

SHEET FEEDER
(Machine Code A453)

1. SPECIFICATIONS

- 1. Copy Paper Size: Maximum: A1, D sideways
 Minimum: A4, A (8 1/2 x 11 in) lengthwise

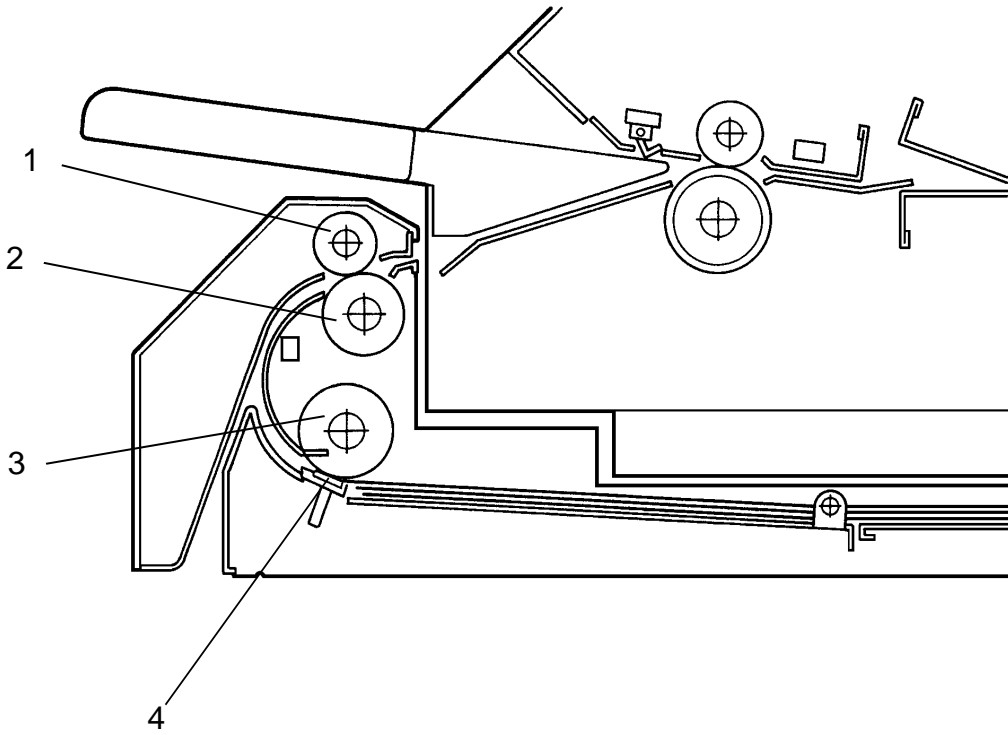
- 2. Tray Capacity: 100 sheets (Bond Paper)
 50 sheets (Translucent Paper)

- 3. Power Source: +24 volts and +5 volts from the copier

- 4. Dimensions 144 x 1,180 x 805 mm
 (H x W x D): 5.7 x 46.5 x 31.7 in

- 5. Weight: 26 kg, 57.3 lb

1.1 MECHANICAL COMPONENT LAYOUT



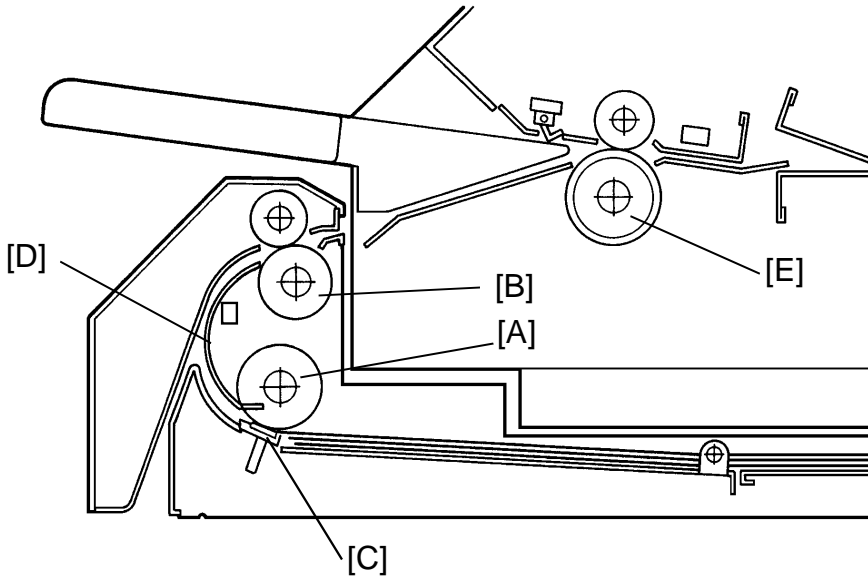
- 1. Upper Relay Roller
- 2. Lower Relay Roller
- 3. Paper Feed Roller
- 4. Friction Pad

1.2 ELECTRICAL COMPONENT DESCRIPTIONS

Refer to the electrical component layout on the reverse side of the Point to Point (Water proof paper) index numbers.

NAME	FUNCTION	Index No.
Solenoids		
Sheet Feeder 1	Turns the paper feed roller of the sheet feeder.	72
Sheet Feeder 2	Turns the relay rollers of the sheet feeder.	73
Sensors		
Paper Entrance	Detects misfeeds in the sheet feeder.	74
Paper End	Detects when the sheet feeder runs out of paper.	75
Switch		
Feed Pressure	Detects if the position of the feed pressure lever is 3 or not.	76

2. BASIC OPERATION



Sheet Feeder operation begins when an original is inserted into the original entrance. At the appropriate timing, the paper feed roller [A] and the relay rollers [B] start turning. The paper feed roller feeds the top sheet of paper past the friction pad [C] to the turn guides [D]. The relay rollers then feed the paper to the manual feed rollers [E]. From that point onwards the paper feed continues in the same way as manual feed.

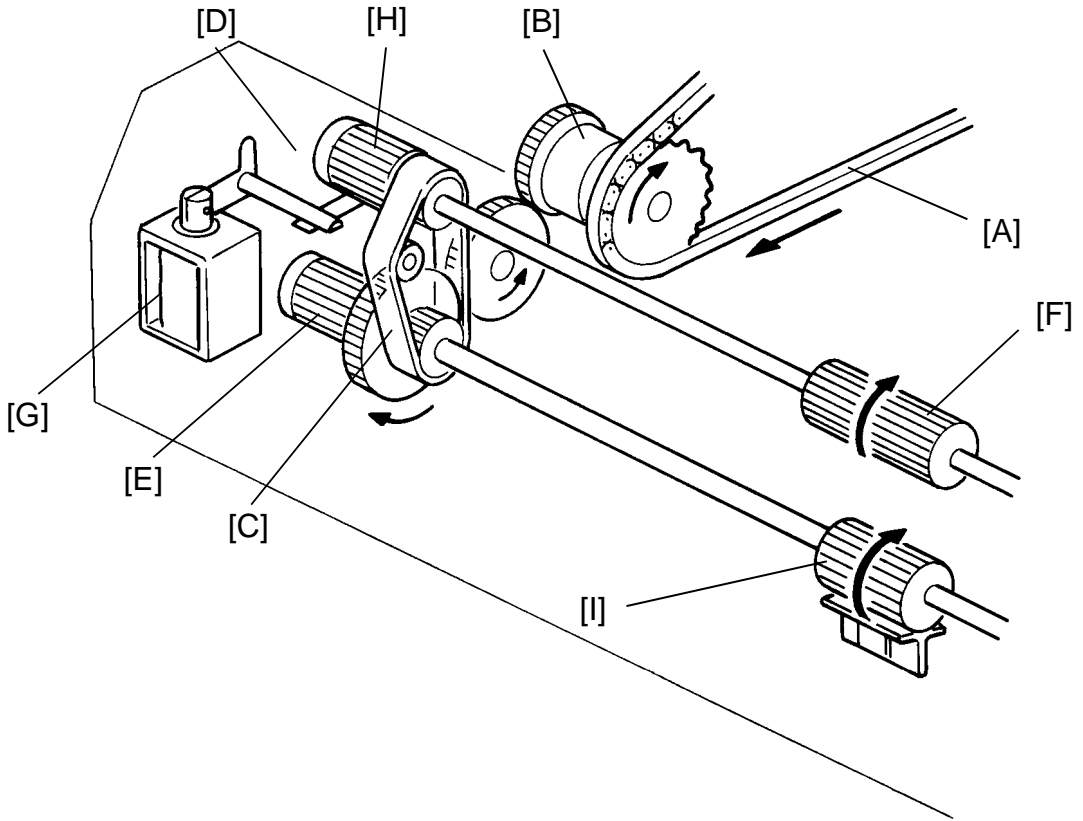
This model uses the friction pad method for paper feeding. The pressure of the friction pad must be greater for translucent paper than for bond paper.

