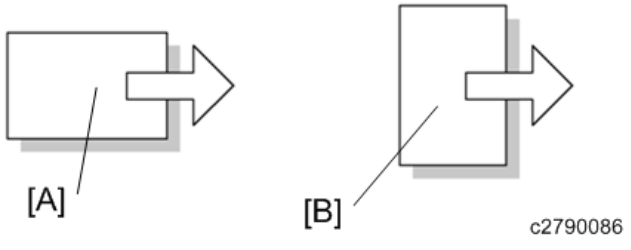
LCIT PB3170/PB3230
Machine Code: D695
Field Service Manual

May, 2016

Symbols, Abbreviations and Trademarks

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

	Clip ring
	Screw
	Connector
	Clamp
SEF	Short Edge Feed [A]
LEF	Long Edge Feed [B]



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1. Replacement and Adjustment

Rear Cover

The Aim of Anti-tip Components and Precautions

The anti-tip components are necessary for meeting the requirements of IEC60950-1, the international standard for safety.

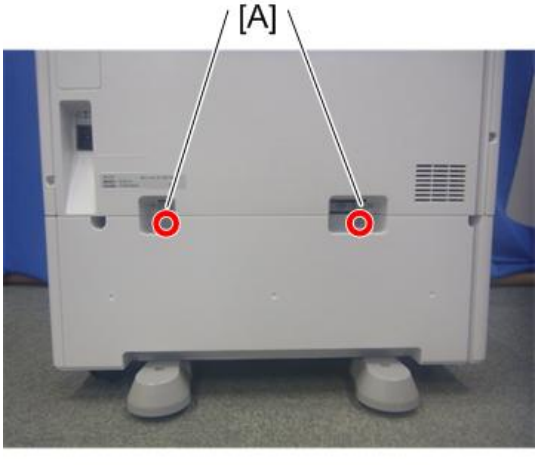
The aim of these components is to prevent the products, which are heavy in weight, from toppling as a result of people running into or leaning onto the products, which can lead to serious accidents such as persons becoming trapped under the product. (U.S.: UL60950-1, Europe: EN60950-1)

Therefore, removal of such components must always be with the consent of the customer.

Do not remove them at your own judgment.

Rear Cover

1. **Connecting brackets [A] (2 brackets, ×2)**



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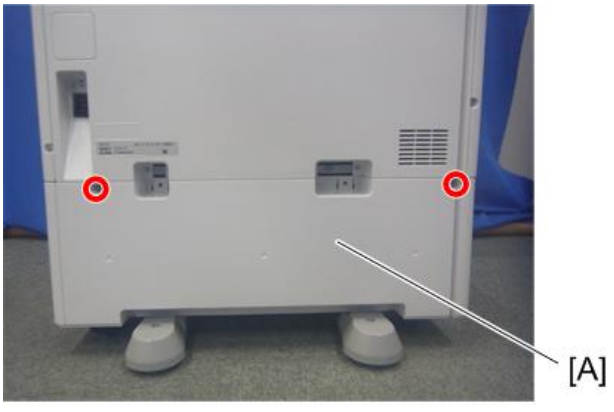
2. Rear cover [A] (×2)



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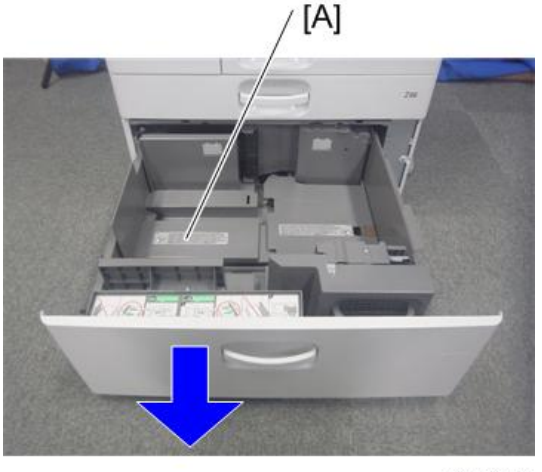
Left and Right Trays

Left and Right Trays

1. Open the paper tray [A].

d1462747

2. Left tray [A]



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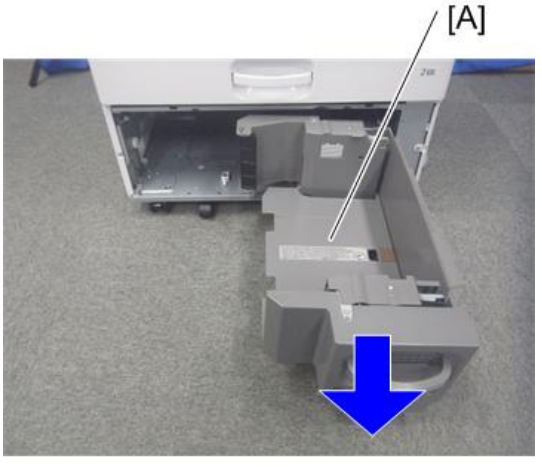
3. Right tray [A]



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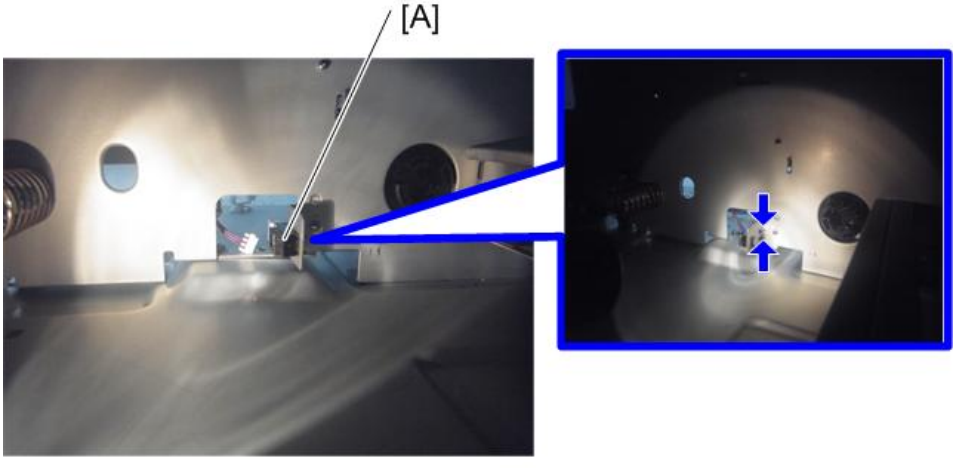
Left Tray Paper Sensor

Left Tray Paper Sensor

1. Left tray (page 7)
2. Rear cover (page 5)
3. Left tray paper sensor [A] (×1)



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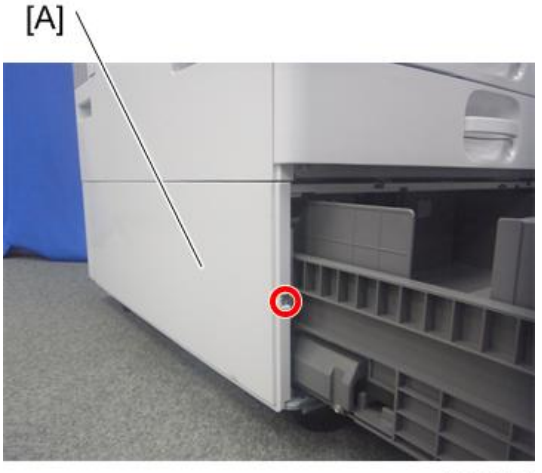
Paper Transfer Home Position Sensor

