

Troubleshooting

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Troubleshooting Process

The troubleshooting process is a systematic approach that addresses the major problems first and then other problems as you identify the causes for printer malfunctions and errors. The Troubleshooting Process, Figure 7-1, on the following two pages, illustrates the major steps for troubleshooting the printing system. Each heading depicts a major troubleshooting step. A **YES** answer to the questions allows you to proceed to the next major step.

A **NO** answer indicates that additional testing is needed. Proceed to the referenced location and follow the directions for that area. After completing the additional testing, proceed to the next major step.

The following list describes the basic questions for the customer and the corresponding troubleshooting step to help you quickly define the problem(s).

Display Page 7-9	Does the display panel indicate Ready, Offline or PowerSave? Contains the procedures for correcting control panel messages and displaying and correcting error log codes.
Configuration Page 7-10	Will the printer print configuration pages successfully? Contains the procedures for printing the configuration pages, and evaluating and correcting system configuration.
Image Quality Page 7-15	Does the print quality meet customer expectations? Contains the image quality comparison tables, cleaning procedures, toner cartridge checks, and High-voltage Power Supply checks.
Error Log Page 7-17	Are there recurring problems in the error log? Contains information about printing the error log and evaluating the error history.
Communication Page 7-19	Can the customer print from the host system successfully? Describes how to determine if the printer is communicating properly with the host system.
Verification Page 7-21	Will the printer print from all sources to all destinations, and have all of the errors in the errorlog been addressed? Contains procedures for verifying the overall printer system operation.
Reference Page 7-23	Contains detailed reference material such as the complete error code list, system schematics, a list of miscellaneous problems and solutions, and a list of all system sensors and their functions.

