

Xerox DocuPrint 100/115/135/155/180 EPS

Operator Guide

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Changes are periodically made to this document. Changes, technical inaccuracies, and typographic errors will be corrected in subsequent editions.

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Safety

Laser safety

WARNING

Adjustments, use of controls, or performance of procedures other than those specified herein may result in hazardous light exposure.

The Xerox DocuPrint printers are certified to comply with the performance standards of the U.S. Department of Health, Education, and Welfare for Class 1 laser products. Class 1 laser products do not emit hazardous radiation. The DocuPrint printers do not emit hazardous radiation because the laser beam is completely enclosed during all modes of customer operation.

The laser danger labels on the system are for Xerox service representatives and are on or near panels or shields that must be removed with a tool.

DO NOT REMOVE LABELED PANELS OR PANELS NEAR LABELS. ONLY XEROX SERVICE REPRESENTATIVES HAVE ACCESS TO THESE PANELS.

DANGER

**LASER RADIATION WHEN OPEN
AVOID DIRECT EXPOSURE TO BEAM**

Ozone information: U. S. only

This product produces ozone during normal operation. The amount of ozone produced depends on copy volume. Ozone is heavier than air. The environmental parameters specified in the Xerox installation instructions ensure that concentration levels are within safe limits. If you need additional information concerning ozone, call 1-800-828-6571 to request the Xerox publication 600P83222, *OZONE*.

Operation safety: U. S.

Your Xerox equipment and supplies have been designed and tested to meet strict safety requirements. They have been approved by safety agencies, and they comply with environmental standards. Please observe the following precautions to ensure your continued safety.

WARNING

Improper connection of the equipment grounding conductor may result in risk of electrical shock.

- Always connect equipment to a properly grounded electrical outlet. If in doubt, have the outlet checked by a qualified electrician.
- Never use a ground adapter plug to connect equipment to an electrical outlet that lacks a ground connection terminal.
- Always place equipment on a solid support surface with adequate strength for its weight.
- Always use materials and supplies specifically designed for your Xerox equipment. Use of unsuitable materials may result in poor performance and may create a hazardous situation.
- Never move either the printer or the controller without first contacting Xerox for approval.
- Never attempt any maintenance that is not specifically described in this documentation.
- Never remove any covers or guards that are fastened with screws. There are no operator-serviceable areas within these covers.
- Never override electrical or mechanical interlocks.

- Never use supplies or cleaning materials for other than their intended purposes. Keep all materials out of the reach of children.
- Never operate the equipment if you notice unusual noises or odors. Disconnect the power cord from the electrical outlet and call service to correct the problem.

If you need any additional safety information concerning the equipment or materials Xerox supplies, call Xerox Product Safety at the following toll-free number in the United States:

1-800-828-6571

For customers outside the United States, contact your local Xerox representative or operating company.

Operation safety: Europe

This Xerox product and supplies are manufactured, tested and certified to strict safety regulations, electromagnetic regulations and established environmental standards.

Any unauthorised alteration, which may include the addition of new functions or connection of external devices, may impact the product certification.

Please contact your Xerox representative for more information.

Warning markings

All warning instructions marked on or supplied with the product should be followed.



This WARNING alerts users to areas of the product where there is the possibility of personal damage.



This WARNING alerts users to areas of the product where there are heated surfaces, which should not be touched.

Electrical supply

This product shall be operated from the type of electrical supply indicated on the product's data plate label. If you are not sure that your electrical supply meets the requirements, please consult your local power company for advice.



This product must be connected to a protective earth circuit. This product is supplied with a plug that has a protective earth pin. This plug will fit only into an earthed electrical outlet. This is a safety feature. Always connect equipment to a properly grounded electrical outlet. If in doubt, have the outlet checked by a qualified electrician.

To disconnect all electrical power to the product, the disconnect device is the power cord. Remove the plug from the electrical outlet.

Ventilation

Slots and opening in the enclosure of the product are provided for ventilation. Do not block or cover the ventilation vents, as this could result in the product overheating.

This product should not be placed in a built-in installation unless proper ventilation is provided, please contact your Xerox representative for advice.

Never push objects of any kind into the ventilation vents of the product.

Operator accessible areas

This product has been designed to restrict operator access to safe areas only. Operator access to hazardous areas is restricted with covers or guards, which would require a tool to remove. Never remove these covers or guards.

Maintenance

Any operator product maintenance procedures will be described in the user documentation supplied with the product. Do not carry out any maintenance on the product, which is not described in the customer documentation.

Before cleaning your product

Before cleaning this product, unplug the product from the electrical outlet. Always use materials specifically designated for this product, the use of other materials may result in poor performance and may create a hazardous situation. Do not use aerosol cleaners, they may be flammable under certain circumstances.

CE mark: Europe only



January 1, 1995: Council Directive 73/23/EEC, amended by Council Directive 93/68/EEC, approximation of the laws of the member states related to low voltage equipment.

January 1, 1996: Council Directive 89/336/EEC, approximation of the laws of the member states related to electromagnetic compatibility.

March 9, 1999: Council Directive 99/5/EC, on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity.

A full declaration of conformity, defining the relevant directives and referenced standards, can be obtained from your Xerox representative.

In order to allow this equipment to operate in proximity to Industrial, Scientific and Medical (ISM) equipment, the external radiation for the ISM equipment may have to be limited or special mitigation measures taken.

This is a Class A product. In a domestic environment this product may cause radio frequency interference, in which case the user may be required to take adequate measures.

Shielded interface cables must be used with this product to maintain compliance with Council Directive 89/36/EEC.

Radio and telecommunications equipment directive (Europe only)

Certification to 1999/5/EC Radio Equipment and Telecommunications Terminal Equipment Directive:

This Xerox product has been self-certified by Xerox for pan-European single terminal connection to the analog public switched telephone network (PSTN) in accordance with Directive 1999/5/EC.

The product has been designed to work with the national PSTNs and compatible PBXs of the following countries:

Austria	Germany	Luxembourg	Sweden
Belgium	Greece	Netherlands	Switzerland
Denmark	Iceland	Norway	United Kingdom
Finland	Ireland	Portugal	
France	Italy	Spain	

In the event of problems, contact your local Xerox representative in the first instance.

This product has been tested to, and is compliant with, TBR21, a specification for terminal equipment for use on analog switched telephone networks in the European Economic area.

The product may be configured to be compatible with other country networks. Please contact your Xerox representative if your product needs to be reconnected to a network in another country. This product has no user-adjustable settings.

NOTE: Although this product can use either loop disconnect (pulse) or DTMF (tone) signaling, it should be set to use DTMF signaling. DTMF signaling provides reliable and faster call setup.

Modification or connection to external control software, or to external control apparatus not authorized by Xerox, invalidates its certification.

For further information

For more information on Environment, Health and Safety in relation to this Xerox product and supplies, please contact the following customer help lines:

Europe:+44 1707 353434

USA:1 800 8286571

Canada:1 800 8286571

Introduction

This document provides information on how to perform operator tasks for the DocuPrint 100/115/135/155/180 Enterprise Printing System (EPS).

About this guide

Before using this documentation, become familiar with its contents and conventions.

Contents

This guide contains the following:

- Chapter 1, “Overview,” provides a functional overview of the system; describes the controller and printer components; and explains the main screens on the graphical user interface, the printing process, and the job flow.
- Chapter 2, “Managing the printer,” provides information specific to the printer, including management of paper stock and programming of the various trays.
- Chapter 3, “Managing the system,” provides management-related information that pertains to the system as a whole, such as starting, stopping, and rebooting the system and operating the tape drives.
- Chapter 4, “Maintaining the system,” provides information on adding and replacing consumable supplies, such as dry ink, and on cleaning the various areas of the system, including the tape drives.
- Chapter 5, “Troubleshooting,” provides information that will assist users in solving problems.
- Appendix A, “UNIX security,” lists the types of accounts defined for the UNIX environment.

- Appendix B, “Supplies,” provides a summary of the paper that are used most often and the necessary supplies, their order numbers, and how to order them from Xerox.
- The Glossary defines terms and abbreviations used in this book.

An index is provided at the end of this document.

Conventions

This guide uses the following conventions:

- **Initial capital and angle brackets:** Within procedures, the names of keys are shown with an initial capital and within angle brackets (for example, press <Enter>).
- **Angle brackets:** Variable information, or the position of a specified argument in the command syntax, appears in angle brackets (for example, List Fonts <pattern>).
- **Fixed pitch font:** Within procedures, text and numbers that you enter are shown in a bold, fixed pitch (“computer”) font (for example, enter **privilege operator**).

Messages that appear on the controller screen are shown in the medium weight fixed pitch font (for example, `Online Gateway disabled`).

- **The word “enter” within procedures:** The two-step process of keying in data and pressing <Enter> (for example, enter **y**).
- **Italics:** Document and library names are shown in italics (for example, the *Xerox DocuPrint NPS/IPS Guide to Managing Print Jobs*).

Variable elements in a command or directory path are also shown in italics (for example, `var/spool/XRXnps/ filename`).

- **Vertical bars:** Alternatives to specified arguments are separated by vertical bars (for example, Set Time <Time | Remote Host Name | IP Address>).

NOTE: Notes are hints that help you perform a task or understand the text.

CAUTION

Cautions alert you to an action that could damage hardware or software.

WARNING

Warnings alert you to conditions that may affect the safety of people.

Documentation

This section lists related publications and provides information on printing the customer documentation.

DocuPrint 100/115/135/155/180 EPS documentation

The following documents contain information on the Xerox DocuPrint 100/115/135/155/180 EPS:

- *Xerox DocuPrint 100/115/135/155/180 EPS Electronic Customer Documentation CD*
- *Xerox DocuPrint 100/115/135/155/180 EPS Operator Guide*
- *Xerox DocuPrint EPS Using LCDS Print Description Language*
- *Xerox DocuPrint 100/115/135/155/180 EPS Installation Planning Guide*
- *Xerox DocuPrint 100/115/135/155/180 EPS NPS/IPS Extension Operations Guide*
- *Xerox DocuPrint EPS Tape Client Job Submission Guide*
- *Xerox DocuPrint EPS Font Reference Manual*
- *Xerox DocuPrint 100/115/135/155/180 EPS Operator Quick Reference Card*
- *Xerox DocuPrint 100/115/135/155/180 EPS Customer Information Quick Reference Card*
- *Xerox DocuPrint 100/115/135/155/180 EPS Job Submission Quick Reference Card*
- *Xerox DocuPrint 100/115/135/155/180 EPS Addendum to Getting Started for DocuSP 03.07.00*

- *Xerox DocuPrint 100/115/135/155/180 EPS Operator Training Instructor Guide*
- *Xerox DocuPrint 100/115/135/155/180 EPS Operator Training Participant Guide*
- *Xerox DocuPrint 100/115/135/155/180 EPS Programmer/Administrator Self-Study*

Printing the customer documentation

To print the latest version of the customer documentation:

1. Create a queue, specifying [ASCII] for input and [Duplex] for output. (Refer to your controller online Help for the procedure for creating a queue.)
2. Insert the DOC CD into the CD drive.
3. Open a UNIX terminal window on the graphical user interface.
4. Enter:

```
cd /cdrom/quantumedoc/pdfs
```
5. To list the names of all documents in PDF format, enter:

```
ls -l
```
6. Enter the lpr location:

```
cd /usr/ucb
```
7. To print the selected file (document), enter:

```
lpr -P queueName/cdrom/quantumedoc/pdfs/  
filename
```

where *filename* is the name of the file to be printed.

1. Overview

This chapter provides a functional overview of the entire system, as well as an overview of the controller and the printer portions of the system.

Functional overview

The Xerox DocuPrint 100/115/135/155/180 EPS prints high quality, high resolution monochrome documents in simplex or duplex mode at high production speeds, from LCDS, PostScript, PCL, and other data streams. The system can switch between printing different types of data streams without a need for rebooting or reconfiguring software.

The printer supports:

- Duplex printing
- Media handling of multiple weights, sizes, and types
- Optional modules for enhanced finishing and output to third-party finishing devices
- Optional enabling of a third-party roll feeder
- Optional high-capacity feeder/stacker modules, which provide additional feeder trays and output bins
- High resolution of LCDS, PostScript, and PCL data streams (shown in the following table)

Table 1-1. Data stream resolution

Data stream	Input resolution	Print resolution: DP155 and DP180	Print resolution: DP100, DP115, and DP135
LCDS	300 by 300 dpi	600 x 2400 dpi	600 by 600 dpi
PostScript and PCL	300 by 300 dpi or 600 by 600 dpi	600 x 2400 dpi	600 by 600 dpi
IPDS*	240 by 240 dpi* or 300 by 300 dpi or 600 by 600 dpi**	600 x 2400 dpi	600 by 600 dpi

* Requires additional equipment to enable.

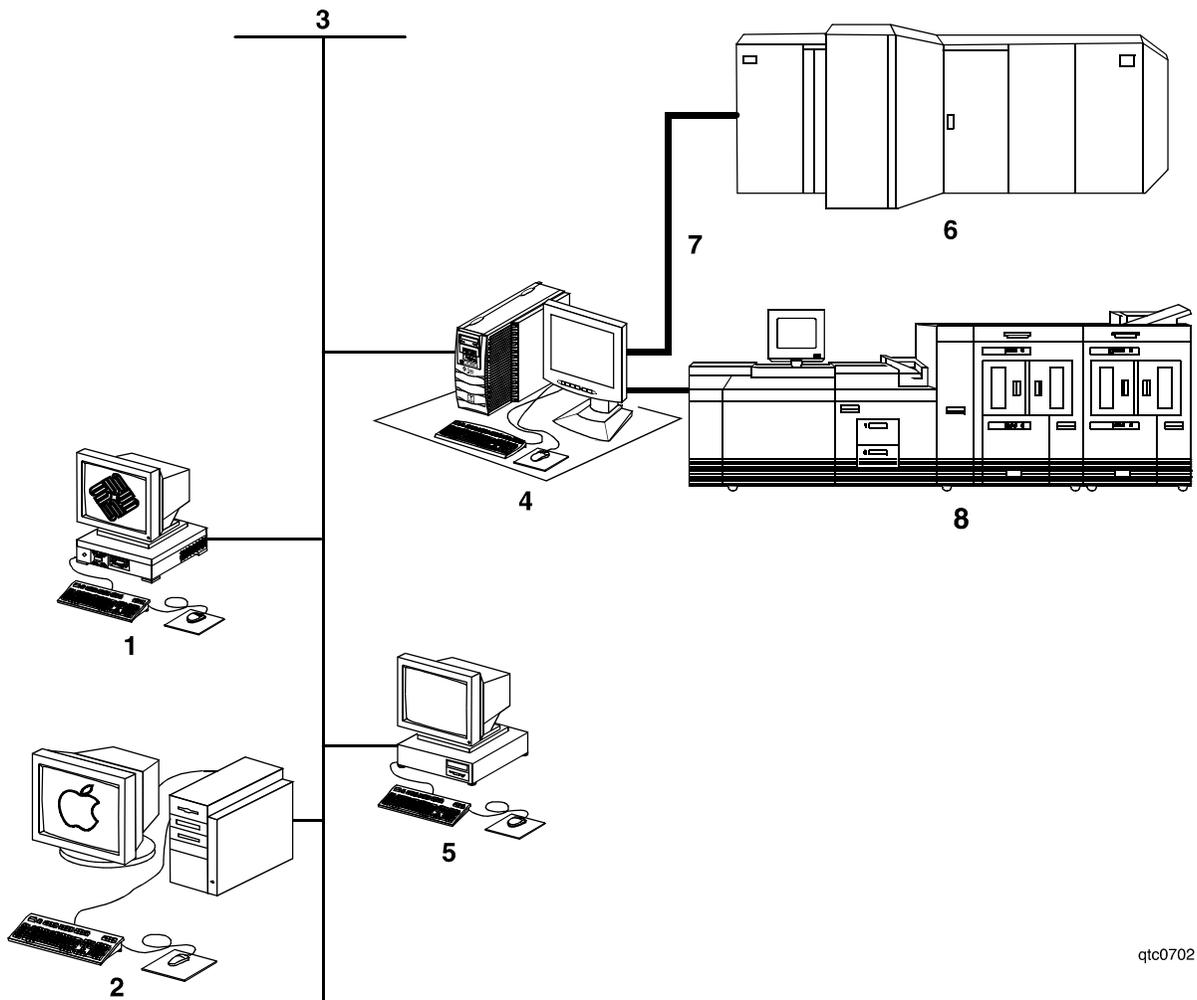
** 600 by 600 dpi input resolution supported for full page IOCA only

Host connectivity options

The Xerox DocuPrint 100/115/135/155/180 EPS can receive data from a host in the following ways:

- Over a channel with bus and tag cable connection
- Through a network interface, using Novell, TCP/IP, or AppleTalk protocols

Your system may have one or both of these configurations.



qtc0702

Figure 1-1. Configurations supported for the Xerox DocuPrint 100/115/135/155/180 EPS

1. Sun UNIX client workstation
2. Apple Macintosh client workstation
3. Network connection
4. Controller
5. PC client workstation
6. Mainframe host computer
7. Bus and tag cables (channel connection)
8. Printer

Data formats supported

The Xerox DocuPrint 100/115/135/155/180 EPS can print the following data formats:

- ASCII
- LCDS
- PCL
- PDF
- PostScript
- TIFF

The system prints LCDS data from a mainframe host computer, emulating an IBM 4245 or 3211 page printer. The printing system can receive data over a channel through bus and tag cables, and through the Socket Gateway or lpr using TCP/IP protocol.

The system also prints PostScript and PCL data submitted over a network (Ethernet or AppleTalk) from a variety of clients:

- PCs (Windows and Windows NT)
- Sun workstations (UNIX)
- UNIX command line clients: lpr (including lp) and Xerox Command Line Client (CLC)
- NetWare Q-Server through a Novell print server (bindery mode only)
- Apple Macintosh workstations

Stock specifications

The success of any print run depends on proper selection, care, and handling of the paper or other stock that is used. It is very important to select, store, condition, and load print media properly in order to keep your printer running at optimum efficiency.

The printer functions best and produces the best print quality when using stocks that have the correct:

- Size
- Weight
- Type
- Color

For more comprehensive information on paper stocks for Xerox printers, refer to *Helpful Facts about Paper*.

Stock sizes

The Xerox DocuPrint 100/115/135/155/180 EPS supports the following sizes of stock:

Table 1-2. Stock sizes

Name of stock	Size in inches	Size in millimeters	Special requirements
US Letter	8.5 by 11 inches	216 by 279 mm	
US Legal	8.5 by 14 inches	216 by 356 mm	
US Ledger US Tabloid	11 by 17 inches 17 by 11 inches	279 by 432 mm 432 by 279 mm	
A3	11.69 by 16.54 inches	297 by 420 mm	
A4	8.27 by 11.69 inches	210 by 297 mm	
B4 (European)	9.84 by 13.89 inches	250 by 353 mm	
JIS B4 (Japanese)	10.12 by 14.33 inches	257 by 364 mm	
—	7 by 10 inches	178 by 254 mm	With 7 by 10 inch option kit
B5	7.17 by 10.12 inches	182 by 257 mm	With 7 by 10 inch option kit

NOTE: To feed papers smaller than 8 inches / 203.2 mm in width, a 7 by 10 inch paper option kit must be installed.

Paper weights

The DP 100/115/135/155/180 EPS supports the following range of paper weights:

16–110 pound / 60–200 gsm

Other paper weights should not be used.

NOTE: The equivalent grams per square meter of 20 pound paper is actually 75 gsm. However, there is no standard 75 gsm paper. The available stock that is closest in weight to 20 pound paper is 80 gsm.

Special stocks

The following special stocks can be used with the DP 100/115/135/155/180 EPS:

- **Labels:** Must be the type designed for high-speed printers and must meet the specifications described in the section above. Loading instructions are printed on all paper trays.
- **Transparencies:** Must be the type designed for high-speed printers and must meet the specifications described in the section above. Loading instructions are printed on all paper trays.
- **Colored paper:** Available in a variety of colors, colored paper has many uses, including calling attention to certain printed material, separating special sections, or dividing chapters of a report.
- **Preprinted paper:** May be letterhead, forms, or logos. (Refer to *Helpful Facts about Paper* to verify that the preprinting inks used on your stock are the kind formulated for use in laser printers.)
- **Predrilled paper:** Has holes for use in binders or binder rings. Before loading predrilled paper, fan it to remove any loose plugs that could cause paper jams.
- **Perforated paper**
- **Precut or full tabs**
- **Carbonless paper**

General paper characteristics to look for

When selecting paper, look for the following:

- Low moisture content (a paper to moisture ratio below 5.7 percent). Paper with higher moisture content may curl and jam.
- Smooth surface
- Moisture resistant wrapping
- No defects such as bent edges or uneven surfaces
- Grain runs parallel with the long side of paper

Graphical user interface overview

The graphical user interface (GUI) on the controller enables you to interact with the printing system. It contains windows, icons, and menus through which you can issue commands and perform operation and system administration tasks.

When the Sun workstation controller is powered on and booted, the DocuSP Print Services main menu displays on the controller screen.

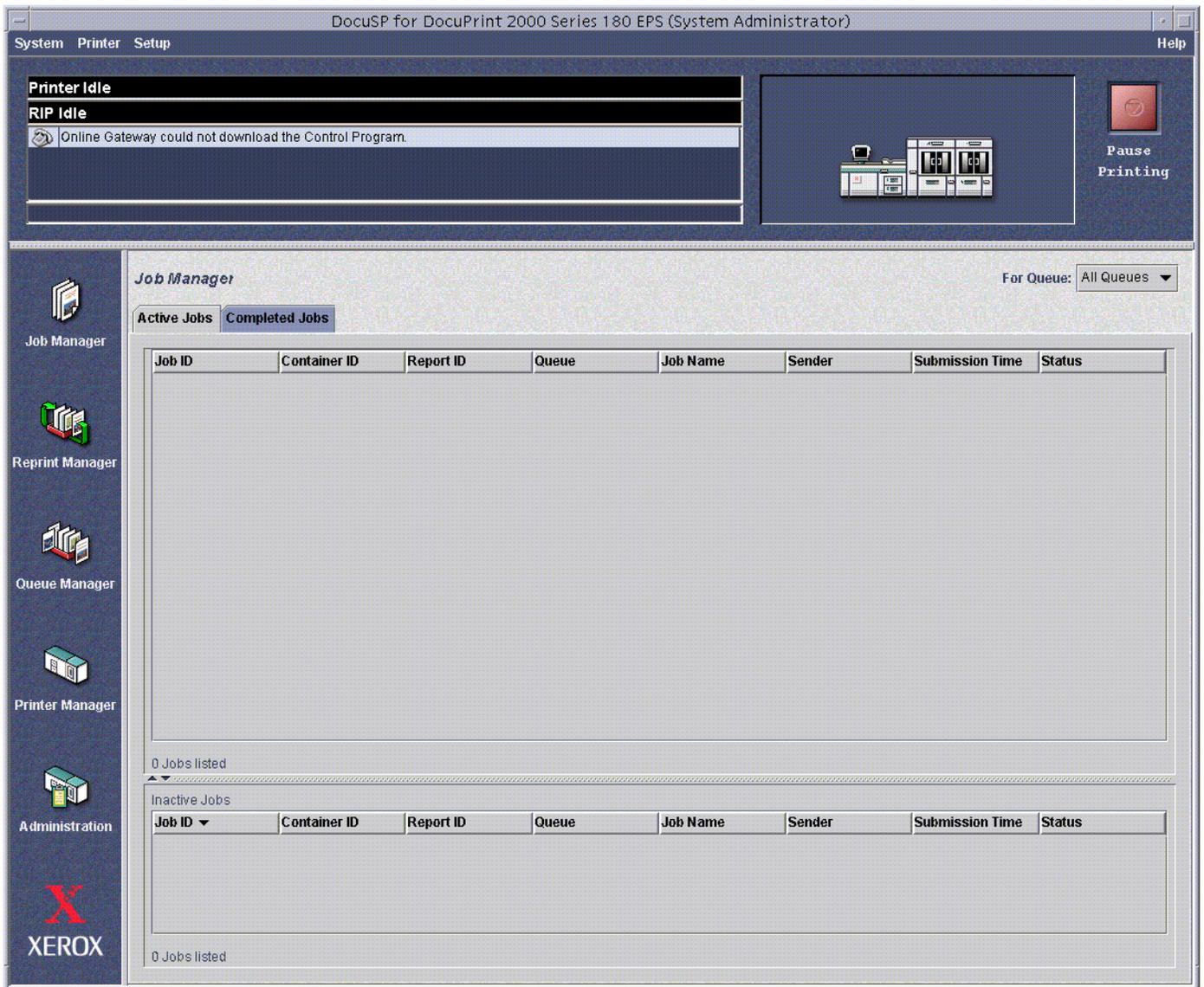


Figure 1-2. DocuSP Print Services main window

DocuSP Print Services main window

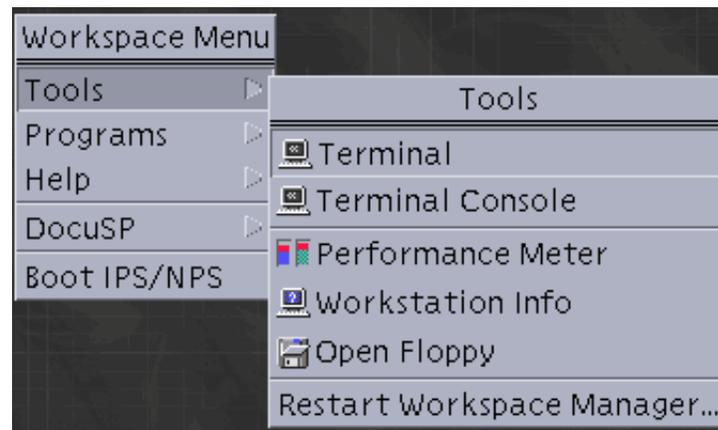
The DocuSP Print Services main window is the starting point for all printing related software tasks and most of the system administration activities for the printer. It contains a menu bar with keywords to access three menus and five software module buttons that access windows for major system functions.

Workspace menu

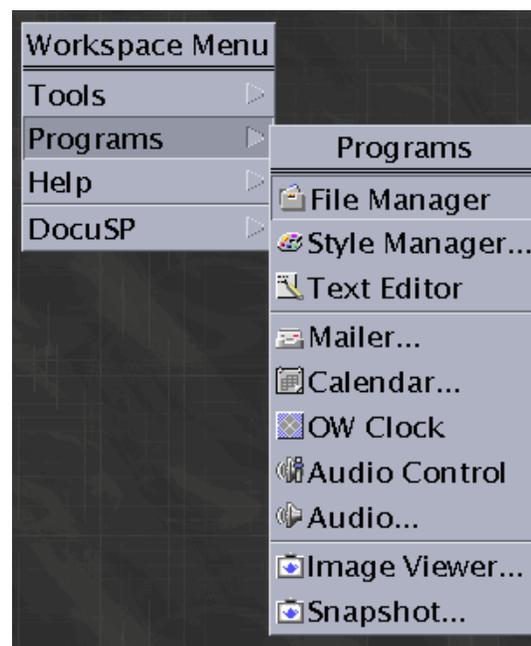
Clicking the right mouse button on the workspace area of the screen will display a Workspace pop-up menu, which includes the Tools, Programs, Help, and DocuSP menus.

NOTE: If the system has the NPS/IPS Extension, a fifth item on this menu is [Boot IPS/NPS]. This item allows you to switch between NPS/IPS and EPS modes. When the system is in NPS/IPS mode, the last option on the menu is {Boot EPS}.

- **Tools:** Allows access to tools such as the Terminal and Terminal Console windows.



- **Programs:** Allows access to some of the Solaris software functions you may need to use such as File Manager (for storing resource files) or Text Editor (for coding PDL applications).



- **Help:** Allows access to information on features, functions, and procedures relating to the UNIX software that runs the Sun workstation controller.
- **DocuSP:** Allows you to restart the system.
- **Boot IPS/NPS:** (Appears only if NPS/IPS Extension is enabled.) Enables you to switch between EPS and NPS/IPS print modes.

Console window

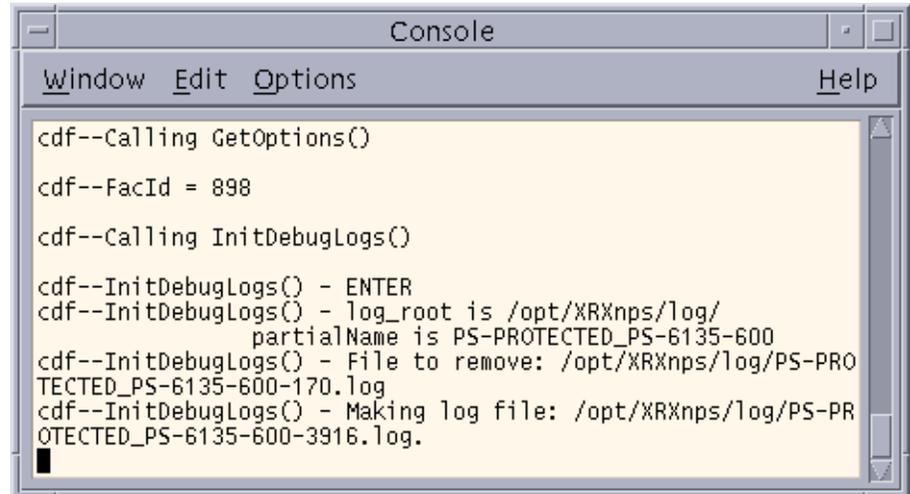
The Console window is a read-only text window that displays system and error messages. It initially appears in the upper-left corner of the screen. The following Console windows are available:

- **Solaris Console window:** This window shows UNIX and operating system messages. Typically, this window should not be used. If you need to enter text, use a Terminal window.

If the Console window is closed, you can open it by selecting Tools, then Terminal Console from the Workspace pop-up menu. Each time you select Console, an additional Console window displays. Messages and status information are displayed on the Console window most recently opened; messages do not display on all open Console windows.

NOTE: Opening multiple console windows is not recommended, because it is easy to forget that you have more than one window open, especially if you have reduced them to icons. You could miss an important system message if it was displayed on an earlier version of Console window.

- **DocuSP Console window:** This window displays from the DocuSP software, and displays messages relating to LCDS only. This window is read-only, and only one window can display at a time.

A screenshot of a window titled "Console". The window has a menu bar with "Window", "Edit", "Options", and "Help". The main area contains the following text:

```
cdf--Calling GetOptions()
cdf--FacId = 898
cdf--Calling InitDebugLogs()
cdf--InitDebugLogs() - ENTER
cdf--InitDebugLogs() - log_root is /opt/XRXnps/log/
                        partialName is PS-PROTECTED_PS-6135-600
cdf--InitDebugLogs() - File to remove: /opt/XRXnps/log/PS-PRO
TECTED_PS-6135-600-170.log
cdf--InitDebugLogs() - Making log file: /opt/XRXnps/log/PS-PR
OTECTED_PS-6135-600-3916.log.
```

Figure 1-3. Console window

Printing process and job flow

This section describes how the system software processes are used as a typical job flows through the system.

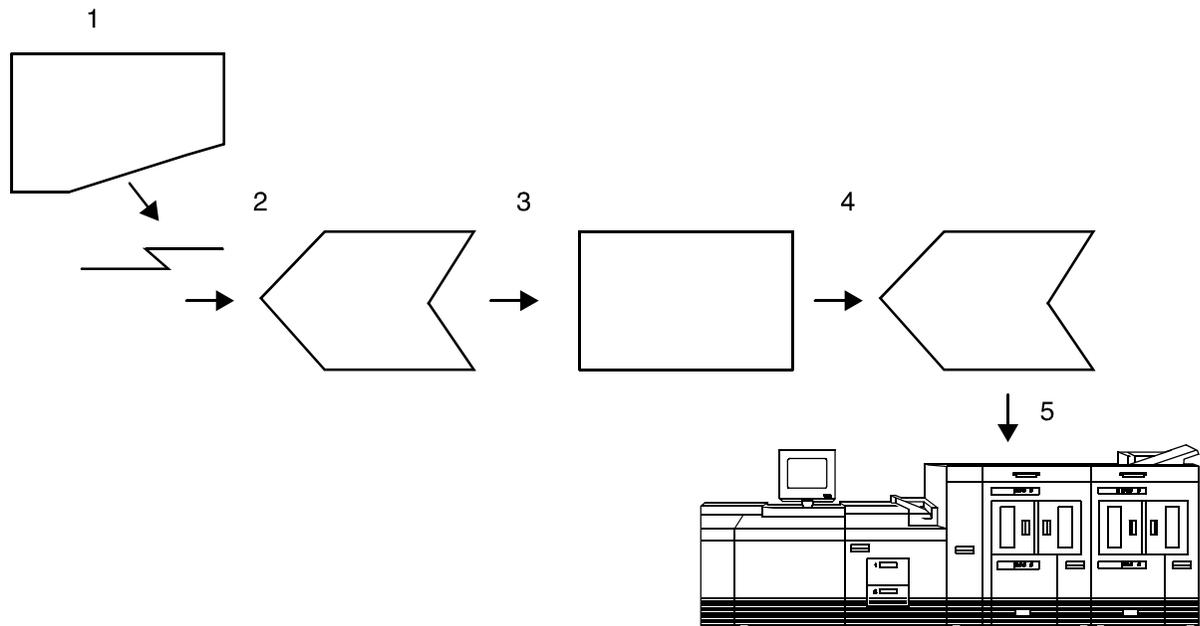


Figure 1-4. Job flow

1. Job
2. Input Queue
3. Decomposer
4. Output queue
5. Printer

Refer to the Job Flow diagram above for the following work flow process.

1. **Job:** The job and the job ticket (if applicable) are received from the network by one of the protocol gateways.
2. **Input queue:** The Job Pool Manager (JPM) process transfers the job into the input queue. The virtual printer name and job attributes are attached to the job. The job remains in the Input Queue until it can be printed; for example, “held” and “faulted” jobs reside in the input queue.

3. **Decomposer:** The Job Chooser (DC process) reconciles the job attributes with the virtual printer attributes. Once the job is ready for print, the Job Chooser gives the job to the appropriate decomposer (ps_cdf process, pcl_cdf process).
4. **Output queue:** After decomposition, the job is stored in the output queue.
5. **Printer:** The marker (marker process) transfers the job from the Output Queue to the Image Output Terminal (IOT or printer). After the job has successfully printed, it is removed from the Output Queue and also from the Input Queue, if the Input Property for the queue is set to spool.

The ps-e or ps-ef commands can be used to list the system software processes. A varying process identification number is listed along with each process.

NOTE: The printing process and job flow is different for PostScript, PCL, TIFF, ASCII, PDF jobs (that is, non-LCDS jobs) and for LCDS jobs.

PostScript, PCL, TIFF, ASCII, and PDF jobs

When the job is sent from the application for printing, a print data file is created. This file becomes the job that is submitted to the printer for printing. The print data file and the job request are submitted to the selected queue. Jobs are processed by priority within the designated queue once the job reaches the queue from a given application.

The following graphic illustrates the priority that each setting has in printing the job. For example, queue override settings in a job take precedence over exception page or job ticket settings.

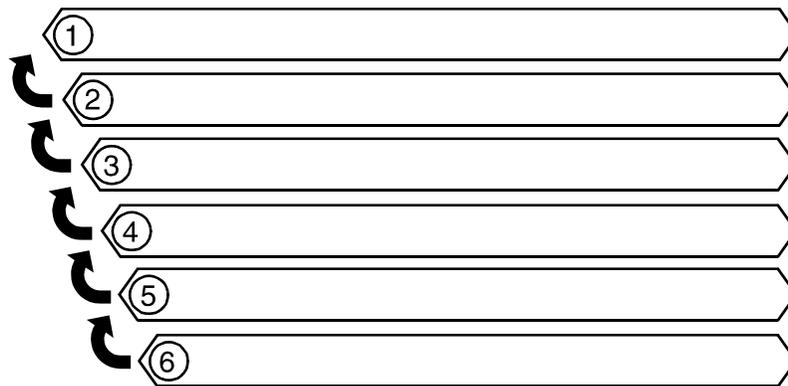


Figure 1-5. Submission and print order of jobs in a queue

1. Queue overrides
2. Exception pages
3. Job ticket
4. Submission print protocol (lp, lpr, nprint)
5. Set page device values/PCL copy count
6. Queue defaults

You can make changes to the printing attributes of a PostScript, PCL, TIFF, ASCII, and PDF job (that is, a non-LCDS job), as long as the job is not streaming. This includes changing the type of paper on which it is printed or specifying printing order from last page to first (N to 1).

Printer overview

The printer receives data from the controller and prints the document according to the print options specified by the user. The printer also stacks the printed output, collates it, and, if configured with one of the available optional third-party finishing devices, performs finishing functions such as binding, stitching, or perforating.

The Xerox DocuPrint 100/115/135/155/180 EPS printer is a monochrome printer. If it receives print jobs that contain color commands, it prints them in black or shades of gray.

Throughput speeds The Xerox DocuPrint 100/115/135/155/180 EPS prints LCDS data from a mainframe host computer, emulating an IBM 4245 or 3211 line printer. The printing system can receive data over a channel through bus and tag cables and through the Socket Gateway or lpr using TCP/IP protocol.

Table 1-3. Throughput speeds

Printing system	Maximum throughput	Maximum throughput with 7 by 10 in / 178 by 254 mm paper
DP100 EPS	100 ppm	100 ppm
DP115 EPS	115 ppm	115 ppm
DP135 EPS	135 ppm	154 ppm
DP155 EPS	155 ppm	155 ppm
DP180 EPS	180 ppm	206 ppm

NOTE: Pages per minute refers to sides of a printed sheet (actually impressions per minute).

Using the smaller papers, such as 7 by 10 inch / 178 by 254 mm or B5, the printer can print at maximum speed. To print these sizes, the printer requires the optional small paper kit.

Monthly print volume The monthly print volume for the Xerox DocuPrint Enterprise Printing Systems is up to 6 million impressions.

Table 1-4. Impressions per month

Printing system	Minimum	Maximum
DP100 EPS	800 thousand	3 million
DP115 EPS	1 million	3.5 million
DP135 EPS	1.2 million	4 million
DP155 EPS	1.4 million	4.5 million
DP180 EPS	1.8 million	6 million

Roll feeder support The roll feeder option may be installed in the inverter feeder/stacker module, replacing the feeder tray. This option does not require DFA software or any additional hardware. The maximum number of feeder/stacker modules supported for this configuration is four, including the inverter module with the roll feeder. With the two processor feeder trays, this makes a total of six input trays possible.

Jam recovery The printer engine monitors the print job so that, if a paper jam occurs, the job resumes on the correct page, at the correct tab, using the same color paper, and so forth, providing complete document integrity.

Printer components

The components and special features of the Xerox DocuPrint 100/115/135/155/180 EPS printer are shown in the following figure.

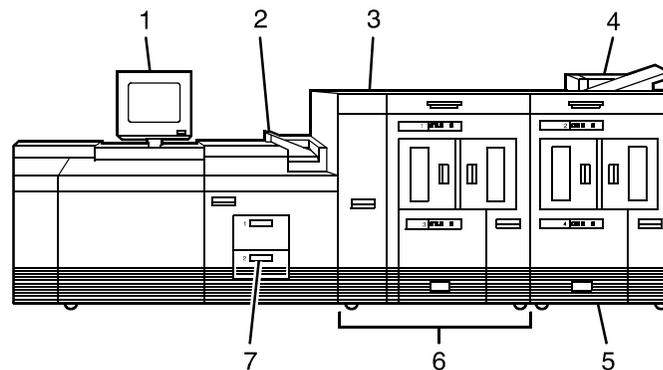


Figure 1-6. Printer components

1. Printer control console
2. Sample tray
3. Attention light
4. Purge tray
5. Feeder/stacker module
6. Inverter feeder/stacker
7. Processor feeder trays

Printer control console

The printer control console is the color monitor located on top of the printer. It keeps you informed of the printer status, and enables you to control certain functions of the printer, such as stopping printing and continuing an interrupted job, without returning to the controller.

The printer control console has the following features:

- **Printer mimic:** Local controls and displays for jam clearance, paper loading and unloading, and diagnostics and service (used by the service representative).
- **Touch-sensitive areas:** Allow you to select options by touching the printer control console screen. A tone sounds when you touch one of these areas.
- **Printer alarm:** Gives three beeps, repeated for ten seconds. The alarm is generated by any event that stops the printer.

The alarm stops after three cycles or as soon as you start to clear the fault condition (for example, when you open printer doors or covers specified in the clearance instructions). You can stop the alarm by pressing one of the printer control console buttons or by selecting a function through the touch screen.

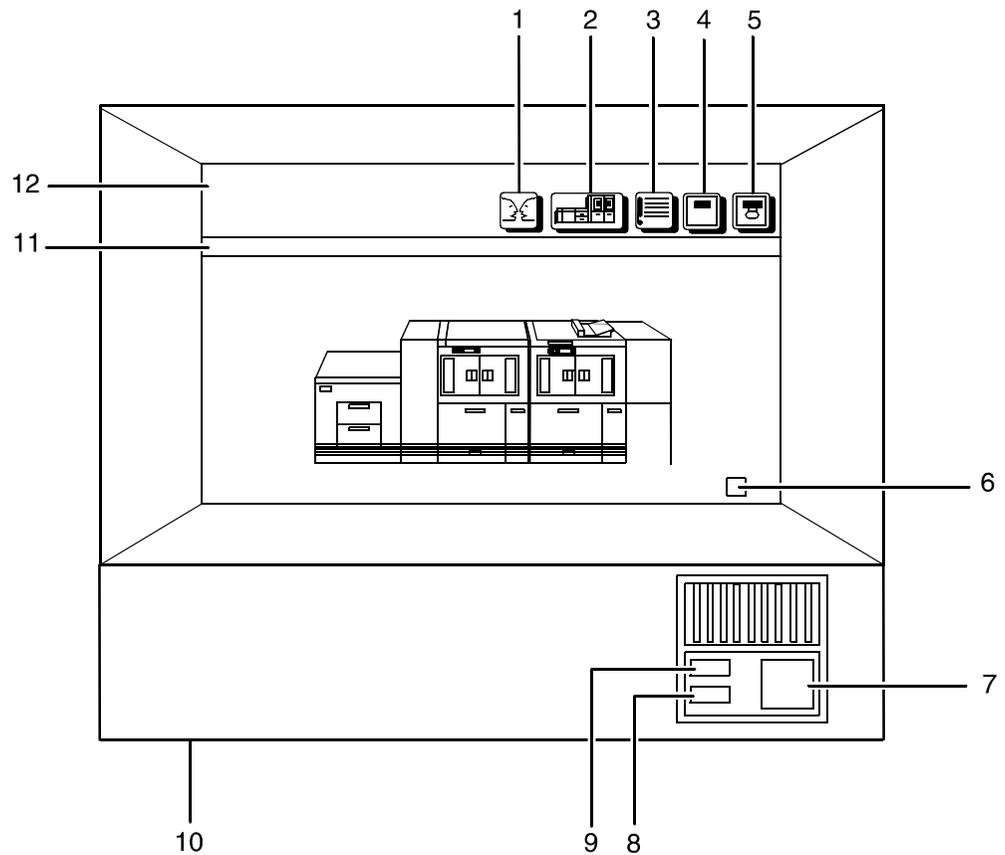


Figure 1-7. Printer control console

1. Language icon
2. Printer icon
3. Fault List icon
4. Tools icon
5. Guarded Tools icon
6. Clear button
7. Continue button
8. Stop button
9. Sample button
10. Brightness control thumbwheel
11. Icons area
12. Messages area

Language icon	Selects the language for messages displayed on your printer control console.
Printer icon	Displays the printer mimic diagram. (This is the default display on the printer control console.)
Fault List icon	Displays the Fault List screen.
Tools icon	Displays information on calling for service. Also enables you to adjust certain features of the printer control console (for example, alarm loudness).
Guarded Tools icon	Accesses certain diagnostics and service tasks. This icon is reserved for the service representative.
Clear button	Clears fault messages from the screen.
Stop button	(Red) Stops printing.
Continue button	(Green) Resumes printing.
Sample button	Prints a sample page (an extra copy of one page from the job that is printing currently) and sends it to the sample tray.
Brightness control thumbwheel	Adjusts the brightness of the printer control console screen.
Icons	Area where the following icons appear: <ul style="list-style-type: none">• Fault icon: Appears when a fault exists in the system that stops the printer or prevents it from printing. If you click this button, the Clear button displays on the screen.• Hint icon: Appears when a masked fault or condition exists in the printer.
Messages area	Two types of messages are displayed here: fault messages, which relate to printer malfunctions, and information messages, which relate to printer conditions such as low dry ink. <p>The message area is organized as follows:</p> <ul style="list-style-type: none">• Lines 1 and 2. Display the current status of the printer; for example, READY.

