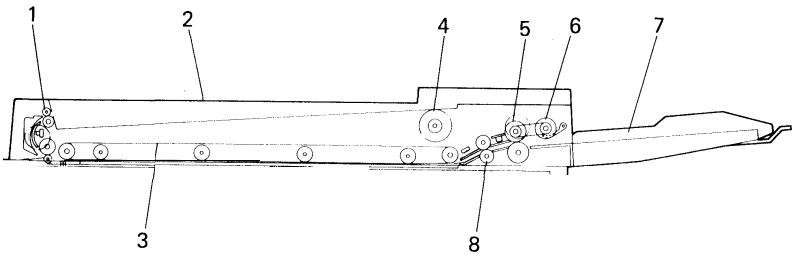
DOCUMENT FEEDER

SPECIFICATIONS

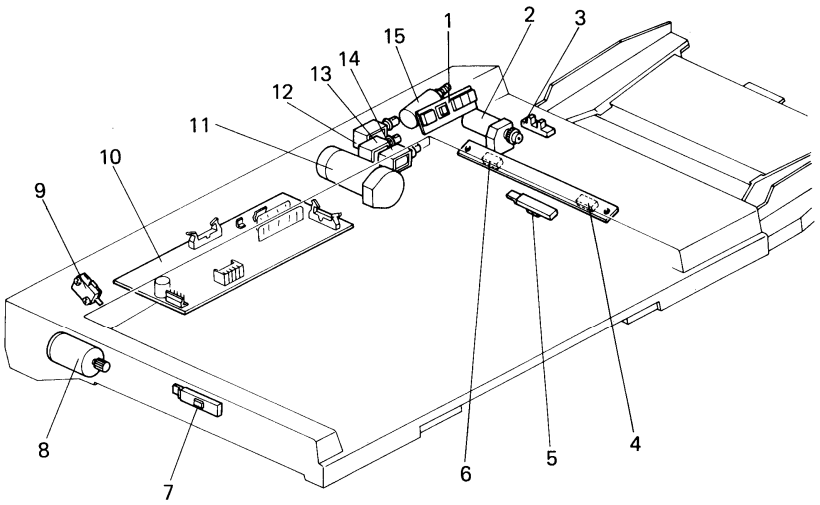
Original Size:	ADF mode Maximum A3 (11" x 17") Minimum A5 (5 1/2" x 8 1/2") SADF mode Maximum A3 (11" x 17") Minimum B6 (5 1/2" x 8 1/2") lengthwise
Weight:	Maximum 130 g/m^2 (34 lb) Minimum 40 g/m^2 (11 lb)
Original Feed Modes:	Automatic Feed (ADF mode) Manual Feed one by one (SADF mode)
Original Capacity:	Maximum 50 sheets (80 g/m^2, 20 lb)
Original Separation:	FFR system
Original Transportation:	Flat belt
Original Stop System:	DC servomotor control system
Original Feed Speed:	15 cpm / ADF mode
Power Source:	DC 24V / 5V (from copier)
Power Consumption:	20 w
Dimensions: (W XDXH)	935mmx515mmx95mm 36.8" **X** 20.3" **X** 3.8"
Weight:	11.5 kg (25.3 lb)
Copier Interface Equipment:	Interface PCB type E

MECHANICAL COMPONENT LAYOUT



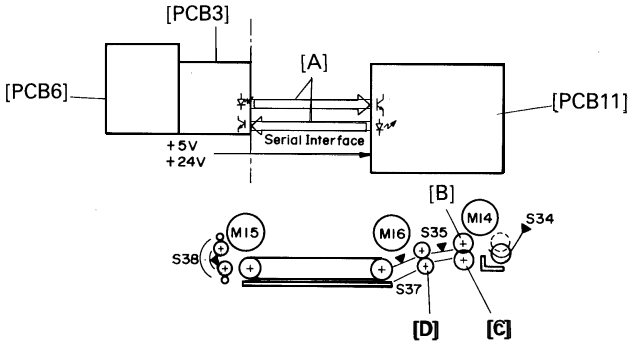
1. Exit Roller
2. DF Cover
3. Drive Belt
4. Drive Pulley
5. Feed Roller
6. Pick-up Roller
7. Original Table
8. Registration Rollers

ELECTRICAL COMPONENT LAYOUT



1. Indicator PCB (PCB-10)
2. Feed-in Motor (M-14)
3. Feed-in Sensor (S-34)
4. Entrance Sensor (S-35)
5. Registration Sensor (S-37)
6. Width Sensor (S-36)
7. Exit Sensor (S-38)
8. Feed-out Motor (M-15)
9. Lift Switch (SW-1 O)
10. DF Main PCB (PCB-11)
11. Belt Drive Motor (M-16)
12. Pick-up Solenoid (Sol-7)
13. Registration Solenoid (Sol-8)
14. Roller Release Solenoid (Sol-9)
15. Stopper Solenoid (Sol-10)

BASIC OPERATION



The DF has its own CPU which controls all of the DF functions. The DF CPU communicates with the copier through an interface board [PCB 3] and serial interface bus. Fiber optics [A] are used for the serial interface bus because they are unaffected by electrical noise.

When an original is set on the original table, the original sensor [S34] is activated. The DF CPU then selects either the ADF or SADF mode depending on the number of originals set. If one original is set, SADF is selected. If more than one original is set at the same time, SADF changes to ADF when the second original starts to feed.

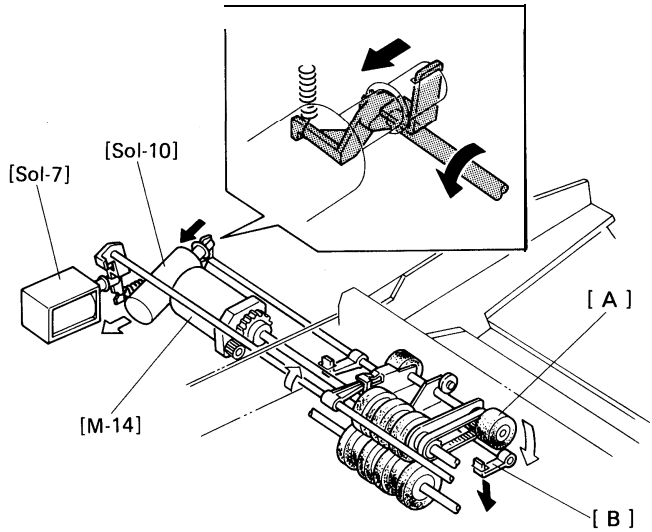
The DF CPU energizes the stopper and pick-up solenoids, and then turns on the feed-in motor [M 14]. The feed [B] and friction rollers [C] separate and feed an original to the registration rollers [D].

A short time after the original reaches the registration roller the DF CPU turns on the belt drive motor [Ml 6] and energizes the registration solenoid. The time lag enables the original skew to be corrected. The belt then feeds the original to the exposure glass, while the CPU counts the pulses of the M16 encoder. At the proper time, the CPU turns off M 16.

When the DF CPU receives the feed-out signal from the copier, it turns on the feed-out motor [M 15] until the exit sensor [S38] is deactuated by the trailing edge of the original.

As the exit sensor is inside the exit unit, the trailing edge of the original is still in the exit unit. After 0.4 second, the CPU turns on Ml 5 to feed the original out completely. This stacks the originals tidily.

FEED-IN UNIT MECHANISM

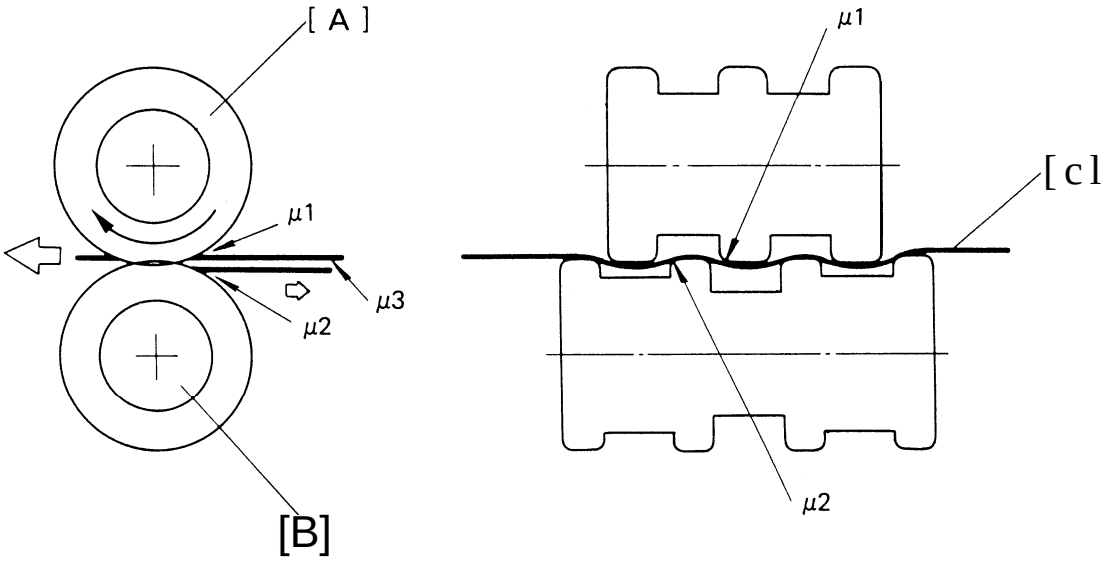


After an original is inserted into the feed-in unit and the Start key is pressed, the DF CPU energizes the pick-up solenoid [S01-7] and the pick-up roller [A] drops onto the top of the original(s). At the same time, the DF CPU energizes the original stopper solenoid [Sol-1 O] to retract the stopper claws [B].

