PAPER TRAY UNIT

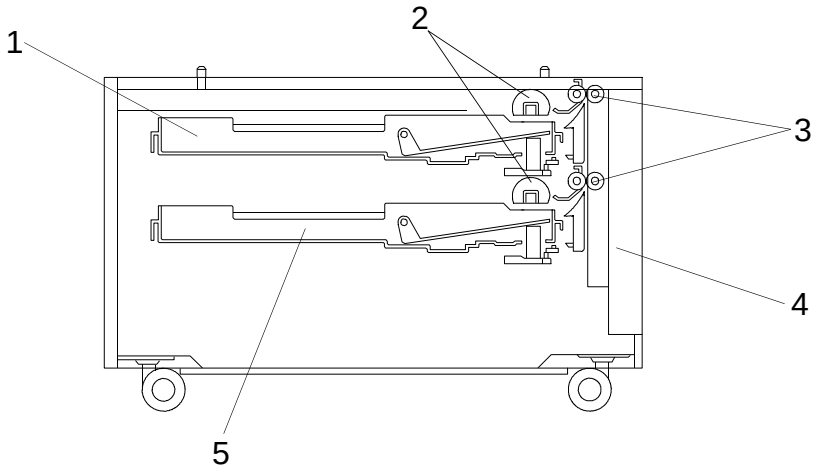
(Machine Code: A553)

1. SPECIFICATIONS

Configuration:	Two-tray table
Copy Paper Size:	Maximum A3/11" x 17" Minimum B5/8 1/2" x 11"
Copy Paper Weight:	64 - 90 g/m^2, 17 - 24 lb
Copy Paper Capacity:	Approximately 250 sheets
Paper Feed Speed:	20 ~ 35 copies/minute (A4 / 8 1/2"X11" sideways)
Power Source:	DC 24V, 5V and AC 120V, 220~240V from the main machine
Power Consumption:	Maximum 43 W Average 22 W
Dimensions:	620 mm/24.4" (width) X 632 mm /24.9" (depth) X 390 mm/15.4" (height)
Weight:	Less than 30 kg/66 lb

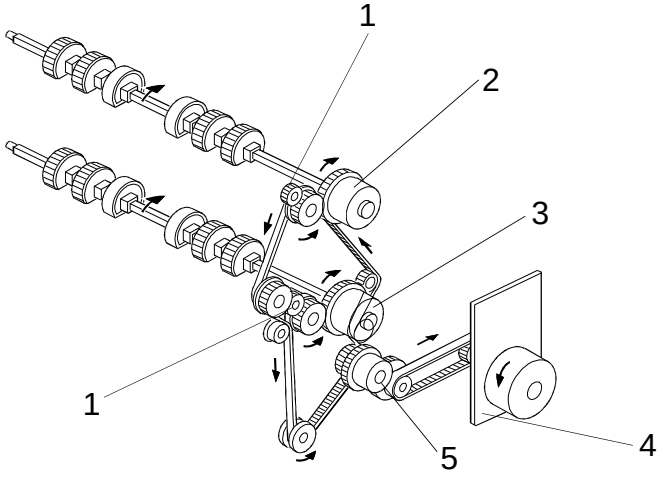
2. COMPONENT LAYOUT

2.1 MECHANICAL COMPONENT LAYOUT



1. Paper Tray 1
2. Paper Feed Rollers
3. Relay Rollers
4. Lower Right Door
5. Paper Tray 2

2.2 DRIVE LAYOUT



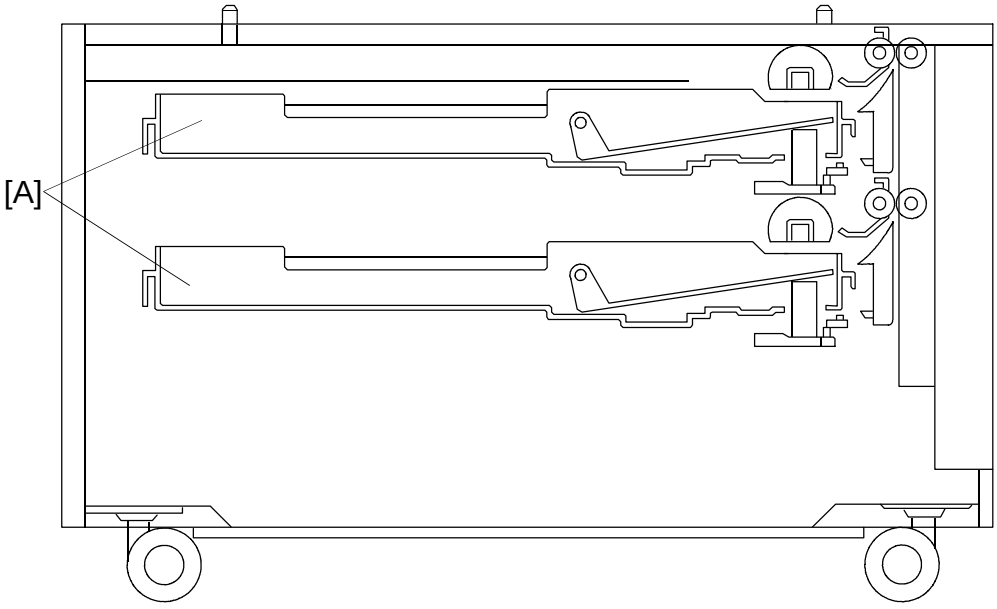
1. Vertical Transport Roller Gears
2. Paper Feed Clutch 1
3. Paper Feed Clutch 2
4. Main Motor
5. Relay Clutch

