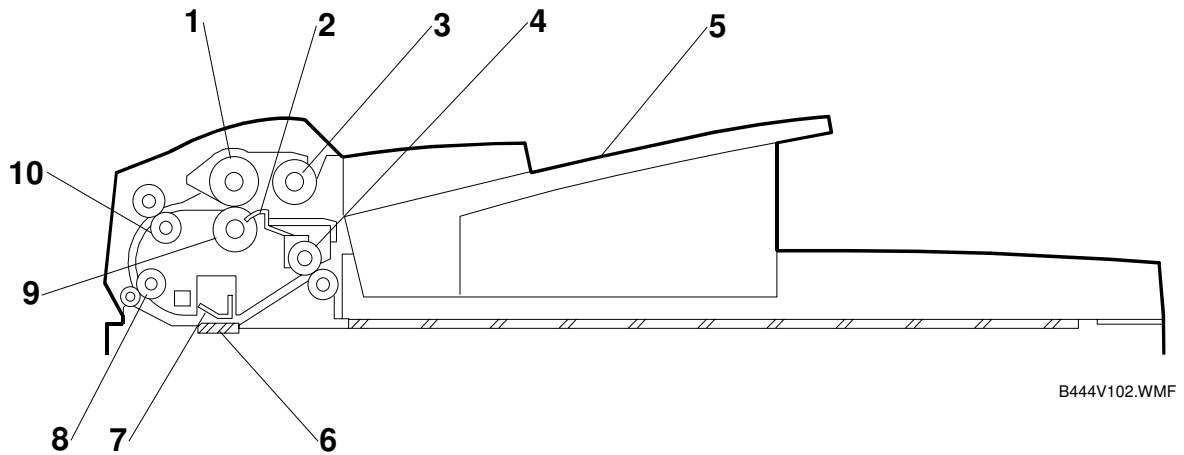


DOCUMENT FEEDER

(Machine Code: B444)

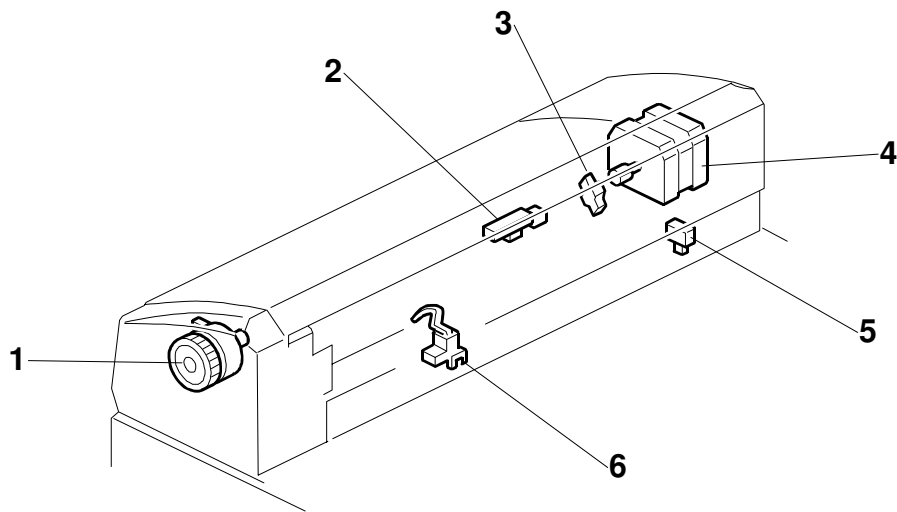
1. OVERALL INFORMATION

1.1 MECHANICAL COMPONENT LAYOUT



- | | |
|-------------------------|--------------------------|
| 1. Feed roller | 6. DF exposure glass |
| 2. Original set sensor | 7. White plate |
| 3. Pickup roller | 8. 2nd transport roller |
| 4. Original exit roller | 9. Separation roller |
| 5. Original table | 10. 1st transport roller |