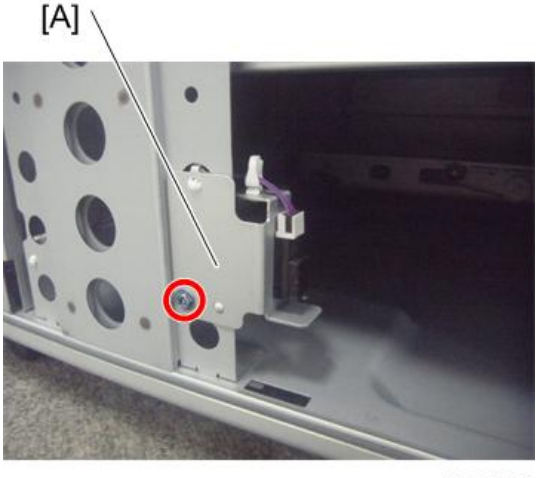
Paper Transfer Home Position Sensor

1. Open the paper tray.
2. Left cover [A] (×1)



d1462751

3. Paper transfer home position sensor unit [A] (×1, ×1, ×2)



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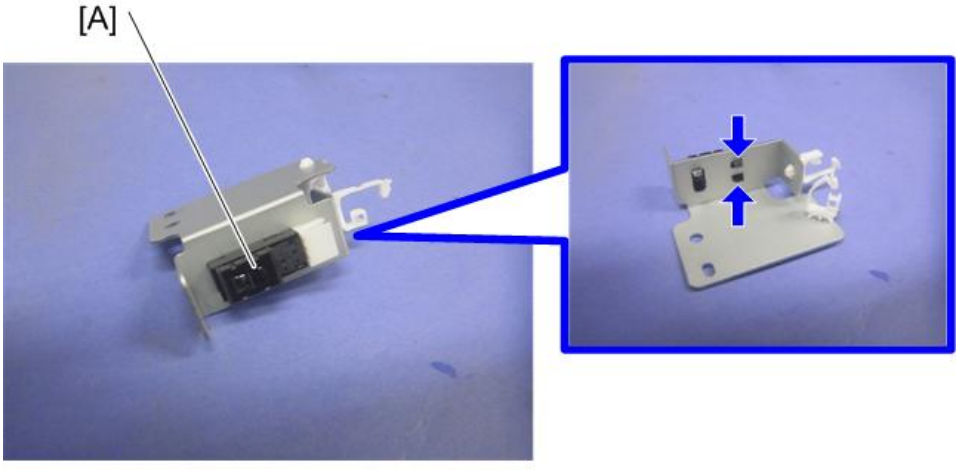
4. **Paper transfer home position sensor [A]**



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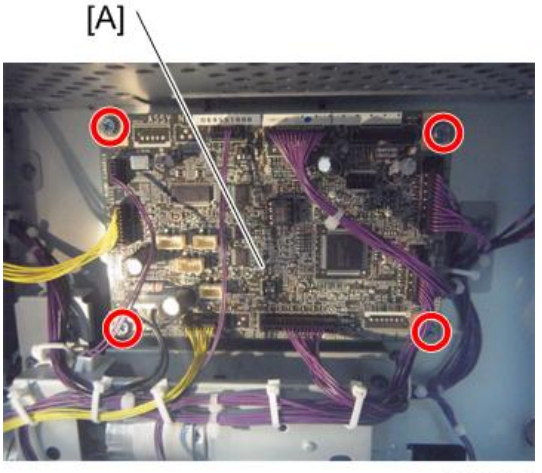
Controller Board

Controller Board

1. Rear cover (page 5)
2. Controller board [A] (×4, ×9)



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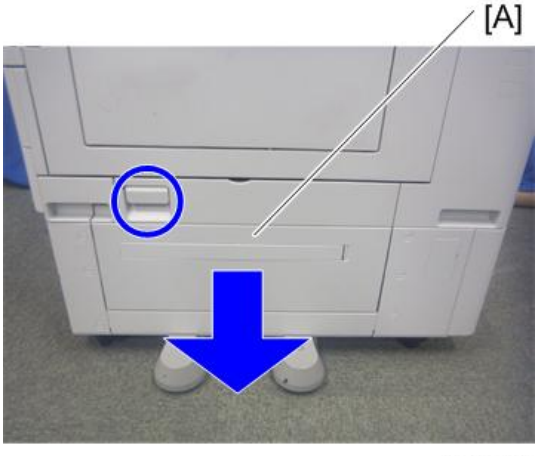
Paper Feed Unit

Paper Feed Unit

1. Open the paper tray.
2. Open the paper transport cover [A].



d1462767

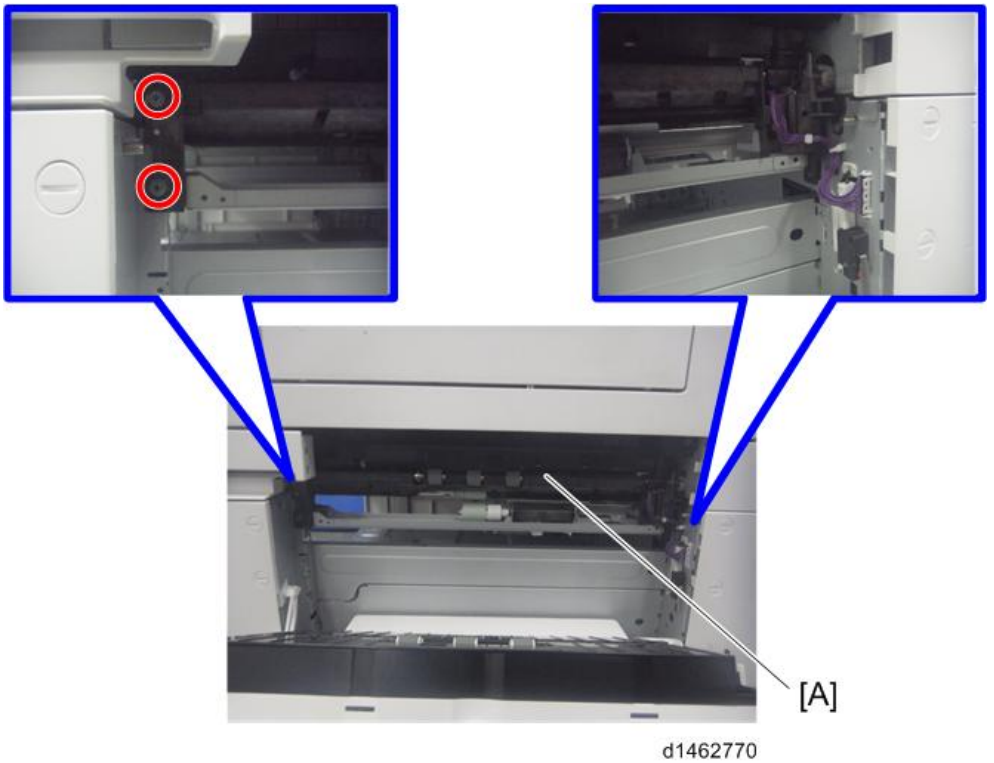
3. Interlock switch cover [A] (×1)

