DDP 70e/92

Digital Document Publisher

Controller Maintenance Manual

N901401

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NOTICE TO USER

In an effort to meet the demands of a rapidly changing technology, the manufacturer is continually developing new features and functions to meet your changing printing or printer needs. Please be sure to consult all manual updates or addenda when using this product's documentation.

Revision Table

Manual Rev.	Machine Rev.	Page No.	Date
00	-	First Edition	May.2005
01	-	All pages	Oct.2005
02	-	4-2: Added “Serial Connector Cover”.	Nov.2005
		4-8: Added ”NOTE”.	
		4-9: Added “Figure 4-6. Controller Assembly”.	
		4-17: Each part name of OCP Ass’y was corrected.	
		4-18: Each part name of OCP Ass’y was corrected.	
		5-14: Flowchart was corrected.	
		5-15: Flowchart was corrected.	
		5-16: Flowchart was corrected.	
		Deleted “Controller Advanced Troubleshooting” in Chapter 5 “Troubleshooting Procedures”.	
		5-12-5-36: Changed page number for deleting of “Controller Advanced Troubleshooting” in Chapter 5 “Troubleshooting Procedures”.	
03	-	Title, 2-1, 3-9, 4-2: Changed Printer Name from DDP70 to DDP70e.	Mar.2006
		1-2: Removed German description.	
		1-3: Removed French description.	
		2-2: Added description for CL141/142 controller specification.	
		3-3: Removed Jam Recovery from Option menu. Added Auto Proof Sample to Option menu. Corrected misprint of Halftone Density.	
		3-4: Added Paper Color and Ordered Sets menu. Added note 3 for HCF.	
		3-5: Added Buzzer on OCP menu. Added note 1 and note 2 for OCP menu.	
		3-6: Added Exit-Jam Recovery, Auto Backup Time, Output Cascade and Best Fit Mode menu. Changed note 1. Added note 3 for PostScript option. Added note 4 for NIC.	
		3-9: Corrected items for Engine consumable menu. Changed note 1 for FS-104 Finisher. Added note 3 for Container Stacker.	
		3-10: Removed Hole Punch from Finisher menu. Added note 1 for Container Stacker.	
		4-6: Added notice for NIC.	

Manual Rev.	Machine Rev.	Page No.	Date
		4-8: Added Figure 4-6 for CL141/142 Controller Board Layout.	
		4-12: Added note for NIC.	
		4-13: Added description of DIMM for CL141/142 controller. Deleted SW2 and SW3 from Figure 4-8.	
		4-15: Corrected description for available disk space. Corrected connector no. to J6 on Removing the HDD.	
		4-16 Corrected connector no. to J6 on Replacing the HDD.	
		4-20: Changed description No.2 for Backup and Restore.	
		Index-1: Corrected page no. for backup / restore. Removed Country Code option.	
		Index-3: Removed Reset option.	
		Made change of all page number due to above changes.	
04	-	3-3: Added Detach Voltage.	Aug.2007
		3-10: Added menu. Added note 2 and 3.	
		4-9: Added ”CAUTION”.	
05	-	Table of Contents i : Added Reinstalling the Keycode.	Aug.2007
		2-1: Features is modified.	
		2-4: Print Options is modified.	
		3-2: Added IPDS Fonts to Font menu. Added note 3 for IPDS.	
		3-3: Added IPDS menu. Added note 4 for IPDS.	
		4-17: Added Reinstalling the Keycode.	
		5-10: Changed figure.	
		5-21: Added Error Codes.	
06	-	Table of Contents ii: Added error codes for Backup/Restore in Chapter 5.	Feb.2008
		3-3: Added PS Wait Timeout and Duplex Print Mode under PostScript menu.	
		3-8: Added Click Charge Count Value menu.	
		3-12: Changed page number for adding of Finisher menu. Added Click Charge Count menu.	
		4-20: Added descriptions for Click Charge Count to Figure.	
		4-21: Added descriptions for Click Charge Count to Table.	

Manual Rev.	Machine Rev.	Page No.	Date
		5-37,5-38: Added error codes for Backup/Restore.	
07	-	Table of Contents ii: Added error codes for Standard Finisher 2 in Chapter 5. Added Appendix B.	Feb.2008
		3-2: Added Standard Finisher 2 in note1.	
		3-7: Added Stapler menu for Standard Finisher 2.	
		3-9: Added Standard Finisher 2 menu.	
		3-10: Moved Finisher menu for Container Stacker to page 3-11.	
		3-11: Added Finisher menu for Standard Finisher 2.	
		4-11: Modified Replacing the Controller Board.	
		4-16: Modified Replacing the Hard Disk Drive.	
		4-17: Modified Replacing the Hard Disk Drive.	
		5-37,5-38: Added error codes for Standard Finisher 2.	
		5-39,5-40: Changed page number for adding of error codes for Standard Finisher 2.	
		Appendix B: Added Appendix B.	

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Chapter 1
Introduction

About this Manual

The *Controller Maintenance Manual* is intended for certified service technicians servicing a printer. If you have not received service certification, you should not attempt to service the controller. The Company does not warrant the performance of the controller if serviced by non-certified personnel.

This manual is divided into the following sections:

- Chapter 1, “Introduction”

  Gives general information about this manual and general information that you should know before you service the controller.

- Chapter 2, “Printer Overview”

  Provides general information about the printer.

- Chapter 3, “Using the Operator Control Panel”

  Tells you how to use the Operator Control Panel for controller functions.

- Chapter 4, “Service Procedures”

  Describes removal and replacement procedures for the controller and controller board components.

- Chapter 5, “Troubleshooting Procedures”

  Identifies the source of common problems and suggests ways of correcting them.

- Appendix A, “MOP Limits”

  Explains how MOP limits are calculated. The MOP feature is for printing multiple collated document sets without multiple file transfers.

Customers should not use the technical service documentation. Do not leave this manual behind after you make a service call.

The Illustrations in this Manual

Illustrations in this manual reflect the controller assembly at the time of publication. Components shown in these illustrations are subject to change. To receive information about any components that do not match illustrations in this manual, contact your authorized service/support center.

Terminology and Conventions

The term “network administrator” refers to the person responsible for maintaining the network at the customer site.

The term “Operator Control Panel” (OCP) describes the area on the front of the printer that has the display window (LCD–liquid crystal display).

The term “PC” refers to any IBM PC or compatible computer running Windows.

The term “10/100BaseT” is used throughout this manual to refer to 10/100BaseTX.

The term “controller” refers to the functional module that supports printing and associated features for the printer.

NOTE:
These statements highlight important messages and additional information.

CAUTION!
These statements indicate a need for special care and safety when handling the equipment.

WARNING!
These statements indicate a need for special care and safety to prevent you from harming yourself when carrying, unpacking, assembling, installing, or operating the product.

Precautions

Always observe the following general precautions when servicing the controller assembly:

1. Always disconnect power before opening the controller.

WARNING!
To avoid serious injury or death, disconnect the power cord from the power outlet. Do not attempt to perform any servicing operation when the power cord is connected to the power outlet. The AC line voltage is present inside the controller enclosure regardless of the main power switch position.

CAUTION!
Although this maintenance manual applies to both the DDP70e and the DDP92 controllers, they are not interchangeable.

The power supply cable is used as the main disconnect device. Ensure that the wall outlet is located near the equipment and is easily accessible.

2. Never alter an existing network without permission.

   The controller is probably connected to an existing Local Area Network (LAN) based on Ethernet hardware. The network is the link between the customer's computer, existing laser printers, and other prepares equipment. Never disturb the LAN by breaking or making a network connection, altering termination, installing or removing networking hardware or software, or shutting down networked devices without the knowledge and express permission of the network administrator.

3. Never enter an IP address in Network Setup.

   Only the network administrator should enter an IP address on a network device. Assigning an incorrect IP address to the controller can cause unpredictable errors on any or all devices connected to the network.

4. Handle the OCP glass display window with care.

   If the glass on the OCP breaks and the liquid crystal inside leaks out, avoid contact with it. If you do come in contact with the liquid crystal, wash it off with soap and water immediately.

   Use a soft cloth moistened with isopropyl or ethyl alcohol to clean the glass display window. Other solvents, such as water, may damage the polarizer.

5. Follow standard ESD (electrostatic discharge) precautions while working on the internal components of the printer.

   Static is always a concern when servicing electronic devices. It is highly unlikely that the area around the printer is static-free. Carpeting, leather-soled shoes, synthetic clothing fibers, silks, and plastics may generate a static charge of more than 10,000 volts. Static discharge is capable of destroying the circuits etched in silicon microchips, or dramatically shortening their life span. By observing standard precautions, you may avoid extra service calls and save the cost of a new board.

   When possible, work on a ground-connected antistatic mat. Wear an antistatic wristband, grounded at the same place as the antistatic mat. If that is not possible:

   - ❒ Attach a grounding strap to your wrist. Attach the other end to a good ground.
   - ❒ When you remove an electronic component, place it into an antistatic bag immediately. Do not walk across a carpet or vinyl floor while carrying an unprotected board.
   - ❒ Leave new electronic components inside their antistatic bags until you are ready to install them.
   - ❒ When you unpack the electronic components, touch a metal area of the printer to discharge the static on your body. Place the components on a grounded antistatic surface, component-side up.

6. Handle printed circuit boards by their edges only, but avoid touching the contacts on the edge of the board.

7. Never set a cup of coffee—or any liquid—on or near any components or the printer.

Tools You Will Need

To service the controller, you should bring the following:

- ESD wrist grounding strap
- Antistatic mat
- #1 and #2 Phillips head screwdrivers (non-magnetic)
- 3/16" Hex nut driver and 4.5 mm Hex nut driver
- Small needlenose pliers
- Flashlight
- This manual and any technical notes you may have for the controller

Chapter 2
Printer Overview

The controller provides computer connectivity and highly efficient printing capabilities for black and white printers. It is optimized for high-speed network communications, processing, rasterization, and printing of half-tone pages.

CAUTION!

Although this maintenance manual applies to both the DDP70e and the DDP92 controllers, they are not interchangeable.

Features

As an integral part of the printing system, the controller enables users to:

- Send files over TCP/IP networks. With the optional Network Interface Card (NIC) and print server software installed, additional network protocols are available.
- Use software running on network-enabled PC's to control spooled print jobs.
- Print text and images in black and white and grayscale.
- Print PCL5e, PCL XL, TIFF and PDF files. Support for PostScript or IPDS files is also available as an option.
  After IPDS is activated on DDP70/92, PS option can not be applied on it. For more detail, refer to IPDS Option Upgrade Kit Installation Instruction.
- Use resident PCL fonts and download additional PCL fonts as needed. PostScript or IPDS fonts are available as an option.

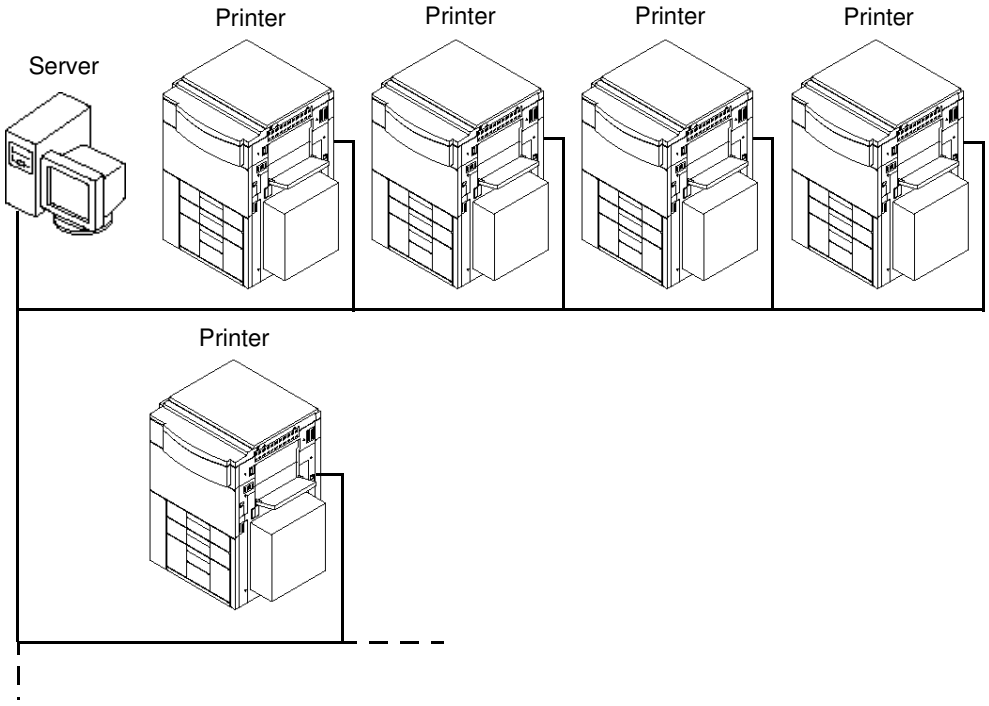


Figure 2-1. Controller Printing System

How the Controller Operates

The controller enables users to access the printer through the network and use it to print files using advanced spooling and job control functions. Users can print to the controller from a local networked PC running TCP/IP. Files are received by the printer in a Raster Image Process (RIP) form allowing for more efficient printing.

The controller custom-designed boards and system software are responsible for efficient image processing and printing controls. The main functions of controller components and software are described below.

The controller uses a motherboard to process image data for printing images. Two sets of the controllers are available as describe below.

CL102(DDP70e), CL101(DDP92)

•PowerPC 750 375MHz microprocessor.

•256MB DIMM (128MB DIMM X 2)

CL141(DDP70e), CL142(DDP92)

•PowerPC 750 800MHz microprocessor.

•256MB DIMM (256MB DIMM X 1)

A diagram of the primary controller functions is shown on page 2-3.

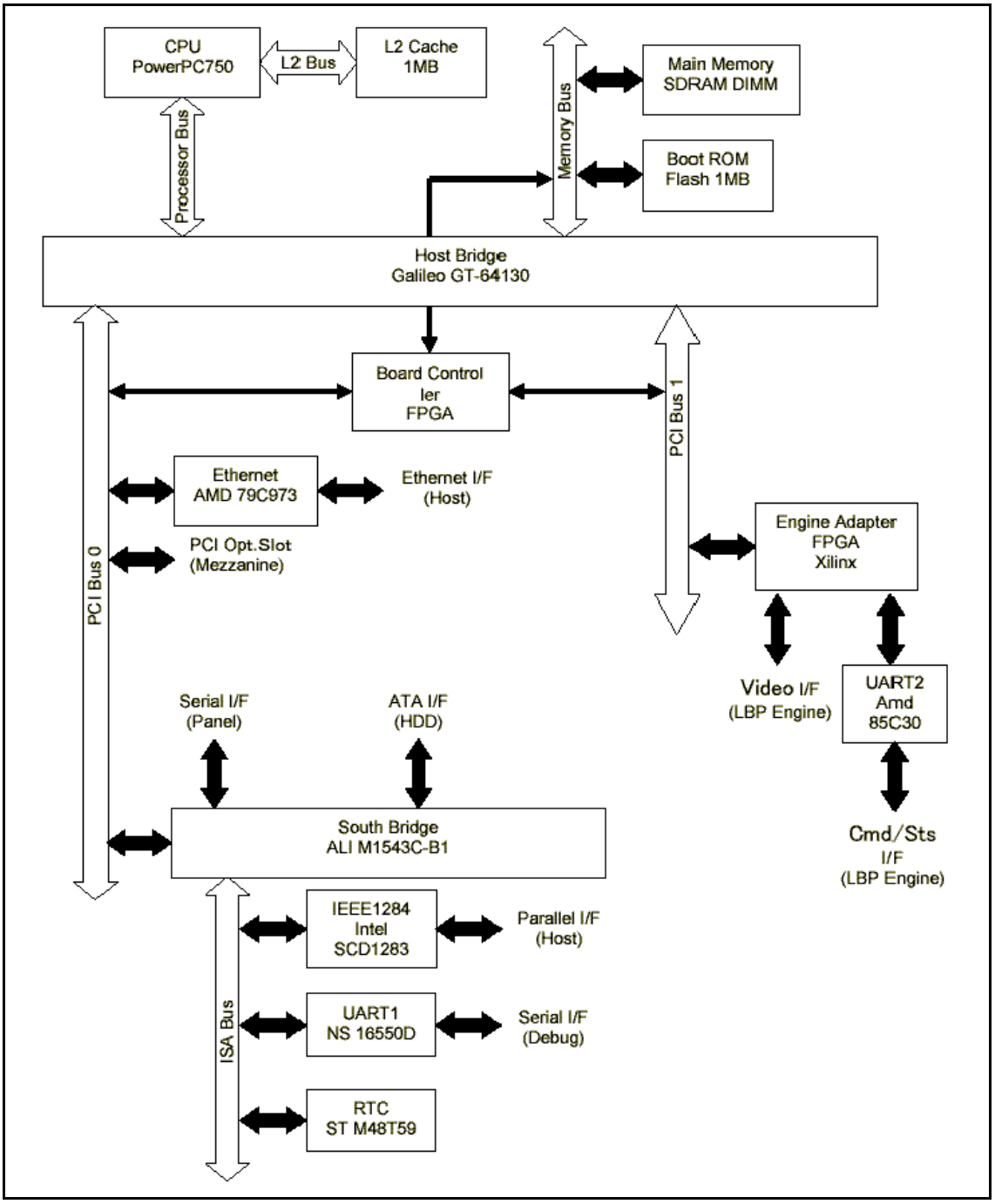


Figure 2-2. Controller Functional Diagram

Print Options

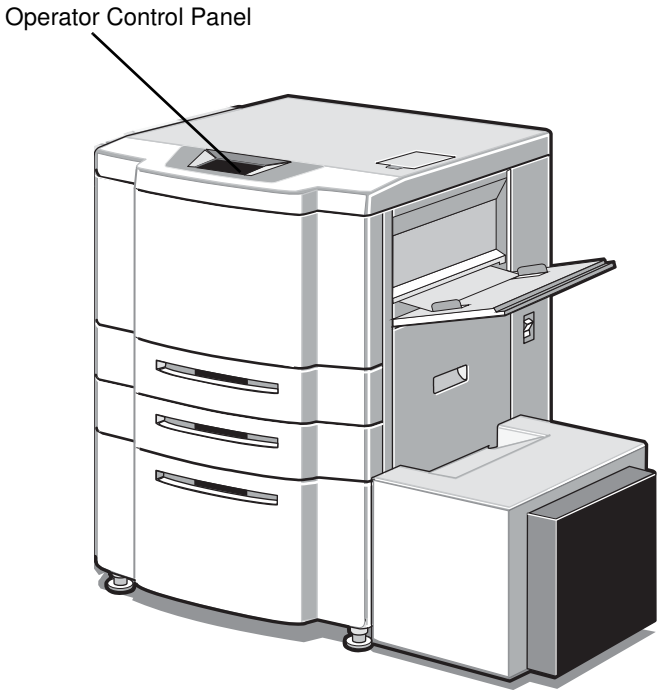
The controller's efficient PCL5e, PCL XL, TIFF, PDF, optional PostScript and optional IPDS capabilities allow customers to use a variety of applications to create printed pages of text and/or images over a network.

Chapter 3
Using the Operator Control Panel

This section describes the controller functions on the Operator Control Panel (OCP). The OCP is located on the top of the printer. The icons on the OCP are used to access and monitor different features of the controller. Refer to the *User's Guide* for a complete description of the OCP.

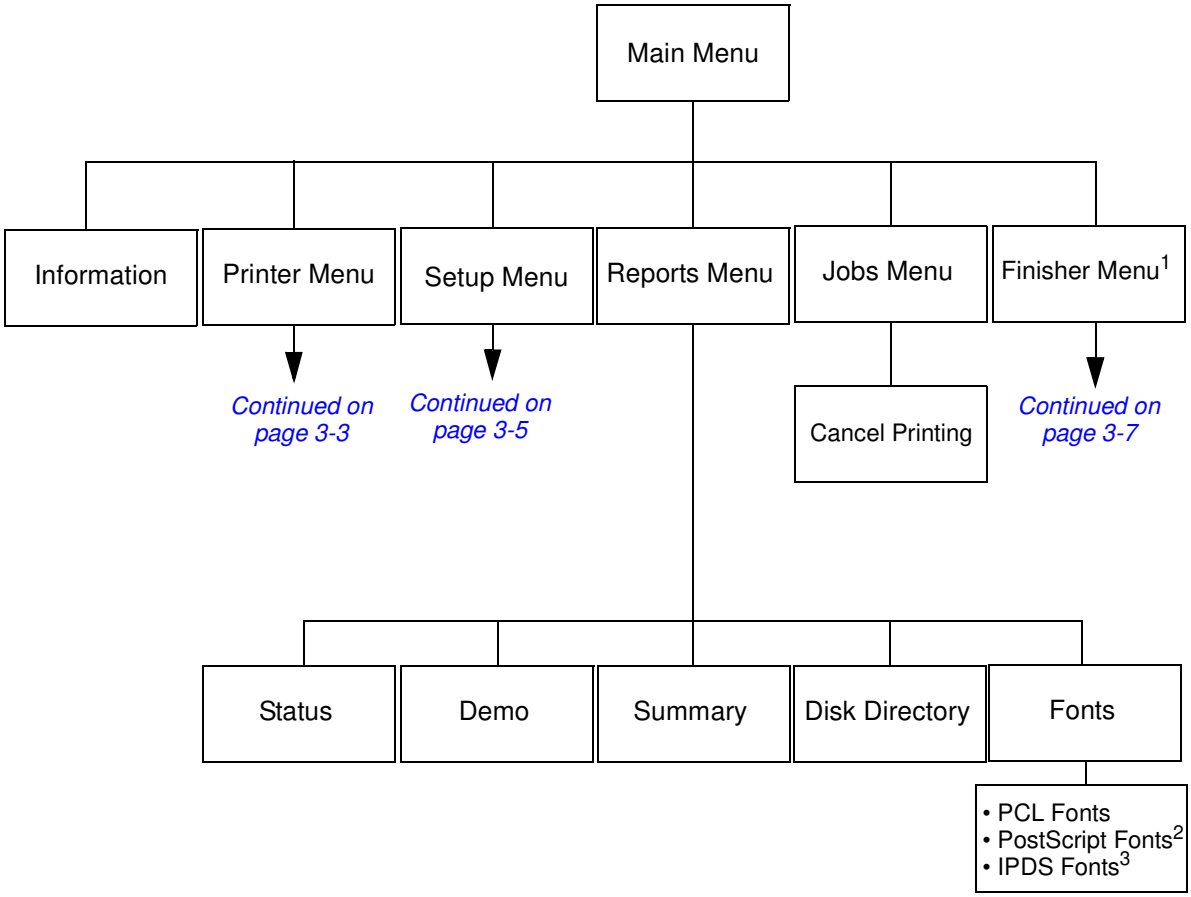
The current status and Setup information are displayed on the Operator Control Panel. Print activity can be monitored in the display window and specific controller functions (such as printing a Test Page and installing or updating system software) are controlled using the touch panel on the display window.

The screens and functions of the OCP display are controlled by simply touching the desired selection or icon. The current active screen is graphically displayed. There are no other buttons.



Menu Structure

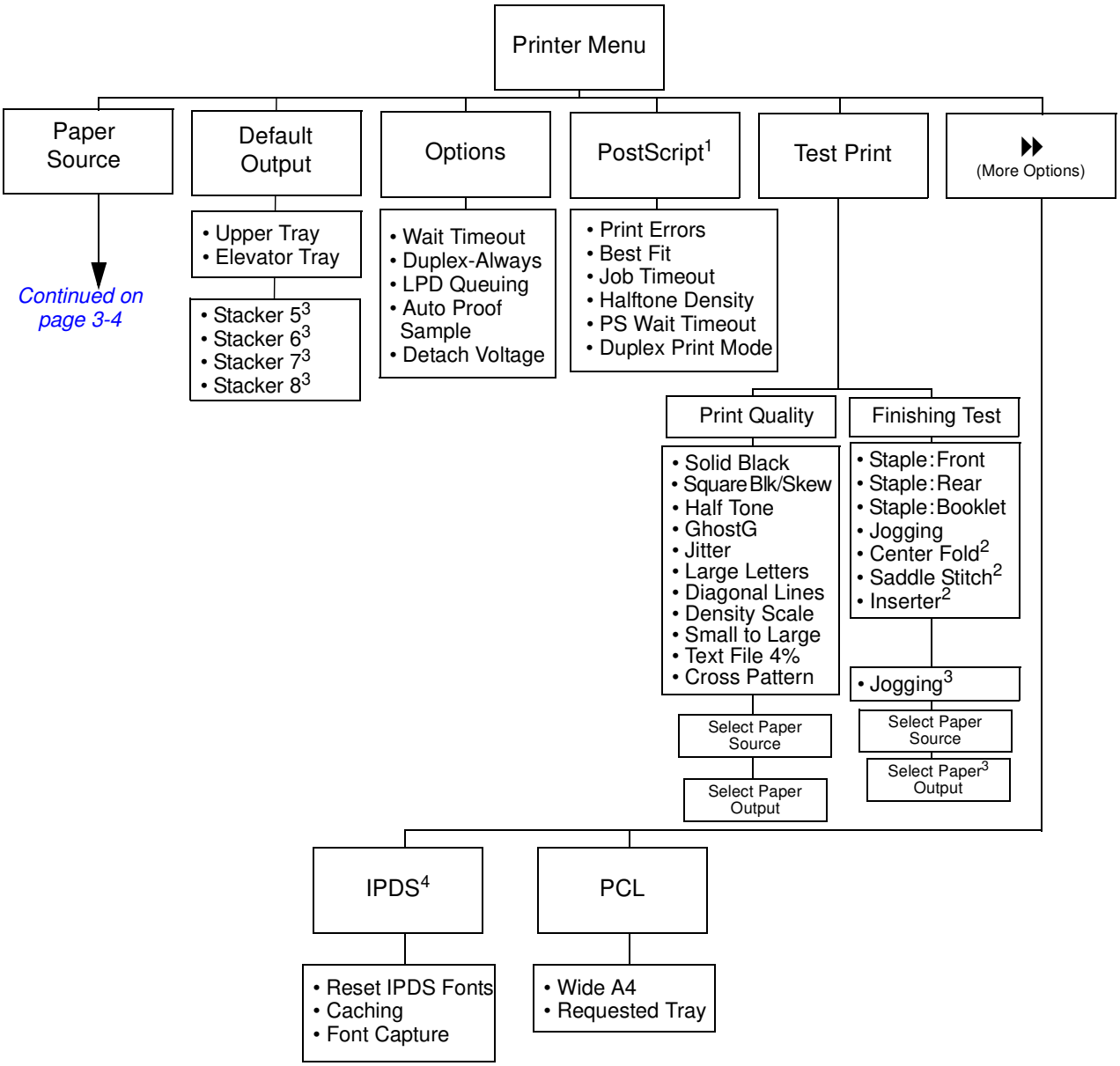
The OCP menu is structured as shown in the following flowcharts. Each box in the chart represents an OCP display screen. Use this flowchart to assist you in setting print job options.



