

**SORTER STAPLER
CONNECTOR UNIT**

CONTENTS

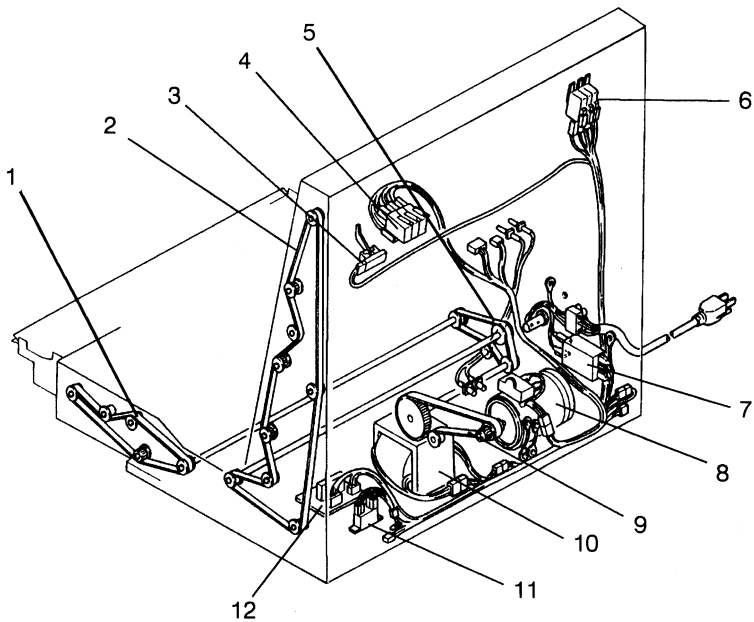
SORTER STAPLER CONNECTOR UNIT

1. SPECIFICATIONS	14-1
2. COMPONENT LAYOUT	14-2
3. MECHANICAL OPERATION	14-3
4. ELECTRICAL OPERATION	14-4
5. INSTALLATION	14-5
5.1 ACCESSORY CHECK	14-5
5.2 INSTALLATION PROCEDURE	14-6
5.2.1 First Sorter/Stapler Preparation	14-6
5.2.2 Second Sorter/Stapler Preparation	14-12
5.3 50 Hz–60 Hz MODIFICATION	14-16
6. REPLACEMENT AND ADJUSTMENT	14-17
6.1 TENSION ADJUSTMENT	14-17

1. SPECIFICATIONS

Paper Transport system:	Rubber Rollers
Copy Paper Weight:	52 to 93 g/m ² , 14 lb to 24 lb
Paper Size:	Maximum: A3, 11" x 17" Minimum: A5, 5½" x 8½" (Sideways)
Power Requirements:	115V, 60 Hz, 2A 220V, 50 Hz, 1A 240V, 50 Hz, 1A
Maximum Power Consumption:	230W
Weight:	Approximately 40kg, 88.3 lb
Minimum System Space Requirements:	Rear 400 mm, 15.7" Front 1.000 mm, 39.4"
Manual Feed:	Not available
Dimensions (W x D x H):	680 x 705 x 635 mm 26.8" x 27.8" x 25.0"
Balance:	Front-Rear less than 5 mm Side to Side less than 10 mm

2. COMPONENT LAYOUT



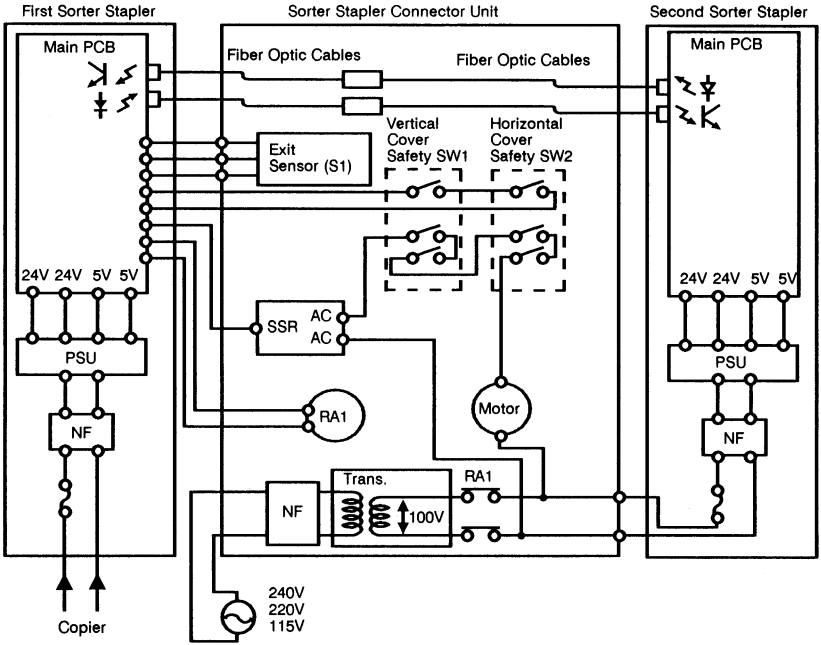
Index No.	Description	S y m b o l	P to P
1	Horizontal Drive Belt	B1	—
2	Vertical Drive Belt	B2	—
3	Paper Exit Sensor	S1	D4
4	Horizontal Cover Safety Switch	SW1	E4
5	Turn Section Belt	B3	—
6	Vertical Cover Safety Switch	SW2	E4
7	Noise Filter	NF	D1,D2
8	AC Drive Motor	M1	F3
9	Motor Belt	B4	—
10	Transformer	TR	G1,G2
11	Solid State Relay	SSR	E3
12	Main Relay	RA	E1,E2,C2

3. MECHANICAL OPERATION

Copy paper exits from the copier and enters the first sorter stapler unit. If the first sorter stapler unit is full, the paper exits through the 20th bin position and enters the sorter stapler connector unit, which transports the copy to the 2nd sorter stapler unit.