d1462768

4. **Paper feed guide plate [A]**

d1462769

5. **Paper feed unit [A] (×2, ×1, ×1)**

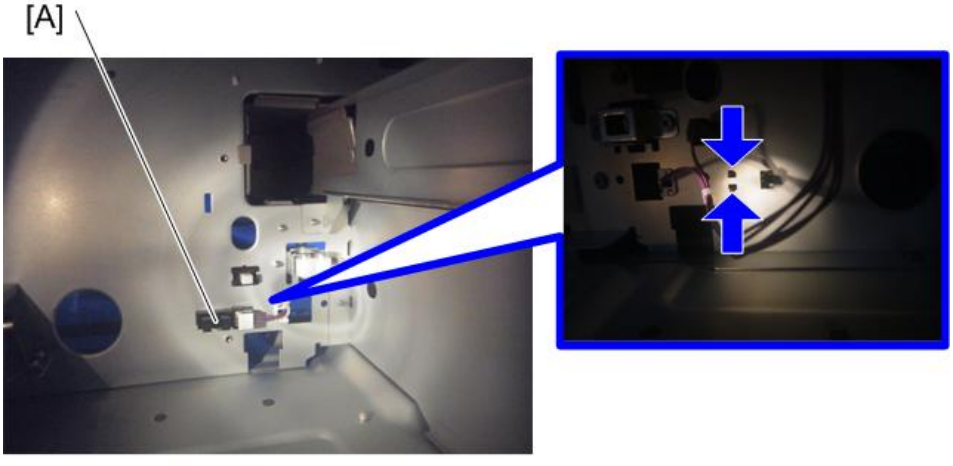


d1462770

Lower Limit Sensor

Lower Limit Sensor

1. Right tray (page 7)
2. Rear cover (page 5)
3. Tray lift/paper transfer unit (page 18)
4. Lower limit sensor [A] (×1)

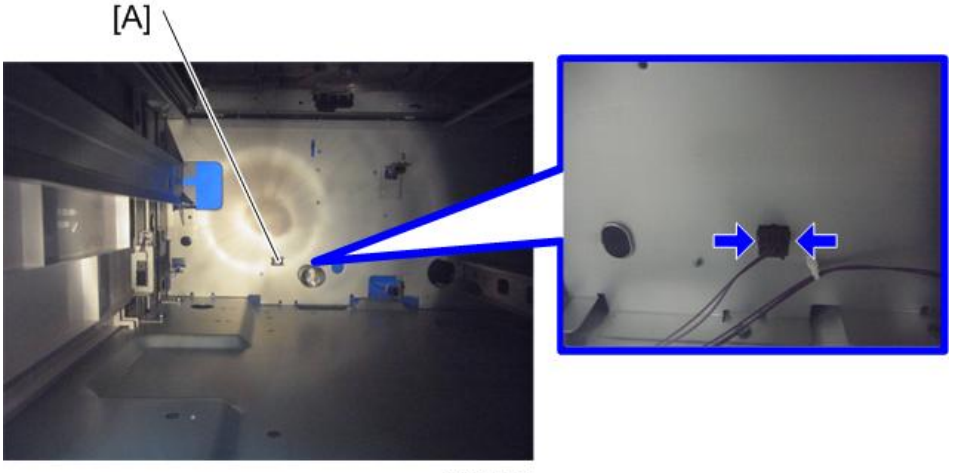


d1462762

Left Tray Set Sensor Switch

Left Tray Set Sensor Switch

1. Left tray (page 7)
2. Rear cover (page 5)
3. Left tray set sensor switch [A] (×1)

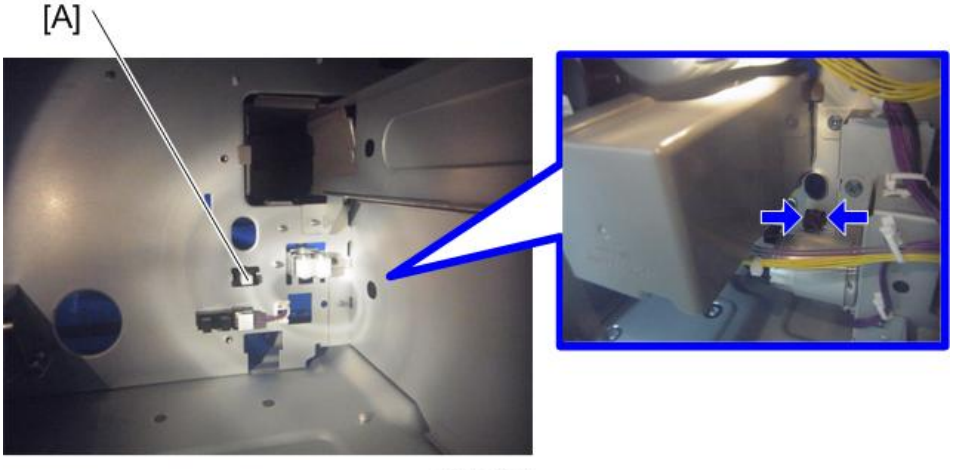


d1462763

Right Tray Set Sensor Switch

Right Tray Set Sensor Switch

1. Right tray (page 7)
2. Rear cover (page 5)
3. Right tray set sensor switch [A] (×1)

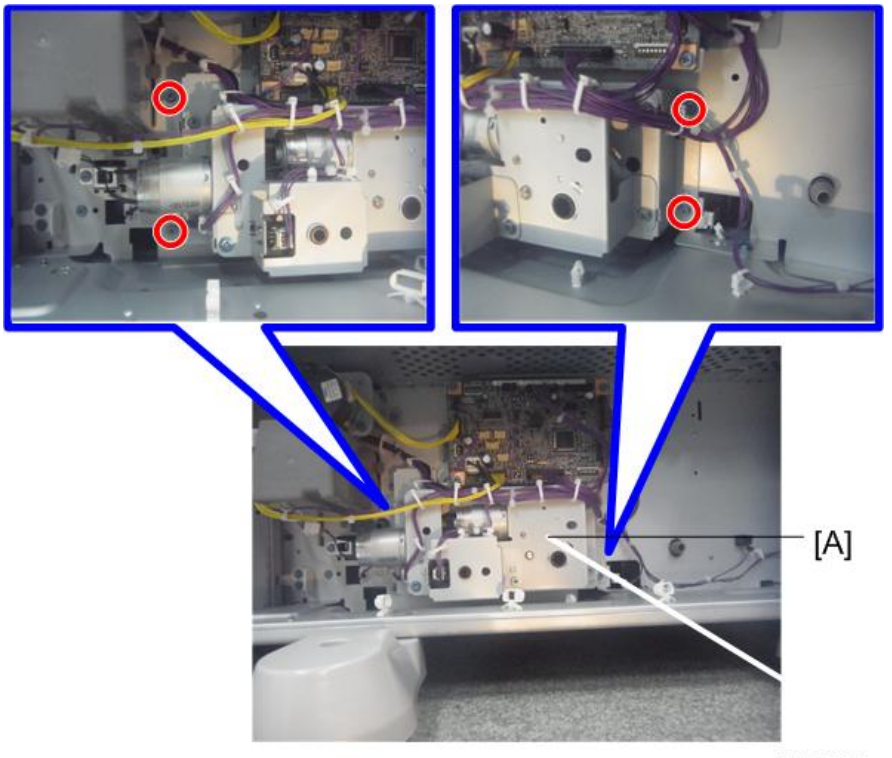


d1462764

Tray Lift/Paper Transfer Unit

Tray Lift/Paper Transfer Unit

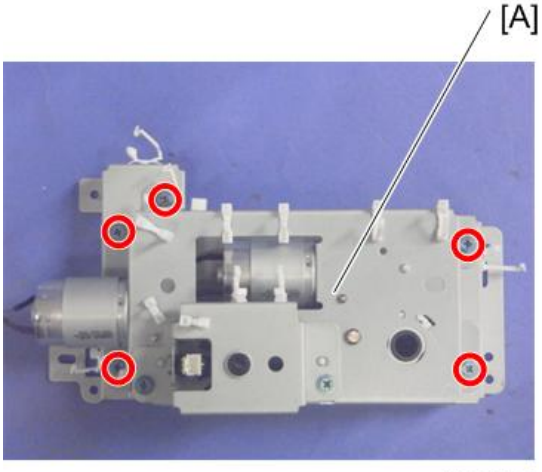
1. Rear cover (page 5)
2. Tray lift/paper transfer unit [A] (×4, ×3, ×14)



Tray Lift Motor

Tray Lift Motor

1. Tray lift/paper transfer unit (page 18)
2. Tray motor unit [A] (×5)



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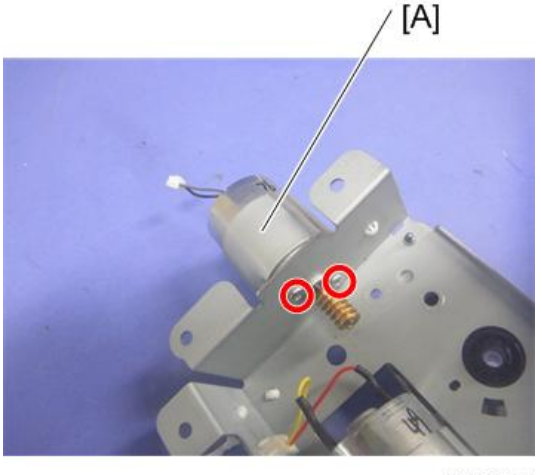
3. Tray lift motor [A] (×2)



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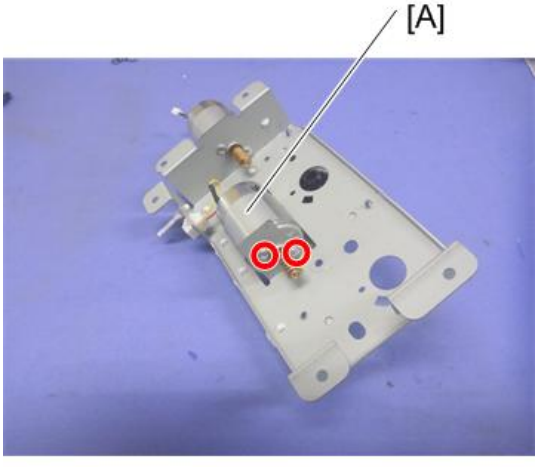
Paper Transfer Motor

