. Lift the top tray [A] out of the drawer (x 4).



Middle Tray (Tray 5)

1. Open the front door.
2. Pull open the middle tray [A] until it stops.



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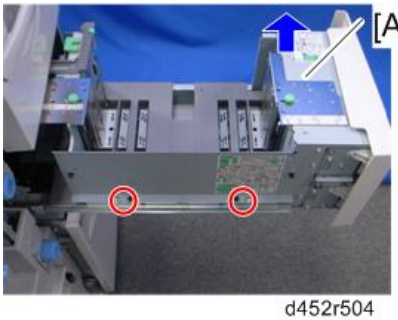
3. Lift the middle tray [A] out of the drawer (x 4, x 2).



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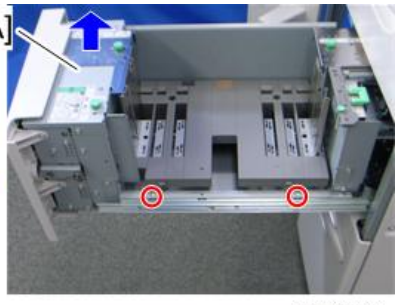

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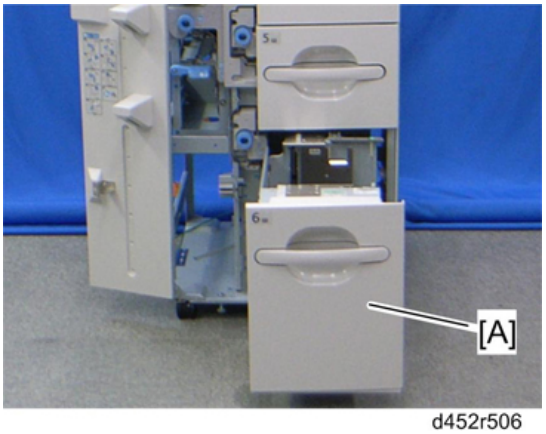
Bottom Tray (Tray 6)

1. Open the front door.
2. Pull open the bottom tray [A] until it stops.



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3. Lift the bottom tray [A] out of the drawer (x 4, x 2).

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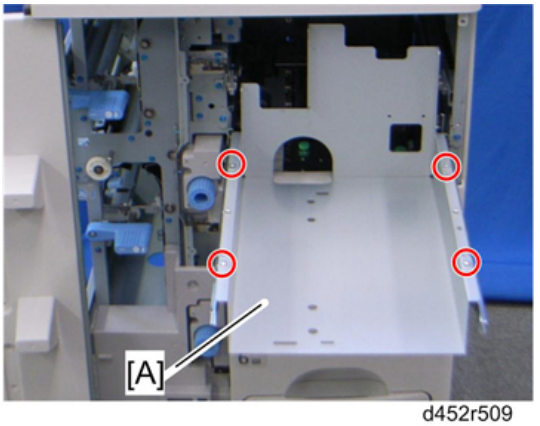
d452r508

Paper Feed

Paper Feed Units

Top Tray Paper Feed Unit

1. Open the front door.
2. Remove:
   - Inner upper cover (page 13)
   - Rear cover (page 9)
   - Top tray (page 14)
3. Cover bracket [A] (x 4)



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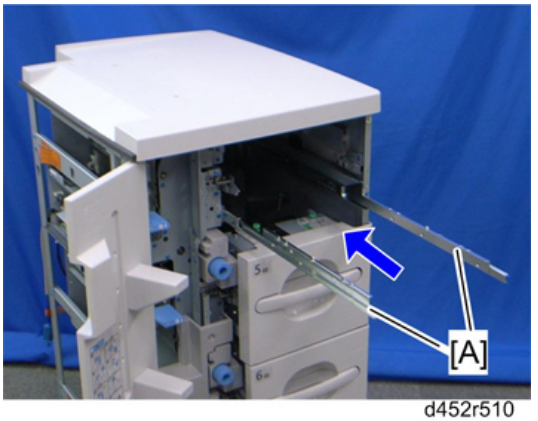
4. Push the slide rails [A] into the machine.



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5. Remove the screw [A] at the rear, indicated by the triangle mark.

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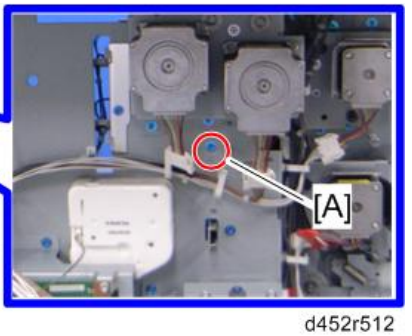
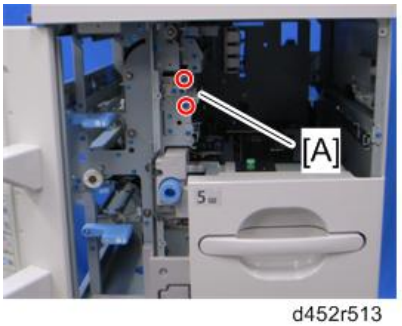


d452r512

6. Stay [A] (x 2)
7. Pull the paper feed unit [B], and then move it to the lower right side (x 2).



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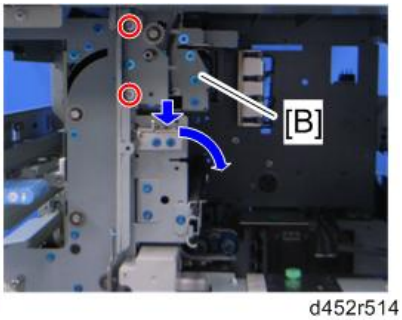
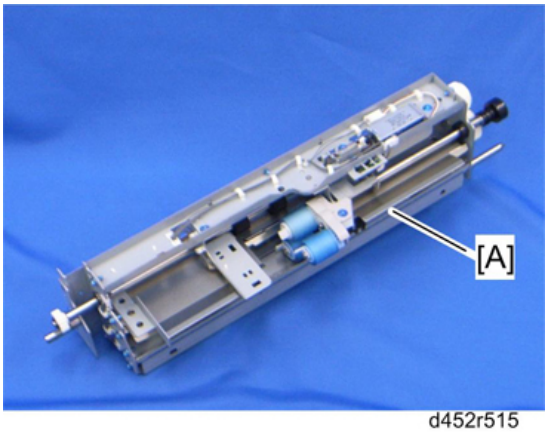


