FrameMaker Ver.5.5E(PC) DF-332 OPTION For 8020/8031
02.08.22

DF-332



SERVICE MANUAL

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GENERAL

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1. SPECIFICATIONS

Name	:	Duplexing Document Feeder
Mode	:	Paper Take-Up from top of stack Transport - Endless Belt Transport Mode Turnover - Loop Turnover Mode Paper Exit - U-turn Turnover + Switchback U-Turn Turnover Mode (only in 1-Sided Mode)
Installation	:	Screw cramp to the copier
Type of Document	:	Standard Mode Plain Paper : 1-Sided Mode - 35g/m2 to 128g/m2 2-Sided Mode - 50g/m2 to 110g/m2
	:	Thick Paper Mode Plain Paper : 1-Sided Mode - 129g/m2 to 210g/m2 Mixed Original Detection Mode : Plain Paper : 1-Sided / 2-Sided Mode - 50g/m2 to 110g/m2
Detectable Document Size	:	Metric area B6L, A5L, A5C, B5L, B5C, A4L, A4C, B4L, A3L Inch area 11 x 17L, 11 x 15L, 8-1/2 x 14L, 8-1/2 x 11L, 11 x 8-1/2C
	:	* For the Combined Original Detection Mode, Refer to the Mixed Original Detection Enabled Size Combination Table.
Capacity		Standard Mode / Mixed Original Detection Mode Document Feed Table: 100 sheets (80g/m2)
	:	Original Exit Tray: 100 sheets (80g/m2)
	:	Thick Paper Mode
	:	Document Feed Table: 38 sheets (210g/m2)
Document Alignment		Center
Document Loading Mode		Face up
	:	Standard Mode: 1-Sided Mode / 2-Sided Mode Thick Paper Mode: 1-Sided Mode
	:	Mixed Original Detection Mode: 1-Sided Mode / 2-Sided Mode DC 24
Power Requirements		DC24V (supplied from the copier)
	:	DC5V (generated within the ADF)
Max. Power Consumption		60W or less
Dimensions	:	Width: 586mm (23-1/16”)
	:	Depth: 135mm (5-5/16”)
		Height: 519mm (20-7/16”)
Weight		14.2kg (31.3lb)
Operating Environment		Same as the copier

2. MIXED ORIGINAL FEED CHART

For Metric

	Max. Original Size	297mm		257mm		210mm		182mm	148mm
Mixed Original Size		A3T	A4Y	B4T	B5Y	A4T	A5Y	B5T	A5T
297mm	A3L	OK	OK	-	-	-	-	-	-
	A4C	OK	OK	-	-	-	-	-	-
257mm	B4L	OK	OK	OK	OK	-	-	-	-
	B5C	OK	OK	OK	OK	-	-	-	-
210mm	A4L	OK	OK	OK	OK	OK	OK	-	-
	A5C	NG	NG	OK	OK	OK	OK	-	-
182mm	B5L	NG	NG	OK	OK	OK	OK	OK	-
148mm	A5L	NG	NG	NG	NG	NG	NG	OK	OK

For Inch

	Max. Original Size	11"		8.5"			5.5"
Mixed Original Size		11 x 17	11 x 8.5	8.5 x 14	8.5 x 11	8.5 x 5.5	5.5 x 8.5
11"	11 x 17	OK	OK	-	-	-	-
	11 x 8.5	OK	OK	-	-	-	-
8.5"	8.5 x 14	OK	OK	OK	OK	OK	-
	8.5 x 11	OK	OK	OK	OK	OK	-
	8.5 x 5.5	NG	NG	OK	OK	OK	-
5.5"	5.5 x 8.5	NG	NG	NG	NG	NG	OK

OK	Mixed Original Feed available (Tilted with in 1.5% or less)	
NG	NO. Mixed Original Feed	
-	Can not Set Original	

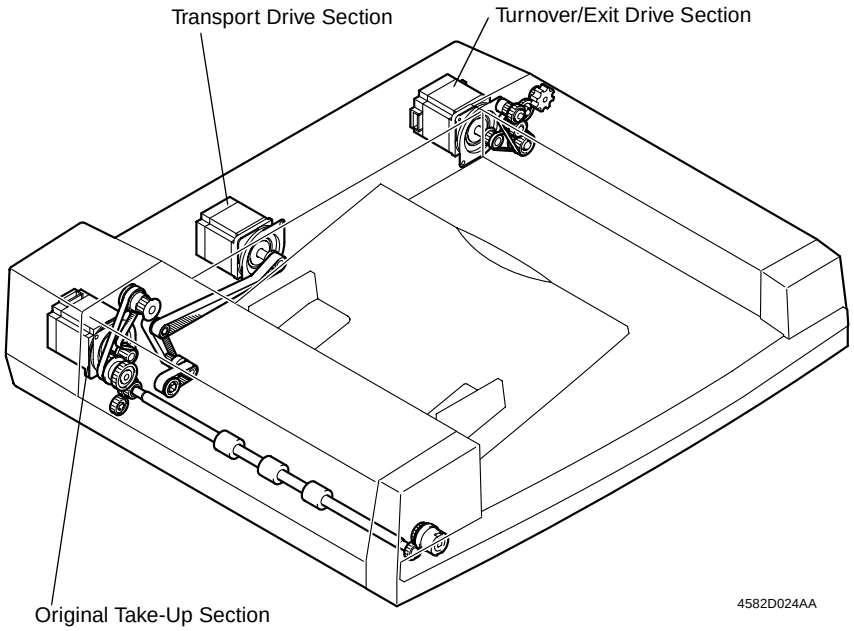
Paper Feed Prohibited Originals : If fed, trouble occurrence will be highly possible.

Type of Original	Possible Trouble
Sheets stapled or clipped together	Take-up failure, damaged sheet, defective drive mechanism due to jammed staples or clips
Sheets glued together	Take-up failure, damaged sheet
Sheets of 211g/m2 or more	Take-up failure
Sheets of 110g/m2 or more in 2-Sided Mode	Take-up failure
Sheets folded, torn or wrinkled	Take-up failure, damaged sheet
Sheets severely curled	Sheets misfed due to being dog-eared or fed in askew
OHP Film	Take-up failure
Label Paper	
Offset Master Paper	
Sheets clipped or notched	Damaged sheet
Sheets patched	Patched part folded or torn sheet

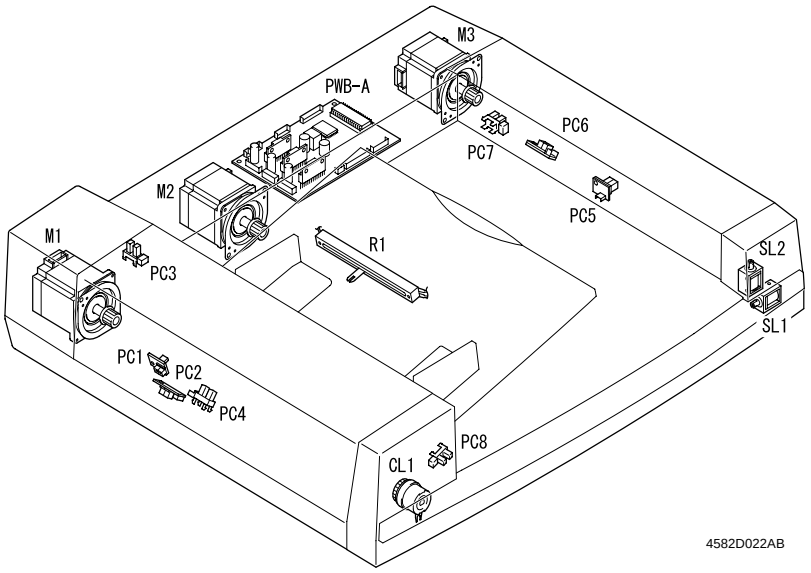
Paper Feed Not Guaranteed Originals : If fed, paper feed will be possible to some extent but trouble occurrence will be possible.

Type of Original	Possible Trouble
Sheets lightly curled (Curled amount: 10 - 15mm)	Dog-eared, exit failure
Heat Sensitive Paper	Edge folded, exit failure, transport failure
Ink Jet Paper	Take-up failure, transport failure
Sheets with smooth surface (Coated Paper)	Take-up failure, transport failure
Intermediate paper	Take-up failure, transport failure
Paper immediately after paper exit from the copier	Take-up failure, transport failure
Paper with many punched holes (e.g., loose leaf) limited to vertical feeding	Multi-page feed due to flashes from holes
Sheets with 2 to 4 holes	Transport failure
Sheets two-folded or Z-folded (A3 or 11x17")	Transport failure, image deformation
Sheets with rough surface (e.g., letterhead)	Take-up failure
Sheets penciled	Contamination
Sheets folded	Image deformation, multi-page feed, take-up failure
Sheets other than detectable-size sheets	Image deficit

3. DRIVE SYSTEM



4. ELECTRICAL COMPONENT LAYOUT



Symbol	Name	Symbol	Name
PWB-A	Control Board	PC4	Paper Empty Sensor
M1	Paper Take-Up Motor	PC5	Turnover Sensor
M2	Transport Motor	PC6	Paper Exit Sensor
M3	Turnover/Exit Motor	PC7	Exit Cover Sensor
SL1	Turnover Solenoid	PC8	Tray Open/Close Sensor
SL2	Paper Exit Solenoid	R1	Document Width Detection Volume
PC1	Registration Sensor	CL1	Registration Clutch
PC2	Timing Sensor		
PC3	Take-up Cover Sensor		

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TEST MODE

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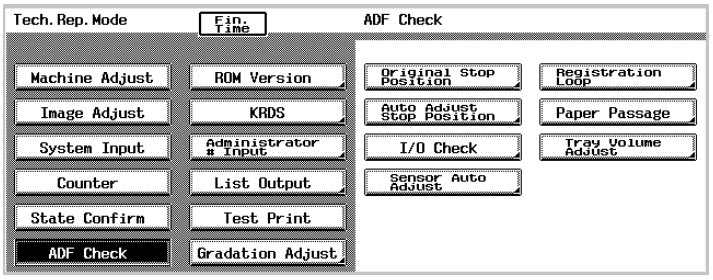
1. TECH. REP. / TEST MODES

The Tech. Rep. / Test Modes are set from the Tech. Rep. Mode screen of the copier.

1-1. Tech. Rep. Mode Setting Procedure

1.Press the “Utility” key.
2.Touch the “Total Check” key.
3.Press the keys, STOP --> 0 --> 0 --> STOP --> 0 --> 1, in this order.
4.Select "ADF Check."

Notes
About the setting procedure for the Tech. Rep. Mode:
Do not teach this procedure to others unless it is absolutely necessary.