Paper Transfer Motor

1. Tray motor unit (page 19)
2. Paper transfer motor [A] (×2, ×1)

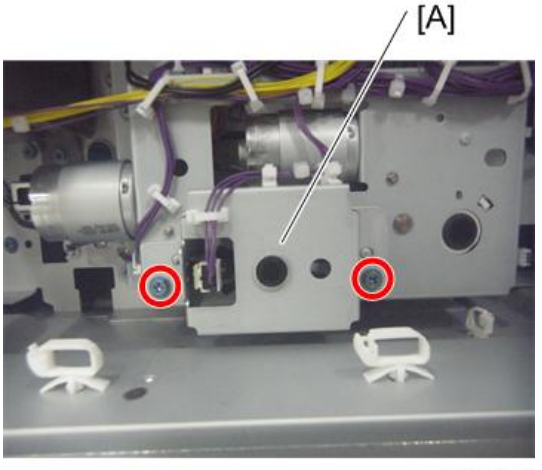


d1462758

Remaining Paper Sensor

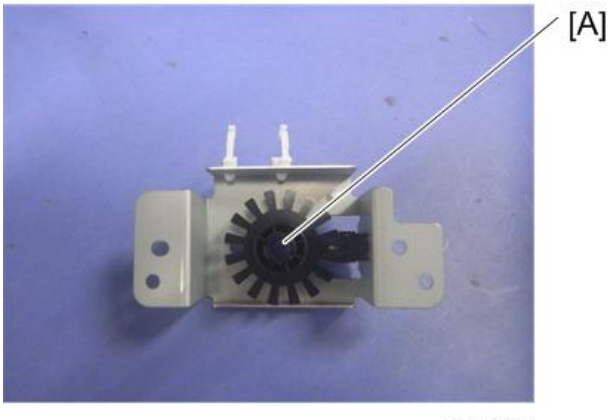
Remaining Paper Sensor

1. Rear cover (page 5)
2. Remaining paper sensor unit [A] (×2, ×1, ×3)



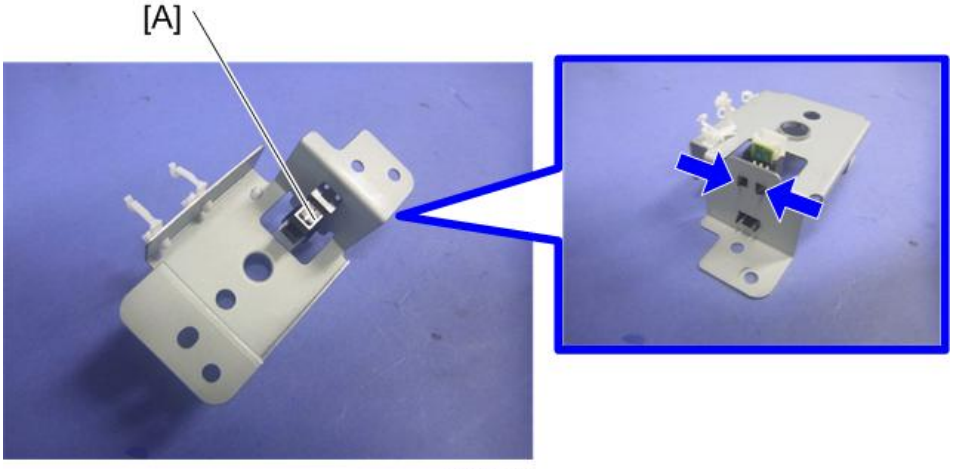
d1462759

3. Actuator [A]



d1462760

4. Remaining paper sensor [A]

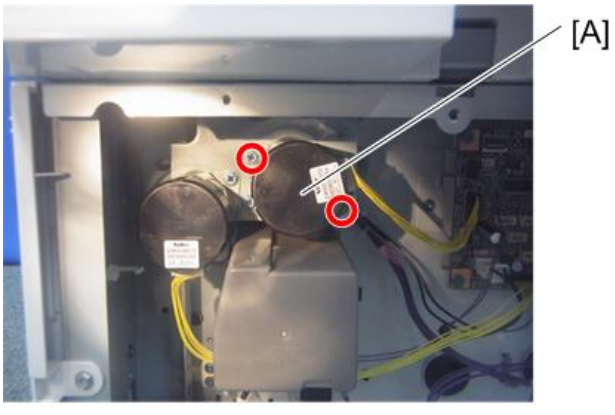


d1462761

Paper Feed Motor

Paper Feed Motor

1. Rear cover (page 5)
2. Paper feed motor [A] (×2, ×1)



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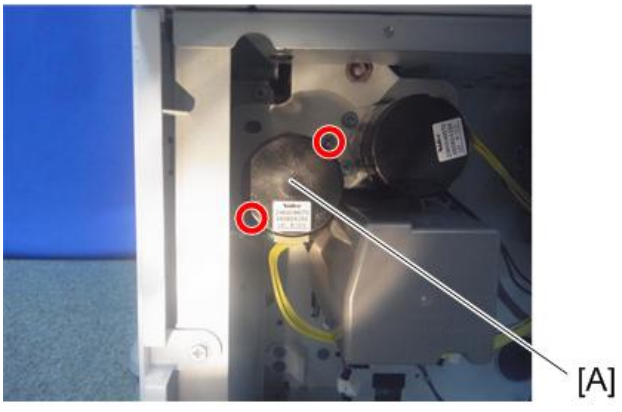
Paper Transport Motor

Paper Transport Motor

1. Rear cover (page 5)