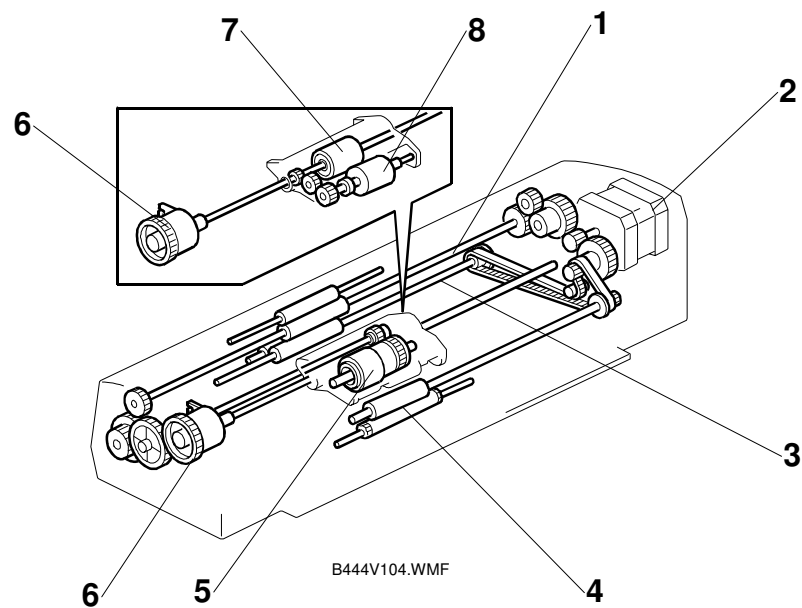
1.2 ELECTRICAL COMPONENT LAYOUT



B444V101.WMF

- | | |
|---------------------------------|------------------------|
| 1. DF feed clutch | 4. DF motor |
| 2. Original registration sensor | 5. Unit open switch |
| 3. Guide open sensor | 6. Original set sensor |

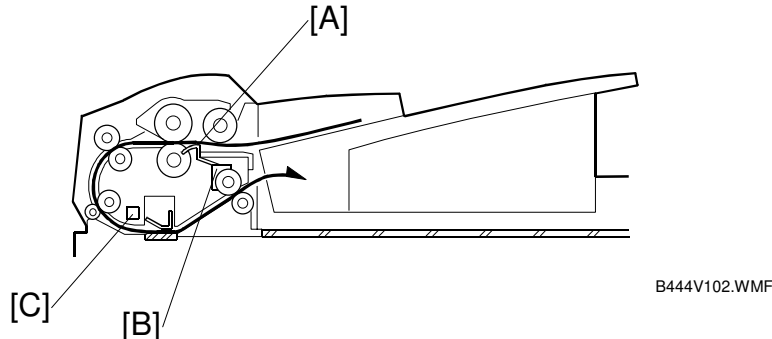
1.3 DRIVE LAYOUT



- | | |
|-------------------------|-------------------------|
| 1. 1st transport roller | 5. DF separation roller |
| 2. DF motor | 6. DF feed clutch |
| 3. 2nd transport roller | 7. DF feed roller |
| 4. Exit roller | 8. DF pickup roller |

2. DETAILED SECTION DESCRIPTIONS

2.1 PICK-UP AND SEPARATION



The ADF uses an FRR (feed & reverse roller) system.

Setting paper lowers the feeler [A], causing the original set sensor [B] to inform the CPU that the ADF is ready to feed.

Press  → short time lag → DF feed clutch engages → DF motor starts.

The motor drives the DF pickup roller, DF feed roller, DF separation roller, and transport rollers. The pickup roller drives the top sheet(s) between the feed and separation roller, where the top sheet is separated and fed to the transport rollers.

2.2 CLUTCH OPERATION

The DF feed clutch is provided to stop feeding in the event of a jam. During jam-free operation the clutch remains activated for the entire feed cycle. In the event of a jam the clutch disengages (by torque limiter).

2.3 TRANSPORT AND EXIT

During pickup and feeding of the first sheet, the scanner moves to carry out white adjustment and then scanning correction.

