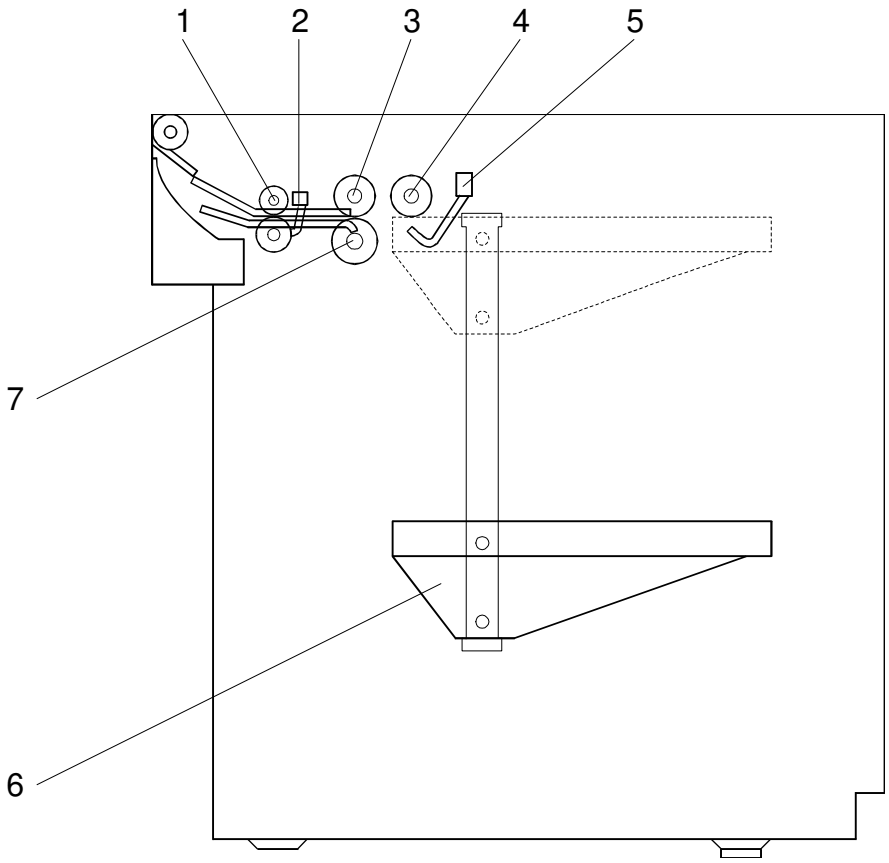
LCT
(Machine Code: A683)

1. OVERALL MACHINE INFORMATION

1.1 SPECIFICATIONS

Paper Size:	A4 sideways/LT sideways
Paper Weight:	60 g/m^2 ~ 105 g/m^2, 16 lb ~ 28 lb
Tray Capacity:	1500 sheets (80 g/m^2, 20lb)
Remaining Paper Detection:	5 steps (100%, 75%, 50%, 25%, Near end)
Power Source:	24 Vdc, 5 Vdc (from copier)
Power Consumption:	40 W
Weight:	17 kg
Size (W x D x H):	390 mm x 500 mm x 390 mm