d452r514

8. Paper feed unit [A]



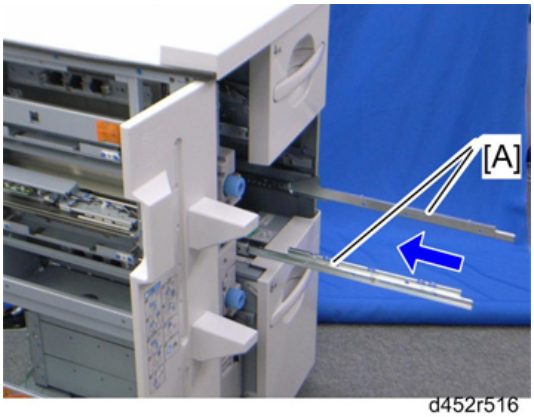
d452r515

Middle Tray Paper Feed Unit

1. Open the front door.
2. Remove: (page 9)
    - Inner upper cover

- Rear cover
- Middle tray

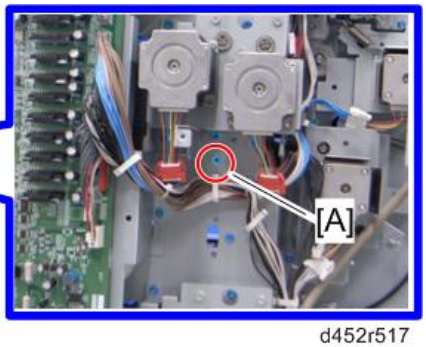
3. Push the slide rails [A] into the machine.



d452r516

4. Remove the screw [A] at the rear, indicated by the triangle mark.


d452r511



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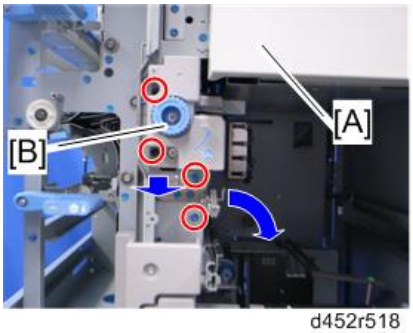
5. Pull out the top tray [A].
6. Pull the paper feed unit with stay [B], and then move it to the lower right side (x 2, x 2).
7. Stay [C] (x 2)
8. Paper feed unit [D]



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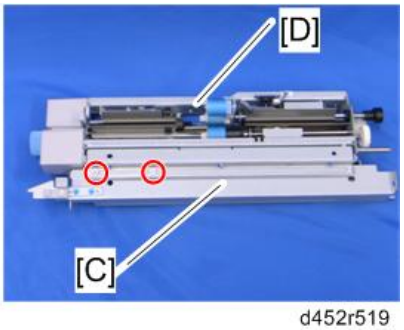
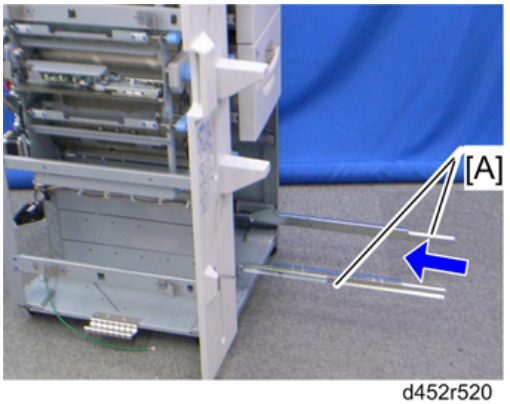


d452r519

Bottom Tray Paper Feed Unit

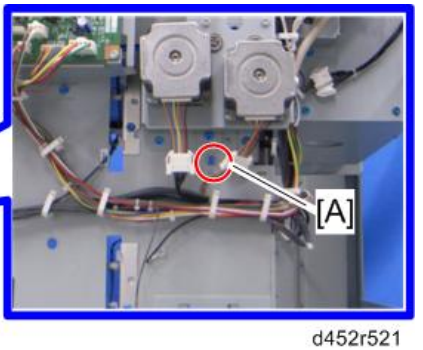
1. Open the front door.
2. Remove: (page 9)
   - Inner upper cover
   - Rear cover
   - Bottom tray
3. Push the slide rails [A] into the machine.



d452r520

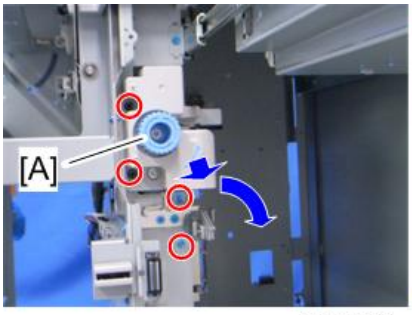
4. Remove the screw [A] indicated by the triangle mark at the rear.

d452r511



d452r521

5. Pull out the middle tray.
6. Pull the paper feed unit with stay [A], and then move it to the right-lower side (x 2, x 2).
7. Stay [B] (x 2)
8. Paper feed unit [C]