A short time after the sheet reaches the original registration sensor [C], the DF motor stops briefly, the scanner moves to DF scan position, and the white peak is read. The DF motor then restarts and the sheet is scanned. The exit roller ejects the sheet.

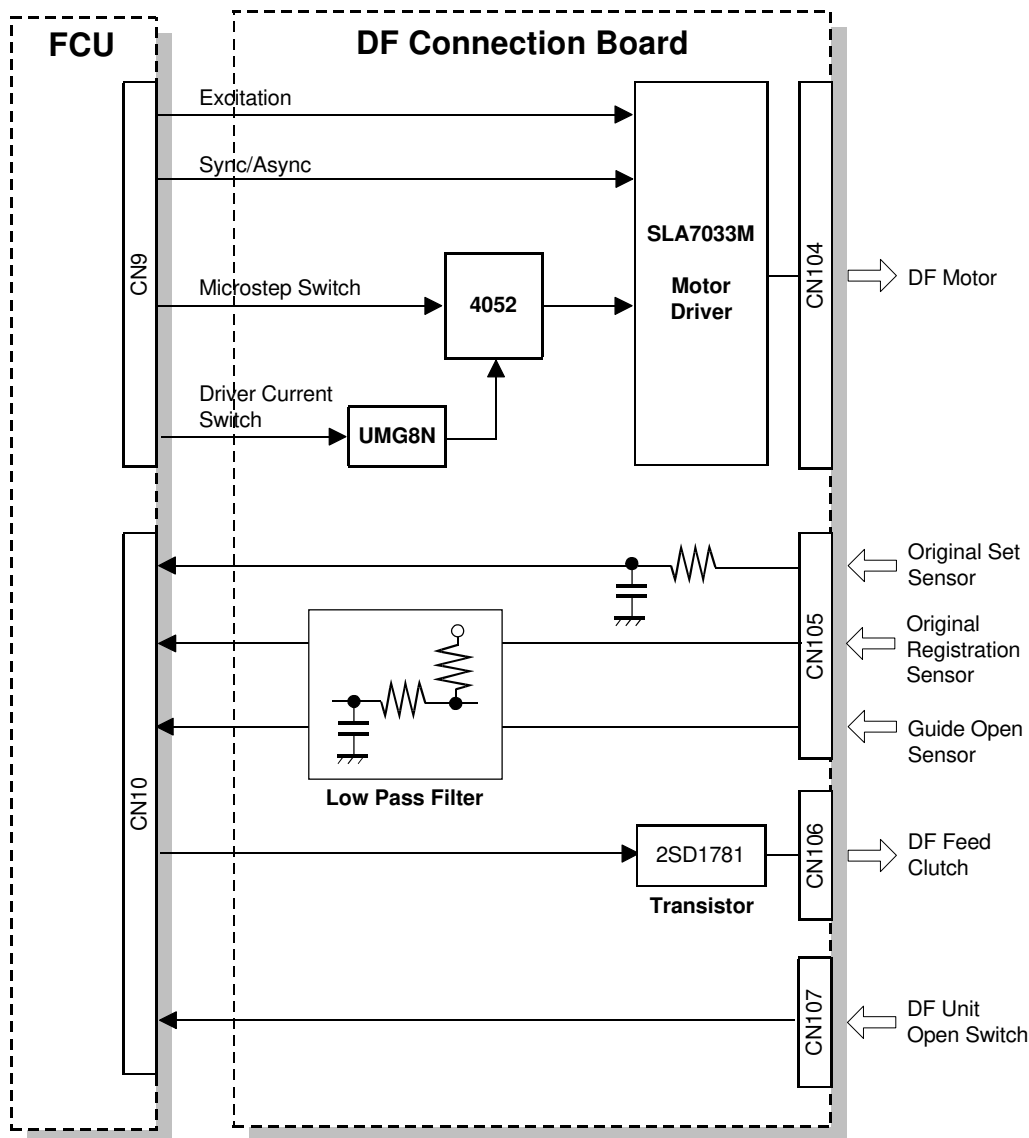
Features of the transport mechanism:

- White peak is read for each sheet. If timing allows, the DF motor continues running while the peak is read between consecutive trailing and leading edges. If timing does not allow, the DF motor stops and then restarts.
- Shading correction is repeated every 10 sheets. The DF motor must stop and restart to carry out this correction.
- Following feeding of the last sheet, the DF motor reverses briefly, raising the pickup roller.

