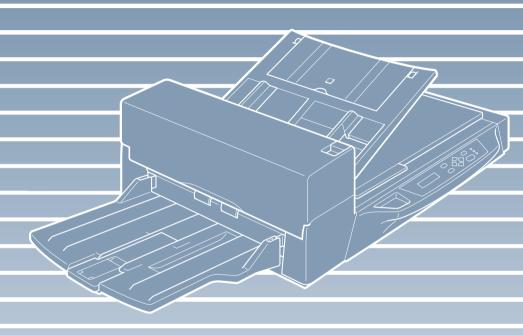




M4097D Image Scanner Cleaning and Maintenance





Note

Treatment of This Manual

READ ALL OF THIS MANUAL CAREFULLY BEFORE USING THIS PRODUCT, IF NOT USED CORRECTLY, UNEXPECTED INJURY MAY BE CAUSED TO USERS OR BYSTANDERS.

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Conventions for Alert Messages

This manual uses alert messages to prevent users and bystanders from being injured or from suffering damage to their property. An alert message consists of an alert signal and alert statements. The alert signals and their meanings are as follows.



WARNING

WARNING indicates that personal injury like pinching of fingers or hands may result if you do not follow a procedure correctly.



CAUTION

CAUTION indicates that damage to the scanner may result if you do not follow a procedure correctly.



A NOTE provides "how-to" tips or suggestions to help you perform a procedure correctly.

Preface

This manual explains how to clean and maintain the M4097D image scanner.

The M4097D is a highly functional image scanner developed for volume filing, using charge-coupled device (CCD) image sensors. This scanner features duplex scanning and high quality image processing with an automatic document feeder (ADF).

Refer to the Operator's Guide for basic information about the M4097D.

Edition	Date published	Revised contents	
01	February, 2000	First edition	
02	February, 2000	Second edition	
03	June, 2000	Third edition	
04	October, 2002	Manual code changed	
Specification No. P3PC-E492-04EN			

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|--|

DESCRIPTION

CHAPTER 2

CLEANING

CHAPTER 3

REPLACEMENT OF PARTS

CHAPTER 4

TROUBLESHOOTING



DESCRIPTION

This chapter describes units, assemblies, indicators and LED functions.

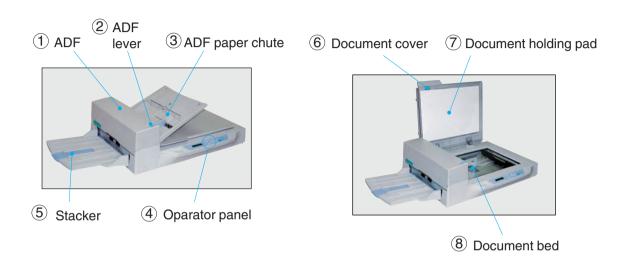
Units

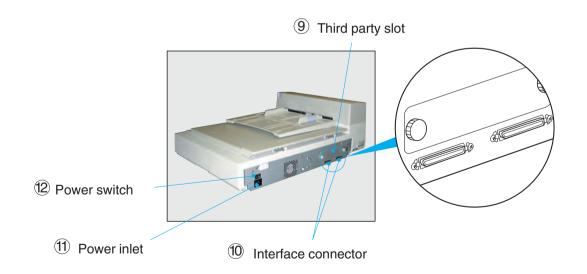
Assemblies

Operator Panel

Panel Display

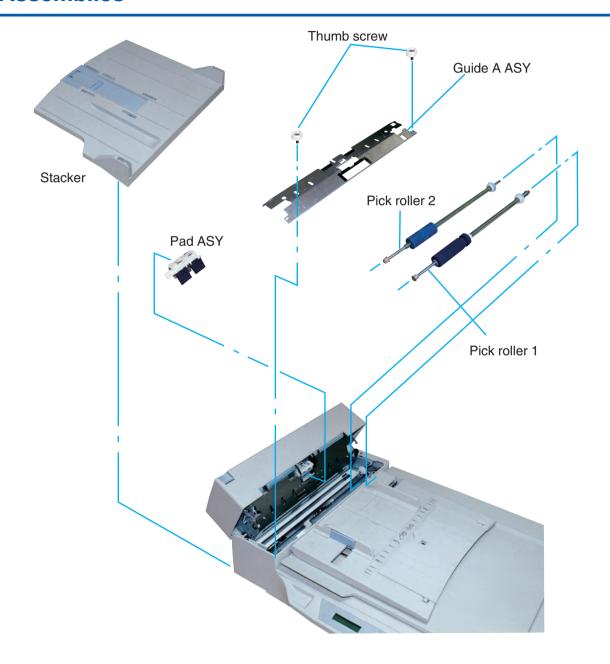
Units





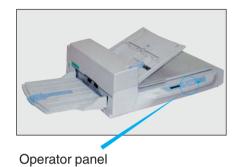
Nº	Function
1	Automatically feeds documents to the reading position.
2	Opens/closes the ADF to enable the removal of documents jammed in the feeder.
3	Holds the documents to be fed by the automatic document feeder (ADF).
4	Contains indicator panel that indicates scanner status.
5	Stacks the read documents.
6	Closes over and keeps in place the document to be read.
7	Presses document to the Document bed.
8	Holds document to be read. Also called Flatbed (FB).
9	A Fujitsu Video Interface Option Board is installed.
10	Connects to the host system with interface cables.
(1)	Connects to an AC power outlet with the power cable.
12	Turns the power On or Off.

Assemblies

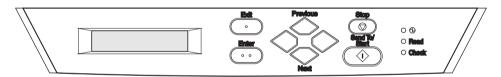


Operator Panel

The Operator panel is located on the upper right hand side of the scanner. The panel consists of an LCD (16 characters x 2 lines), LEDs, and buttons.