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1-2. Type of the Tech. Rep. Mode

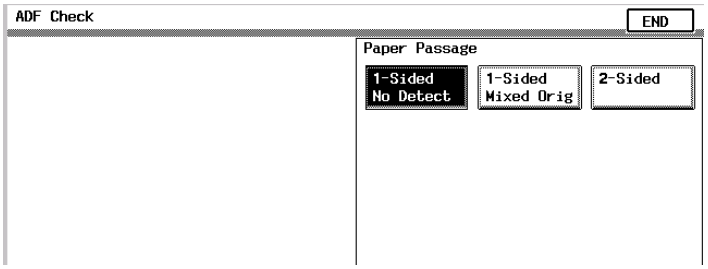
- The ADF Check in the Tech. Rep. Mode has 7 items as follows:
  - •Origin Stop Position (Adjust)
  - •Registration Loop (Adjust)
  - •Auto Adjust Stop Position (Adjust)
  - •Paper Passage (Test)
  - •I/O Check (Test)
  - •Tray Volume Adjust (Adjust)
  - •Sensor Auto Adjust (Adjust)
- The TECH. REP. / TEST MODES chapter will describe the procedures for Paper Passage and I/O Check. The adjustment items will be described in the DIS/REASSEBLY, ADJUSTMENT chapter.

1-3. ADF Paper Passage

- The Paper Passage motion of the Automatic Document Feeder is checked.
  Procedure:
  1. Set the mode to the Tech. Rep. Mode.
  2. Touch the ADF Check key.
  3. Touch the Paper Passage key.
  4. Select the Paper Passage Mode to be tested from "1-Sided (No Detect)," "1-Sided (Mixed Orig)" and "2-Sided."
  5. Set the Original in the Take-up Tray.
     The Start key color changes from orange to green.
  6. Press the Start key. The operation starts.

Notes

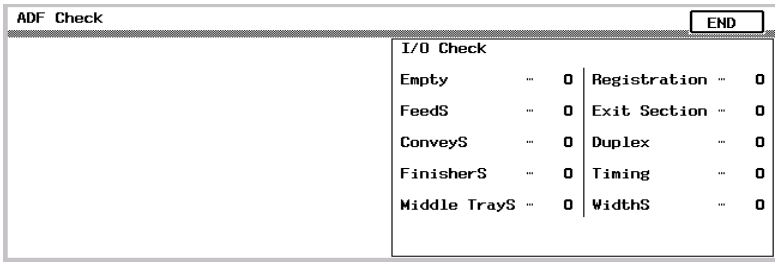
- After starting the operation by pressing the Start key, if the Start key is pressed during the operation, the operation will be suspended. Then, if the Start key is pressed again during the suspension, the operation will be resumed.
- If the Stop key is pressed during the test operation, the test will be forced to end.
- If there is no Original set in the Take-Up Tray, the Start key will not work.
- All Originals set in the Take-Up Tray are passed through. Upon the completion of all Originals passed through, the Paper Through Test ends.



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1-4. I/O Sensor Check

- In order to ensure you to check the sensor operation easily and safely whether signals are inputted properly or not, check the sensor input data in the machine standby status (including the conditions of misfeed, trouble and faulty set).
  Procedure:
  1.Set the mode to the Tech. Rep. Mode.
  2.Touch the ADF Check key.
  3.Touch the I/O Check key.
  4.Operate the sensor to check by using paper or the like, and check the screen display (Paper detected: 1, No paper detected: 0)



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- *Note with care that the Take-Up (Feed) Section Open/Close Sensor, the Transport (Convey) Section Open/Close Sensor, the Exit Section Open/Close Sensor and the Middle Tray Open/Close Sensor are displayed as Faulty Set Detected when they are opened.*
- *The "Convey S" on the IR. The ADF up to 15 degree open when sensor (PC202)detected.*
- *Output display of Width S*
  The operation of the sensor can be checked whether it is normal or faulty by changing the guide width of the Document Take-up Tray to change the output value.

Symbol	Panel display	Signal name	Operation characteristics 0	Operation characteristics 1	CN/PJ No.
PC4	Empty S	PC40N		No paper detected	CN7A-6
PC3	Feed S	PC30N		OPEN	CN7A-3
PC	Convey S	PC0N		OPEN	
PC7	Exit Section	PC70N		OPEN	PC9A-9
PC8	Middle Tray S	PC80N		OPEN	CN7A-15
PC1	Registration	PC10N		Paper detected	CN7A-9
PC6	Finisher S	PC60N		Paper detected	CN9A-6
PC5	Duplex	PC50N		Paper detected	CN9A-3
PC2	Timing	PC20N		Paper detected	CN7A-12
R1	WidthS				CN12A-

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DIS/REASSEMBLY, ADJUSTMENT

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1. MAINTENANCE SCHEDULE

- In order to ensure you to provide satisfactory copying performance at all times and use the copier for a long time in the stabilized condition with minimal failures, be sure to maintain the components listed below at regular intervals:

PM Parts	Maintenance Schedule Cycle		Tools Used for Cleaning	Parts. No.	Qty	Life counter	Ref. page
	Clean.	Replace.					
Pick-Up Roller	50K	200K	Alcohol, Cloth	13YH4064✻	2	ADF Take-up	D-4
Take-Up Roller	50K	200K		13YH4039✻	1		D-4
Separator Roller	50K	200K		13YH4066✻	1		D-5
Transport Belt	50K	—		———	1	ADF Take-up	
Registration Roller	50K	—		———	1	ADF Take-up	
Registration Roll	50K	—		———	1		
Turnover Roller	50K	—		———	1	ADF Take-up	
Exit Roller	50K	—		———	1	ADF Take-up	
Exit Roll	50K	—		———	4		
Reflection Type Sensor Section	200K	—	Blower brush, Brush	———	5	ADF Take-up	

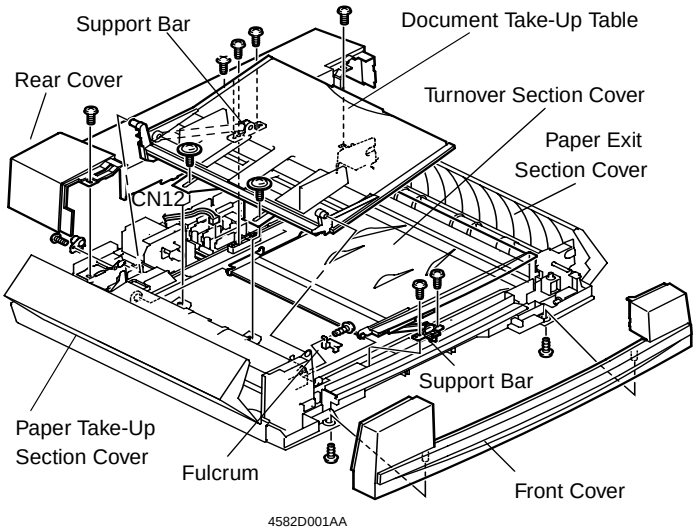
(Unit: K=1,000 sheets)

NOTES

- *The Pick-Up Roller, the Take-Up Roller and the Separator Roller must be replaced together.*
- *The maintenance component list above is subject to change without notice.*
- *For the component numbers, refer to the component manual and the component change information.*
- *Refer to the PM counter value of the copier for maintenance work. (Refer to "SWITCHES ON PWBs, TECH. REP. SETTINGS" in the copier manual.)*

2. DISASSEMBLY

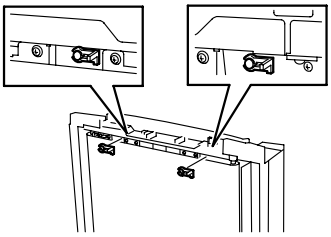
2-1. Removal of the Outer Cover, the Document Take-Up Table and the Turnover Section Cover



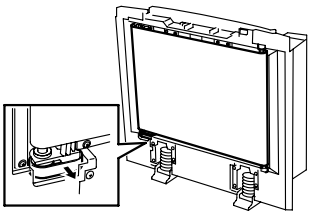
1.Open the Paper Take-Up Section Cover and the Paper Exit Section Cover.
2.Remove the Rear Cover by removing the two screws.
3.Remove the Front Cover by removing the two screws.
4.Remove the three screws fixing the Support Bar of the Document Take-Up Table and the one screw fixing the Fulcrum of the Document Take-Up Table, and unplug the CN-12 (3P) from the PWB-CONT.
5.Remove the Fulcrum of the Document Take-Up Table from the ADF, and remove the Document Take-Up Table.
6.Remove the two screws fixing the Support Bar of the Turnover Cover and the one screw fixing the Fulcrum of the Turnover Section Cover, and remove the Turnover Cover from the ADF.

3. DISASSEMBLY AND CLEANING

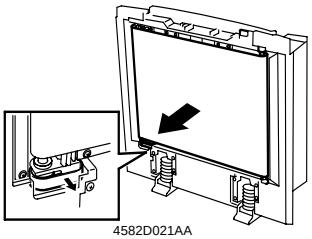
3-1. Removal of the Transport Belt


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1. Remove the two C-clips.

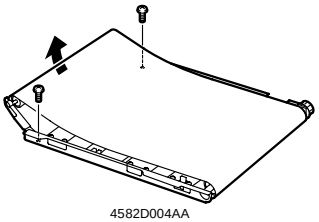

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2. Remove the Transport Belt Roller Assembly from the belt connected.

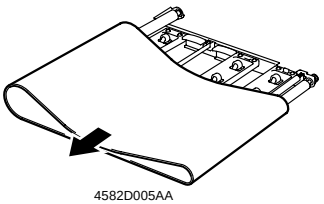

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3. Pull out and remove the Transport Belt Roller Assembly.

Notes
In reassembling, ensure that the Transport Belt Roller Assembly is set exactly to the connection belt.

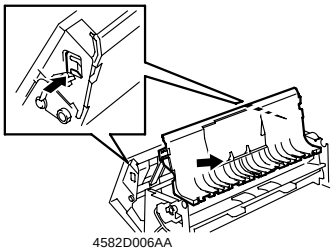

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4. Remove the two screws, and pull up the Roller Section.

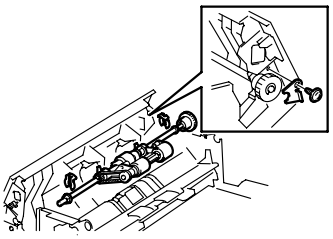

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5. Remove the Transport Belt.

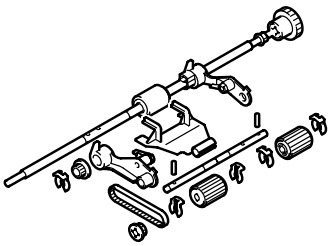
3-2. Removal of the Pick-Up Roller and the Take-Up Roller


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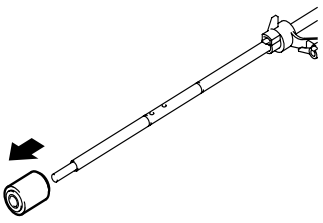
1. Open the Paper Take-Up Section Cover, press inward and unlock the locking claws at both ends of the Paper Take-Up Section Guide (the Inner Cover), and remove the Paper Take-Up Section Guide.


