

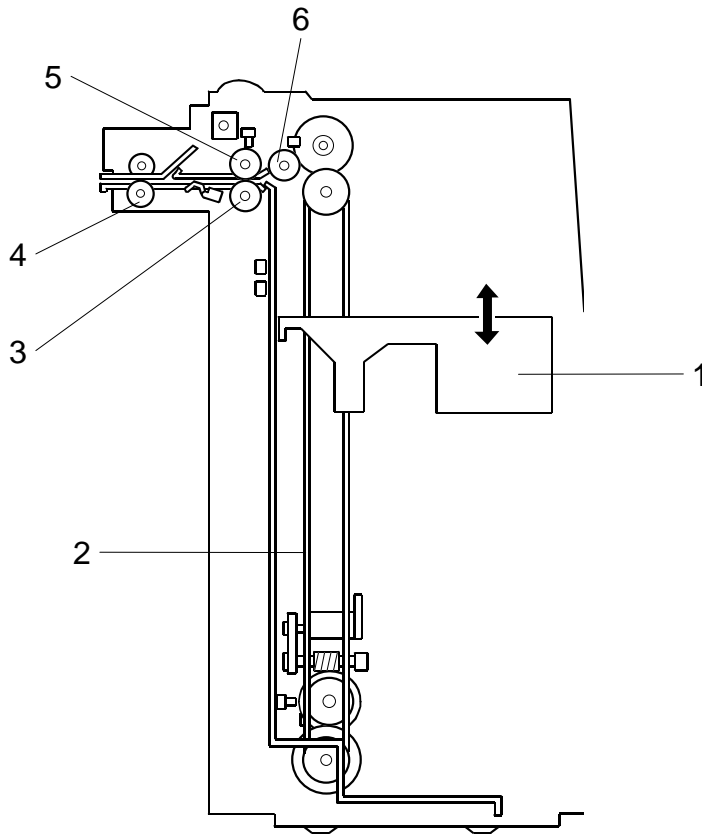
LARGE CAPACITY TRAY
(Machine Code: A822)

1. OVERALL MACHINE INFORMATION

1.1 SPECIFICATIONS

Copy Paper Size:	A4 sideways B5 Sideways 8 1/2" x 11" sideways
Copy Paper Weight:	64 ~ 105 g/m ² 16~24 lb
Power Source:	DC 24 V, 5 V (from the copier)
Power Consumption:	48 W
Dimensions (W x D x H):	403 x 529 x 608 mm (15.9" x 20.9" x 24.0")
Weight:	22.0 kg (48.5 lb)
Tray Capacity:	3,500 sheets (may vary slightly depending on paper weight)

1.2 MECHANICAL COMPONENT LAYOUT



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1. Bottom Plate
2. Tray Drive Belt
3. Separation Roller
4. Transport Rollers
5. Feed Roller
6. Pick-up Roller

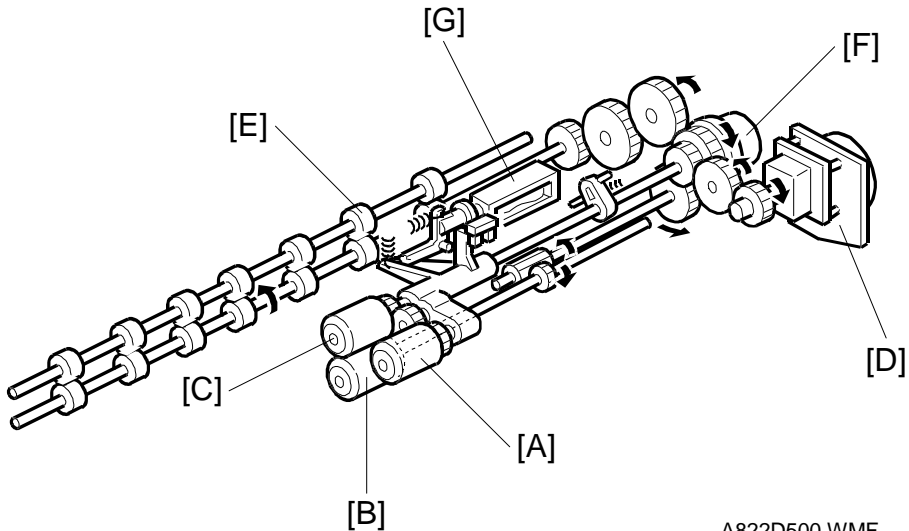
1.3 ELECTRICAL COMPONENT DESCRIPTION

Refer to the electrical component layout on the reverse side of the point-to-point diagram for the location of the components using the symbols and index numbers.

Symbol	Name	Function	Index No.
Motors			
M1	LCT	Lifts and lowers the LCT bottom plate to bring the paper to the feed position and allow loading of the paper.	11
M2	Feed	Drives all feed and transport rollers.	5
Magnetic Clutches			
MC1	Feed	Starts the paper feed from the LCT.	4
Switches			
SW1	LCT Cover 1	Ensures that +24V can be passed to the LCT motor whether the cover is open or closed.	15
SW2	LCT Cover 2	Detects if the LCT cover is opened or not.	14
SW3	LCT Cover 3	Cuts the power line for LCT when the LCT cover is opened.	13
SW4	Feed Unit Cover 1	Detects if the feed unit cover is opened or not.	6
SW5	Feed Unit Cover 2	Cuts the power line for LCT when the LCT cover is opened.	7
SW6	Tray Down	Lowers the LCT bottom plate	16
Solenoids			
SOL1	Pick-up	Controls the up-down movement of the pick-up roller.	3
Sensors			
S1	Paper End	Informs the CPU that there is no paper on the LCT bottom plate.	8
S2	Paper Near End	Informs the CPU that about 60 sheets of paper remain on the LCT bottom plate.	9
S3	Paper Position	Detects the paper position.	10
S4	Tray Down	Informs the CPU that the LCT bottom plate is in the lowest position.	12
S5	Feed	Control the paper feed clutch off-on timing and the pick-up solenoid off timing.	1
S6	Lift	Detects the correct paper feed height.	2

2. DETAILED DESCRIPTION

2.1 MECHANICAL OPERATION



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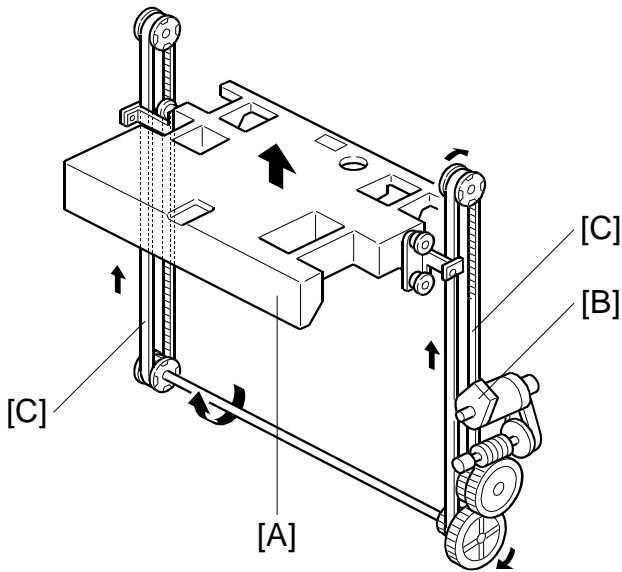
The LCT uses an FRR feed system which uses three rollers. The pick-up [A], separation [B] and feed [C] rollers are common with those of the by-pass feed unit of the mainframe but different from those of the paper feed stations in the paper tray unit.