Arrangement



Panel Display

■ Button/LED Function

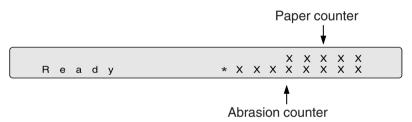
Name of the button and LED		Function		
Button	Next 🔷	Displays the next LCD screen.		
	Previous 🔷	Displays the previous LCD screen.		
	\Diamond	Moves the cursor to the left.		
	\Diamond	Moves the cursor to the right.		
	Exit	When you are entering settings on the Operator panel, pressing this button returns you immediately to the "Scanner Ready" screen.		
	Enter	Enters the parameter currently selected by the cursor.		
	Send To/ Start	Operational only when Manual start mode is set or the "Read" lamp lights; Starts the reading when video interface option is used. Some application software packages make use of this button.		
	Stop	When the "Check" LED lights, pressing this button releases the error status (turns off "Check" and returns to the "Scanner Ready" screen). Operational only during the reading operation; stops the reading when the video interface option is used. Also turns off the "Check" lamp.		
LED	0	Indicates that the scanner is On.		
	Read	Indicates the scanner is reading or ready to read.		
	Check	 If lit, this indicates that an alarm occurred. Pressing the "Stop" button turns the "Check" lamp Off. If it blinks at one second intervals, this means that a jam or double feed has been detected. If the problem is jammed paper, removing the jammed paper turns off the "Check" lamp. If the problem is double feed, pressing the "Stop" button turns off the "Check" lamp. If it blinks at four seconds intervals, this means that cleaning the ADF is necessary. 		

Counter Display

Batch counter and Abrasion counters are shown bellow:



Simultaneously press the both \Diamond (Left) and \Diamond (Right) button for at least one second, to switch to the Life counter panel display as shown bellow:



To return from "Fig.2" to "Fig.1", press the both \bigcirc (Left) and \bigcirc (Right) button for at least one second.

Counter	Function		
Paper counter	When the button is pressed	The paper counter counts the number of scanned sheets from the start of reading until Paper Empty or an error is detected. The counter is automatically reset at the start of reading. The counter is used for checking the number of the sheets scanned in one batch.	
	When the \diamondsuit button is pressed	This counter increments each time a document is scanned. It is not initialized until the power is turned off. The counter can be used, for example, for checking the number of sheets that have been scanned in one day.	
Abrasion counter	The abrasion counter counts the accumulated number of scanned sheets. This counter increments every 10 sheets. It is useful to check the cleaning cycle or the parts replacement cycle. How to reset it is described in Chapter 6.		
Life counter	keeps a cumulative count of the number of scans made after shipping. This counter is increased by one per sheet and may be used to estimate of the device's remaining scan life. This counter cannot be reset.		



When the counter value is 0, no number is displayed.

Operation status

The operation status is indicated by the following messages:

<Not Ready>

Warming — up Now!!

<Reading>

Now Reading!

<Waiting for Start>

Start SW ON!

The scanner displays the following screen when waiting for the Start button to be pressed:

(Only When the Video Interface Option is installed.)

<Reading>
(Cleaning request)

When the Pick roller cleaning is necessary, the scanner displays the following on the upper line:

Clean ADF Glass Now Reading!

When the ADF glass cleaning is necessary, the scanner displays the following on the LCD:

Clean Pickroller Now Reading!

Clean the Pick roller or the ADF glass in accordance with the manual, "Cleaning and Maintenance".

<Power-on>
(Preparing the print cartridge)

Please prepare a new Ink

<Waiting>

When the messages of LCD on the Operation panel disappears and the Power LED lamp lights, the scanner is in Low power mode.



One of the following will wake up the scanner:

- Pressing any button.
- Setting the paper on the ADF.
- Sending a command from the host computer.

<Reading>
(Preparing the print cartridge)

Please a new Ink Now Reading!

<Waiting>
(Pick roller cleaning request)

Clean Pickroller Ready xxxxx0

<Waiting>
(ADF glass cleaning request)

Clean ADF Glass Ready xxxxx0

<Waiting>
(Pick roller and ADF glass cleaning request)

Clean Pickroller Clean ADF Glass

Temporary error

<Hopper empty>

Paper Empty

This message is displayed if there is no more paper on the ADF paper chute during a read operation in ADF mode. Fill the ADF paper chute with paper. To enable the read operation, press the stop button.

<Jam>

Paper Jam

This message is displayed if a document is jammed in the ADF. See the "Cleaning and Maintenance" manual for removing jammed documents.

<ADF cover open>

ADF-Cover Open

This message is displayed when the ADF detects the Double feed error. Check the document and re-scan the document.

<Double feed error>

Double Feed

This message is displayed if the ADF is not closed completely. Close the ADF completely, and enable the read operation.

<Waiting>
(When double feed occurs)

Double Feed xxxx Ready xxxxx0

<Reading>
(When double feed occurs)

Double Feed Now reading! <Hopper empty error> (When the double feed error is displayed)

Double Feed Paper Empty

<Ink cartridge empty error>

No Ink Cartridge

<Print disition/document error> (Paper empty)

Print Alarm

Alarm

One of the following messages is displayed if an error occurs in the scanner. If one of the following error messages is displayed, turn the power Off and then On again. If the same message is displayed, contact your service representative.

<optical alarm="" front=""></optical>	Front Side Optical Alarm
<optical alarm="" back=""></optical>	Back Side Optical Alarm
<fb alarm="" mechanism=""></fb>	Flatbed Mechanical Alarm

When the total number of sheets scanned by the ADF is less than 100, the message above and the message below are displayed alternately. Remove the bracket (Shipping Lock) that holds the carrier in place.

in place.	
	Check Shipping Lock
<motor alarm="" fuse=""></motor>	
<inotor alarm="" ruse=""></inotor>	Motorfuse Alarm
<lamp alarm="" fuse=""></lamp>	

Lampfuse

Alarm

<lmage alarm="" transfer=""></lmage>	Img Trans Alarm
<memory alarm=""></memory>	Memory Alarm
<eeprom alarm=""></eeprom>	Img Trans Alarm
<fan alarm=""></fan>	FAN Alarm
<ipc alarm="" board=""></ipc>	SCSIfuse Alarm
<imprinter error=""></imprinter>	Imprinter Alarm
<adf chute="" error=""></adf>	ADF Chute Alarm
<self-diagnostic error=""></self-diagnostic>	

1-14



This chapter describes cleaning supplies, areas that require cleaning, and procedures for cleaning the ADF and the flatbed.