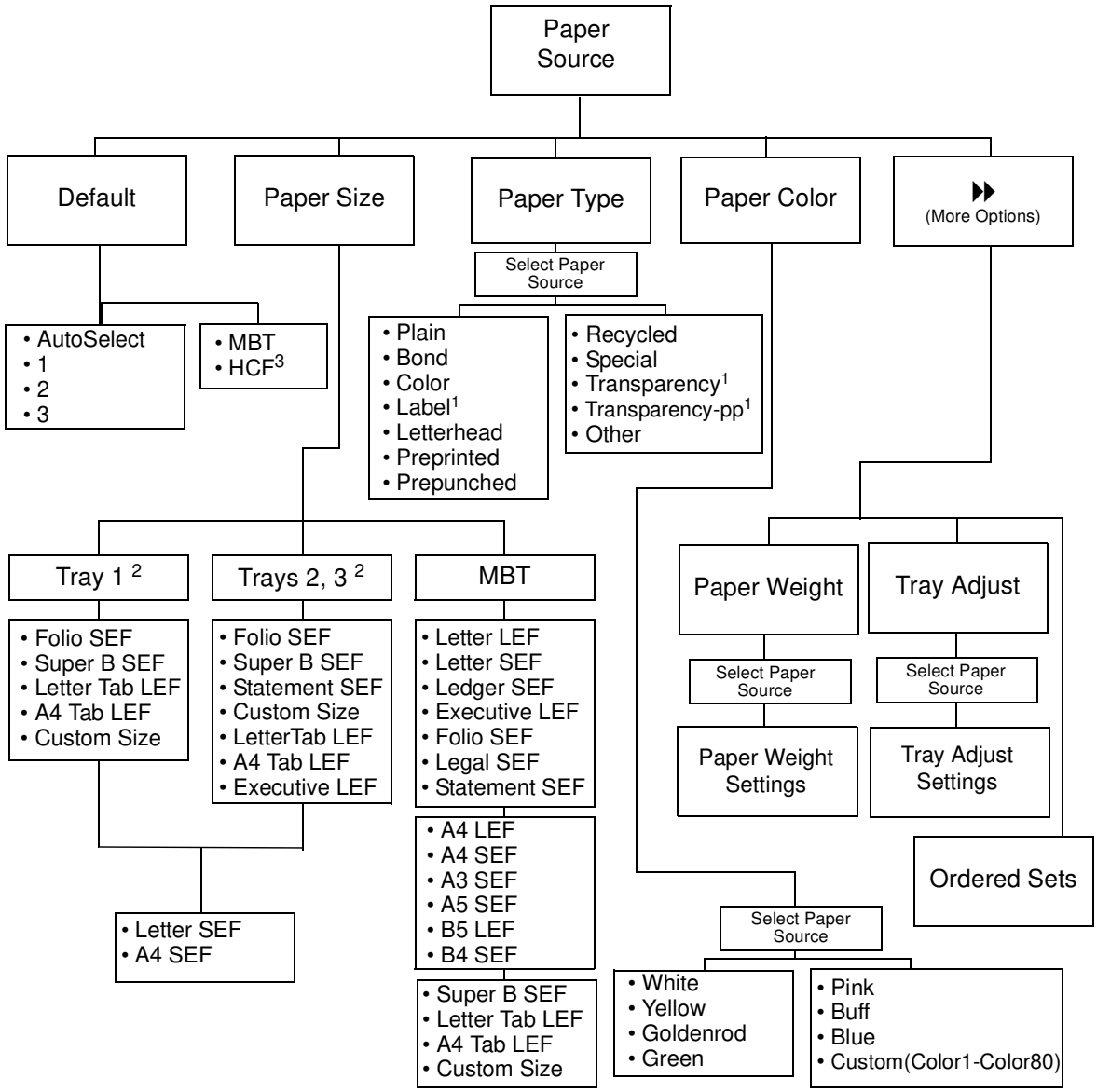
[1] The Finisher Menu is only displayed when the Standard Finisher 2 (SR5000), Booklet Finisher or Container Stacker is installed.

[2] Available when PostScript is installed.

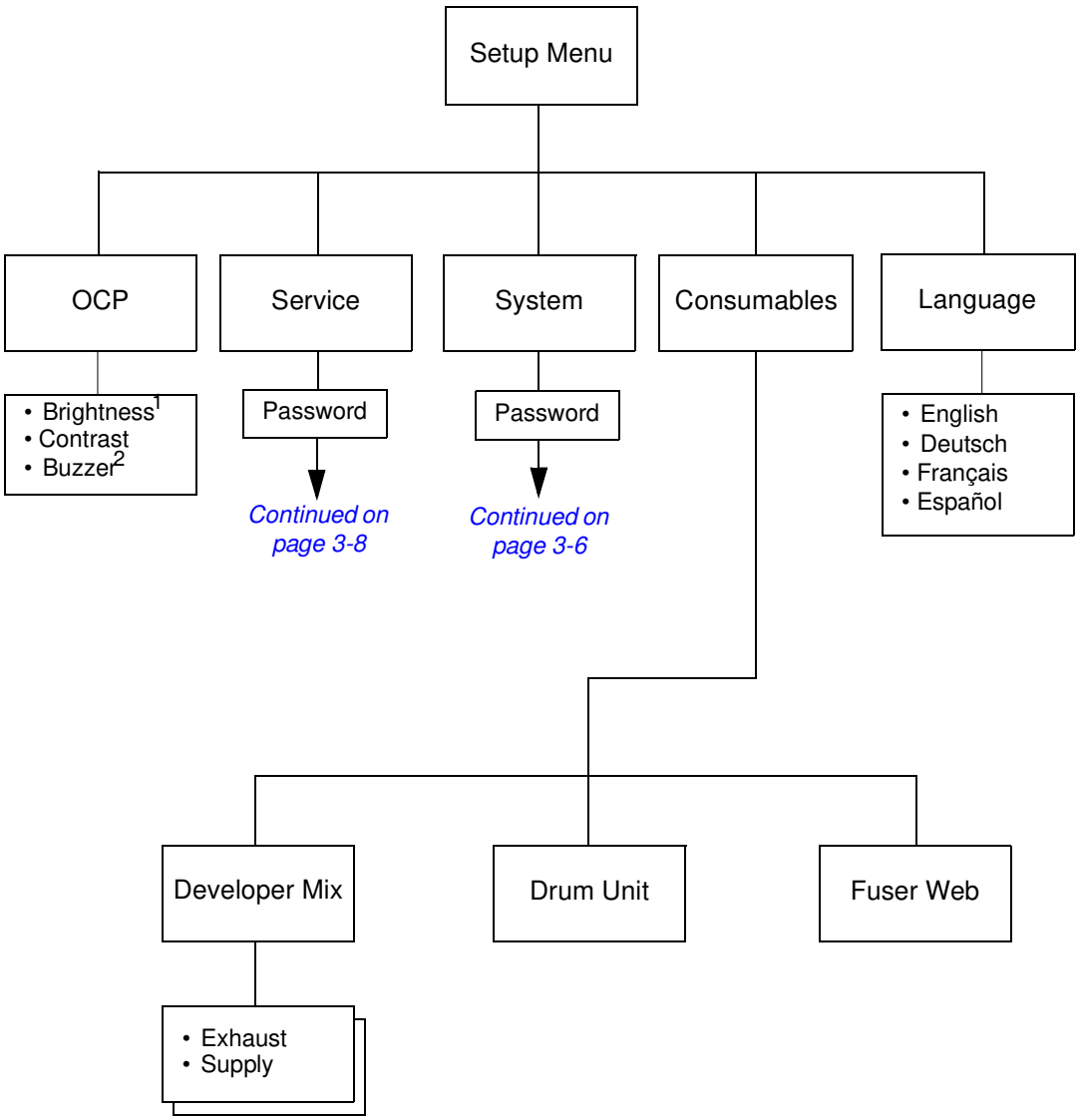
[3] Available when IPDS is installed.



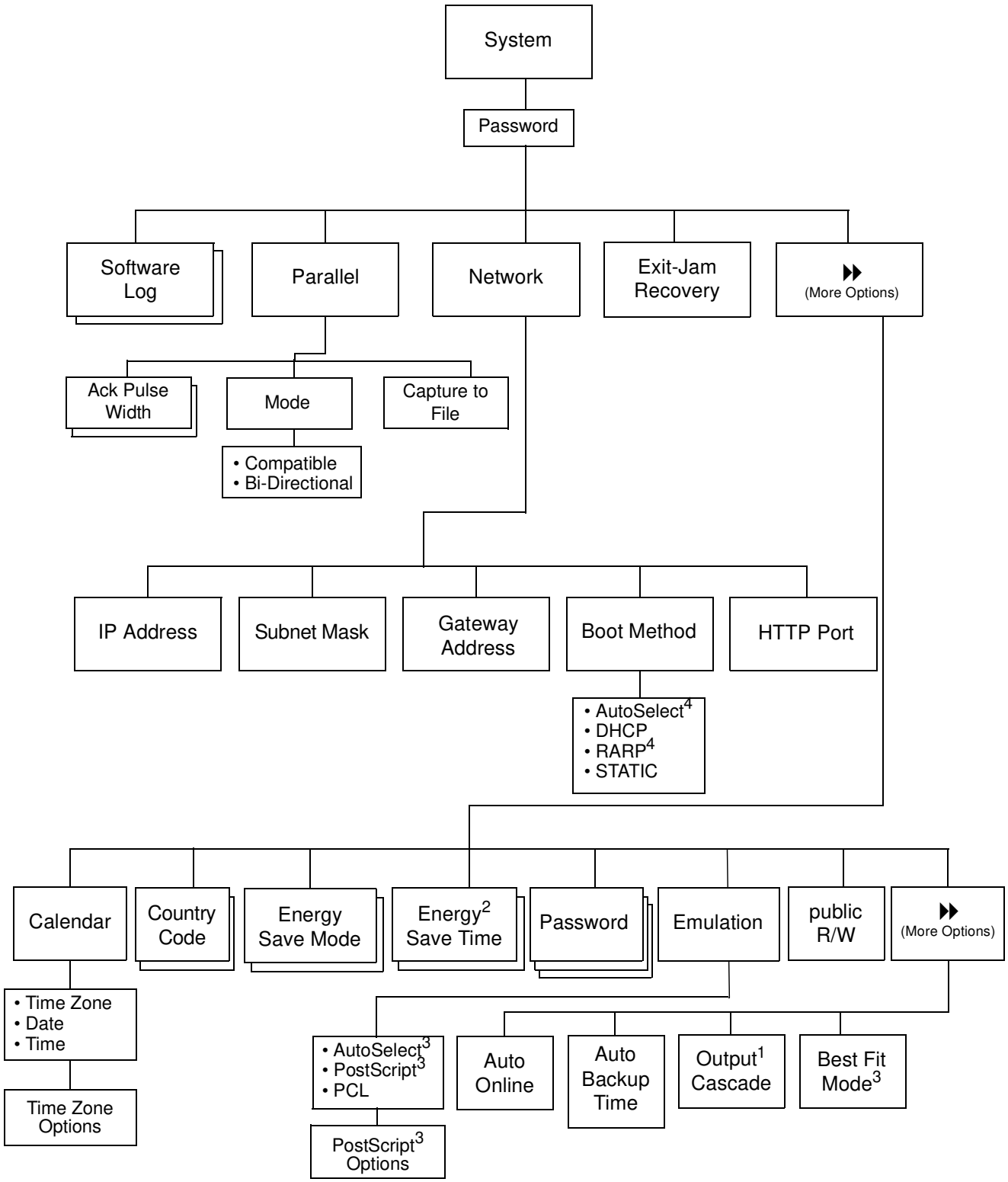
[1] Available when PostScript is installed.
[2] Available when the Booklet Finisher is installed.
[3] Available when the Container Stacker is installed.
[4] Available when IPDS is installed.



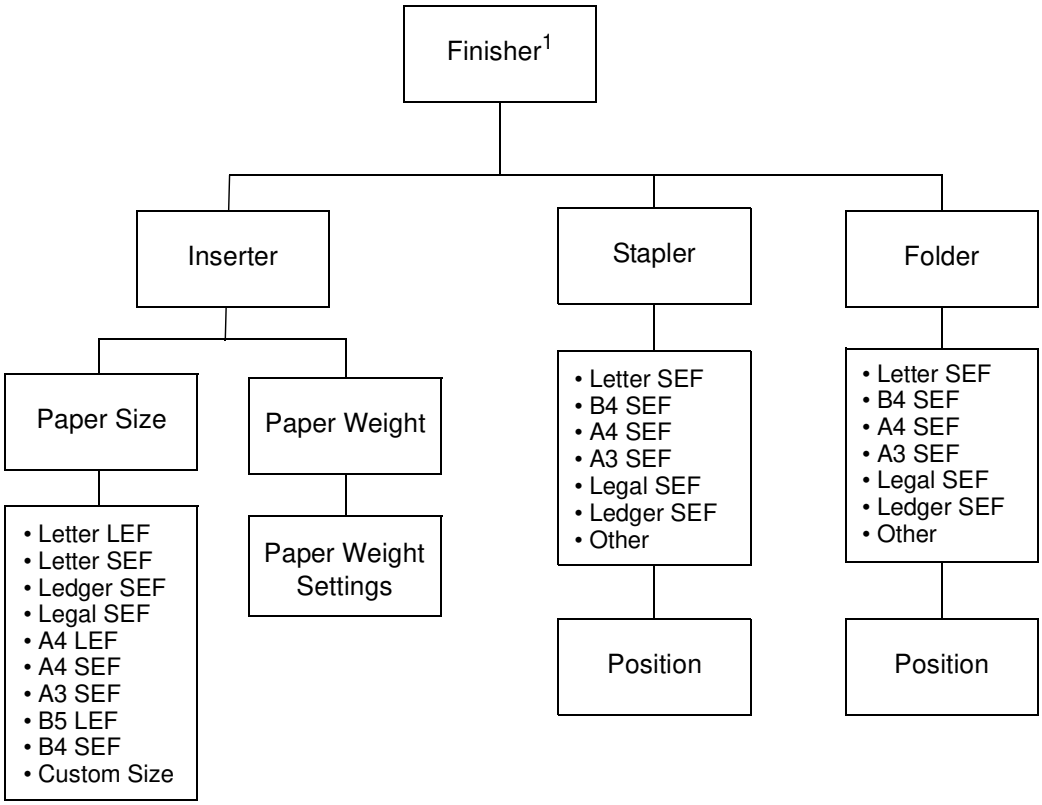
[1] Available when MBT is selected.
[2] Available when the sensor plate in the tray is set to the first position.
[3] Available when HCF is installed.

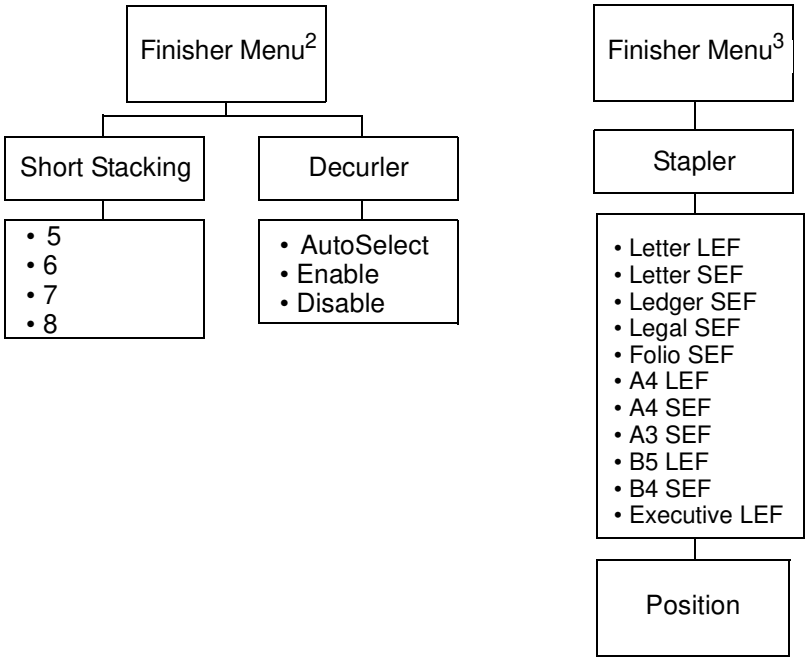


[1] Available for CL101/102 controller board.
[2] Available for CL141/142 controller board.



[1] Available when the Container Stacker is installed.
[2] Available when Energy Save Mode is enabled.
[3] Available when PostScript is installed.
[4] Available with the optional Network Interface Card only.

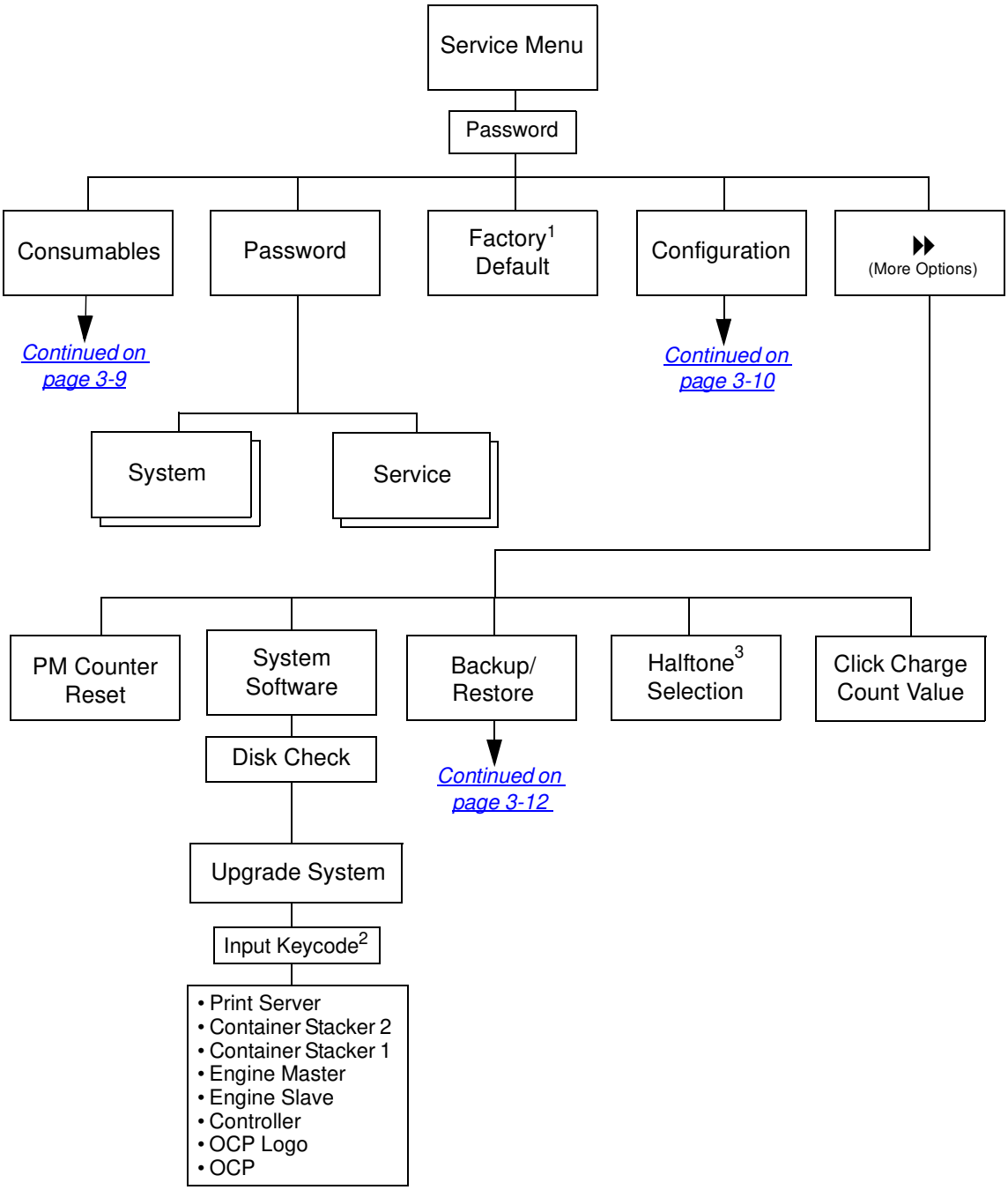




[1] DDP92 with Booklet Finisher

[2] Container Stacker

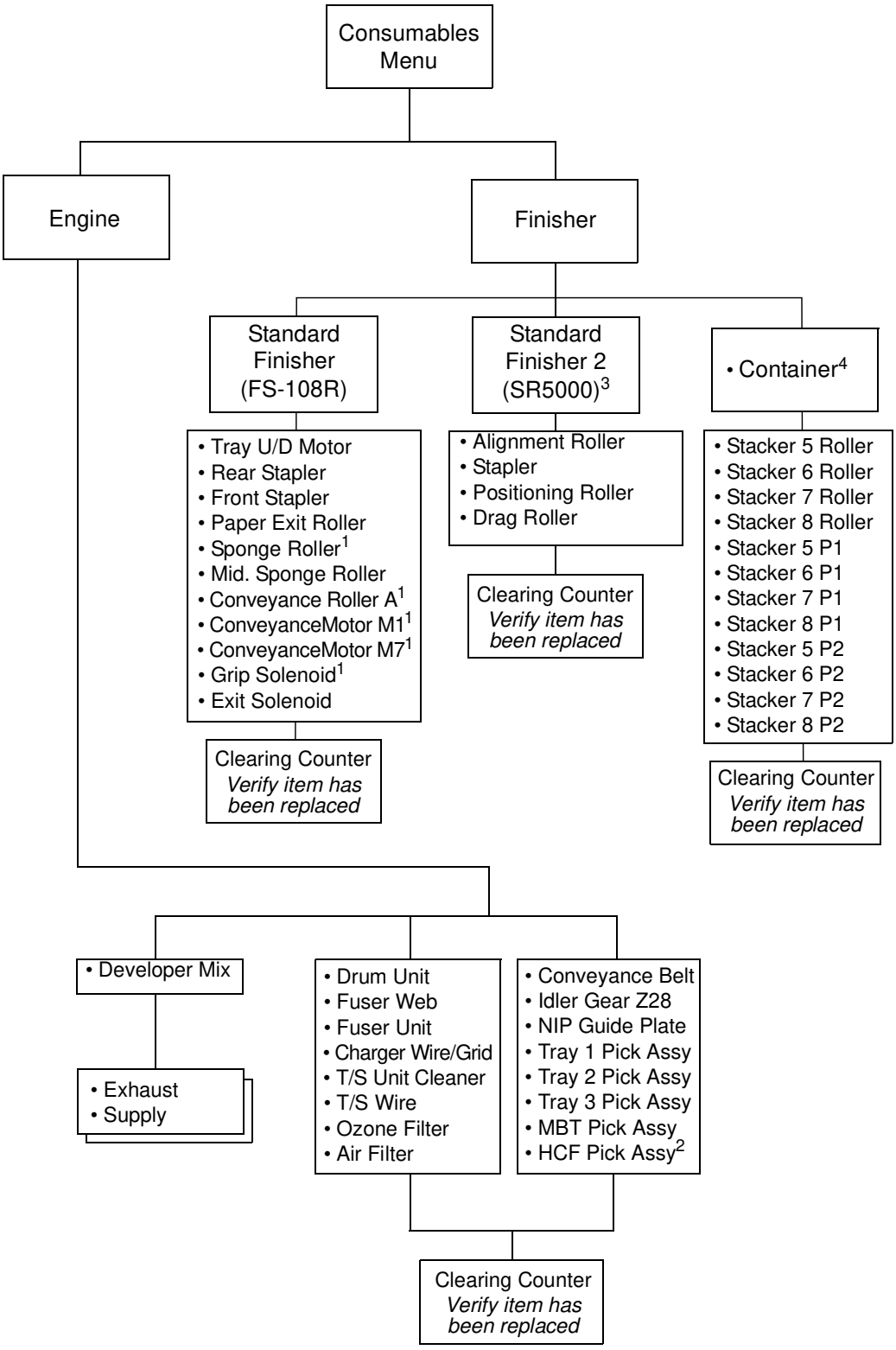
[3] Standard Finisher 2 (SR5000)



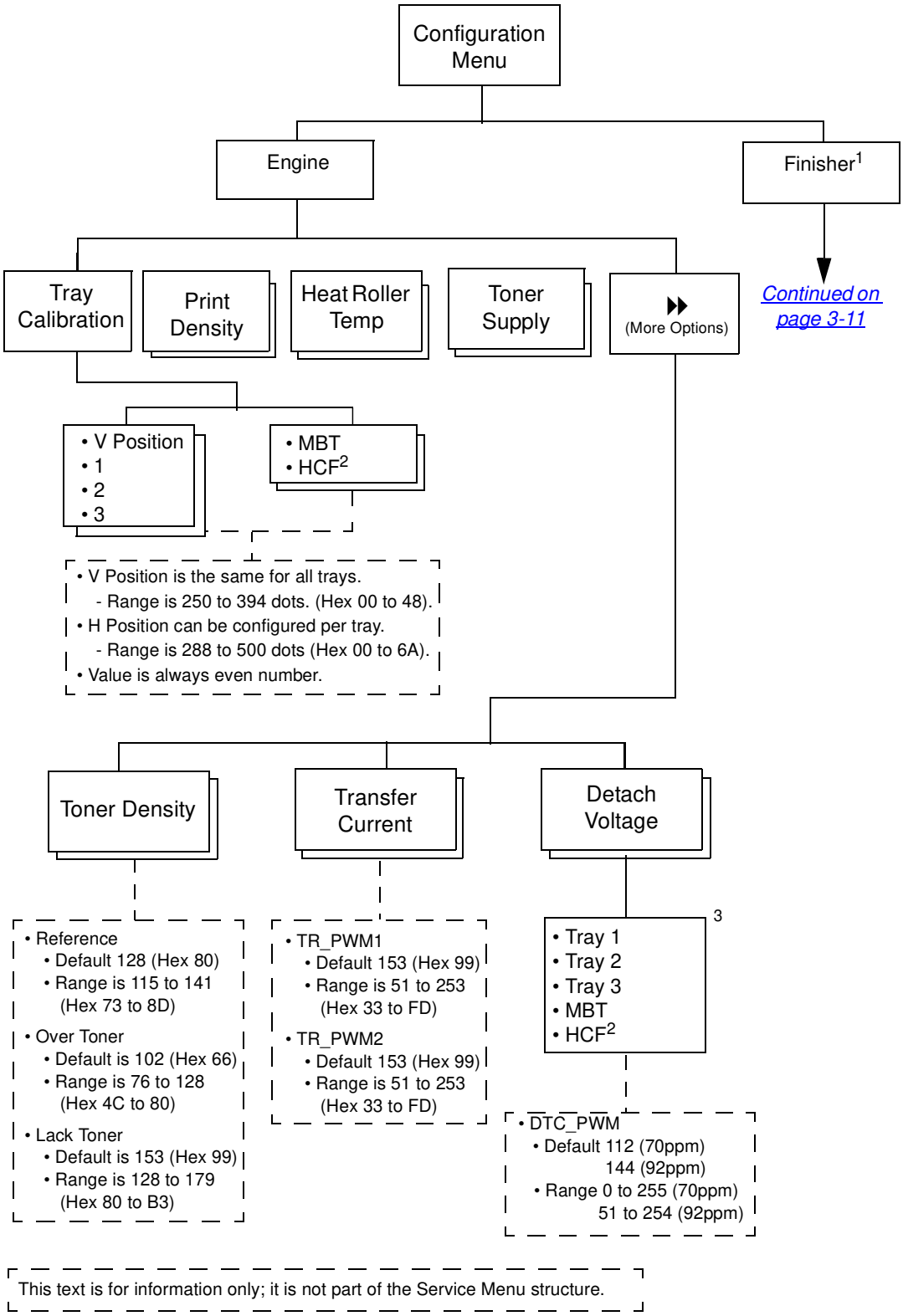
[1] Restores configuration to factory default.

