Continuable and Non-Continuable Error Codes

Some of the Error Codes are continuable, which means you can press **OK** on the front-panel and continue working with the Printer. Non-Continuable Error Codes do not allow you to continue working with the Printer, in this case power the Printer OFF and ON again and see if the System Error disappears. If the Error Code reappears, then the Printer requires an on-site visit in order to resolve the problem.

Even though the customer can continue working with a Continuable Error Code, an on-site visit should still be planned to troubleshoot the problem.

System Error Code Brief Descriptions

Reading a System Error Code

System Error Codes explain which component/system is failing and what action should be taken to resolve the problem.

System Error Codes are displayed directly on the front panel (but can also be seen on the Information Page) and have been defined in the format **XX.YZ**. or **XX.n:YZ.m**.

- **XX**: Can be a malfunctioning subsystem or process (2 digits).
- **n**: Subsystem or process Index (if more than one used in the product) - Optional.
  - e.g. Identify the Ink Supply (color and number).
- **Y**: Who should perform the action (1 digit) - (0 for User or1 for Service Engineer).
- **Z**: Action to perform (1 digit).

System Error Code Table

The following table explains the **XX** part of the System Error Code or Warning:

Code	Component/System
01.0	Main PCA/Electronics module
01.1	Add-on Electronics module (printmech)
01.2	Print Mech PCA
02.1	Carriage PCA
03	Power supply
06	Formatter
08	Formatter/Front panel
11	Trailing cable
21	Service station

Code	Component/System
21.1	Service station
22.0	Bongo error BPS0 (ISS Left)
22.1	Bongo error BPS1 (ISSLeft)
24	Tube assembly (IDS)
26.n	Ink Cartridge (color = n)
27	Printhead error
31	Cutter
38	Output Tray
41	Paper-axis motor
41.1	Paper-axis motor
42	Scan-axis motor
44	Aerosol fan
45	Rewinder
47	Star wheel motor
48	PPS mechanism
51	Window Sensor
52	Drop detector
55	Line sensor
56	Drive roller analog encoder sensor
61	Error job
62	PC Interface
63	Input/output through LAN card
64	Input/output through USB port
65	Input/output (not known what port)
66	Input/output (not known what port)
67	Input/output through FireWire port
68	Loss of engine counters tracking
71	Memory management
71.19	PrintMech PCA/Formatter
72	Firmware error
73	Servo
74	Firmware upgrade
74.1	Media Profile Update
75.1	Preventive Maintenance kit #1
75.2	Preventive Maintenance kit #2
75.3	Preventive Maintenance kit #3
76	Disk Full
77	Web access application

Code	Component/System
78	Borderless
78.1	Media Settings
79	Assertion (uncontrolled FW error)
79.1	Recoverable Firmware Error
81	Media advance
81.1	Media advance
84	Roll Feed
85	Media-axis encoder reading
86	Paper path
87	Scan axis
93	Ink Pumping
94	Color calibration
94.1	Profiler
95	Printhead alignment
97	Paper advance calibration

Corrective Actions Table

The following table explains the **YZ** part of the System Error Code or Warning:

Code	Recovery Action	Response
00	Replace	Possible for customer to perform action
01	Reseat/Reconnect/Clean/Adjust (manually)	
02	Calibrate/Adjust (using Automatic Process)	
03	Power OFF and Restart the Printer	
04	Upgrade System Firmware	
05	Upgrade Driver or Computer Software	
06	Add Accessory	
07	Escalate	
08	Send Plot Again	
09	Wrong Part Installed	

Code	Recovery Action	Response
10	Replace	hp qualified personnel assistance required
11	Reseat/Reconnect/Clean/Adjust (manually)	
12	Calibrate/Adjust (using Automatic Process)	
13	Power OFF	
14	Upgrade System Firmware	
15	Upgrade Driver or Computer Software	
16	Add Accessory	
17	Escalate	
18	Send Plot Again	
19	Wrong Part Installed	

System Error Codes - Full Descriptions

This sections describes each of the system error codes and warnings that could be encountered while using the printer and provides the remedial action required to solve the problem detected.

Only replace one component at a time and check if the error has gone before replacing another component. Using this procedure you will be able to determine exactly which component failed.

System Error: **01.0:YZ**

Problem Description: Communication with Main PCA failed.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Remove the formatter and reinsert it again. Ensure that it connects properly in the Main PCA connector.
   - If the System Error continues, replace the Main PCA. See Electronics Module Main PCA and PSU (T1100/T1100ps/T610) on page 6-202 or Electronics Module Main PCA and PSU (T1120/T1120ps) on page 6-205.
   - If the System Error continues, replace the Formatter. See Formatter on page 6-200.

System Error: **01.1:YZ (T1100/T1100ps/T610 ONLY)**

Problem Description: Error in the Print Mech PCA.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. If the System Error continues, replace the Main PCA. See Electronics Module Main PCA and PSU (T1100/T1100ps/T610) on page 6-202 or Electronics Module Main PCA and PSU (T1120/T1120ps) on page 6-205.
3. If the System Error continues, replace the Formatter. See Formatter on page 6-200.

System Error: **01.2:YZ**

Problem Description: Failure reading acumen chip of an Ink Supply Station.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Check that there are not two cartridges of the same color installed.
3. Perform the Ink Delivery System diagnostic test. See 7. Ink Delivery System (IDS) on page 3-36.
   - If the test finds that the ink supply is defective, replace it.
   - If the test does not find any errors, remove all the ink supplies from the ISS and reboot the printer.
4. Install the ink cardtriges with the printer booted in normal mode. Use the replacement option available from the Front Panel and install the cartridges one by one. If an error appears after installing a supply, the last supply you installed is defective. Replace it.
5. If the System Error continues, replace the Main PCA. See Electronics Module Main PCA and PSU (T1100/T1100ps/T610) on page 6-202 or Electronics Module Main PCA and PSU (T1120/T1120ps) on page 6-205.
6. If the System Error continues, replace the Left Ink Supply Station. See Left Ink Supply Station on page 6-183.

System Error: **02.1:YZ**

Problem Description: Problem with the Carriage PCA.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Check that the Trailing Cable is not damaged.
3. Check that the Trailing Cable is correctly connected between the Main PCA and Carriage PCA.

4 If the System Error continues, replace the Trailing Cable and Carriage PCA Covers. See Trailing Cable (T1100/T1100ps/T610) on page 6-102 or Trailing Cable (T1120/T1120ps) on page 6-109.

5 If the System Error continues, replace the Carriage PCA. See Carriage PCA (T1100/T1100ps/T610) on page 6-173 or Carriage PCA (T1120/T1120ps) on page 6-178.

6 If the System Error continues, replace the Main PCA. See Electronics Module Main PCA and PSU (T1100/T1100ps/T610) on page 6-202 or Electronics Module Main PCA and PSU (T1120/T1120ps) on page 6-205.

7 Replace the Carriage Assembly. See Carriage Assembly (T1100/T1100ps/T610) on page 6-116 or Carriage Assembly (T1120/T1120ps) on page 6-127.

System Error: **03:YZ**

Problem Description: Problem with Power Supply Unit.

Corrective Action: Try the following:

1 Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.

2 Perform the Electronics Module Test Diagnostic to troubleshoot the problem further. See 3. Electronics Module on page 3-21.

3 If the System Error continues, replace the Power Supply Unit (PSU). See Electronics Module Main PCA and PSU (T1100/T1100ps/T610) on page 6-202 or Electronics Module Main PCA and PSU (T1120/T1120ps) on page 6-205.

System Error: **03.0:10**

Problem Description: Battery of Real Time Clock ran down.

Corrective Action: Replace the battery:

1 Turn the printer off and unplug the cable. Unplug any network or USB cables.

2 Loosen the screws that attach the formatter to the printer with your fingers, or with the help of a flat screwdriver, and remove the formatter.

3 Locate the round, flat battery in the formatter.

4 Push the battery slightly to one side and then pull it up. A little force may be required.

5 Insert the new battery by pressing it down.

6 Insert the formatter into the printer by pressing it down, and tighten the screws.

7 Reconnect the cables and turn the printer on.

System Error: **06:YZ**

Problem Description: Failure reading/writing NVM in Hard disk.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. If the System Error continues, replace the Formatter. See Formatter on page 6-200.

System Error: **08:YZ (T1100/T1100ps/T610 ONLY)**

Problem Description: No comunication between the Front Panel and the Main PCA.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Check that the Front Panel interface cable is not damaged and is correctly connected between the Main PCA and the Front Panel.
3. Check that the connections between the Formatter and the Main PCA are not damaged and are correctly connected.
4. If the System Error continues, replace the Formatter. See Formatter on page 6-200.
5. If the System Error continues, replace the Main PCA. See Starwheel Assembly on page 6-208.
6. If the System Error continues, replace the Front Panel. See Front Panel on page 6-47.

System Error: **08:YZ (T1120/T1120ps ONLY)**

Corrective Action: The LEDs of the formatter (visible through the cover) and the power supply can help you troubleshoot a problem when the Front Panel is blank.

The following image shows the Power Supply LED, looking through the cover.

The following image shows the Formatter LEDs, which should be marked 1, 2, and 3.

Use the following table to interpret the LEDs and find the source of the problem. Remember that you should read these LEDs when you push the **Power** button.

Some combinations may require the replacement of two or more components. In this case, always replace one component at a time. Test the printer to see if the problem has disappeared (check the LEDs again). If the same LED sequence continues, replace the next component indicated in the table.