- **Line 3.** Displays messages concerning masked conditions, such as low dry ink. These messages are preceded by an asterisk.
- **Line 4.** Displays messages that originate at the controller.

Sample tray

The sample tray, located on top of the printer, receives output such as transparencies, sample sheets from printing jobs, prints from system files such as forms, and waste sheets that cannot be sent to the purge tray.

Monitor the sample tray and empty it when it contains 100 sheets.

NOTE: The system does not notify you when the tray is full.

Attention light

An Attention light is mounted on top of the inverter module. This light either blinks or modulates (alternately brightens and dims) when the printer requires operator attention. The light has three states:

- **Off:** No printer problems exist that require attention.
- **Steady light:** A situation exists that needs attention soon.
- **Flashing:** The printer has stopped and requires your attention immediately.

NOTE: When the Attention light starts flashing, an explanatory message appears on the printer control console display. A similar message appears in the Console window on the controller screen.

Purge tray

The purge tray is located on top of the last feeder/stacker module. Aborted sheets (for example, damaged sheets or sheets cleared after a paper jam) are sent to this tray. The purge tray should be emptied when it has received 100 sheets of paper.

NOTE: The system does not notify you when the tray is full.

Feeder trays

Multiple feeder trays can be configured to feed paper for jobs in the most effective manner. For example, the trays can provide nonstop printing of a complex job that requires many paper stocks, or only a few stocks, by using the trays continuous loading capability. A different input tray can also be selected for each copy of a specific page in a print job, for example, to provide different paper colors for specific pages.

The printing system may have up to six feeder trays: two processor feeder trays and two to four high-capacity trays. Four addressable input trays are standard with the system, and two additional high-capacity trays are optional.

Processor feeder trays

Two processor feeder trays (trays 1 and 2) are located in the main part of the printer and are not part of a feeder/stacker module.

Trays 1 and 2 can handle paper sized from 8 by 10 inches / 203 by 254 mm to 9.02 by 14.02 inches / 230 by 356 mm.

Feeder tray capacity

The feeder trays have the following capacities, based on 20 pound or 80 gsm (grams per square meter) paper:

- **Tray 1:** 1100 sheets
- **Tray 2:** 600 sheets
- **Trays 3, 4, 5, and 6 (high-capacity trays):** 2600 sheets each

An elevator moves each tray up or down when it is in use. In each tray, a control panel consisting of a button, indicators, and paper level displays controls the elevator tray and indicates its status.

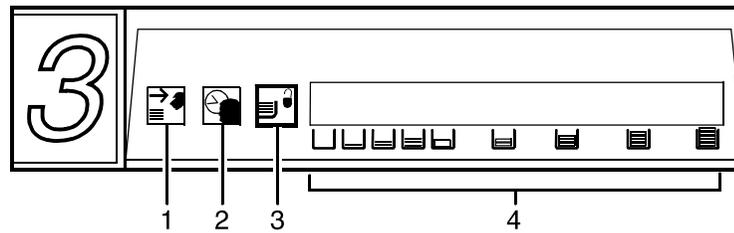


Figure 1-8. Feeder tray control panel

1. Ready to Open indicator on feeder trays
2. Please Wait indicator on feeder trays
3. Tray Unlock button (feeder)
4. Paper Level indicators on feeder trays

Ready to Open indicator on feeder trays

Glows green when the tray can be pulled out and paper can be added to it.

Please Wait indicator on feeder trays

Shows that the tray is in motion. This indicator is lit red when the Tray Unlock button is pressed, while the tray is lowering, and while the tray is rising. The indicator goes off when the tray elevator reaches its destination.

Tray Unlock button (feeder)

Enables the feeder tray to be opened.

- If the tray is in use when this button is pressed, the feed selection switches to the backup tray if one has been identified. Otherwise, printing stops.
- If the tray is in use and selected as a backup tray, pressing the Tray Unlock button causes the tray elevator to lower and the tray to be unavailable for auto switching.
- If the tray elevator is in the raised position and the tray is not in use or selected as a backup tray, pressing this button causes the elevator to lower with no effect on printing operations.

This button functions when the Please Wait indicator is off.

Paper Level indicators on feeder trays

Display the approximate quantity of paper in the tray. Each display shows paper by quarter reams up to one ream, and then by full reams. The green indicator appears above its Paper Level indicator.

Stacker bins

Each output stacker bin has offsetting capability and a capacity of 2500 sheets of 20 pound or 80 gsm paper.

NOTE: This capacity does not apply to 11 by 17 inch and A3 papers. Because of the additional weight these large sheets add to the bins, each bin is restricted to hold only up to 1500 sheets of A3 or 11 by 17 inch papers, for safety reasons.

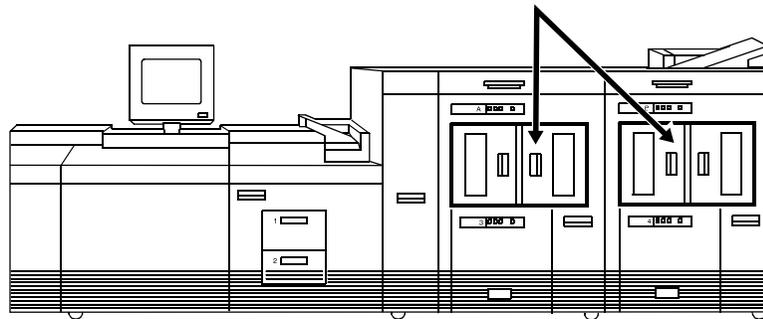


Figure 1-9. High capacity stackers (HCS)

The stackers can stack the printed output in the bin three ways:

1. Directly onto the bin platform.
2. Into a container that is set on top of the bin platform.

NOTE: The stacking capacity is approximately 100 to 150 sheets less when stacking into a container.

3. Onto a pallet without a container (for paper sizes 11 by 17 inches or A3 only).

Using the Stacking windows on the user interface, you can select the level to which paper will be stacked in the HCS.

A stacking elevator maintains the paper at the proper level for stacking and lowers the stack for unloading. An offset mechanism offsets printed sets toward the front or back of the HCS bin.

The elevator platform lowers under the following conditions:

- The bin capacity has been reached.
- A selection to lower the platform is entered at the printer control console or a user interface window.
- The job being printed reaches a designated unload boundary.

Each HCS bin has unlinked double doors to give you easy and safe access for unloading output from the printer.

The elevator bin platform automatically rises when the doors are closed after the stacker has been unloaded.

Bin control panels on stackers

Each stacker bin has a control panel consisting of buttons and indicators.

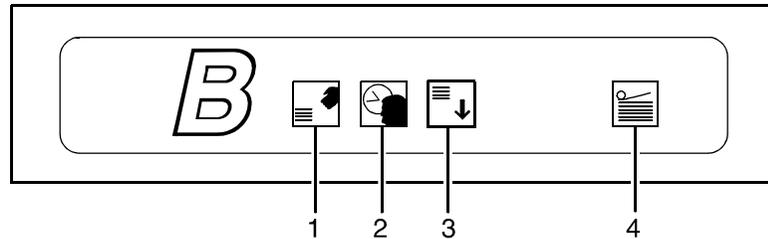


Figure 1-10. High capacity stacker bin control panel

1. Ready to Unload indicator on stacker bins
2. Please Wait indicator on stacker bins
3. Bin Unload button on stacker
4. In Use indicator on stacker bin

Ready to Unload indicator on stacker bins

When this indicator glows, you can remove printed sheets from the stacker bin.

Please Wait indicator on stacker bins

When this indicator glows, the elevator is in motion. This indicator turns off when the platform reaches its destination.

Bin Unload button on stacker

Lowers the bin elevator.

- If the bin is in use when this button is pressed, the printed pages begin stacking in the other stacker bin, if auto switching has been enabled.
- If the bin is not in use, pressing this button does not affect printing operations.

In Use indicator on stacker bin

When this indicator glows, the bin has been made ready to receive output.

Feeder/stacker modules

The feeder/stacker modules contain the high-capacity feeder trays and the stacker bins. The printer may have up to four feeder/stacker modules (including the inverter feeder/stacker), containing feeder trays 3, 4, 5, and 6, and stacker bins A, B, C, and D. Each module contains one high-capacity feeder tray and one high capacity stacker bin.

High-capacity feeders

The high-capacity feeder (HCF) trays are located in the bottom half of the feeder/stacker modules. Each HCF tray can hold up to 2500 sheets of 20 pound or 80 gsm paper.

The high-capacity feeder trays can handle paper sized from 8 by 10 inches / 203 by 254 mm to 17 by 14.02 inches / 432 by 356 mm.

Unlike the processor feeder trays, the HCF trays have Paper Level switches, which detect the position of the elevator to determine the fullness of the tray.

High-capacity stackers

The high-capacity stacker (HCS) bins are located in the top half of the feeder/stacker modules, accessed through double doors.

Two high-capacity stacker bins are standard, with up to two additional bins available as options (providing up to four bins total). Each bin holds up to 2500 sheets of 20 pound or 80 gsm paper.

Inverter

The inverter is part of the inverter feeder/stacker module. It allows for proper collation of the print job. It also directs printed output to the sample tray, when required.

Printer configurations

The standard printer configuration consists of an inverter feeder/stacker plus one additional feeder/stacker.

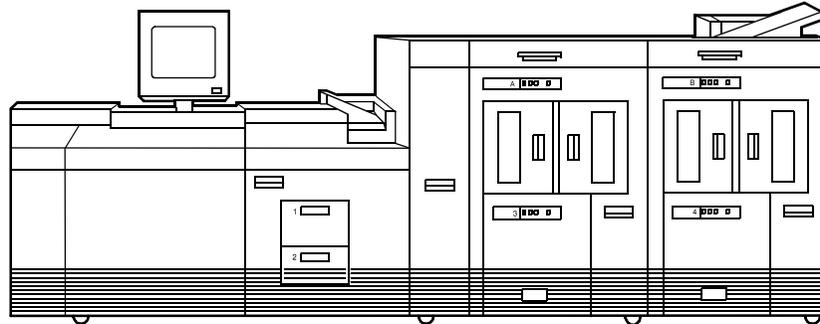


Figure 1-11. Printer with inverter feeder/stacker + feeder/stacker (standard base configuration)

In addition, the printer is available with three or four feeder/stacker modules.

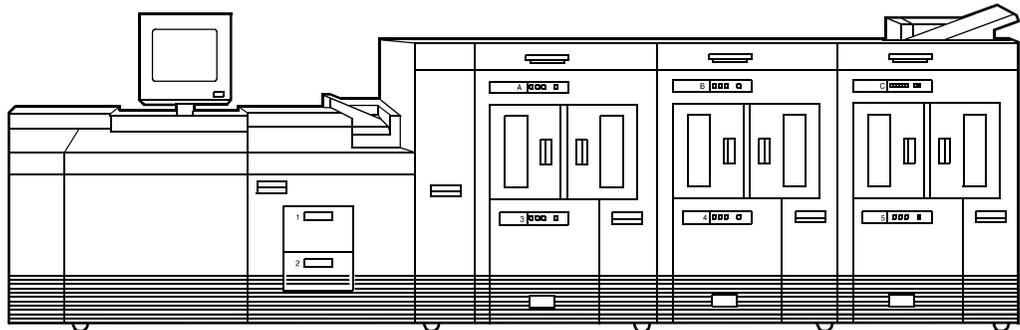


Figure 1-12. Printer with inverter feeder/stacker + feeder/stacker + feeder/stacker

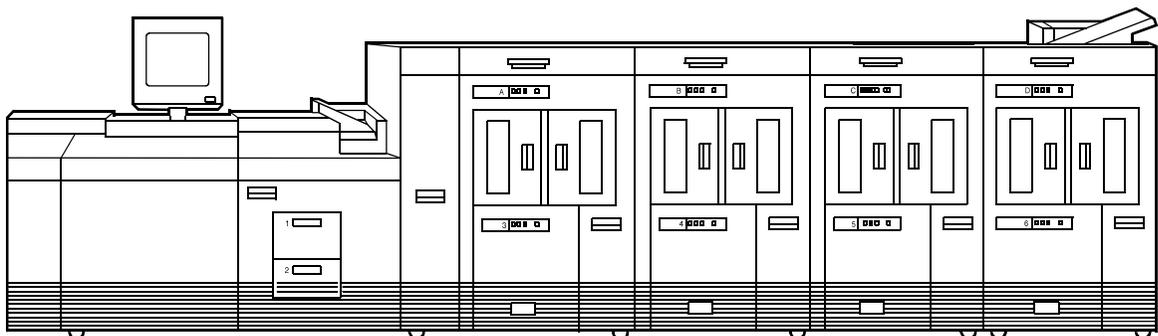


Figure 1-13. Printer with inverter feeder/stacker + feeder/stacker + feeder/stacker + feeder/stacker

NOTE: The bypass transport device is not available for this configuration (four feeder/stacker modules).

Printer options

The printing system is available in several configurations, and may be connected to a bypass transport.

Bypass transport

The bypass transport option enables third-party finishing devices to interface directly with the printing system. The bypass transport allows you to customize your printer for increased efficiency and specialized applications involving finishing.

NOTE: A bypass transport must be installed for the printing system to support a third-party finishing device.

Function of the bypass transport

Connected to the last feeder/stacker module, the bypass transport moves paper from the stacker to a third-party finisher such as a stitcher, booklet maker, tape binder, and so on. By making selections on the user interface windows, you can program the printer to send output to the bypass transport, which feeds the output to the finishing equipment.

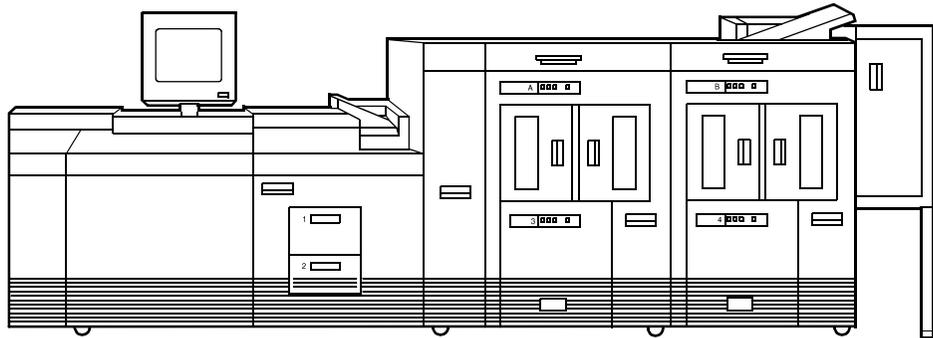


Figure 1-14. Printer with inverter feeder/stacker + feeder/stacker + bypass transport

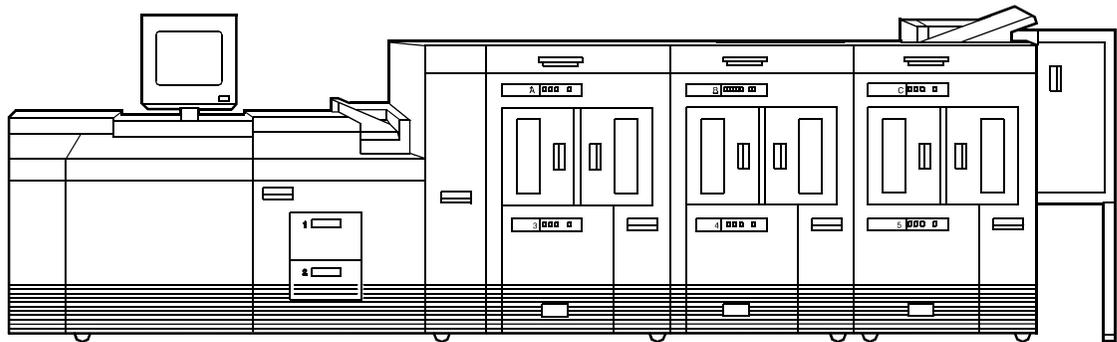


Figure 1-15. Printer with inverter feeder/stacker + feeder/stacker + feeder/stacker + bypass transport

The illustrations above show a printer with two feeder/stacker modules and a bypass transport, and a printer with three feeder/stacker modules and a bypass transport. With the bypass transport installed, the printer can support up to three feeder/stacker modules, including the inverter feeder/stacker.

Paper stocks supported on bypass transport

The bypass transport accepts all paper stocks on which the printer can print, and it accommodates simplex and duplex printing.

DFA support

The bypass transport meets the Xerox Document Feeding and Finishing Architecture (DFA) specifications. The system software supports DFA. However, in order for the bypass transport to function correctly, you need to set up finishing personality profiles to identify your finishing device to the printing system. (The customer support representative for your finishing device can give you the information you need to create a personality profile for your third-party finishing device.)

Support and interface with feeders

For information on marketing partners that provide solutions for support and interface with feeders, contact your local Xerox sales representative.

NOTE: The input enablement device is NOT an option on the Xerox DocuPrint 155 and 180 EPS.

The input enablement device is available only for the Xerox DocuPrint 100, 115, and 135 EPS.

7 by 10 inch enablement kit

The 7 by 10 inch enablement kit allows the printing system to print on 7 by 10 inch/178 by 254 mm paper size, with throughput speed of up to 206 PPM.

Paper paths

The paper path is the route that materials (paper, transparencies, labels, and so on) follow through the printer from the feeder trays to the output bins or finisher.

Printer paper path

The following figure shows the path the paper takes through the printer.

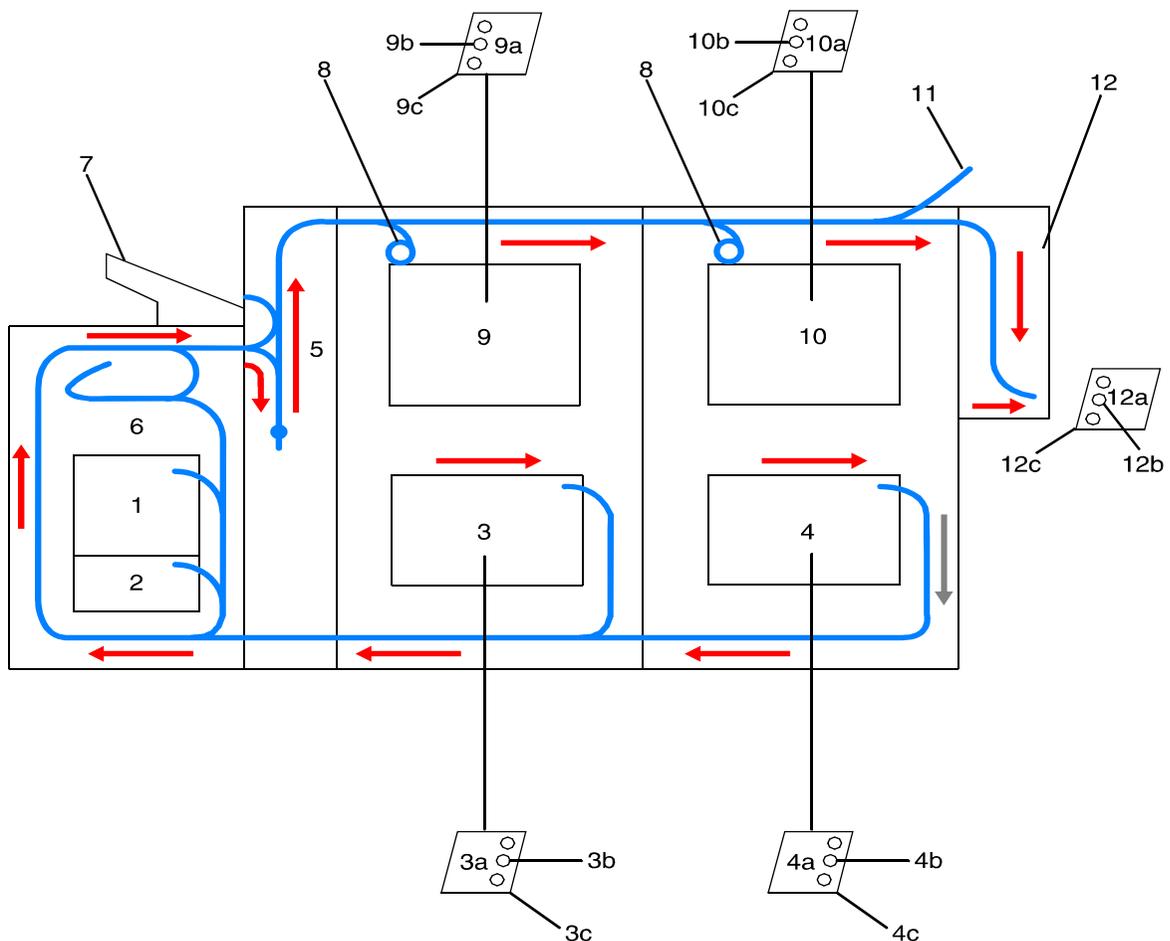


Figure 1-16. Route of paper through the printer

1. Processor feeder tray 1
2. Processor feeder tray 2
3. High-capacity feeder tray 3
 - a. Side 1 of sheet leaving feeder tray
 - b. Drilled holes (on right edge)
 - c. Origin 0,0: portrait orientation
4. High-capacity feeder tray 4
 - a. Side 1 of sheet leaving feeder tray
 - b. Drilled holes (on right edge)
 - c. Origin 0,0: portrait orientation
5. Inverter
6. Duplex inverter
7. Sample tray
8. Disk inversion
9. High-capacity stacker bin A
 - a. Side 2 of sheet stacked in bin
 - b. Drilled holes (on left edge)
 - c. Origin 0,0: portrait orientation
10. High-capacity stacker bin B
 - a. Side 2 of sheet stacked in bin
 - b. Drilled holes (on left edge)
 - c. Origin 0,0: portrait orientation
11. Purge tray
12. Bypass transport
 - a. Side 2 of sheet passing through bypass transport
 - b. Drilled holes (on left edge)
 - c. Origin 0,0: portrait orientation

Bypass transport paper path

The following figure shows the paper path through the bypass transport, viewed from the front of the printer.

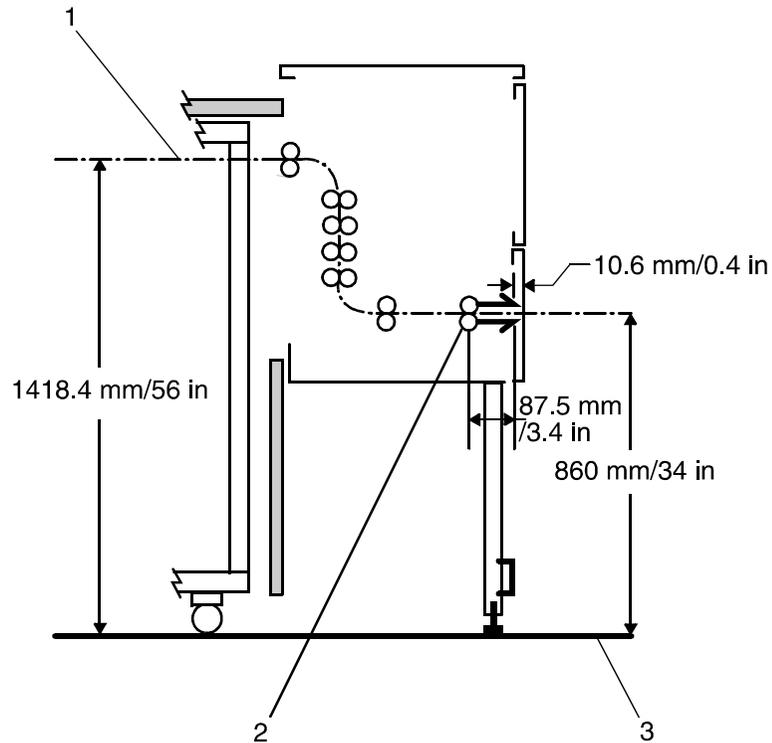


Figure 1-17. Bypass transport paper path

1. Sheet path
2. Exit rollers
3. Floor

Controller overview

The controller receives LCDS, PostScript, and PCL data streams from a mainframe host or a workstation client, processes the data, and sends it to the printer. The controller also provides the printer with print data and commands and receives status information from the printer.

The controller consists of a Sun Workstation computer, which is run by the Sun Solaris Operating environment. Also resident on the controller is the Document Services Platform application software, known as DocuSP software, which manages all printing, diagnostic, and administrative functions on the printing system.

The DocuSP software includes a full-color graphical user interface, which enables you to interact with the printing system to set up and configure the system, to set up and implement system options, to run print jobs, etc.

Online Help (menus and buttons) provides access to online help that contains information when requested.

Accessing DocuSP remotely (Remote Workflow)

Remote Workflow, a remote graphical user interface (GUI), is available for installation from a CD. Remote Workflow allows you to manage your DocuSP-based printers from a single PC or Sun workstation. You may set your preferences from the remote client to disable or enable some or all connections.

Remote Workflow allows you to configure the printers that you want to manage, and provides real time status of the printers. You may switch between the printers that you are managing, but you can display only one printer GUI at a time.

The remote client GUI looks and functions the same as the local DocuSP GUI on the controller.

Controller components

The controller consists of a specially-configured Sun workstation and uses proprietary Xerox hardware, firmware, and software. Your controller has one of two possible configurations, described in the following sections.

NOTE: Controller hardware configurations are subject to change, to keep up with technology advances.

Sun Blade workstation

The controller is based on either the Sun Blade 1000/2000 or the Sun Blade 2500, workstations with high-performance architecture for complex processing tasks.

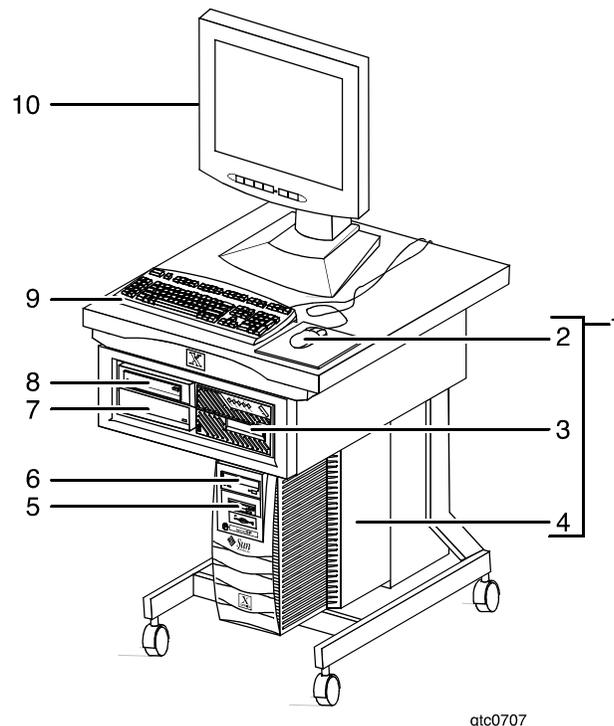
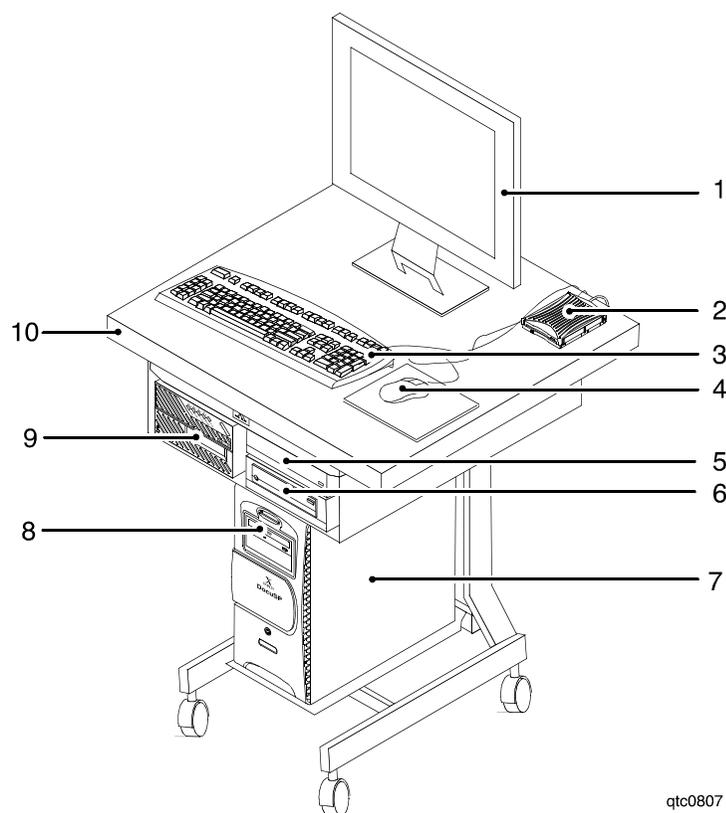


Figure 1-18. Sun Blade 1000/2000 controller

1. Controller stand
2. Mouse
3. 18/36-track cartridge tape drive (optional)
4. Processor
5. Diskette drive
6. DVD-ROM drive
7. Quarter-inch cartridge (QIC) tape drive
8. External fixed disk drive (optional)
9. Keyboard
10. Display monitor



qtc0807

Figure 1-19. Sun Blade 2500 controller

1. Display monitor
2. External diskette drive
3. Keyboard
4. Mouse
5. External fixed disk drive (optional)
6. Quarter-inch cartridge (QIC) tape drive
7. Processor
8. DVD-ROM drive
9. 18/36-track cartridge tape drive (optional)
10. Controller stand

The Sun Blade workstation controller contains the following hardware components:

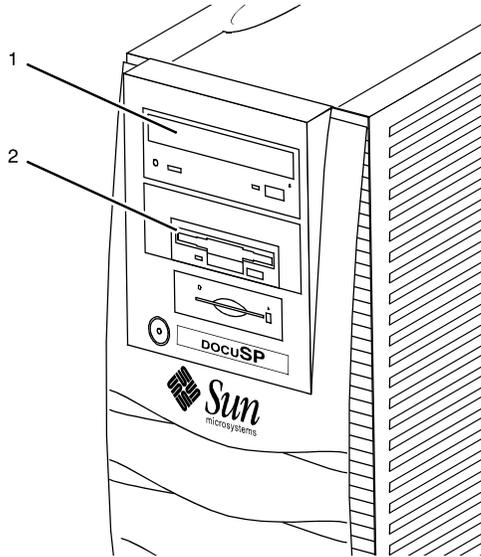
- Processor (system unit) containing the following:
 - One or two UltraSPARC high-speed processing unit (CPU) modules
 - One or two 1-GB memory modules
 - NOTE: In Xerox Europe, all printers use a 2 GB memory configuration.*
 - Hard disk drive
 - High-density, read-only DVD-ROM drive
 - Diskette drive (Sun Blade 1000/2000 only)
 - Ethernet
 - One or two Printer Controller Interface (PCI) boards to interface with the printer
 - Video graphics board
- Universal Serial Bus (USB) keyboard and three-button mouse
- 17-inch flat panel monitor
- External diskette drive (Sun Blade 2500 only)

Processor The central processing unit contains the memory, internal disk drive, a graphics board, a DVD-ROM drive, a diskette drive, power receptacle and outlet, connectors, and ports.

- **Memory:** One or two 1-GB Dual In-line Memory Modules, or DIMMs, are provided as a standard feature of the processor.
- **Hard disk drive:** The internal hard disk drive stores the operating system software, the NPS/IPS Extension application, and any queued print jobs are stored on the internal disk. This disk cannot be used to store other applications or data except as directed by your service representative.
- **Diskette drive:** Diskettes are used to install fonts and to load files to, and back up files from, the internal disk drive. The diskette drive uses industry standard 3.5 inch, 1.44 MB, double-sided, high-density diskettes.

NOTE: On the Sun Blade 2500, the diskette drive is external, and plugs into the processor back panel.

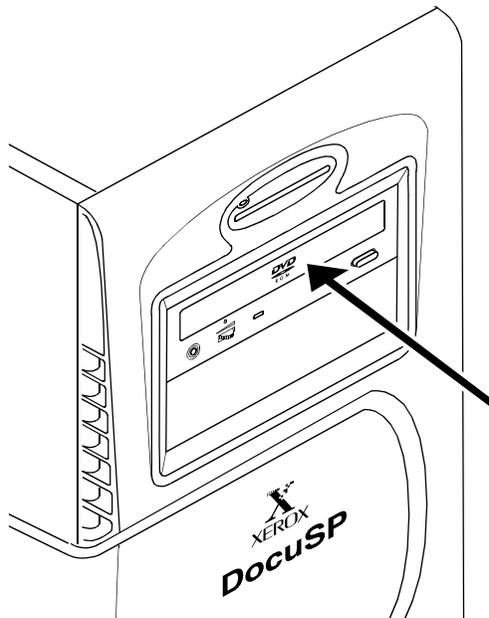
- **DVD-ROM drive:** The DVD-ROM drive is a high density, read-only, optical laser storage device used for loading the NPS/IPS operating system and other files. The DVD-ROM drive is located in the processor above the diskette drive.



qtc0703

Figure 1-20. Drive locations on Sun Blade 1000/2000

1. DVD-ROM drive
2. Diskette drive



qtc0806

Figure 1-21. DVD ROM drive location on the Sun Blade 2500

- **Back panel:** The back panel of the processor has a power receptacle and outlet, connectors, connector openings, and ports.

Keyboard The keyboard consists of alphanumeric keys similar to a typewriter, symbols and special character keys, an extended character set, and function keys. The keyboard is one of your main methods of communicating with the printer. You can use the keyboard to make selections, and to enter commands that control functions such as requesting sample prints, or shutting down the system.

Mouse The mouse is another main method of communicating with the printer.

Display monitor The LCD monitor allows you to interact with the printer and to monitor its interaction with the various components. During a print job, printer error messages may display to notify you of any unexpected conditions.

Optional processor components The controller may be configured with any of the following optional components:

- Connectivity board to enable Token Ring
- Channel interface board for channel connection to a host for online LCDS printing
- One SCSI board to connect to an external tape drive
- Creator-3D series 3 graphics board (may replace the video graphics board delivered with the controller)

External components and options

The following components are external to the processor. The controller stand contains sections that may hold these components.

- Quarter-inch cartridge (QIC) tape drive
- 36-track cartridge tape drive (optional)
- External 36 GB hard disk drive (optional)

NOTE: This additional drive is standard equipment on systems with the NPS/IPS extension.

Controller stand

The controller is provided with a special stand that holds all its standard components. In addition to the processor, keyboard with the mouse, and the quarter-inch cartridge tape drive, the stand can accommodate the optional 36-track tape drive and one external hard disk drive (required for the NPS/IPS Extension option).

Online and offline interfaces

The Xerox DocuPrint 100/115/135/155/180 EPS may be configured for either the online interface, the offline interface, or both.

Online interface The online (channel-attached) interface receives input directly from any environment that supports the IBM 3211 and 4245 host systems.

Offline interface The Xerox DocuPrint 100/115/135/155/180 EPS supports three types of peripheral devices from which you can import resource files such as forms, fonts, and JSLs, and receive print data from tape. These devices are called “peripheral” because they handle media external to the system disk.

The following drives are supported:

- 26-track cartridge tape drive (QIC)
- 9-track reel tape drives
- 36-track cartridge tape drives

Moving the controller

To ensure consistent performance and avoid any damage to equipment, follow these rules for placing the components of the workstation controller.

Do:

- Use the controller stand that comes with your printing system equipment.
- Keep the processor in an upright, vertical position as illustrated below.

- Allow at least 6 inches / 152 mm of unobstructed space at the front and rear of the processor, so the fan and vents are not blocked.

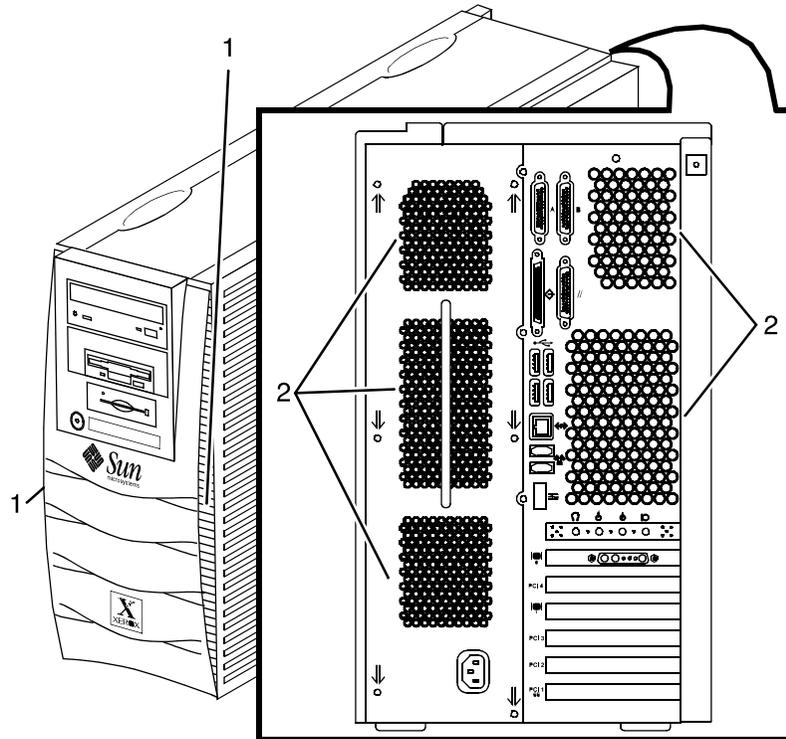


Figure 1-22. Sun Blade 1000/2000 fan and vent locations to keep clear

1. Vents in front of processor
2. Vents in back of processor

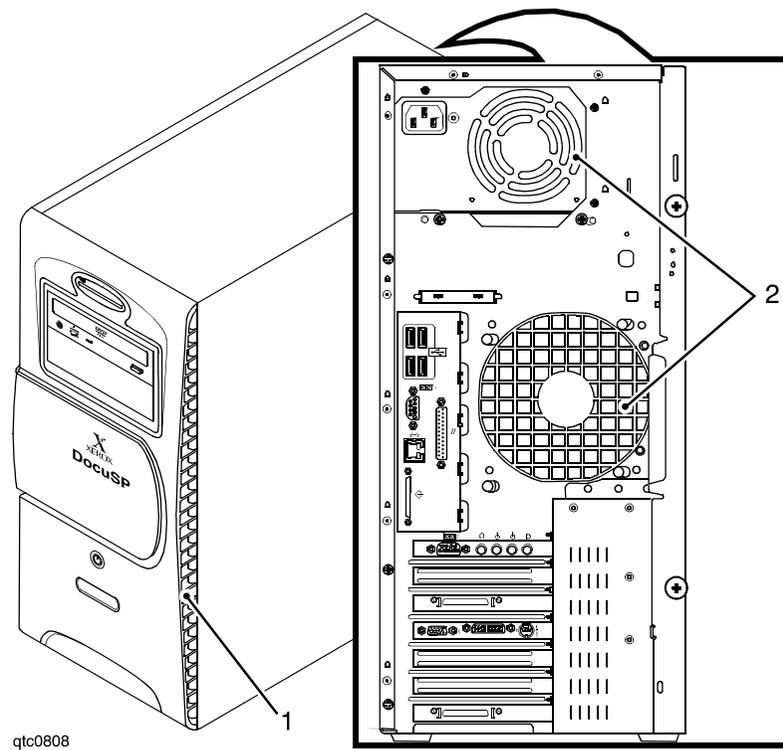


Figure 1-23. Sun Blade 2500 fan and vent locations to keep clear

1. Vents in front of processor
2. Vents in back of processor

CAUTION

Do not place the monitor on top of the processor. Do not block any fan or vent on the front, sides, or rear of the processor.

Do not:

- Do not place the monitor and processor on a desk or table top.
- Do not place the monitor on top of the processor.
- Do not allow any piece of equipment to blow warm air into the air intake vents of the processor.
- Do not place the processor on its side, or in any other position but the upright, vertical position achieved by using the controller stand.
- Do not place the processor or monitor on top of the printer.

Tape drives overview

The DocuPrint 100/115/135/155/180 EPS supports several types of tape drives that may be used to load resources (forms, fonts, etc.) or to submit offline LCDS print jobs.

The 26-track cartridge tape drive, provided with your Xerox DocuPrint 100/115/135/155/180 EPS, can be used only to import resources to the system disk. 9-track and 36-track tape drives can be used to submit print jobs to the DocuPrint EPS, or load resources.

The DocuSP Tape Client software enables transmission of data from a cartridge or open reel tape to the DocuPrint EPS controller via the Socket gateway.

26-track cartridge tape drive (QIC) (for resource loading only)

The 4 GB external SCSI quarter inch cartridge (QIC) tape drive is an external device provided with the Xerox DocuPrint 100/115/135/155/180 EPS. The cartridge tape drive connects to the controller through the SCSI port on the processor back panel.

Like the diskette and DVD drives, this tape drive is not an input source for print jobs or for any other data or application. You can use it to load resource files, and the service representative uses it to load system maintenance files or to save diagnostic information.

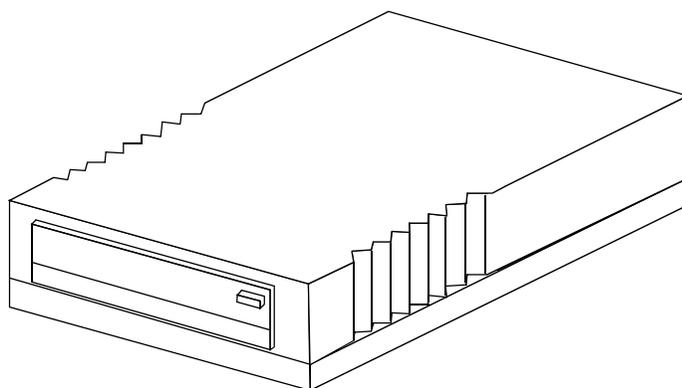


Figure 1-24. 26-track cartridge tape drive (QIC)

36-track cartridge tape drive

An 18/36-track cartridge tape drive is an option. You can use this drive to load resources and to submit offline LCDS print jobs.

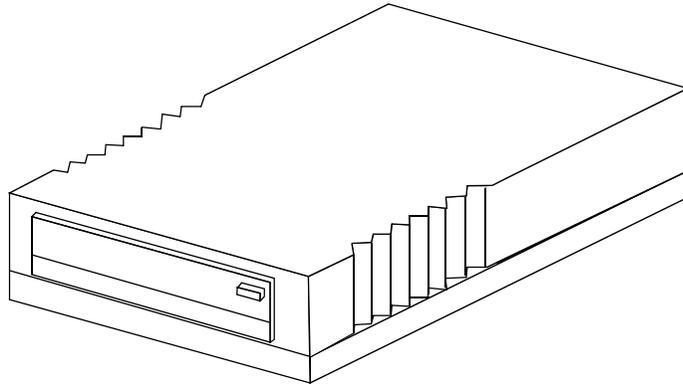


Figure 1-25. 18/36-track cartridge tape drive

Peripheral cabinet (9-track and 18/36-track tape drives)

Some Xerox customers may already have a peripheral cabinet that houses a 9-track magnetic and an 18/36-track cartridge tape drive. The DP EPS supports existing peripheral cabinets, but they are not available with new systems. In addition, if a peripheral cabinet has either of the following 18-track tape drives, they are not supported:

- STK 4220 MOD 1 tape drive
- STK 4220 MOD 2 tape drive

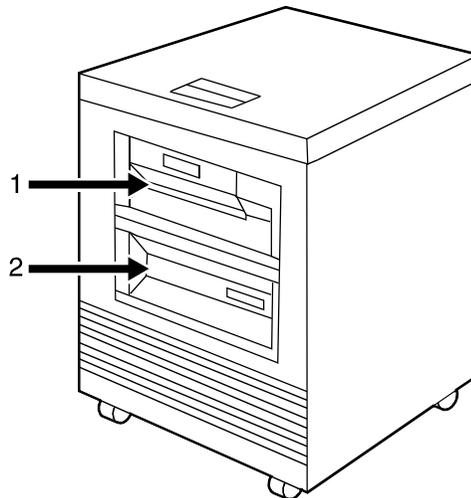


Figure 1-26. Peripheral cabinet

1. 9-track magnetic tape drive
2. 18/36-track cartridge tape drive

Paper sizing and print speed

The printer paper trays have edge guide sensors that detect paper length and width. The system selects correct paper trays for the print job based on the paper size specified in the job, as follows:

- If an exact match is found, the print job continues.
- If an exact match is not found, the programmer can specify in the job for the printer to do one of the following:
 - Stop printing the job and print an error sheet.
 - Print the data on an oversized sheet.

