FrameMaker Ver.5.5(PC) DB-432 OPTION FOR 8020/8031
02.08.23

DB-432

SERVICE MANUAL



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GENERAL

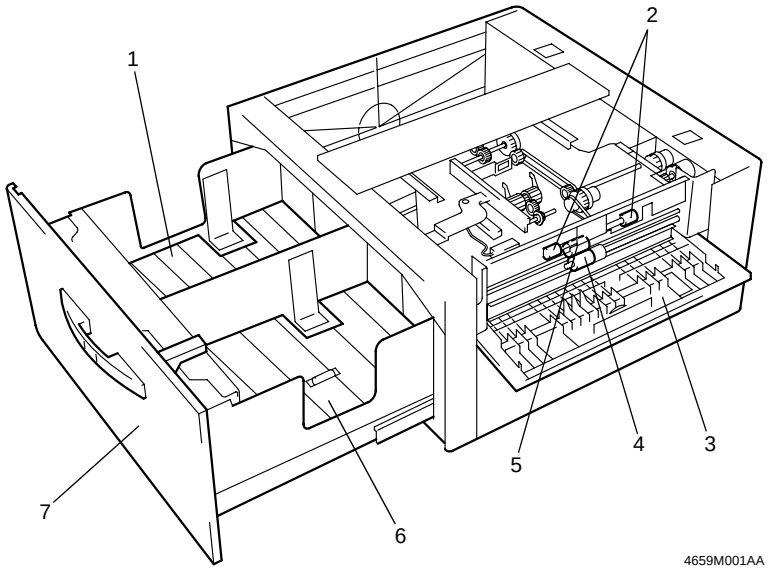


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1. SPECIFICATIONS

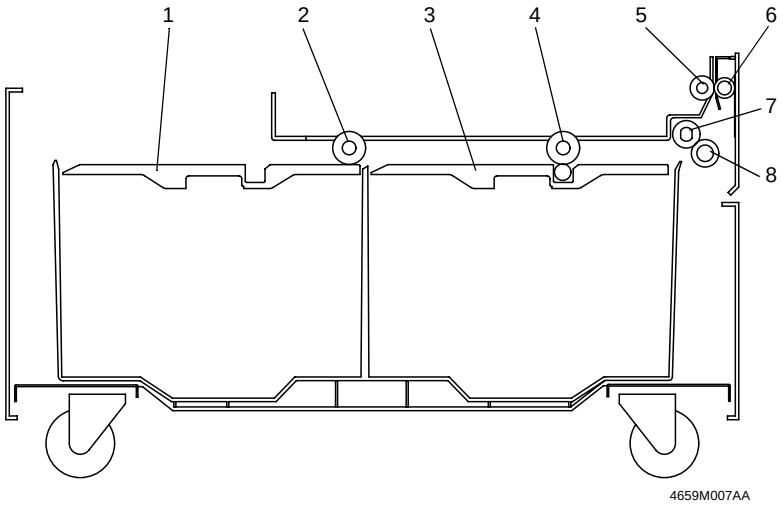
Type	:	Front Loading Type LCT
Type of Paper	:	Plain paper
Paper Size	:	B5C, A4C, Letter C
Paper Weight	:	64 to 90 g/m^2 or 17 to 24 lbs.
Registration	:	Center
Paper Capacity	:	2,500 sheets (1250 × 2)
Power Requirements	:	DC24 V ± 10 %, DC5.1 V ± 5 % (supplied from copier)
Dimensions	:	Width.....535 mm or 21 in Depth .....568 mm or 22-1/4 in Height .....284 mm or 11-1/4 in
Weight	:	17 kg or 37-1/2 lbs.