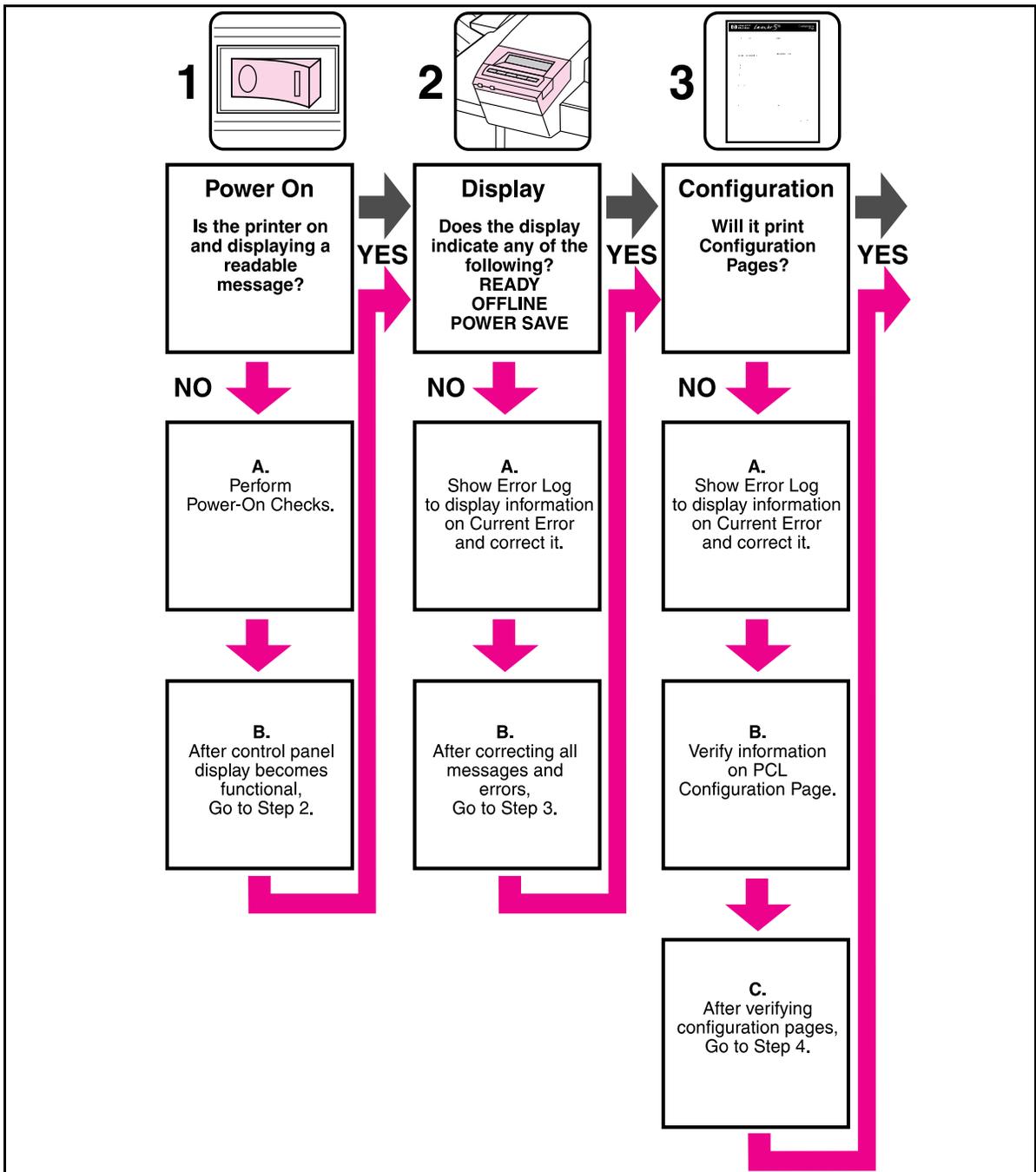


Figure 7-1 HP LaserJet 5Si / 5Si MX / 5Si Mopier Troubleshooting Process

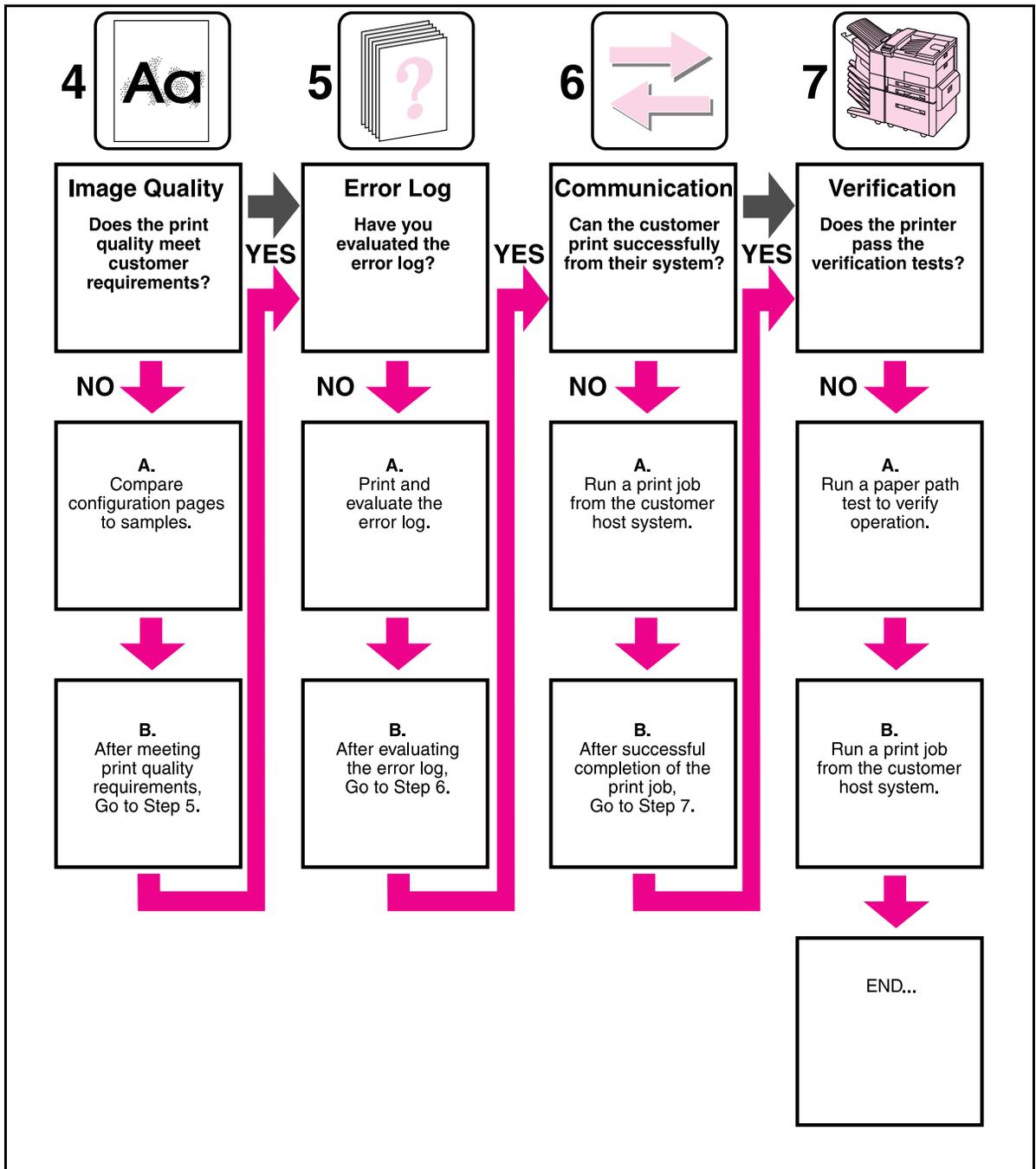


Figure 7-2 HP LaserJet 5Si / 5Si MX / 5Si Mopier Troubleshooting Process

Power-On