1.2 MECHANICAL COMPONENT LAYOUT



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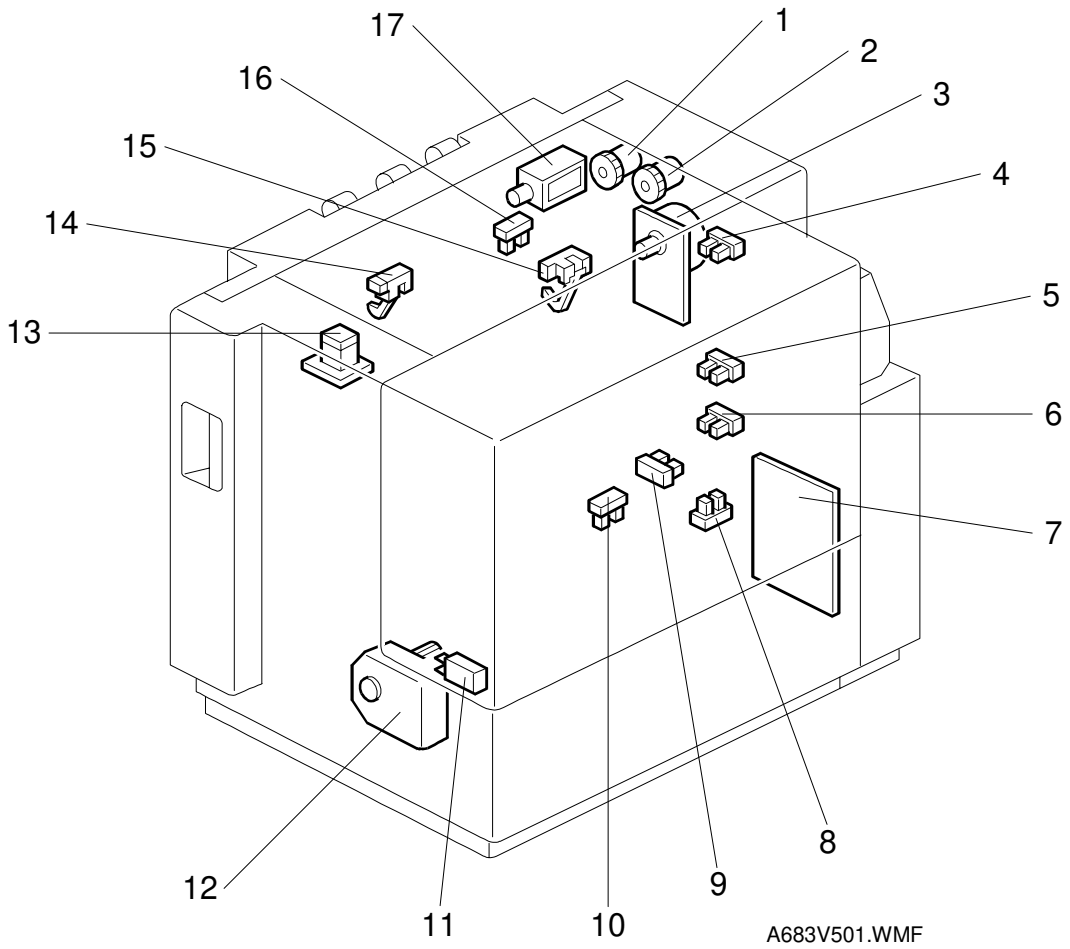
1. Relay Roller
2. Relay Sensor
3. Paper Feed Roller
4. Pick-up Roller
5. Paper End Sensor
6. Paper Tray
7. Separation Roller

