DDP 184
Digital Document Publisher

User's Guide

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Revision Table

Manual Rev.	Machine Rev.	Page No.	Date
00	-	First Edition	May.2005
01	-	2-10(01), 2-18(01), 2-20(01), 4-5(01), 4-16(01), 4-25(01), 4-26(01), 4-27(01), 4-28(01), 4-29(01), 5-15(01), 6-47(01), Glossary-3(01)	Oct.2005
02	-	2-3(01): Added “Note1” for “Sample Tray Output”.	Nov.2005
		2-14(00),2-17(01): Added “PCL” into Chapter2 “Operator Control Panel”.	
		2-16(01)-2-18(01),2-19(02),2-20(01),2-21(02),2-22(01)-2-25(01): Changed page number for adding of “PCL” into Chapter2 ”Operator Control Panel”.	
		5-21(01): Corrected the spelling of “Preserving”.	
		D-1(01): Added ”a” - “d” beside the figure. Revised the figure.	
		D-2(01): Revised the figure.	
		D-3(01): Clarified the words in the figures. Revised the figure.	
		D-5(01): Revised the figure.	
		D-6(01): Clarified the words in the figures.	
		D-7(01): Revised the figure.	
		Deleted “Index”.	
03	-	introduction ix(01): Delete "Appendix D" and "Index".	Apr.2006
		1-2(01): Changed the contents of "HCF" and "Inserter". Delete the contents of "Booklet Finisher". Changed the contents of "MOP".	
		1-3(01): Added "HCF" in the contents of "High-volume printing".	
		1-4(01): Changed the figures.(Changed:"High Capacity Feeder" , Delete:"Inserter", "Booklet Tary" , Added:"Finisher Front Cover", "Top Cover")	
		1-5(01): Changed the Table. (Changed:"High Capacity Feeder" , Delete:"Inserter", "Booklet Tary" , Added:"Finisher Front Cover", "Top Cover") Changed Note. Delete "1.When Booklet •••" in Note. Added "1.Option" in Note.	
		1-6(01): Changed the figure. (Added "Fuser Latch", "Fuser Unit", "Drum Center Lock", "TH Handle" in the front engine. Added "Top Cover Latch", "Tonner Hopper Unit", "Developer Duct" in the rear engine.)	

Manual Rev.	Machine Rev.	Page No.	Date
(03)	-	1-7(01): Changed the upper figure (Booklet Finisher -> Standard Finisher). Delete "Inserter", "Booklet Holder", "Folding Unit". Changed the Table (Delete the row of "Booklet Finisher". Delete the colum of "Inserter", "Booklet Holder", "Folding Unit". Changed the description of "Staple F")	(Apr.2006)
		1-8(01): Changed the figure.	
		1-9(01):Changed the figure. (Delete the "Inserter", "Booklet Holder".). *Added "Warning".	
		1-10(01):-Added the figure of "Preserving Parameters" with (Note1).	
		1-11(01): Added the (Note2) on the figure of "Ready". Added Note.	
		1-12(01): Changed the figure of "Paper Out Tray1".	
		1-13(01):Changed the title (Added IM#XX.)	
		2-2(01): Changed the figure (Delete "Inserter", "Booklet Holder".).	
		2-3(02): Changed the Table (Changed the colum of "Ten key". Deleted the colum of "Brightness". Added the colum of "Buzzer volume".).	
		2-6(01):Changed the explanation for "Using the + / - Change Button Menu". Changed the figure of OCP menu.	
		2-7(01): Changed the figure of Options menu.	
		2-8(01): Changed the contents of "Finisher Menu".	
		2-9(01):Changed the contents of "Consumables".	
		2-10(02):Changed the Table (Reviewed application of "Note x" (x=1,•••••,8). Deleted "Tray Grouping" in "Information"-"Printer"-"Front/Rear"-"MBT". Deleted "Fuser Unit" in "Information"-"Consumables"-"Front/Rear". Changed "Usage" in "Information". Deleted "Booklet" in "Information"-"Finisher". Changed the explanation of "Note 1" - "Note 8".).	
		2-11(01): Changed the figure of Printer menu.	
		2-12(01) : Changed the Table2-2. Deleted "Note".	
		2-13(01) : Deleted the contents of "Exit Jam Recovery" in Options. Changed the contents of "Wait Timeout", "Duplex Always" in Options. Deleted the contents of "PostScript".	
		2-15 (02):Changed the Table (Added "HCF" in "Printer"-"Paper Source"-"Paper Size". Added "Note 4" - "Note 5".). Added the explanation of "Note 4"- "Note 5".	

Manual Rev.	Machine Rev.	Page No.	Date
(03)	-	2-16(02): Changed the Table (Added the row of "Level 8". Reviewed application of "Note 3". Changed "Tray Adjust", "Color Control", "Paper Pattern" in "Printer"-"Paper Source". Deleted "Exit Jam Recovery" in "Printer"-"Options". Changed "Wait Timeout", "Detach Voltage", "Laser Power Adjust", "H Positioning" in "Printer"-"Options".). Changed the explanation of "Note 3".	(Apr.2006)
		2-17(02): Changed the Table (Reviewed application of "Note x" (x=1, 2, 3). Changed "Test Print" in "Printer".) Changed the explanation of "Note 1" - "Note 3".	
		2-18(02): Changed the explanation of "OCP". Changed the explanation of "Network" in "System".	
		2-19(03): Changed the explanation of "Public R/W". Added the contents of "Auto Backup Time", "Output Cascade".	
		2-20(02): Added (Note1) to "Charger", "Corotron". *Changed the explanation in "Note".	
		2-21(03):Changed the Table (Deleted "Brightness" in "Setup"-"OCP". Added "buzzer volume" in "Setup"-"OCP". Added "Auto Backup Time", "Output Cascade" in "Setup"-"System"-"Input Password".). Changed the explanation of "Note 5". Added "Note 6".	
		2-22(02): Changed the explanation of "Reports Menu". Changed the Table (Deleted "(See Note)". Deleted the explanation of "Note".	
		Deleted the contents of "Finisher Menu for the Booklet Finisher".	
		2-23(02): Change the Title of section (Finisher Menu for the conatainer Stacker -> Finisher Menu). Changed the figures. Changed Tables. (Added Level 4.)	
		2-24(01): Added the contents of "Jobs" menu.	
		3-1(01): Add "Paper".	
		3-2(01): Deleted "Bond Paper:••••• Inserter" in "Paper Weights".	
		3-5(01): Deleted the row of "Inserter" in the Table.	
		3-7(01):Changed reference pages in "Loading Paper".	
		3-9(01):Changed the selections from OCP in 8, 9.	
		3-14(01):Changed the reference page of "Note" in 4. Changed the reference page in 6.	
		Deleted the contents of "Loading Paper into the Inserter".	

Manual Rev.	Machine Rev.	Page No.	Date
(03)	-	Deleted "Table 3-3. Inserter".	(Apr.2006)
		3-18(01):*Deleted the row of "Inserter" in the Table.	
		3-19(01):Changed the reference page of "Note" in 1. Changed the reference page in 3.	
		3-21(01):Add "Note".	
		3-22(01): Add "CAUSION".	
		3-23(01), 3-24(01): Changed the Table.	
		3-25(01): Changed the explanation of "Paper Size and Weight Limits". Delete the rows of "Booklet", "Center Folding" in the Table.	
		3-26(01):Deleted the contents of "Finisher Adjustment".	
		3-29(01): Changed the explanation of "Paper Pattern". Changed the reference page in "Paper Pattern". Deleted "Paper Pattern (with Detach Voltage Support)".	
		3-30(01):Changed the reference pages in "Note" in 4.	
		3-31(01): Changed the explanation and figures of "Clearing Preset Values".	
		4-5(02): Changed the explanation of "Consumables" “Reports” in the table.	
		4-8(01): Changed the figure.	
		4-10(01): Changed the explanation of "Status-Consumables". Changed the figures. Changed the Table (Deleted the column of "Fuser Unit". Added the column of "Charger", "Corotron". Added "***" and the explanation.)	
		4-12(01): Changed the explanation in "*1", "*2".	
		4-14(01): Changed the figure.	
		4-16(02): Changed the table.	
		4-18(01): Changed the reference pages in "Paper Source". Delete "Note".	
		4-20(01): Changed the figure of "Options".	
		4-21(01): Changed the figure of "Stapler".	
		Deleted the contents of "Inserter", "Stapler", "Folder".	
		4-22(01): Added the contents of "Short Stacking".	
		4-25(02): Changed the explanation of "Misc". *Changed the figure of "Misc".	
		4-27(02): Changed the figure of "TCP/IP".	
		4-30(01): Changed the figure of "Jobs".	

Manual Rev.	Machine Rev.	Page No.	Date
(03)	-	4-35(01): Deleted "Network I/F" in "Channel Source" in the Table. Changed the descriptions of "VPT", "PDL Source".	(Apr.2006)
		5-3(01): Changed "Basic Troubleshooting Tips". (Deleted information of MicroPress.)	
		5-4(01):Changed the reference pages.	
		5-5(01):Changed the reference pages.	
		5-6(01): Changed the reference pages.	
		5-8(01): Delete the contents of "Booklet Finisher Error Codes (Option)".	
		5-10(0): Delete Booklet Finisher Error Codes (Option)““.	
		5-11(01) - 5-13(01), 5-14(02), 5-20(01): Deleted "Booklet Stacker "Booklet Stacker Full Remove Booklets", "Booklet Stacker Full Remove Paper", "Inserter Load xxx", "Invalid Combination #1 Cancel Job", "Invalid Combination #2 Cancel Job", "Invalid Folder #xx Clear Paper Path", "Invalid Folder #xx Cancel Job", "Paper in Fin Holding Path Remove Paper", "Paper in Fin Sheet Path Remove Paper", "Paper in Sheet Inserter 1 Remove Paper", "Paper in Sheet Inserter 2 Remove Paper", "Paper Jam Connect-ing Unit Remove Paper", "Paper Jam Connecting Unit Remove Paper", "Paper Jam Fin Bypass Remove Paper", "Paper Jam Fin Exit Remove Paper", "Paper Jam Fin Folder Remove Paper", "Paper Jam Fin Sheet Path Remove Paper", "Paper Jam Sheet Inserter 1 Remove Paper", "Paper Jam Sheet Inserter 1 Remove Paper", "Paper Jam Sheet Inserter 1 Remove Paper", "Paper Jam Sheet Inserter 2 Remove Paper", "Paper Jam Sheet Inserter 2 Remove Paper", "Paper Jam Sheet Inserter 2 Remove Paper", "Paper Out Sheet Inserter 1 Load xxx", "Paper Out Sheet Inserter 1 Load xxx", "Paper Out Sheet Inserter 2 Load xxx", "Sheet Inserter 1 Open Close Tray", "Sheet Inserter 2 Open Close Tray", "Trimming Trash Box Full Empty Box", "Trimming Trash Box Not Set Check Box", "Trimming Unit Not Set Check Unit". Added "IM#XX" into "Call for Service Exxx or other text", (Note x) into "Paper Unmatch Check Paper Information", "PM Counter Exceeded", "Note 1" - "Note2". (PM Exceeded -> Note 2 PM Counter Exceeded.)	
		6-2(01) - 6-3(01) : *Delete the column of "Fuser" in Table.	
		6-4(01) - 6-5(01): Added the explanation of 2.	

Manual Rev.	Machine Rev.	Page No.	Date
(03)	-	6-9(01) - 6-11(01): Changed the explanation for "Replacing the Developer Mix". Added the figures of OCP. Changed the selections from OCP in 5.	(Apr.2006)
		6-13(01): Revised the selections from OCP.	
		6-12(01) - 6-14(01):Added the explanationand figure of 1. Changed the selections from OCP in 6.	
		6-17(01) - 6-18(01): Changed the selections from OCP in 5. *Added the figures of OCP.	
		6-21(01): Changed the selections from OCP in 4. Add the figures of OCP.	
		6-22(01):Changed the Title (Deleted Standard or Booklet Maker Finisher). Changed the explanation for "Replacing Staples"	
		6-26(01): Deleted "E069", "E06A", "E06B", "E06C" in the upper figure. Changed the lower figure.	
		6-27(01): Changed the figure of "Finisher Jam". *Deleted "E1C9", "E1C7", "Booklet Jam" in "Finisher Jam".	
		6-29(01): Changed the right figure in 2.	
		6-31(01): Changed the figures in 8, 10.	
		6-32(01): Changed the figure in 12.	
		6-38(01): Changed the Title ("Multi-bypass Tray" -> "MBT (Multi-bypass Tray)", "High Capacity Feeder" -> "HCF (High Capacity Feeder)")	
		6-40(01):Changed the Title. (Deleted Standard or Booklet Maker Finisher)	
		6-44(01) - 6-45(01): Add the figures in 7,8.	
		6-51(01): Added the contents of "Cleaning the the Trays and Finsher Area".	
		6-57(01): Changed the figure in 10.	
		6-59(01): Changed the figure in 1.	
		6-61(01): Changed the figures of OCP.	
		6-64(01): Changed the figures of OCP.	
		6-66(01) - 6-67(01): Changed the "Detach Voltage Adjustment". (Delete tha case of "Individual Tray Adjust Not Supported".)	
		A-2(01): Changed the upper figure.	
		A-4(01): Changed the Declaration and the Table.	

Manual Rev.	Machine Rev.	Page No.	Date
(03)	-	B-2(01): Changed the Table of "Base Printer" (Deleted first "Controller". Changed second "Controller".). *Deleted the row of "Booklet Finisher" in the Table of "Finisher".	(Apr.2006)
		B-5(01):Deleted the row of "Fuser Unit" in the Table.	
		Delete the section of "Appendix D Finisher Adjustment".	
		Made change of all page number due to above changes.	
04	-	TRADEMARK, NOTICE TO USER	Dec.2006
		1-13(02):Added the Note.	
		2-14(01):Fixed the spelling (behavior).	
		2-18(03):Changed the explanation for "OCP"	
		2-24(03):Changed the value for buzzer volume	
		5-21(00)-5-22(00): Added the Note3 on the figure.	
		6-25(01):Added the Note 2.	
05	-	Table of Contents iv(02): Added the “Staple Error”	May.2007
		2-17(03): Added the “Note 4”.	
		3-23(02),3-24(02): Changed the Stapling.	
		4-35(02): Added the “Completed Copies” and “PDL Copies”.	
		C-15(01): Added the “Note”.	
06	-	Table of Contents i(02), ii(02), iii(02), iv(03), v(02), vi(02), vii(02): Changed page number for adding of “Powering On the Server”, “Powering Off the Server”.	Oct.2007
		1-4(02): Changed the figure.	
		1-5(02): Changed the Table. (Added “DDP Server”, “Server Power Switch”, “Power Button”) Added “3” in Note.	
		1-9(02): Added “CAUTION”.	
		1-10(02): Added “Powering On the Server”.	
		1-11(02), 1-12(02), 1-13(03), 1-14(01): Changed page number for adding of “Powering On the Server”.	
		1-12(02): Added “Powering Off the Server”.	
		2-16(03): Changed the Table. (Added “DTC_PWM”)	
		3-20(01): Added “Note”.	
		5-13(02): Changed the Table. (Added “Invalid Mac Address”)	

Manual Rev.	Machine Rev.	Page No.	Date
(06)	-	6-66(02): Changed the figure.	(Oct.2007)
		A-4(02): Modified the “Declaration of Conformity for Safety/EMI”.	
07	-	2-10(03): Added “Mode 4”.	Jan.2008
		2-17(04): Modified “Note 4”.	
		5-7(02): Modified “Out of Staples”.	

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Glossary

About This Manual

This manual provides easy access to the information you need to operate the 184 PPM (Pages Per Minute) laser printer.

To find out about a specific topic, refer to:

- Chapter 1: **Printer Overview** – For printer components and features.
- Chapter 2: **Operator Control Panel** – To access and use the liquid crystal display (LCD) window and the menus screens.
- Chapter 3: **Paper Handling** – For media recommendations and paper handling procedures.
- Chapter 4: **Web Utilities**– For information on accessing the printer via the Internet or your company's Intranet.
- Chapter 5: **Troubleshooting** – For information on printing problems and printer error and warning messages.
- Chapter 6: **Care and Maintenance**– For detailed instructions on replacing consumables, clearing paper jams, and cleaning and maintaining the printer.
- Appendix A: **Safety Information** – For safety information and printer characteristics, including environmental and electrical requirements.
- Appendix B: **Printer Specifications** – For printer specifications.
- Appendix C: **Paper Specifications** – For media specifications and printing guidelines.
- **Glossary** – For definitions of terms and acronyms.

Audience

This manual is written for those persons responsible for operating the printer. A basic understanding of computer equipment and its operations is required.

Manual Conventions

The following conventions are used in this manual:

- **Bold** and *Italics* are used sparingly for emphasis.
- Information you enter: ***`Looks Like This.`***
- Key Names (or Labels): *Look Like This.*
- System messages: `Look Like This.`
- Variable user information: *Looks Like This.*

Pay particular attention to Notes, Cautions, and Warnings. These alert you to critical information, as follows:

NOTE:

Provides important additional information.

CAUTION!

Alerts you to an operating procedure, practice, or condition that, if not strictly observed, might result in damage to the equipment.

WARNING!

Alerts you to an operating procedure, practice, or condition that, if not strictly observed, can result in safety hazards to personnel, severe injury, or loss of life.

For More Information

Refer to the following related documents for more details about your printer.

- *Unpacking and Setup Instructions*
- *Engine Maintenance Manual*
- *Controller Maintenance Manual*
- *Illustrated Parts List (IPL)*

Chapter 1
Printer Overview

What This Chapter Provides

This chapter describes the parts and functions of the printer.

Printer Features

The printer is a high-speed, shared-use laser printer for a 600K page/month printing environment. It incorporates a wide variety of features:

- High-Speed and High-Quality Printing.
  - Print speed is up to 184 pages per minute (ppm), A4/Letter (Simplex) black/ black printout.
  - The printing output is at a resolution of 600 dots per inch (dpi), assuring razor-sharp graphic and text output, even at very small point sizes.
- Flexible Paper Source and Delivery.

  Paper Source:
  - Standard – Two 500-sheet universal paper trays and one 2000-sheet universal paper cassette.
  - Standard – 150-sheet capacity Multi-bypass Tray (MBT) for automatically printing small jobs, or manually feeding single sheets (including transparencies, labels, and odd-sized print media).
  - Option – High Capacity Feeder (HCF) with 3000-sheet capacity.

  Paper Delivery:
  - Standard - Standard Finisher
    2,500-sheet (Elevator Tray)
    200-sheet (Upper Tray) capacity Finisher
  - Option – Container Stacker with 1,500 to 6,000-sheet capacity and stacking capability.
- Multiple Original Printing (MOP) – for printing of multiple collated document sets without multiple file transfers. Processes jobs once, stores the images on disk, and prints each set from disk (after the first set).
- Web Utilities – for remote access to the printer through the Internet or your company's Intranet.
- Ergonomic operation.
  - The easy-to-read display clearly shows the operational status of the printer.

- Component-based consumables.
  - User replaceable toner and staples.
- High-volume printing (20 lb. paper)
  - Three standard paper cassettes with approximately 3000-sheet capacity total and the Multi-bypass Tray (MBT) with a 150-sheet capacity.
  - High Capacity Feeder (HCF) provides a 3,000-sheet capacity additionally.
- Supports a wide-range of media types (bond, color, label, letterhead, preprinted, prepunched, recycled, transparency) and other sizes.

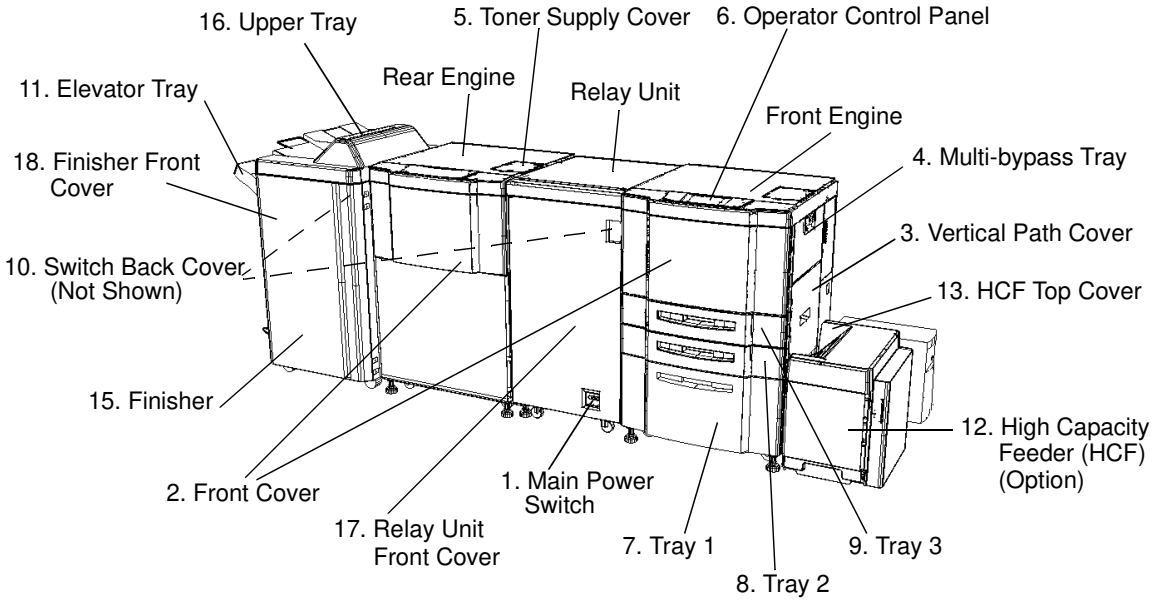
Operator Control Panel

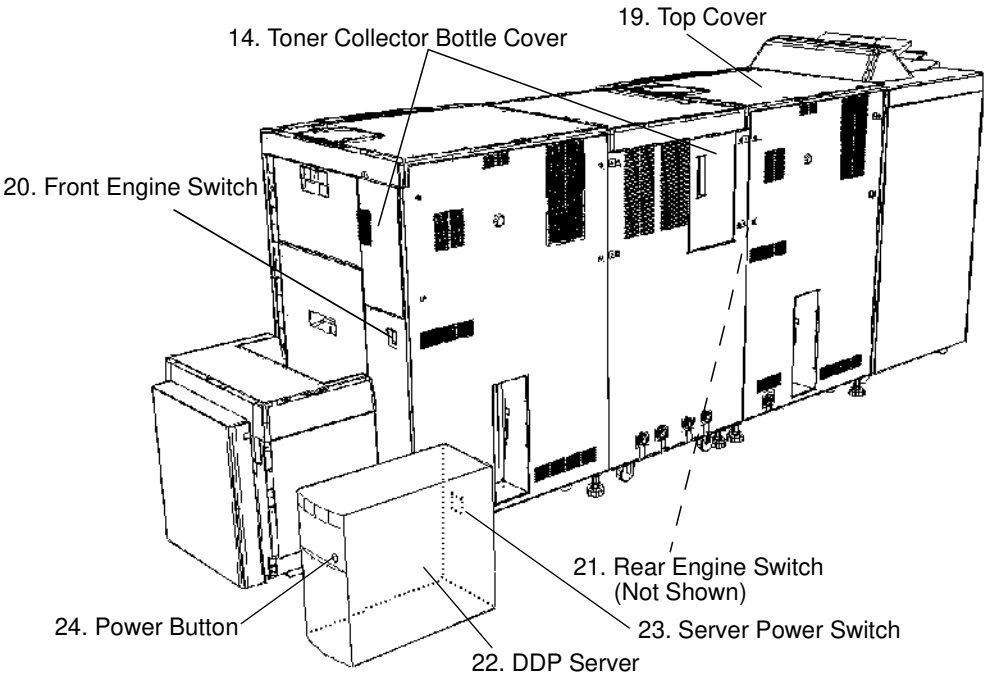
The Operator Control Panel (OCP) is your physical interface to the printer's features and functions. From the control panel, you can monitor the printer's operating status and configure the specific printer functions.

See Chapter 2 for detailed information about the OCP.

External View of the Printer

The following illustration shows the printer with a Standard Finisher and High Capacity Feeder installed. Refer to your option-specific User's Guide for details on other devices.





Key	Component	Description
1	Main Power Switch	Use to turn the system on and off.
2	Front Cover	Open to replace units, clear paper jams, or clean the inside of the printer. (Front and Rear Printer)
3	Vertical Path Cover	Open to clear paper jams. (Front and Rear Printer)
4	Multi-bypass Tray (MBT)	Holds up to 150 sheets of paper. (Front Printer)
5	Toner Supply Cover	Open to replenish the toner supply. (Front and Rear Printer)
6	Operator Control Panel (OCP)	Displays printer status and menu information. (Front Printer)
7	Tray 1	Holds up to 2,000 sheets of paper. (Front Printer)
8	Tray 2	Holds up to 500 sheets of paper. (Front Printer)
9	Tray 3	Holds up to 500 sheets of paper. (Front Printer)
10	Switch Back Cover	Open to clear paper jams.(Front and Rear Printer)
11	Elevator Tray	Output tray.
12	High Capacity Feeder (HCF) *(Note1)*	Holds up to 3,000 sheets of paper.
13	HCF Top Cover	Open to clear paper jams.
14	Toner Collector Bottle Cover	Open to replace the toner collector bottle.(Front and Rear Printer)
15	Finisher	For stacking, job offset, and stapling.
16	Upper Tray	Output tray.
17	Relay Unit Front Cover	Open to clear paper jams.
18	Finisher Front Cover	Open to replace staples and clear paper jams.
19	Top Cover	Open to replace a color kit.
20	Front Engine Switch *(Note2)*	Use to turn the front Engine on and off.
21	Rear Engine Switch (not shown) *(Note2)*	Use to turn the rear Engine on and off.
22	DDP Server	Connects the Printer and the other network environment. Receives and converts the Print data and sends it to the Printer.
23	Server Power Switch	Use to turn the Server standby power on and off.*(Note3)*
24	Power Button	Use to turn the Server on and off.

NOTE:

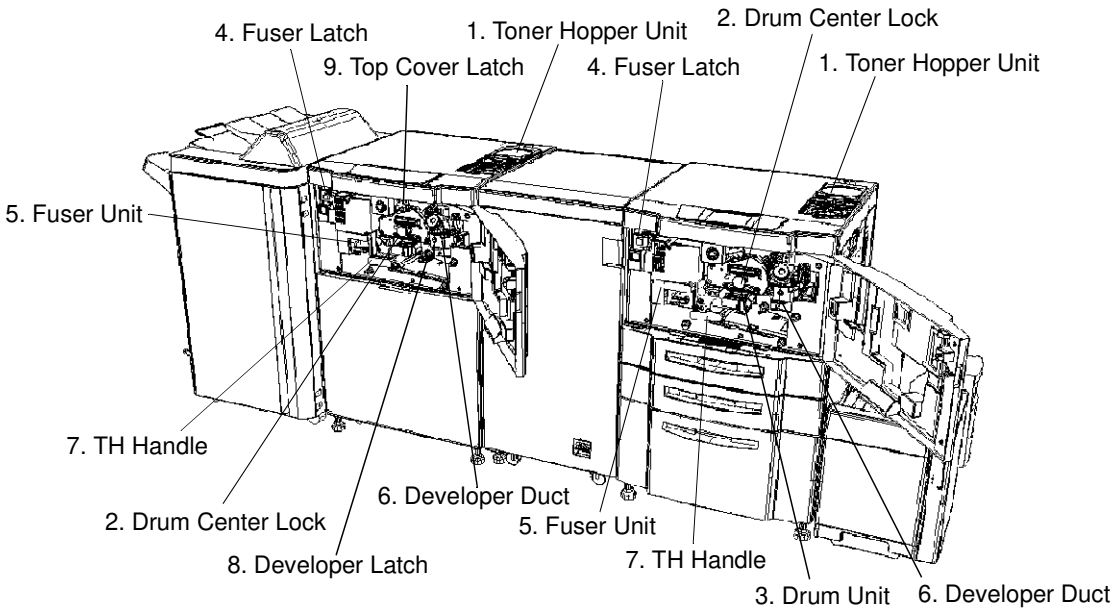
1 Option.

2 Front and Rear Engine power switch should remain on. Use Main Power Switch to power the system on and off. *See "Powering On the Printer" on page 1-9.*

3 If the Server Power Switch is covered by the metal plate, it is always on.

Internal View of the Printer

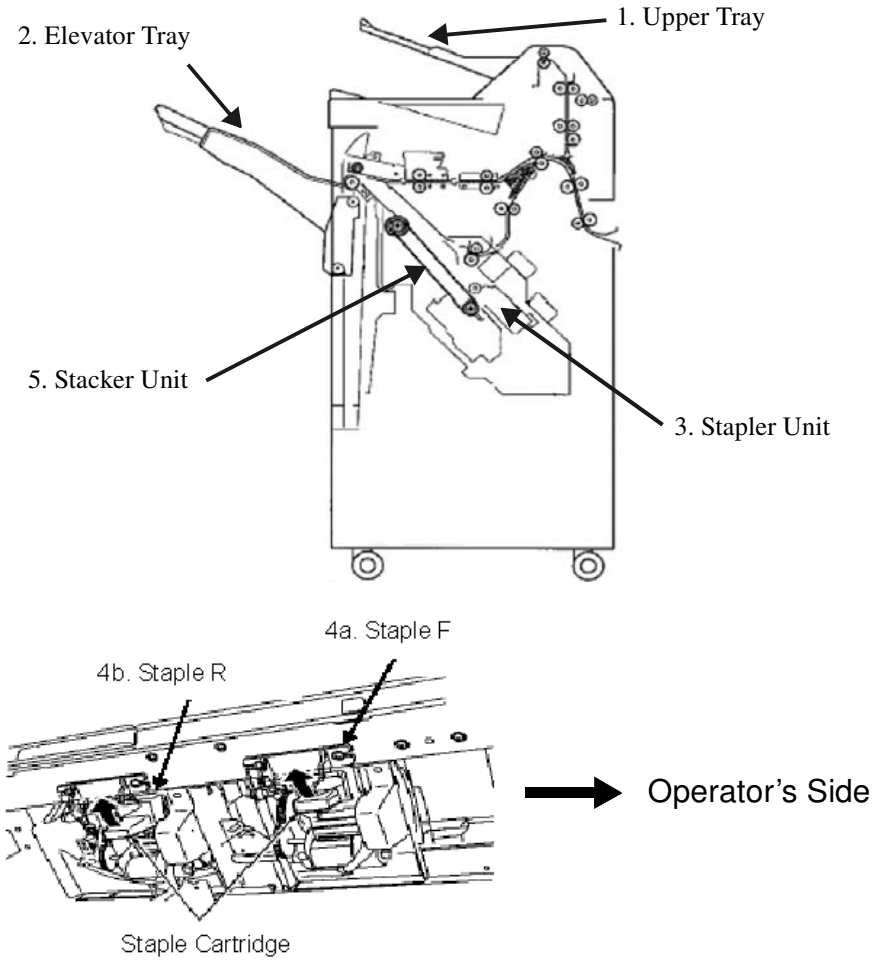
The following figure shows an internal view of both the Front and Rear Engine. The components are identical in both engines.



Key	Component	Description
1	Toner Hopper Unit	For replacing toner.
2	Drum Center Lock	Holds the drum in place.
3	Drum Unit	OPC drum.
4	Fuser Latch	Provides access to the fuser unit.
5	Fuser Unit	Fuses the toner on the paper.
6	Developer Duct	For replacing developer.
7	TH Handle	Handle of the toner transfer unit.
8	Developer Latch	Provides access to the developer unit
9	Top Cover Latch	Provides access to the toner hopper unit

Internal View of the Finisher

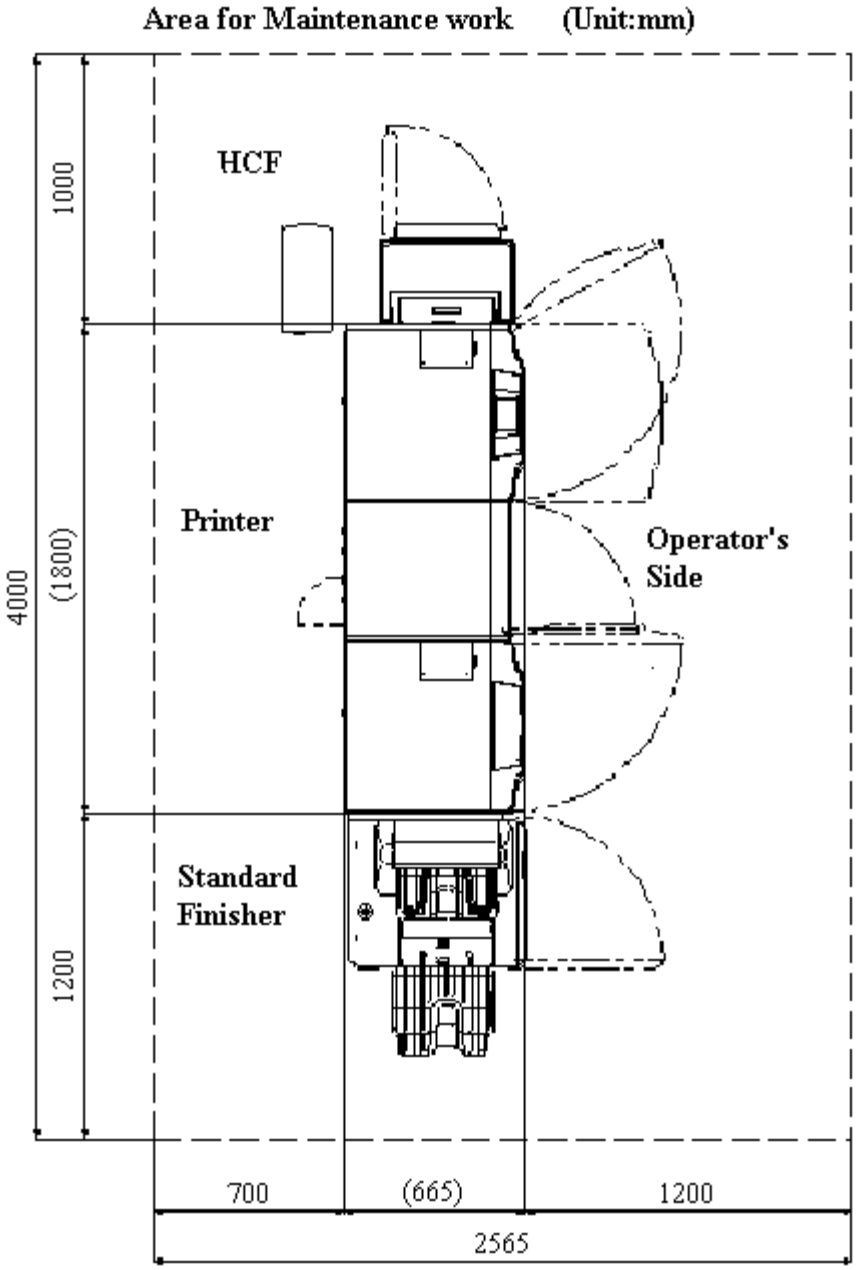
The following figure shows an internal view of the finisher with the front cover open.



Key	Component	Standard Finisher	Description
1	Upper Tray	O	Exit tray.
2	Elevator Tray	O	Exit tray.
3	Stapler Unit	O	Contains both a front and rear staple cartridge.
4a	Stapler F	O	Front staple cartridge.
4b	Stapler R	O	Rear staple cartridge.
5	Stacker Unit	O	Copies are stacked here until they are stapled and set to the output tray.

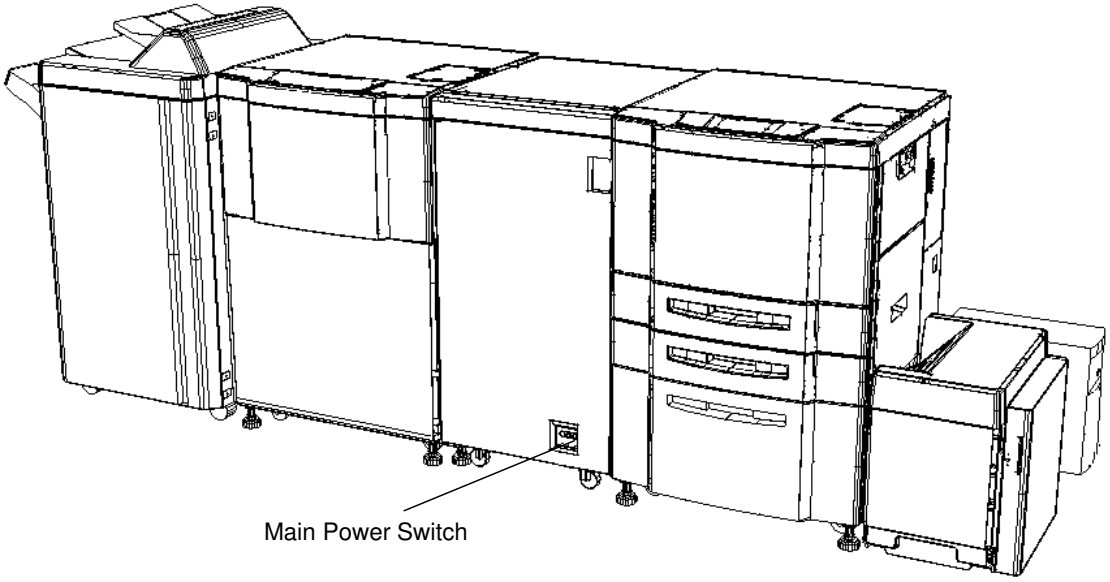
Space Requirements

Install the printer in a well-ventilated area and leave space around the printer as shown below for safe and effective operation. If a fan's exhaust port or intake port are restricted, print quality may deteriorate or the printer may be damaged.



Powering On the Printer

The location of the main power switch is shown below. The switch is marked “O” for Off and “I” for On.



When the printer is powered on, the printer and the finisher go through a power-up sequence that takes approximately 5 minutes. During the power-up sequence, the printer runs a series of internal tests.

CAUTION!

1.Turn On the Main Power Switch and be sure that the Operator Control Panel shows “READY” status before powering on the Server.

2.If the printer does not power on, power off the printer, wait at least 30 seconds, then power n the printer again.

WARNING!

In the event of an emergency, POWER OFF the printer by turning the Power Switch to “O”.

NOTE:

The entire system should be powered On and Off using the main power switch shown above. To do this, both the front and rear engine power switches must remain in the On position. If either the front or rear engine power switch is in the Off position, an error will occur or the OCP display will not come up. In this situation, turn Off the main power switch, turn On the power to the front and/or rear engine, then turn On the main power switch.

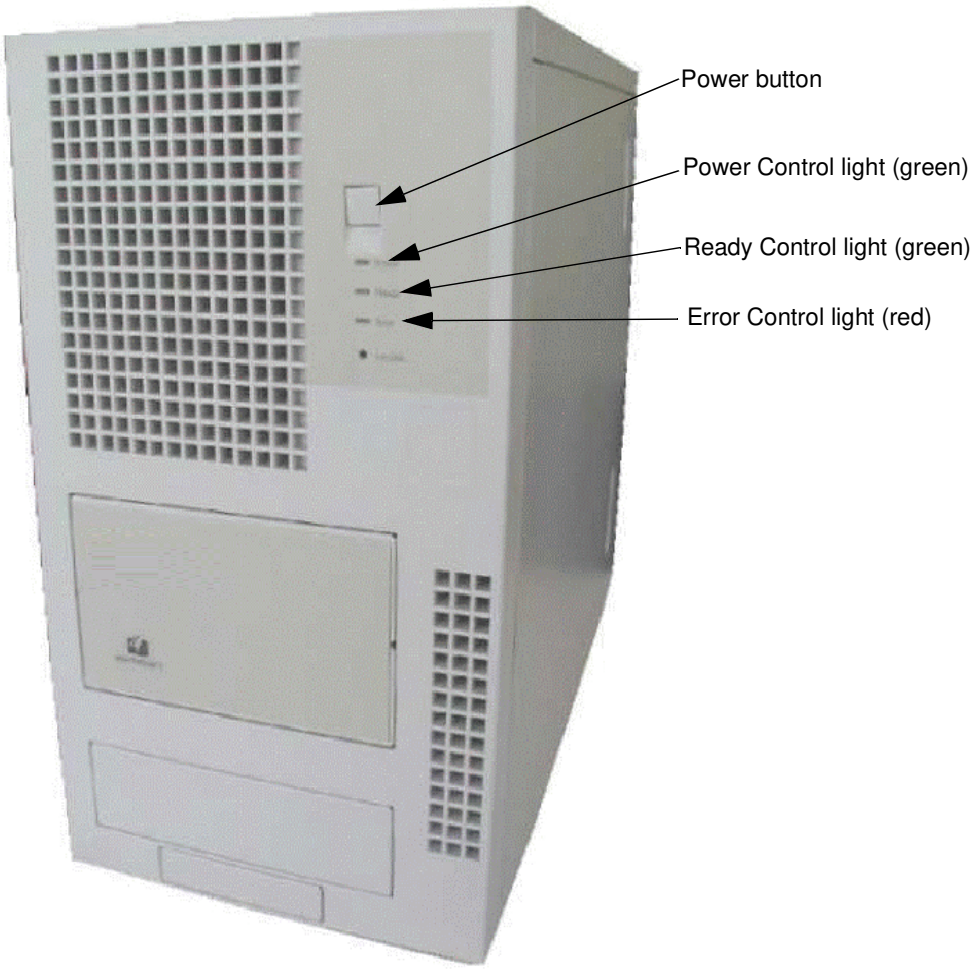
Powering On the Server

CAUTION!

1.Be sure and connect the USB Dongle to the server USB port before powering on the Server. The server does not operate normally when the server is started without dongle.

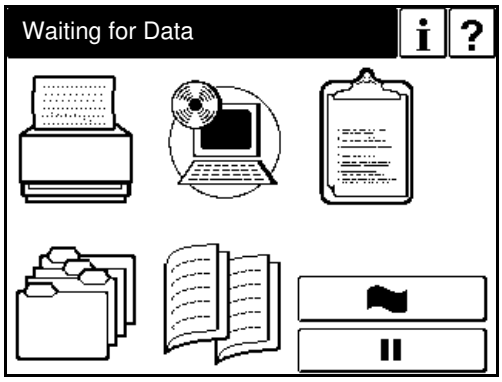
2.Be sure that the printer's OCP shows READY status before powering on the Server.

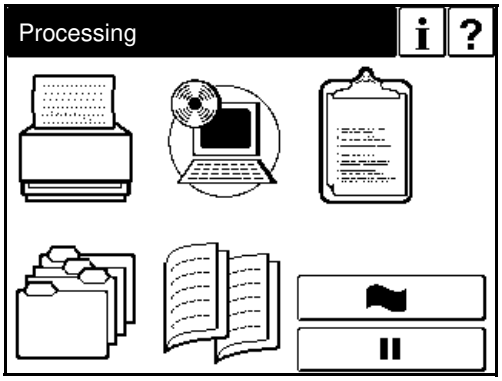
1. Confirm that the power switch of the server rear side is on ("I" side is pushed). If the server power switch is covered by metal plate, it is always "ON" ("I") position.
2. Push the power button of the server front side. (Push this button shortly)
3. Wait until LEDs of the Power control light and the Ready Control light turn on.

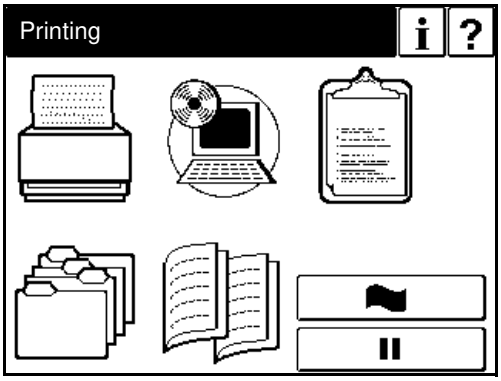


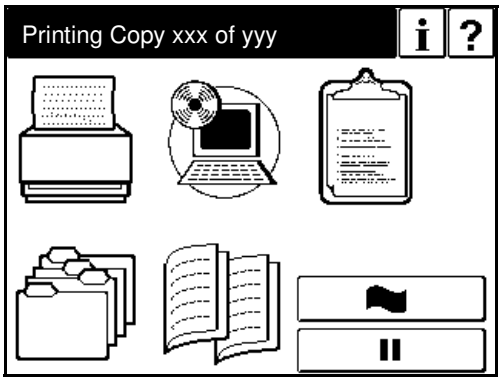
Powering Off the Printer

The printer should only be powered off when it is in a “Ready” state; that is, there are no jobs printing or processing. The following OCP displays indicate normal conditions. In these conditions, wait until printing is complete and the printer is Ready, then switch off the Main Power.

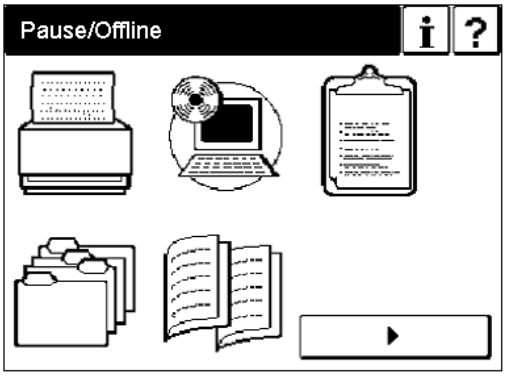


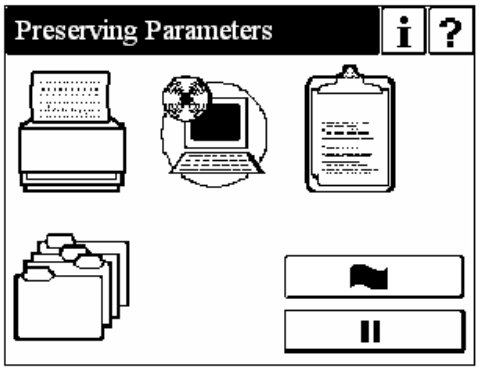




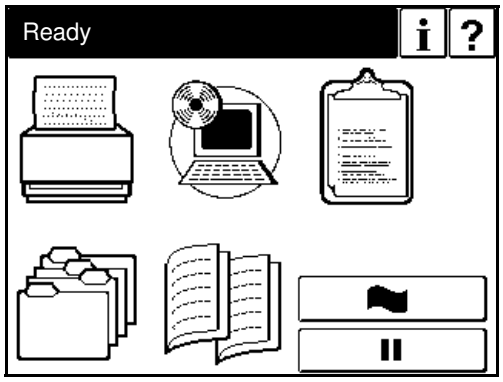


(Note1)





(Note2)



If the printer status is Pause/Offline, touch ▸ to return printer to a Ready status before powering off.

NOTE:

1.Do not turn off the printer power during "Preserving Parameters".

2.Turning off the printer power immediately after having printed for a long time in high temperature environment (two hours or more in 28 ℃ or more) might cause a trouble by rising the temperature inside the printer. In such a case, turn off the printer power 20 minutes or more after finishing the print.

Powering Off the Server

1. Push the power button of the server front side.
2. Be sure that all LEDs of Control light go out.

Canceling a Print Job

If an error condition exists, you may need to cancel the print job(s).

1. Canceling a job in the DDP Server

   Please refer to “DocXPLORER Reference Guide” for instructions on canceling a job that has been spooled to the DDP Server but has not yet begun to print.The DocXPLORER Reference Guide can be found on the User’s Documentation CD.

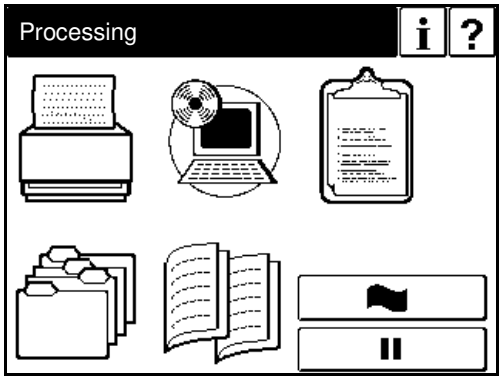
2. Canceling a job in the printer

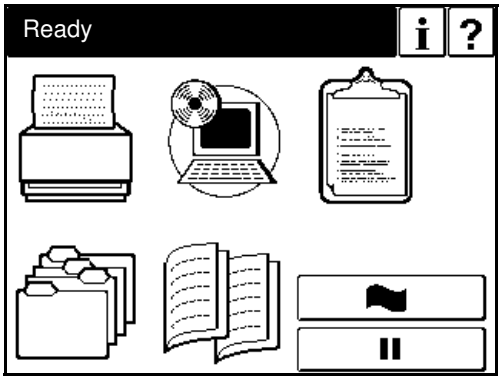
   To cancel a job that has been sent to the printer or has already been spooled in the printer, access the Jobs menu on the OCP.

Clearing Other Error Conditions

OCP Alternates between Ready and Processing (hangs up).

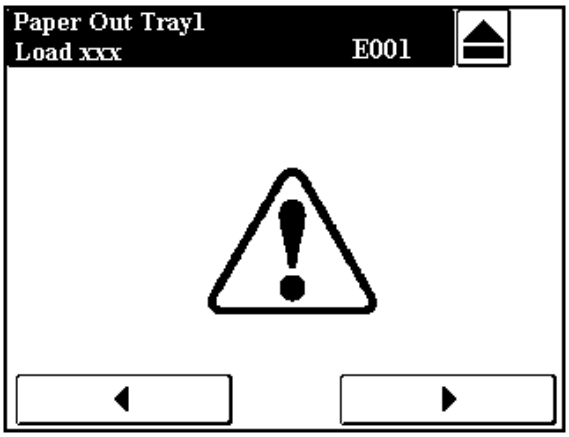
1. Use the procedure above to cancel the print job(s).





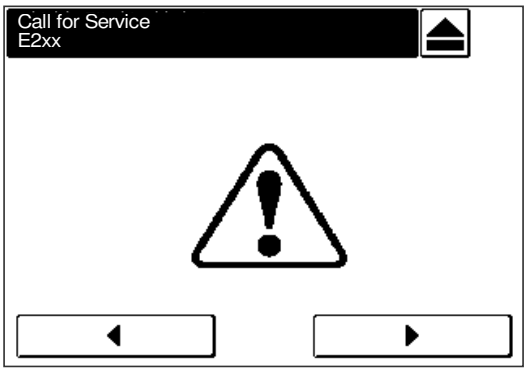
E0XX, E1XX Error

1. Correct the error and press the Resume (▸) button on the OCP display.
2. Wait until printing is completed and the printer returns to Ready, then switch off the main power.



E2XX, EC#XX, BR#XX, IM#XX Call for Service Error

1. Press the Resume (▸) button on the OCP display.
2. Wait until printing is complete and the printer returns to Ready.



3. If the Call for Service error persists, cancel the print job(s), power off the printer, and contact your authorized service technician.

NOTE:
When IM#XX error occurs, incorrect result might be printed. Be sure to check the printed result of the printing job or the last job. Then restart print from the necessary page.

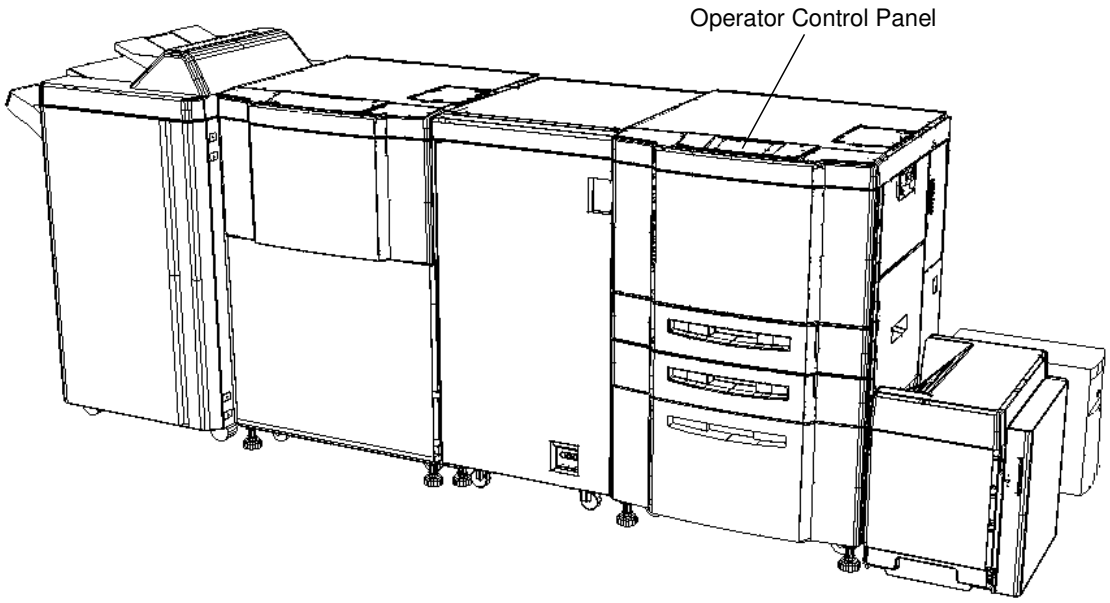
Chapter 2
Operator Control Panel

What This Chapter Provides

This chapter contains information on the following topics.

OCP Description

The Operator Control Panel (OCP) is a touch panel display that you use to set up print options and monitor job and printer status. It is also used by the System Administrator to configure the printer and by the Service Technician to perform maintenance on the printer.



OCP Menu Icons and Buttons

The menus are accessed via the touch panel. Each OCP menu consists of icons and buttons that you use to make selections. The icons and buttons are defined below. See "Main Menu" on page 2-8 for more icons.

Icon or Button	Name	Function
?	Help	Touch to display Help on the current screen.
i	Information	From the Main Menu, displays information about the printer and consumables. From relevant screens, displays an illustration of the paper trays or finisher trays.
	Sample Tray Output	Touch to print a copy of the current print job to the sample tray. (Note 1)
II	Pause/Offline	Touch to pause the printer.
	Resume/Online	When the printer is offline, touch to return to Ready status.
	Return to Main Menu	Touch to cancel the current selection and return to the Main Menu.
	Previous Menu	Touch to cancel the current selection and return to the previous screen or menu.
	More Options	Touch to display additional options for the current selection.
	Enter or Accept	Confirm or Done. Touch to confirm your selection and return to the previous screen or menu.
	Text Box	Values that are entered using the ten key pad are shown in the text box.
Clr	Clear Button	Touch to erase entire entry.
Del	Delete Button	Touch to erase last character entered.
0 – 9	Ten Key	Use to enter numeric values.
	Contrast	Use to adjust the contrast level of the OCP display.
	Buzzer volume	Use to adjust the buzzer volume.
	Status Bar	Displays the current screen name and/or any system messages.

Note 1: "Sample Tray Output" function is not available in printing of staple job or fold job.

Using the OCP Menus

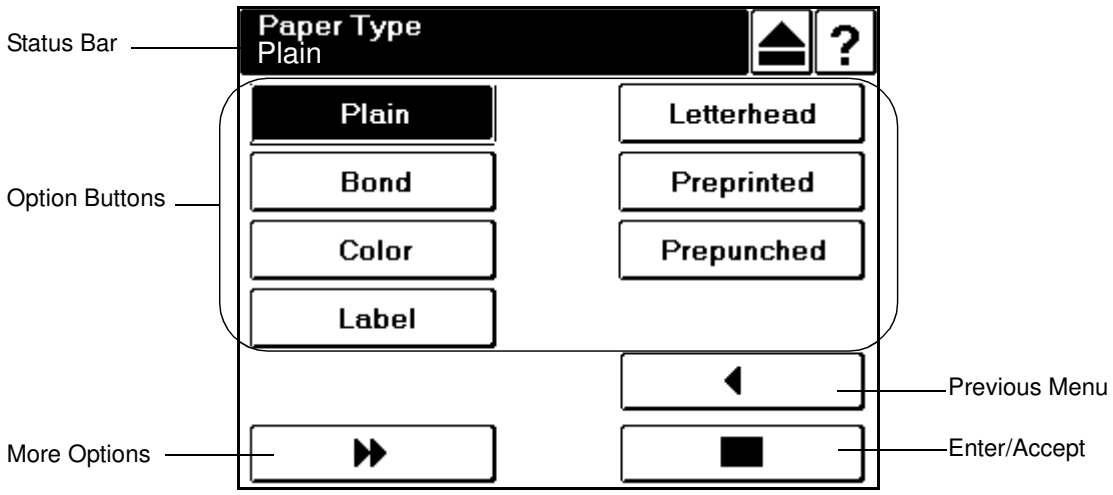
There are 4 types of OCP Menu displays.

- Option Button
- Ten Key Pad
- Change Button (+ / -)
- Change Button (Enable/Disable)

A brief description of each menu and how to use it follows.

Using the Option Button Menu

The image below is a sample of a menu with Option buttons. The status bar indicates the current setting. In this sample there is a More Options button indicating there are more options to choose from on the following page.



To use this menu,

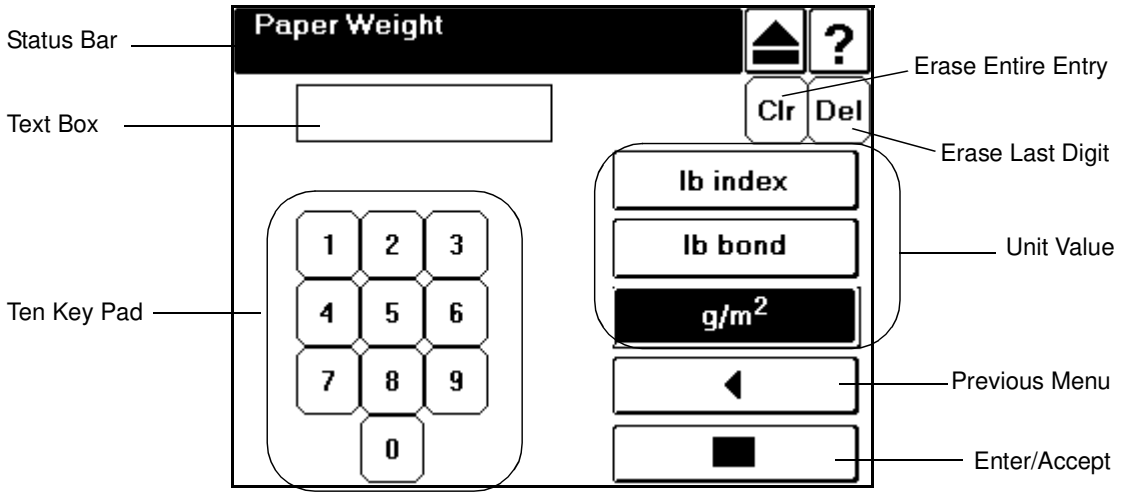
1. Touch the Option button. The selection is highlighted.
2. Touch the Enter/Accept button to activate the selection.

NOTE:

The selection will be ignored if the Enter/Accept button is not touched, or if any other button is touched prior to touching Enter/Accept.

Using the Ten Key Pad Menu

The image below is a sample of a menu with a ten key pad. It is used to enter numeric values.



To enter a value,

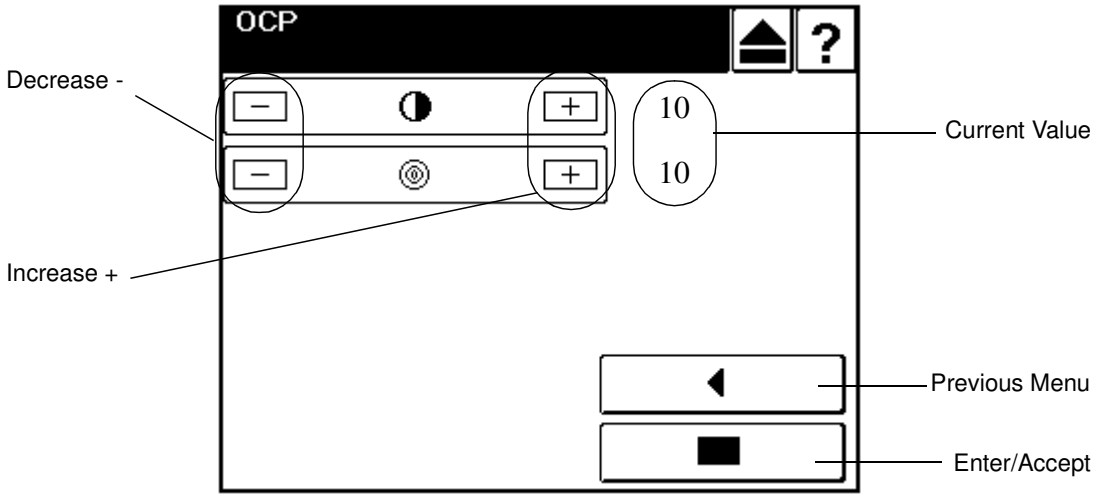
1. Touch the appropriate numbers on the pad. The value appears in the Text Box.
2. Touch the desired Unit Value button (if applicable).
3. Touch the Enter/Accept button to activate the entry.

NOTE:

The entry will be ignored if the Enter/Accept button is not touched, or if the Previous Menu button is touched prior to touching Enter/Accept.