If you encounter any problems related to paper sizing, contact your lead operator or Xerox service representative.

Long and short edge feeding

To feed through the printer, the leading edge of the paper must be at least 10 inches long. Therefore, the following standard sizes of paper must be loaded so that sheets feed long edge first:

- 7 by 10 inch
- B5
- A4
- US Letter
- B4
- US Legal

The following papers, which have long edges greater than 14.33 inches / 364 mm must feed short edge first:

- A3
- US Ledger or US Tabloid

NOTE: JIS B4 can be fed either long edge or short edge first.

Paper width and throughput speed (LCDS printing only)

The width of the paper you use for your LCDS print job is directly related to the rate at which the printer can print the job. The rate at which a job prints is called the “throughput speed” and is measured in pages per minute (ppm).

NOTE: “Pages per minute” actually means “impressions per minute,” referring to one side of a printed sheet.

A pitch is the amount of time the printer takes to image a page on the photoreceptor belt. The term “pitch mode” refers to the number of pitches that can occur during one complete photoreceptor revolution. The pitch mode in which a specific job prints is based on the paper size used for that job.

The following table lists the pitch mode boundary values, paper widths, and related printing speeds for the system. The chart shows that the shorter the paper width, the higher the pitch mode and the faster the throughput speed (higher page per minute rate).

Table 1-5. Throughput data for DP100

Pitch	Paper width	Speed
5	7 to 12.12 in / 178 to 308 mm	100 ppm
4	12.12 to 15.31 in / 308 to 389 mm	77 ppm
3	15.31 to 17 in / 389 to 432 mm	58 ppm

Table 1-6. Throughput data for DP115

Pitch	Paper width	Speed
6	7 to 10.19 in / 178 to 259 mm	116 ppm
5	10.19 to 12.12 in / 259 to 308 mm	96 ppm
4	12.12 to 15.31 in / 308 to 389 mm	77 ppm
3	15.31 to 17 in / 389 to 432 mm	58 ppm

Table 1-7. Throughput data for DP135

Pitch	Paper width	Speed
8	7 to 7.4 in / 178 to 188 mm	154 ppm
7	7.4 to 9.01 in / 188 to 229 mm	135 ppm
6	9.01 to 10.19 in / 229 to 259 mm	116 ppm
5	10.19 to 12.12 in / 259 to 308 mm	96 ppm
4	12.12 to 15.31 in / 308 to 389 mm	77 ppm
3	15.31 to 17 in / 389 to 432 mm	58 ppm

Table 1-8. Throughput data for DP155

Pitch	Paper width	Speed
6	7 to 10.19 in / 178 to 259 mm	154 ppm
5	10.19 to 12.12 in / 259 to 308 mm	128 ppm
4	12.12 to 15.31 in / 308 to 389 mm	103 ppm
3	15.31 to 17 in / 389 to 432 mm	77 ppm

Table 1-9. Throughput data for DP180

Pitch	Paper width	Speed
8	7 to 7.4 in / 178 to 188 mm	206 ppm
7	7.4 to 9.01 in / 188 to 229 mm	180 ppm
6	9.01 to 10.19 in / 229 to 259 mm	154 ppm
5	10.19 to 12.12 in / 259 to 308 mm	128 ppm
4	12.12 to 15.31 in / 308 to 389 mm	103 ppm
3	15.31 to 17 in / 389 to 432 mm	77 ppm

Each time a job requires a different paper size that changes across a pitch boundary, the system performs a time-consuming xerographic quality adjustment. When the printing speed of an LCDS job appears to degrade due to the use of mixed stock sizes, the following actions may improve the performance:

- You can optimize throughput by double clicking on a job in Job Manager or double clicking on a queue in Queue Manager and selecting Properties. The Output tab has a Mixed Stock Size Job window where you can select Optimize throughput. You must also enter the width of the widest paper in inches or millimeters for the job.

- The job programmer may be able to improve the speed by using the LCDS PDL command OUTPUT TMODE in the JSL to run the print job in a lower pitch mode. Refer to the OUTPUT TMODE parameter in the *Xerox DocuPrint EPS Using LCDS Print Description Language* for information on using this command.
- Similarly, if the system cycles down frequently because your external finishing equipment has a slower throughput rate than the printing system, the OUTPUT TMODE command can be used to lower the pitch mode to match the speed of the finishing equipment. This can improve overall throughput by avoiding time-consuming cycle downs.

NOTE: Pitch mode changes are supported only for LCDS printing.

Paper size and pitch mode minimum and maximum

The illustrations in this section show the pitch modes in which you can operate, with the smallest and largest size papers supported by the printing system.

Using small paper sizes in 8 pitch mode

Printing in 8 pitch mode provides the highest throughput speed available (up to 206 ppm). However, keep the following in mind when you select the paper you want to use for this mode:

- Paper sizes smaller than 8 inches / 203 mm in width are supported only when the optional 7 inch paper kit is installed on the printer.
- The leading edge of any paper used in the printer cannot be less than 10 inches / 254 mm long.

The following figure illustrates the maximum and minimum paper sizes supported in 8 pitch mode.

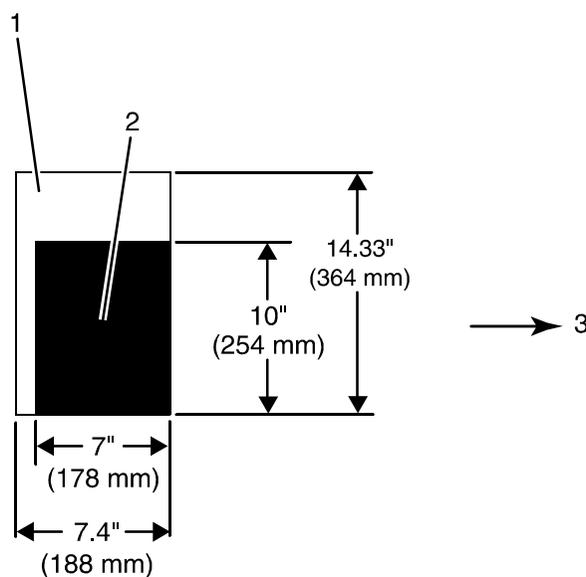


Figure 1-27. 8 pitch mode paper sizes

1. Maximum paper size for 8 pitch mode
2. Minimum paper size for 8 pitch mode
3. Travel direction of sheets out of paper tray

Using large paper sizes in 3 pitch mode

Large paper sizes with widths of 15.31 to 17 inches / 389 to 432 mm are supported only in 3 pitch mode and must feed short edge first. These paper sizes slow down the throughput speed. Therefore, a short edge feed job takes longer to print than a long edge feed job.

NOTE: The system can support 14 by 17 inch / 356 by 432 mm, 20 pound or 80 gsm paper stock in 3 pitch mode. However, printing performance is not guaranteed for all types of paper of this size. Heavy (110 pound / 200 gsm) and light (16 pound / 60 gsm) weight papers can cause jams throughout the system, and are not recommended.

The following figure illustrates the maximum and minimum paper sizes supported in 3 pitch mode.

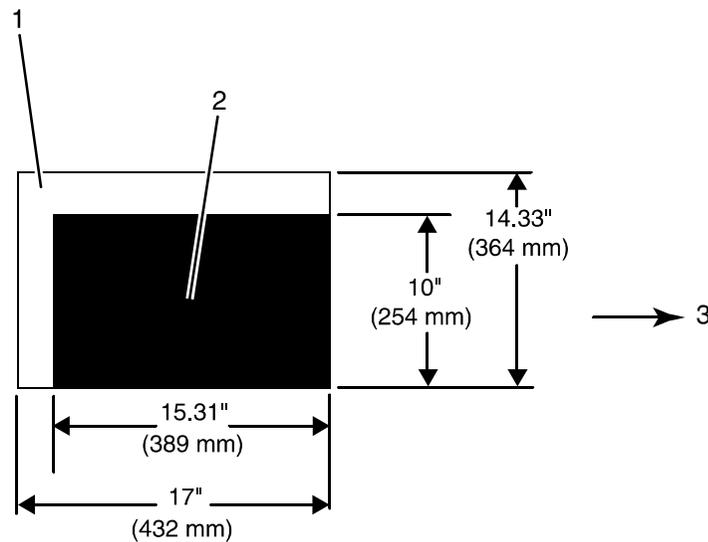


Figure 1-28. 3 pitch mode paper sizes

1. Maximum paper size for 3 pitch mode
2. Minimum paper size for 3 pitch mode
3. Travel direction of sheets out of paper tray

Feed direction for standard paper sizes

Currently, 14.33 inches / 364 mm is the maximum paper length for which the system supports long edge feeding (5 to 8 pitch mode). Any papers with long edges greater than this (such as 11 by 17 inch / 279 by 432 mm paper) must be loaded for short edge feeding (3 or 4 pitch mode).

The following figures show how some of the standard paper sizes feed through the printer in various pitch modes.

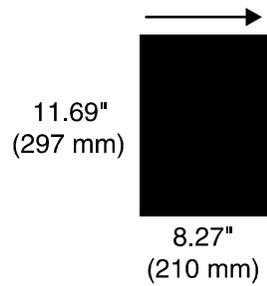
European papers

Figure 1-29. A4 (210 by 297 mm) paper feeding (long edge feed)

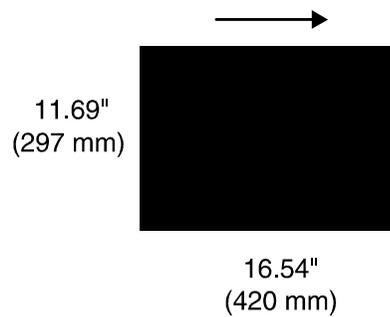


Figure 1-30. A3 (297 by 420 mm) paper feeding (short edge feed)

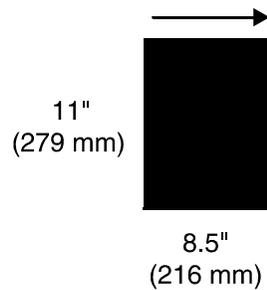
US papers

Figure 1-31. US Letter (8.5 by 11 inch) paper feeding (long edge feed)

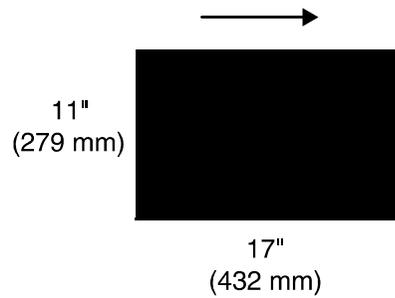


Figure 1-32. US Ledger or US Tabloid (11 by 17 inch) paper feeding (short edge feed)

B4 papers

There are two versions of B4 paper: European (ISO B4: 9.84 by 13.89 inches / 250 by 353 mm) and Japanese (JIS B4: 14.33 by 10.12 inches / 364 by 257 mm). European B4 feeds long edge first, while JIS B4 may feed either long edge or short edge first.

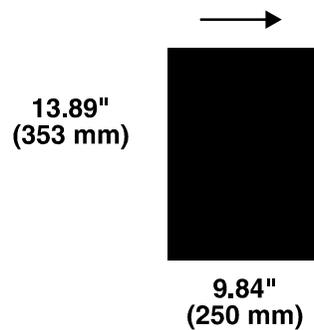


Figure 1-33. B4 (250 by 353 mm) paper feeding (long edge feed)

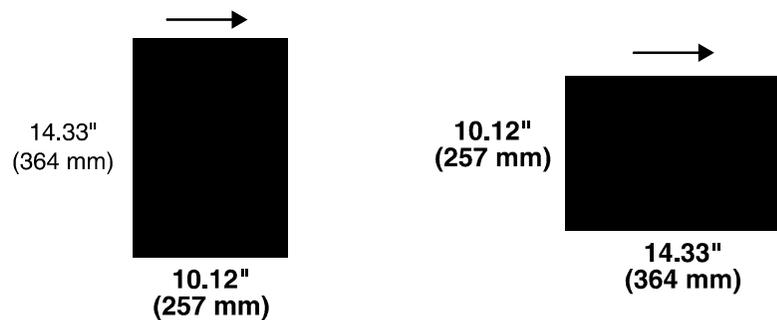


Figure 1-34. JIS B4 (257 by 364 mm) paper feeding (may be long or short edge feed)

2. Managing the printer

This chapter describes the operator tasks that are related to printing and print quality.

Controlling the printer

You can perform the following tasks on the DocuSP Print Services window.

You can also select them from the Options pull-down menu on the Printer Manager window.

Interrupting printing

Click the red [Pause Printing] icon.

Resuming printing

Click the green [Resume Printing] icon.

Powering on the printer

Select [Printer On] from the Printer menu.

Powering off the printer

1. Select [Printer Off] from the Printer menu.
2. Click [Yes] on the confirmation window.

Powering off the printer immediately

1. Select [Immediate Printer Off] from the Printer menu.
2. Click [Yes] on the confirmation window.

Adjusting the registration transport roll levers for heavy paper

When you use paper that is heavier than 24 pounds/90 gsm, you must adjust the registration transport roll levers, which are located behind areas 2 and 4.

1. Open the right and left doors of the printer.
2. For each lever:
 - a. Pull the lever toward you.
 - b. While holding the lever toward you, turn it to the left.

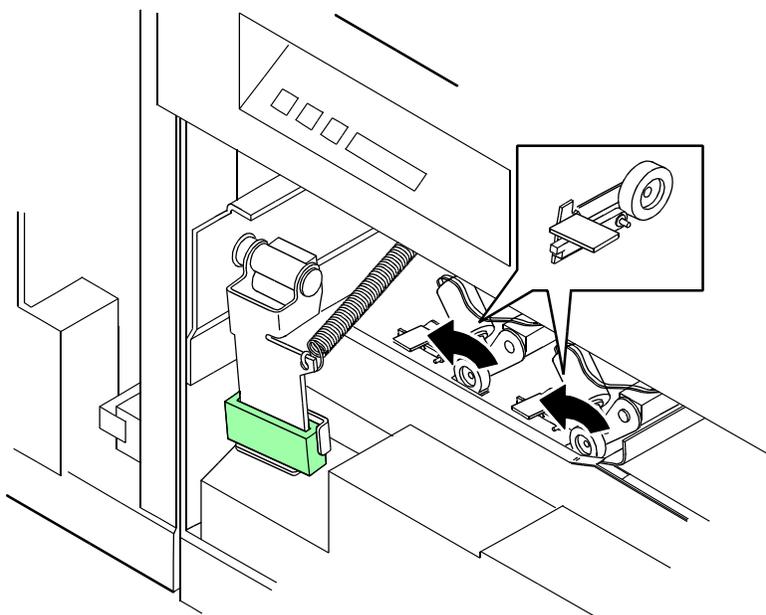


Figure 2-1. Turning the registration transport roll levers

For systems with small paper (7 by 10-inch/178 by 254 mm) enablement:

Systems with this option have three levers. To process heavy papers, turn the levers as shown in the following figure.

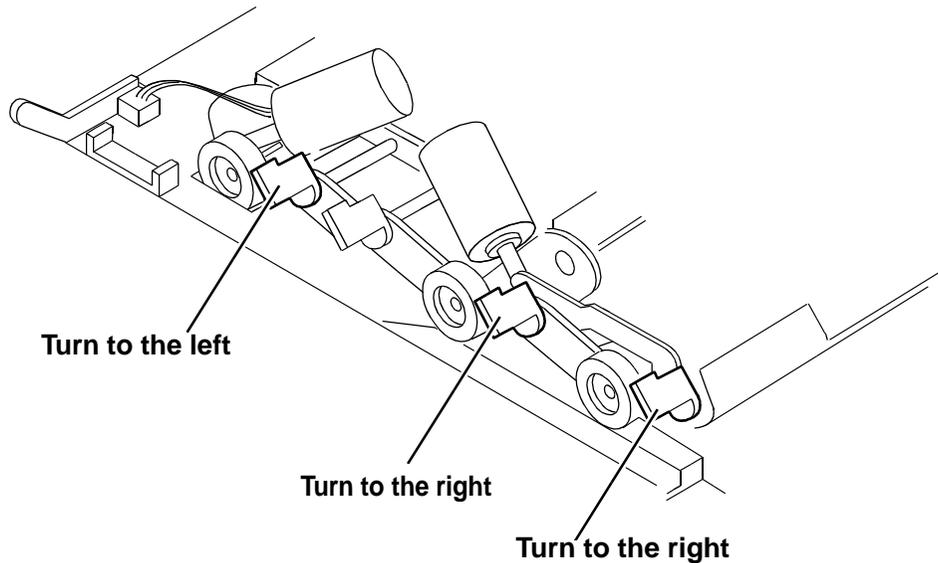


Figure 2-2. Three levers in systems with small paper enablement

NOTE: Use the same pressure setting for all levers.

3. When the job is complete, return the levers to their normal positions.

NOTE: Positioning may be affected by machine tolerance, the paper supplier, or job type (for example, duplex).

Loading paper

Your printer may have up to six feeder trays: two processor trays (trays 1 and 2) and two to four high-capacity trays (trays 3 through 6). Up to six different stocks may be used within a print job, including oversized cover stock or tabs.

- You can unlock, pull out, and load any tray from which paper is not being fed, without interrupting printing.
- If you open a tray that is in use, feeding switches to a backup tray. If no tray is available, printing stops.

- The printer stops feeding paper from any tray when a ¼-inch/ 6 mm stack remains in the tray.
1. Unlock the tray that you want to load, using one of the following methods:
 - **On the printer:** Press the Tray Unlock button on the front of the tray.

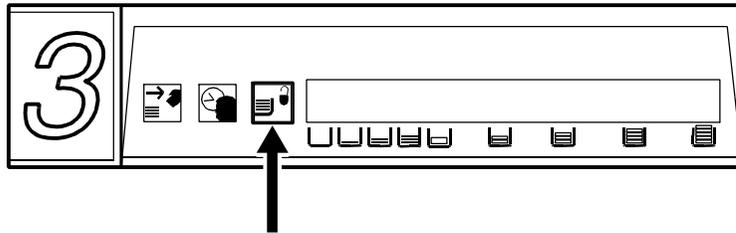


Figure 2-3. Tray Unlock button on feeder

- **At the printer control console:** Touch the [Tray Unlock] icon on the printer mimic screen.
- **At the controller:** On the Printer Manager window, Paper Trays tab, right click the tray name. From the properties pop-up menu, select [Tray Unlock].

NOTE: If the printer stops due to insufficient paper in a tray, the system unlocks the tray.

2. When the green Ready to Open indicator lights, pull the feeder tray out until it stops.

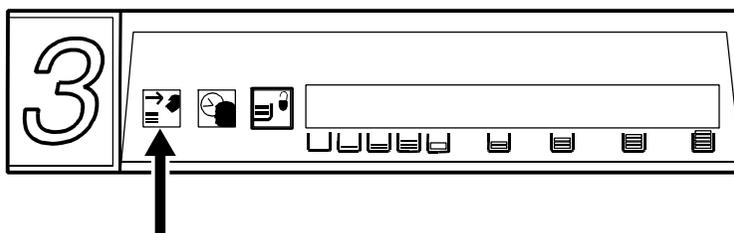


Figure 2-4. Ready to Open indicator

3. Place the paper in the tray, following the instructions on the labels.

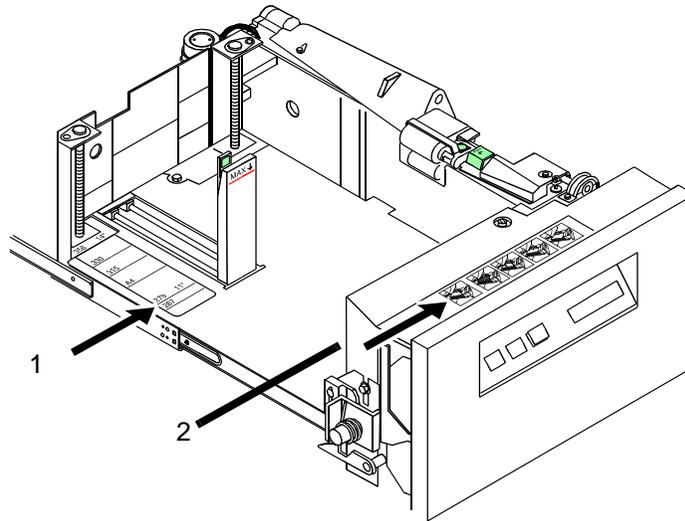


Figure 2-5. Tray labels

1. Paper edge guide lines
2. Loading instructions

Do the following:

- Remove any damaged sheets.
- Trays 1 and 2: Load paper with the wrapper seam side **up**.
Trays 3, 4, 5 and 6: Load paper with the curl side up. If you do not see any curl, load the paper with the wrapper seam side **down**.
- Fan predrilled paper fan thoroughly and remove any paper plugs.
- Load transparencies and 9-inch / 229 mm tabs into trays 1 and 2 only.

- Ensure that the paper is loaded into the right front corner of the tray.

CAUTION

Do not load above the MAX line on the paper guide.

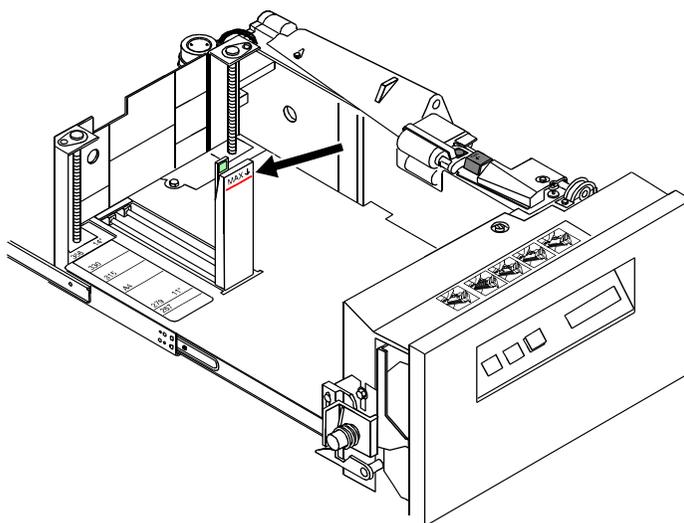


Figure 2-6. Maximum fill line

- After loading paper in tray 1 or 2, adjust the rear guide to touch the paper stack.

- In tray 3, 4, 5, or 6, adjust the rear and side paper guides to touch the stack.

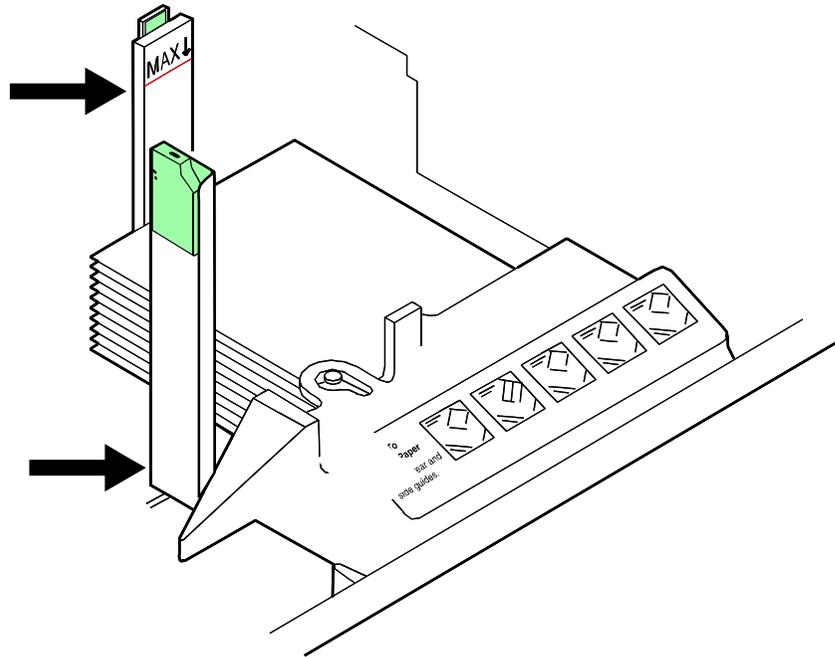


Figure 2-7. Rear and side guides in trays 3, 4, 5, and 6

NOTE: To enable short-edge feed (SEF) for larger papers, load paper with the short edge against the side paper guide and the long edge against the rear guide.

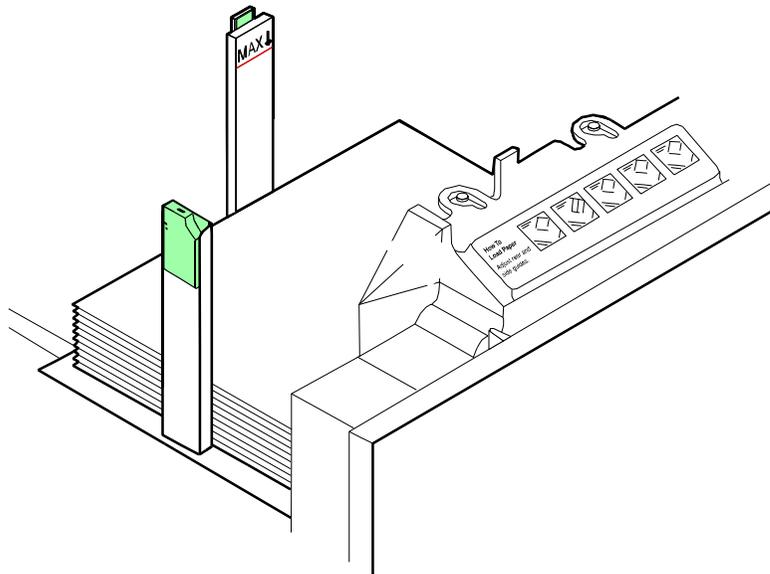
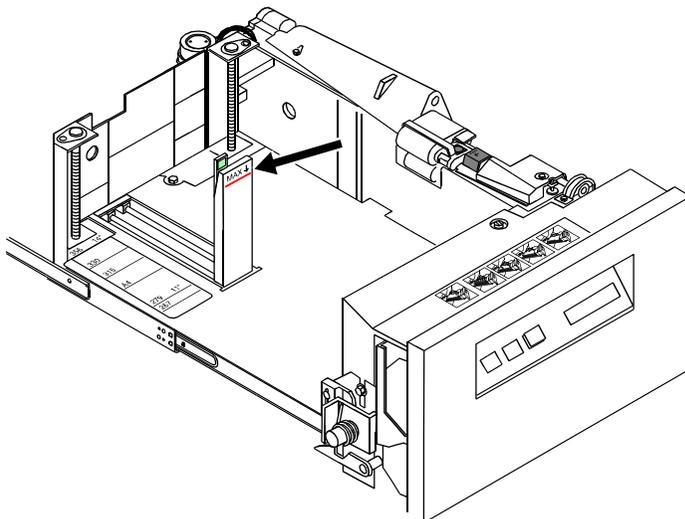
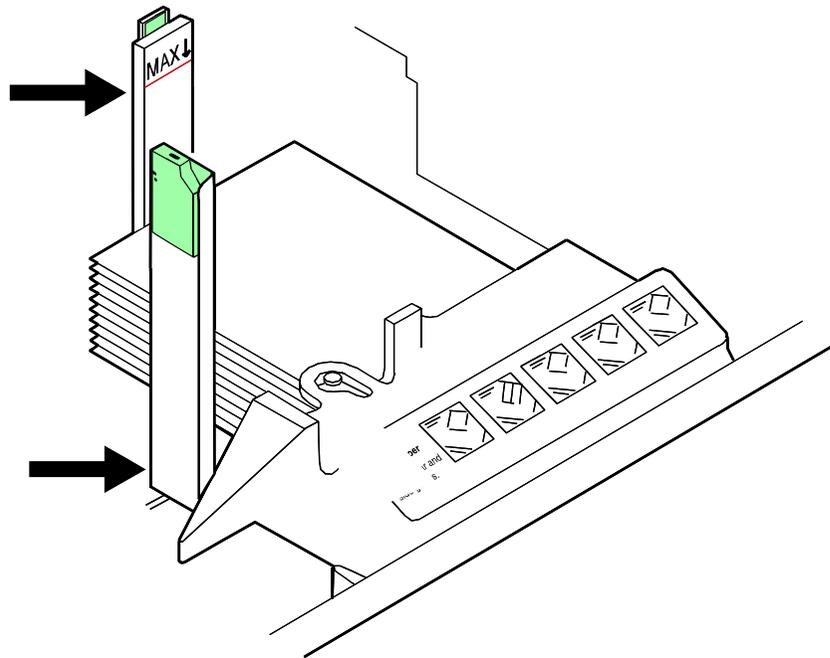


Figure 2-8. Large paper loaded for short edge feeding; for example, 11 by 17 inches / 279 by 432 mm

4. In trays 1 and 2, slide the rear guide until it touches the stack.



5. Press the green dot on the tray latch until the assembly clicks into place.



6. Push the tray in slowly but firmly, until it latches.

CAUTION

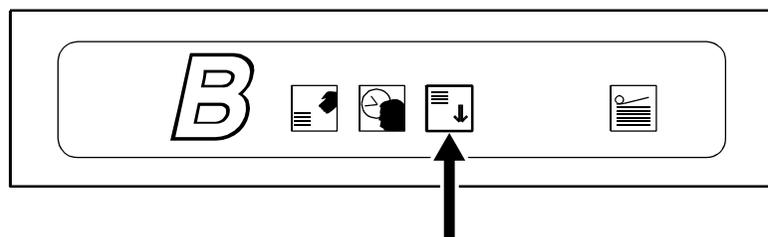
Do not slam the tray closed.

7. If the printer has stopped due to low paper, press the Continue button on the printer console.

Unloading a stacker bin

Follow this procedure to unload printed output from a stacker bin.

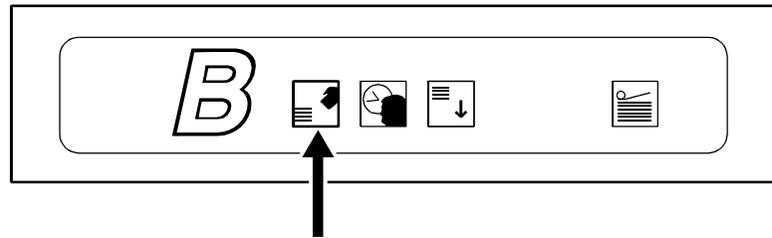
1. Select a bin for unloading by pressing the Bin Unload button on the bin control panel. You can also select a bin for unloading from the printer mimic on the printer control screen.



When a bin is selected, the bin elevator lowers.

NOTE: After the bin elevator lowers, the bin cannot be used until it is emptied completely.

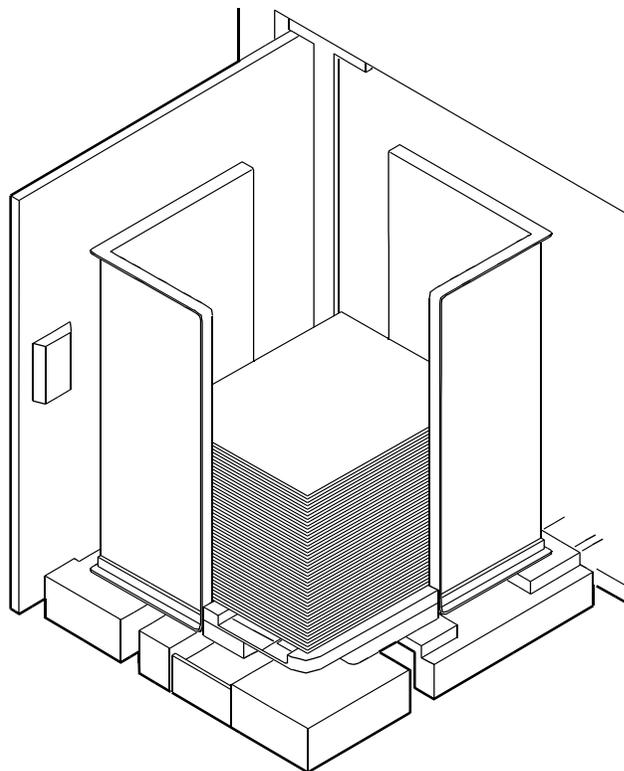
2. When the bin elevator stops in the down position, the Ready to Unload indicator lights.



CAUTION

Always use both hands to lift a container or pallet out of the bin.

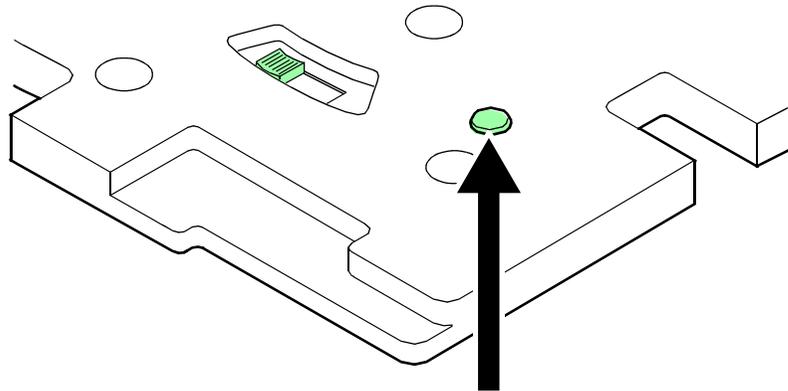
3. Open the bin doors, pull the platform out until it stops, and lift the container, pallet (for “pallet only” stacking), or paper stack off the platform.



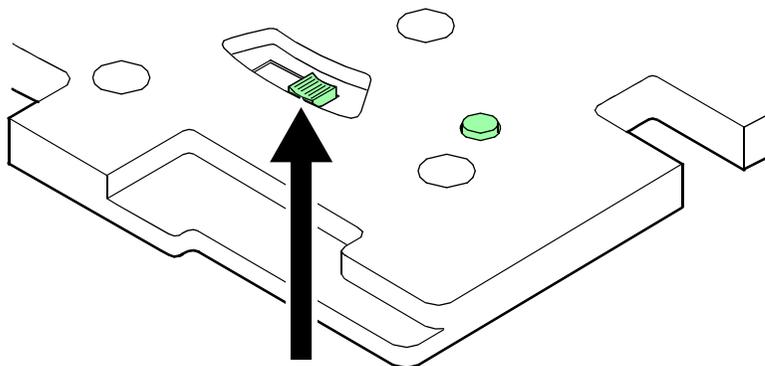
4. Carry the loaded container, pallet, or paper stack to a nearby table or paper cart.
5. If you are using a container or pallet, empty it and return it to the stacker bin.

Points to note for containers:

- The empty container must be the same size as the previous container if the bin is in an auto switching combination, or if the print job is not complete and stacking continues into the bin.
- A different size container may be used if the bin is not selected for use or is not in an auto switching combination.
- To switch from containerless stacking to stacking in a container or on a pallet (for “pallet only” stacking), press and release the green button on top of the stacker bin platform.



- To switch from stacking into a container or pallet to containerless stacking, slide the green tab (located on top of the stacker bin platform) forward until you hear a click. The following figure shows the green tab location.



6. Firmly push the platform back to its original position and close the bin doors. The bin elevator rises, and the bin is again ready for use.

NOTE: The platform does not rise until you have opened and closed both bin doors.

If the bin is not empty, the elevator remains down, and a message appears on the printer control console and the controller display telling you to empty the bin.

3. Managing the system

This chapter provides management-related information that pertains to the system as a whole such as starting, stopping, and rebooting the system and operating the tape drives.

Starting, stopping, and rebooting the system

Shut down and reboot the system only when you are directed in the “Troubleshooting” chapter of this guide; or after loading new software, such as Novell NetWare or AppleTalk gateways.

CAUTION

Do not use either of the following methods to shut down the controller:

- *The Quit option on the pull-down menu of any window*
- *The Exit option on the Workspace pop-up menu*

Powering on the controller

Wait at least one minute after power has been switched off before continuing. Then switch on power to the controller components in the following order:

1. Any external SCSI devices, starting with the unit with the SCSI terminator and following the connection chain toward the Sun workstation
2. Other peripherals
3. Monitor
4. Sun workstation

When the operating system finishes rebooting, the Xerox application software starts. When the DocuSP Print Services window displays, power on the printer.

Powering on the printer

1. Make sure the printer power cord is securely plugged into the power receptacle, and the power button is pressed on.
2. Log on as the Administrator or Trusted User.
3. On the DocuSP Print Services window, select [Printer On] from the Printer menu.

Holding queues

Before rebooting or powering off the system, hold all active queues. A held queue does not release any jobs for printing, nor accept any jobs that are sent to it.

On the Queue Manager window, do the following for each active queue:

1. Right click the queue name.
2. From the Properties menu, select [Do Not Accept Jobs] or [Do Not Release Jobs], as appropriate.

To hold all queues:

1. Right click in the queue list section, and select [Select All] from the pop-up menu.
2. Right click again in the queue list section and select [Do Not Accept Jobs].
3. Right click in the queue list section, and select [Do Not Release Jobs].

Releasing queues

After rebooting or powering on the system, release all held queues.

On the Queue Manager window, do the following for each active queue:

1. Right click the queue name.
2. From the pop-up menu, select [Accept Jobs] or [Release Jobs], as appropriate.

To release all queues:

1. Right click in the queue list section, and select [Select All] from the pop-up window.

2. Right click again in the queue list section, and select [Accept Jobs].
3. Right click in the queue list section, and select [Release Jobs].

Rebooting the system (warm boot)

1. On the DocuSP Print Services window, click the [Queue Manager] icon.
2. Hold all queues. (Refer to “Holding queues,” earlier in this chapter.)
3. On the DocuSP Print Services window, select [Exit] from the System menu. All GUI windows disappear.
4. Open a Terminal window, as follows:
 - a. Right click on the screen background.
 - b. From the Workspace pop-up menu, select [Tools].
 - c. From the Tools menu, select [Terminal].
5. In the Terminal window, log on as root user.
6. Enter:

```
sync; sync; reboot
```
7. When the DocuSP Print Service window reopens, log on as Trusted User or Administrator.
8. Power on the printer by selecting [Printer On] from the Printer menu.
9. Release all held queues. (Refer to “Releasing queues,” earlier in this chapter.)

Performing a deferred shutdown and reboot

Use this procedure when the system requests a reboot during a recovery, and you want to wait for queued jobs to finish printing.

1. On the DocuSP Print Services window, log on as Administrator or Trusted User.
2. Hold any active queues. (Refer to “Holding queues,” earlier in this chapter.)
3. On the DocuSP Print Services window, select [Shutdown] from the System menu.

4. When the DocuSp Print Services window closes and an ok prompt appears at the bottom of the screen, enter **boot**.
5. When the DocuSP Print Services window reopens, release all held queues. (Refer to “Releasing queues,” earlier in this chapter.)

Performing an immediate shutdown and reboot

Use this procedure when the system requests a reboot during a recovery without waiting for queued jobs to finish printing.

1. On the DocuSP Print Services window, log on as Administrator or Trusted User.
2. Hold any active queues. (Refer to “Holding queues,” earlier in this chapter.)
3. On the DocuSP Print Services window, select [Immediate Shutdown] from the System menu.
4. Click [Yes] on the confirmation window.
5. When the DocuSp Print Services window closes and an ok prompt appears at the bottom of the screen, enter **boot**.
6. When the DocuSP Print Services window reopens, release all held queues. (Refer to “Releasing queues,” earlier in this chapter.)

Restarting the DocuSP software

1. On the DocuSP Print Services window, log on as Administrator or Trusted User.
2. Hold any active queues. (Refer to “Holding queues,” earlier in this chapter.)
3. On the DocuSP Print Services window, select [Restart] from the System menu.
4. Wait for the DocuSP Print Services window to close and reopen.
5. Release all held queues. (Refer to “Releasing queues,” earlier in this chapter.)

Powering off the system

You may be required to power down the system under the following conditions:

- Work is being done on an attached printer.
- The Sun workstation is being moved.
- SCSI peripherals are being added or removed.
- A power outage is planned.
- The Sun workstation is receiving hardware maintenance.
- The DocuSP controller will not be in use for an extended period.

The Sun workstation should run continuously. Refer to the Sun hardware manuals for recommendations for when to power off the system.

CAUTION

Do not shut down DVD players and SCSI tape drives unless you are powering off the entire system.

1. Log on as Administrator or Trusted User.
2. Hold any active queues. (Refer to “Holding queues,” earlier in this chapter.)
3. Select [Printer Off] from the Printer menu.
4. Select [Shutdown] from the System menu.
5. Click [Yes] on the confirmation window.
6. When the DocuSP Print Services window closes and an ok prompt appears at the bottom of the screen, switch off power to the computer components in the following order:
 - a. Any external SCSI devices, such as disk drives, tape drives, or DVD players
 - b. Any other peripheral devices, such as modems
 - c. Sun workstation
 - d. Monitor
7. When the DocuSP software is running again, resubmit any documents that had not completed printing.

Performing an emergency power off

Disconnect the power cable from the power outlet immediately after powering off, and contact your Xerox service representative.

Use this procedure to switch off power quickly if any of the following occurs:

- The equipment emits unusual odors or makes unusual noises.
- The power cable is damaged or frayed.
- A wall panel circuit breaker, fuse, or other safety device is switched.
- Liquid is spilled into the equipment.
- The equipment is exposed to water damage or flooding.
- Any part of the equipment is damaged.

Powering off the controller

CAUTION

This procedure may corrupt the DocuSP software or result in data loss. Use it only in emergency.

1. On the DocuSP Print Services window, select [Immediate Shutdown] from the System menu.
2. After the DocuSP Print Services window has closed, shut off the power to the controller by one of the following methods:
 - Switch off the controller power switch, located on the front of the processor.
 - Grasp the controller plug firmly and pull it from the wall outlet.

WARNING

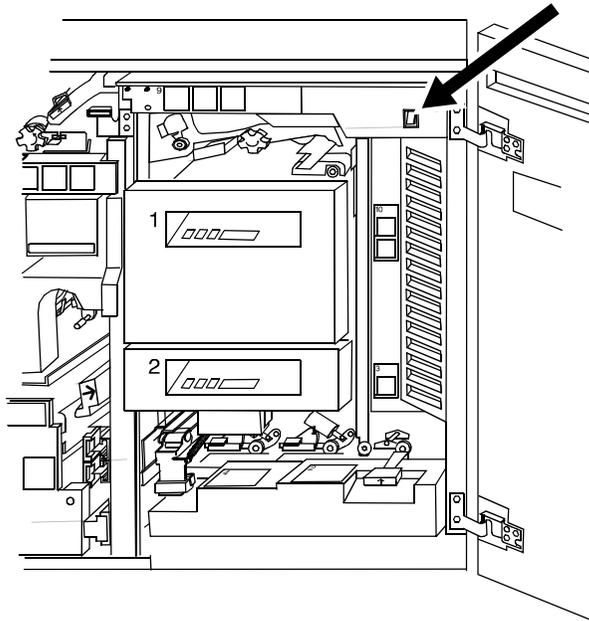
Do not grasp the cable to pull out the plug.

- Switch off the controller power strip.

NOTE: This method powers off everything that is plugged into the power strip, including the processor, monitor, QIC tape drive, 36-track tape drive, and external hard disk drive.

Powering off the printer

1. Power off the controller.
2. Shut off power to the printer by one of the following methods:
 - Open the right front door of the printer and press the power button.



- (U. S. only) Grasp the printer plug firmly and pull it from the wall outlet.

WARNING

Do not grasp the cable to pull out the plug.

- Open the left door of the printer, and push down circuit breakers CB101, CB102, and CB103.

