Paper Feed Unit PB1090 Machine Code: D794

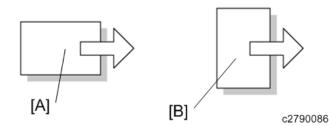
Field Service Manual

Symbols and Abbreviations

Conventions Used in this Manual

This manual uses several symbols.

| Symbol | What it means | |
|----------|---------------|--|
| OPP | Screw | |
| F | Connector | |
| C | E-ring | |
| (F) | Clip ring | |
| Ş | Clamp | |



[A]: Short Edge Feed (SEF)[B]: Long Edge Feed (LEF)

Cautions, Notes, etc.

The following headings provide special information:

MARNING

• Failure to obey warning information could result in serious injury or death.

ACAUTION

• Obey these guidelines to ensure safe operation and prevent minor injuries.

- Obey these guidelines to avoid problems such as misfeeds, damage to originals, loss of valuable data and to prevent damage to the machine.
- Always obey these guidelines to avoid serious problems such as misfeeds, damage to originals, loss of valuable data and to prevent damage to the machine. bold is added for emphasis.



• This document provides tips and advice about how to best service the machine.

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1. Replacement and Adjustment

Covers and Rollers

Paper Tray

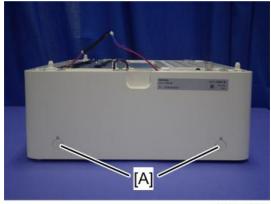
1. Pull out the paper tray [A].



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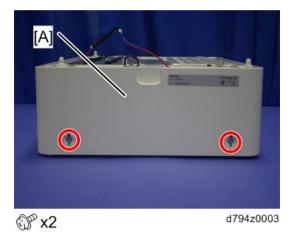
Rear Cover

1. Two screw covers [A]



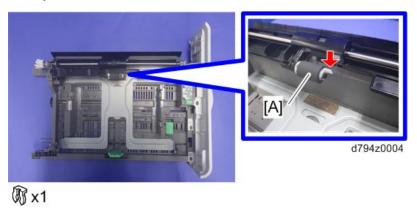
d794z0002

2. Rear cover [A]



Pick-up Roller

- 1. Paper tray (page 5)
- 2. Pick-up roller [A]

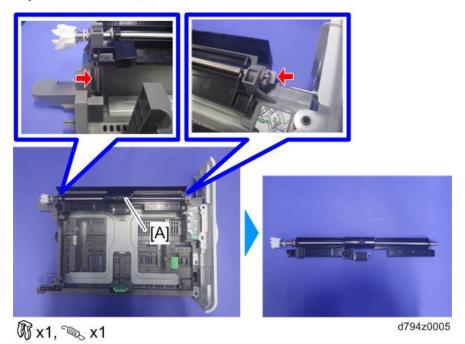


Paper Feed Roller

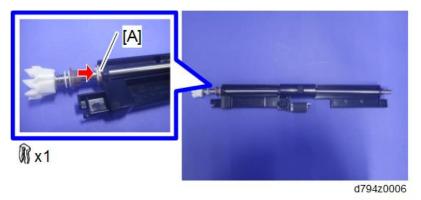
1. Pick-up roller (page 6)

1

2. Paper feed roller unit [A]

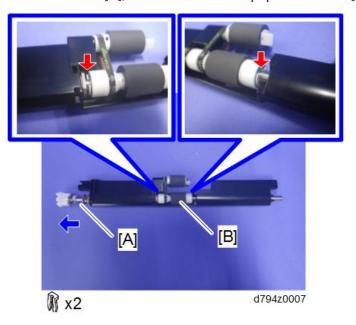


3. Bearing [A]



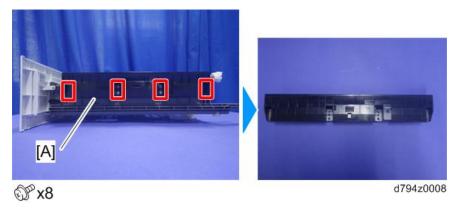
,

4. Pull out the shaft [A], and then remove the paper feed roller [B].



Friction Roller

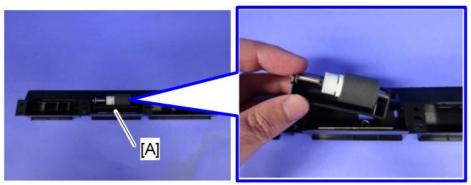
- 1. Paper tray (page 5)
- 2. Paper feed guide [A]



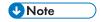
3. Remove the clamp from paper feed guide.