Using the + / - Change Button Menu

The image below is a sample of a menu with a + / - change button. It is used to increase and decrease the OCP contrast and Buzzer volume. The current value is displayed to the right of the icon.



To increase or decrease the value,

1. Touch the + or - to adjust brightness or contrast. The numeric value and the display will change immediately.

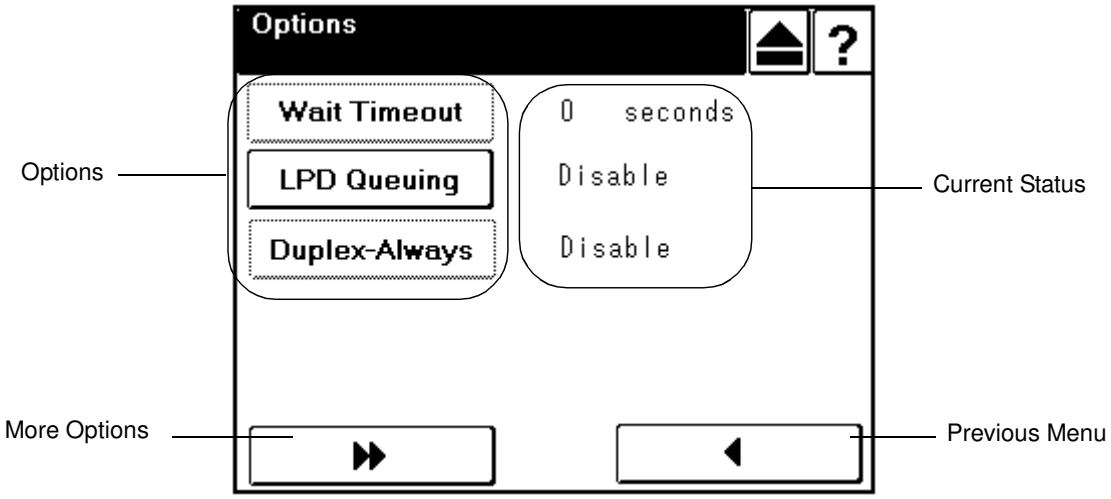
Touch the Enter/Accept button to activate setting.

NOTE:

The setting will be ignored if the Enter/Accept button is not touched, or if the Previous Menu button is touched prior to touching Enter/Accept.

Using the Enable/Disable Change Button Menu

The image below is a sample of a menu with an Enable/Disable toggle. It is used to turn an option on or off.



1. Touch the Option Button to toggle between enable and disable. The current setting appears to the right.
2. When you are finished, touch the Previous Menu button.

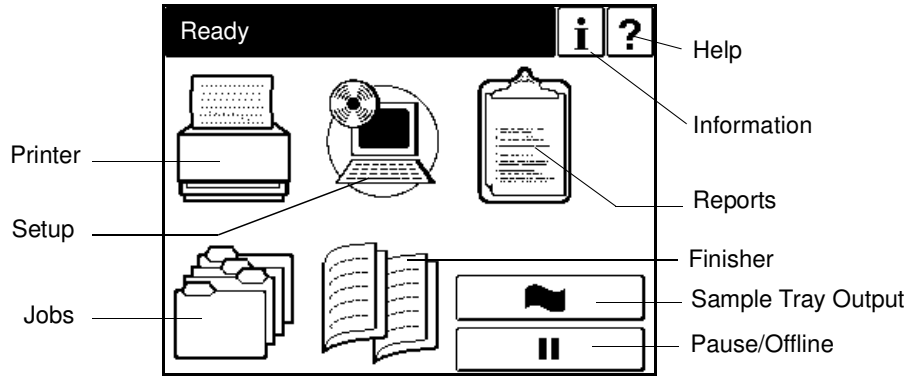
NOTE:
The Enter/Accept button is not used for Enable/Disable options. The setting is activated immediately.

Menu Structure

The OCP menu is structured as shown on the following pages. A top level menu screen is shown followed by a description of the options on the screen. A table that outlines the complete structure of the menu is also provided. Each box in the table represents an OCP display menu. Use this information to assist you in setting printer options.

Main Menu

The Main Menu screen is shown below. A description of the icons that make up the screen follows.



Printer Menu

Touch to display the Printer Menu.

Setup Menu

Touch to display the Setup Menu.

Reports Menu

Touch to display the Reports Menu.

Jobs Menu

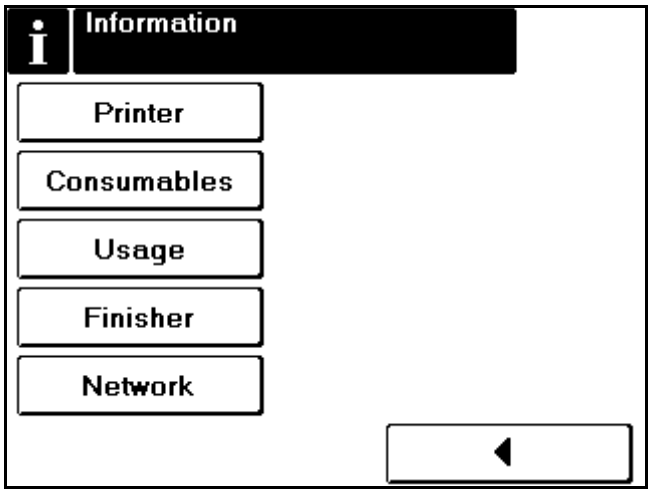
Touch to display the Cancel Printing screen and view a list of all jobs.

Finisher Menu

Touch to display the Finisher Menu. This icon appears only when a Container Stacker is installed.

Information Menu

When you touch the information icon on the Main Menu this screen is displayed. You can use it to determine the current settings and status of the options described below. See Table 2-1 on page 2-10 for the complete Information Menu structure.



Printer

Touch to display information about the engine and controller software revision, error counts, and the current paper type and source settings.

Consumables

Displays the status of the consumables: Toner, Developer, Drum, Fuser Cleaning Web, Charger and Corotron.

Usage

Displays current information regarding print density, preventative maintenance, and page counts.

Finisher

Displays current information regarding the Finisher(s) attached to the printer.

Network

Displays information such as MAC and IP Address, Gateway Address, Subnet Mask and HTTP Port.

Table 2-1. Information Menu Structure

Level 1	Level2	Level 3	Level 4	Level 5
Information	Printer	Front/Rear	1 *(Note 1)*	Size, Status, Type, Color, Weight, Tray Grouping
			2 *(Note 1)*	Size, Status, Type, Color, Weight, Tray Grouping
			3 *(Note 1)*	Size, Status, Type, Color, Weight, Tray Grouping
			MBT *(Note 1)*	Size, Status, Type, Color, Weight
			HCF*(Note 1) (Note 7)*	Size, Status, Type, Color, Weight, Tray Grouping
			Printer Graphic (Front) *(Note 1)*	
			Default Paper Source *(Note 1)*	
			Error Count This Period	
			Error Count Last 1000 page	
			Engine Revision	
			Controller Revision	
			Toner Color	
	Consumable	Front/Rear	Toner	Normal/Low
			Developer Mix	(current/limit k)
			Drum Unit	(current/limit k)
			Fuser Web	(current/limit k)
			Charger (*Note 3*)	(current/limit k)
			Corotron (*Note 3*)	(current/limit k)
	Usage (Note 2)	PM Due In,Click Charge Count (Mode1/Mode2),Black, Color, MICR		
	Usage (Note 5)	PM Due In,Click Charge Count (Mode3/Mode4), Total Count		
	Usage (Note 6)	PM Due In,Click Charge Count (Mode5), Black x Black (Simplex/Duplex), Black x Color (Simplex/Duplex)		
	Usage(Note 4)	Front/Rear	Toner Coverage, PM Due In, Total Sheets *(Note 1),* Total Sides *(Note 1)*	
	Finisher	Standard	Upper Tray	Normal/Full
			Elevator Tray	Normal/Full
			Rear Staple Cartridge	Normal/Low
			Front Staple Cartridge	Normal/Low
			Default Output	
		Container *(Note 8)*	CS1 Lower, CS1 Upper CS2 Lower, CS2 Upper	Paper size, Basket information
	Network	Front/Rear	MAC Address	
			IP Address	
			Subnet Mask	
			Gateway Address	
			HTTP Port	

Note 1: This display is only available for the Front Engine.

Note 2: This menu is displayed when the Click Charge is set "[Service] - [Click Charge] - [Page Click] = Validated" and "[Service] - [Click Charge] - [Mode Select] = Mode1 or Mode2".

Note 3: This feature is only available for the Rear Engine.

Note 4: This menu is displayed when the Click Charge is set [Service] - [Click Charge] - [Page Click] = All.

Note 5: This menu is displayed when the Click Charge is set "[Service] - [Click Charge] - [Page Click] = Validated" and "[Service] - [Click Charge] - [Mode Select] = Mode3 or Mode4".

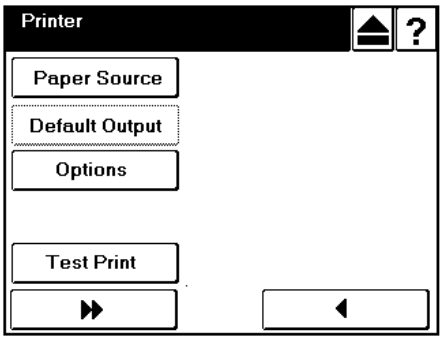
Note 6: This menu is displayed when the Click Charge is set "[Service] - [Click Charge] - [Page Click] = Validated" and "[Service] - [Click Charge] - [Mode Select] = Mode5".

Note 7: This display is only available when the HCF is installed.

Note 8: This display is only available when the Container Stacker is installed.

Printer Menu

When you select Printer from the Main Menu, this screen is displayed. You use the Printer Menu to gain access to the printing options described below. See Table 2-3 beginning on page 2-15 for the complete Printer Menu structure.



Paper Source Options

- Default

  Use this when the paper source is not designated by a host command. If a command from the host defines the paper source, the OCP setting is ignored.

- Paper Size

  When Paper Size is selected the paper size of the currently selected paper source is displayed. To use the OCP to set the paper size to something other than the predetermined sizes in the paper tray, set the sensor plate in the paper tray to "▲", then select Paper Size on the OCP.

- Paper Type

  When Paper type is selected the currently selected paper type is displayed. Press the option buttons to select the desired paper type. See Table 2-3 beginning on page 2-15 for a list of paper type options.

- Paper Color

  When Paper Color is selected the currently selected paper color is displayed. Press the option buttons to select the desired paper color. Table 2-3 beginning on page 2-15 for a list of paper color options.

- Paper Weight

  When Paper Weight is selected the currently selected paper weight is displayed. Press the option buttons to set the desired paper weight. See Table 2-3 beginning on page 2-15 for a list of paper weight options.

- Tray Adjust

  The print position can be adjusted vertically and horizontally using the Tray Adjust option. The white arrow on the Tray Adjust screen indicates paper feed direction. The adjustment can be set to millimeters or inches and the range is -6.3 to +6.3 millimeters (-0.25 to +0.25 inches) in increments of 0.1 millimeter (0.01 inch). Difference positions can be set for front and back side in duplex printing mode.

- Color Control

  This function is used when necessary to reduce the image size on the printed page due to paper shrinkage during printing. It uses the set-up value to reduce the printed image. For the front engine the reduction of the image for the horizontal direction can be 0%, 0.12%, 0.24%, 0.36% or 0.48%. For the rear engine the reduction of the image for the horizontal direction can be 0.12%, 0.24%, 0.36%, 0.48% and 0.60%. For both the front and rear engine the reduction of the image for the vertical direction can be from 0 to 1.00% in increments of 0.01%.

  Before this function is used, the print position must be adjusted vertically and horizontally. Refer to Setting the Tray Adjust values for adjustment of print position.

  The screen display is based on whether the print mode is simplex or duplex.

  In the case of simplex mode, the reduction value is fixed at 0% for the front side in the front engine because the paper does not shrink. The value needs to be set for the front side of the rear engine only.

  In the case of duplex printing when the paper length is 9 in. or less, the printing sequence is as follows: Front side/front engine > back side/front engine > front side/rear engine > back side/rear engine. Therefore, the reduction value should be set at 0% for front side/front engine > X% for back side/front engine > X% for front side/rear engine > X% for back side/rear engine.

  In the case of duplex printing when the paper length is over 9 in. (Letter SEF, A4 SEF, etc.), the printing sequence is as follows: Back side/front engine > front side/front engine > back side/rear engine > front side/rear engine. Therefore, the reduction value should be set at 0% back side/front engine > X% front side/front engine > X% front side/rear engine > X% back side/rear engine.

  NOTE:
  If the paper size or direction is changed, the image may not be printed correctly. Reset the reduction value.

  The cross pattern can be test printed from this menu. Factory default settings are shown below:

Table 2-2. Color Control Settings

Mode	Engine/Side	Value
Simplex	Front Engine/Front Side	0%
	Rear Engine/Front Side	0.12%
Duplex	Front Engine/Front Side	0%
	Front Engine/Back Side	0%
	Rear Engine/Front Side	0.12%
	Rear Engine/Back Side	0.12%

- Paper Pattern
  This menu displays the 16 pattern data for every paper tray.

Default Output

This option button is not available.

Options

- Wait Timeout

  Defines the waiting period (in seconds) from reception of last data to the reception of next data. If data is not received within the defined period, the job is cancelled. The factory default is 0 second. The setting cannot be changed.

- LPD Queuing

  This option is not normally used in the 184 printing environment. The factory default is disabled.

- Duplex Always

  The factory default is disable. The setting cannot be changed.

- Print Density

  Print Density can be adjusted to five settings: Light, Semi-Light, Middle, Semi-Dark or Dark

- Detach Voltage

  It is recommended that you contact your authorized Service Technician prior to making any change to the detach voltage settings.

- Heat Roll TMP

  Heat Roll Temperature can be adjusted to three settings:
  (Low: 180 C, Normal: 190 C, High: 200 C)

- Laser Power

  This option can be adjust to 31 levels from -15 to +15. The laser line becomes thinner at the - settings and wider at the + settings.

- DBL Feed Detect

  Can be set to enable or disable.

- H Positioning

  Can be set to enable or disable. When set to enable, skew detect can be set to enable or disable.

Test Print

Use this option button to select from the various test print patterns.

PCL

- Requested Tray

  Defines the printer behavior when requested tray is specified in jobs.

  - Exclusively
    Printer should print from the requested tray only.
  - First
    Printer should print from the requested tray first.

Table 2-3. Printer Menu Structure

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Printer *(Note 1)*	Paper Source	Default	Auto Select / 1 / 2 / 3 / MBT / HCF*(Note 4)*		
		Paper Size	1	Folio SEF, Letter Tab LEF, Super B LEF, A4 Tab LEF, Letter SEF, A4 SEF, Custom Size *(Note 2)*	Input menu for Custom Size
			2	Folio SEF, Letter Tab LEF, Super B LEF, A4 Tab LEF, Statement SEF, Executive LEF, Custom Size, Letter SEF, A4 SEF *(Note 2)*	Input menu for Custom Size
			3	Folio SEF, Letter Tab LEF, Super B LEF, A4 Tab LEF, Statement SEF, Executive LEF, Custom Size, Letter SEF, A4 SEF *(Note 2)*	Input menu for Custom Size
			MBT *(Note 3)*	Letter LEF, Folio SEF, Letter SEF, Legal SEF. Ledger SEF, Statement SEF, Executive LEF, A4 LEF, B5 LEF, A4 SEF, B4 SEF, A3 SEF, A5 SEF, Super B SEF, Letter Tab LEF, A4 Tab LEF, Custom Size	Input menu for Custom Size
			HCF*(Note 4)*	A4 LEF*(Note5)*, Letter LEF*(Note5)*	
		Paper Type	1	Plain, Bond, Color, Letterhead, Preprinted, Prepunched, Recycled, Special, Other, Type 1 - Type 16	
			2	Plain, Bond, Color, Letterhead, Preprinted, Prepunched, Recycled, Special, Other, Type 1 - Type 16	
			3	Plain, Bond, Color, Letterhead, Preprinted, Prepunched, Recycled, Special, Other, Type 1 - Type 16	
			MBT	Plain, Bond, Color, Letterhead, Preprinted, Prepunched, Recycled, Special, Transparency, Transparency-pp, Other, Type 1 - Type 16	
			HCF *(Note 4)*	Plain, Bond, Color, Letterhead, Preprinted, Prepunched, Recycled, Special, Type 1 - Type 16	
		Paper Color	1	White, Pink, Yellow, Buff, Goldenrod, Blue, Green, Transparent, Color 1 - Color 16	
			2	White, Pink, Yellow, Buff, Goldenrod, Blue, Green, Transparent, Color 1 - Color 16	
			3	White, Pink, Yellow, Buff, Goldenrod, Blue, Green, Transparent, Color 1 - Color 16	
			MBT	White, Pink, Yellow, Buff, Goldenrod, Blue, Green, Transparent, Color 1 - Color 16	
			HCF *(Note 4)*	White, Pink, Yellow, Buff, Goldenrod, Blue, Green, Transparent, Color 1 - Color 16	

Note 1: Commands from the Host override OCP settings.
Note 2: This menu is available only when the sensor plate in the printer tray is set to "▲".
Note 3: Paper size for the MBT can only be set using the OCP.
Note 4: This menu is available only when HCF is installed.
Note 5: Paper size for HCF cannot be set using OCP and is only displayed .

Table 2-3. Printer Menu Structure - Continued

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8
Printer	Paper Source	Paper Weight	1, 2, 3, MBT HCF *(Note 1)*	64-163gm^2 (35-90 lb. index, 17-43 lb. bond)			
		Tray Adjust	1, 2, 3, MBT HCF *(Note 1)*	Front, Back	x, y	-0.25 - +0.25inch / -6.3 - +6.3mm	
		Color Control	1, 2, 3, HCF *(Note 1)*	H Direction, V Direction	Simplex	R : Front Side	0.12%/0.24%/ 0.36%/0.48%/ 0.60%
					Duplex	F : Front Side, F : Back side	0%/0.12%/ 0.24%/0.36%/ 0.48%/0.60%
						R : Front Side, R: Back side	0.12%/ 0.24%/ 0.36%/0.48%/ 0.60%
		Paper Pattern	Preset Load, Preset Register, Preset Clear	1, 2, 3, MBT, HCF (*Note 1*), Default	Pattern1-16	Paper Size. Paper Type, Paper Weight, Tray Adjust, Color Control (*Note 3*), Detach Voltage, Paper Color, H Positioning (*Note 3*)	
	Options	Wait Timeout	0 seconds				
		LPD Queuing	Enable/Disable				
		Duplex Always	Disable				
		Print Density	Front, Rear	Light / Simi-Light / Middle / Semi-Dark /Dark			
		Detach Voltage	Front, Rear	1,2,3,MBT, HCF(*Note 1*), All Trays	Front1, Front2, Back1(*Note 3*), DTC_PWM, Back2 (*Note 3*), Default		
		Heat Roller Tmp	Front, Rear	Low, Normal, High			
		Laser Power Adjust	Front, Rear	Laser1, Laser2, Default			
		DBL Feed Detect	Enable/Disable				
		H Positioning	1,2,3,MBT, HCF(*Note 1*)	Positioning	Enable/Disable		
				Skew Detect	Enable/Disable		

Note 1: This menu is available only when the HCF is installed.
Note 2: This menu is displayed only when the Container Stacker is installed.
Note 3: This menu is not displayed when the MBT is selected.

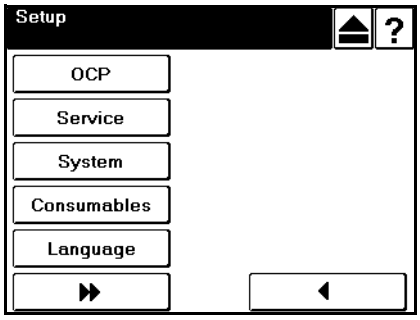
Table 2-3. Printer Menu Structure - Continued

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8
Printer	Test Print (*Note 2*)	Print Quality	Solid Black	1 / 2 / 3 / MBT / HCF(*Note 3*)	Upper Tray / Elevator Tray / CS1 Lower *(Note 1)* / CS1 Upper *(Note 1)* / CS2 Lower *(Note 1)* / CS2 Upper *(Note 1)* / Sample Tray (Note 1)	184 mode / Color: Simplex / Color: Duplex *(Note 4)*	Copies
			Square Blk/Skew				
			Half Tone				
			Grid				
			Jitter				
			Large Letters				
			Diagonal Lines				
			Density Scale				
			Small to Large				
			Text File 4%				
			Cross Pattern				
		Finishing Test	Standard	Staple:Front	1/2/3/MBT/ HCF(*Note 3*)		
				Staple:Rear			
				Staple:Booklet			
				Jogging			
			Container *(Note 1)*	Jogging	1 / 2 / 3 / MBT / HCF(*Note 3*)	CS1 Lower / CS 1 Upper / CS 2 Lower / CS 2 Upper / Sample Tray	
	PCL	Requested Tray	Exclusively / First				

Note 1: This menu is displayed only when the Container Stacker is installed.
Note 2: The menu is not available during a print job.
Note 3: This menu is available only when the HCF is installed.
Note 4: When the toner is composed of "Black/Black", it is not possible to select only 184 modes.
In the case of other toner compositions, "Color Simplex/Color Duplex" only can be selected.

Setup Menu

When you select Setup from the Main Menu, this screen is displayed. Use it to gain access to the Setup option screens that are described below. See Table 2-4 on page 2-21 for the complete Setup Menu structure.



OCP

Touch to display the OCP screen. You use this screen to adjust the contrast values for the OCP display and buzzer volume. The range of contrast is 1 to 16. The factory default is 10.The range of buzzer volume is 0 to 5. The factory default is 3.

Service

The Service option is password protected. Contact your Authorized Service Technician for more information.

System

The System option is password protected. Contact your System Administrator if you need access to these options.

- Software Log
  - Front Engine
    Create software log
  - Rear Engine
    Create software log
- Network
  - Front Engine (Do not change)
    IP Address - Factory default is 10.0.1.1
    Subnet Mask - Factory default is 0.0.0.0.
    Gateway Address - Factory default is 0.0.0.0
    Boot Method - Factory default is STATIC
    HTTP Port - Factory default is 80
  - Rear Engine (Do not change)
    IP Address - Factory default is 10.0.2.1
    Subnet Mask - Factory default is 0.0.0.0.
    Gateway Address - Factory default is 0.0.0.0
    Boot Method - Factory default is STATIC
    HTTP Port - Factory default is 80

CAUTION!

If you change the Network parameters, the DDP Server will not be able to communicate with the printers.

- Calendar - The following settings can be made:
  - Time Zone - See the following table for options.
  - Date - 0000/00/00 (Year/Month/Day)
  - Time - Set printer clock
- Country Code

  Select the appropriate country code used in international phone numbers. The default setting is 1.
- Energy Save Mode

  When set to “Enable” the printer will go into energy save mode when there is no printing or OCP activity for a specified period of time. There are two aspects to energy save mode: heater-off mode which is set using Energy Save Time, and sleep mode which turns off the power supply. The printer will not go into energy save mode if a printer error occurs. Energy save mode is canceled under the following conditions:
  - When the printer status line reads Online
  - When any key on the OCP is touched
  - When a setting is made from the Web Utilities
- Energy Save Time

  Use to set the time for heater-off mode. The range is 5 to 230 minutes. The default time is 15 minutes. Sleep mode occurs automatically when the printer has been in heater-off mode for 10 minutes.
- Password

  Use to change the System password. Contact your System Administrator.
- Public R/W

  Enable allows read/write when SNMP community name is Public. The factory default is enable. (Do not change.)
- Sample Print

  When set to “Enable” the OCP will display a “continue printing?” prompt after completion of the first part of print data that is designated to print in two or more parts. The default is “Disable”.
- Auto Backup Time

  Specifies time of auto backup. Valid range is 0-23. Factory-set to 1:00 AM. (Auto backup is executed at boot-up in addition to time set by AutoBackup Time.)
- Output Cascade

  Specifies the priority of output destination in container stackers in printing with CS-AutoCascade mode.
  Lower to Upper : Priority of Lower stacker is higher than Upper stacker.
  Upper to Lower : Priority of Upper stacker is higher than Lower stacker.

Consumables

Touch to display the user consumable options, which include replacing the developer mix, drum unit, and fuser web.

- Developer Mix

  Select exhaust to empty old developer mix, then select Supply to replenish with new developer mix. The counter is automatically reset.

- Drum Unit

  Touch to reset the counter following drum replacement.

- Fuser Web

  Touch to reset the counter following Fuser Web replacement.

- Charger *(Note1)*

  Touch to reset the counter following Charger replacement.

- Corotron *(Note1)*

  Touch to reset the counter following Corotron replacement.

NOTE:
1.This menu is only available for the Rear Engine.

Language

- Touch to list the OCP display language options. (English, Japanese, Deutsche, Fransais)

Configuration

- Decurler

  Select from Auto Select, Disable, and Enable. Factory default is Auto Select.

Table 2-4. Setup Menu Structure

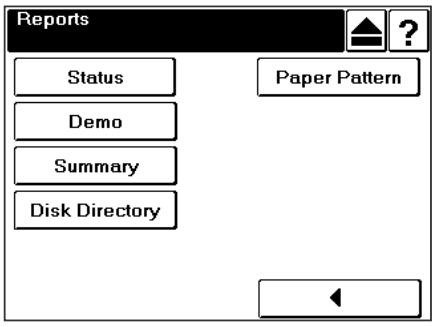
Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Setup	OCP	Contrast	1-16			
		buzzer volume	0-5			
	Service *(Note 1)*					
	System	Input Password *(Note 2)*	Software Log	Front, Rear		
			Network	Front, Rear	IP Address	
					Subnet Mask	
					Gateway Address	
					Boot Method	Static / DHCP
					HTTP Port	
			Calendar	Time Zone	GMT-12:00 - GMT+12:00	
				Date *(Note 3)*		
				Time		
			Country Code			
			Energy Save Mode	Enable/Disable		
			Energy Save time *(Note 4)*			
			Password	Input Password		
			Public R/W	Enable/Disable		
			Sample Print	Enable/Disable		
			Auto Backup Time	0 - 23		
			Output Cascade *(Note 6)*	Lower to Upper / Upper to Lower		
	Consumable	Front, Rear	Developer Mix	Exhaust		
				Supply		
			Drum Unit			
			Fuser Web			
			Charger *(Note 5)*			
			Corotron *(Note 5)*			
	Language	English / Japanese / Deutsche / Fransais				
	Configuration	Decurler	Auto Select / Enable / Disable			

Note 1: Use of the service menu is password protected. Contact your authorized Service Technician.
Note 2: Use of the system menu is password protected. Contact your System Administrator.
Note 3: Date format is 0000/00/00 (Year/Month/Day)
Note 4: Only displayed when Energy Save Mode is enabled. The default is 15 minutes.
Note 5: This menu is only available for the Rear Engine.
Note 6: This menu is displayed only when the Container Stacker is installed.

Reports Menu

When you select Reports from the Main Menu, this screen is displayed. You use it to print the reports described below.

This menu is not accessable while printing a job.



Status

Touch to print a status report and return to the Main Menu. The status report shows the current configuration of the printer and printer usage information.

Demo

Touch to print a demo report and return to the Main Menu. The demo report shows the printer specifications such as speed, paper handling, resolution, etc.

Summary

Touch to print a summary report and return to the Main Menu. The summary report shows processor, connectivity, RAM and other miscellaneous information.

Disk Directory

Touch to print a PCL disk directory report and return to the Main Menu.

Paper Pattern

Touch to print the registration value of the paper patterns for each tray.

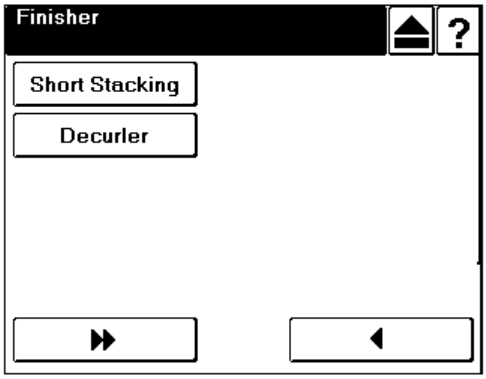
Table 2-5. Report Menu Structure

Level 1	Level 2
Reports	Status
	Demo
	Summary
	Disk Directory
	Paper Pattern

Finisher Menu

When you have the optional Container Stacker installed and you select the Finisher icon from the Main Menu, this screen is displayed. You use it to gain access to the Container Stacker options.

For additional information on the Container Stacker, refer to the *Container Stacker User's Guide*.



Short Stacking

Touch to enable or disable short stacking mode. Short stacking mode lets you limit the amount of paper that can be delivered to the stackers.

Decurler

Touch to display the Decurler screen, where the options for decurler are AutoSelect, Enable, and Disable.

NOTE:

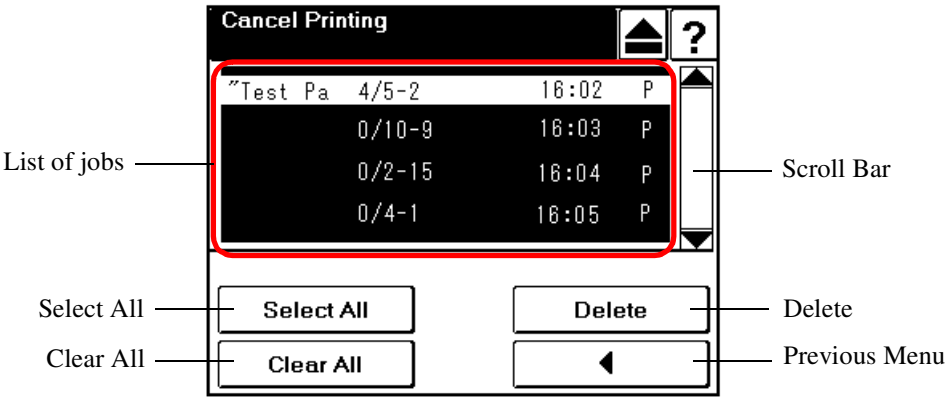
Activating the Decurler may cause paper jams when printing with 28 lb. bond or heavier paper.

Table 2-6. Container Stacker Menu Structure

Level 1	Level 2	Level 3	Level 4
Finisher	Short Stacking	CS1 Lower	Disable / Enable
		CS1 Upper	Disable / Enable
		CS2 Lower	Disable / Enable
		CS2 Upper	Disable / Enable
	Decurler	Auto Select / Enable / Disable	

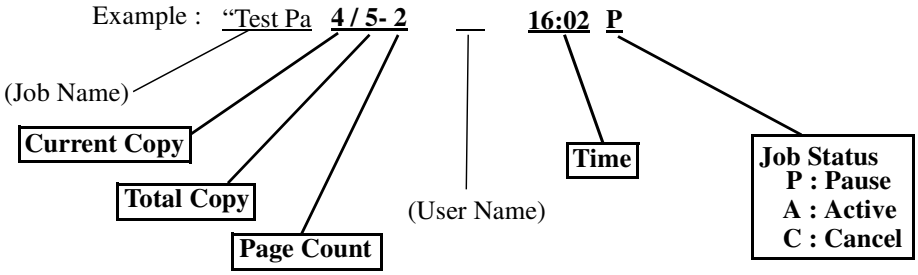
Jobs

When you select Jobs from the Main Menu, this screen is displayed. You use it to cancel printing jobs and see a list of all jobs described below.



List of jobs

The print jobs that are ready for printing are displayed. By touching a displayed print job, it is highlighted and selected.



NOTE:

1. If 100 seconds pass where a printing job list is displayed, it will become On-Line automatically.
2. The print job information sent from DDP Server does not include the print job nameand the user name.

Select All

All the print jobs listed in the list of job are selected.

Clear All

All the print jobs listed in the list of job are canceled.

Delete

Selected jobs are deleted.

Passwords

Passwords provide security to restrict access to system parameters and certain printer maintenance functions. Two types of passwords are available with your printer: a system password and a service password.

The system password is used by your System Administrator and provides access to the system parameters. The service password is used by your Service Technician and provides access to service and maintenance functions, as well as the system parameters.

The passwords are not set at the factory and should be set up at installation.

1. To set up or change the service password make the following selections from the OCP:

   Setup / Service

   The ten-key pad will appear.

2. If you are setting the password for the first time press Enter (■), or

   If you are changing the password, use the ten-key pad to enter the current password, then press Enter (■).

3. Select ***Passwords*** from the menu.

4. Enter a new password using the ten-key pad then press Enter (■).

5. Re-enter the password and press Enter (■). The display will indicate that the password has been changed.

CAUTION!
If the password is lost or forgotten it cannot be recovered. In that case, replace the HDD.

Chapter 3
Paper Handling

What This Chapter Provides

This chapter contains information on the following topics.

Paper

To obtain good print quality, use the recommended paper and properly position it in the correct trays. For the desired paper orientation, see the labels on the trays. Refer to Appendix C for detailed information about paper specifications, printing on special print media, and other paper handling guidelines.

Paper Weights

The printer accepts the following paper weights in all paper trays, including the MBT and HCF:

- Bond paper: 17-90 lb (64-163 g/m^2) (black + black duplex mode)
- Index paper: 20-90 lb (75-163 g/m^2) (black + black simplex mode, black + color simplex mode, black + color duplex mode)

Unacceptable Paper

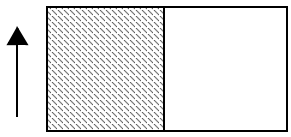
Avoid using the following media as they cause paper jams and print quality problems.

- Excessively thick or thin paper
- Paper that has already been printed (preprinted letterhead is allowed)
- Wrinkled, torn, or bent paper
- Moist or wet paper
- Curled paper
- Paper with an electrostatic charge
- Glued paper
- Paper with special coating
- Colored paper with surface treatment
- Paper unable to withstand temperature of 302°F (150° C)
- Thermal paper
- Carbon paper
- Paper with paper fasteners, ribbons, tape, etc., attached
- Heavily textured paper
- Label stock with exposed backing sheets

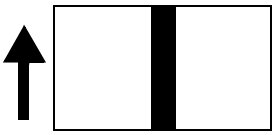
Multi-Feed Detect

The following media is liable to cause multi-feed misdetection. To avoid this problem, use the OCP to change the setup for Multi-feed Detect from “enable” to “disable.”

- Transparency paper
- Blue lined paper (blue, aqua blue, green, etc.)
- Preprinted paper that is different from side to side (See example below)



- Preprinted paper that has a solid black center near the center (see below)

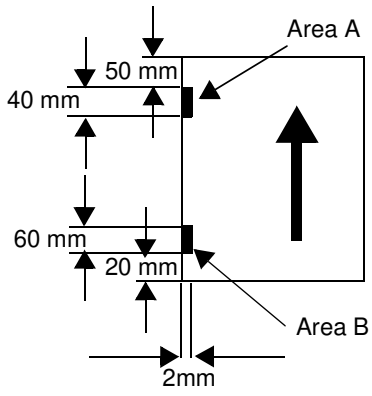


- Paper weight greater than 90lb index (163 g/m^2)

Image Sensor Detect

The following media is liable to cause image sensor (H POS sensor) misdetection. Misdetection causes irregular horizontal print position problems or misdetection of skew error. To avoid these problems use the OCP to change the setup for H Positioning from “enable” to “disable” or change the setup for H Positioning Skew Detect from “enable” to “disable.”

- Dark colored paper
- Preprinted paper that is printed within 2 mm of the left edge of the paper



NOTE:

If the preprinting occurs outside of Area A and B printing will be done correctly.

If the paper length is less that 8.7 in. and the preprinting is outside of Area A, printing will be done correctly.

Storing Paper

Store the paper properly to avoid print quality problems and paper jams.

- Store paper horizontally, in a flat, dry location to avoid wrinkling, bending, curling, etc.
- Store paper away from direct sunlight.
- Store any unused paper in its original packing.

Paper Sizes, Paper Types, Paper Color, and Printer Input Trays

The following table shows which paper sizes can be used with the various input trays. The paper size is shown in both millimeters and inches. The term *SEF* indicates the paper is being fed into the printer short edge first and the term *LEF* indicates the paper is being fed into the printer long edge first.

Paper Size	Leading Edge mm/inch	Side Edge mm/inch	Tray 1, 2, 3	HCF	MBT (Note 1)
A5 (SEF)	148.5.0/5.85	210.0/8.27	2, 3 only		✓
B5 (LEF)	257.0/10.12	182.0/7.17	✓		✓
A4 (SEF)	210.0/8.27	297.0/11.69	✓		✓
A4 (LEF)	297.0/11.69	210.0/8.27	✓	✓	✓
B4 (SEF)	257.0/10.12	364.0/14.33	✓		✓
A3 (SEF)	297.0/11.69	420.0/16.54	✓		✓
Letter (LEF)	279.0/11.0	215.9/8.5	✓	✓	✓
Letter (SEF)	215.9/8.5	279.0/11.0	✓		✓
Tab Stock (Letter LEF)	297.4/11.0	228.6/9.0	✓		✓
Tab Stock (A4 LEF)	297.0/11.69	225/8.86	✓		
Folio (SEF)	215.9/8.5	330.2/13.0	✓		✓
Legal (SEF)	216.0/8.5	355.6/14.0	✓		✓
Ledger (SEF)	279.4/11.0	431.8/17.0	✓		✓
Super B (SEF)	304.8/12.0	457.2/18.0	✓		✓
Statement (SEF)	139.7/5.5	215.9/8.5	2, 3 only		✓
Executive (LEF)	266.7/10.5	184.2/7.25	2, 3 only		✓
Custom (0.1 mm/0.1 in. increments) (Notes 2 and 3)	139.7 to 304.8/ 5.5 to 12.0	182.0 to 457.2/ 7.2 to 18.0	✓		✓

NOTES:

1. MBT Supports simplex printing only.

2. Tray 1 can be adjusted; however, the physical settings are limited to standard paper sizes. Use of custom size paper may result in skewing. Custom Size range is: Leading edge 210.0 mm (8.27 in), 218.0 mm (8.58 in), 257.0 (10.12 in), 297.0 mm (11.69 in), and 304.8 mm (12.0 in)

3. Custom size range for the Inserter tray is: 210.0 mm (8.27 in) £ Leading Edge £ 204.8 mm (12.1 in) 182.0 mm (7.2 in) £ Side Edge £ 457.2 mm (18.0 in)

Paper Types and Input Trays

The following table shows which paper type can be used in the various input trays.

Paper Type	Tray 1, 2, 3	HCF	MBT
Plain	✓	✓	✓
Bond	✓	✓	✓
Color	✓	✓	✓
Label (See Note)			✓
Letterhead	✓	✓	✓
Pre-printed	✓	✓	✓
Pre-punched	✓	✓	✓
Recycled	✓	✓	✓
Special	✓	✓	✓
Transparency			✓
Transparency-pp			✓
Type 1 - Type 16	✓	✓	✓
Other	✓		✓

NOTE:
Label stock must exit the printer and finisher in Face Up mode.

Paper Color and Input Trays

The following table shows what paper color can be used in the various input trays.

Paper Color	Tray 1, 2, 3	HCF	MBT
White	✓	✓	✓
Pink	✓	✓	✓
Yellow	✓	✓	✓
Buff	✓	✓	✓
Goldenrod	✓	✓	✓
Blue	✓	✓	✓
Green	✓	✓	✓
Transparent	✓	✓	✓
Color 1 - Color 16	✓	✓	✓

Loading Paper

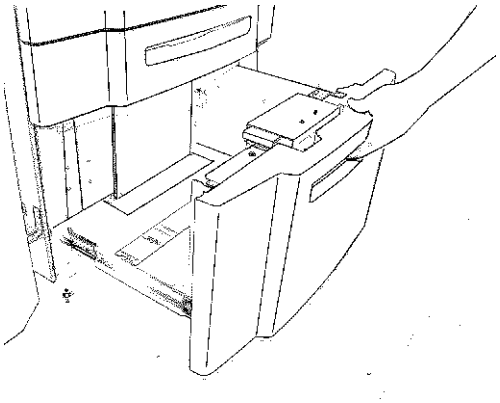
Load paper into the trays according to the instructions that follow. See "Loading Special Media" on page 3-16 for directions on loading prepunched and preprinted paper, as well as tab stock. Paper can be loaded while a print job is running, except into the tray that is currently in use.

Loading Paper in Tray 1

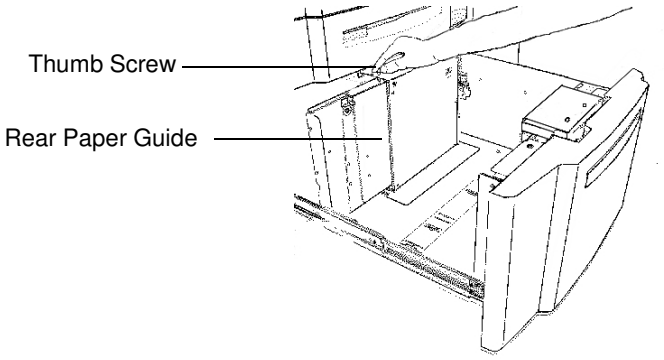
WARNING!

Do not open Tray 1 if the Fuser Unit is pulled out. The printer may tip over causing personal injury or damage to the printer.

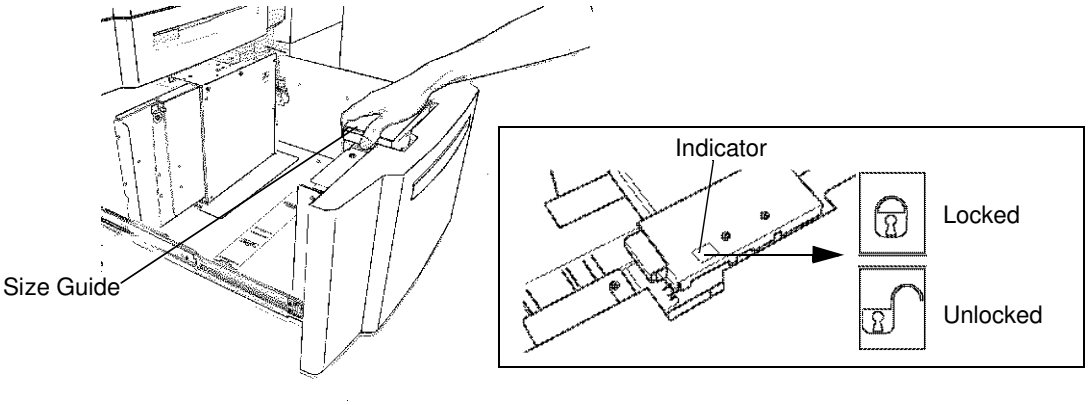
1. Open the tray by pulling it by the handle.



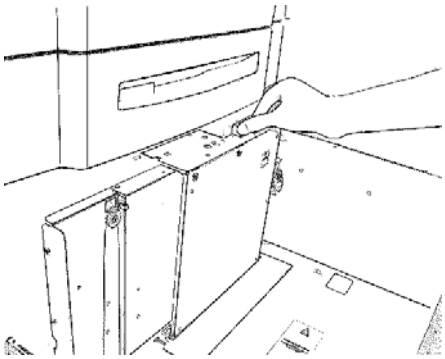
2. Loosen the Thumb Screw (black knob). (Skip to Step 3 if the Thumb Screw is not installed).



3. Adjust the size guide to the proper size. The available sizes are marked on the tray. Use the indicator to verify the guide is locked in place.



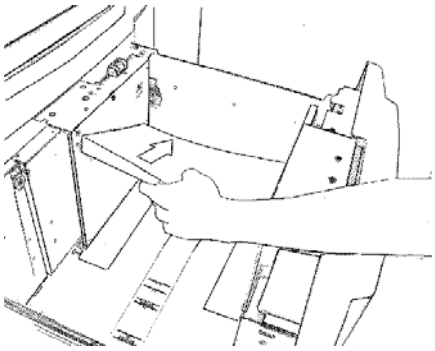
4. Adjust the sensor plate to the proper size. Size markers are located on the sensor plate in the following order: ▲ (special), B5, LGR, LGL, LTR (LEF), B4, A3, and A4 (LEF). Verify the setting is locked into position..



NOTE:
If the paper size you need is not listed, set the sensor plate to ▲ (the first position). Then, in Step 8, you will select the paper size from the OCP display.

5. Place the paper into the tray.

6. Adjust the size guide until the gap is less than 1mm, then tighten the Thumb Screw. (Skip to Step 7 if the Thumb Screw is not installed).



NOTE:
The paper should be loaded no higher than the Max. level indicator. The Max. level indicator is located inside the tray.

7. Close the tray.

8. If you set the sensor plate to ▲ in Step 3, select the paper size from the OCP by making the following selections:

   Printer/Paper Source/Paper Size/1/Paper Size

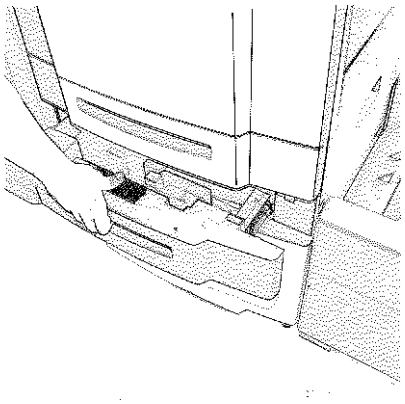
9. Adjust the paper weight. The default paper weight is 20 lb. bond. If necessary, change the paper weight by making the following selections:

   Printer/Paper Source/ ⏩/Paper Weight/1

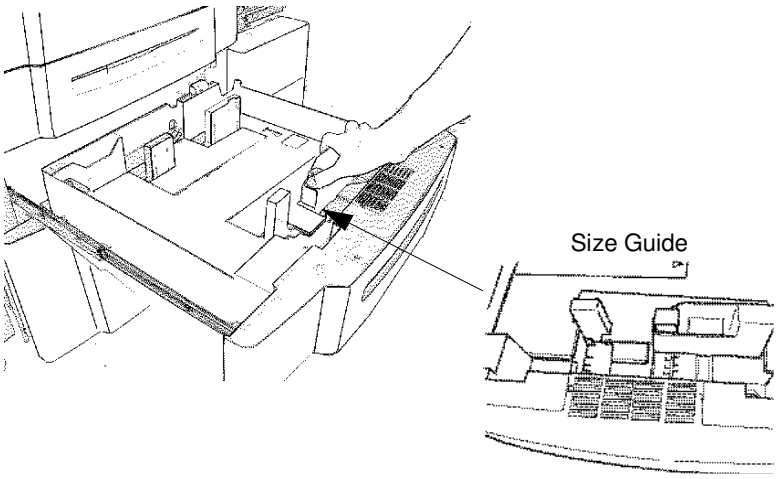
10. Select Index, Bond, or g/m^2, then use the keypad to input the weight and press ■.

Loading Paper in Tray 2 or 3

1. Open the tray.



2. Adjust the size guide to the proper size. The available sizes are marked on the bottom of the tray.



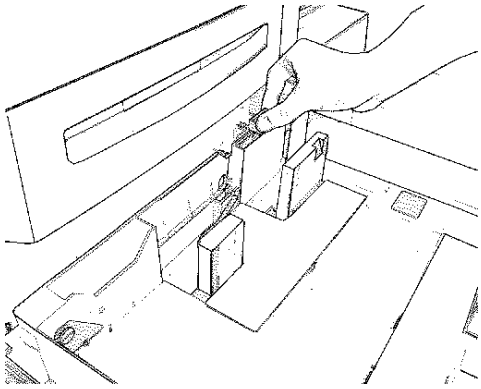
CAUTION!

Paper jams may occur if the size guide is not set to the proper position.

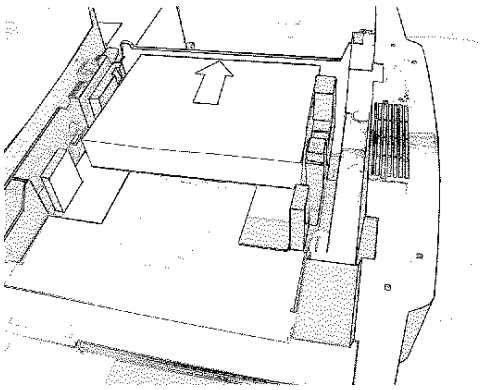
3. Adjust the sensor plate to the proper size. Size markers are located on the sensor plate in the following order: ▲ (special), B5, A5, LGR, LGL, LTR, B4, A3, and A4.

NOTE:

If the paper size you need is not listed, set the sensor plate to ▲ (the first position). Then, in Step 8, you will select the paper size from the OCP display.



4. Place the paper into the tray.



NOTE:

The paper should be loaded no higher than the Max. level indicator. The Max. level indicator is located inside the tray.

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5. Close the tray.

6. If you set the sensor plate to ▲ in Step 3, select the paper size from the OCP by making the following selections:

   Printer/Paper Source/Paper Size/Tray Number/Paper Size

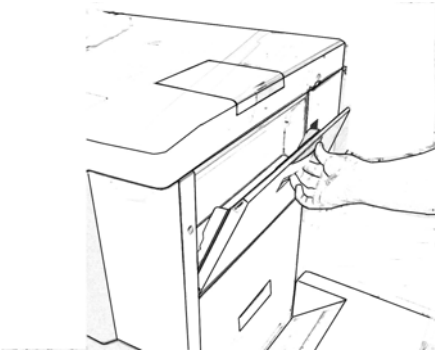
7. Adjust the paper weight. The default paper weight is 20 lb. bond. If necessary, change the paper weight by making the following selections:

   Printer/Paper Source/ ⏩/Paper Weight//Tray Number

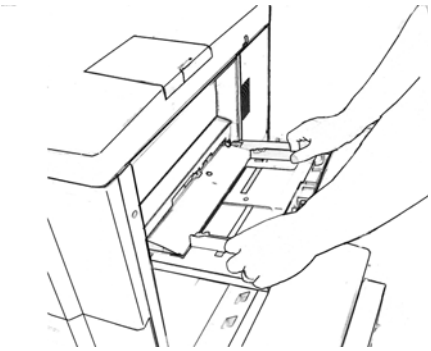
8. Select Index, Bond, or g/m^2, then use the keypad to input the weight and press ■.

Loading Paper into the MBT

1. Open the MBT by pulling it by the handle.



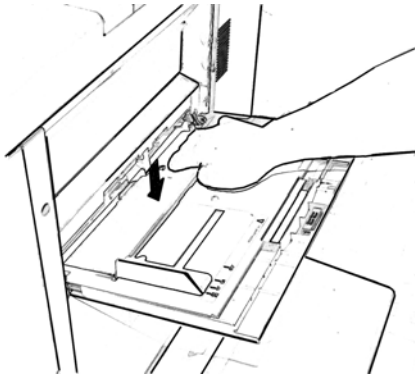
2. Adjust the size guide to the proper size. The paper size positions are marked on the bottom of the tray and on the top of the size guide.



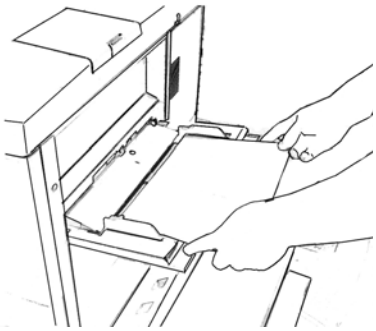
CAUTION!

Paper jams may occur if the size guide is not set to the proper position.

3. Push down the paper tray.



4. Insert the paper onto the tray until it reaches the inner end of the tray.



)

NOTE:

The paper should be loaded no higher than the Max. level indicator. The Max. level indicator is located inside the tray.

When printing on pre-punched paper, refer to "Loading Special Media" on page 3-16.

5. Select the paper size from the OCP by making the following selections:

   Printer/Paper Source/Paper Size/MBT/Paper Size

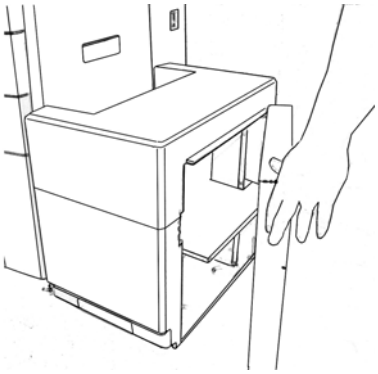
6. If the paper size you choose is custom, see "Setting the Custom Paper Size Values" on page 3-20.

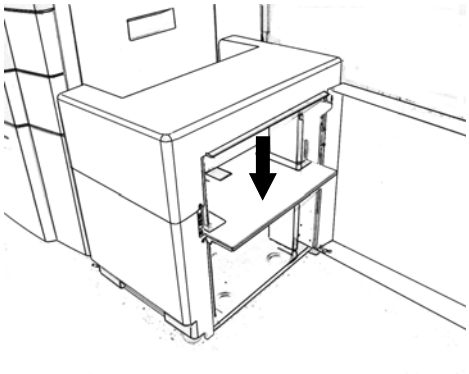
Loading Paper into the HCF

WARNING!

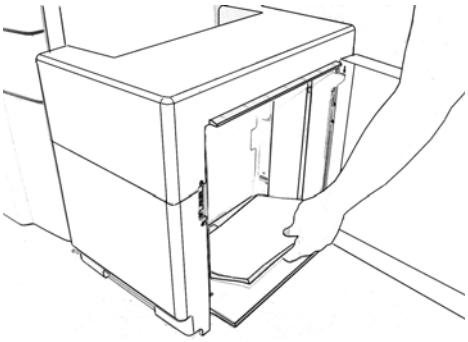
The table inside the HCF automatically descends when you open the door of the HCF. Do not allow anything to be caught between the table and the bottom of the HCF.

1. Open the door of the HCF by pulling it by the handle. The table inside the HCF automatically moves to its lowermost position and stops.





2. Set the paper into the HCF so that it aligns with the left side of the tray. (The HCF is set to handle Letter LEF or A4 LEF size only. A service call is required to change from one size to the other.c



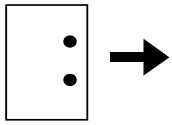
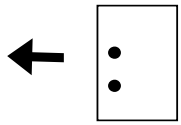
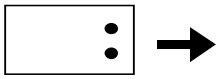
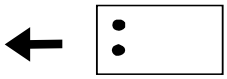
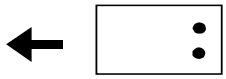
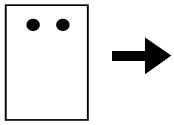
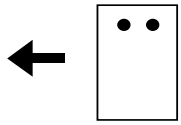
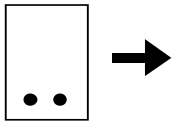
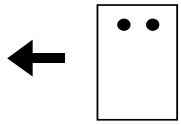
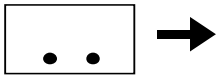
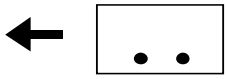
3. Close the door.

Loading Special Media

Pre-punched Paper

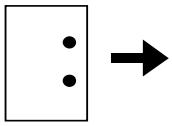
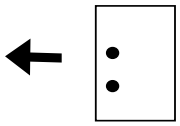
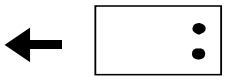
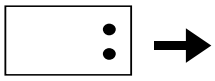
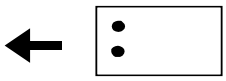
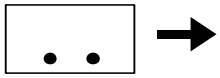
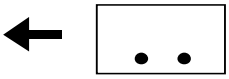
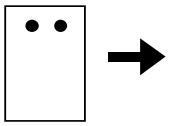
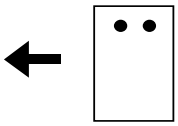
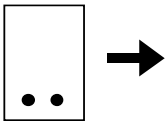
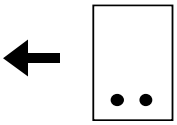
Load pre-punched paper as indicated in the following diagrams. Refer to Appendix C for more information about using pre-punched paper.

Table 3-1. Simplex Printing (Single-sided)

Paper Size	Orientation	Loading into	
		Tray 1 - 3	MBT or HCF
Letter/A4	Portrait/Landscape		
Ledger/A3	Portrait		
Ledger/A3	Landscape		
Letter/A4	Portrait		
Letter/A4	Landscape		
Ledger/A3	Portrait/Landscape		

 Arrows indicate paper feed direction.

Table 3-2. Duplex Printing (Double-sided)

Paper Size	Orientation	Loading into	
		Tray 1 - 3	MBT or HCF
Letter/A4	Portrait/Landscape (Long Edge Bind)		
Ledger/A3	Portrait (Short Edge Bind)		
Ledger/A3	Landscape (Short Edge Bind)		
Ledger/A3	Portrait/Landscape (Long Edge Bind)		
Letter/A4	Portrait (Short Edge Bind)		
Letter/A4	Landscape (Short Edge Bind)		

 Arrows indicate paper feed direction.

Loading Pre-printed Paper

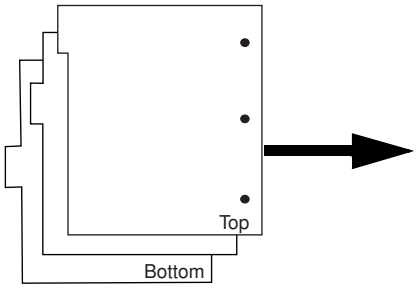
Load pre-printed paper as indicated in the following table. Refer to Appendix C for more details about using pre-printed paper.

Paper Type	Print Mode	Loading Into	
		Tray 1 - 3	MBT/HCF
Front/Back Side Predetermined	Simplex	Front side down	Front side up
	Duplex	Paper up to 9 in.(feed direction), front side down Paper longer than 9 in. (feed direction), front side up (See Note 1)	Front side up
Page Number Predetermined	Simplex	First sheet on top, face down	First sheet on top, face up
	Duplex	Paper up to 9 in. (feed direction), first sheet on top, face down Paper longer than 9 in. (feed direction), first sheet on top, face up (See Note 1.)	First sheet on top, face up

Note 1: *The restriction of 9 inches only applies to printers with a powered Finisher or Container Stacker installed because the printer does not support face-up delivery of paper longer than 9 in. to a powered Finisher or Container Stacker.*

Loading Tab Stock

1. Load tab stock as shown in the illustration below.



NOTE:
Avoid bending the tabs or the corners of the tab dividers as this will increase the likelihood of a jam occurring during the printing process. If a jam does occur, refer to page 6-39 for instructions on jam recovery.

In the main paper trays, place the straight edge of the tab stock against the straight *right* leading edge of the paper tray. The tabs should be on the *left*, also known as the trailing edge. In the MBT, place the straight edge into the machine. Tab stock cannot be used in the HCF.

Load only complete tab sets. The first tab in the set should be on top of the stack and the last tab on the bottom. Adjust the paper guides so that they hold the tab stock securely in position in the tray.

NOTE:
You must set the sensor plate in the tray to the Custom position (▲).

2. Select the paper size from the OCP by making the following selections. (If the tab stock is not 9 in. by 11 in., select Custom Size.)

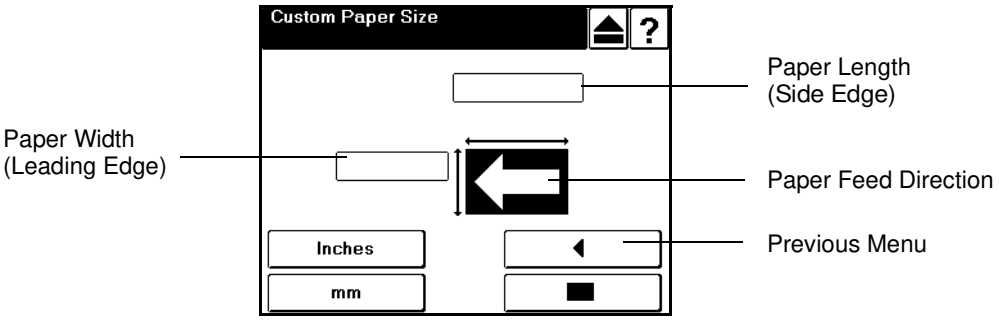
   Printer/Paper Source/Paper Size/tray number/LetterTab or Custom Size

3. If you selected Custom Size in Step 2, see "Setting the Custom Paper Size Values" on page 3-20 for instructions on entering the custom paper size.

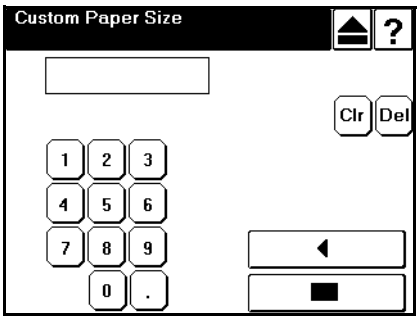
Setting the Custom Paper Size Values

If the paper size you have selected is a custom size you must set the paper size using the OCP. First, follow the steps for loading paper into the desired tray, then perform these steps

1. On the Custom Paper Size screen, touch the value box for the leading edge (the arrow in the illustration points to the leading edge).



The Custom Paper Size Input screen is displayed.



2. Using the number pad, enter the value for the leading edge of the paper.
3. Press enter (■). The display returns to Custom Paper Size and the value you have entered is shown.
4. Touch the value box for the side edge. The display returns to Custom Paper Size Input.
5. Using the number pad, enter the value for the side edge of the paper.
6. Press enter (■). The display returns to Custom Paper Size and now both values you have entered are displayed.
7. Press enter (■). Your custom paper size settings are now saved.