Cleaning Supplies and Areas Requiring Cleaning

Supplies

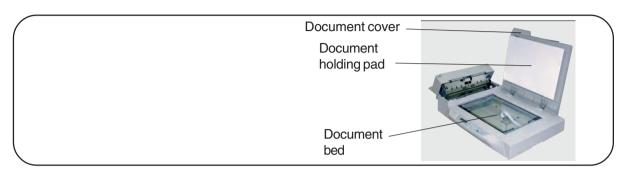
Areas Requiring Cleaning

Cleaning the ADF

Cleaning the Flatbed

2-1

Cleaning Supplies and Areas Requiring Cleaning



Supplies

Cleaning Supplies	Type No.	Frequencies (*1)(*3)	Remarks
Cleaning sheet	Contact your	Every 5,000 sheets	
	_ dealer or		
Cleaner F2	distributor	• Plastic rollers (*2)	1 bottle
			Apply Cleaner F2
			to cotton swab.
Cleaner F1 or Isopropyl alcohol		PAD assembly	1 bottle.
Isopropyl alcohol		Every 5,000 sheets	Apply Cleaner F1
		Pick roller/Feed rollers/	to cloth.
		Glass/Sheet guide	
		Every 5,000 sheets	
Cotton swab			
Dry cloth			

^{*1} If the display on the operator panel shows "Please clean Pick-roller", then clean it regardless of the frequencies recommended here.



CAUTION

*2 Do not clean the rubber rollers with cleaner F2.

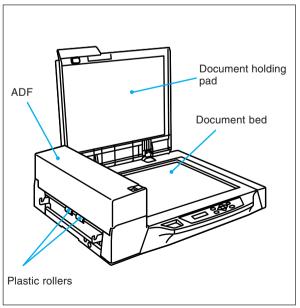


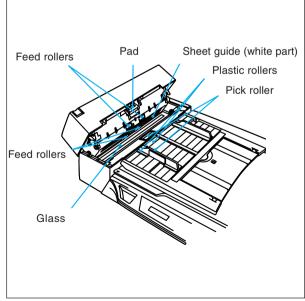
When the following paper types are used, it may be necessary to clean more frequently:

- Paper with a smooth surface, such as coated paper.
- Paper almost entirely covered with printing.
- Paper with special chemical coatings, such as carbonless paper.
- *3 Refer to the Abrasion counter on the Operator panel to estimate when the next cleaning is necessary.

Areas Requiring Cleaning

Area	Name	Cleaning paper with Cleaner F1	Dry cloth with Cleaner F1	Cotton swab with Cleaner F1 or F2
Flatteral	Document holding pad		0	
Flatbed	Document bed		0	
ADF	Pad	0	0	
	Glass/Sheet guide	0	0	
	Pick roller	0	0	
	Plastic rollers	0	0	0
	Feed rollers	0	0	
	Pick Arm Rollers		0	0



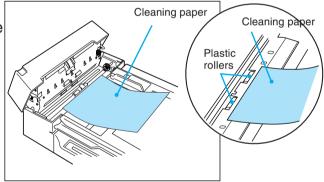


Cleaning the ADF

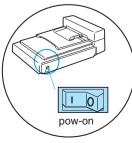
- Cleaning the ADF with cleaning paper
- Pull the ADF lever to open the ADF.
- Apply cleaner F1 to a new piece of cleaning paper.



Place the cleaning paper on the ADF so that the edge of the short side touches the Plastic roller.



- Close the ADF and turn the power on to start the cleaning.
- Turn the power off.
- Repeat steps 1 through 5.





Cleaning the ADF with a Dry cloth or a Cloth with Cleaner F1

- Pull the ADF lever to open the ADF.
- Use a dry cloth or a cloth moistened with Cleaner F1 to softly remove dirt and dust as follows.

Pad assembly:

Wipe the pad in a downward direction (as indicated by the arrow). Be careful not to catch the Pick spring when wiping.

Glass:

Wipe the glass lightly.



NOTE

If the glass is dirty, the image may include black vertical stripes.





Pick roller:

Wipe the roller.

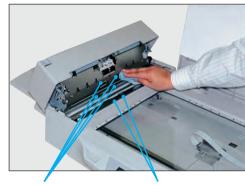
Be careful not to damage the surface of the roller and the mylar strip above the Pick roller. Pick rollers



Feed rollers and Plastic rollers:

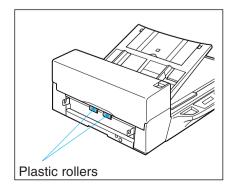
Wipe the rollers.

Be careful not to damage the surface of the rollers.



Feed rollers

Plastic rollers



Sheet guide (white part): Wipe the sheet guide.





If the Sheet guide is dirty, the front image may show vertical stripes.



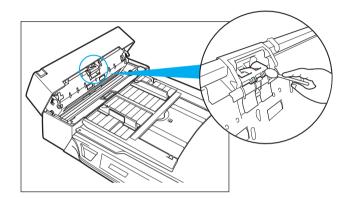


Close the ADF to lock the ADF lever.



Cleaning the Pick Arm Rollers

- Pull the ADF lever to open the ADF.
- Moisten a cotton swab or Dry cloth with F1 or F2 Cleaner.
- Wipe the small Plastic rollers at the tip of the Pick Arm.
- Wipe the small Plastic rollers and the Pick Arm with a clean, dry cloth to dry them.





When non-carbon paper is used, the Pick Arm rollers may become dirty with a black substance. Use Cleaner F2 to remove the contamination.

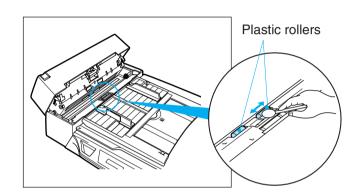


CAUTION

- 1. Don't wipe the pad rubbers with the F2 cleaner.
- 2. Don't apply the F2 cleaner to the pad rubber.

Cleaning the Plastic rollers with Cleaner F2

- Pull the ADF lever to open the ADF.
- Moisten a cotton swab with Cleaner F2.
- Wipe the Plastic roller surfaces.