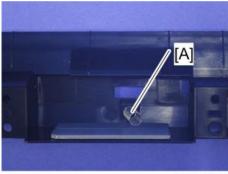
4. Friction roller bracket [A]



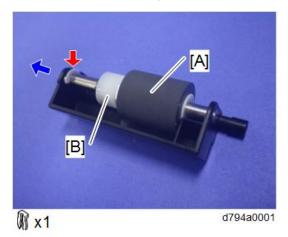
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• There is a spring [A] under the friction roller bracket. Be careful not to lose it because it is not fixed.

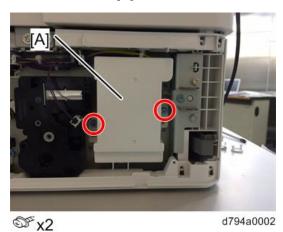


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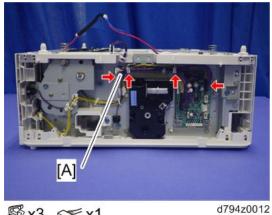
Vertical Transfer Roller

- 1. Paper tray (page 5)
- 2. Rear cover (page 5)
- 3. Main board cover [A]



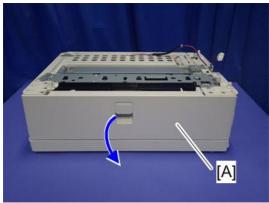
10

4. Release the harness [A] of the vertical transfer unit.



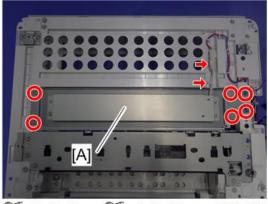
\$x3, **₹**x1

5. Open the right door [A].



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6. Tray heater [A] (If it is installed)





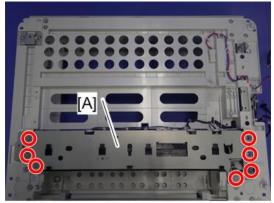
UNote

• 3x6 screws are used on the rear cover side.



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7. Vertical transfer roller unit [A]



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 3x6 screws are used on the rear cover side. One of them at the front side (indicated by the arrow in the diagram) is enclosed by a spring.



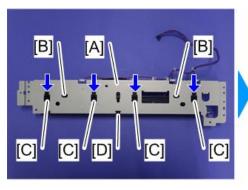


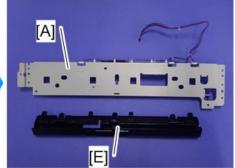
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8. Vertical transfer roller cover [A]



• Slide the hooks [C] with the buttons [B] held pressed, and then release the hook [D] to remove the guide plate [E] from the vertical transfer roller cover [A].





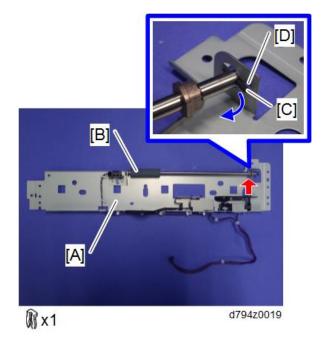
d794a0005

9. Do the following:

- 1. Turn the vertical transfer roller unit [A] upside down.
- 2. Remove the Vertical transfer roller [B] ($\Re \times$ 1)



• Slide the vertical transfer roller axis, and then pull out the vertical transfer roller [B] from the bracket by aligning the pin [C] with the slot [D] in the bracket.



Motors and Clutch

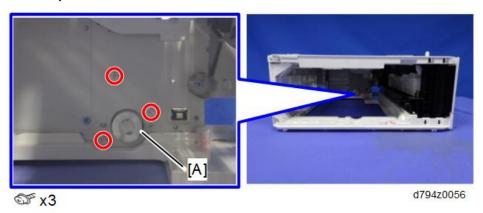


• Unplug the machine power cord before starting the following procedures.