In ADF mode, the original stopper claws stay underneath the original feed table until all the originals have been fed. In SADF mode, the stopper claws rise up for each original.

200 ms after energizing the solenoids, the DF CPU turns on the feed-in motor [M-14] which rotates the feed and pick-up rollers.

SEPARATION MECHANISM



μ1 ----- Coefficient of friction between the feed rollers and the original.

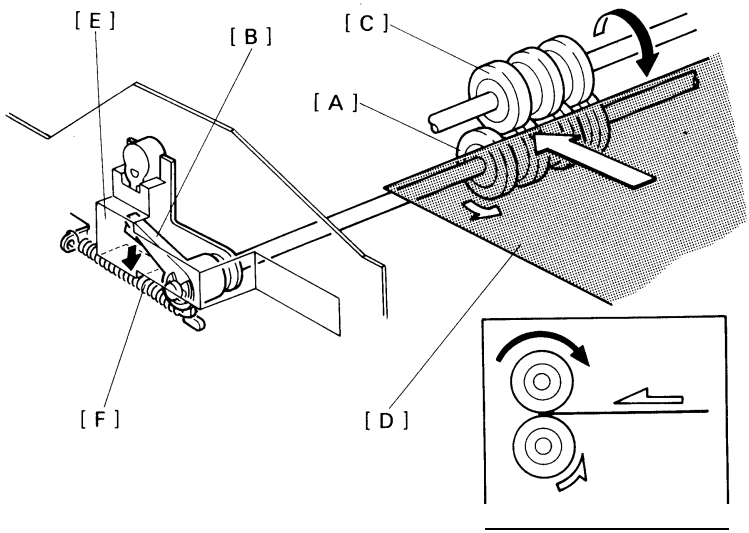
μ2 ----- Coefficient of friction between the friction rollers and the original.

μ3 ----- Coefficient of friction between originals.

This model uses an FFR (Feed and Friction **Roller) original feed system with three sets of rollers** (feed, friction and pick-up roller). The feed [A] and friction rollers [B] have grooves in them which interlock with one another. The rollers interlock to decrease damage to the originals [C], especially pencil written originals, from direct roller-to-roller pressure.

The pick-up roller sometimes sends more than one original to the feed and friction rollers. When this happens, the friction rollers strip the extra original from the top original as follows: μ1 is greater than μ3, and because μ2 is greater than μ3, the top original will slide past the friction rollers while lower originals are stopped.

MISFEED PREVENTION

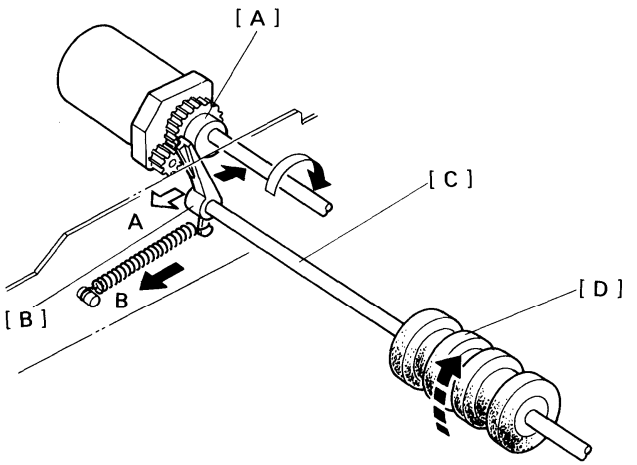


The front side of the friction roller [A] is attached to the misfeed prevention lever [B] through a one-way clutch.

When the leading edge of an original first contacts the feed [C] and friction rollers [A], the friction roller is stationary. As the leading edge is fed between these rollers, the friction roller rotates counter clockwise a few degrees to help feed thick originals [D]. After the friction roller has rotated a few degrees, the misfeed prevention lever contacts the stopper plate [E] and the friction roller stops rotating. At this point, the separation mechanism will eliminate multiple feeding.

When the trailing edge of the original passes the friction roller, the spring [F] returns the lever to its original position without rotating the friction roller shaft.

WEAR PREVENTION

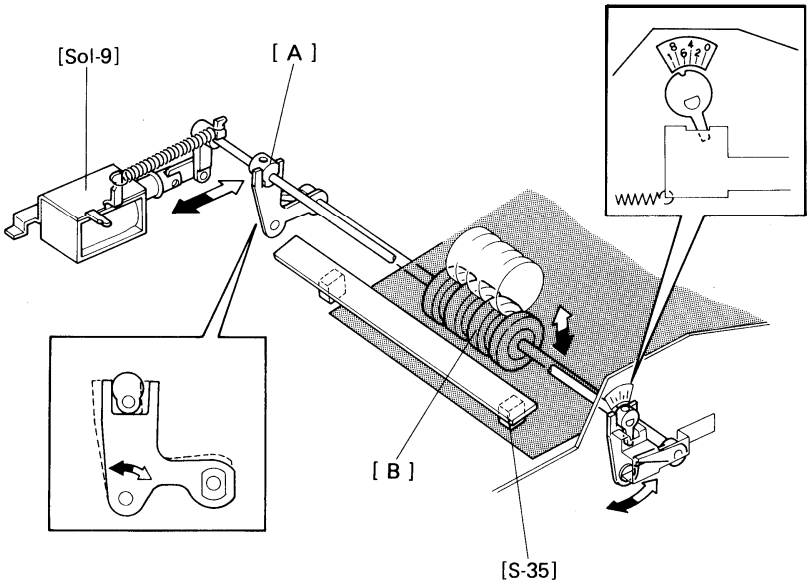


The rear side of the feed roller shaft drive gear has an eccentric cam [A]. This cam contacts the wear prevention lever [B] which is attached via a one-way clutch to the friction roller shaft [C]. This lever is free to rotate in the direction of the white arrow A.

As the feed roller drive gear rotates, the high point of the cam pushes back the wear prevention lever in the A direction. As the cam rotates to the low point, a spring returns the wear prevention lever to its original position (black arrow B). When the wear prevention lever returns, it rotates the friction roller shaft, through the one-way clutch.

Every time the feed roller shaft rotates once, the friction roller shaft is rotated a few degrees. This prevents the friction roller [D] from wearing unevenly or too quickly.

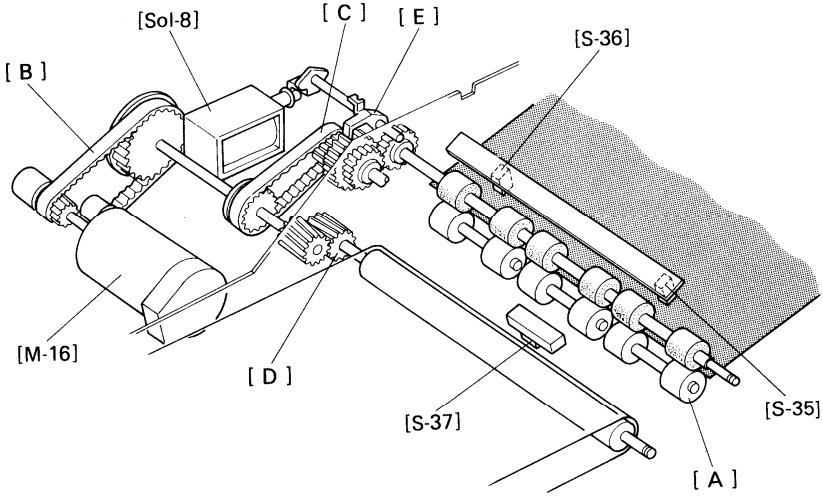
FRICTION ROLLER RELEASE MECHANISM



In the ADF mode, when the original activates the original entrance sensor [S-35], the DF CPU energizes the roller release solenoid [Sol-9], This action rotates the roller release cam shaft, which has an eccentric cam [A] on each end, to decrease the overlap of the feed and friction rollers. This is to prevent the original from being smeared by the friction roller [B]. The overlap is 0.9 mm when the solenoid is off, and 0.4 mm when it is on.

In the SADF mode, it is not necessary to separate the originals, so the DF CPU energizes the roller release solenoid and releases the friction roller before feeding the original.

REGISTRATION



The DF CPU stops the feed-in motor [M 14] 30 milliseconds after the leading edge of the original activates the original entrance sensor [S-35]. The original's own forward momentum, which causes the original to align against the registration roller [A], corrects the skew.

