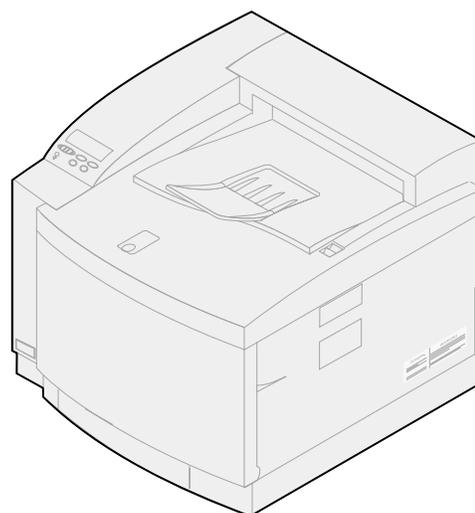




# C720

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## User's Reference



November 2000





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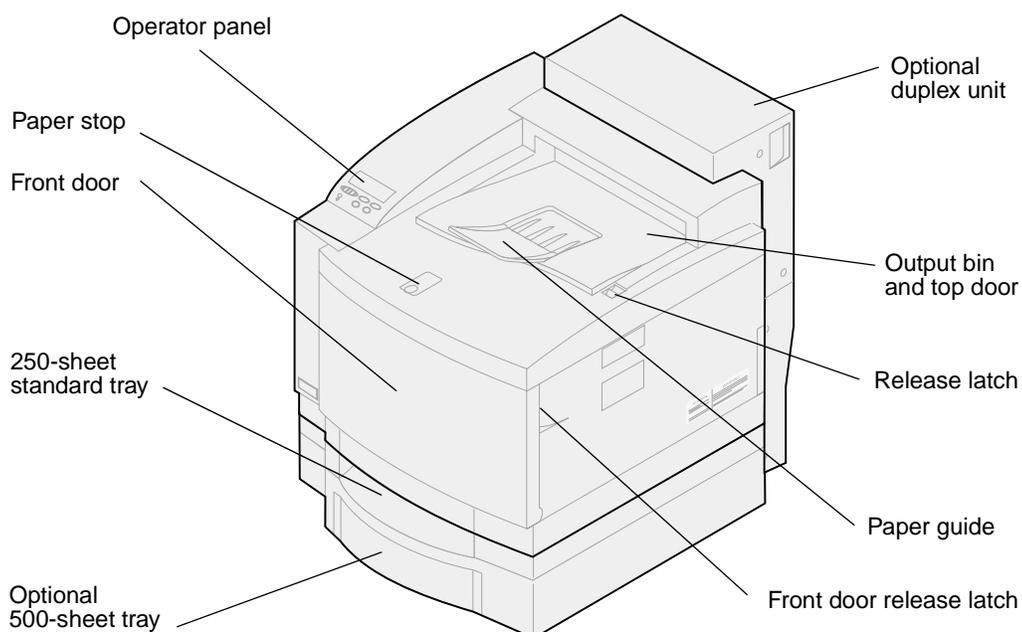
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# 1

## Printer overview

### Introducing your printer



Your Lexmark™ C720 color laser printer is the ideal printer for presentations, business graphics, line art, and text. Your printer uses laser diode electrophotographic technology to deliver remarkable quality print images and text. You can print up to 24 pages per minute (ppm) for monochrome print jobs and 6 ppm for color print jobs. You can use your printer as a shared network or desktop printer.

A variety of connectivity options makes your printer an excellent choice for all types of system environments. Standard Ethernet and parallel connection ports are provided, plus you can install an internal adapter to support other network configurations.

Your printer also offers flexible paper handling. It supports a variety of paper sizes making it easy to print envelopes, transparencies, paper, labels, and custom size paper.

You can add an optional drawer to increase the printer total paper capacity to 750 sheets. You can also add an optional duplex unit so you can print on both sides of the paper.

Your Lexmark printer software lets you master advanced color management techniques such as levels of brightness, contrast, and saturation. You can easily print professional color graphics, exceptional gray scale images, or razor-sharp black printing for text and detailed line art.

The modular design of your printer lets you perform routine printer maintenance procedures without the aid of a service technician. This includes replacing the photo developer cartridge, oil bottle, cleaning roll, fuser, waste toner bottle, and all four color print cartridges.

### ***Print speed***

Your printer can print at up to 24 ppm for monochrome print jobs and 6 ppm for color print jobs. If you install an optional duplex unit, you can print duplex jobs at up to 8 ppm for monochrome print jobs and 3 ppm for full color print jobs. Print speeds can vary depending on specific characteristics of the job, such as the size of the formatted page, the number of fonts, the number and complexity of images and graphics, and so on.

### ***Memory***

Your printer ships with at least 32MB of standard printer memory for fast, efficient processing of color jobs. (Some models may ship with more memory.) If you typically print large, complex jobs, you can install optional memory cards to increase the total usable memory to a maximum of 384MB.

In addition, you can install flash memory or an optional hard disk for storing downloaded resources, job statistics, and for spooling or collating print jobs.

### ***Color quality***

Your printer is set to provide you with high quality business graphics. It also has several print quality settings to accommodate your many printing needs. These settings can provide you with superb quality presentations or draft printouts.

### ***Printer drivers***

The printer drivers included on the drivers CD shipped with your new printer are specially designed for this printer. Use these printer drivers to give you the greatest control over the features and functions of your printer. Your printer drivers are designed to work efficiently with your printer and provide you with the best possible print quality.

### ***MarkVision***

The MarkVision™ printer utility, included on the drivers CD shipped with your printer, provides numerous printer management and color management tools you can access directly from your computer. MarkVision can display a graphic of your printer indicating the options installed and the location of any printer problems. If your printer is attached to a network and located some distance from your computer, you can view printer status and change printer settings without leaving your desk. You can also use MarkVision to gather statistics about the jobs you print, or to download resources.

### ***Paper handling***

Your printer comes equipped with a 250-sheet paper tray. The paper tray lets you load envelopes, transparencies, paper, labels, or card stock for a variety of print jobs. To increase paper feeding capacity, add an optional drawer consisting of one 500-sheet tray. This additional paper handling option lets you use two different types or sizes of media or link the trays together and use the same paper throughout to reduce the number of times you reload paper. An optional 250-sheet legal size

paper tray is also available. In addition to accepting legal size paper, the optional legal size paper tray can accept all of the media supported by the standard 250-sheet paper tray.

---

## ***Using your documentation***

Your Lexmark C720 online information provides details about color functions, media specifications, memory requirements, the operator panel, printer configuration, printer settings, troubleshooting problems, and ordering supplies.

### ***Conventions***

It may help you to recognize the conventions we use in your online information:

- Operator panel buttons appear in a boldface type:  
Press **Go** after changing a menu setting.
- Messages on the operator panel display appear in the following type:  
If **Cyan Toner Low** appears on the operator panel display, you should order a new Cyan print cartridge.



## Using printer drivers

---

Using the printer drivers supplied with your printer gives you the greatest control over the features and functions of your printer. These printer drivers are designed to work efficiently with your printer and provide you with the best possible print quality. Using and accessing these drivers from your computer is fast, easy, and convenient.

Most Windows software packages let you modify common printer settings through the use of their print dialog box. To modify your printer settings this way, select **File** from the menu bar and then **Print** or **Printer Settings**. This opens a print or printer settings window that lets you modify some or all of the many printer settings.

**Note:** Printer settings selected from a software application or driver override default settings selected from the operator panel.

Many software printer dialog boxes have a printer *Setup* or printer *Properties* button. Select this button to access your printer driver window. Changing the printer settings through the software package or printer driver is the fastest and most convenient method for controlling your printer.

Using the printer driver window lets you print a test page that describes your printer driver and port settings. You can also use it to control things such as user identification pages, paper size, and overlays. If you encounter an item on the printer driver window you are not sure about, use your online Help for the latest information about that feature.

The method you use to access your printer driver window depends on your operating system, personal preferences, and how your operating system is configured.

If you encounter a printer feature you cannot control from the printer driver or application software, use the printer operator panel or the remote operator panel available from MarkVision. Changing a printer setting from the operator panel or from MarkVision makes that setting the user default for all subsequent jobs sent to the printer. You can override these operator panel settings through the software application or printer driver. In most cases, settings you change from your software application or printer driver apply only to the job you are preparing to send to the printer.



## Changing printer settings

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You can change your printer setting by using your application software, your Lexmark printer driver, the printer operator panel, or the remote operator panel available from MarkVision.

**Note:** Printer settings selected from a software application or driver override default settings selected from the operator panel.

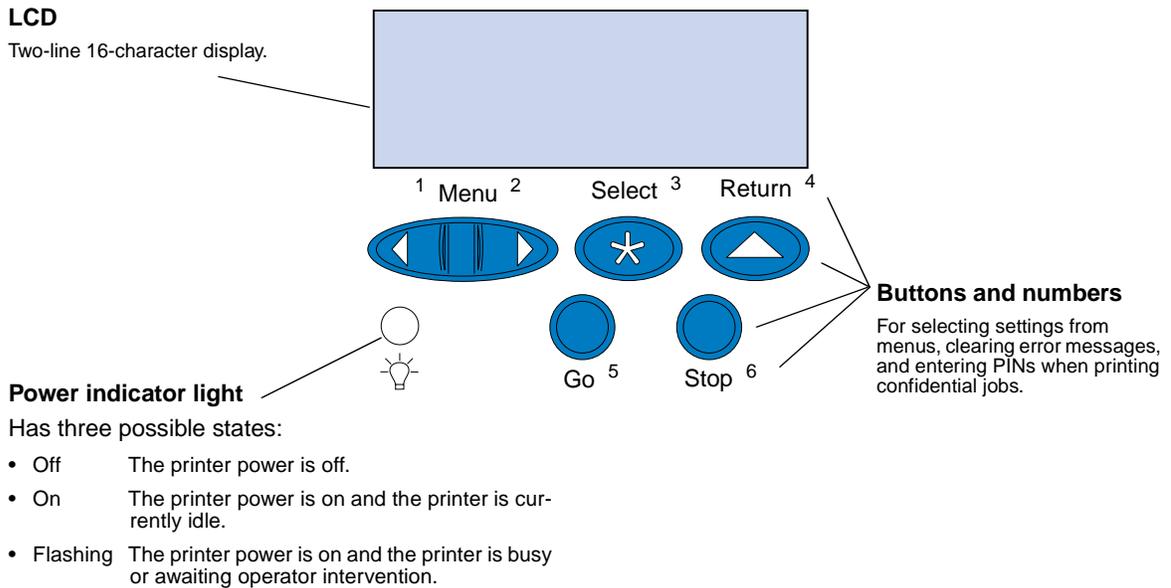
If there is a printer feature you cannot control from the application or printer driver, use the printer operator panel or the remote operator panel available from MarkVision. Changing a printer setting from the operator panel or from MarkVision makes that setting the user default for all subsequent jobs sent to the printer. In most cases, settings you change from the application or driver apply only to the job you are preparing to send to the printer.

For more information, click one of the following headings:

- [Understanding the operator panel](#)
- [Changing menu settings](#)
- [Locking the menus](#)
- [Using the MarkVision remote operator panel](#)
- [Using the operator panel](#)

## Understanding the operator panel

The operator panel on the top left side of your printer has a 2-line by 16-character liquid crystal display (LCD), five buttons, and one indicator light. The operator panel can be disabled so that other users cannot access most of the menus. Users can still access the Job Menu.



Use the five operator panel buttons to open a menu, scroll through a list of values, select printer settings, clear error messages, and enter a personal identification number (PIN) for confidential print jobs.

### Operator panel buttons

Button	Function
Go <sup>5</sup>	Press <b>Go</b> to: <ul style="list-style-type: none"> <li>• Exit printer menus and return the printer to the <b>Ready</b> state.</li> <li>• Clear certain messages from the display.</li> <li>• Enter a number 5 as part of a PIN for confidential or print and hold printing.</li> </ul> If you've changed printer settings from the operator panel, cleared a paper jam, or changed a supply item, press <b>Go</b> to resume printing.
<sup>1</sup> Menu > and <Menu <sup>2</sup>	Press <b>Menu&gt;</b> or <b>&lt;Menu</b> to: <ul style="list-style-type: none"> <li>• Enter the menus from the <b>Ready</b> state.</li> <li>• Scroll to the next (<b>Menu&gt;</b>) or previous (<b>&lt;Menu</b>) menu, menu item, or value.</li> <li>• Increase or decrease a numerical value for a menu item setting.</li> <li>• Display the Job Menu or the Supplies Menu while the printer is busy.</li> <li>• Enter a number 1 or 2 as part of a PIN for confidential or print and hold printing.</li> </ul>

## Operator panel buttons

Button	Function
<b>Select</b> <sup>3</sup>	Press <b>Select</b> to: <ul style="list-style-type: none"><li>• Select the menu shown on the second line of the display and view the available menu items.</li><li>• Select the menu item shown on the second line of the display and view the available value or current user default setting for that menu item.</li><li>• Save the value displayed on the second line of the display as the new user default setting.</li><li>• Clear certain messages from the display.</li><li>• Enter a number 3 as part of a PIN for confidential or print and hold printing.</li></ul>
<b>Return</b> <sup>4</sup>	Press <b>Return</b> to: <ul style="list-style-type: none"><li>• Back up to the previous level of the menu structure without selecting a new menu item or value.</li><li>• Enter a number 4 as part of a PIN for confidential or print and hold printing.</li></ul>
<b>Stop</b> <sup>6</sup>	Press <b>Stop</b> when: <ul style="list-style-type: none"><li>• The printer displays the <b>Busy</b> or <b>Waiting</b> message to temporarily stop all activity. The message <b>Not Ready</b> then displays until you press <b>Go</b> to continue printer activity.</li><li>• Entering a number 6 as part of a PIN for confidential or print and hold printing.</li></ul> For example, if you need to load paper in a tray while a job is printing, press <b>Stop</b> and wait for the printer motors to idle before removing the tray. Reinsert the loaded tray, and then press <b>Go</b> .

---

## Changing menu settings

**Note:** Remember, settings you choose from your software application or printer driver override the user default settings you set on the operator panel.

To change the user default settings through the operator panel menus:

- 1 Press and release **Menu>** or **<Menu** until the menu item you want is on the second line of the display.  
See **Using printer menus** for the menus and their menu items.
- 2 Press **Select** to display the list of items for the selected menu.
- 3 Press **Menu>** or **<Menu** until the item you want appears on the second line.
- 4 Press **Select** to display a list of available values for the menu item.

Some menu items have submenus. For example, if you select the Paper Menu, and then select Paper Type, you must select another menu (such as Tray 1 Type) before the available values are displayed.

A value can be:

- An On or Off setting
- A phrase or word that describes a setting
- A numerical value that you can increase or decrease

- 5 Press **Menu>** or **<Menu** to scroll through the list of values.

**Note:** Press **Return** if you need to go back to previous menus or menu items without changing the current setting.

- 6 When the value you want is on the second line of the display, press **Select** to make the value the new user default setting.

An asterisk appears beside the value to indicate that it is now the user default setting. The new setting shows for one second and then clears and shows the word **Saved**. The previous list of menu items appears.

**Note:** User default settings remain in effect until you save new settings or restore factory defaults.

- 7 Press **Go** when you have finished changing menu settings.

---

## ***Locking the menus***

To lock menus so changes cannot be made to user default settings:

- 1 Turn the printer off.
- 2 Press and hold the **Go** and **Stop** buttons and turn the printer on.
- 3 Release both buttons when **Performing Self Test** or **Engine Warming** appears.  
**Configuration Menu** appears on the first line.
- 4 Press **Menu>** or **<Menu**, until **Panel Menus** appears on the second line.
- 5 Press **Select**.
- 6 Press **Menu>** or **<Menu**, until **Disable** appears on the second line.
- 7 Press **Select**.  
**CONFIG MENUS** appears on the first line and **Panel Menus** appears on the second line.
- 8 Press **Menu>** or **<Menu**, until **Exit Config Menu** appears on the second line.
- 9 Press **Select**.

To unlock the menus, repeat steps 1-9. However, select **Enable** when it appears on the second line, instead of **Disable**.

If you want to disable the button sequence so users cannot easily lock or unlock the menus from the printer operator panel, change the password variable of the PjL JOB command. Select any nonzero value for the password variable to prevent the button sequence from unlocking (or locking) the menus. Refer to the *Technical Reference* for more information about PjL commands.

## ***Using the MarkVision remote operator panel***

The MarkVision utility has a remote operator panel that shows an exact replica of the printer operator panel on your computer screen. You can use the remote operator panel to check printer status and change printer settings just as you would on the actual printer operator panel. If the printer is located

some distance from your computer, it may be more convenient to use the remote operator panel on your computer.

In addition to the remote operator panel, some versions of MarkVision also provide a way to view many of the menu items for one menu on a single screen. If you need to make several changes to settings in the Paper Menu, for example, you may find it easier to make those changes when you can see all of the menu items and their available values at one time. Using this option eliminates the time required to scroll through the various menu items and values when using the operator panel and its two-line display.

For additional information see [MarkVision printer management software](#).

# 4

## Using Print and Hold

---

When sending a job to the printer, you can specify in the driver that you want the printer to hold the job in memory and not print it immediately. When you are ready to print the job, you must go to the printer and use the operator panel menus to identify which *held* job you want to print.

You can use this function to:

- Request extra copies of a job at a later time.
- Delay printing a job.
- Verify one copy before printing additional copies.
- Print a confidential job when you are able to be at the printer to retrieve it.

For more information, click one of the following:

- [Printing and deleting held jobs](#)
- [Repeat Print](#)
- [Reserve Print](#)
- [Verify Print](#)
- [Confidential Jobs](#)

---

### *Printing and deleting held jobs*

Once held jobs are stored in printer memory, use the printer operator panel to specify what you want to do with one or more of the jobs. From the **Job Menu**, you can select either **Confidential Job** or **Held Jobs** (Repeat Print, Reserve Print, and Verify Print jobs). If you select **Confidential Job**, you must enter the personal identification number (PIN) you specified in the driver when you sent the job. See [Confidential Jobs](#) for more information.

From either the **Confidential Job** or the **Held Jobs** menu items, you have five choices:

- Print All Jobs
- Print a Job
- Delete All Jobs
- Delete a Job
- Print Copies

**WARNING:** If you select **Delete All Jobs** from the **Held Jobs** menu item, you will delete all Repeat Print, Reserve Print, and Verify Print jobs stored in printer memory. This includes jobs you sent to the printer or jobs others in your network group sent to the printer. Use caution when selecting this option.

## ***Accessing held jobs from the operator panel***

- 1** To access held jobs from the operator panel:
  - If the printer is **Busy**, press **Menu>** to display the **Job Menu**.
  - If the printer is **Ready**, continue with step 2.
- 2** Press **Menu>** or **<Menu** until either **HELD JOBS** or **CONFIDENTIAL JOB** shows on the operator panel, depending on the type of job you want to access.
- 3** Press **Select**.

**Note:** If you are looking for a confidential job, you are prompted to enter your PIN. See **Confidential Jobs** for more information.

- 4** Press **Menu>** or **<Menu** until the action you want to take appears on the second line of the operator panel (print a job, delete a job, and so on).
- 5** Press **Select**.
  - If you are looking for one particular job, press **Menu>** and **<Menu** to scroll through the list of jobs available, and press **Select** when the correct job is displayed. An asterisk (\*) appears next to the job name indicating you have chosen to print or delete that job.
  - If you are prompted to enter the number of copies you want to print, use the **Menu>** and **<Menu** buttons to increase or decrease the number on the operator panel, and press **Select**.
- 6** Press **Go** to print or delete specific jobs you have marked.

The printer briefly displays messages indicating what print and hold functions it is performing, and then returns to the **Ready** state.

## ***Recognizing when format errors occur***

If the  $\wr$  symbol appears on the operator panel, it indicates the printer had trouble formatting one or more of the held jobs. These formatting problems are most commonly the result of insufficient printer memory or invalid data that might cause the printer to discard the job.

When a  $\wr$  symbol appears next to a held job, you can:

- Print the job. Be aware, however, that only part of the job may print.
- Delete the job. You may want to free up additional printer memory by scrolling through the list of held jobs and deleting others you have sent to the printer.

If formatting errors are a recurring problem with held jobs, your printer requires more memory (see **Printer memory**).

---

## ***Repeat Print***

If you send a Repeat Print job, the printer prints all requested copies of the job *and* stores the job in memory so you can print additional copies later. You can print additional copies as long as the job remains stored in memory.

**Note:** Repeat Print jobs are automatically deleted from printer memory when the printer requires extra memory to process additional held jobs.

---

## ***Reserve Print***

If you send a Reserve Print job, the printer stores the job in memory so you can print the job later. The job is held in memory until you delete it from the Held Jobs menu. Reserve Print jobs may be deleted (see **37 Insufficient Memory**) if the printer requires extra memory to process additional held jobs.

See **Printing and deleting held jobs** for information on printing and deleting Reserve Print jobs.

---

## ***Verify Print***

If you send a Verify Print job, the printer prints one copy and holds the remaining copies you requested from the driver in printer memory. Use Verify Print to examine the first copy to see if it is satisfactory before printing the remaining copies.

See **Printing and deleting held jobs** if you need help printing the additional copies stored in memory.

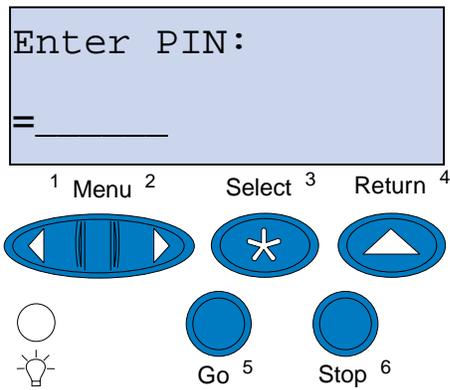
**Note:** Once all copies are printed, the Verify Print job is deleted from printer memory.

---

## ***Confidential Jobs***

When you send a job to the printer, you can enter a personal identification number (PIN) from the driver. The PIN must be four digits using the numbers 1 through 6. The job is then held in printer memory until you enter the same four-digit PIN from the printer operator panel and choose to print or delete the job. This ensures the job does not print until you are there to retrieve it, and no one else using the printer can print the job.

When you select Confidential Job from the Job Menu, the following prompt appears:



Enter the PIN you assigned and press **Go** to print the confidential job.

# 5

## Understanding color

---

Your printer gives you the power to communicate in color. Color attracts attention, commands respect, and adds value to your printed material or information. Using color increases readership and is read more often than the same material printed in black and white. Color can be used to motivate people and speed the analysis of complex data. When you print on-demand color, you save money.

To enhance your use and understanding about color printing, this section provides information about color and how to select, use, and adjust color for your network and desktop printing.

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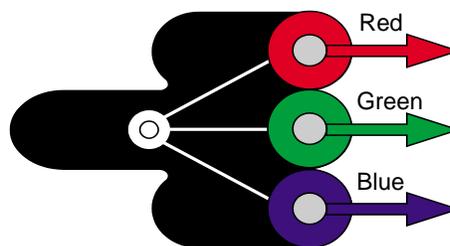
### *Types of color*

To be effective, the use of color needs to be planned. The reason for this is how the eye sees color. When light is used to produce color on your monitor or TV, it uses three primary colors. They are red, green, and blue (also known as RGB color). All printed output such as newspapers, magazines, brochures, and of course your documents use the colors cyan, magenta, yellow, and black (known as CMYK color). Because the colors are presented to the eye differently, what you see on your monitor may look different than what you have printed. By understanding how we see color on the screen and how we see color in printed documents, we can better plan the use of color.

---

### *How we see color*

When we see color, we actually see light that is passed through or reflected from an object. What our eyes perceive as visible light are wavelengths. Our eyes are sensitive to three specific wavelength colors: red, green, and blue.

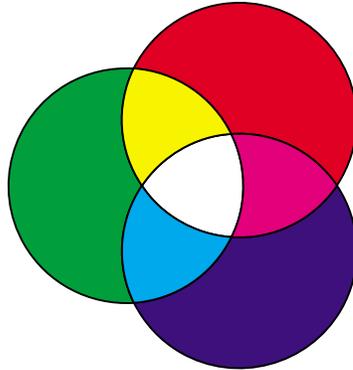


When you look at your monitor, you see red, green, and blue light that is projected into your eyes. This additive color begins with black and adds red, green, and blue to produce the colors you can see. If you add equal amounts of red, green, and blue, you produce white. The images and colors you see on your screen are created using various amounts of red, green, and blue.

---

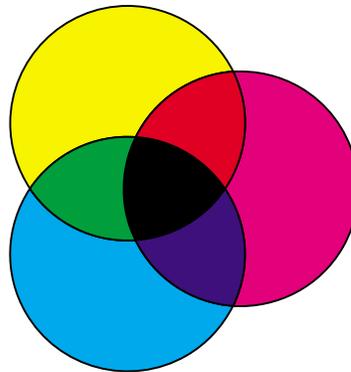
## ***Primary colors***

Notice the three primary additive colors red, green, and blue in the illustration. You can see that when all three colors are combined, you get white. However, look at the area where any two colors overlap. What you see is cyan, magenta, or yellow. Equal amounts of green and blue produce cyan. Equal amounts of blue and red produce magenta, and equal amounts of red and green produce yellow. The toner colors used to place color on your printed material are cyan, magenta, yellow, and black.



The colors in newspapers, magazines, and the documents you print are based on the light being reflected from the printed material and into your eyes. The color you see is subtractive color. Subtractive color begins with white light. Portions of the white light wavelength are then subtracted based on the colors present on the printed page. What this means is the light reaching your document is partially absorbed by the toner placed on the page. For example, when white light encounters cyan, it absorbs the red wavelength in the light and reflects blue and green toward your eyes.

If you add equal amounts of cyan, magenta, and yellow, you create black. When you combine these colors equally in your printed material you create what is known as process black. When printed, process black looks like a very dirty or muddy brown. Because of this, your printer has a black print cartridge to provide you with true black for all your printing needs.



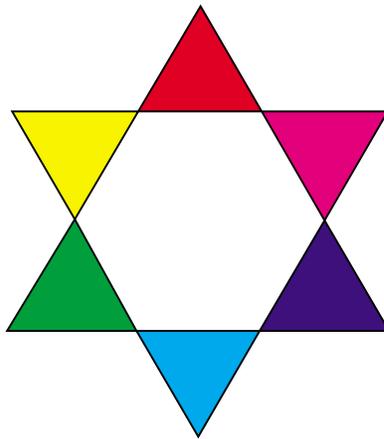
---

## Color difference

Most software applications today provide us with a WYSIWYG (What You See Is What You Get) environment. This helps us develop the look of our document. However, the difference between the additive and subtractive colors may sometimes cause a problem between what you see and what you get. This is due to the difference between additive and subtractive colors. The reason for this lies in the color spectrum of the different devices.

Your printer is capable of delivering over 16 million colors. With such a large variety of colors to choose from, you'll probably be able to closely match most of your screen designs. There are, however, colors your printer can produce that are impossible to duplicate on your monitor and there are colors your monitor can display that cannot be duplicated on any printer.

There are many ways you can ensure the color on the screen and the color you print are the same or at least a very close match. When you create a swatch like the one below, you can choose and compare your printed and screen colors.

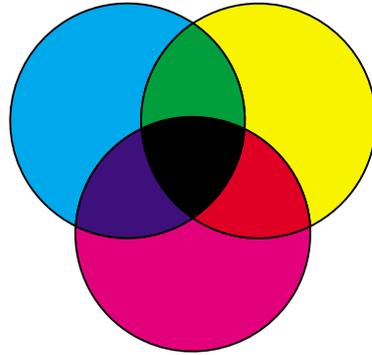


The easiest way for you to get consistent color from your screen to your printer is to select standard colors. When you produce color on your screen, it is produced using a color model. A color model is a system that defines color according to a set of basic properties. Most software applications can use this color model to closely match the colors you have on your screen.

As we said earlier, one simple method to aid in planning the use of color is to produce a color swatch of the colors you plan to use. Then, you can see how these colors will look when printed.

As your monitor ages, the colors on the screen also change. Changing the toner cartridges, photo developer cartridge, and paper in your printer also has a major impact on the color in your printed

document. Always print a new swatch of the colors you plan on using before you invest a lot of time creating your screen designs.





## Managing color

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There are many color management systems on the market today. They range from simple swatchbooks to specially designed and designated color servers. A color management system (CMS) helps you match colors across a number of devices, including scanners, monitors, and printers. A CMS ensures what you see at every step of the publishing process matches the printed output. Color management systems compensate for device limitations by taking into account the varying capabilities of different brands of monitors and printers. There are three major elements of a CMS: they are the device profile, color calibration, and translation.

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### ***Device profile***

Each piece of equipment is characterized or profiled. The profile reveals the color capabilities of the equipment. The profile includes details about which colors the device is capable of detecting, displaying, or printing. The device profile is used to convert different color values from one device to another.

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### ***Color calibration***

Even the best equipment ages over time. For example, a monitor capable of displaying very accurate colors when purchased eventually dims as it ages. Calibration ensures consistency by returning colors to their original specifications. You should calibrate your equipment at the interval your CMS specifies. Without calibration, your output may be different than you expected.

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### ***Translation between color models***

Translation is the most complex element of a CMS. Because each device is based on a device-dependent color model, such as RGB or CMYK, the range of colors each device supports is different. It is difficult and sometimes impossible to produce a particular color on different devices when each device uses a different color model.

Translation requires a device-independent color model. Most color management systems are based on the CIE color space model. This color space specification was devised by the Commission Internationale de l'Eclairage (CIE). Rather than translating RGB to CIE and CIE to CMYK, most CMS's translate directly from RGB to CMYK using the CIE color space as a reference.

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## ***Popular color management systems***

There are many color management systems for you to choose from. The type of CMS you choose impacts the color quality of your printed output. Choose a CMS that best meets your cost and performance needs. Some popular color management systems are described here.

### ***Windows ICM***

Microsoft Windows 95/98/Me, Windows 2000, and Windows NT support Image Color Management (ICM). ICM is an operating system-level CMS based on the CIE independent color model. It helps to translate color values between RGB and CMYK.

### ***ColorSync 3***

ColorSync 3 is an operating system-level CMS developed by Apple. It also uses the CIE independent model to translate between RGB and CMYK values.

### ***Agfa FotoTune***

Agfa FotoTune also uses the CIE independent color model to translate between RGB and CMYK values. It only works with certain applications, however, such as Adobe Photoshop.

# 7

## Controlling printed output

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Your printer driver provides you with the best quality output for various types of printing needs. However, you may want more control over how your printed document will look.

You can control the screening methods, graphics effects, and fill resolution used during printing. These setting adjustments can easily be made through your printer driver, operator panel, or MarkVision remote operator panel. Adjusting any of these settings affects the output of your documents.

You can return your printer driver to the factory default settings by selecting the Restore Defaults button on the printer driver screen or restoring the default settings at the operator panel.

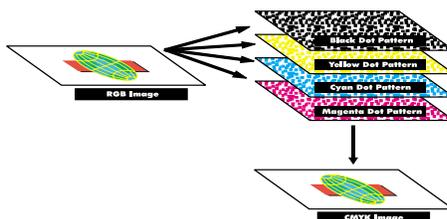
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### Driver Settings

#### Print Quality

Your printer is a four-color process printer that uses the CMYK color model. One of the most important issues for printing using the CMYK model is how the printer combines each of the four colors on the page. The process used to produce this high quality print is known as *screening*.

When printing in color, you use four different color planes or screens. A separate dot pattern is created for each of these color planes. These separate dot patterns are then combined (effectively laid on top of each other) to produce your final full-color image.



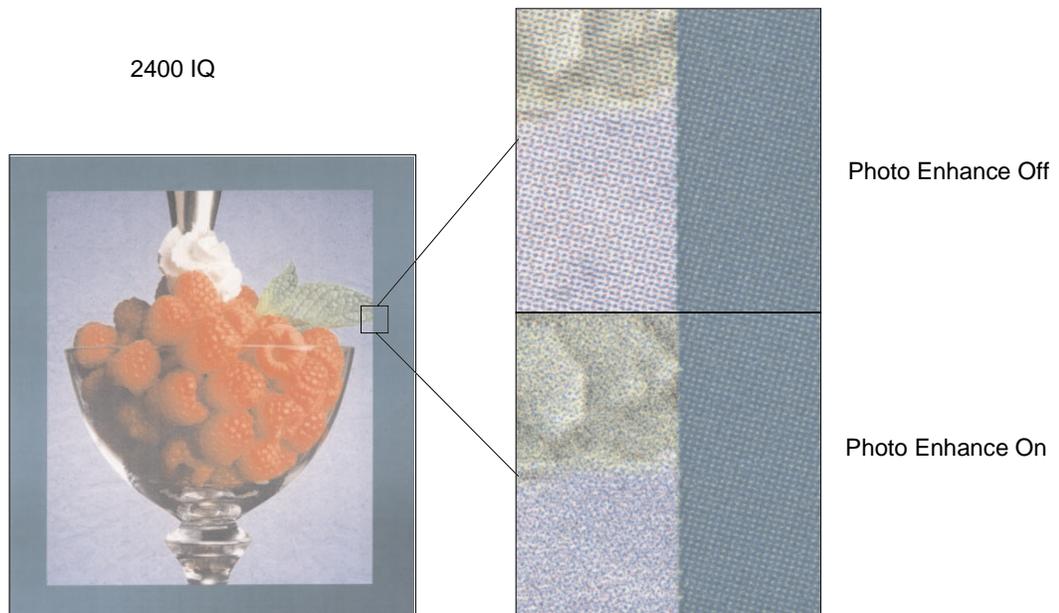
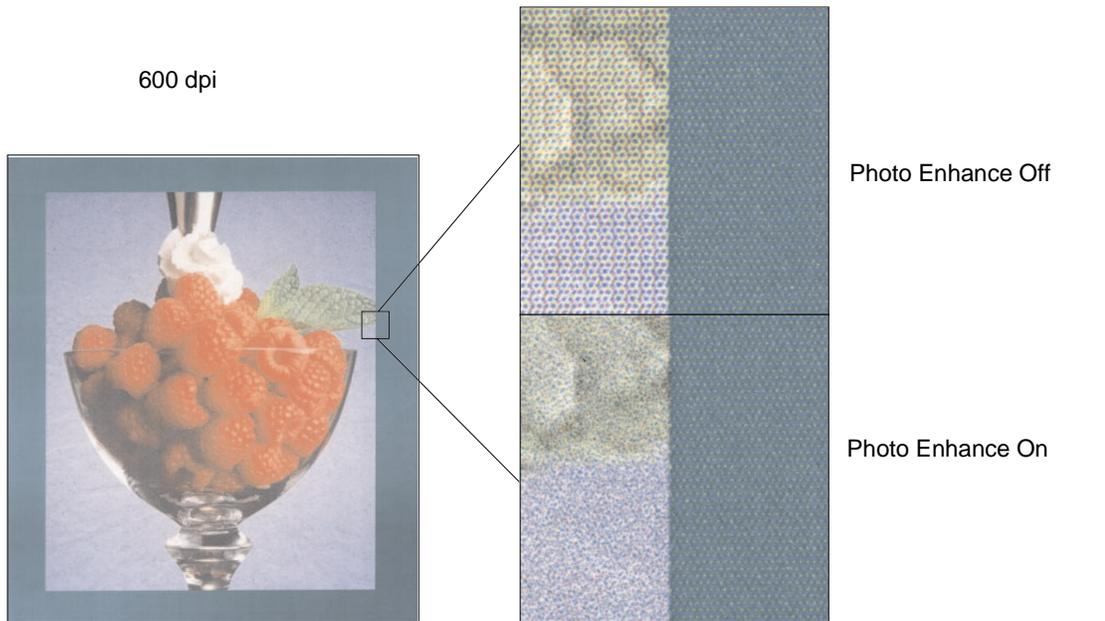
Your color printer uses different screening methods depending on the material to be printed.

There are two print quality settings you can choose from; 600 dpi (dots per inch) and 2400 IQ (image quality). The 600 dpi setting provides true 600 x 600 dpi resolution. The default setting 2400 IQ, enhances images you send to the printer. The 2400 IQ setting also provides an optimum balance for most printing needs.

You can change these settings through the color tab on your printer driver or the Color Menu on the operator panel.

### **Photo Enhance**

When you place Photo Enhance setting On, your printer changes the method it uses to place pels on your print media. This change enhances the printing of photographic images and is most noticeable in flesh tone areas. The following illustrations demonstrate how Photo Enhance changes the toner pattern that is placed on your print media.



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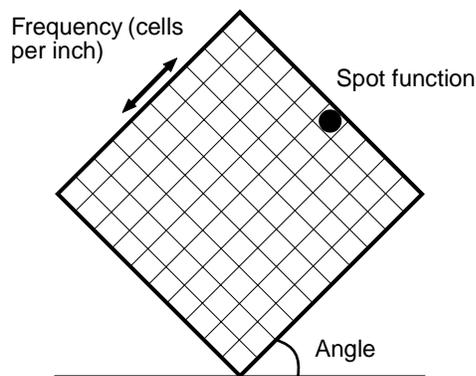
## Halftone screens

The term *halftone screen* refers to the pattern of dots applied to an object on the page (text, graphics, or images). If you look at a black and white photograph in a magazine, it appears to contain many shades of gray. If you place the same picture under a magnifying glass, you see that it is actually composed of a large number of small dots. These dots, also known as pels, may be of varying sizes or varying tones. Without halftoning, it would not be possible to produce quality photographic images on a page printer. This process of representing an image as a series of halftones is known as halftone screening.

### Attributes

Halftone screens have three main attributes: screen frequency, screen angle, and spot function. The halftone screen is further divided into halftone cells. These cells contain the individual pel spaces. The screen frequency and angle attributes determine both the number of halftone cells that make up a halftone screen and the orientation of the cell.

The spot function determines which of the individual pels in the halftone cell is turned on to represent a particular gray level or color tone. The following illustration shows a halftone screen and halftone cells rotated 45 degrees.



### Screen frequency

The screen frequency is the number of halftone cells per inch. A higher screen frequency setting increases the number of halftone cells per inch. Increasing the number of halftone cells per inch does not necessarily give you better quality. The reason for this is the higher settings may make the colors or halftones seem to run together or bleed.

Different printing needs do require different screen frequency settings; for example, offset printing requires a higher setting, whereas newsprint generally requires a lower setting. Your printer default is set to give you the best screen frequency setting for high quality business graphics.

### Screen angle

The default angle of the halftone screen and cells place the dots so they are the least noticeable to the eye. It also ensures the alignment of color through all four color planes. By avoiding the placement of halftone cells at an angle of 90 degrees, the viewer's eyes are focused on the image and not on the dots.

## ***Spot function***

The spot function determines the shape of the dots by controlling the order in which the pels in the halftone cell are turned on. The printer code defines the order by assigning a priority to each individual pel within the halftone cell. By turning on or printing a portion of the pels within the halftone cell and then combining the different halftone screens, your printer is able to print millions of colors.

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## ***Image Smoothing***

You can turn Image Smoothing on from the graphics tab of your printer driver or through the PostScript Menu using MarkVision or the operator panel. This increases the contrast and sharpness of bitmapped images and smooths color transitions. This setting is useful for images downloaded from the World Wide Web at 72 dpi. The setting has no effect on images downloaded at 300 dpi resolution or higher.

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## ***Printing text***

In both PostScript and PCL emulations, 100% black text prints using black toner (K of CMYK). This results in sharp, crisp text characters. The printer applies a unique screening algorithm to small text (less than 24 points in size). This helps ensure that small point size text has smooth, crisp edges.



## Color correction

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Color Correction lets you modify the color settings used to print your documents. The Color Correction settings you can choose from are: Auto, Display, CMYK, Black and White, 2-Color draft, Off, and Vivid. Auto is the default setting when the printer is shipped from the factory. It uses different color profiles for the different objects on the page (text, graphics, and images).

You can use these settings to adjust your printed color to better match the colors of other output devices or standard color systems. You can also use these settings to adjust the brightness and saturation of your text and business graphics. You can access and change these settings through your printer driver Color tab or the operator panel Color Menu.

The following is an overview of the Color settings and their applications.

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### **Auto**

When your Color Correction is set to Auto, the printer applies different color profiles to each object on the printed page. This setting provides high quality output for text, graphics, images, line art, and charts. This setting is most useful for documents that contain a variety of objects.

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### **Display**

You can use this setting to print color that approximates the colors on your computer screen. This setting uses common color tables to translate the color settings displayed on your monitor into the color values used by the printer CMYK color model.

This setting is generally used when your application does not do its own color correction and defines colors as RGB (Red, Green, Blue), HLS (Hue, Lightness, Saturation), or HSB (Hue, Saturation, Brightness).

**Note:** Due to the difference between additive and subtractive colors, your printer can produce colors that are impossible to duplicate on your monitor and your monitor can display colors that cannot be duplicated on any printer. For more information, see [Color difference](#).

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### **CMYK**

When you select CMYK as your color correction, the printer expects to receive CMYK color values from your software. Use this setting when attempting to reproduce standard CMYK colors such as Pantone or when printing CMYK images.

If you use this setting without the necessary color management software or your application does not provide the correct information, your printed output may have unexpected results.

---

## ***Black and White***

The Black and White setting converts any colors in your document to solid black. This setting produces output just like any standard monochrome printer using various shades of gray. This setting can be especially useful when you have replaced a monochrome printer and want to print occasional color. Cost conscious users benefit most by using this setting as a default and print color only when needed. Because you are only printing black and white, your print jobs print faster than full color print jobs.

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## ***2-Color Draft***

You can select 2-Color Draft to reduce the amount of toner you use when printing color drafts. Selecting 2-Color Draft decreases the amount of toner by using only two colors of toner instead of four colors. This setting lets you conserve printing cost while still attracting attention through the use of color.

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## ***Off***

When you select Off as your color correction, the printer expects to receive the necessary color correction from your software. Use this setting when you have software that manages its own color correction or if you use another color management tool.

If you use this setting without the necessary color management software or your application does not provide the correct information, your printed output may have unexpected results.

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## ***Vivid***

This setting can help you print brighter colors. The Vivid setting adjusts the CMYK components, resulting in more saturated colors. You may want to use this setting when creating overhead transparencies to enhance or sharpen your colors if they seem faded. This setting is especially useful if you like saturated colors and color matching is not a concern. For example, you can saturate your business graphics to be more pleasant or make presentations more dynamic. Since you are saturating your color, flesh tones and other colors may not seem life like.



## Avoiding print quality problems

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To prevent print quality problems, do not touch the print cartridge toner roller, photo developer transfer film, or the fuser rollers. Scratches or fingerprints on any of these surfaces can adversely affect print quality.

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### *Media and supplies*

Always use media that meets the recommended guidelines. See [Media guidelines](#) for more information.

Feeding media that is too heavy, too light, damp, damaged, or otherwise unacceptable for this printer may result in print quality problems.

Some print quality problems may indicate it is time to replace certain printer supplies. Check the operator panel display, the Supplies Menu, or MarkVision for an indication of any supply items that may need to be replaced.

Depending on the type of jobs you print and the media you use, some parts or supplies may wear or become expended faster than anticipated. See [Maintenance](#) for more information about supplies and when to replace them.

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### *Transparencies*

To ensure high quality output on transparencies, we recommend using the following Lexmark transparencies. They have been designed specifically for your printer:

P/N 12A5590 (letter size)

P/N 12A5591 (A4 size)

These transparencies have characteristics that minimize curl and optimize toner transfer in a wide range of printing environments. If you use other transparencies, the print quality may be unacceptable.

Handle transparencies carefully because fingerprints may affect the adhesion of toner. Always set the Paper Type to Transparency (see [Changing the Paper Type setting](#)) before printing transparencies. This adjusts the fuser temperature and slows the print speed to ensure the best possible transfer of toner.

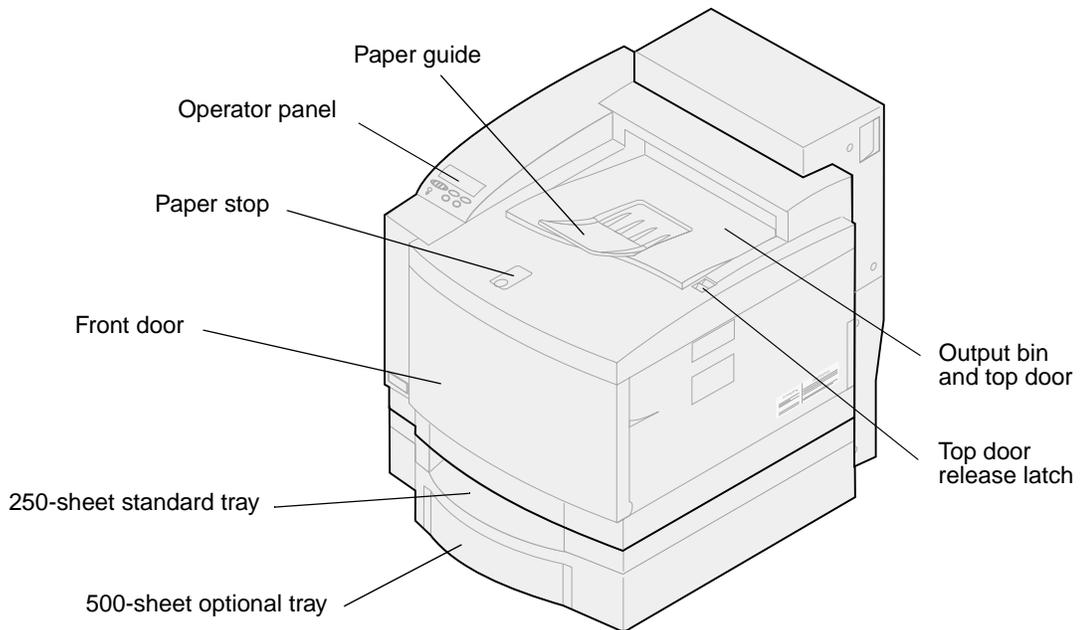
See [Loading transparencies](#) for more information.

# 10

## Paper sources and output

Your printer comes with a 250-sheet paper tray. You can load paper, transparencies, labels, or envelopes in the paper tray.

For additional paper capacity, you can attach an optional drawer with a 500-sheet tray. When linked, you create a single 750-sheet source (see [Tray linking](#)). Refer to the *Setup Guide* for information about installing the optional drawer.



The following table details the types and quantities of media you can load in each of the printer paper sources. For more information about selecting specific media, see [Media guidelines](#). Place paper in

the tray printing side up. Printed output is placed printed side down in the output bin on the top of your printer.

Source	Media	Size supported	Weight	Capacity*
Standard tray (tray 1)	Paper Transparencies Labels Envelopes Card stock	A4, letter, executive, JIS B5, A5, DL env, #9 env, #10 env, B5 env, C5 env  Supports any custom size paper within the following dimensions (width x length):  Minimum: 105 x 220 mm (4.1 x 8.7 in.)  Maximum: 216 x 297 mm (8.5 x 11.7 in.)	60–90 g/m <sup>2</sup> (16–24 lb)  Card stock: 90-163 g/m <sup>2</sup> (24-43 lb)  Labels:*** 163 g/m <sup>2</sup>	250 sheets 50 transparencies 80 label sheets up to 10 envelopes 120 card stock sheets
Optional tray (tray 2)	Paper	A4, letter, executive	75–105 g/m <sup>2</sup> (20–28 lb)	500 sheets
Optional legal tray** (tray 1)	Paper Transparencies Labels Envelopes Card stock	legal, A4, letter, executive, JIS B5, A5, DL env, #9 env, #10 env, B5 env, C5 env  Supports any odd-size paper within the following dimensions (width x length):  Minimum: 105 x 220 mm (4.1 x 8.7 in.)  Maximum: 216 x 355 mm (8.5 x 14 in.)	60–90 g/m <sup>2</sup> (16–24 lb)  Card stock: 90-163 g/m <sup>2</sup> (24-43 lb)  Labels:*** 163 g/m <sup>2</sup>	250 sheets 50 transparencies 80 label sheets up to 10 envelopes 120 card stock sheets
<p>* For 20 lb paper, unless otherwise noted.  ** Replaces the standard tray (Tray 1).  ***Recommended labels are Avery 5260  The printer can only duplex print A4, letter, B5, and legal size paper.</p>				

**Note:** Place 18 lb paper only in tray 1. Do not use 18 lb paper with the duplex unit.

# 11 Paper sizes

Your printer supports a wide variety of paper sizes. See [Media guidelines](#) for illustrations of proper paper orientation.

The printer determines the size paper loaded in the trays by the position of the paper guides. Make sure you adjust the guides each time you change paper sizes. The following tables list the paper and envelope sizes your printer supports.

Size	Dimensions	Print speed in black and white/ color <sup>1</sup> (ppm)
A4	210 x 297 mm (8.3 x 11.7 in.)	24/6
Letter	215 x 279 mm (8.5 x 11 in.)	24/6
Executive	184 x 266 mm (7.25 x 10.5 in.)	24/6
B5	182 x 257 mm (7.2 x 10.1 in.)	24/6
Legal <sup>2</sup>	216 x 356 mm (8.5 x 14 in.)	23/3
A5	148 x 210 mm (5.8 x 8.2 in.)	24/6
<sup>1</sup> Simplex printing speeds at factory default settings. <sup>2</sup> Can only be placed in the optional legal tray.		

Size	Dimensions (h/w)	Print speed in black and white/ color* (ppm)
DL Envelope	110 x 220 mm (4.3 x 8.7 in.)	12/4
C5 Envelope	162 x 229 mm (6.4 x 9 in.)	12/4
B5 Envelope	176 x 250 mm (6.9 x 9.9 in.)	12/4
9 Envelope	99 x 226 mm (3.9 x 8.9 in. )	12/4
10 Envelope	103 x 241 mm (4.125 x 9.5 in.)	12/4
* Simplex printing speeds at factory default settings.		

## Paper size sensing

Your printer can automatically sense when A4, letter, legal, executive media or B5, DL, and #10 envelopes are loaded in tray1. To do this, the **Auto Size Sense** setting must be set to **On**. Your printer default was set at the factory to either the US or Non-US default with the **Auto Size Sense** setting **On**. The US or Non-US default setting affects the auto sensing ability of the printer. In the US mode, the tray sensing recognizes the #10 envelope and not the DL envelope. In the Non-US mode, it

recognizes the DL envelope, but not the #10 envelope. Refer to the *Technical Reference* for more information on US and Non-US defaults.

The printer determines the size of the media loaded in the trays by the position of the front paper guide. The optional 500-sheet tray is always set to **Auto Size Sense On**. Since tray 2 is for plain paper only, and cannot be used for legal paper or envelopes, tray 2 auto sensing only recognizes A4, letter, or executive size paper. Tray 2 sensing cannot be turned off.

When **Auto Size Sense** is **On** you cannot select paper sizes at the operator panel, in MarkVision or in your software application. Since the printer is automatically detecting the paper size from the tray, it does not let you override the paper size menu.

If you want to use paper sizes that are not recognized when **Auto Size Sense** is **On** you must change **Auto Size Sense** to **Off**.

To change the Auto Size Sense setting to **Off**:

- 1** Turn the printer off.
- 2** Press and hold the **Go** and **Stop** buttons and turn the printer on.
- 3** Release both buttons when **Performing Self Test** appears.
- 4** Press **Menu>** or **<Menu**, until the **Tray 1 Auto Size** message appears.
- 5** Press **Select**.
- 6** Press **Menu>** or **<Menu**, until **Off** appears on the display.
- 7** Press **Select**.

To return the Auto Size Sense setting to **On**, repeat steps 1 through 7 but, select **On** during step 6.

# 12 Media guidelines

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Use recommended media (paper, transparencies, envelopes, card stock and labels) for your printer to avoid printing problems. For detailed information about media characteristics, refer to the *Card Stock & Label Guide* available on the drivers CD provided with your printer. Brief guidelines for choosing paper and other media follow.

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## Paper

**Note:** Using low quality paper may result in unsatisfactory performance and may degrade print quality.

When printing photographic quality images, use a high quality laser printer paper. We recommend the following paper for optimum results:

- Hammermill Laser Print 90 g/m<sup>2</sup> (24 lb)

For printing text and typical business graphics, you may find 75 g/m<sup>2</sup> (20 lb) paper designed for use with laser printers or photocopiers produces acceptable print quality. Always try a sample of any paper before buying large quantities.

Before loading paper, note the recommended print side identified on the paper package. Load paper with the recommended print side *face up* in the paper trays. For paper loading instructions, see **Loading paper, card stock, or labels**.

The following papers are not recommended for use with your printer:

- Paper with a large cotton content
- Paper with a rough or heavily textured surface
- Coated papers, such as erasable bond
- Preprinted papers manufactured with chemicals that may contaminate the printer
- Paper designed for inkjet printers
- Deformed or damaged paper
- Paper that is wet or has absorbed moisture
- Paper that is punched, embossed, or perforated
- Multiple-part forms
- Synthetic papers
- Thermal papers
- Recycled paper having a weight less than 75 g/m<sup>2</sup> (20 lb)

Preprinted papers such as letterhead must be able to withstand temperatures up to 175°C (347°F) without melting or releasing hazardous emissions. Use inks that are not affected by the resin in toner or the silicone in the fuser. Inks that are oxidation-set or oil-based should meet these requirements. Latex inks may melt.

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## Transparencies

For best results, use the following Lexmark transparencies:

### Recommended transparencies

Part number	Size
12A5590	Letter
12A5591	A4

These transparencies are designed to provide optimal print quality. Using other transparencies designed for laser printers may yield unpredictable results and possibly cause damage to your printer.

Transparencies must be able to withstand temperatures of 175°C (347°F) without melting, discoloring, offsetting, or releasing hazardous emissions.

To order transparencies in the U.S., call 1-800-438-2468. In other countries, see [Contacts for supplies information](#) for a list of phone numbers or visit [www.Lexmark.com](http://www.Lexmark.com) on the World Wide web.

Black and white transparencies print at approximately 4 ppm and color transparencies print at approximately 3 ppm. For transparency loading instructions, see [Loading transparencies](#).

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## Envelopes

You can load up to 10 envelopes in tray 1. Load envelopes with the flap side down with the return address positioned to enter the printer first. Do not load stamped envelopes. Load envelopes only in tray 1. Before loading envelopes, fan the stack to prevent them from sticking together. For envelope loading instructions, see [Loading envelopes](#).

To ensure the best print quality, set Paper Type to Envelope and select the correct envelope size before sending the job to print.

When printing on envelopes:

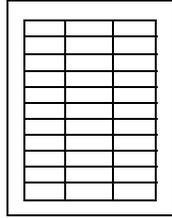
- Try a sample of any envelopes you are considering using before buying large quantities.
- Use envelopes made from 90 to 105 g/m<sup>2</sup> (24 to 28 lb) bond paper. Do *not* use envelopes that:
  - Have excessive curl
  - Are stuck together
  - Are damaged in any way
  - Contain windows, holes, perforations, cutouts, or embossing
  - Use metal clasps or string ties
  - Have postage stamps attached
  - Have any exposed adhesive when the flap is in the sealed or closed position
- Use envelopes that can withstand temperatures of 175°C (347°F) without sealing, excessive curling, wrinkling, or releasing hazardous emissions.
- Adjust the left, and front paper guides to fit the envelope's width.

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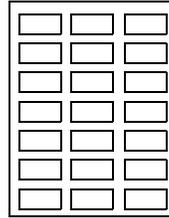
## Labels

Use only labels designed for laser printers. Use only label sheets that have no gaps between the labels, as shown below. Try a sample of any labels before purchasing a large quantity.

Acceptable labels



Unacceptable labels



Labels must be able to withstand temperatures of 175°C (347°F) without melting, discoloring, offsetting, or releasing hazardous emissions. For detailed information on label printing, characteristics, and design, refer to the *Card Stock & Label Guide* on the drivers CD.

Feed labels only from tray 1. When printing on labels:

- Use only paper labels. Do not use vinyl labels.
- Do not print a large number of labels consecutively.
- Do not use labels that have adhesive exposed on the sheets.
- Do not use labels that have coating or sizing applied to make the labels liquid-resistant.
- From the operator panel or from MarkVision, set the Paper Type to Labels.