The LCT feed motor [D] drives the pick-up, separation, feed, and transport [E] rollers.

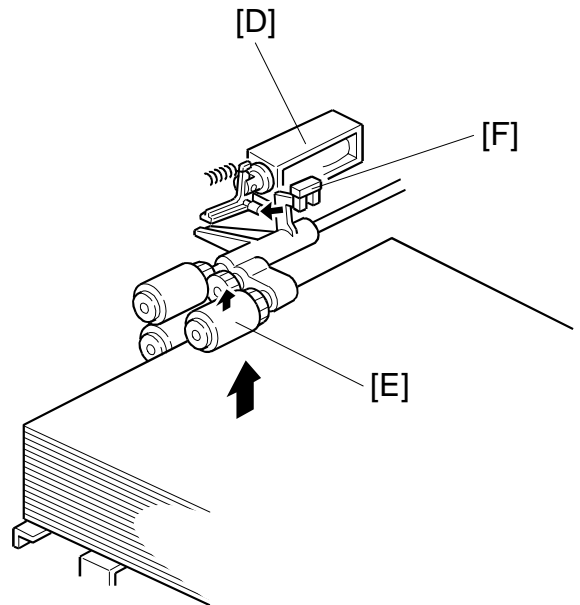
The pick-up and feed rollers rotate only when the LCT feed clutch [F] activates.

Paper feeding starts when the LCT pick up solenoid [G] activates.

2.2 PAPER LIFT MECHANISM

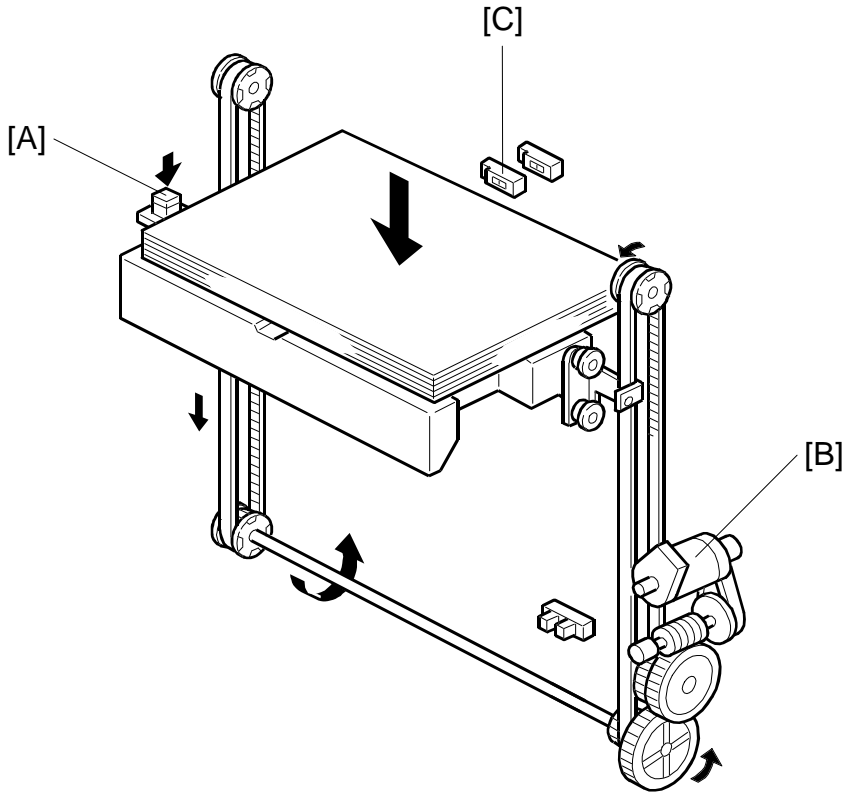


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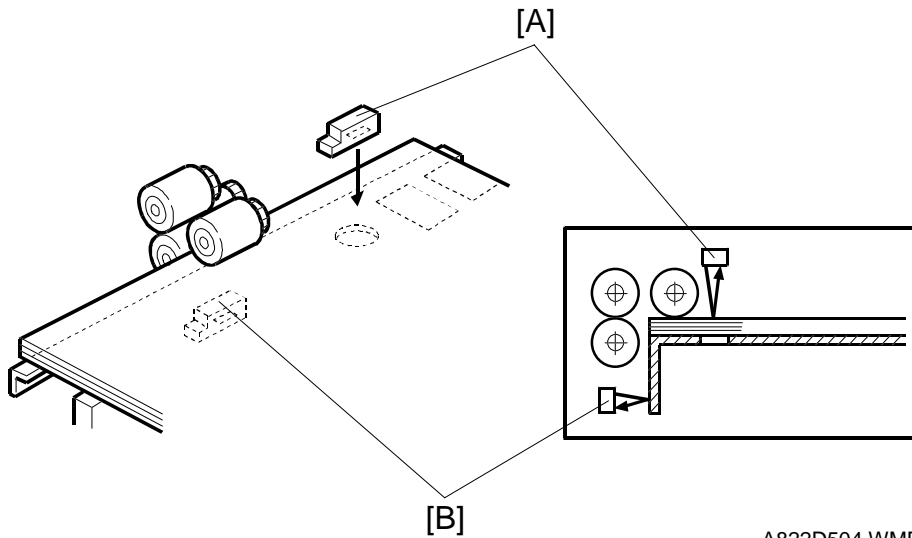
The bottom plate [A] of the LCT is raised and lowered by the LCT motor [B] and the drive belts [C]. When the main switch is on and the LCT cover is closed, the pick-up solenoid [D] activates and the LCT motor [B] rotates clockwise to raise the bottom plate until the top sheet pushes up the pick-up roller [E]. When the lift sensor [F] is de-actuated, the copier CPU de-activates the LCT motor [B] and the pick-up solenoid [D].



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If the tray down switch [A] is pressed, or paper runs out, or a paper jam occurs in the LCT, the LCT motor [B] rotates counterclockwise to lower the bottom plate. However, it is not lowered all the way down at this time. When the paper position sensor [C] activates, the LCT motor stops once. At this point, the bottom plate (or the top sheet of paper) is positioned about 5 cm below the top. This gives enough space for the customer to replenish about 500 sheets of paper. If the tray down switch is then pressed again, the bottom plate moves down and stops once again when the top sheet of paper just passes the paper position sensor. In this way, the bottom plate is lowered 5 cm at each press of the tray down switch. This allows the customer to replenish paper in convenient amounts and at the same position.