1.3 ELECTRICAL COMPONENT LAYOUT

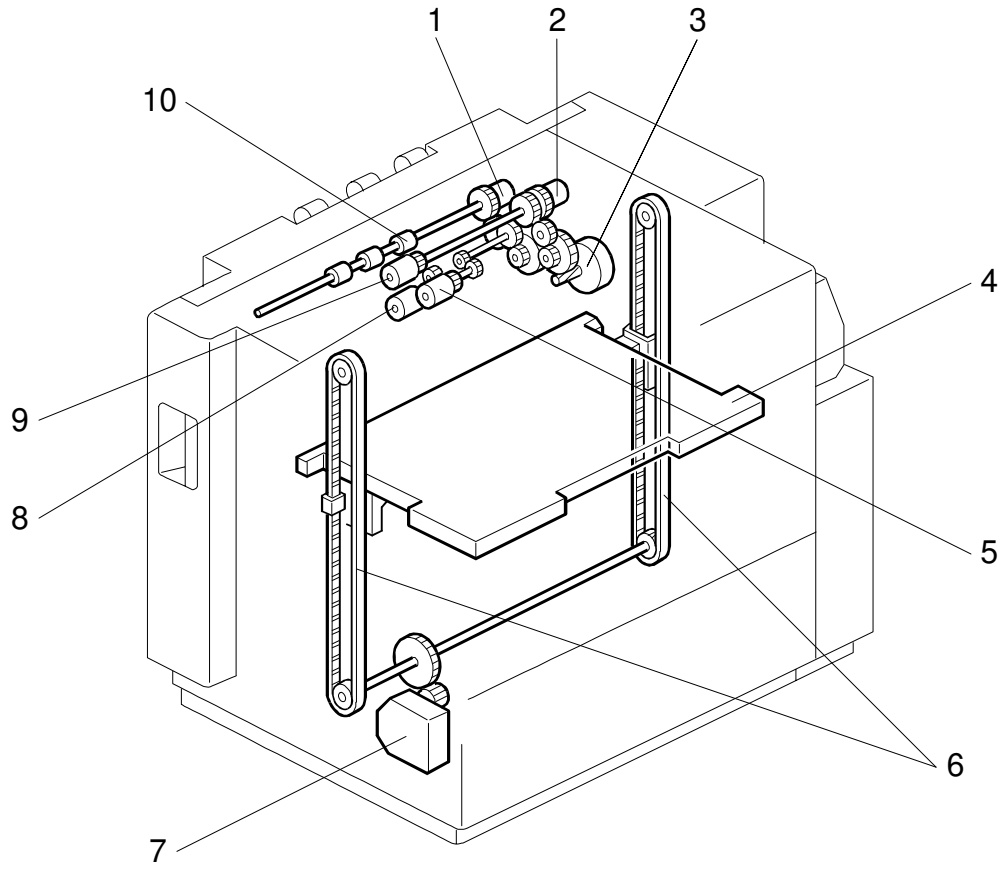


1. Relay Clutch
2. Paper Feed Clutch
3. LCT Motor
4. Paper Height 1 Sensor
5. Paper Height 2 Sensor
6. Paper Height 3 Sensor
7. Main Board
8. Side Fence Position Sensor
9. Lower Limit Sensor
10. LCT Set Sensor
11. Tray Cover Switch
12. Lift Motor
13. Down Switch
14. Relay Sensor
15. Paper End Sensor
16. Lift Sensor
17. Pick-up Solenoid

1.4 ELECTRICAL COMPONENT DESCRIPTION

Symbol	Name	Function	Index No.
Motors			
M1	LCT	Drives all rollers.	3
M2	Lift	Drives the paper tray up or down.	12
Sensors			
S1	Paper End	Informs the copier when the paper has run out.	15
S2	Relay	Detects the copy paper coming to the relay roller and checks for misfeeds.	14
S3	Lift	Detects when the paper is at the correct paper feed height.	16
S4	Lower Limit	Detects when the tray is completely lowered, to stop the LCT motor.	9
S5	Paper Height 1	Detects the paper height.	4
S6	Paper Height 2	Detects the paper height.	5
S7	Paper Height 3	Detects the paper height.	6
S8	LCT Set	Detects whether the LCT is correctly set or not.	10
S9	Side Fence Position	Detects when the side fence is set at the A4 size position.	8
Switches			
SW1	Tray Cover	Stops the LCT lift motor when the tray cover is opened.	11
SW2	Down	Lowers the LCT bottom plate if pressed by the user.	13
Solenoids			
SOL1	Pick-up	Controls up-down movement of the pick-up roller.	17
Magnetic Clutches			
MC1	Paper Feed	Drives the paper feed roller.	2
MC2	Relay	Drives the relay roller.	1
PCBs			
PCB1	Main	Controls the LCT and communicates with the copier.	7

1.5 DRIVE LAYOUT



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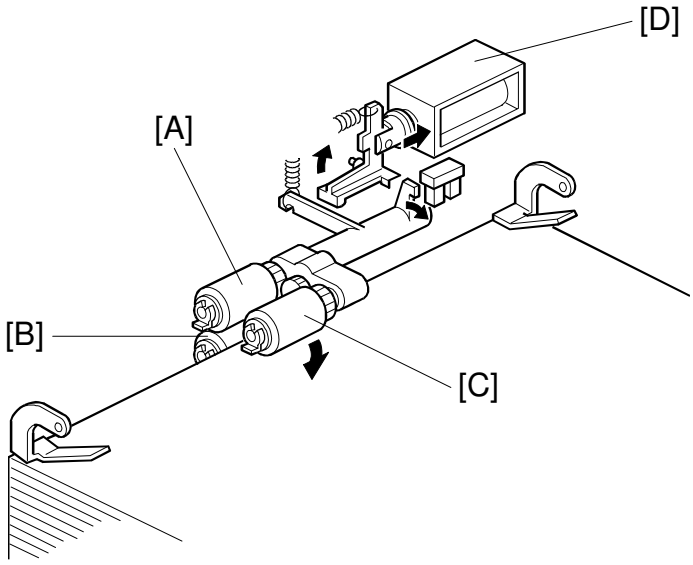
1. Relay Clutch
2. Paper Feed Clutch
3. LCT Motor
4. Tray Bottom Plate
5. Pick-up Roller
6. Tray Drive Belts
7. Lift Motor
8. Separation Roller
9. Paper Feed Roller
10. Relay Roller

