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# **QMS<sup>®</sup> 4060**

# **Print System**

# **Operation**

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**1800463-001C**

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# 1

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## Introduction

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### **In This Chapter . . .**

- “Introduction” on page 1-2
- “Typographic Conventions” on page 1-3
- “Printer Basics” on page 1-5
- “The QMS 4060 Print System” on page 1-5
- “Printer Components” on page 1-6

# Introduction

This manual provides information on installing consumables such as paper and toner. You'll also find information on advanced printing features, printer care, print quality, and troubleshooting. Use this guide in conjunction with your other QMS 4060 Print System documentation.

This chapter gives you a brief overview of this manual.

## About This Manual

The information in this manual is divided into the following sections:

<b>1</b>	<b>Introduction</b>	Provides an overview of this guide.
<b>2</b>	<b>Consumables</b>	Describes the Paper that's best suited for your printer; how to load paper, labels, transparencies; and how to replace the toner, developer, fuser, rollers, and print drum.
<b>3</b>	<b>Printer Care</b>	Describes how to handle and clean the printer.
<b>4</b>	<b>Printer Jams</b>	Provides you with detailed procedures for clearing jams.
<b>5</b>	<b>Advanced Printing Features</b>	Explains how to print duplex, chain trays, collate output, print a status page, cancel a print job, and end a print job.
<b>6</b>	<b>Local and Remote Console</b>	Explains how to use the local console port and remote console over a network.
<b>7</b>	<b>Print Quality</b>	Gives information on how to improve print quality through adjustments of print density and printer resolution.




<b>8</b>	<b>Crownview Printer Webpage</b>	Allows you to monitor printer consumables, configure the printer to send you email, and access information that is normally available only by printing a status page.
<b>9</b>	<b>Troubleshooting Printer Problems</b>	Provides paper jam prevention tips, explains how to locate and clear paper jams, lists printer status messages, outlines printer and print quality problems and solutions, and describes how to place a service call.
<b>A</b>	<b>QMS Customer Support</b>	Provides product sales and support telephone numbers and describes how to communicate with QMS through CompuServe, the Internet, and Q-FAX.
<b>B</b>	<b>Configuration Menu</b>	Provides you with a graphical flowchart of the configuration menu.
<b>C</b>	<b>Repacking the Printer</b>	Provides you with detailed procedures for repacking the printer and options for shipping.

## Typographic Conventions

The following typographic conventions are used in this manual:

Mixed-Case Courier	Text you type, and messages and information displayed on the screen
<i>Mixed-Case Italic Courier</i>	Variable text you type; replace the italicized word(s) with information specific to your printer or computer
UPPERCASE COURIER	Information displayed in the printer message window
<b>lowercase bold</b>	PostScript operators and DOS commands

## Introduction

<i>lowercase italic</i>	Variable information in text
UPPERCASE	File and utility names
↵	Press the Enter key (PC) or Return key (Macintosh)
^	Press and hold down the Ctrl key (PC)
	In Adobe Acrobat PDF versions of the manual, click to play a QuickTime video clip of the procedure described in the text

» **Note:** *Notes contain tips, extra information, or important information that deserves emphasis or reiteration.*

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▲ **Caution:** *Cautions present information that you need to know to avoid equipment damage, process failure, or extreme annoyance.*

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💡 **WARNING!** *Warnings indicate the possibility of personal injury if a specific procedure is not performed exactly as described in the manual.*

**ACHTUNG!** *Bitte halten Sie sich exakt an die im Handbuch beschriebene Vorgehensweise, da sonst Verletzungsgefahr bestehen könnte.*

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## Orientation

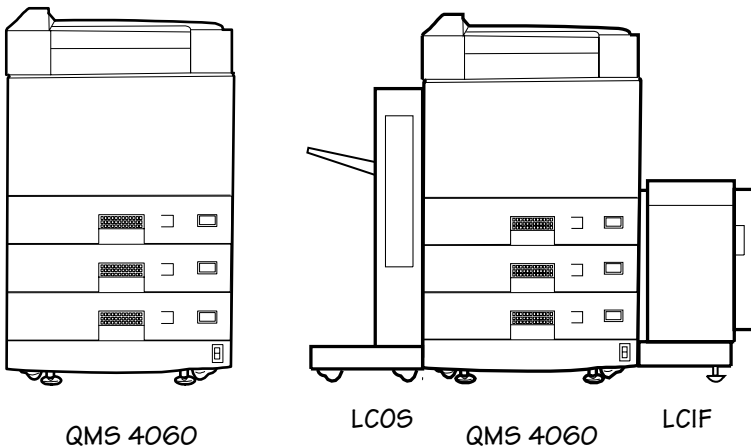
All instructions in this and the other QMS manuals are referenced to the front of the printer. For example, if the installation instructions say that the LCOS is on the left side of the printer, then it means you are facing the front of the printer and the LCOS is on your left.

# Printer Basics

This section provides you with some basic introductory concepts on the printer. These basic concepts will help you when you are trying some of the more advanced procedures in the following chapters.

## The QMS 4060 Print System

Your printer may or may not have installed the optional LCIF (large-capacity input feeder) or LCOS (large-capacity output stacker) paper handling units. If you decide to order these units later, see the *Options* manual for more information and installation instructions.



Some basic features of the printer are

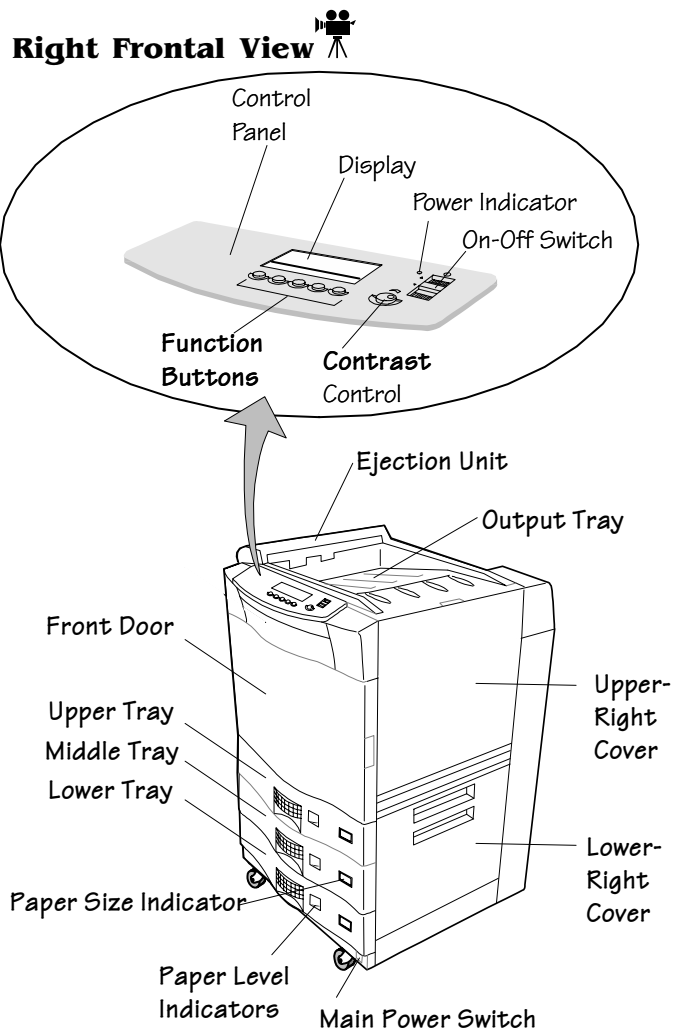
- Paper input capacity of 1500 sheets, 4500 with the LCIF
- Paper stacking capacity of 500 sheets, 2500 with the 2K LCOS
- Paper stacking capacity of 500 sheets, 3500 with the 3K LCOS
- Consumable replacement by the operator
- Duplex printing

## **Printer Basics**

- Energy Star compliance
- Page recovery after printer jams
- Easy jam removal
- User friendly control panel

## **Printer Components**

Refer to the illustrations and tables in this section when trying to find your way around the printer.

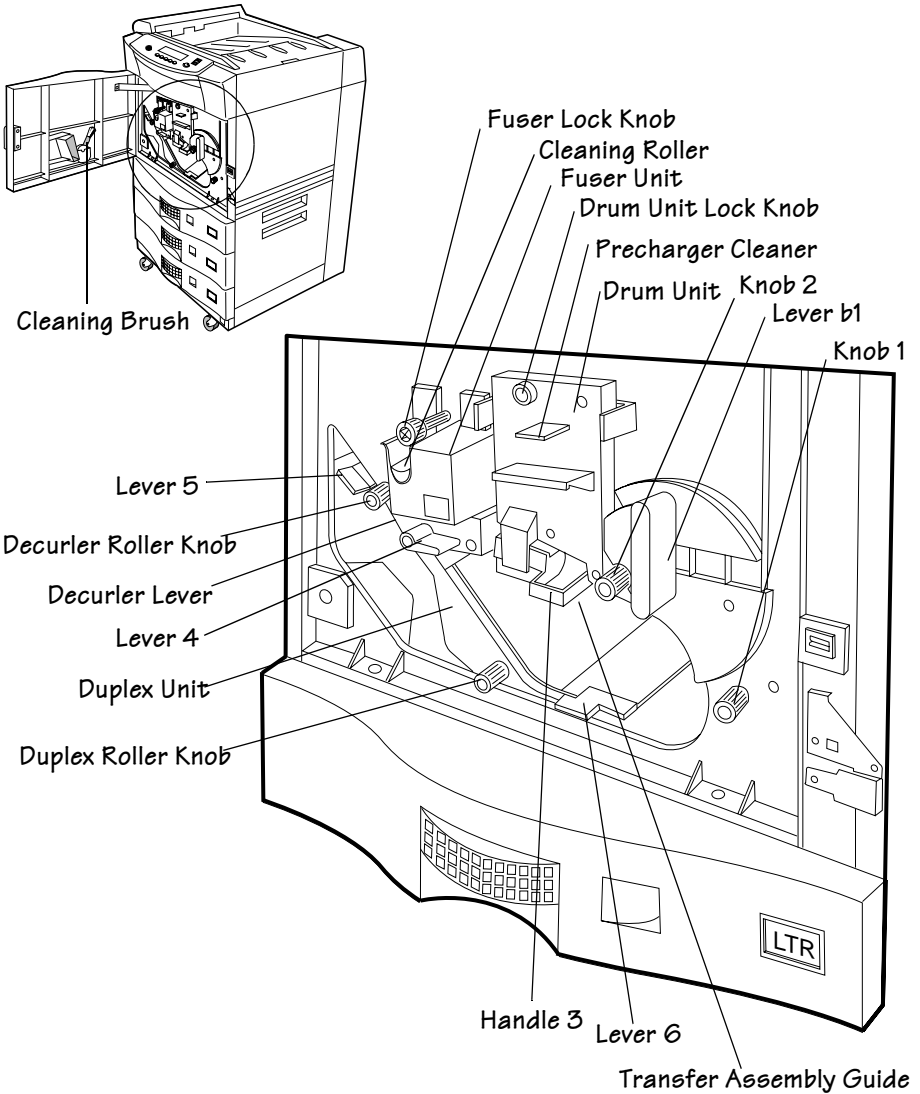


Printer Component	Function
Control Panel	The user interface to printer functions.
Contrast Control	Controls the contrast of the LCD panel.
Function Buttons	Five buttons for printer configuration.

## Printer Basics

Printer Component	Function
Power Indicator	Lights when the power is on.
On-Off Switch	Turns the printer on or off.
Ejection Unit	A door that ejects paper to the output tray.
Output Tray	Holds 500 sheets of paper.
Upper-Right Cover	Access for adding toner and developer.
Lower-Right Cover	Access for clearing feed jams.
Main Power Switch	Main electrical power switch.
Paper Level Indicators	Shows how much paper is left in tray.
Paper Size Indicator	Shows what size paper tray is set to.
Lower Tray	500-sheet lower tray.
Middle Tray	500-sheet middle tray.
Upper Tray	500-sheet upper tray.
Front Door	Access to internal components.

## Inside the Front Door

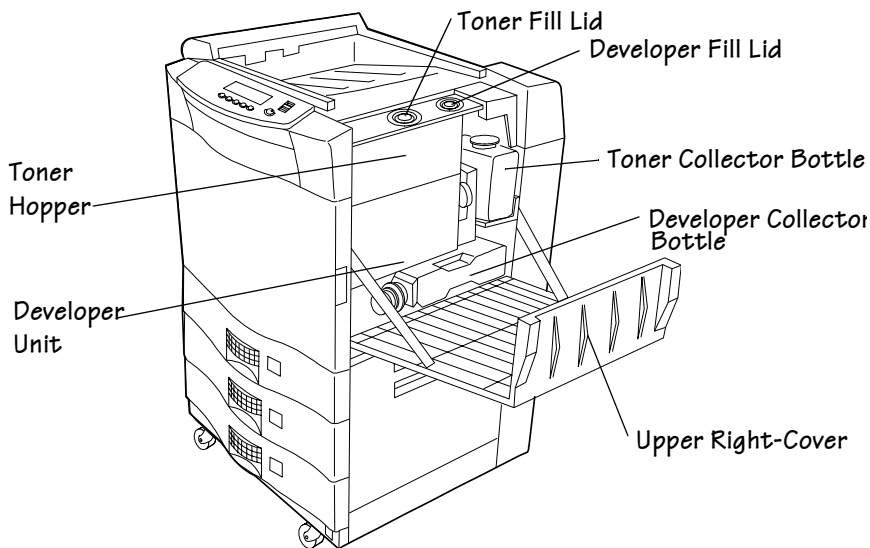


## Printer Basics

Printer Component	Function
Fuser Lock Knob	Locks the fuser unit in place.
Cleaning Roller	Collects excess toner from the drum.
Fuser Unit	Applies heat and pressure to melt the toner to the paper.
Drum Unit Lock Knob	Locks the drum unit in place.
Precharger Cleaner	Used to clean the precharger for print quality.
Drum Unit	Contains the precharger, cleaner, and photosensitive drum.
Knob 2	Used for clearing jams as paper exits the paper trays and enters the drum area.
Lever b1	Used to lock internal components in the paper path.
Knob 1	Used for clearing jams as paper exits the paper trays and enters the drum area.
Transfer Assembly Guide	Transfers the print image from the drum to the paper.
Lever 6	Used for clearing jams.
Handle 3	Used to hold the transfer assembly guide in place.
Duplex Roller Knob	Used to clear jams in the duplex area.
Duplex Unit	For two-sided printing.
Lever 4	Releases tension on paper in the fuser area to clear jams.
Decurler Lever	Access to jammed paper in the decurler area.
Decurler Roller Knob	Used to clear jams in the decurler area.
Lever 5	Access to jammed paper in the reverser area.
Cleaning Brush	Used to clean the transfer assembly.

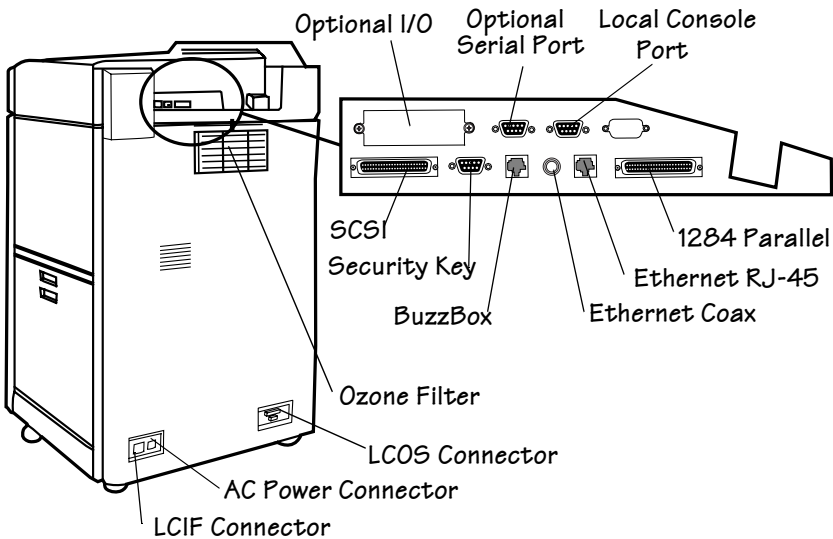


**Under the Upper Right Cover**



Printer Component	Function
Toner Fill Lid	Open to add toner.
Developer Fill Lid	Open to add developer.
Toner Collector Bottle	Used to collect waste toner.
Developer Collector Bottle	Used to collect used developer.
Upper-Right Cover	Access cover to toner and developer units.
Developer Unit	Contains a supply of developer, when mixed with toner, forms the image on the photosensitive drum. The control panel informs you when developer is low or out.
Toner Hopper	Contains a supply of toner. The control panel informs you when toner is low or out.

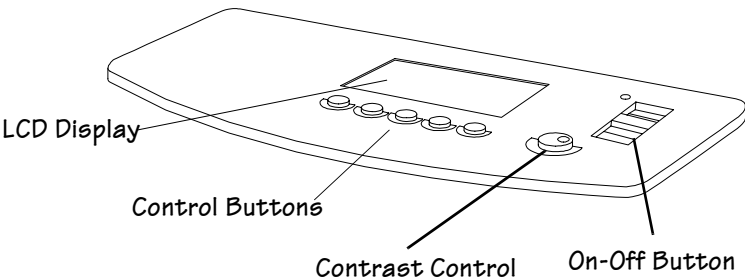
**Rear of the Printer**



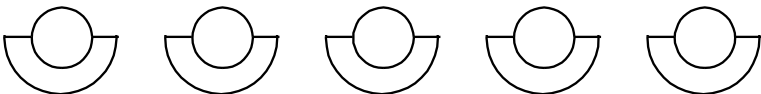
Printer Component	Function
Optional I/O	Optional network port.
Optional Serial Port	Optional serial interface.
Local Console Port	Serial console port for printer configuration.
1284 Parallel	Standard parallel port.
Ethernet RJ-45	10BaseT port.
Ethernet Coax	10Base2 port.
BuzzBox	Audio alarm option.
SCSI	For added disk drives or CrownCopy.
Ozone Filter	Filters ozone produced in print process.
LCOS Connector	Used for optional LCOS.
AC Power Connector	Power input for printer.
LCIF Connector	Used for optional LCIF.

## The Control Panel

The control panel for your QMS 4060 Print System consists of 5 control buttons and a backlit LCD display with a contrast control. The LCD display contains graphical and textual information on printer status and control button functions.

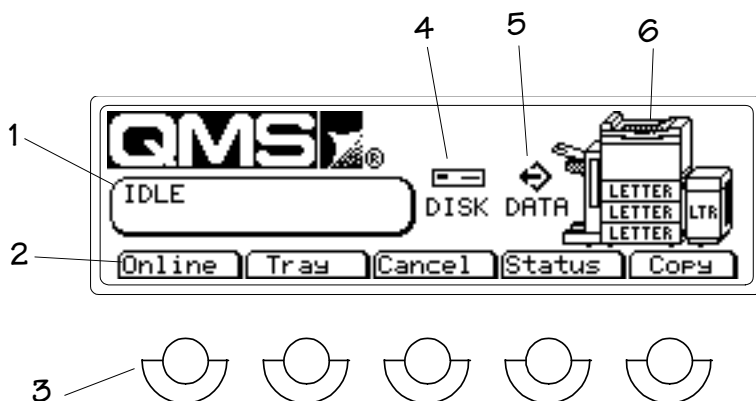


The control buttons change function as you take the printer off line or when you access menu selections. The following sections will help you identify control panel elements and show you how to operate the control panel.



### Control Panel Functions

This illustration shows the control panel with the elements numbered. See the list below the illustration for an explanation of the element.



- 1 This is the printer message window. This provides status messages, error messages, and menu configuration information.
- 2 This indicates the present function of each control button below the label.
- 3 These are the five control buttons.
- 4 The Disk symbol turns on whenever the printer is accessing the internal hard disk. Otherwise this symbol will not appear.
- 5 The Data symbol flashes on and off periodically when the printer is receiving data from the interfaces. Otherwise, this symbol will not appear.
- 6 The printer graphic shows the type of paper set up for the three input trays. The currently selected tray is highlighted. If the optional high-capacity input bin or the output stacker is installed, then the graphic shows these units attached.



# 2

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## Consumables

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### **In This Chapter . . .**

- “Consumable Life Expectancies” on page 2-2
  - “Media” on page 2-6
  - “Replacing Toner, Collector Bottle, and Cleaning Roller” on page 2-15
  - “Replacing Developer” on page 2-24
  - “Replacing the Ozone Filter” on page 2-33
  - “Replacing the Drum Unit and Transfer Charger” on page 2-35
  - “Replacing the Fuser” on page 2-43
  - “Replacing the Pick Rollers” on page 2-48
-

# Introduction

This chapter covers information on the handling of printer consumables, such as paper, toner, developer, drum unit, fuser, and pick-up rollers.

## Consumable Life Expectancies

### Job Size and Consumable Life

Your 4060 Print System is designed as a high-volume, network print system that provides low cost-per-page printing and high-quality output. There are some factors that can directly affect the life of some consumables and thus affect your cost per page.

This section explains these factors and gives you information to allow you to customize your printing environment so that you can achieve the lowest cost and longest life on your consumables.

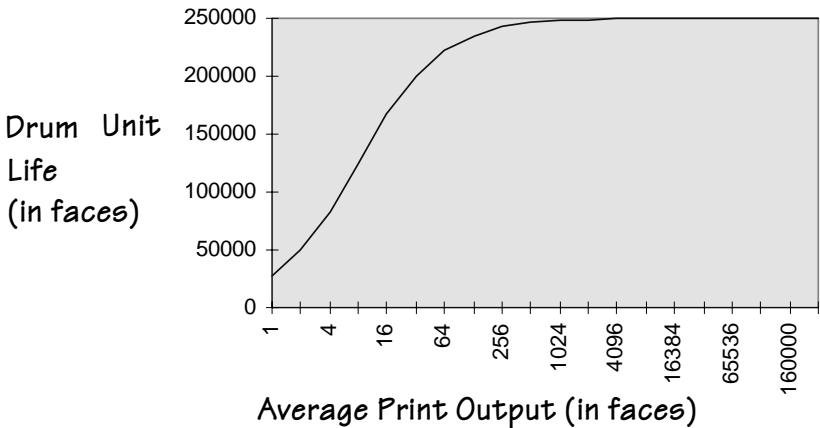
### Print Jobs

Your QMS 4060 Print System will actually work more efficiently when continuously printing. The reason for this fact is that the printer has to mechanically prepare itself for printing before and after every print message it receives from the host computer. The amount of preparation before and after printing is the same for a 1-page job as for a 100-page job. The efficiency improvement for the drum unit comparing these two jobs would be from 12.5% for a 1-page job to 93% for a 100-page job. Use the following charts and tables to help you plan your jobs and host printing environment.

- » **Note:** *The units used in these charts are “faces.” Faces are counted as the front and back of each page printed. For simplex printing, the number of faces equals the number of pages. For duplex printing, the number of faces is twice the number of pages printed.*

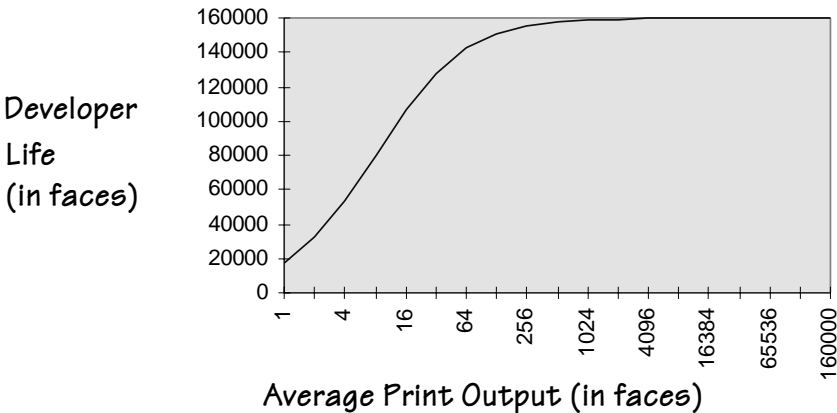
**Drum Life**

The drum unit rotates before and after each print operation to properly prepare itself for printing. Because of this, the drum unit will actually last longer if you continuously print jobs. The chart below compares average printing output with drum unit life.



**Developer Life**

Since the developer is also used during these preparatory rotations of the print drum, its life can also be affected by average printing output. The chart below compares average printing output with developer life.



### Tips for Extending Consumable Life

As you check these charts, you can see that increasing the continuous printing output can greatly extend the life of the drum unit and developer. For example, if your average printing output is 16 faces, the charts show you that you can expect approximately 160,000 faces printed for the drum unit and 105,000 faces printed for the developer.

However, if you increase your average printing output to 32 faces, the charts show you that you could expect approximately 190,000 faces printed for the drum unit and 123,000 faces printed for the developer.

- » **Note:** *The complexity of your print job can also affect the printer speed and consumable life. Very complex graphics and fonts on the page can slow down the printer controller and the printer speed. Although the QMS 4060 uses a high performance controller with a state of the art processor, even its performance can be affected by very complex jobs.*

Here's a short list of tips for extending consumable life expectancies:

- Reduce the number of very small jobs.
  - Fill the trays before printing large cycles.
  - Use the optional LCIF and LCOS to prevent frequent reloading and unloading of paper.
  - If you print smaller jobs frequently from a network, set up your host to queue several jobs and group them before sending them to the printer.
  - Manage your printing requirements to reduce the number of times the printer starts and stops.
- » **Note:** *The selected input tray can be reloaded when it runs out of paper if the printer chains to one of the other trays. The printer will continue feeding paper from the other tray while you are filling the selected input tray and switch back to it after it is reloaded.*



## **Average Life Expectancies**

Use the following table as a guideline for life expectancies for each consumable. Keep in mind that the life expectancy of each consumable depends on printing variables, such as page coverage, job size, paper size, and printer operating condition.

<b>Consumable</b>	<b>Maximum Life</b>	<b>Average Life</b>
Toner (1 bottle)	20,000 faces	18,000 faces
Developer (1 bottle)	160,000 faces	114,000 faces
Drum Unit	250,000 faces	178,500 faces
Transfer Charger	250,000 faces	178,500 faces
Fuser	300,000 faces	300,000 faces
Cleaning Roller	40,000 faces	36,000 faces
Ozone Filter	320,000 faces	320,000 faces
Waste Toner Bottle	20,000 faces	18,000 faces
Pick Rollers	500,000 faces	500,000 faces

- » **Note:** All maximum life figures are based on continuous printing with 4% toner coverage on A4/Letter paper. Your figures will vary depending on job size, toner coverage, and size of paper. "Faces" includes printing duplex. Therefore, for 1 letter-size page that is printed duplex, you would have 2 faces.

# Media

## Preventing Media Jams

There are several things you can do to reduce the occurrence of media jams.

- Use paper, labels, and transparencies that match the printer specifications. See appendix B, “Technical Specifications,” in the *Reference* guide.
- If you have problems with double feeding, remove the paper from the tray or input bin and fan the edges. The sheets may be sticking together.
- » **Note:** *Do not fan transparencies since this causes static.*
- Print paper must be stored away from moisture and humidity. Recommended storage temperature and humidity are 32°-95°F/ 0°-35°C and 20%-80% RH for paper sealed in cartons. The recommended storage temperature and humidity for paper in opened cartons are 59°-77°F/15°-25°C and 40%-50% RH.
- Refer to the table in the next section for loading paper requirements.
- If none of the above relieves paper jamming, notify your vendor.

## Loading Paper Requirements

When loading paper, you should note the direction of the arrow on the manufacturer's end-label. This arrow identifies the face side of the paper.

Inspect the paper for indented or interlocked edges, bent corners, wrinkled sheets and excess glue from the wrapper. Always discard the top and bottom sheets in case glue from the wrapper has leaked upon them.

Load the paper in the printer tray or the optional LCIF as recommended in the following table.

Printing Job Requirements		Loaded in Tray Face Side	Loaded in LCIF Face Side
<b>Regular Paper</b>	Single-sided	Down	Up
	Double-sided	Up	Up
<b>Pre-punched Paper</b>	Single-sided	Down	Up
		Holes on leading edge	Holes on trailing edge
	Double-sided	Up	Up
		Holes on trailing edge	
<b>Forms</b>	Single-sided	Down	Up
		Top of form towards back of printer	

## Loading the Paper Tray

The QMS 4060 Print System standard configuration includes three 500-sheet paper trays. Loading paper in any tray involves the following steps:

- Opening the tray
- Setting the correct paper size for the tray (if necessary) and paper size indicator
- Loading paper in the tray
- Closing the tray

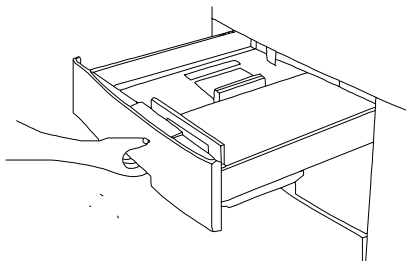
These steps are described in detail, later in this procedure.