For label loading instructions, see [Loading paper, card stock, or labels](#).

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## Card stock

**Note:** Load card stock in tray 1 only. Do not load more than 50 sheets of card stock into tray 1. Loading more than 50 sheets of card stock or using the wrong paper source may cause paper jams or a failure to feed.

You can load a small quantity of heavier paper in tray 1. The properties of the card stock you choose—such as the orientation of the paper fibers, moisture content, thickness, and texture—can affect the print quality.

For optimum results, we recommend using:

- Springhill Index Plus 90 lb card stock.

Card stock must be able to withstand temperatures up to 175°C (347°F) without melting or releasing hazardous emissions.

For more information on card stock your printer supports, refer to the *Card Stock & Label Guide* on the drivers CD

Always set the Paper Type to Card Stock when printing on heavier paper. The printer then adjusts the fuser temperature and engine speed to ensure the best print quality.

For card stock loading instructions, see [Loading paper, card stock, or labels](#).

# 13

## Storing media

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Proper storage of media helps ensure trouble-free printing. For best results:

- Store media in an environment where the temperature is approximately 21°C (70°F) and the relative humidity is 40%.
- Store cartons of paper on a pallet or shelf, rather than directly on the floor.
- If you store individual packages of paper out of the original carton, make sure they rest on a flat surface so the edges do not buckle or curl.
- Do not place anything on top of paper packages.

# 14

## Avoiding paper jams

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If you follow the [Media guidelines](#), you're well on your way to trouble-free printing. If you do experience a paper jam, see [Clearing paper jams](#) for instructions on clearing the jam.

A few reminders to avoid paper jams:

- Ensure paper guides in trays are properly positioned for the size paper you have loaded. See [Loading media](#) for more information
- To load paper in a tray while a job is printing, press the operator panel **Stop** button and wait for the printer motor to idle. Remove the tray from the printer. Load paper and reinstall tray. Press **Go** to continue printing.
- Use only recommended media. See [Media guidelines](#) for more information.
- Do not load wrinkled, creased, or damp paper.
- Flex and straighten paper before loading.
- Do not overload paper trays. Make sure the paper stack does not exceed the maximum height indicator located inside the paper tray.
- Change the Paper Type settings if you load anything other than plain paper.



## Loading media

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Click a topic to go directly to specific loading instructions

- **Loading paper, card stock, or labels**
- **Loading transparencies**
- **Loading envelopes**

The procedures for loading paper in the standard 250-sheet tray and the optional 500-sheet tray are the same.

The printer lets you know when you need to load paper in the trays. If a tray becomes empty, the **supplies** message appears on the second line of the operator panel. Press **Menu>** or **<Menu** to open the Supplies Menu. Scroll through the supplies list to determine which supply(s) need attention. The menu indicates whether a tray is missing or empty.

When you change the paper in the tray, make sure the paper guides are in the correct positions. The position of the paper guides informs the printer of the size paper loaded in the tray. Feeding paper when the paper guide is not in the correct position may result in misfeeds or paper jams.

If you load a different type of media such as card stock or labels, change the Paper Type setting in the Paper Menu. Selecting the correct paper type guarantees optimal print quality for that media. See **Media guidelines** for information about the changes the printer makes for specific media. For more information about changing the Paper Type setting, see **Changing menu settings** or refer to the *Setup Guide*.

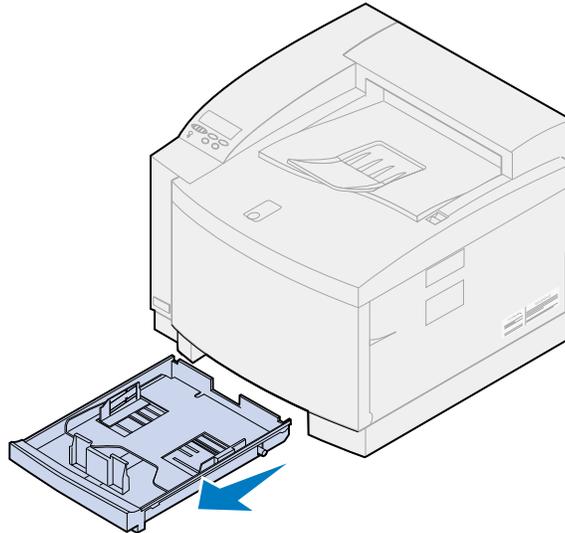
The paper size and the paper type also must be set correctly for tray linking to work as expected. See **Tray linking** for more information about tray linking.

Your printer is set at the factory so it can automatically sense when A4, letter, executive media or B5, DL, and #10 envelopes are loaded in tray1. If you want to use paper sizes that are not automatically sensed or if you install an optional legal tray to print on legal size paper, you must change the **Auto size sense** setting to **off**. See **Paper size sensing** for more information about changing the **Auto size sense** setting.

## Loading paper, card stock, or labels

**Note:** If you attach an optional drawer, the instructions are the same for loading paper in that tray. However, load *only* paper in tray 2.

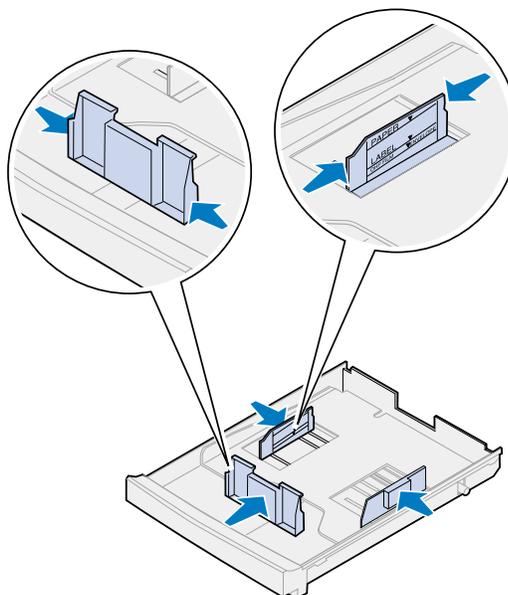
- 1 Pull the tray completely out of the printer.



- 2 Set the tray on a flat surface.

**Note:** If you are loading A4 or letter size paper, the tray may already be set up for the appropriate paper size.

- 3 Squeeze the snap locks on the end of the front paper guide.



- 4 Slide the front paper guide to align with the position of the paper size you are loading.

**5** Release the snap locks.

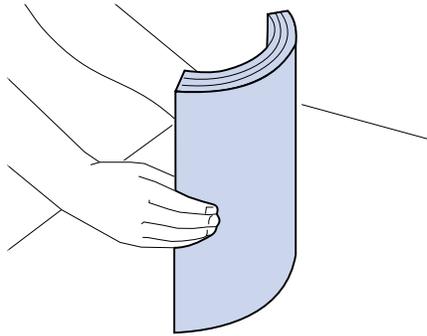
The position of the paper guides inform the printer the size of the paper in the tray. If the paper guides are in the wrong position, you may experience feeding problems or incorrect formatting of pages.

**6** Squeeze the snap locks on the end of the left side paper guide.

**7** Slide the left side paper guide to align with the position of the paper size you are loading.

**8** Release the snap locks.

**9** Flex the sheets back and forth to loosen them, and then fan them. Straighten the edges on a level surface.

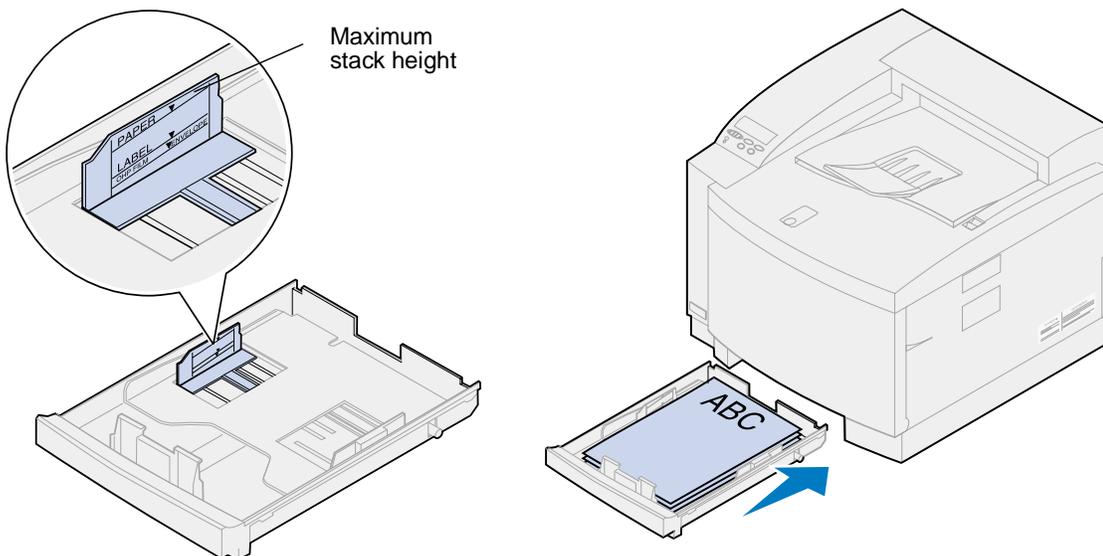


**10** Load the paper with the recommended print side face up.

Do not exceed the maximum stack height indicated on the label inside the tray.

If you're loading letterhead, place the top of the page at the rear of the tray with the print side up.

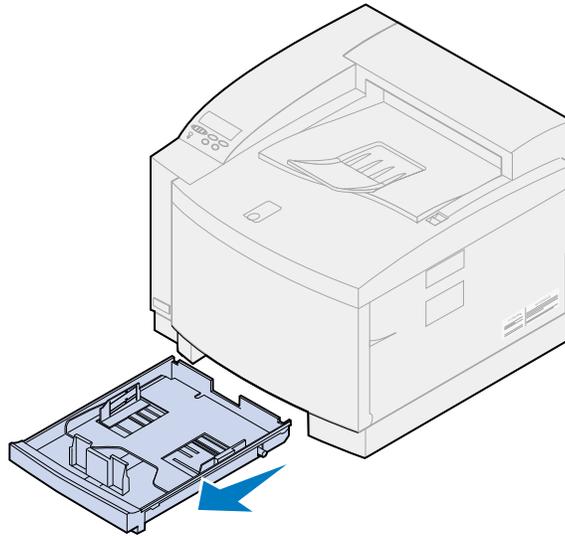
**11** Slide the tray into the printer.



## Loading transparencies

To load the tray:

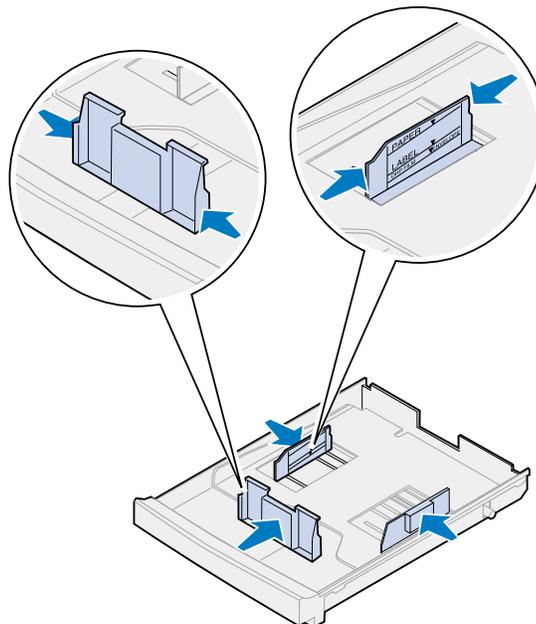
- 1 Pull the tray completely out of the printer.



- 2 Set the tray on a flat surface.

**Note:** If you are loading A4 or letter size paper, the tray may already be set up for the appropriate paper size.

- 3 Squeeze the snap locks on the end of the front paper guide.



- 4 Slide the front paper guide to align with the position of the transparency size you are loading.

**5** Release the snap locks.

The position of the paper guides inform the printer the size of the transparency in the tray. If the paper guides are in the wrong position, you may experience feeding problems or incorrect formatting of transparencies.

**6** Squeeze the snap locks on the end of the left side paper guide.

**7** Slide the left side paper guide to align with the position of the transparency size you are loading.

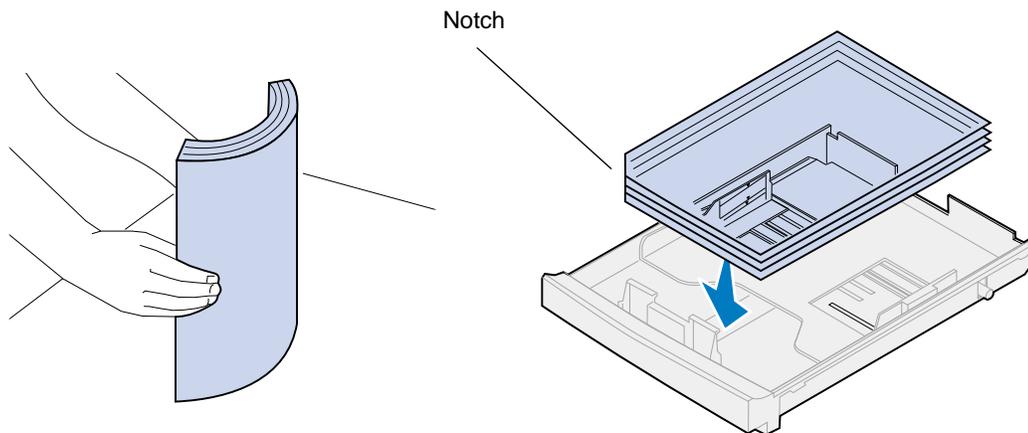
**8** Release the snap locks.

**9** Fan the stack to prevent the sheets from sticking together.

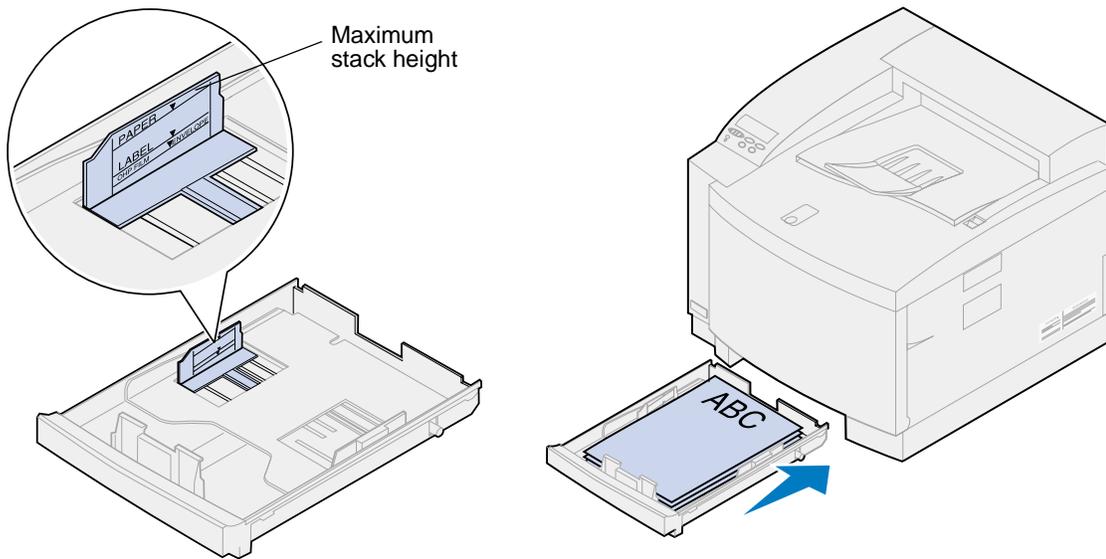
To prevent print quality problems, avoid getting fingerprints on the transparencies.

**10** Place the transparencies with the notch to the left front of the tray as shown.

**Note:** Load transparencies only in tray 1. Do not exceed the maximum stack height indicated on the label inside the tray.



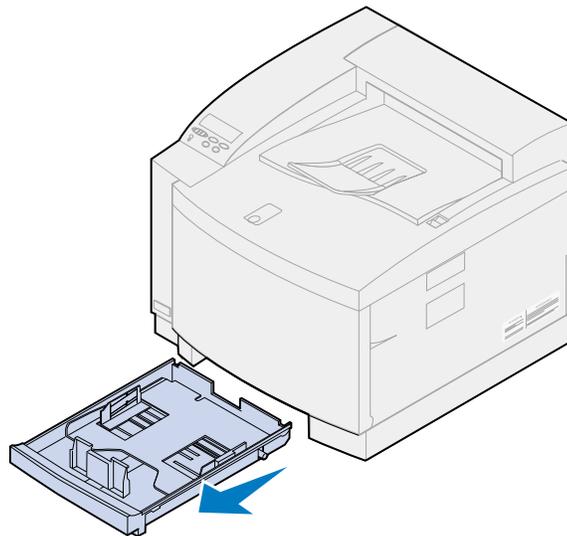
- 11 Slide the tray into the printer.



### Loading envelopes

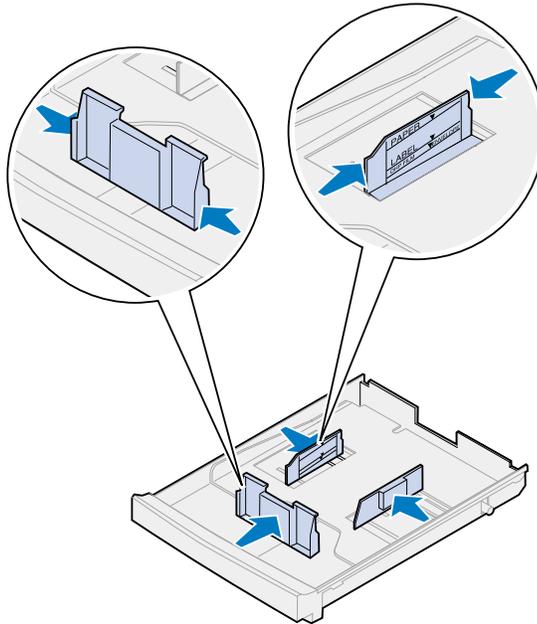
**Note:** Do not load envelopes in tray 2, envelopes can *only* be printed from tray 1.

- 1 Pull the tray completely out of the printer.



- 2 Set the tray on a flat surface.

- 3 Squeeze the snap locks on the end of the front paper guide.



- 4 Slide the front paper guide to align with the position of the envelope size you are loading.

- 5 Release the snap locks.

The position of the paper guides inform the printer of the size envelopes in the tray. If the paper guides are in the wrong position, you may experience paper feeding problems or incorrect formatting.

- 6 Squeeze the snap locks on the end of the left side paper guide.

- 7 Slide the left side paper guide to align with the position of the envelope size you are loading.

- 8 Release the snap locks.

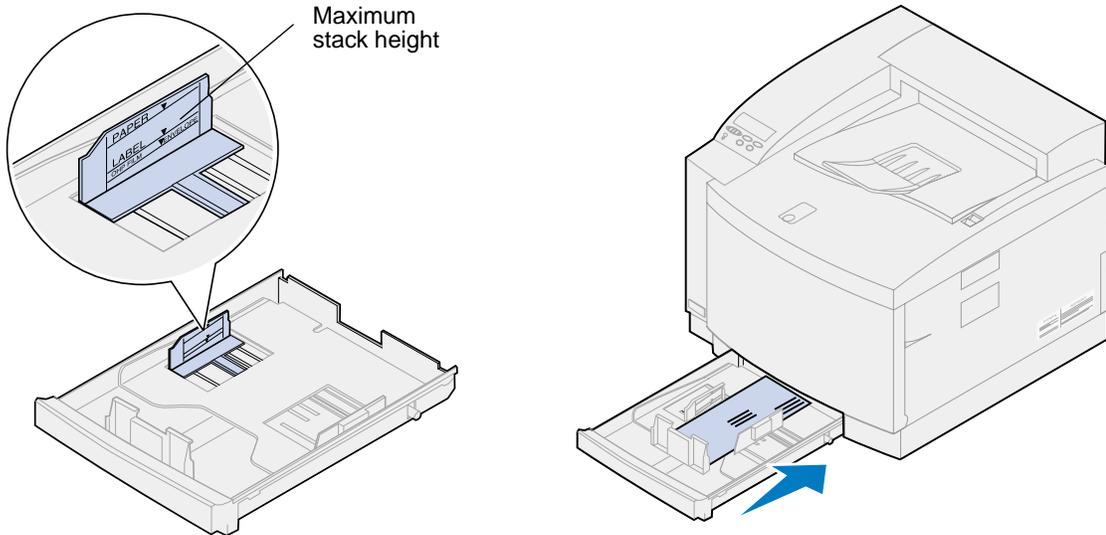
- 9 Before loading the envelopes, flex them back and forth to loosen them, and then fan them. Straighten the edges on a level surface.



- 10** Load the envelopes with the recommended print side face up and the part of the envelope with the return address toward the rear of the printer.

Do not load stamped envelopes.

Do not exceed the maximum stack height indicated on the label inside the tray.



- 11** Slide the tray into the printer.

## 16 Tray linking

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If you want to increase your printer paper capacity, add an optional drawer with a 500-sheet paper tray to your printer. If you load the same paper size and paper type in both trays, the printer automatically links the trays when one tray is empty, and feeds paper from the other tray. By linking the trays you create a single paper source that holds up to 750 sheets.

To initiate tray linking:

- 1 Load paper of the same size and type in both trays.
- 2 Make sure the paper guides in both trays are set to the proper position for the paper size you have loaded.

**Note:** The position of the paper guides tells the printer the paper size loaded. See **Paper size sensing** for more information about changing the **Auto Size Sense** setting.

- 3 Select the same Paper Type setting for both sources.

See **Changing the Paper Type setting** for more information about changing the Paper Type setting.

To disable tray linking, change the Paper Type setting for one or both of the trays to a custom setting. See **Changing menu settings** for more information.

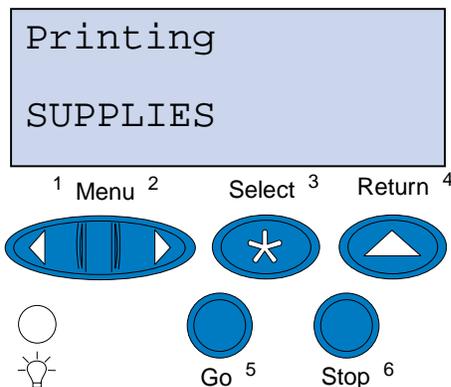
# 17 Supplies overview

Click a topic for more information about:

Supply item...	Replacing the...
<ul style="list-style-type: none"> <li>• Toner cartridges</li> <li>• Photo developer cartridge</li> <li>• Oil bottle</li> <li>• Cleaning roll</li> <li>• Waste toner bottle</li> <li>• Fuser and air filter kit</li> <li>• Maintenance kit</li> </ul>	<ul style="list-style-type: none"> <li>• Toner cartridges</li> <li>• Photo developer cartridge</li> <li>• Oil bottle</li> <li>• Cleaning roll</li> <li>• Waste toner bottle</li> <li>• Fuser and air filter kit</li> <li>• Maintenance kit</li> </ul>

Your printer has been designed to let you replace supply items without the need of a service technician. Periodically you'll need to install new toner cartridges and other items to keep your printer operating properly. You may want to keep extra replacement supplies so you can operate your printer without interruption.

Your printer displays **supplies** on the second line of the operator panel display when any supplies need attention. Press **Menu>** or **<Menu** to open the Supplies Menu and quickly determine whether you need to load paper, replace a toner cartridge, or replace other supply items.



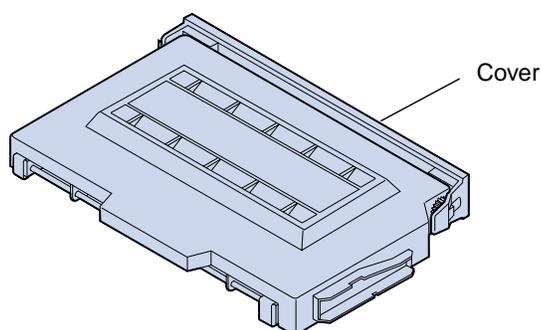
The average *yield* of a supply is the average number of pages or images you can print before you need to replace the supply. This average yield is determined using A4 or letter size paper with a 5% toner coverage. The actual yield varies depending on factors such as the printer settings you choose, the toner coverage on each printed page, and the size of the paper you use.

The paper size affects the printer page count calculations. The printer counts an A4 or letter size sheet as one page and a legal size sheet as 1.2 pages. Therefore, if you print all your jobs on legal paper, the yield for a particular supply may appear to be lower than the yield claimed for that supply. The number of images on a page also affects the average yield page count.

# 18 Supplies

## Toner cartridges

**WARNING:** Do not touch the cartridge roller located under the cover.



Your printer uses four separate toner cartridges, one for each color: cyan, yellow, magenta, and black. They are located behind the front door. The stacking order from top to bottom is black, yellow, magenta, and cyan.

The approximate yield of the black toner cartridge is 12,000 pages. The cyan, yellow, and magenta toner cartridges have an approximate yield of 7,200 pages.

The average yield is determined using A4 or letter size paper with a 5% toner coverage. The actual yield depends on the toner coverage on each page.

When the printer detects the toner supply in a particular cartridge is getting low, it displays **88 <color> Toner Low**. If you do not already have a replacement toner cartridge available, order one at this time. For more information on ordering toner cartridges, see [Ordering supplies](#).

Press **Go** to clear the message. The **supplies** message appears on the second line of the operator panel to remind you that supplies need attention. Open the Supplies Menu to see which toner cartridge is low.

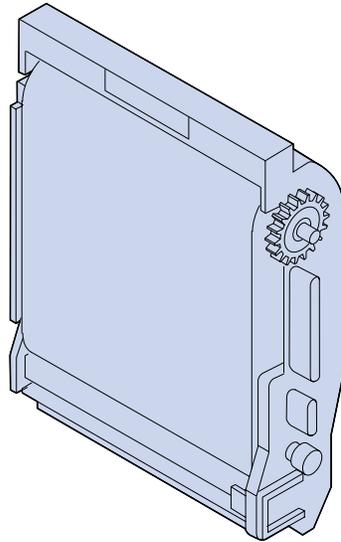
The printer continues to display the **<color> Toner Low** in the Supplies Menu until you replace the toner cartridge or until it is empty.

When the life of the toner cartridge has expired, the printer display alternates between the **88 <color> Toner Empty** and **Open Door Replace <color>** messages. You must replace the toner cartridge to continue printing.

If you notice a reduction in print quality before the **88 <color> Toner Low** message appears, you may want to replace the cartridge before the message appears. See [Identifying other problems](#) for information about printing problems that may indicate it is time to replace the toner cartridge.

When you need to install a new toner cartridge, see [Replacing toner cartridges](#) or the installation instructions that come with the new cartridge.

### ***Photo developer cartridge***



The photo developer cartridge receives toner from the toner cartridges. The toner image is generated on the photo developer media. The photo developer transfers the generated image onto the transfer drum so it can be placed on the print media you selected.

The approximate yield of the photo developer cartridge is 40,000 images. The average yield is determined by the number of pages in each print job.

To ensure print quality, your photo developer cartridge has a developer charger. The charger removes excess toner, dust, and other debris from your photo developer film before the next image is applied. The developer charger needs to be cleaned periodically to prevent streaks and voids. We recommend cleaning the discharger when you replace the waste toner bottle. For more information, see [Cleaning the developer charger](#).

Your printer monitors the life of your photo developer cartridge. When the photo developer cartridge reaches the end of its life, the printer shows **82 Photo Dev Cart Exhausted**. It is time for you to replace the photo developer cartridge.

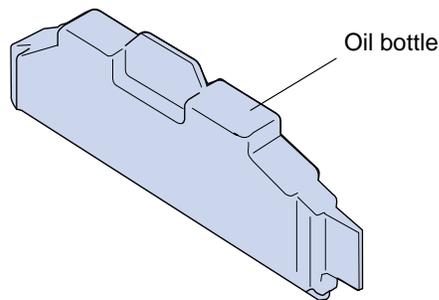
If you do not already have a replacement photo developer cartridge available, order one at this time. For more information on ordering a photo developer cartridge, see [Ordering supplies](#).

Press **Go** to clear the message. The **supplies** message appears on the second line of the operator panel to remind you that supplies need attention.

The printer continues to show **Photo Dev Cart Exhausted** in the Supplies Menu until you replace the photo developer cartridge.

When you need to install a new photo developer cartridge, see [Replacing the photo developer cartridge](#) or the installation instructions that come with the new cartridge.

## Oil bottle



The oil bottle provides oil that lubricates the fuser. The approximate yield of the oil bottle is 12,000 pages. The average yield is determined by the number of printing of A4 or letter size pages printed.

Your printer monitors the life of your oil bottle. When the oil bottle becomes low, **Oil Bottle Low** appears. It is time for you to replace your oil bottle.

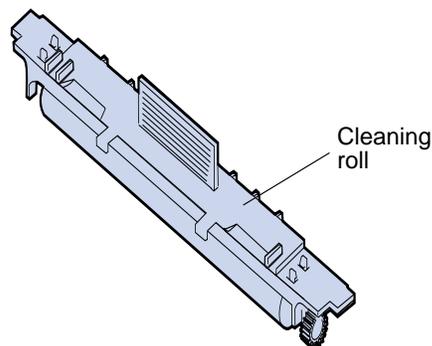
If you do not already have a replacement oil bottle available, order one at this time. For more information on ordering an oil bottle, see [Ordering supplies](#).

Press **Go** to clear the message. The **Supplies** message appears on the second line of the operator panel to remind you that supplies need attention.

The printer continues to show **Oil Bottle Low** in the Supplies Menu until you replace the oil bottle or until the oil bottle is empty.

When the oil bottle is empty, the printer shows **81 Oil Bottle Empty or Missing** and stops printing. You must replace the oil bottle to continue printing. When you need to install a new oil bottle, see [Replacing the oil bottle](#) or the installation instructions that come with the new oil bottle.

## Cleaning roll



The cleaning roll removes excess toner and other contaminants from the fuser. It is located under the top door. The approximate yield of the cleaning roll is 12,000 pages. The actual yield depends on the toner coverage on each printed page.

Your printer monitors the life of your cleaning roll. When the cleaning roll is nearing the end of its life, the printer shows **85 Fuser Cleaner Life Warning**. It is time for you to replace your cleaning roll.

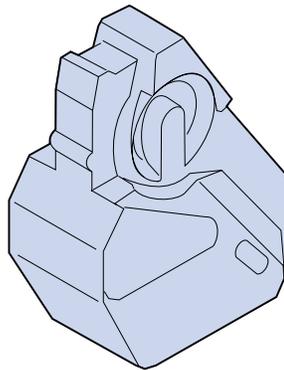
If you do not already have a replacement cleaning roll available, order one at this time. For more information on ordering a cleaning roll, see [Ordering supplies](#).

Press **Go** to clear the message. The **Supplies** message appears on the second line of the operator panel to remind you that supplies need attention.

The printer continues to show **Fuser Cleaner Life Warning** in the Supplies Menu until you replace the cleaning roll or until the cleaning roll is exhausted.

When the life of the cleaning roll is exhausted, the printer displays **85 Fuser Cleaner Exhausted** and stops printing. You must replace the cleaning roll to continue printing. When you need to install a new cleaning roll, see [Replacing the cleaning roll](#) or the installation instructions that come with the new cleaning roll.

## **Waste toner bottle**



The toner used for printing is a fine powder. When creating an image, some excess toner remains on the photo developer after the image is placed on the transfer drum. A wiper and collector assembly remove the excess toner and place it in the waste toner bottle so it cannot contaminate your next image.

The approximate yield of the waste toner bottle is 12,000 images. The actual yield varies depending on factors such as the printer settings you choose, the toner coverage on each printed page, and the size of the paper you use.

Your printer monitors the life of your waste toner bottle. When the waste toner bottle is nearing full, the printer shows **83 Waste Toner Bottle Near Full**. It is time for you to replace or empty your waste toner bottle.

If you do not already have a replacement waste toner bottle available, order one at this time. For more information on ordering a waste toner bottle, see [Ordering supplies](#).

Press **Go** to clear the message. The **supplies** message appears on the second line of the operator panel to remind you that supplies need attention.

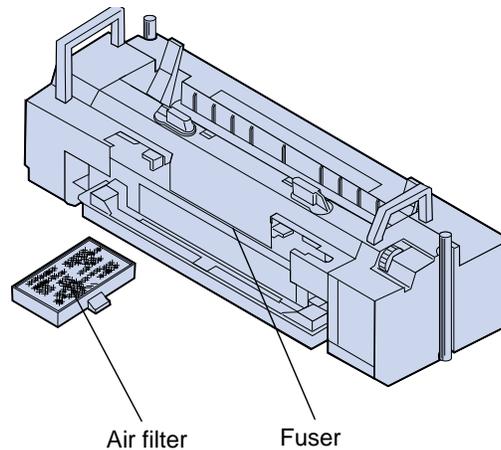
The printer continues to show **Waste Toner Bottle Near Full** in the Supplies Menu until you replace or empty the waste toner bottle or until it is full.

When the waste toner bottle becomes full, the printer stops printing and **83 Waste Bottle Full or Missing** appears. You must replace the waste toner bottle to clear this message and continue printing.

Whenever you install a new waste toner bottle, make sure you clean the developer charger on the photo developer. The developer charger prepares the photo developer to accept the toner that makes up your printed image. To prevent streaks and voids and to ensure print quality, the developer charger needs to be cleaned periodically. We recommend cleaning the developer charger when you replace the waste toner bottle. For more information, see [Cleaning the developer charger](#).

When you need to install a new waste toner bottle, see [Replacing the waste toner bottle](#) or the installation instructions that come with the new waste toner bottle.

### ***Fuser and air filter kit***



The fuser uses heat and pressure to permanently bond the toner to the print media. The air filter removes dust and other contaminants from the printer. You receive a new filter each time you order the fuser kit. The approximate yield of the fuser and air filter is 40,000 pages.

Your printer monitors the life of your fuser. When the fuser reaches the end of its life, the printer shows **87 Fuser Exhausted**. It is time for you to replace your fuser and air filter.

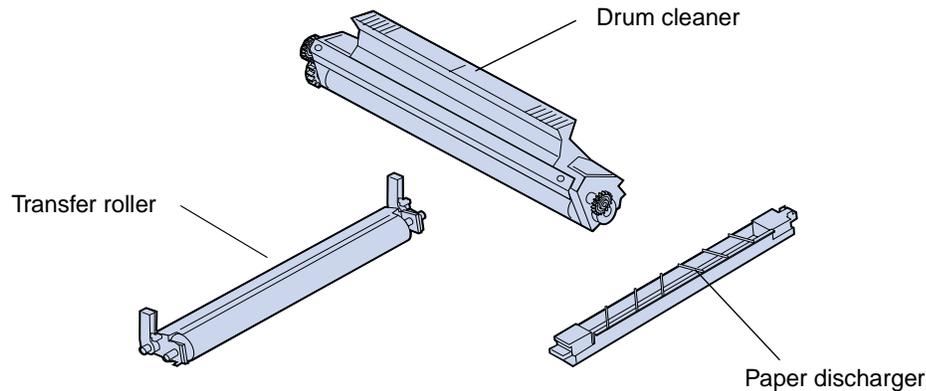
If you do not already have a replacement fuser and air filter kit available, order one at this time. For more information on ordering a fuser and air filter kit, see [Ordering supplies](#).

Press **Go** to clear the message. The **Supplies** message appears on the second line of the operator panel to remind you that supplies need attention.

The printer continues to display the **Fuser Exhausted** in the Supplies Menu until you replace the fuser and air filter.

When the fuser is exhausted you may experience poor print quality and an increase in paper jams. When you need to install a new fuser and air filter, see [Replacing the fuser kit](#) or the installation instructions that come with the new fuser and air filter.

## Maintenance kit



The maintenance kit consists of three components; the transfer roller, paper discharger and drum cleaner. These components work together to transfer your print image to the media you have selected.

The paper discharger reduces the occurrence of paper jams at the transfer drum. The transfer roller pulls the image from the transfer drum onto the print media. The drum cleaner removes excess toner and other contaminants from the transfer drum after the print image is transferred to the print media. All three components have an effect on print quality. The approximate yield of the maintenance kit is 120,000 pages.

Your printer monitors the life of your maintenance kit. When the maintenance kit reaches the end of its life, the printer shows **80 Scheduled Maintenance**. It is time for you to replace your maintenance kit.

If you do not already have a replacement maintenance kit available, order one at this time. For more information on ordering a maintenance kit, see **Ordering supplies**.

Press **Go** to clear the message. The **Supplies** message appears on the second line of the operator panel to remind you that supplies need attention.

The printer continues to show **Scheduled Maintenance** in the Supplies Menu until you replace the maintenance kit.

When the maintenance kit is exhausted, you may experience poor print quality. When you need to install a new maintenance kit, see **Replacing the maintenance kit** or the installation instructions that come with the new maintenance kit.

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## Ordering supplies

### Routine maintenance supplies

Part number	Item	Approximate yield
15W0903	Black toner cartridge	12,000 pages (5% toner coverage)
15W0901	Magenta toner cartridge	7,200 pages (5% toner coverage)
15W0900	Cyan toner cartridge	
15W0902	Yellow toner cartridge	
15W0905	Fuser cleaning roll	12,000 pages (5% monochrome coverage) (20% color coverage)
15W0906	Oil bottle	12,000 pages
15W0907	Waste toner bottle	12,000 images
15W0904	Photo developer cartridge	40,000 images
15W0908	Fuser kit (low voltage; consists of fuser and air filter)	40,000 pages
15W0909	Fuser kit (high voltage; consists of fuser and air filter)	40,000 pages
12G7220	Maintenance kit (consists; of transfer roller, paper discharger and drum cleaner)	120,000 pages

### Other supplies

Part number	Item
12A5590	Transparencies (letter size)
12A5591	Transparencies (A4 size)

For more information about the supplies available to you from Lexmark, you can visit Lexmark on the World Wide Web at [www.lexmark.com](http://www.lexmark.com). You can also get the latest information on the location and telephone numbers for Authorized Supplies Dealers in your area.

In the U.S., you can call 1-800-438-2468 to order supplies or to request information about Lexmark Authorized Supplies Dealers in your area. The following table lists appropriate phone numbers for other countries. In countries not listed, contact a representative at the place where you bought your printer.

### Contacts for supplies information

Region	Country	Phone number
North America	Canada	(888) 453-9226
	U.S.	(800) 438-2468

## Contacts for supplies information (continued)

Region	Country	Phone number
Latin America	Headquarters	305 447 2200
	Argentina	54 1 319 8900
	Brazil	55 11 820 5733
	Mexico	52 5 254 2435
Asia / Pacific	Australia	1300 362 192
	Hong Kong	852 825 6168
	Japan	81 3 3523 7077
	Singapore	65 227 3488
	Taiwan	886 2 713 1000
Europe	Austria	43 1 797 32 0
	Belgium	32 2 716 74 11
	Denmark	45 45 82 55 11
	Finland	358 0 452 34 00
	France	33 1 46 67 40 00
	Germany	49 6074 488 0
	Italy	39 2 28 103 1
	Netherlands	31 20 56 32 800
	Norway	47 22 76 35 00
	Spain	34 1 436 0048
	Sweden	46 8 705 79 00
	Switzerland	41 1 722 88 11
	United Kingdom	44 1628 481 500

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## Storing supplies

Choose a cool, clean storage area for your printer supplies. Store toner cartridges and other supplies in their original packaging until you are ready to install them.

Do not expose printer supplies to:

- Direct sunlight
- Temperatures above 35°C (95°F)
- High humidity (above 80%)
- Salty air
- Corrosive gases
- Heavy dust

# 19

## Replacing supply items

### Replacing supplies

For information about replacing an individual supply item, click the headings below:

[Toner cartridges](#)

[Photo developer cartridge](#)

[Oil bottle](#)

[Fuser cleaner](#)

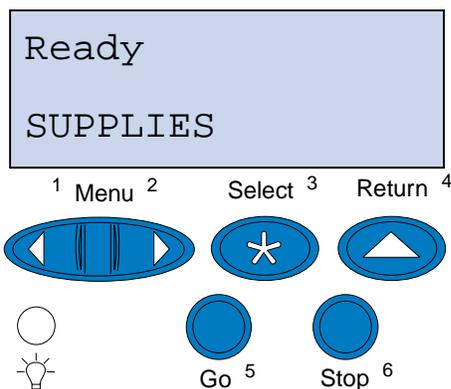
[Waste toner bottle](#)

[Fuser and air filter kit](#)

[Maintenance kit](#)

The printer calculates and stores information on the number of images that have been printed. When a count for a supply nears the end of the supplies life, the **supplies** status message appears on the second line of the display to remind you there are supplies that need attention.

Open the Supplies Menu to view the supplies that need to be replaced. Replacement of these parts ensures peak printer performance and prevents print quality and paper feed problems resulting from worn parts.



The printer counter keeps track of your toner cartridges, photo developer cartridge, oil bottle, fuser cleaner, fuser and air filter, and the maintenance kit. It posts a **Low**, **Empty**, **Life Warning**, **Near Full**, **Full**, or an **Exhausted** message on the display when one of these supplies reaches an end of life condition. If you do not have the appropriate supply item on hand, order one when the **Low**, **Empty**, **Life Warning**, or **Exhausted** message appears.

Press **Go** to clear the message. The **supplies** status message appears on the second line of the display to remind you there are supplies that need attention. Press **Menu>** or **<Menu** to open the Supplies Menu and quickly determine the supply items that need to be replaced.

The printer continues to display the **Supplies** status message until you replace the required supply items.

After the **Supplies** status message appears, the printer continues to monitor the required supply items until the supply is exhausted. The printer displays **Low**, **Empty**, **Item Exhausted**, **Item Empty**, **Item Full** or **Missing**.

To prevent damage to your printer or its components, some supply items do not allow the printer to operate when the item is exhausted. When this occurs, *you must install the appropriate new supplies before you can continue printing.*

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## **Replacing toner cartridges**

Your printer monitors the toner level of your toner cartridges. When the toner in your toner cartridge is getting low, the printer displays **88 <color> Toner Low**. This message indicates it is time for you to replace one or more specified toner cartridges. Press **Go** to clear the attendance message.

The **supplies** status message appears on the second line of the display to remind you there are supplies that need attention. Open the Supplies Menu to see which toner cartridge is low.

The printer continues to display the **supplies** message until you replace the toner cartridge or until it is empty.

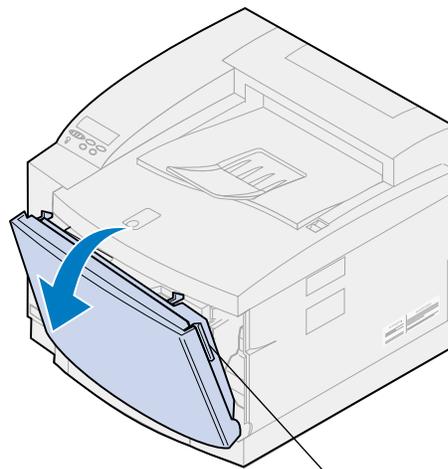
When the life of the toner cartridge has expired, the printer display alternates between the **88 <color> Toner Empty** and **Open Door Replace <color>** messages. You must replace the toner cartridge to continue printing.

If you install new toner cartridges before the **88 <color> Toner Empty** message appeared, you must manually reset the toner cartridge counter. For more information, see [Reset the toner cartridge counter](#).

Use the following steps or the instruction sheet supplied with the toner cartridge to replace toner cartridges.

- 1** Pull the front door release latch toward the front of the printer.

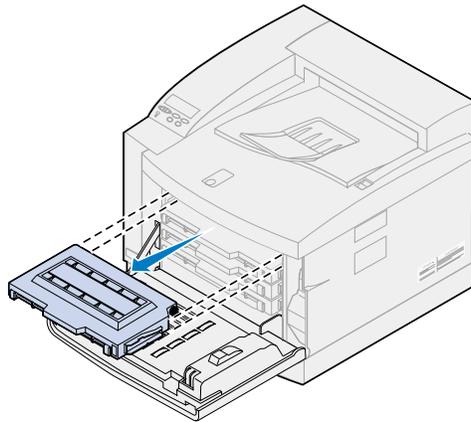
- 2 Open the front door.



Front door release latch

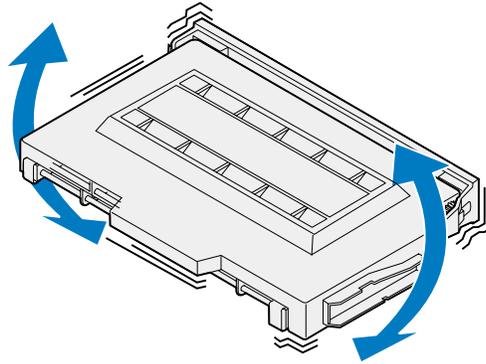
- 3 Remove the appropriate toner cartridge (black K, yellow Y, magenta M, cyan C) from the printer.

**Note:** The toner inside the toner cartridges can soil clothing. Do not clean clothing soiled with toner in hot water; this permanently adheres the toner to the clothing. Use cold water to remove toner that has soiled clothing.



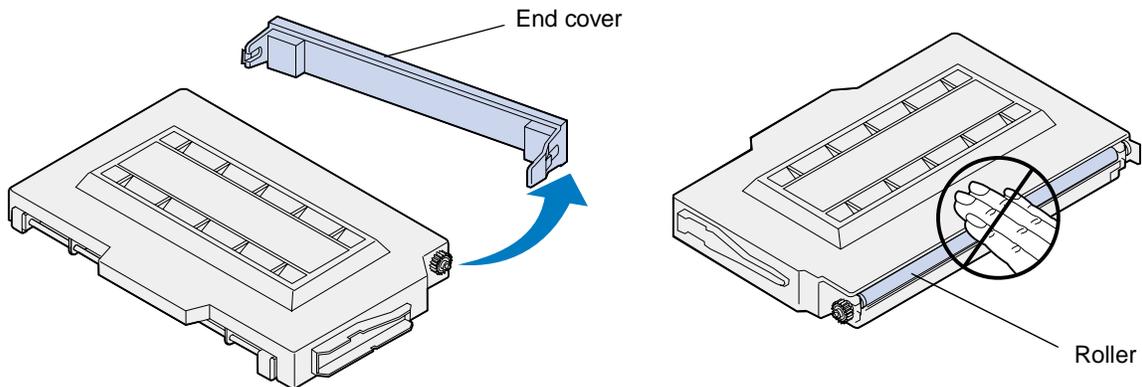
- 4 Remove the new toner cartridge from the packing material.

- 5 Gently shake the new toner cartridge to distribute the toner evenly.



- 6 Remove the end cover and any tape or other packing material from the toner cartridge.  
To remove the end cover, pull one of the ends away from the toner cartridge.

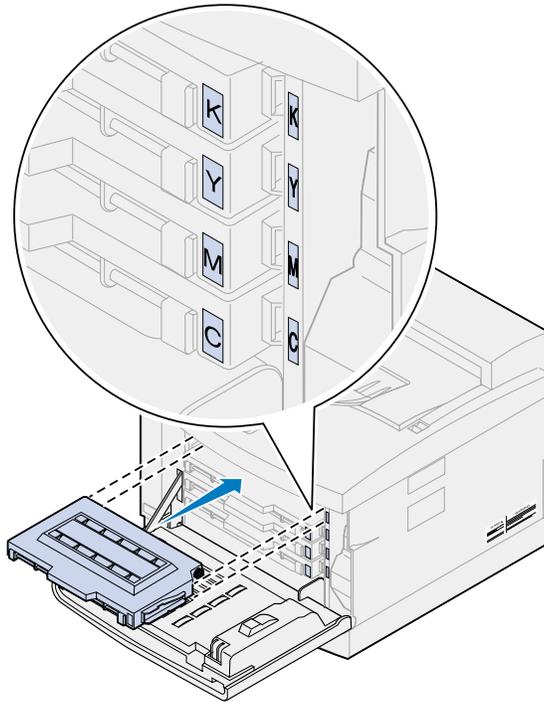
**WARNING:** Do not touch the cartridge roller, it may become scratched or damaged.



- 7 Align the toner cartridge with the appropriate slot in the front of the printer.

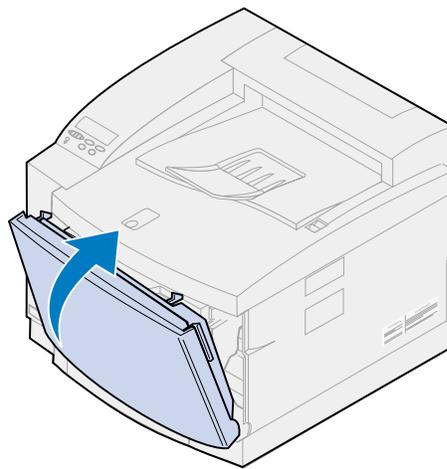
**Note:** Each cartridge is keyed to fit a specific location inside the printer. If the cartridge does not fit, make sure you are placing the cartridge in the correct location.

- 8** Slide the new toner cartridge into the printer.



- 9** Repeat steps 4 through 8 to install additional cartridges.

- 10** Close the front door.

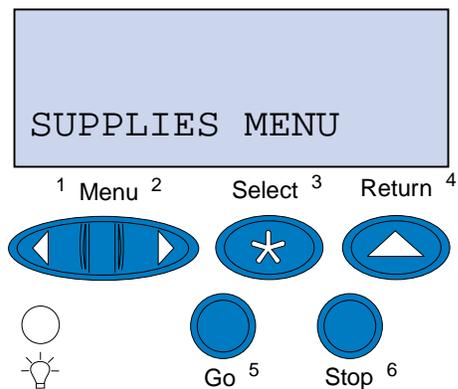


**11** Reset the toner cartridge counter.

If you replace toner cartridges before the **88 <color> Toner Low** message appeared, use the following steps to reset the counter for the new toner cartridge.

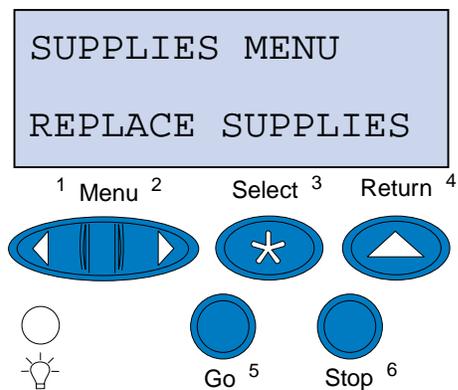
**Note:** If you do not reset the counter, you may receive a false **88 <color> Toner Low** message.

- a** Press **Menu>** or **<Menu** until **Supplies Menu** appears on the second line of the display.



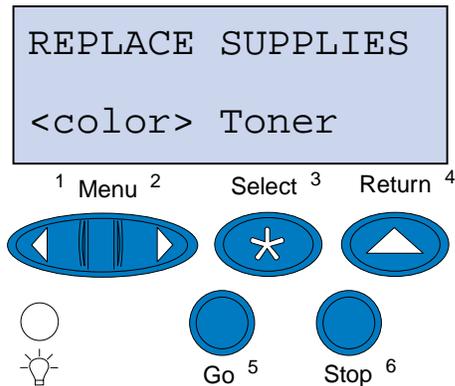
- b** Press **Select** to open the Supplies Menu.

- c** Press **Menu>** or **<Menu** until **Replace Supplies** appears on the second line of the display

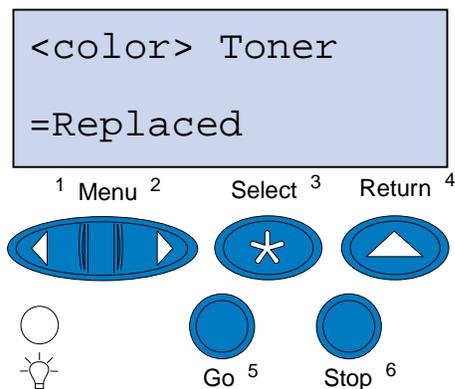


- d** Press **Select** to open Replace Supplies.

- e Press **Menu>** or **<Menu** until the appropriate **<color> Toner** appears on the second line of the display.



- f Press **Select** to open the **<color> Toner** menu item.
- g Press **Menu>** or **<Menu** until **=ReplacEd** appears on the display.



- h Press **Select** to reset the **<color> toner** cartridge counter to zero.
- i Press **Go**.

---

## ***Replacing the photo developer cartridge***

Your printer monitors the life of your photo developer cartridge. When the photo developer cartridge reaches the end of its life, the printer displays **Photo Dev Cart Exhausted**.

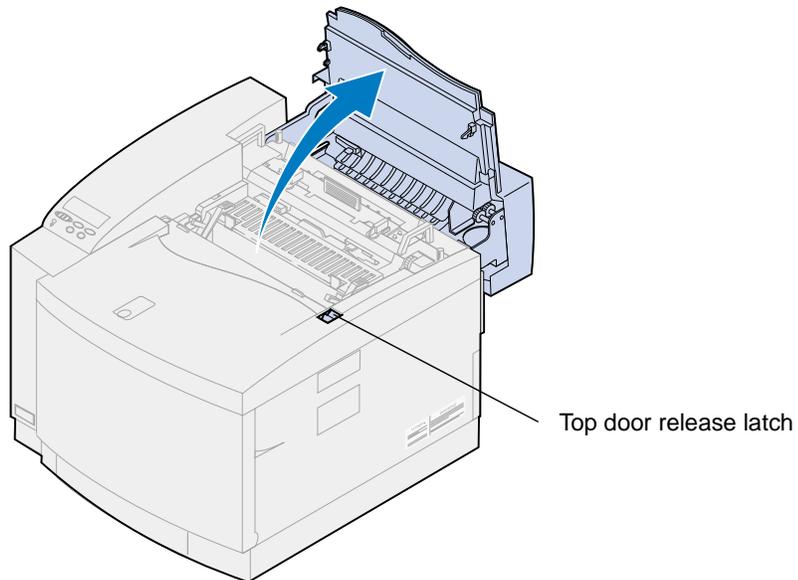
It is time for you to replace the photo developer cartridge. Press **Go** to clear the message. The **supplies** message appears on the second line of the display to remind you that supplies need attention.

If the top door is opened and closed, the message **Did you replace Photo Dev Cart?** appears. If a new photo developer cartridge has not been installed, press **Stop**. If a new photo developer cartridge has been installed, press **Go**.

If you install a new photo developer cartridge before the **Photo Dev Cart Exhausted** message appeared, you must manually reset the photo developer cartridge counter. For more information, see [reset the photo developer cartridge counter](#).

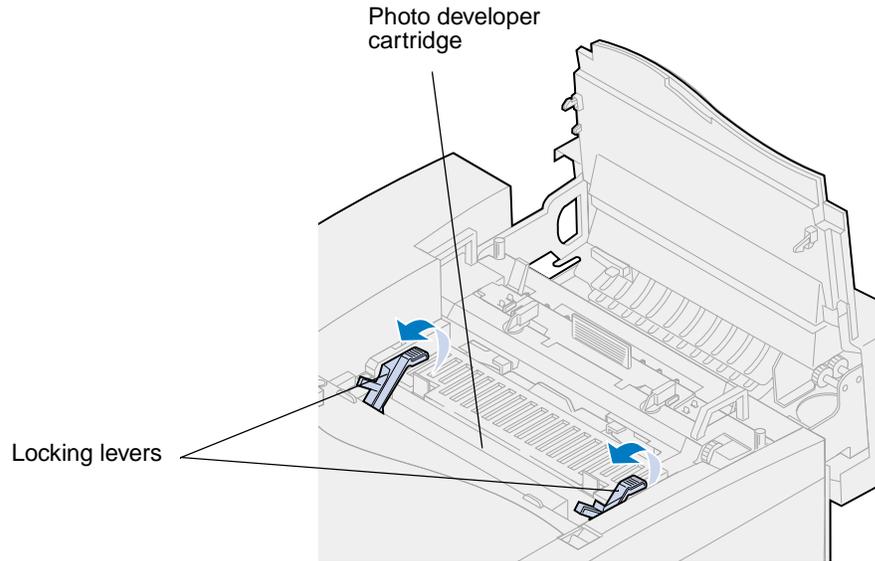
To replace the photo developer cartridge, use the following steps or the instruction sheet supplied with the photo developer cartridge:

- 1 Slide the top door release latch toward the front of the printer.
- 2 Lift the top door.