	Power supply LED	Formatter 1 LED	Formatter 2 LED	Formatter 3 LED	Front panel status	Part to change
1	Off ○	Off ○	Off ○	Off ○	Off ○	Power supply Page 6-205
2	On ●	Off ○	Off ○	Off ○	Off ○	Main PCA Page 6-205
3	On ●	On ●	Off ○	Off ○	X	Formatter Page 6-200
4	On ●	*Flashing*	Off ○	Off ○	X	Hard Disc Drive Page 6-200
5	On ●	On ●	*Flashing*	Off ○	X	Hard Disc Drive Page 6-200
6	On ●	On ●	On ●	Off ○	X	**1.** Formatter Page 6-200 **2.** Main PCA Page 6-205
7	On ●	On ●	On ●	*Flashing*	X	Main PCA. Page 6-205

8	On	On	On	On	X	**1.** Front Panel Page 6-47 **2.** Formatter Page 6-200 **3.** Main PCA Page 6-205 **4.** Front panel cable Page 6-47
9	On	On	On	On	Off	Front Panel Page 6-47

System Error: **11:YZ**

Problem Description: Trailing Cable does not seem to be detected.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Check that the Trailing Cable is not damaged.
3. Check that the Trailing Cable is correctly connected betwen the Main PCA and Carriage PCA and make sure that the connectors in these boards are not damaged.
4. If the System Error continues, replace the Trailing Cable. See Trailing Cable (T1100/T1100ps/T610) on page 6-102 or Trailing Cable (T1120/T1120ps) on page 6-109.
5. If the System Error continues, replace the Main PCA. See Starwheel Assembly on page 6-208.
6. If the System Error continues, replace the Carriage PCA. See Carriage PCA (T1100/T1100ps/T610) on page 6-173 or Carriage PCA (T1120/T1120ps) on page 6-178.

System Error: **21:YZ**

Problem Description: Fail moving Service Station.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Check the Primer Tubes. Reconnect the power cord and power On the Printer.
2. Make sure that the Service Station path is clear. Remove any visible obstacles (e.g. screws, plastic parts, etc...) restricting the movement of the Service Station.
3. Perform the Service Station diagnostic test to troubleshoot the problem further. See 8. Service Station on page 3-42.

4 If the System Error continues, replace the Service Station. See Service Station (T1100/T1100ps/T610) on page 6-61 or Service Station (T1120/T1120ps) on page 6-65.

5 If the System Error continues, replace the PrintMech PCA. See PrintMech PCA (T1100, T1100ps, T610 ONLY) on page 6-73.

System Error: **21.1:YZ**

Problem Description: Fail moving the Primer Motor of the Service Station.

Corrective Action: Try the following:

1 Remove the Right Cover and make sure the cables from the Printmech PCA to the Service Station are connected and are not damaged (T1100/T1100ps/T610 ONLY).

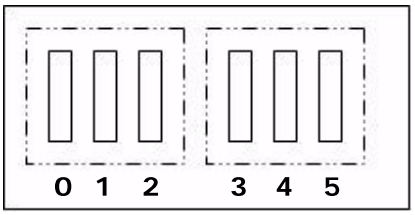
2 Perform the Service Station diagnostic test to troubleshoot the problem further. See 8. Service Station on page 3-42.

3 If the System Error continues, replace the Service Station. See Service Station (T1100/T1100ps/T610) on page 6-61 or Service Station (T1120/T1120ps) on page 6-65.

4 If the System Error continues, replace the PrintMech PCA. See PrintMech PCA (T1100, T1100ps, T610 ONLY) on page 6-73.

Warning: **2x.n:10**

Problem Description: Ink supply error found during IDS diagnostic test. The n represents the ink supply that is failing. The ink supply furthest to the left is always 0, and then they count up from left to right.



Left Ink Supplies

Corrective Action: Try the following:

- Replace the Left Ink Supply Station. See Left Ink Supply Station on page 6-183.

System Error: **22.0:YZ**

Problem Description: Left Ink Supply Station error.

Corrective Action: Try the following:

1 Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.

2 Check that the cables between the Left Ink Supply Station and Main PCA the are not damaged and are correctly connected.

3 Perform the Ink Delivery System diagnostic test to troubleshoot the problem further. See 7. Ink Delivery System (IDS) on page 3-36.

4 If the System Error continues, replace the Left Ink Supply Station. See Left Ink Supply Station on page 6-183.

5 If the System Error continues, replace the Main PCA. See Electronics Module Main PCA and PSU (T1100/T1100ps/T610) on page 6-202 or Electronics Module Main PCA and PSU (T1120/T1120ps) on page 6-205.

System Error: **22.1:YZ**

Problem Description: Left Ink Supply Station error.

Corrective Action: Try the following:

1 Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.

2 Check that the cables between the Left Ink Supply Station and Main PCA the are not damaged and are correctly connected.

3 Perform the Ink Delivery System diagnostic test to troubleshoot the problem further. See 7. Ink Delivery System (IDS) on page 3-36.

4 If the System Error continues, replace the Left Ink Supply Station. See Left Ink Supply Station on page 6-183.

5 If the System Error continues, replace the Main PCA. See Starwheel Assembly on page 6-208.

System Error: **24:YZ**

Problem Description: Ink Setup failure (you must bring purgers).

Corrective Action: Try the following:

1 Switch the Power OFF from the back of the Printer and disconnect the Power cord. Insert the new purgers, reconnect the power cord and power On the Printer.

2 Perform the Ink Delivery System diagnostic test in order to check that the bongos (pushers) go up and down to pressurize ink in the tubes and the Out of Ink sensors work properly. See 7. Ink Delivery System (IDS) on page 3-36.

3 Try purging the Ink Supply Tubes again once the Printer has been restarted.

4 If the diagnostic test does not find any problem, install new cartridges in the printer and try purging the Ink Supply Tubes again. It could be that one of the cartridges is defective.

5 If the problem persists, replace the Ink Supply Tubes. See Ink Supply Tubes (T1100/T1100ps/T610) on page 6-187 or Ink Supply Tubes (T1120/T1120ps) on page 6-193.

System Error: **31:02**

Problem Description: An error has been detected with the cutter.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Check the Cutter Assembly for blockage or any other obvious problems.
3. Replace the Cutter Assembly. See Cutter Assembly on page 6-42.

System Error: **31:03**

Problem Description: Paper is loaded. While testing the cutter, paper should not be loaded.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord.
2. Unload the media.
3. Reconnect the power cord and power On the Printer.

System Error: **41:03**

Problem Description: Media-Axis Motor failure (likely due to friction or obstacles in the media path).

Corrective Action: Try the following:

- Same as 41:YZ but after testing the issue is repeatable.

System Error: **41:YZ**

Problem Description: Electrical fault or current limit in Media-Axis Motor.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Open the Window and check for any visible obstacles restricting the movement of the Media Advance Roller. If there is a wrinkled mass of media inside the paper path, lift the Pinch wheels (using Media Lever) and clear the obstruction.
3. Perform the Paper Drive diagnostic test to troubleshoot the problem furthe. See 2. Paper Drive on page 3-18.
4. If the printer has a 44 inch scan axis (and a Rewinder), perform the Rewinder diagnostic test to troubleshoot the problem further. See 6. Rewinder on page 3-34.
5. Check that the Media Advance Drive cable is not damaged and is correctly connected to the Main PCA.
6. Replace the Media Advance Drive. See Media Advance Drive on page 6-218.

7 If the System Error continues, replace the Main PCA. See Starwheel Assembly on page 6-208.

System Error: **41.1:YZ**

Problem Description: Electrical fault or current limit in Media-Axis Motor.

Corrective Action: Try the following:

1 Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.

2 Open the Window and check for any visible obstacles restricting the movement of the Media Advance Roller. If there is a wrinkled mass of media inside the paper path, lift the Pinch wheels (using Media Lever) and clear the obstruction.

3 Perform the Paper Drive diagnostic test to troubleshoot the problem furthe. See 2. Paper Drive on page 3-18.

4 If the printer has a 44 inch scan axis (and a Rewinder), perform the Rewinder diagnostic test to troubleshoot the problem further. See 6. Rewinder on page 3-34.

5 Check that the Media Advance Drive cable is not damaged and is correctly connected to the Main PCA.

6 Replace the Media Advance Drive. See Media Advance Drive on page 6-218.

7 If the System Error continues, replace the Main PCA. See Starwheel Assembly on page 6-208.

System Error: **42:03**

Problem Description: Scan-Axis Motor failure (likely due to obstacles in the scan axis or electrical fault).

Corrective Action: Try the following:

- Same as 42:YZ but after testing the issue is repeatable.

System Error: **42:YZ**

Problem Description: Scan-Axis Motor failure (likely due to friction or obstacles in the media path).

Corrective Action: Try the following:

1 Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.

2 Open the Window and check for any visible obstacles restricting the movement of the Media Advance Roller. If there is a wrinkled mass of media inside the paper path, lift the Pinch wheels (using Media Lever) and clear the obstruction.

3 Perform the Scan Axis diagnostic test to troubleshoot the problem further. See 1. Scan Axis on page 3-6.

4 Check that there is no obstacle preventing the Service Station from working.

5 Perform the Service Station diagnostic test to troubleshoot the problem further. See 8. Service Station on page 3-42.

6 Check that the Scan-Axis Motor cable is not damaged and is correctly connected to the PrintMech PCA.

7 Replace the Scan-Axis Motor. See Scan-Axis Motor (T1100/T1100ps/T610) on page 6-142 or Scan-Axis Motor (T1120/T1120ps) on page 6-146.

8 If the System Error continues, replace the PrintMech PCA. See PrintMech PCA (T1100, T1100ps, T610 ONLY) on page 6-73.

System Error:

44:YZ (T1100/T1100ps/T610 ONLY)

Problem Description: The 44:10 system error signifies an electrical error with the Aerosol Fan, or a connection error.

Please note that only T1100/T1100ps/T610 printers manufactured before mid-February, 2008, have aerosol fans.