- » **Note:** *Ensure the paper size matches the tray size (for example, letter paper must be loaded only when the tray is set to letter size). Since the paper tray sends a paper size signal to the printer controller, using the wrong size paper will cause your image to be positioned incorrectly on the page or the image to be clipped.*

## **Opening the Tray**

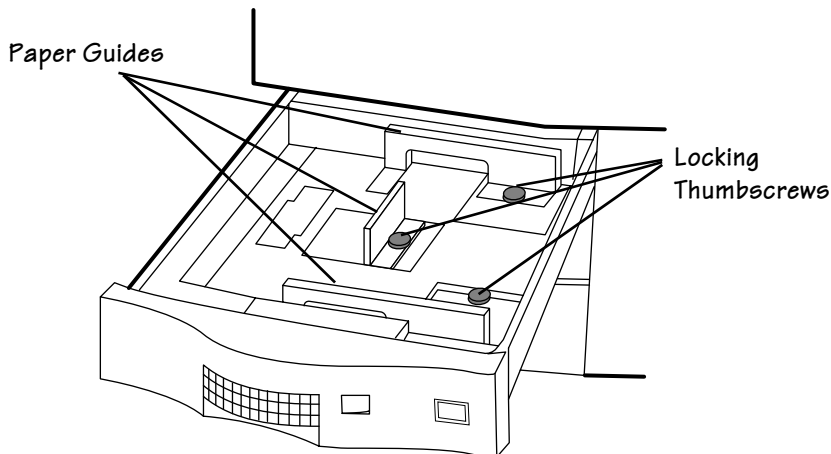
» **Note:** *Open and close the tray like a drawer when loading paper.*

- 1 Using the tray handle, pull the tray away from the printer as far as it will go without removing it from the printer.**



- 2 Locate the three paper side guides in the tray.**

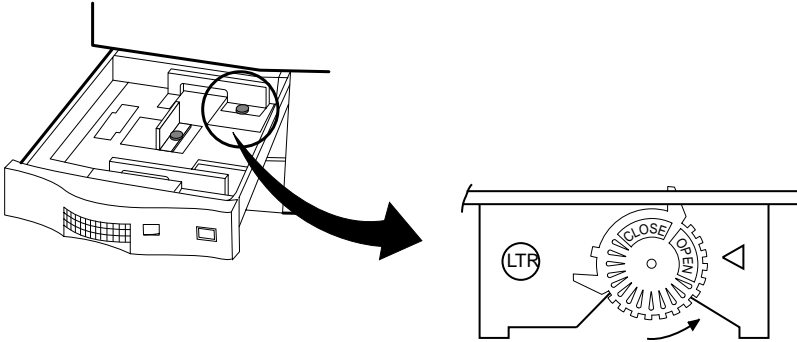
Each paper side guide has a blue locking thumbscrew marked open or close. On one side of the thumbscrew is a hole that allows you to read the current size adjustment. On the other side of the thumbscrew is a triangle-shaped arrow which points to the open or close indication on the screw.



## Changing the Paper Size for the Paper Tray

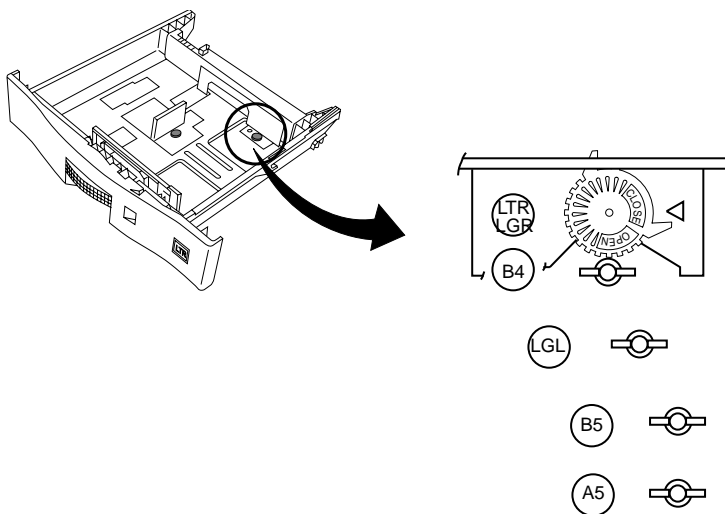
- 1 Turn the thumbscrew counterclockwise to unlock one of the paper size guides.

You should be able to lift up and remove the paper size guide after unlocking it.

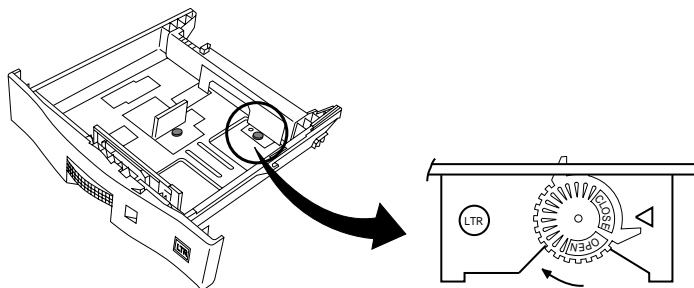


- 2 Move the paper size guide to the appropriate slots to align it with the paper size marker.

You should be able to read the paper size (A3/A4, LTR/LGR, LEG, EX, B4, B5) in the small alignment holes built into the paper guide.



- 3 Turn the dial to clockwise to lock the paper size guide.



- 4 Repeat steps 1-3 for the other two paper size guides.

» **Note:** If you are setting up the tray for 11"x17" (ledger), the left paper guide is stored in a slot near the front section of the tray.

- 5 Set up the tray paper size tabs on the rear of the paper tray. Use the following chart for reference or the label attached to the paper tray.

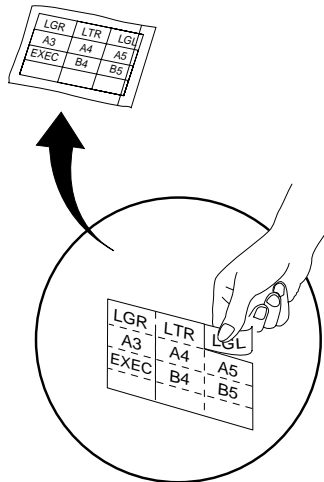
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	:A5	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	:B5	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	:LTR	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	:LGL
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	:A4	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	:B4	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	:LGR	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	:EXEC
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	:A3						

- ☐ - Tab is pushed forward  
☐ - Tab is pushed backward

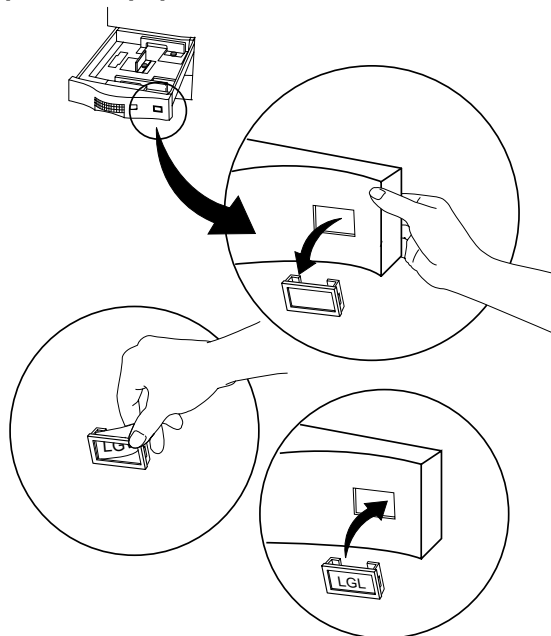
- 6 Adjust the other paper trays, if necessary, using the same procedures.

### Setting Up the Paper Size Indicator

- 1 Open the plastic bag in the starter kit containing the paper-size cards.
- 2 Break off the label that indicates the correct paper size for each tray.



- 3 Pull out each tray and push out the paper-size holder.
- 4 Place the paper-size label in the paper-size holder of each tray.
- 5 Replace the paper-size holders.



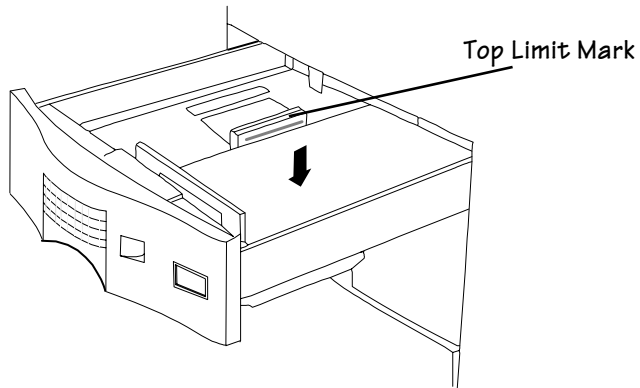
### Loading Paper in the Tray

- 1 Unwrap the paper and note which side the arrow points to.
  - » **Note:** Paper is packed in reams of 500 sheets. Do not unpack the paper above the printer as this might cause particles to fall into the printer components. Note the arrows on the wrapper. They show print side of the paper.
- 2 Take off the top and bottom sheets.

The top and bottom sheets sometimes have residual glue buildup that could cause the printer damage.

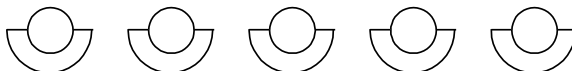
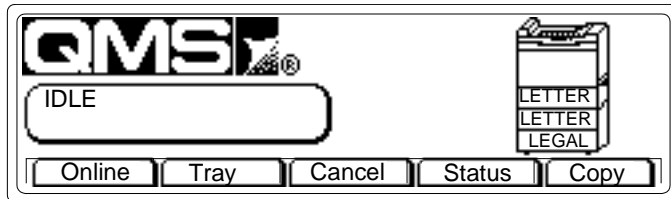


- 3 Place a stack of paper in the tray with the print side facing down.
- 4 Ensure that the paper stack lies flat and does not exceed the top limit mark.



**Caution:** *Never mix the types of paper loaded in a tray. This could result in multiple sheet feeds and other paper handling problems.*

- 5 If the paper doesn't fit properly in the tray, recheck your paper guides to make sure they are in the proper position.
- 6 Check the display panel graphic for the correct paper size for each tray.



- 7 Close the tray.
- 8 Repeat this procedure for the other trays.

### Labels: Special Considerations

The procedure for feeding labels is almost the same as for regular paper. Keep in mind the following considerations:

- Use a typical label stock such as Avery Label Stock 5160. Adhesive label stock should have pressure-sensitive (peel-and-stick) adhesive backing and should be 17-34 lbs (64 -128 g/m<sup>2</sup>).
- The surface (print face) of the labels must be made of normal paper with a matte-finish, similar to copy paper.
- The label backing must be able to withstand the heat generated by the fixing assembly (190° C/374° F).
- Ensure that the label backing is not made of easily removable coated paper.
- Avoid using labels with exposed adhesive; it may stick to the print drum or fuser roller, causing labels to peel off and damage the printer.
- Label data should be formatted within your application. Try printing your data on a plain sheet of paper first to check placement. This reduces the number of label sheets you use.
- Before printing labels, disable the duplexer.
- Load the labels lengthwise (long edge first), face-down, and with the top of the page toward the rear of the printer.

### Custom-Size Paper: Special Considerations

Custom-size paper is printed from the custom tray. See Chapter 6, "Hardware Options," of your *Options* guide for more information. Keep in mind the following considerations:

- Use only 17-28 lbs (64-105 g/m<sup>2</sup>) custom-size paper recommended for laser printers.
- Paper sizes for the custom tray are Letter, Executive, A4, A5, B4, B5, Legal, 11"x17", A3, Statement, B4(ISO), and B5(ISO).

## **Transparencies: Special Considerations**

Keep in mind the following considerations when printing transparencies:

- Use a typical brand such as 3M type PP2500 transparencies.
- Use only transparency sizes letter or A4.
- Transparencies must be able to withstand the heat generated by the fuser (190° C/374° F), without melting.
- Tap the stack of transparencies on a flat surface to align the edges, before loading them. Remember, don't fan the stack.
- When handling transparencies, hold them by their edges and avoid touching the print side.
- Load transparencies printing side down. The correct print side is usually marked on the transparency package. No more than 20 sheets should be loaded at one time.
- Remember to keep the paper path clean. Transparencies are especially sensitive to a dirty paper path. If there are shadows either on the top or the bottom of the sheets, see chapter 3, "Printer Care," for instructions on how to clean the paper path.

# **Replacing Toner, Collector Bottle, and Cleaning Roller**

Characters and images are created in your laser printer through a process that applies toner to the page. During image formation, an electrical charge is applied to the photosensitive drum to attract the toner. The toner forms the image on the drum and then transfers the image to the page. The photosensitive drum has characteristics similar to those of photographic film.

## Replacing Toner, Collector Bottle, and Cleaning Roller

### Toner Life


The toner bottle contains enough toner to print 20,000 letter/A4-size pages at normal (4%) page coverage. If the printer is run entirely in Conserve Toner mode (Administrator/Engine/Print Quality menu), a single toner bottle may last much longer but print quality will be much lighter.

To help you lower your printing costs, your printer provides an option called Conserve Toner, which simulates draft-quality printing. The printer reduces the amount of toner used during printing by screening the black dots in a 1:3.5 ratio. In other words, 1 black dot prints for every 3.5 black dots that would print in normal printing mode. Increasing the Toner Density may darken your draft-quality printing

The Conserve Toner option can be enabled through your printer driver or through the Administration/Engine/Print Quality menu.

- » **Note:** *The Conserve Toner option is designed for draft printing only. Turn off Conserve Toner when printing proof or final copies of documents to avoid any possible distortion of patterns, halftone, and images.*

### Toner Recycling

In addition, the printer can recycle the waste toner through the machine for increased toner life. There are two ways to use this mode. Either remove the waste toner collector bottle next time you add toner or close the toner recycling shutter located over the waste toner bottle. The printer then recycles the waste toner. 

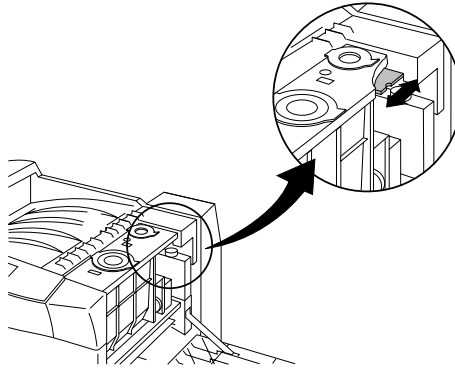
- 
- ▲ **Caution:** *Failure to replace the waste toner bottle will cause the waste toner bottle to fill and the printer to go into toner recycling automatically. You should always replace the waste toner bottle when adding toner to the printer.*
- 

Toner recycling will add 20-30% of life to a toner bottle. You have the option of recycling waste toner (by turning on toner recycling) or disposing of it. For optimal print quality, we do not recommend recycling.

## **Replacing Toner, Collector Bottle, and Cleaning Roller**

With toner recycling enabled, you may experience lighter print with occasional small voids. If this print quality using toner recycling is unacceptable, follow the procedures in the section titled "Recovering From Toner Recycling Mode," in Chapter 9, "Troubleshooting Printer Problems," in this manual.

The toner recycling control shutter can be enabled or disabled by moving a plastic slide located directly over the toner collector bottle. If it is pushed to the right, toner is recycled. If it is pushed to the left, waste toner collects in the toner collector bottle for disposal.



## **Toner Storage**

Extra toner bottles

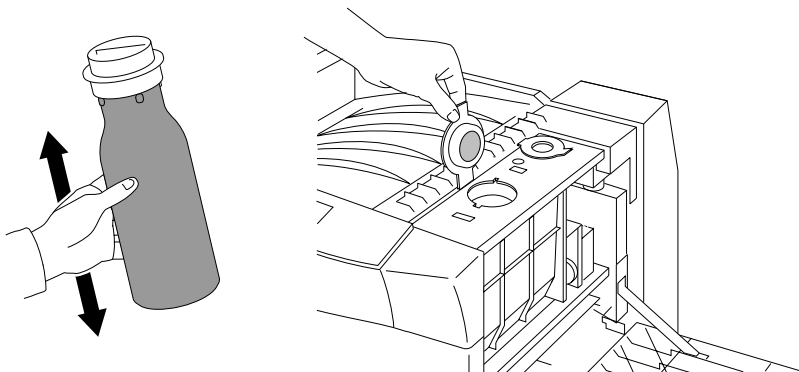
- Should be stored in the original box in a cool, dry location away from sunlight.
- Should be kept level during storage. Do not stand or store the bottle on its end or turn upside down; the toner inside the cartridge may become caked or unequally distributed.
- Should be kept away from extreme heat or humidity.

Additional toner bottles may be purchased from your QMS vendor.

## Replacing Toner, Collector Bottle, and Cleaning Roller

### Adding Toner

- 1 Remove the toner bottle from its packaging. Shake the contents of the toner bottle to loosen any toner that has settled and packed during shipment.
- 2 Open the upper right door.
- 3 Open the toner fill lid.



- 4 Line up the guide pins on the bottle with the guide pin slots on the toner fill opening.



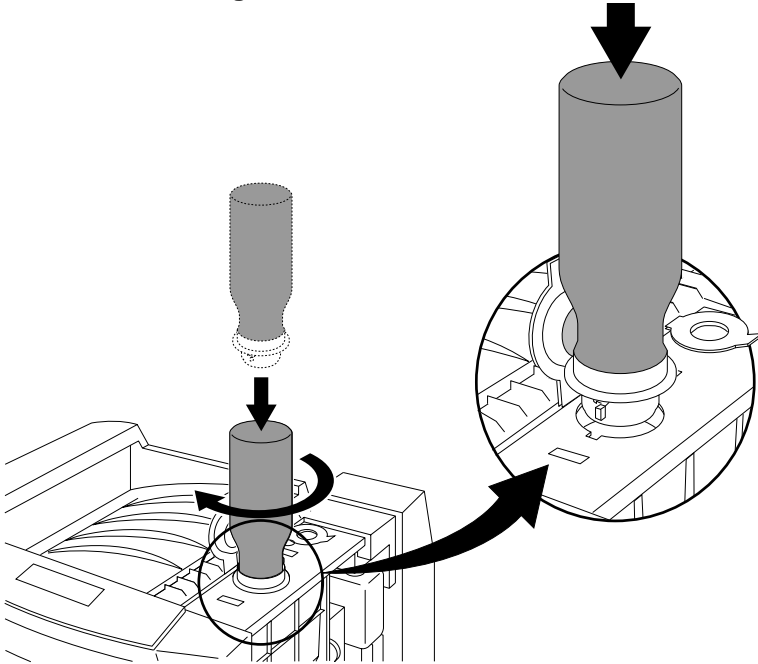
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**Caution:** *QMS recommends that you use only QMS consumables on your printer. QMS consumables are keyed only for QMS printers. Other brands of consumables will not fit the printer and will cause toner and developer spills. This will result in possible damage to the printer and its environment.*

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**Replacing Toner,  
Collector Bottle,  
and Cleaning  
Roller**

- 5 Insert and turn the toner bottle clockwise 180° (1/2 turn) to start filling.

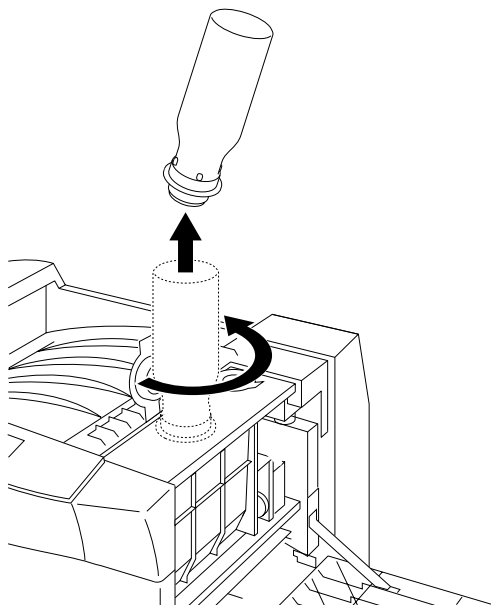


- 6 Tap the toner bottle several times to make sure all of the toner has emptied.

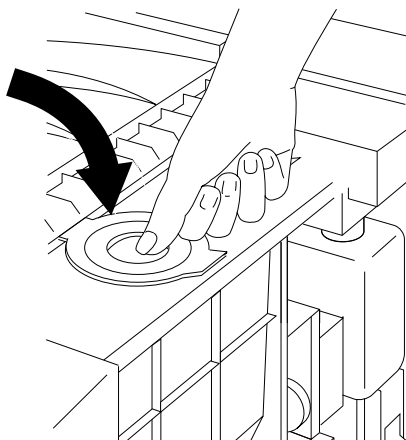
» **Note:** *It takes about 30 seconds for the bottle to empty.*

## Replacing Toner, Collector Bottle, and Cleaning Roller

- 7 When the toner bottle is empty, turn it 180° (1/2 turn) counter-clockwise and lift up to remove.



- 8 Close the toner fill lid.



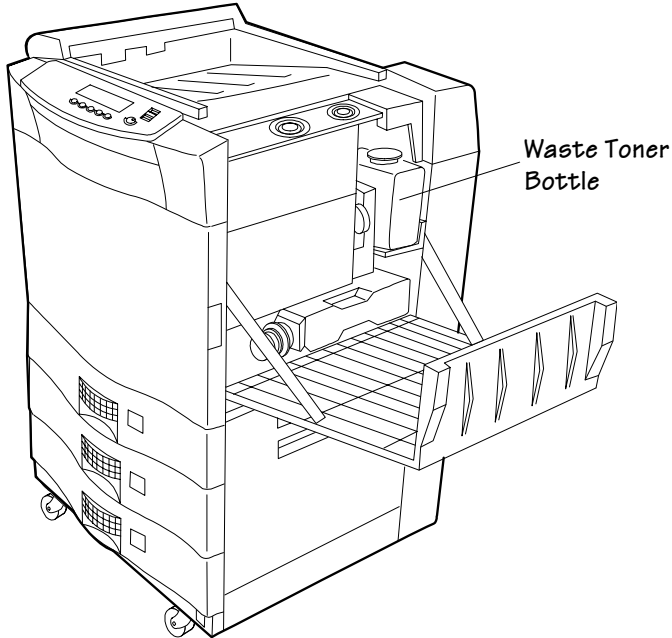


## Replacing Toner, Collector Bottle, and Cleaning Roller

### 9 Dispose of the old toner bottle.

- » **Note:** *The toner bottle is made of recyclable materials. Dispose of it in accordance with local regulations.*

### 10 Replace the waste toner collection bottle after you have completed adding toner.

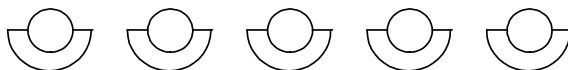
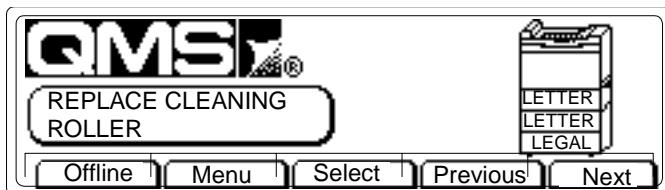


- » **Note:** *Every other time you refill the toner, the message window will remind you to replace the cleaning roller. This message appears after you close the upper-right door and the printer detects new toner. Follow the next procedure for replacing the cleaning roller.*

## Replacing Toner, Collector Bottle, and Cleaning Roller

### Replacing the Cleaning Roller and Precharger

For every two bottles of toner used in your printer or approximately every 40,000 prints the printer displays a message for you to replace the cleaning roller.



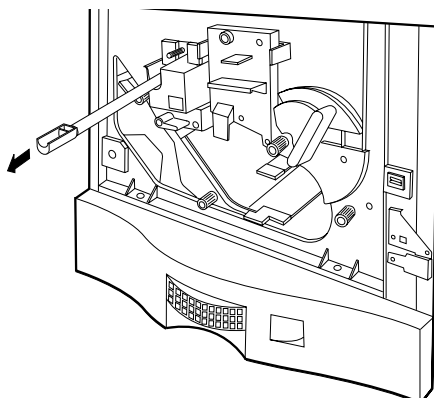
Follow this procedure when replacing the cleaning roller.

- 1 **Open the front door of the printer.**
- 2 **Pull out the handle of the old cleaning roller until you have removed it from the printer.**



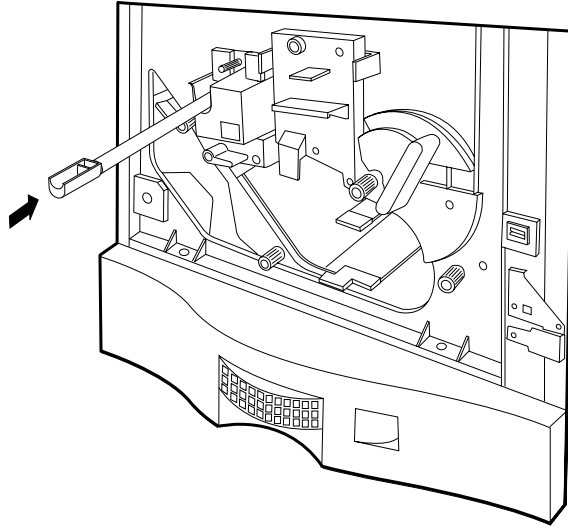
**WARNING:** *Be careful; the area around the fuser assembly is hot.*

**ACHTUNG!** *Verletzungsgefahr! Bei Betrieb wird die Umgebung der Fixiereinheit heiß.*



## **Replacing Toner, Collector Bottle, and Cleaning Roller**

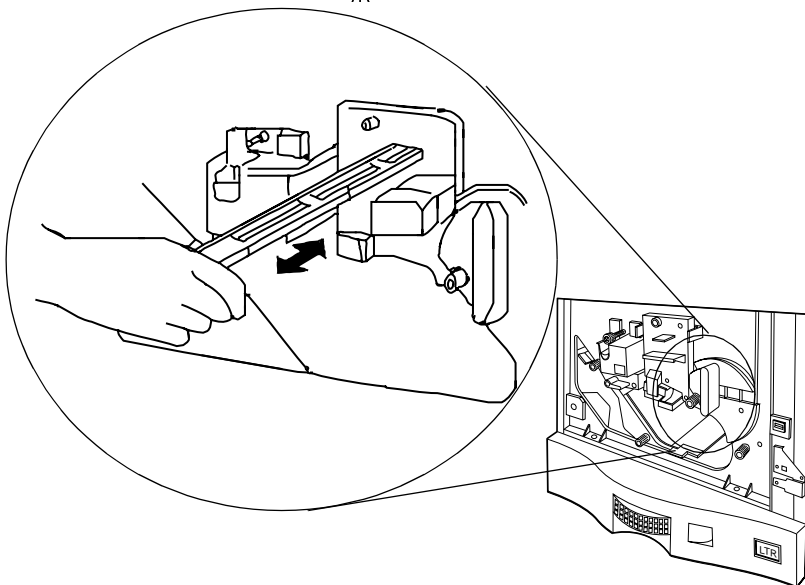
- 3 Insert the new cleaning roller, and push it all the way in until it is firmly seated.**



## Replacing Developer

Follow this procedure when cleaning the precharger.

- 4 Pull the precharger cleaner out, then push it back into its original position. 



- 5 Repeat this “out and in” process several times.
- 6 Push the precharger in completely.
- 7 Close the front door to place the printer back on line.
- 8 Dispose of the old cleaning roller in accordance with local regulations.

## Replacing Developer

When the developer has reached the end of its useful life, the printer will prompt you to replace the developer. This should occur at approximately 160,000 faces.

## Replacing Developer

» **Note:** Every other time you replace developer (320,000 faces) you should replace the ozone filter. See "Replacing the Ozone Filter" on page 2-33, for the ozone filter replacement procedure.

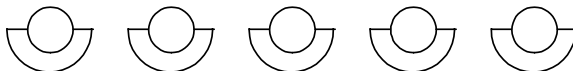
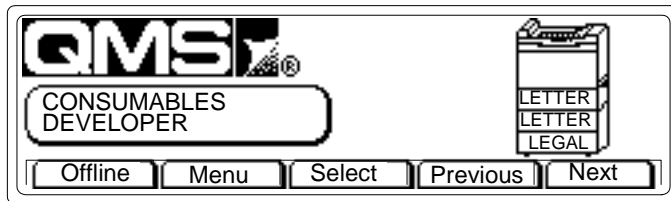
▲ **Caution:** The new bottle serves as the developer purge bottle after you have filled the developer. Follow the procedures carefully for removing the cap and installing the developer purge bottle.

### 1 Remove the developer bottle from the developer kit.



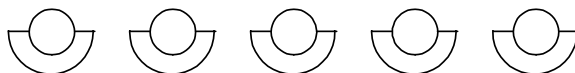
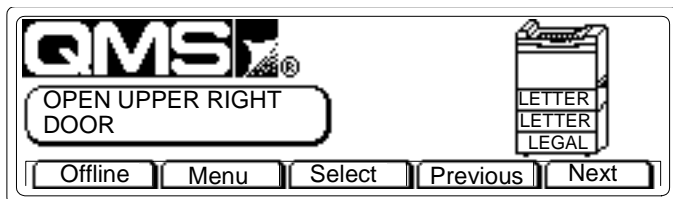
### 2 Press the Offline button and access the Administration/Consumables/Developer menu.