The friction lever can be used to change the pressure of the friction pad. There are three settings.

<u>Position</u>	<u>Pressure</u>	<u>Kind of Paper</u>
1	standard	Bond Paper
2	stronger	Translucent Paper (A3, A4)
3	strongest	Translucent Paper (A1, A2)

NOTE: When position 3 is selected, the copy paper feeding speed becomes slower and paper/original registration will not function properly. To correct this, the CPU delays original feed and the copying speed becomes half (1/2) of the standard speed.

2.1 DRIVE MECHANISM



Constant drive is provided from the main motor via the paper feed drive chain [A], to the drive sprocket [B], and through gears to the feed drive belt [C].

Engaging and disengaging the sheet feeder solenoid 1 [D] allows the spring clutch [E] to turn, thus driving the relay roller [F]. Engaging and disengaging the sheet feeder solenoid 2 [G] allows the spring clutch [H] to turn, thus driving the paper feed roller [I].

3. INSTALLATION PROCEDURE

3.1 ACCESSORY CHECK

Check the accessories and their quantities according to the following list:

- 1. Right Feeder Stopper 1 pc
- 2. Left Feeder Stopper 1 pc
- 3. Ground Wire..... 1 pc
- 4. Ground Wire Cover 2 pcs
- 5. Right Rear Feeder Cover..... 1 pc
- 6. Left Rear Feeder Cover 1 pc
- 7. Right Feeder Lock Bracket 1 pc
- 8. Left Feeder Lock Bracket..... 1 pc
- 9. Safety Switch with Bracket 1 pc
- 10. Connector Socket with Bracket..... 1 pc
- 11. Shoulder Screw..... 1 pc
- 12. Pan Head Screw15 pcs
- 13. Harness Holder Bracket..... 2 pcs
- 14. Toothed Washer 2 pcs
- 15. Caution Decal 1 pc

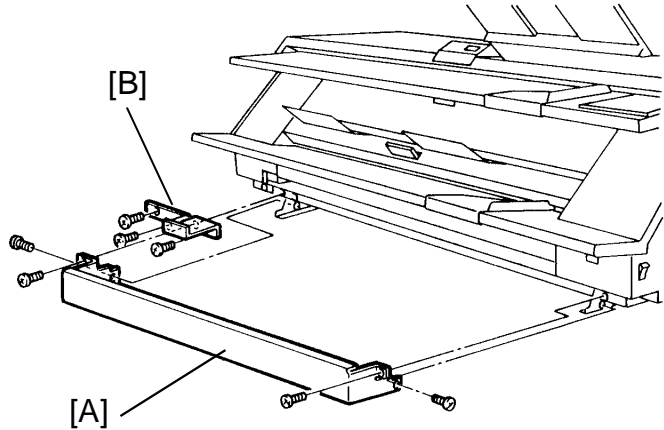
CAUTION: Unplug the copier power cord before starting the following procedure.

3.2 INSTALLATION PROCEDURE

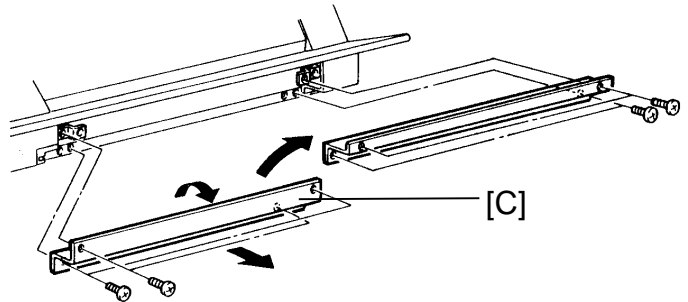
1. Remove the lower front cover [A] (4 screws) and the gear cover [B] (3 screws) from the copier.

NOTE:

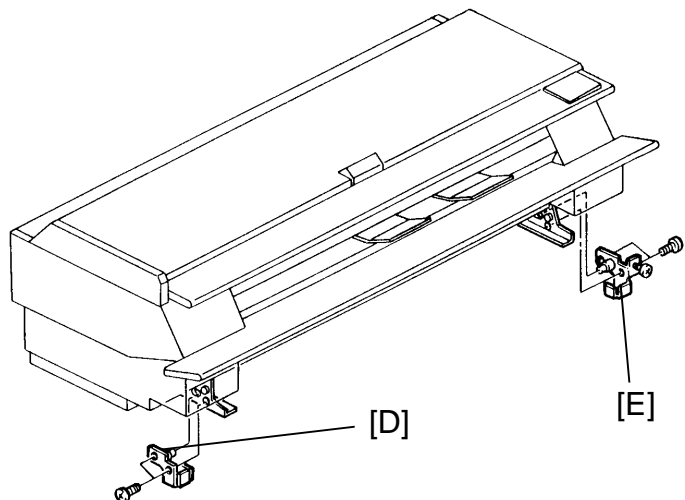
If the roll feeder has been installed, then these parts have already been removed.



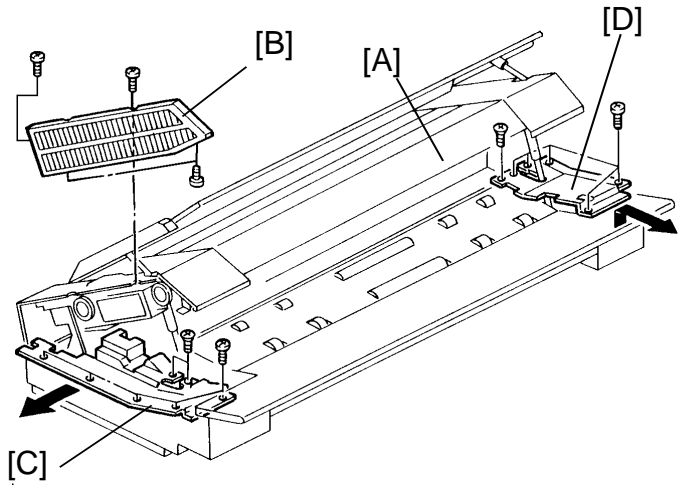
2. Remove the front lower plate [C] on the copier (4 screws). Revolve the plate 180 degrees and then reinstall it in the same position again.