2.3 ELECTRICAL COMPONENT DESCRIPTION

Refer to the electrical component layout on the reverse side of the Point to Point Diagram (on waterproof paper).

Symbol	Index No.	Description	Note
Motors			
M1	4	Main	Drives all the paper tray components
Circuit board			
PCB1	1	Interface board	Controls the paper feed tray unit in response to signals from the copier
Sensors			
S1	2	Tray set 1	Detects whether the paper tray is in place
S2	3	Tray set 2	
S3	10	Relay 1	Detects when the leading edge of the paper leaves the paper tray, to determine copier relay clutch timing and jam detection timing
S4	11	Relay 2	
S5	5	Paper end 1	Detects when the paper tray runs out of paper
S6	6	Paper end 2	
Switches			
SW1	12	Tray cover	Detects whether the tray unit cover is open, and cuts the 24 Vdc line if it is.
Clutches			
CL1	7	Paper feed 1	Starts to feed paper from the tray
CL2	8	Paper feed 2	
CL3	9	Relay	Drives the rollers in the paper trays
Heaters			
H1	13	Tray (Option)	Turns on when the main switch is off, to keep the paper in the trays dry
H2	14	Tray (Option)	

3. OVERVIEW

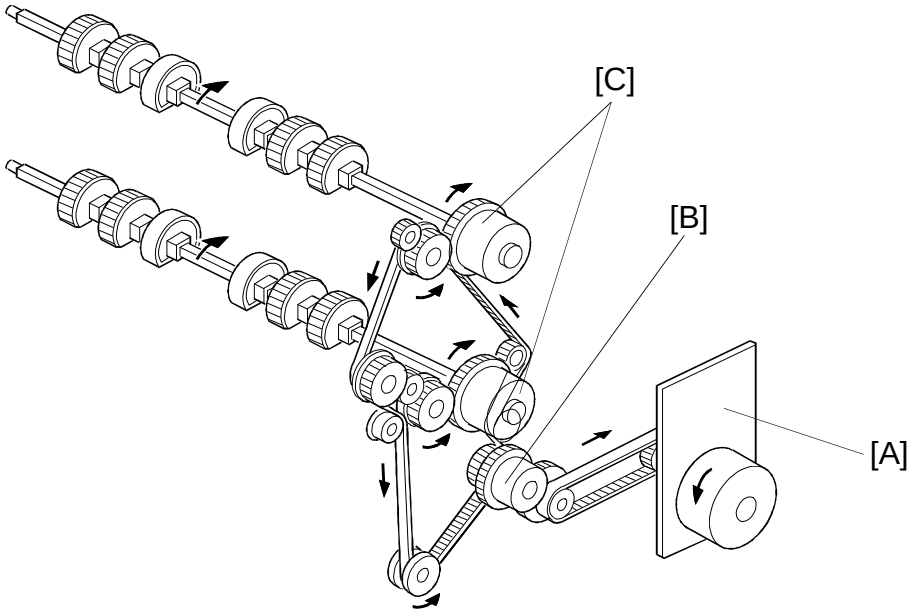


This paper feed unit is a two-tray type. Each paper tray [A] is a drawer type that can hold up to 250 sheets of paper.

The paper feed mechanism uses a corner separator system. The function of the system is exactly the same as for the main machine except that there is no paper size detection. The paper size for each paper tray is input at the operation panel, either by the technician or by the user.

All the electrical components of the paper tray are controlled by the copier main board through the tray interface board.

