Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System Operator Guide

THE DOCUMENT COMPANY
XEROX

April 1998
721P85590

Xerox Corporation
701 S. Aviation Boulevard
El Segundo, CA 90245

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Printed in the United States of America.

Publication number: 721P85590

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Related publications

The *Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System Operator Guide* is part of the eight manual reference set for your laser printing system. The entire reference set is listed in the table below. Several other related documents are also listed for your convenience. For a complete list and description of available Xerox documentation, refer to the Xerox Documentation Catalog (Publication number 610P17417) or call the Xerox Documentation and Software Services (XDSS) at 1-800-327-9753.

Table 1. **Related Publications**

Publication	Number
Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System Operator Guide	721P85590
Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System Operations Reference	721P85610
Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System Message Guide	721P85650
Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System PDL Reference	721P85640
Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System Forms Creation Guide	721P85630
Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System System Generation Guide	721P85620
Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System Installation Planning Guide	721P85600
Xerox DocuPrint 96/DocuPrint 96MX Laser Printing Operator Command Summary Card	721P85660
Xerox Laser Printing Systems Tape Formats Manual	600P86175
X*erox Laser Printing Systems Standard Font Library Font User Guide*	600P86174
Helpful Facts About Paper	721P82492

Notice

This publication may contain descriptions of concepts and features not currently available for your Xerox Laser Printing System. Consult your Xerox sales representative or your operating system software program description for additional information.

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Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System Forms Creation Guide	721P85630
Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System System Generation Guide	721P85620
Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System Installation Planning Guide	721P85600
Xerox DocuPrint 96/DocuPrint 96MX Laser Printing Operator Command Summary Card	721P85660
Xerox Laser Printing Systems Tape Formats Manual	600P86175
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Introduction

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About the reference set

This document is part of a reference set designed to help you receive maximum benefit from your Xerox DocuPrint 96/DocuPrint 96MX Laser Printing system (LPS)

To help you select the appropriate document for your needs, the following section identifies the documents in the set and describes the information contained in each.

Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System document set

The Xerox DocuPrint 96/DocuPrint 96MX LPS document set includes the following:

Xerox DocuPrint 96/DocuPrint 96MX LPS Operator Guide

This reference contains the following information:

- System overview
- Paper facts and procedures
- Operating procedures
- Maintenance
- Problem solving
- Supplies
- Meter reading and reporting

Xerox DocuPrint 96/DocuPrint 96MX LPS PDL Reference

This reference contains the following information:

- Print Description Language components and processes
- Input processing functions
- Output processing functions
- PDL command summary
- Page formatting guidelines
- Character code assignment tables
- PDL programming information with step-by-step instructions

Xerox DocuPrint 96/DocuPrint 96MX LPS System Generation Guide

This reference contains the following information:

- Configuration options
- Commands
- OSS software installation, upgrade, and modification

Xerox DocuPrint 96/DocuPrint 96MX LPS Operations Reference

This reference contains the following information:

- Command syntax for operator and system administrator procedures
- LPS defaults
- LPS resources
- Command summaries
- Communication and graphics on the LPS
- Command files

Xerox DocuPrint 96/DocuPrint 96MX LPS Forms Creation Guide

This reference contains the following information:

- Basic concepts for creating forms
- Coding and compiling for LPS Forms Description Language
- Sample form setup command sets
- Tips for successful forms creation

Xerox DocuPrint 96/DocuPrint 96MX LPS Operator Command Summary Card

This reference provides a quick reference of commonly-used commands.

Xerox DocuPrint 96/DocuPrint 96MX LPS Message Guide

This reference contains the following information:

- OSS and other messages
- Meaning and recovery procedures

Xerox DocuPrint 96/DocuPrint 96MX LPS Installation Planning Guide

This reference contains the following information:

- LPS basic components and options
- Tasks that must be accomplished before installation
- Preinstallation requirements
- Installation process
- Postinstallation activities

Xerox LPS Tape Formats Manual

This reference contains the following information:

- Characteristics of different formats
- File organization
- Data formats
- Carriage control conventions

Xerox LPS Standard Font Library Font User Guide

This reference contains the following information:

- Font naming conventions
- Listing of standard fonts
- Data Sheets
- Glossary to typography terminology

Helpful Facts About Paper

This reference contains the following information:

- Selection and guidelines
- Storage
- Specifications for different printers

Document conventions

This guide uses the following conventions:

< >	Angle brackets are used for keys on the system controller keyboard.
{}	Curly brackets are used for required characters.
...	Ellipses indicate that you may repeat a parameter or list a series of parameters.
[]	Square brackets are used for optional command characters.
|	Vertical bars are used to separate parameters in a series. The vertical bar stands for “or.”
Bold	Bold is used for characters you enter at the command line.
Italics	Italics are used for variable information.
Monospace font	The monospace font is used to display system responses.
Underline	System default parameters are underlined.
UPPERCASE	Uppercase letters are used for command names. You may key in entire words for each command, or the first three characters of each word. In this manual the entire word of each command is spelled out.

Note: A note indicates an operation, practice or condition that should be taken into consideration to efficiently accomplish a task.

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.

Introduction

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The Xerox DocuPrint 96/DocuPrint 96MX LPS document set includes the following:

Xerox DocuPrint 96/DocuPrint 96MX LPS Operator Guide

This reference contains the following information:

- System overview
- Paper facts and procedures
- Operating procedures
- Maintenance
- Problem solving
- Supplies
- Meter reading and reporting

Xerox DocuPrint 96/DocuPrint 96MX LPS PDL Reference

This reference contains the following information:

- Print Description Language components and processes
- Input processing functions
- Output processing functions
- PDL command summary
- Page formatting guidelines
- Character code assignment tables
- PDL programming information with step-by-step instructions

Xerox DocuPrint 96/DocuPrint 96MX LPS System Generation Guide

This reference contains the following information:

- Configuration options
- Commands
- OSS software installation, upgrade, and modification

Xerox DocuPrint 96/DocuPrint 96MX LPS Operations Reference

This reference contains the following information:

- Command syntax for operator and system administrator procedures
- LPS defaults
- LPS resources
- Command summaries
- Communication and graphics on the LPS
- Command files

Xerox DocuPrint 96/DocuPrint 96MX LPS Forms Creation Guide

This reference contains the following information:

- Basic concepts for creating forms
- Coding and compiling for LPS Forms Description Language
- Sample form setup command sets
- Tips for successful forms creation

Xerox DocuPrint 96/DocuPrint 96MX LPS Operator Command Summary Card

This reference provides a quick reference of commonly-used commands.

Xerox DocuPrint 96/DocuPrint 96MX LPS Message Guide

This reference contains the following information:

- OSS and other messages
- Meaning and recovery procedures

Xerox DocuPrint 96/DocuPrint 96MX LPS Installation Planning Guide

This reference contains the following information:

- LPS basic components and options
- Tasks that must be accomplished before installation
- Preinstallation requirements
- Installation process
- Postinstallation activities

Xerox LPS Tape Formats Manual

This reference contains the following information:

- Characteristics of different formats
- File organization
- Data formats
- Carriage control conventions

Xerox LPS Standard Font Library Font User Guide

This reference contains the following information:

- Font naming conventions
- Listing of standard fonts
- Data Sheets
- Glossary to typography terminology

Helpful Facts About Paper

This reference contains the following information:

- Selection and guidelines
- Storage
- Specifications for different printers

Document conventions

This guide uses the following conventions:

< >	Angle brackets are used for keys on the system controller keyboard.
{}	Curly brackets are used for required characters.
...	Ellipses indicate that you may repeat a parameter or list a series of parameters.
[]	Square brackets are used for optional command characters.
|	Vertical bars are used to separate parameters in a series. The vertical bar stands for “or.”
Bold	Bold is used for characters you enter at the command line.
Italics	Italics are used for variable information.
Monospace font	The monospace font is used to display system responses.
Underline	System default parameters are underlined.
UPPERCASE	Uppercase letters are used for command names. You may key in entire words for each command, or the first three characters of each word. In this manual the entire word of each command is spelled out.

Note: A note indicates an operation, practice or condition that should be taken into consideration to efficiently accomplish a task.

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.

1. System overview of the Xerox DocuPrint 96/DocuPrint 96MX LPS

This chapter explains in detail the base components and the optional components of the Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System (LPS).

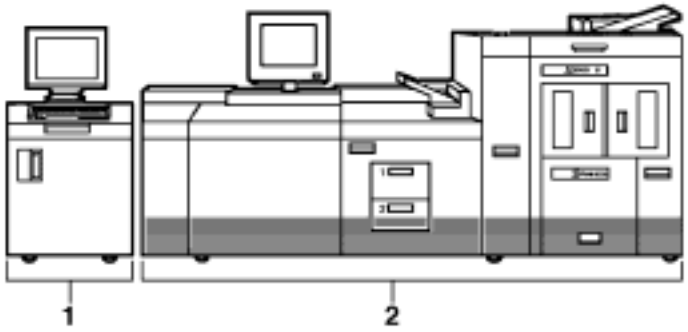
The Xerox DocuPrint 96/DocuPrint 96MX LPS is a versatile, high-performance printing system that processes and prints data from a variety of sources. It enables host mainframe computers and network-connected devices (such as workstations and graphic scanners) to produce publications and other documents, incorporating graphics, forms, logos, signatures, and a variety of fonts. With the Xerox DocuPrint 96/DocuPrint 96MX LPS, management information systems (MIS) and data processing (DP) environments have a high-performance printer in which built-in intelligence eliminates the need for the host computer to store and manage forms, fonts, and other document resources.

Data is printed at a rate of up to 96 pages per minute. A variety of fonts ranging in size from 3 points to 36 points, in all four orientations (portrait, inverse portrait, landscape, inverse landscape), and many publishing typefaces are available to meet your printing requirements. In addition to the standard set of fonts that is delivered with the LPS, special or customized fonts can be developed by the Xerox Font Center or by Xerox Limited.

Base components

The base components of the Xerox DocuPrint 96/DocuPrint 96MX LPS are the system controller and the printer, shown in figure 1-1.

Figure 1-1. **Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System**



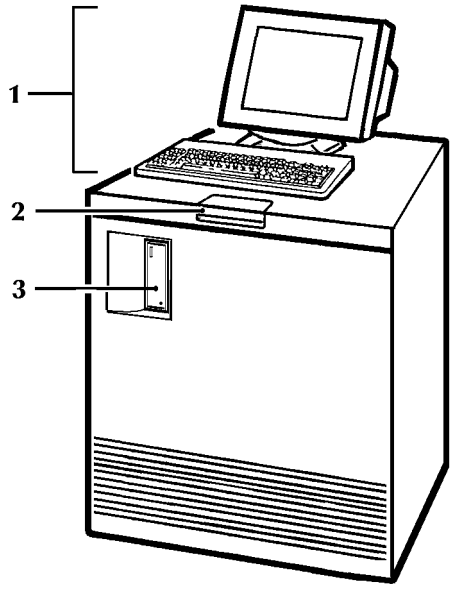
1 System controller
2 Printer

Note: Figure 1-1 shows one of the Xerox DocuPrint 96/DocuPrint 96MX configuration options. For information on the various Xerox DocuPrint 96/DocuPrint 96MX configurations, refer to the “Optional components” section later in this chapter.

System controller components

The system controller, shown in figure 1-2, is the part of the LPS that allows you to interact with the printer. Use the system user interface to enter commands and select options which control the operation of the printer.

Figure 1-2. **Xerox DocuPrint 96/DocuPrint 96MX system controller**



1 System user interface
2 Operator control panel
3 1/4 inch cartridge tape drive.

System user interface

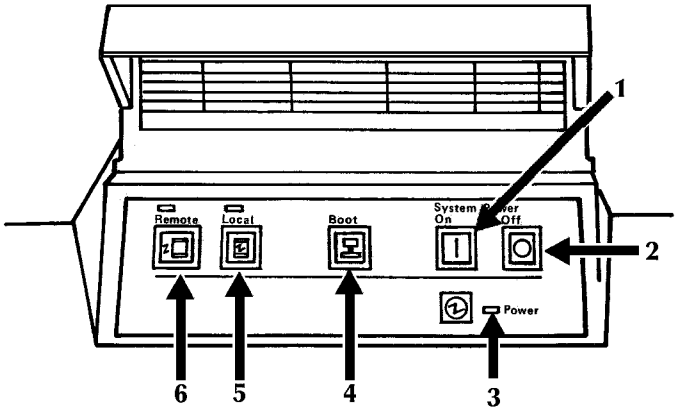
The system user interface consists of a keyboard and display. Figure 1-3 shows the keyboard display.

Figure 1-3. **Keyboard display**

Operator control panel

The operator control panel allows you to power the printer on and off, boot the operating system software, and switch the LPS between remote and local operation. Figure 1-4 shows the operator control panel.

Figure 1-4. **Operator control panel**



1. **Power On switch**
2. **Power Off switch**
3. **Power On indicator**
4. **Boot switch**
5. **Local switch and indicator**
6. **Remote switch and indicator**

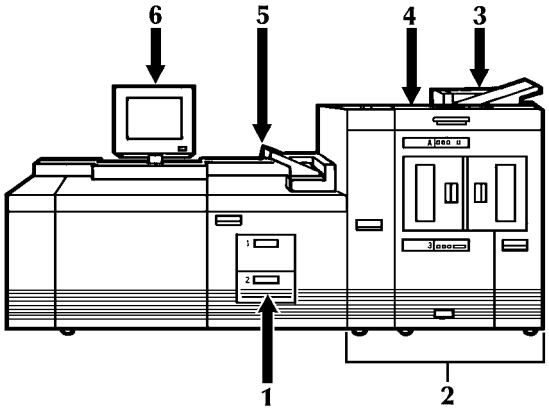
1/4 inch cartridge tape drive

The 1/4 inch cartridge tape drive, also referred to as QIC (quarter inch cartridge), is used for performing sysgen, disk save and restore (DSR), and file loading/backup for online system configuration. (Refer to the “1/4 inch cartridge tape drive procedures” section of the “Offline printing tasks” chapter for instructions on loading and unloading cartridge tapes.)

Printer components

The printer is the part of the LPS that processes the electronic images and produces the printed report. Figure 1-5 shows the printer and its various components.

Figure 1-5. **Xerox DocuPrint 96/DocuPrint 96MX printer**

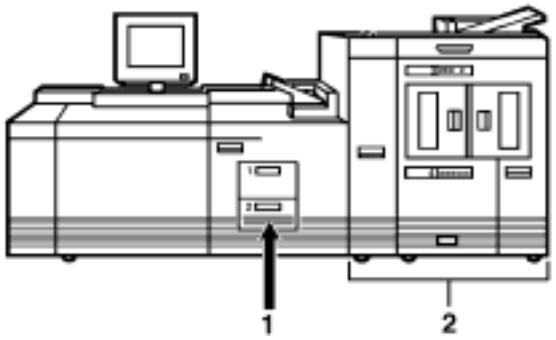


1 Processor feeder trays
2 Inverter feeder/stacker module
3 Purge tray
4 Attention light
5 Sample tray
6 Printer control console

Feeder trays

The feeder trays hold and convey paper and other materials (for example, transparencies) used to produce printed output.

Figure 1-6. **Xerox DocuPrint 96/DocuPrint 96MX feeder trays and inverter feeder/stacker module**



1 Processor feeder trays

2 Inverter feeder/stacker module (contains high capacity feeder and stacker)

Two processor feeder trays are located in the main part of the printer.

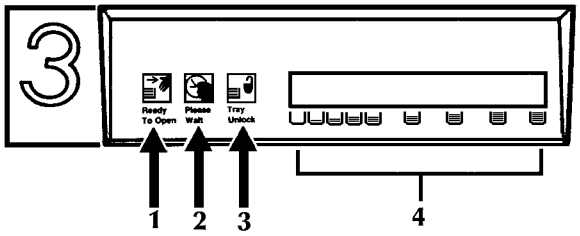
- The main tray (tray 1) holds 1100 sheets of 20 pound/75 gsm paper.
- The auxiliary tray (tray 2) holds 600 sheets of 20 pound/75 gsm paper.
- If configured, trays 1 and 2 can handle paper sized from 8 by 10 inches/203 by 254 mm to 9.05 by 14.02 inches/230 by 356 mm.

There is one high-capacity feeder (HCF) tray in the feeder/stacker module (tray 3). The HCF tray is the primary paper supply for the printer. Each tray can handle paper sized from 8 by 10 inches/203 by 254 mm to 14.33 by 17 inches/364 by 432 mm.

An elevator moves the tray up or down when it is in use. The HCF trays have Paper Level switches which detect the position of the elevator to determine the fullness of the tray. Paper Size switches detect the size of the paper loaded in the trays.

Each processor feeder tray and HCF tray has a control panel consisting of a button, indicators, and paper level displays, as shown in figure 1-7.

Figure 1-7. **Feeder tray control panel**



1 **Ready to Open indicator**
2 **Please Wait indicator**
3 **Tray Unlock button**
4 **Paper Level indicators**

Ready to Open indicator. This indicator is lit when paper can be added to the tray.

Please Wait indicator. This indicator shows that the tray is in motion. It is lit when the Tray Unlock button is pressed, when the tray is being lowered, or when the tray is being raised. The indicator goes off when the tray elevator reaches its destination.

Tray Unlock button. This button can be used any time the Please Wait indicator is off.

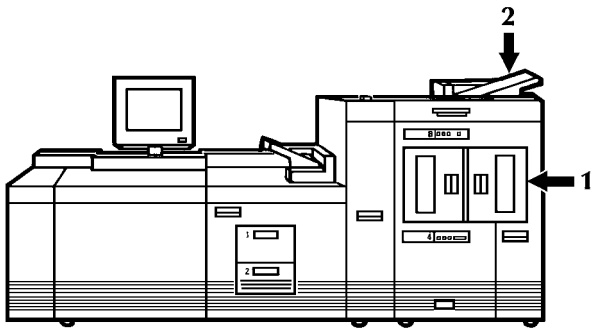
- If the tray is in use when this button is pressed, the feed selection changes to the backup tray if one exists. Otherwise, printing stops.
- If the tray is in use and selected as a backup tray, pressing this button causes the tray elevator to lower and the tray is no longer available for auto switching.
- 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.

Paper Level indicators. These indicators display the approximate quantity of paper within the tray. The display shows paper by quarter reams up to one ream, and then by full reams. The green indicator light appears above the Paper Level indicator which shows the amount of paper in the tray.

High-capacity stacker bins

The Xerox DocuPrint 96/DocuPrint 96MX LPS contains a high-capacity stacker (HCS) bin. Figure 1-8 shows the high-capacity stacker bin with the purge tray.

Figure 1-8. **HCS bin with purge tray**



1 High capacity stacker
2 Purge tray

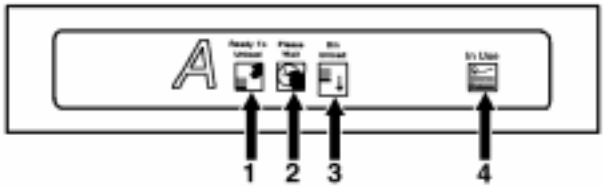
The HCS can hold 2500 sheets of 20 pound/75 gsm paper. The paper can be stacked onto the bin platform, a container on top of the bin platform, or a pallet without its container (for container sizes 11 by 17 inches or A3 only). The stacking capacity is approximately 100-150 sheets less when stacking into a container. (Refer to table 9-1 for information on available containers.)

It is also possible to select the level to which paper will be stacked in the HCS. Refer to the “Status and print tasks” chapter for additional information.

A stacking elevator maintains the paper at the proper level for stacking and lowers the stack for unloading. There is an offset mechanism that offsets printed sets toward the front or back of the HCS bin. Each HCS bin has unlinked double doors to provide you with easy, yet safe, access for unloading paper from the printer.

The HCS bin has a control panel consisting of buttons and indicators, as shown in figure 1-9.

Figure 1-9. **HCS bin control panel**



1 Ready to Unload indicator
2 Please Wait indicator
3 Bin Unload button
4 In Use indicator

Ready to Unload indicator. When this indicator is lit, you can remove printed sheets from the stacker bin.

Please Wait indicator. When this indicator is lit, the elevator is in motion. This indicator goes off when the platform reaches its destination.

Bin Unload button. Pressing this button causes the bin elevator to lower. If the bin is in use and part of a SELECT AUTO combination, the printed pages begin stacking in the other stacker bin. If the bin is not in use, there is no effect on printing operations.

In Use indicator. When this indicator is lit, the bin is selected to receive the next printed sheet.

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.

Sample tray

The sample tray is located on top of the printer. (Refer to figure 1-5.) It can hold up to 100 sheets of paper. Certain types of output (for example, transparencies) and requested sample prints of system files (for example, fonts or forms) or the print job in progress are sent to the sample tray. The sample tray also receives waste sheets that cannot be sent to the purge tray.

Purge tray

The purge tray is located on top of the feeder/stacker module. Aborted sheets (for example, sheets cleared after a paper jam) are sent to this tray. It can hold up to 100 sheets of paper.

Printer control console

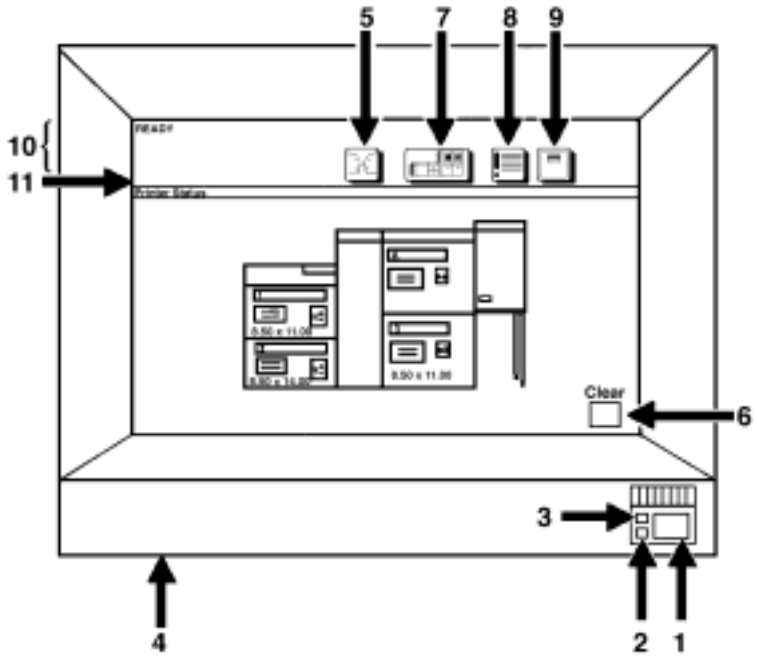
The printer control console, shown in figure 1-10, is a color monitor located on top of the printer. It contains message areas and graphic displays that alert you to paper jams and other fault and status conditions (such as low dry ink). It also contains buttons which allow you to control certain functions of the printer (for example, continuing an interrupted job) without returning to the keyboard display. The printer control console has the following features:

- Local controls and displays for jam clearance, paper loading/ unloading, and diagnostics/service (used by the service representative). Two types of messages are displayed on the printer control console: fault messages, which relate to printer malfunctions, and information messages, which relate to printer conditions such as low dry ink.
- Touch-sensitive areas that allow you to select options by touching the printer control console screen. A tone sounds when you touch one of these areas.
- Printer alarm consisting of sets of three beeps, for a duration of ten seconds. This tone is generated by any event that stops printer operation (for example, a paper jam).

  You can deactivate the alarm through the keyboard display (refer to the “System control tasks” chapter for instructions). The tone stops after three cycles, or when the fault condition is cleared or clearing has started (for example, doors or covers specified in the clearance instructions are opened). You can also stop the tone by pressing one of the printer control console buttons or by selecting a function through the touch screen.
- To prevent monitor burnout a screen saver feature automatically blanks the screen.

  To return to the screen press any key.

Figure 1-10. **Printer control console**



1. **Continue button.** Press this button to resume printing.
2. **Stop button.** Press this button to stop printing.
3. **Sample button.** Press this button to cause a sample of the current print job to be sent to the sample tray.
4. **Brightness control thumbwheel.** Use this thumbwheel to adjust the brightness of the printer control console display.
5. **Language icon.** If two languages are available for your printer control console, selecting this icon allows you to choose the language for the printer control console messages.
6. **Clear button.** Select this button to clear fault messages.
7. **Printer icon.** Select this icon to display the printer mimic. (This is the default display on the printer control console.)
8. **Tools icon.** Select this icon to display call for service information and to adjust display features of the printer control console (for example, alarm loudness).
9. **Fault List icon.** Select this icon to display the Fault List screen. Refer to the "Fault masking and the printer control console" section of the "Problem solving tasks" chapter for additional information on this screen.
10. **Message area.** This area is used as follows:
    - Lines 1 and 2. These lines display the current status of the printer, for example, READY.
    - Line 3. This line displays messages concerning masked conditions, such as low dry ink. These messages are preceded by an asterisk.
    - Line 4. This line displays messages that originate at the system controller.
11. **Icons area.** The following icons appear in this area:

Hint icon. This icon appears when a masked fault MT038 or a condition exists in the printer. (Refer to the "Fault masking and the printer control console" section of chapter 12, "Problem solving tasks," for additional information.)

Fault icon. This icon appears when a fault exists in the system that stops the printer or prevents it from printing.

Attention light

An Attention light is mounted on top of the inverter feeder/stacker module. (Refer to figure 1-5.) The Attention light can be enabled or disabled (refer to chapter 4, "System control tasks," for instructions). When enabled, the light has three states:

- **Off**. No printer problems exist that require your attention.
- **Steady light**. A situation exists that needs your attention (such as low dry ink condition).
- **Flashing**. The printer has stopped and your attention is required immediately.

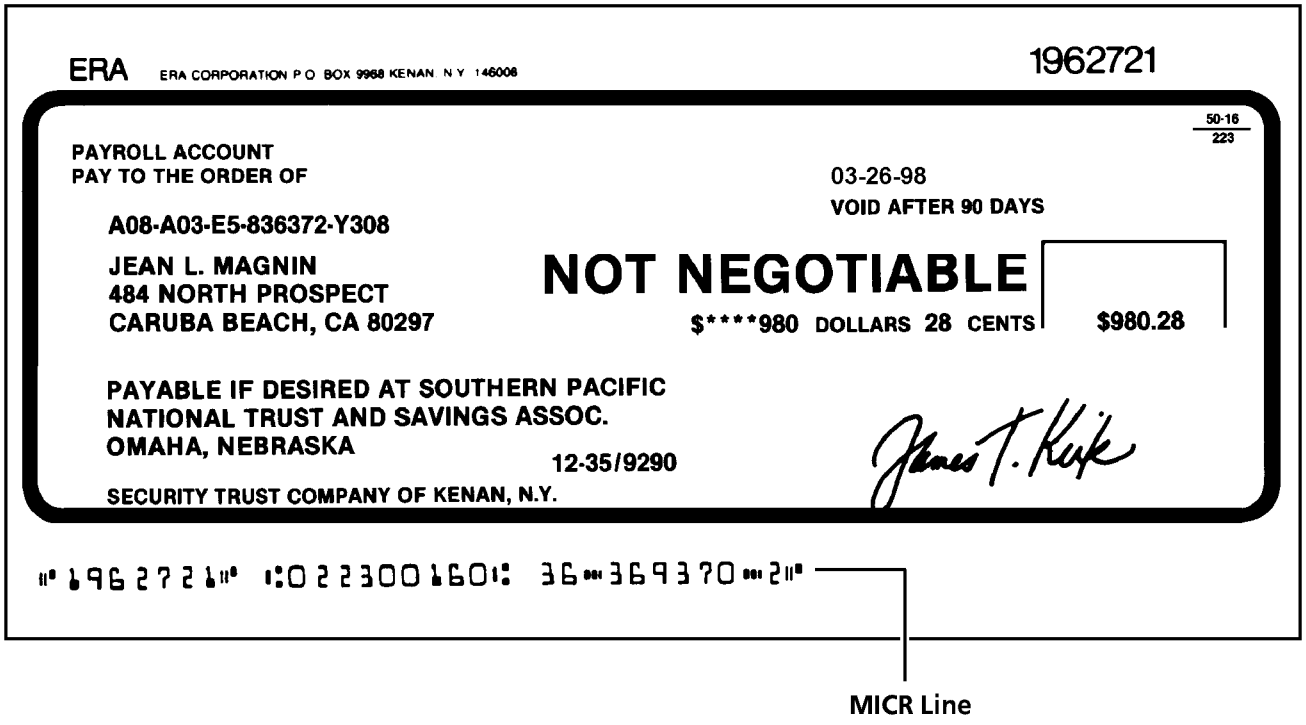
Registration transport levers

The heavy paper levers are used to optimize performance when running heavy weight or oversized papers. Refer to the “Printing problems” section in the “Problem solving tasks” chapter for more information on these levers.

Magnetic Ink Character Recognition (MICR)

The Xerox DocuPrint 96MX LPS produces a MICR line on negotiable and turnaround documents such as checks and bills. Figure 1-11 shows an example of a MICR line.

Figure 1-11. **MICR line**



Optional components

Optional components are available for both the system controller and the printer.

Optional system controller components

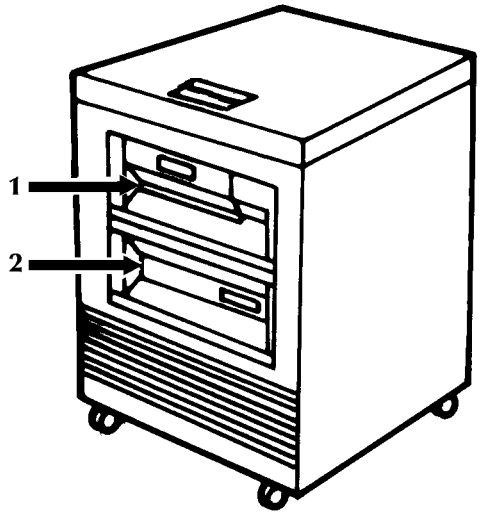
The optional components for the system controller are as follows:

- Peripheral cabinet
- Open-reel tape drive
- 1/2 inch cartridge tape drive
- Floppy disk drive.

Peripheral cabinet

The peripheral cabinet houses the open-reel and 1/2 inch tape drives. Both drives are shown in figure 1-12.

Figure 1-12. **Peripheral cabinet with tape drives**



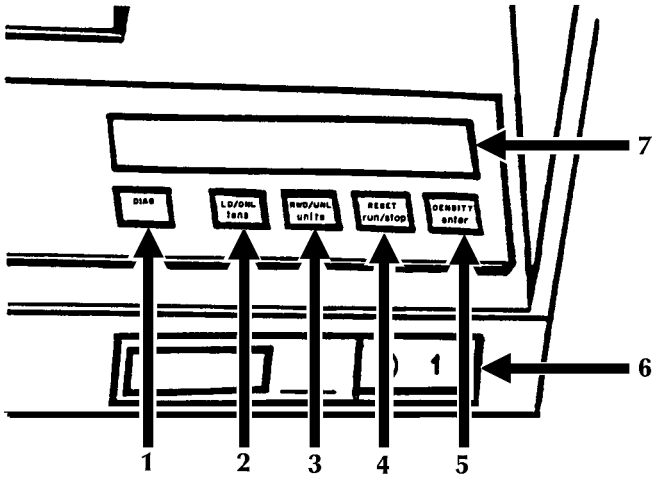
1 Open-reel tape drive
2 1/2 inch cartridge tape drive

Open-reel tape drive

The open-reel tape drive has the following features:

- 1/2 inch/13 mm streamer with a horizontal tape path.
- Self-loading tape system.
- Tape is visible through a window in the front of the tape drive so you can verify the presence of the tape and tape motion.
- The tape cover can be raised for routine cleaning.
- It has a control panel including an eight-character alphanumeric display for messages and error information. Figure 1-13 shows the control panel.

Figure 1-13. **Open-reel tape drive control panel**



1. **Diag button.** Sets or cancels diagnostic mode. (If DIAG appears in the message display and a diagnostic program is not active, pressing the Diag button cancels the diagnostic mode. If DIAG does not appear in the message display, pressing the Diag button sets the diagnostic mode.)
2. **Ld/Onl(tens) button.** Initiates loading; if loading is finished, puts the tape drive online to the system controller. In diagnostic mode, pressing this button increments the program number appearing in the message display by tens.
3. **Rwd/Unl(units) button.** Rewinds the tape to beginning of tape (BOT) if the tape drive is not online; when at BOT, unloads the tape and opens the tape door. In diagnostic mode, pressing this button increments the program number appearing in the message display by single digits.
4. **Reset(run/stop) button.** Takes the tape drive offline and cancels load and unload sequences. In diagnostic mode, pressing this button starts a program or program stack if a program is not running and stops the program or program stack if a program is running.
5. **Density(enter) button.** Used to select the required operating density or check the current density setting. In diagnostic mode, this button is used to enter a program number to the program stack.

6. **Power switch.** Powers the tape drive on (1) or off (0).
7. **Message display.** Displays tape drive messages and error codes.

1/2 inch cartridge tape drive

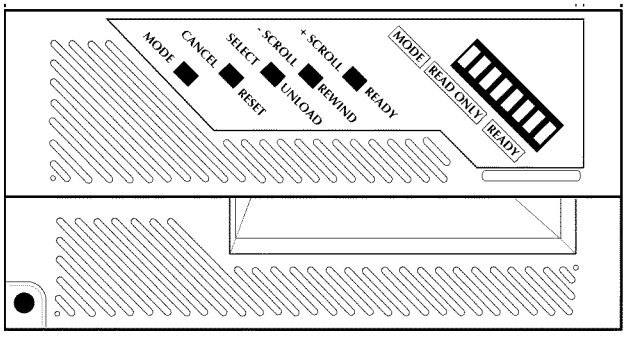
The 1/2 inch cartridge tape is used with the 18/36 track drive. The Xerox DocuPrint 96/DocuPrint 96MX LPS 1/2 inch cartridge tape drives have the following features:

- An integrated controller and tape drive.
- A fully-featured IBM 3480/3490 compatible cartridge tape subsystem.
- Uses a 3480/3490 type tape cartridge.
- The tape drive is self-threading.

The 18/36 track drive has a control panel including a 8 character message display for messages and error information.

The 18/36 track drive can read either 18 or 36 track format, but records in only 36 track format.

Figure 1-14. **18/36 track cartridge tape drive control panel**



The following push buttons are located on the tape drive front panel:

Ready Button Places the drive "online" to communicate with the system controller. This button also serves as the + Scroll control menu selection when the alternate mode is selected.

Rewind button Rewinds the tape to the beginning of Tape (BOT). This button also serves as the - Scroll control for menu selection when the alternate mode is selected.

Unload button Rewinds tape completely into housing and then ejects the cartridge. This button only functions when the tape drive is "offline" to the controller. This button also serves as the Select function for menu items when the alternate mode is selected.

Reset button Stops tape motion during rewind, unload, or "online" operation. If the drive is "online" pressing this button will take the drive "offline". This button also serves as the Cancel function, taking the operator back one menu level when the alternate mode is selected.

Mode button Switches modes of the tape drive, displaying menu selections and assigning alternate functions to the buttons described above. This button only functions when the tape unit is not ready.

The front panel also contains the following three indicator lights:

Read only Is illuminated if the installed cartridge is write protected.

Ready Is illuminated when a cartridge is loaded and the tape drive is online to the system controller.

Mode Is illuminated when the alternate mode has been selected.

Note: If all three indicators lights are flashing, a problem has occurred and operator intervention is required.

Message display Displays tape drive messages, menus, and error codes. Messages such as LOADING, BOT, REWIND, CLEAN, are displayed to show status. Other messages such as CST indicating a standard length cassette, ECCST indicating an extended length cassette, or CLEANING indicating a cleaning cartridge are also displayed. The message display will also show a small flashing square in the rightmost character space to indicate tape unit interface activity

Floppy disk drive

When installed, the optional floppy disk drive is located in the system controller, to the right of the 1/4 inch cartridge tape drive. It allows you to transfer files between a floppy disk and the system controller's hard disk.

Optional printer components

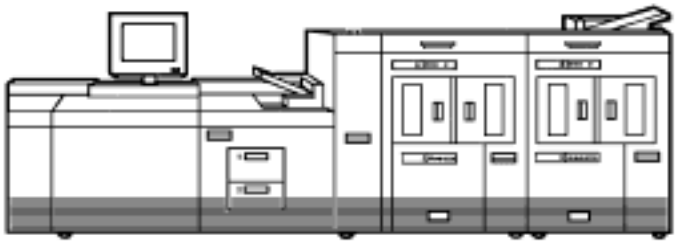
This section describes the following optional printer components:

- Feeder/Stacker
- Bypass Transport Module
- Input enablement device

Feeder/stacker

Figure 1-15 illustrates the Xerox DocuPrint 96/DocuPrint 96MX with the optional inverter feeder stacker. The feeder/stacker contains a high capacity feeder and a high capacity stacker. These devices have the same functions as the feeder and stacker contained in the inverter-feeder/stacker.

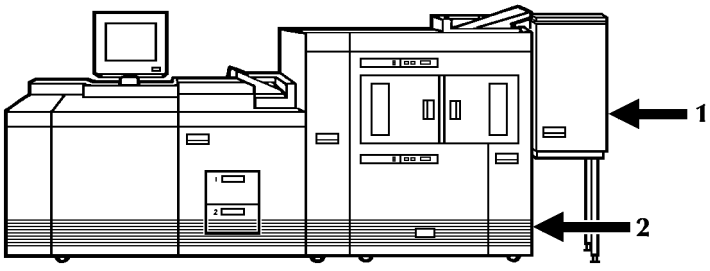
Figure 1-15. **Printer + Inverter Feeder Stacker + Feeder Stacker**



Bypass Transport Module

The Bypass Transport Module moves paper from the stacker to a third party finishing device (for example, a stitcher). When installed, the Bypass Transport Module is attached to the stacker module. Figure 1-16 shows the Bypass Transport Module.

Figure 1-16. **Bypass Transport Module and input enablement device**



1 Bypass transport paper output location
2 Input enablement device paper input location

Input enablement device

The input enablement device allows your Xerox DocuPrint 96/ DocuPrint 96MX to support and interface directly with a feeder. As shown in figure 1-16, it is located on the right side of the feeder/ stacker.

Entering commands

Key-in conventions

Follow these conventions when entering commands:

- The system is ready to receive commands when this message appears in the Messages window:

  ```
  OS1000 READY FOR COMMANDS
  ```

- All commands may be abbreviated to the first three characters or spelled out fully and correctly.
- Commands are executed by pressing <ENTER>, except for those entered with the function keys.
- Spaces or commas may be used to separate command parameters.
- Error and information messages from the system are preceded by OS and a four-digit code indicating the severity level. Refer to the *Xerox DocuPrint 96/DocuPrint 96MX LPS Message Guide* for information on a particular error message.
- A message acknowledging your request appears as positive feedback to you. An error message appears when a command is entered incorrectly:

  ```
  OS2710 INVALID COMMAND, PLEASE REENTER
  ```

Guide command conventions

When command instructions are given in this guide, the following conventions apply:

- Capital letters represent command keywords, the required part of the command.
- Lowercase letters, appearing in italics, represent data that changes each time you use the command. For example, the number of copies and the name of a form can vary for each job.
- Characters enclosed in square brackets ([ ]) are optional. You key them in only when you need them. For example, when you see [copies] in a command and you do not key in a specific number, the system automatically prints one copy.
- Characters enclosed in curly braces ({ }) are required.
- Options are separated by a vertical line (|).

1. System overview of the Xerox DocuPrint 96/DocuPrint 96MX LPS

This chapter explains in detail the base components and the optional components of the Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System (LPS).

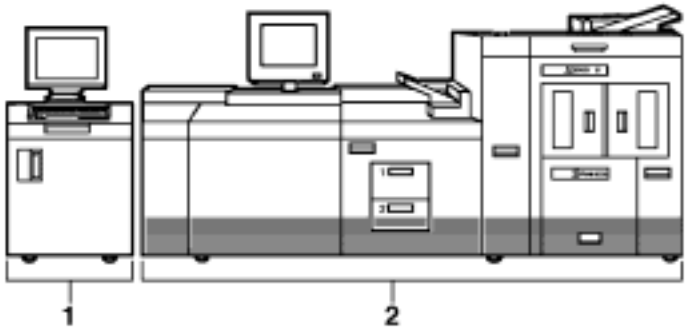
The Xerox DocuPrint 96/DocuPrint 96MX LPS is a versatile, high-performance printing system that processes and prints data from a variety of sources. It enables host mainframe computers and network-connected devices (such as workstations and graphic scanners) to produce publications and other documents, incorporating graphics, forms, logos, signatures, and a variety of fonts. With the Xerox DocuPrint 96/DocuPrint 96MX LPS, management information systems (MIS) and data processing (DP) environments have a high-performance printer in which built-in intelligence eliminates the need for the host computer to store and manage forms, fonts, and other document resources.

Data is printed at a rate of up to 96 pages per minute. A variety of fonts ranging in size from 3 points to 36 points, in all four orientations (portrait, inverse portrait, landscape, inverse landscape), and many publishing typefaces are available to meet your printing requirements. In addition to the standard set of fonts that is delivered with the LPS, special or customized fonts can be developed by the Xerox Font Center or by Xerox Limited.

Base components

The base components of the Xerox DocuPrint 96/DocuPrint 96MX LPS are the system controller and the printer, shown in figure 1-1.

Figure 1-1. **Xerox DocuPrint 96/DocuPrint 96MX Laser Printing System**



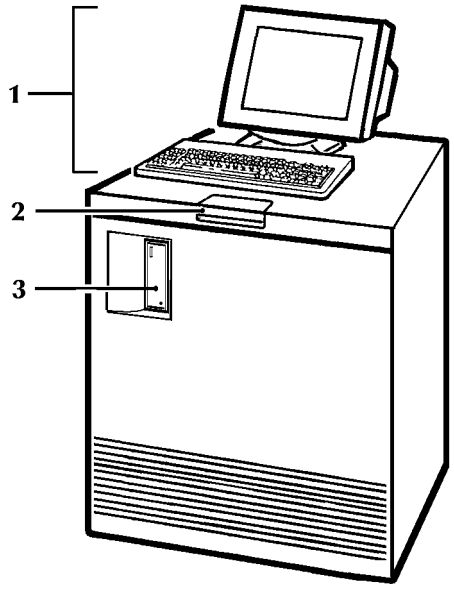
1 System controller
2 Printer

Note: Figure 1-1 shows one of the Xerox DocuPrint 96/DocuPrint 96MX configuration options. For information on the various Xerox DocuPrint 96/DocuPrint 96MX configurations, refer to the “Optional components” section later in this chapter.

System controller components

The system controller, shown in figure 1-2, is the part of the LPS that allows you to interact with the printer. Use the system user interface to enter commands and select options which control the operation of the printer.

Figure 1-2. **Xerox DocuPrint 96/DocuPrint 96MX system controller**



1 System user interface
2 Operator control panel
3 1/4 inch cartridge tape drive.

System user interface

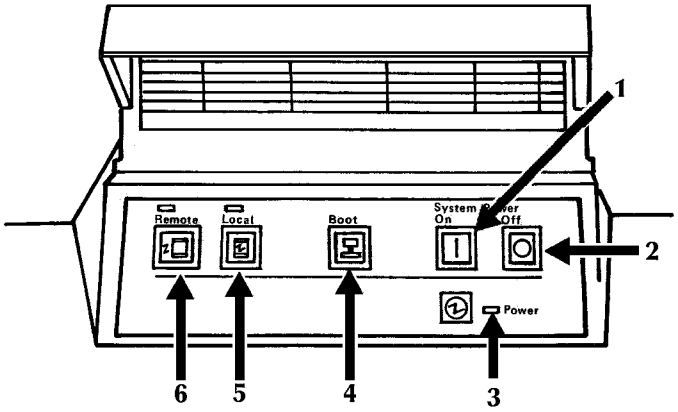
The system user interface consists of a keyboard and display. Figure 1-3 shows the keyboard display.

Figure 1-3. **Keyboard display**

Operator control panel

The operator control panel allows you to power the printer on and off, boot the operating system software, and switch the LPS between remote and local operation. Figure 1-4 shows the operator control panel.

Figure 1-4. **Operator control panel**



1. **Power On switch**
2. **Power Off switch**
3. **Power On indicator**
4. **Boot switch**
5. **Local switch and indicator**
6. **Remote switch and indicator**

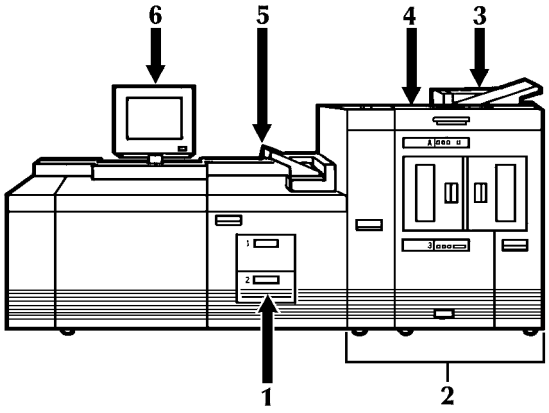
1/4 inch cartridge tape drive

The 1/4 inch cartridge tape drive, also referred to as QIC (quarter inch cartridge), is used for performing sysgen, disk save and restore (DSR), and file loading/backup for online system configuration. (Refer to the “1/4 inch cartridge tape drive procedures” section of the “Offline printing tasks” chapter for instructions on loading and unloading cartridge tapes.)

Printer components

The printer is the part of the LPS that processes the electronic images and produces the printed report. Figure 1-5 shows the printer and its various components.

Figure 1-5. **Xerox DocuPrint 96/DocuPrint 96MX printer**

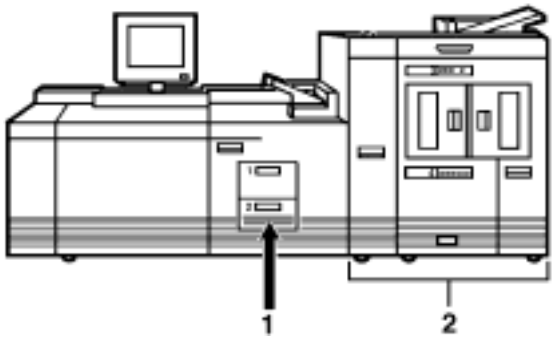


1 Processor feeder trays
2 Inverter feeder/stacker module
3 Purge tray
4 Attention light
5 Sample tray
6 Printer control console

Feeder trays

The feeder trays hold and convey paper and other materials (for example, transparencies) used to produce printed output.

Figure 1-6. **Xerox DocuPrint 96/DocuPrint 96MX feeder trays and inverter feeder/stacker module**



1 Processor feeder trays

2 Inverter feeder/stacker module (contains high capacity feeder and stacker)

Two processor feeder trays are located in the main part of the printer.

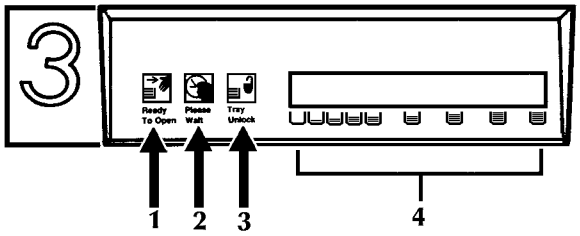
- The main tray (tray 1) holds 1100 sheets of 20 pound/75 gsm paper.
- The auxiliary tray (tray 2) holds 600 sheets of 20 pound/75 gsm paper.
- If configured, trays 1 and 2 can handle paper sized from 8 by 10 inches/203 by 254 mm to 9.05 by 14.02 inches/230 by 356 mm.

There is one high-capacity feeder (HCF) tray in the feeder/stacker module (tray 3). The HCF tray is the primary paper supply for the printer. Each tray can handle paper sized from 8 by 10 inches/203 by 254 mm to 14.33 by 17 inches/364 by 432 mm.

An elevator moves the tray up or down when it is in use. The HCF trays have Paper Level switches which detect the position of the elevator to determine the fullness of the tray. Paper Size switches detect the size of the paper loaded in the trays.

Each processor feeder tray and HCF tray has a control panel consisting of a button, indicators, and paper level displays, as shown in figure 1-7.

Figure 1-7. **Feeder tray control panel**



1 **Ready to Open indicator**
2 **Please Wait indicator**
3 **Tray Unlock button**
4 **Paper Level indicators**

Ready to Open indicator. This indicator is lit when paper can be added to the tray.

Please Wait indicator. This indicator shows that the tray is in motion. It is lit when the Tray Unlock button is pressed, when the tray is being lowered, or when the tray is being raised. The indicator goes off when the tray elevator reaches its destination.

Tray Unlock button. This button can be used any time the Please Wait indicator is off.

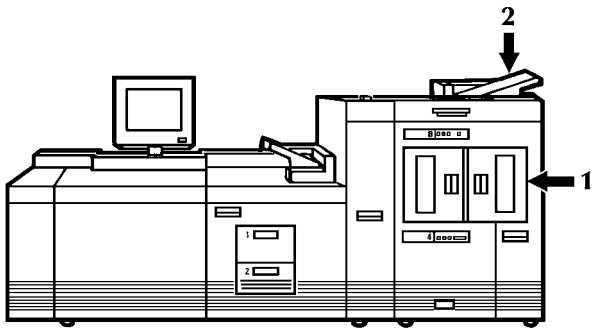
- If the tray is in use when this button is pressed, the feed selection changes to the backup tray if one exists. Otherwise, printing stops.
- If the tray is in use and selected as a backup tray, pressing this button causes the tray elevator to lower and the tray is no longer available for auto switching.
- 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.

Paper Level indicators. These indicators display the approximate quantity of paper within the tray. The display shows paper by quarter reams up to one ream, and then by full reams. The green indicator light appears above the Paper Level indicator which shows the amount of paper in the tray.

High-capacity stacker bins

The Xerox DocuPrint 96/DocuPrint 96MX LPS contains a high-capacity stacker (HCS) bin. Figure 1-8 shows the high-capacity stacker bin with the purge tray.

Figure 1-8. **HCS bin with purge tray**



1 High capacity stacker
2 Purge tray

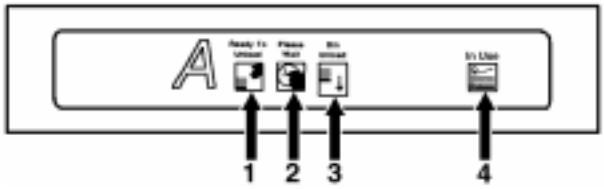
The HCS can hold 2500 sheets of 20 pound/75 gsm paper. The paper can be stacked onto the bin platform, a container on top of the bin platform, or a pallet without its container (for container sizes 11 by 17 inches or A3 only). The stacking capacity is approximately 100-150 sheets less when stacking into a container. (Refer to table 9-1 for information on available containers.)

It is also possible to select the level to which paper will be stacked in the HCS. Refer to the “Status and print tasks” chapter for additional information.

A stacking elevator maintains the paper at the proper level for stacking and lowers the stack for unloading. There is an offset mechanism that offsets printed sets toward the front or back of the HCS bin. Each HCS bin has unlinked double doors to provide you with easy, yet safe, access for unloading paper from the printer.

The HCS bin has a control panel consisting of buttons and indicators, as shown in figure 1-9.

Figure 1-9. **HCS bin control panel**



1 Ready to Unload indicator
2 Please Wait indicator
3 Bin Unload button
4 In Use indicator

Ready to Unload indicator. When this indicator is lit, you can remove printed sheets from the stacker bin.

Please Wait indicator. When this indicator is lit, the elevator is in motion. This indicator goes off when the platform reaches its destination.

Bin Unload button. Pressing this button causes the bin elevator to lower. If the bin is in use and part of a SELECT AUTO combination, the printed pages begin stacking in the other stacker bin. If the bin is not in use, there is no effect on printing operations.

In Use indicator. When this indicator is lit, the bin is selected to receive the next printed sheet.

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.

Sample tray

The sample tray is located on top of the printer. (Refer to figure 1-5.) It can hold up to 100 sheets of paper. Certain types of output (for example, transparencies) and requested sample prints of system files (for example, fonts or forms) or the print job in progress are sent to the sample tray. The sample tray also receives waste sheets that cannot be sent to the purge tray.

Purge tray

The purge tray is located on top of the feeder/stacker module. Aborted sheets (for example, sheets cleared after a paper jam) are sent to this tray. It can hold up to 100 sheets of paper.

Printer control console

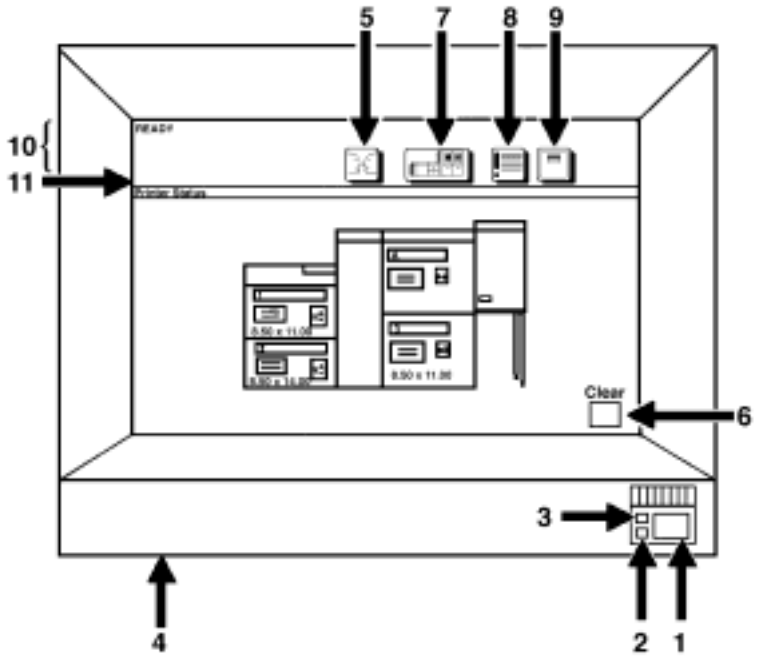
The printer control console, shown in figure 1-10, is a color monitor located on top of the printer. It contains message areas and graphic displays that alert you to paper jams and other fault and status conditions (such as low dry ink). It also contains buttons which allow you to control certain functions of the printer (for example, continuing an interrupted job) without returning to the keyboard display. The printer control console has the following features:

- Local controls and displays for jam clearance, paper loading/ unloading, and diagnostics/service (used by the service representative). Two types of messages are displayed on the printer control console: fault messages, which relate to printer malfunctions, and information messages, which relate to printer conditions such as low dry ink.
- Touch-sensitive areas that allow you to select options by touching the printer control console screen. A tone sounds when you touch one of these areas.
- Printer alarm consisting of sets of three beeps, for a duration of ten seconds. This tone is generated by any event that stops printer operation (for example, a paper jam).

  You can deactivate the alarm through the keyboard display (refer to the “System control tasks” chapter for instructions). The tone stops after three cycles, or when the fault condition is cleared or clearing has started (for example, doors or covers specified in the clearance instructions are opened). You can also stop the tone by pressing one of the printer control console buttons or by selecting a function through the touch screen.
- To prevent monitor burnout a screen saver feature automatically blanks the screen.

  To return to the screen press any key.

Figure 1-10. **Printer control console**



1. **Continue button.** Press this button to resume printing.
2. **Stop button.** Press this button to stop printing.
3. **Sample button.** Press this button to cause a sample of the current print job to be sent to the sample tray.
4. **Brightness control thumbwheel.** Use this thumbwheel to adjust the brightness of the printer control console display.
5. **Language icon.** If two languages are available for your printer control console, selecting this icon allows you to choose the language for the printer control console messages.
6. **Clear button.** Select this button to clear fault messages.
7. **Printer icon.** Select this icon to display the printer mimic. (This is the default display on the printer control console.)
8. **Tools icon.** Select this icon to display call for service information and to adjust display features of the printer control console (for example, alarm loudness).
9. **Fault List icon.** Select this icon to display the Fault List screen. Refer to the "Fault masking and the printer control console" section of the "Problem solving tasks" chapter for additional information on this screen.
10. **Message area.** This area is used as follows:
    - Lines 1 and 2. These lines display the current status of the printer, for example, READY.
    - Line 3. This line displays messages concerning masked conditions, such as low dry ink. These messages are preceded by an asterisk.
    - Line 4. This line displays messages that originate at the system controller.
11. **Icons area.** The following icons appear in this area:

Hint icon. This icon appears when a masked fault MT038 or a condition exists in the printer. (Refer to the "Fault masking and the printer control console" section of chapter 12, "Problem solving tasks," for additional information.)

Fault icon. This icon appears when a fault exists in the system that stops the printer or prevents it from printing.

Attention light

An Attention light is mounted on top of the inverter feeder/stacker module. (Refer to figure 1-5.) The Attention light can be enabled or disabled (refer to chapter 4, "System control tasks," for instructions). When enabled, the light has three states:

- **Off**. No printer problems exist that require your attention.
- **Steady light**. A situation exists that needs your attention (such as low dry ink condition).
- **Flashing**. The printer has stopped and your attention is required immediately.

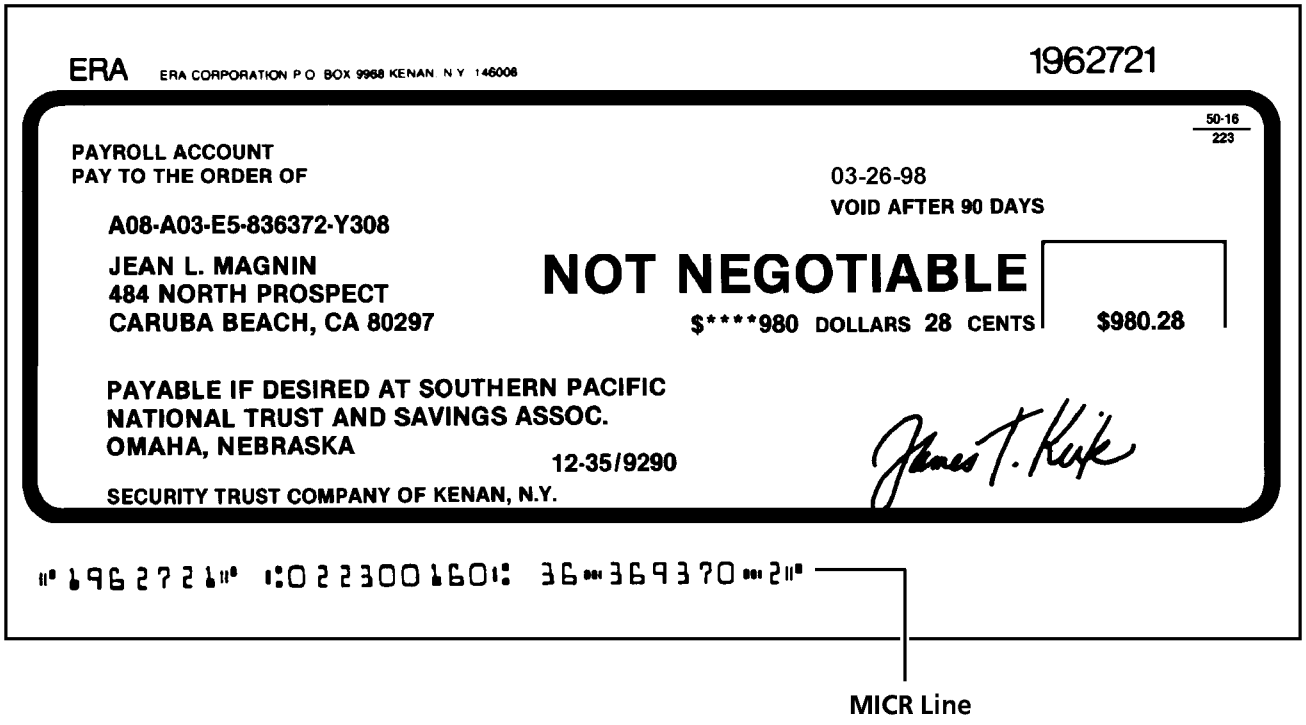
Registration transport levers

The heavy paper levers are used to optimize performance when running heavy weight or oversized papers. Refer to the “Printing problems” section in the “Problem solving tasks” chapter for more information on these levers.

Magnetic Ink Character Recognition (MICR)

The Xerox DocuPrint 96MX LPS produces a MICR line on negotiable and turnaround documents such as checks and bills. Figure 1-11 shows an example of a MICR line.

Figure 1-11. **MICR line**



Optional components

Optional components are available for both the system controller and the printer.

Optional system controller components

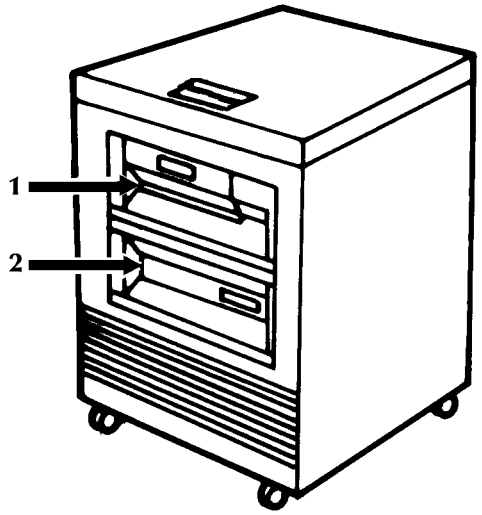
The optional components for the system controller are as follows:

- Peripheral cabinet
- Open-reel tape drive
- 1/2 inch cartridge tape drive
- Floppy disk drive.

Peripheral cabinet

The peripheral cabinet houses the open-reel and 1/2 inch tape drives. Both drives are shown in figure 1-12.

Figure 1-12. **Peripheral cabinet with tape drives**



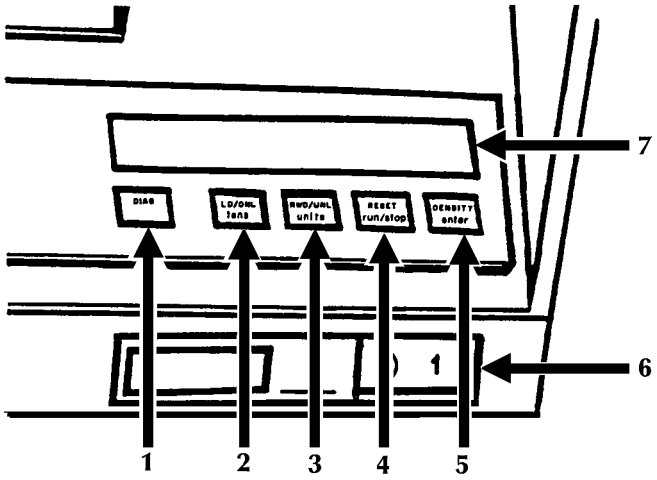
1 Open-reel tape drive
2 1/2 inch cartridge tape drive

Open-reel tape drive

The open-reel tape drive has the following features:

- 1/2 inch/13 mm streamer with a horizontal tape path.
- Self-loading tape system.
- Tape is visible through a window in the front of the tape drive so you can verify the presence of the tape and tape motion.
- The tape cover can be raised for routine cleaning.
- It has a control panel including an eight-character alphanumeric display for messages and error information. Figure 1-13 shows the control panel.

Figure 1-13. **Open-reel tape drive control panel**



1. **Diag button.** Sets or cancels diagnostic mode. (If DIAG appears in the message display and a diagnostic program is not active, pressing the Diag button cancels the diagnostic mode. If DIAG does not appear in the message display, pressing the Diag button sets the diagnostic mode.)
2. **Ld/Onl(tens) button.** Initiates loading; if loading is finished, puts the tape drive online to the system controller. In diagnostic mode, pressing this button increments the program number appearing in the message display by tens.
3. **Rwd/Unl(units) button.** Rewinds the tape to beginning of tape (BOT) if the tape drive is not online; when at BOT, unloads the tape and opens the tape door. In diagnostic mode, pressing this button increments the program number appearing in the message display by single digits.
4. **Reset(run/stop) button.** Takes the tape drive offline and cancels load and unload sequences. In diagnostic mode, pressing this button starts a program or program stack if a program is not running and stops the program or program stack if a program is running.
5. **Density(enter) button.** Used to select the required operating density or check the current density setting. In diagnostic mode, this button is used to enter a program number to the program stack.

6. **Power switch.** Powers the tape drive on (1) or off (0).
7. **Message display.** Displays tape drive messages and error codes.

1/2 inch cartridge tape drive

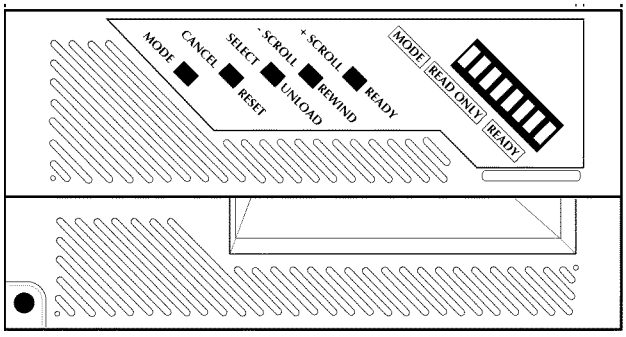
The 1/2 inch cartridge tape is used with the 18/36 track drive. The Xerox DocuPrint 96/DocuPrint 96MX LPS 1/2 inch cartridge tape drives have the following features:

- An integrated controller and tape drive.
- A fully-featured IBM 3480/3490 compatible cartridge tape subsystem.
- Uses a 3480/3490 type tape cartridge.
- The tape drive is self-threading.

The 18/36 track drive has a control panel including a 8 character message display for messages and error information.

The 18/36 track drive can read either 18 or 36 track format, but records in only 36 track format.

Figure 1-14. **18/36 track cartridge tape drive control panel**



The following push buttons are located on the tape drive front panel:

Ready Button Places the drive "online" to communicate with the system controller. This button also serves as the + Scroll control menu selection when the alternate mode is selected.

Rewind button Rewinds the tape to the beginning of Tape (BOT). This button also serves as the - Scroll control for menu selection when the alternate mode is selected.

Unload button Rewinds tape completely into housing and then ejects the cartridge. This button only functions when the tape drive is "offline" to the controller. This button also serves as the Select function for menu items when the alternate mode is selected.

Reset button Stops tape motion during rewind, unload, or "online" operation. If the drive is "online" pressing this button will take the drive "offline". This button also serves as the Cancel function, taking the operator back one menu level when the alternate mode is selected.

Mode button Switches modes of the tape drive, displaying menu selections and assigning alternate functions to the buttons described above. This button only functions when the tape unit is not ready.

The front panel also contains the following three indicator lights:

Read only Is illuminated if the installed cartridge is write protected.

Ready Is illuminated when a cartridge is loaded and the tape drive is online to the system controller.

Mode Is illuminated when the alternate mode has been selected.

Note: If all three indicators lights are flashing, a problem has occurred and operator intervention is required.

Message display Displays tape drive messages, menus, and error codes. Messages such as LOADING, BOT, REWIND, CLEAN, are displayed to show status. Other messages such as CST indicating a standard length cassette, ECCST indicating an extended length cassette, or CLEANING indicating a cleaning cartridge are also displayed. The message display will also show a small flashing square in the rightmost character space to indicate tape unit interface activity

Floppy disk drive

When installed, the optional floppy disk drive is located in the system controller, to the right of the 1/4 inch cartridge tape drive. It allows you to transfer files between a floppy disk and the system controller's hard disk.

Optional printer components

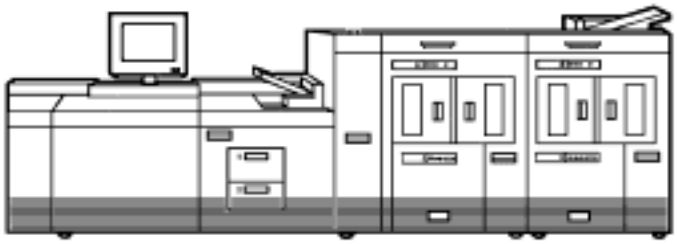
This section describes the following optional printer components:

- Feeder/Stacker
- Bypass Transport Module
- Input enablement device

Feeder/stacker

Figure 1-15 illustrates the Xerox DocuPrint 96/DocuPrint 96MX with the optional inverter feeder stacker. The feeder/stacker contains a high capacity feeder and a high capacity stacker. These devices have the same functions as the feeder and stacker contained in the inverter-feeder/stacker.

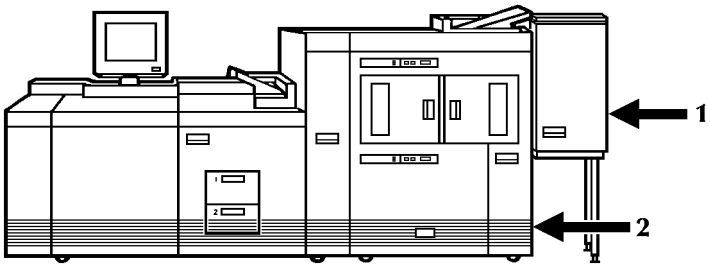
Figure 1-15. **Printer + Inverter Feeder Stacker + Feeder Stacker**



Bypass Transport Module

The Bypass Transport Module moves paper from the stacker to a third party finishing device (for example, a stitcher). When installed, the Bypass Transport Module is attached to the stacker module. Figure 1-16 shows the Bypass Transport Module.

Figure 1-16. **Bypass Transport Module and input enablement device**



1 Bypass transport paper output location
2 Input enablement device paper input location

Input enablement device

The input enablement device allows your Xerox DocuPrint 96/ DocuPrint 96MX to support and interface directly with a feeder. As shown in figure 1-16, it is located on the right side of the feeder/ stacker.

Entering commands

Key-in conventions

Follow these conventions when entering commands:

- The system is ready to receive commands when this message appears in the Messages window:

  ```
  OS1000 READY FOR COMMANDS
  ```

- All commands may be abbreviated to the first three characters or spelled out fully and correctly.
- Commands are executed by pressing <ENTER>, except for those entered with the function keys.
- Spaces or commas may be used to separate command parameters.
- Error and information messages from the system are preceded by OS and a four-digit code indicating the severity level. Refer to the *Xerox DocuPrint 96/DocuPrint 96MX LPS Message Guide* for information on a particular error message.
- A message acknowledging your request appears as positive feedback to you. An error message appears when a command is entered incorrectly:

  ```
  OS2710 INVALID COMMAND, PLEASE REENTER
  ```

Guide command conventions

When command instructions are given in this guide, the following conventions apply:

- Capital letters represent command keywords, the required part of the command.
- Lowercase letters, appearing in italics, represent data that changes each time you use the command. For example, the number of copies and the name of a form can vary for each job.
- Characters enclosed in square brackets ([ ]) are optional. You key them in only when you need them. For example, when you see [copies] in a command and you do not key in a specific number, the system automatically prints one copy.
- Characters enclosed in curly braces ({ }) are required.
- Options are separated by a vertical line (|).

2. Paper facts

This chapter contains information about paper handling and procedures for loading feeder trays and unloading the stacker bin.

Important facts about paper

As the operator of the Xerox DocuPrint 96/DocuPrint 96MX LPS printer, you need to be aware of the importance of taking good care of the paper used in it. Using the correct type of paper and taking time to store and condition it properly helps to keep your printer running at optimum speed and efficiency, with fewer time-wasting paper jams.

For additional information about paper, refer to *Helpful Facts About Paper*.

Paper storage

Follow these storage guidelines:

- Do not unwrap the paper stock until it is needed.
- Store the reams of paper in their carton.
- Do not leave the paper cartons directly on the floor. Place something beneath them, for example, wooden pallets.
- When the paper stock is taken from a storage area with a different humidity or temperature, keep it in the room where it will be used for at least 48 hours before loading it into the LPS.

Paper specifications

This section lists the paper sizes, weights, and types that can be used in the Xerox DocuPrint 96/DocuPrint 96MX LPS.

Paper sizes

The following paper sizes can be used:

- Width: 8 to 17 inches/203 to 432 mm (17 inch/178 mm paper parallel to feed direction)
- Length: 10 to 14.33 inches/254 to 364 mm.

A continuous range of paper sizes from the system minimum to the system maximum is supported. Table 2-1 lists the standard paper sizes.

Note: Trays 1 and 2 hold 8 X 10 inch up to 9 X 14 inch paper. The High Capacity Feeder holds 8 X 10 inch up to A3 and 14.33 X 17 inch paper.

Table 2-1. **Standard table sizes**

Width (inches)	Length (inches)	Generic name
8.27	11.69	A4
8.50	11.0	USLETTER
8.50	14.0	USLEGAL
16.54	11.69	A3
10.12	14.33	B4
17.0	11.0	17 X 11

Paper weights

The Xerox DocuPrint 96/DocuPrint 96MX LPS supports 16 pound/60 gsm to 110 pound/200 gsm paper.

Types of paper

The following types of paper are supported:

- Predrilled
- Perforated
- Pressure-sensitive labels
- Transparencies
- Precut or full tabs
- Carbonless (Xerox)
- Standard types

Paper performance guides

The following guides summarize the capabilities of the paper trays, duplex printing considerations, and paper stock considerations.

Note: You may use the adjustable levers to optimize performance when running heavy weight or oversized papers. Refer to the "Problem solving tasks" chapter, "Printing problems" section for information on these levers.

Table 2-2. **Trays 1 and 2 performance guide[1]**

Paper	Superior performance	Good performance	Performance limits and suggested alternatives
Size range	8 by 10 to 9 by 14 inches/203 by 254 to 229 by 356 mm. Includes: • 8.5 by 11 inches • A4 (210 by 297 mm)		Paper smaller than 8 by 10 inches/203 by 254 mm cannot be used. For paper larger than 9 by 14 inches/229 by 356 mm, refer to the Performance Guide for tray 3.
Weight range	20 to 110 pounds/80 to 200 gsm	16 to 20 pounds/60 to 80 gsm[2]	Weights outside the limits shown are not recommended. Refer to the Paper Stocks Guide later in this chapter for additional information.
Capacity	Tray 1: 1100 sheets, 20 pound/ 80 gsm paper Tray 2: 600 sheets, 20 pound/ 80 gsm paper		
Type or condition	• Xerographic paper in good condition • Predrilled stock (fanned thoroughly) • Tab stock (in perfectly flat condition)	• Transparencies • High-speed label stock • Slightly curled paper[3] • Intermixed weights • Paper with reinforced binding edges	• Excessively curled paper[4] • Manual two-sided (duplex) prints • Freshly printed offset prints

1. Refer to the Paper stocks guide (table 2-5) for additional information
2. Make sure that heavy weight paper levers (located in areas 2 and 4 of the printer) are in the appropriate position for the weight of paper being used. Refer to the "Prints are skewed" section of the "Problem solving tasks" chapter.
3. Curl direction should be determined before loading paper into trays. Refer to the "Paper jams and paper curl" section of chapter 12, "Problem solving tasks," for additional information.
4. Curl direction should be determined before loading paper into trays. Refer to the "Paper jams and paper curl" section of chapter 12, "Problem solving tasks," for additional information.

Table 2-3. **High capacity tray performance guide[1]**

Paper	Superior performance	Good performance	Performance limits and suggested alternatives
Size range	8 by 10 to 11.69 by 17 inches/ 203 by 254 to 297 by 432 mm. Includes: • 11 by 14 inches • 11 by 17 inches • B4 (250 by 353 mm) • A3 (297 by 420 mm)		Smaller or larger sizes cannot be used.
Weight range	20 to 110 pounds/80 to 200 gsm	16 to 20 pounds/60 to 80 gsm[2]	Weights outside the limits shown are not recommended.
Capacity	Tray 3: 2600 sheets, 20 pound/ 80 gsm paper		
Type or condition	• Xerographic paper in good condition • Predrilled stock (fanned thoroughly)	• Slightly curled paper[3] • Manual two-sided (duplex) prints • High speed label stock	• Excessively curled paper[4] • Curl direction should be determined before loading paper into tray.[5] • DO NOT use mylar reinforced paper in tray 3. Hardware damage may result. Use trays 1 or 2.

1. Refer to the Paper stocks guide (table 2-5) for additional information
2. Make sure that heavy weight paper levers (located in areas 2 and 4 of the printer) are in the appropriate position for the weight of paper being used. Refer to the “Prints are skewed“ section of the “Problem solving tasks“chapter.
3. Curl direction should be determined before loading paper into trays. Refer to the “Paper jams and paper curl” section of chapter 12, “Problem solving tasks,” for additional information.
4. Curl direction should be determined before loading paper into trays. Refer to the “Paper jams and paper curl” section of chapter 12, “Problem solving tasks,” for additional information.
5. Curl direction should be determined before loading paper into trays. Refer to the “Paper jams and paper curl” section of chapter 12, “Problem solving tasks,” for additional information.

Table 2-4. **Two-sided (duplex) printing performance guide[1]**

Paper	Superior performance	Good performance	Performance limits and suggested alternatives
Size range	8 by 10 to 11.69 by 17 inches/ 203 by 254 to 297 by 432 mm.		Smaller or larger sizes cannot be used.
Weight range	20 to 110 pounds/80 to 200 gsm[2]		Weights outside the limits shown are not recommended. If show through occurs, adjust print quality or use heavier weight paper.
Type or condition	• Xerographic paper in good condition • Predrilled stock (fanned thoroughly)	• Slightly curled paper[3] • Paper with reinforced binding edges • Tabs Refer to the Paper Stocks Guide for additional information.	• Excessively curled paper[4] • Avoid Transparencies Stock not defined here is included in the Paper Stocks Guide, which follows.

1. Refer to the Paper stocks guide for additional information.
2. Make sure that heavy weight paper levers (located in areas 2 and 4 of the printer) are in the appropriate position for the weight of paper being used. Refer to the “Prints are skewed” section of the “Problem solving tasks“chapter
3. Curl direction should be determined before loading paper into trays. Refer to the “Paper jams and paper curl” section of chapter 12, “Problem solving tasks,” for additional information.
4. Curl direction should be determined before loading paper into trays. Refer to the “Paper jams and paper curl” section of chapter 12, “Problem solving tasks,” for additional information.

Table 2-5. **Paper stocks guide**

Stock type	Instructions for use
16 pound/60 gsm paper	• Load paper with ream wrapper seam side down. If there is no arrow on the ream wrapper, load paper in tray 3 with curl up. • Duplexing 16 lb. paper is not recommended. • Best performance can be expected from tray 3.
20 pound/80 gsm paper	Load paper with ream wrapper seam down. If there is no arrow on the ream wrapper, load paper in tray 3 with curl up.
65 pound card stock 110 pound/200 gsm paper (index)	Run from any tray.
20 pound or 80 gsm dual-purpose 3-hole drilled 4-hole drilled 7-hole drilled	• Load with holes to the RIGHT. • Use the Align task to avoid printing near the holes. • Fan paper thoroughly and check for loose paper plugs prior to loading.
Non-tearing 3-hole	• Load in trays 1 and 2 only. • Load with holes to the RIGHT. • DO NOT run two-sided (duplex) prints.
Non-tearing	• Load in trays 1 and 2 only. • DO NOT run two-sided (duplex) prints.
Xerox carbonless paper	• Load paper in tray 3 only. • Only Xerox carbonless paper is recommended for High speed Xerographic equipment.
3-hole drilled, edge reinforced dual-purpose	• Use trays 1 and 2. • Load paper with holes to the right, reinforced side DOWN. • In two-sided (duplex) printing, degraded print quality may occur near the reinforcement. • Leave stock in wrapper until use to achieve maximum stock flatness. • Run with no more than 200 sheets in a tray.[1]
Transparencies— Oversized (8.5 by 14 inches, 0.5 inch white stripe/216 by 356 mm, 1 mm white strip)	• Load with the white stripe to the RIGHT in trays 1 and 2 (“shiny” side UP for best performance). • Simplex only.
Preprinted stock	Certain types of ink or insufficient drying time may cause the ink to adhere to various machine components and printed sheets. Allow at least 3 hours of drying time before using preprinted stock. CAUTION: Certain preprinted stocks lie unevenly in the feeder trays. If the right side of the stack is higher than the left in tray 3 SEVERE hardware damage can occur. Load the stock in trays 1 or 2 or load fewer sheets.
Transparencies— Paper-backed, high-speed, removable stripe	• High-speed paper-backed transparencies may be run from trays 1 and 2 with paper side DOWN. • Run no more than 50 removable stripe transparencies at one time. • Load the transparencies on top of approximately 50 sheets of paper.

Table 2-5. **Paper stocks guide** (continued)

Stock type	Instructions for use
Tab stock	• Load into trays 1 and 2 with tabs to the LEFT. • For best performance, print should be centered on the tab and should not extend to either edge. • Use tab stock in perfectly flat condition. DO NOT use deformed, bent, or damaged tabs.
9-inch cover stock 110 pound/200 gsm	Load into any tray.
High-speed label stock	• Load FACE UP. • DO NOT run two-sided (duplex) prints.
Letterhead	• Load into trays with side 1 UP and top edge toward the front of the tray (avoid placing the print in line with the feed belt in trays 1 and 2). • Avoid using freshly preprinted paper.
Manual two-sided (duplex) prints	• Load into trays with printed side DOWN and top edge toward the front of the tray (avoid placing the print in line with the feed belt in trays 1 and 2). • Print the second side as soon as possible after the first side to prevent wrinkling and excessive curl.
Textured paper	Heavily textured paper may yield prints with ragged character appearance and/ or deletions. To test, print a sample sheet.

1. You can order a mylar reinforcement tray which allows a feeder tray to handle up to 500 sheets of this type of stock. Contact your service representative for additional information.

Paper sizing and print jobs

The Xerox DocuPrint 96/DocuPrint 96MX LPS feeder trays have edge guide sensors that detect paper length and width. The LPS selects the correct feeder tray(s) for the print job, based on the paper size specified in the job.

- If an exact match is found, the print job proceeds.
- If an exact match is not found, depending on how the job was set up, one of the following occurs:
  - — A message appears on the system controller display and the printer control console telling you to load different paper or inquiring whether it is permissible to print the job on paper that is larger than specified for the job.
  - — The job prints on paper larger than specified for the job.
  - — The job is aborted.

Note: The LPS never prints a job on paper known to be smaller than that specified for the job.

If you encounter any problems related to paper sizing, contact your lead operator, systems specialist, or Xerox support specialist

Feeder trays

Your LPS provides three feeder trays:

- Two processor feeder trays
- One high-capacity feeder (HCF) tray.

Up to three different stocks may be used within a print job, including oversize covers or tabs.

Note: If your LPS is fitted with a bulk feeder, the number of available stocks increases by one.

For instructions on selecting feeder trays and managing clusters (groupings of trays), refer to the “Status and print tasks” chapter.

Feeder tray features

Note the following features of the feeder trays:

- Any tray not currently in use can be opened, pulled out, and loaded, without interrupting printing.
- If you try to open a tray currently in use, feeding switches to a backup tray if one is available. If one is not available, the printer stops.
- The printer does not feed all the paper out of a tray. (A stack of approximately 1/4 inch/6 mm remains in the tray.)

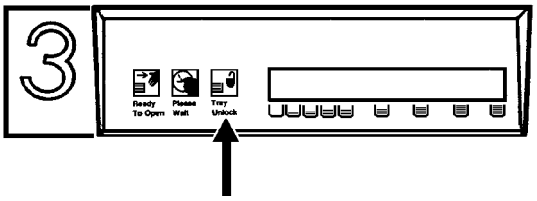
Loading a feeder tray

To load one of the feeder trays.

Step 1. Select the tray you want to load by pressing the Tray Unlock button on the paper tray. The Tray Unlock button is shown in figure 2-1. You may also select the tray through the printer mimic on the printer control console. Refer to the “Lower trays and bins” section of the “Status and print tasks” chapter for instructions.

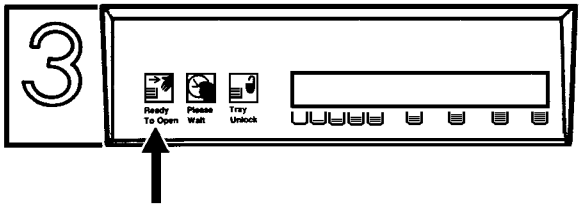
Note: If the printer has stopped due to a low paper condition, you do not need to press the Tray Unlock button.

Figure 2-1. **Tray Unlock button**



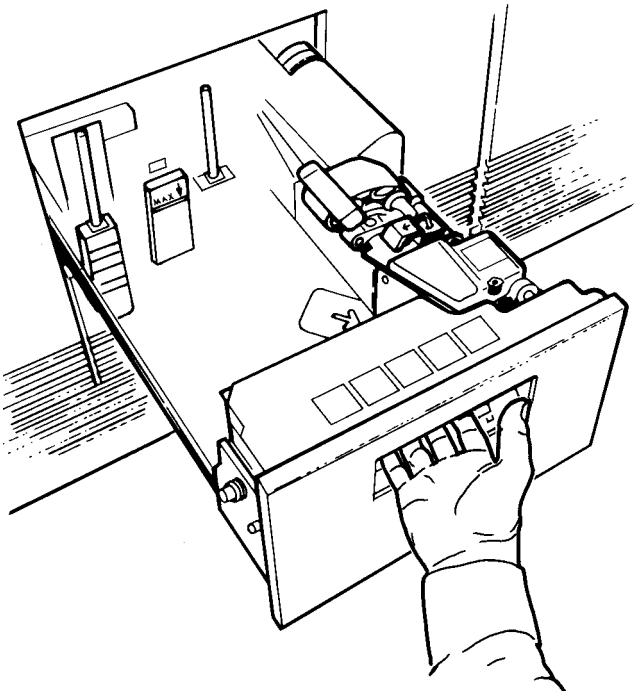
Step 2. Wait until the Ready to Open indicator lights (see figure 2-2).

Figure 2-2. **Ready to Open indicator**



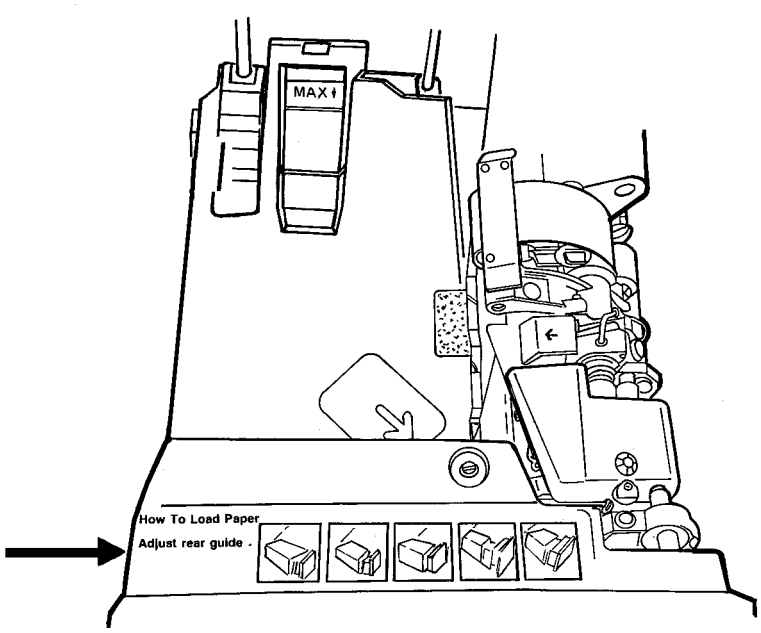
Step 3. Pull the feeder tray out until it stops, as shown in figure 2-3.