2.3 PAPER END DETECTION



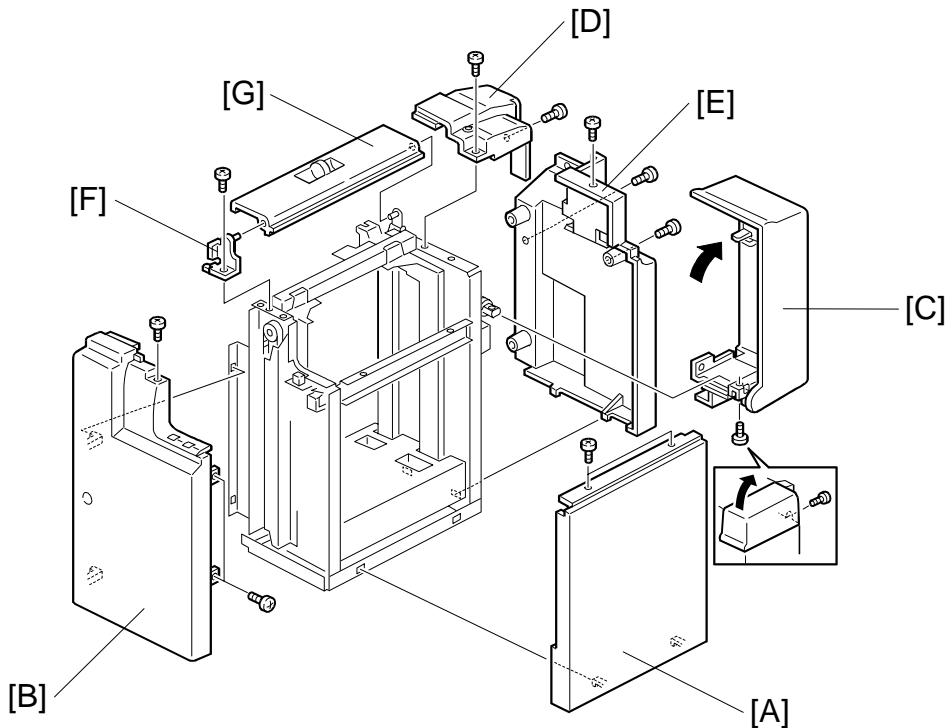
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The paper end sensor [A] detects paper on the bottom plate. If there is paper on the table, reflected light from the paper activates the paper end sensor. When the paper runs out, the paper end sensor de-activates and informs the copier CPU of the paper end condition.

The paper near end sensor [B] also detects the paper and the tray bottom plate. If there is enough paper on the table, reflected light from the paper activates the paper near end sensor. If less than about 60 sheets of paper remain, the paper near end sensor de-activates because the black colored bottom plate does not reflect the light from the sensor LED.

3. REPLACEMENTS AND ADJUSTMENTS

3.1 EXTERIOR COVER REMOVAL



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3.1.1 FRONT COVER REMOVAL

1. Remove the right cover [A] (2 screws).
2. Remove the front cover [B] (3 screws).

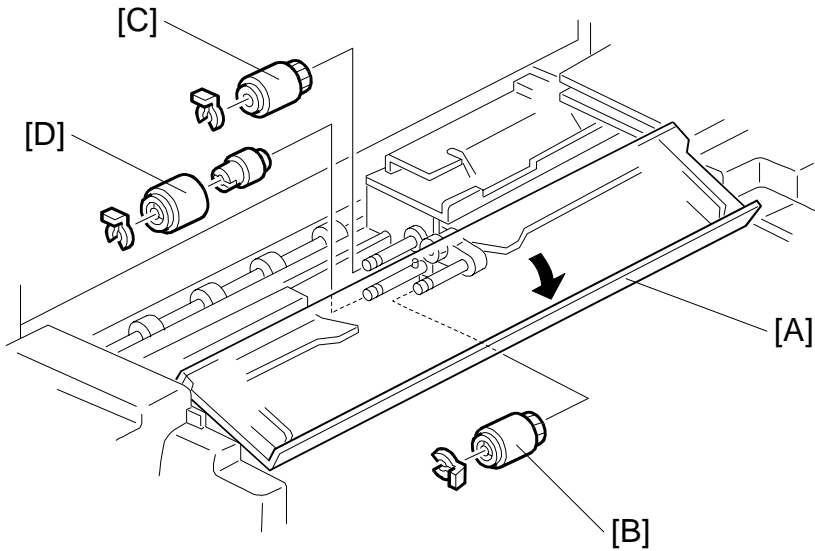
3.1.2 REAR LOWER COVER REMOVAL

1. Open the LCT cover [C], then remove it (1 screw).
2. Remove the rear upper cover [D] (1 screw).
3. Remove the rear lower cover [E] (3 screws).

3.1.3 TOP COVER REMOVAL

1. Remove the right cover.
2. Remove the front cover.
3. Remove the hinge bracket [F] (1 screw).
4. Remove the top cover [G].

3.2 PAPER FEED ROLLERS REPLACEMENT



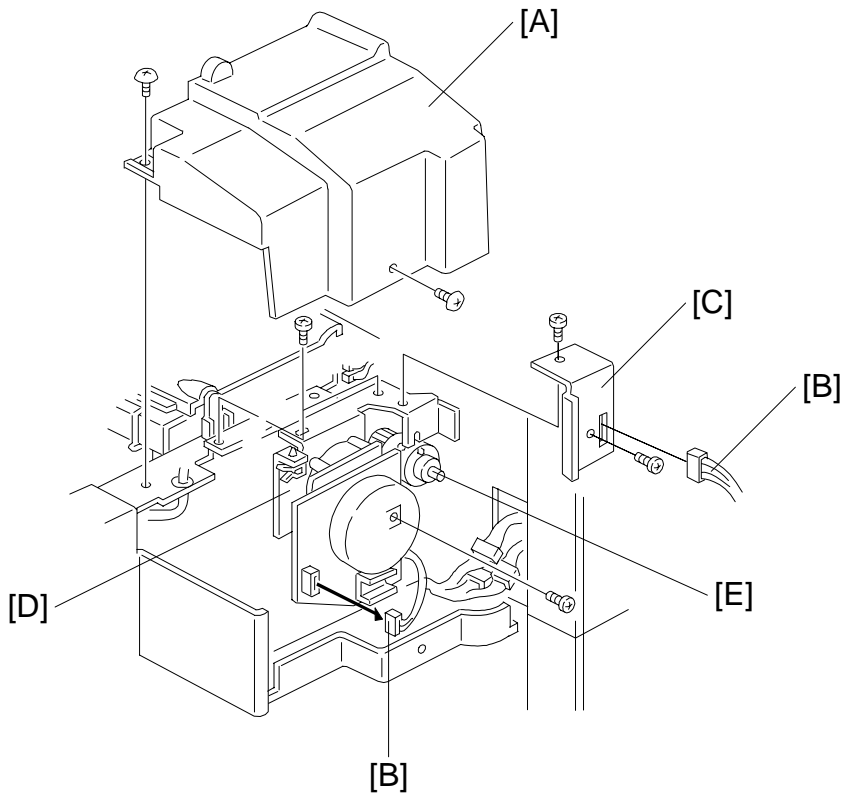
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1. Open the top cover [A].
2. Remove the pick-up roller [B] (1 snap ring).
3. Remove the feed roller [C] (1 snap ring).
4. Remove the separation roller [D] (1 snap ring).

NOTE: Do not touch the surface of the rollers with oily hands.

The paper feed rollers used in the LCT are different from rollers used in the 1st ~ 3rd feed units in the paper tray unit. They are not interchangeable.