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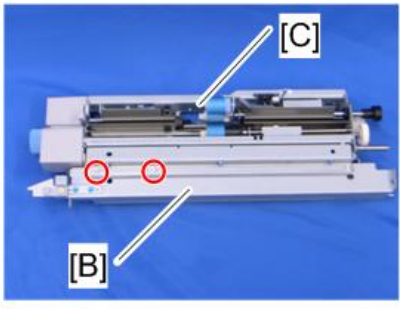


d452r519

Paper Feed, Separation and Pickup Rollers

⚠CAUTION

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

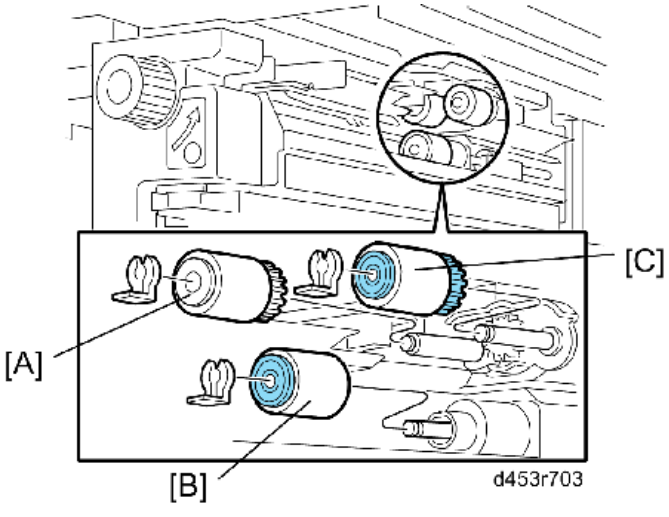
Top Tray

1. Top tray (page 14)
2. Remove:

   [A]: Paper feed roller (x 1)

   [B]: Separation roller (x 1)

   [C]: Pickup roller (x 1)



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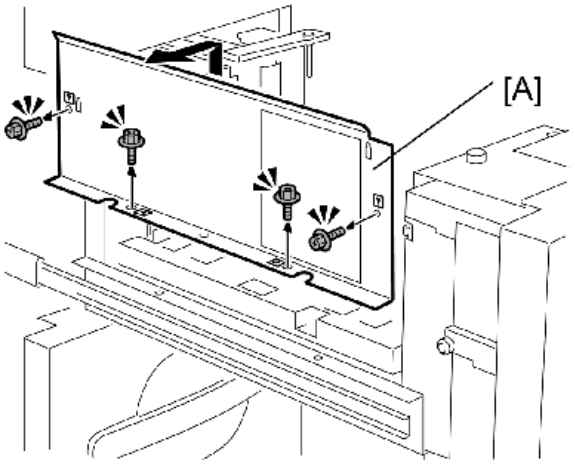
Middle, Bottom Tray

1. Middle tray or Bottom tray
2. Inner upper cover for the middle tray or Inner lower cover for the bottom tray (page 13)
3. Tray side plate [A] (x 4).

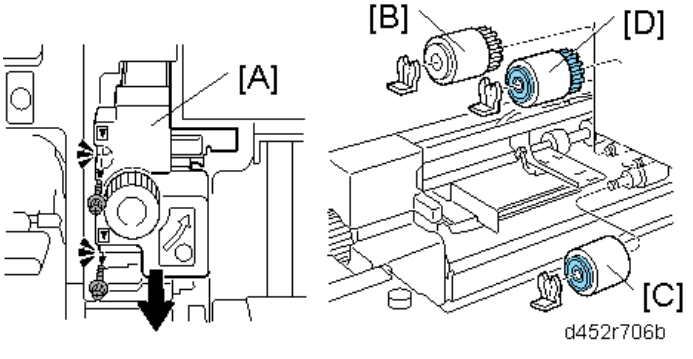


4. Pull the paper feed unit [A].
5. Remove:

   [B]: Paper feed roller (x 1)

   [C]: Separation roller (x 1)

   [D]: Pickup roller (x 1)



Motors

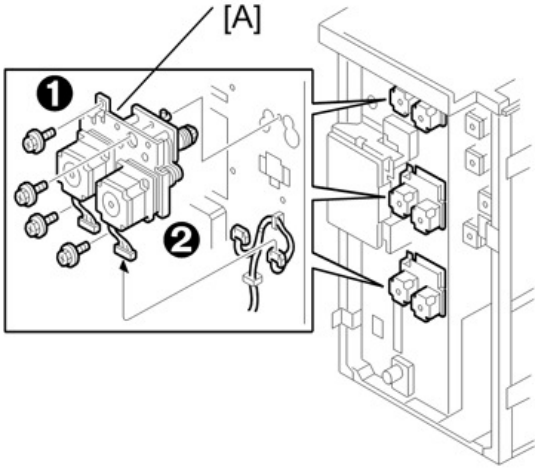
Paper Feed, Grip Motors

Each paper feed unit has a paper feed motor ① and a grip motor ②.

The removal procedure is the same for each feed tray.

Remove:

1. Remove rear cover. (page 9)
   [A] Motor unit (x4, x2)



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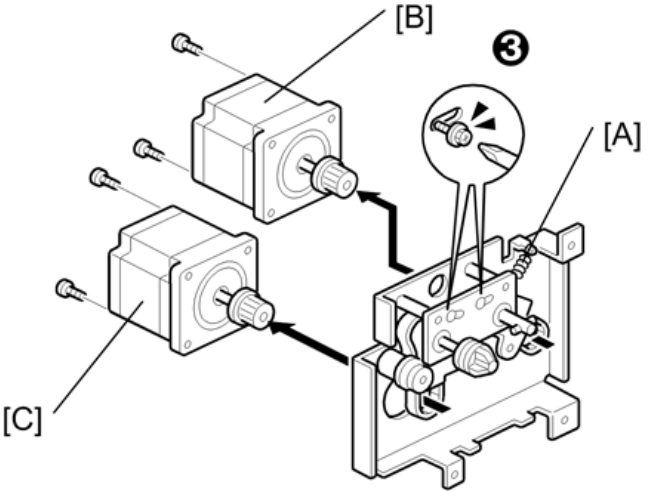
[A] Springs (x 2), First, loosen the screws ③ (x2)

[B] Paper feed motor (x2)

[C] Grip motor (x2)



B832R109A

Reinstallation

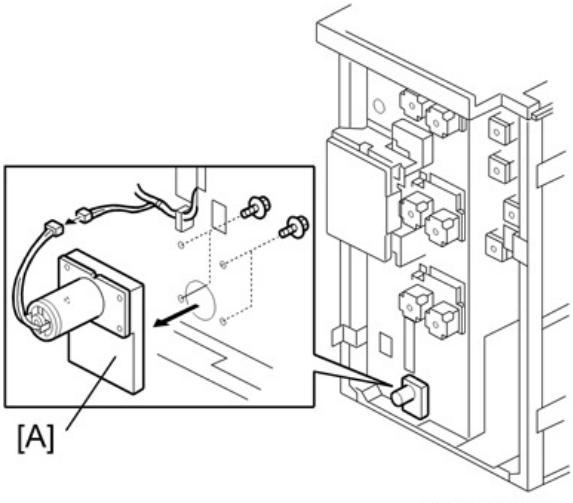
- Attach the tension spring, and then tighten the screws ③ to tighten the belts.