2. DETAILED DESCRIPTIONS

2.1 PAPER FEED MECHANISM



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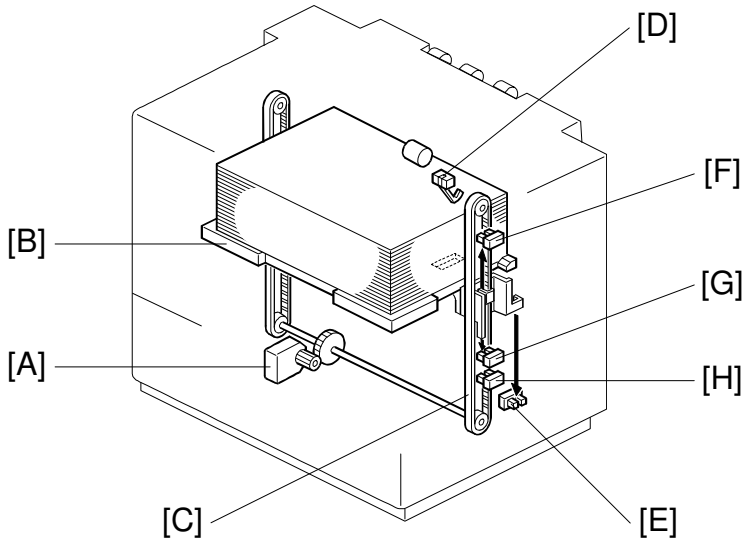
This machine uses the FRR paper feed system (paper feed roller [A], separation roller [B], pick-up roller [C]).

When the start key is pressed, the pick-up solenoid [D] energizes and the pick-up roller touches the paper.

2.2 TRAY LIFT AND PAPER HEIGHT DETECTION MECHANISM



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The lift motor [A] controls the vertical position of the tray bottom plate [B] through gears and timing belts [C].

Tray lifting conditions

When the tray lift sensor [D] turns off in the following conditions, the tray lift motor raises the tray bottom plate until the tray lift sensor [D] turns on again.

- Just after the main switch is turned on
- During copying
- Just after the tray cover is closed
- Just after leaving the energy saving mode

Tray lowering conditions

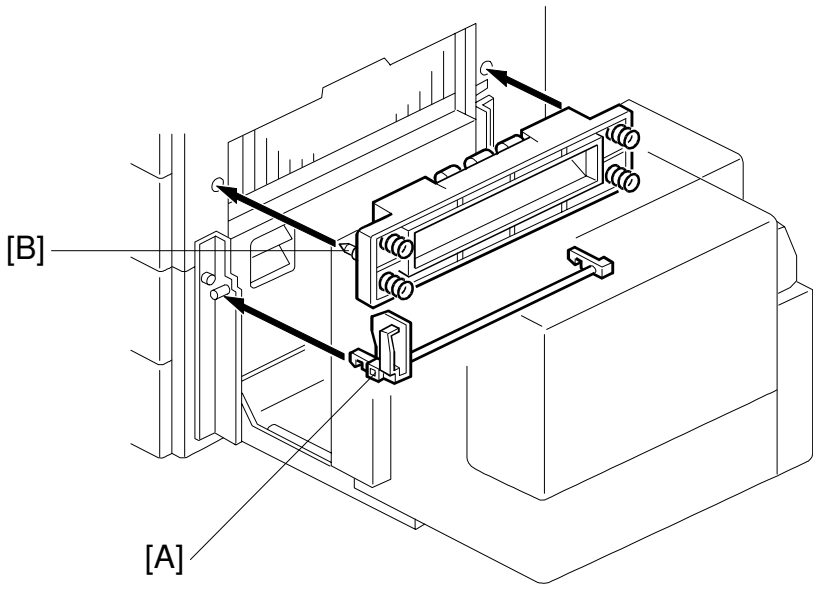
In the following conditions, the lift motor lowers the tray bottom plate until the lower limit [E] sensor turns on.

- Just after the paper end sensor turns on
- Just after the down switch is pressed by the user

The amount of the paper in the tray is detected by combination of high/low outputs from three sensors (paper height sensor 1 [F], 2 [G], and 3 [H].)