[2] If a new Keycode is not required or not available, press Continue. The Software Upgrade will complete processing and the printer will function in its base configuration. If a new Keycode is required to make optional features functional, it can be input using the Web Utilities after the Software Upgrade procedure is complete.

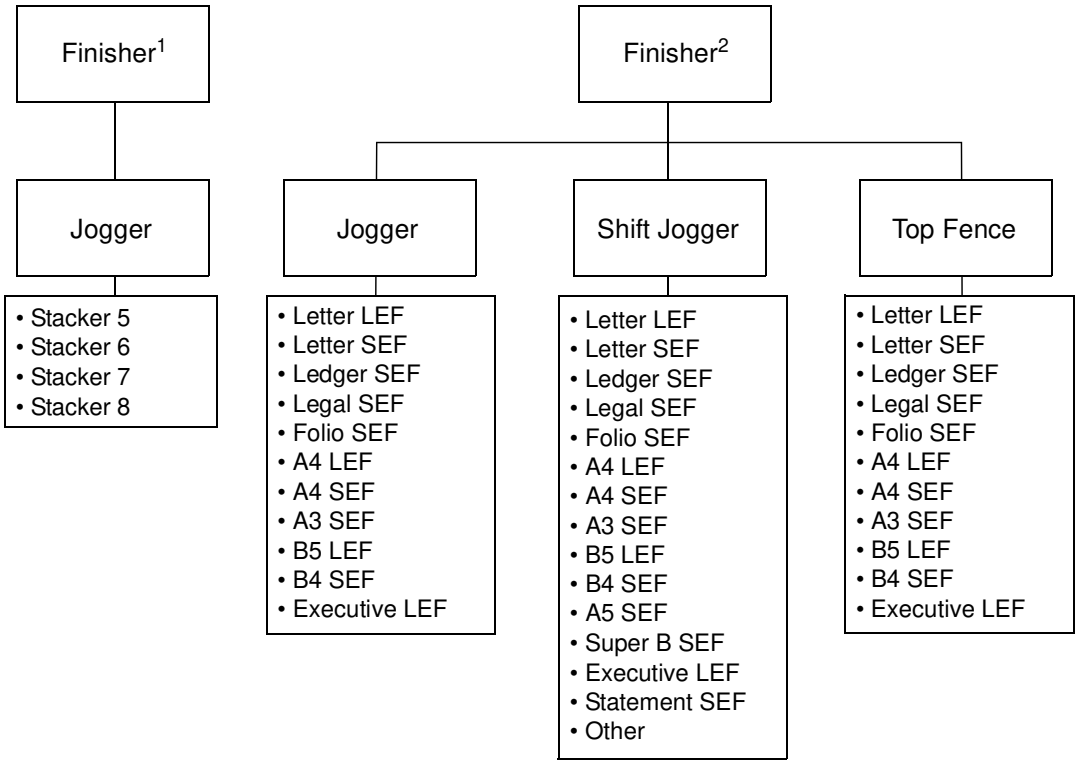
[3]Available when PostScript is installed.



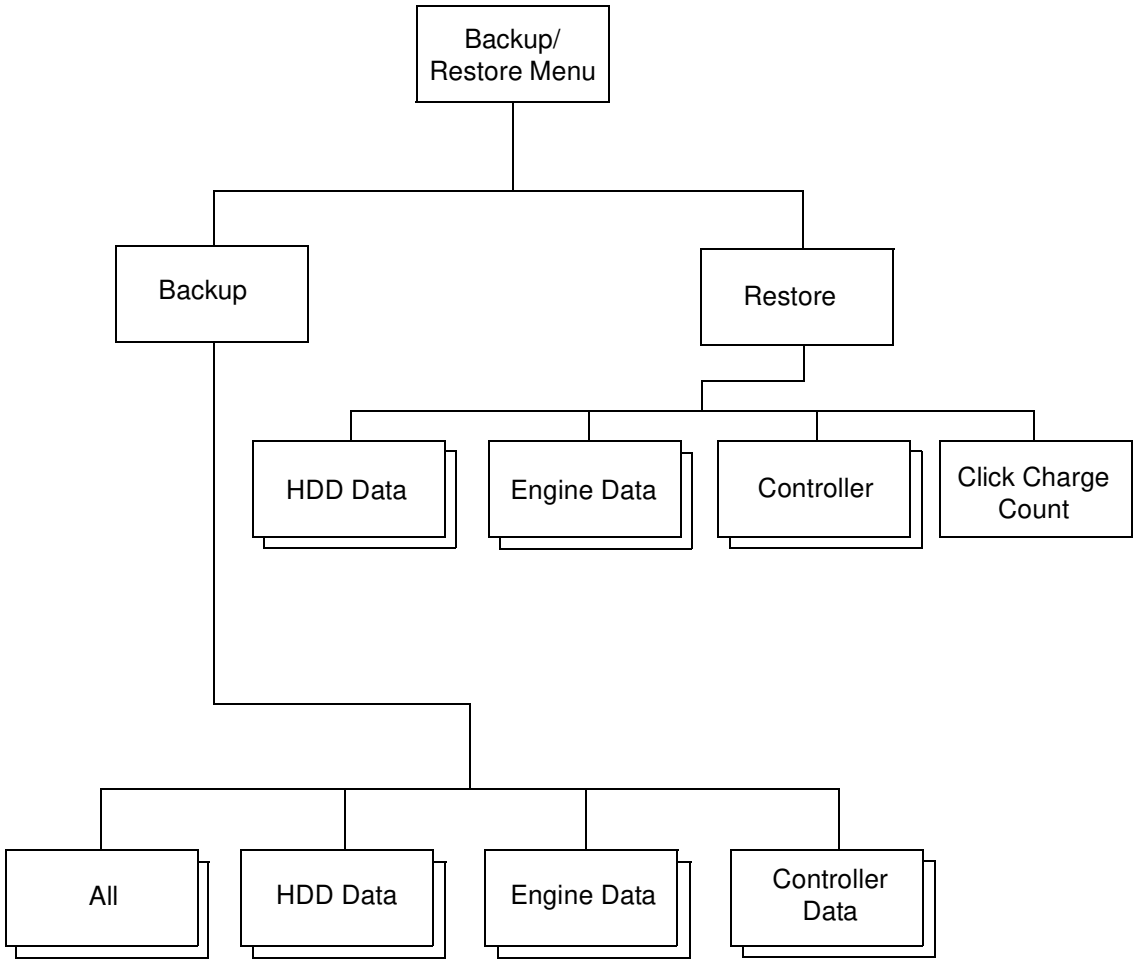
[1] DDP70e with FS-104H Finisher only
[2] Available when HCF is connected.
[3] Available when Standard Finisher 2 (SR5000) is connected.
[4] Available when Container Stacker is connected.



[1] Available when Container Stacker or Standard Finisher 2 (SR5000) is connected.
[2] Available when HCF is connected.
[3] This menu is shown when Controller Software version is ev626 or later.



[1] Available when Container Stacker is connected.
[2] Available when Standard Finisher 2 (SR5000) is connected.


Backup/
Restore Menu
Backup
Restore
HDD Data
Engine Data
Controller
Click Charge
Count
All
HDD Data
Engine Data
Controller
Data

Chapter 4
Service Procedures

Generally, the controller assembly does not require regular service or maintenance. Use the procedures in this chapter to inspect, remove, reseat, or replace major hardware components and also to install system software.

Overview

This chapter includes information on servicing the following components:

- Controller internal cable connections
- Circuit boards: controller board and Network Interface Card (NIC)
- Replacable parts on the controller board (DIMMs)
- Hard disk drive
- Fan
- Operator Control Panel/LCD

See Figure 4-1 for an overview of controller assembly components. Replacement parts are available from your authorized service representative.

Before performing the procedures described in this chapter, see “Precautions” on page 1-2 and “Tools You Will Need” on page 1-4.

Controller Assembly Diagram

CAUTION!

Although this maintenance manual applies to both the DDP70e and the DDP92 controllers, they are not interchangeable.

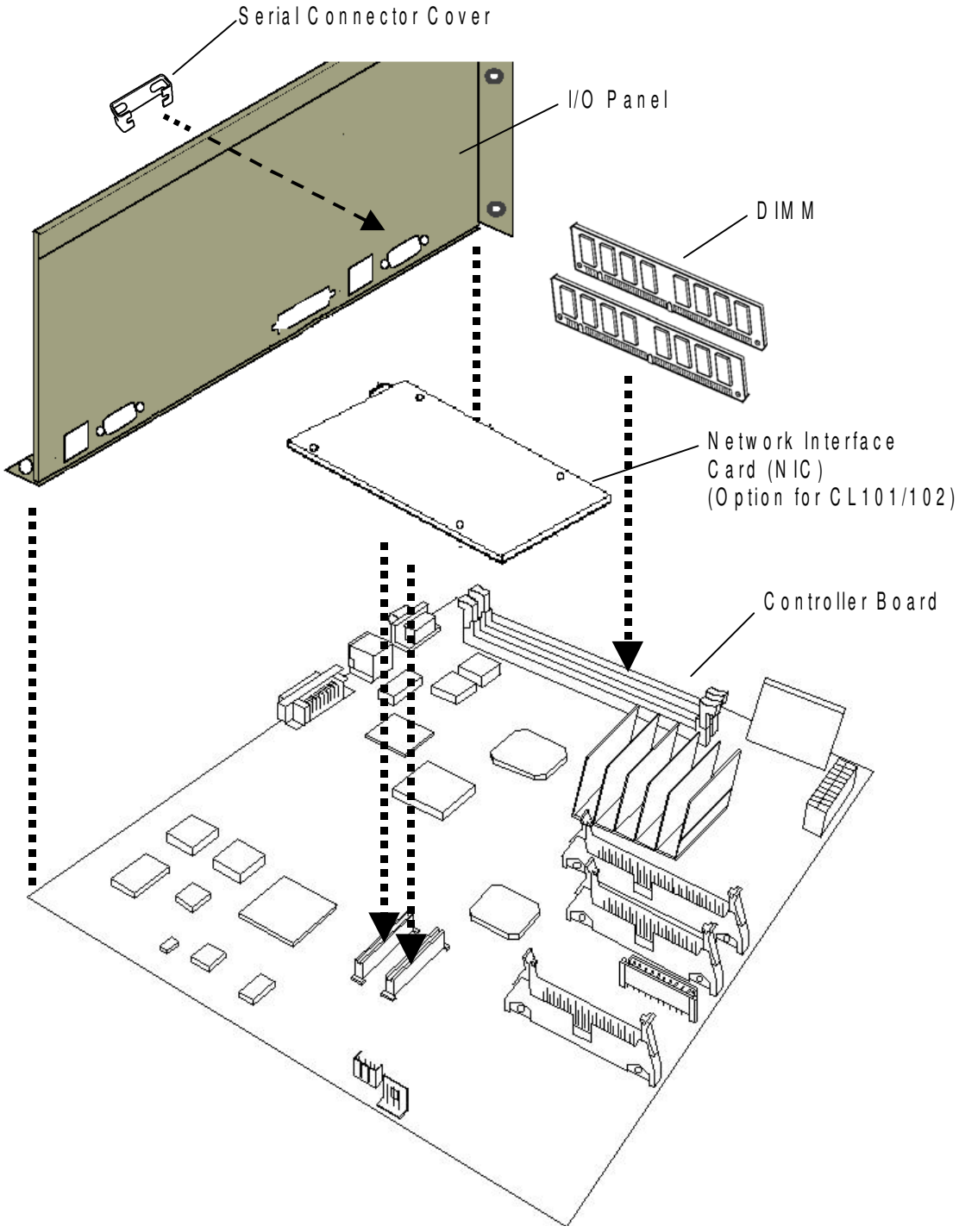


Figure 4-1. Controller Assembly and Parts

Accessing the Controller Assembly

A diagram of the controller assembly is shown in Figure 4-1. When the entire controller assembly is installed inside the printer, the ports for external devices are accessible from the back panel of the printer.

Always use the following procedures when accessing the controller assembly. Make sure you attach an ESD grounding wrist strap and follow standard ESD (electrostatic discharge) precautions before following this procedure.

Shutting Down the Printer

1. Make sure that the Operator Control Panel (OCP) is idle.

   When "Processing" appears on the OCP, the controller is currently processing. Ready/(blank), Ready/Heater Off Mode (Sleep Mode), or Pause/Off-line/Heater Off Mode (Sleep Mode) appears on the OCP when the controller has finished processing.

2. Power off the printer using the power switch on the side of the printer.

3. Unplug the power cable from the wall outlet.

WARNING!

To avoid serious injury or death, disconnect the power cord from the power outlet. Do not attempt to perform any servicing operation when the power cord is connected to the power outlet. The AC line voltage is present inside the controller enclosure regardless of the main power switch position.

Accessing the Controller Assembly

1. Make sure you have shut down the printer and unplugged the power cable from the wall.

2. Take off the rear cover of the printer by removing the six screws that secure the rear cover to the printer. Unhook the bottom of the rear cover, then lift up and pull forward to release it.

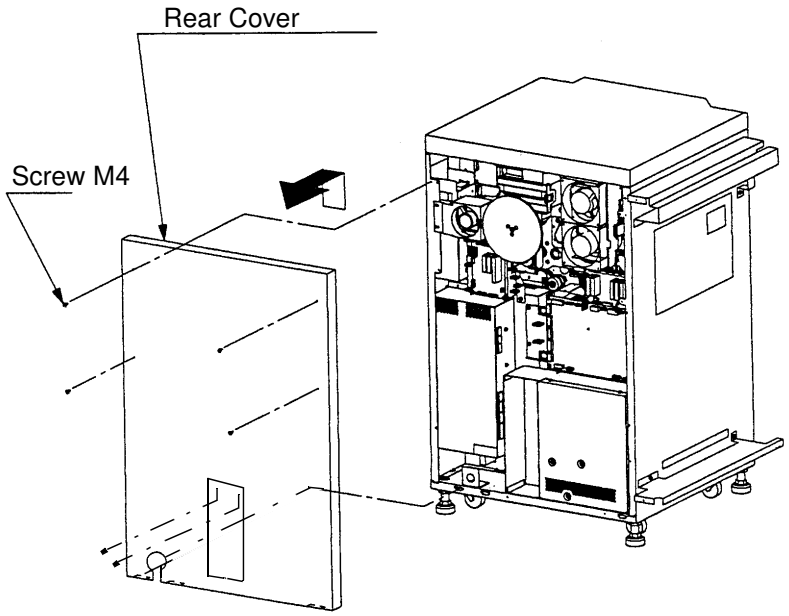


Figure 4-2. Accessing the Controller Assembly

3. Remove the twelve screws that secure the box CE box cover.

CAUTION!
The HDD is attached to the CE cover and has a cable connection. Take precautions to not damage the HDD cable when removing the CE cover from the printer.

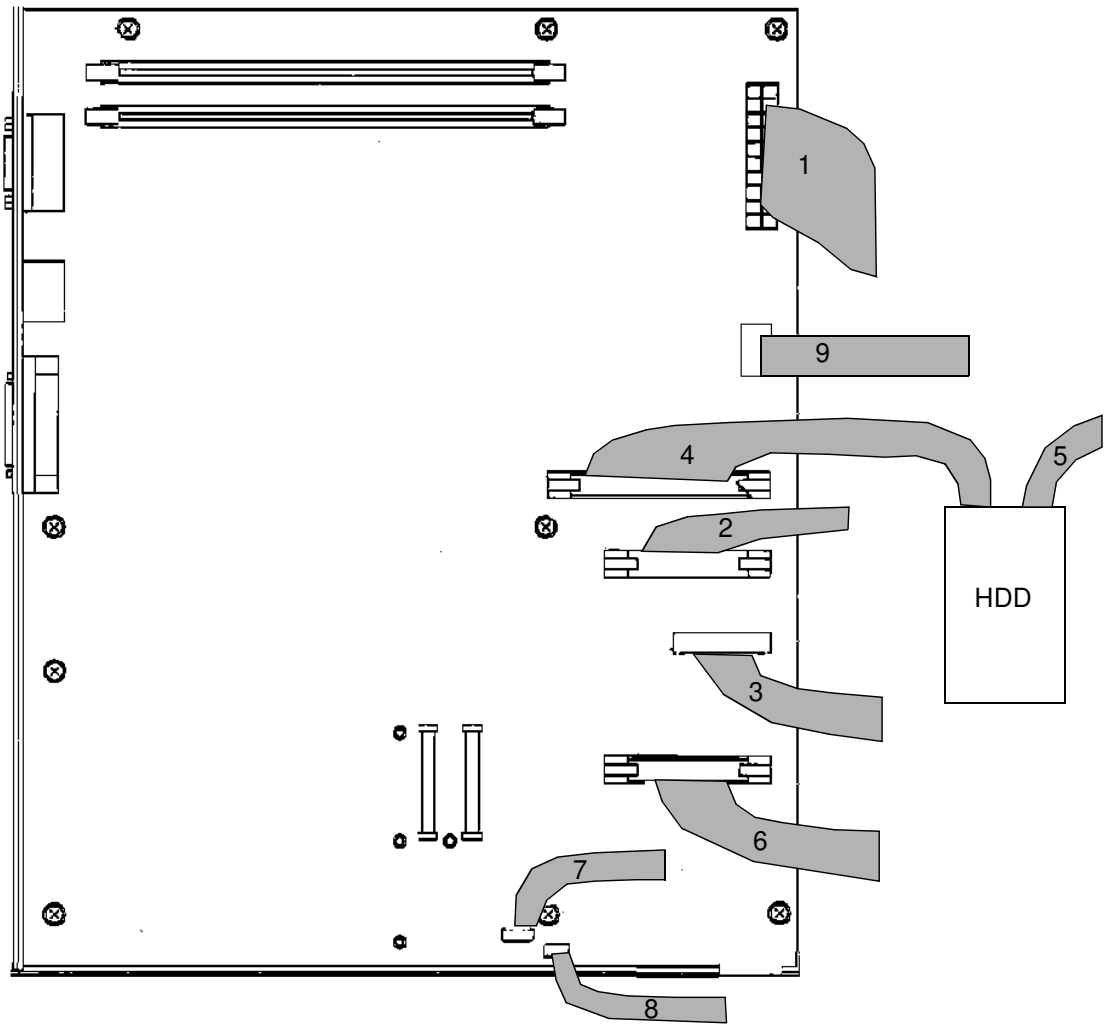
4. The controller board is now accessible. A diagram of the controller assembly is shown in Figure 4-1.

Checking Internal Connections

The most common causes of hardware problems are faulty or loose connections. Once you conclude that all the external connections are good, check the internal connections.

1. Before you touch any parts inside the printer, attach an ESD grounding wrist strap.
2. Inspect internal ribbon cables to see if they are intact.

   Faulty ribbon cables are easily overlooked. Check the contact point between the cable and the connector to ensure that they have not separated. If a ribbon cable is suspect, substitute it with a tested cable.
3. Make sure that all controller cables and DIMMs are properly aligned and well seated on their controller connectors. For connector and DIMM locations on the controller board, see page 4-7 or page 4-8.



	Cable	From	To
1	Controller power cable	Power supply	Controller Board
2	Engine communication cable	Engine controller	Controller Board
3	Video cable	Video board	Controller Board
4	HDD cable	Controller board	HDD
5	HDD power cable	Power supply	HDD
6	OCP Serial Cable	Controller Board	OCP
7	Energy Save Cable	Power Supply	Controller Board
8	Fan cable	Controller Board	Fan
9	Power Fail Cable	Controller Board	AC011 Assembly

Figure 4-3. Controller Internal Connections

Restoring Controller Functionality After Service

1. Reinstall any internal boards, cables, connectors, and other parts of the controller assembly that you loosened during inspection or service.
2. If you removed the control panel cover, replace it.
3. Replace the power cable.
4. Reinstall any cables you removed from the back panel of the printer.
5. Verify controller operation as outlined below.

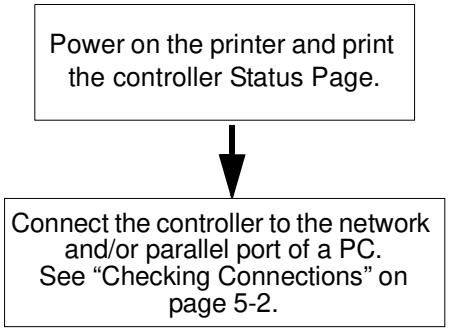


Figure 4-4. Controller Connection Verification Steps

Removing and Replacing Circuit Boards

This section describes the procedure for removing and replacing the following boards:

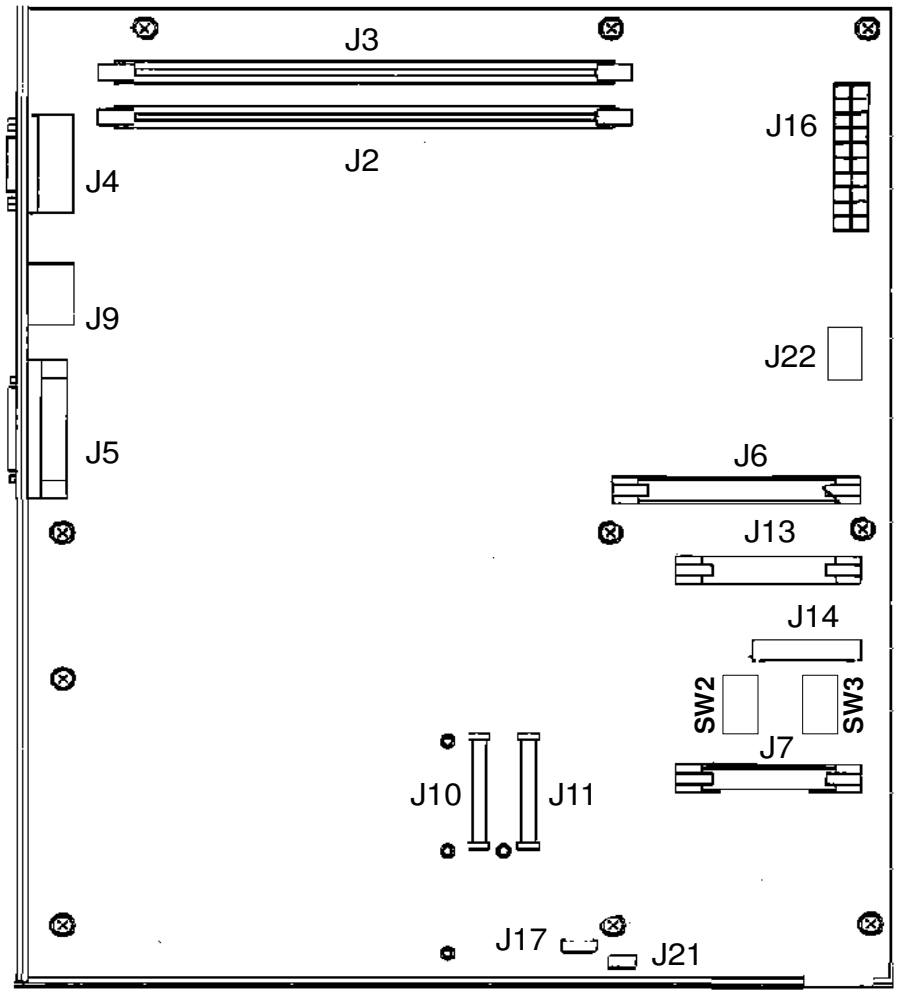
- Controller board
- Network Interface Card (NIC) : Option for CL101/102
- DIMMs
- Operator Control Panel

Controller Board

This section includes instructions for replacing the controller board. The controller board is installed in the Controller Electronics box (CE box) on permanent standoffs. The layout of the controller board is shown in Figure 4-5 or Figure 4-6.