2. Paper transport motor [A] (×2, ×1)

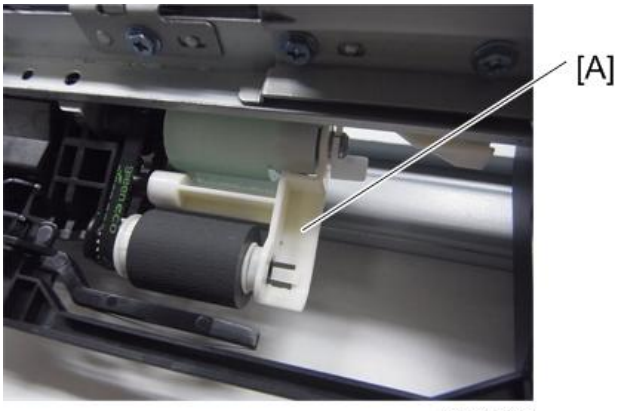


d1462766

Pick-up Roller, Feed Roller, Friction Roller

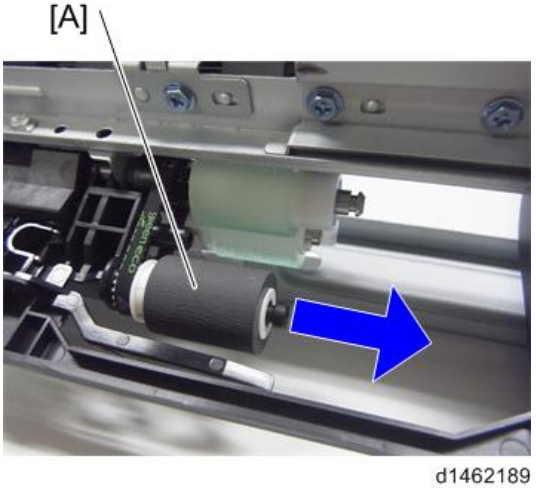
Pick-up Roller, Feed Roller, Friction Roller

1. Paper feed unit (page 13)
2. Holder [A] (×1)



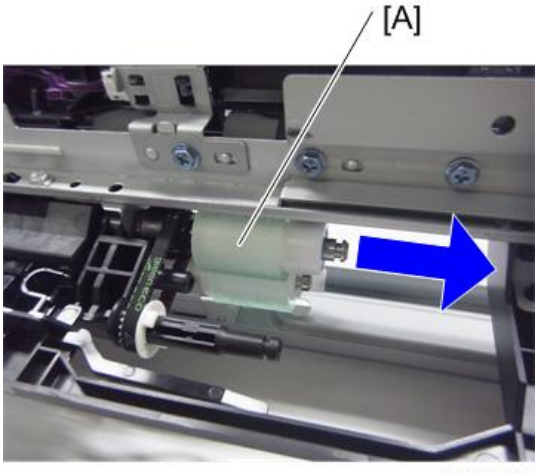
d1462188

3. Pick-up roller [A]



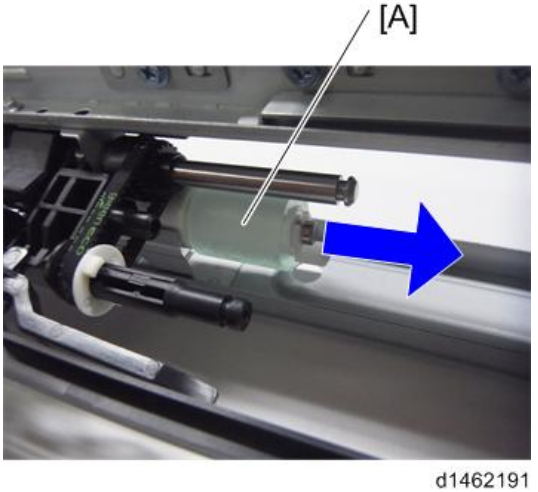
d1462189

4. **Feed roller [A]**



d1462190

5. **Friction roller [A]** (×1)

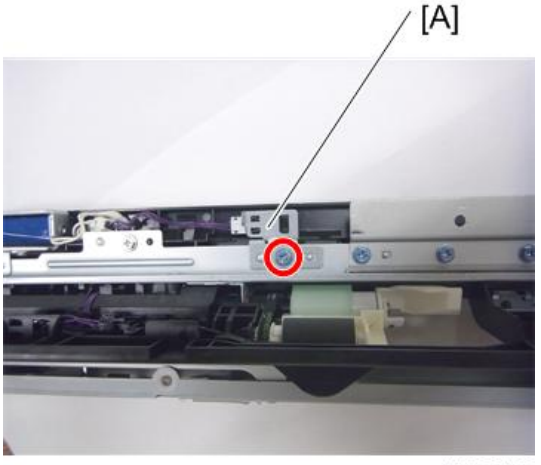


d1462191

Paper Transport Sensor, Paper Feed Sensor, Paper End Sensor, Upper Limit Sensor

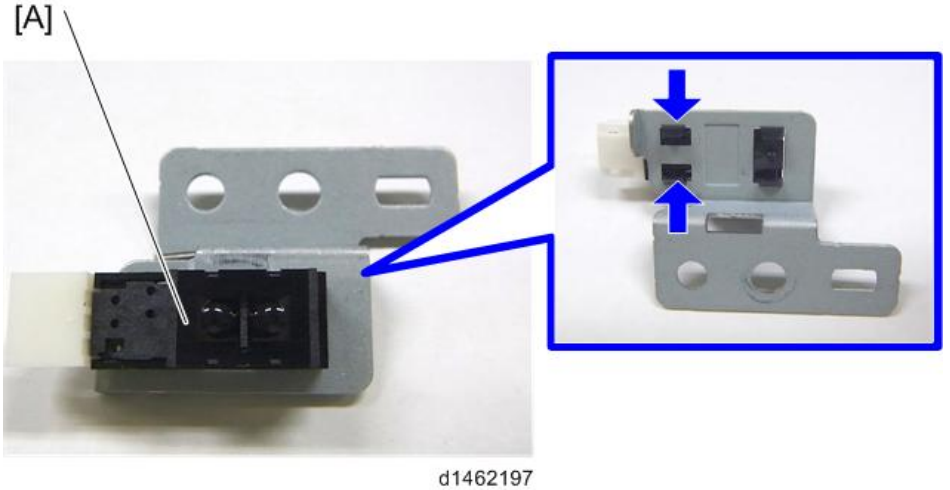
Paper Transport Sensor, Paper Feed Sensor, Paper End Sensor, Upper Limit Sensor