2. PARTS IDENTIFICATION



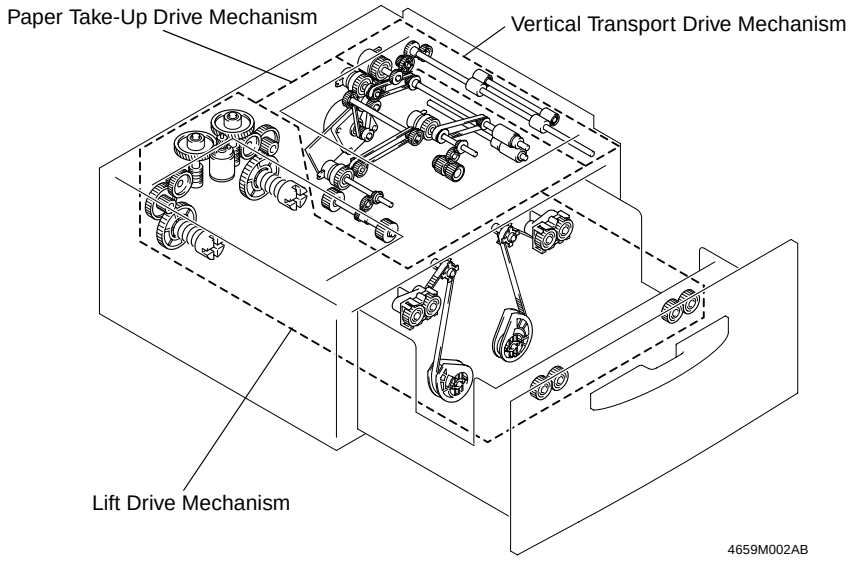
1. Lift 2
2. Vertical Transport Rolls
3. Right Side Door
4. Separator Roll
5. Feed Roll
6. Lift 1
7. Front Cover

3. CROSS-SECTIONAL VIEW

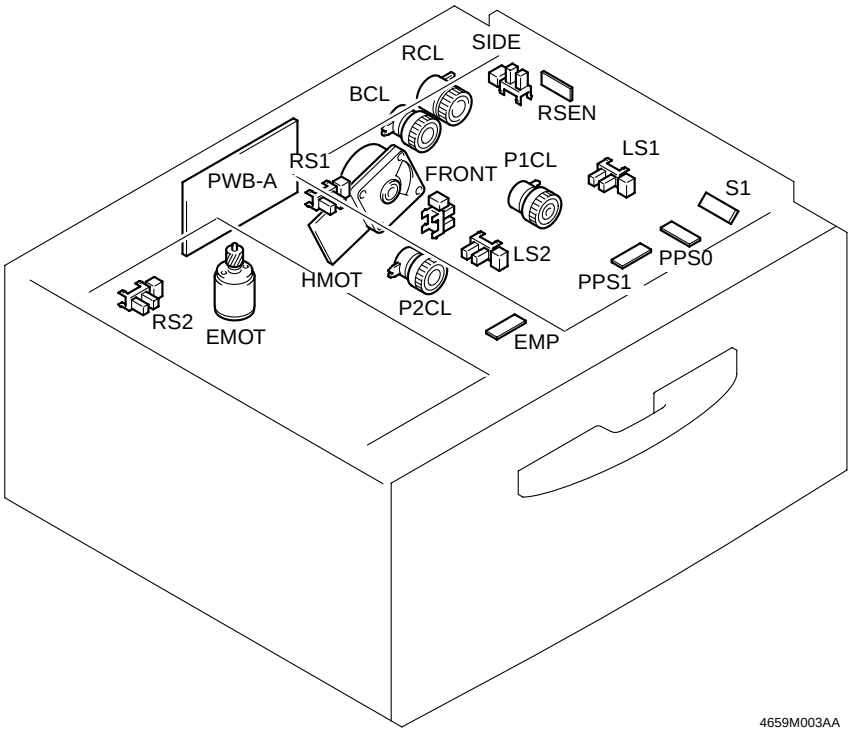


1. Lift 2
2. Paper Take-Up Roll 2
3. Lift 1
4. Paper Take-Up Roll 1
5. Vertical Transport Roller
6. Vertical Transport Roll
7. Feed Roll
8. Separator Roll

4. DRIVE SYSTEM



5. ELECTRICAL COMPONENTS LAYOUT



4659M003AA

Symbol	Name	Symbol	Name
PWB-A	LCT Control Board	S1	Paper Standby Position Sensor
HMOT	LCT Transport Motor	RSEN	Registration Sensor
EMOT	LCT Lift-Up Motor	EMP	Paper Empty Sensor 2
P1CL	Paper Take-Up Clutch 1	SIDE	Side Cover Set Sensor
P2CL	Paper Take-Up Clutch 2	FRONT	LCT Set Sensor
BCL	Separator Clutch	RS1	Paper Near Empty Sensor 1
RCL	Registration Clutch	RS2	Paper Near Empty Sensor 2
PPS0	LCT Paper Take-Up Sensor	LS1	Lift-Up Sensor 1
PPS1	Paper Empty Sensor 1	LS2	Lift-Up Sensor 2