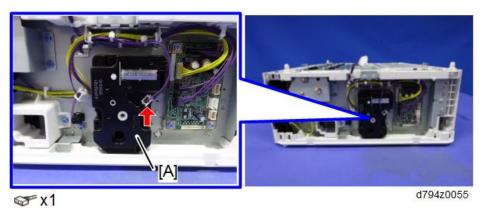
Tray Lift Motor

- 1. Paper tray (page 5)
- 2. Rear cover (page 5)
- 3. Tray lift motor [A]

In the tray



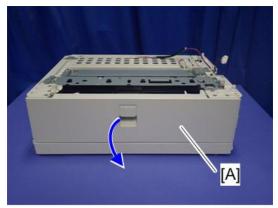
From the rear



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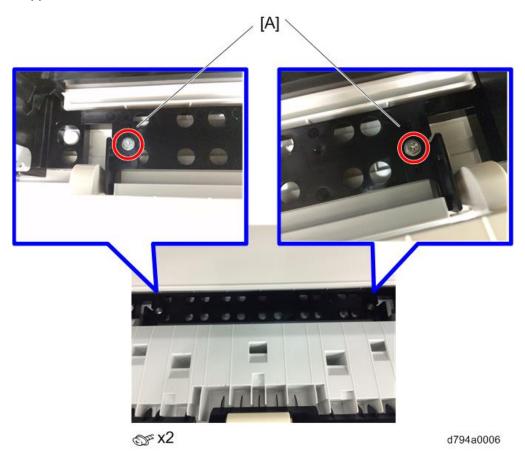
Paper Feed Motor

1. Open the right door [A].



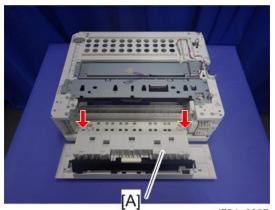
d794z0013

2. Stoppers [A]



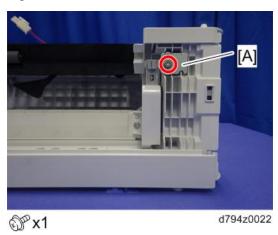
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3. Right door [A]

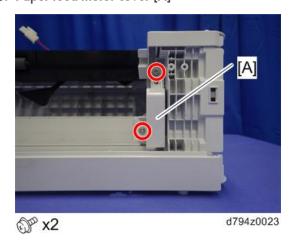


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4. Right door bracket [A]

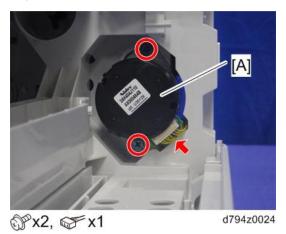


5. Paper feed motor cover [A]



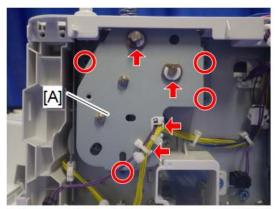
17

6. Paper feed motor [A]



Paper Feed Clutch

- 1. Rear cover (page 5)
- 2. Right door switch bracket (page 25)
- 3. Gear cover [A]

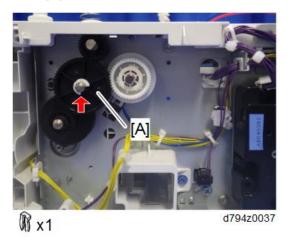


್x4, ≅x2, ⋒x2

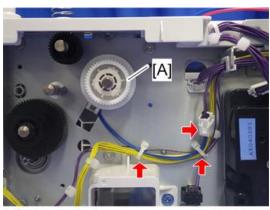
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4. Gear [A]



5. Paper feed clutch [A]



\$x2, **₹**x1

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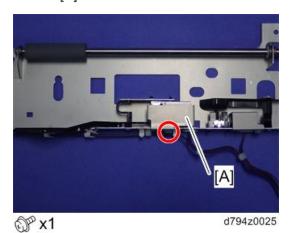
Sensors and Board



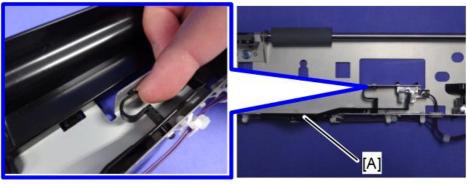
• Unplug the machine power cord before starting the following procedure.

Paper End Sensor

- 1. Vertical transfer roller cover (page 10)
- 2. Bracket [A]

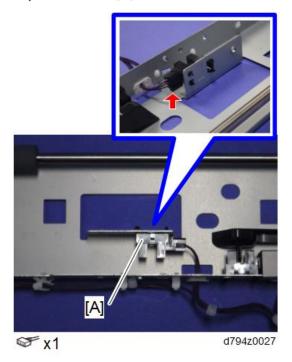


3. Paper end feeler [A]



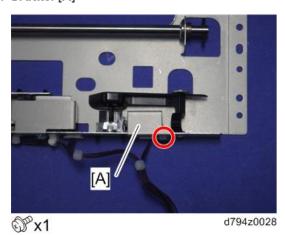
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4. Paper end sensor [A]