Corrective Action: Try the following:

1 Did you replace the Formatter before the error occurred? Is the printer a T1100/T1100ps/T610? If so, see *If the error occurred after replacing the Formatter* below.

2 Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.

3 Check that the Aerosol Fan cable is not damaged and is correctly connected to the PrintMech PCA

4 Replace the Aerosol Fan Assembly. See Aerosol Fan Assembly (T1100, T1100ps, T610 ONLY) on page 6-71.

If the error occurred after replacing the formatter

As a design enhancement from mid February, 2008, the HP Designjet T Series printers do not include an Aerosol Fan.

A small quantity of printers manufactured after mid February, 2008, are displaying the system error 44:10 if the formatter has been replaced, because the formatter contains a previous firmware version (previous to version 6) that checks for a fan connection.

Corrective Action

Check the serial number plate which is located at the rear of the printer. If the printer was built after mid February, 2008, replace the Formatter using the following part numbers:

HP Designjet T1100 Printer: Q6683-60021 (or any formatter service kit including fw 6 or superior)

HP Designjet T610 Printer: Q6711-60024 (or any formatter service kit including fw 6 or superior)

- If the printer was manufactured before mid-February, 2008 perform the standard troubleshooting procedure above.

System Error: **45:YZ**

Problem Description: An error with the Rewinder System has been detected.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Check that the Rewinder cable is not damaged and is correctly connected to the PrintMech PCA.
3. Check that the Right Spindle Holder (rewinder included) is correctly attached to and aligned with the Right Cover.
4. Perform the Rewinder diagnostic test to troubleshoot the problem further. See 6. Rewinder on page 3-34.
5. Replace the Right Spindle Holder (rewinder included). See Right Spindle Holder and Rewinder (T1120/T1120ps) on page 6-87 or Right Spindle Holder and Rewinder (T1120/T1120ps) on page 6-87.
6. If the System Error continues, replace the PrintMech PCA. See PrintMech PCA (T1100, T1100ps, T610 ONLY) on page 6-73.

System Error: **47:03**

Problem Description: Star wheels motor error.

Corrective Action: Try the following:

- Same as 47:YZ. The error is continuable, but only if it happens from time to time.

System Error: **47:YZ**

Problem Description: Star wheels motor error.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Check that the Starwheel Assembly cable is not damaged and is correctly connected to Main PCA.
3. Open the Window and check for any visible obstacles restricting the movement of the Starwheel Assembly, then clear the obstruction.
4. Perform the Scan Axis Starwheel diagnostic test to troubleshoot the problem further. See Star Wheel Lifter test on page 3-7.
5. Replace the Starwheel Motor. See Starwheel Motor on page 6-245.
6. If the System Error continues, replace the Main PCA. See Starwheel Assembly on page 6-208.

System Error: **48:YZ**

Problem Description: PPS system failure.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Check that the Pen to Paper Space (PPS) Solenoid cable is not damaged and is correctly connected to the PrintMech PCA.
3. Perform the Scan Axis PRS diagnostic test to troubleshoot the problem further. See PRS Test on page 3-9.
4. Make sure the Service Station is correctly installed. Sometimes, if the Service Station is not correctly installed, the front of the Service Station falls down (causing the Service Station to be tilted), and the L-Bracket support does not fit properly. The front of the Service Station should be "UP," and the L-Bracket should fit well with the Service Station.
5. Replace the Pen to Paper Space (PPS) Solenoid. See Pen to Paper Space (PPS) Solenoid (T1100/T1100ps/T610) on page 6-75 or Pen to Paper Space (PPS) Solenoid (T1120/T1120ps) on page 6-77.
6. If the System Error continues, replace the PrintMech PCA. See PrintMech PCA (T1100, T1100ps, T610 ONLY) on page 6-73.

System Error: **51:YZ**

Problem Description: Window Sensor failure.

Corrective Action: Try the following:

1. Check that the Window Position Sensor cable is not damaged and is correctly connected to the PrintMech PCA.
2. Perform the Sensors Test to troubleshoot the problem further. See 5. Sensors on page 3-31.
3. Replace the Window Position Sensor. See Window Position Sensor on page 6-53.

System Error: **52:10**

Problem Description: The printer has detected fibers in the Drop Detector.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Check that the Drop Detector cable is not damaged and is correctly connected to the PrintMech PCA.
3. Clean the drop detector.
4. Check that the Service Station cable is not damaged and is correctly connected to the PrintMech PCA.

5 Replace the Drop Detector. See Drop Detector on page 6-69.

6 Reset the Calibration Flag of the Drop Detector. See Drop Detector Calibration on page 4-12.

7 If the System Error continues, replace the PrintMech PCA. See PrintMech PCA (T1100, T1100ps, T610 ONLY) on page 6-73.

System Error: **55:YZ**

Problem Description: Problem with the Line Sensor. The printer has detected a failure to access Line Sensor EEPROM).

Corrective Action: Try the following:

1 Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.

2 Perform the Carriage Test to troubleshoot the problem further. See 4. Carriage Assembly on page 3-26

3 Check the Line Sensor connections to the Carriage PCA.

4 Replace the Line Sensor. See Line Sensor (T1100/T1100ps/T610) on page 6-152 or Line Sensor (T1120/T1120ps) on page 6-157.

5 If the System Error continues, replace the Carriage PCA. See Carriage PCA (T1100/T1100ps/T610) on page 6-173 or Carriage PCA (T1120/T1120ps) on page 6-178.

System Error: **56:YZ**

Problem Description: Drive roller analog encoder sensor fail or calibration failed.

Corrective Action: Try the following:

1 Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.

2 Perform the Media Path Test to troubleshoot the problem further. See 2. Paper Drive on page 3-18.

3 Replace the Encoder Disk and Encoder Sensor. See Encoder Disk and Encoder Sensor on page 6-216.

4 If the System Error continues, replace the Main PCA. See Starwheel Assembly on page 6-208.

System Error: **58:YZ**

Problem Description: The Line Sensor of the printer is not functioning correctly. Either the Line Sensor shutter has failed to open, there is a failure to communicate with the Line Sensor, the Line Sensor is not calibrated correctly, or the firmware is not compatible with the Line Sensor.

Corrective Action: Try the following:

1 Switch the Power OFF from the back of the Printer and disconnect the power cord. Reconnect the power cord and power On the Printer.

2 Perform the Line Sensor calibration.

3 Check that the Printer has the latest Firmware version. If not, update the Firmware to the latest version.

4 Perform the Carriage Test to troubleshoot the problem further. See 4. Carriage Assembly on page 3-26.

5 If the System Error continues, replace the Line Sensor. See Line Sensor (T1100/T1100ps/T610) on page 6-152 or Line Sensor (T1120/T1120ps) on page 6-157.

System Error: **61:YZ**

Problem Description: The file format is incorrect and the Printer cannot process the job.

Corrective Action: Try the following:

1 Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.

2 Check the graphic language setting of the Printer (Refer to the User's Guide).

3 Resend the file to the printer.

4 Check that the Printer has the latest Firmware version. If not, update the Firmware to the latest version.

5 The PostScript™ fonts are missing. Upgrading the Firmware will re-install the fonts.

6 The file cannot be printed because it is password protected. Resend the file without password protection.

System Error: **63:YZ**

Problem Description: Input/Output problem through the network interface of the Formatter.

Corrective Action: Try the following:

1 Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.

2 Check that the Network cable is correctly connected to the Formatter.

3 Check that the Printer has the latest Firmware version. If not, update the Firmware to the latest version.

4 If the System Error continues, replace the Formatter. See Formatter on page 6-200.

System Error: **64:YZ**

Problem Description: Input/Output problem through the USB Port.

Corrective Action: Try the following:

1 Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.

2 Check that the USB cable is correctly connected to the Printer.

3 Check that the Printer has the latest Firmware version. If not, update the Firmware to the latest version.

4 If the System Error continues, replace the Formatter. See Formatter on page 6-200.

System Error: **65:YZ**

Problem Description: Memory Driver Internal I/O error, I/O Socket Manager Internal I/O error.

Corrective Action: Try the following:

1 Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.

2 Check that the unknown port cable is correctly connected to the Printer.

3 Check that the Printer has the latest Firmware version. If not, update the Firmware to the latest version.

4 If the System Error continues, replace the Formatter. See Formatter on page 6-200.

5 If the System Error continues, replace the Main PCA. See Starwheel Assembly on page 6-208.

System Error: **68:YZ**

Problem Description: Loss of engine counters tracking.

Corrective Action: Try the following:

- Reboot the printer. The printer will continue to function correctly, but the life counters will not continue counting until you restart the printer.

71:YZ

Problem Description: Out of memory failure.

Corrective Action: Try the following:

- It is recommended that you remove any unnecessary files from the Hard Disk Drive of the Formatter using the Web Server.

System Error: **71:04 (T610 printers ONLY)**

Problem Description: Out of memory failure.

The total RAM memory available in the HP Designjet T610 Printer Series is 128MB. If the amount of memory that the printer needs to process the file is more than 128MB, the printer will display the system error 71:04 System Error ("Out of Memory" message). This quantity of memory for processing the file is know as the 'Display list memory':

- The display list memory is the amount of memory that the printer needs to process a file, this should not be confused with the file size of the print job, which is different. The size of the display list memory depends on several variables such as the resolution, file size and file content.