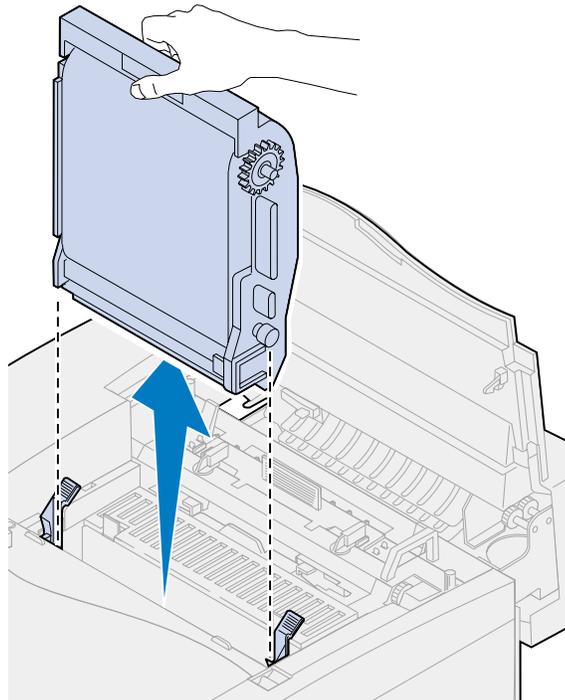


**CAUTION:** The internal components of the printer may be hot. Allow the printer to cool before touching any internal components.

- 3** Lift the left and right green photo developer cartridge locking levers.



- 4** Lift the old photo developer cartridge from the printer.



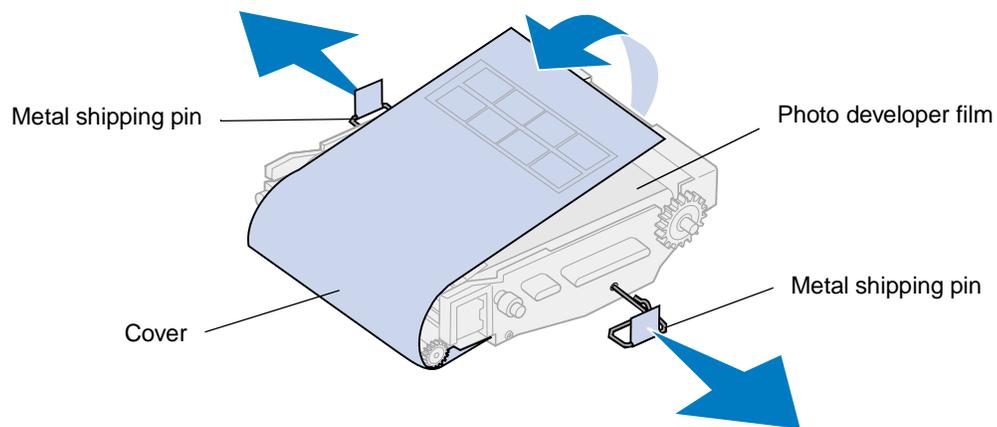
- 5 Remove the new photo developer cartridge from the packing material.

**WARNING:**

Do not touch or scratch the surface of the glossy green film in the photo developer cartridge. Touching the photo developer film damages it and reduces print quality.

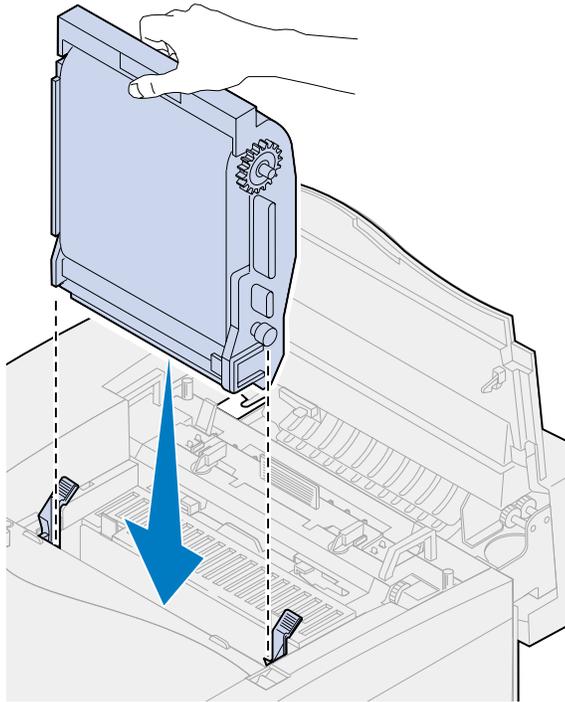
Do not leave the cartridge exposed to light for more than 5 minutes. If the cartridge will be exposed to light for longer than 5 minutes, place it in the box or cover it.

- 6 Pull the two metal shipping pins off of the photo developer cartridge and then discard them.  
The metal shipping pins have orange tape on them.
- 7 Remove and discard the cover and any packing material from the photo developer cartridge.

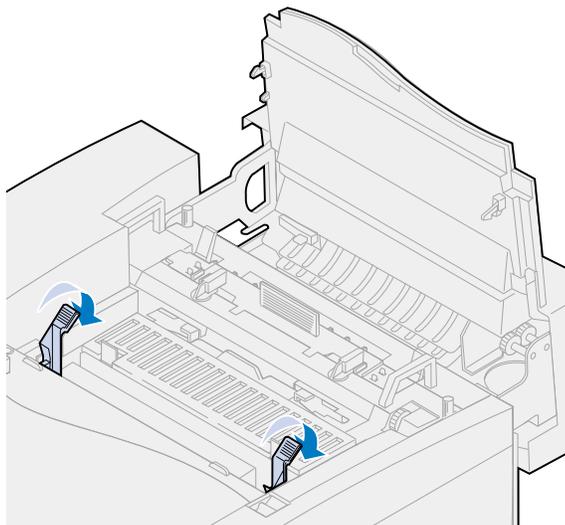


- 8 Align the photo developer cartridge with the slots in the green locking levers.

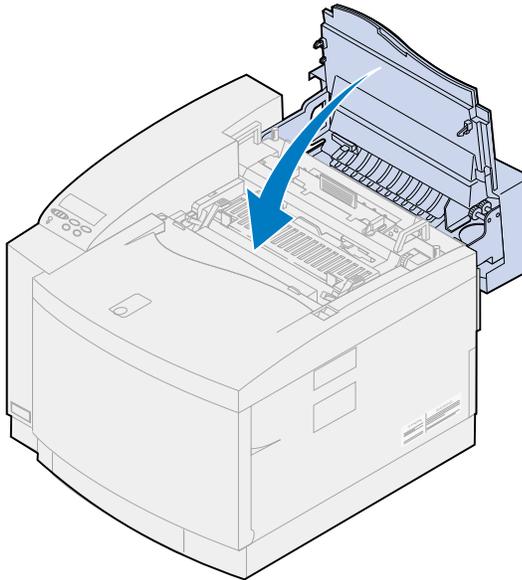
- 9** Lower the photo developer cartridge into the printer until it is firmly seated.



- 10** Rotate the green photo developer locking levers down.

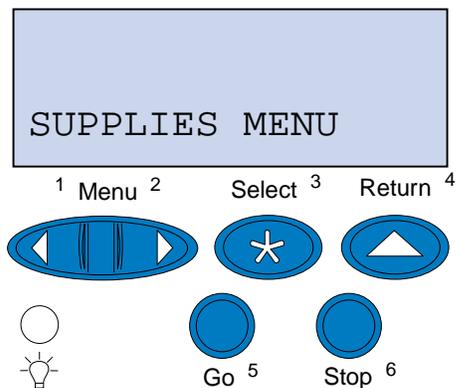


- 11 Close the top door.



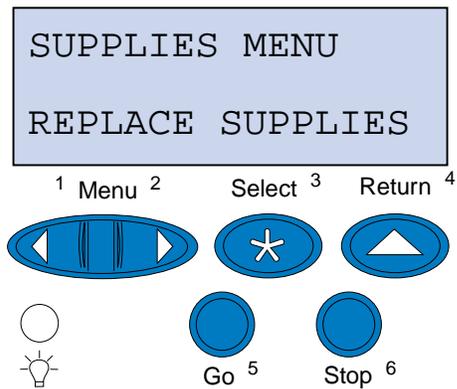
- 12 If the message **Did you replace Photo Dev Cart?** appears, press **Go**. Otherwise, use the following steps to reset the photo developer cartridge counter.

- a Press **Menu>** or **<Menu** until **Supplies Menu** appears on the second line of the display.

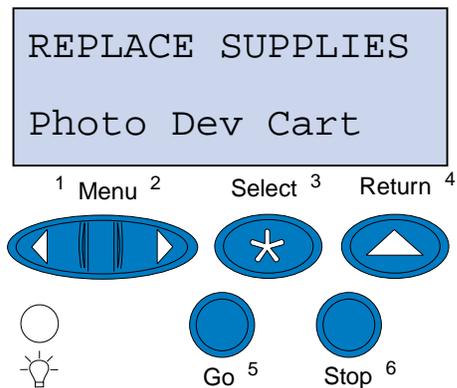


- b Press **Select** to open the Supplies Menu.

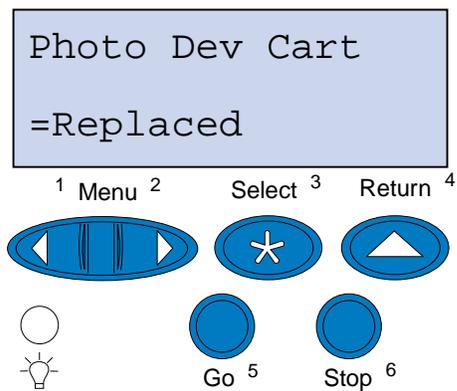
- c Press **Menu>** or **<Menu** until **Replac** **Suppl** appears on the second line of the display



- d Press **Select** to open Replace Supplies.
- e Press **Menu>** or **<Menu** until **Photo Dev Cart** appears on the second line of the display.



- f Press **Select** to open the Photo Dev Cart menu item.
- g Press **Menu>** or **<Menu** until **=Replac** appears on the display.



- h Press **Select** to reset the photo developer cartridge counter to zero.
- i Press **Go**.

---

## Replacing the oil bottle

Your printer monitors the life of your oil bottle. When the oil bottle becomes low, **81 Oil Bottle Low** appears. It is time for you to replace your oil bottle.

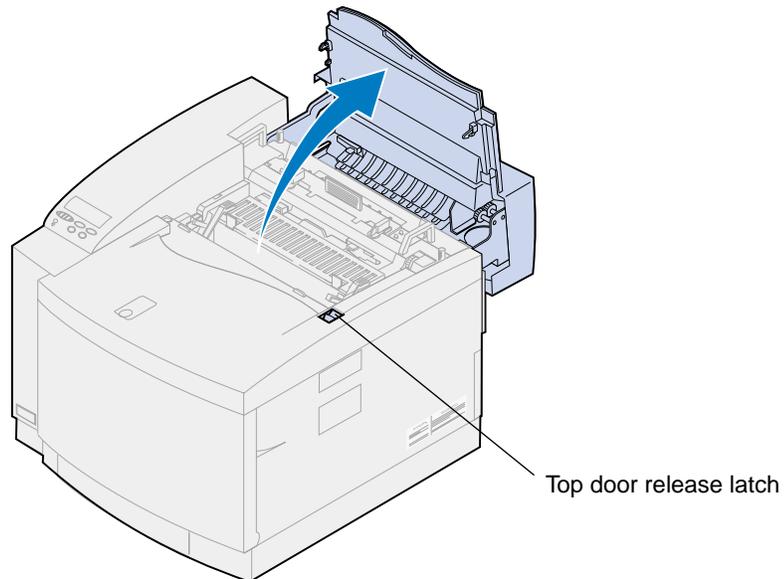
Press **Go** to clear the message. The **Supplies** message appears on the second line of the display to remind you that supplies need attention.

The printer continues to show **Oil Bottle Low** in the Supplies Menu until you replace the oil bottle or until the oil bottle is empty.

When the oil bottle is empty, the printer displays **81 Oil Bottle Empty or Missing** and stops printing. You must replace the oil bottle to continue printing.

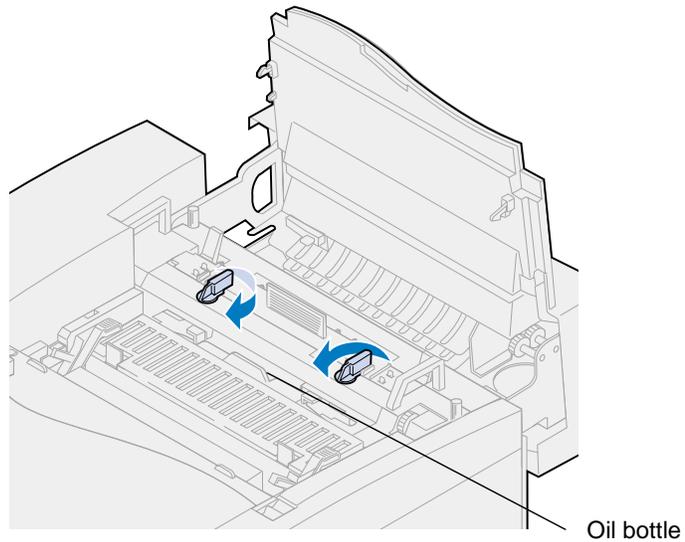
To replace the oil bottle, use the following steps or the instruction sheet supplied with the new oil bottle.

- 1 Slide the top door release latch toward the front of the printer.
- 2 Lift the top door.



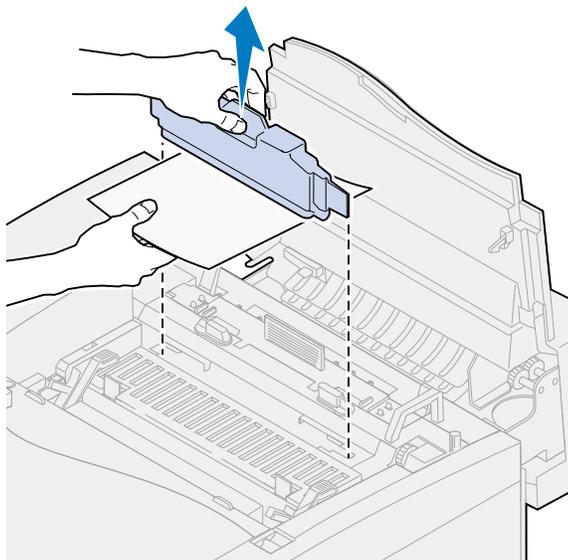
**CAUTION:** The internal components of the printer may be hot. Allow the printer to cool before touching any internal components.

- 3 Rotate the left and right green oil bottle locking levers to unlock the oil bottle.



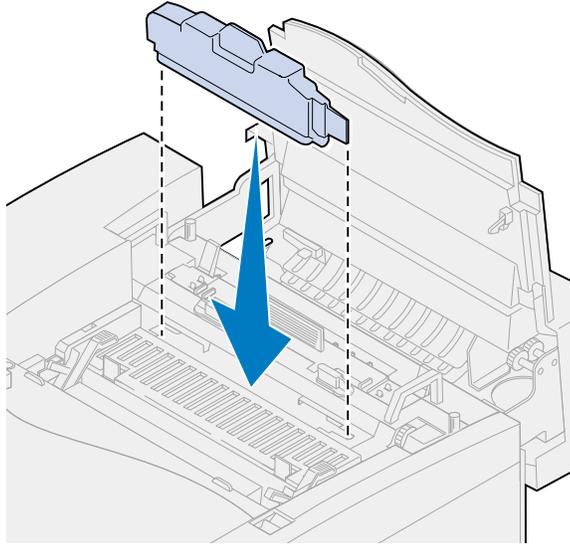
- 4 Lift the oil bottle from the printer.

**Note:** Oil may drop from the bottom of the oil bottle. You can place a piece of paper under the bottle after you lift it to prevent oil from dropping on the printer, floor, or your clothing.

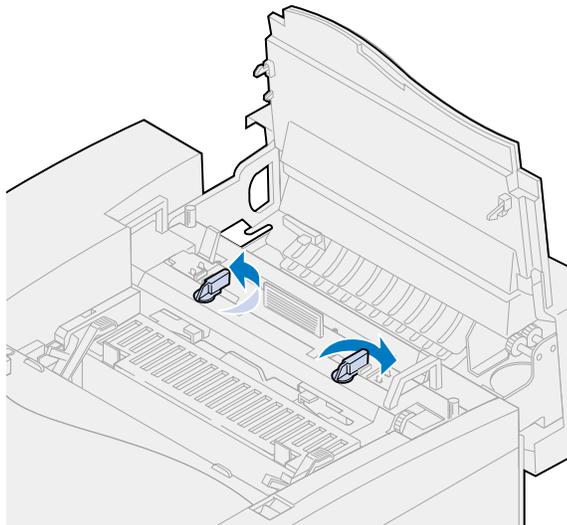


- 5 Remove the new oil bottle from its packaging material.
- 6 Align the oil bottle with the slots in the printer.

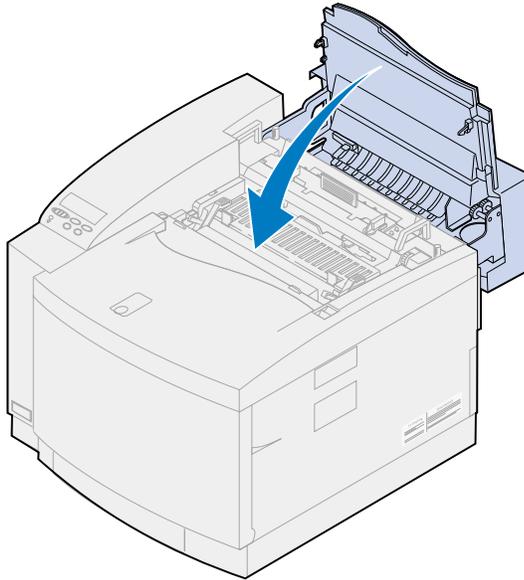
- 7** Lower the oil bottle into the printer.



- 8** Rotate the left and right oil bottle locking levers to lock the oil bottle in the printer.



- 9 Close the top door.



---

## ***Replacing the cleaning roll***

Your printer monitors the life of your cleaning roll. When the cleaning roll becomes low, **85 Fuser Cleaner Life Warning** appears. It is time for you to replace your cleaning roll.

Press **Go** to clear the message. The **Supplies** message appears on the second line of the display to remind you that supplies need attention.

The printer continues to show **Fuser Cleaner Life Warning** in the Supplies Menu until you replace the cleaning roll or until the cleaning roll is exhausted.

When the cleaning roll is exhausted, the printer displays **85 Fuser Cleaner Exhausted** and stops printing. You must replace the cleaning roll to continue printing.

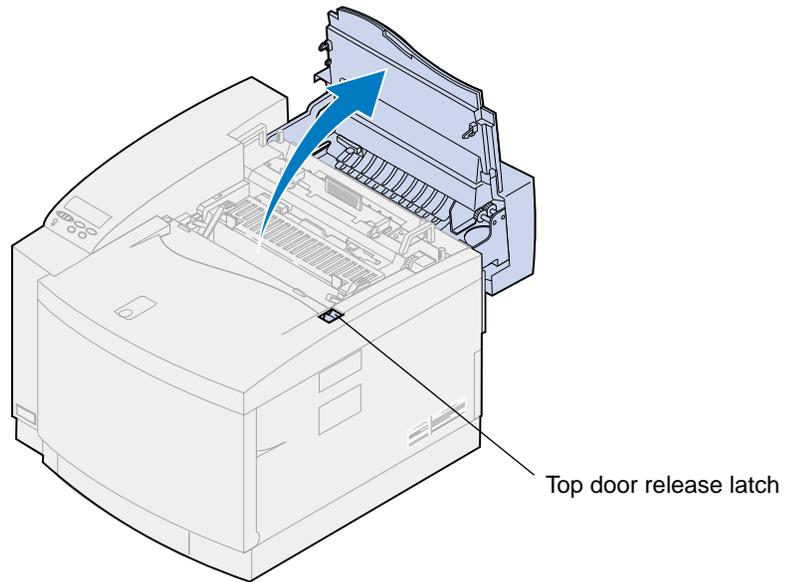
If the top door is opened and closed, the message **Did you replace Fuser Cleaner?** appears. If a new cleaner roll has not been installed press **Stop**. If a new cleaner roll has been installed, press **Go**.

If you install a new cleaning roll before the **85 Fuser Cleaner Exhausted** message appears, you must manually reset the cleaning roll counter. For more information, see [reset the cleaning roll counter](#).

To replace the cleaning roll, use the following steps or the instruction sheet supplied with the new cleaning roll.

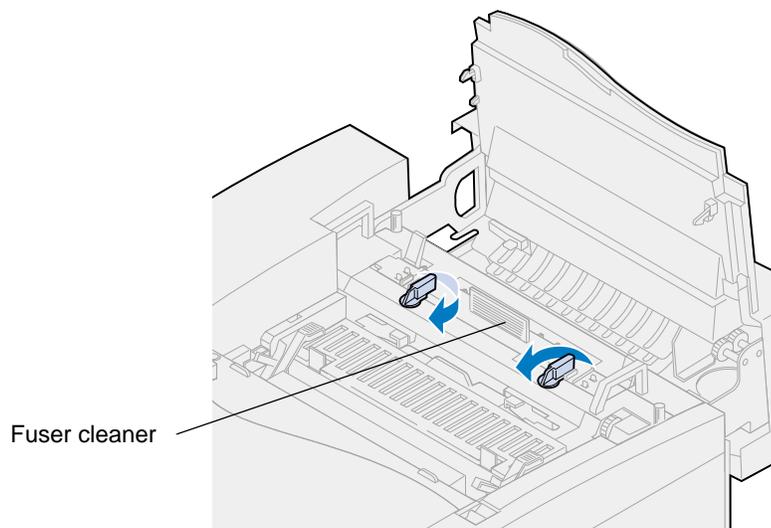
- 1 Slide the top door release latch toward the front of the printer.

- 2 Lift the top door.

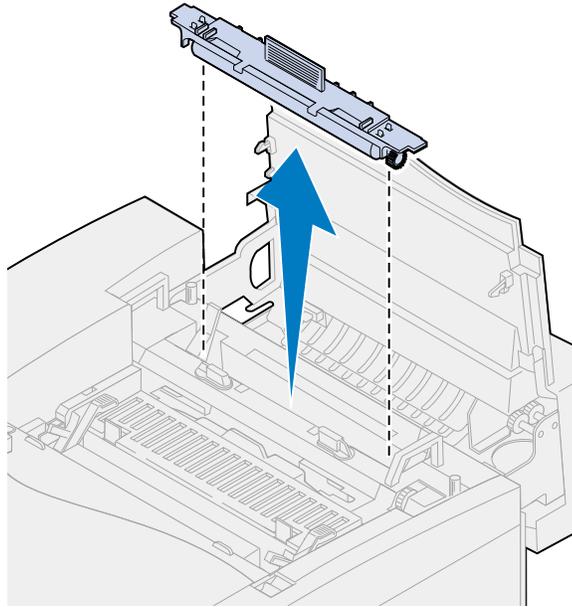


**CAUTION:** The internal components of the printer may be hot. Allow the printer to cool before touching any internal components.

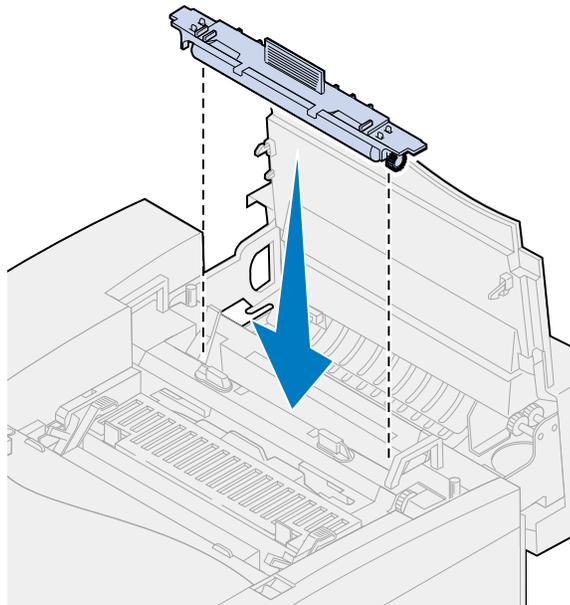
- 3 Rotate the left and right green oil bottle locking levers to unlock the cleaning roll.



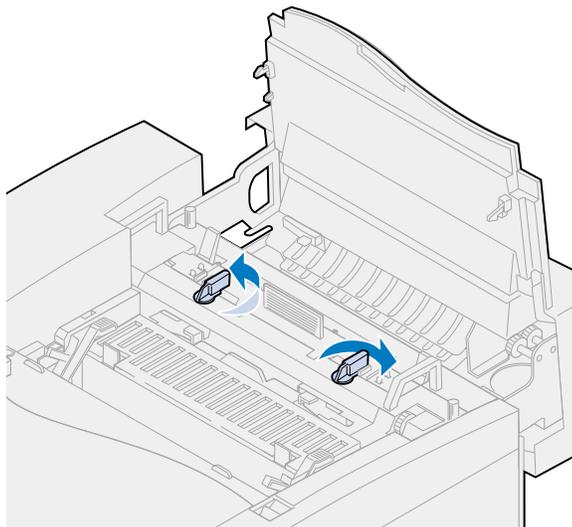
- 4 Lift the cleaning roll from the printer.



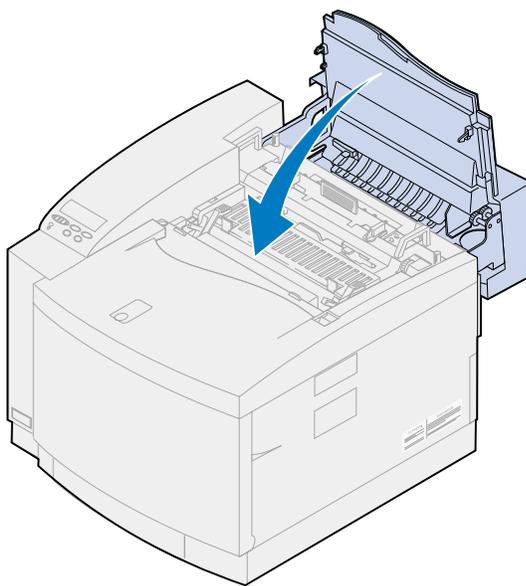
- 5 Remove the new cleaning roll from its packaging material and remove any packing material or tape from the cleaning roll.
- 6 Align the new cleaning roll with the slot in the printer.
- 7 Lower the cleaning roll into the printer.



- 8** Rotate the left and right oil bottle locking levers to lock the cleaning roll in the printer.



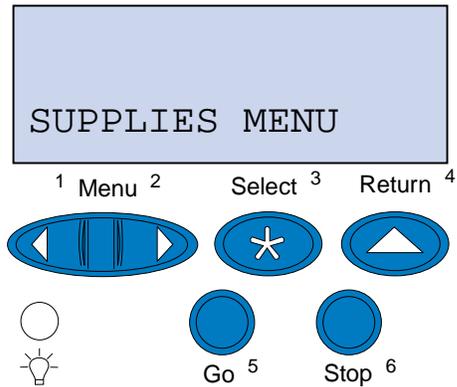
- 9** Close the top door.



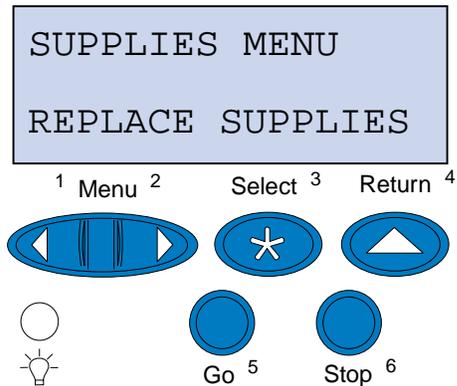
- 10** If the message **Did you replace Fuser Cleaner?** appears, press **Go**. Otherwise, use the following steps to reset the cleaning roll counter.

**Note:** Depending on the printer warm up requirements, it could take time for this message to appear.

- a** Press **Menu>** or **<Menu** until **Supplies Menu** appears on the second line of the display.

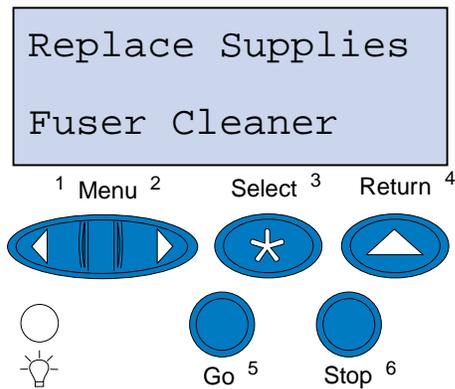


- b** Press **Select** to open the Supplies Menu.
- c** Press **Menu>** or **<Menu** until **Replace Supplies** appears on the second line of the display.

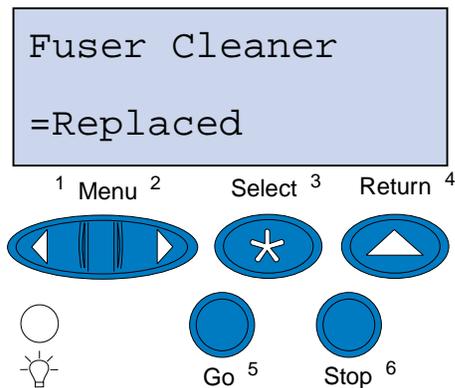


- d** Press **Select** to open Replace Supplies.

- e Press **Menu>** or **<Menu** until **Fuser Cleaner** appears on the second line of the display.



- f Press **Select** to open the Fuser Cleaner menu item.
- g Press **Menu>** or **<Menu** until **=ReplacEd** appears on the display.



- h Press **Select** to reset the fuser cleaner counter to zero.
- i Press **Go**.

---

## ***Replacing the waste toner bottle***

Your printer monitors the life of your waste toner bottle. When the waste toner bottle is nearing the end of its life, the printer displays **83 Waste Toner Bottle Near Full**.

It is time for you to replace the waste toner bottle. Press **Go** to clear the message. The **Supplies** message appears on the second line of the display to remind you that supplies need attention.

The printer continues to show **Waste Toner Bottle Near Full** in the Supplies Menu until you replace the waste toner bottle or until the waste toner bottle is full.

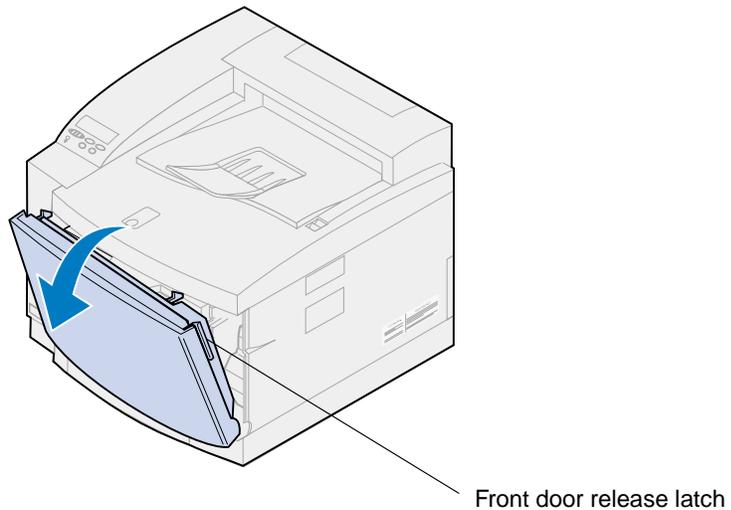
When the waste toner bottle is full, the printer displays **83 Waste Bottle Full or Missing** and stops printing. You must replace the waste toner bottle to continue printing.

To ensure print quality, your photo developer cartridge has a developer charger. The developer charger prepares the photo developer to accept the toner that makes up your printed image. The developer

charger needs to be cleaned periodically to prevent streaks and voids. We recommend cleaning the developer charger when you replace the waste toner bottle. For more information, see [Cleaning the developer charger](#).

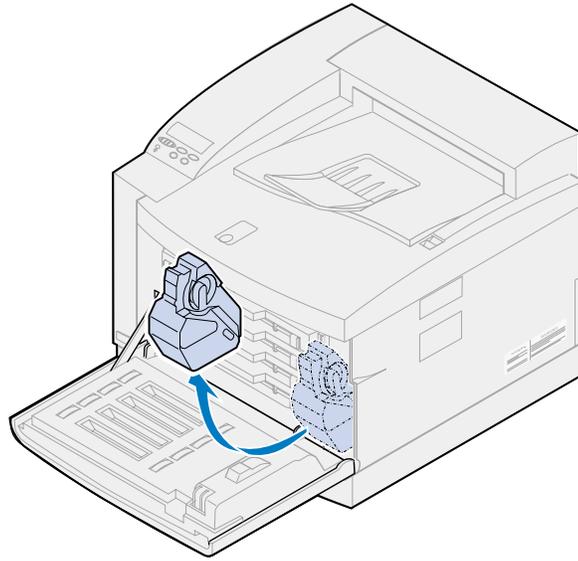
To replace the waste toner bottle, use the following steps or the instruction sheet supplied with the new waste toner bottle.

- 1 Pull the front door release latch toward the front of the printer.
- 2 Open the front door.

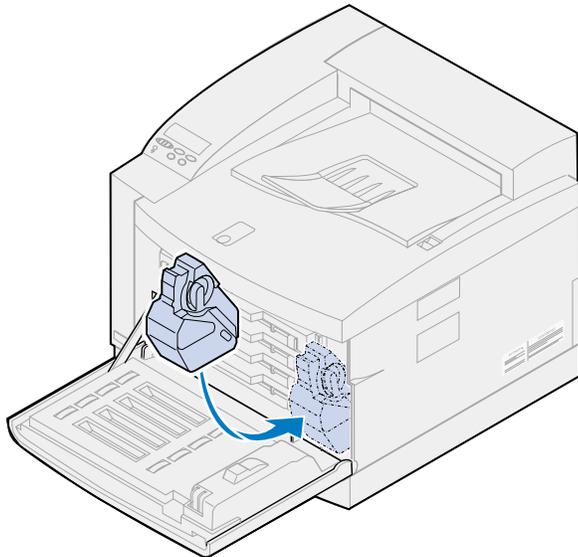


**Note:** The toner inside the waste toner bottle can soil clothing. Do not clean clothing soiled with toner in hot water; this permanently adheres the toner to the clothing. Use cold water to remove toner that has soiled clothing.

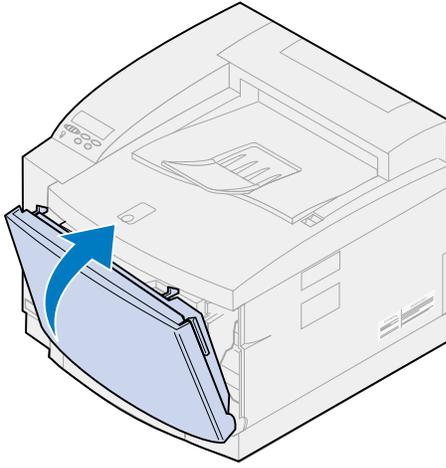
- 3 Carefully tilt the top of the waste toner bottle toward the front of the printer and lift it out.



- 4 Place the full waste toner bottle in the plastic bag provided with the new waste toner bottle.
- 5 Seal the plastic bag and discard the waste toner bottle.
- 6 Remove the new waste toner bottle from its packing material.
- 7 Place the bottom of the waste toner bottle in the printer.
- 8 Align the opening in the new waste toner bottle with the spout inside the printer.



- 9 Close the front door.

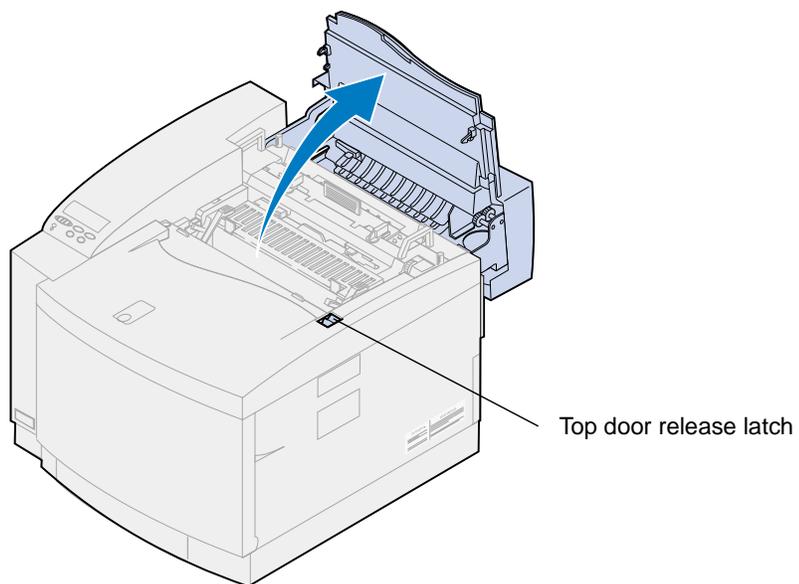


**Note:** The developer charger needs to be cleaned to prevent streaks and voids.

- 10 Use the following instructions to remove and clean the discharger.

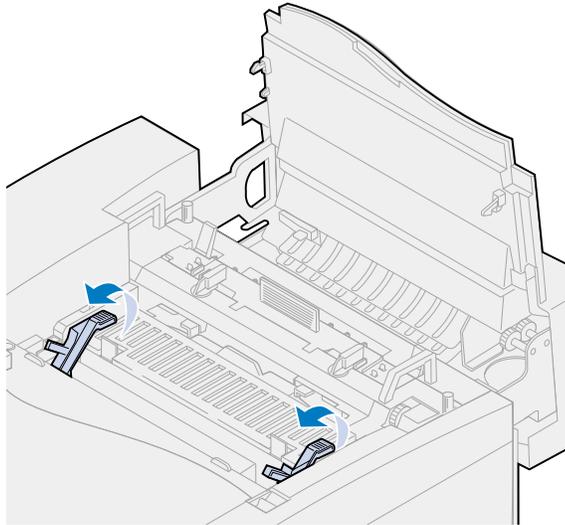
### ***Cleaning the developer charger***

- 1 Slide the top door release latch toward the front of the printer.
- 2 Lift the top door.

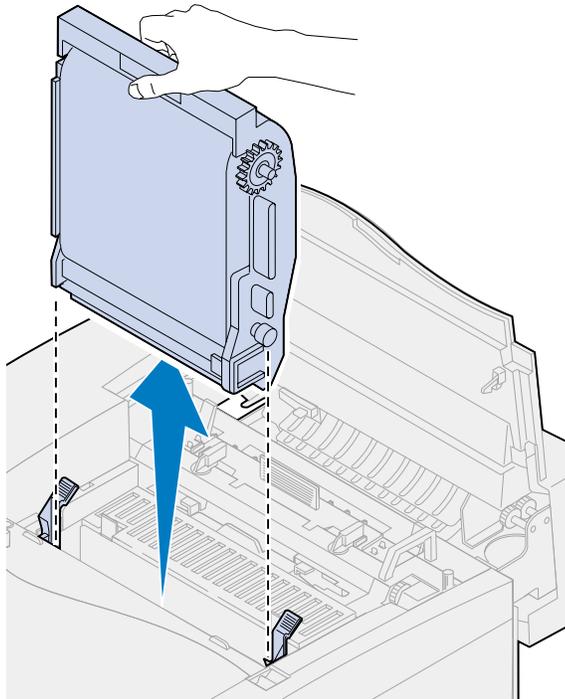


**CAUTION:** The internal components of the printer may be hot. Allow the printer to cool before touching any internal components.

- 3 Lift the left and right green photo developer cartridge locking levers.

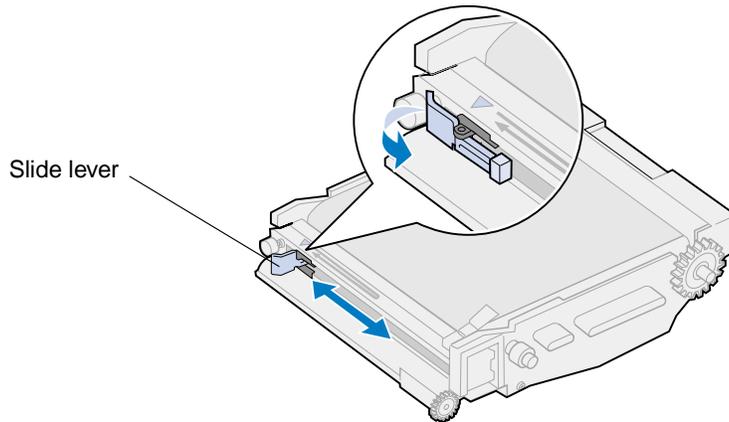


- 4 Lift the old photo developer cartridge from the printer.

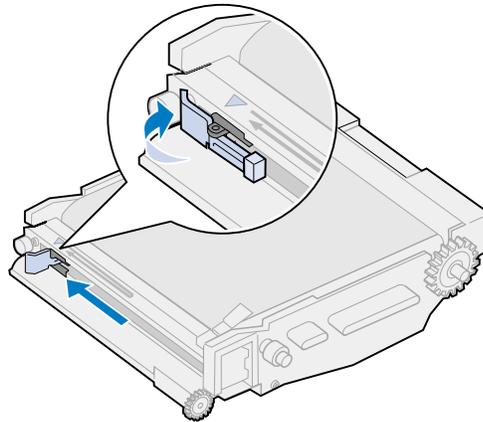


**WARNING:** Do not touch the glossy green film in the photo developer cartridge. Touching the photo developer film damages it and reduces print quality.

- 5 Place the photo developer cartridge on a flat level surface.
- 6 Lift the green slide lever.  
The pad on the end of the slide should make contact with the discharge wire.
- 7 Move the green slide completely across the photo developer cartridge and back again five times.

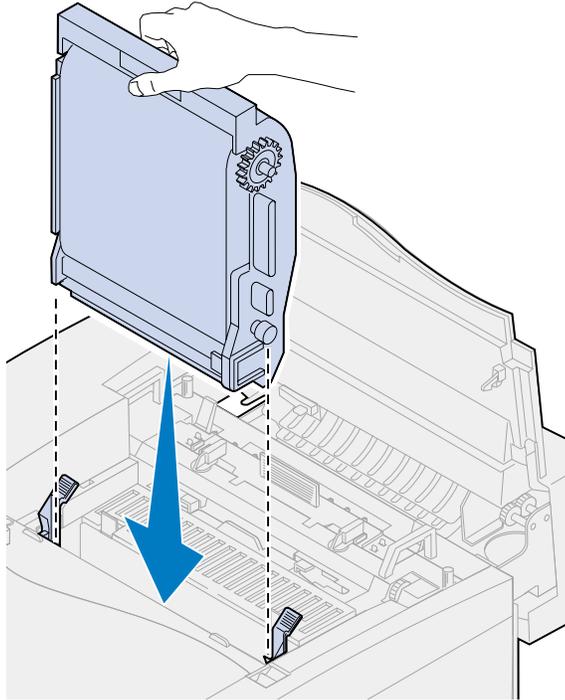


- 8 Move the green slide to the left side of the photo developer cartridge.
- 9 Place the green slide lever against the photo developer cartridge.

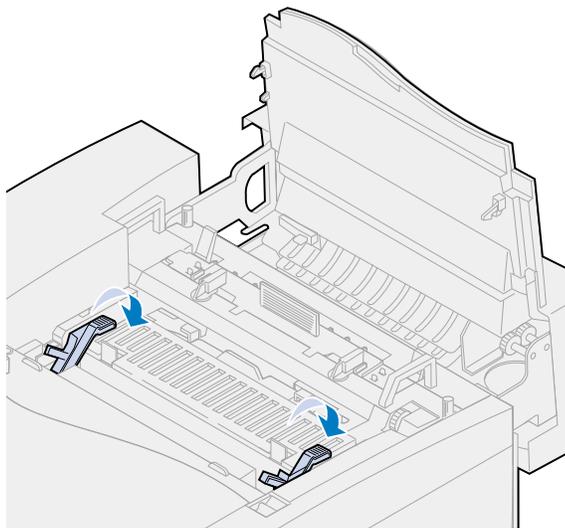


- 10 Align the photo developer cartridge with the slots in the green locking levers.

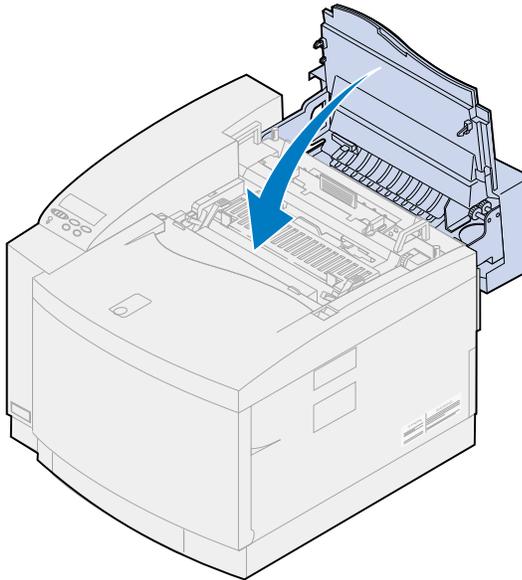
- 11** Lower the photo developer cartridge into the printer until it is firmly seated.



- 12** Rotate the green photo developer locking levers down.



- 13 Close the top door.



---

## **Replacing the fuser and air filter kit**

Your printer monitors the life of your fuser. When the fuser reaches the end of its life, the printer displays **87 Fuser Exhausted**.

It is time for you to replace the fuser kit. The fuser kit consists of a fuser and air filter. For best print quality, make sure you replace the air filter when you replace your fuser. The air filter removes excess dust and other contaminants from the printer.

Press **Go** to clear the message. The **supplies** message appears on the second line of the display to remind you that supplies need attention.

If the top door is opened and closed, the message **Did you replace Fuser?** appears. If a new fuser and air filter have not been installed, press **Stop**. If a new fuser and air filter have been installed, press **Go**.

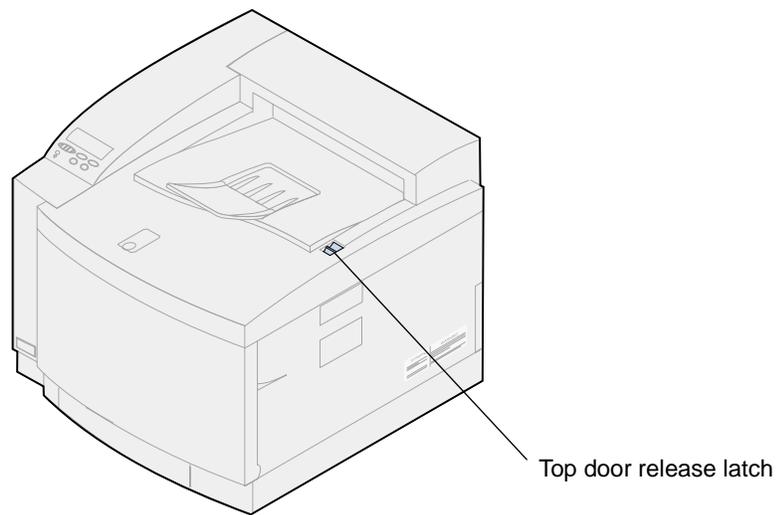
If you install a new fuser and air filter before the **87 Fuser Exhausted** message appeared, you must manually reset the fuser counter. For more information, see [reset the fuser counter](#).

To replace the fuser and air filter kit components, use the following steps or the instruction sheet supplied with the fuser and air filter kit:

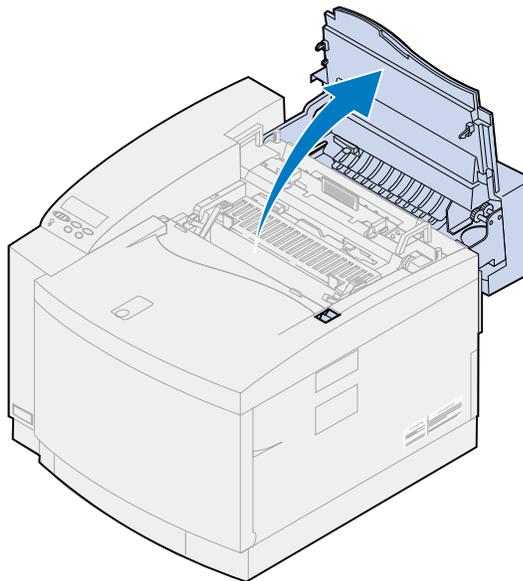
**WARNING:** It takes approximately 30 minutes for the oil to reach the fuser after oil bottle installation. Make sure the oil bottle has been installed for at least 30 minutes before printing.

## ***Remove the old fuser***

- 1** Slide the top door release latch toward the front of the printer.

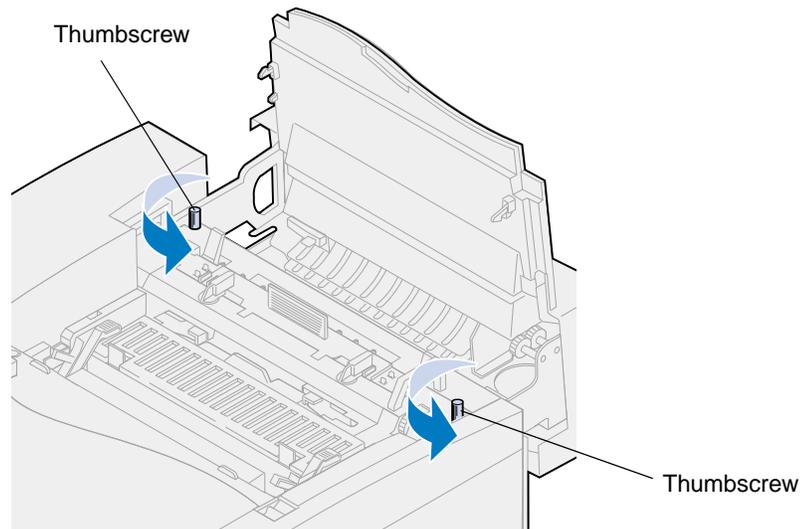


- 2** Lift the top door.



**CAUTION:** The internal components of the printer may be hot. Allow the printer to cool before touching any internal components.

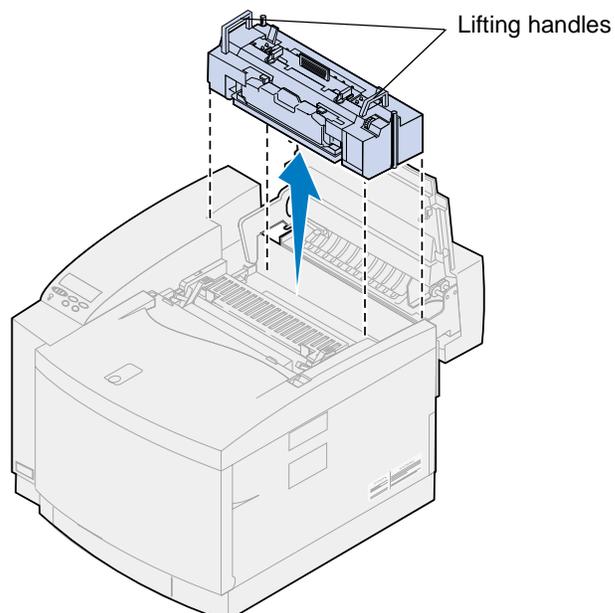
- 3 Loosen the thumbscrews on each side of the fuser.



**WARNING:** Do not tilt the fuser when removing. The fuser contains oil that may soil clothing and damage the printer components.

- 4 Use the lifting handles to lift the fuser from the printer.

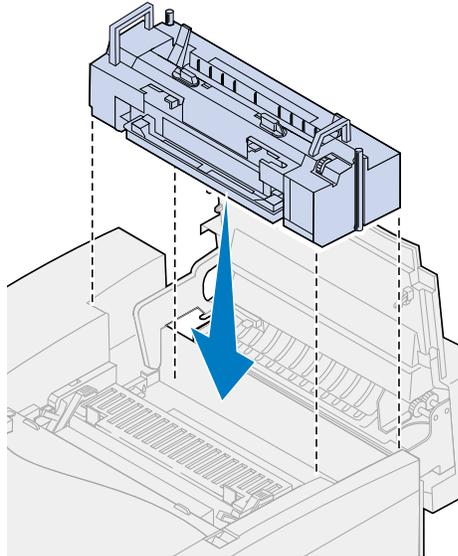
**Note:** Do not discard the old fuser at this time. The oil bottle and cleaning roll will be installed in the new fuser.



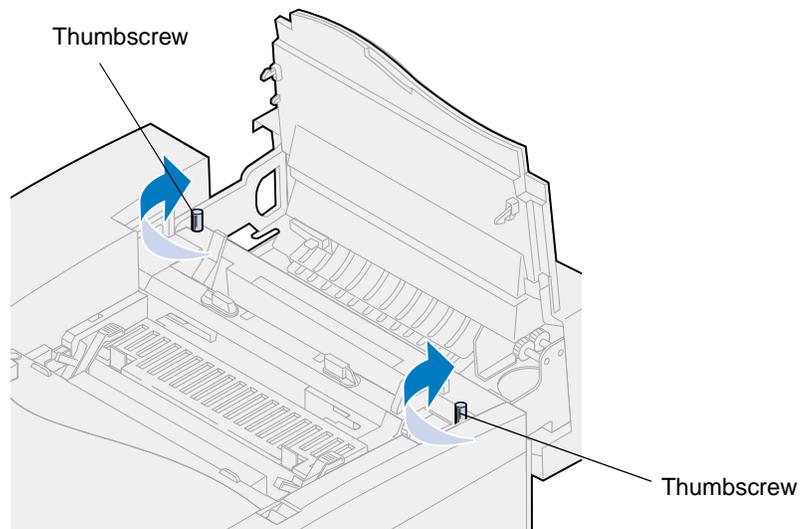
- 5 Set the fuser on a flat level surface.

### ***Install the new fuser***

- 1** Remove any packing material from the new fuser.
- 2** Align the new fuser with the slots inside the printer.
- 3** Lower the fuser into the printer.

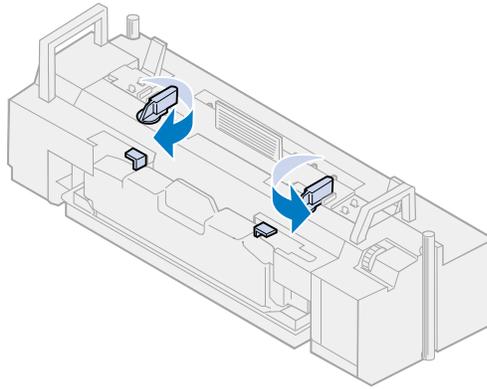


- 4** Tighten the thumbscrews on both sides of the fuser.



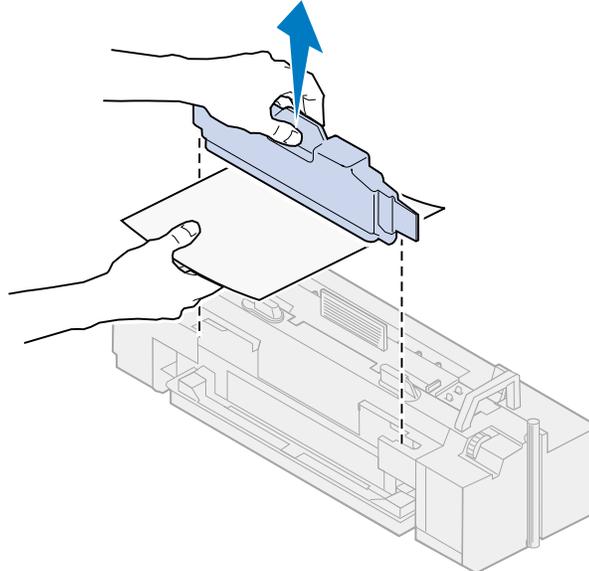
## Transfer the oil bottle and cleaner roll

- 1 Rotate the left and right green oil bottle locking levers on the old fuser to unlock the oil bottle and cleaning roll.