4. DRIVE MECHANISM



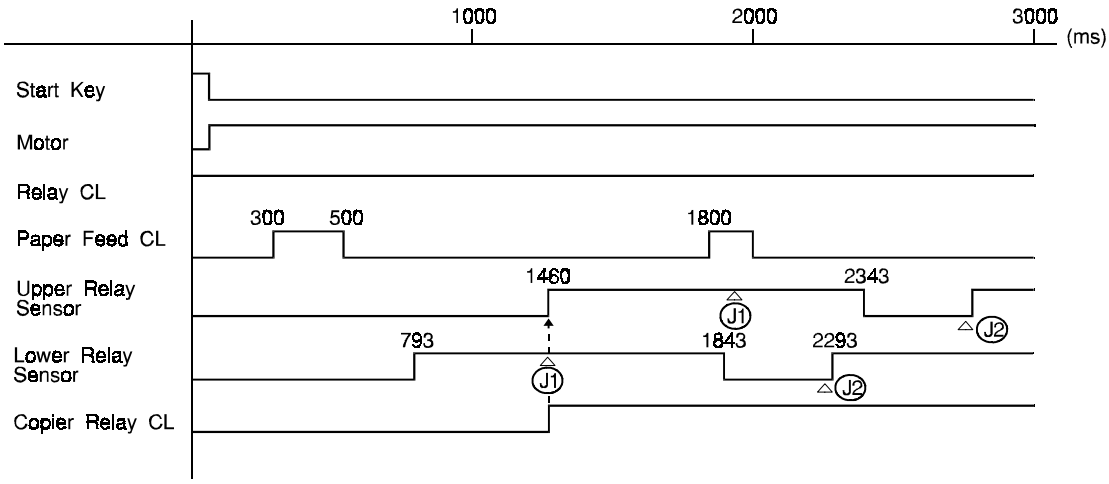
All the tray rollers are driven by the main motor [A] via timing belts, clutches and a train of gears.

The main motor and the relay clutch [B] are energized at the same time as the Start key is pressed.

The paper feed clutch [C] is energized 300 ms after the main motor starts to rotate. When the paper feed clutch for the selected paper tray is energized, paper is fed from the paper tray to the main frame through the relay rollers.

5. PAPER FEED AND MISFEED DETECTION TIMING

A4 Sideways. Lower Paper Feed Station 200 mm/s



J1 and J2: Checks whether the sensor is activeted within 667 ms after the designeted time for these sensor.

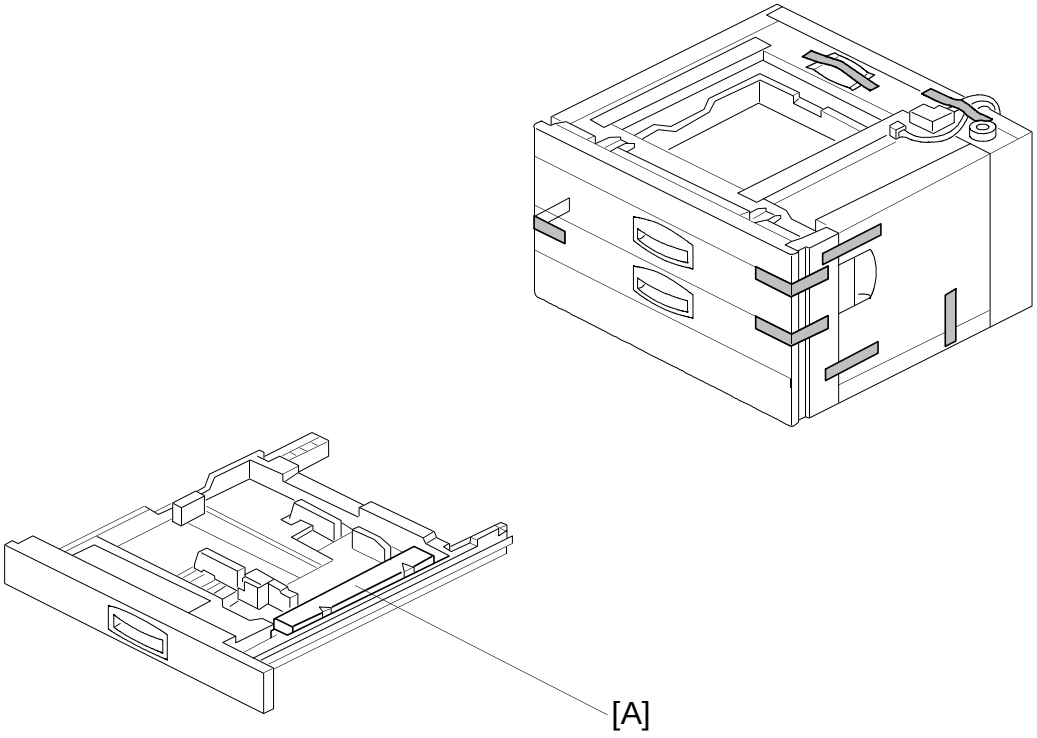
6. INSTALLATION

6.1 ACCESSORY CHECK

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

1. Right Support Bracket 1
2. Left Support Bracket 1
3. Joint Bracket 1
4. Shoulder Screw 1
5. Screw - M4 x 8 4
6. New Equipment Condition Report 1
7. Installation Procedure 1