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2. Remove the one screw (on the rear side) of the Pick-Up/Take-Up Roller Assembly shaft positioning plate and the C-clips (at both ends) of the Pick-Up/Take-Up Roller Assembly shaft, and remove the Pick-Up/Take-Up Roller Assembly.


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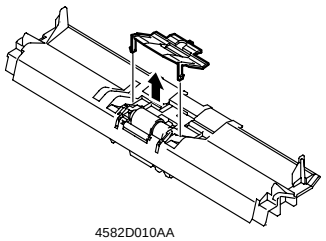
3. Remove the four C-clips of the Pick-Up Roller and the gear-fixing C-clip (black) of the Pick-Up/Take-Up Roller connected Timing Belt, and remove the Pick-Up/Tale-Up Roller connecting section from the shaft.
4. Remove the Pick-Up Roller.


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5. Remove the C-clip (black) of the Take-Up Roller, and remove the Take-Up Roller.

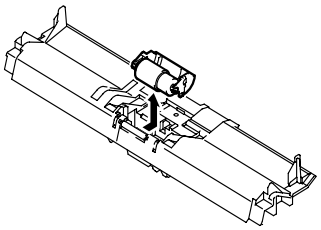
Notes
Be careful not to lose the Pick-Up/Take-Up Roller fixing pin.

3-3. Removal of the Separator Roller



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1. Unlock the Separator Roller Cover locking claws, and remove the Separator Roller Cover.

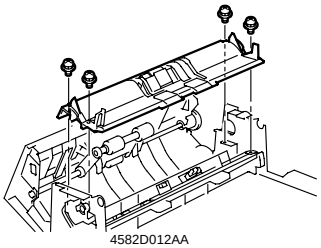


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2. Remove the Separator Roller Assembly.

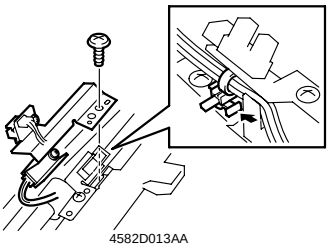
Notes
- *Replacing the Separator Roller in assembly.*
- *The Separator Roller Assembly is of a set-in type. Pinch the roller shaft at both ends and pull out the Separator Roller Assembly upward.*

3-4. Cleaning of the Registration Roller/Roll



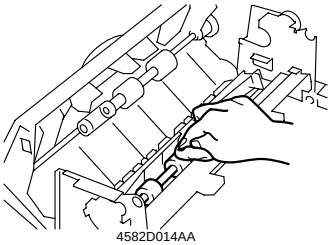
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1. Open the Paper Take-Up Section Cover.
2. Remove the four screws from the Registration Roller Cover.



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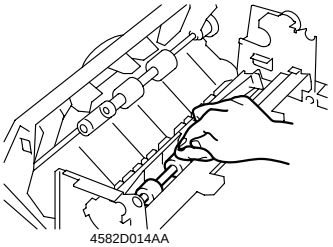
3. Remove the Wire Harness Saddle and the one screw from the Registration/Timing Sensor mounting plate.



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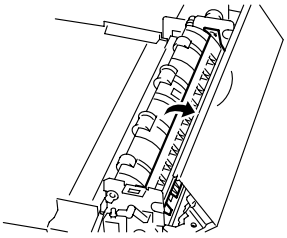
4. Wet a cloth with alcohol, and use it to wipe up the Registration Roller/Roll.

3-5. Cleaning of the Exit Roller/Roll

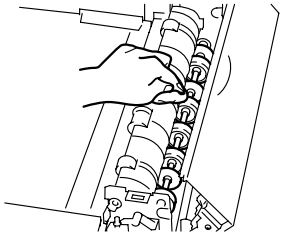

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1. Open the Paper Exit Section Cover.
2. Wet a cloth with alcohol, and use it to wipe up the Exit Roller/Roll.

3-6. Cleaning of the Turnover Roller

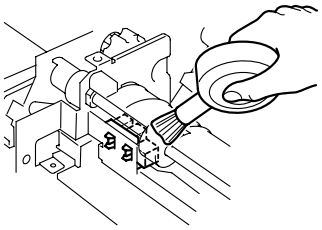

4582D016AA

1. Open the Paper Exit Section Cover, and open the Turnover Guide Plate.


4582D017AA

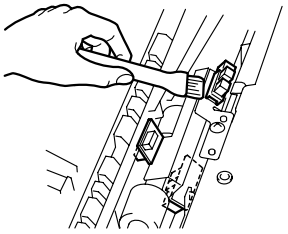
2. Wet a cloth with alcohol, and use it to wipe up the Turnover Roller.

3-7. Cleaning of the Sensor Section



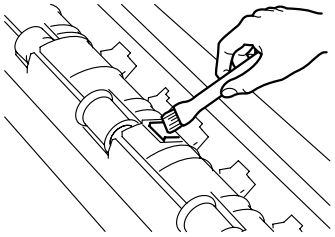
4582D020AB

1. Open the Paper Take-Up Section Cover.
2. Clean the Registration/Timing Sensor with a blower brush or the like.



4582D018AA

3. Open the Paper Take-Up Section Cover.
4. Clean the Paper Empty Sensor with a brush or the like.



4582D019AA

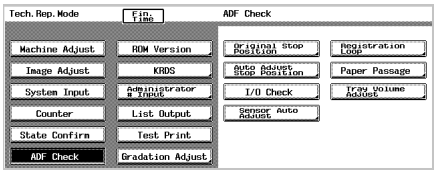
5. Open the Paper Exit Section Cover.
6. Clean the Turnover/Paper Exit Sensor with a brush or the like.

4. ADJUSTMENTS

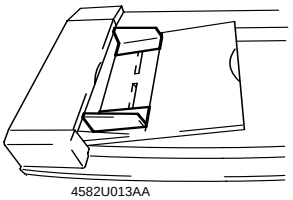
4-1. Adjustment of the Tray Volume

Read out the value of maximum width and minimum width of the document width detection volume interlocked with the Document Take-Up Tray Edge Guide.

1. Set the mode to the Tech. Rep. Mode.
2. Press the Utility key.
3. Touch the Total Check key.
4. Press the keys, STOP --> 0 --> 0 --> STOP --> 0 --> 1, in this order.
5. Select "ADF Check" - "Tray Volume Adjust."

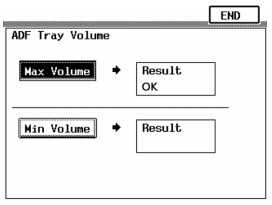


k4582S100



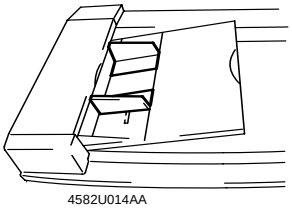
4582U013AA

6. Widen the Document Set Guide to the maximum.
7. Select "Max. Width."



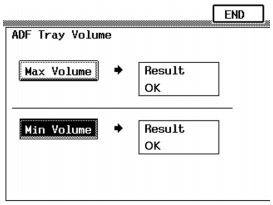
4582P007CA

8. Press the Start key. Confirm that the Result is "OK."



4582U014AA

9. Narrow the Document Set Guide to the minimum.



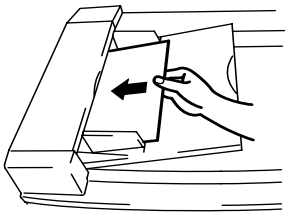
4582P008CA

10. Select "Min. Width."
11. Press the Start key. Confirm that the Result is "OK."
12. Touch the OK key.
13. Touch the END key.

• If the Result is "NG":
Possible causes includes failure of the document width detection volume, wrong wiring to the volume and failure of the PWB-CONT.

4-2. Adjustment of the Document Edge Guide Reference Position

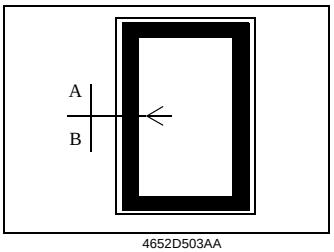
(Adjustment standard: Displacement of the document edge should be within 4±1mm to the FD scale.)



4582U003AA

1. Set the supplied chart in the Document Take-Up Tray (with the arrow facing up).
2. Set the mode to:

- Auto paper mode
- 1-Sided Document / 1-Sided Copy Mode

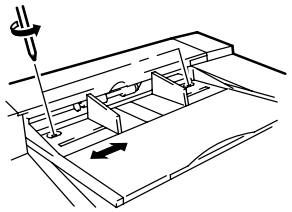


4652D503AA

3. Press the Start key.
4. Fold in half the exited copy.
5. Check whether the arrow is displaced in the direction of A or B with reference to the fold line.

Standard:
The arrow should be within ±3mm from the center.

If the displacement is over, make adjustment using the following procedure:



4582U005AB

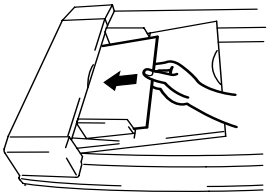
6. Loosen the screw of the Document Take-Up Tray.

If displaced in the direction A:
Shift the Tray to the front.
If displaced in the direction B:
Shift the Tray to the rear.

7. Make recheck.

4-3. Adjustment of the Document Skew

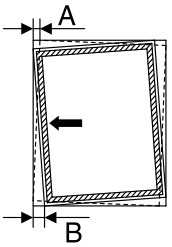
(Adjustment standard: Skew should be 0.35% or less with respect to the document length; within 1.0mm for document of A4Y size.)



4582U003AA

1. Set the supplied chart in the Document Take-Up Tray (with the arrow facing up).
2. Set the mode to:

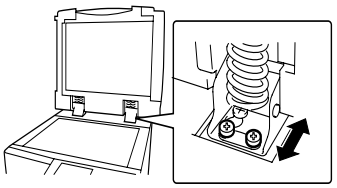
- Auto Paper Mode
- 1-Sided Document / 1-Sided Copy Mode



4582U006AC

3. Press the Start key.
4. Check whether the exited copied image is askew in the direction of A or B.
   Standard: Skew should be within 1mm.

If the skew is over, make adjustment using the following procedure:



4582U007AC

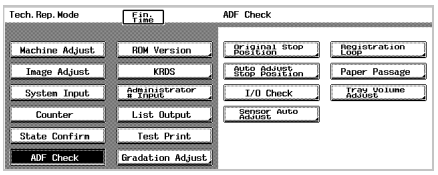
5. Loosen the two front screws of the right hinge section.
6. If askew in the direction A: Shift the ADF to the rear.
   If askew in the direction B: Shift the ADF to the front.
7. Tighten the two screws.
8. Make recheck.