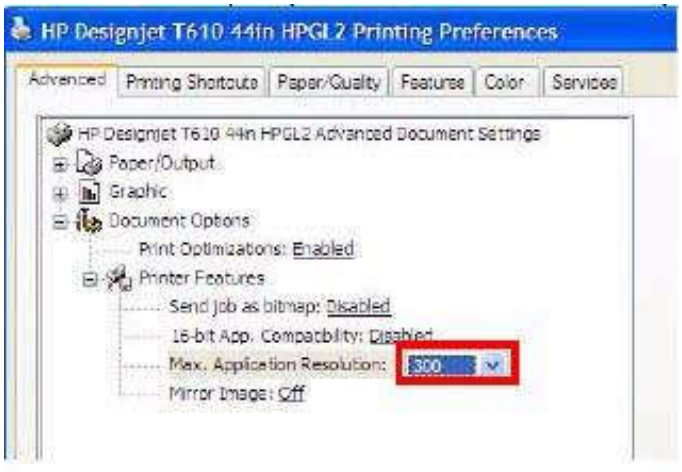
- The display list is not visible to the user.
- There has been a few cases where a print job that had a relatively small file size has triggered an out of memory message to be displayed. Print jobs like this typically have a large number of objects in them or have complex objects such as raster images with gradients or objects with multiple layers. Any print job that contains these type of images can result in a display list memory greater than 128MB.

Corrective Action: Try the following:

1. It is recommended that you remove any unnecessary files from the Hard Disk Drive of the Formatter using the Web Server.
2. It is also recommended that you upgrade the firmware to the latest version available at www.hp.com.
3. Decrease the print resolution to 300 dpi

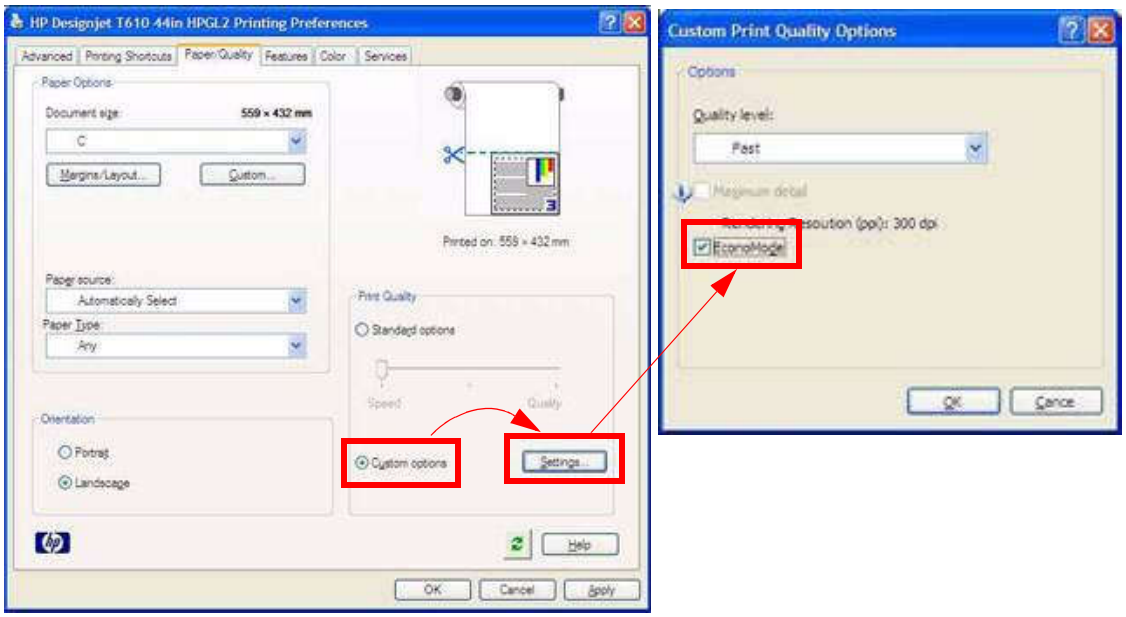
If the customer does not accept the print quality after reducing the resolution or using Econofast printmode, proceed to the workaround in step 4.

- The resolution required by the printer to process the file is set by printmode selected (Best, Normal, Fast). There is a setting available that enables you to decrease the resolution for each printmode to 300 dpi. If this setting is used, the rendering resolution will be reduced, but the output (printing) resolution will remain the default of the selected printmode There could be an impact on Image Quality because of the reduction in the rendering resolution, this will be especially noticeable in circles and lines with very low inclination.



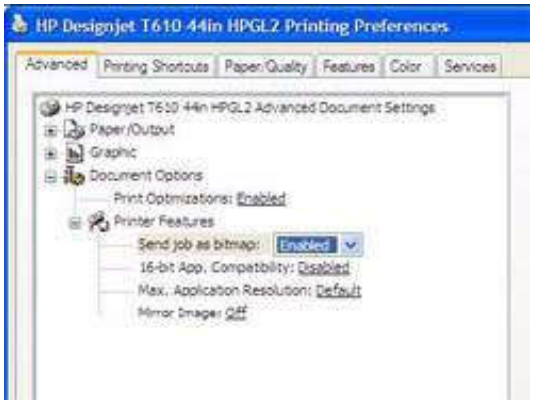
4. Use 'Econofast' printmode. The rendering resolution will be selected by default to 300 dpi. From the Printint Preferences pane, select **custom**

options and then **settings**. In the Custom Print Quality Options pane, select **Economode**.



If the Out of Memory message still persists, proceed to the next workaround.

5 Out of Memory issues can always be solved if the processing of the job can be performed before reaching the printer. This can be done by selecting 'Send Job as Bitmap'. The main processing of the print job will then be performed by the computer. This means that more computer resources can be used to process the plot. This form of printing is recommended in the case where the print job contains raster images plots, and mixed plots with raster images and lines, this is because the process of turning the print job made of raster images to vector images leads to a significant increase in the display list size.



System Error: **71:19**

For T1100/T1100ps/T610 printers, the backup NVM is located in the Printmech PCA.

For T1120/T1120ps printers, the backup NVM is located in the Media Advance Encoder PCA.

In all T Series printers, the main NVM is located in the Formatter service part.

You MUST NEVER replace both the Formatter and the PrintMech PCA (T1100/T1100ps/T610) or Media Advance Encoder PCA (T1120/T1120ps) at the same time. If both parts need to be replaced, you MUST first replace one part and then power ON the Printer until it completely initializes. Then you can power OFF the Printer and replace the other part.

Never install a previously used PrintMech PCA (T1100/T1100ps/T610) or Media Advance Encoder PCA (T1120/T1120ps) into another printer.

Problem Description: Default Serial Number found in the main and backup NVM.

It seems that both the Formatter and PrintMech PCA (T1100/T1100ps/T610) or Media Advance Encoder PCA (T1120/T1120ps) have been replaced together, or a previously used Printmech PCA or Media Advance Encoder PCA was installed.

Corrective action: Try the following:

- Perform the Error 71:19 Recovery Service Utility. See 13. Error 71:19 Recovery on page 3-51.

More information:

Unauthorized upgrades

To prevent unauthorized upgrades of printers to a superior model, the new firmware has changed the initialization process of the printer.

Location of the Serial and Product numbers

The serial number and the product number information is stored in two locations, in the EEROM of the Printmech and the EEROM of the Formatter.

Old initialization process

1. In the previous initialization of the printer, the serial numbers and product numbers were compared in the EEROM of the PrintMech PCA (T1100/T1100ps/T610) or Media Advance Encoder PCA (T1120/T1120ps) and the ERROM of the Formatter. If there was a difference, the printer displayed SE 71:19.
2. The 71:19 recovery procedure could then be performed. This enabled anyone to do one of the following, possibly resulting in an unauthorized upgrade:
   - Input a serial number and product number into the PrintMech PCA (T1100/T1100ps/T610) or Media Advance Encoder PCA (T1120/

T1120ps) and Formatter EEROM.

- Choose which EEROM held the correct information, and copy it across to the other EEROM.

New initialization process

From firmware 7.x.x.x onwards, the information is now always copied automatically from the EEROM in the PrintMech PCA (T1100/T1100ps/T610) or Media Advance Encoder PCA (T1120/T1120ps) to the EEEROM in the Formatter.

This means that the printer will now take on all the attributes of the information located in the PrintMech PCA (T1100/T1100ps/T610) or Media Advance Encoder PCA (T1120/T1120ps), possibly rendering the printer unusable. The following are just a few examples of why this could be possible.

- The printer may not be able to fully initialize if there is a mismatch between the size of the printer and the size in the EEROM of the PrintMech PCA (T1100/T1100ps/T610) or Media Advance Encoder PCA (T1120/T1120ps).
- The PostScript capabilities of the printer could be affected.
- All the calibrations applied from the factory will be copied, so incorrect calibrations could be applied to the printer.

How to resolve serial/product number errors

Any issue will need to be escalated through your local support organization if:

- A reused PrintMech PCA (T1100/T1100ps/T610) or Media Advance Encoder PCA (T1120/T1120ps) has been accidentally installed
- Both the PrintMech PCA (T1100/T1100ps/T610) or Media Advance Encoder PCA (T1120/T1120ps) and the Formatter have been installed at the same time in error.

System Error: **72:YZ**

Problem Description: A service calibration must be performed. Check the internal error code to see which calibration must be performed. To check the internal error code, press UP and CANCEL together while the error code is displayed.

Corrective Action: Check the internal error code:

- 0x07090001 (gain). Perform the Line Sensor Calibration. See Line Sensor Calibration on page 4-15.
- 0x07090002 (LS2K). Perform the Line Sensor Calibration. See Line Sensor Calibration on page 4-15.
- 0x07090003 (DD). Perform the Drop Detector Calibration. See Drop Detector Calibration on page 4-12.
- 0x07090004 (Adv). Perform the Paper Advance Calibration. See Paper Advance Calibration on page 4-6.
- 0x07090005 (Alig). Perform the Printhead Alignment Calibration. See Aligning Printheads on page 1-49.
- 0x07090008 (Analog Encoder). Perform the Paper Advance Calibration. See Paper Advance Calibration on page 4-6.