Amount of paper	Paper Height Sensor 1	Paper Height Sensor 2	Paper Height Sensor 3
Near end	On (High)	Off (Low)	Off (Low)
25%	Off (Low)	On (High)	Off (Low)
50%	Off (Low)	On (High)	On (High)
75%	Off (Low)	Off (Low)	On (High)
100%	Off (Low)	Off (Low)	Off (Low)

2.3 TRAY UNIT SLIDE MECHANISM



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When there is a paper jam between the copier and the LCT, the user releases the lock lever [A] and can slide the LCT away from the copier to remove the jammed paper.

When sliding the LCT back into position, the LCT is secured against the copier in the correct position by the docking pins [B] on the LCT.

3. SERVICE TABLES

3.1 DIP SWITCHES

DPS101								Description
1	2	3	4	5	6	7	8	
1	0	0	0	0	0	0	0	Default
1	0	0	0	0	0	0	1	Free run

NOTE: 1) Do not use any other settings.
2) To do the free run, proceed as follows:
1. Remove the paper from the LCT (this is because the machine has no jam detection).
2. Set DPS101 for the free run as shown above.
3. Turn the main switch off, wait a few seconds, then switch back on.
4. Press SW101 to start the free run.
5. To stop the free run, press SW102.

3.2 TEST POINTS

No.	Label	Monitored Signal
TP100	(24 V)	+24 V
TP101	(GND)	Ground
TP103	(TXD)	TXD to the copier
TP104	(RXD)	RXD from the copier
TP105	(5 V)	+5 V
TP106	(GND)	Ground

3.3 SWITCHES

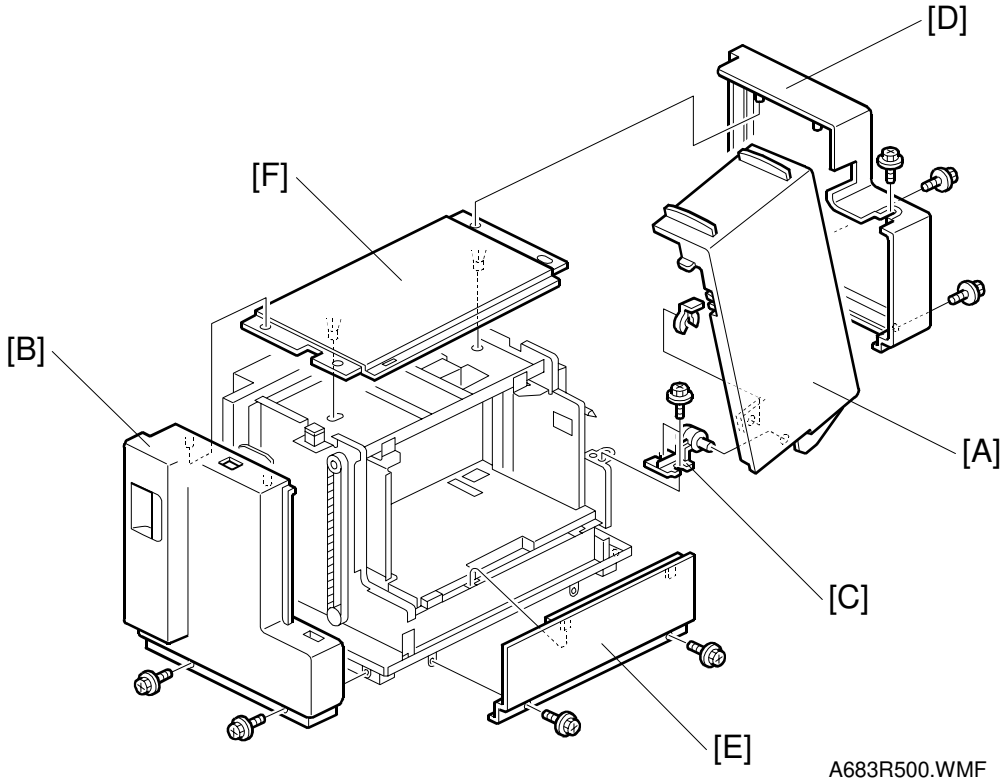
No.	Function
SW101	Starts the free run
SW102	Stops the free run

3.4 FUSES

No.	Function
FU101	Protects the 24 V line.