4-4. Adjustment of the Document Stop Position

Adjustment of the document stop position is made automatically and manually (by entering numbers).
The following adjustment is made in the Tech. Rep. Mode.
To set the mode to the Tech. Rep. Mode:

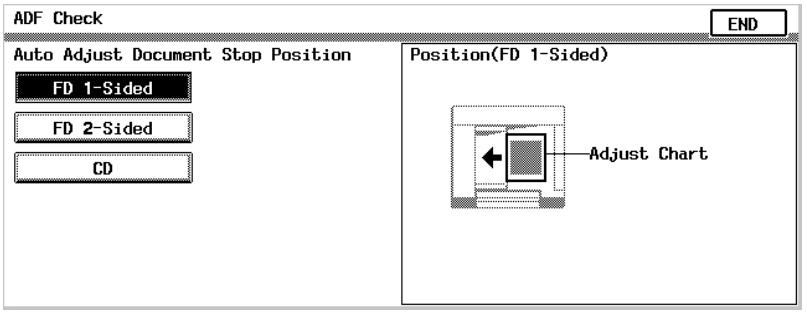
1. Press the Utility key.
2. Touch the Total Check key.
3. Press the keys "STOP", -->"0"-->"0"-->"STOP"--> "0" --> "1", in this order.

• Select "ADF Check" - "Auto Adjust Stop Position."

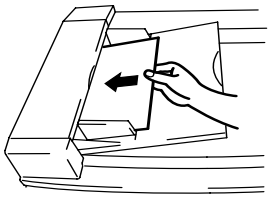


4582S100

(1) Auto Adjust: FD 1-Sided Stop Position

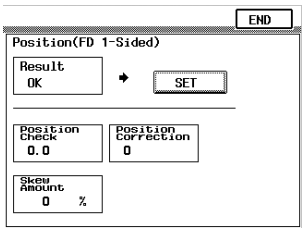


4582S105



4582U003AA

1. Set the supplied chart in the Document Take-Up Tray (with the arrow facing up).
2. Press the Start key.

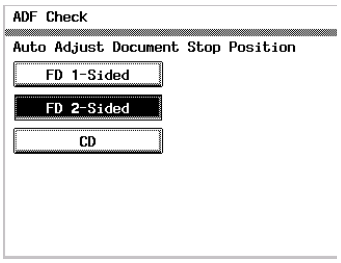


4582P010CA

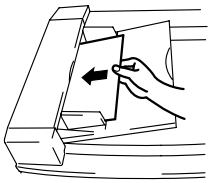
3. Confirm that the Result is "OK," and then touch the Register key.
4. Touch the OK key.
5. Touch the END key.
   If the Result is "NG":

- Check and correct the skew of the document.
- Manually correct the value of "Position Correction".

(2) Auto Adjust: FD 2-Sided Stop Position



4582S106

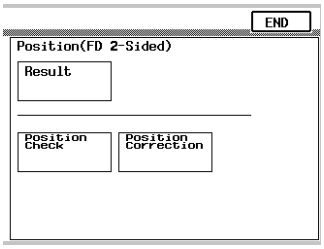


4582U003AA

1. Set the supplied chart in the Document Take-Up Tray.

Notes
Set the chart with its blank side facing up.

2. Press the Start key.

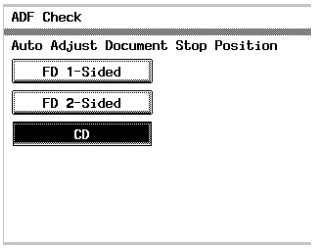


4582S115

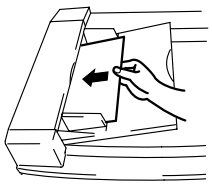
3. Confirm that the Result is "OK," and then press the Register key.
4. Press the OK key.
5. Press the END key.

✻ If the Result is "NG":
- Check and correct the skew of the document.
- Manually correct the value of "Position Correction."

(3) Auto Adjust: CD Image Scan Start Position

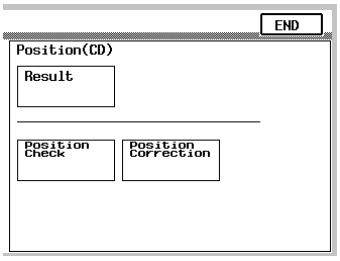


4582S107



4582U003AA

1. Set the supplied chart in the Document Take-Up Tray (with the arrow facing up).
2. Press the Start key.



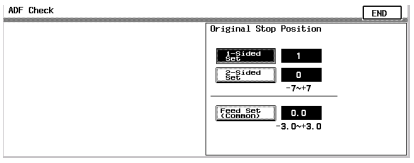
4582S116

3. Confirm that the Result is "OK," and then press the Register key.
4. Press the OK key.
5. Press the END key.

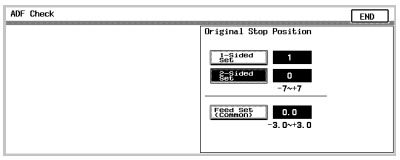
✻ If the Result is "NG":

- Check and correct the skew of the document.
- Manually correct the value of "Position Correction."

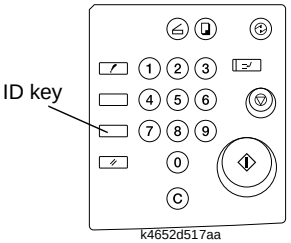
(4) Manual Adjust: FD 1-Sided / 2-Sided Document Stop Position Adjustment
(Adjusted range: -7mm to +7mm)



4582S110

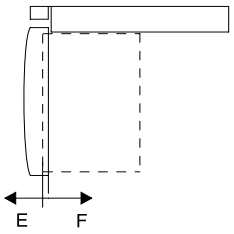


4582S111



k4652d517aa

1. Select "1-Sided Set" or "2-Sided Set."
2. Enter the value from the ten-key pad.
   (Press the ID key to change the +/- code.)

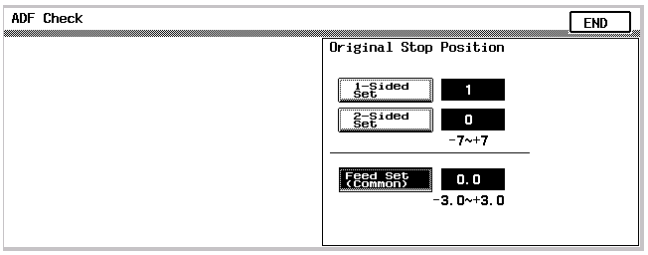


4652d509aa

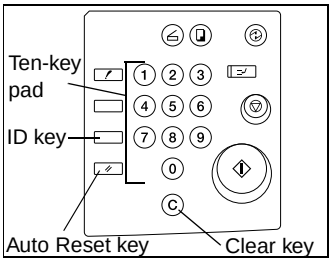
- To shift the position in the direction of F, set the code to +.
- To shift the position in the direction of E, set the code to -.

3. Touch the OK key on the panel.

(5) Manual Adjust: CD Image Scan Position Adjustment
(Adjusted range: -3mm to +3mm)

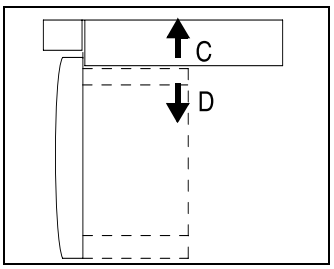


4852S112



k4652d517aa

1. Select "Feed Set (Common)."
   Enter the value from the ten-key pad.
   (Press the ID key to change the code.)



4652d505aa

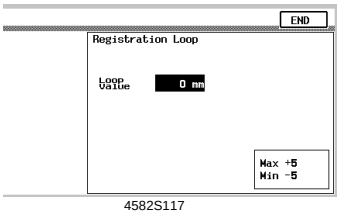
- To scan the image in the direction of C, set the code to -.
- To shift the image in the direction of D, set the code to +.

2. Touch the OK key on the panel.

4-5. Adjustment of the Loop Value

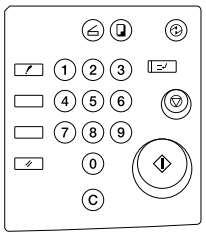
(Adjusted range: -5mm to +5mm) Default value: 0 (Loop value: 5mm)

- The loop value is increased by the entered + value and decreased by the entered - value.
- Too much loop value may result in dog-eared document, and too little loop value may result in askew document.



4582S117

1. Select "Registration Loop."

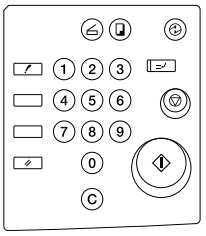

k4652d517aa

2. Enter the value from the ten-key pad. (Press the ID key to change the +/- code.)
3. Touch the OK key on the panel.

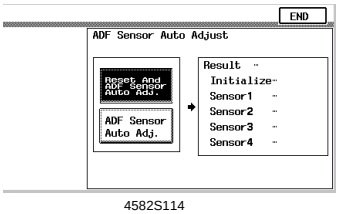
4-6. Automatic Adjustment of the Sensor

The detection level of the document through path sensor is automatically adjusted.
The adjustment has two modes: "Reset and ADF Sensor Auto Adj." and "ADF Sensor Auto.

✻ Make this adjustment as appropriate after the replacement of the ADF board or in case of the document detection error.


k4652d517aa

1. Set the mode to the Tech. Rep. Mode.
2. Press the Utility key.
3. Press the Total Check key.
4. Press the keys,"STOP"-->"0"-->"0"-->"STOP"--> "0"-->"1", in this order.
5. Select "ADF Check" - "Sensor Auto Adjust."



4582S114

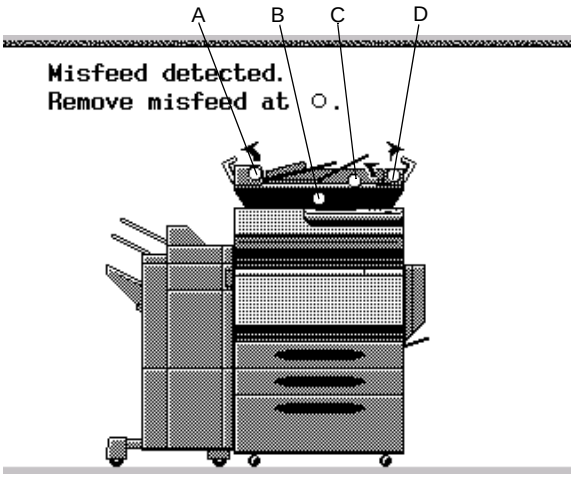
6. Select "Reset and ADF Sensor Auto Adj." or "ADF Sensor Auto Adj."
7. Press the Start key.
8. If the result is "OK," touch the OK key on the panel.
9. If the result is "NG," check the influencing sensor, replace it if necessary, and then make readjustment.