6.2 INSTALLATION PROCEDURE



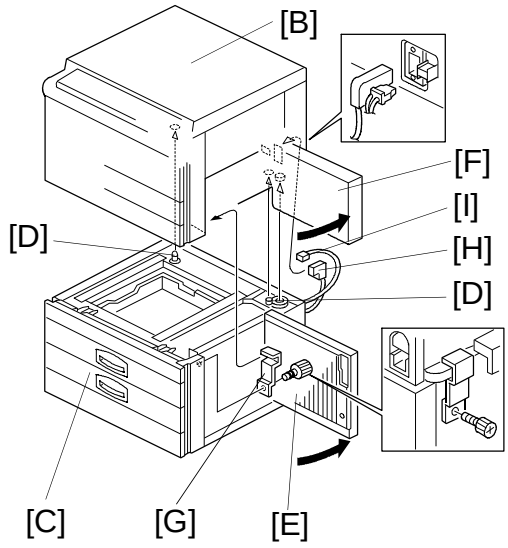
! CAUTION

Unplug the copier power cord before starting the following procedure.

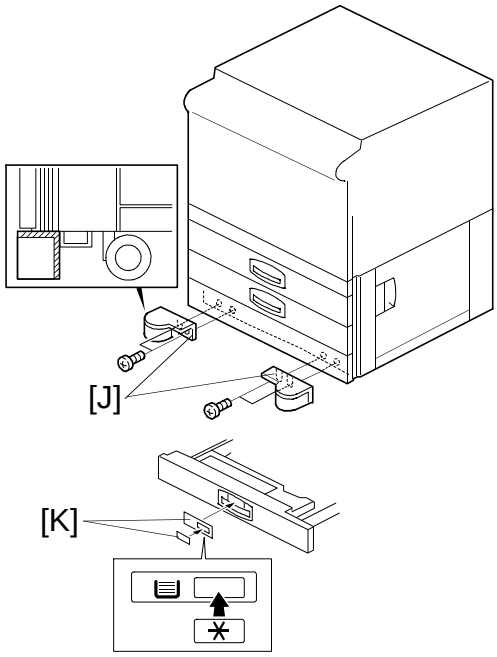
NOTE: Keep the shipping retainers after installing the machine. They will be reused if the machine is transported to another location in the future.

Proper reinstallation of the shipping retainers is required in order to avoid any transport damage.

1. Remove the strips of tape.
2. Remove the bottom plate stopper [A].



For copiers with an LCT unit: Do not lift the copier by holding the LCT unit.



3. Set the copier [B] on the paper tray unit [C]. Align the 2 pins [D] on the paper tray unit with the holes in the base plate of the copier.
4. Open the lower right door [E] and either the LCT [F] or the upper right door [F] (depending on the type of copier).
5. Secure the copier to the paper tray unit with the joint bracket [G].
6. Connect the cable [H] and optic fiber [I].
7. Attach the support brackets [J] to the bottom of the paper tray unit as shown (4 screws).