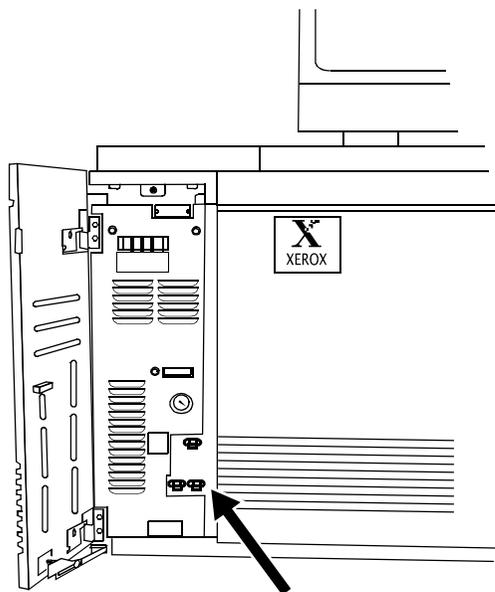


Figure 3-1. Circuit breaker locations

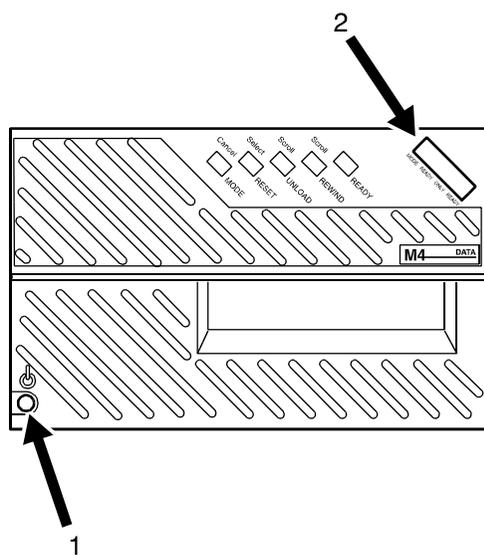
Operating the 18/36 track tape drive

The external 18/36 track tape drive uses 1/2-inch cartridge tapes. You can use it to load resources and to submit offline print jobs.

Powering on the tape drive

Press the Power button on the front of the drive.

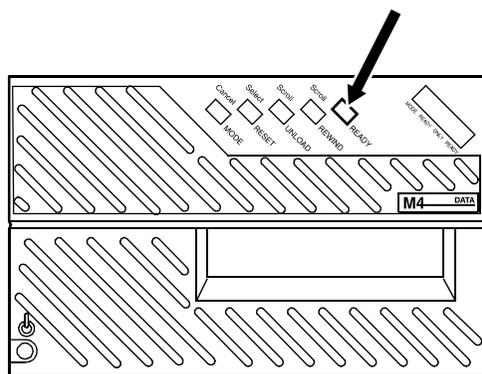
The drive displays the name of each diagnostic test while performing it.



1. Power switch
2. Message display

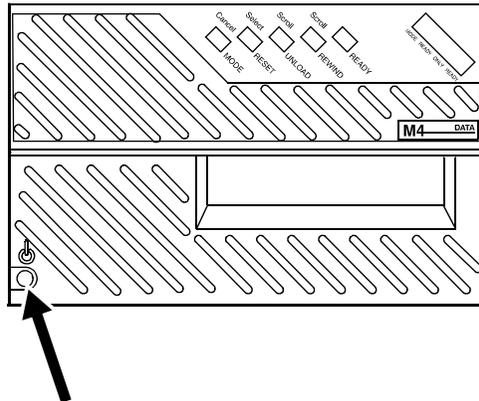
Powering off the tape drive

1. Press the Ready button.



2. Unload any tape cartridge.

3. Press the Power button.



Placing the tape drive online

1. Load a tape cartridge in the drive.
2. Press the Ready button.

If a tape is loaded but the drive is not online, press the Ready button to place the drive online.

Loading a tape

Before loading a tape, check the cartridge for damage.

CAUTION

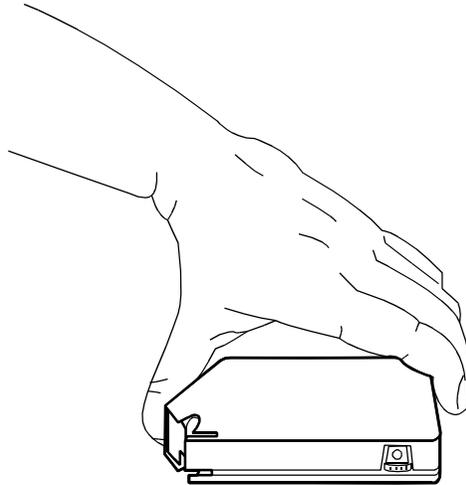
A damaged cartridge can prevent the tape from threading correctly and can damage the tape drive.

Do not load a cartridge if:

- The case is cracked or broken.
- The leader block (the blank section at the beginning of the tape) or its latch is broken.
- The file protect selector or sensor is damaged.
- The label is peeling.
- The case contains any liquid.
- The tape was wound completely out of the cartridge, then reattached to the cartridge reel.

If a cartridge is damaged, substitute one that contains a backup version of the data.

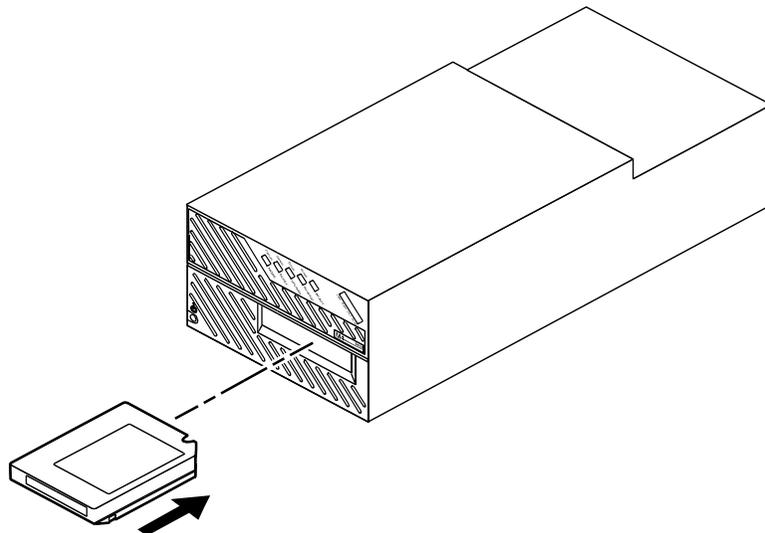
1. Hold the cartridge with the smooth side on top and the leader block toward the drive.



CAUTION

Never force a cartridge into the tape drive.

2. Slide the cartridge into the entry slot of the tape drive until it stops.

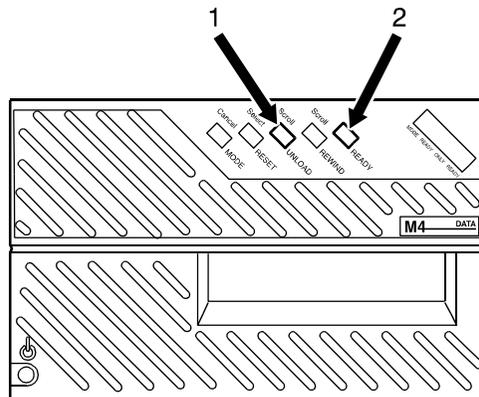


After about 15 seconds, the tape is loaded. The message window displays Online, and indicates whether the cartridge is file protected (F) or unprotected (U).

Unloading a tape

Automatic procedure When a job is finished, the tape drive rewinds the tape and unloads and ejects the cartridge.

- Manual procedure**
1. Press the Ready button to take the tape drive offline.
 2. Press the Unload button.



1. Unload button
2. Ready button

The message window indicates when the tape drive is rewinding or unloading.

Guidelines for handling cartridges

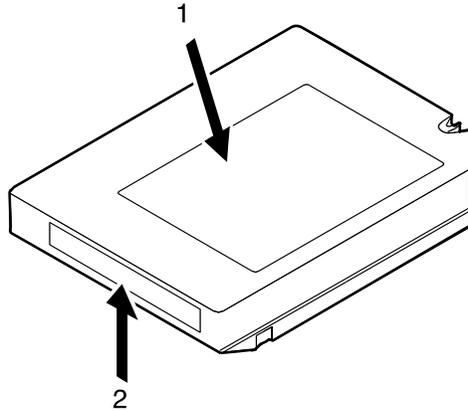
- Never pry open the feed slot door of the tape drive.
- Never force a tape cartridge into or out of the tape drive.
- Never leave a cartridge in the tape drive while powering off. This could damage data on the tape and the tape drive components.
- Store cartridges vertically in a clean area that has the same temperature and humidity as the tape drive location.
If the storage environment is different, bring the cartridges into the tape system environment 24 hours before using them.
- Never remove the protective wrapping until you are ready to use the cartridge.

- Every time you pick up a cartridge, ensure that the leader block is latched.
- Never carry two or more cartridges loose in a container. Leader blocks can snag on other cartridges and unlatch.
- Keep cartridges clean and dry.
- Never release a leader block and pull tape from a cartridge.
- Never open a cartridge.
- Never expose tape or a cartridge to direct sunlight.
- Never smoke near the tape drive or cartridge storage areas. Tobacco smoke and ash are damaging to tapes.
- Never place cartridges near electric motors or any other magnetic sources that may erase data.
- To clean a cartridge, wipe off dust, dirt, and moisture with a lint-free cloth.

If you must use a cleaning solution, make sure it is formulated for tape cartridges. Never allow the solution to touch the tape.

- If a leader block comes off and there is no other damage, you can use a leader block repair kit to reattach the block. You can then use the cartridge one more time to copy the data onto a new cartridge.
- If a label starts to peel, replace it immediately.
- Do not write on a label that is on a cartridge. Write a new label, remove the old one, and replace it with the new one.

- Place the two labels in the recessed areas of the cartridge as shown below:



1. Customer label on top
2. Volume and serial number label on the side opposite the thumbwheel

- Write on labels with markers that do not smear.
- Use only labels that leave no residue when removed.

Setting file protection

To make a tape read-only, turn the thumbwheel on the side of the cartridge until a white dot appears in the window.

To enable writing to the tape, turn the thumbwheel until the dot is not visible.

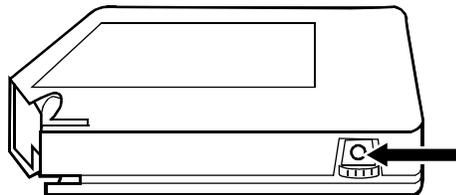


Figure 3-2. File protection dot

Printing the online Help documentation

You can print out the entire set of Help documentation screens from the controller as a single document.

1. From the Help pull-down menu, located in the upper-left corner of the DocuSP window, select [Print Help Documentation...].
2. On the Print Help Documentation window, select from the Queue menu the queue to which you want to send the Help file to print.
3. Click [OK]. The printer prints out the entire set of Help windows.

4. Maintaining the system

This chapter provides information on paper care, on adding and replacing consumable supplies such as dry ink, and on cleaning the various areas of the system, including the tape drives.

Paper care

Correct storage and handling of media prevents jams and delays, and ensures optimum productivity.

Storing paper

It is important to store paper correctly. Temperature and humidity affect the way your printer processes paper. Store paper in the cartons it came in. To reduce the possibility of moisture absorption, always place cartons on a wooden pallet or store them in a cabinet off the floor.

After removing the paper from its carton, always store it:

- In its wrapper
- On a flat surface
- In a closed cabinet
- In a cool, dry area
- In 68 to 76°F / 20 to 24.4°C
- In 35% to 55% humidity

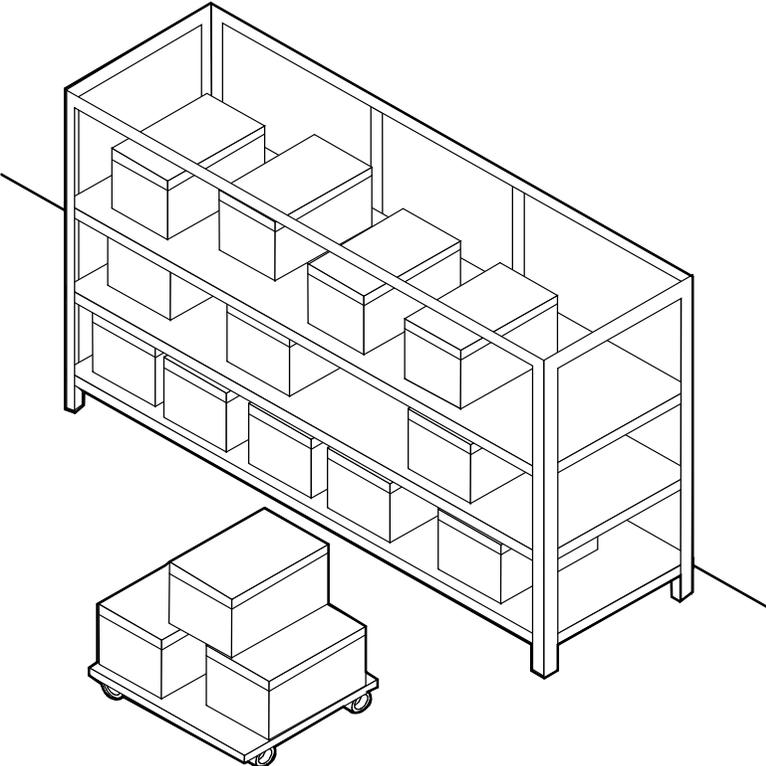


Figure 4-1. Storing paper correctly

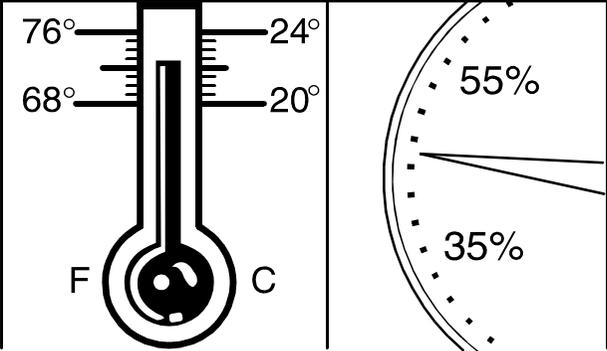


Figure 4-2. Recommended temperature and humidity for paper storage

Conditioning paper

Because temperature and humidity affect paper performance in the printer, you need to condition paper before using it. To condition paper, store it for a specified length of time in the same type of environment as your printer.

The length of time you should condition your paper depends on the amount of paper and the difference between the storage and operating temperatures.

Use the following chart to determine the number of hours needed to condition stacked cartons of paper.

NOTE: The numbers in the top two rows indicate the temperature difference between the storage area and the operating environment, not actual room temperatures.

Table 4-1. Paper conditioning

	Temperature difference between storage and operating areas						
	Fahrenheit						
	10°	15°	20°	25°	30°	40°	50°
	Centigrade						
	5.5°	8.5°	11°	13°	17°	22°	28°
Cartons	Hours needed to condition the paper						
1	4	8	11	14	17	24	34
5	5	9	12	15	18	25	35
10	8	14	18	22	27	38	51
20	11	16	23	28	35	48	67
40	14	19	26	32	38	54	75

Example: If you want to move ten cartons of paper from a storage area with a temperature of 90° F to an operating area with a temperature of 70° F (a 20° difference), you should do so at least 18 hours before using the paper.

Paper curl

Before the manufacturer cuts paper into sheets, it is stored on large rolls. After it is cut and packaged, it retains some of the curl from the rollers.

Although it is unnecessary to load paper with the curl facing up or down, best results occur when you are consistent. For example, if you open paper with the wrapper seam up, always load it in the tray that way.

Using consumables

The following tasks are part of maintaining your system:

- Adding fuser agent
- Replacing the dry ink waste container
- Replacing the dry ink cartridge
- Using the custom transfer assist blade

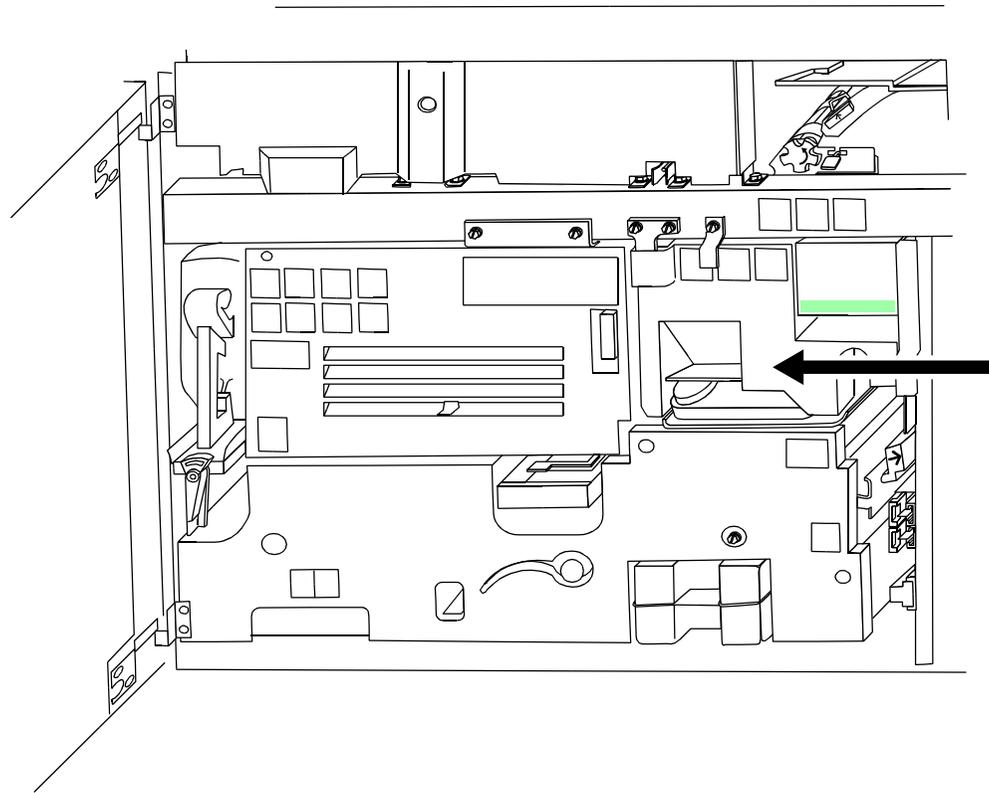
Adding fuser agent

To add fuser agent:

WARNING

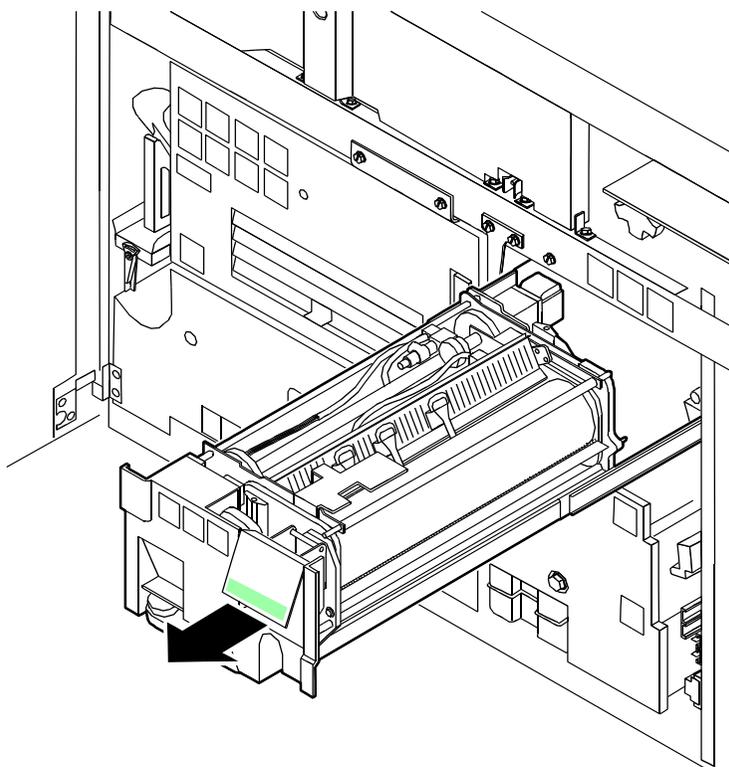
Fuser agent contains silicone, which can cause irritation upon contact with the eyes. Be sure to wash your hands with soap and water after you finish this procedure.

1. Open the right and left doors of the printer and locate the fuser area.

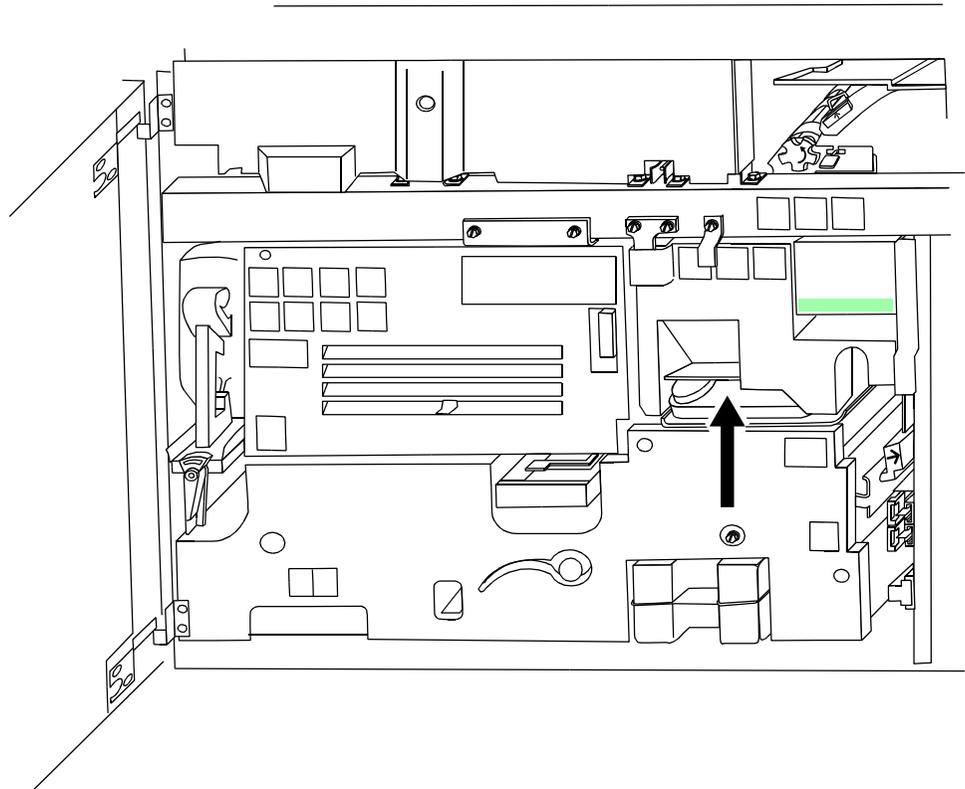


2. Place a dropcloth on the floor under the fuser area.

3. Grasp the green handle on the fuser drawer and pull it out until it stops.



4. Locate the fuser agent reservoir.



5. Pull the fuser agent reservoir out until it stops.
6. Remove the reservoir cap by turning it counterclockwise.
7. Remove the cap from a new bottle of fuser agent.

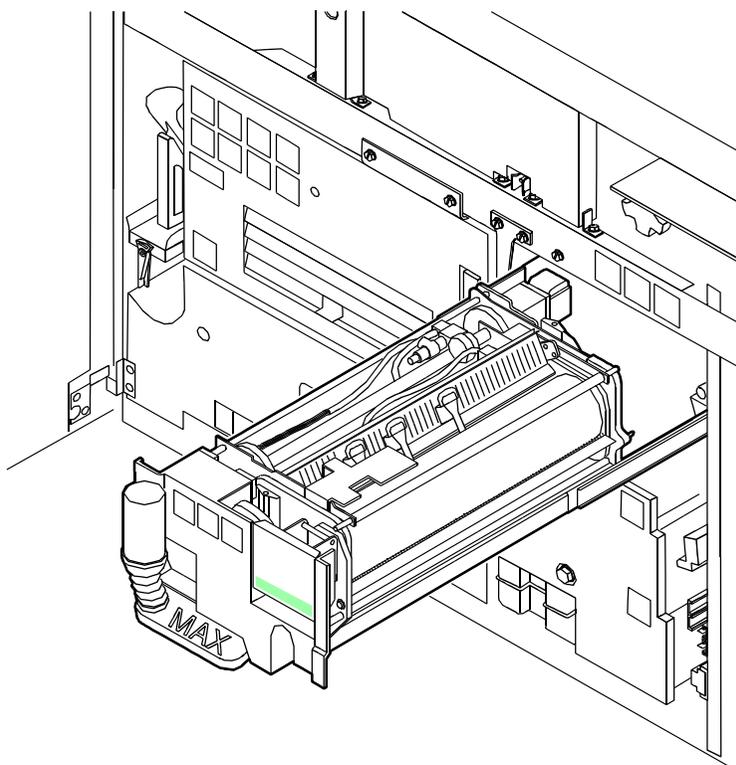
WARNING

If any fuser agent spills on the floor, remove it immediately. Fuser agent spills make the floor slippery.

CAUTION

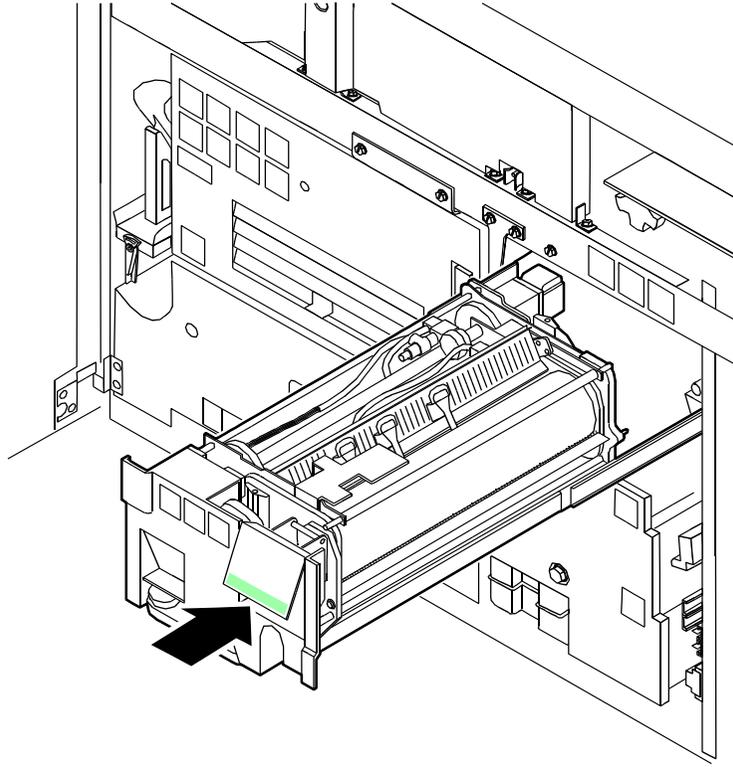
The fuser reservoir has an antispash seal. Do not push the fuser agent bottle into the reservoir with excessive force, as this can damage the seal.

8. Carefully pour the fuser agent into the reservoir, until the level reaches the MAX line.



9. Replace the reservoir cap by turning it clockwise.
10. Push the fuser agent reservoir in until it stops.

11. Push the fuser drawer in until it latches in place.



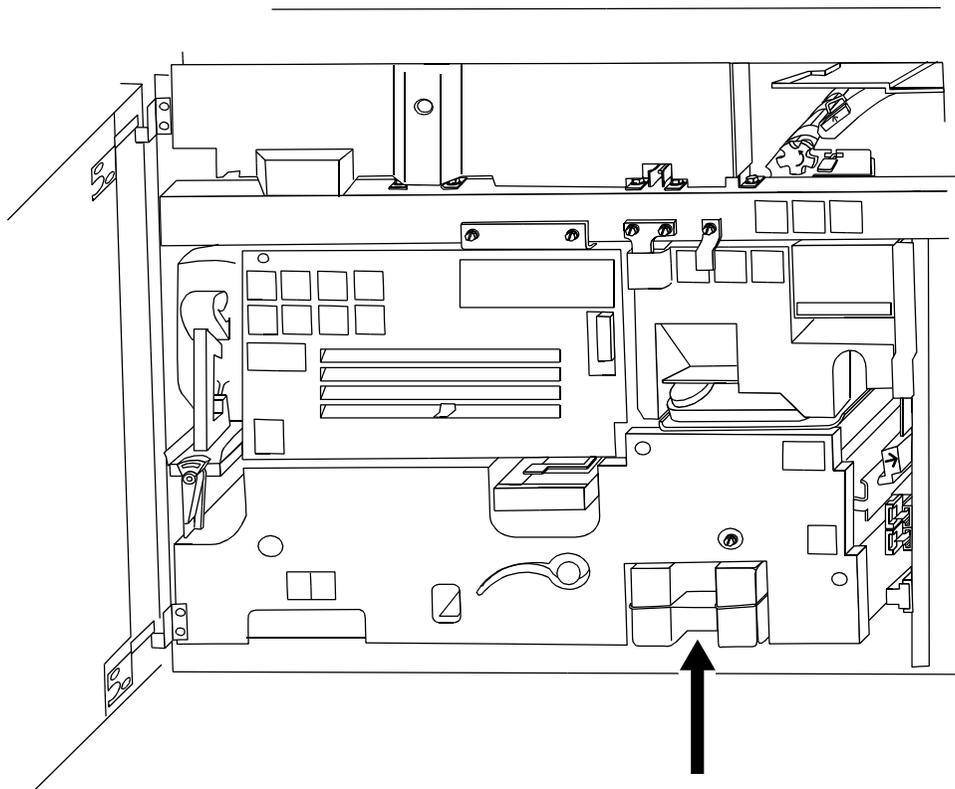
12. Close the printer doors.

NOTE: The fuser agent message disappears after the system prints between 32 and 40 sheets. Because the sheets must be processed continuously, you may want to run 45 test pages in order to clear the message from the system (unless the current print job contains at least 40 pages).

Replacing the dry ink waste container

To replace the dry ink waste container:

1. Open the right and left doors of the printer and locate the dry ink waste container.

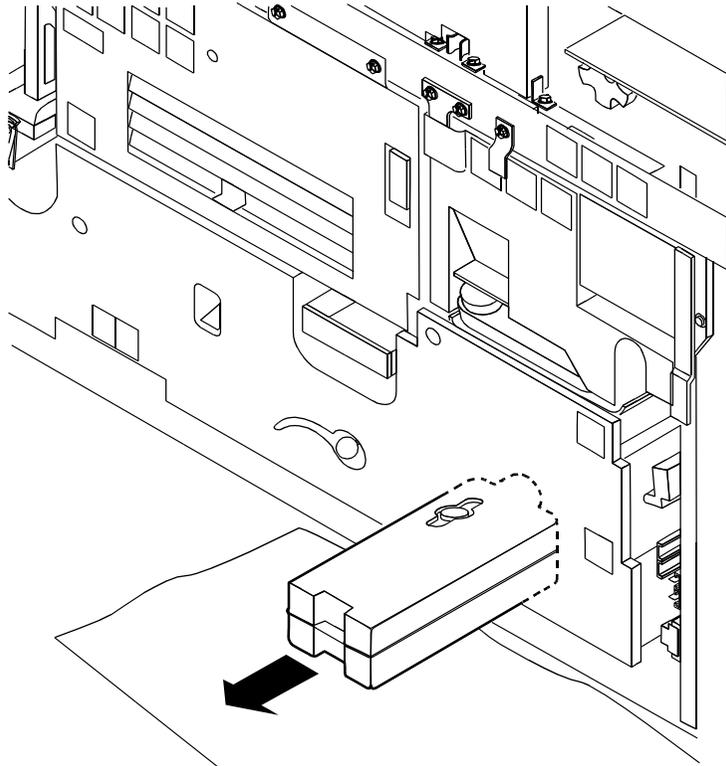


2. Place a dropcloth on the floor under the dry ink waste container area.

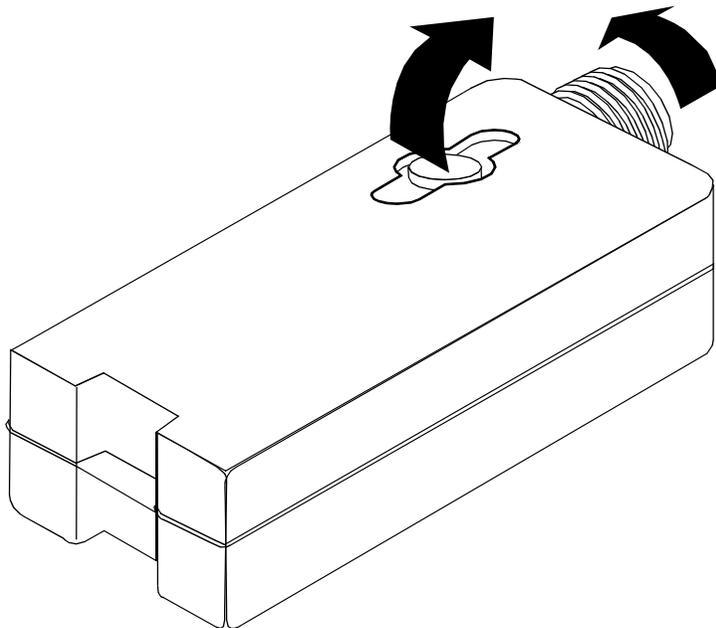
CAUTION

To prevent dry ink spills, do not tip or tilt the waste container.

3. Pull the full waste container out of the printer.

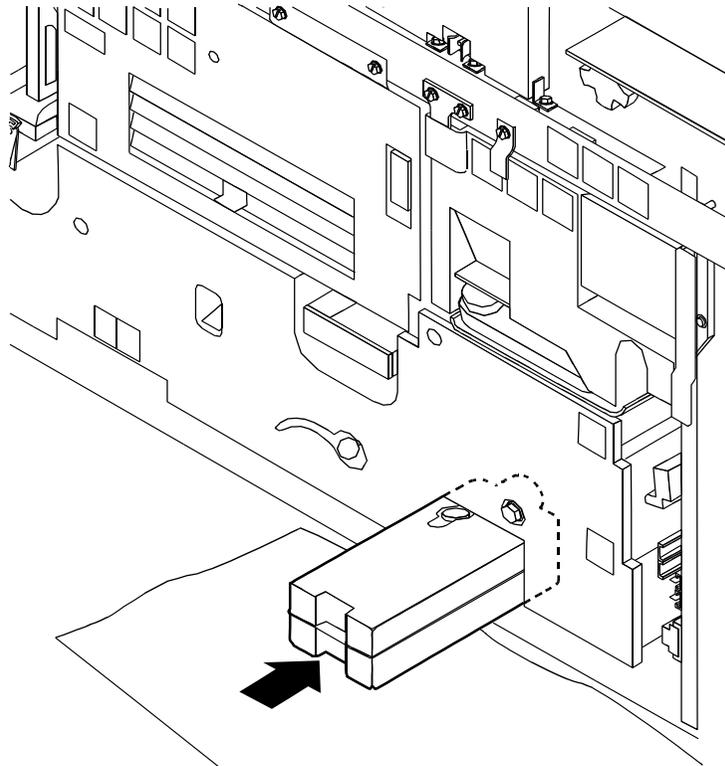


4. Remove the cap from the top of the full waste container.



5. Place the removed cap over the opening on the end of the full waste container.

6. Slide a new, empty, dry ink waste container into the printer until the container stops.



7. Close the printer doors.

NOTE: If any dry ink gets on your hands, wash them with soap and cold water. Heat sets the ink permanently. If any dry ink gets on your clothes, brush them with a dry paper towel or a stiff bristled brush. If this does not remove the ink immediately, launder with detergent and cold water. Dry cleaners should be told that the spot is dry ink for a printer, so they do not use a solvent that sets the stain.

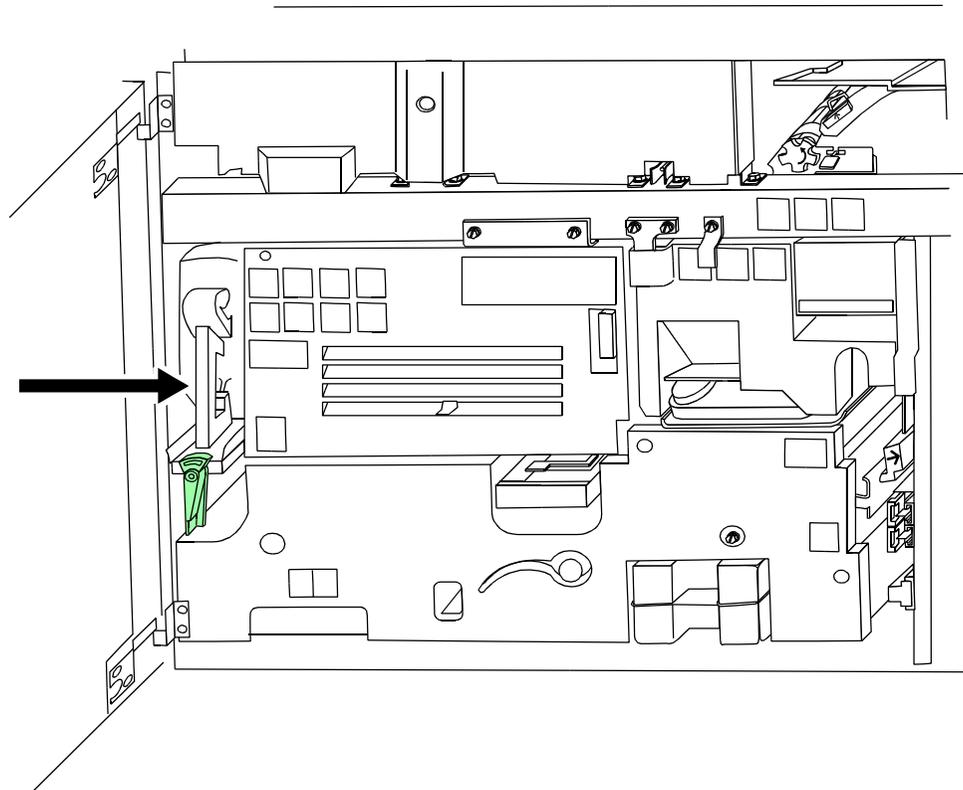
Replacing the dry ink cartridge

To replace the dry ink cartridge:

CAUTION

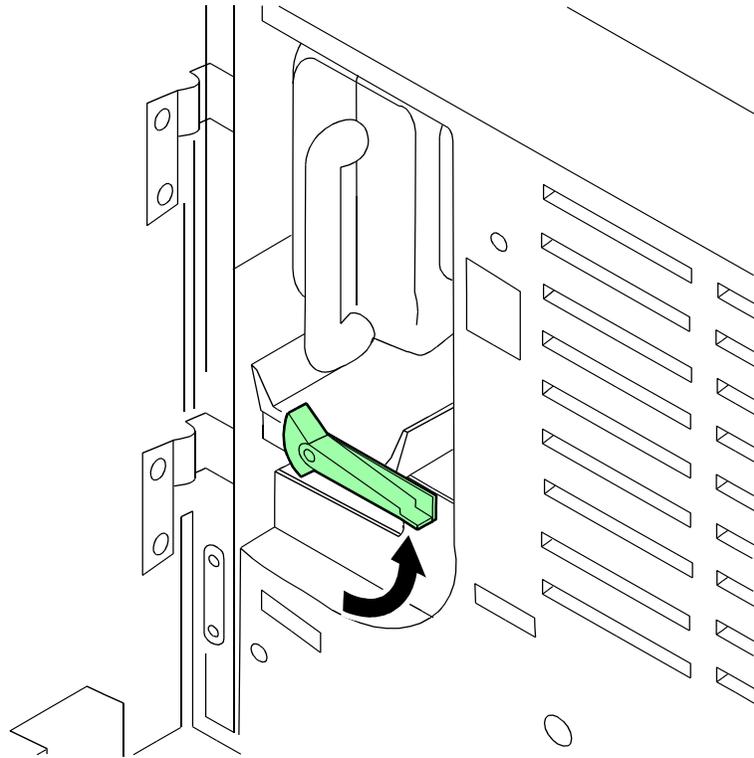
To prevent dry ink spillage, remove the cartridge only when directed to do so by a message on the printer control console.

1. Open the right and left doors of the printer and locate the dry ink area at the left side of the printer. There are step by step instructions on the panel next to the dry ink cartridge.

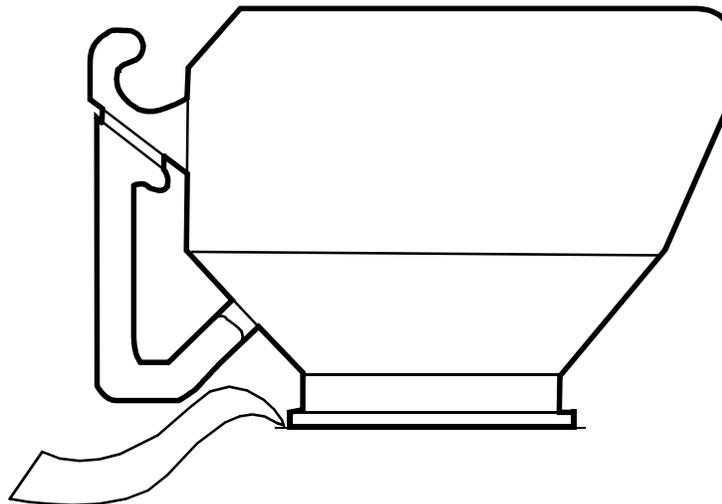


2. Place a dropcloth on the floor under the dry ink area.
3. Pull the empty dry ink cartridge out until it stops.

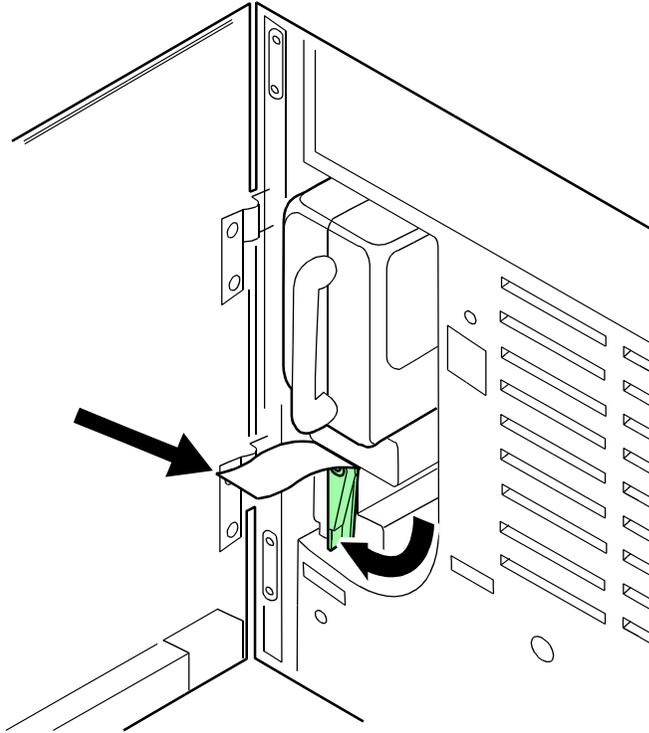
4. Move the green handle to the right (the unlatched position) to release the cartridge and lid.



5. Remove the empty cartridge and discard it.
6. Turn a new, full cartridge of dry ink upside down and shake it well to loosen the contents thoroughly.
7. Insert the new cartridge into the printer until it stops.



8. Move the green handle to the left (the latched position) to secure the lid of the cartridge.



9. Hold the cartridge in place and pull off the paper seal.
10. Discard the seal along with the drop cloth.
11. Close the printer doors.

NOTE: If any dry ink gets on your hands, wash them with soap and cold water. Heat sets the ink permanently. If any dry ink gets on your clothes, brush them with a dry paper towel or a stiff bristled brush. If this does not remove the ink immediately, launder with detergent and cold water. Dry cleaners should be told that the spot is dry ink for a printer, so they will not use a solvent that sets the stain.

Using the custom transfer assist blade

The custom transfer assist blade in the printer assures good print quality for your jobs. A kit is available allowing you to customize the transfer assist blade for use with nonstandard paper sizes.

You cannot use the custom transfer assist blade for print jobs that use more than one paper size. In addition, the following paper lengths cannot use the blade:

- In U.S. markets
 - 11.1 to 11.4 inches/282 to 290 mm
 - 11.8 to 12.1 inches/300 to 307 mm
 - 13 to 13.5 inches/330 to 343 mm
- In non-U.S. markets
 - 11.1 inches to 11.4 inches/282 to 290 mm
 - 11.8 inches to 12.1 inches/300 to 307 mm

NOTE: With these paper sizes, transfer efficiency may be reduced.

CAUTION

To avoid damage to the photoreceptor, you must perform the Setting tray size with the transfer assist blade.

Installing the custom transfer assist blade

The custom transfer assist blade comes in a package containing detailed instructions. Be sure you follow the instructions carefully.

CAUTION

To prevent damage to the system, have your service representative show you the procedure before you attempt to customize and install a transfer assist blade for the first time.

**Setting tray size
with the custom
transfer assist
blade**

When you are using the custom transfer assist blade, you must set the tray length. Use the following two tables to determine the tray length setting to use.