The message window should display



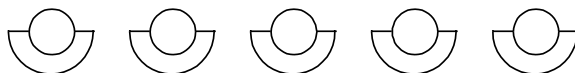
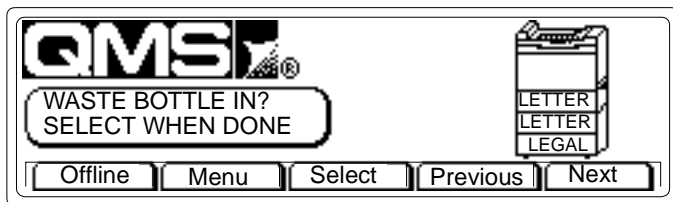
- 3 Press the Select button to tell the printer you are ready to add developer.**

The message window displays



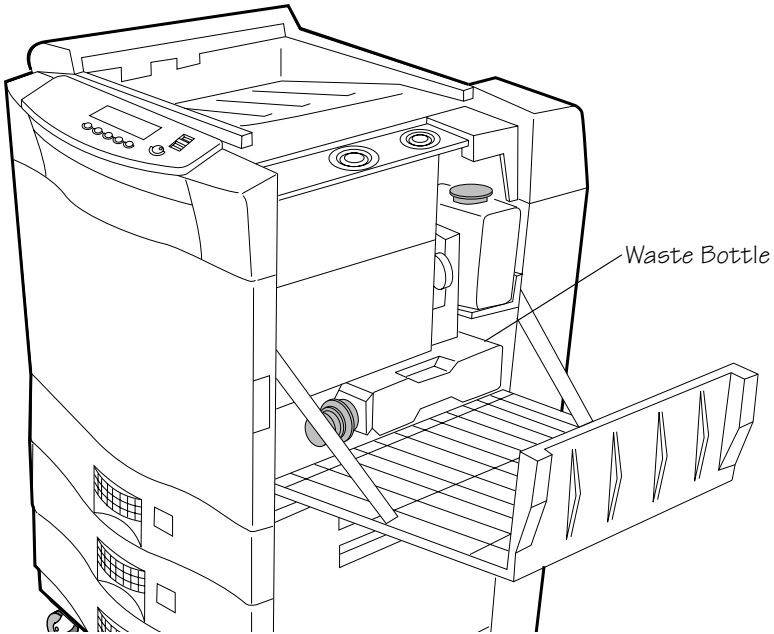
- 4 Open the upper-right door.**

The message window displays



## Replacing Developer

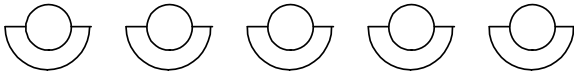
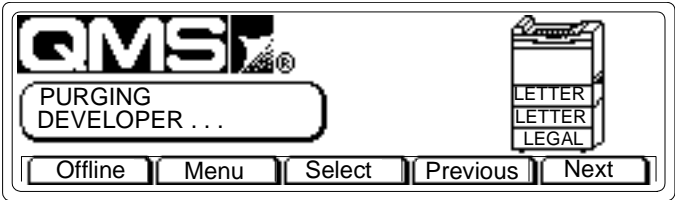
- 5 Check that the developer waste bottle (WASTE BOTTLE) is in place.



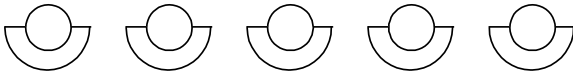
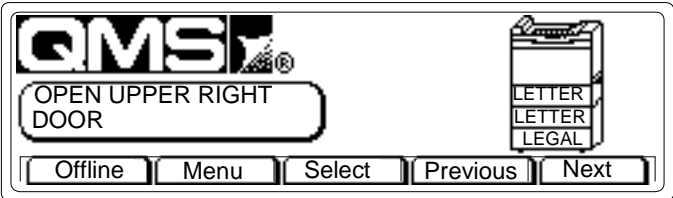
- » **Note:** Make sure the developer waste bottle is in place. The printer will not perform the next step until the bottle is set properly. The printer will prompt you to insert the developer waste bottle.

- 6 Close the right door and press the **Select** button to confirm that the developer waste bottle is in place.**

After you check that the developer waste bottle is in place and press the **Select** button the message window displays



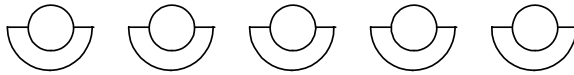
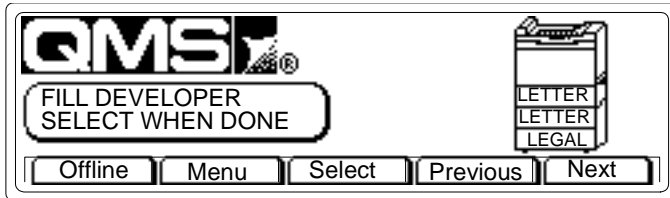
You should hear the developer purging and after about 30 seconds the message window displays



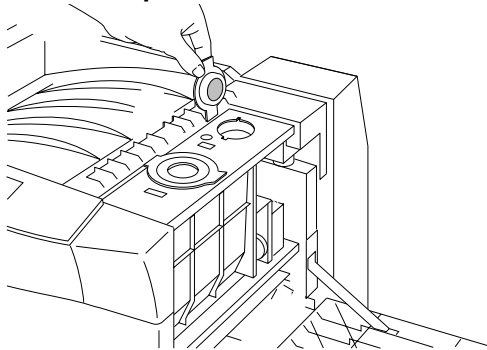


- 7 Open the upper-right door of the printer.** 

After you open the upper right door the message window displays



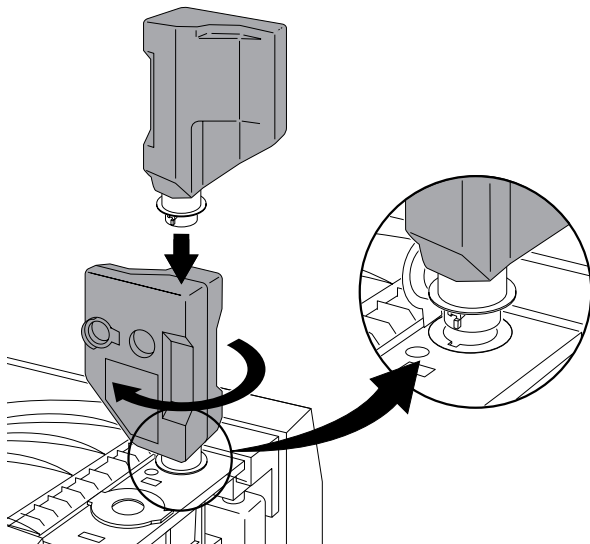
- 8 Open the developer fill lid.**



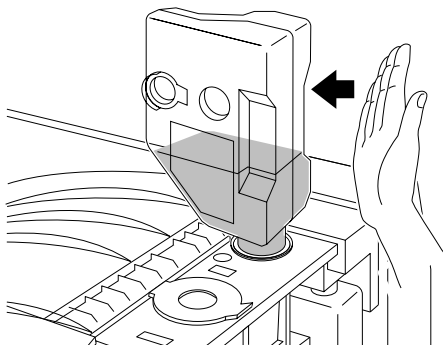
- 9 Line up the guide pins on the bottle with the guide pin slots on the developer fill opening.**

## Replacing Developer

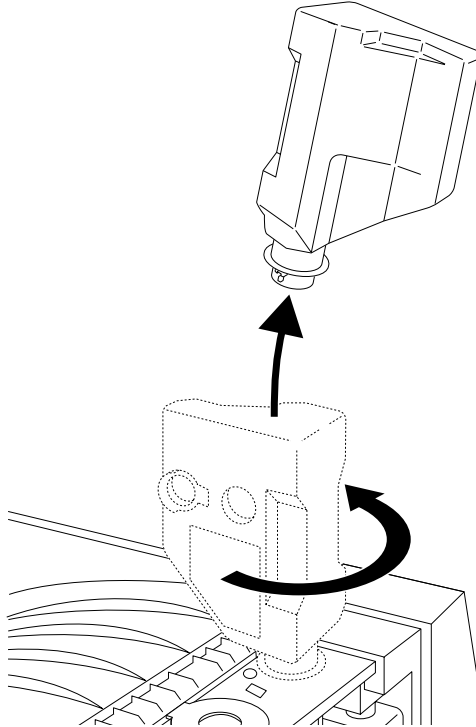
- 10 Insert and turn the developer bottle clockwise 180° (1/2 turn) to lock the bottle in place and begin filling.



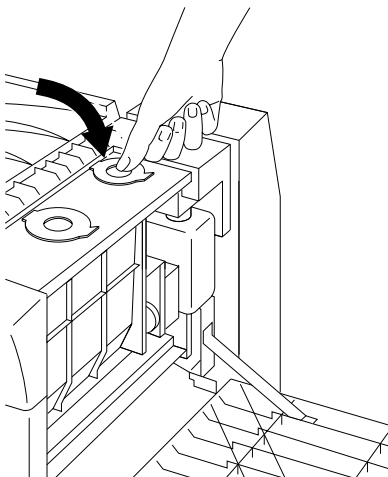
- 11 When the bottle is empty, gently tap it several times to make sure all of the developer has loaded.



- 12 Turn the developer bottle 180° counterclockwise and lift it up to remove it.**

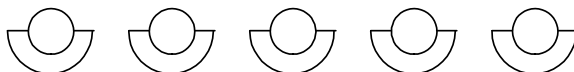
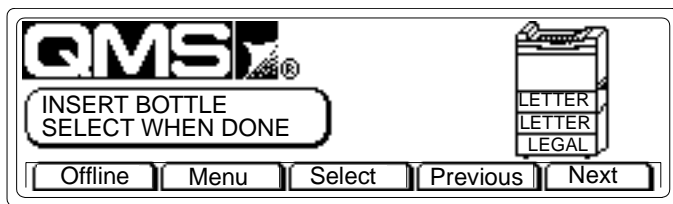


- 13 Close the developer fill lid.**



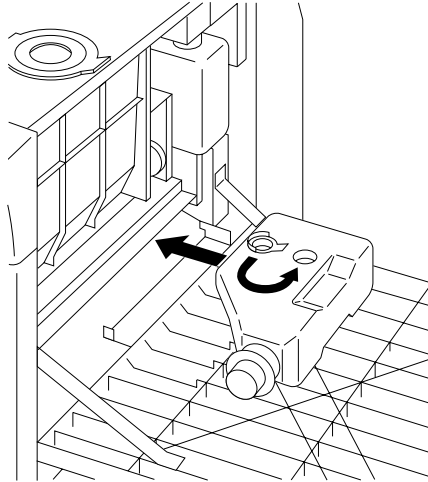
- 14 Press the Select button on the control panel.**

The display message window shows:



- 15 Remove the small cap from the side of the developer bottle.**
- 16 Turn the cap around and place it in the storage position on the bottle.**

- 17 Insert the developer bottle into the storage position.**




▲ **Caution:** *In the storage position the developer bottle is used whenever the developer hopper is purged. Make sure the cap is removed and the bottle is in the correct position.*

- 18 Close the upper-right door.**
- 19 Press Select on the control panel.**
- 20 Press the Offline button twice to place the printer back on-line.**

The printer will begin an automatic cycle to set the toner density.  
After about two minutes you will be able to resume normal operation.

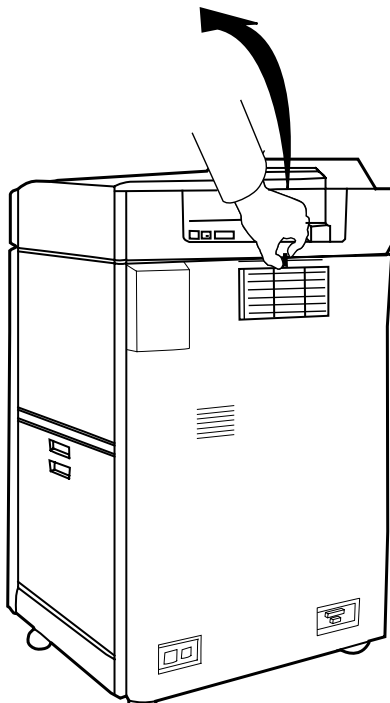
## **Replacing the Ozone Filter**

Every other time that you replace the developer you should also replace the ozone filter. » 

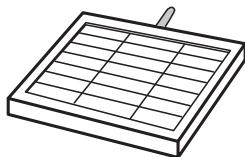
## Replacing the Ozone Filter

- 
- ▲ **Caution:** Failure to install the ozone filter will result in poor print quality and possible damage to internal printer components.
- 

- 1 Remove the old ozone filter from the holder on the rear of the printer.



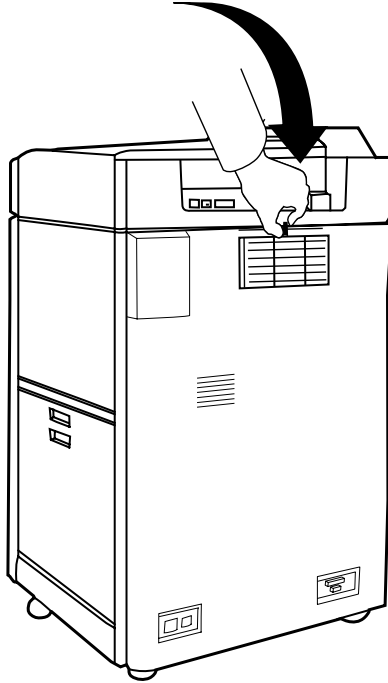
- 2 Remove the ozone filter from the developer kit and take it out of its packaging.



Ozone  
Filter

## Replacing the Drum Unit and Transfer Charger

- 3 Slide the ozone filter into the ozone filter holder on the rear of the printer.



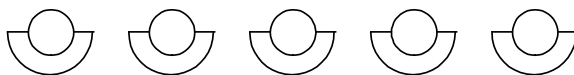
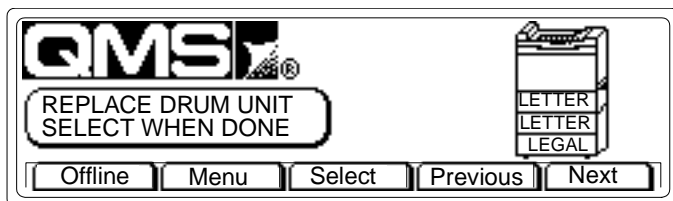
## Replacing the Drum Unit and Transfer Charger

The drum unit and transfer charger in your printer lasts approximately 250,000 prints before you need to replace them. Use the following procedure to replace the drum unit and transfer charger.

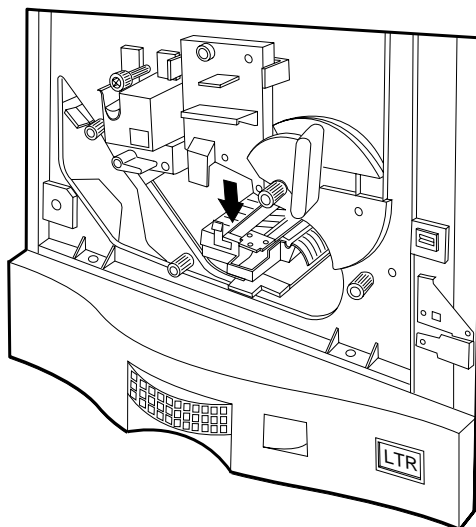
## Replacing the Drum Unit and Transfer Charger

- 1 Press the Offline button and access the Administration/Consumables/Drum Unit menu.

The message window should display



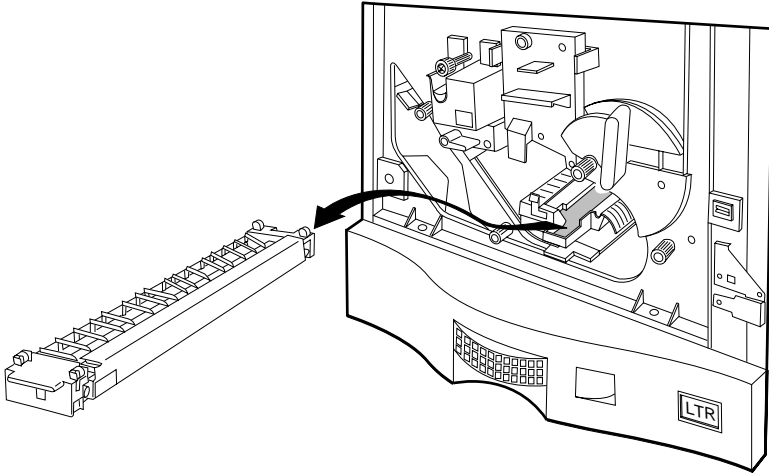
- 2 Open the front door of the printer.
- 3 While pulling down on handle 3, carefully lower the transfer assembly guide.



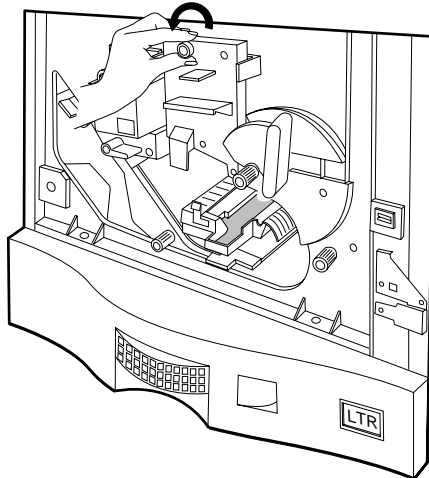


## Replacing the Drum Unit and Transfer Charger

- 4 In one movement, push in, pull up, and then pull out to remove the transfer assembly from the guide assembly.

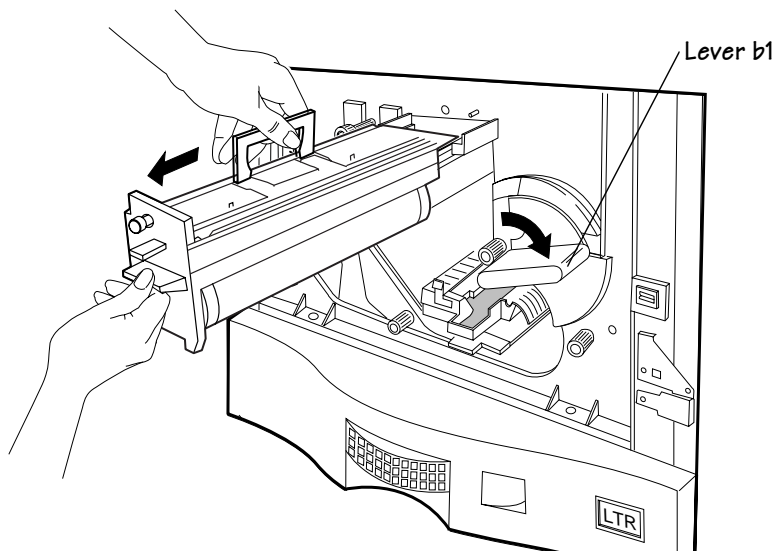



- 5 Set the old transfer assembly aside for now.
- 6 Turn the drum locking knob counterclockwise to release the drum.



## Replacing the Drum Unit and Transfer Charger

- 7 Turn lever b1 to the right to unlock the internal components.
- 8 Use the drum handles on top and front to pull out the old drum unit.

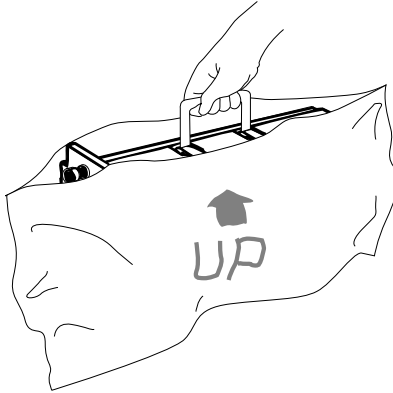


- 9 Carefully set the old drum unit aside for now.
  - 10 Remove the bag containing the new drum unit from the maintenance kit. 
  - 11 Open the protective aluminum bag by tearing open the top (there's a notch on the bag to help you start tearing the bag).
- » **Note:** After removing the drum unit from its protective bag, do not touch the OPC drum on the unit because it may deteriorate the drum and reduce print quality. Also, we recommend that you keep the bag for use if you should have to remove the drum from the printer.

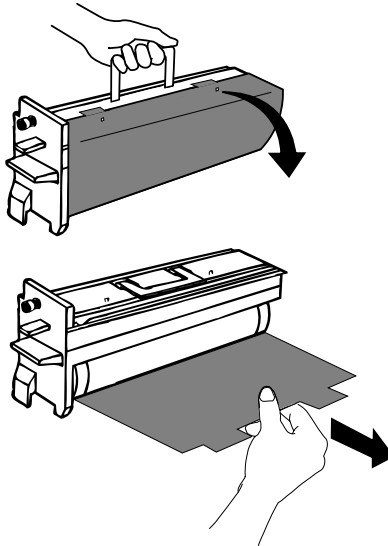
## Replacing the Drum Unit and Transfer Charger

- 12 Remove the drum unit by grasping the blue handle on top of the unit.

» **Note:** After removing the drum unit from its protective bag, do not touch the OPC drum on the unit because it may deteriorate the drum and reduce print quality.

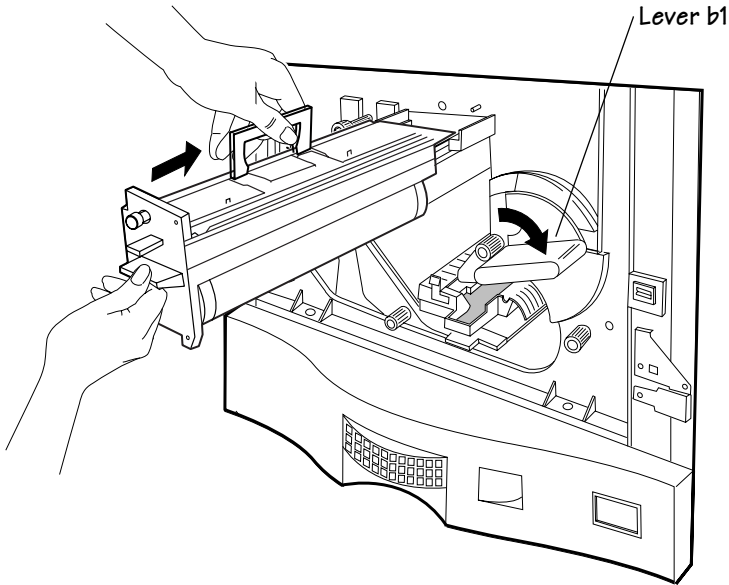


- 13 While holding the drum by the handle, set it on a solid surface and carefully remove the protective cover from the drum.



## Replacing the Drum Unit and Transfer Charger

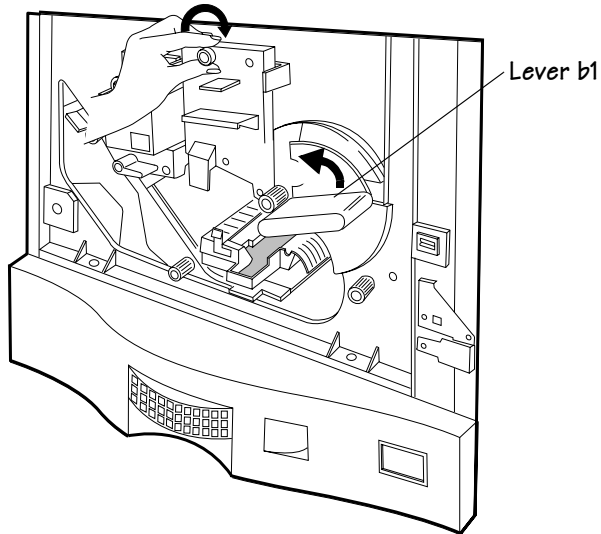
- 14 Make sure lever b1 is turned to the right to the open position.
- 15 Use the drum handles on the top and front to insert the drum unit along the guide rails and gently push it all the way in to make sure it is seated.



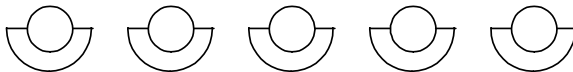
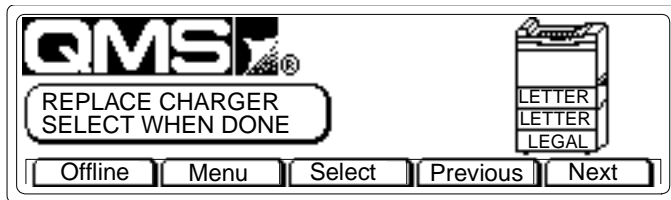
- 16 Gently push on the drum unit and turn the thumbscrew clockwise to lock the drum unit in place.

## Replacing the Drum Unit and Transfer Charger

- 17 Turn lever b1 to the left to lock the internal components.



- 18 Press the Select button to confirm that you have replaced the drum unit.
- 19 The message window displays

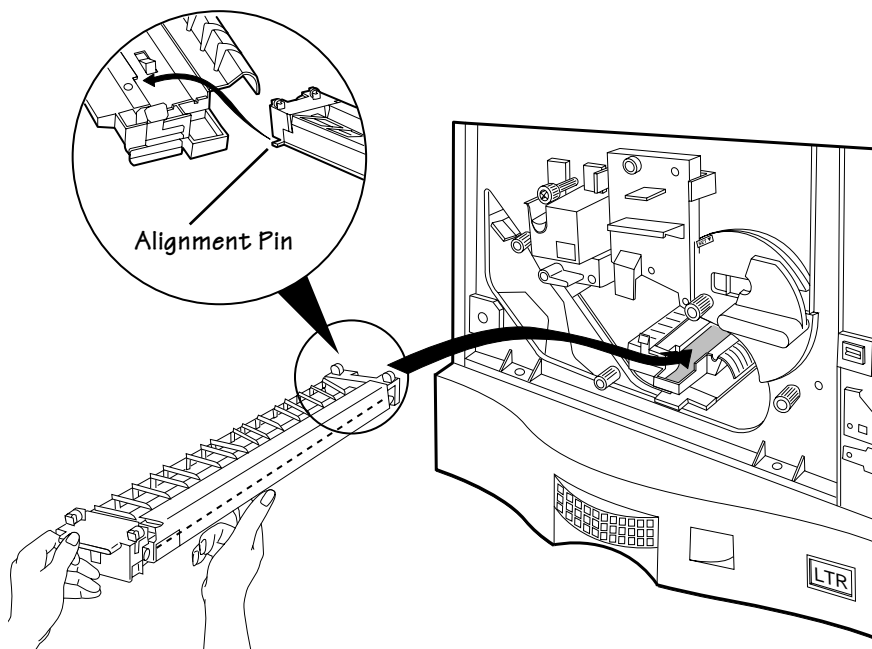


- 20 Remove the new transfer assembly from the maintenance kit and take it out of its shipping box and cover.

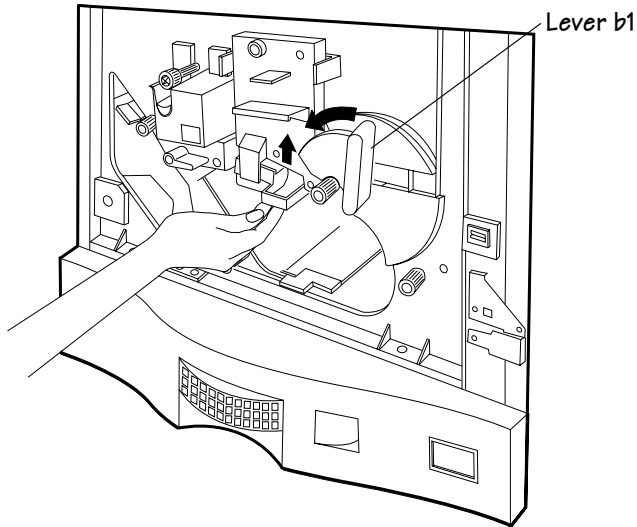
## Replacing the Drum Unit and Transfer Charger

### 21 Insert the transfer assembly into the transfer assembly guide.

- Locate the alignment pin on the end of the transfer assembly.
- Insert the alignment pin of the transfer assembly into the left rail of the transfer assembly guide at a slight angle.
- Slide the transfer assembly all the way into the transfer assembly guide until it clicks into place.



- 22 Lift the transfer assembly guide and lock it back into place.**



- 23 Turn lever b1 to the left.**

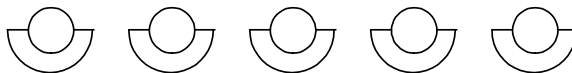
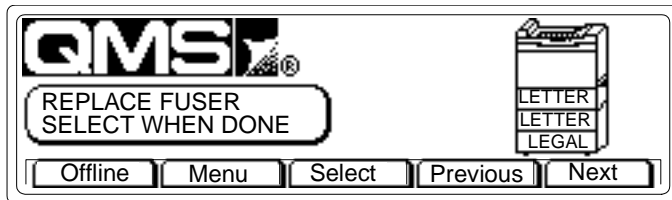
## Replacing the Fuser

Approximately every 300,000 faces you need to replace the fuser of your printer. Use the following procedure to guide you through this replacement.

## Replacing the Fuser

- 1 Press the Offline button and access the Administration/Consumables/Fuser menu.