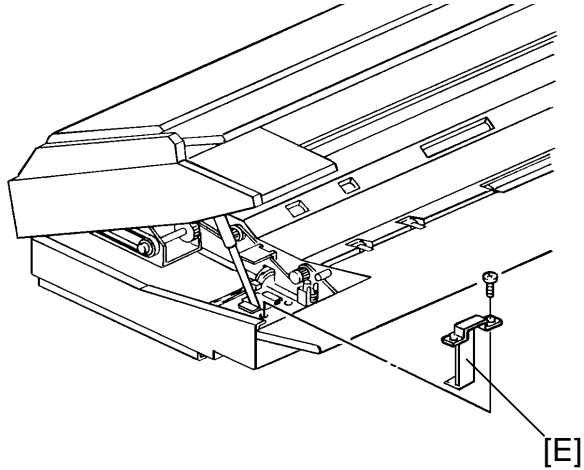
3. Install the left and right feeder lock brackets [D, E] on the front rail of the copier. (2 screws each)



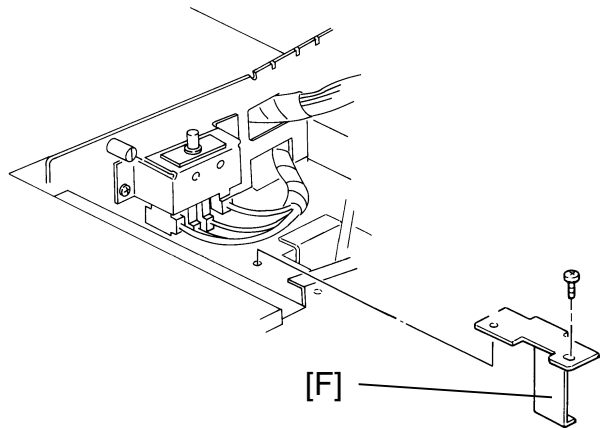
- 4. Open the upper unit [A] of the copier and remove the left middle cover [B] (4 screws), the left inner cover [C] (7 screws), and the right inner cover [D] (6 screws).



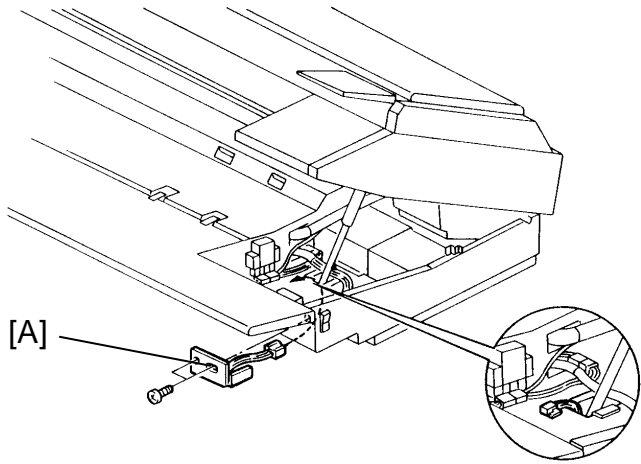
- 5. Remove the left harness holder bracket [E]. (1 screw)



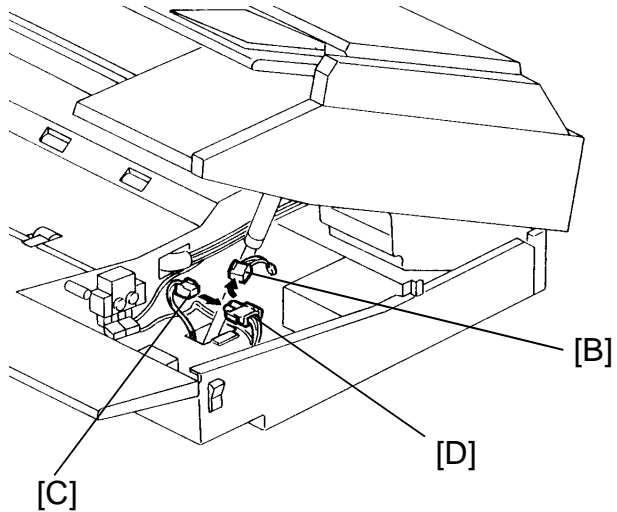
- 6. Remove the right holder bracket [F]. (1 screw)



- 7. Install the safety switch with bracket [A] on the right lower portion of the copier. Reinstall the two screws that were mounted there previously.



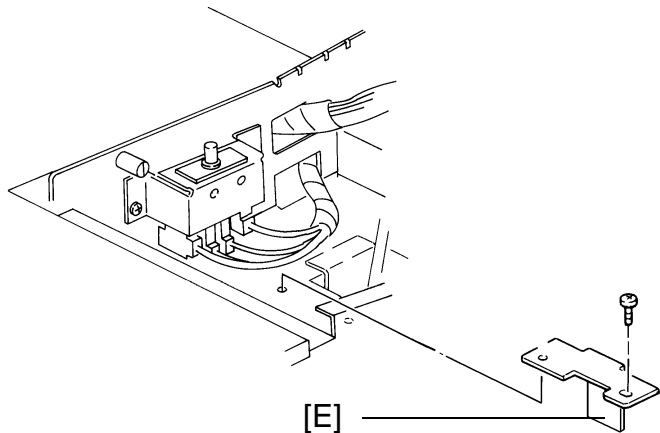
- 8. Disconnect the jumper connector [B] and connect the safety switch connector [C] with the copier connector [D].



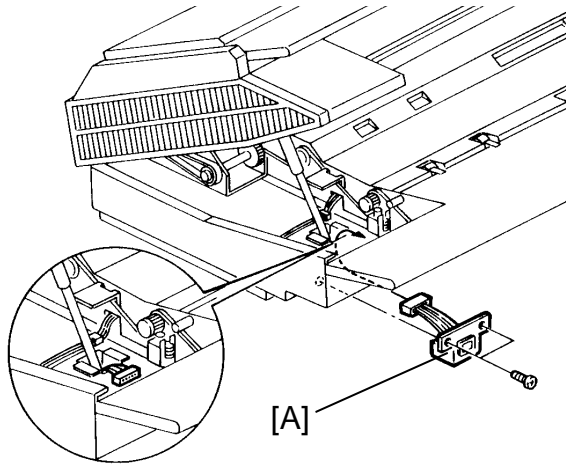
NOTE:

Keep the jumper connector for future use.

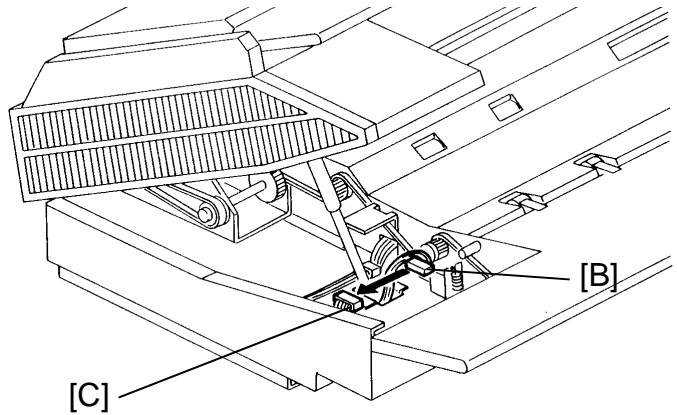
- 9. Install the harness holder bracket [E]. (1 screw)
- 10. Reinstall the right inner cover. (6 screws)



- 11. Install the connector socket with the bracket [A] temporarily on the lower left of the copier (2 screws).

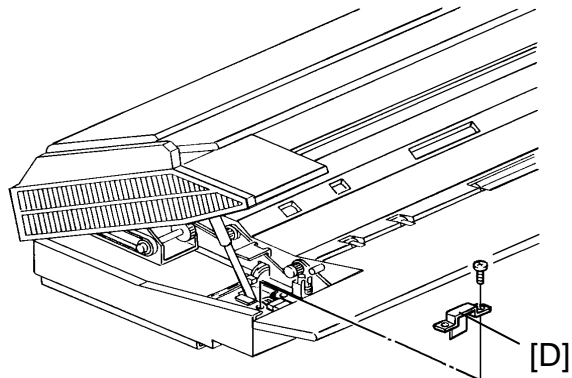


- 12. Join the connector [B] from the bracket with the one [C] from the copier.