6th Lift Motor

Remove: (page 9)

- Rear cover
- Right cover

[A] 6th lift motor (x 4, x1)



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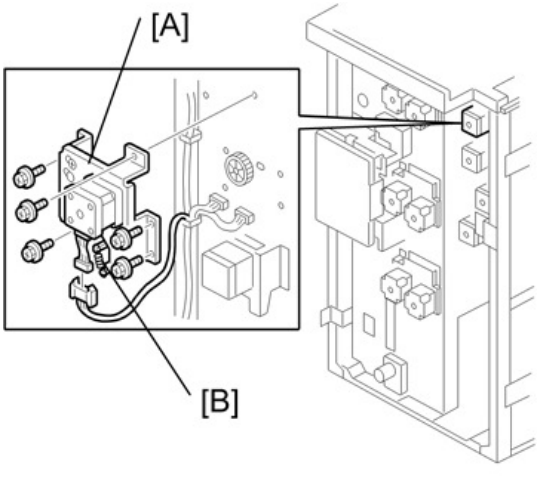
4th Transport Motor

Remove:

- Rear cover (page 9)

[A] 4th Transport motor unit (x 5, x 1).

[B] Spring (x1). First, loosen screw ① (x 1).



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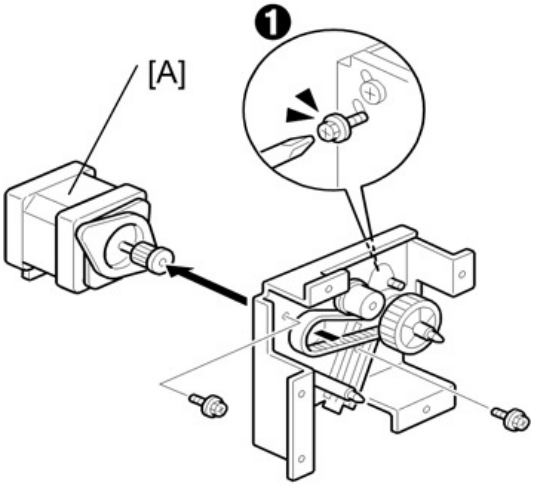
[A] 4th transport motor (x2, x1)



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Reinstallation

- Be sure that the tension spring is connected, then tighten the screw ①.

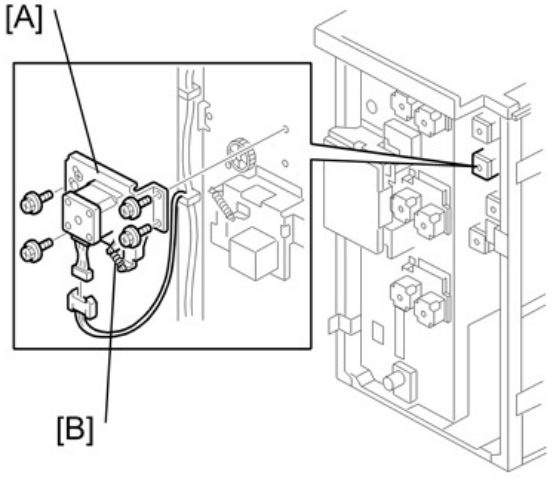
5th Transport Motor

Remove:

- Rear cover (page 9)

[A] Motor unit (x4, x 1).

[B] Spring (x1). First, loosen screw ① (x 1).



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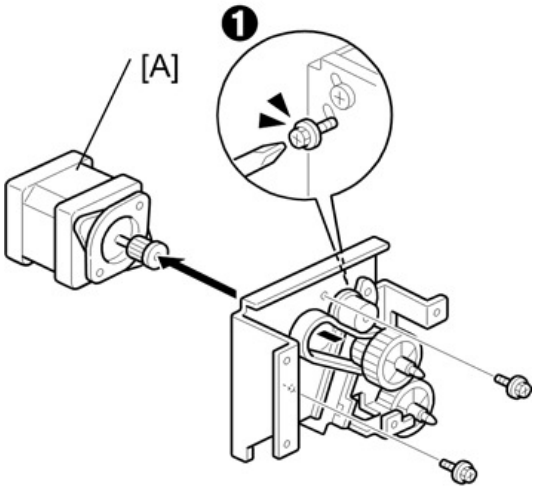
[A] 5th Transport motor (x2, x1)



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Reinstallation

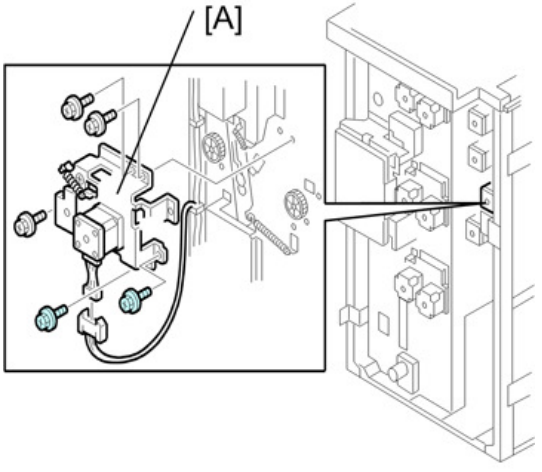
- Be sure that the tension spring is connected, then tighten the screw ①.

LCT Exit Motor

Remove:

- Rear cover (page 9)

[A] Motor unit (x6, x 1).