Figure 2-3. **Pulling out the feeder tray**



Step 4. Load paper, following the instructions on the label at the front top of the feeder tray. Figure 2-4 shows the location of these instructions.

Figure 2-4. **Paper loading instructions**

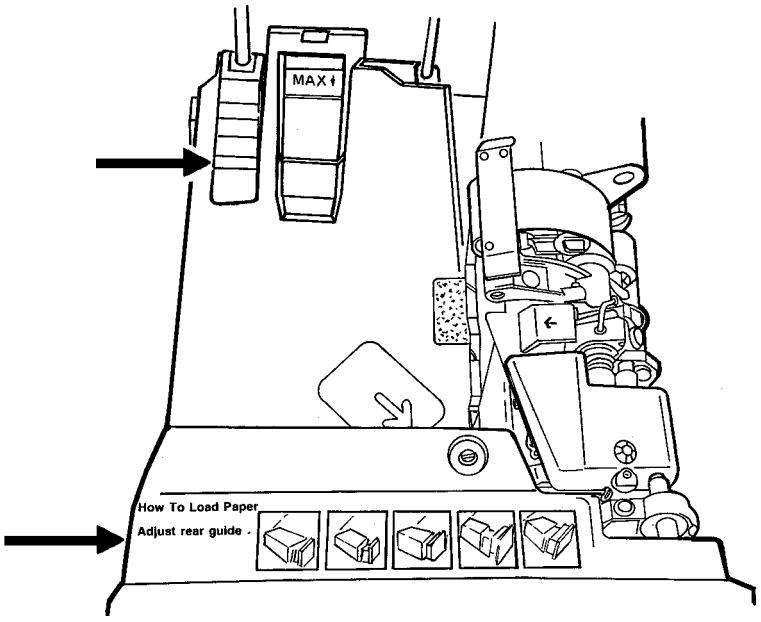


Note: Load transparencies and 9-inch/229-mm tabs into one of the processor feeder trays only.

Remember the following:

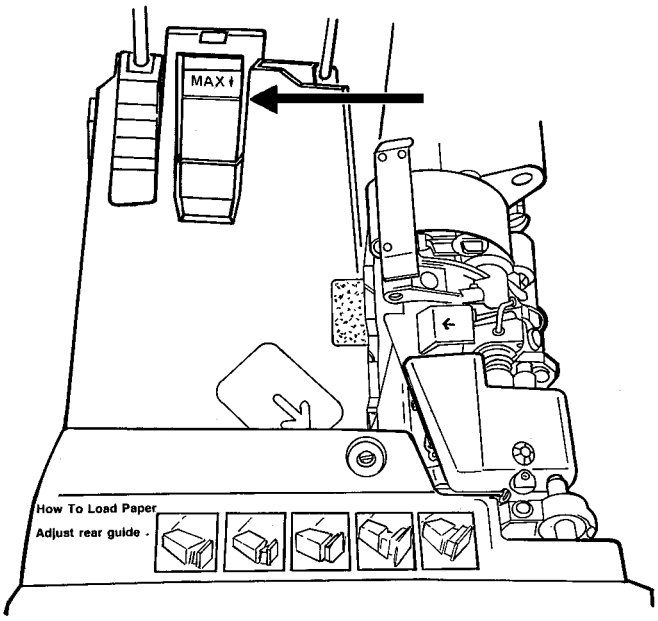
- Remove any damaged sheets.
- Load the paper with the package wrapper seam side up.
- For tray 3 only, load paper with curl side up if paper curl is detected. If no paper curl is detected, load paper with the wrapper seam side down.
- If using tab stock, remove any deformed, bent, or damaged stock.
- If using predrilled paper, fan thoroughly and remove any loose paper plugs
- Ensure the paper is loaded into the front, right corner of the tray, as indicated by the green arrow on the bottom of the tray and by the arrows on the instruction label (see figure 2-5).

Figure 2-5. **Arrows on the bottom of the tray and the instruction label**



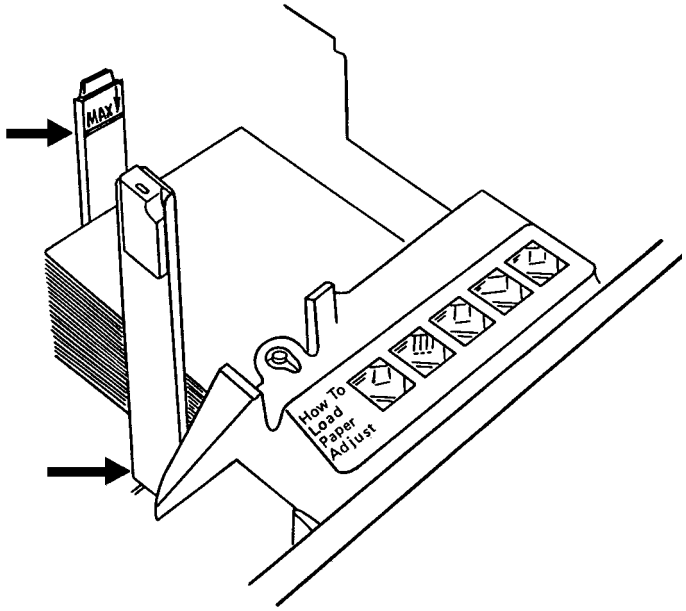
Caution: Do not load above the MAX line shown on the paper guide (see figure 2-6).

Figure 2-6. **Max line on the paper guide**



Step 5. For the high-capacity feeder tray, adjust the rear and side paper guides to touch the paper stack (see figure 2-7).

Figure 2-7. **High-capacity feeder tray rear and side paper guides**



Note: The high-capacity feeder tray gives you the option of loading paper with the short edge touching the side paper guide and the long edge touching the rear paper guide. This allows the Xerox DocuPrint 96/DocuPrint 96MX LPS to print on larger paper than would fit in the tray the usual way (that is, with the long edge touching the side paper guide and the short edge touching the rear paper guide). The way you load the paper in the high-capacity feeder trays depends on the paper size required by the job. (Refer to figures 2-8 and 2-9.) Refer to the *Xerox DocuPrint 96/DocuPrint 96MX LPS Operations Reference* for size considerations for short edge feed (SEF).

Figure 2-8. **Paper loaded normally (for example, 8 by 10 inches/203 by 254 mm)**

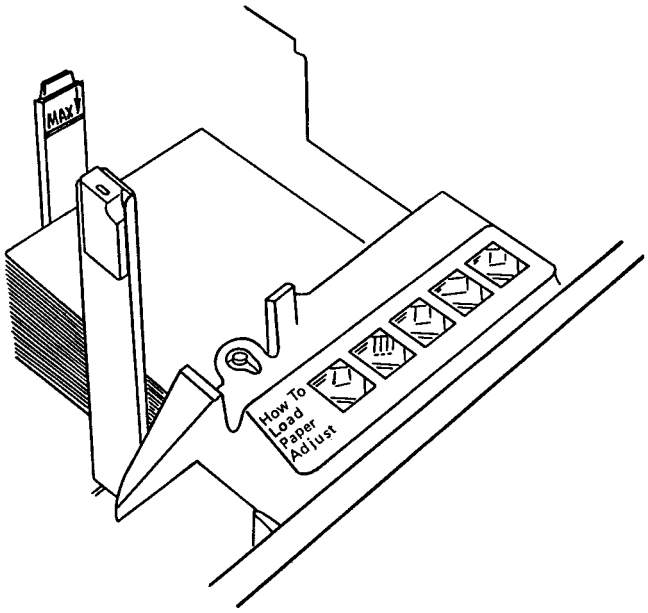
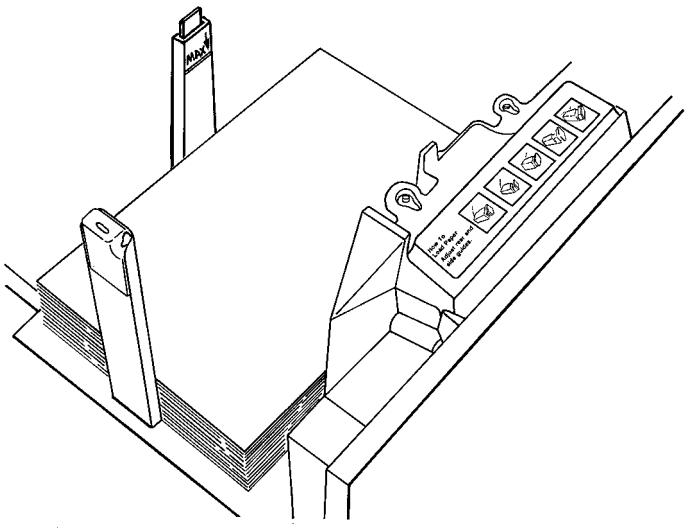
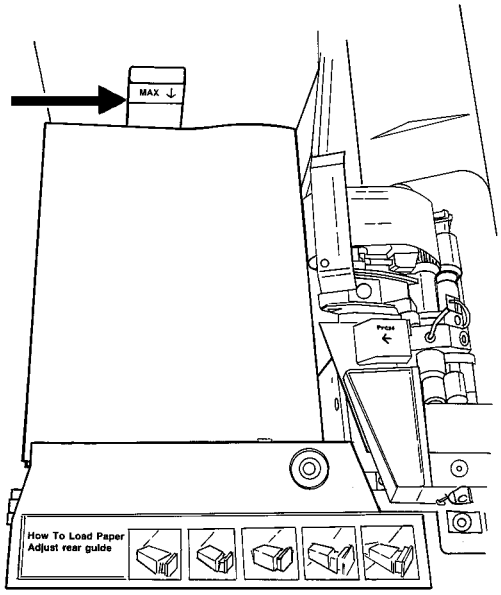


Figure 2-9. **Paper loaded with the short edge to the left (for example, 11 by 17 inches/279 by 432 mm)**



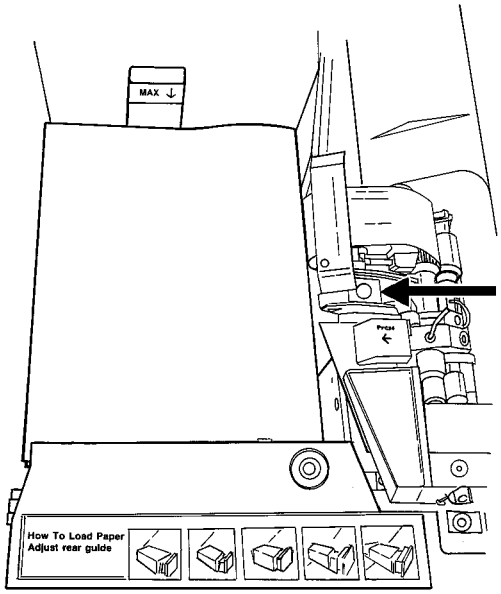
Step 6. For the processor feeder trays, adjust the rear guide until it touches the paper stack (see figure 2-10).

Figure 2-10. **Rear guide of the processor feeder tray**



Step 7. Relatch the paper feeder assembly by pressing the green dot (shown in figure 2-11) until the assembly clicks into place.

Figure 2-11. **Relatching the paper feeder assembly**



Step 8. Push the tray in, slowly but firmly, until it latches.

Caution: Do not slam the tray closed, as this can cause improper latching or machine damage.

Step 9. If the printer stopped due to a low paper condition, press the Continue button on the printer control console to resume the print job.

Stacker bins

The Xerox DocuPrint 96/DocuPrint 96MX LPS has one high-capacity stacker (HCS) bin.

- You can not lower, pull out, and unload the bin without interrupting printing.
- If you select the bin that is in use printing stops.
- Once a sheet is delivered to the stacker bin, each subsequent sheet must be within 25 mm of each dimension of the first sheet.

Refer to table 2-6 for additional information on performance of the high-capacity stacker bins.

Table 2-6. **Stacker bin performance guide**

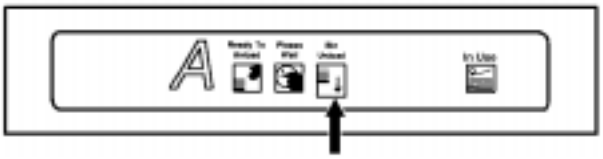
Paper	Superior performance	Good performance	Performance limits and suggested alternatives
Size range	8 by 10 to 11.69 by 17 inches/203 by 254 to 297 by 432 mm		Smaller or larger sizes cannot be used.
Weight range	20 to 110 pounds/80 to 200 gsm	Lighter than 20 pounds/80 gsm and no lighter than 16 pounds/60 gsm	Weights outside the limits shown here are not recommended.
Capacity			• Capacity automatically limited so stack weight will not exceed 30 lbs/13.g kg • Selectable with bin capacity programming (Refer to the “Bin full criteria and setting bin limits” section of the “Status and print tasks” chapter for instructions.
Stack quality	• Xerographic paper in good condition • 20 pound/80 gsm and heavier stock • Very low to no output curl	• Lighter weight stocks with low output curl • Intermixed stocks	• Adjust process decurler • Flip paper in paper feeders • Limit stack capacity to acceptable limits.
Type or condition	• Xerographic paper in good condition • Predrilled stock • No cut-outs, perforated or intermixed weights	• Labels, preprinted forms, perforated stocks • Intermixed weights	• High output curl stocks can cause severe stack quality problems • Tab stock intermixed with smaller stocks results in degraded stack quality • Reinforced mylar should be limited to small stacks of 200 sheets or less or sent to the sample tray

Unloading a stacker bin

To unload a stacker bin:

Step 1. Select a bin for unloading by pressing the Bin Unload button on the bin control panel. Figure 2-12 shows the Bin Unload button. You can also select the bin for unloading through the printer mimic of the printer control console. Refer to the “Lower trays and bins” section of the “Status and print tasks” chapter for instructions.

Figure 2-12. **Bin Unload button**

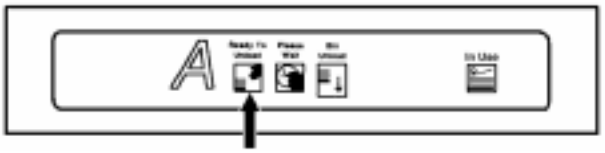


Step 2. Once a bin is selected, the bin elevator lowers.

Note: Once the bin elevator lowers, the bin cannot be used until it is emptied completely.

Step 3. When the bin elevator stops in the down position, the Ready to Unload indicator lights (see figure 2-13).

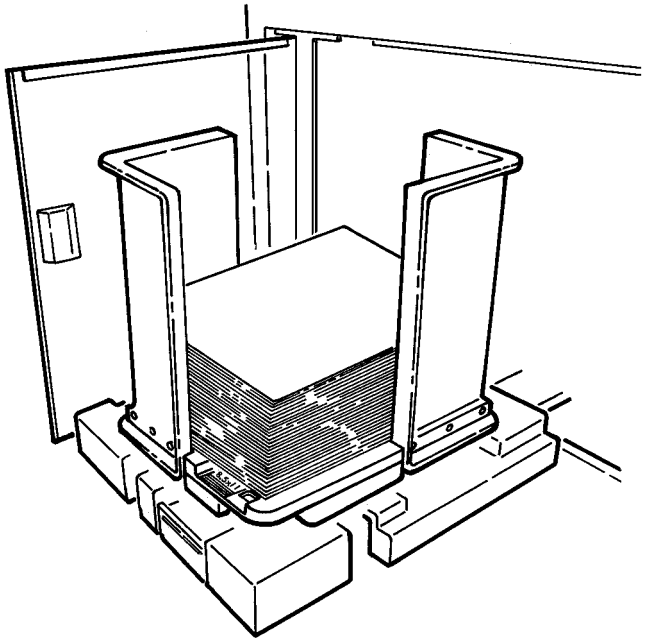
Figure 2-13. **Ready to Unload indicator**



Step 4. 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 (see figure 2-14).

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

Figure 2-14. **Stacker bin and container**



Step 5. Carry the loaded container, pallet, or paper stack to a nearby table or paper cart.

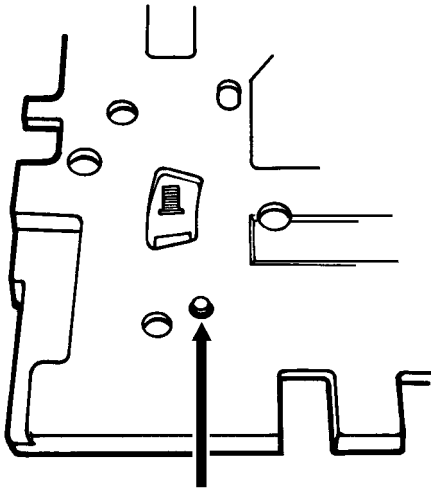
Step 6. If you are using a container or pallet, empty it and return it to the stacker bin.

Note: An empty container or a pallet must be in place if the bin is set for container stacking.

Note the following facts regarding the container:

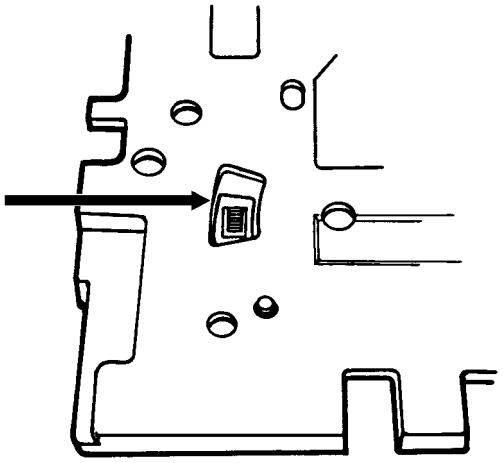
- The empty container must be the same size as the previous container if the bin is in an auto switching combination or if the print job is not complete and stacking will continue into the bin.
- A different size container may be used if the bin is not selected for use or is not in an auto switching combination.
- To switch from containerless stacking to stacking into a container or onto a pallet (for “pallet only” stacking), press and release the green button on top of the stacker bin platform (see figure 2-15).

Figure 2-15. **Green button**



- 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. Figure 2-16 shows the green tab location.

Figure 2-16. **Green tab**



Step 7. 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: If the bin is not empty, the elevator remains down, and a message appears on the printer control console and the display telling you to empty the bin.

Sample tray and purge tray

This section describes the sample and purge tray of the Xerox DocuPrint 96/DocuPrint 96MX LPS.

Sample tray

Samples requested during operation of the LPS are delivered to the sample tray. The sample tray can hold up to 100 sheets. It can handle paper sized from 8 by 10 inches/203 by 254 mm to 11.69 by 17 inches/297 by 432 mm.

Note the following:

- Since the sample tray can receive waste sheets purged after a paper jam, always clear the sample tray after clearing a jam. This prevents waste sheets from being confused with good sample sheets.
- No message appears when the sample tray is full. Since a paper jam can occur if the tray is overfilled, empty the sample tray regularly, if it is in use.

Purge tray

Aborted sheets (that is, sheets damaged during printing or cleared before or after a paper jam) are sent to the purge tray. The purge tray can hold up to 100 sheets. It can handle paper sized from 8 by 10 inches/203 by 254 mm to 11.69 by 17 inches/297 by 432 mm.

Note the following:

- No message appears when the purge tray is full. Since a paper jam can occur if the tray is overfilled, empty the purge tray at least once a day.
- Sheets may be purged before, during, or after print jobs.
- Sheets are sent to the purge tray following a fuser area jam. The sheets purged at that time clean the fuser area, ensuring good print quality for your subsequent jobs.

2. Paper facts

This chapter contains information about paper handling and procedures for loading feeder trays and unloading the stacker bin.

Important facts about paper

As the operator of the Xerox DocuPrint 96/DocuPrint 96MX LPS printer, you need to be aware of the importance of taking good care of the paper used in it. Using the correct type of paper and taking time to store and condition it properly helps to keep your printer running at optimum speed and efficiency, with fewer time-wasting paper jams.

For additional information about paper, refer to *Helpful Facts About Paper*.

Paper storage

Follow these storage guidelines:

- Do not unwrap the paper stock until it is needed.
- Store the reams of paper in their carton.
- Do not leave the paper cartons directly on the floor. Place something beneath them, for example, wooden pallets.
- When the paper stock is taken from a storage area with a different humidity or temperature, keep it in the room where it will be used for at least 48 hours before loading it into the LPS.

Paper specifications

This section lists the paper sizes, weights, and types that can be used in the Xerox DocuPrint 96/DocuPrint 96MX LPS.

Paper sizes

The following paper sizes can be used:

- Width: 8 to 17 inches/203 to 432 mm (17 inch/178 mm paper parallel to feed direction)
- Length: 10 to 14.33 inches/254 to 364 mm.

A continuous range of paper sizes from the system minimum to the system maximum is supported. Table 2-1 lists the standard paper sizes.

Note: Trays 1 and 2 hold 8 X 10 inch up to 9 X 14 inch paper. The High Capacity Feeder holds 8 X 10 inch up to A3 and 14.33 X 17 inch paper.

Table 2-1. **Standard table sizes**

Width (inches)	Length (inches)	Generic name
8.27	11.69	A4
8.50	11.0	USLETTER
8.50	14.0	USLEGAL
16.54	11.69	A3
10.12	14.33	B4
17.0	11.0	17 X 11

Paper weights

The Xerox DocuPrint 96/DocuPrint 96MX LPS supports 16 pound/60 gsm to 110 pound/200 gsm paper.

Types of paper

The following types of paper are supported:

- Predrilled
- Perforated
- Pressure-sensitive labels
- Transparencies
- Precut or full tabs
- Carbonless (Xerox)
- Standard types

Paper performance guides

The following guides summarize the capabilities of the paper trays, duplex printing considerations, and paper stock considerations.

Note: You may use the adjustable levers to optimize performance when running heavy weight or oversized papers. Refer to the "Problem solving tasks" chapter, "Printing problems" section for information on these levers.

Table 2-2. **Trays 1 and 2 performance guide[1]**

Paper	Superior performance	Good performance	Performance limits and suggested alternatives
Size range	8 by 10 to 9 by 14 inches/203 by 254 to 229 by 356 mm. Includes: • 8.5 by 11 inches • A4 (210 by 297 mm)		Paper smaller than 8 by 10 inches/203 by 254 mm cannot be used. For paper larger than 9 by 14 inches/229 by 356 mm, refer to the Performance Guide for tray 3.
Weight range	20 to 110 pounds/80 to 200 gsm	16 to 20 pounds/60 to 80 gsm[2]	Weights outside the limits shown are not recommended. Refer to the Paper Stocks Guide later in this chapter for additional information.
Capacity	Tray 1: 1100 sheets, 20 pound/ 80 gsm paper Tray 2: 600 sheets, 20 pound/ 80 gsm paper		
Type or condition	• Xerographic paper in good condition • Predrilled stock (fanned thoroughly) • Tab stock (in perfectly flat condition)	• Transparencies • High-speed label stock • Slightly curled paper[3] • Intermixed weights • Paper with reinforced binding edges	• Excessively curled paper[4] • Manual two-sided (duplex) prints • Freshly printed offset prints

1. Refer to the Paper stocks guide (table 2-5) for additional information
2. Make sure that heavy weight paper levers (located in areas 2 and 4 of the printer) are in the appropriate position for the weight of paper being used. Refer to the "Prints are skewed" section of the "Problem solving tasks" chapter.
3. Curl direction should be determined before loading paper into trays. Refer to the "Paper jams and paper curl" section of chapter 12, "Problem solving tasks," for additional information.
4. Curl direction should be determined before loading paper into trays. Refer to the "Paper jams and paper curl" section of chapter 12, "Problem solving tasks," for additional information.

Table 2-3. **High capacity tray performance guide[1]**

Paper	Superior performance	Good performance	Performance limits and suggested alternatives
Size range	8 by 10 to 11.69 by 17 inches/ 203 by 254 to 297 by 432 mm. Includes: • 11 by 14 inches • 11 by 17 inches • B4 (250 by 353 mm) • A3 (297 by 420 mm)		Smaller or larger sizes cannot be used.
Weight range	20 to 110 pounds/80 to 200 gsm	16 to 20 pounds/60 to 80 gsm[2]	Weights outside the limits shown are not recommended.
Capacity	Tray 3: 2600 sheets, 20 pound/ 80 gsm paper		
Type or condition	• Xerographic paper in good condition • Predrilled stock (fanned thoroughly)	• Slightly curled paper[3] • Manual two-sided (duplex) prints • High speed label stock	• Excessively curled paper[4] • Curl direction should be determined before loading paper into tray.[5] • DO NOT use mylar reinforced paper in tray 3. Hardware damage may result. Use trays 1 or 2.

1. Refer to the Paper stocks guide (table 2-5) for additional information
2. Make sure that heavy weight paper levers (located in areas 2 and 4 of the printer) are in the appropriate position for the weight of paper being used. Refer to the “Prints are skewed“ section of the “Problem solving tasks“chapter.
3. Curl direction should be determined before loading paper into trays. Refer to the “Paper jams and paper curl” section of chapter 12, “Problem solving tasks,” for additional information.
4. Curl direction should be determined before loading paper into trays. Refer to the “Paper jams and paper curl” section of chapter 12, “Problem solving tasks,” for additional information.
5. Curl direction should be determined before loading paper into trays. Refer to the “Paper jams and paper curl” section of chapter 12, “Problem solving tasks,” for additional information.

Table 2-4. **Two-sided (duplex) printing performance guide[1]**

Paper	Superior performance	Good performance	Performance limits and suggested alternatives
Size range	8 by 10 to 11.69 by 17 inches/ 203 by 254 to 297 by 432 mm.		Smaller or larger sizes cannot be used.
Weight range	20 to 110 pounds/80 to 200 gsm[2]		Weights outside the limits shown are not recommended. If show through occurs, adjust print quality or use heavier weight paper.
Type or condition	• Xerographic paper in good condition • Predrilled stock (fanned thoroughly)	• Slightly curled paper[3] • Paper with reinforced binding edges • Tabs Refer to the Paper Stocks Guide for additional information.	• Excessively curled paper[4] • Avoid Transparencies Stock not defined here is included in the Paper Stocks Guide, which follows.

1. Refer to the Paper stocks guide for additional information.
2. Make sure that heavy weight paper levers (located in areas 2 and 4 of the printer) are in the appropriate position for the weight of paper being used. Refer to the “Prints are skewed” section of the “Problem solving tasks“chapter
3. Curl direction should be determined before loading paper into trays. Refer to the “Paper jams and paper curl” section of chapter 12, “Problem solving tasks,” for additional information.
4. Curl direction should be determined before loading paper into trays. Refer to the “Paper jams and paper curl” section of chapter 12, “Problem solving tasks,” for additional information.

Table 2-5. **Paper stocks guide**

Stock type	Instructions for use
16 pound/60 gsm paper	• Load paper with ream wrapper seam side down. If there is no arrow on the ream wrapper, load paper in tray 3 with curl up. • Duplexing 16 lb. paper is not recommended. • Best performance can be expected from tray 3.
20 pound/80 gsm paper	Load paper with ream wrapper seam down. If there is no arrow on the ream wrapper, load paper in tray 3 with curl up.
65 pound card stock 110 pound/200 gsm paper (index)	Run from any tray.
20 pound or 80 gsm dual-purpose 3-hole drilled 4-hole drilled 7-hole drilled	• Load with holes to the RIGHT. • Use the Align task to avoid printing near the holes. • Fan paper thoroughly and check for loose paper plugs prior to loading.
Non-tearing 3-hole	• Load in trays 1 and 2 only. • Load with holes to the RIGHT. • DO NOT run two-sided (duplex) prints.
Non-tearing	• Load in trays 1 and 2 only. • DO NOT run two-sided (duplex) prints.
Xerox carbonless paper	• Load paper in tray 3 only. • Only Xerox carbonless paper is recommended for High speed Xerographic equipment.
3-hole drilled, edge reinforced dual-purpose	• Use trays 1 and 2. • Load paper with holes to the right, reinforced side DOWN. • In two-sided (duplex) printing, degraded print quality may occur near the reinforcement. • Leave stock in wrapper until use to achieve maximum stock flatness. • Run with no more than 200 sheets in a tray.[1]
Transparencies— Oversized (8.5 by 14 inches, 0.5 inch white stripe/216 by 356 mm, 1 mm white strip)	• Load with the white stripe to the RIGHT in trays 1 and 2 (“shiny” side UP for best performance). • Simplex only.
Preprinted stock	Certain types of ink or insufficient drying time may cause the ink to adhere to various machine components and printed sheets. Allow at least 3 hours of drying time before using preprinted stock. CAUTION: Certain preprinted stocks lie unevenly in the feeder trays. If the right side of the stack is higher than the left in tray 3 SEVERE hardware damage can occur. Load the stock in trays 1 or 2 or load fewer sheets.
Transparencies— Paper-backed, high-speed, removable stripe	• High-speed paper-backed transparencies may be run from trays 1 and 2 with paper side DOWN. • Run no more than 50 removable stripe transparencies at one time. • Load the transparencies on top of approximately 50 sheets of paper.

Table 2-5. **Paper stocks guide** (continued)

Stock type	Instructions for use
Tab stock	• Load into trays 1 and 2 with tabs to the LEFT. • For best performance, print should be centered on the tab and should not extend to either edge. • Use tab stock in perfectly flat condition. DO NOT use deformed, bent, or damaged tabs.
9-inch cover stock 110 pound/200 gsm	Load into any tray.
High-speed label stock	• Load FACE UP. • DO NOT run two-sided (duplex) prints.
Letterhead	• Load into trays with side 1 UP and top edge toward the front of the tray (avoid placing the print in line with the feed belt in trays 1 and 2). • Avoid using freshly preprinted paper.
Manual two-sided (duplex) prints	• Load into trays with printed side DOWN and top edge toward the front of the tray (avoid placing the print in line with the feed belt in trays 1 and 2). • Print the second side as soon as possible after the first side to prevent wrinkling and excessive curl.
Textured paper	Heavily textured paper may yield prints with ragged character appearance and/ or deletions. To test, print a sample sheet.

1. You can order a mylar reinforcement tray which allows a feeder tray to handle up to 500 sheets of this type of stock. Contact your service representative for additional information.

Paper sizing and print jobs

The Xerox DocuPrint 96/DocuPrint 96MX LPS feeder trays have edge guide sensors that detect paper length and width. The LPS selects the correct feeder tray(s) for the print job, based on the paper size specified in the job.

- If an exact match is found, the print job proceeds.
- If an exact match is not found, depending on how the job was set up, one of the following occurs:
  - — A message appears on the system controller display and the printer control console telling you to load different paper or inquiring whether it is permissible to print the job on paper that is larger than specified for the job.
  - — The job prints on paper larger than specified for the job.
  - — The job is aborted.

Note: The LPS never prints a job on paper known to be smaller than that specified for the job.

If you encounter any problems related to paper sizing, contact your lead operator, systems specialist, or Xerox support specialist

Feeder trays

Your LPS provides three feeder trays:

- Two processor feeder trays
- One high-capacity feeder (HCF) tray.

Up to three different stocks may be used within a print job, including oversize covers or tabs.

Note: If your LPS is fitted with a bulk feeder, the number of available stocks increases by one.

For instructions on selecting feeder trays and managing clusters (groupings of trays), refer to the “Status and print tasks” chapter.

Feeder tray features

Note the following features of the feeder trays:

- Any tray not currently in use can be opened, pulled out, and loaded, without interrupting printing.
- If you try to open a tray currently in use, feeding switches to a backup tray if one is available. If one is not available, the printer stops.
- The printer does not feed all the paper out of a tray. (A stack of approximately 1/4 inch/6 mm remains in the tray.)

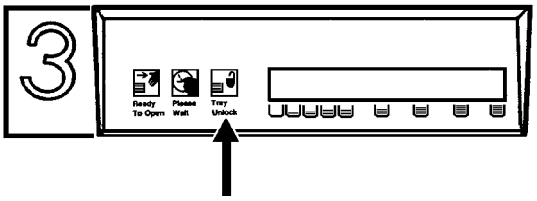
Loading a feeder tray

To load one of the feeder trays.

Step 1. Select the tray you want to load by pressing the Tray Unlock button on the paper tray. The Tray Unlock button is shown in figure 2-1. You may also select the tray through the printer mimic on the printer control console. Refer to the “Lower trays and bins” section of the “Status and print tasks” chapter for instructions.

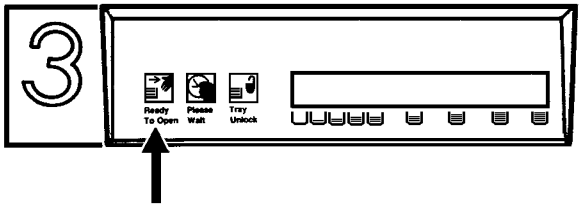
Note: If the printer has stopped due to a low paper condition, you do not need to press the Tray Unlock button.

Figure 2-1. **Tray Unlock button**



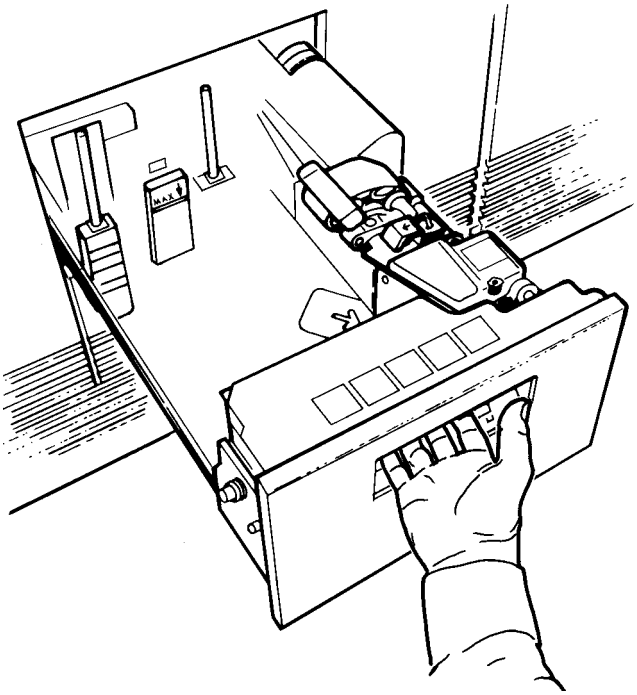
Step 2. Wait until the Ready to Open indicator lights (see figure 2-2).

Figure 2-2. **Ready to Open indicator**



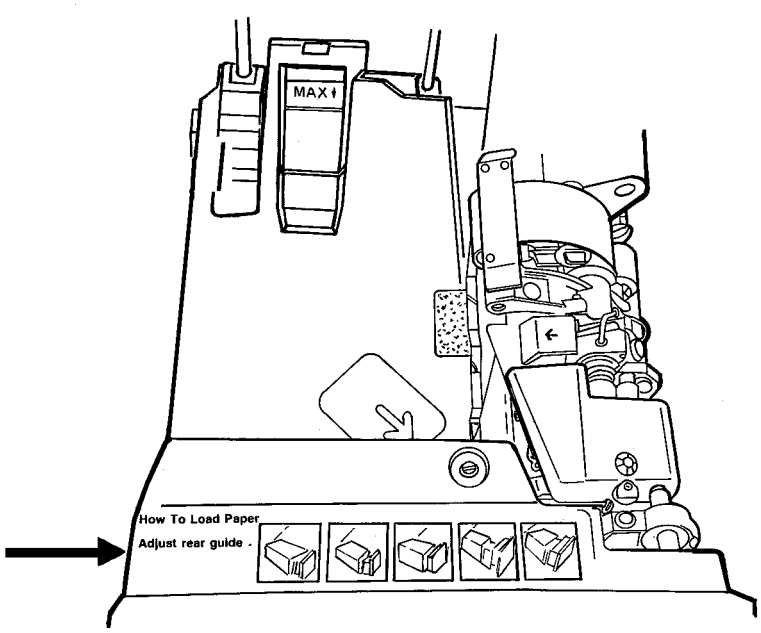
Step 3. Pull the feeder tray out until it stops, as shown in figure 2-3.

Figure 2-3. **Pulling out the feeder tray**



Step 4. Load paper, following the instructions on the label at the front top of the feeder tray. Figure 2-4 shows the location of these instructions.

Figure 2-4. **Paper loading instructions**

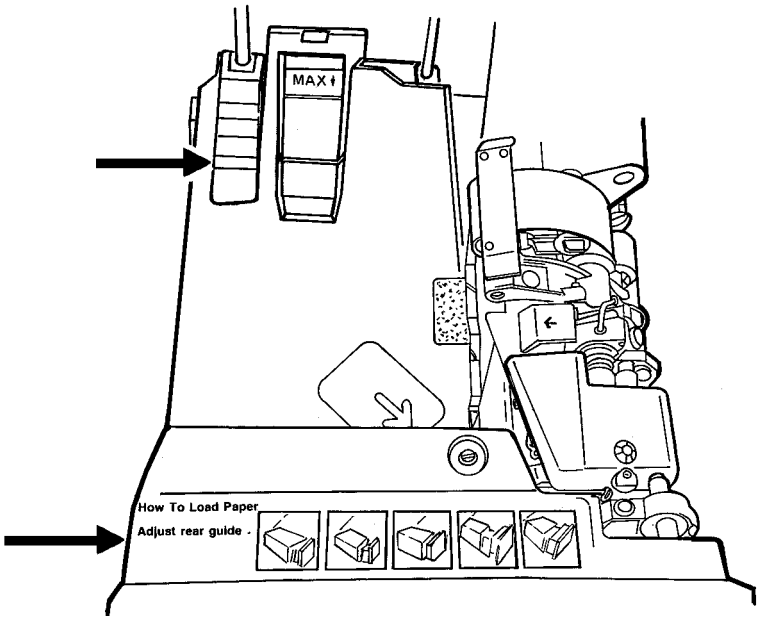


Note: Load transparencies and 9-inch/229-mm tabs into one of the processor feeder trays only.

Remember the following:

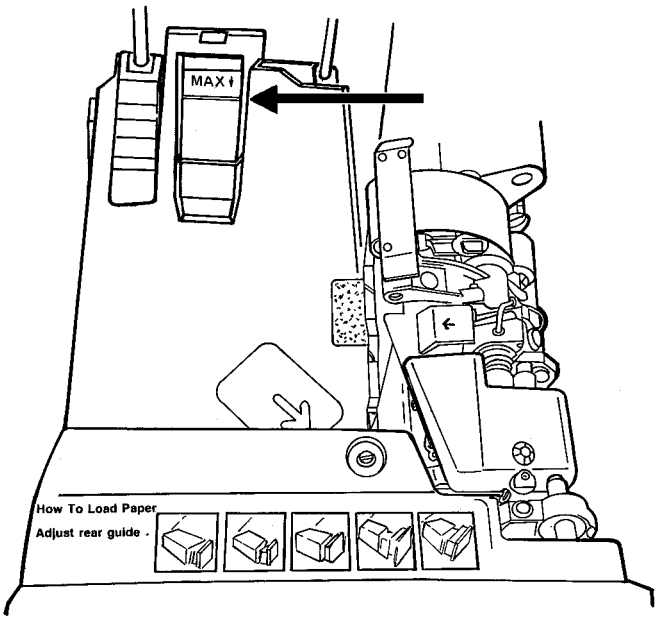
- Remove any damaged sheets.
- Load the paper with the package wrapper seam side up.
- For tray 3 only, load paper with curl side up if paper curl is detected. If no paper curl is detected, load paper with the wrapper seam side down.
- If using tab stock, remove any deformed, bent, or damaged stock.
- If using predrilled paper, fan thoroughly and remove any loose paper plugs
- Ensure the paper is loaded into the front, right corner of the tray, as indicated by the green arrow on the bottom of the tray and by the arrows on the instruction label (see figure 2-5).

Figure 2-5. **Arrows on the bottom of the tray and the instruction label**



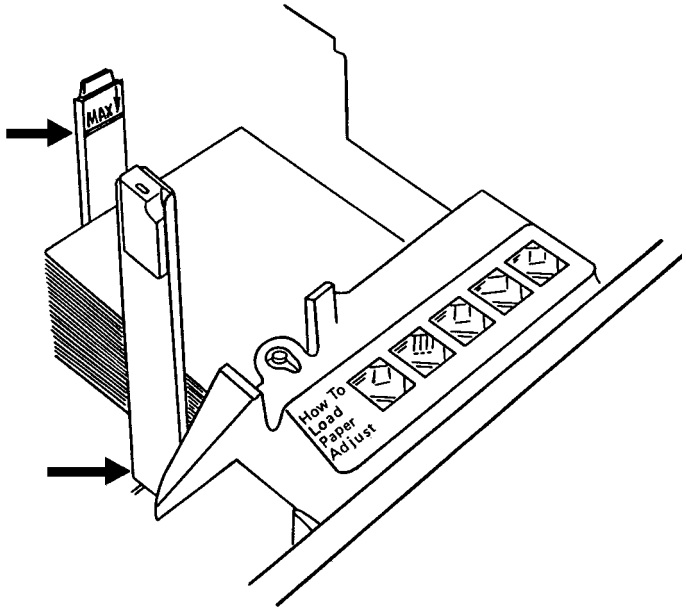
Caution: Do not load above the MAX line shown on the paper guide (see figure 2-6).

Figure 2-6. **Max line on the paper guide**



Step 5. For the high-capacity feeder tray, adjust the rear and side paper guides to touch the paper stack (see figure 2-7).

Figure 2-7. **High-capacity feeder tray rear and side paper guides**



Note: The high-capacity feeder tray gives you the option of loading paper with the short edge touching the side paper guide and the long edge touching the rear paper guide. This allows the Xerox DocuPrint 96/DocuPrint 96MX LPS to print on larger paper than would fit in the tray the usual way (that is, with the long edge touching the side paper guide and the short edge touching the rear paper guide). The way you load the paper in the high-capacity feeder trays depends on the paper size required by the job. (Refer to figures 2-8 and 2-9.) Refer to the *Xerox DocuPrint 96/DocuPrint 96MX LPS Operations Reference* for size considerations for short edge feed (SEF).

Figure 2-8. **Paper loaded normally (for example, 8 by 10 inches/203 by 254 mm)**

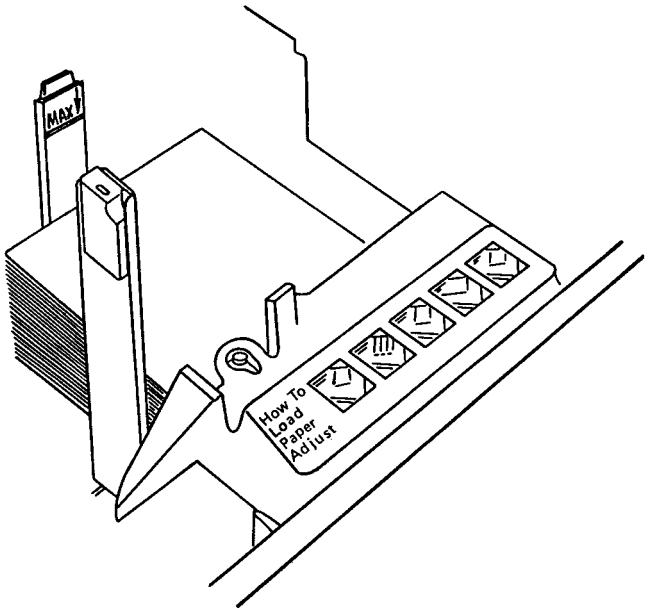
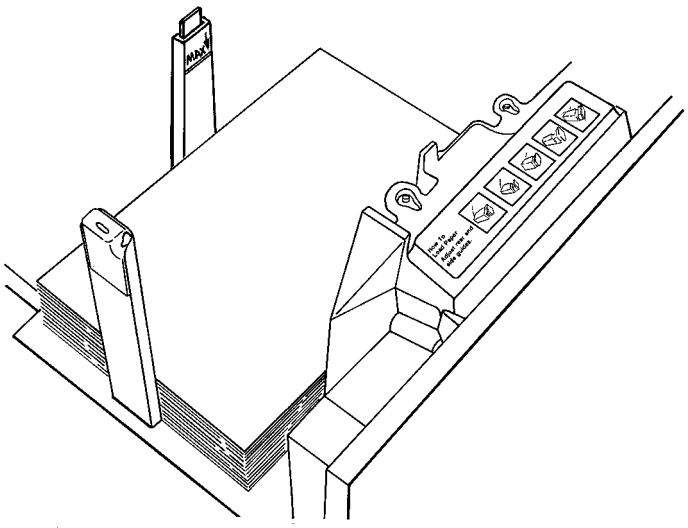
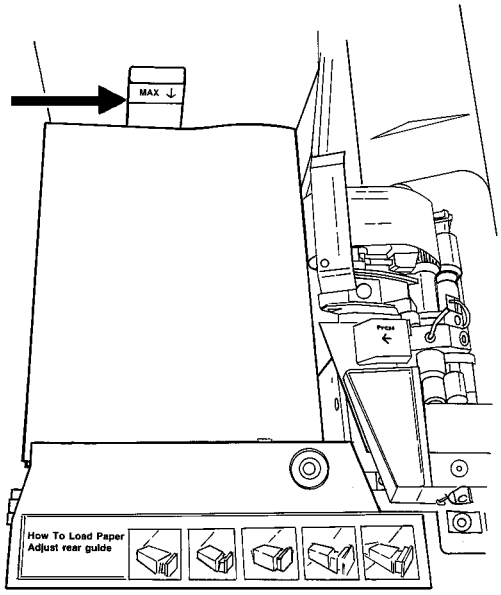


Figure 2-9. **Paper loaded with the short edge to the left (for example, 11 by 17 inches/279 by 432 mm)**



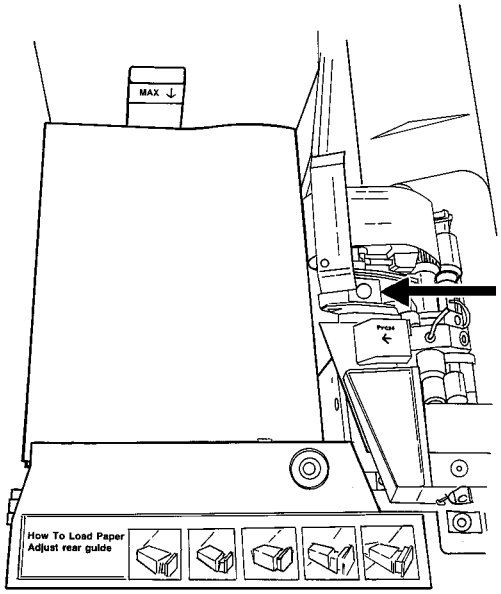
Step 6. For the processor feeder trays, adjust the rear guide until it touches the paper stack (see figure 2-10).

Figure 2-10. **Rear guide of the processor feeder tray**



Step 7. Relatch the paper feeder assembly by pressing the green dot (shown in figure 2-11) until the assembly clicks into place.

Figure 2-11. **Relatching the paper feeder assembly**



Step 8. Push the tray in, slowly but firmly, until it latches.

Caution: Do not slam the tray closed, as this can cause improper latching or machine damage.

Step 9. If the printer stopped due to a low paper condition, press the Continue button on the printer control console to resume the print job.

Stacker bins

The Xerox DocuPrint 96/DocuPrint 96MX LPS has one high-capacity stacker (HCS) bin.

- You can not lower, pull out, and unload the bin without interrupting printing.
- If you select the bin that is in use printing stops.
- Once a sheet is delivered to the stacker bin, each subsequent sheet must be within 25 mm of each dimension of the first sheet.

Refer to table 2-6 for additional information on performance of the high-capacity stacker bins.

Table 2-6. **Stacker bin performance guide**

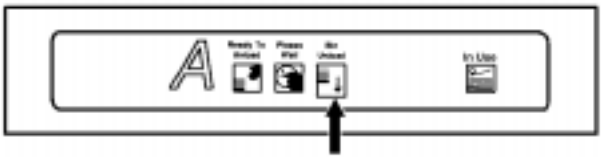
Paper	Superior performance	Good performance	Performance limits and suggested alternatives
Size range	8 by 10 to 11.69 by 17 inches/203 by 254 to 297 by 432 mm		Smaller or larger sizes cannot be used.
Weight range	20 to 110 pounds/80 to 200 gsm	Lighter than 20 pounds/80 gsm and no lighter than 16 pounds/60 gsm	Weights outside the limits shown here are not recommended.
Capacity			• Capacity automatically limited so stack weight will not exceed 30 lbs/13.g kg • Selectable with bin capacity programming (Refer to the “Bin full criteria and setting bin limits” section of the “Status and print tasks” chapter for instructions.
Stack quality	• Xerographic paper in good condition • 20 pound/80 gsm and heavier stock • Very low to no output curl	• Lighter weight stocks with low output curl • Intermixed stocks	• Adjust process decurler • Flip paper in paper feeders • Limit stack capacity to acceptable limits.
Type or condition	• Xerographic paper in good condition • Predrilled stock • No cut-outs, perforated or intermixed weights	• Labels, preprinted forms, perforated stocks • Intermixed weights	• High output curl stocks can cause severe stack quality problems • Tab stock intermixed with smaller stocks results in degraded stack quality • Reinforced mylar should be limited to small stacks of 200 sheets or less or sent to the sample tray

Unloading a stacker bin

To unload a stacker bin:

Step 1. Select a bin for unloading by pressing the Bin Unload button on the bin control panel. Figure 2-12 shows the Bin Unload button. You can also select the bin for unloading through the printer mimic of the printer control console. Refer to the “Lower trays and bins” section of the “Status and print tasks” chapter for instructions.

Figure 2-12. **Bin Unload button**

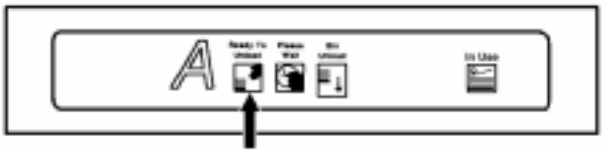


Step 2. Once a bin is selected, the bin elevator lowers.

Note: Once the bin elevator lowers, the bin cannot be used until it is emptied completely.

Step 3. When the bin elevator stops in the down position, the Ready to Unload indicator lights (see figure 2-13).

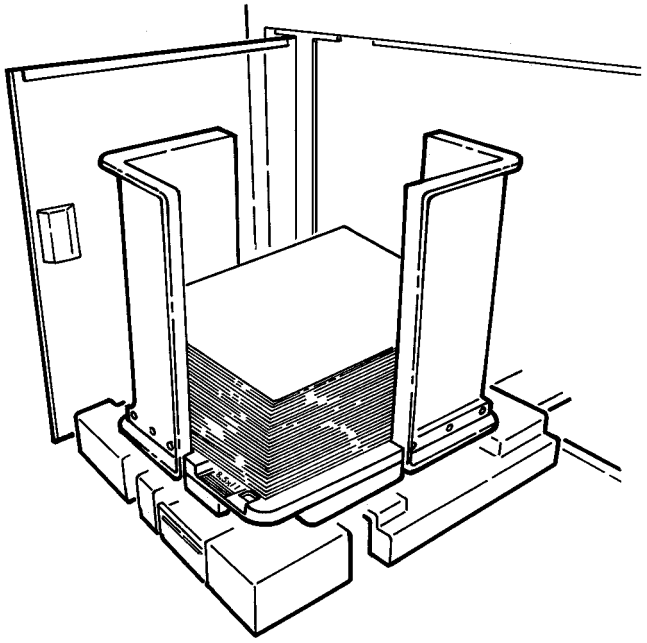
Figure 2-13. **Ready to Unload indicator**



Step 4. 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 (see figure 2-14).

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

Figure 2-14. **Stacker bin and container**



Step 5. Carry the loaded container, pallet, or paper stack to a nearby table or paper cart.

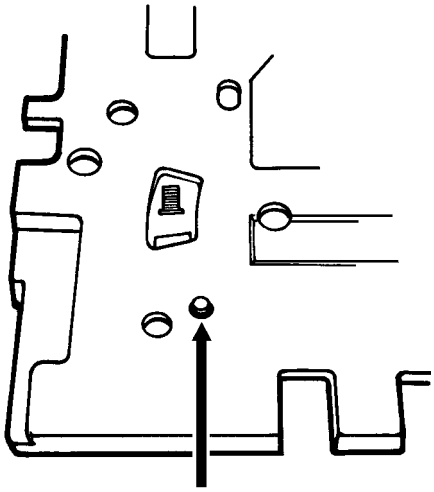
Step 6. If you are using a container or pallet, empty it and return it to the stacker bin.

Note: An empty container or a pallet must be in place if the bin is set for container stacking.

Note the following facts regarding the container:

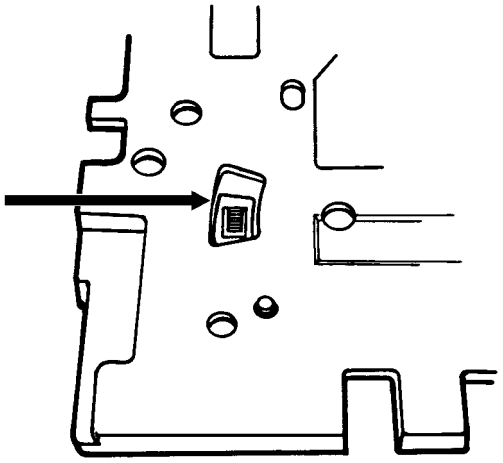
- The empty container must be the same size as the previous container if the bin is in an auto switching combination or if the print job is not complete and stacking will continue into the bin.
- A different size container may be used if the bin is not selected for use or is not in an auto switching combination.
- To switch from containerless stacking to stacking into a container or onto a pallet (for “pallet only” stacking), press and release the green button on top of the stacker bin platform (see figure 2-15).

Figure 2-15. **Green button**



- 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. Figure 2-16 shows the green tab location.

Figure 2-16. **Green tab**



Step 7. 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: If the bin is not empty, the elevator remains down, and a message appears on the printer control console and the display telling you to empty the bin.

Sample tray and purge tray

This section describes the sample and purge tray of the Xerox DocuPrint 96/DocuPrint 96MX LPS.

Sample tray

Samples requested during operation of the LPS are delivered to the sample tray. The sample tray can hold up to 100 sheets. It can handle paper sized from 8 by 10 inches/203 by 254 mm to 11.69 by 17 inches/297 by 432 mm.

Note the following:

- Since the sample tray can receive waste sheets purged after a paper jam, always clear the sample tray after clearing a jam. This prevents waste sheets from being confused with good sample sheets.
- No message appears when the sample tray is full. Since a paper jam can occur if the tray is overfilled, empty the sample tray regularly, if it is in use.

Purge tray

Aborted sheets (that is, sheets damaged during printing or cleared before or after a paper jam) are sent to the purge tray. The purge tray can hold up to 100 sheets. It can handle paper sized from 8 by 10 inches/203 by 254 mm to 11.69 by 17 inches/297 by 432 mm.

Note the following:

- No message appears when the purge tray is full. Since a paper jam can occur if the tray is overfilled, empty the purge tray at least once a day.
- Sheets may be purged before, during, or after print jobs.
- Sheets are sent to the purge tray following a fuser area jam. The sheets purged at that time clean the fuser area, ensuring good print quality for your subsequent jobs.

3. System control tasks

This chapter contains instructions for performing system control tasks. These tasks affect the operation of the LPS.

Refer to the list below for the tasks described in this chapter:

- System control tasks
- Power on the LPS
- Power off the LPS
- Boot the LPS
- System rollover
- System version
- Attention light/alarm
- Turn off Attention light
- Energy saver
- Data Capture Utility (DCU)
- Problem

System control tasks

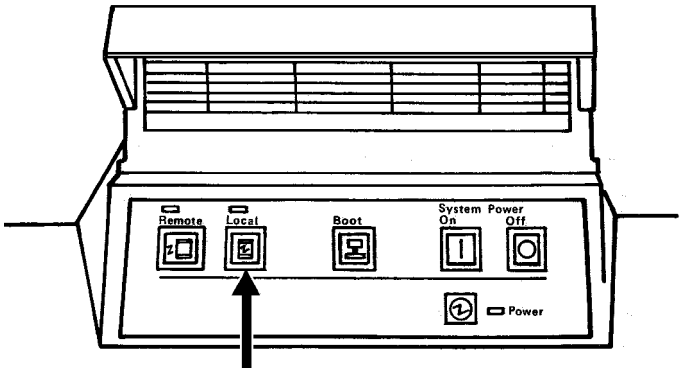
The following sections contain instructions for performing specific system control tasks.

Power on the LPS

Use this task to start the LPS:

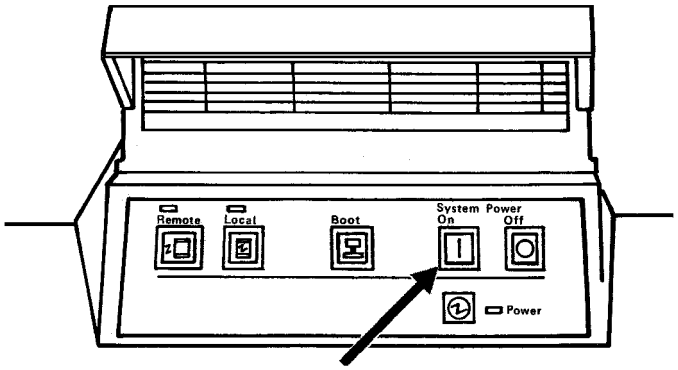
Step 1. Press the Local button on the operator control panel (see figure 3-1, unless otherwise instructed.

Figure 3-1. **Local button on operator control panel**



Step 2. Press the System Power On button on the operator control panel (see figure 3-2).

Figure 3-2. **System Power On button on operator control panel**



The Power indicator lights and READY $ appears on the display.

Power off the LPS

If no one is using the LPS for more than eight hours, power it off. For idle times of less than eight hours, the LPS has a built-in energy saver feature that can be adjusted to conserve energy and machine parts. (Refer to the "Energy saver" section later in this chapter for additional information.)

When LPS is in online mode

To power off the LPS if you are running online to a host computer:

Step 1. Contact the host system operator and request that the output from the host to the LPS be drained and the LPS be varied offline at the host.

Step 2. Press the <JOBS STATUS> key to ensure the system is idle (that is, not processing print jobs or performing nonprinting tasks).

Step 3. If the job queue is not empty: Use either the Endjob or Drain tasks to print any pages remaining in the print file. Press the <JOBS STATUS> key again, to ensure the job queue is empty.

Step 4. Enter the OFFLINE command.

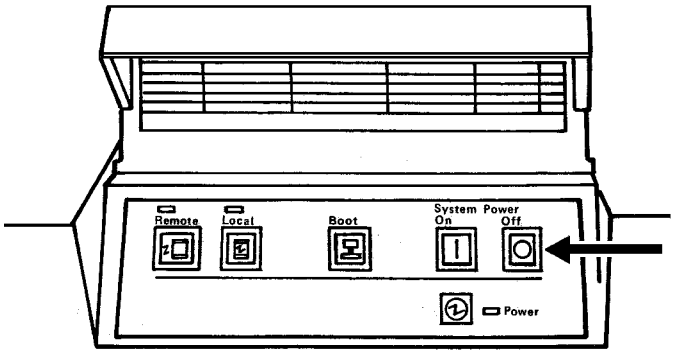
Step 5. Do one of the following:

- Enter the CONTINUE I command.
- Press the Continue button on the printer control console.
- Press the <CON> key on the keyboard.

Caution: Failure to have the LPS offline prior to powering off causes problems with the host system.

Step 6. When the LPS is offline, press the System Power Off button on the operator control panel (see figure 3-3).

Figure 3-3. **System Power Off button on operator control panel**



When the LPS is in offline mode

To power off the LPS if you are running offline:

Step 1. Press the <JOBS STATUS> key to ensure the system is idle.

Step 2. Unload the tape or cartridge. (Refer to “Offline printing tasks” chapter for instructions on unloading tapes and cartridges.)

Caution: If a tape or cartridge is loaded when the LPS is powered off, data on the tape or cartridge may be destroyed.

Step 3. Press the System Power Off button on the operator control panel. (Refer to figure 3-3.)

Boot the LPS

Use this task to select a boot source and start low-level system testing:

- If your LPS has the autoboot option, the system controller automatically begins booting the printer operating system when the LPS is first powered on.
- If your LPS does not have the autoboot option, you boot the LPS through commands entered at the keyboard.

Boot the LPS task

To boot the LPS follow this procedure:

Step 1. Press <B> for BOOT on the keyboard to load the operating system software (OSS).

Note: The operating system software must be loaded before the system can finish the warm-up cycle.

When loading is complete, the following messages appear on the display:

```
LOADING PROGRAM.......
XEROX [PRODUCT ID]
LASER PRINTING SYSTEM
VERSION X REVISION Y
DISK ID: [Thirty-character-ID-record
ENTER DATE:MM:DD:YY
```

Step 2. Key in the date, using numerals. You may use a space, a colon (:), or a slash (/) between the month, day, and year. Once you have entered the date, a written version is displayed, that is, 1/23/98 becomes January 23, 1998.

Step 3. Next you are asked to enter the time.

```
ENTER TIME (HH:MM:SS)
```

Enter the time, using the military 24-hour system. (For example, 2:30 p.m. is 14:30.) The date and time are displayed with the following message:

```
ARE THE DATE AND TIME CORRECT AS DISPLAYED (Y/N)?
```

Step 4. Press <Y> if they are correct.

If either is incorrect, enter <N> and reenter the date and time correctly.

Note: You are not always asked to enter the date and time.

Step 5. You are asked if you want the time displayed in the upper right corner of the screen and a constant update of the system's status.

```
LOAD AND ENABLE TIME-OF-DAY/STATUS DISPLAY (Y/N)?
```

In most cases, you should press <Y> for yes. If you do so, the system keeps you informed of the time and status. If you want to disable this feature at a later time, enter TIME OFF. To reenable it, you need only enter TIME ON.

If <N> is entered, you cannot add the time/status display without rebooting the system.

Allow four to seven minutes for the printer to complete its warm-up. When the printer is ready, a tone sounds, and the following message appears:

```
READY---JOB START WILL BE DELAYED 40-80 SECONDS FOR
PRINT QUALITY ADJUSTMENT
```

Note: Before the LPS starts printing, the system checks print quality and controls. Any adjustments, if necessary, are made by the system to give you the best quality prints. The system also checks print quality on an ongoing basis and may stop printing, correct a quality problem, and resume where it left off.

System rollover

A system rollover is a recovery technique the LPS uses to initiate a restart following a system error. This error may be induced by either a software or hardware failure.

System rollover message

If you are running the printer online the following messages are displayed:

```
OS2575 SYSTEM ROLLOVER. VARY OFFLINE FROM HOST.
ENTER 'C'
```

Perform the following steps:

Step 1. Enter "C" to initiate the recovery procedure. With either online or offline mode, the following messages are displayed:

```
SYSTEM RECOVERY FROM #### ABORT
PRINT ABORT DATA FOR LATER ANALYSIS Y/N?
```

Step 2. Press <Y> for yes. `PRINT REQUEST WILL BE QUEUED` is displayed. You are asked to verify date and time, and the following messages are then displayed for online mode:

```
DO YOU WANT TO ATTEMPT AUTOMATIC JOB
RECOVERY? ('Y' OR 'N')
OS1061 INITIALIZING CSI
```

Step 3. Press <Y> for yes. The system rollover causes the LPS to go offline. After the system rollover, the following messages are displayed:

```
OS0030 SYSTEM IS 'ONLINE'
OS2960 BACK UP HOST TO START OF REPORT
OR n PAGES, WHICHEVER IS LESS
OS2035 INPUT STOPPED. ENTER 'CONTINUE I' WHEN
HOST IS READY
```

Step 4. The system automatically goes back online. Enter CONTINUE I to resume printing. Any of the following messages may be displayed, depending on the status of the system before the system rollover:

```
OS0010 RESUMING INPUT
OS0020 RESUMING OUTPUT
OS1650 OUTPUT PROCESSING HAS CAUGHT UP WITH
INPUT PROCESSING
OS4650 INPUT HAS RECOVERED TO PAGE BOUNDARY
OS4651 OUTPUT HAS RECOVERED TO PAGE
BOUNDARY
```

Printed output to be given to the analyst is generated after completion of the job in progress. It follows the message:

```
OS1030 JOB #### HAS COMPLETED PRINTING
PERFORMING ABORT ANALYSIS DUMP
OS0040 SYSTEM IS OFFLINE
```

Step 5. Enter the ONLINE (for online mode) and START commands to resume normal operation.

System version

Use this task to display the system version number, the disk ID, and the current logon level.

System Version

Enter the following command:

OCS

Note: The Dialog versions do not appear when you enter this command.

Attention Light/Alarm

Use this task to enable or disable the Attention light and/or alarm.

The Attention light can be enabled or disabled for either or both modes—steady and flashing. If, for example, you disable the steady mode of the Attention light, but leave the flashing mode enabled, the Attention light does not go on when a condition such as low dry ink occurs (and the corresponding Hint icon does not appear on the printer control console), but the Attention light still flashes when the printer stops due to a fault (and the corresponding Fault icon still appears on the printer control console).

Attention Light/Alarm task

To enable the Attention light, enter the following command:

ATTENTION LIGHT ENABLE [STEADY | FLASHING]

Table 3-1 lists each parameter and its description.

Table 3-1. **ATTENTION LIGHT ENABLE command parameters and descriptions**

Parameter	Description
STEADY	Enables only the steady mode of the Attention light.
FLASHING	Enables only the flashing mode of the Attention light.

To disable the Attention light, enter the following command:

ATTENTION LIGHT DISABLE [STEADY | FLASHING]

Table 3-2 lists each parameter and its description.

Table 3-2. **ATTENTION LIGHT DISABLE command parameters and descriptions**

Parameter	Description
STEADY	Disables only the steady mode of the Attention light.
FLASHING	Disables only the flashing mode of the Attention light.

To enable the alarm, enter the following command:

ATTENTION ALARM ENABLE {0-10}

0-10 Sets the tone volume for the alarm. 0 is softest, 10 is loudest volume.

To disable the alarm, enter the following command:

ATTENTION ALARM DISABLE

Turn off Attention light or alarm

Use this task to turn off the Attention light. Neither the steady nor flashing modes of the Attention light operate, and the Hint and Fault icons do not appear on the printer control console. When the next fault condition occurs, the Attention light and appropriate icons appear again.

Turn off Attention Light task

Enter the following command:

ATTENTION ALL OFF

Energy saver

To conserve energy and prolong the life of some of its critical parts, the LPS was designed with a power saver mode. After a predetermined period of inactivity, portions of the printer are shut down. The time-out period is factory set, but it can be readjusted.

Heating and cooling are the most costly uses of electricity. Therefore, maintaining the system at full temperature while idle is not cost effective. After four hours of inactivity (or whatever time period you set), the fusing system shuts down. Once it cools down, it requires the same four- to seven-minute warm-up time as if the system had been turned off.

Use the Energy Saver task to readjust the time-out period. The energy saver timer starts whenever the printer stops.

Energy Saver task

To adjust the time-out period, enter the following command:

ENERGY [*timeout*]

Table 3-3 lists the parameter and its description.

Table 3-3. **ENERGY command parameter and description**

Parameter	Description
timeout	The number of minutes after which the energy saver mode begins. If you do not enter a value, the current timeout value appears.

Set date/time

Use this task to set the system date and time. The system must be idle when you perform this task. (Idle means not printing, offline, and not performing any non-printing tasks.)

Note: You must be at logon level 2 to use this task.

Note: The hours field is specified in military time, that is, 0—23, with 0 signifying midnight.

Set Date/Time task

Enter the following command:

SET TIME *mm/dd/yy hh:mm:ss*

You can separate the numbers in the date with a slash (/) or a dash (—). You can use the numbers from 1 to 12 for the months or the following abbreviations: JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC.

You can separate the numbers in the time with a colon (:). Entering the seconds is optional; the system assumes :00 if you do not enter the seconds.

Because the command is designed to allow you to change either the time, the date, or both, you do not enter commas for missing elements when setting only one of them. To change only the time, for example, enter:

SET TIME 10:27

Track console activity with Data Capture Utility (DCU)

Use this task to track console activity. DCU creates a console log of all LPS console entries and system console messages.

The following commands are used with the Data Capture Utility (DCU):

- DCU CAPTURE
  Use this command to start or stop logging of all LPS console entries and system console messages. This command creates the log file which automatically records all LPS console entries and system console messages for the specified number of days. You can specify that a message display at the selected interval to indicate logging of console entries. You can also display or print the log file you create.
- DCU DELETE
  Use this command to delete all data logged in the file or to delete all data through the specified date.
- DCU EXIT
  Use this command to stop DCU and unload the DCU processing task from the system. This frees up the memory used by DCU. To begin logging console data again, you must recreate the log file using the DCU CAPTURE CONSOLE command.

- DCU FORMAT DISPLAY
  Use this command to display the data logged in the file.
- DCU FORMAT PRINT
  Use this command to print the data logged in the file.
- DCU HELP
  Use this command to check DCU syntax for the action you want to execute. It displays a list of all DCU commands and parameters.
- DCU REMINDER
  Use this command to set and display the current setting of the reminder message device and time interval between messages.
- DCU RESET
  Use this command to delete all the data logged in the file and to stop DCU logging.
- DCU SHOW
  Use this command to check whether LPS console entries and system console messages are being logged.

Problem

Use this task before calling for service, when:

- The system recognizes a problem that is not correctable and directs you to key in the PROBLEM command
- You are experiencing difficulties that you wish to report to Service.

Prior to placing a service call, you should use the Problem task to get the 6-digit dispatch code from the system.

Problem task Perform the following steps:

Step 1. Enter the following command:

PROBLEM

The following messages appear:

```
PROBLEM MXX   PROBLEM ANALYSIS:RUNNING

WHICH OF THE FOLLOWING TYPES OF PROBLEMS DO YOU WISH
TO REPORT?

1. PRINT QUALITY PROBLEMS
2. FREQUENT JAMS
3. OUTPUT TRAY PROBLEMS
4. PAPER TRAY PROBLEMS
5. TAPE PROBLEMS
6. OTHER SYSTEM PROBLEMS
7. NO OTHER SYSTEM PROBLEMS


INDICATE SELECTION BY ENTERING NUMBER
```

Step 2. Select one of the above options.

When you select options 1, 3, 4, or 5, messages appear requesting more detail about the problem you are reporting.

Next, or after selecting option 2, the following messages appear:

```
PROBLEM ANALYSIS RESULTS<MDSH>DISPATCH CODES
(DISPATCH CODE AND MESSAGE)

1. TO REPORT ADDITIONAL PROBLEMS.
2. NO MORE PROBLEMS TO REPORT.


INDICATE SELECTION BY ENTERING NUMBER
```

If you select option 1, you are returned to the previous problem menu.

If you select option 2, the following messages appear:

```
CALL THE FIELD SERVICE DISPATCHER AND REPORT THESE
NUMBERS
(DISPATCH CODES)
OPERATOR --- INDICATE THE ACTION YOU HAVE TAKEN.
1. SERVICE CALL HAS BEEN PLACED. WAITING FOR
SERVICE.
2. SERVICE CALL HAS BEEN PLACED. RETURN TO THE
OPERATING SYSTEM.
3. SERVICE NUMBERS COPIED FOR LATER CALL. RETURN TO
THE OPERATING SYSTEM.
```

```
4. NONE OF THE ABOVE. RETURN TO THE OPERATING
SYSTEM.

INDICATE SELECTION BY ENTERING NUMBER
```

If you select any option other than 1, you can continue using the LPS.

If you select option 1, the following messages appear:

```
SERVICE CALL PLACED.
WAITING FOR CE
1. REDISPLAY DISPATCH CODES
2. RETURN TO OPERATING SYSTEM

INDICATE SELECTION BY ENTERING NUMBER
```

Step 3. Select option 1 to see the dispatch codes, or select option 2 to continue using the LPS.

Step 4. Ensure that you record the 6-digit dispatch code to report to the service representative.

Note: In the U.S., the message `CALL THE FIELD SERVICE DISPATCHER AND REPORT THESE NUMBERS` refers to the National Customer Service Support Center. For non-U.S. areas, contact your local service representative.

Remote Terminal

The remote terminal function is only available in conjunction with Xerox Print Services Manager software. Please refer to the *Xerox DocuPrint 96/DocuPrint 96MX Installation Planning Guide* for hardware requirements for use of the remote terminal option.

Use this task to transfer control of the Xerox DocuPrint 96/ DocuPrint 96MX from the keyboard display to a remote device when running DocuPrintServer (formerly XPSM) jobs.

3. System control tasks

This chapter contains instructions for performing system control tasks. These tasks affect the operation of the LPS.

Refer to the list below for the tasks described in this chapter:

- System control tasks
- Power on the LPS
- Power off the LPS
- Boot the LPS
- System rollover
- System version
- Attention light/alarm
- Turn off Attention light
- Energy saver
- Data Capture Utility (DCU)
- Problem

System control tasks

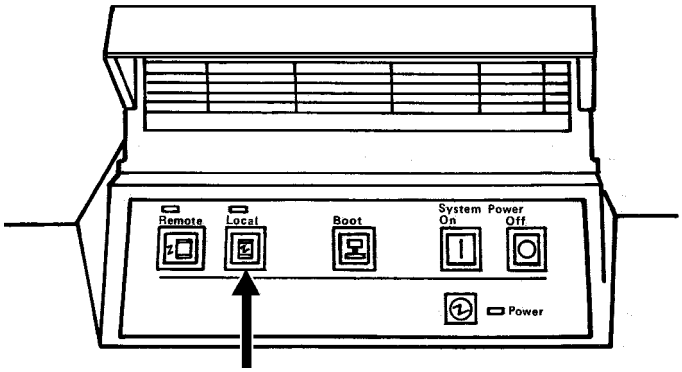
The following sections contain instructions for performing specific system control tasks.

Power on the LPS

Use this task to start the LPS:

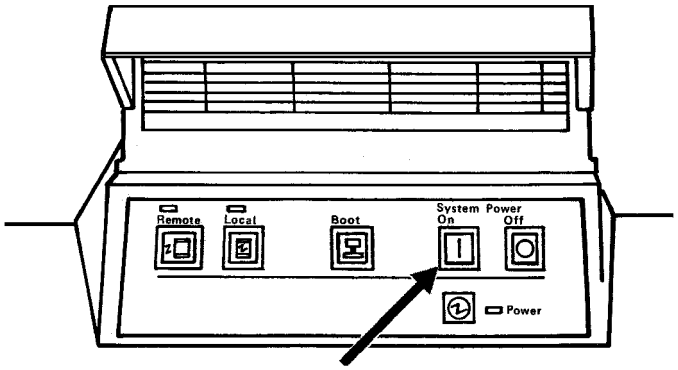
Step 1. Press the Local button on the operator control panel (see figure 3-1, unless otherwise instructed.

Figure 3-1. **Local button on operator control panel**



Step 2. Press the System Power On button on the operator control panel (see figure 3-2).

Figure 3-2. **System Power On button on operator control panel**



The Power indicator lights and READY $ appears on the display.

Power off the LPS

If no one is using the LPS for more than eight hours, power it off. For idle times of less than eight hours, the LPS has a built-in energy saver feature that can be adjusted to conserve energy and machine parts. (Refer to the "Energy saver" section later in this chapter for additional information.)

When LPS is in online mode

To power off the LPS if you are running online to a host computer:

Step 1. Contact the host system operator and request that the output from the host to the LPS be drained and the LPS be varied offline at the host.

Step 2. Press the <JOBS STATUS> key to ensure the system is idle (that is, not processing print jobs or performing nonprinting tasks).

Step 3. If the job queue is not empty: Use either the Endjob or Drain tasks to print any pages remaining in the print file. Press the <JOBS STATUS> key again, to ensure the job queue is empty.

Step 4. Enter the OFFLINE command.

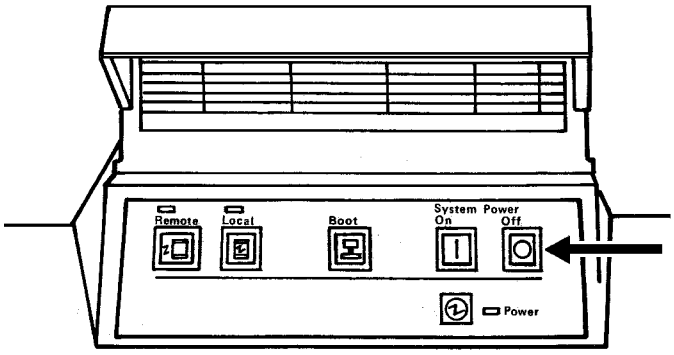
Step 5. Do one of the following:

- Enter the CONTINUE I command.
- Press the Continue button on the printer control console.
- Press the <CON> key on the keyboard.

Caution: Failure to have the LPS offline prior to powering off causes problems with the host system.

Step 6. When the LPS is offline, press the System Power Off button on the operator control panel (see figure 3-3).

Figure 3-3. **System Power Off button on operator control panel**



When the LPS is in offline mode

To power off the LPS if you are running offline:

Step 1. Press the <JOBS STATUS> key to ensure the system is idle.

Step 2. Unload the tape or cartridge. (Refer to “Offline printing tasks” chapter for instructions on unloading tapes and cartridges.)

Caution: If a tape or cartridge is loaded when the LPS is powered off, data on the tape or cartridge may be destroyed.

Step 3. Press the System Power Off button on the operator control panel. (Refer to figure 3-3.)

Boot the LPS

Use this task to select a boot source and start low-level system testing:

- If your LPS has the autoboot option, the system controller automatically begins booting the printer operating system when the LPS is first powered on.
- If your LPS does not have the autoboot option, you boot the LPS through commands entered at the keyboard.

Boot the LPS task

To boot the LPS follow this procedure:

Step 1. Press <B> for BOOT on the keyboard to load the operating system software (OSS).

Note: The operating system software must be loaded before the system can finish the warm-up cycle.

When loading is complete, the following messages appear on the display:

```
LOADING PROGRAM.......
XEROX [PRODUCT ID]
LASER PRINTING SYSTEM
VERSION X REVISION Y
DISK ID: [Thirty-character-ID-record
ENTER DATE:MM:DD:YY
```

Step 2. Key in the date, using numerals. You may use a space, a colon (:), or a slash (/) between the month, day, and year. Once you have entered the date, a written version is displayed, that is, 1/23/98 becomes January 23, 1998.

Step 3. Next you are asked to enter the time.

```
ENTER TIME (HH:MM:SS)
```

Enter the time, using the military 24-hour system. (For example, 2:30 p.m. is 14:30.) The date and time are displayed with the following message:

```
ARE THE DATE AND TIME CORRECT AS DISPLAYED (Y/N)?
```

Step 4. Press <Y> if they are correct.

If either is incorrect, enter <N> and reenter the date and time correctly.

Note: You are not always asked to enter the date and time.

Step 5. You are asked if you want the time displayed in the upper right corner of the screen and a constant update of the system's status.

```
LOAD AND ENABLE TIME-OF-DAY/STATUS DISPLAY (Y/N)?
```

In most cases, you should press <Y> for yes. If you do so, the system keeps you informed of the time and status. If you want to disable this feature at a later time, enter TIME OFF. To reenable it, you need only enter TIME ON.

If <N> is entered, you cannot add the time/status display without rebooting the system.

Allow four to seven minutes for the printer to complete its warm-up. When the printer is ready, a tone sounds, and the following message appears:

```
READY---JOB START WILL BE DELAYED 40-80 SECONDS FOR
PRINT QUALITY ADJUSTMENT
```

Note: Before the LPS starts printing, the system checks print quality and controls. Any adjustments, if necessary, are made by the system to give you the best quality prints. The system also checks print quality on an ongoing basis and may stop printing, correct a quality problem, and resume where it left off.

System rollover

A system rollover is a recovery technique the LPS uses to initiate a restart following a system error. This error may be induced by either a software or hardware failure.

System rollover message

If you are running the printer online the following messages are displayed:

```
OS2575 SYSTEM ROLLOVER. VARY OFFLINE FROM HOST.
ENTER 'C'
```

Perform the following steps:

Step 1. Enter "C" to initiate the recovery procedure. With either online or offline mode, the following messages are displayed:

```
SYSTEM RECOVERY FROM #### ABORT
PRINT ABORT DATA FOR LATER ANALYSIS Y/N?
```

Step 2. Press <Y> for yes. `PRINT REQUEST WILL BE QUEUED` is displayed. You are asked to verify date and time, and the following messages are then displayed for online mode:

```
DO YOU WANT TO ATTEMPT AUTOMATIC JOB
RECOVERY? ('Y' OR 'N')
OS1061 INITIALIZING CSI
```

Step 3. Press <Y> for yes. The system rollover causes the LPS to go offline. After the system rollover, the following messages are displayed:

```
OS0030 SYSTEM IS 'ONLINE'
OS2960 BACK UP HOST TO START OF REPORT
OR n PAGES, WHICHEVER IS LESS
OS2035 INPUT STOPPED. ENTER 'CONTINUE I' WHEN
HOST IS READY
```

Step 4. The system automatically goes back online. Enter CONTINUE I to resume printing. Any of the following messages may be displayed, depending on the status of the system before the system rollover:

```
OS0010 RESUMING INPUT
OS0020 RESUMING OUTPUT
OS1650 OUTPUT PROCESSING HAS CAUGHT UP WITH
INPUT PROCESSING
OS4650 INPUT HAS RECOVERED TO PAGE BOUNDARY
OS4651 OUTPUT HAS RECOVERED TO PAGE
BOUNDARY
```

Printed output to be given to the analyst is generated after completion of the job in progress. It follows the message:

```
OS1030 JOB #### HAS COMPLETED PRINTING
PERFORMING ABORT ANALYSIS DUMP
OS0040 SYSTEM IS OFFLINE
```

Step 5. Enter the ONLINE (for online mode) and START commands to resume normal operation.

System version

Use this task to display the system version number, the disk ID, and the current logon level.

System Version

Enter the following command:

OCS

Note: The Dialog versions do not appear when you enter this command.

Attention Light/Alarm

Use this task to enable or disable the Attention light and/or alarm.

The Attention light can be enabled or disabled for either or both modes—steady and flashing. If, for example, you disable the steady mode of the Attention light, but leave the flashing mode enabled, the Attention light does not go on when a condition such as low dry ink occurs (and the corresponding Hint icon does not appear on the printer control console), but the Attention light still flashes when the printer stops due to a fault (and the corresponding Fault icon still appears on the printer control console).

Attention Light/Alarm task

To enable the Attention light, enter the following command:

ATTENTION LIGHT ENABLE [STEADY | FLASHING]

Table 3-1 lists each parameter and its description.

Table 3-1. **ATTENTION LIGHT ENABLE command parameters and descriptions**

Parameter	Description
STEADY	Enables only the steady mode of the Attention light.
FLASHING	Enables only the flashing mode of the Attention light.

To disable the Attention light, enter the following command:

ATTENTION LIGHT DISABLE [STEADY | FLASHING]

Table 3-2 lists each parameter and its description.

Table 3-2. **ATTENTION LIGHT DISABLE command parameters and descriptions**

Parameter	Description
STEADY	Disables only the steady mode of the Attention light.
FLASHING	Disables only the flashing mode of the Attention light.

To enable the alarm, enter the following command:

ATTENTION ALARM ENABLE {0-10}

0-10 Sets the tone volume for the alarm. 0 is softest, 10 is loudest volume.

To disable the alarm, enter the following command:

ATTENTION ALARM DISABLE

Turn off Attention light or alarm

Use this task to turn off the Attention light. Neither the steady nor flashing modes of the Attention light operate, and the Hint and Fault icons do not appear on the printer control console. When the next fault condition occurs, the Attention light and appropriate icons appear again.

Turn off Attention Light task

Enter the following command:

ATTENTION ALL OFF

Energy saver

To conserve energy and prolong the life of some of its critical parts, the LPS was designed with a power saver mode. After a predetermined period of inactivity, portions of the printer are shut down. The time-out period is factory set, but it can be readjusted.

Heating and cooling are the most costly uses of electricity. Therefore, maintaining the system at full temperature while idle is not cost effective. After four hours of inactivity (or whatever time period you set), the fusing system shuts down. Once it cools down, it requires the same four- to seven-minute warm-up time as if the system had been turned off.

Use the Energy Saver task to readjust the time-out period. The energy saver timer starts whenever the printer stops.

Energy Saver task

To adjust the time-out period, enter the following command:

ENERGY [*timeout*]

Table 3-3 lists the parameter and its description.

Table 3-3. **ENERGY command parameter and description**

Parameter	Description
timeout	The number of minutes after which the energy saver mode begins. If you do not enter a value, the current timeout value appears.

Set date/time

Use this task to set the system date and time. The system must be idle when you perform this task. (Idle means not printing, offline, and not performing any non-printing tasks.)

Note: You must be at logon level 2 to use this task.

Note: The hours field is specified in military time, that is, 0—23, with 0 signifying midnight.

Set Date/Time task

Enter the following command:

SET TIME *mm/dd/yy hh:mm:ss*

You can separate the numbers in the date with a slash (/) or a dash (—). You can use the numbers from 1 to 12 for the months or the following abbreviations: JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC.

You can separate the numbers in the time with a colon (:). Entering the seconds is optional; the system assumes :00 if you do not enter the seconds.

Because the command is designed to allow you to change either the time, the date, or both, you do not enter commas for missing elements when setting only one of them. To change only the time, for example, enter:

SET TIME 10:27

Track console activity with Data Capture Utility (DCU)

Use this task to track console activity. DCU creates a console log of all LPS console entries and system console messages.

The following commands are used with the Data Capture Utility (DCU):

- DCU CAPTURE
  Use this command to start or stop logging of all LPS console entries and system console messages. This command creates the log file which automatically records all LPS console entries and system console messages for the specified number of days. You can specify that a message display at the selected interval to indicate logging of console entries. You can also display or print the log file you create.
- DCU DELETE
  Use this command to delete all data logged in the file or to delete all data through the specified date.
- DCU EXIT
  Use this command to stop DCU and unload the DCU processing task from the system. This frees up the memory used by DCU. To begin logging console data again, you must recreate the log file using the DCU CAPTURE CONSOLE command.