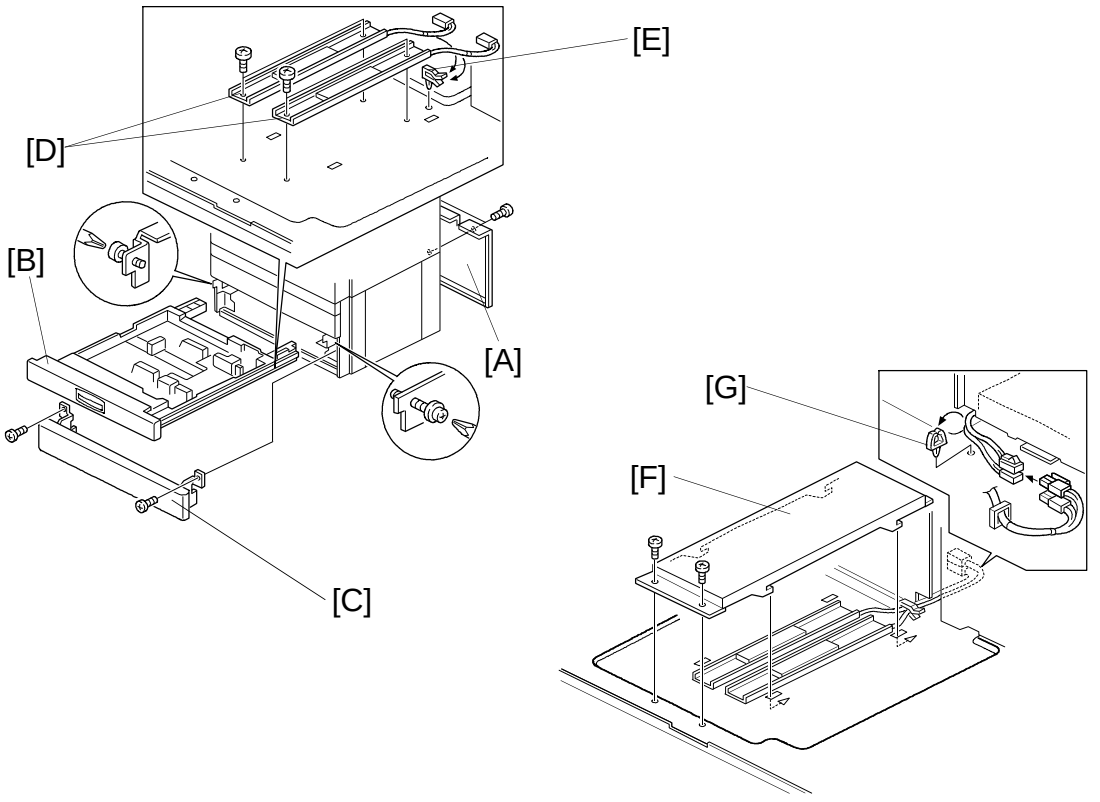
! CAUTION

If you do not do this, the machine may fall forwards if all the paper trays are pulled open.

8. Pull out the paper tray and load paper into it. (The paper size and direction for each tray should be designated by a customer.)

   NOTE: The side and rear fences should be properly positioned.
9. Turn on the main switch.
10. Enter the proper paper size for each paper tray by following the instructions in the copier's manual.
11. Attach the appropriate tray decals [K] which are included in the accessory box of the main copier.
12. Check the machine's operation and copy quality.

6.3 TRAY HEATER (OPTION)



1. Remove the rear cover [A].
2. Remove the second paper tray [B] (2 screws) and the lower front cover [C] (2 screws).
3. Install the tray heaters [D] (2 screws each).
4. Install the clamper [E] and clamp the heater harnesses.
5. Install the heater bracket [F] (2 screws).
6. Connect the heater harnesses.
7. Install the clamper [G] and clamp the heater harnesses.

NOTE: After replacing the paper tray, perform the side-to-side registration adjustment (see the Removal and Adjustment section of the manual for the copier).

7. SERVICE TABLES

7.1 DIP SWITCHES

DIP SW 101

1	2	3	4	5	6	7	Function
Off	-	-	-	-	-	-	Speed in the free run mode: 200 mm/s
On	-	-	-	-	-	-	Speed in the free run mode: 150 mm/s
-	On	Off	-	-	-	-	Bank type : 500 sheet type
-	Off	On	-	-	-	-	Bank type : 250 sheet type
-	-	-	Off	On	-	-	Normal Operation / Free Run Mode 1*: One paper feed tray type
							Free Run Mode 2*: Paper feed tray 1 only
-	-	-	On	Off	-	-	Normal Operation / Free Run Mode 1*: Two paper feed tray type
							Free Run Mode 2*: Paper feed tray 2 only
-	-	-	On	On	-	-	Normal Operation / Free Run Mode 1*: Three paper feed tray type
							Free Run Mode 2*: Paper feed tray 3 only
-	-	-	-	-	On	Off	Free Run Mode 2
-	-	-	-	-	On	On	Free Run Mode 1

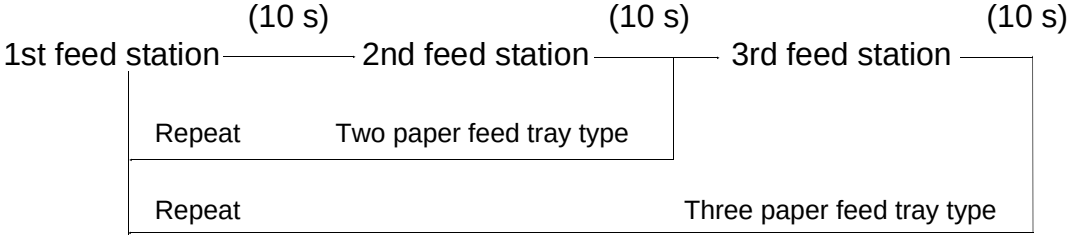
Do not touch dip switches 1 to 5.