The message window should display



- 2 Open the front door of the printer.
- 3 Turn lever b1 to the right to unlock the internal printer components.



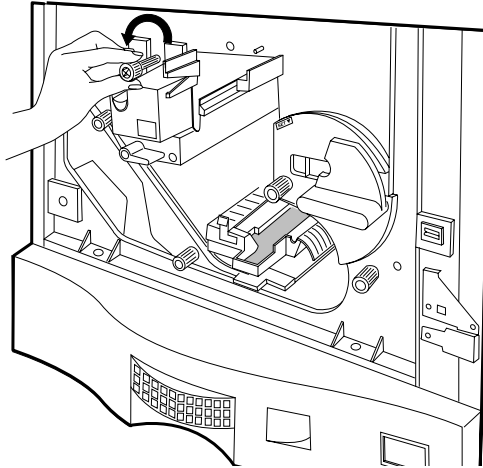
**WARNING:** *Be careful; the area around the fuser assembly is hot.*

**ACHTUNG!** *Verletzungsgefahr! Bei Betrieb wird die Umgebung der Fixiereinheit heiß.*

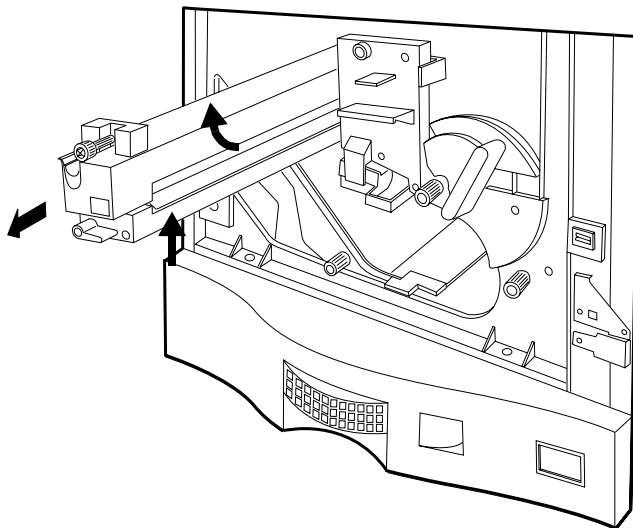


## Replacing the Fuser

- 4 Loosen the thumbscrew by turning it counterclockwise to unlock the old fuser.

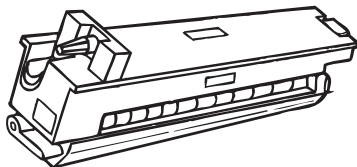


- 5 Pull the old fuser out and lift up and hold the bottom to remove it from the printer.

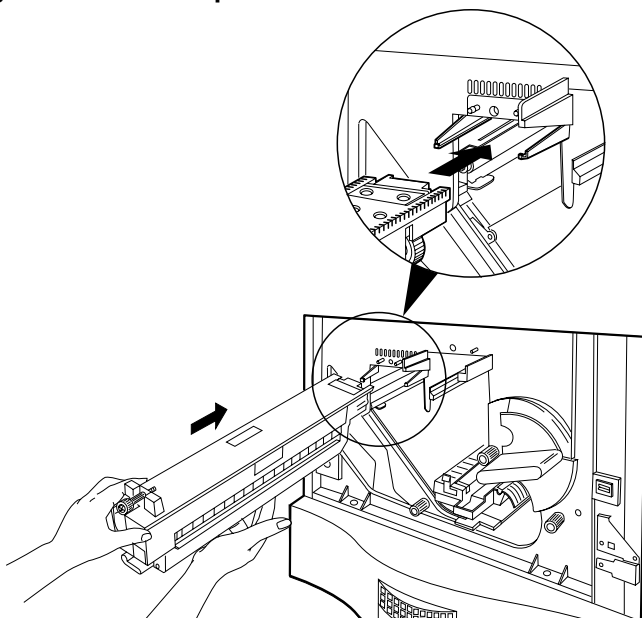


## Replacing the Fuser

- 6 Remove the fuser box from the maintenance kit and remove its contents.
- 7 Remove the fuser from its packaging.
- 8 Remove the foam tab next to the pressure release lever on the front of the fuser.

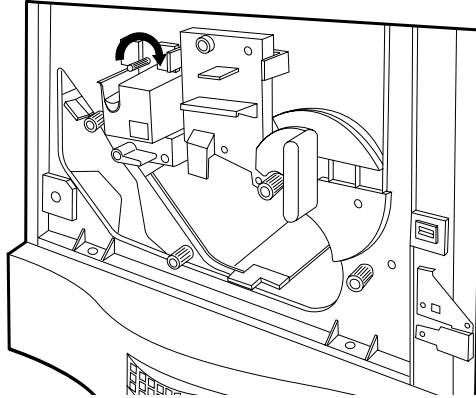


- 9 Insert the new fuser in the printer by aligning the fuser to the guides inside the printer.



## Replacing the Fuser

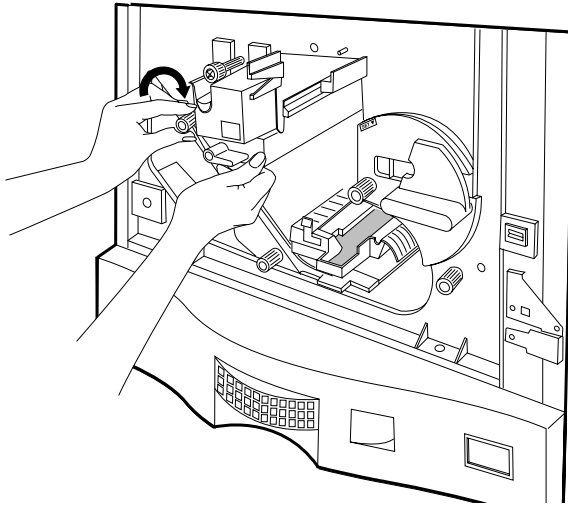
- 10 Gently push the fuser all the way to the back of the printer to make sure that it is properly seated.
- 11 Lightly push on the fuser and tighten the thumbscrew by turning it clockwise to lock the fuser in place.



- 12 If the fuser does not seat properly:
  - a Hold the fuser up against the printer using light pressure.
  - b Carefully rotate the decurler roller knob clockwise until the fuser seats flush against the printer.

## Replacing the Pick Rollers

- c Repeat step 11.



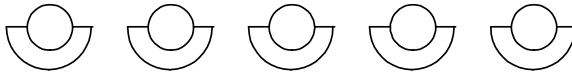
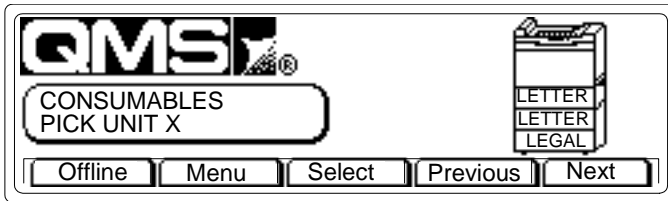
- 13 Turn lever b1 left to lock the internal printer components.
- 14 Press the Select button to confirm that you have replaced the fuser.

## Replacing the Pick Rollers

The tray pick rollers in your printer last approximately 500,000 faces before you need to replace them. Use the following procedure to replace the pick rollers for the upper, middle, and lower trays.

- 1 Press the **Offline** button and access the **Administration/Consumables/Pick Unit 1** menu.

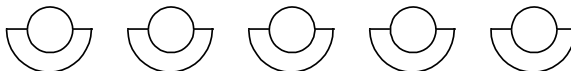
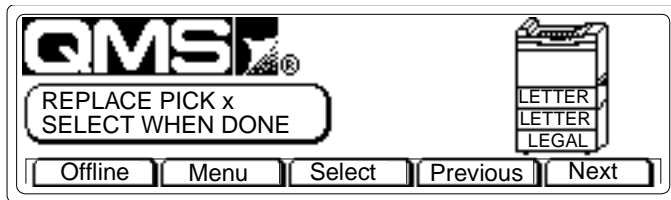
The message window should display



X = 1, 2, or 3. These are the upper, middle, lower trays, respectively.

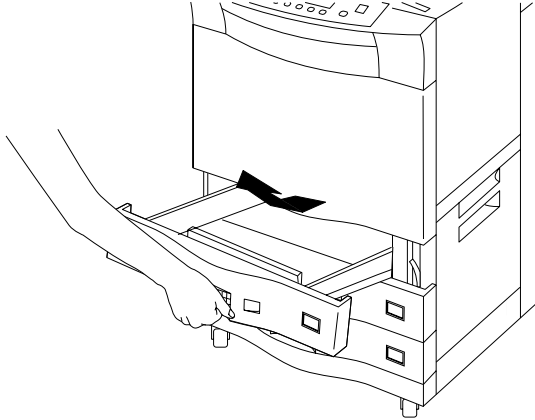
- 2 Press the **Select** button to tell the printer you are ready to replace the pick roller.


The message window displays

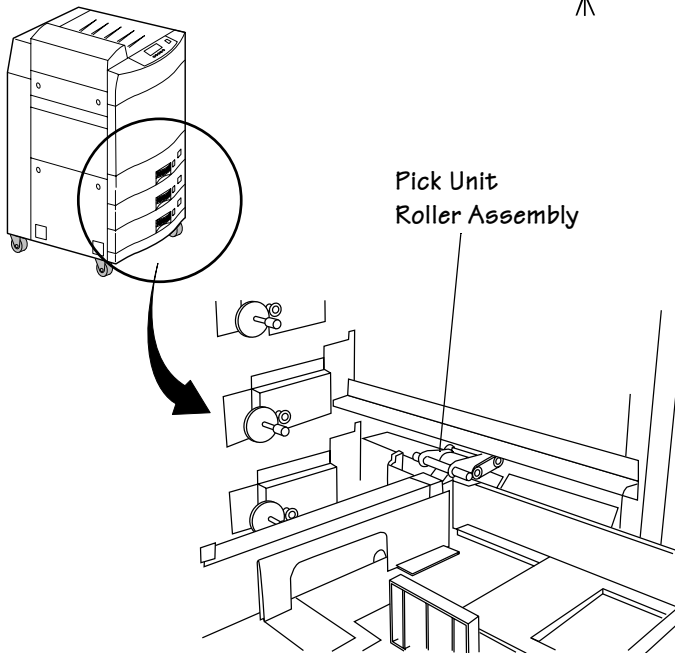


## Replacing the Pick Rollers

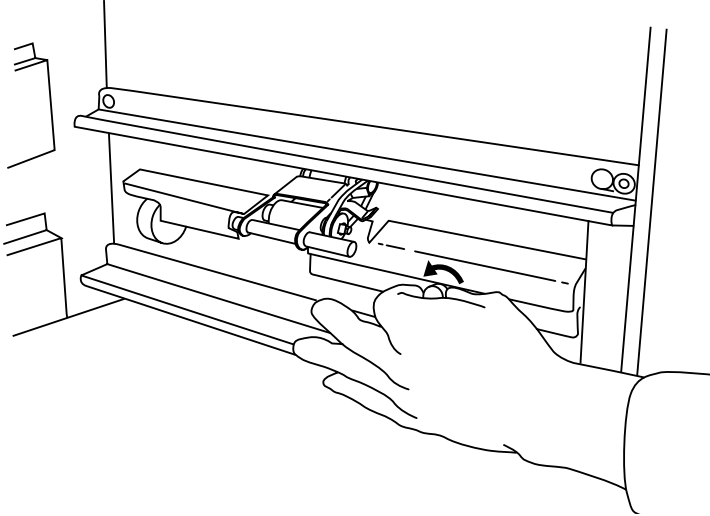
- 3 For ease of accessing the tray roller assemblies, remove all trays and set them aside.



- 4 Locate the pick unit 1 (upper tray) assembly. 



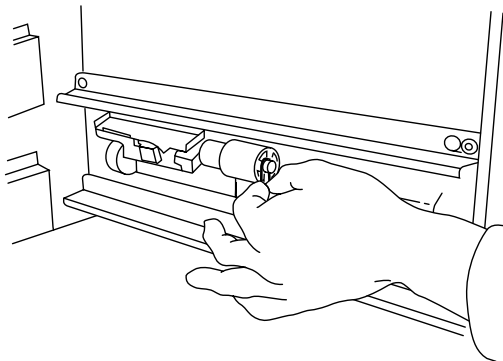
- 5 Locate the dust cover (secured by a thumbscrew) to the right side of the roller assembly. 



- 6 Remove the dust cover and set it aside.

Notice there are two roller assemblies: the upper movable assembly and the lower fixed roller. Both are secured in place by blue plastic clips.

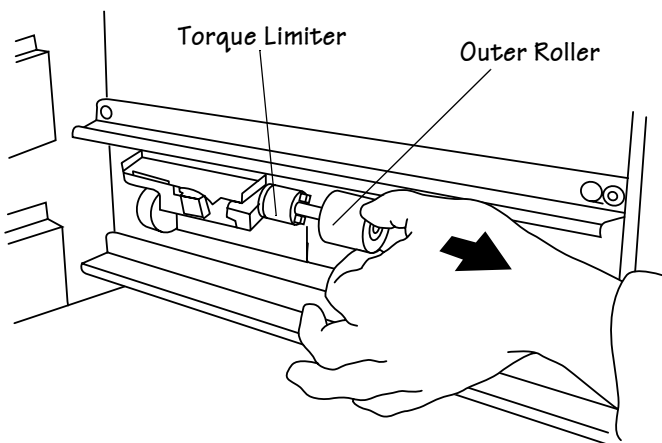
- 7 On the lower assembly, remove the clip by pulling down on the tab.



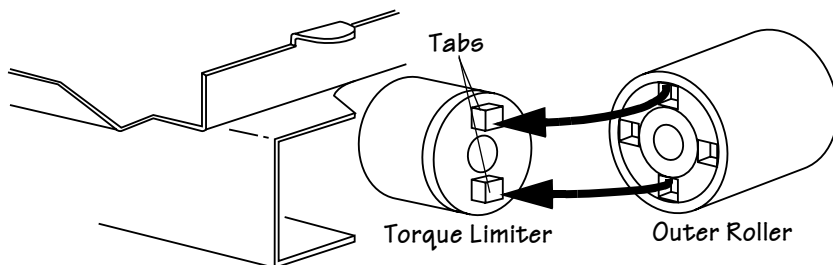
## Replacing the Pick Rollers

- 8 Grasp the outer roller and slip it off the shaft.
- 9 Grasp the inside torque limiter and pull it off the shaft.

Note that the limiter has two tabs sticking out. These tabs fit into the roller slots.

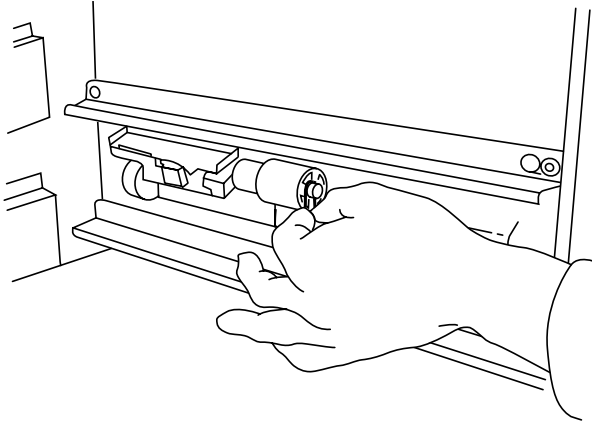


- 10 Holding the new limiter with the tabs pointing towards you, slip the limiter onto the shaft.
- 11 Turn the new limiter on the shaft until it locks into place.
- 12 Slip the new lower roller on the shaft and turn it until the limiter tabs are seated into the roller holes.

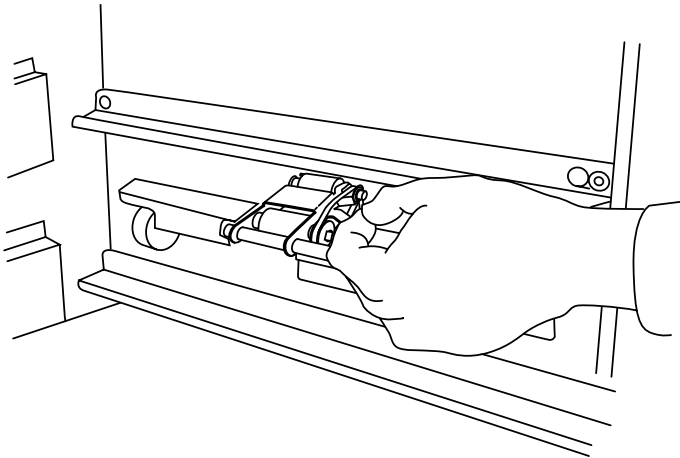




- 13 Attach the new clip onto the shaft to secure the lower roller assembly.**



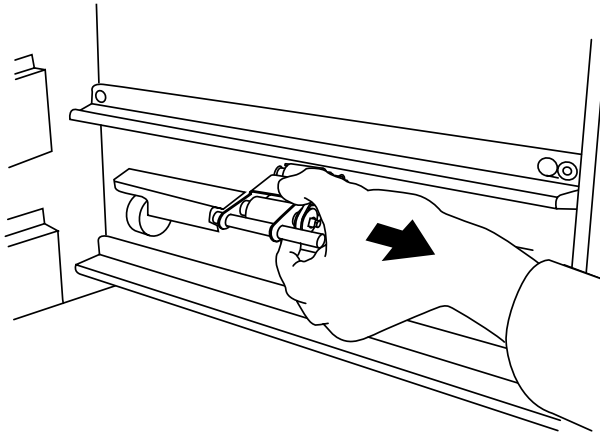
- 14 On the upper roller assembly, remove the clip by pulling down on the tab.**



## Replacing the Pick Rollers

- 15 Grasp the upper roller assembly and slowly pull the assembly towards you off of the shaft.

» **Note:** As you pull, the assembly drops a little. It is released from a supporting tab.

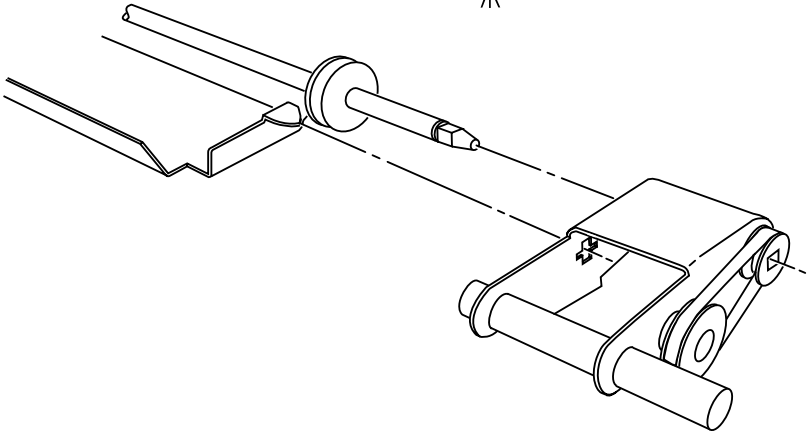


- 16 Pull the assembly all the way out.

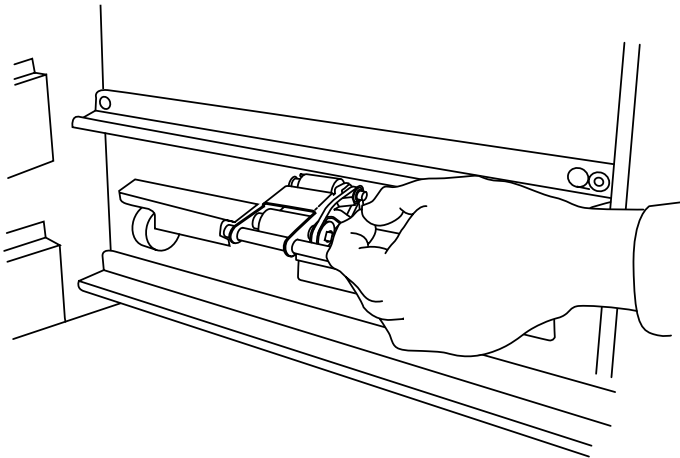
» **Note:** On the side away from you, the assembly has a slot. Look inside the printer and locate the supporting tab.

- 17 Hold the new upper roller assembly the same way you took the old assembly out, and slide the new assembly onto the shaft.

- 18** Position the assembly hole over the tab and slide the upper roller assembly all the way in. 

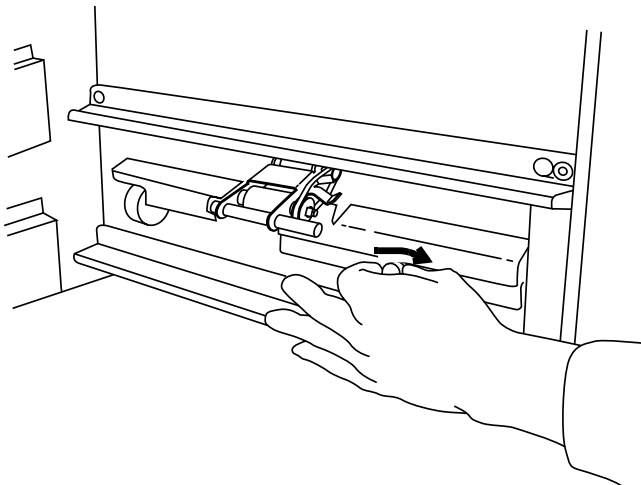


- 19** Attach the new clip onto the shaft to secure the upper roller assembly.

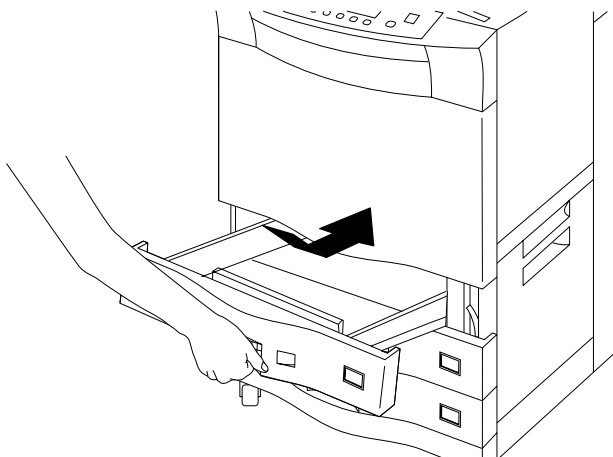


## Replacing the Pick Rollers


- 20** Reattach the dust cover by positioning the cover tabs into the locating holes and then finger tighten the thumbscrew.



- 21** Press the Select button to confirm that you have replaced the upper pick roller.
- 22** Follow the same procedure to replace the pick roller for the other two trays.
- 23** Reinstall the trays in the proper positions.

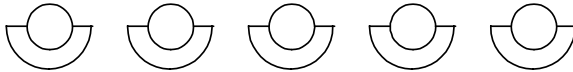
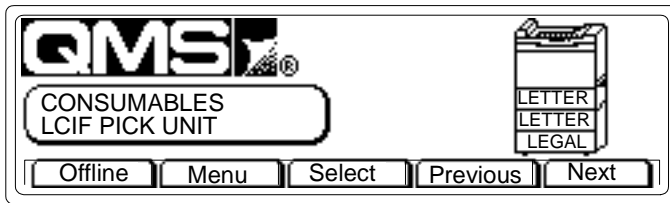


## **Replacing the Pick Rollers in the LCIF**

The LCIF pick rollers in your printer last approximately 500,000 faces before you need to replace them. Use the following procedure to replace the pick rollers in the optional LCIF. 

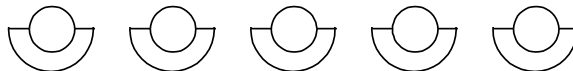
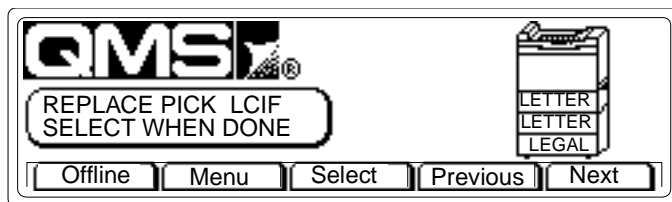
- 1 **Press the Offline button and access the Administration/Consumables/Optional Pick menu.**

The message window should display



- 2 **Press the Select button to tell the printer you are ready to replace the pick roller.**

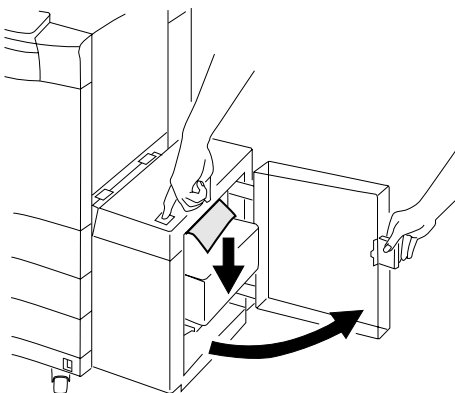
The message window displays



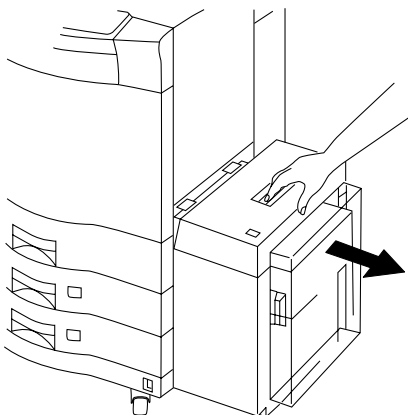
## Replacing the Pick Rollers

### Removing LCIF Lower Roller Assembly

- 1 Open the door and lower the tray on the LCIF by pressing the button on top.



- 2 Release the LCIF from the printer and slide it back on its rails.



- 3 From the printer side of the LCIF, locate the lower roller assembly at the center top.

- 4 Locate the two retaining springs providing tension to the lower roller assembly. Note how the springs are attached to the roller shaft.
- 5 Remove the white plastic clip at the back side of the lower roller shaft.
- 6 Grasp the lower roller assembly and slide it toward the front.
- 7 Set the lower roller assembly aside.

### **Removing LCIF Upper Roller Assembly**



- 1 From the paper side of the LCIF, locate the upper roller assembly.
- 2 On the printer side of the LCIF locate the two thumbscrews and remove them while holding the upper roller assembly up.
- 3 Note the top of the assembly. Grasp the upper roller assembly and carefully pull it out and set it aside.

### **Installing the New LCIF Upper Roller Assembly**



- 1 Hold the replacement upper roller assembly the same way as you removed the old one.
- 2 Insert the new assembly shaft into the plastic cap and position the assembly over the screw holes.
- 3 While holding the assembly with one hand, attach the two thumbscrews. You may have to adjust the upper roller assembly left or right so the screws can engage the holes.
- 4 Tighten the thumbscrews finger tight.

### **Installing the New LCIF Lower Roller Assembly**



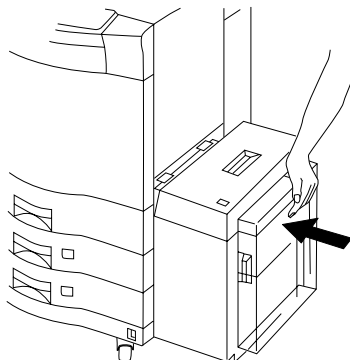
- 1 Grasp the new lower roller assembly and insert the shaft into the holding tabs the same way you removed the old assembly.
- 2 Slide it in and back into the other tab.

## Replacing the Pick Rollers

- 3 Snap the white plastic clip into place to hold the assembly.**

The clip fits into a groove at the back end of the shaft. If you can't see this groove the roller assembly may not be completely seated all the way onto the shaft.

- 4 Attach the springs to the ends of the lower roller assembly shaft by grasping the spring end tabs to hold the spring.**
- 5 Slide the LCIF back towards the printer until it latches.**



- 6 Add paper and close the door.**
- 7 Press Select on the control panel.**





# 3

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## Printer Care

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### **In This Chapter . . .**

- “Handling the Printer” on page 3-2
- “Cleaning the Printer” on page 3-3

# Introduction

Investing a few minutes each week on your printer's maintenance will ensure a minimum of downtime and an extended printer life. Try to assign someone to do cleaning and maintenance and follow the instructions in this manual. Always perform the maintenance at the recommended intervals.

## Handling the Printer

Handle the printer with care to preserve its life. Abuse may cause damage. Keep the following guidelines in mind:

- Avoid spraying cleaning solution directly on the printer's surface; the spray could penetrate through the air vents of the printer and damage the internal circuits.
- Be careful when cleaning the inside or removing paper jams, as the fuser and other internal parts become very hot.
- Do not close the covers abruptly, or expose the printer to vibrations.
- Do not leave the printer open for any length of time, especially in the sun or in well-lit places; light will damage the photosensitive drum.
- Do not open the printer during printing.
- Do not place anything on top of the printer, the LCIF or the LCOS.
- Do not attempt to disassemble the printer.
- Make sure two people are available to lift the printer when moving it. The printer weighs about 298 lbs (135 kg); do not attempt to move it by yourself.

- Keep the following in mind when storing the printer for an extended period:
  - Unplug the printer.
  - Remove the drum unit from inside the printer. After removing the drum unit from the printer, return it to the aluminum bag in which it was originally packaged or wrap it in a thick cloth to protect it from direct sunlight or any other bright light.