- DCU FORMAT DISPLAY
  Use this command to display the data logged in the file.
- DCU FORMAT PRINT
  Use this command to print the data logged in the file.
- DCU HELP
  Use this command to check DCU syntax for the action you want to execute. It displays a list of all DCU commands and parameters.
- DCU REMINDER
  Use this command to set and display the current setting of the reminder message device and time interval between messages.
- DCU RESET
  Use this command to delete all the data logged in the file and to stop DCU logging.
- DCU SHOW
  Use this command to check whether LPS console entries and system console messages are being logged.

Problem

Use this task before calling for service, when:

- The system recognizes a problem that is not correctable and directs you to key in the PROBLEM command
- You are experiencing difficulties that you wish to report to Service.

Prior to placing a service call, you should use the Problem task to get the 6-digit dispatch code from the system.

Problem task Perform the following steps:

Step 1. Enter the following command:

PROBLEM

The following messages appear:

```
PROBLEM MXX   PROBLEM ANALYSIS:RUNNING

WHICH OF THE FOLLOWING TYPES OF PROBLEMS DO YOU WISH
TO REPORT?

1. PRINT QUALITY PROBLEMS
2. FREQUENT JAMS
3. OUTPUT TRAY PROBLEMS
4. PAPER TRAY PROBLEMS
5. TAPE PROBLEMS
6. OTHER SYSTEM PROBLEMS
7. NO OTHER SYSTEM PROBLEMS


INDICATE SELECTION BY ENTERING NUMBER
```

Step 2. Select one of the above options.

When you select options 1, 3, 4, or 5, messages appear requesting more detail about the problem you are reporting.

Next, or after selecting option 2, the following messages appear:

```
PROBLEM ANALYSIS RESULTS<MDSH>DISPATCH CODES
(DISPATCH CODE AND MESSAGE)

1. TO REPORT ADDITIONAL PROBLEMS.
2. NO MORE PROBLEMS TO REPORT.


INDICATE SELECTION BY ENTERING NUMBER
```

If you select option 1, you are returned to the previous problem menu.

If you select option 2, the following messages appear:

```
CALL THE FIELD SERVICE DISPATCHER AND REPORT THESE
NUMBERS
(DISPATCH CODES)
OPERATOR --- INDICATE THE ACTION YOU HAVE TAKEN.
1. SERVICE CALL HAS BEEN PLACED. WAITING FOR
SERVICE.
2. SERVICE CALL HAS BEEN PLACED. RETURN TO THE
OPERATING SYSTEM.
3. SERVICE NUMBERS COPIED FOR LATER CALL. RETURN TO
THE OPERATING SYSTEM.
```

```
4. NONE OF THE ABOVE. RETURN TO THE OPERATING
SYSTEM.

INDICATE SELECTION BY ENTERING NUMBER
```

If you select any option other than 1, you can continue using the LPS.

If you select option 1, the following messages appear:

```
SERVICE CALL PLACED.
WAITING FOR CE
1. REDISPLAY DISPATCH CODES
2. RETURN TO OPERATING SYSTEM

INDICATE SELECTION BY ENTERING NUMBER
```

Step 3. Select option 1 to see the dispatch codes, or select option 2 to continue using the LPS.

Step 4. Ensure that you record the 6-digit dispatch code to report to the service representative.

Note: In the U.S., the message `CALL THE FIELD SERVICE DISPATCHER AND REPORT THESE NUMBERS` refers to the National Customer Service Support Center. For non-U.S. areas, contact your local service representative.

Remote Terminal

The remote terminal function is only available in conjunction with Xerox Print Services Manager software. Please refer to the *Xerox DocuPrint 96/DocuPrint 96MX Installation Planning Guide* for hardware requirements for use of the remote terminal option.

Use this task to transfer control of the Xerox DocuPrint 96/ DocuPrint 96MX from the keyboard display to a remote device when running DocuPrintServer (formerly XPSM) jobs.

4. Job control tasks

This chapter contains instructions for performing job control tasks. These tasks allow you to control and manage print jobs.

Refer to the list below for the tasks described in this chapter:

- Job control tasks
- Abort
- Reset
- Align
- Print Darkness
- Lead edge screen
- Fonts/forms/graphics
- Sample files
- Stop input/output
- Continue input/output
- Sample

Job control tasks

You can activate job control tasks by entering commands through the keyboard

The following sections contain instructions for performing specific job control tasks.

Abort

Use this task to do one of the following:

- Remove a specific print job from the system
- Remove the print job currently being processed
- Cause the current print job to stop printing (printing continues with the next report)
- Cause the currently active nonprint task (such as FDL or PDL) to abort (there must be no active print jobs when this command is entered).

Abort task

To remove a specific print job from the system, enter the following command:

ABORT *job-id*

Table 4-1 lists the parameter and its description.

Table 4-1. **ABORT command parameter and description**

Parameter	Description
job-id	The name of the job you want to abort.

To cause the current job to stop printing, enter the following command:

ABORT O

To remove the print job currently being input into the system, enter the following command:

ABORT I

To abort a nonprint task (such as FDL or PDL), enter the following command:

ABORT

For this command to work, there must be no print jobs active at the time it is entered. If there is an active print job, the following message appears:

```
OS1190 INVALID PARAMETER, COMMAND IGNORED
```

Reset

When the Reset task is used:

- All print jobs are removed from the job queue.
- Any pages in the printer paper path are sent to the selected stacker bin.
- All processing activity ceases, including accounting.
- If your LPS is operating online to a host computer, all jobs in the system need to be resent from the host.

Note: The Reset task should not be used if the Abort task can be used instead.

- If the system is idle when the Reset task is selected, a message appears informing you that the system has been reset and is ready for another request.
- If the system is not idle, a message appears asking you to confirm the clearing of the job queue.

Reset task Enter the following command:

RESET

If the system is idle when the Reset command is entered, a message displays informing you that the system has been reset and is ready for another request. If the system is not idle, the following messages appear on the keyboard display:

```
RESET WILL CLEAR THE JOB QUEUE. DO YOU WANT TO
PROCEED?
(TYPE 'Y' FOR YES, OR 'N' FOR NO; ENTER = YES)
```

Press <Y> to clear the job queue; press <N> to cancel the RESET command.

Align

Use this task to align the laser image of the printer with the paper.

Note: Normal alignment on the LPS is exceptionally accurate and very seldom, if ever, requires adjustment. If you need to adjust the alignment for a specific form, it is very important to remember to restore the alignment to the original specifications when the job is completed. Failure to do so could result in lost information when printing future jobs. (The normal alignment setting of the Xerox DocuPrint 96/DocuPrint 96MX LPS is 1,0.)

Align task To change the alignment for forms:

Step 1. Enter ALIGN to display the current setting (normal operating setting). For example:

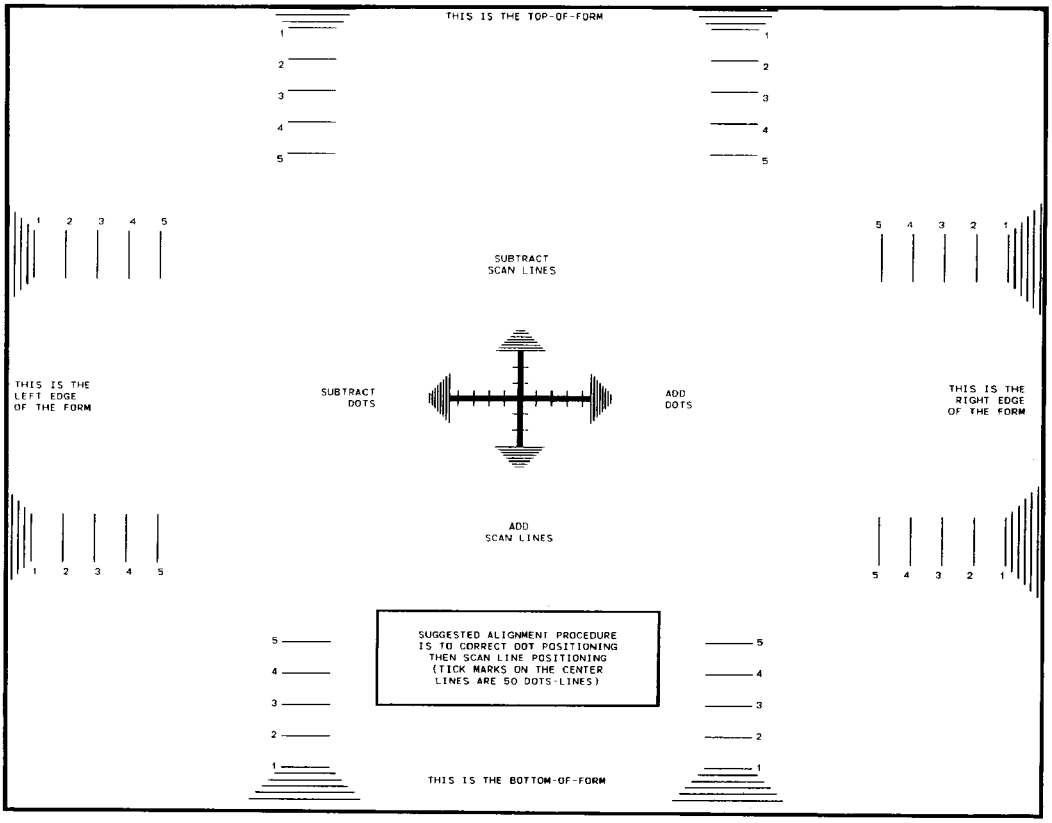
```
OS1380 ALIGNMENT IS 1 SCAN LINES AND 0 DOTS
```

Step 2. To change these values (and move the image to correspond to your form), key in ALIGN plus the new line value and the new dot value. There is a space between ALIGN and the number for the new line value, but only a comma between the values for the lines and dots. For example, if the initial alignment was 1 and 0, ALIGN 16,20 changes the initial alignment by 15 lines and 20 dots.

When using the test pattern, which is in landscape format, adding dots moves the image to the right; adding scan lines moves the image toward the bottom of the page. You may move the image by adding as many as 296 lines and up to 1496 dots. To go in the opposite direction, subtract dots or lines. You may not use negative numbers.

Step 3. To check the amount of shift, key in SAMPLE TEST.FRM to print the built-in test form (see figure 4-1), or you may print a sample of the actual job on the preprinted form to be used.

Figure 4-1. **Sample test form**



Step 4. If further adjustments are needed, repeat steps 2 and 3 until you are satisfied with the results.

There is another method used to set alignment with the system-generated test pattern. Enter the ALIGN command with the new values, followed immediately (no spaces) by, TEST (for example, ALIGN 3,8,TEST). This command sets the new values and automatically generates a single test form sample for your evaluation. The new values are printed near the top of the form.

The ALIGN, TEST command may be used any time you wish to generate a sample test form with the current values printed on it. (You could use this command in step 1, instead of the basic ALIGN command.)

Note: Remember to restore the printer to its original values. Enter ALIGN and the original values, whatever they were at the beginning. Refer to step 1.

Print Darkness

Use this task to make the printed image lighter or darker. The setting ranges from 1 (the lightest) to 9 (the darkest). The default value is 5.

Note: Turn off MICR mode when adjusting the DARKNESS settings.

Print Darkness task

To change the print darkness level, enter the following command:

DARKNESS [*level* [,TEST]]]

Table 4-2 lists each parameter and its description.

Table 4-2. **DARKNESS command parameters and descriptions**

Parameter	Description
level	Print darkness level you want to apply.
TEST	To receive a sample with the new darkness value applied.

If a job is printing, a page with the new value applied is delivered to the sample tray. If no job is printing, the test form with the new value applied is delivered to the sample tray. (See figure 4-1.)

To display the current image darkness value, enter the following command:

DARKNESS

Lead edge screen

Use this task to apply a screen to the leading margin of a printed sheet. The screen lightens a high density image in the margin. The edge lightening change is applied to:

- The next print job
- The current print job if printing was interrupted.

Note: Turn off MICR mode when adjusting the EDGE settings.

If you select this task while the LPS is printing, the following messages appear on the screen:

```
OS1331  LEAD EDGE SCREEN SETTING IS [OFF, NORMAL,
STRESS] OS0500  OUTPUT STOPPED
```

Lead Edge Screen task

To change the edge lightening value, enter the following command:

EDGE [NORMAL | STRESS | OFF]

Table 4-3 lists each parameter and its description.

Table 4-3. **EDGE command parameters and descriptions**

Parameter	Description
NORMAL	Apply normal edge lightening.
STRESS	Apply heavier edge lightening.
OFF	Turn off edge lightening.

To display the current value of edge lightening, enter the following command:

EDGE

MICR control

The DP96MX LPS may run in MICR or non-MICR mode. This gives you control of the printer MICR state. Refer to the chapter “MICR operating procedures” for information on how to perform the mode selection.

Fonts/forms/graphics

In order to improve printer throughput, you can define the maximum number of fonts, forms, and graphics that the system stores in memory during a print job. The values remain in effect until you change them or perform an LPS Update or Sysgen task. (Refer to the *Xerox DocuPrint 96/DocuPrint 96MX LPS System Generation Guide* for additional information.)

Use the Fonts/Forms/Graphics task to set the maximum number for the following:

- Fonts. Sets the maximum number of active fonts per print job. No single printed page can have more fonts than this number.

Note: This number must include all fonts used on the form as well as in the variable data.

If the number of fonts specified is exceeded during a print job, the job aborts and a message displays on the display screen of the system controller.

- Forms. Sets the maximum number of active forms per print job. Specifying a number larger than one allows form changes on a page to page basis without negative effects on printing speed as long as there is room for all the forms in system memory.
- Graphics. Sets the maximum number of active graphics per print job. No single printed page may call for more than 16 graphics.

Note: This number must also include all graphics used on a form for the page, if a form is used.

Fonts/Forms/Graphics task

To set the maximum number of files, enter the following command:

{FONTS | FORMS | GRAPHIC} ***number***

Table 4-4 lists the parameter and its description.

Table 4-4. **FONTS/FORMS/GRAPHIC command parameter and description**

Parameter	Description
number	The maximum number per print job.

To display the current number of fonts, enter the following command:

FONTS

To display the current number of forms, enter the following command:

FORMS

To display the current number of graphics, enter the following command:

GRAPHIC

Sample files

Use this task to print samples of fonts, forms, logos, or graphics.

Sample Files task

To print a sample of a form, font, logo, or graphic stored on the system disk, enter the following command:

SAMPLE *file-name.file-type* [,D,*copies*]

Table 4-5 lists each parameter and its description.

Table 4-5. **SAMPLE command parameters and descriptions**

Parameter	Description
file-name	The name of the file, obtained from your systems personnel.
file-type	One of the following: • .FRM (form) • .FNT (font) • .IMG (graphic)
D	Print the samples on both sides of each sheet of paper (duplex mode). If you do not enter a D, the samples print on only one side of each sheet of paper (simplex mode).
copies	The number of copies you want. If you do not enter a number, one copy is printed.

Note: For prints of graphics only, you may be asked to use the HARDCOPY command instead of the SAMPLE command. There is no difference in the graphic, but the data sheet that is printed with it is more detailed when the HARDCOPY command is used.

To print samples of all files of a certain type, such as font, form, and logo files, specify the type only. Enter the following command:

SAMPLE .*file-type* [,D,*copies*]

Table 4-6 lists each parameter and its description.

Table 4-6. **SAMPLE command parameters and descriptions**

Parameter	Description
file-type	One of the following: • .FRM (form) • .FNT (font) • .IMG (graphic)
D	Print the samples on both sides of each sheet of paper (duplex mode). If you do not enter a D, the samples print on only one side of each sheet of paper (simplex mode).
copies	The number of copies you want. If you do not enter a number, one copy is printed.

Stop input/output

Use this task to stop input processing, output processing (printing), or both.

- To stop both input and output processing, you may also press the <STOP> key on the keyboard.
- To stop printing, you may also press the Stop button on the printer control console.

Note: When running an online job, stopping output processing will also stop input processing. When doing the same for an offline job, the input processing continues.

Stop Input/Output task

Use this task as follows:

- To stop both input processing and printing, enter the following command:

  STOP

- To stop input processing, enter the following command:

  STOP I

- To stop printing, enter the following command:

  STOP O

Continue input/output

Use this task to resume interrupted input processing, printing, or both.

Continue is also used:

- To confirm that you have completed activities such as loading paper
- To resume operation of the LPS after a system report of a fault, such as a paper jam.

Input and/or printing resume at the point where stopped.

- To resume both input and output processing, you may also press the <CONTINUE> key on the keyboard
- To resume printing, you may also press the Continue button on the printer control console.

Continue Input/Output task

Use this task as follows:

- To resume both input processing and printing, enter the following command:

  CONTINUE

- To resume input processing, enter the following command:

  CONTINUE I

- To resume printing, enter the following command:

  CONTINUE O

Sample

Use this task to print a single page sample of the current job being printed.

Note the following when sampling the current job:

- The job may be running or suspended.
- The job must be at least three pages in length for you to be able to sample it.
- The next available page is printed twice and the extra page is sent to the sample tray.

To get a sample, you may also:

- Press the <SAMPLE> key on the keyboard.
- Press the Sample button on the printer control console.

Note: A print job must be in output processing in order to obtain a sample print. Also, you may not print samples when the sample tray is the output destination for a job, for example, when printing transparencies or when ordered stock is being used in the job.

Sample task

To print a sample of the current print job, enter the following command:

SAMPLE

4. Job control tasks

This chapter contains instructions for performing job control tasks. These tasks allow you to control and manage print jobs.

Refer to the list below for the tasks described in this chapter:

- Job control tasks
- Abort
- Reset
- Align
- Print Darkness
- Lead edge screen
- Fonts/forms/graphics
- Sample files
- Stop input/output
- Continue input/output
- Sample

Job control tasks

You can activate job control tasks by entering commands through the keyboard

The following sections contain instructions for performing specific job control tasks.

Abort

Use this task to do one of the following:

- Remove a specific print job from the system
- Remove the print job currently being processed
- Cause the current print job to stop printing (printing continues with the next report)
- Cause the currently active nonprint task (such as FDL or PDL) to abort (there must be no active print jobs when this command is entered).

Abort task

To remove a specific print job from the system, enter the following command:

ABORT *job-id*

Table 4-1 lists the parameter and its description.

Table 4-1. **ABORT command parameter and description**

Parameter	Description
job-id	The name of the job you want to abort.

To cause the current job to stop printing, enter the following command:

ABORT O

To remove the print job currently being input into the system, enter the following command:

ABORT I

To abort a nonprint task (such as FDL or PDL), enter the following command:

ABORT

For this command to work, there must be no print jobs active at the time it is entered. If there is an active print job, the following message appears:

```
OS1190 INVALID PARAMETER, COMMAND IGNORED
```

Reset

When the Reset task is used:

- All print jobs are removed from the job queue.
- Any pages in the printer paper path are sent to the selected stacker bin.
- All processing activity ceases, including accounting.
- If your LPS is operating online to a host computer, all jobs in the system need to be resent from the host.

Note: The Reset task should not be used if the Abort task can be used instead.

- If the system is idle when the Reset task is selected, a message appears informing you that the system has been reset and is ready for another request.
- If the system is not idle, a message appears asking you to confirm the clearing of the job queue.

Reset task Enter the following command:

RESET

If the system is idle when the Reset command is entered, a message displays informing you that the system has been reset and is ready for another request. If the system is not idle, the following messages appear on the keyboard display:

```
RESET WILL CLEAR THE JOB QUEUE. DO YOU WANT TO
PROCEED?
(TYPE 'Y' FOR YES, OR 'N' FOR NO; ENTER = YES)
```

Press <Y> to clear the job queue; press <N> to cancel the RESET command.

Align

Use this task to align the laser image of the printer with the paper.

Note: Normal alignment on the LPS is exceptionally accurate and very seldom, if ever, requires adjustment. If you need to adjust the alignment for a specific form, it is very important to remember to restore the alignment to the original specifications when the job is completed. Failure to do so could result in lost information when printing future jobs. (The normal alignment setting of the Xerox DocuPrint 96/DocuPrint 96MX LPS is 1,0.)

Align task To change the alignment for forms:

Step 1. Enter ALIGN to display the current setting (normal operating setting). For example:

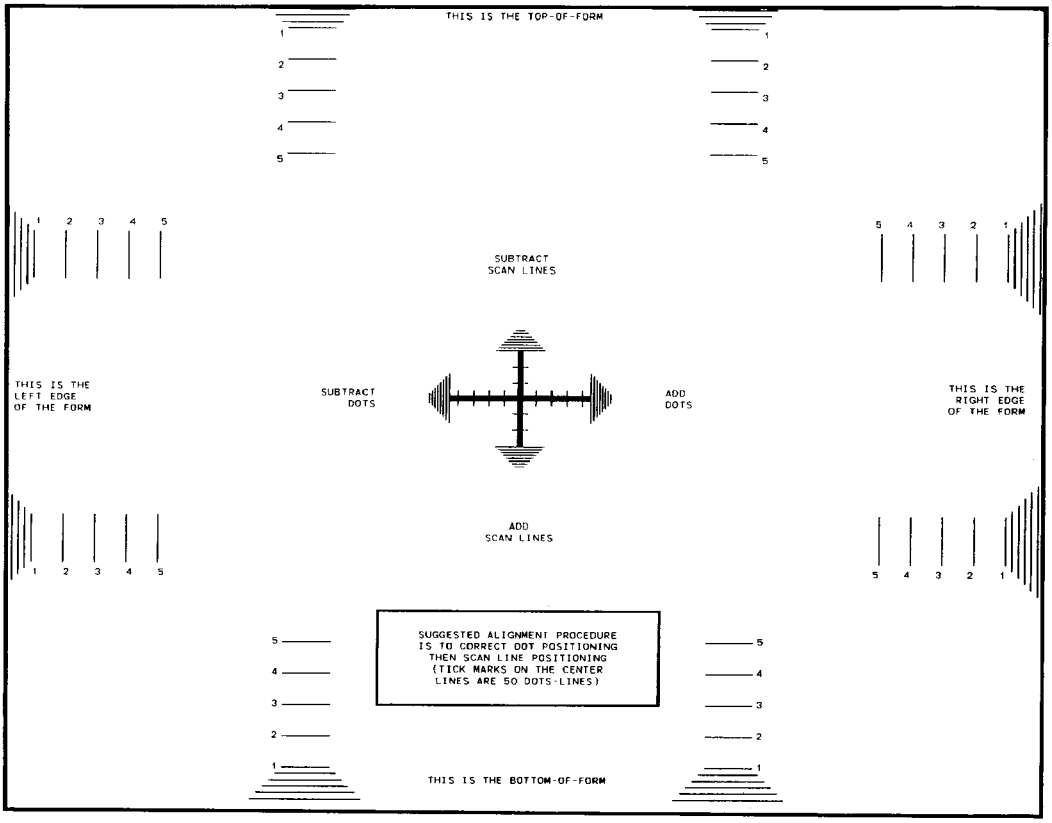
```
OS1380 ALIGNMENT IS 1 SCAN LINES AND 0 DOTS
```

Step 2. To change these values (and move the image to correspond to your form), key in ALIGN plus the new line value and the new dot value. There is a space between ALIGN and the number for the new line value, but only a comma between the values for the lines and dots. For example, if the initial alignment was 1 and 0, ALIGN 16,20 changes the initial alignment by 15 lines and 20 dots.

When using the test pattern, which is in landscape format, adding dots moves the image to the right; adding scan lines moves the image toward the bottom of the page. You may move the image by adding as many as 296 lines and up to 1496 dots. To go in the opposite direction, subtract dots or lines. You may not use negative numbers.

Step 3. To check the amount of shift, key in SAMPLE TEST.FRM to print the built-in test form (see figure 4-1), or you may print a sample of the actual job on the preprinted form to be used.

Figure 4-1. **Sample test form**



Step 4. If further adjustments are needed, repeat steps 2 and 3 until you are satisfied with the results.

There is another method used to set alignment with the system-generated test pattern. Enter the ALIGN command with the new values, followed immediately (no spaces) by, TEST (for example, ALIGN 3,8,TEST). This command sets the new values and automatically generates a single test form sample for your evaluation. The new values are printed near the top of the form.

The ALIGN, TEST command may be used any time you wish to generate a sample test form with the current values printed on it. (You could use this command in step 1, instead of the basic ALIGN command.)

Note: Remember to restore the printer to its original values. Enter ALIGN and the original values, whatever they were at the beginning. Refer to step 1.

Print Darkness

Use this task to make the printed image lighter or darker. The setting ranges from 1 (the lightest) to 9 (the darkest). The default value is 5.

Note: Turn off MICR mode when adjusting the DARKNESS settings.

Print Darkness task

To change the print darkness level, enter the following command:

DARKNESS [*level* [,TEST]]]

Table 4-2 lists each parameter and its description.

Table 4-2. **DARKNESS command parameters and descriptions**

Parameter	Description
level	Print darkness level you want to apply.
TEST	To receive a sample with the new darkness value applied.

If a job is printing, a page with the new value applied is delivered to the sample tray. If no job is printing, the test form with the new value applied is delivered to the sample tray. (See figure 4-1.)

To display the current image darkness value, enter the following command:

DARKNESS

Lead edge screen

Use this task to apply a screen to the leading margin of a printed sheet. The screen lightens a high density image in the margin. The edge lightening change is applied to:

- The next print job
- The current print job if printing was interrupted.

Note: Turn off MICR mode when adjusting the EDGE settings.

If you select this task while the LPS is printing, the following messages appear on the screen:

```
OS1331  LEAD EDGE SCREEN SETTING IS [OFF, NORMAL,
STRESS] OS0500  OUTPUT STOPPED
```

Lead Edge Screen task

To change the edge lightening value, enter the following command:

EDGE [NORMAL | STRESS | OFF]

Table 4-3 lists each parameter and its description.

Table 4-3. **EDGE command parameters and descriptions**

Parameter	Description
NORMAL	Apply normal edge lightening.
STRESS	Apply heavier edge lightening.
OFF	Turn off edge lightening.

To display the current value of edge lightening, enter the following command:

EDGE

MICR control

The DP96MX LPS may run in MICR or non-MICR mode. This gives you control of the printer MICR state. Refer to the chapter “MICR operating procedures” for information on how to perform the mode selection.

Fonts/forms/graphics

In order to improve printer throughput, you can define the maximum number of fonts, forms, and graphics that the system stores in memory during a print job. The values remain in effect until you change them or perform an LPS Update or Sysgen task. (Refer to the *Xerox DocuPrint 96/DocuPrint 96MX LPS System Generation Guide* for additional information.)

Use the Fonts/Forms/Graphics task to set the maximum number for the following:

- Fonts. Sets the maximum number of active fonts per print job. No single printed page can have more fonts than this number.

Note: This number must include all fonts used on the form as well as in the variable data.

If the number of fonts specified is exceeded during a print job, the job aborts and a message displays on the display screen of the system controller.

- Forms. Sets the maximum number of active forms per print job. Specifying a number larger than one allows form changes on a page to page basis without negative effects on printing speed as long as there is room for all the forms in system memory.
- Graphics. Sets the maximum number of active graphics per print job. No single printed page may call for more than 16 graphics.

Note: This number must also include all graphics used on a form for the page, if a form is used.

Fonts/Forms/Graphics task

To set the maximum number of files, enter the following command:

{FONTS | FORMS | GRAPHIC} ***number***

Table 4-4 lists the parameter and its description.

Table 4-4. **FONTS/FORMS/GRAPHIC command parameter and description**

Parameter	Description
number	The maximum number per print job.

To display the current number of fonts, enter the following command:

FONTS

To display the current number of forms, enter the following command:

FORMS

To display the current number of graphics, enter the following command:

GRAPHIC

Sample files

Use this task to print samples of fonts, forms, logos, or graphics.

Sample Files task

To print a sample of a form, font, logo, or graphic stored on the system disk, enter the following command:

SAMPLE *file-name.file-type* [,D,*copies*]

Table 4-5 lists each parameter and its description.

Table 4-5. **SAMPLE command parameters and descriptions**

Parameter	Description
file-name	The name of the file, obtained from your systems personnel.
file-type	One of the following: • .FRM (form) • .FNT (font) • .IMG (graphic)
D	Print the samples on both sides of each sheet of paper (duplex mode). If you do not enter a D, the samples print on only one side of each sheet of paper (simplex mode).
copies	The number of copies you want. If you do not enter a number, one copy is printed.

Note: For prints of graphics only, you may be asked to use the HARDCOPY command instead of the SAMPLE command. There is no difference in the graphic, but the data sheet that is printed with it is more detailed when the HARDCOPY command is used.

To print samples of all files of a certain type, such as font, form, and logo files, specify the type only. Enter the following command:

SAMPLE .*file-type* [,D,*copies*]

Table 4-6 lists each parameter and its description.

Table 4-6. **SAMPLE command parameters and descriptions**

Parameter	Description
file-type	One of the following: • .FRM (form) • .FNT (font) • .IMG (graphic)
D	Print the samples on both sides of each sheet of paper (duplex mode). If you do not enter a D, the samples print on only one side of each sheet of paper (simplex mode).
copies	The number of copies you want. If you do not enter a number, one copy is printed.

Stop input/output

Use this task to stop input processing, output processing (printing), or both.

- To stop both input and output processing, you may also press the <STOP> key on the keyboard.
- To stop printing, you may also press the Stop button on the printer control console.

Note: When running an online job, stopping output processing will also stop input processing. When doing the same for an offline job, the input processing continues.

Stop Input/Output task

Use this task as follows:

- To stop both input processing and printing, enter the following command:

  STOP

- To stop input processing, enter the following command:

  STOP I

- To stop printing, enter the following command:

  STOP O

Continue input/output

Use this task to resume interrupted input processing, printing, or both.

Continue is also used:

- To confirm that you have completed activities such as loading paper
- To resume operation of the LPS after a system report of a fault, such as a paper jam.

Input and/or printing resume at the point where stopped.

- To resume both input and output processing, you may also press the <CONTINUE> key on the keyboard
- To resume printing, you may also press the Continue button on the printer control console.

Continue Input/Output task

Use this task as follows:

- To resume both input processing and printing, enter the following command:

  CONTINUE

- To resume input processing, enter the following command:

  CONTINUE I

- To resume printing, enter the following command:

  CONTINUE O

Sample

Use this task to print a single page sample of the current job being printed.

Note the following when sampling the current job:

- The job may be running or suspended.
- The job must be at least three pages in length for you to be able to sample it.
- The next available page is printed twice and the extra page is sent to the sample tray.

To get a sample, you may also:

- Press the <SAMPLE> key on the keyboard.
- Press the Sample button on the printer control console.

Note: A print job must be in output processing in order to obtain a sample print. Also, you may not print samples when the sample tray is the output destination for a job, for example, when printing transparencies or when ordered stock is being used in the job.

Sample task

To print a sample of the current print job, enter the following command:

SAMPLE

5. Online printing tasks

This chapter contains instructions for performing online printing tasks. These tasks allow you to run print jobs from a host computer.

Refer to the list below for the tasks described in this chapter:

- Online printing tasks
- Place the LPS online
- Start an online print job
- Space
- Endjob
- Drain
- Disk saturation

Online printing tasks

You can perform online printing tasks by entering commands through the keyboard.

Place the LPS online to the host computer

Use this task to place the LPS online to the host computer.

Place the LPS Online task

To place the LPS online to the host computer, enter the following command:

ONLINE

Start an online print job

Use this task to begin printing an online job.

Start Job task

To start printing an online job, enter the following command:

START [[*jde*][,[*jdl*][,,[*copies*][,FORM=*form*]]]]

Table 5-1 lists each parameter and its description.

Table 5-1. **START command parameters and descriptions**

Parameter	Description
START	Specifies the command, to be followed by any or all of the specifications as needed.
jde	The name or number of the job descriptor entry which may be up to six characters in length.
jdl	The name or number of the job descriptor library which contains the JDE task used. The name or number may be up to six characters in length.
, (comma)	The comma replaces the multi/single report mode parameter when giving the START command online.
copies	The requested number of prints for each report.
FORM=*form*	The name of the form to be used. The extension .FRM is optional.

Refer to the *Xerox DocuPrint 96/DocuPrint 96MX LPS Operations Reference* for further information.

Space

The Space task allows you to move forward a specified number of pages within a report in order to begin printing at that point in the report.

If you have already started the print job, do the following:

Step 1. Stop the print job.

Step 2. Perform the Space task.

Step 3. Continue the print job.

Space task

Enter the following command:

SPACE *n* PAGES

n is the number of pages you want to space forward. It must be a positive number.

Endjob

The Endjob task signals the LPS that the current print job is the last job coming from the host. All formatted pages in the output queue are printed. You may want to use the Endjob task under the following circumstances:

- When switching from printing online to printing offline
- When an online print job doesn't contain a trailer page to indicate the end of the report
- If the trailer page has not been sent completely
- As an option to deal with multi-copy disk saturation
- When a "MOUNT FORM" message appears on an IBM host terminal.

Endjob task

Enter the following command:

ENDJOB

Drain

Use the Drain task to print all formatted pages in the print file or in memory without ending the print job in progress. You do not need to enter another start request for printing to continue.

Note: Sheets are printed if complete data pages are in the print file or in memory. Partially completed pages are not printed.

Before draining the print queue, check the status of the job using the jobs status task. Refer to the "Status and print tasks" chapter for instructions.

Drain task

Enter the following command:

DRAIN

Disk saturation

If a report is larger than the size of the print file, the system may not be able to receive the entire report onto the system disk at one time. If it cannot, a disk saturation message appears on the system controller screen alerting you of the situation and asking you for instructions.

Disk Saturation task

When disk saturation occurs, the following message appears:

```
OS6300 CURRENT REPORT SATURATES DISK.  ENTER
OPTION:
"CONTINUE I - CONTINUE MULTI-COPY MODE
"PRINT - PRINT ONE COPY OF CURRENT REPORT
"ENDJOB" - PRINT ALL COPIES OF REPORT SO FAR, END
"ABORT O" - ABORT CURRENT REPORT
"ABORT n" - ABORT CURRENT JOB
```

To resolve disk saturation, enter one of the commands listed in table 5-2.

Table 5-2. **Commands options following disk saturation and descriptions**

Parameter	Description
CONTINUE I	Continues multi-copy printing in sections. You will need to merge the prints of the different sections to get complete prints of the whole report.
PRINT 1	One copy of the current report is printed. The report must be retransmitted from the host for each copy required.
ENDJOB	Prints already formatted pages and ends the current job file.
ABORT O	Cancels the current report and starts printing the next report.
ABORT *n*	Cancels the job whose number is entered.

5. Online printing tasks

This chapter contains instructions for performing online printing tasks. These tasks allow you to run print jobs from a host computer.

Refer to the list below for the tasks described in this chapter:

- Online printing tasks
- Place the LPS online
- Start an online print job
- Space
- Endjob
- Drain
- Disk saturation

Online printing tasks

You can perform online printing tasks by entering commands through the keyboard.

Place the LPS online to the host computer

Use this task to place the LPS online to the host computer.

Place the LPS Online task

To place the LPS online to the host computer, enter the following command:

ONLINE

Start an online print job

Use this task to begin printing an online job.

Start Job task

To start printing an online job, enter the following command:

START [[*jde*][,[*jdl*][,,[*copies*][,FORM=*form*]]]]

Table 5-1 lists each parameter and its description.

Table 5-1. **START command parameters and descriptions**

Parameter	Description
START	Specifies the command, to be followed by any or all of the specifications as needed.
jde	The name or number of the job descriptor entry which may be up to six characters in length.
jdl	The name or number of the job descriptor library which contains the JDE task used. The name or number may be up to six characters in length.
, (comma)	The comma replaces the multi/single report mode parameter when giving the START command online.
copies	The requested number of prints for each report.
FORM=*form*	The name of the form to be used. The extension .FRM is optional.

Refer to the *Xerox DocuPrint 96/DocuPrint 96MX LPS Operations Reference* for further information.

Space

The Space task allows you to move forward a specified number of pages within a report in order to begin printing at that point in the report.

If you have already started the print job, do the following:

Step 1. Stop the print job.

Step 2. Perform the Space task.

Step 3. Continue the print job.

Space task

Enter the following command:

SPACE *n* PAGES

n is the number of pages you want to space forward. It must be a positive number.

Endjob

The Endjob task signals the LPS that the current print job is the last job coming from the host. All formatted pages in the output queue are printed. You may want to use the Endjob task under the following circumstances:

- When switching from printing online to printing offline
- When an online print job doesn't contain a trailer page to indicate the end of the report
- If the trailer page has not been sent completely
- As an option to deal with multi-copy disk saturation
- When a "MOUNT FORM" message appears on an IBM host terminal.

Endjob task

Enter the following command:

ENDJOB

Drain

Use the Drain task to print all formatted pages in the print file or in memory without ending the print job in progress. You do not need to enter another start request for printing to continue.

Note: Sheets are printed if complete data pages are in the print file or in memory. Partially completed pages are not printed.

Before draining the print queue, check the status of the job using the jobs status task. Refer to the "Status and print tasks" chapter for instructions.

Drain task

Enter the following command:

DRAIN

Disk saturation

If a report is larger than the size of the print file, the system may not be able to receive the entire report onto the system disk at one time. If it cannot, a disk saturation message appears on the system controller screen alerting you of the situation and asking you for instructions.

Disk Saturation task

When disk saturation occurs, the following message appears:

```
OS6300 CURRENT REPORT SATURATES DISK.  ENTER
OPTION:
"CONTINUE I - CONTINUE MULTI-COPY MODE
"PRINT - PRINT ONE COPY OF CURRENT REPORT
"ENDJOB" - PRINT ALL COPIES OF REPORT SO FAR, END
"ABORT O" - ABORT CURRENT REPORT
"ABORT n" - ABORT CURRENT JOB
```

To resolve disk saturation, enter one of the commands listed in table 5-2.

Table 5-2. **Commands options following disk saturation and descriptions**

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PRINT 1	One copy of the current report is printed. The report must be retransmitted from the host for each copy required.
ENDJOB	Prints already formatted pages and ends the current job file.
ABORT O	Cancels the current report and starts printing the next report.
ABORT *n*	Cancels the job whose number is entered.

6. Offline printing tasks

This chapter contains instructions for performing offline printing tasks. These tasks allow you to run print jobs from either the open-reel tape drive or the 1/2 inch cartridge tape drive of the peripheral cabinet. Procedures for handling the 1/4 inch cartridge tape drive and the floppy drive are also included. Refer to the “System overview of the Xerox DocuPrint 96/DocuPrint 96MX LPS” chapter for additional information on the tape drives.

The first part of this chapter describes the procedures for handling the tape drives and magnetic and cartridge tapes. The rest of the chapter explains the procedures for managing offline print jobs. For each of these tasks, instructions are given for accomplishing the task using keyed-in commands. Refer to the list below for the tasks described in this chapter:

- Power on the open-reel tape drive
- Load an open-reel tape
- Load an open-reel tape by hand
- Unload an open-reel tape
- Unload an open-reel tape during a power failure
- Power off the open-reel tape drive
- Handle open-reel tapes
- Power on the 18/36 track 1/2 inch cartridge tape drive
- Load a 1/2 inch cartridge
- Unload a 1/2 inch cartridge
- Power off the 1/2 inch cartridge tape drive
- Handle cartridge tapes
- Load a 1/4 inch cartridge tape
- Unload a 1/4 inch cartridge tape
- Handle 1/4 inch cartridge tapes
- Load a floppy disk
- Unload a floppy disk
- Handle floppy disks
- Offline printing tasks
- Start an offline print job
- Rewind/unload tape
- Space
- Move

Open-reel tape drive procedures

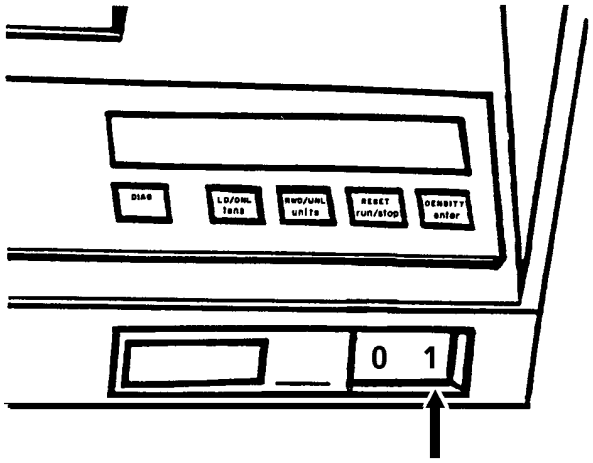
The following sections contain instructions for handling the open-reel tape drive.

Power on the open-reel tape drive

To power on the open-reel tape drive:

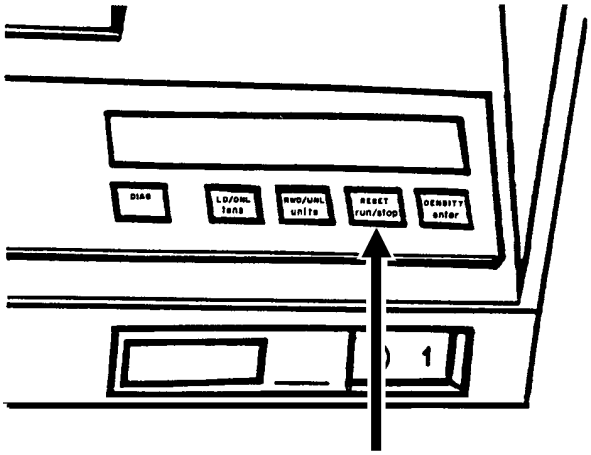
Step 1. Press the Power switch to the ON position by pressing down on the side marked (see figure 6-1).

Figure 6-1. **Power switch**



Step 2. Press the Reset button to open the loading door.

Figure 6-2. **Reset button**



The loading door opens and you can load an open-reel tape.

Note: If “0K” appears on the message display, but the door is closed, press the Reset button to open it. If this fails, tap lightly on the door to open it

Load an open-reel tape

Before loading a tape, ensure the following:

- The write enable ring is either:
  - — On the tape to allow writing
  - — Removed to prevent writing over existing data on the tape.
- The tape end is free; for new reels, remove the adhesive strip and/or rubber block that attaches the free end to the tape pack.

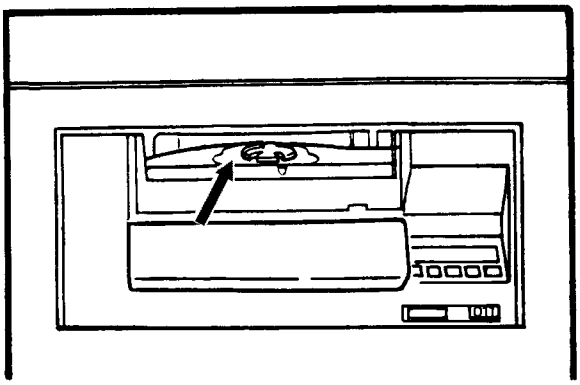
Follow this procedure to load a tape into the open-reel tape drive.

Step 1. Press the Reset button to open the tape loading door.

Step 2. Place the tape reel in the loading chamber and close the loading door.

The ring side should be facedown (see figure 6-3).

Figure 6-3. **Placing a tape in the loading chamber**



- "LOCATING" and then "LOCKING" appear on the tape drive message display.
- The self loading routine of the tape drive threads the tape.
- When the tape drive finds the BOT indicator, "Ld Point" appears on the tape drive message display and the tape drive is placed online.

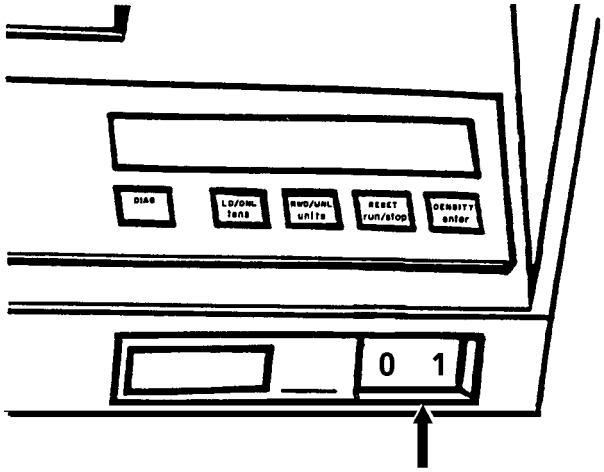
Load an open-reel tape by hand

If you need to load a tape by hand, follow this procedure.

Step 1. Press the Power switch to the OFF position by pressing down the side marked 0 (see figure 6-4).

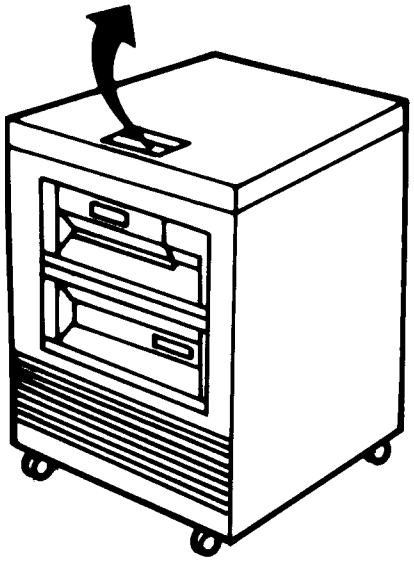
Warning: This is essential for safety reasons.

Figure 6-4. **Power switch**



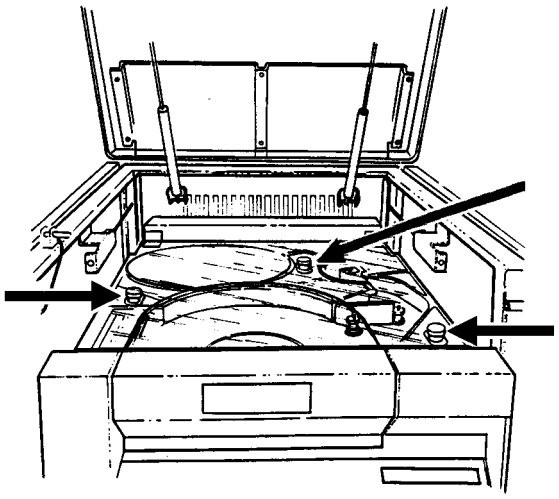
Step 2. Lift the cover of the peripheral cabinet (see figure 6-5).

Figure 6-5. **Lifting the peripheral cabinet cover**



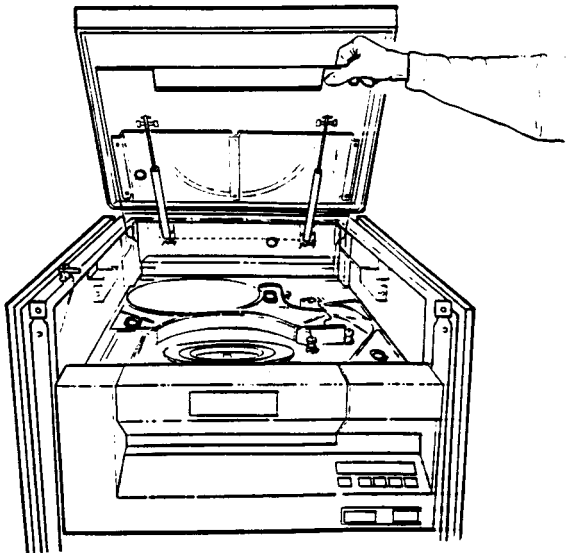
Step 3. Release the turnbuckles on the tape path cover by turning them counterclockwise (see figure 6-6)

Figure 6-6. **Turnbuckles**



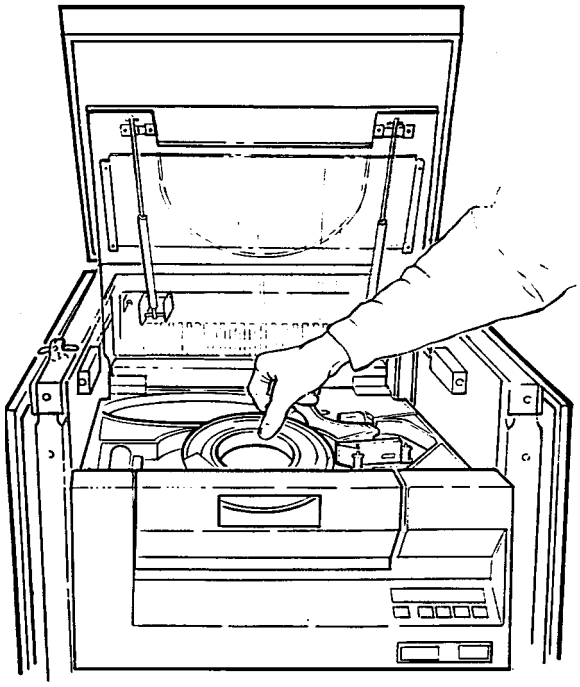
Step 4. Lift the tape path cover (see figure 6-7).

Figure 6-7. **Lifting the tape path cover**



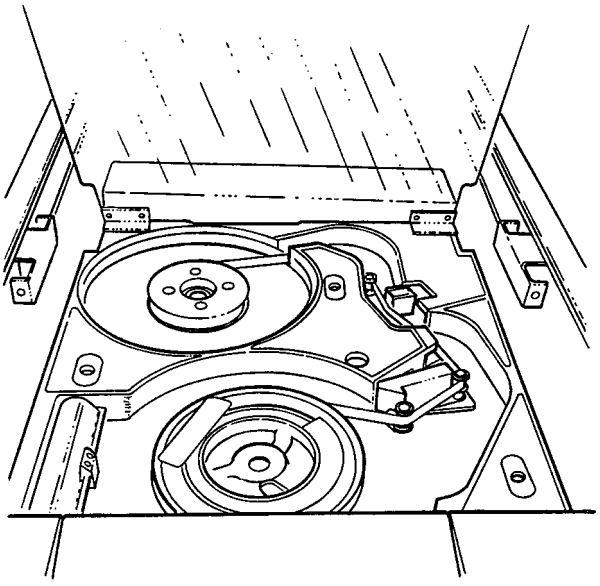
Step 5. Place the tape reel on the supply hub (see figure 6-8).

Figure 6-8. **Placing the tape reel on the supply hub**



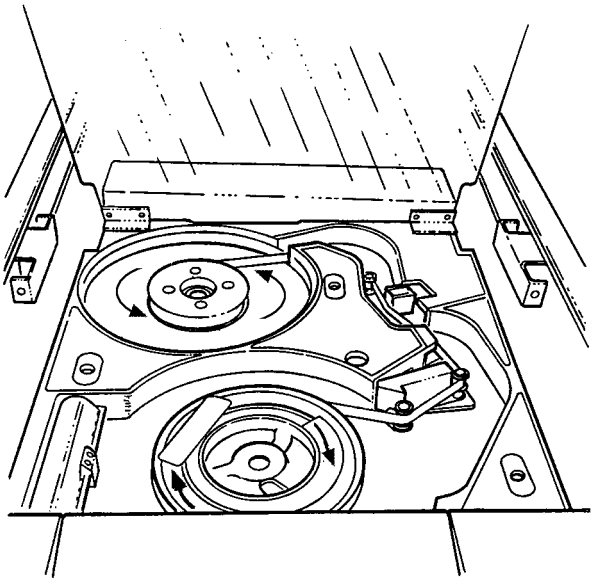
Step 6. Thread the tape to the take-up hub (see figure 6-9).

Figure 6-9. **Threading the tape**



Step 7. Wind the tape clockwise for approximately two turns. Wind the take-up reel counterclockwise until the tape tightens (see figure 6-10).

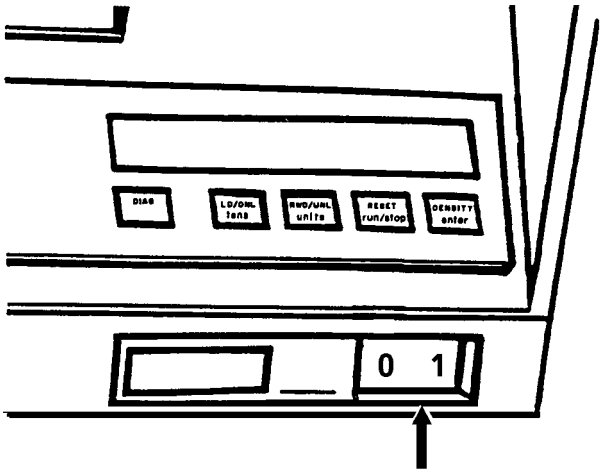
Figure 6-10. **Winding the tape**



Step 8. Close the tape path cover and secure the turnbuckles by turning them clockwise.

Step 9. Close the cover of the peripheral cabinet and press the Power switch to the ON position by pressing down on the side marked 1 (see figure 6-11).

Figure 6-11. **Power switch**



Step 10. When the tape drive finds the BOT indicator, "`Ld Point`" appears on the tape drive message display and the tape drive is placed online.

Unload an open-reel tape

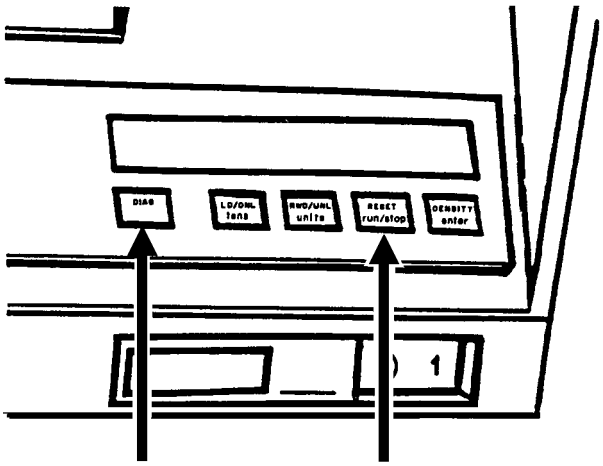
Before unloading a tape, ensure that the LPS system is not accessing the open-reel tape drive, to avoid loss of data. The tape drive should be offline and the message display should read “Ready” before you remove a tape.

Note: You can also rewind and/or unload a tape using the system controller terminal. For instructions, refer to the “Rewind/unload tape” section later in this chapter.

Place the tape drive offline

To take the open-reel tape drive offline, press the Reset button, or the Diag button if you are in Diagnostic mode (see figure 6-12).

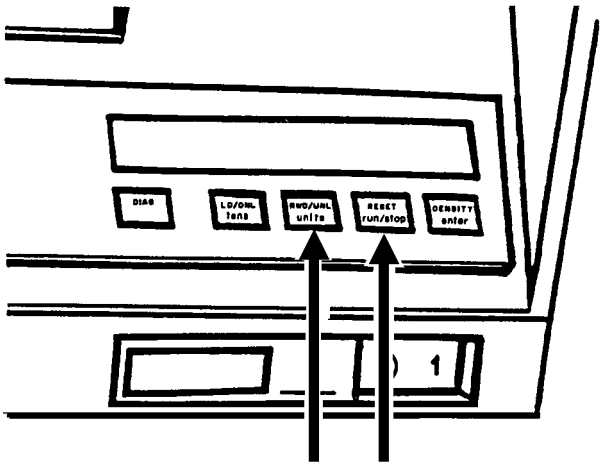
Figure 6-12. **Reset and Diag buttons**



To unload a tape from the 9-track magnetic tape drive:

Step 1. When “`Offline`” appears on the message display, press and hold the Reset button and the Rwd/Unl button (see figure 6-13).

Figure 6-13. **Reset and Rwd/Unl buttons**



Then the following happens:

- The tape rewinds through beginning of tape (BOT).
- The tape reel is unclamped.
- The tape door opens.
- "0K" appears on the tape drive message display.

Step 2. Remove the tape.

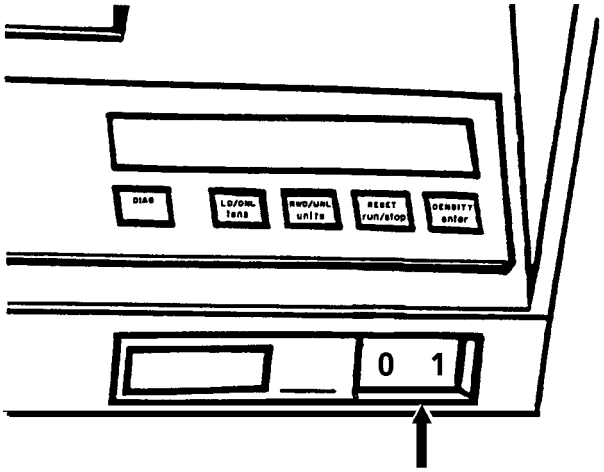
Unload an open-reel tape during a power failure

If power to the open-reel tape drive is cut off and you must unload the tape reel before power is restored, follow this procedure.

Step 1. Press the Power switch to the OFF position by pressing down the side marked 0 (see figure 6-14).

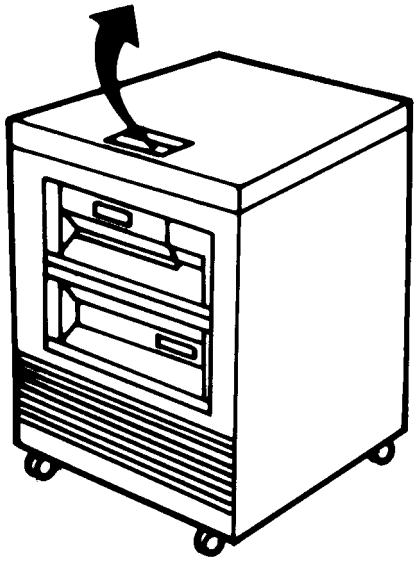
Warning: This is essential for safety reasons.

Figure 6-14. **Power switch**



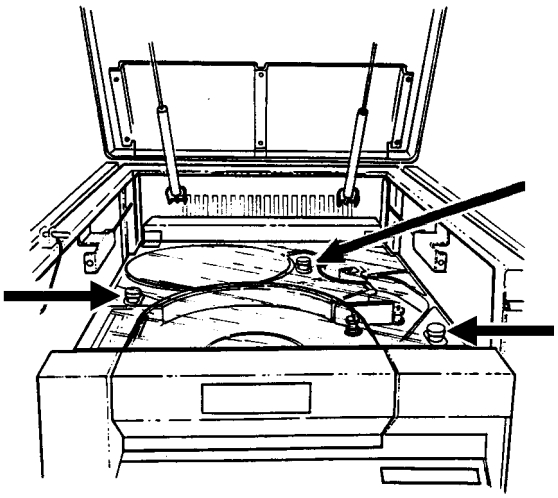
Step 2. Lift the cover of the peripheral cabinet (see figure 6-15).

Figure 6-15. **Opening the peripheral cabinet cover**



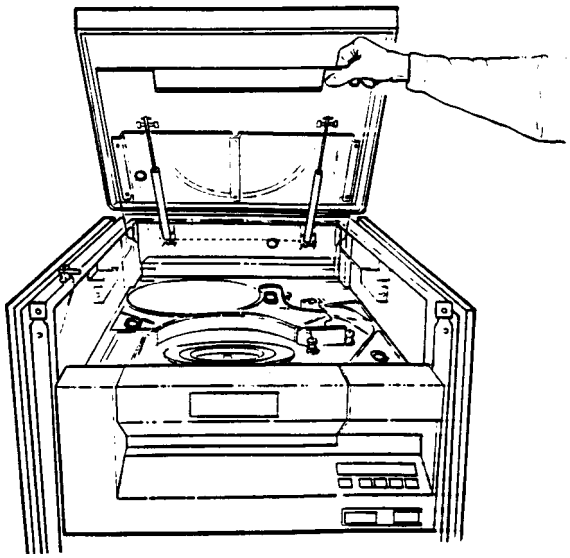
Step 3. Release the turnbuckles on the tape path cover by turning them counterclockwise (see figure 6-16).

Figure 6-16. **Turnbuckles**



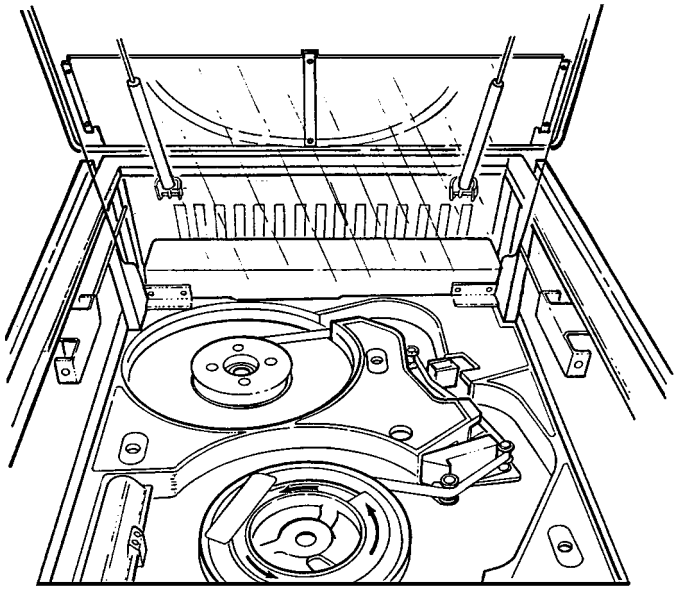
Step 4. Lift the tape path cover (see figure 6-17).

Figure 6-17. **Lifting the tape path cover**



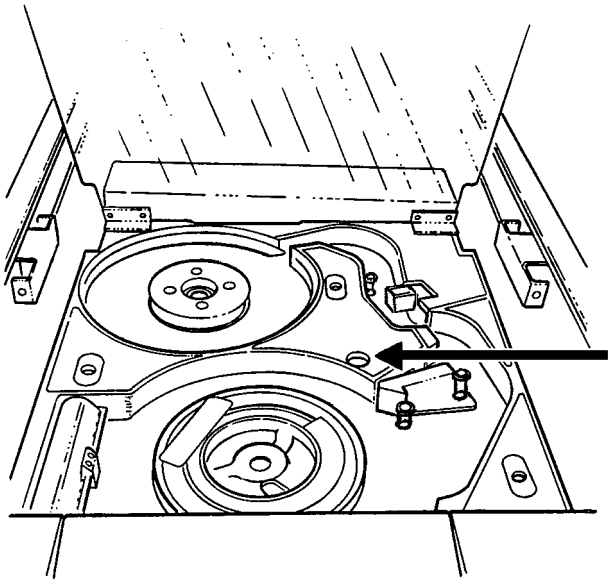
Step 5. Rotate the supply reel counterclockwise until all the tape is rewound (see figure 6-18).

Figure 6-18. **Rewinding the tape**



Step 6. Gently depress the Hub Release lever (see figure 6-19).

Figure 6-19. **Hub Release lever**

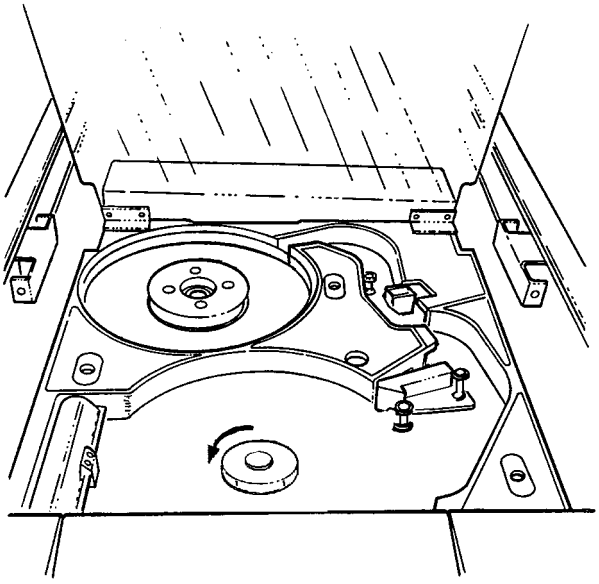


Step 7. While depressing the Hub Release lever, turn the tape reel counterclockwise to unclamp it.

Step 8. Carefully lift off the unclamped supply reel.

Step 9. Gently depress the Hub Release lever, again, and turn the hub counterclockwise until the clamp pads are fully retracted (see figure 6-20).

Figure 6-20. **Turning the hub**



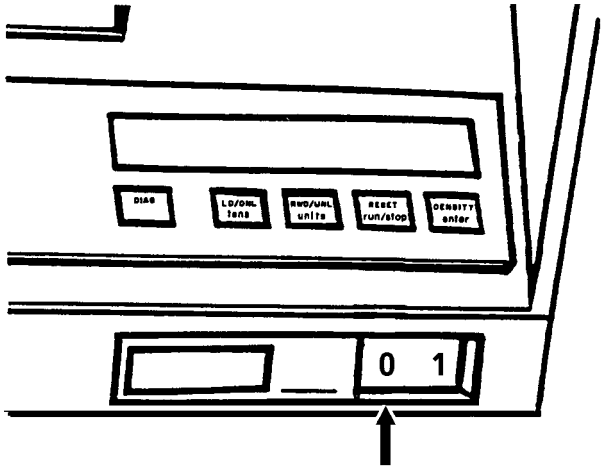
Step 10. Close the tape path cover and secure the turnbuckles by turning them clockwise.

Step 11. Close the cover of the peripheral cabinet.

Power off the open-reel tape drive

To power off the open-reel tape drive, press the Power switch to the OFF position by pressing down on the side marked 0 (see figure 6-21).

Figure 6-21. **Power switch**

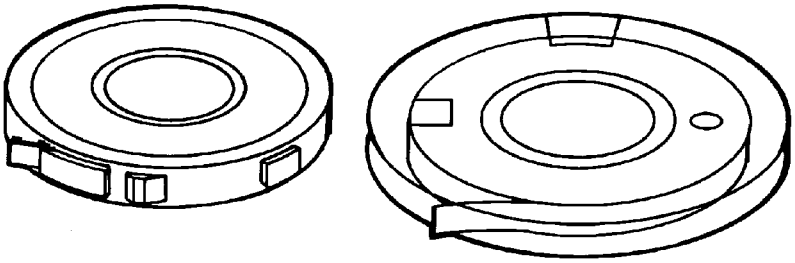


Caution: Unload the tape (or at least return it to BOT) before powering off the tape drive.

Handle open-reel tapes

Since improper handling can cause damage to tapes and result in unreadable data, store tapes in their protective containers when they are not being used (see figure 6-22). Most read/write errors are caused by dust or dirt on the read/write head, transferred there by the tapes.

Figure 6-22. **Open-reel tapes and their protective containers**



Make sure to follow these handling tips:

- Do not spill tape off the reel onto the floor or any dusty surface.
- Do not touch the flat sides of the tape between the beginning of tape (BOT) and end of tape (EOT) markers. In addition to possibly causing loss of data, oil from fingers attracts dust and dirt and leaves deposits on the read/write head.
- Do not smoke near the tape transport or tape storage area. Tobacco smoke and ash are especially damaging to tapes.
- Do not place tapes near line printers or other devices that produce paper dust.
- Do not place tapes near electric motors or any other magnetic sources that may erase data.
- Do not press the edges of the reel together. It can lead to tape edge damage when winding or unwinding tapes.
- Do not pull on the end of the tape to tighten it on the reel.
- Ensure the tape drive components are dry after cleaning them before loading the tape.
- Store tapes in the same climate-controlled environment in which you keep your system. Excessive heat can damage tapes.
- Store tapes vertically in racks.

File protection

Files on an open-reel tape can be protected or written over, depending on whether or not there is a write-enable ring on the tape reel, sensed by the tape drive.

When the write-enable ring is absent, the tape is protected and you can perform only read functions, including printing data from the tape. When the write-enable is present, you can both read and write (add files) on that tape.

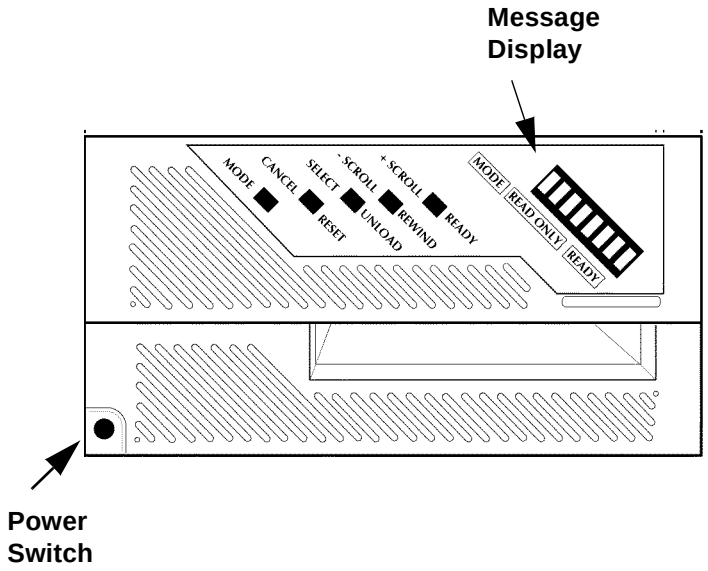
1/2 inch cartridge tape drive procedures

The following sections contain instructions for handling the 1/2 inch cartridge tape drive.

Power on the 18/36 track 1/2 inch cartridge tape drive

To power on the 18/36 track cartridge tape drive, press the Power switch.

Figure 6-23. **18/36 track Power switch**

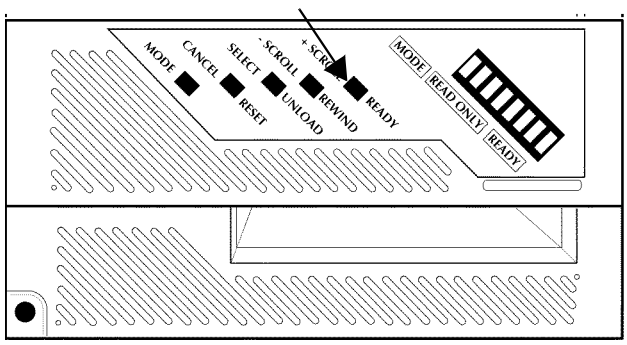


Diagnostics are performed and are listed on the message display.

Place the tape drive online

The 18/36 track drive must have a tape cartridge loaded before it can be placed online. If a cartridge is loaded but the drive is not online, press the Ready button to place the drive online.

Figure 6-24. **Ready button**



Load a 1/2 inch cartridge

Cartridge tape precautions

Before loading a cartridge, ensure it is not damaged. A damaged cartridge can prevent the tape from threading correctly and cause damage to the tape drive. A cartridge should not be used if the:

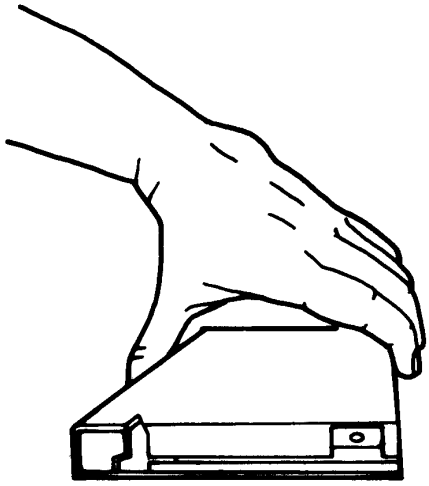
- Cartridge case is cracked or broken.
- Leader block or leader block latch is broken.
- File-protect selector is damaged.
- Label is peeling off.
- File protect sensor is damaged.
- Cartridge case contains any liquid.
- Cartridge has any other obvious damage.
- Tape was wound completely out of the cartridge onto the machine reel and then reattached to the cartridge reel.

If you have a damaged cartridge, substitute a back-up version of the data from another cartridge.

Follow this procedure to load a cartridge into the 1/2 inch cartridge tape drive.

Step 1. Hold the cartridge with the smooth side on top and the leader block toward the drive (see figure 6-24).

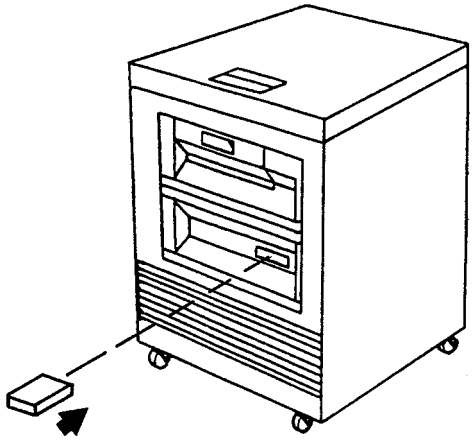
Figure 6-25. **Holding the 1/2 inch cartridge**



Step 2. Insert the cartridge into the entry slot, and slide it all the way into the drive opening until it stops (see figure 6-25).

Caution: When you insert a cartridge, never force it.

Figure 6-26. **Inserting the cartridge into the slot**



After about 15 seconds, the tape drive completes the loading process and the message display reads “ON LINE.” The message display also shows whether the cartridge is file-protected (F) or unprotected (U).

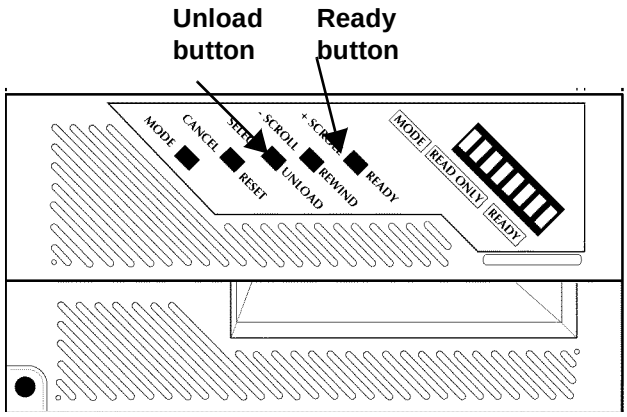
Unload a 1/2 inch cartridge

During normal operation:

Manual procedure 18/36 track To unload the 18/36 track cartridge manually, follow this procedure:

Step 1. Press the Ready button to take the drive offline and then press the Unload button.

Figure 6-27. **Ready and Unload buttons**

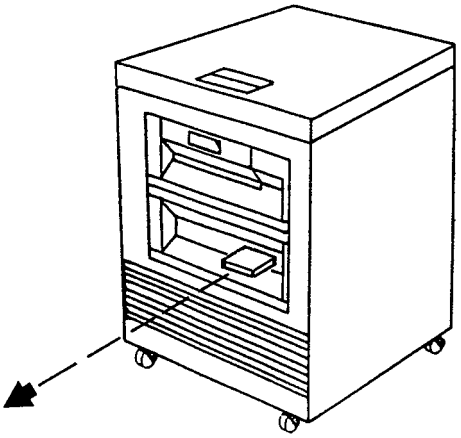


The message display shows the tape drive condition while the rewind and unload operation is in progress.

The cartridge is ejected from the transport.

Step 2. Once the cartridge is ejected, you can remove it from the tape drive (see figure 6-27).

Figure 6-28. **Removing the cartridge**

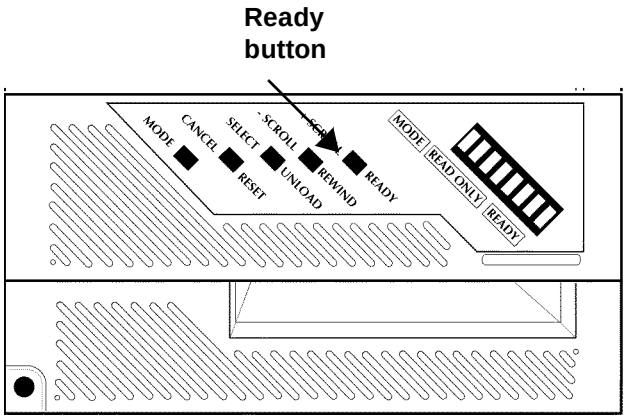


Note: You can also rewind and/or unload a tape using the system controller terminal. For instructions, refer to the “Rewind/ unload tape” section later in this chapter.

Power off the 18/36 track 1/2 inch tape drive

Follow these instructions when powering off the tape drive.

Figure 6-29. **Ready button**

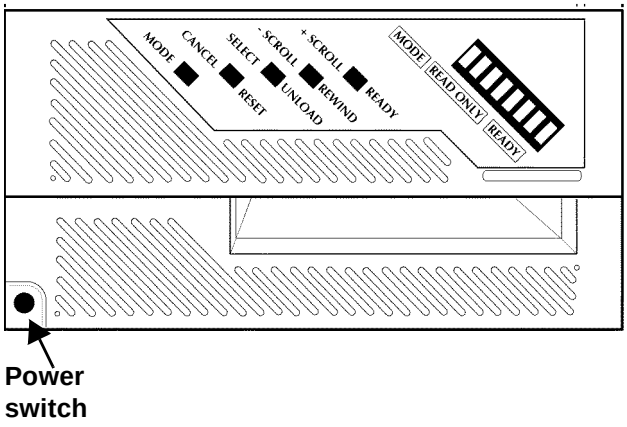


Step 1. Press and release the Ready button.

Step 2. If a cartridge is loaded in the tape drive, unload it. (Refer to the "Rewind/unload tape" section in this chapter.)

Step 3. Press and release the Power switch

Figure 6-30. **Power switch**



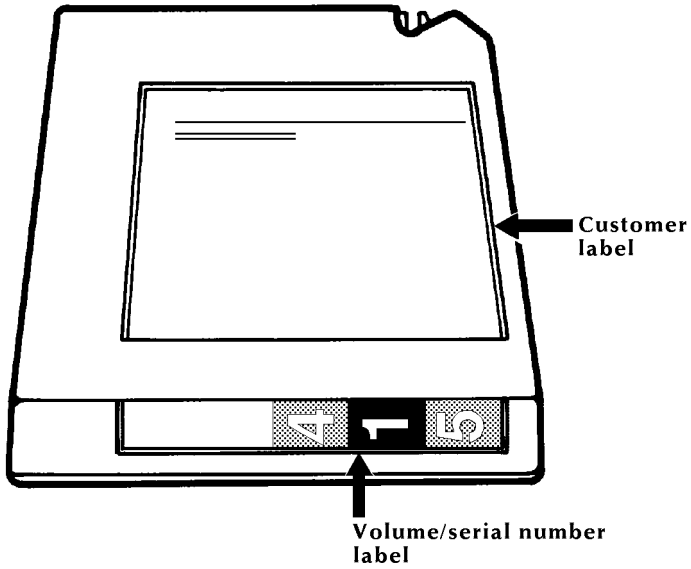
Handle cartridge tapes

Follow these instructions when handling cartridge tapes:

- Never try to pry open the feed slot door or force a tape cartridge into or out of a drive.
- Never leave a cartridge in a tape drive when powering off. You could damage data on the tape and the tape drive components.
- When cartridges are not being used, store them vertically in a dirt-free area that matches as closely as possible the environment of the room where you have the tape system. If the temperature or humidity are different, bring cartridges into the tape system environment 24 hours in advance to condition them.
- Never remove the protective wrapping until you are ready to use the cartridge.
- Every time you pick up a cartridge, ensure the leader block is latched.
- Never carry two or more cartridges loose in a container. Leader blocks can snag on other cartridges and become unlatched.
- Keep cartridges clean and dry.
- Never release a leader block and pull tape from the cartridge.
- Never open a cartridge; you will probably damage the tape.
- Never expose the tape or cartridges to direct sunlight.
- Never smoke near the tape transport or cartridge storage areas. Tobacco smoke and ash are especially 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, ensure it is made specifically for cleaning cartridges. Never allow the solution to touch the tape.
- If a leader block (blank section at beginning of tape) comes off, but there is no other obvious damage to the cartridge or the tape, a leader block repair kit may be used. The kit allows you to reattach the block and use the cartridge one more time to copy the data onto a new cartridge.
- If a label starts to peel off, replace it immediately to avoid loading/unloading problems.
- Do not write on a label that is on a cartridge. If you want to change a label, fill out a new one, remove the old one, and replace it with the new one.

- Place the volume/serial number label on the side of the cartridge opposite the file-protect selector and the customer label on the top surface of the cartridge. Use the recessed areas provided for them. When you want a new label on a cartridge, remove the old one before you put on a new one. Figure 6-31 shows the 1/2 inch cartridge tape labels.

Figure 6-31. **1/2 inch cartridge tape labels**

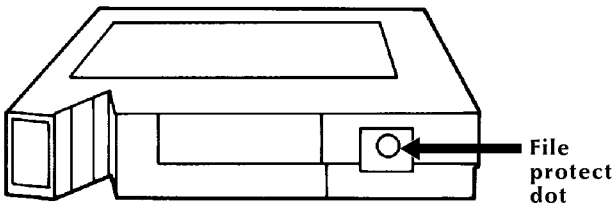


- Write on labels with markers that do not smear. Use only labels that leave no residue when removed.

File protection

A 1/2 inch cartridge tape has a thumbwheel on the side of the cartridge that allows you to protect or write on a tape. When the white dot is showing in the window, the cartridge is protected and you can perform only read functions. When the white dot is not showing, you can both read and write on that tape. Figure 6-32 shows a 1/2 inch cartridge that is file protected (white dot showing).

Figure 6-32. **File-protected 1/2 inch cartridge**

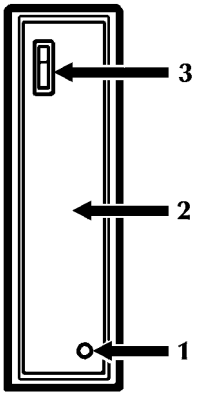


1/4 inch cartridge tape drive procedures

The following sections contain instructions for handling the 1/4 inch cartridge tape drive.

Figure 6-33 shows the components of the 1/4 inch cartridge tape drive.

Figure 6-33. **1/4 inch cartridge tape drive**



1 LED indicator
2 Door
3 Release button

Load a 1/4 inch cartridge tape

To load a 1/4 inch cartridge tape:

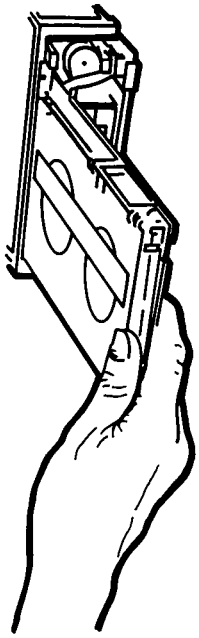
Step 1. Press the Release button. The door opens partially.

Step 2. Manually open the door completely. Insert the cartridge into the feed slot with the label facing to the left.

Step 3. Close the door. The tape is automatically loaded and positioned at BOT.

The LED indicator is green when the tape is operating properly. If the indicator is flashing red, call for service.

Figure 6-34. **Inserting a cartridge**



Unload a 1/4 inch cartridge tape

To unload a 1/4 inch cartridge tape:

Step 1. Use the Rewind Tape task to rewind the tape. (Refer to the “Rewind/ unload tape” section of this chapter.)

Step 2. Press the Release button to open the door. Lower the door manually.

Step 3. Carefully remove the cartridge.

Step 4. Close the door to prevent dust accumulation.

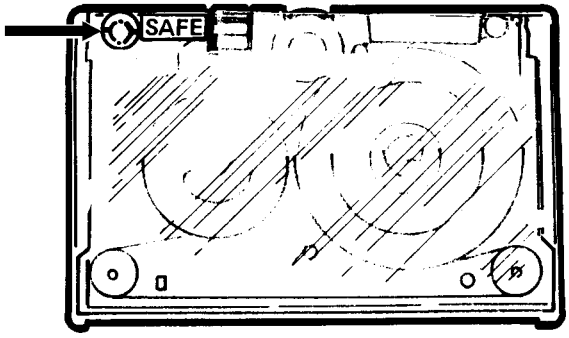
Handle 1/4 inch cartridge tapes

Refer to the “Handle cartridge tapes” section earlier in this chapter.

File protection

A 1/4 inch cartridge tape has a block file protect tab on the labeled side of the cartridge. When the arrow on the tab is pointing to the word “SAFE,” the cartridge tape is protected from being written over.

Figure 6-35. **File-protected 1/4 inch cartridge with the black tab pointing to SAFE**



Load a floppy disk

To load a floppy disk, insert the floppy disk label side up, until you hear a click.

Unload a floppy disk

To unload a floppy disk, press the floppy eject button. The floppy disk will pop out slightly.

Handle floppy disks

Floppy disks must be stored and handled properly to prevent damage. If a disk is damaged, files stored on it probably will be lost.

To help keep your floppy disks in good condition:

- Place identification labels on each disk, listing the names of the files it contains.
- Never attempt to clean a floppy disk.
- Never leave floppy disks on or near magnets or magnetized objects, such as telephones or the floppy disk drive. Exposure to magnetic fields can cause data loss.
- Never place heavy objects on top of a floppy disk.
- Never expose floppy disks to excessive heat or sunlight.

Offline printing tasks

You can perform offline printing tasks by entering commands through the keyboard.

Start an offline print job

Use this task to begin printing an offline job.

Start Job task

To start an offline print job, enter the following command:

START [[*jde*][,[*jdl*][,[S | M][,[*copies*] [,[[REPORTS:r1,r2,...] [,,TD*n*]][,TD*n*]] | [DISC:file.ext FORM=*form.frm*]]]]]

Table 6-1 lists each parameter and its description.

Table 6-1. **START command parameters and descriptions**

Parameter	Description
START	Specifies the command, to be followed by any or all of the specifications as needed (often abbreviated as STA).
jde	The name or number of the job descriptor entry, which may be up to six characters in length.
jdl	The name or number of the job descriptor library which contains the jde used. The name or number may be up to six characters in length.
S	Single report mode processes only one report at a time. Use this mode when changes must be made to the job specification from one report to the next. The system assumes multiple report mode if you insert a comma instead of S or M.
M	Multiple report mode means that the LPS continuously processes all reports in the job. Processing automatically sequences from report to report, volume to volume, until all reports are processed. The system assumes multiple report mode if you insert a comma instead of S or M.
copies	The requested number of prints for each report.
REPORTS: r1,r2	Allows you to specify the sequence and set of reports to be processed. In the example that follows, the LPS was directed to print the first report, then the third through the fifth, and finally the second. The system assumes you want prints of all the reports if you do not use this option. You are not required to use a comma if the REPORTS option is not used.

Table 6-1. **START command parameters and descriptions**

Parameter	Description
TD*n*	Specifies the tape device being used. **Notes:** 1. The tape device identifications are set up during sysgen. Refer to the *Xerox DocuPrint 96/ DocuPrint 96MX LPS System Generation Guide* for additional information. 2. You cannot select a tape device when you have selected DISC or FORM.
DISC:*file-name.filetype*	Indicates you want to print a file stored on the system disc.
FORM=*Form-name.Frm*	Indicates you want to print a form stored on the system disc.

Example: STA 21,POWGRP,M,2,REPORTS:1,3-5,2 means start to process or print from the JDE called 21, the JDL file called POWGRP, in multiple report mode, two prints each of reports 1, 3-5, and 2.