How to do a free run

1. Select either mode 1 or mode 2 with dip switches 6 and 7.
2. Turn off the power, disconnect the optical cable, and turn on the power.
3. Press SW101 on the PCB to start the free run.
4. When you wish to stop the free run, press SW102 on the PCB, then reset the dip switches to their default settings.

Free Run Mode 1

The paper feed operation performs up to 20 times for each paper feed station.



Free Run Mode 2

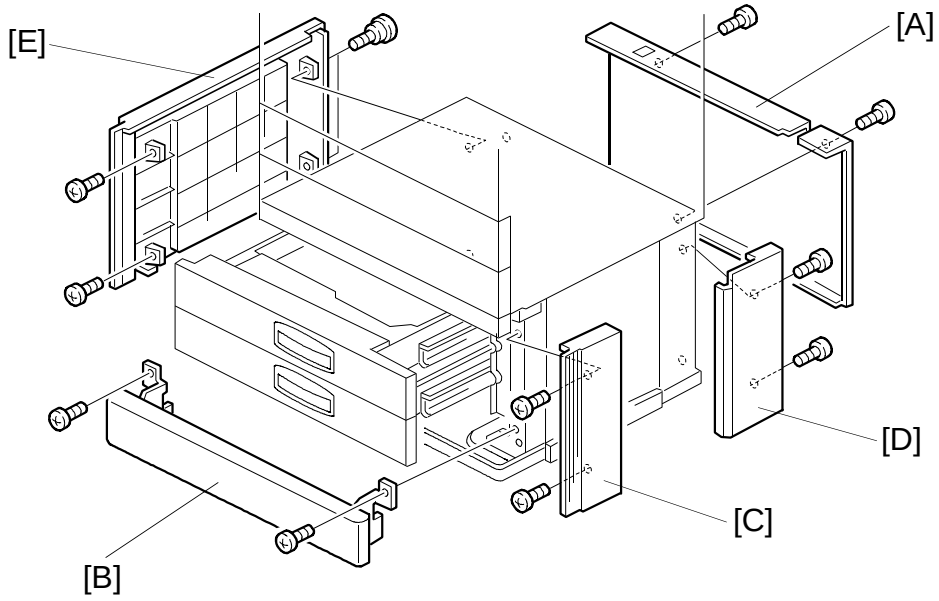
The paper feed operation can be checked for the selected paper feed station.

7.2 TEST POINTS

NUMBER	FUNCTION
TP101	+ 5V
TP102	+ 24V
TP103	GND
TP104	TXD (Transmit signal)
TP105	RXD (Receive signal)
TP106	GND

8. REPLACEMENT AND ADJUSTMENT

8.1 EXTERIOR COVER REMOVAL



Rear Cover [A]: (2 screws)

Front Lower Cover [B]:

1. Slide out the cassettes.
2. Remove the front lower cover (2 screws).

Right Front Cover [C]:

1. Remove the front lower cover [B].
2. Remove the right front cover (2 screws).

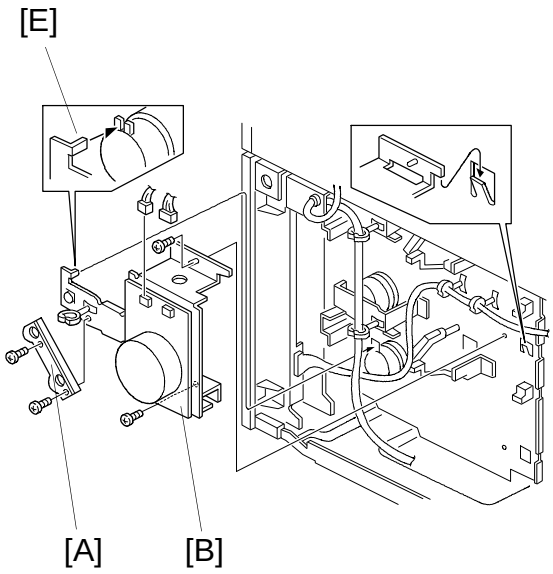
Right Rear Cover [D]:

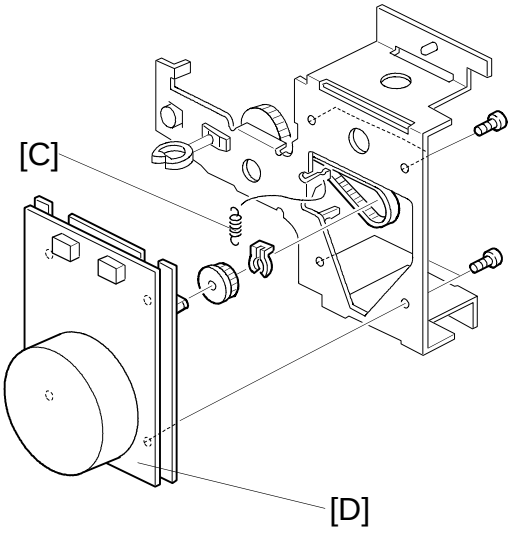
1. Remove the rear cover [A].
2. Remove the right rear cover (2 screws).

Left Cover [E]:

1. Remove the rear cover [A].
2. Remove the front lower cover [B].
3. Remove the left cover (4 screws).

8.2 MAIN MOTOR REPLACEMENT

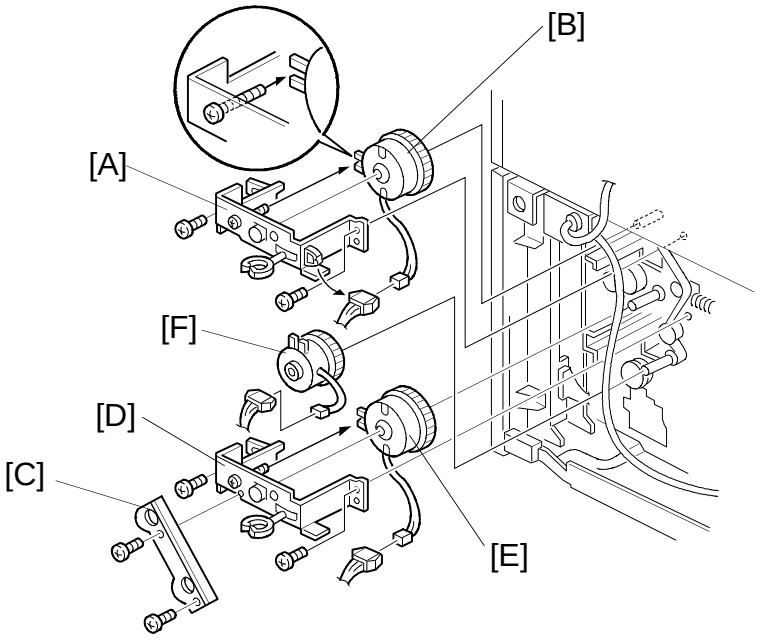




1. Remove the rear cover (see Exterior Cover Removal).
2. Remove the link bracket [A] (2 screws).
3. Remove the main motor bracket assembly [B] (2 screws, 2 connectors).
4. Remove the spring [C].
5. Remove the main motor [D] (4 screws, 1 clip, 1 gear).

NOTE: When reinstalling the main motor assembly, make sure that the relay clutch stopper groove engages with the stopper [E] on the main motor bracket.

8.3 CLUTCH REPLACEMENT



First Paper Feed Clutch

1. Remove the rear cover (see Exterior Cover Removal).
2. Remove the bracket [A] (2 screws).
3. Remove the first paper feed clutch [B] (1 connector).

Second Paper Feed Clutch

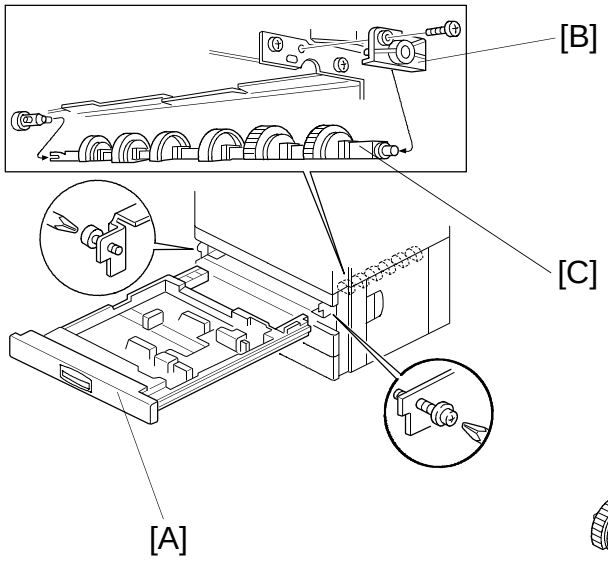
1. Remove the rear cover (see Exterior Cover Removal).
2. Remove the link bracket [C] (2 screws).
3. Remove the bracket [D] (2 screws)
4. Remove the second paper feed clutch [E] (1 connector).