NOTE:

1.Jobs for custom paper size should specify input tray number when you set custom paper size to more than one input tray.

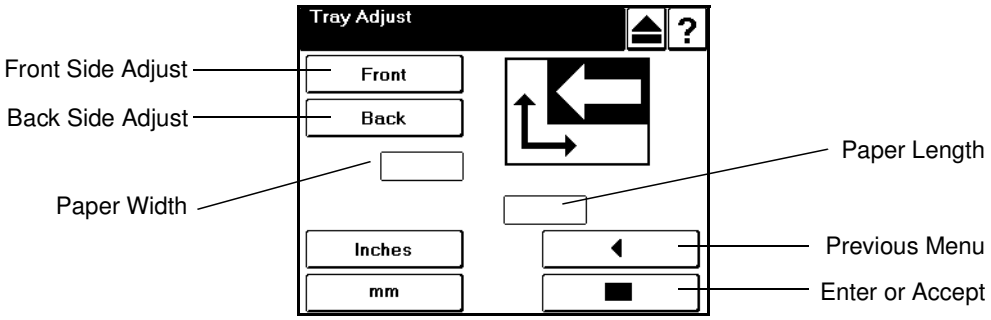
2.Do not configure two or more different custom paper sizes in the same tray group.

Setting the Tray Adjust Values

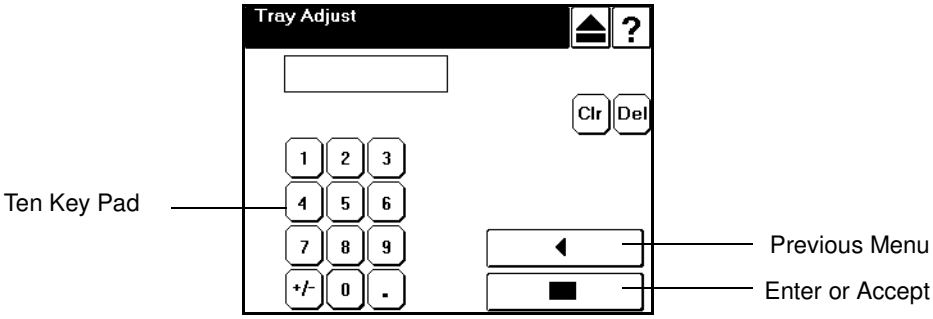
The tray adjust feature is used when it is necessary to shift the image on the printed page. You can shift the image − 0.25 in. (− 6.3 mm). When printing in duplex mode, you can set different tray adjust values for the front side and back side of the paper.

1. To display the Tray Adjust screen, make the following selections from the OCP:

   Printer/Paper Source/ ▸▸ /Tray Adjust/tray number



2. On the Tray Adjust screen, touch the left-most value box. The Tray Adjust Input screen is displayed.



3. Using the number pad, enter the value for the feed direction of the paper. A positive value, (+0.25) moves the image right or up and a negative value (-0.25) moves the image to the left or down on the printed page.
4. Press enter (■). The display returns to the Tray Adjust screen and the value you have entered is shown.
5. Touch the bottom-most value box. The display returns to Tray Adjust Input.
6. Using the number pad, enter the value for the scan direction of the paper. For example, entering + 0.25 moves the image 0.25 in. to the top of the printed page.
7. Press enter (■). The display returns to the Tray Adjust screen and now both values you have entered are displayed.
8. Press enter (■). Your tray adjust settings are now saved.

NOTE:
Print position might be varied depending on environment of the printing room (e.g. temperature, humidity) or type of paper within the range of +/-2.5mm.

Setting the Default Tray

When a print job does not specify the paper source, the printer will use the default setting. You set the default paper source as follows. From the OCP select:

Printer / Paper Source / Default / Tray

Setting the Paper Type

To set the paper type for each tray perform the following steps. From the OCP select:

Printer / Paper Source / Paper Type

Setting the Paper Color

To set the paper color for each tray perform the following steps. From the OCP select:

Printer / Paper Source / Paper Color

Setting the Paper Weight

To set the paper weight for each tray perform the following steps. From the OCP select:

Printer / Paper Source / Paper Weight

The paper weight adjustment screen is displayed.

1. Using the number pad, enter the value.
2. Select the unit of weight.
3. Press enter (■).

CAUTION!

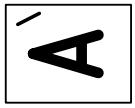
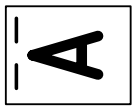
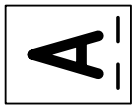
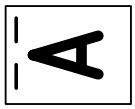
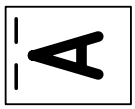
1.If incorrect value is set, it will be occurred paper jam. Because a part of duplex unit is changed automatically.

2.It is necessary that setting the Paper size, Paper Type and Paper Weight is all the same to cascade between each tray.

Stapling

Portrait

Use the following table as a guide for staple position on a Portrait document.

Settings		Paper Direction	
Staple	**Binding side right**	**Long Edge Feed(LEF)**	**Short Edge Feed(SEF)**
Corner	OFF		
	ON		
Long edge /Side	OFF		
	ON		
Short edge	OFF		
	ON		
Top	OFF		
	ON		

Landscape

Use the following table as a guide for staple position on a Landscape document.

Settings		Paper Direction	
Staple	**Binding side right**	**Long Edge Feed(LEF)**	**Short Edge Feed(SEF)**
Corner	OFF		
	ON		
Long edge	OFF		
	ON		
Short edge /Side	OFF		
	ON		
Top	OFF		
	ON		

Copy Limits

It is recommended that you limit the amount of copies in a job to avoid premature wear of the finisher output rollers. Use the following guidelines.

Number of Sheets in Staple Set	Number of Copies B5, A4, B4, Letter, Folio, Legal	Number of Copies A3, Ledger
2-9	100	50
10-20	50	50
21-30	30	30
31-40	25	25
41-50	20	20

Paper Size and Weight Limits

The following table displays the paper size and weight limitations for stapling.

		Stapling
Paper Size		A3 SEF, B4 SEF, A4 LEF, A4 SEF, B5 LEF, Letter LEF, Letter SEF, Folio SEF, Legal SEF, Ledger SEF, Executive LEF, Super B SEF
Custom Size	**Leading Edge**	8.27 in. x 12.0 in.(210.0 mm - 304. 8mm)
	Side Edge	7.2 in. - 18.0 in.(182.0 mm - 457.2 mm)
Paper Weight		17 - 41 lb. (64 - 157 g/m^2)
Number of Sheets		50 Max.
Thickness		5.0 mm Max

Setting the Color Control

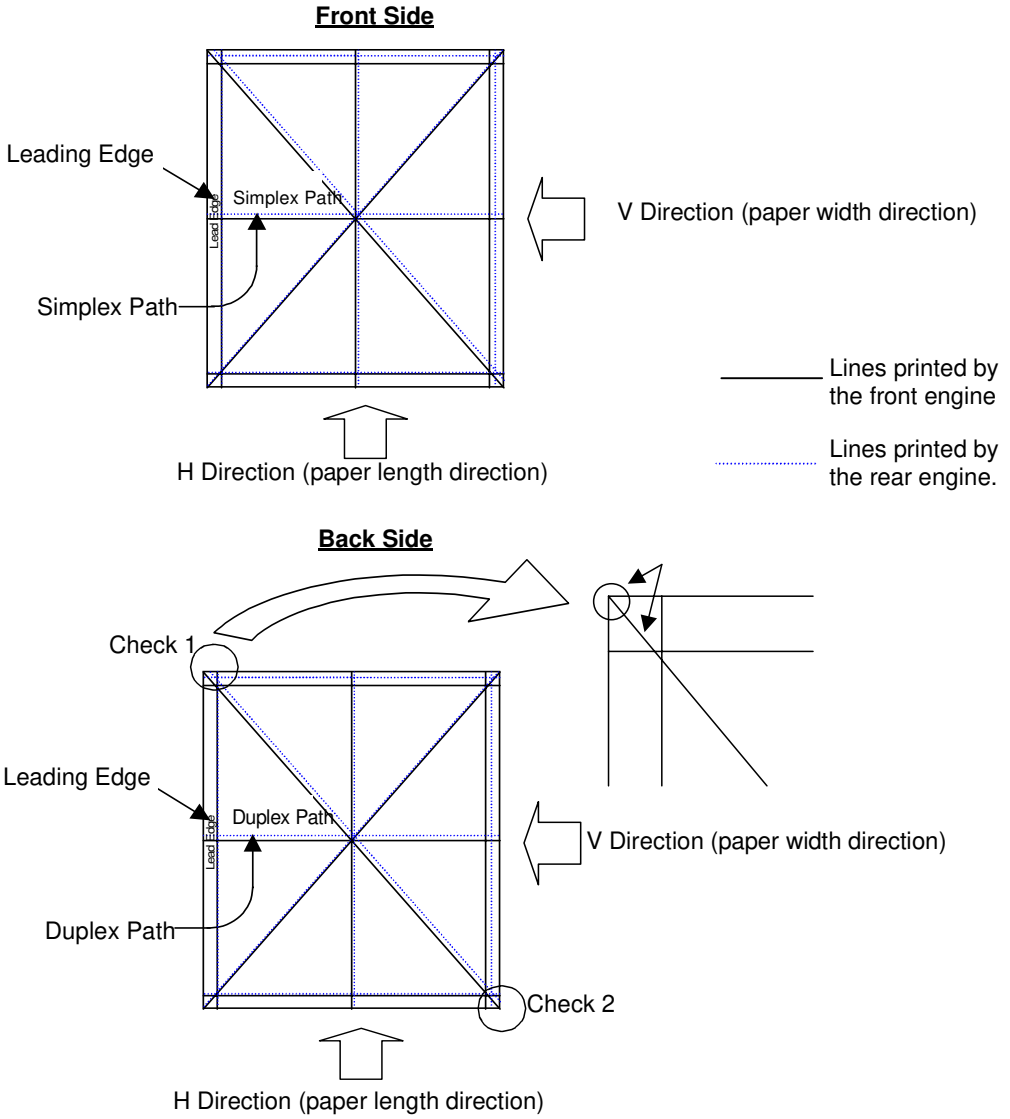
Due to shrinkage that can occur during the fusing process, the image size may need to be adjusted between the front and rear printer. Follow the instructions below to adjust image size. For additional information refer to page 2-12.

Cross Pattern

1. Make the following selections from the OCP:

   Printer / Paper Source / Color Control / Tray Number / H Direction / Duplex / Cross Pattern

2. When the ten-key screen is displayed, enter "1" and press enter (■). The printer will print a Cross Pattern page as shown below.



Front Side/Front Engine

The reduction value for the Front Side/Front Engine should remain at 0% because there is no paper shrinkage.Front Side/Rear Engine. Compare the lines printed by the front and rear engine. If the lines printed by the rear engine do not align with the lines printed by the front engine, perform the following steps.

1. For Vertical line adjustment make the following selections from the OCP:

   Printer / Paper Source / Color Control / Tray # / V Direction / Duplex / R: Front Side

2. Select the desired value and press (■) .

3. For Horizontal line adjustment make the following selections from the OCP:

   Printer / Paper Source / Color Control / Tray # / H Direction / Duplex / R: Front Side

4. Select the desired value and press enter (■).

5. Print another Cross Pattern to verify the adjustment. If further adjustment is necessary repeat Steps 1 through 4 until alignment is achieved.

Back Side/Front Engine

Check the lines printed by the Front Engine. The line at the upper left corner should be almost square to the corner of the paper. (Refer to Check 1 on the Cross Pattern sample on page 3-26). If an adjustment is necessary perform the following steps:

1. Make the following selections from the OCP:

   Printer / Paper Source / Color Control / Tray # / H Direction / Duplex / F: Back Side

2. Select the desired value and press enter (■).

The line at the lower right corner should be almost square to the corner of the paper. (Refer to Check 2 on the Cross Pattern sample on page 3-26). If an adjustment is necessary perform the following steps:

1. Make the following selections from the OCP:

   Printer / Paper Source / Color Control / Tray # / H Direction / Duplex / F: Back Side

2. Select the desired value and press enter (■).

   Printer / Paper Source / Color Control / Tray # / V Direction / Duplex / R Front Side

3. Select the desired value and press enter (■).

Print another Cross Pattern to verify the adjustment. If further adjustment is necessary repeat Steps 1 through 4 until alignment is achieved

Back Side/Back Engine

Compare the lines printed by the front and rear engine. If the lines printed by the rear engine do not align with the lines printed by the front engine, perform the following steps.

1. For Vertical line adjustment make the following selections from the OCP:

   Printer / Paper Source / Color Control / Tray # / V Direction / Duplex / R: Back Side

2. Select the desired value and press enter (■).

3. For Horizontal line adjustment make the following selections from the OCP:

   Printer / Paper Source / Color Control / Tray # / H Direction / Duplex / R: Back Side

4. Select the desired value and press enter (■).

5. Print another Cross Pattern to verify the adjustment. If further adjustment is necessary repeat Steps 1 through 4 until alignment is achieved.

Paper Pattern

Each paper tray can be preset with up to 16 different patterns (profiles) using the OCP. The settings include

- Paper Size
- Paper Type
- Paper Color
- Paper Weight
- Color Control
- Tray Adjust
- Detach Voltage
- H Positioning

All 16 patterns for all trays are set to default values and can be changed to suit your printing requirements. To view all registered patterns select ***Reports / Paper Pattern*** from the OCP.

Setting up your own patterns is a three stage process. First you create the pattern, then you register it, then you load it. For instructions on creating and registering you own pattern, start with "Create a Registered Pattern" below.

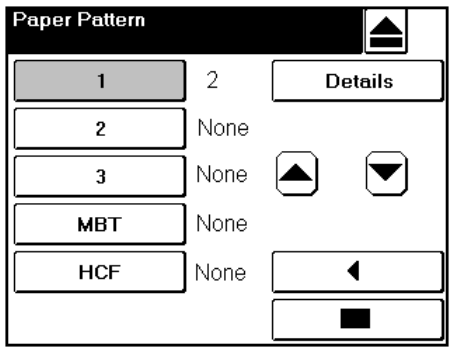
To use a default pattern, skip to "Load a Registered Pattern" on page 3-31.

Create a Registered Pattern

1. From the OCP make the following selections:

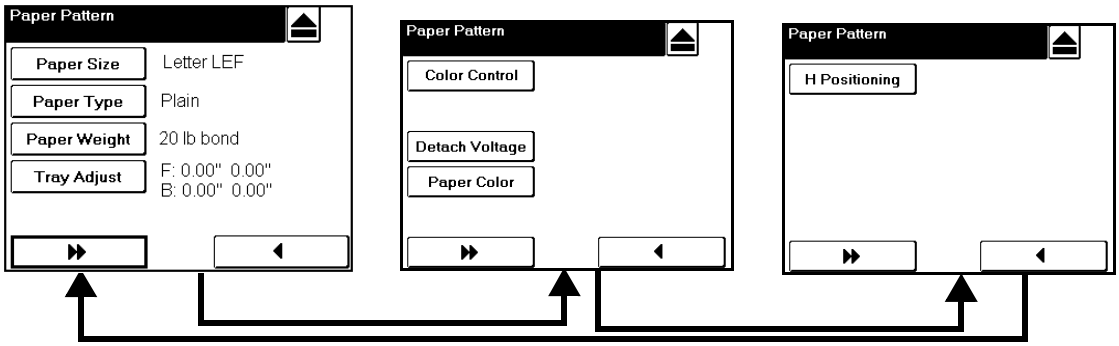
   Printer / Paper Source / Paper Pattern / Preset Load

   The following screen is displayed.



2. Select the desired Tray #. Use the ▲/▼ buttons to select the Pattern # (the example above shows Tray 1, Pattern 2 is selected).

3. Press the Details button. The screen on the left is displayed.



4. Set the desired items (Paper Size, Paper Type, Paper Weight, Tray Adjust, etc.) as desired. Use the more (⏩) button to toggle between the screens.

NOTE:
Refer to page 3-21 for Tray Adjust instructions.
Refer to page 3-26 for Color Control instructions.
Refer to page 6-66 for Detach Voltage instructions.
Refer to page 6-71 for H Positioning

5. When you are finished, press return (◀), then enter (■). The OCP will indicate "Processing". When processing is complete press ⏏ to return to the main menu.

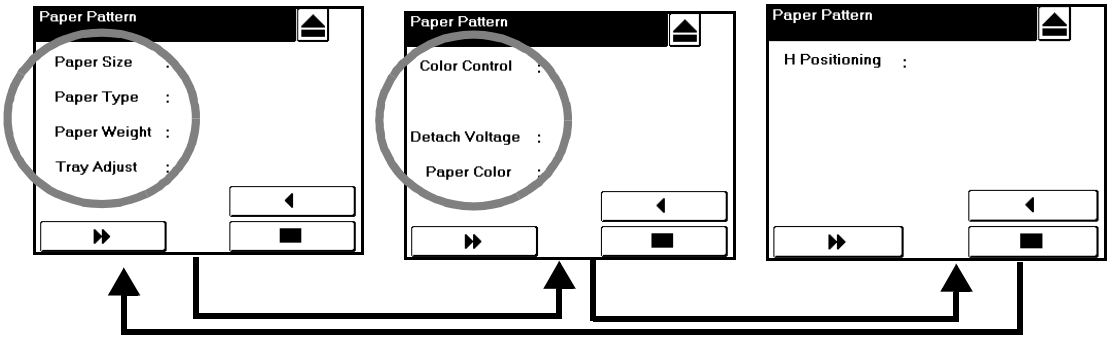
Register your pattern using the instructions below.

Registering a Paper Pattern

1. To register a paper pattern make the following selections from the OCP:

Printer / Paper Source / Paper Pattern / Preset Register / Tray # / Pattern #

The display will appear like the samples below but will show the selected pattern settings on the right side of the display. Use the more (⏩) button to toggle between the screens and verify all settings are correct.



2. Press enter (■) from either screen to register the pattern.The display will indicate Processing. When processing is complete press ⏏ to return to the main menu.

Load the pattern using the instructions that follow.

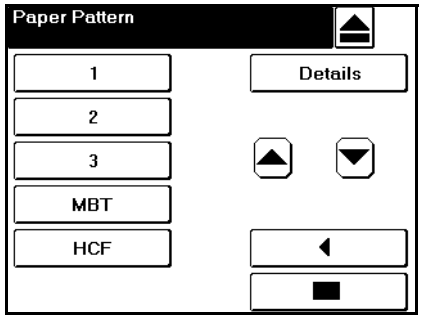
Load a Registered Pattern

To use a registered pattern perform the following steps:

1. From the OCP make the following selections:

   Printer / Paper Source / Paper Pattern / Preset Load / Tray #.

   The following screen is displayed.



2. Select the desired Tray #. Use the ▲/▼ buttons to select the Pattern #, then press enter (■).

Clearing Preset Values

You can clear the preset values and return them to the default settings individually or all at once using the following steps.

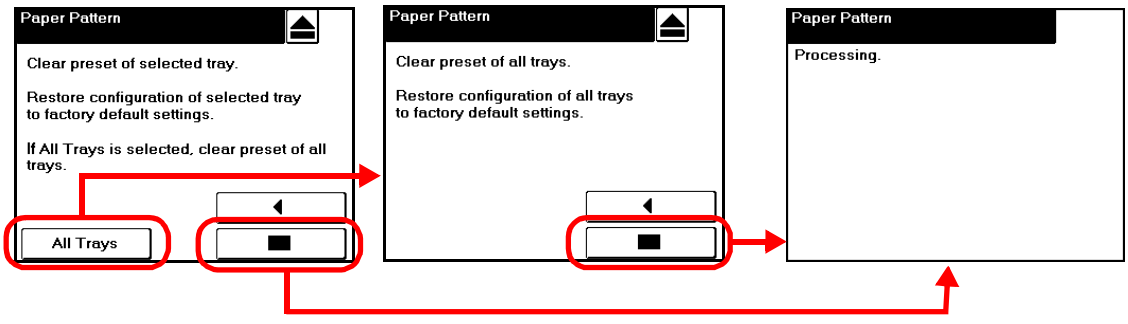
1. From the OCP select

   Printer / Paper Source / Paper Pattern / Preset Clear / Tray #.

2. The following screen (a) is displayedPress enter (■) to clear the selected tray.

   Or, press the All Trays button to clear all trays. The following screen (b) is displayed. Press enter (■) to clear all trays.

(a) (b)



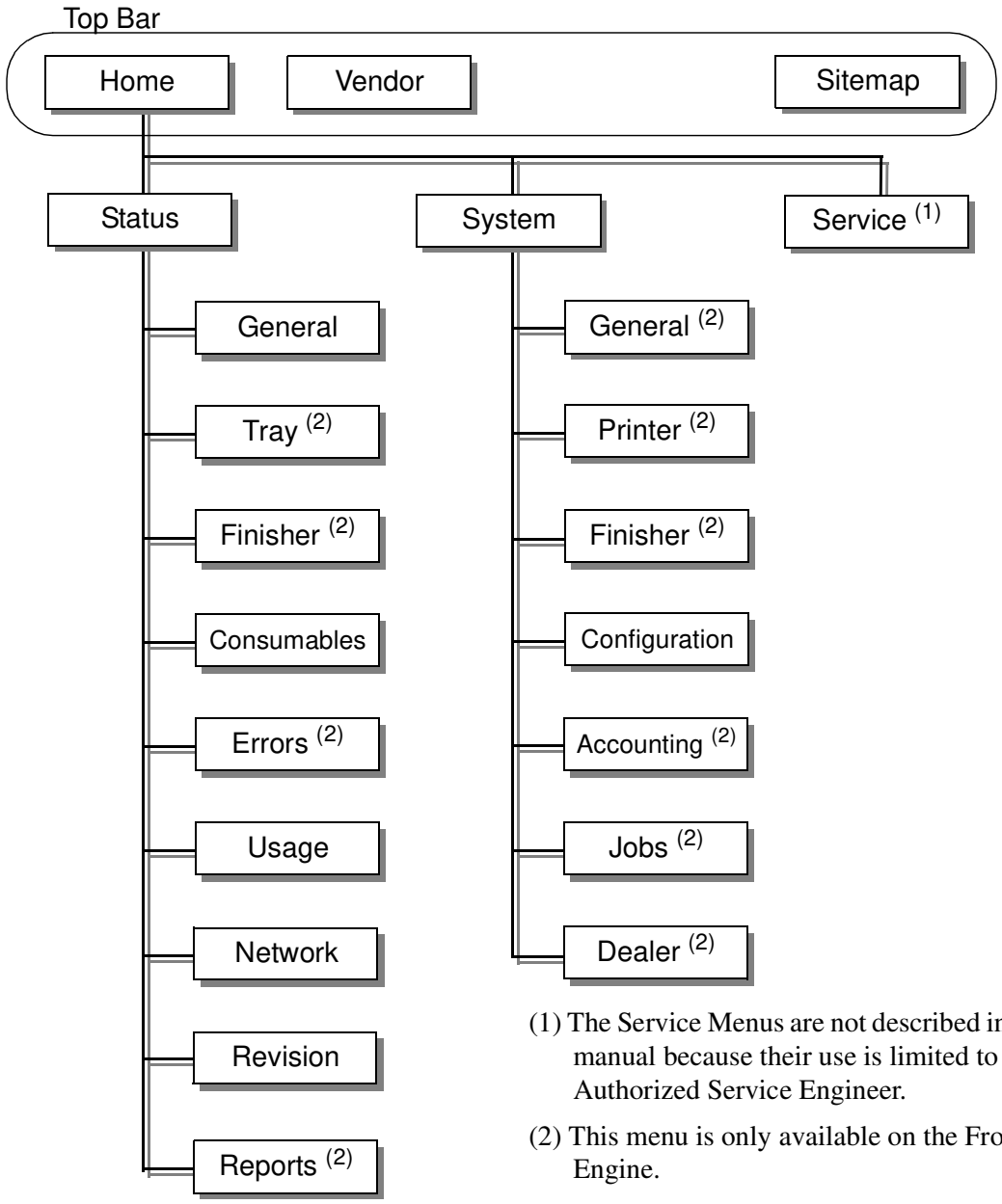
Chapter 4
Web Utilities

What This Chapter Provides

This chapter contains information on the following topics:

Overview

The Web Utilities give you the power to access the printer through the Internet or your company's Intranet. You can use the Web Utilities to perform many functions, which are divided into three main areas: Status, System, and Service. The options available in each area are listed below.



(1) The Service Menus are not described in this manual because their use is limited to the Authorized Service Engineer.

(2) This menu is only available on the Front Engine.

The options available to you depend on the features installed on your system, so some of the options shown in this chapter may not be available to you. For example, if the Booklet Finisher is not installed on your system, any options and Web pages relating to the Booklet Finisher will not be displayed.

NOTE:
Settings made with the Web Utilities override OCP settings.

Often, the status of an item is indicated with a colored button or graphic. Three colors are used throughout the Web Utilities to graphically display the status of various items.

- Green indicates a normal condition.
- Yellow indicates a warning condition (e.g., low paper, low toner, consumable near end of life).
- Red indicates an obstacle to printing, such as an empty condition, consumable at end of life, paper jam, or door open.

Access and Security

Not all Web Utilities are available to every type of user. Access to certain utilities is limited by a password. Passwords provide security to the System and Service areas of the system. The Web Utilities provide three levels of access: Status, System, and Service, which are described below.

- Status Access

  Access to the Status area of the system does not require a password. It allows the user to view all Status options and print Status, Summary, Demo, and font reports.

- System Access

  System access requires a password and enables the user to perform System functions. System functions include modifying the printer configuration, displaying all jobs in the system, and changing the system password. All user-accessible items are available as well.

- Service Access

  Service access requires a password and enables unrestricted access to the system. Service access allows you to display and modify the system configuration, counters, license keycode, and both system and service passwords. All user- and system-accessible items are available as well.

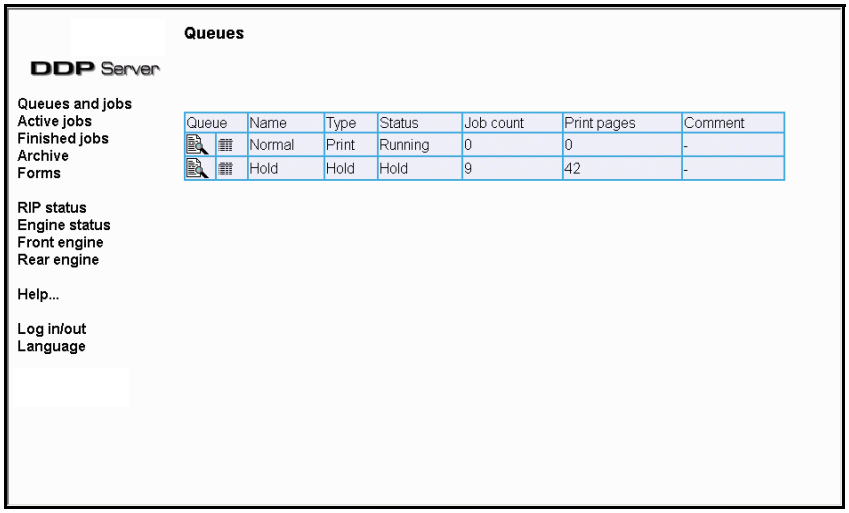
NOTES:

It is the responsibility of the servicing dealer and/or system administrator to set and secure passwords in the Web Utilities.

To access the System area, enter the User Name **system**. *To access the Service area, enter the User Name* **service**. *The default password for both areas is blank and should be changed when the printer is installed.*

Accessing the Web Utilities

To access the Web Utilities, enter the IP address of the DDP Server in the address bar of your Internet browser. The DDP Server Home Page will be displayed.



Choose Front Engine or Rear Engine. The Home Page is the first page that will be displayed.

You can make a selection from the Home Page or wait 30 seconds for the Status-General page to be automatically displayed.

The three main areas of the system, Status, System, and Service, are discussed in the following pages.

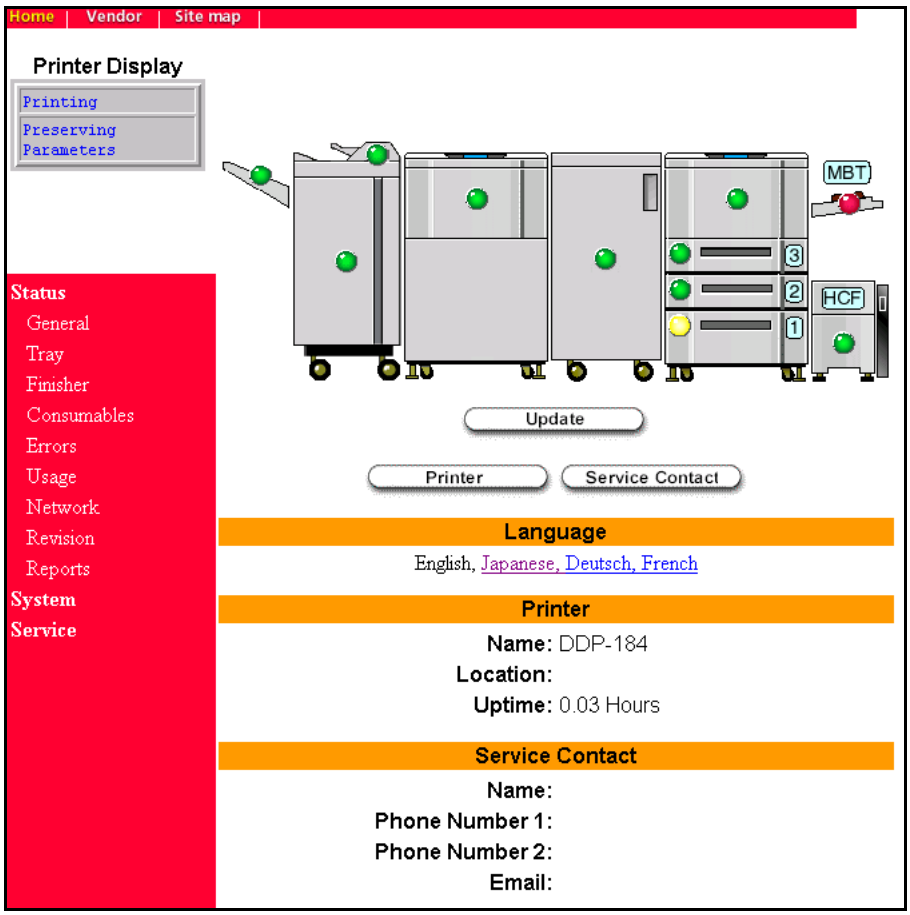
Status Options

Each of the options available under Status are described in the following table. Access to the Status options is not restricted by a password.

Option	Description
General	Displays printer configuration and status. Displays information on the printer, contact, language, printer location, printer name, and printer uptime.
Tray	Displays the size, type, color, and weight of the paper in each tray. Graphically displays the amount of paper in each tray. Links to paper source setup pages.
Finisher	Displays information on installed finishers. Depending on the finisher installed, the status of elements such as cover, stacker, and staple cartridges may be displayed.
Consumables	Displays the status of the toner, developer mix, fuser web, and drum unit.
Errors	Displays the error counts for the printer.
Usage	Displays paper usage information, toner coverage percentages, and preventative maintenance (PM) page counts. Displays page counts for all available paper sizes, for the current period and the life of the printer.
Network	Displays the MAC address, IP address, and subnet mask of the onboard network controller.
Revision	Displays revision information for the engine firmware and controller software.
Reports	Lists all available reports as links. Reports include Status, Summary, Demo, PCL Directory and Paper Pattern reports. Prints the relevant report when the link is clicked.

Status-General

The Status-General page displays the status of the print engine, paper trays, finisher, consumables, all installed options, and Service Contact information. It also allows you to select the desired language for your web pages.



NOTE:
Only the options that are installed will be displayed on the Status-General page.

A colored button is located on each part of the printer to graphically indicate the condition of the item.

- Green indicates a normal condition.
- Yellow indicates a warning condition (e.g., low paper, low toner, consumable near end of life).
- Red indicates an obstacle to printing, such as an empty condition, consumable at end of life, paper jam, or door open.

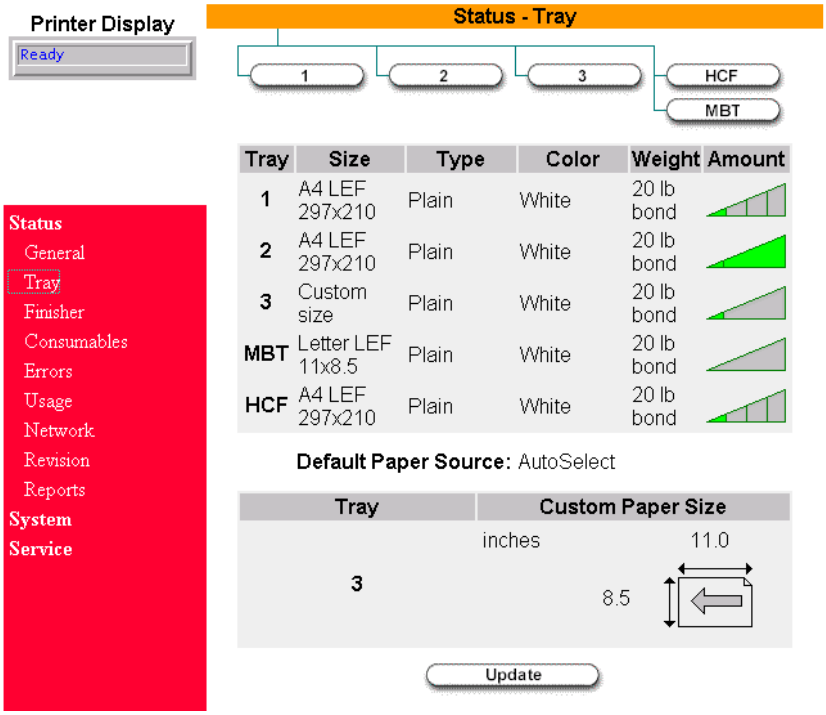
Click a button to display information on that part of the printer. For example, if you click on the MBT button, the Status-Tray page is displayed with detailed paper tray information.

This page refreshes automatically every 30 seconds. Optionally, you can click the Update button to refresh the display on demand.

Status-Tray

The Status-Tray page displays the status of the paper trays. For each paper tray, the size, type, color, and weight of the paper is noted. The amount of paper in each tray is graphically displayed in the far right column.

Click the paper source button (1, 2, 3, HCF or MBT) to set the desired paper size for each tray.



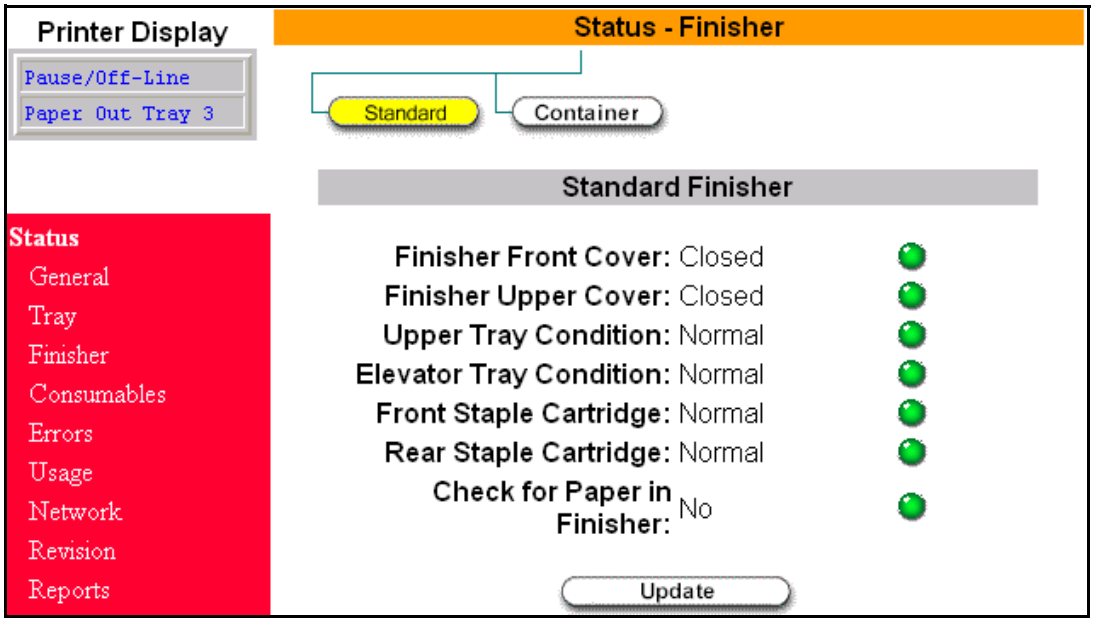
This page refreshes automatically every 30 seconds. Optionally, you can click the Update button to refresh the display on demand.

NOTE:

Some functions available from this page can only be accessed by users with the System or Service password.

Status-Finisher

The Status-Finisher page displays the status of the finisher elements, such as the position of the cover, and the condition of the stacker and staple cartridges.



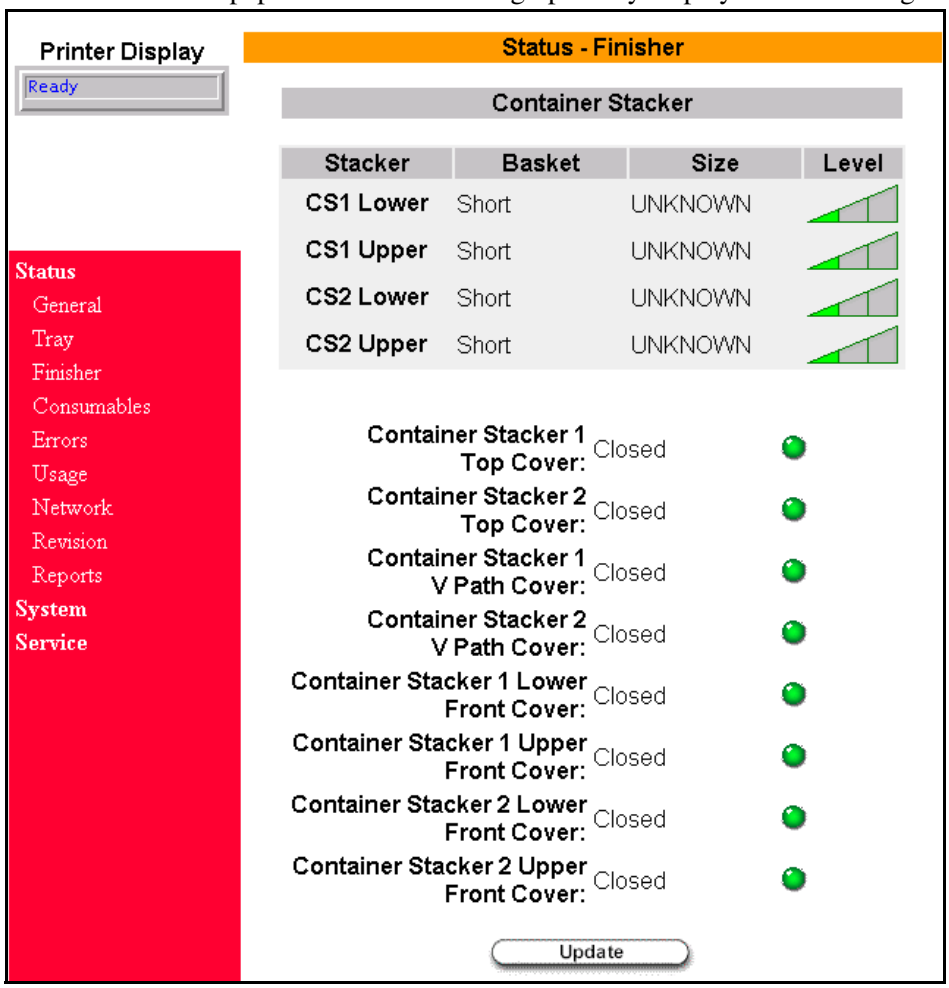
A colored button graphically indicates the condition of each element.

- Green indicates a normal condition.
- Yellow indicates a warning condition (e.g., consumable near end of life).
- Red indicates an obstacle to printing, such as an empty condition, consumable at end of life, paper jam, or door open.

This page refreshes automatically every 30 seconds. Optionally, you can click the Update button to refresh the display on demand.

Status-Container Stacker

The Status-Finisher page for the Container Stacker option displays information on each stacker installed. For each stacker, the basket size and paper size is displayed. The amount of paper in each stacker is graphically displayed in the far right colum.

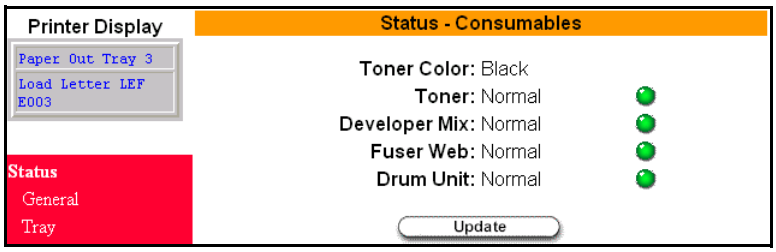


This page refreshes automatically every 30 seconds. Optionally, you can click the Update button to refresh the display on demand.

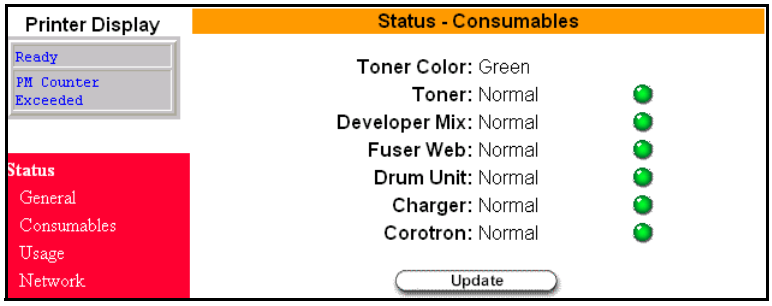
Status-Consumables

The Status-Consumables page graphically displays the status of the printer consumables. This includes the status of the toner, developer mix, fuser web, drum unit, charger and corotron.

[Front Engine]



[Rear Engine]



A colored button graphically indicates the condition of each element.

- Green indicates a normal condition.
- Yellow indicates a warning condition (e.g., low toner, consumable near end of life).

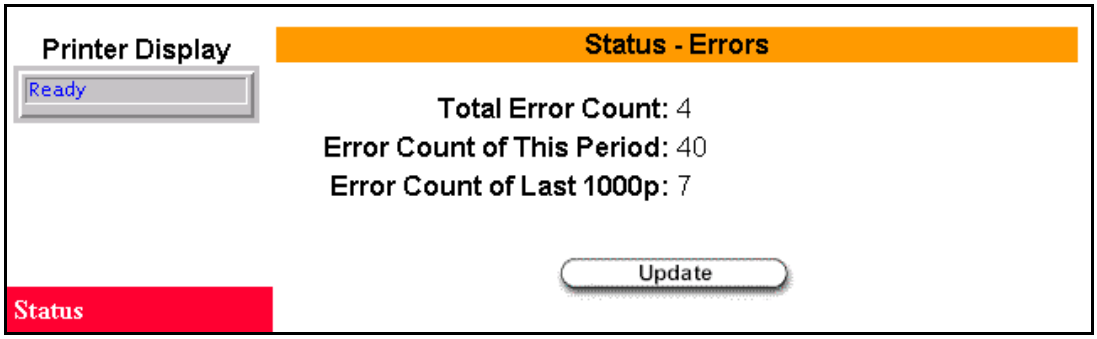
Consumable	Yellow Condition Approximate Page Count Remaining
Toner*	Less than 1,800
Developer Mix**	8,000
Fuser Web	10,000
Drum Unit	8,000
Charger***	10,000
Corotron***	10,000
* Based on 4% coverage.	
** Based on 80% drum rotations with actual printing.	
***Only available for the Rear Engine.	

- Red indicates an obstacle to printing, such as an empty condition, consumable at end of life, paper jam, or door open.

Optionally, you can click the Update button to refresh the display on demand.

Status-Errors

The Status-Errors page displays the error counts for the printer. This information is useful to Service and Technical Support personnel.



Optionally, you can click the Update button to refresh the display on demand.

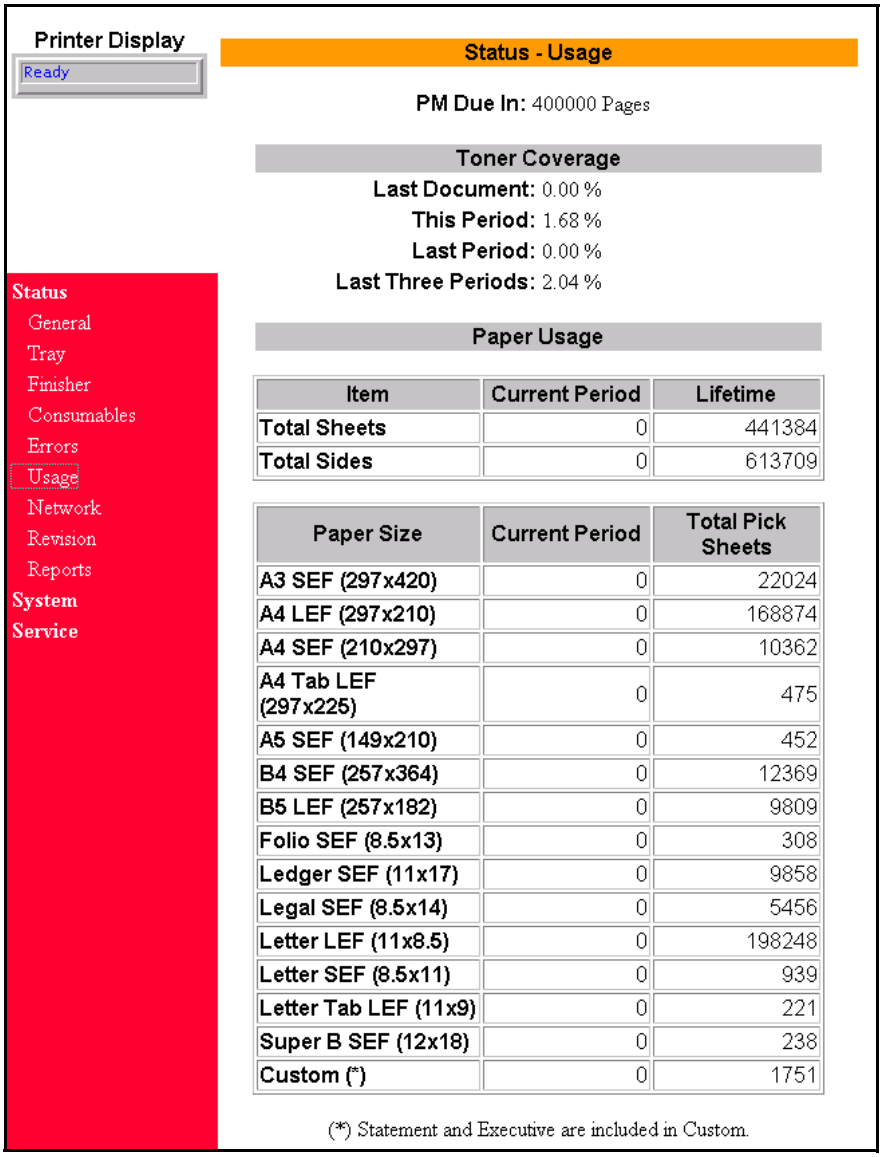
Status-Usage

The Status-Usage page displays the number of pages left before the next preventative maintenance (PM) service, as well as Toner Coverage*[1] or Click Charge Count*[2] and paper usage information.

The Current Period value is increased when a page is printed. The Lifetime value is increased when the engine picks up a paper from an input tray.

The Paper Usage is available only front engine.

This page refreshes automatically every 60 seconds. Optionally, you can click the Update button to refresh the display on demand.



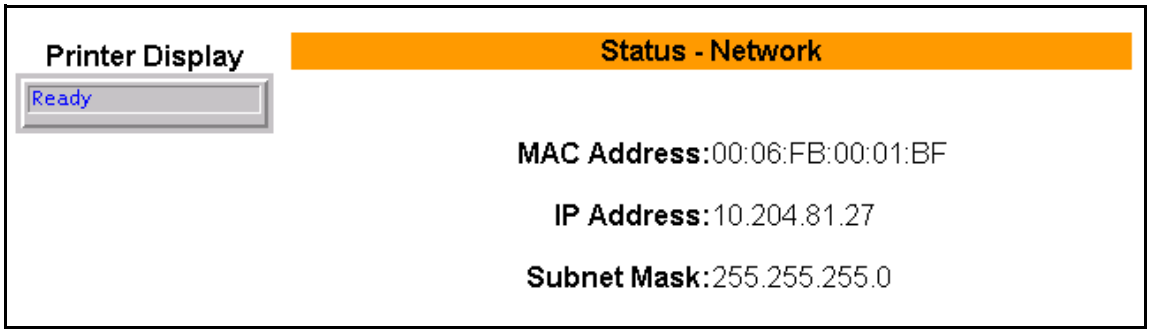
*1:This menu is displayed when the Click Charge is set "[Service]-[Click Charge]-[Page Click]=All".

*2:This menu is displayed when the Click Charge is set "[Service]-[Click Charge]-[Page Click]=Validated".

Status-Network

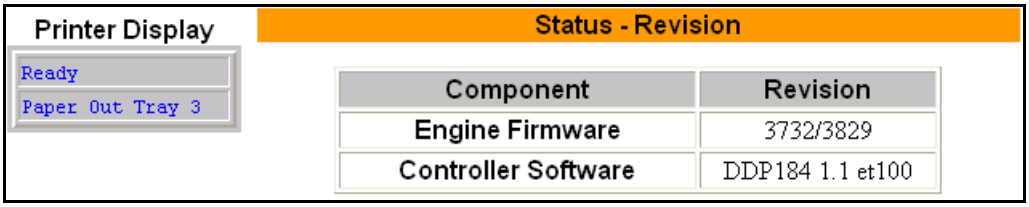
The Status-Network page displays the current network address information.

- MAC Address - Current information is displayed. This address cannot be changed.
- IP Address - Current information is displayed. This address can be changed using the System Configuration page. (Network Administrator or Service Technician only).
- Subnet Mask - Current information is displayed. This address can be changed using the System Configuration page. (Network Administrator or Service Technician only).



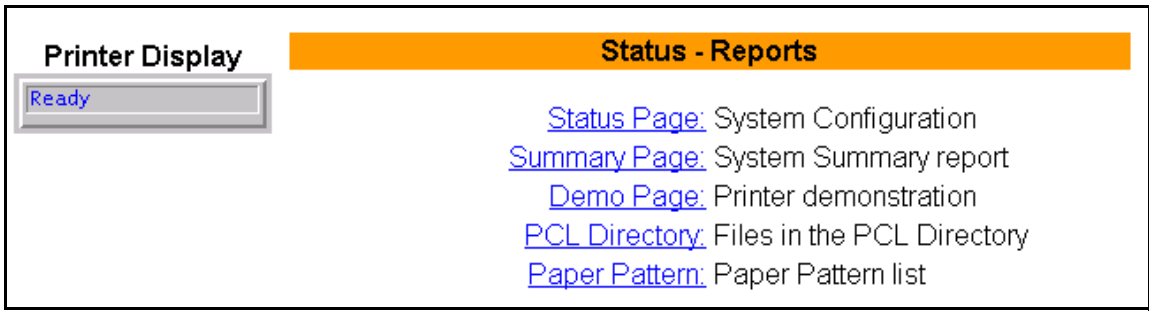
Status-Revision

The Status-Revision page displays revision information for each installed component of the printer (e.g., engine firmware and controller software). This information is useful to Service and Technical Support personnel.



Status-Reports

The Status-Reports page displays all available printer reports as links. If the PostScript option is not installed on your system, the PostScript reports are not displayed. Simply click on the desired report to print it.



NOTE:

This page is not available during a print job.

System Options

Each of the options available under System are described in the following table. You must have the System password to access or update these Web pages.

NOTES:

It is the responsibility of the servicing dealer and/or system administrator to set and secure passwords in the Web Utilities.

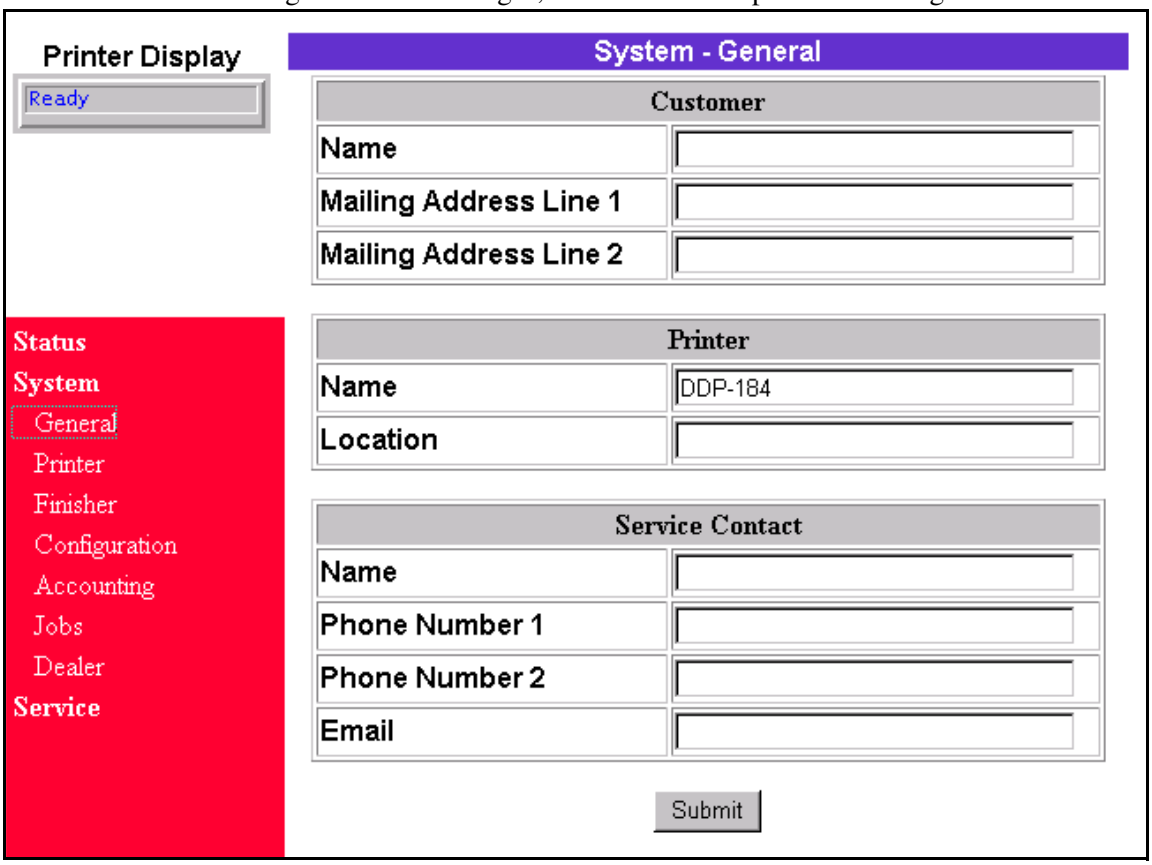
To access the System area, enter the User Name **system**. *The default password is blank and should be changed when the printer is installed.*

Option	Description
General	Displays the customer name, mailing address, printer name, printer location, and service contact information.
Printer	Displays the paper size, type, weight, and tray adjust information for the selected paper source.
Finisher	Provides access to the Finisher Web pages for any installed finishers. Depending on the finisher installed on your system, the pages may include access to staple, inserter tray, and other options.
Configuration	Items under System-Configuration include changing the system password, resetting the system, modifying parallel port settings, and entering network configuration information.
Accounting	Displays accounting information such as page counts, toner coverage and billing data. Also lists all paper sizes with current period and lifetime counts for each. Optionally, the accounting reports can be downloaded to your computer.
Jobs	Displays all jobs in the system. Jobs can monitored or cancelled from this page.
Dealer	Displays the dealer's name and mailing address.

System-General

The System-General page displays customer, printer, and service contact information. The printer and service contact information you enter here is displayed on the Status-General page which is available to all users.

After making the desired changes, click Submit to update the settings.



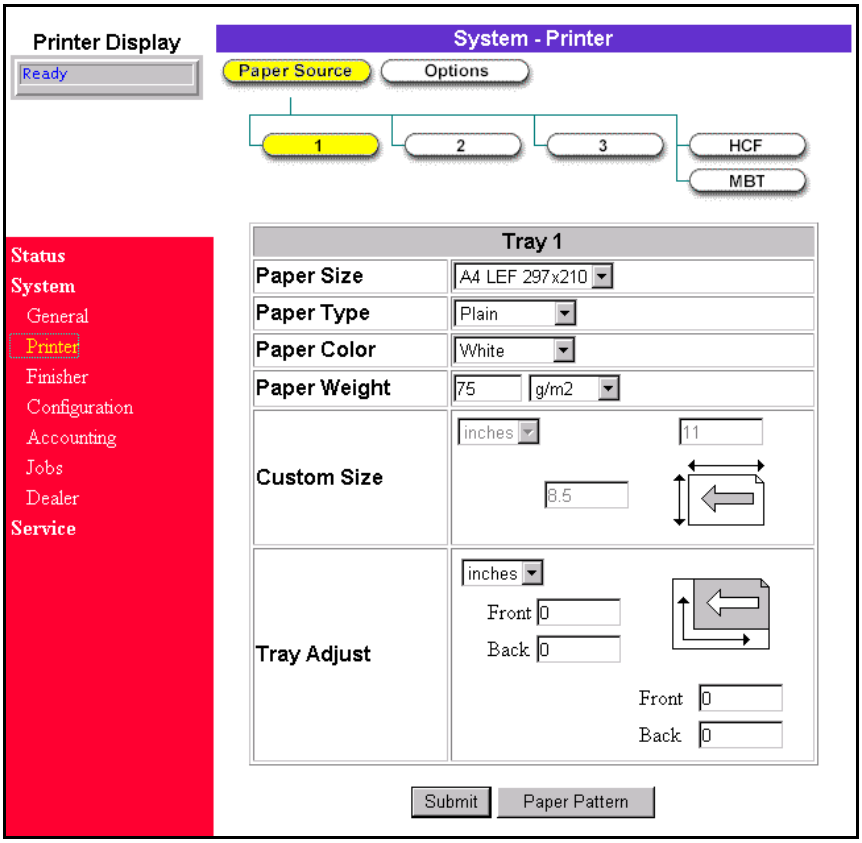
System-Printer

Paper Source

The Paper Source page displays the paper size, paper type, paper color, paper weight, and tray adjust information for the selected paper source.

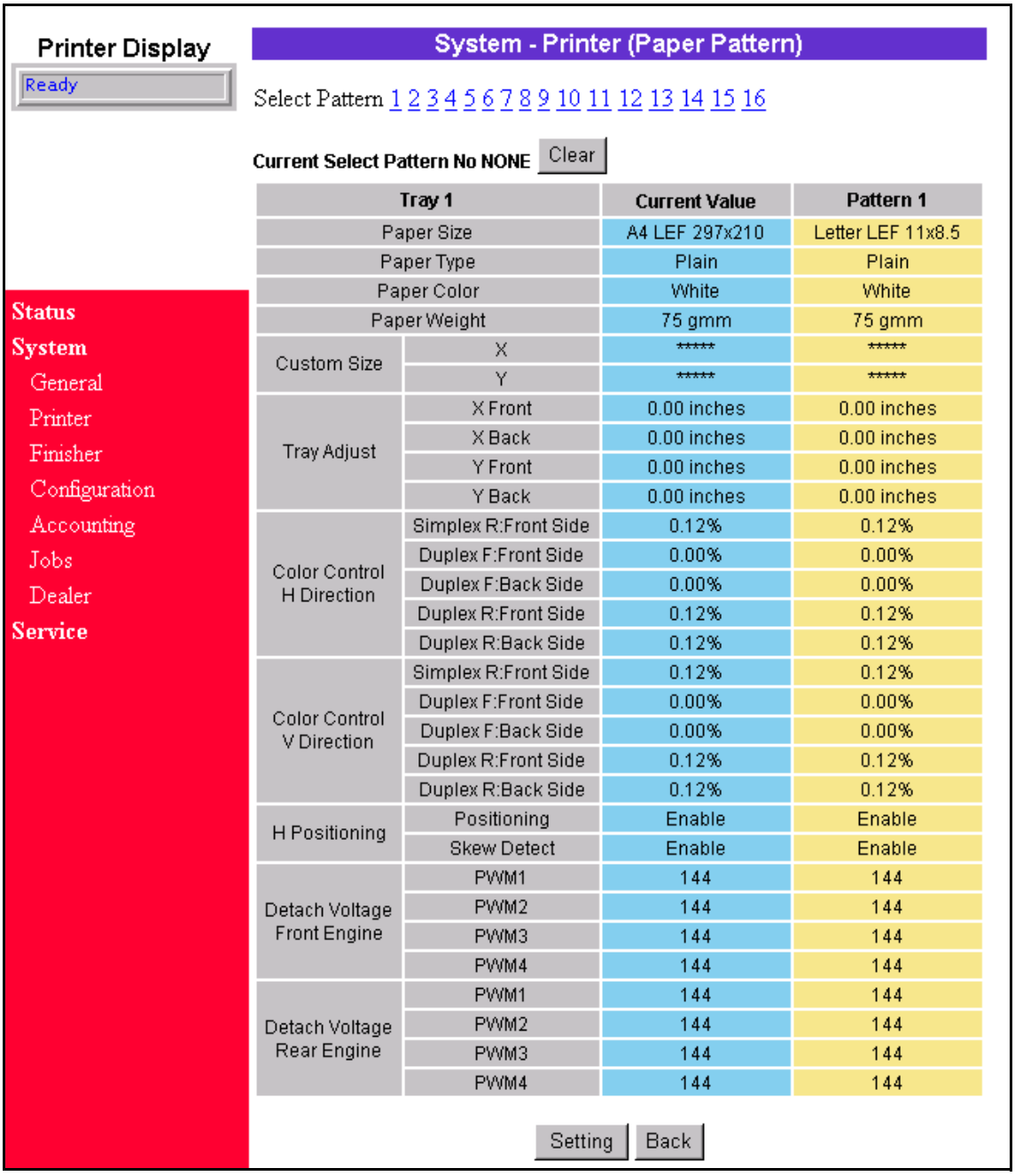
To select a paper source, click on 1, 2, 3, HCF, or MBT near the top of the page. The selected paper source is highlighted in yellow. For instructions on custom paper sizes and adjusting the trays, see "Setting the Custom Paper Size Values" on page 3-20 and "Setting the Tray Adjust Values" on page 3-21.