- 2 Lift the oil bottle from the old fuser.

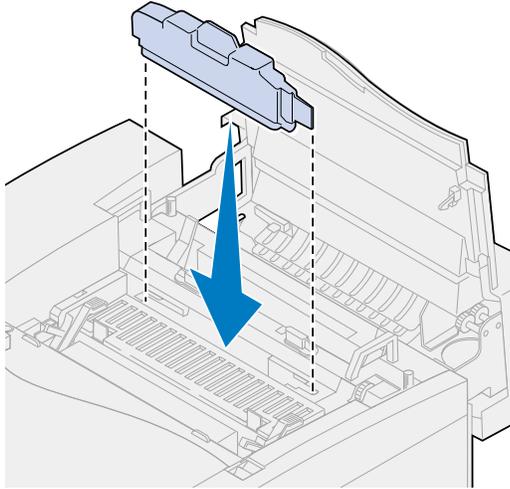
**Note:** Oil may drop from the bottom of the oil bottle. You can place a piece of paper under the bottle after you lift it to prevent oil from dropping on the printer, floor, or your clothing.



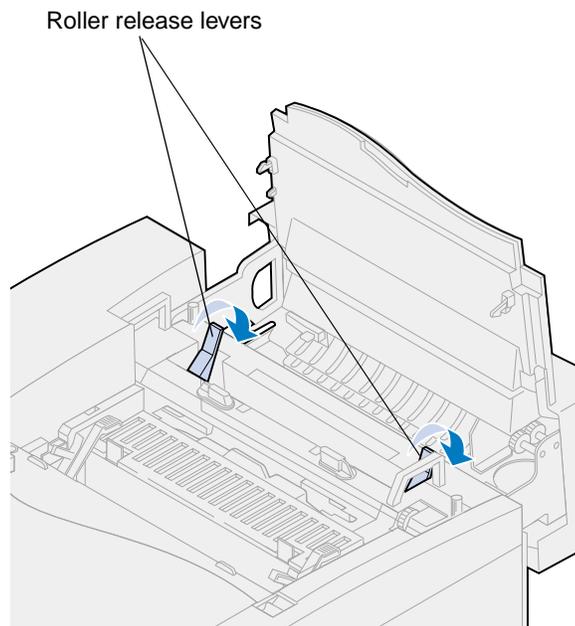
- 3 Align the oil bottle with the slots in the new fuser.
- 4 Lower the oil bottle into the fuser.

**WARNING:** It takes approximately 30 minutes for the oil to reach the fuser after initial oil bottle installation. Make sure the oil bottle has been installed for at least 30 minutes

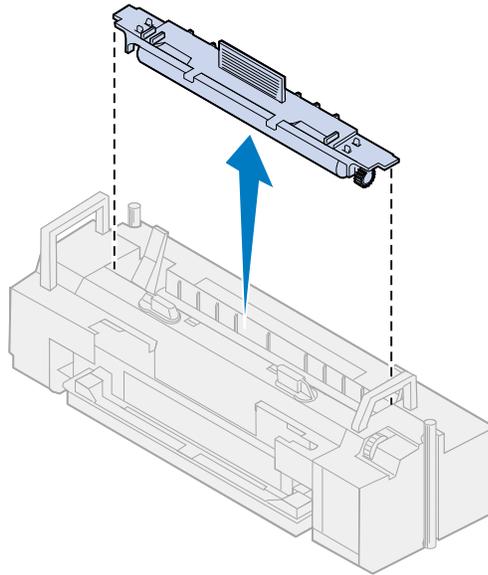
before printing. Without oil, your fuser does not operate properly. Insufficient lubrication causes paper jams and reduces the life of your fuser.



- 5 Move the green fuser roller release levers toward the rear of the printer. It may require some force to move the levers.

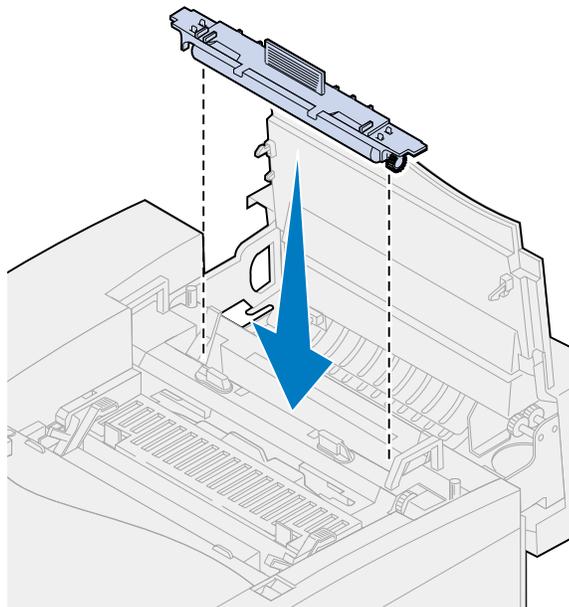


- 6** Lift the cleaning roll from the old fuser.

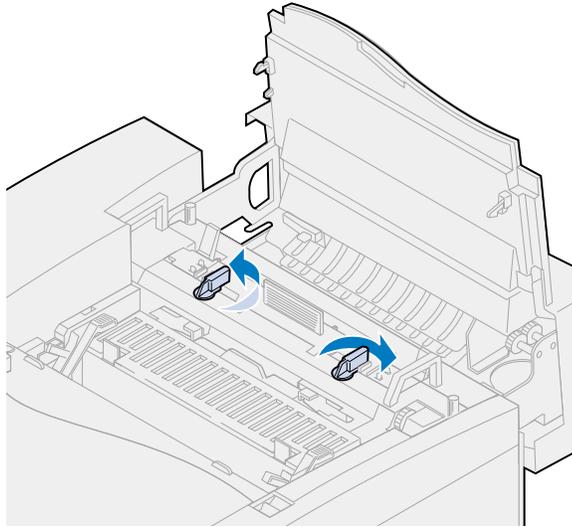


- 7** Align the cleaning roll with the slot in the new fuser.

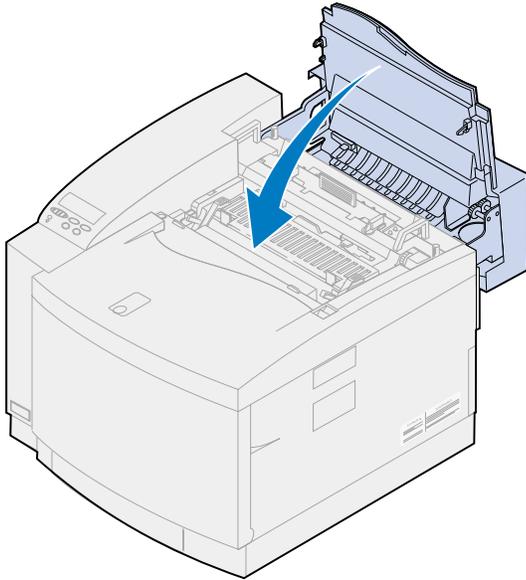
- 8** Lower the cleaning roll into the new fuser.



- 9** Rotate the left and right green oil bottle locking levers to lock the oil bottle and cleaning roll in the fuser.

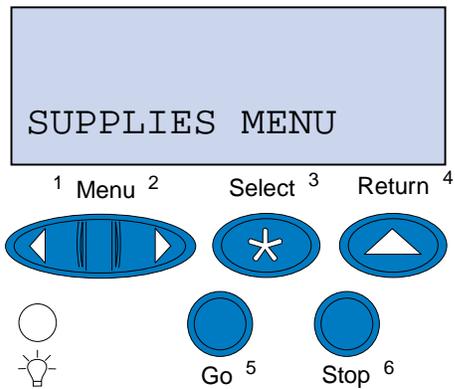


- 10** Close the top door.



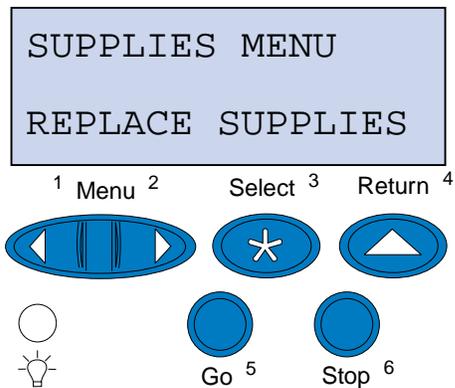
- 11** If the message **Did you replace Fuser?** appears, press **Go**. Otherwise, use the following steps to reset the fuser counter.

- a** Press **Menu>** or **<Menu** until **Supplies Menu** appears on the second line of the display.



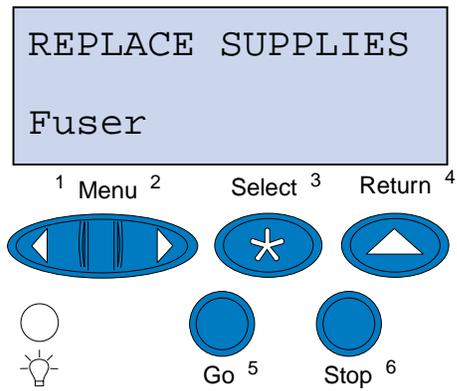
- b** Press **Select** to open the Supplies Menu.

- c** Press **Menu>** or **<Menu** until **Replace Supplies** appears on the second line of the display.

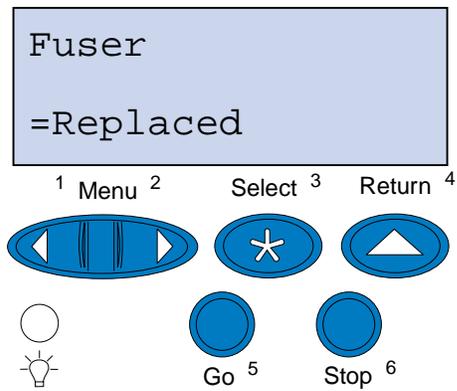


- d** Press **Select** to open Replace Supplies.

- e Press **Menu>** or **<Menu** until **Fuser** appears on the second line of the display.



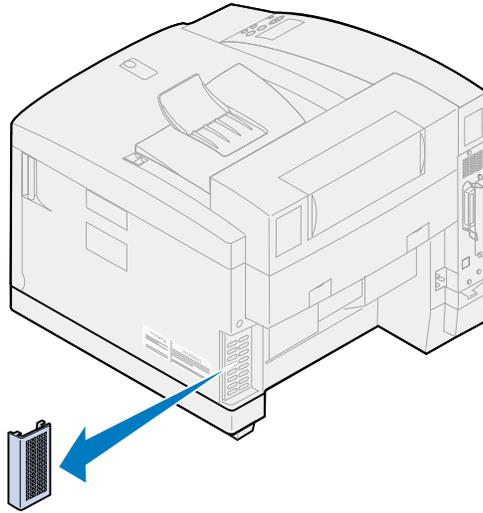
- f Press **Select** to open the Fuser menu item.
- g Press **Menu>** or **<Menu** until **=Replac** appears on the display.



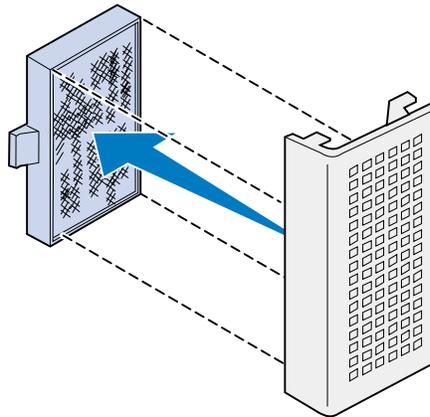
- h Press **Select** to reset the fuser counter to zero.
- i Press **Go**.

## Replacing the air filter

- 1 Slide the filter cover assembly to the left.

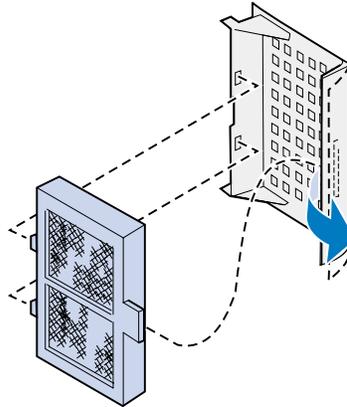


- 2 Remove the filter from the cover.

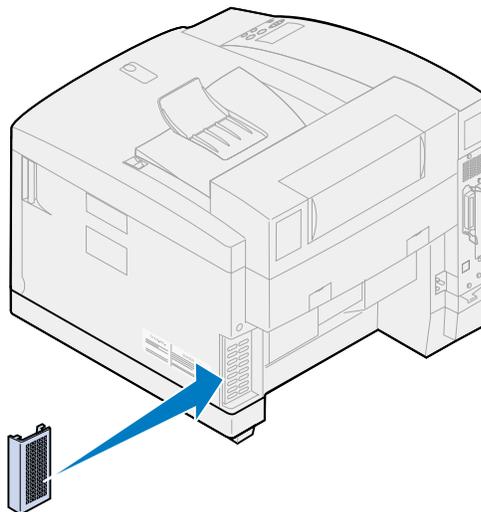


- 3 Remove the new filter from the packing material.

- 4 Align the filter assembly with the slots in the cover as shown.



- 5 Slide the filter cover assembly onto the printer until it locks into place.



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## ***Replacing the maintenance kit***

Your printer monitors the life of printer components that affect your print quality. When these components reach the end of their life, the printer displays **80 Scheduled Maintenance**.

It is time for you to replace the maintenance kit. The maintenance kit consists of a transfer roller, paper discharger, and drum cleaner. For best print quality, make sure you replace the maintenance kit components when the **80 Scheduled Maintenance** message appears.

Press **Go** to clear the message. The **supplies** message appears on the second line of the display to remind you that supplies need attention.

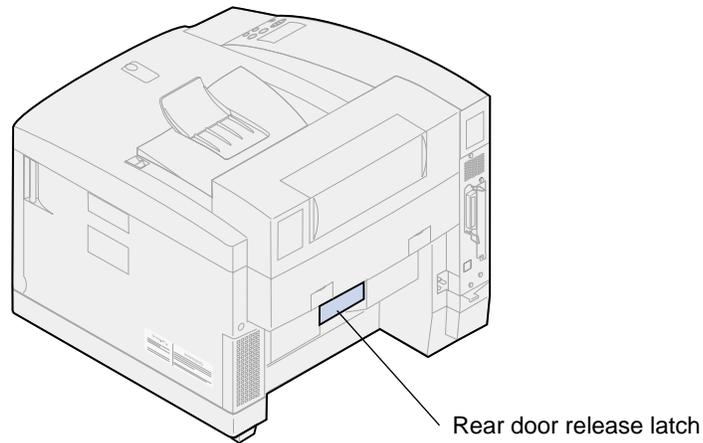
If the top door is opened and closed, the message **Did you replace Maintenance Kit?** appears. If a new maintenance kit has not been installed, press **Stop**. If a new maintenance kit has been installed, press **Go**.

If you install a new maintenance kit before the 80 **Scheduled Maintenance** message appeared, you must manually reset the fuser counter. For more information, see [reset the maintenance kit counter](#).

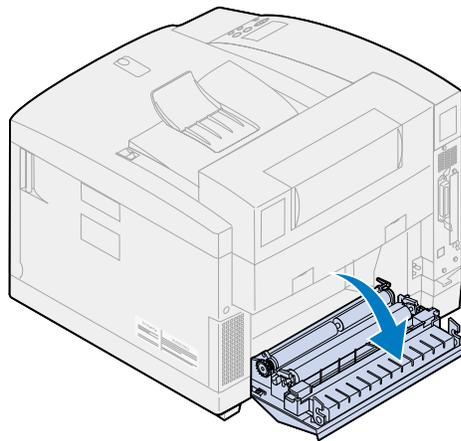
To replace the maintenance kit components, use the following steps or the instruction sheet supplied with the maintenance kit:

### ***Replacing the transfer roller***

- 1** Pull the rear door release latch toward the rear of the printer.



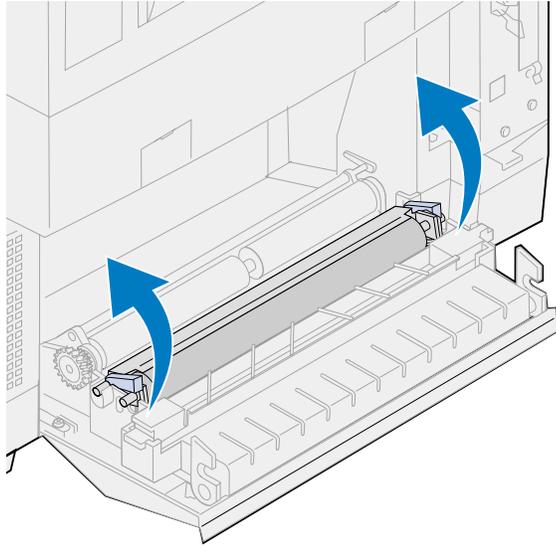
- 2** Lower the rear door.



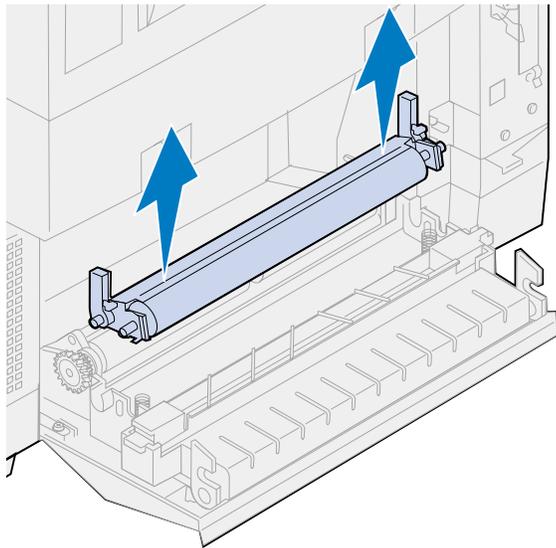
**CAUTION:** The inside of the printer may be hot. Allow the printer to cool before touching any internal components.

- 3 Rotate both locking levers upward until they stop.

It may take some force to lift the levers.

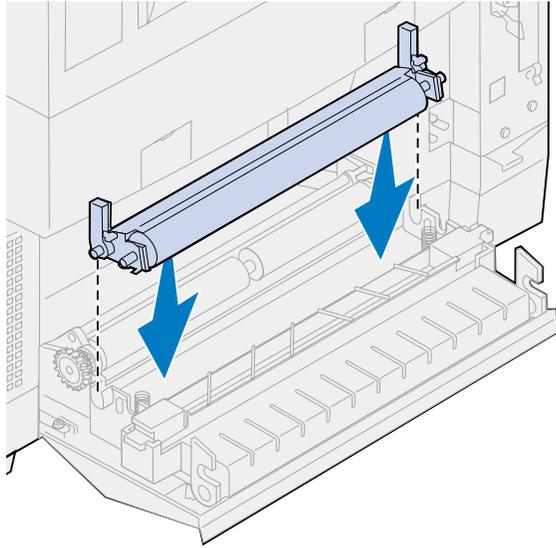


- 4 Lift the transfer roller assembly from the rear door.

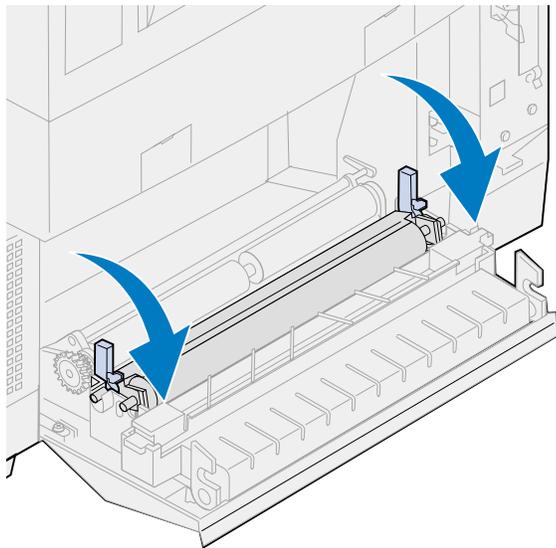


- 5 Remove the new transfer roller from the packaging material.
- 6 Remove any other packing material or tape from the transfer roller.
- 7 Align the left and right cam on the new transfer roller with the slots in the rear door.

- 8** Lower the transfer roller into the rear door.

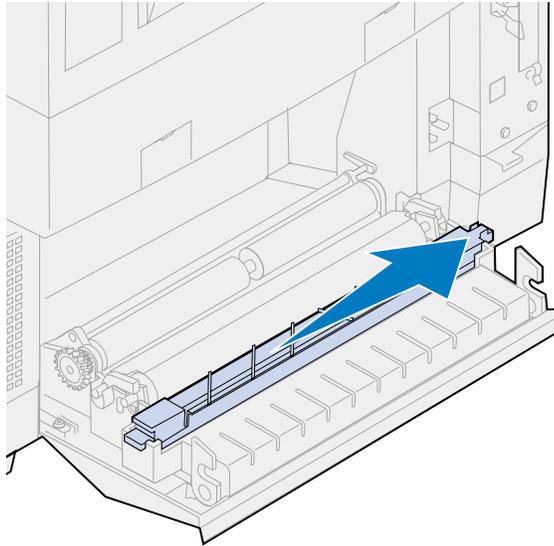


- 9** Rotate the locking lever downward until they snap into place.  
It may take some force for the locking levers to snap into place.

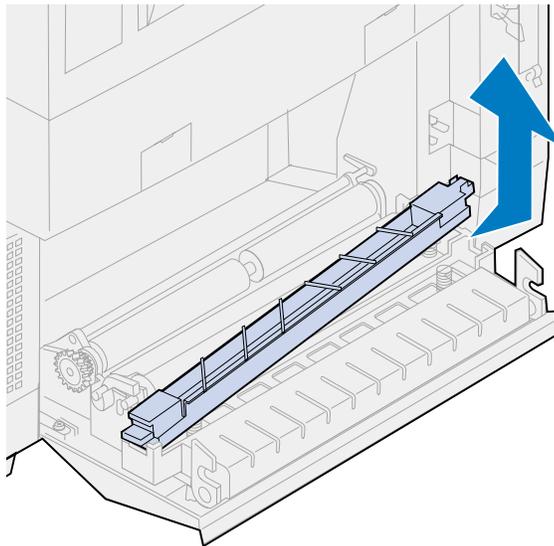


## ***Replace the paper discharger***

- 1** Press down on the paper discharger and move it to the right.

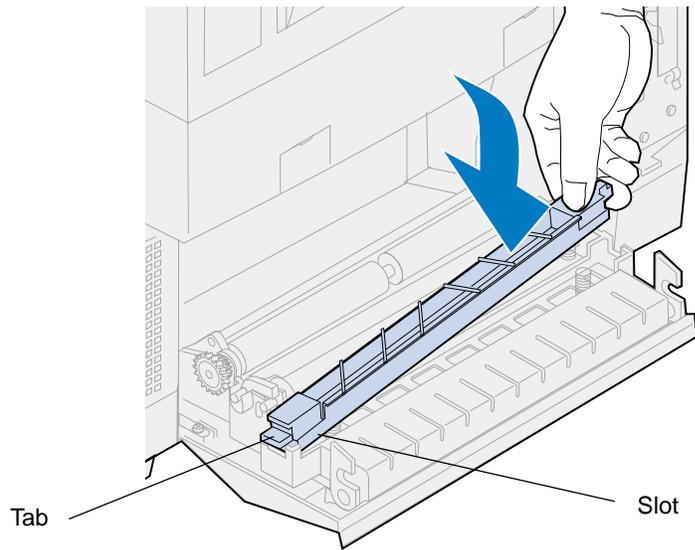


- 2** Lift the discharger from the rear door.

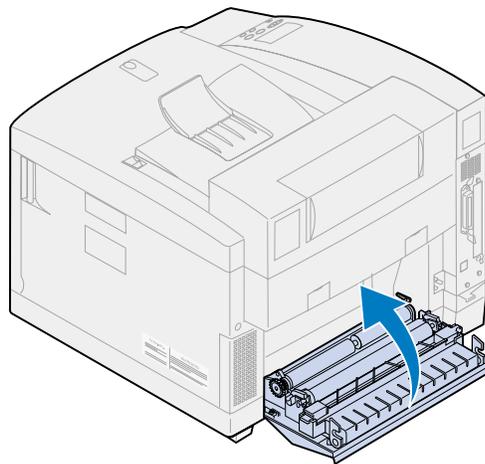


- 3** Remove the new paper discharger from the packaging material.
- 4** Remove any other packing material or tape from the discharger.

- 5 Place the flat green tab of the paper discharger into the slot on the rear door.



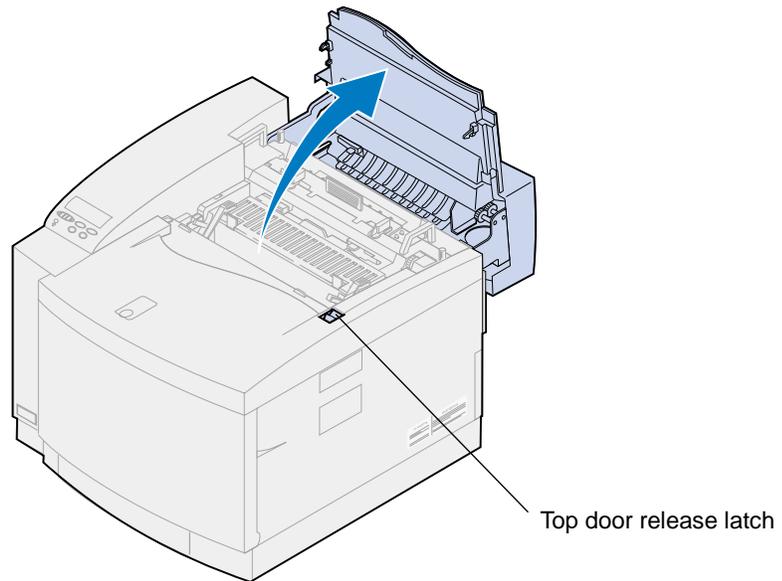
- 6 Press down and slide the discharger to the left.
- 7 Release the discharger.
- 8 Close the rear door.



### ***Replace the drum cleaner***

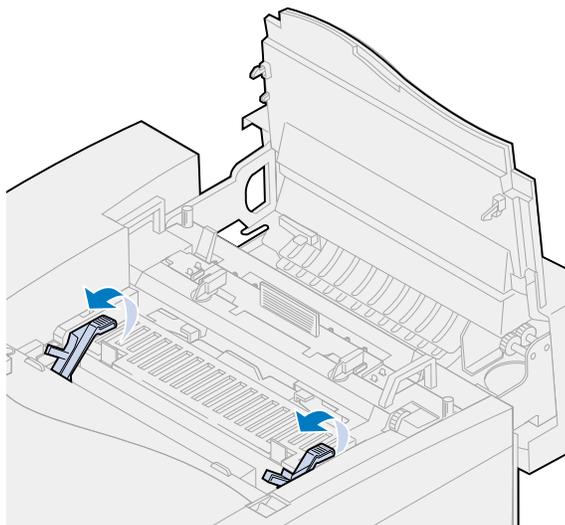
- 1 Slide the top door release latch toward the front of the printer.

- 2 Lift the top door.

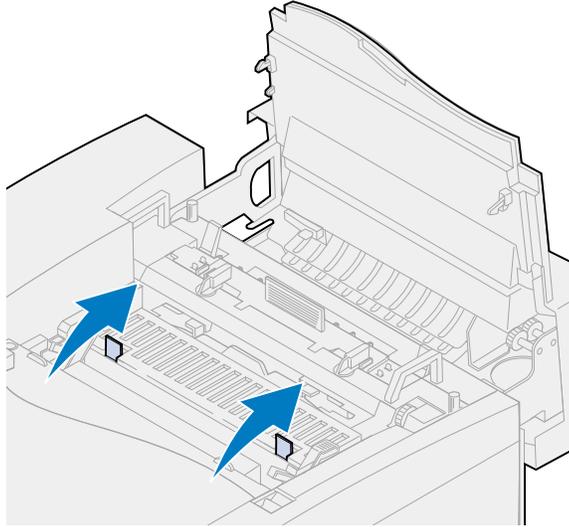


**CAUTION:** The internal components of the printer may be hot. Allow the printer to cool before touching any internal components.

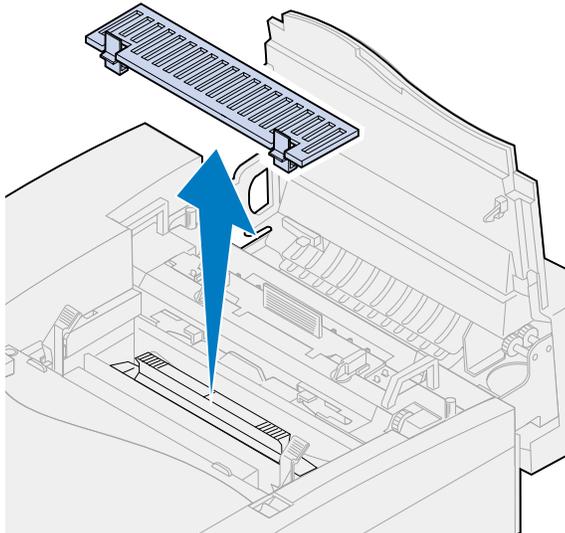
- 3 Lift the left and right green photo developer cartridge locking levers.



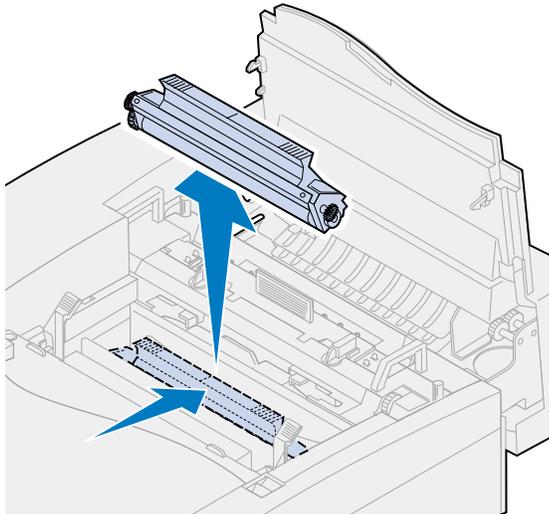
- 4** Push both drum cleaner cover latches to rear.



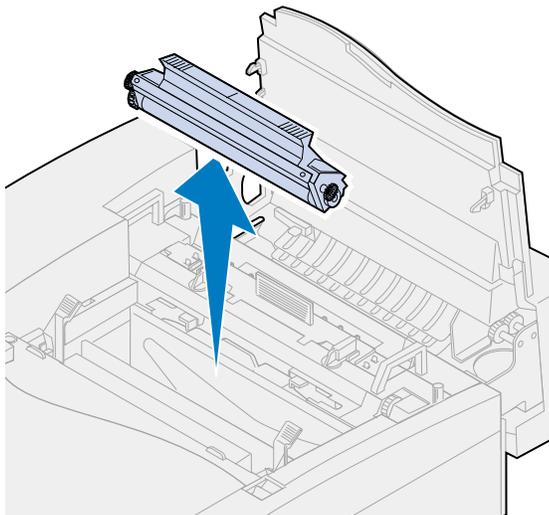
- 5** Lift and remove the drum cleaner cover.



- 6 Push the drum cleaner handle toward the rear of the printer.

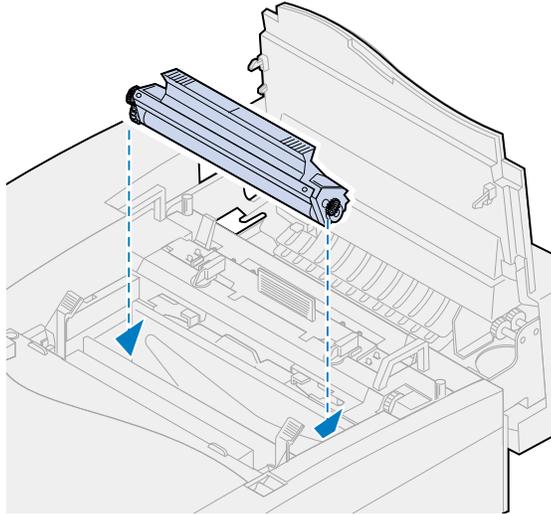


- 7 Lift and remove the drum cleaner.



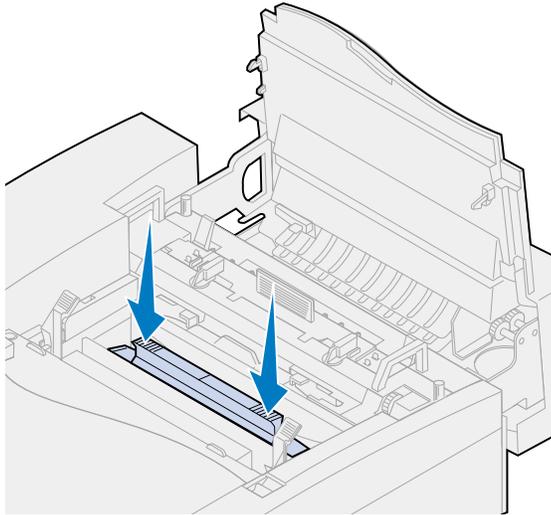
- 8 Remove the new drum cleaner from the packaging material.
- 9 Remove any other packing material or tape from the drum cleaner.
- 10 Align the drum cleaner to the slots in the printer.  
The metal shield faces to the front of the printer.

- 11** Lower the drum cleaner into the printer.



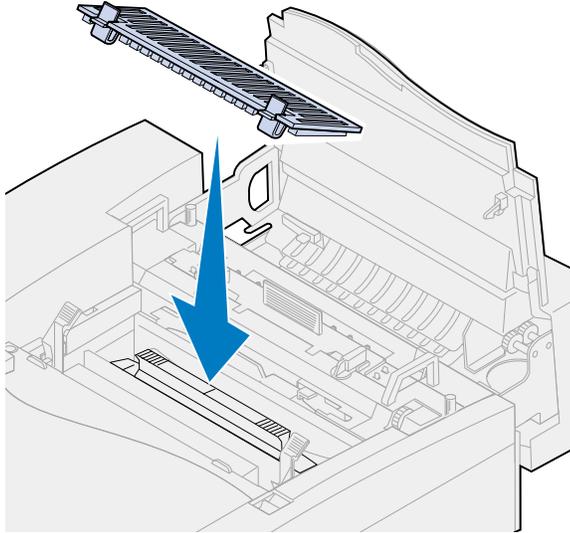
- 12** Push the handle downward until the drum cleaner snaps into place.

**Note:** If the drum cleaner is not fully seated, you may experience poor print quality.

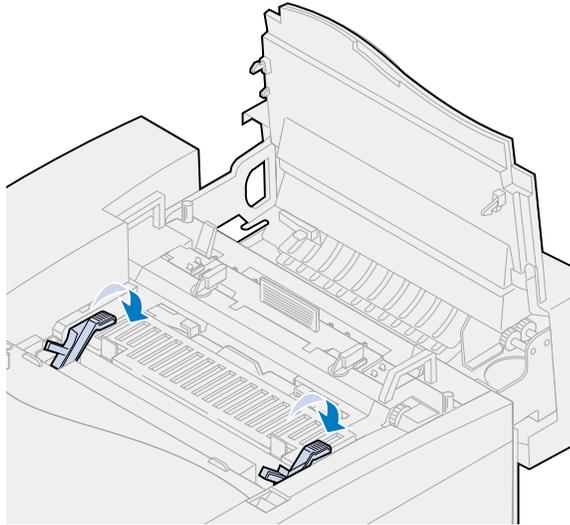


- 13** Align the cover with the opening in the printer (back edge first).

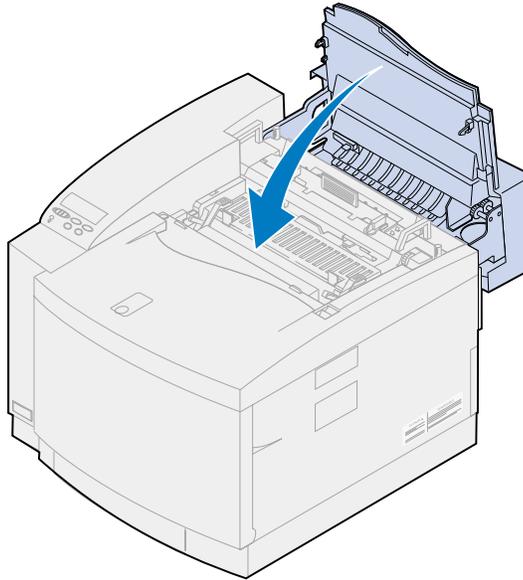
- 14** Push down on the cover latches until both locks snap into place.



- 15** Rotate the green photo developer cartridge levers down.

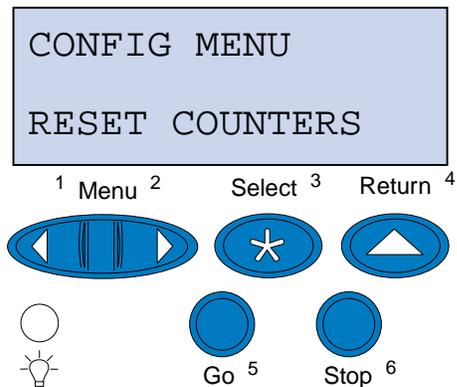


- 16 Close the top door.



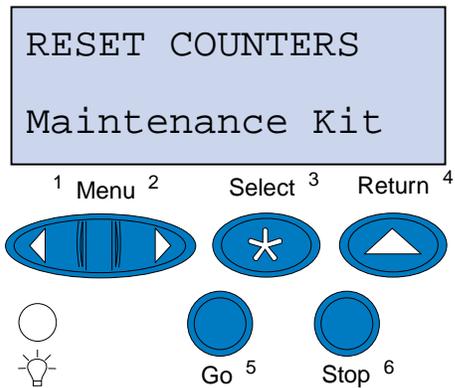
- 17 If the message **Did You Replace Maintenance Kit?** appears, press **Go**. Otherwise, use the following steps to Reset the maintenance kit counter.

- a Turn the printer off.
- b Press and hold the **Select** and **Return** buttons.
- c While holding the **Select** and **Return** buttons, turn the printer on.  
The **CONFIG MENU** appears.
- d Press **Menu>** or **<Menu** until **RESET COUNTERS** appears.



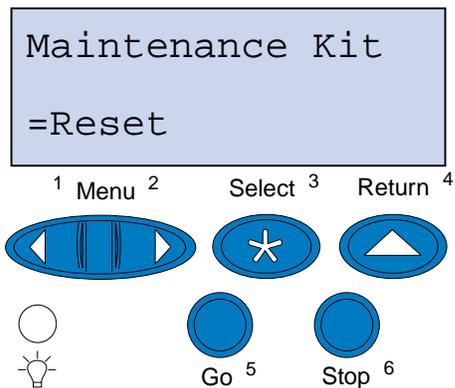
- e Press **Select** to open Reset Counters.

- f Press **Menu>** or **<Menu** until **Maintenance Kit** appears.



- g Press **Select** to open the maintenance kit menu item.

- h Press **Menu>** or **<Menu** until **=Reset** appears.



- i Press **Select** to reset the maintenance kit counter to zero.

- j Press **Return**.

- k Press **Menu>** or **<Menu** until **Exit Config** appears.

- l Press **Select**.

# 20

## Recycling used supplies

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Lexmark's Operation ReSource<sup>SM</sup> program lets you participate in a worldwide recycling effort at no cost to you.



Simply package your used toner cartridges or photo developer cartridge in the shipping box used for the replacement supply. Follow the instructions on the outside of the box to send the used supply back to Lexmark.

If a prepaid shipping label is not available for your country, contact the place where you bought your printer for additional recycling information.

**Note:** Lexmark does not recommend refilling used toner cartridges or purchasing refilled cartridges from a third party. Print quality and printer reliability cannot be guaranteed if you do. The printer warranty does not cover damage caused by using refilled cartridges.

# 21

## Conserving supplies

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### ***Toner Saver***

To get the most from your toner supply, set Toner Saver **on**. Toner Saver reduces all color planes to 80% saturation. This helps lower the cost of printing without greatly effecting print quality. Toner Saver can be used when color correction has been set to: Auto, 2-Color Draft, or Black and White.

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### ***2-Color Draft***

When you select 2-Color Draft, the printer only uses the black and cyan colors to print your document. This reduces the color toner applied to each page when you are printing multicolor drafts. This setting significantly cuts the cost of printing color drafts and increases print speed.

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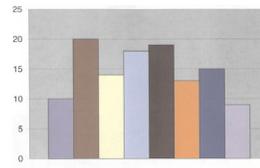
### ***Black and White***

If you're printing drafts of a color document, or you're printing a color document that you want to photocopy, set Color Correction to Black and White. Your document prints in shades of gray suitable for reviewing or photocopying on a monochrome copier. This saves the toner in the magenta, cyan, and yellow toner cartridges.

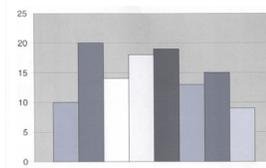
The following illustration shows the difference for each of the three color correction settings.

## Color correction setting

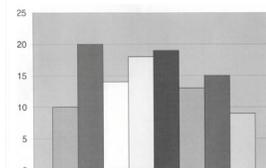
**Automatic**



**2 Color draft**



**Black & white**



# 22

## Moving your printer

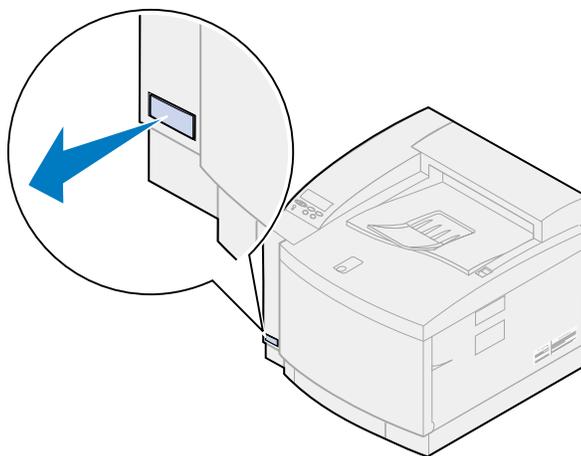
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### *Moving the printer*

If you're going to move the printer, you must remove the supplies and attached options to prevent damage to the printer. Use the following steps to remove the options and supplies.

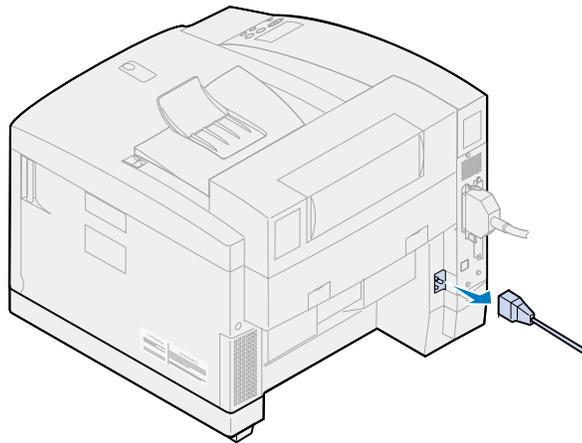
#### *Remove cables*

- 1 Turn the printer off.



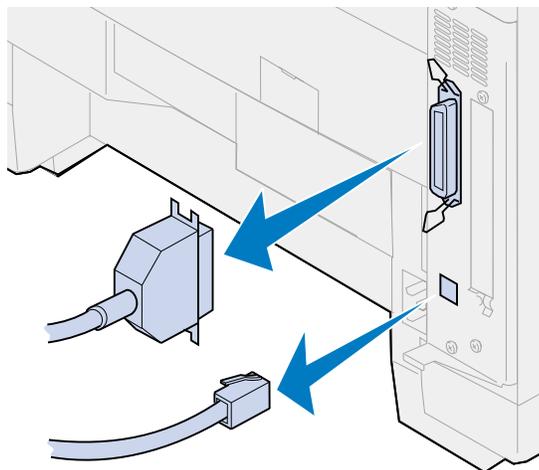
- 2 Unplug the power cord from the electrical outlet.

- 3 Unplug the power cord from the rear of the printer.



- 4 Unplug the parallel or the optional port connector.

Depending on the options you have installed, additional parallel, serial, USB, or network connectors may have to be removed.



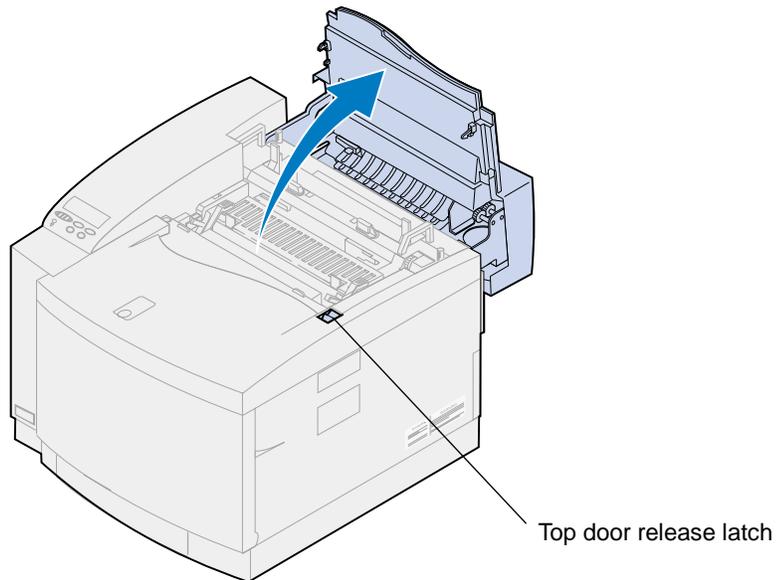
### ***Removing the supplies***

Whenever you move the printer, remove the oil bottle and toner cartridges to make sure you don't drip oil or spread toner inside the printer.

**Note:** Do not remove the photo developer cartridge or the waste toner bottle when moving the printer. Removing these items may spread toner inside the printer.

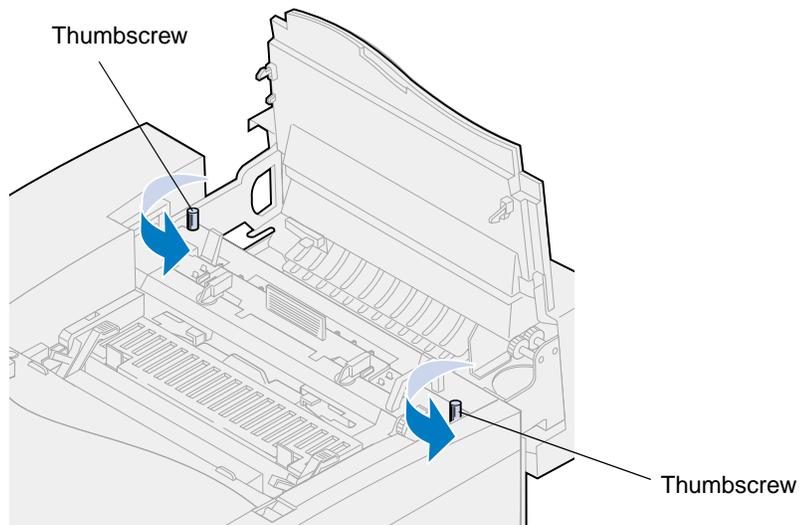
## Remove the fuser

- 1 Slide the top door release latch toward the front of the printer and lift the top door.



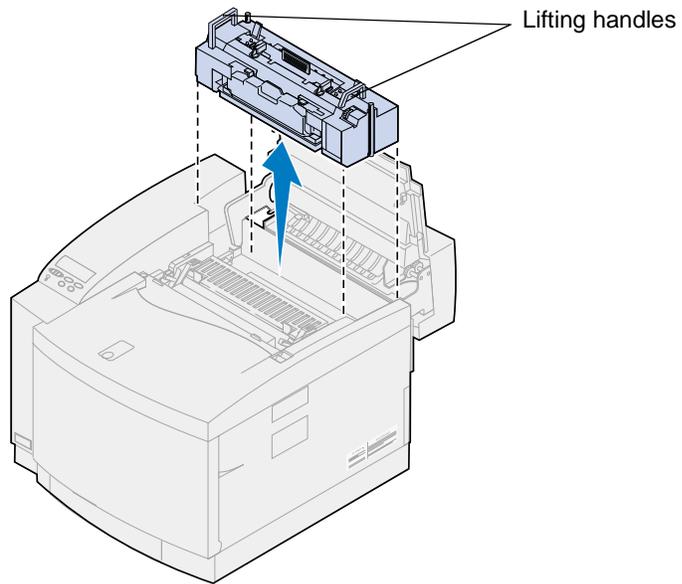
**CAUTION:** The internal components of the printer may be hot. Allow the printer to cool before touching any internal components.

- 2 Loosen the thumbscrews on each side of the fuser.

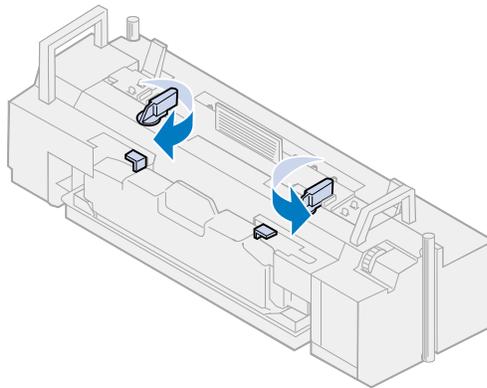


**WARNING:** Do not tilt the fuser when removing. The fuser contains oil that may soil clothing and damage the printer components.

- 3 Use the lifting handles to lift the fuser from the printer.

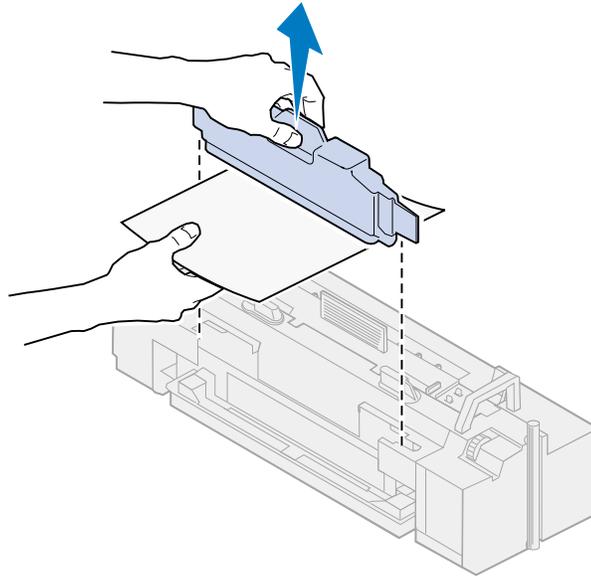


- 4 Set the fuser on a flat level surface.
- 5 Rotate the left and right green oil bottle locking levers on the fuser to unlock the oil bottle and cleaning roll.

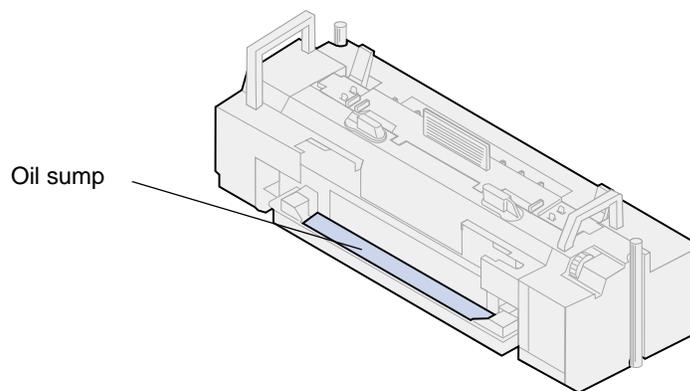


- 6 Lift the oil bottle from the fuser.

**Note:** Oil may drop from the bottom of the oil bottle. You can place a piece of paper under the bottle after you lift it to prevent oil from dropping on the printer, floor, or your clothing.

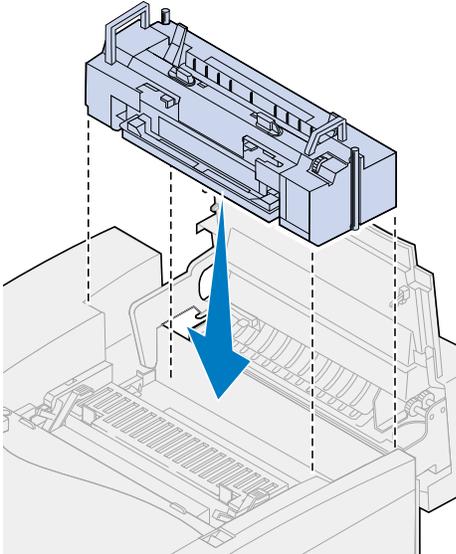


- 7 Using the oil drain syringe supplied with your printer, paper towels, or an absorbant cloth, remove the oil from the fuser oil sump.

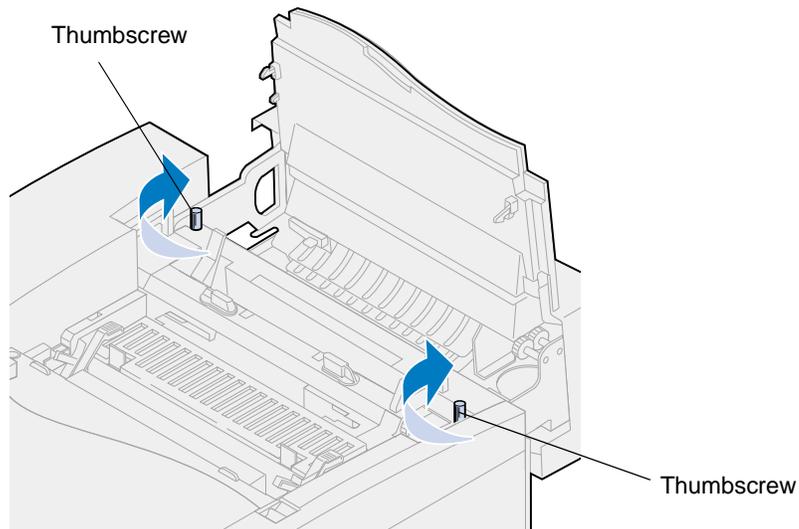


- 8 Place a paper towel or absorbant cloth in the oil sump.

- 9 Align the fuser with the slots inside the printer.
- 10 Lower the fuser into the printer.

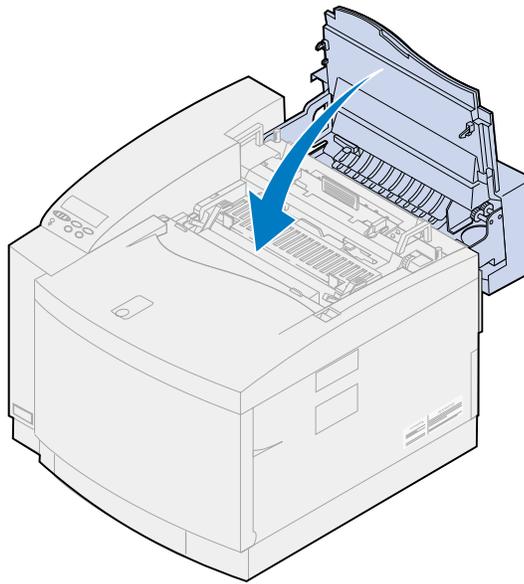


- 11 Tighten the thumbscrews on both sides of the fuser.