The motor of the sorter stapler connector unit turns on when the sensor at the 1st sorter stapler unit exit detects a sheet of paper.

4. ELECTRICAL OPERATION



- AC -

AC power from the wall outlet passes through the sorter stapler connector unit to the sorter stapler connector motor and to the second sorter stapler.

When the main switch of the copier is turned on, the copier provides AC power 100V to the first sorter stapler.

The main PCB of the first sorter stapler then energizes the power relay (RA1) of the sorter stapler connector unit, and AC power is provided to the second sorter stapler and sorter stapler connector motor.

When the copy paper is detected by the exit sensor of 1st sorter stapler, the main PCB of the first sorter stapler sends a signal to the connector unit that closes the SSR AC circuit and starts the connector unit motor. The Vertical cover safety switch (SW1) and the Horizontal cover safety switch (SW2) also close when this signal is sent.

The sorter stapler transfers the sort, stack, and stapler command data to the second sorter stapler over fiber optics cables. The second sorter stapler then sends a feed back signal (Jam, Ready, or stapler end) to the first sorter stapler.

5. INSTALLATION

5.1 ACCESSORY CHECK

Check the quantity of the accessories in the box according to the following list.

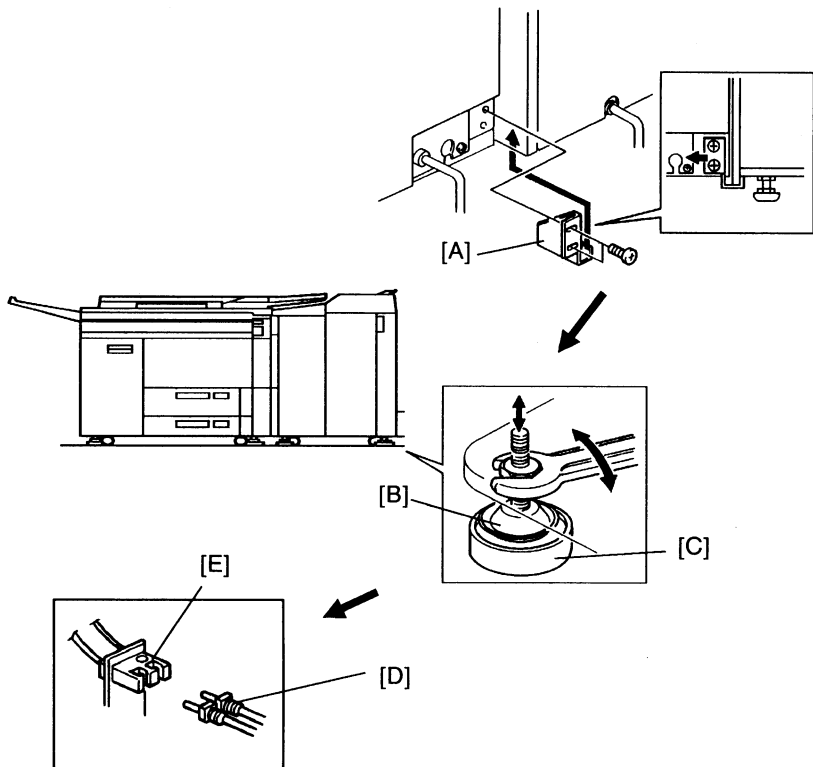
Description	Quantity
1. Stand Shoe	2
2. Docking Pin	1
3. Phillips Panhead Screw (M4 x 8 mm)	2
4. Phillips Panhead Screw (M4 x 6 mm)	2
5. Silver Screw (M4 x 6)	4
6. Left Shield Cover-Second Sorter/Stapler	1
7. Front Left Shield Cover Bracket-Second Sorter/Stapler	1
8. Ground Screw with Star Washer.....	1
9. Ground Sticker	1
10. Ground Wire	1
11. Rear Fixing Bracket	1
12. Paper Misfeed Decal	1
13. Wire Clamp (6N)	3
14. EPROM (Sorter/Stapler Main ROM)	2
15. Connection Guide Bracket	1
16. Stapler Sticker	1