The settings on this page reflect what is set on the Operator Control Panel. If you make changes to this page and click the Submit button, the changes will be reflected on the Operator Control Panel.



Paper Pattern

The Paper Pattern page displays the paper size, paper type, paper color, paper weight, paper position, color control, H positioning, and detach voltage. It also gives you access to the current values.



Printer Display

Ready

System - Printer (Paper Pattern)

Select Pattern 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Current Select Pattern No NONE Clear

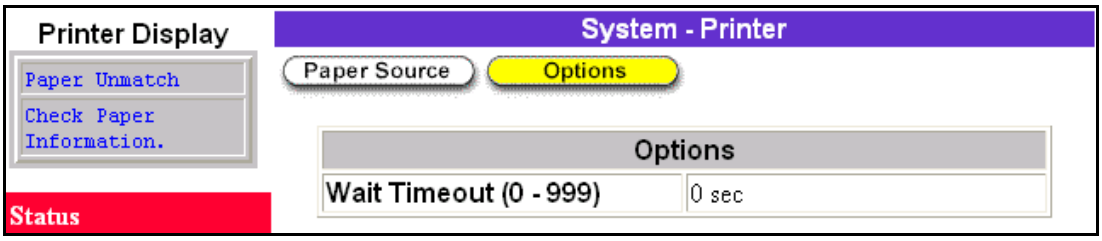
- Status
- System
  - General
  - Printer
  - Finisher
  - Configuration
  - Accounting
  - Jobs
  - Dealer
- Service

Tray 1		Current Value	Pattern 1
Paper Size		A4 LEF 297x210	Letter LEF 11x8.5
Paper Type		Plain	Plain
Paper Color		White	White
Paper Weight		75 gmm	75 gmm
Custom Size	X	*****	*****
	Y	*****	*****
Tray Adjust	X Front	0.00 inches	0.00 inches
	X Back	0.00 inches	0.00 inches
	Y Front	0.00 inches	0.00 inches
	Y Back	0.00 inches	0.00 inches
Color Control H Direction	Simplex R:Front Side	0.12%	0.12%
	Duplex F:Front Side	0.00%	0.00%
	Duplex F:Back Side	0.00%	0.00%
	Duplex R:Front Side	0.12%	0.12%
	Duplex R:Back Side	0.12%	0.12%
Color Control V Direction	Simplex R:Front Side	0.12%	0.12%
	Duplex F:Front Side	0.00%	0.00%
	Duplex F:Back Side	0.00%	0.00%
	Duplex R:Front Side	0.12%	0.12%
	Duplex R:Back Side	0.12%	0.12%
H Positioning	Positioning	Enable	Enable
	Skew Detect	Enable	Enable
Detach Voltage Front Engine	PWM1	144	144
	PWM2	144	144
	PWM3	144	144
	PWM4	144	144
Detach Voltage Rear Engine	PWM1	144	144
	PWM2	144	144
	PWM3	144	144
	PWM4	144	144

Setting Back

Options

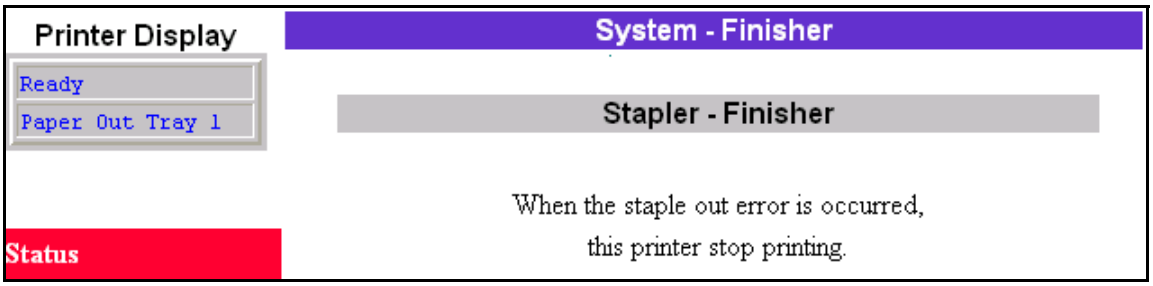
The Options page displays additional printer parameters.



System-Finisher

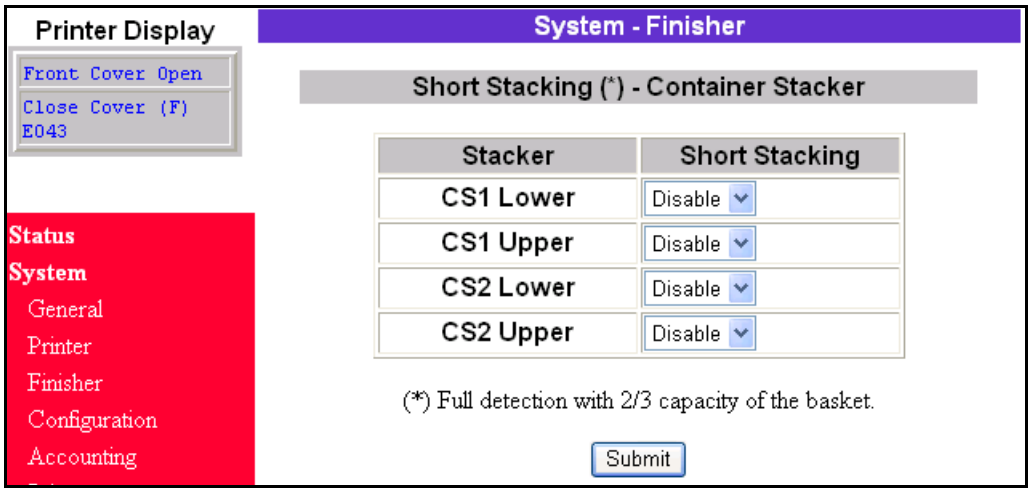
Staple Error

This page indicates that printing will stop when the Standard Finisher runs out of staples during a staple job. There is no user input for this page.



Short Stacking

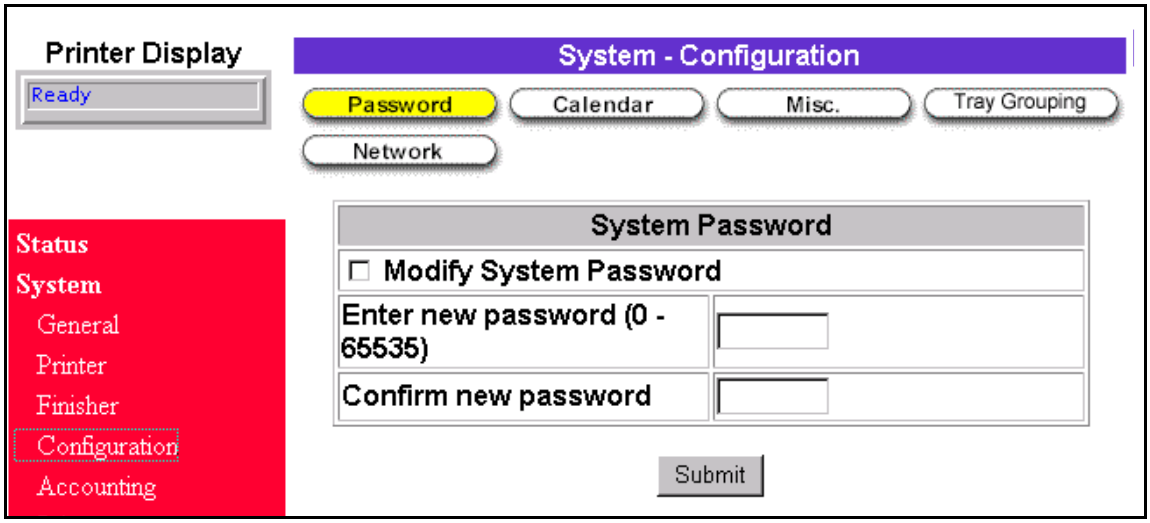
The Short Stacking page allows you modify the detection of Stacker Full. After making any desired changes, click Submit to update the setting.



System-Configuration

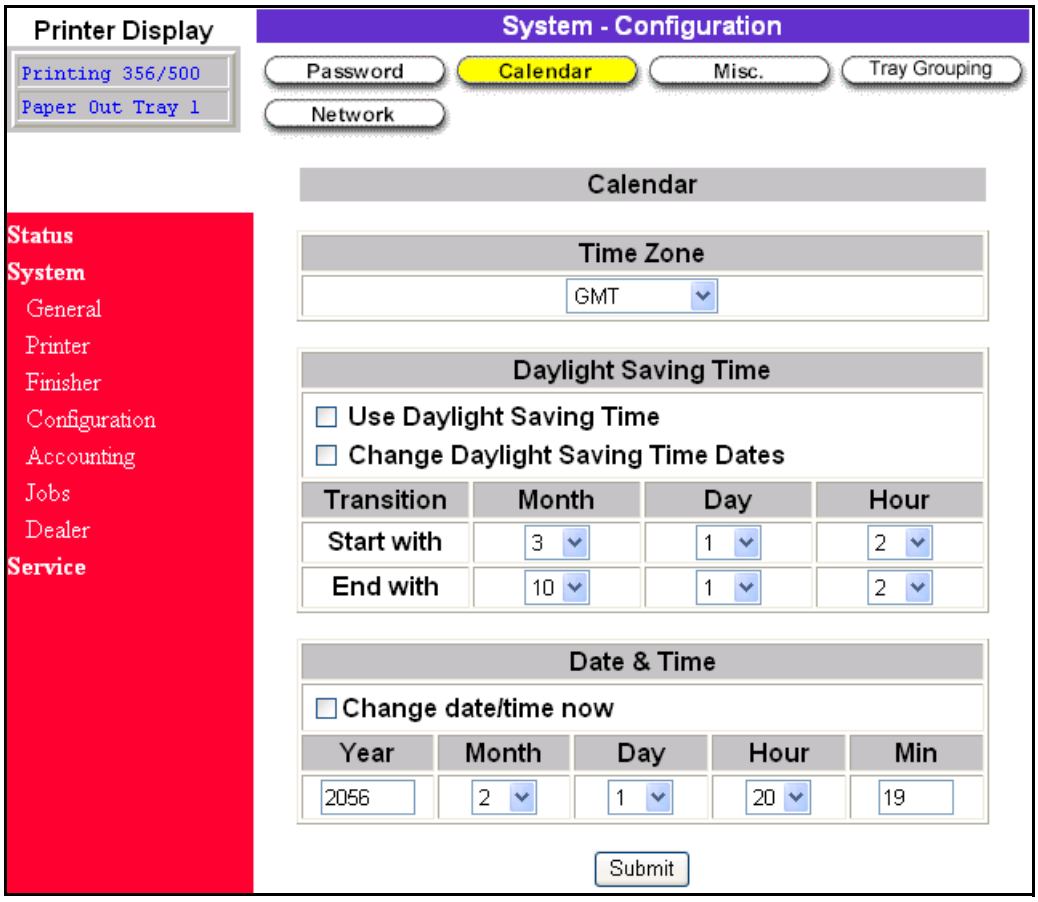
Password

The System-Configuration Password page lets you modify the system password. After filling in the required information, click Submit to update the password.



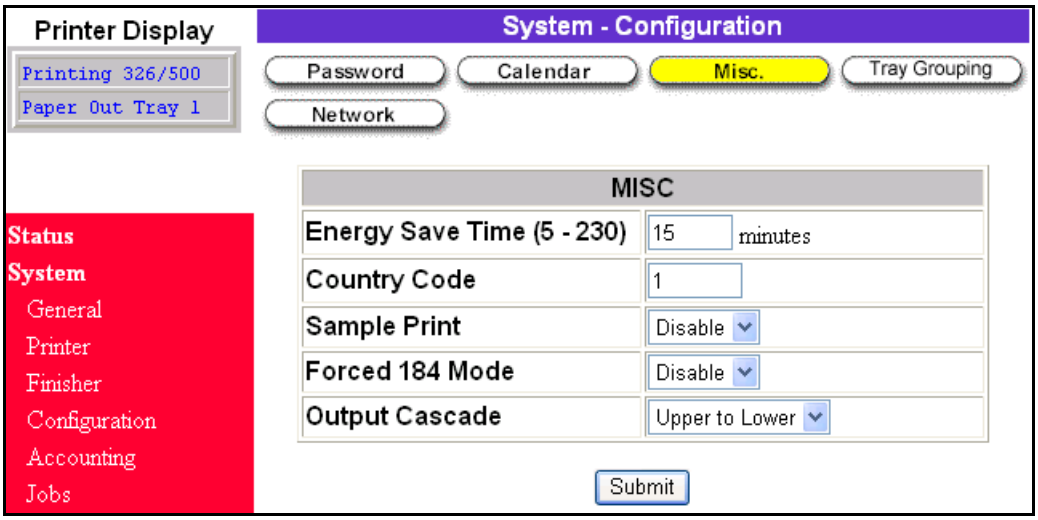
Calendar

The Calendar page lets you view or modify the system date and time information. To modify any of these settings, make the desired changes, and click Submit to update the settings.



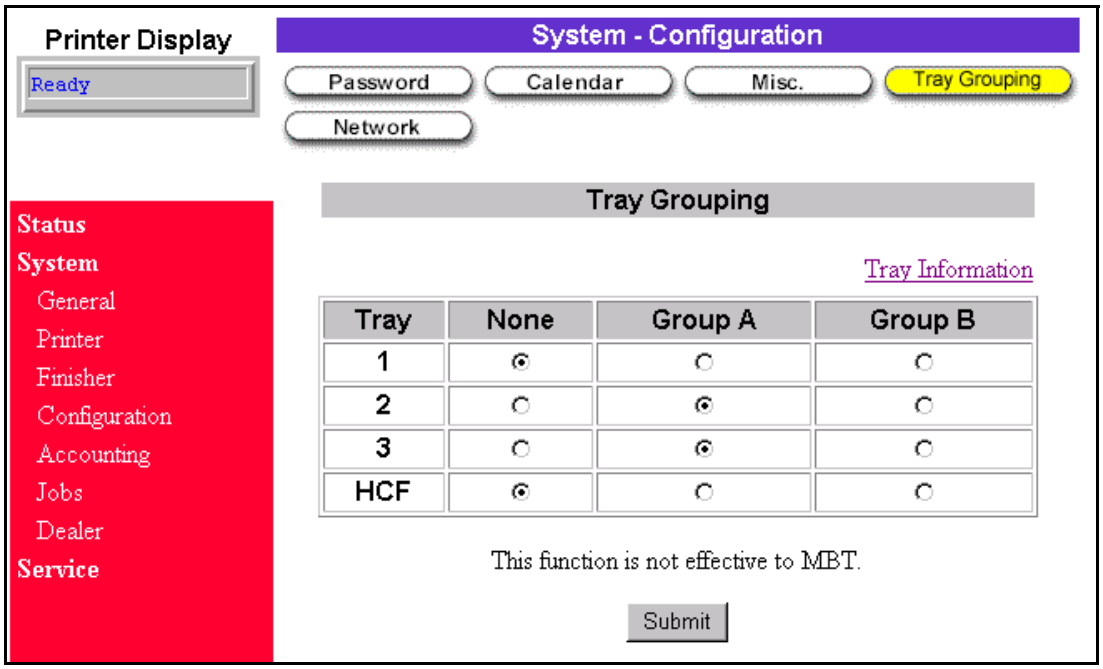
Misc.

The Misc. page allows you to view or modify the Energy Save Time, Country Code settings, Sample Print, Forced 184 Mode and Output Cascade, After making the desired change, click Submit to update the setting.



Tray Grouping

You can define the grouping of input tray (paper source) by accessing this item, Input trays that belong to the same group will be handled as one physical tray. Click the submit button to make the definition effective.

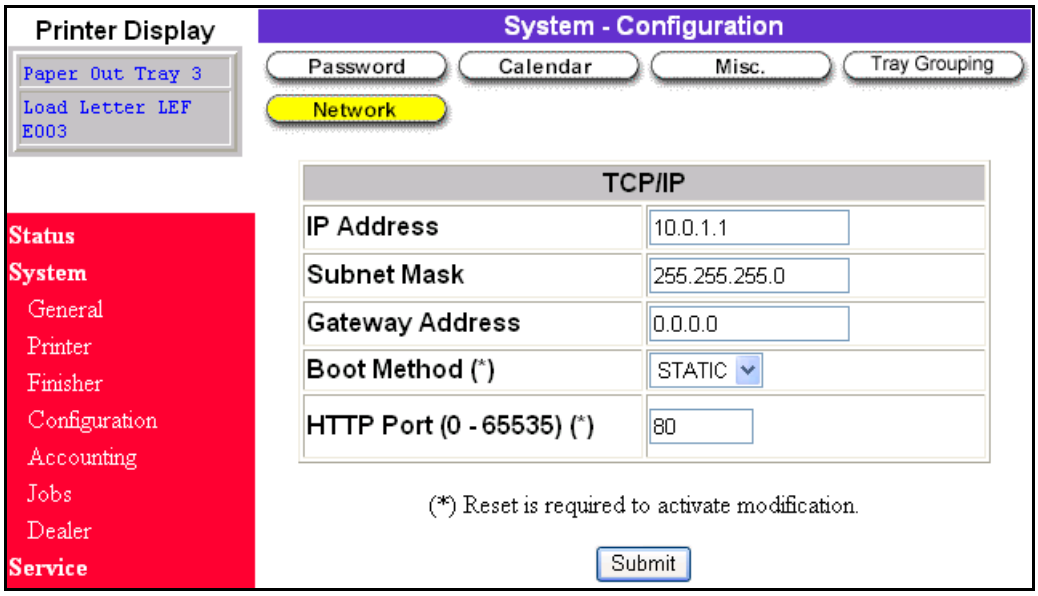


NOTE:

The Tray Grouping function is effective to all input trays except MBT. It is recommended that the paper in all input trays that belong to the same group be the same specification in size, type, color and weight.

Network

The System-Configuration Network page allows you view and modify the configuration setting for the onboard network controller. After making any desired changes, click Submit to update the settings.

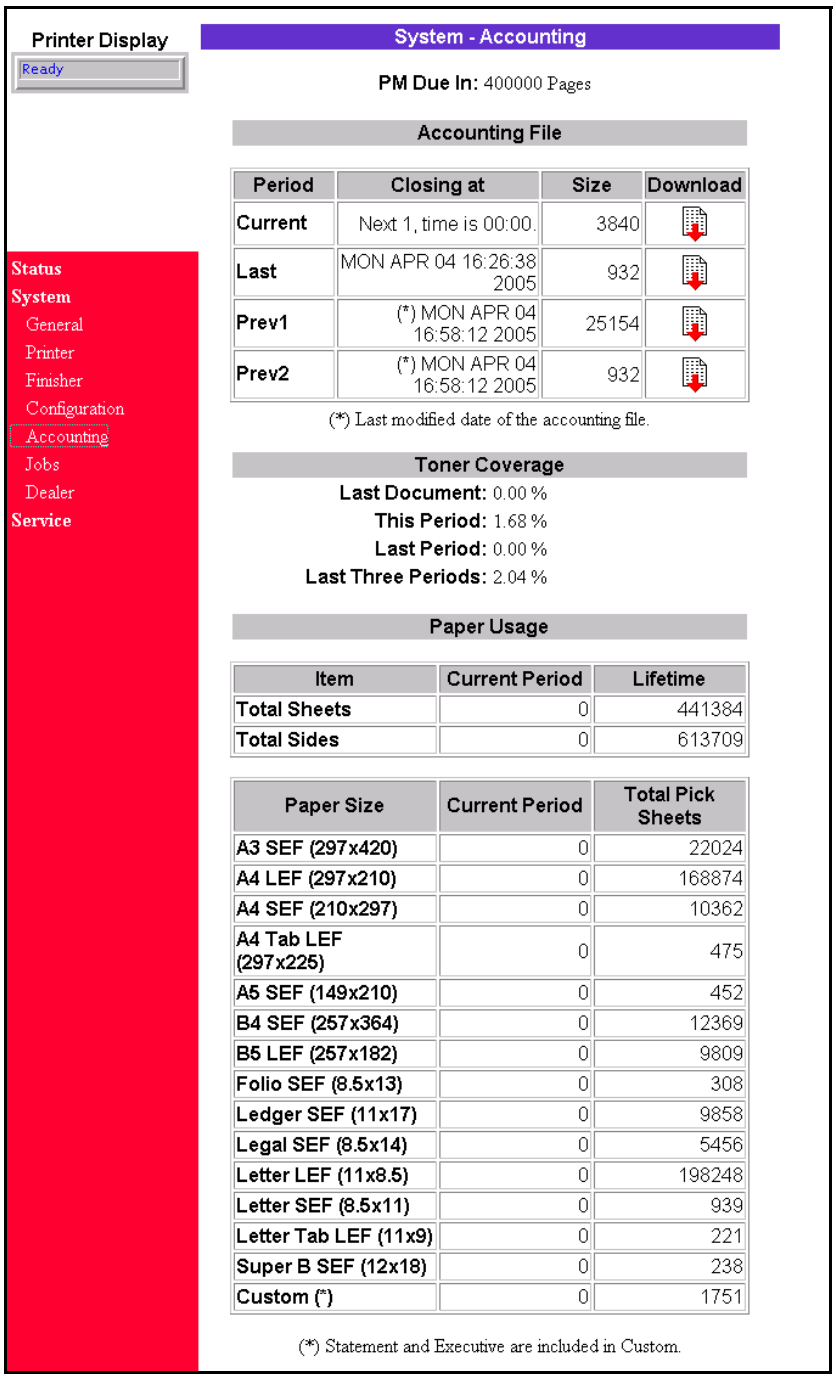


System-Accounting

The System-Accounting page displays detailed accounting information that you can use to monitor and control your printer resources.

NOTE:
The data shown on the Accounting file relates to the selected engine only (Front or Rear).

.



The accounting information displayed on the web page includes:

- the number of pages left before the next PM service
- the closing date of the period
- the percent of toner coverage for the last printed document, the current billing period, and the last three billing periods

  NOTE:
  Toner coverage data may be disabled at your installation. See your Service Technician if you need additional information.

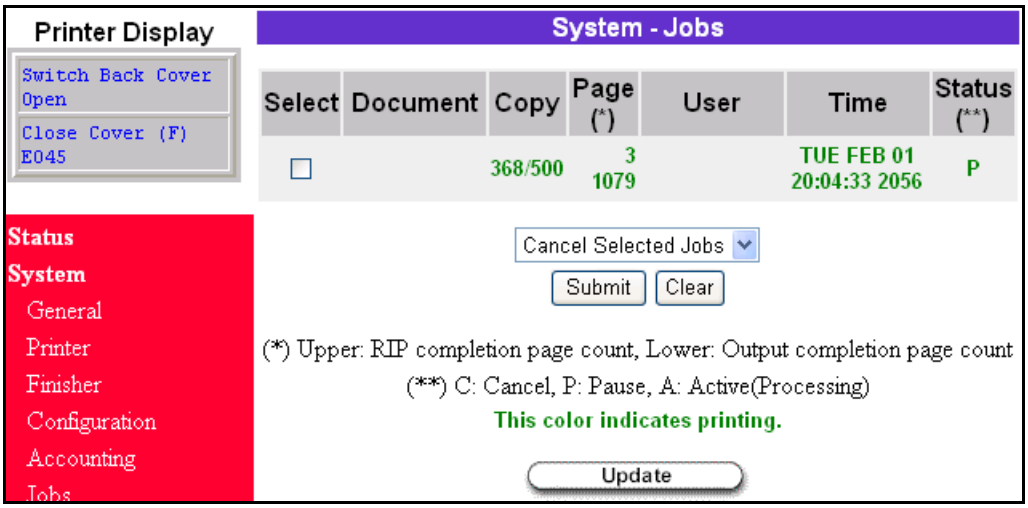
- current period and lifetime counts for all paper sizes. (The Current Period value is increased when a page is printed. The Lifetime value is increased when the engine picks up a paper from an input tray.)

For details on accessing and using the accounting information, refer to "Using the Accounting File" on page 4-32.

System-Jobs

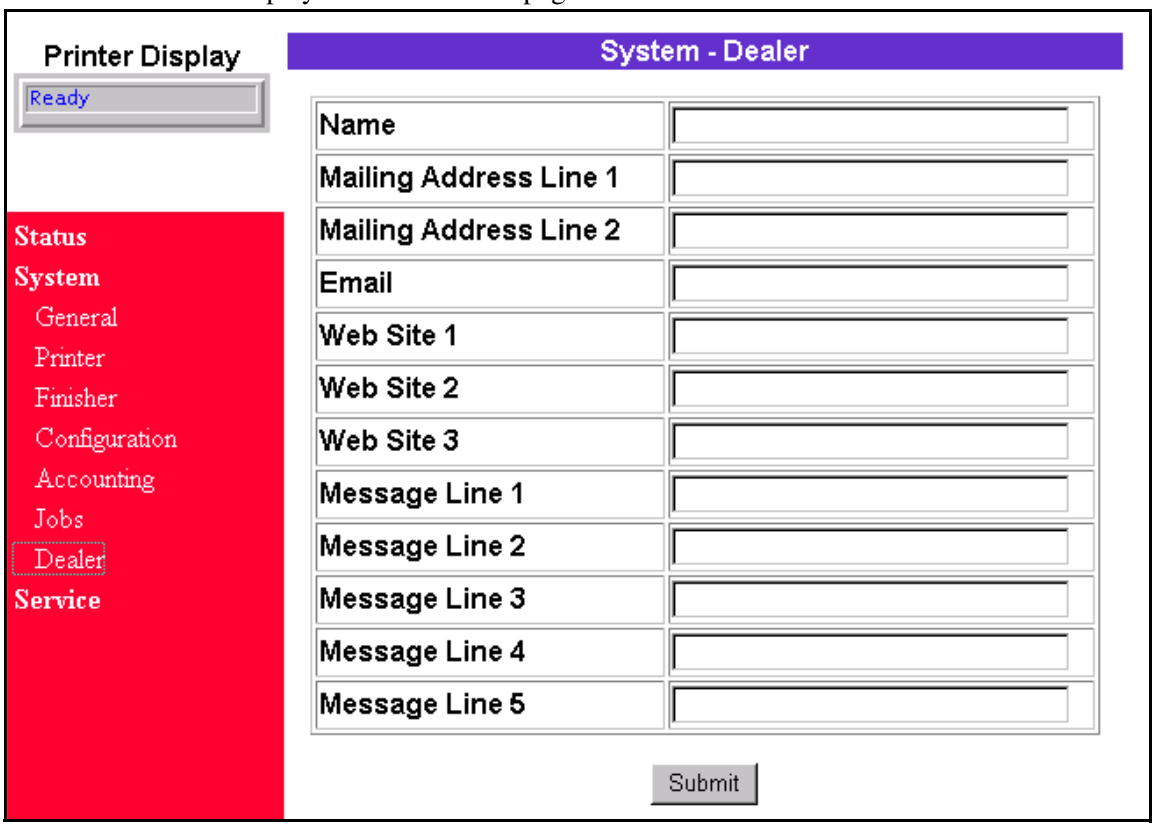
The System-Jobs page displays all of the jobs in the system. For each job, all available information is displayed.

Jobs can be monitored or cancelled from this page. To cancel a job, simply check the box in the Select column for the job(s) you want to cancel and click Submit. Click Update to refresh the display.



System-Dealer

The System-Dealer page contains the dealer's name and addresses. Additional information can be entered in the Message Line text boxes. The information entered here is displayed on the Vendor page which is available to all users.



Using the Accounting File

The accounting file contains detailed usage information that you can use to monitor and control your printer resources. The file contains precise usage data that gives you the power to calculate accurate and timely usage data on your printer supplies and service.

NOTE:

The data shown on the Accounting file relates to the selected engine only (Front or Rear).

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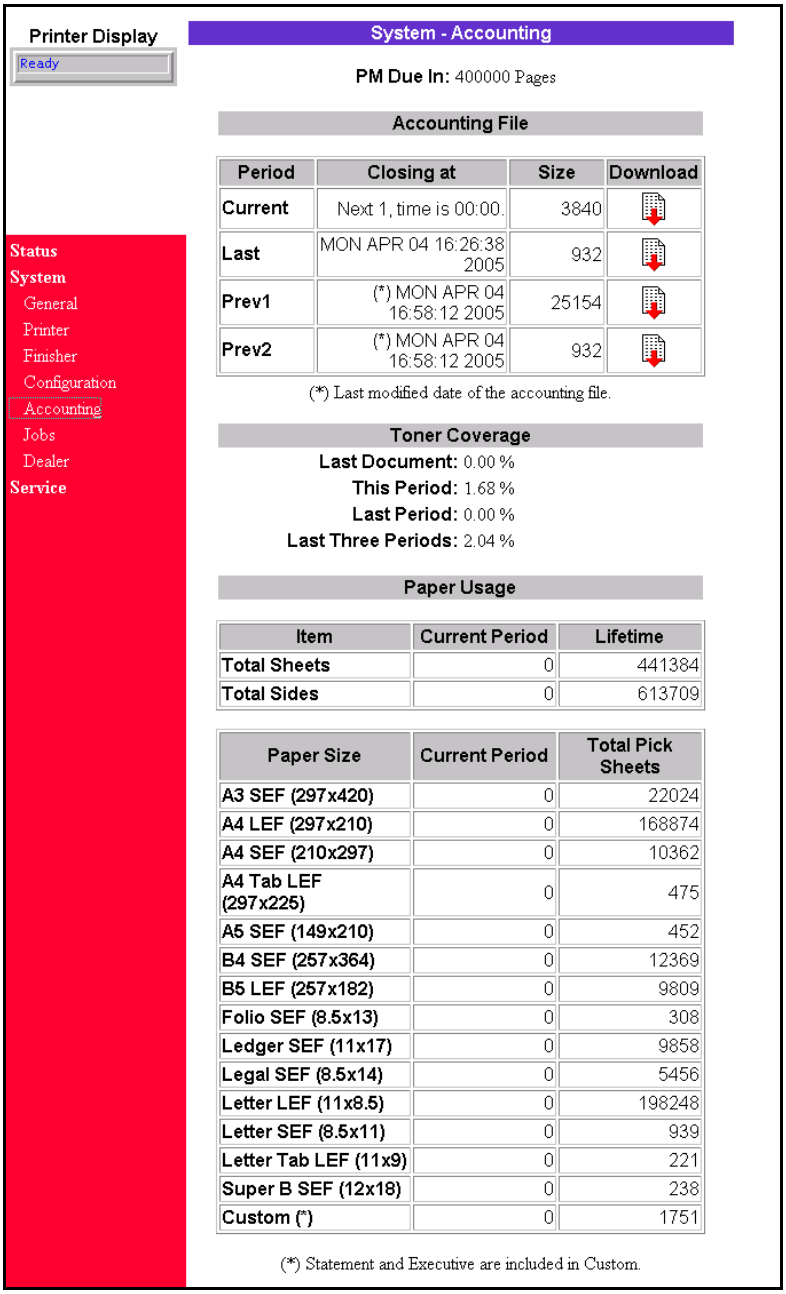


With the Web Utilities, authorized users have quick and easy access to the information in the accounting file. Follow the instructions on page 4-4 to access the Web Utilities.

The System-Accounting web page, shown above, displays actual usage information for the latest job and for specific time periods. Authorized users can monitor paper and toner usage, as well as the number of pages left in the current PM cycle. The web page also displays comprehensive totals of current period counts and lifetime counts for all paper sizes, as well as the total number of sheets and total number of sides printed.

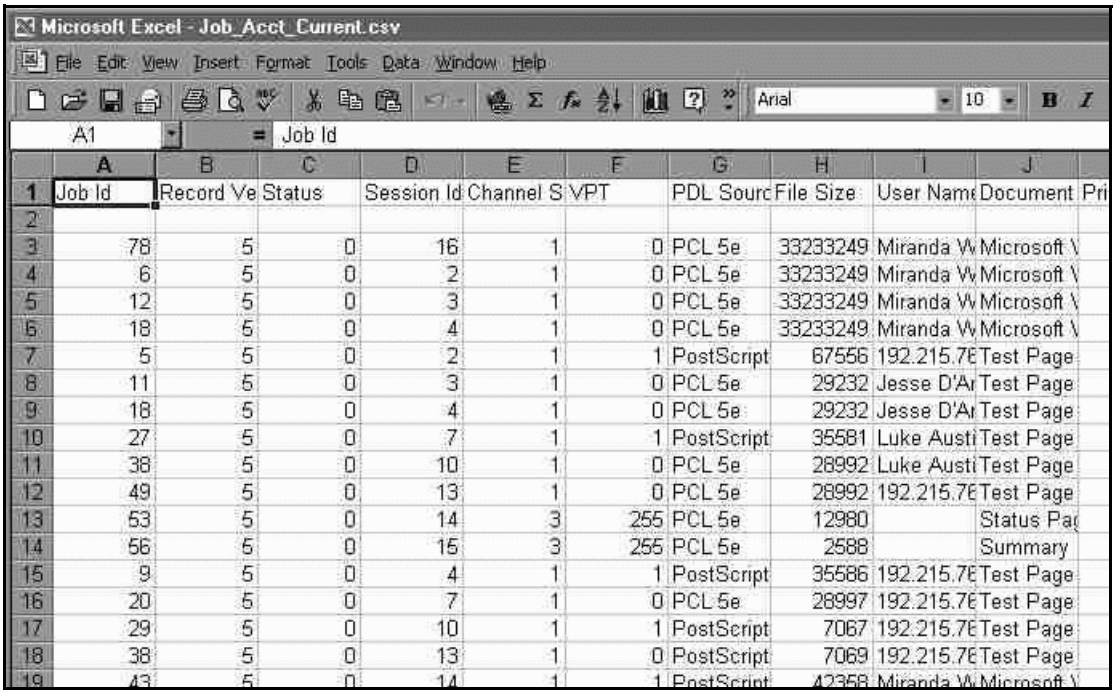
> ***NOTE:***
> *Toner coverage data may be disabled at your installation. See your Service Technician if you need additional information.*

You can also download the accounting file to your desktop computer. The file is ideal for use in accounting programs to track and control printing resources.

The accounting file is updated each time a job enters the system. First, a detailed accounting record is created for each job. Then the accounting record is saved in the accounting file on the printer's hard drive. The file is in comma-delimited (.csv) format and can be imported into Excel or any accounting package that supports comma-delimited or ASCII formats.

To download the file, right-click on the icon (if you are using Internet Explorer) in the Download column and save the file with a new name in a new location.

The sample below shows the accounting file imported into an Excel worksheet. The fields in the accounting file are described on page 4-35.


Microsoft Excel - Job_Acct_Current.csv

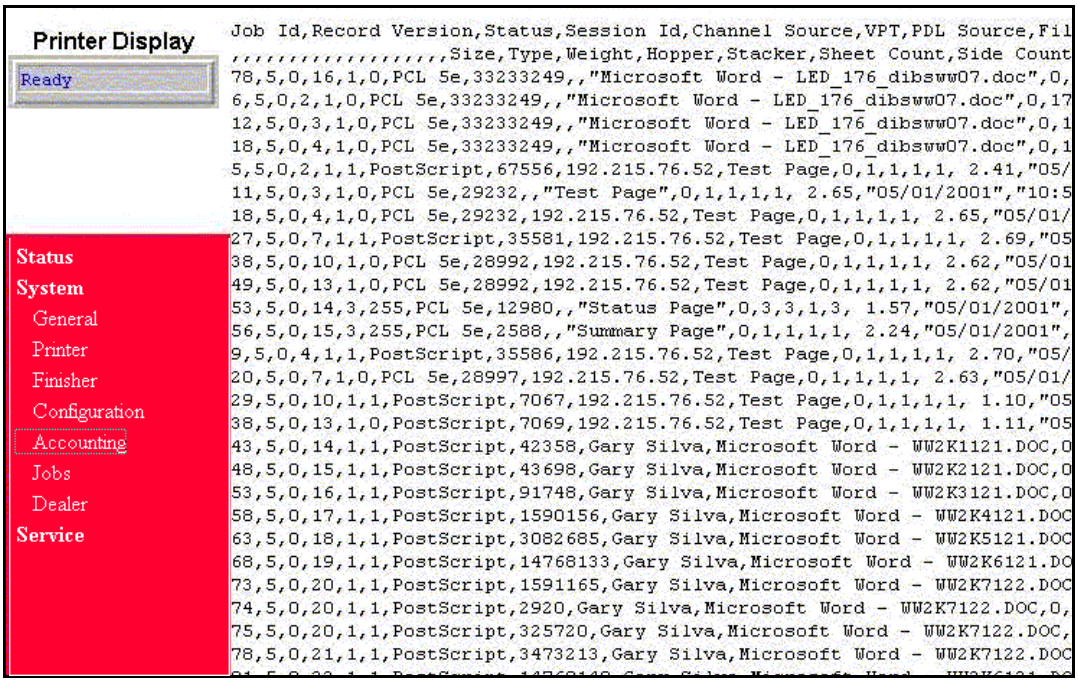
File Edit View Insert Format Tools Data Window Help

Arial 10 B I

A1 = Job Id

	A	B	C	D	E	F	G	H	I	J	
1	Job Id	Record Ve	Status	Session Id	Channel S	VPT	PDL Sourc	File Size	User Name	Document	Pri
2											
3	78	5	0	16	1	0	PCL 5e	33233249	Miranda W	Microsoft \	
4	6	5	0	2	1	0	PCL 5e	33233249	Miranda W	Microsoft \	
5	12	5	0	3	1	0	PCL 5e	33233249	Miranda W	Microsoft \	
6	18	5	0	4	1	0	PCL 5e	33233249	Miranda W	Microsoft \	
7	5	5	0	2	1	1	PostScript	67556	192.215.7E	Test Page	
8	11	5	0	3	1	0	PCL 5e	29232	Jesse D'Ar	Test Page	
9	18	5	0	4	1	0	PCL 5e	29232	Jesse D'Ar	Test Page	
10	27	5	0	7	1	1	PostScript	35581	Luke Austi	Test Page	
11	38	5	0	10	1	0	PCL 5e	28992	Luke Austi	Test Page	
12	49	5	0	13	1	0	PCL 5e	28992	192.215.7E	Test Page	
13	53	5	0	14	3	255	PCL 5e	12980		Status Pa	
14	56	5	0	15	3	255	PCL 5e	2588		Summary	
15	9	5	0	4	1	1	PostScript	35586	192.215.7E	Test Page	
16	20	5	0	7	1	0	PCL 5e	28997	192.215.7E	Test Page	
17	29	5	0	10	1	1	PostScript	7067	192.215.7E	Test Page	
18	38	5	0	13	1	0	PostScript	7069	192.215.7E	Test Page	
19	43	5	0	14	1	1	PostScript	42358	Miranda W	Microsoft \	

If you click (or double-click, depending on your browser) on the icon in the Download column, the accounting file is displayed on the web page without any formatting.



Fields in the Accounting Record

Field Name	Description	
Job Id	Internal ID.	
Record Version	Accounting file format version.	
Status	0	Completed
	2	Canceled
Session Id	Internal ID.	
Channel Source	1	Network I/F
	3	Offline Printing (Status Page, Test Print, etc.)
VPT	Reserved.	
PDL Source	Reserved.	
File Size	File size in bytes.	
User Name	User name.	
Document Name	Document name.	
Priority	Reserved.	
Completed Sides	Completed side count.	
Completed Copies	Number of completed copies.	
PDL Sides	Expected side count.	
PDL Copies	Number of PDL copies.	
Total Sets	Number of sets in the job.	
Total Sheets	Number of paper sheets used.	
Added Sides	Number of back sides generated for simplex pages (Duplex-Always mode only).	
Toner Coverage	Average toner coverage. (May be disabled at your installation. See your Service Technician for additional information.)	
Date Created	Date of record creation.	
Time Created	Time of record creation (i.e., end of job).	
Duration	Duration of job in seconds (from start of job to Time Created).	
Media *n* Size*	0	A5 SEF.
	2	SuperB.
	3	B5 LEF.
	4	Letter SEF.
	5	Letter LEF.
	6	B4 SEF.
	7	A4 Tab stock.
	8	A4 SEF.
	9	A4 LEF.
	10	A3 SEF.
	11	8.5" x 12.4" SEF.
	12	8.5" x 13" SEF (folio).
	13	Legal SEF.
	14	Ledger SEF.
	15	Letter Tab stock.
	16	Custom size.
	33	Statement SEF.
	34	Executive LEF.

Fields in the Accounting Record

Media *n* Type*	1	Plain.
	2	Bond.
	3	Color.
	4	Label.
	5	Letterhead.
	6	Pre-printed.
	7	Pre-punched.
	8	Recycled.
	9	Special.
	10	Transparency.
	11	Pre-punched Transparency.
	12	Other.
Media n Weight*	Media weight in lbs. or g/m^2.	
Media n Hopper* *(Input paper tray)*	0	No tray.
	1	Tray 1.
	2	Tray 2.
	4	Tray 3.
	8	MBT.
	16	HCF.
	32	Inserter
	255	Auto tray selection.
Media n Stacker* *(Output paper tray)*	0	No stacker.
	1	Stacker 1 (no finisher, default output).
	2	Stacker 2 (Elevator tray with Finisher).
	4	Stacker 3 (Upper tray, Finisher).
	8	Stacker 4 (Booklet Finisher).
	16	Stacker 5 (Container Stacker)
	32	Stacker 6 (Container Stacker)
	64	Stacker 7 (Container Stacker)
	128	Stacker 8 (Container Stacker)
	255	Auto stacker selection.
Media n Sheet Count*	Number of sheets for this media selection.	
Media n Side Count*	Number of sides for this media selection.	
* Media fields are repeated for each media selection in the job (10 maximum).		

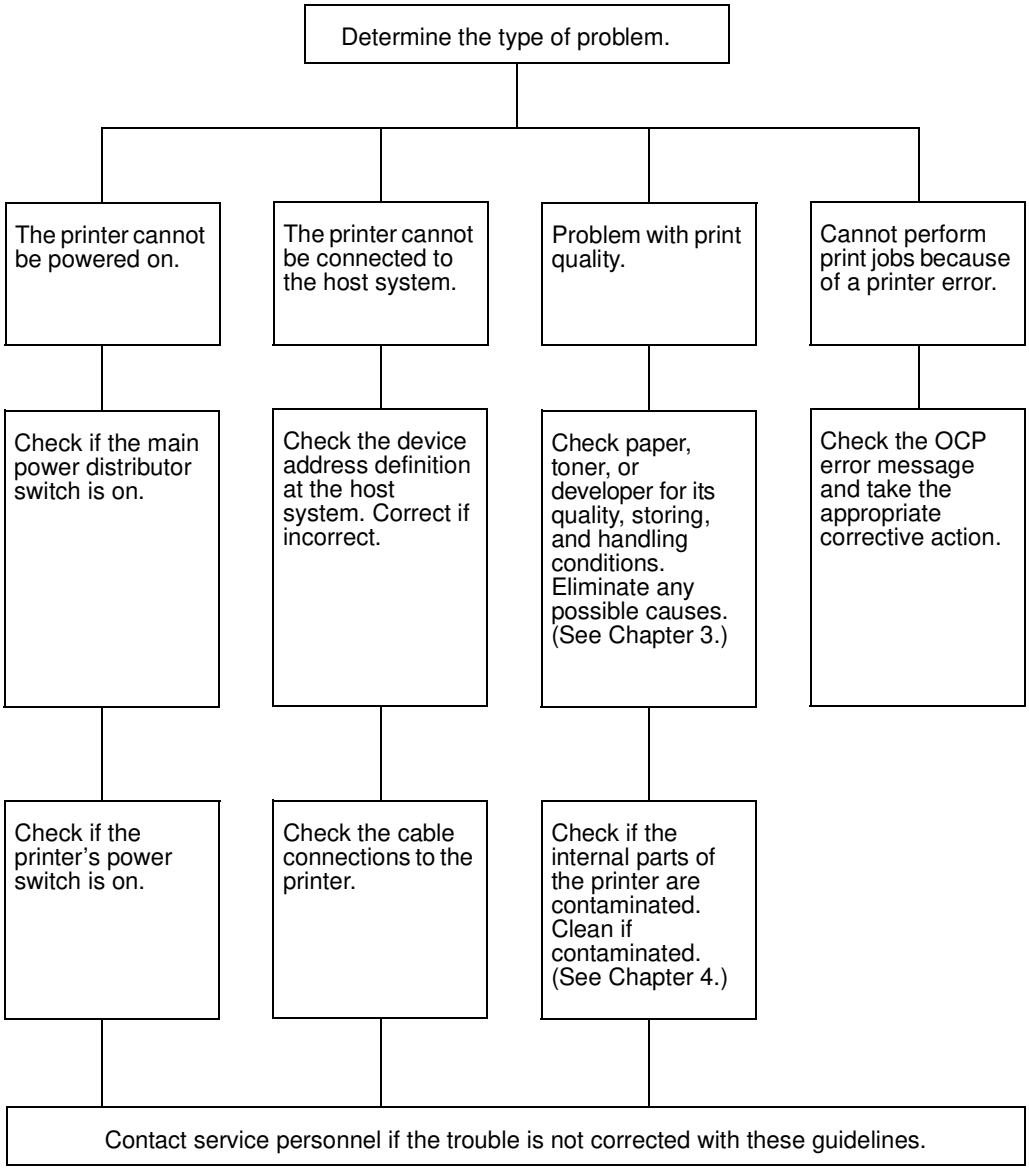
Chapter 5
Troubleshooting

What This Chapter Provides

This contains the following information.

NOTE:
The following sections provide troubleshooting guidelines. If you are still unable to resolve a problem, contact your authorized service center.

Guidelines Flowchart



Basic Troubleshooting Tips

The following are some common situations that can cause a variety of problems. Before you look for a specific problem use the tips in this list.

- Check the power and all cables to the printer.
- Check the printer OCP for information.
- If possible, print the Status Page from the Reports menu and verify that the settings match your configuration.
- Check the current status of the printer.
  - The current status appears on the OCP.

    If the printer is processing your job, the status message reflects this.

    If your print job does not appear in the status message, another user's job may be printing before yours or the printer may already have finished printing your job.

    If your job is waiting to print, it appears in the list for the print queue.

General Printing Problems

If this happens	Try this
Paper handling problems (jams)	• Check pick rollers and clean area of problem paper source. • Straighten paper stack of problem paper source. • Confirm paper size in printer driver, paper tray, and OCP.
Drum Wrap	• Paper fibers should run parallel to the paper feed direction. See Appendix C. • Paper curl should be less than 10mm. See Appendix C.
Printer does not respond to a Print command	• Try printing a Status Page from the Reports menu. If you are able to print the Status Page but still cannot print a file from your computer, contact your system administrator or your authorized service/support center. • Verify that you printed to the correct queue. • If you are still unable to print, contact your system administrator.
Message requests a paper size that you do not have	1. Cancel the job. 2. Change the page size in the Print option of your application. 3. Resubmit the job.
Status Page does not print	• If the OCP shows a diagnostic or error message, take the appropriate corrective action. • If the OCP is completely blank, shut down and restart the printer. When the printer reaches Ready status, try printing a Status Page from the Reports menu. If the Status Page still fails to print, contact your authorized service/support center.
Stacked Paper Sticks	• Too much paper on the Finisher. - Remove the stacked paper from the Finisher. • Print density is too high. - See “Print Density Adjustment” on page 6-68
Print settings for your job output do not match the settings you gave	• Verify that you did not override the setting for job in another place.
Paper is not being picked from the tray	• Perform a test print on the tray.
Staple function is not working	• Perform a stapling test using the Test Print.
Job offset is not working	• Perform aa job offset test using the Test Print.
Incorrect font is printed.	• Print a font list report to confirm the font is available. • Confirm the printer driver setting. • Refer to the README file in the printer driver CD-ROM.

Print Quality Problems

If this happens	Try this
Page is wrinkled or printed characters are blurred	• Paper does not meet specification. - See “Media Guidelines” on page C-1 • Moisture content is too high. - Replace with newly unwrapped paper. • The side guide is not adjusted properly. - Adjust to proper size. • OCP setting does not match loaded paper. - Load the correct size paper • Print density is too high. - Adjust print density. See “Print Density Adjustment” on page 6-68
Paper is streaked, spotted, or smudged	• The inside of the printer is dirty. - See “Cleaning the Inside of the Printer” on page 6-47 • Print density is too high. - See “Print Density Adjustment” on page 6-68 • Change of paper settings. - Print a Cross Pattern test print to remove dirt. • The Drum may be damaged. - Replace the drum. **Notes:** *This is an electric printing device and slight dots or smudges are unavoidable.* *A paper jam may cause staining of the fuser unit. Print several pages to remove the stain. Cleaning or replacement of the fuser unit is required in some cases.*
Print density of color toner decreases. Fusing of color toner is poor. Printing is too light.	• Moisture content of paper is high. - Replace with newly unwrapped paper. • OCP setting does not match loaded paper. - Load the correct size paper. • Print density is too low. - Adjust print density. See “Print Density Adjustment” on page 6-68 • Heat Roller Temperature is too low. -Adjust temperature. See “Heat Roller Temperature Adjustment” on page 6-69 • Print density gradually decreased by low density continuous printing. - Print a Halftone Pattern of several hundred pages to increase print density. Repeat until print density is recovered. • The developer may be damaged. - Replace the developer unit.

If this happens	Try this
Voids or vertical voids	• Moisture content is too high. - Replace with newly unwrapped paper. • Paper does not meet specification. - See “Media Guidelines” on page C-1. • Creased or wrinkled paper is loaded in the tray. - Removed damaged paper or replace with newly unwrapped paper. • Print density is too high. - Adjust print density. See “Print Density Adjustment” on page 6-68 • Host application setting is incorrect. - Correct the application settings. • There may be condensation inside the printer. - Turn on the printer power and leave it for 30-60 minutes, then start printing. • The drum unit may be damaged. - Replace the drum unit.
The tip or back end of paper is dirty	• Clean the NIP Guide and TR guide in the Conveyance Belt area. • Clean the Finisher Exit Roller.
Part of solid printing is scraped	• Print Density is too high - Adjust print density. See “Print Density Adjustment” on page 6-68
Printing is too dark	• Print Density is too high - Adjust print density. See “Print Density Adjustment” on page 6-68 • Print Density is too high after initial power up. Adjust print density lower. After several thousand pages are printed, return the print density to the higher setting.

Duplex Printing Problems

If this happens	Try this
Duplex pages print upside down	Change the Duplex print option that specifies how the second image is placed relative to the first image.
Paper Jam	• Confirm paper weight setting in the OCP. • Use paper (grain long) with fibers that run in parallel with the paper feed direction.

Printing Notes

- Duplex on Transparency

  When duplex printing and Transparency, Transparency-pp, or Label stock are specified at the same time, the job is delivered in simplex mode.

- Input Tray PCL

  The MBT cannot be included in PCL Tray Auto Select. If the MBT is included, and even if the specified paper is loaded in the MBT, printing will stop and the OCP will prompt you to load the correct paper size to the MBT.

- Duplex on Tab Stock

  When duplex printing and A4 Tab or Letter Tab paper are specified, the job is delivered in simplex mode.

- Single Page Staple

  When stapling is specified on a one-page document, no stapling will occur.

- Out of Staples

  When the Finisher runs out of staples the Error message will appear on the OCP.

- Staple Upper Limit

  If the staple job contains more than 50 sheets or if the thickness of the paper is more than 5.0mm, the job is delivered offset with no stapling.

- Staple/Collate

  If stapling is specified but not collating, the job will not be stapled.

- Staple/Face Up

  When stapling and face-up delivery are both specified, the job will be delivered face up and offset with no stapling.

- Staple/Upper Tray

  When stapling and upper tray are both specified, the job will be delivered stapled in the elevator tray.

- Staple/Paper Type

  When staple and transparency or transparency-pp are both specified, the job is delivered offset with no stapling.

- Offset Printing/Upper Tray

  When offset printing and upper tray are both specified, the job is delivered to the Upper Tray with no offset.

- Staple Feasible Paper Weight

  When stapling is specified and the paper weight exceeds 34 lb. (128 g/m^2) the printer will deliver the job offset with no stapling.

- Staple/Offset

  When stapling and offset are both specified, the job is delivered stapled with no offset.

- Collate

  For collated output disable the application software and enable the printer driver.

- Report/Test Print

  When report and test printing are chosen from the OCP while a job is printing, the report and test are printed after the current job is complete.

- Perform a test print to check print quality prior to starting daily print jobs and prior to starting jobs requiring high print quality.
- Continuous half-tone or solid black printing may cause print quality degradation.
- Frequent high black-to-white ratio and high-density printing can cause degraded print quality such as black dots or offset. Check the print quality periodically and clean the inside of the printer as described in “Cleaning the Printer” on page 6-46.
- Color printing causes more toner scatter than black printing, which results in the inside of the printer becoming dirty easily. Check the print quality periodically and clean the inside of the printer as described in “Cleaning the Printer” on page 6-46.
- A high black-to-white ratio on duplex print jobs can cause paper to stick to the finisher. To avoid this problem, remove paper from the finisher stack frequently or lower the print density.
- Print density may be high for several thousand pages after powering on the printer. If that is the case, set the print density to “Light” for several thousand pages, then return the print density to “Medium”. See “Print Density Adjustment” on page 6-68.
- Print density may be gradually decreased by continuous low-density printing. Print several hundred pages of a half-tone pattern to increase print density.
- After continuous printing of thick paper, the first sheet of a new print job may pick up dirt from the fuser unit. Run a cross-pattern test print to remove dirt
- When thin paper (less than 28lb) and thick paper (more than 28lb) prints alternately continually, the printing spend decreases.
- Paper jams (e.g. E134) may happen at the Switch Back Station, when printing thick papers (much stiffness).

- Banding may happen when printing half tone. This phenomena happens when papers go into the fuser unit or papers go out from the regist rollers.
- Banding may happen when half tone printing to thick papers (much stiffness). This phenomena happens when papers go into the fuser unit or papers go out from the regist rollers.
- Print position may be gradually shifted to backward in a paper when thick papers printing.
- Multiple paper feed may happen on papers out of the specification (e.g.. Papers have dull edge).
- Paper jams (e.g. E118,E119,E128,E134,etc), stacker jams, poor stacking accuracy and poor staple accuracy may happen on papers with much curl.
- Print start position may change by paper size and paper weight.
- Print density may become light or print uniformity may become poor when printing more than 30% print coverage.
- Stacking accuracy may become poor when printing thin long papers.
- Contamination may happen when printing out of printable area. Paper exit rollers of the finisher may contaminated in short period.
- Print density is dark after replaced with new developer mixture rather than during stable printing.
- In case something hard like a ring, a button is hit to OPC drum, some scratches may happen.
- Tray combination causes print speed down for preventing from happening paper jam.

Network Problems

The following lists some common causes and solutions for network problems. If you suspect printing problems are network related, contact your System Administrator.

1. Is the Ethernet cable broken or otherwise abnormal?

   Change the Ethernet cable.

2. Is the host interface running normally?

   Test printing using a different host.

3. Is there a printer problem?

   Execute a print test to confirm the printer is operating properly.

4. Is the network cable connected to the printer?

5. Were both ends of the network cable connected prior to powering on the printer?

OCP Display Messages

The OCP displays the printer status with 1- to 2-line messages. There are three types of messages: status, warning, and error messages. The following table lists the messages in alphabetical order. Each message is explained and a corrective action is given when applicable.

For information on messages not explained here, please refer to your option-specific user's guide.

Message	Description	Corrective Action
Any Tray Except MBT	The wrong size paper is loaded except in the MBT	Load any tray except the MBT with the requested paper size.
Call for Service E*xxx* or *other text*	Any "Call for Service" message requires a service call for problem resolution. Line 2 is the error code.	See "E2XX, EC#XX, BR#XX, IM#XX Call for Service Error" on page 1-14. Contact your authorized Service Technician and provide the error code displayed on the OCP.
Center Guide Open Close Guide E040	Self-explanatory.	Close the guide.
Center Cover Open Close Guide E041	Self-explanatory.	Close the cover.
Clearing Error	Status message.	Wait for the printer to return to a Ready state.
Container *x* Top Cover Open Close Cover	The top cover of the container is open. *x* is the container number.	Close the cover.
Container *x* V Path Cover Open Close Cover	The v path cover of the container is open. *x* is the container number.	Close the cover.
Creating Software Log	Status message. The printer is creating the requested software log.	Wait for the printer to return to a Ready state.
CS1 Lower Basket Size Change Basket E092	The stacker basket is the wrong size for the requested paper size	Change the basket.
CS1 Upper Basket Size Change Basket E093	The stacker basket is the wrong size for the requested paper size	Change the basket.
CS2 Lower Basket Size Change Basket E094	The stacker basket is the wrong size for the requested paper size	Change the basket.
CS2 Upper Basket Size Change Basket E095	The stacker basket is the wrong size for the requested paper size	Change the basket.
Deleting Jobs	Status message. The selected jobs are being deleted from the print queue.	Wait for the printer to return to a Ready state.
Developer Bottle Not Set Set Developer Bottle E01E	The developer bottle is not seated properly.	Reseat the bottle.
Developer Charge E0A1	Replacement of the developer is running.	Wait for the printer to return to a Ready state.
Developer Discharge E0A2	Replacement of the developer is running.	Wait for the printer to return to a Ready state.
Developer Error Check Color E049	The color is different between the toner unit and the developer unit.	Check the toner and developer units and replace the incorrect unit.
Developer Error Retry Exhausting E048	An error occurred when operating the developer.	Retry. If the error occurs again, contact an authorized Service Technician.

Message	Description	Corrective Action
Developer Error Retry Operation E047	An error occurred when replacing the developer mix.	Retry. If the error occurs again, contact an authorized Service Technician.
Developer Mix End of Life Replace Developer E012	The developer mixture needs to be exchanged.	Replace developer. Printing will resume when the developer is replaced.
Developer Unit Not Set Check Developer Unit E037	Self Explanatory	Set the Developer Unit.
Drum Unit End of Life Replace Drum Unit E016	The photoconductive drum needs to be replaced.	Replace the Drum Unit. Printing will resume when the Drum Unit is replaced.
Drum Wrap Sensor Error Clean Wrap Sensor E018	The drum wrap sensor level is abnormal.	Contact your authorized Service Technician.
Drum Wrap Remove Paper E118	Simplex paper is wrapped around the drum.	Remove the jammed paper.
Drum Wrap Remove Paper E119	Duplex paper is wrapped around the drum.	Remove the jammed paper.
Duplex-Always	Duplex-Always mode is enabled.	Contact your System Administrator for additional information.
Elevator Tray Paper Full Remove Paper E009	The output tray of the Standard Finisher is full.	Remove paper from the elevator tray.
Elevator Tray Paper Full Remove Paper E00A	Paper did not stack properly in the output tray of the Standard Finisher.	Remove paper from the elevator tray.
Enter new password	Passwords are for use by System Administrators and Service Technicians only.	Contact your System Administrator for additional information.
Enter new password again	Passwords are for use by System Administrators and Service Technicians only.	Contact your System Administrator for additional information.
Enter service password	You must provide the service password to gain access to the selected menu item.	Contact your Authorized Service Technician if you need access to the Service menu.
Enter system password	You must supply the system password to gain access to the selected menu item.	Contact your System Administrator if you need access to menu items that are password protected.
Entrance Paper Guide Open Close Guide	The Entrance Paper Guide is located behind Front Cover R of the Publishing Finisher.	Close the guide completely, then close the cover.
Finisher Front Cover Open Close Cover E03F	The front cover of the Standard Finisher is open.	Close the cover.
Front Cover Open Close Cover E043	Self-explanatory.	Close the cover.
Fuser Unit End of Life Replace Fuser Unit E015	The fuser unit needs to be replaced.	Contact your authorized Service Technician.
Fuser Warning (life) F/R	The fuser unit has been operated more than the specified time F:Front Engine R:Rear Engine	Be aware that service maintenance is regured when reaching the specified time, Refer Replacing the Fuser Cleaning Web on 6-15 page.
Fuser Web End of Life Replace Fuser Web E014 or E017	The fuser cleaning web needs to be replaced.	Replace the Fuser Cleaning Web. Printing will resume when the Fuser Cleaning Web is replaced.