TROUBLESHOOTING

Blank page

1. MISFEED DETECTION

- If misfeed or trouble for some reason is detected, the Panel of the copier will have the following display:



4582S113

1-1. Description of Misfeed

Misfeed location	Description of Misfeed	Detail of Misfeed
A: Paper Take-Up Section B: Transport Section	Misfeed due to paper not reached the Registration Sensor	Misfeed is detected if the Registration Sensor is not turned ON within a preset time after the Take-Up Motor started normal rotation.
A: Paper Take-Up Section B: Transport Section	Misfeed due to paper not reached the Pick-Up Sensor	Misfeed is detected if the Pick-Up Sensor is not turned ON within a preset time after the Take-Up Motor started reverse rotation.
B: Transport Section	Misfeed due to paper remaining at the Pick-Up Sensor	Misfeed is detected if the Pick-Up Sensor is not turned OFF within a preset time after the Take-Up Motor started reverse rotation.
B: Transport Section	Misfeed due to paper not reached the Turnover Sensor	Misfeed is detected if the Turnover Sensor is not turned ON within a preset time after the Transport Motor started.
D: Paper Exit / Turnover Section	Misfeed due to paper remaining at the Turnover Sensor	Misfeed is detected if the Turnover Sensor is not turned OFF within a preset time after the Turnover Sensor was tuned ON.
C: Transport Tray Section	Misfeed due to paper not reached the Exit Sensor (in the 1-Sided Mode)	Misfeed is detected if the Exit Sensor is not turned ON within a preset time after exit operation started in the 1-Sided Mode.

D: Paper Exit / Turnover Section	Misfeed due to paper not reached the Exit Sensor (in the 2-Sided Mode)	Misfeed is detected if the Exit Sensor is not turned ON within a preset time after the Turnover Sensor was turned ON in the 2-Sided mode.
D: Paper Exit / Turnover Section	Misfeed due to paper remaining at the Exit Sensor	Misfeed is detected if the Exit Sensor is not turned OFF within a preset time after the Exit Sensor was tuned ON.
C: Transport Tray Section	Misfeed at the Transport Tray	Misfeed is detected if the difference between the paper feeding size measured at the Turnover Sensor and that measured at the Exit Sensor is 20mm or more.

1-2. Troubleshooting Procedures for Misfeed

1. Refer to the display on the Panel.
2. Identify the trouble phenomena.
3. Check the items listed below for each trouble phenomenon.

A. Misfeed at the Take-Up Section

- The document is not taken up at all.
- The document stops before the Registration Sensor.

Step	Check Item	Result	Action
1	Is the document used guaranteed for paper through?	NO	Instruct the user.
2	Is the document set in the Paper Take-Up Tray over the capacity?	YES	Instruct the user.
3	Is the Take-Up Roller, the Pick-Up Roller or the Separator Pad deformed, worn or contaminated with paper dust?	YES	Clean or replace the defective roller or pad.
4	Is the Pick-Up Roller holding down the document?	NO	Repair the Pick-Up mechanism.
5	Does the Take-Up Motor rotate?	YES	Replace the Control Board.
		NO	Replace the Take-Up Motor.

- The document is taken up not separately.

Step	Check Item	Result	Action
1	Is the document used guaranteed for paper through?	NO	Instruct the user.
2	Is the Take-Up Roller, the Pick-Up Roller or the Separator Pad deformed, worn or contaminated with paper dust?	YES	Clean or replace the defective roller or pad.

- The document is transported to the Registration Sensor.

Step	Check Item	Result	Action
1	Is the Registration Sensor checked?	YES	Replace the Control Board.
2	When the Registration Sensor is light- blocked with paper, does the CN7A-7 / GND voltage on the Control Board change from DC5V to DC0V?	YES	Replace the Control Board.
		NO	Replace the Registration Sensor.

• The document is transported to the Pick-Up Sensor.

Step	Check Item	Result	Action
1	Is the Pick-Up Sensor checked?	YES	Replace the Control Board.
2	When the Pick-Up Sensor is light-blocked with paper, does the CN7A-10 / GND voltage on the Control Board change from DC5V to DC0V?	YES	Replace the Control Board.
		NO	Replace the Pick-Up Sensor.

B. Misfeed at the Transport Section

• The document is transported to the Registration Sensor.

Step	Check Item	Result	Action
1	Is the Registration Sensor checked?	YES	Replace the Control Board.
2	When the Registration Sensor is light- blocked with paper, does the CN7A-7 / GND voltage on the Control Board change from DC5V to DC0V?	YES	Replace the Control Board.
		NO	Replace the Registration Sensor.

• The rear edge of the document remains at the Registration Sensor or the Pick-Up Sensor.

Step	Check Item	Result	Action
1	Is the document used guaranteed for paper through?	NO	Instruct the user.
2	Is the Registration Roller deformed, worn or contaminated?	YES	Clean or replace the Registration Roller.
3	Is the Registration Sensor checked?	YES	Go to the step 5.
4	When the Registration Sensor light-blocked with paper is light-transmitted, does the CN7A-7 / GND voltage on the Control Board change from DC0V to DC5V?	YES	Replace the Control Board.
		NO	Replace the Registration Sensor.
5	When the Pick-Up Sensor light-blocked with paper is light-transmitted, does the CN7A-7 / GND voltage on the Control Board change from DC0V to DC5V?	YES	Replace the Control Board.
		NO	Replace the Pick-Up Sensor.
6	Is the Transport Belt worn or contaminated?	YES	Clean or replace the Transport Belt.
7	Is the Original Glass contaminated?	YES	Clean or replace the Original Glass.
8	Does the Transport Motor rotate?	YES	Replace the Control Board.
		NO	Replace the Transport Motor.

• The document is transported to the Turnover Sensor.

Step	Check Item	Result	Action
1	Is the Turnover Sensor checked?	YES	Replace the Control Board.
2	When the Turnover Sensor is light-blocked with paper, does the CN9A-1 / GND voltage on the Control Board change from DC0V to DC5V?	YES	Replace the Control Board.
		NO	Replace the Turnover Sensor.

- When the document is set in the Document Take-Up Tray, the ADF misfeed is displayed on the Panel.
- Immediately after the Start key is pressed, the ADF misfeed is displayed on the Panel.

Step	Check Item	Result	Action
1	Does the document remain on the Original Glass?	YES	Remove the document.
2	Is each sensor in the paper transport path checked?	YES	Replace the Control Board.
		NO	Replace the defective sensor.

- The document stops before the Turnover Sensor.

Step	Check Item	Result	Action
1	Is the document used guaranteed for paper through?	NO	Instruct the user.
2	Is the Transport Belt worn or contaminated?	YES	Clean or replace the Transport Belt.
3	Is the Original Glass contaminated?	YES	Clean or replace the Original Glass.
4	Is the Turnover Sensor checked?	YES	Go to the step 6.
5	When the Turnover Sensor is light-blocked with paper, does the CN9A-1 / GND voltage on the Control Board change from DC5V to DC0V?	YES	Replace the Control Board.
		NO	Replace the Turnover Sensor.
6	Does the Transport Motor rotate?	YES	Replace the Control Board.
		NO	Replace the Transport Motor.

- The document is caught by the Turnover/Exit Switching Plate.

Step	Check Item	Result	Action
1	Is the Turnover/Exit Switching Plate defective?	YES	Replace the Turnover/Exit Switching Plate.
2	Does the Turnover Solenoid work?	YES	Replace the Control Board.
		NO	Replace the Turnover Solenoid.

C. Misfeed at the Turnover/Exit Section

• The document is caught by the Turnover/Exit Switching Plate.

Step	Check Item	Result	Action
1	Is the Turnover/Exit Switching Plate defective?	YES	Replace the Turnover/Exit Switching Plate.
2	Does the Turnover Solenoid work?	YES	Replace the Control Board.
		NO	Replace the Turnover Solenoid.

• The rear edge of the document remains at the Exit Sensor.

Step	Check Item	Result	Action
1	Is the document used guaranteed for paper through?	NO	Instruct the user.
2	Is the Transport Belt worn or contaminated?	YES	Clean or replace the Transport Belt.
3	Is the Original Glass contaminated?	YES	Clean or replace the Original Glass.
4	Is the Exit Sensor checked?	YES	Go to the step 6.
5	When the Exit Sensor is light-blocked with paper, does the CN9A-4 / GND voltage on the Control Board change from DC5V to DC0V?	YES	Replace the Control Board.
		NO	Replace the Exit Sensor.
6	Does the Turnover/Exit Motor rotate?	YES	Replace the Control Board.
		NO	Replace the Turnover/Exit Motor.

• The rear edge of the document remains at the Turnover Sensor.

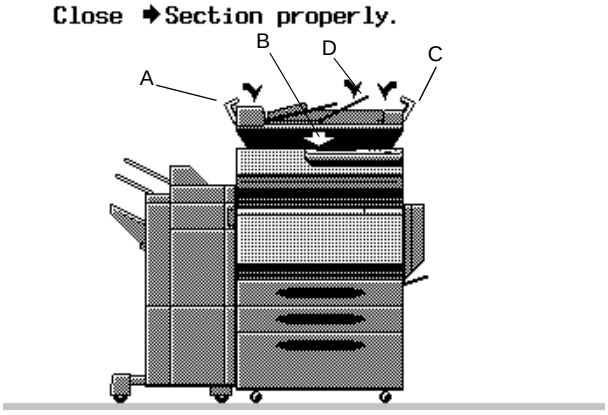
Step	Check Item	Result	Action
1	Is the document used guaranteed for paper through?	NO	Instruct the user.
2	Is the Turnover Roller deformed, worn or contaminated?	YES	Clean or replace the Turnover Roller.
3	Is the Transport Belt worn or contaminated?	YES	Clean or replace the Transport Belt.
4	Is the Original Glass contaminated?	YES	Clean or replace the Original Glass.
5	Is the Turnover Sensor checked?	YES	Go to the step 7.
6	When the Turnover Sensor is light-blocked with paper, does the CN9A-1 / GND voltage on the Control Board change from DC5V to DC0V?	YES	Replace the Control Board.
		NO	Replace the Turnover Sensor.
7	Does the Turnover/Exit Motor rotate?	NO	Replace the Turnover/Exit Motor.
8	Does the Transport Motor rotate?	YES	Replace the Control Board.
		NO	Replace the Transport Motor.

• The document stops before the Exit Sensor.