System Error: **73:YZ**

Problem Description: Servo Error.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Check that the Printer has the latest Firmware version. If not, update the Firmware to the latest version.
3. Perform the Scan Axis Test to troubleshoot the problem further. See 1. Scan Axis on page 3-6.
4. If the System Error continues, perform the Media Drive diagnostic test to troubleshoot the problem further. See 2. Paper Drive on page 3-18.

System Error: **74:YZ**

Problem Description: Error uploading firmware update file.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Make sure the connection between the computer and the printer is functioning properly.
3. Try to update the Firmware again.

System Error: **74.1:YZ**

Problem Description: Error uploading media profile update file.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Make sure the connection between the computer and the printer is functioning properly.
3. Try to upload the media profile update file again.

System Error: **75.21:YZ**

Problem Description: The spittoons (Left Spittoon, Service Station) have reached 80% capacity.

Corrective Action: Try the following:

- Use Preventive Maintenance Kit #2 to replace the Left Spitton and Service Station.

System Error: **75.22:YZ**

Problem Description: The spittoons (Left Spittoon, Service Station) are full.

Corrective Action: Try the following:

- Use Preventive Maintenance Kit #2 to replace the Left Spitton and Service Station.

System Error: **76:YZ**

Problem Description: Hard disk drive is full.

Corrective Action: Try the following:

- Remove any unnecessary files from the hard disk using the web server.

System Error: **77:YZ**

Problem Description: Web access application. The web server is not functioning correctly.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Check that the Printer has the latest Firmware version. If not, update the Firmware to the latest version.

System Error: **78:08**

Problem Description: The job received can not be printed without borders on this paper.

Corrective Action: Try the following:

1. Use a paper that supports borderless printing.
2. This system error code does NOT require service help. It should be resolved by the customer.

System Error: **78.1:YZ**

Problem Description: Media settings area missing in media settings file.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Check that the Printer has the latest Firmware version. If not, update the Firmware to the latest version.
3. Update the OMES.

System Error: **79:YZ**

Problem Description: Generic Firmware error.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Check that the Printer has the latest Firmware version. If not, update the Firmware to the latest version.

If you see system error 79:04, see Appendix A: How to troubleshoot SE 79:04 on page 2-33**.**

System Error: **79.1:YZ**

Problem Description: Recoverable firmware error that does not stop the printing process.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Check that the Printer has the latest Firmware version. If not, update the Firmware to the latest version.

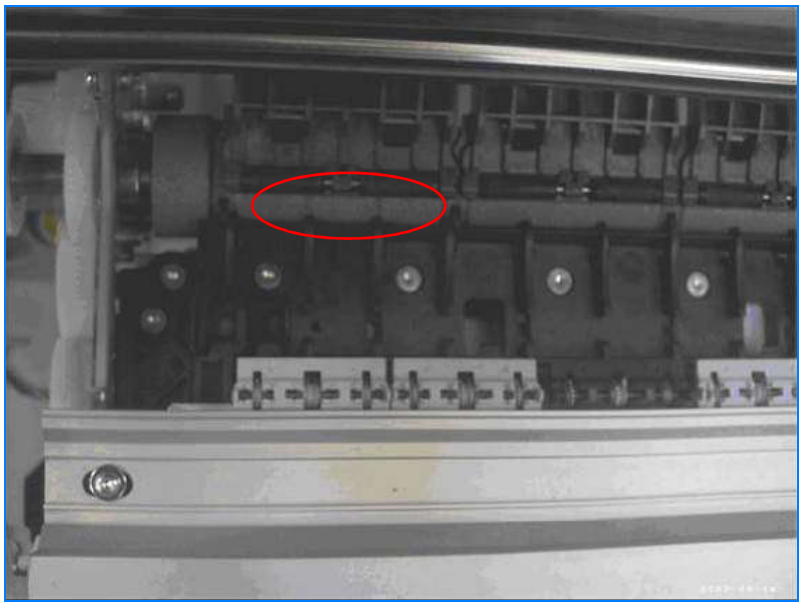
System Error: **81:YZ**

Initial checks: This error can occur because the printer has been dropped during transportation, causing structural damage. Before continuing with the 81:YZ troubleshooting, first look for structural damage.

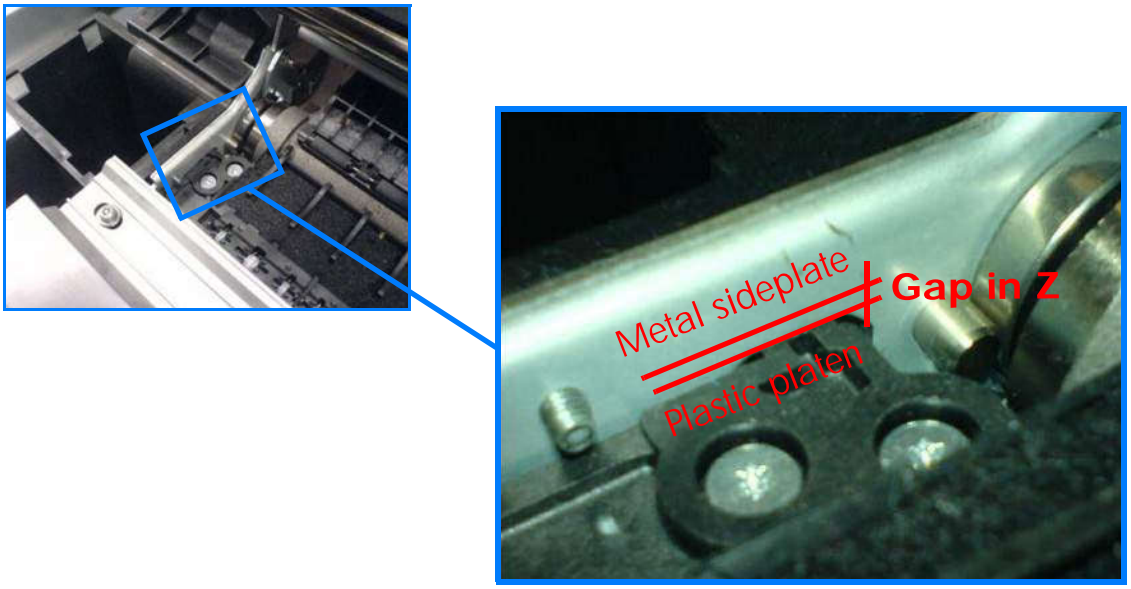
To identify the structural damage, look for the following three things:

- Consistent 81:YZ error codes.
- Platen fingers rubbing on the roller surface, leaving black marks on the

roller.



- A gap on the platen beam. If there's any gap in Z (vertical direction) between the plastic feature of the platen and the metal side plate, then the chassis is damaged and the unit cannot be repaired.



Problem Description: Problem with paper advance. This source of error could come from an error in any of the following systems: paper motor, disk encoder, cables or main electronics.

Corrective Action: Try the following:

1 Open the Window and check for any visible obstacles restricting the movement of the Drive Roller. If there is a wrinkled mass of media inside the paper path, lift the Pinchwheels (using the Media Lever) and clear the obstruction.

2 Perform the Media Drive diagnostic test to troubleshoot the problem further. See 2. Paper Drive on page 3-18.

3 If the printer has a 44 inch scan axis (and a Rewinder), perform the Rewinder diagnostic test to troubleshoot the problem further. See 6. Rewinder on page 3-34.

4 Check the connections on the Main PCA; the Media Advance Drive is connected to the connector labeled Paper Motor.

5 Adjust the encoder disc and motor mount configuration using the Media Advance Drive installation instructions. See Media Advance Drive on page 6-218.

6 If the System Error continues, replace the Media Advance Drive. See Media Advance Drive on page 6-218.

System Error: **84:YZ**

Problem Description: Back tension servo shutdown (roll feeding).

Corrective Action: Try the following:

1 Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.

2 If the problem persists, contact HP support.

System Error: **85:YZ**

Problem Description: Problem finding the Drive Roller zero.

Corrective Action: Try the following:

1 Perform the Media Drive diagnostic test to troubleshoot the problem further. See 2. Paper Drive on page 3-18.

2 If the System Error continues, replace the Encoder Disk and Encoder Sensor. See Encoder Disk and Encoder Sensor on page 6-216.

System Error: **86:YZ**

Problem Description: Possible Paper Jam.

Corrective Action: Try the following:

1 Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.

2 Open the Window and check for any visible obstacles restricting the movement of the Drive Roller. If there is a wrinkled mass of media inside the paper path, lift the Pinch wheels (using the Media Lever) and clear the obstruction.

System Error: **87:YZ**

Problem Description: Problem finding the Scan-axis encoder reading.

Corrective Action: Try the following:

1. Upgrade the firmware.
2. Clean the Encoder Strip.
3. Replace the Encoder Strip. See Encoder Strip, spring and attachment nut (T1100/T1100ps/T610) on page 6-96 or Encoder Strip, spring and attachment nut (T1120/T1120ps) on page 6-99.
4. Replace the Carriage PCA. See Carriage PCA (T1100/T1100ps/T610) on page 6-173 or Carriage PCA (T1120/T1120ps) on page 6-178.
5. Replace the Trailing Cables. See Trailing Cable (T1100/T1100ps/T610) on page 6-102 or Trailing Cable (T1120/T1120ps) on page 6-109.

System Error: **93:YZ**

Problem Description: Unable to pressurize the Ink Delivery System. The ISS Motor does not move as expected.

Corrective Action: Try the following:

1. Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.
2. Perform the Ink Delivery System diagnostic test to further troubleshoot the problem. See 7. Ink Delivery System (IDS) on page 3-36.
3. Replace the Left Ink Supply Station, depending on the results of the diagnostic test. See Left Ink Supply Station on page 6-183.
4. After replacing the Left Ink Supply Station, if the problem persists replace the Main PCA. See Electronics Module Main PCA and PSU (T1100/T1100ps/T610) on page 6-202 or Electronics Module Main PCA and PSU (T1120/T1120ps) on page 6-205.