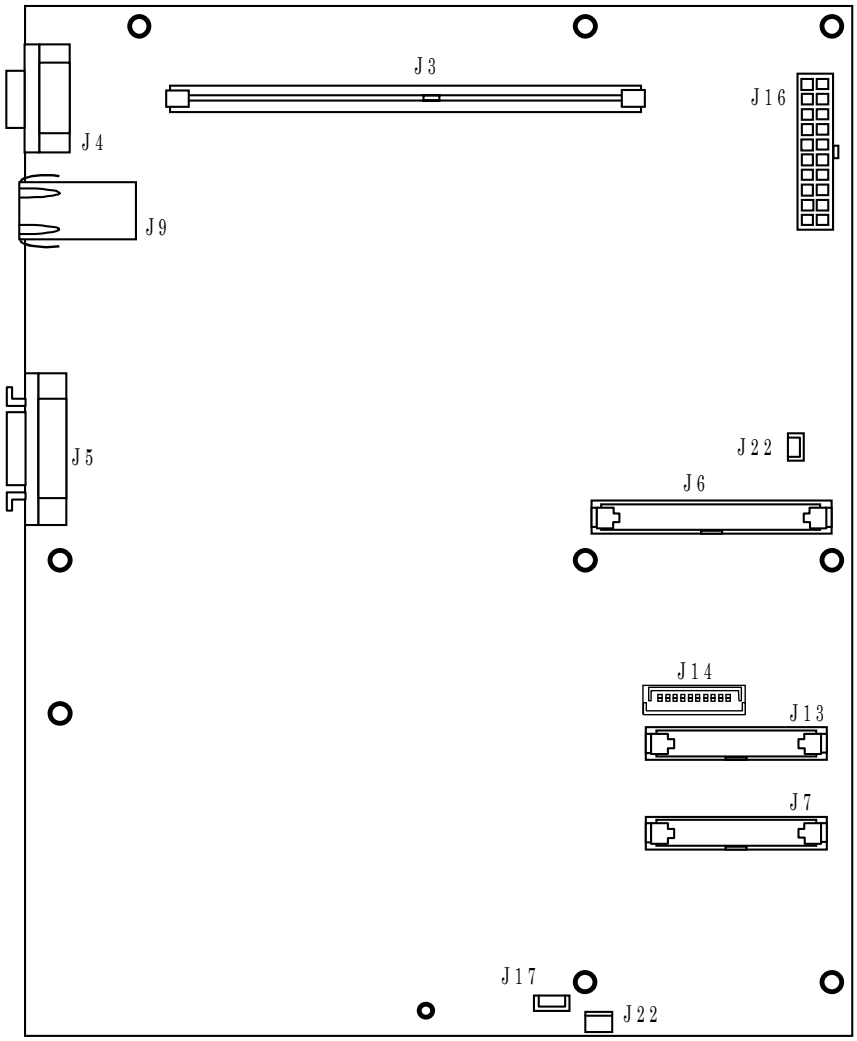
Before you can remove the controller board you must remove:

- All cables attached to the controller board
- Network Interface Card if installed
- Memory (DIMM)



Item	Connector(s)
Serial Port, Com1 (maintenance use only)	J4
10/100 BaseT Ethernet Port	J9
HDD	J6
Power	J16
Memory (DIMM)	J2, J3
IEEE 1284 Parallel Cable	J5
Serial Port COM3 (Debug use only)	J7
Engine controller	J13
Video board	J14
Fan	J21
Energy Save cable	J17
Network Interface Card	J10, J11
Power Fail Connector	J22

Figure 4-5. CL101/102 Controller Board Layout



Item	Connector(s)
Serial Port, Com1 (maintenance use only)	J4
10/100 BaseT Ethernet Port	J9
HDD	J6
Power	J16
Memory (DIMM)	J3
IEEE 1284 Parallel Cable	J5
Serial Port COM3 (Debug use only)	J7
Engine controller	J13
Video board	J14
Fan	J21
Energy Save cable	J17
Power Fail Connector	J22

Figure 4-6. CL141/142 Controller Board Layout

Removing the Controller Board

CAUTION!

Do not exchange battery. There is danger of explosion if battery is replaced incorrectly. Dispose of used in accordance with local regulations. Do not dispose in fire.

1. Print the Status page from the Reports menu.

   After you replace the controller board, you will need to:

   - ❒ reinstall system software.
   - ❒ install a new keycode if the printer has PostScript options installed. A new keycode is required to enable the printer options.

   Setup settings are reset to the default configuration when you reinstall system software. The Status page gives you current Setup information that you can refer to after you replace the controller board.

2. Note the PCL Font List from the Status page.

   The Font List details what fonts are installed on the controller HDD. Along with the fonts that are provided on the distribution CD, the customer may have installed additional fonts that will be deleted when you replace the controller board.

3. Shut down and open the printer as described in “Accessing the Controller Assembly” on page 4-3.

4. Remove all external cables connected to the I/O panel.

5. Remove the power supply cable from controller board connector J16.

6. Remove the HDD cable from controller board connector J6. Using a ribbon cable connector extractor is recommended.

7. Remove the fan cable from controller board connector J21.

8. Remove the engine communication, video, energy save, and power fail cables from the controller board at connectors J13, J14, J17, and J22.

9. Remove the serial cable from J7.

10. Remove the screws that hold the controller board and the screws that hold the I/O panel. Place the controller board on a flat surface.

11. Remove the screws that secure the controller board to the I/O panel and the Serial Connector Cover.

NOTE:

Keep it because the Serial Connector Cover and the Dust Cover attached to controller board connector J4 are installed again when the controller board is installed.

12. Remove the I/O panel and set aside.

13. Remove the NIC (if installed as an option) from controller board connectors J10 and J11 (see “Network Interface Card (option)” on page 4-12).

14. Remove the DIMMs from controller board connector J2 or J3.

15. Place the controller board into an antistatic bag.

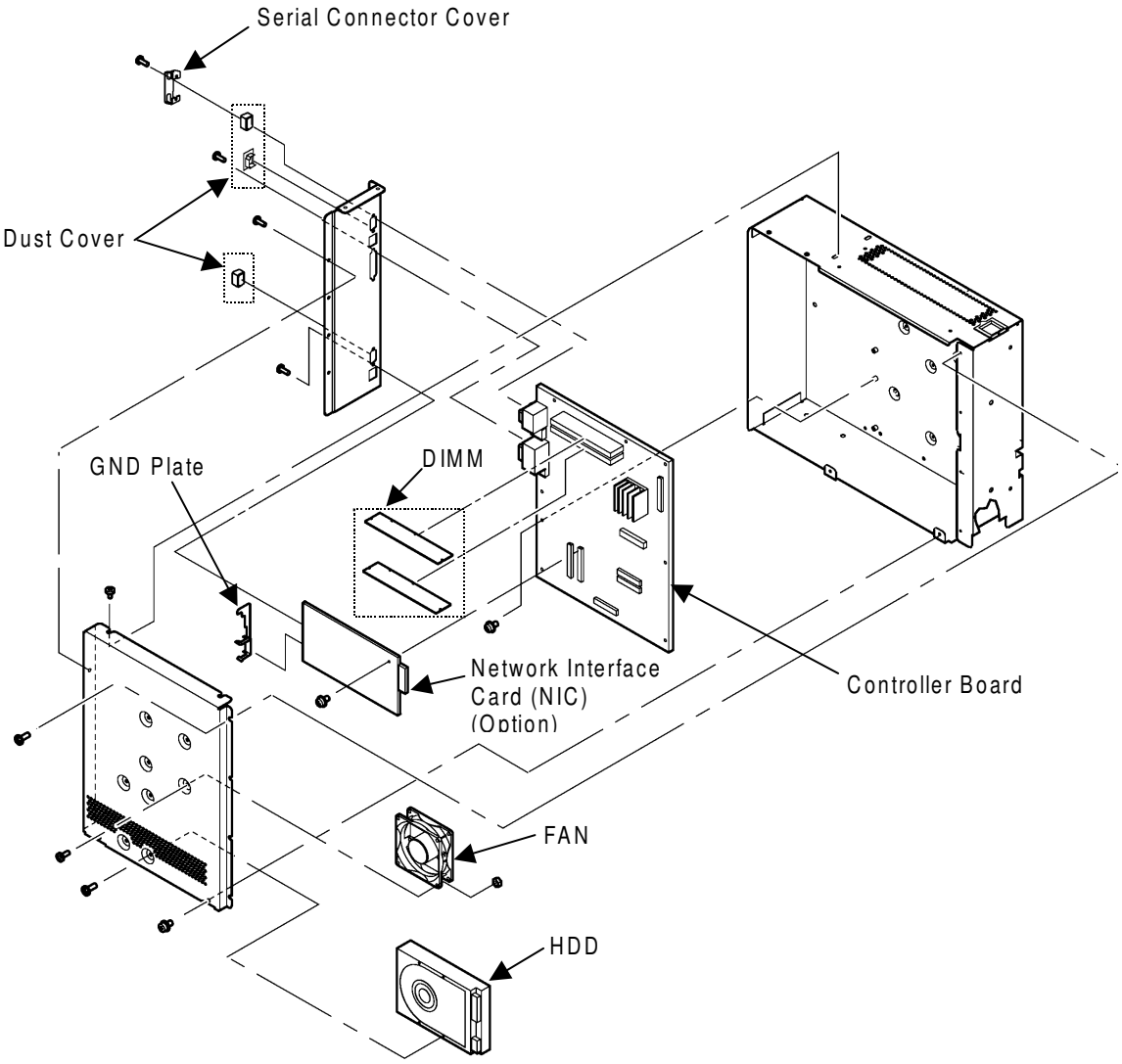


Figure 4-7. Controller Assembly

Replacing the Controller Board

1. If applicable, reseat the NIC in controller board connectors J10 and J11 as described in “Replacing the NIC” on page 4-12.
2. Reseat the DIMMs in controller board connector J2 or J3 as described in “Replacing or Upgrading a DIMM” on page 4-14.
3. Reassemble the controller board and I/O panel in reverse order of disassembling them.

   Make sure that the controller board ports are correctly aligned in the cutouts in the I/O panel before you replace the mounting screws.
4. Connect the engine communication cable, video cable, energy save cable, and power fail cable to the controller board at connectors J13, J14, J17, and J22, respectively.
5. Attach the HDD cable to controller board connector J6.
6. Connect the power supply cable to controller board connector J16.
7. Reassemble the printer and verify functionality as described in “Restoring Controller Functionality After Service” on page 4-6 or other documentation. BR#xx error may occur when the revision of the Controller is ev701 or later.
8. Controller Board (xx) Ass’y can be restored with procedure below. Select menu below via OCP.
   (1)Setup / Service / Backup/Restore / Restore / Controller
   (2)Setup / Service / Backup/Restore / Backup / HDD Data
9. Cycling of pinter power, make sure that BR#xx error does not display on OCP.
10. If the printer has PostScript options installed, you need to install a new keycode as described in “Adobe PostScript3 Upgrade Kit Installation Instruction” for detail.

Network Interface Card (option)

This section contains instructions for replacing the optional Network Interface Card (NIC). The NIC inserts into controller board connectors J10 and J11.

NOTE:
The optional Network Interface Card is available for CL101/102 Controller Hardware only.

Removing the NIC

1. Shut down and open the printer as described in "Accessing the Controller Assembly" on page 4-3.
2. Remove four screws and washers from the corners of the NIC, and two screws from the I/O Panel.

   Set aside and save the screws for use when installing the new NIC.
3. Remove the dust cover from the NIC.

   Set aside and save the dust cover for use when installing the new NIC.
4. Remove the NIC from the controller board connectors J10 and J11.
5. Remove the shield that surrounds the NIC.

   Set aside and save the shield for use when installing the new NIC.
6. Place the NIC into an antistatic bag.

Replacing the NIC

1. Reassemble the NIC in reverse order of disassembling it.

   NOTE:
   Make sure the connectors are lined up properly before pressing them into the controller board.
2. Reassemble the printer and verify functionality as described in "Restoring Controller Functionality After Service" on page 4-6 or other documentation.

Please refer to the "Multi Protocol NIC Installation Instruction" in the optional NIC kit for more detail.

DIMM

The DIMM (dual in-line memory module) is held in place by levers at each end of its socket on the controller board. The standard configuration is 256MB of memory, in sockets J2 and J3 on CL101/102 or sockets J3 on CL141/142.

Figure 4-8 shows the DIMM location on the controller board.

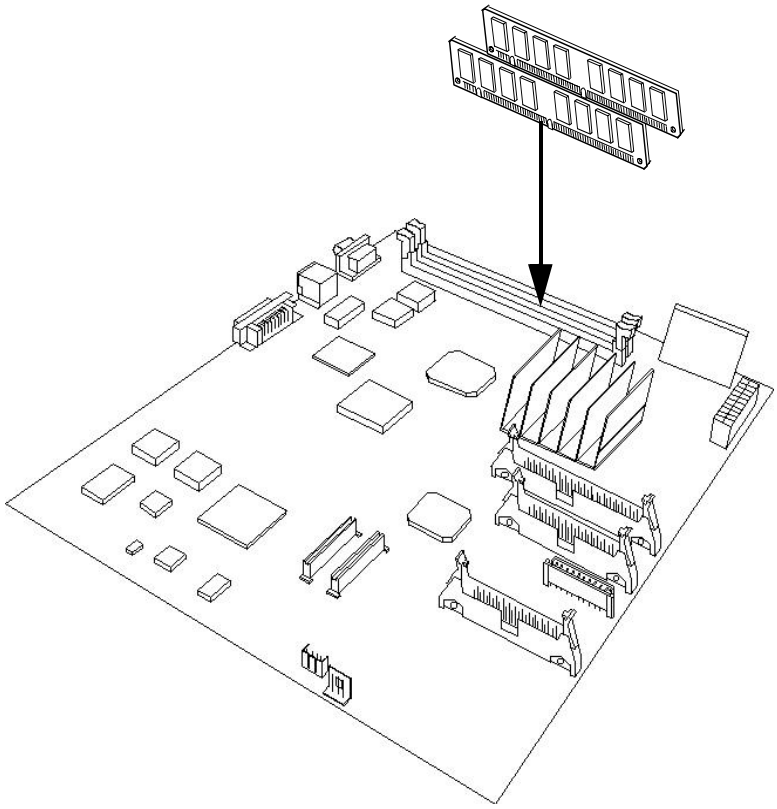


Figure 4-8. DIMM Location on the Controller Board

NOTE:
Approved DIMMs are available from your authorized service representative.

Replacing or Upgrading a DIMM

1. Shut down and open the printer as described in "Accessing the Controller Assembly" on page 4-3.
2. To release a DIMM, push outward on the lever on each side of the DIMM as shown below.

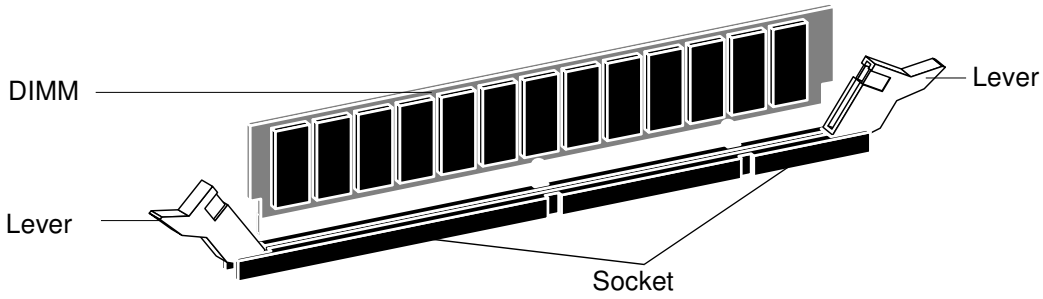


Figure 4-9. Releasing a DIMM

3. Slide the DIMM out of the socket.

   To install a DIMM, slide it into the socket until the levers snap into place.

   Make sure that the levers close securely around the ends of the DIMM and that the DIMM is fully seated in its socket. Avoid flexing the board while you firmly seat the DIMM in its socket.

   The DIMM fits the socket only one way. The two notches on the bottom of the DIMM should line up with the notches in the socket.

4. Reassemble the printer and verify functionality as described in "Restoring Controller Functionality After Service" on page 4-6 or other documentation.

Hard Disk Drive

The factory-installed hard disk drive (HDD) is formatted and loaded with all controller software, including operating software, system software, and printer fonts. Because the HDD is used to store spooled print jobs, available disk space is printed on the Disc Directory Page.

The HDD is secured to the CE box cover as shown in the figure below.

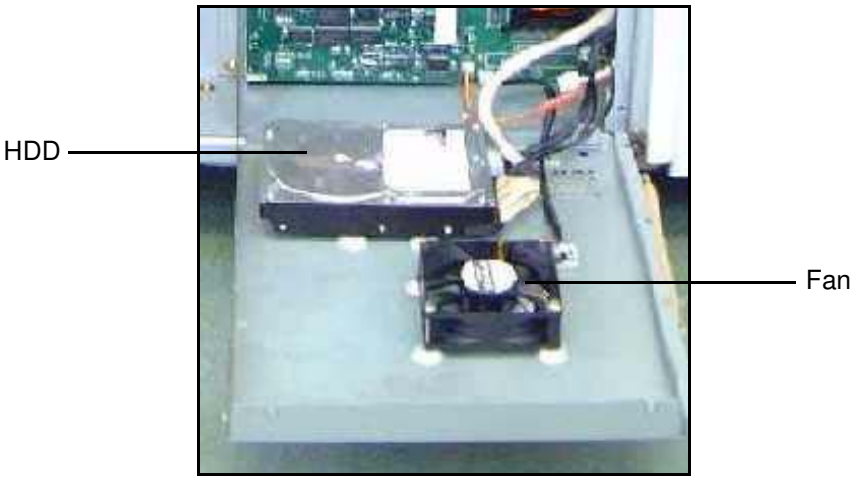


Figure 4-10. Hard Disk Drive and Fan

Proper Handling

Handle the HDD with care:

- Use proper ESD practices when grounding yourself and the controller.
- Keep magnets and magnetic-sensitive objects away from the HDD.
- Loosening the screws on the top of the HDD voids the warranty.
- Never drop, jar, or bump the HDD.
- Handle the HDD by its sides and avoid touching the printed circuit board assembly.
- Allow the HDD to reach room temperature before installation.

Before you decide that the HDD needs to be replaced, make sure that all cables are connected properly.

Removing the HDD

1. Shut down and open the printer as described in “Accessing the Controller Assembly” on page 4-3.
2. Remove the HDD cable from controller board connector J6.
3. Unplug the HDD cable from the HDD.

4. Unplug the HDD power cable from the HDD.

5. Remove the four screws that secure the HDD to the Controller Electronics box (CE box) cover.

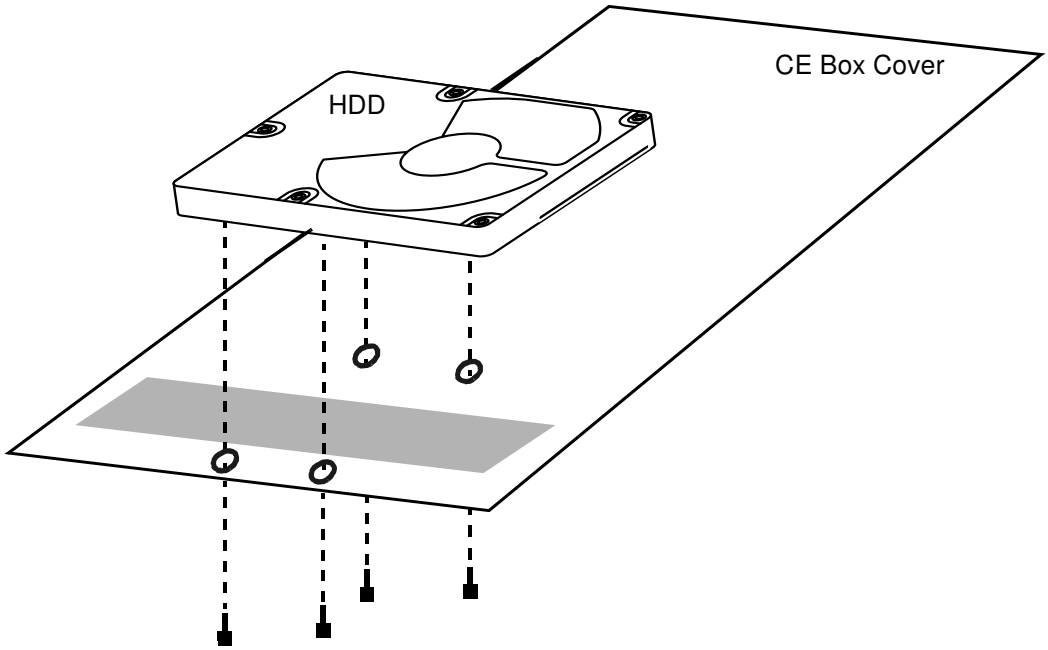


Figure 4-11. Removing the HDD

6. Lift the HDD from the CE box cover and place the HDD in an antistatic bag.

   Do not touch the drive with magnetic objects, such as magnetic screwdrivers. Do not place items near the hard disk drive that are sensitive to magnets, such as credit cards and employee ID cards. See “Proper Handling” on page 4-15.

Replacing the Hard Disk Drive

1. Secure the HDD to the CE box cover using the screws you removed earlier (see Figure 4-11).

2. Reinstall the HDD cable to controller board connector J6.

3. Plug the other end of the HDD cable into the HDD.

4. Reinstall the HDD power cable into the HDD.

5. Reassemble the printer and verify functionality as described in “Restoring Controller Functionality After Service” on page 4-6.
   BR#xx error may occur when the revision of the Controller is ev701 or later.

6. If passwords were installed in the printer, they must be re-entered after replacing the hard disk drive.

(a) In case of same Controller Revision replacement.

(1)Setup / Service / Backup/Restore / Restore / HDD Data
(2)Setup / Service / Backup/Restore / Backup / Engine Data
(3)Setup / Service / Backup/Restore / Backup / Controller

(b) In case of different Controller Revision replacement.

(1)Setup / Service / Backup/Restore / Backup / All

7. Cycling of pinter power, make sure that BR#xx error does not display on OCP.

Reinstalling the Keycode

If the optional IPDS is installed on the HDD, following procedures are needed.

1. Start your Internet Browser application.
2. To access the Web Tools, enter the IP address of the printer.(The IP address can be obtained from the OCP.)
3. Select Service.
4. In the Password dialog enter service in the User Name text box and enter the Password (if required). Click OK.
5. Select License Keycode from the Configuration menu to display the Configuration-Keycode window.
6. Enter IPDS Option PIN Number in PIN Number(IPDS) text box, and enter the keycode for IPDS in the Assigned Keycode(IPDS) text box.
7. Check the box in the select column, and click Submit.
8. The following message will be displayed:
"Keycode was accepted. Reset in progress. It will take several minutes. Please wait."

Fan

This section contains instructions for replacing the fan. The fan is secured to the CE Box cover as shown on page 4-15.

Removing the Fan

1. Shut down and open the printer as described in “Accessing the Controller Assembly” on page 4-3.
2. Remove the fan cable from controller board connector J21.
3. Remove the four screws that secure the fan to the CE box cover.

Replacing the Fan

1. Reassemble the fan in reverse order of disassembling it.

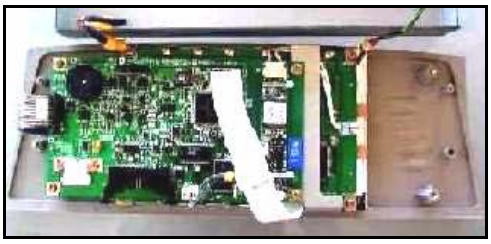
Operator Control Panel

The OCP Ass'y consists of two removable parts: the OCP board (2) Ass'y and the LCD Module. The OCP Ass'y includes the above parts plus screws, Panel Cover (M) Ass'y, and the Panel Holder Ass'y.

Panel Cover (M) Ass'y

Panel Holder Ass'y

LCD Module



OCP Board (2) Ass'y

Figure 4-12. OCP Ass'y

Removing the OCP Ass'y

1. Shut down the printer as described in "Shutting Down the Printer" on page 4-3.
2. Open the front top door of the printer.
3. Remove the top cover by unscrewing two screws from the rear and two screws from the front.
4. Unscrew the right-hand screw and loosen the left-hand screw that secure the OCP Ass'y.
5. Remove the OCP Ass'y.
6. Unplug the two cables connected to the OCP Ass'y.

Replacing OCP Board (2) Ass'y

1. Unplug the cables of the LCD Module to OCP board (2) Ass'y (J3, J4, and the Backlight cable to the TDK on the board).
2. Unscrew OCP board (2) Ass'y from the Panel Cover (M) Ass'y.
3. Remove the two self-tapping screws that secure the LCD Module onto the Panel Cover (M) Ass'y at the right side.
4. If replacing the LCD Module, remove the two screws that attach the LCD to the bezel.
5. Replace OCP board (2) Ass'y in the reverse order of removing it.

Replacing the OCP Ass'y

1. Replace the OCP Ass'y in the reverse order of "Removing the OCP Ass'y" above.

Backup and Restore

The Backup/Restore feature is used to save vital data during printer service. Internal printer configuration data is saved to different locations depending on its origin.

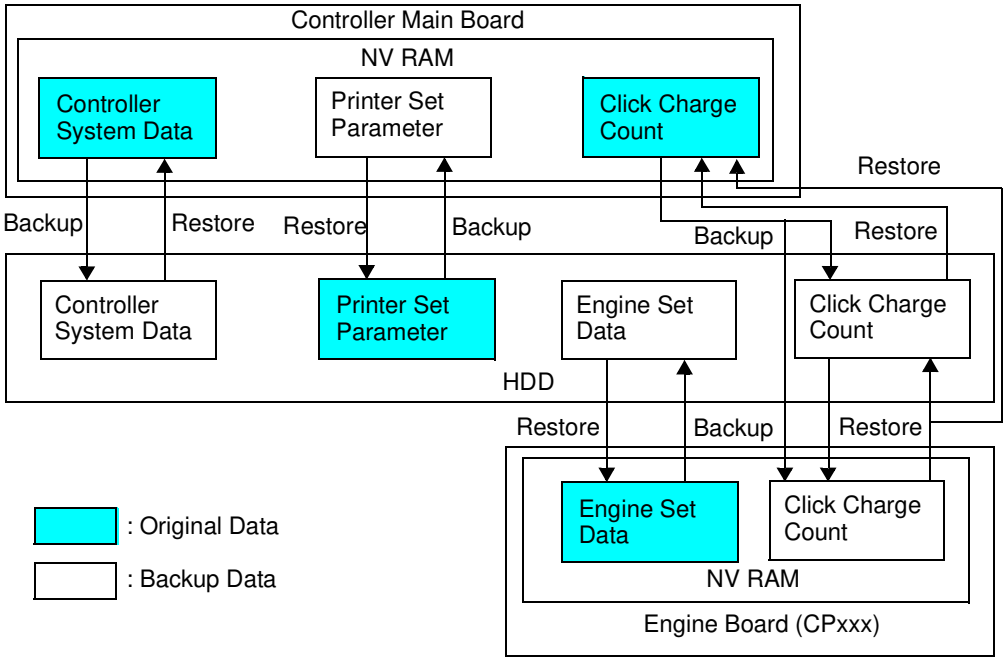


Figure 4-13. Backup and Restore

The printer data are backed up at the following opportunities:

1. When the printer initializes.
2. When the printer clock turns to Backup time which is set from following menu. ***Setup / System / Auto Backup Time***
3. When the OCP Backup/Restore manual backup function is used.