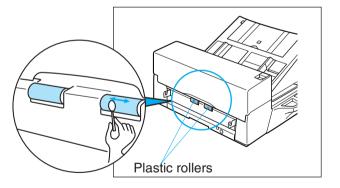




CAUTION

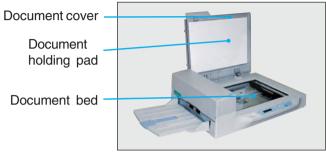
Don't wipe the Pick Rollers with a cotton swab using cleaner F2.

Wipe the Plastic roller surface with a clean, dry cloth. Allow it to dry.



Cleaning the Flatbed

Cleaning the Flatbed with a Cloth and Cleaner F1





Window or glass cleaner can be used instead of cleaner F1. However, do not use organic solvents.

- Open the Document cover.
- Apply Cleaner F1 to a clean cloth.
- Wipe the Document holding pad and the Document bed.
- Allow them to dry.





NOTE

Be sure to prevent liquid from seeping through the opening between the Document bed and the plastic cover.



REPLACEMENT OF PARTS

This chapter describes how to replace the pad assembly and the pick roller.

Pad Assembly

Pick Roller

Pad Assembly

ADF lever Pad ASY (PA03951-0151)





The life span of the pad assembly is about 100,000 sheets or one year. Use the Abrasion counter on the Operator panel to estimate when the Pad assembly needs replacement. The life span may be decreased by as much as half when carbonless paper is read frequently.



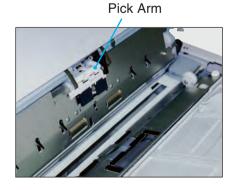
CAUTION

Turn off the power before replacing the Pad Assembly.



- Pull the ADF lever to open the ADF.

Push the Pick Arm carefully.



Slide the Pad Assembly to the left and pull it towards you. Then, being careful not to hook the Pad spring, remove the Pad Assembly.



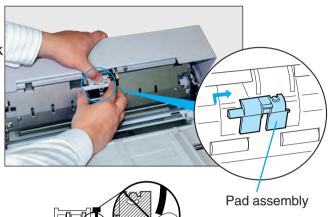
NOTE

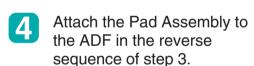
Hold both ends of the Pad assembly as shown in the left photo.



CAUTION

Don't hold the sensor arm with the Pad assembly.

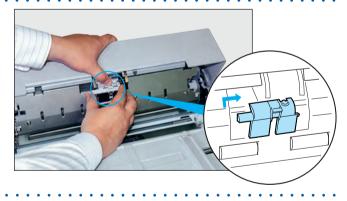






NOTE

Fit the Pad assembly pin into the larger hole, then slide it to the right until it stops.



Glose the ADF.



Pick Roller

Pick rollers (PA03951-0153) (Two rollers are included)





The life span of the Pick roller is about 200, 000 sheets or one year. Use the Abrasion counter on the operator panel to estimate when the Pick roller needs replacement. The life span may be decreased by as much as half when carbonless sheets are frequently read.

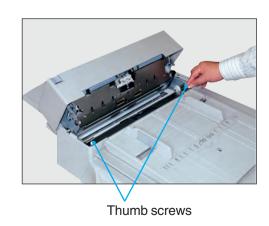


WARNING

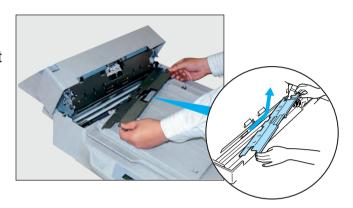
Turn off the power before replacing the Pick Rollers.

- Pull the ADF lever to open the ADF.
- Remove the two Thumb screws.
- . NOTE

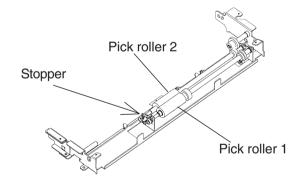
Use a Phillips screwdriver if they are tight.

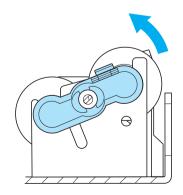


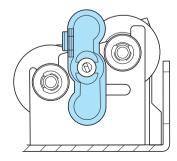
With both hands, lift up Guide A and disengage its tip from the right hole. Then lift the right side of the cover and remove it.



To remove the Pick rollers, turn the stopper counter-clockwise.

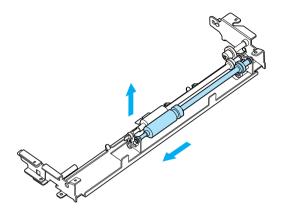




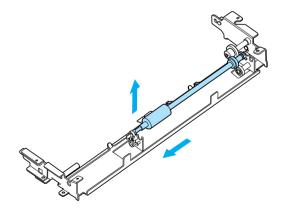


Position for Replacement

To remove the Pick roller 1, move it to the left and then lift it.

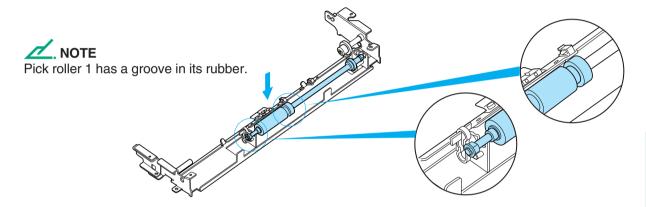


Immediately after removing the Pick roller 1, remove the Pick roller 2 in the same way.

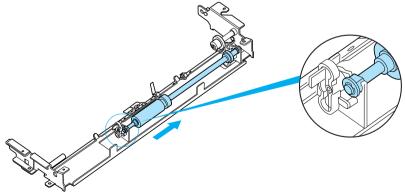




To attach the new Pick rollers, place Pick roller 1 from the right side above the bearing for Pick roller 1.



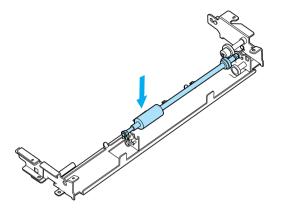
Put the shaft of Pick roller 1 into the bearing. Then, slide Pick roller 1 toward the right side.



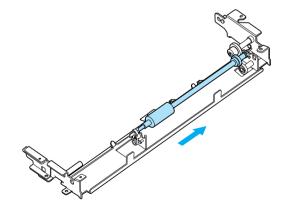


Make sure that the shaft is securely fixed to the bearings.