3.3 LCT FEED CLUTCH REMOVAL

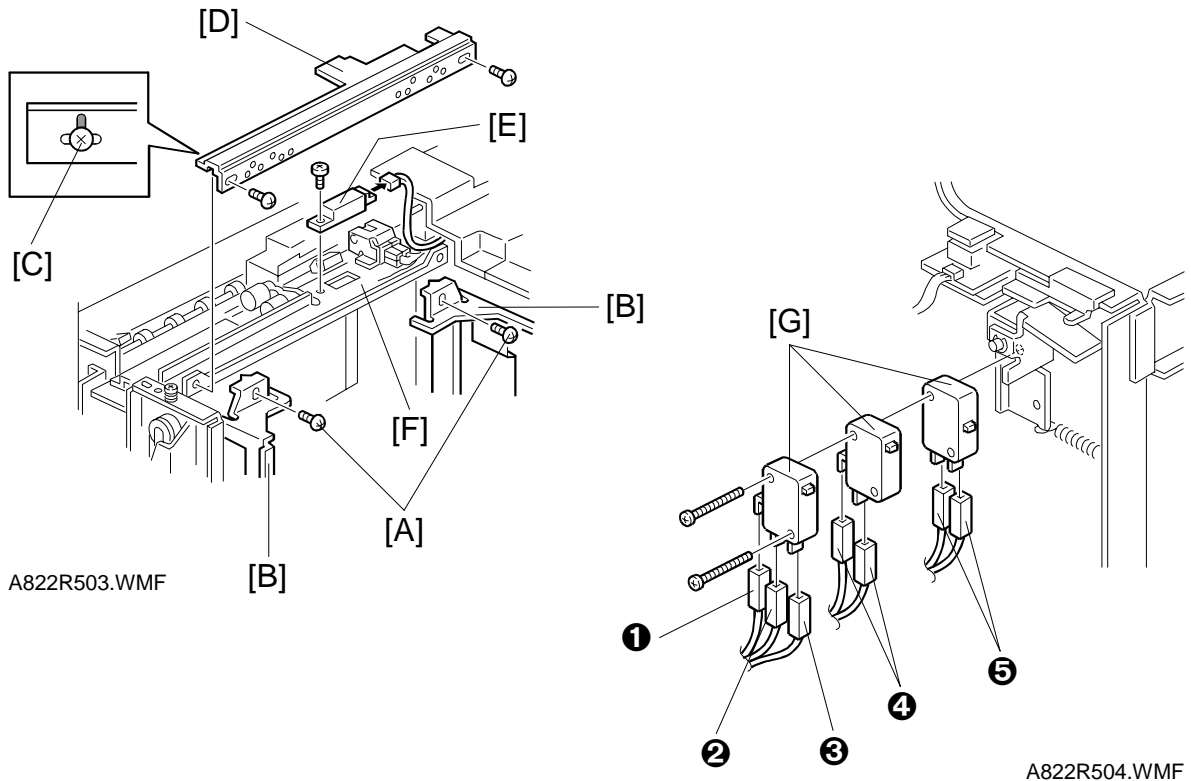


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1. Remove the rear upper cover [A] (2 screws).
2. Disconnect the two connectors [B].
3. Remove the harness bracket [C] (2 screws).
4. Remove the bracket [D] with the LCT feed motor (3 screws).
5. Replace the LCT feed clutch [E] (2 Allen screws).

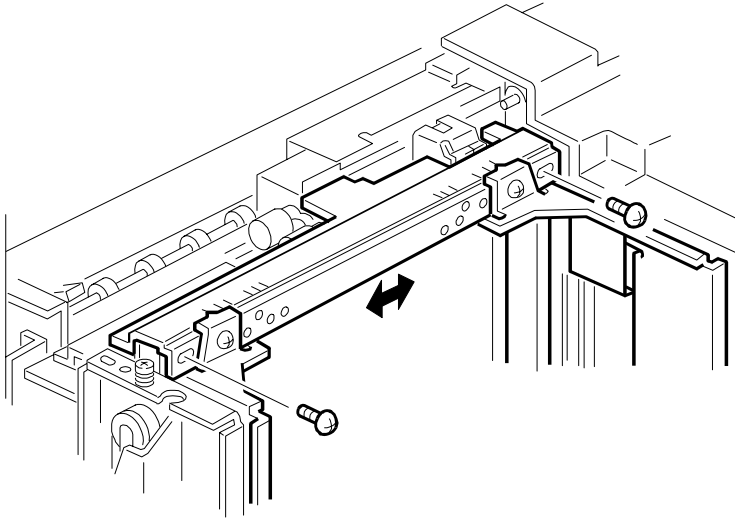
NOTE: When installing the LCT feed clutch, set the stopper pin on the clutch in the cut-out [F] on the bracket.

3.4 UPPER COVER SWITCHES REMOVAL



1. Shade the paper position and paper end sensors with a hand, then push the tray down switch. (The tray go down to tray down sensor position.)
2. Turn off the main switch.
3. Remove the front cover. (Refer to Front Cover Removal, section 7.1.)
4. Remove the screws [A] securing the side fences [B].
5. Mark the original position of the screws [C] securing the bracket [D].
6. Remove the bracket [D] (2 screws).
7. Remove the paper end sensor [E] (1 connector, 1 screw).
NOTE: When removing the paper end sensor, do not bend the stay [F].
8. Replace the upper cover switches [G] (7 connectors, 2 screws).
NOTE: When re-installing the switches, set the connectors correctly.
 - ① Yellow
 - ② Blue
 - ③ Green
 - ④ Small white
 - ⑤ Large white
9. Re-assemble and check copy quality.