2.4 UNIT OPEN SWITCH AND GUIDE OPEN SENSOR

The guide open sensor is ON while the DF guide is open, and the unit open switch is ON when the DF unit itself is raised. The machine will not carry out scanning when either of these is ON, but will instead display a message instructing the user to close the DF.

2.5 OVERALL ELECTRICAL CIRCUIT

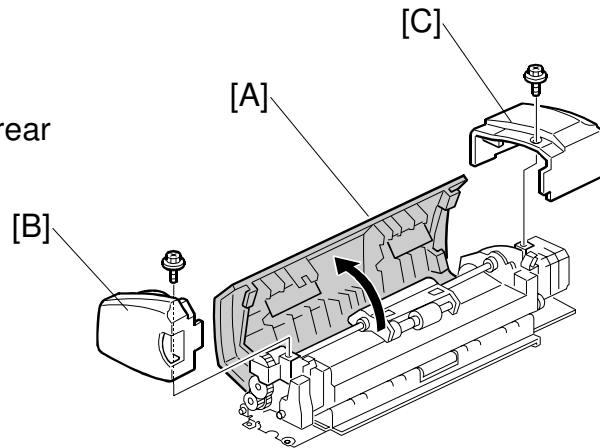


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3. REPLACEMENT AND ADJUSTMENT

3.1 DF UPPER COVERS

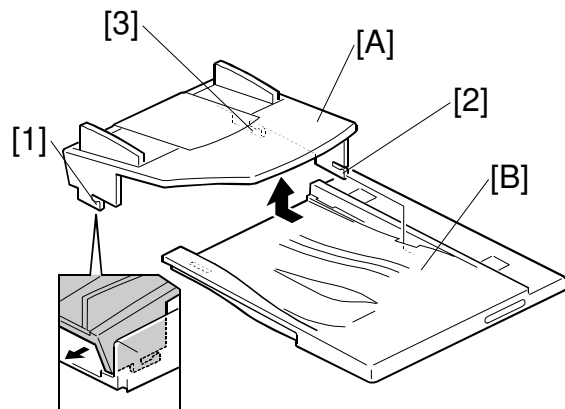
1. Open the upper guide [A].
2. DF front upper cover [B] and/or DF rear upper cover [C] (1 screw each)



3.2 ORIGINAL TABLE

1. Push the original table [A] to the left so that the three latches come free of the platen cover [B], and lift off.

NOTE: When reinstalling, first set the table flat onto the platen cover so that the latches go all the way in to the openings, and be sure that the contact area around each latch is flush against the cover. Then push so that latch [1] locks into place, then latch [2], and then latch [3].