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DIS/REASSEMBLY, ADJUSTMENT



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1. DISASSEMBLY

1-1. Maintenance Schedule

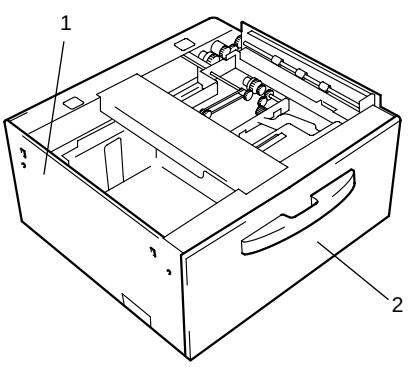
- To ensure good copies and an extended service life of the Duplex Unit, it is recommended that the maintenance jobs described in this schedule be carried out.

PM Parts	Maintenance Schedule Cycle (K)		Tools Used for Cleaning	Parts No.	QTY	Counter/ Life	Reference Page
	Clean	Replace					
Paper Take-Up Roll 1	❍	300	Cloth, alcohol	112E5122✻	1	LCT Parts 1 LCT Parts 2	☞ D-4
Paper Take-Up Roll 2	❍	300		112E5123✻	2		☞ D-4
Feed Roll	❍	200		112E5124✻	1		☞ D-6
Separator Roll	❍	200		112E5125✻	1		☞ D-6
Vertical Transport Roller	❍	–		–	1		☞ D-7
Vertical Transport Roll	❍	–		–	2		☞ D-7
Roll with torque limiter	❍	–		–	1		☞ D-7
Torque Limiter Assy	–	200	–	112E-411✻	1		☞ D-6

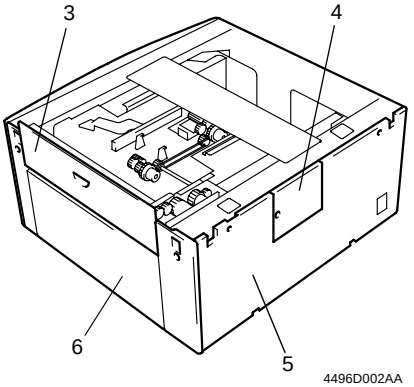
K=1,000 sheets

- The above maintenance schedule is to be based on the value of Counter/Life.
- Cleaning (indicated by "❍" in the above schedule) should be performed when a paper transport failure occurs.
- The above information is subject to change without notice.
- The Feed Roll, Separator Roll, and Torque Limiter Assy should be replaced at the same time.

1-2. Removal of Exterior Parts



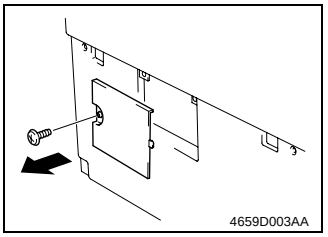
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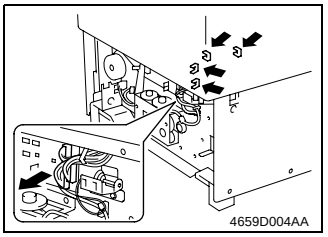
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No.	Part Name	Removal Steps
1	Left Cover	Remove two screws and take off the cover.
2	Front Cover	Slide out the drawer, remove three screws, and take off the cover.
3	Right Side Door	Open this door and take it off.
4	Maintenance Cover	Remove one screw and take off the cover.
5	Rear Cover	After the Maintenance Cover has been removed, remove four screws and take off the cover.
6	Right Cover	Remove two screws and take off the cover.

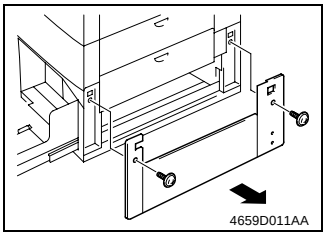
1-3. Removal of the Paper Take-Up Unit



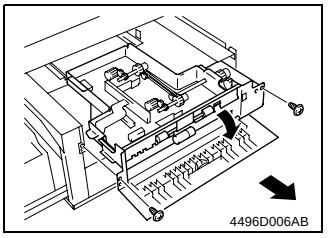
1. Slide out the LCT.
2. Remove two screws and the Left Cover.
3. Remove one screw and the Maintenance Cover.