System Error: **94:YZ**

Problem Description: Color calibration Error.

Corrective Action: Try the following:

1. Profiling failed due to a different error (not algorithm / data processing).
2. Perform the Line Sensor calibration. See Troubleshooting, Line Sensor. See The Line Sensor has Problems Detecting Media on page 1-5.
3. If the System Error continues, replace the Line Sensor. See Line Sensor (T1100/T1100ps/T610) on page 6-152 or Line Sensor (T1120/T1120ps) on page 6-157.
4. If the System Error continues, replace the Carriage PCA. See Carriage PCA (T1100/T1100ps/T610) on page 6-173 or Carriage PCA (T1120/T1120ps) on page 6-178.

5 If the System Error continues, replace the Formatter. See Formatter on page 6-200.

System Error: **94.1:YZ**

Problem Description: Profiling algorithm failed.

Corrective Action: Try the following:

1 Profiling failed due to a different error (not algorithm / data processing).

2 Perform the Line Sensor calibration.

3 See The Line Sensor has Problems Detecting Media on page 1-5.

4 If the System Error continues, replace the Line Sensor. See Line Sensor (T1100/T1100ps/T610) on page 6-152 or Line Sensor (T1120/T1120ps) on page 6-157.

5 If the System Error continues, replace the Carriage PCA. See Carriage PCA (T1100/T1100ps/T610) on page 6-173 or Carriage PCA (T1120/T1120ps) on page 6-178.

6 If the System Error continues, replace the Formatter. See Formatter on page 6-200.

System Error: **98:YZ**

Problem Description: Automatic backup print mode enabled.

Try the following:

Corrective Action:

1 Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.

- Recover the printheads.

Appendix A: How to troubleshoot SE 79:04

Introduction

The System error 79:04 is a generic firmware error (equivalent to a blue screen in Windows). It's the System Error that the printer will display when an unknown exception occurs that cannot be pointed to by any specific subsystem of the printer.

Since this is a generic error, there can be multiple causes behind it. This document will cover the most probable causes behind a system error 79:04 and will recommend the most efficient troubleshooting steps to resolve customer issues.

One important point to mention is that, although 79:04 system errors can be caused by a hardware malfunction, the vast majority of 79:04 system errors are pure software or firmware issues. In these cases the issue can only be solved by determining the root cause and implementing a solution. The solution can usually be applied by either correctly configuring a selection, updating the printer's firmware/software that is being used or by fixing an error in the code).

Possible causes

Since the 79:04 system error is a generic error, the number of possible causes behind it is large. The majority can be grouped, however, into the following groups.

Job related SE79:04

A specific print job that is not correctly formatted for the printer or that is not correctly processed by it can trigger a 79:04 system error.

The incorrect format or processing can come from two sources:

- Incorrect commands in the job itself. For example, a PS job with some commands that do not have the correct PS format.
- Issues applying to the settings in the job

Possible symptoms

79:04 caused by a print job always have the same symptoms:

1. The job is received by the printer and starts to process.
2. In the middle of the processing, the printer stops and displays 79:04.
3. The printer will display the 79:04 system error again immediately after reboot. This is due to the fact that the printer will try to reprint the job, which is pending in the queue, after reboot.
4. After the second reboot, the printer will start up normally
5. If the same job is sent again, it will always produce a 79:04 system error

These types of 79:04 system errors are normally caused by jobs that have been generated by 3rd party applications (RIPs, 3rd party drivers, files exported by an application to PS, PDF, HP-GL/2, RTL, … or any other format supported by the printer). Jobs generated by HP drivers will not normally generate 79:04 system errors, since the output that our drivers generate is very controlled and has been designed taking into consideration the characteristics of our printer's language interpreters.

There is an exception to this general rule: there are certain applications that can generate their own PS code (Adobe PhotoShop, Adobe Illustrator, Adobe Acrobat, Corel Draw, Freehand, QuarkXpress, …). When used with a PS driver, these applications generate the output PS themselves, instead of using the driver's rendering capabilities. This is known as PostScript pass-through. So, when using an HP PostScript driver together with an application that has PS passthrough capabilities, the PS code that comes into the printer has not been rendered by the HP driver, and, should the source file contain any PS commands that are not correctly processed by the printer, a 79:04 system error could occur even though an HP driver is being used.

Solutions and workarounds

When a job consistently generates a 79:04 system error, it is either because of a issue in the printer's firmware or because of a defect in the job itself (when it has been generated by 3rd party SW). In order to identify the cause and find out a solution, these issues should always be immediately escalated to the GBU through the GCC.

Also, there are a set of workarounds and short term solutions that can be tested in order to get the customer up and running in the shortest possible time:

1. Send the job using a variety of different settings. Many times, the issue is caused by a combination of the job contents combined with some specific setting(s).
2. If the customer is sending the file directly to the printer, try using the HP driver instead.
3. If the issue is occurring when printing through the HP PostScript driver from an application with PS passthrough, try changing the options in the application so that it prints PS as raster (the option is typically located in the "Advanced" options of the application's printing dialog).

Data related SE79:04

HP Designjet printers have Hard Disks and non volatile memories that contain data bases and files that can be modified with user data. Some examples include:

- The printer's queue
- The hard drive partitions that contain user jobs
- The data base that stores the printer settings
- The data base that stores accounting information

Some of this data is accessed by the printer at start up, and some others are accessed as needed.

If any of this fields contains corrupt data or data with characters or values that cannot be correctly processed by the printer, a 79:04 system error may occur.

Possible symptoms

There are two different types of symptoms for data related 79:04 system errors:

1. When the corrupt data is accessed during start up:
   - **a** The printer will display a 79:04 during the start up process
   - **b** Switching the printer off and on again will not solve the issue. The printer will continue displaying the 79:04 system error until the corrupt data has been cleared through a service procedure
2. When the corrupt data is accessed during normal printer operation
   - **a** The printer will start up normally
   - **b** When the data is accessed (for example while printing, while navigating the queue or when changing some settings), the printer displays a 79:04 system error

c The printer can reboot normally

d When the data is accessed again (typically, under the same conditions as in step "b"), the 79:04 system error is displayed again

Solutions and workarounds

Many times, data related 79:04 errors are resolved by means of hardware intervention. Since data is stored in physical components (RAM, EEROM and Hard Disk), replacing these components with new ones which are empty usually solves the problem. However, there are quicker and more effective solutions to these types of errors:

1 Clear all information that has been introduced by the user using the standard tools available in the printer:

a Delete all jobs from the queue (from the Front Panel or the EWS)

b Reset to factory defaults to clear the user's configurations and calibrations

a Delete any non standard paper preset in the printer (both the ones that have been created by the user and the ones that have been installed as OMES profiles through the EWS or the HP Printer Utility)

2 If step 1 did not resolve the issue, you can use Service Tools to clear additional information that could be causing the issue:

a Start the printer in Diagnostics Boot Mode

b Perform an EEROM reset

3 If step 2 did not resolve the issue, it is possible to completely clear the information on the Hard Disk and the different EEROMs, leaving them in an equivalent state to a new part:

a Access the Service Utilities Menu

b In the Secure Disk Wipe menu, set the Sanitize level to "Unsecure mode"

c Execute the Disk Wipe. This takes 45-75 minutes and it will completely clear all partitions in the Hard Disk which contain user data, including the partition where the Operating System is installed. After the disk wipe has completed, a backup firmware version will automatically be installed from a backup partition to allow the unit to start up. This firmware version is very old.

d The firmware in the printer should be upgraded to the latest official version as soon as the printer has restarted.

After step "c", any 79:04 which is caused by corrupt data in the printer will be solved.

Important note:

It is possible that the corrupt data came to be in the printer as a consequence of some activity in the customer's workflow. In this case, it is possible that the issue will happen again. In these cases, it is very important to understand the sequence of events in the customer's workflow that led to the error occurring. Once the error can be traced in the customer's workflow, escalate the issue to the GBU (through the GCC). This is done to implement any changes in the printer's firmware that can prevent these issues occurring again.

Network related SE79:04

Most HP Designjet printers have built-in networking capabilities. Network settings can be set manually, but in the majority of cases, they are obtained automatically from the printer. These settings include many different fields, such as IP address and subnet mask, available gateways, host and domain names, etc.

In some cases, there can be issues in the firmware that can cause a certain value in one of these fields to be interpreted incorrectly, and this can lead to a 79:04 system error.

Symptoms

There is no single set of symptoms that can absolutely pinpoint a network related 79:04 system error. However, the following guidelines can be applied:

- It can happen at start up or when accessing the Network Configuration section of the FP
- In both cases, repeating the action with the LAN cable disconnected does not cause the 79:04 to occur

Solutions and workarounds

In the majority of cases, these issues will be due to an issue in the printer's firmware. As soon as the conditions where the issue happens can be understood, it should be escalated to the GBU through the GCC.

At the same time, the following short term solutions and workarounds can help the customer to get up and running in the shortest possible time:

1. Disconnect the network cable to be able to boot the printer and change network settings
2. In the Network configuration menu in the Front Panel, disable any protocols that you are not using, including IPv6, SNMP and WebServices.
3. If step "2" does not work, try setting a manual configuration of the device:
   a. Enter the correct subnet mask and an IP in the valid range
   b. In the GateWay field, set the same value as in the IP address field
   c. Do not set a host name or a domain name
4. If step "3" does not work and the customer is using the network card which is part of the printer, try using an accessory Jetdirect card instead.