Table 4-2. Tray length settings for custom transfer assist blades (U.S. markets)

Paper Size	Set Paper Size to
11.5 to 11.7 inches/292 to 297 mm	11.7 inches/297 mm
12.1 to 12.9 inches/307 to 328 mm	13 inches/330 mm
13 to 13.9 inches/330 to 353 mm	14 inches/356 mm

Table 4-3. Tray length settings for custom transfer assist blades (Non-U.S. markets)

Paper Size	Set Paper Size to
10 to 10.9 inches/254 to 277 mm	11 inches/279 mm
11.5 to 11.6 inches/292 to 294 mm	11.7 inches/297 mm
12.1 to 12.9 inches/307 to 328 mm	13 inches/330 mm

Cleaning the system and its components

Cleaning tasks consist of the following:

- Cleaning the 18/36-track cartridge tape drive
- Cleaning the 26-track cartridge tape drive
- Cleaning the DVD drive
- Cleaning the diskette drive
- Cleaning the sensors and the reflecting surfaces
- Cleaning the display
- Cleaning the exterior surfaces of the system

Cleaning the 18/36-track cartridge tape drive

A cleaning cartridge is shipped with each 18/36-track cartridge tape drive. This cartridge should be replaced after 500 uses.

When the tape drive needs to be cleaned, CLEAN appears in the message display after a cartridge is unloaded and during a rewind or locate operation.

NOTE: CLEAN is a status message, not an error message.

CAUTION

Never power off the tape drive without following the cleaning procedure once the CLEAN message has appeared.

To clean the 18/36-track cartridge tape drive read/write heads:

CAUTION

The cleaning cartridge must be undamaged and clean.

1. Remove any cartridge loaded in the tape drive.
2. Insert the cleaning cartridge.

The cleaning cycle takes approximately 15 seconds.

3. Remove the cleaning cartridge when it is unloaded.
4. Mark the usage on the tape label. Do not use a grease pencil.

You must clean the 18/36-track cartridge tape drive regularly to keep it functioning properly.

Cleaning the 26-track cartridge tape drive

The 26-track, or quarter inch cartridge (QIC) tape drive heads should be cleaned at least once a week. If you use the drive for eight hours or more per day, then you should clean the drive daily. The process is simple and requires very little time.

1. If there is a cartridge in the tape drive, remove it.
2. Insert the cleaning cartridge into the tape drive and close the door. Cleaning begins automatically once the cartridge is inserted.
3. Allow the tape to run for approximately 30 seconds, then remove it.

NOTE: Replace the foam pad on the cleaning cartridge after it has been used three times. The cleaning cartridge itself can be used approximately 100 times.

Cleaning the DVD drive

Follow the DVD cleaning directions and recommended cleaning frequency.

1. If there is a DVD disk in the drive, remove it.
2. Follow the directions to clean the DVD drive.

Cleaning the diskette drive

The floppy disk drive must be cleaned at recommended intervals to prevent read and write errors.

To clean the diskette drive:

1. If there is a diskette in the floppy disk drive, remove it.
2. Insert the cleaning diskette into the disk drive.
3. Follow the directions on the cleaning diskette to clean the diskette drive.
4. Remove the cleaning diskette.

Cleaning the sensors and the reflecting surfaces

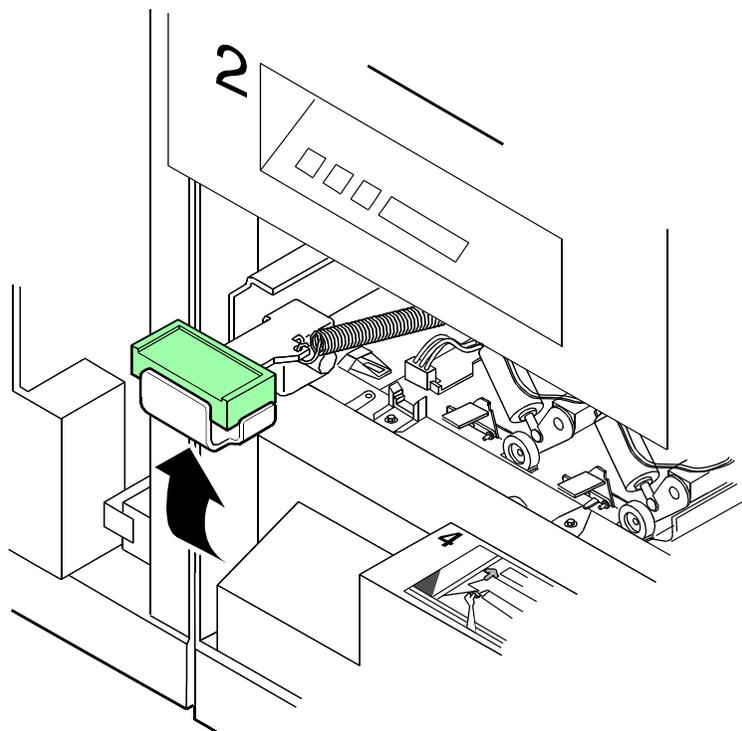
The following is a list of sensors to clean:

- Q850 sensor
- Q1011 sensor and mirror
- Q1106 sensor
- Q1166 sensor
- Q1107 sensor
- Q1164 sensor

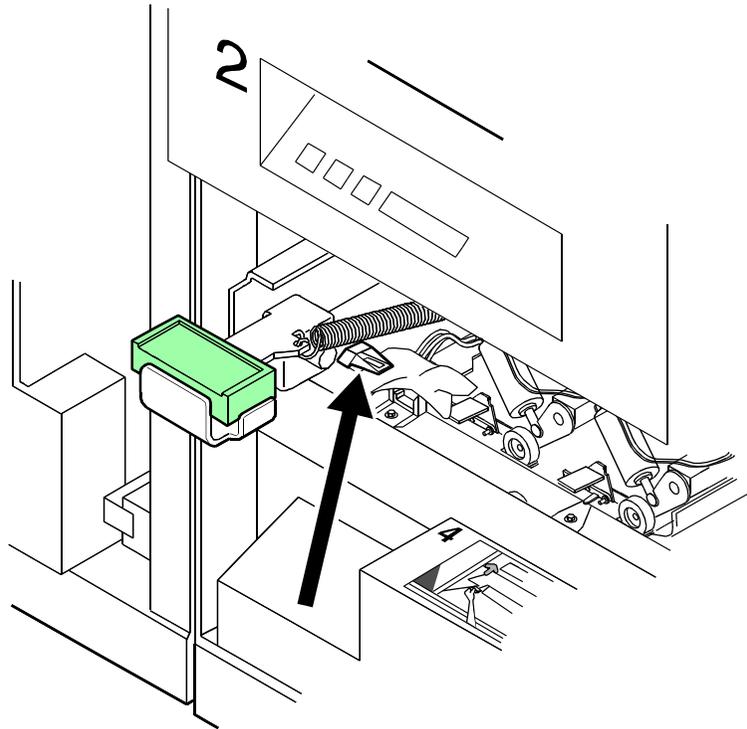
Cleaning the Q850 sensor

Follow this procedure when directed by Xerox Customer Support Center personnel.

1. Open the right and left doors of the printer and locate area 4.
2. Raise the area 4 green handle until it locks into place.



3. Locate the Q850 sensor.

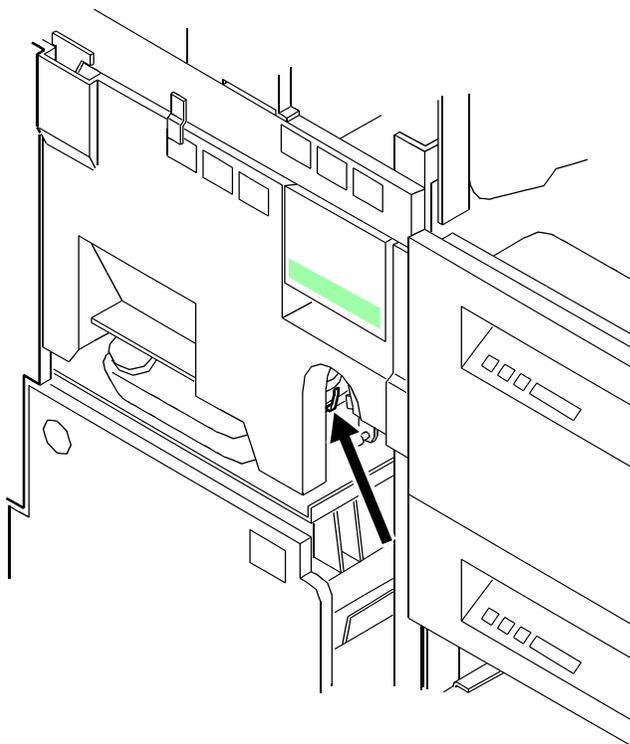


4. Place a dry cleaning pad on the sensor and move it from left to right to clean the sensor.
5. Lower the area 4 green handle.
6. Close the printer doors.

Cleaning the Q1011 sensor and mirror

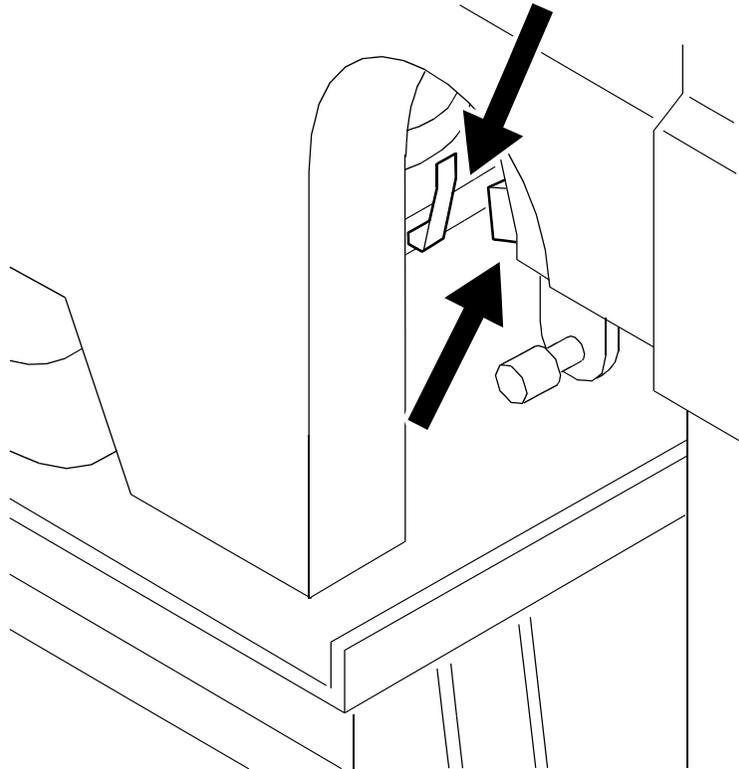
Follow this procedure when directed by Xerox Customer Support Center personnel.

1. Open the right and left doors of the printer and locate the Q1011 sensor.



2. Apply a small amount of lens and mirror cleaner to a cleaning pad.

3. Wipe the sensor and mirror gently with the cleaning pad.



Cleaning additional sensors

There are additional sensors that you should clean when directed by Xerox Customer Support Center personnel.

NOTE: If the sensor is very dirty, you may use a small amount of alcohol on a swab to clean it.

CAUTION

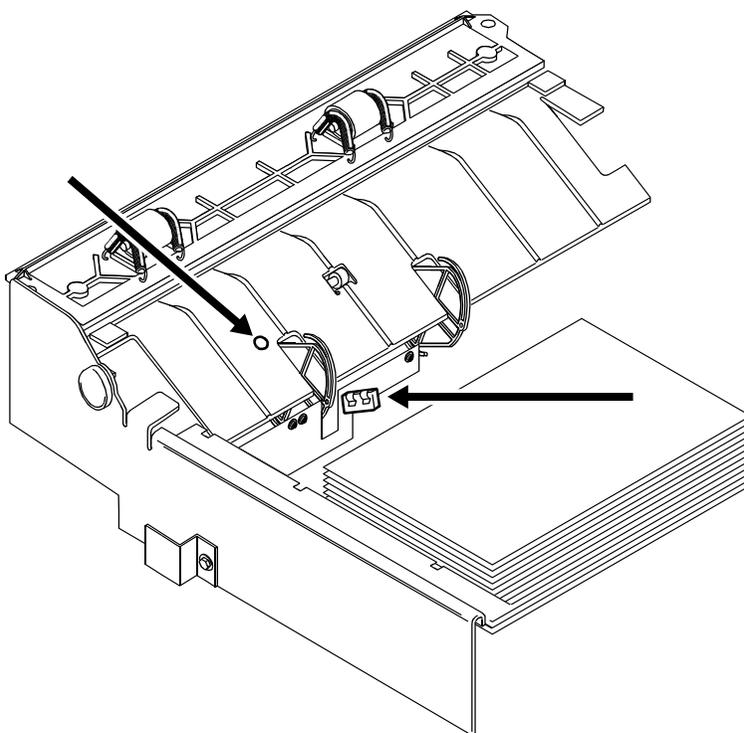
Do not use any abrasive materials or stronger solvents on the sensor.

Cleaning the Q1106 and Q1166 sensors

To access sensors Q1106 and Q1166, open the top cover of the high capacity stacker.

To clean the sensors:

1. Brush or wipe the sensor windows lightly.
2. Remove any paper dust present in the area.

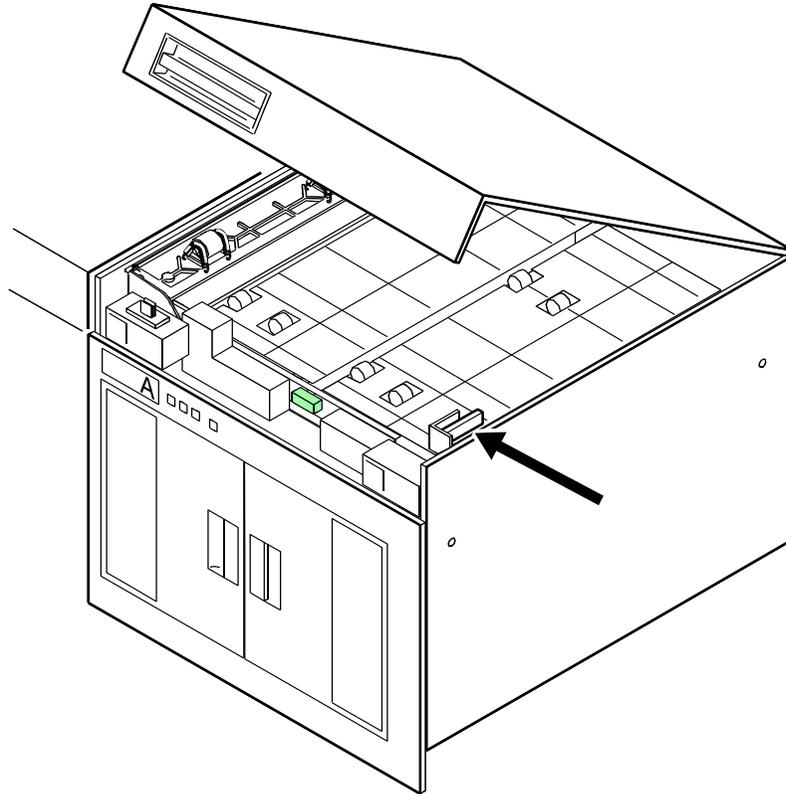


Cleaning the Q1107 sensor

To access sensor Q1107, open the top cover of the high capacity stacker.

To clean the sensor:

1. Brush or wipe the sensor window lightly.
2. Remove any paper dust present in the area.

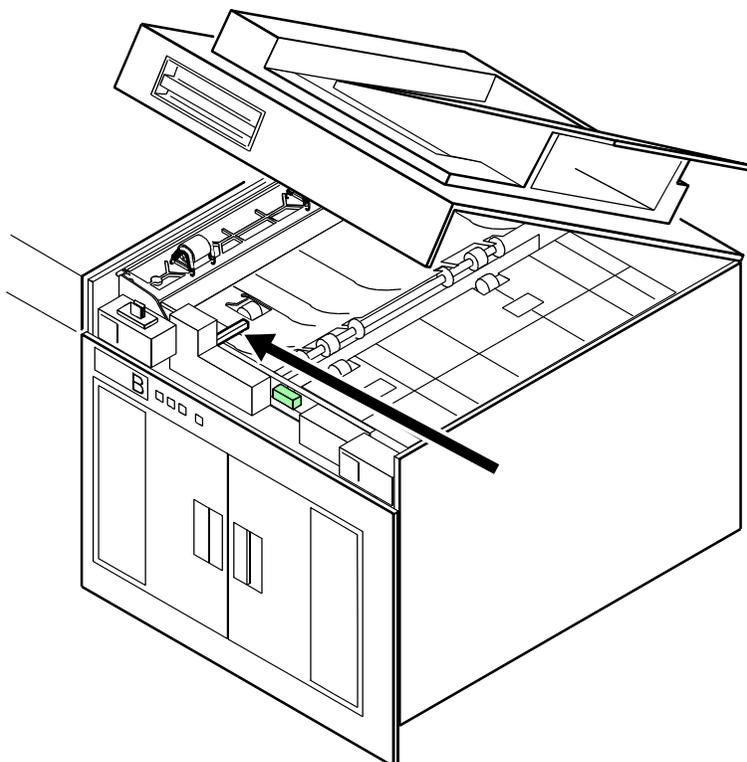


Cleaning the Q1164 sensor

To access sensor Q1164, open the top cover of the last feeder/stacker module (the one containing the purge tray).

To clean the sensor:

1. Brush or wipe the sensor window lightly.
2. Remove any paper dust present in the area.



Cleaning the display

The display should be cleaned as required.

Clean the display with a soft, lint-free cloth dampened with a glass or lens and mirror cleaner. Do not spray the liquid directly onto the display because it may cause damage.

Cleaning the exterior surfaces of the system

Clean the exterior surfaces of the printer daily, if possible.

Clean the exterior surfaces with a mild household detergent that has been poured or sprayed onto a cloth lightly dampened with water. Do not saturate the cloth; just dampen it.

CAUTION

Liquids must not be allowed to drip onto anything electrical or mechanical. For the same reason, never spray or pour the cleaner directly onto the keyboard or the exterior surfaces of the system.

5. Troubleshooting

This chapter contains instructions for performing problem isolation and resolution, including paper jams.

Undeclared faults

Undeclared faults are problems that occur with no message displayed at the client workstation and no fault declared by the system software.

Problem classifications

Problems that may occur on the system can be categorized as follows:

- **Client problems:** Client problems includes job submission problems with no message displayed at the client workstation.
- **Graphical User Interface (GUI) problems:** Graphical User Interface (GUI) icons or windows do not appear correctly, do not operate correctly, or disappear suddenly.
- **Print quality:** The output from the printer contains image defects such as deletions, problems with lines, missing images, smudges, shading, or text problems.
- **Font problems:** The output from the printer contains font defects, such as incorrect character spacing, jagged characters, text runs off the page, or sentences run into each other.
- **Inoperable system:** The inoperable system has experienced an unrecoverable software error due to a job or operator action.
- **Job flow:** Jobs sent from the client are not received at a printer queue.

- **Job integrity:** Job Integrity means the output from the printer is not as expected, such as having missing pages, missing data, incorrect page orientation, incorrectly ordered sets, or job attribute inconsistencies.
- **PDL problem isolation:** The PDL problem isolation procedure provides questions that a System Administrator may ask the job submitters when they are experiencing problems with printing.
- **Process problems:** A process was followed incorrectly or unintentionally.
- **Productivity and performance:** Productivity/performance problems means the job takes an excessive amount of time to complete.
- **Save problems:** A job is submitted from a client with [Save] designated, but the job is not saved.

Troubleshooting client problems

Client problems are handled differently, depending on the client platform used.

After determining the type of problem, follow the appropriate procedure. If the problem still exists after completing the procedure, contact the customer support center for assistance.

Solving MicroSoft Windows problems

Problem: A job that is submitted from a Windows client is not received by the printer queue.

If the Xerox Document Submission client application does not run properly or the job cannot be submitted to a queue, perform the following:

1. Ask the user to exit the Xerox Document Submission and Windows applications.
2. Verify that the user is logged on to the appropriate file server.
3. Restart the Xerox Document Submission software at the client workstation.

Solving Macintosh problems

Problem: A job is submitted from a Macintosh client, and the printer queues cannot be viewed.

If the Macintosh client cannot view any printer queues from the Chooser, perform the following:

1. Verify that the AppleTalk network is up and that there is at least one router on the network.
2. If there is no router on the AppleTalk network, jobs cannot be submitted through the Apple Talk gateway. When a router becomes available, reboot the controller to submit jobs through the AppleTalk gateway.

If there is a router on the AppleTalk network, delete the **/opt/XXnps/bin/atports** file at the controller and reboot.

NOTE: You must be logged on as the root user to delete this file.

Solving DigiPath problems

Problem: A job that is submitted from a DigiPath client does not print.

If the following message displays, perform the procedure below.

Warning: cannot open the file xdms/XXXXX.gf/XXXXX.tif. Select OK to continue or cancel to stop the print job.

1. Hold the queue to which the DigiPath jobs are being sent.
NOTE: You may want to create a naming convention and a queue for DigiPath jobs to easier identify these jobs.
 - a. Click the Queue Manager icon on the DocuSP window.
 - b. Right click in the queue list section and select [Select All] from the pop-up menu.
 - c. Right click in the queue list section and select [Do Not Accept Jobs] from the pop-up menu.
2. Wait until all jobs have completed printing.
3. Purge the **/local/var/spool/data/xdms** directory. (Completed jobs from the DigiPath 2.5 client do not delete automatically).

Troubleshooting Graphical User Interface (GUI) problems

Use the following procedures when the Printer Manager, Queue Manager, Job Manager, Administration, or Help modules do not function, or you cannot use Exit to restart the system.

- **Problem:** One of the icons on the DocuSP Print Services window is selected and does not respond or suddenly disappears.
 1. Restart the software.
- **Problem:** The GUI comes up with a black background, and the label names do not display correctly.
 1. Determine if the **/opt/XXnps/XXservui/data/locale/<locale>/resources** directory exists.
 - Determine if there are files in the directory.
 - Determine if the users have read permission for the files.
 2. Determine if the **/opt/XXnps/XXservui/data/ui.mn.config** file exists.
 3. If the **/opt/XXnps/XXservui/data/locale/<locale>/resources** directory or the **/opt/XXnps/XXservui/data/ui.mn.config** file do not exist, set the XAPPLRESDIR environment variable by entering the following:

```
setenv XAPPLRESDIR/opt/XXnps/XXservui/data/
locale/<locale>resources
```

*NOTE: **<locale> is the locale of your server:*

- *en_US for U.S. English*
- *fr for French*
- *es for Spanish*
- *de for German*
- *it for Italian*
- *ja for Japanese*
- *po for Portuguese*
- *ne for Dutch*

Troubleshooting print quality problems

A print quality problem means that the job was submitted successfully, but does not print correctly.

NOTE: If the Image Quality parameters are changed, you must restart or reboot the DocuSP software in order for the changes to take affect.

NOTE: The image quality default settings are optimized for the printer. If changes have been made, you can restore the factory installed defaults by selecting [Defaults].

Selecting [Reset] sets the image quality parameters to the most recently applied setting.

Isolating and resolving print quality problems on a PostScript job

To isolate and resolve a print quality problem on a PostScript job, perform the following:

- Determine if an error page has been printed.

*NOTE: If error pages are not enabled, you can enable error pages and resubmit the job, or obtain the information from the **/opt/XRXnps/log/errorLogs** directory. This directory contains **error.##.log** files, where **##** corresponds with the Job ID number. Note the Job ID number from the printer queue and read the corresponding error log.*

- Submit the job to a draft PostScript printer, if one is available, to determine if the master is valid.
- Ensure that jobs are being sent to the correct queue.
- Ensure that a valid PDL is used; for example, an Adobe driver outputs a valid PDL file in PostScript format.

NOTE: Gray scales or graphic images may contain image quality differences if they are printed using a 300 dpi decomposer.

Isolating and resolving printer-driven print quality problems

Problem: The output from the printer contains defects such as deletions, line problems, and missing images.

- Determine if the job has ever been printed correctly on this system.
- If possible, print the job on a draft printer. If the job prints correctly, contact the customer support center.
- Determine if other jobs are exhibiting the same problem. This could indicate a printer problem. Contact the customer support center.
- Recreate the job with a different print driver and resubmit it to the printer.

Resolving font problems

Use the following procedures to isolate and resolve common font problems.

- **Problem:** The job prints with the wrong font.
Determine if the font is being downloaded with the job. If a downloaded font is not found, font substitution occurs and an error page is printed.
If the font is not being downloaded with the job, determine if the font is loaded on the server by viewing the PostScript/PCL Fonts tab on the Administration window.
- **Problem:** Characters appear jagged.
Determine if there is a scalable option available for that font and whether the user selected that option.
- **Problem:** Some incorrect characters print.
Determine if the document was created with one driver and printed with another driver.
- **Problem:** Text runs off the page, or sentences run into each other.
Determine if the document was created with one driver and printed with another driver.
- **Problem:** Small fonts are printing ragged.
Change the default font renderer in the Printer Manager from Adobe Type Manager to Font Solution.

NOTE: If you are comparing prints from a proof printer, ensure that the same PDL file was used to make the prints on both printers.

Troubleshooting an inoperable system

- **Problem:** The system is inoperable due to a software, job, or operator error.

If the screen is locked up, perform the following steps:

1. Open a Terminal window.
2. Enter the following commands:

```
ps -ae | grep xlock  
kill <process id#>
```

3. If you cannot log in from another system, hold down the <Stop> key while pressing <A> to reboot. At the OK prompt, enter **sync**, then enter **boot**.

NOTE: Always assign a password to the "xrxusr" before selecting the Lock Screen.

NOTE: If the above procedure does not work, power off the controller. Wait one minute, then power on the controller.

CAUTION

Pressing <Stop> + <A> may result in lost information if a job is currently being received by the system. You may need to resend some jobs.

- **Problem:** The controller does not come up in the OpenWindows environment.
 1. Record any visible messages on the screen.
 2. Contact the customer support center.

Troubleshooting job flow problems

When a job is submitted to the printer but does not print, follow these procedures.

- **Problem:** A job is at the Novell server and does not reach the print queue.
 1. Determine the status of the printer queues.

2. Determine the status of the printer.
3. Ensure that the Novell queue is set to release jobs.
- **Problem:** The file system is out of disk space
 1. Check the console window for messages regarding full partitions.
 2. Use the **df** command to determine which partition is full.
 3. If the **/var/spool/XXnps/outQ/** partition is full:
 - a. Place all queues (receiving and releasing) on hold.
 - b. Allow all processing jobs to complete printing.
 - c. Delete all the ***bm*** files in the **var/spool/XXnps/outQ/** directory.
 - d. Release all held queues.
 4. If the **/opt** partition is full:
 - a. Delete any unnecessary files.
 - b. Compress and move any core files in the **/opt/XXnps/corefiles** directory.
 5. If the **/var/spool** partition is full:
 - a. Determine the size of the **/var/spool/XXnps/inQ** directory.
 - b. If the job is larger than half of the size of the **/var/spool/XXnps/inQ** directory, delete the job and restart the Xerox software.
 - c. Store the job on a server. From the client, use either the “Remote File Option” from the Xerox Document Submission software, or the **sourceFile<path>** command from the Print Client software to resubmit the job.
 - d. Delete any faulted, ineligible, or held jobs that are no longer needed.
 - e. If completed jobs have not been deleted, the directory **/opt/XXnps/log/errorLogs** has a tendency to fill up with **error.##.log** files. You may want to delete these log files periodically.
 6. If any other partition is full, free some space on that partition by deleting any unnecessary files.
 7. If there is only one job in the printer queue, cancel the job. Resubmit the job in smaller portions.

- **Problem:** A PostScript, ASCII, or TIFF job displays a status of Processing, and does not print.
 1. Hold the job.
 2. Submit the job to a draft PostScript printer, if possible, to determine if the master is corrupted.
 3. If the job prints, contact the customer support center.
- **Problem:** A job that does not have faults has been submitted and is not printing.
 1. Shut down, then restart the DocuSP software.

NOTE: After the restart, the job either processes or faults.
 2. If the banner or error pages are enabled, determine if the **-admfac** process is active.
- **Problem:** An active job with a status of “printing” or “waiting for printer” is not printing and there are no faults or messages.
 1. Open a printer door. If a message appears in the faults and messages frame, the controller is communicating with the printer.
 2. If you determine that the job is taking too much time, restart the DocuSP software.

Troubleshooting job integrity problems

A job integrity problem means that the output from the printer is not as expected; for example, missing pages, missing data, incorrect page orientation, incorrectly ordered sets, or job attribute inconsistencies.

- **Problem:** The job does not print as expected:
 1. Check the job properties to determine if the job was programmed correctly.
 2. Check for any queue override attributes.
 3. If the job is a PCL or a PostScript job, check the file for job ticket information.
 4. Resubmit the job from the client.
 5. If possible, submit to the draft printer, recreate the job.
- **Problem:** Jobs are printing in reverse order.
 - Verify that your PDL file was created without reverse order instructions.
 - Verify that the application was not set up to print in reverse order.

Troubleshooting PDL problems

The problem isolation for PDL problems procedure provides questions that the system administrator may ask the job submitters when they are encountering problems with printing PDL files. The answers to these questions will assist in isolating the problem.

Isolating HP PCL file problems

Ask the following questions when there are problems with HP PCL files:

- What printer driver was used to create the file?
- What application was used to create the file?
- Do all applications create this file format?
- Have you tried selecting a different driver to create this type of file? If so, did it print without problems?
- Has the file been printed previously on a different printer? If so, what printer was selected?

- Because HP PCL printers rarely print a list of errors, what do you see as the specific image errors or problems in the prints?
- When you compare the problem prints with a hard copy proof, what specifically do you need to correct?
- Was the file recreated and resubmitted? If so, what was the result?
- Especially for large jobs, has the file been submitted to a queue that is accepting files and is clear of problems, or for which resources were available and adequate?
- Did this file or similar files print on a previously installed version of the system software?
- Has printing been attempted with the most recent version of the system software?

Isolating PostScript file problems

Ask the following questions when there are problems with PostScript files:

- What printer driver was used to create the file?
- What client/application was used to create the file? Do all applications create this type of file?
- Was the file recreated and resubmitted with a different driver (for example: 6135 driver, Adobe with the 6135 PPD, LaserWriterII NTX, Linotronic330, or DT135)? If so, what was the result?
- Has the file been printed on a second PostScript printer (for example: on another printer, a true Adobe PS2 printer)?
- Is there a printed PostScript error page. If there is one, what errors are listed?
- Was the file recreated and resubmitted? If so, what was the result?
- Especially for large jobs: Has the file been submitted to a queue that is accepting files and is clear of problems, and for which resources were available and adequate?
- What do you see as the specific image errors or problems in the prints?
- When you compare the problem prints with a hard copy proof (for example, from a true Adobe2 printer), what specifically do you need to correct?

- Did this file or similar files print on a previously installed version of the system software?
- Has printing been attempted with the most recently released version of the system software installed?

Isolating TIFF file problems

Ask the following questions when there are problems with TIFFS:

- Is the file a true TIFF or is it a TIFF wrapped in PostScript as determined by viewing the file in a text editor and checking the PostScript header?
- Did the PostScript error page list the error as "Decomposition Task Failed" to indicate that the tags and compression formats of this file are not supported?
- What type of client and application was used to submit the file?
- Was the file created using XDOD or DigiPath, or using generic image manipulation software (for example: Corel, PhotoShop, or Word) or did it originate from a scanner?
- Can the TIFF image be viewed using any software package (for example: Corel, PhotoShop, ImageWiz, Word, XDOD, or DigiPath)?
- Has the file been recreated and resubmitted?
- Does the error page list errors such as "image mask," "Xeroximage," or "image" to indicate that the FTP transmission of the file has corrupted the TIFF image data?
- If the file has an orientation problem, has an attempt been made to change the orientation using the Xerox Client Software print command orientation switch, <orientation>?

Additional TIFF questions:

- What compression format was used to compress the file (for example: group 3, group 4, packbits, or RLE)?
- What dots per inch (DPI) resolution was used or intended for the file (for example: 300 dpi or 600 dpi)?
- What TIFF specification was used or intended for the file (for example: TIFF Spec. 5.0 vs. TIFF Spec. 6.0)?
- Did this file or similar files print on a previously installed version of the system software?
- Has printing been attempted with the most recent version of system software installed?

Isolating PDF file problems

Ask the following questions when there are problems with PDF files:

- Did you try creating the PDF from the original PostScript through the latest version of Adobe's PDF Distiller?
- Does the original PostScript file print correctly? If yes, does it print correctly on other PostScript printers?
- Can you open all pages within Adobe's Acrobat? Within Acrobat, can you print correctly from PostScript?
- What application and/or PDF software created the PDF file?
- With the printer's error pages turned on, does the printer produce a PostScript error page?
- Does the PDF file print on other PDF printers?
- Have you tried printing the PDF file using the most Current release of system software?
- Have you tried redistilling the PostScript file again?
- Have all the document fonts been downloaded and included throughout the process? Keep in mind that the fonts have to be within the PostScript and the resulting PDF.
- Did you use PDF Writer to create the PDF file? If so, recreate the PDF file using Adobe's PDF Distiller.

Troubleshooting process problems

Process problems mean that a procedure is followed incorrectly or performed by mistake.

- **Problem:** [Exit] was selected from the System menu in error.

To start the DocuSP software without rebooting the controller:

1. Open a terminal window and enter the following:

```
cd /export/home/xrxusr  
.openwin-init
```

NOTE: No special logon is required to restart the Xerox software.

- **Problem:** You forget the Trusted User or Administrator password.

Restore the system default passwords: “trust” for Trusted User and “administ” for Administrator.

1. In a terminal window, enter the following:

```
cd /opt/XRXnps/XRXservui/data  
ls -la
```

2. Delete the following files:

- .npw
- .sum

NOTE: You must be logged in as “root” to delete these files.

NOTE: You must enable the Accounting Remote Purge utility again.

Troubleshooting productivity and performance problems

When the job seems to take too much time to process through the system, there may be a productivity or a performance problem.

1. Check the job status in the Job Manager window.
2. If the job status is <hold>, right click on the job list and select [Release] from the pop-up menu.

If the job status is <processing>, do the following:

- Check the Print Services window. If the job is processing, you should see a message:

input to printer delayed

You can also check the performance meter. If the CPU activity is high, the decomposer is working.

- If you have no message in the Print Services window or the CPU activity is low on the performance meter, the process has been stalled. Restart the DocuSP software.
3. Submit the job to a draft printer, if possible, to determine if the master is valid.
 4. If the job prints on a draft printer, contact the customer support center.

If you have any removable peripherals (DVD player, tape drives, and so on) connected to the controller, keep the peripheral devices powered on, even when they are not in use.

Troubleshooting problems with saving jobs

A save problem means that a job is submitted from a client with Save designated, but the job is not saved.

- **Problem:** The job has a status of “Save Completed,” but nothing is saved.
 1. Ensure that the banner and error pages are enabled.
 2. Submit the job for printing.
 3. If only the banner page prints and the job shows a status of “Successfully Completed,” check the PDL file for invalid “showpage” operators or no image data.
 4. If possible, submit the job to a draft printer. If the job prints successfully, contact the customer support center.
- **Problem:** The job has a status of “Save Completed with errors,” but nothing is saved:
 1. Ensure that the banner and error pages are enabled.
 2. Submit the job for printing.
 3. Check the error page for the information following the statement “OFFENDING COMMAND” to correct the PDL file if it is corrupt.
 4. If possible, submit the job to a draft printer. If the job prints successfully, contact the customer support center.

- **Problem:** You are receiving PostScript error messages while trying to merge variable data with the form.
Create the variable data file by using the Adobe driver.

Crash recovery

This section explains how to recover a job after a system crash or rollover, in Streaming and Spooling modes.

NOTE: In Streaming mode, the printing system begins processing (decomposing and printing) the data stream as soon as a minimum amount of data is received, and continues to process the data as it is received. I

Streaming mode

In Streaming mode, the printing system begins processing (decomposing and printing) the data stream as soon as a minimum amount of data is received, and continues to process the data as it is received.

If the system crashes **during** the printing of an LCDS report, the software tries to recover to a page boundary. If this recovery is successful, you do not notice anything different with the output of your recovered report, but you are asked to restart the system after a crash. The recovered page may be offset from the rest of the report if you specified ABNORMAL REPORT = YES for that report. (For more information, refer to the *Xerox DocuPrint EPS Using LCDS Print Description Language*).

If the system cannot completely recover an LCDS report (due to data loss or missing online records) after a crash, it ends the job and prints all remaining formatted reports. A message on the screen notifies you that the job completed with errors.

UI recovery messages

After a crash, the Printer Faults window displays a short recovery-related message. Double clicking on the message opens the Printer Fault Clearance window, which displays a detailed message including clearance instruction for that selected fault. You have the option to close the window without taking any action or to perform the appropriate clearance action after which the window closes and the fault is removed from the list.

The system attempts to reestablish the correct state of the system at the time of the crash to assure no loss of formatted data. After the successfully recovered report has completed printing, the accounting log shows the recovered report has completed successfully and the total pages is the maximum number of pages in the report (even if the job ended early).

The following four examples illustrate the short and long messages associated with a crash.

Recovery message examples

Example 1 **Short message:**

```
Online Gateway could not recover the current
job due to data loss.
```

Long message:

```
The Online Gateway was unable to recover the
current job due to data loss.
Job <job ID> ended prematurely.
Select Reset to clear fault.
```

This message displays when the online gateway cannot completely recover after a crash recovery and ends the job. The job status shows that the job completed successfully. If the job specifies an accounting page, the page is generated. The accounting log displays the Job Completed status.

Example 2 **Short Message:**

```
Online Gateway could not recover the current
job due to an internal error.
```

Long Message:

```
The Online Gateway was unable to recover the
current job due to an internal error.
Job <job ID> aborted.
```

Select Reset to clear fault.

This message displays when the Online gateway encounters an internal error during a crash recovery and the system aborts the job. The job status shows the state of the job. If the job specifies an accounting page, the page is generated. The accounting log displays the Job Aborted status.

Example 3 Short message:

```
Job <job ID>: LCDS Decomposer could not recover
data. Job will be ended prematurely.
```

Long Message:

```
Job <job ID>: LCDS Decomposer could not recover
data. Job will be ended prematurely.
```

This message is displayed when the LCDS Decomposer encounters an internal error during recovery. Upon clicking Continue in the Printer Fault Clearance window, the job is aborted. The job status shows the Job Aborted state. No accounting page is generated.

Spooling mode

In Spooling mode, a job does not print until all its data is received.

If the system crashes **after** spooling all the data, follow the directions for Streaming mode. If the system crashes **while** receiving data, the job is aborted.

After a crash, wait until the system is idle before restarting. Wait for the printer engine to cycle down and make sure that the Job Manager shows no changes in the job state.

Points to note

- If automatic recovery is possible and the same system fault occurs twice within the report, the system prints any formatted reports, but aborts the current job. If there are system faults that do not result in restarting the system, the system does not print the reports.

Automatic recovery refers to restarting of the system software following a system fault such as when a critical component dies.

- You may change the buffer size that determines how many records the system can hold in case of a crash recovery. Change the size through the Online Setup window. (Refer to the online help for more information.)
- A reset or a power off can occur if the Solaris operating system opens or loses files or directories to the printing system, and the system is left in an inconsistent state with its persistent memory.
- In case of a power off, perform a UPS (for FX markets only).
- When a restart or immediate shutdown occurs in the middle of an LCDS report, the LCDS job is aborted upon recovery.

Clearing online print data

If the system crashes with an online job stuck at the host, purge the print data from the host queue. (The software problem that caused the crash also causes this data to remain.)

1. Click the Queue Manager icon.
2. Right click on a queue, and select [Properties] from the pop-up menu.
3. On the Properties window, select [Spooling] as the input mode, and click [Apply].
4. Right click on the queue again, and select [Do Not Release Jobs] from the pop-up menu. This prevents the unnecessary processing of the data.
5. Select [Online Manager...] from the System menu.
6. On the Online Manager window, select the Output Queue that you set up in the previous steps.
7. Start a new job, and wait until the data transmission is completed.
8. End the job.
9. On the Job Manager window, select the job and delete it.
10. Restore the setup of the queue, if necessary.

The host queue is now clear and the DocuPrint EPS software is ready for the next job.

Online gateway faults

Submitting a job from the host

When submitting an online LCDS job from a host, access the printer state screen or the output queue screen on the host in order to make sure the job is sent to the printing system correctly.

A job completion notification on the host terminal screen or a beep sound does not mean that the job is completely transmitted to the printer; it means only that the data has been queued to the printer on the host. The actual data transmission from the host to the printer may not have been completed at that point, especially if it is a long job.

Wait until the data transmission is complete before clicking the [End] button on the Online Manager window. Clicking [End] prematurely causes problems such as missing pages or missing lines of data at the end of the job.

CAUTION

If Automatic End is enabled on your system, do not click [End] to finish the job. Doing so could cause loss of data at the end of the job.

Obtaining information about a job

Follow these steps to determine what is happening to your job after submitting it from the host:

1. Check the job completion message on the host terminal for any JCL errors. If a JCL error occurs, only a banner page prints.
2. Access the printer status window on the host terminal and check whether the printer is active and your job is associated with the printer.

If the printer is in an ACTIVE state, wait until it goes into INACTIVE state. When the printer becomes inactive, the data transmission is complete and you can continue.

3. On the Online Manager window, click the [End] button, if Automatic End is not enabled.

If the printer is inactive, one of following could have happened:

- Your job has been transmitted to the printer already. Continue to step 4.
 - Your job has not been queued to the printer. Skip to step 5.
4. Contact the host operator or access the output queue screen on the host terminal to find out if the job is queued.
 - If the job is queued, the Printer State should be ACTIVE.
 - If the job is queued and the printer is not ACTIVE, there may be a problem at the host.
 5. Access the log screen on the host terminal to check whether the job has completed with or without errors.
 6. Go to the log screen on the host terminal and see if the job completed with or without errors. If there was a JCL error in your job, you see an indication of it.

Data type on the Online Manager window

If the Online Manager window indicates a data type that is not LCDS when the streaming job is started, this may cause unpredictable system behavior, such as the window graying out. Make sure to select LCDS as your data type before submitting a job.

Streaming queue release setup

When Do Not Release Jobs is specified for the streaming queue, the Online gateway creates a new job, but does not start accepting data from the host. This is because the job is not scheduled while the queue is set up to not release jobs. The gateway does not start receiving data from the host until the job is scheduled and the decomposer becomes ready to accept data. This is not an error or abnormal situation. Change the queue setting to Release Jobs, and the gateway starts receiving data normally.

Incorrect printer state on host

Problem: The host erroneously indicates that the printer state is ACTIVE.

1. Verify that the device address on the Online Setup window is accurate.
2. Start a new job from the Online Manager window. If the host printer state does not change, continue to step 3.
3. Access the log screen on the host terminal. Check the bottom of the log for a message for your device that is awaiting your response. If there is a message, reply to it.

For example:

```
"/r <msg id>,pn"
```

Clearing paper jams

The paper path is the route that materials (paper, transparencies, labels, and so on) follow through the printer from the feeder trays to the stacker bins, sample tray, or purge tray. Paper jams can occur at any stage of the paper path. After a paper jam the printer stops, and the following happens:

- If enabled, the Attention light flashes.
- The Fault icon appears on the printer control console.
- Messages appear on the controller informing you of the paper jam and its location in the printer.
- The printer mimic graphic on the printer control console shows the area of the paper jam and lists instructions for clearing the jam.