Message	Description	Corrective Action
H Pos Sensor Error Clean H Pos Sensor E01F	Image Sensor (H Pos Sensor) is dirty.	Clean the Image Sensor.
Getting Time xxx.xxx.xxx	Getting the time	None
HCF Open Close Tray E023	The door of the high capacity feeder is open.	Close the door.
HCF Top Cover Open Close Cover E046	Self-explanatory.	Close the cover.
Heater Off Mode	Status message	Heater off mode is cancelled when 1. the printer is On Line 2. any OCP key is pushed. 3. the consumable counter is reset from the Web. 4. printer Status is displayed from the Web.
Hopper Size Unmatch Load Paper E090	The wrong size paper is loaded in the hopper.	Load the requested size.
Input Keycode	A valid keycode is required to activate this feature.	Contact your System Administrator or authorized Service Technician.
Input Station Cover Open Close Cover E044	The IS cover is also referred to as the *vertical path cover*.	Close the cover.
Insufficient Disk Space One Copy Job	There is not enough space for the requested operation. Only one copy is printed.	Increase disk space or send job multiple times. See table below
Invalid Mac Address	H/W Error	Cycle Power. If the error occurs again, contact your Authrized Service Technician.
Invalid Password	A valid password is required to access this area of the OCP.	Retry password. If incorrect, contact your System Administrator.
Invalid Time Server Address	The specified Time Server is invalid.	Check the time server IP address via the Web Utilities.
Invalid Value	Incorrect value entered.	Re-enter value.
IS Cover Open Close Cover E044	Self-explanatory.	Close the cover.
LED Eraser Not Set Set Erase Lamp E080	The LED eraser is not set.	Contact your authorized Service Technician.
Lifting *Tray Name*	The specified tray is moving into the feed position.	Status message. Wait for the printer to return to a Ready state.
Loading Fail Network	Status message.	Wait for the printer to return to a Ready state.
Loading Network	Status message.	Wait for the printer to return to a Ready state.
Low on Front Staples	Status message.	Have replacement staples available.
Low on Rear Staples	Status message.	Have replacement staples available.
Low Toner - Recovery E09A	In process of supplying the toner.	Wait for the printer to return to a Ready state.
MBT Load xx E090	The wrong paper size is loaded in the multi-bypass tray.	Load the MBT with the requested paper size.

Message	Description	Corrective Action
Multi Feed Jam HCF*x* Remove Paper E15D or E15E	Two sheets were fed from the HCF.	Remove the jammed paper.
Multi Feed Jam Tray *x* Remove Paper E15x	Two sheets were fed from the tray. *x* is the tray number.	Remove the jammed paper.
Out of Front Staples Load Staples	The front stapler unit of the Standard Finisher is out of staples.	Replace the front staple cartridge.
Out of Rear Staples Load Staples	The rear stapler unit of the Standard Finisher is out of staples.	Replace the rear staple cartridge.
Paper in Center Path Remove Paper E0Cx	Self-explanatory	Remove the jammed paper.
Paper in Connecting Unit Remove Paper E073	Paper jam in connecting unit of the Publishing Finisher.	Remove the jammed paper.
Paper in Container x path y Remove Paper E0Bx	Paper jam in container stacker. *x* is the container number, *y* is the path number.	Remove the jammed paper. Refer to the Container Stacker User's Guide.
Paper in CS1 Lower Remove Paper E0B7	Paper jam in stacker.	Remove the jammed paper. Refer to the Container Stacker User's Guide.
Paper in CS1 Upper Remove Paper E0B8	Paper jam in stacker.	Remove the jammed paper. Refer to the Container Stacker User's Guide.
Paper in CS2 Lower Remove Paper E0C0	Paper jam in stacker.	Remove the jammed paper. Refer to the Container Stacker User's Guide.
Paper in CS2 Upper Remove Paper E0C1	Paper jam in stacker.	Remove the jammed paper. Refer to the Container Stacker User's Guide.
Paper in Finisher Remove Paper E064	Paper jam in entrance path of the Standard Finisher.	Remove the jammed paper.
Paper in Finisher Remove Paper E065	Paper jam in exit path of the Standard Finisher.	Remove the jammed paper.
Paper in Finisher Remove Paper E066	Paper jam in bypass of the Standard Finisher.	Remove the jammed paper.
Paper in Finisher Remove Paper E067	Paper jam in staple tray of the Standard Finisher.	Remove the jammed paper.
Paper in Finisher Remove Paper E068	Paper jam in exit path of the Standard Finisher sub tray.	Remove the jammed paper.
Paper in Fuser Remove Paper E070	Paper jam in fuser unit.	Remove the jammed paper.
Paper in Input Station Remove Paper E050	Paper jam on IS path 1.	Remove the jammed paper.
Paper in Input Station Remove Paper E051	Paper jam on IS path 2.	Remove the jammed paper.
Paper in Input Station Remove Paper E052	Paper jam on IS path 3.	Remove the jammed paper.
Paper in Input Station Remove Paper E072	Paper jam on feed path of tray table 5.	Remove the jammed paper.
Paper in Input Station Remove Paper E056	Paper jam on IS timing path.	Remove the jammed paper.
Paper in Paper Exit Remove Paper E05E	Paper jam on IS path 12.	Remove the jammed paper.

Message	Description	Corrective Action
Paper in Return Path Remove Paper E05C	Paper jam on return path 1.	Remove the jammed paper.
Paper in Return Path Remove Paper E05D	Paper jam on return path 3.	Remove the jammed paper.
Paper in Stacker *x* Remove Paper	Paper jam in stacker. *x* is the stacker number.	Remove the jammed paper.
Paper in Stacker *x* Top Remove Paper	Paper jam in stacker. *x* is the stacker number.	Remove the jammed paper.
Paper in Stacker *x* V Path Remove Paper	Paper jam in stacker. *x* is the stacker number.	Remove the jammed paper.
Paper in Switch Back Remove Paper E05B	Paper jam on switch back path.	Remove the jammed paper.
Paper in Switch Back Remove Paper E05F	Paper jam on flip path.	Remove the jammed paper.
Paper in Transfer Station Remove Paper E05A	Paper jam on drum.	Remove the jammed paper.
Paper Jam Center Path *x* Remove Paper E14x	Paper jam on center path *x*. *x* is the path number.	Remove the jammed paper.
Paper Jam Container *x* Path *y* Remove Paper E1xx	Paper jam in container stacker. *x* is the container number, *y* is the path number.	Remove the jammed paper. Refer to the Container Stacker User's Guide.
Paper jam CS1 Lower Remove Paper E198	Paper jam in stacker.	Remove the jammed paper. Refer to the Container Stacker User's Guide.
Paper jam CS1 Lower Remove Paper E199	Paper jam in stacker.	Remove the jammed paper. Refer to the Container Stacker User's Guide.
Paper jam CS1 Upper Remove Paper E19A	Paper jam in stacker.	Remove the jammed paper. Refer to the Container Stacker User's Guide.
Paper jam CS1 Upper Remove Paper E19B	Paper jam in stacker.	Remove the jammed paper. Refer to the Container Stacker User's Guide.
Paper jam CS2 Lower Remove Paper E19C	Paper jam in stacker.	Remove the jammed paper. Refer to the Container Stacker User's Guide.
Paper jam CS2 Lower Remove Paper E19D	Paper jam in stacker.	Remove the jammed paper. Refer to the Container Stacker User's Guide.
Paper jam CS2 Upper Remove Paper E19E	Paper jam in stacker.	Remove the jammed paper. Refer to the Container Stacker User's Guide.
Paper jam CS2 Upper Remove Paper E19F	Paper jam in stacker.	Remove the jammed paper. Refer to the Container Stacker User's Guide.
Paper Jam Duplex Path Remove Paper E194	Paper jam on return path 3.	Remove the jammed paper.
Paper Jam Finisher Remove Paper E1D0	Paper jam in Standard Finisher path.	Remove the jammed paper.
Paper Jam Finisher Remove Paper E1D1	Paper jam in Standard Finisher path.	Remove the jammed paper.
Paper Jam Finisher Remove Paper E1D2	Paper jam in Standard Finisher path.	Remove the jammed paper.
Paper Jam Finisher Remove Paper E1D3	Paper jam in Standard Finisher path.	Remove the jammed paper.

Message	Description	Corrective Action
Paper Jam Finisher Remove Paper E1D4	Paper jam in stapler tray of Standard Finisher.	Remove the jammed paper.
Paper Jam Finisher Remove Paper E1D5	Paper jam in the Standard Finisher exit.	Remove the jammed paper.
Paper Jam Finisher Remove Paper E1D6	Paper jam in the bypass of the Standard Finisher.	Remove the jammed paper.
Paper Jam Finisher Remove Paper E1D7	Paper jam in Standard Finisher exit.	Remove the jammed paper.
Paper Jam Finisher Remove Paper E1D8	Paper jam in Standard Finisher path.	Remove the jammed paper.
Paper Jam Finisher Remove Paper E1D9	Paper jam in the exit sub tray of the Standard Finisher.	Remove the jammed paper.
Paper Jam Fuser Remove Paper E128	Paper jam before flip path.	Remove the jammed paper.
Paper Jam Fuser Remove Paper E129	Paper jam on flip path.	Remove the jammed paper.
Paper Jam HCF Remove Paper E190	Paper jam before IS path 5.	Remove the jammed paper.
Paper Jam HCF Remove Paper E192	Paper jam on IS path 5.	Remove the jammed paper.
Paper Jam Input Station Remove Paper E181	Paper jam on IS path 1.	Remove the jammed paper.
Paper Jam Input Station Remove Paper E182	Paper jam before IS path 2.	Remove the jammed paper.
Paper Jam Input Station Remove Paper E185	Paper jam on IS path 2.	Remove the jammed paper.
Paper Jam Input Station Remove Paper E186	Paper jam before IS path 3.	Remove the jammed paper.
Paper Jam Input Station Remove Paper E189	Paper jam on IS path 3.	Remove the jammed paper.
Paper Jam Input Station Remove Paper E191	Paper jam on IS path 5.	Remove the jammed paper.
Paper Jam Input Station Remove Paper E193	Paper jam before IS path 5.	Remove the jammed paper.
Paper Jam Input Station Remove Paper E195	Paper jam in input station.	Remove the jammed paper.
Paper Jam Input Station Remove Paper E18A	Paper jam before IS timing path.	Remove the jammed paper.
Paper Jam Input Station Remove Paper E18B	Paper jam on IS timing path.	Remove the jammed paper.
Paper Jam MBT Remove Paper E18C	Paper jam before MBT timing path.	Remove the jammed paper.
Paper Jam Paper Exit Remove Paper E134	Paper jam before paper out path.	Remove the jammed paper.
Paper Jam Paper Exit Remove Paper E135	Paper jam on paper out path.	Remove the jammed paper.

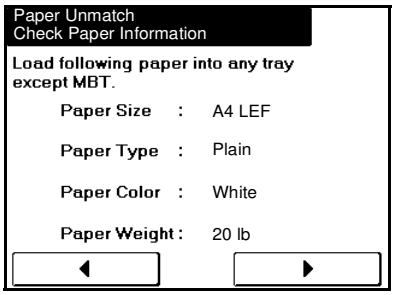
Message	Description	Corrective Action
Paper Jam Regist. Station Remove Paper E110	Paper jam before skew path (simplex).	Remove the jammed paper.
Paper Jam Regist. Station Remove Paper E111	Paper jam on skew path (simplex).	Remove the jammed paper.
Paper Jam Regist. Station Remove Paper E112	Paper jam before skew path (duplex).	Remove the jammed paper.
Paper Jam Regist. Station Remove Paper E113	Paper jam on skew path (duplex).	Remove the jammed paper.
Paper Jam Return Path Remove Paper E138	Paper jam before return 1 path.	Remove the jammed paper.
Paper Jam Return Path Remove Paper E139	Paper jam on return 1 path.	Remove the jammed paper.
Paper Jam Return Path Remove Paper E13A	Paper jam before return 2 path.	Remove the jammed paper.
Paper Jam Return Path Remove Paper E13B	Paper jam on return 3 path.	Remove the jammed paper.
Paper Jam Stacker Input Remove Paper	Paper jam in stacker input.	Remove the jammed paper.
Paper Jam Stacker *x* Remove Paper	Paper jam in stacker. *x* is the stacker number.	Remove the jammed paper.
Paper Jam Stacker *x* Top Remove Paper	Paper jam in stacker. *x* is the stacker number.	Remove the jammed paper.
Paper Jam Stacker *x* V Path Remove Paper	Paper jam in stacker. *x* is the stacker number.	Remove the jammed paper.
Paper Jam Switch Back Remove Paper E130	Paper jam before switch back path.	Remove the jammed paper.
Paper Jam Switch Back Remove Paper E131	Paper jam on switch back path.	Remove the jammed paper.
Paper Jam Tray 1 Remove Paper E180	Paper jam before IS 1 path.	Remove the jammed paper.
Paper Jam Tray 1 Remove Paper E183	Paper jam on IS 1 path.	Remove the jammed paper.
Paper Jam Tray 2 Remove Paper E184	Paper jam before IS 2 path.	Remove the jammed paper.
Paper Jam Tray 2 Remove Paper E187	Paper jam on IS 2 path.	Remove the jammed paper.
Paper Jam Tray 3 Remove Paper E188	Paper jam before IS 3 path.	Remove the jammed paper.
Paper Jam Tray 3 Remove Paper E18D	Paper jam on IS 3 path.	Remove the jammed paper.
Paper Out HCF Load *xxx* E005	The high capacity feeder is out of paper. *xxx* is the paper size.	Load the requested paper in the HCF.
Paper Out MBT Load *xxx* E004	The multi-bypass tray is out of paper. *xxx* is the paper size.	Load the requested paper in the MBT.
Paper Out Tray 1 Load *xxx* E001	Tray 1 is out of paper. *xxx* is the paper size.	Load the requested paper in tray 1.

Message	Description	Corrective Action
Paper Out Tray 2 Load *xxx* E002	Tray 2 is out of paper. *xxx* is the paper size.	Load the requested paper in tray 2.
Paper Out Tray 3 Load *xxx* E003	Tray 3 is out of paper. *xxx* is the paper size.	Load the requested paper in tray 3.
Paper Out *Tray Name*	The specified paper tray is out of paper.	Load paper into the tray.
Paper size invalid in Tray x	Paper size error for Test Print	Cancel the job.
Paper Skew Center Path Remove Paper E156	Skewed paper in center path.	Remove the jammed paper.
Paper Skew Duplex Path Remove Paper E154	Skewed paper in duplex path.	Remove the jammed paper.
Paper Skew HCF Remove Paper E155	Skewed paper in HCF tray.	Remove the jammed paper.
Paper Skew MBT Remove Paper E153	Skewed paper in MBT tray.	Remove the jammed paper.
Paper Skew Tray 1 Remove Paper E150	Skewed paper in tray 1.	Remove the jammed paper.
Paper Skew Tray 2 Remove Paper E151	Skewed paper in tray 2.	Remove the jammed paper.
Paper Skew Tray 3 Remove Paper E152	Skewed paper in tray 3.	Remove the jammed paper.
Paper weight invalid in tray x	Paper weight error for Test Print	Cancel the job.
Paper Unmatch Check Paper Information *(Note1)*	The paper attribute does not match	Load any tray except the MBT with the requested paper.
Pause/Offline	The printer was taken offline.	Touch4to return to Ready status.
PM Counter Exceeded *(Note2)*	The printer has printed more than 400,000 pages. Service maintenance is required.	Contact your authorized Service Technician.
PM Counter Warning	The printer has printed more than 390,000 pages.	Be aware that preventative service maintenance is required at 400K pages.
Preserving Parameters	The printer is saving user setting.	Wait for the printer to return to a Ready state.
Printing *xxx* / *yyy*	Status message. Displays the number of copies printed / the number of copies requested.	Wait for the printer to return to a Ready state.
Processing	Status message. The printer is processing print job data.	Wait for the printer to return to a Ready state.
Ready	The printer has warmed up and initialized and is idle while waiting for data.	None.
Resetting	Status message. The printer is resetting the configuration.	Wait for the printer to return to Ready state.
SB Cover Open Close Cover E045	Self-explanatory.	Close the cover.
Self Cleaning	Status message.	Wait for the printer to return to a Ready state.

Message	Description	Corrective Action
Sleep Mode	The Energy Save time has been reached and the printer is in energy saving mode.	Sleep mode is cancelled when 1. the printer is On Line 2. any OCP key is pushed. 3. the consumable counter is reset from the Web. 4. printer Status is displayed from the Web.
Stacker *x* Basket Not Set Check Basket	The stacker basket is not seated properly. *x* is the stacker number.	Reseat the basket.
Stacker *x* Basket Size Change Basket	The stacker basket is the wrong size for the requested paper type. *x* is the stacker number.	Change the basket.
Stacker *x* Front Cover Open Close Cover	Self-explanatory.	Close the cover.
Stacker *x* Mixed Paper Empty Basket	The stacker contains paper from a previous job.	Remove the paper.
Stacker *x* Paper Full Remove Paper	The stacker is full. *x* is the stacker number.	Remove the paper.
Stacker *x* Top Cover Open Close Cover	The top cover of the indicated stacker is open. *x* is the stacker number.	Close the cover.
Stacker *x* V Path Cover Open Close Cover	The V path cover of the indicated stacker is open. *x* is the stacker number.	Close the cover.
Sub Tray Cover Open Close Cover	Self-explanatory.	Close the cover.
Sub Tray Paper Full Remove Paper	Self-explanatory.	Remove the paper.
Suspended Task	The printer may have a problem on execution.	Cycle Power.
Switch Back Cover Open Close Cover E045	Self-explanatory.	Close the switch back cover (on the left side of the printer).
Toner Collector Bottle Full Replace Bottle E010 or E013	Self-explanatory.	Replace the toner collector bottle.
Toner Collector Not Set Check Toner Bottle E01D	The toner collector bottle is not seated properly.	Reseat the bottle.
Toner Low Add Toner	Print quality will diminish until toner is replenished.	Supply toner.
Toner Out Supply Toner E011	The toner supply is empty	Supply toner.
Toner Unit Not Set Check Toner Unit E036	Self-explanatory	Set the toner unit.
Top Cover Open Close Cover E042	Self-explanatory.	Close the guide.
Tray 1 Open Close Tray E020	Self-explanatory.	Close the tray.
Tray 1, 2, or 3 Open	Self-explanatory.	Close the tray.

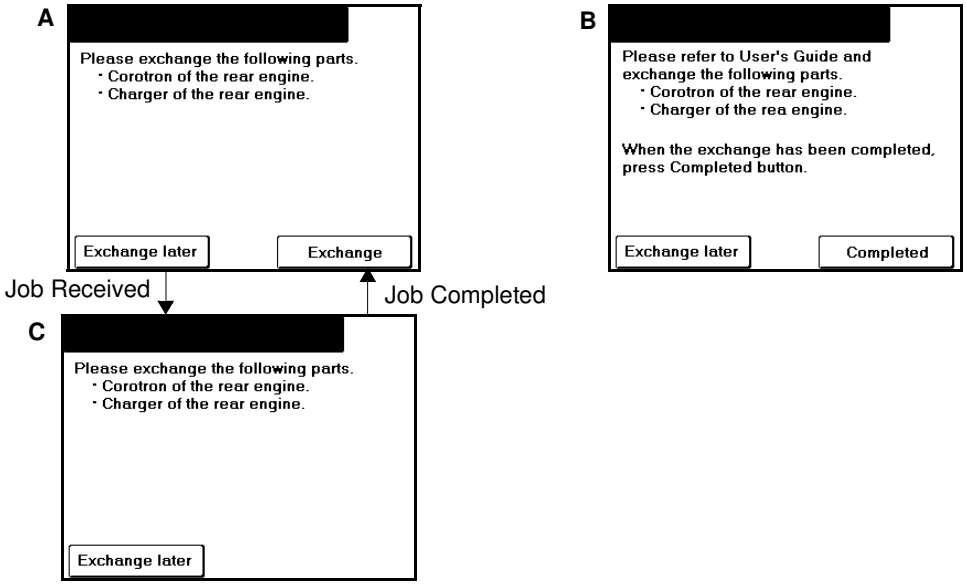
Message	Description	Corrective Action
Tray 1, 2, or 3 Load *xxx* E090	The wrong paper size is loaded in the tray.	Load the specified tray with the requested paper size.
Tray 1, 2, or 3 Load *xxx*	The specified tray needs paper.	Load the specified tray with the requested paper size.
Tray 2 Open Close Tray E021	Self-explanatory.	Close the tray.
Tray 3 Open Close Tray E022	Self-explanatory.	Close the tray.
Tray x Active	Displayed during printing.	
Upper Tray Cover Open Close Cover E03E		
Wait	Status message.	Wait for the printer to return to a Ready state.
Waiting for data	Status message. May appear if: 1) a large file is being processed, 2) the network connection is slow, or 3) a print job was not terminated correctly.	Wait for the printer to return to Ready state.
Warming up	Status message. Displayed during the power up cycle.	Wait for the printer to reach a Ready state.

Note 1: This display is only available for the Front Engine.

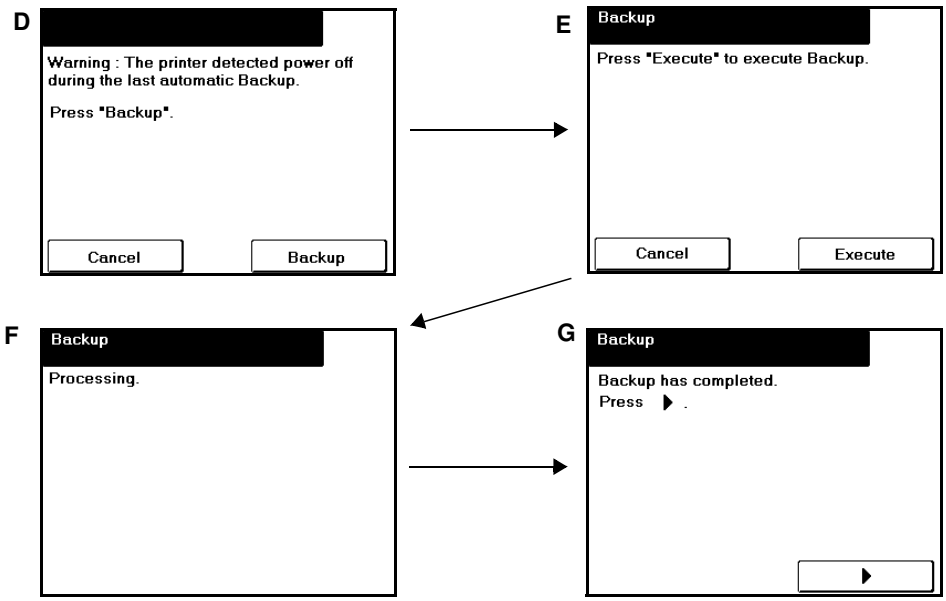


Note 2: PM Counter Exceeded.

If screen A is displayed in the "Ready" status, please exchange the following parts.



Note 3: If screen D is displayed in the "Ready" status, please execute Backup as following procedure.



Chapter 6
Care and Maintenance

What This Chapter Provides

This chapter contains the following information:

- Replacing Consumables and PM Parts
- Clearing Paper Jams
- Cleaning the Printer
- Replacing the Color Kit
- Handling and Storing Consumables

Replacing Consumables & PM Parts

When a consumable needs to be replaced, the printer stops printing and displays an error message indicating which consumable should be replaced. The following table shows the life expectancy of each consumable.

Consumable	Average Life Expectancy
Toner (Black)	36,000 images (5% coverage[1])
Toner (Color)	80,000 images[2] (1.5% coverage)
Developer Mix (Black)	480,000 images (600,000 drum rotations)
Developer Mix (Color)	480,000 images (600,000 drum rotations)
Drum Unit	400,000 images (500,000 drum rotations)
Fuser Cleaning Web	320,000 images
Toner Collector Bottle	Black: Every other refill of the toner[3] Color: Every refill of the toner
Staple Cartridge	5,000 staples
Charger Unit[4]	200,000 images
Corotron Unit[4]	200,000 Images

[1] *Coverage is calculated per printed sheet and is defined as the ratio of area with toner to the total area of the sheet. Toner usage is based on 5% coverage when the toner density level is set to the default value. The following items affect toner coverage: the printed image content, the paper used, and the condition and calibration of the printer. Actual toner usage may vary due to these factors.*

[2] *"Image" means paper size of Letter/Ar LEF. Other page sizes will have "images" based on Length of Form/8.5 in.*

[3] *Toner collector bottle is replaced at every two toner supply. However, toner collector bottle replacement require message is not displayed at correct frequency after removing the toner collector bottle when not displayed "replacement require message".*

When printing low print density, toner collector bottle replacement require message may be displayed before the standard replacement frequency (every two toner supply).

[4] *Rear engine only in Spot Color Mode.*

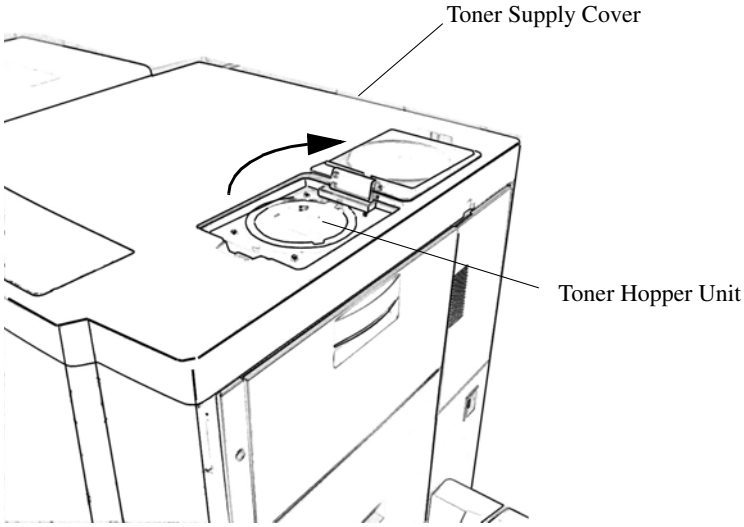
External factors can affect the average yield of consumables. Some of these factors are:

- Humidity
- Temperature
- Type of paper
- Run length of jobs
- Adequate ventilation around equipment
- Image coverage on page

- Print Utilization - if less than 80%, projected consumable life may become shorter.
- Print Density

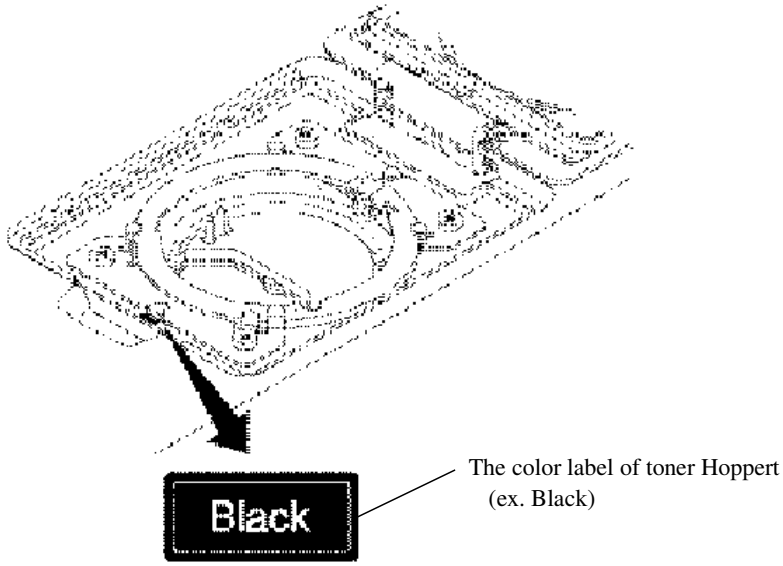
Adding Toner

1. Open the Toner Supply Cover.

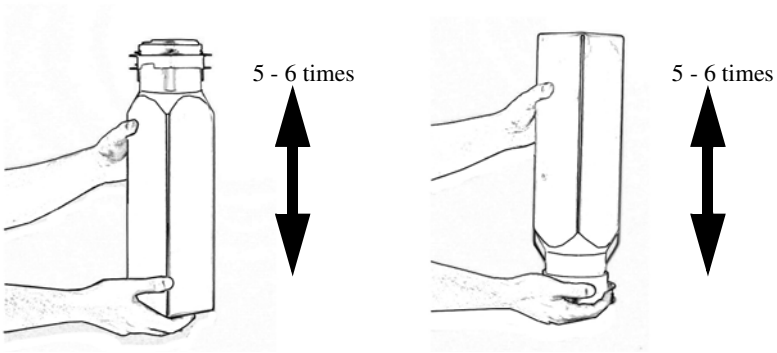


2. Prepare a toner bottle.

CAUTION!
When you supply the toner, the toner color must be the same color indicated in the label on the Toner Hopper Unit. The toner color is shown in the label on toner bottle or toner box.



3. Make sure that the mouth of the toner bottle is closed. Shake the toner bottle up and down about six times, then turn the toner bottle upside down and shake it again.

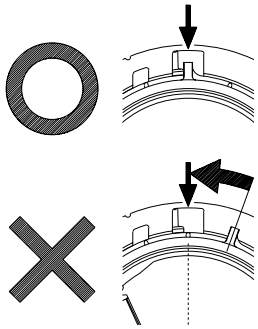


CAUTION!

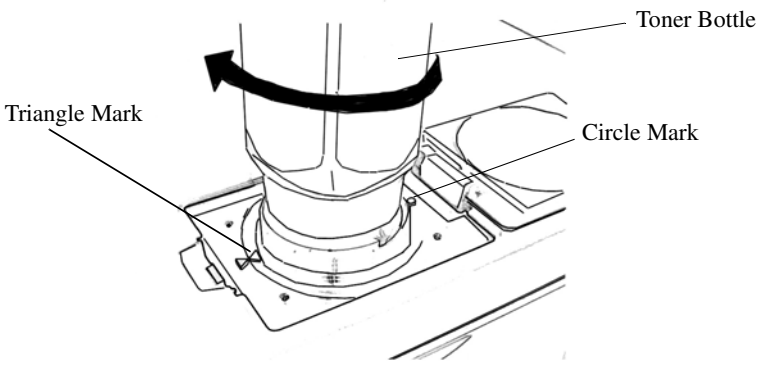
Toner is not harmful to the human body, but if some toner has come in contact with your skin or clothes, you should wash it immediately with cold water.

4. Peel the toner seal film.

NOTE:
Before peeling the toner seal film, make sure that the projection of the toner bottle cap is located at the click point. If it is not, turn the bottle cap counterclockwise to move the projection to the click point as shown in the figure below, and then peel the seal film.

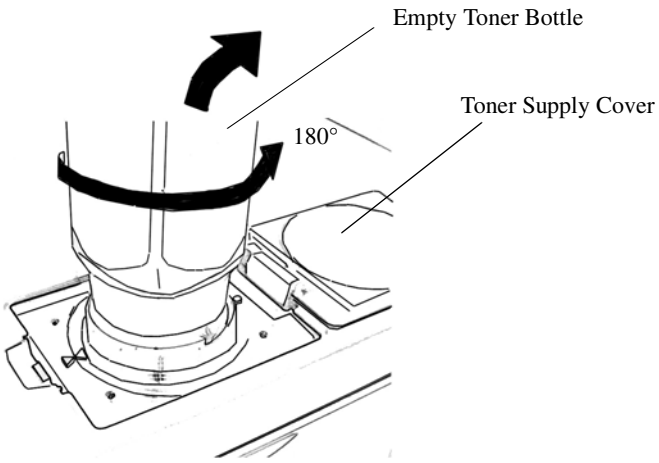


5. Install the toner bottle into the Toner Hopper Unit so that the triangle marks on the bottle mouth and the Toner Hopper Unit line up. Turn the bottle in a half circle until the triangle mark on the bottle comes to fit the circle mark on the Toner Hopper Unit.



6. Hold the top of the bottle and tap the side to transfer the toner into the Toner Hopper Unit.

7. When the toner bottle is empty, turn it back in a half circle and take it out.

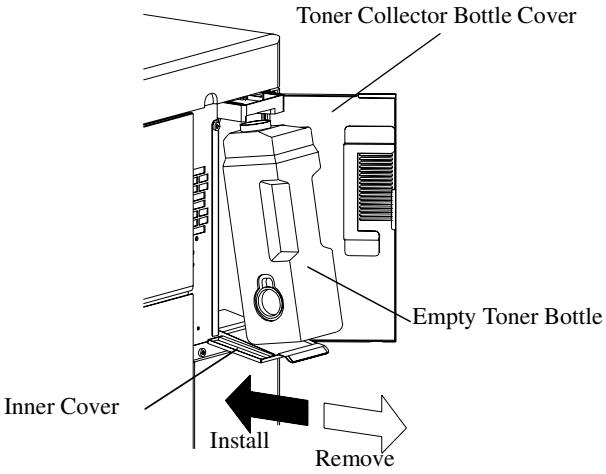


8. Close the Toner Supply Cover and discard the empty toner bottle.

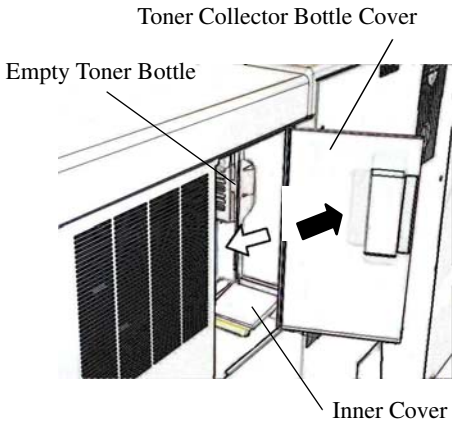
Replacing the Toner Collector Bottle

When the OCP displays the message `Toner Bottle Full`, replace the Toner Collector Bottle with a new empty bottle.

1. Open the Toner Collector Bottle Cover and the Inner Cover. (The Toner Cover Door is located at the right side of the printer next to the MBT.)
2. Remove the old Toner Collector Bottle**.**

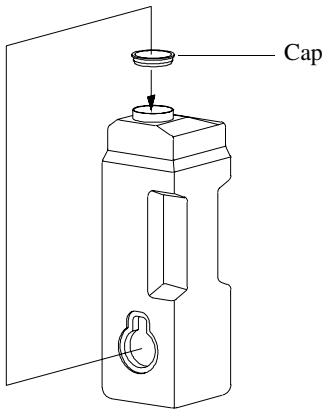


Front Engine



Rear Engine

3. Remove the cap from the side of the Toner Collection Bottle and place it on top of the bottle to seal it.



4. Install a new Toner Collector Bottle. (See illustration for Step 2.)
5. Close the Inner Cover and the Toner Collector Bottle Cover.

6. Dispose of the full toner bottle properly.

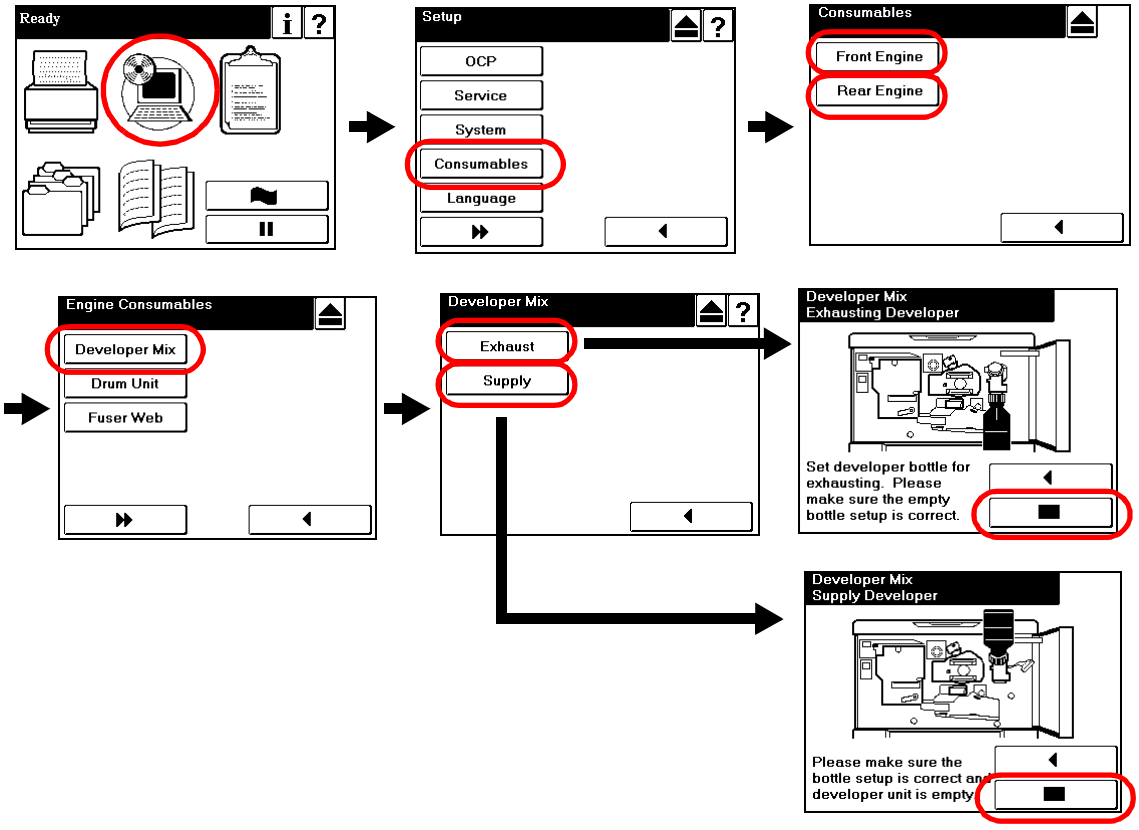
WARNING!

Waste materials should be disposed of or incinerated under conditions which meet all federal, state and local environmental regulations. Since regulations may vary from one region to another, check with the agency that governs waste disposal in your area for proper procedures.

Replacing the Developer Mix

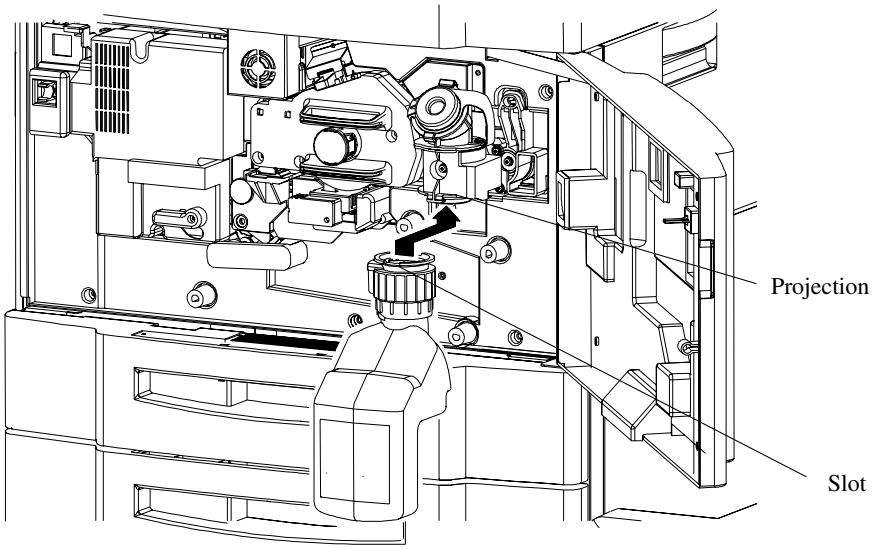
Replacing the developer mix is a two-phase process. First you exhaust the Developer Mix, and then you supply it.

To replace the developer mix, make the following selections from OCP.

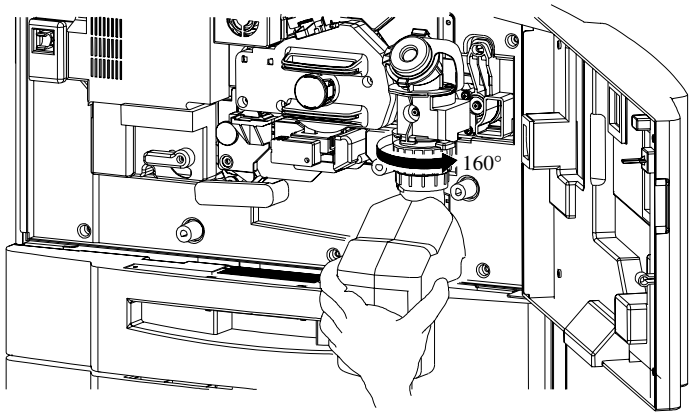


Exhausting the Developer Mix

1. Take the empty developer bottle out of the box.
2. Open the Front Cover of the printer.
3. Attach the empty developer bottle to the Developer Unit Duct so that the slot of the bottle fits the projection of the duct.



4. Lock the empty developer bottle by turning the developer bottle cap about 160 degrees in the direction shown below.



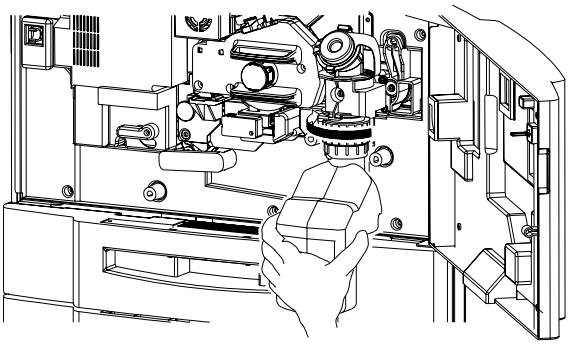
CAUTION!
Hold the developer bottle when you turn the cap so that the bottle is not turned together with the cap.

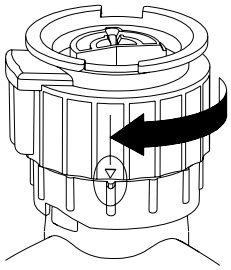
5. To start the exhaust process, make the following selections from the OCP:

   Setup / Consumable / Front Engine or Rear Engine / Developer Mix / Exhaust ■

   The exhaust process takes approximately 2 minutes.

6. Remove the developer bottle by turning the bottle cap back about 160 degrees in the direction shown below.

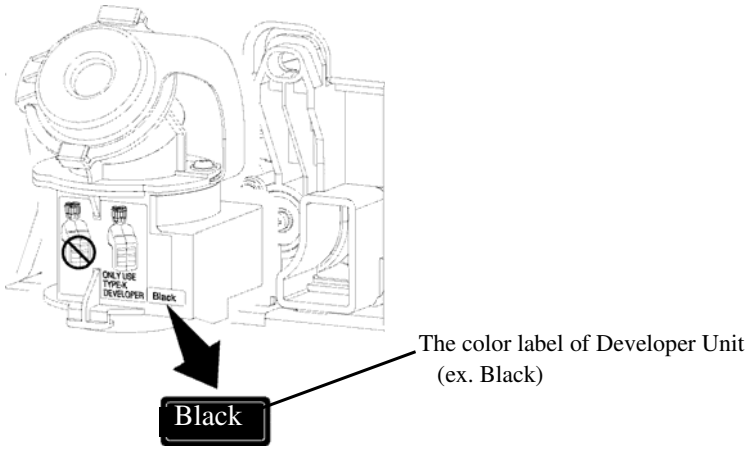




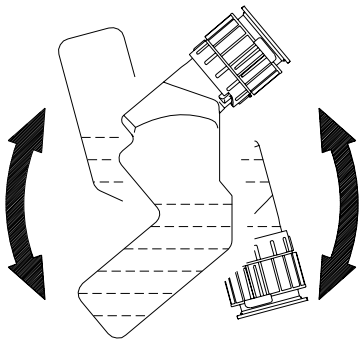
Supplying the Developer Mix

1. Prepare a new developer bottle.

CAUTION!
When you supply the developer mix, the color of the developer mix must be the same color indicated in the label right under developer duct of the Developer Unit.The use of developer mix not suited may cause serious trouble.

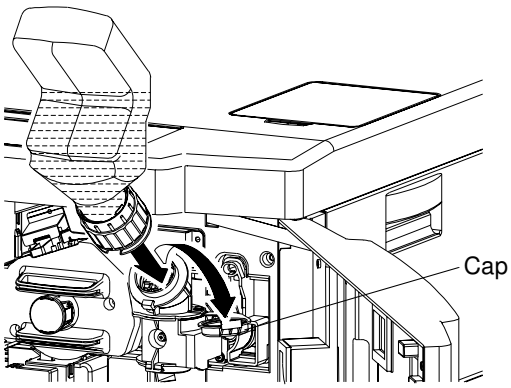


2. Take the new developer bottle out of the box and shake it.

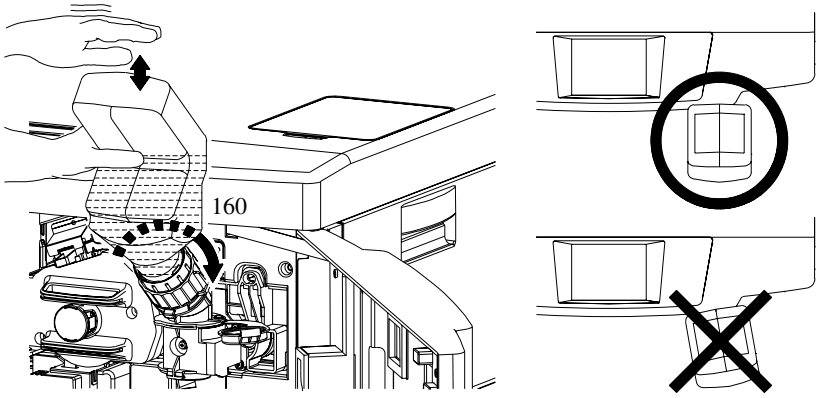


3. Remove the duct cap from the developer duct.

4. Place the new developer bottle onto the developer unit duct.



5. Lock the bottle in place by turning the developer bottle cap about 160 degrees in the direction shown below.



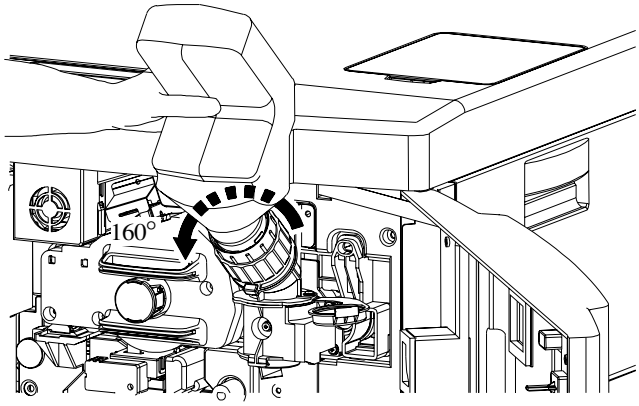
CAUTION!
Hold the developer bottle when you turn the cap so that the bottle is not turned together with the cap.

6. To start the replacement process, make the following selections from the OCP:

   Setup / Consumable / Front Engine or Rear Engine / Developer Mix / Supply ■

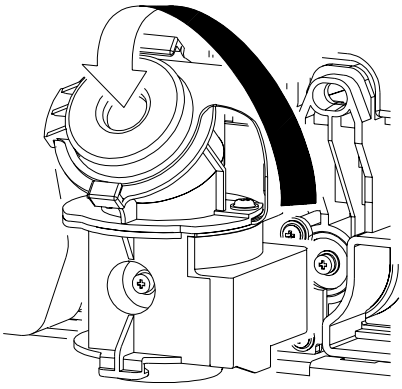
   The replacement process takes approximately 2 minutes. (Maximum replacement time is 4½ minutes.)

7. Turn the cap back about 160 degrees in the direction shown and remove the developer bottle.



CAUTION!
The Rear Engine cannot perform a toner supply operation with the Top Cover open. Make sure the Top Cover is closed.

8. Place the duct cap back on the developer duct.



9. Clean any spilled developer from the printer.

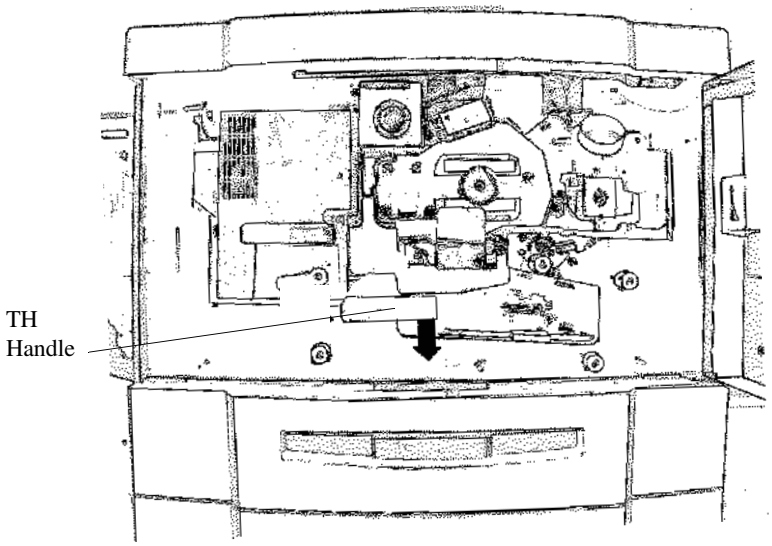
10. Close the Front Cover.

NOTE:
Save the empty developer bottle for use during the next developer exhaust process.

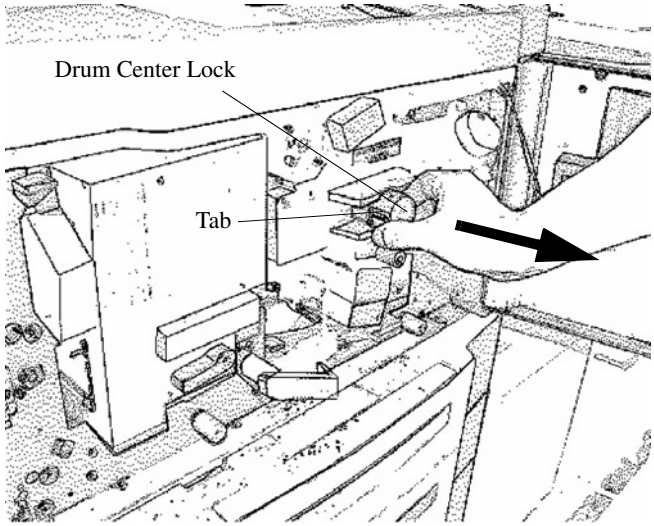
Replacing the Drum Unit

To remove the Drum Unit:

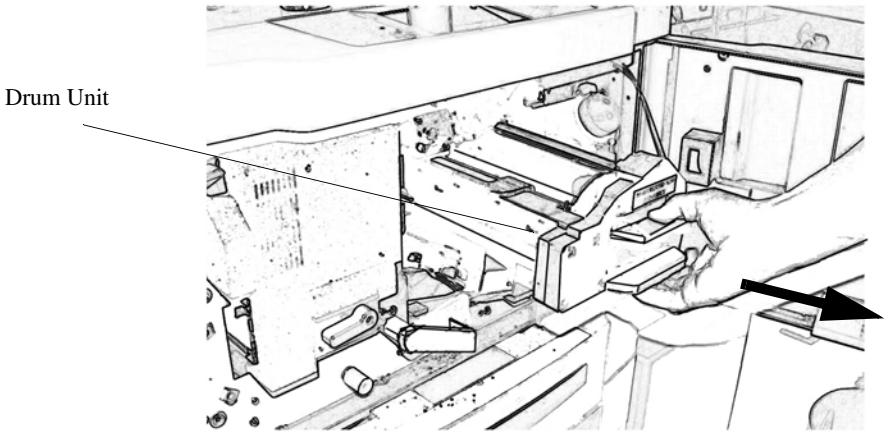
1. Open the Front Cover of the printer.
2. Turn the handle clockwise to release the Drum Unit.

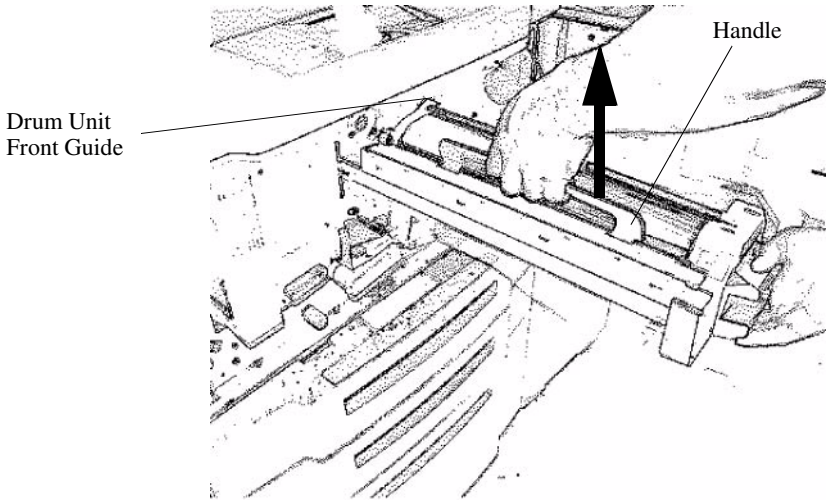


3. Turn the Drum Center Lock until the tab on the side of the lock appears. Push the tab to release the Lock. Pull the drum center lock out of the center shaft.



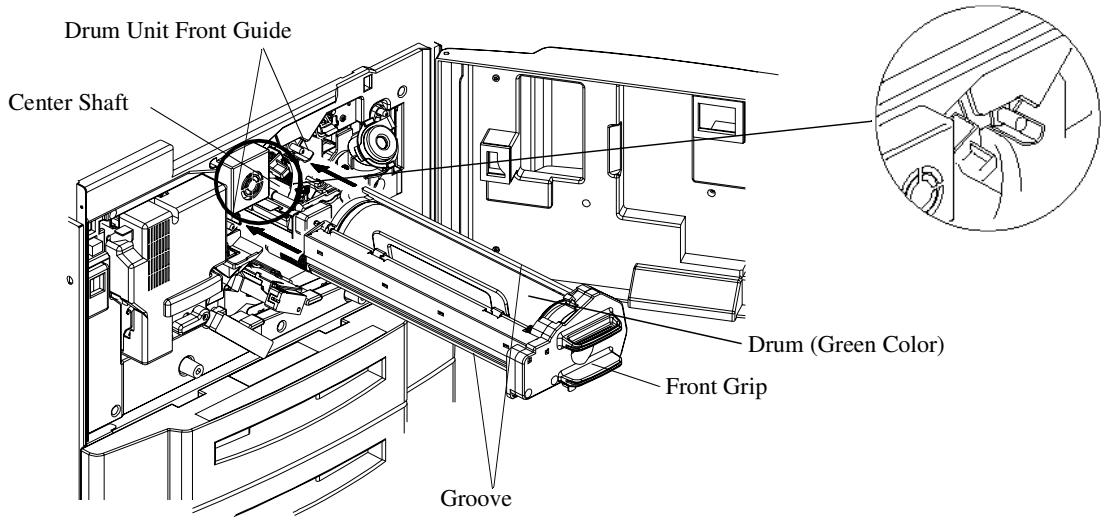
4. Using the grip of the front side of the drum unit, pull it out until the stopper behind the unit catches, then hold the handle and lift the drum unit to remove it.





To install the new Drum Unit:

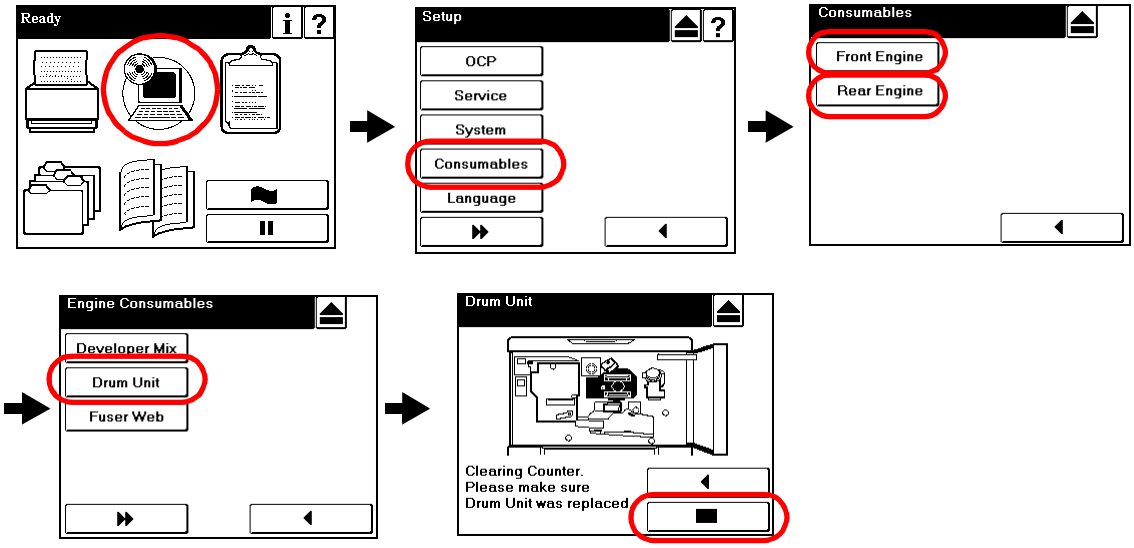
1. Align the groove on both sides of the Drum Unit to the Drum Unit Front Guides that are located on the front side of the Console Frame. Push the front grip of the Drum Unit until the Drum Unit is set in the proper position.



2. Replace the Drum Center Lock on the Center Shaft. Push the lock until it latches. Make sure the lock is latched by pulling. It should not come back out.
3. Turn the handle counterclockwise to close the TH unit.
4. Close the Front Cover of the printer.

5. To clear the usage counter for the Drum Unit, make the following selections from the OCP:

   Setup / Consumable / Front Engine or Rear Engine / Drum Unit / ■



CAUTION!

Disposal of the used drum unit is the user's responsibility.Dispose of it in accordance with local industrial waste laws.

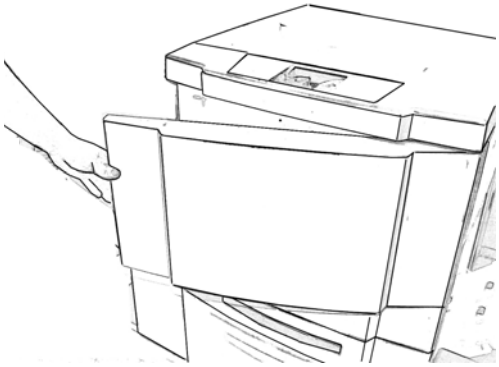
Do not attempt to burn the drum unit. Drum units are dangerous if exposed to fire.

Do not touch the green portion of the drum unit.

Replacing the Fuser Cleaning Web

To remove the Fuser Unit:

1. Open the Front Cover of the printer.

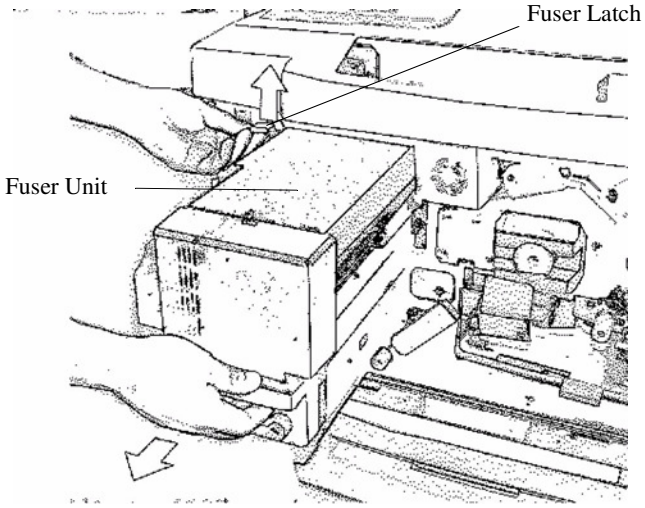


WARNING!

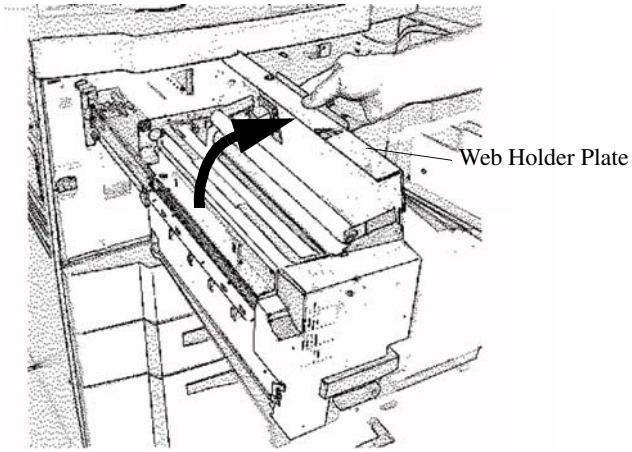
The Fuser Unit is very hot. Do not touch any parts of the Fuser Unit except those parts which are used to replace the Fuser Cleaning Web.

