ENVELOPE FEEDER

(Machine Code: G904)

1. OVERALL MACHINE INFORMATION

1.1 SPECIFICATIONS

Paper Size:

Maximum: Width 163.5 mm, 6.5"
Length 242.8 mm, 9.6"

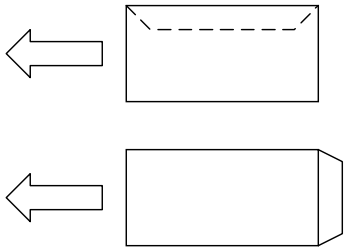
Minimum: Width 96.9 mm, 3.8"
Length 146.5 mm, 5.8"

Paper Capacity:

Envelopes	70 mm stack height *
Postcards	120 sheets (190 g/m^2)

* 70 mm stack height equals about 100 envelopes.

Feed:



- Place in short edge feed direction
- The flap side should face down
- If the flap is at the end of a lengthwise envelope (the narrow end), the flap should be positioned at the trailing edge. If the flap is at the side of a lengthwise envelope (the wide end), the flap side should be positioned at the rear of the machine.

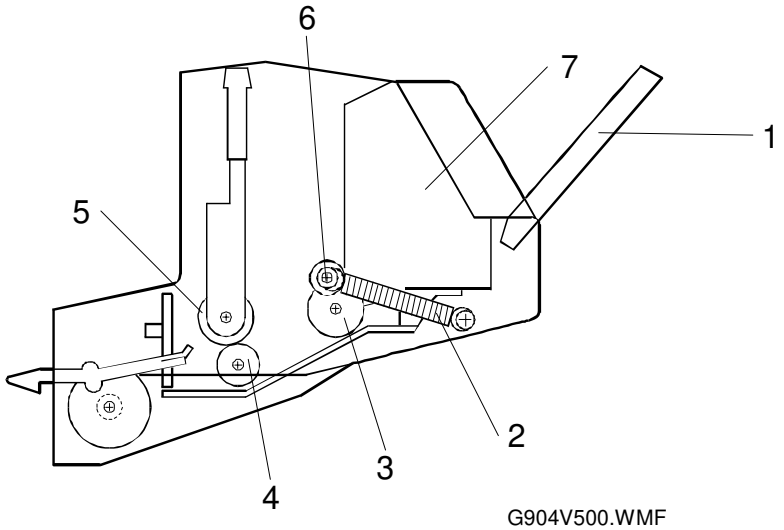
Dimensions (W x D x H): 267 x 167 x 172 mm (10.5" x 6.6" x 6.8")

Weight: Approximately 1.4 kg (3 lb)

- Specifications are subject to change without notice.

1.2 COMPONENT LAYOUT

1.2.1 MECHANICAL COMPONENT LAYOUT



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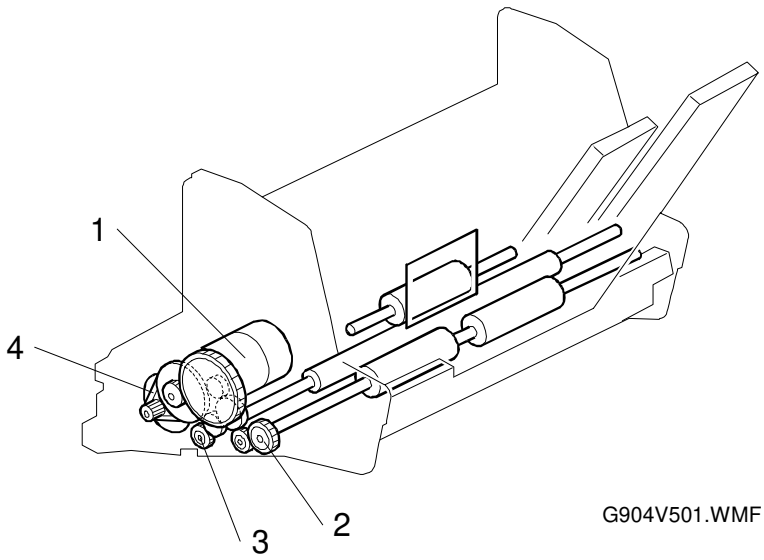
1. Stack Tray
2. Pressure Bar Spring
3. Pick-up Roller
4. Feed Roller
5. Separation Roller
6. Pressure Bar
7. Side Fence