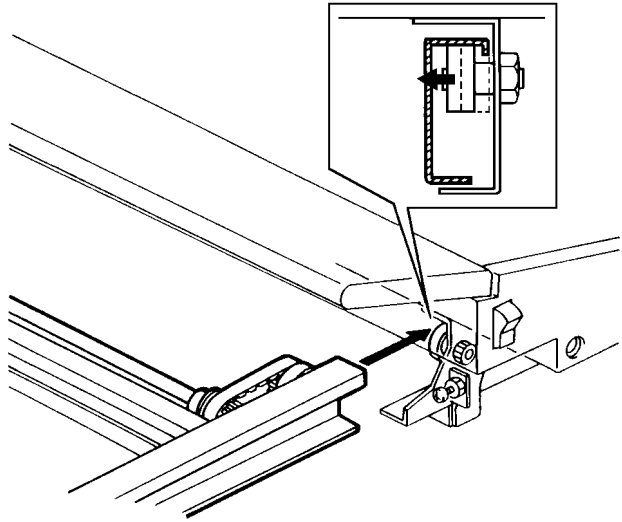


- 13. Install the harness holder bracket [D]. (1 screw)

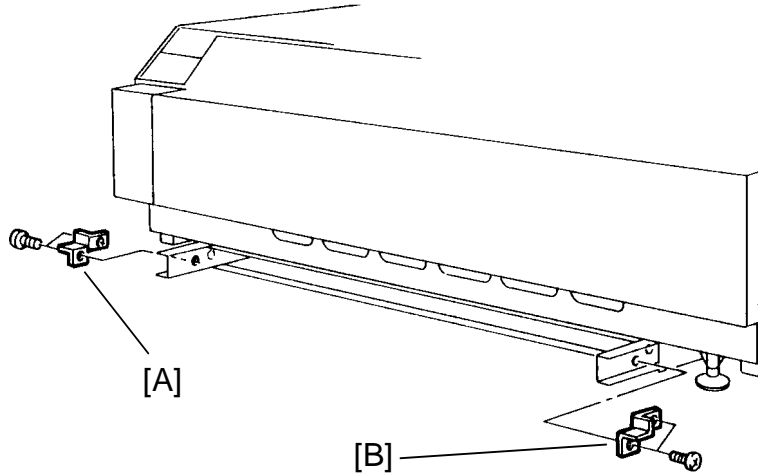
- 14. Install the left inner cover. (6 screws)



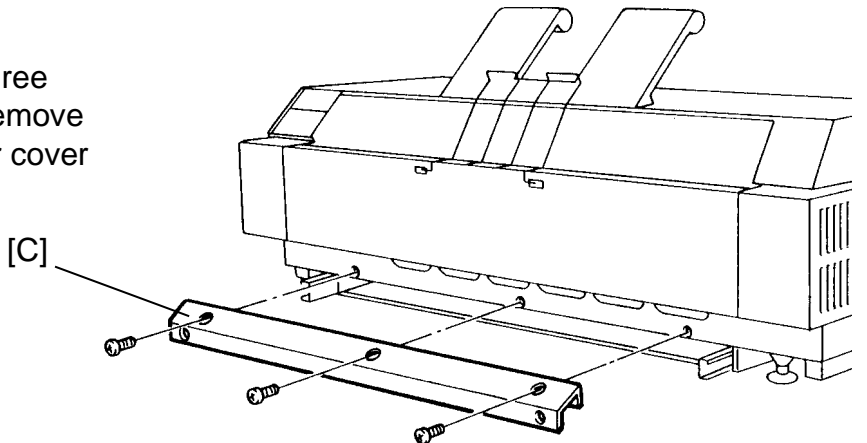
- 15. Move the two ball bearings of the left and right lock brackets toward the inside.
- 16. Slide the auto sheet feeder unit into the copier.



- 17. Install the left and right feeder stoppers [A, B]. (2 screws each)

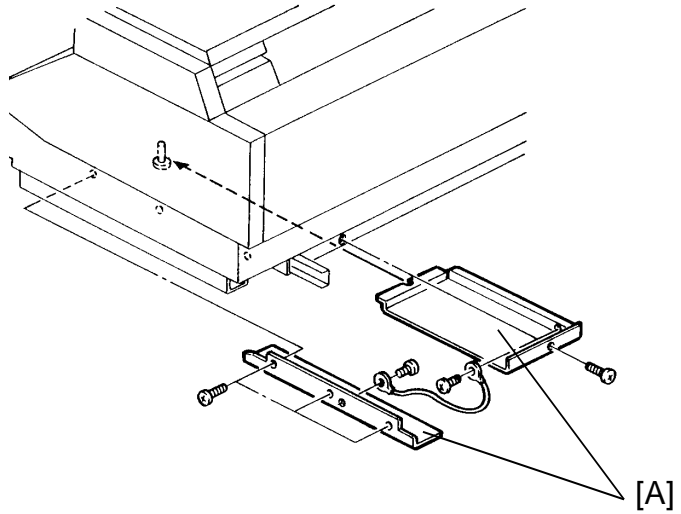


- 18. Loosen the three screws and remove the rear lower cover [C].

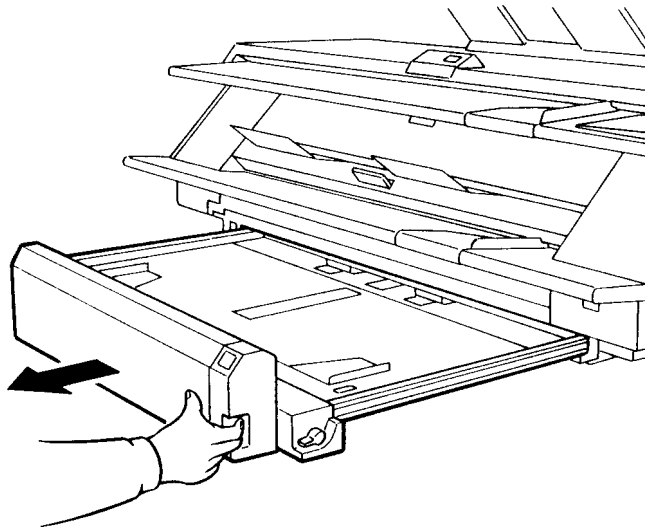


Sheet Feeder

- 19. Install the ground wire covers [A] with the ground wire as shown in the figure.

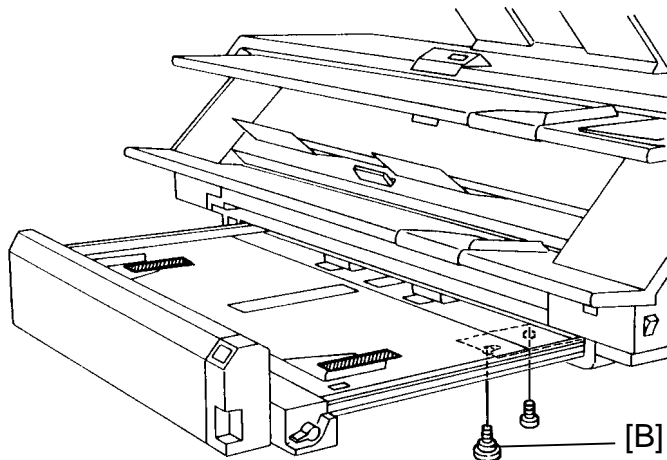


- 20. Pull out the auto sheet feeder unit until it stops. Remove all strips of shipping tape from the unit.

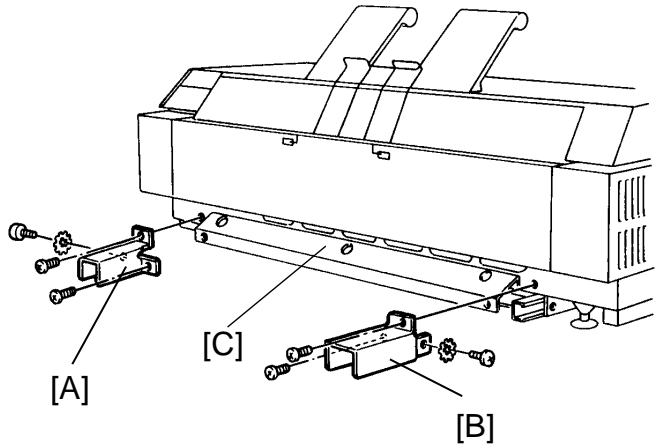


- 21. Fix the ground wire cover with the shoulder screw [B] and a pan head screw.