Rewind/unload tape

The Rewind/Unload Tape task allows you to do the following from the system controller terminal:

- Rewind a tape to BOT
- Rewind a tape and unload it from the take-up reel, clearing the tape path.

Rewind/Unload Tape task

To rewind a tape, enter the following command:

TAPE[CARTRIDGE | TD*n*] REWIND

Table 6-2 lists the parameter and its description.

Table 6-2. **TAPE command parameter and description**

Parameter	Description
TD*n*	The tape drive you are using. (The tape device identifications are set up during sysgen. Refer to the *Xerox DocuPrint 96/DocuPrint 96MX LPS System Generation Guide* for additional information.)

To unload a tape, enter the following command:

TAPE[CARTRIDGE|TD*n*] UNLOAD

Refer to table 6-2 for a description of the TD*n* parameter.

Space

The Space task allows you to print a specific job (or jobs) by spacing over pages or reports on a tape.

To move forward, enter a positive number; to move backward, enter a negative number.

If you have already started a print job:

Step 1. Stop the print job.

Step 2. Perform the Space task.

Step 3. Continue the print job.

Space task

To space over pages within a report, enter the following command:

SPACE *n* PAGES

n is the number of pages.

To space over reports, enter the following command:

SPACE *n* REPORTS

n is the number of reports.

Move

The Move task allows you to position a tape forward or backward a specific number of files or blocks.

Note: After using the Move task, you must reset the system before changing to another device.

Note: While the Move task is being processed, input stops and a message appears telling you that the tape is being positioned. You must press the Continue button to resume input processing of any active jobs.

Move task

Enter the following command:

MOVE *n* {files | blocks}

n is the number of files or blocks you want to move forward or backward on the tape. A positive number positions you forward; a negative number positions you backward.

6. Offline printing tasks

This chapter contains instructions for performing offline printing tasks. These tasks allow you to run print jobs from either the open-reel tape drive or the 1/2 inch cartridge tape drive of the peripheral cabinet. Procedures for handling the 1/4 inch cartridge tape drive and the floppy drive are also included. Refer to the “System overview of the Xerox DocuPrint 96/DocuPrint 96MX LPS” chapter for additional information on the tape drives.

The first part of this chapter describes the procedures for handling the tape drives and magnetic and cartridge tapes. The rest of the chapter explains the procedures for managing offline print jobs. For each of these tasks, instructions are given for accomplishing the task using keyed-in commands. Refer to the list below for the tasks described in this chapter:

- Power on the open-reel tape drive
- Load an open-reel tape
- Load an open-reel tape by hand
- Unload an open-reel tape
- Unload an open-reel tape during a power failure
- Power off the open-reel tape drive
- Handle open-reel tapes
- Power on the 18/36 track 1/2 inch cartridge tape drive
- Load a 1/2 inch cartridge
- Unload a 1/2 inch cartridge
- Power off the 1/2 inch cartridge tape drive
- Handle cartridge tapes
- Load a 1/4 inch cartridge tape
- Unload a 1/4 inch cartridge tape
- Handle 1/4 inch cartridge tapes
- Load a floppy disk
- Unload a floppy disk
- Handle floppy disks
- Offline printing tasks
- Start an offline print job
- Rewind/unload tape
- Space
- Move

Open-reel tape drive procedures

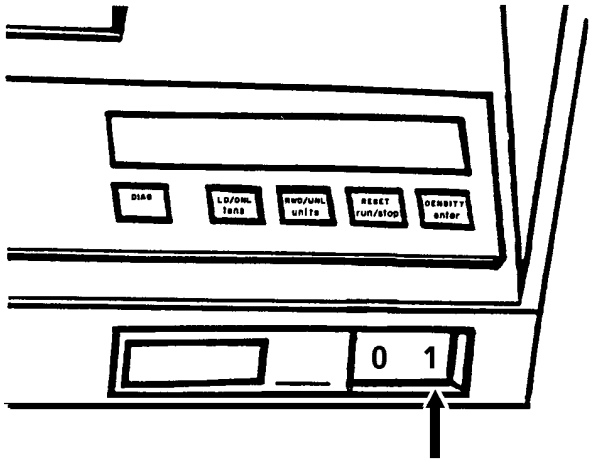
The following sections contain instructions for handling the open-reel tape drive.

Power on the open-reel tape drive

To power on the open-reel tape drive:

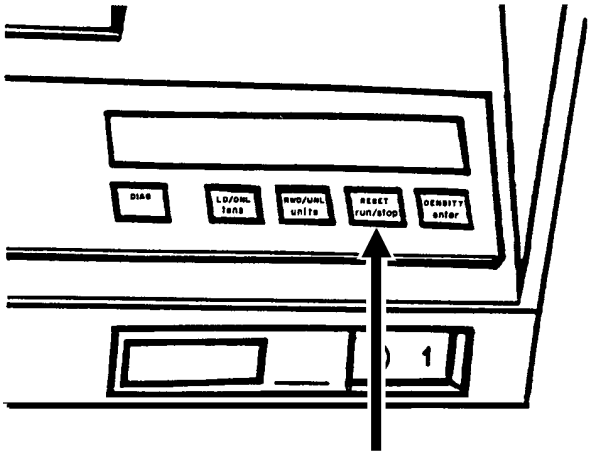
Step 1. Press the Power switch to the ON position by pressing down on the side marked (see figure 6-1).

Figure 6-1. **Power switch**



Step 2. Press the Reset button to open the loading door.

Figure 6-2. **Reset button**



The loading door opens and you can load an open-reel tape.

Note: If “0K” appears on the message display, but the door is closed, press the Reset button to open it. If this fails, tap lightly on the door to open it

Load an open-reel tape

Before loading a tape, ensure the following:

- The write enable ring is either:
  - — On the tape to allow writing
  - — Removed to prevent writing over existing data on the tape.
- The tape end is free; for new reels, remove the adhesive strip and/or rubber block that attaches the free end to the tape pack.

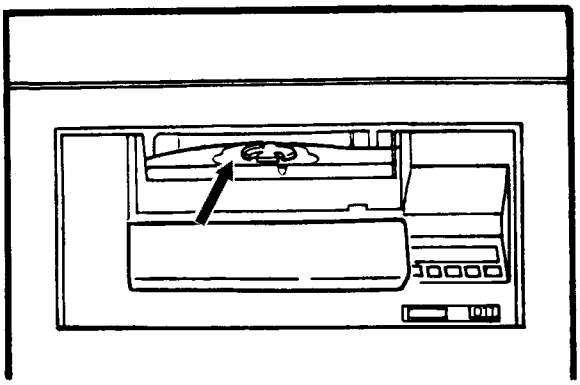
Follow this procedure to load a tape into the open-reel tape drive.

Step 1. Press the Reset button to open the tape loading door.

Step 2. Place the tape reel in the loading chamber and close the loading door.

The ring side should be facedown (see figure 6-3).

Figure 6-3. **Placing a tape in the loading chamber**



- "LOCATING" and then "LOCKING" appear on the tape drive message display.
- The self loading routine of the tape drive threads the tape.
- When the tape drive finds the BOT indicator, "Ld Point" appears on the tape drive message display and the tape drive is placed online.

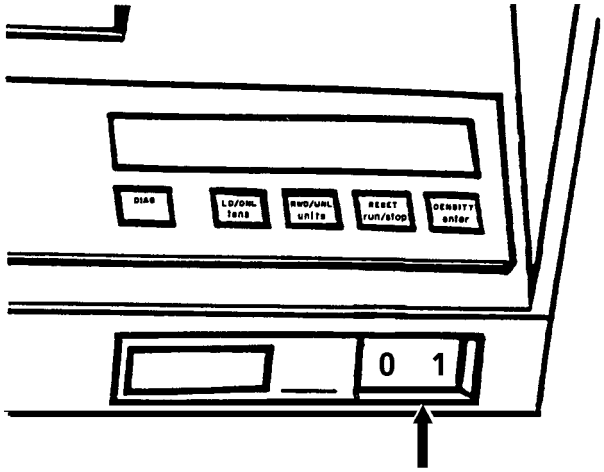
Load an open-reel tape by hand

If you need to load a tape by hand, follow this procedure.

Step 1. Press the Power switch to the OFF position by pressing down the side marked 0 (see figure 6-4).

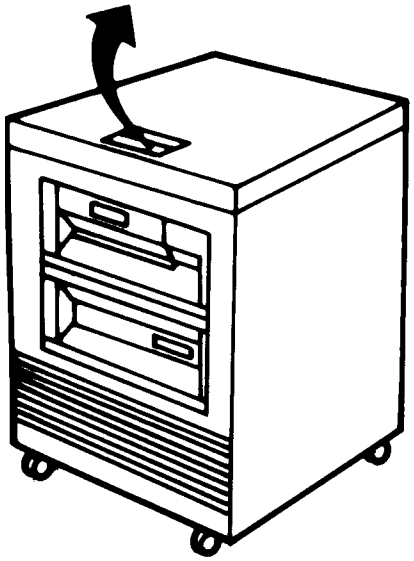
Warning: This is essential for safety reasons.

Figure 6-4. **Power switch**



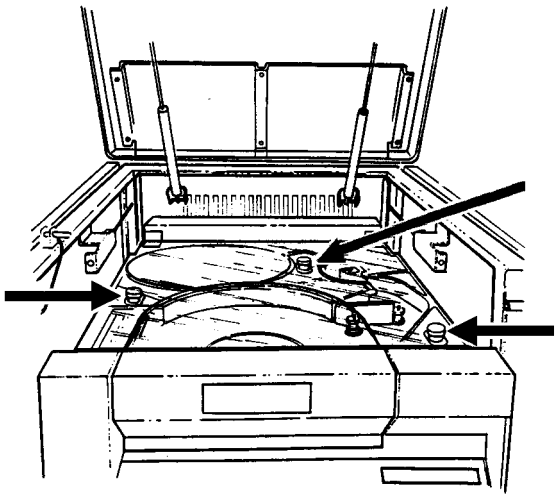
Step 2. Lift the cover of the peripheral cabinet (see figure 6-5).

Figure 6-5. **Lifting the peripheral cabinet cover**



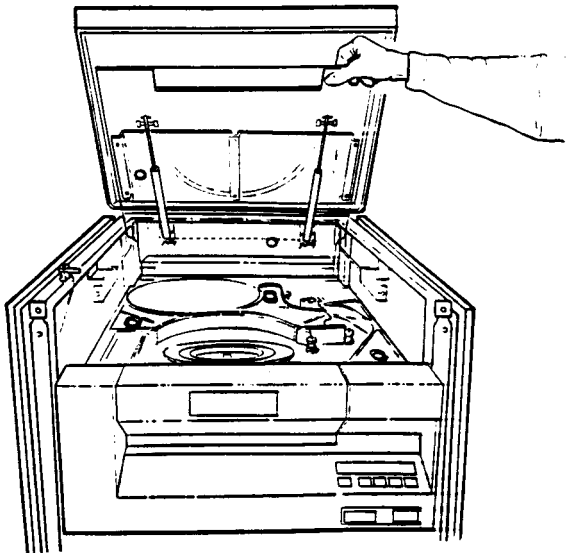
Step 3. Release the turnbuckles on the tape path cover by turning them counterclockwise (see figure 6-6)

Figure 6-6. **Turnbuckles**



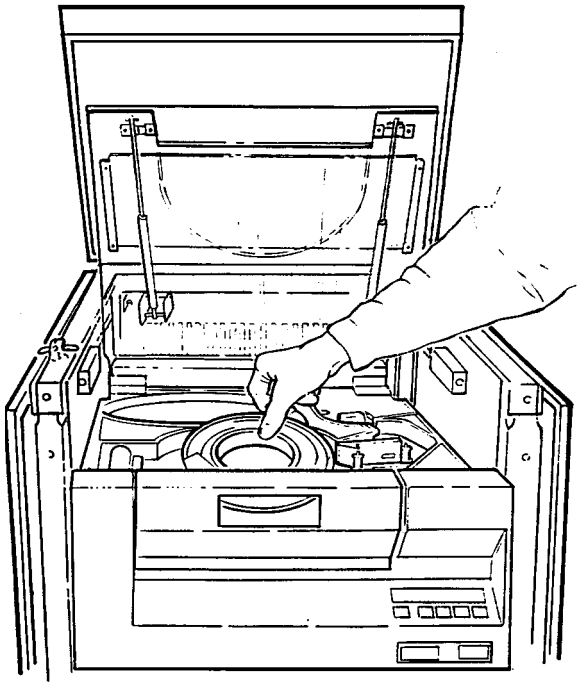
Step 4. Lift the tape path cover (see figure 6-7).

Figure 6-7. **Lifting the tape path cover**



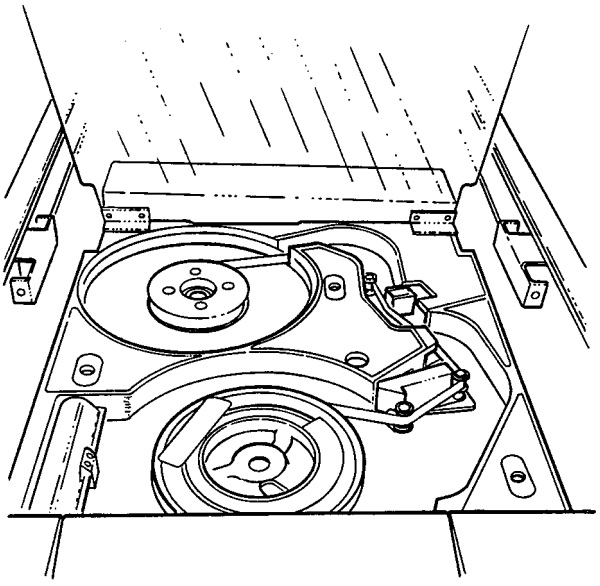
Step 5. Place the tape reel on the supply hub (see figure 6-8).

Figure 6-8. **Placing the tape reel on the supply hub**



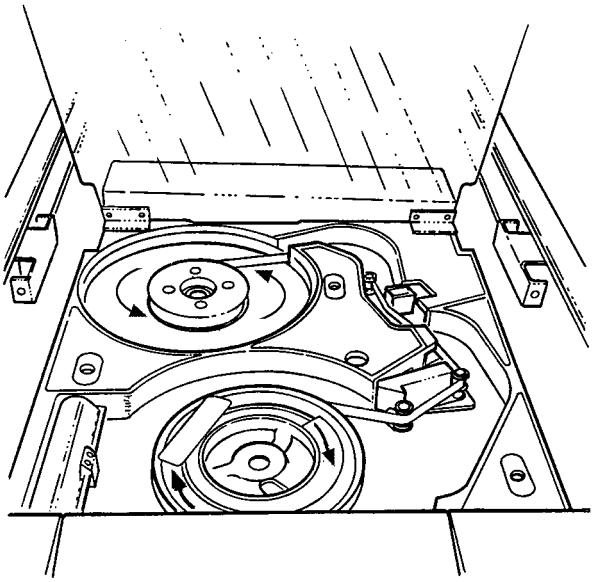
Step 6. Thread the tape to the take-up hub (see figure 6-9).

Figure 6-9. **Threading the tape**



Step 7. Wind the tape clockwise for approximately two turns. Wind the take-up reel counterclockwise until the tape tightens (see figure 6-10).

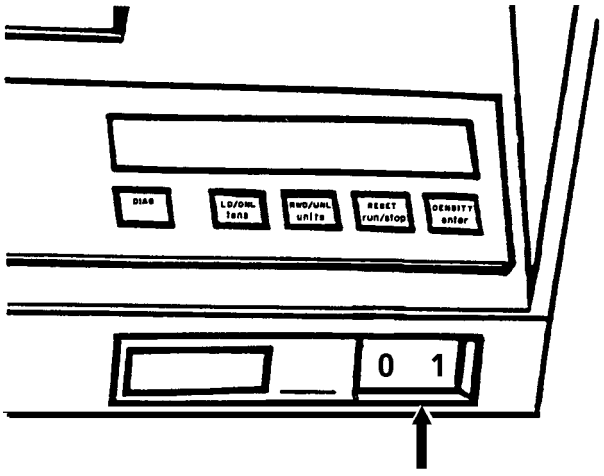
Figure 6-10. **Winding the tape**



Step 8. Close the tape path cover and secure the turnbuckles by turning them clockwise.

Step 9. Close the cover of the peripheral cabinet and press the Power switch to the ON position by pressing down on the side marked 1 (see figure 6-11).

Figure 6-11. **Power switch**



Step 10. When the tape drive finds the BOT indicator, "`Ld Point`" appears on the tape drive message display and the tape drive is placed online.

Unload an open-reel tape

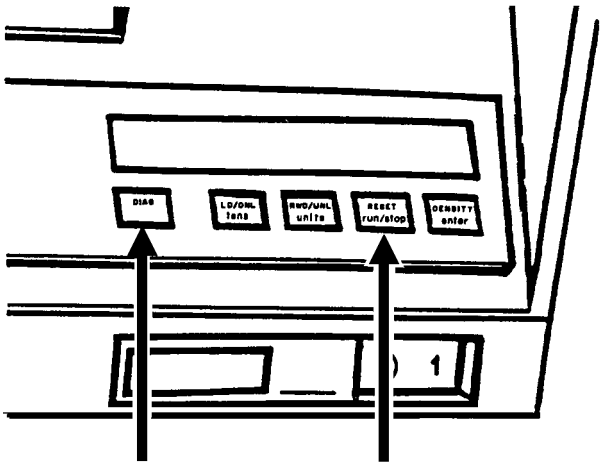
Before unloading a tape, ensure that the LPS system is not accessing the open-reel tape drive, to avoid loss of data. The tape drive should be offline and the message display should read “Ready” before you remove a tape.

Note: You can also rewind and/or unload a tape using the system controller terminal. For instructions, refer to the “Rewind/unload tape” section later in this chapter.

Place the tape drive offline

To take the open-reel tape drive offline, press the Reset button, or the Diag button if you are in Diagnostic mode (see figure 6-12).

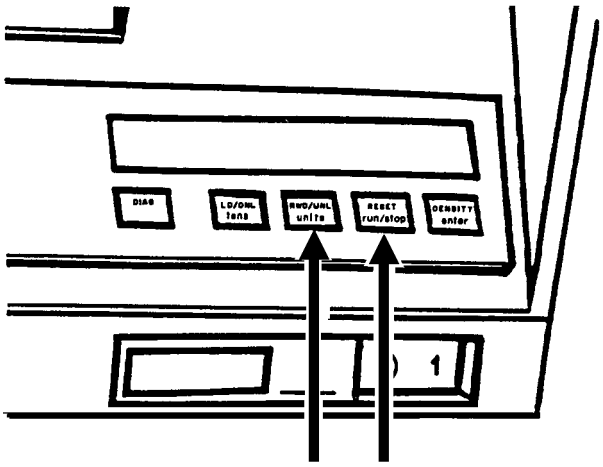
Figure 6-12. **Reset and Diag buttons**



To unload a tape from the 9-track magnetic tape drive:

Step 1. When “`Offline`” appears on the message display, press and hold the Reset button and the Rwd/Unl button (see figure 6-13).

Figure 6-13. **Reset and Rwd/Unl buttons**



Then the following happens:

- The tape rewinds through beginning of tape (BOT).
- The tape reel is unclamped.
- The tape door opens.
- "0K" appears on the tape drive message display.

Step 2. Remove the tape.

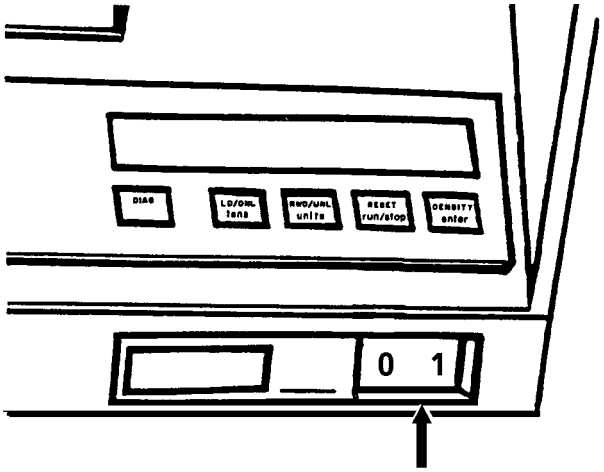
Unload an open-reel tape during a power failure

If power to the open-reel tape drive is cut off and you must unload the tape reel before power is restored, follow this procedure.

Step 1. Press the Power switch to the OFF position by pressing down the side marked 0 (see figure 6-14).

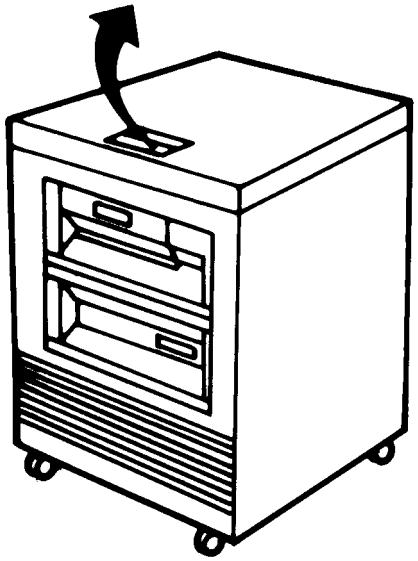
Warning: This is essential for safety reasons.

Figure 6-14. **Power switch**



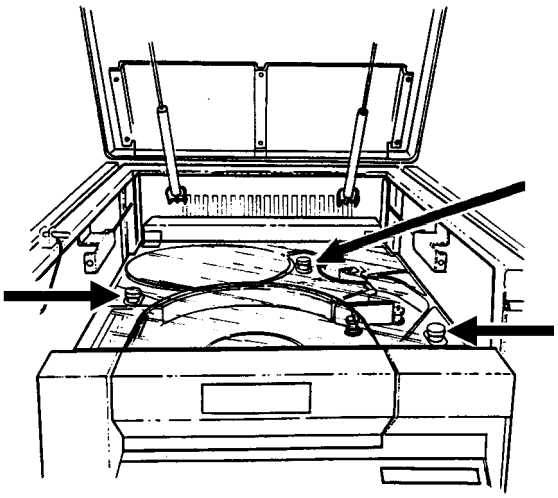
Step 2. Lift the cover of the peripheral cabinet (see figure 6-15).

Figure 6-15. **Opening the peripheral cabinet cover**



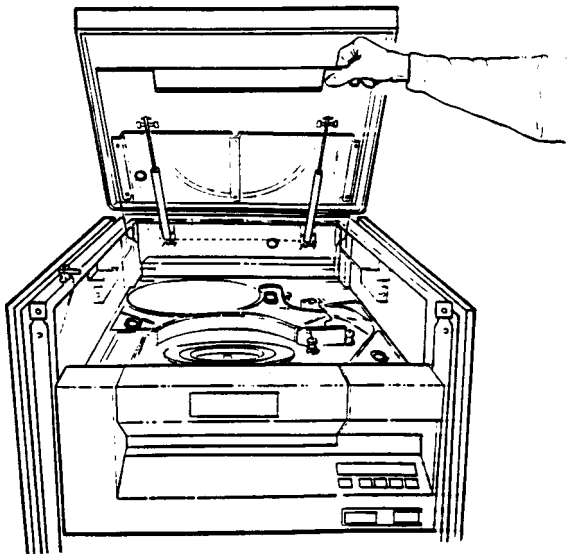
Step 3. Release the turnbuckles on the tape path cover by turning them counterclockwise (see figure 6-16).

Figure 6-16. **Turnbuckles**



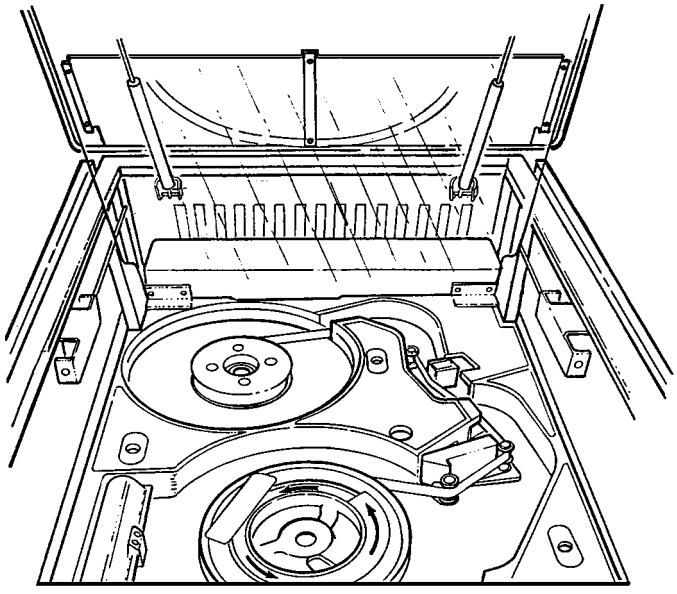
Step 4. Lift the tape path cover (see figure 6-17).

Figure 6-17. **Lifting the tape path cover**



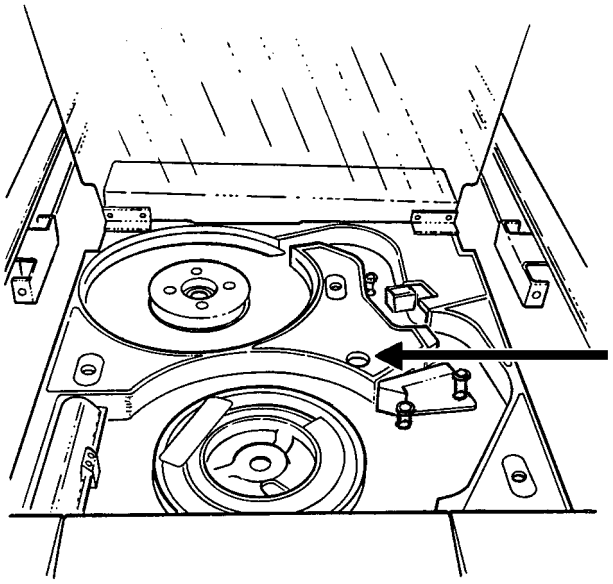
Step 5. Rotate the supply reel counterclockwise until all the tape is rewound (see figure 6-18).

Figure 6-18. **Rewinding the tape**



Step 6. Gently depress the Hub Release lever (see figure 6-19).

Figure 6-19. **Hub Release lever**

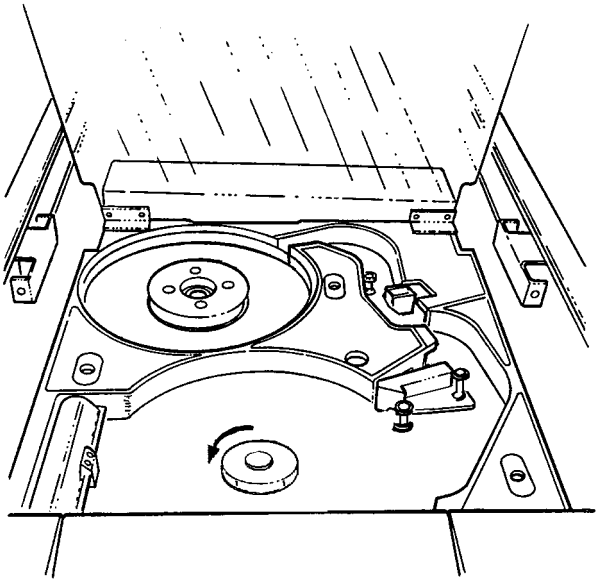


Step 7. While depressing the Hub Release lever, turn the tape reel counterclockwise to unclamp it.

Step 8. Carefully lift off the unclamped supply reel.

Step 9. Gently depress the Hub Release lever, again, and turn the hub counterclockwise until the clamp pads are fully retracted (see figure 6-20).

Figure 6-20. **Turning the hub**



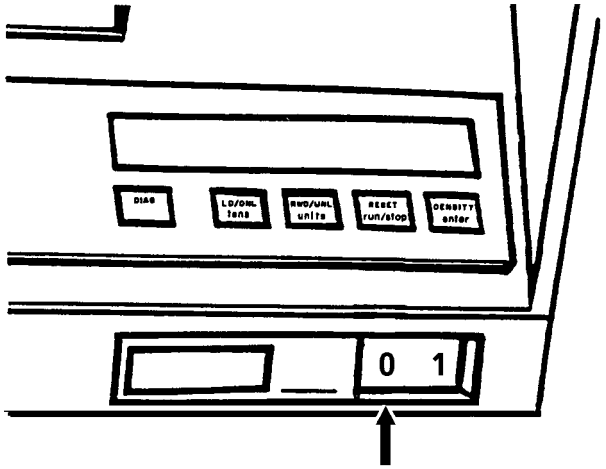
Step 10. Close the tape path cover and secure the turnbuckles by turning them clockwise.

Step 11. Close the cover of the peripheral cabinet.

Power off the open-reel tape drive

To power off the open-reel tape drive, press the Power switch to the OFF position by pressing down on the side marked 0 (see figure 6-21).

Figure 6-21. **Power switch**

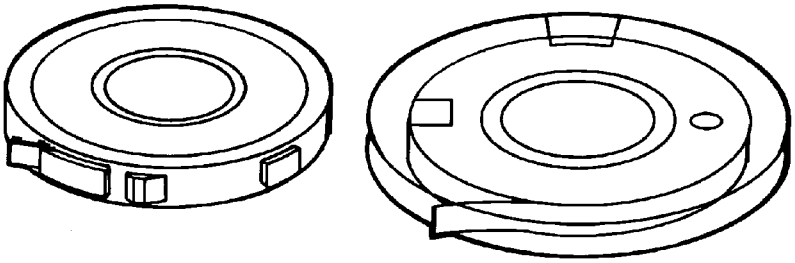


Caution: Unload the tape (or at least return it to BOT) before powering off the tape drive.

Handle open-reel tapes

Since improper handling can cause damage to tapes and result in unreadable data, store tapes in their protective containers when they are not being used (see figure 6-22). Most read/write errors are caused by dust or dirt on the read/write head, transferred there by the tapes.

Figure 6-22. **Open-reel tapes and their protective containers**



Make sure to follow these handling tips:

- Do not spill tape off the reel onto the floor or any dusty surface.
- Do not touch the flat sides of the tape between the beginning of tape (BOT) and end of tape (EOT) markers. In addition to possibly causing loss of data, oil from fingers attracts dust and dirt and leaves deposits on the read/write head.
- Do not smoke near the tape transport or tape storage area. Tobacco smoke and ash are especially damaging to tapes.
- Do not place tapes near line printers or other devices that produce paper dust.
- Do not place tapes near electric motors or any other magnetic sources that may erase data.
- Do not press the edges of the reel together. It can lead to tape edge damage when winding or unwinding tapes.
- Do not pull on the end of the tape to tighten it on the reel.
- Ensure the tape drive components are dry after cleaning them before loading the tape.
- Store tapes in the same climate-controlled environment in which you keep your system. Excessive heat can damage tapes.
- Store tapes vertically in racks.

File protection

Files on an open-reel tape can be protected or written over, depending on whether or not there is a write-enable ring on the tape reel, sensed by the tape drive.

When the write-enable ring is absent, the tape is protected and you can perform only read functions, including printing data from the tape. When the write-enable is present, you can both read and write (add files) on that tape.

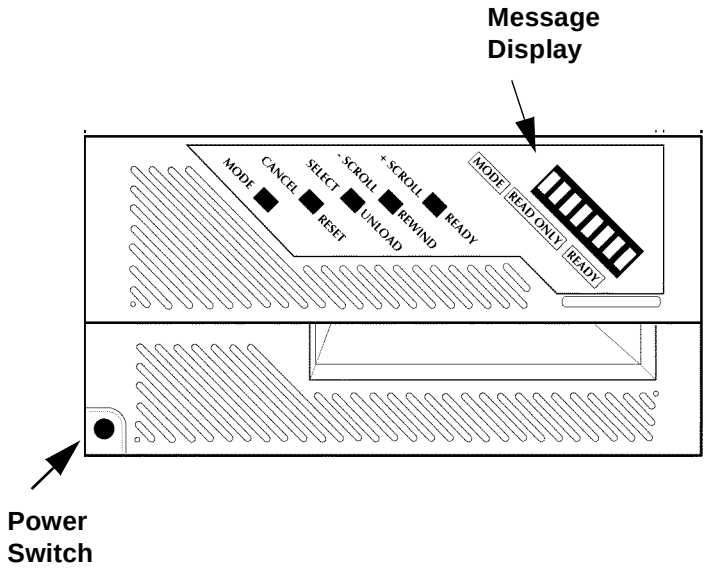
1/2 inch cartridge tape drive procedures

The following sections contain instructions for handling the 1/2 inch cartridge tape drive.

Power on the 18/36 track 1/2 inch cartridge tape drive

To power on the 18/36 track cartridge tape drive, press the Power switch.

Figure 6-23. **18/36 track Power switch**

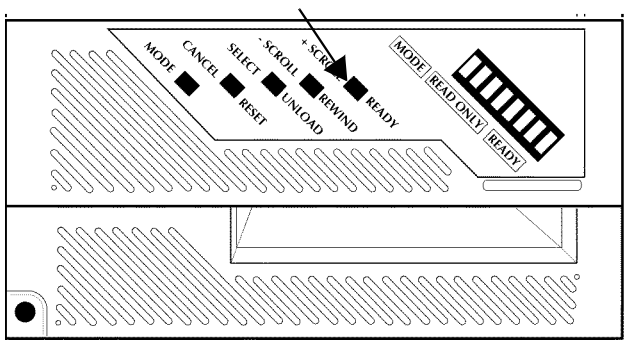


Diagnostics are performed and are listed on the message display.

Place the tape drive online

The 18/36 track drive must have a tape cartridge loaded before it can be placed online. If a cartridge is loaded but the drive is not online, press the Ready button to place the drive online.

Figure 6-24. **Ready button**



Load a 1/2 inch cartridge

Cartridge tape precautions

Before loading a cartridge, ensure it is not damaged. A damaged cartridge can prevent the tape from threading correctly and cause damage to the tape drive. A cartridge should not be used if the:

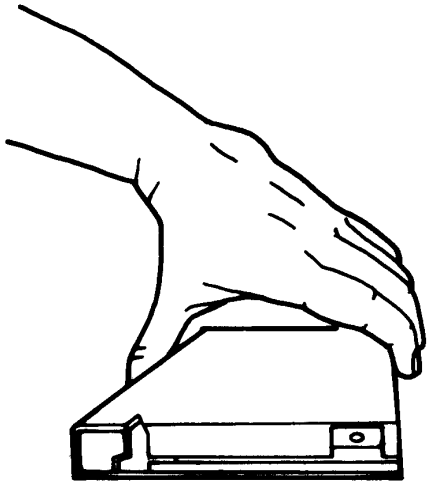
- Cartridge case is cracked or broken.
- Leader block or leader block latch is broken.
- File-protect selector is damaged.
- Label is peeling off.
- File protect sensor is damaged.
- Cartridge case contains any liquid.
- Cartridge has any other obvious damage.
- Tape was wound completely out of the cartridge onto the machine reel and then reattached to the cartridge reel.

If you have a damaged cartridge, substitute a back-up version of the data from another cartridge.

Follow this procedure to load a cartridge into the 1/2 inch cartridge tape drive.

Step 1. Hold the cartridge with the smooth side on top and the leader block toward the drive (see figure 6-24).

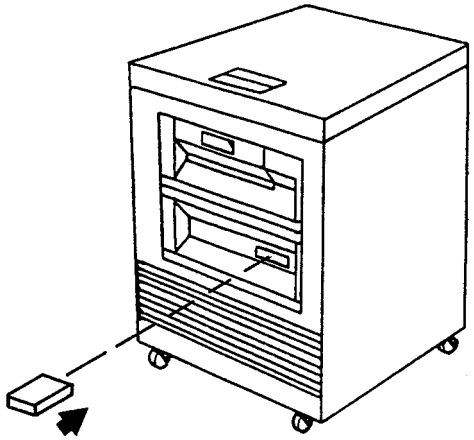
Figure 6-25. **Holding the 1/2 inch cartridge**



Step 2. Insert the cartridge into the entry slot, and slide it all the way into the drive opening until it stops (see figure 6-25).

Caution: When you insert a cartridge, never force it.

Figure 6-26. **Inserting the cartridge into the slot**



After about 15 seconds, the tape drive completes the loading process and the message display reads “ON LINE.” The message display also shows whether the cartridge is file-protected (F) or unprotected (U).

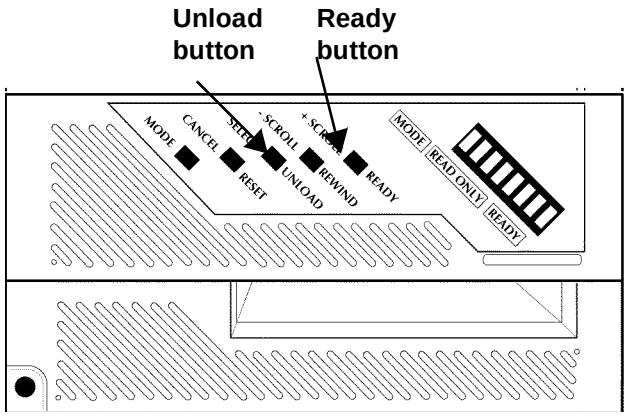
Unload a 1/2 inch cartridge

During normal operation:

Manual procedure 18/36 track To unload the 18/36 track cartridge manually, follow this procedure:

Step 1. Press the Ready button to take the drive offline and then press the Unload button.

Figure 6-27. **Ready and Unload buttons**

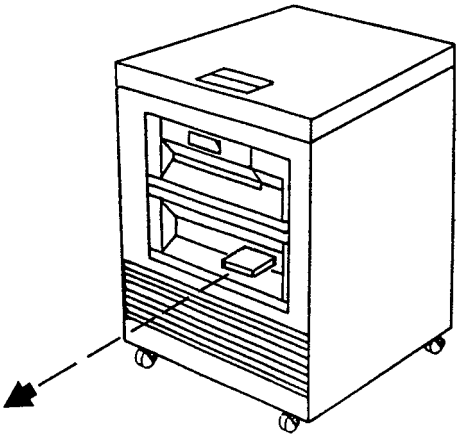


The message display shows the tape drive condition while the rewind and unload operation is in progress.

The cartridge is ejected from the transport.

Step 2. Once the cartridge is ejected, you can remove it from the tape drive (see figure 6-27).

Figure 6-28. **Removing the cartridge**

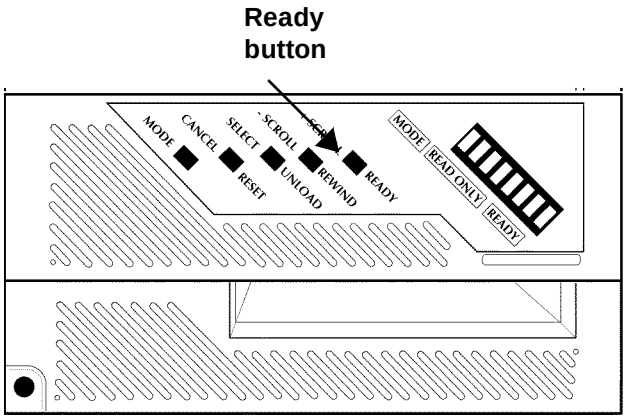


Note: You can also rewind and/or unload a tape using the system controller terminal. For instructions, refer to the “Rewind/ unload tape” section later in this chapter.

Power off the 18/36 track 1/2 inch tape drive

Follow these instructions when powering off the tape drive.

Figure 6-29. **Ready button**

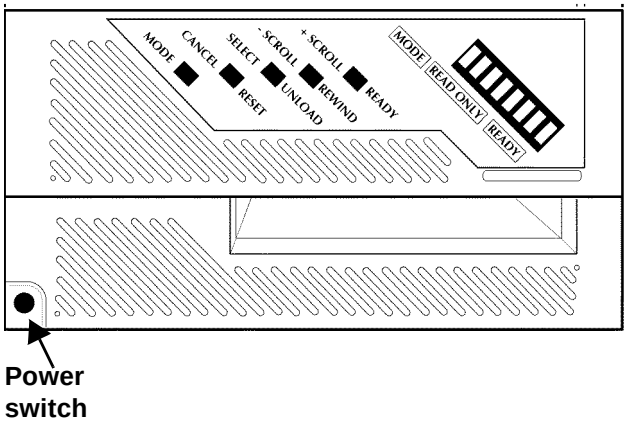


Step 1. Press and release the Ready button.

Step 2. If a cartridge is loaded in the tape drive, unload it. (Refer to the "Rewind/unload tape" section in this chapter.)

Step 3. Press and release the Power switch

Figure 6-30. **Power switch**



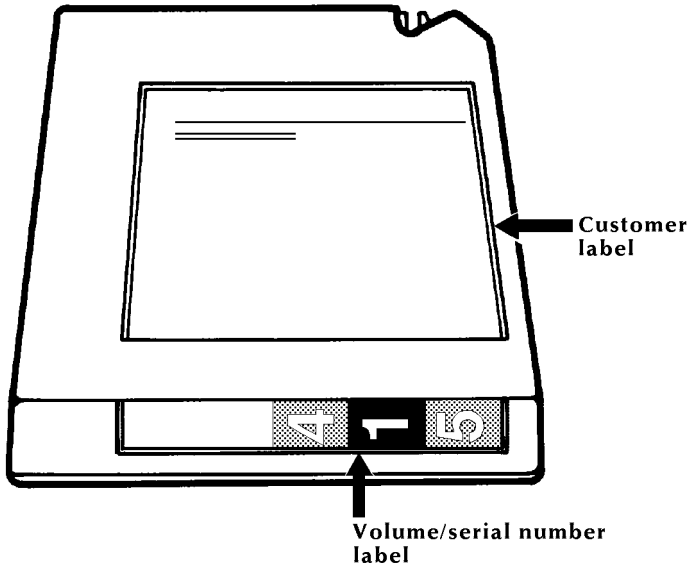
Handle cartridge tapes

Follow these instructions when handling cartridge tapes:

- Never try to pry open the feed slot door or force a tape cartridge into or out of a drive.
- Never leave a cartridge in a tape drive when powering off. You could damage data on the tape and the tape drive components.
- When cartridges are not being used, store them vertically in a dirt-free area that matches as closely as possible the environment of the room where you have the tape system. If the temperature or humidity are different, bring cartridges into the tape system environment 24 hours in advance to condition them.
- Never remove the protective wrapping until you are ready to use the cartridge.
- Every time you pick up a cartridge, ensure the leader block is latched.
- Never carry two or more cartridges loose in a container. Leader blocks can snag on other cartridges and become unlatched.
- Keep cartridges clean and dry.
- Never release a leader block and pull tape from the cartridge.
- Never open a cartridge; you will probably damage the tape.
- Never expose the tape or cartridges to direct sunlight.
- Never smoke near the tape transport or cartridge storage areas. Tobacco smoke and ash are especially 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, ensure it is made specifically for cleaning cartridges. Never allow the solution to touch the tape.
- If a leader block (blank section at beginning of tape) comes off, but there is no other obvious damage to the cartridge or the tape, a leader block repair kit may be used. The kit allows you to reattach the block and use the cartridge one more time to copy the data onto a new cartridge.
- If a label starts to peel off, replace it immediately to avoid loading/unloading problems.
- Do not write on a label that is on a cartridge. If you want to change a label, fill out a new one, remove the old one, and replace it with the new one.

- Place the volume/serial number label on the side of the cartridge opposite the file-protect selector and the customer label on the top surface of the cartridge. Use the recessed areas provided for them. When you want a new label on a cartridge, remove the old one before you put on a new one. Figure 6-31 shows the 1/2 inch cartridge tape labels.

Figure 6-31. **1/2 inch cartridge tape labels**

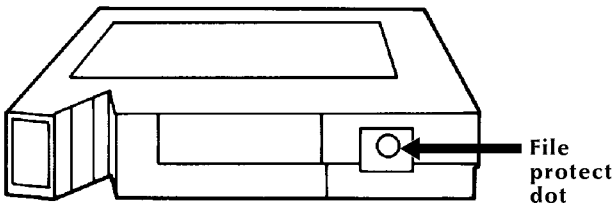


- Write on labels with markers that do not smear. Use only labels that leave no residue when removed.

File protection

A 1/2 inch cartridge tape has a thumbwheel on the side of the cartridge that allows you to protect or write on a tape. When the white dot is showing in the window, the cartridge is protected and you can perform only read functions. When the white dot is not showing, you can both read and write on that tape. Figure 6-32 shows a 1/2 inch cartridge that is file protected (white dot showing).

Figure 6-32. **File-protected 1/2 inch cartridge**

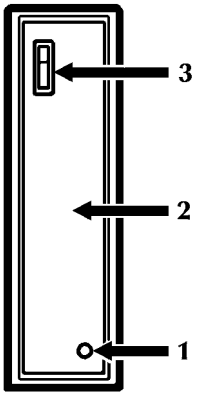


1/4 inch cartridge tape drive procedures

The following sections contain instructions for handling the 1/4 inch cartridge tape drive.

Figure 6-33 shows the components of the 1/4 inch cartridge tape drive.

Figure 6-33. **1/4 inch cartridge tape drive**



1 LED indicator
2 Door
3 Release button

Load a 1/4 inch cartridge tape

To load a 1/4 inch cartridge tape:

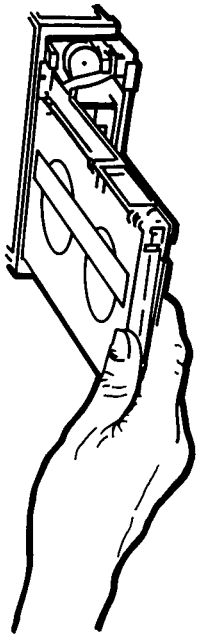
Step 1. Press the Release button. The door opens partially.

Step 2. Manually open the door completely. Insert the cartridge into the feed slot with the label facing to the left.

Step 3. Close the door. The tape is automatically loaded and positioned at BOT.

The LED indicator is green when the tape is operating properly. If the indicator is flashing red, call for service.

Figure 6-34. **Inserting a cartridge**



Unload a 1/4 inch cartridge tape

To unload a 1/4 inch cartridge tape:

Step 1. Use the Rewind Tape task to rewind the tape. (Refer to the “Rewind/ unload tape” section of this chapter.)

Step 2. Press the Release button to open the door. Lower the door manually.

Step 3. Carefully remove the cartridge.

Step 4. Close the door to prevent dust accumulation.

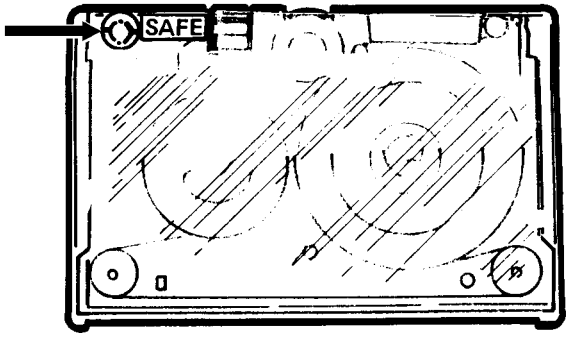
Handle 1/4 inch cartridge tapes

Refer to the “Handle cartridge tapes” section earlier in this chapter.

File protection

A 1/4 inch cartridge tape has a block file protect tab on the labeled side of the cartridge. When the arrow on the tab is pointing to the word “SAFE,” the cartridge tape is protected from being written over.

Figure 6-35. **File-protected 1/4 inch cartridge with the black tab pointing to SAFE**



Load a floppy disk

To load a floppy disk, insert the floppy disk label side up, until you hear a click.

Unload a floppy disk

To unload a floppy disk, press the floppy eject button. The floppy disk will pop out slightly.

Handle floppy disks

Floppy disks must be stored and handled properly to prevent damage. If a disk is damaged, files stored on it probably will be lost.

To help keep your floppy disks in good condition:

- Place identification labels on each disk, listing the names of the files it contains.
- Never attempt to clean a floppy disk.
- Never leave floppy disks on or near magnets or magnetized objects, such as telephones or the floppy disk drive. Exposure to magnetic fields can cause data loss.
- Never place heavy objects on top of a floppy disk.
- Never expose floppy disks to excessive heat or sunlight.

Offline printing tasks

You can perform offline printing tasks by entering commands through the keyboard.

Start an offline print job

Use this task to begin printing an offline job.

Start Job task

To start an offline print job, enter the following command:

START [[*jde*][,[*jdl*][,[S | M][,[*copies*] [,[[REPORTS:r1,r2,...] [,,TD*n*]][,TD*n*]] | [DISC:file.ext FORM=*form.frm*]]]]]

Table 6-1 lists each parameter and its description.

Table 6-1. **START command parameters and descriptions**

Parameter	Description
START	Specifies the command, to be followed by any or all of the specifications as needed (often abbreviated as STA).
jde	The name or number of the job descriptor entry, which may be up to six characters in length.
jdl	The name or number of the job descriptor library which contains the jde used. The name or number may be up to six characters in length.
S	Single report mode processes only one report at a time. Use this mode when changes must be made to the job specification from one report to the next. The system assumes multiple report mode if you insert a comma instead of S or M.
M	Multiple report mode means that the LPS continuously processes all reports in the job. Processing automatically sequences from report to report, volume to volume, until all reports are processed. The system assumes multiple report mode if you insert a comma instead of S or M.
copies	The requested number of prints for each report.
REPORTS: r1,r2	Allows you to specify the sequence and set of reports to be processed. In the example that follows, the LPS was directed to print the first report, then the third through the fifth, and finally the second. The system assumes you want prints of all the reports if you do not use this option. You are not required to use a comma if the REPORTS option is not used.

Table 6-1. **START command parameters and descriptions**

Parameter	Description
TD*n*	Specifies the tape device being used. **Notes:** 1. The tape device identifications are set up during sysgen. Refer to the *Xerox DocuPrint 96/ DocuPrint 96MX LPS System Generation Guide* for additional information. 2. You cannot select a tape device when you have selected DISC or FORM.
DISC:*file-name.filetype*	Indicates you want to print a file stored on the system disc.
FORM=*Form-name.Frm*	Indicates you want to print a form stored on the system disc.

Example: STA 21,POWGRP,M,2,REPORTS:1,3-5,2 means start to process or print from the JDE called 21, the JDL file called POWGRP, in multiple report mode, two prints each of reports 1, 3-5, and 2.

Rewind/unload tape

The Rewind/Unload Tape task allows you to do the following from the system controller terminal:

- Rewind a tape to BOT
- Rewind a tape and unload it from the take-up reel, clearing the tape path.

Rewind/Unload Tape task

To rewind a tape, enter the following command:

TAPE[CARTRIDGE | TD*n*] REWIND

Table 6-2 lists the parameter and its description.

Table 6-2. **TAPE command parameter and description**

Parameter	Description
TD*n*	The tape drive you are using. (The tape device identifications are set up during sysgen. Refer to the *Xerox DocuPrint 96/DocuPrint 96MX LPS System Generation Guide* for additional information.)

To unload a tape, enter the following command:

TAPE[CARTRIDGE|TD*n*] UNLOAD

Refer to table 6-2 for a description of the TD*n* parameter.

Space

The Space task allows you to print a specific job (or jobs) by spacing over pages or reports on a tape.

To move forward, enter a positive number; to move backward, enter a negative number.

If you have already started a print job:

Step 1. Stop the print job.

Step 2. Perform the Space task.

Step 3. Continue the print job.

Space task

To space over pages within a report, enter the following command:

SPACE *n* PAGES

n is the number of pages.

To space over reports, enter the following command:

SPACE *n* REPORTS

n is the number of reports.

Move

The Move task allows you to position a tape forward or backward a specific number of files or blocks.

Note: After using the Move task, you must reset the system before changing to another device.

Note: While the Move task is being processed, input stops and a message appears telling you that the tape is being positioned. You must press the Continue button to resume input processing of any active jobs.

Move task

Enter the following command:

MOVE *n* {files | blocks}

n is the number of files or blocks you want to move forward or backward on the tape. A positive number positions you forward; a negative number positions you backward.

7. HIP printing tasks

This chapter contains procedures for accessing remote host systems (XNS, XPAF, or DocuPrintServer (formerly XPSM)) and printing jobs and receiving files from them, using Host Interface Processor (HIP) software.

Where applicable, instructions are given for accomplishing the tasks using keyed-in commands. Refer to the list below for the tasks described in this chapter:

- HIP printing tasks
- Enter HIP communication mode
- Select a communication mode
- Place HIP online
- Take HIP offline
- Start a HIP print job
- Stop HIP print jobs
- Abort HIP print jobs
- HIP jobs status
- End HIP

HIP printing tasks

You can perform HIP printing tasks by entering commands through the keyboard.

The following sections contain instructions for performing specific HIP printing tasks.

Enter HIP communication mode

Use this task to enter HIP communication mode.

Enter HIP Communication Mode task

Enter the following command:

HIP [option[,option[,...]]]

HIP options are provided in this chapter in the task sections; however, for a complete list and explanation of all available HIP options, refer to the *Xerox DocuPrint 96/DocuPrint 96MX LPS Operations Reference*.

Note the following:

- If your LPS has only one host and it is set up as the default host in HIP.LIB, or if only one host is set up in HIP.LIB, entering HIP has the same effect as entering HIP HOST, HIP ONLINE, and HIP START.
- If your LPS has more than one host, then the one which is set up as the default host in the HIP.LIB becomes active when you enter the HIP command. If you want to use another host, you must specify the host name.
- The first time you enter HIP after performing a system generation, you must specify a host name. This host is saved in the recovery file of the system disk. If you do not enter a host name, the following message appears:

  ```
  HP2010 NO HOST SELECTED
  ```

- If the host is not online and responding, the following message appears every 15 seconds until the host comes online or HIP is terminated:

  ```
  HP1240 HOST NOT RESPONDING
  ```

Note: Note that listed options are separated by commas while parameters are separated from the option keyword by a space.

Command errors

If an error is detected in the command line, the incorrect part of the line is displayed. A message to correct and reenter the command is made as follows:

```
HP2300 COMMAND IN ERROR AT: (part of command in error)
HP2310 RE-ENTER COMMAND
```

Some commands are not valid for all hosts, and some commands are not valid if a host is not selected. When this happens, one of the following messages appears:

```
HP1320 FUNCTION IS NOT SUPPORTED BY CURRENT HOST
HP2320 INVALID COMMAND WITH CURRENT HOST TYPE
HP2330 INVALID COMMAND WITH NO HOST SPECIFIED
```

Select a communication mode

Use this task to select the HIP communication mode to use.

Note: This task is not necessary if your LPS has only one host.

Select a Communication Mode task

Enter the following command:

HIP HOST {XNS | XPF}

HIP must be offline to change from one host to another. If the system is not offline or is not idle, the command is rejected and one or more of the following messages appears:

```
HP2020 SELECTED HOST NOT PRESENT ON SYSTEM
HP2400 HIP INTERFACE MUST BE OFFLINE. ENTER 'HIP
OFFLINE'.
HP7100 CANNOT CHANGE HOSTS WHILE JOBS ARE PENDING
OR ACTIVE.
```

Place HIP online

Use this task to place the LPS online to the host.

Place HIP Online task

Enter the following command:

HIP ONLINE [ALL]

The ALL parameter specifies that both print and nonprint files are accepted. The default is that only print files are accepted. As print jobs are received, they are entered into HIP's internal job queue and become eligible for submission to Operator Communications Subsystem (OCS) for printing. One of the following messages appears:

```
HP1210 HOST ONLINE. ACCEPTING ALL JOBS
HP1220 HOST ONLINE. ACCEPTING PRINT JOBS ONLY
HP2010 NO HOST SELECTED
HP2030 ALL NOT ALLOWED AT CURRENT LOGON LEVEL
HP0200 FAILED TO GO ONLINE
```

Note: ONLINE ALL is accepted in logon level class 2 and above for all hosts except for XNS hosts. HIP is always in ONLINE ALL mode for the XNS hosts.

If the selected host is not online and responding, the following message appears every 30 seconds until the host comes online or the online request is terminated by the HIP OFFLINE command:

```
HP1240 HOST NOT RESPONDING
```

Take HIP offline

Use this task to take HIP offline. The LPS no longer accepts jobs from the host.

Take HIP Offline task

Enter the following command:

HIP OFFLINE

The system's response is delayed to the end of the current file if a file is being transmitted. The following messages appear:

```
HP1200 OFFLINE PENDING END OF TRANSMISSION
HP1207 OFFLINE PENDING END OF CURRENT ACTIVE XNS
SESSION
HP1230 HOST OFFLINE
```

Start a HIP print job

Use this task to start or continue printing jobs from HIP's internal job queue.

Note: The host must be selected and HIP online before you use this task.

Start Job task

To start or continue printing jobs from HIP's internal job queue, enter the following command:

HIP START [DUMP][JID[,...]]

If no jid (job identification) parameters are specified, the entire queue is processed in the order the jobs were received (or as reordered by a previous START command).

If jids are specified, those jobs are reordered to the top of the job queue, so they will be the next jobs submitted to OCS for processing. Jobs that have already been submitted to OCS cannot be reordered. The START commands issued to OCS are displayed when the job is submitted.

If the optional DUMP parameter is specified, the specified job, or the next job in the HIP's queue, is submitted using the START command parameters specified by the DUMPJOB command in the HIP file. Only one job is submitted. After the job is submitted, HIP effects a HIP STOP command.

If any listed jid is not eligible, it is listed in the message:

```
HP1150 CANNOT START JOB(S): n [,...]
```

Note that HIP may be taken offline temporarily with the HIP START command. Should this occur, processing automatically continues where it left off when HIP is put online again; that is, files are accepted immediately from the host and printed from HIP's internal job queue.

If printing is to stop while the printing system is taken offline and brought back online, enter the HIP STOP command. (Refer to the next section of this chapter.)

Stop HIP print jobs

Use this task to stop HIP from submitting jobs for printing.

Stop Jobs task

Enter the following command:

HIP STOP

Jobs already submitted for processing are not affected and are processed.

Note: If jobs are being processed in job concatenation mode, enter HIP DRAIN instead.

Abort a HIP print job

Use this task to abort a specific job or all jobs from the HIP job queue.

Note: You can abort only HIP jobs whose status is Receive or Pending.

Abort Job task

Enter the following command:

HIP ABORT {ALL | *job-id*[,*job-id*...]}

Table 7-1 lists each parameter and its description.

Table 7-1. **HIP ABORT command parameters and descriptions**

Parameter	Description
ALL	Causes all jobs in the job queue to abort.
[*job-id*[,*job-id*]]	One or more HIP job numbers you want to abort. You can find the HIP job number through the HIP Jobs Status task.

HIP jobs status

Use this task to display a list of the jobs in the HIP job queue.

HIP Jobs Status task

Enter the following command:

HIP SHOW JOBS [parameter]

This command displays the current status of the selected jobs in the HIP jobs queue as well as the current status of the HIP processor. The format of the display depends on the parameter.

Table 7-2 lists each parameter and its description.

Table 7-2. **HIP SHOW JOBS command parameters and descriptions**

Parameter	Description
ABORTED	Display all jobs that have been aborted.
ACTIVE	Display all jobs in the active state: QUEUED, ACTIVE, OQUEUED, or PRINTING.
ALL	Display all jobs in all queues.
CANCELLED	Display all jobs that have been cancelled.
COMPLETED	Display jobs in a completed state: PRINTED, STORED, SEND, or ABORTED.
CONTINUE	Continue a previously requested display if all jobs in the queue were not displayed.
PAGE[*n*]	Divide the queue up to 20 jobs, which are ordered from the oldest completed job to newest completed job received.
PENDING	Display all jobs in the pending state: PENDING or RECEIVING (but not submitted to the OCS).
PRINTED	Display the jobs in the printed state: PRINTED or TRUNCATED.
SENT	Display all files that have been sent to the host.
STORED	Display all files that have been stored by the host.
SUMMARY	Display a summary of the job queue. (See figure 7-1.)

Figure 7-1. **Sample summary job queue display**

```
JID# HOST NAME   RECEIVED   STATUS     JOB#   TIME

nnnn<host name>  hh:mm:ss   status     000    hh:mm:ss
 .  .            .          COMPLETED  .      .
 .  .            .          COMPLETED  .      .
 .  .            .          STORED     .      .
 ...  and n more COMPETED jobs
 .  .            .          PRINTING   .      .
 .  .            .          ACTIVE     .      .
 .  .            .          PENDING    .      .
 .  .            .          PENDING    .      .
 .  .            .          PENDING    .      .
 .  .            .          PENDING    .      .
 .  .            .          PENDING    .      .
...  and n more PENDING jobs
 .  .                       RECEIVE   .      .
 HP1110 END OF JOB DISPLAY
```

The normal job queue display screen consists of:

- Two lines of header information
- Up to 20 lines of jobs status information
- A message indicating the end of the display.

Note the following:

- If there are fewer than 20 jobs in the selected state, only that number is displayed.
- If there are more than 20 jobs in the selected state, all jobs are not shown and the following message appears:

  `HP2145 ENTER 'HIP SHOW JOBS CONTINUE' FOR MORE.`

To display the additional jobs, enter the following command:

HIP SHOW JOBS CONTINUE

Figure 7-2 shows the format of a normal display screen.

Figure 7-2. **Example of HIP job status display**

```
HOST:hst:linemode  HIP:runmode   FILEMODE:filemode

JID# HOST NAME     RECEIVED      STATUS     JOB#   TIME

nnnn host name     hh:mm:ss      status     000    hh:mm:ss
 .  .              .             .          .      .
 .  .              .             .          .      .
 .  .              .             .          .      .

HP1110 END OF JOB DISPLAY
```

Table 7-3 lists each field and its description.

Table 7-3. **HIP jobs status display fields and descriptions**

Field	Description
hst	Specifies one of the possible hosts (XNS or XPF).
linemode	Specifies the status of the host interface (OFFLINE, ONLINE PEND, READY, RECEIVING, SENDING, or SUSPENDED).
runmode	Specifies the jobs run mode (STARTED, STOPPED, DUMP, or CONCATENATED).
filemode	Specifies the acceptable file types (ALL JOBS or PRINT JOBS).
nnnn	Specifies the internal job identification number (JID) for HIP.
hostname	Indicates the host name on the file label
0000	Specifies the job number assigned by OCS when the job is submitted for printing. It is 0000 for nonprint and pending jobs.
hh:mm:ss	Specifies the time a job was received and when its status was last changed.
status	Specifies the current status of a job, which is one of the following: • RECEIVE: The job is currently being received. • SENDING: The job is currently being sent. • PENDING: The job is waiting to be sent. • QUEUED: The job is in OCS job queue waiting to be processed. • ACTIVE: The job is being processed by input and/or output. • OQUEUED: Input phase is complete and the job is queued for printing. • PRINTING: Input phase is complete and printing is in progress. • TRUNCATED: The transfer was ended before completion. • COMPLETED: The job was completed normally. • STORED: The file was stored in a permanent file directory. • SENT: The file was successfully sent to the host. • ABORTED: The job was aborted by a HIP or OCS ABORT command. • HOSTABORT: The job was aborted by the host command. • REJECTED: The transfer from the host to the OEM was rejected. • CANCELLED: The transfer was cancelled by a host restart. • STOREFILE: The job is a file to be stored, not printed. • CONCATENATED: The job is a concatenated job. • RETAINDATA: The data from the job is retained for HIP CHANGE. • HOLDJOB: The job is retained due to HIP CHANGE. • PASSTHROUGH (XPF, only): The job is a pass through job.

End HIP

Use this task to shut down HIP in an orderly manner. When using this task, the following occurs:

- The current files being received, transmitted, or printed (if any) are completed.
- The internal HIP job queue is saved on the system disk for later restart.
- The following message appear on the screen:

  ```
  HP1020 HOST INTERFACE PROCESSOR UNLOADED
  ```

- The connection to the current host is sent offline.

End HIP task

Enter the following command:

HIP END

7. HIP printing tasks

This chapter contains procedures for accessing remote host systems (XNS, XPAF, or DocuPrintServer (formerly XPSM)) and printing jobs and receiving files from them, using Host Interface Processor (HIP) software.

Where applicable, instructions are given for accomplishing the tasks using keyed-in commands. Refer to the list below for the tasks described in this chapter:

- HIP printing tasks
- Enter HIP communication mode
- Select a communication mode
- Place HIP online
- Take HIP offline
- Start a HIP print job
- Stop HIP print jobs
- Abort HIP print jobs
- HIP jobs status
- End HIP

HIP printing tasks

You can perform HIP printing tasks by entering commands through the keyboard.

The following sections contain instructions for performing specific HIP printing tasks.

Enter HIP communication mode

Use this task to enter HIP communication mode.

Enter HIP Communication Mode task

Enter the following command:

HIP [option[,option[,...]]]

HIP options are provided in this chapter in the task sections; however, for a complete list and explanation of all available HIP options, refer to the *Xerox DocuPrint 96/DocuPrint 96MX LPS Operations Reference*.

Note the following:

- If your LPS has only one host and it is set up as the default host in HIP.LIB, or if only one host is set up in HIP.LIB, entering HIP has the same effect as entering HIP HOST, HIP ONLINE, and HIP START.
- If your LPS has more than one host, then the one which is set up as the default host in the HIP.LIB becomes active when you enter the HIP command. If you want to use another host, you must specify the host name.
- The first time you enter HIP after performing a system generation, you must specify a host name. This host is saved in the recovery file of the system disk. If you do not enter a host name, the following message appears:

  ```
  HP2010 NO HOST SELECTED
  ```

- If the host is not online and responding, the following message appears every 15 seconds until the host comes online or HIP is terminated:

  ```
  HP1240 HOST NOT RESPONDING
  ```

Note: Note that listed options are separated by commas while parameters are separated from the option keyword by a space.

Command errors

If an error is detected in the command line, the incorrect part of the line is displayed. A message to correct and reenter the command is made as follows:

```
HP2300 COMMAND IN ERROR AT: (part of command in error)
HP2310 RE-ENTER COMMAND
```

Some commands are not valid for all hosts, and some commands are not valid if a host is not selected. When this happens, one of the following messages appears:

```
HP1320 FUNCTION IS NOT SUPPORTED BY CURRENT HOST
HP2320 INVALID COMMAND WITH CURRENT HOST TYPE
HP2330 INVALID COMMAND WITH NO HOST SPECIFIED
```

Select a communication mode

Use this task to select the HIP communication mode to use.

Note: This task is not necessary if your LPS has only one host.

Select a Communication Mode task

Enter the following command:

HIP HOST {XNS | XPF}

HIP must be offline to change from one host to another. If the system is not offline or is not idle, the command is rejected and one or more of the following messages appears:

```
HP2020 SELECTED HOST NOT PRESENT ON SYSTEM
HP2400 HIP INTERFACE MUST BE OFFLINE. ENTER 'HIP
OFFLINE'.
HP7100 CANNOT CHANGE HOSTS WHILE JOBS ARE PENDING
OR ACTIVE.
```

Place HIP online

Use this task to place the LPS online to the host.

Place HIP Online task

Enter the following command:

HIP ONLINE [ALL]

The ALL parameter specifies that both print and nonprint files are accepted. The default is that only print files are accepted. As print jobs are received, they are entered into HIP's internal job queue and become eligible for submission to Operator Communications Subsystem (OCS) for printing. One of the following messages appears:

```
HP1210 HOST ONLINE. ACCEPTING ALL JOBS
HP1220 HOST ONLINE. ACCEPTING PRINT JOBS ONLY
HP2010 NO HOST SELECTED
HP2030 ALL NOT ALLOWED AT CURRENT LOGON LEVEL
HP0200 FAILED TO GO ONLINE
```

Note: ONLINE ALL is accepted in logon level class 2 and above for all hosts except for XNS hosts. HIP is always in ONLINE ALL mode for the XNS hosts.

If the selected host is not online and responding, the following message appears every 30 seconds until the host comes online or the online request is terminated by the HIP OFFLINE command:

```
HP1240 HOST NOT RESPONDING
```

Take HIP offline

Use this task to take HIP offline. The LPS no longer accepts jobs from the host.

Take HIP Offline task

Enter the following command:

HIP OFFLINE

The system's response is delayed to the end of the current file if a file is being transmitted. The following messages appear:

```
HP1200 OFFLINE PENDING END OF TRANSMISSION
HP1207 OFFLINE PENDING END OF CURRENT ACTIVE XNS
SESSION
HP1230 HOST OFFLINE
```

Start a HIP print job

Use this task to start or continue printing jobs from HIP's internal job queue.

Note: The host must be selected and HIP online before you use this task.

Start Job task

To start or continue printing jobs from HIP's internal job queue, enter the following command:

HIP START [DUMP][JID[,...]]

If no jid (job identification) parameters are specified, the entire queue is processed in the order the jobs were received (or as reordered by a previous START command).

If jids are specified, those jobs are reordered to the top of the job queue, so they will be the next jobs submitted to OCS for processing. Jobs that have already been submitted to OCS cannot be reordered. The START commands issued to OCS are displayed when the job is submitted.

If the optional DUMP parameter is specified, the specified job, or the next job in the HIP's queue, is submitted using the START command parameters specified by the DUMPJOB command in the HIP file. Only one job is submitted. After the job is submitted, HIP effects a HIP STOP command.

If any listed jid is not eligible, it is listed in the message:

```
HP1150 CANNOT START JOB(S): n [,...]
```

Note that HIP may be taken offline temporarily with the HIP START command. Should this occur, processing automatically continues where it left off when HIP is put online again; that is, files are accepted immediately from the host and printed from HIP's internal job queue.

If printing is to stop while the printing system is taken offline and brought back online, enter the HIP STOP command. (Refer to the next section of this chapter.)

Stop HIP print jobs

Use this task to stop HIP from submitting jobs for printing.

Stop Jobs task

Enter the following command:

HIP STOP

Jobs already submitted for processing are not affected and are processed.

Note: If jobs are being processed in job concatenation mode, enter HIP DRAIN instead.

Abort a HIP print job

Use this task to abort a specific job or all jobs from the HIP job queue.

Note: You can abort only HIP jobs whose status is Receive or Pending.

Abort Job task

Enter the following command:

HIP ABORT {ALL | *job-id*[,*job-id*...]}

Table 7-1 lists each parameter and its description.

Table 7-1. **HIP ABORT command parameters and descriptions**

Parameter	Description
ALL	Causes all jobs in the job queue to abort.
[*job-id*[,*job-id*]]	One or more HIP job numbers you want to abort. You can find the HIP job number through the HIP Jobs Status task.

HIP jobs status

Use this task to display a list of the jobs in the HIP job queue.

HIP Jobs Status task

Enter the following command:

HIP SHOW JOBS [parameter]

This command displays the current status of the selected jobs in the HIP jobs queue as well as the current status of the HIP processor. The format of the display depends on the parameter.

Table 7-2 lists each parameter and its description.

Table 7-2. **HIP SHOW JOBS command parameters and descriptions**

Parameter	Description
ABORTED	Display all jobs that have been aborted.
ACTIVE	Display all jobs in the active state: QUEUED, ACTIVE, OQUEUED, or PRINTING.
ALL	Display all jobs in all queues.
CANCELLED	Display all jobs that have been cancelled.
COMPLETED	Display jobs in a completed state: PRINTED, STORED, SEND, or ABORTED.
CONTINUE	Continue a previously requested display if all jobs in the queue were not displayed.
PAGE[*n*]	Divide the queue up to 20 jobs, which are ordered from the oldest completed job to newest completed job received.
PENDING	Display all jobs in the pending state: PENDING or RECEIVING (but not submitted to the OCS).
PRINTED	Display the jobs in the printed state: PRINTED or TRUNCATED.
SENT	Display all files that have been sent to the host.
STORED	Display all files that have been stored by the host.
SUMMARY	Display a summary of the job queue. (See figure 7-1.)

Figure 7-1. **Sample summary job queue display**

```
JID# HOST NAME   RECEIVED   STATUS     JOB#   TIME

nnnn<host name>  hh:mm:ss   status     000    hh:mm:ss
 .  .            .          COMPLETED  .      .
 .  .            .          COMPLETED  .      .
 .  .            .          STORED     .      .
 ...  and n more COMPETED jobs
 .  .            .          PRINTING   .      .
 .  .            .          ACTIVE     .      .
 .  .            .          PENDING    .      .
 .  .            .          PENDING    .      .
 .  .            .          PENDING    .      .
 .  .            .          PENDING    .      .
 .  .            .          PENDING    .      .
...  and n more PENDING jobs
 .  .                       RECEIVE   .      .
 HP1110 END OF JOB DISPLAY
```

The normal job queue display screen consists of:

- Two lines of header information
- Up to 20 lines of jobs status information
- A message indicating the end of the display.

Note the following:

- If there are fewer than 20 jobs in the selected state, only that number is displayed.
- If there are more than 20 jobs in the selected state, all jobs are not shown and the following message appears:

  `HP2145 ENTER 'HIP SHOW JOBS CONTINUE' FOR MORE.`

To display the additional jobs, enter the following command:

HIP SHOW JOBS CONTINUE

Figure 7-2 shows the format of a normal display screen.

Figure 7-2. **Example of HIP job status display**

```
HOST:hst:linemode  HIP:runmode   FILEMODE:filemode

JID# HOST NAME     RECEIVED      STATUS     JOB#   TIME

nnnn host name     hh:mm:ss      status     000    hh:mm:ss
 .  .              .             .          .      .
 .  .              .             .          .      .
 .  .              .             .          .      .

HP1110 END OF JOB DISPLAY
```

Table 7-3 lists each field and its description.

Table 7-3. **HIP jobs status display fields and descriptions**

Field	Description
hst	Specifies one of the possible hosts (XNS or XPF).
linemode	Specifies the status of the host interface (OFFLINE, ONLINE PEND, READY, RECEIVING, SENDING, or SUSPENDED).
runmode	Specifies the jobs run mode (STARTED, STOPPED, DUMP, or CONCATENATED).
filemode	Specifies the acceptable file types (ALL JOBS or PRINT JOBS).
nnnn	Specifies the internal job identification number (JID) for HIP.
hostname	Indicates the host name on the file label
0000	Specifies the job number assigned by OCS when the job is submitted for printing. It is 0000 for nonprint and pending jobs.
hh:mm:ss	Specifies the time a job was received and when its status was last changed.
status	Specifies the current status of a job, which is one of the following: • RECEIVE: The job is currently being received. • SENDING: The job is currently being sent. • PENDING: The job is waiting to be sent. • QUEUED: The job is in OCS job queue waiting to be processed. • ACTIVE: The job is being processed by input and/or output. • OQUEUED: Input phase is complete and the job is queued for printing. • PRINTING: Input phase is complete and printing is in progress. • TRUNCATED: The transfer was ended before completion. • COMPLETED: The job was completed normally. • STORED: The file was stored in a permanent file directory. • SENT: The file was successfully sent to the host. • ABORTED: The job was aborted by a HIP or OCS ABORT command. • HOSTABORT: The job was aborted by the host command. • REJECTED: The transfer from the host to the OEM was rejected. • CANCELLED: The transfer was cancelled by a host restart. • STOREFILE: The job is a file to be stored, not printed. • CONCATENATED: The job is a concatenated job. • RETAINDATA: The data from the job is retained for HIP CHANGE. • HOLDJOB: The job is retained due to HIP CHANGE. • PASSTHROUGH (XPF, only): The job is a pass through job.

End HIP

Use this task to shut down HIP in an orderly manner. When using this task, the following occurs:

- The current files being received, transmitted, or printed (if any) are completed.
- The internal HIP job queue is saved on the system disk for later restart.
- The following message appear on the screen:

  ```
  HP1020 HOST INTERFACE PROCESSOR UNLOADED
  ```

- The connection to the current host is sent offline.

End HIP task

Enter the following command:

HIP END

8. Status and print tasks

This chapter contains instructions for obtaining printer and job status information, selecting feeder trays and stacker bins, managing clusters, setting up bin limits, and handling feeding and finishing devices.

Where applicable, instructions are given for accomplishing the task using keyed-in commands. Refer to the list below for the tasks described in this chapter:

- Status and print tasks
- Understanding clusters
- Printer status
- Select feeder trays
- Select stacker bins
- Tray loading
- Clusters
- Ordered stock
- Transparencies
- Purge feed
- Lower trays and bins
- Set tray size
- Set container size
- Bin full criteria and setting bin limits
- Jobs status
- Configure feeding or finishing device

Status and print tasks

You can perform status and print tasks by using the keyboard to enter commands.

Understanding clusters

A cluster is a group of related feeder trays. The trays assigned to a cluster usually contain the same size and type of paper. All trays within a cluster are considered equal when the LPS identifies which tray will feed a sheet of paper. This allows common stock to feed from more than one tray.

Clusters are set up and named by the person who creates the job. The cluster name consists of 1 to 6 alphanumeric characters, beginning with an alphabetic character. The name can represent the type of stock used in the job (for example, BLUE). The cluster definition and name allow the LPS to locate the feeder trays with the correct paper stock used for a specific job. Clusters allow you to use more than one size of paper within a job and to use groups of trays within a job as if they were only one tray.

Based on messages from the LPS, you load the correct stock into the feeder trays and tell the LPS which stock is in which tray (refer to the "Tray loading and clusters" section later in this chapter). The LPS then selects the stock as required by the print job, selecting a feeder tray for each page by checking the cluster name and paper size associated with the page.

You can display the current clusters, override the preferred trays recommended by the cluster, or choose a specific cluster or tray to be used for feeding paper for a job. For additional information on clusters, refer to the *Xerox DocuPrint 96/DocuPrint 96MX LPS Operations Reference*.

Status and print tasks

The following sections contain instructions for performing specific status and print tasks.

Printer status

Use this task to display the current status of the feeder trays and stacker bins. You see the following information:

- **Cluster names.** The name of the cluster(s) (currently in use) defined for each feeder tray.
- **Feeder tray state.** The state can be one of the following:
  - In Use. The tray is in the current stockset (though paper may not be feeding from it right now).
  - Ready. The tray is ready to feed paper.
  - Not Available. For example, the tray is broken.
  - Busy. The tray elevator is raising or lowering.
  - Lowered. The tray elevator is down.
  - Empty. The tray does not contain any paper.
- **Feeder tray size.** Name or measurement of paper currently assigned to the tray.

- **Paper tray levels.** The levels depicted indicate:
  - Empty
  - 1/4 ream
  - 1/2 ream
  - 3/4 ream
  - 1 ream
  - 2 reams
  - 3 reams
  - 4 reams
  - Full.
- **Stacker bin state.** The state can be one of the following:
  - In Use. The current print job is stacking in the bin.
  - Ready. The bin is ready to receive output.
  - Not Available. For example, the bin is broken).
  - Busy. The bin elevator is raising or lowering.
  - Lowered. The bin elevator is down.
- **Stacker bin size.** The size is either:
  - None. The bin is empty and containers are not being used. Any size output can be stacked in the bin.
  - x by y. The size of paper or container and paper currently stacked in the bin.

Note: When various sized paper is stacked in a bin, the size displayed indicates the largest paper width and length.

- **Stacker bin levels.** The levels depicted indicate:
  - Empty
  - 1 ream
  - 2 reams
  - 3 reams
  - 4 reams
  - Full.
- **Output bin mode.** The mode is either:
  - Auto. When the first bin is full, stacking automatically switches to the next bin.
  - Separate. The report switches to the next bin at the report boundary.

Note: The Output Bin mode displays on the bin that is currently in use.

Note the following:

- You can display printer status by pressing the <PRINTER STATUS> key.
- The printer control console also provides a mimic of the printer showing some of the same information specified in this section.

Printer Status task

Enter the following command:

PSTATUS

The selection and status information appears on the screen. Figure 8-1 shows an example of HIP job status display.

Figure 8-1. **Example of HIP job status display**

```
IOT State:                                  Client-layer:
Current feed mode:          feed mode
Current select mode:        select mode


   Tray:    Status:        Paper level:    Paper size:
    1       Selected         1/2 full        11.5 by 8.0
    2       Ready            Full            11.5 by 8.0
    3       Ready            Full            11.5 by 8.0


   Bin:     Status:        Paper level:    Paper size:
    A       Selected         1/2 full        8.5 by 11.00
```

Select feeder trays

Use this task to override stock selections in the print job and force printing of a job using a specific tray, cluster, or a feeding device.

Select Feeder Trays task

To use the clusters set up in the print job, enter the following command:

FEED MAIN

To feed paper from the Aux cluster, enter the following command:

FEED AUX

To feed paper from all trays, enter the following command:

FEED AUTO

To feed paper using a specific cluster, enter the following command:

FEED *cluster name*

cluster name is the name of the cluster you want to use.

To feed paper from a specific tray, enter the following command:

FEED *tray number*

tray number is the number of the tray you want to use.

To feed paper from a bulk feeder, enter the following command:

FEED 7

Select stacker bins

Use this task to select the bin(s) used for stacking printed pages. You can also select the sample tray or a finishing device as the output destination.

The stacking order default is AUTOMODE, which specifies that Stacker A is to be used.

If you specify a different stacking order through this task:

- If the LPS is printing, the output goes to the selected bin (unless it is full).
- When the selected bin is full, the LPS sends output to the next empty bin that can accept the paper size.
- If no bin is available that can accept the paper size, the printer stops and you must unload the bin(s).
- If you select the sample tray, all printed pages are delivered there until the report ends or you change the stacker bin selection.

Select Stacker Bins task

To select the AUTOMODE stacking order, enter the following command:

SELECT AUTO

To select the sample tray, enter the following command:

SELECT TRAY

To select Stacker A, enter the following command:

SELECT A

Tray loading

Use the Tray Loading task to respond to system messages concerning stockset problems for the current print job.

Tray Loading task Perform the following steps:

Step 1. When a print job calls for a stock change, the existing clusters appear on the system controller display. The current trays field is blank for undefined clusters.

Refer to the following example.

BLUE	ASIZ	----PREFER---	----CURRENT---	---STATUS---
		1 3	1 3	HAS TRAYS
GREEN	ASIZ	---PREFER---	---CURRENT---	---STATUS---
		2		IS DEFINED

Step 2. Load the correct stock in the correct trays.

Step 3. To define the current trays for the undefined cluster, enter the following command:

CLUSTER *cl-name tray number*

Table 8-1 lists each parameter and its description.

Table 8-1. **CLUSTER command parameters and descriptions**

Parameter	Description
cl-name	Disables only the steady mode of the Attention light.
tray number	The tray(s) in which stock for the cluster is currently loaded.

Clusters

Use the Clusters task to:

- Display all the clusters in the system with their preferred and current trays
- Define new clusters
- Edit preferred or current trays for existing clusters.

Note: You must define tray contents to the LPS when you change the stock in a tray being used by the current stockset without being prompted by the system to change the stock in that tray.

Clusters task To display all clusters in the system, enter the following command:

CLUSTER

To display all clusters and their preferred trays (without the current trays), enter the following command:

CLP

To create a new cluster or edit an existing cluster, enter the following command:

CLUSTER *cl-name* [SET | *n* | +*n* | -*n* v ALL | -ALL][/NR]

Table 8-2 lists each parameter and its description.

Table 8-2. **CLUSTER command parameters and descriptions**

Parameter	Description
cl-name	The name of the cluster.
SET	Assigns current trays to match all preferred trays in the cluster.
n	Gives specified tray(s) current status in named cluster.
+*n*	Adds specified tray(s) to cluster's current list.
-*n*	Removes specified tray(s) from cluster's current list.
ALL	Adds all trays to cluster's current status.
-ALL	Deletes all current trays from the cluster.
/NR	Prevents tray being removed from current status in any inactive cluster.

Note: When a current tray is added or assigned to a cluster, that tray number is deleted from all other clusters, unless /NR is entered with it.

Ordered stock

Ordered stock consists of paper arranged in a specific order in a feeder tray so that it can be printed in a cycle. Prenumbered sheets and tabs are two examples of ordered stock.

The Ordered Stock task allows you to reset the ordered stock position in the feeder tray.

Ordered Stock task

Enter the following command:

OSTK *m*,*n*

Table 8-3 lists each parameter and its description.

Table 8-3. **OSTK command parameters and descriptions**

Parameter	Description
m	The number of the tray containing the ordered stock.
n	The new position of the ordered stock.

For example:

1. You are printing a job using prenumbered sheets of paper, numbered from 1-10, feeding from tray 3.
2. You remove some sheets from the top of the stack in tray 3.
3. The LPS expects the next sheet to be number 3, though it is, in fact, number 6.
4. Use the OSTK command in the following way:

   OSTK 3 6

   The above command tells the LPS that page 6 is ready to be printed from the ordered stock in tray 3

Transparencies

Transparencies:

- Can feed only from the processor feeder trays (trays 1 and 2)
- Are printed only in simplex (one-sided) mode
- Must be delivered to the sample tray.

The Transparencies task allows you to override or request the use of transparencies for a particular print job. The Transparencies task:

- Can be entered only when the system is idle (that is, not printing and not engaged in any nonprinting tasks)
- Causes or cancels the use of transparencies in the next print job.

  Once the job has printed, the transparency control returns to the coding in the job stream. (Refer to the *Xerox DocuPrint 96/ DocuPrint 96MX LPS PDL Reference* for additional information.)

Transparencies task

To cause printing on transparencies, enter the following command:

TRANS YES

To cancel printing on transparencies, enter the following command:

TRANS NO

Note: You must still ensure that either transparency or regular stock is loaded in the appropriate feeder trays.

Purge feed

Use the Purge Feed task to specify which feeder trays you want to supply the LPS with purge sheets.

Note: In order to clean the photoreceptor properly following a fuser area jam, one of the feeder trays you specify must contain paper at least as long as the paper used in the current print job.

Note: Do not specify a tray containing ordered stock.

Purge Feed task

To specify trays for purge feeding, enter the following command:

PFEED *[tray list*]

Table 8-4 lists the parameter and its description.

Table 8-4. **PFEED command parameter and description**

Parameter	Description
tray list	The numbers of the trays you want the LPS to use for purge sheets.

To display the currently assigned purge feed trays, enter the following command:

PFEED

Lower trays and bins

Use this task to lower tray and bin elevators from the keyboard display.

Lower Trays and Bins task

Enter the following command:

UNLOAD {*n* | *a*}

Table 8-5 lists each parameter and its description.

Table 8-5. **UNLOAD command parameters and descriptions**

Parameter	Description
n	The feeder tray.
a	The stacker bin.

Set tray size

Use this task to tell the printer that custom size paper is loaded in a feeder tray.

Set Tray Size task

Enter the following command:

SET TRAY *n,w,l*

Table 8-6 lists each parameter and its description.

Table 8-6. **SET TRAY command parameters and descriptions**

Parameter	Description
n	The tray you want to modify.
w	The new width in millimeters.
l	The new length in millimeters.

Set container size

Use this task to change the maximum paper size allowed in a container for custom print jobs.