1.2.2 DRIVE LAYOUT



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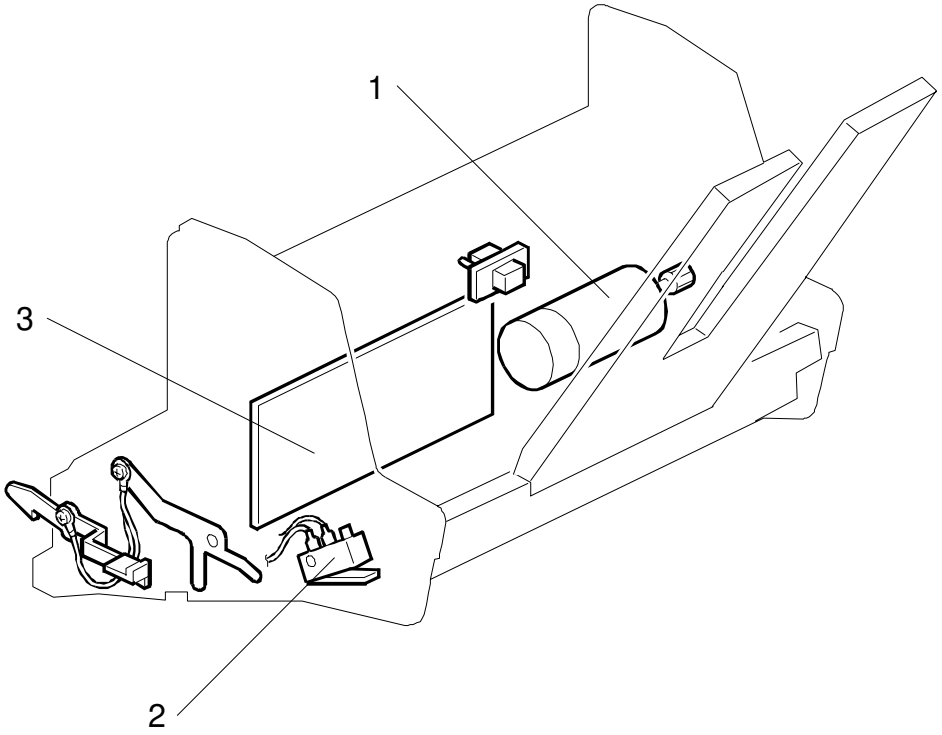
1. Feed Motor
2. Pick-up Roller Gear
3. Feed Roller Gear
4. Timing Belt

1.2.3 ELECTRICAL COMPONENT DESCRIPTIONS



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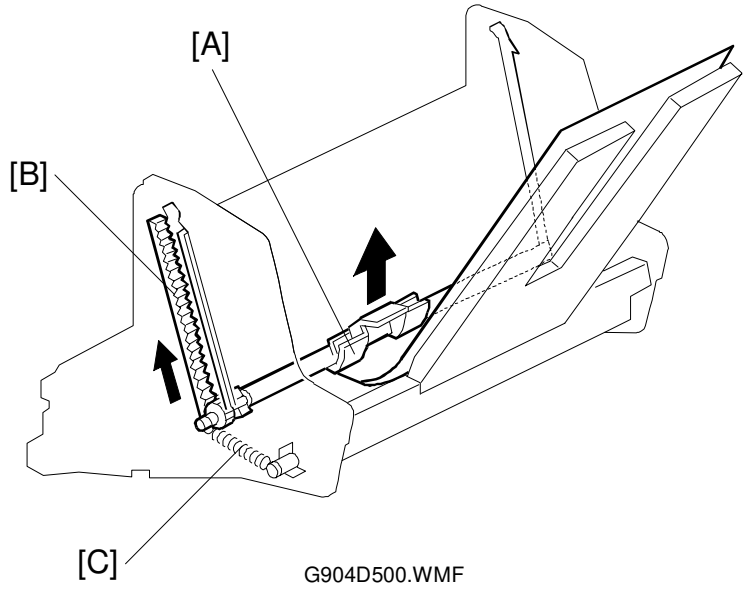
Symbols	Name	Function	Index No.
Motors			
M1	Feed Motor	Drives all components to feed the envelope into the printer.	1
Switches			
SW1	Envelope Set Switch	Informs the printer that an envelope has been placed.	2
PCB			
PCB1	Main Control Board	Controls all envelope feeder functions.	3