5.2 INSTALLATION PROCEDURE

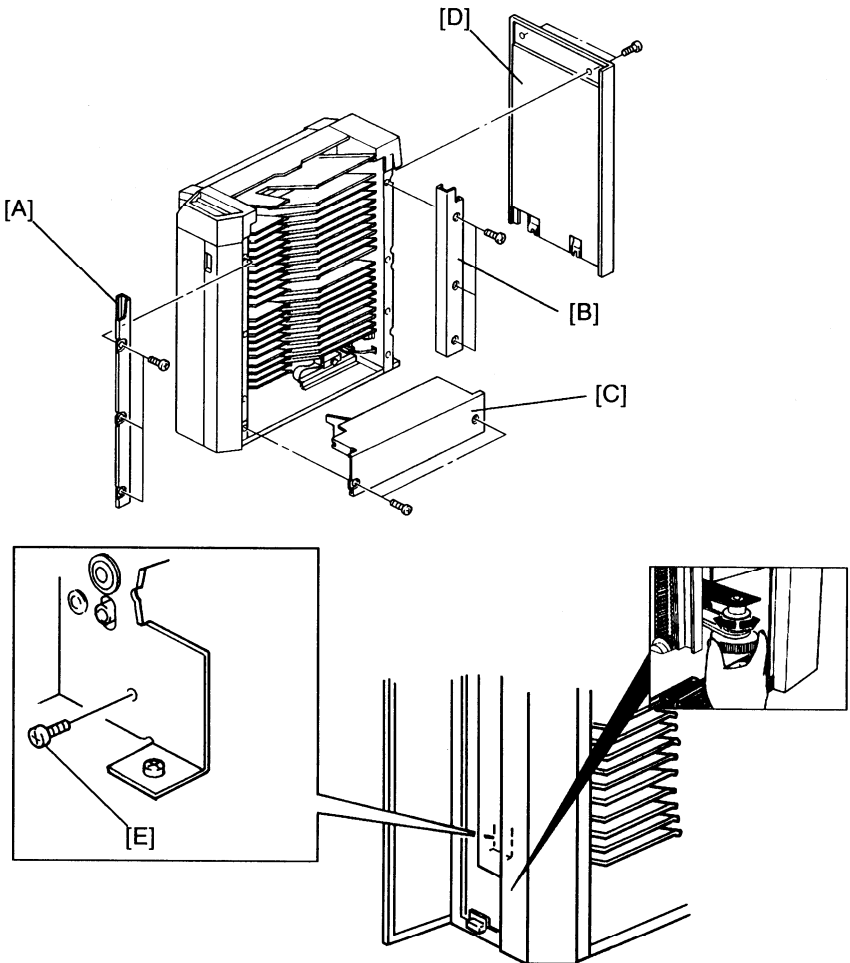
CAUTION: Turn off the copier main switch before starting installation.

5.2.1 First Sorter/Stapler Preparation

If the Sorter/Stapler has been installed, start at step #1 on this page. If the Sorter/Stapler has not been installed, skip steps #1 - 4, and go next page.



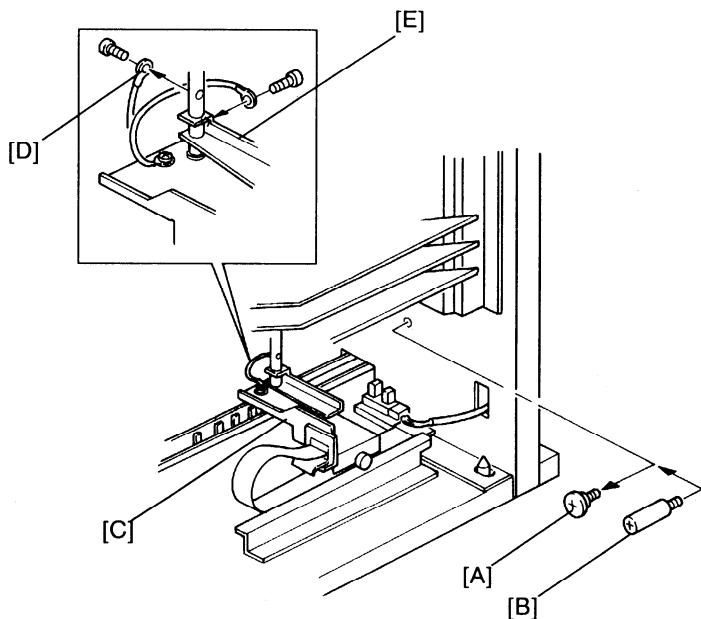
1. Remove the screws securing the fixing bracket [A] (4 screws).
2. Screw the leveling stands [B] up until the sorter/stapler rests on the casters, and remove the stand shoes [C].
3. Open the copier top unit and remove the sorter/stapler. Be careful not to damage the fiber optics cable [D].
4. Disconnect the fiber optics cable from the copier's connector [E].



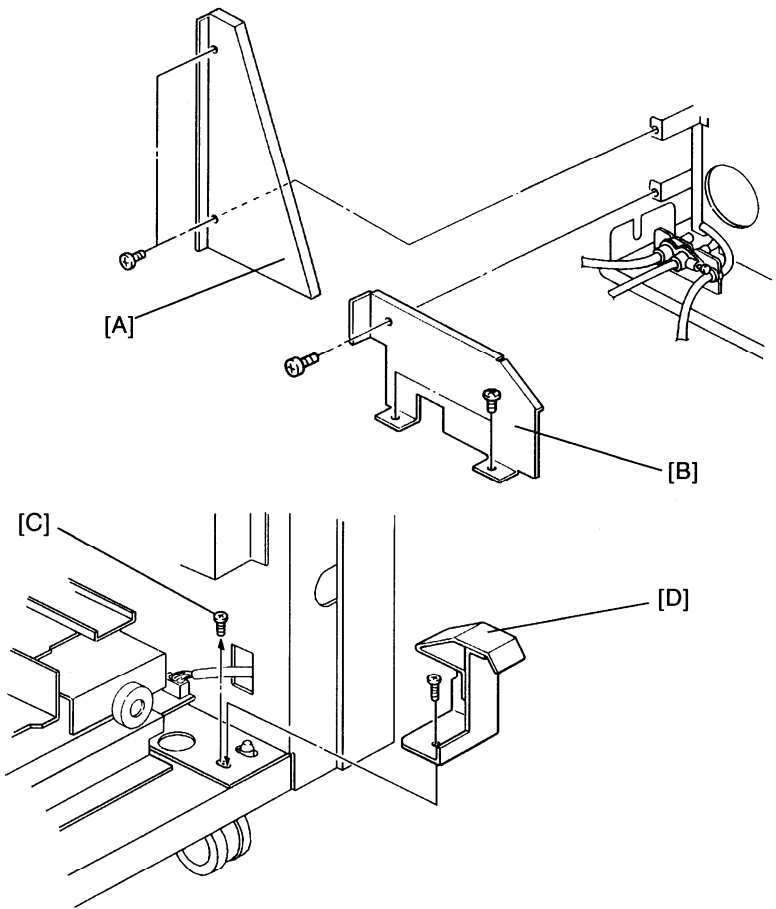
5. Remove the following parts from the sorter/stapler.