CAUTION!

The automatic backup function is only executed if the original time and backup time are the same. If the original time and backup time are different or the Backup/Restore menu displays "unavailable", then the OCP Backup/Restore Manual Backup Function "All" must be used.

Restoring previously saved data to a HDD containing a different version of the controller software may render the printer unusable

When the HDD is replaced, the ***Restore/HDD Data*** *should be selected. Also, the* ***Backup/ENGINE*** *and* ***CONTROLLER*** *functions should be selected.*

When the CPxxx Assembly is replaced, the ***Restore/ENGINE Data*** *should be selected.*

When the Controller Main Board is replaced, the ***Restore/CONTROLLER Data*** *should be selected.*

The table below shows the source and destination of data for the Backup/Restore function as well as the menu hierarchy.

Table 4-1. Backup and Restore

Service	Option	Option	Source/Destination
Backup/Restore	Backup	All	(Backup all data)
		HDD Data	HDD to NVRAM
		Engine Data	Engine Controller to HDD
		Controller	Egret NVRAM to HDD
	Restore	HDD Data	NVRAM to HDD
		Engine Data	HDD to Engine Controller
		Controller	HDD to Egret NVRAM
		Click Charge Count	HDD to Egret NVRAM

If you see the word *unavailable* next to an item during a backup/restore, it means that the backup procedure has never been completed and, therefore, there is no backup data to restore. When a backup has been completed, a date is next to the item, indicating when the backup was performed.

Chapter 5
Troubleshooting Procedures

This chapter focuses on troubleshooting problems that can occur with the controller assembly. It identifies the source of common problems and suggests ways of correcting them. This chapter does not attempt to provide troubleshooting information for attached computers (such as Windows), for printers, or for extensive networks. Refer problems in these areas to the appropriate service departments and network administrators.

The Troubleshooting Process

The troubleshooting process is designed to eliminate the most obvious causes of failure before progressing to more complex issues. "Where Problems Occur" on page 5-1 gives an overview of the controller components and indicates areas most likely to require troubleshooting.

If the controller fails to complete its Start-up sequence and the printer does not reach Idle, the most likely cause is a loose cable or board connection. See "Errors During Start-up Diagnostics" on page 5-3 for the different error messages that are reported to the Control Panel and "Checking Internal Connections" on page 4-4.

- Try a phone check before you go to the customer site.

  "Before You Go to the Customer Site" on page 5-2 suggests areas you should check out before making a service call to the customer site. With a phone call, you can find out if the problem is a simple operating failure or a failure caused by a network or configuration change. You can ask the customer to check for loose cables on the side of the printer and loose connections at a power strip or outlet.

- Check for obvious causes of problems.

  "Preliminary On-site Checkout" on page 5-2 takes you through the initial visual checkouts you should make when you arrive at the customer site. You should check the Control Panel for an error message and see if the activity lights indicate an error condition. Then inspect the printer externally and internally for the most common problems, such as loose or faulty cables.

- Check network connections.

  "Checking Network Connections" on page 5-11 provides guidelines for checking the network connections between the printer and the computers to which it is connected as well as information on several printing problems.

Where Problems Occur

The controller as a built-in print server for the printer is generally part of a configuration like the one shown in Figure 2-1. Problems may occur in one of the following areas:

- The interface between the controller board and the printer
- The interface between the controller and computers that print to it
- The controller board or printer itself

Before You Go to the Customer Site

Before you make a service call to a customer site, talk to the customer on the phone and check out the following items:

1. Does the printer work?

   If the printer works but the user cannot print the controller Status Page, have the customer check for any error messages in the Control Panel. If the Control Panel reports an error, check the cables between the controller and the printer.

2. Has the customer made any network changes?

   If network changes have occurred, request that the customer's network administrator verify the controller network requirements.

3. Is the user having printing problems with a particular image file?

   If there are problems with files from particular applications, the user may be more successful using different print settings.

If your telephone call fails to clear up the problem, proceed to the next phase, the preliminary on-site checkout.

Preliminary On-site Checkout

Your goal in the preliminary on-site checkout is to eliminate obvious problems, such as loose or missing cables and connectors.

Checking Connections

Before you remove the printer cover to inspect cables:

- If a PC is attached to the controller network port, make sure that the network cable is properly connected.
- Make sure the printer power cable is plugged into the wall outlet and that the printer is powered on.
- Remove the rear cover and CE box cover. Make sure the printer cables are attached to the controller board and to the printer.
- Make sure the DIMMs are plugged in properly.
- Make sure the HDD cable is attached to the HDD and to the controller board.

Also, see "Checking Internal Connections" on page 4-4, as well as other sections for guidelines when disassembling, checking, and reassembling the printer. If all the connectors are in place and the problem still exists when the printer is powered on, then proceed to the next stage of troubleshooting.

Errors During Start-up Diagnostics

When you power on the printer or reboot the controller, the system goes through a series of diagnostic tests that check the controller board. If an error occurs during the Start-up diagnostics, the display may change to the "splash display," and there will be no control from the OCP. When you encounter this condition, power off and open the printer and inspect the controller for an obviously loose part or cable. Then check the other components as suggested in the following sections.

General Controller System Errors

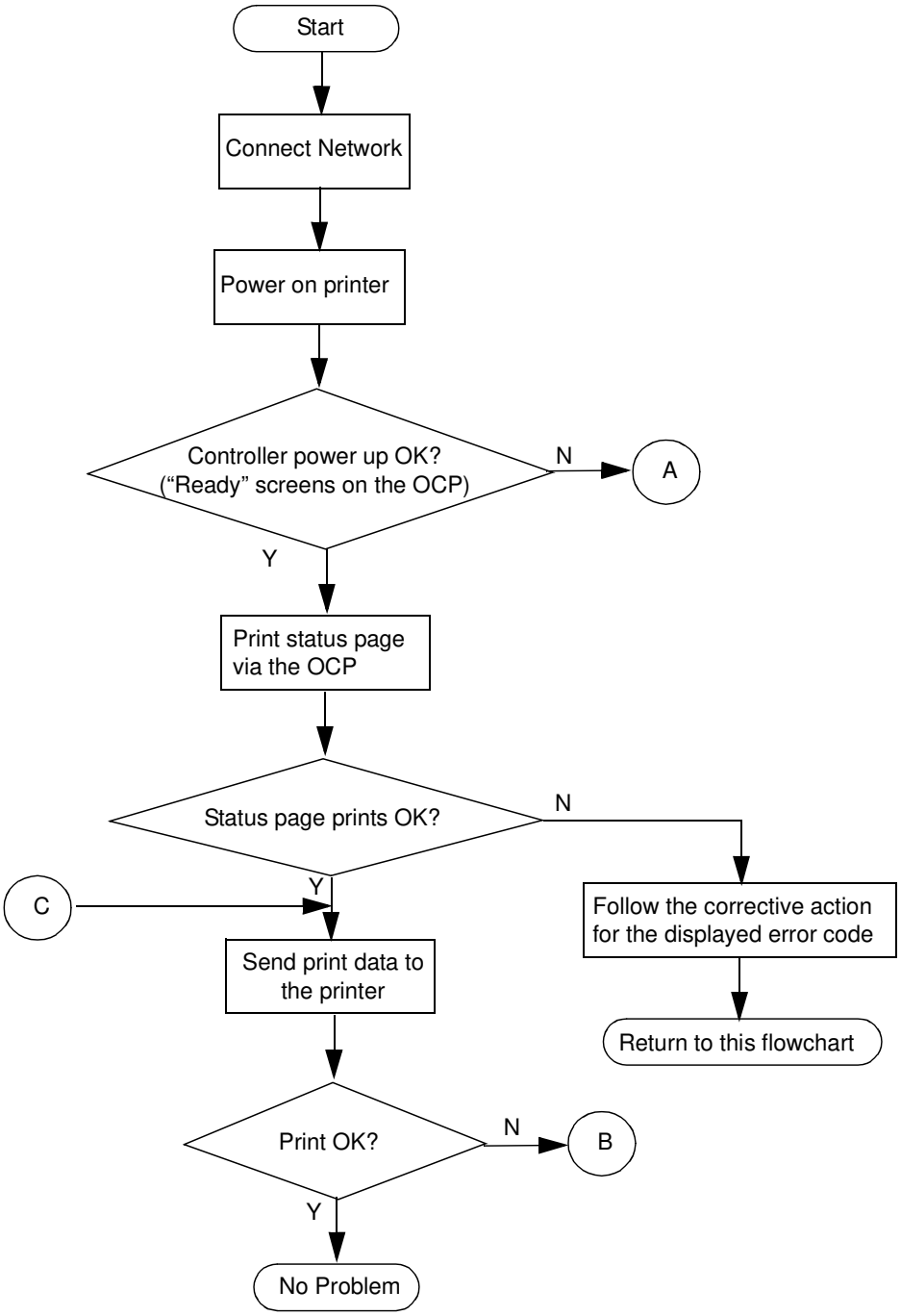
When you start up the system or when you install system software, you may encounter error conditions that are not reported during the Start-up diagnostics. Table 5-1 lists some of these error conditions and suggests corrective actions.

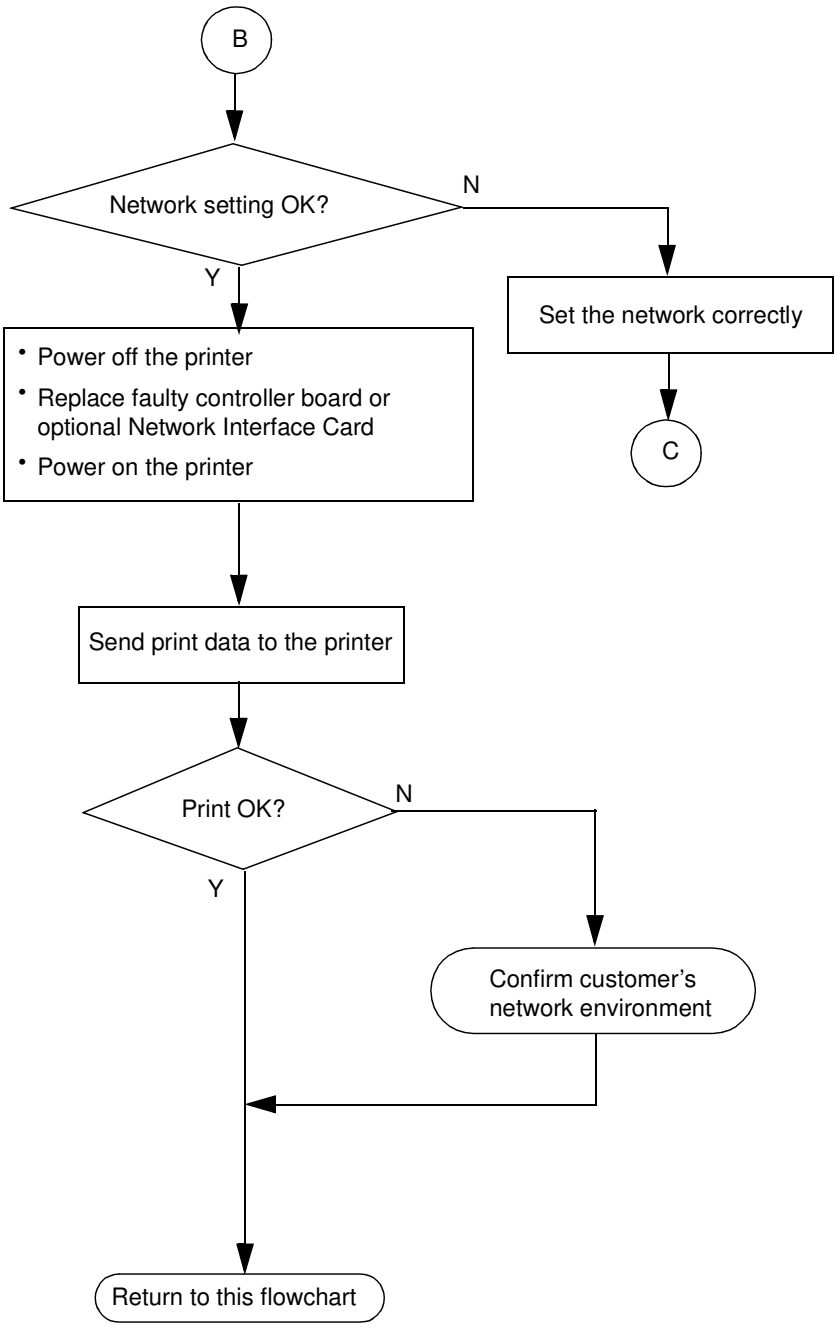
When you first encounter any of these error conditions, power off and open the printer and inspect the controller assembly for any obviously loose parts or cables. Then check other components as suggested below.

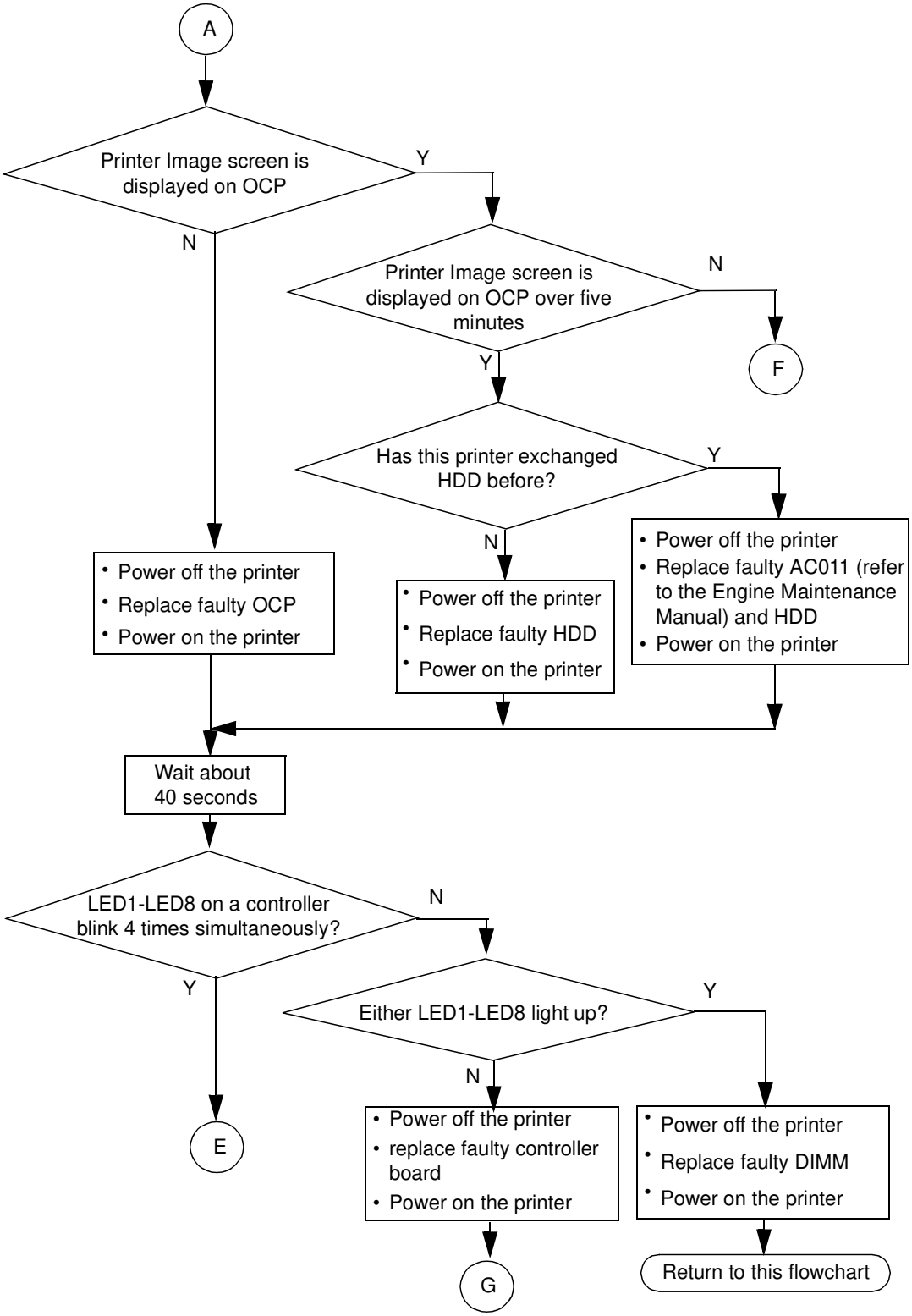
Table 5-1. General Controller System Error Conditions and Messages

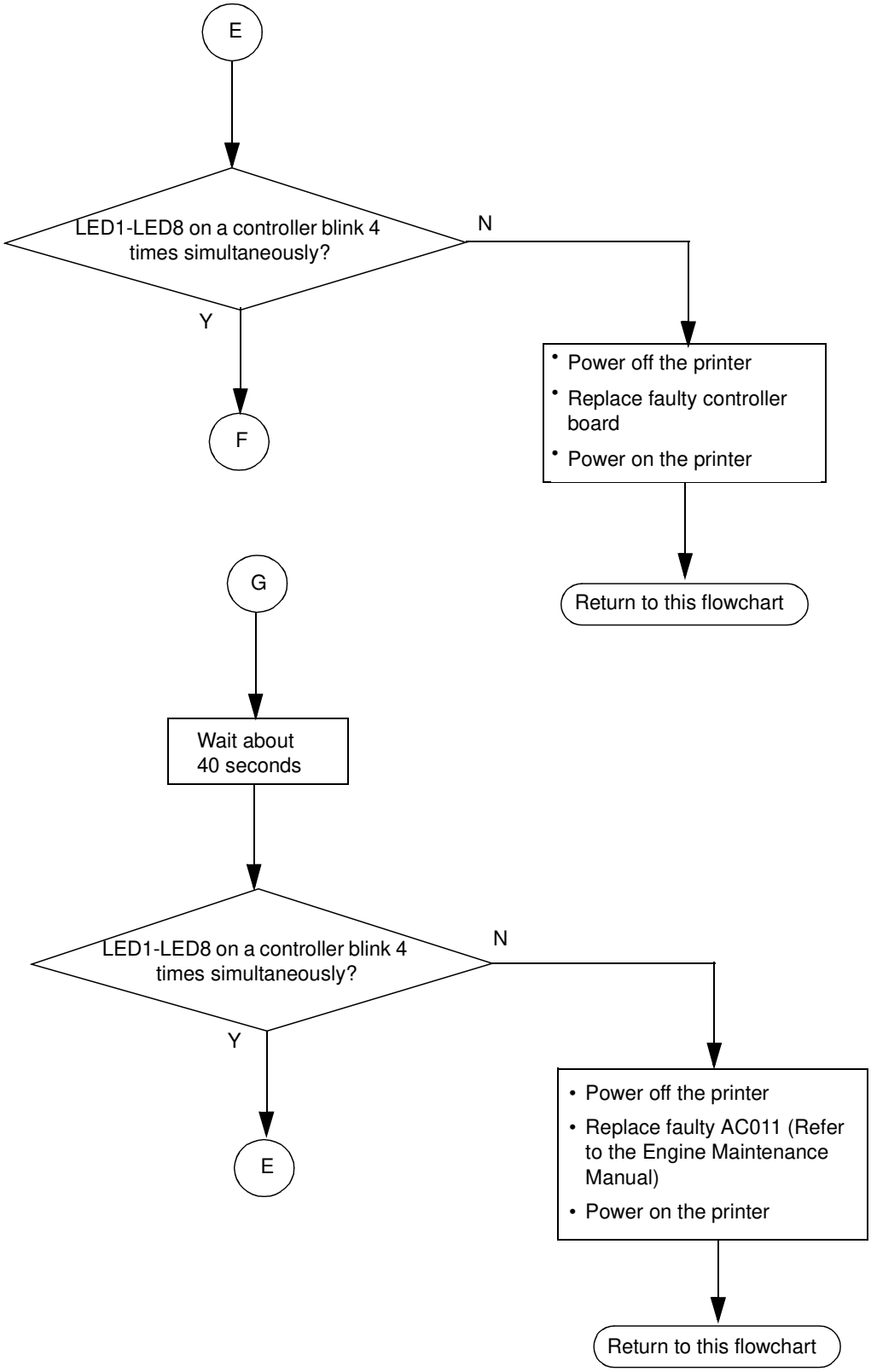
Symptom	Probable Cause	Suggested Action
Controller does not start up.	Power supply cable is not properly connected.	• Make sure the printer power supply cable is connected to the controller assembly power supply cable at the side of the pan.
	Controller power supply failed.	• Replace the controller power supply.
Touch pads do not work on the OCP.	Connection to the OCP is faulty or the OCP is bad.	• Check the OCP cable connections to the controller board. • Power on the printer. • If the problem persists, replace the cable. • If the problem still persists, replace the OCP.
	Faulty chip on the controller.	• Replace the controller board.
Nothing appears on the OCP when the printer is powered on.	Power connection to the OCP is faulty or the OCP is faulty.	• Check the power cable connection to the OCP board and the power supply. • Power on the printer. • If the problem persists, replace the OCP cable. • If the problem persists, replace the OCP. • If the problem still persists, replace the controller board.
	Faulty controller power supply.	• Check power supply cable connections to the power supply, relay board, and controller board (see “Checking Internal Connections” on page 4-4). • If the problem persists, replace the power supply.
Controller hangs at the Loading system. or the Loading settings. screen.	System software is not installed on the HDD.	• Install system software (see “System Software” on page 4-18).
	Faulty HDD.	• Replace the HDD.
	Faulty controller board.	• Replace the controller board.
Printer does not print.	Faulty controller board	• Check cable connections at J13 and J14. • Replace the controller board.
	Faulty HDD.	• Replace the HDD.
	Faulty NIC board.	• Replace the NIC board.
Splash screen on OCP after “Warm up” is completed. (Main Menu does not display.)	HDD is faulty.	• Power cycle. • Check the HDD cable connection. • Replace the HDD.
	OCP is faulty.	• Check the OCP cable. • Replace the OCP.
	Controller is faulty.	• Replace the controller board.

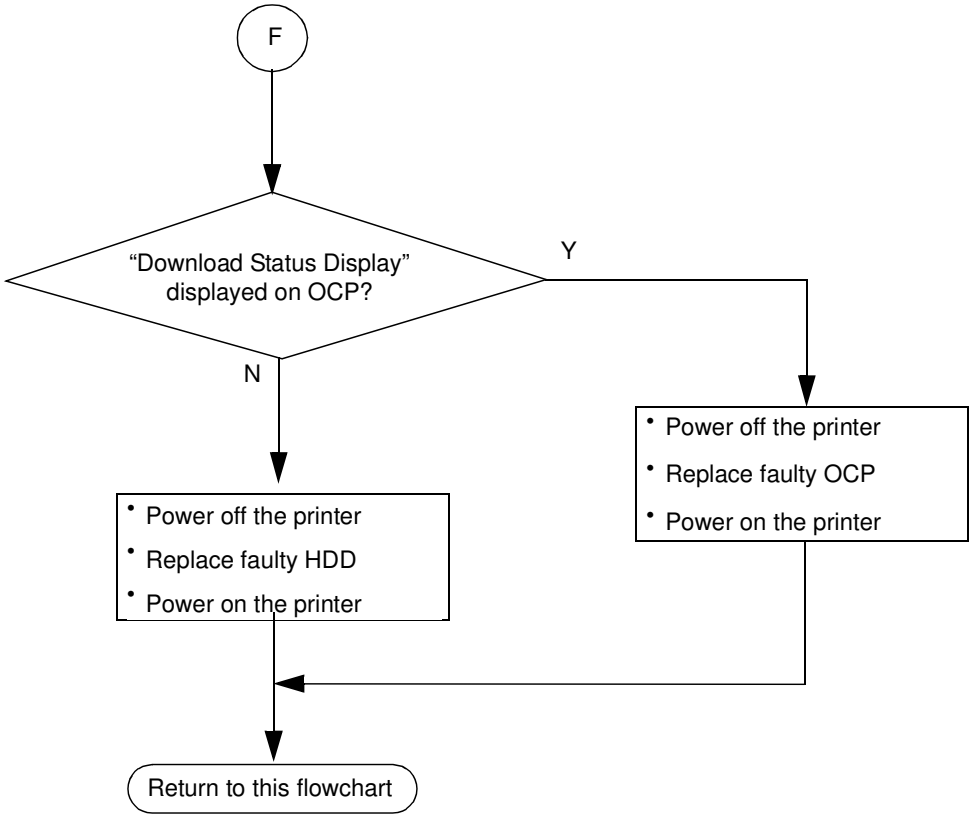
The Controller Status Flowchart




B
Network setting OK?
N
Y
Set the network correctly
C
• Power off the printer
• Replace faulty controller board or optional Network Interface Card
• Power on the printer
Send print data to the printer
Print OK?
N
Y
Confirm customer's network environment
Return to this flowchart


A
Printer Image screen is displayed on OCP
Y
N
Printer Image screen is displayed on OCP over five minutes
N
F
Y
Has this printer exchanged HDD before?
Y
N
• Power off the printer
• Replace faulty OCP
• Power on the printer
• Power off the printer
• Replace faulty HDD
• Power on the printer
• Power off the printer
• Replace faulty AC011 (refer to the Engine Maintenance Manual) and HDD
• Power on the printer
Wait about 40 seconds
LED1-LED8 on a controller blink 4 times simultaneously?
N
Y
Either LED1-LED8 light up?
Y
N
E
• Power off the printer
• replace faulty controller board
• Power on the printer
• Power off the printer
• Replace faulty DIMM
• Power on the printer
G
Return to this flowchart


E
LED1-LED8 on a controller blink 4 times simultaneously?
N
Y
F
• Power off the printer
• Replace faulty controller board
• Power on the printer
Return to this flowchart
G
Wait about 40 seconds
LED1-LED8 on a controller blink 4 times simultaneously?
N
Y
E
• Power off the printer
• Replace faulty AC011 (Refer to the Engine Maintenance Manual)
• Power on the printer
Return to this flowchart

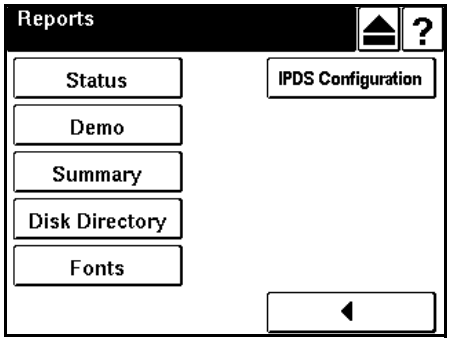

F
"Download Status Display" displayed on OCP?
Y
N
• Power off the printer
• Replace faulty OCP
• Power on the printer
• Power off the printer
• Replace faulty HDD
• Power on the printer
Return to this flowchart

Printing the Status Page

Print the Status Page to make sure that the interface between the printer and the controller is working properly.