## **Cleaning the Printer**

Fine particles of dust from the paper may accumulate inside the printer. This could affect the printer's performance. So the printer should be cleaned on a regular basis to prevent potential malfunctions. You need to clean only the following areas:

- The transfer assembly
- The fuser
- The reversing unit
- The precharger
- The outside of the printer

## **Cleaning Toner Spills**

The printer uses a fine black powder known as toner as the “ink” for the printed image. During removal or replacement of various consumable parts, toner occasionally spills onto the printer interior or exterior.

Do not attempt to clean up spilled toner with hot water, as this can “set” the toner. Use a vacuum cleaner especially designed for trapping toner particles. Regular vacuum cleaners cannot trap the fine toner particles and will exhaust the fine particles into the air.

Call QMS Service if you cannot clean up serious toner spills. See appendix A, “QMS Customer Support,” for information on contacting QMS service.

**Tools for Cleaning**

- Polyethelene (rubber) gloves
- Cleaning cloths
- Vacuum cleaner specially designed for picking up toner
- Blower brush


**Printer Cleaning Intervals**

Use this table as a guideline for regular cleaning intervals.

Part Name	Cleaning Interval
Transfer Assembly	500,000 pages or 3 months
Fuser Assembly	3 months
Reversing Unit	500,000 pages or 3 months
Outside Surface	When needed

**General Cleaning Guidelines**

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 **WARNING!** *Turn off the printer, unplug the power cord, and disconnect any interface cables before cleaning.*

**ACHTUNG!** *Ziehen Sie den Netzstecker aus der Steckdose bevor Sie den Drucker reinigen.*

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In addition to unplugging the printer, follow these guidelines when cleaning the printer:

- Clean the printer before use or allow a few minutes after unplugging it so that the fusing unit can cool down.
- Do not leave moisture inside the printer. Allow all parts to dry thoroughly before closing the printer cover.
- Use a soft, lint-free cloth.

## **Cleaning the Transfer Assembly**

- ⚠ WARNING!** *Turn off the printer, unplug the power cord, disconnect any interface cables, and make sure that the fusing unit has cooled down before cleaning.*

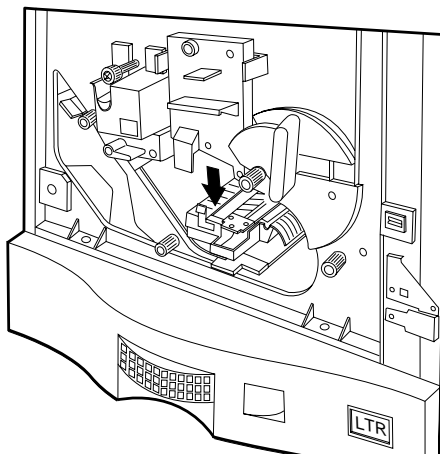
**ACHTUNG!** *Schalten Sie vor der Reinigung bitte den Drucker aus, ziehen den Netzstecker heraus und entfernen alle Kabel von den Schnittstellenanschlüssen, bis die Fixiereinheit abgekühlt ist.*

To maintain clear, crisp print quality, and to help prevent paper jams, clean the transfer assembly area after 500,000 pages, or when necessary. Use the following procedure:

- 1 Open the front door of the printer.**
- 2 Use a toner vacuum or cleaning cloths to wipe any toner or dust off the outside of the transfer assembly guide and paper guides.**

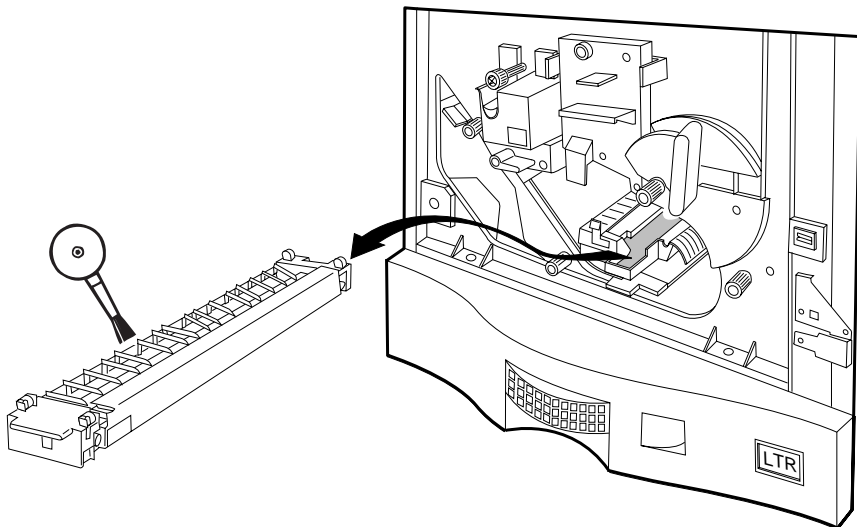
**▲ Caution:** *As you handle the transfer assembly, be careful not to touch or damage the transfer wire.*

- 3 While pulling down on handle 3, lower the transfer assembly guide.**

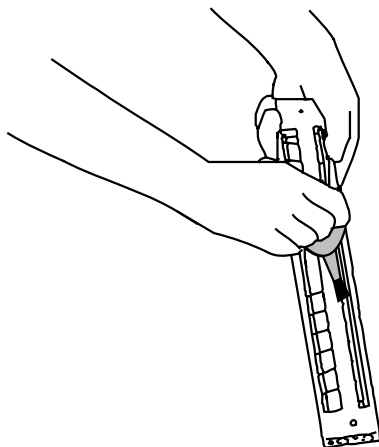


## **Cleaning the Printer**

- 4 In one movement, push in, pull up, and then pull out to remove the transfer assembly from the guide assembly.**

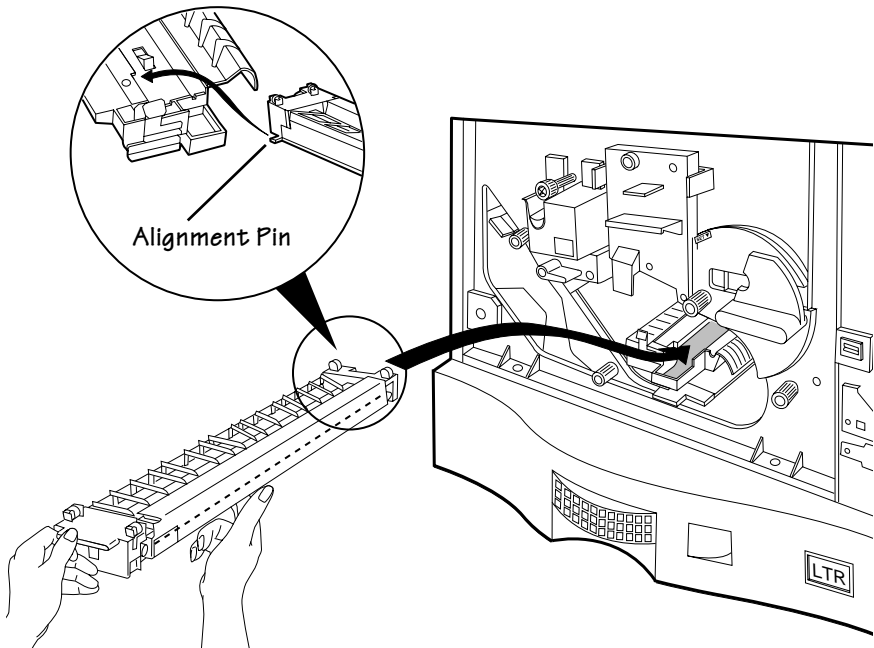


- 5 Use the blower brush, stored on the inside of the front door, to clean the transfer assembly.**



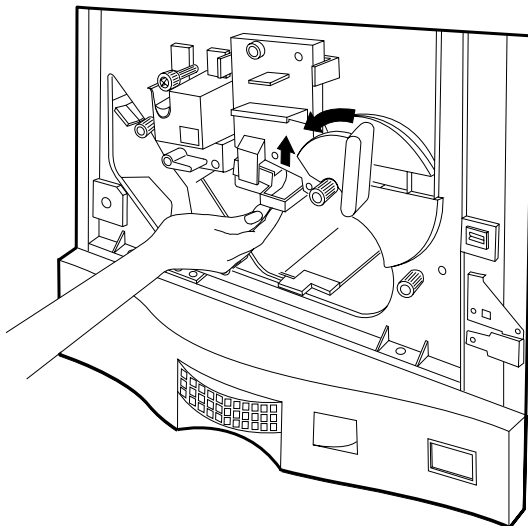
**6 Insert the transfer assembly into the transfer assembly guide.**

- a Locate the alignment pin on the end of the transfer assembly.
- b Insert the alignment pin of the transfer assembly into the left rail of the transfer assembly guide at a slight angle.
- c Slide the transfer assembly all the way into the transfer assembly guide until it is firmly seated.




## Cleaning the Printer

- 7 Lift the transfer assembly guide and lock it back into place.



- 8 Close the front door of the printer.

## Cleaning the Fuser Assembly

 **WARNING!** Turn off the printer, unplug the power cord, disconnect any interface cables, and make sure that the fusing unit has cooled down before cleaning.

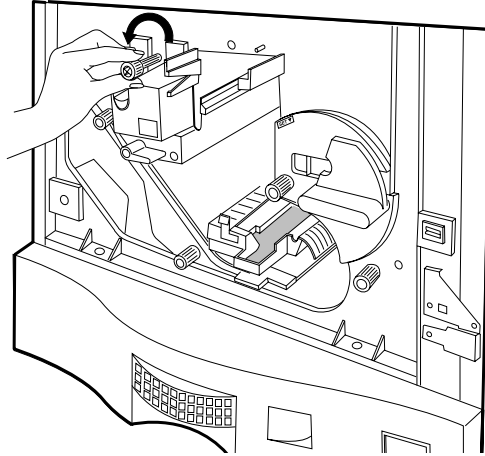
**ACHTUNG!** Schalten Sie vor der Reinigung bitte den Drucker aus, ziehen den Netzstecker heraus und entfernen alle Kabel von den Schnittstellenanschlüssen, bis die Fixiereinheit abgekühlt ist.

To maintain clear, crisp print quality, and to help prevent paper jams, clean the fuser assembly every 3 months, or when necessary. Use the following procedure:

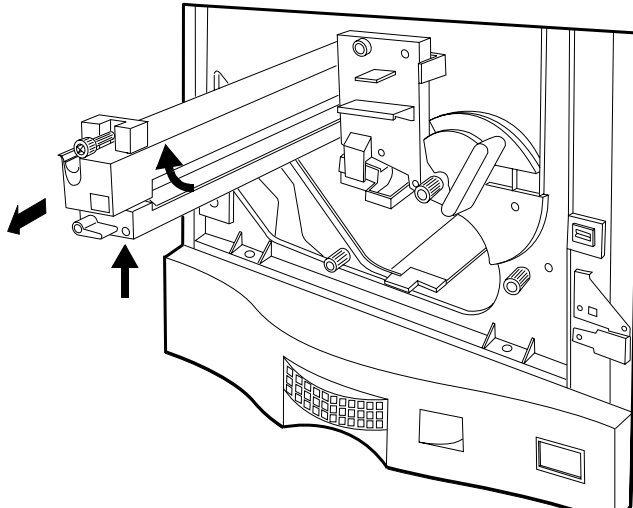
- 1 Open the front door of the printer.



- 2 Loosen the thumbscrew by turning it counterclockwise to unlock the fuser.



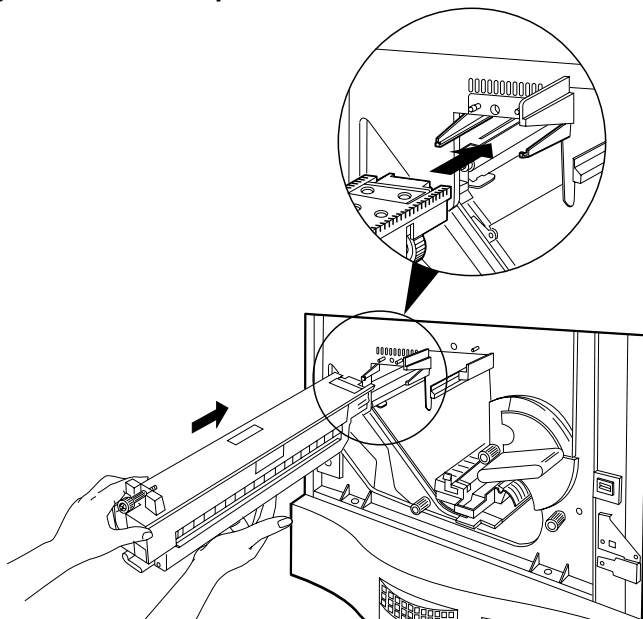
- 3 Pull the fuser out and lift up and hold the bottom to remove it from the printer.



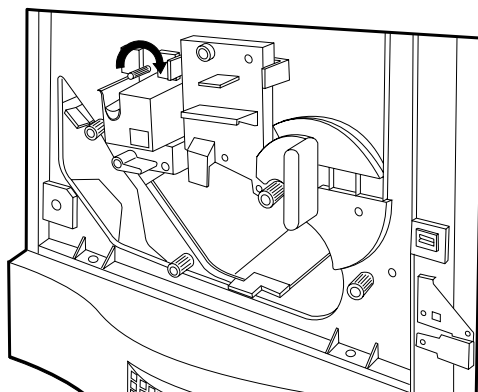
- 4 Use a clean cloth or a toner vacuum to wipe any toner or dust off the fuser and paper guides.

## **Cleaning the Printer**

- 5 Insert the fuser in the printer by aligning the fuser to the guides inside the printer.**

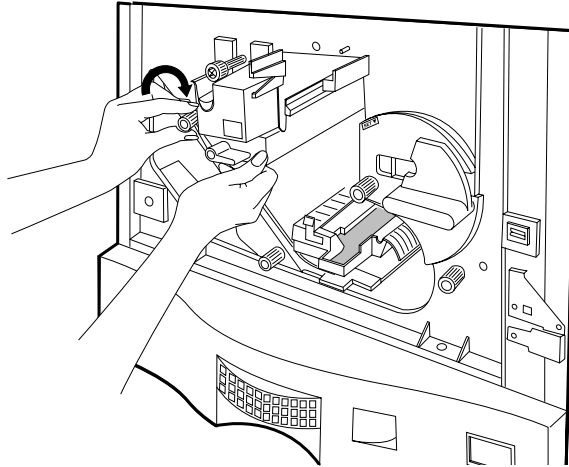


- 6 Gently push the fuser all the way to the back of the printer to make sure that it is properly seated.**
- 7 Lightly push on the fuser and tighten the thumbscrew by turning it clockwise to lock the fuser in place.**




### 8 If the fuser does not seat properly:

- a Hold the fuser up against the printer using light pressure.
- b Carefully rotate the decurler roller knob clockwise until the fuser seats flush against the printer.
- c Repeat step 7.



### 9 Close the front door of the printer.

## Cleaning the Reversing Unit

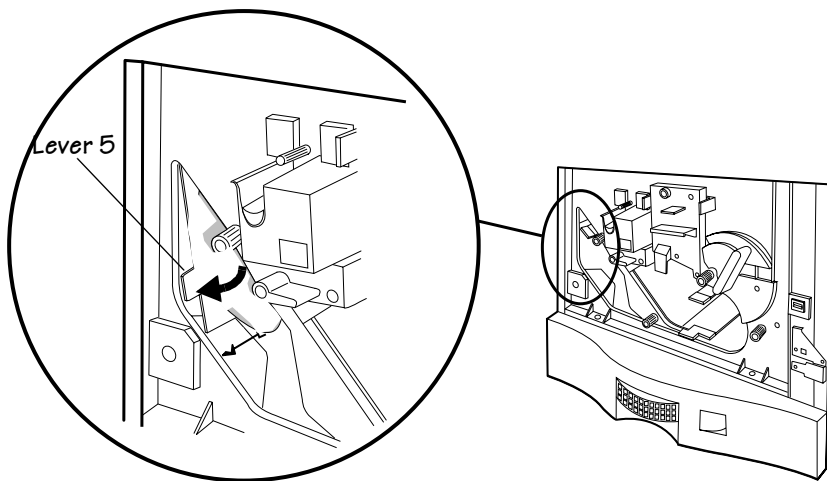
 **WARNING!** Turn off the printer, unplug the power cord, disconnect any interface cables, and make sure that the fusing unit has cooled down before cleaning.

**ACHTUNG!** Schalten Sie vor der Reinigung bitte den Drucker aus, ziehen den Netzstecker heraus und entfernen alle Kabel von den Schnittstellenanschlüssen, bis die Fixiereinheit abgekühlt ist.

## Cleaning the Printer

To maintain clear, crisp print quality, and to help prevent paper jams, clean the reversing unit every 500,000 pages, 9 months, or when necessary. Use the following procedure:

- 1 Open the front door of the printer.
- 2 Open the reversing unit with lever 5.



- 3 Use cloths or a toner vacuum to wipe any toner or dust off of the reversing unit.
- 4 Close the front door of the printer.

## Cleaning the Outside of the Printer

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**⚠ WARNING!** Turn off the printer, unplug the power cord, and disconnect any interface cables before cleaning.

**ACHTUNG!** Ziehen Sie den Netzstecker aus der Steckdose bevor Sie den Drucker reinigen.

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To protect and maintain the appearance of your printer, wipe the cover and external parts with a soft cloth moistened with water or mild detergent.


---

 **WARNING!** *Do not spill water or detergent into the printer; otherwise the printer will be damaged and an electric shock may occur.*

**ACHTUNG!** *Verschütten Sie kein Wasser oder andere Flüssigkeiten auf dem Drucker, da das Gerät sonst beschädigt wird oder die Gefahr eines elektrischen Schlages besteht.*

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 **CAUTION:** *Avoid using solvents, such as alcohol and benzene, or sprays as they may damage the finish.*

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# 4

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## Printer Jams

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### **In This Chapter. . .**

- “Paper Path” on page 4-2
- “Clearing Pick-Up Jams” on page 4-5
- “Clearing LCIF Pick-Up Jams” on page 4-6
- “Clearing a Feed Path Paper Loading Jam” on page 4-10
- “Clearing a Feed Path Jam in the Fuser Area” on page 4-14
- “Clearing a Duplex Paper Path Jam” on page 4-16
- “Clearing a Paper Ejection Jam” on page 4-20
- “Clearing a Stacker Jam on the 2000-Sheet LCOS Stacker” on page 4-20
- “Clearing a Paper Jam on the 3000-Sheet LCOS Stacker” on page 4-23

# Paper Jams

## Paper Path

Understanding how paper travels inside the printer helps you better handle paper jams.

After a sheet of paper is fed from the tray, it travels to the drum unit where toner is attracted onto the paper by means of electrostatic charge. Then, the paper moves to the fuser assembly area where toner is melted onto the paper. Finally, the printed sheet arrives at the output tray, depending on the paper delivery selected.

## Automatic Jam Recovery

With most printers, if a jam occurs, you must remove the jammed paper and then reprint the job. However, the QMS 4060 Print System provides automatic jam recovery (when enabled through the Administration/Engine/Page Recovery menu). If a paper jam occurs, remove the jammed paper, and the printing automatically resumes from the page the printer stopped at when the jam occurred.

- » **Note:** *For automatic jam recovery to work, it is necessary to leave the printer turned on when you remove the jammed paper.*

## Clearing Paper Jams

### Locating Paper Jams

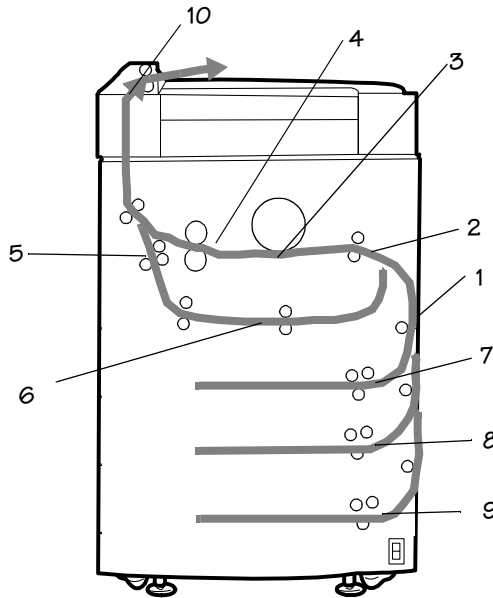
When a paper jam occurs, a PAPER JAM message displays in the message window. Frequent jams in any area indicate that area should be checked, repaired, or cleaned. Repeated jams may also happen if you are using the wrong size or weight paper.

Check the instructions inside the front door of the printer for a quick reference to clearing jams.

There are six areas inside the front door of the printer that are numbered 1 through 6. The printer jam messages list these numbers for a general area to check for jams.

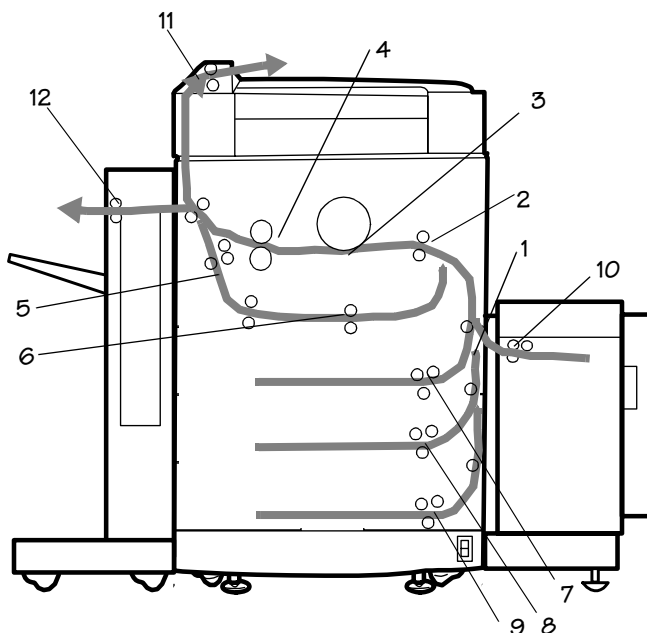


Print paper jams can occur in the following areas:



- |                           |                        |
|---------------------------|------------------------|
| 1 Feed Path (Area 1)      | 6 Duplex Unit (Area 6) |
| 2 Feed Path (Area 2)      | 7 Upper Tray           |
| 3 Drum Unit (Area 3)      | 8 Middle Tray          |
| 4 Fuser Unit (Area 4)     | 9 Lower Tray           |
| 5 Reversing Unit (Area 5) | 10 Ejection Unit       |

## Paper Jams



- |                           |                  |
|---------------------------|------------------|
| 1 Feed Path (Area 1)      | 7 Upper Tray     |
| 2 Feed Path (Area 2)      | 8 Middle Tray    |
| 3 Drum Unit (Area 3)      | 9 Lower Tray     |
| 4 Fuser Unit (Area 4)     | 10 LCIF          |
| 5 Reversing Unit (Area 5) | 11 Ejection Unit |
| 6 Duplex Unit (Area 6)    | 12 LCOS          |

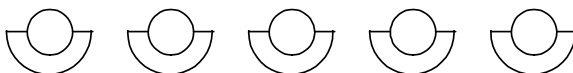
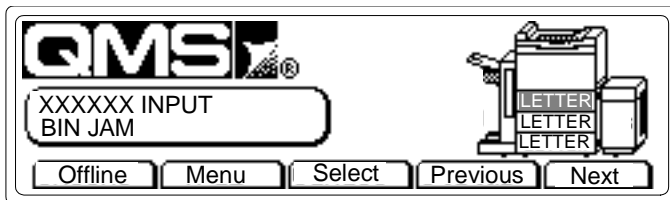
Check each of the indicated locations, and remove any jammed print paper. Jams can occur in more than one location at a time, so be sure to check all the indicated locations.

After checking for and removing paper from the areas indicated, try opening and closing one of the printer covers to clear the jam signal. If all the jammed paper has been removed, printing automatically restarts when the cover is closed. If printing does not restart or if the

printer jams again, make sure that no pieces of paper remain in the printer.

### Clearing Pick-Up Jams

When the printer tries to load a sheet of paper from one of the paper trays and encounters a pick up problem, the control panel displays:



XXXX= UPPER, MIDDLE, or LOWER

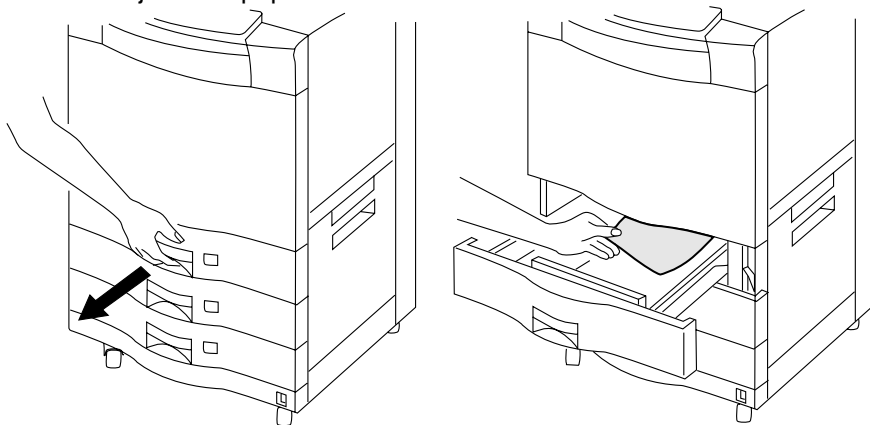
Follow this procedure to clear a paper jam from the input bin area.

- 1 **Open the indicated tray.**

## Paper Jams

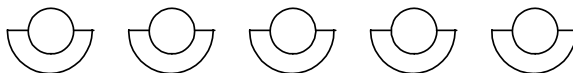
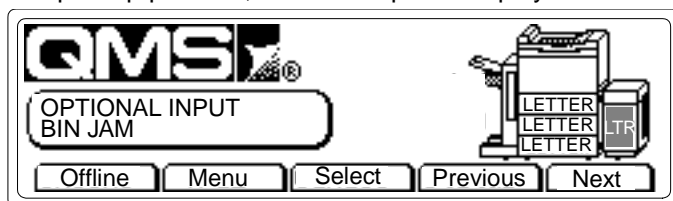
### 2 Pull out the jammed paper.

You may have to look very carefully inside the paper tray, particularly towards the upper right of the tray. Be careful not to tear the jammed paper.



## Clearing LCIF Pick-Up Jams

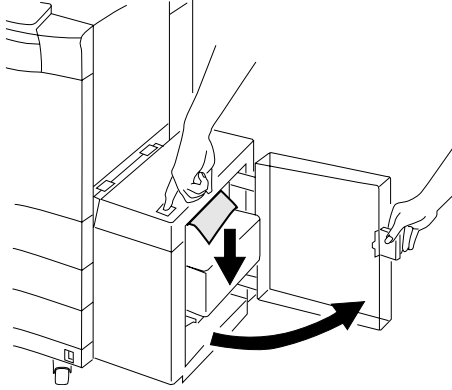
When the printer tries to load a sheet of paper from LCIF and encounters a pick up problem, the control panel displays:



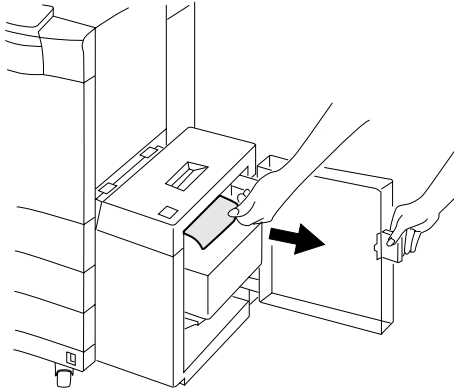
Follow this procedure to clear a paper jam from the LCIF area.

### 1 Open the LCIF tray (highlighted on the printer graphic).

- 2 Press the button on top to lower the paper stack.**

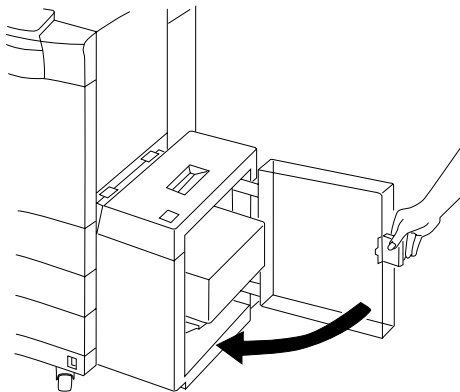


- 3 Pull out the jammed paper.**

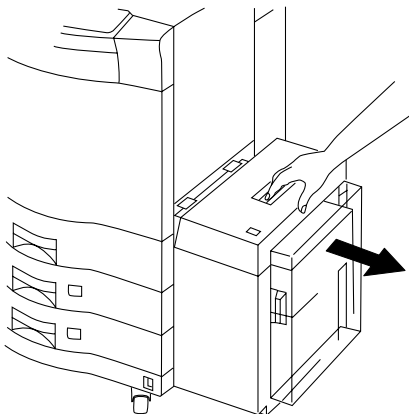


## Paper Jams

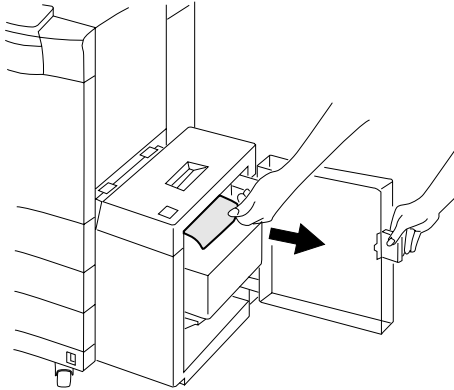
- 4 Close the LCIF door.