Step	Check Item	Result	Action
1	Is the document used guaranteed for paper through?	NO	Instruct the user.
2	Is the Transport Belt worn or contaminated?	YES	Clean or replace the Transport Belt.
3	Is the Original Glass contaminated?	YES	Clean or replace the Original Glass.
4	Is the Exit Sensor checked?	YES	Go to the step 6.
5	When the Exit Sensor is light-blocked with paper, does the CN9A-4 / GND voltage on the Control Board change from DC5V to DC0V?	YES	Replace the Control Board.
		NO	Replace the Exit Sensor.
6	Does the Exit Motor rotate?	YES	Replace the Control Board.
		NO	Replace the Exit Motor.

2. SET ERROR DETECTION

- When the ADF or cover set error for some reason is detected, the Panel of the copier will have the following display:



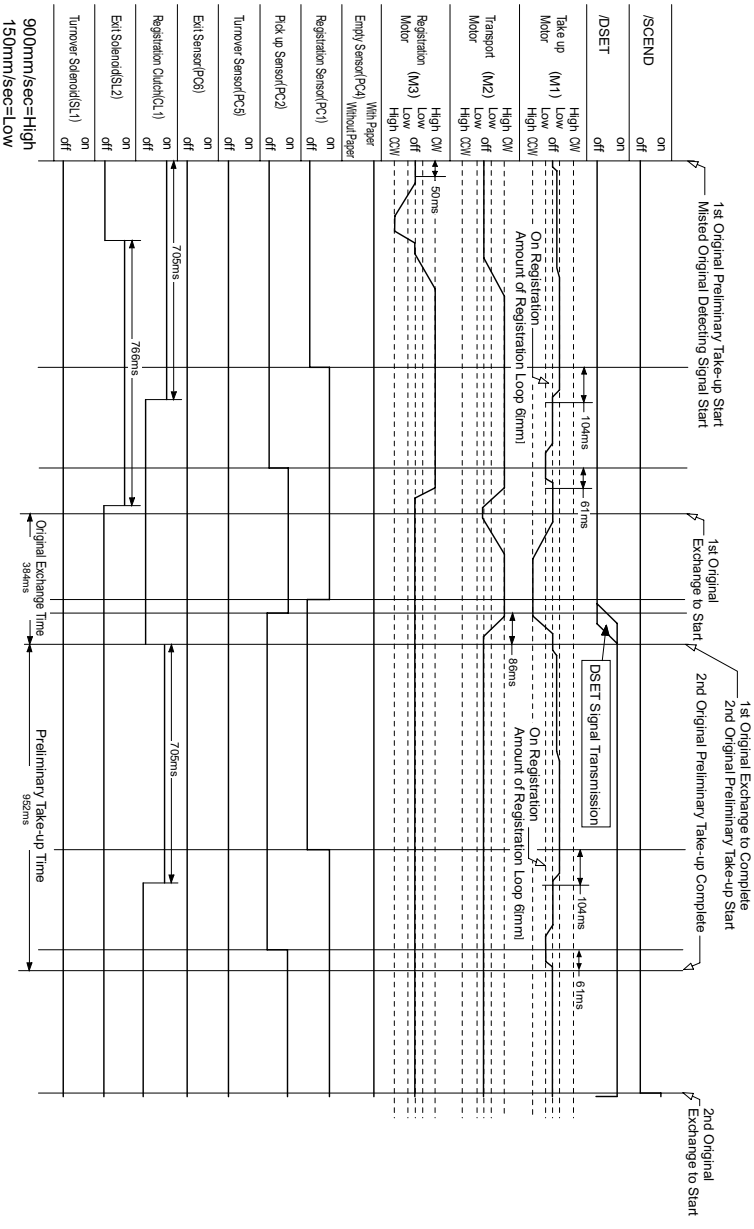
4582S118

✻ Opening detected.Close it the --> part.
Panel Display and Detection Timing for each

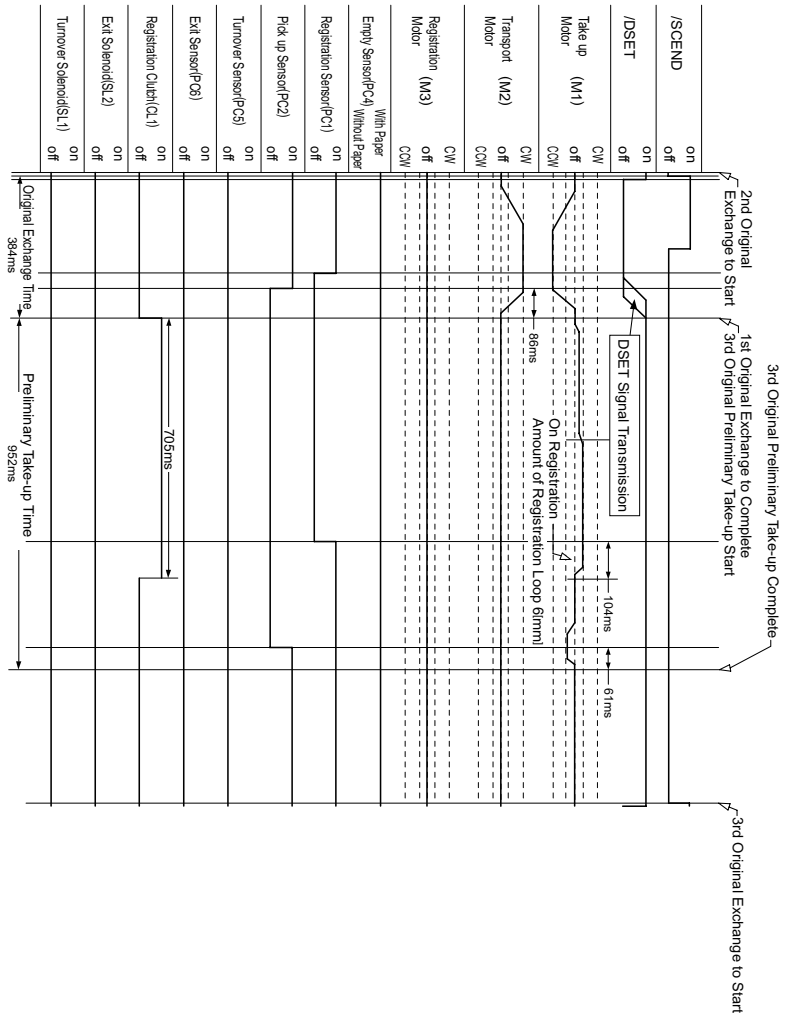
Panel Display	Description of Error	Detection Start	Detection Timing
A	Paper Take-Up Section Cover Set Error	When the document is set in the ADF	Paper Take-Up Section Open/Close Sensor (when light-blocked)
B	ADF Set Error	When the document is set in the ADF	Size Reset Switch on the copier (when turned ON)
C	Paper Exit Section Cover Set Error	When the document is set in the ADF	Paper Exit Section Open/Close Sensor (when light-blocked)
D	Transport Tray Section Cover Set Error	When the document is set in the ADF	Transport Tray Open/ Close Sensor (when light- blocked)