- Front bin bracket [A] (3 screws)
- Rear bin bracket [B] (3 screws)
- Base plate cover [C] (2 screws)
- Rear cover [D] (2 screws)

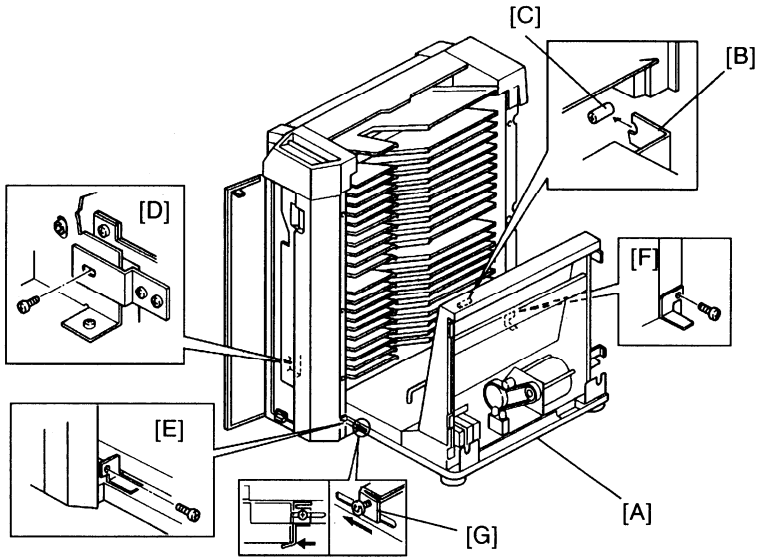
6. Remove the screw [E] securing the bottom bracket to the bin/jam sensor board. If the stapler unit is located at the lower position, turn the knob at the lower right side of the door to manually move the stapler unit to the middle position.



7. Replace the shoulder screw [A] with the docking pin [B] which comes in the accessory box. Remove the front shoulder screw.
8. Remove the lowest two bins from the sorter/stapler.
9. Manually move the jogger unit [C] to the left.
10. Remove the grounding terminal [D] from the jogger shaft, and fix the terminal onto the jogger cam bracket [E].
11. Manually move the jogger unit back to its home position.
12. Connect the sorter/stapler to the copier (2 docking pins and fiber optics cable).
13. Fix the sorter/stapler to the copier with the fixing bracket (2 screws).



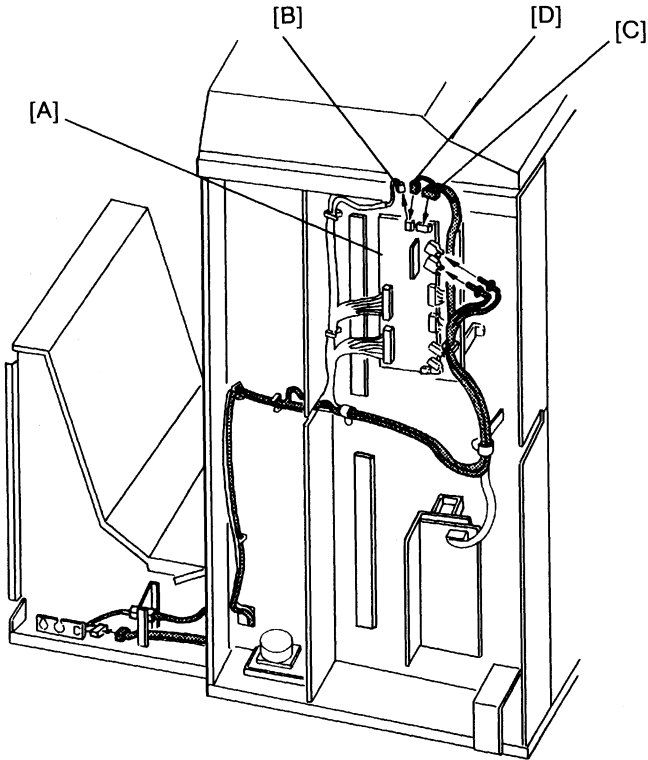
14. Remove all the external strips of tape from the connector unit and remove the upper [A] and two lower covers [B]. Remove the **red shipping bracket** (4 screws) on the back side of the S/S connector unit.
15. Remove the screw [C] and install the connector bracket [D] (M4 x 8 screw) from the accessory box.



- Slide the connector unit [A] into the first sorter/stapler. While sliding it in, slightly lift the paper entrance section of the connector unit so that the bracket [B] meets the docking pin [C].

CAUTION: Be careful not to damage the side plate HP sensor.

- Fix the connector unit with the sorter/stapler at the front left [D], front middle [E], and rear middle [F] of the unit (3 screws).
- Tighten the screws while pressing the locking bracket [G] to the left.
- Install the lowest two bins, front bin bracket and rear bin bracket.
- Remove the Gate spring from the **TOP** of the 21st bin gate (very bottom) and re-attach the spring to the **BOTTOM** spring hole. (This is to keep the 21st gate open at all times.)