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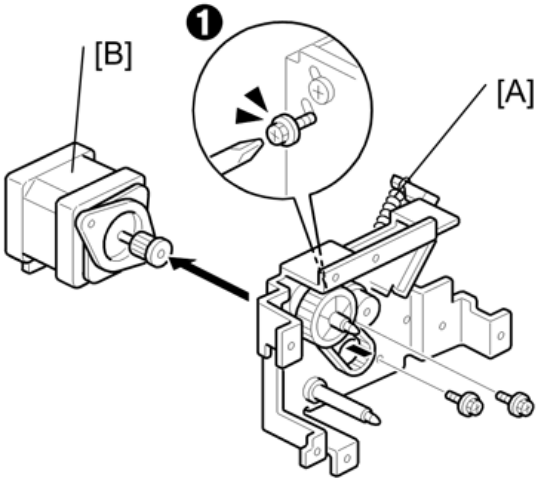
[A] Spring (x1). First, loosen screw ① (x 1).

[B] LCT exit motor (x2, x1)



B832R109H

Reinstallation

- Be sure that the tension spring is connected, then tighten the screw ①.

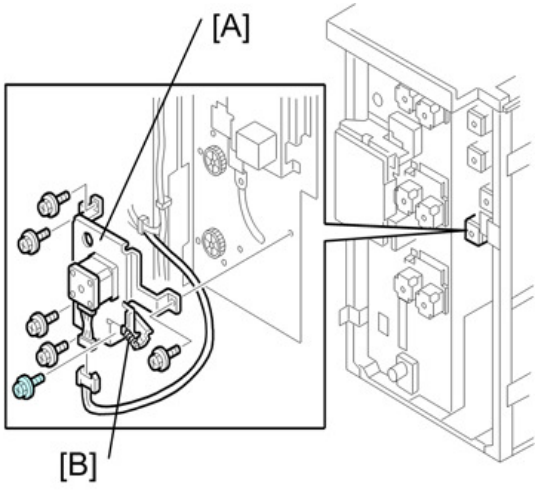
6th Transport Motor

Remove:

- Rear cover (page 9)

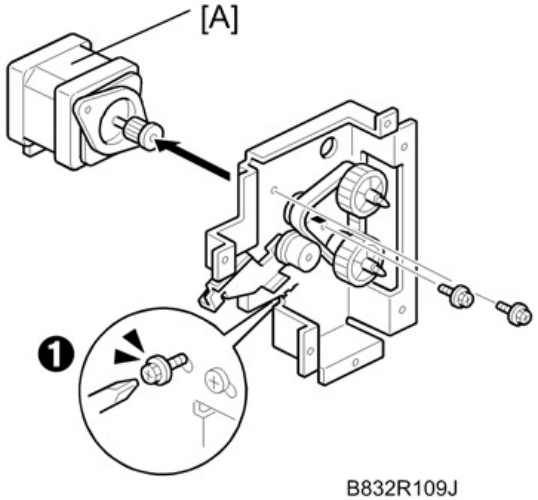
[A] Motor unit (x6, x 1).

[B] Spring (x1). First, loosen screw ① (x 1).



B832R109I

[A] LCT exit motor (x2, x1)



B832R109J

Reinstallation

- Be sure that the tension spring is connected, then tighten the screw ①.

4th, 5th Lift Motors

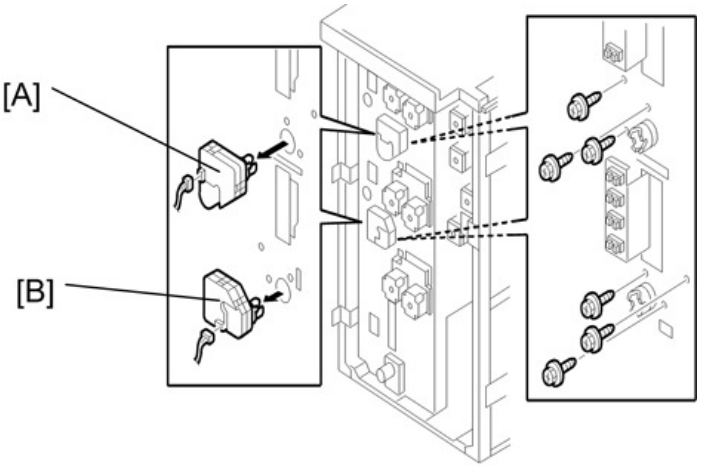
Remove:

- Rear cover (page 9)

- Main control board bracket (page 34)

[A] 4th lift motor (x3, x 1)

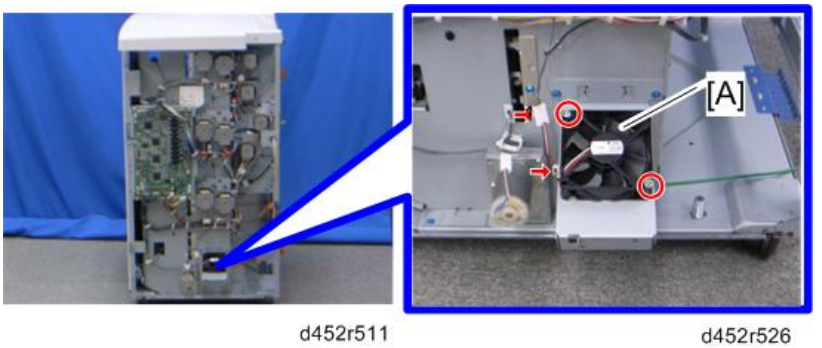
[B] 5th lift motor (x3, x 1)



B832R109L

Cooling Fan

1. Rear cover. (page 9)
2. Cooling fan [A] (x 2, x 1, x 1)



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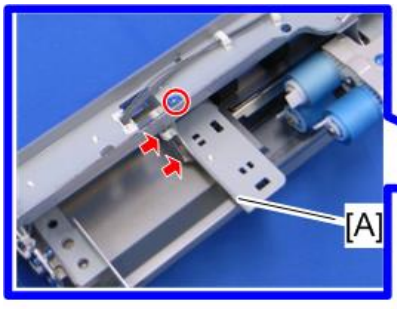
Important