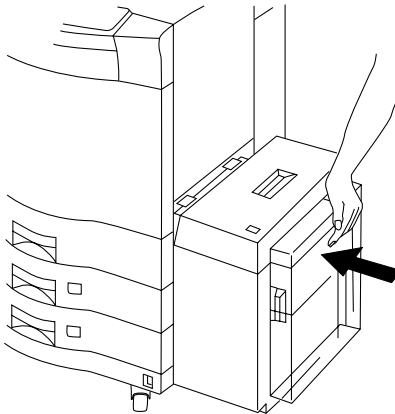
- 5 If you could not access the jammed paper inside the LCIF, then release the LCIF from the printer and pull it out.



- 6 If there is paper showing in the printer slot, remove it.



- 7 Push the LCIF back into its latched position.

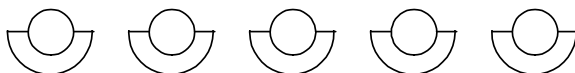
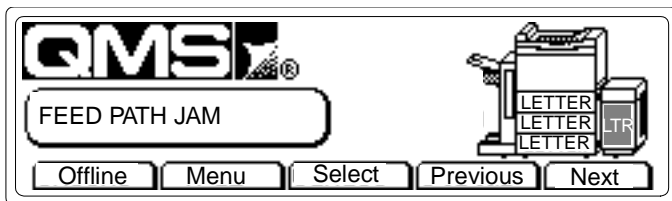


- » **Note:** *If the jam error message remains in the message window even though you have cleared the jam, open and close one of the main printer doors to clear the message.*

### Clearing a Feed Path Paper Loading Jam

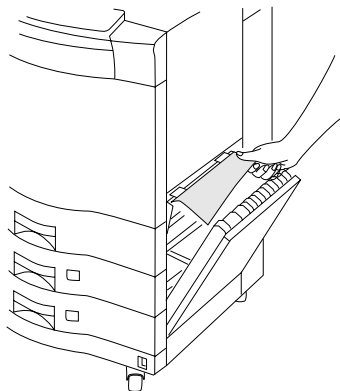
A feed path jam occurs between the trays or the LCIF and the drum unit.

When the printer tries to load a sheet of paper from the LCIF or the trays and the sheet jams, the control panel displays:



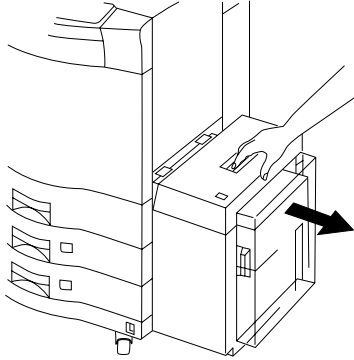
Follow this procedure to clear a paper jam from the LCIF area.

- 1 **Open the right-side cover.**
- 2 **Remove the jammed paper.**



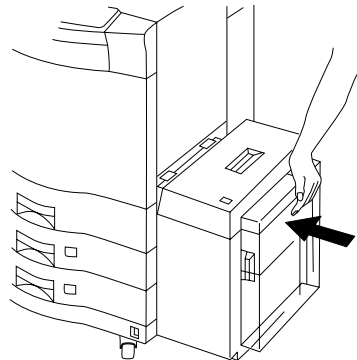
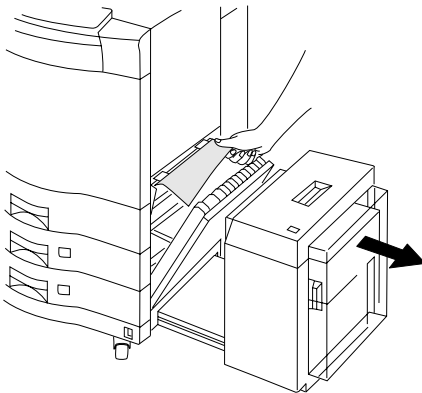


- 3 If you have an optional LCIF attached, unlatch the LCIF and pull it away from the printer.



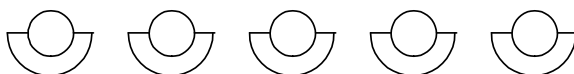
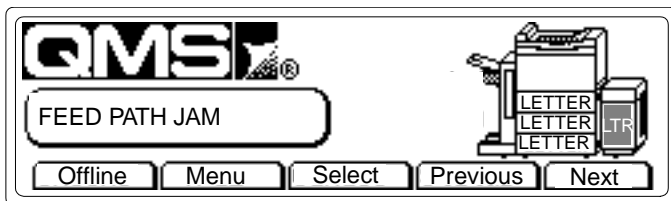
- 4 Open the right side cover and look for paper caught in the feed path.


- 5 Push the LCIF back until it locks into place.

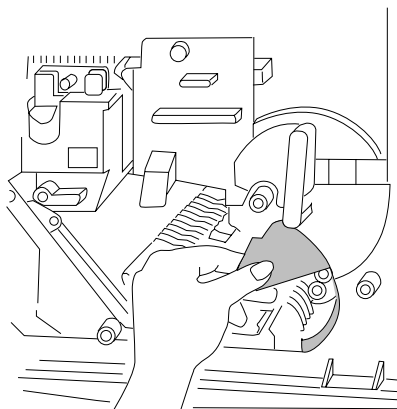
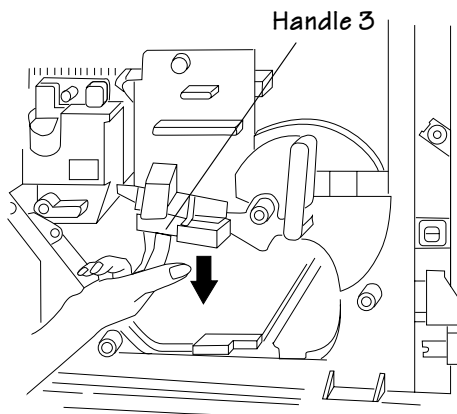


## Paper Jams

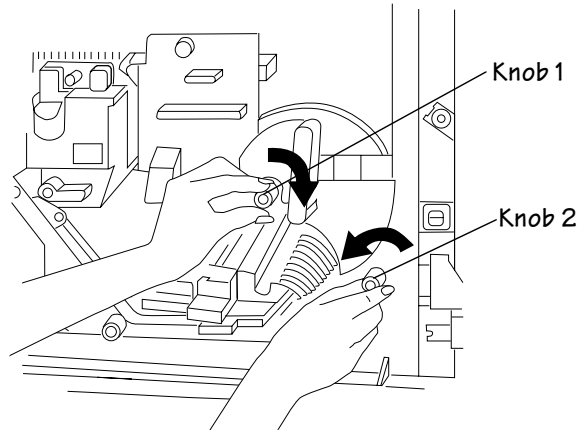
If the paper has been transported further into the printer the display might show



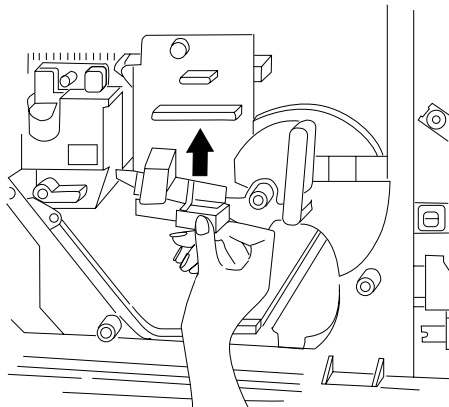
- 6 Open the front door of the printer. 
- 7 Gently pull out on handle 3 to lower the transfer assembly.
- 8 If you can see the paper jam, remove the jammed paper.



- 9** If the paper is not visible, turn knob 1 clockwise and knob 2 counterclockwise to move the paper into position for removal.

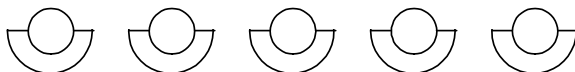
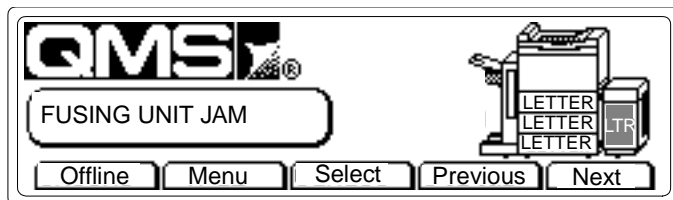



- 10** Lift the transfer assembly back up into its locked position.



### Clearing a Feed Path Jam in the Fuser Area

A feed path jam occurs between the drum unit and the fuser area can be cleared using the following procedure. The control panel displays:



Follow this procedure to clear a paper jam from the fuser area. 

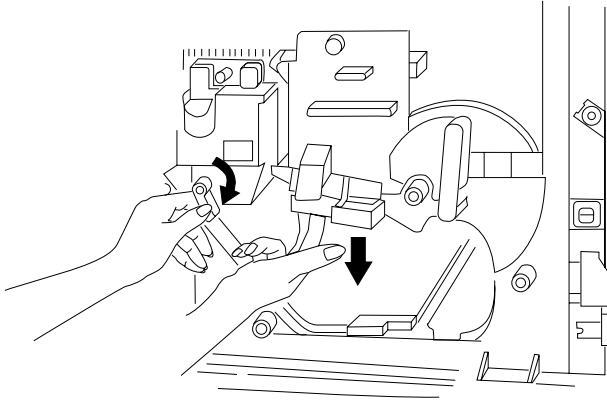



**WARNING:** *Be careful; the area around the fuser assembly is hot.*

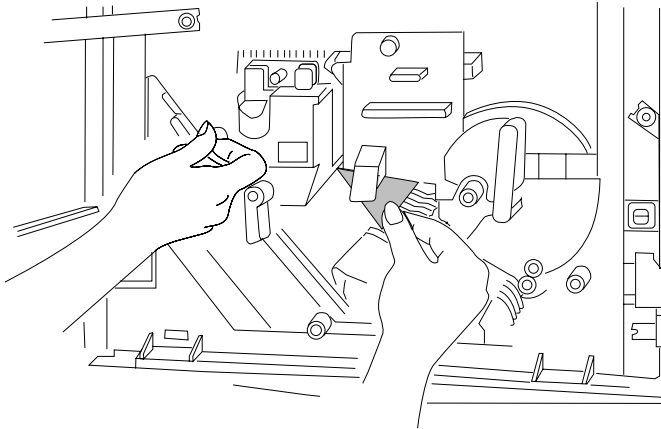
**ACHTUNG!** *Verletzungsgefahr! Bei Betrieb wird die Umgebung der Fixiereinheit heiß.*

- 1 Open the front door of the printer.
- 2 Lower the transfer assembly by gently pulling on handle 3.

- 3 Turn lever 4 clockwise (straight down) until stopped to relieve tension on the paper.

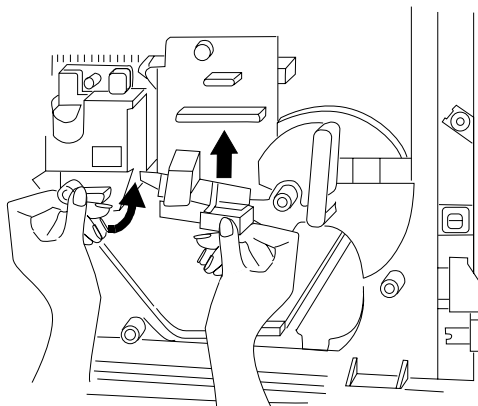


- 4 Look for the jammed paper on the right side of the fuser unit.
- 5 While pressing the decurler lever with your left hand, reach in and remove any jammed paper with your right hand. » 



## Paper Jams

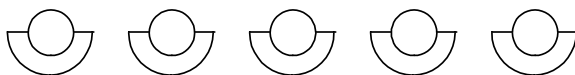
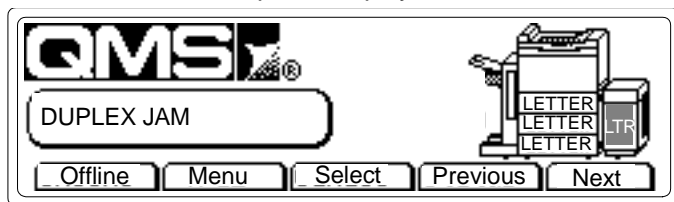
- 6 Lift the transfer assembly back to the locked position, turn lever 4 counterclockwise to lock it, and close the front door of the printer.



## Clearing a Duplex Paper Path Jam

A duplex paper path jam occurs in the areas along the duplex path and can be cleared using the following procedures.

In one area the control panel displays

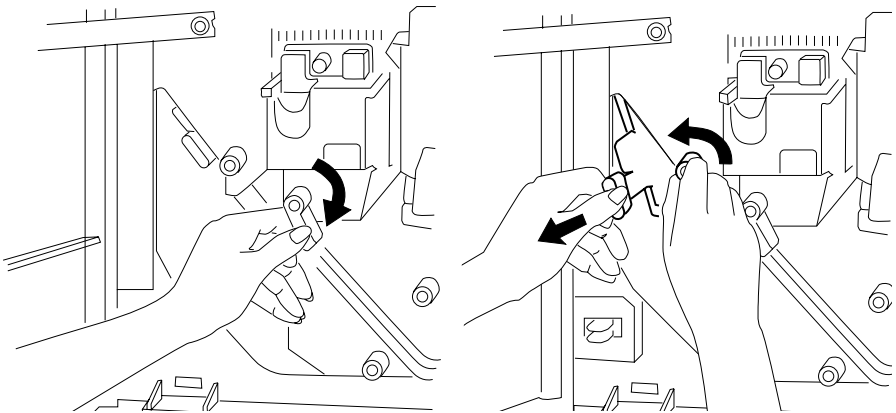




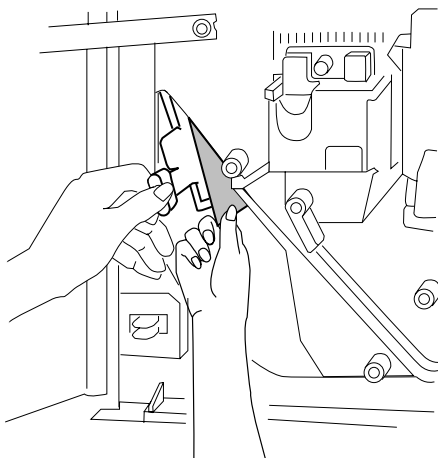
**WARNING:** *Be careful; the area around the fuser assembly is hot.*

**ACHTUNG!** *Verletzungsgefahr! Bei Betrieb wird die Umgebung der Fixiereinheit heiß.*

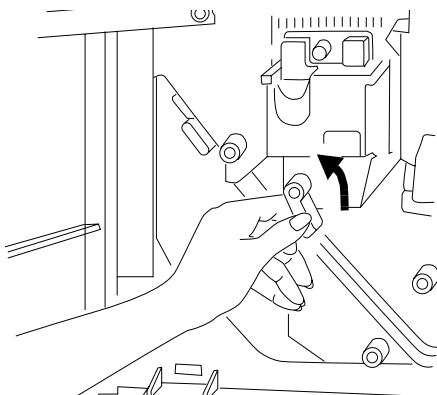
- 1 Open the front door of the printer.
- 2 Turn lever 4 clockwise (straight down) until stopped to relieve tension on the paper.
- 3 Push lever 5 downward and away from the fuser unit area.
- 4 If paper is not visible, turn the decurler roller knob counter-clockwise to move any jammed paper into view.



- 5 Remove the jammed paper.

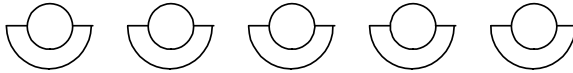
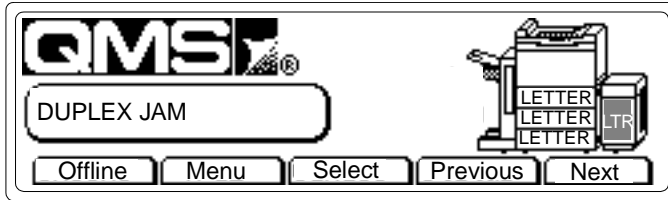


- 6 Turn lever 4 fully counterclockwise back to its closed position.

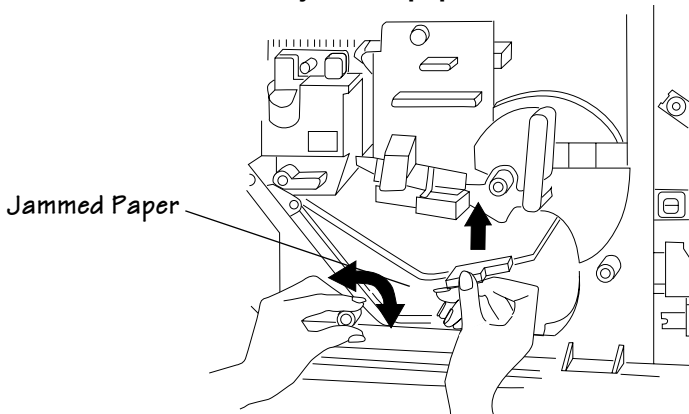




In another duplex area the control panel displays

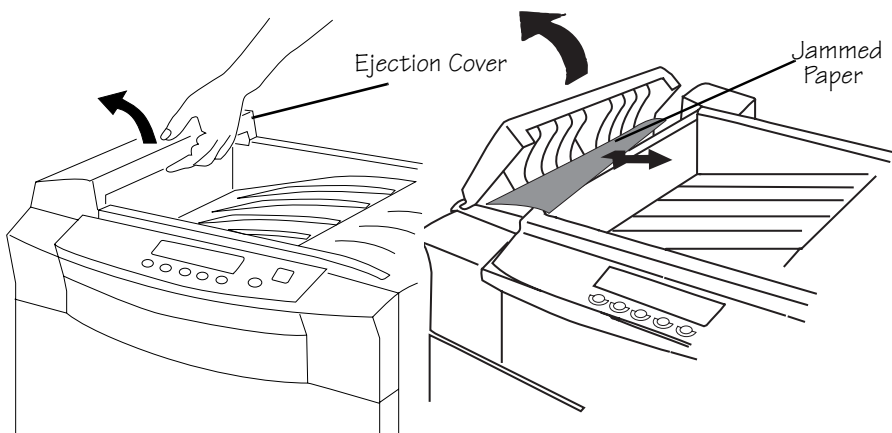


- 1 Open the front door of the printer.
- 2 Lift lever 6 while turning the duplex roller knob to move any paper into view.
- 3 Remove the jammed paper.



### Clearing a Paper Ejection Jam

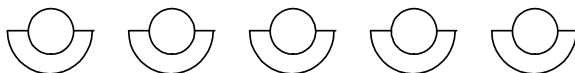
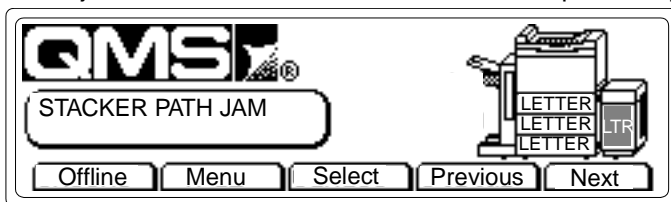
- 1 Open the paper ejection cover to the left and remove the jammed paper.



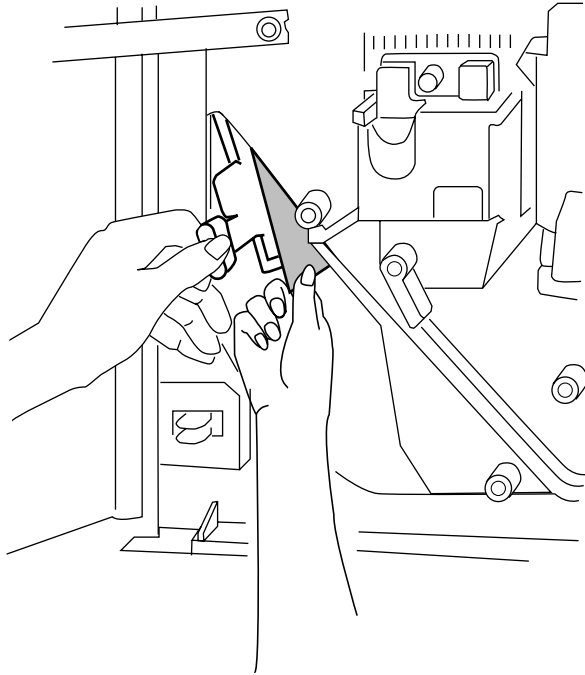
- 2 Close the paper ejection cover.

### Clearing a Stacker Jam on the 2000-Sheet LCOS Stacker

When a jam occurs in the LCOS area the control panel displays



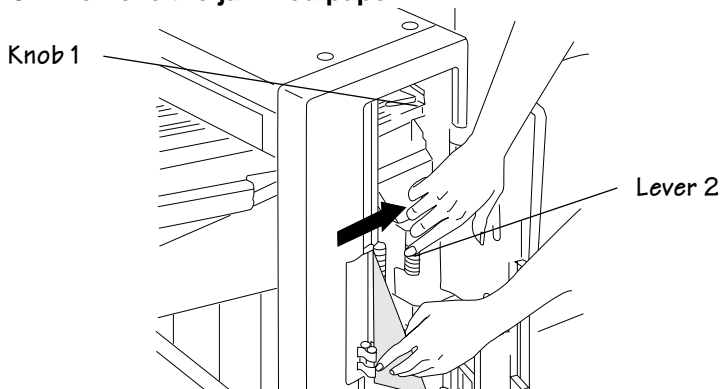
- 1 Open the front door of the printer and remove any jammed paper in the reversing area.



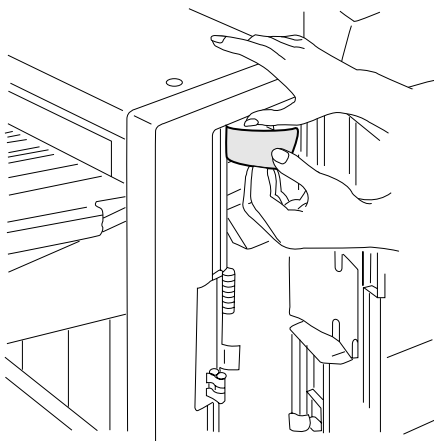
- 2 Open the door on the front of the stacker.
- 3 Turn knob 1 counterclockwise to move the jammed paper into view.
- 4 Pull lever 2 back and remove any jammed paper.

## Paper Jams

### 5 Remove the jammed paper.



### 6 Check for jammed paper near the top of the LCOS door.



### 7 Remove any paper you find.

### 8 Close the front cover.

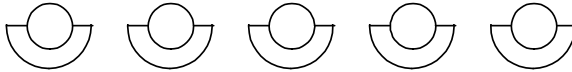
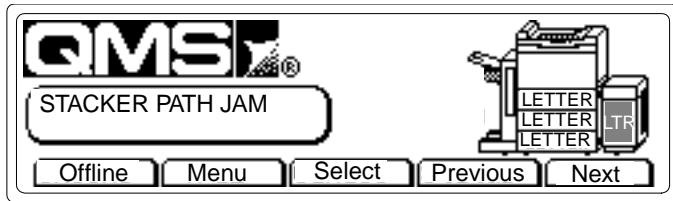
### 9 If jammed paper is still not visible, paper may be jammed between the LCOS and the printer. Separate the LCOS from the printer and check for jams.

### 10 Remove any paper you find.

### 11 Reconnect the LCOS and printer.

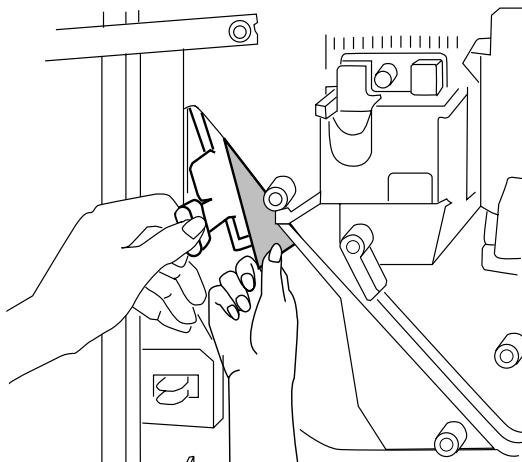
## Clearing a Paper Jam on the 3000-Sheet LCOS Stacker

If the 3000-sheet Large-Capacity Output Stacker has a paper jam, the control panel displays



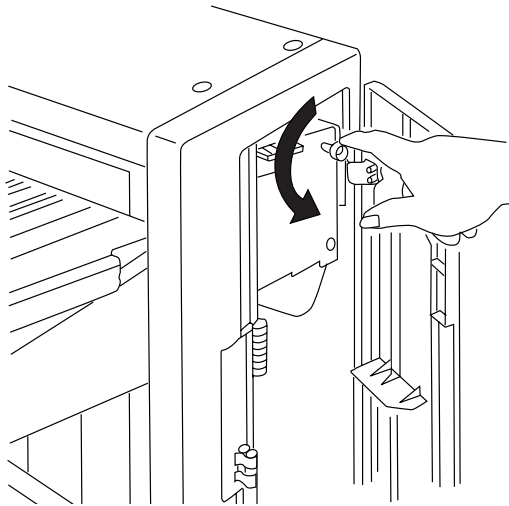
Use the following steps to clear a paper jam in the LCOS.

- 1 **Open the front door of the printer and remove any jammed paper in the reversing area.**

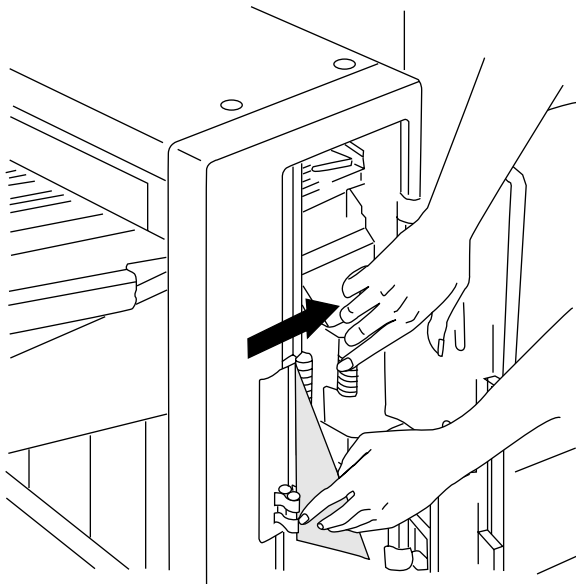


## Paper Jams

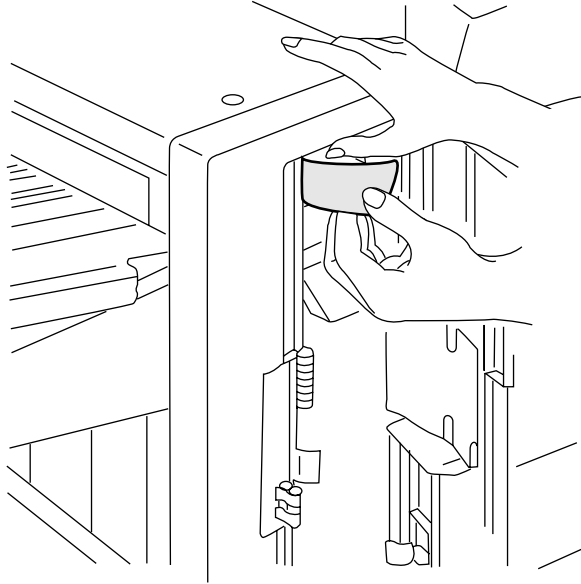
- 2 Open the LCOS door and locate knob 1.
- 3 Rotate the knob counterclockwise to move the paper from the LCOS input area to the lower section.



- 4 Pull back on lever 2 and remove any paper you find.



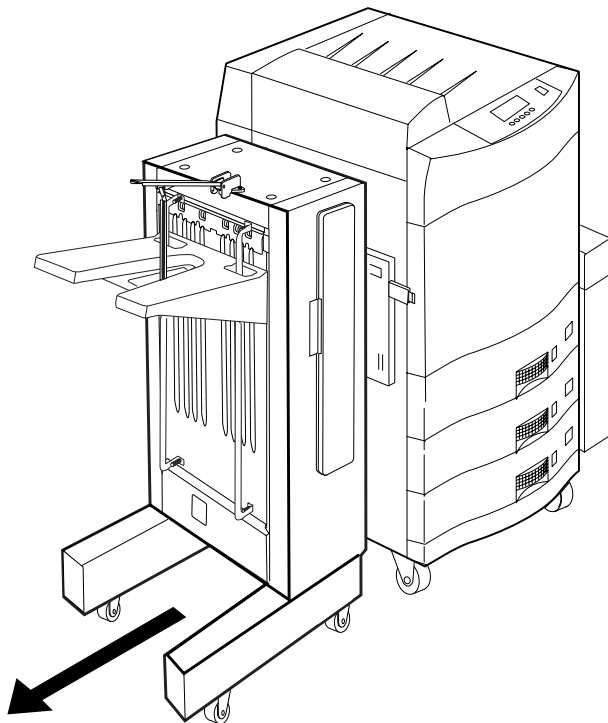
- 5 If the jammed paper is not visible, lift the LCOS lever 1 to see if any paper is jammed near the top of the LCOS.