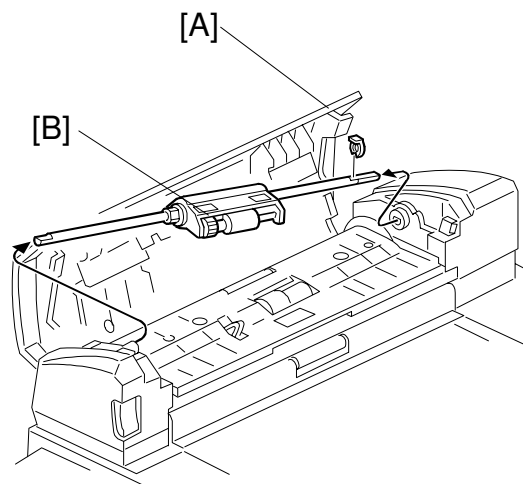


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3.3 FEED UNIT

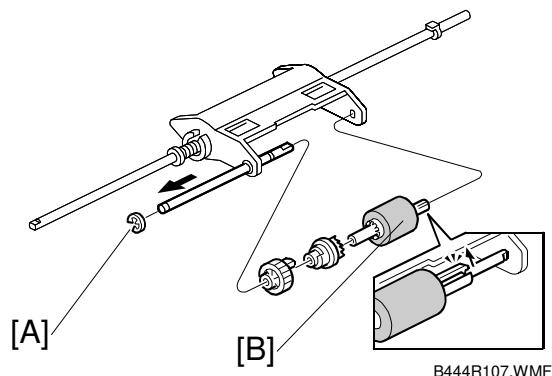
1. Raise the upper guide [A].
2. Feed unit [B] (☞ x 1).



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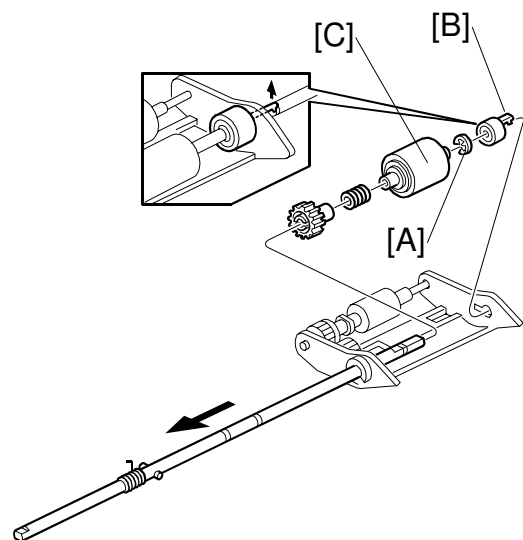
3.4 DF PICKUP ROLLER

1. Feed unit (☛ 3.3)
2. Remove E-ring [A].
3. DF pickup roller [B].



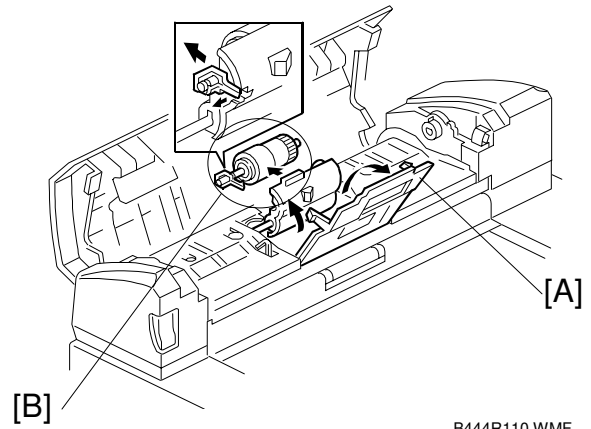
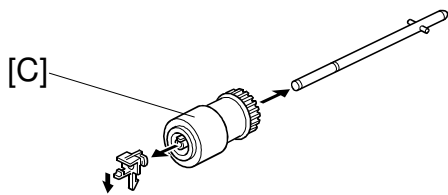
3.5 DF FEED ROLLER

1. Feed unit (☛ 3.3)
2. Remove E-ring [A].
3. Lift catch [B] and pull shaft in indicated direction.
4. DF feed roller [C]



3.6 DF SEPARATION ROLLER

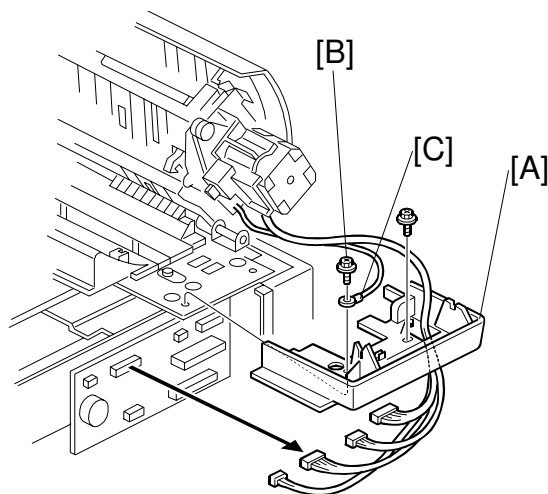
1. Feed unit (☛ 3.3)
2. Open the center lid [A]
3. Lift out the separation roller ass'y [B].
4. DF separation roller [C]