- 22. Close the sheet feeder completely and fix the screws of the connector bracket.

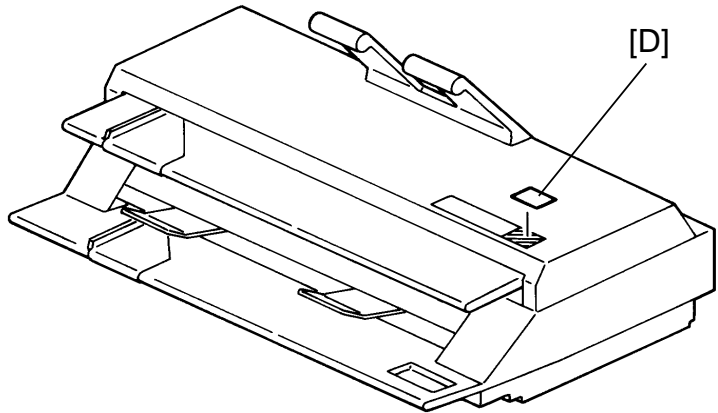


23. Install the left and right rear feeder covers [A, B] including the toothed washers. (Remove the two screws from the right and left sides of the copier for installation of the rear feeder covers.)



24. Install the rear lower cover [C].

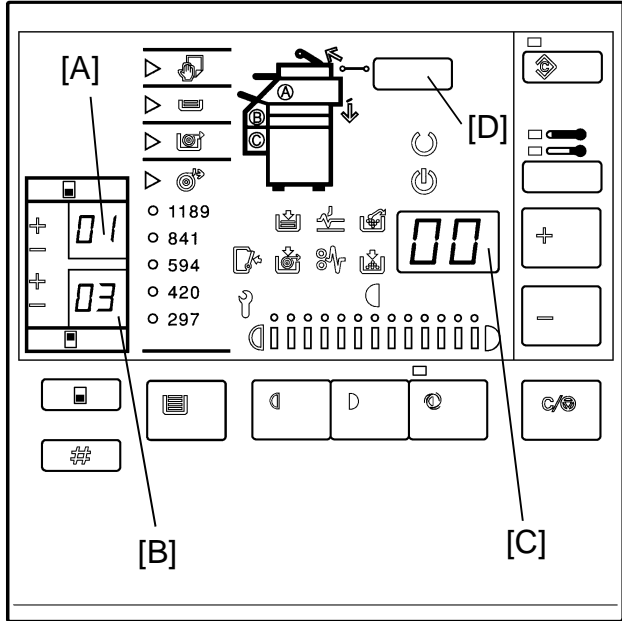
25. Stick the caution decal [D] on the top cover of the copier.



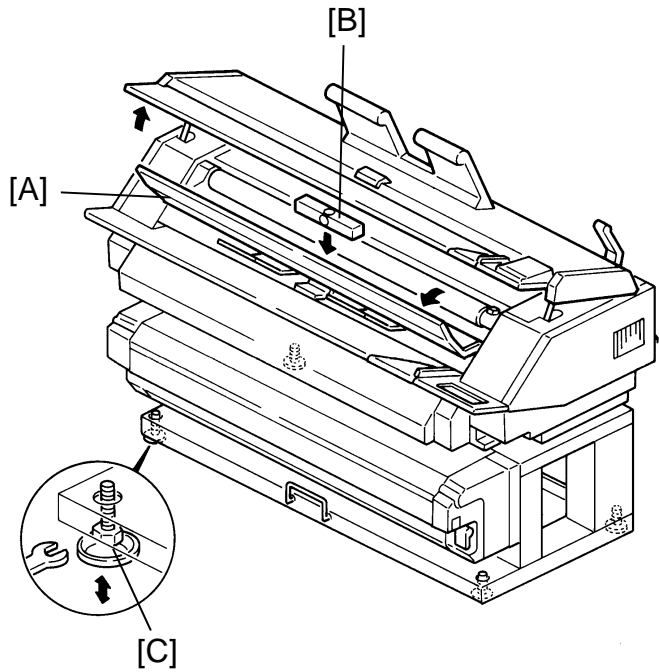
26. Plug in the copier power supply cord and turn on DIP101-8 on the main board. Then, turn on the main switch.

27. a) Set the leading margin indicator [A] to 01 and the trailing margin indicator [B] to 03.
b) Select the copy counter indicator [C] to 00 (with roll feeder) or 02 (without roll feeder).
c) Press the copy exit way key [D].

28. Turn off the main switch and DIP101-8.



- 29. Open the toner cartridge cover [A].
- 30. Place a level [B] in the space between the cartridge cover and the developer entrance.
- 31. Adjust the level of the machine by turning the bolts on the 4 table feet [C].



- 32. Reinstall all the covers and turn on the main switch.
- 33. Check machine operation.

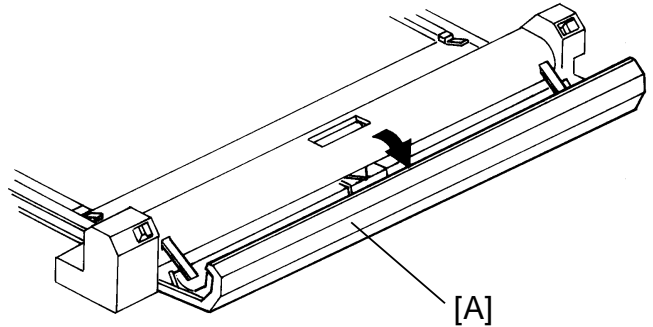
4. REPLACEMENT AND ADJUSTMENT

4.1 EXTERIOR COVERS REMOVAL

4.1.1 Left and Right Cover Removal

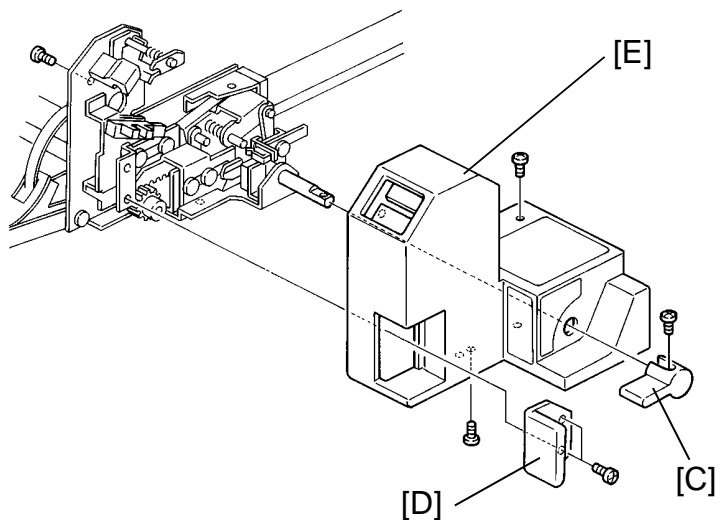
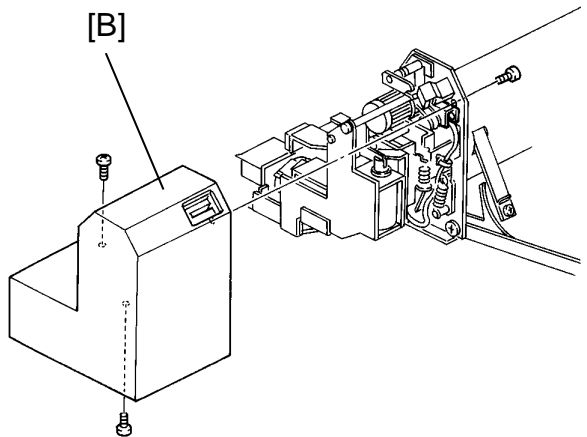
–Left cover removal–

1. Pull out the sheet feeder unit.
2. Open the front cover [A].
3. Remove the left cover [B] (3 screws).



–Right cover removal–

1. Pull out the sheet feeder unit.
2. Open the front cover [A].
3. Remove the separation knob [C] (1 screw).
4. Remove the lock release grip [D] (2 screws).
5. Remove the right cover [E] (3 screws).