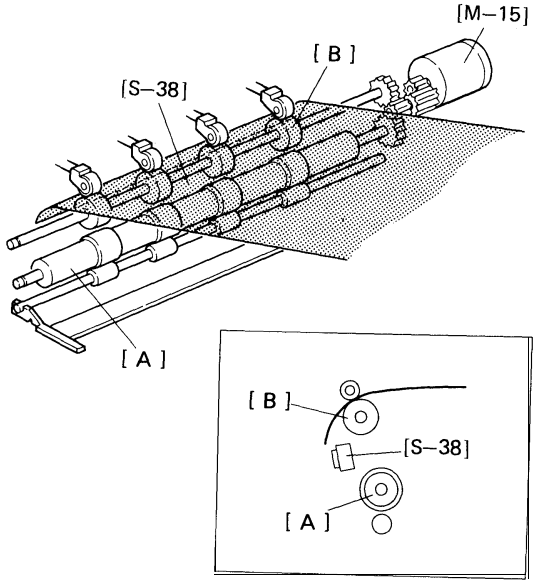
After a further 30 milliseconds, the DF CPU energizes the belt drive motor [M-16] and the registration solenoid [Sol-8]. Rotation of the belt drive motor is transmitted to the feed belt and registration rollers via the timing belts [B and C], belt drive gear [D], registration clutch [E], and registration roller gear.

The DF CPU starts counting the pulses from MI 6 when the leading edge of the original activates the registration sensor [S-37]. When the pulse count reaches 1,962 pulses (about 940 ins), the original is at the proper position, and the DF CPU stops M16.

In Auto Paper Selection or Auto R/E mode, the ADF automatically determines the original size. The registration sensor and the original width sensor [S-36] measure the original size. The registration sensor measures the length of the original by counting the MI 6 pulses as the original passes under it. Then, if the original size cannot be determined from the length alone, the CPU checks whether the original has actuated the original width sensor. Based on the input from these two sensors, the correct original size can be determined.

The registration sensor is also a jam detector.

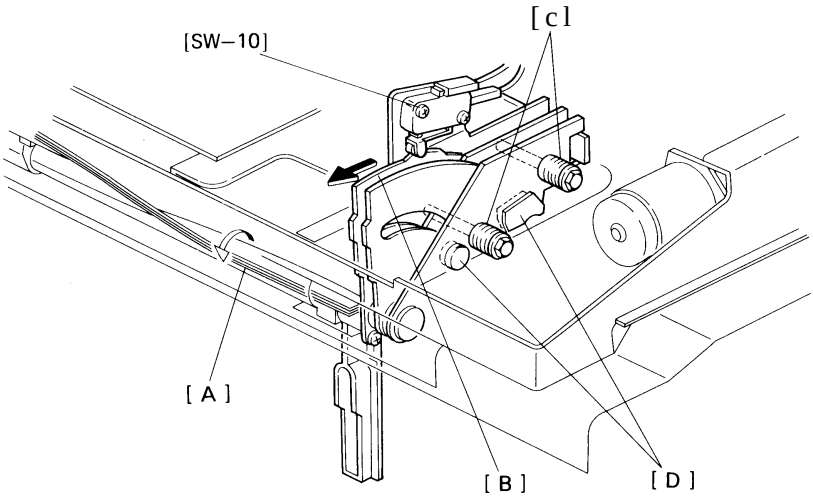
FEED-OUT MECHANISM



When the DF CPU receives the feed-out signal, it energizes the belt feed-out motors. The feed-out motor [M- 15] drives both the lower [A] and the upper exit roller [B] through an idle gear, drive and exit roller

When the exit sensor [S-38] detects the trailing edge of the original, the CPU reduces the speed of the feed-out motor to feed the original out completely. This is done to stack the originals neatly.

LIFTING MECHANISM

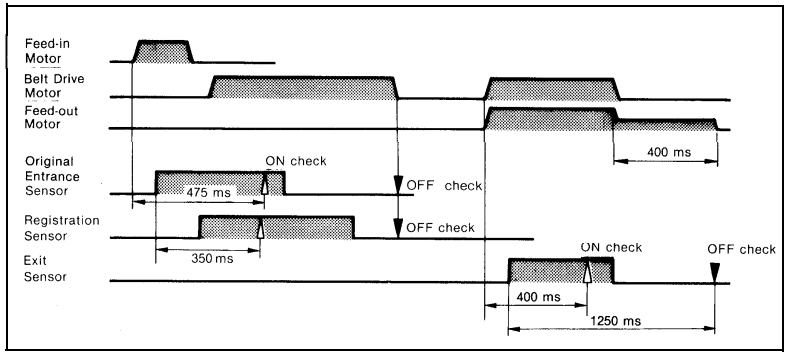


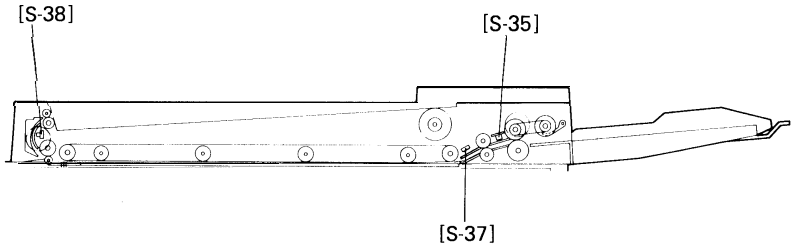
The torsion spring [A] is installed inside the torsion spring collars. A screw fixes the center of the torsion spring, and both sides of the spring are twisted when the belt unit is lowered. The spring tension makes it easier to lift up the belt unit.

The cam plates [B] are sandwiched between the brake shoes [C], which are under pressure from the brake shoe springs [D]. This causes friction between the cam plate and the brake shoes.

When the belt unit is lifted up, the lift switch [SW-IO] is turned on by the detent arm as it moves along the cam plate. When the lift switch is turned on, DF modes are prohibited. At the same time, the DF CPU sends a signal to the copier CPU. This signal enables the copier to operate without the document feeder.

MISFEED CHECK





Three sensors are used for misfeed checks: the entrance sensor [S-35], registration sensor [S-37], and exit sensor [S-38]. After the feed-in motor [M-14] is energized, the original activates the entrance sensor. The DF CPU checks to see if the entrance sensor has been activated (entrance sensor ON check) 475 ms after the feed-in motor has been energized. Then, 350 ms after the entrance sensor is activated, the DF CPU checks to see if the registration sensor has been activated (registration sensor ON check).

The OFF check is carried out when the belt drive motor [M-16] is de-energized. The DF CPU checks to see if the registration sensor has been deactivated (registration sensor OFF check), and if the entrance sensor has been deactivated (entrance sensor OFF check).

The ON check for the exit sensor occurs 400 ms after the feed-out and belt drive motors are re-energized. The OFF check for the exit sensor is done 1,250 ms after the exit sensor is activated. When a misfeed is detected, the DF CPU stops the DF and sends a misfeed signal to the copier. The lift switch cancels a misfeed condition.

DOCUMENT FEEDER INSTALLATION

1. Accessory Check (FT4490)

Check the quantity and condition of the accessories in the box according to the following list:

1. Installation Procedure (115V - English only/220V - five languages)	1
2. New Equipment Condition Report	1
3. Envelope - NECR(115V only)	1
4. Original Exit Guide	1
5. Flip Scale	1
6. Flip Scale spring	1
7. Flathead Shoulder Screw	2
8. Original Feed Table	1
9. Original Table Cover	1
10. DF Interface Harness	1
11. Nylon Harness Bushing	1
12. Test Chart A4	1
13. Flathead Screw - M4 x 6	2
14. Ground Screw	2
15. Toothed Washer	2
16. Pan Head Screw - M4 x 6	4
17. Pan Head Screw with Washer - M4 x 6	2
18. Pan Head Screw - M5 x 12	4
19. Multilingual Decals (220/240V only)	1 set
20. Ty-wrap	1

Interface PCB type E is also required to install the OF.

Check the accessories according to the following list.

Interface PCB Type E box:

1. PCB Mounting Stud	2

NOTE: - This is not necessary if a sorter is already installed in the machine.

DOCUMENT FEEDER INSTALLATION

1• Accessory Check (FT4430)

Check the quantity and condition of the accessories in the box according to the following list:

1. Installation procedure (115V - English only/220V - five languages)	1
2. New Equipment Condition Report	1
3. Envelop - NECR(115V only)	1
4. Original exit guide	1
5. Flip scale	1
6. Flip scale spring	1
7. Flathead shoulder screw	2
8. Original feed table	1
9. Original table cover	1
10. DF interface harness	1
11. Nylon harness bushing	1
12. Test chart A4	1
13. Flathead screw - M4 x 6	2
14. Ground screw	2
15. Toothed washer	2
16. Pan head screw - M4 x 6	4
17. Pan head screw with washer - M4 x 6	2
18. Pan head screw - M5 x 12	4
19. Multilingual decals (220/240V only)	1 set
20. Ty-wrap	1

Interface PCB type E is also required to install the **DF.**

Check the accessories according to the following list.

Interface PCB Type E box:

1. PCB Mounting Stud	2

NOTE: - The interface PCB is not necessary with the A024-I 7 and A024-27 version machines (already equipped at the production line).
- This is not necessary if a sorter is already installed in the machine.
- The exposure glass holders are enclosed with a copier.