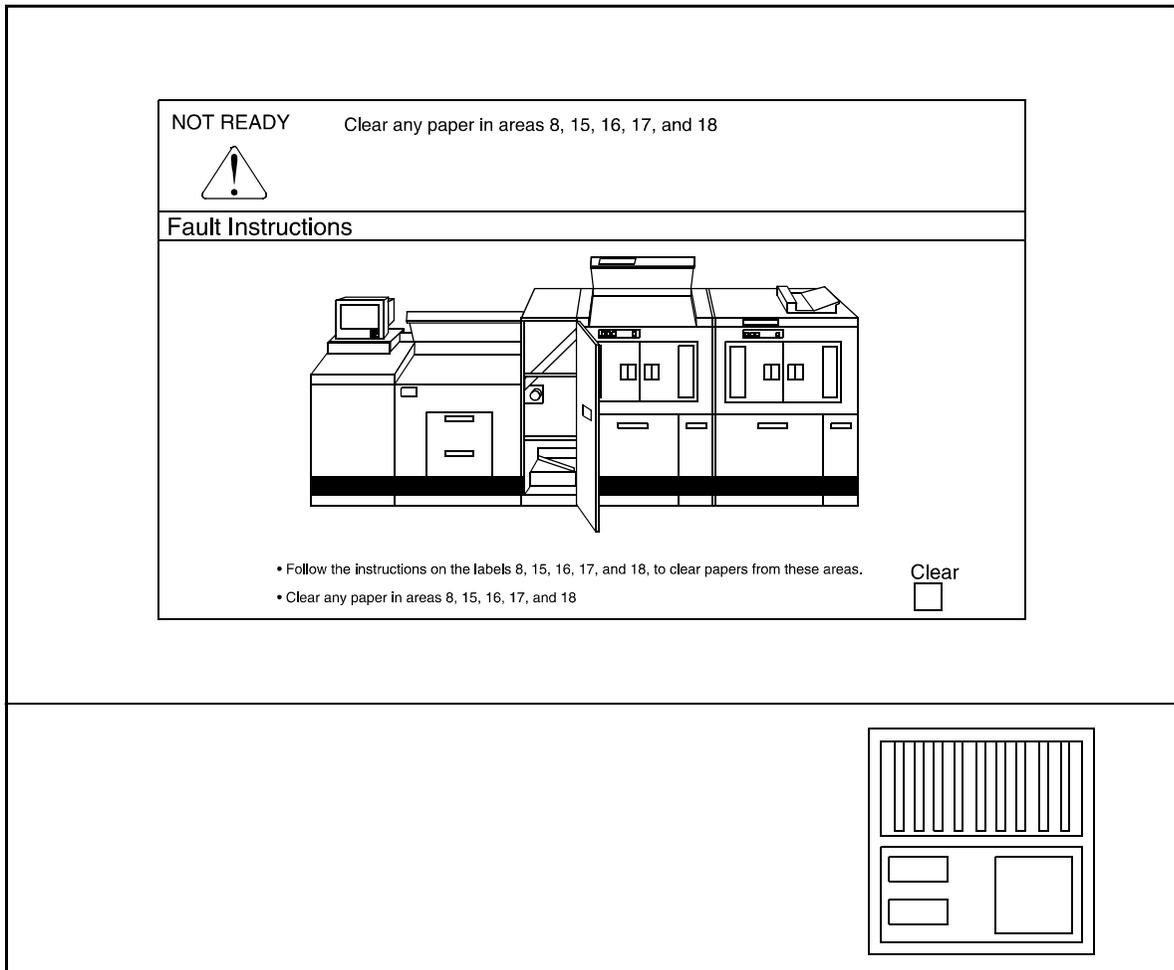


Figure 5-1. Jam display on the printer control console

NOTE: It is important that you clear the sheets only in the areas indicated on the printer control console.

Aids to paper jam clearance

Each area of the printer in which jams can occur has detailed jam clearance labels that tell you how to clear a jam in that area.

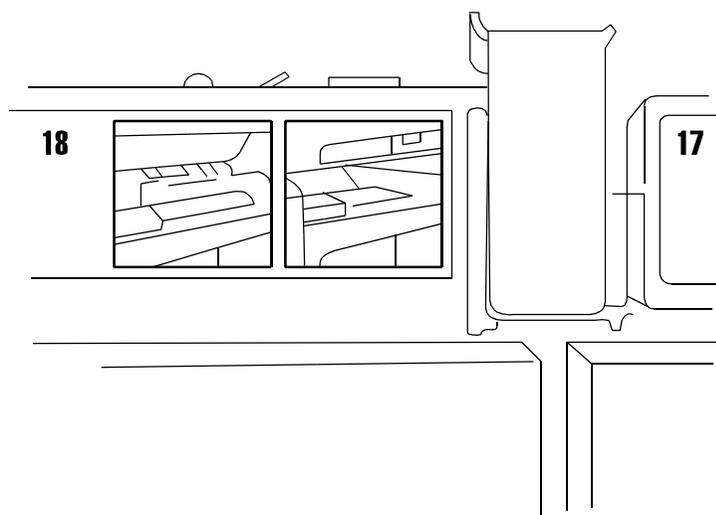


Figure 5-2. Area jam clearance labels inside the printer

Each handle, lever, or knob that must be moved to clear a jam is bright green and marked with an arrow indicating the direction it moves.

Clearing paper jams in all printer areas

The following figure gives an overview of the areas in which paper jams may occur.

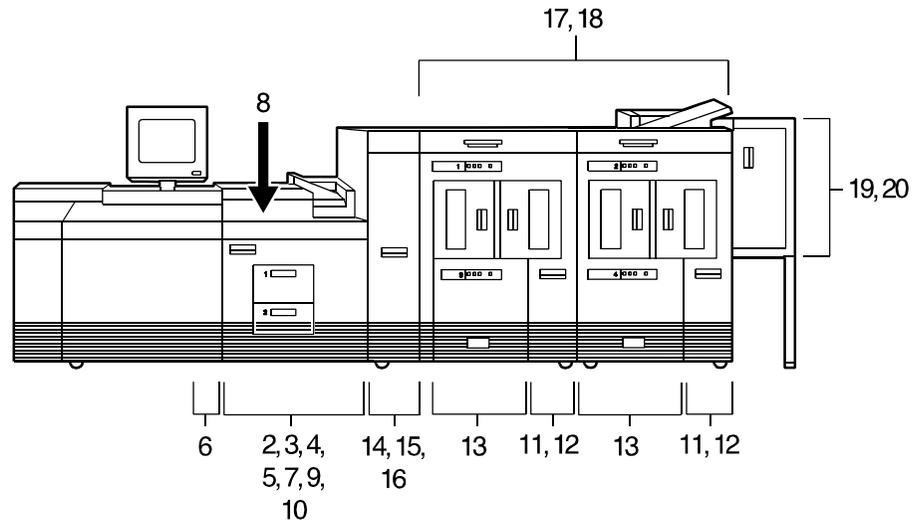


Figure 5-3. Jam clearance areas

To clear a paper jam:

1. Open any printer doors necessary to access the area of the printer indicated by the messages and display on the printer control console.
2. Clear the jammed sheets from the area, following the instructions on the printer message labels and the messages on the printer control console.

NOTE: Occasionally you may find that the printer has already cleared the paper from an area and sent it to the sample or purge trays.

3. Close any printer doors that were opened.
4. Press the Continue button to resume printing.
5. Discard any damaged sheets that were sent to the sample tray or purge tray.

For additional paper jam information, refer to the following sections:

- Checking job integrity following a paper jam
- Clearing paper jams in printer areas 2 through 20
- Clearing a misfeed (feeder tray fault)

- Troubleshooting frequent misfeeds (processor feeder trays)
- Incorrect paper size message

Checking job integrity following a paper jam

When printing resumes following a paper jam, there is a slight possibility that duplicate sheets may be printed or sheets may be missing from a report. For that reason, you should check job integrity after the report has been printed.

1. The printer offsets the first sheet printed following a paper jam. Locate that sheet in the stack.
2. Check the sheets immediately before and after the offset sheet to see if there are any missing or duplicate sheets in the report.

NOTE: A message may appear on the controller screen and the printer control console telling you that there is a suspected page delivery error and advising you to check the output.

Clearing paper jams in printer areas 2 through 20

In the following figures, the printer jam clearance areas have arrows pointing to them or circles drawn around them.

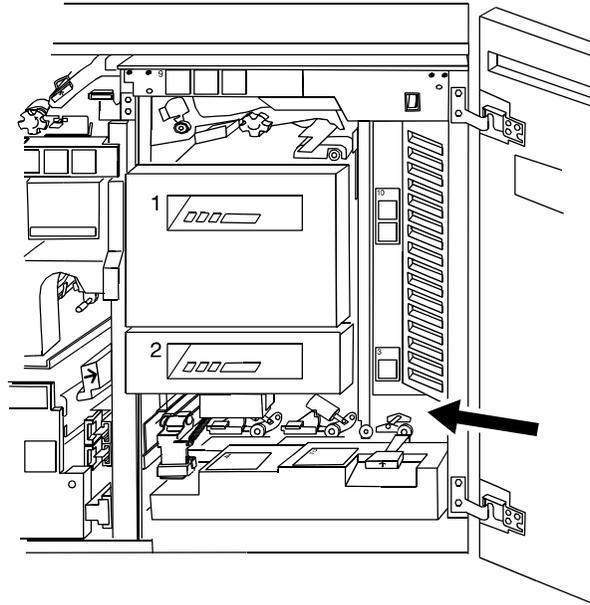


Figure 5-4. Area 2

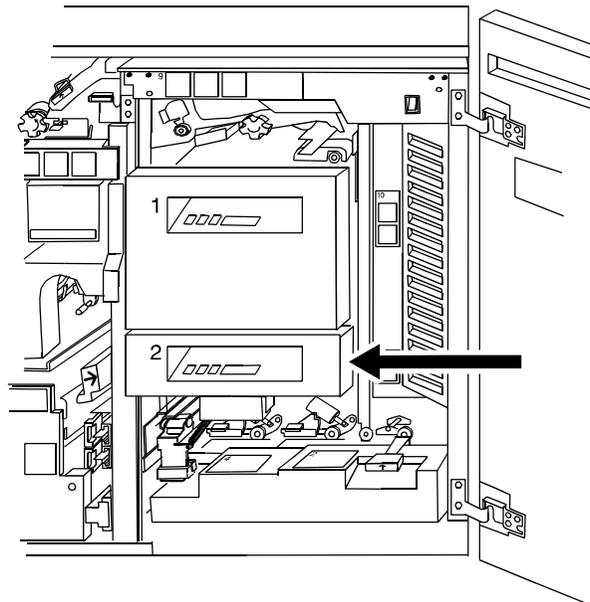


Figure 5-5. Area 3

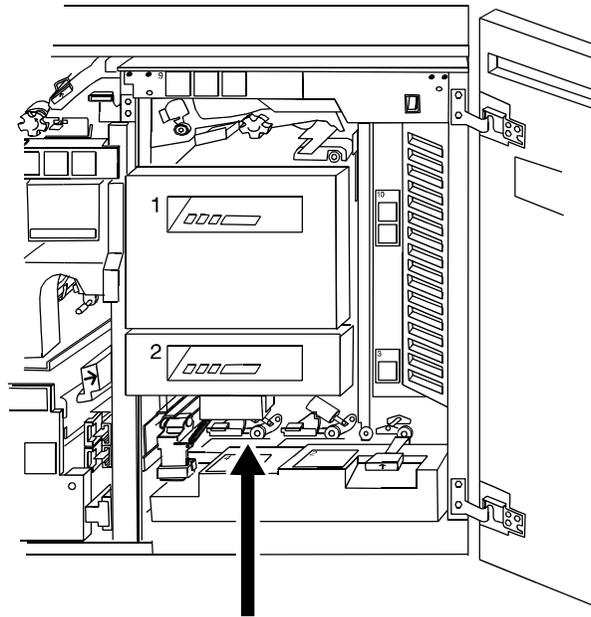


Figure 5-6. Area 4

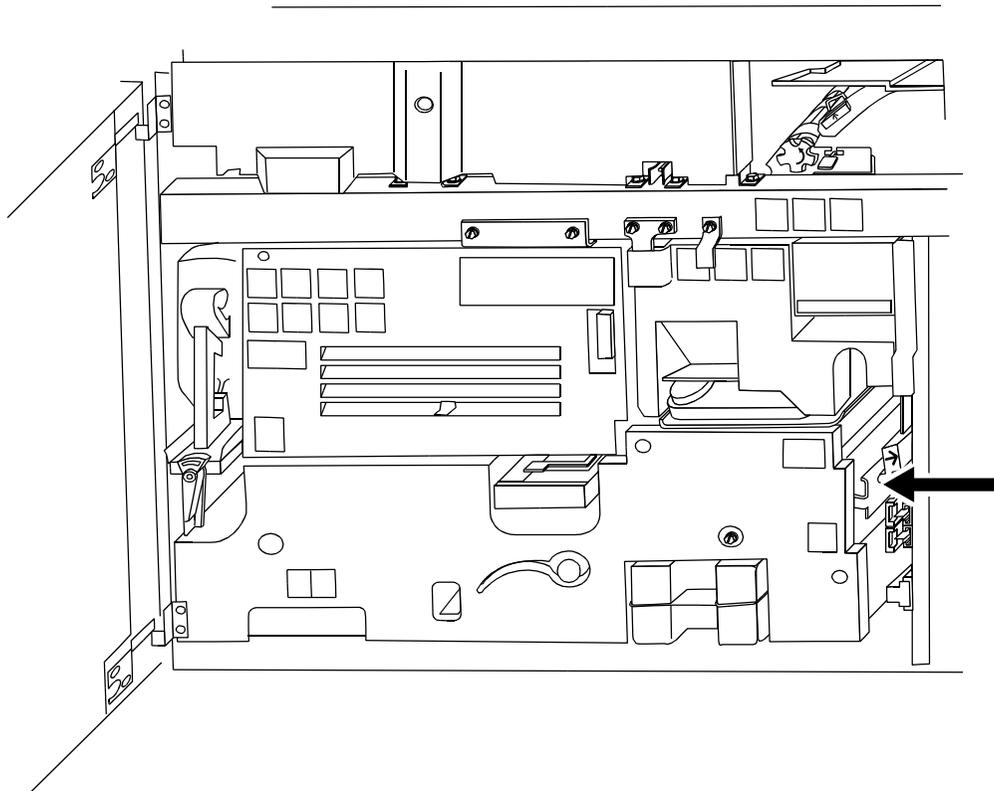


Figure 5-7. Area 5

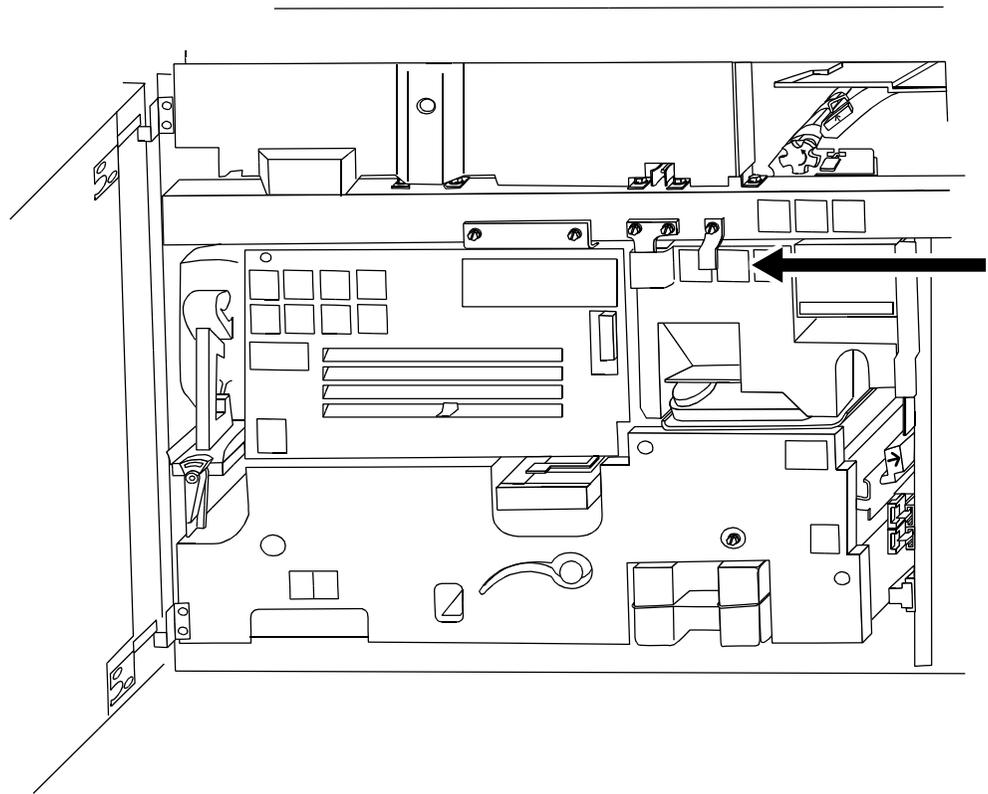


Figure 5-8. Area 6

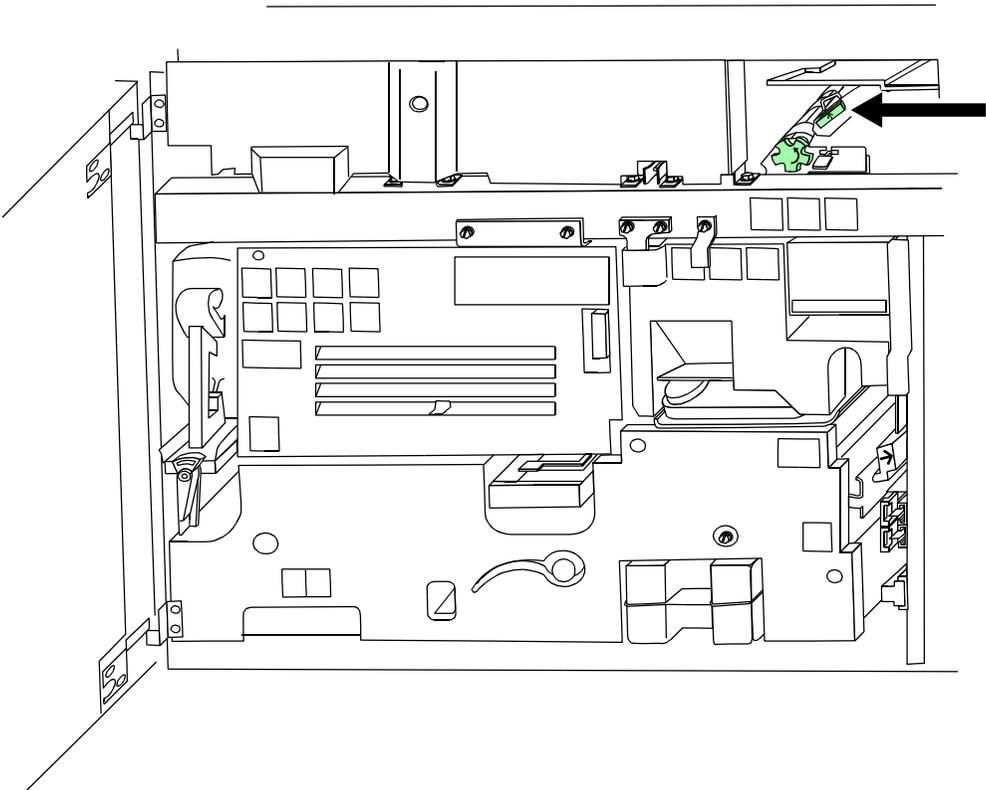


Figure 5-9. Area 7

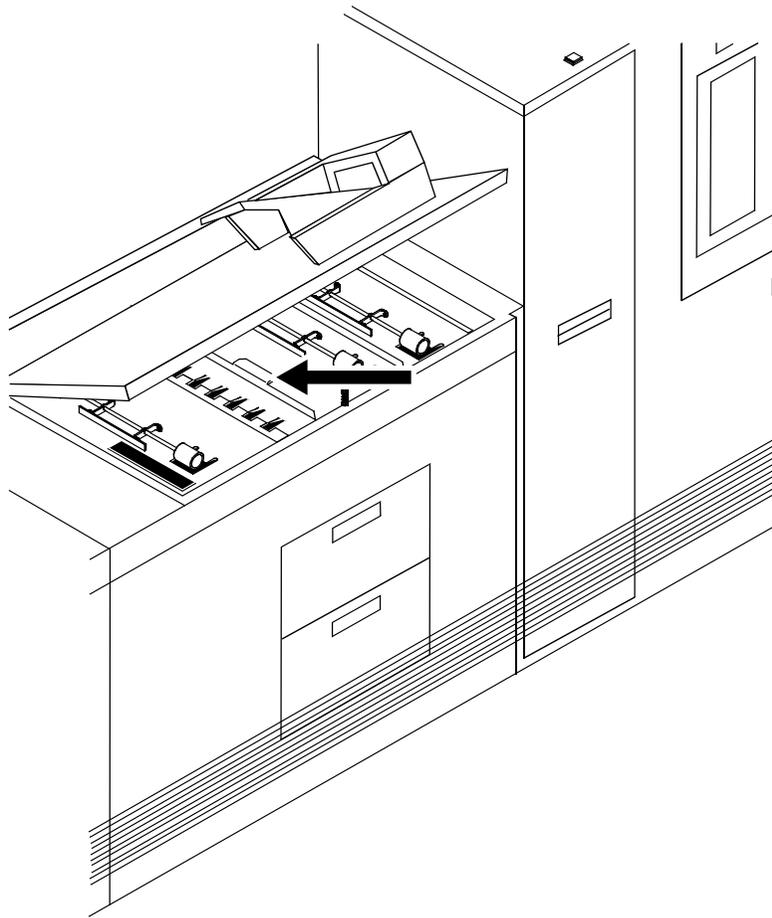


Figure 5-10. Area 8

NOTE: If a jammed sheet rips as you are removing it from area 8, you may have to use the pinch lever in area 9 to remove the paper. Refer to the “Note” following the area 14 figure for additional instructions.

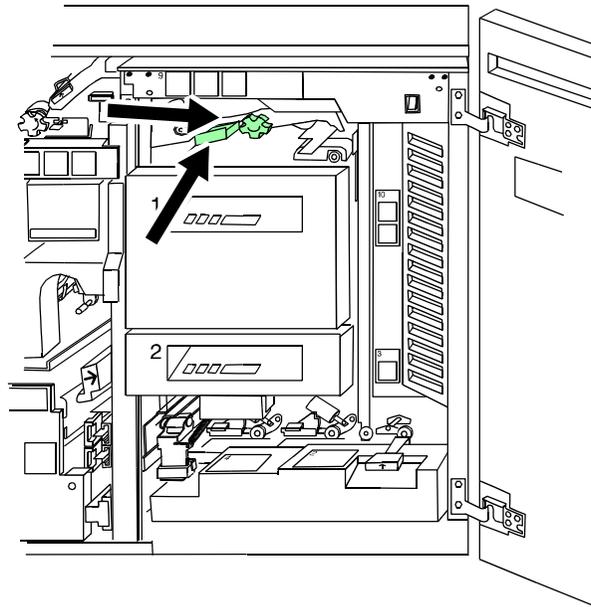


Figure 5-11. Area 9

To clear jams from area 9:

1. Lower and pull out tray 1 to give you better access to area 9.
2. Pull the area 9 green lever toward you to unlatch it. Be sure to relatch the lever after you have cleared any paper in this area. To further facilitate removing sheets wedged in this area, pull out tray 1 and hold the green lever down.
3. Turn the green knob (located to the right of the lever), to move jammed sheets further along the paper path to where they are more accessible and easier to remove.
4. If paper rips as you are removing it from area 9, or if you have difficulty removing paper from this area, use the pinch lever located further inside area 9. Paper may be caught in this area during duplex printing.

Using the pinch lever to access area 9

To use the pinch lever located inside area 9:

CAUTION

This area of the printer may be hot. Be careful when inserting your hand.

1. Locate the green pinch lever directly behind area 9 (above the green knob and further inside area 9).
2. Carefully reaching your hand into the area, squeeze the edges of the pinch lever and lift it up.
3. Remove any paper caught in this area.
4. Turn the green pinch lever to its original position. Make sure that you relatch the lever after you have cleared any paper in this area.

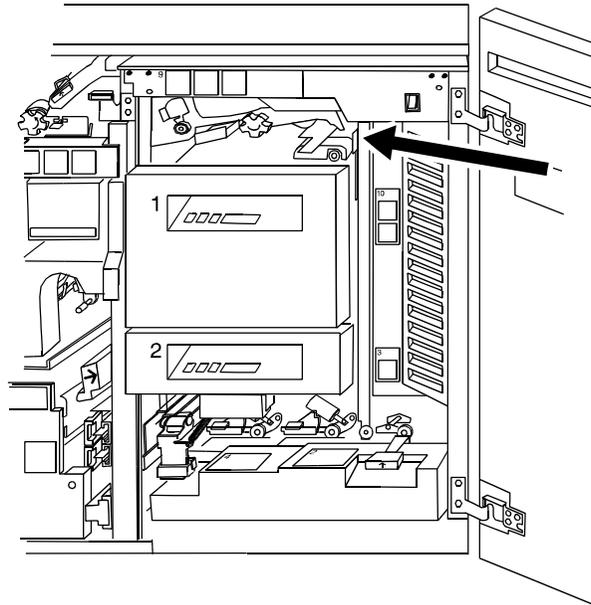


Figure 5-12. Area 10

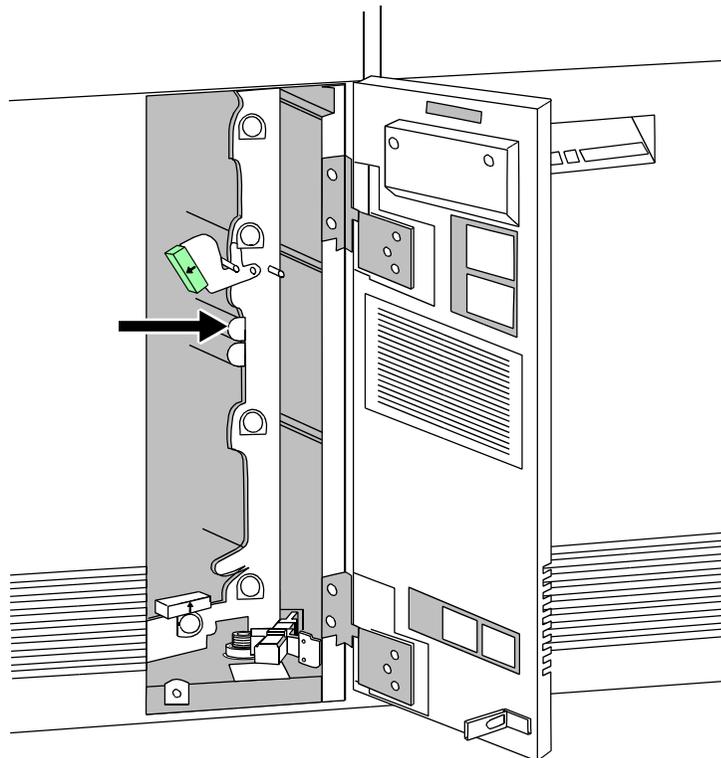


Figure 5-13. Area 11 (all feeder/stackers)

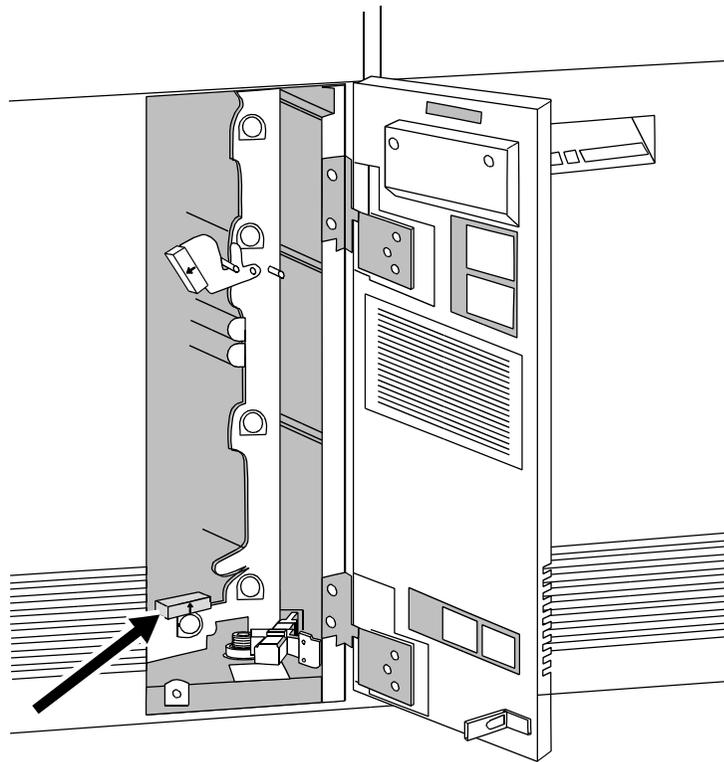


Figure 5-14. Area 12 (all feeder/stackers)

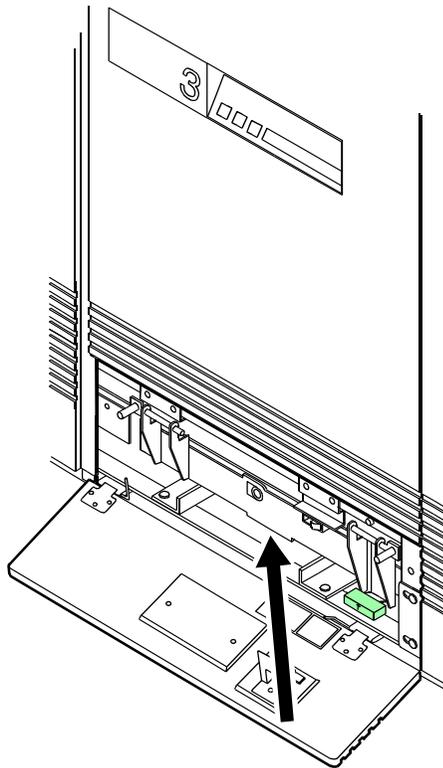


Figure 5-15. Area 13

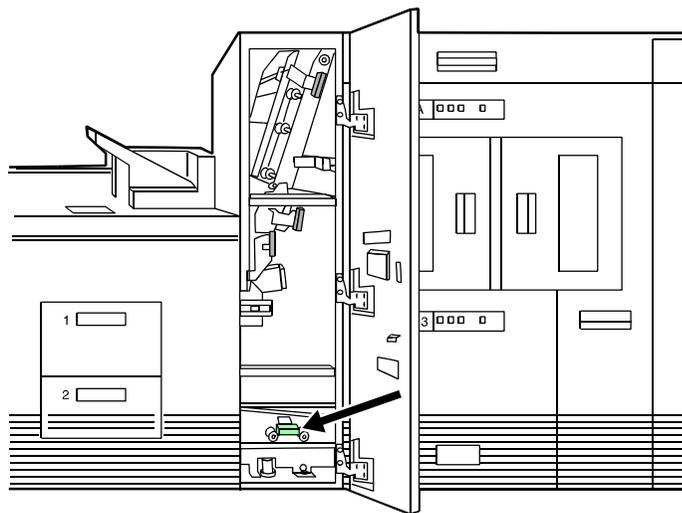


Figure 5-16. Area 14

NOTE: You may sometimes find paper lying on top of area 14, even though there is no message indicating a jam in this area. Discard the paper.

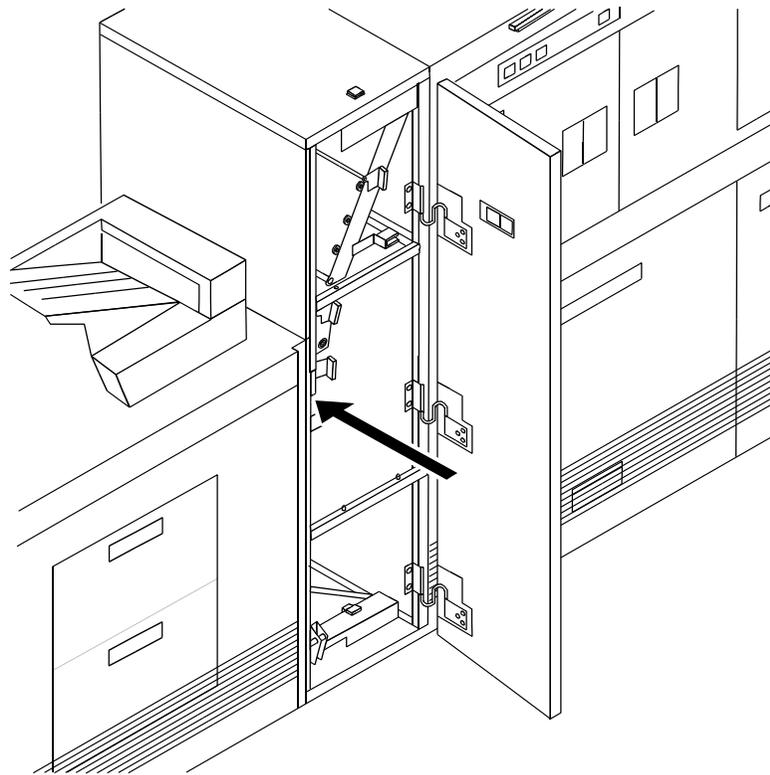


Figure 5-17. Area 15

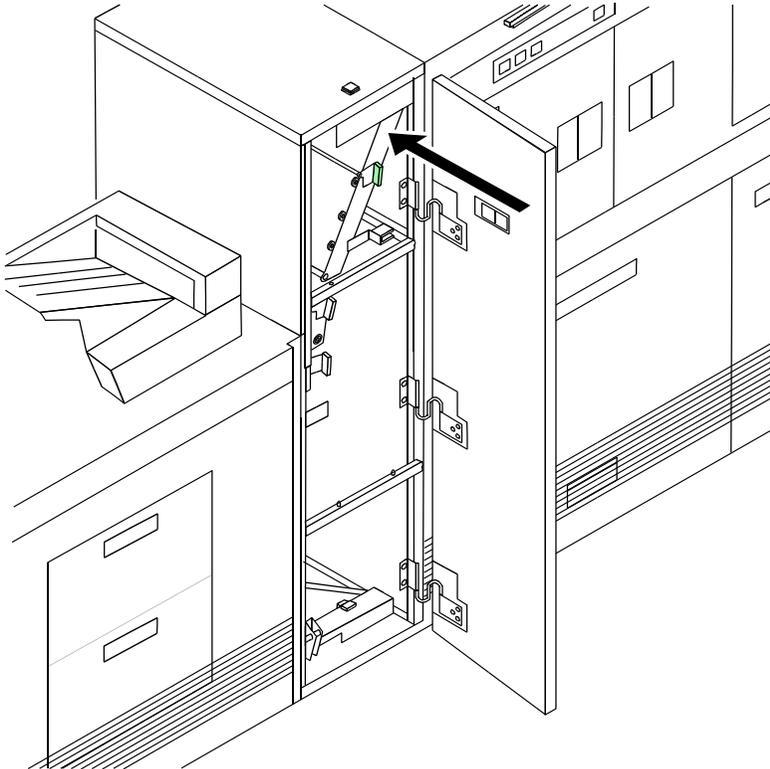


Figure 5-18. Area 16

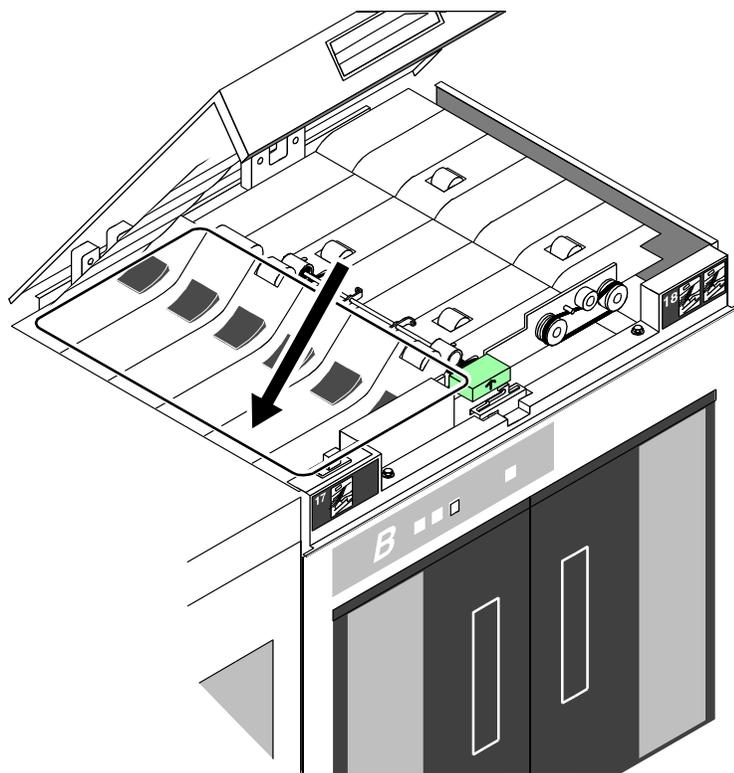


Figure 5-19. Area 17

NOTE: If your printer has frequent jams in this area, you may need to clean the Q1106 sensor.

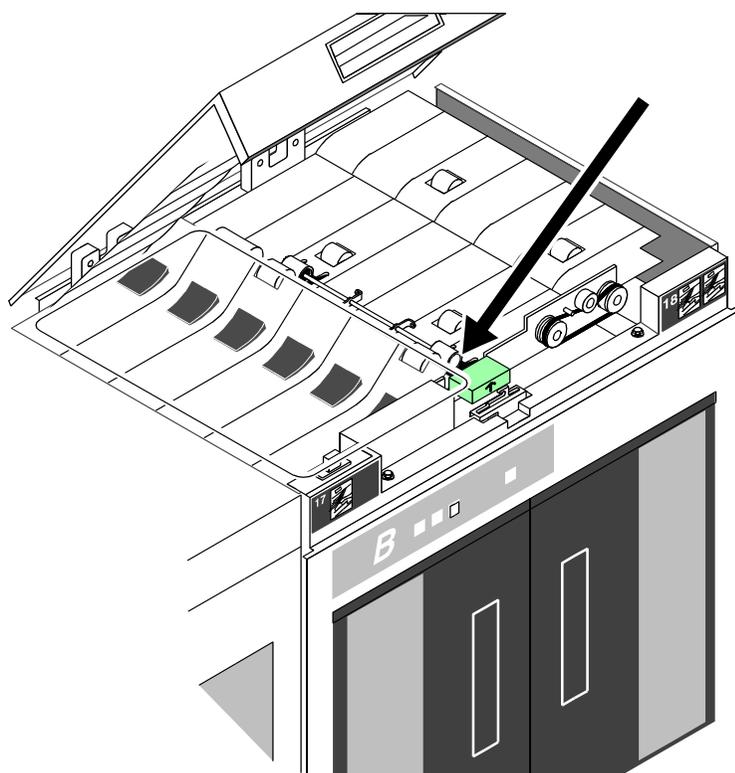


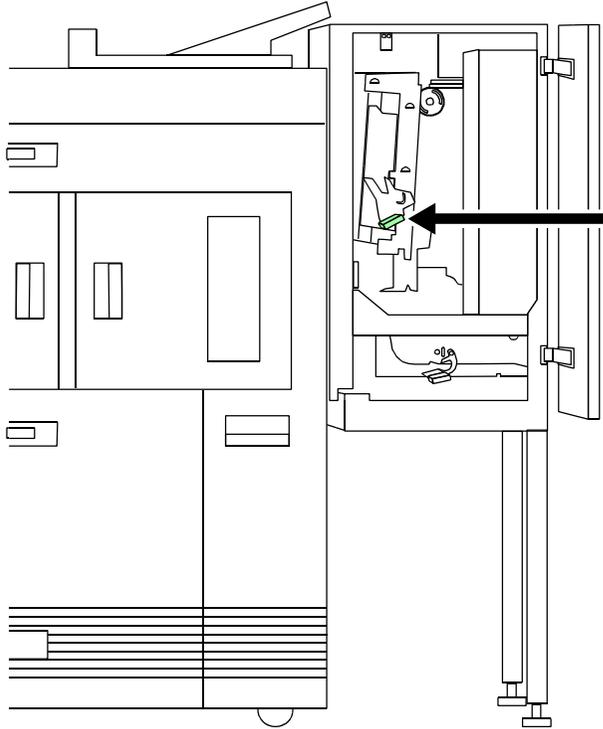
Figure 5-20. Area 18

Points to note for clearing jams in area 18:

- Sometimes the printer control console messages direct you to discard the last sheet delivered to the stack following a jam in area 18. Check for this message when clearing an area 18 paper jam.
- If your printer has frequent jams in this area, you may need to clean the Q1107 sensor.
- If your printer has a bypass transport module, you should check for paper jams in areas 19 and 20 after clearing an area 18 paper jam.

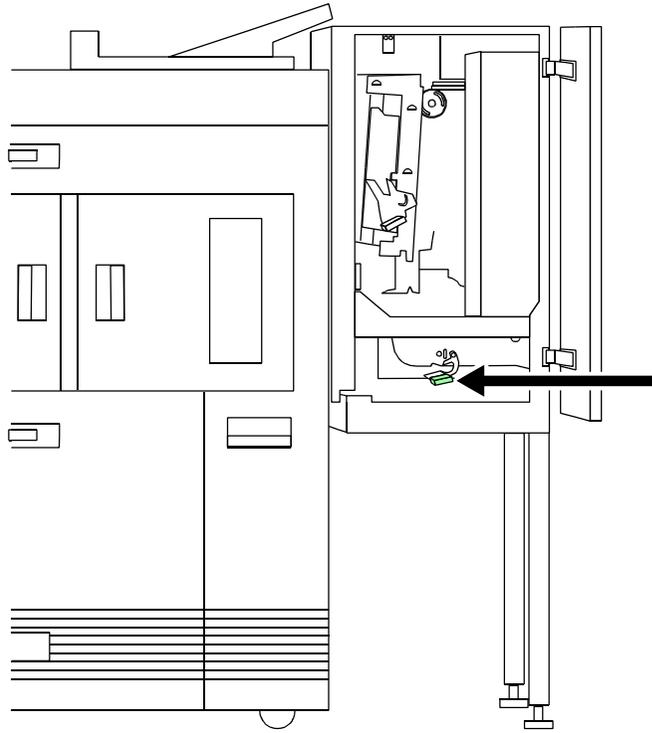
Clearing a paper jam in the bypass transport

1. Open the bypass transport module door.
2. Press the area 19 green lever in the direction of the arrow printed on it.



3. Remove any paper from the exposed area.
4. Press the green lever to the left until the latch catches.

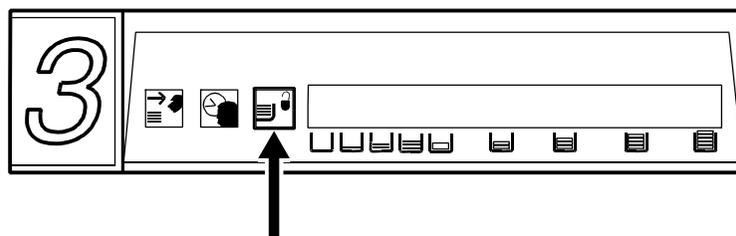
5. Press the area 20 green lever in the direction of the arrow printed on it.



6. Remove any paper from the exposed area.
7. Press the green lever down and to the left until the latch catches.
8. Close the bypass transport module door.

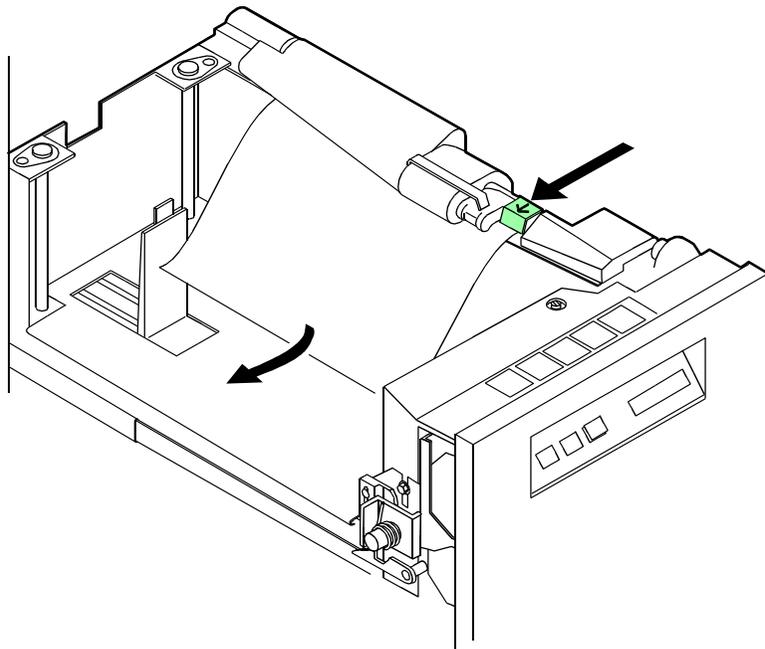
Clearing a misfeed (feeder tray fault)

1. If the Ready to Open indicator is not lit, press the Tray Unlock button located on the feeder tray control panel.



2. When the Ready to Open indicator lights, open the feeder tray. Pull the tray all the way out for best results.

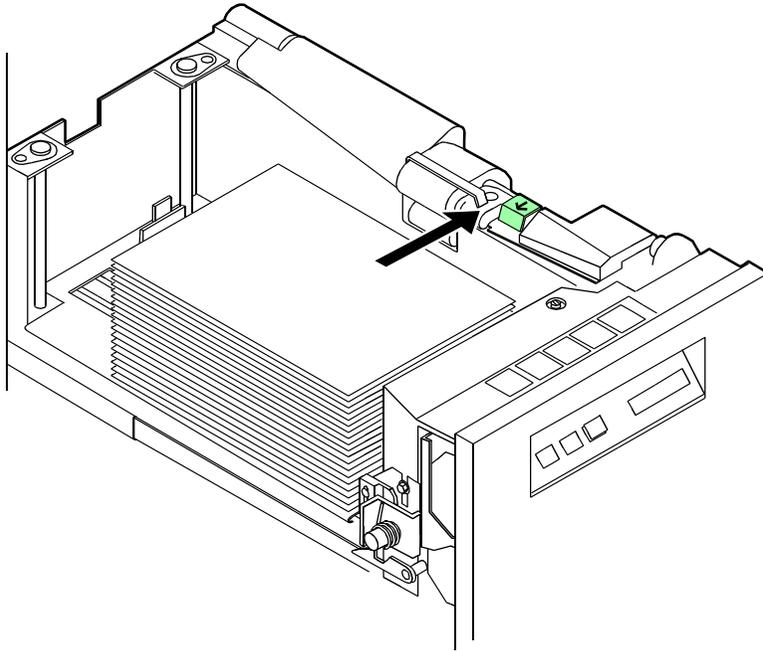
3. For the processor feeder trays, press the green lever to unlatch the paper feeder assembly.