1. Paper feed unit (page 13)
2. Paper transport sensor unit [A] (×1, ×1)



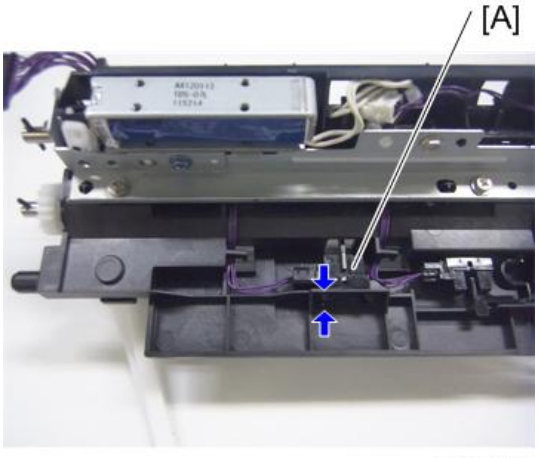
d1462196

3. Paper transport sensor [A]



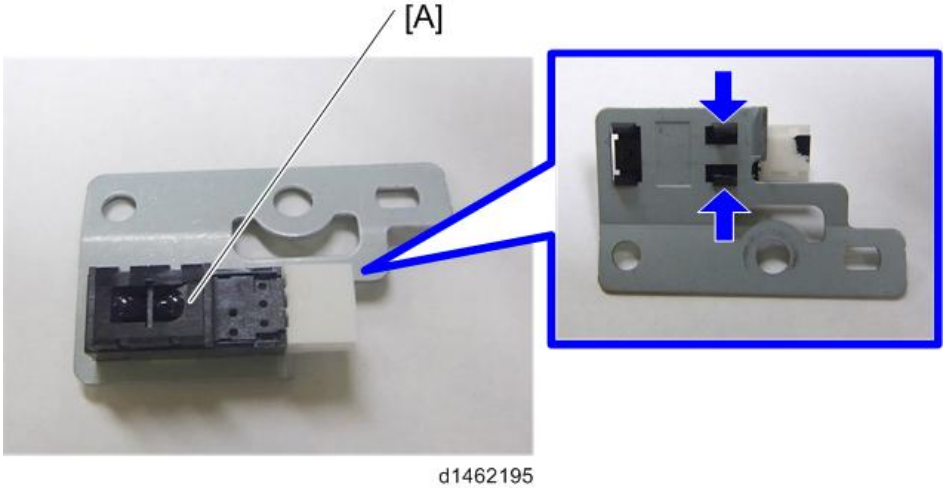
d1462197

4. **Paper feed sensor unit [A] (×1)**



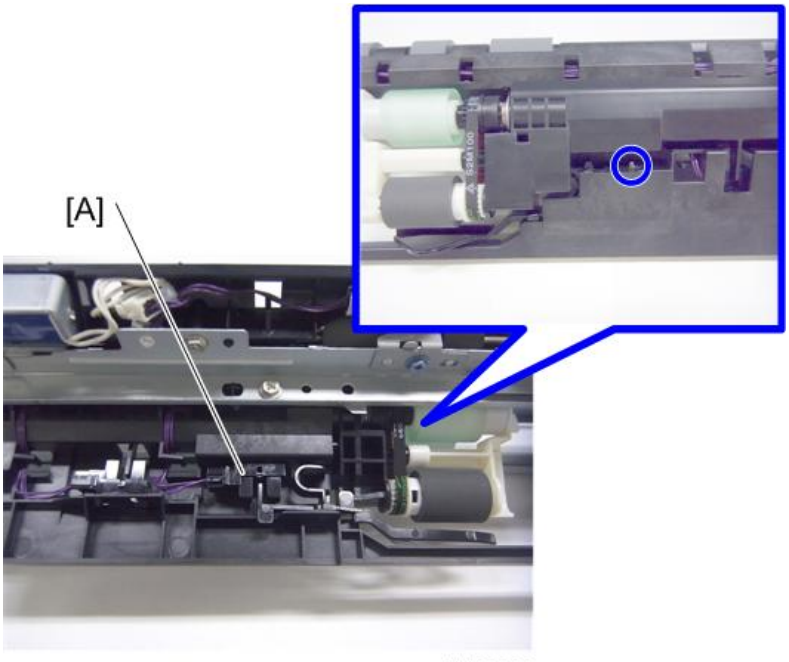
d1462198

5. **Paper feed sensor [A]**



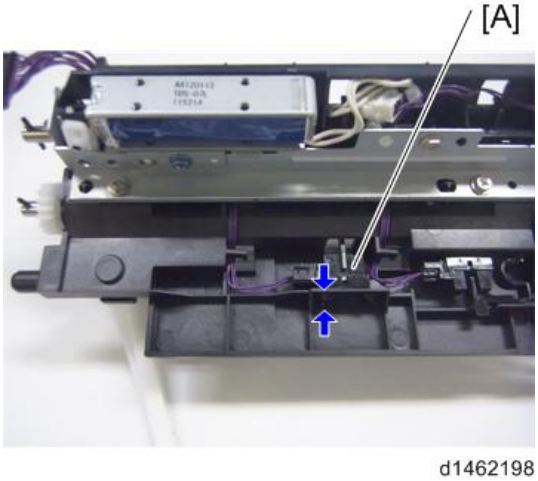
d1462195

6. **Press the claw shown by the blue circle, and remove the paper end sensor [A] (×1)**



d1462200

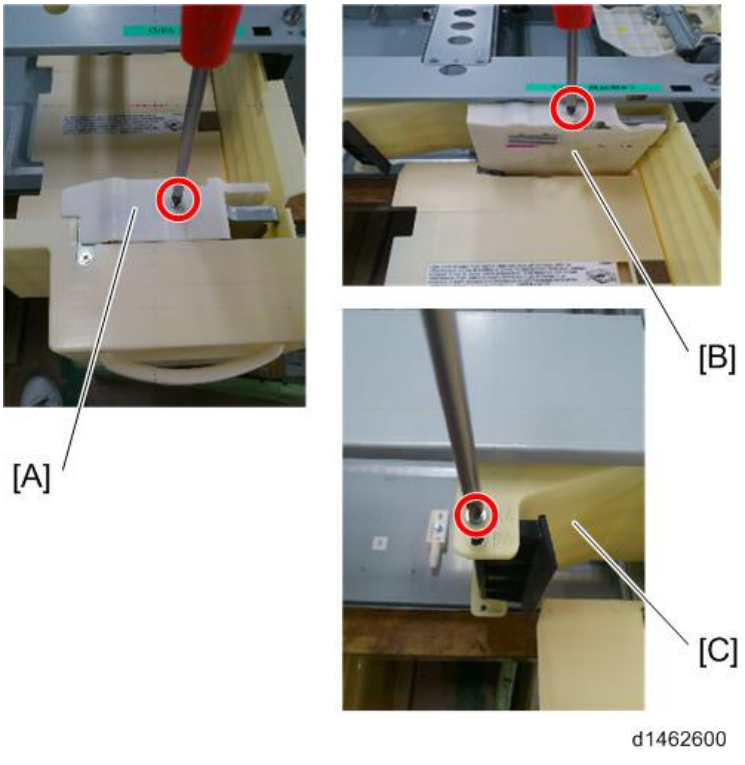
7. **Upper limit sensor [A] (×1)**



d1462198

Right Tray Side Fence

1. Open the left and right trays.
2. Right tray side fence (front) [A], right tray side fence (rear) [B], and right tray end fence [C] (×3)