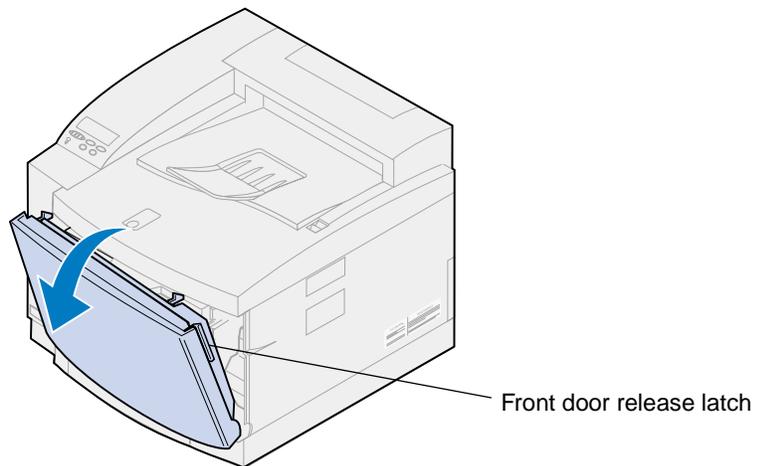
**Note:** Do not remove the photo developer cartridge. Removing the photo developer cartridge may spread toner inside the printer.

- 12 Close the top cover.



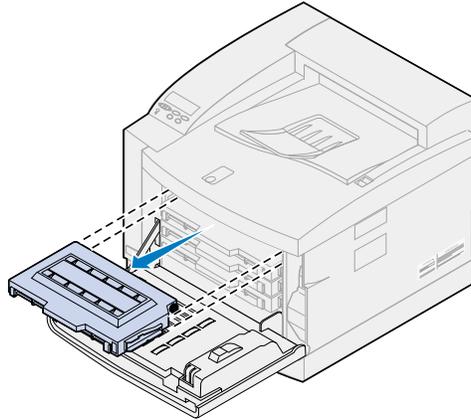
### Remove the toner cartridges

- 1 Pull the front door release latch toward the front of the printer.
- 2 Open the front door.

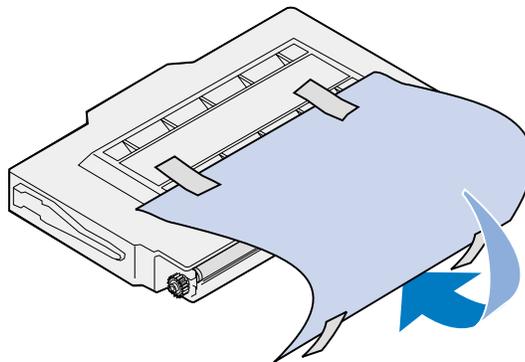


**Note:** Do not remove the waste toner bottle. Removing the waste toner bottle may spread toner inside the printer.

- 3 Remove the toner cartridges (black K, yellow Y, magenta M, cyan C) from the printer.



- 4 Cover the end of the toner cartridge with clean paper.



**WARNING:**

Do not touch or scratch the surface of the glossy green glass on the toner cartridges. Touching the glass may damage it and reduce print quality.

Do not leave the cartridges exposed to light for more than 5 minutes. Leaving the cartridges exposed to light for more than 5 minutes may damage them and reduce print quality.

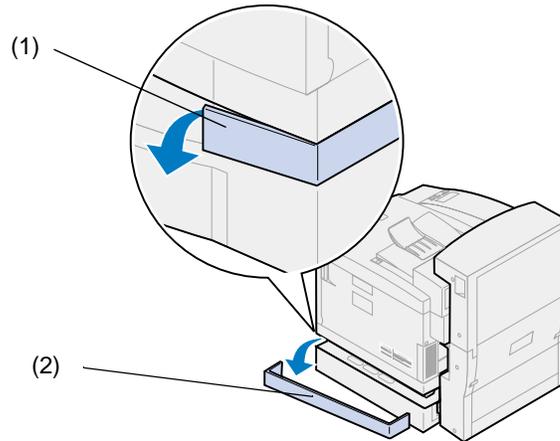
- 5 Place the toner cartridges in a box or cover them.

### ***Removing the optional duplex unit***

**Note:** Removing the optional duplex unit is easier if you have access to the rear and sides of the printer.

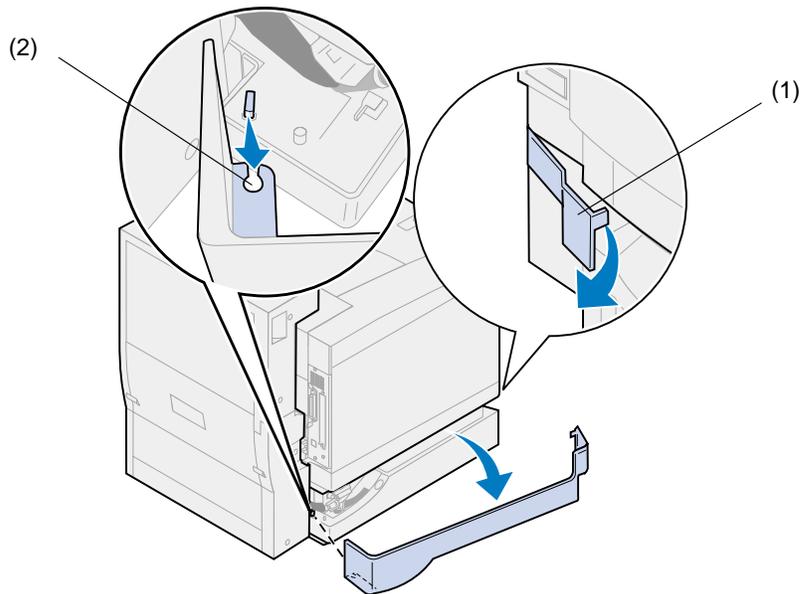
- 1 Remove the right side access panel.
  - a Pull the front of the panel (1) out slightly.

- b** Rotate the panel toward the rear of the printer until it separates (2) from the printer.

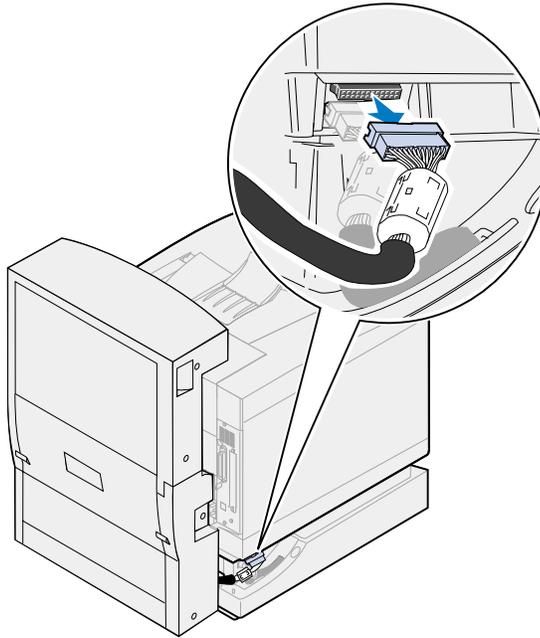


**2** Remove the left side access panel.

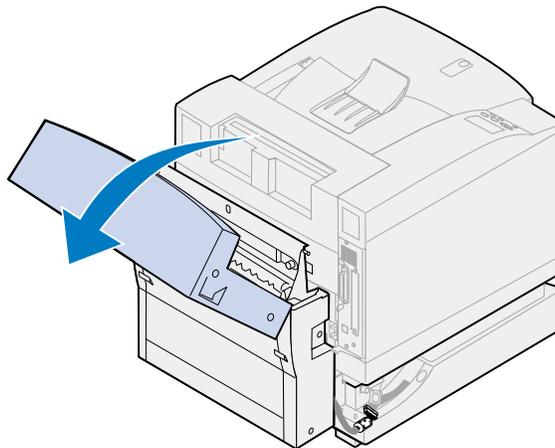
- a** Pull the front of the panel (1) out slightly.
- b** Rotate the panel toward the rear of the printer until it separates (2) from the printer.



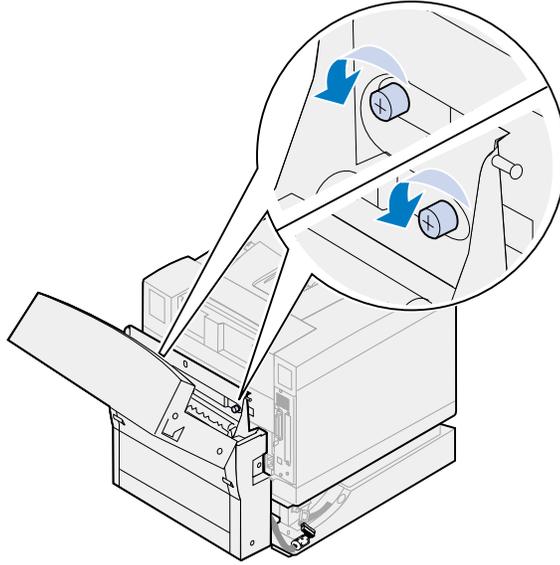
- 3** Disconnect the black duplex unit connector from the black printer connector.



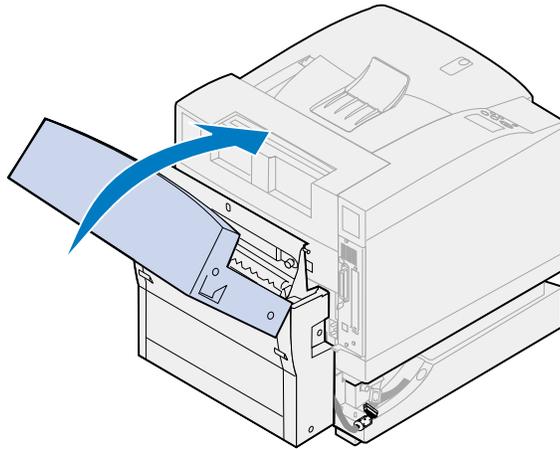
- 4** Open the duplex unit top cover.



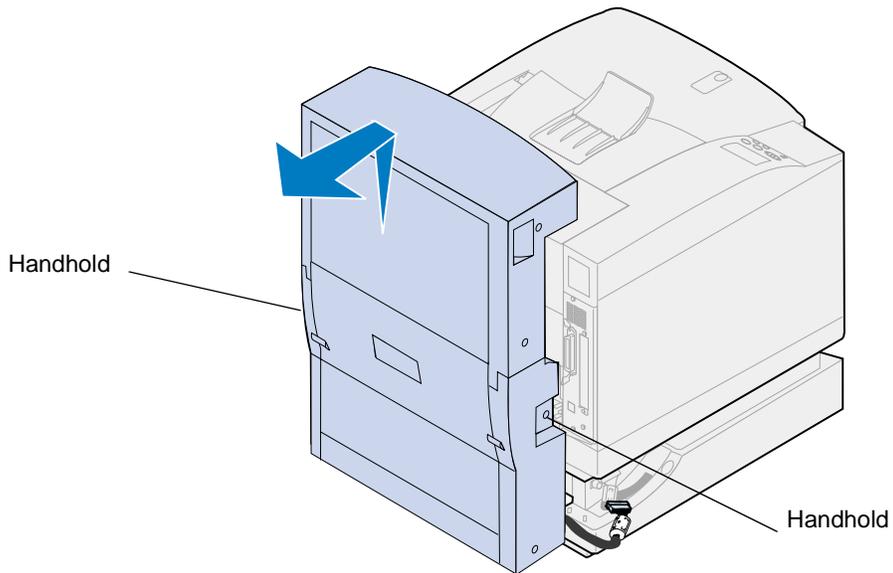
- 5** Loosen the thumbscrews on the duplex unit.



- 6** Close the duplex unit top cover.



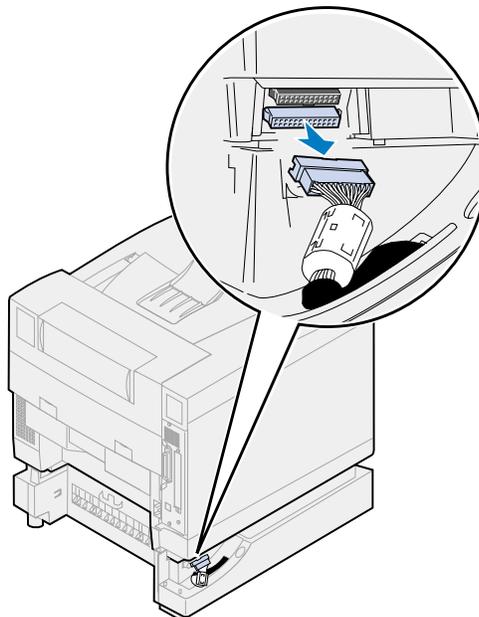
- 7 Grab the handholds on both sides of the duplex unit.
- 8 Lift the duplex unit straight up, and then slide the duplex unit toward you.



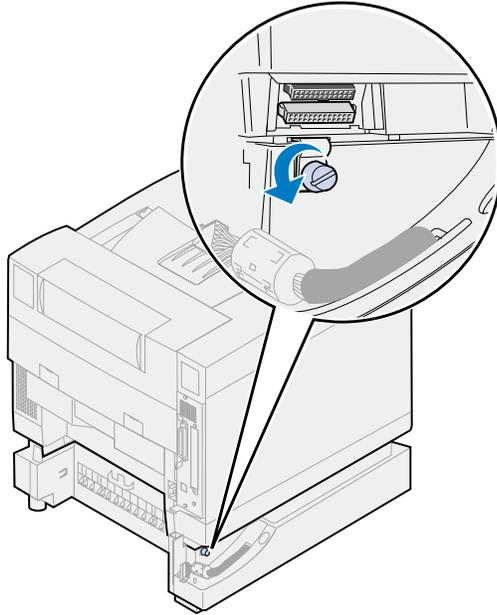
### ***Removing the optional drawer***

**Note:** Removing the optional drawer is easier if you have access to the rear and sides of the printer.

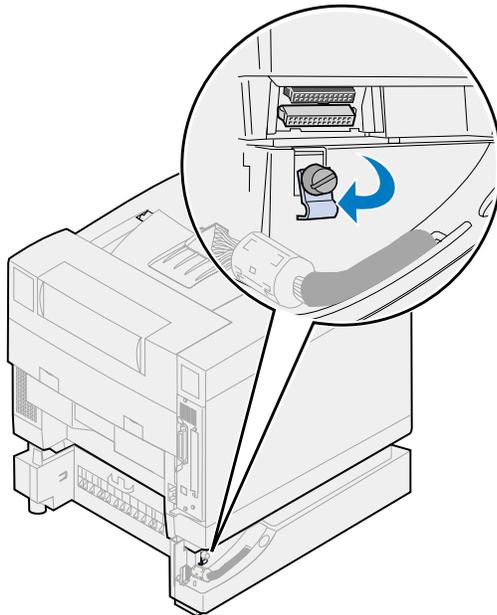
- 1 Disconnect the white drawer connector from the white printer connector.



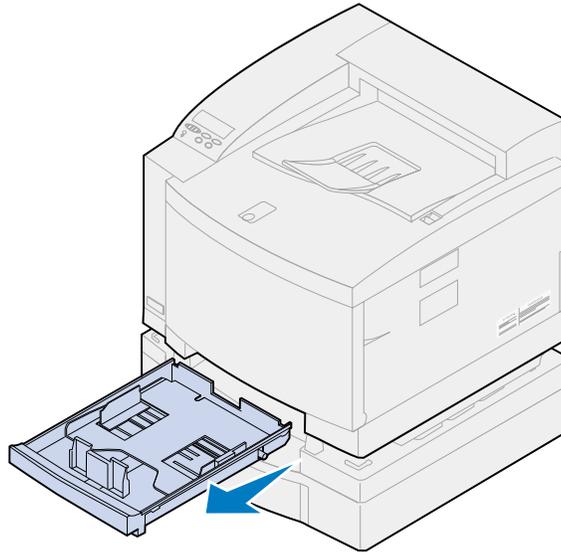
- 2 Loosen the locking clip thumbscrew by rotating counterclockwise.



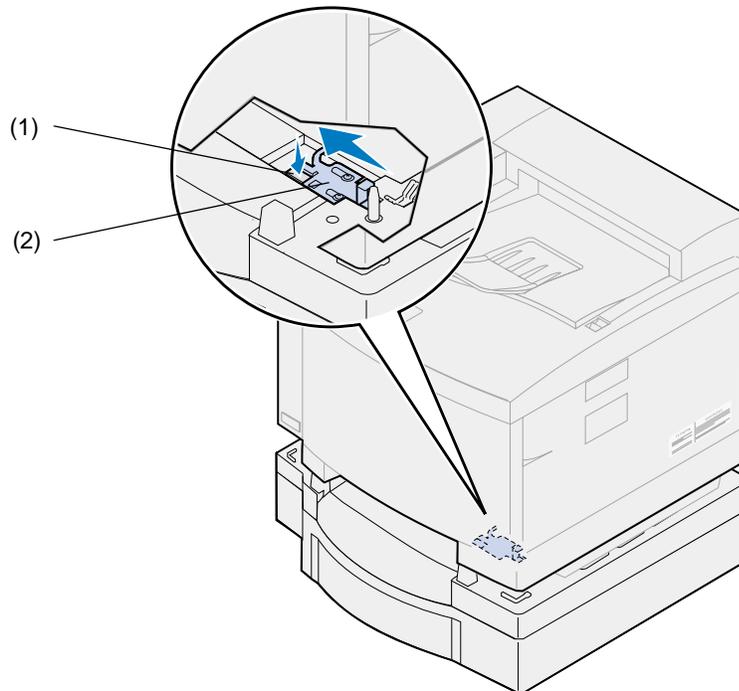
- 3 Rotate the locking clip so it hangs down.



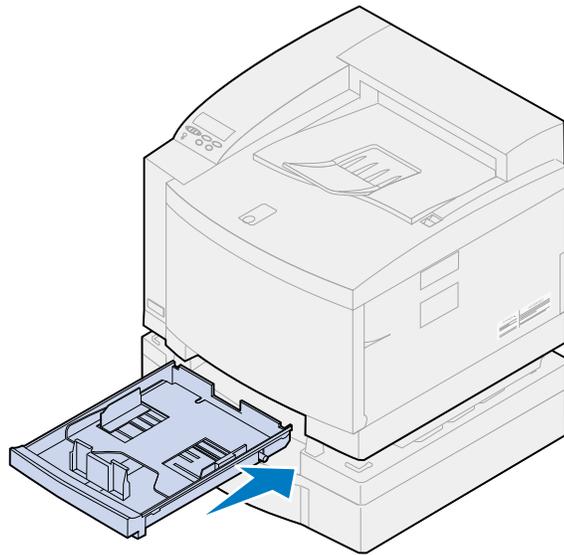
- 4** Remove the paper tray from the printer.



- 5** Press and hold the slide lock (1) and move the drawer slide (2) to the left.

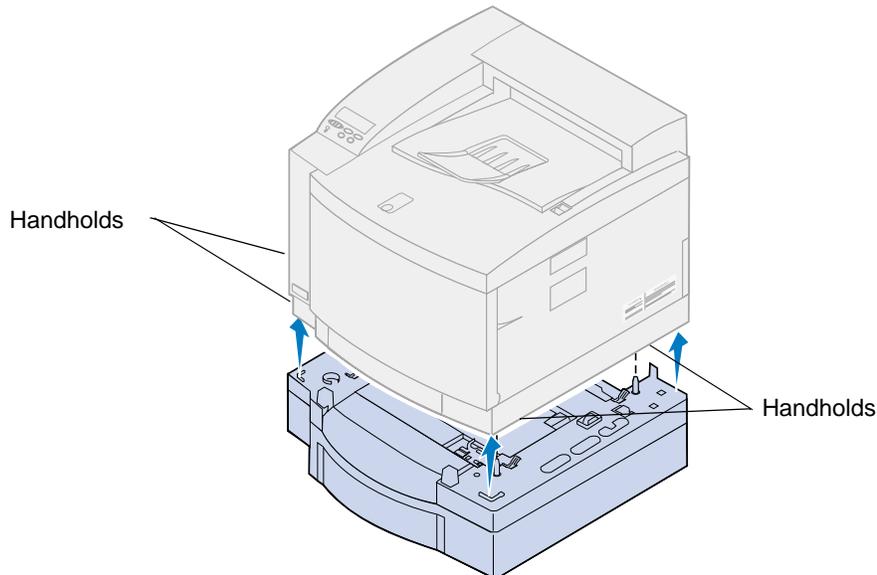


- 6 Place the paper tray into the printer.



**CAUTION:** This printer weighs 39 kg (86 lb) and requires two people to lift it. Anytime you move or lift the printer, make sure you have someone help you. Whenever you lift the printer, use the handholds located on the sides of the printer.

- 7 Grab the printer by the handholds and lift the printer straight up and off the optional drawer.



Choosing the new location for your Lexmark C720 printer is vital to ensuring the printer provides you with the quality of service you expect.

When selecting a place to set up your printer consider:

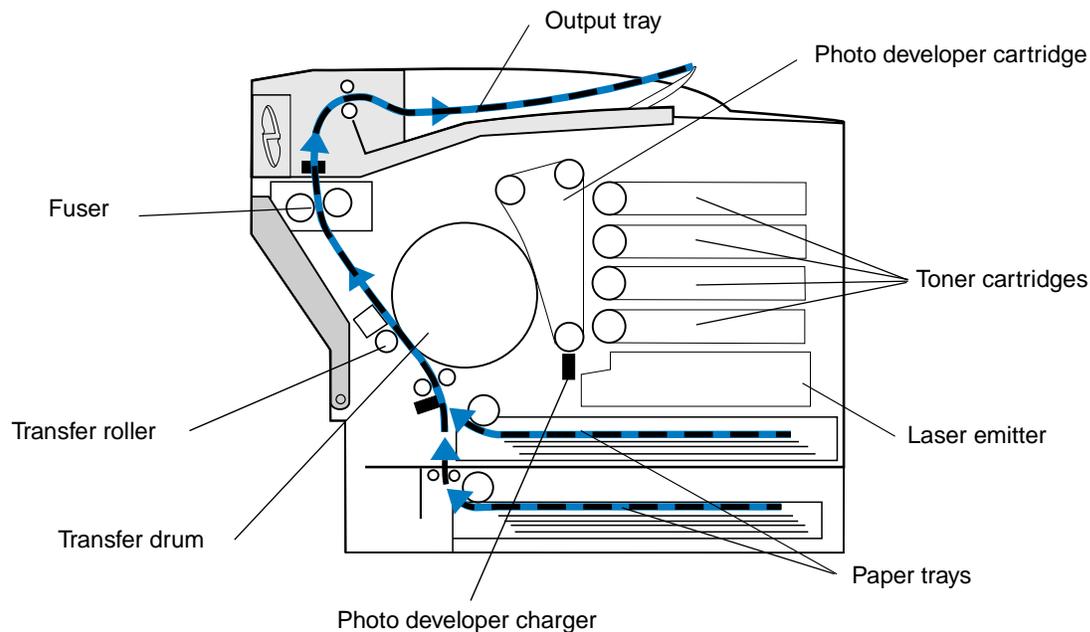
- The amount of space your printer and any options will require
- The type of environment necessary for optimum printer performance

For more information on the amount of space your printer requires, environmental consideration, and instructions on setting up your printer, refer to the *Setup Guide*.

## 23

## Theory of operation

By understanding how the toner cartridges, photo developer cartridge, transfer drum, transfer roller, and fuser interact you can understand why problems occur and how to correct or prevent them.



The green film inside the photo developer is a belt that makes a continuous loop as your printer operates. The photo developer charger (the thin wire on the bottom of the photo developer), places a uniform negative charge on the surface of the green film (photo developer media) as the media travels past the photo developer charger.

As the media moves toward the toner cartridges it passes the laser emitter inside your printer. The information you send to your printer is changed into a laser-emitted signal. This signal is projected onto the photo developer media and discharges portions of the media.

The discharged areas on the photo developer media pull negatively charged toner particles from the toner cartridges into the discharged areas on the photo developer media.

As the photo developer media rotates, it meets the transfer drum. The transfer drum has a uniform neutral charge on it. When the transfer drum and photo developer meet, the image on the photo developer media moves from the media onto the transfer drum.

As the transfer drum rotates toward the rear of the printer, the paper is pulled from the paper tray and travels up the paper path to meet your image. The paper or other media (such as transparencies or envelopes), arrives at the transfer roller and transfer drum just prior to your image.

The transfer roller is located on the inside of the rear door of the printer. It has a strong uniform positive charge on the roller. The positive charge on the transfer roller goes through the paper to the transfer drum.

As the transfer drum rotates it brings the image toward your paper. The paper and toner image on the transfer drum meet at the transfer roller. The negatively charged toner image on the transfer drum is pulled from the transfer drum into the paper by the strong positive charge on the transfer roller. As the paper continues to move up the paper path and the transfer drum rotates, more of the transfer drum image is moved onto the paper.

The paper travels up the paper path to meet the fuser. The fuser uses heat and pressure to make the toner adhere to the paper. The result of these components working together is the sharp laser image you want.

To get the best possible output, use the correct media thickness and type. The media recommended by Lexmark provides the best print quality.



## Solving printing problems

---

Some printer problems are very easy to solve. If your printer is not responding, first make sure:

- The printer cable is securely attached to the printer and the host computer.
- The power cord is plugged into the printer and a properly grounded electrical outlet.
- The printer is turned on.
- The electrical outlet is not turned off by any switch or breaker.
- The printer front, top, and rear doors are completely closed.
- All printer options are properly installed.

Once you've checked each of these possibilities, turn the printer off and back on. This often fixes the problem.

If a message appears on the operator panel display, see [Understanding printer messages](#) for more information. If the message indicates the printer has a paper jam, see [Clearing paper jams](#).

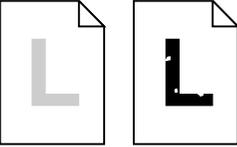
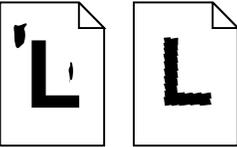
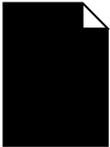
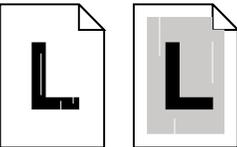
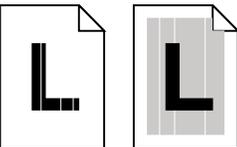
If you are having trouble determining the source of the problem, see [Print quality problems](#) for other suggestions.

The information in the following tables may help you solve printing problems. If these suggestions do not correct the problem, call for service. You may have a printer part that requires adjustment or replacement.

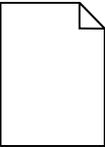
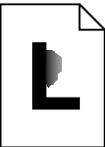
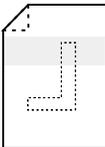
### Toner cartridge problems

Problem	Action
You cannot insert a toner cartridge into the printer.	Make sure the toner cartridge is aligned properly and is being installed in the correct location. See <a href="#">Replacing toner cartridges</a> for more information.
Toner accumulates inside the printer.	Replace the toner cartridge that matches the color of the toner that has accumulated inside the printer. See <a href="#">Replacing toner cartridges</a> .

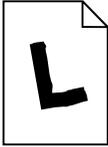
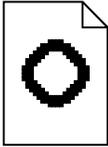
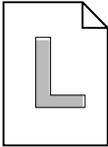
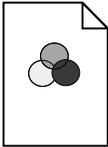
## Print quality problems

Problem	Action
<p>Print is too light, or printed images or characters have voids or dropouts.</p> 	<p>Make sure the front, top, and rear doors are closed completely.</p> <p>Make sure you're using <b>recommended paper</b> or other <b>media</b>. Use media from a new package.</p> <p>Make sure you have selected the correct <b>Paper Type</b> setting for the media you're using.</p> <p>If you suspect a toner cartridge is low on toner, remove the appropriate cartridge and gently shake it back-and-forth to distribute the toner evenly. Reinsert the cartridge and try printing the job again.</p> <p>Replace the toner cartridge that matches the color on the page that is too light or not present in the void areas. See <b>Replacing the toner cartridge</b>.</p>
<p>Colored lines, streaks, or smudges appear on the printed page, or print appears blurred or unclear.</p> 	<p>Replace the toner cartridge that matches the color of the lines, streaks, or smudges on the page. See <b>Replacing toner cartridges</b>.</p> <p>Clean the photo developer discharger. See <b>Cleaning the photo developer charger</b>.</p> <p>Make sure the the drum cleaner is fully seated. See <b>Replace the drum cleaner</b>.</p>
<p>The page has 100% coverage of one color.</p> 	<p>Replace the toner cartridge that matches the color on the page. See <b>Replacing toner cartridges</b>.</p>
<p>Light lines or streaks appear on the printed page.</p> 	<p>Remove the toner cartridge that matches the color of the lines or streaks and gently shake it back and forth to distribute the toner evenly. Reinsert the toner cartridge and try printing the job again.</p> <p>Replace the toner cartridge that matches the color of the lines or streaks on the page. See <b>Replacing toner cartridges</b>.</p> <p>If the lines are black, you may need to replace the fuser. See <b>Fuser and air filter</b> for more information.</p>
<p>Light lines or voids appear from the top of the page to the bottom of the page.</p> 	<p>Remove the photo developer cartridge and clean the dust from the photo developer cartridge discharger. (See <b>Cleaning the photo developer charger</b>.) Reinsert the photo developer cartridge and try printing the job again.</p> <p>The toner cartridge may be low on toner, remove the cartridge, shake it, and reinsert it. If the problem still occurs, replace the toner cartridge. See <b>Replacing toner cartridges</b>.</p> <p>Replace the photo developer cartridge. See <b>Replacing the photo developer cartridge</b>.</p>

## Print quality problems (continued)

Problem	Action
<p>The page is blank or one of the colors is missing.</p> 	<p>Replace the toner cartridge that matches the missing color on the page. See <a href="#">Replacing toner cartridges</a>.</p>
<p>Toner smears or rubs off the page.</p> 	<p>Make sure you're using <a href="#">recommended paper</a> or other <a href="#">media</a>.</p> <p>Make sure you have selected the correct <a href="#">Paper Type</a> setting for the media you're using.</p> <p>Make sure the rear door is completely closed.</p>
<p>Toner adheres to the back of the page.</p> 	<p>Make sure the paper size is set properly for the paper length you are printing on. Print several pages to clean the transfer roller of excess toner.</p> <p>You may need to replace the fuser. See <a href="#">Fuser and air filter</a> for more information.</p>
<p>Printed materials delivered by the postal service arrive with ghosting or mirror images of the text visible on the page.</p> 	<p>When preparing printed materials for mailing:</p> <ul style="list-style-type: none"> <li>• Use 24 lb (90 g/m<sup>2</sup>) paper.</li> <li>• Avoid rough paper; select paper with a smoothness from 100 to 150 Sheffield points.</li> <li>• Fold sheets with the text facing outward.</li> <li>• Meter envelopes or use precanceled stamps.</li> <li>• Place envelopes in trays and deliver to the post office; do not drop envelopes into mail boxes or chutes.</li> </ul>
<p>Quality of printed transparencies is inadequate.</p> 	<p>Make sure you're using the recommended Lexmark transparencies. See <a href="#">Transparencies</a> for more information.</p> <p>When printing transparencies, always set Paper Type to Transparency.</p> <p>Avoid getting fingerprints on transparencies before printing.</p>

## Print quality problems (continued)

Problem	Action
<p>Print on the page is skewed.</p> 	<p>Make sure the width guides in the paper tray fit snugly against the media you loaded. See <a href="#">Loading media</a> for more information.</p>
<p>Quality of printed images is inadequate.</p> 	<p>If you're printing low resolution images using PostScript 3 emulation, set Image Smoothing On. See <a href="#">PostScript Menu</a> for more information.</p>
<p>A white gap is noticeable between color fills.</p> 	<p>Make sure the three printer foot pads are resting on a level surface.</p>
<p>Colors do not print as you expect.</p> 	<p>Make sure you have selected the appropriate Color Correction and Print Quality values for the job you're printing. See <a href="#">Color Menu</a> for more information.</p>

## Other printing problems

Problem	Action
Your job did not print or incorrect characters printed.	Make sure <b>Ready</b> (or <b>Power Saver</b> ) appears on the first line of the operator panel display before you send a job to print. Press <b>Go</b> to return the printer to the ready state.
	If <b>Ready Hex</b> appears on the operator panel display, you must exit Hex Trace mode before you can print your job. To exit Hex Trace mode, reset the printer or turn the printer off and back on.
	Make sure the printer is not displaying a <b>Toner Empty</b> message. If it is, you cannot print until you replace the specified toner cartridge.
	If you're using a parallel interface, make sure you're using an IEEE 1284-compliant parallel cable. We recommend Lexmark part number 1329605 (10 ft) or 1427498 (20 ft) for the standard parallel port.
	If you're using a Lexmark internal or external network adapter, verify it is set up properly and the network cable is securely connected. Refer to the documentation that came with your adapter, or the network documentation on the drivers CD for more information.
You cannot print color.	Make sure the Color Correction menu item is not set to Black and White.
	Make sure you're using a color printer driver.
	Make sure color printing is selected from the printer driver.
You cannot print the menu settings page.	Make sure the selected paper source holds A4, letter, or legal size paper. Make sure the Paper Type setting for the selected source is Plain Paper.
You cannot print using the LocalTalk port.	Make sure neither LocalTalk Port nor LocalTalk Buffer is set to Disabled in the LocalTalk Menu.
	Verify the printer is set up correctly in the Macintosh Chooser.
Paper does not feed properly.	Make sure you're using recommended media. If you are using 16 lb paper, make sure it has been placed in tray 1 only. Do not use 16 lb paper with the duplex unit.
	Make sure the adjustable guides in the paper tray are adjusted properly for the media you loaded.
	Make sure the stack of media does not exceed the maximum stack height indicated on the tray.
The printer seems slow to print.	If Photo Enhance is On, it may take longer to print some complex jobs or jobs formatted for larger paper. You can set Photo Enhance to Off and select the 600 dpi setting if you need the job to print faster. See <b>Photo Enhance</b> for more information.
	Make sure you select the appropriate Paper Type setting before sending a job to print.
	If the Paper Type is set to Transparency, the printer adjusts the fuser temperature and slows printing to improve the print quality. After printing on this media, the printer requires additional time to warm the fuser after you select another Paper Type setting (such as Plain Paper or Letterhead).
	Reduce the complexity of your print job. Eliminating the number and size of fonts, the number and complexity of images, and the number of pages in a job may increase print speed.
	Set Page Protect Off from the Setup Menu. See <b>Page Protect</b> for more information.

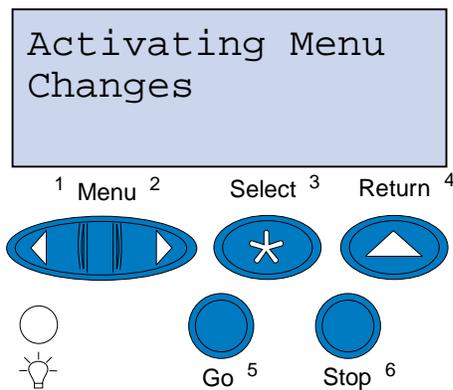
## Other printing problems (continued)

Problem	Action
You can't collate a large job.	Reduce the complexity of your print job. Eliminate the number and size of fonts, the number and complexity of images, and the number of pages.
	Add more printer memory. See <b>Adding memory</b> or refer to the <i>Setup Guide</i> for more information.
	Install an optional hard disk in your printer. See <b>Hard disk</b> , or refer to the <i>Setup Guide</i> for more information.
You get unexpected page breaks.	Increase the Print Timeout value in the <b>Setup Menu</b> .
Transparencies curl excessively.	Make sure you're using the recommended Lexmark transparencies. See <b>Transparencies</b> for more information.
Transparencies jam.	Fan transparencies before loading. Make sure you load transparencies only in tray 1. See <b>Loading transparencies</b> for more information.
	If you just turned the printer on or the printer has been idle for a period of time, print on paper before trying to print on transparencies. Disabling Power Saver may also prevent transparencies from jamming after the printer has been idle. See <b>Power Saver</b> for more information.
Paper is jammed in the fuser.	Open the fuser unit roller latches and remove the jammed paper. See <b>202 paper jam (fuser and output rollers)</b> for more information.
You cannot clear the paper jam message.	To clear the paper jam messages, you must remove all paper from the printer paper path. Check both inside the printer as well as the paper source you were using. Paper may jam at the rear of the paper tray, remove the tray and look inside for jammed paper. Then open and close the rear door and top door and press <b>Go</b> . See <b>Clearing printer paper jams</b> .
The page that jammed does not reprint after you clear the jam.	Set Jam Recovery to Auto or to On in the Setup Menu. See <b>Auto Continue</b> for more information.
Part of the printed page was clipped or is cut off.	Make sure you have the correct size paper in the paper tray and the paper size is set correctly for the paper in the tray.
	Make sure auto sensing is On unless you have a legal tray installed or are using a paper size that is not supported in auto sensing.

# 25

## Understanding printer messages

The printer operator panel displays messages describing the current state of the printer and indicates possible printer problems you must resolve. This topic provides a list of all printer messages, explains what they mean, and tells you how to clear the messages.



Click a letter or number at the bottom of the page to locate information about a message beginning with that character.

### A

**Activating Menu Changes**

**Adjusting Fuser Temperature**

### B

**Busy**

### C

**Canceling Job**

**Clearing Job Accounting Stat**

**Close Door <x>**

### D

**Defragmenting**

**Delete All Jobs**

**Deleting Jobs**

**Did you replace Fuser?**

**Did you replace Fuser Cleaner?**

**Did you replace Maintenance Kit?**

**Did you replace Photo Dev Cart?**

**Disabling Menus**

**E**

**Enabling Menus**

**Engine Warming**

**Enter PIN: =\_\_\_**

**F**

**Files will be Lost**

**Flushing Buffer**

**Formatting Disk**

**Formatting Flash**

**G**

**H**

**Held Jobs may be lost**

**I**

**Insert Tray <x>**

**Invalid Network <x> Code**

**J**

**K**

**L**

**LocalTalk <x>**

**M**

**Menus Disabled**

## **N**

**Network Card Busy**

**Network <x>**

**No Jobs Found. Retry?**

**Not Ready**

## **O**

## **P**

**Parallel <x>**

**Performing Self Test**

**Power Saver**

**Print Jobs on Disk**

**Printing Directory List**

**Printing Font List**

**Printing Job Accounting Stat**

**Printing Menu Settings**

**Prog System Code**

**Program Flash**

**Programming Disk**

## **Q**

**Queuing and Deleting Jobs**

**Queuing Jobs**

## **R**

**Ready**

**Ready Hex**

**Resetting the Printer**

**Resetting Maint Cnt Value**

**Restoring Factory Defaults**

## **S**

**Serial <x>**

**Supplies**

**T**

**Tray <x> Empty**

**Tray <x> Missing**

**U**

**V**

**W**

**Waiting**

**X**

**Y**

**Z**

**0**

**1**

**2**

**2<xx> Paper Jam**

**3**

**30 <color> Toner Cart Missing**

**37 Insufficient Collation Area**

**37 Insufficient Defrag Memory**

**37 Insufficient Memory**

**38 Memory Full**

**39 Complex Page**

**4**

**5**

**51 Defective Flash**

**52 Flash Full**

**53 Unformatted Flash**

**54 Network <x> Software Error**

**54 Par <x> ENA Connection Lost**

**54 Serial Option <x> Error**  
**54 Network <x> Software Error**  
54 Std Network Software Error  
**54 Std Par ENA Connection Lost**  
**55 Insufficient Fax Buffer**  
**56 Parallel Port <x> Disabled**  
**56 Serial Port <x> Disabled**  
**56 Std Parallel Port Disabled**  
**58 Too Many Disks Installed**  
**58 Too Many Flash Options**

**6**

**61 Defective Disk**  
**62 Disk Full**  
**63 Unformatted Disk**

**7**

**70–79 <message>**

**8**

**80 Scheduled Maintenance**  
**80 Transfer Roller Missing**  
**81 Oil Bottle Empty or Missing**  
**81 Oil Bottle Low**  
**82 Photo Dev Cart Exhausted**  
**82 Photo Dev Cart Missing**  
**83 Waste Bottle Full Or Missing**  
**83 Waste Toner Bottle Near Full**  
**84 Transfer Drum Exhausted**  
**85 Fuser Cleaner Exhausted**  
**85 Fuser Cleaner Missing**  
**86 Insert Tray 2**  
**87 Fuser Exhausted**

**87 Fuser Missing**

**88 <color> Toner Empty**

**88 <color> Toner Low**

**9**

**900–999 Service <message>**

---

### **Activating Menu Changes**

**What this message means:**

The printer is activating changes made to the printer settings.

**What you can do:**

Wait for the message to clear.

---

### **Adjusting Fuser Temperature**

**What this message means:**

The printer has printed several pages and needs time to cool down.

**What you can do:**

Wait for the message to clear.

---

### **Busy**

**What this message means:**

The printer is busy receiving, processing, or printing data.

**What you can do:**

- Wait for the message to clear.
- Press **Menu>** or **<Menu** to open the Job Menu and cancel the current job.

---

## Canceling Job

### What this message means:

The printer is processing a request to cancel the current print job.

### What you can do:

Wait for the message to clear.

---

## Clearing Job Accounting Stat

### What this message means:

The printer is deleting all job statistics stored on the hard disk.

### What you can do:

Wait for the message to clear.

---

## Close Door <x>

### What this message means:

The specified door is open.

### What you can do:

Close the door to clear the message. Look for a label on the printer to help you locate the door specified in the message.

---

## Defragmenting

### What this message means:

The printer is defragmenting the flash memory to reclaim storage space occupied by deleted resources.

### What you can do:

Wait for the message to clear.

**WARNING:** Do not turn the printer off while this message is displayed.

---

## Delete All Jobs

### What this message means:

The printer is requesting confirmation to delete all held jobs.

### What you can do:

- Press **Go** to continue. The printer deletes all held jobs.
- Press **Stop** to cancel the operation.

---

## Deleting Jobs

### What this message means:

The printer is deleting one or more held jobs.

### What you can do:

Wait for the message to clear.

---

## Did you replace Fuser?

### What this message means:

When it's time to replace the fuser, the printer alerts you each time you open and close the printer top door.

### What you can do:

Replace the fuser to prevent this message from recurring.

To continue printing:

- Press **Go** if you replaced the fuser.
- Press **Stop** if you have not replaced the fuser.

### See also:

[Fuser and air filter](#)

---

## Did you replace Fuser Cleaner?

### What this message means:

When it's time to replace the cleaning roll, the printer alerts you each time you open and close the printer top door.

### What you can do:

Replace the cleaning roll to prevent this message from recurring.

To continue printing:

- Press **Go** if you replaced the cleaning roll.
- Press **Stop** if you have not replaced the cleaning roll.

### See also:

[Cleaning roll](#)

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## Did you replace Maintenance Kit?

### What this message means:

When it's time to replace the maintenance kit, the printer alerts you each time you open and close the printer top door.

### What you can do:

Replace the maintenance kit to prevent this message from recurring.

To continue printing:

- Press **Go** if you replaced the maintenance kit.
- Press **Stop** if you have not replaced the maintenance kit.

### See also:

[Maintenance kit; Replacing the maintenance kit](#)

---

## Did you replace Photo Dev Cart?

### What this message means:

When it's time to replace the photo developer cartridge, the printer alerts you each time you open and close the printer top door.

**What you can do:**

Replace the photo developer cartridge to prevent this message from recurring.

To continue printing:

- Press **Go** if you replaced the photo developer cartridge.
- Press **Stop** if you have not replaced the photo developer cartridge.

**See also:**

[Photo developer cartridge](#)

---

**Disabling Menus****What this message means:**

The printer is responding to a request to disable the menus.

**What you can do:**

Wait for the message to clear.

**Note:** While the menus are disabled, you cannot change the printer settings from the operator panel.

---

**Enabling Menus****What this message means:**

The printer is responding to a request to make the menus available to all users.

**What you can do:**

Wait for the message to clear, and then press **Menu>** or **<Menu** to view the menus from the operator panel.

---

**Engine Warming****What this message means:**

The printer is warming the fuser to prepare for printing.

**What you can do:**

Wait for the message to clear.

---

**Enter PIN:**

=\_\_\_\_

**What this message means:**

The printer is waiting for you to enter your four-digit personal identification number (PIN).

**What you can do:**

Use the operator panel buttons to enter the PIN you identified in the driver when you sent the confidential job to the printer.

**See also:**

[Confidential jobs](#)

---

**Files will be  
Lost****What this message means:**

You have changed the Job Buffer Size setting from the operator panel, and the printer must format the hard disk to activate the change.

**What you can do:**

- Press **Go** to format the hard disk and delete all files currently stored on the disk.
- Press **Return** or **Stop** to cancel this operation.

---

**Flushing Buffer****What this message means:**

The printer is flushing corrupted print data and discarding the current print job.

**What you can do:**

Wait for the message to clear.

---

**Formatting Disk****What this message means:**

The printer is formatting the hard disk.

**What you can do:**

Wait for the message to clear.

**WARNING:** Do not turn the printer off while this message is displayed.

---

**Formatting Flash****What this message means:**

The printer is formatting the flash memory.

**What you can do:**

Wait for the message to clear.

**WARNING:** Do not turn the printer off while this message is displayed.

---

**Held Jobs may be lost****What this message means:**

The printer memory is too full to continue processing print jobs.

**What you can do:**

- Press **Go** to clear the message and continue printing. The printer frees memory by deleting the oldest held job and continues deleting held jobs until there is enough printer memory to process the job.
- Press **Stop** to clear the message without deleting any held jobs. The current job may not print correctly.
- Press **Menu>** or **<Menu** to open the Job Menu and cancel the current job.
- To avoid this error in the future:
  - Delete fonts, macros, and other data stored in printer memory.
  - Install more printer memory.

**Note:** The messages **37 Insufficient Memory** and **Held Jobs may be lost** alternate on the display.

---

**Insert Tray <x>****What this message means:**

The specified tray is either missing or not fully inserted into the printer.

**What you can do:**

Insert the specified tray completely into the printer.

---

**Invalid  
Network <x> Code****What this message means:**

The code in an internal print server is not valid. The printer cannot receive and process jobs until valid code is programmed into the internal print server.

**What you can do:**

Download valid code to the printer's internal print server.

**Note:** You can download network code while this message is displayed.

---

**LocalTalk <x>****What this message means:**

A LocalTalk interface is the active communication link.

---

**Menus Disabled****What this message means:**

The printer menus are disabled. You cannot change the printer settings from the operator panel.

**What you can do:**

Enable the printer menus.

**See also:**

[Locking the menus](#)

---

**Network Card  
Busy****What this message means:**

An internal print server (also called an internal network adapter or INA) is being reset.

**What you can do:**

Wait for the message to clear.

---

**Network <x>****What this message means:**

A network interface is the active communication link.

---

**No Jobs Found.  
Retry?****What this message means:**

The four-digit personal identification number (PIN) you entered is not associated with any confidential print job.

**What you can do:**

- Press **Go** to enter another PIN.
- Press **Stop** to clear the PIN entry prompt.

**See also:**

[Confidential jobs](#)

---

**Not Ready****What this message means:**

The printer is not ready to receive or process data. Someone pressed **Stop** to take the printer offline.

**What you can do:**

Press **Go** to make the printer ready to receive jobs.

---

**Parallel <x>****What this message means:**

A parallel interface is the active communication link.

---

## Performing Self Test

### What this message means:

The printer is running the series of start-up tests it performs after it is turned on.

### What you can do:

Wait for the message to clear.

---

## Power Saver

### What this message means:

The printer is ready to receive and process data. It is reducing its electricity consumption while idle. If the printer remains inactive for the period of time specified in the Power Saver menu item (20 minutes is the factory default), the **Power Saver** message replaces the **Ready** message.

### What you can do:

- Send a job to print.
- Press **Go** to quickly warm the printer to normal operating temperature and display the **Ready** message.

---

## Print Jobs on Disk

### What this message means:

Jobs that were spooled to the hard disk before the printer was last turned off have not yet printed.

### What you can do:

- Press **Go** to print the jobs.
- Press **Return** or **Stop** to delete the jobs from the hard disk without printing them.

---

## Printing Directory List

### What this message means:

The printer is processing or printing a directory of all files stored in flash memory or on a hard disk.

**What you can do:**

Wait for the message to clear.

---

**Printing  
Font List****What this message means:**

The printer is processing or printing a list of all available fonts for the specified printer language.

**What you can do:**

Wait for the message to clear.

---

**Printing Job  
Accounting Stat****What this message means:**

The printer is processing or printing all job accounting statistics stored on the hard disk.

**What you can do:**

Wait for the message to clear.

---

**Printing Menu  
Settings****What this message means:**

The printer is processing or printing the menu settings page.

**What you can do:**

Wait for the message to clear.

---

**Prog System Code****What this message means:**

The printer is programming new system code.

**What you can do:**

Wait for the message to clear and the printer to reset.

**WARNING:** Do not turn the printer off while this message is displayed.

---

**Program Flash****What this message means:**

The printer is storing resources, such as fonts or macros, in flash memory.

**What you can do:**

Wait for the message to clear.

**WARNING:** Do not turn the printer off while this message is displayed.

---

**Programming Disk****What this message means:**

The printer is storing resources, such as fonts or macros, on the hard disk.

**What you can do:**

Wait for the message to clear.

**WARNING:** Do not turn the printer off while this message is displayed.

---

**Queuing and  
Deleting Jobs****What this message means:**

The printer is deleting one or more held jobs and sending one or more jobs to print.

**What you can do:**

Wait for the message to clear.

---

**Queuing Jobs****What this message means:**

The printer is sending one or more held jobs to print.

**What you can do:**

Wait for the message to clear.

---

**Ready****What this message means:**

The printer is ready to receive and process print jobs.

**What you can do:**

Send a job to print.

---

**Ready Hex****What this message means:**

The printer is in Hex Trace mode and is ready to receive and process print jobs.

**What you can do:**

- Send a job to print. All data sent to the printer is printed in hexadecimal and character representation. Control strings are printed, not executed.
  - Turn the printer off and then on to exit Hex Trace mode and return to Ready status.
- 

**Resetting the  
Printer****What this message means:**

The printer is resetting to the current default settings. Any active print jobs are canceled.

**What you can do:**

Wait for the message to clear.

---

**Resetting  
Maint Cnt Value****What this message means:**

The printer is resetting the counter that tracks wear on the fuser.

**What you can do:**

Wait for the message to clear.

---

## Restoring Factory Defaults

### What this message means:

The printer is restoring the factory default printer settings. When factory default settings are restored:

- All downloaded resources (fonts, macros, symbol sets) in the printer memory are deleted.
- All menu settings return to the factory default setting *except*:
  - The Display Language setting in the Setup Menu.
  - All settings in the Parallel Menu, Serial Menu, Network Menu, Infrared Menu, LocalTalk Menu, USB Menu, and Fax Menu.

### What you can do:

Wait for the message to clear.

---

## Serial <x>

### What this message means:

A serial interface is the active communication link.

---

## Supplies

### What this message means:

At least one of the printer supplies requires attention. For example, you may have a paper tray that is out of paper or a photo developer cartridge that needs replacing.

### What you can do:

Press **Menu>** or **<Menu** to open the Supplies Menu and identify which supply item needs replacing. Replace the appropriate printer supplies.

### See also:

[Maintenance; Supplies overview](#)

---

## Tray <x> Empty

### What this message means:

The specified tray is out of paper.

**What you can do:**

Load paper in the tray to clear the message.

---

**Tray <x> Missing****What this message means:**

The specified tray is either missing or not fully inserted into the printer.

**What you can do:**

Insert the tray completely into the printer.

---

**Waiting****What this message means:**

The printer has received a page of data to print but is waiting for an End of Job command, a Form Feed command, or additional data.

**What you can do:**

- Press **Go** to print the contents of the buffer.
- Press **Menu** or **<Menu** to open the Job Menu and cancel the current job.

---

**2<xx> Paper Jam****What this message means:**

The printer detects a paper jam. Although the location of the paper jam appears on the second line of the display, you must clear paper from the entire paper path.

**What you can do:**

Clear the entire paper path.

**See also:**

[Paper jams](#)

---

**30 <color> Toner  
Cart Missing****What this message means:**

The specified toner cartridge is either missing or incorrectly installed.

**What you can do:**

Insert the toner cartridge completely into the printer. The printer automatically clears the message.

---

**37 Insufficient  
Collation Area****What this message means:**

The printer memory (or hard disk, if installed) does not have the free space necessary to collate the print job.

**What you can do:**

- Press **Go** to print the portion of the job already stored and begin collating the rest of the job.
- Press **Menu>** or **<Menu** to open the Job Menu and cancel the current job.

---

**37 Insufficient  
Defrag Memory****What this message means:**

The printer cannot defragment flash memory because the printer memory used to store undeleted flash resources is full.

**What you can do:**

- Delete fonts, macros, and other data in printer memory.
- Install additional printer memory.

---

**37 Insufficient  
Memory****What this message means:**

The printer memory is full and cannot continue processing current print jobs.

**What you can do:**

- Press **Go** to clear the message and continue the current print job. The printer frees memory by deleting the oldest held job and continues deleting held jobs until there is enough printer memory to process the job.
- Press **Stop** to clear the message without deleting any held jobs. The current job may not print correctly.
- Press **Menu>** or **<Menu** to open the Job Menu and cancel the current job.

- To avoid this error in the future:
  - Delete fonts, macros, and other data in printer memory.
  - Install additional printer memory.

**Note:** The messages 37 **Insufficient Memory** and **Held Jobs may be lost** alternate on the display.

---

## 38 Memory Full

### What this message means:

The printer is processing data, but the memory used to store pages is full.

### What you can do:

- Press **Go** to clear the message and continue printing the job. The job may not print correctly.
- Press **Menu>** or **<Menu** to open the Job Menu and cancel the current job.
- To avoid this error in the future:
  - Simplify the print job by reducing the amount of text or graphics on a page and deleting unnecessary downloaded fonts or macros.
  - Install additional printer memory.

---

## 39 Complex Page

### What this message means:

The page may not print correctly because the print information on the page is too complex.

### What you can do:

- Press **Go** to clear the message and continue printing the job. The job may not print correctly.
- Press **Menu>** or **<Menu** to open the Job Menu and cancel the current job.
- To avoid this error in the future:
  - Reduce the complexity of the page by reducing the amount of text or graphics on the page and deleting unnecessary downloaded fonts or macros.
  - Set Page Protect to On in the Setup Menu.
  - Install additional printer memory.

### See also:

[Setup Menu](#)

---

## 51 Defective Flash

### What this message means:

The printer detects defective flash memory.

### What you can do:

Press **Go** to clear the message and continue printing. You must install different flash memory before you can download any resources to flash.

---

## 52 Flash Full

### What this message means:

There is not enough free space in the flash memory to store the data you are trying to download.

### What you can do:

- Press **Go** to clear the message and continue printing. Downloaded fonts and macros not previously stored in flash memory are deleted.
- Delete fonts, macros, and other data stored on the flash memory.
- Install flash memory with more storage capacity.

---

## 53 Unformatted Flash

### What this message means:

The printer detects unformatted flash memory.

### What you can do:

- Press **Go** to clear the message and continue printing. You must format the flash memory before you can store any resources on it.
- If the error message remains, the flash memory may be defective and require replacing.

### See also:

[Utilities Menu](#)

---

## 54 Serial Option <x> Error

**What this message means:**

The printer has detected a serial interface error on a serial port.

**What you can do:**

- Make sure the serial link is set up correctly and you are using the appropriate cable.
- Press **Go** to clear the message and continue printing. The job may not print correctly.
- Press **Menu>** or **<Menu** to open the Job Menu and reset the printer.

---

**54 Network <x>  
Software Error**

---

**54 Std Network  
Software Error**

**What these messages mean:**

The printer cannot establish communications with an installed network port.

**What you can do:**

- Press **Go** to clear the message and continue printing. The job may not print correctly.
- Program new firmware for the network interface by the parallel port.
- Press **Menu>** or **<Menu** to open the Job Menu and reset the printer.

---

**54 Std Par ENA  
Connection Lost**

---

**54 Par <x> ENA  
Connection Lost**

**What these messages mean:**

The printer has lost the connection to an external print server (also called an external network adapter or ENA).