3.5 SIDE-TO-SIDE REGISTRATION ADJUSTMENT

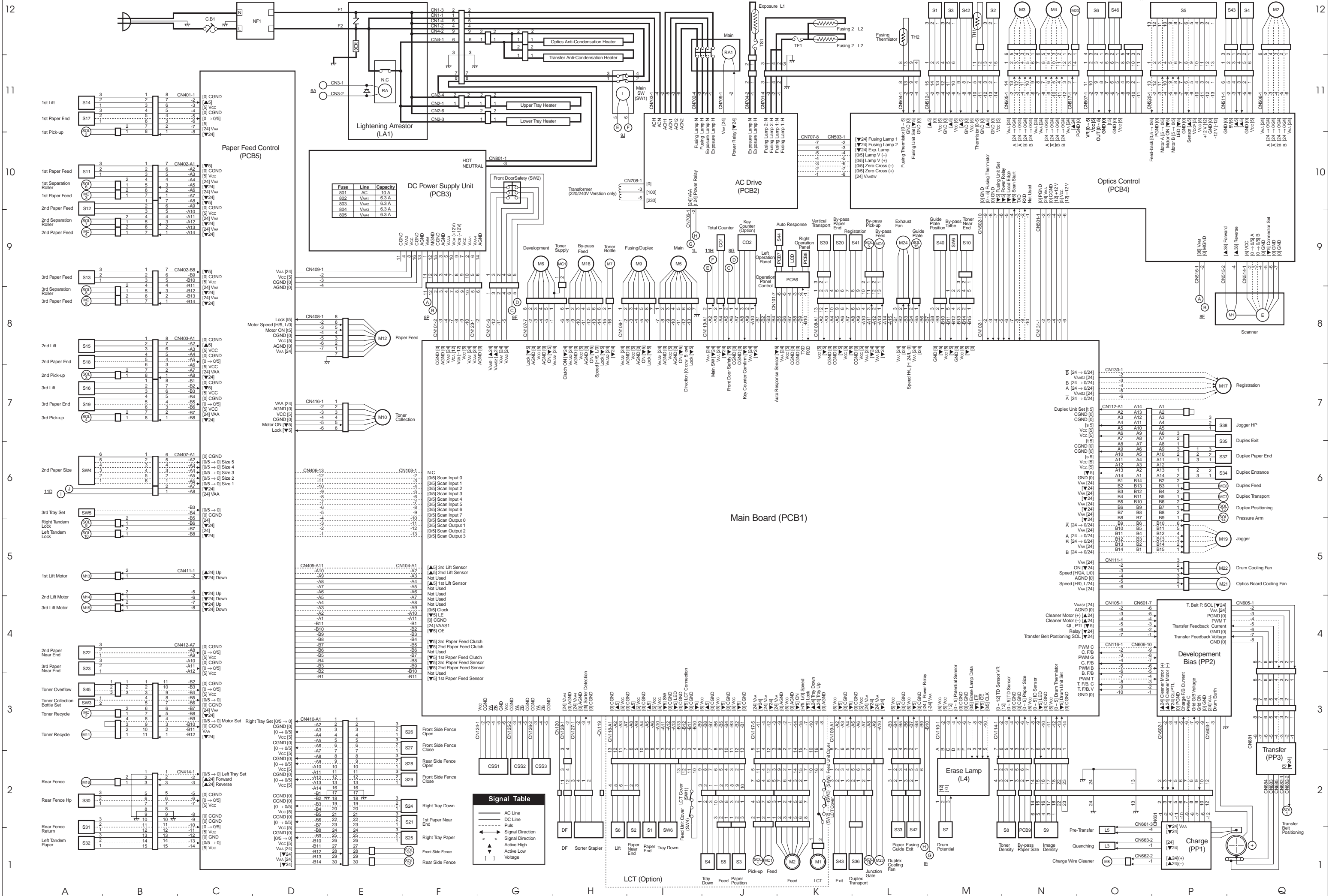


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1. Follow the copier's side-to-side registration adjustment.

Adjustment standard: less than ± 2 mm difference between the original and the copy.

A246/A247/A248/A822 Point to Point Diagram

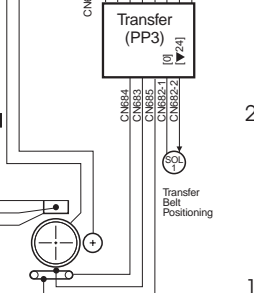
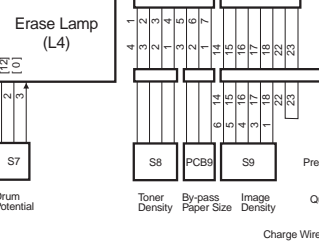
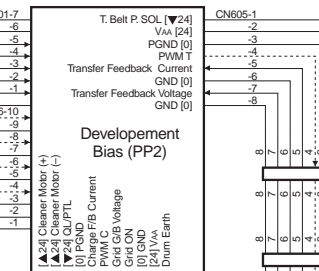
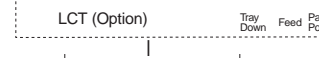
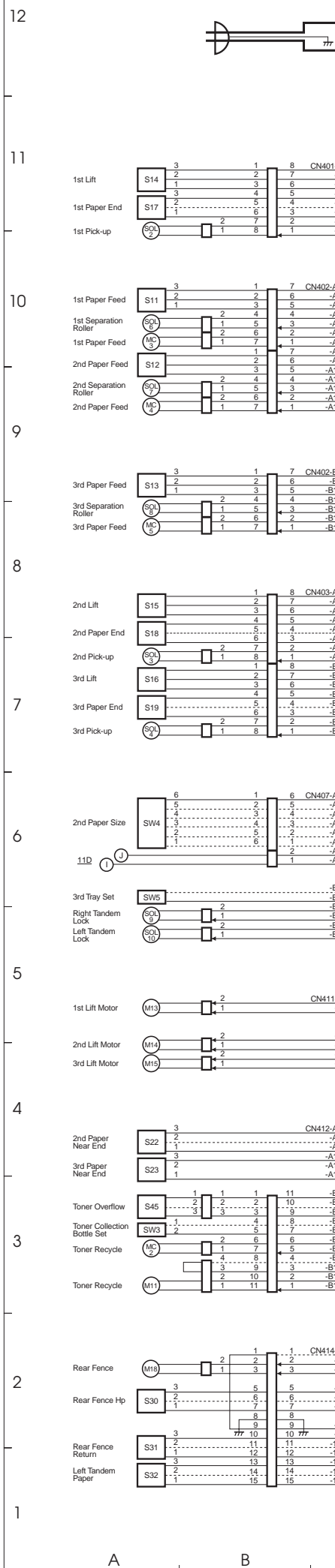


DC Power Supply Unit (PCB3) Fuse List

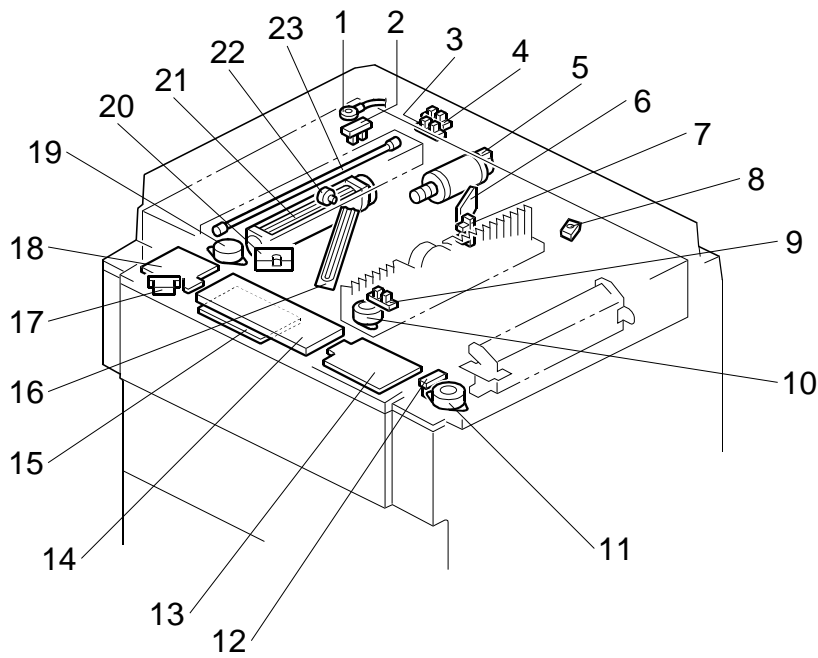
Fuse	Line	Capacity
801	AC	10 A
802	VAA1	6.3 A
803	VAA2	6.3 A
804	VAA3	6.3 A
805	VAA4	6.3 A