4. REPLACEMENT AND ADJUSTMENT

4.1 COVER REPLACEMENT



Tray Cover

1. Remove the tray cover [A] (1 snap ring).

Front Cover

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

Rear Cover

1. Remove the tray cover.
2. Remove the cover hinge [C] (2 screws).
3. Remove the rear cover [D] (3 screws).

Right Lower Cover

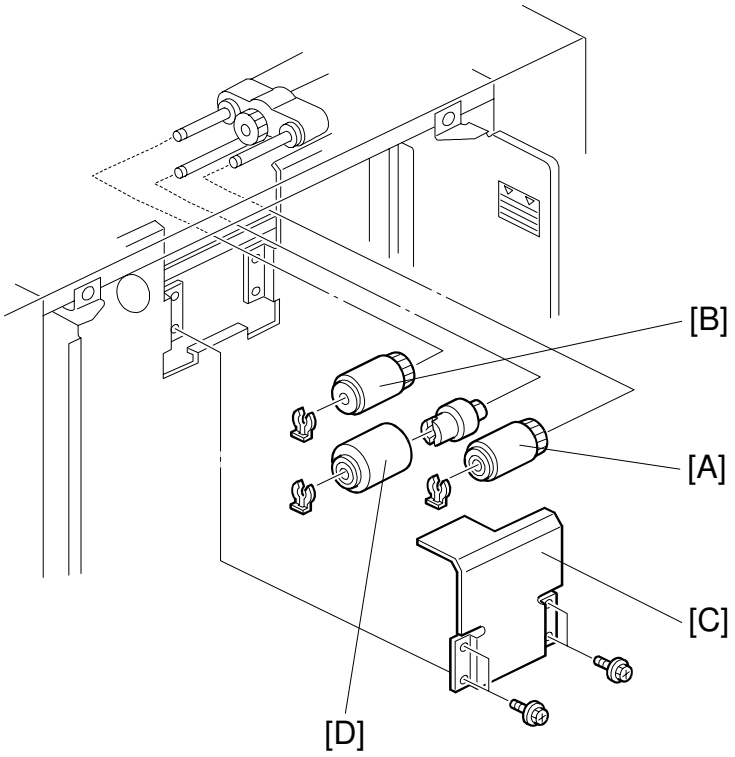
1. Remove the right lower cover [E] (2 screws).

Upper Cover

1. Remove the front cover.
2. Remove the rear cover.
3. Remove the upper cover [F].

4.2 ROLLER REPLACEMENT

4.2.1 PAPER FEED, SEPARATION, AND PICK-UP ROLLERS



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1. Push the down switch to lower the tray bottom plate until it reaches its lowest position.
2. Open the tray cover.

Pick-up Roller

3. Replace the pick-up roller [A] (1 snap ring).

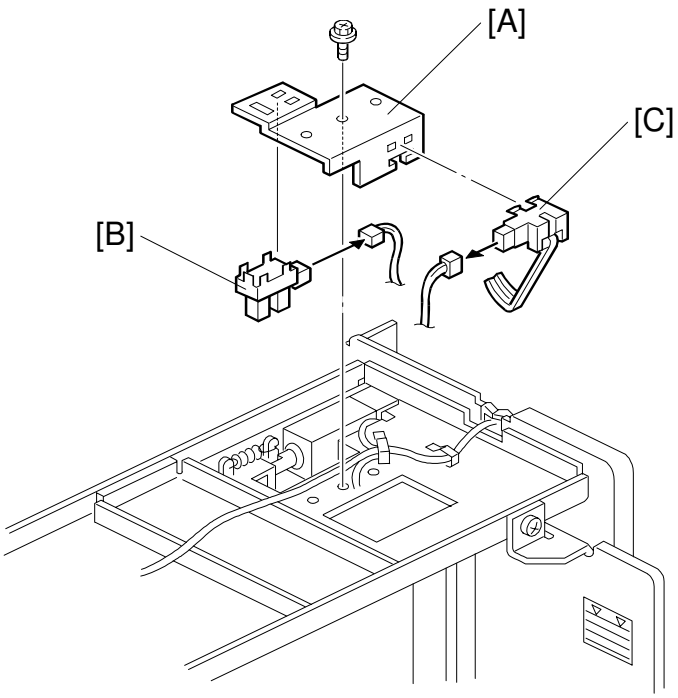
Paper Feed Roller

3. Replace the paper feed roller [B] (1 snap ring).

Separation Roller

3. Remove the guide plate [C] (2 screws).
4. Replace the separation roller [D] (1 snap ring).

4.3 TRAY LIFT AND PAPER END SENSOR REPLACEMENT



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1. Remove the front and rear cover.
2. Remove the upper cover.
3. Remove the sensor bracket [A] (1 screw).