UNPACKING AND INSTALLATION

- ACCESSORY CHECK (FT4480) -

Check the quantity and condition of the accessories in the box according to the following list:

	DESCRIPTION	Q'TY
1.	Installation procedure (115V - English only. 220V/240V - five languages)	1
2.	New Equipment Condition Report	1
3.	NECR Envelope (115V only)	1
4.	Original exit guide	1
5.	Flip scale	1
6.	Flip scale spring	1
7.	Flathead shoulder screw	2
8.	Original feed table	1
9.	Original table cover	1
10.	DF interface harness	1
11.	Nylon harness bushing	1
12.	Test chart A4	1
13.	Flathead screw - M4 X 6	2
14.	Ground screw	2
15.	Toothed washer	2
16.	Pan head screw - M4 X 6	4
17.	Pan head screw with washer - M4 X 6	2
18.	Pan head screw - M5 X 12	4
19.	Flathead Screw - M4 X 8	2
20.	Multilingual decals (220/240V only)	1

Interface PCB type E is also required for DF installation.

Check the accessories according to the following list:

Interface PCB Type E box:

	DESCRIPTION	Q'TY
1.	PCB Mounting Stud	2
2.	Bolt	2
3.	Nut	2

NOTE: The interface PCB type E is not necessary if a sorter is already installed in the machine.

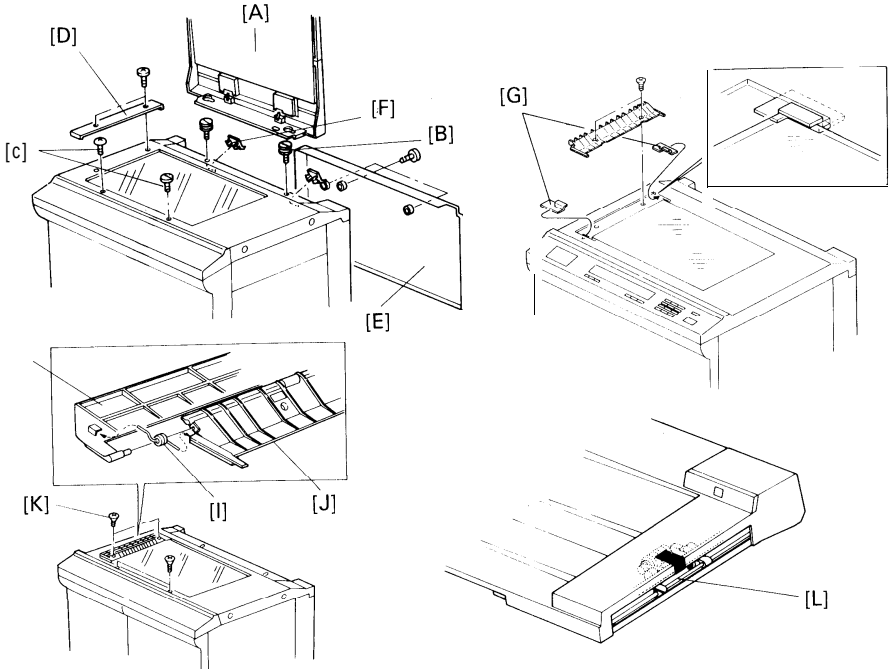
DOCUMENT FEEDER INSTALLATION

ACCESSORY CHECK (FT5560)

Check the accessories in the box according to the following list:

1.	Installation procedure	1
2.	New Equipment Condition Report	1
3.	Envelope - NECR (115V only)	1
4.	Original exit guide	1
5.	Flip scale	1
6.	Flip scale spring	1
7.	Flathead shoulder screw	2
8.	Original feed table	1
9.	Original table cover	1
10.	DF interface harness	1
11.	Nylon harness bushing	1
12.	A4 test chart	1
13.	Flathead screw - M4 x 6	2
14.	Ground screw	2
15.	Star washer	2
16.	Pan head screw - M4 x 6	4
17.	Pan head screw with washer - M4 x 6	2
18.	Pan head screw - M5 x 12	4
19.	Multilingual decals (220/240V only)	1 set

2. **Installation Procedure (FT4430/FT4490)**



1 Turn off the main switch and unplug the power supply cord of the copier.

2. Remove the following parts:
   A) Platen cover
   B) Mounting stud (2 pcs)
   C) Truss screw
   D) Left scale (2 screws)
   E) Rear cover (3 screws)
   F) ADF docking hole cap (2 **PCS)**

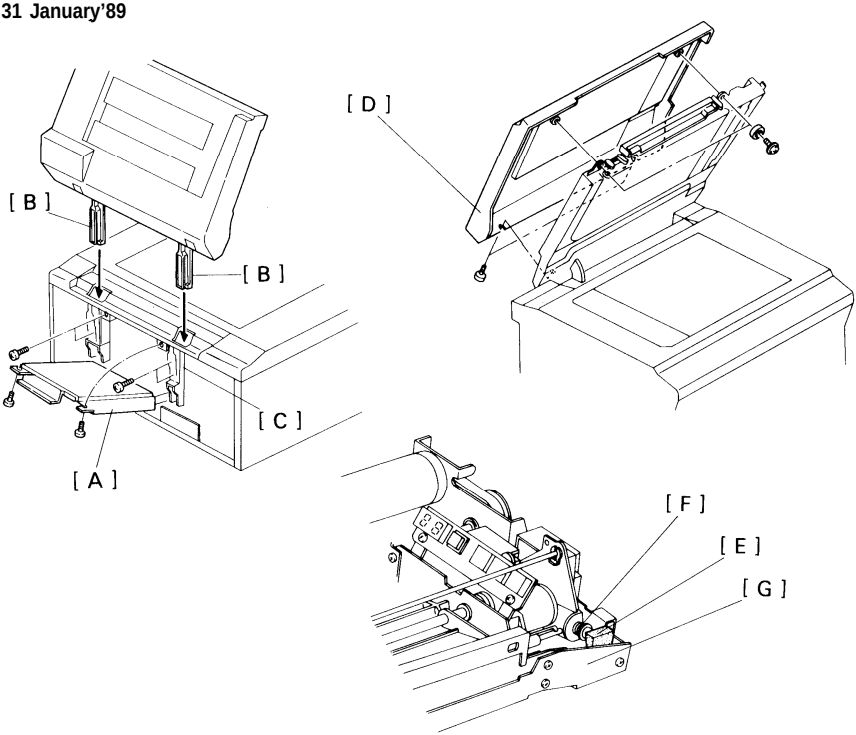
NOTE: Save the above parts for future use.

3. Install the exposure glass holders [G] at the left side of the exposure glass as shown (European version only).

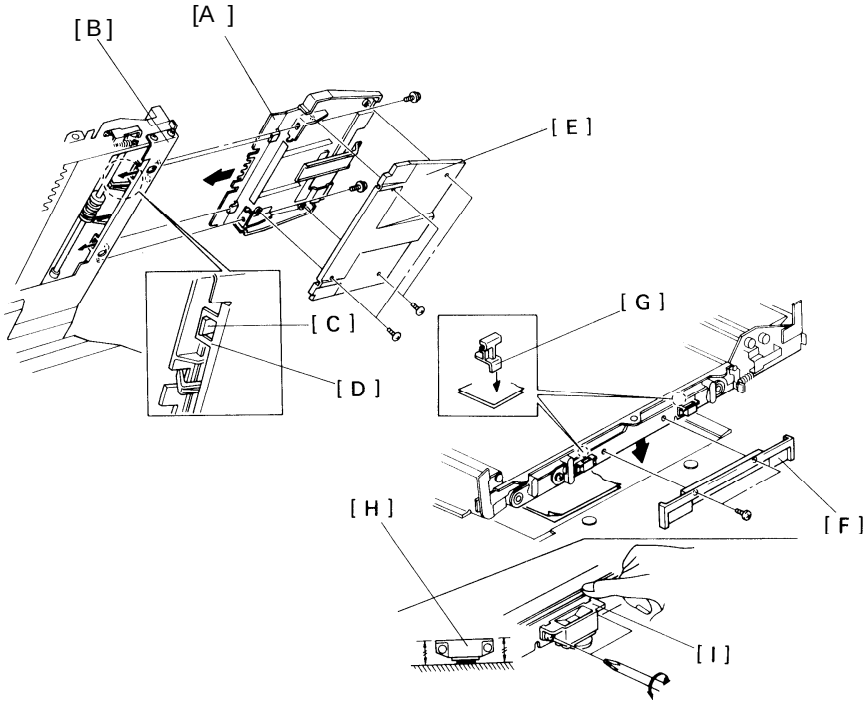
4. Set the flip scale [H] (with the flip scale spring [1]) on the original exit guide [J]; then, mount it as shown (2 flathead screws).