Overview

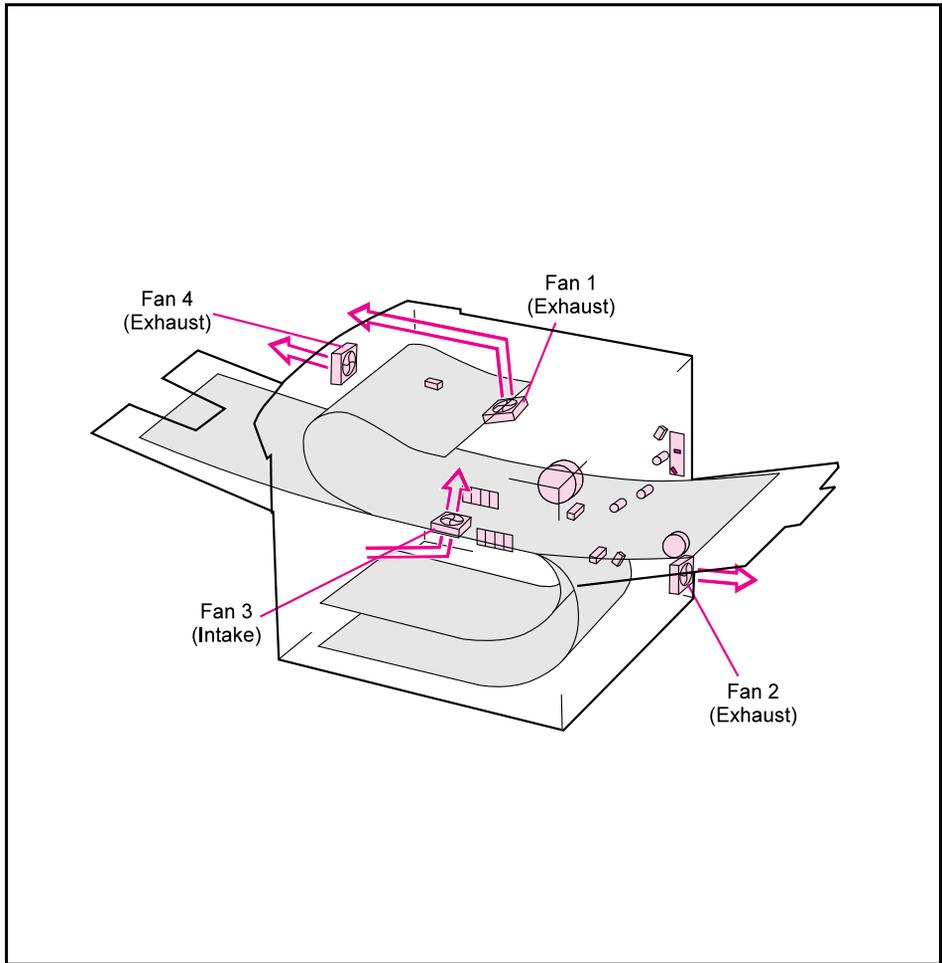
It is important to have the printer's Control Panel functional as soon as possible in the troubleshooting process so that the printer's diagnostics can assist in locating printer errors.