3.7 DF MOTOR

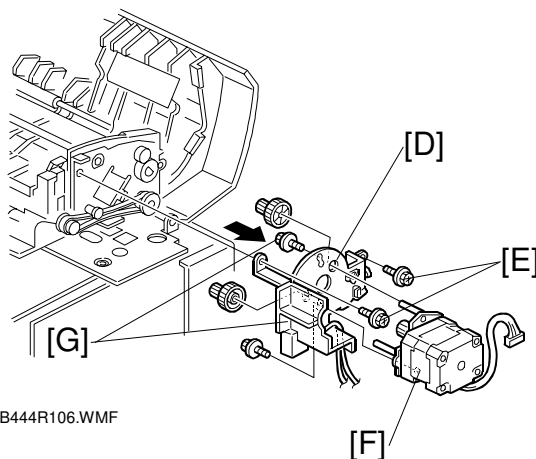
1. Copier rear cover (☛ Copier Service Manual, Section 3.3.2)
2. DF rear upper cover (☛ 3.1)
3. Unscrew and lift away the rear lower cover [A] (⚙ × 2).

NOTE: It is not necessary to disconnect all connectors and remove the cover completely. When replacing, remember that the left screw [B] must also go through the ground line [C].



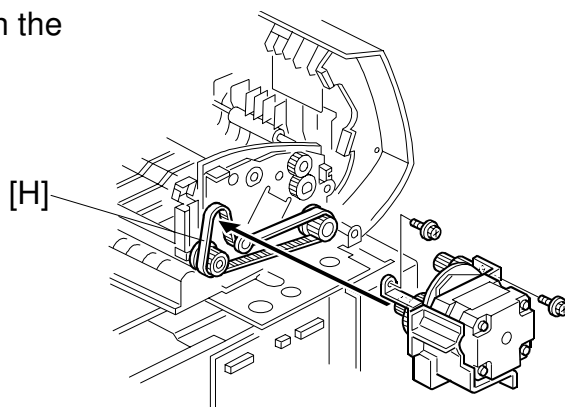
B444R114.WMF

4. Motor bracket [D] (2 screws at [E]).
NOTE: Before removing the bracket, open the three clamps (not shown) on the bracket and take the wiring out of the them.
5. Motor [F] (2 screws at [G], ⚙ × 1).



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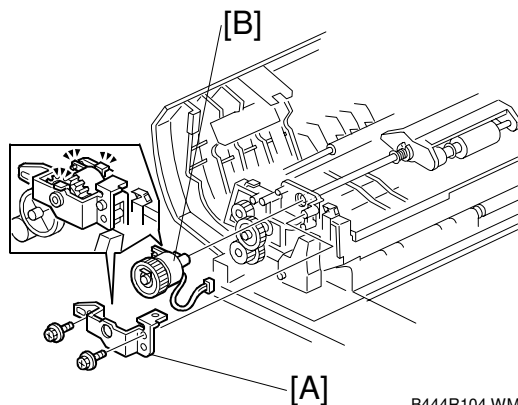
NOTE: When reinstalling, be sure that the belt [H] is arranged as shown in the illustration.



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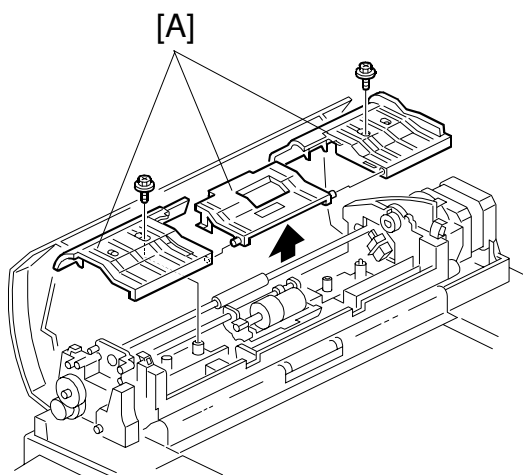
3.8 DF FEED CLUTCH