5. Secure two flathead shoulder screws [K] as shown in the figure.

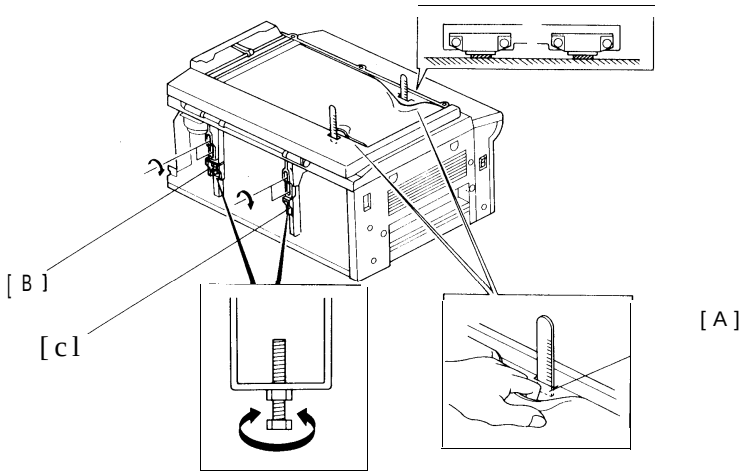
6. Remove the strips of shipping tape [L].



7. Lower the PCB plate [A] (2 screws).
8. Insert the mounting posts [B] into the DF mounting brackets [C].
9. Temporarily secure the mounting posts to the DF mounting brackets (4 screws, M5 x 12).
10. Remove the DF cover [D] (4 screws).
11. Remove the shipping foam [E] between the stopper solenoid [F] and the DF side plate [G].



12. Install the original feed table [A] on the right side of the belt unit [B] (2 screws with washer). (Be sure to engage the 2 hooks [C] of the original table with the docking holes [D] of the belt unit).
13. Install the original table cover [E] under the original table (4 screws).
14. Level the DF as follows:
    - **a)** Remove the DF grip plate [F] (2 screws).
    - **b)** Place 2 sheets of A3 (11" x 17") paper between the white belt guide spacers [G] and the exposure glass.
    - **c)** Loosen the mounting screws of the right side magnetic catch [H]. Push down the right side of the magnetic catch bracket [1], then tighten the screws of the right magnetic catch. Repeat this process with the left side magnetic catch.
    - **d)** Remove the 2 sheets of paper.



e) Adjust the height of rear side of the belt unit as follows:

1) Lift the upper part of the feed belt out of the way and measure the distance between the top of the access hole [A] in the pressure roller support bracket and the lower part of the feed belt at the front and rear left corners.

2) Adjust the two amounts so that they are the same by using the left height adjusting bolt [B] on the DF mounting bracket.

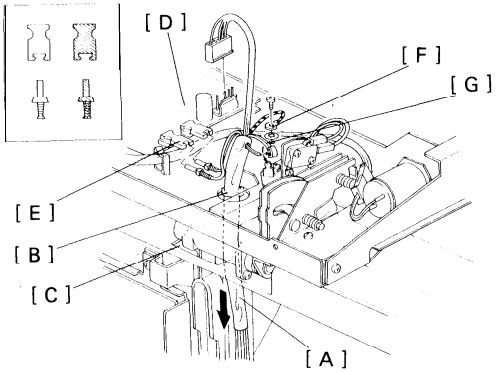
3) Adjust the right rear height adjusting bolt [C] so that the DF closes properly.

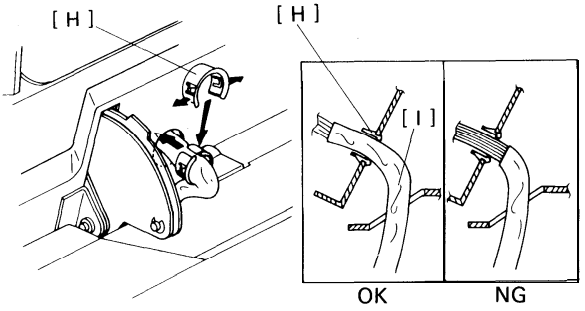
NOTE: Make sure that the belt is properly positioned in the belt guide spacers.

4) Tighten the four screws (M5 x 12) on the mounting posts. Lock the height adjusting bolts [B] and [C] (2 lock nuts).

f) Install the DF grip plate.

g) Check that the DF closes properly.





15. Pass the DF interface harness [A] through the harness hole [B] of the DF and the docking hole of the copier [C].

Avoid sharply bending the fiber optics or they will become damaged.

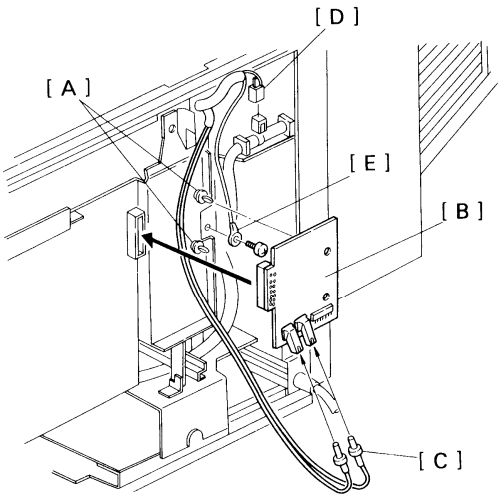
16. Connect the DF interface harness to the DF PCB [D] (3 connectors).

NOTE: The fiber optics connectors [E] have different colours. Be sure to match these colours when making these connections.

17. Secure the DF ground wire [F] on the DF base plate (1 ground screw and toothed washer).

18. Pass the Ty-wrap [G] through the hole of the vinyl tube of the DF harness, and then bind the vinyl tube to the bracket as shown.

19. Open the DF and install the nylon harness bushing [H] from the underside. (This harness bushing should be positioned around the vinyl tube [1] of the DF harness as shown.)



20. Secure the copier PCB plate(2 screws).

21. Fix the two PCB mounting studs [A] on the main board and install the interface board [B]. (This is not necessary if a sorter is already installed in the machine.)

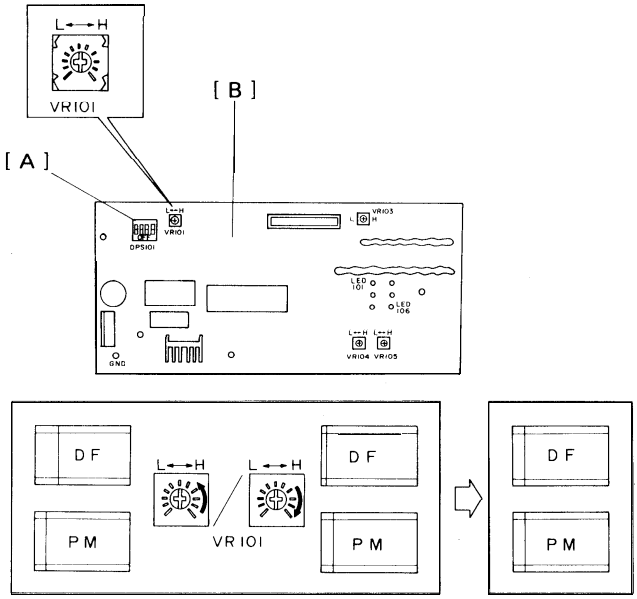
22. Connect the 3 DF connectors.

    a) Connect two fiber optic connectors [C] to the interface board as follows, being careful not to damage them:

    CN806 Brown CN103
    CN807 Black CN104.

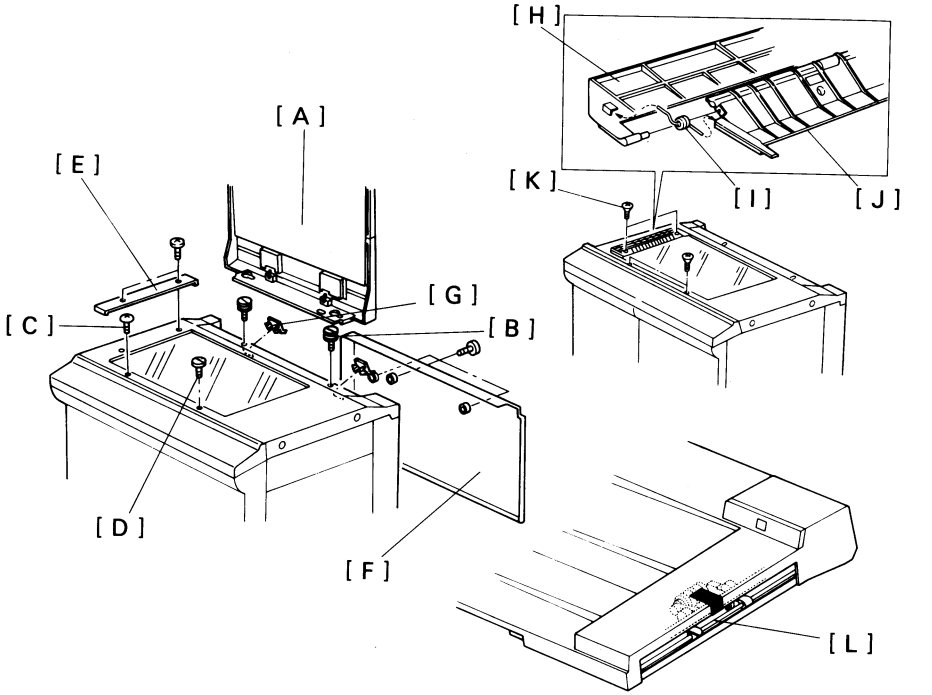
    b) Connect the DF harness connector [D] to the copier's ac 4P connector.