Do Not open the Fuser Unit and Tray 1 at the same time. The printer may tip over causing personal injury or damage to the printer.

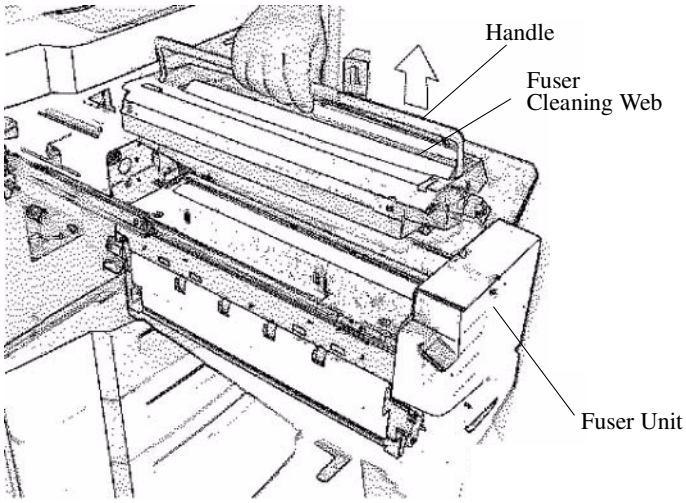
2. Hold up the Fuser Latch and pull out the Fuser Unit.



3. Open the Web Holder Plate as shown below.

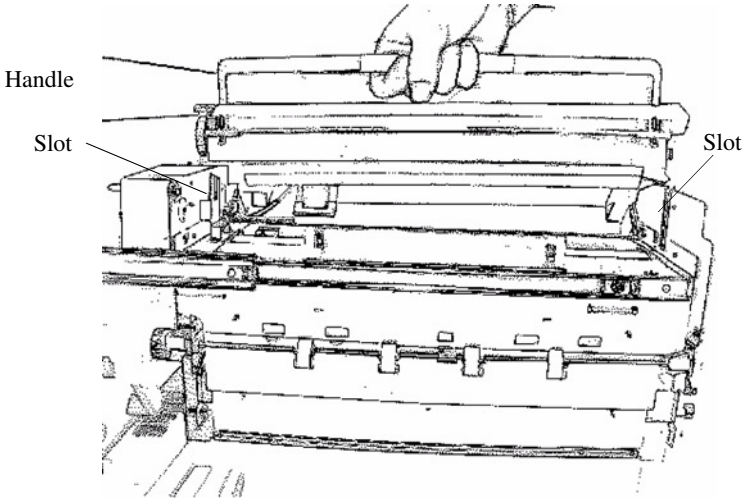


4. Pull the handle up and use it to lift the Fuser Cleaning Web out of the Fuser Unit.



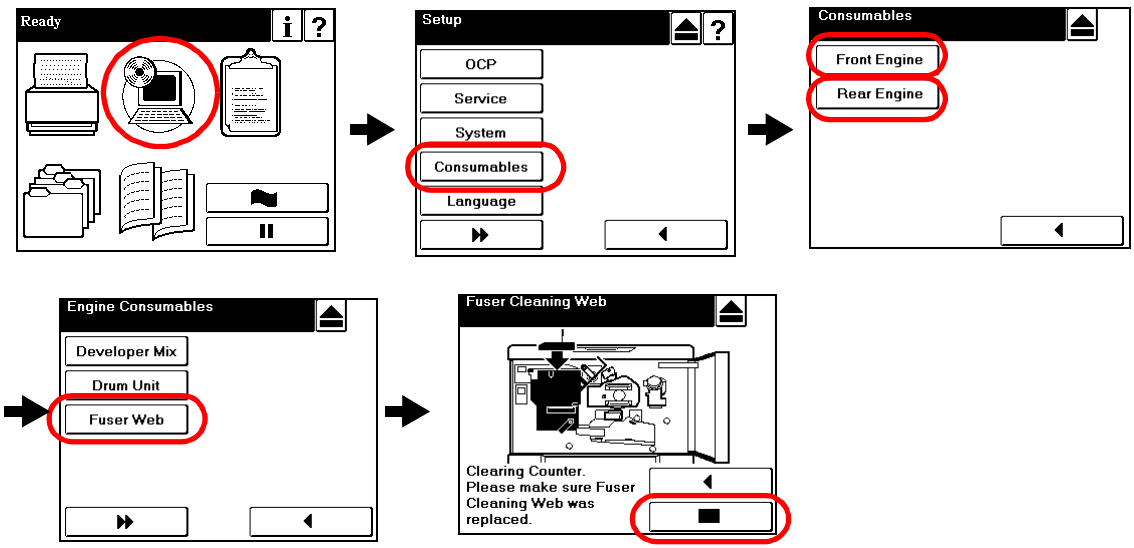
To install the new Fuser Cleaning Web:

1. Slide the Fuser Cleaning Web into the slots of the Fuser Unit and lock it into place by pushing down the handle.



2. Close the Web Holder Plate and push the Fuser Unit back in.
3. Close the Front Cover.
4. To clear the usage counter for the Fuser Web, make the following selections from the OCP:

   Setup / Consumable / Front Engine or Rear Engine / Fuser Web / ■

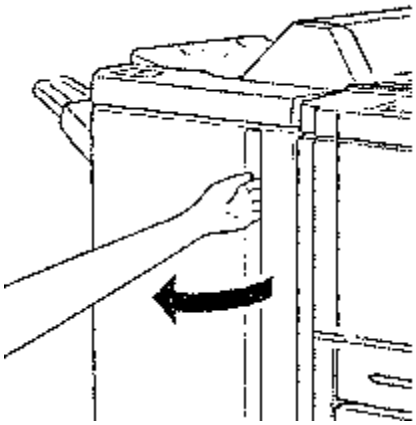


Replacing Staples

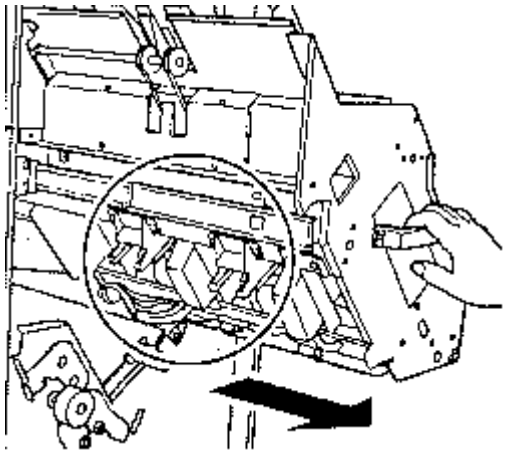
To replace staples in the Finisher, follow the steps below.

Replace the staple cartridge when LOW STAPLE (R) or LOW STAPLE (F) is displayed on the OCP.

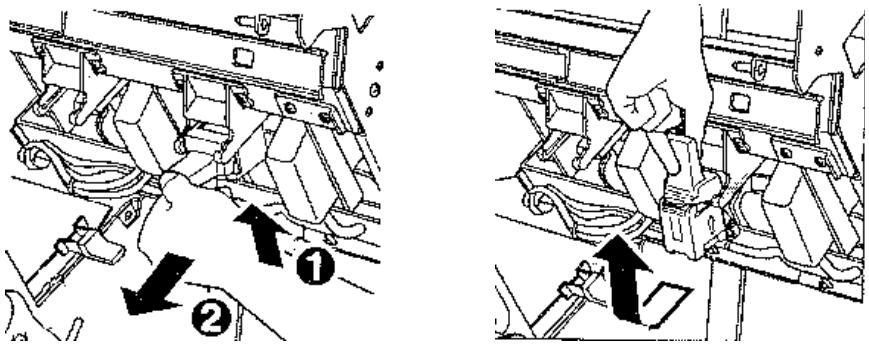
1. Open the Finisher Front Cover.



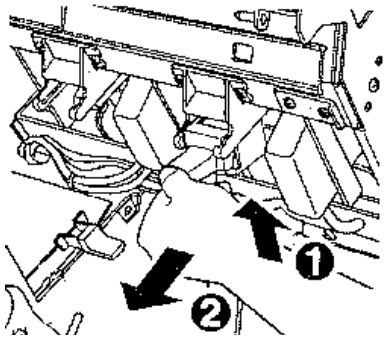
2. Pull out the stacker unit using the handle.



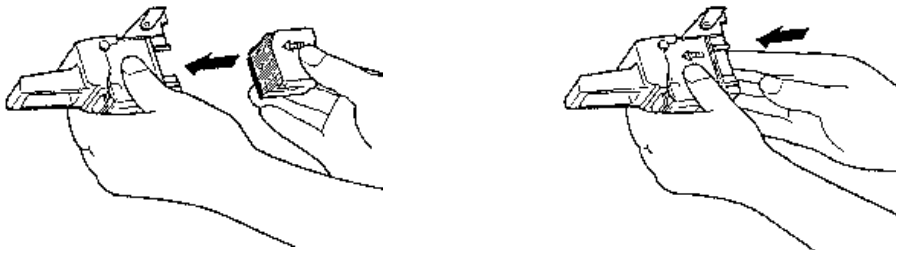
3. Pull up the cartridge housing, then remove it by sliding it along the stapler rail.



4. Remove the empty cartridge from the cartridge housing.



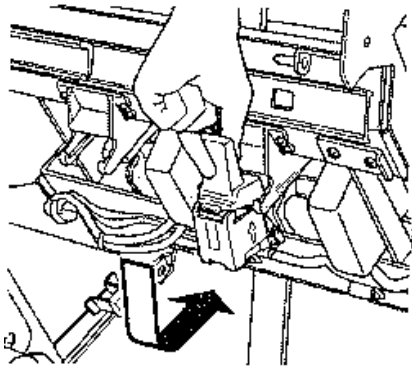
5. Insert the new cartridge into the housing.

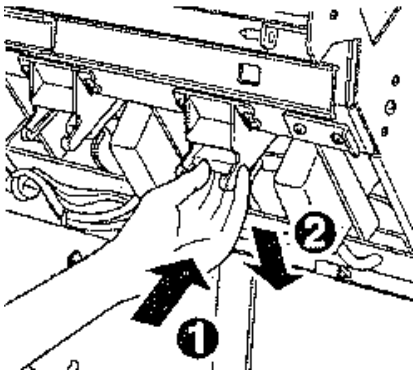


NOTE:

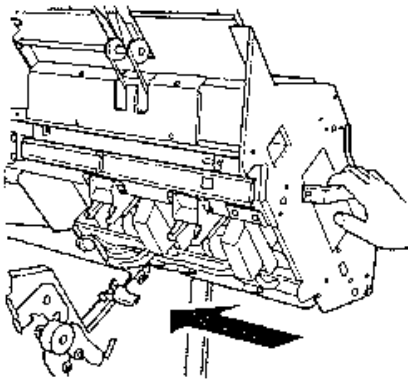
Do not remove any staples remaining in the housing, otherwise, the first set output to the Finisher will not be stapled.

6. Insert the cartridge housing by sliding it along the stapler rail, then push it down and in to secure it in place.





7. Return the stacker unit to its original position.

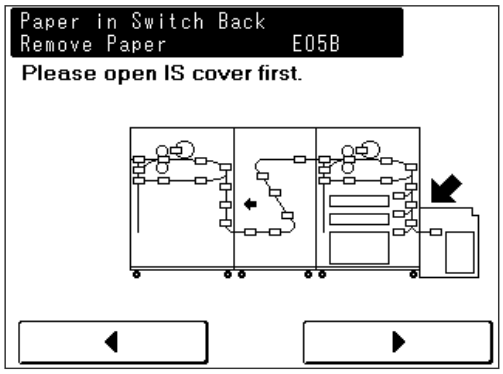


8. Close the Finisher door.

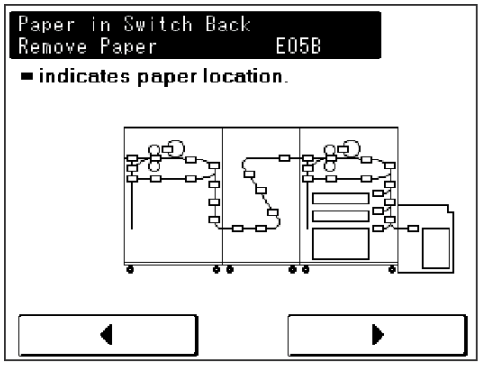
Clearing Paper Jams

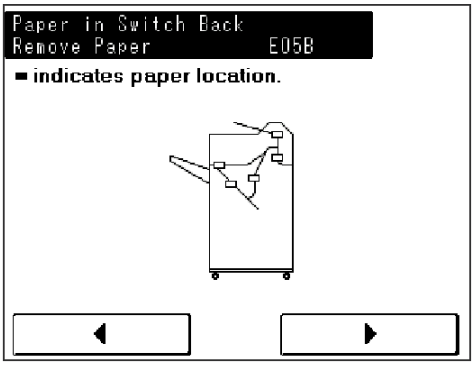
When a paper jam occurs, an illustration of the printer is displayed on the OCP with a highlighted box indicating the paper position.

1. If the illustration indicates paper is in the Input Station, open the IS cover first and remove the paper.

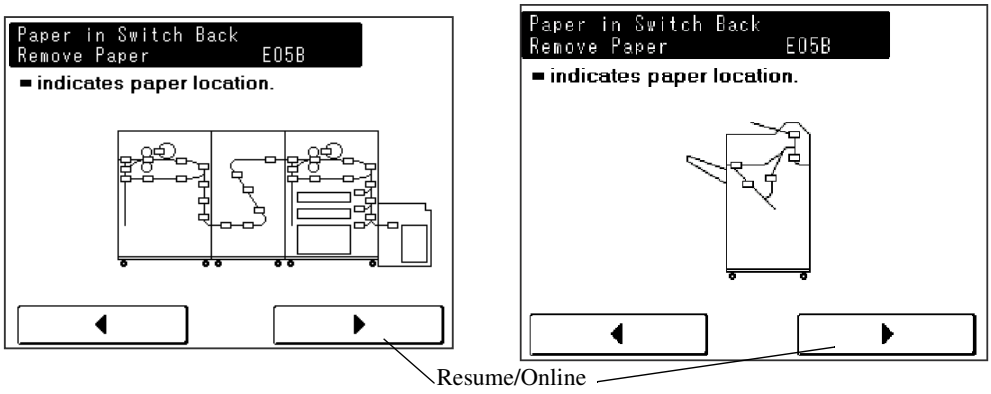


2. Close the IS cover and check the display for other paper jams.





3. Remove any remaining paper and touch the Resume button to continue printing.

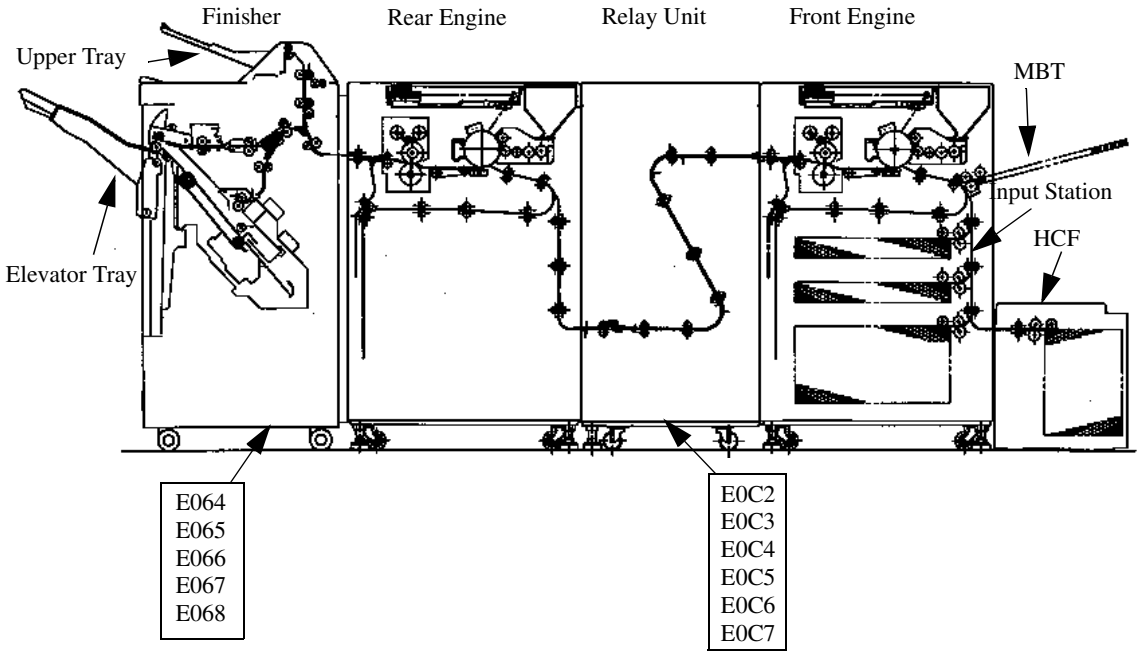


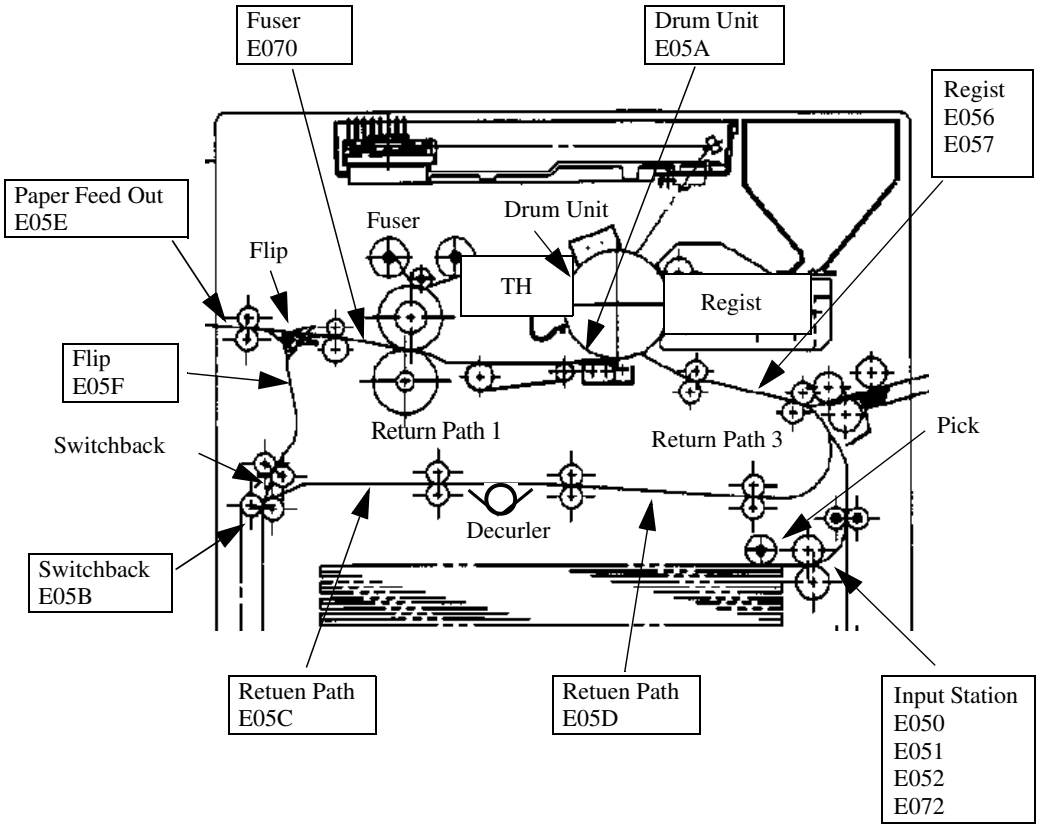
NOTE:

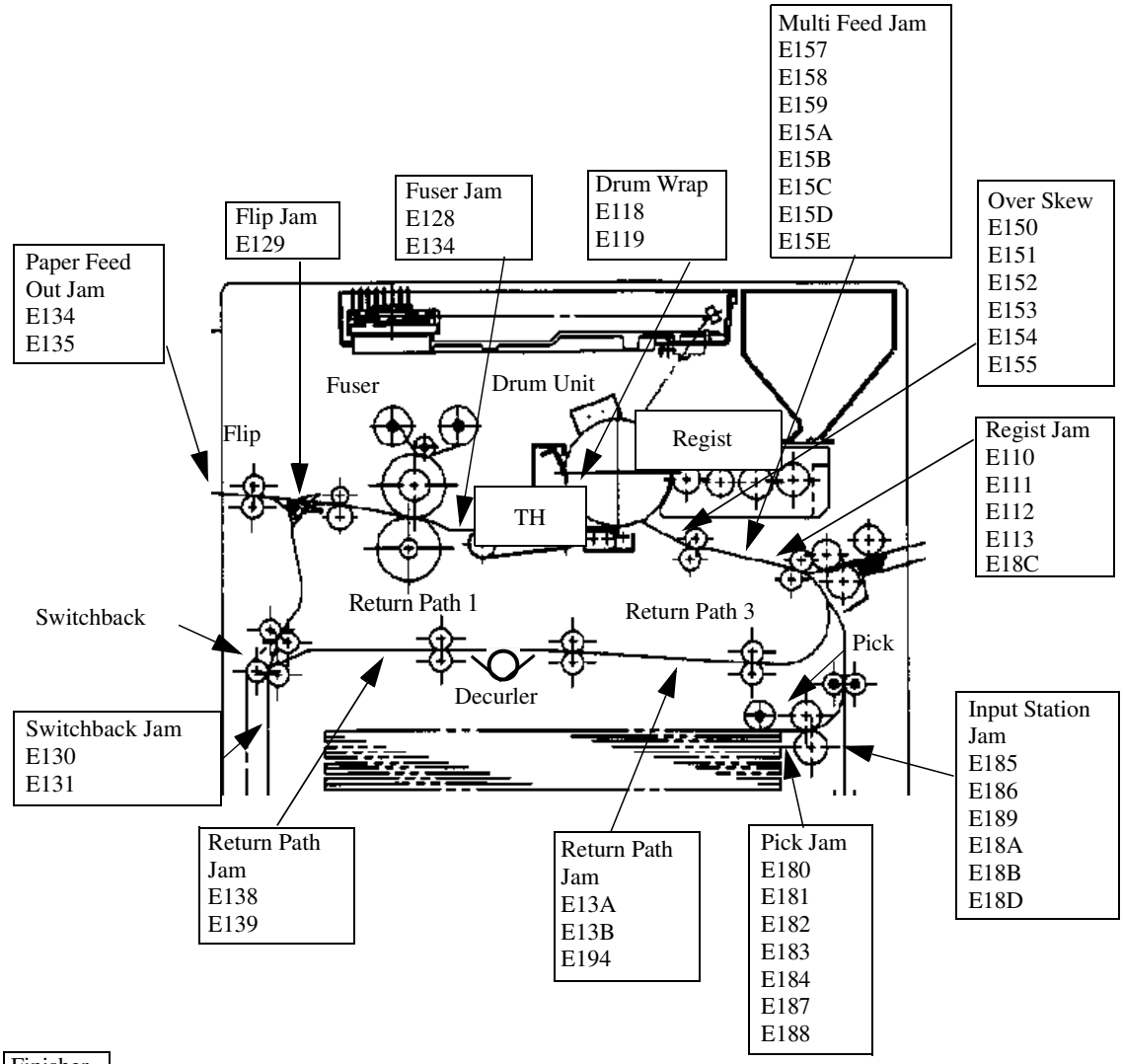
1. Contact your Authorized Service Technician and provide the 4-digit error code if the error persists.

2. When paper jams occur, incorrect result might be printed. Check the printed result. If it is incorrect result, reprint the job.

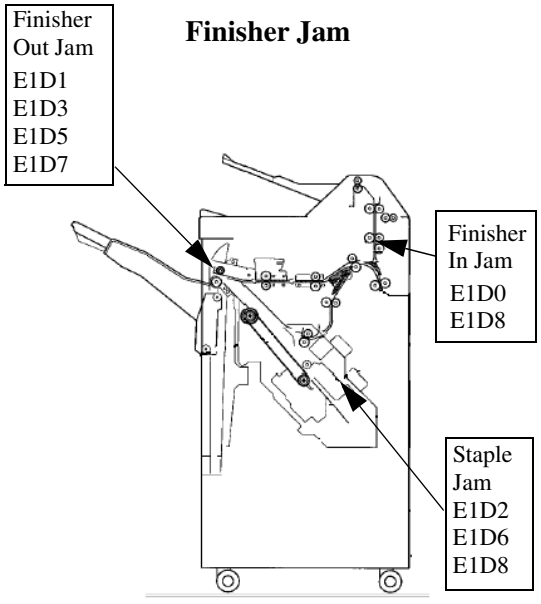
The following shows the correlation between error code and paper jam location.



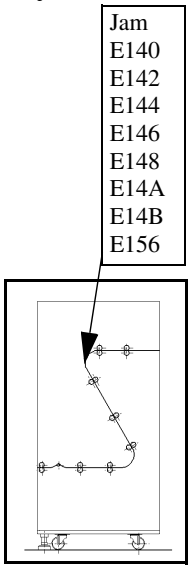




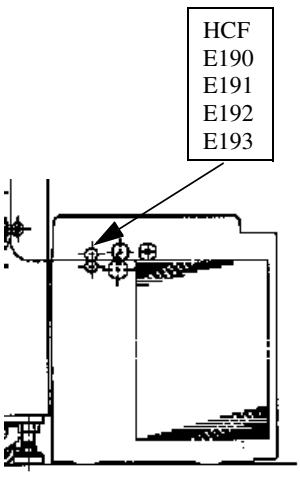
Finisher Jam



Relay Unit Jam



High Capacity Feeder Jam

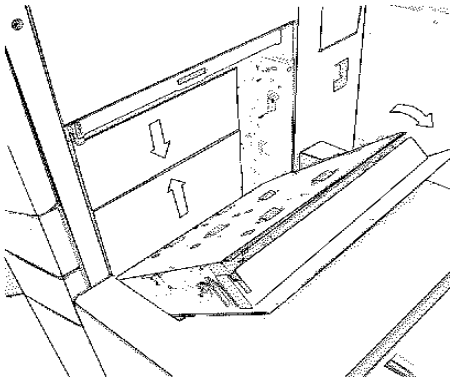


Vertical Path Cover (Front Engine)

Follow the steps below to clear paper from the Vertical Path Cover.

NOTE:
The Vertical Path Cover is also referred to as the "Input Station Cover" (IS cover).

1. Open the Vertical Path Cover and remove the jammed paper. Paper along the paper path is automatically ejected from the Vertical Path Cover.

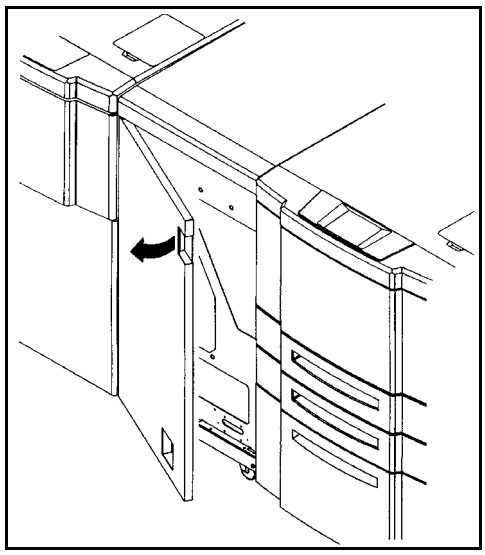


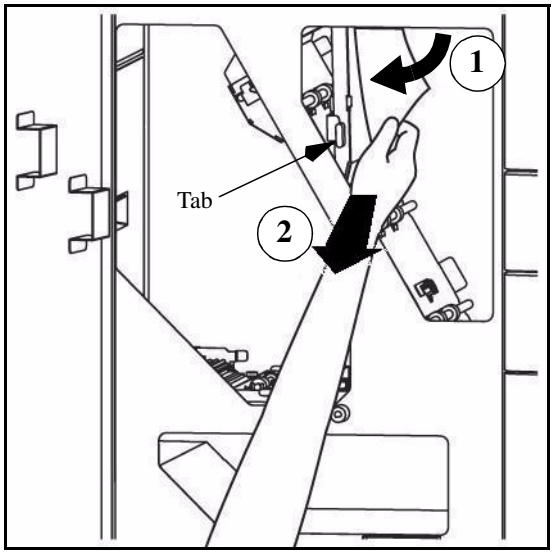
2. Close the Vertical Path Cover.
3. Touch ▸ on the OCP to clear any error messages.

Relay Unit Area

Follow the steps below to clear paper from the Relay Unit area:

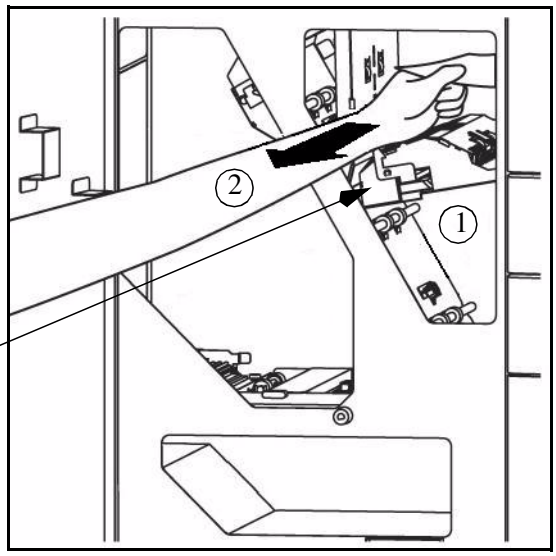
1. Open the Relay Unit front cover and the Tab.
2. Remove the jammed paper.





3. Open the Switch Back Cover.

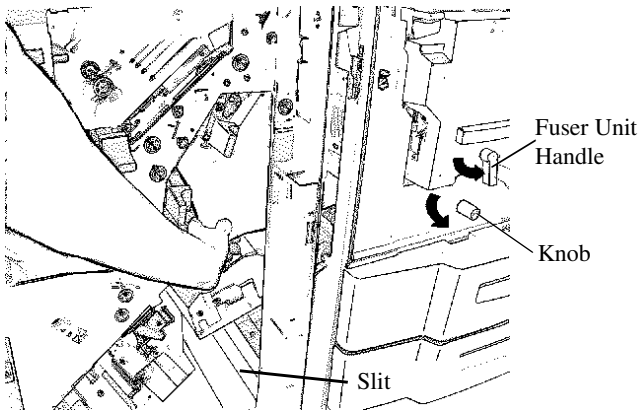
NOTE:
The Switch Back Cover is located on the left side of the printer, but is accessed from inside of the Relay Unit.



Switch Back Cover

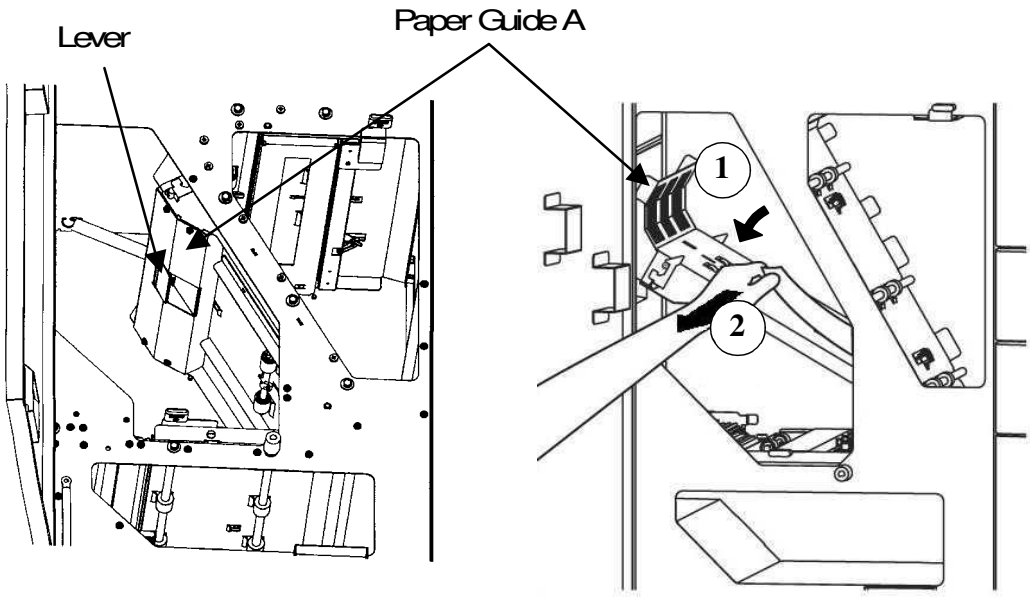
4. Turn the Fuser Unit Handle to the RELEASE position and rotate the blue knob in the direction shown below to remove the jammed paper.

NOTE:
The jammed paper may come out of the slit below the cove



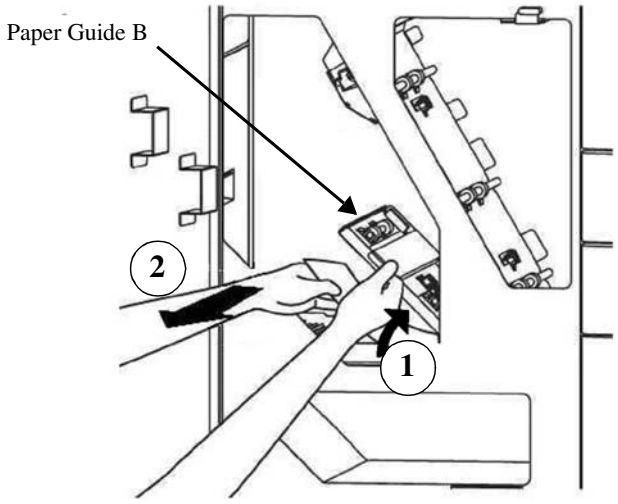
5. Close the Switch Back Cover. Then close the Tab.

6. Pull the Lever to open the Paper Guide A and remove the jammed paper.



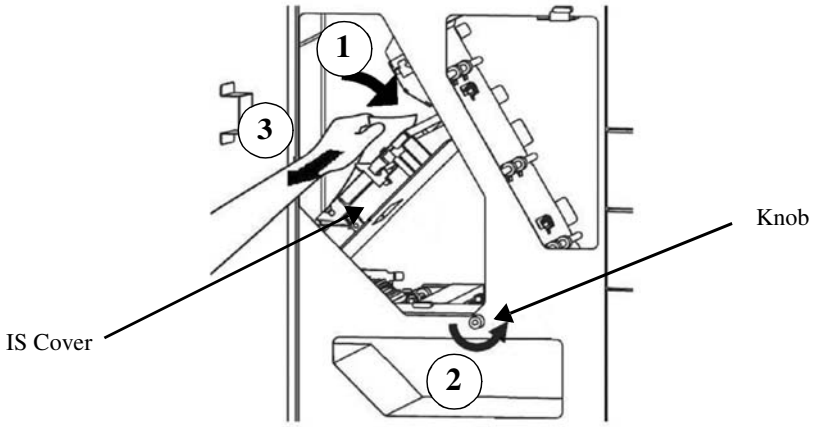
7. Close Paper Guide A.

8. Open Paper Guide B and remove the jammed paper

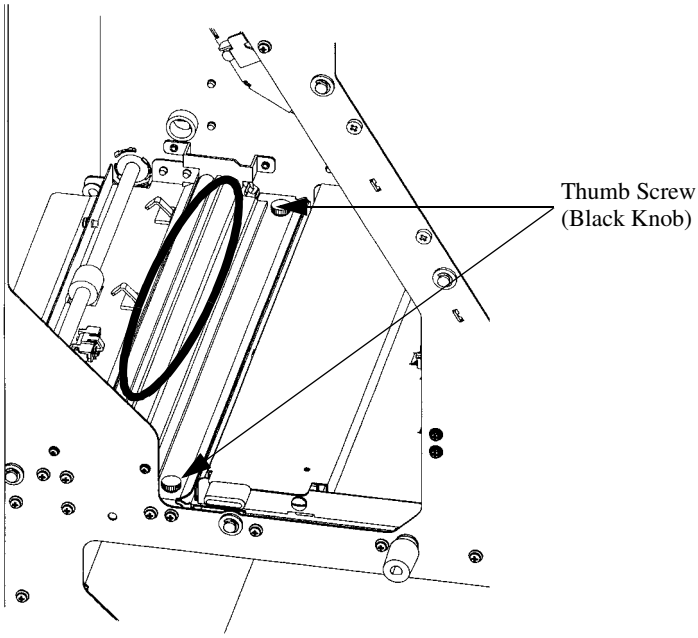


9. Close Paper Guide B.

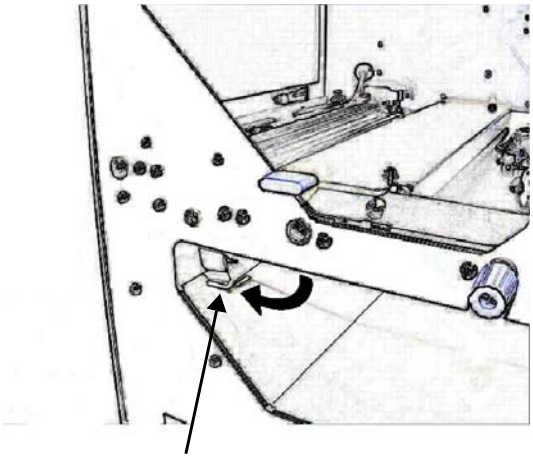
10. Open the IS Cover and rotate the blue knob in the direction shown to remove the jammed paper.



11. If paper is jammed in the section marked “A” below, loosen the Thumb Screws, open the Paper Guide C.

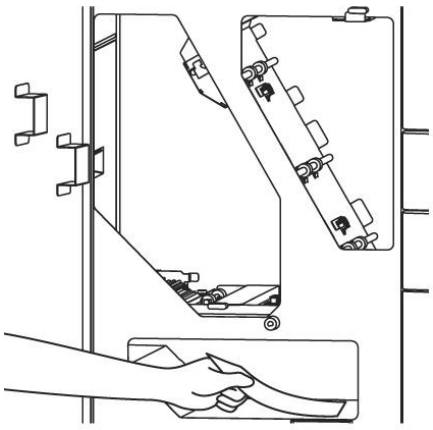


12. Remove the jammed paper, then close the Paper Guide C and tighten the Thumb Screw.



13. Close the IS Cover.

14. Remove jammed paper from the bottom.



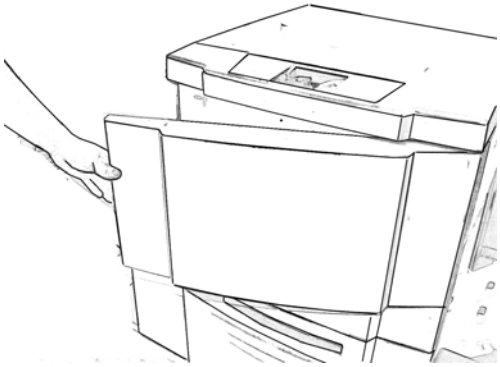
15. Verify Paper Guide A and B are securely closed.

16. Touch ▶ on the OCP to clear any error messages.

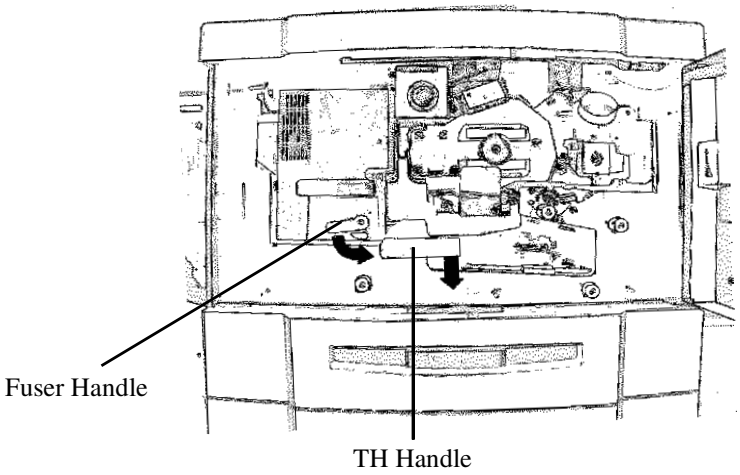
Paper Feed Block Area (Front and Rear Engine)

Follow the steps below to clear paper from the Paper Feed Block area.

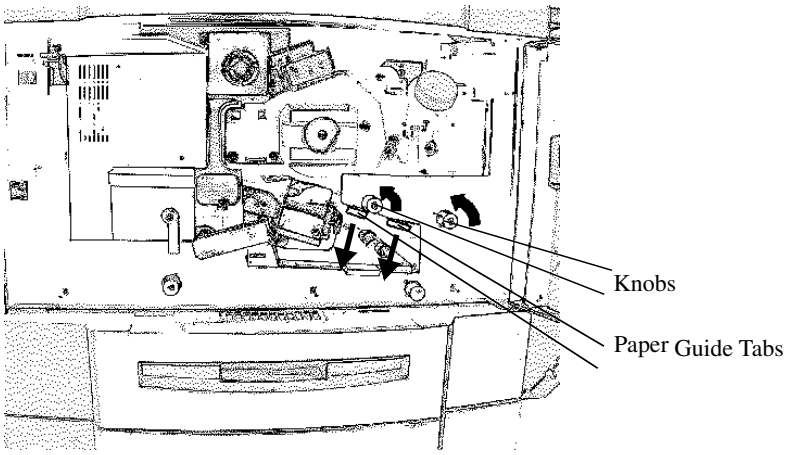
1. Open the Front Cover.



2. Turn the TH handle and Fuser handle to the RELEASE position.

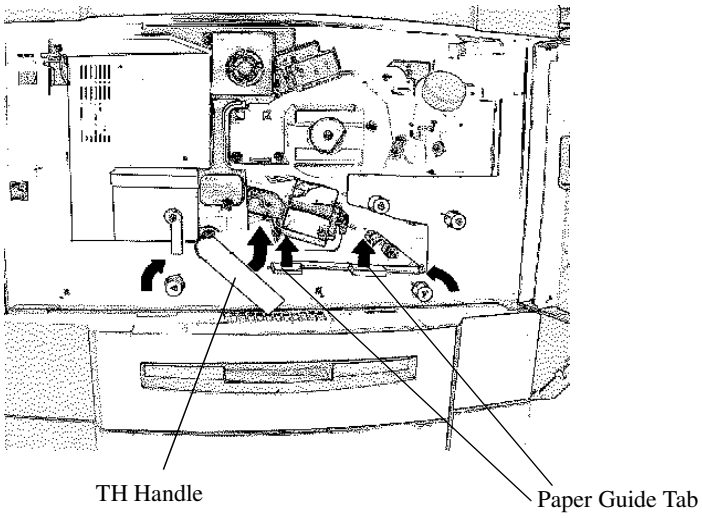


3. Rotate the blue knobs as shown below to remove any jammed paper.



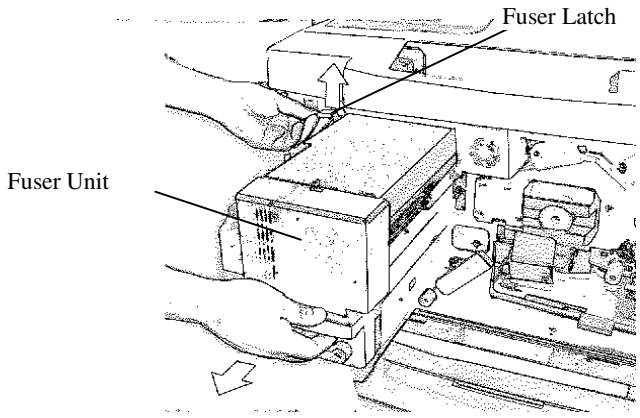
4. Turn the TH handle to the LOCK position.

5. In duplex printing, remove any jammed paper from the Paper Guide Tab. While holding the Paper Guide Tab up, rotate each blue knob as shown below to remove any jammed paper.

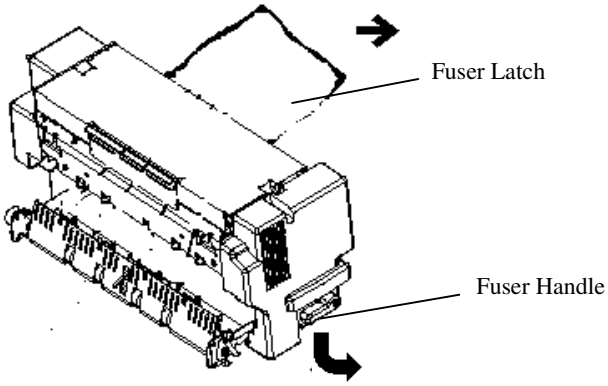


6. Turn the TH Handle and the Fuser handle to the LOCK position.

7. If a paper jam occurs in the Fuser Unit, hold up the fuser Latch and pull out the Fuser Unit.



8. Lower the Fuser Unit Handle and remove the jammed paper.



CAUTION!
Do not attempt to removed the jammed paper without lowering the Fuser Handle as this can cause damage to the Fuser Cleaning Web or Fuser Unit.

9. Push the Fuser Unit back in.
10. Close the Front Cover.
11. Touch ▶ on the OCP to clear any error messages.

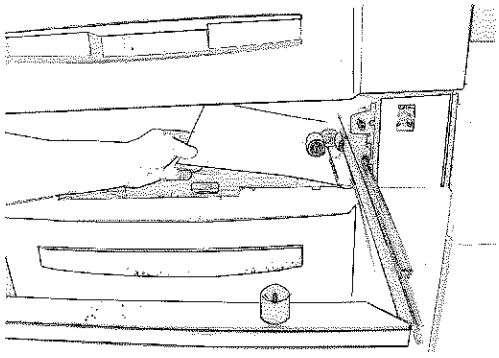
Trays 1, 2, and 3

Follow the steps below to clear paper from Trays 1, 2, and 3.

Tray 1

WARNING!
Do not open Tray 1 if the Fuser Unit is pulled out. The printer may tip over causing personal injury or damage to the printer.

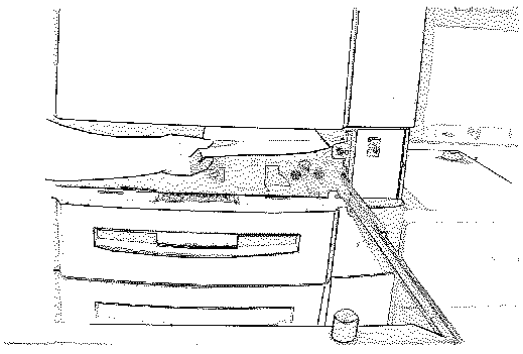
1. Open the tray and remove the jammed paper.



2. Close the tray.
3. Touch ▸ on the OCP to clear any error messages.

Tray 2 or 3

1. Open the tray and remove the jammed paper.

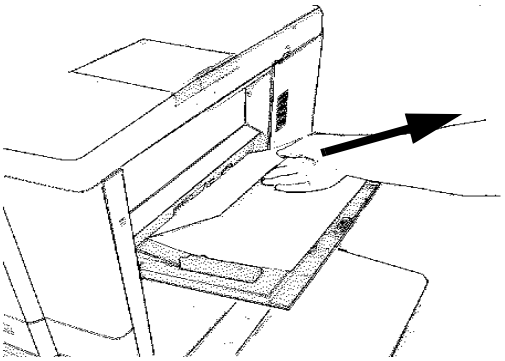


2. Close the tray.
3. Touch ▸ on the OCP to clear any error messages.

MBT (Multi-bypass Tray)

Follow the steps below to clear paper from the MBT.

1. Remove the jammed paper by pulling it out in the direction shown below.



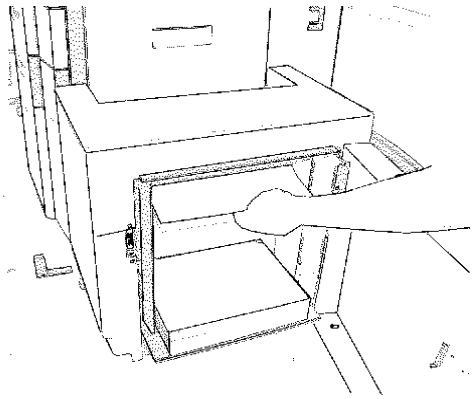
2. Touch ▶ on the OCP to clear any error messages.

HCF (High Capacity Feeder)

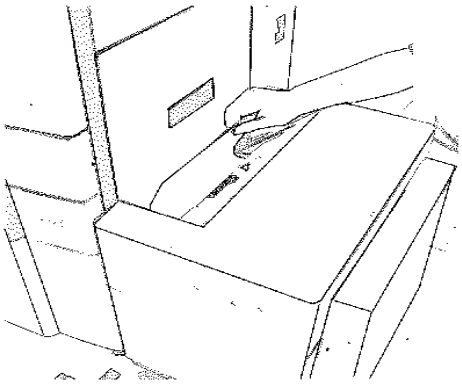
Follow the steps below to clear paper from the optional HCF.

WARNING!
The table inside the HCF automatically descends when you open the door of the HCF. Do not allow anything to be caught between the table and the bottom of the HCF.

1. Open the door of the HCF and remove any jammed paper.



2. Take out the Top Cover and remove any jammed paper.



3. Return the Top Cover to its original position and close the door of the HCF.
4. Touch ▶ on the OCP to clear any error messages.

Tab Stock Jam Recovery

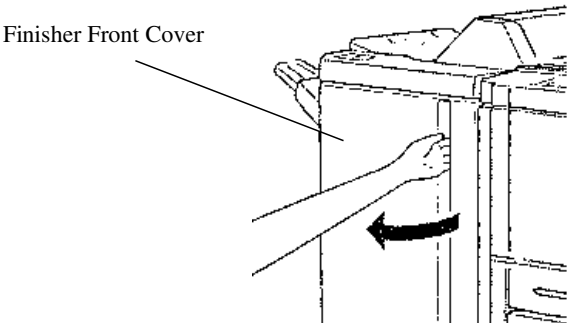
If a jam occurs when the tab stock is in the paper path, follow the steps below to clear the printer and resume your print job. If there is no tab stock in the paper path, proceed as you would for any paper jam.

1. Clear the jammed paper and tab stock from the paper path.
2. Determine which tab in the set was affected by the jam.
3. Open the paper tray that contains the tab stock. Remove tab stock from the stack until the tab position that jammed is on top. Close the paper tray.
4. Return the printer to the on-line position and your print job will resume automatically.

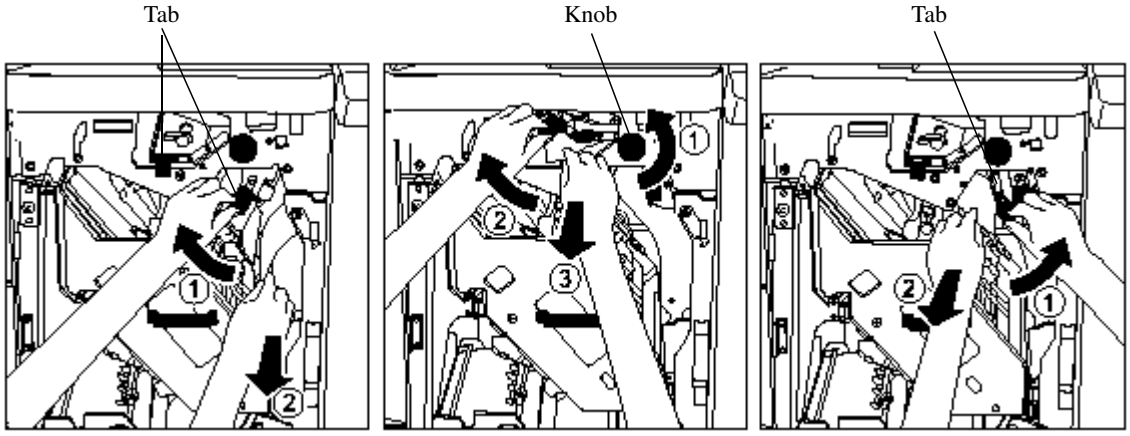
Finisher Jam

If a jam occurs in the finisher, follow the steps below to clear the jam and resume the print job. For the Publishing Finisher or the Container Stacker, please refer to the relevant User's Guide.

1. Open the Finisher Front Cover.

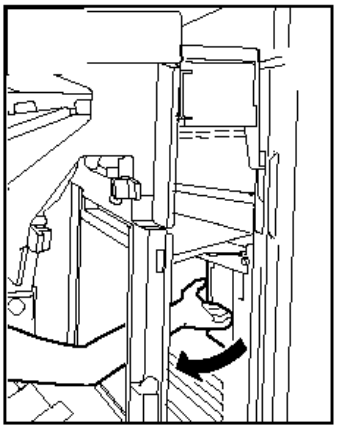


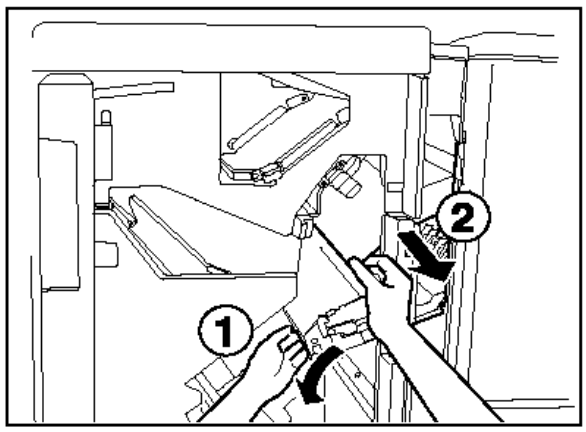
2. Move the blue tab and remove the paper. Turn the blue knob, move the blue tab, than remove the paper. Move the blue tab and remove the paper.



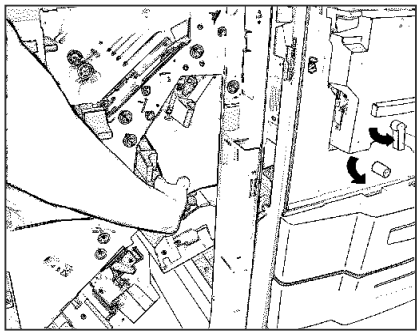
3. Open the Switch Back Cover and remove the paper.

NOTE:
The Switch Back Cover is located on the left side of the printer but is accessed from inside of the Finisher.





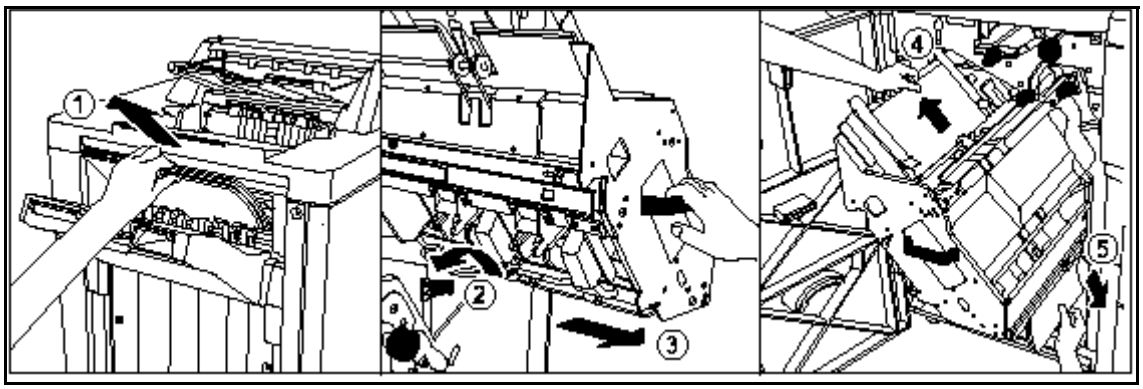
4. Open the Front Cover and turn the fuser unit handle to the Release position and rotate the blue know in the direction of the arrow to remove the paper.



NOTE:
The paper may come out of the slot below the cover.

5. Remove the paper from the Elevator Tray.

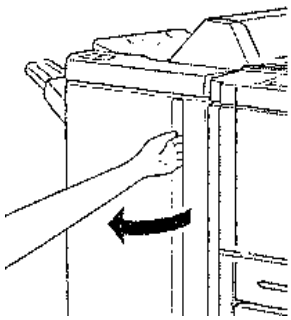
6. Pull out the Stacker and remove the paper from the Delivery Tray.



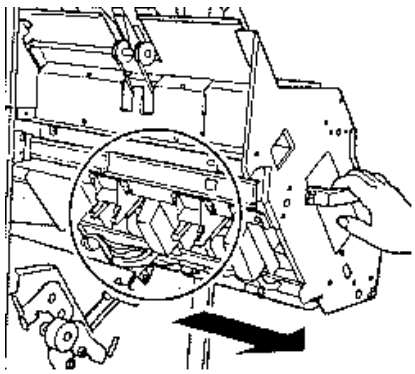
Clearing Wedged Staples

Follow the steps below to clear wedged staples.

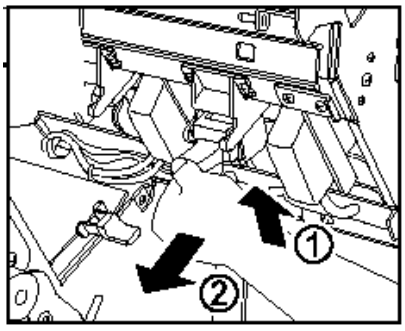
1. Open the Finisher Front Cover.

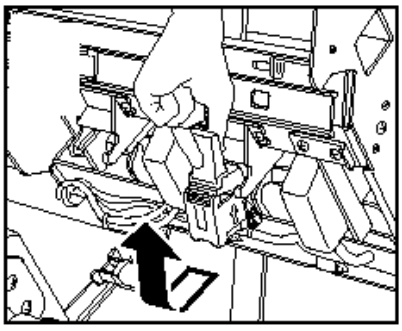


2. Pull out the stacker unit using the handle.

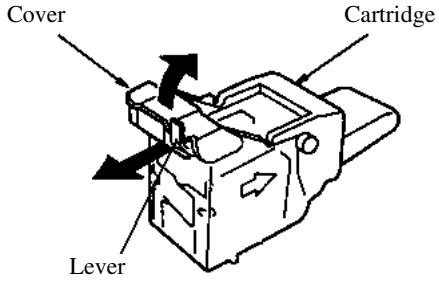


3. Pull up the cartridge housing and slide it along the stapler rail to remove it.

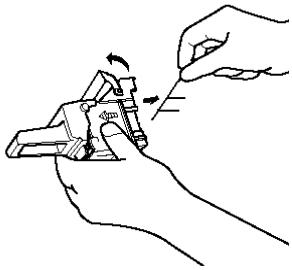




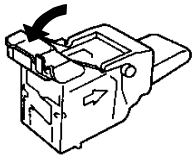
4. Pull the lever of the cartridge, then open the cover.



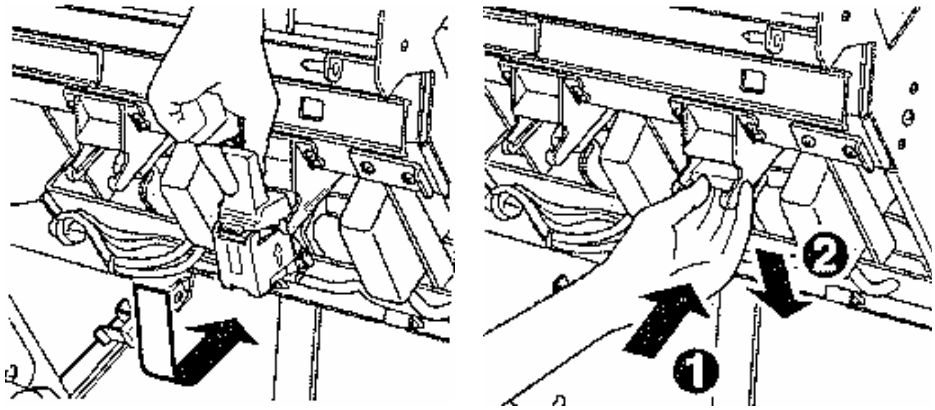
5. Remove the wedge staples.



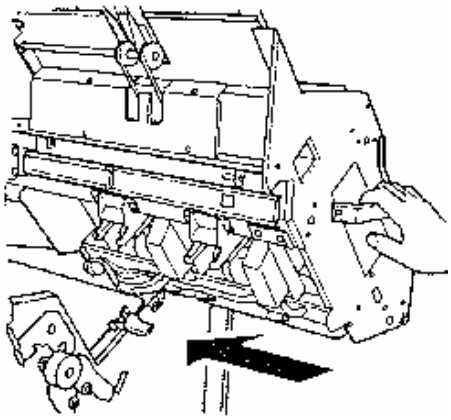
6. Close the cover.