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

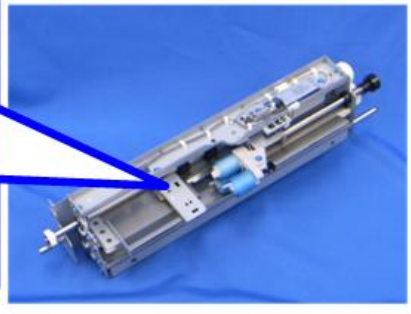
Electrical Components

Paper Feed and End Sensors

1. Paper feed unit (page 17)
2. Sensor bracket [A] (x 1, x 3, x 1)



d452r528

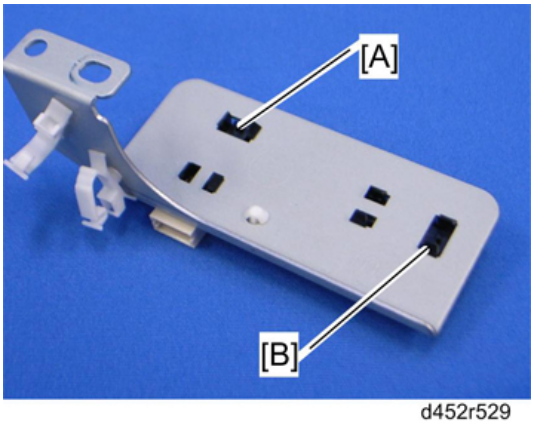


d452r515

3. Remove:

   [A]: Paper feed sensor (hooks)

   [B]: Paper end sensor (hooks)



d452r529

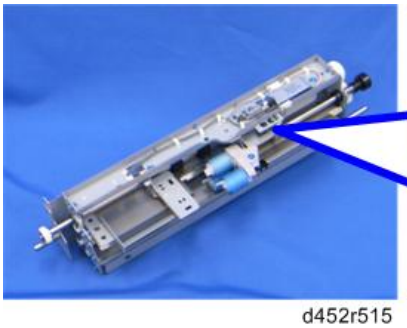
When reinstalling the sensor bracket

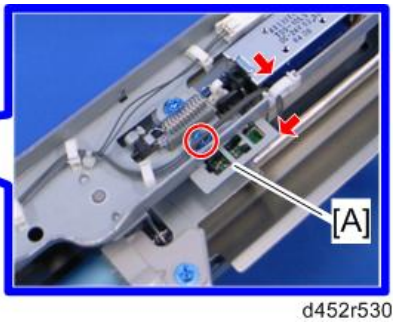
- Make sure that the white connector is connected to the paper feed sensor and the red connector is connected to the paper end sensor.

Lift Sensor

1. Paper feed unit (page 17)

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





3. Lift sensor [A] ( )

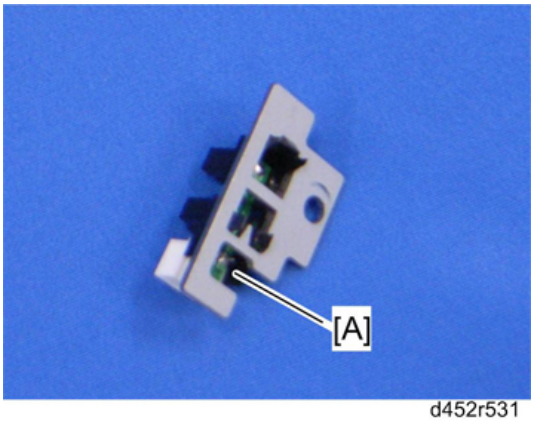


Image Position Sensor Board, Exit Sensor

Image Position Sensor

1. Disconnect the LCT from the copier.
2. Remove:

   [A] Harness cover (x1, x1)

   [B] Image position sensor unit (x1, x1, x1)

   [C] Stopper (x1)

   [D] Image position sensor

- After replacing the image position sensor, do the procedure for image position sensor adjustment. (page 36)

Image Position Sensor Board

1. Remove:

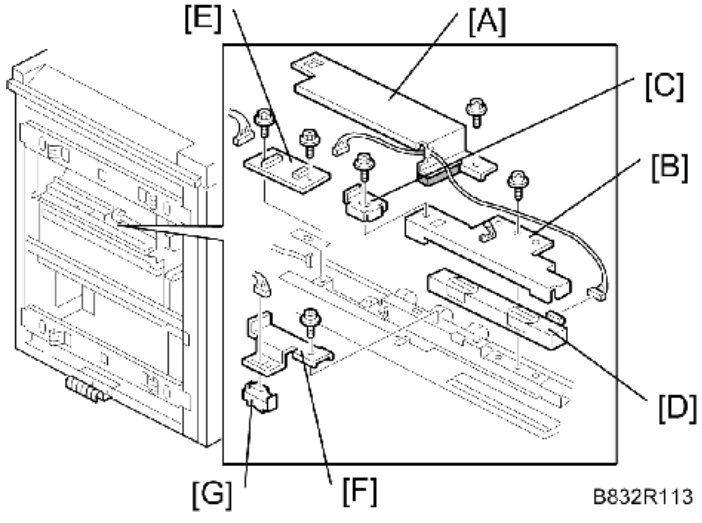
   [E] Image position sensor board (x2, x1, x 2)

Exit Sensor

1. Remove:

   [F] Exit sensor unit (x1, x1, x 1)

   [G] Exit sensor



Paper Height Sensors, Paper Size Sensors

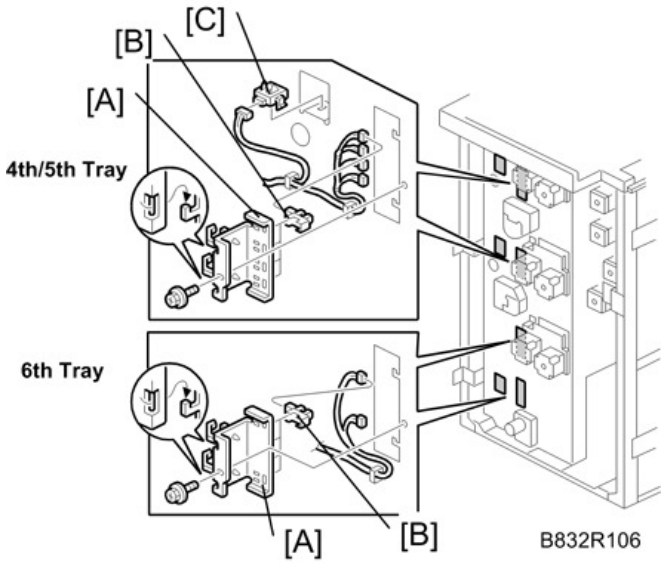
Remove:

- Rear cover (page 9)
- Right cover (page 9)

  [A] Paper height sensor unit (x2, x 1, x 4).