Attach Pick roller 2, in the same way as Pick roller 1 as shown in step 7.



Then slide the Pick roller 2 toward right side.

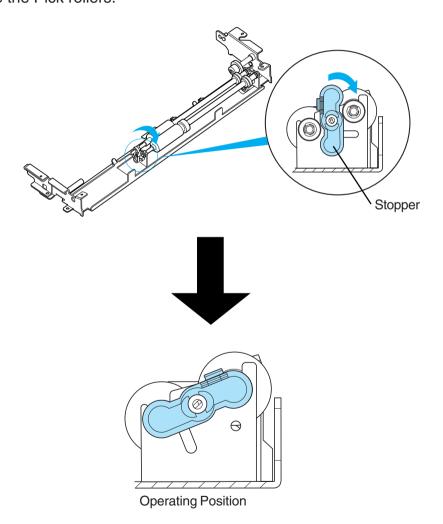


_____. NOTE

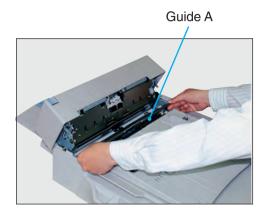
Make sure that the shaft is securely fixed to the bearings.



Turn the stopper clockwise to secure the Pick rollers.



Attach Guide A in the reverse sequence of step 3 and align the screw hole. See the graphic on page 1-4.



- Tighten the thumb screws.
- Close the ADF unit.



Thumb screws



TROUBLESHOOTING

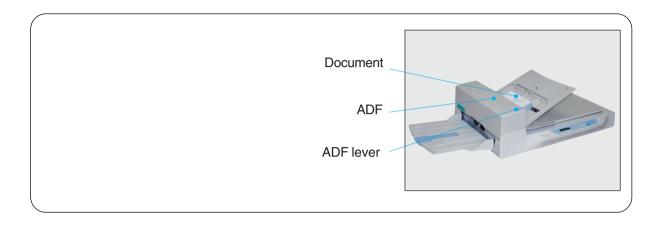
This chapter describes how to clear paper jams and run initial checks. It also contains a Problem Checklist that should be completed before you call a service representative.

Clearing Paper Jams

Initial Checks

Problem Checklist

Clearing Paper Jams



- Remove all the documents from the ADF paper chute.
- Pull the ADF lever to open the ADF.
- Remove the jammed document(s).

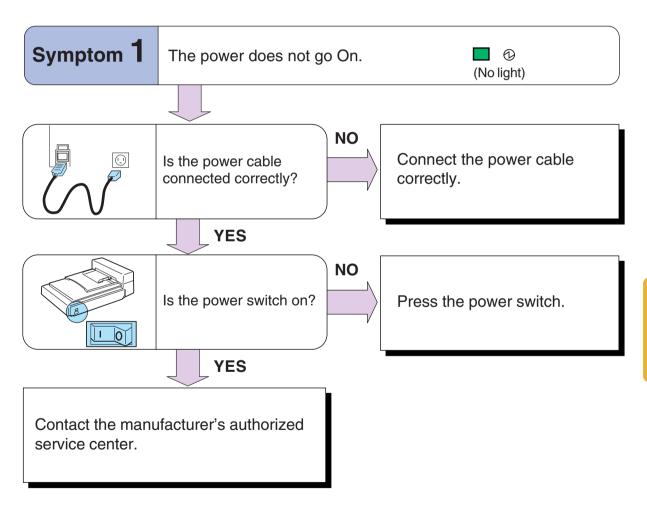


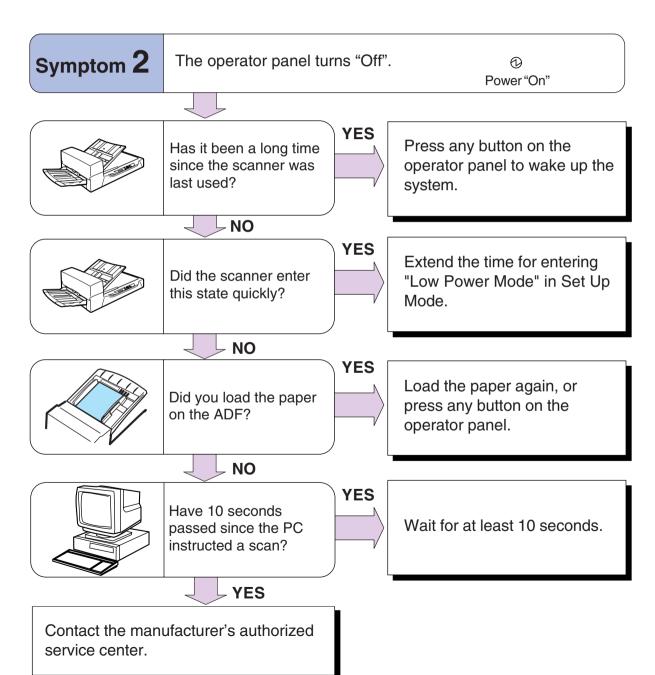
// NOTES

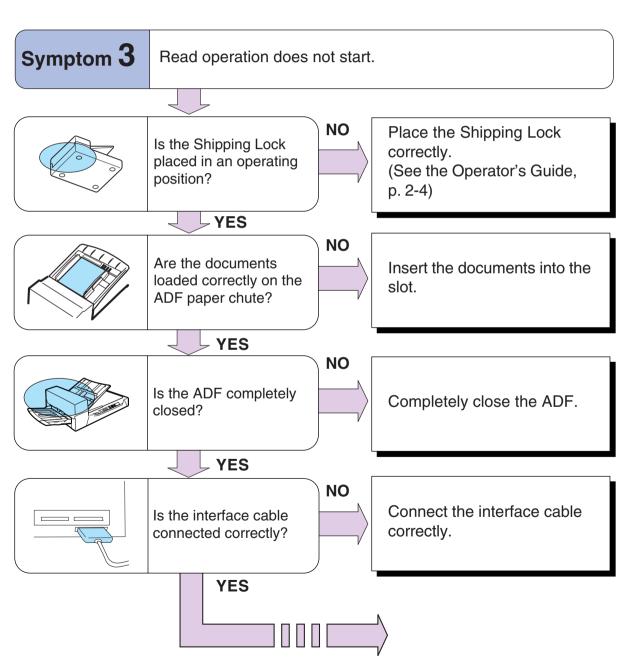
- Inspect the paper and the paper path. Make sure no staples, paper clips or other materials caused the jam. All staples and paper clips should be removed from all documents before scanning.
- Be careful not to pull the pad spring while removing a jammed document.
 - Close the ADF so that the ADF lever locks.