23. Secure the ground wire [E] to the ADF right mounting bracket (1 ground screw and toothed washer).



24. Turn on DIP switch 101-2 [A] on the DF main PCB.
25. Adjust the lead edge registration as follows:
    a) Turn on the copier main switch and make a copy in the platen mode using the flip scale and the test chart.
    b) Keep this copy for reference and mark “PM” (Platen Mode) on the reverse side of it.
    c) Make a copy in DF mode using the test chart.
    d) Adjust the DF registration against the platen mode reference (“PM”) using VR101 on the DF PCB [B]:
        PM > DF: Turn VR101 clockwise
        PM < DF: Turn VR101 counterclockwise.
    e) Continue to repeat steps “c)” and “d)” until the same registration as in step “b)” is achieved.
26. Replace all covers.
27. Check the operation of the DF and copier system.
28. Fill out the New Equipment Condition Report.

- INSTALLATION PROCEDURE (FT4480) -



1. Turn off the main switch and unplug the power supply cord of the copier.

2. Remove the following parts:

   1) Platen cover [A]
   2) Mounting stud (2 pcs) [B]
   3) Truss screw [C]
   4) Plastic screw [D]
   5) Left scale (2 screws) [E]
   6) Rear cover (3 screws) [F]
   7) ADF docking hole cap (2 pcs) [G]

   Save the above parts for future use.

3. Set the flip scale [H] (with the flip scale spring [I]) on the original exit guide [J]; then, mount it as shown (2 flathead screws).

4. Secure two flathead shoulder screws [K] as shown in the figure.

5. Remove the shipping tape [L].

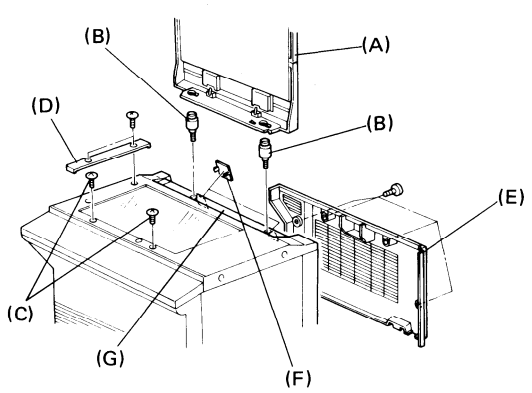
INSTALLATION PROCEDURE (FT5560)

1. Turn off the main switch.

2. Remove the following parts:

   Platen cover [A]
   Mounting stud (2 pcs) [B]
   Truss screw [C]
   Left scale (2 screws) [D]
   Rear cover (3 screws) [E]
   ADF docking hole cap (2 pcs) [F]

   ▶ Save the above parts for future use.

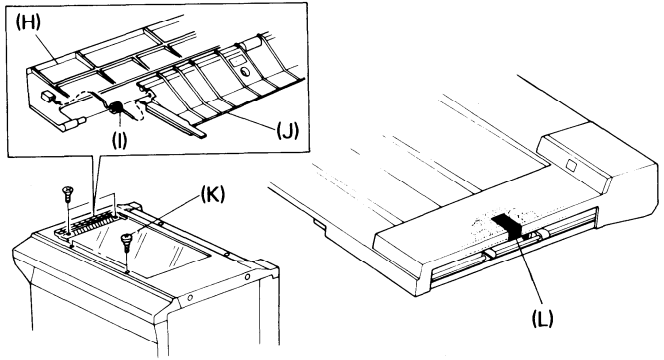


3. Secure the rear upper cover [G] (2 screws).

4. Set the flip scale [H] (with the flip scale spring [I]) on the original exit guide [J]; then, mount it as shown (2 flathead screws).

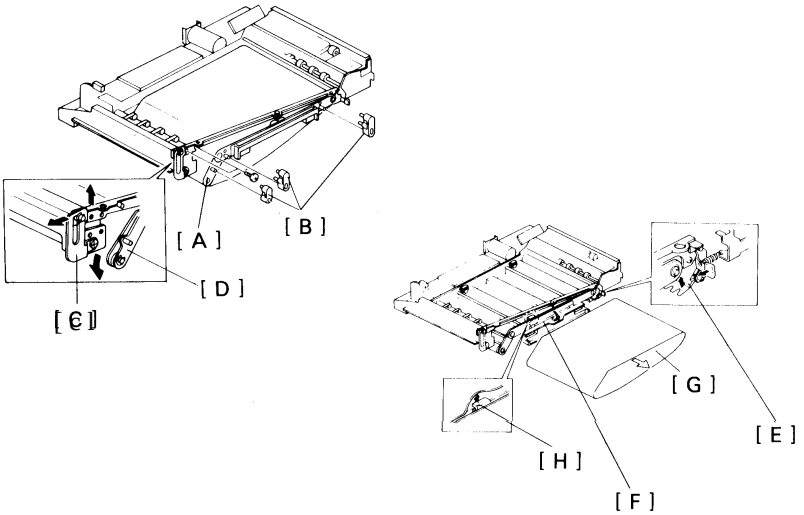
5. Secure two flathead shoulder screws [K] as shown in the figure.

6. Remove the strips of shipping tape [L].



REPLACEMENT AND ADJUSTMENT

1. DF Belt Replacement

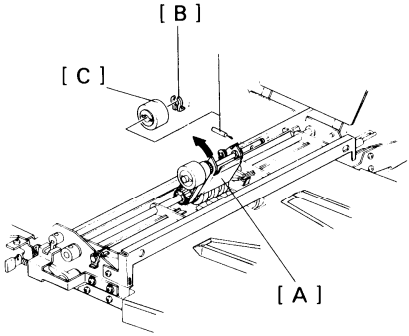


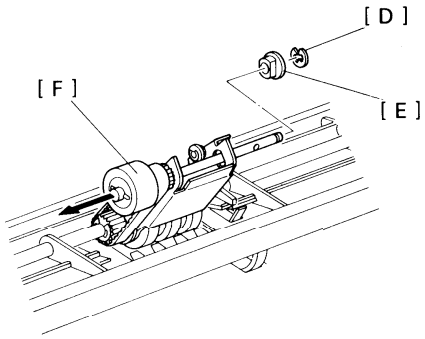
1. Remove the DF cover (4 screws, 2 collars).
2. Remove the 2 screws securing the left side of the front stay [A] and remove the 3 belt unit holders [B].
3. Raise the left end of the front stay and set it in the up position with the lock plate [C].
4. Rotate the belt release bracket [D] counterclockwise and lower the original entrance guide [E].
5. Lower the DF grip bracket [F] and release the belt [G] from the belt guide spacers [H].
6. Slide off the DF belt [G] and replace it.

NOTE: - After installing the DF belt, make sure that the belt is properly positioned in the belt guide spacers.

- When returning the DF grip bracket to its original position, make sure that the DF grip bracket is properly set behind the flathead screw.

2. **Pick-up Roller Replacement**





1, Remove the DF cover (4 screws, 2 collars).

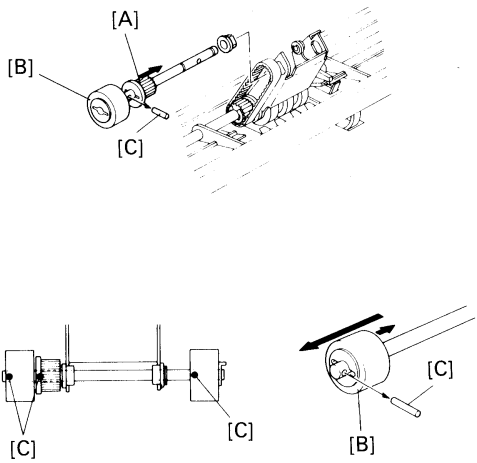
2. Lift up the pick-up roller unit [A] and remove the snap ring [B].

3. Slide off the rear pick-up roller [C].

NOTE: Be careful not to lose the pin.

4. Remove the E-ring [D] and bushing [E].

5. Slide off the front pick-up roller assembly [F].

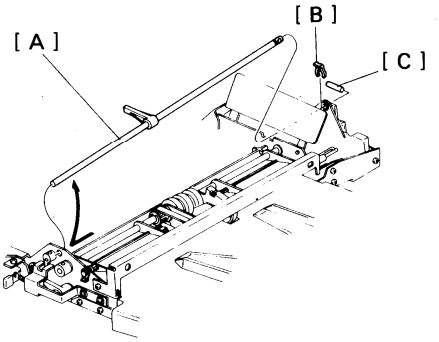


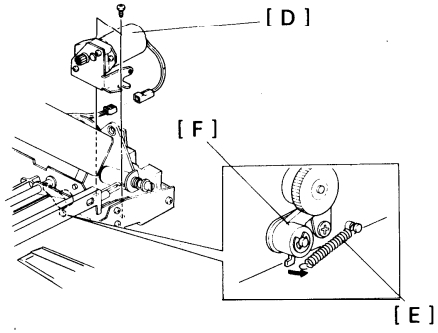
6. Slide of the pulley [A] and the pick-up roller [B].