Follow the steps below to print the Status Page.

1. Power on the printer and allow it to warm up.
2. Before proceeding, make sure that the printer is not in use.
3. Touch the Reports icon on the OCP to display the Reports menu (shown below).



4. Touch Status.

   The controller sends the Status Page to the printer and displays Ready.

5. Examine the quality of the printed Status Page to confirm that the connection between the controller and the printer is good.

   If the Status Page does not print at all or has a low-quality image, the controller board or printer interface cables may be faulty, or the printer may not be functioning properly. In these cases, you should first check controller board connections. If printing the Status Page still shows there is a problem, run the appropriate Custom diagnostics.

Checking Network Connections

Printing problems may arise if the network hardware or software is not set up properly or does not match network settings on the controller. Problems may also arise when printing from a specific application or printing a particular file.

Most of these problems show up as printing problems and do not necessarily indicate a controller malfunction. The customer's network administrator can eliminate many printing problems without requiring you to make a service call. The network administrator deals with:

- Print device error conditions
- Network connection problems that result in the printer not appearing in the list of printers on the customer's computers

NOTE:
If the printer does not appear in the list of printers on the network, there may be another device on the network with the same Ethernet hardware address.

- Conflicting network settings in Setup and on the customer's computers
- Printing problems caused by inappropriate Setup options
- Application-specific printing errors caused by missing or incorrectly installed printer description files

Printing to the Controller

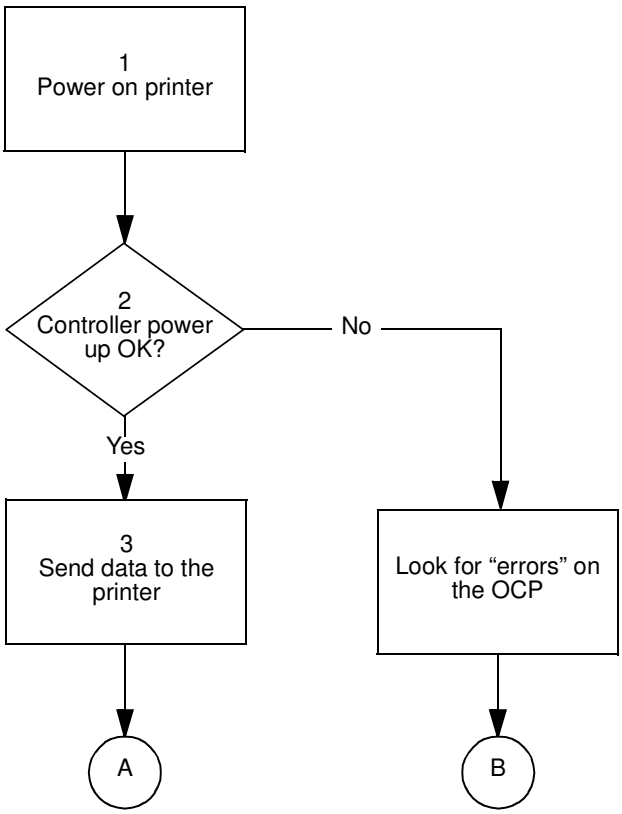
If the customer can print a controller Status Page but cannot print a job from a computer on the network, you may have to make a service call. However, first make sure the network administrator has done the following:

- Checked all components of the network including cables, connectors, terminators, network adapter boards, and network drivers.
- Activated the network and used it to communicate with other printers.
- Confirmed that the applicable network settings in Setup (such as IP address, Subnet mask, Gateway address, and HTTP port) match the settings used in the network.

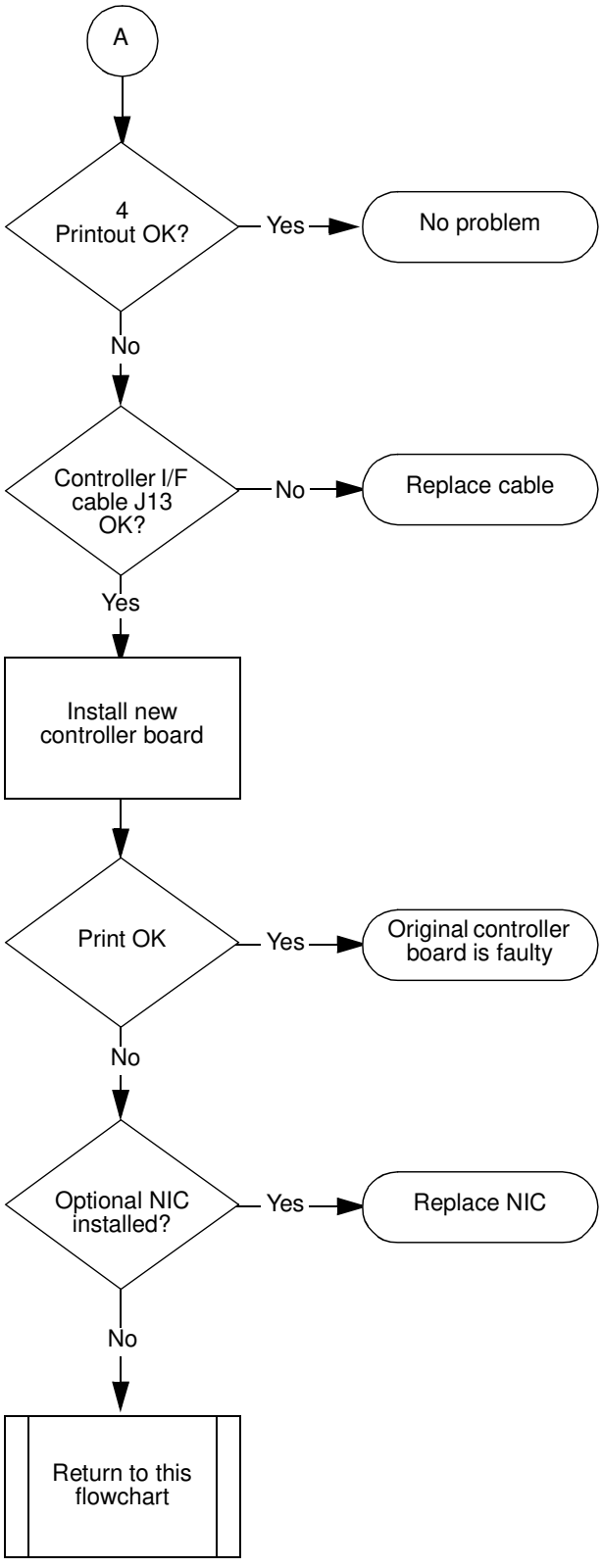
When you make a service call, check the controller ports on the back panel of the printer to make sure that the appropriate network connection is in place.

Print quality problems are difficult to trace. Before you try to troubleshoot print quality problems, print a test page to make sure that the printer does not need servicing or adjusting. Also, make sure the correct paper is being used in the printer.

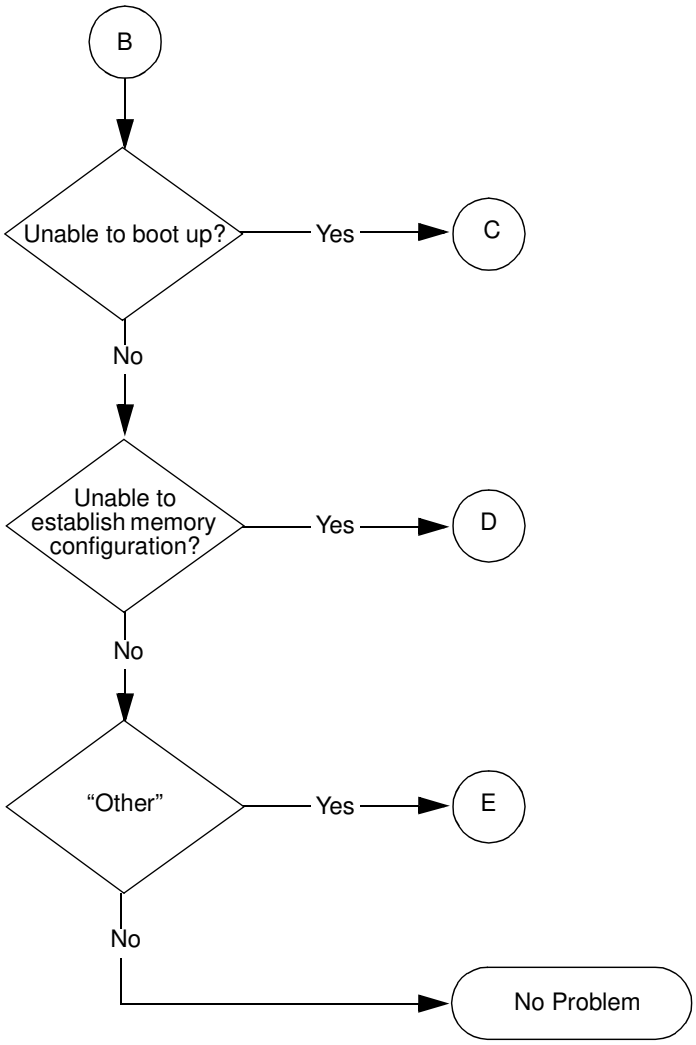
Controller Software Status Flowchart *(page 1 of 6)*



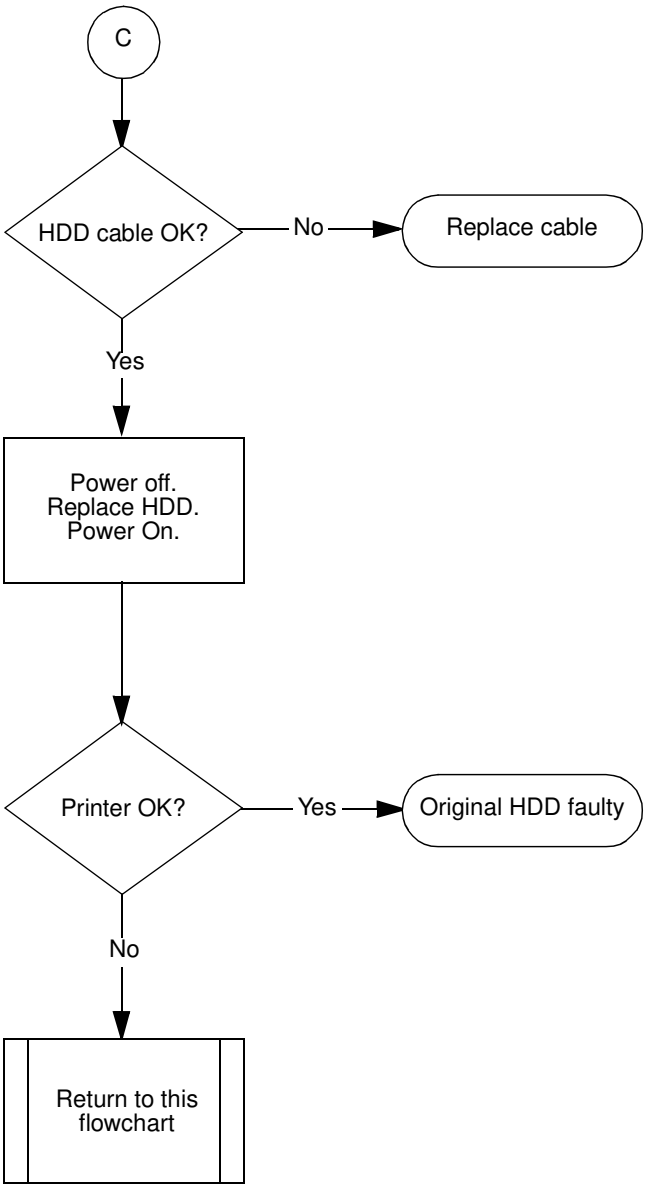
Controller Software Status Flowchart *(page 2 of 6)*



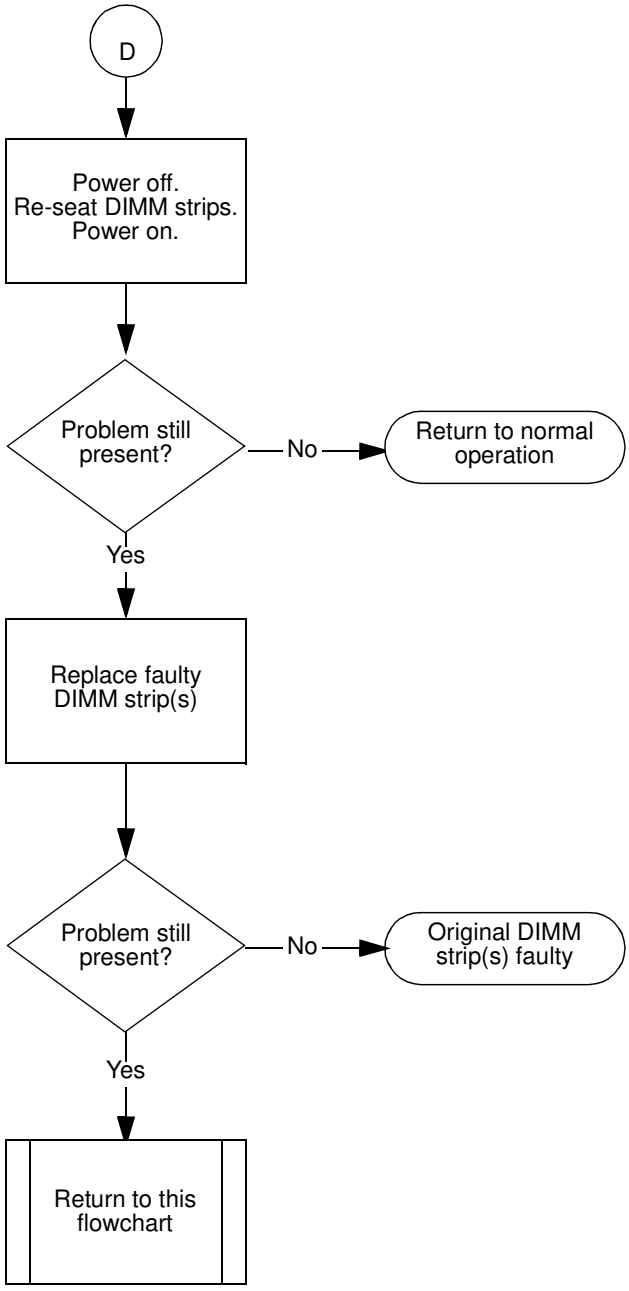
Controller Software Status Flowchart *(page 3 of 6)*



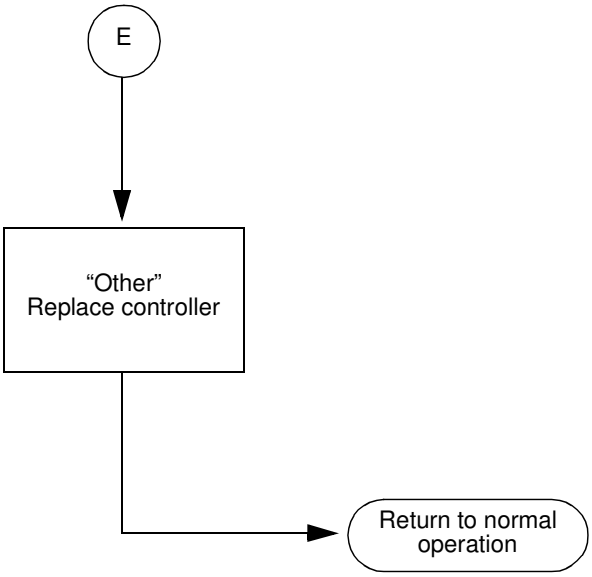
Controller Software Status Flowchart *(page 4 of 6)*



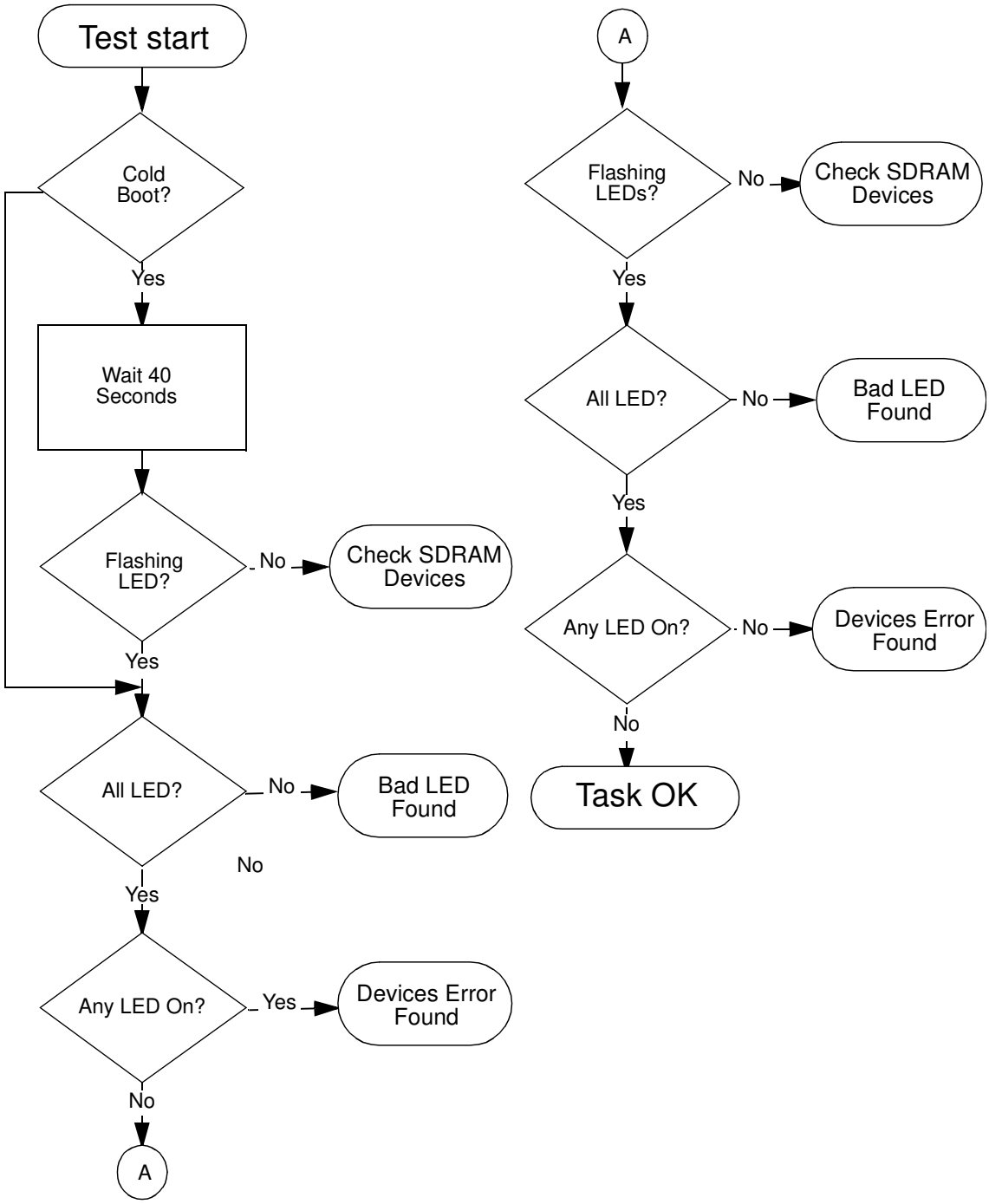
Controller Software Status Flowchart *(page 5 of 6)*



Controller Software Status Flowchart *(page 6 of 6)*



Controller Device Test



Controller Error Codes

An extensive system of tests and checks are performed by the printer during the power-up cycle and normal operations. Most errors cause a message or an error code to be displayed. This section lists the errors with possible solutions.

Print Engine and Interface Error Codes (EC)

Print engine error codes show errors and conditions that occur during communications between the controller and print engine. In some cases the errors may be cleared by pressing Continue. Printer operations may continue, but data may be lost. All other EC errors are fatal errors that require the cycling of printer power. The following should be done to attempt to correct the problem.

1. Print log.
2. If the error message is not cleared, check to see that the cables between the controller and the print engine are seated correctly and are not damaged. Replace defective cables if necessary.
3. Replace controller board.

Table 5-2. Terms Used in Error Codes

Term	Definition
CE	Controller.
CPF	Paper feed.
Cx..	Controller-generated signals.
DD	Device data.
DORMANT	Control command. CE issues this to PR which sets the Wait status.
DSE	Stacker exit (paper has arrived at specific stacker).
DTPD	Top of paper, Duplex. (The PR is Print Data Acceptable Condition.)
DTPS	Top of paper, Simplex. (The PR is Print Data Acceptable Condition.)
Dx..	Engine-generated signals.
PR	Printer.

Table 5-3. Engine/Controller Interface Error Codes

OCP Line 1	OCP Line 2	Error Name	Brief Description
Call for Service	EC#01	EC_NO_DETAIL_ERROR_CODE	Invalid error code reported by the Engine (error code is other than xEXXX).
Call for Service	EC#02	EC_ACTIVATE_TIMEOUT_ERROR	Activate time-out detected (99 seconds after the Activate command is sent).
Call for Service	EC#03	EC_DORMANT_TIMEOUT_ERROR	DORMANT bit is not set after DORMANT command is sent.
Call for Service	EC#04	EC_MODE_SET_TIMEOUT_ERROR	DUPLEX/SIMPLEX mode is not set after DUPLEX/SIMPLEX command is sent.
Call for Service	EC#05	EC_DTPS_TIMEOUT_ERROR	DTPS time-out is detected (15 seconds after Pick command or after the previous DTPS).
Call for Service	EC#06	EC_DTPD_TIMEOUT_ERROR	DTPD time-out is detected (15 seconds after a DTPS or the previous DTPD.
Call for Service	EC#07	EC_EOP_TIMEOUT_ERROR	End of Page not reported by the engine device driver after previous DTPx receipt.
Call for Service	EC#08	EC_DSE_TIMEOUT_ERROR	DSE time-out detected (6.6 seconds after the previous DTPx).
Call for Service	EC#09	EC_PRINT_TIMEOUT_ERROR	PRINT time-out detected (22sec(20sec*1.1) after the last CPF signal).
Call for Service	EC#0A	EC_PAGE_OFFSET_ERROR	Invalid HV print position data is set by the Engine.
Call for Service	EC#0B	EC_NO_PAPER_SIZE_MATCH_ERROR	No right size paper loaded in designated hoppers.
Call for Service	EC#0C	EC_NO_PAPER_TYPE_MATCH_ERROR	No right type paper loaded in designated hoppers.
Call for Service	EC#10	EC_BAD_PJD_PARAMETER_ERROR	Invalid print parameter set in PAGEOBJ.
Call for Service	EC#11	EC_NO_HOPPER_MATCH_ERROR	No proper hopper designated in PAGEOBJ.
Call for Service	EC#12	EC_NO_STACKER_MATCH_ERROR	No proper stacker designated in PAGEOBJ.
Call for Service	EC#13	EC_CANNOT_FIND_PBLK_ERROR	No PBLK in the fifo.
Call for Service	EC#14	EC_FIFO_OVERFLOW_ERROR	No free space in fifo to put a new sheet.
Call for Service	EC#15	EC_IMAGE_LOCK_ERROR	Image lock error detected.
Call for Service	EC#16	EC_IMAGELOCK_TIMEOUT_ERROR	Image lock time-out detected (60 sec).
Call for Service	EC#18	EC_INVALID_COMMAND_ERROR	Invalid command received by the Engine.
Call for Service	EC#19	EC_ENGINE_CODE_READ_ERR	Engine micro code file read error detected.
Call for Service	EC#20	EC_HARDWARE_INITIALIZE_ERROR	Engine Adapter card not initialized.
Call for Service	EC#21	EC_OVERRUN _ERROR	Overrun error detected on a receiving serial data (DD-data).

Table 5-3. Engine/Controller Interface Error Codes (Continued)

OCP Line 1	OCP Line 2	Error Name	Brief Description
Call for Service	EC#22	EC_FRAMING_ERROR	Framing error detected on a receiving serial data (DD-data).
Call for Service	EC#23	EC_PARITY ERROR	Parity error detected on a receiving serial data (DD-data).
Call for Service	EC#24	EC_DRIVER_TIMEOUT_ERROR	DD time-out detected by the device driver with the time of 30 ms.
Call for Service	EC#25	EC_PCI_TARGET_ABORT_ERROR	PCI Target Abort error detected.
Call for Service	EC#26	EC_PCI_MASTER_ABORT_ERROR	PCI Master Abort error detected.
Call for Service	EC#27	EC_DECOMPRESSION_ERROR	Decompression error detected.
Call for Service	EC#28	EC_DIOF_ERROR	Decompression Input FIFO Overflow.
Call for Service	EC#29	EC_DOUF_ERROR	Decompression Output FIFO Overflow.
Call for Service	EC#2A	EC_BD_CHECK_ERROR	Beam Detect error.
Call for Service	EC#2B	EC_BD_GAP_ERROR	Beam Detect Gap error.
Call for Service	EC#2C	EC_SFFEMP_ERROR	Synchronous FIFO Empty error.
Call for Service	EC#2D	EC_PRINT_CLOCK_ERROR	Print Clock error.
Call for Service	EC#2E	EC_SFFRD_ERROR	Synchronous FIFO Read error.
Call for Service	EC#2F	EC_DTPS_FIFO_EMPTY_ERROR	DTPS FIFO Empty error.
Call for Service	EC#30	EC_DTPD_FIFO_EMPTY_ERROR	DTPD FIFO Empty error.
Call for Service	EC#31	EC_DTPS_FIFO_FULL_ERROR	DTPS FIFO Full error.
Call for Service	EC#32	EC_DTPD_FIFO_FULL_ERROR	DTPD FIFO Full error.
Call for Service	EC#33	EC_BUSY_TIMEOUT_ERROR	The marking engine did not clear a busy condition within the allotted time.
Call for Service	EC#40	EC_UNDEFINED_ERROR	
IPDS Internal Error	100~999A	IPDS Internal Error	IPDS Logical programming error.
IPDS Database Error		IPDS Database Error	IPDS Font Resource abnormal data found.