The allowable paper size range is 8 by 10 inches/203 by 254 mm to 11.69 by 17 inches/297 by 432 mm.

Any subsequent pages after the first sheet must be within 25 mm on each dimension of the first sheet.

You must not set the container size larger than the actual size of the container.

Note: Once you change a container size using this task, you must change it back again if you want to use a standard size container.

The following table shows the default size for each container.

Table 8-7. **Default container sizes**

Container number	Default container size
1	8 by 10.5 inches/203 by 267 mm
2	A4 (210 by 297 mm/8.26 by 11.69 inches)
3	8.5 by 11 inches/216 by 279 mm
4	8.5 by 13 inches/216 by 330 mm
5	8.5 by 14 inches/216 by 356 mm
6	11 by 17 inches/279 by 432 mm or A3 (420 by 297 mm/16.53 by 11.69 inches)
7	10.12 by 14.33 inches/257 by 364 mm

Set Container Size

Enter the following command:

SET CONTAINER *container #,w,l*

Table 8-8 lists each parameter and its description.

Table 8-8. **SET CONTAINER command parameters and descriptions**

Parameter	Description
container #	The container you want to modify.
w	The new width in millimeters.
l	The new length in millimeters.

Bin full criteria and setting bin limits

You can request that bins continue to fill until:

- A specific number of reams or sheets has been stacked
- A specific report, report set, or print job is finished
- A specific report, report set, or print job is finished after a specific number of sheets has been stacked.

Bin Full Criteria and Setting Bin Limits task

To set the maximum number of reams for the bin, enter the following command:

BINFULL [*threshold, boundary*]

Table 8-9 lists each parameter and its description.

Table 8-9. **BINFULL command parameters and descriptions**

Parameter	Description
threshold	The maximum number of reams for the bin. This number must be between 0 and 5. **Note:** If the threshold is 0, the boundary must be specified.
boundary	The separation boundary for the bin. The options are: • **NONE.** There is no separation boundary. • **SET.** The stacking switches after each printed set. • **REPORT.** The stacking switches after each printed report. • **JOB.** The stacking switches after each printed job.

To specify the maximum number of sheets for the bin, enter the following command:

BLIMIT *bin letter,sheet count*

Table 8-10 lists each parameter and its description.

Table 8-10. **BLIMIT command parameters and descriptions**

Parameter	Description
bin letter	The bin whose limit you are setting. For example, enter A to set the limit for stacker bin A.
sheet count	The number of sheets that can be sent to the bin. The number must be between 100 and 2500.

Job status

Use this task to display information about jobs in the print queue. The following information appears:

- The print job queued for input (that is, processing).
- Print job information for each job in the queue:
  - **Job number**
  - **Customer job number**
  - **Report number**
  - **Report name**
  - **Number of copies requested**
  - **Total pages in the job**
  - **Number of pages printed**
  - **Number of pages printed**
  - **Status of the job**
  - **Status message number** (either a blank if the print job completed normally, an error message number, or “CS” if the report is copy sensitive, that is, different copies of the report contain different information).

Note: You can display the job status by pressing the <JOBS STATUS> key.

Jobs Status task

To display jobs status, enter the following command:

JOBS

To display only reports in the print queue (that is, waiting to be printed), enter the following command:

JOBS Q

To display up to 100 jobs with specific statuses, enter the following command:

JOBS ALL {DONE | RESET | ABORT | RCVY | *n*}

DONE

Display jobs with the status “Done.”

RESET

Display jobs with the status “Reset.”

ABORT

Display jobs with the status “Aborted.”

RCVY

Display jobs with the status “RCVY/NS.”

n

The number of jobs for which you want status information displayed.

Configuring a finishing device

Use this task to configure a finishing or feeding device.

FCG (display the profile labels)

Use this command to display the profile labels in the FCG.LIB file.

Logon Level Levels 2 through 5.

Syntax FCG

FCG (configure a finishing or feeding device)

Use this command to load into printer memory the personality profile the LPS must use to communicate with the finishing device or bulk feeder. The personality profile is an entry in a text file called "FCG.LIB." Once this file is created, it is preserved across sysgens.

Logon Level Levels 2 through 5.

Syntax FCG {*profile-label*}

Parameters Table 8-11 shows the parameters used in FCG to configure a finishing or feeding device.

Table 8-11. **Parameters of the FCG (configure a finishing or feeding device) command**

Parameter	Description
profile-label	Specifies the entry in the FCG.LIB file to be sent to the printer.

FCG SHOW (check finishing or feeding device settings)

Use this command to check the settings for the finishing or feeding devices configured for the LPS.

Logon level Levels 2 through 5.

Syntax FCG SHOW

Restrictions SHOW cannot be abbreviated to SHO.

FCG procedures

Use this task to:

- Send the configuration values for a feeding or finishing device to the printer
- Display the current device configuration values.

Configure task

Table 8-12 shows the command to send feeding or finishing device configurations to the printer.

Table 8-12. **Parameters of the FCG SHOW (check finishing or feeding device settings) command**

Parameter	Description
FCG *profile-label*	
profile-label	The name assigned to the feeding or finishing device configuration.

To display all profile labels for the feeding or finishing device, enter the following command:

FCG

To display the current device configuration values, enter the following command:

FCG SHOW

Note: **SHOW** cannot be abbreviated to **SHO**.

8. Status and print tasks

This chapter contains instructions for obtaining printer and job status information, selecting feeder trays and stacker bins, managing clusters, setting up bin limits, and handling feeding and finishing devices.

Where applicable, instructions are given for accomplishing the task using keyed-in commands. Refer to the list below for the tasks described in this chapter:

- Status and print tasks
- Understanding clusters
- Printer status
- Select feeder trays
- Select stacker bins
- Tray loading
- Clusters
- Ordered stock
- Transparencies
- Purge feed
- Lower trays and bins
- Set tray size
- Set container size
- Bin full criteria and setting bin limits
- Jobs status
- Configure feeding or finishing device

Status and print tasks

You can perform status and print tasks by using the keyboard to enter commands.

Understanding clusters

A cluster is a group of related feeder trays. The trays assigned to a cluster usually contain the same size and type of paper. All trays within a cluster are considered equal when the LPS identifies which tray will feed a sheet of paper. This allows common stock to feed from more than one tray.

Clusters are set up and named by the person who creates the job. The cluster name consists of 1 to 6 alphanumeric characters, beginning with an alphabetic character. The name can represent the type of stock used in the job (for example, BLUE). The cluster definition and name allow the LPS to locate the feeder trays with the correct paper stock used for a specific job. Clusters allow you to use more than one size of paper within a job and to use groups of trays within a job as if they were only one tray.

Based on messages from the LPS, you load the correct stock into the feeder trays and tell the LPS which stock is in which tray (refer to the "Tray loading and clusters" section later in this chapter). The LPS then selects the stock as required by the print job, selecting a feeder tray for each page by checking the cluster name and paper size associated with the page.

You can display the current clusters, override the preferred trays recommended by the cluster, or choose a specific cluster or tray to be used for feeding paper for a job. For additional information on clusters, refer to the *Xerox DocuPrint 96/DocuPrint 96MX LPS Operations Reference*.

Status and print tasks

The following sections contain instructions for performing specific status and print tasks.

Printer status

Use this task to display the current status of the feeder trays and stacker bins. You see the following information:

- **Cluster names.** The name of the cluster(s) (currently in use) defined for each feeder tray.
- **Feeder tray state.** The state can be one of the following:
  - In Use. The tray is in the current stockset (though paper may not be feeding from it right now).
  - Ready. The tray is ready to feed paper.
  - Not Available. For example, the tray is broken.
  - Busy. The tray elevator is raising or lowering.
  - Lowered. The tray elevator is down.
  - Empty. The tray does not contain any paper.
- **Feeder tray size.** Name or measurement of paper currently assigned to the tray.

- **Paper tray levels.** The levels depicted indicate:
  - Empty
  - 1/4 ream
  - 1/2 ream
  - 3/4 ream
  - 1 ream
  - 2 reams
  - 3 reams
  - 4 reams
  - Full.
- **Stacker bin state.** The state can be one of the following:
  - In Use. The current print job is stacking in the bin.
  - Ready. The bin is ready to receive output.
  - Not Available. For example, the bin is broken).
  - Busy. The bin elevator is raising or lowering.
  - Lowered. The bin elevator is down.
- **Stacker bin size.** The size is either:
  - None. The bin is empty and containers are not being used. Any size output can be stacked in the bin.
  - x by y. The size of paper or container and paper currently stacked in the bin.

Note: When various sized paper is stacked in a bin, the size displayed indicates the largest paper width and length.

- **Stacker bin levels.** The levels depicted indicate:
  - Empty
  - 1 ream
  - 2 reams
  - 3 reams
  - 4 reams
  - Full.
- **Output bin mode.** The mode is either:
  - Auto. When the first bin is full, stacking automatically switches to the next bin.
  - Separate. The report switches to the next bin at the report boundary.

Note: The Output Bin mode displays on the bin that is currently in use.

Note the following:

- You can display printer status by pressing the <PRINTER STATUS> key.
- The printer control console also provides a mimic of the printer showing some of the same information specified in this section.

Printer Status task

Enter the following command:

PSTATUS

The selection and status information appears on the screen. Figure 8-1 shows an example of HIP job status display.

Figure 8-1. **Example of HIP job status display**

```
IOT State:                                  Client-layer:
Current feed mode:          feed mode
Current select mode:        select mode


   Tray:    Status:        Paper level:    Paper size:
    1       Selected         1/2 full        11.5 by 8.0
    2       Ready            Full            11.5 by 8.0
    3       Ready            Full            11.5 by 8.0


   Bin:     Status:        Paper level:    Paper size:
    A       Selected         1/2 full        8.5 by 11.00
```

Select feeder trays

Use this task to override stock selections in the print job and force printing of a job using a specific tray, cluster, or a feeding device.

Select Feeder Trays task

To use the clusters set up in the print job, enter the following command:

FEED MAIN

To feed paper from the Aux cluster, enter the following command:

FEED AUX

To feed paper from all trays, enter the following command:

FEED AUTO

To feed paper using a specific cluster, enter the following command:

FEED *cluster name*

cluster name is the name of the cluster you want to use.

To feed paper from a specific tray, enter the following command:

FEED *tray number*

tray number is the number of the tray you want to use.

To feed paper from a bulk feeder, enter the following command:

FEED 7

Select stacker bins

Use this task to select the bin(s) used for stacking printed pages. You can also select the sample tray or a finishing device as the output destination.

The stacking order default is AUTOMODE, which specifies that Stacker A is to be used.

If you specify a different stacking order through this task:

- If the LPS is printing, the output goes to the selected bin (unless it is full).
- When the selected bin is full, the LPS sends output to the next empty bin that can accept the paper size.
- If no bin is available that can accept the paper size, the printer stops and you must unload the bin(s).
- If you select the sample tray, all printed pages are delivered there until the report ends or you change the stacker bin selection.

Select Stacker Bins task

To select the AUTOMODE stacking order, enter the following command:

SELECT AUTO

To select the sample tray, enter the following command:

SELECT TRAY

To select Stacker A, enter the following command:

SELECT A

Tray loading

Use the Tray Loading task to respond to system messages concerning stockset problems for the current print job.

Tray Loading task Perform the following steps:

Step 1. When a print job calls for a stock change, the existing clusters appear on the system controller display. The current trays field is blank for undefined clusters.

Refer to the following example.

BLUE	ASIZ	----PREFER---	----CURRENT---	---STATUS---
		1 3	1 3	HAS TRAYS
GREEN	ASIZ	---PREFER---	---CURRENT---	---STATUS---
		2		IS DEFINED

Step 2. Load the correct stock in the correct trays.

Step 3. To define the current trays for the undefined cluster, enter the following command:

CLUSTER *cl-name tray number*

Table 8-1 lists each parameter and its description.

Table 8-1. **CLUSTER command parameters and descriptions**

Parameter	Description
cl-name	Disables only the steady mode of the Attention light.
tray number	The tray(s) in which stock for the cluster is currently loaded.

Clusters

Use the Clusters task to:

- Display all the clusters in the system with their preferred and current trays
- Define new clusters
- Edit preferred or current trays for existing clusters.

Note: You must define tray contents to the LPS when you change the stock in a tray being used by the current stockset without being prompted by the system to change the stock in that tray.

Clusters task To display all clusters in the system, enter the following command:

CLUSTER

To display all clusters and their preferred trays (without the current trays), enter the following command:

CLP

To create a new cluster or edit an existing cluster, enter the following command:

CLUSTER *cl-name* [SET | *n* | +*n* | -*n* v ALL | -ALL][/NR]

Table 8-2 lists each parameter and its description.

Table 8-2. **CLUSTER command parameters and descriptions**

Parameter	Description
cl-name	The name of the cluster.
SET	Assigns current trays to match all preferred trays in the cluster.
n	Gives specified tray(s) current status in named cluster.
+*n*	Adds specified tray(s) to cluster's current list.
-*n*	Removes specified tray(s) from cluster's current list.
ALL	Adds all trays to cluster's current status.
-ALL	Deletes all current trays from the cluster.
/NR	Prevents tray being removed from current status in any inactive cluster.

Note: When a current tray is added or assigned to a cluster, that tray number is deleted from all other clusters, unless /NR is entered with it.

Ordered stock

Ordered stock consists of paper arranged in a specific order in a feeder tray so that it can be printed in a cycle. Prenumbered sheets and tabs are two examples of ordered stock.

The Ordered Stock task allows you to reset the ordered stock position in the feeder tray.

Ordered Stock task

Enter the following command:

OSTK *m*,*n*

Table 8-3 lists each parameter and its description.

Table 8-3. **OSTK command parameters and descriptions**

Parameter	Description
m	The number of the tray containing the ordered stock.
n	The new position of the ordered stock.

For example:

1. You are printing a job using prenumbered sheets of paper, numbered from 1-10, feeding from tray 3.
2. You remove some sheets from the top of the stack in tray 3.
3. The LPS expects the next sheet to be number 3, though it is, in fact, number 6.
4. Use the OSTK command in the following way:

   OSTK 3 6

   The above command tells the LPS that page 6 is ready to be printed from the ordered stock in tray 3

Transparencies

Transparencies:

- Can feed only from the processor feeder trays (trays 1 and 2)
- Are printed only in simplex (one-sided) mode
- Must be delivered to the sample tray.

The Transparencies task allows you to override or request the use of transparencies for a particular print job. The Transparencies task:

- Can be entered only when the system is idle (that is, not printing and not engaged in any nonprinting tasks)
- Causes or cancels the use of transparencies in the next print job.

  Once the job has printed, the transparency control returns to the coding in the job stream. (Refer to the *Xerox DocuPrint 96/ DocuPrint 96MX LPS PDL Reference* for additional information.)

Transparencies task

To cause printing on transparencies, enter the following command:

TRANS YES

To cancel printing on transparencies, enter the following command:

TRANS NO

Note: You must still ensure that either transparency or regular stock is loaded in the appropriate feeder trays.

Purge feed

Use the Purge Feed task to specify which feeder trays you want to supply the LPS with purge sheets.

Note: In order to clean the photoreceptor properly following a fuser area jam, one of the feeder trays you specify must contain paper at least as long as the paper used in the current print job.

Note: Do not specify a tray containing ordered stock.

Purge Feed task

To specify trays for purge feeding, enter the following command:

PFEED *[tray list*]

Table 8-4 lists the parameter and its description.

Table 8-4. **PFEED command parameter and description**

Parameter	Description
tray list	The numbers of the trays you want the LPS to use for purge sheets.

To display the currently assigned purge feed trays, enter the following command:

PFEED

Lower trays and bins

Use this task to lower tray and bin elevators from the keyboard display.

Lower Trays and Bins task

Enter the following command:

UNLOAD {*n* | *a*}

Table 8-5 lists each parameter and its description.

Table 8-5. **UNLOAD command parameters and descriptions**

Parameter	Description
n	The feeder tray.
a	The stacker bin.

Set tray size

Use this task to tell the printer that custom size paper is loaded in a feeder tray.

Set Tray Size task

Enter the following command:

SET TRAY *n,w,l*

Table 8-6 lists each parameter and its description.

Table 8-6. **SET TRAY command parameters and descriptions**

Parameter	Description
n	The tray you want to modify.
w	The new width in millimeters.
l	The new length in millimeters.

Set container size

Use this task to change the maximum paper size allowed in a container for custom print jobs.

The allowable paper size range is 8 by 10 inches/203 by 254 mm to 11.69 by 17 inches/297 by 432 mm.

Any subsequent pages after the first sheet must be within 25 mm on each dimension of the first sheet.

You must not set the container size larger than the actual size of the container.

Note: Once you change a container size using this task, you must change it back again if you want to use a standard size container.

The following table shows the default size for each container.

Table 8-7. **Default container sizes**

Container number	Default container size
1	8 by 10.5 inches/203 by 267 mm
2	A4 (210 by 297 mm/8.26 by 11.69 inches)
3	8.5 by 11 inches/216 by 279 mm
4	8.5 by 13 inches/216 by 330 mm
5	8.5 by 14 inches/216 by 356 mm
6	11 by 17 inches/279 by 432 mm or A3 (420 by 297 mm/16.53 by 11.69 inches)
7	10.12 by 14.33 inches/257 by 364 mm

Set Container Size

Enter the following command:

SET CONTAINER *container #,w,l*

Table 8-8 lists each parameter and its description.

Table 8-8. **SET CONTAINER command parameters and descriptions**

Parameter	Description
container #	The container you want to modify.
w	The new width in millimeters.
l	The new length in millimeters.

Bin full criteria and setting bin limits

You can request that bins continue to fill until:

- A specific number of reams or sheets has been stacked
- A specific report, report set, or print job is finished
- A specific report, report set, or print job is finished after a specific number of sheets has been stacked.

Bin Full Criteria and Setting Bin Limits task

To set the maximum number of reams for the bin, enter the following command:

BINFULL [*threshold, boundary*]

Table 8-9 lists each parameter and its description.

Table 8-9. **BINFULL command parameters and descriptions**

Parameter	Description
threshold	The maximum number of reams for the bin. This number must be between 0 and 5. **Note:** If the threshold is 0, the boundary must be specified.
boundary	The separation boundary for the bin. The options are: • **NONE.** There is no separation boundary. • **SET.** The stacking switches after each printed set. • **REPORT.** The stacking switches after each printed report. • **JOB.** The stacking switches after each printed job.

To specify the maximum number of sheets for the bin, enter the following command:

BLIMIT *bin letter,sheet count*

Table 8-10 lists each parameter and its description.

Table 8-10. **BLIMIT command parameters and descriptions**

Parameter	Description
bin letter	The bin whose limit you are setting. For example, enter A to set the limit for stacker bin A.
sheet count	The number of sheets that can be sent to the bin. The number must be between 100 and 2500.

Job status

Use this task to display information about jobs in the print queue. The following information appears:

- The print job queued for input (that is, processing).
- Print job information for each job in the queue:
  - **Job number**
  - **Customer job number**
  - **Report number**
  - **Report name**
  - **Number of copies requested**
  - **Total pages in the job**
  - **Number of pages printed**
  - **Number of pages printed**
  - **Status of the job**
  - **Status message number** (either a blank if the print job completed normally, an error message number, or “CS” if the report is copy sensitive, that is, different copies of the report contain different information).

Note: You can display the job status by pressing the <JOBS STATUS> key.

Jobs Status task

To display jobs status, enter the following command:

JOBS

To display only reports in the print queue (that is, waiting to be printed), enter the following command:

JOBS Q

To display up to 100 jobs with specific statuses, enter the following command:

JOBS ALL {DONE | RESET | ABORT | RCVY | *n*}

DONE

Display jobs with the status “Done.”

RESET

Display jobs with the status “Reset.”

ABORT

Display jobs with the status “Aborted.”

RCVY

Display jobs with the status “RCVY/NS.”

n

The number of jobs for which you want status information displayed.

Configuring a finishing device

Use this task to configure a finishing or feeding device.

FCG (display the profile labels)

Use this command to display the profile labels in the FCG.LIB file.

Logon Level Levels 2 through 5.

Syntax FCG

FCG (configure a finishing or feeding device)

Use this command to load into printer memory the personality profile the LPS must use to communicate with the finishing device or bulk feeder. The personality profile is an entry in a text file called "FCG.LIB." Once this file is created, it is preserved across sysgens.

Logon Level Levels 2 through 5.

Syntax FCG {*profile-label*}

Parameters Table 8-11 shows the parameters used in FCG to configure a finishing or feeding device.

Table 8-11. **Parameters of the FCG (configure a finishing or feeding device) command**

Parameter	Description
profile-label	Specifies the entry in the FCG.LIB file to be sent to the printer.

FCG SHOW (check finishing or feeding device settings)

Use this command to check the settings for the finishing or feeding devices configured for the LPS.

Logon level Levels 2 through 5.

Syntax FCG SHOW

Restrictions SHOW cannot be abbreviated to SHO.

FCG procedures

Use this task to:

- Send the configuration values for a feeding or finishing device to the printer
- Display the current device configuration values.

Configure task

Table 8-12 shows the command to send feeding or finishing device configurations to the printer.

Table 8-12. **Parameters of the FCG SHOW (check finishing or feeding device settings) command**

Parameter	Description
FCG *profile-label*	
profile-label	The name assigned to the feeding or finishing device configuration.

To display all profile labels for the feeding or finishing device, enter the following command:

FCG

To display the current device configuration values, enter the following command:

FCG SHOW

Note: **SHOW** cannot be abbreviated to **SHO**.

9. File control tasks

This chapter contains instructions for copying files between the system disk and labeled and unlabeled tapes and cartridges.

Instructions are given for performing the tasks using keyed-in commands at the keyboard display. Refer to the list below for the tasks described in this chapter:

- Copy files from disk to disk, tape to disk, or disk to tape
- Copy to/from floppy
- Delete files from the system
- Display file names in each disk file directory
- Modify licensed and standard fonts/logos, and format the font/logo matrix
- Review files in the directory
- Rename files
- Scale 300 spi fonts, forms and logos to 600 spi equivalents
- List tape or cartridge files
- Display source files without editing the files

File control tasks

You can perform file control tasks by entering commands at the keyboard display.

The following sections contain instructions for performing specific file control tasks.

COPY

Use this task to copy files residing on the system disk.

Copying files

Use the copy commands to copy files from disk to disk, tape to disk, or disk to tape.

The Xerox DocuPrint 96/DocuPrint 96MX LPS may use open-reel tape, 1/2 inch cartridge, or 1/4 inch cartridge. In these commands:

- TAPE refers to TD0.
- CARTRIDGE refers to TD1.
- TD*n* refers to the previously assigned TD*n* device.

The Xerox DocuPrint 96/DocuPrint 96MX LPS open-reel tape drive handles only tapes with 15 or more feet of leader preceding the beginning of tape (BOT).

COPY (disk to disk)

Use this command syntax to create a backup copy of a disk file on disk.

Syntax COPY [*disk-id*] *input-file-id* [*disk-id*] *output file-id*

Parameters Table 9-1 shows the parameters of the copy (disk to disk) command.

Table 9-1. **Parameters of the COPY (disk to disk) command**

Parameter	Description
disk-id	Specifies the input file disk or the output file disk. Must be DP0: or DP1: or DP2: or DP3:.
file-id	Specifies the input or output file identified by *file-name.file-type*. If the output file type is omitted, the file type defaults to the file type of the input file. (Masking cannot be used for this application.)

Example

```
COPY FORMA.FSL FORMX
CREATING FILE FORMX.FSL
```

Restriction The output file name must be different from the input file name unless you copy the file to a different disk with the disk-id parameter. If the output file name is the name of an existing file on the disk, then the contents of the existing file are replaced by the contents of the input file.

COPY (disk to labeled tape or cartridge)

Use this command to add new files after the existing files on a tape or cartridge. If there are no other files, the new files are written, starting at BOT.

Syntax COPY [TAPE **|** CARTRIDGE **|** TD*n*] WRITE [/BF:*n*] LABEL [*disk-id*] {*input-file-id* **|** *output-file-id*] |*file-id* **|** *file-type* **|** ALL}

Parameters Table 9-2 shows the syntax parameters of the COPY (disk to labeled tape or cartridge) command.

Table 9-2. **Parameters of the COPY (disk to labeled tape or cartridge) command**

Parameter	Description
TAPE **|** CARTRIDGE	Keywords specifying that files must be written to an LPS-labeled tape. TAPE is TD0; CARTRIDGE is TD1.
TD*n*	A tape device number.
/BF:*n*	Groups *n* disk blocks into one tape block. n can have a value of 1 to 16, and the size of the tape block, in bytes, resides in the tape label. The default blocking factor is 1, and the label indicates the blocking factor.
disk-id	Specifies the system disk (DP0:, DP1, DP2, or DP3:) on which the file resides.
input-file-id [*output-file-id*]	Specifies the name of an input disk file and the name to be given the output tape file, in the form *file-name.file-type*. If no *output-file-id* is specified, the disk *file-name* is used for the tape file.
file-type	Specifies the name of a directory (CMD, CME, FNT, FRM, FSL, IMG, JDL, JSL, LGO, MSC, PDE, TMP, TST, XCS, IPM, LIB, STK, TSK, SYS, PCH, LOG, SAF, OSD, DAT, TPF, IPF, and FIS) in which all the files of that directory are written to tape.
ALL	Specifies that all user files are to be copied to tape. Files will be written to tape from the CMD, CME, FNT, FRM, FSL, IDR, JDL, JSL, LGO, PDE, TMP, TST, IPM, MSC, IMG, LIB, and STK directories.

Note: If the LPS has only a 1/4 inch cartridge, then the sysgen assigns it to TD0 which is associated with the keyword TAPE. This assignment can be changed to CARTRIDGE with the SUBSTITUTE DEVICE command.

The restoration of user files that were saved from COPY TAPE WRITE LABEL ALL command from a disk containing another version of operating system software (older or newer) to a disk containing the current level of software may result in incompatible user file type existing on the disk because of software differences.

COPY (disk to unlabeled tape)

Use this command to copy source files (such as .FSL or .JSL files) to tape. No initialization (that is, TAPE VOLINIT) is necessary to write to an unlabeled tape. A 1/4 inch cartridge, if unlabeled, must be initialized.

Syntax COPY [TAPE **|** CARTRIDGE **|** TD*n*] WRITE [EBCDIC **|** ASCII] {*disk-id*} *file-id*

Parameters Table 9-3 shows the syntax parameters of the COPY (disk to unlabeled tape) command.

Table 9-3. **Parameters of the COPY (disk to unlabeled tape) command**

Parameter	Description
TAPE **|** CARTRIDGE	Keywords specifying that files must be written to tape. TAPE is TD0; CARTRIDGE is TD1.
TD*n*	A tape device number.
EBCDIC or ASCII	Specifies the format of the tape to be written. EBCDIC is the default.
disk-id	Specifies the system disk (DP0:, DP1, DP2, or DP3:) on which the file resides. If no *disk-id* is specified, DP0 is the default.
file-type	Specifies the name of the disk file to be written to tape. (Masking cannot be used for this application.)

Note: If the LPS has only a 1/4 inch cartridge, then the sysgen assigns it to TD0 which is associated with the keyword TAPE. This assignment can be changed to CARTRIDGE with the SUBSTITUTE DEVICE command.

When writing files to an unlabeled tape, there is no position checking. The tape write always starts at the current tape position and is terminated by writing two EOFs, backspacing over one of them when another file is written. This results in one EOF between each file, with a double EOF at the end of all the files.

COPY (labeled tape or cartridge to disk)

Use this command to copy files from a tape or cartridge to disk.

Syntax COPY [TAPE **|** CARTRIDGE **|** TD*n*][READ] LABEL[REVIEW] [*disk-id*] {*input-file-id* [*output file-id*] **|** *file-id* **|** NEXT **|** ALL **|** *file-type*}

Parameters Table 9-4 shows the syntax parameters of the COPY (labeled tape or cartridge to disk) command.

Table 9-4. **Parameters of the COPY (labeled tape or cartridge to disk) command**

Parameter	Description
TAPE **|** CARTRIDGE	Keywords specifying that files must be written to an LPS-labeled tape. TAPE is TD0; CARTRIDGE is TD1.
TD*n*	A tape device number. 0 indicates open-reel; 1 indicates 1/4 inch; 2 indicates 1/2 inch.
[READ] LABEL	Specifies that the input file comes from the tape device number.
REVIEW	Prompts the user when the file on the tape would replace an existing file of the same name on the disk and requests whether to replace the file. If the operator responds with Y, the file on tape replaces the disk file. If the response is N, the tape skips to the next file. Entering X aborts the entire copy process.
disk-id	Specifies the system disk (DP0:, DP1:, DP2:, or DP3:) to which the file is copied.
input-file-id *output-file-id*	Specifies the name of an input tape file to be copied to disk and the name to be given the output disk file, in the form *file-name.file-type*. Masking cannot be used with this application. If no *output-file-id* is specified, the file written to disk has the same name as the file tape.
NEXT	Specifies that the next file on the tape will be copied to disk.
ALL	Specifies that all the files on tape are to be copied to disk. Files will be written to disk from the CMD, CME, FNT, FRM, FSL, IMG, JDL, JSL, LGO, MSC, PDE, TMP, TST, IPF, IPM, LIB, STK, TSK, SYS, PCH, FIS, LOG, SAF, OSD, DAT, TPF, and XCS directories.
file-type	Specifies the name of a directory on tape to be written to disk.

Note: If the LPS has only a 1/4 inch cartridge, then the sysgen assigns it to TD0 which is associated with the keyword TAPE. This assignment can be changed to CARTRIDGE with the SUBSTITUTE DEVICE command.

Use the COPY TAPE WRITE LABEL ALL command only to save files for later restoration on a Xerox DocuPrint 96/DocuPrint 96MX LPS running the same OSS version so that the user files (.FSL, .JSL, .FNT, .FRM, .JDL, and .PDE files) are not corrupted. Use the COPY TAPE READ LABEL *file-type* command to restore user files saved with the COPY TAPE WRITE LABEL ALL command.

Example COPY TAPE LABEL OCRA.FNT

```
Searching for file OCRA.FNT
Creating file OCRA.FNT
```

(if the file is a new file and does not exist on the disk)

```
REPLACING FILE OCRA.FNT
```

(if the file already exists on disk and is overwritten)

The preceding command finds and copies the file OCRA from the tape to disk. Its disk file name is OCRA, and it is cataloged in the FNT file directory. If another file exists on this tape (after the one just copied), the command, COPY TAPE LABEL NEXT copies the next file from tape and stores it in a *file-name.file-type* as specified in the tape label information.

The command, COPY TAPE [LABEL] ALL copies all the files from the Xerox-labeled tape, stores them with the same file name as on tape and catalogs them by file type. After copying the files from an LPS-labeled file tape to disk, use the TAPE REWIND or TAPE UNLOAD command to rewind the tape.

COPY (unlabeled tape to disk)

Use this command syntax to copy files from an unlabeled tape to disk.

Syntax 2 COPY [TAPE **|** CARTRIDGE **|** TD*n*][READ] [EBCDIC **|** ASCII] [*disk-id*] *file-id*

Parameters Table 9-5 shows the syntax parameters of the COPY (unlabeled tape to disk) command.

Table 9-5. **Parameters of the COPY (unlabeled tape to disk) command**

Parameter	Description
TAPE **|** CARTRIDGE	Specifies that the input file comes from tape. TAPE is TD0; CARTRIDGE is TD1.
TD*n*	Specifies tape device number.
READ	Specifies a copy from tape to disk. This copy command defaults to read even if not specified.
EBCDIC **|** ASCII	Specifies the recording format of the input tape. EBCDIC is the default.
disk-id	Specifies the system disk to which the file will be copied.
file-type	Specifies the file to be written to disk, in the form *file-name.file-type*. (Masking cannot be used for this application.)

Note: If the LPS has only a 1/4 inch cartridge, then the sysgen assigns it to TD0 which is associated with the keyword TAPE. This assignment can be changed to CARTRIDGE with the SUBSTITUTE DEVICE command.

Restrictions The following are restrictions to copying files from an unlabeled tape to disk.

- The input tape must be unlabeled, unblocked, EBCDIC or ASCII, open-reel, and 1600 bpi or 6250 bpi.
- The maximum record length is 150 characters, although only the first 72 characters of each record are entered into the disk file.
- A sequence number is placed in bytes 75 to 80 of the disk file record.
- Records shorter than 72 bytes are blank filled to 72 bytes.
- The largest file that can be created is 10,000 records.

Example COPY TAPE UNSYS.JSL

This command copies a file from an unblocked, unlabeled tape to disk.

Note: If the *file-id* used in the COPY TAPE command already exists on a disk, the file directory pointer is erased first. Then, when the tape read is successful, the new file is copied to disk.

Copy to/from floppy

Use this task to copy files from:

- System disk to floppy disk
- Floppy disk to system disk.

Note: This task is used for the optional floppy disk drive on the system controller.

Copy Floppy Disks task

To format and initialize a floppy disk, enter the following command:

FLOPPY FORMAT

Refer to your *Xerox DocuPrint 96/DocuPrint 96MX LPS Operations Reference* for additional information.

To copy files from the system disk to a floppy disk, enter the following command:

FLOPPY SAVE [REVIEW] [*disk-id*] {*input-file-id* |*output-file-id* |*file-id* | *file-type* | ALL}

Table 9-6 lists each parameter and its description.

Table 9-6. FLOPPY SAVE command parameters and descriptions

Parameter	Description
REVIEW	Prompts you to confirm or stop overwriting a floppy file by a system file. If you enter N, the file is not copied to floppy disk, and the save process skips to the next file on the system disk.
disk-id	The system disk unit containing the files to be saved. If you do not specify a disk id, all disks are searched.
input-file-id **|** *output-file-id* **|** *file-id* **|** *file-type*	The identity of the input and output files.
ALL	Saves all user files on the floppy disk.

To copy files from a floppy disk to the system disk, enter the following command:

FLOPPY RESTORE [REVIEW] [*disk-id*] {*input-file-id* | *output-file-id* | *file-id* | *file-type* | ALL}

Table 9-7 lists each parameter and its description.

Table 9-7. FLOPPY RESTORE command parameters and descriptions

Parameter	Description
REVIEW	Prompts you to confirm or stop overwriting a system file by a floppy file. If you enter N, the file is not copied to system disk, and the restore process skips to the next file on the floppy disk.
disk-id	The system disk unit to which the file is copied.
input-file-id **|** *output-file-id* **|** *file-id* **|** *file-type*	The identity of the input and output files.
ALL	Saves all user files on the floppy disk to the system disk.

DELETE

Use this command to delete a file from the system.

Syntax DELETE [*disk-id*]*file-mask*[, *file-mask*,...,*file-mask*]

Parameters Table 9-8 shows the syntax parameters of the DELETE command.

Table 9-8. **Parameters of the DELETE command**

Parameter	Description
disk-id	Specifies the system disk (DP0:, DP1:, DP2:, or DP3:) which contains the file to be deleted.
file-mask	Specifies a file or set of files as *file-name.file-type*.

To delete a file from the system, the user must have an appropriate level of access. Refer to the “Setting file access and task executing privileges” section in chapter 1 for further information. Masking can be used with this application.

Example

```
DELETE UNIVAC.JSL,FORMX.FSL
UNIVAC.JSL DELETED
FORMX.FSL DELETED
```

Caution: System (SYS) files should never be deleted.

FILE

Use this command to display the file names in each disk file directory. Specific file IDs within the catalog or the entire catalog may be displayed.

Syntax FILE{[/EX][*disk-id*][*file-id*][,*file-id*...] |

[*disk-id*][*file-id*]/SORT,*filename*[.*file-type*] |

[*disk-id*][*file-id*]/*filename*[.*file-type*],[*leading string*],[*trailing string*]}

Parameters Table 9-9 shows the parameters of the FILE (display file list) command.

Table 9-9. **Parameters of the FILE (display file list) command**

Parameter	Description
/EX	Displays all the file characteristics of a file id. The display format is a title line identifying the information in each column. Note that when /EX is selected, the leading and trailing strings are not displayed.

```
FILE NAME  UNIT  FSIZE  RSIZE  FFBY  EOF  DISK ADDR
XRX.IMG    2     6       512   512   6    472522
KI1.IMG    2     8       512   0     8    472530
KI2.IMG    2     21      512   0     21   472540
```

FILE NAME	A ten-character field indicating file name and file-type.
UNIT	The system disk (DP0:, DP1:, DP3:) on which the file resides.
FSIZE	A ten-character decimal field indicating the number of blocks allocated to the file.
RSIZE	A six-character decimal field indicating the number of bytes in a record.
FFBY	A six-character decimal filed indicating the first free byte in the last block of the file.
EOF	A ten-character decimal field indicating the end-of-file block number.
DISK ADDR	A ten-character octal field indicating the starting address of the file on the disk.

If the /EX option is not entered, only the file IDs are displayed. Note that when /EX is selected, the leading and trailing strings are not allowed.

Note: Extended file information is not displayed for licensed fonts and logos or secured files.

Table 9-10. **File information**

Parameter	Description
disk-id	Identifies which system disk (DP0:, DP1:, DP2:, or DP3:) contains the file id(s) to be printed.
file-id	Refers to the name of a file and the file directory in which it resides, in the form *file-name.file-type*. If no *file-id* is specified, the default files are all the files in the directory. (Masking can be used with this application.)
/SORT	Alphabetically sorts a list of files by type to be printed or displayed. The number of files that can be sorted with the FILE[/SORT] command is limited by the availability of dynamic memory. When this limit is reached, the message `File/ list too long, only first xxxx File names will be sorted.` is displayed. Sorting should be done by file types for large disk or tape volumes.
leading string	A string of any characters (except commas) which is added before each file name in the list that is created.
trailing string	A string of characters (except commas) that is added after each file name in the list that is created. The total number of leading and trailing characters cannot be greater than 50.
/file-name[.file-type]	A keyword specifying a file created on disk which contains a record for each file listed in the following order: Lead str *file-id* Trailstr. If *file-type* is omitted, the file is set up in the directory .TMP.
,file-name[.file-type]	Specifying a file created on disk which contains the alphabetically sorted list of tape files. If the *file-type* is omitted, the file is set up with the *file-type* .TMP.

The total number of files displayed as well as the total number of disk sectors used by these files is accumulated and displayed by file type.

The `Total of n sectors in m files` message displays as each parameter on the file command is processed.

Table 9-11. **File command information**

Parameter	Description
n	The sum of the FSIZE field for all the files of a *file-type* requested by a parameter on the FILE command.
m	A decimal number that represents the number of files for the given *file-type*.
The `Grand total of n sectors in m files` message is displayed when all the parameters on the FILE command are satisfied.	
n	The sum of the FSIZE field for all the files requested by the parameter string of the FILE command.
m	A decimal number that represents the total number of files requested by the parameter string of the FILE command

If during the search of the system file directories, file catalogs are found to contain no files, this information is saved until all the parameters of the FILE command have been completed. The `No files in type file-type` message displays.

Example FILE DP0: *.SYS/SORT, SYSFIL.TMP

This command creates a file called “SYSFIL.TMP” which lists all the SYS files on the DP0: disk. The filenames in SYSFIL.TMP are sorted in alphabetical order, and SYSFIL.TMP is displayed on the screen. If the screen display of the sorted records is interrupted, then the created file “SYSFIL.TMP” lists only the displayed file names.

FIX

Use this command to modify licensed and standard fonts and logos and to format the font/logo matrix for the configured imaging hardware.

Syntax FIX [*file-id.file-type* **|** *file-id* [,*file-id*...]]

Parameters Table 9-12 shows the syntax parameters of the FIX command.

Table 9-12. **Parameters of the FIX (modify font or logo file) command**

Parameter	Description
file-id	Refers to the name of a file and the file directory (must be FNT or LGO) in which it resides, in the form *file-name.file-type*. (Masking can be used for this application.)
file-type	Specifies the file directory type (must be FNT or LGO) on which the fix process is performed.

When no parameters are specified, the system defaults to all fonts and all logos in the font and logo file catalogs.

REVIEW

Use this command to review each file in a directory with the option of deleting it.

Syntax REVIEW [*disk-id*]{*file-id*[,*file-id*,...]}

Parameters Table 9-13 shows the syntax parameters of the REVIEW command.

Table 9-13. **Parameters of the REVIEW command**

Parameter	Description
disk-id	Refers to the system disk (DP0:, DP1:, DP2:, DP3:) that contains the specified directory.
file-id	Refers to the name of a file and the file directory in which it resides. The form used is *file-name.file-type* as previously defined. To delete a file from the system, the operator must have an appropriate level of access; refer to the Setting file access and task execution privileges" section in chapter 1. (Masking can be used for this application.)

After the operator requests the set of file names in a file type displayed, the file names are displayed one at a time. The operator has the option of deleting a file by entering D or exiting the display process by entering the X command.

Any response other than D or X (for example pressing the space bar) results in the current file being retained and the next file name being displayed. Any file name containing a period or dollar sign cannot be deleted and is displayed with the message `*PROTECTED*`.

RNAME

Use this command to change the name and/or directory type of a file. After the file name has been changed, the original name is deleted from the file directory.

Syntax RNAME *old-file-id new-file-id*

If the file-type part of the new file-id is not specified, the file type is the same as the old file. (Masking does not apply to this command.)

SCALE

Use this command to scale 300 spi fonts, forms, and logos to 600 spi equivalents. To scale fonts and logos, SCALE doubles all positioning metrics in the output file and employs the same set of interpolation rules used by the ROS to render the 600 spi character bit maps. The appearance of the fonts and logos produced by the SCALE and printed at 600 spi is indistinguishable from the appearance of the same unscaled 300 spi files interpolated by the ROS. Forms are scaled by changing all internal references to font, logos, and images in the form header to refer to FN6, LG6, IM6 entities.

Logon level Levels 1 through 5.

Syntax SCALE *input-filename.file-type*$_1$ [*output-filename.file-type*$_2$] [/a **|** /b **|** /o **|** /5]

Parameters Table 9-14 shows the parameters of the SCALE command.

Table 9-14. **Parameters of the SCALE command**

Parameter	Description
input-filename	Specifies the font (.FNT), form (.FRM) or logo (.LGO) file to be converted to 600 spi.
filetype1	Specifies the file type as .FNT, .FRM or .LGO.
output-filename	Specifies the name for the new 600 spi file.
filetype2	Specifies the file type as .FNT or .FN6, .FRM or .FR6, .LGO or .LG6, .MSC or .TMP; usually "6" is substituted for the last character of the original file type.
/b	Doubles the font or logo bitmaps instead of using the interpolation formula to scale the input file.
/O	Overwrites the output filename without prompting.
/A	Overrides the escapement error message `** DiagChar NNN in XYZABC.FN6 exceeds byte escape, set to 0.425 in **` if the font is not used Interpress and justification is not required. If the switch /A assign escapement is added to the command line (that is , SCALE XYZABC.FNT /A), SCALE sets the width of the large characters to 255/ 600 (.425) inches. Widths overridden in this manner may yield "compressed" characters when used in Interpress printing. Problem characters will typically be in 36 point fonts and above.

Restrictions The following restrictions apply:

- When large 300 spi proportional spaced fonts (or logos) are scaled to 600 spi and used in printing an Interpress job, the results may not be correct. If any scaled character widths are larger than 255/600 (.425) inches, the output font will not generate and the `FONT FILE, %s, CANNOT BE SCALED(BYTE ESCAPEMENT)**` message appears.
- Do not interrupt SCALE processing. If an interruption occurs, enter a carriage return to resume the process.

List tape or cartridge files

The following explains the procedure for listing tape or cartridge files.

TAPE [CARTRIDGE | TDn] LIST

Use this command to display or to create a disk file of file-names and sort them alphabetically or add leading or trailing strings to facilitate future command file manipulation of that tape or cartridge.

Logon level Levels 1 through 5.

Syntax TAPE [CARTRIDGE **|** TD*n*] LIST [,PRINT]/EX {[[/SORT,*file-name* [.*file-type*]] **|** */file-name*[.*file-type*],[*leading string*],[*trailing string*]]}

Parameters Table 9-15 shows the syntax parameters for creating tape or cartridge file lists.

Table 9-15. **Parameters of the TAPE [CARTRIDGE | TDn] LIST command**

Parameter	Description
TAPE CARTRIDGE	TAPE is TD0; CARTRIDGE is TD1.
TD*n*	Specifies a tape device number.
LIST[,PRINT]	Lists the *file-ids* of the labeled tape, beginning at the current tape position. If PRINT is omitted, the tape directory is displayed.
/EX	Prints all the file characteristics of a given file id. Note that when /EX is selected, the leading and trailing strings are not allowed. If the /EX option is not entered, only the file IDs are printed.
/SORT	Alphabetically sorts a list of file names of the files on tape. The number of files that can be sorted is limited by the availability of dynamic memory. When this limit is reached, the message `FILE/ LIST TOO LONG.ONLY FIRST xxxx FILENAMES WILL BE SORTED.` is displayed. Sort by file types for large disk or tape volumes.
,file-name [file-type]	Specifies the file created on disk that contains the alphabetically sorted list of tape files. The default *file-type* is .TMP.
/file-name [file-type]	Specifies the file, created on disk, which contains a record for each file listed in the following order: Lead str *file-id* Trailstr. The default *file-type* is .TMP
leading string	A character string (except commas) that is added before each *file-name* in the list that is created.
trailing string	A character string (except commas) appended to each *file-name* in the list that is created. The total number of leading and trailing characters cannot be greater than 50.

Example TAPE LIST,PRINT /SORT, *.FRM FRMFIL.LST

This command creates a file called “FRMFIL.LST” which lists all the .FRM files on the mounted tape. The file names in FRMFIL.LST are sorted in alphabetical order, and FRMFIL.LST is printed. If the screen display of the sorted records is interrupted during a pause by the X command, then the created file “FRMFIL.LST” lists only the displayed filenames.

Listing begins at the current tape position and continues to the end of the tape. (The listing may be stopped by entering the X command when the pause occurs on the display.) If the PRINT option is specified, the operator is asked to enter a tape volume ID. The ID can be 1 to 30 characters. If more than 30 characters are entered, only the first 30 characters are used. The following title line appears on each page of the printed listing:

```
Tape directory   date   time   Tape ID:   id string
```

The following header line precedes the tape file information on both the screen and printed listings:

```
File No.   File Name   File Size   -BF-   Date
```

Table 9-16. **File header description for FMFIL.LST listing**

File header	Description
FILE NO.	The decimal number that indicates the numerical position of the file on the tape.
FILE NAME	The *file-id*.
FILE SIZE	The number of 512 byte disk sectors.
- BF -	The number of 512 byte disk sectors in 1 tape block.
DATE	The date the file was written to tape.

If a valid tape label cannot be found, a number appears in the FILE NO. field but the other fields are blank. This is the case when listing a system software tape (SST). The first two files of the SST do not have labels (with some unlabeled tapes, other meaningless characters may appear). A string of asterisks appearing in the date field means no date was specified in the label or that it could not be converted properly.

To print the file, exit from the editor (using the END command). You may spool editor print files. The current working storage file is intact if you reenter the editor after the file is printed. The listing is in portrait mode.

TYPE

Use this command to display a source file without editing the file.

Logon level Levels 1 through 5.

Syntax TYPE [*disk-id*]*file-id*

Parameters Table 9-17 shows the syntax parameters of the TYPE command.

Table 9-17. **Parameters of the TYPE command**

Parameter	Description
disk-id	Identifies the system disk (DP0:, DP1:, DP2:, or DP3:) which contains the *file-id* to be displayed.
file-id	Refers to the name of a file and the file directory in which it resides. The form used is *file-name.file-type* as previously defined.

Each source file has line numbers associated with its data records. These line numbers are supplied by the editor during file creation. Editable files created by the COPY TAPE READ command from open-reel tape have line numbers added to them at the time the file is created. Source files downloaded from the online subsystem through HOSTCOPY must have line numbers added with the editor (refer to the MERGE command).

Only the uppercase letters A to Z, and the digits 0 to 9 can be used in source file names.

9. File control tasks

This chapter contains instructions for copying files between the system disk and labeled and unlabeled tapes and cartridges.

Instructions are given for performing the tasks using keyed-in commands at the keyboard display. Refer to the list below for the tasks described in this chapter:

- Copy files from disk to disk, tape to disk, or disk to tape
- Copy to/from floppy
- Delete files from the system
- Display file names in each disk file directory
- Modify licensed and standard fonts/logos, and format the font/logo matrix
- Review files in the directory
- Rename files
- Scale 300 spi fonts, forms and logos to 600 spi equivalents
- List tape or cartridge files
- Display source files without editing the files

File control tasks

You can perform file control tasks by entering commands at the keyboard display.

The following sections contain instructions for performing specific file control tasks.

COPY

Use this task to copy files residing on the system disk.

Copying files

Use the copy commands to copy files from disk to disk, tape to disk, or disk to tape.

The Xerox DocuPrint 96/DocuPrint 96MX LPS may use open-reel tape, 1/2 inch cartridge, or 1/4 inch cartridge. In these commands:

- TAPE refers to TD0.
- CARTRIDGE refers to TD1.
- TD*n* refers to the previously assigned TD*n* device.

The Xerox DocuPrint 96/DocuPrint 96MX LPS open-reel tape drive handles only tapes with 15 or more feet of leader preceding the beginning of tape (BOT).

COPY (disk to disk)

Use this command syntax to create a backup copy of a disk file on disk.

Syntax COPY [*disk-id*] *input-file-id* [*disk-id*] *output file-id*

Parameters Table 9-1 shows the parameters of the copy (disk to disk) command.

Table 9-1. **Parameters of the COPY (disk to disk) command**

Parameter	Description
disk-id	Specifies the input file disk or the output file disk. Must be DP0: or DP1: or DP2: or DP3:.
file-id	Specifies the input or output file identified by *file-name.file-type*. If the output file type is omitted, the file type defaults to the file type of the input file. (Masking cannot be used for this application.)

Example

```
COPY FORMA.FSL FORMX
CREATING FILE FORMX.FSL
```

Restriction The output file name must be different from the input file name unless you copy the file to a different disk with the disk-id parameter. If the output file name is the name of an existing file on the disk, then the contents of the existing file are replaced by the contents of the input file.

COPY (disk to labeled tape or cartridge)

Use this command to add new files after the existing files on a tape or cartridge. If there are no other files, the new files are written, starting at BOT.

Syntax COPY [TAPE **|** CARTRIDGE **|** TD*n*] WRITE [/BF:*n*] LABEL [*disk-id*] {*input-file-id* **|** *output-file-id*] |*file-id* **|** *file-type* **|** ALL}

Parameters Table 9-2 shows the syntax parameters of the COPY (disk to labeled tape or cartridge) command.

Table 9-2. **Parameters of the COPY (disk to labeled tape or cartridge) command**

Parameter	Description
TAPE **|** CARTRIDGE	Keywords specifying that files must be written to an LPS-labeled tape. TAPE is TD0; CARTRIDGE is TD1.
TD*n*	A tape device number.
/BF:*n*	Groups *n* disk blocks into one tape block. n can have a value of 1 to 16, and the size of the tape block, in bytes, resides in the tape label. The default blocking factor is 1, and the label indicates the blocking factor.
disk-id	Specifies the system disk (DP0:, DP1, DP2, or DP3:) on which the file resides.
input-file-id [*output-file-id*]	Specifies the name of an input disk file and the name to be given the output tape file, in the form *file-name.file-type*. If no *output-file-id* is specified, the disk *file-name* is used for the tape file.
file-type	Specifies the name of a directory (CMD, CME, FNT, FRM, FSL, IMG, JDL, JSL, LGO, MSC, PDE, TMP, TST, XCS, IPM, LIB, STK, TSK, SYS, PCH, LOG, SAF, OSD, DAT, TPF, IPF, and FIS) in which all the files of that directory are written to tape.
ALL	Specifies that all user files are to be copied to tape. Files will be written to tape from the CMD, CME, FNT, FRM, FSL, IDR, JDL, JSL, LGO, PDE, TMP, TST, IPM, MSC, IMG, LIB, and STK directories.

Note: If the LPS has only a 1/4 inch cartridge, then the sysgen assigns it to TD0 which is associated with the keyword TAPE. This assignment can be changed to CARTRIDGE with the SUBSTITUTE DEVICE command.

The restoration of user files that were saved from COPY TAPE WRITE LABEL ALL command from a disk containing another version of operating system software (older or newer) to a disk containing the current level of software may result in incompatible user file type existing on the disk because of software differences.

COPY (disk to unlabeled tape)

Use this command to copy source files (such as .FSL or .JSL files) to tape. No initialization (that is, TAPE VOLINIT) is necessary to write to an unlabeled tape. A 1/4 inch cartridge, if unlabeled, must be initialized.

Syntax COPY [TAPE **|** CARTRIDGE **|** TD*n*] WRITE [EBCDIC **|** ASCII] {*disk-id*} *file-id*

Parameters Table 9-3 shows the syntax parameters of the COPY (disk to unlabeled tape) command.

Table 9-3. **Parameters of the COPY (disk to unlabeled tape) command**

Parameter	Description
TAPE **|** CARTRIDGE	Keywords specifying that files must be written to tape. TAPE is TD0; CARTRIDGE is TD1.
TD*n*	A tape device number.
EBCDIC or ASCII	Specifies the format of the tape to be written. EBCDIC is the default.
disk-id	Specifies the system disk (DP0:, DP1, DP2, or DP3:) on which the file resides. If no *disk-id* is specified, DP0 is the default.
file-type	Specifies the name of the disk file to be written to tape. (Masking cannot be used for this application.)

Note: If the LPS has only a 1/4 inch cartridge, then the sysgen assigns it to TD0 which is associated with the keyword TAPE. This assignment can be changed to CARTRIDGE with the SUBSTITUTE DEVICE command.

When writing files to an unlabeled tape, there is no position checking. The tape write always starts at the current tape position and is terminated by writing two EOFs, backspacing over one of them when another file is written. This results in one EOF between each file, with a double EOF at the end of all the files.

COPY (labeled tape or cartridge to disk)

Use this command to copy files from a tape or cartridge to disk.

Syntax COPY [TAPE **|** CARTRIDGE **|** TD*n*][READ] LABEL[REVIEW] [*disk-id*] {*input-file-id* [*output file-id*] **|** *file-id* **|** NEXT **|** ALL **|** *file-type*}

Parameters Table 9-4 shows the syntax parameters of the COPY (labeled tape or cartridge to disk) command.

Table 9-4. **Parameters of the COPY (labeled tape or cartridge to disk) command**

Parameter	Description
TAPE **|** CARTRIDGE	Keywords specifying that files must be written to an LPS-labeled tape. TAPE is TD0; CARTRIDGE is TD1.
TD*n*	A tape device number. 0 indicates open-reel; 1 indicates 1/4 inch; 2 indicates 1/2 inch.
[READ] LABEL	Specifies that the input file comes from the tape device number.
REVIEW	Prompts the user when the file on the tape would replace an existing file of the same name on the disk and requests whether to replace the file. If the operator responds with Y, the file on tape replaces the disk file. If the response is N, the tape skips to the next file. Entering X aborts the entire copy process.
disk-id	Specifies the system disk (DP0:, DP1:, DP2:, or DP3:) to which the file is copied.
input-file-id *output-file-id*	Specifies the name of an input tape file to be copied to disk and the name to be given the output disk file, in the form *file-name.file-type*. Masking cannot be used with this application. If no *output-file-id* is specified, the file written to disk has the same name as the file tape.
NEXT	Specifies that the next file on the tape will be copied to disk.
ALL	Specifies that all the files on tape are to be copied to disk. Files will be written to disk from the CMD, CME, FNT, FRM, FSL, IMG, JDL, JSL, LGO, MSC, PDE, TMP, TST, IPF, IPM, LIB, STK, TSK, SYS, PCH, FIS, LOG, SAF, OSD, DAT, TPF, and XCS directories.
file-type	Specifies the name of a directory on tape to be written to disk.

Note: If the LPS has only a 1/4 inch cartridge, then the sysgen assigns it to TD0 which is associated with the keyword TAPE. This assignment can be changed to CARTRIDGE with the SUBSTITUTE DEVICE command.

Use the COPY TAPE WRITE LABEL ALL command only to save files for later restoration on a Xerox DocuPrint 96/DocuPrint 96MX LPS running the same OSS version so that the user files (.FSL, .JSL, .FNT, .FRM, .JDL, and .PDE files) are not corrupted. Use the COPY TAPE READ LABEL *file-type* command to restore user files saved with the COPY TAPE WRITE LABEL ALL command.

Example COPY TAPE LABEL OCRA.FNT

```
Searching for file OCRA.FNT
Creating file OCRA.FNT
```

(if the file is a new file and does not exist on the disk)

```
REPLACING FILE OCRA.FNT
```

(if the file already exists on disk and is overwritten)

The preceding command finds and copies the file OCRA from the tape to disk. Its disk file name is OCRA, and it is cataloged in the FNT file directory. If another file exists on this tape (after the one just copied), the command, COPY TAPE LABEL NEXT copies the next file from tape and stores it in a *file-name.file-type* as specified in the tape label information.

The command, COPY TAPE [LABEL] ALL copies all the files from the Xerox-labeled tape, stores them with the same file name as on tape and catalogs them by file type. After copying the files from an LPS-labeled file tape to disk, use the TAPE REWIND or TAPE UNLOAD command to rewind the tape.

COPY (unlabeled tape to disk)

Use this command syntax to copy files from an unlabeled tape to disk.

Syntax 2 COPY [TAPE **|** CARTRIDGE **|** TD*n*][READ] [EBCDIC **|** ASCII] [*disk-id*] *file-id*

Parameters Table 9-5 shows the syntax parameters of the COPY (unlabeled tape to disk) command.

Table 9-5. **Parameters of the COPY (unlabeled tape to disk) command**

Parameter	Description
TAPE **|** CARTRIDGE	Specifies that the input file comes from tape. TAPE is TD0; CARTRIDGE is TD1.
TD*n*	Specifies tape device number.
READ	Specifies a copy from tape to disk. This copy command defaults to read even if not specified.
EBCDIC **|** ASCII	Specifies the recording format of the input tape. EBCDIC is the default.
disk-id	Specifies the system disk to which the file will be copied.
file-type	Specifies the file to be written to disk, in the form *file-name.file-type*. (Masking cannot be used for this application.)

Note: If the LPS has only a 1/4 inch cartridge, then the sysgen assigns it to TD0 which is associated with the keyword TAPE. This assignment can be changed to CARTRIDGE with the SUBSTITUTE DEVICE command.

Restrictions The following are restrictions to copying files from an unlabeled tape to disk.

- The input tape must be unlabeled, unblocked, EBCDIC or ASCII, open-reel, and 1600 bpi or 6250 bpi.
- The maximum record length is 150 characters, although only the first 72 characters of each record are entered into the disk file.
- A sequence number is placed in bytes 75 to 80 of the disk file record.
- Records shorter than 72 bytes are blank filled to 72 bytes.
- The largest file that can be created is 10,000 records.

Example COPY TAPE UNSYS.JSL

This command copies a file from an unblocked, unlabeled tape to disk.

Note: If the *file-id* used in the COPY TAPE command already exists on a disk, the file directory pointer is erased first. Then, when the tape read is successful, the new file is copied to disk.

Copy to/from floppy

Use this task to copy files from:

- System disk to floppy disk
- Floppy disk to system disk.

Note: This task is used for the optional floppy disk drive on the system controller.

Copy Floppy Disks task

To format and initialize a floppy disk, enter the following command:

FLOPPY FORMAT

Refer to your *Xerox DocuPrint 96/DocuPrint 96MX LPS Operations Reference* for additional information.

To copy files from the system disk to a floppy disk, enter the following command:

FLOPPY SAVE [REVIEW] [*disk-id*] {*input-file-id* |*output-file-id* |*file-id* | *file-type* | ALL}

Table 9-6 lists each parameter and its description.

Table 9-6. FLOPPY SAVE command parameters and descriptions

Parameter	Description
REVIEW	Prompts you to confirm or stop overwriting a floppy file by a system file. If you enter N, the file is not copied to floppy disk, and the save process skips to the next file on the system disk.
disk-id	The system disk unit containing the files to be saved. If you do not specify a disk id, all disks are searched.
input-file-id **|** *output-file-id* **|** *file-id* **|** *file-type*	The identity of the input and output files.
ALL	Saves all user files on the floppy disk.

To copy files from a floppy disk to the system disk, enter the following command:

FLOPPY RESTORE [REVIEW] [*disk-id*] {*input-file-id* | *output-file-id* | *file-id* | *file-type* | ALL}

Table 9-7 lists each parameter and its description.

Table 9-7. FLOPPY RESTORE command parameters and descriptions

Parameter	Description
REVIEW	Prompts you to confirm or stop overwriting a system file by a floppy file. If you enter N, the file is not copied to system disk, and the restore process skips to the next file on the floppy disk.
disk-id	The system disk unit to which the file is copied.
input-file-id **|** *output-file-id* **|** *file-id* **|** *file-type*	The identity of the input and output files.
ALL	Saves all user files on the floppy disk to the system disk.

DELETE

Use this command to delete a file from the system.

Syntax DELETE [*disk-id*]*file-mask*[, *file-mask*,...,*file-mask*]

Parameters Table 9-8 shows the syntax parameters of the DELETE command.

Table 9-8. **Parameters of the DELETE command**

Parameter	Description
disk-id	Specifies the system disk (DP0:, DP1:, DP2:, or DP3:) which contains the file to be deleted.
file-mask	Specifies a file or set of files as *file-name.file-type*.

To delete a file from the system, the user must have an appropriate level of access. Refer to the “Setting file access and task executing privileges” section in chapter 1 for further information. Masking can be used with this application.

Example

```
DELETE UNIVAC.JSL,FORMX.FSL
UNIVAC.JSL DELETED
FORMX.FSL DELETED
```

Caution: System (SYS) files should never be deleted.

FILE

Use this command to display the file names in each disk file directory. Specific file IDs within the catalog or the entire catalog may be displayed.

Syntax FILE{[/EX][*disk-id*][*file-id*][,*file-id*...] |

[*disk-id*][*file-id*]/SORT,*filename*[.*file-type*] |

[*disk-id*][*file-id*]/*filename*[.*file-type*],[*leading string*],[*trailing string*]}

Parameters Table 9-9 shows the parameters of the FILE (display file list) command.

Table 9-9. **Parameters of the FILE (display file list) command**

Parameter	Description
/EX	Displays all the file characteristics of a file id. The display format is a title line identifying the information in each column. Note that when /EX is selected, the leading and trailing strings are not displayed.

```
FILE NAME  UNIT  FSIZE  RSIZE  FFBY  EOF  DISK ADDR
XRX.IMG    2     6       512   512   6    472522
KI1.IMG    2     8       512   0     8    472530
KI2.IMG    2     21      512   0     21   472540
```

FILE NAME	A ten-character field indicating file name and file-type.
UNIT	The system disk (DP0:, DP1:, DP3:) on which the file resides.
FSIZE	A ten-character decimal field indicating the number of blocks allocated to the file.
RSIZE	A six-character decimal field indicating the number of bytes in a record.
FFBY	A six-character decimal filed indicating the first free byte in the last block of the file.
EOF	A ten-character decimal field indicating the end-of-file block number.
DISK ADDR	A ten-character octal field indicating the starting address of the file on the disk.

If the /EX option is not entered, only the file IDs are displayed. Note that when /EX is selected, the leading and trailing strings are not allowed.

Note: Extended file information is not displayed for licensed fonts and logos or secured files.

Table 9-10. **File information**

Parameter	Description
disk-id	Identifies which system disk (DP0:, DP1:, DP2:, or DP3:) contains the file id(s) to be printed.
file-id	Refers to the name of a file and the file directory in which it resides, in the form *file-name.file-type*. If no *file-id* is specified, the default files are all the files in the directory. (Masking can be used with this application.)
/SORT	Alphabetically sorts a list of files by type to be printed or displayed. The number of files that can be sorted with the FILE[/SORT] command is limited by the availability of dynamic memory. When this limit is reached, the message `File/ list too long, only first xxxx File names will be sorted.` is displayed. Sorting should be done by file types for large disk or tape volumes.
leading string	A string of any characters (except commas) which is added before each file name in the list that is created.
trailing string	A string of characters (except commas) that is added after each file name in the list that is created. The total number of leading and trailing characters cannot be greater than 50.
/file-name[.file-type]	A keyword specifying a file created on disk which contains a record for each file listed in the following order: Lead str *file-id* Trailstr. If *file-type* is omitted, the file is set up in the directory .TMP.
,file-name[.file-type]	Specifying a file created on disk which contains the alphabetically sorted list of tape files. If the *file-type* is omitted, the file is set up with the *file-type* .TMP.

The total number of files displayed as well as the total number of disk sectors used by these files is accumulated and displayed by file type.

The `Total of n sectors in m files` message displays as each parameter on the file command is processed.

Table 9-11. **File command information**

Parameter	Description
n	The sum of the FSIZE field for all the files of a *file-type* requested by a parameter on the FILE command.
m	A decimal number that represents the number of files for the given *file-type*.
The `Grand total of n sectors in m files` message is displayed when all the parameters on the FILE command are satisfied.	
n	The sum of the FSIZE field for all the files requested by the parameter string of the FILE command.
m	A decimal number that represents the total number of files requested by the parameter string of the FILE command

If during the search of the system file directories, file catalogs are found to contain no files, this information is saved until all the parameters of the FILE command have been completed. The `No files in type file-type` message displays.

Example FILE DP0: *.SYS/SORT, SYSFIL.TMP

This command creates a file called “SYSFIL.TMP” which lists all the SYS files on the DP0: disk. The filenames in SYSFIL.TMP are sorted in alphabetical order, and SYSFIL.TMP is displayed on the screen. If the screen display of the sorted records is interrupted, then the created file “SYSFIL.TMP” lists only the displayed file names.

FIX

Use this command to modify licensed and standard fonts and logos and to format the font/logo matrix for the configured imaging hardware.

Syntax FIX [*file-id.file-type* **|** *file-id* [,*file-id*...]]

Parameters Table 9-12 shows the syntax parameters of the FIX command.

Table 9-12. **Parameters of the FIX (modify font or logo file) command**

Parameter	Description
file-id	Refers to the name of a file and the file directory (must be FNT or LGO) in which it resides, in the form *file-name.file-type*. (Masking can be used for this application.)
file-type	Specifies the file directory type (must be FNT or LGO) on which the fix process is performed.

When no parameters are specified, the system defaults to all fonts and all logos in the font and logo file catalogs.

REVIEW

Use this command to review each file in a directory with the option of deleting it.

Syntax REVIEW [*disk-id*]{*file-id*[,*file-id*,...]}

Parameters Table 9-13 shows the syntax parameters of the REVIEW command.

Table 9-13. **Parameters of the REVIEW command**

Parameter	Description
disk-id	Refers to the system disk (DP0:, DP1:, DP2:, DP3:) that contains the specified directory.
file-id	Refers to the name of a file and the file directory in which it resides. The form used is *file-name.file-type* as previously defined. To delete a file from the system, the operator must have an appropriate level of access; refer to the Setting file access and task execution privileges" section in chapter 1. (Masking can be used for this application.)

After the operator requests the set of file names in a file type displayed, the file names are displayed one at a time. The operator has the option of deleting a file by entering D or exiting the display process by entering the X command.

Any response other than D or X (for example pressing the space bar) results in the current file being retained and the next file name being displayed. Any file name containing a period or dollar sign cannot be deleted and is displayed with the message `*PROTECTED*`.

RNAME

Use this command to change the name and/or directory type of a file. After the file name has been changed, the original name is deleted from the file directory.

Syntax RNAME *old-file-id new-file-id*

If the file-type part of the new file-id is not specified, the file type is the same as the old file. (Masking does not apply to this command.)

SCALE

Use this command to scale 300 spi fonts, forms, and logos to 600 spi equivalents. To scale fonts and logos, SCALE doubles all positioning metrics in the output file and employs the same set of interpolation rules used by the ROS to render the 600 spi character bit maps. The appearance of the fonts and logos produced by the SCALE and printed at 600 spi is indistinguishable from the appearance of the same unscaled 300 spi files interpolated by the ROS. Forms are scaled by changing all internal references to font, logos, and images in the form header to refer to FN6, LG6, IM6 entities.

Logon level Levels 1 through 5.

Syntax SCALE *input-filename.file-type*$_1$ [*output-filename.file-type*$_2$] [/a **|** /b **|** /o **|** /5]

Parameters Table 9-14 shows the parameters of the SCALE command.

Table 9-14. **Parameters of the SCALE command**

Parameter	Description
input-filename	Specifies the font (.FNT), form (.FRM) or logo (.LGO) file to be converted to 600 spi.
filetype1	Specifies the file type as .FNT, .FRM or .LGO.
output-filename	Specifies the name for the new 600 spi file.
filetype2	Specifies the file type as .FNT or .FN6, .FRM or .FR6, .LGO or .LG6, .MSC or .TMP; usually "6" is substituted for the last character of the original file type.
/b	Doubles the font or logo bitmaps instead of using the interpolation formula to scale the input file.
/O	Overwrites the output filename without prompting.
/A	Overrides the escapement error message `** DiagChar NNN in XYZABC.FN6 exceeds byte escape, set to 0.425 in **` if the font is not used Interpress and justification is not required. If the switch /A assign escapement is added to the command line (that is , SCALE XYZABC.FNT /A), SCALE sets the width of the large characters to 255/ 600 (.425) inches. Widths overridden in this manner may yield "compressed" characters when used in Interpress printing. Problem characters will typically be in 36 point fonts and above.

Restrictions The following restrictions apply:

- When large 300 spi proportional spaced fonts (or logos) are scaled to 600 spi and used in printing an Interpress job, the results may not be correct. If any scaled character widths are larger than 255/600 (.425) inches, the output font will not generate and the `FONT FILE, %s, CANNOT BE SCALED(BYTE ESCAPEMENT)**` message appears.
- Do not interrupt SCALE processing. If an interruption occurs, enter a carriage return to resume the process.

List tape or cartridge files

The following explains the procedure for listing tape or cartridge files.

TAPE [CARTRIDGE | TDn] LIST

Use this command to display or to create a disk file of file-names and sort them alphabetically or add leading or trailing strings to facilitate future command file manipulation of that tape or cartridge.

Logon level Levels 1 through 5.

Syntax TAPE [CARTRIDGE **|** TD*n*] LIST [,PRINT]/EX {[[/SORT,*file-name* [.*file-type*]] **|** */file-name*[.*file-type*],[*leading string*],[*trailing string*]]}

Parameters Table 9-15 shows the syntax parameters for creating tape or cartridge file lists.

Table 9-15. **Parameters of the TAPE [CARTRIDGE | TDn] LIST command**

Parameter	Description
TAPE CARTRIDGE	TAPE is TD0; CARTRIDGE is TD1.
TD*n*	Specifies a tape device number.
LIST[,PRINT]	Lists the *file-ids* of the labeled tape, beginning at the current tape position. If PRINT is omitted, the tape directory is displayed.
/EX	Prints all the file characteristics of a given file id. Note that when /EX is selected, the leading and trailing strings are not allowed. If the /EX option is not entered, only the file IDs are printed.
/SORT	Alphabetically sorts a list of file names of the files on tape. The number of files that can be sorted is limited by the availability of dynamic memory. When this limit is reached, the message `FILE/ LIST TOO LONG.ONLY FIRST xxxx FILENAMES WILL BE SORTED.` is displayed. Sort by file types for large disk or tape volumes.
,file-name [file-type]	Specifies the file created on disk that contains the alphabetically sorted list of tape files. The default *file-type* is .TMP.
/file-name [file-type]	Specifies the file, created on disk, which contains a record for each file listed in the following order: Lead str *file-id* Trailstr. The default *file-type* is .TMP
leading string	A character string (except commas) that is added before each *file-name* in the list that is created.
trailing string	A character string (except commas) appended to each *file-name* in the list that is created. The total number of leading and trailing characters cannot be greater than 50.

Example TAPE LIST,PRINT /SORT, *.FRM FRMFIL.LST

This command creates a file called “FRMFIL.LST” which lists all the .FRM files on the mounted tape. The file names in FRMFIL.LST are sorted in alphabetical order, and FRMFIL.LST is printed. If the screen display of the sorted records is interrupted during a pause by the X command, then the created file “FRMFIL.LST” lists only the displayed filenames.

Listing begins at the current tape position and continues to the end of the tape. (The listing may be stopped by entering the X command when the pause occurs on the display.) If the PRINT option is specified, the operator is asked to enter a tape volume ID. The ID can be 1 to 30 characters. If more than 30 characters are entered, only the first 30 characters are used. The following title line appears on each page of the printed listing:

```
Tape directory   date   time   Tape ID:   id string
```

The following header line precedes the tape file information on both the screen and printed listings:

```
File No.   File Name   File Size   -BF-   Date
```

Table 9-16. **File header description for FMFIL.LST listing**

File header	Description
FILE NO.	The decimal number that indicates the numerical position of the file on the tape.
FILE NAME	The *file-id*.
FILE SIZE	The number of 512 byte disk sectors.
- BF -	The number of 512 byte disk sectors in 1 tape block.
DATE	The date the file was written to tape.

If a valid tape label cannot be found, a number appears in the FILE NO. field but the other fields are blank. This is the case when listing a system software tape (SST). The first two files of the SST do not have labels (with some unlabeled tapes, other meaningless characters may appear). A string of asterisks appearing in the date field means no date was specified in the label or that it could not be converted properly.

To print the file, exit from the editor (using the END command). You may spool editor print files. The current working storage file is intact if you reenter the editor after the file is printed. The listing is in portrait mode.

TYPE

Use this command to display a source file without editing the file.

Logon level Levels 1 through 5.

Syntax TYPE [*disk-id*]*file-id*

Parameters Table 9-17 shows the syntax parameters of the TYPE command.

Table 9-17. **Parameters of the TYPE command**

Parameter	Description
disk-id	Identifies the system disk (DP0:, DP1:, DP2:, or DP3:) which contains the *file-id* to be displayed.
file-id	Refers to the name of a file and the file directory in which it resides. The form used is *file-name.file-type* as previously defined.

Each source file has line numbers associated with its data records. These line numbers are supplied by the editor during file creation. Editable files created by the COPY TAPE READ command from open-reel tape have line numbers added to them at the time the file is created. Source files downloaded from the online subsystem through HOSTCOPY must have line numbers added with the editor (refer to the MERGE command).

Only the uppercase letters A to Z, and the digits 0 to 9 can be used in source file names.

10. Maintenance tasks

This chapter contains instructions for performing routine maintenance tasks for the LPS. The activities described here are essential to maintain system reliability and productivity.

This chapter also contains instructions for using the custom transfer assist blade.

Precautions you should take

For your own safety and to protect the LPS, follow these precautions whenever you perform maintenance tasks:

- Use only replacement supplies recommended by Xerox or Xerox Limited.
- Keep replacement supplies in stock. (Refer to appendix B, “Supplies.”)
- Handle all system parts carefully when performing maintenance tasks.
- To prevent spillage, always use a drop cloth when replacing the dry ink, dry ink waste container, or fuser agent.

Cleaning supplies

The cleaning supplies necessary to complete the cleaning tasks are described in this chapter, where appropriate. Additional information can be found in the “Supplies" appendix.

Maintaining the printer

When supplies for the LPS need to be replaced, for instance, when the dry ink supply is low, the following indications appear:

- If enabled, the Attention light goes on.
- A message and instructions appear on the printer control console.
- The Hint icon appears on the printer control console.

Note: If the Attention light is turned off, the Hint icon does not appear.

To ensure that the LPS runs efficiently, replace the appropriate supplies as soon as possible after seeing the indications. If you do not do so, the printer eventually stops and does not continue until you replace the supplies.

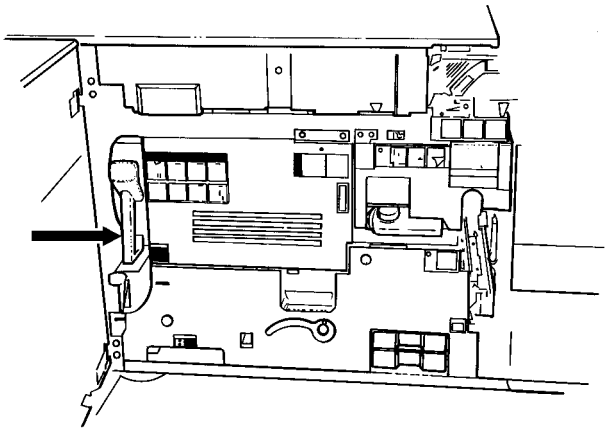
Replacing the dry ink cartridge

Note: Make sure to use only MICR dry ink. The dry ink cartridge of the DocuPrint 96/DocuPrint 96MX system is red, and the dispenser is keyed to prevent the installation of the wrong type of dry ink.

Follow this procedure to replace the dry ink cartridge:

Step 1. Open the printer's right and left doors and locate the dry ink area at the left side of the printer (see figure 10-1). There are step-by-step instructions on the panel next to the dry ink cartridge.

Figure 10-1. **Locating the dry ink cartridge**

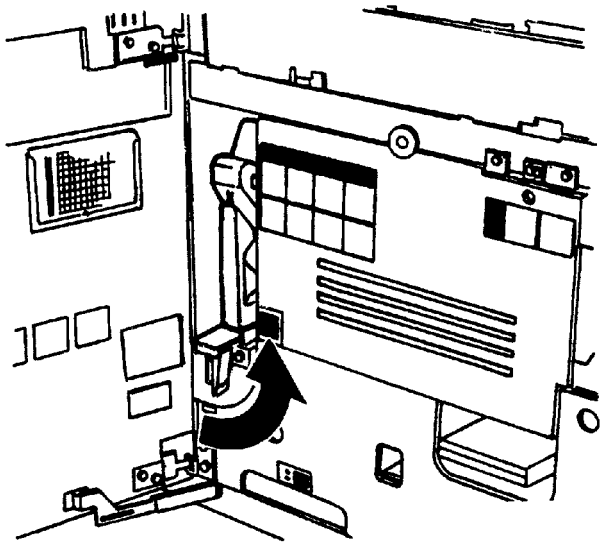


Step 2. Place a drop cloth on the floor under the dry ink area.

Step 3. Pull the empty dry ink cartridge out until it stops.

Step 4. Move the green handle to the right (the unlatched position) to release the cartridge and lid (see figure 10-2).

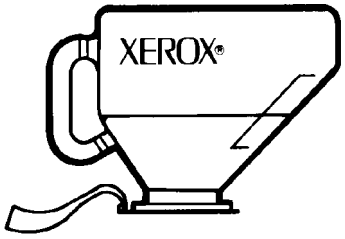
Figure 10-2. **Unlatching the dry ink cartridge**



Step 5. Remove the empty cartridge and discard it.

Step 6. Turn a new, full cartridge of dry ink upside down and shake it well to loosen the contents thoroughly (see figure 10-3).

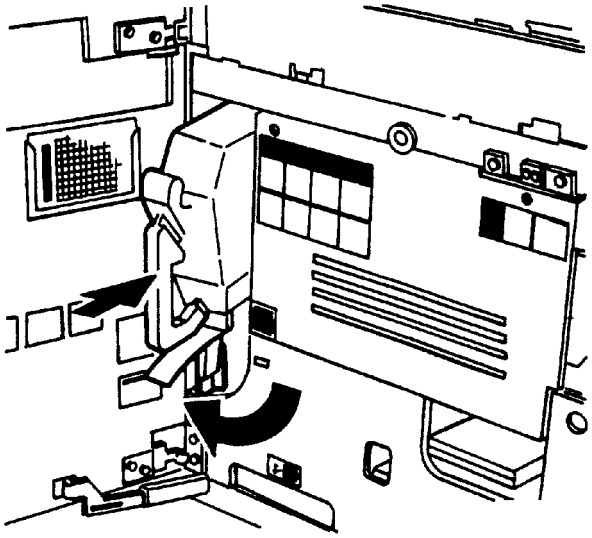
Figure 10-3. **Preparing the dry ink cartridge**



Step 7. Insert the new cartridge into the printer until it stops.

Step 8. Move the green handle to the left (the latched position) to secure the lid of the cartridge (see figure 10-4).

Figure 10-4. **Inserting and latching the dry ink cartridge**



Step 9. Hold the cartridge in place and pull off the paper seal.

Step 10. Discard the seal along with the drop cloth.

Step 11. Close the printer doors.

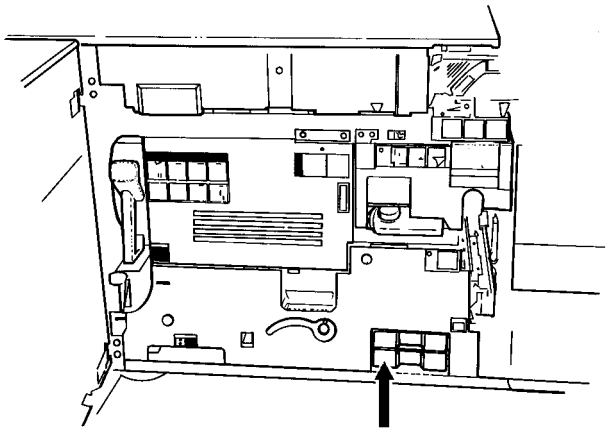
Note: If any dry ink gets on your hands, wash them with soap and cold water. Heat sets the ink permanently. If any dry ink gets on your clothes, brush them with a dry paper towel or a stiff-bristled brush. If this does not remove the ink immediately, launder with detergent and cold water. Dry cleaners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

Replacing the dry ink waste container

To replace the dry ink waste container:

Step 1. Open the right and left doors of the printer and locate the dry ink waste container (see figure 10-5).

Figure 10-5. **Dry ink waste container**

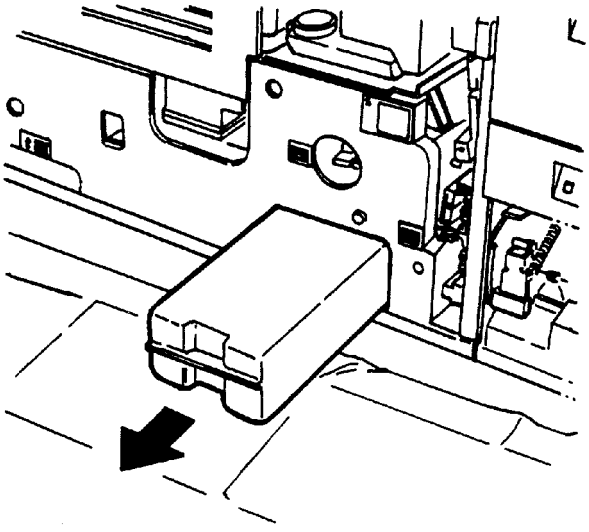


Step 2. Place a drop cloth on the floor under the dry ink waste container area.

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

Step 3. Pull the full waste container out of the printer (see figure 10-6).

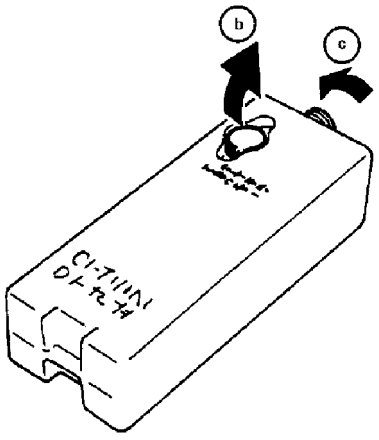
Figure 10-6. **Removing the full waste container**



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

Step 5. Place the removed cap over the opening on the end of the full waste container (see figure 10-7).

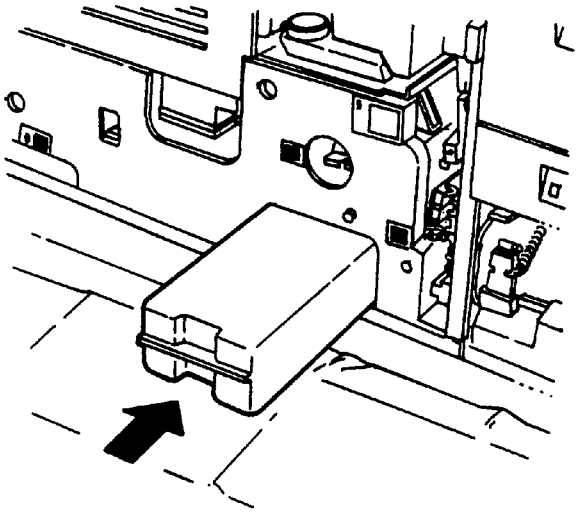
Figure 10-7. **Placing the cap on the waste container**



Step 6. Slide a new, empty, dry ink waste container into the printer until the container stops (see figure 10-8).

Note: Do not remove the cap from the new container.

Figure 10-8. **Inserting the new dry ink waste container**



Step 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 will not use a solvent that sets the stain.

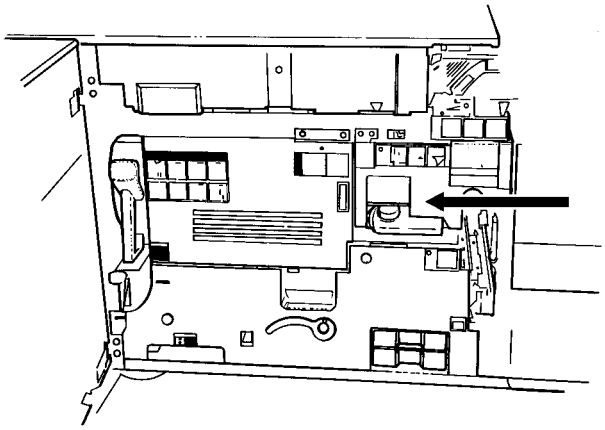
Adding fuser agent

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.

To add fuser agent:

Step 1. Open the right and left doors of the printer and locate the fuser area (see figure 10-9).

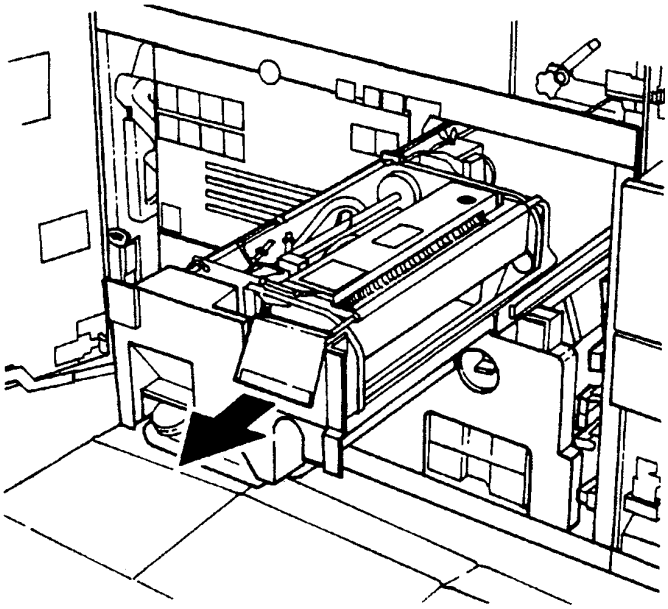
Figure 10-9. **Fuser area**



Step 2. Place a drop cloth on the floor under the fuser area.