Table 7-1

Power-On

Problem	Action
1. Is AC power available at the printer's power receptacle?	Verify. See Table 1-7.
2. Is the printer's ON/OFF switch set to ON?	Push the switch to the ON position.
3. Are the printer's fans on? Ensure that the printer is not in PowerSave mode (See Figure 7-3 to locate the fans.)	Note: Fan operation is significant since all fans are controlled by the printer's DC Controller PCA. Operational fans indicate: <ol style="list-style-type: none">1. AC power is present in the printer.2. DC power supply is functional (both 24vdc and 5vdc are being generated).3. DC Controller PCA's micro-processor is functional.
NO	If the fans are NOT working, turn off the printer and remove the printer's Formatter PCA. Disconnect all the printer's paper handling options. Then turn on the printer and check the fans again. If the fans are still not working, perform the following steps: <ol style="list-style-type: none">1. Verify that all fans are connected to the DC Controller PCA according to Figure 7-332. Replace the low-voltage DC power supply.3. Replace the DC Controller PCA.
YES	If the fans are working but the printer's Control Panel is blank, print an engine test. See the section titled "Engine Test." If the engine test was successful, perform the following steps: <ol style="list-style-type: none">1. Reseat or replace the cable from the Control Panel which is connected to J203 of the DC Controller PCA (see Figure 7-35).2. Replace the printer's Formatter PCA.3. Replace the Control Panel assembly. If the engine test was not successful, verify that no paper is in the paper path. Retry the engine test. If the engine test is still unsuccessful, replace the DC Controller PCA.

Figure 7-3



Fan Location and Airflow

Note

When the printer is in PowerSave mode, the fans are off.

Table 7-2

Fans

Fan Number	Fan Name	Fan Location
1	Laser/Scanner fan	Exhaust air flows from the back of the printer, on the left-hand side of the fusing assembly.
2	Low-voltage Power Supply	Lower right-hand corner of the printer.
3	Formatter (intake)	Intake fan directly above the input power receptacle.
4	Face-down Delivery Unit	Directly above the center of the fusing assembly.

Engine Test

The engine test verifies that the print engine is functioning correctly. The Formatter PCA is completely bypassed during an engine test. This test is very useful for isolating printer problems. The engine test prints a full page of horizontal lines across the entire printable area, and is also useful for checking and adjusting registration. The engine test prints from Tray 3 only, and can be activated with the Formatter PCA removed.

Note

Tray 3 **must** be installed and loaded with paper to perform an engine test. Also, ensure that the EP toner cartridge is installed in the printer.