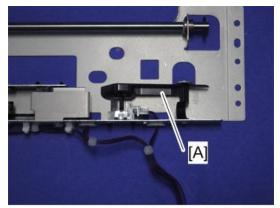


Tray Lift Sensor

- 1. Vertical transfer roller cover (page 10)
- 2. Bracket [A]

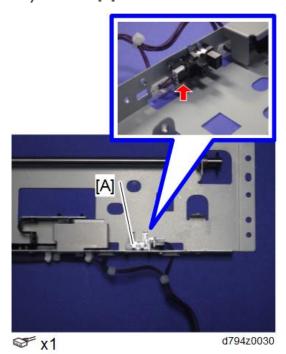


3. Tray lift feeler [A]

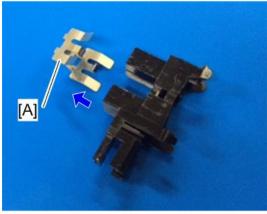


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4. Tray lift sensor [A]



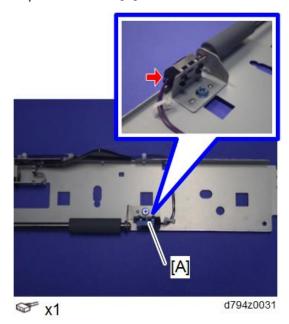
5. Sensor protector [A]



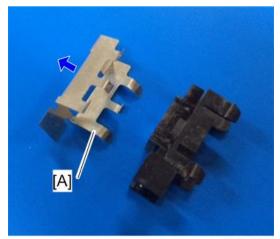
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Paper Feed Sensor

- 1. Vertical transfer roller cover (page 10)
- 2. Paper feed sensor [A]



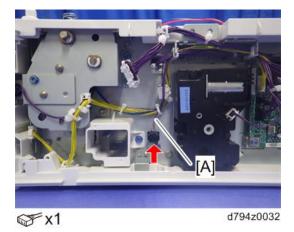
3. Sensor protector [A]



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Tray Set Switch

- 1. Paper tray (page 5)
- 2. Rear cover (page 5)
- 3. Tray set switch harness [A]



4. Tray set switch [A]



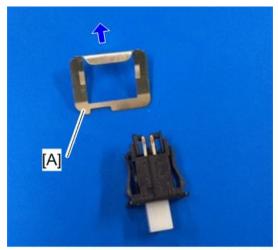
• Pull it out from the inside of the mainframe.

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5. Sensor protector [A]

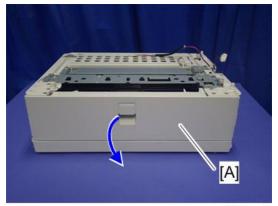


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Right Door Switch

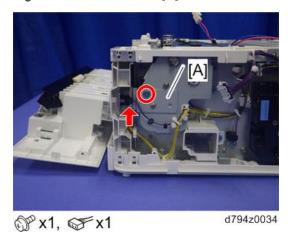
1. Rear cover (page 5)

2. Open the right door [A].

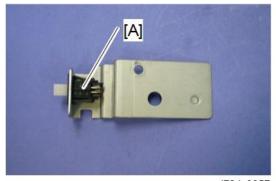


d794z0013

3. Right door switch bracket [A]



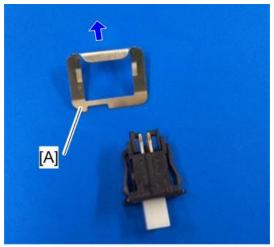
4. Right door switch [A]



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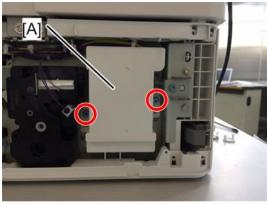
5. Sensor protector [A]



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Main Board

- 1. Rear cover (page 5)
- 2. Main board cover



© x2

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3. Main board [A]