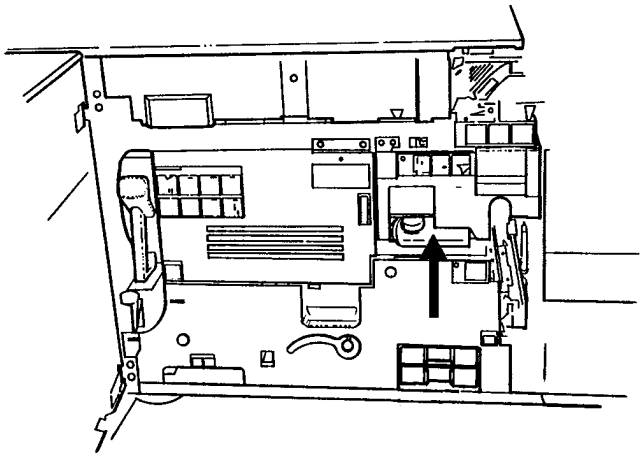
Step 3. Grasp the green handle on the fuser drawer and pull it out until it stops (see figure 10-10).

Figure 10-10. **Opening the fuser drawer**



Step 4. Locate the fuser agent reservoir (see figure 10-11).

Figure 10-11. **Locating the fuser agent reservoir**



Step 5. Pull the fuser agent reservoir out until it stops.

Step 6. Remove the reservoir cap by turning it counterclockwise.

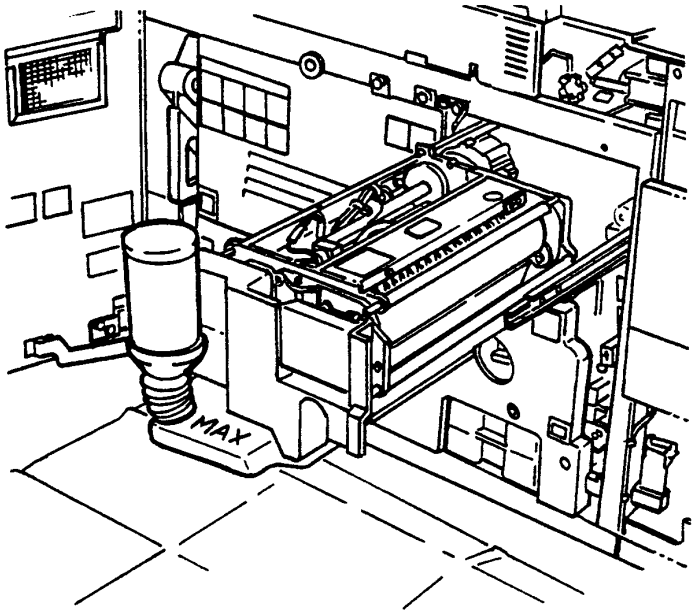
Step 7. Remove the cap from a new bottle of fuser agent.

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 antisplash seal. Do not push the fuser agent bottle into the reservoir with excessive force, as this can damage the seal.

Step 8. Carefully pour the fuser agent into the reservoir, until the level reaches the MAX line (see figure 10-12).

Figure 10-12. **Adding the fuser agent**

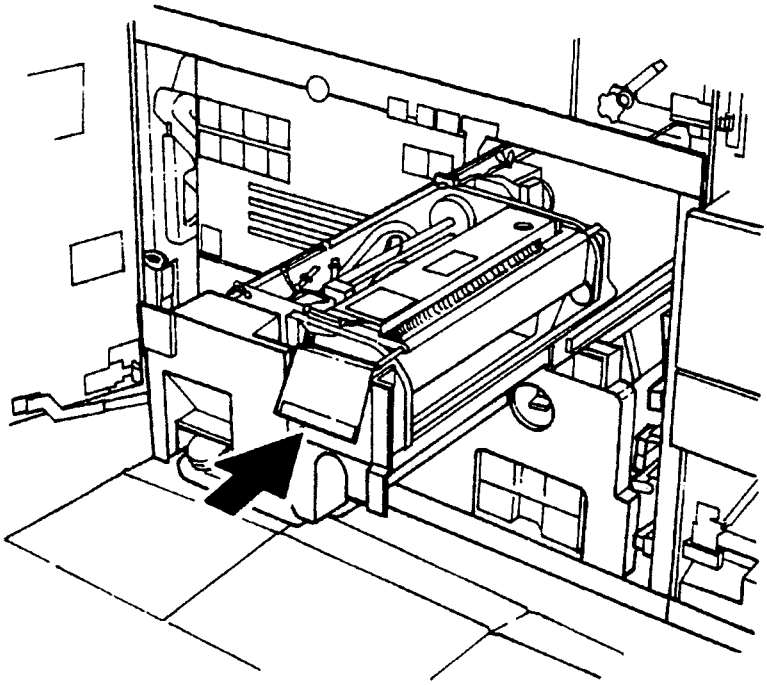


Step 9. Replace the reservoir cap by turning it clockwise.

Step 10. Push the fuser agent reservoir in until it stops.

Step 11. Push the fuser drawer in until it latches in place (see figure 10-13).

Figure 10-13. **Closing the fuser drawer**



Step 12. Close the printer doors.

Note: The fuser agent message disappears after the LPS prints between 32 and 40 sheets. Since 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).

Cleaning the sensors and the reflecting surfaces

This section lists the steps to clean the following:

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

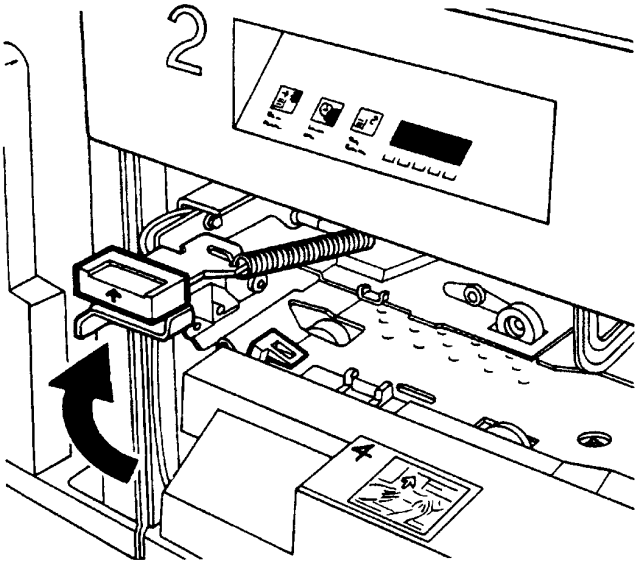
Cleaning the Q850 sensor

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

Step 1. Open the printer right and left doors and locate area 4.

Step 2. Raise the area 4 green handle until it locks into place (see figure 10-14).

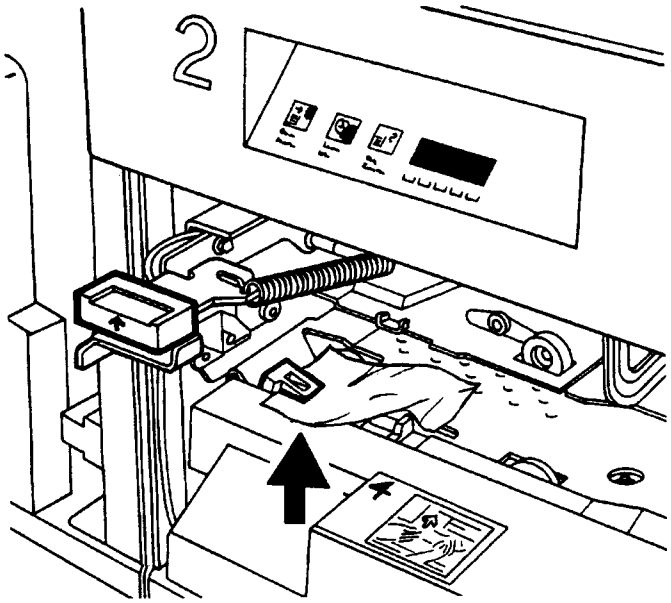
Figure 10-14. **Raising the Area 4 green handle**



Step 3. Locate the Q850 sensor (see figure 10-15).

Step 4. Place a dry cleaning pad on the sensor and move it from left to right to clean the sensor.

Figure 10-15. **Cleaning the Q850 sensor**



Step 5. Lower the area 4 green handle.

Step 6. Close the printer doors.

Cleaning the Q1011 sensor and mirror

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

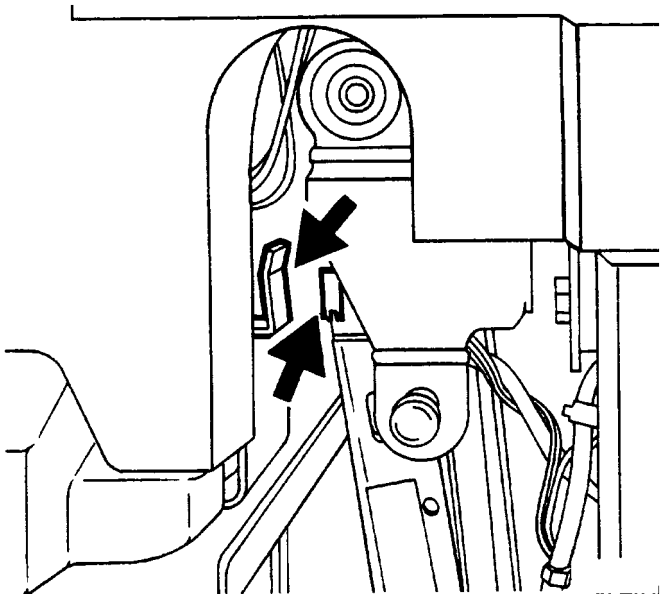
Step 1. Open the right and left doors of the printer and locate the Q1011 sensor (see figure 10-16).

Figure 10-16. **Q1011 sensor location**

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

Step 3. Wipe the sensor and mirror gently with the cleaning pad (see figure 10-17).

Figure 10-17. **Areas to clean**



Step 4. Close the printer doors.

Cleaning additional sensors

There are additional sensors which you should clean when directed by the Xerox Customer Support Center personnel. To clean the sensors, follow this procedure:

Step 1. Brush or wipe the sensor window lightly.

Step 2. Remove any paper dust present in the area.

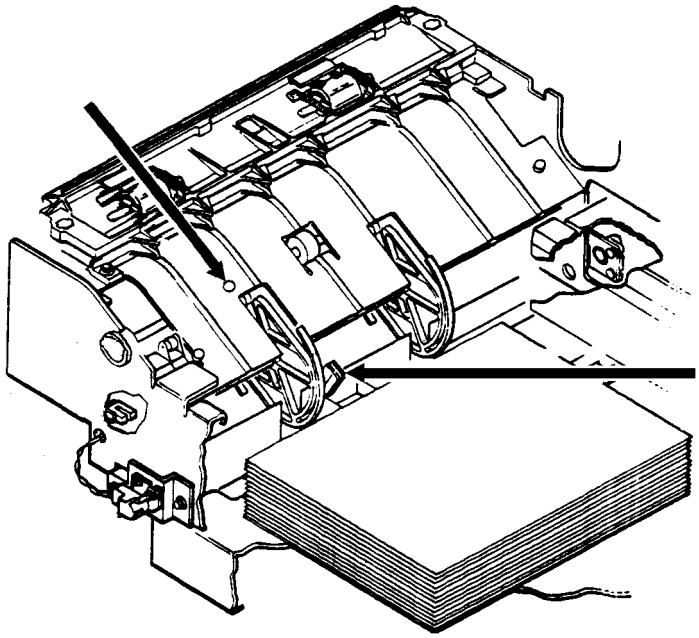
Note: If the sensor is very dirty, you may use a small amount of alcohol on a swab to clean it.

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

Sensors Q1106 and Q1166

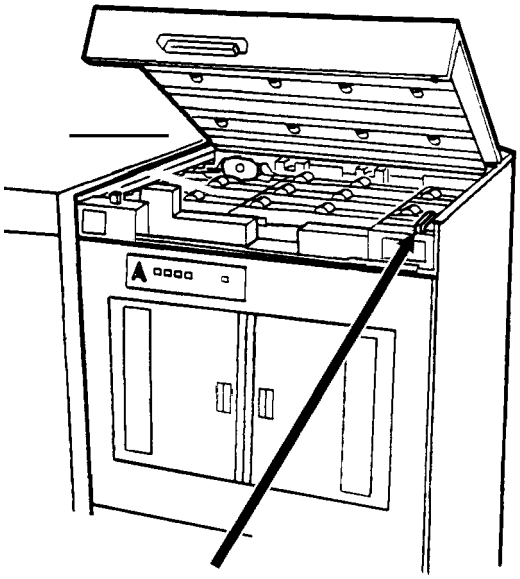
To access sensors Q1106 and Q1166, open the top cover of the high-capacity stacker. See figure 10-18 for the location of the sensors.

Figure 10-18. **Q1106 and Q1166 sensor location**



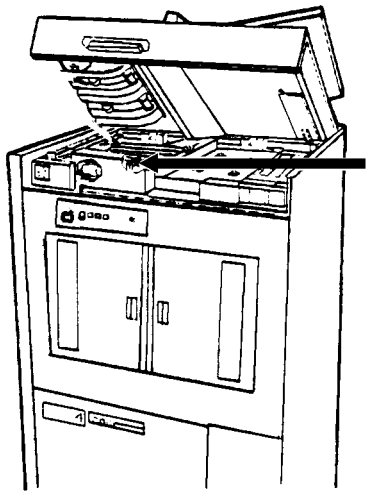
Sensor Q1107 To access sensor Q1107, open the top cover of the high-capacity stacker. See figure 10-19 for the location of the sensor.

Figure 10-19. **Q1107 sensor location**



Sensor Q1164 To access sensor Q1164, open the top cover of the last feeder/ stacker module (the one containing the purge tray). See figure 10-20 for the location of the sensor.

Figure 10-20. **Q1164 sensor location**



Cleaning the terminal and the exterior surfaces of the system

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 since it may cause damage.

Although the keyboard may seldom need to be cleaned, the exterior surfaces of the system controller and printer should be cleaned daily, if possible. Clean the keyboard and exterior surfaces with a mild household detergent which has been poured or sprayed onto a cloth lightly dampened with water. Do not saturate the cloth; just dampen it. 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**.

Cleaning the open-reel tape drive

The open-reel tape drive must be cleaned regularly to keep it functioning properly. Clean the:

- Tape path
- Exterior of the tape drive.

Note: Refer to the “Supplies” appendix for recommended cleaning materials.

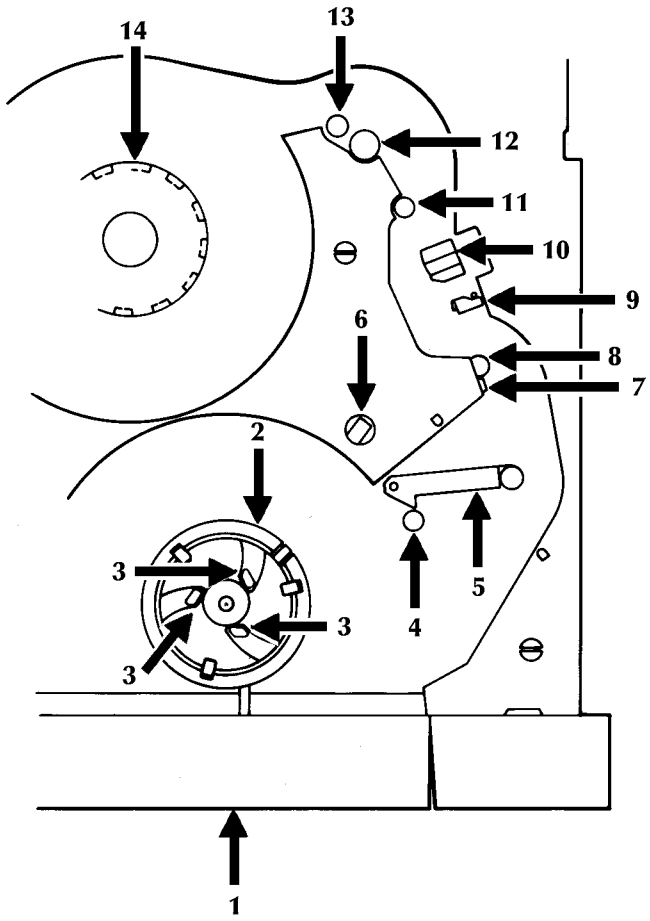
Tape drive cleaning schedule

When first using the open-reel tape drive, follow this cleaning schedule:

- If the tape drive is used continuously, clean the following parts daily:
  - Tape heads
  - Tape cleaner
  - Bollards
  - Rollers
  - Tacho roller.
- Clean after 100 tape loads:
  - Supply reel
  - Clamp pads.
- Clean as required:
  - Painted surfaces
  - Tape path cover.

Figure 10-21 shows the location of the tape path components.

Figure 10-21. **9-track tape drive tape path components**



1 **Tape loading door**
2 **Supply hub**
3 **Clamp pads**
4 **Roller**
5 **Tension arm**
6 **Hub Release lever**
7 **BOT/EOT sensor**
8 **Bollard**
9 **Tape cleaner**
10 **Tape heads**
11 **Bollard**
12 **Tachometer**
13 **Roller**
14 **Take-up hub**

Inspect the tape path regularly and monitor the error rates. You may be able to clean less frequently after seeing the results of this schedule.

Cleaning precautions—READ BEFORE CLEANING

Note the following:

- The edges of the tape cleaner are extremely sharp. Observe great care when cleaning them.
- Avoid inhaling fumes from the cleaning fluids.
- Keep the cleaning solution containers tightly closed when not in use.
- Use the cleaning solutions only in well-ventilated areas.
- If you have sensitive skin, you may want to wear gloves when using the cleaning solutions.
- Avoid prolonged contact with the skin.

Cleaning procedures

This section lists the steps to access and clean the tape path, and to clean the exterior of the tape drive.

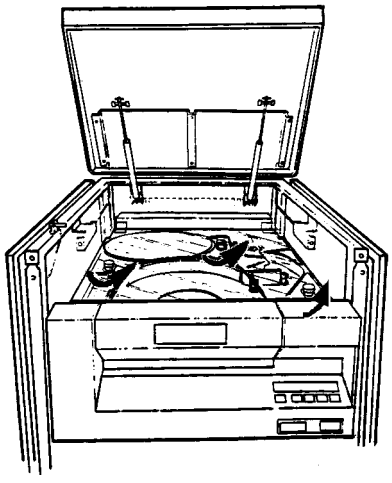
Access to the tape path

To access the tape path:

Step 1. Open the cover of the peripheral cabinet.

Step 2. Release the three turnbuckles on the tape path cover by turning them counter clockwise (see figure 10-22).

Figure 10-22. **Releasing the turnbuckles**



Step 3. Raise the cover as far as it will go.

Step 4. Press the Reset button to open the tape loading door.

Step 5. Turn off the tape drive by pressing the Power switch off.

Cleaning the tape path

To clean the tape path:

Step 1. Lightly moisten a soft, lint-free cloth with cleaning solution.

Step 2. Carefully wipe the surfaces of the head and the tape cleaner, removing all traces of dirt and oxide.

In *extreme* cases, you may need to use a scrubbing action to remove hard oxide deposits.

Warning: The edges of the tape cleaner are extremely sharp. Observe great care when cleaning them.

Step 3. Inspect the remaining tape path components. If necessary, clean the following components:

- Tape contact surfaces of the roller guides
- Tension arm roller
- Surface of the tachometer (tacho) roller.

Caution: Do not use alcohol-based fluid or any other solvents on plastic or painted parts.

Caution: Do not allow cleaning fluid to enter pregreased roller bearings.

Step 4. Remove any dirt or oxide you find around the take-up and supply reel areas.

Step 5. Close the tape path cover and secure the turnbuckles by turning them clockwise.

Step 6. Close the cover of the peripheral cabinet.

Step 7. Turn on the tape drive by pressing the Power switch on.

Cleaning the exterior of the tape drive

To clean the exterior of the tape drive, you must use the following materials:

- Antistatic cleaner and a soft cloth to clean the tape path cover.
- A cloth moistened with soapy water to clean the painted surfaces of the tape drive.

Cleaning the 1/2 inch cartridge tape drive

You must clean the 1/2 inch cartridge tape drive regularly to keep it functioning properly. You can clean the:

- Tape path
- Cartridges.

Cleaning supplies

A cleaning cartridge is shipped with each 1/2 inch cartridge tape drive. This cartridge should be replaced after 500 uses.

When to clean the tape drive

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.

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

Cleaning procedures

This section lists the steps to clean the tape path and the cartridge.

Cleaning the tape path

To clean the tape path:

Step 1. Remove any cartridge loaded in the tape drive.

Step 2. Insert the cleaning cartridge.

Caution: The cleaning cartridge must be undamaged and clean.

The cleaning cycle takes approximately 15 seconds.

Step 3. Remove the cleaning cartridge when it is unloaded.

Step 4. Mark the usage on the tape label. Do not use a grease pencil.

Cleaning a cartridge

Before inserting a cartridge, inspect it for damage or dirt.

If the cartridge is dirty, wipe the outside surfaces with a lint-free cloth.

Cleaning the 1/4 inch cartridge tape drive

The 1/4 inch cartridge 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.

Step 1. If there is a cartridge in the tape drive, remove it.

Step 2. Insert the cleaning cartridge into the tape drive and close the door. Cleaning begins automatically once the cartridge is inserted.

Step 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.

Using the custom transfer assist blade

The transfer assist blade in the Xerox DocuPrint 96/DocuPrint 96MX LPS assures good print quality for your jobs. A kit is available allowing you to customize a transfer assist blade for use with non-standard paper size.

Note: Use the custom transfer assist blade on all 4635MX systems running non-standard paper sizes to ensure acceptable MICR line quality.

When not to use the custom transfer assist blade

You cannot use the custom transfer assist blade for print jobs that use more than one paper size. In addition, the following range of paper lengths cannot use the custom 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: For the above paper sizes, the standard transfer assist blade must be used.

Caution: To avoid damage to the photoreceptor, you must perform the Set Tray Size task explained in the “Status and print tasks” chapter.

Installing the custom transfer assist blade

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

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

Setting tray size with the custom transfer assist blades

When you are using the custom transfer assist blade, you must set the tray length differently than described in the “Set tray size” section of the “Status and print tasks” chapter. Use tables 10-1 and 10-2 to determine the tray length setting to use.

Table 10-1. **Tray length settings for custom transfer assist blades (U.S. markets)**

Paper size	Set tray 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 10-2. **Tray length settings for custom transfer assist blades (Non-U.S. markets)**

Paper size	Set tray 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

Note: Set the tray width to the width of the custom paper.

10. Maintenance tasks

This chapter contains instructions for performing routine maintenance tasks for the LPS. The activities described here are essential to maintain system reliability and productivity.

This chapter also contains instructions for using the custom transfer assist blade.

Precautions you should take

For your own safety and to protect the LPS, follow these precautions whenever you perform maintenance tasks:

- Use only replacement supplies recommended by Xerox or Xerox Limited.
- Keep replacement supplies in stock. (Refer to appendix B, “Supplies.”)
- Handle all system parts carefully when performing maintenance tasks.
- To prevent spillage, always use a drop cloth when replacing the dry ink, dry ink waste container, or fuser agent.

Cleaning supplies

The cleaning supplies necessary to complete the cleaning tasks are described in this chapter, where appropriate. Additional information can be found in the “Supplies" appendix.

Maintaining the printer

When supplies for the LPS need to be replaced, for instance, when the dry ink supply is low, the following indications appear:

- If enabled, the Attention light goes on.
- A message and instructions appear on the printer control console.
- The Hint icon appears on the printer control console.

Note: If the Attention light is turned off, the Hint icon does not appear.

To ensure that the LPS runs efficiently, replace the appropriate supplies as soon as possible after seeing the indications. If you do not do so, the printer eventually stops and does not continue until you replace the supplies.

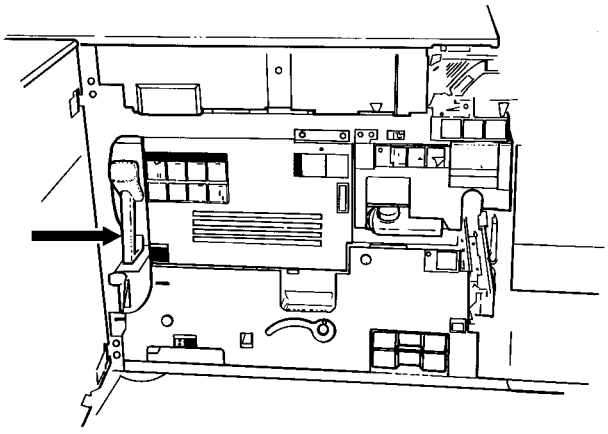
Replacing the dry ink cartridge

Note: Make sure to use only MICR dry ink. The dry ink cartridge of the DocuPrint 96/DocuPrint 96MX system is red, and the dispenser is keyed to prevent the installation of the wrong type of dry ink.

Follow this procedure to replace the dry ink cartridge:

Step 1. Open the printer's right and left doors and locate the dry ink area at the left side of the printer (see figure 10-1). There are step-by-step instructions on the panel next to the dry ink cartridge.

Figure 10-1. **Locating the dry ink cartridge**

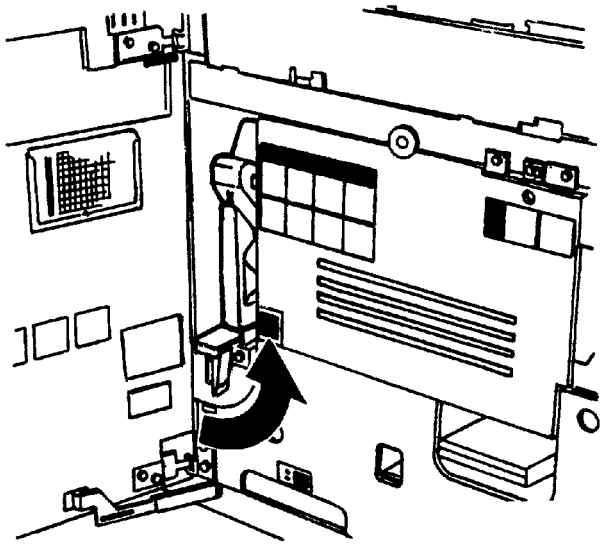


Step 2. Place a drop cloth on the floor under the dry ink area.

Step 3. Pull the empty dry ink cartridge out until it stops.

Step 4. Move the green handle to the right (the unlatched position) to release the cartridge and lid (see figure 10-2).

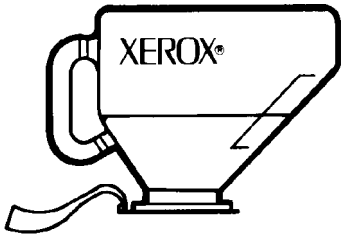
Figure 10-2. **Unlatching the dry ink cartridge**



Step 5. Remove the empty cartridge and discard it.

Step 6. Turn a new, full cartridge of dry ink upside down and shake it well to loosen the contents thoroughly (see figure 10-3).

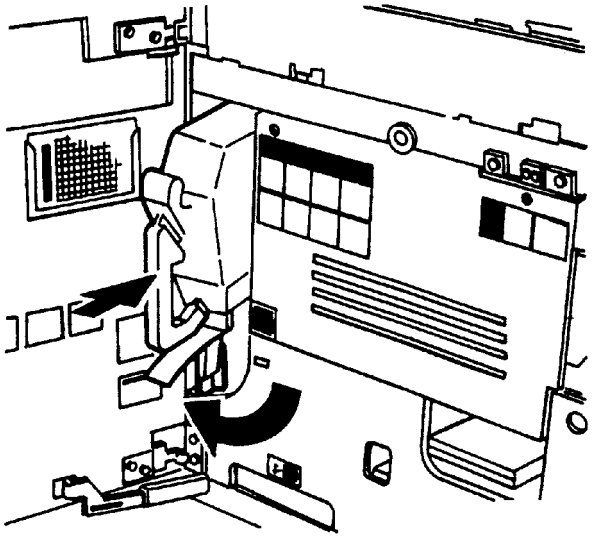
Figure 10-3. **Preparing the dry ink cartridge**



Step 7. Insert the new cartridge into the printer until it stops.

Step 8. Move the green handle to the left (the latched position) to secure the lid of the cartridge (see figure 10-4).

Figure 10-4. **Inserting and latching the dry ink cartridge**



Step 9. Hold the cartridge in place and pull off the paper seal.

Step 10. Discard the seal along with the drop cloth.

Step 11. Close the printer doors.

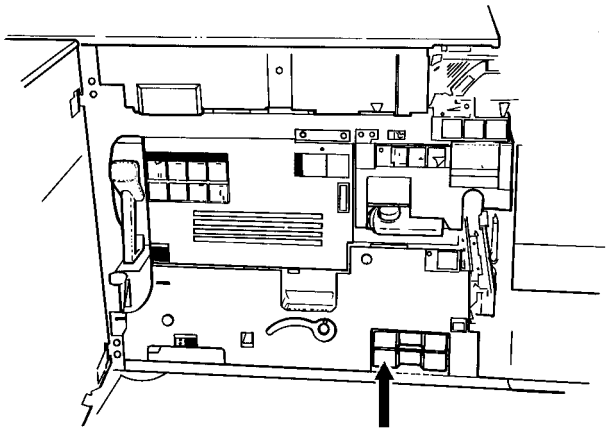
Note: If any dry ink gets on your hands, wash them with soap and cold water. Heat sets the ink permanently. If any dry ink gets on your clothes, brush them with a dry paper towel or a stiff-bristled brush. If this does not remove the ink immediately, launder with detergent and cold water. Dry cleaners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

Replacing the dry ink waste container

To replace the dry ink waste container:

Step 1. Open the right and left doors of the printer and locate the dry ink waste container (see figure 10-5).

Figure 10-5. **Dry ink waste container**

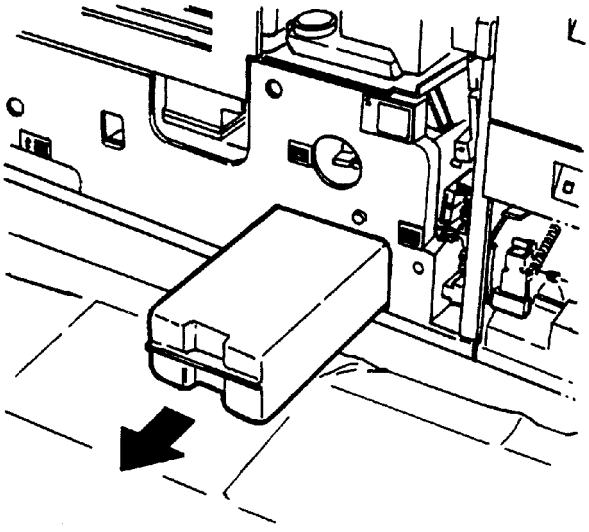


Step 2. Place a drop cloth on the floor under the dry ink waste container area.

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

Step 3. Pull the full waste container out of the printer (see figure 10-6).

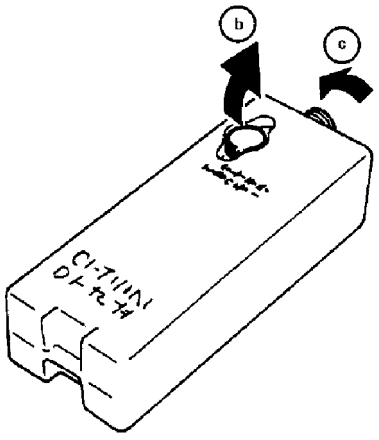
Figure 10-6. **Removing the full waste container**



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

Step 5. Place the removed cap over the opening on the end of the full waste container (see figure 10-7).

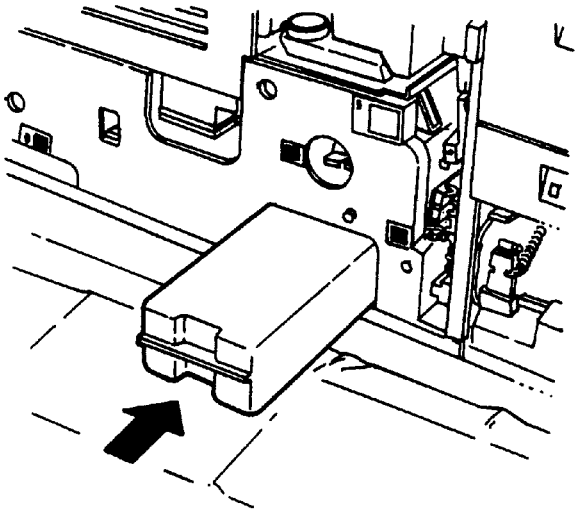
Figure 10-7. **Placing the cap on the waste container**



Step 6. Slide a new, empty, dry ink waste container into the printer until the container stops (see figure 10-8).

Note: Do not remove the cap from the new container.

Figure 10-8. **Inserting the new dry ink waste container**



Step 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 will not use a solvent that sets the stain.

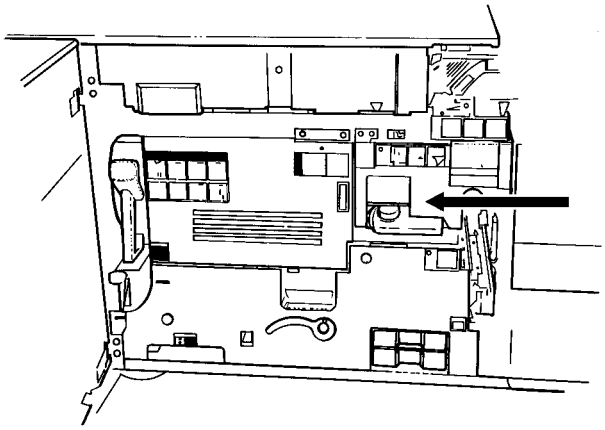
Adding fuser agent

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.

To add fuser agent:

Step 1. Open the right and left doors of the printer and locate the fuser area (see figure 10-9).

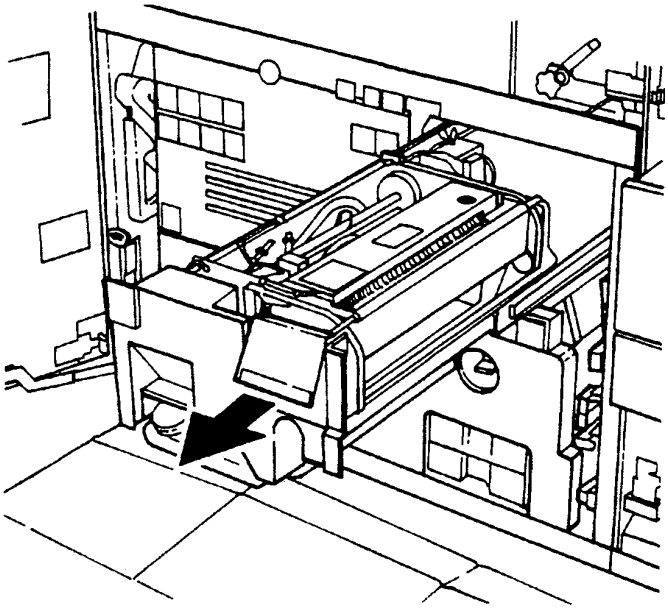
Figure 10-9. **Fuser area**



Step 2. Place a drop cloth on the floor under the fuser area.

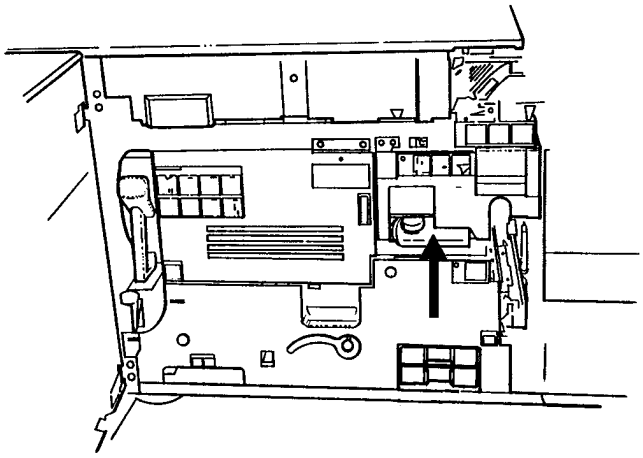
Step 3. Grasp the green handle on the fuser drawer and pull it out until it stops (see figure 10-10).

Figure 10-10. **Opening the fuser drawer**



Step 4. Locate the fuser agent reservoir (see figure 10-11).

Figure 10-11. **Locating the fuser agent reservoir**



Step 5. Pull the fuser agent reservoir out until it stops.

Step 6. Remove the reservoir cap by turning it counterclockwise.

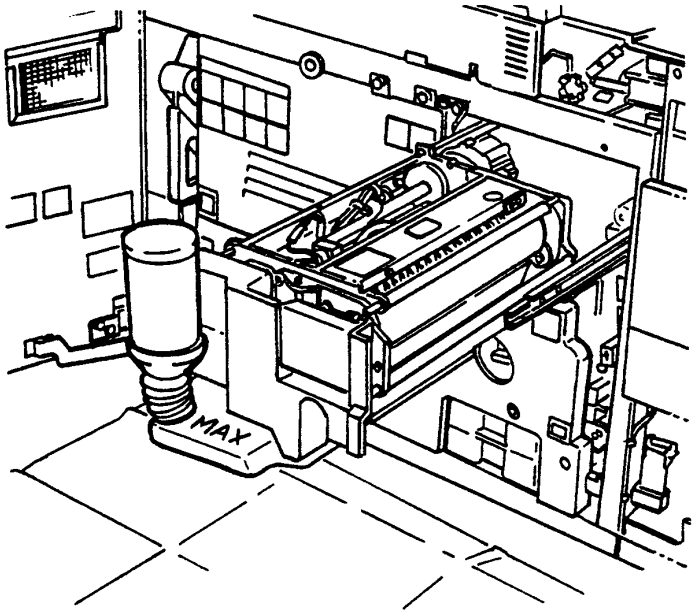
Step 7. Remove the cap from a new bottle of fuser agent.

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 antisplash seal. Do not push the fuser agent bottle into the reservoir with excessive force, as this can damage the seal.

Step 8. Carefully pour the fuser agent into the reservoir, until the level reaches the MAX line (see figure 10-12).

Figure 10-12. **Adding the fuser agent**

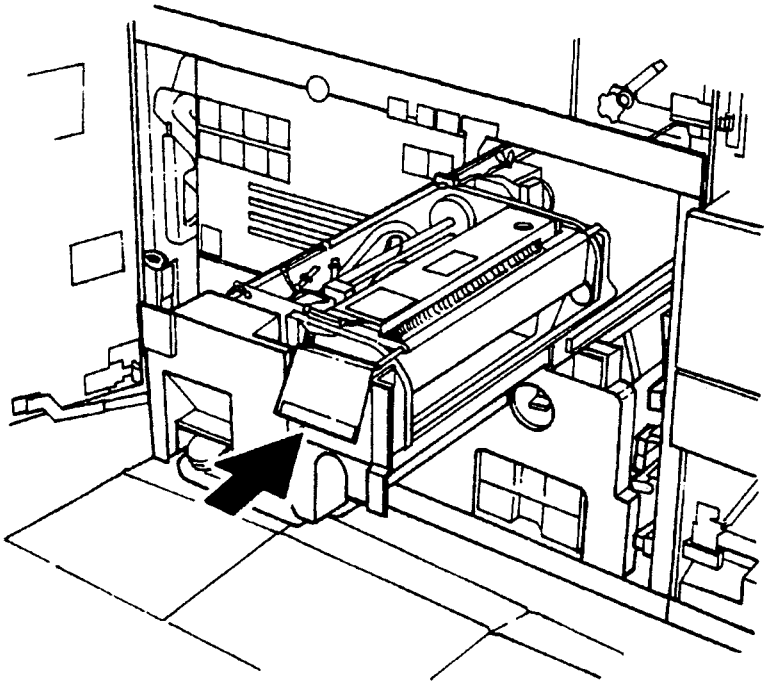


Step 9. Replace the reservoir cap by turning it clockwise.

Step 10. Push the fuser agent reservoir in until it stops.

Step 11. Push the fuser drawer in until it latches in place (see figure 10-13).

Figure 10-13. **Closing the fuser drawer**



Step 12. Close the printer doors.

Note: The fuser agent message disappears after the LPS prints between 32 and 40 sheets. Since 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).

Cleaning the sensors and the reflecting surfaces

This section lists the steps to clean the following:

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

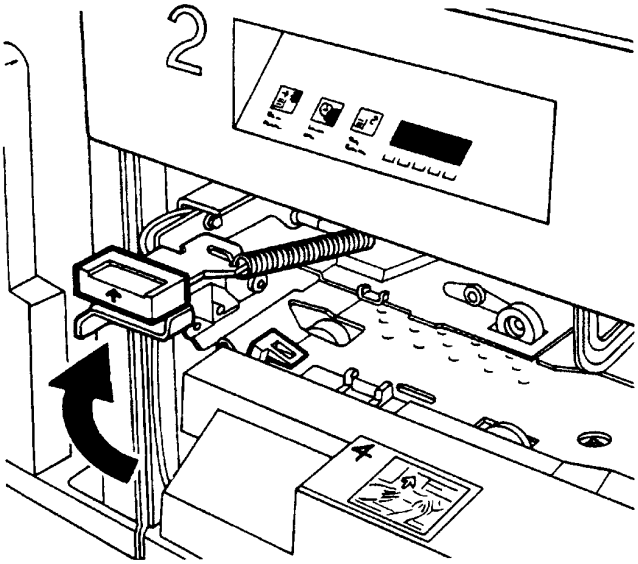
Cleaning the Q850 sensor

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

Step 1. Open the printer right and left doors and locate area 4.

Step 2. Raise the area 4 green handle until it locks into place (see figure 10-14).

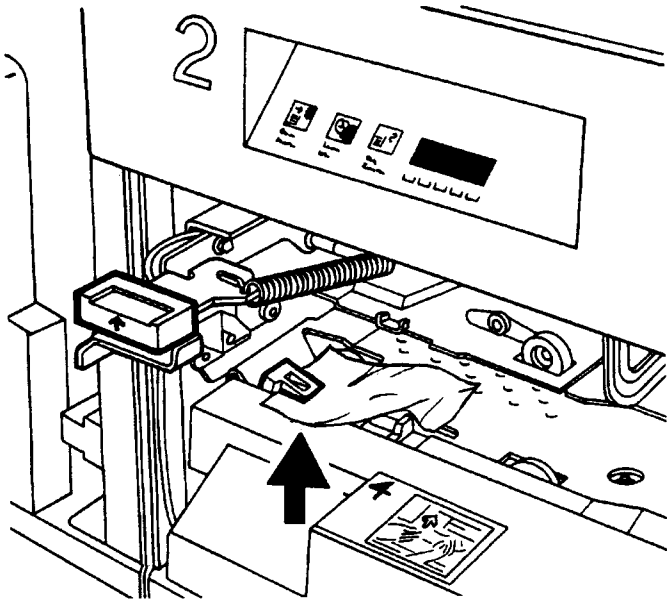
Figure 10-14. **Raising the Area 4 green handle**



Step 3. Locate the Q850 sensor (see figure 10-15).

Step 4. Place a dry cleaning pad on the sensor and move it from left to right to clean the sensor.

Figure 10-15. **Cleaning the Q850 sensor**



Step 5. Lower the area 4 green handle.

Step 6. Close the printer doors.

Cleaning the Q1011 sensor and mirror

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

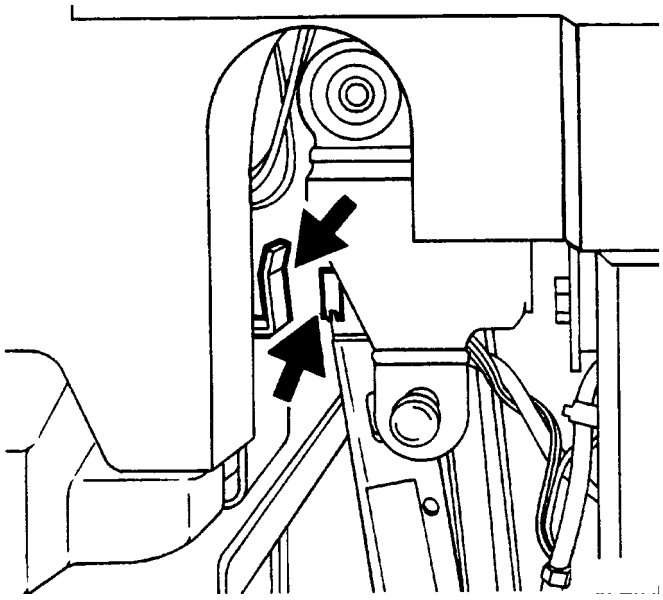
Step 1. Open the right and left doors of the printer and locate the Q1011 sensor (see figure 10-16).

Figure 10-16. **Q1011 sensor location**

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

Step 3. Wipe the sensor and mirror gently with the cleaning pad (see figure 10-17).

Figure 10-17. **Areas to clean**



Step 4. Close the printer doors.

Cleaning additional sensors

There are additional sensors which you should clean when directed by the Xerox Customer Support Center personnel. To clean the sensors, follow this procedure:

Step 1. Brush or wipe the sensor window lightly.

Step 2. Remove any paper dust present in the area.

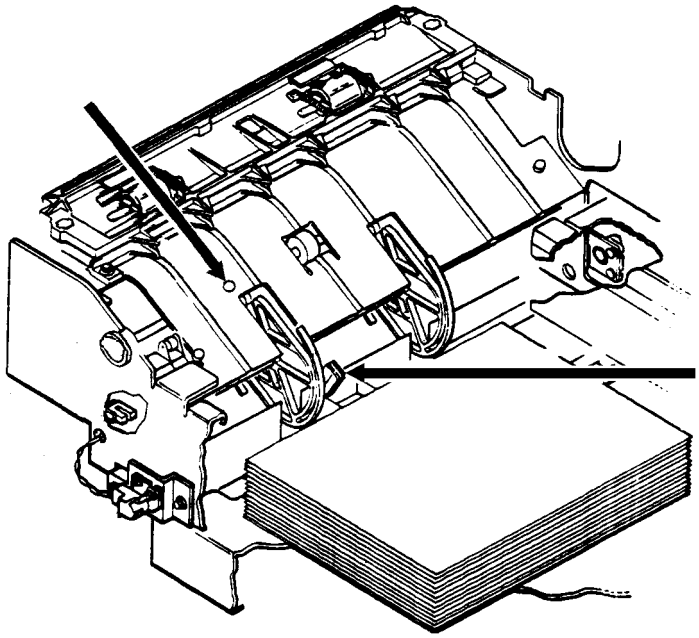
Note: If the sensor is very dirty, you may use a small amount of alcohol on a swab to clean it.

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

Sensors Q1106 and Q1166

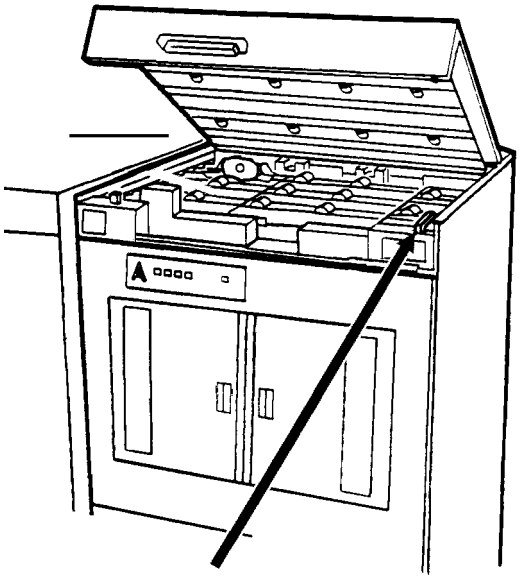
To access sensors Q1106 and Q1166, open the top cover of the high-capacity stacker. See figure 10-18 for the location of the sensors.

Figure 10-18. **Q1106 and Q1166 sensor location**



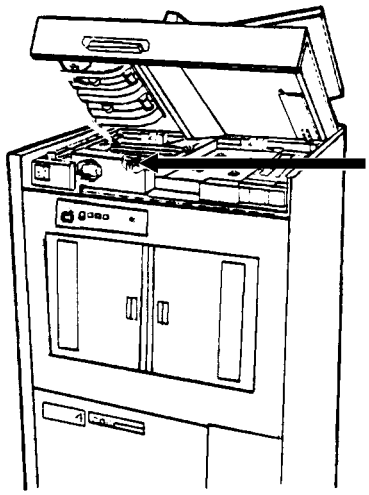
Sensor Q1107 To access sensor Q1107, open the top cover of the high-capacity stacker. See figure 10-19 for the location of the sensor.

Figure 10-19. **Q1107 sensor location**



Sensor Q1164 To access sensor Q1164, open the top cover of the last feeder/ stacker module (the one containing the purge tray). See figure 10-20 for the location of the sensor.

Figure 10-20. **Q1164 sensor location**



Cleaning the terminal and the exterior surfaces of the system

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 since it may cause damage.

Although the keyboard may seldom need to be cleaned, the exterior surfaces of the system controller and printer should be cleaned daily, if possible. Clean the keyboard and exterior surfaces with a mild household detergent which has been poured or sprayed onto a cloth lightly dampened with water. Do not saturate the cloth; just dampen it. 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**.

Cleaning the open-reel tape drive

The open-reel tape drive must be cleaned regularly to keep it functioning properly. Clean the:

- Tape path
- Exterior of the tape drive.

Note: Refer to the “Supplies” appendix for recommended cleaning materials.

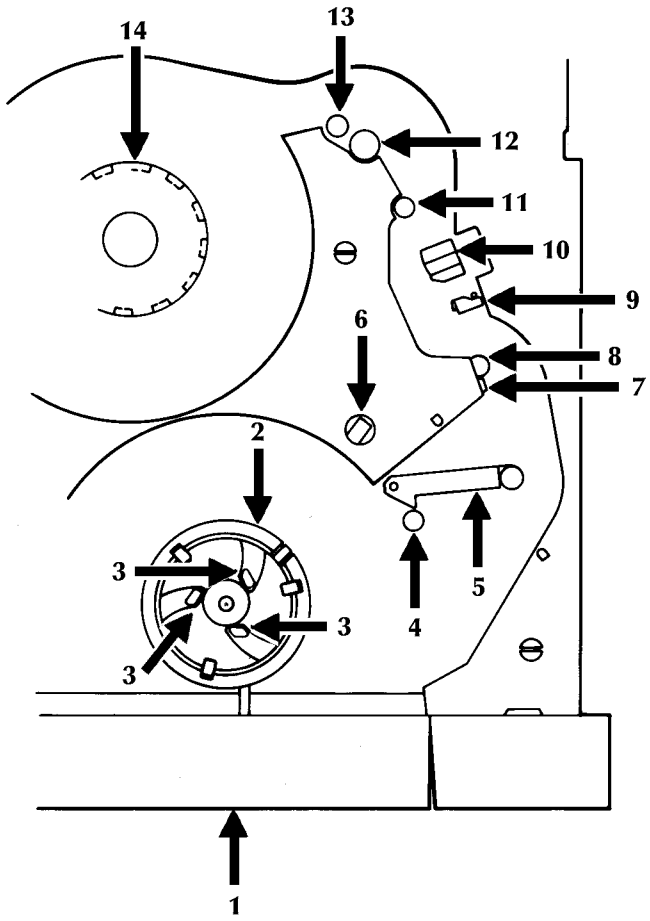
Tape drive cleaning schedule

When first using the open-reel tape drive, follow this cleaning schedule:

- If the tape drive is used continuously, clean the following parts daily:
  - Tape heads
  - Tape cleaner
  - Bollards
  - Rollers
  - Tacho roller.
- Clean after 100 tape loads:
  - Supply reel
  - Clamp pads.
- Clean as required:
  - Painted surfaces
  - Tape path cover.

Figure 10-21 shows the location of the tape path components.

Figure 10-21. **9-track tape drive tape path components**



1 **Tape loading door**
2 **Supply hub**
3 **Clamp pads**
4 **Roller**
5 **Tension arm**
6 **Hub Release lever**
7 **BOT/EOT sensor**
8 **Bollard**
9 **Tape cleaner**
10 **Tape heads**
11 **Bollard**
12 **Tachometer**
13 **Roller**
14 **Take-up hub**

Inspect the tape path regularly and monitor the error rates. You may be able to clean less frequently after seeing the results of this schedule.

Cleaning precautions—READ BEFORE CLEANING

Note the following:

- The edges of the tape cleaner are extremely sharp. Observe great care when cleaning them.
- Avoid inhaling fumes from the cleaning fluids.
- Keep the cleaning solution containers tightly closed when not in use.
- Use the cleaning solutions only in well-ventilated areas.
- If you have sensitive skin, you may want to wear gloves when using the cleaning solutions.
- Avoid prolonged contact with the skin.

Cleaning procedures

This section lists the steps to access and clean the tape path, and to clean the exterior of the tape drive.

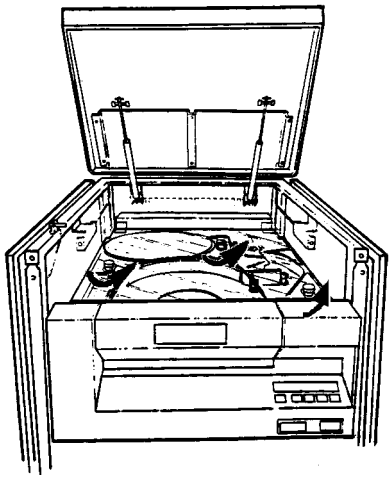
Access to the tape path

To access the tape path:

Step 1. Open the cover of the peripheral cabinet.

Step 2. Release the three turnbuckles on the tape path cover by turning them counter clockwise (see figure 10-22).

Figure 10-22. **Releasing the turnbuckles**



Step 3. Raise the cover as far as it will go.

Step 4. Press the Reset button to open the tape loading door.

Step 5. Turn off the tape drive by pressing the Power switch off.

Cleaning the tape path

To clean the tape path:

Step 1. Lightly moisten a soft, lint-free cloth with cleaning solution.

Step 2. Carefully wipe the surfaces of the head and the tape cleaner, removing all traces of dirt and oxide.

In *extreme* cases, you may need to use a scrubbing action to remove hard oxide deposits.

Warning: The edges of the tape cleaner are extremely sharp. Observe great care when cleaning them.

Step 3. Inspect the remaining tape path components. If necessary, clean the following components:

- Tape contact surfaces of the roller guides
- Tension arm roller
- Surface of the tachometer (tacho) roller.

Caution: Do not use alcohol-based fluid or any other solvents on plastic or painted parts.

Caution: Do not allow cleaning fluid to enter pregreased roller bearings.

Step 4. Remove any dirt or oxide you find around the take-up and supply reel areas.

Step 5. Close the tape path cover and secure the turnbuckles by turning them clockwise.

Step 6. Close the cover of the peripheral cabinet.

Step 7. Turn on the tape drive by pressing the Power switch on.

Cleaning the exterior of the tape drive

To clean the exterior of the tape drive, you must use the following materials:

- Antistatic cleaner and a soft cloth to clean the tape path cover.
- A cloth moistened with soapy water to clean the painted surfaces of the tape drive.

Cleaning the 1/2 inch cartridge tape drive

You must clean the 1/2 inch cartridge tape drive regularly to keep it functioning properly. You can clean the:

- Tape path
- Cartridges.

Cleaning supplies

A cleaning cartridge is shipped with each 1/2 inch cartridge tape drive. This cartridge should be replaced after 500 uses.

When to clean the tape drive

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.

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

Cleaning procedures

This section lists the steps to clean the tape path and the cartridge.

Cleaning the tape path

To clean the tape path:

Step 1. Remove any cartridge loaded in the tape drive.

Step 2. Insert the cleaning cartridge.

Caution: The cleaning cartridge must be undamaged and clean.

The cleaning cycle takes approximately 15 seconds.

Step 3. Remove the cleaning cartridge when it is unloaded.

Step 4. Mark the usage on the tape label. Do not use a grease pencil.

Cleaning a cartridge

Before inserting a cartridge, inspect it for damage or dirt.

If the cartridge is dirty, wipe the outside surfaces with a lint-free cloth.

Cleaning the 1/4 inch cartridge tape drive

The 1/4 inch cartridge 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.

Step 1. If there is a cartridge in the tape drive, remove it.

Step 2. Insert the cleaning cartridge into the tape drive and close the door. Cleaning begins automatically once the cartridge is inserted.

Step 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.

Using the custom transfer assist blade

The transfer assist blade in the Xerox DocuPrint 96/DocuPrint 96MX LPS assures good print quality for your jobs. A kit is available allowing you to customize a transfer assist blade for use with non-standard paper size.

Note: Use the custom transfer assist blade on all 4635MX systems running non-standard paper sizes to ensure acceptable MICR line quality.

When not to use the custom transfer assist blade

You cannot use the custom transfer assist blade for print jobs that use more than one paper size. In addition, the following range of paper lengths cannot use the custom 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: For the above paper sizes, the standard transfer assist blade must be used.

Caution: To avoid damage to the photoreceptor, you must perform the Set Tray Size task explained in the “Status and print tasks” chapter.

Installing the custom transfer assist blade

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

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

Setting tray size with the custom transfer assist blades

When you are using the custom transfer assist blade, you must set the tray length differently than described in the “Set tray size” section of the “Status and print tasks” chapter. Use tables 10-1 and 10-2 to determine the tray length setting to use.

Table 10-1. **Tray length settings for custom transfer assist blades (U.S. markets)**

Paper size	Set tray 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 10-2. **Tray length settings for custom transfer assist blades (Non-U.S. markets)**

Paper size	Set tray 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

Note: Set the tray width to the width of the custom paper.

11. Problem solving tasks

This chapter contains instructions for diagnosing and solving common problems that may arise when operating the LPS. Also included are instructions for placing a service call, when needed.

LPS problems

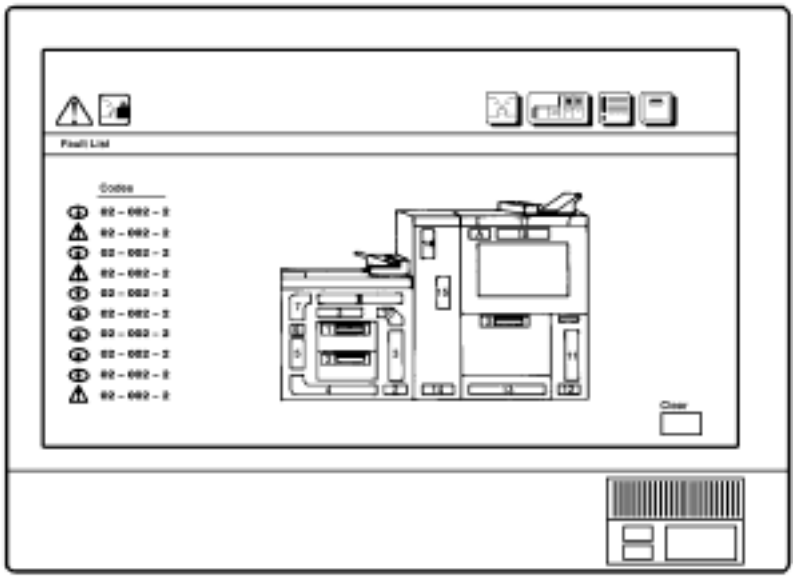
The following sections deal with LPS problems.

Fault masking and the printer control console

The Xerox DocuPrint 96/DocuPrint 96MX LPS allows you to continue printing while certain faults or conditions exist in areas of the printer not currently being used. The LPS does this by “masking” the fault or condition and continuing to print the current job. For example, if you are printing a report using feeder tray 1 and stacking into stacker bin A, the LPS continues printing even if a jam exists in feeder tray 2 or if stacker bin B is full. Whenever there is a masked fault or condition, the Hint icon (a light yellow circle with an asterisk inside) appears on the printer control console and the Attention light goes on. If a condition is being masked, such as low dry ink, a message also appears in line 3 of the message area of the printer control console. The message is preceded by an asterisk. To display the area containing the masked fault (for example, the location of the paper jam), touch the Fault List icon on the printer control console.

The Fault List screen appears. (See figure 11-1.)

Figure 11-1. **Fault List screen**



The Fault List screen displays any outstanding fault codes and shows a mimic of the printer, with the area containing the masked fault highlighted in light yellow.

Note the following:

- For greatest printer productivity, clear any masked faults at your earliest opportunity.
- When the printer stops because of a fault, it is a good idea to display the Fault List screen after clearing the fault to see if there are any outstanding masked faults. Clear these masked faults before continuing with the print job. Doing so will enhance printer productivity.
- When there is a fault that cannot be masked, that is, that causes the printer to stop, the Fault icon (a dark yellow triangle with an exclamation point inside) appears on the printer control console and the Attention light flashes. The Fault screen appears on the printer control console, highlighting (in dark yellow) the area(s) of the printer containing the fault, and instructions are given for clearing the fault.
- If a fault exists in the system at the time that a masked fault occurs, only the Fault icon appears on the printer control console. Any masked fault condition messages still appear in the message area of the printer control console.

Printing problems

When prints are skewed or damaged, follow these steps to adjust the registration transport roll levers (heavy paper levers):

Prints are skewed or damaged

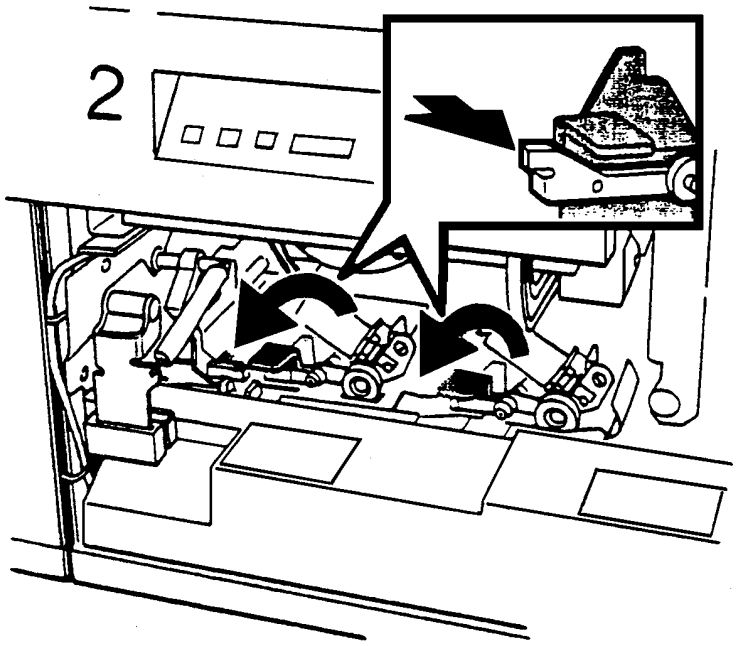
To correct this problem, adjust the registration transport roll levers (heavy paper levers) in the following way:

Step 1. Open the right and left doors of the printer and locate the heavy paper levers. (They are located behind area 4 and area 2.)

Step 2. Pull the levers forward (toward you) on the silver latch release.

Step 3. Turn both levers to the left (counter clockwise), as illustrated in figure 11-2.

Figure 11-2. **Locating the two heavy weight levers**



Step 4. When the print job is complete, return the levers to their normal position.

Step 5. Close the printer doors.

Note the following:

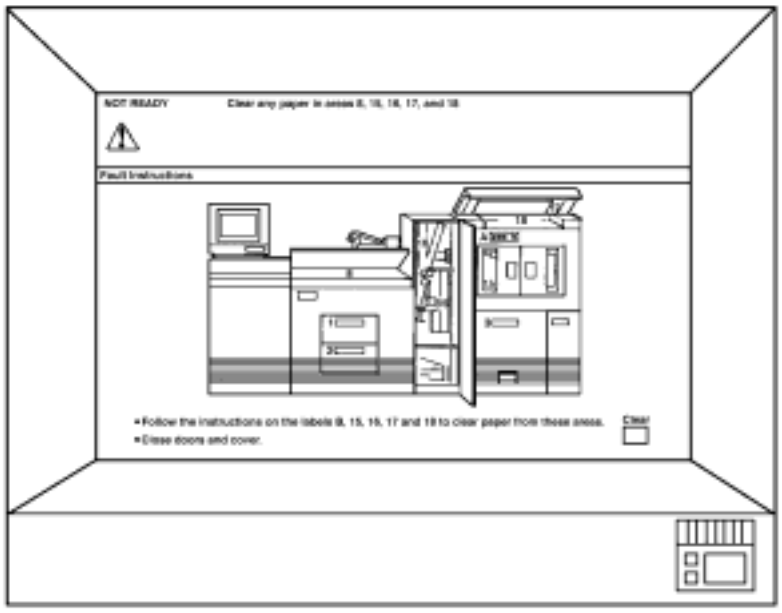
- Position all levers for either the minimum or the maximum pressure settings. Do not intermix the position of the levers.
- Paper greater than 14 inch is considered oversized.
- Paper heavier than 24 pounds is considered heavy weight.
- The following factors may affect the positioning of the paper levers:
  - — machine tolerance
  - — paper supplier
  - — job type (e.g., duplex).

Paper jams

The paper path is the route 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. Following a paper jam the printer stops, and the following indications appear:

- If enabled, the Attention light flashes.
- The Fault icon appears on the printer control console.
- Messages appear on the display informing you of the paper jam.
- The printer mimic on the printer control console shows the area of the paper jam and lists instructions for clearing the jam (see figure 11-3).

Figure 11-3. **Jam display on the printer control console**



Note: It is important that you clear the sheets only in the area(s) indicated on the printer control console.

Paper curl and paper jams

Too much curl in the paper stock can cause paper jams. You can adjust the decurler lever to correct most of these problems. Refer to the paper curl chart at the end of this chapter (figure 11-46) to determine the amount of curl in the paper stock.

Measuring the paper curl

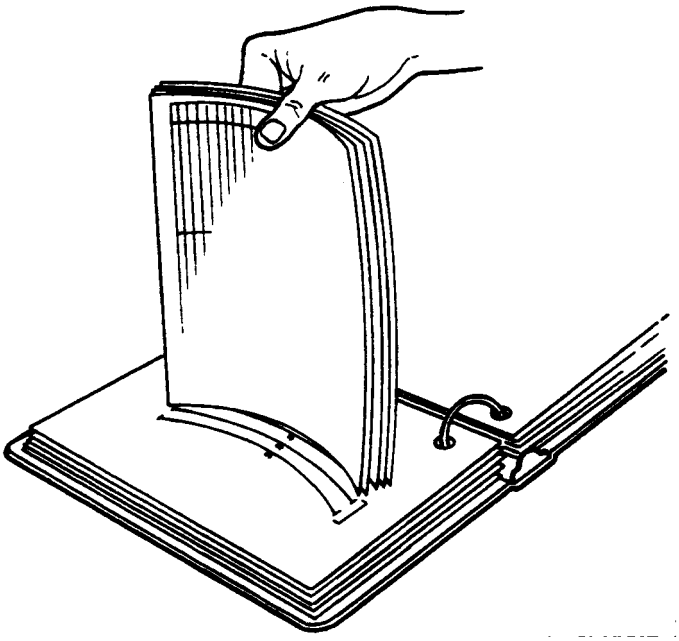
To measure the paper curl:

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

Step 2. Measure the amount of curl in the prints by holding the five prints in the top center of the short edge (see figure 11-4).

Keep the image toward you.

Figure 11-4. **Measuring the paper curl**



Step 3. Place the bottom edge of the prints over the paper curl measurement chart located at the end of this chapter.

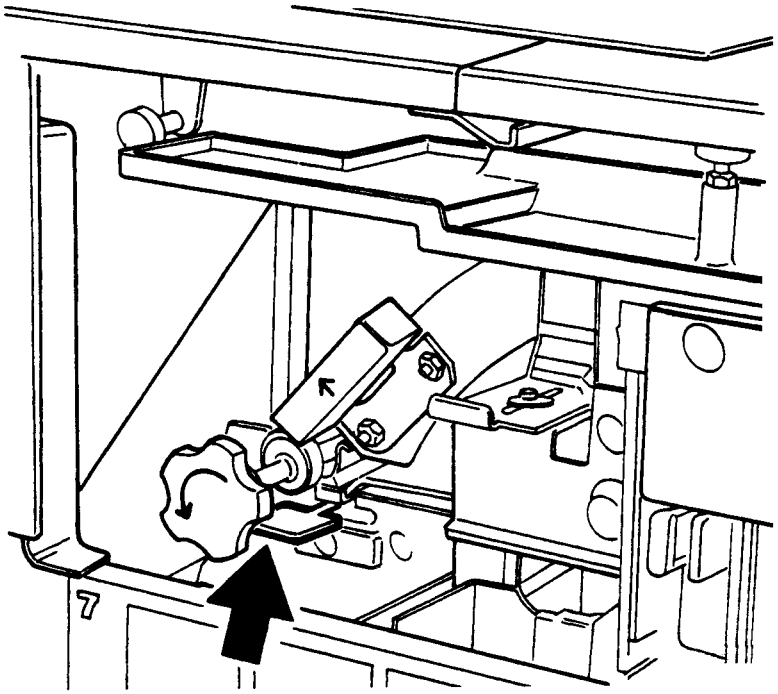
- If the print curl on the printed paper stock measures between +2 and -2, do not change the decurler setting.
- If the curl is between +2 and +3, or -3 and -4, use the following procedure to adjust the decurler lever.

Adjusting the decurler lever

To adjust the decurler lever:

Step 1. Open the right door of the printer and locate the decurler lever (see figure 11-5).

Figure 11-5. **Decurler lever**



Step 2. If the print curl is +2 or more, move the green decurler lever to the right.

Step 3. If the print is -3 or more, move the green decurler lever to the left.

Step 4. If the decurler adjustment does not eliminate the paper curl problem, turn the paper stack over in the feeder tray.

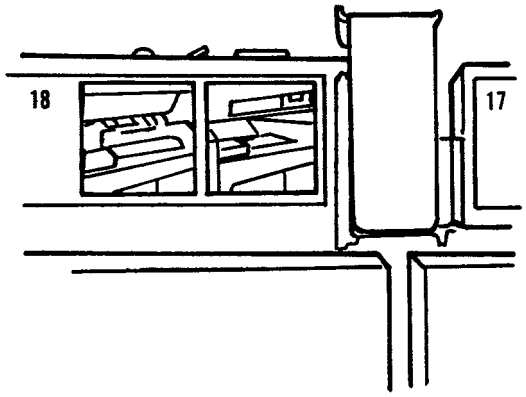
Step 5. If there is still a paper curl problem, perform steps 1 to 4 again.

Step 6. If all else fails, insert paper from a new ream.

Aids to paper jam clearance

Each area of the printer where jams can occur has detailed message labels that tell you how to clear the jam (see figure 11-6).

Figure 11-6. **Message labels inside the LPS**

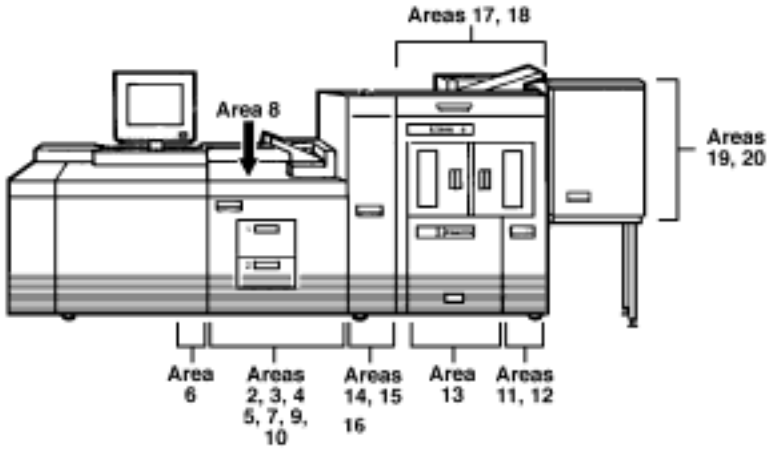


Each handle, lever, or knob that must be moved to clear a jam is bright green and marked with an arrow indicating the direction it moves.

Clearing area paper jams

Refer to figure 11-7 for an overview of the paper jam areas.

Figure 11-7. **Paper jam areas**



To clear a paper jam:

Step 1. Go to the area of the printer indicated by the messages and display on the printer control console.

Step 2. Open any printer doors necessary to access the area.

Step 3. Clear the jammed paper from the area, following the instructions on the LPS message labels and the messages on the printer control console.

Note: Occasionally you may find that the printer has already cleared the paper from a paper jam area to the sample or purge trays.

Step 4. Close any printer doors that were opened.

Step 5. Press the Continue button to resume printing.

Step 6. Discard any damaged sheets sent to the sample tray or purge tray.

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 once the report has been printed.

To check job integrity:

Step 1. The printer offsets the first sheet printed following a paper jam. Locate that sheet.

Step 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 system controller display and printer control console telling you that there is a suspected page delivery error and advising you to check the output.

Printer areas

Figures 11-8 through 11-26 show printer areas 2 through 20.

Figure 11-8. **Area 2**

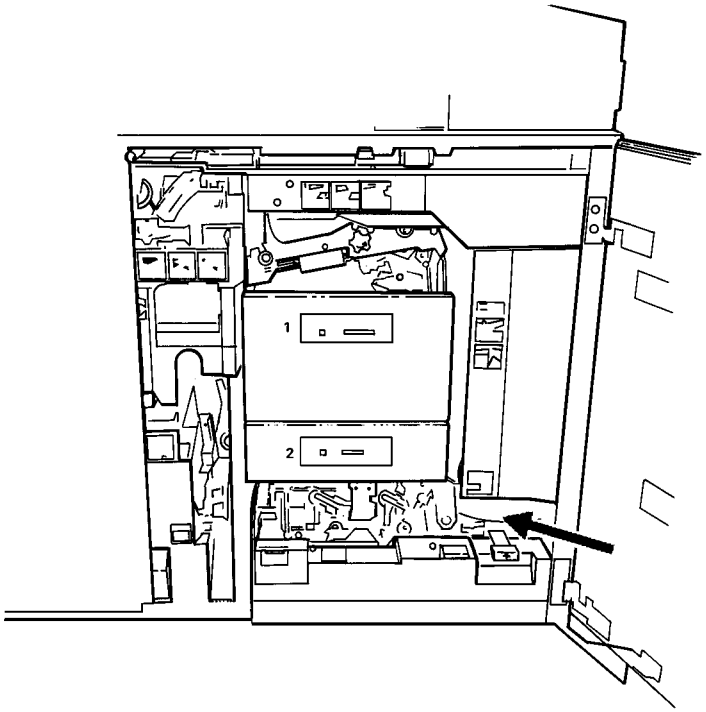


Figure 11-9. **Area 3**

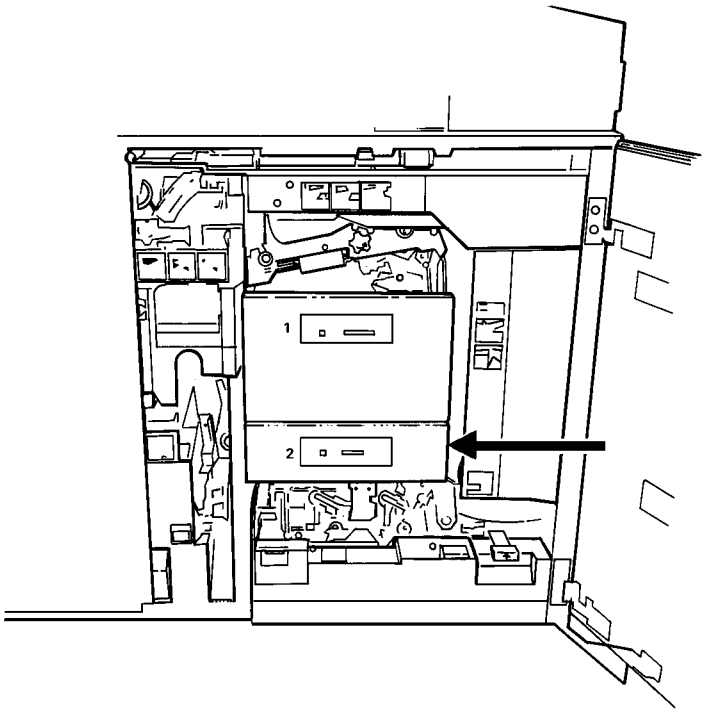


Figure 11-10. **Area 4**

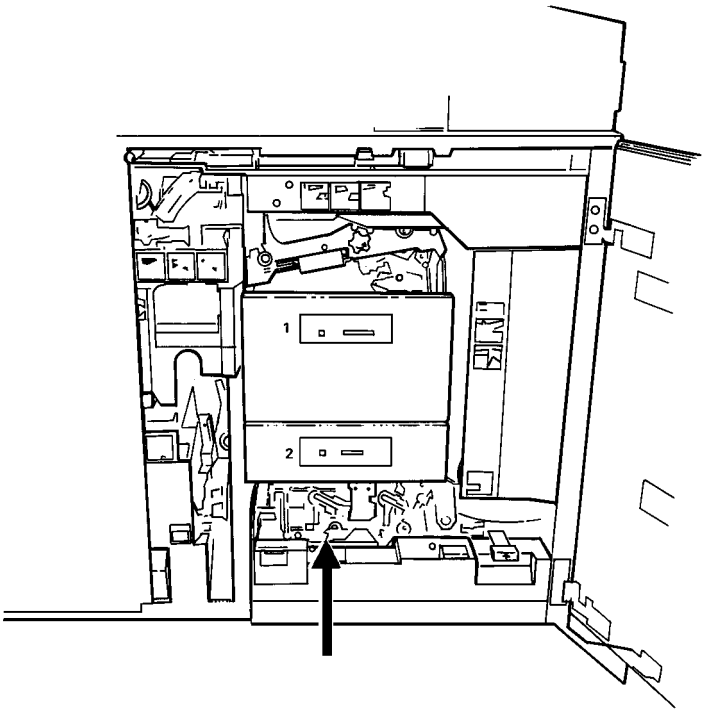


Figure 11-11. **Area 5**

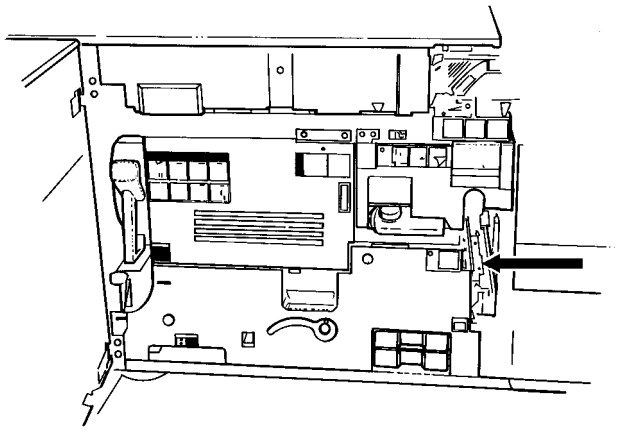


Figure 11-12. **Area 6**

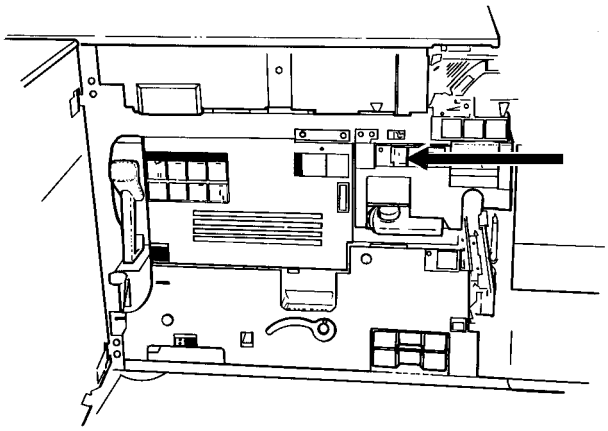


Figure 11-13. **Area 7**

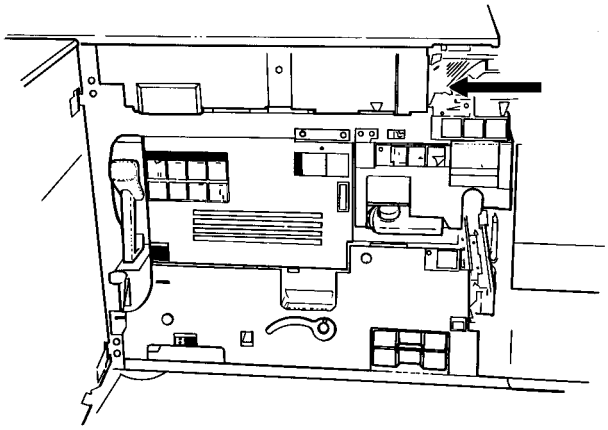
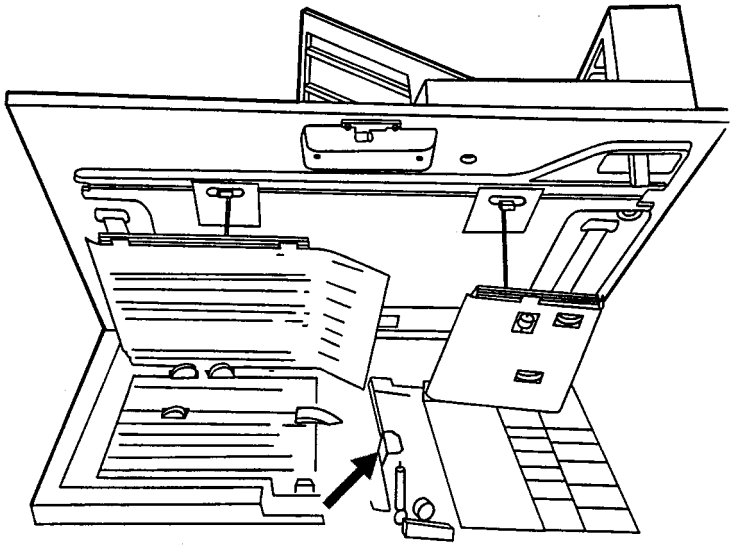


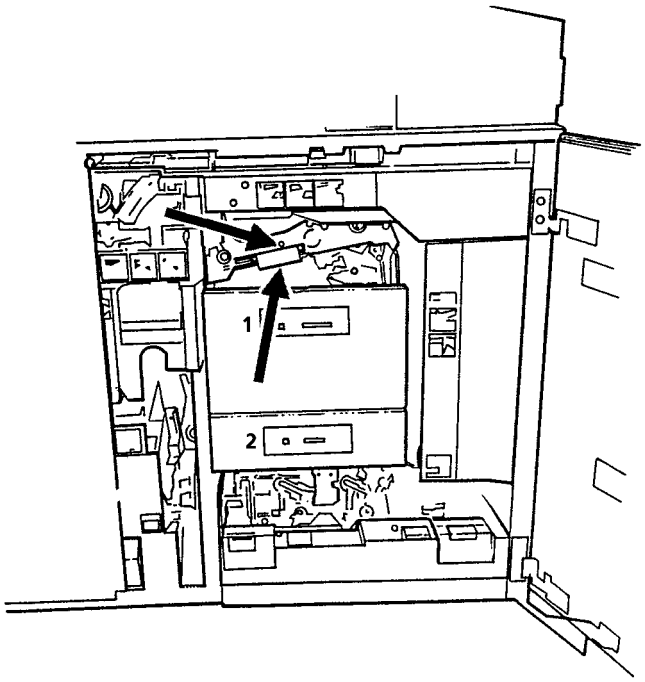
Figure 11-14. **Area 8**



Note the following:

Note: If jammed paper 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 “Notes” section following figure 11-15 for instructions.

Figure 11-15. **Area 9**



Note: Note the following:

- Lower tray 1 and pull out tray to allow better access, when clearing area 9.
- Pull the area 9 green lever toward you to unlatch it. Ensure that you relatch the lever once you have cleared any paper in this area. You may also want to pull out tray 1 and hold the green lever down in order to remove paper wedged in this area more easily.
- Area 9 also has a green knob (located to the right of the lever), which can be turned to help you clear paper.
- If paper rips as you are removing it from area 9, or if you have difficulty removing paper from this area, you may have to use the pinch lever located further inside area 9. Paper may be caught in this area when doing duplex printing.

To use the pinch lever located inside area 9:

Step 1. Locate the green pinch lever directly behind area 9 (above the green knob and further inside area 9).

Step 2. Carefully reaching your hand into the area, squeeze the edges of the pinch lever and lift it up.

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

Step 3. Remove any paper caught in this area.

Step 4. Replace the green pinch lever to its original position. Make sure that you relatch the lever once you have cleared any paper in this area.

Step 5. Discard any paper you removed.