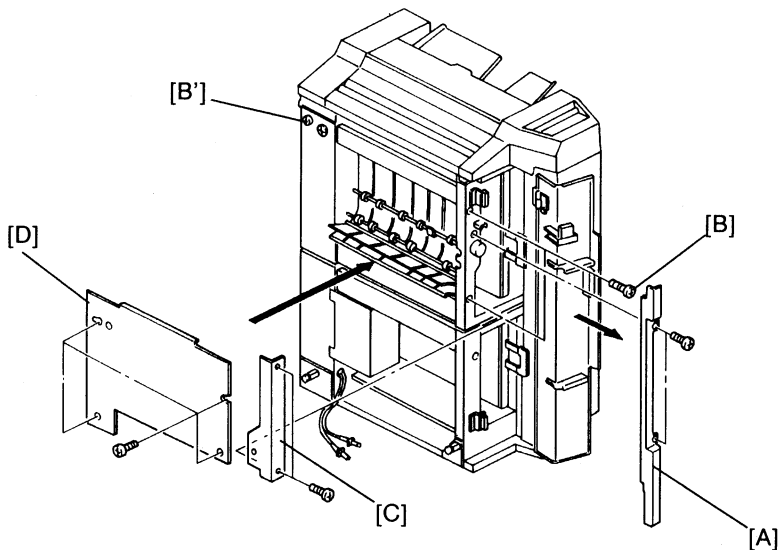


20. Route the interface cable from the connector unit to the first sorter/stapler main PCB [A].

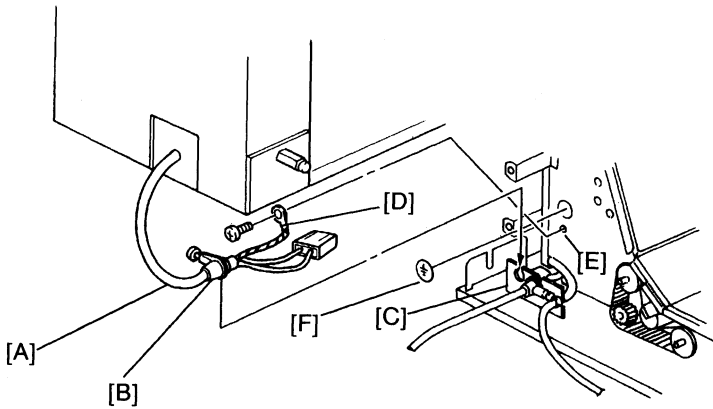
NOTE: The wire clamps must be replaced with the bigger ones which come in the accessory box.

21. Connect the fiber cable to the Sorter/Stapler main PCB, and disconnect the 2P connector [B] on top of the Sorter/Stapler main PCB.
22. Connect the 8P [C] and 2P [D] connectors of the interface cable to the main PCB.
23. Turn on **DIP S/W 100-5** on the Sorter/Stapler main PCB.
24. Replace the EPROM on the Sorter/Stapler main PCB with the EPROM from the accessory box. Then, put the Sorter/Stapler cover back on the Sorter/Stapler.