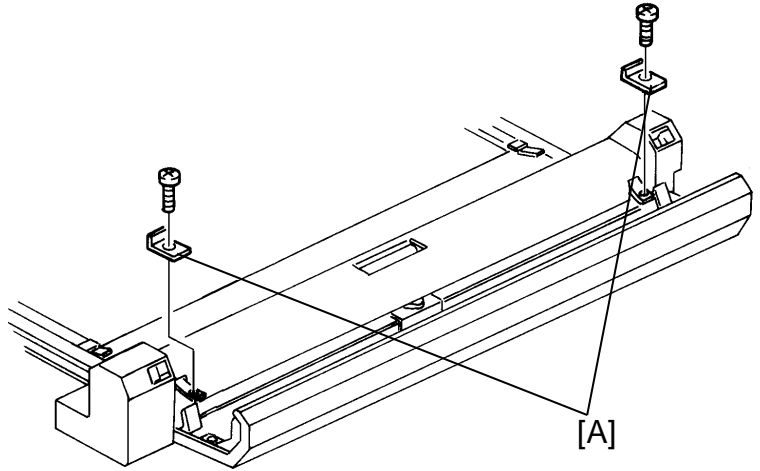


NOTE:

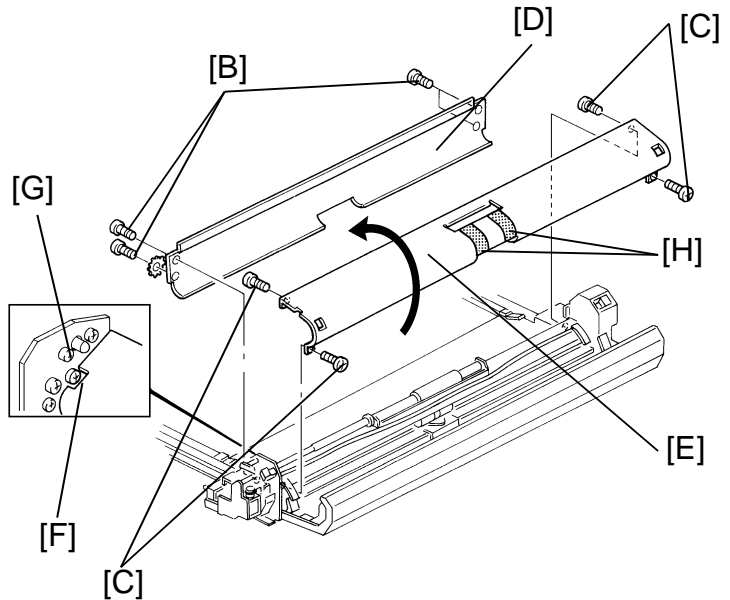
When reassembling, install the lock release grip, right cover, and separation knob in that order.

4.2 TEFLON TAPE REPLACEMENT

1. Pull out the sheet feeder unit and open the front cover.
2. Remove the stopper holder brackets [A] (1 screw each).

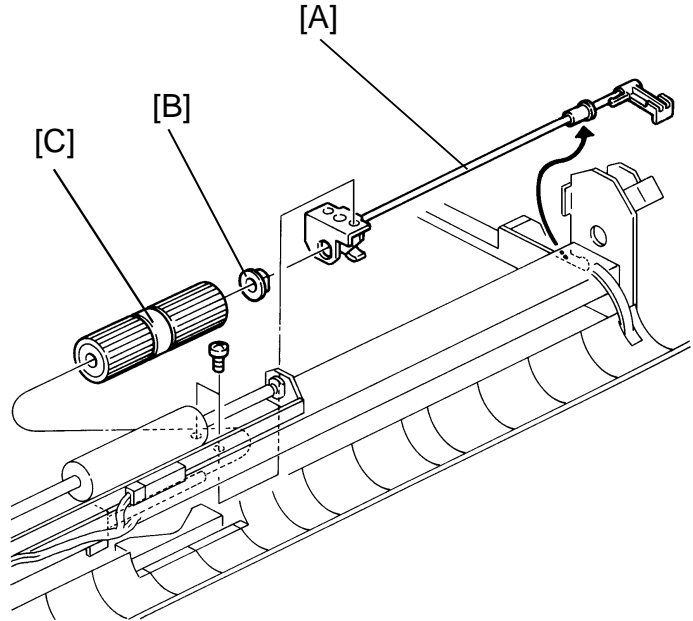


3. Remove the 4 screws [B] for the inner cover and 4 screws [C] for the inner cover plate.
4. Remove the inner cover [D] which is fixed to the frame with two sided tape.
5. Remove the inner cover plate [E] so that the cutout [F] of the inner cover plate left end does not meet the screw head [G].
6. Replace the teflon tape [H].



4.3 FEED ROLLER REPLACEMENT

1. Perform steps 1 to 5 of the teflon tape replacement.
2. Remove the right cover.
3. Remove the paper end sensor lever [A] with the bracket (2 screws and 1 bushing [B]).
4. Slide the paper feed roller [C] to the right.
5. Replace the paper feed roller.
6. Re-assemble the parts removed.

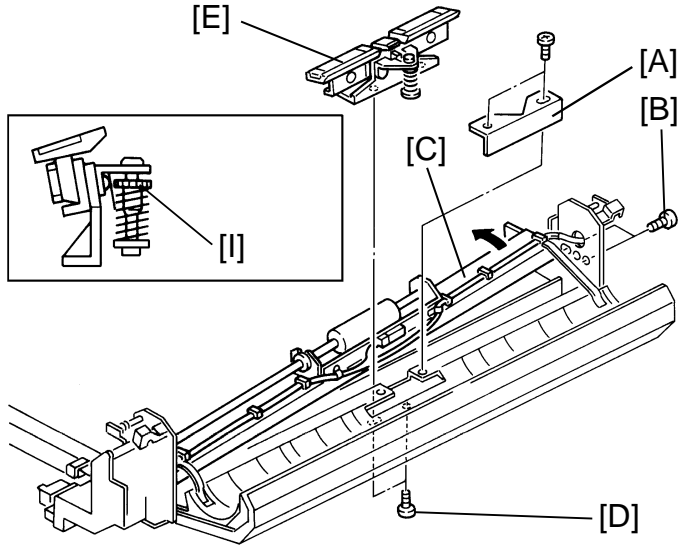


4.4 FRICTION PAD REPLACEMENT AND ADJUSTMENT

1. Remove the paper feed roller.
2. Remove the bracket [A] (2 screws).

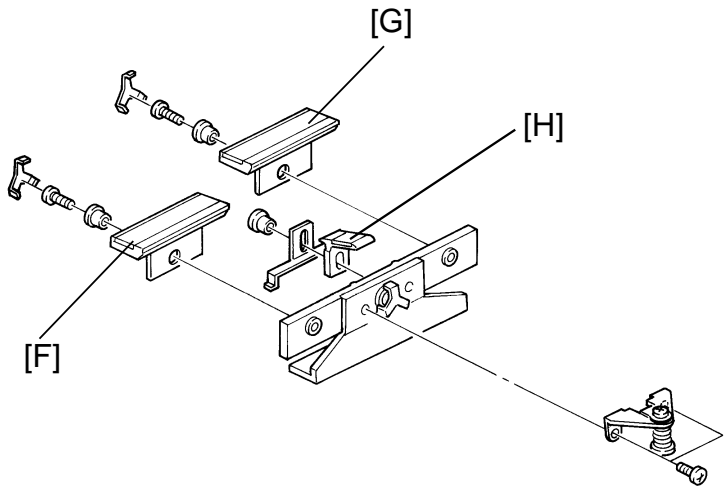
NOTE:

For easier removal of the friction pad assembly, remove two screws [B] and move the bracket [C] a little as indicated by the arrow.