Figure 11-16. **Area 10**

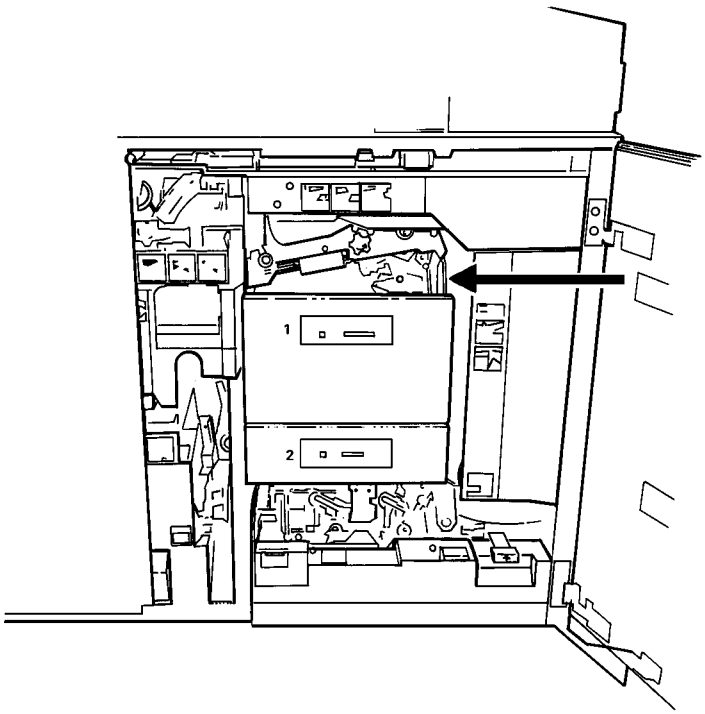


Figure 11-17. **Area 11 (feeder/stacker)**

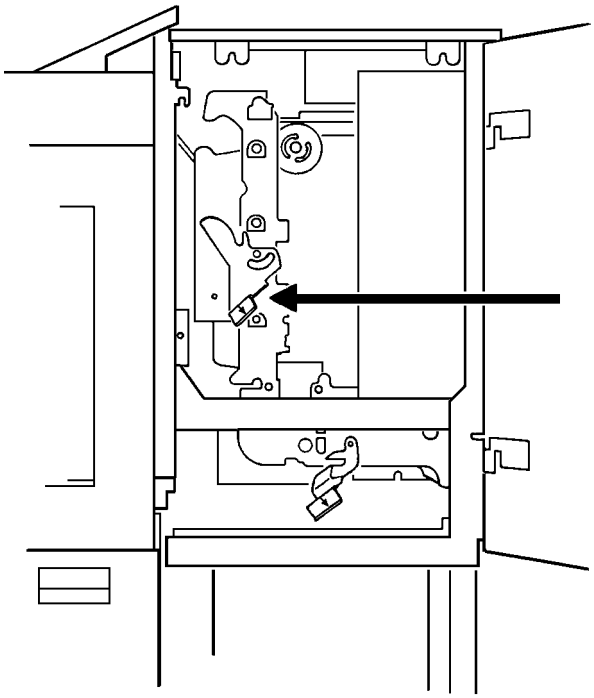


Figure 11-18. **Area 12 (feeder/stacker)**

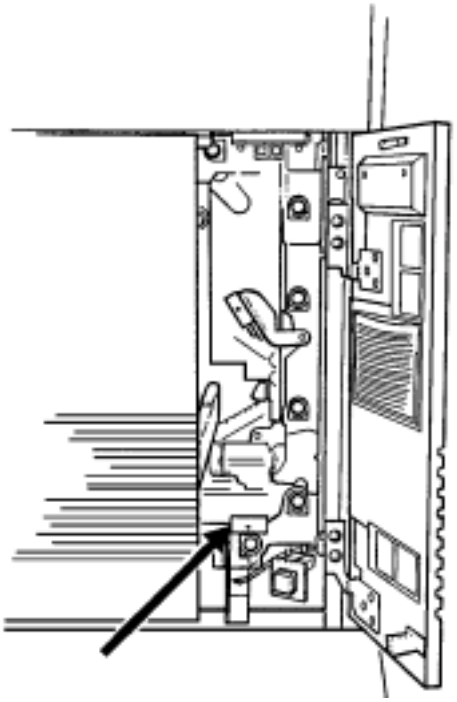


Figure 11-19. **Area 13**

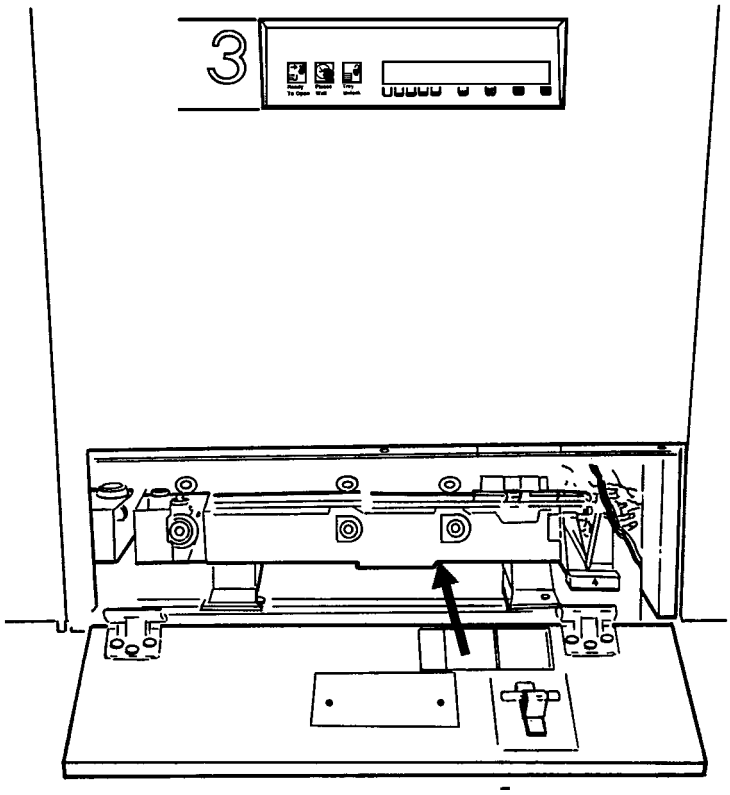
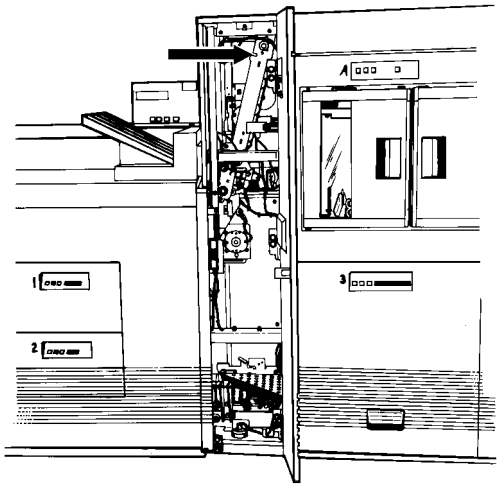


Figure 11-20. **Area 14**



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 11-21. **Area 15**

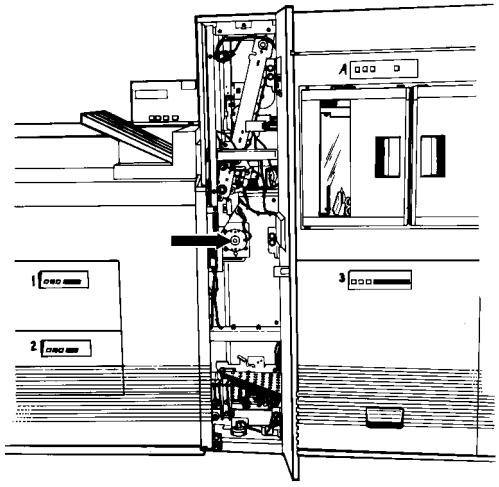


Figure 11-22. **Area 16**

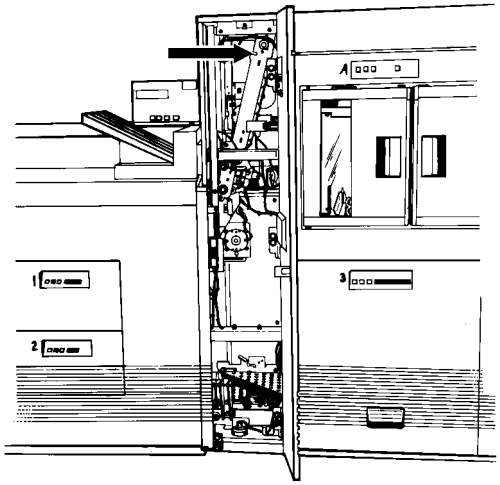


Figure 11-23. **Area 17**

Note: If your LPS has frequent jams in this area, you may need to clean the Q1106 sensor. Refer to the “Cleaning the sensors and the reflecting surfaces” section of the “Maintenance tasks” chapter.

Figure 11-24. **Area 18**

Note: Note the following:

- 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 LPS has frequent jams in this area, you may need to clean the Q1107A sensor. Refer to the “Cleaning the sensors and the reflecting surfaces” section of the “Maintenance tasks” chapter.
- If your LPS is fitted with a Bypass Transport Module, you should check for paper jams in areas 19 and 20 after clearing an area 18 paper jam. To do so:

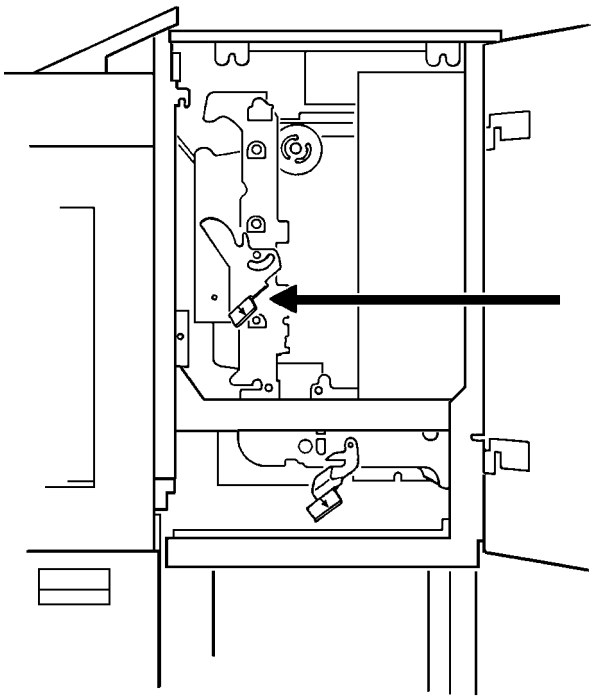
Clearing a paper jam of a printer with a bypass Transport Module

To clear a paper jam of an LPS with a Bypass Transport Module:

Step 1. Open the Bypass Transport Module door.

Step 2. Press the Area 19 green lever in the direction of the arrow printed on it (see figure 11-25).

Figure 11-25. **Area 19**

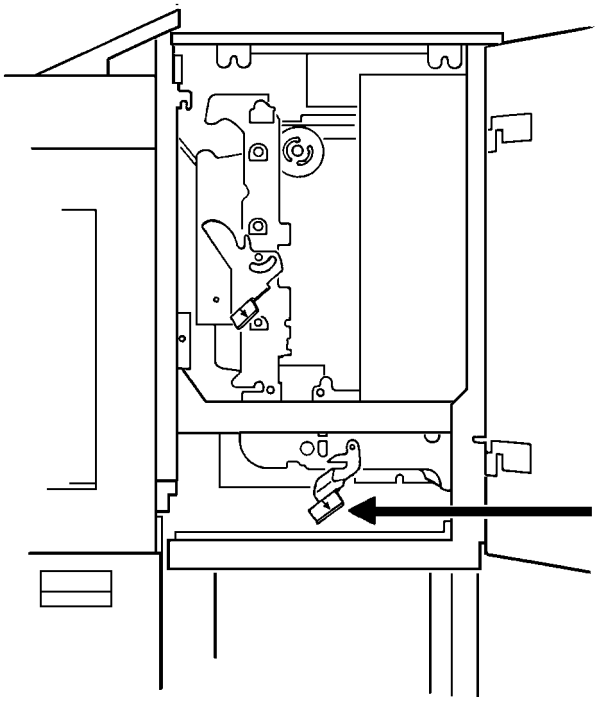


Step 3. Remove any paper in the exposed area.

Step 4. Press the green lever to the left until the latch catches.

Step 5. Press the Area 20 green lever in the direction of the arrow printed on it (see figure 11-26).

Figure 11-26. **Area 20**



Step 6. Remove any paper in the exposed area.

Step 7. Press the green lever down and to the left until the latch catches.

Step 8. Close the Bypass Transport Module door.

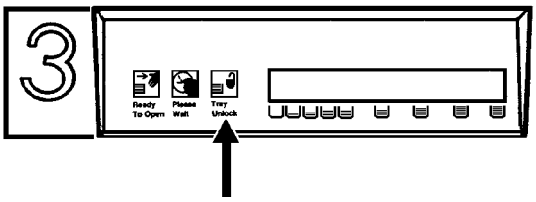
Clearing a misfeed (feeder tray fault)

To clear a misfeed:

Step 1. Go to the feeder tray indicated by the message and display on the printer control console.

Step 2. If the Ready to Open indicator is not lit, press the Tray Unlock button located on the feeder tray control panel (see figure 11-27).

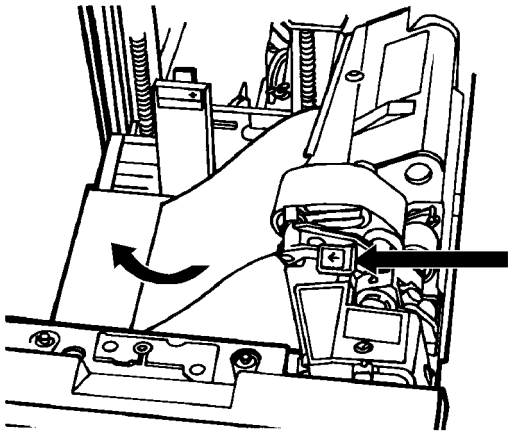
Figure 11-27. **Tray Unlock button**



Step 3. When the Ready to Open indicator lights, open the feeder tray. Pull the tray all the way out for best results.

Step 4. For the processor feeder trays, press the green lever to unlatch the paper feeder assembly (see figure 11-28).

Figure 11-28. **Unlatching the paper feeder assembly**



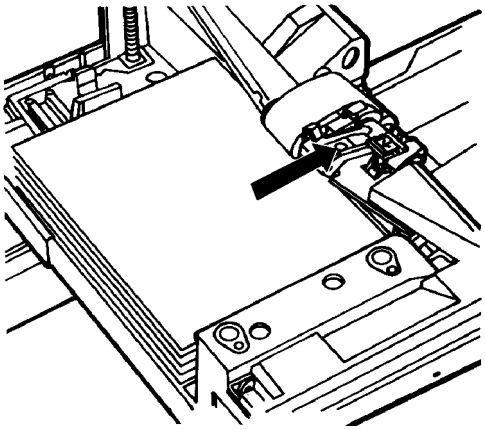
Step 5. Remove and discard any partially fed paper. Ensure that:

- 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.

Step 6. For the processor feeder trays, relatch the paper feeder assembly by pressing the green dot until the assembly clicks into place (see figure 11-29).

Figure 11-29. **Relatching the paper feeder assembly**



Step 7. Slide the tray back into the printer until the tray latches and press the Continue button to resume printing.

Step 8. Discard any pages sent to the sample tray, purge tray, or unused stacker bin when the misfeed was detected.

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.)

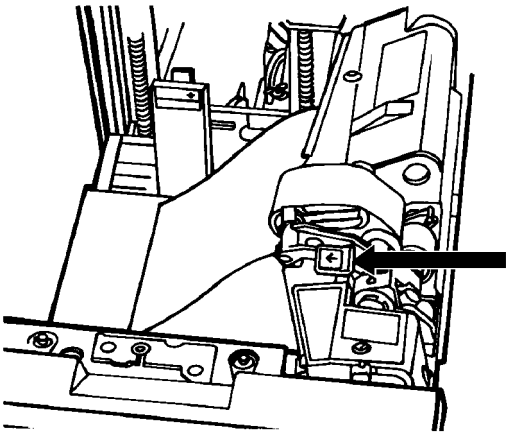
If you suspect this is the problem, cleaning the feed belt may eliminate the need to place a service call. Refer to the following procedure.

Cleaning the feed belt

To clean the feed belt:

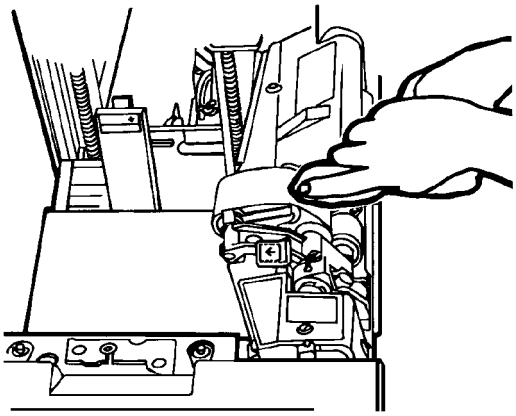
Step 1. Clear any misfeeds that have occurred, but do not relatch the paper feeder assembly. The paper feeder assembly must be unlatched to clean the belt; if necessary, unlatch it by pressing down on the bright green lever on the right side of the paper tray (see figure 11-30).

Figure 11-30. **Unlatching the paper feeder assembly**



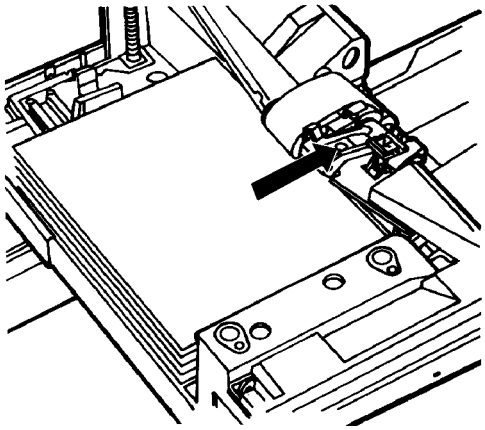
Step 2. Lightly moisten a lint-free towel with Xerox recommended film remover and wipe the outside surface of the feed belt thoroughly in the same direction as the ribs on the belt (see figure 11-31). Wiping from side to side might pull the belt off its track. Allow a few seconds for the film remover to evaporate.

Figure 11-31. **Cleaning the feed belt**



Step 3. Relatch the paper feeder assembly by pressing down on the bright green dot (see figure 11-32). Slide the paper tray completely back into the printer.

Figure 11-32. **Relatching the paper feeder assembly**



Step 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 will dry them out and cause them to fail prematurely. Film remover may be obtained from your Xerox service representative.

Faults are cleared but the Attention light is still on

If you have cleared all faults that are listed on the printer control console, but the Attention light is still on and the message “Output is stopped. See message at the System Display” appears on the printer control console, there may be an uncleared output fault. Check the system controller display. Follow the instructions in the output message and press the Continue button.

Printing does not continue when the Continue button is pressed

If the Continue button is pressed before all printer faults are cleared, the outstanding faults are changed to the status of masked faults (refer to the “Fault masking and the printer control console” section earlier in this chapter). If the printer status displayed in the message area of the printer control console is READY, but printing does not continue when you press the Continue button, touch the Fault List icon on the printer control console to display the Fault List screen. (Refer to figure 11-1.) Clear any faults displayed on this screen and press the Continue button again.

Incorrect paper size message

If printing stops and a message appears on the printer control console telling you that an incorrect paper size is loaded in a feeder tray, 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. 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 LPS automatically purges any dog-eared or skewed sheets of paper. When the LPS encounters paper in this condition, it may stop printing and issue an incorrect paper size message.

Stacker bin problems

This section explains what to do when papers are being thrown around the stacker, and when paper stack is falling over or sliding around the bin.

Papers are being thrown around the stacker

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

Note: Never unload paper this way.

To remedy this situation, unload the bin following the normal procedure. (Refer to the “Unloading a stacker bin” section of the “Paper facts” chapter.)

Paper stack is falling over or sliding around the bin

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

- Reduce the paper curl by following the instructions in the “Paper curl and paper jams” section of this chapter.
- Reduce the number of sheets going to the bin through the Bin Limits task. (Refer to the “Status and print tasks” chapter for instructions.)

System controller problems

This section explains what to do when one of the following problems occur:

- LPS does not boot
- Printer does not respond to the system controller
- Blank display on the system controller terminal
- Rasterization messages appear on the system controller display

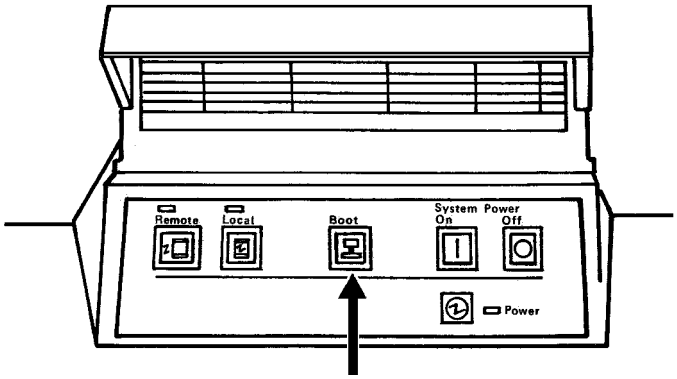
LPS does not boot (system controller terminal)

If you have followed the procedure for powering on and booting the LPS, but the system does not boot properly:

Step 1. Press the <CAPSLOCK> key on the system controller keyboard.

Step 2. Press the Boot button on the operator control panel (see figure 11-33).

Figure 11-33. **Boot button on the operator control panel**



Step 3. Reenter the BOOT command.

If the system still does not boot, call for service.

Printer does not respond to system controller

If the printer control console displays PRESS CONTINUE TO RESUME PRINTING, but the printer does not respond when you press the Continue button, or if the printer does not respond to directions from the system controller keyboard, they may have lost communication with each other. Use the following procedure to restore the communication between the system controller and printer.

Step 1. Press the Continue button on the printer control console, if directed to do so.

Note: If the printer responds and resumes printing, do not follow the rest of this procedure.

Step 2. If the printer does not respond and resume printing enter the RESET command.

(Refer to the “Reset” section of chapter 4, “Job control tasks.”)

Step 3. Enter the PSC (printer subsystem controller) command. This should put the printer back in communication with the system controller.

Note: Ask your Xerox service representative to change this command to a Logon Level 2 if not already done. Otherwise, you will not be able to access it.

Step 4. Retry the command to which the printer would not respond earlier. If it still does not respond, tell your supervisor or a systems analyst.

Blank display (system controller terminal)

To prolong the life of the system controller display, the light is turned off and the display becomes blank when it has not been used for 15 minutes. As soon as any key is pressed, the image returns exactly as it was prior to turning itself off. There is no loss of information.

If there is no display when you press a key, check that the ON/OFF switch on the right side of the display (just below the screen) is in the ON position. Also check the brightness control (intensity adjustment lever); slide it to the right to make the screen brighter. If the display is turned on, the lever is all the way to the right, and the display screen is still blank, place a service call

Rasterization messages

When a line of print is too complex for the system to process normally, the output processor directs the image generator to produce a bitmap image instead of aborting the page. This process can take anywhere from 3 to 20 minutes. The following messages appear on the system controller display:

```
OS1620 Local density problem has caused a printer
cycle down
OS1625 Local density problem rasterization in
progress.
```

Note: Do not press any keys until the process is complete. Any commands normally allowed during print mode (for example, FEED, JOBS, PSTATUS, SELECT, and so on) entered while rasterization is in progress are delayed until the rasterization process is finished. When the process is complete, the following message appears:

```
OS1627 Local density problem rasterization is
complete
```

The printer now cycles up and prints the problem page.

Power failure

If there is a power failure and your LPS is online to a host computer, the system controller display should prompt you to enter “C”. (It is possible that the message will not appear. Enter “C” anyway at the system controller keyboard.) If there is no response from the system after you enter “C”, press the System Power Off and System Power On buttons on the operator control panel to reboot the system.

In the event of a power failure, you must initiate recovery of the data files to recover the data content. The system asks if you want it to attempt recovery. If you do, key in <Y> (yes), or select the Yes button.

It is possible that not all data can be recovered; the amount of recovery that can be accomplished depends on when the last system checkpoint was taken because of the method used by the system to restore its dynamic (active) memory.

If working online to a host computer, check the output in the stacker bins to find the last completed page. Request that the host operator retransmit the job beginning at that point. The operator may have to back up the spooler a number of pages.

Status file nearly full message

As jobs are printed, report information is automatically accumulated and saved in the status file on a report basis each time a report is both input and printed.

When the following message appears:

```
STATUS FILE NEARLY FULL
```

The accounting/status file has only enough space for 25 more reports. When that number is exceeded, the system continues to add new reports by deleting those at the beginning of the status file, thereby losing important information.

When this message appears, notify your supervisor immediately. Appropriate action can then be taken to save the report information and reinitialize the status file.

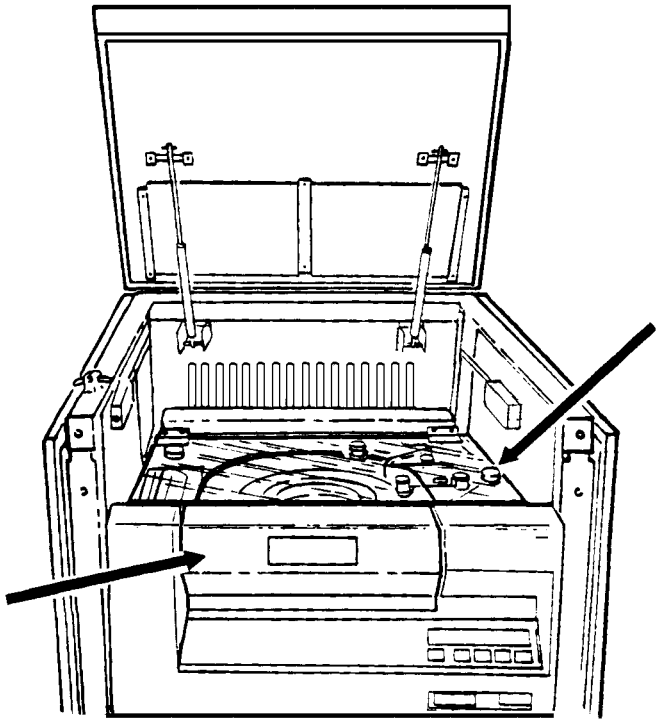
Open-reel tape drive problems

The following sections deal with open-reel tape drive problems.

Tape drive does not perform self-load routine

Ensure the tape path cover and the loading door are fully closed (see figure 11-34).

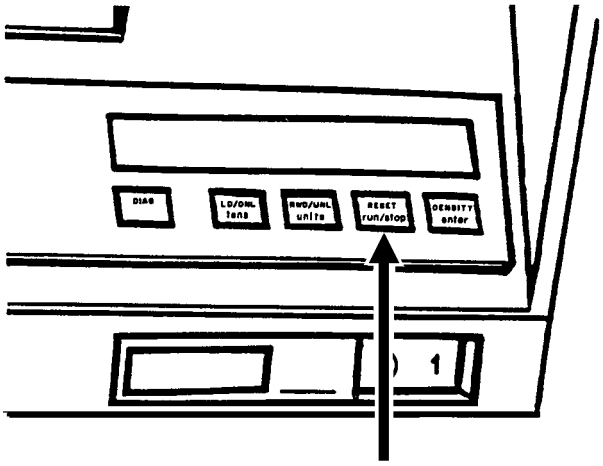
Figure 11-34. **Tape path cover and loading door**



“OK” appears on the tape drive message display, but the loading door is closed

Press the Reset button to open the door (see figure 11-35).

Figure 11-35. **Reset button**

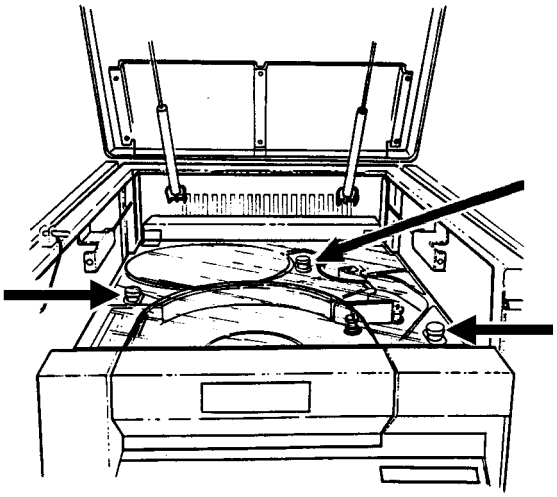


If the door still does not open, tap on it lightly to open it.

“LID OPEN” appears on the tape drive message display

Ensure the tape path cover turnbuckles are all secured (see figure 11-36).

Figure 11-36. **Tape path cover turnbuckles**



1/2 inch cartridge tape drive problems

The following sections deal with 1/2 inch cartridge tape drive problems.

Basic recovery procedure

Always try to recover the cartridge from the 1/2 inch cartridge tape drive before you try to correct any problems with the drive. Follow these basic recovery steps:

Step 1. Vary the tape drive offline. (Refer to “Power off the 18/36 track 1/2 inch cartridge tape drive” section of chapter 6, “Offline printing tasks.”)

Step 2. If there is a relevant message on the printer control console or system controller display, perform the action described there.

Step 3. If there is an error code on the tape drive message display, record the error code and time and call for service.

Initial program load (IPL) procedure fails

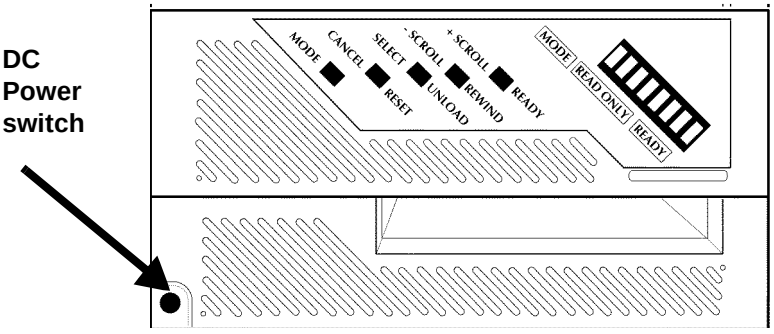
An error occurred during the IPL procedure if:

- The three indicator lights (Read only, Ready, and Mode) flash on the 18/36 track drive
- An error code displays after you power on the tape drive.

Re-IPL the tape drive using one of the following procedures:

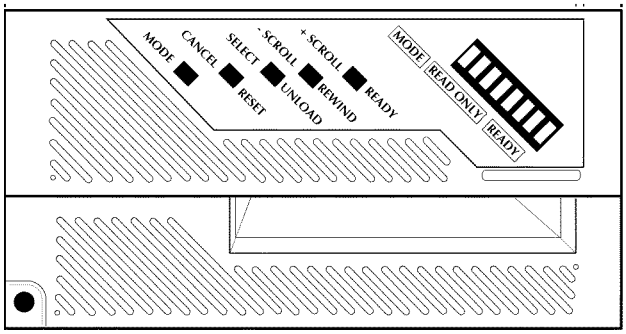
- Turn off the tape drive by pressing the Power switch to OFF.
- Wait 10 seconds and then turn the tape drive back on by pressing the Power switch to ON

Figure 11-37. **DC power switch**



- Depress and hold the Scroll, Select, and Unload buttons for at least five seconds (see figure 11-38).

Figure 11-38. **Scroll, Select, and Unload buttons**



If the IPL procedure still fails, note the error code and time and call for service.

If you cannot insert a cartridge

Inspect the cartridge for damage. (Refer to the “Load a cartridge tape” section of the “Offline printing tasks” chapter 6.)

If the cartridge is damaged, use an undamaged cartridge instead.

If the cartridge is undamaged but you cannot load it, call for service.

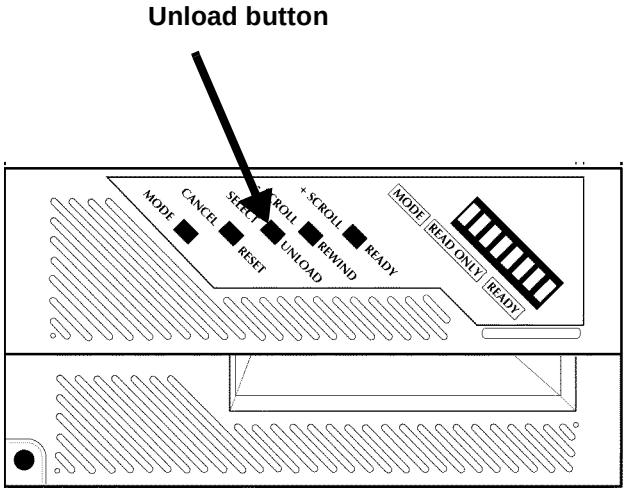
If tape does not unload

To solve this problem:

Step 1. If there is an error code message on the message display, record the error code.

Step 2. Press the Unload button (see figure 11-39).

Figure 11-39. **Unload switch**



Step 3. Try unloading the tape again.

Step 4. If the tape still does not unload, record the error code on the message display, record the time, and call for service.

Unloading a cartridge after a power failure

To unload a cartridge after a power failure:

Step 1. Turn the tape drive on. (Refer to the “Emergency procedures” section of the “Offline printing tasks” chapter.)

Step 2. Press the Unload button.

Tape winds 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.

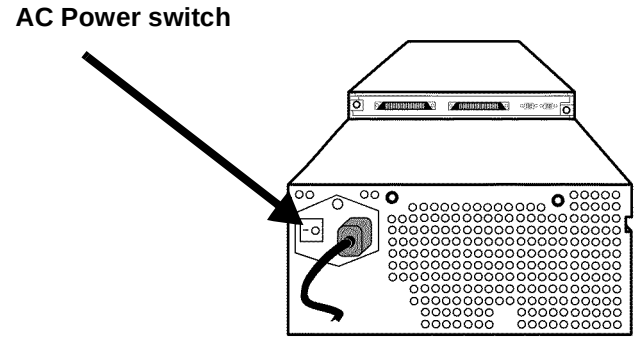
Message display is blank

To solve this problem:

Step 1. Ensure the tape drive is receiving power from the main AC source.

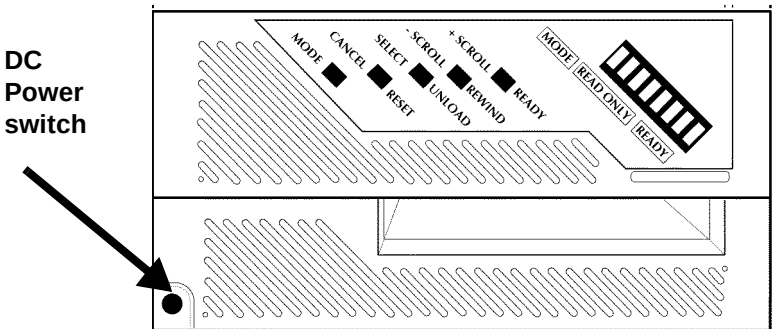
Step 2. Ensure that the AC Power switch on the rear of the tape drive is on (see figure 11-40).

Figure 11-40. **18/36 Track AC power switch**



Step 3. Turn the Power switch OFF and then ON. (See figure 11-41).

Figure 11-41. **DC power switch**



Step 4. If the display is still blank, call for service.

If tape drive does not become ready

To solve this problem:

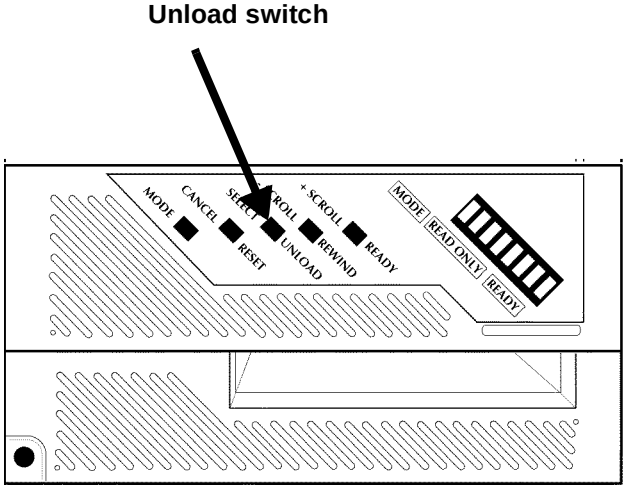
Step 1. Determine if the tape drive is online by pressing the Scroll button until the message display shows the Status display.

Step 2. If the tape drive is offline, follow the procedures listed in the “Place the tape drive online” section of the “Offline printing tasks” chapter.

Step 3. If the drive still does not become ready, the cartridge may be inserted incorrectly. Remove the cartridge from the transport and insert it again.

Step 4. If there is an error code message in the message display, record the error code, press the Unload switch (see figure 11-42), and try the operation again.

Figure 11-42. **Unload switch**



Step 5. If the 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 chapter 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.

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

Before contacting Xerox service, please make note of:

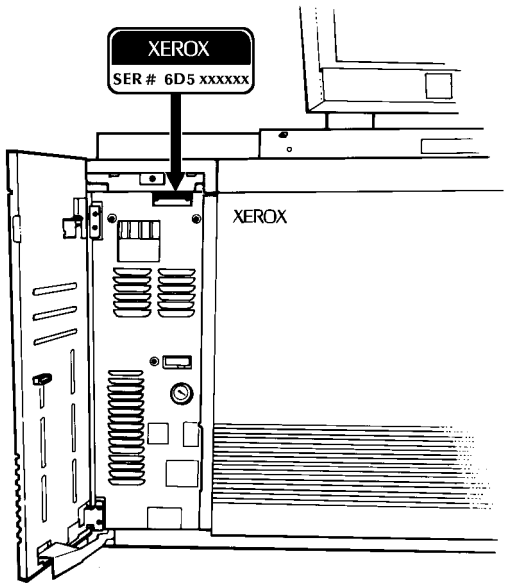
- Status code numbers and messages which appear on the system controller display, including the 6-digit code number that resulted from running the PROBLEM command
- Status messages which appear on the printer control console
- Indicator lights which may or may not be lit
- Status codes which appear in the message display of the tape drive control panel if there is a tape drive problem.

Your call will be answered by a Xerox representative who will ask you for your equipment model.

You will also be asked for:

- Your printing system's serial number, located on a panel inside the printer, behind the left-hand, small door (see figure 11-43).

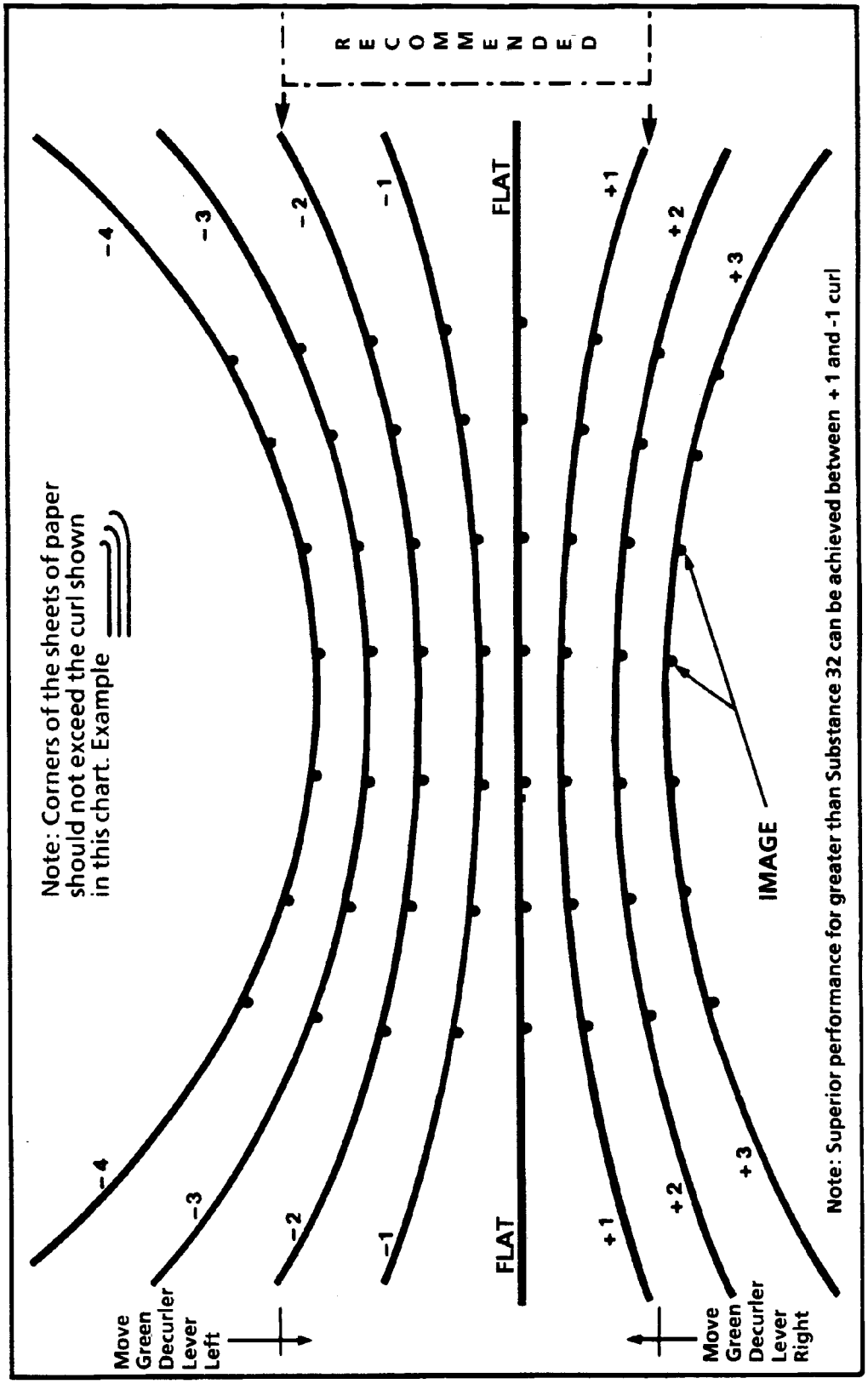
Figure 11-43. **Locating the LPS serial number**



- Your name
- Your company's name
- The system condition or status.

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

Figure 11-44. **Paper curl chart**



11. Problem solving tasks

This chapter contains instructions for diagnosing and solving common problems that may arise when operating the LPS. Also included are instructions for placing a service call, when needed.

LPS problems

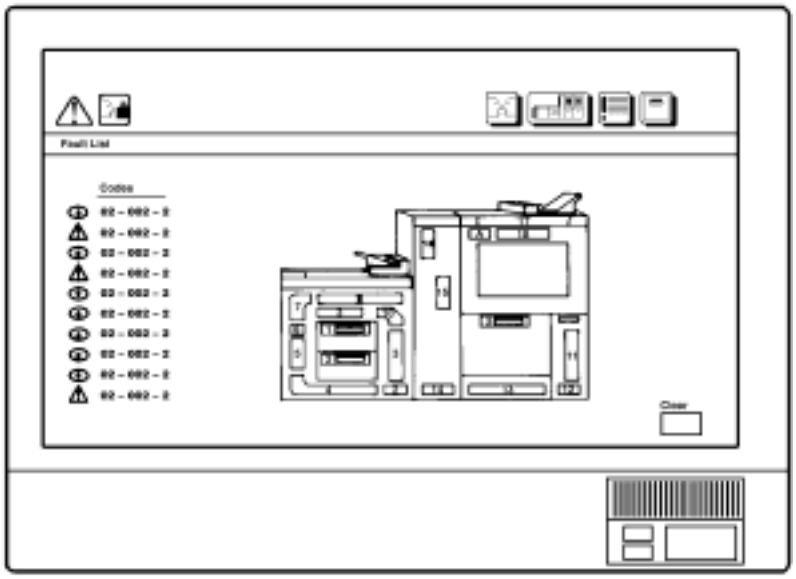
The following sections deal with LPS problems.

Fault masking and the printer control console

The Xerox DocuPrint 96/DocuPrint 96MX LPS allows you to continue printing while certain faults or conditions exist in areas of the printer not currently being used. The LPS does this by “masking” the fault or condition and continuing to print the current job. For example, if you are printing a report using feeder tray 1 and stacking into stacker bin A, the LPS continues printing even if a jam exists in feeder tray 2 or if stacker bin B is full. Whenever there is a masked fault or condition, the Hint icon (a light yellow circle with an asterisk inside) appears on the printer control console and the Attention light goes on. If a condition is being masked, such as low dry ink, a message also appears in line 3 of the message area of the printer control console. The message is preceded by an asterisk. To display the area containing the masked fault (for example, the location of the paper jam), touch the Fault List icon on the printer control console.

The Fault List screen appears. (See figure 11-1.)

Figure 11-1. **Fault List screen**



The Fault List screen displays any outstanding fault codes and shows a mimic of the printer, with the area containing the masked fault highlighted in light yellow.

Note the following:

- For greatest printer productivity, clear any masked faults at your earliest opportunity.
- When the printer stops because of a fault, it is a good idea to display the Fault List screen after clearing the fault to see if there are any outstanding masked faults. Clear these masked faults before continuing with the print job. Doing so will enhance printer productivity.
- When there is a fault that cannot be masked, that is, that causes the printer to stop, the Fault icon (a dark yellow triangle with an exclamation point inside) appears on the printer control console and the Attention light flashes. The Fault screen appears on the printer control console, highlighting (in dark yellow) the area(s) of the printer containing the fault, and instructions are given for clearing the fault.
- If a fault exists in the system at the time that a masked fault occurs, only the Fault icon appears on the printer control console. Any masked fault condition messages still appear in the message area of the printer control console.

Printing problems

When prints are skewed or damaged, follow these steps to adjust the registration transport roll levers (heavy paper levers):

Prints are skewed or damaged

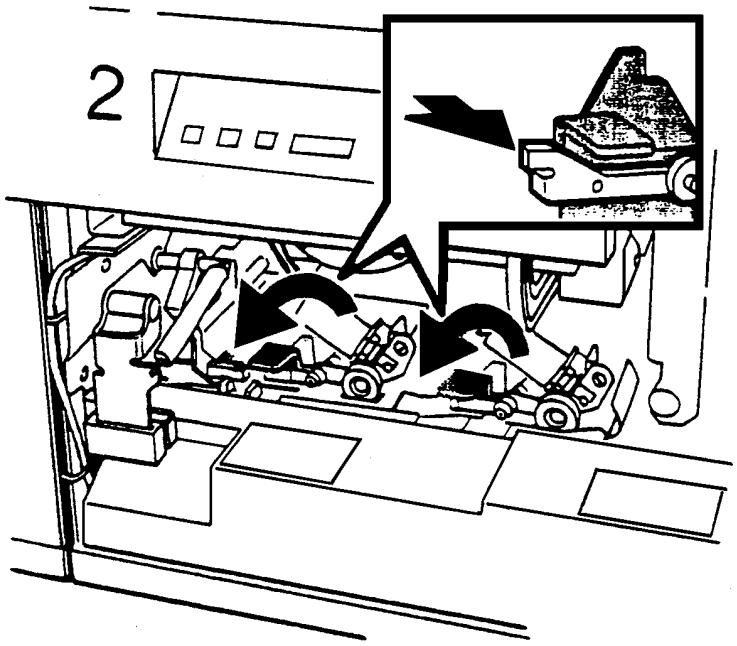
To correct this problem, adjust the registration transport roll levers (heavy paper levers) in the following way:

Step 1. Open the right and left doors of the printer and locate the heavy paper levers. (They are located behind area 4 and area 2.)

Step 2. Pull the levers forward (toward you) on the silver latch release.

Step 3. Turn both levers to the left (counter clockwise), as illustrated in figure 11-2.

Figure 11-2. **Locating the two heavy weight levers**



Step 4. When the print job is complete, return the levers to their normal position.

Step 5. Close the printer doors.

Note the following:

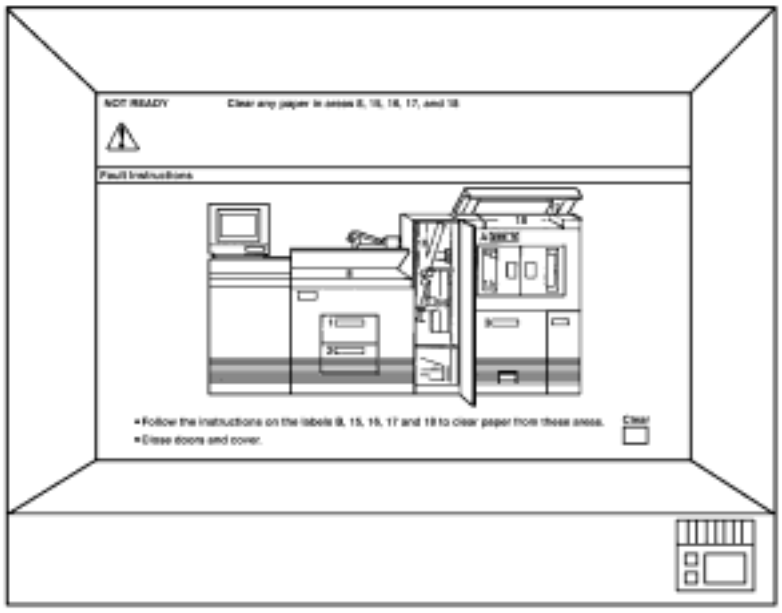
- Position all levers for either the minimum or the maximum pressure settings. Do not intermix the position of the levers.
- Paper greater than 14 inch is considered oversized.
- Paper heavier than 24 pounds is considered heavy weight.
- The following factors may affect the positioning of the paper levers:
  - — machine tolerance
  - — paper supplier
  - — job type (e.g., duplex).

Paper jams

The paper path is the route 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. Following a paper jam the printer stops, and the following indications appear:

- If enabled, the Attention light flashes.
- The Fault icon appears on the printer control console.
- Messages appear on the display informing you of the paper jam.
- The printer mimic on the printer control console shows the area of the paper jam and lists instructions for clearing the jam (see figure 11-3).

Figure 11-3. **Jam display on the printer control console**



Note: It is important that you clear the sheets only in the area(s) indicated on the printer control console.

Paper curl and paper jams

Too much curl in the paper stock can cause paper jams. You can adjust the decurler lever to correct most of these problems. Refer to the paper curl chart at the end of this chapter (figure 11-46) to determine the amount of curl in the paper stock.

Measuring the paper curl

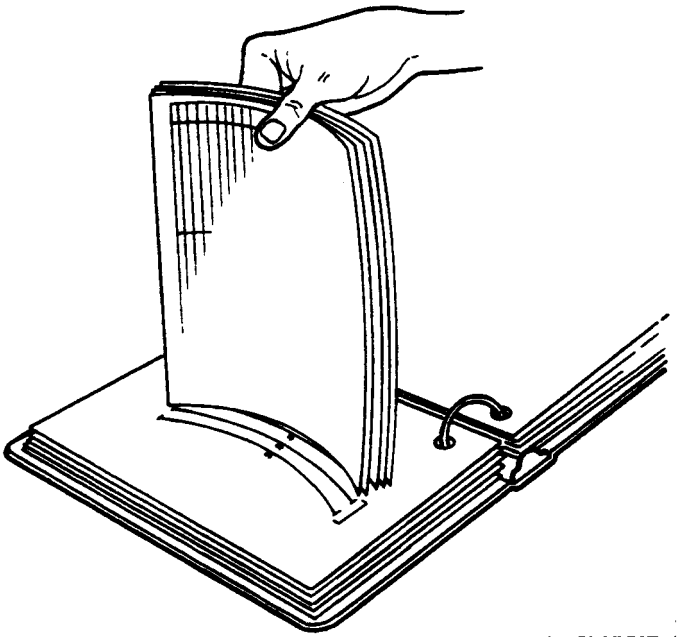
To measure the paper curl:

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

Step 2. Measure the amount of curl in the prints by holding the five prints in the top center of the short edge (see figure 11-4).

Keep the image toward you.

Figure 11-4. **Measuring the paper curl**



Step 3. Place the bottom edge of the prints over the paper curl measurement chart located at the end of this chapter.

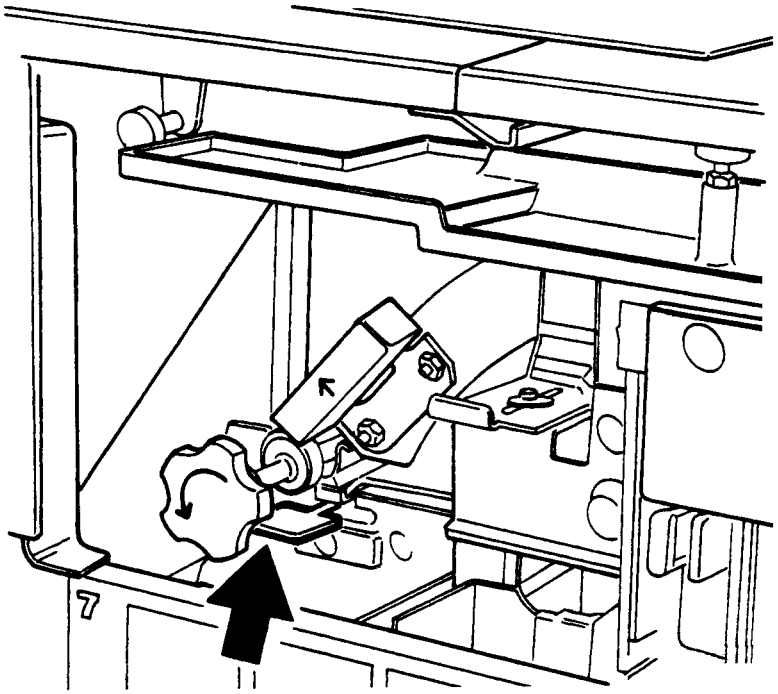
- If the print curl on the printed paper stock measures between +2 and -2, do not change the decurler setting.
- If the curl is between +2 and +3, or -3 and -4, use the following procedure to adjust the decurler lever.

Adjusting the decurler lever

To adjust the decurler lever:

Step 1. Open the right door of the printer and locate the decurler lever (see figure 11-5).

Figure 11-5. **Decurler lever**



Step 2. If the print curl is +2 or more, move the green decurler lever to the right.

Step 3. If the print is -3 or more, move the green decurler lever to the left.

Step 4. If the decurler adjustment does not eliminate the paper curl problem, turn the paper stack over in the feeder tray.

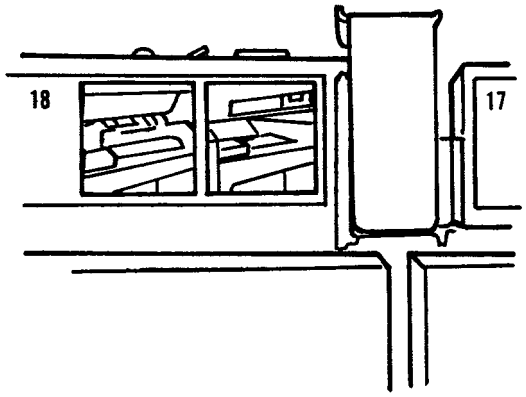
Step 5. If there is still a paper curl problem, perform steps 1 to 4 again.

Step 6. If all else fails, insert paper from a new ream.

Aids to paper jam clearance

Each area of the printer where jams can occur has detailed message labels that tell you how to clear the jam (see figure 11-6).

Figure 11-6. **Message labels inside the LPS**

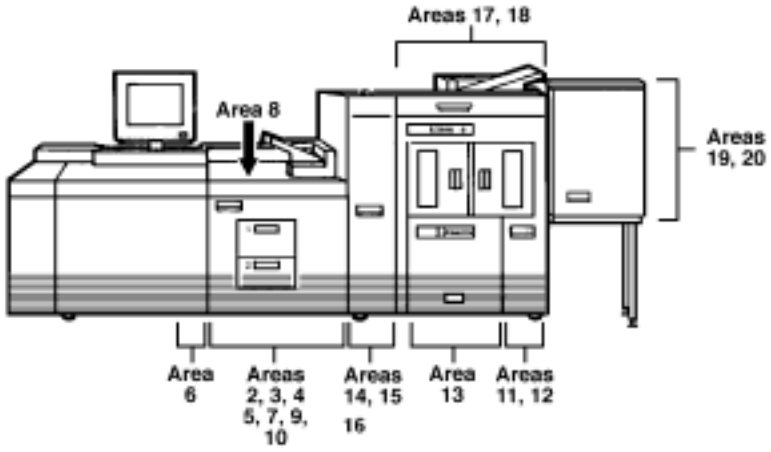


Each handle, lever, or knob that must be moved to clear a jam is bright green and marked with an arrow indicating the direction it moves.

Clearing area paper jams

Refer to figure 11-7 for an overview of the paper jam areas.

Figure 11-7. **Paper jam areas**



To clear a paper jam:

Step 1. Go to the area of the printer indicated by the messages and display on the printer control console.

Step 2. Open any printer doors necessary to access the area.

Step 3. Clear the jammed paper from the area, following the instructions on the LPS message labels and the messages on the printer control console.

Note: Occasionally you may find that the printer has already cleared the paper from a paper jam area to the sample or purge trays.

Step 4. Close any printer doors that were opened.

Step 5. Press the Continue button to resume printing.

Step 6. Discard any damaged sheets sent to the sample tray or purge tray.

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 once the report has been printed.

To check job integrity:

Step 1. The printer offsets the first sheet printed following a paper jam. Locate that sheet.

Step 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 system controller display and printer control console telling you that there is a suspected page delivery error and advising you to check the output.

Printer areas

Figures 11-8 through 11-26 show printer areas 2 through 20.

Figure 11-8. **Area 2**

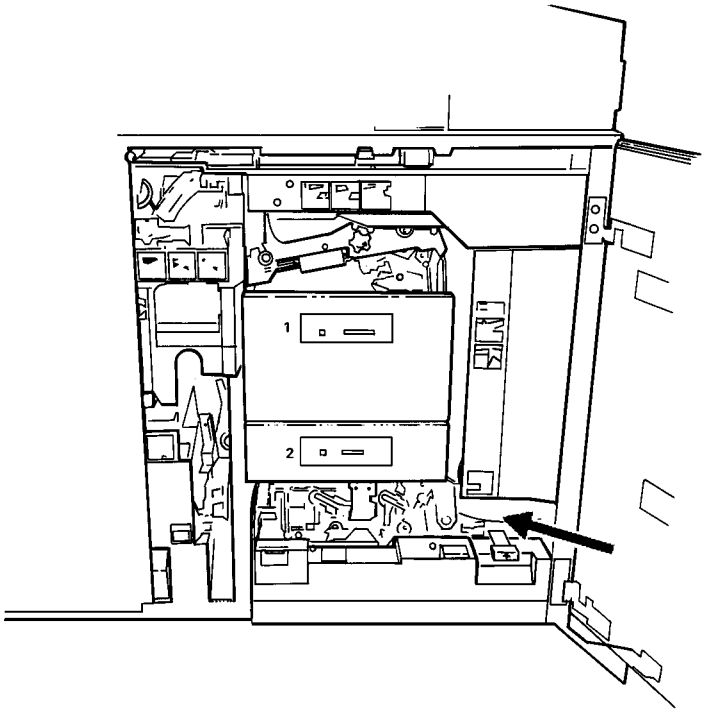


Figure 11-9. **Area 3**

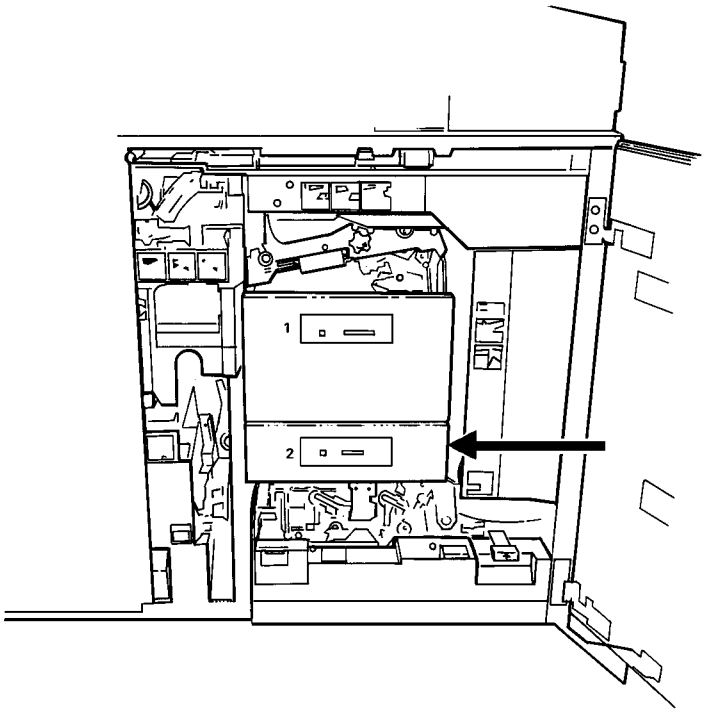


Figure 11-10. **Area 4**

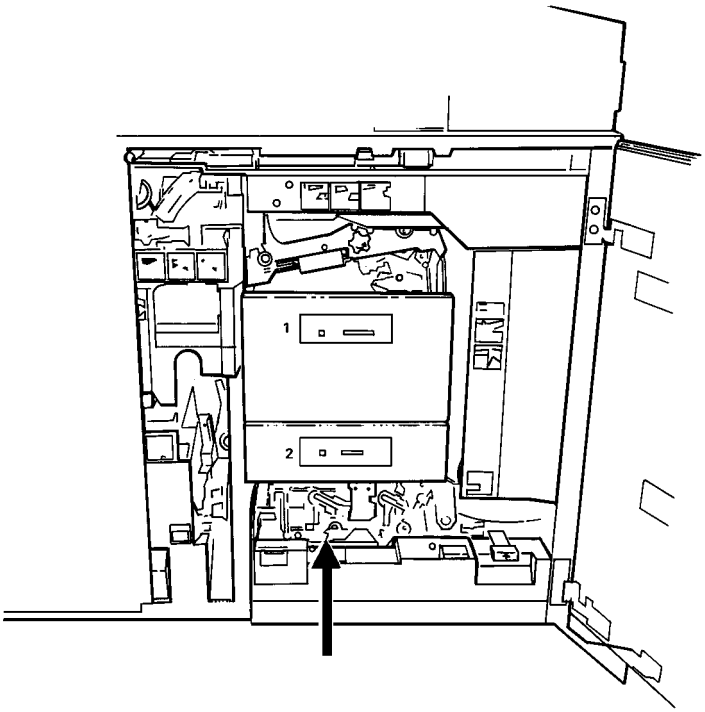


Figure 11-11. **Area 5**

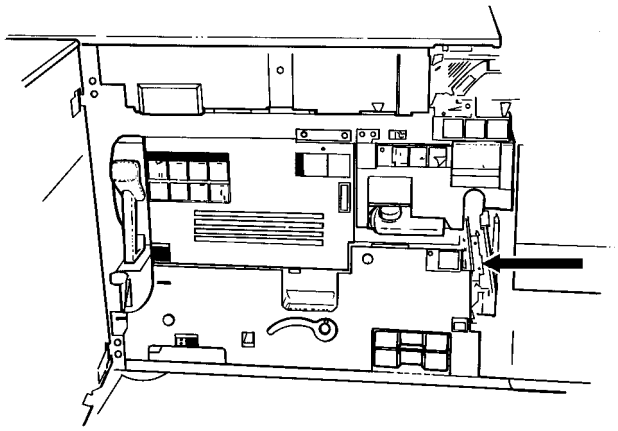


Figure 11-12. **Area 6**

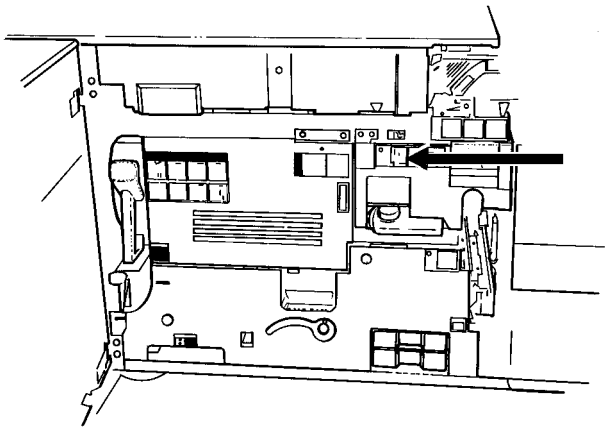


Figure 11-13. **Area 7**

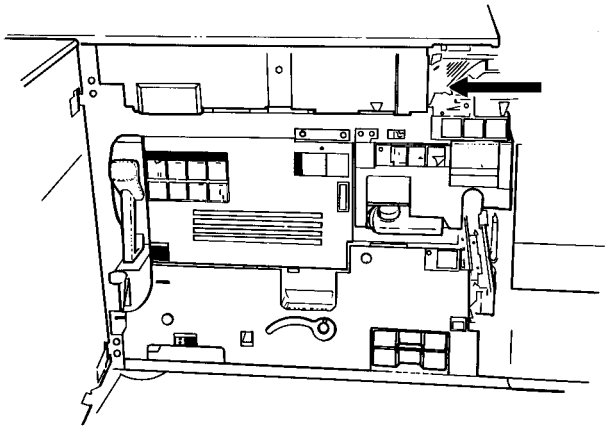
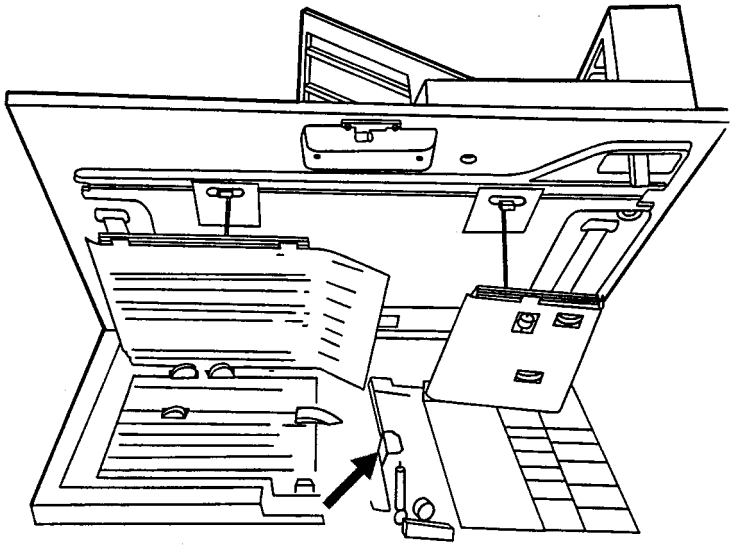


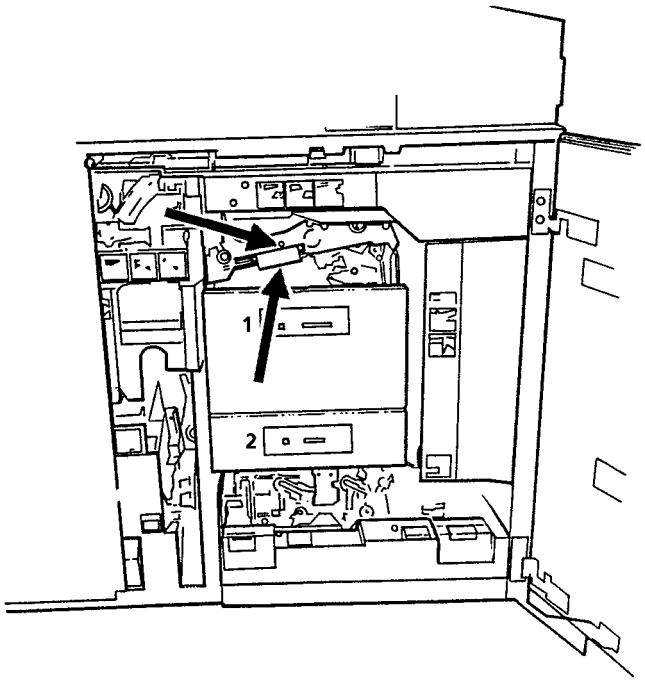
Figure 11-14. **Area 8**



Note the following:

Note: If jammed paper 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 “Notes” section following figure 11-15 for instructions.

Figure 11-15. **Area 9**



Note: Note the following:

- Lower tray 1 and pull out tray to allow better access, when clearing area 9.
- Pull the area 9 green lever toward you to unlatch it. Ensure that you relatch the lever once you have cleared any paper in this area. You may also want to pull out tray 1 and hold the green lever down in order to remove paper wedged in this area more easily.
- Area 9 also has a green knob (located to the right of the lever), which can be turned to help you clear paper.
- If paper rips as you are removing it from area 9, or if you have difficulty removing paper from this area, you may have to use the pinch lever located further inside area 9. Paper may be caught in this area when doing duplex printing.

To use the pinch lever located inside area 9:

Step 1. Locate the green pinch lever directly behind area 9 (above the green knob and further inside area 9).

Step 2. Carefully reaching your hand into the area, squeeze the edges of the pinch lever and lift it up.

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

Step 3. Remove any paper caught in this area.

Step 4. Replace the green pinch lever to its original position. Make sure that you relatch the lever once you have cleared any paper in this area.

Step 5. Discard any paper you removed.

Figure 11-16. **Area 10**

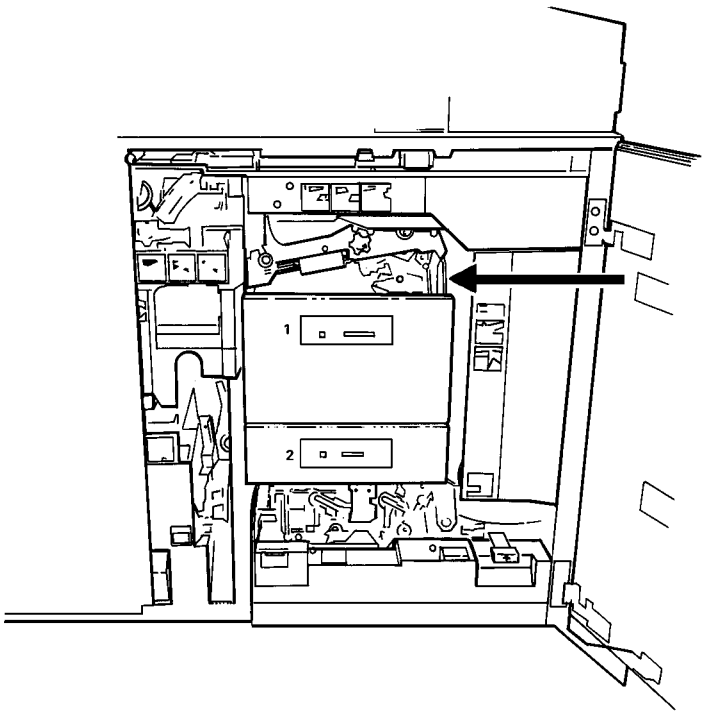


Figure 11-17. **Area 11 (feeder/stacker)**

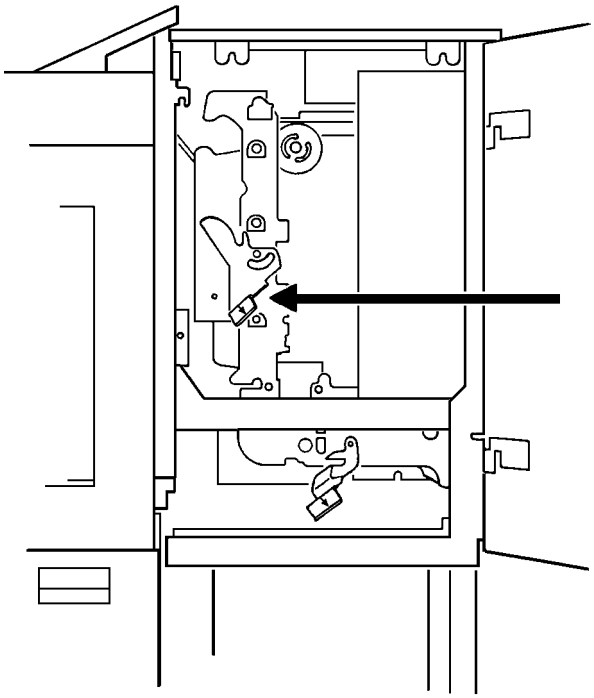


Figure 11-18. **Area 12 (feeder/stacker)**

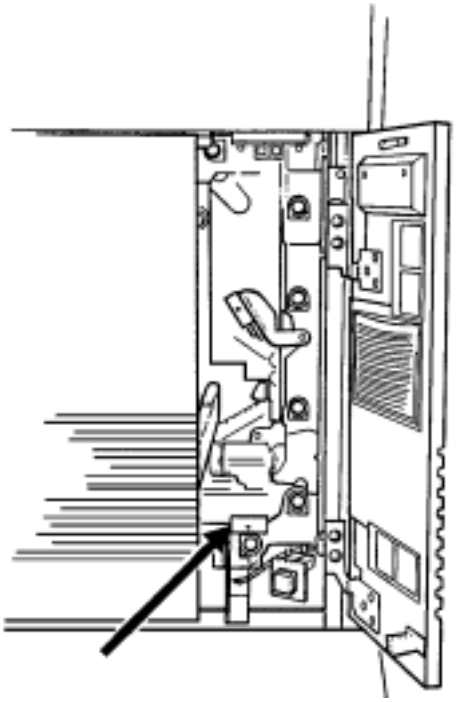


Figure 11-19. **Area 13**

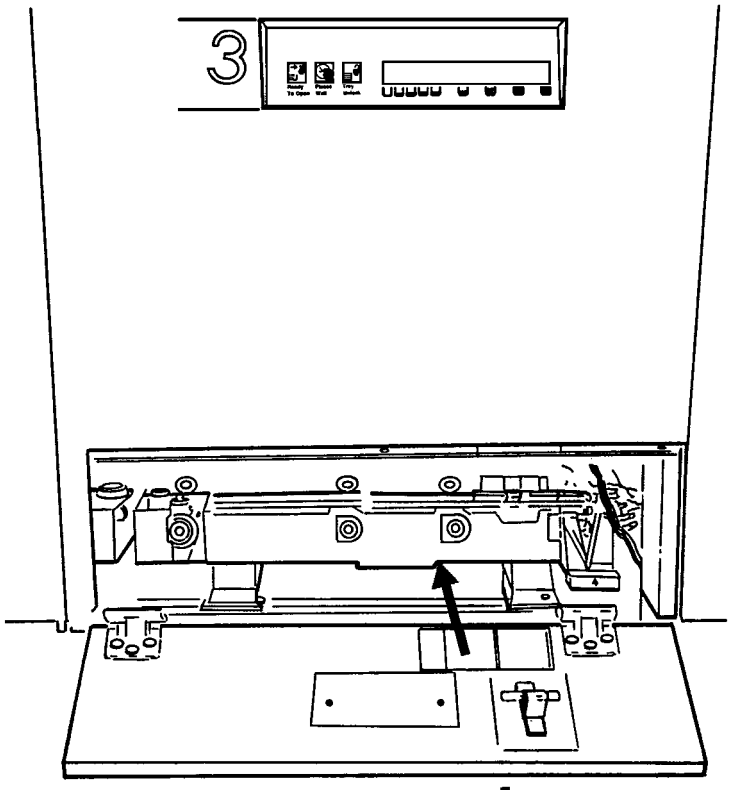
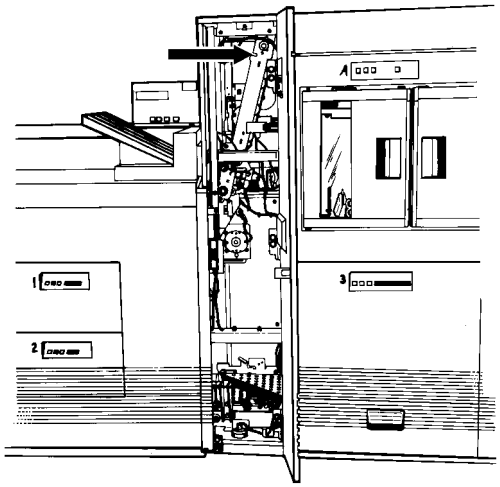


Figure 11-20. **Area 14**



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 11-21. **Area 15**

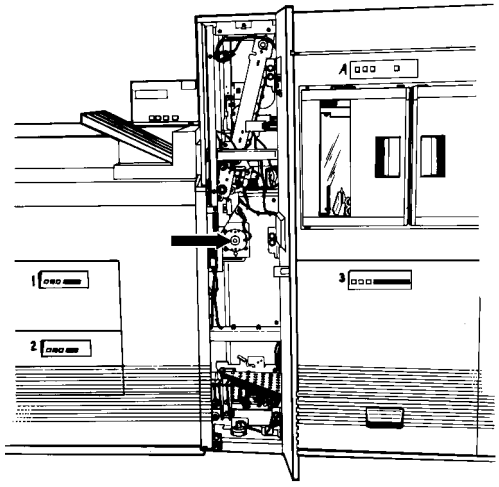


Figure 11-22. **Area 16**

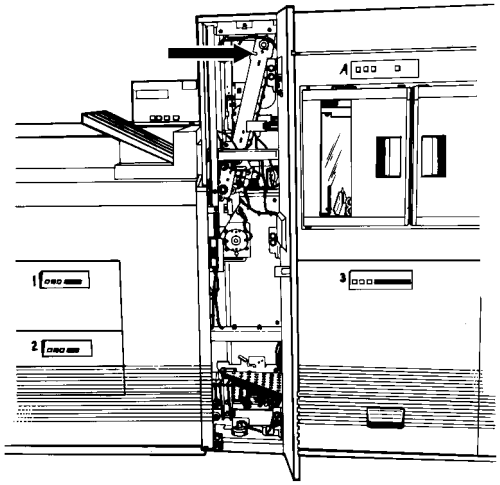


Figure 11-23. **Area 17**

Note: If your LPS has frequent jams in this area, you may need to clean the Q1106 sensor. Refer to the “Cleaning the sensors and the reflecting surfaces” section of the “Maintenance tasks” chapter.

Figure 11-24. **Area 18**

Note: Note the following:

- 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 LPS has frequent jams in this area, you may need to clean the Q1107A sensor. Refer to the “Cleaning the sensors and the reflecting surfaces” section of the “Maintenance tasks” chapter.
- If your LPS is fitted with a Bypass Transport Module, you should check for paper jams in areas 19 and 20 after clearing an area 18 paper jam. To do so:

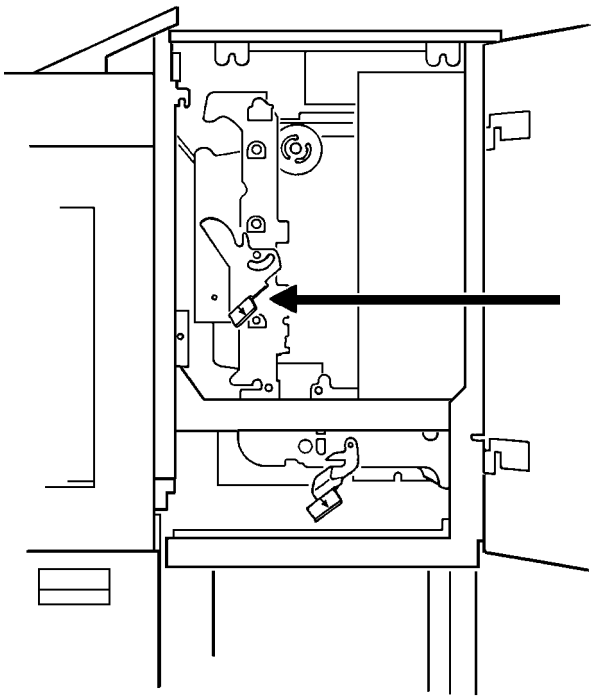
Clearing a paper jam of a printer with a bypass Transport Module

To clear a paper jam of an LPS with a Bypass Transport Module:

Step 1. Open the Bypass Transport Module door.

Step 2. Press the Area 19 green lever in the direction of the arrow printed on it (see figure 11-25).

Figure 11-25. **Area 19**

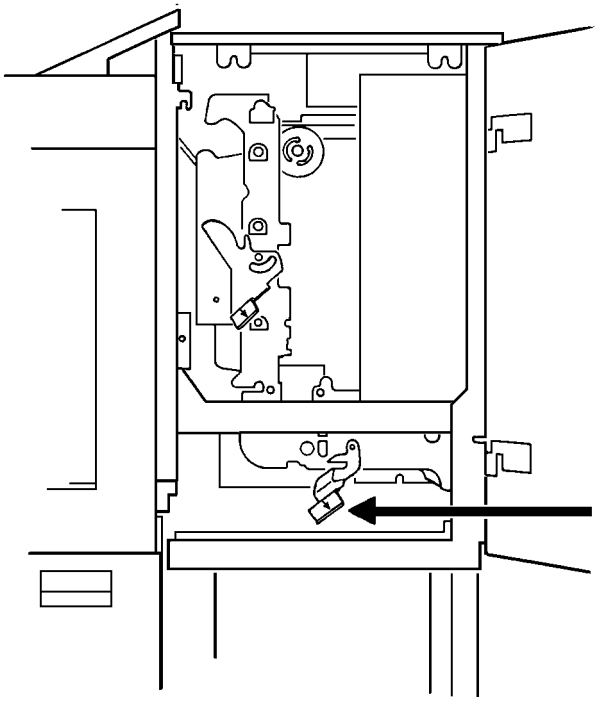


Step 3. Remove any paper in the exposed area.

Step 4. Press the green lever to the left until the latch catches.

Step 5. Press the Area 20 green lever in the direction of the arrow printed on it (see figure 11-26).

Figure 11-26. **Area 20**



Step 6. Remove any paper in the exposed area.

Step 7. Press the green lever down and to the left until the latch catches.

Step 8. Close the Bypass Transport Module door.

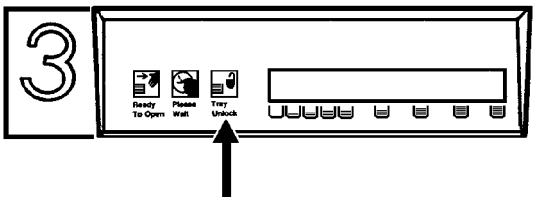
Clearing a misfeed (feeder tray fault)

To clear a misfeed:

Step 1. Go to the feeder tray indicated by the message and display on the printer control console.

Step 2. If the Ready to Open indicator is not lit, press the Tray Unlock button located on the feeder tray control panel (see figure 11-27).

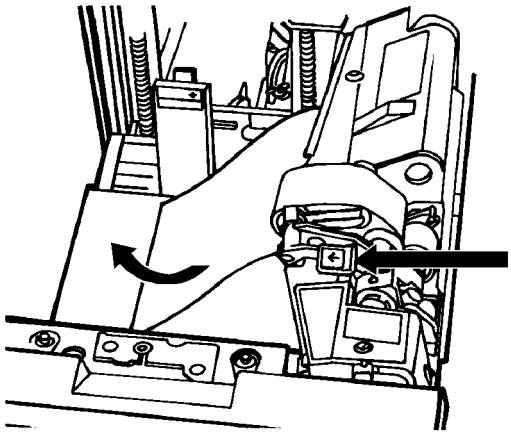
Figure 11-27. **Tray Unlock button**



Step 3. When the Ready to Open indicator lights, open the feeder tray. Pull the tray all the way out for best results.

Step 4. For the processor feeder trays, press the green lever to unlatch the paper feeder assembly (see figure 11-28).

Figure 11-28. **Unlatching the paper feeder assembly**



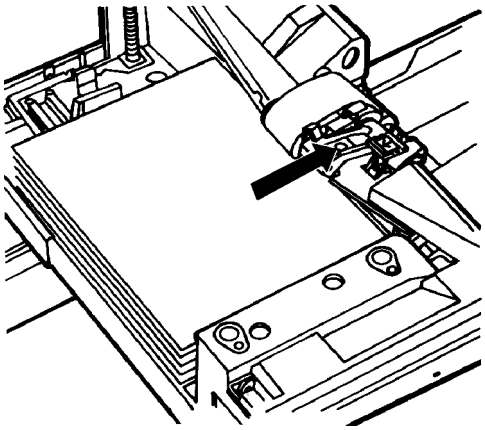
Step 5. Remove and discard any partially fed paper. Ensure that:

- 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.

Step 6. For the processor feeder trays, relatch the paper feeder assembly by pressing the green dot until the assembly clicks into place (see figure 11-29).

Figure 11-29. **Relatching the paper feeder assembly**



Step 7. Slide the tray back into the printer until the tray latches and press the Continue button to resume printing.

Step 8. Discard any pages sent to the sample tray, purge tray, or unused stacker bin when the misfeed was detected.

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.)

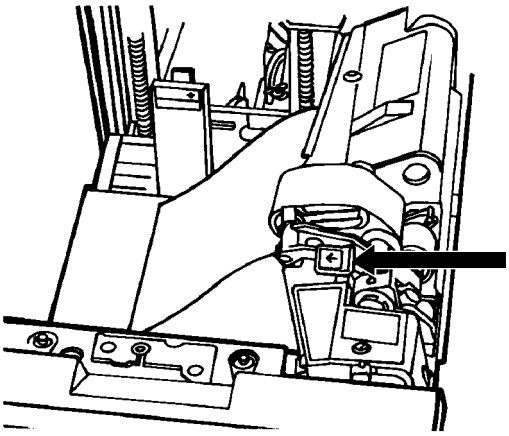
If you suspect this is the problem, cleaning the feed belt may eliminate the need to place a service call. Refer to the following procedure.

Cleaning the feed belt

To clean the feed belt:

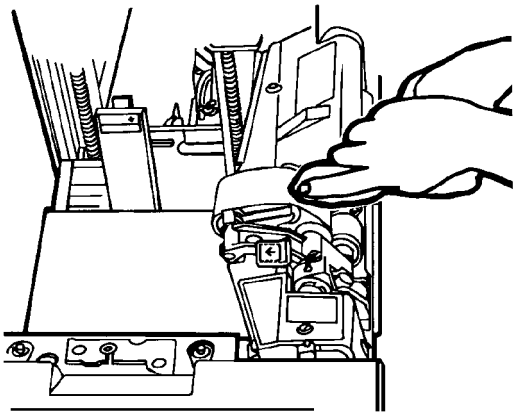
Step 1. Clear any misfeeds that have occurred, but do not relatch the paper feeder assembly. The paper feeder assembly must be unlatched to clean the belt; if necessary, unlatch it by pressing down on the bright green lever on the right side of the paper tray (see figure 11-30).

Figure 11-30. **Unlatching the paper feeder assembly**



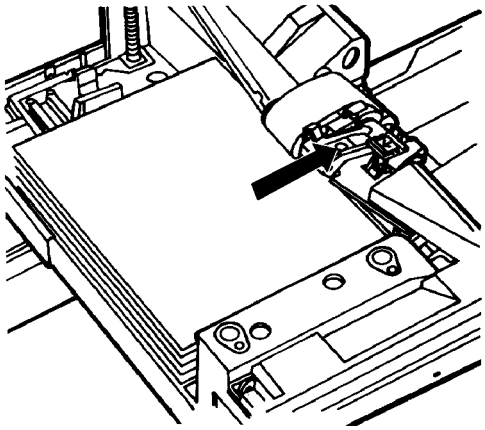
Step 2. Lightly moisten a lint-free towel with Xerox recommended film remover and wipe the outside surface of the feed belt thoroughly in the same direction as the ribs on the belt (see figure 11-31). Wiping from side to side might pull the belt off its track. Allow a few seconds for the film remover to evaporate.

Figure 11-31. **Cleaning the feed belt**



Step 3. Relatch the paper feeder assembly by pressing down on the bright green dot (see figure 11-32). Slide the paper tray completely back into the printer.

Figure 11-32. **Relatching the paper feeder assembly**



Step 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 will dry them out and cause them to fail prematurely. Film remover may be obtained from your Xerox service representative.