Signal Table

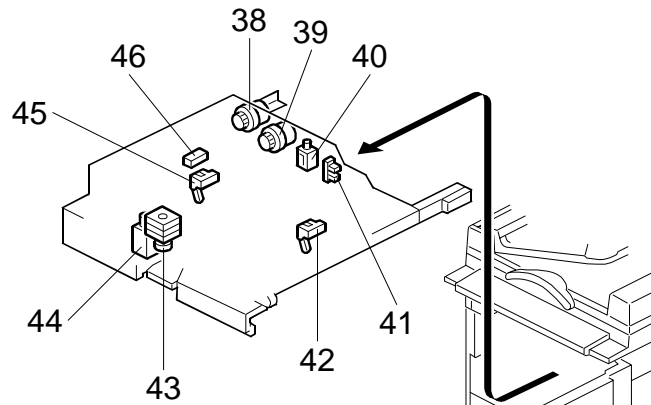
—	AC Line
—	DC Line
—	Puls
←	Signal Direction
→	Signal Direction
▲	Active High
▼	Active Low
□	Voltage



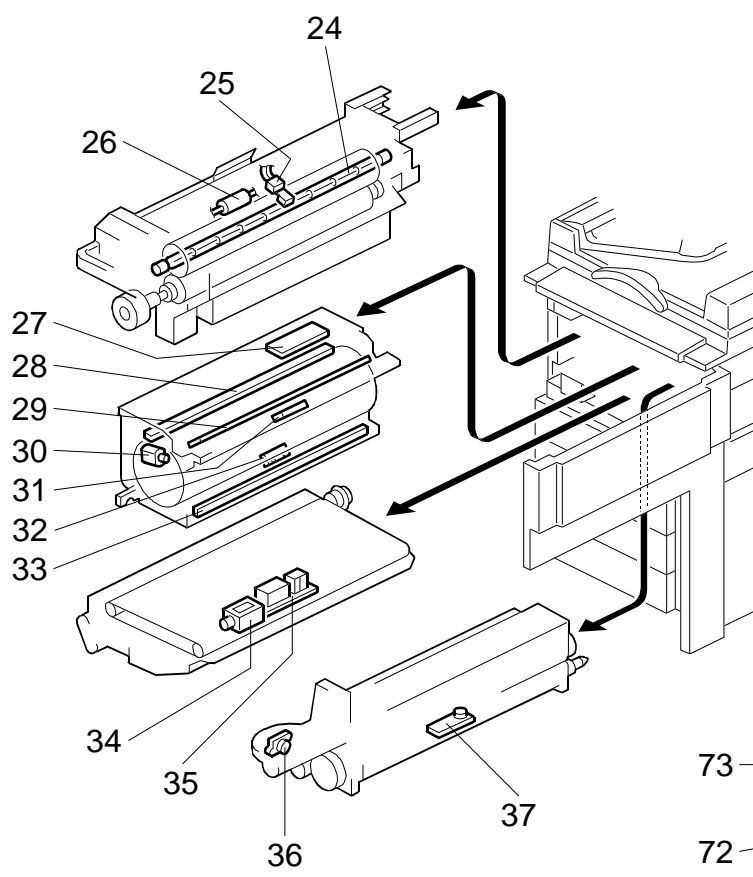
ELECTRICAL COMPONENT LAYOUT (A246/A247/A248/A822) 1/2