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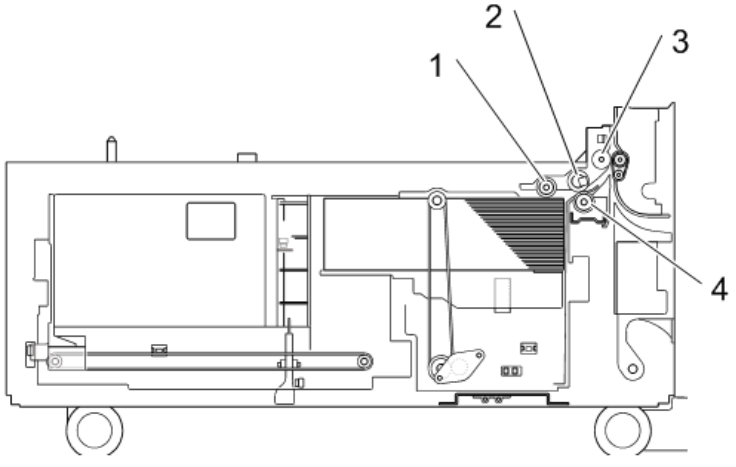
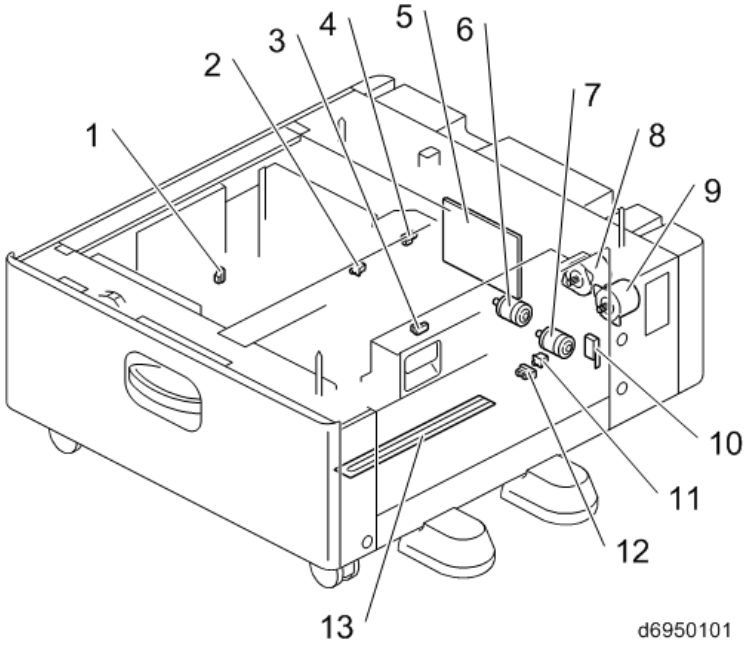
2. Detailed Descriptions

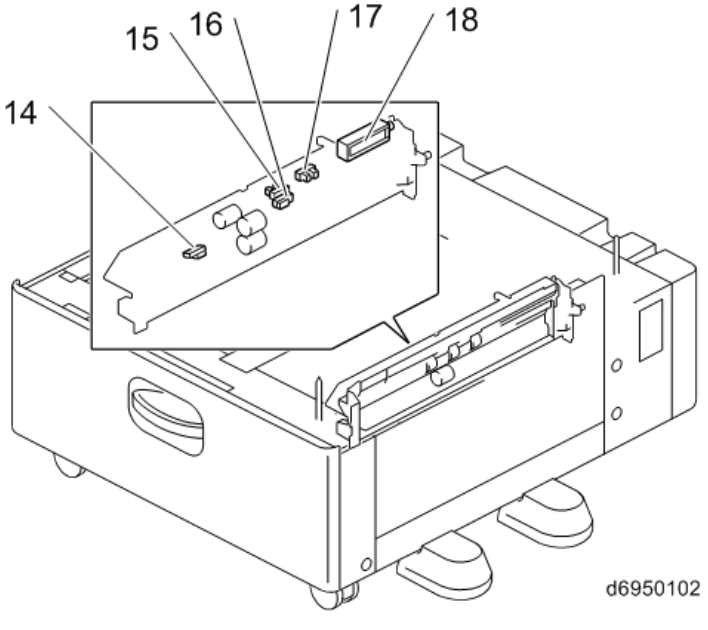
LCIT PB3170/ LCIT PB3230 (D695)

Parts Layout



No.	Description	No.	Description
1	Pick-up roller	3	Paper transport roller
2	Feed roller	4	Friction roller





No.	Description	No.	Description
1	Paper transfer home position sensor	10	Paper transport cover open/close switch
2	Left tray set sensor switch	11	Right tray set sensor switch

No.	Description	No.	Description
3	Left tray paper end sensor	12	Lower limit sensor
4	Transfer fence Home Position sensor	13	Dehumidifying heater
5	Controller board	14	Paper feed sensor
6	Paper transfer motor	15	Paper end sensor
7	Paper lift motor	16	Paper transport sensor
8	Paper feed motor	17	Upper limit sensor
9	Paper transport motor	18	Pick-up solenoid

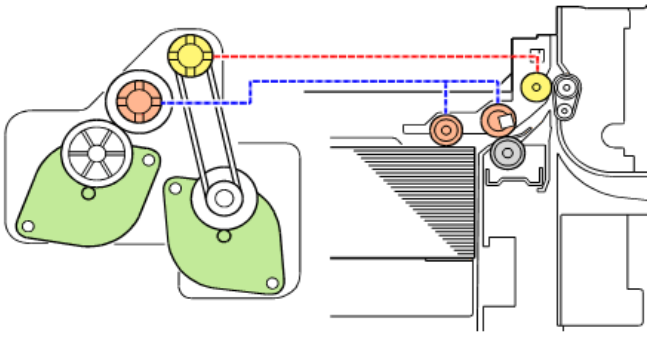
Mechanism

Paper feed separation mechanism

The feed system is a RF paper feed system. The paper feed unit has a pick-up roller, feed roller, and friction roller. The feed roller and friction roller are high durability rollers.

Drive mechanism

The pick-up roller and feed roller are driven by the paper feed motor. The transport roller is driven by the transport motor. The friction roller is not driven.