Engine Error Codes

The following table is for reference only. Refer to the *Engine Maintenance Manual* for information on correcting errors.

Table 5-4. Engine Error Codes

OCP Line 1	OCP Line 2	Error Name	Brief Description
Call for Service	E210	Drum Rev. Error	The photoconductive drum did not rotate normally.
Call for Service	E218	Drum Motor Time Out	The photoconductive drum did not start to rotate.
Call for Service	E224	Dev Bias Volt	Abnormal voltage at mag roll bias.
Call for Service	E225	Charge/Grid Volt	Abnormal voltage at charger/ grid bias.
Call for Service	E226	Transfer Volt	Abnormal voltage at transfer corona wire.
Call for Service	E227	Detach Volt	Abnormal voltage at detach corona wire.
Call for Service	E228	Magroll Rev. Error 1	The magrolls did not rotate normally.
Call for Service	E229	Magroll Rev. Error 2	The mixing rate of the developer mixture is not valid.
Call for Service	E22A	Over Toner	Toner is very high in the developer mix.
Call for Service	E22B	Lack Toner	Toner is too low in the developer mix.
Call for Service	E22F	Tnr. Feed Motor Error.	Toner feed motor did not drive normally.
Call for Service	E231	Toner Screw Rev. Error	Toner screw did not rotate normally.
Call for Service	E233	TR Cleaner Error	Driving time of the transfer cleaner motor is too long.
Call for Service	E235	NIP Cleaner Pos. Error	Error at NIP cleaner sensor.
Call for Service	E238	BD Time Out	Optical unit did not come ready.
Call for Service	E239	BD Error	Beam detect signal not detected in the specified time.
Call for Service	E23C	Mirror Mot Time Out	Mirror motor was not driven.
Call for Service	E23E	Mirror Mot Alarm	Mirror motor did not rotate normally.
Call for Service	E23F	VD Open 1	Video data 1 is not valid.
Call for Service	E240	VD Open 2	Video data 2 is not valid.
Call for Service	E241	CVD Clock1 Open Error	Clock signal for video data 1 is not valid.
Call for Service	E242	CVD Clock2 Open Error	Clock signal for video data 2 is not valid.
Call for Service	E243	CVD Clock1 Error	Clock signal for video data 1 is keeping low level.

Table 5-4. Engine Error Codes (Continued)

OCP Line 1	OCP Line 2	Error Name	Brief Description
Call for Service	E244	CVD Clock2 Error	Clock signal for video data 2 is keeping low.
Call for Service	E247	FC P/K CPU Error	FC P/K CPU error.
Call for Service	E248	FC P/K Incorrect Command	Command data not issued to FC P/K on the valid condition.
Call for Service	E249	FC P/K Act Timeout	FC P/K dormant signal has been on over specified time.
Call for Service	E24A	FC P/K Dormant Timeout	FC P/K dormant signal has been off over specified time.
Call for Service	E24B	FC P/K Busy Timeout	FC P/K busy signal has been on over specified time.
Call for Service	E24C	FC P/K Print Timeout	FC P/K print signal has been off over specified time.
Call for Service	E251	Incorrect Cmd.	Command data not issued on the valid condition.
Call for Service	E252	Pick Count Over	The pick count is over 8 sheets.
Call for Service	E253	Invalid Configuration	Command (data) not defined.
Call for Service	E254	Slave CPU Error	The slave CPU has an error.
Call for Service	E255	Insert Pick Count Over	Insert pick count >15 sheets.
Call for Service	E257	Signal Trans. Error 3	Transfer error in HP P/K (slave CPU).
Call for Service	E258	Signal Trans. Error 4	Transfer error in HP 2 P/K (slave CPU).
Call for Service	E25B	CPF/DTP Error	Abnormal CPF/DTP signal.
Call for Service	E25C	Signal Trans. Error 5	Transfer error in HP P/K (master CPU).
Call for Service	E25D	Signal Trans. Error 6	Transfer error in HP 2 P/K (master CPU).
Call for Service	E260	Fns. 1 CPU Error	Finisher 1 CPU error.
Call for Service	E262	Fns 1 Incorrect Cmd.	Command data not issued to finisher 1 on valid condition.
Call for Service	E264	Fns 1 Act Timeout	Finisher 1 dormant signal on over specified time.
Call for Service	E266	Fns 1 Dorm Timeout	Finisher 1 dormant signal on over specified time.
Call for Service	E268	Fns 1 Busy Timeout	Finisher 1 busy signal on over the specified time.
Call for Service	E26A	Fns 1 ST Exit Sig. Err.	Finisher 1 exit signal on over the specified time.
Call for Service	E26C	Finisher 1 Print Timeout	Standard Finisher print signal on over specified time.
Call for Service	E270	Heater Lamp Off	Heater lamp wire is broken.
Call for Service	E271	Thermistor Off	Thermistor is blown out.
Call for Service	E272	HR Over Temp.	The HR overheated (over 200 degrees).

Table 5-4. Engine Error Codes (Continued)

OCP Line 1	OCP Line 2	Error Name	Brief Description
Call for Service	E274	HR Time Out	Heater lamp did not reach specified temp. in 3 minutes.
Call for Service	E275	HR Low Temp	Temperature of the HR is too low (less than 160 degrees).
Call for Service	E278	Stacker 5 Tbl Up Timeout	Stacker 5 table did not rise in specified time.
Call for Service	E279	Stacker 5 Tbl Down Timeout	Stacker 5 table did not descend in specified time.
Call for Service	E27A	Stacker 6 Tbl Up Timeout	Stacker 6 table did not rise in specified time.
Call for Service	E27B	Stacker 6 Tbl Down Timeout	Stacker 6 table did not descend in specified time.
Call for Service	E27C	Stacker 7 Tbl Up Timeout	Stacker 7 table did not rise in specified time.
Call for Service	E27D	Stacker 7 Tbl Down Timeout	Stacker 7 table did not descend in specified time.
Call for Service	E27E	Stacker 8 Tbl Up Timeout	Stacker 8 table did not rise in specified time.
Call for Service	E27F	Stacker 8 Tbl Down Timeout	Stacker 8 table did not descend in specified time.
Call for Service	E281	LED Eraser Off Error	Over current of LED eraser.
Call for Service	E283	Sensor Error 1	Toner level adjustment did not complete.
Call for Service	E284	Sensor Error 2	Error in paper width sensor 1.
Call for Service	E285	Sensor Error 3	Error in paper width sensor 2.
Call for Service	E286	Sensor Error 4	Error in paper width sensor 3.
Call for Service	E291	Blower Fan Alarm	The ozone blower cooling fan did not rotate normally.
Call for Service	E292	OC Fan Alarm	The optical unit cooling fan did not rotate normally.
Call for Service	E293	DSE4 Read Error	DSE4 signal error.
Call for Service	E294	Container Stacker Incorrect Command	Incorrect command in the Container Stacker.
Call for Service	E295	Exp. Container Stacker Incorrect Command	Incorrect command in the Container Stacker.
Call for Service	E296	Container Stacker Exit Signal Error	Exit signal error in the Container Stacker.
Call for Service	E297	Exp. Container Stacker Exit Signal Error	Exit signal error in the Container Stacker.
Call for Service	E298	Container Stacker Rom Error	ROM error in the Container Stacker.
Call for Service	E299	Exp. Container Stacker Rom Error	ROM error in the Container Stacker.
Call for Service	E29A	Container Stacker CPU Error	CPU error in the Container Stacker.

Table 5-4. Engine Error Codes (Continued)

OCP Line 1	OCP Line 2	Error Name	Brief Description
Call for Service	E29B	Exp. Container Stacker CPU Error	CPU error in the Container Stacker.
Call for Service	E29C	Container Stacker ACT Timeout	Container Stacker does not start operation.
Call for Service	E29D	Container Stacker Dormant Timeout	Container Stacker cannot be in standby mode.
Call for Service	E29E	Container Stacker Busy Timeout	Container Stacker is busy continuously.
Call for Service	E29F	Container Stacker Print Timeout	Container Stacker is in print mode continuously.
Call for Service	E2A0	Container Stacker Ram Error	RAM error in the Container Stacker.
Call for Service	E2A1	Exp. Container Stacker Ram Error	RAM error in the Container Stacker.
Call for Service	E2A2	Hopper 1 Table Timeout	Hopper table 1 did not rise in the specified time.
Call for Service	E2A6	Hopper 2 Table Timeout	Hopper table 2 did not rise in the specified time.
Call for Service	E2AA	Hopper 3 Table Timeout	Hopper table 3 did not rise in the specified time.
Call for Service	E2AD	Hopper 5 Safety Sw. On	Safety sensor of hopper table 5 turned on during hopper table 5 rising.
Call for Service	E2AE	Hopper 5 Table Time	Hopper table 5 did not move in the specified time.
Call for Service	E2AF	Table Over Run	Limit sensor of hopper table 5 did not turn on.
Call for Service	E2B1	Model2 Insert Tray TBL Timeout	Model 2 insert tray table did not move normally.
Call for Service	E2B4	Stacker 5 F Jogger Pos. Error	Front jogger of stacker 5 did not move correctly.
Call for Service	E2B5	Stacker 5 R Jogger Pos. Error	Front jogger of stacker 5 did not move correctly.
Call for Service	E2B6	Stacker 5 Stopper Pos. Error	Front jogger of stacker 5 did not move correctly.
Call for Service	E2B7	Stacker 6 F Jogger Pos. Error	Front jogger of stacker 5 did not move correctly.
Call for Service	E2B8	Stacker 6 R Jogger Pos. Error	Front jogger of stacker 5 did not move correctly.
Call for Service	E2B9	Stacker 6 Stopper Pos. Error	Front jogger of stacker 5 did not move correctly.
Call for Service	E2BA	Stacker 7 R Jogger Pos. Error	Front jogger of stacker 5 did not move correctly.
Call for Service	E2BB	Stacker 7 R Jogger Pos. Error	Front jogger of stacker 5 did not move correctly.

Table 5-4. Engine Error Codes (Continued)

OCP Line 1	OCP Line 2	Error Name	Brief Description
Call for Service	E2BC	Stacker 7 Stopper Pos. Error	Front jogger of stacker 5 did not move correctly.
Call for Service	E2BD	Stacker 8 F Jogger Pos. Error	Front jogger of stacker 5 did not move correctly.
Call for Service	E2BE	Stacker 8 R Jogger Pos. Error	Front jogger of stacker 5 did not move correctly.
Call for Service	E2BF	Stacker 8 Stopper Pos. Error	Front jogger of stacker 5 did not move correctly.
Call for Service	E2C1	Stapler Pos. Error	Error in stapler position.
Call for Service	E2C2	Stapling Error	Front and rear staplers did not work.
Call for Service	E2C3	Stapling L Error	Front stapler did not work correctly.
Call for Service	E2C4	Stapling R Error	Rear stapler did not work correctly.
Call for Service	E2C5	Stapler Rotate Error	Stapler did not rotate normally.
Call for Service	E2C6	Staple Table Timeout	Stapler table did not move in the specified time.
Call for Service	E2C7	Jogger Pos. Error	Error in position sensor of the jogger.
Call for Service	E2C8	Shift Pos. Error	Error in position sensor of the shift unit.
Call for Service	E2C9	Belt Pos. Error	Error in position sensor of belt.
Call for Service	E2CA	Exit Door Pos. Error	Exit sensor error.
Call for Service	E2CC	Cont.Stk Gate Pos. Error	The path gate of stacker unit 1 did not move correctly.
Call for Service	E2CD	Exp Cont.Stk Gate Pos. Error	The path gate of stacker unit 2 did not move correctly.
Call for Service	E2E0	CP Driver 1	+24V error in the CP P/K.
Call for Service	E2E1	CP Driver 2	+24VS error in the CP P/K.
Call for Service	E2E2	HP Driver	+24V error in the HP P/K.
Call for Service	E2E3	HP5 Driver	+24v error in the HP5 P/K.
Call for Service	E2E4	Container Stacker Power Error	Drive power error in the Container Stacker P/K.
Call for Service	E2E5	Fns. Driver	+24V error in the finisher P/K.
Call for Service	E2E6	Exp. Container Stacker Power Error	Drive power error in the Container Stacker P/K.
Call for Service	E2E7	Conveyance Motor Error	Conveyance motor did not work correctly.
Call for Service	E2E8	Folding Conveyance Motor Err	Folding conveyance motor did not work correctly.
Call for Service	E2E9	Staple side Guide Error	Error in staple side guide motor.
Call for Service	E2EA	Staple & Folding Stopper release M error	Error in staple stopper motor.

Table 5-4. Engine Error Codes (Continued)

OCP Line 1	OCP Line 2	Error Name	Brief Description
Call for Service	E2EB	Folding Stopper Error	Error after folding.
Call for Service	E2EC	Folding knife pos. error	Error in folding knife motor.
Call for Service	E2ED	Stapler & Folding stopper M error	Error after stapling.
Call for Service	E2EE	Fin signal Translation error	Error in connection error in Fin P/K.
Call for Service	IF#01		PostScript is unable to send a status message to the Network Interface Card. If this error persists, it indicates the NIC software has crashed, and the printer must be rebooted to clear the error.
Call for Service	PPC Exception		PPC exception occurred. Software log created.
Call for Service	TaskExit		A task exit occurred.
CNT STK Feed Jam 1	E1A0		Paper did not arrive at paper path sensor 1 of Cont. Stkr.
CNT STK Feed Jam 10	E1A9		Paper did not depart from paper path sensor 7 of the Container Stacker.
CNT STK Feed Jam 11	E1AA		Paper did not arrive at paper path sensor 5 of Cont. Stkr.
CNT STK Feed Jam 12	E1AB		Paper did not depart from paper path sensor 5 of the Container Stacker.
CNT STK Feed Jam 13	E1AC		Paper did not arrive at paper path sensor 6 of Cont. Stkr.
CNT STK Feed Jam 14	E1AD		Paper did not depart from paper path sensor 6 of the Container Stacker.
CNT STK Feed Jam 15	E1AE		Paper did not arrive at paper path sensor 1 of Cont. Stkr.
CNT STK Feed Jam 16	E1AF		Paper did not depart from paper path sensor 1 of the Container Stacker.
CNT STK Feed Jam 17	E1B0		Paper did not arrive at paper path sensor 2 of Cont. Stkr.
CNT STK Feed Jam 18	E1B1		Paper did not depart from paper path sensor 2 of the Container Stacker.
CNT STK Feed Jam 19	E1B2		Paper did not arrive at paper path sensor 3 of Cont. Stkr.
CNT STK Feed Jam 2	E1A1		Paper did not depart from paper path sensor 1 of the Container Stacker.

Table 5-4. Engine Error Codes (Continued)

OCP Line 1	OCP Line 2	Error Name	Brief Description
CNT STK Feed Jam 20	E1B3		Paper did not depart from paper path sensor 3 of the Container Stacker.
CNT STK Feed Jam 21	E1B4		Paper did not arrive at paper path sensor 4 of Cont. Stkr.
CNT STK Feed Jam 22	E1B5		Paper did not depart from the paper path sensor 4 of the Container Stacker.
CNT STK Feed Jam 23	E1B6		Paper did not arrive at paper path sensor 7 of Cont. Stkr.
CNT STK Feed Jam 24	E1B7		Paper did not depart from paper path sensor 7 of the Container Stacker.
CNT STK Feed Jam 25	E1B8		Paper did not arrive at paper path sensor 5 of Cont. Stkr.
CNT STK Feed Jam 26	E1B9		Paper did not depart from paper path sensor 5 of the Container Stacker.
CNT STK Feed Jam 27	E1BA		Paper did not arrive at paper path sensor 6 of Cont. Stkr.
CNT STK Feed Jam 28	E1BB		Paper did not depart from paper path sensor 6 of the Container Stacker.
CNT STK Feed Jam 3	E1A2		Paper did not arrive at paper path sensor 2 of Cont. Stkr.
CNT STK Feed Jam 5	E1A4		Paper did not arrive at paper path sensor 3 of Cont. Stkr.
CNT STK Feed Jam 6	E1A5		Paper did not depart from paper path sensor 3 of the Container Stacker.
CNT STK Feed Jam 7	E1A6		Paper did not arrive at paper path sensor 4 of Cont. Stkr.
CNT STK Feed Jam 8	E1A7		Paper did not depart from paper path sensor 4 of the Container Stacker.
CNT STK Feed Jam 9	E1A8		Paper did not arrive at paper path sensor 7 of Cont. Stkr.
CNT STK Feed Jam 4	E1A3		Paper did not depart from paper path sensor 2 of the Container Stacker.
CNT STK Jam 1	E198		Paper did not arrive at jam sensor of lower Cont. Stkr.
CNT STK Jam 2	E199		Paper did not depart from jam sensor of lower Cont. Stkr.
CNT STK Jam 3	E19A		Paper did not arrive at jam sensor of upper Cont. Stkr.

Table 5-4. Engine Error Codes (Continued)

OCP Line 1	OCP Line 2		Error Name	Brief Description
CNT STK Jam 4		E19B		Paper did not depart from jam sensor of upper Cont. Stkr.
CNT STK Jam 5		E19C		Paper did not arrive at jam sensor of lower Cont. Stkr.
CNT STK Jam 6		E19D		Paper did not depart from jam sensor of lower Cont. Stkr.
CNT STK Jam 7		E19E		Paper did not arrive at jam sensor of upper Cont. Stkr.
CNT STK Jam 8		E19F		Paper did not depart from jam sensor of upper Cont. Stkr.
CNT STK Top Cover Open		E02D		Top cover of the Cont. Stkr. is open. Close cover.
CNT STK V Path Cover Open		E038		Vertical path cover of Cont. Stkr. is open. Close cover.
CONT ST ACT Timeout		E29C		Container Stacker did not start operation.
CONT ST BUSY Timeout		E29E		Container Stacker is busy continuously.
CONT ST CPU Error		E29A		CPU error in Cont. Stacker.
CONT ST DORMANT Timeout		E29D		Container Stacker cannot be in standby mode.
CONT ST Exit Signal Error		E296		Exit signal error in Container Stacker.
CONT ST Incorrect Command		E294		Incorrect command in Container Stacker.
CONT ST Power Error		E2E4		ST P/K +24V error in Container Stacker.
CONT ST PRINT Timeout		E29F		Container Stacker is in print mode continuously.
CONT ST RAM Error		E2A0		RAM error in Cont. Stacker.
CONT ST ROM error		E298		ROM error in Cont. Stacker.
Developer Bottle Not Set	Set Developer Bottle	E01E	Dev Bottle Set	Developer bottle is not set correctly.
Developer Charge		E0A1	Developer Charge	Replacing the developer.
Developer Discharge		E0A2	Developer Discharge	Replacing the developer.
Developer Error	Retry Exhausting	E048	Developer Error 2 Retry Replacing	Abnormality when operating the developer (will not mix/ operate properly).
Developer Error	Retry Operation	E047	Developer Error 1 Retry Replacing	Abnormality when replacing the developer mix.
Developer Life Time	Replace Developer	E012	Dev. Rep. Req.	Replace the developer mixture.
Drum Unit Life Time	Replace Drum Unit	E016	PC End	The photoconductive drum needs to be replaced.
Drum Wrap	Remove Paper	E118	Drum Wrap 1	Paper stuck on the photo-conductive drum (simplex).

Table 5-4. Engine Error Codes (Continued)

OCP Line 1	OCP Line 2		Error Name	Brief Description
Drum Wrap	Remove Paper	E119	Drum Wrap 2	Paper stuck on the photo-conductive drum (duplex).
Drum Wrap Sensor	Clean Wrap Sensor	E018	Wrap Sensor Clean Wrap Sns.	Abnormal wrap sensor level.
Elevator Tray Paper Full	Remove Paper	E009	Stacker 2 Table 1 Full.	Stacker 2 table 1 is full.
Elevator Tray Paper Full	Remove Paper	E00A	Stacker 2 Table 2 Full.	Stacker 2 table 2 is full.
EXP CNT ST Incorrect Command		E295		Incorrect command in the Container Stacker.
EXP CNT STK Top Cover Open		E03B		Top cover of the Container Stacker is open.
EXP CNT STK V. Path Cover Open		E039		Vertical path cover of the Container Stacker is open.
EXP CONT ST CPU Error		E29B		CPU error in Container Stacker.
EXP CONT ST Exit Signal Error		E297		Exit signal error in Container Stacker.
EXP CONT ST Power Error		E2E6		ST P/K +24V error in Container Stacker.
EXP CONT ST RAM Error		E2A1		RAM error in Container Stacker.
Finisher Front Cover Open	Close Cover	E03F	Fns. Front Cover Open	Close the finisher front cover.
Front Cover Open	Close Cover	E043	Front Cover Open	Close the front cover.
Fuser Unit Life Time	Replace Fuser Unit	E015	Fuser Unit	Replace the Fuser unit.
Fuser Web Life Time	Replace Fuser Web	E014	Felt End	Replace HR cleaner.
HCF Open	Close Tray	E023	Hopper 5 Open	Close the HCF.
HCF Top Cover Open	Close Cover	E046	HCF Cover Open	Close the HCF cover.
IS Cover Open	Close Cover	E044	IS Cover Open	Close the IS cover.
Lack Toner Recovery		E09A	Lack Toner Recovery	Supplying toner error.
LED Eraser Non Set	Set Erase Lamp	E080	LED Eraser Non Set	The LED eraser is not set.
MBT	Load xx	E090	The wrong size paper is loaded in the MBT	Load the MBT with *xxx* paper.
Paper in Finisher	Remove Paper	E064	Paper on Paper Path 14	Paper on finisher entrance path.
Paper in Finisher	Remove Paper	E065	Paper on Paper Path 15	Paper on exit path of finisher.
Paper in Finisher	Remove Paper	E066	Paper on Paper Path 16	Paper on the bypass.
Paper in Finisher	Remove Paper	E067	Paper on Paper Path 17	Paper on staple tray of the finisher.
Paper in Finisher	Remove Paper	E068	Paper on Paper Path 18	Paper on exit path of sub tray.
Paper in Fuser	Remove Paper	E070	Paper on Paper Path 7	Paper on the HR unit.
Paper in Input Station	Remove Paper	E050	Paper on Paper Path 1	Paper on IS path 1.
Paper in Input Station	Remove Paper	E051	Paper on Paper Path 2	Paper on IS path 2.

Table 5-4. Engine Error Codes (Continued)

OCP Line 1	OCP Line 2		Error Name	Brief Description
Paper in Input Station	Remove Paper	E052	Paper on Paper Path 3	Paper on IS path 3.
Paper in Input Station	Remove Paper	E056	Paper on Paper Path 4	Paper on timing path.
Paper in Input Station	Remove Paper	E072	Paper on Paper Path 19	Paper on hopper 5 feed path.
Paper in Paper Exit	Remove Paper	E05E	Paper on Paper Path 12	Paper on IS path 12.
Paper in Regist. Station	Remove Paper	E057	Paper on Paper Path 5	Paper on skew path.
Paper in Return Path	Remove Paper	E05C	Paper on Paper Path 10	Paper on return path 1.
Paper in Return Path	Remove Paper	E05D	Paper on Paper Path 11	Paper on return path 3.
Paper in Switch Back	Remove Paper	E05B	Paper on Paper Path 9	Paper on SB path.
Paper in Switch Back	Remove Paper	E05F	Paper on Paper Path 8	Paper on Flip path.
Paper in Transfer Station	Remove Paper	E05A	Paper on Paper Path 6	Paper on the drum.
Paper Jam Duplex Path	Remove Paper	E194	Pick Jam 10	Paper not at timing path from Rtn. 3 path in specified time.
Paper Jam Duplex Path	Remove Paper	E194	Pick Jam 10	Paper not at timing path from Rtn. 3 path in specified time.
Paper Jam Finisher	Remove Paper	E1D0	Fns. 1 Lead Jam 1	Paper did not get to entrance of the finisher path in time.
Paper Jam Finisher	Remove Paper	E1D1	Fns. 1 Lead Jam 2	Paper not at exit (non staple) of the finisher path in time.
Paper Jam Finisher	Remove Paper	E1D2	Fns. 1 Lead Jam 3	Paper not at bypass of the finisher path in specified time.
Paper Jam Finisher	Remove Paper	E1D3	Fns. 1 Lead Jam 4	Paper not at exit (bundle) of finisher path in specified time.
Paper Jam Finisher	Remove Paper	E1D4	Fns. 1 Trail Jam 1	Paper jam in stapler tray of the finisher.
Paper Jam Finisher	Remove Paper	E1D5	Fns. 1 Trail Jam 2	Paper jam at exit (non staple) of the finisher.
Paper Jam Finisher	Remove Paper	E1D6	Fns. 1 Trail Jam 3	Paper jam at bypass of the finisher.
Paper Jam Finisher	Remove Paper	E1D7	Fns. 1 Trail Jam 4	Paper jam at exit (bundle) of the finisher.
Paper Jam Finisher	Remove Paper	E1D8	Fns. 1 Lead Jam 5	Paper not at exit (sub tray) of the finisher path in time.
Paper Jam Finisher	Remove Paper	E1D9	Fns. 1 Trail Jam 5	Paper jam at exit (sub tray) of the finisher.
Paper Jam Fuser	Remove Paper	E128	HR Jam 1	Paper not at the flip path in the specified time.
Paper Jam Fuser	Remove Paper	E129	HR Jam 2	Paper jam on the flip path.
Paper Jam HCF	Remove Paper	E190	Pick Jam 8	Paper not at IS 5 path in the specified time.
Paper Jam HCF	Remove Paper	E192	Pick Jam 9	Paper at IS 5 path before the specified time.
Paper Jam Input Station	Remove Paper	E181	IS Feed Jam 1	Paper jam IS 1 path.