2. DETAILED DESCRIPTIONS

2.1 ENVELOPE FEED MECHANISM



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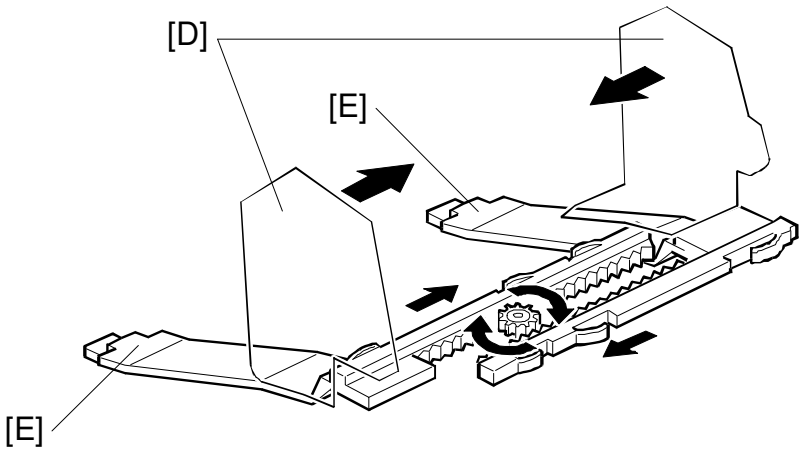

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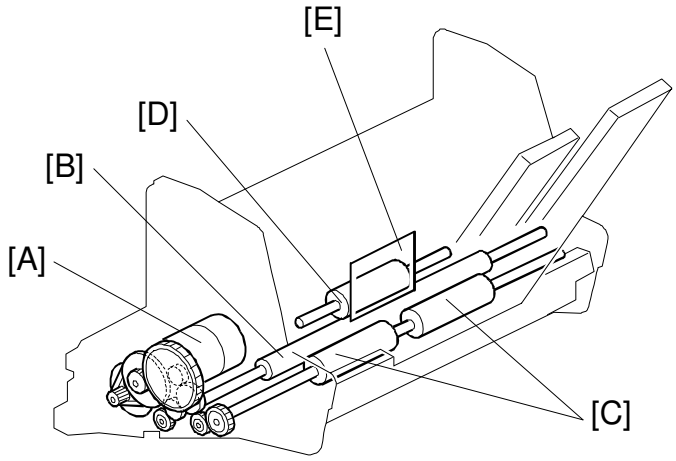
The pressure bar [A] rides along the gear rails [B]. It is linked with springs on both ends [C], to apply even pressure to the envelope.

The pads on the pressure bar prevents double feeding.

The position of the side fences [D] can be adjusted manually using a rack and pinion mechanism. The side fences also serve as a transport guide, as the envelope rides on the rails [E] which lead directly to the printer's feed-in inlet.



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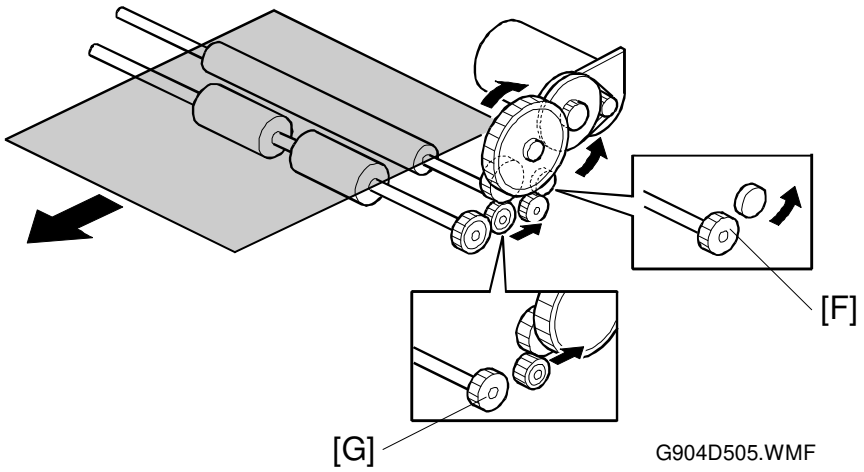

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When the feed motor [A] turns on, the drive is transmitted to the feed roller [B] and the pick-up roller [C] through a timing belt and gears.