3. Remove the two screws [D] fixing the friction pad assembly [E] and remove the assembly from the unit.

4. Replace the left and right friction pads [F, G] (1 spring plate, 1 screw, and 1 bushing) and middle friction pad [H] (1 shoulder screw and 1 spring plate).



5. Re-assemble the parts removed.

CAUTION:

The friction pad pressure is adjusted by special tools at the factory.

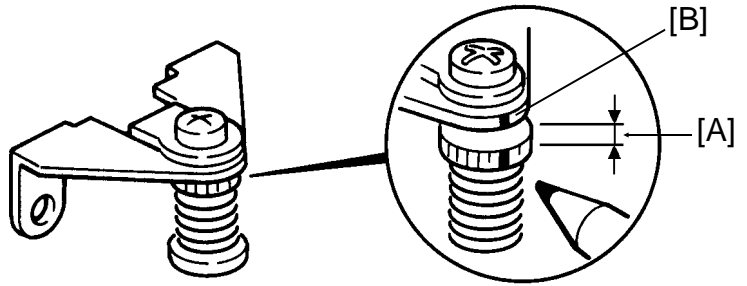
The knob screw [I] should not be turned in the field.

Note:

If the knob screw is required to be turned to confirm the paper feed condition, measure the gap [A] and mark the knob screw and sleeve bracket [B] as shown before turning the knob screw.

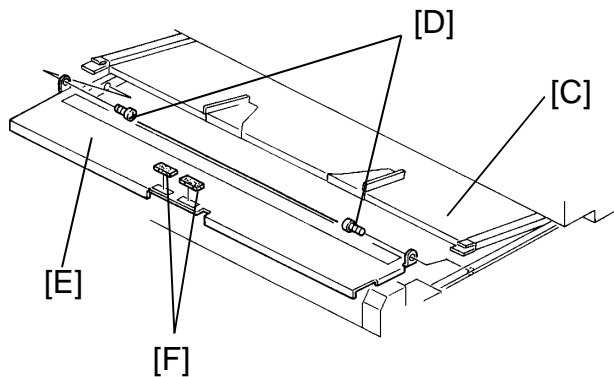
The gap can be returned to the factory adjustment by aligning the both marks.

(0.7 mm/turn)



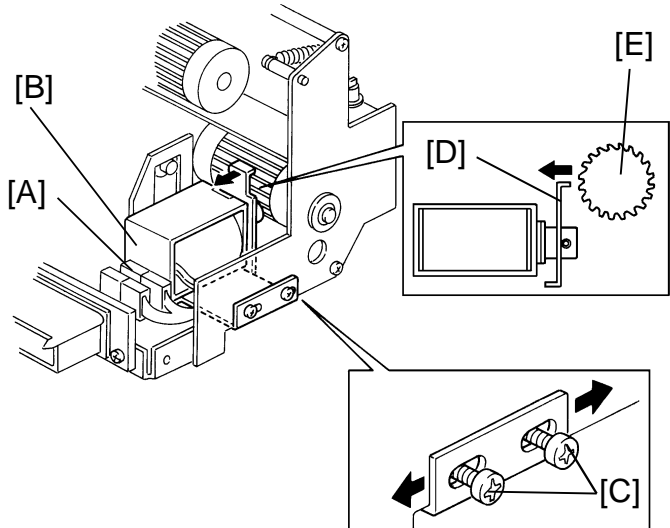
4.5 BOTTOM PLATE PAD REPLACEMENT

1. Pull out the sheet feeder unit.
2. Lift the paper set plate [C] to the up position.
3. Remove the two screws [D] from the bottom plate.
4. Open the bottom plate [E] and replace the bottom plate pads [F].



4.6 SHEET FEEDER SOLENOID 1 REPLACEMENT AND ADJUSTMENT

1. Remove the left cover (3 screws).
2. Disconnect the connector [A] of the paper feed solenoid [B].
3. Remove the two screws [C].
4. Remove the paper feed solenoid.
5. Replace the solenoid.
6. Fix the solenoid with the two screws [C] to meet the following condition.
 - 1) When the plunger of the solenoid is pulled, the tip of the clutch pawl [D] must be released from the paper feed clutch sleeve [E].
 - 2) When the solenoid is not energized, the tip of the clutch pawl must be latched on the clutch sleeve.
7. Connect the solenoid connector.



4.7 SHEET FEEDER SOLENOID 2 REPLACEMENT AND ADJUSTMENT

1. Remove the left cover (3 screws).

2. Disconnect the connector [A] of the paper transport solenoid [B].

3. Remove the spring [C].

4. Remove the three screws [D].

5. Remove the paper transport solenoid [B].

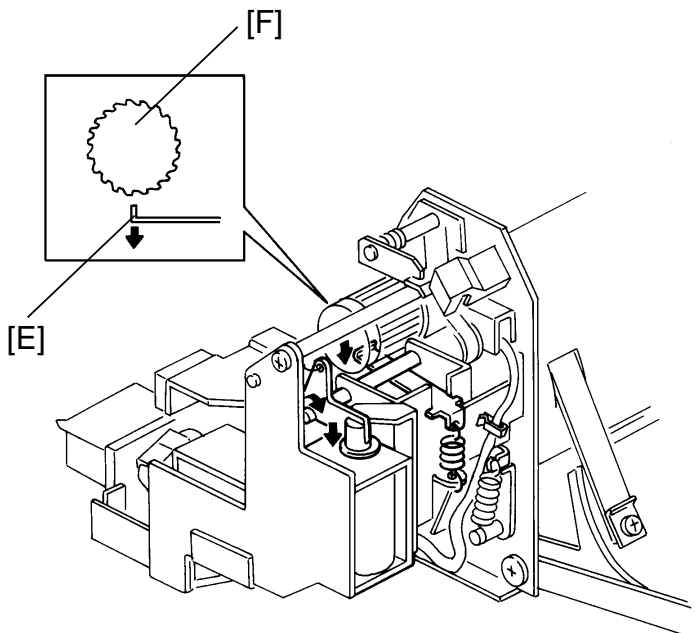
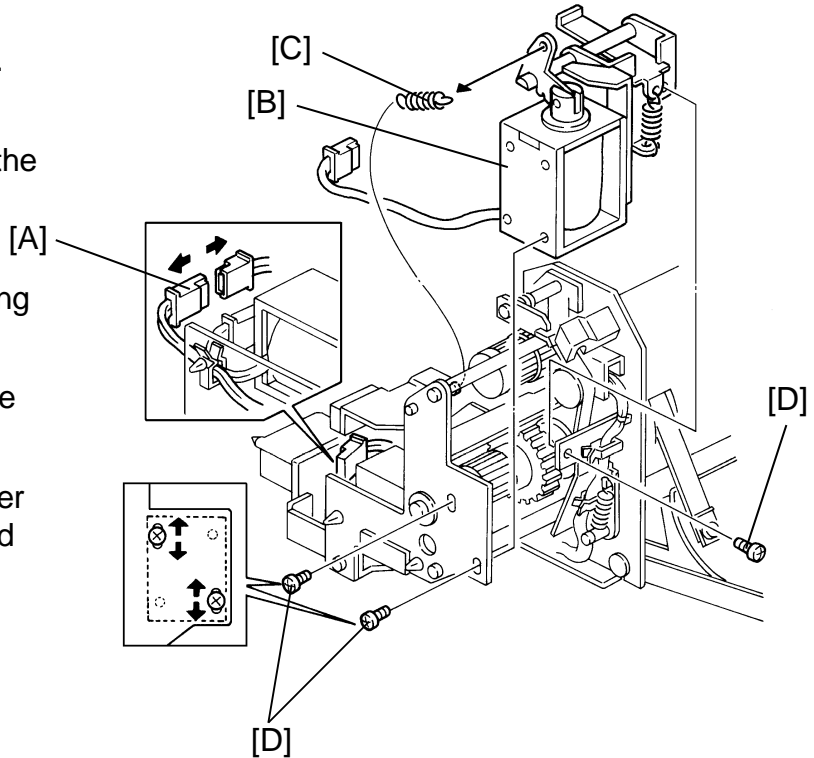
6. Replace the solenoid.