4. Remove four screws and the Rear Cover.
5. Unplug three connectors and remove the harness from four cord clamps.

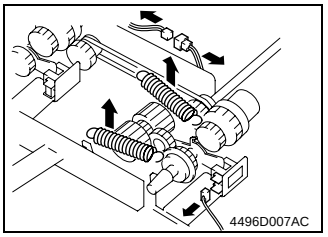


6. Remove two screws and the Right Cover.

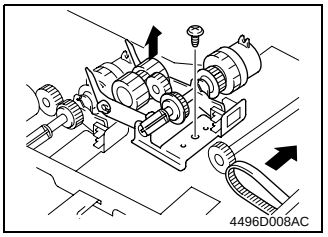


7. Open the Right Side Door.
8. Remove two screws and the Paper Take-Up Unit.

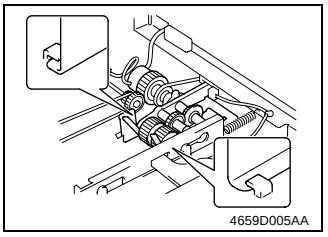
1-4. Removal of the Paper Take-Up Rolls



1. Remove the Paper Take-Up Unit.
2. Unplug one connector of Lift-Up Sensor 1 and one connector of Paper Take-Up Clutch 1 on the Paper Take-Up Roll 1 Assy.
3. Unhook two springs.

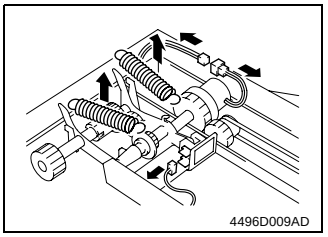


4. Remove one screw and, while taking off the timing belt in the direction of the clutch, remove the Paper Take-Up Roll 1 Assy.

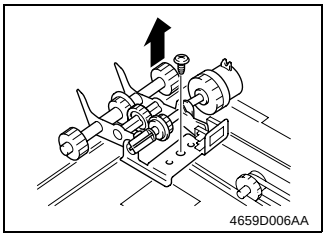


NOTE

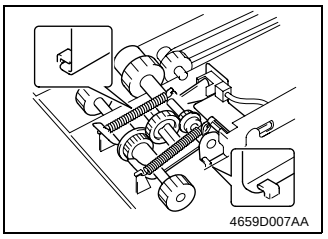
- *When reinstalling the Paper Take-Up Roll 1 Assy, make sure that the edges of the assy are positioned correctly as illustrated.*



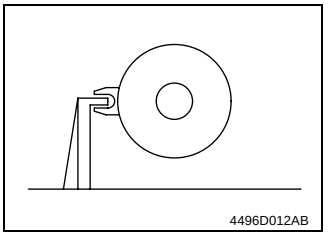
5. Unplug one connector of Lift-Up Sensor 2 and one connector of Paper Take-Up Clutch 2 on the Paper Take-Up Roll 2 Assy.
6. Unhook two springs.



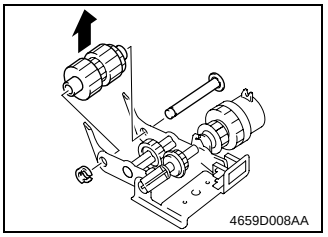
7. Remove one screw and the Paper Take-Up Roll 2 Assy.



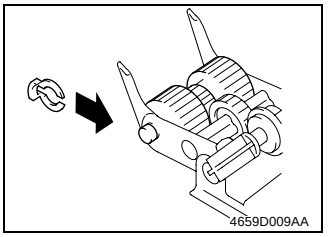
NOTE
- *When reinstalling the Paper Take-Up Roll 2 Assy, make sure that the edges of the assy are positioned correctly as illustrated.*



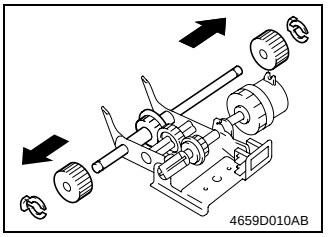
NOTE
- *When reinstalling each Paper Take-Up Roll assy, make sure that the Paper Take-Up Clutch is positioned correctly as illustrated.*