NOTE: Be sure not to lose the drive pins [C] of the pulley and pick- up roller.

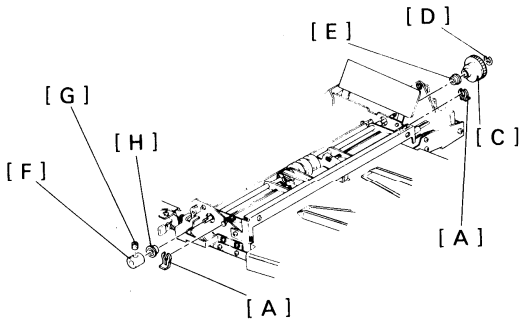
7. Replace the pick-up rollers and reassemble.

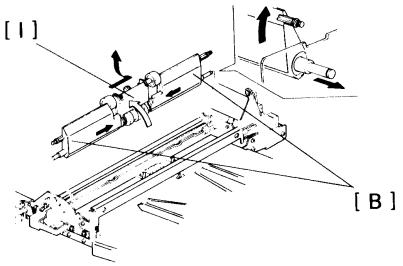
3. Feed Roller Replacement



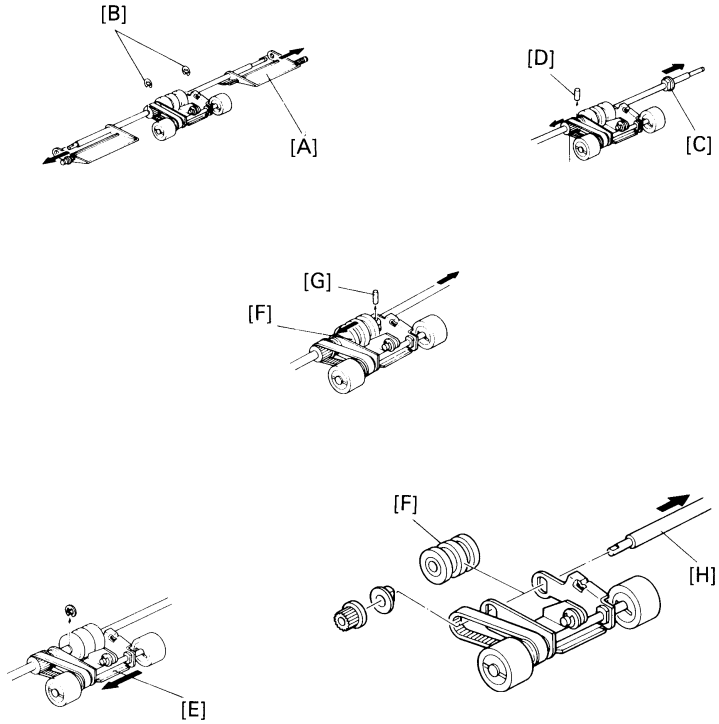


1. Remove the DF cover (4 screws, 2 collars).
2. Remove the pick-up control shaft [A] (1 snap ring [B], 1 pin [C]).
3. Remove the feed-in motor [D] (2 screws).
4. Unhook the spring [E] of the wear prevention lever [F].

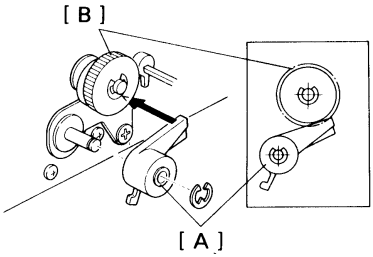


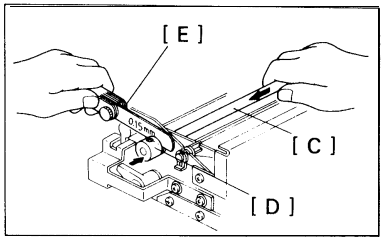


5. Remove the two snap rings [A] fixing the feed-in guides [B].
6. Remove the feed roller drive gear [C] (1 E-ring [D], 1 bearing [E]).
7. Remove the collar [F] (1 Allen screw [G]) and the bearing on the front feed roller shaft [H].
8. Stand the feed roller unit [1] and slide the feed-in guides as shown in the figure.
9. Then slide the unit to the rear, lift the front of the unit, and remove it from the DF.



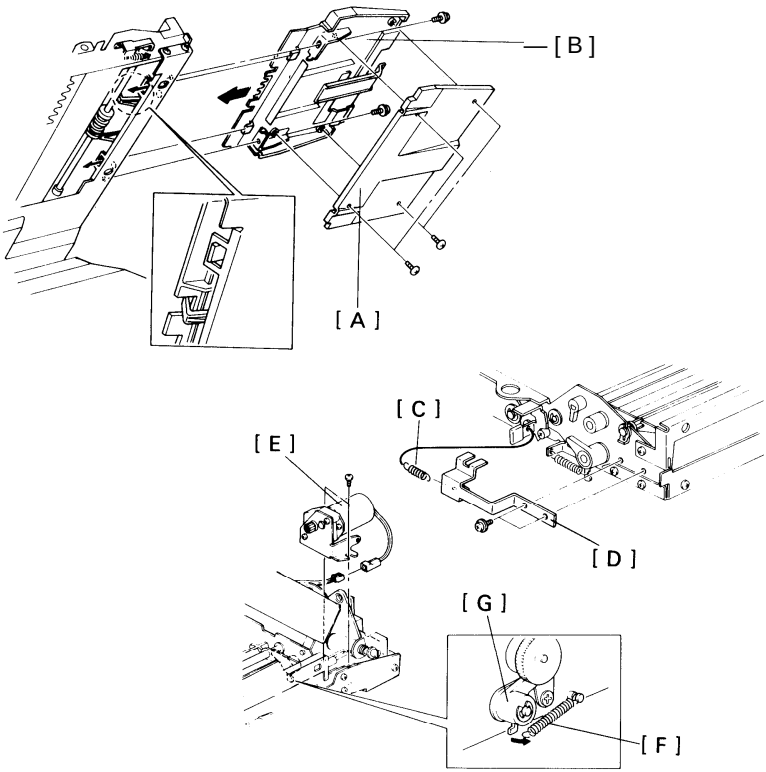
10. Slide off the feed-in guides [A] and remove two E-rings [B].
11. Remove the bushing [C] and slide the pulley towards the front to remove the pulley pin [D].
12. Slide the pick-up roller unit [E] to the front and remove the E-ring.
13. Slide the feed roller [F] to the front and remove the pin [G].
14. Slide off the feed roller shaft [H].
15. Replace the feed roller and reassemble.



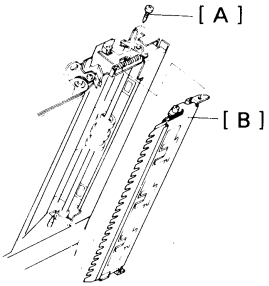


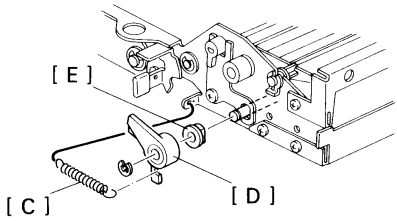
16. When reassembling the feed roller unit, make sure of the following points:
    1) Confirm that the wear prevention lever [A] is to the right of the drive gear [B] as viewed from the rear.
    2) Tighten the Allen screw of the feed roller shaft [C] collar [D] so that the clearance between the bushing and collar is 0.15 mm (check with a thickness gauge [E]).

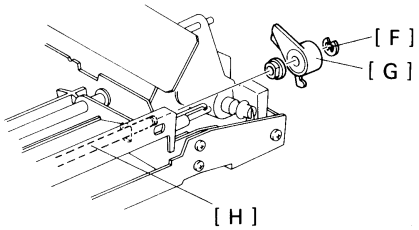
4. **Friction Roller Replacement**



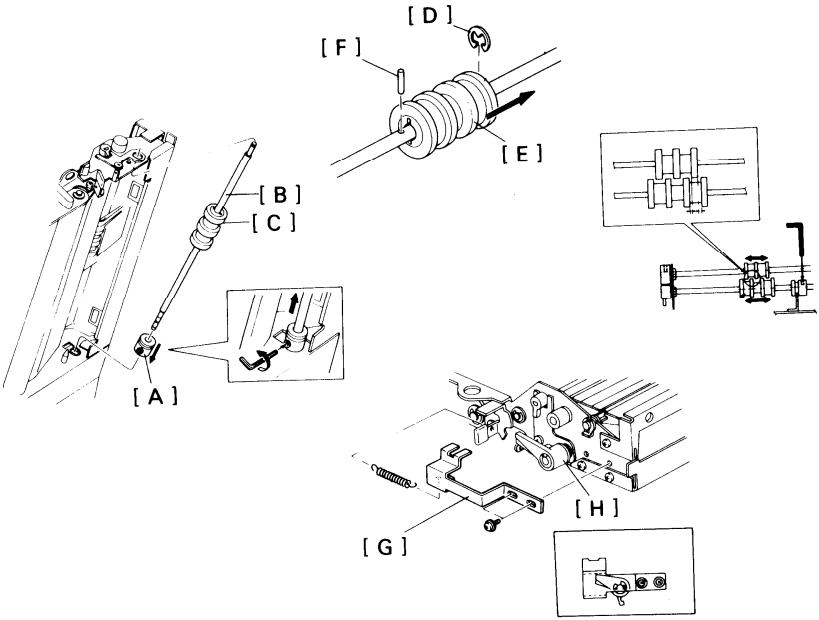
1. Remove the DF cover (4 screws, 2 collars).
2. Remove the original table cover [A] (4 screws).
3. Remove the original table [B] (2 screws).
4. Remove the lever spring [C] and the stopper plate [D] (2 screws).
5. Remove the feed-in motor [E] (2 screws, 1 connector).
6. Unhook the spring [F] of the wear prevention lever [G].