7. Fix the solenoid with the three screws [D] to meet the following conditions.

1) When the plunger of the solenoid is pulled, the tip of the clutch pawl [E], must be released from the paper transport clutch sleeve [F].

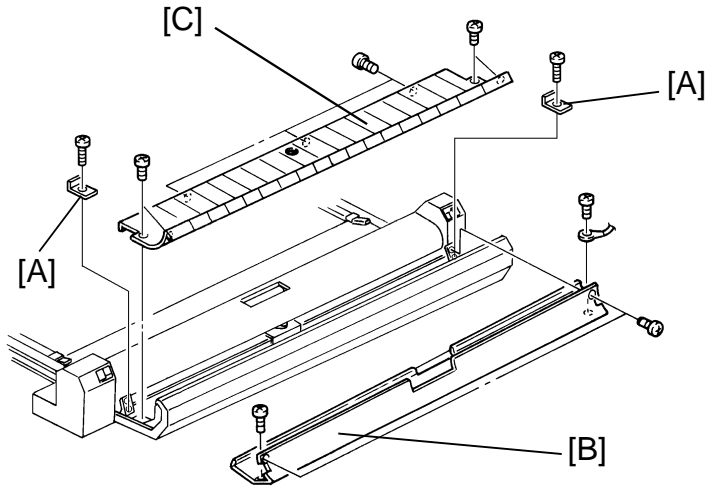
2) When the solenoid is not energized, the tip of the clutch pawl must be latched on the clutch sleeve.

8. Connect the solenoid connector.

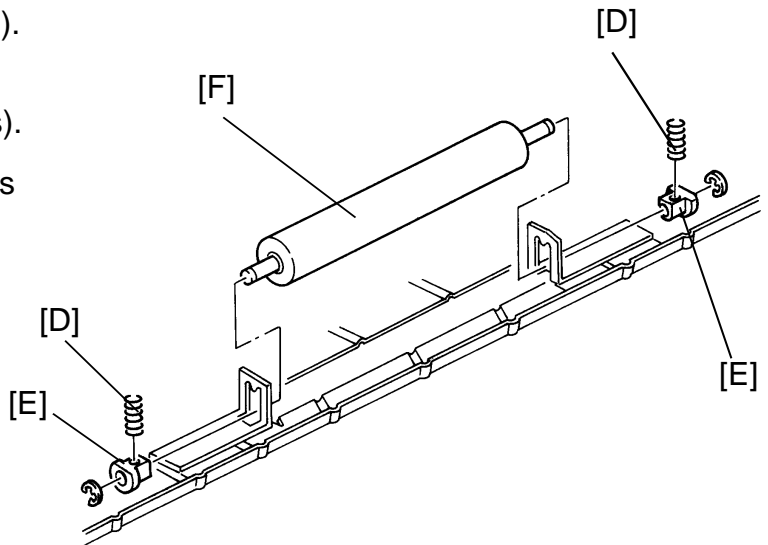


4.8 UPPER RELAY ROLLER REPLACEMENT

1. Pull out the sheet feeder unit and open the front cover.
2. Remove the stopper holder brackets [A] (1 screw each).

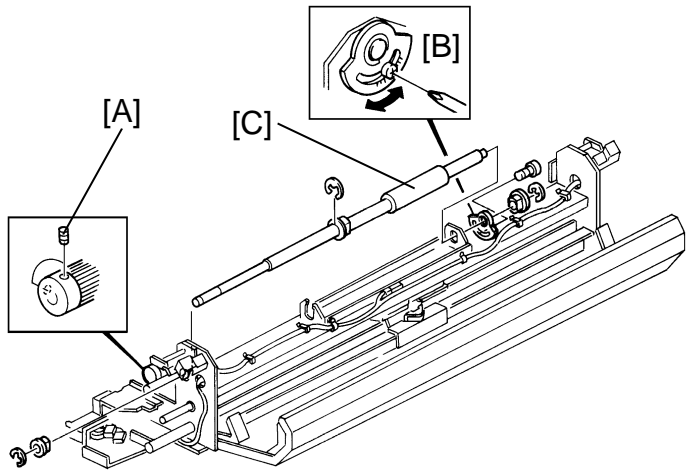


3. Remove the paper guide [B] (4 screws).
4. Remove the turn guide [C] (7 screws).
5. Remove the springs [D].
6. Remove the bushings [E] (2 E-rings).
7. Replace the upper relay roller [F].



4.9 LOWER RELAY ROLLER REPLACEMENT

- 1. Perform steps 1 to 5 of the teflon tape replacement.
- 2. Remove the left cover (3 screws).



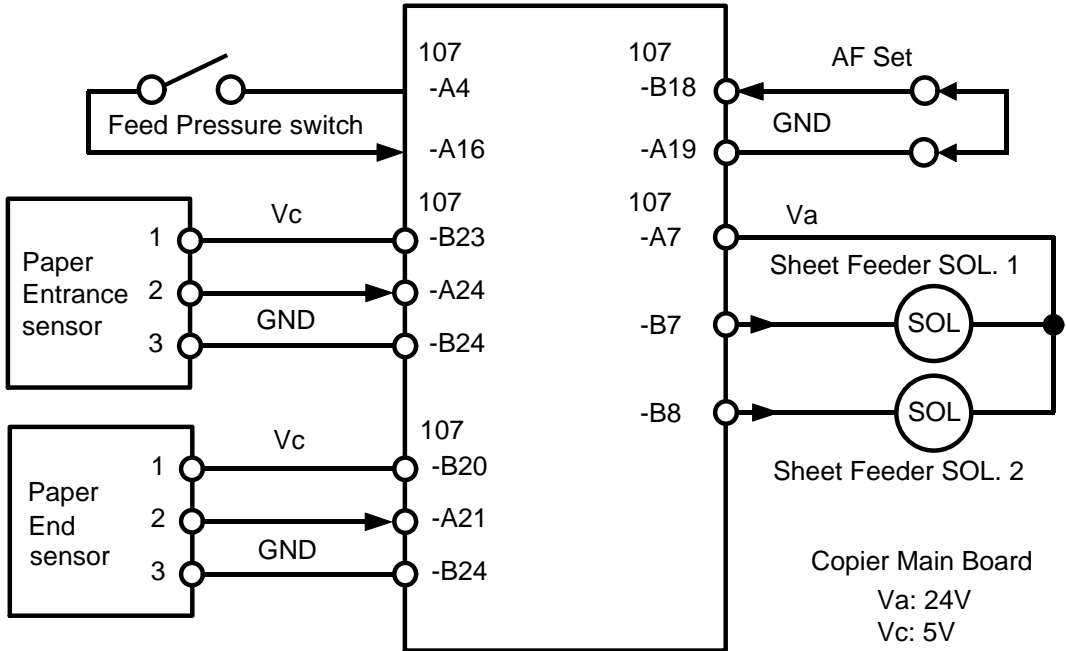
NOTE:

Before removing the lower relay roller, mark the position of the adjusting plate [B].

- 3. Loosen the two hexagonal headless screws [A] fixing the clutch sleeve.
- 4. Remove the lower relay roller [C] (3 E-rings, 2 bushings, 1 screw, and 1 adjusting plate).
- 5. Replace the lower relay roller.

5. ELECTRICAL CIRCUIT

5.1 CIRCUIT



5.2 SIGNAL LEVEL

Signal	In or Out	CN No.	Signal Level
Feed Pressure	I	107-A16	GND Position "3"
Paper Entrance	I	107-A24	GND Scan Paper is set
Paper End	I	107-A21	
AF Set	I	107-B18	Scan "Set" GND
Sheet Feeder solenoid 1 (Paper Feed)	O	107-B7	24 V ON
Sheet Feeder solenoid 2 (Exit)	O	107-B8	

Sheet Feeder