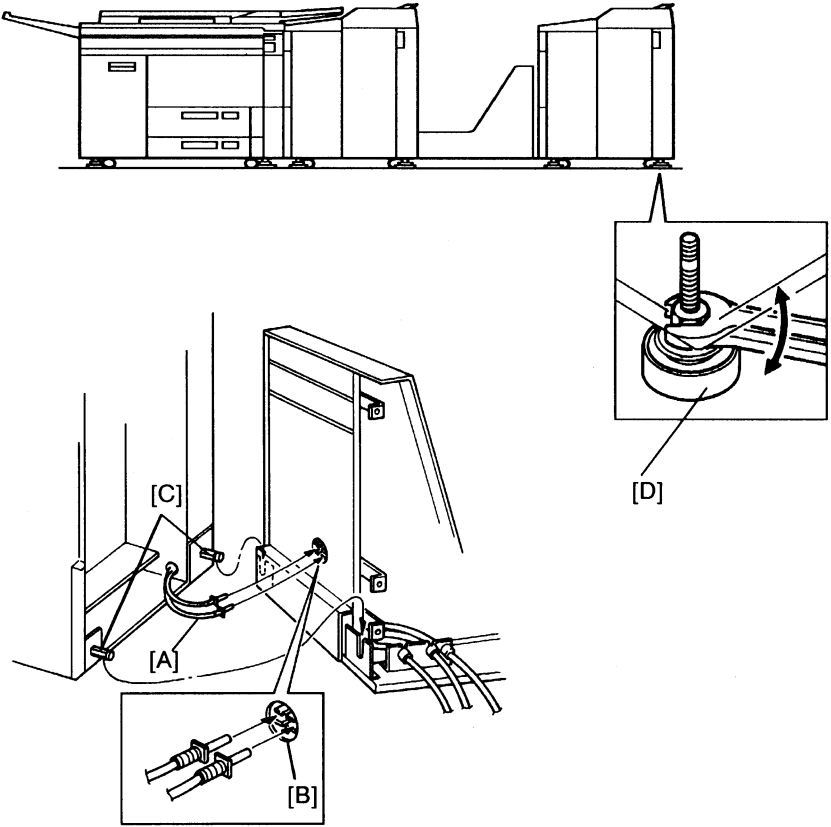
5.2.2 Second Sorter/Stapler Preparation



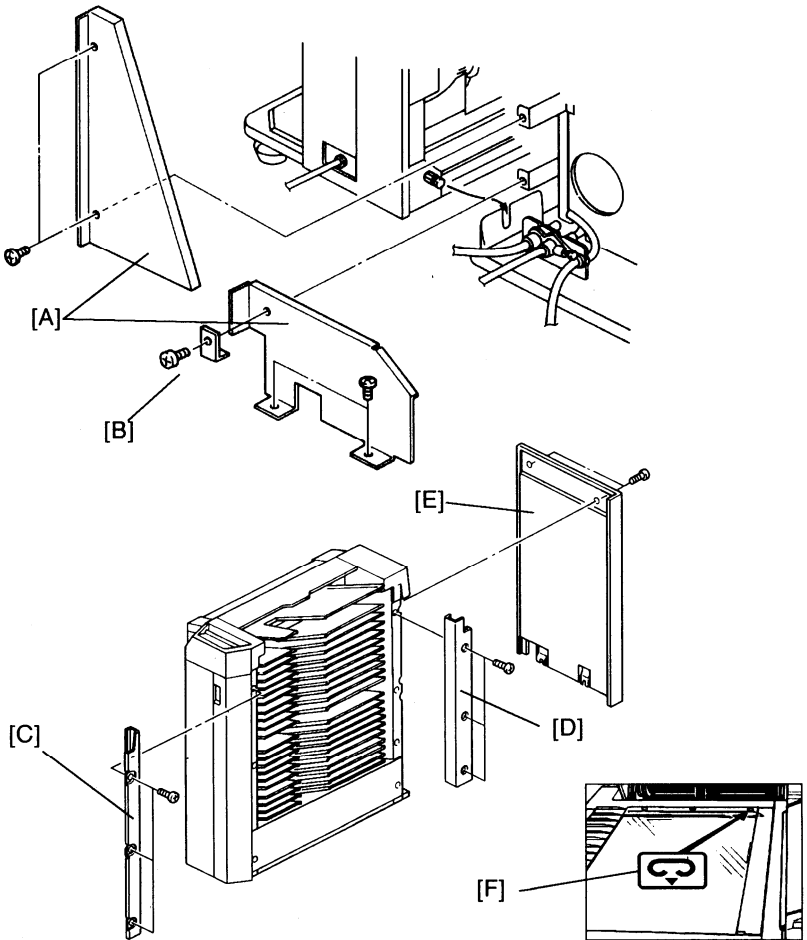
25. Remove the front left cover [A] (4 screws), two screws [B], and just loosen a screw [B'].
26. Fix the front left shield cover bracket [C] to the sorter/stapler frame.
27. Reinstall the front left cover [A], and install the left shield cover [D] on the sorter/stapler.
28. Remove the rear cover to replace the EPROM on the second Sorter/Stapler main PCB with the EPROM which comes in the accessory box.



29. Mount the second sorter/stapler power supply cord [A] on the connector unit. Make sure the cord stopper [B] is fixed to the cord bracket [C].
30. Secure the ground wire [D] to the connector unit rear plate [E], and stick the ground decal [F] beside it. Then, connect the 2P connector.

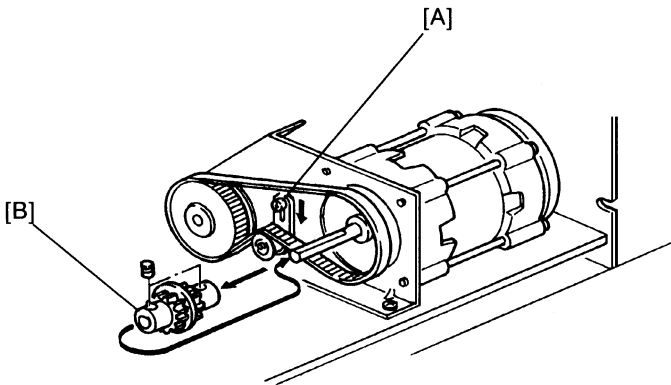


31. Connect the fiber optics cables [A] of the second sorter/stapler to the connector [B] mounted on the connector unit.
32. Connect the second sorter/stapler to the connector unit. Make sure that the docking pins [C] are in the correct position.
33. Place the stand shoes [D] under the feet and level the sorter/stapler.



34. Fix the rear covers [A] (7 screws).
35. Fix the rear fixing bracket [B] so that the rear docking pin of the second sorter/stapler does not come out of position.
36. Install the front bin bracket [C], rear bin bracket [D], and rear cover [E] of the first sorter/stapler.
37. Connect the first and second sorter/stapler units with a ground wire.
38. Stick the misfeed decal inside the left front door of the first sorter/stapler.
39. Stick the stapler decal [F] on the top scale at the location.