8. Snap off one C-clip from the Paper Take-Up Roll 1 shaft.
9. Remove the shaft and Paper Take-Up Roll 1.

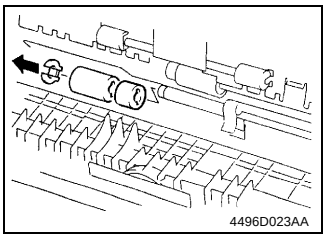


NOTE
- *When reinstalling Paper Take-Up Roll 1, make sure that the C-clip faces in the direction shown.*

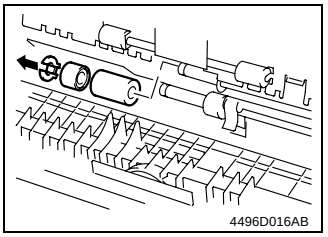


10. Snap off two C-clips and take off Paper Take-Up Roll 2.

1-5. Removal of the Feed Roll, Separator Roll and Torque Limiter Assy

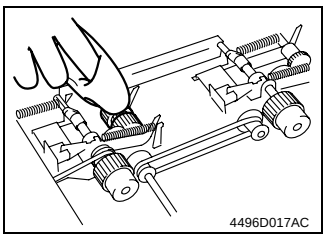


1. Open the Right Side Door.
2. Snap off one C-clip from the Separator Roll shaft and remove the Separator Roll and Torque Limiter Assy.



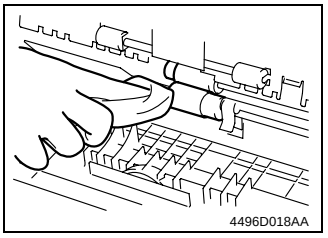
3. Snap off one C-clip from the Feed Roll shaft and remove the Feed Roll.

1-6. Cleaning of the Paper Take-Up Roll



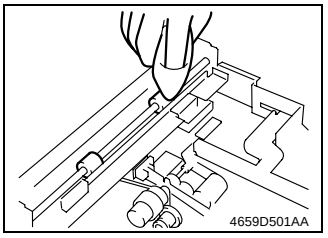
1. Remove the Paper Take-Up Unit.
2. Using a soft cloth dampened with alcohol, wipe the surface of Paper Take-Up Roll 1/2.

1-7. Cleaning of the Feed Roll and Separator Roll



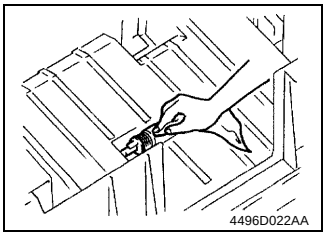
1. Open the Right Side Door.
2. Using a soft cloth dampened with alcohol, wipe the surface of the Feed/Separator Roll.

1-8. Cleaning of the Vertical Transport Roller/Rolls



1. Remove the Paper Take-Up Unit.
2. Using a soft cloth dampened with alcohol, wipe the surface of the Vertical Transport Roller/Rolls.

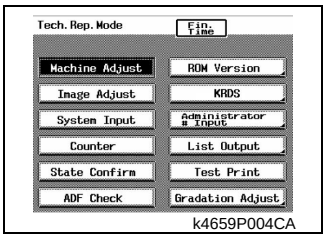
1-9. Cleaning of the Roll with a Torque Limiter



1. Slide out the LCT.
2. Using a soft cloth dampened with alcohol, wipe the surface of the roll with a torque limiter.

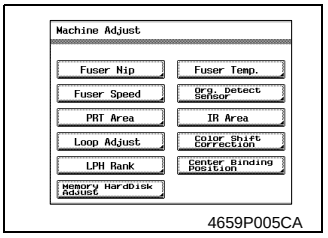
2. ADJUSTMENT

2-1. Reference Position Adjustment



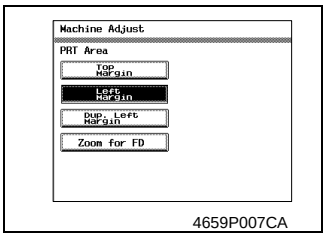
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1. Load A4-size paper in the large capacity cabinet.
• If the paper size has been changed, use the paper of the newly set size.
2. Display the Tech. Rep. Mode screen.
(For details of how to display the Tech. Rep. Mode screen, see the Service Manual.)
3. Touch “Machine Adjust.”



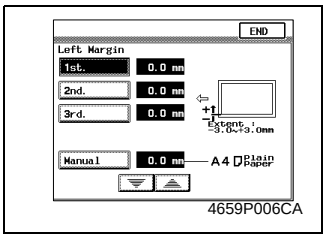
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4. Touch “PRT Area.”