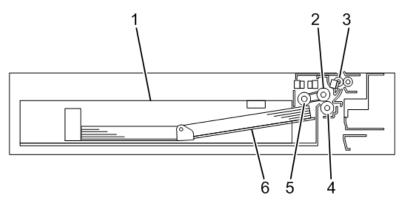


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2. Detailed Descriptions

Mechanisms

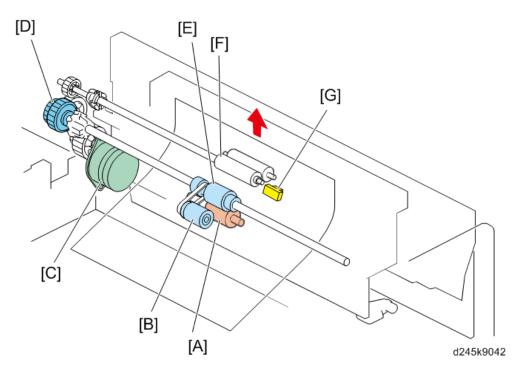
Overview



d245k9049

| 1 | Paper feed tray | 4 | Friction roller |
|---|--------------------------|---|-------------------|
| 2 | Paper feed roller | 5 | Pick-up roller |
| 3 | Vertical transfer roller | 6 | Tray bottom plate |

Paper Feed and Separation



The paper feed unit employs an RF system.

In a conventional FRR system, double feed of paper is prevented by reverse rotation of the separating roller. However, paper separation of the RF system is assisted by the resistance of a friction roller [A] with a torque limiter (reverse drive is not performed).

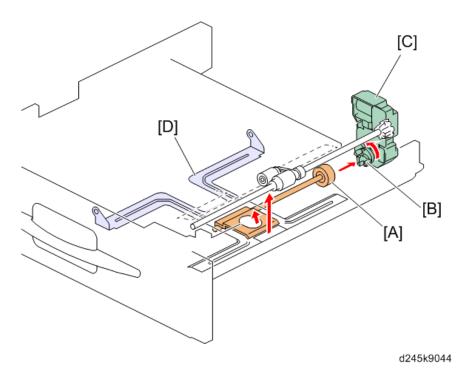
When the paper feed tray is set in the machine, the tray bottom plate is lifted up, and the pick-up roller [B] contacts the top of the stuck paper.

When the transport motor [C] and the paper feed clutch [D] is switched ON, the rollers rotate, and then paper is supplied to the mainframe by the paper feed roller [E] and vertical transport roller [F].

The paper feed sensor [G] detects the leading edge and trailing edge of paper to control the feed timing and determine a paper jam.

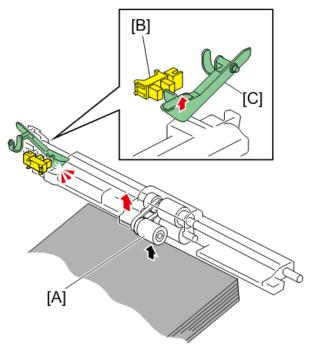
The roller holder functions as a paper guide and roller clip ring. The roller holder prevents the paper from winding up.

Paper Lift Mechanism



When the paper feed tray is set in the machine, the set switch at the rear of the tray switches ON, and it is detected that the tray is set.

The coupling [B] between the shaft [A] at the rear of the tray and the lift motor [C] then engages, the motor rotates, and the tray bottom plate [D] is lifted.

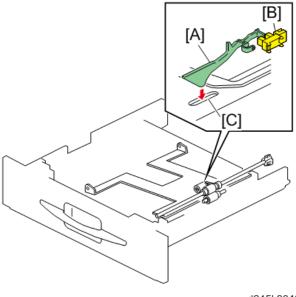


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The tray bottom plate lifts until the paper surface pushes up the pick-up roller [A], the tray lift sensor [B] switches OFF (interrupt) by the tray lift feeler [C], and the machine enters the paper feed standby mode.

When the tray is removed, the coupling is released, and the tray bottom plate moves down. The lift motor then rotates until the coupling returns to the home position.

Paper End Detection



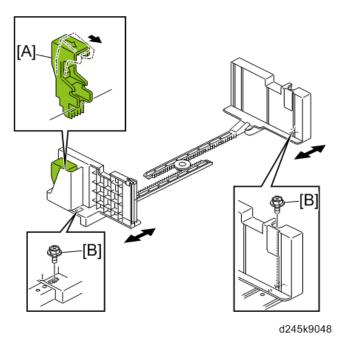
d245k9046

If there is some paper in the paper tray, the paper stack raises the paper end feeler [A] and the paper end sensor [B] is deactivated.

When the paper tray runs out of paper, the paper end feeler drops into the cutout [C] in the tray bottom plate and the paper end sensor is activated.

When the paper tray is drawn out with no paper in the tray, the paper end feeler is not caught in the paper tray due to its shape.

Side Fences



If the tray is full of paper and it is pushed in strongly, the fences may deform or bend. This may cause the paper to skew or the side-to-side registration to be incorrect. To correct this, each side fence has a stopper [A] attached to it. Each side fence can be secured with a screw [B], for customers who do not want to change the paper size.

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