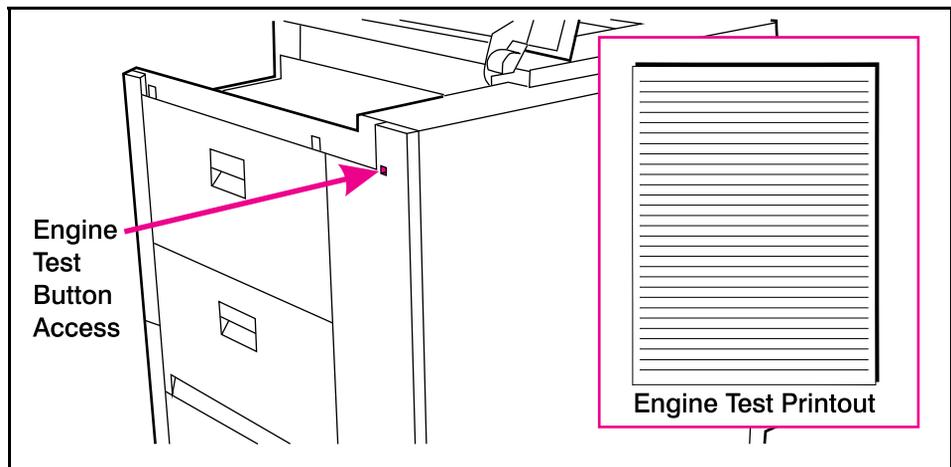
Engine Test Button Location

The engine test button is located on the DC Controller PCA. It is accessible through a hole at the right rear of the printer.

Printing an Engine Test

To print an engine test, use a non-metallic object to press the engine test button (see Figure 7-4). A single test page will print.

Figure 7-4



Engine Test Button

Display

Overview

Use the printer's Control Panel to access the error log to troubleshoot the printer. With the printer's test menu, you can access the printer's error log to display more information about the current error. The error log retains the printer's last 50 error messages.

Refer to the section titled "Reference" for more information about correcting printer error log messages.

Note

The error log codes and the error on the display panel do not always correspond. The numbers in the display panel message may not be the same in the error log. Ensure that you refer to the correct number in the "Reference" section.

Display and Evaluate the Error Log

If the printer cannot print or move any paper, follow these steps to display the error log:

- 1 Press [Menu] until TEST MENU appears.
- 2 Press [Item] until SHOW ERROR LOG appears.
- 3 Press [Select] to show the error log.
- 4 Press + to scroll through the error log.
- 5 Write down the error messages. For example:

```
50 13.59.11 52700  
EXTERNAL INPUT DEVIC
```

Error Log on Display Panel

```
13.11 PAPER JAM
```

Display Panel Message

50 = Error Number
13.59.11 = Error Log Code
52700 = Page Count

- 6 Check the error log for specific error trends in the last 10,000 printed pages.
- 7 Ask the customer for any observed error trends.
- 8 Record any specific error trends, and review the "Error Log Interpretation" later in this chapter.
- 9 Refer to the error log table in the "Reference" section and follow the recommended action.
- 10 If the display panel indicates any messages other than Ready, Offline or PowerSave, restart at step 1. If not, go to the next section.

Configuration

Use the configuration pages to verify the proper installation of accessories, options, and personalities. When you print the configuration pages, the printer checks its internal controller and I/O interface, then prints two pages. One shows the overall printer configuration, and the other one shows the current menu settings. Refer to Figure 7-5 and Figure 7-6 or information about interpreting the configuration page. If any of the installed devices are not shown on the configuration pages, verify that the C-Link cabling is correctly connected and functional (Figure 7-7), and that DC power is available to the paper handling devices. Check and reseal suspect cable connections. If any of the cables are replaced, you must cycle the power to have the printer recognize the device again.

To print a PCL configuration page:

- 1 Press **[Menu]** until TEST MENU appears.
- 2 Press **[Item]** until PCL CONFIGURATION PAGE appears.
- 3 Press **[Select]** to print the configuration pages.

Verify Presence of Installed Personalities and Options on the Configuration Pages

Under Installed Personalities and Options, look for options such as:

- Postscript (C3169A)
- 420 MB Disk (C2965A)
- SIMM types RAM or ROM and sizes.

Verify that the options which are physically installed in your printer are reflected in the PCL configuration page. If an installed device is not shown on the PCL configuration page, check the following table.