4. Remove and discard any partially fed paper. Ensure that:
 - The paper supply is neatly stacked.
 - The stack is not higher than the MAX line on the length guide.
 - The length guide is firmly touching the back edge of the stack.
 - For the high capacity feeder trays, also ensure the side guide is firmly touching the side of the stack.

NOTE: You do not need to discard transparencies and other stiff materials unless they are damaged.

5. For the processor feeder trays, relatch the paper feeder assembly by pressing the green dot until the assembly clicks into place.



6. Slide the tray back into the printer until the tray latches and press the Continue button to resume printing.
7. Discard any pages sent to the sample tray, purge tray, or unused stacker bin when the misfeed was detected.

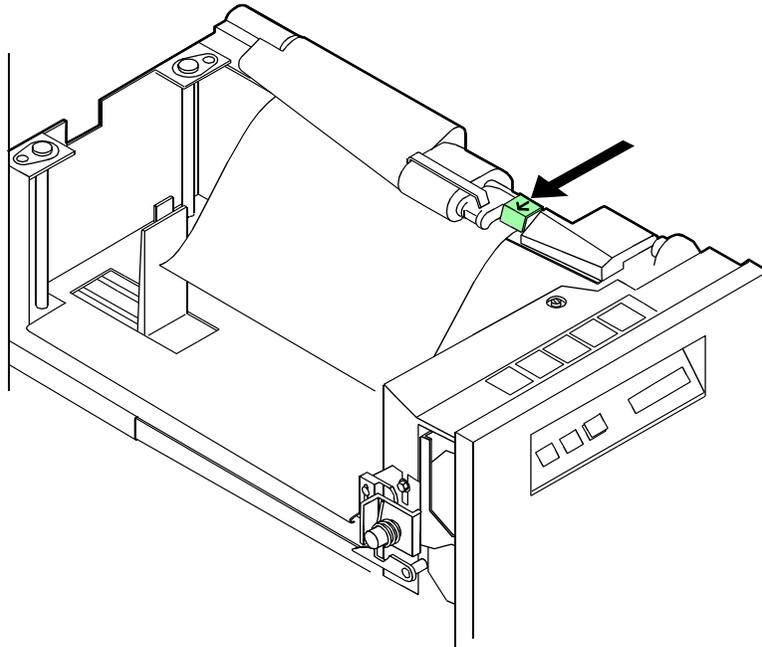
Troubleshooting frequent misfeeds (processor feeder trays)

If the printer misfeeds frequently, the problem may be caused by a glazed feed belt, especially if you notice that one tray feeds the same paper better than another one does. (Glazing is caused by a buildup of the chemicals found on most papers.)

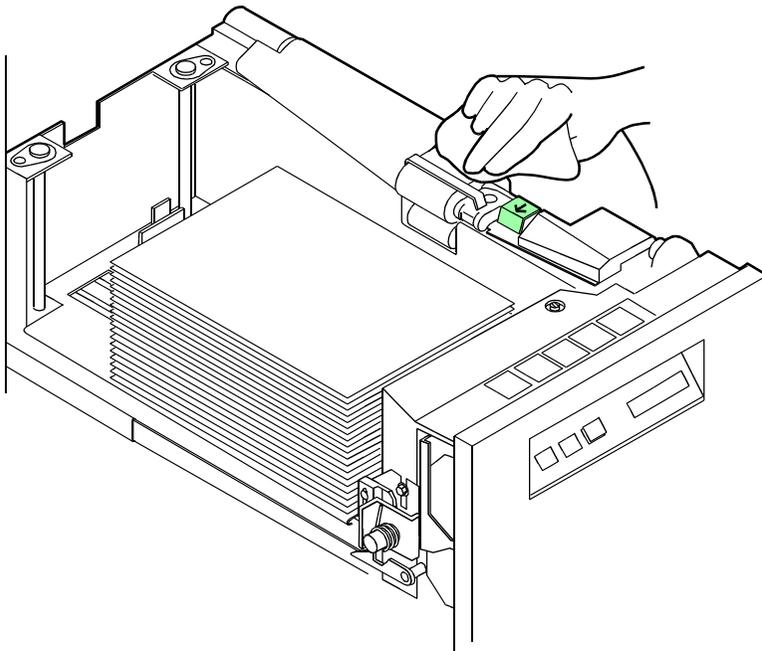
If you suspect this is the problem, cleaning the feed belt may eliminate the need to place a service call.

To clean the feed belt:

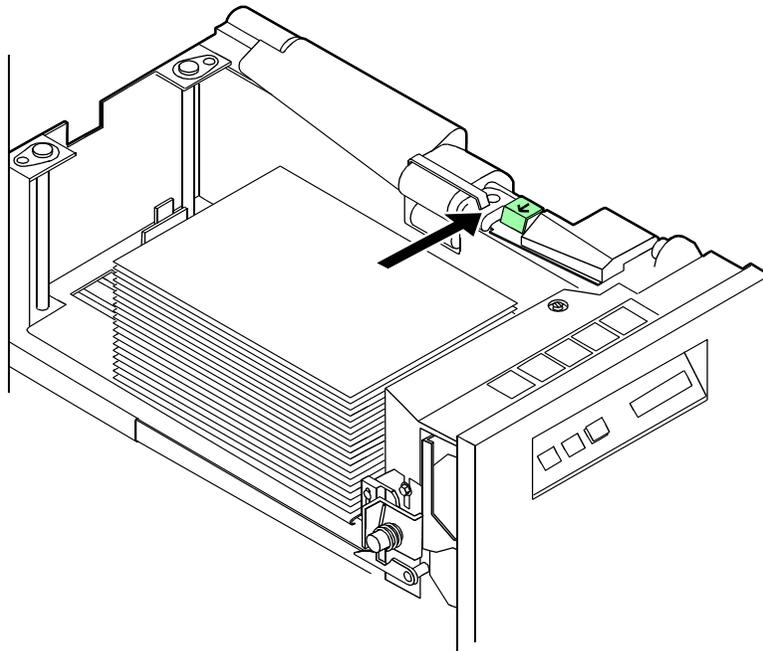
1. Clear any misfeeds that have occurred, but do not relatch the paper feeder assembly. The paper feeder assembly must be unlatched to clean the belt; if necessary, unlatch it by pressing down on the bright green lever on the right side of the paper tray.



2. Lightly moisten a lint free towel with a Xerox recommended film remover and wipe the outside surface of the feed belt thoroughly in the same direction as the ribs on the belt. Wiping from side to side might pull the belt off its track. Allow a few seconds for the film remover to evaporate.



3. Relatch the paper feeder assembly by pressing down on the bright green dot. Slide the paper tray completely back into the printer.



4. Operate the system as usual. If you are still experiencing misfeeds, place a service call.

NOTE: This procedure should be used only to correct a problem, not as a routine maintenance procedure. Because the belts are made of rubber, frequent cleaning with film remover dries them out and causes them to fail prematurely. Film remover may be obtained from your service representative.

Incorrect paper size message

Perform this procedure when printing stops and an incorrect paper size message appears on the printer control console.

1. Check the paper in the indicated tray. If the paper is not the correct size for the job, either load the correct size paper or select another feeder tray containing the correct size paper.
2. If the paper size is correct, press the Continue button to resume printing. The message may have been caused by a damaged sheet.

NOTE: In order to assure good print quality for your jobs, the printer purges any dog-eared or skewed sheets. In addition, the printer may stop and issue an incorrect paper size message.

Generating a test page

You can print the sample test page on paper stock other than USLetter (8.5 by 11 inches) or A4. While the PostScript test image does not cover the entire page when using non-USLetter or A4 sizes, you can still use the test page as a guide in making the necessary alignment adjustments. Fold the test page horizontally and vertically to check whether the folds intersect at the center of the page.

To change the alignment values:

1. Click the Queue Management icon.
2. Right click on the queue to which the job was sent, and select [Properties...] from the pop-up menu.
3. In the Properties window, select the [Alignment] tab.
4. Change the alignment values as needed.
5. Apply your changes by one of these methods:
 - Click [Apply] for the changes to go into effect on the next job.
 - Click [Apply Properties Now] to apply the changes to the current job. The system displays a message stating that the properties were changed and that it will take a little while to make the changes. The printer slows down or stops, then resumes printing. You can pause the printer at this point to check that your changes took affect.

Troubleshooting stacker problems

The following stacker problems may occur during printing.

- **Problem:** Papers are being thrown around in the stacker.

This problem may occur when you have unloaded paper by opening the top cover of the stacker bin.

NOTE: Do not open the top cover of the stacker bin to unload paper.

To remedy this situation, unload the bin following the normal procedure.

- **Problem:** The paper stack is falling over or sliding around in the bin.

This problem may be due to excessive paper curl. Try the following:

- Reduce the paper curl by adjusting the decurler. Refer to the section, “Troubleshooting paper curl problems”.
- Reduce the number of sheets going to the bin.

Troubleshooting paper curl problems

Too much curl in the paper stock can cause paper jams.

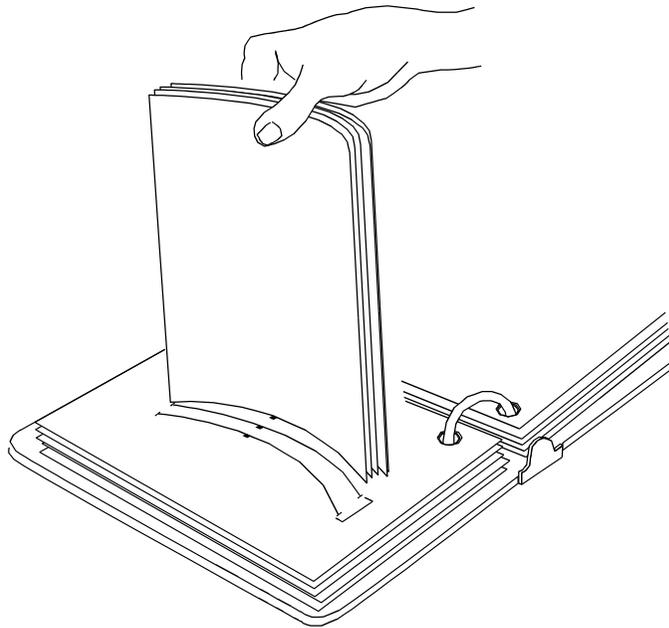
Checking paper curl

You can adjust the decurler lever to correct most paper curl problems. Refer to the paper curl chart, later in this chapter, to determine the amount of curl in the paper stock.

Perform the following to measure paper curl:

1. Print five one sided (simplex) 8.5 by 11 inch or A4 sheets.

2. Hold the printed sheets by the top center of the short edge, keeping the image toward you.



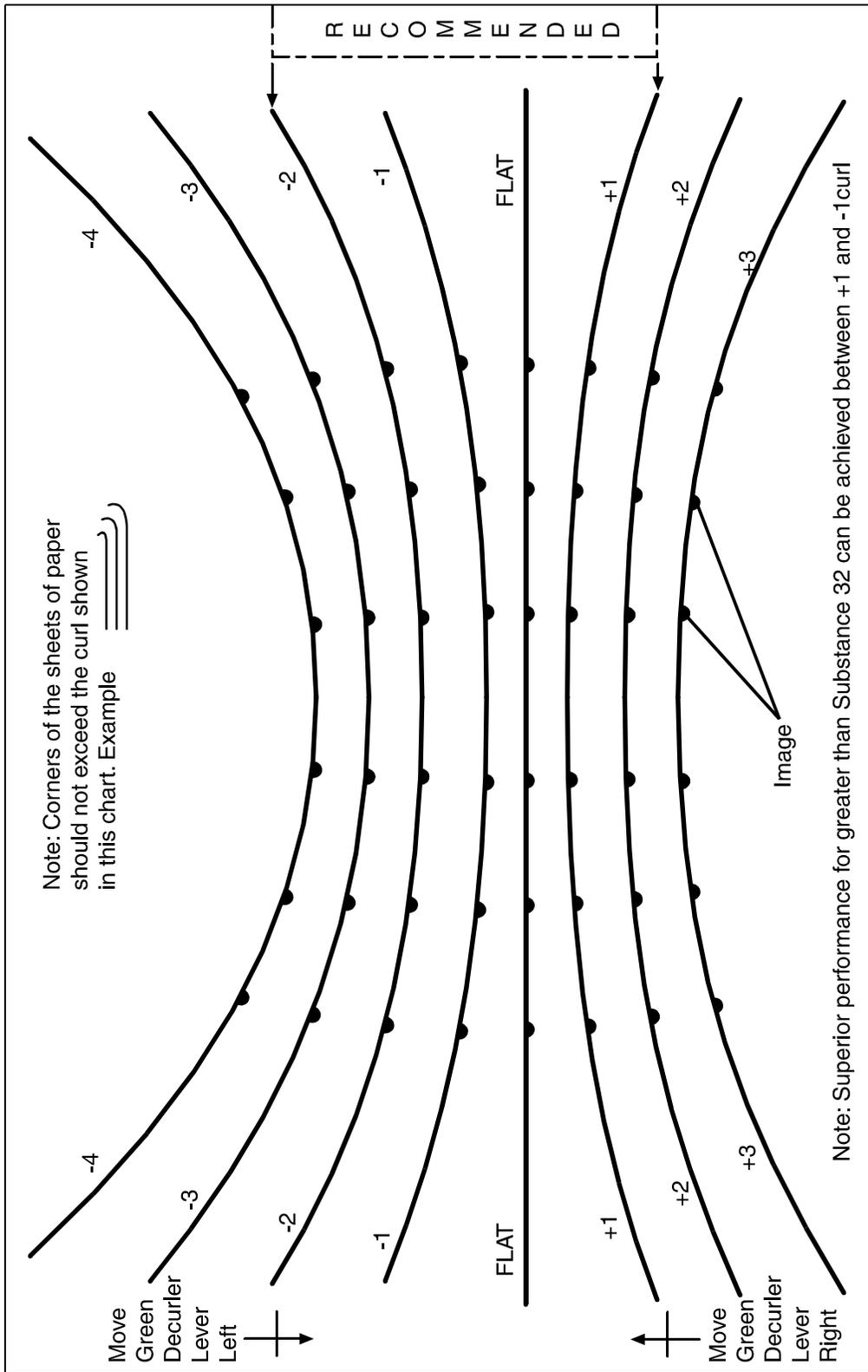


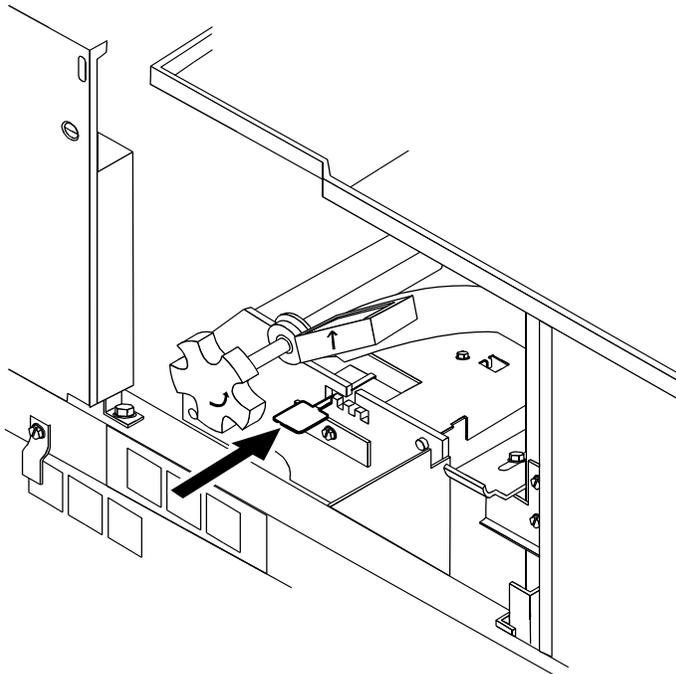
Figure 5-21. Paper curl chart

3. Place the bottom edge of the prints over the paper curl measurement chart on the line that best represents the curve of the sheets.
 - If the curl on the printed paper stock measures between +2 and -2, do not change the decurler setting.
 - If the curl is between +2 and +3, or -3 and +4, adjust the decurler lever.

Adjusting the decurler lever

To adjust the decurler lever:

1. Open the right door of the printer and locate the decurler lever.



2. If the print curl is +2 or more, move the green decurler lever to the right.
3. If the print is -3 or more, move the green decurler lever to the left.
4. If the decurler adjustment does not eliminate the paper curl problem, turn the paper stock over in the feeder tray.
5. If the curl problem persists, perform steps 1 to 4 again.
6. If the problem still persists, load paper from a new ream.

Troubleshooting the 36-track tape drive

Use the following procedures to solve problems with your 36-track tape drive:

- Performing basic recovery
- Troubleshooting initial program load (IPL) failure
- Handling problems with inserting a tape cartridge
- Troubleshooting tape unload problem
- Unload a cartridge after a power failure
- Troubleshooting tape winding completely out of cartridge
- Troubleshooting blank message display
- Troubleshooting tape drive ready problem
- Calling for service

Performing basic recovery

Always try to recover the cartridge from the inch cartridge tape drive before you try to correct any problems with the drive. Follow these basic recovery steps:

1. Take the tape drive offline.
2. If there is a relevant message on the printer control console or controller, perform the action described there.
3. If there is an error code on the tape drive message display, record the error code and time, then call for service.

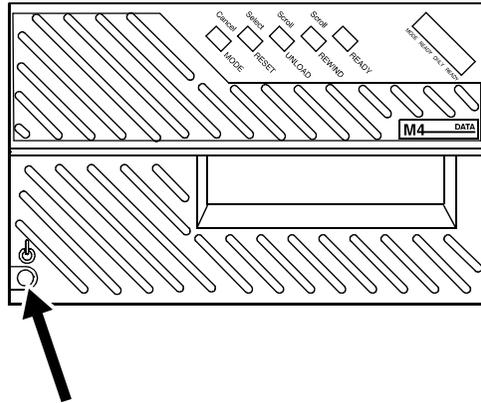
Troubleshooting initial program load (IPL) failure

An error occurred during the IPL procedure if:

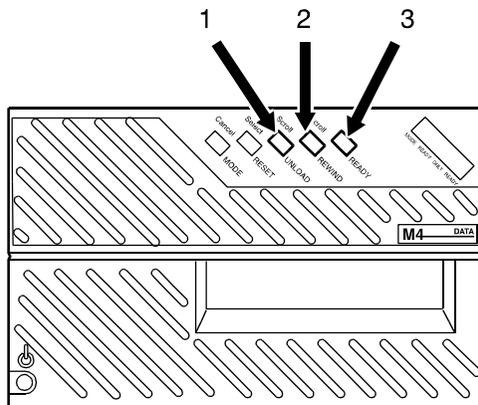
- The three indicator lights (Read only, Ready, and Mode) flash on the 36-track drive.
- An error code displays after you power on the tape drive.

Perform IPL on the tape drive again, using one of the following procedure:

1. Turn off the tape drive by pressing the Power switch to OFF.
2. Wait 10 seconds and power the tape drive on by pressing the Power switch to ON.



3. For the 36-track drive, press and hold the Select, Scroll, and Ready buttons for at least five seconds.



- a. Select button
- b. Scroll button
- c. Ready button

If the Initial Program Load procedure fails again, note the error code and time, then call for service.

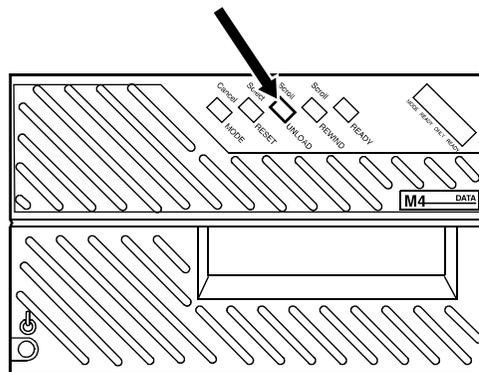
Solving other cartridge tape drive problems

Other problems that may occur with the 36-track cartridge tape drive include the following.

- **Problem:** The tape cartridge does not stay in place after insertion.

Inspect the cartridge for damage.

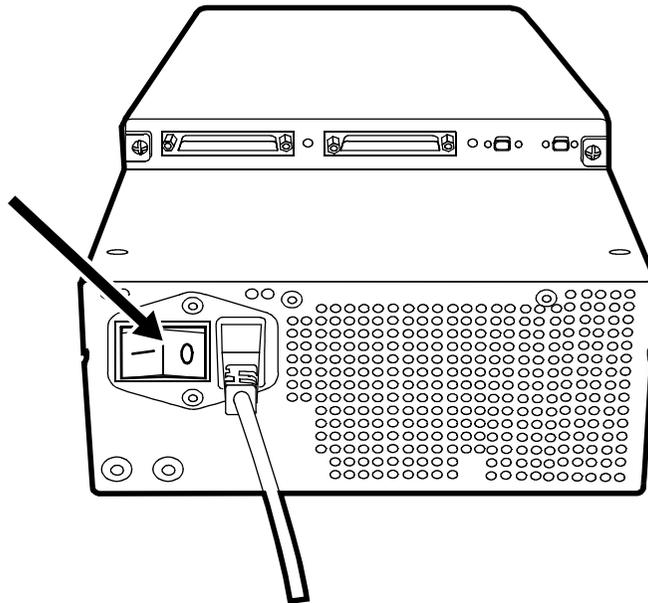
 - If the cartridge is damaged, replace it.
 - If the cartridge is undamaged, but the tape drive does not load it, call for service.
- **Problem:** The tape does not unload when the Unload button is pressed or [Unload] is selected on the Tape Client window.
 1. If there is an error code message on the message display, record the error code.
 2. Press the Unload button.



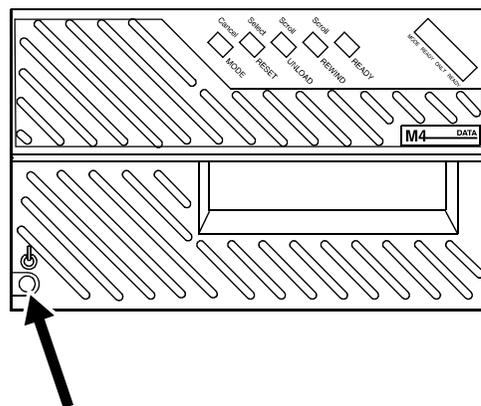
3. Try unloading the tape again.
 4. If the tape still does not unload, record the error code on the message display, record the time, and call for service.
- **Problem:** Unloading a cartridge after a power failure
 1. Power on the tape drive.
 2. Press the Unload button.
 - **Problem:** The tape has wound completely out of cartridge

Call for service. If there is an error code message on the message display, record the code and report it to the service representative.

- **Problem:** The message display is blank.
 1. Ensure that the tape drive is receiving power from the main AC source.
 2. Ensure that the AC power switch on the rear of the tape drive is on.

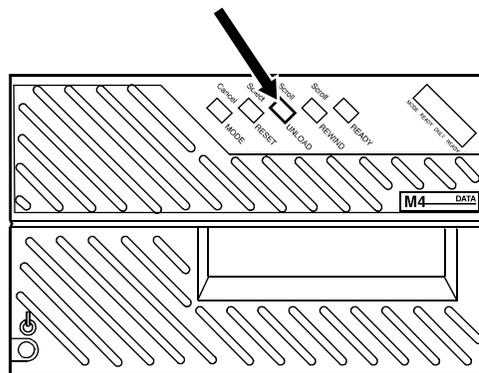


3. Turn the DC power switch OFF(0) and then ON (1).



4. If the display is still blank, call for service.
- **Problem:** The tape drive does not go into a Ready state.
 1. Determine if the tape drive is online by pressing the Scroll button until the message display shows the Status display.
 2. If the tape drive is offline, refer to the section, "Placing the tape drive online" in the "Managing the system" chapter.

3. If the tape drive still is not ready, the cartridge may be inserted incorrectly. Remove the cartridge from the transport and insert it again.
4. If there is an error code message in the message display, record the error code, press the Unload button, and try the operation again.



5. If the tape drive still does not become ready, call for service. If there is an error code message on the message display, record the code and report it to the service representative.

Calling for service

Before calling the Customer Service Support Center, ensure you have read this information and have tried the corrective actions described here. If the problem persists, gather the necessary information (details follow) and call the appropriate Customer Service Support Center phone number. Your site representative can supply you with the telephone number for the Customer Service Support Center in your area.

The correct phone number is attached to your printer at installation time.

Before calling for service, make note of:

- Print/job fault messages, that appear on the controller
- Status messages that appear on the printer control console
- Indicator lights that may or may not be lit
- Status codes that appear in the message display of the tape drive control panel if there is a tape drive problem

Your call is answered by a representative who asks you for your equipment model. You are also asked for:

- Your printing system serial number, which is located on a panel inside the printer, behind the small door on the left

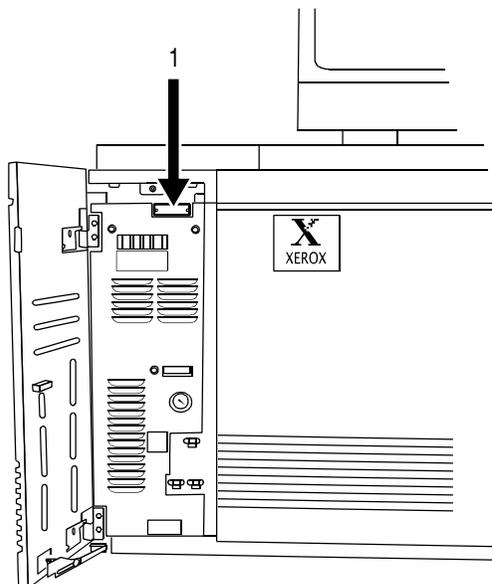


Figure 5-22. Location of printing system serial number

1. Printer serial number

- Your name
- Your company name
- The system condition or status

NOTE: The printer serial number and fault codes can also be seen on the Tools display of the printer control console.

This information is given to a customer service representative who calls you back to discuss the information and gives you an estimated time of arrival or assist you over the phone to resolve the problem.

A. UNIX security

Four accounts are defined for the UNIX environment:

1. **root**: The account that provides superuser access to the workstation. The initial password is set during installation of the operating system.

NOTE: For security reasons, the root password must be changed as soon as Xerox service personnel have completed the installation. The Xerox customer support personnel must have root access to the DocuSP controller in order to provide service and support. Either provide the root password, or ensure that someone with root access is available when service must be performed on the controller.

2. **xrxusr**: The account from which the DocuSP software runs. The default password for this account is xrx123.
3. **ftp**: An account to permit the retrieval of some client software from the DocuSP controller using the TCP/IP communication protocol. This account permits anonymous ftp and does not require a password. The base directory for ftp is set to the directory containing the client software.
4. **Pxrxsvc**: The account for remote diagnostics access for use by Xerox service personnel. The DocuSP controller is accessed via modem.

One new group, **xrxgrp**, is defined to access the DocuSP software.

NOTE: The user and group identifications, uid and gid, that are listed above cannot be changed in the password and group files because the ability of the software to run properly is based on the proper access to the Xerox supplied files.

B. Supplies

Effective management of your printing system requires that you maintain proper inventory levels of paper and other supplies at all times. No one wants to lose production time because supplies are not available when they are needed.

Planning ahead also makes sense from a financial standpoint. It allows you to take advantage of quantity discounts, which can mean very great savings to your company. Your sales representative or supply specialist can help you plan most effectively and economically. The purpose of this information is to give you a summary of the most used paper and the necessary supplies, their order numbers, and how to order them from Xerox.

Available supplies

The table lists the supplies that are available from Xerox for your laser printing system. Use this table to help you determine your supply needs.

Table B-1. Supplies

Item	Description	Supply Number
Paper	Xerox paper quantities are 10 reams (5000 sheets) to a carton unless otherwise noted. The 3, 4, and 7 hole papers marked with an asterisk (*) are drilled with 5/16 inch holes.	
8.5 x 11 inch	4024 Dual Purpose Paper	3R721
A4	4024 Dual Purpose Paper	3R2594
8.5 x 14 inch	4024 Dual Purpose Paper	3R727
8.5 x 11 inch	4024 Dual Purpose Paper 3 hole	3R723
8.5 x 11 inch	4024 Dual Purpose Paper 3 hole*	3R2193
8.5 x 11 inch	4024 Dual Purpose Paper 4 hole	3R1983
8.5 x 11 inch	4024 Dual Purpose Paper 4 hole*	3R3008

Table B-1. Supplies (Continued)

Item	Description	Supply Number
8.5 x 11 inch	4024 Dual Purpose Paper 7 hole	3R1984
8.5 x 11 inch	4024 Dual Purpose Paper 7 hole*	3R3010
8.5 x 11 inch	4024 Smooth	3R2675
8.5 x 14 inch	4024 Smooth	3R2677
8.5 x 11 inch	Dual Purpose Colors, Blue	3R3052
8.5 x 11 inch	Dual Purpose Colors, Blue, 3 hole	3R3068
8.5 x 14 inch	Dual Purpose Colors, Blue	3R3084
8.5 x 11 inch	Dual Purpose Colors, Green	3R3056
8.5 x 11 inch	Dual Purpose Colors, Green, 3 hole	3R3072
8.5 x 14 inch	Dual Purpose Colors, Green	3R3088
8.5 x 11 inch	Dual Purpose Colors, Pink	3R3058
8.5 x 11 inch	Dual Purpose Colors, Pink, 3 hole	3R3074
8.5 x 14 inch	Dual Purpose Colors, Pink	3R3090
8.5 x 11 inch	Dual Purpose Colors, Yellow	3R3054
8.5 x 11 inch	Dual Purpose Colors, Yellow, 3 hole	3R3070
8.5 x 14 inch	Dual Purpose Colors, Yellow	3R3086
8.5 x 11 inch	Dual Purpose Colors, Buff	3R3060
8.5 x 11 inch	Dual Purpose Colors, Buff, 3 hole	3R3076
8.5 x 14 inch	Dual Purpose Colors, Buff	3R3092
8.5 x 11 inch	Dual Purpose Colors, Goldenrod	3R3062
8.5 x 11 inch	Dual Purpose Colors, Goldenrod, 3 hole	3R3078
8.5 x 14 inch	Dual Purpose Colors, Goldenrod	3R3094
8.5 x 11 inch	Dual Purpose Colors, Ivory	3R3064
8.5 x 11 inch	Dual Purpose Colors, Ivory, 3 hole	3R3080
8.5 x 14 inch	Dual Purpose Colors, Ivory	3R3096
8.5 x 11 inch	Dual Purpose Colors, Gray	3R3066
8.5 x 11 inch	Dual Purpose Colors, Gray, 3 hole	3R3802
8.5 x 14 inch	Dual Purpose Colors, Gray	3R3098
8.5 x 11 inch	Dual Purpose Colors, Rainbow Pack (35,000 sheets /carton, 250 sheets/pack)	3R3107

Table B-1. Supplies (Continued)

Item	Description	Supply Number
8.5 x 11 inch	10 Series Dual Purpose Paper	3R2950
8.5 x 11 inch	10 Series Dual Purpose Paper, 3 hole	3R2952
8.5 x 11 inch	10 Series Dual Purpose Paper, 3 hole*	3R3016
8.5 x 14 inch	10 Series Dual Purpose Paper	3R2954
8.5 x 11 inch	10 Series Smooth	3R54
8.5 x 14 inch	10 Series Smooth	3R83
8.5 x 11 inch	4024 Dual Purpose, reinforced 3 hole	3R2057
9 x 11 inch	65 lbs, divider white	3R3428
11 x 17 inch	4024 Dual Purpose Paper	3R729
Transparencies	Xerox transparencies are packaged 100 to a box	
8.5 x 11 inch	Clear, with a white strip on the edge	3R2780
High speed labels (gummed)	All labels are on 8.5 x 11 inch sheets, 1000 sheets to a box.	
8.5 x 11 inch	33 labels per sheet	3R3139
8.5 x 11 inch	24 labels per sheet	3R4474
8.5 x 11 inch	8 labels per sheet	3R4475
8.5 x 11 inch	6 labels per sheet	3R3146
8.5 x 11 inch	1 label per sheet	3R4476
8.5 x 11 inch	Custom form To order call the appropriate telephone number in your area.	
Tab stock	250 sheets per carton	
Straight Collated Singles (5 tab set)	Non-drilled, 90 lbs, Index white	3R4417
	3 hole drilled, 90 lbs, Index white	3R4418
	Non-drilled, 90 lbs, Index blue	3R4425
	3 hole drilled, 90 lbs, Index blue	3R4426
Reverse Collated Singles (5 tab set)	Non-drilled, 90 lbs, Index white	3R4415
	3 hole drilled, 90 lbs, Index white	3R4416

Table B-1. Supplies (Continued)

Item	Description	Supply Number
Cover stock		
8.5 x 11 inch	65 lbs, blue	3R3044
8.5 x 11 inch	65 lbs, white	3R3041
Dry ink	Packaged 3 cartridges per carton. (Consumption rate is approximately 180,000 pages per carton for 8.5 x 11 inch paper at 7% coverage.)	6R206
Dry ink, MICR	Packaged 3 cartridges per carton. Consumption rate is approximately one cartridge per 60,000 pages.	6R819
Dry ink waste bottle		93K460
Developer	Packaged 2 bottles per carton. Effective life is approximately 1,000,000 pages per carton. (2 bottles required for replacement.)	5R161
Developer, MICR	Packaged 2 bottles per carton. Effective life is approximately one carton per 600,000 pages. (2 bottles required for replacement.)	5R573
Fuser agent	Packaged 1 bottle per carton. (Consumption rate is approximately 250,000 pages per liter.)	8R2955
Cleaning supplies	1/2 inch cleaning cartridge. Call the appropriate telephone number in your area to order.	8R3635
	QIC Tape Drive Head Cleaning Kit	9R88432
	Foam-tipped swabs	99P87256
	Lint free towels	35P2163
	Hub and Transport Cleaner	99P87486
Containers		
8.5 x 11 inch	Base	9R1103
	Pallet	9R1104
11 x 17 inch	Base	9R1105
	Pallet	9R1106
QIC blank cartridge	150 MB blank cartridge tape 8 GB blank cartridge tape	9R84168 109R00510

How to order supplies

Call the appropriate telephone number in your area to order supplies. Your site representative can supply you with the telephone number for ordering supplies in your area.

Give the representative the following information:

- Your Xerox customer number (which is supplied by your Xerox representative). Your customer number is also included on your Xerox invoice.
- Your equipment model number: DocuPrint 180 EPS, for example
- Item description (Refer to “Available supplies,” earlier in this chapter.)
- Quantities required for each item
- A purchase order number, if that is the method of payment used by your company

Glossary

This glossary contains a list of terms for working with the Xerox DocuPrint 100/115/135/155/180 EPS, and a definition of each.

- A3** Paper size measuring 297 by 420 mm.
- A4** Paper size measuring 210 by 297 mm.
- abort** To terminate a program, printing, or nonprinting execution before it is completed.
- access** To retrieve stored information when it is requested.
- account** A way to identify a job. An account can consist of a mixture of letters, numbers, and symbols. If an account is not entered, the system indicates "none specified."
- AIM** Ancillary IOT message processor. System task that initializes the client layer between the printer and the controller. It also displays the Fault, Hint, and information messages.
- algorithm** Computational procedure that can be repeated any number of times.
- alignment** Positioning of an image on a page for printing.
- alphanumeric** Set of characters including the letters A through Z, numerals 0 through 9, and all printable special symbols.
- API** Application Programmatic Interface. An application protocol for exchanging data between applications in synchronous (online), asynchronous (store and forward), or batch (file transfer) mode. APIs are fundamental building blocks of distributed client/server applications.
- AppleTalk** Network communication protocol inherent to the Apple Macintosh operating system. The AppleTalk protocol for operating over Ethernet is called EtherTalk.
- applications software** Host or LPS resident software that directs the computer to perform specific tasks or functions as opposed to the software used to operate the computer. Common business applications include payroll, accounting, and inventory.
- architecture** See network architecture.
- archive** To send, to move, or to copy data to other media, for long term storage.

argument	Any character or string of characters that are separated by spaces or tabs after the command in a command line.
ascender	Portion of alphabetic character that rises above the body of the character (its x–height portion). See also descender; x height.
ASCII	American Standard Code for Information Interchange. Standard 7 bit code that represents alphanumeric information. Each alphanumeric character and several nonprinting characters are assigned a binary number, covering 128 possible characters. It is used for information interchange among data processing systems, data communication systems, and associated equipment.
asynchronous	Transmission in data communications controlled by start and stop elements at the beginning and end of each character. Thus, time intervals between transmitted characters may be unequal in length.
audit log	Captures the sheet delivery information for every page in an audited report, certain details about each sheet, the planned and actual report control totals, and waste management.
auxiliary menu	Menu that contains options not displayed in a window. The symbol for an auxiliary menu is a box containing three horizontal lines.
B4	Paper size measuring 250 by 353 mm (ISO) or 257 by 364 (Japan).
background	An underlying area on which objects such as controls and windows are displayed.
background job	Low priority job, usually batched, that is executed automatically as system resources become available.
backup file	File copied to a storage medium for safekeeping in case the original is damaged or lost.
band	Area in printer memory into which an image that is sent to the printer from a computer is divided.
banner page	A page printed with each print request that shows the user who submitted the print request, the request ID, when the request was printed, and other information about the printed job.
batch processing	Allows for repetitive operations to be performed sequentially on batched data without much involvement of the computer operator.
bind	To join printed pages and covers in order to form a book.

binary	Numbering system based on 2 that uses only the symbols 0 and 1. Binary is used in computers and related devices since information can be represented with electric pulses (0=off, 1=on). Most computer calculations are binary.
binary digit (bit)	In the binary numbering system, either of the characters 0 or 1. The "bit" is the base unit of information used by computers. It can take the form of a magnetized spot, an electric pulse, or a positive or negative charge. A sequentially stored set of bits represents a character on a computer. Multipliers are: 1 or 0 byte = 8,192 bits kilobyte (KB) or 1,024 bytes = 8,388,608 bits. Computer space equivalents are: 1.5 KB = about 1 single spaced typed page 30 KB = about 20 typed pages 150 KB = about 100 typed pages
binary synchronous transmission	Data transmission in which synchronization of characters is controlled by timing signals generated at the sending and receiving stations.
bit	Abbreviation for binary digit, the smallest unit of information recognized by a computer. See also binary digit.
bit mapped	Display image generated bit by bit for each point or dot. A software driven scanner is used to create characters or graphics.
bitmap	An electronic image. It is comprised of a matrix of picture elements (pixels or dots), where a bit value of one means that the picture element is imaged, and a bit value of zero means that the picture element is not imaged. The number of picture elements in a square area is a function of the display device resolution.
blocking	Process of combining two or more records into a single block of data which can then be moved, operated upon, or stored, as a single unit by the computer.
block length	Number of characters or bytes contained in a block of data (the block is treated as a unit within the computer). Block length is usually invariable within a system and may be specified in units such as records, words, computer words, or characters.
boot	To load the initial instructions of a program into computer memory; these instructions then direct the loading of the rest of the program. Booting may require entry of a few commands at the keyboard or the flip of a switch to begin the process.
bps	bits per second. In serial communication, the instantaneous bit speed with which a device or channel transmits a character.

BSC	binary synchronous communication. 1. Communication using binary synchronous line discipline. 2. Uniform procedure using a standardized set of control characters and control character sequences for synchronous transmission of binary coded data between stations.
buffer	Compartment of memory in which data is stored during transfer from one device to another. This is useful for accumulating data into blocks before storage or processing and for adjusting differences of speed between devices, or between a device and a communicating facility.
button	A one choice element of a control area or a menu. Buttons are used to execute commands, display popup windows, and display menus
Bypass Transport	Optional module that moves paper from the last stacker bin to a finishing device.
byte	Fixed number of bits (in data processing, usually 8) operated upon as a unit. A byte may represent a character, a machine instruction, or some other logical unit of information.
cache	A small, fast memory area that holds the most active part of a larger and slower memory.
carriage return	Control character that causes the printing system to start printing at the left margin of the current line unless set to be interpreted as a line end.
case sensitive	Treating lowercase and uppercase characters differently.
caution	A notice to the user that alerts to the safety information that will prevent damage to the equipment or to a software file.
channel	1. In data communications, a path or line that enables two or more devices to communicate (sometimes called a circuit, facility, or link). 2. In computers, a path for communication between the central processing unit (CPU) and input/output units, or between the CPU and peripheral devices.
character	Single printable letter (A through Z), numeral (0 through 9), symbol (& % #), or punctuation mark (, . ! ?) used to represent data. Characters can also be nonprinting, such as space, tab, or carriage return.
character cell	Digitized space containing a single character within a font set.
character code	Code representing alphanumeric information, for example, ASCII.
character code identifier	Code associated with the universal identifier "Xerox" to indicate the version of the Xerox character code standard used to code Interpress strings.

character set	Number of different characters used by a particular device, including alphabetic, numeric, and special characters such as symbols.
click	To press a mouse button once and release it without moving the pointer.
client	A person, or person and workstation, or a logical process that initiates some service, and that benefits from the service having been provided
client layer	The software interface used by the AIM task and the Output task to communicate with the printer, allowing printing commands and fault and status information to be exchanged.
client software	The software that enables the submission of print jobs to the controller.
clocking	A method of synchronizing the sending and receiving of data communications devices. Clocking allows synchronous transmission at high speeds.
cluster	Group of paper feeder trays, usually containing the same size and type of paper (stock). Each cluster has a name, consisting of one to six alphanumeric characters. See also stock; stockset.
CME	copy modification entry. Entry modifying the output printing characteristics of a report on a copy basis.
code	1. Set of symbols representing data or instructions to a computer. 2. To write a list of instructions (software) to cause the product/system to perform specified operations.
code conversion	Translation of one type of character or symbol code to another.
collate	To arrange or assemble into ordered sets.
column	Vertical arrangement of characters.
command	User instruction to a computer, using the controller keyboard. Commands are words, mnemonics, or characters that cause a computer to perform predefined operations. Coded instruction to a computer or computer based system.
command language	Set of commands that can be used for a system, such as how the system can be instructed to perform a task.
command line	A string of statements with possible arguments that you enter to instruct the system to perform an operation or series of operations.
comment	Explanations written with program instructions. They are ignored by the computer.

communication line	Telecommunication line connecting devices at one location with devices at other locations in order to transmit and receive information.
communication link	Physical means, such as data link, connecting one location to another to transmit and receive information.
communications	Ability of two devices to transmit information to each other.
compatibility	Characteristic of computer equipment permitting one device to use the same information or programs as another device without conversion or code modification.
compiler	Software that translates instructions written in high level language into machine language for execution by a system.
computer	Functional unit capable of performing substantial computations, including numerous arithmetic or logic operations without human intervention during a run.
computer language	Computer oriented language consisting solely of computer instructions. See also machine language.
computer system	A Central Processing Unit (CPU) with main storage, input and output channels and devices, control units, and external storage devices connected to it.
concatenate	To connect or link in a series, as when files are grouped together for faster processing. See also job concatenation mode.
console	Functional unit containing devices used by an operator to communicate with an operating system. It may consist of a display, keyboard, and certain switches or other controls.
consumable supplies	Supplies such as paper and dry ink that are depleted (used up) during the course of normal printer operation.
continuous printing	Refers to Interpress job integrity under any of the following conditions: excessive graphics, forms, or font use problems.
continuous tone image	A photograph, rendering, or other similar image consisting of gradual flows of gray tones or color tones without definable edges
constraint	A condition that limits a solution to a problem.
control program	Program that supports the operating system by monitoring the flow of jobs, tasks, processing, and so on, within the system; for example, a data communication program.
controller	Part of the LPS that provides interfacing capability, data handling, formatting, buffering, and operator control for the system.
coordinate	Point on the x and y axis that determines a grid position.

copy	To duplicate data in a new location or on an additional storage medium, for example, to copy files from disk to tape.
copy sensitive	Term used to indicate jobs in which multiple copies of a report contain different data, as with paychecks and banking statements.
cpi	characters per inch. Designates the number of characters per inch for a particular typeface. See also pitch.
CPU	central processing unit. Interprets and executes instructions, performs all operations and calculations, and controls input and output units and auxiliary attachments.
daemon	A task that runs continually in conjunction with the UNIX operating system that periodically checks for specific conditions or logical events and performs some action if the conditions are met. The task can be used to display and notify the operator of such conditions.
data	1. In general, facts, numbers, letters, symbols, and so on, which can be processed or produced by a computer. 2. In data processing, the source data or raw data entered for processing, as opposed to the results obtained by processing.
data communications	Transmission and reception of encoded information over telecommunication lines.
data file	Collection of related data records organized in a specific manner so that each record is similarly structured, for example, a payroll file set up with one record for each employee, last name first, indicating the rate of pay and all deductions.
data processing	Operations carried out on data by means of algorithms and programs to produce information or a specific result. The rearrangement of data into a suitable form for further use.
data rate	In data communications, the rate at which a channel carries data, measured in bits per second (bps).
data storage	Preservation of data on various media, for example, tape, disks, magnetic bubble memory, and so on.
data stream	The format of data passed from one device to another.
data transmission	Transmission of coded data over telephone or other telecommunication lines.
database	Information to meet specific processing and retrieval needs. Generally applies to integrated file of data, arranged for access by many subsystems.
debug	To detect and correct errors in a program.