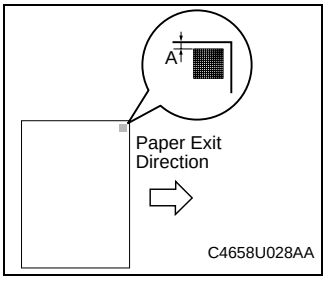
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5. Touch “Left Margin.”



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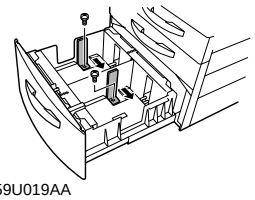
6. Touch “3rd.”



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7. Measure width A from the edge of the paper to the pattern printed on the test print and check that it falls within the specified range.
<Specifications: 3.0 mm ± 1.0 mm>
8. Adjusting the Paper Reference Position
If the measured width A falls outside the specified range, enter the correction value using the ▲ or ▼ key.

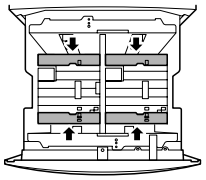
2-2. Settings for Paper Size



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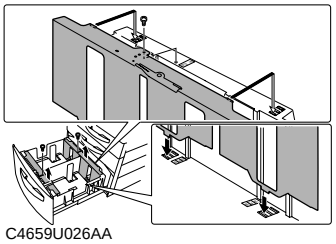
* The default paper size setting is A4C.

1. Remove the screws (two) from the left and right trailing edge stops.
2. Install the two trailing edge stops at the correct positions according to the size of the paper to be loaded and then secure them with the screws (two).



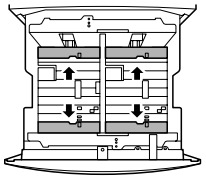
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3. Move the slides at the bottom of the cabinet all the way in the direction of the arrows.



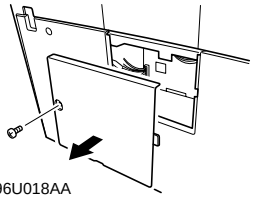
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4. Remove the fixing screws (one each) on the front and rear edge guides and lift up the edge guides.
5. Insert the tabs on the bottom of the front and rear edge guides into the slots corresponding to the size of the paper to be loaded.
6. Insert the tabs on the top of the front and rear edge guides into the slots corresponding to the size of the paper to be loaded.
7. Make sure that all tabs on both the front and rear edge guides are inserted in the correct slots. Then, secure each edge guide with the screw.



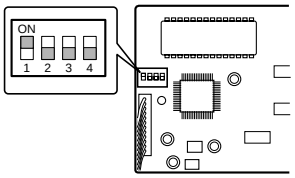
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8. Slide the slides, which have been moved in step 3, back to the positions of the edge guides.



C4496U018AA

9. Remove the rear cover from the large capacity cabinet (one screw).



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10. Make the DIP switch settings according to size of the paper to be loaded. See the table given below.