**What you can do:**

- Make sure the cable connecting the ENA and the printer is securely attached. Turn the printer off and then on to reset the printer.
- Press **Go** to clear the message. The printer erases any reference to the ENA and then resets.

---

**55 Insufficient  
Fax Buffer**

**What this message means:**

The buffer used to process data is too full to receive an incoming fax. This has broken the connection between the printer and the sending fax machine. The printer will not accept additional fax data until sufficient fax buffer space is made available.

**What you can do:**

- Press **Go** to clear the message and print any fax data stored in the fax buffer. The job may not print correctly.
- Increase the size of the Fax Buffer in the Fax Menu.

---

**56 Serial  
Port <x> Disabled****What this message means:**

Data has been sent to the printer through a serial port, but the serial port is disabled.

**What you can do:**

- Press **Go** to clear the message. The printer discards any data received through the serial port.
- Make sure the Serial Buffer menu item in the Serial Menu is not set to Disabled.

**See also:**

[Serial Menu](#)

---

**56 Parallel  
Port <x> Disabled**

---

**56 Std Parallel  
Port Disabled****What these messages mean:**

Data has been sent to the printer through a parallel port, but the parallel port is disabled.

**What you can do:**

- Press **Go** to clear the message. The printer discards any data received through the parallel port.
- Make sure the Parallel Buffer menu item in the Parallel Menu is not set to Disabled.

**See also:**

[Parallel Menu](#)

---

**58 Too Many  
Disks Installed****What this message means:**

Too many hard disks are installed on the printer. The printer only supports one hard disk at a time.

**What you can do:**

Turn off and unplug the printer. Remove the excess hard disks from the printer. Plug in the printer and turn it on.

**See also:**

*Setup Guide*

---

**58 Too Many  
Flash Options****What this message means:**

Too many flash memory options are installed on the printer.

**What you can do:**

Turn off and unplug the printer. Remove the excess flash memory. Plug in the printer and turn it on.

**See also:**

*Setup Guide*

---

**61 Defective  
Disk****What this message means:**

The printer detects a defective hard disk.

**What you can do:**

- Press **Go** to clear the message and continue printing.
- Install a different hard disk before you perform any operations that require one.

**See also:**

*Setup Guide*

---

**62 Disk Full****What this message means:**

There is not enough memory on the hard disk to store the data sent to the printer.

**What you can do:**

- Press **Go** to clear the message and continue processing. Any information not previously stored on the hard disk is deleted.
- Delete fonts, macros, and other data stored on the hard disk.

---

## 63 Unformatted Disk

### What this message means:

The printer detects an unformatted hard disk.

### What you can do:

- Press **Go** to clear the message and continue printing.
- Format the disk before performing any disk operations. To format the disk, select Format Disk from the Utilities Menu.
- If the error message remains, the hard disk may be defective and require replacing. Install a new hard disk and format it.

---

## 70–79 <message>

### What these messages mean:

Messages 70–79 identify problems related to the internal print server.

### What you can do:

Refer to the drivers CD for more information. Click **View Documentation**, and then click **MarkNet Print Servers**.

---

## 80 Scheduled Maintenance

### What this message means:

The printer requires replacement of routine maintenance items to maintain top performance and avoid print quality and paper feed problems.

### What you can do:

- Replace the maintenance kit and reset the printer maintenance counter.
- Press **Go** to clear the message and continue printing.

### See also:

[Maintenance kit; Replacing the maintenance kit](#)

---

## 80 Transfer Roller Missing

### What this message means:

The transfer roller is either missing or incorrectly installed.

### What you can do:

Correctly install the transfer roller to clear the message.

### See also:

[Replacing the transfer roller](#)

---

## 81 Oil Bottle Empty or Missing

### What this message means:

The oil bottle is either empty or missing.

### What you can do:

Replace the oil bottle to clear the message and continue printing.

### See also:

[Oil bottle](#)

---

## 81 Oil Bottle Low

### What this message means:

The oil bottle is low on oil.

### What you can do:

- Replace the oil bottle.
- Press **Go** to clear the message and continue printing.

### See also:

[Oil bottle](#)

---

## 82 Photo Dev Cart Exhausted

### What this message means:

The photo developer cartridge has reached its end of life.

### What you can do:

- Press **Go** to clear the message and continue printing.
- Replace the photo developer cartridge and reset the photo developer cartridge counter to continue printing.

### See also:

[Photo developer cartridge](#)

---

## 82 Photo Dev Cart Missing

### What this message means:

The photo developer cartridge is either missing or incorrectly installed.

### What you can do:

Correctly install the photo developer cartridge to clear the message and continue printing.

### See also:

[Photo developer cartridge](#)

---

## 83 Waste Bottle Full Or Missing

### What this message means:

The waste toner bottle is either full or missing.

### What you can do:

Install an empty waste toner bottle to clear the message and continue printing.

### See also:

[Waste toner bottle](#)

---

## **83 Waste Toner Bottle Near Full**

### **What this message means:**

The waste toner bottle is nearly full.

### **What you can do:**

- Replace the waste toner bottle.
- Press **Go** to clear the message and continue printing.

### **See also:**

[Waste toner bottle](#)

---

## **84 Transfer Drum Exhausted**

### **What this message means:**

The transfer drum has reached its end of life.

### **What you can do:**

Press **Go** to clear the message. Contact your local Lexmark dealer to arrange for a trained service professional to replace the transfer drum.

---

## **85 Fuser Cleaner Exhausted**

### **What this message means:**

The fuser cleaner has reached its end of life.

### **What you can do:**

Replace the fuser cleaner and reset the maintenance counter to continue printing.

### **See also:**

[Cleaning roll](#)

---

## **85 Fuser Cleaner Missing**

### **What this message means:**

The fuser cleaner is either missing or incorrectly installed.

### **What you can do:**

Correctly install the fuser cleaner to clear the message and continue printing.

### **See also:**

[Cleaning roll](#)

---

## **86 Insert Tray 2**

### **What this message means:**

Tray 2 is incorrectly inserted in the printer.

### **What you can do:**

Insert Tray 2 completely into the printer to clear the message.

---

## **87 Fuser Exhausted**

### **What this message means:**

The fuser has reached its end of life.

### **What you can do:**

- Replace the fuser and the air filter that comes packaged with the fuser.
- Press **Go** to continue printing.

### **See also:**

[Fuser and air filter](#)

---

## **87 Fuser Missing**

### **What this message means:**

The fuser is either missing or incorrectly installed.

**What you can do:**

Correctly install the fuser to clear the message and continue printing.

**See also:**

[Fuser and air filter](#)

---

**88 <color>  
Toner Empty**

**What this message means:**

The printer has ceased operating because the specified toner cartridge is empty. You cannot print until you replace the specified toner cartridge.

**What you can do:**

Install a new toner cartridge.

**See also:**

[Toner cartridges](#)

---

**88 <color> Toner  
Low**

**What this message means:**

The printer has detected that the toner supply in the specified cartridge is low. If you do not have the specified toner cartridge on hand, order one now. You can print approximately 250 pages before the **88 <color> Toner Empty** message appears and the printer ceases operating.

**What you can do:**

- Replace the specified toner cartridge.
- Press **Go** to clear the message and continue printing. The **Supplies** message is displayed on the second line of the operator panel until you replace the specified toner cartridge.

**See also:**

[Toner cartridges](#)

---

## 900–999 Service <message>

### What these messages mean:

Messages 900–999 relate to printer problems that may require printer service.

### What you can do:

Turn the printer off and check all cable connections. Turn the printer back on. If the service message recurs, call for service and report the message number and description of the problem.

### See also:

[961-963 Service RAM Memory Error](#); [970-979 Service Network Card <x>](#)

---

## 961–963 Service RAM Memory Error

### What these messages mean:

A memory error has occurred and one or more memory cards need to be replaced.

961—the memory card in slot 1 is defective.

962—the memory card in slot 2 is defective.

963—the memory card in slot 3 is defective.

### What you can do:

Remove or replace the defective memory card. See [Removing memory and network options](#) or refer to your *Setup Guide* for information on installing memory.

---

## 970–979 Service Network Card <x>

### What these messages mean:

The network card is defective. If Alarm Control is set to on, an alarm sounds.

### What you can do:

Remove or replace the network card. Refer to your *Setup Guide* for information on removing and installing interface options.



## Clearing paper jams

---

### *Paper jam messages*

The following table lists the paper jam messages. The message number indicates where the paper jam occurred.

#### Paper jam messages

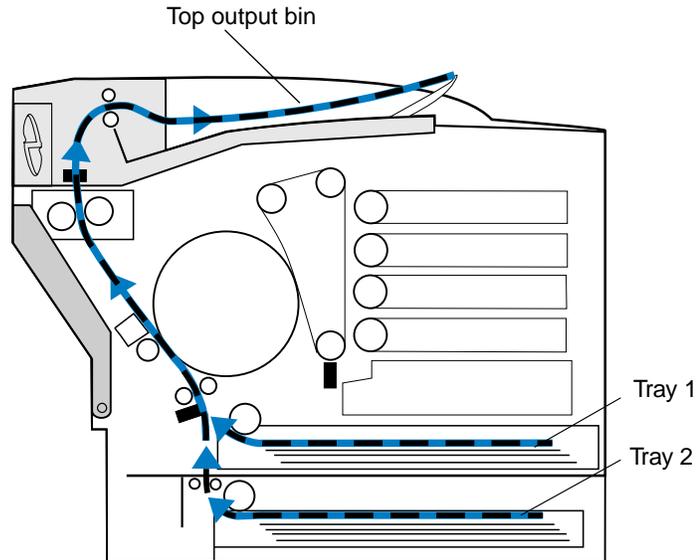
Message	To locate the jam...	For details see...
201 Paper Jam	Open the rear door	<a href="#">201 Paper jam (rear door)</a>
202 Paper Jam	Open the top door	<a href="#">202 Paper jam (fuser and output rollers)</a>
230 Paper Jam	Open the duplex unit top door	<a href="#">230 Paper jam (duplex unit top door)</a>
231 Paper Jam	Open the duplex unit lower door	<a href="#">231 Paper jam (duplex unit lower door)</a>
24x Paper Jam	Open the paper tray	<a href="#">24x Paper jam (trays 1 or 2)</a>

**CAUTION:** The inside of the printer may be hot. Allow the printer to cool before touching any internal components.

By carefully selecting print media and loading it properly, you should avoid most paper jams. For more information on proper paper handling and avoiding paper jams, see [Paper handling](#).

When a jam does occur, the **Paper Jam** message appears and indicates the location of the jammed paper. You must clear the paper from this area, but you must also *clear all paper from the entire paper*

*path*. The illustration of the paper path may help you. For paper jams occurring in the duplex unit, see [Clearing paper jams in the duplex unit](#).

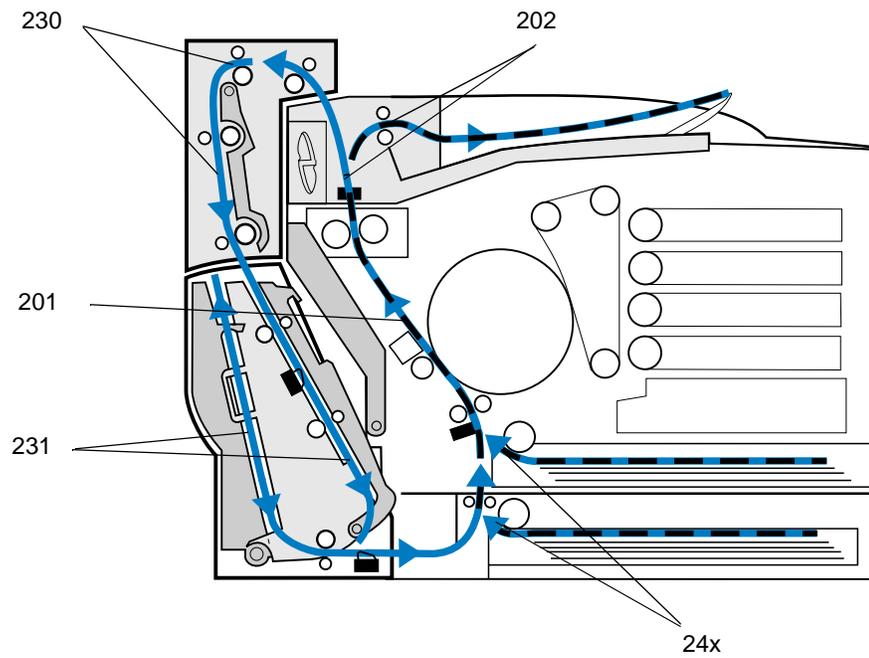


After you have cleared all the paper, close the printer rear door and top door, and then press **Go** to clear the message.

The Jam Recovery setting in the Setup Menu determines whether the printer reprints the jammed page. See [Auto Continue](#) for more information.

**Note:** If you feel you have cleared all the paper from the paper path, but the paper jam message is still displayed, remove the paper trays and check for jammed paper inside the paper tray cavity, replace the paper trays, open and close the rear and top door, and then press **Go**.

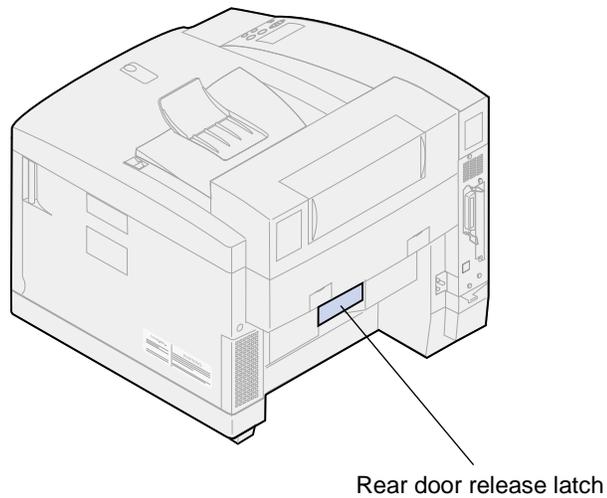
The following illustration identifies the printer jam number locations.



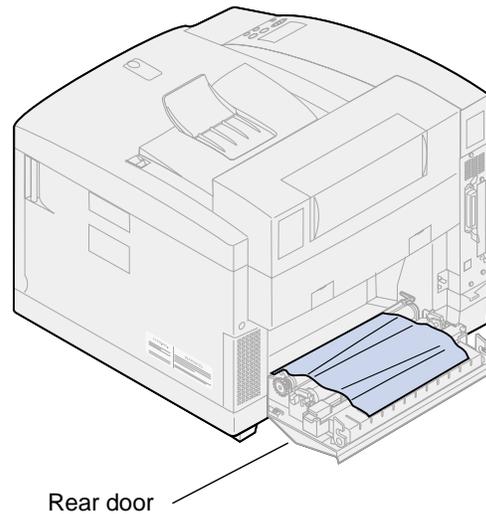
### **201 Paper jam (rear door)**

- 1 Pull the rear door release latch toward the rear of the printer.

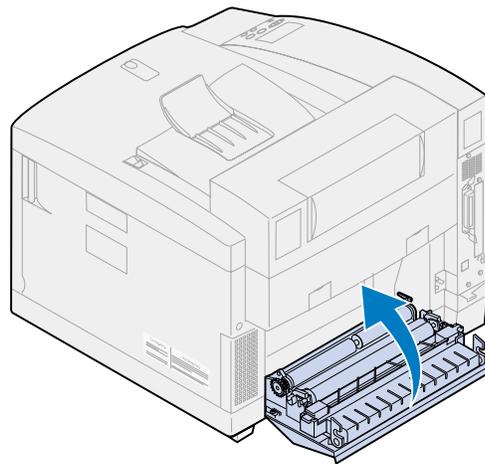
**CAUTION:** The inside of the printer may be hot. Allow the printer to cool before touching any internal components.



- 2 Lower the rear door and carefully remove any paper from the back of the printer.



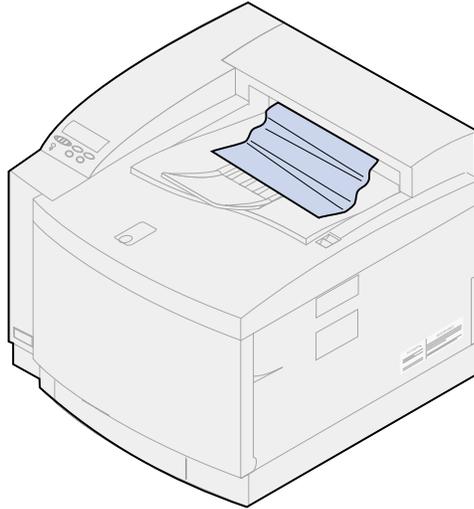
- 3 Close the rear door.
- 4 Press **Go** on the operator panel.



## 202 Paper jam (fuser and output rollers)

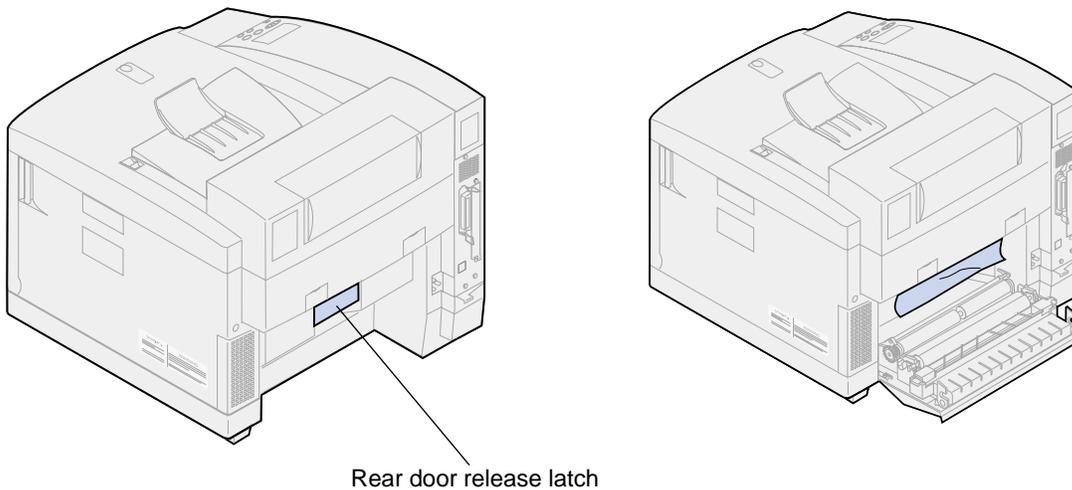
**Note:** Paper jammed in the fuser rollers must be removed from the back of the printer to avoid contaminating the fuser rollers with unfused toner.

- 1 Carefully remove any jammed paper from the output rollers.

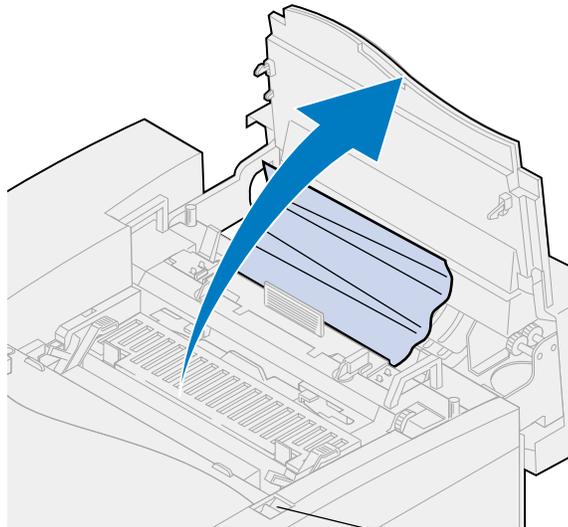


- 2 Pull the rear door release latch toward the rear of the printer and lower the rear door.

**CAUTION:** The inside of the printer may be hot. Allow the printer to cool before touching any internal components.

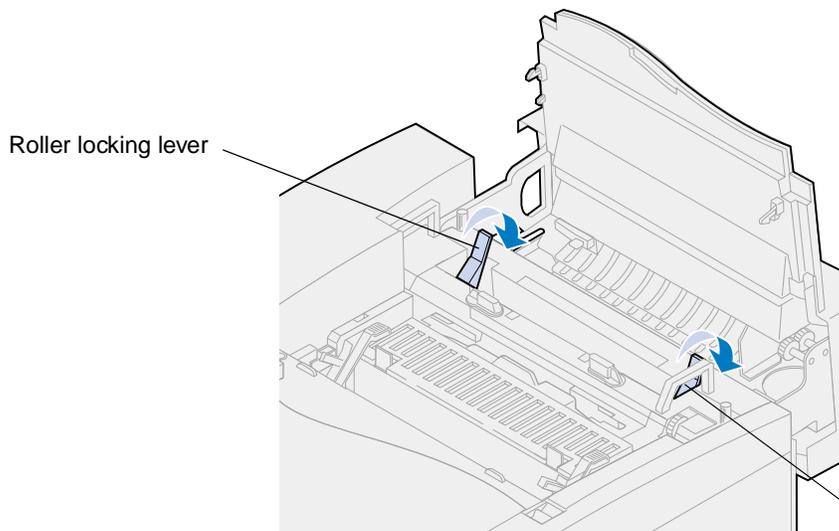


- 3 Slide the top door release latch toward the front of the printer.
- 4 Lift the top door.



Top door release latch

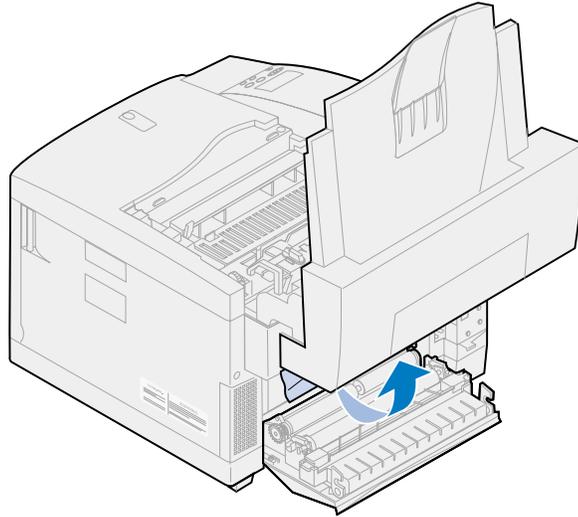
- 5 Move the green roller locking levers toward the rear of the printer.



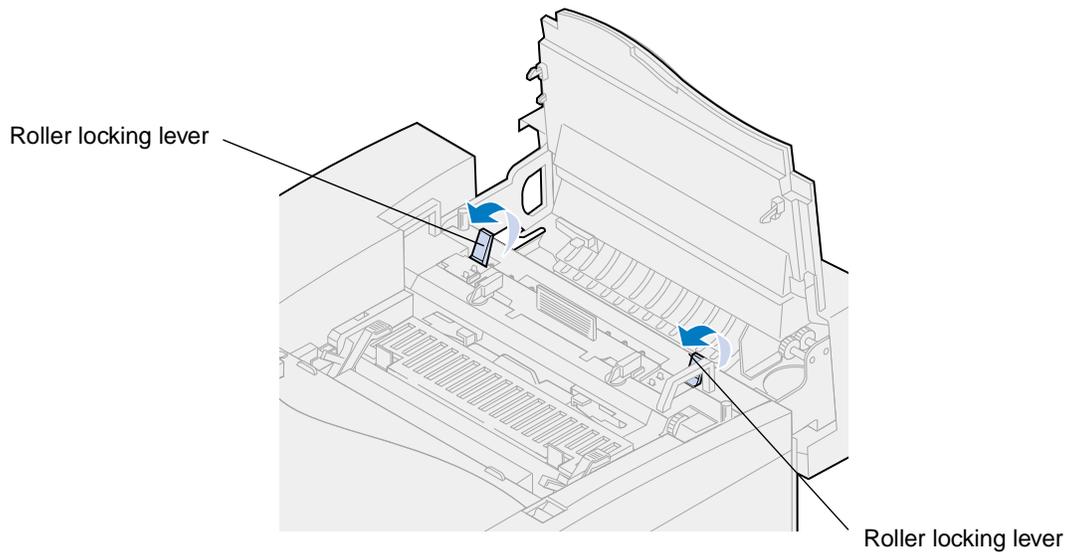
Roller locking lever

Roller locking lever

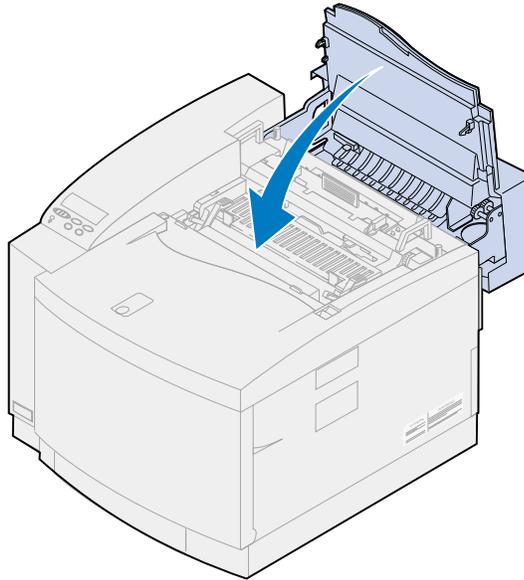
- 6** Remove the jammed paper from the rear of the printer.



- 7** Move the green roller locking levers to center position.

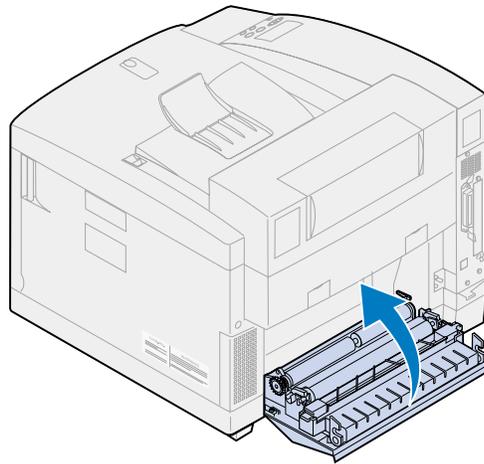


- 8 Close the top door.



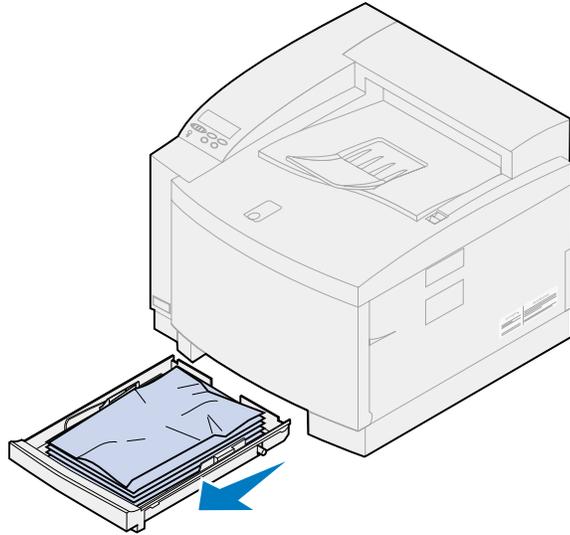
- 9 Close the rear door.

- 10 Press **Go** on the operator panel.

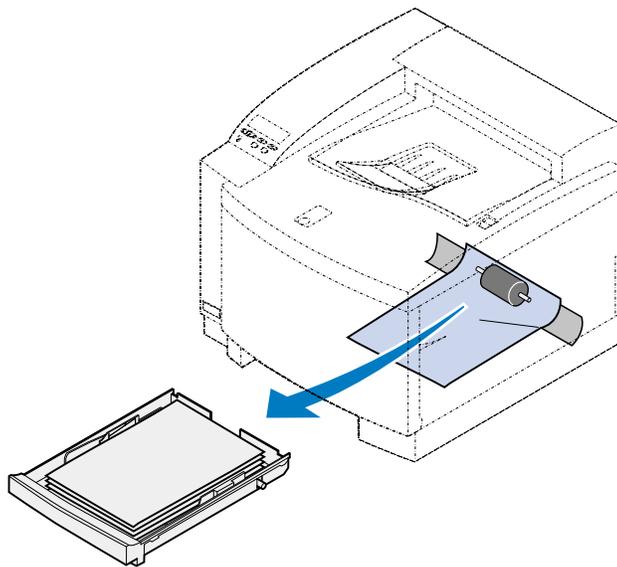


## 24x Paper jam (trays 1 or 2)

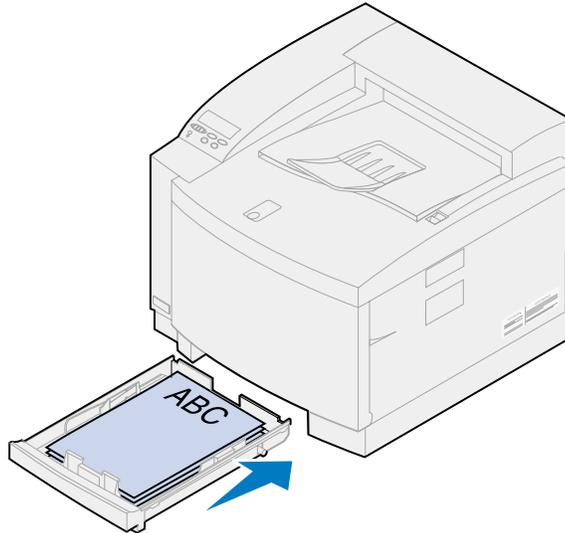
- 1 Pull the paper tray completely out of the printer and set it on a flat surface.
- 2 Remove any wrinkled or damaged paper.



- 3 Examine inside the paper tray cavity and remove any paper inside the printer.

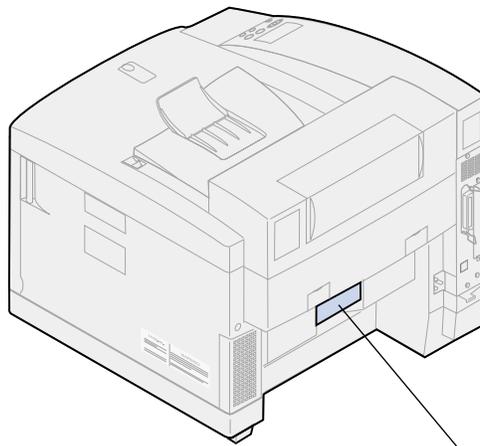


- 4 Place the paper in the paper tray.
- 5 Hold the paper tray with both hands and firmly slide it all the way into the printer.



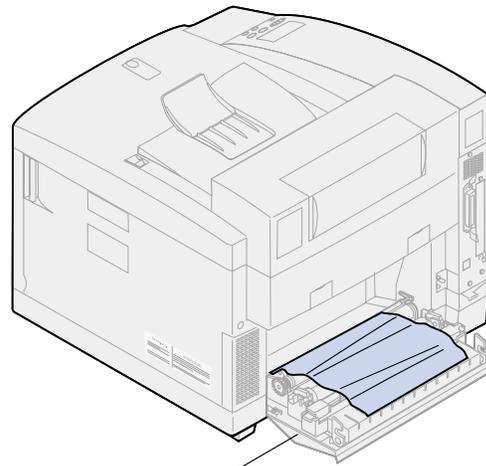
- 6 Pull the rear door release latch toward the rear of the printer.

**CAUTION:** The inside of the printer may be hot. Allow the printer to cool before touching any internal components.



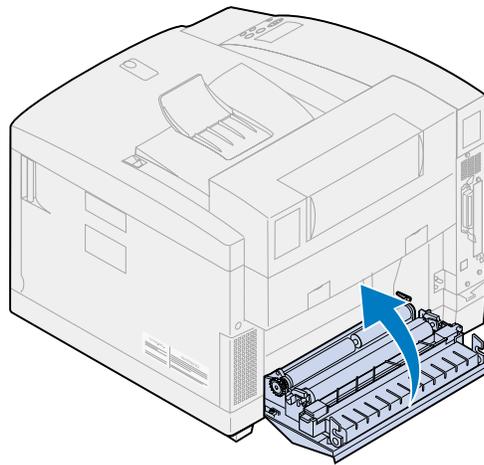
Rear door release latch

- 7 Carefully remove any paper from the back of the printer.



Rear door

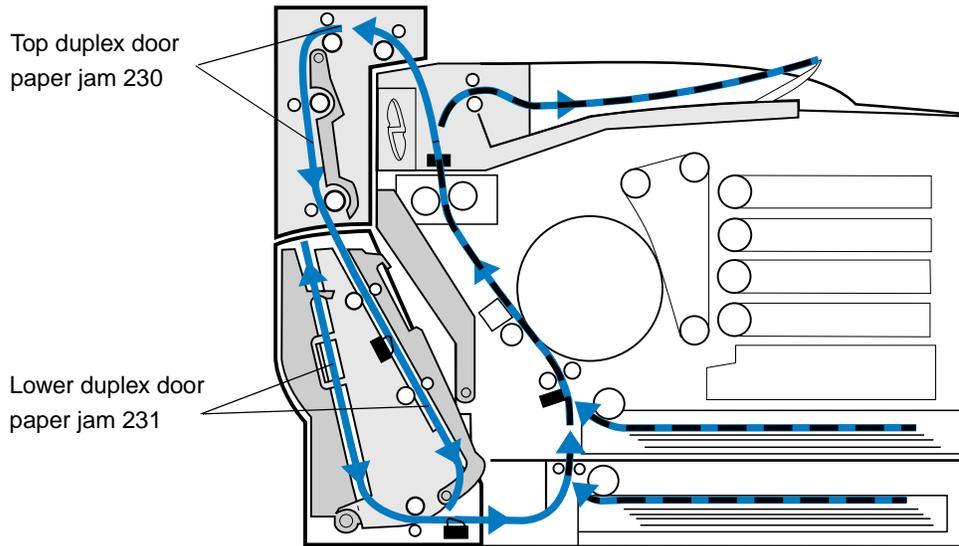
- 8 Close the rear door.
- 9 Press **Go** on the operator panel.



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## Clearing paper jams in the duplex unit

When a jam occurs in the duplex unit, the 230 or 231 **Paper Jam** message appears and indicates where to find the jammed paper. You must clear the paper from this area. The illustration of the duplex unit paper path may help you.

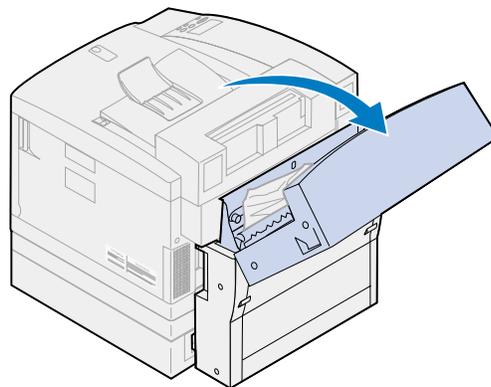


After you have cleared the paper jam, close the duplex unit, doors and then press **Go** to clear the message.

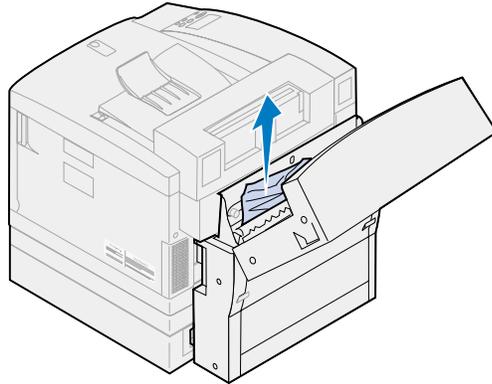
The Jam Recovery setting in the Setup Menu determines whether the printer reprints the jammed page. See **Auto Continue** for more information.

### 230 Paper jam (duplex unit top door)

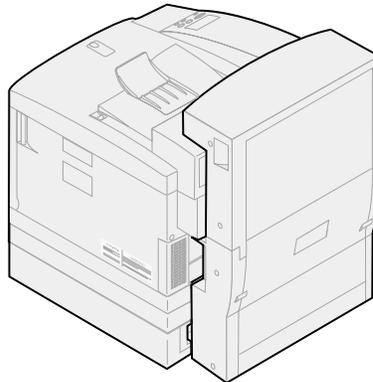
- 1 Open the top duplex door.



- 2 Carefully remove any jammed paper from the top of the duplex unit.

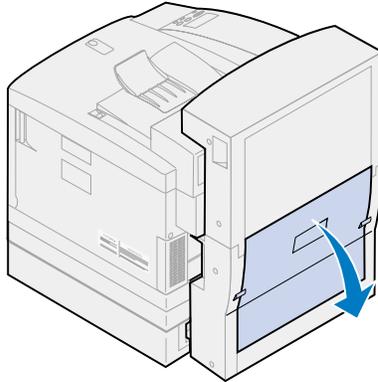


- 3 Close the top duplex door.
- 4 Press **Go** on the operator panel.

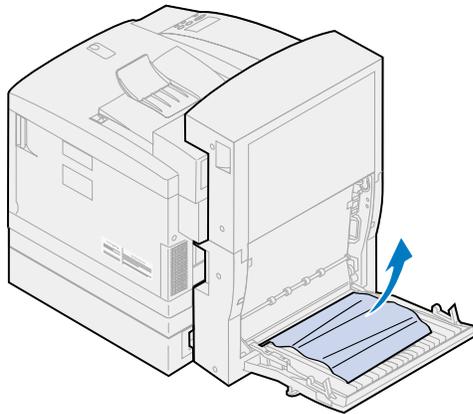


## 231 Paper jam (duplex unit lower door)

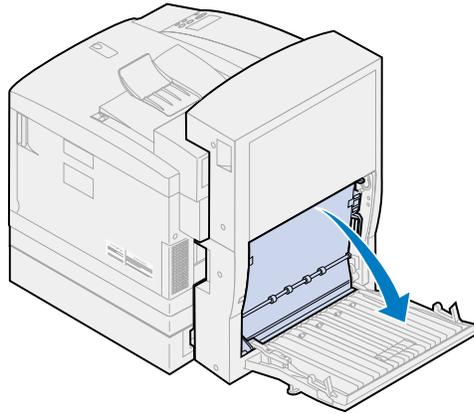
- 1 Open the *outer* lower duplex access door.



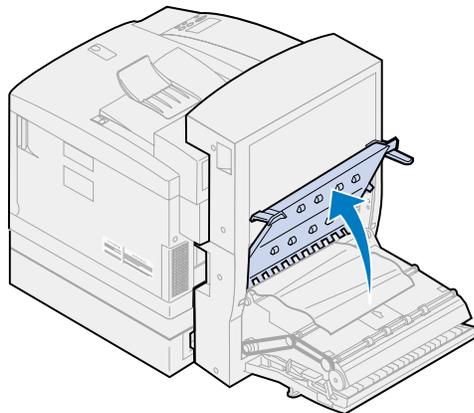
- 2 Carefully remove any jammed paper from the rear of the duplex unit.



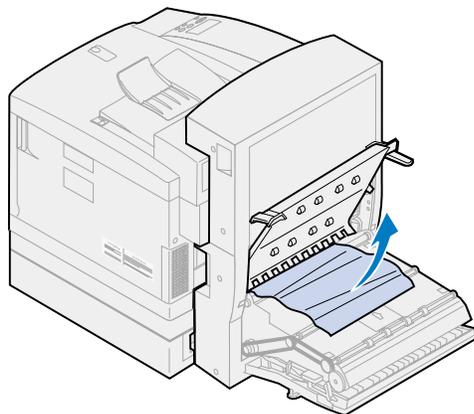
- 3** Lower the *inner* rear duplex door.



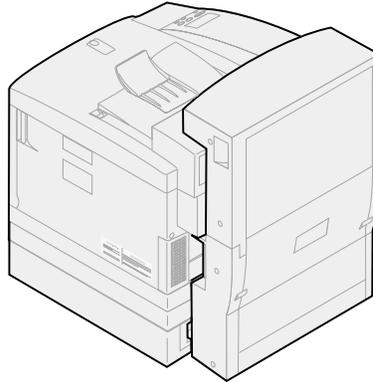
- 4** Lift the *inner* rear duplex access panel.



- 5** Carefully remove any jammed paper from inside the duplex unit.



- 6** Close the inner and outer rear duplex access doors.
- 7** Press **Go** on the operator panel.

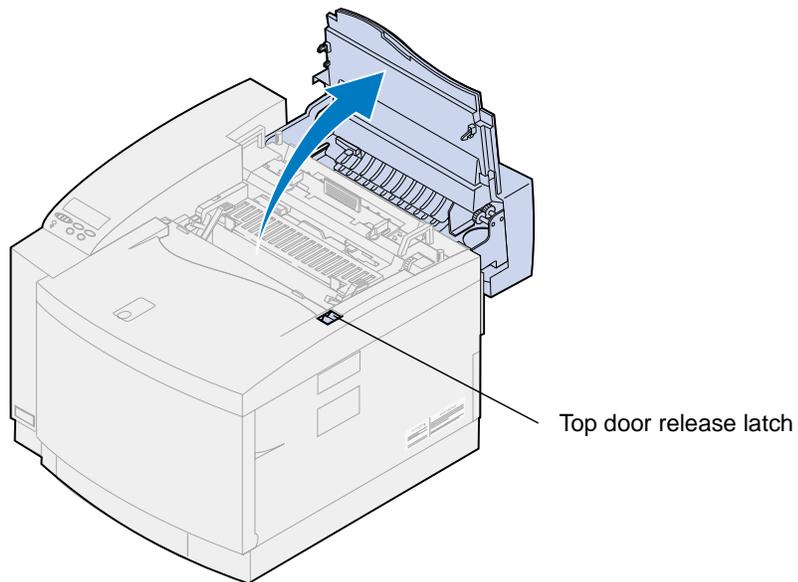


# 27

## Cleaning the photo developer charger

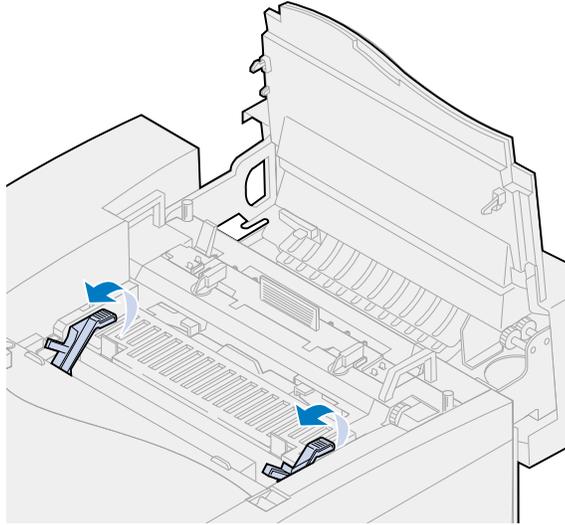
If you notice continuous vertical voids, streaks, or lines of stray toner when printing, toner dust may be accumulating on the photo developer cartridge charger. This toner may accumulate in one or more locations on the wire and interfere with the developer charger as it prepares the photo developer to accept the toner that makes up your printed image. Use the following steps to clear the photo developer charger of this problem.

- 1 Slide the top door release latch toward the front of the printer and lift the top door.

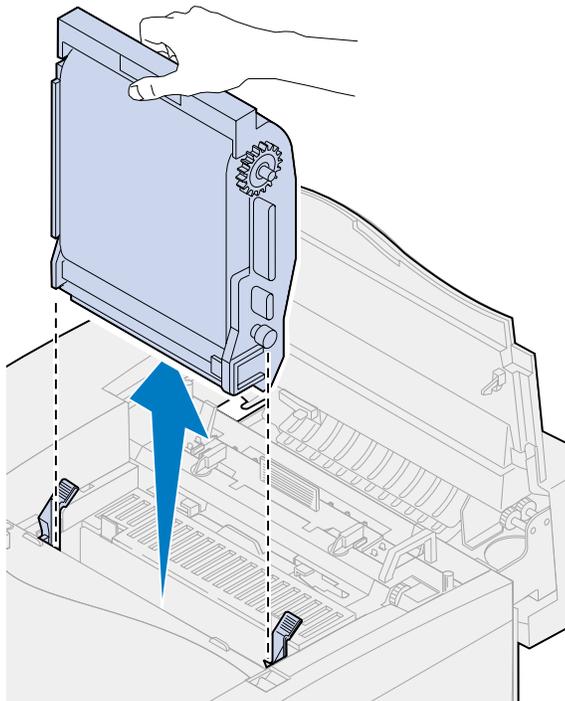


**CAUTION:** The internal components of the printer may be hot. Allow the printer to cool before touching any internal components.

- 2 Lift the left and right green photo developer cartridge locking levers.



- 3 Lift the photo developer cartridge from the printer.



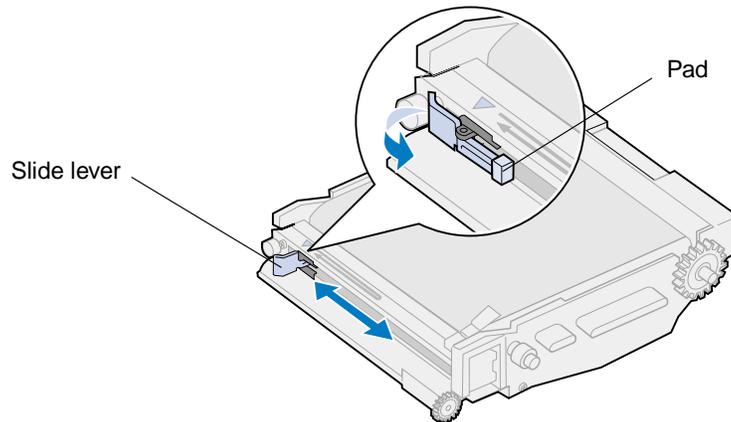
**WARNING:** Do not touch the glossy green film in the photo developer cartridge. Touching the photo developer film damages it and reduces print quality.

- 4 Place the photo developer cartridge on a flat level surface.

- 5 Lift the green slide lever.

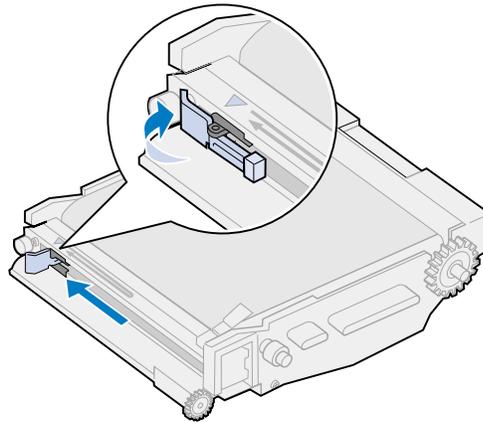
The pad on the end of the slide should make contact with the charger wire.

- 6 Move the green slide completely across the photo developer cartridge and back again five times.



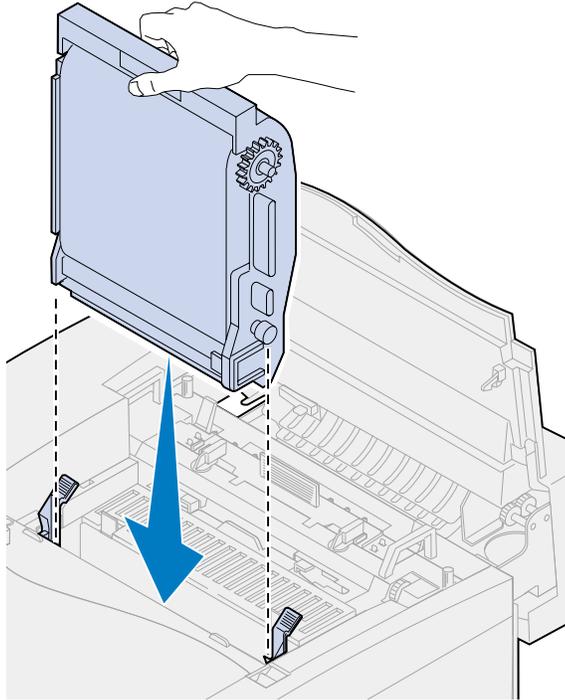
- 7 Move the green slide to the left side of the photo developer cartridge.

- 8 Place the green slide lever against the photo developer cartridge.

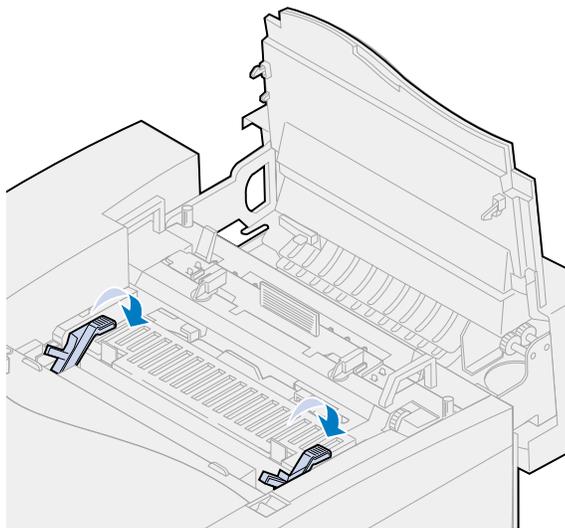


- 9 Align the photo developer cartridge with the slots in the green locking levers.

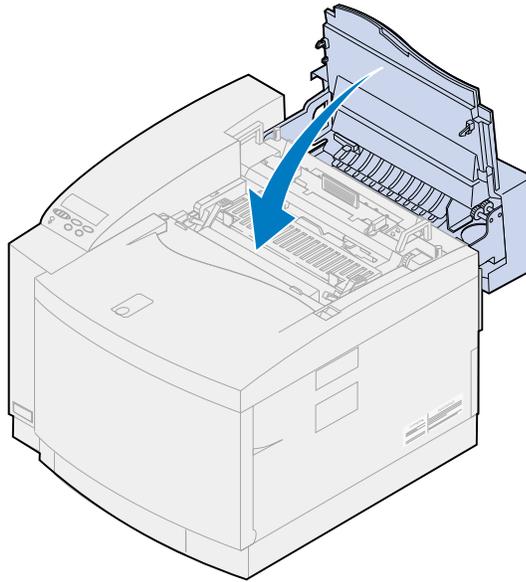
- 10** Lower the photo developer cartridge into the printer until it is firmly seated.



- 11** Rotate the green photo developer locking levers down.



**12** Close the top door.



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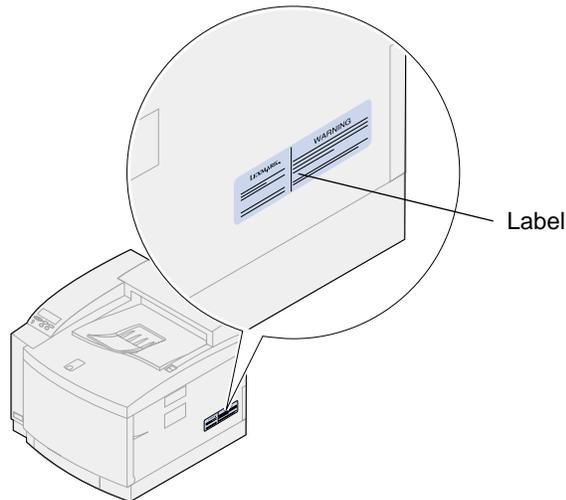
## Calling for customer support

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You can contact your local Lexmark service representative or contact the Lexmark Customer Support on the World Wide Web at [www.Lexmark.com](http://www.Lexmark.com).

When you contact your local service provider or customer support, be prepared to describe the problem you are experiencing or the error message on the printer operator panel.

You'll also need to know the printer model type and serial number located on the label on the side of the printer. The serial number is also listed on the menu settings page and can be printed from the Utilities Menu.



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## Using the operator panel

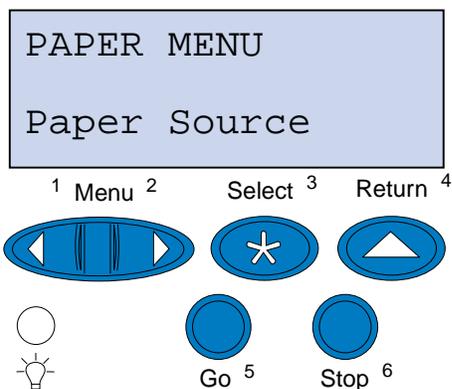
### Printing a menu settings page

You can print a list of the current user default settings at any time.

**Note:** Before printing the menu settings page, ensure the selected paper source holds A4 or letter size paper.

- 1 From the operator panel, press **Menu>** or **<Menu** to enter the menus.

If you do not need to verify the paper source and paper type, go to **step 11**.



- 2 Continue to press and release **Menu>** or **<Menu** until you see Paper Menu.

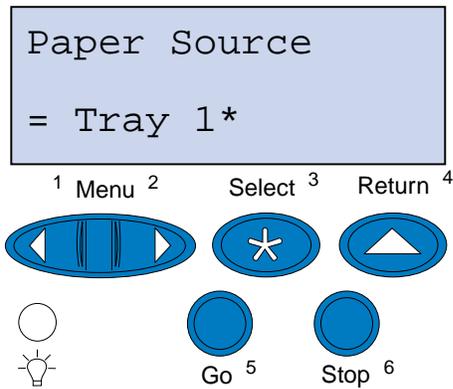
- 3 Press **Select**.

Paper Menu appears on the first line, and Paper Source is on the second line.

**4** Press **Select**.

Paper Source appears on the first line, and the current paper source is on the second line.

If you want to select a different paper source, press and release **Menu>** or **<Menu** until the source you want appears on the second line.



**5** Press **Select**.

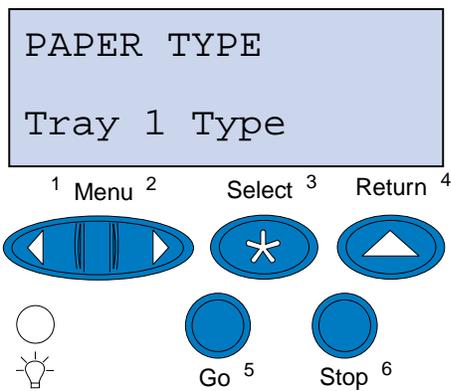
Paper Menu appears on the first line, and Paper Source is on the second line.

**6** Press and release **Menu>** or **<Menu** until you see Paper Type.

**7** Press **Select**.

Paper Type appears on the first line, and the paper source is on the second line.

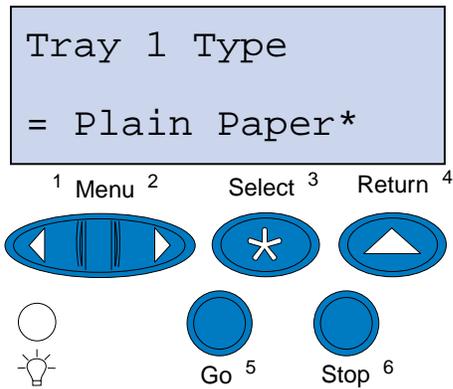
If you want to select a different paper source, press and release **Menu>** or **<Menu** until the source you want is on the second line.



**8** Press **Select**.

The current paper source is displayed on the first line, and the current paper type is on the second line.

If you want to select a different paper type, press and release **Menu>** or **<Menu** until the type you want is on the second line.



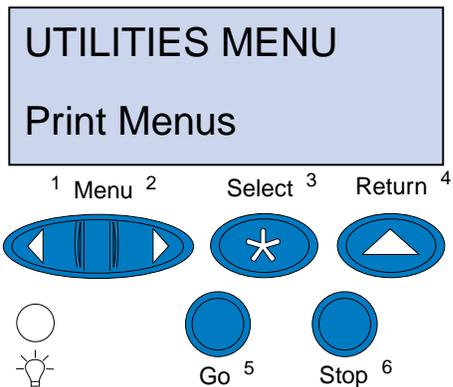
**9** Press **Select**.

**10** Press **Return** twice.

**11** Press and release **Menu>** or **<Menu** until you see **Utilities Menu**.

**12** Press **Select**.

**13** **Utilities Menu** appears on the first line, and **Print Menus** is on the second line.



**14** Press **Select** again to print the page.

**15** The message **Printing Menu Settings** appears. The printer returns to the Ready state after the list of user default settings prints.

If an error message appears, see [Understanding printer messages](#).