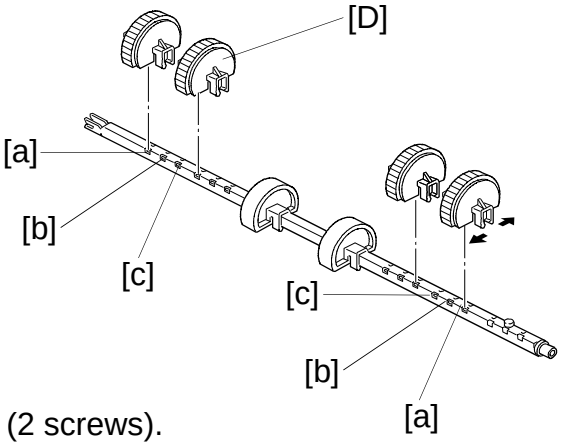
Relay Clutch

1. Remove the rear cover (see Exterior Cover Removal).
2. Remove the link bracket [C] (2 screws).
3. Remove the main motor bracket assemlby (see Main Motor Replacement).
4. Remove the relay clutch [F] (1 connector).

NOTE: When you reinstall a clutch, make sure that the clutch stopper groove engages the clutch stopper.

8.4 FEED ROLLER REPLACEMENT



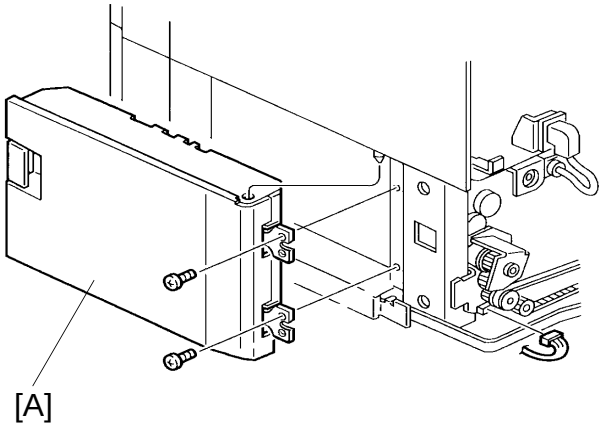


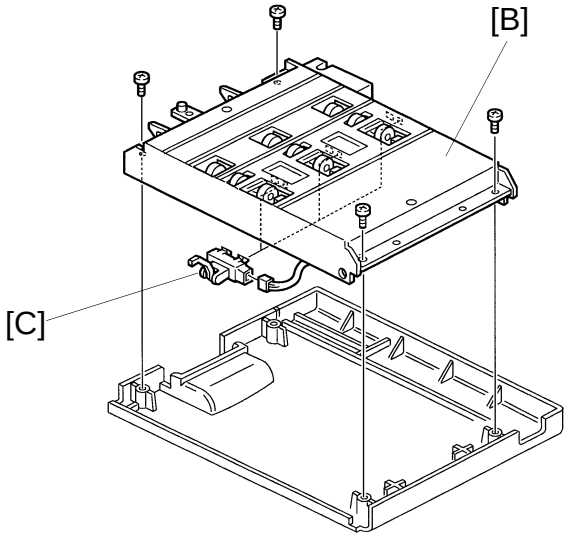
1. Remove the paper feed tray [A] (2 screws).
2. Remove the stopper bracket [B] (1 screw).
3. Remove the feed roller assembly [C].
4. Remove the feed roller [D].

NOTE:

- When installing the feed roller assembly, the flat side of the roller should be facing down.
- The two rollers without rubber should be at the center position of the shaft.
- The normal roller position is [a].
- There are two extra roller positions: for A size paper/LT size paper [b] and B size paper [c]. When paper jam and non-feed errors occur, change the feed roller position.
- After reinstalling the paper tray, perform the side-to side-registration adjustment (see Removal and Adjustment in the manual for the copier).

8.5 RELAY SENSOR REPLACEMENT





1. Remove the rear cover (see Exterior Cover Removal).
2. Remove the rear right cover (see Exterior Cover Removal).
3. Remove the vertical transport unit [A] (2 screws).
4. Remove the vertical transport guide [B] (4 screws).
5. Remove the relay sensors [C] (1 connector each).

PAPER TRAY UNIT(A553) POINT TO POINT DIAGRAM