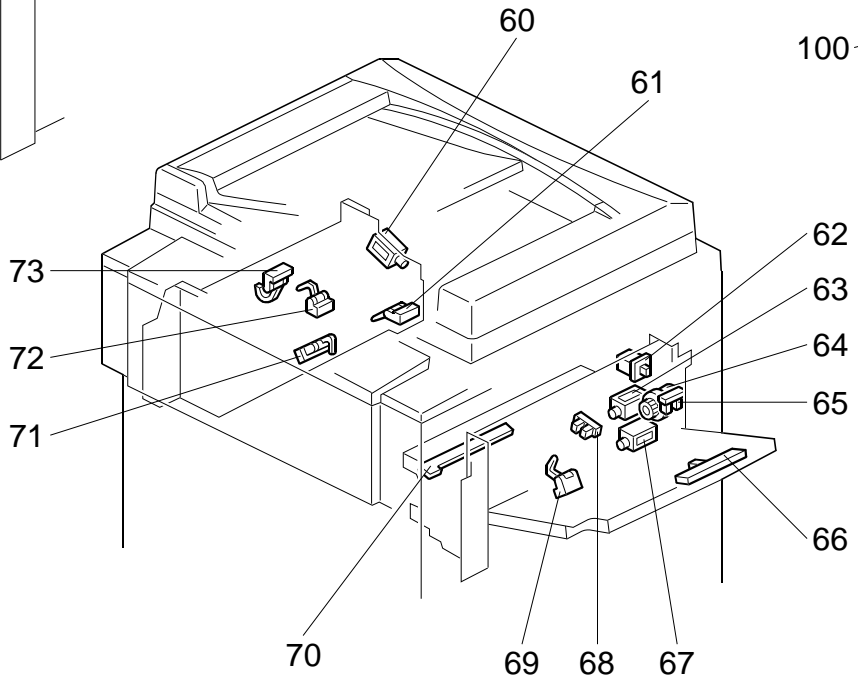
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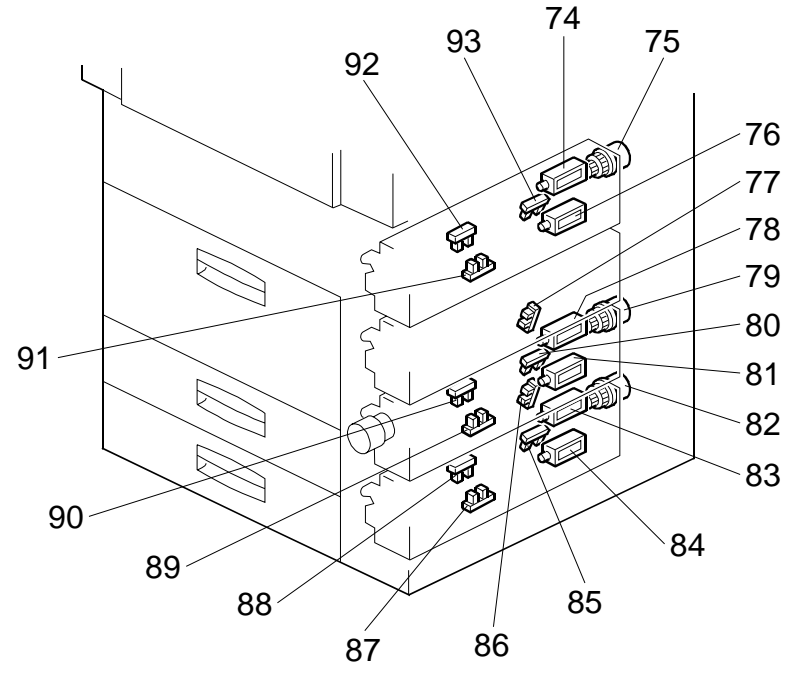
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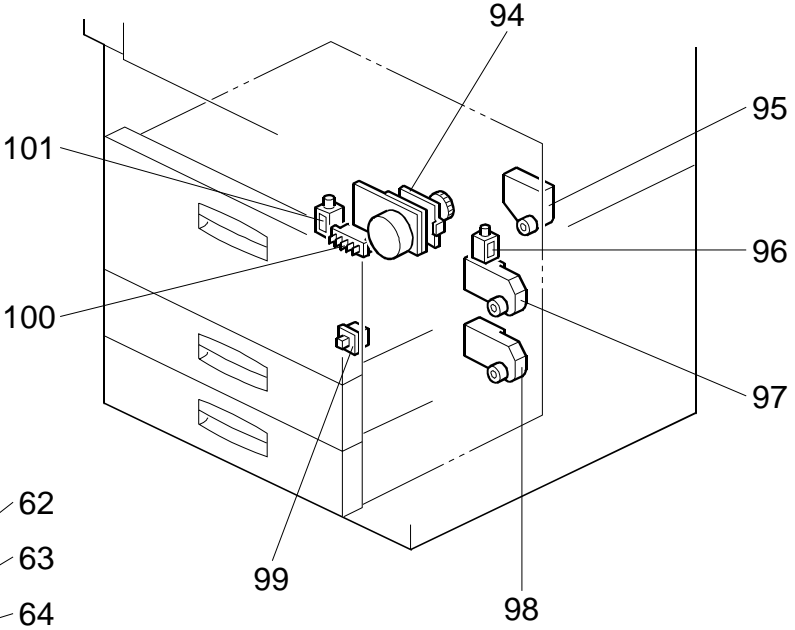
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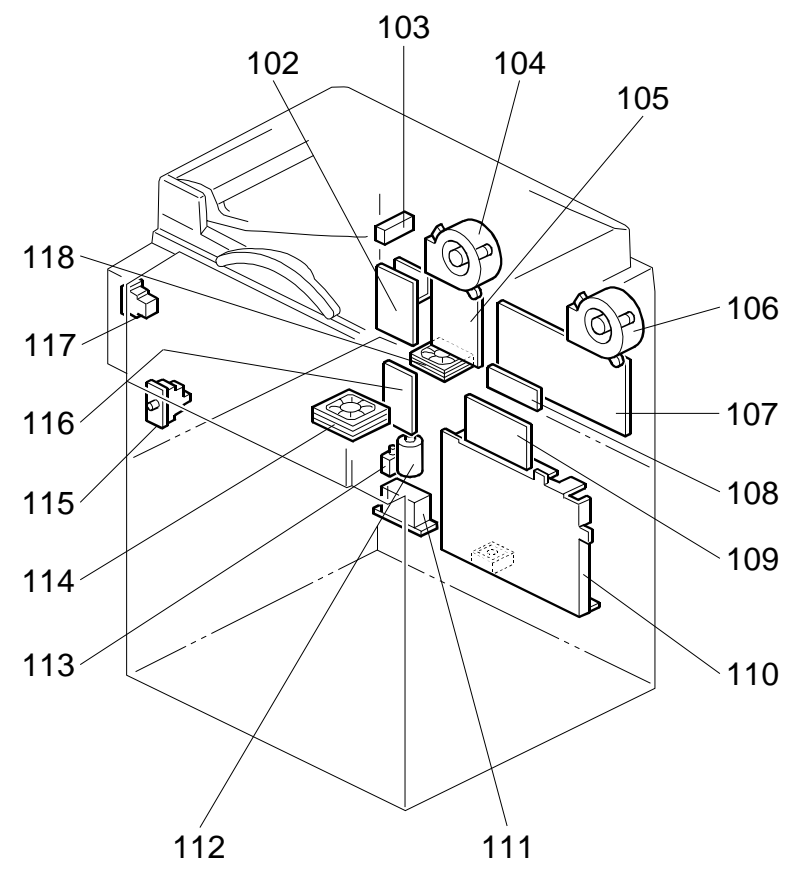
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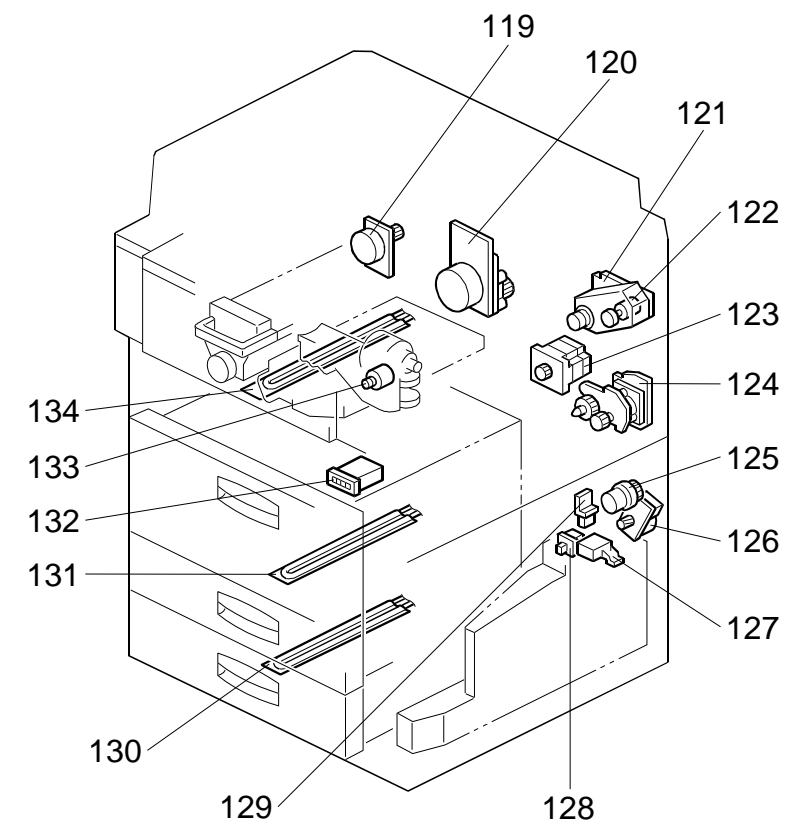
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A246S505.WMF



A246S506.WMF



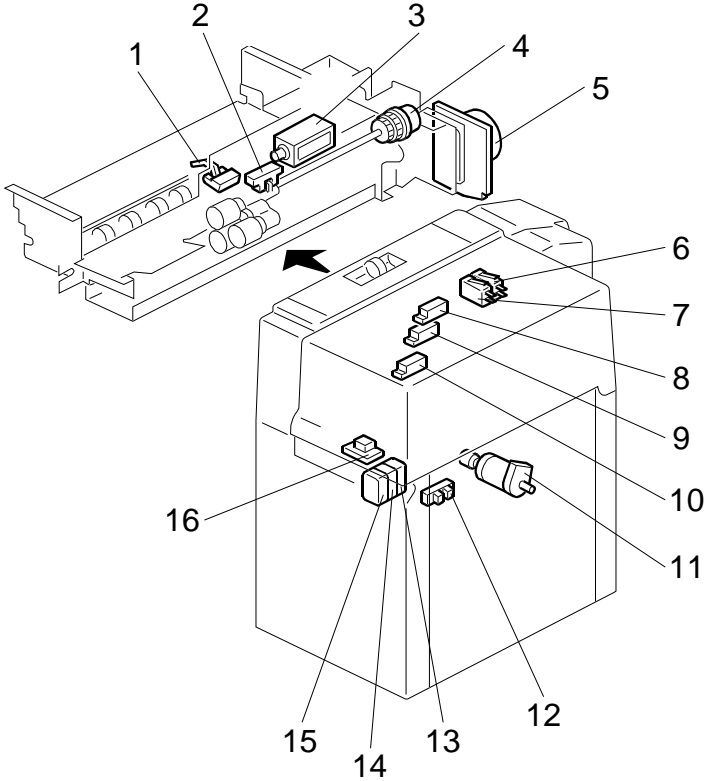
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ELECTRICAL COMPONENT LAYOUT (A246/A247/A248/A822) 2/2