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## Changing the Paper Type setting

It is important to verify the Paper Type settings are accurate for all the installed paper sources. Refer to the menu settings page you printed. The Paper Type is listed for each of the installed paper sources.

Paper Type refers to the type of media loaded in the sources: plain paper, letterhead, envelopes, and transparencies. Since tray 1 can hold different media, you can customize tray 1 Paper Type settings.

The printer uses the Paper Type setting to optimize print quality for the media you specified. For example, selecting the Transparency paper type slows the printing process to produce the best transparency possible.

The Paper Type setting also affects the printer automatic source selection capability, as well as the tray linking function. For these reasons, it's important to change the setting each time you change the media in the trays.

To change a Paper Type setting:

- 1 From the printer operator panel, press **Menu>** or **<Menu** to enter the menus.  
Paper Menu appears on the second line of the display.
- 2 Press **Select** to open the Paper Menu.
- 3 Press and release **Menu>** or **<Menu** until Paper Type appears on the second line.
- 4 Press **Select**.  
Tray 1 Type appears on the second line of the display.
- 5 Press **Select** again if you want to change the **Tray 1 Type** setting or press **Menu>** or **<Menu** to change to **Tray 2 Type**.
- 6 Press **Select**.
- 7 Press **Menu>** or **<Menu** to scroll through the list of paper types.
- 8 When the correct paper type appears on the second line of the display, press **Select** to save the type as the default for that paper tray.
- 9 When you are finished changing the Paper Type settings, press **Go** to return the printer to the ready state.



## Using printer menus

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Select a menu from the following list for more information. Or, click a letter in the index at the bottom of the page to find a specific menu item that starts with that letter.

[Click here to see an overview of the menu structure.](#)

- **Color Menu**
- **Finishing Menu**
- **Infrared Menu**
- **Job Menu**
- **LocalTalk Menu**
- **Network Menu**
- **Paper Menu**
- **Parallel Menu**
- **PCL Emul Menu**
- **PostScript Menu**
- **Serial Menu**
- **Setup Menu**
- **Supplies Menu**
- **USB Menu**
- **Utilities Menu**

Select a menu or menu item for more details.

<b>Color Menu</b> <a href="#">Photo Enhance</a> <a href="#">Print Quality</a> <a href="#">Color Correction</a>	<b>Job Menu</b> <a href="#">Confidential Job</a> <a href="#">Reset Printer</a> <a href="#">Cancel Fax</a> <a href="#">Held Jobs</a>	<b>Paper Menu</b> <a href="#">Paper Source</a> <a href="#">Paper Size</a> <a href="#">Paper Type</a> <a href="#">Custom Types</a> <a href="#">Substitute Size</a> <a href="#">Paper Weight</a> <a href="#">Paper Loading</a>	<b>PCL Emul Menu</b> <a href="#">Font Source</a> <a href="#">Font Name</a> <a href="#">Point Size</a> <a href="#">Pitch</a> <a href="#">Symbol Set</a> <a href="#">Orientation</a> <a href="#">Lines per Page</a> <a href="#">A4 Width</a> <a href="#">Auto CR after LF</a> <a href="#">Auto LF after CR</a> <a href="#">Tray Renumber</a>	<b>Serial Menu</b> <a href="#">PCL SmartSwitch</a> <a href="#">PS SmartSwitch</a> <a href="#">NPA Mode</a> <a href="#">Serial Buffer</a> <a href="#">Job Buffering</a> <a href="#">RS-232/RS-422</a> <a href="#">RS-422 Polarity</a> <a href="#">Serial Protocol</a> <a href="#">Robust XON</a> <a href="#">Baud</a> <a href="#">Data Bits</a> <a href="#">Parity</a> <a href="#">Honor DSR</a>	<b>Supplies Menu</b> <a href="#">&lt;color&gt;Toner</a> <a href="#">Tray &lt;x&gt; Status</a> <a href="#">Photo Dev Cart</a> <a href="#">Oil Bottle</a> <a href="#">Waste Bottle</a> <a href="#">Fuser</a> <a href="#">Fuser Cleaner</a> <a href="#">Replace Supplies</a> <a href="#">Supplies Life</a> <a href="#">Maintenance</a>
<b>Finishing Menu</b> <a href="#">Duplex</a> <a href="#">Duplex Bind</a> <a href="#">Copies</a> <a href="#">Blank Pages</a> <a href="#">Collation</a> <a href="#">Separator Sheets</a> <a href="#">Separator Source</a> <a href="#">Multipage Border</a> <a href="#">Multipage Print</a> <a href="#">Multipage Order</a> <a href="#">Multipage View</a>	<b>LocalTalk Menu</b> <a href="#">LocalTalk Port</a> <a href="#">PCL SmartSwitch</a> <a href="#">PS SmartSwitch</a> <a href="#">NPA Mode</a> <a href="#">LocalTalk Buffer</a> <a href="#">Job Buffering</a> <a href="#">NPA Hosts</a> <a href="#">LocalTalk Name</a> <a href="#">LocalTalk Addr</a> <a href="#">LocalTalk Zone</a>	<b>Parallel Menu</b> <a href="#">PCL SmartSwitch</a> <a href="#">PS SmartSwitch</a> <a href="#">NPA Mode</a> <a href="#">Parallel Buffer</a> <a href="#">Job Buffering</a> <a href="#">Advanced Status</a> <a href="#">Protocol</a> <a href="#">Honor Init</a> <a href="#">Parallel Mode 1</a> <a href="#">Parallel Mode 2</a>	<b>Setup Menu</b> <a href="#">Printer Language</a> <a href="#">Power Saver</a> <a href="#">Resource Save</a> <a href="#">Download Target</a> <a href="#">Print Timeout</a> <a href="#">Auto Continue</a> <a href="#">Wait Timeout</a> <a href="#">Jam Recovery</a> <a href="#">Page Protect</a> <a href="#">Display Language</a> <a href="#">Alarm Control</a> <a href="#">Job Buffer Size</a> <a href="#">Job Accounting</a> <a href="#">Print Area</a> <a href="#">Toner Saver</a> <a href="#">Left Margin</a>	<b>PostScript Menu</b> <a href="#">Print PS Error</a> <a href="#">Font Priority</a> <a href="#">Image Smoothing</a>	<b>USB Menu</b> <a href="#">PCL SmartSwitch</a> <a href="#">PS SmartSwitch</a> <a href="#">NPA Mode</a> <a href="#">USB Buffer</a> <a href="#">MAC Binary PS</a> <a href="#">Job Buffering</a>
<b>Infrared Menu</b> <a href="#">Infrared Port</a> <a href="#">PCL SmartSwitch</a> <a href="#">PS SmartSwitch</a> <a href="#">NPA Mode</a> <a href="#">Infrared Buffer</a> <a href="#">Job Buffering</a> <a href="#">Window Size</a> <a href="#">Transmit Delay</a> <a href="#">Max Baud Rate</a>	<b>Network Menu</b> <a href="#">PCL SmartSwitch</a> <a href="#">PS SmartSwitch</a> <a href="#">NPA Mode</a> <a href="#">Network Buffer</a> <a href="#">Job Buffering</a> <a href="#">MAC Binary PS</a> <a href="#">Network &lt;x&gt; Setup</a>			<b>Utilities Menu</b> <a href="#">Print Menus</a> <a href="#">Print Net &lt;x&gt;</a> <a href="#">Setup</a> <a href="#">Print Fonts</a> <a href="#">Print Directory</a> <a href="#">Factory Defaults</a> <a href="#">Format Flash</a> <a href="#">Defragment Flash</a> <a href="#">Format Disk</a> <a href="#">Job Acct Stat</a> <a href="#">Hex Trace</a>	

**A**

**A4 Width**

**Advanced Status**

**Alarm Control**

**Auto Continue**

**Auto CR after LF**

**Auto LF after CR**

**B**

**Baud**

**Blank Pages**

**C**

**Cancel Fax**

**Collation**

**Color Correction**

**Color Menu**

**<color>Toner**

**Confidential Job**

**Copies**

**Custom Types**

**D**

**Data Bits**

**Defragment Flash**

**Display Language**

**Download Target**

**Duplex**

**Duplex Bind**

**E**

**F**

**Factory Defaults**

**Finishing Menu**

**Font Name**

**Font Priority**

**Font Source**

**Format Disk**

**Format Flash**

**Fuser**

**Fuser Cleaner**

**G**

**H**

**Held Jobs**

**Hex Trace**

**Honor DSR**

**Honor Init**

**I**

**Image Smoothing**

**Infrared Buffer**

**Infrared Menu**

**Infrared Port**

## **J**

**Jam Recovery**

**Job Acct Stat**

**Job Accounting**

**Job Buffer Size**

Job Buffering

    Infrared Menu

    LocalTalk Menu

    Network Menu

    Parallel Menu

    Serial Menu

    USB Menu

**Job Menu**

## **K**

## **L**

**Lines per Page**

**LocalTalk Addr**

**LocalTalk Buffer**

**LocalTalk Menu**

**LocalTalk Name**

**LocalTalk Port**

**LocalTalk Zone**

## **M**

**MAC Binary PS**

**Maintenance**

**Max Baud Rate**

**Multipage Border**

**Multipage Order**

**Multipage Print**

## **Multipage View**

### **N**

**Network Buffer**

**Network Menu**

**Network <x> Setup**

**NPA Hosts**

NPA Mode

Infrared Menu

LocalTalk Menu

Network Menu

Parallel Menu

Serial Menu

USB Menu

### **O**

**Oil Bottle**

**Orientation**

### **P**

**Page Protect**

**Paper Loading**

**Paper Menu**

**Paper Size**

**Paper Source**

**Paper Type**

**Paper Weight**

**Parallel Buffer**

**Parallel Menu**

**Parallel Mode 1**

**Parallel Mode 2**

**Parity**

**PCL Emul Menu**

PCL SmartSwitch

Infrared Menu

LocalTalk Menu

Network Menu  
Parallel Menu  
Serial Menu  
USB Menu

**Photo Dev Cart**

**Photo Enhance**

**Pitch**

**Point Size**

**PostScript Menu**

**Power Saver**

Print Area

**Print Directory**

**Print Fonts**

**Print Menus**

**Print Net <x> Setup**

**Print PS Error**

**Print Timeout**

**Print Quality**

**Printer Language**

**Protocol**

PS SmartSwitch  
Infrared Menu  
LocalTalk Menu  
Network Menu  
Parallel Menu  
Serial Menu  
USB Menu

**Q**

**R**

**Replace Supplies**

**Reset Printer**

**Resource Save**

**Robust XON**

**RS-422 Polarity**

**RS-232/RS-422**

**S**

**Separator Sheets**

**Separator Source**

**Serial Buffer**

**Serial Menu**

**Serial Protocol**

**Setup Menu**

**Substitute Size**

**Supplies Life**

**Supplies Menu**

**Symbol Set**

**T**

**Transmit Delay**

**Tray Renumber**

**Tray <x> Status**

**U**

**USB Buffer**

**USB Menu**

**Utilities Menu**

**V**

**W**

**Wait Timeout**

**Waste Bottle**

**Window Size**

**X**

**Y**

**Z**

# 31 Color Menu

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Use the Color Menu to adjust print quality and customize color printing.

Select a menu item for more details:

- **Print Quality**
- **Photo Enhance**
- **Color Correction**

**Note:** Values marked by an asterisk are the factory default settings.

---

## Print Quality

### Purpose:

To define the number of dots printed per inch (dpi). The higher the value, the sharper the clarity of printed characters and graphics.

### Values:

<b>600 dpi</b>	Produces high quality output for print jobs that are mostly text.
<b>2400 IQ*</b>	Higher resolutions provide tighter line screens. This setting enhances your images and gives you greater detail with less noticeable jaggedness.

### See also:

[Controlling your printed output](#)

---

## Photo Enhance

### Purpose:

To specify whether the printer uses error diffusion for photos.

## Values:

- On** Uses error diffusion on photos. This works in either 600 dpi or 2400 IQ mode.  
**Note:** Photo Enhance is not supported in PCL.
- Off** Does not use error diffusion.

## See also:

[Controlling your printed output](#)

---

## Color Correction

### Purpose:

To adjust the printed color to better match the colors of other output devices or standard color systems.

### Values:

- Auto\*** Applies the optimum color settings for typical business applications, where jobs contain a mixture of text, graphics, and images.
- Vivid** Prints bright, well-saturated colors.
- Off** Prints without any color correction, thereby allowing computer-based color management systems such as Windows ICM or Apple ColorSync to define the printed color.
- CMYK** Lets applications that do their own color correction for CMYK colors (such as CorelDraw, Adobe PhotoShop, or Adobe Illustrator) print without interference from the printer color corrections. Useful for pre-press simulations.  
**Note:** CMYK is not supported in PCL.
- Black and White** Prints images in a monochrome grayscale. Useful if you want to preserve color supplies or if you need to make black-and-white photocopies of a color image.
- Display** Prints colors that approximate those that appear on a standard computer monitor.
- 2-Color Draft** Prints using only cyan and black, thereby providing limited color output with reduced consumption of color supplies and a faster print speed.  
**Note:** 2-Color Draft is not supported in PCL.

**Note:** Due to the differences between additive and subtractive colors, certain colors that appear on your monitor are impossible to duplicate on your printer.

## See also:

[Color correction](#)



## Finishing Menu

---

Use the Finishing Menu to define how the printer delivers the printed output.

Select a menu item for more details:

- **Blank Pages**
- **Collation**
- **Copies**
- **Duplex**
- **Duplex Bind**
- **Multipage Border**
- **Multipage Order**
- **Multipage Print**
- **Multipage View**
- **Separator Sheets**
- **Separator Source**

**Note:** Values marked by an asterisk are the factory default settings.

---

### Blank Pages

**Purpose:**

To specify whether to include application-generated blank pages as part of your printed output.

**Values:**

<b>Do Not Print*</b>	Does not print application-generated blank pages as part of your job.
<b>Print</b>	Prints application-generated blank pages as part of your job.

---

### Collation

**Purpose:**

To keep the pages of a print job stacked in sequence, particularly when printing multiple copies of the job.

**Values:**

- Off\*** Prints each page of a job the number of times specified by the Copies menu item. For example, if you set Copies to 2 and send three pages to print, the printer prints page 1, page 1, page 2, page 2, page 3, page 3.
- On** Prints entire job the number of times specified by the Copies menu item. For example, if you set Copies to 2 and send three pages to print, the printer prints page 1, page 2, page 3, page 1, page 2, page 3.

---

## Copies

**Purpose:**

To set the number of copies you want for the printer default value. (Set the number of copies required for a specific job from the printer driver. Values selected from the printer driver always override values selected from the operator panel.)

**Values:**

1...999 (1\*)

**See also:**

[Collation](#)

---

## Duplex

**Purpose:**

To set duplexing as the default for all print jobs. (Select Duplex from the printer driver to duplex only specific jobs.)

**Values:**

- Off\*** Prints on one side of the paper.
- On** Prints on both sides of the paper.

**See also:**

[Duplex Bind](#)

---

## Duplex Bind

**Purpose:**

To define the way duplexed pages would be bound, and how the printing on the back of the sheet (even-numbered pages) is oriented in relation to the printing on the front (odd-numbered pages).

**Values:**

<b>Long Edge*</b>	Assumes binding along the long end of the page (left edge for portrait orientation and top edge for landscape orientation).
<b>Short Edge</b>	Assumes binding along the short edge of the page (top edge for portrait orientation and left edge for landscape orientation).

**See also:**

[Duplex](#)

---

## Multipage Border

**Purpose:**

To print a border around each page image when using Multipage Print.

**Values:**

<b>None*</b>	Does not print a border around each page image.
<b>Solid</b>	Prints a solid line border around each page image.

**See also:**

[Multipage Print](#)

---

## Multipage Order

**Purpose:**

To determine the positioning of multiple page images when using Multipage Print. The positioning depends on the number of images and whether the images are portrait or landscape in orientation.

**Values:**

**Horizontal\***  
**Vertical**  
**Rev Horizontal**  
**Rev Vertical**

**See also:**

[Multipage Print](#)

---

## Multipage Print

**Purpose:**

To print multiple page images on one side of a sheet of paper. Also called *n-up* or *Paper Saver*.

**Values:**

<b>Off*</b>	Prints 1 page image per side.	<b>6 Up</b>	Prints 6 page images per side.
<b>2 Up</b>	Prints 2 page images per side.	<b>9 Up</b>	Prints 9 page images per side.
<b>3 Up</b>	Prints 3 page images per side.	<b>12 Up</b>	Prints 12 page images per side.
<b>4 Up</b>	Prints 4 page images per side.	<b>16 Up</b>	Prints 16 page images per side.

**See also:**

[Multipage Border](#); [Multipage Order](#); [Multipage View](#)

---

## Multipage View

**Purpose:**

To determine the orientation of a multipage sheet.

**Values:**

<b>Auto*</b>	Lets the printer choose between portrait and landscape orientation.
<b>Long Edge</b>	Sets the long edge of the paper as the top of the page (landscape).
<b>Short Edge</b>	Sets the short edge of the paper as the top of the page (portrait).

**See also:**

[Multipage Print](#)

---

## Separator Sheets

**Purpose:**

To insert blank separator sheets between jobs, between multiple copies of a job, or between each page of a job.

**Values:**

<b>None*</b>	Does not insert separator sheets.
<b>Between Copies</b>	Inserts a blank sheet between each copy of a job. If Collation is Off, a blank page is inserted between each set of printed pages (all page 1's, all page 2's, and so on). If Collation is On, a blank page is inserted between each collated copy of the job.
<b>Between Jobs</b>	Inserts a blank sheet between jobs.
<b>Between Pages</b>	Inserts a blank sheet between each page of a job. This is useful if you are printing transparencies or want to insert blank pages in a document for notes.

**See also:**

[Separator Source](#); [Collation](#)

---

## Separator Source

**Purpose:**

To specify the paper source that holds separator sheets.

**Values:**

<b>Tray &lt;x&gt; (Tray 1*)</b>	Selects separator sheets from the specified tray.
<b>MP Feeder</b>	Selects separator sheets from the multipurpose feeder. (You must also set Configure MP to Cassette.)
<b>Env Feeder</b>	Inserts envelopes as separator sheets.

**See also:**

[Separator Sheets](#)



## Infrared Menu

---

Use the Infrared Menu to change printer settings affecting jobs sent to the printer through an infrared port.

Select a menu item for more details:

- **Infrared Buffer**
- **Infrared Port**
- **Job Buffering**
- **Max Baud Rate**
- **NPA Mode**
- **PCL SmartSwitch**
- **PS SmartSwitch**
- **Transmit Delay**
- **Window Size**

**Note:** Values marked by an asterisk are the factory default settings.

---

### Infrared Buffer

**Purpose:**

To configure the size of the infrared input buffer.

**Values:**

<b>Disabled</b>	Disables job buffering. Any jobs already buffered on the disk are printed before normal processing of incoming jobs resumes.
<b>Auto*</b>	Printer automatically calculates the Infrared Buffer size (recommended setting).
<b>5K to maximum size allowed</b>	User specifies the Infrared Buffer size. The maximum size setting depends on the amount of memory in your printer, the size of the other link buffers, and whether Resource Save is set to On or Off. To maximize the range for the Infrared Buffer size, disable or reduce the size of the parallel, serial, network, LocalTalk, and USB buffers.

**Note:** Changing the Infrared Buffer menu item automatically resets the printer.

**See also:**

[Resource Save](#)

---

## Infrared Port

### Purpose:

To activate the infrared port.

### Values:

<b>Disabled*</b>	Disables the infrared port and all other menu items in the Infrared Menu.
<b>IR Option &lt;x&gt;</b>	Activates the specified infrared port.

---

## Job Buffering

### Purpose:

To temporarily store jobs on the printer hard disk before printing.

### Values:

<b>Off*</b>	Does not buffer print jobs to the hard disk.
<b>On</b>	Buffers print jobs to the hard disk.
<b>Auto</b>	Buffers print jobs only if the printer is busy processing data from another input port.

**Note:** Changing the Job Buffering menu item automatically resets the printer.

### See also:

[Job Buffer Size](#)

---

## Max Baud Rate

### Purpose:

To specify the rate at which data can be received through the infrared port.

### Values:

<b>2400</b>	<b>115200</b>
<b>9600</b>	<b>576000</b>
<b>19200</b>	<b>1152000*</b>
<b>38400</b>	<b>4000000</b>
<b>57600</b>	

The maximum baud possible for both the printer and the infrared adapter is automatically set during a power on reset. However, if your printer is located in a bright or highly reflective environment, you may experience intermittent communication problems. If you do, select a lower baud for the infrared connection.

---

## NPA Mode

### Purpose:

To specify whether the printer performs the special processing required for bidirectional communication, following the conventions defined in the Network Printing Alliance (NPA) Protocol.

### Values:

- On** Printer performs NPA processing. If data is not in NPA format, it is rejected as bad data.
- Off** Printer does not perform NPA processing.
- Auto\*** Printer examines the data to determine the format and then processes it appropriately.

Changing this menu item automatically resets the printer.

---

## PCL SmartSwitch

### Purpose:

To configure the printer so it automatically switches to PCL emulation when a print job received through the infrared port requires it, regardless of the default printer language.

### Values:

- On\*** Printer examines the data on the infrared interface and selects PCL emulation if the data indicates that is the required printer language.
- Off** Printer does not examine the incoming data. The printer uses PostScript emulation to process the job if PS SmartSwitch is On, or uses the default printer language specified in the Setup Menu if PS SmartSwitch is Off.

### See also:

[PS SmartSwitch](#); [Printer Language](#)

---

## PS SmartSwitch

### Purpose:

To configure the printer so it automatically switches to PostScript emulation when a print job received through the infrared port requires it, regardless of the default printer language.

### Values:

- On\*** Printer examines data on the infrared interface and selects PostScript emulation if the data indicates that is the required printer language.
- Off** Printer does not examine the incoming data. The printer uses PCL emulation to process the job if PCL SmartSwitch is On, or uses the default printer language specified in the Setup Menu if PCL SmartSwitch is Off.

**See also:**

[PCL SmartSwitch](#); [Printer Language](#)

---

## Transmit Delay

### Purpose:

To define the amount of time, in seconds, the printer must wait before transmitting meaningful infrared data to the host computer, as well as the amount of time the printer requests that the host computer wait before transmitting infrared data.

### Values:

- |               |   |
|---------------|---|
| <b>Auto*</b>  | Printer sets the Transmit Delay value during a power on reset to maximize link performance (recommended).   |
| <b>None</b>   | No delay is imposed by the printer. However, not all host computers can communicate without some transmission delays.   |
| <b>1...15</b> | User selects a Transmit Delay value between 1 and 15 seconds. If you have trouble printing using the infrared port, selecting a high Transmit Delay value, such as 15, may resolve the problem. |

---

## Window Size

### Purpose:

To specify the maximum number of infrared frames the printer can receive before sending an acknowledgment to the host computer.

### Values:

- |              |  |
|--------------|--|
| <b>Auto*</b> | Printer sets the Window Size value during a power on reset to maximize link performance (recommended).   |
| <b>1</b>     | User sets the Window Size to one frame (1). If you have trouble printing using the infrared port, changing the Window Size menu item to 1 may resolve the problem. |



## Job Menu

---

The Job Menu is only available when the printer is busy processing or printing a job, when a printer message is displayed, or when the printer is in Hex Trace mode. Press **Menu>** or **<Menu** to open the Job Menu.

Select a menu item for more details:

- **Cancel Fax**
- **Confidential Job**
- **Held Jobs**
- **Reset Printer**

---

### Cancel Fax

#### Purpose:

To cancel outgoing faxes before they are transmitted or to cancel incoming faxes before they finish printing.

#### Values:

- R** Cancels an incoming fax. When the fax number for the sending machine is displayed, press **Select** to cancel the incoming fax.
- D** Cancels an outgoing fax. When the fax number for the receiving machine is displayed, press **Select** to cancel the fax job. If the telephone number of the fax you want to cancel is not displayed, use the **<Menu** or **Menu>** buttons to scroll through the list. The printer can display up to five outgoing fax numbers in the outgoing fax queue. When more than five faxes are in the queue, the next fax job appears on the display as an outgoing fax is transmitted or canceled.

---

### Confidential Job

#### Purpose:

To print confidential jobs stored in printer memory. (When the Confidential Job prints, it is automatically deleted from printer memory.)

*First enter the Personal Identification Number (PIN) associated with your Confidential Job:*

- Enter PIN** Use the operator panel buttons to enter the PIN associated with your Confidential Job.

*Then select a value:*

<b>Print All Jobs</b>	Prints all jobs associated with your PIN.
<b>Print A Job</b>	Prints the specified Confidential Job. Press <b>&lt;Menu or Menu&gt;</b> to scroll through the list of confidential jobs associated with your PIN. Press <b>Select</b> to print a specific job.
<b>Delete All Jobs</b>	Deletes all jobs associated with your PIN.
<b>Delete A Job</b>	Deletes the specified Confidential Job. Press <b>&lt;Menu or Menu&gt;</b> to scroll through the list of Confidential Jobs associated with your PIN. Press <b>Select</b> to delete a specific job.
<b>Copies</b>	Determines the number of copies printed for each Confidential Job. Press <b>&lt;Menu or Menu&gt;</b> to scroll through the list of Confidential Jobs associated with your PIN. Press <b>Select</b> to specify the job you want to print. Press <b>&lt;Menu or Menu&gt;</b> to increase or decrease the number of copies, and then press <b>Select</b> .

---

## Held Jobs

### **Purpose:**

To print Reserve Print, Repeat Print, or Verify Print jobs stored in printer memory.

### **Values:**

<b>Print All Jobs</b>	Prints all held jobs.
<b>Print A Job</b>	Prints the specified held job. Press <b>&lt;Menu or Menu&gt;</b> to scroll through the list of held jobs. Press <b>Select</b> to print the specific job.
<b>Delete All Jobs</b>	Deletes all held jobs.
<b>Delete A Job</b>	Deletes the designated held job. Press <b>&lt;Menu or Menu&gt;</b> to scroll through the list of held jobs. Press <b>Select</b> to delete the job.
<b>Copies</b>	Determines the number of copies for each held job. Press <b>&lt;Menu or Menu&gt;</b> to scroll through the list of held jobs. Press <b>Select</b> to specify the job you want to print. Press <b>&lt;Menu or Menu&gt;</b> to increase or decrease the number of copies, and then press <b>Select</b> .

---

## Reset Printer

### **Purpose:**

To reset the printer to the user default value for each menu item, delete all downloaded resources (fonts, macros, and symbol sets) stored in printer memory (RAM), and delete all data in the interface link buffer.

**Note:** Before selecting Reset Printer, exit the software application you are using.



## LocalTalk Menu

---

Use the LocalTalk Menu to change printer settings affecting jobs sent to the printer through a LocalTalk port.

Select a menu item for more details:

- **Job Buffering**
- **LocalTalk Addr**
- **LocalTalk Buffer**
- **LocalTalk Name**
- **LocalTalk Port**
- **LocalTalk Zone**
- **NPA Hosts**
- **NPA Mode**
- **PCL SmartSwitch**
- **PS SmartSwitch**

**Note:** Values marked by an asterisk are the factory default settings.

---

### Job Buffering

**Purpose:**

To temporarily store jobs on the printer hard disk before printing.

**Values:**

- |             |   |
|-------------|---|
| <b>Off*</b> | Does not buffer the print job to the hard disk.   |
| <b>On</b>   | Buffers print jobs to the hard disk.  |
| <b>Auto</b> | Buffers print jobs only if the printer is busy processing data from another input port. |

**Note:** Changing the Job Buffering menu item automatically resets the printer.

**See also:**

[Job Buffer Size](#)

---

### LocalTalk Addr

**Purpose:**

To identify the LocalTalk Node number assigned to the printer. This menu item cannot be modified through the operator panel.

---

## LocalTalk Buffer

### Purpose:

To configure the size of the LocalTalk input buffer.

### Values:

<b>Disabled</b>	Disables job buffering. Any jobs already buffered on the disk are printed before normal processing of incoming jobs resumes.
<b>Auto*</b>	Printer automatically calculates LocalTalk Buffer size (recommended).
<b>6K to maximum size allowed</b>	User specifies the LocalTalk Buffer size. The maximum size depends on the amount of memory in your printer, the size of the other link buffers, and whether Resource Save is set to On or Off. To maximize the range for the LocalTalk Buffer size, disable or reduce the size of the parallel, serial, network, infrared, and USB buffers.

**Note:** Changing the LocalTalk Buffer menu item automatically resets the printer.

### See also:

[Resource Save](#)

---

## LocalTalk Name

### Purpose:

To identify the printer model name stored in printer memory. This menu item cannot be modified through the operator panel.

---

## LocalTalk Port

### Purpose:

To activate the LocalTalk port.

### Values:

<b>Disabled*</b>	Disables the LocalTalk port and all other menu items in the LocalTalk Menu.
<b>LTalk Option &lt;x&gt;</b>	Activates the specified LocalTalk port.

---

## LocalTalk Zone

### Purpose:

To identify the LocalTalk Zone provided by the LocalTalk network. This menu item cannot be modified through the operator panel.

---

## NPA Hosts

### Purpose:

To specify the maximum number of NPA hosts that can register for NPA alerts.

### Values:

1...10 (2\*)

---

## NPA Mode

### Purpose:

To specify whether the printer performs the special processing required for bidirectional communication, following the conventions defined in the Network Printing Alliance (NPA) Protocol.

### Values:

- On** Printer performs NPA processing. If data is not in NPA format, it is rejected as bad data.
- Off** Printer does not perform NPA processing.
- Auto\*** Printer examines the data to determine the format and then processes it appropriately.

**Note:** Changing this menu item automatically resets the printer.

---

## PCL SmartSwitch

### Purpose:

To configure the printer so it automatically switches to PCL emulation when a print job received through the LocalTalk port requires it, regardless of the default printer language.

### Values:

- On\*** Printer examines data on the LocalTalk interface and selects PCL emulation if the data indicates that is the required printer language.
- Off** Printer does not examine the incoming data. The printer uses PostScript emulation to process the job if PS SmartSwitch is On, or uses the default printer language specified in the Setup Menu if PS SmartSwitch is Off.

**See also:**

[PS SmartSwitch](#); [Printer Language](#)

---

## **PS SmartSwitch**

**Purpose:**

To configure the printer so it automatically switches to PostScript emulation when a print job received through the LocalTalk port requires it, regardless of the default printer language.

**Values:**

- On\*** Printer examines data on the LocalTalk interface and selects PostScript emulation if the data indicates that is the required printer language.
- Off** Printer does not examine the incoming data. The printer uses PCL emulation to process the job if PCL SmartSwitch is On, or uses the default printer language specified in the Setup Menu if PCL SmartSwitch is Off.

**See also:**

[PCL SmartSwitch](#); [Printer Language](#)



## Network Menu

---

Use the Network Menu to change printer settings affecting jobs sent to the printer through a network port (either Standard Network or Network Opt <x>).

Select a menu item for more details:

- **Job Buffering**
- **Network Buffer**
- **Network <x> Setup**
- **NPA Mode**
- **PCL SmartSwitch**
- **PS SmartSwitch**
- **MAC Binary PS**

**Note:** Values marked by an asterisk are the factory default settings.

---

### Job Buffering

**Purpose:**

To temporarily store jobs on the printer hard disk before printing.

**Values:**

- |             |   |
|-------------|---|
| <b>Off*</b> | Does not buffer jobs to the hard disk.  |
| <b>On</b>   | Buffers print jobs to the hard disk.  |
| <b>Auto</b> | Buffers print jobs only if the printer is busy processing data from another input port. |

**Note:** Changing the Job Buffering menu item automatically resets the printer.

**See also:**

**Job Buffer Size**

---

## Network Buffer

### Purpose:

To configure the size of the network input buffer.

### Values:

<b>Auto*</b>	Printer automatically calculates the Network Buffer size (recommended setting).
<b>3K to maximum size allowed</b>	User specifies the Network Buffer size. The maximum size depends on the amount of memory in your printer, the size of the other link buffers, and whether Resource Save is set to On or Off. To maximize the range for the Network Buffer size, disable or reduce the size of the parallel, serial, infrared, LocalTalk, and USB buffers.

**Note:** Changing the Network Buffer menu item automatically resets the printer.

### See also:

[Resource Save](#)

---

## Network <x> Setup

### Purpose:

To configure an internal print server.

### Values:

Values for this menu item are supplied by the specific print server. Select the menu item to see the available values.

**Note:** Refer to the documentation on the drivers CD for more information.

---

## NPA Mode

### Purpose:

To specify whether the printer performs the special processing required for bidirectional communication, following the conventions defined in the Network Printing Alliance (NPA) Protocol.

### Values:

<b>On</b>	Printer performs NPA processing. If data is not in NPA format, it is rejected as bad data.
<b>Off</b>	Printer does not perform NPA processing.
<b>Auto*</b>	Printer examines the data to determine the format and then processes it appropriately.

**Note:** Changing this menu item automatically resets the printer.

---

## PCL SmartSwitch

### Purpose:

To configure the printer so it automatically switches to PCL emulation when a print job received through the network port requires it, regardless of the default printer language.

### Values:

- On\*** Printer examines data on the network interface and selects PCL emulation if the data indicates that is the required printer language.
- Off** Printer does not examine the incoming data. The printer uses PostScript emulation to process the job if PS SmartSwitch is On, or uses the default printer language specified in the Setup Menu if PS SmartSwitch is Off.

### See also:

[PS SmartSwitch](#); [Printer Language](#)

---

## PS SmartSwitch

### Purpose:

To configure the printer so it automatically switches to PostScript emulation when a print job received through the network port requires it, regardless of the default printer language.

### Values:

- On\*** Printer examines data on the network interface connection and selects PostScript emulation if the data indicates that is the required printer language.
- Off** Printer does not examine the incoming data. The printer uses PCL emulation to process the job if PCL SmartSwitch is On, or uses the default printer language specified in the Setup Menu if PCL SmartSwitch is Off.

### See also:

[PCL SmartSwitch](#); [Printer Language](#)

---

## MAC Binary PS

### Purpose:

To let the printer receive binary PS data from a Macintosh computer and print it properly.

**Note:** When Mac Binary PS is turned On, the printer may not properly print data from a Windows system.

### Values:

- On** Enables the printer to receive and print binary PS data from a Macintosh computer. This setting turns filtering off for the printer network port.
- Off\*** Places all network protocol filtering on for the printer network port.
- Custom** To show that a mixture of network protocol filtering exists on the printer network port.

**Note:** Custom will only display when a PS or NPA command was used to set some of the network protocols Off and others On. Custom cannot be selected as a value.

### See also:

*Technical Reference*



# Paper Menu

---

Use the Paper Menu to define the paper loaded in each paper tray and the default paper source and output bin.

Select a menu item for more details:

- Custom Types
- Paper Loading
- Paper Size
- Paper Source
- Paper Type
- Paper Weight
- Substitute Size

**Note:** Values marked by an asterisk are the factory default settings.

---

## Custom Types

### Purpose:

To specify the kind of paper associated with each of the Custom Types available in the Paper Type menu item.

### Values (for Custom Type <x>, where <x> represents 1 through 6):

Paper*	Labels
Card Stock	Envelope
Transparency	

**Note:** If a user-defined name is available, it is displayed instead of Custom Type <x>. The user-defined name is truncated to 14 characters. If two or more custom types share the same name, the name only appears once in the Custom Types value list.

---

## Paper Loading

### Purpose:

To properly handle preprinted paper loaded in a tray, whether the job is a duplexed job or a single-sided job.

**Values:**

*First select a paper type:*

<b>Card Stock Load</b>	<b>Colored Loading</b>	<b>Ltrhead Loading</b>	<b>Bond Loading</b>
<b>Labels Loading</b>	<b>Custom &lt;x&gt; Loading</b>	<b>Preprint Loading</b>	

*Then select a value:*

<b>Duplex</b>	Notifies the printer that the specified paper type is loaded properly for duplex printing. If the printer receives a single-sided job using that paper type, the printer inserts blank pages as necessary to print the job properly on preprinted forms. This setting may slow single-sided printing.
<b>Off*</b>	Printer assumes preprinted material is loaded for single-sided printing. Duplexed jobs may not print properly.

**Note:** If a user-defined name is available, it is displayed instead of Custom <x> Loading. The name is truncated to 14 characters.

---

## Paper Size

**Purpose:**

To identify the default paper size for each paper source. For trays with automatic size sensing, only the value detected by the hardware is displayed.

**Values:**

*First select a paper source:*

**Tray <x> Size**

*Then select a value( \* denotes country-specific values):*

<b>Letter*</b>	<b>A4*</b>	<b>10 Envelope*</b>
<b>Legal</b>	<b>B5</b>	<b>DL Envelope*</b>
<b>Executive</b>		<b>C5 Envelope</b>
		<b>#9 Envelope</b>

---

## Paper Source

**Purpose:**

To identify the default paper source.

**Values:**

**Tray <x> (Tray 1\*)**  
**Tray <x> (Tray 2)**

If you loaded the same size and type of paper in two paper sources (and the Paper Size and Paper Type menu items are correctly set), the trays are automatically linked. When one paper source is empty, paper automatically feeds from the next linked source.

---

## Paper Type

### Purpose:

To identify the type of paper installed in each paper source.

### Values:

*First select a paper source:*

**Tray <x> Type**

*Then select a value:*

<b>Plain Paper</b>	<b>Labels</b>	<b>Preprinted</b>	<b>Envelope</b>
<b>Card Stock</b>	<b>Bond</b>	<b>Colored Paper</b>	
<b>Transparency</b>	<b>Letterhead</b>	<b>Custom Type &lt;x&gt;</b>	

The Paper Type default for each envelope source is Envelope. The Paper Type default for each paper tray is:

**Tray 1**–Plain Paper  
**Tray 2**–Custom Type 2

Use this menu item to:

- Optimize print quality for the specified paper.
- Select paper sources through your software application by selecting type and size.
- Automatically link paper sources. Any sources containing the same type and size of paper are automatically linked by the printer, if you have set the Paper Size and the Paper Type to the correct values.

---

## Paper Weight

### Purpose:

To identify the relative weight of the paper loaded in a specific source and ensure the toner adheres properly to the printed page.

### Values:

*First select a paper type:*

<b>Plain Paper</b>	<b>Letterhead</b>	<b>Preprinted</b>	<b>Colored Paper</b>
<b>Custom Type1</b>	<b>Custom Type 2</b>		

*Then select a value:*

**Light**

**Normal\***

**Note:** If a user-defined name is available, it is displayed instead of Custom <x> Weight. The name is truncated to 14 characters.

---

## **Substitute Size**

### **Purpose:**

To have the printer substitute the specified paper size if the requested size is not loaded.

### **Values:**

<b>Off</b>	Printer prompts the user to load the requested paper size.
<b>Letter/A4*</b>	Prints A4 size jobs on letter size paper if only letter size paper is loaded, and prints letter size jobs on A4 size paper if only A4 size paper is loaded.

### **See also:**

[Paper handling](#)



## Parallel Menu

---

Use the Parallel Menu to change printer settings affecting jobs sent to the printer through a parallel port (either Std Parallel or Parallel Opt <x>).

Select a menu item for more details:

- **Advanced Status**
- **Honor Init**
- **Job Buffering**
- **NPA Mode**
- **Parallel Buffer**
- **Parallel Mode 1**
- **Parallel Mode 2**
- **PCL SmartSwitch**
- **PS SmartSwitch**
- **Protocol**

**Note:** Values marked by an asterisk are the factory default settings.

---

### Advanced Status

**Purpose:**

To enable bidirectional communication through the parallel port.

**Values:**

- Off** Disables parallel port negotiation.
- On\*** Enables bidirectional communication through the parallel interface.

---

### Honor Init

**Purpose:**

To determine whether the printer honors hardware initialization requests from the computer. The computer requests initialization by activating the INIT signal on the parallel interface. Many personal computers activate the INIT signal each time the computer is turned on and off.

**Values:**

- Off\*** Printer does not honor hardware initialization requests from the computer.

**On** Printer honors hardware initialization requests from the computer.

---

## Job Buffering

### Purpose:

To temporarily store jobs on the printer hard disk before printing.

### Values:

- Off\*** Does not buffer print jobs to the hard disk.
- On** Buffers print jobs to the hard disk.
- Auto** Buffers print jobs only if the printer is busy processing data from another input port.

**Note:** Changing the Job Buffering menu item automatically resets the printer.

### See also:

[Job Buffer Size](#)

---

## NPA Mode

### Purpose:

To specify whether the printer performs the special processing required for bidirectional communication, following the conventions defined in the Network Printing Alliance (NPA) Protocol.

### Values:

- On** Printer performs NPA processing. If data is not in NPA format, it is rejected as bad data.
- Off** Printer does not perform NPA processing.
- Auto\*** Printer examines data and determines the format and then processes it appropriately.

**Note:** Changing this menu item automatically resets the printer.

---

## Parallel Buffer

### Purpose:

To configure the size of the parallel input buffer.

**Values:**

<b>Disabled</b>	Disables job buffering. Any jobs already buffered on the disk are printed before normal processing of incoming jobs resumes.
<b>Auto*</b>	Printer automatically calculates the Parallel Buffer size (recommended setting).
<b>3K to maximum size allowed</b>	User specifies the Parallel Buffer size. The maximum size depends on the amount of memory in your printer, the size of the other link buffers, and whether Resource Save is set to On or Off. To maximize the range for the Parallel Buffer size, disable or reduce the size of the serial, infrared, LocalTalk, and USB buffers.

**Note:** Changing the Parallel Buffer menu item automatically resets the printer.

**See also:**

[Resource Save](#)

---

## Parallel Mode 1

**Purpose:**

To control the pull-up resistors on the parallel port signals. This menu item is useful for personal computers that have open collector outputs on the parallel port signals.

**Values:**

<b>On</b>	Disables the resistors.
<b>Off*</b>	Enables the resistors.

---

## Parallel Mode 2

**Purpose:**

To determine whether the parallel port data is sampled on the leading or trailing edge of strobe.

**Values:**

<b>On*</b>	Samples parallel port data on the leading edge of strobe.
<b>Off</b>	Samples parallel port data on the trailing edge of strobe.

---

## PCL SmartSwitch

**Purpose:**

To configure the printer so it automatically switches to PCL emulation when a print job received through the parallel port requires it, regardless of the default printer language.

**Values:**

- On\*** Printer examines data on the parallel interface and selects PCL emulation if the data indicates that is the required printer language.
- Off** Printer does not examine the incoming data. The printer uses PostScript emulation to process the job if PS SmartSwitch is On, or uses the default printer language specified in the Setup Menu if PS SmartSwitch is Off.

**See also:**

[Printer Language; PS SmartSwitch](#)

---

## PS SmartSwitch

**Purpose:**

To configure the printer so it automatically switches to PostScript emulation when a print job received through the parallel port requires it, regardless of the default printer language.

**Values:**

- On\*** Printer examines data on the parallel interface and selects PostScript emulation if the data indicates that is the required printer language.
- Off** Printer does not examine the incoming data. The printer uses PCL emulation to process the job if PCL SmartSwitch is On, or uses the default printer language specified in the Setup Menu if PCL SmartSwitch is Off.

**See also:**

[PCL SmartSwitch; Printer Language](#)

---

## Protocol

**Purpose:**

To specify the parallel interface protocol.

**Values:**

- Standard** May resolve some parallel interface problems.
- Fastbytes\*** Provides compatibility with most existing parallel interface implementations (recommended setting).

**See also:**

*Technical Reference*



## PCL Emul Menu

---

Use the PCL Emul Menu to change printer settings that only affect jobs using the PCL emulation printer language.

Select a menu item for more details:

- **A4 Width**
- **Auto CR after LF**
- **Auto LF after CR**
- **Font Name**
- **Font Source**
- **Lines per Page**
- **Orientation**
- **Pitch**
- **Point Size**
- **Symbol Set**
- **Tray Renumber**

**Note:** Values marked by an asterisk are the factory default settings.

---

### A4 Width

**Purpose:**

To select the width of the logical page for A4 size paper.

**Values:**

- |                |  |
|----------------|--|
| <b>198 mm*</b> | Makes the logical page compatible with the Hewlett-Packard LaserJet 5 Printer. |
| <b>203 mm</b>  | Makes the logical page wide enough to print eighty 10-pitch characters.        |

---

### Auto CR after LF

**Purpose:**

To specify whether the printer automatically performs a carriage return after a line feed control command.

**Values:**

- Off\*** Printer does not perform a carriage return after a line feed control command.
- On** Printer performs a carriage return after a line feed control command.

---

## Auto LF after CR

**Purpose:**

To specify whether the printer automatically performs a line feed after a carriage return control command.

**Values:**

- Off\*** Printer does not perform a line feed after a carriage return control command.
- On** Printer performs a line feed after a carriage return control command.

---

## Font Name

**Purpose:**

To choose a specific font from the specified font source.

**Values:**

**R0 Courier 10\***

The font name and font ID for all fonts in the selected font source are displayed. The font source abbreviation is R for resident, F for flash, K for disk, and D for download.

**See also:**

[Font Source](#)

---

## Font Source

**Purpose:**

To determine the set of fonts displayed in the Font Name menu item.

**Values:**

- Resident\*** Displays all fonts resident in printer RAM when the printer ships from the factory.
- Download** Displays all fonts downloaded to printer RAM.
- Flash** Displays all fonts stored in flash memory.
- Disk** Displays all fonts stored on the printer hard disk.
- All** Displays all fonts available to the printer from all sources.

**See also:**

[Font Name](#)

---

## Lines per Page

**Purpose:**

To determine the number of lines that print on each page.

**Values:**

1...255

60\* (country-specific)

64\* (country-specific)

The printer sets the amount of space between each line (vertical line spacing) based on the Lines per Page, Paper Size, and Orientation menu items. Select the correct Paper Size and Orientation before changing Lines per Page.

**See also:**

[Orientation](#); [Paper Size](#)

---

## Orientation

**Purpose:**

To determine how text and graphics are oriented on the page.

**Values:**

**Portrait\*** Prints text and graphics parallel to the short edge of the paper.

**Landscape** Prints text and graphics parallel to the long edge of the paper.

---

## Pitch

**Purpose:**

To specify the font pitch for scalable monospaced fonts.

**Values:**

0.08...100 (in increments of 0.01 cpi)

10\*

Pitch refers to the number of fixed-space characters in a horizontal inch of type. You can select a pitch from 0.08 to 100 characters per inch (cpi) in increments of 0.01 cpi. For nonscalable monospaced fonts, the pitch is displayed, but cannot be changed.

**Note:** Pitch is only displayed for fixed, or monospaced, fonts.

---

## Point Size

### Purpose:

To change the point size for scalable typographic fonts.

### Values:

1...1008 (in increments of 0.25 points)

12\*

Point size refers to the height of the characters in the font. One point equals approximately 1/72 of an inch. You can select point sizes from 1 to 1008 in increments of 0.25 points.

**Note:** Point Size is only displayed for typographic fonts.

---

## Symbol Set

### Purpose:

To choose a symbol set for a specified font name.

### Values:

10U PC-8\* (country-specific)

12U PC-850\* (country-specific)

A symbol set is a set of alphabetic and numeric characters, punctuation, and special symbols used when printing with a selected font. Symbol sets support the different requirements for languages or specific applications, such as math symbols for scientific text. Only the symbol sets supported for the selected font name are displayed.

### See also:

[Font Name](#)

---

## Tray Renumber

### Purpose:

To configure your printer to work with printer drivers or applications that use different source assignments for the paper trays.

*First select a paper source:*

**Assign Tray <x>**

*Then select a value:*

<b>Off*</b>	Printer uses factory default paper source assignments.
<b>0...199</b>	Select a numeric value to assign a custom value to a paper source.
<b>None</b>	Paper source ignores the Select Paper Feed command.
<b>View Factory Def</b>	Displays the factory default value assigned to the specified paper source.
<b>Restore Defaults</b>	Select <b>Yes</b> to return all tray assignments to factory default values.

**Note:** Refer to the *Technical Reference* for more information about assigning source numbers.



## PostScript Menu

---

Use the PostScript Menu to change printer settings that only affect jobs using the PostScript emulation printer language.

Select a menu item for more details:

- **Font Priority**
- **Image Smoothing**
- **Print PS Error**

**Note:** Values marked by an asterisk are the factory default settings.

---

### Font Priority

**Purpose:**

To establish the font search order.

**Values:**

<b>Resident*</b>	Printer searches printer memory for the requested font before searching flash memory or hard disk.
<b>Flash/Disk</b>	Printer searches the hard disk and flash memory for the requested font before searching printer memory.

**Note:** Font Priority is only displayed when a formatted flash or hard disk is installed, is neither defective nor Read/Write or Write protected, and Job Buffer Size is not set to 100%.

---

### Image Smoothing

**Purpose:**

To enhance the contrast and sharpness of low resolution bitmapped images (such as images downloaded from the World Wide Web) and smooth their color transitions.

**Values:**

- Off\*** Uses default resolution when printing all images.
- On** Enhances low resolution images, such as graphics with a resolution of 72 dpi.

**Note:** Image Smoothing has no effect on images that are 300 dpi or higher resolution.

---

**Print PS Error****Purpose:**

To print a page defining the PostScript emulation error when an error occurs.

**Values:**

- Off\*** Discards the print job without printing an error message.
- On** Prints an error message before it discards the job.

# 41 Serial Menu

---

Use the Serial Menu to change printer settings affecting jobs sent to the printer through a serial port (either Standard Serial or Serial Opt <x> ).

Select a menu item for more details:

- Baud
- Data Bits
- Honor DSR
- Job Buffering
- NPA Mode
- Parity
- PCL SmartSwitch
- PS SmartSwitch
- Robust XON
- RS-232/RS-422
- RS-422 Polarity
- Serial Buffer
- Serial Protocol

**Note:** Values marked with an asterisk are the factory default settings.

---

## Baud

### Purpose:

To specify the rate at which data can be received through the serial port.

### Values:

1200	57600
2400	115200
4800	138200
9600*	172800
19200	230400
38400	345600

### See also:

*Technical Reference*

---

## Data Bits

### Purpose:

To specify the number of data bits that are sent in each transmission frame.

### Values:

7

8\*

### See also:

*Technical Reference*

---

## Honor DSR

### Purpose:

To determine whether the printer uses the Data Set Ready (DSR) signal. DSR is one of the handshaking signals for most serial interface cables.

### Values:

**Off\*** All data received by the serial port is treated as valid data.

**On** Only data received while the DSR signal is high is treated as valid.

The serial interface uses DSR to distinguish data sent by the computer from data created by electrical noise in the serial cable. This electrical noise can cause stray characters to print. Select On to prevent stray characters from printing.

---

## Job Buffering

### Purpose:

To temporarily store jobs on the printer hard disk before printing.

### Values:

**Off\*** Does not buffer print jobs to the hard disk.

**On** Buffers print jobs to the hard disk.

**Auto** Buffers print jobs only if the printer is busy processing data from another input port.

**Note:** Changing the Job Buffering menu item automatically resets the printer.

### See also:

[Job Buffer Size](#)

---

## NPA Mode

### Purpose:

To specify whether the printer performs the special processing required for bidirectional communication, following the conventions defined in the Network Printing Alliance (NPA) Protocol.

### Values:

- On** Printer performs NPA processing. If data is not in NPA format, it is rejected as bad data.
- Off** Printer does not perform NPA processing.
- Auto\*** Printer examines the data to determine the format and then processes it appropriately.

**Note:** Changing this menu item automatically resets the printer.

---

## Parity

### Purpose:

To select the parity for serial input and output data frames.

### Values:

- Even**
- Odd**
- None\***
- Ignore**

### See also:

*Technical Reference*

---

## PCL SmartSwitch

### Purpose:

To configure the printer so it automatically switches to PCL emulation when a print job received through the serial port requires it, regardless of the default printer language.

### Values:

- On\*** Printer examines data on the serial interface and selects PCL emulation if the data indicates that is the required printer language.
- Off** Printer does not examine the incoming data. The printer uses PostScript emulation to process the job if PS SmartSwitch is On, or uses the default printer language specified in the Setup Menu if PS SmartSwitch is Off.

**See also:**

[PS SmartSwitch](#); [Printer Language](#)

---

## PS SmartSwitch

**Purpose:**

To configure the printer so it automatically switches to PostScript emulation when a print job received through the serial port requires it, regardless of the default printer language.

**Values:**

- On\*** Printer examines data on the serial interface and selects PostScript emulation if the data indicates that is the required printer language.
- Off** Printer does not examine the incoming data. The printer uses PCL emulation to process the job if PCL SmartSwitch is On, or uses the default printer language specified in the Setup Menu if PCL SmartSwitch is Off.

**See also:**

[PCL SmartSwitch](#); [Printer Language](#)

---

## Robust XON

**Purpose:**

To determine whether the printer communicates availability to the computer.

**Values:**

- Off\*** Printer waits to receive data from the computer.
- On** Printer sends a continuous stream of XONs to the host computer to indicate that the serial port is ready to receive more data.

This menu item only applies to the serial port if Serial Protocol is set to XON/XOFF.

---

## RS-232/RS-422

**Purpose:**

To specify the type of serial communication.

**Values:**

- RS-232\***
- RS-422**

**Note:** Selecting RS-422 automatically sets Serial Protocol to XON/XOFF.

---

## RS-422 Polarity

### Purpose:

To establish the behavior of the positive and negative signals when using RS-422 serial communication.

### Values:

<b>Normal*</b>	Uses default definition of one and zero.
<b>Reverse</b>	Reverses the definition of one and zero, thereby allowing a positive connection to a host computer negative terminal without changing the physical cable.

---

## Serial Buffer

### Purpose:

To configure the size of the serial input buffer.

### Values:

<b>Disabled</b>	Disables job buffering. Any jobs already buffered on the disk are printed before normal processing of incoming jobs resumes.
<b>Auto*</b>	Printer automatically calculates the Serial Buffer size (recommended setting).
<b>3K to maximum size allowed</b>	User specifies the Serial Buffer size. The maximum size depends on the amount of memory in your printer, the size of the other link buffers, and whether Resource Save is set to On or Off. To maximize the range for the Serial Buffer size, disable or reduce the size of the parallel, infrared, LocalTalk, and USB buffers.

**Note:** Changing the Serial Buffer menu item automatically resets the printer.

### See also:

[Resource Save](#)

---

## Serial Protocol

### Purpose:

To select the hardware and software handshaking values for the serial interface.

### Values:

<b>DTR*</b>	Hardware handshaking.
<b>DTR/DSR</b>	Hardware handshaking.
<b>XON/XOFF</b>	Software handshaking.
<b>XON/XOFF/DTR</b>	Combined hardware and software handshaking.

**XON/XOFF/DTRDSR**

Combined hardware and software handshaking.

**See also:**

*Technical Reference*



## Setup Menu

---

Use the Setup Menu to configure a variety of printer features.

Select a menu item for more details:

- **Alarm Control**
- **Auto Continue**
- **Display Language**
- **Download Target**
- **Jam Recovery**
- **Job Accounting**
- **Job Buffer Size**
- **Page Protect**
- **Power Saver**
- **Print Timeout**
- **Printer Language**
- **Resource Save**
- **Wait Timeout**
- **Print Area**
- **Toner Saver**
- **Left Margin**

**Note:** Values marked by an asterisk are the factory default settings.

---

### Alarm Control

**Purpose:**

To establish whether the printer sounds an alarm when the printer requires operator intervention.

**Values:**

<b>Off</b>	Printer does not sound an alarm.
<b>Single*</b>	Printer sounds three quick beeps.
<b>Continuous</b>	Printer repeats three beeps every 10 seconds.

---

### Auto Continue

**Purpose:**

To define the amount of time (in seconds) the printer waits after displaying an operator intervention error message before it resumes printing.

**Values:**

- Disabled\*** Printer does not resume printing until someone clears the error message.
- 5...255** Printer waits the specified amount of time, and then automatically resumes printing. This timeout value also applies if the menus are displayed (and the printer is offline) for the specified period of time.

---

## Display Language

**Purpose:**

To determine the language of the text on the operator panel display.