3. TIME CHART

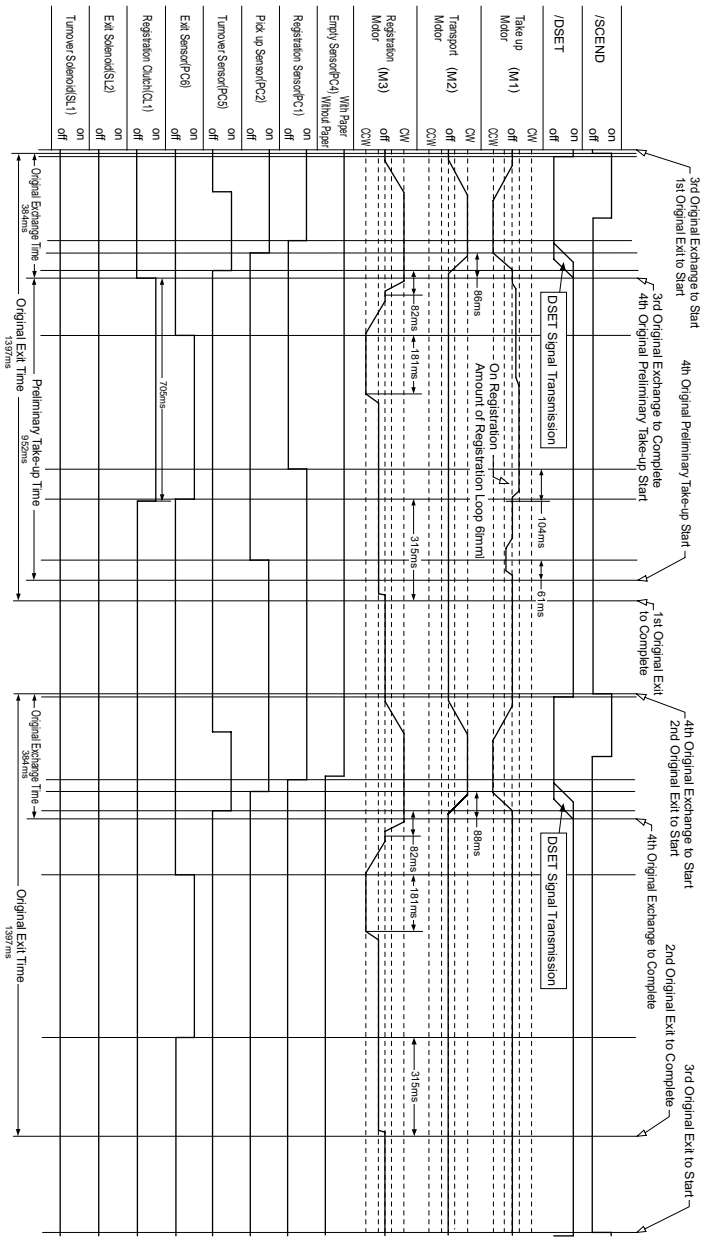
3-1. 1-Sided Mode



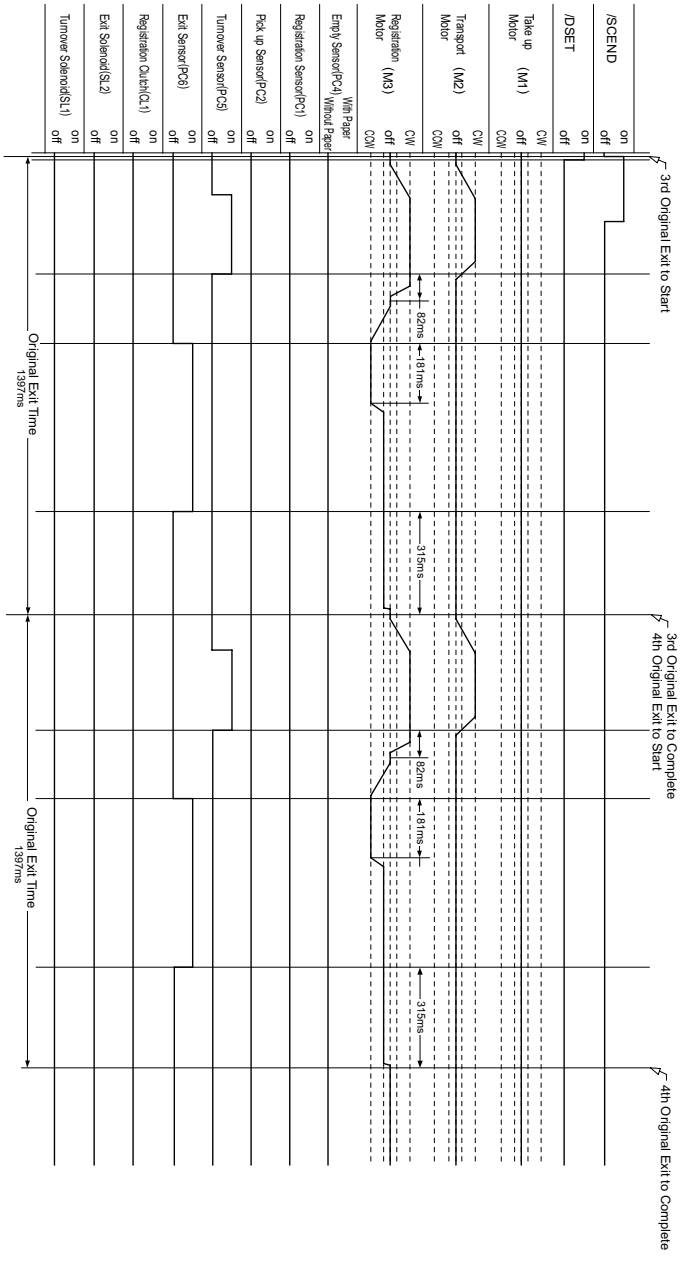
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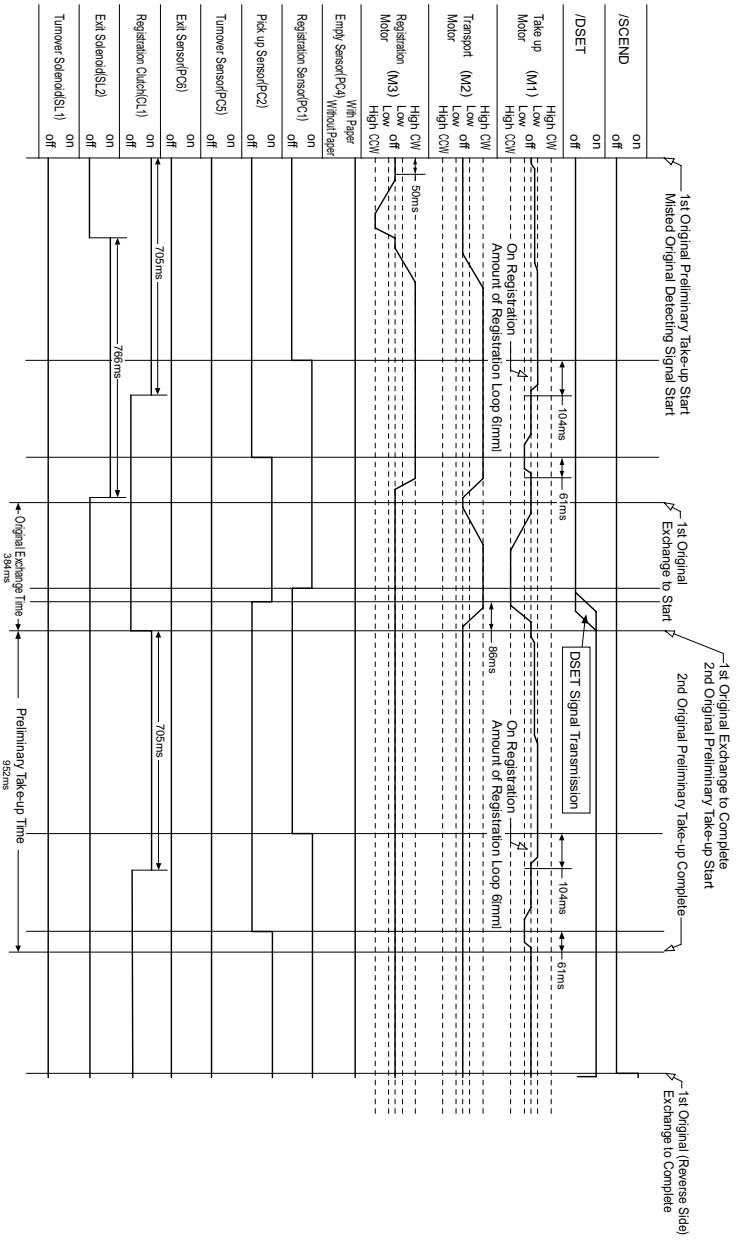


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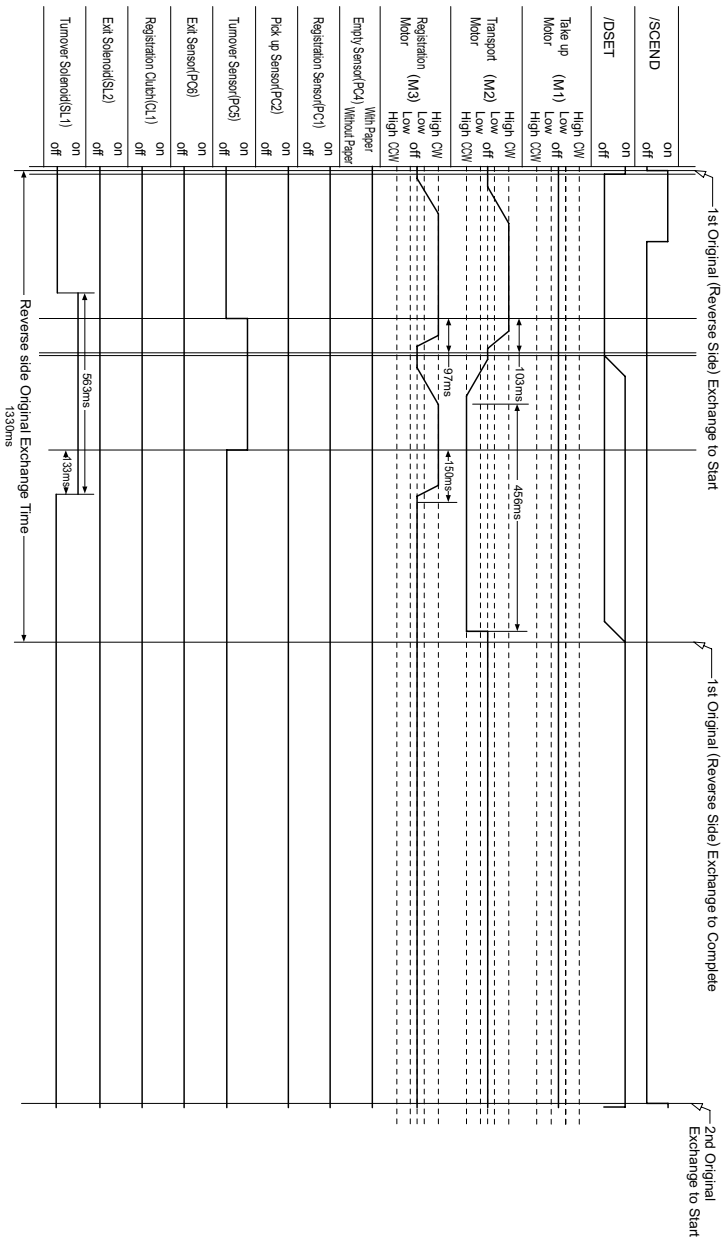


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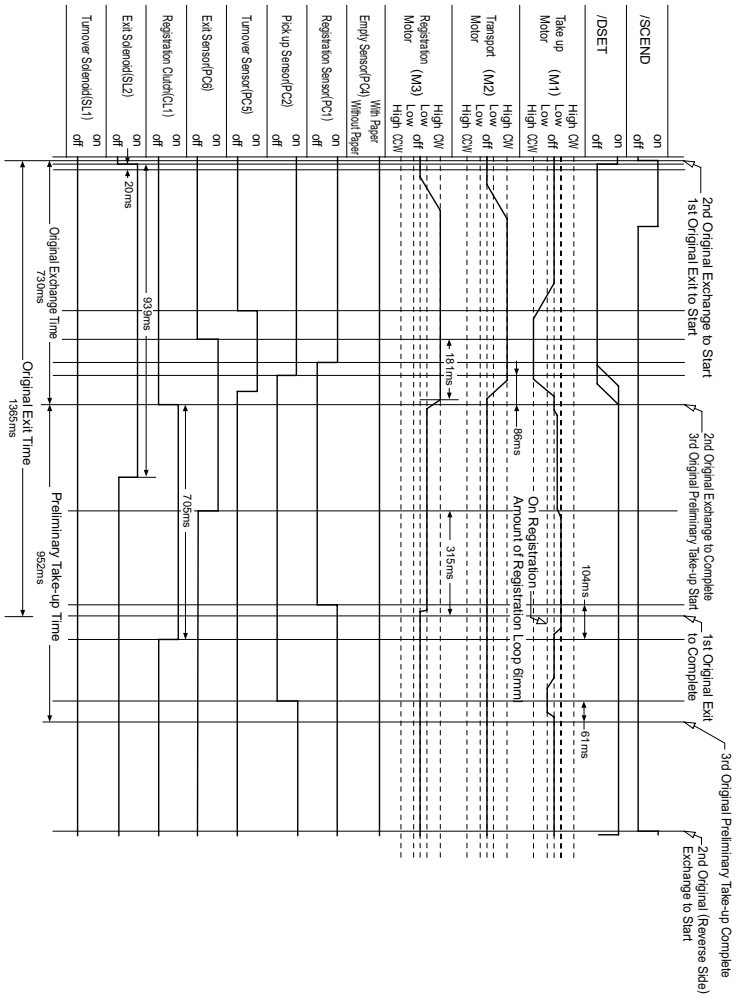
3-2. Mixed Original Detection Mode