Symbol	Name	Index No.	P to P
Motors			
M1	Scanner	5	Q8
M2	3rd Scanner	11	Q12
M3	Lens Horizontal	10	N12
M4	Lens Vertical	19	N12
M5	Main	120	I9
M6	Development	121	G9
M7	Toner Bottle	133	H9
M8	Charge Wire Cleaner	30	O1
M9	Fusing/Duplex	119	19
M10	Toner Collection	126	E7
M11	Toner Recycle	129	A3
M12	Paper Feed	94	E8
M13	1st Lift	95	A5
M14	2nd Lift	97	A4
M15	3rd Lift	98	A4
M16	By-pass Feed	124	H9
M17	Registration	123	Q7
M18	Rear Fence	55	A2
M19	Jogger	43	Q5
M20	Optics Cooling Fan	21	O12
M21	Optics Board Cooling Fan	118	Q5
M22	Drum Cooling Fan	106	Q5
M23	Duplex Cooling Fan	114	L1
M24	Exhaust Fan	104	L9
Magnetic Clutches			
MC1	Toner Supply	122	H9
MC2	Toner Recycling	125	A3
MC3	1st Feed	75	A10
MC4	2nd Feed	79	A9
MC5	3rd Feed	82	A8
MC6	By-pass Feed	64	L99
MC7	Duplex Transport	39	Q6
MC8	Duplex Feed	38	Q6
Switches			
SW1	Main	117	H11
SW2	Front Door Safety	115	G10
SW3	Toner Collection Bottle	128	A3
SW4	2nd Paper Size	100	A6
SW5	3rd Tray Set	99	A6
SW6	By-pass Table	62	M9
Solenoids			
SOL1	Transfer Belt Positioning	34	Q2
SOL2	1st Pick-up	74	A11
SOL3	2nd Pick-up	78	A7
SOL4	3rd Pick-up	83	A7
SOL5	By-pass Pick-up	63	L9
SOL6	1st Separation Roller	76	A10
SOL7	2nd Separation Roller	81	A9
SOL8	3rd Separation Roller	84	A8
SOL9	Right Tandem Lock	96	A5
SOL10	Left Tandem Lock	101	A5
SOL11	Front Side Fence	54	E1
SOL12	Rear Side Fence	49	E1
SOL13	Duplex Positioning	40	Q6
SOL14	Pressure Arm	44	Q5
SOL15	Guide Plate	67	L9
SOL13	Junction Gate	60	L1

Symbol	Name	Index No.	P to P
Sensors			
S1	Scanner HP	2	M12
S2	3rd Scanner HP	9	M12
S3	Lens Vertical HP	7	M12
S4	Lens Horizontal HP	12	Q12
S5	APS	20	P12
S6	Auto Image Density	6	O12
S7	Drum Potential	31	M1
S8	Toner Density	37	N1
S9	Image Density	32	N1
S10	Toner Near End	36	M9
S11	1st Paper Feed	91	A10
S12	2nd Paper Feed	89	A10
S13	3rd Paper Feed	87	A9
S14	1st Lift	93	A11
S15	2nd Lift	80	A8
S16	3rd Lift	85	A7
S17	1st Paper End	92	A11
S18	2nd Paper End	90	A8
S19	3rd Paper End	88	A7
S20	By-pass Paper End	65	K9
S21	1st Paper Near End	53	E2
S22	2nd Paper Near End	77	A4
S23	3rd Paper Near End	86	A4
S24	Right Tray Down	52	E2
S25	Right Tray Paper	50	E1
S26	Front Side Fence Open	58	E3
S27	Front Side Fence Close	57	E3
S28	Rear Side Fence Open	48	E2
S29	Rear Side Fence Close	47	E2
S30	Rear Fence HP	59	A2
S31	Rear Fence Return	51	A1
S32	Left Tandem Paper	56	A1
S33	Paper Guide	61	L1
S34	Duplex Entrance	45	Q6
S35	Duplex Exit	42	Q7
S36	Duplex Transport	71	L1
S37	Duplex Paper End	46	Q6
S38	Jogger HP	41	Q7
S39	Vertical Transport	69	K9
S40	Guide Plate Position	68	M9
S41	Registration	70	L9
S42	Fusing Exit	72	L1
S43	Exit	73	K1
S44	Auto Response	17	J9
S45	Toner Overflow	127	A3
S46	Original Length (LT version only)	8	O12
S47	Platen Cover Position 1 (Option)	3	M12
S48	Platen Cover Position 2 (Option)	4	Q12

Symbol	Name	Index No.	P to P
PCBs			
PCB1	Main	107	J6
PCB2	AC Drive	102	J10
PCB3	DC Power Supply	110	F10
PCB4	Optic Control	105	O10
PCB5	Paper Feed Control	109	C10
PCB6	Operation Panel Control	15	K9
PCB7	Left Operation Panel	18	J9
PCB8	Right Operation Panel	13	K9
PCB9	By-pass Paper Size	66	N1
Lamps			
L1	Exposure Lamp	23	J12
L2	Fusing Lamps	24	K12
L3	Quenching	28	O1
L4	Erase	29	M2
L5	Pre-transfer	33	O1
Power Packs			
PP1	Charge	27	P1
PP2	Development	108	P4
PP3	Transfer	35	Q2
Heaters			
H1	Optic Anti-condensation	16	H12
H2	Transfer Anti-condensation	134	H12
H3	Upper Tray	131	G11
H4	Lower Tray	130	G11
Thermistors			
TH1	Optic	1	M12
TH2	Fusing	25	L12
TH3	Drum (on the image density Sensor)	(32)	N1
Others			
CB1	Circuit Breaker	113	C12
CO1	Total Counter	132	J9
CO2	Key Counter	-	J9
LA1	Lightening Arrestor	116	E11
LCD1	LCD	14	K9
NF1	Noise Filter	112	D12
RA1	Main Power Relay	103	J12
TF1	Fusing Thermofuse	26	K12
TR1	Transformer (220 V version only)	111	H10
TS1	Optics Thermoswitch	22	J2



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Symbol	Name	Index No.	P to P
Motors			
M1	LCT	11	K1
M2	Feed	5	K1
Magnetic Clutch			
MC1	Feed	4	K1
Switches			
SW1	LCT Cover 1	15	I2
SW2	LCT Cover 2	14	K2
SW3	LCT Cover 3	13	K2
SW4	Feed Unit Cover 1	6	I1
SW5	Feed Unit Cover 2	7	K2
SW6	Tray Down	16	I1
Sensors			
S1	Paper End	8	I1
S2	Paper Near End	9	I1
S3	Paper Position	10	J1
S4	Tray Down	12	J1
S5	Feed	1	J1
S6	Lift	2	H1
Solenoids			
SOL1	Pick-up	3	J1