Faults are cleared but the Attention light is still on

If you have cleared all faults that are listed on the printer control console, but the Attention light is still on and the message “Output is stopped. See message at the System Display” appears on the printer control console, there may be an uncleared output fault. Check the system controller display. Follow the instructions in the output message and press the Continue button.

Printing does not continue when the Continue button is pressed

If the Continue button is pressed before all printer faults are cleared, the outstanding faults are changed to the status of masked faults (refer to the “Fault masking and the printer control console” section earlier in this chapter). If the printer status displayed in the message area of the printer control console is READY, but printing does not continue when you press the Continue button, touch the Fault List icon on the printer control console to display the Fault List screen. (Refer to figure 11-1.) Clear any faults displayed on this screen and press the Continue button again.

Incorrect paper size message

If printing stops and a message appears on the printer control console telling you that an incorrect paper size is loaded in a feeder tray, 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. 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 LPS automatically purges any dog-eared or skewed sheets of paper. When the LPS encounters paper in this condition, it may stop printing and issue an incorrect paper size message.

Stacker bin problems

This section explains what to do when papers are being thrown around the stacker, and when paper stack is falling over or sliding around the bin.

Papers are being thrown around the stacker

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

Note: Never unload paper this way.

To remedy this situation, unload the bin following the normal procedure. (Refer to the “Unloading a stacker bin” section of the “Paper facts” chapter.)

Paper stack is falling over or sliding around the bin

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

- Reduce the paper curl by following the instructions in the “Paper curl and paper jams” section of this chapter.
- Reduce the number of sheets going to the bin through the Bin Limits task. (Refer to the “Status and print tasks” chapter for instructions.)

System controller problems

This section explains what to do when one of the following problems occur:

- LPS does not boot
- Printer does not respond to the system controller
- Blank display on the system controller terminal
- Rasterization messages appear on the system controller display

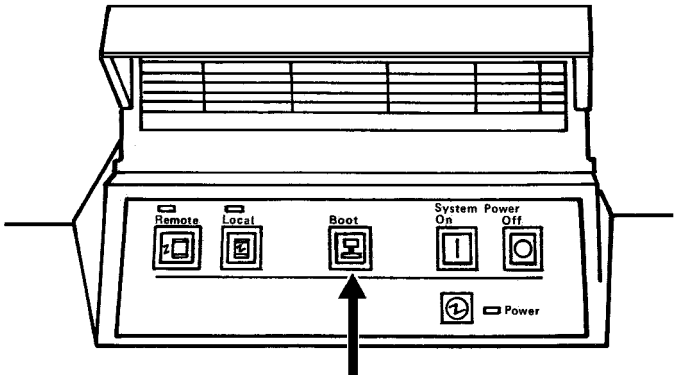
LPS does not boot (system controller terminal)

If you have followed the procedure for powering on and booting the LPS, but the system does not boot properly:

Step 1. Press the <CAPSLOCK> key on the system controller keyboard.

Step 2. Press the Boot button on the operator control panel (see figure 11-33).

Figure 11-33. **Boot button on the operator control panel**



Step 3. Reenter the BOOT command.

If the system still does not boot, call for service.

Printer does not respond to system controller

If the printer control console displays PRESS CONTINUE TO RESUME PRINTING, but the printer does not respond when you press the Continue button, or if the printer does not respond to directions from the system controller keyboard, they may have lost communication with each other. Use the following procedure to restore the communication between the system controller and printer.

Step 1. Press the Continue button on the printer control console, if directed to do so.

Note: If the printer responds and resumes printing, do not follow the rest of this procedure.

Step 2. If the printer does not respond and resume printing enter the RESET command.

(Refer to the “Reset” section of chapter 4, “Job control tasks.”)

Step 3. Enter the PSC (printer subsystem controller) command. This should put the printer back in communication with the system controller.

Note: Ask your Xerox service representative to change this command to a Logon Level 2 if not already done. Otherwise, you will not be able to access it.

Step 4. Retry the command to which the printer would not respond earlier. If it still does not respond, tell your supervisor or a systems analyst.

Blank display (system controller terminal)

To prolong the life of the system controller display, the light is turned off and the display becomes blank when it has not been used for 15 minutes. As soon as any key is pressed, the image returns exactly as it was prior to turning itself off. There is no loss of information.

If there is no display when you press a key, check that the ON/OFF switch on the right side of the display (just below the screen) is in the ON position. Also check the brightness control (intensity adjustment lever); slide it to the right to make the screen brighter. If the display is turned on, the lever is all the way to the right, and the display screen is still blank, place a service call

Rasterization messages

When a line of print is too complex for the system to process normally, the output processor directs the image generator to produce a bitmap image instead of aborting the page. This process can take anywhere from 3 to 20 minutes. The following messages appear on the system controller display:

```
OS1620 Local density problem has caused a printer
cycle down
OS1625 Local density problem rasterization in
progress.
```

Note: Do not press any keys until the process is complete. Any commands normally allowed during print mode (for example, FEED, JOBS, PSTATUS, SELECT, and so on) entered while rasterization is in progress are delayed until the rasterization process is finished. When the process is complete, the following message appears:

```
OS1627 Local density problem rasterization is
complete
```

The printer now cycles up and prints the problem page.

Power failure

If there is a power failure and your LPS is online to a host computer, the system controller display should prompt you to enter “C”. (It is possible that the message will not appear. Enter “C” anyway at the system controller keyboard.) If there is no response from the system after you enter “C”, press the System Power Off and System Power On buttons on the operator control panel to reboot the system.

In the event of a power failure, you must initiate recovery of the data files to recover the data content. The system asks if you want it to attempt recovery. If you do, key in <Y> (yes), or select the Yes button.

It is possible that not all data can be recovered; the amount of recovery that can be accomplished depends on when the last system checkpoint was taken because of the method used by the system to restore its dynamic (active) memory.

If working online to a host computer, check the output in the stacker bins to find the last completed page. Request that the host operator retransmit the job beginning at that point. The operator may have to back up the spooler a number of pages.

Status file nearly full message

As jobs are printed, report information is automatically accumulated and saved in the status file on a report basis each time a report is both input and printed.

When the following message appears:

```
STATUS FILE NEARLY FULL
```

The accounting/status file has only enough space for 25 more reports. When that number is exceeded, the system continues to add new reports by deleting those at the beginning of the status file, thereby losing important information.

When this message appears, notify your supervisor immediately. Appropriate action can then be taken to save the report information and reinitialize the status file.

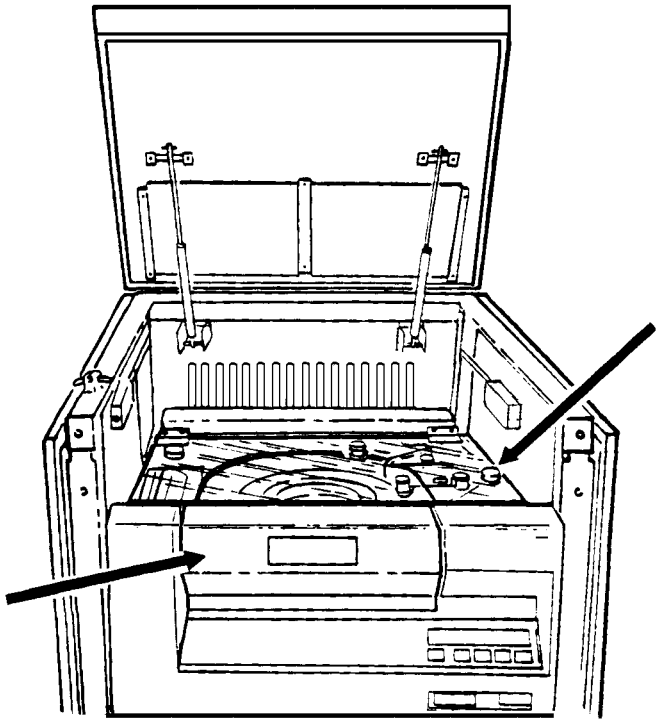
Open-reel tape drive problems

The following sections deal with open-reel tape drive problems.

Tape drive does not perform self-load routine

Ensure the tape path cover and the loading door are fully closed (see figure 11-34).

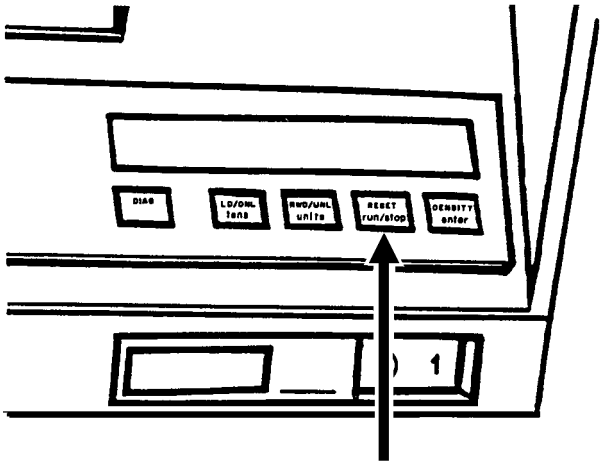
Figure 11-34. **Tape path cover and loading door**



“OK” appears on the tape drive message display, but the loading door is closed

Press the Reset button to open the door (see figure 11-35).

Figure 11-35. **Reset button**

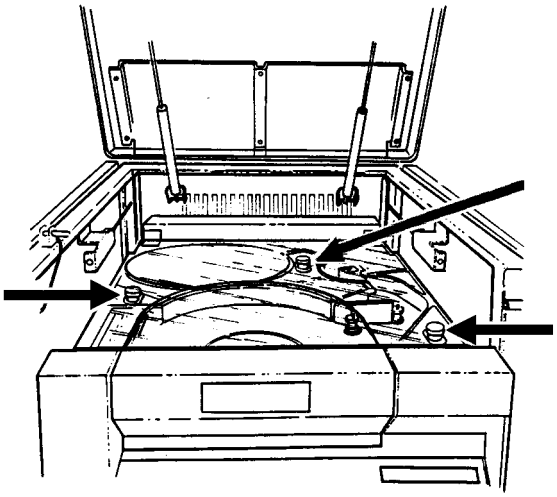


If the door still does not open, tap on it lightly to open it.

“LID OPEN” appears on the tape drive message display

Ensure the tape path cover turnbuckles are all secured (see figure 11-36).

Figure 11-36. **Tape path cover turnbuckles**



1/2 inch cartridge tape drive problems

The following sections deal with 1/2 inch cartridge tape drive problems.

Basic recovery procedure

Always try to recover the cartridge from the 1/2 inch cartridge tape drive before you try to correct any problems with the drive. Follow these basic recovery steps:

Step 1. Vary the tape drive offline. (Refer to “Power off the 18/36 track 1/2 inch cartridge tape drive” section of chapter 6, “Offline printing tasks.”)

Step 2. If there is a relevant message on the printer control console or system controller display, perform the action described there.

Step 3. If there is an error code on the tape drive message display, record the error code and time and call for service.

Initial program load (IPL) procedure fails

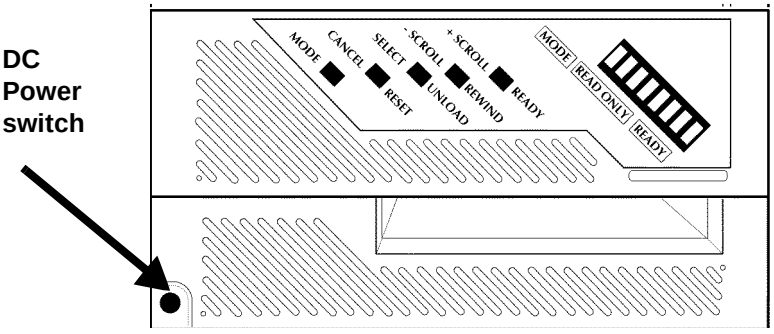
An error occurred during the IPL procedure if:

- The three indicator lights (Read only, Ready, and Mode) flash on the 18/36 track drive
- An error code displays after you power on the tape drive.

Re-IPL the tape drive using one of the following procedures:

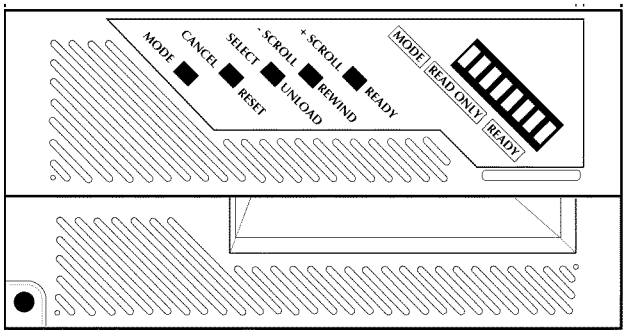
- Turn off the tape drive by pressing the Power switch to OFF.
- Wait 10 seconds and then turn the tape drive back on by pressing the Power switch to ON

Figure 11-37. **DC power switch**



- Depress and hold the Scroll, Select, and Unload buttons for at least five seconds (see figure 11-38).

Figure 11-38. **Scroll, Select, and Unload buttons**



If the IPL procedure still fails, note the error code and time and call for service.

If you cannot insert a cartridge

Inspect the cartridge for damage. (Refer to the “Load a cartridge tape” section of the “Offline printing tasks” chapter 6.)

If the cartridge is damaged, use an undamaged cartridge instead.

If the cartridge is undamaged but you cannot load it, call for service.

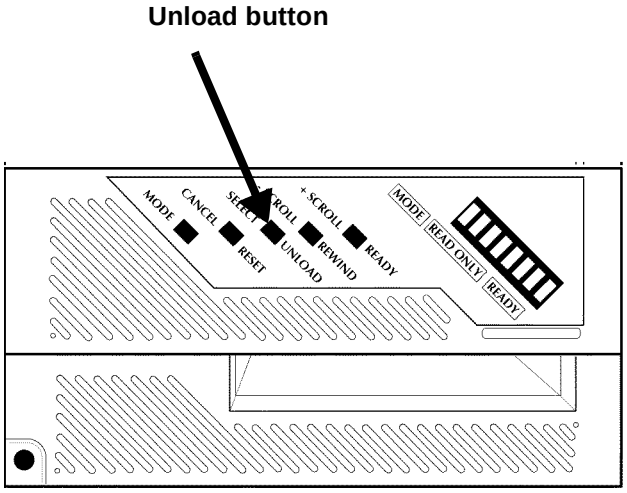
If tape does not unload

To solve this problem:

Step 1. If there is an error code message on the message display, record the error code.

Step 2. Press the Unload button (see figure 11-39).

Figure 11-39. **Unload switch**



Step 3. Try unloading the tape again.

Step 4. If the tape still does not unload, record the error code on the message display, record the time, and call for service.

Unloading a cartridge after a power failure

To unload a cartridge after a power failure:

Step 1. Turn the tape drive on. (Refer to the “Emergency procedures” section of the “Offline printing tasks” chapter.)

Step 2. Press the Unload button.

Tape winds 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.

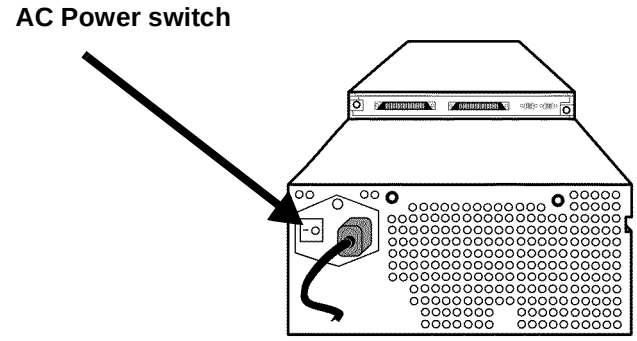
Message display is blank

To solve this problem:

Step 1. Ensure the tape drive is receiving power from the main AC source.

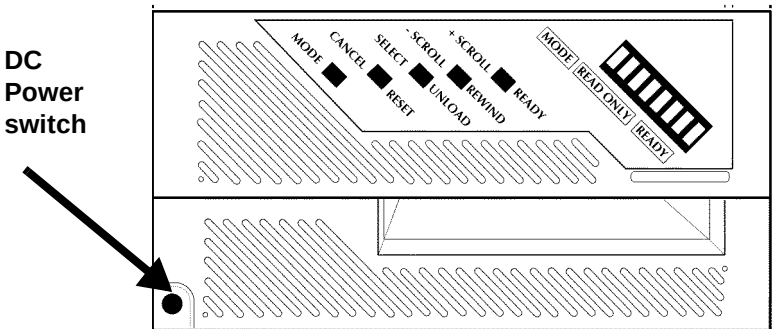
Step 2. Ensure that the AC Power switch on the rear of the tape drive is on (see figure 11-40).

Figure 11-40. **18/36 Track AC power switch**



Step 3. Turn the Power switch OFF and then ON. (See figure 11-41).

Figure 11-41. **DC power switch**



Step 4. If the display is still blank, call for service.

If tape drive does not become ready

To solve this problem:

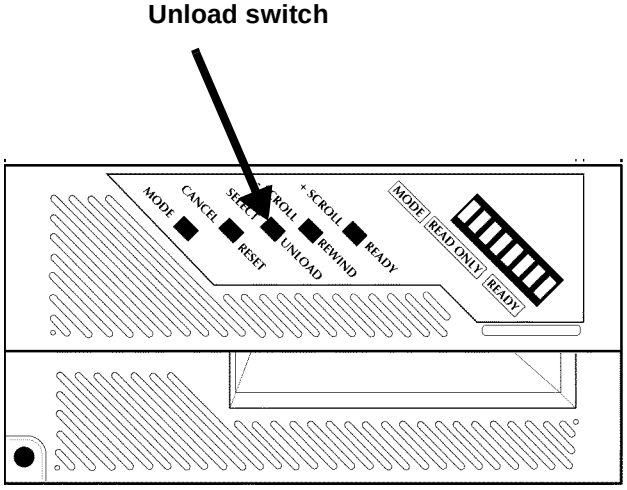
Step 1. Determine if the tape drive is online by pressing the Scroll button until the message display shows the Status display.

Step 2. If the tape drive is offline, follow the procedures listed in the “Place the tape drive online” section of the “Offline printing tasks” chapter.

Step 3. If the drive still does not become ready, the cartridge may be inserted incorrectly. Remove the cartridge from the transport and insert it again.

Step 4. If there is an error code message in the message display, record the error code, press the Unload switch (see figure 11-42), and try the operation again.

Figure 11-42. **Unload switch**



Step 5. If the 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 chapter 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.

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

Before contacting Xerox service, please make note of:

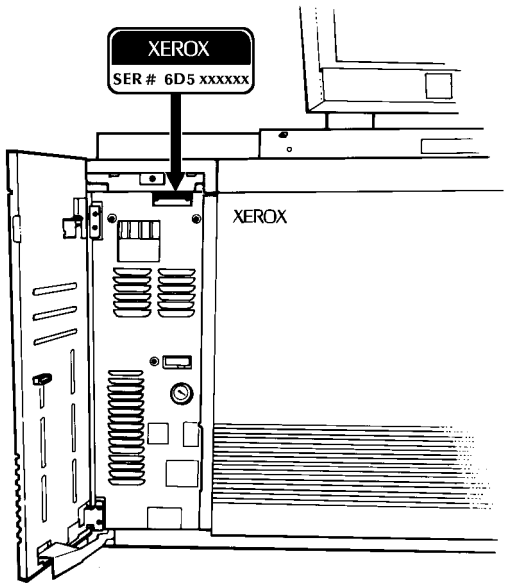
- Status code numbers and messages which appear on the system controller display, including the 6-digit code number that resulted from running the PROBLEM command
- Status messages which appear on the printer control console
- Indicator lights which may or may not be lit
- Status codes which appear in the message display of the tape drive control panel if there is a tape drive problem.

Your call will be answered by a Xerox representative who will ask you for your equipment model.

You will also be asked for:

- Your printing system's serial number, located on a panel inside the printer, behind the left-hand, small door (see figure 11-43).

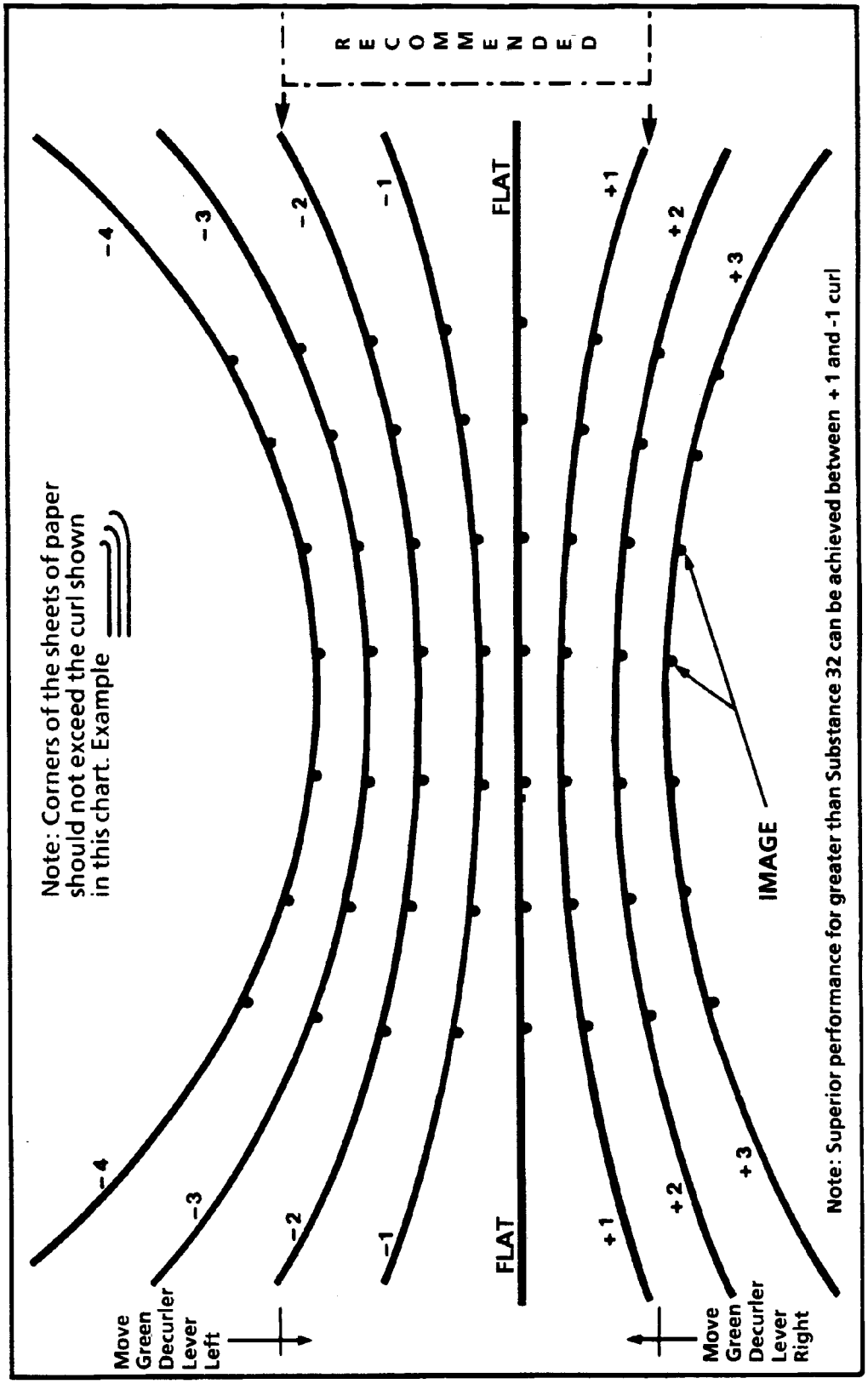
Figure 11-43. **Locating the LPS serial number**



- Your name
- Your company's name
- The system condition or status.

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

Figure 11-44. **Paper curl chart**



12. MICR operating procedures

Overview

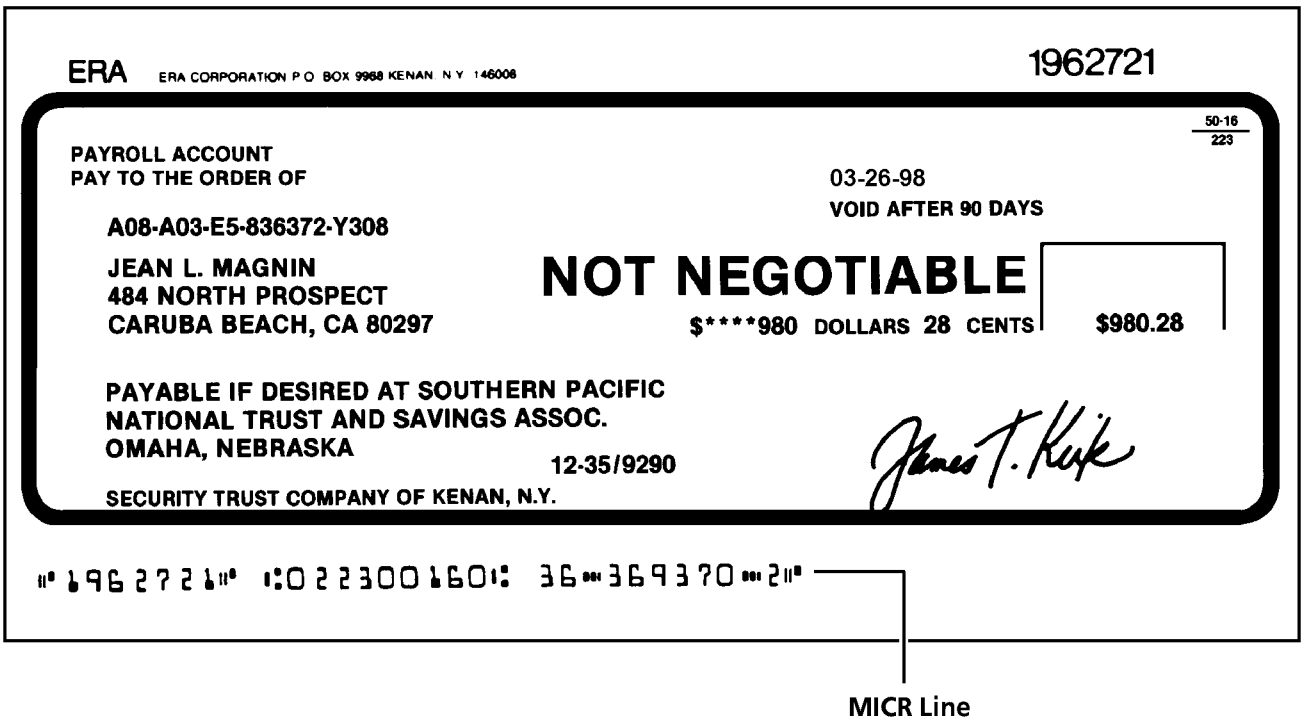
MICR is an acronym for Magnetic Ink Character Recognition. The Xerox DocuPrint 96MX LPS is identical to the Xerox DocuPrint 96 LPS, except that it is enhanced to provide MICR capability. Xerox DocuPrint 96MX systems may be operated in MICR or non-MICR mode.

This chapter describes procedures and operations which are specific to the Xerox DocuPrint 96MX LPS system.

Features of the Xerox DocuPrint 96MX system

The Xerox DocuPrint 96MX system produces a Magnetic Ink Character Recognition (MICR) line on negotiable and turnaround documents such as checks and bills. Figure 12-1 shows an example of a MICR line.

Figure 12-1. **MICR line**



The Xerox DocuPrint 96MX system is designed to meet ABA standards and ANSI and ISO specifications for automatic check handling. It prints the variable data and the MICR line at the same time.

MICR materials

Toner and developer Both the toner and the developer are designed to function on a Xerox DocuPrint 96MX LPS and do not function satisfactorily in the Xerox DocuPrint 96 systems.

Fuser agent Use only fuser agent in a Xerox DocuPrint 96MX system.

Turning MICR mode on or off

The Xerox DocuPrint 96MX LPS may run in MICR or non-MICR mode. This gives you control of the printer MICR state. To perform the mode selection, enter the following command at the System Controller terminal:

MICR [ON/OFF]

MICR mode echo

The MICR mode echo is an icon on the desktop header (see figure 12-2). It indicates the state of the printer's MICR mode status.

Figure 12-2. **MICR mode echo icon**

Should MICR be turned off or on?

MICR is the normal operating mode for MICR systems. MICR mode should be turned off only when necessary to process jobs that require the following settings, which are not supported in MICR mode:

- DARKNESS setting of other than 5
- EDGE setting of other than OFF

An attempt to change the DARKNESS or the EDGE settings when MICR mode is on will result with an error message.

At the end-of-job, the MICR mode setting will return to the sysgened default.

Points regarding MICR mode and the system UI

Note the following:

Step 1. A question mark (?) displays whenever MICR mode is turned off.

Step 2. You may turn MICR mode on or off only when the printer is idle, and may not switch modes when the printer is online. This feature prevents signal strength errors.

Step 3. When MICR mode is turned on, the Print Darkness and Leading Edge Lightening windows are unavailable.

MICR mode following a sysgen

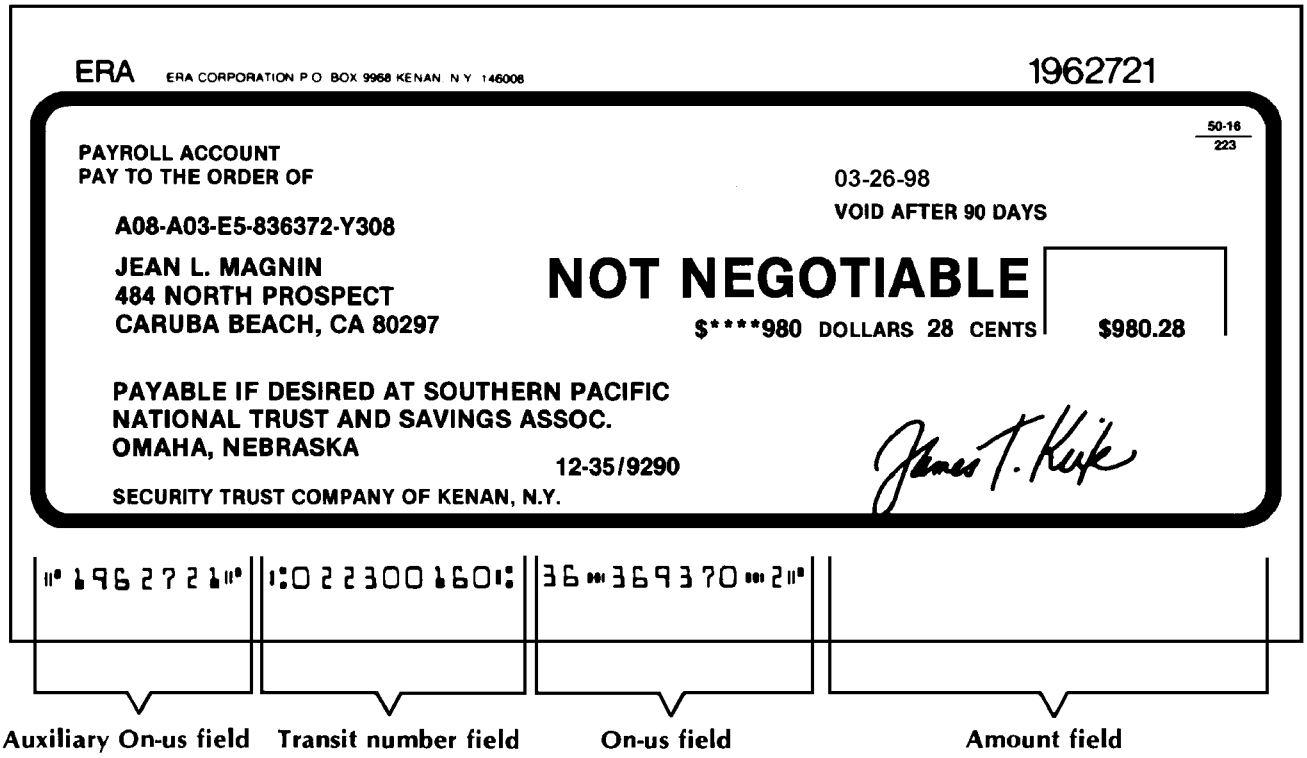
You can specify the system default MICR mode as follows:

- **ON**, where the system will come up with MICR mode following a sysgen, and revert back to MICR mode after the completion of a job for which MICR mode has been disabled.
- **OFF**, where the system will come up with the non-MICR mode settings following a sysgen, and will revert back to the pre-MICR mode settings upon completion of a MICR mode job.
- **NONE**, where the system will come up with the non-MICR mode settings following a sysgen, and will stay at any keyed-in setting until a new setting is entered.

MICR output

It is important that you check MICR output periodically for general MICR line readability. Check the MICR Clear Band (see figure 12-3).

Figure 12-3. **MICR Clear Band**



The Xerox DocuPrint 96MX LPS enables you to create machine-readable documents using the standard E-13B font that supports 14 characters including numerals zero through nine, as well as the following symbols:

- Transit
- Amount
- On-Us
- Dash

Transit There are two transit symbols in a MICR line. The numbers between the transit symbols identify the institution upon which the check is drawn, and where the document should be sent for processing.

Amount There are two amount symbols in a MICR line. The numbers between the amount symbols are the amount of the check. This amount is normally added later by the bank.

On-Us The On-Us symbol indicates that the numbers to the left of the symbol are the account number. The content of the On-Us field is determined by the issuing institution. The bank branch the check is drawn on may also be indicated.

You will recognize your account number, your bank branch number, and probably the check number. The check serial number appears typically to the right of the On-Us symbol.

On larger business size checks, this symbol is also used to define a field on the left end of the check. This field, called the Auxiliary On-Us field, is optional and frequently contains a multiple digit serial number.

Dash The dash is sometimes used as a separator within the On-Us field, although reader/sorter manufacturers discourage its use because of detection problems. Some banks use the dash to separate the bank branch number from the account number.

Tools to check MICR output

The following tools can be used to determine whether a document is within specifications or not:

- MICR Position and Dimension Gauge
- 8 Power (X) Comparator with MICR Grid.

Note: Use the custom transfer assist blade on all Xerox DocuPrint 96MX systems running non-standard paper sizes to ensure acceptable MICR line quality. Refer to the “Maintenance tasks” chapter, “Custom transfer assist blade” section for information on the transfer assist blade.

MICR Position and Dimension Gauge

The MICR Position and Dimension Gauge, shipped in a kit which includes a small magnifying glass, allows you to compare the Xerox MICR printer information to industry standards. You can compare character spacing, horizontal and vertical alignment, and check for voids (deletions) and spots.

The MICR Position and Dimension Gauge is printed on a thin sheet of flexible plastic, which is attached to the bottom of a piece of thick, hard plastic. The Gauge is used by slipping the document to be evaluated between the two pieces of plastic.

8 Power (X) Comparator with MICR Grid

Like the MICR Position and Dimension Gauge, the 8 Power (X) Comparator with MICR Grid also allows you to compare the MICR characters to industry standards.

The comparator is an optical tool which magnifies the character eight times. It has a built-in measuring scale to measure the size of the MICR characters and to check for spots and voids.

The comparator can be used by transmitted light or by reflected light.

Transmitted light

Hold the document in front of a transmitted light source, with the bottom of the comparator on the document. This allows the light to be transmitted through the document. This is especially useful when looking for voids (deletions) and checking character edges.

While transmitted light leads to the most accurate viewing of character quality, transmitted light tends to narrow lines and make spots appear smaller. Also, the comparator's grid dimensions refer to viewing by reflected light.

Reflected light

Hold the document in front of a reflected light source, with the bottom of the comparator on the document. Reflected light is the best way to check spots.

Note the following:

- Patterned paper may cause viewing problems. It is a good idea, therefore, to use white paper for quality evaluations.
- MICR quality may vary with the type of paper used.
- Handle the comparator with care. The grid is printed on the bottom and may be damaged or worn off in time.

Adding dry ink

The procedure for adding dry ink is identical to the procedure on the non-MICR printer.

Caution: Use only MICR dry ink for a MICR (Xerox DocuPrint 96MX) printer. MICR dry ink cannot be re-used or interchanged with the standard, Xerox DocuPrint 96 LPS, Xerox 4135 LPS, or Xerox 4635 LPS dry ink.

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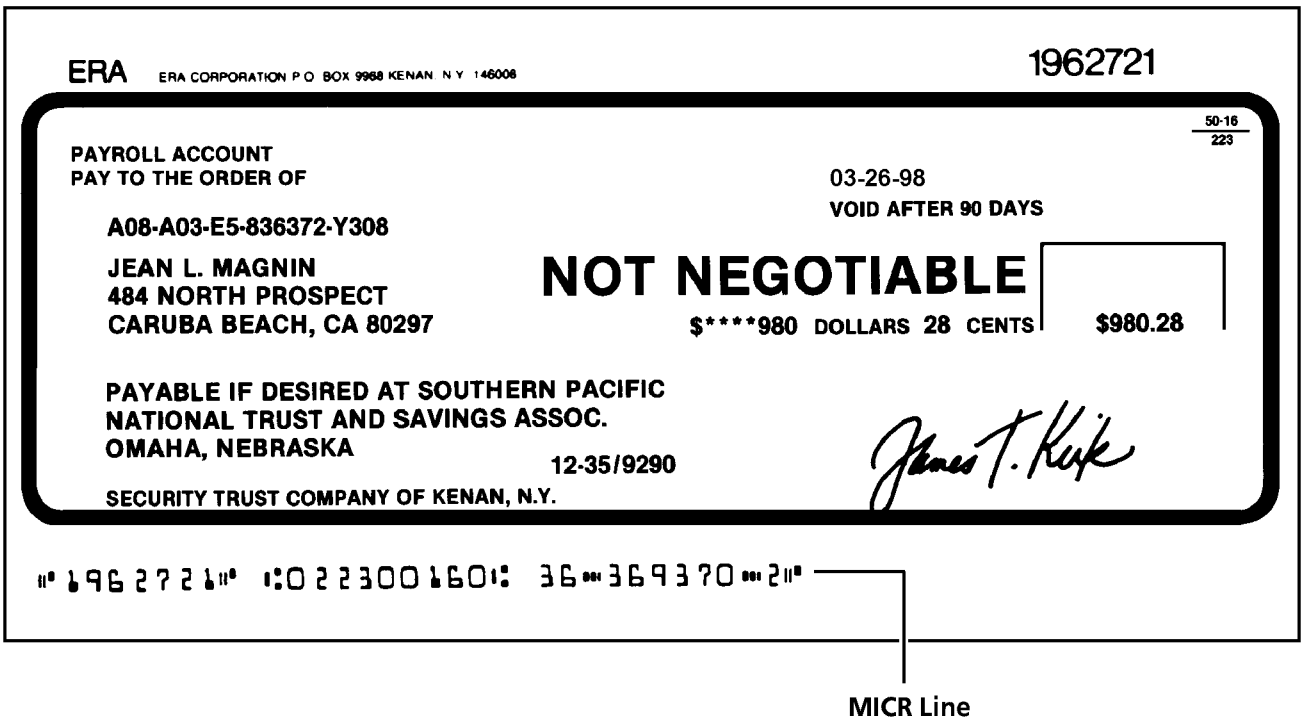

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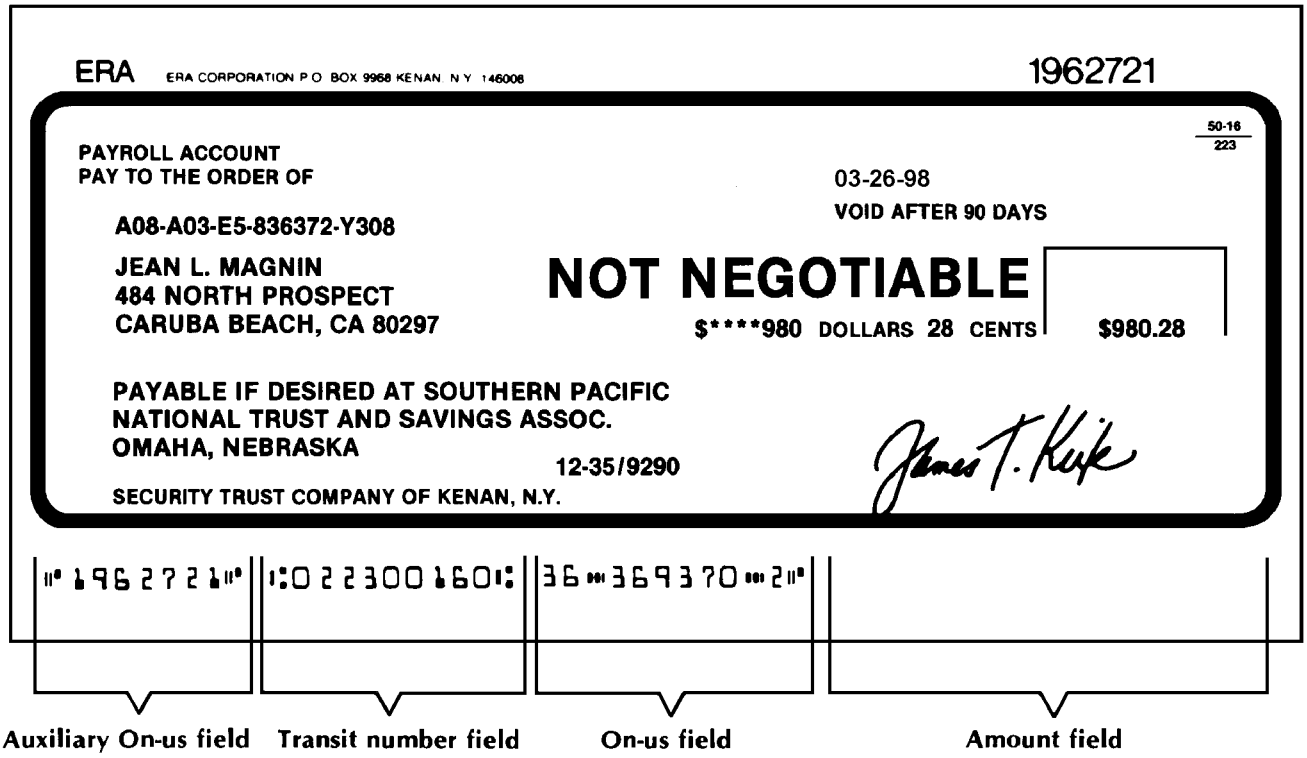

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A. Meter reading and reporting

As jobs are printed by the LPS, usage information is accumulated and saved. Instead of using physical meters, software in the printer maintains the page count in its memory. Each month, that information needs to be reviewed and transmitted to Xerox for billing purposes. This appendix describes the procedures necessary to extract the information and report it to Xerox.

Meter reading and billing report

There are two meters maintained by the laser printing system for customer billing as follows:

- Meter A counts all good impressions delivered to their intended output tray. This meter cannot be reset.
- Meter J counts only sheets printed in the printer diagnostic mode and delivered to their intended output tray. Like meter A, it cannot be reset.

Sometime during the last five working days of the month, *when the system is idle*, you must extract the billing information and report it to Xerox. To obtain a billing report, enter the REPORT BILLING command at the system controller keyboard.

Billing report

To display billing report information, enter the following command:

REPORT BILLING,DISPLAY

To print the billing report, enter the following command:

REPORT BILLING,PRINT

To display and print the billing report, enter the following command:

REPORT BILLING,DISPLAY,PRINT

Figure A-1. **Customer billing report**

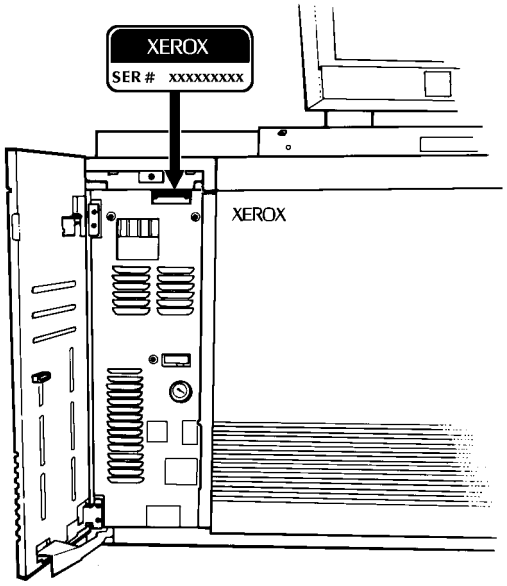
```
                              CUSTOMER BILLING REPORT

Date        10/31/1997
Time        16:57

Serial no   0000000000
System ID:  V3B R5.1 INC 10/31/97

                    **** SYSTEM CONFIGURATION ****
                    Machine Type - DocuPrint 96/DocuPrint 96MX

CPU MEMORY = 1024K                          SCSI Disk Units: 0,Floppy
AIS: Version 2                              Page Buffer Memory Size: 128 Banks
Bitmap Memory: 256 Megabits                 Page Buffer A,B: 2 BUFFERS
Ink Memory: 2 Megabits                      Memory Test at Boot = no
Text and Metrics Memory: 3 Megabytes        Auto Boot Enabled = no
Online: Address 31                          Boot Message Display
-Mode Burst, Device 3211                    Printer Characteristics
Terminal Type: Character                     - Speed: 96 ppm
SCSI Tape Devices:                           - Resolution: 300 spi
- Reel to Reel: HP-SCSI A/Ch O/Tg 0          - Default Order: 1 to N
- Streamer Tape: HP-SCSI A/Ch O/Tg 1         - Paper size: 8.50 x 11.00 Inches
                                            Language: U.S. English
                                            Graphics Type: AIS
                                            SCSI Tape Device Assignments:
                                            - TD0 = Reel to Reel Tape
                                            - TD1 = Streamer tape









Good Impressions Successfully Delivered:     101675

Impressions printed in IOT diagnostic mode = 7400
Number of purge sheets sent to purge tray = 3300
Good Impressions Successfully Delivered in 3 pitch mode:300
Good Impressions Successfully Delivered in 4 pitch mode:0
Good Impressions Successfully Delivered in 5 pitch mode:0
Good Impressions Successfully Delivered = 101600
Percentage of duplex impressions:         68
```

Reporting meter reads

Before you call the Xerox Electronic Meter Collection Center, ensure you have the following information:

- Meter read information (the A meter)
- Your printing system's serial number, located on a panel inside the printer, behind the center door (see figure A-2).

Figure A-2. **Locating your LPS serial number**



If you are reporting other Xerox printers during the same call, ensure you have the serial number and meter read information available for each one before calling the Electronic Meter Read Collection System.

Read through all of the following instructions carefully before you attempt to make your first meter reading report. If you need assistance with this process, place a toll-free call to the Help Line 1-800-433-7769 between 8:30 a.m. to 5:15 p.m., Eastern time. An answering device operates during non business hours; please leave your name and phone number, and your call will be returned.

Touchtone Telephone Direct Meter Read Entry System

The Touchtone Telephone Direct Meter Read Entry System is designed to guide you through an error-free meter read entry session. After reviewing this procedure and making several entries, you will need these instructions only for special situations. You should have no problems in entering your meter reads; if you do, the system is designed to enable you to make any necessary corrections.

This section includes:

- Step-by-step instructions for entering your meter readings and reviewing and changing data.
- A Month End Meter Read Reporting Worksheet (see figure A-3) to help you record your meter readings. The worksheet can be used as a master for making additional copies.

Figure A-3. **Month End Meter Read Reporting Worksheet**

Month End Meter Read Reporting Worksheet

Call:
423-6168 (in Rochester, NY)
1-800-638-7979 (All other U.S. locations)

Enter:

Converted Serial Numbers	Ending Meter Read(s)
_____#	_____#
_____#	_____#
_____#	_____#
_____#	_____#
_____#	_____#
_____#	_____#
_____#	_____#
_____#	_____#
_____#	_____#
_____#	_____#

Enter: # to acknowledge completion of serial number/meter read entry for each machine.

Enter: **91# to end call and record entry in computer base.

For your information only:

Date of Entry: _____

For Assistance Call 1-800-433-7769.

Understanding the system

The following points are very important to understand before beginning to use the touchtone system:

- Always wait for the system voice to finish a prompt before entering data.
- Always complete each entry with the # (pound sign). This tells the system you have finished entering the data item it requested. When you press the pound sign, the system repeats the information you just entered and prompts you for the next piece of information for the report.
- Any time you want the system to repeat the voice prompt or message it just completed, enter **3#.
- When you want the system to cancel an entry it just read back to you, enter **4#. After acknowledging the cancellation, the system asks you to reenter the needed information.
- Enter **94# to cancel all data entered for a machine. It can be used any time before you enter the pound sign that completes the data entry for that machine. (Refer to step 5 in the following section.)
- Each letter in the serial number must be translated into numbers because letters are not individual keys on the touchtone keypad.
  - — To tell the system you are about to enter a letter, press the asterisk (*).
  - — Next, press the number key on the touchtone pad that has the letter on it—press 7 for S, for example.
  - — Finally, press 1, 2, or 3 for the letter's position on the key. S is in the third position on the 7 key, for example, so you press 3. (The entire “code” for S is *73.)

  Example: To enter the serial number 6D5789123, press the following keys: 6 *31 5 7 8 9 1 2 3 #

Note: It is possible for a serial number to contain letters in any or all of the first three positions. If there are no letters, simply enter the nine numbers and the #. For assistance in converting your serial numbers, refer to table A-1.

Table A-1. **Letter-to-number conversion chart**

Letter	Conversion	Letter	Conversion
A	21	N	*62
B	*22	O	*63
C	*23	P	*71
D	*31	Q	*11[1]
E	*32	R	*72
F	*33	S	*73
G	*41	T	*81
H	*42	U	*82
I	*43	V	*83
J	*51	W	*91
K	*52	X	*92
L	*53	Y	*93
M	*61	Z	*13[2]

1. Indicates letters not on the touchtone keypad that were assigned by this system to the 1 key.
2. Indicates letters not on the touchtone keypad that were assigned by this system to the 1 key.

Entering meter read information

To enter meter read information:

Step 1. Call the Xerox Electronic Meter Data Collection System's toll- free number. It operates 24 hours a day, every day, including weekends and holidays. Meter readings should be reported between the 20th and the last working day of each month.

423-6168 (in Rochester, NY)

1-800-638-7979 (all other U.S. locations)

When the system answers your call, you hear:

"Thank you for calling the Xerox Electronic Meter Collection System. For assistance, please call 800-433-7769."

When it is necessary to provide special information of interest to our customers, a special announcement message follows this greeting. Following these initial messages, the system is ready to receive your meter readings.

Step 2. The system prompts you to begin by asking for your machine serial number.

"Please enter the machine serial number."

Enter your machine serial number, followed by a pound sign (#), on the telephone keypad.

Once you enter your machine serial number, the system repeats it back to you. (To eliminate the possibility of a coding error for any letters in the serial number, the system uncodes your entry and says it with the letters. If the system says the wrong letter, cancel this entry by entering **4#, recode the letter, and reenter your serial number.)

Step 3. When the serial number has been entered and accepted, the system asks for the date of the reading.

"Please enter the date of the reading or enter the pound sign for today's date."

For example, May 3, 1998 would be entered as 05 03 98 #.

If a date appears to be incorrect, you receive a special message and are asked to reenter the date.

If the system tells you your date is not within the acceptance range, it also gives you the correct range. If you do not enter a date within that range, the system refers you to the touchtone information number and terminates the call.

When a correct date is entered, the system reads back the date, for example:

"Date is five three eighty-nine."

Step 4. When the system finishes reading back the date, it then asks for the meter reading.

"Please enter meter A."

Enter the A meter reading, ending with the pound sign. Do not enter zeros in front of the numbers of the meter read.

Note: From the serial number, the system knows how many meters there are to report and asks for them by name.

If you want to review the data, enter **1# to start the review. Refer to the following section "How to review and change data" for instructions.

Step 5. When the A meter has been entered, the system reads it back to you and says:

"All meter reads for this machine are complete. Enter pound sign to acknowledge."

Enter the pound sign (#) if the meter read was correctly entered. If there was a mistake, enter **4# to cancel the read and reenter the correct meter read. Once again the system repeats the meter read to you and asks you to enter the pound sign to confirm the entry. If it is correct, enter #; if it is not, repeat the cancellation/reentry process.

Step 6. Once you have successfully completed step 5, the system says:

"All readings accepted."

Step 7. The system's next message is to ask you for a machine serial number. At this point you have the following choices:

- If you have more machines to report, repeat the previous steps until all machines have been reported.
- If you have no more machines to report and you are sure of the accuracy of the information, enter **91# to end the reporting session. The system responds by indicating how many machines were processed and accepted during this session.

  "Readings for ___ machines accepted. Thank you for using the Xerox Electronic Meter Reading System."

Note: If you would like to practice with an imaginary serial number before entering your actual serial number and meter read, you can use serial number X12377889 (which converts to *9212377889). This serial number is only a demonstration serial number; it cannot generate a bill. You may practice all procedures described in the "Entering meter read information" section using this serial number.

Reviewing and changing data

To review and change data:

Step 1. To begin the review, enter **1#. The system reads the first serial number.

Step 2. To accept the serial number and continue, enter #. The system then reads back the A meter read.

Step 3. Continue the review by accepting with the # sign each time the entry is read back correctly.

If an entry read back is incorrect, enter **4# to cancel the entry, and reenter the correct information after the voice prompts you to do so. Be sure to wait until the voice is finished before making entries.

Step 4. To end the review at any time, enter **2#. When the review is ended, the system asks you to enter the # sign to acknowledge the entries as complete. You may then choose to enter more machine information or terminate the session. (Refer to step 6 in the previous section.)

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Sometime during the last five working days of the month, *when the system is idle*, you must extract the billing information and report it to Xerox. To obtain a billing report, enter the REPORT BILLING command at the system controller keyboard.

Billing report

To display billing report information, enter the following command:

REPORT BILLING,DISPLAY

To print the billing report, enter the following command:

REPORT BILLING,PRINT

To display and print the billing report, enter the following command:

REPORT BILLING,DISPLAY,PRINT

Figure A-1. **Customer billing report**

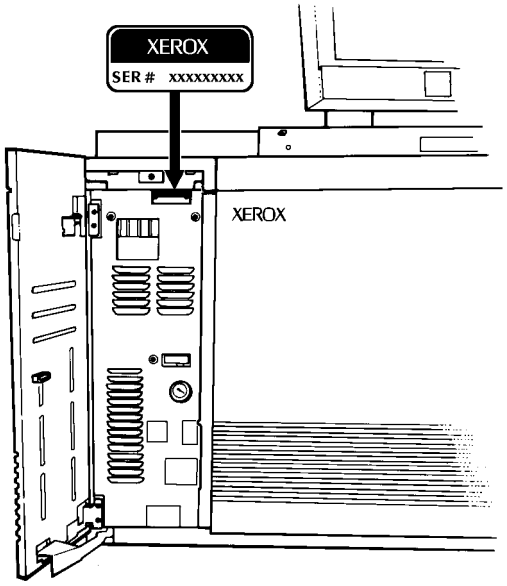
```
                              CUSTOMER BILLING REPORT

Date        10/31/1997
Time        16:57

Serial no   0000000000
System ID:  V3B R5.1 INC 10/31/97

                    **** SYSTEM CONFIGURATION ****
                    Machine Type - DocuPrint 96/DocuPrint 96MX

CPU MEMORY = 1024K                          SCSI Disk Units: 0,Floppy
AIS: Version 2                              Page Buffer Memory Size: 128 Banks
Bitmap Memory: 256 Megabits                 Page Buffer A,B: 2 BUFFERS
Ink Memory: 2 Megabits                      Memory Test at Boot = no
Text and Metrics Memory: 3 Megabytes        Auto Boot Enabled = no
Online: Address 31                          Boot Message Display
-Mode Burst, Device 3211                    Printer Characteristics
Terminal Type: Character                     - Speed: 96 ppm
SCSI Tape Devices:                           - Resolution: 300 spi
- Reel to Reel: HP-SCSI A/Ch O/Tg 0          - Default Order: 1 to N
- Streamer Tape: HP-SCSI A/Ch O/Tg 1         - Paper size: 8.50 x 11.00 Inches
                                            Language: U.S. English
                                            Graphics Type: AIS
                                            SCSI Tape Device Assignments:
                                            - TD0 = Reel to Reel Tape
                                            - TD1 = Streamer tape









Good Impressions Successfully Delivered:     101675

Impressions printed in IOT diagnostic mode = 7400
Number of purge sheets sent to purge tray = 3300
Good Impressions Successfully Delivered in 3 pitch mode:300
Good Impressions Successfully Delivered in 4 pitch mode:0
Good Impressions Successfully Delivered in 5 pitch mode:0
Good Impressions Successfully Delivered = 101600
Percentage of duplex impressions:         68
```

Reporting meter reads

Before you call the Xerox Electronic Meter Collection Center, ensure you have the following information:

- Meter read information (the A meter)
- Your printing system's serial number, located on a panel inside the printer, behind the center door (see figure A-2).

Figure A-2. **Locating your LPS serial number**



If you are reporting other Xerox printers during the same call, ensure you have the serial number and meter read information available for each one before calling the Electronic Meter Read Collection System.

Read through all of the following instructions carefully before you attempt to make your first meter reading report. If you need assistance with this process, place a toll-free call to the Help Line 1-800-433-7769 between 8:30 a.m. to 5:15 p.m., Eastern time. An answering device operates during non business hours; please leave your name and phone number, and your call will be returned.

Touchtone Telephone Direct Meter Read Entry System

The Touchtone Telephone Direct Meter Read Entry System is designed to guide you through an error-free meter read entry session. After reviewing this procedure and making several entries, you will need these instructions only for special situations. You should have no problems in entering your meter reads; if you do, the system is designed to enable you to make any necessary corrections.

This section includes:

- Step-by-step instructions for entering your meter readings and reviewing and changing data.
- A Month End Meter Read Reporting Worksheet (see figure A-3) to help you record your meter readings. The worksheet can be used as a master for making additional copies.

Figure A-3. **Month End Meter Read Reporting Worksheet**

Month End Meter Read Reporting Worksheet

Call:
423-6168 (in Rochester, NY)
1-800-638-7979 (All other U.S. locations)

Enter:

Converted Serial Numbers	Ending Meter Read(s)
_____#	_____#
_____#	_____#
_____#	_____#
_____#	_____#
_____#	_____#
_____#	_____#
_____#	_____#
_____#	_____#
_____#	_____#
_____#	_____#

Enter: # to acknowledge completion of serial number/meter read entry for each machine.

Enter: **91# to end call and record entry in computer base.

For your information only:

Date of Entry: _____

For Assistance Call 1-800-433-7769.

Understanding the system

The following points are very important to understand before beginning to use the touchtone system:

- Always wait for the system voice to finish a prompt before entering data.
- Always complete each entry with the # (pound sign). This tells the system you have finished entering the data item it requested. When you press the pound sign, the system repeats the information you just entered and prompts you for the next piece of information for the report.
- Any time you want the system to repeat the voice prompt or message it just completed, enter **3#.
- When you want the system to cancel an entry it just read back to you, enter **4#. After acknowledging the cancellation, the system asks you to reenter the needed information.
- Enter **94# to cancel all data entered for a machine. It can be used any time before you enter the pound sign that completes the data entry for that machine. (Refer to step 5 in the following section.)
- Each letter in the serial number must be translated into numbers because letters are not individual keys on the touchtone keypad.
  - — To tell the system you are about to enter a letter, press the asterisk (*).
  - — Next, press the number key on the touchtone pad that has the letter on it—press 7 for S, for example.
  - — Finally, press 1, 2, or 3 for the letter's position on the key. S is in the third position on the 7 key, for example, so you press 3. (The entire “code” for S is *73.)

  Example: To enter the serial number 6D5789123, press the following keys: 6 *31 5 7 8 9 1 2 3 #

Note: It is possible for a serial number to contain letters in any or all of the first three positions. If there are no letters, simply enter the nine numbers and the #. For assistance in converting your serial numbers, refer to table A-1.

Table A-1. **Letter-to-number conversion chart**

Letter	Conversion	Letter	Conversion
A	21	N	*62
B	*22	O	*63
C	*23	P	*71
D	*31	Q	*11[1]
E	*32	R	*72
F	*33	S	*73
G	*41	T	*81
H	*42	U	*82
I	*43	V	*83
J	*51	W	*91
K	*52	X	*92
L	*53	Y	*93
M	*61	Z	*13[2]

1. Indicates letters not on the touchtone keypad that were assigned by this system to the 1 key.
2. Indicates letters not on the touchtone keypad that were assigned by this system to the 1 key.

Entering meter read information

To enter meter read information:

Step 1. Call the Xerox Electronic Meter Data Collection System's toll- free number. It operates 24 hours a day, every day, including weekends and holidays. Meter readings should be reported between the 20th and the last working day of each month.

423-6168 (in Rochester, NY)

1-800-638-7979 (all other U.S. locations)

When the system answers your call, you hear:

"Thank you for calling the Xerox Electronic Meter Collection System. For assistance, please call 800-433-7769."

When it is necessary to provide special information of interest to our customers, a special announcement message follows this greeting. Following these initial messages, the system is ready to receive your meter readings.

Step 2. The system prompts you to begin by asking for your machine serial number.

"Please enter the machine serial number."

Enter your machine serial number, followed by a pound sign (#), on the telephone keypad.

Once you enter your machine serial number, the system repeats it back to you. (To eliminate the possibility of a coding error for any letters in the serial number, the system uncodes your entry and says it with the letters. If the system says the wrong letter, cancel this entry by entering **4#, recode the letter, and reenter your serial number.)

Step 3. When the serial number has been entered and accepted, the system asks for the date of the reading.

"Please enter the date of the reading or enter the pound sign for today's date."

For example, May 3, 1998 would be entered as 05 03 98 #.

If a date appears to be incorrect, you receive a special message and are asked to reenter the date.

If the system tells you your date is not within the acceptance range, it also gives you the correct range. If you do not enter a date within that range, the system refers you to the touchtone information number and terminates the call.

When a correct date is entered, the system reads back the date, for example:

"Date is five three eighty-nine."

Step 4. When the system finishes reading back the date, it then asks for the meter reading.

"Please enter meter A."

Enter the A meter reading, ending with the pound sign. Do not enter zeros in front of the numbers of the meter read.

Note: From the serial number, the system knows how many meters there are to report and asks for them by name.

If you want to review the data, enter **1# to start the review. Refer to the following section "How to review and change data" for instructions.

Step 5. When the A meter has been entered, the system reads it back to you and says:

"All meter reads for this machine are complete. Enter pound sign to acknowledge."

Enter the pound sign (#) if the meter read was correctly entered. If there was a mistake, enter **4# to cancel the read and reenter the correct meter read. Once again the system repeats the meter read to you and asks you to enter the pound sign to confirm the entry. If it is correct, enter #; if it is not, repeat the cancellation/reentry process.

Step 6. Once you have successfully completed step 5, the system says:

"All readings accepted."

Step 7. The system's next message is to ask you for a machine serial number. At this point you have the following choices:

- If you have more machines to report, repeat the previous steps until all machines have been reported.
- If you have no more machines to report and you are sure of the accuracy of the information, enter **91# to end the reporting session. The system responds by indicating how many machines were processed and accepted during this session.

  "Readings for ___ machines accepted. Thank you for using the Xerox Electronic Meter Reading System."

Note: If you would like to practice with an imaginary serial number before entering your actual serial number and meter read, you can use serial number X12377889 (which converts to *9212377889). This serial number is only a demonstration serial number; it cannot generate a bill. You may practice all procedures described in the "Entering meter read information" section using this serial number.

Reviewing and changing data

To review and change data:

Step 1. To begin the review, enter **1#. The system reads the first serial number.

Step 2. To accept the serial number and continue, enter #. The system then reads back the A meter read.

Step 3. Continue the review by accepting with the # sign each time the entry is read back correctly.

If an entry read back is incorrect, enter **4# to cancel the entry, and reenter the correct information after the voice prompts you to do so. Be sure to wait until the voice is finished before making entries.

Step 4. To end the review at any time, enter **2#. When the review is ended, the system asks you to enter the # sign to acknowledge the entries as complete. You may then choose to enter more machine information or terminate the session. (Refer to step 6 in the previous section.)

B. Supplies

Effective management of your laser 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 chapter 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.

How to order supplies (in U.S.A.)

Call this toll-free number: 1-800-822-2200, Monday through Friday, between 8:00 a.m. and 5:00 p.m., Pacific time.

Give the supply order 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: Xerox DocuPrint 96 or DocuPrint 96MX
- Item description (Refer to table B-1, “Consumable supplies.”)
- Quantities required for each item
- A purchase order number, if that is the method of payment used by your company.

Consumable supplies table

Table B-1 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. **Consumable supplies**

Item	Description	Part number
Paper	Xerox paper quantities are 10 reams (5000 sheets) to a carton unless otherwise noted. The 3-hole papers marked with an asterisk (*) are drilled with 5/16-inch holes.	
8.5 x 11 inch	4024 Dual Purpose Paper	3R721

Table B-1. **Consumable supplies** (continued)

Item	Description	Part number
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
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

Table B-1. **Consumable supplies** (continued)

Item	Description	Part number
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
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 lb., 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 labels per sheet	3R4476
8.5 x 11 inch	Custom form To order call: 800-822-2200, or 714-423-3861	
Tab stock	250 sheets per carton	
Straight Collated Singles (5-tab set)	Non-drilled, 90 lb., Index white	3R4417
	3 hole drilled, 90 lb., Index white	3R4418
	Non-drilled, 90 lb., Index white	3R4425
	3 hole drilled, 90 lb., Index white	3R4426
Reverse Collated Singles (5-tab set)	Non-drilled, 90 lb., Index white	3R4415
	3 hole drilled, 90 lb., Index white	3R4416
Cover stock		
8.5 x 11 inch	65 lb., blue	3R3044

Table B-1. **Consumable supplies** (continued)

Item	Description	Part number
8.5 x 11 inch	65 lb., white	3R3041
Dry ink (for Xerox DocuPrint 96)	Packaged three cartridges per carton. (Consumption rate is approximately 180,000 pages per carton for 8.5 x 11 inch paper at 7% coverage.)	6R206
MICR Dry ink (for DocuPrint 96MX)	Packaged three cartridges per carton. (Consumption rate is approximately 180,000 pages per carton for 8.5 x 11 inch paper at 7% coverage.)	6R819
Developer (for Xerox DocuPrint 96)	Packaged two bottles per carton. (Effective life is approximately 600,000 pages per carton.)	5R161
Developer (for Xerox DocuPrint 96MX)	Packaged two bottles per carton. (Effective life is approximately 600,000 pages per carton.)	5R573
Fuser agent	Packaged one bottle per carton. (Consumption rate is approximately 250,000 pages per liter.)	8R2955
Waste toner bottle		93K460
Cleaning supplies	Magnetic Head Cleaning Kit, packaged two disks per box.	8R3812
	1/2 inch cleaning cartridge—Call 1-800-828-5881 to order	8R3635
	1/4-inch Cartridge Tape Drive Head Cleaning Kit	9R88432
	Foam-tipped swabs	99P87256
	Lint-free towels	35P2163
Containers		
8.5 x 11 inch	Base	9R1103
	Pallet	9R1104
11 x 17 inch	Base	9R1105
	Pallet	9R1106
QIC blank cartridge	Call 1-800-828-5881 to order	9R84168

B. Supplies

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- Your equipment model number: Xerox DocuPrint 96 or DocuPrint 96MX
- Item description (Refer to table B-1, “Consumable supplies.”)
- Quantities required for each item
- A purchase order number, if that is the method of payment used by your company.

Consumable supplies table

Table B-1 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. **Consumable supplies**

Item	Description	Part number
Paper	Xerox paper quantities are 10 reams (5000 sheets) to a carton unless otherwise noted. The 3-hole papers marked with an asterisk (*) are drilled with 5/16-inch holes.	
8.5 x 11 inch	4024 Dual Purpose Paper	3R721

Table B-1. **Consumable supplies** (continued)

Item	Description	Part number
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
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

Table B-1. **Consumable supplies** (continued)

Item	Description	Part number
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
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 lb., 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 labels per sheet	3R4476
8.5 x 11 inch	Custom form To order call: 800-822-2200, or 714-423-3861	
Tab stock	250 sheets per carton	
Straight Collated Singles (5-tab set)	Non-drilled, 90 lb., Index white	3R4417
	3 hole drilled, 90 lb., Index white	3R4418
	Non-drilled, 90 lb., Index white	3R4425
	3 hole drilled, 90 lb., Index white	3R4426
Reverse Collated Singles (5-tab set)	Non-drilled, 90 lb., Index white	3R4415
	3 hole drilled, 90 lb., Index white	3R4416
Cover stock		
8.5 x 11 inch	65 lb., blue	3R3044

Table B-1. **Consumable supplies** (continued)

Item	Description	Part number
8.5 x 11 inch	65 lb., white	3R3041
Dry ink (for Xerox DocuPrint 96)	Packaged three cartridges per carton. (Consumption rate is approximately 180,000 pages per carton for 8.5 x 11 inch paper at 7% coverage.)	6R206
MICR Dry ink (for DocuPrint 96MX)	Packaged three cartridges per carton. (Consumption rate is approximately 180,000 pages per carton for 8.5 x 11 inch paper at 7% coverage.)	6R819
Developer (for Xerox DocuPrint 96)	Packaged two bottles per carton. (Effective life is approximately 600,000 pages per carton.)	5R161
Developer (for Xerox DocuPrint 96MX)	Packaged two bottles per carton. (Effective life is approximately 600,000 pages per carton.)	5R573
Fuser agent	Packaged one bottle per carton. (Consumption rate is approximately 250,000 pages per liter.)	8R2955
Waste toner bottle		93K460
Cleaning supplies	Magnetic Head Cleaning Kit, packaged two disks per box.	8R3812
	1/2 inch cleaning cartridge—Call 1-800-828-5881 to order	8R3635
	1/4-inch Cartridge Tape Drive Head Cleaning Kit	9R88432
	Foam-tipped swabs	99P87256
	Lint-free towels	35P2163
Containers		
8.5 x 11 inch	Base	9R1103
	Pallet	9R1104
11 x 17 inch	Base	9R1105
	Pallet	9R1106
QIC blank cartridge	Call 1-800-828-5881 to order	9R84168

Glossary

A3 Paper size measuring 297 by 420 mm.

A4 Paper size measuring 210 by 297 mm.

abort To terminate the printing of a job or execution of a program before it completes.

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.

AIM Ancillary IOT message processor. System task that initializes the client layer between the printer and the system controller. It also displays the Fault, Hint, and information messages.

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.

application Use to which a computer program or system is put, for example, sorting employee records.

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.

ascender Portion of alphabetic character that rises above the body of the character (its x-height portion). See also descender; x height.

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.

B4 Paper size measuring 250 by 353 mm.

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 Rectangular area in printer memory into which an image sent to the printer from a computer is divided.

batch processing Allows for repetitive operations to be performed sequentially on batched data without much involvement of the computer operator.

baud Measurement of data rate in bits per second. This term is used to describe information flow between two devices. Unit of data transmitting and receiving speed is roughly equal to a single bit per second. Common baud rates are 110, 300, 1200, 2400, 4800, and 9600.

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 map Visual representation of graphic images in which a bit defines a picture element (pixel); for example, if a bit is 1, the corresponding pixel is printed.

bit mapped Display image generated bit by bit for each point or dot. A software-driven scanner is used to create characters or graphics.

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 this 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.

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.

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.

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-Z), numeral (0-9), 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.

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.

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-to-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 system 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.

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 Central processing unit (CPU) with main storage, input/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.

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.

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 will 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.

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.

database Information to meet specific processing and retrieval needs. Generally applies to integrated file of data, arranged for access by many subsystems.

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 transmission Transmission of coded data over telephone or other telecommunication lines.

debug To detect and correct errors in a program.

decompose To break down into component parts, such as when Interpress breaks down a Font Interchange Standard (FIS) master to compile font information.

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.

device Any piece of hardware other than the central processing unit (CPU).

digitize To express or represent data in digital (binary) form so that it can be processed electronically.

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.

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.

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.

dry ink Minute dry particles of resin and carbon black used to create images. Dry ink can accept an electrical charge.

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.

Ethernet Xerox local area network (LAN) that allows data to be transmitted by cable from one device to another, enabling it to share the network.

extended metrics Measurements used in Interpress to alter the size of fonts, allowing more precision with character escapement. Used for rendered characters.

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 protection To prevent the contents on a disk or tape from being erased or written over by disabling the write head of a unit.

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 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 Set of images, usually characters and symbols, having common characteristics such as style, width, height, and weight.

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.

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.

form feed Keyboard or printer control character that causes the printer to skip the top of the next page.

FSL forms source library. Uncompiled collection of user-created files containing FDL commands. Refer to FDL; form.

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.

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).

graphics Use of lines and figures to display data, as opposed to using text.

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.

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.

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.

hard values Nonoptimal adjustment of particular FIS fonts in terms of point size and orientation.

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 DocuPrint 96 LPS. 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.

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.

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.

icon Symbol appearing on the printer control console that can be opened to display a window or screen options.

id identifier. Character used to identify or name data and possibly to indicate certain properties of that data.

image area Area on a physical page that may contain text or graphics.

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).

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 Device by which two systems connect and communicate with each other.

interpolation Series of logical rules implemented in the printer to convert a 300 spi input video stream to a 600 spi 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.

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).

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 1. Set of instructions (JDEs) defining a unit of work for the system. 2. In setting a separation boundary through the Bin Full Criteria task, job refers to everything printed as the result of a single start command. See also JDE.

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 management Collective functions of job scheduling and command processing.

JSL job source library. Collection of uncompiled job descriptions. See also job; JDE; and JDL.

keyboard Group of alphabetic, numeric, and/or function keys used to enter information into a 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).

landscape page orientation Orientation of print lines or top of an illustration parallel to the long edge of the paper if the sheet is within the standard size range. (Sheets larger than standard have the reverse print orientation.)

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.

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.

log Collection of messages or message segments placed on an auxiliary storage device for accounting or data collection purposes.

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.

log off Procedure by which a user ends a session.

log on Procedure by which a user begins a session between an application program and a logical unit.

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 1. Selection of bits from a storage unit by using an instruction that eliminates the other bits in the unit. 2. In accessing files, a file name mask is used to reference one or more files with similar file-id (identifier) syntax. 3. In Interpress, a mask serves as a template, indicating the shape and position of an object on a page.

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 Unit of information transmitted by one facility to another in a form that the receiving facility can understand and act upon. The standard message format consists of a header (containing identifying and control information), followed by the actual message content, followed by a trailer (indicating that the message is completed).

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.

mode Manner in which an activity or process is carried out.

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.

network 1. System of geographically separate computers, linked to one another over transmission lines. 2. Communication lines connecting a computer to its remote terminals.

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 To place pages currently being printed in slightly different positions from previous pages.

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.

operating system Basic host- or LPS-resident controlling program that governs the operations of a computer, such as job entry, input/output, and data management. The operating system is always running when the computer is active. Unlike other types of programs, it does not run to an end point and stop. The operating system of a Xerox LPS is referred to as the operating system software (OSS).

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, or terminal, causing a control program to provide requested information, alter normal operations, initiate new operations, or terminate existing operations.

orientation 1. In reference to image area, orientation describes whether the printed lines are parallel to the long edge of the paper or the short edge of the paper. 2. Choice of printing portrait (vertically) or landscape (horizontally).

origin In reference to image area, this is the upper left corner of a sheet.

output 1. Material produced by a peripheral device of a computer, such as a printout or a magnetic tape. 2. Result of completed operations.

overprinting Printing more than one character at the same position.

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.

override To take precedence or priority over, to overrule.

overstrike To print characters over each other.

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.

parameter Part of a command, other than the keyword. See also keyword; operator command.

pass-through 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 Unique word or set of characters that an operator or user must supply to log on to a system.

patch In programming, to modify a portion of the program at the machine language level, as opposed to modifying at the source program level.

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).

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 4135 LPS operates in a multi-pitch mode, allowing the mode to be adjusted according to the width of the paper used.

pixel Acronym for picture element. Smallest addressable point of a bit-mapped 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.

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.

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.

printer Output device that produces hardcopy printouts. Also referred to as the IOT.

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.

printout Informal expression referring to almost anything printed by a computer peripheral device.

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.

purge To delete data from a system.

queue List of documents waiting to be processed.

RAM random access memory. Storage that allows data, such as documents, to be stored and retrieved directly by address location without reading through any other data.

raster data Binary data, usually consisting of dots arranged in scan lines, according to the print order.

rasterization Creation of a page's bit map image for printing.

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).

resolution Number of dots per unit. The LPS imaging system converts a character from digitized data into a printed image composed of these tiny dots. The greater the number of dots per inch, that is, the resolution, the clearer the image that is produced.

ROM read-only memory. Solid-state memory for programs. It cannot be rewritten.

save To store programs, data, or text for retrieval at a later time.

scale To adjust font or image size according to given proportions.

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.

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). For the 4135 LPS, short-edge feed allows larger sizes of paper (up to 11 by 17 inches/279 by 432 mm) to be printed.

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.

set In setting a separation boundary through the Bin Full Criteria task, set refers to multiple copies of the same report.

simplex printing Printing on one side of the page. See also duplex printing.

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.

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.

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.

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.

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 Connected sequence of alphanumeric characters treated as one unit of data by a program.

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 controller Part of the LPS that provides interfacing capability, data handling, formatting, buffering, and operator control for the system. Also referred to as the “ESS”.

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.

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.

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.

trailer In data communications, the last portion of a message that signals the end.

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-by-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.

truncated Cut off before completion, as when data transfer from a host to a printer is cut off before all data has been transmitted.

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

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.

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.

warning message System-issued message indicating that an error has been encountered even though 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.

write To record data in memory or an external storage medium.

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.

x axis Horizontal axis on a forms 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.

x height Height of lowercase letters without their ascenders or descenders (height of letter “x”). See also ascender; descender.

y axis Vertical axis on a forms grid

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 system 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

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 library

JID job identifier

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 long-edge feed

lpi lines per inch

LPS Laser Printing System

MTU magnetic tape unit (refers to the 9-track magnetic tape drive; also referred to as “magnetic tape drive”)

MICR Magnetic Ink Character Recognition

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

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	1/4 inch cartridge
RAM	random access memory
ROS	raster output scanner
SAFES	stand-alone field engineering software
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

XNS Xerox Network Systems

XPAF, XPF Xerox Printer Access Facility

XPMF-VMS Xerox Print Management Facility - VMS Version

XPPI Xerox Pen Plotter Interface

XPS Xerox Publishing System

Glossary

A3 Paper size measuring 297 by 420 mm.

A4 Paper size measuring 210 by 297 mm.

abort To terminate the printing of a job or execution of a program before it completes.

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.

AIM Ancillary IOT message processor. System task that initializes the client layer between the printer and the system controller. It also displays the Fault, Hint, and information messages.

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.

application Use to which a computer program or system is put, for example, sorting employee records.

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.

ascender Portion of alphabetic character that rises above the body of the character (its x-height portion). See also descender; x height.

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.

B4 Paper size measuring 250 by 353 mm.

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 Rectangular area in printer memory into which an image sent to the printer from a computer is divided.

batch processing Allows for repetitive operations to be performed sequentially on batched data without much involvement of the computer operator.

baud Measurement of data rate in bits per second. This term is used to describe information flow between two devices. Unit of data transmitting and receiving speed is roughly equal to a single bit per second. Common baud rates are 110, 300, 1200, 2400, 4800, and 9600.

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 map Visual representation of graphic images in which a bit defines a picture element (pixel); for example, if a bit is 1, the corresponding pixel is printed.

bit mapped Display image generated bit by bit for each point or dot. A software-driven scanner is used to create characters or graphics.

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 this 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.

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.

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.

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-Z), numeral (0-9), 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.

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.

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-to-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 system 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.

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 Central processing unit (CPU) with main storage, input/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.

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.

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 will 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.

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.

database Information to meet specific processing and retrieval needs. Generally applies to integrated file of data, arranged for access by many subsystems.

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 transmission Transmission of coded data over telephone or other telecommunication lines.

debug To detect and correct errors in a program.

decompose To break down into component parts, such as when Interpress breaks down a Font Interchange Standard (FIS) master to compile font information.

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.

device Any piece of hardware other than the central processing unit (CPU).

digitize To express or represent data in digital (binary) form so that it can be processed electronically.

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.

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.

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.

dry ink Minute dry particles of resin and carbon black used to create images. Dry ink can accept an electrical charge.

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.

Ethernet Xerox local area network (LAN) that allows data to be transmitted by cable from one device to another, enabling it to share the network.

extended metrics Measurements used in Interpress to alter the size of fonts, allowing more precision with character escapement. Used for rendered characters.

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 protection To prevent the contents on a disk or tape from being erased or written over by disabling the write head of a unit.

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 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 Set of images, usually characters and symbols, having common characteristics such as style, width, height, and weight.

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.

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.

form feed Keyboard or printer control character that causes the printer to skip the top of the next page.

FSL forms source library. Uncompiled collection of user-created files containing FDL commands. Refer to FDL; form.

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.

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).

graphics Use of lines and figures to display data, as opposed to using text.

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.

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.

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.

hard values Nonoptimal adjustment of particular FIS fonts in terms of point size and orientation.

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 DocuPrint 96 LPS. 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.

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.

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.

icon Symbol appearing on the printer control console that can be opened to display a window or screen options.

id identifier. Character used to identify or name data and possibly to indicate certain properties of that data.

image area Area on a physical page that may contain text or graphics.

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).

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 Device by which two systems connect and communicate with each other.

interpolation Series of logical rules implemented in the printer to convert a 300 spi input video stream to a 600 spi 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.

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).

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 1. Set of instructions (JDEs) defining a unit of work for the system. 2. In setting a separation boundary through the Bin Full Criteria task, job refers to everything printed as the result of a single start command. See also JDE.

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 management Collective functions of job scheduling and command processing.

JSL job source library. Collection of uncompiled job descriptions. See also job; JDE; and JDL.

keyboard Group of alphabetic, numeric, and/or function keys used to enter information into a 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).

landscape page orientation Orientation of print lines or top of an illustration parallel to the long edge of the paper if the sheet is within the standard size range. (Sheets larger than standard have the reverse print orientation.)

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.

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.

log Collection of messages or message segments placed on an auxiliary storage device for accounting or data collection purposes.

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.

log off Procedure by which a user ends a session.

log on Procedure by which a user begins a session between an application program and a logical unit.

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 1. Selection of bits from a storage unit by using an instruction that eliminates the other bits in the unit. 2. In accessing files, a file name mask is used to reference one or more files with similar file-id (identifier) syntax. 3. In Interpress, a mask serves as a template, indicating the shape and position of an object on a page.

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 Unit of information transmitted by one facility to another in a form that the receiving facility can understand and act upon. The standard message format consists of a header (containing identifying and control information), followed by the actual message content, followed by a trailer (indicating that the message is completed).

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.

mode Manner in which an activity or process is carried out.

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.

network 1. System of geographically separate computers, linked to one another over transmission lines. 2. Communication lines connecting a computer to its remote terminals.

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 To place pages currently being printed in slightly different positions from previous pages.

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.

operating system Basic host- or LPS-resident controlling program that governs the operations of a computer, such as job entry, input/output, and data management. The operating system is always running when the computer is active. Unlike other types of programs, it does not run to an end point and stop. The operating system of a Xerox LPS is referred to as the operating system software (OSS).

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, or terminal, causing a control program to provide requested information, alter normal operations, initiate new operations, or terminate existing operations.

orientation 1. In reference to image area, orientation describes whether the printed lines are parallel to the long edge of the paper or the short edge of the paper. 2. Choice of printing portrait (vertically) or landscape (horizontally).

origin In reference to image area, this is the upper left corner of a sheet.

output 1. Material produced by a peripheral device of a computer, such as a printout or a magnetic tape. 2. Result of completed operations.

overprinting Printing more than one character at the same position.

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.

override To take precedence or priority over, to overrule.

overstrike To print characters over each other.

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.

parameter Part of a command, other than the keyword. See also keyword; operator command.

pass-through 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 Unique word or set of characters that an operator or user must supply to log on to a system.

patch In programming, to modify a portion of the program at the machine language level, as opposed to modifying at the source program level.

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).

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 4135 LPS operates in a multi-pitch mode, allowing the mode to be adjusted according to the width of the paper used.

pixel Acronym for picture element. Smallest addressable point of a bit-mapped 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.

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.

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.

printer Output device that produces hardcopy printouts. Also referred to as the IOT.

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.

printout Informal expression referring to almost anything printed by a computer peripheral device.

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.

purge To delete data from a system.

queue List of documents waiting to be processed.

RAM random access memory. Storage that allows data, such as documents, to be stored and retrieved directly by address location without reading through any other data.

raster data Binary data, usually consisting of dots arranged in scan lines, according to the print order.

rasterization Creation of a page's bit map image for printing.

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).

resolution Number of dots per unit. The LPS imaging system converts a character from digitized data into a printed image composed of these tiny dots. The greater the number of dots per inch, that is, the resolution, the clearer the image that is produced.

ROM read-only memory. Solid-state memory for programs. It cannot be rewritten.

save To store programs, data, or text for retrieval at a later time.

scale To adjust font or image size according to given proportions.

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.

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). For the 4135 LPS, short-edge feed allows larger sizes of paper (up to 11 by 17 inches/279 by 432 mm) to be printed.

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.

set In setting a separation boundary through the Bin Full Criteria task, set refers to multiple copies of the same report.

simplex printing Printing on one side of the page. See also duplex printing.

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.

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.

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.

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.

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 Connected sequence of alphanumeric characters treated as one unit of data by a program.

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 controller Part of the LPS that provides interfacing capability, data handling, formatting, buffering, and operator control for the system. Also referred to as the “ESS”.

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.

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.

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.

trailer In data communications, the last portion of a message that signals the end.

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-by-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.

truncated Cut off before completion, as when data transfer from a host to a printer is cut off before all data has been transmitted.

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

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.

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.

warning message System-issued message indicating that an error has been encountered even though 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.

write To record data in memory or an external storage medium.

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.

x axis Horizontal axis on a forms 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.

x height Height of lowercase letters without their ascenders or descenders (height of letter “x”). See also ascender; descender.

y axis Vertical axis on a forms grid

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 system 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

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 library

JID job identifier

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 long-edge feed

lpi lines per inch

LPS Laser Printing System

MTU magnetic tape unit (refers to the 9-track magnetic tape drive; also referred to as “magnetic tape drive”)

MICR Magnetic Ink Character Recognition

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

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	1/4 inch cartridge
RAM	random access memory
ROS	raster output scanner
SAFES	stand-alone field engineering software
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

XNS Xerox Network Systems

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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