SW	1	2	3	4
Letter C	OFF	OFF	OFF	OFF
A4C	ON	OFF	OFF	OFF
B5L	OFF	ON	OFF	OFF

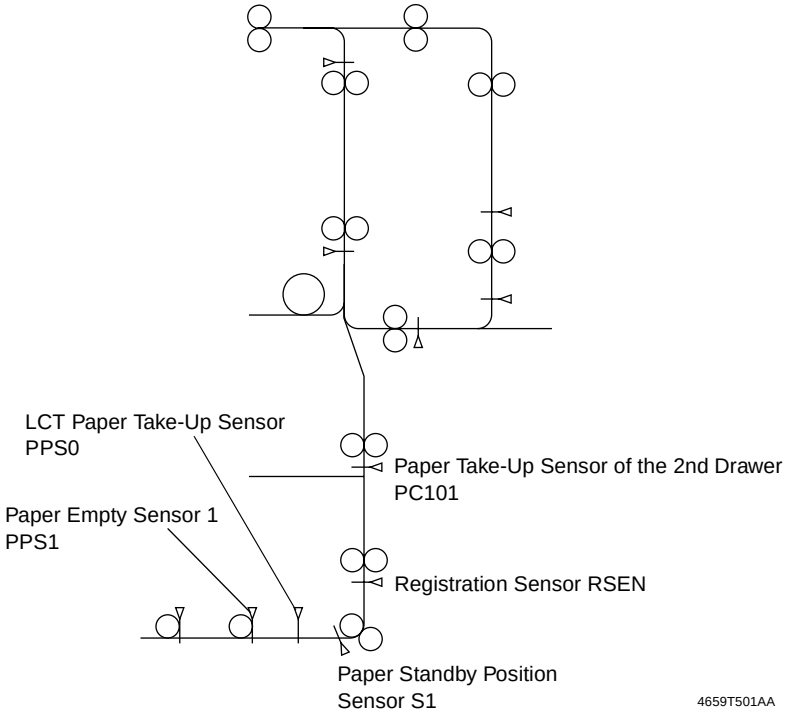
MISFEED/MALFUNCTION DETECTION



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1. MISFEED DETECTION

1-1. Location of Misfeed Detecting Sensors



1-2. Misfeed Detection Timing

- The following lists the types of misfeed detection and detection timings for different misfeed locations.
- The symbol “L” (for the leading edge) and “T” (for the trailing edge) given in ( ) indicate the particular edge of the paper detected by the sensor.

Type	Detection Start	Detection
Paper left	Power Switch ON	Registration Sensor ON
	Misfeed reset	
Lift 1 paper take-up failure	Paper Take-Up Clutch 1 ON	Paper Standby Position Sensor (L)
Lift 2 paper take-up failure	Paper Take-Up Clutch 2 ON	Paper Empty Sensor 1 (L)
		LCT Paper Take-Up Sensor (L) ✻1
	Paper Take-Up Clutch 1 ON	Paper Standby Position Sensor (L)
Registration Sensor's failure to detect leading edge	Separator Clutch ON	Registration Sensor (L)
Registration Sensor's failure to detect trailing edge	Registration Clutch ON	Registration Sensor (T)
Paper take-up failure	LCT Paper Take-Up Request signal	Registration Clutch energized
Misfeed in the vertical transport section	Registration Clutch energized	Paper Take-Up Sensor of the 2nd Drawer (L)
Misfeed caused by a size error	Paper Take-Up Sensor of the 2nd Drawer (L)	Paper Take-Up Sensor of the 2nd Drawer (T)

✻ 1: Only when a misfeed condition is reset (when power is turned ON, LCT Drawer is slid into position, and the door is closed)

2. MALFUNCTION DETECTION

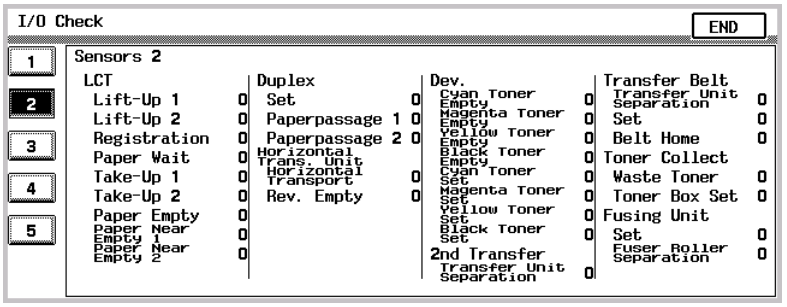
Code	Description	Detection Timing
C0990	LCT Lift-Up Motor EMOT failure to turn	The overcurrent detection circuit detects an overcurrent condition that lasts for a given period of time while EMOT remains energized.
C0991	Lift 1 ascent motion failure	Lift-Up Sensor 1 LS1 is not blocked (H) within a given period of time after EMOT has been energized (Lift 1 has started moving up).
C0995	LCT Transport Motor HMOT failure to turn	The HMOT Lock signal is not input for a given period of time.
C0999	Lift 2 ascent motion failure	Lift-Up Sensor 2 LS2 is not blocked (H) within a given period of time after EMOT has been energized (Lift 2 has started moving up).

3. SENSOR CHECK

- To permit easy and safe checks of sensors, the sensor input data are checked when the copier is in the standby state (including a misfeed, malfunction, and closure failure condition), thereby determining if correct signals are properly input to the sensors.

3-1. Sensor Check Screen

- The following screens are only typical and port data may look differently on actual copiers.
- To set the Tech. Rep. Mode -> State Confirm -> I/O Check-> Sensors 2
- <Sensor Monitor 2>



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