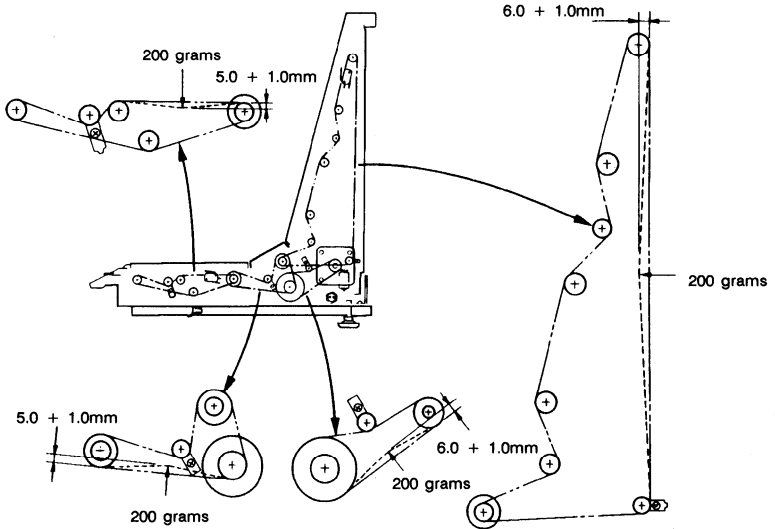
5.3 50 Hz-60 Hz MODIFICATION



1. Loosen the belt tension bracket screw [A].
2. Loosen the two Allen screws and remove the main motor pulley [B].
3. Reverse the main motor pulley and install it so that it is flush with the end of the main motor shaft.
4. Adjust the main motor drive belt tension. There should be 6.0 ± 1.0 mm deflection of the belt when 200 grams pressure is applied.

6. REPLACEMENT AND ADJUSTMENT

6.1 TENSION ADJUSTMENT



1. Horizontal Drive Belt Tension

Standard: 5.0 ± 1.0 mm deflection at 200g pressure Adjust with tightener [A].

2. Turn Section Belt Tension

Standard: 5.0 ± 1.0 mm deflection at 200g pressure Adjust with tightener [B].

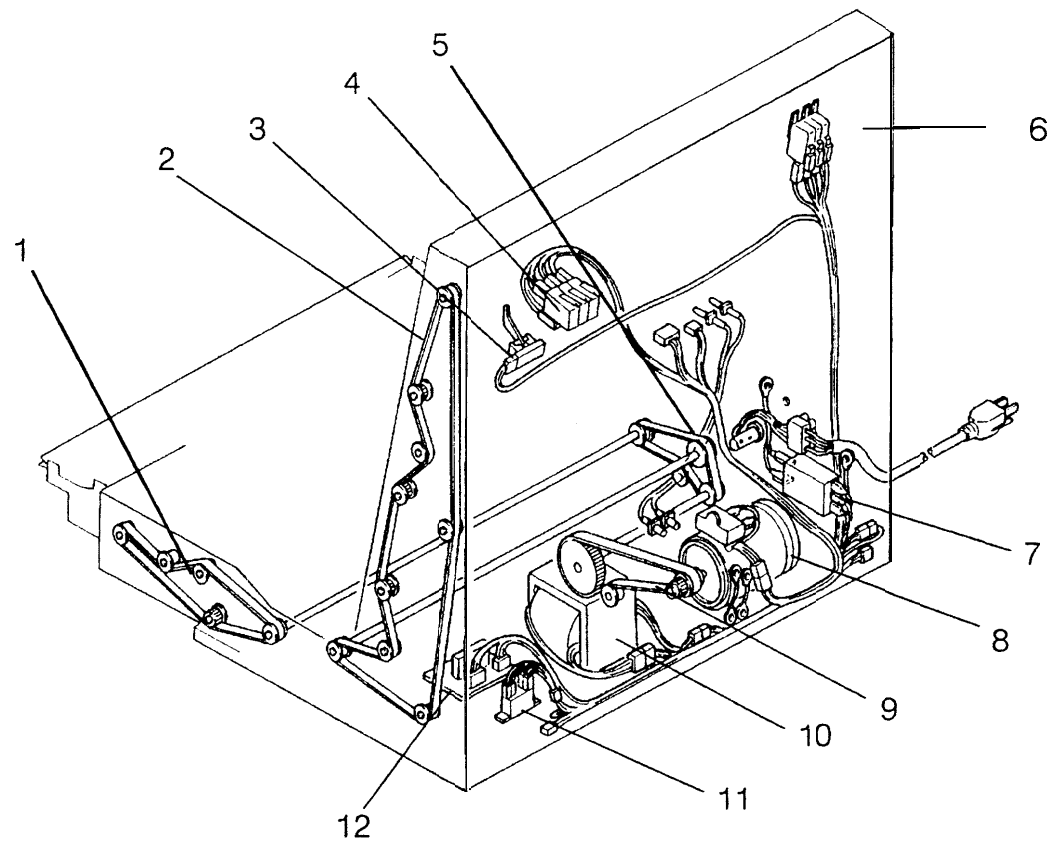
3. Motor Belt Tension

Standard: 6.0 ± 1.0 mm deflection at 200g pressure Adjust with tightener [C].

4. Vertical Drive Belt Tension

Standard: 6.0 ± 1.0 mm deflection at 200g pressure Adjust with tightener [D].