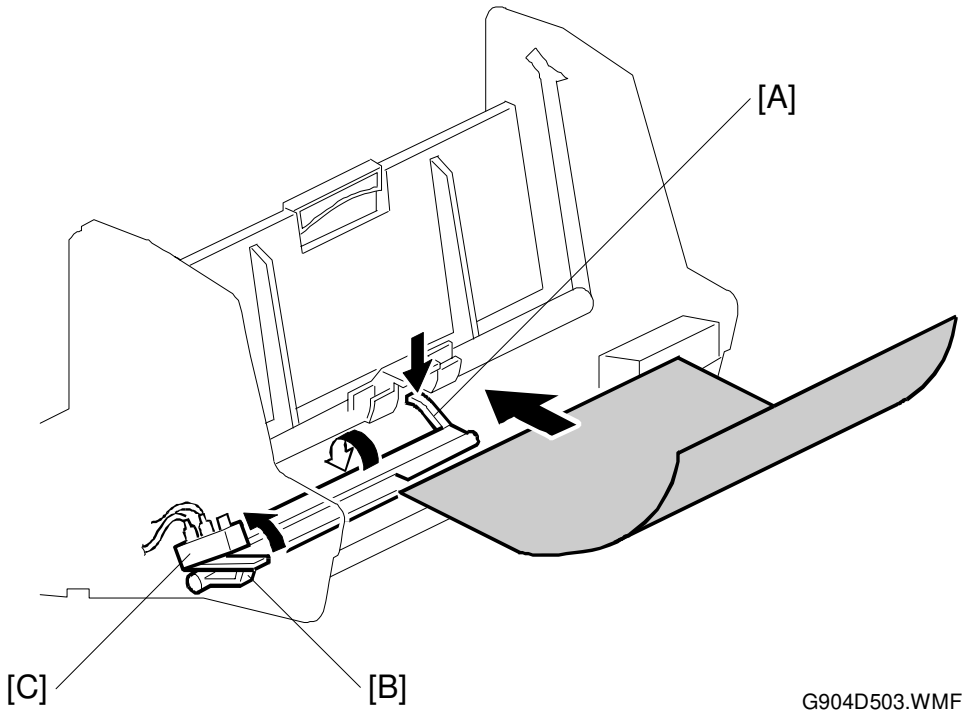
The bottom envelope of the stack is fed into the printer. The space between the separation roller [D] and the mylar strip [E] only allows one envelope of normal thickness to pass.

If two envelopes are fed past the mylar strip, the separation roller separates the envelopes. Since the amount of friction between envelopes is less than the amount of friction between the top envelope and the separation roller, only the bottom envelope advances to the printer.

After the envelope reaches the printer by-pass feed roller, the printer takes over the envelope feed.

The by-pass feed roller's rotation speed (132.4 m/s) is slightly faster than the envelope feeder's rotation speed (111.0 m/s). The envelope feeder, therefore, has a link disconnection mechanism that separates the drive gears from the paper feed [F] and pick-up roller gears [G] when the printer starts to pull the leading edge of the envelope. Thus only the load of the feed roller needs to be overcome by the printer by-pass feed roller.