**Values:**

- |                 |                   |                  |
|-----------------|-------------------|------------------|
| <b>English</b>  | <b>Norsk</b>      | <b>Polski</b>    |
| <b>Français</b> | <b>Nederlands</b> | <b>Hungarian</b> |
| <b>Deutsch</b>  | <b>Svenska</b>    | <b>Turkish</b>   |
| <b>Italiano</b> | <b>Português</b>  | <b>Czech</b>     |
| <b>Español</b>  | <b>Suomi</b>      |                  |
| <b>Dansk</b>    | <b>Russian</b>    |                  |

**Note:** All values may not be available.

---

## Download Target

**Purpose:**

To specify the storage location for downloaded resources.

**Values:**

- RAM\*** All downloaded resources are automatically stored in printer memory (RAM).
- Flash** All downloaded resources are automatically stored in flash memory.
- Disk** All downloaded resources are automatically stored on the hard disk.

Storing downloaded resources in flash memory or on a hard disk is permanent storage rather than the temporary storage that RAM provides. The resources remain in the flash memory or on the hard disk even when the printer is turned off. Use MarkVision to download resources to the printer.

---

## Jam Recovery

**Purpose:**

To establish whether the printer reprints jammed pages.

**Values:**

- On** Printer reprints jammed pages.
- Off** Printer does not reprint jammed pages.
- Auto\*** Printer reprints a jammed page unless the memory required to hold the page is needed for other printer tasks.

---

## Job Accounting

**Purpose:**

To store statistical information about your most recent print jobs on the hard disk. The statistics include whether the job printed with or without errors, the print time, the job size (in bytes), the requested paper size and paper type, the total number of printed pages, and the number of copies requested.

**Values:**

- Off\*** Printer does not store job statistics on disk.
- On** Printer stores job statistics for the most recent print jobs.

**Note:** Job Accounting is only displayed when a hard disk is installed, is neither defective nor Read/Write or Write protected, and Job Buffer Size is not set to 100%.

---

## Job Buffer Size

**Purpose:**

To specify the percentage of the hard disk storage capacity that is dedicated to job buffering.

**Values:**

- Disabled\*** No jobs are buffered to the hard disk.
- 10%...100%** Specifies the amount of hard disk space (in 1% increments) allocated to job buffering for jobs transmitted through all ports that have Job Buffering set to On or Auto.

**Note:** If you change the Job Buffer Size, all jobs stored on the hard disk are deleted.

---

## Page Protect

**Purpose:**

To successfully print a page that may otherwise generate **Complex Page** errors.

**Values:**

- |             |   |
|-------------|---|
| <b>Off*</b> | Prints a partial page of data if memory is insufficient to process the entire page. |
| <b>On</b>   | Ensures that an entire page is processed before it prints.                          |

If, after selecting On, you still cannot print the page, you may also have to reduce the size and number of fonts on the page, or increase the installed printer memory.

For most print jobs, you do not need to select On. When On is selected, printing may be slower.

---

## Power Saver

**Purpose:**

To specify the amount of time (in minutes) the printer waits after a job is printed before it goes into a reduced power state.

**Values:**

- |                 |  |
|-----------------|--|
| <b>Disabled</b> | Disables Power Saver; the fuser remains warm and ready to print at all times.  |
| <b>1...240</b>  | Specifies the amount of time after a print job before the printer goes into Power Saver mode.<br><b>Note:</b> The factory default is 20 minutes. |

**Power Saver** replaces the **Ready** message. When the printer is in Power Saver mode, it is still ready to receive print jobs.

Select 1 to put the printer in Power Saver mode one minute after it finishes a print job. This uses much less energy, but requires more warm-up time for the printer. Select 1 if your printer shares an electrical circuit with room lighting and you notice lights flickering.

Select a high value if your printer is in constant use. Under most circumstances, this keeps the printer ready to print with minimum warm-up time. Select a value between 1 and 240 minutes if you want a balance between energy consumption and a shorter warm-up period.

---

## Print Timeout

**Purpose:**

To specify the amount of time (in seconds) the printer waits before printing the last page of a print job that does not end with a command to print the page. The print timeout counter does not start until **waiting** is displayed.

**Values:**

- |                      |   |
|----------------------|---|
| <b>Disabled</b>      | The printer does not print the last page of a print job until one of the following occurs: <ul style="list-style-type: none"><li>• The printer receives enough information to fill the page.</li><li>• The printer receives a Form Feed command.</li><li>• You select Print Buffer from the Job Menu.</li></ul> |
| <b>1...225 (90*)</b> | The printer prints the last page after the specified time.  |

---

## Printer Language

### Purpose:

To establish the default printer language used to communicate data from the computer to the printer.

### Values:

<b>PCL Emulation*</b>	PCL emulation, compatible with Hewlett-Packard printers.
<b>PS Emulation</b>	PostScript emulation, compatible with Adobe PostScript language.

**Note:** Setting a printer language as the default does not prevent a software application from sending print jobs that use the other language.

---

## Resource Save

### Purpose:

To determine what the printer does with downloaded resources, such as fonts and macros stored in RAM, if the printer receives a job that requires more memory than is available.

### Values:

<b>Off*</b>	Printer retains downloaded resources only until memory is needed. It then deletes those resources associated with the inactive printer language.
<b>On</b>	Printer retains all downloaded resources for all printer languages during language changes and printer resets. If the printer runs out of memory, <b>38 Memory Full</b> is displayed.

### See also:

[Memory full](#)

---

## Wait Timeout

### Purpose:

To specify the amount of time (in seconds) the printer waits to receive additional bytes of data from the computer. When this timeout expires, the print job is canceled.

### Values:

<b>Disabled</b>	Disables Wait Timeout.
<b>15...65535 (40*)</b>	Specifies the amount of time the printer waits for additional data before it cancels the job.

**Note:** Wait Timeout is only available when you use PostScript emulation. This menu item has no effect on PCL emulation print jobs.

---

## Print Area

### Purpose:

To modify the logical and physical printable area.

### Values:

<b>Print Area</b>	Normal*
	Whole Page

---

## Toner Saver

### Purpose:

To control the amount of toner used on the printed page.

### Values:

<b>Off*</b>	Select On to reduce the amount of toner used. Selecting On also may help reduce printing costs.
<b>On</b>	Select Off to improve print quality.

### See also:

[Toner Saver](#)

---

## Left Margin

### Purpose:

To adjust the printed left margins from tray 2 and the duplex unit to match the printed margin of tray 1.

### Values:

<b>Tray 2 =1-15</b>	Select Tray 2 to move the printed margin of tray 2.
<b>Duplex =1-15</b>	Select Duplex to align the printed margins of duplexed pages.

### See also:

*Setup Guide*



# Supplies Menu

---

The Supplies Menu provides information about printer supplies that require attention. It is only available when a supply is low or needs replacement.

Select a menu item for more details:

- **<color>Toner**
- **Fuser**
- **Fuser Cleaner**
- **Oil Bottle**
- **Photo Dev Cart**
- **Tray <x> Status**
- **Waste Bottle**
- **Maintenance**
- **Replace Supplies**
- **Supplies Life**

---

## <color>Toner

### Purpose:

To view the status of the color print cartridges when in a maintenance state.

### Values:

- |              |  |
|--------------|--|
| <b>Low</b>   | The <color> toner cartridge is low. If you do not have a replacement toner cartridge, you should order one at this time. |
| <b>Empty</b> | You must replace the <color> toner cartridge to continue printing.   |

### See also:

[Supplies](#)

---

## Fuser

### Purpose:

To view the status of the printer fuser when in a maintenance state.

**Values:**

**Exhausted** It's time to replace the fuser.

**See also:**

[Supplies](#)

---

**Fuser Cleaner****Purpose:**

To view the status of the printer fuser cleaning roll when in a maintenance state.

**Values:**

**Missing** The cleaning roll is missing or improperly installed.

**Life Warning** The cleaning roll is near its end of life.

**Exhausted** It's time to replace the cleaning roll.

**See also:**

[Supplies](#)

---

**Oil Bottle****Purpose:**

To view the status of the printer oil bottle when in a maintenance state.

**Values:**

**Low** The oil bottle is low. If you do not have a replacement oil bottle, you should order one at this time.

**Empty** You must replace the oil bottle to continue printing.

**See also:**

[Supplies](#)

---

**Photo Dev Cart****Purpose:**

To view the status of the printer photo developer cartridge when in a maintenance state.

**Values:**

<b>Missing</b>	The photo developer cartridge is either missing or improperly installed.
<b>Exhausted</b>	It's time to replace the photo developer cartridge.

**See also:**

[Supplies](#)

---

## Tray <x> Status

**Purpose:**

To view the status of all printer paper trays when in a maintenance state.

**Values:**

<b>Missing</b>	Tray <x> is either missing or improperly installed.
<b>Empty</b>	Tray <x> is empty.

**See also:**

[Loading paper, card stock, or labels](#)

---

## Waste Bottle

**Purpose:**

To view the status of the printer waste toner bottle when in a maintenance state.

**Values:**

<b>Near Full</b>	The waste toner bottle is nearly full.
<b>Full</b>	It's time to empty or replace the waste toner bottle.

**See also:**

[Supplies](#)

---

## Maintenance

**Purpose:**

To view the status of the maintenance kit when in a maintenance state.

**Value:**

**120,000 Page Kit**    The Maintenance Kit needs to be replaced.

**See also:**

[Supplies](#)

## Replace Supplies

**Purpose:**

To reset the counters for various supply items before they enter a maintenance state.

**Values:**

<b>&lt;color&gt; Toner</b>	=Not Replaced =Replaced
<b>Photo Dev Cart</b>	=Not Replaced =Replaced
<b>Fuser</b>	=Not Replaced =Replaced
<b>Fuser Cleaner</b>	=Not Replaced =Replaced

**See also:**

[Supplies](#)

## Supplies Life

**Purpose:**

To view the current status of the printer supplies.

Supply items appear in the supplies list with the current percent life remaining or listed as OK. The percentage life remaining is replaced with the maintenance status once an item has reached a maintenance state for example, the waste bottle would change from **OK** to **Near Full**.

**Values:**

<b>&lt;color&gt; Toner</b>	=Empty =xx%	<b>Photo Dev Cart</b>	=Exhausted =xx% =Missing
<b>Waste Bottle</b>	=Near Full =Full or Missing =OK	<b>Fuser</b>	=Exhausted =xx%
<b>Oil Bottle</b>	=Low =Empty =OK	<b>Fuser Cleaner</b>	=Life Warning =xx% =Exhausted

**See also:**

[Supplies](#)

# 44 USB Menu

---

Use the USB Menu to change printer settings affecting a Universal Serial Bus (USB) port (USB Option <x>).

Select a menu item for more details:

- **Job Buffering**
- **NPA Mode**
- **PCL SmartSwitch**
- **PS SmartSwitch**
- **USB Buffer**
- **MAC Binary PS**

**Note:** Values marked by an asterisk are the factory default settings.

---

## Job Buffering

### Purpose:

To temporarily store jobs on the printer hard disk before printing.

### Values:

- |             |   |
|-------------|---|
| <b>Off*</b> | Does not buffer print jobs to the hard disk.  |
| <b>On</b>   | Buffers print jobs to the hard disk.  |
| <b>Auto</b> | Buffers print jobs only if the printer is busy processing data from another input port. |

**Note:** Changing the Job Buffering menu item automatically resets the printer.

### See also:

**Job Buffer Size**

---

## NPA Mode

### Purpose:

To specify whether the printer performs the special processing required for bidirectional communication, following the conventions defined in the Network Printing Alliance (NPA) Protocol.

### Values:

- On** Printer performs NPA processing. If data is not in NPA format, it is rejected as bad data.
- Off** Printer does not perform NPA processing.
- Auto\*** Printer examines the data to determine the format and then processes it appropriately.

**Note:** Changing this menu item automatically resets the printer.

---

## PCL SmartSwitch

### Purpose:

To configure the printer so it automatically switches to PCL emulation when a print job received through the USB port requires it, regardless of the default printer language.

### Values:

- On\*** Printer examines the data on the USB interface and selects PCL emulation if the data indicates that is the required printer language.
- Off** Printer does not examine the incoming data. The printer uses PostScript emulation to process the job if PS SmartSwitch is On, or uses the default printer language specified in the Setup Menu if PS SmartSwitch is Off.

### See also:

[PS SmartSwitch](#); [Printer Language](#)

---

## PS SmartSwitch

### Purpose:

To configure the printer so it automatically switches to PostScript emulation when a print job received through the USB port requires it, regardless of the default printer language.

### Values:

- On\*** Printer examines data on the USB interface and selects PostScript emulation if the data indicates that is the required printer language.
- Off** Printer does not examine the incoming data. The printer uses PCL emulation to process the job if PCL SmartSwitch is On, or uses the default printer language specified in the Setup Menu if PCL SmartSwitch is Off.

**See also:**

[PCL SmartSwitch](#); [Printer Language](#)

---

## USB Buffer

### **Purpose:**

To configure the size of the USB input buffer.

### **Values:**

<b>Disabled</b>	Job buffering is disabled. Any jobs already buffered on the disk are printed before normal processing of incoming jobs resumes.
<b>Auto*</b>	Printer automatically calculates the USB Buffer size (recommended setting).
<b>3K to maximum size allowed</b>	User specifies the USB Buffer size. The maximum size depends on the amount of memory in your printer, the size of the other link buffers, and whether Resource Save is set to On or Off. To maximize the range for the USB Buffer size, disable or reduce the size of the parallel, serial, network, infrared, and LocalTalk buffers.

**Note:** Changing the USB Buffer menu item automatically resets the printer.

**See also:**

[Resource Save](#)

---

## MAC Binary PS

### **Purpose:**

To let the printer receive binary PS data from a Macintosh computer and print it properly.

**Note:** When Mac Binary PS is turned On, the printer may not properly print data from a Windows system.

### **Values:**

<b>On</b>	Enables the printer to receive and print binary PS data from a Macintosh computer. This setting turns filtering off for the printer USB port.
<b>Off*</b>	Places all USB protocol filtering on for the printer USB port.

**See also:**

*Technical Reference*



## Utilities Menu

---

Use the Utilities Menu to print a variety of listings relating to available printer resources, printer settings, and print jobs. Other menu items let you set up printer hardware and troubleshoot printer problems.

Select a menu item for more details:

- **Defragment Flash**
- **Factory Defaults**
- **Format Disk**
- **Format Flash**
- **Hex Trace**
- **Job Acct Stat**
- **Print Directory**
- **Print Fonts**
- **Print Menus**
- **Print Net <x> Setup**

---

### Defragment Flash

**Purpose:**

To retrieve storage area lost when resources are deleted from flash memory.

**Values:**

- |            |  |
|------------|--|
| <b>Yes</b> | Printer transfers all resources stored in flash memory to printer memory and then reformats the flash memory option. When the format operation is complete, the resources are loaded back into flash memory. |
| <b>No</b>  | Printer cancels the request to defragment the flash memory.  |

**WARNING:** Do not turn off the printer while the flash is defragmenting.

**See also:**

[37 Insufficient Defrag Memory](#)

---

### Factory Defaults

**Purpose:**

To return your printer settings to the factory default values.

**Values:**

- |                       |   |
|-----------------------|---|
| <b>Restore</b>        | <ul style="list-style-type: none"><li>• All menu items are returned to the factory default values except:<ul style="list-style-type: none"><li>– Display Language.</li><li>– All settings in the Parallel Menu, Serial Menu, Network Menu, Infrared Menu, LocalTalk Menu, and USB Menu.</li></ul></li><li>• All downloaded resources (fonts, macros, and symbol sets) in printer memory (RAM) are deleted. (Resources residing in flash memory or on the hard disk are unaffected.)</li></ul> |
| <b>Do Not Restore</b> | User-defined settings remain.   |

---

## Format Disk

**Purpose:**

To format the printer hard disk.

**Values:**

- |            |   |
|------------|---|
| <b>Yes</b> | Deletes any data stored on the hard disk and prepares the device to receive new resources.  |
| <b>No</b>  | Cancel the request to format the hard disk and leaves current resources stored on the disk. |

**WARNING:** Do not turn off the printer while the hard disk is formatting.

**See also:**

[61 Defective Disk](#)

---

## Format Flash

**Purpose:**

To format the flash memory.

**Values:**

- |            |  |
|------------|--|
| <b>Yes</b> | Deletes any data stored in flash memory and prepares the flash memory to receive new resources.    |
| <b>No</b>  | Cancel the request to format the flash memory and leaves current resources stored in flash memory. |

**WARNING:** Do not turn off the printer while the flash is formatting.

**See also:**

[51 Defective Flash](#)

---

## Hex Trace

### Purpose:

To help isolate the source of a print job problem. With Hex Trace selected, all data sent to the printer is printed in hexadecimal and character representation. Control codes are not executed.

To exit Hex Trace, turn the printer off or reset the printer from the Job Menu.

---

## Job Acct Stat

### Purpose:

To print a listing of all job statistics stored on the hard disk, or to clear all statistics on the disk.

### Values:

<b>Print</b>	Prints all statistics available for the most recent print jobs.
<b>Clear</b>	Deletes all accumulated job statistics from the hard disk.

### See also:

[Job Accounting](#)

---

## Print Directory

### Purpose:

To print a list of all the resources stored in flash memory or on the hard disk.

**Note:** Print Directory is available only when either a nondefective flash or disk is installed and formatted, and Job Buffer Size is not set to 100%.

### See also:

*Technical Reference*

---

## Print Fonts

### Purpose:

To print a sample of all the fonts available for the selected printer language.

### Values:

<b>PCL Fonts</b>	Prints a sample of all printer fonts available for PCL emulation.
<b>PS Fonts</b>	Prints a sample of all printer fonts available for PostScript emulation.

---

## **Print Menus**

### **Purpose:**

To print a listing of the current user default values, the installed options, the amount of installed printer memory, and the status of printer supplies.

---

## **Print Net <x> Setup**

### **Purpose:**

To print information relating to the internal print server and the network settings defined by the Network <x> Setup menu item in the Network Menu.



## Printer specifications

### Standard features

Feature	Description
Print method	Dry electrophotographic process using a laser diode unit
Print addressability	600 x 600 dpi
Maximum simplex print speed (mono/color)	24/6 ppm (letter and A4 paper)
Maximum duplex print speed (mono/color)	8/3 duplexed ppm (letter and A4 paper)
Fonts	<ul style="list-style-type: none"><li>• 240 resident scalable fonts:<ul style="list-style-type: none"><li>– 156 PostScript 3 emulation</li><li>– 84 PCL emulation</li></ul></li><li>• 2 PCL bitmap fonts:<ul style="list-style-type: none"><li>– LinePrinter</li><li>– POSTNET Barcode</li></ul></li><li>• World class international font support:<ul style="list-style-type: none"><li>– 83 symbol sets, including support for Canadian French, Brazilian Portuguese, Cyrillic, Greek, and Multilingual Euro</li></ul></li></ul>
Paper input	250-sheet tray
Paper output	Top output bin: 250 sheets
Paper sizes supported	A4, letter, executive, JIS B5, A5, DL env, #9 env, #10 env, B5 env, C5 env.
Printer memory	32MB (SDRAM) <b>Note:</b> Some printer models may ship with more memory. When a duplex unit is installed, 64MB is the recommended minimum printer memory.
Interface	Parallel (complies with bidirectional IEEE 1284B) USB
Internal solutions ports	1 port for Tri-Port Adapter, serial port adapter, or additional parallel port adapter 3 memory connectors
Printer software	MarkVision utility that lets you manage your printer from your computer.

## Options

Option	Description
Optional drawer	Drawer unit with one 500-sheet tray installed underneath the printer.
Optional legal tray	Provides the ability to print legal size paper (8.5 x 14 in. / 215.4 x 354.8 mm).
Duplex unit	Provides two sided color or monochrome printing.
Memory	Maximum usable memory: 384MB.
Hard disk option	2.5-inch hard disk to store fonts, forms, job statistics, and spooled jobs (8GB limit).
MarkNet™ N2000 internal print servers	Internal print servers available to support the following topologies: <ul style="list-style-type: none"> <li>• Ethernet 10BaseT and 10Base2</li> <li>• Ethernet 10/100BaseTX</li> <li>• Token-Ring (connects the printer to a Token-Ring network by way of DB9 or RJ45)</li> </ul>
Tri-Port Adapter	Provides support for the following interfaces: <ul style="list-style-type: none"> <li>• Serial RS-232C/RS-422A (which can also be configured to support a class 1 fax modem)</li> <li>• High speed Infrared local connections</li> <li>• LocalTalk network connection</li> </ul>
Parallel/USB interface card	IEEE 1284 adapter provides additional parallel and USB port.
Infrared adapter	For use with the Tri-Port Adapter; receives infrared beam from an IrDA-compatible workstation.
Serial interface adapter	Converts the printer parallel port to a serial port.
Parallel cables	High speed bidirectional 10-ft and 20-ft 1284-B parallel cables; 9.8-ft 1284 A-C parallel cable.
Serial cable	50-foot serial cable.
OptraImage	Transforms your printer into an easy-to-use networkable print/copy station.

## Printer supplies

Supply	Description	Approximate yield
Toner cartridges	Black cartridge.	12,000 pages (5% toner coverage)
	Magenta, cyan, or yellow cartridge.	7,200 pages (5% toner coverage)
Oil bottle	Oil for fuser.	12,000 pages
Cleaning roll	Cleans fuser.	12,000 pages (5% monochrome coverage) (20% color coverage)
Fuser and air filter kit	Fuses toner to media (consists of fuser and air filter).	40,000 pages
Photo developer cartridge	Transfers toner to the image drum.	40,000 images

## Printer supplies

Supply	Description	Approximate yield
Waste toner bottle	Collects excess toner from the photo developer.	12,000 images
Maintenance kit	Transfers image to media (consists of transfer roller, paper discharger, and drum cleaner).	120,00 pages

## Dimensions

Printer configuration	Height	Weight	Depth
Printer	410 mm (16.1 in.)	500 mm (19.7 in.)	520 mm (20.5 in.)
Printer with optional drawer unit	555 mm (21.9 in.)	500 mm (19.7 in.)	520 mm (20.5 in.)
Printer with optional drawer unit and duplex unit	605 mm (23.8 in.)	500 mm (19.7 in.)	605 mm (23.8 in.)

## Weight

Printer configuration	Weight
Printer (without supplies installed)	33.6 kg (74 lb)
Printer (with supplies installed <sup>1</sup> )	39 kg (86 lb)
Optional drawer unit	8.4 kg (19 lb)
Optional duplex unit	9.2 kg (21 lb)
<sup>1</sup> Excludes the weight of paper.	

---

### *MarkVision printer management software*

MarkVision for Windows 95/98/2000, Windows NT 4.0, and Macintosh is shipped with your printer on the drivers CD.

The MarkVision graphical user interface provides advanced, real-time, centralized management capabilities for Lexmark printers connected locally or attached directly to a network. Network users and administrators can also use the following MarkVision features to increase productivity:

- Centralized setup capabilities let you quickly configure and install multiple printers.
  - You can configure multiple printers simultaneously from one workstation.
  - Automatic network printer discovery and multi-adapter flash update let you set up and configure Lexmark network printers and change network addresses from one workstation.

**Note:** You can integrate MarkVision directly into your favorite network management software.

- Use MarkVision to easily manage and monitor your Lexmark printers.
  - Messages on the MarkVision remote operator panel reflect printer real-time status.
  - The dynamic printer graphic provides a visual confirmation of installed options.
  - A list of installed features shows you printer capabilities.

**Note:** Management capabilities for multivendor printers are available in some versions of MarkVision.

- MarkVision provides the tools to make printer-related administrative tasks effortless.
  - Monitor network print jobs, change their printing order, and hold or delete specific jobs.
  - Use asset management options to maintain printer inventory, assign property tags, track page counts, and gather job statistics.
  - Download and manage resources such as fonts, demo pages, and overlays.

---

### *MarkVision Professional*

MarkVision Professional is a Web-based printer management utility shipped on the drivers CD that:

- Lets you monitor and manage devices using a Web browser from any PC with intranet access.
- Enables print management over your existing intranet infrastructure using TCP/IP.
- Offers a cross-platform solution for Windows and UNIX users.

- Lets you manage multivendor printers.

Network users and administrators can also use the following MarkVision features to increase productivity.

### ***Maps***

Locate printers quickly in your organization by positioning printer icons on a map to show not only printer status, but also actual printer location.

### ***Filters***

Search for devices using criteria such as printer status and installed features.

Filters automatically organize printers into groups based on real-time status information.

### ***Remote updates***

Remotely update firmware on multiple Lexmark print servers simultaneously.

---

## ***MarkVision for UNIX networks***

MarkVision for UNIX/Sun offers enterprise scalability, reliability, and performance that helps you easily set up, manage, and maintain printers across networks. Ultimately, this reduces help desk costs and increases network administrator productivity using:

- Centralized Lexmark printer setup capabilities.
- Remote monitoring and management.
- Proactive status alerts on Lexmark printers.
- Tools that allocate printing expenses, balance workload, and access printing resources.

MarkVision Simple Network Management Protocol (SNMP) Services let administrators manage popular multivendor printers.

MarkVision for UNIX Networks and Intranet Servers is recommended to assist in remote printer setup for UNIX platforms.

To purchase MarkVision for UNIX, contact the place where you bought your printer or visit the Lexmark Web site at [www.lexmark.com](http://www.lexmark.com).

---

## ***MarkVision Messenger***

MarkVision Messenger lets you create Actions that execute commands whenever a status event occurs across a set of devices. Device status events are conditions signaled by messages like Paper Tray Missing or Ink Low. Actions can be set up to occur automatically, as well as conditionally or repeatedly.

---

## ***Lexmark MarkTrack™***

MarkTrack is a network printer reporting software package that helps administrators manage printing environments more efficiently. Administrators can use MarkTrack to:

- Retrieve and analyze network printer information from a Web browser.
- Allocate printing resources more efficiently.
- Make better purchasing decisions.
- Allocate printing costs to different departments.
- Provide statistical information on employee printing habits.
- Track Lexmark and SNMP-compliant printers.
- Collect, analyze, and create reports using MarkVision Printer Inventory and Job Statistics data or SNMP MIB data.
- Create reports using a Web server.
- View reports using a Web browser.
- Create an inventory of network printer assets automatically.
- Analyze printing for the enterprise.
- Plan ahead for supplies purchases, maintenance schedules, and printer replacement.

For more information on MarkTrack, refer to the product information, contact the place where you bought your printer, or visit the Lexmark Web site at [www.lexmark.com](http://www.lexmark.com).

---

## **Lexmark NetPnP**

The NetPnP utility for Windows NT ships on the drivers CD.

NetPnP automates the configuration and installation of Lexmark printers on a network. NetPnP senses when a new printer is attached to the network, automatically creates a shared printer object on a Windows NT 4.0 system, and notifies users via e-mail that the printer is available for printing. It also notifies IT administrators via e-mail when a new printer is detected or when an error occurs during automatic printer installation.

- Lets administrators make printers available to users within seconds.
- Extends network printer installation to include the end user by installing all necessary components that enable printing to workstations across the network.
- Provides huge productivity gains when rolling out large numbers of network printers.
- Supports a wide range of printer installation options for IT administrators, from fully automatic installation to prompted confirmations.
- Lets you customize network printer installation in Windows NT environments running TCP/IP.
- Automates the setup of Lexmark network printers, eliminating more than a dozen steps in the process.
- Distribution of drivers with custom settings to users.

IT administrators can remotely install, update, and distribute drivers with custom settings to users on the network, eliminating time-consuming workstation driver installation and configuration.

---

## *Printer memory*

Your printer ships with at least 32MB of memory. To determine the amount of memory currently installed in your printer, select Print Menus from the Utility Menu. The total installed memory appears on the printout. For more information about printing the menu settings page, see [Printing current menu settings](#).

The memory shipped in your printer and the memory options available use SDRAM DIMM memory technology. Unpredictable results may occur if you attempt to operate your printer with memory other than SDRAM DIMM memory installed.

When purchasing memory for your printer, make sure you use SDRAM DIMM memory cards that meet the following criteria:

- 100MHz or greater
- 100 pin
- 4KB refresh rate
- Unbuffered, non ECC
- x32
- 3.3 V

---

## *Adding memory*

Your printer has three memory slots. The maximum amount of usable memory is 384MB. You may add SDRAM DIMM memory cards in any memory combination to suit your needs; however, the maximum amount of memory your printer can use is 384MB.

**Note:** Memory options designed for other Lexmark laser printers may not work with your printer.

Lexmark offers three memory options for your printer: 32MB, 64MB and 128MB. For memory installation instructions, refer to the *Setup Guide*.

Additional memory lets the printer print complex jobs, collate large jobs, and operate more efficiently. You can also download fonts and macros to printer memory. However, this type of memory is temporary storage. Anything stored in printer memory is lost when the printer power is turned off.

## Solving memory problems

If your printer encounters a memory shortage when trying to print a job, it may post an error message (37 **Insufficient Collation Area**, 37 **Insufficient Defrag Memory**, 38 **Memory Full**, or 39 **Complex Page**), depending on the task it is trying to complete. See [Understanding printer messages](#) for more information about these and other messages.

If these messages appear frequently, you probably want to install additional printer memory. If they only occur rarely, try reducing the following:

- The number of pages in the job
- The number of fonts or graphics on each page
- The size of scalable fonts used in the document
- The number of fonts or macros downloaded to printer memory
- Deleting Held Jobs

You may also try adjusting the following settings:

- Print resolution to 600 dpi
- Page Protect On from the Setup Menu
- Resource Save Off from the Setup Menu

## Allocating memory

A portion of printer memory is reserved for input buffers that hold print jobs sent from your software application. Your printer has an input buffer for each interface (parallel, serial, network, LocalTalk, or infrared). You can change the amount of memory allocated to each buffer, depending on your system requirements. For more information about using printer menus to allocate memory for each interface, see [Using printer menus](#) and select the interface menu you want information about.

The size of the input buffers varies with the amount of memory installed in the printer. The following table lists the default size of the input buffers for each interface. If your printer is not using a particular interface, the allocated memory is reserved for job processing.

For more detailed information about these input buffers and memory allocation, refer to the *Technical Reference*.

### Default input buffer size

Installed memory	Each parallel port	Each serial port	Each network port	LocalTalk port	Infrared port	USB port
32MB	192KB <sup>1</sup>	150KB	1MB	1MB	150KB	150KB
64MB 128MB	2MB	300KB	2MB	2MB	300KB	300KB

<sup>1</sup> 1MB allocated to standard parallel port if no optional adapter is installed.

---

## Flash memory

You can add optional flash memory to your printer. If you frequently download fonts, macros, forms, or symbol sets to your printer, you may want to use flash memory storage rather than RAM. Resources stored in flash memory are not lost when the printer power is turned off.

---

## **Hard disk**

If you have a large number of permanent resources you'd like to download to your printer, you may want to install an optional hard disk. The hard disk works much like flash memory, but has a larger storage capacity for downloaded resources. You can also use the hard disk for job buffering, collating large jobs, and gathering job statistics.

For instructions on installing a hard disk, refer to the *Setup Guide*.

### **Job buffering**

You can partition a portion of the hard disk for job buffering. In some cases, spooling jobs to a disk may decrease the time required for the printer to accept the print job data from the application. The job also remains stored on the disk until the entire job prints. Since disk memory acts as permanent storage, your jobs remain secure in the event of a power failure.

You can enable or disable job buffering for each of the available printer ports (parallel, serial, fax, network, infrared, and LocalTalk) by doing the following:

- 1** Using the printer operator panel or MarkVision, select **Job Buffer Size** under the Setup Menu.
- 2** Set the percentage of the disk you want to use for job buffering.
- 3** Press **Go** to return the printer to Ready status.

### **Collating jobs**

If you are collating a large job and printer memory is not sufficient, the printer automatically uses storage area available on an installed hard disk to finish collating the job. See **Collation** for more information.

### **Storing job statistics**

You can also use an installed hard disk to gather statistics about a specified number of the most recent print jobs. The statistics include whether the job printed with or without errors, the time required to print the job, the size (in bytes) of the job, the requested paper size and paper type, the color settings used, the total number of printed pages, and the number of copies requested.

See **Job Accounting** for more information about setting up your printer to gather job statistics and printing the accumulated data. Or, if you're using the MarkVision utility, refer to the MarkVision online Help or the MarkVision documentation on the drivers CD.

---

## **Managing resources downloaded to flash or disk**

Use the MarkVision utility to manage the resources you store on flash memory or hard disk. MarkVision offers tools for;

- Setting the download target, formatting the storage devices
- Downloading resources

- Deleting files
- Moving files from one storage device to the other on the same printer or from one printer to another printer
- Printing a directory listing the resources stored on a device
- Read/write and write passwords to protect resources stored on flash memory or hard disk, or to protect individual files

For more information about the specific resource management tools that MarkVision offers, see [Introducing MarkVision](#) or refer to the MarkVision online Help. For more information about setting passwords, refer to the *Technical Reference*.

---

## ***Removing memory and network options***

Previously installed memory and interface options can easily be removed by using the procedures on the following pages.

### ***Removing the rear cover and system board***

You must remove the rear cover and the system board to remove memory cards, a hard disk, print server, Tri-Port Adapter, or a parallel port interface card.

**CAUTION:** Anytime you move or lift the printer make sure you have someone help you.

**WARNING:** Once the oil bottle has been installed, do not tilt or move the printer. Oil can drip and cause damage.

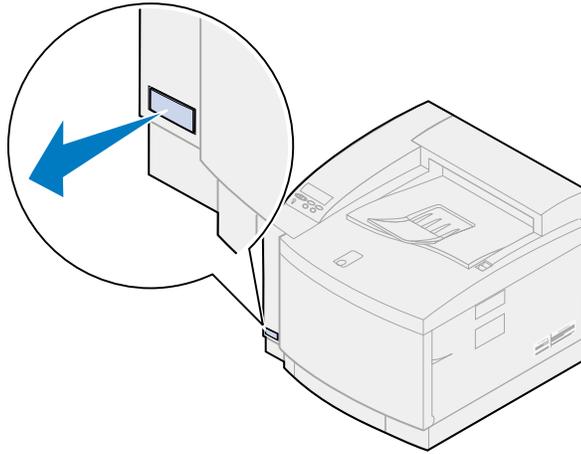
You need a number 2 Phillips screwdriver to remove the rear cover and system board.

**CAUTION:** If you have any other devices connected to the printer, turn them off and unplug their power cords, and any cables going to the printer.

**Note:** The duplex unit and optional drawer do not have to be removed to access the rear cover and system board.

- 1 Turn the printer off.

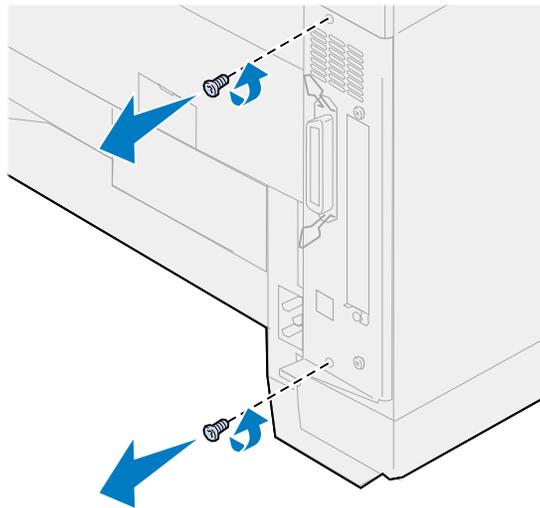
- 2 Unplug the power cord.



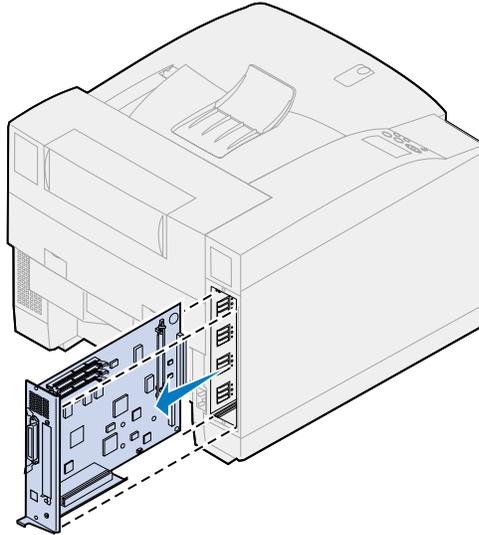
- 3 Remove the two screws on the rear cover.

Place the screws in a safe place so they are available when you reinstall the cover and system board.

**Note:** You must replace the system board before you can operate the printer.



- 4 Remove the rear cover and system board.



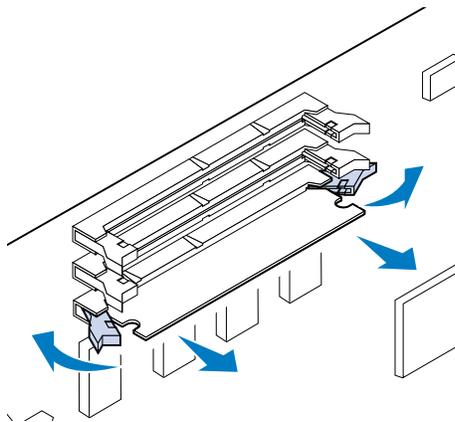
### **Removing a memory card**

Complete the following steps if you need to remove a memory card. Otherwise, go to **Removing a flash memory card**, **Removing an interface card**, or **Installing the rear cover and system board**.

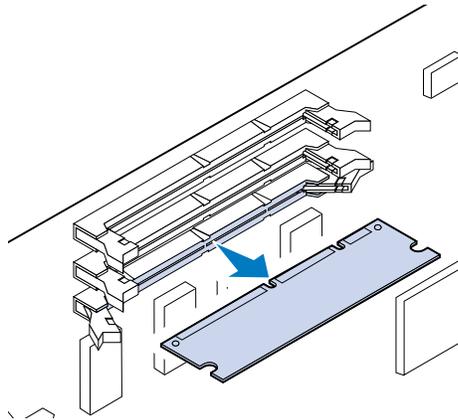
- 1 Make sure the printer is turned off and the power cord is unplugged.
- 2 Follow the steps for **Removing the rear cover and system board** if the rear cover is still installed.

**WARNING:** Memory cards are easily damaged by static electricity. Touch something metal before you touch a memory card.

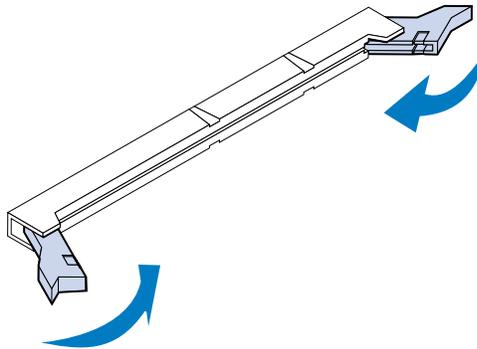
- 3 Push the latches at each end of the connector away from the card.  
The memory card moves out of the connector as the latches open.



- 4 Gently pull the card out of the connector.



- 5 Place the card into the original packaging.  
If you do not have the original packaging, wrap the card in paper and store it in a box.
- 6 Close both latches.



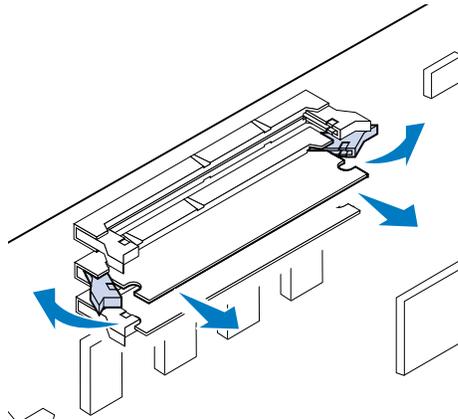
- 7 Repeat **step 3** through **step 6** to remove additional memory cards.

### ***Removing a flash memory card***

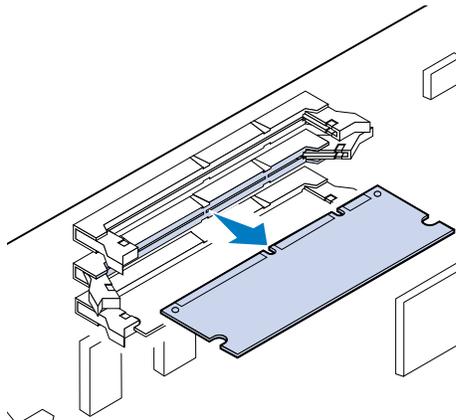
- 1 Follow the steps for **Removing the rear cover and system board** if the rear cover is still installed.

**WARNING:** The flash memory card is easily damaged by static electricity. Touch something metal before you touch the memory card.

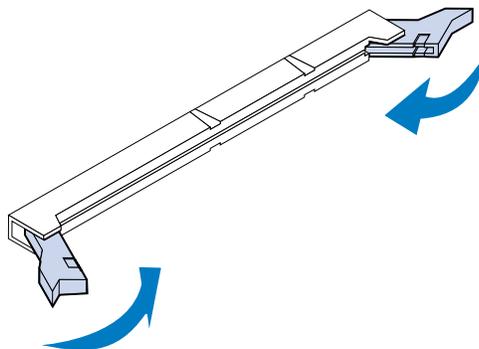
- 2** Push the latches at each end of the connector away from the card as shown.  
The memory card moves out of the connector as the latches open.



- 3** Gently pull the card out of the connector.



- 4** Place the card into the original packaging.  
If you do not have the original packaging, wrap the card in paper and store it in a box.
- 5** Close both latches.



- 6** Repeat steps 1 through 5 to remove additional memory cards.

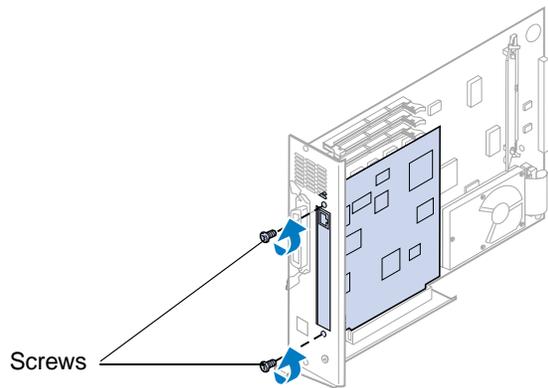
## Removing an interface card

You need a number 2 Phillips screwdriver to remove an interface card.

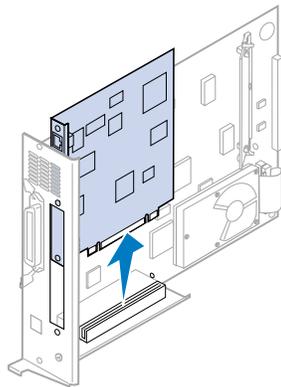
- 1 Make sure the printer is turned off and the power cord is unplugged.
- 2 Complete the steps for **Removing the rear cover and system board** if the rear cover and system board are still installed.

**WARNING:** Interface cards are easily damaged by static electricity. Touch something metal before you touch an interface card.

- 3 Remove the two screws securing the interface card to the rear cover.



- 4 Gently pull the interface card completely out of the connector.

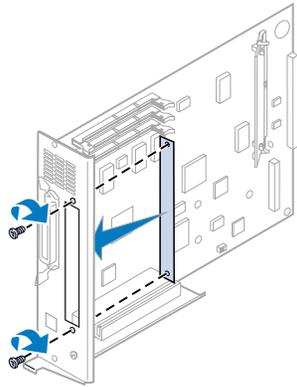


- 5 Place the interface card in its original packaging.

If you do not have the original packaging, wrap the interface card in paper and store it in a box.

- 6 If you are not installing another interface card in the connector, cover the opening with a blank INA cover.

Covering the opening ensures proper airflow around the system board. If you do not have a cover, contact your service representative and request a blank INA cover.

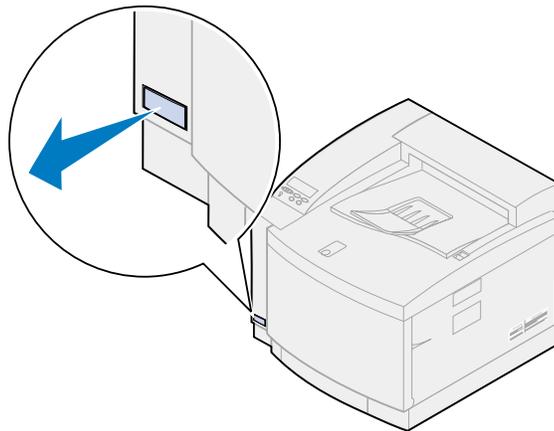


### ***Installing the rear cover and system board***

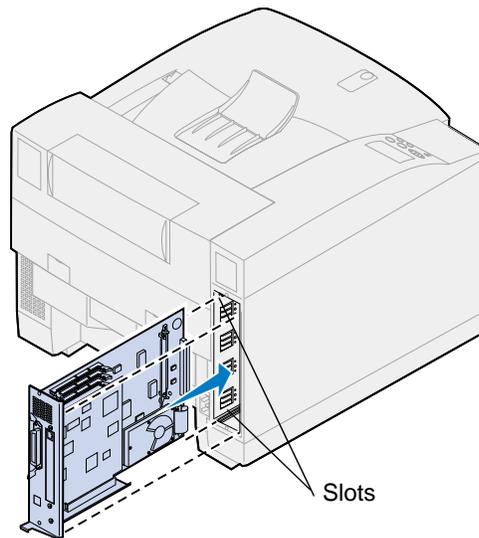
After you have removed your options, complete the following steps to install the rear cover and system board.

You need a number 2 Phillips screwdriver to install the cover.

- 1 Make sure the printer is off.

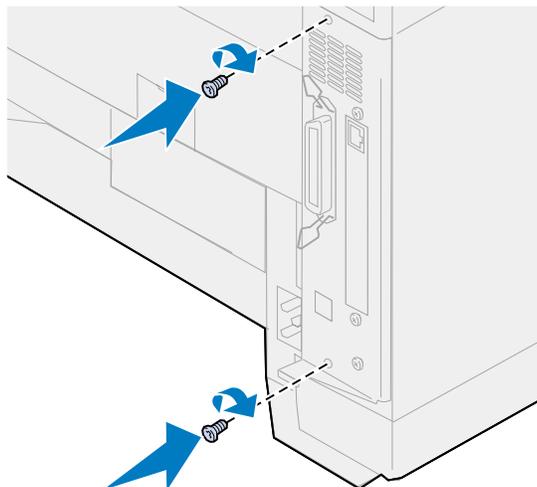


- 2 Align the system board with the slots inside the rear of the printer.



- 3 Insert the system board into the printer.
- 4 Align the two screws in the rear cover with the holes on the printer frame.
- 5 Tighten the two screws to secure the rear cover and system board to the printer.

If you installed internal options after initial printer setup, connect the printer cables and power cord, and turn the printer on.





## Notices

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- **Edition notice**
- **Trademarks**
- **Safety information**
- **Cautions and warnings**
- **Warranty**
- **Electronic emission notices**
- **German acoustics statement**
- **Energy Star**
- **Laser notices**

### **Edition: November 2000**

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PANTONE Colors generated by the printer are four-color process simulations and may not match PANTONE-identified solid color standards. Use current PANTONE Color Reference manuals for accurate color.

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PostScript® is a registered trademark of Adobe Systems Incorporated. PostScript 3 is Adobe Systems' designation of a set of printer commands (language) and functions included in its software products. This printer is intended to be compatible with the PostScript 3 language. This means the printer recognizes PostScript 3 commands used in various application programs, and that the printer emulates the functions corresponding to the commands.

Details relating to compatibility are included in the *Technical Reference*

Other trademarks are the property of their respective owners.

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## ***Safety information***

- If your product is NOT marked with this symbol , it MUST be connected to an electrical outlet that is properly grounded.
- The power cord must be connected to an electrical outlet that is near the product and easily accessible.
- Refer service or repairs, other than those described in the operating instructions, to a professional service person.
- This product is designed, tested, and approved to meet strict global safety standards with the use of specific Lexmark components. The safety features of some parts may not always be obvious. Lexmark is not responsible for the use of other replacement parts.

---

## ***Cautions and warnings***

**CAUTION:** A caution identifies something that might cause you harm.

**WARNING:** A warning identifies something that might damage your printer hardware or software.

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## ***Statement of limited warranty***

### ***Lexmark International, Inc., Lexington, KY***

This warranty applies to the United States and Canada. For customers outside the U.S. and Canada, refer to the country-specific warranty information that came with your printer.

### **Lexmark PRODUCT**

This Statement of Limited Warranty applies to this product if it was originally purchased for your use, and not for resale, from Lexmark or a Lexmark remarketer, referred to in this statement as "Remarketer."

### **Warranty**

Lexmark warrants that this product:

- Is manufactured from new parts, or new and serviceable used parts, which perform like new parts
- Is free from defects in material and workmanship
- Conforms to Lexmark's official published specifications
- Is in good working order

If this product does not function as warranted during the warranty period, contact a Remarketer or Lexmark for repair without charge.

If this product is a feature or option, this statement applies only when that feature or option is used with the product for which it was designed. To obtain warranty service, you may be required to present the feature or option with the product.

If you transfer this product to another user, warranty service under the terms of this statement is available to that user for the remainder of the warranty period. You should transfer proof of original purchase and this statement to that user.

### **Warranty service**

The warranty period is 12 months and starts on the date of original purchase as shown on the purchase receipt.

To obtain warranty service you may be required to present proof of original purchase. Warranty service will be provided

- At your location.

When warranty service involves the exchange of a product or part, the item replaced becomes the property of the Remarketer or Lexmark. The replacement may be a new or repaired item. The replacement item assumes the remaining warranty period of the original product.

Replacement is not available to you if the product you present for exchange is defaced, altered, in need of a repair not included in warranty service, or damaged beyond repair. Also, such product must be free of any legal obligation or restrictions that prevent its exchange.

Before you present this product for warranty service, remove all programs, data, and removable storage media.

For further explanation of your warranty alternatives and the nearest Lexmark authorized servicer in your area, please contact Lexmark at 1-800-LEXMARK (1-800-539-6275), or on the World Wide Web at [www.lexmark.com](http://www.lexmark.com).

Free remote technical support is provided for this product throughout its warranty period. Lexmark offers a variety of extended warranty programs that include an extension of technical support. For products no longer covered by a Lexmark warranty, technical support may only be available for a fee.

### **Extent of warranty**

We do not warrant uninterrupted or error-free operation of a product.

Warranty service does not include repair of failures caused by:

- Modification or attachments
- Accidents or misuse
- Unsuitable physical or operating environment
- Maintenance by anyone other than Lexmark or a Lexmark authorized servicer
- Operation of a product beyond the limit of its duty cycle
- Failure to have installed a maintenance kit as specified (if applicable)
- Use of printing media outside of Lexmark specifications
- Use of other than Lexmark supplies (such as toner cartridges, inkjet cartridges, and ribbons)
- Use of other than Lexmark product or component

**ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE WARRANTY PERIOD. NO WARRANTIES, EXPRESS OR IMPLIED, WILL APPLY AFTER THIS PERIOD.**

### **Limitation of liability**

Your sole remedy under this Statement of Limited Warranty is set forth in this section. For any claim concerning performance or nonperformance of Lexmark or a Remarketer for this product under this Statement of Limited Warranty, you may recover actual damages up to the limit set forth in the following paragraph.

Lexmark's liability for actual damages from any cause whatsoever will be limited to the greater of 1) \$5,000 or 2) the amount you paid for the product that caused the damages. This limitation of liability will not apply to claims by you for bodily injury or damage to real property or tangible personal property for which Lexmark is legally liable. In no event will Lexmark be liable for any lost profits, lost savings, incidental damage, or other economic consequential damages. This is true even if you advise Lexmark or a Remarketer of the possibility of such damages. Lexmark is not liable for any claim by you based on a third party claim.

This limitation of remedies also applies to any developer of materials supplied to Lexmark. Lexmark's and the developer's limitations of remedies are not cumulative. Such developer is an intended beneficiary of this limitation.

### **Additional rights**

Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusion or limitation of incidental or consequential damages. If such laws apply, the limitations or exclusions contained in this statement may not apply to you.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

---

## ***Electronic emission notices***

Electronic emission information for your printer varies, depending on whether or not you have an optional network adapter installed.

### ***Without a network cable installed***

#### **Federal Communications Commission (FCC) compliance information statement**

Your printer has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The FCC Class B limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which

can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult your point of purchase or service representative for additional suggestions.

The manufacturer is not responsible for any radio or television interference caused by using other than recommended cables or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate this equipment.

To assure compliance with FCC regulations on electromagnetic interference for a Class B computing device, use a properly shielded and grounded cable such as Lexmark part number 1329605 for parallel or 12A2405 for USB. Use of a substitute cable not properly shielded and grounded may result in a violation of FCC regulations.

Any questions regarding this compliance information statement should be directed to:

Director of Lab Operations  
Lexmark International, Inc.  
740 West New Circle Road  
Lexington, KY 40550  
(859) 232-3000

### **Industry Canada compliance statement**

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

### **Avis de conformité aux normes d'Industrie Canada**

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

### **European Community (EC) directives conformity**

This product is in conformity with the protection requirements of EC Council directives 89/336/EEC and 73/23/EEC on the approximation and harmonization of the laws of the Member States relating to electromagnetic compatibility and safety of electrical equipment designed for use within certain voltage limits.

A declaration of conformity with the requirements of the Directives has been signed by the Director of Manufacturing and Technical Support, Lexmark International, S.A., Boigny, France.

This product satisfies the Class B limits of EN 55022 and safety requirements of EN 60950.

### ***With a network cable installed***

### **Federal Communications Commission (FCC) compliance information statement**

Your printer has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The FCC Class A limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

The manufacturer is not responsible for any radio or television interference caused by using other than recommended cables or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate this equipment.

To assure compliance with FCC regulations on electromagnetic interference for a Class A computing device, use a properly shielded and grounded cable such as Lexmark part number 1329605 for parallel or 12A2405 for USB. Use of a substitute cable not properly shielded and grounded may result in a violation of FCC regulations.

### **Industry Canada compliance statement**

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

### **Avis de conformité aux normes d'Industrie Canada**

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

### **European Community (EC) directives conformity**

This product is in conformity with the protection requirements of EC Council directives 89/336/EEC and 73/23/EEC on the approximation and harmonization of the laws of the Member States relating to electromagnetic compatibility and safety of electrical equipment designed for use within certain voltage limits.

A declaration of conformity with the requirements of the Directives has been signed by the Director of Manufacturing and Technical Support, Lexmark International, S.A., Boigny, France.

This product satisfies the Class A limits of EN 55022 and safety requirements of EN 60950.

### **Warning**

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

### **The United Kingdom Telecommunications Act 1984**

This apparatus is approved under the approval number NS/G/1234/J/100003 for the indirect connections to the public telecommunications systems in the United Kingdom.

---

## **German acoustics statement**

The following measurements were made in accordance with ISO 7779 and reported in conformance with ISO 9296.

### **Acoustics**

1-Meter average sound pressure, dBA	
Printing	51 dBA
Idling	45 dBA

---

## **Energy Star**



The EPA ENERGY STAR Computers program is a partnership effort with computer manufacturers to promote the introduction of energy-efficient products and to reduce air pollution caused by power generation.

Companies participating in this program introduce personal computers, printers, monitors, or fax machines that power down when they are not being used. This feature cuts the energy used by up to 50 percent. Lexmark is proud to be a participant in this program.

As an Energy Star Partner, Lexmark International, Inc., has determined that this product meets the Energy Star guidelines for energy efficiency.

---

## **Laser notices**

The printer is certified in the U.S. to conform to the requirements of DHHS 21 CFR Subchapter J for Class I (1) laser products, and elsewhere is certified as a Class I laser product conforming to the requirements of IEC 60825-1.

Class I laser products are not considered to be hazardous. The printer contains internally a Class IIIb (3b) laser that is nominally a 5 milliwatt gallium arsenide laser operating in the wavelength region of 770-795 nanometers. The laser system and printer are designed so there is never any human access to laser radiation above a Class I level during normal operation, user maintenance, or prescribed service condition.



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