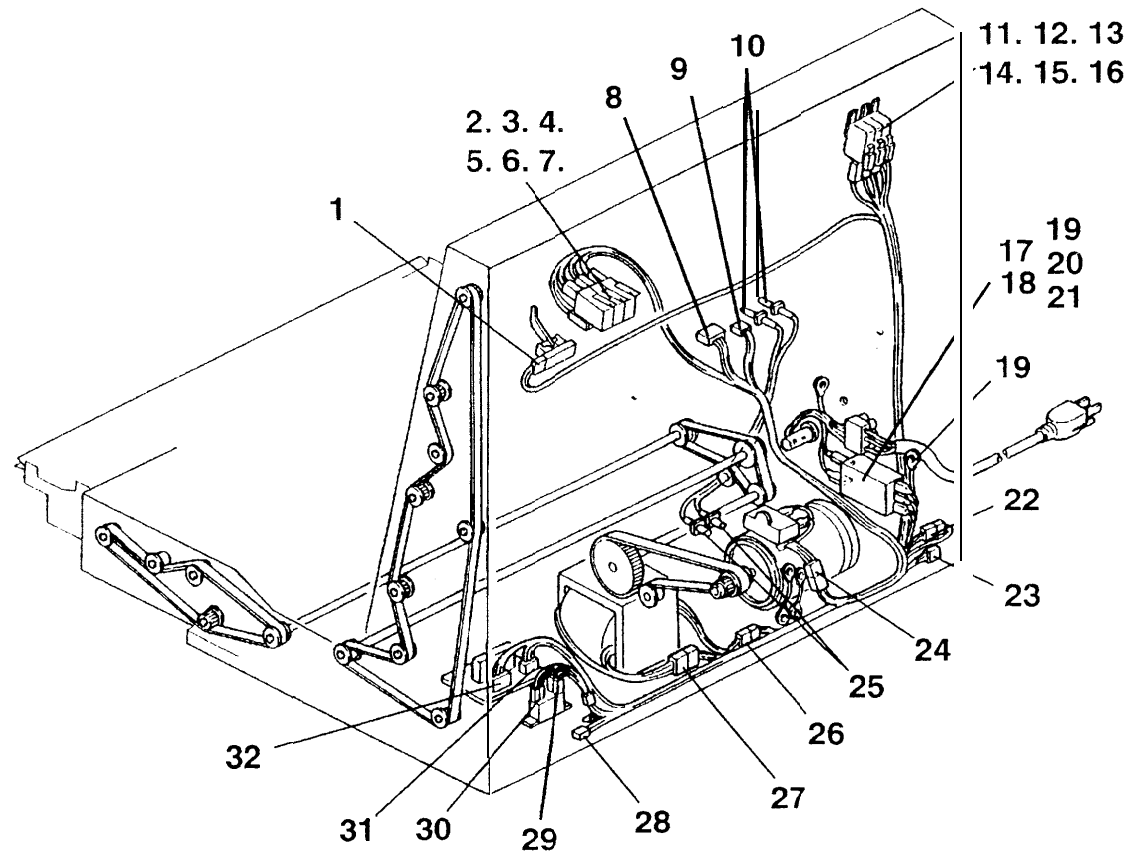
— COMPONENT LAYOUT —



COMPONENT LAYOUT

Index No.	Description	Symbol	P to P
1	Horizontal Drive Belt	B1	—
2	Vertical Drive Belt	B2	—
3	Paper Exit Sensor	S1	D4
4	Horizontal Cover Safety Switch	SW1	E4
5	Turn Section Belt	B3	—
6	Vertical Cover Safety Switch	SW2	E4
7	Noise Filter	NF	D1,D2
8	AC Drive Motor	M1	F3
9	Motor Belt	B4	—
10	Transformer	TR	G1,G2
11	Solid State Relay	SSR	E3
12	Main Relay	RA	E1,E2,C2

— HARNESS LAYOUT —



HARNESS LAYOUT

INDEX	CN. NO.	COMPONENT	TYPE	COLOR	P to P LOCATION
1	CN720	Exit Sensor (S1)	3P	W	C-4
2	T820	Horizontal Cover Safety SW (220/240V only)	1P	Y	E-4
3	T704	Horizontal Cover Safety SW	1P	Y	D-4
4	T816	Horizontal Cover Safety SW (220/240V only)	1P	Y	E-4
5	T817	Horizontal Cover Safety SW	1P	Y	E-4
6	T705	Horizontal Cover Safety SW	1P	Y	D-4
7	T821	Horizontal Cover Safety SW	1P	Y	E-4
8	CN750	Intermediate (1st Sorter Stapler)	5P	T	B-3
9	CN740	Intermediate (1st Sorter Stapler)	2P	T	B-4
10	FC	Fiber Connector	2P	B	B-4
11	T814	Vertical Cover Safety Switch (220/240V only)	1P	W	E-4
12	T702	Vertical Cover Safety Switch	1P	W	E-4
13	T818	Vertical Cover Safety Switch (220/240V only)	1P	W	E-4
14	T819	Vertical Cover Safety Switch	1P	W	E-4
15	T703	Vertical Cover Safety Switch	1P	W	E-4
16	T815	Vertical Cover Safety Switch	1P	W	E-4
17	T802	Noise Filter	1P	SH	D-1
18	T803	Noise Filter	1P	SH	D-1
19	T810	Noise Filter	1P	SH	D-1
20	T811	Noise Filter	1P	SH	D-1
21	T812	Noise Filter	1P	SH	D-1
22	CN830	Intermediate	2P	W	F-4
23	CN810	2nd Sorter Stople	2P	W	G-4
24	CN870	AC Motor	2P	W	F-3
25	FC	Fiber Connector	2P	B	G-4
26	CN820	Intermediate (Transformer) 240V only	1P	W	E-1
26	CN821	Intermediate (Transformer) 220V only	1P	W	E-1
27	CN800	Transformer	4P	W	F-1
28	CN730	Not used	2P	G	G-3
29	T700,701	Main Relay	2P	Y	C-3
30	T800,801	Main Relay	2P	W	E-1,E-2
31	CN551	SSR	2P	W	D-3
32	CN552	SSR	2P	W	F-3

SORTER STAPLER CONNECTOR UNIT POINT TO POINT DIAGRAM