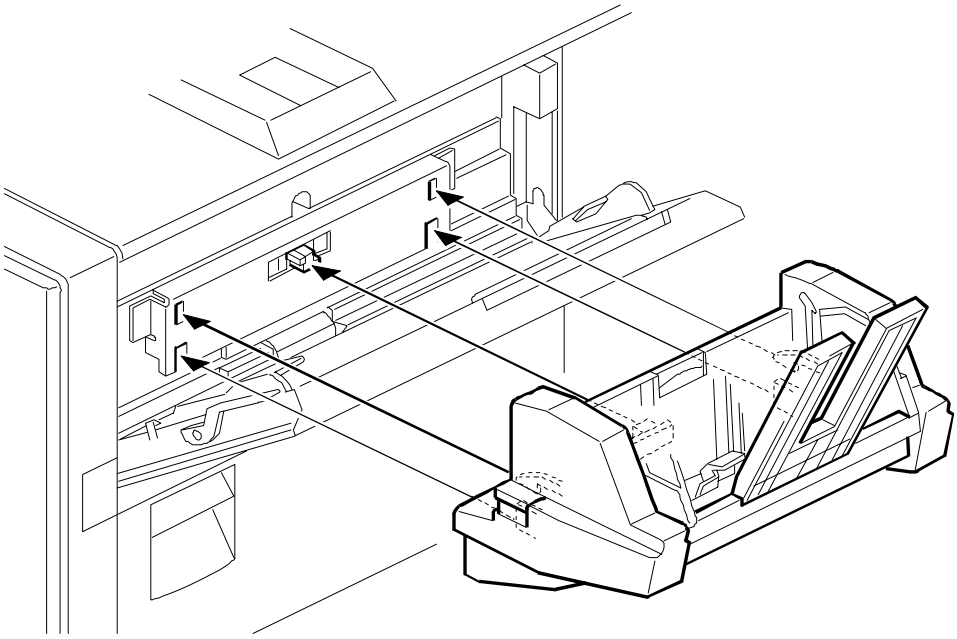
2.2 ENVELOPE END DETECTION



The envelope end feeler [A] is on the same shaft as the actuator [B].

When the pressure bar is lifted and an envelope is placed in position, the envelope end feeler is pressed down, and the actuator activates the envelope set switch [C].

2.3 OTHERS



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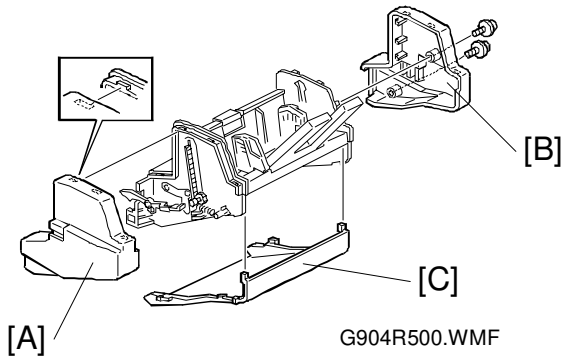
Both the feed roller shaft and the pick-up roller shaft are connected to a grounding plate. This will drain static charge to prevent damage to the unit's main control board.

The envelope feeder is connected to the base printer electrically by an 8-pin connector, and mechanically by the levers on both sides, as shown. See the communication signals for the 8 pins, below.

Pin No.	Signal	In/Out
1	+24 V	—
2	+5 V	—
3	Motor On	Out
4	Envelope Set	In
5	GND	—
6	GND	—
7	—	—
8	Connection Detection	—

3. REPLACEMENT AND ADJUSTMENT

3.1 FEED MOTOR AND MAIN CONTROL BOARD REPLACEMENT



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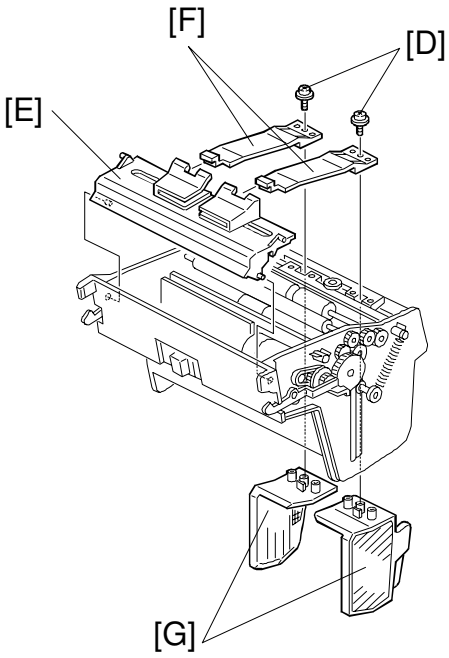