User Interaction related SE79:04

In some cases the printer may not react as expected when a certain set of conditions coincide. In these cases, if the printer doesn't know how to react, it may simple display a 79:04 system error and force a reboot. Some examples (not real) that can help to illustrate this:

- An error occurs when a job is cancelled when it is at the "Finishing print" state and when the queue is disabled
- An error occurs if the Window is opened while the printer is checking the printheads

These errors will most likely only happen in very specific corner cases that have not been identified during the development or the qualification of the printer, so normally, they do not severely impact the customer, as they do not affect their regular working flows.

Symptoms

The symptoms here are as numerous as the number of possible interactions between the user and the printer. In any case, it's possible to identify the steps that caused the error to occur and avoid them as the steps will always be the same with no variance.

Important: An major element in determining the error is what the state the printer was in at the time the error was displayed. Actions the user has made when the printer is drying for example can produce an error, whereas the same action when the printer is doing something else (or is idle) may not produce any errors.

Solutions and workarounds

The recommended action plan in these cases is to identify the previous steps that caused the error and:

1. Escalate the issue to the GBU through the GCC in order to have it corrected in the firmware.
2. Recommend to the customer that they try to avoid the same steps to prevent the issue
3. If the conditions that cause the error are in the customer's regular workflow, try to identify a different way of achieving the same result out of the printer.

Random SE79:04: Concurrence issues and memory leaks

Some 79:04 errors happen randomly when the printer is being heavily used. However, it's impossible to find a single set of conditions that reproduce the problem. It just happens from time to time, without a defined pattern.

These random 79:04 can have two different types of root causes:

- Memory leaks: before a program is executed, it allocates the memory it will need. After the execution is complete, the allocated memory is freed to be used by other programs. If the allocation or the release of the memory are not properly programmed, every time the program is executed some memory will be incorrectly labeled (either as used or as free). This is known as a memory leak. When a program with a memory leak is executed a lot, the memory becomes progressively full (since it is not properly freed). When the leak becomes too big, the printer is left 'out of memory' to execute new processes and a 79:04 is triggered
- Concurrence issues: there are certain resources that can be accessed by multiple programs or by multiple executions of the same program (what is known as multiple threads). Access to these resources must be correctly controlled to prevent unexpected behavior. Issues caused by an incorrect control of these resources are concurrence issues.

In the following you have a simple example: let's imagine that there is a counter that controls the communication between the JetDirect card and the printer's firmware. Whenever a new packet of information is sent by the JetDirect card to the printer, the counter increases. When the printer receives the packet and processes it correctly, the counter decreases. Another process

checks the counter from time to time to see its value and take conclusions from it. If the counter is near 0, it means that the printer is processing correctly, and if it grows too big, it may mean that there is a bottleneck somewhere and maybe the JetDirect card throughput is decreased to control its speed to the printer. However, if the access to this counter is not properly controlled, undesirable effects may happen: in a real environment, a JetDirect card processes thousands of information packets per second, so this counter is updated frequently, both by the JetDirect and the printer. If at a certain point the JetDirect and the printer try to access the counter at the same time and the code is not prepare to handle this, it may happen that the JetDirect cannot increase the counter because the printer is writing to it, and what's worse, that it does not realize this fact. If this happens a few times each second, it may happen that the counter is decreasing faster than it's increasing and that at a certain point it has a negative value. And then, what will the process that is checking this counter do? Most likely, the process will not be prepared to react to a negative value and will launch an exception that will trigger a 79:04 system error.

Symptoms

This type of 79:04 always occurs in heavy load conditions, so the symptoms will always be similar to this pattern:

- A printer that is being heavily used (printing a project or in a reprographics environment) produces 79:04 errors randomly, forcing the user to reboot.
- After rebooting, the printer can be used without any issues for an extended period of time, but if the workload is consistently high, a random error will occur again.
- The error can never be associated with a specific file. The file that was being printed when the error occurred the last time can be printed without issues after reboot. And a file that has been printed without issues several times can trigger the error in the future.
- This error is very dependant of the workflow the customer has. The most common user workflows have been extensively tested both by HP and by our beta sites, so it is highly unlikely to see random 79:04 issues in these cases. These random issues tend to occur in very specific corner cases, and cannot be reproduced unless the exact conditions of the workflow are replicated. They normally happen when sending files generated by external applications (RIPs, 3rd party drivers, etc.)

Workarounds and solutions

Random 79:04 errors are, by far, the most complex ones to diagnose and to fix. The only solutions available in these cases are:

1. Identify the root cause (either in the files or in the firmware) and fix it in the code, which requires the intervention of the GBU
2. Test any options available to modify the customer's workflow and see if any combination of them solves the issue

   In both cases, a profound understanding of the customer's workflow is necessary. In particular, the information that is needed is:

   - Printer front panel settings
   - Application that is being used; RIP or driver that is being used

- Application/RIP/Driver settings
- Type of output files this application, RIP or driver is generating
- Some sample files that are representative of what the customer is using
- Operating System
- Method of connection to the printer

A description of the normal flow when the issue occurs and the typical frequency of occurrence (i.e. once every hour when sending non stop several files, each of them with multiple copies)

With this information, the environment can be replicated in order to try and find workarounds. This is also the information that will be needed at the GBU to investigate and fix the root cause of this issue once it is escalated.

Hardware related SE79:04

Hardware is, by far, the least likely cause of a 79:04 system error. Replacing hardware components does not normally fix the issue and increases the total turn around time in finding a workable solution.

In some cases, a failure in a component in the printer's electronics may cause a 79:04 system error, since the printer's electronics are involved in the execution of the firmware and the processing of jobs. It needs to be noted, however, that hardware failures in the electronics tend to produce specific system errors that point directly to the component that is failing.

Some HW causes that could be behind a 79:04 error are:

- Defective clusters in the Hard Disk drive. If these clusters are used to execute the firmware or to process a job, they may produce a 79:04. It needs to be noted however, that most 79:04 errors that are resolved by an HDD replacement are in fact, data related 79:04 that could have been solved more efficiently and quickly following the steps in Section 3.
- Defective memory segments. If the RAM memory has some defective segments, a 79:04 may occur when these segments are used.
- Intermittent defects in the electronic components that are involved in the processing of a job: Carriage PCA, Trailing cable, Formatter and Print Mech. This is a highly unlikely cause, since defects in these components will produce subsystem specific errors.

Symptoms

There's no single set of symptoms behind hardware related 79:04 system errors. The most usual ones, however are:

- 79:04 during start up. Rebooting the printer may or may not solve the problem
- 79:04 while processing or printing a job. Rebooting the printer and printing the same job does not always produce the error.

Solutions and workarounds

In the following procedure perform each step as it appears in the list and only move on to the next step once you are sure the 79:04 error has not been cleared:

1 Reboot the printer in Diagnostics Boot mode and execute the service tests to validate the functionality of all the electronics components

- Execute the troubleshooting for "data related" system errors, refer to page 3, Data related SE79:04

2 Replace the memory

3 Replace the HDD

4 Escalate the issue before replacing any additional parts.

Troubleshooting based on symptoms

This section will describe which troubleshooting steps to perform for a 79:04 system error based on the symptoms of the issue. Perform each step as it appears in the list and only move on to the next step once you are sure the 79:04 error has not been cleared:

Front panel displays 79:04 at Start-up

1 Reboot the printer twice. If the System error has been caused by a job because its in an incorrect format, rebooting twice will clear the error (the first time after reboot, the printer will attempt to print the job again, and this will cause the error to re-appear). If rebooting the printer twice solves the issue, then it is an issue related to the job and you should refer to page 2, Job related SE79:04.

2 Upgrade the printer's firmware. Even if the currently installed firmware version is the latest one, re-install it. Since the printer cannot start normally, you will need to upgrade the firmware while booting the printer in Diagnostics Boot Mode. For this, a special file and a special upgrade process will be needed. For more information, see Appendix B: Updating firmware in diagnostics boot mode on page 2-45 .

3 Disconnect the network cable and restart the printer. If this solves the problem, then it is a network related 79:04 and you should follow the guidelines for this type of 79:04. See Network related SE79:04 on page 2-37.

4 Remove all cartridges, printheads and printhead cleaners (if available). Unload the media. Restart the printer. If the printer can start normally, insert the consumables one by one until you isolate the one that is causing the error. Do NOT insert any of the replaced consumables in another printer

5 Restart the printer in Diagnostics Boot Mode and perform the "Electronics test". If an electronic component is identified as faulty, replace it.

- Restart the printer in Diagnostics Boot Mode and Reset the EEROM. If the issue is solved by this, this is a data related 79:04 system error and you should follow the guidelines, refer to page 3, Data related SE79:04.

6 If the unit has been used for some time and suddenly has started to show this behavior, replace the Hard Disk Drive (it may be included with the Formatter in some models).

7 If the issue is new and the issue happens since the first boot, do NOT replace the HDD.

8 If none of the previous steps solved the issue, escalate the issue with the following information:

- Unit information: S/N, P/N, accessories

- Conditions where the problem occurs and conditions prior to the first occurrence of the problem
- The results of the previous 8 steps
- The System Error detailed information (this can be obtained by pressing CANCEL + Down)
- The printer logs. In order to obtain the printer logs, check the corresponding appendix. See Appendix C: Obtaining printer logs on page 2-46.