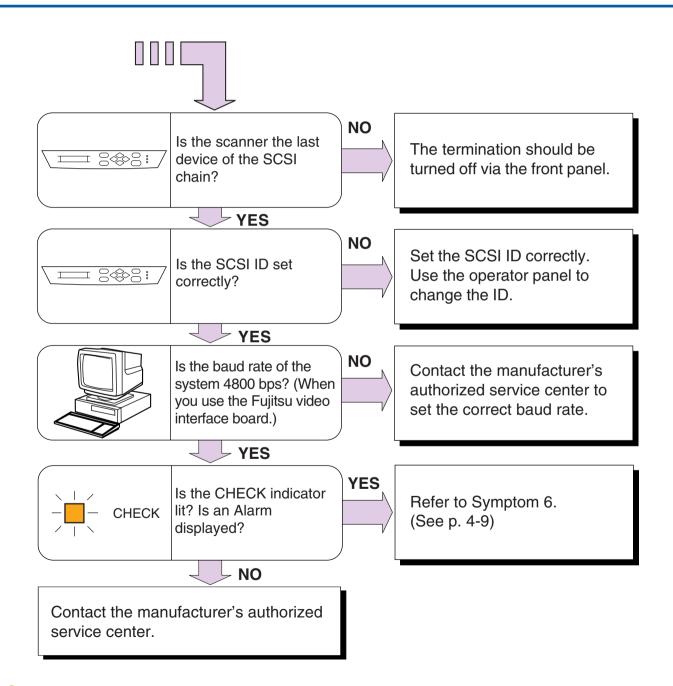
Initial Checks

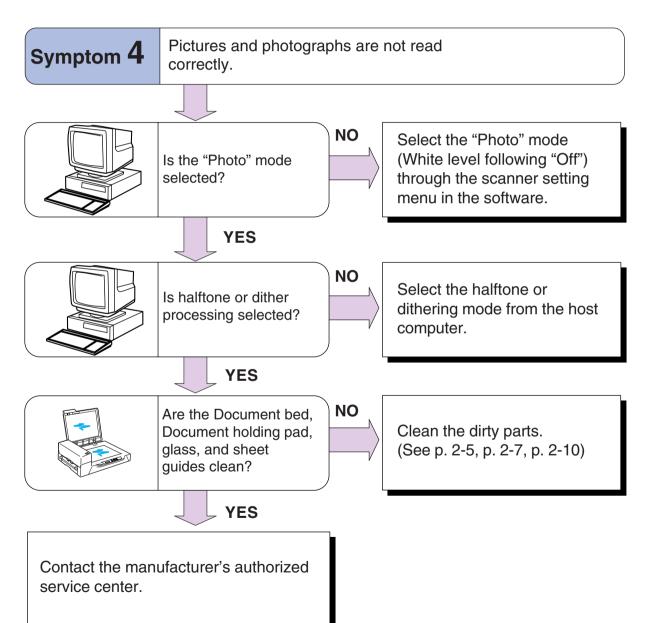
If a problem occurs, check the following items before contacting the manufacturer's authorized service center.