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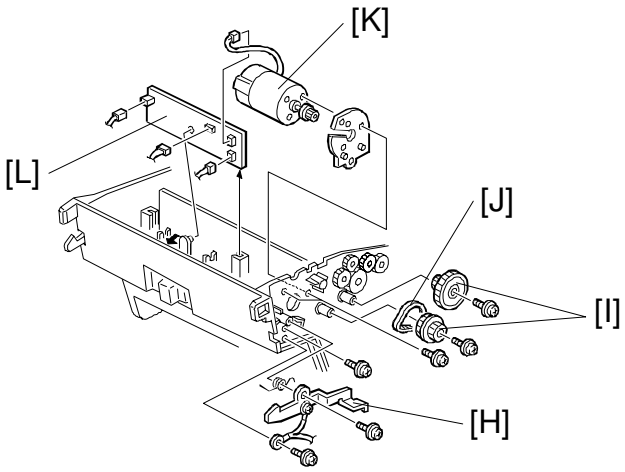

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1. Remove the envelope feeder from the printer.
2. Remove the front [A] and rear [B] covers (2 screws).
3. Remove the bottom cover [C] (2 snap fits).
4. Remove the two screws [D] securing the side fences. Then remove the entrance guide plate [E], guide rails [F], and side fences [G], as shown.

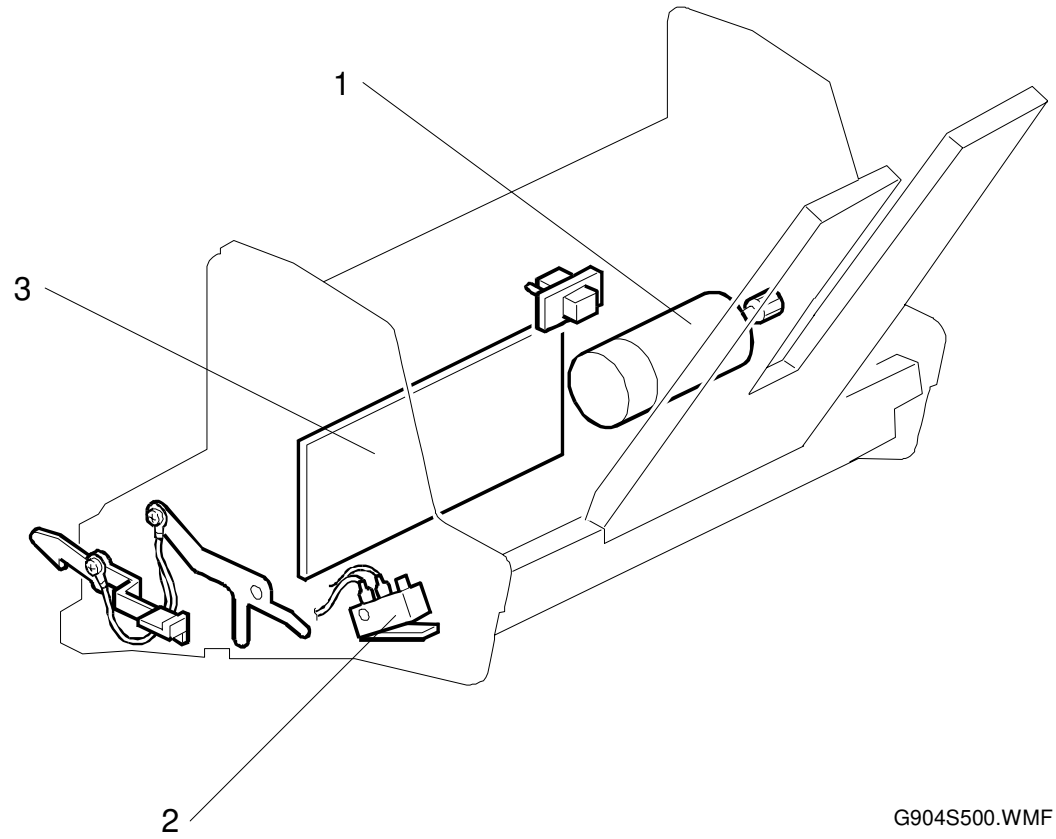
Feed Motor

5. Remove the lock lever [H] (2 screws).
6. Remove the two gears [I] (1 screw each) and the timing belt [J].
7. Replace the feed motor [K] (3 screws and 1 connector).

Main Control Board

5. Replace the main control board [L] (1 snap fit and all the connectors).

ENVELOPE FEEDER (G904) ELECTRICAL COMPONENT LAYOUT



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Description	Index No.	P-to-P Location
Feed Motor (M1)	1	O17
Envelope Set Switch (SW1)	2	P17
Main Control Board (PCB1)	3	P17