7. Remove the front stud screw [A] and take out the original entrance guide [B].
8. Unhook the spring [C] of the misfeed prevention lever [D] and remove the misfeed prevention lever and the bushing [E] (1 E-ring [F]).
9. Remove the wear prevention lever [G] (1 E-ring) and the bushings on the friction roller shaft [H].



10. Loosen the Allen screw in the collar [A] on the friction roller shaft [B] and remove the friction roller assembly [C].
11. Remove the E-ring [D] and replace the friction roller [E].

NOTE: - Be sure not to lose the pin [F].

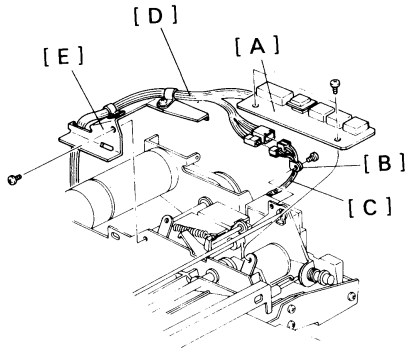
- When reassembling the unit, make sure of the following points:

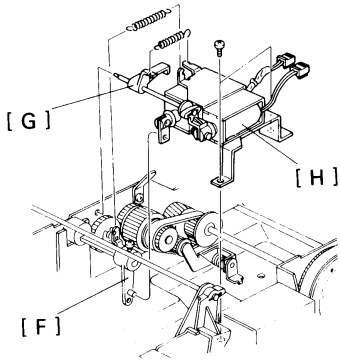
  - When replacing the collar on the friction roller shaft, position the friction roller so that it is centered on the feed roller.

  - When replacing the stopper plate [G], make sure that the misfeed prevention lever [H] is restrained by the stopper plate as shown.

  - Confirm the mounting position of the stopper plate (see Stopper Plate Positioning).

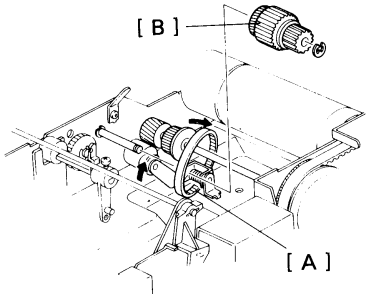
5. **Registration Roller Replacement**

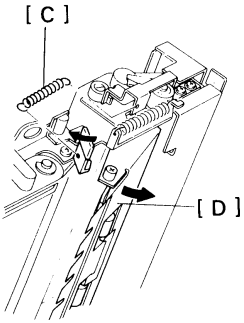


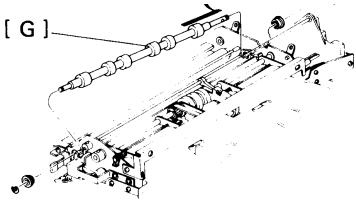


1. Remove the DF cover (4 screws, 2 collars).
2. Remove the indicator board [A] (2 screws).
3. Remove the harness clamp [B] as shown (1 screw).
4. Disconnect the registration solenoid harness [C] and roller release solenoid harness [D] (2 red connectors).
5. Move the indicator board and the harness bracket [E] (1 screw) away from the feed-in section.
6. Remove the springs of the friction roller release lever [F] and the registration clutch lever [G].
7. Remove the solenoid assembly [H] (2 screws).

NOTE: The release solenoid plunger is engaged with the roller release lever.







8. Slip off the timing belt [A] while lifting the belt tightener.

9. Remove the registration clutch assembly [B] (1 E-ring).

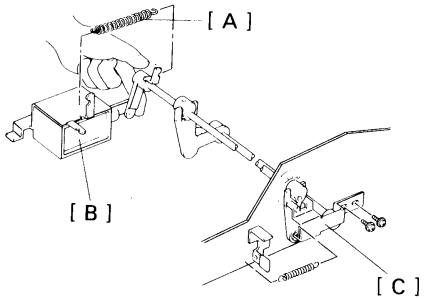
10. At the front, remove the lever spring [C] and lower the original entrance guide [D].

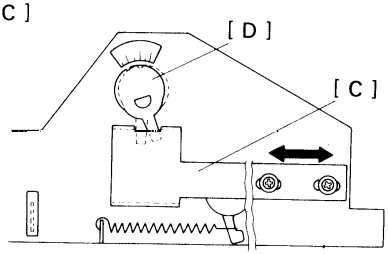
11. Remove the registration drive gear [E] (1 E-ring, 1 pin [F]).

NOTE: Do not lose the pin.

12. Remove the registration roller [G] as shown in the figure (1 E-ring, 2 bearings).

6. Stopper Plate Position Adjustment





Reinstall the stopper plate as follows:

1. Remove the spring [A] of the friction roller release solenoid [B] and keep the solenoid plunger inside the coil.

2. Loosen the two screws of the stopper plate [C].

3. Position the plate so that the groove of the cam [D] aligns with the ".4" calibration mark.

NOTE: - This means that the overlap of the feed and friction rollers is adjusted to 0.4 mm when the friction roller is released from the feed roller.

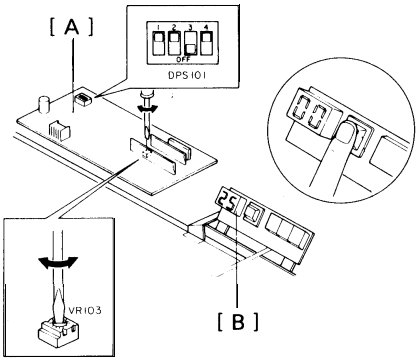
- If the cam cannot align with the ".4" mark, reposition the roller release solenoid by loosening the solenoid mounting screws.

4. Replace the spring of the solenoid.

NOTE: - If multiple feeding occurs, increase the overlap by repositioning the stopper plate.

- If the original becomes smeared, decrease the overlap.

7. DF Belt Drive Motor Speed Adjustment



This adjustment should be done when the DF PCB [A] is replaced.

ADJUSTMENT STANDARD: 2500 ± 30 rpm

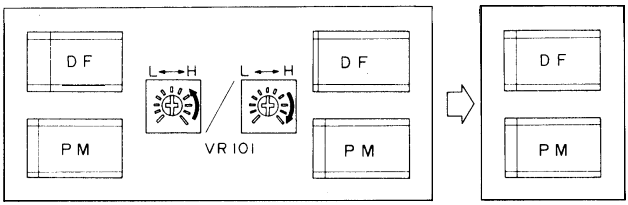
1. Turn off the main switch.
2. Remove the DF cover (4 screws, 2 collars).
3. Lower the DF unit.
4. Turn on DIP switch nos. 101-2 and 101-4 of the DF main board.
5. Turn on the main switch.

   The belt drive motor will start turning, and the left two digits of the motor speed will 'be displayed in the original counter. To display the second two digits of the motor speed, press the Counter Reset key.

   For example, if the motor speed is 2500 rpm, "00" will be displayed on the original counter [B] when the Counter Reset key is pressed; **"25" will** be displayed when it is not pressed.

6. Adjust the motor speed to 2500 ± 30 rpm by turning VRI 03 on the DF main board.
7. Turn off the main switch, turn off DIP switch nos. 101-2 and 101-4 to the normal position (DIP switch no. 101-1 is on and all others are off), and reassemble.

8. Lead Edge Registration Adjustment



1. Adjust the lead edge registration as follows:
   a) Turn on the copier main switch and make a copy using the test chart in the platen mode using the flip scale to align the original.
   b) Keep this copy for reference and mark "PM" (Platen Mode) on the reverse side of it.
   c) Make a copy using the test chart with the DF.
   d) Adjust the DF registration to match the "PM" reference copy using VR101 on the DF PCB [B].

      PM > DF: Turn VRI 01 clockwise
      PM < DF: Turn VR1 01 counterclockwise.

   e) Continue to repeat steps c) and d) until you achieve the same registration as in step b).
2. Replace all covers.
3. Check the operation of the DF and copier system.
4. Fill out the New Equipment Condition Report.

22. Connect the 3 DF connectors:

a) Run the two fiber optic connectors [B] from behind the PCB plate [C], being careful not to damage them, and connect them to the interface board as follows.

CN806 ----- Brown
CN807 ----- Black

b) Connect the DF harness connector to the copier's ac 4P connector.