DECnet	A communications product offered by Digital Equipment Corporation.
decompose	To break down into component parts, such as when Interpress breaks down a Font Interchange Standard (FIS) master to compile font information.
decomposer	A controller subsystem that generates the bitmap image that is based on the PDL file.
Decomposition Service	A process within Print Service that allows, through the use of various applications and options, saving of files on the controller as TIFF image files.
decurler	A component of the Printer. The decurler removes the excess curl in the paper.
default	Value assigned to a field by the system. Default fields may be used for such items as document formats, menu selections, input fields, font selection, and paper or image size. The default value of a field may be changed.
descender	Portion of alphabetic character that extends below the baseline. See also ascender, x height.
desktop	Basic display screen of the PC UI.
device	Any piece of equipment that accepts PDL jobs and provides output resulting from those jobs. A laser printer capable of interpreting PDL and outputting text and images is a device. Equivalent terms for "device" in this supplement are "printer," "printing device," "output device," and "raster device."
device dependent	A feature associated with a particular model of device. Device dependent features result in output appearance varying from one printing device to another.
diagnostics	The programs that are used to diagnose problems within the system or to help service personnel pinpoint the source of such problems.
digitize	To express or represent data in digital (binary) form so that it can be processed electronically.
directory	Logical grouping of files and subdirectories that are identified by name.
disk drive	Device that can read or write magnetic media.
display	Viewing device (monitor) that visually communicates system warnings, status, and error messages and reflects operator interaction with the system on a display.
dithering	The process in electronic printing that uses dot patterns to simulate shades of gray or tones of a color.

DJDE	Dynamic Job Descriptor Entry. Command within an input data stream used to modify the printing environment dynamically.
DMR	Command parameter that designates a Digital Equipment Corporation host system.
document	1. Data medium and the data recorded on it, usually permanent, which can be read by you or a computer. 2. Collection of information pertaining to a specific subject or related subjects.
double click	To press the mouse button twice quickly as an accelerator that performs a specific function without using a menu.
DocuSP	The Xerox application software that is running on the Sun workstation which becomes the interface connection between the client and the printer.
DOS	Disk Operating System. An operating system that is commonly used on personal computers. See also Operating system
dot	Unit of measurement representing a fraction of an inch, for example, 300 dots per inch (dpi). It may also be referred to as a picture element (pixel) or spot.
download	To copy files using communication lines from the host onto LPS system disks.
dpi	Dots per inch.
drag	To press and hold the mouse button down while using the pointer to move the object on the screen.
dry ink	The minute particles of resin and carbon black toner which are deposited and fused onto the page to create images.
duplex printing	Printing on both sides (front and back) of a page. See also simplex printing.
EBCDIC	Extended Binary Coded Decimal Interchange Code. Coded character set consisting of 8 bit coded characters. It can accommodate 256 characters.
edgemarking	Use of graphic objects, usually lines or boxes, that bleed off the edge of the physical page. See also physical page.
electronic publishing	Integrated production of documents on demand, using digitally stored documents, computerized composition, and electronic printing systems.
elite	Smallest size standard typewriter type: 12 characters per horizontal inch. See also pica.
embedded blanks	Blank spaces within a command line.
enter	To supply a name, a number, or a value into an entry box or text field.

error message	message displayed on the system or printed on an error page, informing you of an error or a fault that occurred with the processing of a job.
error page	A page printed at the end of a print job that includes any error messages, if any occurred.
Ethernet	The network architecture standard consisting of a coaxial cable and associated components for connecting workstations to each other, to file servers, and to peripherals. This communication system enables workstation users to share information and services.
EtherTalk	Hardware interface and network management software for Apple Macintosh computers that provides connection to an Ethernet network.
extended metrics	Measurements used in Interpress to alter the size of fonts, allowing more precision with character escapement. Used for rendered characters.
extension	Portion of a filename that follows a period. In some instances the extension identifies the file type. For example, .ps could specify a PostScript file.
fault	A condition which prevents proper processing of a print job and requires the intervention of an operator. For example, a paper jam is a fault.
FCB	forms control buffer. Buffer for controlling the vertical format of printed output.
FDL	forms description language. LPS resident source language used for designing electronic forms. See also FSL; form.
field	1. Part of a record that serves a similar function in all records of that group, such as name and address field. 2. Area or setting of practical activity or application.
file	Set of records or text that can be stored and retrieved. An organized, named collection of records treated as a unit. For offline, it is the data between the two tape marks. For online, it is the data between banner pages.
file of files	Sometimes referred to as FOF. An ASCII text file, consisting of a number of TIFF files or of a number of ASCII files to be printed as one job.
file protection	To prevent the contents on a disk or tape from being erased or written over by disabling the write head of a unit.
filename	A name of a file or a directory.

fill	The PostScript graphic operation in which the inside of a shape is painted with some color, such as black or a pattern.
finishing	The operations that are performed after a document leaves the press. For example, binding the documents is a finishing operation.
firmware	Permanent programs stored in read-only memory (ROM).
FIS	Font Interchange Standard. Standard that defines the digital representation of fonts and character metrics for the generation of an entire series of Interpress fonts.
fixed disk	A disk drive that is mounted within a computer and is not removable.
fixed font	Font containing characters with fixed spacing. See also proportional font.
fixed pitch	Font set in which every character cell has the same width. In reference to character sets, this term describes typefaces in which all character cells are of equal width. Monospaced as opposed to proportional spaced.
fixed spacing	Arrangement of characters on a line so that all characters occupy the same amount of horizontal space.
floating accent	Nonspacing accent characters that can be combined with characters and printed as a composite.
font	A complete set of alphanumeric characters and symbols that have common characteristics such as style (typeface), point size, weight, and stress. Computers store font images in data files, defined in either bitmap or contour format. For example, 10 point Helvetica Light Italic.
form	1. Compiled forms source library (.FSL) file. 2. Printed or typed document with blank spaces for inserting information. Specific arrangement of lines, text, and graphics stored in a computer under an identifying name. Page of data that, when preceded by proper commands, is stored on the system disk as a permanent file. It may be merged with variable data by a form start command. See also FDL; FSL.
form feed	Keyboard or printer control character that causes the printer to skip the top of the next page.
format	1. Layout of a document, including margins, page length, line spacing, typeface, and so on. 2. In data storage, the way the surface of a disk is organized to store data. 3. To prepare the surface of a disk for acceptance of data.
FormMerge	An application within the decomposition service used to merge one page of form with one page of data.

frame	The unit of data within a packet whose specifications are defined by the network architecture and network communications protocol. See also packet
frame buffer	An internal representation of the image that is printed on the page by the device. The frame buffer collects and stores pixel values for use by the laser printing device.
FSL	forms source library. Uncompiled collection of user created files containing FDL commands. Refer to FDL; form.
FTP	File Transport Protocol. A network protocol layer for reliably transferring files over a network, built upon TCP/IP.
function keys	Keyboard keys that produce no character but initiate a particular machine function, such as delete.
fuse	To affix dry ink to paper by heat or pressure or a combination of both.
fuser wrap	A printer fault condition in which a sheet of paper sticks to the fuser roll and curls around it, causing a paper jam.
gateway	A network switching device that is used to connect incompatible networks.
GCR	group code recording mode. Refers to the specific density of data (such as 6250 bpi) as it is recorded on tape, which is measured in bits per inch (bpi).
glyph	An identified abstract graphical symbol independent of any actual image.
Graphical User Interface (GUI)	The GUI is a means of input/output that allows users to interact in a more intuitive and effective way. GUIs consist of windows, icons, and pull-down or popup menus.
graphics	Use of lines and figures to display data, as opposed to using text.
gray scale	The image in which each picture element (pixel or dot) is defined as a gray value as opposed to simply black or white. An image file may contain different numbers of gray values depending on its resolution. A halftone screen is applied to gray scale images to prepare them for printing on devices that are capable of printing only solid black dots.
grid	Imaginary pattern of evenly spaced horizontal and vertical lines on a page.
grid unit	Smallest rectangle enclosed by horizontal and vertical lines on a grid. The size of a grid unit is expressed as the length of one side of a rectangle.

half bitting	A control that simulates a partial change in position of a pixel by printing every other pixel and allowing the printer to smooth out the ripples. The effect is the peaks and valleys of the pixels are smoothed.
halftone screen	A tool used in offset printing, typesetting, and laser printing to convert a continuous tone (such as photographic) image to dots, which allows the image to be rendered accurately in these printing processes.
hard disk	See fixed disk.
hard values	Nonoptimal adjustment of particular FIS fonts in terms of point size and orientation.
hardcopy	Machine output in permanent form, such as printed reports, listings, and so on. Output in a permanent form (usually on paper or paper tape) rather than in temporary form, as on a display. Contains readable printed copy of machine (for example, computer) output.
hardware	Physical components, such as mechanical, magnetic, and electronic elements of a system, as opposed to programs, procedures, rules, and associated documentation. Hardware is operated by software and firmware.
HCF	high capacity feeder. Feeder tray capable of holding 2500 sheets of 20 pound/75 gsm paper. The high capacity feeder trays are the primary paper supply for the printer. They are located in the bottom half of the feeder/stacker modules.
HCS	high capacity stacker. Stacker bin capable of holding 2500 sheets of 20 pound/75 gsm paper. In the LPS, the high capacity stacker bins are located in the top half of the feeder/stacker modules.
header page	See banner page
head to head	To print the reverse side of a sheet so that the finished document has a booklet format.
head to toe	To print the reverse side of a sheet so that the finished document has a calendar format.
hexadecimal	Numbering system with a base of 16. In this system, 10 through 15 are represented by A through F, respectively.
hierarchy	Relative priority assigned to arithmetic or logical operations that must be performed.

high level language	Language consisting of words and symbols that are close to normal English and, therefore, readily understandable by the user. High level languages are oriented to problems or commercial procedures and are the source languages for most programs.
highlight	A visual indication that an object is in a special state. Often used to denote that an item is selected.
host	Computer accessed by users which serves as a source of high speed data processing for workstations with less computer power. See also mainframe.
host interface	Connection between network and host computer.
HP PCL	Page description language developed by Hewlett Packard Company. It supports graphics, text, and images with a wide variety of fonts. It is designed to be printer independent.
hue	Description of the general appearance of a color or the wavelength of light reflected by pigment.
icon	A small pictorial representation of a base window. When an icon is used, it conserves screen space and keeps the window available for easier access.
id	identifier. Character used to identify or name data and possibly to indicate certain properties of that data.
image	Rectangular array of sample values. Each sample value represents some gray level value or color. Also known as "sampled image."
image area	Area on a physical page that may contain text or graphics.
ineligible job	A selection within the system software that causes jobs for which the required resources are not available become ineligible rather than fault. Once those resources become available to the printer, the job prints.
information processing	Generic term encompassing both word and data processing, used to describe the entire scope of operations performed by a computer.
initialize	1. To prepare the magnetic surface of a blank diskette so that it can accept data. 2. To set all information in a computer system to its starting values (usually the first step is accomplished when a program is booted).
IPL	initial program load. For the optional open reel tape drive, the internal initialization sequence whereby certain functions are loaded into random access memory (RAM).
input	Data or text introduced into a computer based system.

input/output	General term encompassing the flow of data into and out of a system.
input processing	Formatting control for the pages of a report.
insert	To add text or graphics to a document.
interface	Hardware that provides physical connection and electronic communication between two hardware devices.
internet	A worldwide electronic network made up of Ethernets and other local area networks connected by long distance communication lines. Network configuration consisting of two or more networks connected through routers. Allows for the sharing of resources between networks.
interpolation	Series of logical rules implemented in the printer to convert a 300 dpi input video stream to a 600 dpi output video stream. Interpolation is functionally analogous to bit doubling (2x scaling), except the logical rules result in superior output.
Interpress	Xerox standard that defines digital representation of lines for printing. Interpress documents can be printed on any sufficiently powerful printer equipped with Interpress print software.
Interpress font utility (IFU) program	Program used to convert FIS fonts to LPS fonts.
Interpress master	File written according to the Interpress standard.
interpreter	Converts a PDL file to data which the printer can image.
IOT	Image Output Terminal. It is the part of a printer that actually puts marks on the paper.
IP	The Internet Protocol of the TCP/IP communications suite.
JDE	job descriptor entry. Collection of job descriptions. See also job; JSL.
JDL	job descriptor library. Collection of compiled job descriptions. See also JSL.
job	A document file that is associated with a set of printing instructions. Print data, print options data, and other information required for processing and printing a document.
job concatenation mode	In HIP, a mode in which multiple print jobs are processed as reports in one print job. See also concatenate.
job control	Program called into storage to prepare each job or job step to be run.
job flow	The path a job takes from creation to completion at the printer.
job management	Collective functions of job scheduling and command processing.

Job Manager	Controller task that provides intelligent management and processing of unprinted jobs from the time they are received at the controller to the time they are printed.
job responsibilities	The tasks to create acceptable document files, submit document files as jobs, manage the jobs at the server, manage the release of jobs to the printer, manage the printer through the server, or manage the system.
job size	The size of the print master data file measured in bytes.
job status	The status of a print job in the print queue.
job submission	The process of sending a document with an attached job ticket to the server.
JSL	job source library. Collection of uncompiled job descriptions. See also job; JDE; and JDL.
keyboard	A component of the controller containing the letter, number, symbol, and function keys that are used to enter information and communicate with the system.
keyword	Required part of a command. See also operator command.
label	1. In data storage, a reference to a file saved on tape or disk, a record indicating the file name or date created, or other control information. 2. In programming, a name assigned to a particular instruction or portion of a program as a locational reference (the computer translates the label into an address).
LAN	Local area network. A network connecting computer and peripheral devices through cables.
landscape	The page orientation that arranges the print image horizontally so the image is wider than it is long. See also portrait.
language	Defined set of characters and symbols combined together by specific rules. See also high level language; low level language.
laser printing	Technology that uses a laser to transfer character forms to a page by direct or indirect means.
latent image	Static charge present on the photoconductor before contact with dry ink particles.
layer	The grouping of components with some commonality within a network architecture.
leading	1. Vertical distance between lines (also called line space), measured from a baseline of one line to the baseline of the next. 2. Extra spacing between lines of type. 3. In typography, spacing between lines and paragraphs.

LED	light emitting diode. Solid substance that glows when a current is passed through it. Often used for indicator lights on disk drives or modems, as well as for displays on other electronic equipment.
LEF	long edge feed. The movement of paper through the printer in the direction of the paper length (the longer side of a sheet of paper).
legal size	Sheet the standard size of legal briefs, 8.5 by 14 inches.
letter size	Paper sized 8.5 by 11 inches/216 by 279 mm.
library	In data storage, a collection of related files or programs.
line	One horizontal flow of characters.
line feed	Control character that, unless set to be interpreted as a line end, causes the printing system to begin printing in the current character position of the next line.
line tables	Internal data structures providing a record in memory of lines to be drawn on a page.
listing	Printout or display of the statements in a program, usually used as a convenience in examining or editing programs.
literal	Alphanumeric beginning with a letter, optionally including an asterisk, period, colon, or slash, and not enclosed in single quotes.
load	To enter data into storage or working registers.
location	Place in which data can be stored.
lockup	The state of system software when it is not functioning (such as, nothing can be selected).
log	A file that contains a record of events, such as messages, errors, jobs and accounting information.
log in	The process of gaining access to a system by entering a user name and, optionally, a password.
log out	The process of exiting a user work session on a system.
logical page	In the Xerox printing systems environment, a formatted page that is smaller than the physical page. A logical page is defined by an origin, thus allowing more than one logical page to be placed on a physical page.
logo	Small illustration or design, usually simple, typically used to identify a company.
long edge feed	The orientation in which the paper is fed through the imaging system long edge first. See also short edge feed.

lpr	Refers both to the print protocol provided in the internet protocol suite and to the program that implements part of that protocol. A command used to submit a job.
magnetic media	Term for all storage devices, such as disks, diskettes, and tape, on which data is stored in the form of magnetized spots on surface of the media.
magnetic storage	Use of magnetic media to store data, programs, and so on.
magnetic tape	Flexible plastic tape, with one side offering a magnetic surface suitable for storing computer data in the form of magnetized spots. Magnetic tape is often used for long term storage since it can accommodate large volumes of information.
mainframe	Central processing unit (CPU) and memory of a large computer. More often used to denote any large computer of the type that might be used to control a group of smaller computers, terminals, or other devices. See also host.
margins	White space on each side of printed text.
mask	An opaque area that covers part of an image.
MB	megabyte. Unit of one million bytes.
media	Vehicles or devices by which information is stored or transmitted. Classifications include source, input, and output.
medium	Object or material on which data is stored, for example, magnetic tape or floppy disk.
memory	Space in a device where information is kept, or the ability of a device to keep information until needed.
menu	List of available functions, commands, and options.
message	Information that is passed to the user. The information is usually associated with an error, fault, or system condition.
metacode	Same as “native mode.” The method of speaking to and controlling the image generator. These controls are used by the character dispatcher to generate scan line information. This information is sent in the form of character specifications to the image generator, which uses it to compose the bit stream that modulates the laser.
MHz	megahertz. 1. Unit of cycling speed (one million cycles per second) for an electromagnetic wave (in particular, a radio wave). 2. Sending and receiving stations of a radio wave transmission must be tuned in to the same unit of megahertz.

MICR	Magnetic Ink Character Recognition. MICR allows a computer to read characters printed in special metallic ink by scanning the shapes of their magnetic fields. MICR fields are often imprinted on bank checks before processing.
modem	Device that converts digital information into an analog signal suitable for sending over analog telecommunication lines. Also converts an analog signal from telecommunication lines into digital information.
module	Cohesive unit within a program. It is consistent in its level and identifiable in terms of loading or with other units.
mouse	A device for moving a cursor or other object around on the display screen.
NLM	NLM refers to NetWare Loadable Module.
nascent	A job submission is being made, and the job has been established; however the job data has not yet been received.
Netware	The networking software offered by Novell which may be run on various platforms.
network	A system comprised of hardware and software which provides for communication of data between connected devices. Also, a system of interconnected computer workstations and servers.
network architecture	The structure of a network system as defined by its network topology and the network communication protocol (for example, Novell, XNS, and AppleTalk).
network communication protocol	The defined standard for the communication of data over a network.
network communication utility	A software utility running on a workstation which provides the ability to pass data over a network in a specific network communications protocol. This utility is required when the operating system on the workstation does not provide inherent support for the network communication protocol required.
network topography	The standard for the physical hardware (cables and interfaces) and the fundamental structure (bus, ring, or star) of a network system.
node	A device, such as a printer or a workstation, on an AppleTalk network.
nonimpact printer	Printer that forms characters without any strikes of a key or element against the paper.
object file	Source file converted into machine language (binary code).

offline	Devices not under the active control of a central processing unit. For example, a computer makes output to a magnetic tape. The tape is then used by an offline printing system to produce printed data. Offline operations are much slower than online operations. See also online.
offset	A stacking option that the operator can select. The edge of each printed set is placed a few inches from the edge of the other printed sets.
offset printing	Widely used method of commercial and corporate printing, where ink is picked up by a metal or paper plate, passed to an offset drum, and then passed to the paper.
online	Devices under the direct control of a central processing unit, for example a printing system in interactive communication with a mainframe. See also offline.
open	To select an icon or menu in order to view its contents.
OpenWindows	A graphical user environment that runs on Sun Microsystems computers.
operating system	Computer software that controls the low level operations of computer hardware, including input and output to memory, disk drives, and peripherals. See also DOS; SunOS; ULTRIX; UNIX; VMS.
operation	Well defined action that, when applied to any permissible combination of known entities, produces a new entity.
operator area	The 24 inch exclusive clearance that must be available directly in front of each component of an LPS for operator activities.
operator command	Statement to control a program, issued through a console device, PC UI, or terminal, causing a control program to provide requested information, alter normal operations, initiate new operations, or terminate existing operations.
orientation	An image position relative to a page. Describes whether the printed image is parallel to the long side of the paper (landscape orientation) or to the short side of the paper (portrait orientation).
origin	In reference to image area, this is the upper left corner of a sheet.
option	A parameter on the command line. Also, the names that are listed in the menus, when an icon or menu is selected.
output	1. Material produced by a peripheral device of a computer, such as a printout or a magnetic tape. 2. Result of completed operations.

overprint lines	Print lines whose carriage control specifies printing with no line spacing after the last printed line.
overprint ratio	Maximum number of variable data and form characters that may be intersected by a single scan line.
overprinting	Printing more than one character at the same position.
override	To take precedence or priority over, to overrule.
overstrike	To print characters over each other.
packet	A unit of data in a form that can be passed over a network. Packet specifications are defined by the network architecture and network communications protocol. See also frame.
page	1. In computer programming, a block of instruction, data, or both that can be located in main or auxiliary storage. 2. In word processing, a defined section of a document.
page orientation	Direction in which data is printed on a report. See also landscape page orientation; portrait page orientation.
palette	A specific set or grouping of colors.
paper curl	The natural curve of a sheet of paper. The normal paper curl is marked on the end of each ream of paper.
parameter	Part of a command, other than the keyword. See also keyword; operator command.
passthrough job	On systems with XPAF, a job that is sent directly from a host to a Xerox printer using XPAF, without undergoing XPAF processing.
password	A combination of letters and numbers associated with a user name. A password provides security for a user account.
patch	In programming, to modify a portion of the program at the machine language level, as opposed to modifying at the source program level.
path	An arbitrary sequence of connected and disconnected points, lines, and curves that together describe shapes and their positions on the page.
pathname	An identifier for the location of a file or directory within the file system.
PC	Personal Computer. A family of computers that most commonly run a version of DOS.
PDL	print description language. Language used to describe printing jobs to an LPS. PDL describes the input (type, format, characteristics), performs the processing functions (logical processing), and describes the output (type, format, font selection, accounting options).

peripheral	A device used in conjunction with a computer or workstation usually for input or output. Printers and modems are examples of peripherals.
permissions	The attribute of a file or directory which specifies who has read, write, or execute access.
physical page	Sheet of paper on which printing is done. See also edgemarking.
pitch	1. Horizontal character spacing; 10 pitch (10 characters per inch) spacing is called pica, and 12 pitch (12 characters per inch) spacing is called elite. 2. The number of page images placed on the xerographic belt during one revolution. The system supports two pitch modes: 7 pitch when paper 9 inches/229 mm long or less is used to print a job, and 3 pitch when paper 9 to 17 inches/229 to 432 mm long is used to print a job.
pixel	Acronym for picture element. Smallest addressable point of a bitmapped screen that can be independently assigned color and intensity. Pixels are definable locations on a display used to form images. For graphic displays, more pixels generally provide higher resolution. Spots, dots, and pixels are used interchangeably.
platform	A combination of hardware and operating system software.
point	Unit of measurement equal to 0.0139 inch. Points are always used to express type size and leading. There are 12 points to a pica and about 72 points to every inch. See also pica.
point size	Height of character set from the top of its ascenders to the bottom of its descenders in units (points). Point size does not always include leading.
pointer	An arrow shaped figure that moves across the screen. A visually displayed cursor.
portrait page orientation	Orientation of print lines or the top of an illustration parallel to the short edge of the paper if the sheet is within the standard size range. Sheets larger than standard have the reverse print orientation.
PostScript	A page description language developed by Adobe Systems, Incorporated. It supports graphics, text, and images with a wide variety of fonts. It is designed to be printer independent.
PostScript job	A PostScript program such as a creator's final form document. Also referred to as a "PostScript master" or "PDL file."
power off	To shut the system down.
power on	To supply power to the system.

PPD	PostScript Printer Description. A file that gives the client's print driver information about the PostScript printer.
ppm	Pages per minute.
predictor	The software that determines the format of a document.
preferences	Within the system software, various preferences can be set for the controller such as, language and font preferences.
print application software	Software that is resident on the client workstation used to create print documents.
print client	The application or machine in the distributed system that assembles a service request and submits the request to the server.
print client workstation	A workstation used to create print jobs (documents) and submit them to the controller.
print driver	Client software used to create PDL files.
print file	Position of the system disk memory (up to 4 MB) received for temporary storage of formatted pages for printing. Pages are retained until they are delivered to the output tray.
print job	An object that represents a request to print one or more documents together on a logical printer.
print options	A set of options available for controlling the processing of a print job. Print options include simplex or duplex printing, media selection, collating, stitching, and so on. Print options can be sent to the controller as a part of the job, providing automatic job processing.
print queue	A queue that temporarily stores print jobs that have been sent over the network.
print service	A print service accepts printing requests and performs the indicated actions.
printer	Output device that produces hardcopy printouts. Also referred to as the IOT.
printer controller	See Controller.
Printer Manager	An application for setting up and managing printers.
printout	Informal expression referring to almost anything printed by a computer peripheral device.
priority	The order in which queues are serviced.
process	1. To perform a systematic sequence of operations, such as add, edit, delete. 2. To produce a specific result by manipulating data.

program	Complete set of instructions in language compatible with the device to be used. A program directs a system to perform each operation at the right time in the proper sequence.
programmer	Person involved in designing, writing, and testing computer programs.
prompt	Message or symbol displayed on a system console requiring the operator to take action.
proportional font	Font containing characters that vary in width. See also fixed font.
proportional spacing	Text in which each alphanumeric character is given a weighted amount of space. Such output has print-like appearance. Proportional spacing allows more space for wide characters and less space for narrow characters
proportional type	Characters that vary in width.
protocol	Formal set of conventions governing the format of data and the control of information exchange between two communication devices.
public net	The main enterprise wide network of the customer, comprising possibly many segments joined by Gateways and Routers.
purge	To delete data from a system.
queue	A subdirectory on a print server where jobs are stored until the print server can deliver it to the printer.
Queue Manager	An application within the system software that allows you to manage print queues and the printer that is associated with those queues.
RAM	Random Access Memory. Volatile memory used for temporary storage of data and software commands, used by programs for immediate task processing.
raster file	A data file containing an image of an array of picture elements (pixels) composed of consecutive lines, similar to the scans on a television screen.
rasterization	Creation of a page's bit map image for printing.
rasterizer	A portion of software that converts graphic objects made up of vectors, or line segments, into dots for output to raster graphic screens, dot matrix and laser printers.
read/write head	Input/output device that reads and writes data in the form of magnetic dots on the surface of an external storage medium, such as a magnetic disk.
record	Collection of data or words treated as a unit.

recovery	Act of overcoming a problem or error during processing. Typically, a specialized software recovery routine gains control and attempts to resolve the error without crashing the system.
remote access	Access to a central computer by terminals or devices geographically separated from that computer.
replace	Process of exchanging one portion of text for another. This process encompasses two functions: deleting old text and inserting new.
report	In setting a separation boundary through the Bin Full Criteria task, report refers to a subset of a job (a job may consist of one or more reports).
Reprint Manager	An application within the system software that allows reprinting of jobs that have been saved through the Decomposition Service.
resident fonts	The fonts that are loaded on the server at the time of installation, and cannot be deleted.
resolution	The measurement of the number of picture elements (pixels or dots) per square area unit.
ROM	read-only memory. Solid state memory for programs. It cannot be rewritten.
router	A device used to connect networks of similar or different architectures to isolate data transmission within each network.
Sample Job	A print file in a specific PDL format whose printed result is known. The output of the Sample Job on a subject printer is compared with the known result as a diagnostic tool to determine whether the printer is working properly.
save	To store programs, data, or text for retrieval at a later time.
scalable (contour or outline) fonts	A mathematical equation that describes to the printer how to draw the characters of the font. Because only one equation must be stored to produce a character in a variety of sizes, the amount of memory that is required is much less than for bitmap fonts.
screen	The glass face of the video display.
scroll	Manipulation of a display to bring upper or lower portions of a document page into view when no space is available for the entire document at once.
scroll bar	Part of a window that allows you to view information extending beyond the window display.
scrolling list	A pane containing a list of items. The list can be read-only or it can be edited.

SCSI	small computer system interface. Accepted standard for connecting peripheral devices to computers.
secondary storage	Form of storage external to a system, such as magnetic tapes or floppy disks.
security	1. Procedure for limiting access to the system resources, programs, or files, to authorized personnel. 2. Protecting programs and files from unintentional or undesired modification.
SEF	short edge feed. The movement of paper through the printer in the direction of the paper width (the shorter side of a sheet of paper). Short edge feed allows larger sizes of paper (lengths from 14 inches/356 mm to 17 inches/432 mm) to be printed.
select	To choose from a list of options, such as those in a menu.
sequential	In numeric sequence, usually in ascending order. As applied to a file organization, describes files in which records are written one after another and cannot be randomly accessed. For example, the first 99 records in a sequential file access file have to be read before the 100th record is accessible.
server	In a computer network, a unit that provides a specific service (such as data storage and compute services) to network users.
server interface	The software by which you manage jobs in server print queues and control the server and the printer. In addition, there is some information feedback to you from the printer through displayed messages. Referred to as GUI.
set	In setting a separation boundary through the Bin Full Criteria task, set refers to multiple copies of the same report.
settings	The controls used for defining values.
short edge feed	Laser printing in which the paper is fed through the imaging system short edge first. Laser printing in which the paper is fed through the imaging system short edge first. See also long edge feed.
simplex printing	Printing on one side of the page. See also duplex printing.
slider	A control that is used to set a value and give a visual indication of the setting.
soft fonts	Fonts that are loaded on the server at any time after installation. These fonts can be deleted when they are no longer needed.
software	Programs, including operating systems, procedures, utilities, and applications programs, written for a system. Software can be supplied by the hardware manufacturer or other firms but does not include programs written by the user.

Solaris	A bundled software release from Sun Microsystems that includes the Sun Operating System.
sort	To rearrange data records according to a particular item (field) which they all contain, using a predetermined ordering scheme.
source	Terminal node at which data enters a network. For example, a computer transmitting data through telecommunication lines to several other computers or receiving terminals.
source file	File containing source language statements or commands.
source language	Language, high level or low level, used by a programmer. A source language must be converted by a compiler to machine language for the instructions to be executed.
source program	Program written in source language
space	Blank area between words, recognized as a character by word and data processing systems.
SPARC	Scalable Processor Architecture. The computer architecture licensed by Sun Microsystems and available from a number of different companies.
special processing	Commands allowing the user to process special reports, such as printing certain records, or printing on special paper.
spooling	Process of releasing data from main memory and storing it temporarily until a peripheral device is ready to accept it, for example storing text before sending it to a printer.
spooling space	The space that is allocated on a print server for storing requests in the printer queue.
spot	Unit of measurement representing a fraction of an inch, for example, 300 spots per inch (spi). May also be referred to as a picture element (pixel) or dot.
statement	Detailed written instructions in a program step. A statement is written according to specific rules called syntax.
static data	Information usually found on preprinted forms or overlays.
status	The present condition of a system component.
status message	The information that is generated by an application that informs you about the progress of a process.
stock	User defined name in the JSL that specifies a certain type of paper for printing a job. See also cluster.
stockset	Collection of stocks to be used on a print job. See also stock; cluster.

storage	Retention of information. Primary storage refers to internal storage where data and program instructions pertinent to current operations/jobs are held. Auxiliary storage refers to external media, such as disks or tapes, for use at a later time.
string	A sequence of alphanumeric characters treated as one unit of data by a program.
stroke	A PostScript graphic operation in which the length of a path is painted with a color, such as black.
submenu	A menu that displays additional choices under a menu item on a menu.
SunOS	An operating system developed by Sun Microsystems for use on Sun computers and workstations. SunOS provides inherent support for UNIX and for TCP/IP.
swap file	A disk partition or file used to temporarily hold the contents of a memory area until it can be loaded back into memory.
symbol	Character used in a computer language to specify a particular function.
synchronous	Efficient encoding of data suitable for high speed, block oriented data transmission by using equal time elements.
syntax	Rules governing the structure of expressions in a programming language.
syntax error	System response to a mistake in a command entry.
system	1. In data processing, a collection of parts and procedures organized to accomplish a set of specific functions. 2. Assembly of components united by some form of regulated interaction to form an organized whole. 3. Operations or procedures through which a business activity is accomplished.
System Administrator	The person responsible for configuring, operating, and maintaining systems and also for installing client software on network workstations.
system controller	See Controller.
system disk	Magnetic disk storage medium, usually of large capacity, that is not removable as opposed to floppy disk or disk packs.
system file	Master software program that keeps all components working together.
system generation	Process whereby the system is made ready to operate. Typically involves selecting the operative parameters and activating the relevant software.

system page	Maximum area in which text and graphics can be imaged on a printing system.
system software	Software programs that support and/or control system functions by governing hardware operation and input/output processes, interpreting source programs and breaking them down into machine language, distributing tasks among various processors, and so on.
tab	To move the cursor on a display or printer to a prespecified column on the display or paper, most often by using the <TAB> key on a keyboard.
Tag Image File Format (TIFF)	A common image format developed by Aldus and Microsoft for scanned color and black and white images.
tape	Recording media for data or computer programs. Tape can be in permanent form, such as perforated paper tape. Generally, tape is used as a mass storage medium in magnetic form and has a far higher storage capacity than disk storage, but it takes longer to write or recover data from tape than from disk.
tape density	The number of characters that can be stored on magnetic media, such as how close together data can be recorded. The Xerox LPS may use either 1600 bpi or 6250 bpi density magnetic media.
tape drive	Input/output device that controls the movement of magnetic storage tape past the read/write head while data is accessed or stored.
task	1. Any major job performed by a computer. 2. One of several programs being executed by a system.
TCP/IP	Transmission Control Protocol / Internet Protocol. Commonly used network communications protocol that is a set of data communications protocols, or a type of "language" that the devices use to "speak" with each other.
telecommunications	Voice or data communications transmitted and received through telephone lines.
teleprocessing	Sending and receiving data through telecommunication lines for processing among various remote terminals and the central processing unit (CPU).
terminal	Device equipped with a keyboard and connected to a computer or a network

testing	1. Process of running a program for the express purpose of discovering any errors it may contain. 2. For computer oriented systems, the process of verifying a system's ability to meet performance objectives in a simulated environment or validating its actual performance in a live environment.
text	In communications, the content portion of a transmitted message.
text string	Consecutive series of characters to be printed exactly as specified in a command.
throughput	In data processing systems, the amount of data that can be processed, transmitted, printed, and so on, per a specified unit of time.
toggle	To switch (alternate) from one tray to another. The system switches from an active feeder or stacker tray to an inactive one to allow continuous printing when the proper commands are invoked.
toner	Particles of resin and carbon black. Toner accepts an electrical charge, and it is used to create the xerographic prints.
topography	See network topology.
trailer	In data communications, the last portion of a message that signals the end.
transfer function	Procedure that maps user specified gray levels into device gray levels.
transaction processing	Method of data processing in which files are updated and results are generated immediately after data entry.
translation	1. In data communications, the conversion of one code to another on a character basis. 2. In programming, the function of a language processor which converts a source program from one programming language to another.
transmission speed	In data communications, the rate at which data is passed through communication lines, usually measured in bits per inch (bpi).
transmit	To send data from one place to another.
transparent printing	Objective of modern printing systems that the printing and processing of documents be as simple and intuitive as possible for users. The ability to send a job to the printer without exiting the user's desktop application.
truncated	Cut off before completion, as when data transfer from a host to a printer is cut off before all data has been transmitted.
tumble	See head to toe.

two up	Application that prints two logical pages on one side of a physical page.
typeface	1. All type of a single design. 2. Set of characters with design features that make them similar to one another.
type size	Height of a typeface, measured from the bottom of its descenders to the top of its ascenders, expressed in points.
type style	Italic, condensed, bold, and other variations of typeface that form a type family.
UCS	Universal Character Set. Printer feature that permits the use of a variety of character
UI	User Interface. See GUI.
ULTRIX	An operating system that runs on DECStations. It consists of a hierarchical system of commands, shells, files, and directories. operating system. See also operating system.
UNIX	An operating system for computers, usually working in a network environment. It consists of a hierarchical system of commands, shells, files, and directories. See also operating system.
upload	To copy files from a remote peripheral device to a host. LPS files are not copied to the host because one of the LPS functions is to store files for the host.
User ID	An identification code for a device on a network, used by the network management software to direct the communication of data properly from source to destination.
user interface	See GUI.
utility program	General purpose program that performs activities, such as initializing a disk or sorting, which are not specific to any application.
validation	Process of testing a system's ability to meet performance objectives by measuring and monitoring its performance in a live environment.
variable	Information of a changeable nature which is merged with a standard or a repetitive document to create specialized or personalized versions of that document.
variable data	Variable data is not a part of a form design. It varies from page to page.
variable text	Text of changing nature, such as various names and addresses combined with a form letter to make a complete document.
virtual page	Page area selected by a forms designer for printing.

virtual printers	Logical names for the printer which allow different sets of default attributes to be applied to submitted jobs. The Print Operator and System Administrator define virtual printer names and the associated set of attributes and values.
VMS	An operating system that runs on the Digital Equipment Corporation VAX family of computers. See also operating system.
warning	A notice that alerts users to safety information that will prevent personal injury.
warning message	A message that is issued by the system and indicates that an error has been encountered, although the program has not failed.
weight	Characteristic of type determined by how light or dark it appears.
wildcard	Part of a command (* symbol, / symbol, ? symbol) that represents a category for which the possible options are requested.
wildcarding	In a command, calling out a general category rather than a specific item within that category. The purpose of wildcarding is to generate the options within the given category.
window	An area of a desktop associated with a task containing application elements.
workstation	A computer able to process data but designed specifically for interaction with a network.
write protection	Data protection feature implemented on magnetic media (for example floppy disk, 9-track tape) to prevent stored data from being modified, written over, or erased.
1x height	Height of lowercase letters without their ascenders or descenders (height of letter "x"). See also ascender; descender.
x axis	The horizontal axis on a grid.
xdot	Unit of measurement representing a fraction of an inch. It may also be referred to as a picture element (pixel) or spot, for example, 1/600 spots per inch (spi).
xerographic engine	Component of a printer that develops an image, transfers it to paper, and fuses it for output as hardcopy.
XMerge	An application within the decomposition service used to merge pages of form with variable data.
XNS	The name for the Xerox enterprise level communications protocol suite.
y axis	The vertical axis on a grid.

zone Logical, user defined grouping of devices in an AppleTalk internet that makes it easier to locate network services.

Acronyms

ACT	Advanced Customer Training
AFP	Advanced Function Printing
ANSI	American National Standards Institute
ASCII	American Standard Code for Information Interchange
BCD	binary coded decimal
BOF	bottom of form
BOT	beginning of tape
bpi	bits per inch
bps	bits per second
BSC	binary synchronous communications
CD	character dispatcher
CDC	control data communications
CD/IG	character dispatcher/image generator
CM	control module
CME	copy modification entry
cpi	characters per inch
CPU	central processing unit
CR	carriage return
DCE	data communications equipment
DDCMP	Digital Data Communication Message Protocol
DEC	Digital Equipment Corporation
DFA	Document Feeding and Finishing Architecture
DJDE	dynamic job descriptor entry
DMR	data mode ready (DEC interface for LPS)
DOS	disk operating system
dpi	dots per inch
DSDD	double sided double density
DSU	digital signal unit

DSR	disk save and restore
DSSD	double sided single density
DTE	data terminal equipment
EBCDIC	Extended Binary Coded Decimal Interchange Code
ENET	Ethernet network
EOT	end of tape
EP	electronic publishing
ESS	electronic subsystem, also referred to as the controller
FCB	forms control buffer
FCG	finishing configuration utility
FCP	file control parameter
FDL	forms description language
FDR	file directory
FFM	font file management
FIS	Font Interchange Standard
FMS	file management subsystem
FPS	formatting print service
FSL	forms source library
FST	font specification table
GCR	group code recording
gsm	grams per square meter
GUI	graphical user interface
HCF	high capacity feeder
HCS	high capacity stacker
HFDL	host forms description language
HIP	Host Interface Processor
hpos	horizontal positioning
IBM	International Business Machines Corporation
IFU	Interpress font utility
IG	image generator
IGM	image generator module
I/O	input/output
IOM	image output module

IOT	input output terminal, also referred to as “printer”
IPD	Interpress decomposer
IPFONTS	Interpress fonts
IPL	initial program load
IPM	Interpress mapping
ips	inches per second
JCB	job control block
JCL	job control language
JDE	job descriptor entry
JDL	job descriptor language
JSL	job source library
LAN	local area network
LASER	light amplification by stimulated emission of radiation
LED	light emitting diode
LEF	long edge feed
LF	line feed
LCDS	line conditioned data stream
lpi	lines per inch
LPS	Laser Printing System
MICR	Magnetic Ink Character Recognition
MTU	magnetic tape unit (refers to the 9-track open reel magnetic tape drive; also referred to as “magnetic tape drive”)
OCR	optical character recognition
OCS	operator communications subsystem
OLI	online interface
OS	operating system
OSDS	operating system diagnostic software
OSEXEC	operating system executive
OSS	operating system software
PC	personal computer
PCC	printer carriage control
PDL	Print Description Language or page definition language
PE	phase encoded

ppm	pages per minute
PQA	print quality adjustment
PROM	programmable read-only memory
PSC	printer subsystem controller
pt	point
PWBA	printed wiring board assembly
QIC	quarter inch cartridge
RAM	random access memory
ROS	raster output scanner
SAN	software analysis number
sci	START command index
SCSI	small computer system interface
SDLC	synchronous data link control
SEF	short edge feed
SFS	status file services
SIF	sequence insert file
SNA	system network architecture
spi	spots per inch
SST	system software tape
sysgen	system generation
TL/DL	text line/display list
TOF	top of form
tpi	tracks per inch
TPJ	test pattern job
TXC	total xerographic convergence
UCS	Universal Character Set
UCSB	Universal Character Set Buffer
UI	user interface
VM	virtual memory
vpos	vertical positioning
VS	virtual storage
WAN	wide area network
XCSC	Xerox Customer Support Center

XDGI	Xerox DCF and GDDM Interface
XDSS	Xerox Documentation and Software Services
XICS	Xerox Integrated Composition System
XJCF	Xerox Job Control Facility
XMP	xerographic mode persistence
XMS	xerographic mode switching
XPAF, XPF	Xerox Printer Access Facility
XPMF-VMS	Xerox Print Management Facility, VMS Version
XPPI	Xerox Pen Plotter Interface
XPS	Xerox Publishing System

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