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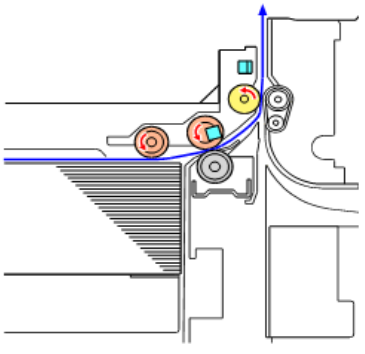
Friction roller/pick-up roller release mechanism

When the right tray is set, the friction roller comes in contact with the feed roller. The pick-up roller touches the top sheet of paper that is to be transported.

When the right tray is opened, contact between the feed roller and friction roller, and contact between the pick-up roller and paper are released.

Paper feed transport mechanism

In order to feed the paper at regular intervals, there is a paper feed sensor between the pick-up roller and the feed roller, and this sensor is used to adjust the paper feed timing.



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Tray lift/descent mechanism

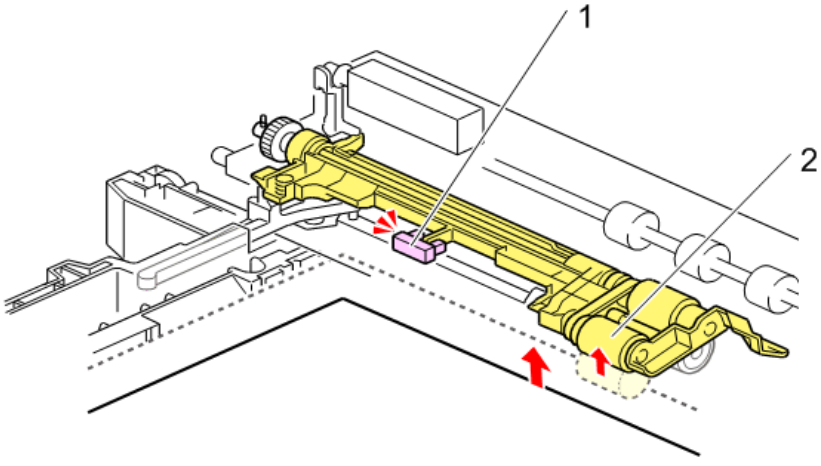
Tray lift

When the right tray is set, the tray set switch on the rear plate turns ON, and the tray lift motor starts rotating. Simultaneously, the remaining paper sensor performs a pulse count to determine the amount of paper in the tray.

The tray lift motor and rotation shaft are joined by a coupling, so that when the rotation shaft rotates, the tray bottom plate rises. The tray bottom plate rises until the actuator turns OFF the upper limit sensor (the sensor is blocked). If there is paper, lift operation stops. If there is no paper, the tray bottom plate descends.

Note

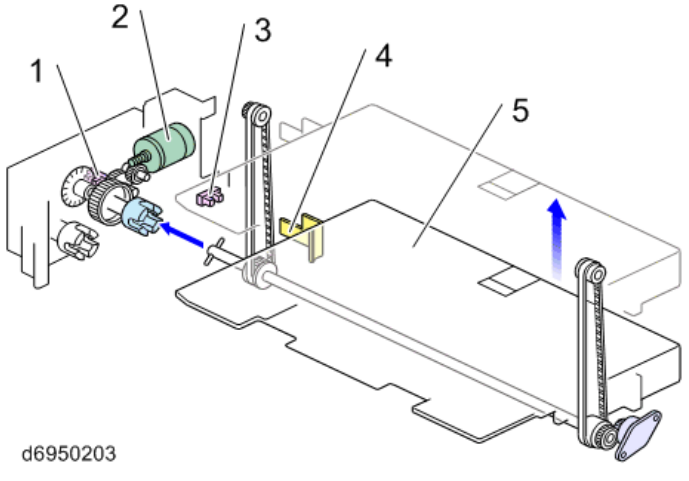
- After the right tray is set, if the upper limit sensor is OFF, it will turn ON. The tray descends until the lower limit sensor turns OFF. After stopping temporarily, the tray bottom plate then rises to the upper limit.



No.	Description
1	Upper limit sensor
2	Pick-up roller

Tray descent

If there is no paper when the upper limit operation is completed, the tray bottom plate descends until the lower limit sensor turns OFF (the sensor is blocked). The tray bottom plate will descend if paper end is detected during paper transport.



No.	Description
1	Remaining paper sensor (inside lift transfer unit)
2	Tray lift motor (inside lift transfer unit)
3	Lower limit sensor
4	Actuator
5	Tray bottom plate

Left tray transfer fence mechanism

After the right tray has finished descending, if there is paper in the left tray, the left tray transfer fence shifts, and the paper in the left tray is transferred to the paper feed tray. When the paper has been transferred to the right tray, the left tray transfer fence returns to its original position, until the transfer home position sensor turns OFF (the sensor is blocked).

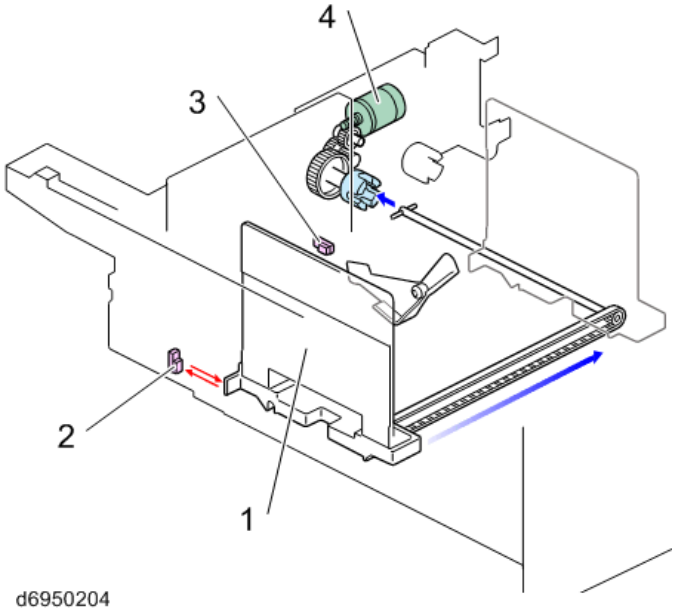
The left tray end fence is moved by the transfer motor (DC motor inside the lift transfer unit).

When the right tray has finished descending, the transfer motor is driven, and the left tray transfer fence begins to shift.

After the left tray paper sensor detects no paper (detection is by a feeler), the left tray transfer fence shifts for a certain time in accordance to the paper size. After shifting, the transfer motor turns OFF.

Note

- This time for which the left tray transfer fence shifts is set for either A4 or LT paper, so that the paper stops at the feed position of the right tray



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No.	Description
1	Left tray transfer fence
2	Paper transfer home position sensor
3	Left tray paper sensor
4	Paper transfer motor (inside lift transfer unit)

Remaining paper detection

Right tray remaining paper detection

The remaining paper sensor in the lift transfer unit performs a pulse count.

Left tray remaining paper detection

The left tray paper sensor is turned ON/OFF using a feeler.

If there is paper in the left tray, paper end will not be displayed even if there is no paper in the right tray.

Remaining paper	Left tray paper sensor	Display
100%	OFF	4 bars
Paper end	ON	None

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