7. Insert the cartridge by sliding it along the stapler rail. Push in and down to secure it in place.



8. Return the stacker unit to its original position.



9. Close the finisher front cover.

Cleaning the Printer

In order to maintain print quality, thoroughly clean the printer following the instructions below. When cleaning the printer, pay particular attention to the notes and cautions for safe maintenance.

CAUTION!
Power OFF the printer prior to cleaning.

Do not use solvent on the printer. Using solvent may dissolve the plastic and paint of the printer.

Do not use cleaning solutions to clean inside and around the printer. Use only a water-moistened cloth.

NOTE:
If the toner gets on your clothes, wipe it off with a dry cloth first and wash the clothes in COLD water. Be careful not to use hot water as it permits the toner to permeate into the fabric. Although the toner is nontoxic, avoid breathing toner particles.

Cleaning Frequency

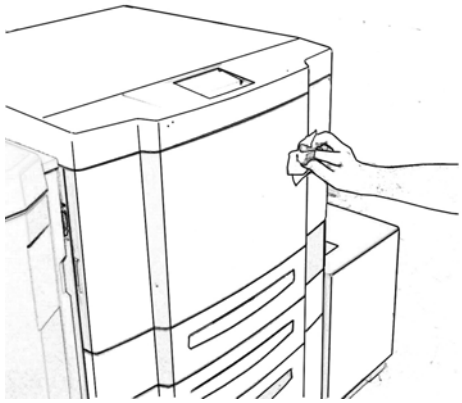
Use the following table as a guide for checking and cleaning the printer.

	Item	Frequency
Check & Clean	Check print quality	Daily and after a paper jam
	Clear print jams	
	Clean the inside of the printer	After replacing drum unit
	Clean the outside of the printer	After replacing the toner collector bottle or whenever necessary.
	Clean the toner bottle area	After supplying toner or whenever necessary.
	Clean the trays and finisher area	Daily
	Clean the conveyance belt area	Daily or whenever paper width is changed. (See Note)
	Clean the image sensor and multi feed sensor	Before using or whenever necessary.

NOTE:
It is very important that the conveyance belt area be cleaned daily to avoid print quality degradation.This is especially true when using color toner.

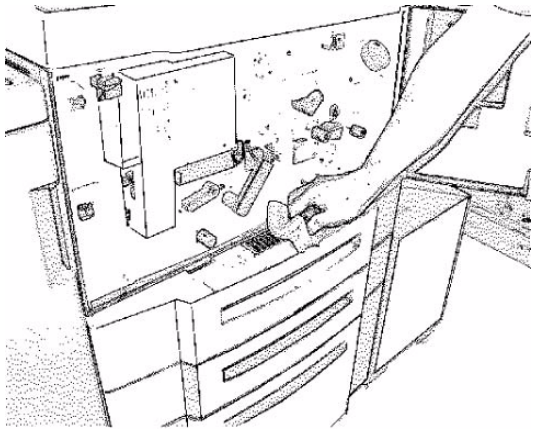
Cleaning the Printer Covers

1. Wipe with a water-moistened, lint-free, soft cloth.
2. Dry with a clean, lint-free soft cloth.



Cleaning the Inside of the Printer

1. Open the Front Cover.
2. Using a dry, lint-free cloth, clean inside the Front Cover by wiping any visible toner away.

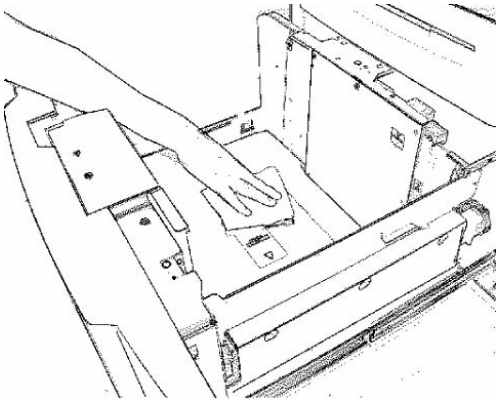


3. Close the Front Cover.

Cleaning Trays 1, 2 and 3, the MBT, and HCF

1. Open the tray and remove the paper.

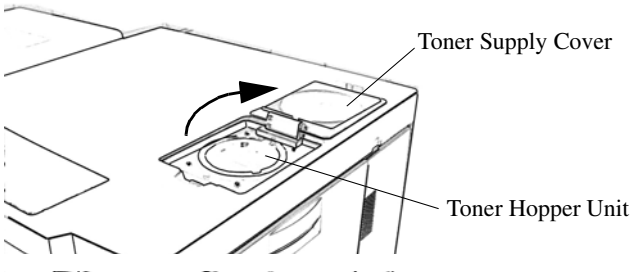
2. Clean inside the tray, especially the corners, by wiping any visible toner away with a dry lint-free cloth.



3. Load the paper back into the tray and close the tray.

Cleaning the Toner Bottle Joint

1. Open the Toner Supply Cover.
2. Clean inside the Toner Supply Cover by wiping any visible toner away with a dry, lint-free cloth.



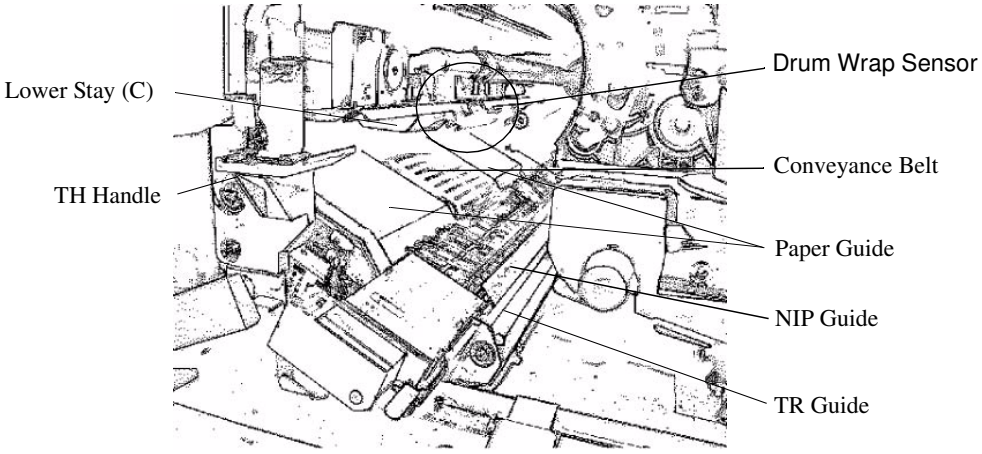
3. Close the Toner Supply Cover.

Cleaning the Conveyance Belt Area (Front and Rear Engine)

1. Open the Front Cover.
2. Turn the TH Handle to the RELEASE position.
3. Remove the Drum Unit. Refer to page 6-15 for instructions.

NOTE:
It is very important that the conveyance belt area be cleaned daily to avoid print quality degradation.This is especially true when using color toner. Do not touch the Drum Wrap Sensor and the hook of the Drum Wrap Sensor Holder, when the surrounding of the Drum Wrap Sensor is cleaned.

4. Clean the Paper Guide, TR Guide, and the Lower Stay (C), and NIP Guide by wiping any visible dust away with a dry lint-free cloth.



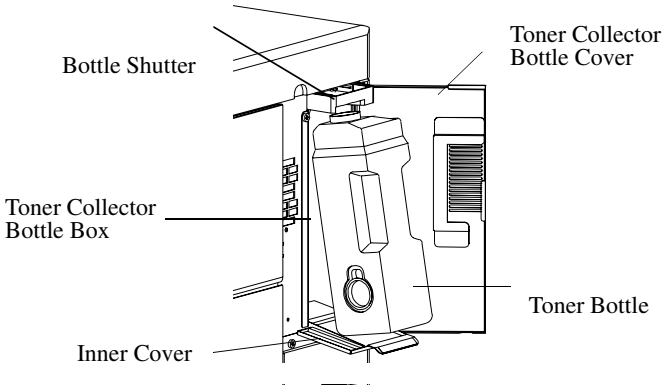
5. Replace the Drum Unit.
6. Turn the TH Handle to the LOCK position.
7. Close the Front Cover.

Cleaning the Toner Collector Bottle Area (Front and Rear Engine)

1. Turn off the power.

   NOTE:
   If the power is not turned off prior to removing the Toner Collector Bottle, the counter will be reset.

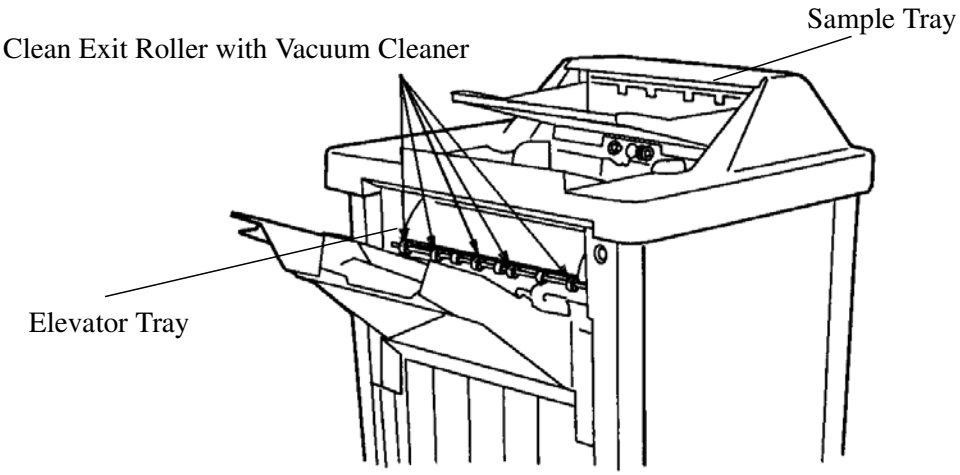
2. Open the Toner Collector Bottle Cover and the Inner Cover
3. Remove the Toner Collector Bottle.
4. Clean the Toner Collector Bottle Cover, Toner Collector Bottle Box, the surface of the Bottle Shutter, and the Inner Cover by wiping any visible toner away with a dry, lint-free cloth.



5. Replace the Toner Collector Bottle.
6. Close the Inner Cover and the Toner Collector Bottle Cover.

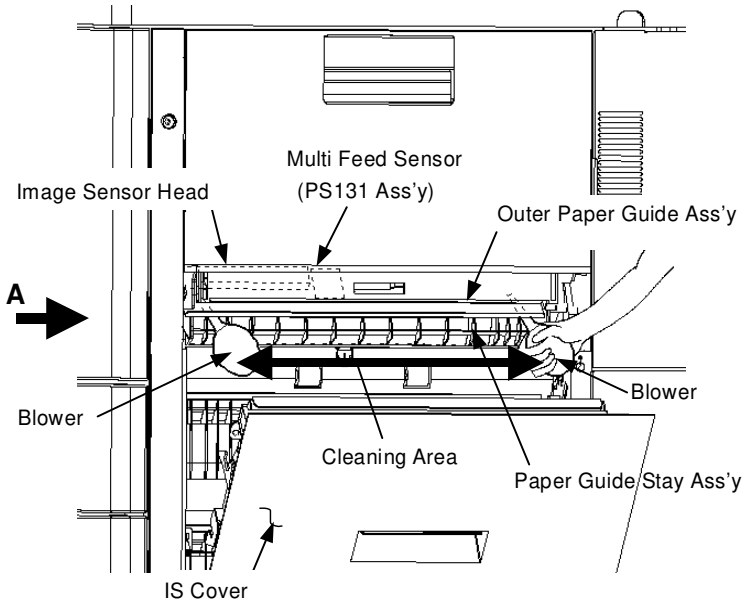
Cleaning the the Trays and Finsher Area

.

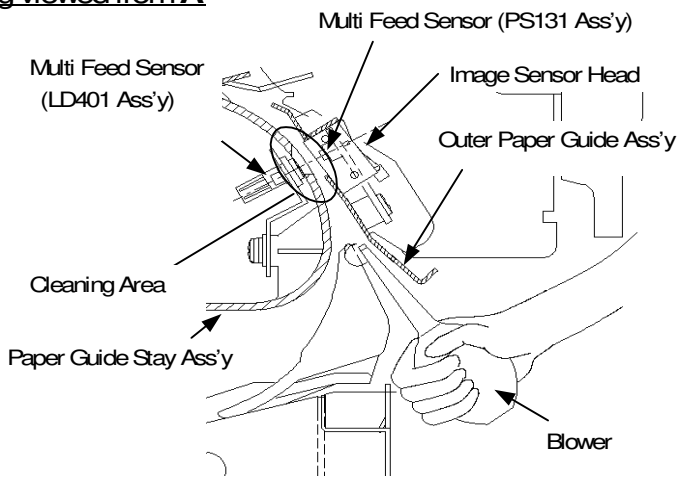


Cleaning the Image Sensor and Multi Feed Sensor (Front and Rear Engine)

1. Open the IS Cover.
2. Insert the top of the blower in the gap of the outer Paper Guide Assembly and the Paper Guide Stay Assembly.
3. Squeeze the blower to force air into the area. Repeat approximately every 5 cm along the width of the Paper Guide. Repeat many times around the Image Sensor Head and the Multi Feed sensor as shown in figure.

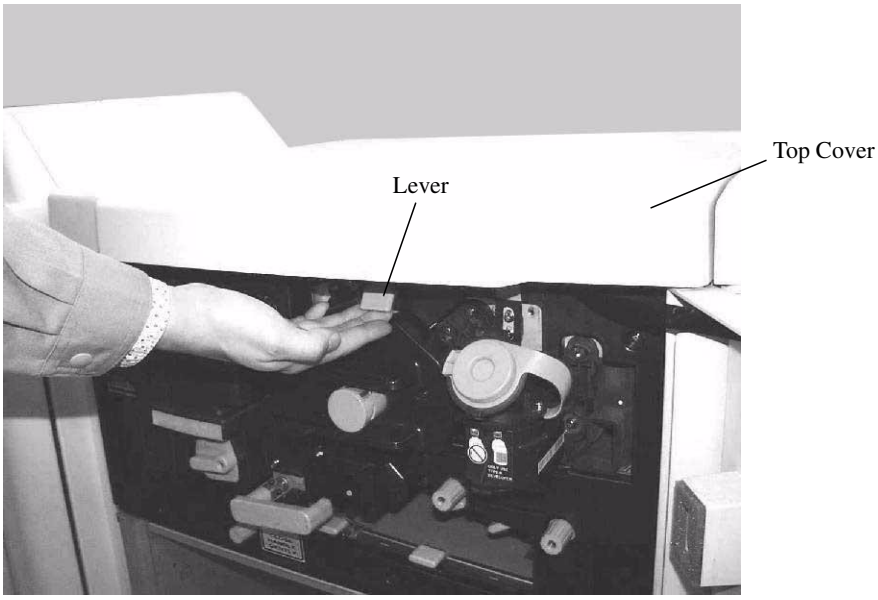


Drawing viewed from **A**

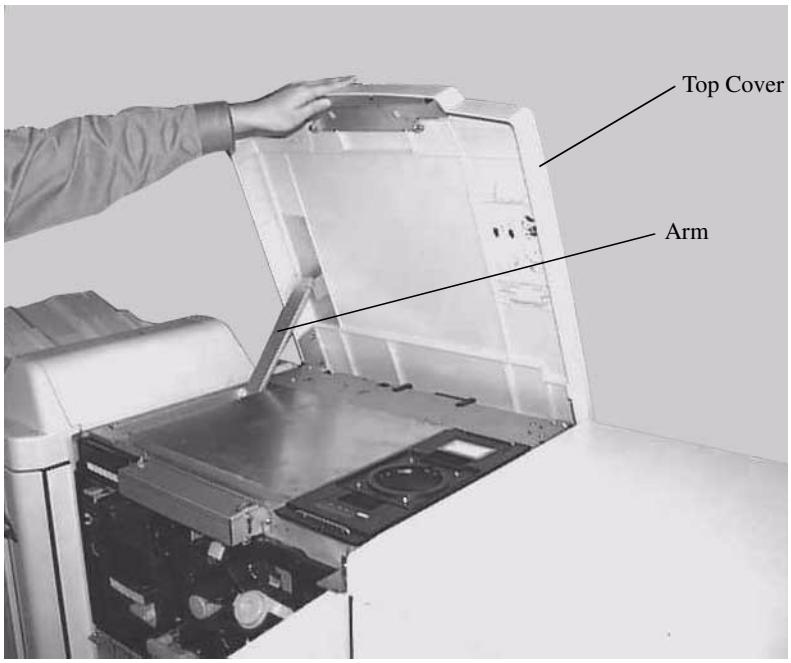


Replacing the Color Kit

1. Open the Front Cover of the Rear Engine.
2. Pull the lever to open the top cover.



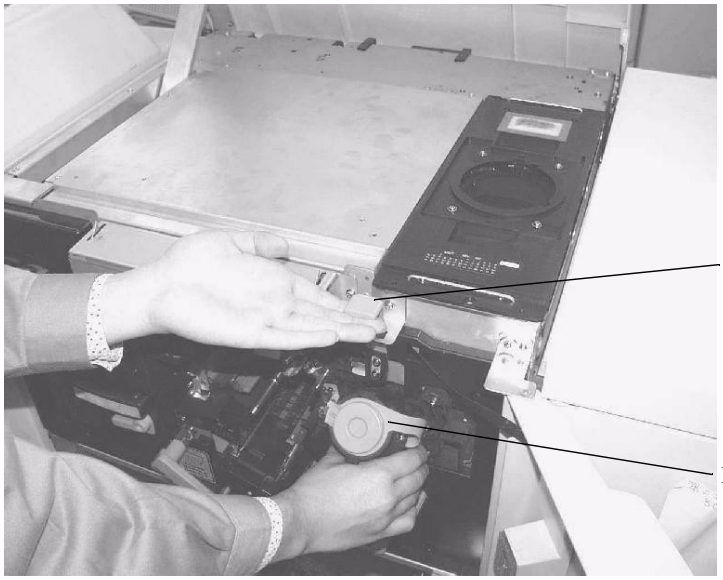
3. Lift the top cover all the way up until the arm is locked.



4. Remove the Drum Unit. See “Replacing the Drum Unit” on page 6-15.

Remove the Developer Unit

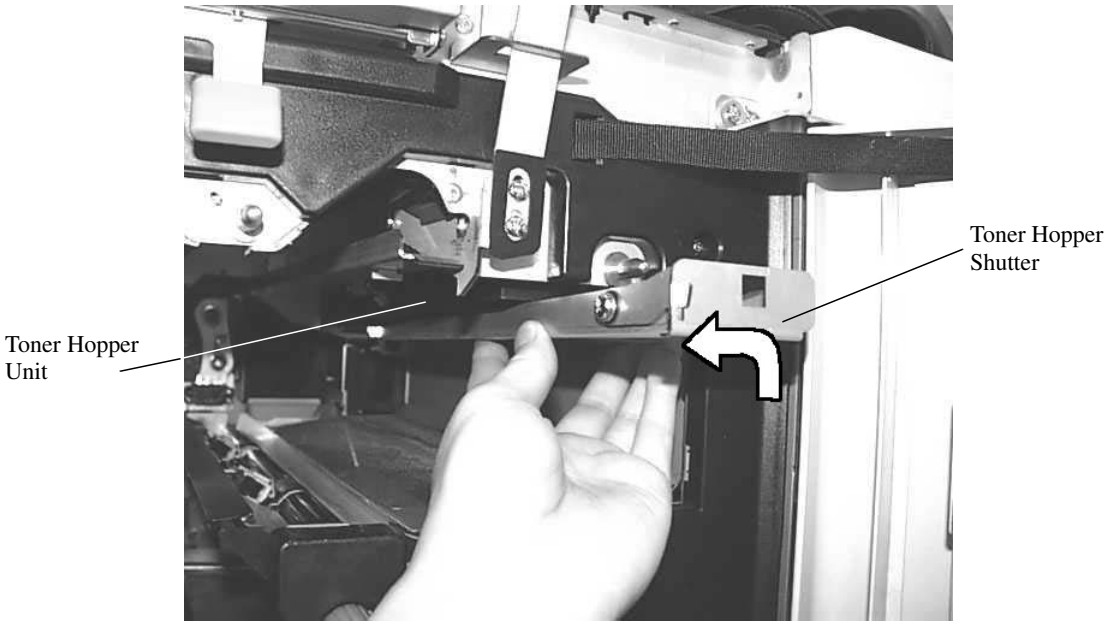
1. Lift up the Lever.
2. Using the Developer Duct, slowly pull out the Developer Unit until the handle is accessible. Use the Handle and the Duct to completely pull out and remove the Developer Unit.

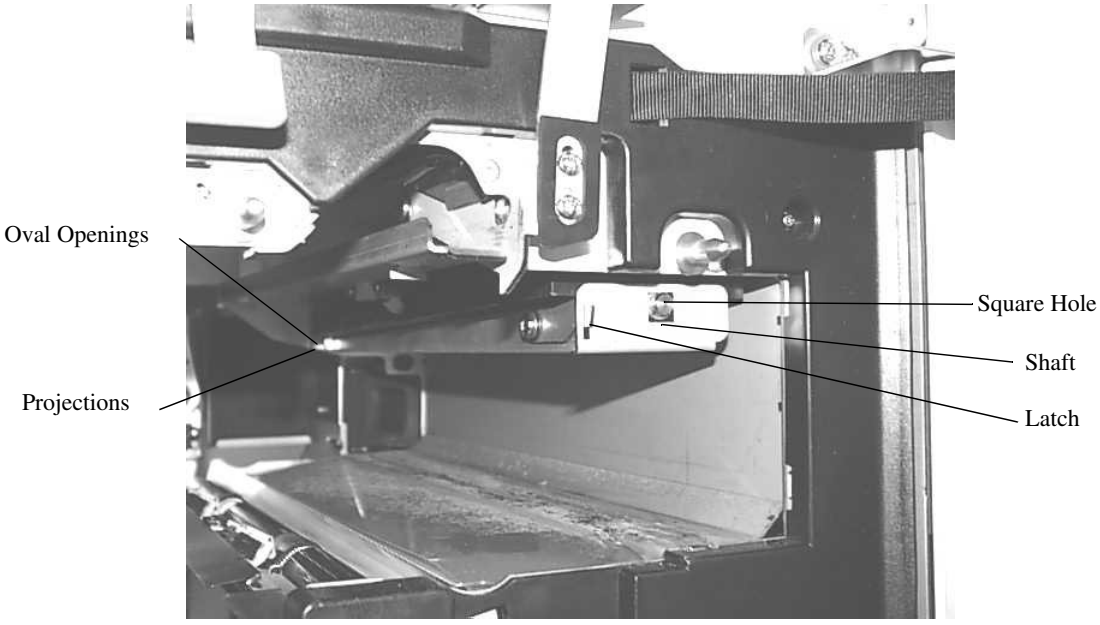


CAUTION!
The Developer Unit is heavy. Use caution when lifting it.
Cover the Developer Unit with paper to protect it.

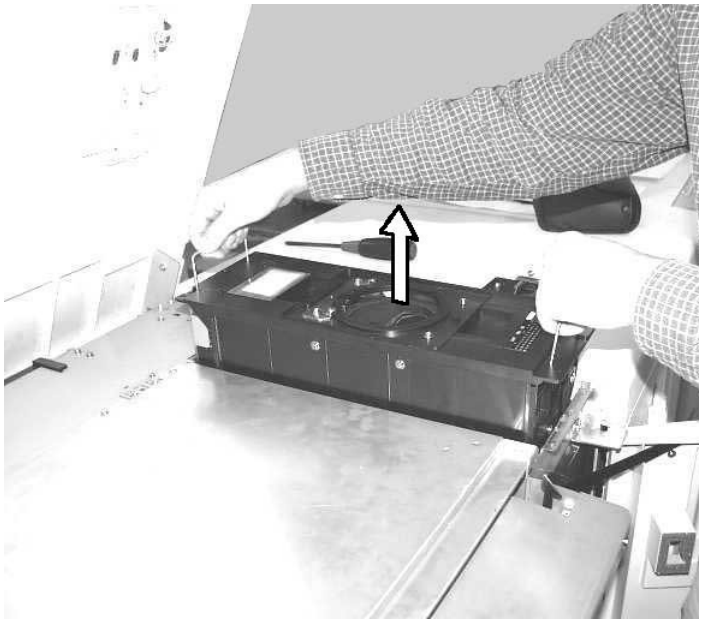
Attach the Toner Hopper Shutter

1. Slide the Toner Hopper Shutter toward the back and align the two projections on the Shutter with the oval openings on the Hopper Unit.
2. When the Shutter and Hopper Unit are aligned, push up to set the Shutter in place.
3. Set the Latch by Installing the Shaft into the square hole on the front Side of the Shutter.

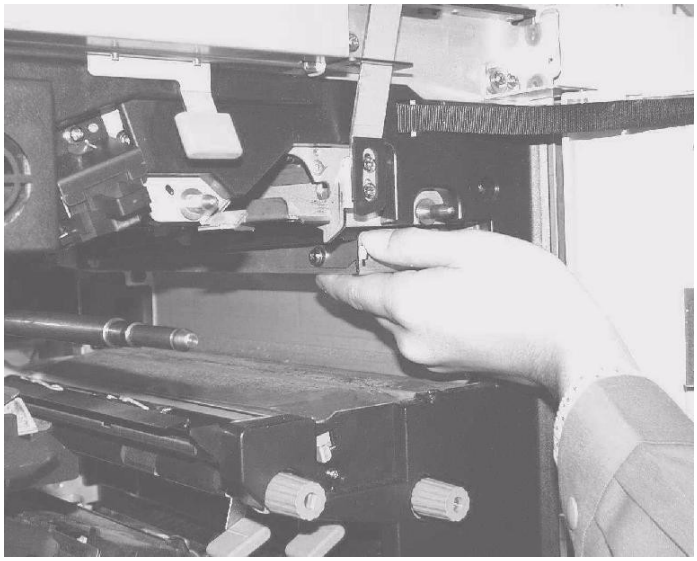




4. Pull out the Toner Hopper Unit using the two handles.



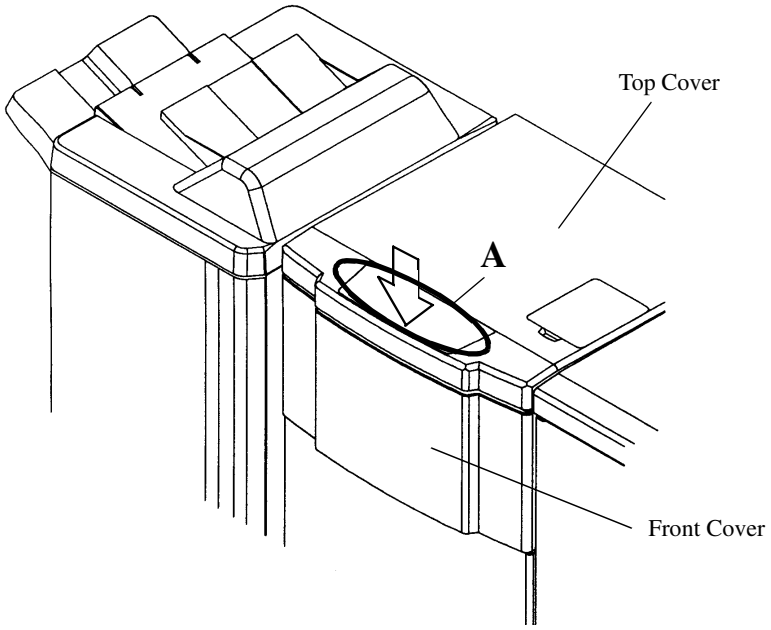
5. Install the new color Toner Hopper Unit in the reverse order.
6. Pull down the Latch and remove the Toner Hopper Shutter.



7. Install the new color Developer Unit in the reverse order. See page 6-54.

8. Lift the Arm and close the Top Cover.

9. Press the area marked “A” to lock the Top Cover.
10. Close the Front Cover.



Handling and Storing Supplies and Consumables

Paper

Proper handling and storing of paper are important to optimize the performance of the printer. For best results, follow the instructions below. See Appendix C for more details on purchasing, loading, storing, and troubleshooting paper.

When Purchasing

- Refer to Appendix C for paper specifications.
- Confirm that the paper complies with the specifications.

When Loading

- Be careful not to damage, crease, or fold paper when handling.
- Eliminate any damaged paper before loading paper into the tray.
- Do not load different types of paper into the same tray.
- Remove any paper previously loaded in the tray when loading new paper. Do not put new paper on the paper formerly loaded in the tray.

When Storing

- Wrap the remaining paper to keep the proper moisture content.
- Store the wrapped paper in an air-conditioned room. There should not be a significant temperature difference between a paper storage environment and a printer operating environment. It may cause paper jams.

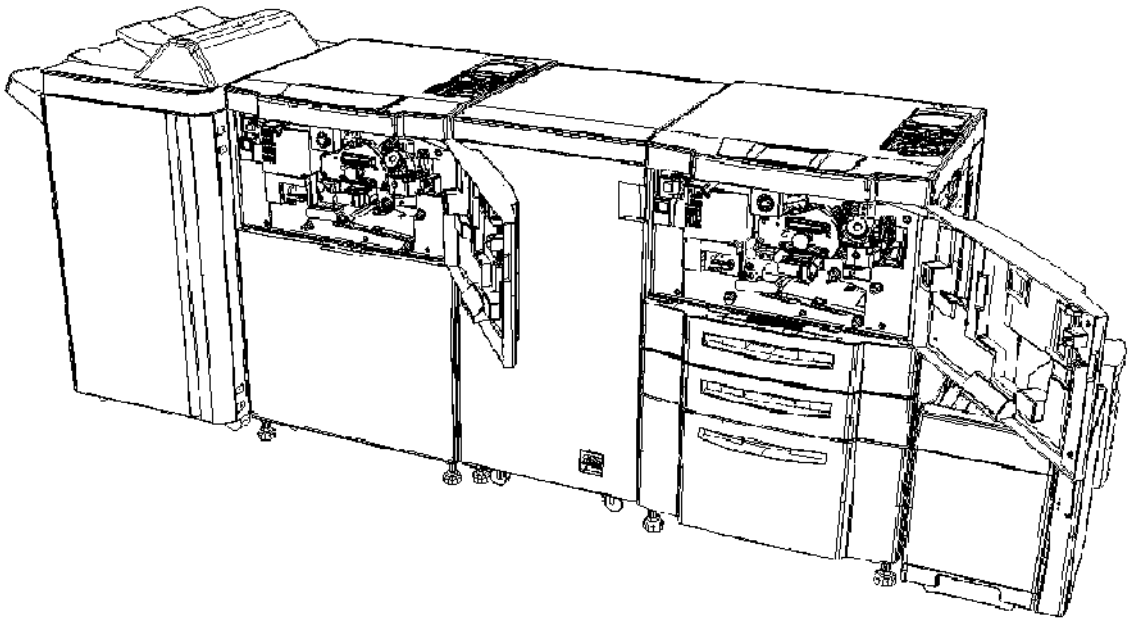
When Paper Jams Frequently Occur

- Replace the paper. Even if paper brands are same, characteristics may be slightly different due to different environmental storage conditions.
- Turn over the paper in the tray. This should not be applied when using paper whose front side or back side is prearranged such as letterhead forms.

Replacing the Charger Unit (Rear Engine Only)

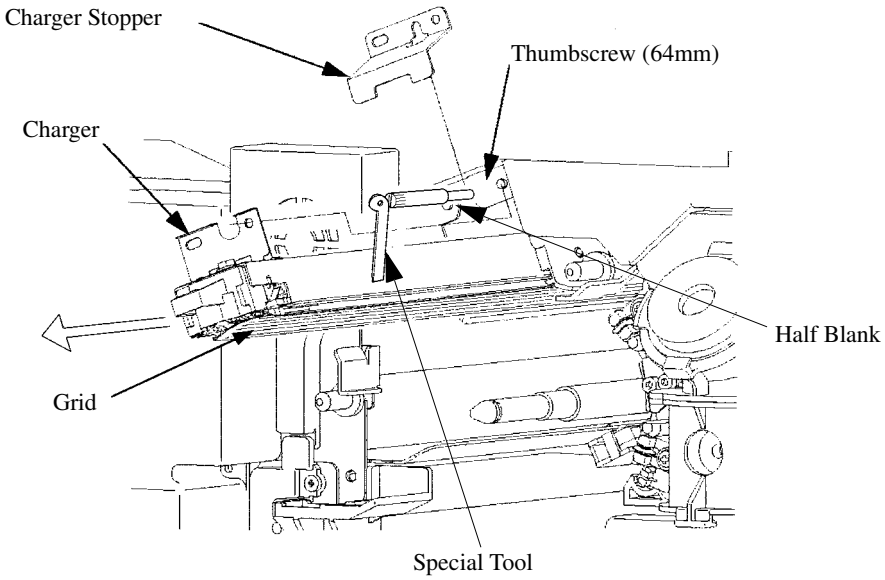
The OCP displays “Clean Charger Unit” when the charger unit needs to be replaced (every 200,000 images). The replace the charger unit, perform the following steps.

1. Open the Rear Engine Front Cover.



2. Remove the OPC drum.

3. Remove the charger stopper by removing the purple thumbscrew. (Using the special tool may make it easier to remove the thumbscrew.



CAUTION!

Take care not to touch the grid wires. Touching the grid wires with your fingers may cause the grid to become contaminated and may cause print quality problems.

4. To remove the charger unit, carefully pull it forward.

NOTE:

There is an extra charger unit in the accessory box. Store the used charger unit in the accessories box or other safe place. When your authorized service technician performs a 400K cleaning, he will clean the used charger unit for use again after 200K images.

5. Install the new charger unit
6. Install the charger stopper plate and secure it with the thumbscrew.

CAUTION!

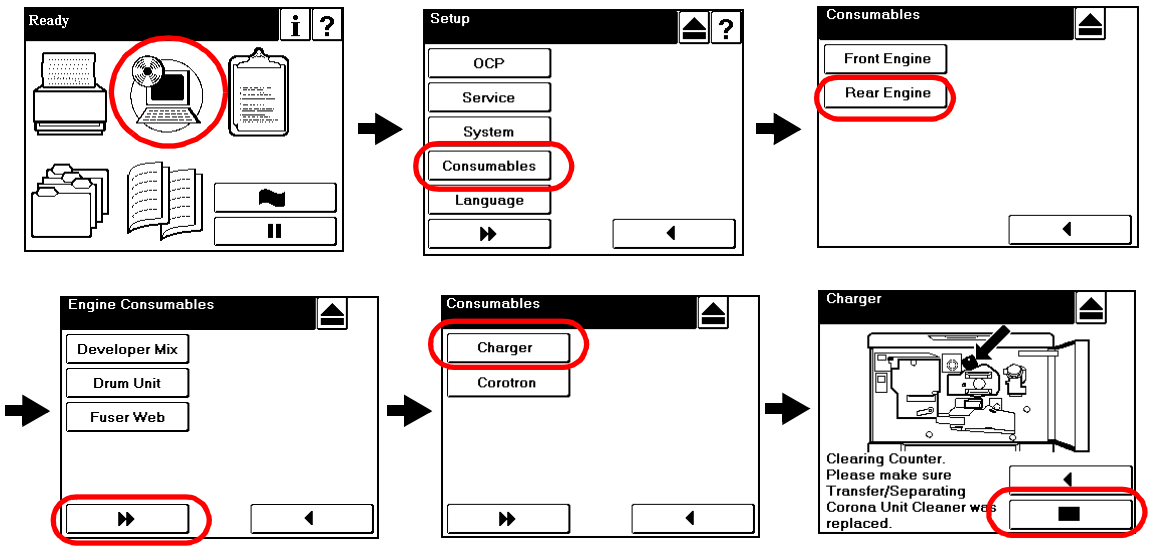
Ensure the holes in the stopper plate align with the raised locating dimples on the frame.

7. Carefully install the drum unit and secure with the drum locking knob.
8. Close the rear engine front cover.

Reset Charger Counter

To reset the charger counter, make the following selections from the OCP:

Setup / Consumables / Rear Engine / Charger / ■

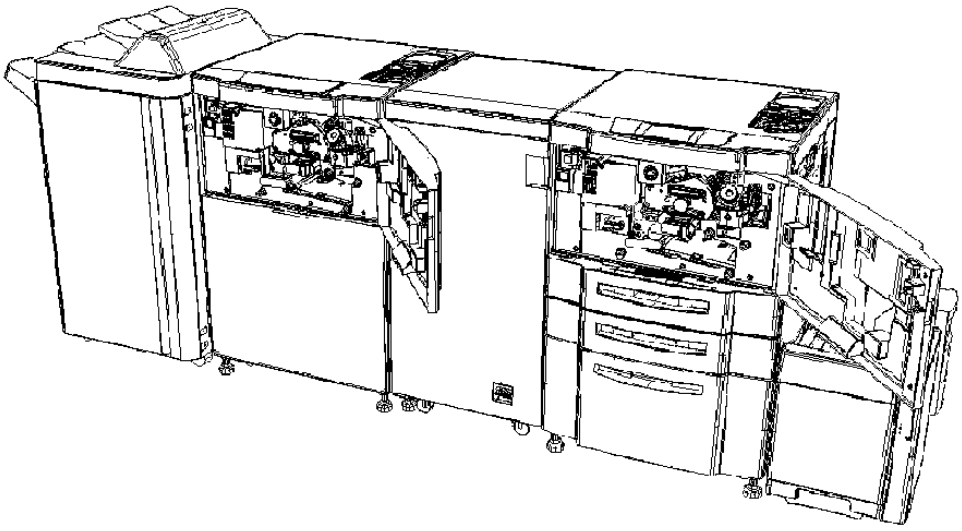


Replacing the Corotron Unit (Rear Engine Only)

The OCP displays “Clean the Corotron Unit” when it needs to be replaced (every 200,000 images). To replace the corotron unit, perform the following steps.

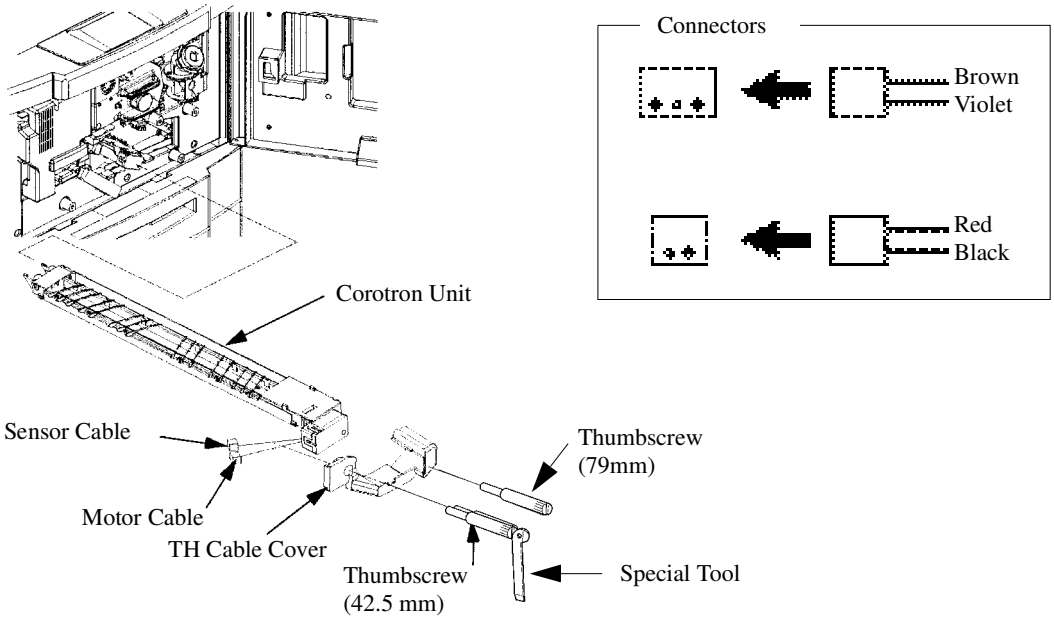
NOTE:
There is an extra corotron unit in the accessory box. Store the used corotron unit in the accessories box or other safe place. When your authorized service technician performs a 400K cleaning, he will clean the used corotron unit for use again after 200K images.

1. Open the rear engine front cover.



2. Open the transport deck assembly by turning the large purple handle down (clockwise).

3. Remove the 2 screws securing the black plastic cover on the TH assembly.



4. Unplug the 2 connectors, disconnect the cable from the cable clamp located on the bottom side of the TH assembly, and remove the TH assembly.

5. Press down slightly on the transfer/separation corotron assembly while pulling forward to remove it.

6. Install the new transfer/separation corotron unit.

7. Reconnect the cables.

8. Reinstall the black plastic cover, securing it in place with the 2 new purple thumbscrews. (Using the special tool may help secure the thumbscrews.)

9. Gently close the transport deck handle by turning it up (counterclockwise).

CAUTION!

Ensure cable connectors are secure.

Ensure the tab on the drum assembly fits into the slot on the transfer/ separation as the deck is closed.

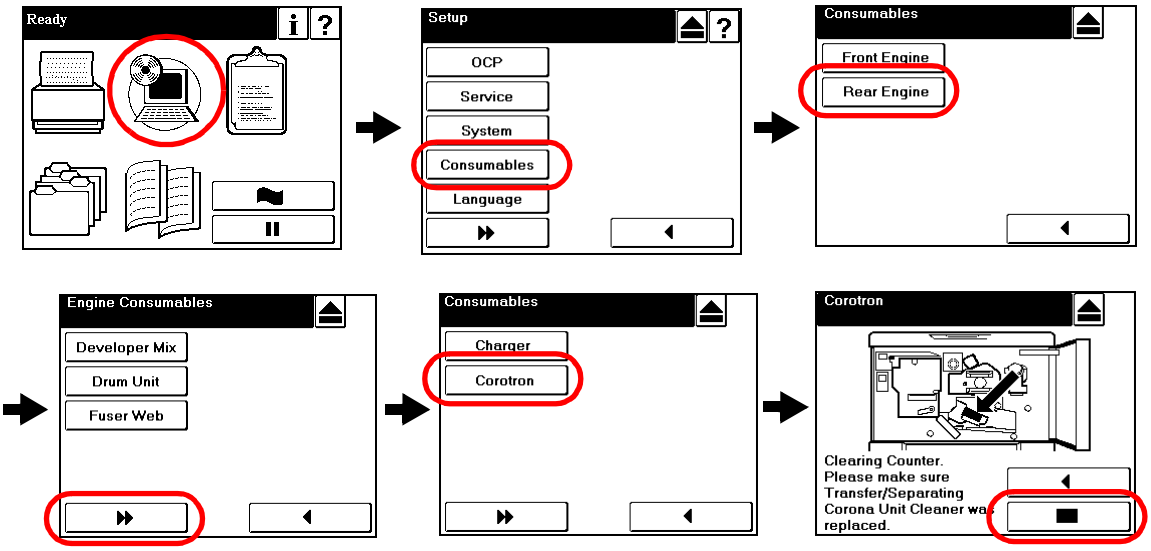
Gently close the transport deck to prevent possible CQ defects.

10. Close the front door.

Reset the Corotron Counter

To reset the corotron counter make the following selections from the OCP:

Setup / Consumable / Rear Engine / Corotron / ■



Toner and Developer

Proper handling and storage of the toner bottle and developer bottle are important to optimize printer performance. For best results, follow the instructions below.

When Purchasing

- Use only toner and developer which are specified for the printer. Print quality may be degraded and troubles may occur if using toner and developer that does not meet the specification.

When Storing

- Store the toner bottle and developer bottle in a well air-conditioned place. If the temperature is over 104 F (40 C), the toner and developer may solidify. The recommended storing temperature is 14°F - 104°F (-10 C~40 C). The recommended relative humidity is 5% to 80%. Do not store for longer than 3 years after the date of manufacture.
- Do not expose developer to the air. If exposed, developer may rust and degrade printing quality.

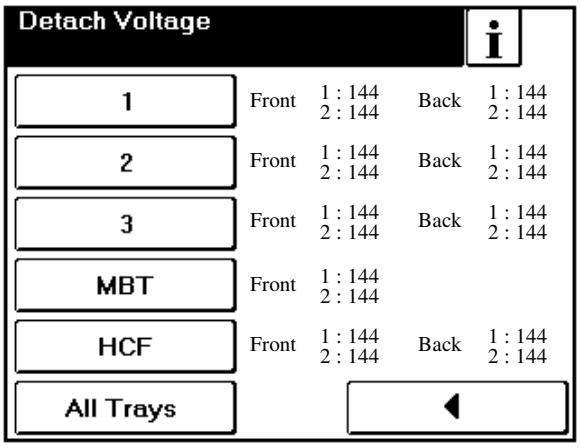
Detach Voltage Adjustment

The Detach Voltage is sensitive to elevation, humidity, and paper type. The default setting is “144”; however, it may be necessary to adjust the setting based on the conditions at the installation site. E118, E119, E128, and E134 errors are an indication that an adjustment is necessary.

The procedure for adjusting the detach voltage will depend on the software revision of your printer. Early revisions do not support individual tray adjustment.To determine which procedure to use perform the following steps:

If individual tray adjustment is supported, the following screen will be displayed:

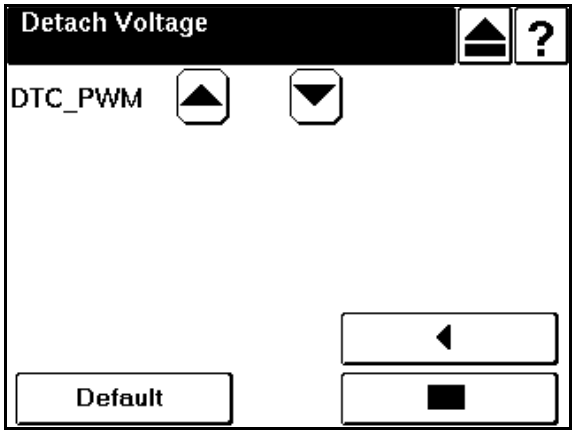
1. Select : ***Printer / Options / ⏩ / Detach Voltage / Front Engine***



2. Select : ***Tray # or All Trays***.

NOTE:
When All Trays is selected, any adjustment you make is common to all trays without having to select them individually.

Press the Default button to make the setting “144”.



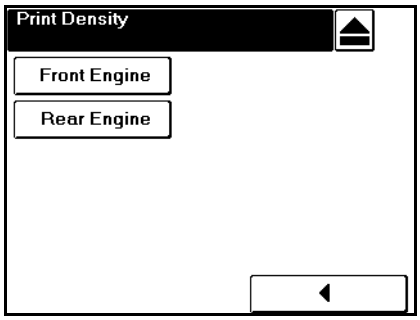
3. Perform blank duplex printing on 20 sheets of your paper or
Select ***Printer / Test Print / Print Quality / Text File 4%*** and select the paper input tray and output tray.
4. Observe whether the duplexed pages are output without an error and record observations.
5. Repeat Step 1 and set all four detach settings lower by an increment of "8" (136).
6. Repeat Step 2, recording observations.
7. Continue repeating Steps 1, and 2, decreasing in increments of "8" (128, 120, 112, 104, 96, 88, 80, 72, 64, 56) recording observations at each setting. The minimum detach voltage is 51.
8. Repeat Step 1 and set all four detach settings to "152".
9. Repeat Steps 2 and 3.
10. Continue repeating Steps 1, 2 and 3, increasing in increments of "8" (160, 168, 176, 184, 192, 200, 208, 216, 224, 232, 240, 248) recording observations at each setting. The maximum voltage is 254.
11. From the observations made in Steps 6 and 9 determine the range of acceptable output (no errors). Make the final setting at the midpoint. For example, if errors occurred at settings of 104 and below and also at settings of 160 and above, make the final setting at 132. (104+160)/2=132.
12. Press ■ to set the value.
13. Repeat steps 1 through 11 for the Rear Engine.

NOTE:
Changes in ambient temperature may require further adjustment. As a guide, decrease the recommended value by 8 for every 7°F (4°C) increase in ambient temperature, and increase the recommended value by 8 for every 7°F (4°C) decrease in ambient temperature.

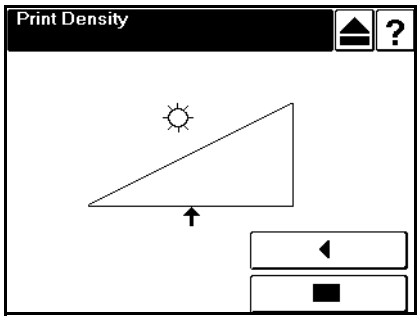
Print Density Adjustment

The print density is adjustable in five levels. Perform adjustment according to the following procedure.

1. Using the OCP select ***Printer / Options / Print Density***. The following screen is displayed.



2. Select either “Front Engine” or “Rear Engine”. The following screen is displayed.

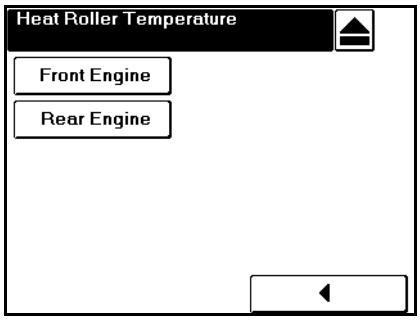


3. The print density is adjustable in five levels, “Light”, “Semi-Light”, “Middle”, “Semi-Dark” and “Dark”. Select the desired print density level by pressing the triangle button on the OCP.
4. After selecting, press [■] key to fix the value.

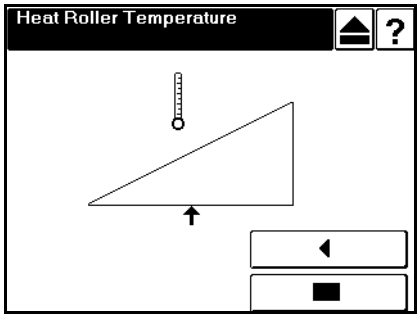
Heat Roller Temperature Adjustment

The heat roller temperature is adjustable in three levels. Perform adjustment according to the following procedure.

1. From the OCP, select ***Printer / Options / Heat Roll Tmp.*** The following screen is displayed.



2. Select either “Front Engine” or “Rear Engine”. The following screen is displayed.

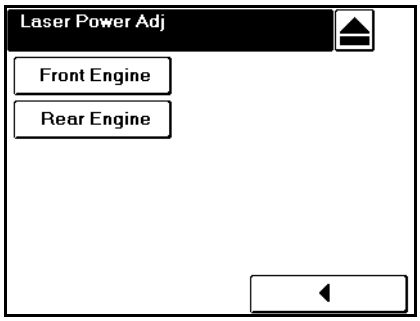


3. The temperature is adjustable in three levels, “Low”, “Normal” and “High”. Select the desired temperature level by pressing the triangle button on the OCP.
4. After selecting, press [■] key to fix the value.

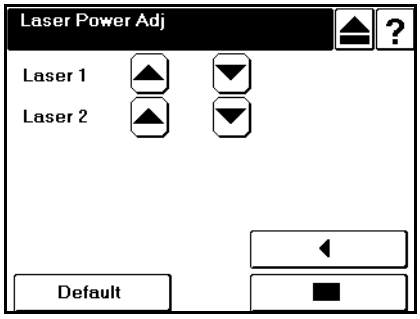
Laser Power Adjustment

The laser power is adjustable within the range from +15 to –15. Perform adjustment according to the following procedure.

1. From the OCP, select ***Printer / Options / Laser Power Adj***. The following screen is displayed.



2. Select either “Front Engine” or “Rear Engine”. The following screen is displayed.



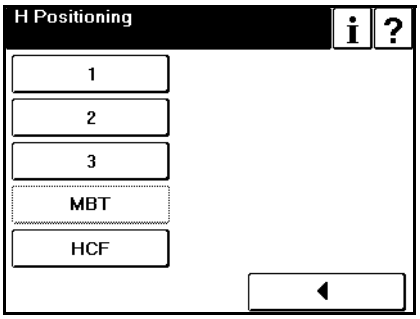
3. The laser power is adjustable in 31 levels within the range from +15 to –15. Be sure to set the same value for “Laser 1” and “Laser 2”. The laser line becomes narrower than the initial value by setting to the minus value. The laser line becomes wider than the initial value by setting to the plus value.
4. After selecting, press [■] key to fix the value.

NOTE:
The setting is reset to “0” by pressing “Initial Value” key.

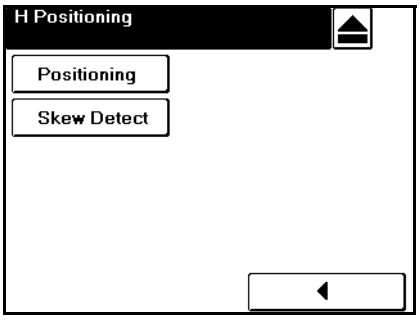
H Positioning Adjustment

H Positioning is set to either enable or disable for each tray. Perform adjustment according to the following procedure.

1. From the OCP select ***Printer / Options / H Positioning***. The following screen is displayed.



2. Select a tray. The following screen is displayed:



3. Select Positioning or Skew Detect and set to enable or disable. .

NOTE:
The positioning key is used for setting the H Positioning to enable or disable. When positioning is set to disable, Skew Detect is not available.

Skew Detect is used to detect skew at the end of a long sheet of paper.

Appendix A
Safety Information

General

- For the safety of the personnel and the product, operate the equipment according to the instructions in this user's guide. The manufacturer will not be responsible for any problems or damage that arise from improper use.
- Electrical specifications and safety regulations differ from country to country. Only purchase products and consumables designed to be used in your country. Do not take the product or consumables to other countries.

Laser Safety

This printer is certified as a Class 1 laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968. This means that the printer does not emit hazardous laser radiation.

Since radiation emitted inside the printer is completely confined within the protective housings and external covers, the laser beam cannot escape from the machine during any phase of user operation.

The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration implemented regulations for laser products on August 1976. These regulations apply to laser products marketed in the United States. The label on the printer indicates compliance with the CDRH regulations and must be attached to laser products marketed in the United States.

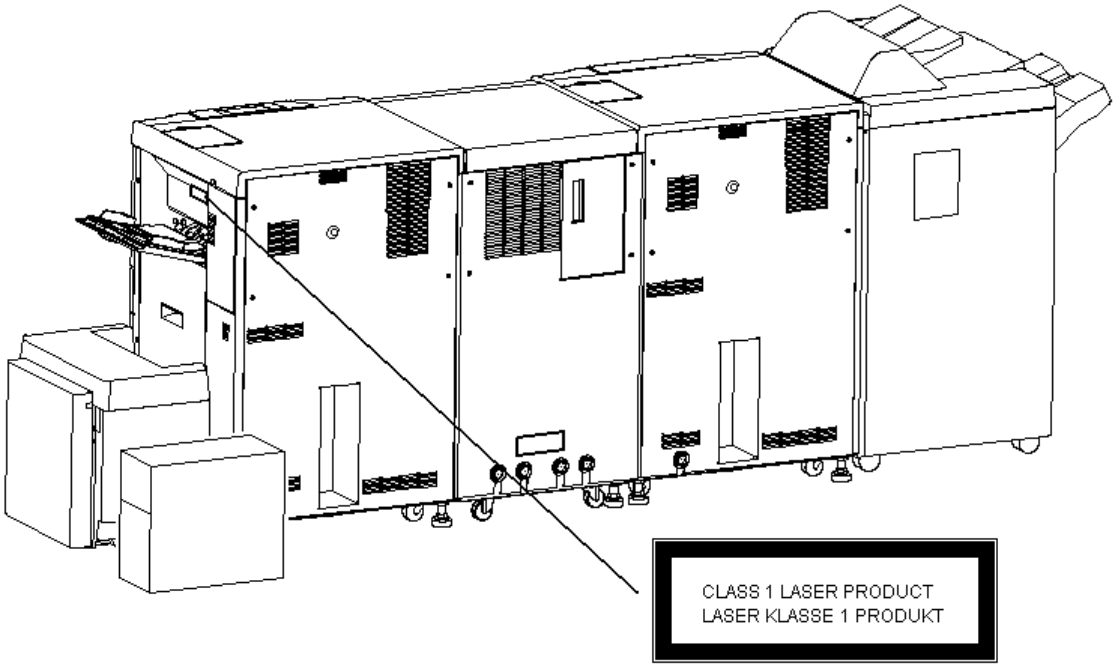
This printer is classified as a Class 1 laser product both under EN60825 and the Code of Federal Regulations, 1040.10 of Title 21.

LOUKAN 1 LASERLAITE
CLASS 1 LASER APPARAT

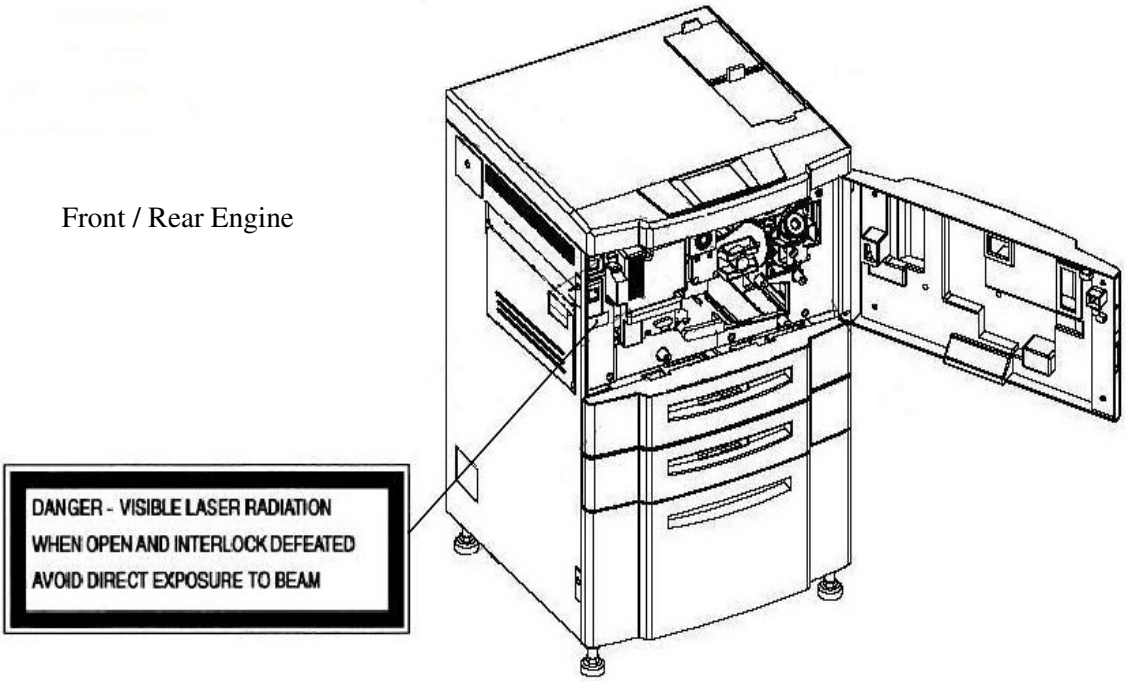
Internal Laser Radiation

Maximum Radiation Power: 5mW x 2 diodes
Wave Length: 675nm

WARNING!
Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous laser radiation exposure.



Front / Rear Engine



Certifications

FCC Notice

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this user's guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference. If this occurs, users are required to correct the interference at their own expense.

Use of shielded cables is required to comply with Class A limits in Subpart B of Part 15 of FCC Rules.

Do not make any changes or modifications to the equipment other than those specified in this user's guide.

You may find the following booklet prepared by the Federal Communications Commission helpful: *How to Identify and Resolve Radio - TV Interference Problems*. This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

Canadian Certification

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

VCCI Notice (Japan)

This is a class 1 product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, you may be required to take corrective actions.

Declaration of Conformity for Safety/EMI

The Printer, Finisher, High Capacity Feeder, and Container Stacker conform to the directives shown below. For further information or to request a copy of the Declaration of Conformity, contact your Distributor.

1. **CE Marking Traceability information**
   Manufacturer:
   Ricoh Printing Systems Ltd.
   1060 Takeda Hitachinaka-city Ibaraki-Pref. 312-8502 Japan
   Authorized representative:
   RICOH EUROPE B.V.
   Prof. W.H. Keesomlaan 1, 1183 DJ Amstelveen The Netherlands
   Before July 19, 2007:
   CE Declaration of Conformity
   The Product complies with the requirements of the EMC Directive 89/336/EEC and its amending directives and the Low Voltage Directive 73/23/EEC and its amending directives.
   After July 20, 2007:
   CE Declaration of Conformity
   The Product complies with the requirements of the EMC Directive 2004/108/EC and the Low Voltage Directive 2006/95/EC and its amending directives.

2. **EMI European standard EN55022**

This equipment has been tested and found to comply with the limits for a class A Information Technology Equipment in accordance with the European Standard EN55022.

These limits are designed to provide reasonable protection against unacceptable interference in either commercial or industrial environments. This equipment generates, uses, and can radiate radio signals and if it is not installed and used in accordance with the instructions detailed in this user's guide, it may cause unacceptable interference to radio communication installations and equipment. The operation of this equipment in a residential area is likely to cause unacceptable interference in which case you may be required to correct the source of the interference at your own expense.

Please be aware that changes and modifications made to the equipment without prior approval of the manufacturer could negate your permission to operate the equipment.