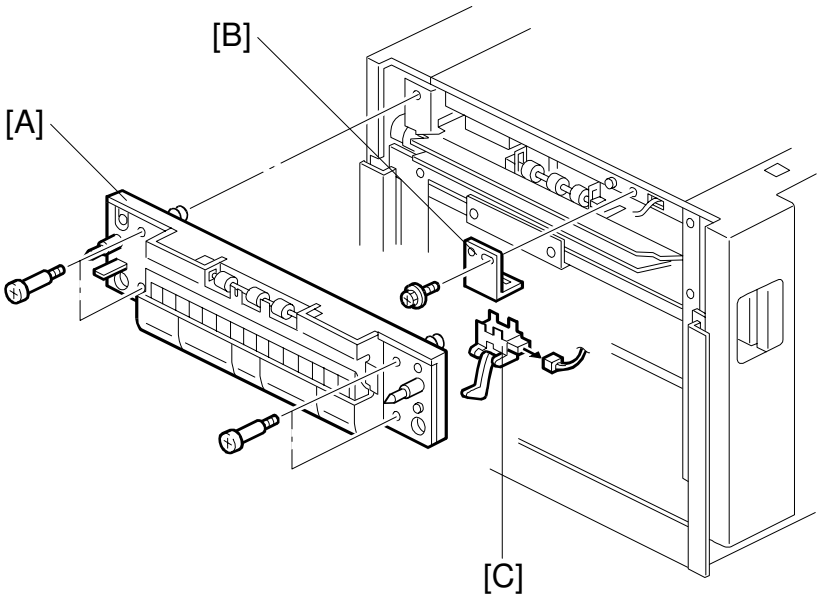
Tray Lift Sensor

3. Replace the tray lift sensor [B] (1 connector).

Paper End Sensor

3. Replace the paper end sensor [C] (1 connector).

4.4 RELAY SENSOR REPLACEMENT



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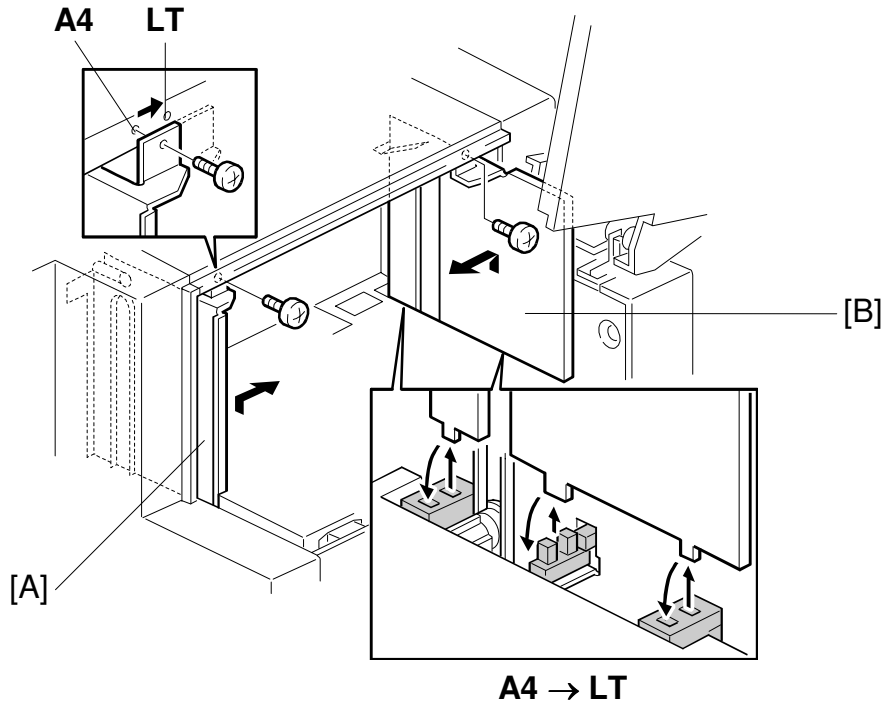
1. Pull out the LCT.
2. Remove the joint guide [A] (4 screws).
3. Remove the sensor bracket [B] (1 screw).
4. Replace the relay sensor [C] (1 connector).

4.5 SIDE FENCE POSITION CHANGE



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1. Push the down switch to lower the tray bottom plate until it reaches its lowest position.
2. Remove the tray cover.
3. Remove the front and rear side fences [A, B] (1 screw each).
4. Install the side fences in the correct position.