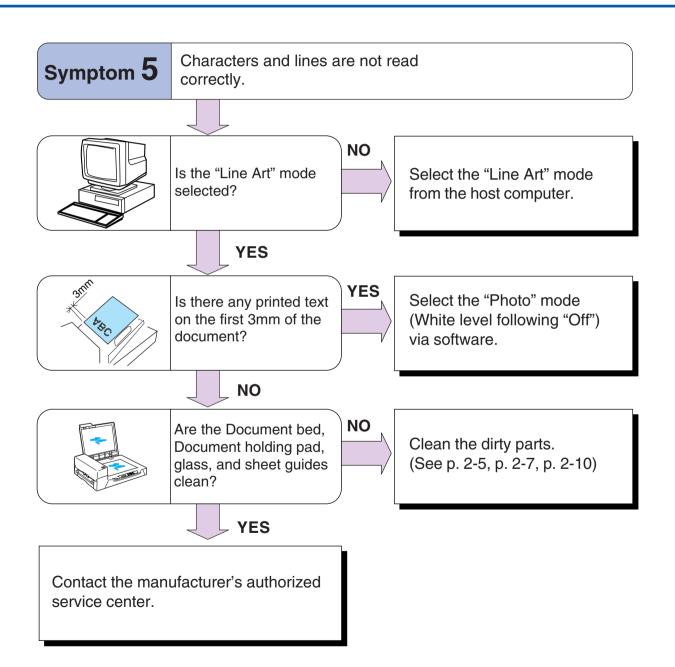


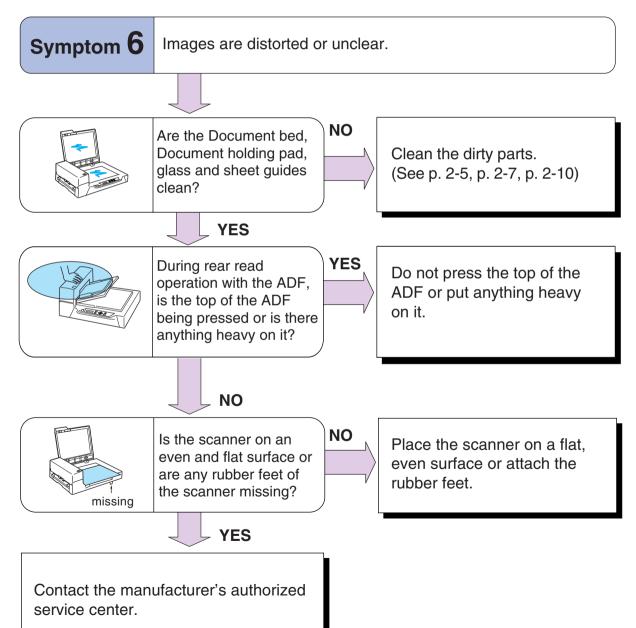


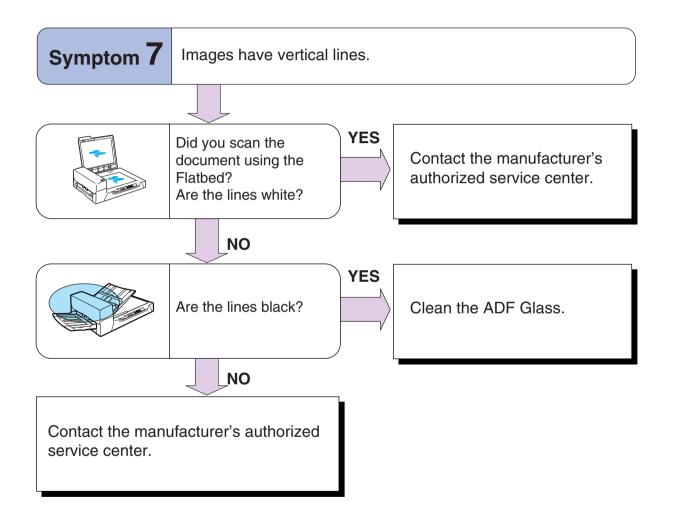


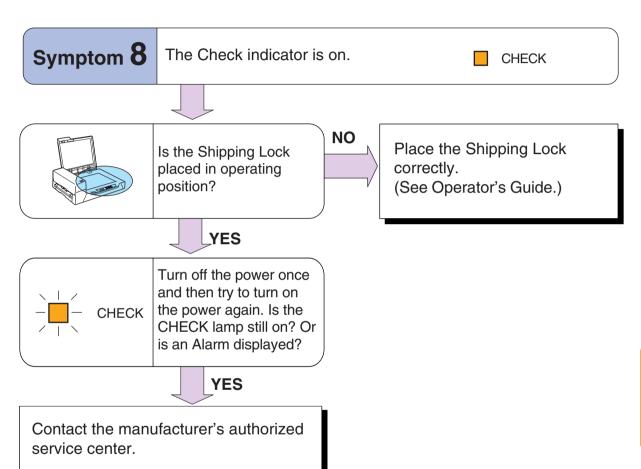


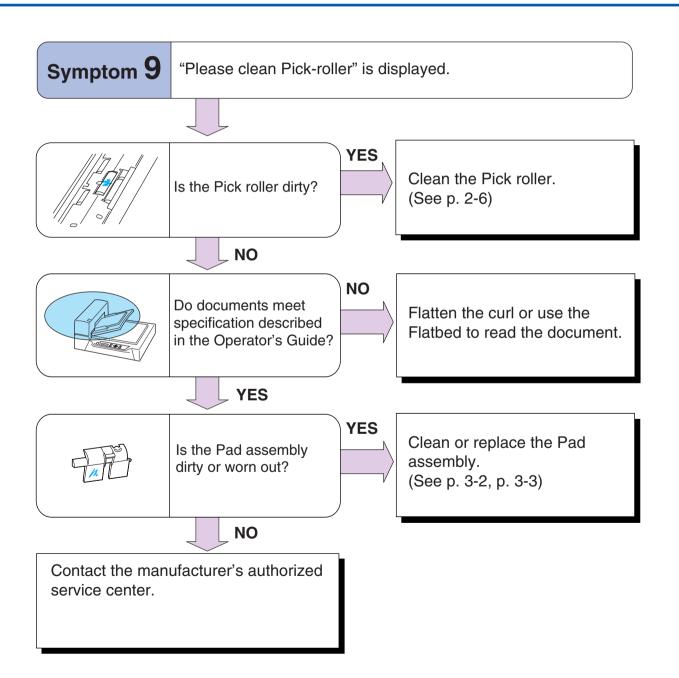






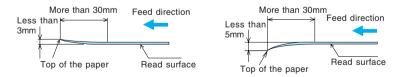




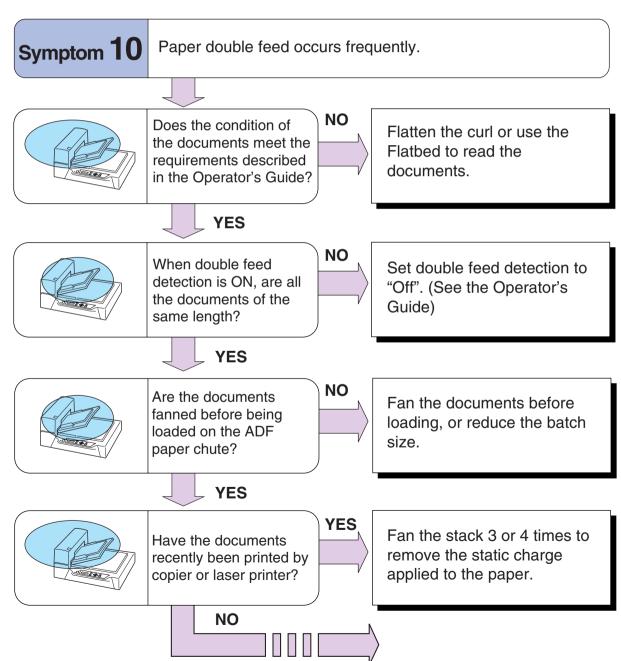


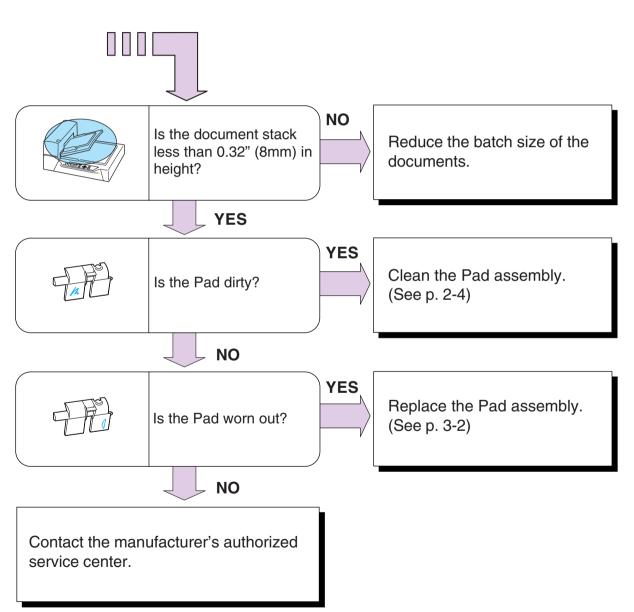
NOTES

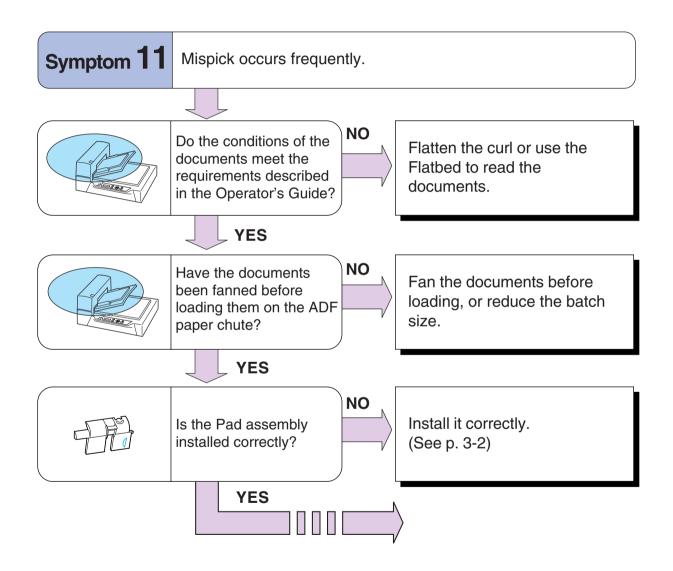
- Remove paper clips and staples. Flatten the staple holes.
- A preliminary document feed test may be necessary to avoid unexpected errors.
 - Paper with clips or staples.
 - Paper with wet ink.
 - Paper of uneven thickness (for example, envelopes).
 - Paper with large rumples or curls.
 - Paper with folds or tears.
 - Tracing paper.
 - Coated paper.
 - Carbon paper.
 - Paper smaller than A6 size or wider than A3.
 - Materials other than paper (for example, cloth, sheet metal, or OHP film).
 - Photographic paper.
 - Paper with perforations on its sides.
 - Non-rectangular paper.
 - Very thin paper.
- The leading edge of all documents fed by the ADF should be straightened so the curl of the paper meets the specifications below:

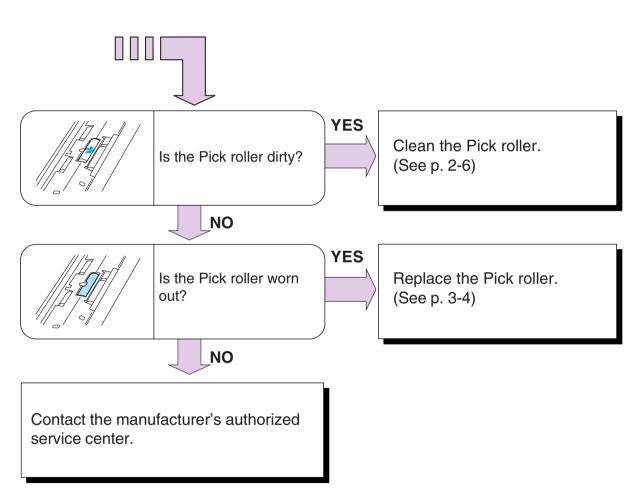


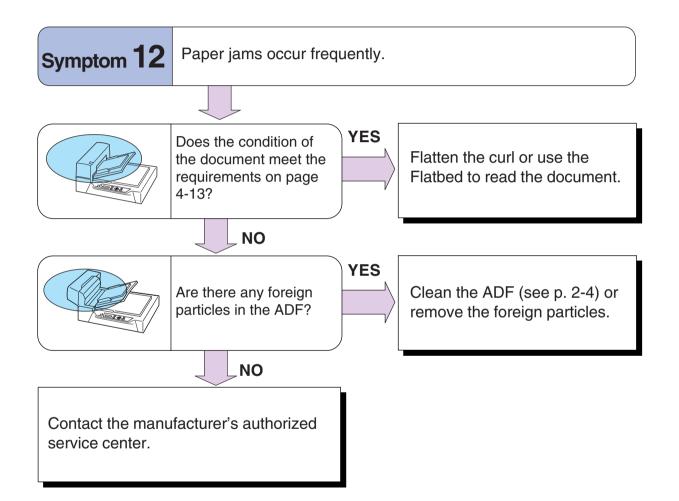
· Do not mix documents of different widths.

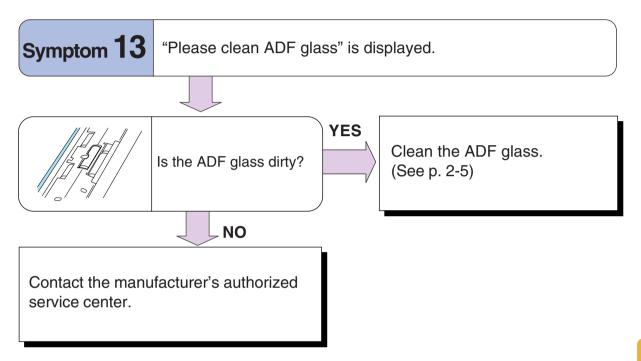












Problem Checklist

Before contacting the manufacturer's authorized service center, please fill in the following items.

General	
Model	(Example) M4097D
Part number	(Example) CA02956-2300
Serial number	(Example) 00002
Manufactured data	(Example) 2000-2
Revision	The revision is printed on the label
A 0±23456789	located at the left corner of the back.
B 01123456789	The revision is indicated by the double line.
C 0123456789	This example shows the revision A2.
Date of purchase	
Symptoms	
Persistent problem?	
Serviced before (when and how)?	
Error status	
Transport error	
Type of document.	
What is your daily usage?	
Date of last cleaning.	
Date of the consumable replacement.	
Image error	
Interface controller model	
Software/application name	
Can you send the original and output of sheet by facsimile or by mail?	

FUJITSU