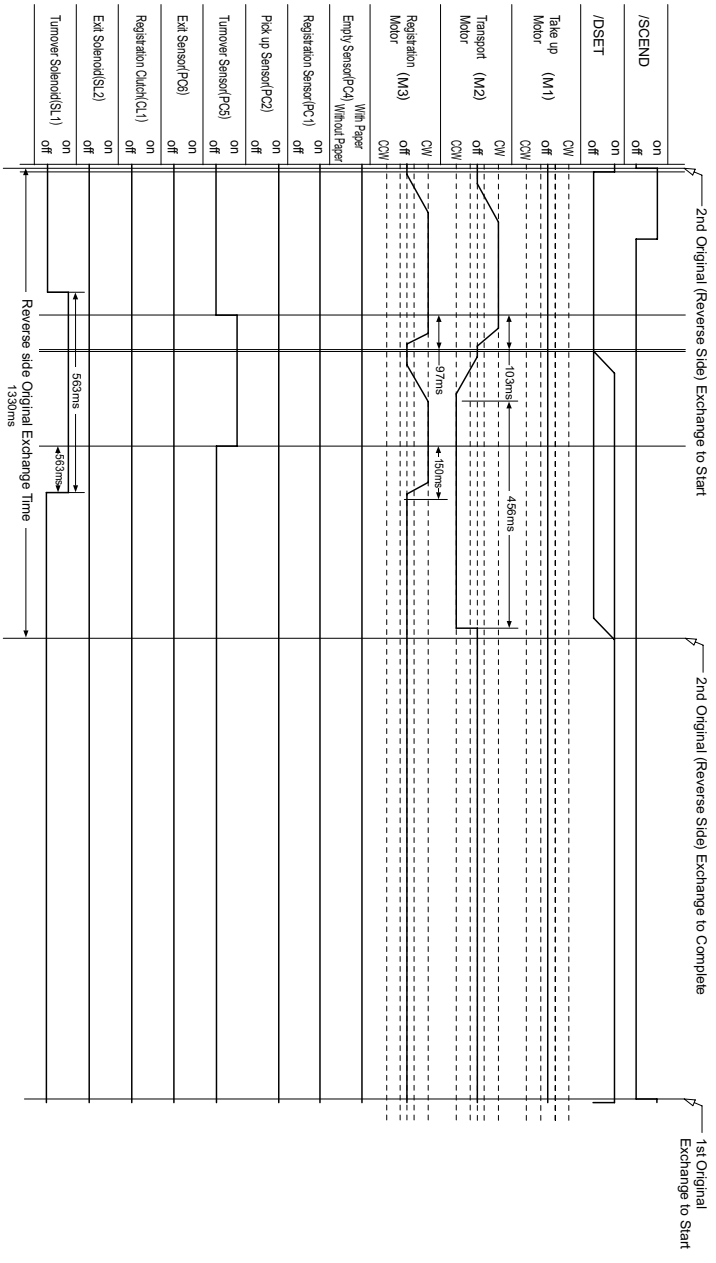
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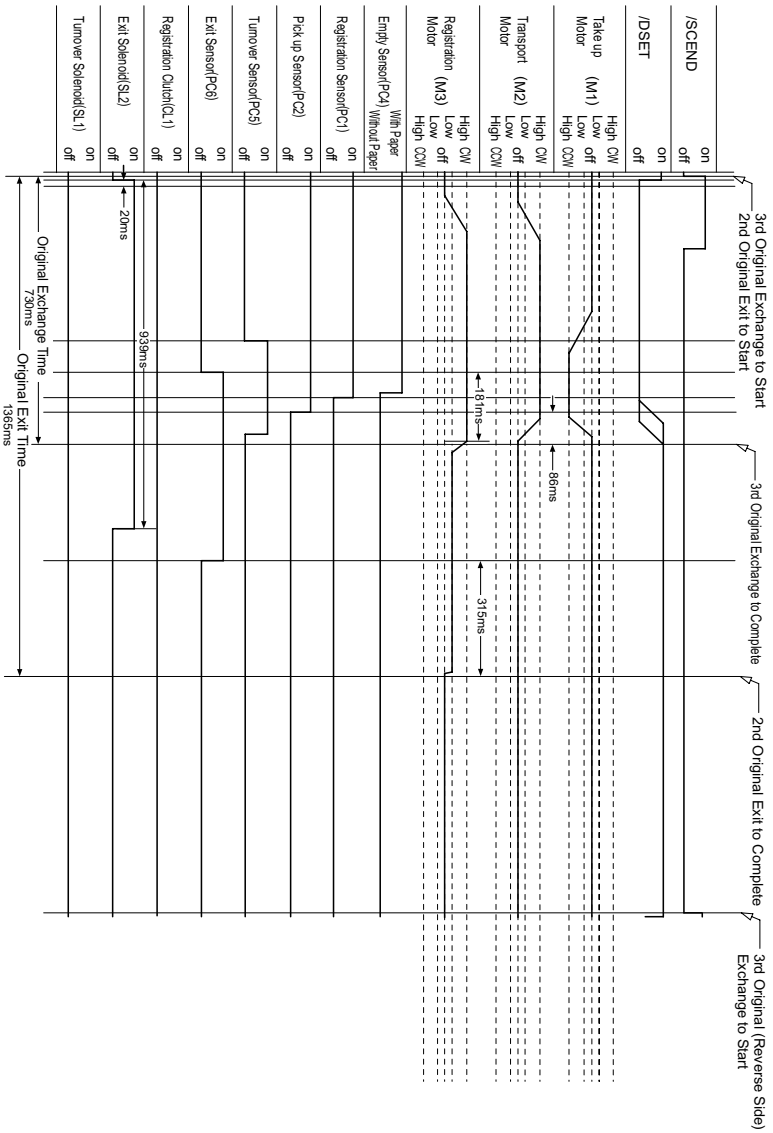
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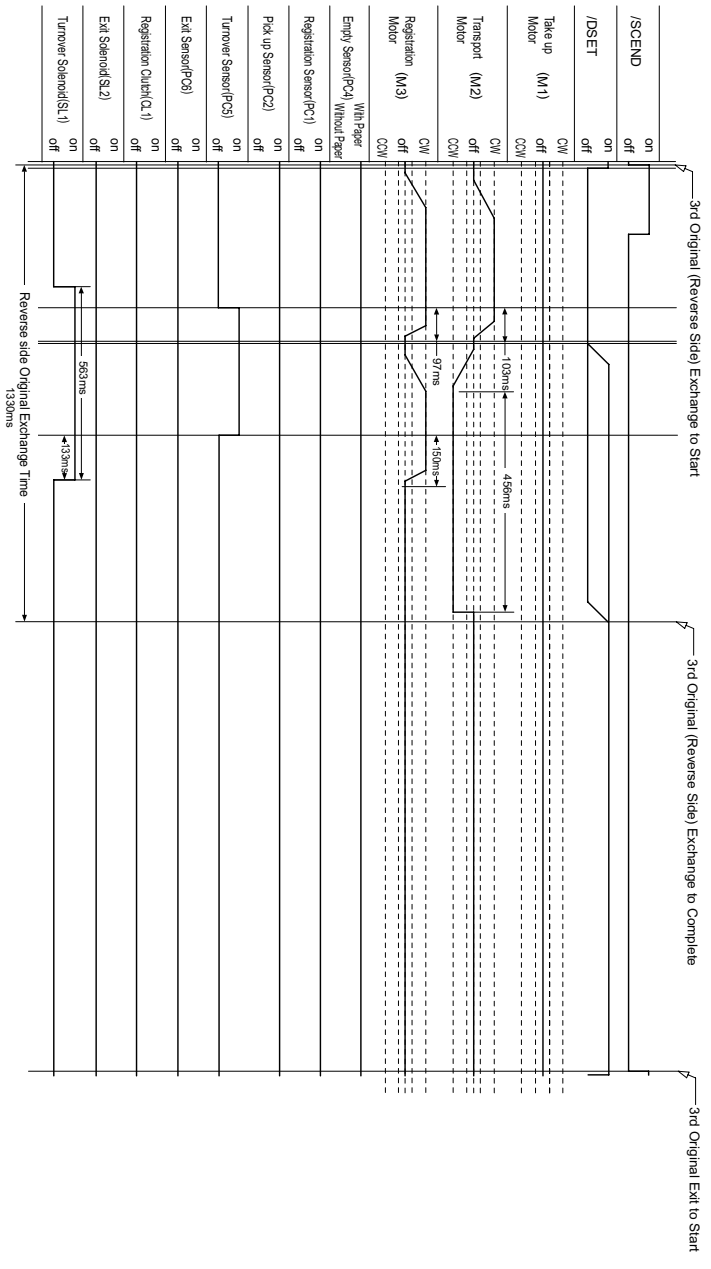
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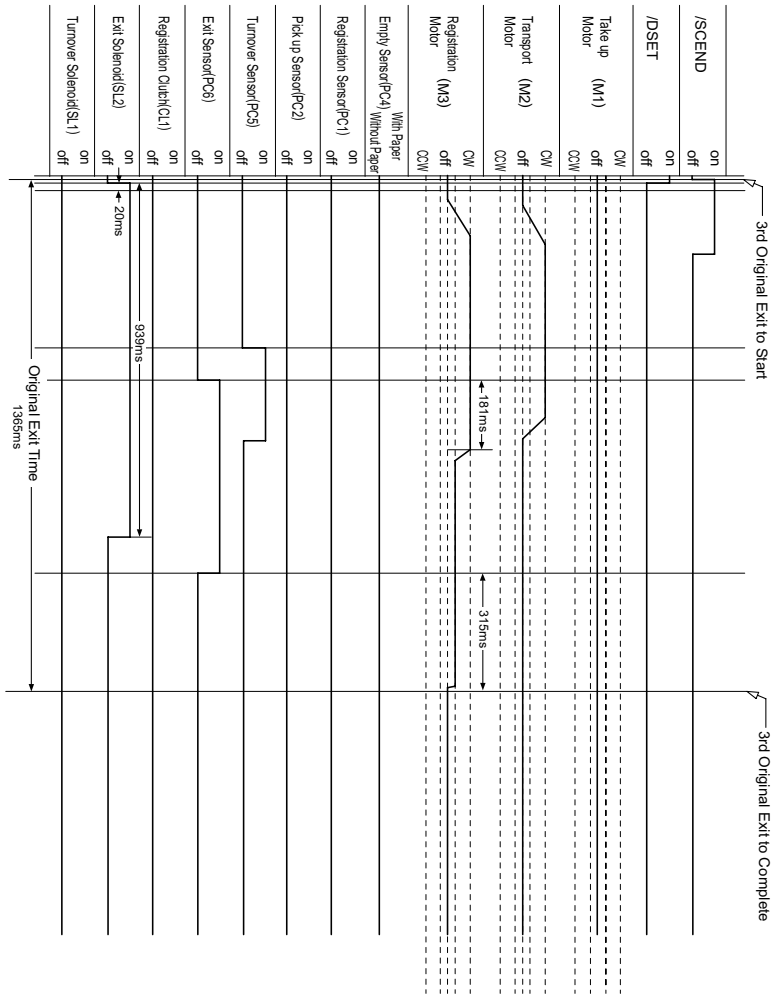
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