- 6 Rotate knob 1 to move any paper into view.
  - 7 Remove any paper you find.
- » **Note:** When you check for jams, make sure you return the LCOS levers to their proper positions. Otherwise, more jams will occur.
- 8 Close front cover.

## Paper Jams

- 9 If jammed paper is still not visible, paper may be jammed between the LCOS and the printer. Separate the LCOS from the printer and check for jams.**
- a Pull the LCOS latch lever toward you, and move the LCOS as far as the stopper that connects the LCOS to the printer allows (about 1 inch).



- b Check for any paper jammed between the LCOS and the printer.

If no other paper jam messages appear on the printer's control panel, you're ready to reattach the LCOS and resume printing.

If the control panel shows another type of jam, search the area indicated.

## **10 Reconnect the LCOS and the printer.**

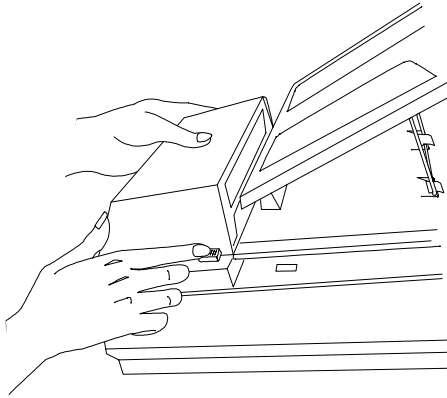


## **Clearing CrownCopy ADF Paper Jams**

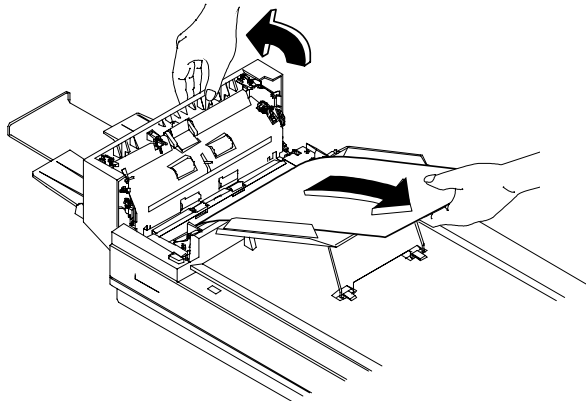
Use the following procedure to remove a paper jam in the automatic document feeder:

- 1 Push the button near the front left side of the scanner.**

The ADF module lifts a little.



- 2 Lift the right side of the ADF module as far as possible, and then slowly remove the jammed paper.**



- 3 Push the ADF module securely back into place.**





# 5

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## Advanced Printing Features

---

### **In This Chapter . . .**

- “High-Resolution Printing” on page 5-2
  - “Printing Duplex” on page 5-3
  - “Tray Chaining” on page 5-4
  - “Collating Output” on page 5-8
  - “Working with Status Pages” on page 5-10
  - “Cancelling/Ending Print Jobs” on page 5-11
-

# Introduction

This chapter describes changing print resolution, using high-resolution while duplexing, chaining paper trays, collating output, printing a status page, cancelling a print job, and ending a print job.

## High-Resolution Printing

The QMS 4060 Print System supports two print resolutions: 300x300, and 600x600 dpi (dots per inch). For printed pages that don't require optimum print quality, such as rough drafts, memos, or text-only pages without graphics (dependent on shading details), you may choose to set the printer at 300 dpi. For pages that demand high-quality output, especially those containing detailed graphics or varying background shades, you'll want to set the printer resolution to 600 dpi.

### Setting the Resolution

You can set the default resolution of your printer through the Administration/Engine/Def Resolution menu.

Menu	Administration/Engine/Def Resolution
Choices	300 dpi—300x300 dpi resolution. 600 dpi—600x600 dpi resolution.
Default	600 dpi

Your printer offers greatly improved print quality at 600 dpi. To take best advantage of these higher resolutions use

- The resident PostScript and PCL 5e typefaces
  - The software printer drivers designed for your printer
- » **Note:** *Whenever possible, set the print resolution through your application. If the print resolution can't be set through the application, set it through the printer control panel, through the printer driver, or through a QMS Document Option Command.*

# Printing Duplex

The QMS 4060 Print System allows you to print on both sides of the page

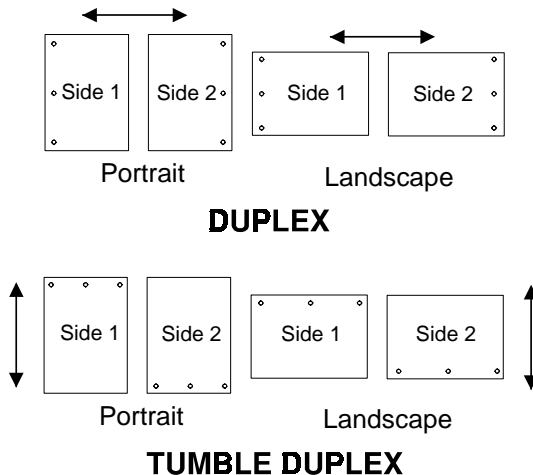
- From any of the trays on any supported size paper (17—36 lbs/ 64—139 g/m<sup>2</sup>).

---

▲ **Caution:** *Make sure duplex printing is turned off when printing labels and transparencies.*

---

There are two types of two-sided printing: duplex and tumble duplex. This illustration shows the difference between these two types, using three-hole-punched paper as an example.



## Automatic via a Paper Tray

Once the duplex printing option is installed on your printer, the Duplex option appears in the Operator Control menu. See chapter 4, “Printer Configuration,” in the *Reference* guide for more information on this option. Use your application to choose duplexing on a per job basis or the control panel to set duplexing as the default for all print jobs.

### Duplex Printing Tips

- Select paper with high opacity for duplex printing. Opacity refers to how effectively paper blocks out what is written on the opposite side of the page. Paper with high opacity has low transparency. If paper has low opacity (high transparency), then the printed data from one side of the page will show through to the other side. For best results, print a small quantity to make sure the opacity is acceptable.
- For duplex printing on pre-printed letterheads, place the sheet face-down with the bottom of the page inserted first. In the duplex mode, the printer prints side two first, then side one.

## Tray Chaining

The QMS 4060 Print System comes standard with three 500-sheet internal trays (also known as input bins) for a total paper capacity of approximately 1500 sheets before a reload is necessary. You may choose to have the printer automatically draw from another tray when the current tray empties. Here are four ways to chain trays:

- Your application may include a specific procedure for using a multi-tray printer. Check your documentation.
- The QMS Level 2 Windows printer driver allows you to select alternate trays for chaining.
- On a network, use CrownAdmin via a remote console to select the paper trays and/or the paper source.
- Configure the printer through its control panel. The following section has more information.

## Using the Configuration Menu

An option in the Operator Control menu allows you to “chain” inputbins (trays) so that when the first inputbin empties, the printer will automatically draw paper from another inputbin with either the same or any size and type of paper (dependent on the choice selected).

<b>Menu</b>	Operator Control/Chain Inputbins
<b>Choices</b>	<p>On—Switch to the next inputbin with the same size and type of paper when the default inputbin is empty.</p> <p>» <b>Note:</b> <i>Make sure the three trays use the same size paper.</i></p> <p>Off—Don’t switch inputbins; use only the default inputbin.</p> <p>On Any—Switch to the next inputbin with similar size of paper when the default inputbin is empty.</p>
<b>Default</b>	On
<b>Notes</b>	<p>Use the Operator Control/Inputbin menu to set the default inputbin. Make sure that the three inputbins use the same size paper.</p> <p>When chaining “on any” and duplexing, the printer will chain to a similar size paper (for example, letter to A4) but not to the large paper sizes—11"x17" and A3. This is because these large sizes are fed through the printer in a different printing order than the smaller sizes. The custom tray chaining on any for large format paper will not occur unless there is another custom tray with the same paper size or a standard tray with A3 or 11"x17" paper.</p> <p>When these restrictions occur on chaining on any, the printer will prompt you to add the default paper size to any tray.</p>

### Setting Up Chaining Options

Options in the Operator Control menu allow you to configure whether or not an inputbin will be available for chaining from another inputbin.

#### Large-Capacity Input Feeder (LCIF)

<b>Menu</b>	Operator Control/Chain Option/Optional
<b>Choices</b>	On—Allow media to be pulled from the large-capacity input tray.  Off—Don't allow media to be pulled from the large-capacity input tray.
<b>Default</b>	On
<b>Notes</b>	The Operator Control/Chain Inputbins menu must be set to On before the setting in this menu takes effect.

#### Lower Inputbin

<b>Menu</b>	Operator Control/Chain Option/Lower
<b>Choices</b>	On—Allow media to be pulled from the lower inputbin if necessary.  Off—Don't allow media to be pulled from the lower inputbin.
<b>Default</b>	On
<b>Notes</b>	The Operator Control/Chain Inputbins menu must be set to On before the setting in this menu takes effect.



### Middle Inputbin

<b>Menu</b>	Operator Control/Chain Option/Middle
<b>Choices</b>	On—Allow media to be pulled from the middle inputbin if necessary.  Off—Don't allow media to be pulled from the middle inputbin.
<b>Default</b>	On
<b>Notes</b>	The Operator Control/Chain Inputbins menu must be set to On before the setting in this menu takes effect.

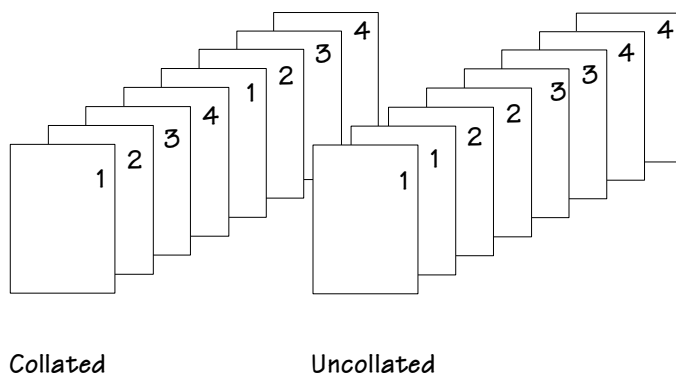
### Upper Inputbin

<b>Menu</b>	Operator Control/Chain Option/Upper
<b>Choices</b>	On—Allow media to be pulled from the upper inputbin if necessary.  Off—Don't allow media to be pulled from the upper inputbin.
<b>Default</b>	On
<b>Notes</b>	The Operator Control/Chain Inputbins menu must be set to On before the setting in this menu takes effect.

# Collating Output

Collation is the printing of sets of multiple copies of a document in numeric order. The QMS 4060 Print System is collation capable. It can deliver multiple copies of your document in collated or uncollated order to the output tray.

The following illustration shows the collated and uncollated stacking for two copies of a four-page file.



To greatly improve collation performance, which allows you to collate longer and more complex print jobs on the QMS 4060 Print system, you can do one of the following:

- Add more printer memory, which automatically increases the Display List client's memory setting. See chapter 1, "Memory and Storage," of the *Options* manual for information on installing additional memory.
- Take any memory, if available and not being used by other clients, and add it to Administration/Memory/K Mem Display.



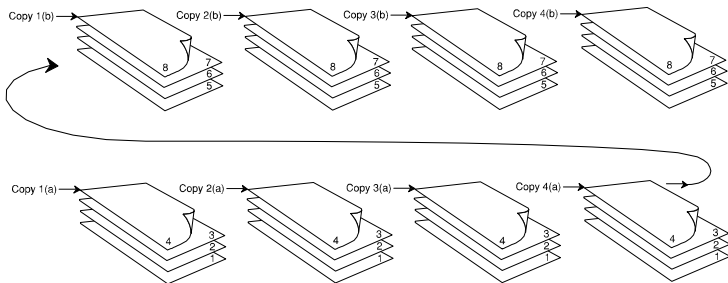
**Caution:** *This option should be used only by individuals who are familiar with adjusting memory settings. Incorrect use of this option could cause your system to operate incorrectly.*

- Turn collation On in the configuration menu.
- » **Note:** *Collating through your application is more time consuming than collating through the printer. The application sends the complete job the requested number of times rather than sending it once and holding data in printer memory.*

For a multiple-copy document with collation On, there must be enough Display List memory to hold the display list blocks for all pages in the collation range. (See the “Display List” memory section in the *Reference*, for detailed information on display list blocks.) If there is not enough memory, then a chunk collation boundary is forced after the last compiled page of the collation range.

### Chunk Collation

This mechanism of introducing a forced boundary is known as chunk collation. Chunk collation breaks a document into several smaller, more manageable sets by gathering the pages into “chunks.” When each set is printed, it frees up memory resources to compile subsequent pages of the document. For example, in the following illustration, copies “a” and “b” of each set must be manually combined to create one collated document. The order of printing is copy 1(a), copy 2(a), copy 3(a), copy 4(a), copy 1(b), copy 2(b), copy 3(b), and copy 4(b).



- » **Note:** *The order of output on your QMS 4060 Print System is from first to last page in both the stacker and face-down output trays. With 32 MB memory, a complex multiple page document sent via the face-up output tray may be chunk collated to ensure that the order of pages is first to last.*

**Advantages of Collation**

The main advantages of collation are user convenience and the time savings derived from not having to separate and sort individual copies of a print job. Each copy of the print job exists as a whole set unless chunk collation has occurred.

If chunk collation does occur, it may be best to use a header and trailer page to determine the beginning and end of each collation sequence. (See chapter 4, “Printer Configuration,” of the *Reference* manual for information on using header and trailer pages.)

**Working with Status Pages**

Printing a status page is a two-step procedure: Identify the type of status page you want to print, and then print it.

**Identifying a Status Page Type**

- Two types of status pages are available:

<b>Menu</b>	Administration/Special Pages/Status Page Type
<b>Choices</b>	Standard, Advanced
<b>Default</b>	Standard

**Standard**

This one-page document provides

- Printer identification (the printer’s name, firmware information, and number of sheets and faces printed)
- Printer settings (printer set-up options for paper handling)
- Current memory configuration (printer memory settings)
- Timeouts (printer timeout settings)
- Communication settings and input buffer sizes (host-printer communication settings, including spooling memory sizes)
- Tickmarks in the lower-left corner for image alignment

## **Advanced**

This document, which can be five or more pages long, provides

- All the information from the standard status page
- The configuration menu settings
- A full list of fonts and downloaded emulations

## **Printing a Status Page**

After you have identified the type of status page to print, send it to the printer in one of the following ways:

- Press the Status button on the control panel
- Use Local Console built into the printer or Remote Console from the network CrownNet interface.

# **Cancelling/Ending Print Jobs**

The Cancel button has three functions:

- It cancels the oldest print job in the system.
- It cancels all jobs with a printing, interpreting, terminating, or spooled status.
- It allows you to send an end-of-job indicator to a currently compiling print job waiting on incoming data.

You don't have to press the Online button before using the Cancel button. There are no equivalent functions in the configuration menu.

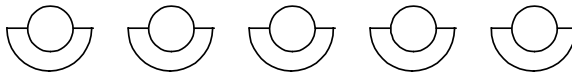
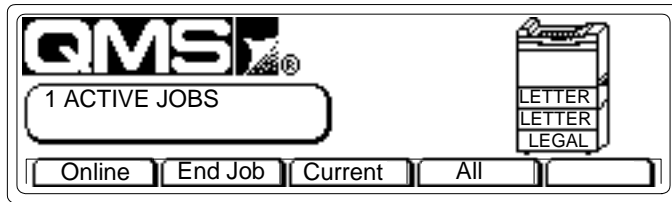
» **Note:** *Use the Cancel button to cancel or end print jobs.*

## **Cancelling a Print Job**

Press the control panel buttons in the order shown in the following instructions to cancel a print job.

### **1 Press the Cancel button.**

The control panel shows



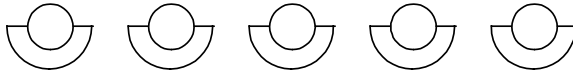
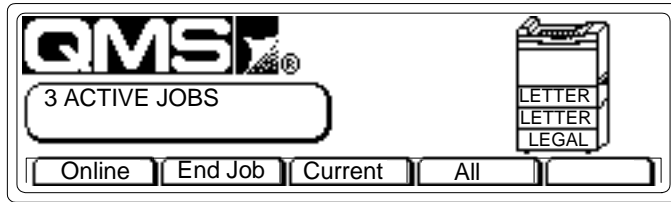
### **2 Press the Current button to cancel your job.**

## **Cancelling All Print Jobs**

Press the control panel buttons in the order shown in the following instructions to cancel all print jobs.

### **1 Press the Cancel button.**

The control panel shows:



### **2 Press the All button to cancel all your print jobs.**

---

▲ **Caution:** *Keep in mind that **all** jobs with a printing, interpreting, or terminating status are cancelled.*

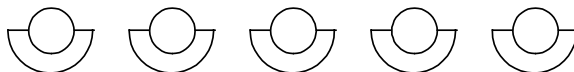
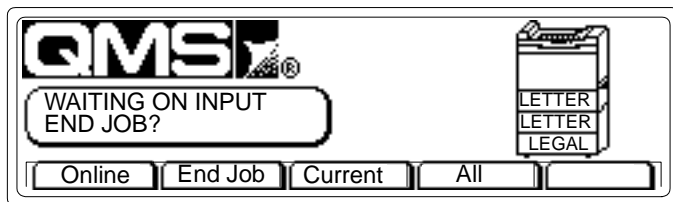
---

## **Ending a Print Job**

- » **Note:** *This procedure does not end print jobs that are still receiving data. Its only purpose is to provide an end-of-job indicator for a print job that does not have one. You can identify an end-of-job indicator in the Administration/Communications/Parallel and Administration/Communications/Serial menu. (See chapter 4, "Printer Configuration," in the Reference for more information). Also see chapter 5, "Additional Technical Information," in the Reference for a complete discussion of End Job Mode.*

### **1 Press the Cancel button.**

The control panel shows:



- 2 Press the End Job button to place an end of job marker on the job that is waiting for more information from the computer.**





# 6

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## Local and Remote Console

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### In This Chapter . . .

- “About This Chapter” on page 6-2
  - “Connecting Local Console” on page 6-3
  - “Starting a Remote Console Session” on page 6-4
  - “Message Display and Console Modes” on page 6-9
  - “Using Remote Console” on page 6-13
  - “Console Commands” on page 6-14
-

## About This Chapter

This chapter provides information on the features and capabilities of the remote console. Operation of the local console port on your QMS 4060 will be very similar. You should be able to follow the same procedures when using local console. This chapter describes how to start a remote console session and explains the remote console modes and commands. See your CrownNet System Administrator's manual for information on using remote console with CrownAdmin 3 software utilities.

## About Crown Consoles

The console feature on QMS Crown printers allows you to access information about your printer or configure printer settings.

Your QMS 4060 supports two types of consoles:

- Local console (through a dedicated serial port)
- Remote console (through a network connection)

A console allows you to communicate with your printer through a terminal connected to the local console serial connection or through a network computer connected to the printer's network connection.

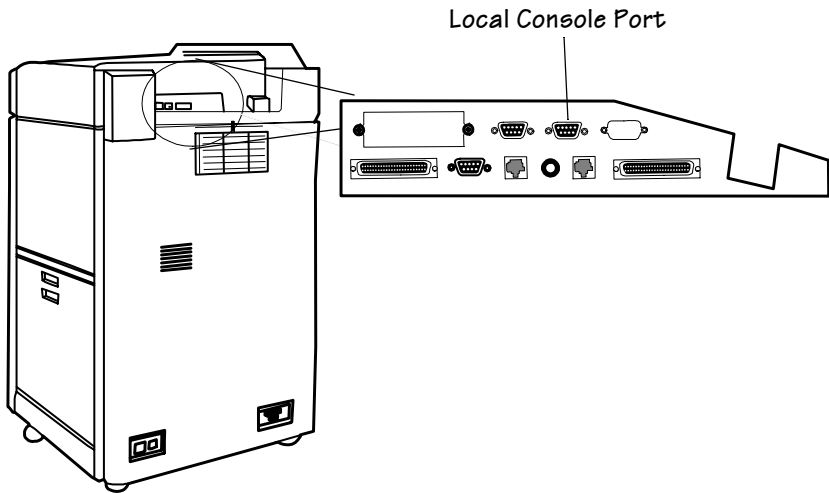
The console is a line-oriented display of 24 lines of 80 characters that provides printer status information, such as printer state, fonts installed, and job status.

The QMS 4060 supports the remote console feature through the CrownNet interface and CrownAdmin software utility, through a DECnet-TCP/IP interface and a Telnet session, or through a DECnet-TCP/IP interface and VMS.

The QMS 4060 also supports a local console connected directly to the printer. The commands and information available with the local console operate like the remote console available over the network.

# Connecting Local Console

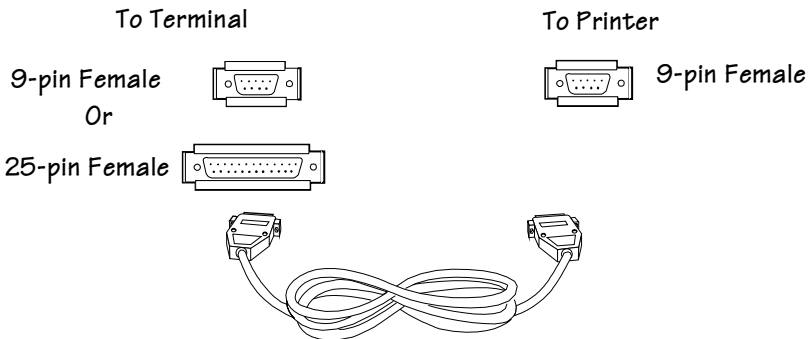
The local console port on your QMS 4060 uses an RS-232C interface connected between the interface panel on the back of the printer and a common terminal.



## Setting Up Local Console

Use this procedure to connect the local console port.

- 1 **Connect a modem-based cable with a nine-pin female connector to the printer interface panel.**



## Starting a Remote Console Session

- » **Note:** *If you are unsure about whether your cable is a modem-based cable, then try to connect a null modem adapter to your cable to test the local console port.*
- 2 Connect the other end of the cable to the terminal.**
- 3 Set up your terminal to operate at 9600 baud, no parity, 8 data bits, and 1 stop bit.**
- 4 Turn on the terminal.**
- 5 Turn on the printer.**

You should see status messages as the printer begins its normal initialization.

# Starting a Remote Console Session

Depending on your system and your network interface, you have one of three ways to start a remote console session.

- If you have a CrownNet interface card, see the appropriate chapter of the *QMS CrownNet Interface System Administrator's Manual*, which is included with your CrownNet shipment.
- If you are not using CrownNet and are in a UNIX environment, use the Telnet protocol described in this manual.
- » **Note:** *Whether you use a VMS host or a TCP/IP host with Telnet commands, remote console works the same once you are in the session.*

## Starting a Telnet Session

### With No Password Set

- » **Note:** *Passwords can be set or changed only through the printer's control panel.*

## Starting a Remote Console Session

To start a remote console session when no operator password is set, do the following:

Use the **telnet** command to connect to the printer. At the system prompt, type

```
telnet printername↵
```

replacing *printername* with the name of the printer you are using. (This name is assigned by the system administrator in the ETC/HOSTS file.) Once the console session is opened, you can view the settings of the QMS *printername*.

When opening a console session, messages like `Trying...` and `Connected...` appear on the screen to show progress. When the connection is complete, a prompt with your QMS printer name and the current printer status appears. The messages you may see when opening a console session vary according to your system protocol.

For example, if you are using a QMS 4060 Print System, the screen looks similar to the following:

```
[b@smith, 35] telnet 4060↵
Trying 161.33.128.183 ...
Connected to 4060.
Escape character is '^]'.

QMS Console Manager
QMS 4060 Print System ->QMS 4060 Print System ->Idle
QMS 4060 Print System ->
```

### With a Password Set

- » **Note:** *Passwords can be set or changed only through the printer's control panel. See your printer user's guide for more information on passwords.*

If the operator password is enabled, you are prompted to enter it before you can use remote console. The password is case-sensitive and can have up to 16 characters. If you enter an invalid password, the connection to remote console closes automatically.

This example shows how a session is closed automatically when the wrong password is used:

## Starting a Remote Console Session

- » **Note:** *If you are at a local console, the password does not appear on the screen as you type it.*

```
[b@venus, 40] telnet 4060␣
Trying 161.33.128.183 ...
Connected to 4060.
Escape character is '^]'.

QMS Console Manager
QMS 4060 Print System ->
Enter Password :A0012␣
*** Invalid password ***
Connection closed by foreign host.
```

This is an example of how a session begins with a correct password:

```
[b@venus, 41] telnet 4060␣
Trying 161.33.128.183 ...
Connected to 4060.
Escape character is '^]'.

QMS Console Manager
QMS 4060 Print System ->
Enter Password :A100␣
QMS 4060 Print System ->Idle
QMS 4060 Print System ->
```

You have now entered a remote console session. Now see “Console Commands” on page 6-14 for information on using remote console.

## If You Cannot Start a Telnet Session

There are two situations where an attempt to start a Telnet session may fail:

- 1 **The maximum number of remote console sessions that can be open at the same time has been reached.**

The system allows a maximum number of remote console sessions to be open at the same time. If this number is reached, the system rejects further requests for new console sessions. For most systems, the maximum number is nine, including local consoles where applicable.

Wait until one of the nine sessions is available and try again.

**2 The system is busy.**

If a positive acknowledgment to a request for opening a remote console session is not received by the daughterboard within a given time limit (which depends on the daughterboard and communication protocol being used), the daughterboard cancels the request. This may occur when the system is very busy.

Try again when the system is not busy.

## **Starting a DECnet Session**

To use remote console on a DECnet setup, do the following:

- 1 Have your system administrator install the QMS PS Executive for VMS on your system.**
- 2 Use the VMS utilities to connect to the printer.**

With your system running, go to the VMS prompt. Then, type the following:

```
RUN SYS$SYSTEM:QMS$PSEXEC,↓
```

The first screen in PS Executive prompts you for the nodename of the printer.

```
$RUN SYS$SYSTEM:PSEXEC  
What is the QMS printer nodename->
```

- 3 Enter the nodename for the printer whose settings you want to view.**

This name was assigned to the printer by the system administrator during client software installation. If you do not know the node-name, ask your administrator or use the method appropriate to your environment.

- In a Phase IV environment, type

```
$ MC NCP SHOW KNOWN NODES,↓
```

This command lists your accessible nodes.

## Starting a Remote Console Session

- In a Phase V environment, if you used the local name space configuration when setting up the printer originally, check the text file `sys$sysroot:[sysexe]decnet_loc_node_definitions.txt`.
- In a Phase V environment, if you used the distributed name space configuration when setting up the printer originally, check with your system administrator for the nodename.

You can view the settings of only one QMS printer at a time. If you have other printers connected to the client, you must exit from PS Executive before viewing others.

Once you enter the nodename, the following PS Executive Main menu appears:

### MAIN MENU

```
Start Remote Console Session
Show Printer Counters
Show Printer Location
Exit PS Executive
Use arrow keys and <RETURN> to select
```

- » **Note:** *If you accidentally enter an invalid nodename or one that is valid but not for a printer (such as another VAX node), various messages or prompts appear depending on what was entered. Until you enter a correct nodename, you cannot open PS Executive to use Remote Console.*

#### 4 Select Start Remote Console Session at the top of the screen.

A Remote Console Session screen similar to the following appears:

### REMOTE CONSOLE SESSION

```
QMS Console Manager
QMS 4060 Print System->QMS 4060 Print System->Idle
QMS 4060 Print System->
```

When the connection to the printer is complete, a prompt with your printer name and the current printer status, such as `Idle` or `Spooling`, appears. In this example, a QMS 4060 Print System is used. The status message, `Idle`, is the same as the display in the printer's message window.



You are now ready to use remote console (see “Using Remote Console” on page 6-13).

- » **Note:** *If the operator password for your QMS printer is enabled, you are prompted to enter it before you can use remote console. If you enter an invalid password, the connection to remote console closes automatically. Passwords can only be set or changed through the printer's control panel. See your printer user's guide for more information on passwords. Also, if you are at a local console, the password does not appear on the screen as you type it.*

# Message Display and Console Modes

The console can operate in several modes and can either have status displayed or not displayed to the screen. The following sections describe these modes.

## Local and Remote Consoles

The console is a simple, line-oriented display of 24 lines of 80 characters. To list the available console commands, type ? on the console keyboard.

## Message Display Mode

The message display mode can be set to either silent or normal. The default for displaying status on a local console is normal, and the default for a remote console is silent. When the message display mode is enabled and set to normal, conditions that require user intervention appear on a local or remote console. The TCP/IP Accounting/Reverse Channel messages (if available) are seen in normal mode, but not in silent mode.