  [B] Paper height sensors (x 4 each)

  [C] Paper size sensors (x 1 each)



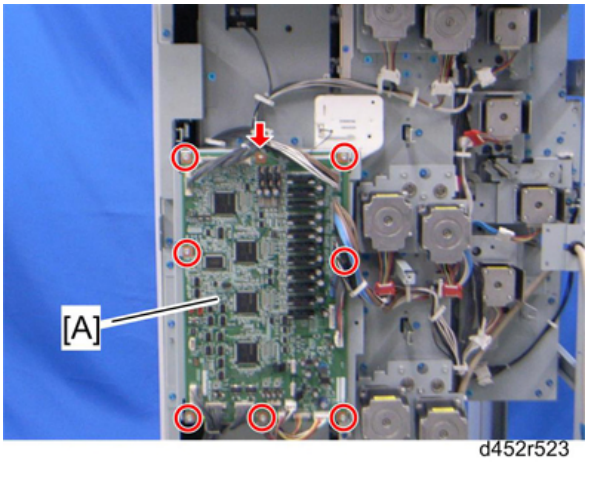
Main Control Board

Main Board

Remove:

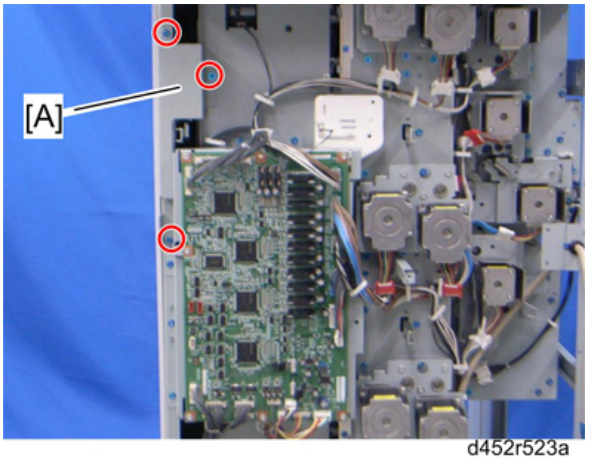
- Rear cover (page 9)

  [A] Main control board (x 7, x 1, x All)



Main Control Board Bracket

1. Rear cover (page 9)
2. Bracket [A] (x 3)



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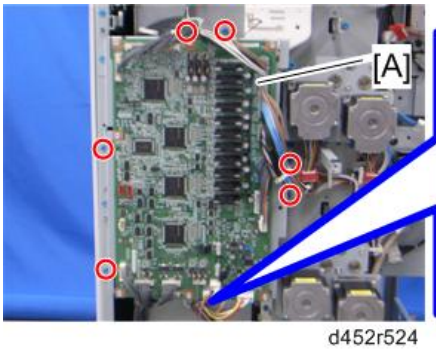
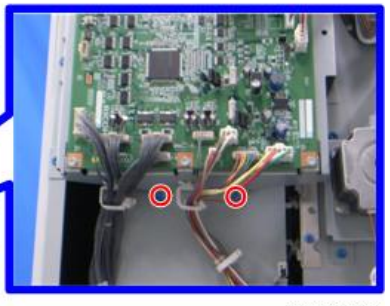
3. Main control board bracket [A] (x 8, x 3, x All)



d452r524

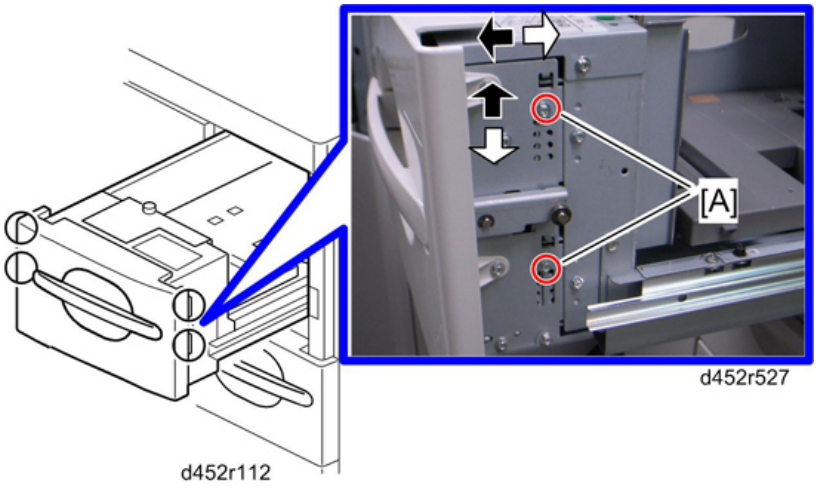

d452r525

Adjustment

Side Registration Adjustment

Normally the side registration of the image can be adjusted with SP1002 004-006 (Side-to-Side Registration – Tray 4, 5, 6). When the punch hole positions are not aligned from a particular feed station, adjust the side registration by changing the tray cover position for the tray, as described below. Then adjust the side registration of the image with SP1002.