Front panel displays 79:04 during printer operation – not while sending jobs

1. Reboot the printer.
2. Upgrade the printer's firmware. Even if the currently installed firmware version is the latest one, re-install it.
3. Reset the printer to factory defaults
4. In order to narrow the scope of the issue, try the following:
   a. Disable the queue
   b. Disable any unused network protocols
   c. Disable SNMP and WebServices (if they are available in the printer)
   d. Disable "Sleep mode" from the Service Utilities menu
   e. Delete any Paper Presets that you may have uploaded or created using the printer Spectrophotometer
5. Restart the printer in Diagnostics Boot Mode and perform the "Electronics test". If an electronic component is identified as faulty, replace it.
6. Restart the printer in Diagnostics Boot Mode and Reset the EEROM. If the issue is solved by this, this is a data related 79:04 system error and you should follow the guidelines for this type error. See Data related SE79:04 on page 2-35.
7. Format the Hard Disk drive. To do so, you will need to start the printer normally, enter the Service Utilities menu and then the Secure Disk Erase option. Set the Erase method to "Fast Erase" and then perform the disk erase process. This will take 45-75 minutes and will erase all user information from the disk, resolving any issue caused by corrupt data. After the erase process, a firmware update will be required. If this solves the issue, this is a data related 79:04 system error and you should follow the guidelines for this type of error. See Data related SE79:04 on page 2-35.
8. Try to identify the combination of settings or actions that led to the system error and try to reach the same result with a different combination. Escalate the issue to fix the original problem.
9. If none of the previous steps could solve the issue, escalate it with the following information:
   - Unit information: S/N, P/N, accessories
   - Conditions where the problem occurs and conditions prior to the first occurrence of the problem
   - The result of the previous 8 steps

- The printer information pages (either printed and faxed or obtained through the Embedded Web Server)
- The System Error detailed information (it can be obtained by pressing CANCEL + Down)
- The printer logs. In order to obtain the printer logs, check the corresponding appendix . See Appendix C: Obtaining printer logs on page 2-46.

Front panel displays 79:04 while printing

While printing a single job

The error happens after a single job is sent. It's easy to identify which job that has produced the error, since every time that this same job is sent, the error is replicated.

1. Reboot the printer twice (after the first reboot, the printer will show the 79:04 system error again, since the printer will attempt to reprint the last job in the queue, which is the one that caused the issue)
2. If you are using an HP driver, update the driver to the latest version
3. Upgrade the printer's firmware. Even if the currently installed firmware version is the latest one, re-install it. Send the job using different print settings. The following ones can be helpful:
   a. Try sending the job without selecting a media profile in the driver
   b. Try changing the Image Quality settings
   c. If you are using the HP-GL/2 driver, try the option "Send job as bitmap"
   d. If you are using the PS driver, try using the HP-GL/2 driver instead
   e. If you are using the PS driver from an Adobe application (or any other application that can handle PS), try changing the application's print settings so that the PS is generated as Raster.
4. Try the following Front Panel settings:
   a. Change the Print Language option in the Front Panel from "Automatic" (which is the default setting) to the language that is being printed (PS, HP-GL/2, ...)
   b. Queue = OFF
   c. Start Printing = After processing
   d. For PS SKUs, try changing the encoding setting ("Automatic" by default) to Binary or ASCII
5. If you are using a 3rd party application that does not print through the HP driver, try modifying the printing workflow by:
   a. Using an HP driver
   b. Changing the settings in the application's printing dialog
6. If you are using an accessory JetDirect card, try using the internal network connector or USB (if available).
7. Escalate the issue, providing the following information:
   - Unit information: S/N, P/N, accessories

- Conditions where the problem occurs and conditions prior to the first occurrence of the problem.
- The result of the previous 7 steps
- The printer information pages (either printed and faxed or obtained through the Embedded Web Server)
- The System Error detailed information (it can be obtained by pressing CANCEL + Down)
- Information on the workflow:
  - Operating System
  - Application
  - Driver
  - Settings in the driver and the application
  - Settings in the printer
  - Connection method and settings

The original file along with the information on how to reproduce the issue

-A print to file that can reproduce the issue

- The printer logs. In order to obtain the printer logs, check the corresponding appendix.. See Appendix C: Obtaining printer logs on page 2-46

Random 79:04 during continuous printing

The error does not happen with a single job. It happens randomly during continuous printing, normally while the printer is managing a heavy load (printing a project or in a reprographics environment).

This type of error is caused either by memory leaks or by concurrence issues in the printer's firmware. They normally happen in non common environments where these memory leaks or concurrence issues that have not been detected during qualification have occurred. These issues cause the printer to crash at a completely random moment during printing, and are not associated to a specific job.

Because of this, troubleshooting these issues is normally quite complex.

1. Reboot the printer twice (after the first reboot, the printer will show the 79:04 system error again, since the printer will attempt to reprint the last job in the queue. If the issue continues occurring randomly, continue troubleshooting
2. If you are using an HP driver, update the driver to the latest version
3. Upgrade the printer's firmware. Even if the currently installed firmware version is the latest one, re-install it.
4. Try the following changes in the workflow:
   a. Change the Print Language option in the Front Panel from "Automatic" (which is the default setting) to the language that is being printed (PS, HP-GL/2, ...)
   b. Queue = OFF
   c. Start Printing = After processing
   d. For PS SKUs, try changing the encoding setting ("Automatic" by default) to Binary or ASCII

e If you are using the HP-GL/2 driver, try sending the job as a bitmap

5 If you are using a 3rd party application that does not print through the HP driver, try modifying the printing workflow by:

a Using an HP driver

b Changing the settings in the application's printing dialog

6 Escalate the issue with the following information:

- Unit information: S/N, P/N, accessories
- The printer information pages (either printed and faxed or obtained through the Embedded Web Server)
- The System Error detailed information (it can be obtained by pressing CANCEL + Down)
- Information on the workflow:
  - Operating System
  - Application
  - Driver
  - Settings in the driver and the application
  - Settings in the printer
  - Connection method and settings
- Exact information on how to replicate the environment that reproduces the issue, including some example files that can be sent to the printer to replicate a heavy load environment. These files will need to be:
  - Original application files, if the issue happens printing from an application through our driver
  - Print to files if the issue happens printing from a 3rd party application
- Information on the approximate frequency of the occurrence of the issue
- The printer logs. In order to obtain the printer logs, check the following appendix.

Appendix B: Updating firmware in diagnostics boot mode

If the printer is displaying a 79:04 system error during start up and will not start normally, then services like the Embedded Web Server will not work.

Since the EWS is necessary to update the printer's firmware using the FMW file which is provided in Designjet Online, when the printer does not boot, an alternative method to update the firmware will be required.

The following method can be used to upgrade the firmware of a printer that will not boot normally:

1 Start the printer in Diagnostics Boot mode. See Using the Front Panel on page 3-5.

2 Perform the I/O information test and take note of the printer's IP address. See 9. I/O Information on page 3-48.

3 Connect to the printer using FTP:

a From a DOS console (or a Linux console in Mac), open a connection to the printer: ftp <printer's IP address>

b Configure the connection to send the data correctly: bin > hash

4 Upload the firmware file (> put <firmware.plt>). Standard FMW files that are available in the customer website will not work with this method, since FMW files need to be uploaded through the EWS in order to work. You will need to use a firmware file in PLT format instead. You can obtain the PLT firmware for the latest available firmware versions in the LFP Customer Assurance website (http://bcnsite.bpo.hp.com/csw/).

Appendix C: Obtaining printer logs

It is possible to obtain internal logs on the activities that are being performed by Designjet printers. These logs allow you to understand the status of the printer when a system error has occurred, helping in the process of finding the root cause and the solution.

By default, the printer does not record logs, since they would consume resources (processing time and HDD space). In order to obtain the logs, it is necessary to:

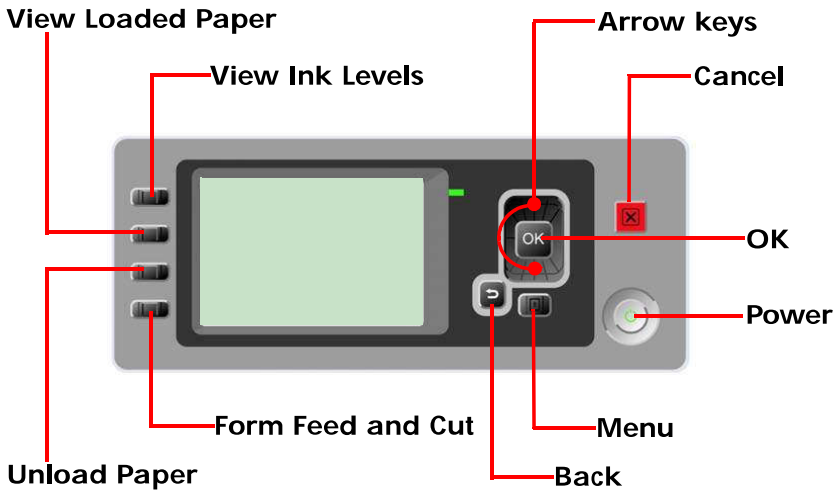
1 Enable the logs and reboot the printer.

2 Operate the printer until the System Error happens.

3 Retrieve the logs from the printer.

4 Disable the logs in order to avoid using more HDD space.

In order to activate the logs, you need to boot the printer with a special combination of keys. To enable the logs, switch the printer OFF. Then hold the OK key and the "View Loaded Paper" key at the same time and switch the power On by pressing the Power key. Hold the three keys together during 5 seconds and then release them. The logs are now activated.



- Once DO NOT REBOOT is displayed, get at least the printer.log file by going through the EWS, go to the following page: http://<IP>/hp/device/3432/8828/tmp/ and download the printer.log file from there. To do this, click one time on the file, and do a right click -> 'Save target as'.

5 The printer.log file contains the logs of the printer activity since the last time the printer was rebooted. Previous logs are automatically compressed when the printer reboots, and are stored in .gz files which contain the date and time of the reboot in the file name. If you are interested in getting traces of the printer activity before the last reboot, you should download these .gz files as well.

6 Once the desired log has been obtained, remember to turn off the logging capability to avoid filling the HDD partition. In order to disable this capability, switch the printer off. Then hold the OK key and the "Form Feed and Cut" key at the same time and switch the power On by pressing the Power key. Hold the three keys together for 5 seconds, then release them. The logs are now activated.