Table 5-4. Engine Error Codes (Continued)

OCP Line 1	OCP Line 2		Error Name	Brief Description
Paper Jam Input Station	Remove Paper	E182	IS Feed Jam 2	Paper not at IS 2 path from IS 1 path in specified time.
Paper Jam Input Station	Remove Paper	E185	IS Feed Jam 3	Paper jam on IS 2 path.
Paper Jam Input Station	Remove Paper	E186	IS Feed Jam 4	Paper not at IS 3 from IS 2 path in the specified time.
Paper Jam Input Station	Remove Paper	E189	IS Feed Jam 5	Paper jam on IS 3 path.
Paper Jam Input Station	Remove Paper	E18A	IS Feed Jam 6	Paper not at timing path from IS 3 path in specified time.
Paper Jam Input Station	Remove Paper	E18B	IS Feed Jam 7	Paper jam on timing path.
Paper Jam Input Station	Remove Paper	E191	IS Feed Jam 8	Paper jam on IS 5 path.
Paper Jam Input Station	Remove Paper	E193	IS Feed Jam 9	Paper not at IS 5 path from IS 1 path in specified time.
Paper Jam MBT	Remove Paper	E18C	Pick Jam 7	Paper not at timing path from MB tray path in specified time.
Paper Jam Paper Exit	Remove Paper	E134	PF Out Jam 1	Paper not at paper out path in the specified time.
Paper Jam Paper Exit	Remove Paper	E135	PF Out Jam 2	Paper jam on paper out path.
Paper Jam Regist. Station	Remove Paper	E110	Regist. Jam 1	Paper not at skew path in the specified time (simplex).
Paper Jam Regist. Station	Remove Paper	E111	Regist. Jam 2	Paper jam on skew path (simplex).
Paper Jam Regist. Station	Remove Paper	E112	Regist. Jam 3	Paper not at skew path in the specified time (duplex).
Paper Jam Regist. Station	Remove Paper	E113	Regist. Jam 4	Paper jam on skew path (duplex).
Paper Jam Return Path	Remove Paper	E138	Rtn. Feed Jam 1	Paper not at Rtn 1 path in the specified time.
Paper Jam Return Path	Remove Paper	E139	Rtn. Feed Jam 2	Paper jam on Rtn. 1 path.
Paper Jam Return Path	Remove Paper	E13A	Rtn. Feed Jam 3	Paper not at Rtn 2 path in the specified time.
Paper Jam Return Path	Remove Paper	E13B	Rtn. Feed Jam 4	Paper jam on Rtn. 2 path.
Paper Jam Sheet Inserter 1	Remove Paper	E1E0	Insert Tray 1 Jam 1	Paper not fed from insert tray 1.
Paper Jam Sheet Inserter 1	Remove Paper	E1E1	Insert Tray 1 Jam 2	Double feed in insert tray 1.
Paper Jam Sheet Inserter 1	Remove Paper	E1E2	Insert Tray 1 Jam 3	Paper jam in insert tray 1.
Paper Jam Sheet Inserter 2	Remove Paper	E1E5	Insert Tray 2 Jam 1	Paper not fed from insert tray 2.

Table 5-4. Engine Error Codes (Continued)

OCP Line 1	OCP Line 2		Error Name	Brief Description
Paper Jam Sheet Inserter 2	Remove Paper	E1E6	Insert Tray 2 Jam 2	Double feed in insert tray 2.
Paper Jam Sheet Inserter 2	Remove Paper	E1E7	Insert Tray 2 Jam 3	Paper jam in insert tray 2.
Paper Jam Stacker Input		E1C8	Open Stacker Jam 1	Paper not at entrance of open stacker path in specified time.
Paper Jam Stacker Input		E1C9	Open Stacker Jam 2	Paper jam on entrance of open stacker.
Paper Jam Switch Back	Remove Paper	E130	SB Jam 1	Paper not at SB path in the specified time.
Paper Jam Switch Back	Remove Paper	E131	SB Jam 2	Paper jam on SB path.
Paper Jam Tray 1	Remove Paper	E180	Pick Jam 1	Paper not at IS 1 path in the specified time.
Paper Jam Tray 1	Remove Paper	E183	Pick Jam 2	Paper at IS 1 path before the specified time.
Paper Jam Tray 2	Remove Paper	E184	Pick Jam 3	Paper not at IS 2 path in the specified time.
Paper Jam Tray 2	Remove Paper	E187	Pick Jam 4	Paper at IS 2 path before the specified time.
Paper Jam Tray 3	Remove Paper	E188	Pick Jam 5	Paper not at IS 3 path in the specified time.
Paper Jam Tray 3	Remove Paper	E18D	Pick Jam 6	Paper at IS 3 path before the specified time.
Paper On Paper Path 30		E0B0		Paper on paper path sensor 1 of the Container Stacker.
Paper On Paper Path 31		E0B1		Paper on paper path sensor 2 of the Container Stacker.
Paper On Paper Path 32		E0B2		Paper on paper path sensor 3 of the Container Stacker.
Paper On Paper Path 33		E0B3		Paper on paper path sensor 4 of the Container Stacker.
Paper On Paper Path 34		E0B4		Paper on paper path sensor 5 of the Container Stacker.
Paper On Paper Path 35		E0B5		Paper on paper path sensor 6 of the Container Stacker.
Paper On Paper Path 36		E0B6		Paper on paper path sensor 7 of the Container Stacker.
Paper On Paper Path 37		E0B7		Paper on lower jam sensor of the Container Stacker.
Paper On Paper Path 38		E0B8		Paper on upper jam sensor of the Container Stacker.
Paper On Paper Path 39		E0B9		Paper on paper path sensor 1 of the Container Stacker.
Paper On Paper Path 40		E0BA		Paper on paper path sensor 2 of the Container Stacker.

Table 5-4. Engine Error Codes (Continued)

OCP Line 1	OCP Line 2		Error Name	Brief Description
Paper On Paper Path 41		E0BB		Paper on paper path sensor 3 of the Container Stacker.
Paper On Paper Path 42		E0BC		Paper on paper path sensor 4 of the Container Stacker.
Paper On Paper Path 43		E0BD		Paper on paper path sensor 5 of the Container Stacker.
Paper On Paper Path 44		E0BE		Paper on paper path sensor 6 of the Container Stacker.
Paper On Paper Path 45		E0BF		Paper on paper path sensor 7 of the Container Stacker.
Paper On Paper Path 46		E0C0		Paper on lower jam sensor of the Container Stacker.
Paper On Paper Path 47		E0C1		Paper on upper jam sensor of the Container Stacker.
Paper Out HCF	Load *xxx*	E005	Tray 5 Paper Empty	Load *xxx* paper in the HCF.
Paper Out MBT	Load *xxx*	E004	MB Tray Paper Empty	Load *xxx* paper in the MBT.
Paper Out Tray 1	Load *xxx*	E001	Tray 1 Paper Empty	Load *xxx* paper in tray 1.
Paper Out Tray 2	Load *xxx*	E002	Tray 2 Paper Empty	Load *xxx* paper in tray 2.
Paper Out Tray 3	Load *xxx*	E003	Tray 3 Paper Empty	Load *xxx* paper in tray 3.
Paper Skew Duplex Path	Remove Paper	E154	Over Skew 6	Skew paper in DPX path.
Paper Skew HCF	Remove Paper	E155	Over Skew 4	Skew paper in tray 5.
Paper Skew MPT	Remove Paper	E153	Over Skew 5	Skew paper in MBT.
Paper Skew Tray 1	Remove Paper	E150	Over Skew 1	Skew paper in tray 1.
Paper Skew Tray 2	Remove Paper	E151	Over Skew 2	Skew paper in tray 2.
Paper Skew Tray 3	Remove Paper	E152	Over Skew 3	Skew paper in tray 3.
Ready	Out of Front Staple	E01A	Low Staple (F)	The front stapler is empty.
Ready	Out of Rear Staples	E019	Low Staple (R)	The rear stapler is empty.
SB Cover Open	Close Cover	E045	SB Cover Open	Close the SB cover.
Sheet Inserter 1 Open	Close Tray	E025	Insert Tray 1 Open	Close insert tray 1.
Sheet Inserter 2 Open	Close Tray	E026	Insert Tray 2 Open	Close insert tray 2.
Stacker 5 Basket Nonset		E029		Set basket in stacker 5.
Stacker 5 F Jogger Ps. Error		E2B4		F jogger position error in stacker 5.
Stacker 5 Front Cover Open		E02E		Close cover of stacker 5.
Stacker 5 Full		E00B		Remove paper from stacker 5.
Stacker 5 R Jogger Ps. Error		E2B5		R jogger position error in stacker 5.
Stacker 5 Size Unmatch		E092		Basket size of stacker 5 does not match the pick size.
Stacker 5 Stopper Pos. Error		E2B6		Stopper position error in stacker 5.

Table 5-4. Engine Error Codes (Continued)

OCP Line 1	OCP Line 2	Error Name	Brief Description
Stacker 5 TBL Down Timeout	E279		Time required to move stacker 5 table down has elapsed.
Stacker 5 TBL Up Timeout	E278		Time required to move stacker 5 table up has elapsed.
Stacker 6 Basket Nonset	E02A		Set basket in stacker 6.
Stacker 6 F Jogger Ps. Error	E2B7		F jogger position error detected in stacker 6.
Stacker 6 Front Cover Open	E03A		Front cover of stacker 6 is open. Close the front cover.
Stacker 6 Full	E00C		Remove paper from stacker 6.
Stacker 6 R Jogger Ps. Error	E2B8		R jogger position error in stacker 6.
Stacker 6 Size Unmatch	E093		Basket size of stacker 6 does not match the pick size.
Stacker 6 Stopper Pos. Error	E2B9		Stopper position error in stacker 6.
Stacker 6 TBL Down Timeout	E27B		Time required to move stacker 6 table down has elapsed.
Stacker 6 TBL Up Timeout	E27A		Time required to move stacker 6 table up has elapsed.
Stacker 7 Basket Nonset	E02B		Set basket in stacker 7.
Stacker 7 F Jogger Ps. Error	E2BA		F jogger position error in stacker 7.
Stacker 7 Front Cover Open	E03C		Front cover of stacker 7 is open. Close the front cover.
Stacker 7 Full	E00E		Remove paper from stacker 7.
Stacker 7 R Jogger Ps. Error	E2BB		R jogger position error in stacker 7.
Stacker 7 Size Unmatch	E094		Basket size of stacker 7 does not match the pick size.
Stacker 7 Stopper Pos. Error	E2BC		Stopper position error in stacker 7.
Stacker 7 TBL Up Timeout	E27C		Time required to move stacker 7 table up has elapsed.
Stacker 8 Basket Nonset	E02C		Set basket in stacker 8.
Stacker 8 F Jogger Ps. Error	E2BD		F jogger position error in stacker 8.
Stacker 8 Front Cover Open	E03D		Close front cover of stacker 8.
Stacker 8 Full	E00F		Remove paper from stacker 8.
Stacker 8 R Jogger Ps. Error	E2BE		R jogger position error in stacker 8.

Table 5-4. Engine Error Codes (Continued)

OCP Line 1	OCP Line 2		Error Name	Brief Description
Stacker 8 Size Unmatch		E095		Basket size of stacker 8 does not match the pick size.
Stacker 8 Stopper Pos. Error		E2BF		Stopper position error in stacker 8.
Stacker 8 TBL Down Timeout		E27F		Time required to move stacker 8 table down has elapsed.
Stacker 8 TBL Up Timeout		E27E		Time required to move stacker 8 table up has elapsed.
Stacker Size Unmatch		E096		Stack size of the stacker does not match the pick size.
Stacker 7 TBL Down Timeout		E27D		Time required to move stacker 7 table down has elapsed.
Toner Bottle Full	Replace Toner Bottle	E010	Toner Bottle Full	The toner collector is full.
Toner Bottle Not Set	Set Toner Bottle	E01D	Toner Bottle Non Set	Re-seat the toner bottle.
Toner Out	Supply Toner	E011	Toner Supply Empty	The toner is empty.
Tray 1 Open	Close Tray	E020	Hopper 1 Open	Close tray 1.
Tray 2 Open	Close Tray	E021	Hopper 2 Open	Close tray 2.
Tray 3 Open	Close Tray	E022	Hopper 3 Open	Close tray 3.
Upper Tray Paper Full	Remove Paper	E090	Upper Tray is Full.	Remove paper from upper tray.

Table 5-5. Engine Error Codes(For Finisher SR5000)

OCP Line 1	OCP Line 2	Error Name	Brief Description
Call for Service	E260	Finisher 1 CPU Error	Finisher SR5000 does not respond to a command.
Call for Service	E262	Finisher 1 Incorrect Command	Finisher SR5000 detected an interface error.
Call for Service	E2C0	Upper Transport Motor Error	The upper transport motor did not work correctly.
Call for Service	E2C1	Lower Transport Motor Error	The lower transport motor did not work correctly.
Call for Service	E2C2	Staple Movement Motor Error	The staple movement motor did not work correctly.
Call for Service	E2C3	Staple Rotation Motor Error	The staple rotation motor did not work correctly.
Call for Service	E2C4	Staple Hammer Motor Error	The staple hammer motor did not work correctly.
Call for Service	E2C5	Upper Tray Exit Motor Error	The upper tray exit motor did not work correctly.
Call for Service	E2C7	Shift Tray Exit Motor Error	The shift tray exit motor did not work correctly.
Call for Service	E2C8	Upper Tray Junction Gate Motor Error	The upper tray junction gate motor did not work correctly.
Call for Service	E2C9	Pre-stack Junction Gate Motor Error	The Pre-stack junction gate motor did not work correctly.
Call for Service	E2CA	Pre-stack Transport Motor Error	The Pre-stack transport motor did not work correctly.
Call for Service	E2CB	Pre-stack Stopper Motor Error	The Pre-stack stopper motor did not work correctly.
Call for Service	E2CC	Drag Roller Motor Error	The drag roller motor did not work correctly.
Call for Service	E2CD	Drag Drive Motor Error	The drag drive motor did not work correctly.
Call for Service	E2CE	Stack Plate Motor (Center) Error	The stack plate motor (center) did not work correctly.
Call for Service	E2CF	Stack Plate Motor (Front) Error	The stack plate motor (front) did not work correctly.
Call for Service	E2D0	Transit Pass Unit Driver Error	The +24V error was occurred on ED082 P/K in the Transit Pass Unit Type DDP.
Call for Service	E2D1	Stack Plate Motor (Rear) Error	The stack plate motor (rear) did not work correctly.
Call for Service	E2D2	Jogger Motor Error	The jogger motor did not work correctly.
Call for Service	E2D3	Stack Feed-out Belt Motor Error	The stack feed-out belt motor did not work correctly.
Call for Service	E2D4	Top Fence Motor Error	The top fence motor did not work correctly.
Call for Service	E2D5	Bottom Fence Motor Error	The bottom fence motor did not work correctly.
Call for Service	E2D6	Exit Guide Motor Error	The exit guide motor did not work correctly.
Call for Service	E2E7	Stapler Exit Motor Error	The stapler exit motor did not work correctly.

Table 5-5. Engine Error Codes(For Finisher SR5000) (Continued)

OCP Line 1	OCP Line 2	Error Name	Brief Description
Call for Service	E2E8	Stapler Junction Gate Motor Error	The stapler junction gate motor did not work correctly.
Call for Service	E2E9	Shift Motor Error	The shift motor did not work correctly.
Call for Service	E2EA	Positioning Roller Motor Error	The positioning roller motor did not work correctly.
Call for Service	E2EB	Positioning Drive Motor Error	The positioning drive motor did not work correctly.
Call for Service	E2EC	Stapler Tray Lift Motor Error	The stapler tray lift motor did not work correctly.
Call for Service	E2ED	Shift Tray Jogger Motor Error	The shift tray jogger motor did not work correctly.
Call for Service	E2EE	Shift Tray Jogger Retraction Motor Error	The shift tray jogger retraction motor did not work correctly.

Backup/Restore Error Codes

The Backup/Restore error codes are displayed when any backup data have some problem. In some cases, the following should be done to attempt to correct the problem.

1. Execute "Backup All" from "Service - Backup/Restore - Backup" on OCP.
2. Cycling of printer power.

Table 5-6. Backup/Restore Error Codes

OCP Line 1	OCP Line 2	Error Name	Brief Description
Call for Service	BR#11	Software Revision Mismatch	The software revision is not matched.
Call for Service	BR#12	No Backup Data	This is no HDD data.
Call for Service	BR#13	Read Error	Read error of HDD backup data
Call for Service	BR#14	Write Error	Write error of HDD backup data
Call for Service	BR#15	Memory Allocation Error	There is no memory to work.
Call for Service	BR#16	Time Stamp Write Error	Write error of time stamp for HDD data.
Call for Service	BR#21	No Backup Data	There is no Engine data.
Call for Service	BR#22	Read Error	Read error of Engine backup data
Call for Service	BR#23	Write Error	Write error of Engine backup data
Call for Service	BR#24	Time Stamp Write Error	Write error of time stamp for Engine data.
Call for Service	BR#31	No Backup Data	This is no Controller data.
Call for Service	BR#32	Read Error	Read error of Controller backup data
Call for Service	BR#33	Write Error	Write error of Controller backup data
Call for Service	BR#34	Time Stamp Write Error	Write error of time stamp for Controller data.
Call for Service	BR#35	Click Charge Count No Backup Data	There is no Click Charge Count data.
Call for Service	BR#36	Click Charge Count Read Error	Read error of Click Charge Count data.
Call for Service	BR#37	Click Charge Count Write Error	Write error of Click Charge Count data (Controller)
Call for Service	BR#38	Click Charge Count Write Error	Write error of Click Charge Count data (Engine)
Call for Service	BR#39	Click Charge Count Time Stamp Write Error	Write error of time stamp for Click Charge Count data (HDD).
Call for Service	BR#41	Data Compression Error	Data Compression Error
Call for Service	BR#42	Read Error	Read error of HDD data.
Call for Service	BR#43	Write Error	Write error of HDD data.
Call for Service	BR#44	Time Stamp Write Error	Write error of time stamp for HDD data.
Call for Service	BR#45	Software Revision Mismatch	The software revision is not matched.
Call for Service	BR#46	Time Stamp Mismatch	Time stamp of HDD data is not matched.
Call for Service	BR#47	Time Stamp Incorrect	Time stamp of Controller data is incorrect.
Call for Service	BR#48	Time Stamp Incorrect	Time stamp of HDD data is incorrect.
Call for Service	BR#51	Read Error	Read error of Engine data.

Table 5-6. Backup/Restore Error Codes (Continued)

OCP Line 1	OCP Line 2	Error Name	Brief Description
Call for Service	BR#52	Write Error	Write error of Engine data.
Call for Service	BR#53	Time Stamp Write Error	Write error of time stamp for Engine data.
Call for Service	BR#54	Time Stamp Mismatch	Time stamp of Engine data is not matched.
Call for Service	BR#55	Time Stamp Incorrect	Time stamp of HDD data is incorrect.
Call for Service	BR#56	Time Stamp Incorrect	Time stamp of Engine data is incorrect.
Call for Service	BR#61	Read Error	Read error of Controller data.
Call for Service	BR#62	Write Error	Write error of Controller data.
Call for Service	BR#63	Time Stamp Write Error	Write error of time stamp for Controller data.
Call for Service	BR#64	Time Stamp Mismatch	Time stamp of Controller data is not matched.
Call for Service	BR#65	Time Stamp Incorrect	Time stamp of HDD data is incorrect.
Call for Service	BR#66	Time Stamp Incorrect	Time stamp of Controller data is incorrect.
Call for Service	BR#67	Click Charge Count Read Error	Read error of Click Charge Count data.
Call for Service	BR#68	Click Charge Count Write Error	Write error of Click Charge Count data (Engine)
Call for Service	BR#69	Click Charge Count Write Error	Write error of Click Charge Count data (HDD)
Call for Service	BR#6A	Click Charge Count Time Stamp Write Error	Write error of time stamp for Click Charge Count data (Controller).
Call for Service	BR#6B	Click Charge Count Time Stamp Mismatch	Time stamp of Click Charge Count is not matched (Controller).
Call for Service	BR#6C	Click Charge Count Time Stamp Mismatch	Time stamp of Click Charge Count is not matched (Engine).
Call for Service	BR#6D	Click Charge Count Time Stamp Mismatch	Time stamp of Click Charge Count is not matched (HDD).
Call for Service	BR#6E	Click Charge Count Time Stamp Mismatch	Time stamp of Click Charge Count is not matched (All).
Call for Service	BR#71	Click Charge Count No Backup Data	There is no Click Charge Count on CPxxx A'ssy.
Call for Service	BR#72	Click Charge Count Read Error	Read error of Click Charge Count of CPxxx A'ssy.
Call for Service	BR#73	Click Charge Count Write Error	Write error of Click Charge Count data (Controller)
Call for Service	BR#74	Click Charge Count Write Error	Write error of Click Charge Count data (HDD)
Call for Service	BR#75	Click Charge Count Time Stamp Write Error	Write error of time stamp for Click Charge Count data (Engine).

Appendix A
MOP Limits

General

There are many complex factors in calculating the estimated MOP limits. The disk partitioning scheme, fragmentation, page block boundaries, edge-to-edge, printer emulation, and sheet/page object overhead all affect the actual MOP limit as seen by the end user. Therefore, the stated MOP limits are defined in terms of "as least this many" sheets per MOP set.

> ***NOTE:***
> *A sheet is defined as a physical paper sheet. Although a Duplex sheet may print data on the backside of the sheet, it is still considered one physical sheet in this context.*

For example, in the table that follows, a Ledger/Simplex MOP job using an 40GB disk, the MOP limit is stated as 1500 sheets. Therefore, the user can print a MOP job with at least 1500 sheets per MOP set. A MOP job exceeding this 1500 sheet estimate is not guaranteed to MOP successfully (i.e., it will be converted into a single copy job). A Ledger/Duplex MOP job could have at least 1000 sheets and still MOP successfully.

Important Information

- When printing a job with mixed paper sizes, use the largest paper size in the job when consulting the table.
- When printing a job with a custom paper size, use the next larger size (in area) when consulting the table.
- When printing a job with Letter or A4 Tab Stock, use the values for letter or A4, respectively. When printing a job with *only* Tab Stock, reduce the stated sheet count by 6%.
- SEF and LEF paper sizes have the same limits and, therefore, are listed as a single paper size.
- There is a maximum of 1500 physical sheets per MOP set.

Table A-1. MOP Limits

Paper Size	Physical Dimensions	Simplex (Sheets)	Duplex (Sheets)
		40GB (or larger)	**40GB** (or larger)
Super B	12” x 18”	1500	1000
Ledger	11” x 17”	1500	1000
Legal	8.5” x 14”	1500	1500
Folio	8.5” x 13”	1500	1500
Letter	8.5” x 11”	1500	1500
Executive	10.5” x 7.25”	1500	1500
Statement	5.5” X 8.5”	1500	1500
A3	297 x 420 mm	1500	1000
B4	257 x 364 mm	1500	1000
A4	210 x 297 mm	1500	1500
B5	257 x 182 mm	1500	1500
A5	149 x 210 mm	1500	1500
Custom	*Use the next larger paper size (in area) to estimate MOP limits for custom size paper.*		

Appendix B
Procedure for Backup / Restore

This chapter shows the procedure for Backup and Restore when the Hard Disk Drive, the Controller Board and Engine Board (CPxxx) are changed. Please execute following procedure in order to save vital data during printer service.

CAUTION!

In case of the revision of Controller is ev701 or later, BR#xx error may occur after replacement parts. In this case, push cancel botton then execute following procedure.

1. Replace one part individually

(1) Replace the Controller Board

(a) Setup / Service / Backup/Restore / Restore / Controller

(b) Setup / Service / Backup/Restore / Backup / HDD Data

(2) Replace the Hard Disk Drive

(2-1) In case of same Controller revision replacement

(a) Setup / Service / Backup/Restore / Restore / HDD Data

(b) Setup / Service / Backup/Restore / Backup / Engine Data

(c) Setup / Service / Backup/Restore / Backup / Controller

(2-2) In case of different Controller revision replacement

(a) Setup / Service / Backup/Restore / Backup / All

WARNING!

After replacement the Hard Disk Drive between different Controller revision, following matters are generated.
(1) Various printer setting values are changed by user are reset to the factory-set.
(2) Virtual Printers that are made by user are deleted.

(3) Replace the Engine Board (CPxxx)

(a) Setup / Service / Backup/Restore / Restore / Engine Data

(b) Setup / Service / Backup/Restore / Backup / Controller

2. Replace multiple parts

(1) Replace the Controller Board and the Hard Disk Drive simultaneously

(a) Setup / Service / Backup/Restore / Restore / Click Charge Count (ev701 or later)

(b) Setup / Service / Backup/Restore / Backup / All

WARNING!

After replacement the Hard Disk Drive between different Controller revision, following matters are generated.
(1) Various printer setting values are changed by user are reset to the factory-set.
(2) Virtual Printers that are made by user are deleted.

---

(2) Replace the Controller Board and the Engine Board (CPxxx) simultaneously

(a) Setup / Service / Backup/Restore / Restore / Engine Data

(b) Setup / Service / Backup/Restore / Restore / Controller

(c) Setup / Service / Backup/Restore / Backup / HDD Data

(3) Replace the Engine Board (CPxxx) and the Hard Disk Drive simultaneously

(3-1) In case of same Controller revision replacement

(a) Setup / Service / Backup/Restore / Restore / HDD Data

(b) Setup / Service / Backup/Restore / Backup / Engine Data

(c) Setup / Service / Backup/Restore / Backup / Controller

(3-2) In case of different Controller revision replacement

(a) Setup / Service / Backup/Restore / Backup / All

WARNING!

Various printer engine data are reset to the factory-set. Please refer to the DDP Engine Maintenance Manual.

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(4) Replace the Controller Board, Engine Board (CPxxx) and the Hard Disk Drive simultaneously

(a) Setup / Service / Backup/Restore / Backup / All

WARNING!

In case of all part (Controller Board, Engine Board and HDD) is replaced at same time, ALL data are reset to the factory-set.

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