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

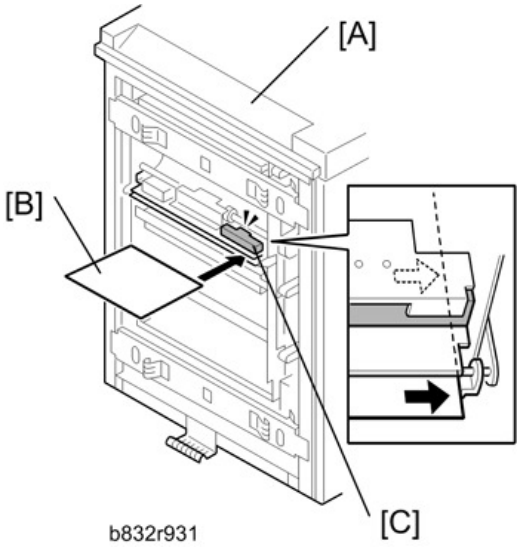


Important

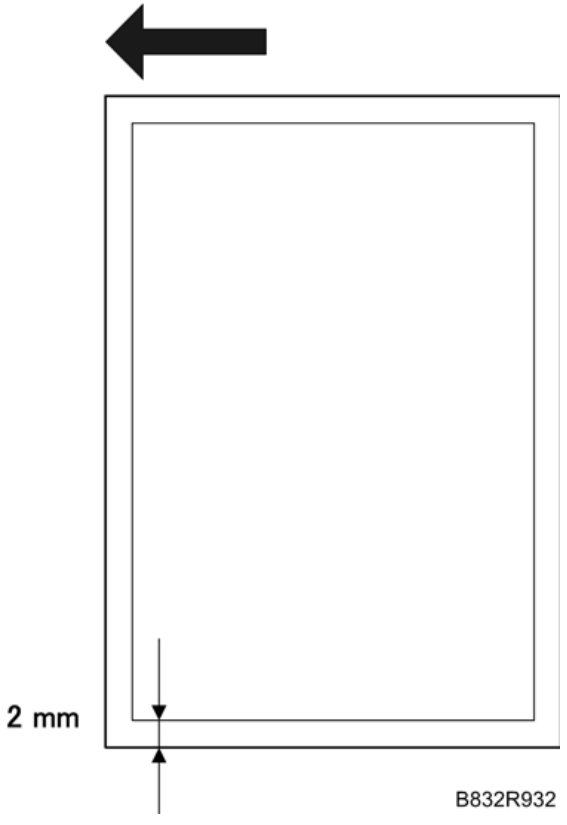
- **Adjustment range: 0 ± 2.0 mm adjustment step: 0.5 mm/step.**

Adjusting Image Position Sensor Strength and Side-To-Side Registration

1. Turn off the main power of the main machine.
2. Disconnect the LCT from the mainframe with the LCT [A] separated from the mainframe, reconnect the LCT cable to the mainframe.
3. Turn on the main power switch.
4. Insert one sheet of plain white paper [B] in the paper path.
5. Make sure that the paper covers the entire area below the image position sensor (CIS) [C].



6. Enter the SP mode and do SP1910-002 (CIS Image Position Adjustment: LED Strength - LCT). This calibrates the amount of light to be emitted from the CIS.
7. Do SP1909 002 (CIS Image Position Adjustment: PWM After Adjustment - LCT).
    - If the displayed value is between Ah (10) and 28h (40), the CIS is calibrated successfully. (The display is in hexadecimal code.)
    - If the value is outside this range, do SP 1910-002 and 1909-002 again. If the value does not come between Ah and 28h, the CIS may be defective.
8. Exit the SP mode.
9. Reinstall the LCT to the side of the copier.
10. Push [User Tools]> [Adjust Settings for Operators].
11. Do "0111-4 to -7" for Trays 4, 5, 6, 7 and set the value for each tray to "Off".
12. Exit from [User Tools] > [Adjust Settings for Operators] and return to the SP mode menu.
13. Adjust the image positions in the main scan direction.
    - Do SP2902-003, select Pattern 27, then print the trimming pattern.
    - Do SP1002 and adjust the image position in the main scan direction for Trays 4, 5, 6, and 7.
    - Print the trimming pattern from each tray of the LCT and from the bypass tray (if installed).
    - To do this, touch "Copy Window" in the SP display, select a tray, then push [Start].
    - The distance of the test pattern line from the paper edge for each tray must be 2 mm. If it is not 2 mm, adjust with SP1002-004 to -007, depending on which tray is not within the specified 2 mm.



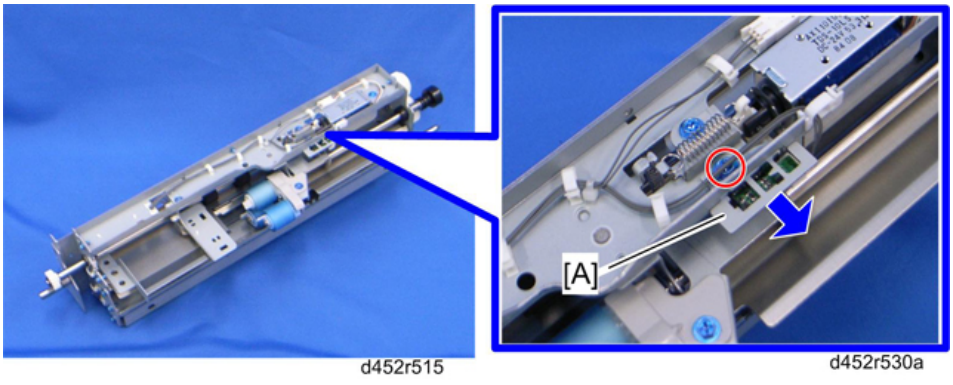
14. Do SP1912-002 (CIS Image Position Adjustment: Normal Paper). This sets the CIS for operation with standard copy paper.
15. Exit the SP mode.
16. Push [User Tools]> [Adjust Settings for Operators].
17. Once again, do "0111-4 to -7" (CIS Image Position Adjustment: Feed Setting) and reset the values for Trays 4, 5, 6, and 7 to "On".

Double Feed Problem from the LCT

If double feed occurs several times when paper is fed from an LCT, 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 page 17
2. Loosen the screw on the lift sensor bracket [A].
3. Move the bracket 0.7 mm in the arrow direction as shown above.
4. Tighten the screw on the lift sensor bracket [A].



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Important

- To return the upper limit position to the default position, move the paper lift sensor bracket 0.7 mm to the opposite side.
- Return the upper limit position to the default if a paper jam occurs at the paper feed sensor in the LCT.

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