1. DF front upper cover (☛ 3.1)
2. Metal retainer [A] (☛ × 2)
3. DF feed clutch [B] (☛ × 1)

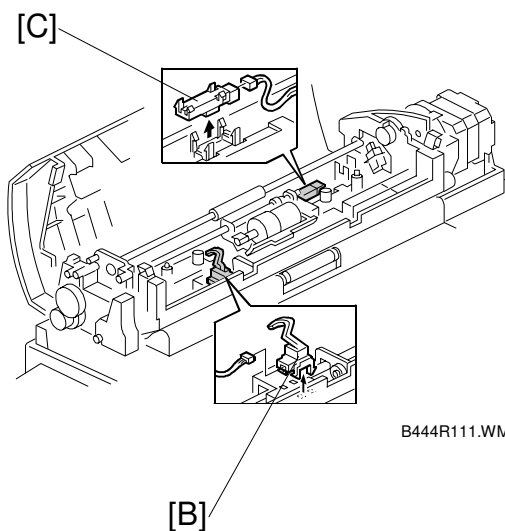


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3.9 SENSORS

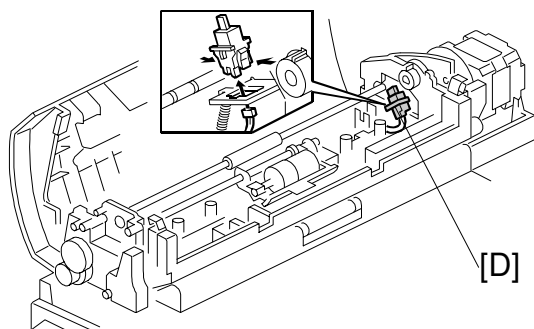


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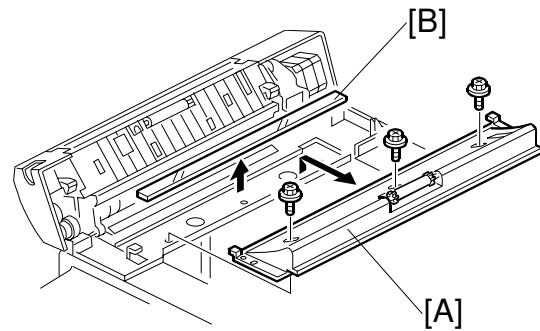
1. Feed unit (☛ 3.3)
 2. Three lids [A] (☛ × 2)
- [B]: Original set sensor (☛ × 1)
 [C]: Original registration sensor (☛ × 1)
 [D]: Guide open sensor (☛ × 1)



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3.10 DF EXPOSURE GLASS

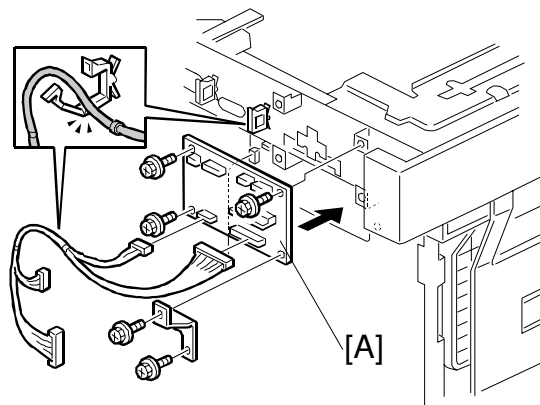
1. Press the DF latch and raise the DF body.
 2. Original exit guide [A] (⌘ × 3)
 3. DF exposure glass [B]
- NOTE:** When reinstalling, set the glass so that its padded side is facing up.



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3.11 DF CONNECTION BOARD

1. Copier rear cover (☛ Copier Service Manual, Section 3.3.2)
2. DF connection board [A] (⌘ × 5, all connectors)



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