Declaration of Conformity for RoHS

The Printer, Finisher, High Capacity Feeder, and Container Stacker conform to the directives and standards shown below. For further information or to request a copy of the Declaration of Conformity, contact your Distributor.

1. **Restriction of Hazardous Substances (RoHS) Directive 2002/95/EC**

LAN, Parallel and Serial Interface Output Voltage

Interface	Output Voltage
10/100/1000 B-T Aux	2.2v - 2.8v
Parallel	Shall not exceed 5.5v
Serial	-14.3 - +14.3

When Installing and Relocating the Printer

Power Specifications

Rated Voltage	Rated Frequency	Rated Current
200-240V	50/60 Hz	Input 1: 12A Input 2: 12A

Power Cords

WARNING!

Connect the power plug only to a properly rated power outlet. Otherwise, a fire or shock hazard may result.

Never use multi-plug adaptors to plug multiple power plugs into the same power source. Be sure to operate the printer on a sole-use receptacle. Multiple connectors can cause overheating and a fire could result.

Ensure that the plug connection is free of dust. In a damp environment, a contaminated connector can draw a non-negligible amount of current that can generate heat and eventually cause a fire over an extended period of time.

To prevent the risk of electric shocks and personal injury, fire, and printer damage:

- Always use the power cord provided with your printer. When an extension power cord is required, always use a properly rated cord.

  If the power cord is not provided, use the following types of power cords:

  - For North America:
    3 wires, Type SJT 3x14 AWG (3x1.33 mm^2) or thicker
    Rated min. 250V/12A (with grounding plug, NEMA 6-15P).
  - For Europe
    3 wires, min. 3x1.5 mm^2
    Harmonized (<HAR>), Rated min. 250V/12A (with grounding plug).

WARNING!

The printer must be connected to the grounding power outlet for safe and proper operation.

Apparatet må kun tilkoples jordet stikkontakt.

Apparaten skall ansulatas till jordat uttag när den ansluts till ett nätverk.

Für einen sicheren und ordnungsgemäßen Betrieb muß der Drucker an eine geerdete Steckdose angeschlossen werden.

- Do not attempt to rework, pull, bend, chafe, or otherwise damage the power cord. Do not place a heavy object on the cord.
- Never touch a power cord with wet hands.

- If your printer produces smoke, excessive heat, unusual noises or odors, or if any liquid is spilled into the printer, immediately switch off and unplug the printer.
- If the power cord is broken or insulated wires are exposed, be sure to get them replaced. (Do not use the damaged cord.)

CAUTION!

Never unplug or replug the printer while it is on.

- When unplugging the printer, grasp the plug instead of the cord.
- Be sure to switch off and unplug the printer before accessing its interior for cleaning or maintenance.
- When the printer is not used over an extended period of time, switch it off and unplug it.
- Once a month, unplug the printer and check that:
  - the power cord is plugged firmly into a receptacle.
  - the power cord is not cracked or frayed.
  - the plug is not excessively heated, rusted, or bent.
  - the plug and receptacle are free of dust.

NOTE:

If you notice any unusual conditions, contact your service representative.

Positioning the Printer Safely

To prevent the risk of electric shocks and personal injury, fire, and printer damage:

- Switch off the printer before connecting the interface cable or optional accessory.

CAUTION!

Do not place the printer near heaters or volatile, flammable, or combustible materials.

- Place the printer on a level and sturdy surface that can withstand the printer's weight. If tilted, the printer may fall over and cause injuries.
- Do not place the printer in a hot, humid, dusty, or poorly ventilated environment.
- When moving the printer, be sure to unplug the power cord from the outlet. If the printer is moved with the power cord connected, it can cause damage to the cord.
- When moving the printer, do not tilt it more than 10 degrees. If tilted excessively, the printer may fall over and cause injuries.
- If you need to move the printer over a long distance, consult your Technical Representative.

Environmental Limit

- The printer is capable of operating normally within the following recommended environmental limits:
  - Temperature range: 50 -89 F (10 -32 C).
  - Humidity range: 20-80% RH (no condensation).

NOTE:

Sudden temperature fluctuations can affect print quality. Rapid heating of a cold room can cause condensation inside the printer, directly interfering with image transfer.

- Do not expose the printer to direct sunlight, or the printer's performance may decline.

Operating Precautions

- Take care not to allow ties, sleeves, shirts and long hair to be caught in the printer while operating.
- Be careful not to touch the hazardous parts near the caution labels.
- Be sure to avoid accidentally powering on the printer or pressing switches on the operator's panel while operating the printer.
- Never touch the high voltage portions of the printer, where caution labels are attached, when the printer is on. It may cause personal injuries if accidentally touched.
- Make sure that the printer paper complies with the supplies specifications. Printing on paper which does not comply with the specifications may result in paper jams and print quality degradation.
- Properly load the paper into the hopper to prevent paper skew and paper jams.
- It is absolutely necessary to follow the procedures and instructions described in this manual in order to optimize the printer's performance and to assure its safe operation.

VORSICHTSMASSNAHMEN BEIM BETRIEB

- Passen Sie auf, daß sich Krawatten, Ärmel, Hemden und langes Haar beim Betrieb nicht im Drucker verfangen.
- Berühren Sie nicht die gefährlichen Teile im Bereich der Aufkleber mit den Warnhinweisen.
- Schalten Sie den Drucker nicht versehentlich ein, und drücken Sie während des Druckerbetriebs keine Schalter im Bedienerfeld.
- Berühren Sie bei eingeschaltetem Drucker unter keinen Umständen die Hochspannungsteile des Druckers, an denen Aufkleber mit Warnhinweisen angebracht sind.
- Vergewissern Sie sich, daß das Druckerpapier die Angaben für Materialen erfüllt. Drucken auf Papier, das diesen Angaben nicht entspricht, kann zu Papierstaus und Einbußen bei der Druckqualität führen. Versehentliches Berühren kann zu Verletzungen führen.
- Legen Sie das Papier sachgemäß in den Behälter ein, um Papierstaus und schiefen Einzug des Papiers zu vermeiden.
- Es ist underläßlich, daß Sie die in diesem Handbuch beschriebenen Verfahrensweisen und Anweisungen befolgen, um die Leistung des Druckers zu oprimieren und einen sicheren Betrieb zu gewährleisten.

SAFETY PRECAUTIONS

- Always keep the area around the printer tidy. Use the printer under the proper lighting (500-1,000 lux.). Keep sufficient space around the printer so the hoppers can be pulled forward. Space required in the vicinity of the printer is as follows:

  Front side: 1.2 meters

  Left, right and rear side: 1 meter

- Do not place anything on the printer.
- Do not open any covers during printing operation. It may cause personal injuries if moving elements or electrical parts are accidentally touched.
- Be particularly careful when working in the fuser unit area. Do not touch the inside of the fuser unit. The fuser unit becomes very hot (approx. 190 C) and it may cause personal injuries if accidentally touched.
- Toner and developer are comprised of powdery particles. Avoid inhaling toner or developer when it accidentally spills and circulates. If it spills on the floor, immediately clean it with water-damped cloth. Do not leave it on the floor. It may cause accidents if stepped on as they are slippery beads of metal.
- Limit your operations to those described in this manual. Contact the field engineer or service technician for further operations which are not explained in this manual.
- This equipment generates ozone. Long-term exposure should be limited to 0.1 ppm calculated as an 8 hr. time weighted average concentration. Provide proper ventilation. Avoid installing the unit in a small room (£ 1000 cubic feet). If installing in a space smaller than 1000 cubic feet, frequent ventilation is necessary

SICHERHEITSVORKEHRUNGEN

- Halten Sie im Bereich des Druckers stets Ordnung. Verwenden Sie den Drucker bei den richtigen Lichtverhältnissen (500-1,000 lux).
  Sorgen Sie für ausreichenden Platz um den Drucker herum, damit die Behälter herausgezogen werden können. Im Druckerbereich wird folgender Platz benötigt:

  Vorderseite: 1.2 Meter

  Links, rechts und auf der Rückseite: 1 Meter

- Legen Sie keine Gegenstände auf den Drucker.
- Öffnen Sie die Abdeckungen nicht während des Druckvorgangs. Versehentliches Berühren beweglicher oder elektrischer Teile kann zu Verletzungen führen.
- Seien Sie bei Arbeiten in Bereich der Fixiereinheit besonders vorsichtig. Berühren Sie auf keinen Fall das Innere der Fixiereinheit. Die Fixiereinheit wird sehr heiß (etwa 190 C) und versehentliches Berühren kann zu Verletzungen führen.

- Toner und Entwickler bestehen aus pulverförmigen Partikeln. Vermeiden Sie das Einatmen von Toner oder Entwickler, wenn Substanzen aus Versehen verschüttet werden und in der Luft zirkulieren. Werden diese Substanzen auf den Boden verschüttet, entfernen Sie sie sofort rait einem mit Wasser angefeuchteten Tuch. Belassen Sie diese Substanzen nicht auf dem Boden. Dies könnte zu Unfällen führen, da Sie auf den schlüpfrigen Metallkügelchen ausrutschen könnten.
- Führen Sie nur die in diesem Handbuch beschriebenen Operationen aus. Setzen Sie sich mit dem zuständigen technischen Außendienst oder mit dem Kundendienst in Verbindung, wenn Sie Operationen ausführen möchten, die nicht in diesem Handbuch beschrieben sind.
- Dieses Gerät erzeugt Ozon. Die langzeitige Belastung solite auf 0.1 ppm. berechnet als 8-stündige mittlere Konzentration beschränkt sein. Gute Belüftung gewhären und das Gerät nicht in einem kleinen Raum (£ 1000 Kubikuß) aufstellen.

  Wird es jedoch in einem kleinen Raum von weniger als 1000 Kubikuß aufgestellt, so ist es erforderlich, die Luft öfters aufzufrischen.

Care of Printer Supplies

- Store the paper, toner, and other supplies in a place free from direct sunlight and away from any heating apparatus. Keep them in a dry, cool, clean environment.
- Store paper that has been removed from its wrapper, but not loaded into the drawer, in a sealed, plastic bag in a cool, dark place.
- If your hands become soiled with toner, wash them with soap and water immediately.

Appendix B
Printer Specifications

What This Appendix Contains

This appendix contains specification information pertaining to the following topics.

- Base Printer
- Printing Speed
- Consumables

Specifications

Base Printer

Design and specifications are subject to change without notice.

Item	Specification
Imaging Method	Electro-Photography.
Exposure System	Semiconductor 2 laser beam (laser diode) scanning.
Image Resolution	600 x 600 dots per inch (dpi).
Printable Area	Full size of the paper
Controller	Egret3R controller with PowerPC 750FX 800MHz
Monthly Print Volume	Up to 600,000 images (184 imp) Recommended maximum monthly print volume: 1,600,000 images
Nominal Voltage	200 to 240 V
Nominal Frequency	50 Hz or 60 Hz
Power Consumption	Standby: less than 1KW (each input) Printing: less than 2.4KW (each input)
Noise Level	70 dBA in operation. 60dBA in standby.
Operating Temperature and Humidity	Temperature range: 50 to 90 F (10 to 32 C). 68 - 77 F (19 to 25 C) recommended Humidity range: 20-80% RH (no condensation) (40 - 60% recommended)
Dimensions	1800 x 1008 x 665mm (H x W x D) (Printer) 400 x 465 x 494 mm (HCF)
Weight	990 lbs. (450 kg) (Printer) 42 lbs. (19 kg) (HCF)
Memory Capacity	256 MB
Product Life	Printer - 60,000,000 pages (30,000,000 images/print engine) or 5 years, whichever comes first.

Finisher

Item	Specification
	Standard Finisher
Dimensions (W x H x D) Dimensions w/Tray Extended)	570 x 1095 x 656 mm 892 x 1,151 x 656 mm
Weight Weight w/Inserter	130 lb. (65 kg) 158 lb. (72kg)
Function	Staple

Printing Speed

Paper size and printing speed are shown in the following tables. These speeds are applicable when printing 2 or more pages to a standard tray.

Black/Black Printing

Paper Size		Simplex Tray 1, 2, 3, HCF ppm/ipm	Duplex Tray 1, 2, 3, HCF ppm/ipm	Simplex MBT ppm/ipm	Duplex MBT ppm/ipm
A5	SEF	Approx. 92/184	Approx. 184/184	Approx. 82/164	Approx. 164/164
B5	LEF	Approx. 92/184	Approx. 184/184	Approx. 82/164	Approx. 164/164
A4	LEF	Approx. 92/184	Approx. 184/184	Approx. 82/164	Approx. 164/164
A4	SEF	Approx. 50/184	Approx. 100/184	Approx. 41/164	Approx. 82/164
A4 Tab	LEF	Approx. 50/184	-	Approx. 41/164	-
B4	SEF	Approx. 50/184	Approx. 100/184	Approx. 41/164	Approx. 82/164
A3	SEF	Approx. 46/184	Approx. 92/184	Approx. 41/164	Approx. 82/164
Letter	LEF	Approx. 92/184	Approx. 184/184	Approx. 82/164	Approx. 164/164
Letter	SEF	Approx. 50/184	Approx. 100/184	Approx. 41/164	Approx. 82/164
Letter Tab	LEF	Approx. 50/184	-	Approx. 41/164	-
Folio	SEF	Approx. 50/184	Approx. 100/184	Approx. 41/164	Approx. 82/1644
Legal	SEF	Approx. 50/184	Approx. 100/184	Approx. 41/164	Approx. 82/164
Ledger	SEF	Approx. 46/184	Approx. 92/184	Approx. 41/164	Approx. 82/164
Statement	SEF	Approx. 92/184	Approx. 184/184	Approx. 82/164	Approx. 164/164
Executive	LEF	Approx. 92/184	Approx. 184/184	Approx. 82/164	Approx. 164/164
Super B	SEF	Approx. 42/184	Approx. 84/184	Approx. 41/180	Approx. 82/180
Custom		Approx.42/184-92/184	Approx. 84/184 184/184	Approx. 41/180 82/164	Approx. 82/180 164/164

Black/Color Printing

Paper Size		Simplex Tray 1, 2, 3, HCF ppm/ipm	Duplex Tray 1, 2, 3, HCF ppm/ipm	Simplex MBT ppm/ipm
A5	SEF	Approx. 92/184	Approx. 92/184	Approx. 82/164
B5	LEF	Approx. 92/184	Approx. 92/184	Approx. 82/164
A4	LEF	Approx. 92/184	Approx. 92/184	Approx. 82/164
A4	SEF	Approx. 50/184	Approx. 50/184	Approx. 41/164
A4 Tab	LEF	Approx. 50/184	-	Approx. 41/164
B4	SEF	Approx. 50/184	Approx. 50/184	Approx. 41/164
A3	SEF	Approx. 46/184	Approx. 46/184	Approx. 41/164
Letter	LEF	Approx. 92/184	Approx. 92/184	Approx. 82/164
Letter	SEF	Approx. 50/184	Approx. 50/184	Approx. 41/164
Letter Tab	LEF	Approx. 50/184	-	Approx. 41/164
Folio	SEF	Approx. 50/184	Approx. 50/184	Approx. 41/164
Legal	SEF	Approx. 50/184	Approx. 50/184	Approx. 41/164
Ledger	SEF	Approx. 46/184	Approx.46/184	Approx. 41/164
Statement	SEF	Approx. 92/184	Approx. 92/184	Approx. 82/164
Executive	LEF	Approx. 92/184	Approx. 92/184	Approx. 82/164
Super B	SEF	Approx. 42/184	Approx.42/184	Approx. 41/180
Custom		Approx.42/184-92/184	Approx.42/184 92/184	Approx. 41/180 82/164

NOTE:

Depending on the amount of data in the print job, time to print may be delayed. If the OCP displays "Processing," the data has reached the printer. Please wait.

Consumables

The expected life of consumables follows.

Consumable	Life Expectancy
Toner (Black)	45,000 images (4% coverage)
Developer Mix (Black)	600,000 rotations (480,000 images)
Toner (Color)	80,000 images (1.5% coverage)
Developer Mix (Color)	600,000 rotations (480,000 images)
Drum Unit	500,000 rotations (400,000 images)
Fuser Cleaning Web	320,000 images
Toner Collector Bottle	Black: Every other refill of the toner. Color: Every refill of the toner.
Staple Cartridge	5,000 staples

Appendix C
Paper Specifications

Media Guidelines

Several types of media can be used in the printer, provided they meet certain guidelines. This appendix provides criteria for purchasing print media. You will also find guidelines for printing on special print media.

General Media Recommendations

Use high-quality xerographic paper for printing applications. The paper should be of good quality, free of cuts, nicks, tears, spots, loose particles, dust, wrinkles, voids, and curled or bent edges.

There are many brands of high quality xerographic paper available to choose from. Refer to “Paper Specifications” on page C-2 when purchasing paper.

Paper Specifications

Characteristics	Recommendation
Paper Grade	No. 1 or No. 4 Xerographic (Note 1)
Fiber Composition	100% chemical wood pulp
Color	White or pastel color
Ash Content	18% maximum (Notes 2 and 4)
Filler	Kaolin or china clay (aluminosilicate) or calcium carbonate. Titanium dioxide or magnesium silicate may be added to improve brightness.
Grain Direction	Parallel to the long dimension (grain long)
$CaCO_3$ Content	0% (Paper that contains $CaCO_3$ can drastically reduce fuser life.)
Cutting Method	Rotary precision cut (Lennox, Will, or equivalent)
Cutting Tolerance	Length and width: ± 0.787 mm (± 0.031 in.) Squareness: all corners 90° ± 0° 6¢
Basis Weight	17 to 90 lb. (64 to 163 g/m^2) (See Notes 3 and 4)
Caliper	17 to 19 lb. (64 to 72 g/m^2): 3.5 to 5.0 mils (90 to 127 ㎜) 20 to 24 lb. (75 to 90 g/m^2): 3.2 to 4.0 mils (81 to 102㎜)
Smoothness (Sheffield)	17 to 19 lb. (64 to72 g/m^2): 70 to 170 Sheffield units 20 to 24 lb. (75 to 90 g/m^2): 100 to 200 Sheffield units
Porosity (Gurley)	10 sec./100 ml minimum
Coefficient of Static Friction	0.35 to 0.62 (Notes 3 and 5)
Surface Sizing	Starch - Do not use synthetic surface sizing
Internal Sizing	Acid Rosin or synthetic (alkylketene dimer or alkyl-succinic anhydride)
Stiffness (Taber)	17 to 19 lb. (64 to 72 g/m^2): MD 1.4 min./CD: 0.5 min. 20 to 24 lb. (75 to 90 g/m^2): MD 1.7 to 4.5 min./CD: 0.8 to 2.4 min.
Moisture Content	3.7% to 5.5% by weight (Notes 3 and 4)
Surface Resistivity	5 x 10^9 to 1 x 10^{12} ohms (Notes 3 and 6)

NOTES:

1. The No. 1 or No. 4 designation applies only in the U.S.

2. Testing method - Technical Association of the Pulp and Paper Industry (TAPPI).

3. Testing method - American Society for Testing and Materials (ASTM).

4. Testing method - International Organization for Standardization (ISO).

5. Use 127 mm/min. (5.0 in./min.) pull rate.

6. Isolate the test specimen from the metal backing plate with a piece of smooth, nonconductive polyester film, at least 0.254 mm (0.010 in.) thick; use 100 volts.

Paper Weight

Paper weight (also referred to as basis weight) for the U.S. market is measured as the weight in pounds of a ream of paper in the basic size for that grade of paper. The basic size differs between the various grades of paper. For cross reference information of basis weight for different paper types, see the table below.

Using the metric system, basis weight is measured as the weight of one square meter of paper and is expressed in grams per square meter or g/m^2.

General media weight guidelines for the printer are:

PAPER TYPE (GRADE) U.S. MARKET				METRIC
	BOND* LEDGER* XEROGRAPHIC LASER	**OFFSET***	**INDEX***	
BASIC SIZE	17 in. x 22 in. 432 x 599 mm	25 in. x 38 in. 635 x 965 mm	25.5 in. x 30.5 in. 648 x 775 mm	g/m^2
BASIS WEIGHT	**17** **20** **24** **28** **32** **36** **40** 42	**43** **50** **60** **70** **80** **90** **100** 105	35 42 50 58 67 75 83 **90**	64 75 90 105 120 135 150 163

NOTES:

1. Commercially available paper is in bold.

2. Paper denoted with (*) should not be used unless specifically formulated for laser printers. Refer to page C-2 for additional information.

3. All weights are for 500 sheets.

Paper Color

Colored paper refers to pastel-colored paper only. Dark colors may affect printer operation. Colored paper should meet the same specifications as white. It is also recommended that colored paper be tested for potential problems before ordering large quantities.

Paper Composition

Use paper made from 100% chemical wood pulp. Paper that contains mechanically-pulped wood or cotton is not recommended due to natural impurities, such as $CaCO_3$, that can contaminate the surface of the photoconductor, thereby decreasing the life of the photoconductor and/or the fuser.

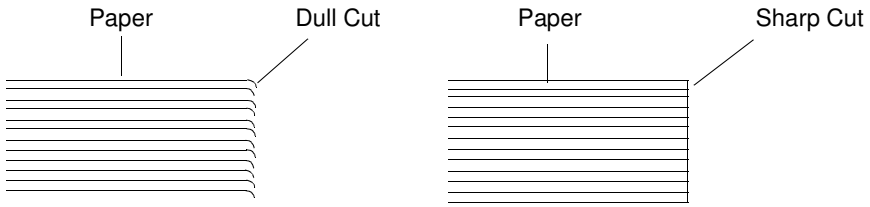
Do not use coated paper containing material that will melt, vaporize, offset, discolor, or release hazardous emissions when exposed to high temperatures.

CAUTION!

Do not use paper that contains $CaCO_3$ as it can drastically reduce fuser life.

Paper Cut

Paper cut is another significant factor affecting printer performance. The cut sheet is produced by cutting a larger stack of paper. If a dull cutter is used, the paper will have ragged edges, or what is called a "burr." This burr can cause such problems as paper jam, multiple feed, and large amounts of paper dust. Refer to "Paper Specifications" on page C-2 for additional information.



Paper Friction

The frictional properties of paper are very important for reliable paper picking. Improper friction properties can cause poor pick up and multi-sheet feeding. High quality xerographic paper has uniform friction. Refer to "Paper Specifications" on page C-2 for additional information.

Paper Smoothness

Paper smoothness affects print quality and paper handling. Paper should not have a rough texture. A rough texture provides poor toner adhesion, particularly in "black fill" areas. Neither should the paper be too smooth, as this can also affect toner adhesion. Paper that is too smooth has inadequate friction and can cause paper handling difficulties. Do not use paper with embossed or raised surfaces. Spotty printing and misfeeding may occur. Refer to "Paper Specifications" on page C-2 for additional information.

Paper Fusing

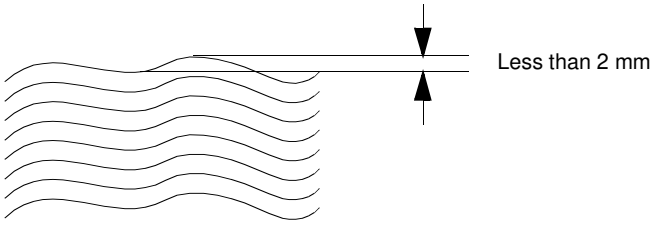
Paper used in the printer must withstand the effects of the fusing process. It should not melt, discolor, vaporize, offset, or delaminate at the following temperature for 1/2 second: 205°C (401°F).

Moisture

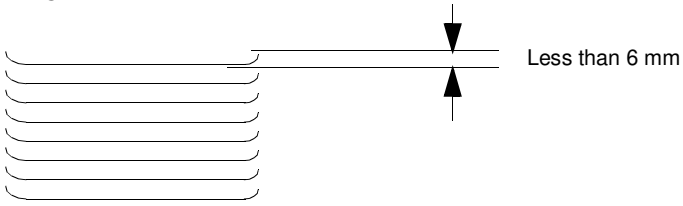
Moisture affects both paper curl and print quality. Excessive moisture can cause the following things:

- Wavy edges
- Tight edges
- Paper curl
- Faded printing

An increase in humidity can cause paper to develop wavy edges. This occurs because the edges absorb moisture while the rest of the ream remains unaffected. This can cause paper skewing and inability to pick paper. Wave is measured as shown below. Do not use paper with a wave of more than 2 mm.



If there is a decrease in humidity the edges can lose moisture. This causes them to contract resulting in tight edges. Tight edges are measured as shown below. Do not use paper with tight edges of more than 6 mm.



Paper Curl

Paper curl is a very significant factor in printer performance. It can affect the printer in the following ways:

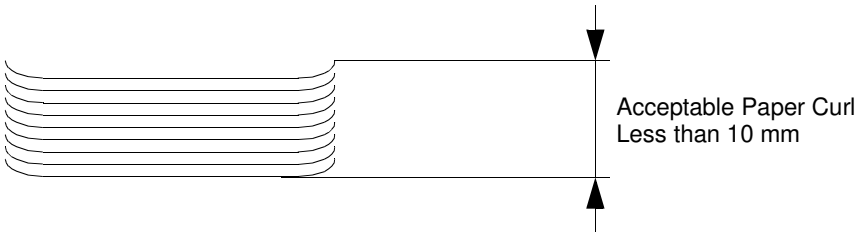
- Paper jam, paper skew and ability to be picked up
- Paper stacking uniformly in the output stacker
- Paper wrinkles through the heat roller (fuser).

Nearly all paper has curl or a tendency to curl. Curl can occur after the paper passes through the printer's fuser where it is exposed to high temperatures. In most paper, curl results from unusually large, sudden, or uneven changes in the moisture content.

Acceptable paper curl is less than 10 mm.

How to measure paper curl:

1. Print simplex, face down, less than 5% print density.
2. Place paper, curl side up, on a flat surface.
3. Measure from the table to the top of the curl as shown below.



NOTE:

Measurement must be performed with 2 minutes of printing.

How to Avoid Paper Curl

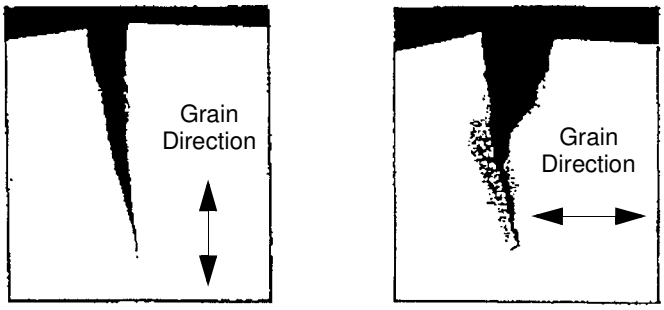
- Use high-quality xerographic paper.
- Store the paper in a moderate environment (40% to 60% relative humidity).
- Minimize humidity changes throughout the day in the printer room.
- Minimize the humidity difference between the paper storage area and the printer room. If the humidity difference is considerable, move the paper into the printer room a few days before to allow the paper to adjust to the printer room environment.
- Wrap the unused paper properly in moisture-resistant wrappers to protect the paper from moisture absorption or loss.

Recycled Paper

Recycled paper is made from used paper. The used paper is dissolved into fibers and then mixed with new paper fibers. However, various kinds of low-grade used paper (such as newspapers and magazines) are added to high-grade old paper. The paper manufacturer must have a high level of expertise and exercise strict controls regarding the use of used paper in recycled paper production. Therefore, it is recommended that paper sold as xerographic recycled paper also be sufficiently tested before using. The most important factor is the length of time the paper can keep its stabilized quality. It is recommended that a small sample (about 2,000 sheets) of recycled paper be tested in the printer and the reliability in paper feed and print quality is confirmed continuously over several months.

Grain Direction

The direction of paper fibers greatly affects paper curl and deformation. High quality xerographic paper is manufactured with the fibers oriented evenly in the same direction (grain long). The direction of the grain can be determined by tearing the paper. A clean tear indicates the grain direction as shown below.



Paper Smoothness

Paper smoothness affects print quality and paper handling. Paper should not have a rough texture. A rough texture provides poor toner adhesion, particularly in “black fill” areas. Neither should the paper be too smooth, as this can also affect toner adhesion. Paper that is too smooth has inadequate friction and can cause paper handling difficulties. Do not use paper with embossed or raised surfaces. Spotty printing and misfeeding may occur.

Special Media

The printer can use special media that has been designed and treated for xerographic use.

- Preprinter paper
- Prepunched paper
- Adhesive labels
- Perforated paper
- Tab paper
- Transparencies

It is recommended that a small sample (500 to 1000 sheets) of the special paper be tested before production quantities are purchased. Testing small samples can give a fairly good indication of what to expect in terms of print quality and toner adhesion; however, only long term tests involving several thousand sheets can begin to provide reliable data about characteristics like environmental changes, paper path reliability, paper dust contamination, loose filler, etc. It is recommended that initial orders of special supplies be limited to a 30-60 day supply until it has have proven to perform well over a long period of time.

Preprinted Paper

It is very important to work closely with the paper supplier when designing and ordering preprinted paper. To avoid problems with preprinted forms, observe the following guidelines:

- Forms must be printed with heat-resistant ink that will not melt, vaporize, delaminate, or release hazardous emissions when subject to heat. Refer to “Paper Fusing” on page C-5 for additional information.
- Minimize the amount of ink used in printing. Avoid print designs that use large quantities of ink. Perform screen printing if a large area needs to be printed.

Ink Recommendations

Ink used in preprinting should be non-volatile and oily. Ink suitable for pre-printing is cured by:

- Ultraviolet or heat (cured for 1 day)
- Oxidative polymerization (cured for 7 days)
- Ink cured by heat (Tinplate Ink)

Before using preprinted forms, make sure the ink is completely cured to prevent it from transferring to the printer's rollers and contaminating the internal printer mechanism.

The following inks are not suitable for preprinting:

- Quick set ink
- Ink dried by evaporation
- Cold set ink
- Ink dried by sedimentation or deposition
- Ink dried by penetration

NOTE:

Preprinted paper should still meet the paper specifications after the preprinting process is complete.

Paper Curl in Preprinted Paper

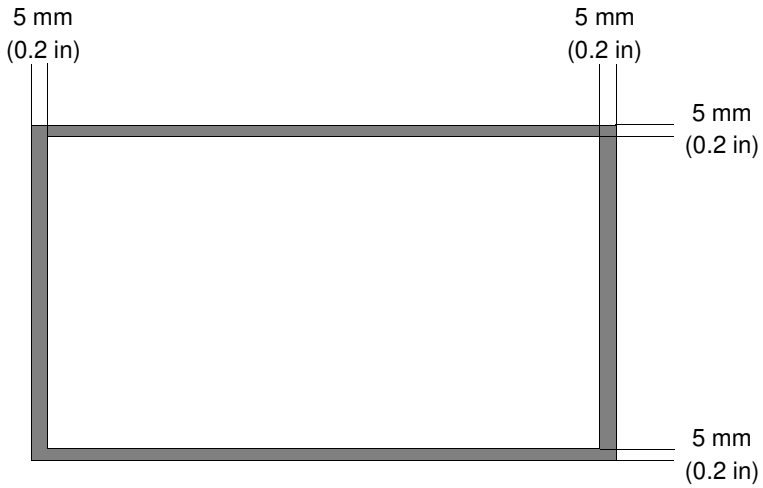
Preprinting can result in paper curl. Generally, the amount of paper curl depends on which side of the paper is printed first. Refer to "Paper Curl" on page C-6 for more information.

Prepunched Paper

Prepunched paper should be flat and without deformation. Do not use paper with ragged or damaged hole edges. Any paper pieces resulting from the punching operation and paper dust should be removed before using.

Use prepunched paper with holes that conform to the following specifications:

- Maximum of four holes.
- Maximum hole diameter of 8.0 mm (0.315 in.).
- Holes must not be located in or protrude into the shaded area shown below.



Adhesive Labels

An adhesive label is paper with a pressure-sensitive adhesive backing. Label stock consists of three components: the top or face sheet, the adhesive, and the liner or carrier sheet, sometimes referred to as the backing. Note the following points about label stock:

- When exposed to the heat of the fuser, the label stock should not curl significantly, and the adhesive should remain stable so that it does not release any hazardous emissions. Refer to "Paper Fusing" on page C-5 for more information.
- No adhesive should be exposed between the labels or along the edge of the label backing.

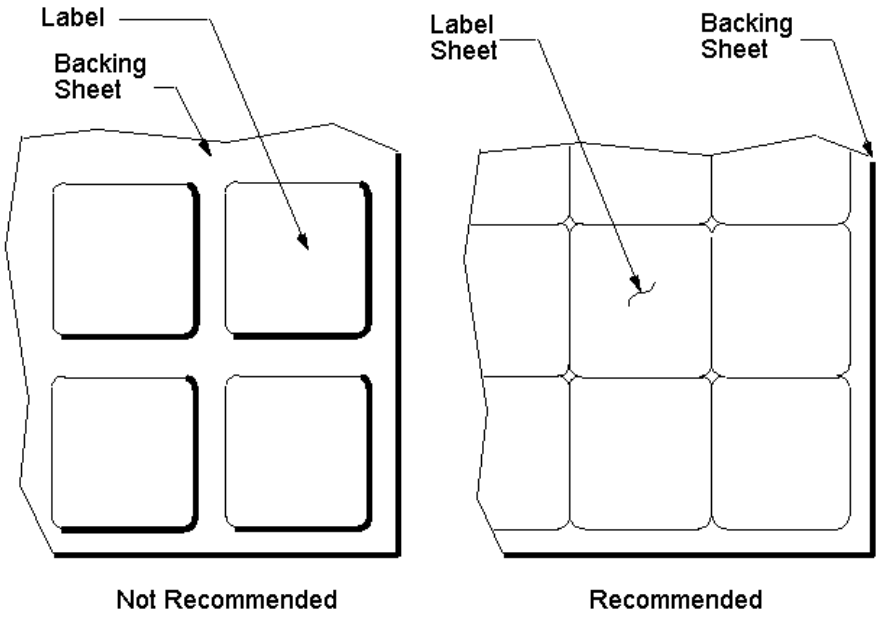
CAUTION!

Adhesive that comes in contact with the printer may contaminate the photoconductor and the internal printer mechanism. To test label stock for adhesive exposure, press a sheet of plain paper against a sheet of label stock. The plain paper should not adhere to the label stock at all.

- Do not use labels with wrinkles, bubbles or any indication of delamination.
- Fan the label stock before loading it into the tray.
- Do not use label stock when printing in duplex mode.
- Do not use label stock that has some of the labels removed.
- Purchase minimum quantities of label stock to avoid the need to store it for longer than 6 months from the date of manufacture.
- Test any label stock you are considering to verify its performance in your printer.

Adhesive Label Configuration

The illustration on the left shows label stock with space between the individual labels. This can cause paper jams and/or labels to peel off during the printing process. The illustration on the right shows the recommended label stock without spaces between the individual labels. Refer to “Adhesive Label Specifications” on page C-13 when purchasing label stock.



Storing Labels

- Store the labels in a clean, dry location where the temperature can be maintained at 18° to 24°C (64° to 70°F) and the relative humidity does not exceed 55%.
- Allow the labels to adjust to the printer room environment before opening the label carton or package. Move the labels into the printer room at least 24 hours prior to opening the carton or package.
- Leave the labels in the original package until printing is ready to begin. Replace the unused labels in the original package and then reseal the package with tape or store the unused labels in a plastic bag.
- Do not leave labels in the hopper of an inactive printer overnight or for long periods of time.
- Use the labels on a first-in, first-out basis.

Adhesive Label Specifications

Use the following specifications when purchasing label stock.

Characteristics	Recommendation
Total Basis Weight Notes 2 and 4	42 lb. (160 g/m^2) (includes face sheet, adhesive, and carrier)
Caliper Notes 1, 2, and 4	5.7 mils (145 ㎜) maximum (includes face sheet, adhesive, and carrier)
Face Stock Smoothness (Sheffield) Notes 1, 2, and 3	100-200 Sheffield units
Coefficient of Static Friction	0.35 to 0.62
Surface Sizing	Starch - Do not use synthetic surface sizing
Internal Sizing	Acid rosin or synthetic (alkylketene dimer or alky-succinic anhydride)

NOTES:

1. Testing method - Technical Association of the Pulp and Paper Industry (TAPPI).

2. Testing method - International Organization for Standardization (ISO).

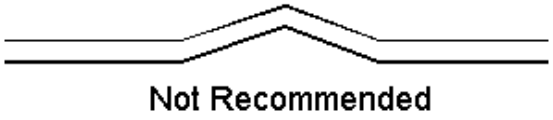
3. The test must be conducted on a large, unscored section of face stock to prevent interference by the score lines.

4. Refers to the adhesive label, including the face stock, adhesive, and the carrier sheet.

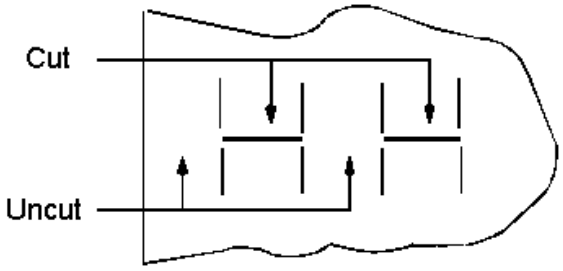
Perforated Paper

A perforation is a series of holes punched through the paper to aid in the separation of one piece from another. Perforated paper can cause jams, misfeeds, and even printer damage. The following guidelines should be used when ordering perforated paper:

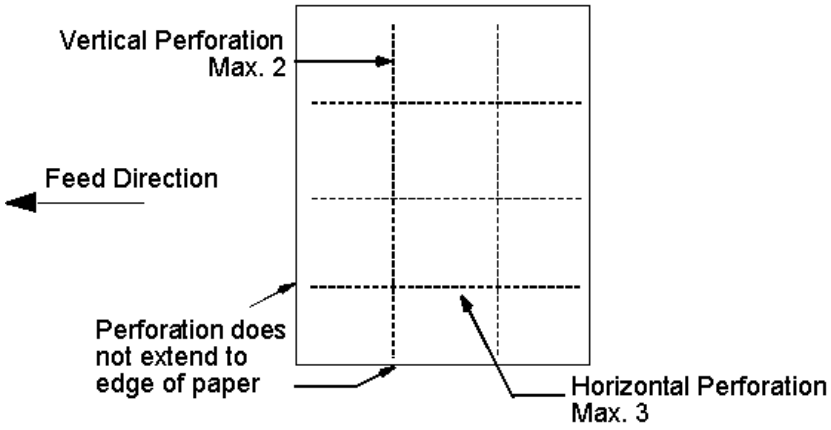
- Perforations should be free from any burrs and paper dust to avoid multiple feed, contamination, or paper jam problems.
- Avoid use of perforations that are not flat.



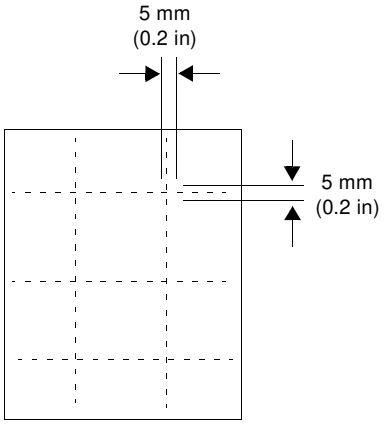
- The ratio of cut to uncut in a perforated line should be 1:1.



- Perforations must not extend to the edge of the page. The minimum distance from perforation to edge of the pages is 50 mm.
- The maximum number of perforated lines per page is 3 horizontal and 2 vertical.



- Do not print within a 5 mm area around the perforations.



Tab Stock

The following sizes and weights of tab stock are supported.

Tab Cut	Paper Size	Paper Weight
3-cut	A4/Letter	42 lb. (163 g/m^2)
5-cut	A4/Letter	42 lb. (163 g/m^2)
8-cut	A4/Letter	42 lb. (163 g/m^2)

NOTES:

1. The Container Stacker is not available for Tab Paper.

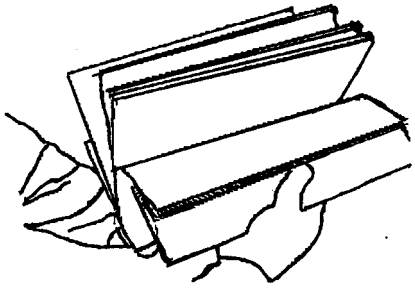
2. The printing quality of tab part is not guaranteed. Because the printable area is defined as 8mm or more from trailing edge.

Transparencies

Transparency stock is used primarily to create images that can be used with projection equipment. Transparencies are made from polyester film that has been specially coated to allow toner to stick to it. Transparencies cannot be printed in duplex mode.

When using transparencies, the following suggestions may improve performance.

- To reduce sticking, fan the transparencies before loading.



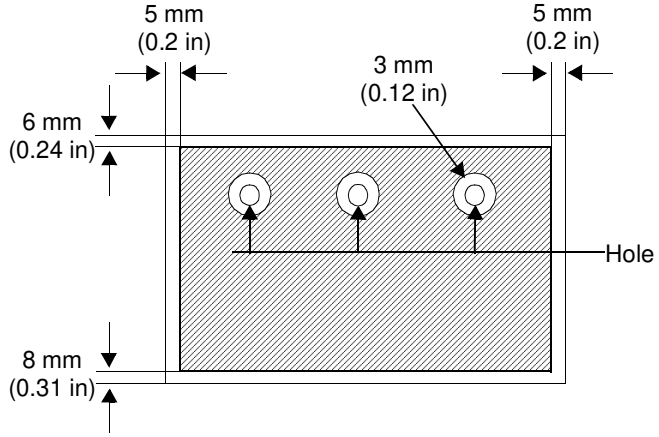
- If excessive paper jams should occur in the paper path after the fusing process, load transparencies in the MBT and print them in face-up mode.

Printing Guidelines

Printable Area

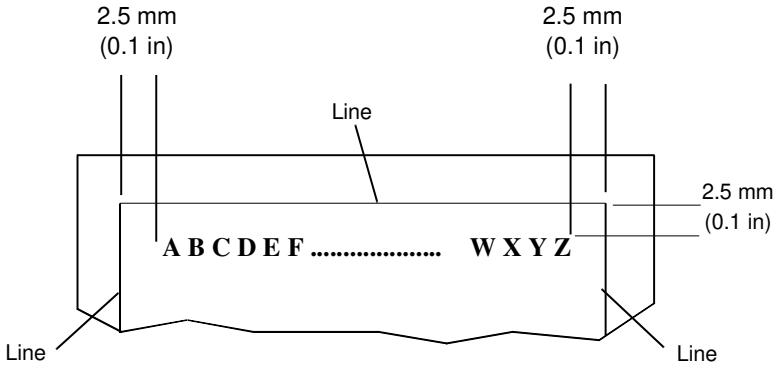
Printable area means the area of the page on which you can print. Print quality can degrade when printing outside the following print area:

- The printable area is 6 mm (0.24 in) from the top, 8 mm (0.31 in) from the bottom, and 5 mm (0.2 in) from the left and right sides of the paper.
- The printable area is 3 mm (0.12 in) from the edge of any punched holes to minimize printer contamination.
- The printable area is marked with diagonal lines.



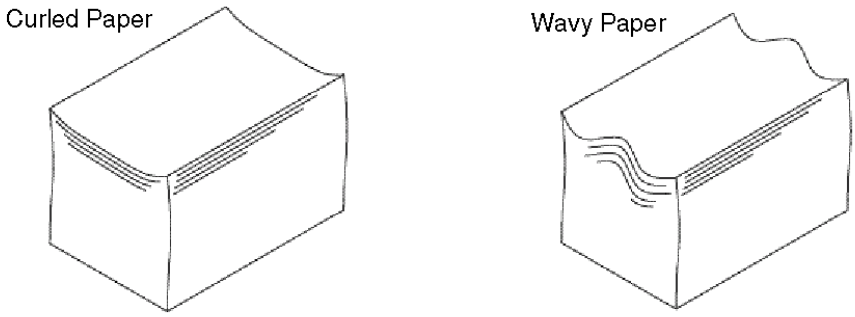
Preprinted Lines

When using a form with preprinted lines the text must be placed a minimum of 2.5 mm (0.10 in) away from the lines.



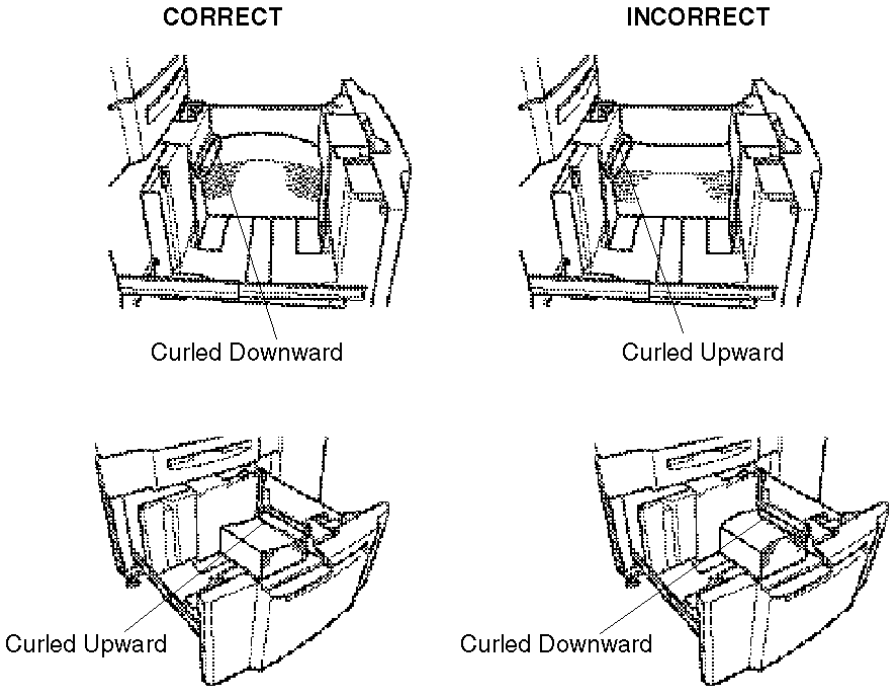
Proper Paper Handling

Paper is easily affected by storage conditions such as temperature and humidity. If the proper moisture content of the paper is not maintained, the paper may become deformed and cause paper jams.



Take the following precautions to avoid paper problems:

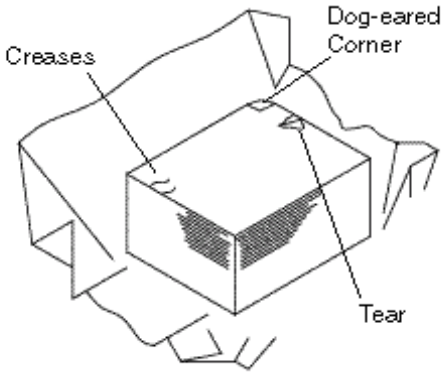
1. Unwrap paper just before printing. The packaging is made of moisture-proof materials to protect the paper from humidity.
2. If the paper is curled or warped, load the paper as shown below.

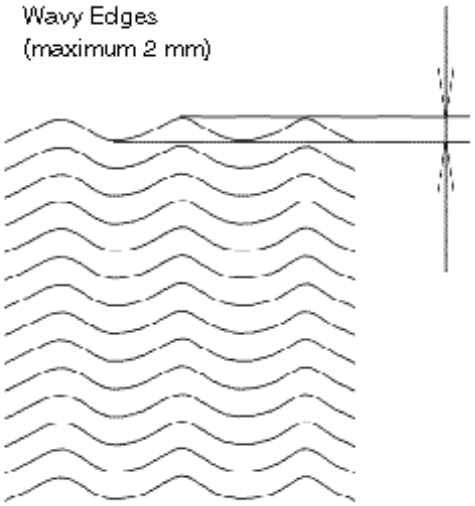


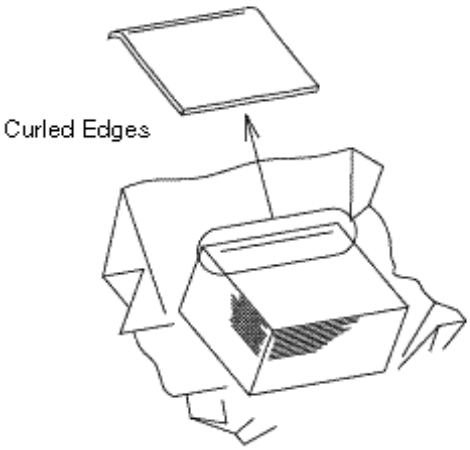
3. Check for paper curl that may have occurred during the night or when air conditioners or ventilators have been turned off for an extended period of time. If the paper has curled, approximately 200-300 sheets from the top of the pile should be turned over, as shown above, or removed.

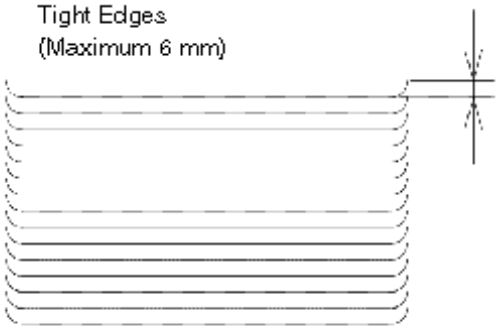
Check Paper Quality

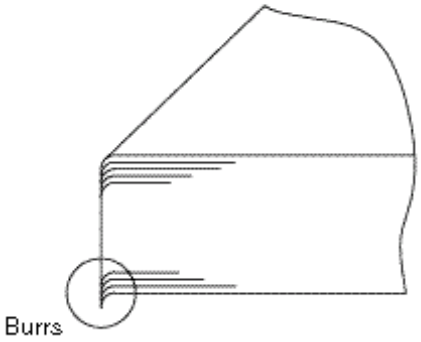
Carefully examine the paper when unwrapping or before loading into the tray. Discard paper with creases, tears, dog-eared corners, curled edges, wavy edges, or tight edges as it may cause paper jams or paper skewing.





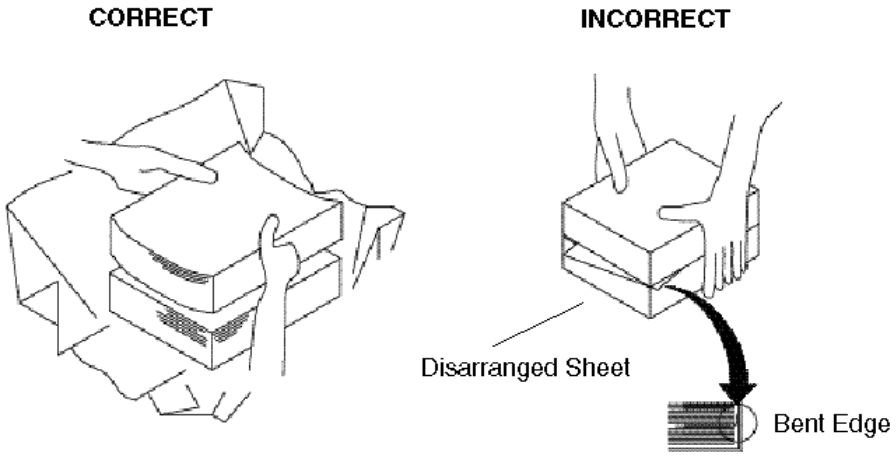




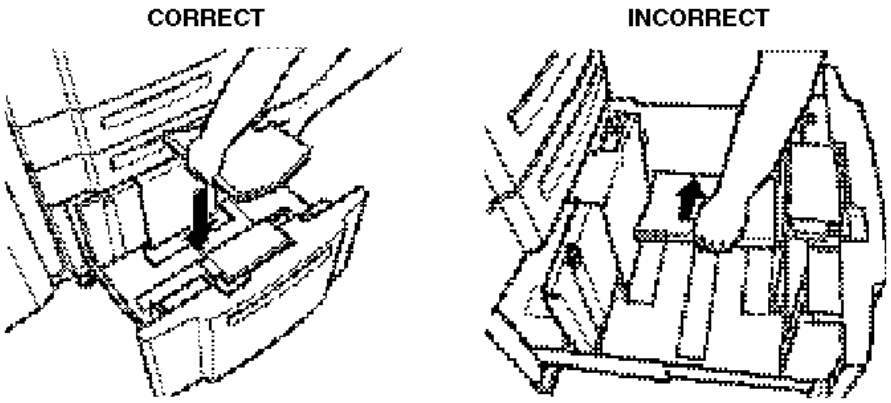


Loading Paper

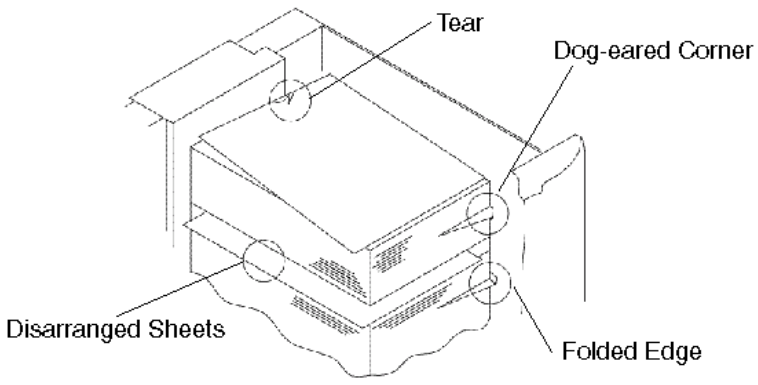
1. Do not pick up or hold too much paper at one time. For example, when loading 1000 sheets of paper, load them 200-250 sheets at a time.



2. Gently place the paper vertically in the tray. Do not slide the paper into the tray.



Check to see that paper is correctly loaded. Look for tears, disarranged sheets, folded edges or dog-eared corners that may have occurred during loading.



Glossary

Numbers

10/100 BaseT. IEEE 802.3 specification, using unshielded twisted pair wiring and running at 10/100 Mbps.

A

ANSI. *American National Standards Institute.* The coordinating body for voluntary standards groups within the United States. ANSI is a member of the International Organization for Standardization (ISO).

AppleTalk. A series of related communications protocols introduced and maintained by Apple Computers.

ASCII. *American Standard Code for Information Interchange*. A standardized coding system for assigning numerical codes to letters and symbols.

Auto Cascade. Automatically chooses the next paper tray when the first tray is empty.

B

Baud. A unit of speed in data transmission equal to one bit per second.

Bi-directional. Bi-directional parallel signals allow printer status messages to appear on the computer screen.

Bit. A binary digit (0 or 1), which is the smallest unit of information used by a printer or computer.

Bits per second (bps). Not same as *baud.*

Byte. A unit of information consisting of 8 bits.

C

Cache memory. Dynamic memory used for short term. Allows rapid access to frequently used data.

Cancel. A button on which the user clicks to end a specific process or action.

CD-ROM. *Compact Disc Read-only Memory.*

Centronics Parallel. An IBM-PC communications standard. An interface for connecting printers and other peripheral devices to a computer. *Also see Parallel Interface.*

Consumables. Items such as toner and/or developer (EP Cartridge) that the printer *consumes*.

Control Code. A type of PCL language command. An ASCII character that initiates a printer function.

Controller. The board that controls the engine. Contains firmware, I/O connectors, RAM, and the main CPU.

CPI. *Characters Per Inch.*

CPU. *Central Processing Unit.*

D

Data. Factual information, commonly organized for analysis.

Database. Body of data manipulated by a database program.

Density. The degree of darkness of a printed image.

Desktop. Refers to the working area on the screen where the cursor is active on your computer.

Dialog box. A box that appears on the screen to request information.

DOS. *Disk Operating System.*

DOT. Use *dot*, not *bit* to describe an individual screen pixel.

Dots per inch (dpi). A measure of the resolution of a printed page.

Download. The process of transferring data from a host to a printer's or print server's internal memory or hard drive**.**

E

EMI. *Electro-Magnetic Interface*.

Emulations. Printer's ability to imitate another printer by accepting and acting on the same commands as the emulated printer (e.g., LJ III emulation).

Escape Sequence. PCL escape sequences consist of two or more characters. The first character is always the escape character, identified by the ^{E}C symbol and is a control code the printer uses to identify a string of characters as a printer command. As the printer monitors incoming data from a computer, it *looks* for the character. When it appears, the printer reads it and its associated characters as a command to be performed, and not as data to be printed.

ESD. *Electro-static Discharge*.

Ethernet. A baseband LAN specification invented by Xerox Corporation and developed jointly by Xerox, Intel, and Digital Equipment Corporation. Ethernet networks operate at 10 Mbps using CSMA/CD to run over coaxial cable.

EtherTalk. AppleTalk protocols running on Ethernet.

Exit. To leave or quit a program.

F

Face down. Printed pages that exit the printer printed side down.

Face up. Printed pages that exit the printer printed side up.

Factory Defaults. Printer settings applied when the printer is manufactured.

H

HCF. *High Capacity Feeder.*

HDD. *Hard Disk Drive.*

I

IEEE. *Institute of Electrical and Electronic Engineers.*

Image Area. Refers to the printable area of a page.

Initialize. To establish the initial default status of the printer by turning on the printer.

I/O Connector. Input/output connector that attaches the computer to the printer is connected here (e.g., parallel, serial, LocalTalk, Ethernet).

IP. Internet Protocol. This is layer 3 (network layer) protocol that contains addressing information and some control information that allows packets to be routed.

ITU-TSS. An international organization that develops communications standards. Formerly, CCITT.

L

LAN. *Local Area Network.*

LCD. *Liquid Crystal Display.*

LED. *Light Emitting Diode.* A semiconductor light source that emits visible light or infrared radiation.

M

MAC. *Media Access Control.*

MBT. *Multi-bypass Tray.* For automatic printing of small jobs or manual feeding of single sheets (including bond, postcard, overheads, labels, and odd-sized print media).

Multimedia. The printer's Multimedia Feeder can be used for various paper sizes, transparencies, and envelopes.

O

OCP. Operator Control Panel.

Operating System. Software that controls the execution of programs.

Orientation. Position of the print on the page. In Portrait orientation, the print runs from the top to bottom margins across the narrow width of a sheet of paper. In Landscape orientation, the print runs from the left to right margins along the length of a sheet of paper.

OSI. *Open Systems Interconnection.* A logical structure for network operations (ISO), to enable multi-vendor equipment interoperability. A seven-layer network protocol standard.

P

Paper Size. Physical dimensions of the paper.

Parallel Interface. An interface that sends data 8 bits at a time. The printer's parallel interface may be configured for bidirectional (two-way) communications between a user system and the printer.

Parity check. The process of checking the integrity of a character.

PCL. Hewlett-Packard *Printer Control Language*.

PDF. *Portable Document Format*.

PDL. *Page Description Language*.

Pixel. In electronic publishing, a basic unit of digital imaging.

Porosity. The ratio of the volume of pores in a material to the volume of the whole, as in a percentage of the volume of pores through which light may pass through paper.

Port. Designates a pathway for the flow of data in or out of a device.

PostScript. A registered trademark of Adobe Systems, Inc.

PPD. *PostScript Printer Description file*.

Printable area. Area of the physical page in which the printer is able to place a dot.

PROM. *Programmable Read-Only Memory.*

PWB. *Printed Wiring Board.*

Q

Queue. A destination for a sequence of stored data or programs awaiting processing, as in files waiting in line to be sent to the printer.

R

RAM. *Random Access Memory.* A type of internal memory that stores data temporarily.

ROM. *Read-only Memory.* A type of internal memory that is used to store programs and data vital to the printer's basic operation permanently.

S

ScanCenter. An option provided for walk-up copying. Also referred to as ICS in the Guide.

SCSI. *Small Computer System Interface*.

Serial interface. An interface that sends data one bit at a time over a single line.

SIMM. *Single In-line Memory Module*.

SNMP. *Simple Network Management Protocol.* Printer Monitor uses SNMP to retrieve printer status and to intercept traps generated by the printer whenever its status changes. The information is displayed through a graphical interface

Startup. The act or process of setting into operation or motion, as in starting up your system with a *startup* disk.

Symbol set. A predefined set of characters (glyphs) and the numeric codes that the computer sends to the printer to represent the characters.

System. A broad term to include a computer and any peripheral devices, accessories, and software.

T

TCP/IP. *Transmission Control Protocol/Internet Protocol*. The two best known protocols often thought of as one protocol. TCP corresponds to layer 4 (transport layer) of the OSI reference model, and provides reliable data transmission. IP corresponds to layer 3 (network layer) and provides connectionless datagram service. U.S. Department of Defense developed TCP/IP in the 1970s to support the construction of worldwide internetworks.

Telnet. Standard Internet terminal emulation protocol.

Token Ring. A token passing LAN developed and supported by IBM.

Toner. Imaging material used in electrophotography and some off-press proofing systems. The material that is used to create the physical image on the page.

V

Virtual printer. A logical printer definition within the physical printer. To the network server and workstations, each *virtual printer* appears as a single physical printer.

VMS. Digital Equipment Corporation (DEC) operating system.

VPT. Virtual Printer Technology. The virtual printer feature of a printer that allows it to appear as multiple printers to other network workstations.

W

WAN. *Wide Area Network.*

Z

Zone. A logical group of nodes within a network separated by routers, bridges, or gateways.