## Message Display and Console Modes

For example, status messages may indicate that paper is low, output bins are full, or a paper jam has occurred. Status messages are displayed each time the user presses the Enter key to ensure that they do not scroll off the screen. When the problem is cleared, the following message displays:

Printer Ready

The printer reports any changes of the printer's status to a console. These changes include the following:

### 1 Changes of printer status:

- Starting a new job.
- Paper jam, low toner, paper out.
- System is idle or off line.

### 2 Error messages generated when printing a document.

You can choose to allow or disallow these messages to be displayed on the console by setting the message display mode to silent or normal with the commands **silent** and **normal**:

#### ■ **silent**

Set the console to silent mode. No message is displayed. In silent mode, pressing Enter causes any outstanding message (like paper jam or low toner) to be echoed to the screen.

#### ■ **normal**

Set the console to normal mode to display all messages.

With message display on, if a remote console session is active while a job is active on the printer, the console screen displays

```
QMS 4060 Print System->  
QMS 4060 Print System->Idle  
QMS 4060 Print System->Starting job 0001  
[Owner: Smith Name: mickey.ps]  
QMS 4060 Print System->Input Idle Printing
```

## **Console Mode**

System users and the system administrator can use the console for different purposes. System users can use the console to check print job status, cancel print jobs, or check certain printer configuration settings. (See “User/Offline Mode Commands” on page 6-14 for a list of commands available to users.) The system administrator can use the console more extensively for printer configuration and file system management. (See “Admin Mode Commands” on page 6-16 for a list of the commands available to the administrator.

The console can operate in one of the following modes. The console prompt indicates what mode the console is operating in.

### ■ **User mode**

This is the initial mode when a console session is opened. It is indicated with the user prompt:

```
QMS 4060 Print System->
```

### ■ **Offline mode**

Use the **offline** command to put the printer off line for service, like adding paper or toner. It is indicated with the offline prompt:

```
offline->
```

- » **Note:** *The console's offline mode does not allow you to access the configuration menus. The console's admin mode, like the printer control panel's offline mode, allows system administrators to access the configuration menus to change the printer configuration.*

## Message Display and Console Modes

### ■ Admin mode

Administrators can use the **admin** command to take the printer off line and enter the admin mode to configure the printer. Only one console session can be in admin mode at a time. This mode is indicated with the admin prompt:

```
admin->
```

If the administrator password is enabled, you are prompted to enter it before you can access admin mode. Usually this password is set by the system administrator through the printer control panel using a security card or a security disk, depending on your system. If you enter an invalid password, an

```
***Invalid password ***
```

message displays, and then the remote console prompt displays.

If the printer is idle when you enter the admin mode, the printer is automatically taken off line and the prompt changes to

```
offline->
```

### ■ Blocked mode

A console is in blocked mode when the administrator or another user is in admin mode or offline mode, or when the printer is put in offline mode from the printer control panel. It is indicated with the following:

```
System Offline  
offline->
```

The current mode of the console determines the type of command you can execute. For a list of commands allowed in admin, user, offline, and blocked modes, type `help` or the shorthand version, `?.` See “Console Commands” on page 6-14 for more information.

## Commands for Switching Among Console Modes

Switch from Mode	Switch to Mode		
	User	Offline	Admin
User	N/A	offline	admin
Offline	online	N/A	admin
Admin	exit	N/A	N/A

- » **Note:** A console in blocked mode returns to user mode when the system is on line. See “User/Offline Mode Commands” on page 6-14 for more specific information on each of these commands.

# Using Remote Console

Whether you use CrownAdmin 3 or a TCP/IP host with Telnet commands, Remote Console works the same once you are in the session. Depending upon how the system administrator sets up access privileges, password security, and disk drives, some or all of the commands in the “Remote Console Commands” section may be available for you to use.

- » **Note:** Options with an *n* parameter allow you to specify a job number. For example, if you enter **cancel** without the parameter, all jobs in the queue are canceled. To cancel just one job, replace the *n* with the job number.

Also, the following commands are available in the admin mode only if the printer you are using has a disk drive: *cd*, *copy*, *cp*, *del*, *rem*, *format*, *ls*, *dir*, *pwd*, *rename*, and *mv*.

# Console Commands

The following sections describe the Remote and Local Console commands. Some commands have a shorthand version. For example, **?** is shorthand for the **help** command. In the descriptions in the following section, shorthand commands are shown in parentheses: (?). The console displays 24 lines of 80 characters. The commands displayed depend on your remote console mode of operation.

## User/Offline Mode Commands

In the default user mode and the offline mode, only a subset of the console commands is available. Commands accessible from user and offline modes are shown in the following table:

User/Offline Mode Commands	
<b>jobs <i>n</i></b>	Display job queue (or details of specific job <i>n</i> ).
<b>fonts</b>	List available fonts.
<b>cancel <i>n</i></b>	Cancel job in progress (or specific job <i>n</i> ).
<b>printsetup</b>	Print status page(s).
<b>offline</b>	Take printer off line. (Not available in offline mode.)
<b>admin</b>	Enter console administrative mode, if you have administrative privileges.
<b>help (?)</b>	Display help menu.
<b>languages</b>	Display the emulation selection menu.
<b>who</b>	Display a list of who is logged into the console server.
<b>quit</b>	Quit the console session.
<b>normal</b>	Enable error/status reporting.
<b>silent</b>	Disable error/status reporting.
<b>priority <i>j p</i></b>	Change job <i>j</i> 's printing priority to priority number <i>p</i> .
<b>order <i>j1 j2</i></b>	Print job number <i>j1</i> before job number <i>j2</i> .
<b>next <i>n</i></b>	Print job number <i>n</i> next.

<b>online</b>	Put printer on line. (Not available in user mode.)
<b>time</b>	Display the current date and time.

## **Blocked Mode Commands**

In the blocked mode, only a subset of the user commands is available. Commands accessible from blocked mode are shown in the following table:

<b>Blocked Mode Commands</b>	
<b>jobs <i>n</i></b>	Display job queue (or details of specific job <i>n</i> ).
<b>fonts</b>	List available fonts.
<b>cancel <i>n</i></b>	Cancel job in progress (or specific job <i>n</i> ).
<b>printsetup</b>	Print status page(s).
<b>help (?)</b>	Display help menu.
<b>languages</b>	Display the emulation selection menu.
<b>who</b>	Display a list of who is logged into the console server.
<b>quit</b>	Quit the console session.
<b>normal</b>	Enable error/status reporting.
<b>silent</b>	Disable error/status reporting.
<b>priority <i>j p</i></b>	Change job <i>j</i> 's printing priority to priority number <i>p</i> .
<b>order <i>j1 j2</i></b>	Print job number <i>j1</i> before job number <i>j2</i> .
<b>next <i>n</i></b>	Print job number <i>n</i> next.
<b>online</b>	Put printer on line. (Not available in user mode.)
<b>time</b>	Display the current date and time.

## **Admin Mode Commands**

If you have administrator privileges, you can enter admin mode. The commands accessible from admin mode are shown in the following table:

<b>Administrator Commands</b>	
<b>jobs <i>n</i></b>	Display job queue (or details of specific job <i>n</i> ).
<b>fonts</b>	List available fonts.
<b>cancel <i>n</i></b>	Cancel job in progress (or specific job <i>n</i> ).
<b>printsetup</b>	Print status page(s).
<b>pwd</b>	Print working directory.
<b>cd</b>	Change directory.
<b>ls, dir</b>	List files.
<b>config</b>	Configure printer.
<b>reboot</b>	Reboot the printer.
<b>reset</b>	Reset the printer configuration to the factory default settings.
<b>help (?)</b>	Display the help menu.
<b>languages</b>	Display the emulation selection menu.
<b>who</b>	Display a list of who is logged into the console server.
<b>exit</b>	Exit console administrator mode.
<b>quit</b>	Quit the console session.
<b>normal</b>	Enable error/status reporting.
<b>silent</b>	Disable error/status reporting.
<b>priority <i>j p</i></b>	Change job <i>j</i> 's printing priority to priority number <i>p</i> .
<b>order <i>j1 j2</i></b>	Print job number <i>j1</i> before job number <i>j2</i> .
<b>next <i>n</i></b>	Print job number <i>n</i> next.



## Print Job Status Information

When using the remote console commands, information displayed on the console may contain any of the following terms.

<b>Cancelled</b>	The job has been cancelled.
<b>Interface</b>	The interface through which the job is received.
<b>Interpreting</b>	The job is compiling.
<b>Job</b>	The job's identification number.
<b>Owner</b>	The owner of the job.
<b>Page</b>	The number of logical pages (page images) printed (how many sides, such as in duplex printing).
<b>Printed</b>	The job is done; all pages are printed.
<b>Printing</b>	The job is printing.
<b>Prio</b>	The job's printing priority. Jobs with bigger priority numbers print first. Jobs with the same priority print in order of arrival.
<b>Sheet</b>	The number of physical pages (sheets of paper) printed.
<b>Spoiled</b>	The printer has received all data for the job.
<b>Spooling</b>	The printer is receiving data for the job.
<b>Status</b>	The current status of the job.
<b>Terminating</b>	The job is about to finish.
<b>Title</b>	The title of the file.

## **System Information Commands**

The system information commands allow you to perform system tasks, such as access help, access font information, print a status page, display the time, display the available emulations, check the console sessions, and display active print jobs.

### **Accessing Help**

**Command**    help (?)

**Purpose**        Display the commands accessible in a given console mode. To access a specific mode's help, you must first be in that mode, and then enter the **help** command at the QMS 4060 Print System -> prompt.

**Mode**            user, admin, offline

**Notes**           If you have administrator privileges, you can enter the admin mode and display help that lists the following commands, plus others which pertain only to the admin mode.  
See "Console Mode" on page 6-11, for information on how to access the admin mode.

**Example**        QMS 4060 Print System->help↓

<b>jobs n</b>	- Display job queue. With n, display details on job n
<b>fonts</b>	- List available fonts
<b>cancel n</b>	- Cancel job in progress (or specific)
<b>printsetup</b>	- Print status page(s)
<b>offline</b>	- Take printer off line
<b>online</b>	- Bring printer on line
<b>admin</b>	- Enter console administrative mode
<b>help (?)</b>	- Help menu
<b>time</b>	- Display the current date and time
<b>languages</b>	- Display the emulation selection menu
<b>who</b>	- Who is logged in on the console server
<b>quit</b>	- Quit console session
<b>normal</b>	- Enable error/status reporting
<b>silent</b>	- Disable error/status reporting

**priority j p**      - Change j's printing priority to p  
**order j1 j2**      - Print j1 before j2  
**next n**            - Print job n next

## Accessing Font Information

**Command**    fonts (f)

**Purpose**      Display a menu that allows you to view the fonts available from an emulation currently installed in the printer.

**Mode**        user, admin, offline

**Notes**       If optional emulations and fonts are installed, they appear also. The value listed in [ ] is the default value and can be entered by pressing the Enter key ↵. If you enter the number that corresponds to the desired emulation, the list of available fonts for that emulation appears with the available font sizes.

**Example**     QMS 4060 Print System->fonts↵

List fonts for:

1. postscript
  2. pcl5
  3. ln03+
  4. impress
  5. hpgl
- [exit] [1]: 4↵

###FONTS###

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```
CENTB : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 20, 22, 24, 28,36
CENTBI : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 20, 22, 24, 28,36
CENTI : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 20, 22, 24, 28,36
CENTR : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 20, 22, 24, 28,36
COUB : 10, 12
COUR : 06, 07, 08, 09, 10, 12, 14, 15
GRKPI : 12, 08, 10
HELBV : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 20, 22, 24, 28,36
HELVI : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 20, 22, 24, 28,36
HELV : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 20, 22, 24, 28,36
LUCB : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 24
LUCI : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 24
LUCR : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 24, 36
LUCSB : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 20, 22, 24, 28,36
```

## Console Commands

```
LUCSI      : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 20, 22, 24, 28,36
LUCSMR     : 08, 10, 12
LUCSR      : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 20, 22, 24, 28,36
PRESTB     : 10, 12
```

Press Enter to continue.↵

```
PRESTR     : 10, 12
S          : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 20, 22, 24, 28,36
TIMESB     : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 20, 22, 24, 28,36
TIMESI     : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 20, 22, 24, 28,36
TIMESR     : 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 20, 22, 24, 28,36
ART        : 10
OCRA       : 12
OCRB       : 12
```

In this example, the number on the second line indicates how many fonts are available. The third and subsequent lines display the font name followed by the available point sizes for the font. If the point size number is 0, the font is scalable.

## Printing Status Page

**Command** printsetup (s)

**Purpose** Print a status page to the printer. Status page information varies depending on the printer.

**Mode** user, offline, admin

**Notes** The status page lists printer information. See your printer user's guide for more information on the status page.

**Example** QMS 4060 Print System->**printsetup**.↵  
Status page(s) queued to print  
QMS 4060 Print System->Printing Status  
QMS 4060 Print System->Idle

## **Displaying the Time**

<b>Command</b>	time (t)
<b>Purpose</b>	Display the current time on the printer system clock.
<b>Mode</b>	user, offline, admin
<b>Notes</b>	On most Crown printers, if the time and date are incorrect, they can be changed through the admin mode <b>settime</b> command. See “Setting the System Clock Time” on page 6-38.

Available only on systems with real-time clocks.

<b>Example</b>	QMS 4060 Print System->time↵ Thur Oct 20, 1998 15:03:12
----------------	--

## **Accessing the Printer Emulation**

<b>Command</b>	languages (l)
<b>Purpose</b>	Display a menu that allows you to view the current setup for a selected emulation.
<b>Mode</b>	user, offline, admin

## Console Commands

**Notes** The value in brackets [ ] is the current value for the selection. This is a display only command. You cannot change the language setting using this command. Not all the options shown in this example are available on all printers. Only the options for your printer will appear on the remote console display.

**Example** QMS 4060 Print System->languages.↓  
Emulations  
1. ESP Default  
2. Postscript  
3. PCL 5e  
4. LN03+  
5. Line Printer  
6. HP-GL  
0. Exit menu  
Choose one [0]: 2.↓  
Postscript  
1. Halftone Type  
2. Intensity  
0. Exit menu  
Choose one [0]: 1.↓  
Halftone Type:  
1. Standard  
2. Advanced  
3. Basic  
Current selection is [1]  
Press Enter to continue.↓

## Listing Current Remote Console Sessions

<b>Command</b>	who (w)
<b>Purpose</b>	List all the current remote console sessions and their modes.
<b>Mode</b>	user, offline, admin
<b>Example</b>	QMS 4060 Print System->who↵ **** Session open status **** Session 0 -- user mode Session 1 -- user mode Session 2 -- user mode

## Displaying the Active Jobs

<b>Command</b>	jobs (j) <i>n</i>
<b>Purpose</b>	Display a list of active print jobs and the last 5 terminated jobs (when applicable). Active jobs and printed jobs are separated by a dashed line. With <i>n</i> , display details on job <i>n</i> .
<b>Mode</b>	user, offline, admin
<b>Notes</b>	This command allows the system administrator to monitor the activity of the printer. For example, you can tell how many files are left to print.
<b>Example</b>	If there are active jobs, the display may look like this:

```
QMS 4060 Print System->jobs↵
QMS 4060 Print System->
Job  Status      Prio  Owner Title                      Interface  Sheet  Page
014  Interpreting   0001              stdin(ditroff)      Ethernet 1  0000  0000
015  Spooled        0001              stdin(ditroff)      Ethernet 1  0000  0000
016  Spooled        0001              stdin(ditroff)      Ethernet 1  0000  0000
017  Spooled        0001              stdin(ditroff)      Ethernet 1  0000  0000
018  Spooled        0001              stdin(ditroff)      Ethernet 1  0000  0000
019  Spooled        0001              stdin(ditroff)      Ethernet 1  0000  0000
020  Spooling       0001              stdin(ditroff)      Ethernet 1  0000  0000
-----
009  Printed        0001              stdin(ditroff)      Ethernet 1  0010  0010
010  Printed        0001              stdin(ditroff)      Ethernet 1  0001  0001
011  Printed        0001              stdin(ditroff)      Ethernet 1  0001  0001
```

## Console Commands

```
012 Printed      0001                      Ethernet 1 0001 0001
013 Printed      0001      stdin(ditroff)  Ethernet 1 0023 0023
End of job query
```

If there is no active job, the display may look like this:

Job	Status	Prio	Owner	Title	Interface	Sheet	Page
022	Printed	0001			Ethernet	0010	0010
023	Printed	0001			1 Ethernet	0001	0001
024	Printed	0001		stdin(ditroff)	1 Ethernet	0001	0001
025	Printed	0001			1 Ethernet	0001	0001
026	Printed	0001		stdin(ditroff)	1 Ethernet	0023	0023

No active job.

**Job Status** Entering the jobs command with a specific number shows the status of the job. This option is valid for active jobs only, not for terminated jobs.

```
QMS 4060 Print System->j 19↵
QMS 4060 Print System->
Description for job [19]
Job Number: 19
Status: Spooled
Priority: 1
Owner:
Title:
Interface: Ethernet 1
Sheet: 0
Page: 0
End of job query
```



## Job Ordering Commands

Job ordering commands are used to set the order and priority of jobs and to cancel jobs.

### Changing Job Priority

- Command**    priority (jp)  $n_1$   $n_2$
- Purpose**      Set the printing priority of a job to advance/delay the printing of a given job by priority order.
- Mode**        user, offline, admin
- Notes**        The valid range of priority values are 1 to 100. A negative priority value causes an \*\*\*Incorrect entry \*\*\* error message to display. A priority greater than 100 is reset to 100. A priority value of 0 is reset to 1.

**Example**      Initial printing order:

```
QMS 4060 Print System->j.␣
QMS 4060 Print System->
```

Job	Status	Prio	Owner	Title	Interface	Sheet	Page
027	Terminating	0001			Ethernet	0001	0001
					1		
028	Interpreting	0001		stdin(ditroff)	Ethernet	0000	0000
					1		
029	Spooled	0001			Ethernet	0000	0000
					1		
030	Spooled	0001			Ethernet	0000	0000
					1		
031	Spooled	0001			Ethernet	0000	0000
					1		
032	Spooled	0001			Ethernet	0000	0000
					1		
033	Spooled	0001			Ethernet	0000	0000
					1		
034	Spooled	0001			Ethernet	0000	0000
					1		
035	Spooled	0001			Ethernet	0000	0000
					1		
036	Spooled	0001			Ethernet	0000	0000
					1		
037	Spooled	0001		stdin(ditroff)	Ethernet	0000	0000
					1		

**Console  
Commands**

```
038 Spooled      0001                      Ethernet  0000  0000
039 Spooled      0001      stdin(ditroff) Ethernet  0000  0000
1
-----
--
022 Printed      0001                      Ethernet  0010  0010
023 Printed      0001                      Ethernet  0001  0001
024 Printed      0001      stdin(ditroff) Ethernet  0001  0001
025 Printed      0001                      Ethernet  0001  0001
026 Printed      0001      stdin(ditroff) Ethernet  0023  0023
1
End of job query
```

Changing printing priority of job 33 to 10:  
QMS 4060 Print System->priority 33 10↵

```
QMS 4060 Print System->j↵
QMS 4060 Print System->
Job  Status      Prio  Owne  Title      Interface  Shee  Page
                                r      t
033  Spooled      0010                      Ethernet  0000  0000
028  Terminating 0001      stdin(ditroff) Ethernet  0000  0000
029  Interpreting 0001                      Ethernet  0000  0000
030  Spooled      0001                      Ethernet  0000  0000
031  Spooled      0001                      Ethernet  0000  0000
032  Spooled      0001                      Ethernet  0000  0000
034  Spooled      0001                      Ethernet  0000  0000
035  Spooled      0001                      Ethernet  0000  0000
036  Spooled      0001                      Ethernet  0000  0000
037  Spooled      0001      stdin(ditroff) Ethernet  0000  0000
038  Spooled      0001                      Ethernet  0000  0000
039  Spooled      0001      stdin(ditroff) Ethernet  0000  0000
1
-----
```

**Console  
Commands**

023	Printed	0001		Ethernet	0001	0001
				1		
024	Printed	0001	stdin(ditroff)	Ethernet	0001	0001
				1		
025	Printed	0001		Ethernet	0001	0001
				1		
026	Printed	0001	stdin(ditroff)	Ethernet	0023	0023
				1		
027	Printed	0001		Ethernet	0001	0001
				1		
End of job query						

**Changing Job Order**

**Command**    order (jo) *n*<sub>1</sub> *n*<sub>2</sub>

**Purpose**      Set a given job to print before another job.

**Mode**        user, offline, admin

**Example**     Set job 39 to print before job 31:  
                  QMS 4060 Print System->order 39 31↵  
                  New printing order:

```

QMS 4060 Print System->j↵
QMS 4060 Print System->
Job  Status      Prio  Owner  Title                Interface  Sheet  Page
                                r
033  Terminating  0010                                Ethernet   0000   0000
                                1
030  Terminating  0001                                Ethernet   0000   0000
                                1
039  Spooled       0001          stdin(ditroff)  Ethernet   0000   0000
                                1
031  Terminating  0001                                Ethernet   0000   0000
                                1
032  Spooled       0001                                Ethernet   0000   0000
                                1
034  Spooled       0001                                Ethernet   0000   0000
                                1
035  Spooled       0001                                Ethernet   0000   0000
                                1
036  Spooled       0001                                Ethernet   0000   0000
                                1
037  Spooled       0001          stdin(ditroff)  Ethernet   0000   0000
                                1
038  Spooled       0001                                Ethernet   0000   0000
                                1
-----
                                -
025  Printed       0001                                Ethernet   0001   0001
                                1
026  Printed       0001          stdin(ditroff)  Ethernet   0023   0023
                                1
027  Printed       0001                                Ethernet   0001   0001
                                1
028  Printed       0001          stdin(ditroff)  Ethernet   0000   0000
                                1
029  Printed       0001                                Ethernet   0000   0000
                                1
End of job query

```

## Printing a Job Next

**Command** next (nt) *n*

**Purpose** Set a given job to be printed next.

**Mode** user, offline, admin

**Example** Setting job 37 to be printed next:  
QMS 4060 Print System->next 37↵

New printing order:

QMS 4060 Print System->j↵

QMS 4060 Print System->

Job	Status	Prio	Owne r	Title	Interface	Shee t	Page
037	Spooled	0001		stdin (ditroff)	Ethernet 1	0000	0000
039	Printing	0001		stdin (ditroff)	Ethernet 1	0012	0012
032	Terminating	0001			Ethernet 1	0010	0010
034	Spooled	0001			Ethernet 1	0000	0000
035	Spooled	0001			Ethernet 1	0000	0000
036	Spooled	0001			Ethernet 1	0000	0000
038	Spooled	0001			Ethernet 1	0000	0000
-----							
028	Printed	0001		stdin (ditroff)	Ethernet 1	0023	0023
029	Printed	0001			Ethernet 1	0001	0001
033	Printed	0010			Ethernet 1	0001	0001
030	Printed	0001			Ethernet 1	0001	0001
031	Printed	0001			Ethernet 1	0002	0002
End of job query							

## **Cancelling a Job**

- 
- ▲ **Caution:** *If you use the cancel command without specifying a job ID, it may cause multiple jobs to be canceled.*
- 

<b>Command</b>	cancel <i>n</i> ( <i>c</i> )
<b>Purpose</b>	Cancel printing the current job(s) or a specific job.
<b>Mode</b>	user, offline, admin
<b>Notes</b>	When the cancel command is entered with a job ID, the specified job is canceled. For example, the command <code>cancel 7</code> , cancels job 7. When the cancel command is entered with no job ID specified, all jobs with the printing, interpreting, or terminating status are canceled. You can use the jobs command to find the job ID or status of any job in the system.
<b>Example</b>	To cancel the current job: QMS 4060 Print System->cancel↵ QMS 4060 Print System->cancelling Job To cancel job number 41: QMS 4060 Print System->cancel 41↵ QMS 4060 Print System->cancelling Job

## **Disk Operation Commands**

The commands in this section are available only when a disk drive is attached to your printer. The Disk Operations commands use the printer's DSK#/USR/xxxxxxx (where # represents a disk ID number in the 1 to 7 range and xxxxxx represents a user-created subdirectory) directory to manipulate files: See the **cd**, **copy (cp)**, **rename (mv)**, and **del (rm)** commands for specific directory information.

## **Path Name Legend**

.	current directory
..	parent directory

## **File and Directory Name Rules**

- File and directory names are composed of a root name of up to 8 characters and an extension name of up to 3 characters.
- The name is not case-sensitive; file name `ABC.doc` is the same as `abc.doc`.
- Wild card characters `*` and `?` in file names are not supported with the exception of the following:

```
cp source_directory/* destination_directory
rm directory/*
```

Commands like `dir *.txt` and `cp bin/* usr` are invalid.

## **Changing the Current Device**

<b>Command</b>	DSK#:
<b>Purpose</b>	Change to a new hard disk, floppy disk or cartridge device
<b>Mode</b>	admin
<b>Notes</b>	This command has no effect if the corresponding device is not available. This command works in the FLP0:, DSK#: (# represents a disk in the range of 1 to 7), and CAR#: (# represents a cartridge in the range of 0 to 3).
<b>Example</b>	Change directory: admin->FLP0:↵ admin->Idle Show the current path of the device: admin->pwd↵ FLP0: / admin->

## **Displaying the Current Working Directory**

<b>Command</b>	pwd
<b>Purpose</b>	Display the current working directory.
<b>Mode</b>	admin
<b>Notes</b>	This command appears only if a disk drive is available on the printer you are using.
<b>Example</b>	admin->pwd↵ DSK7:USR



## **Displaying Directory Contents**

<b>Command</b>	<code>dir (ls)</code>
<b>Purpose</b>	Display the contents of the current directory or a given directory.
<b>Mode</b>	admin
<b>Notes</b>	This command appears only if a disk drive is available on the printer you are using.
<b>Example</b>	<p>Current directory:</p> <pre>admin-&gt;ls↵ BIN.&lt;DIR&gt;01-19-199415:42:01 SYSTEM.DL 381740001-19-199415:50:01 TMP.&lt;DIR&gt;01-19-199415:53:01 SPOOL.&lt;DIR&gt;01-19-199415:53:01 FONTS.&lt;DIR&gt;01-19-199415:55:01 ROM.DL405448801-20-199414:30:01</pre> <p>Specific directory:</p> <pre>admin-&gt;ls dsk6:/usr↵ ..&lt;DIR&gt;01-19-199415:42:01 ...&lt;DIR&gt;01-19-199415:42:01 ACC.DIC688401-21-199413:27:01 ACC.STA15001-21-199412:46:01 ACC1.JOB688401-21-199413:27:01 ACC.PAP15001-21-199412:46:01</pre>

## **Changing the Working Directory**

<b>Command</b>	<code>cd</code>
<b>Purpose</b>	Change to a new working directory.
<b>Mode</b>	admin
<b>Notes</b>	This command appears only if a disk drive is available on the printer you are using. This command works in the FLP0: and DSK#:/USR/xxxxxxx directory. (# represents a disk in the range of 1 to 7 and xxxxxxxx represents a user created subdirectory.)

**Example    Change directory:**

```
admin->cd usr↵  
admin->Idle
```

**List contents of directory DSK6:/usr:**

```
admin->ls↵  
..<DIR>01-19-199415:42:01  
...<DIR>01-19-199415:42:01  
ACC.DIC688401-21-199413:27:01  
ACC.STA15001-21-199412:46:01  
ACC1.JOB688401-21-199413:27:01  
ACC.PAP15001-21-199412:46:01
```

**Change to Parent Directory**

```
admin->cd ..↵
```

**Change to Root Directory**

```
admin->cd↵
```

## **Copying a File**

**Command**    copy (cp)

**Purpose**     Copy the contents of a file to a new file.

**Mode**       admin

**Notes**      You may use the following shortcut to copy all files from one directory to another:

```
cp source_directory/*  
destination_directory↵
```

This command appears only if a disk drive is available on the printer you are using. This command works in the FLP0:, CAR#: (where # represents a cartridge in the range of 0 to 3) and/or DSK#:/USR/xxxxxxx directory (where # represents a disk in the range of 1 to 7 and xxxxxxxx represents a user created subdirectory).

**Example** Initial content of directories usr and bin:

```
admin->dir usr↵
..<DIR>01-19-199415:42:01
...<DIR>01-19-199415:42:01
ACC.DIC688401-21-199413:27:01
ACC.STA15001-21-199412:46:01
ACC1.JOB688401-21-199413:27:01
ACC.PAP15001-21-199412:46:01
```

```
admin->dir bin↵
..<DIR>01-19-199415:42:01
...<DIR>01-19-199415:42:01
FE.<DIR>01-19-199415:42:01
EMULATE.<DIR>01-19-199415:42:01
DIAGS.<DIR>01-19-199415:43:01
NVR.<DIR>01-19-199415:43:01
```

Copy file DSK6:/usr/acc.pap to DSK6:/bin/acc.bak:

```
admin->copy usr/acc.dic bin/acc.bak↵
Copying data...
```

New content of directory bin:

```
admin->dir bin↵
..<DIR>01-19-199415:42:01
...<DIR>01-19-199415:42:01
FE.<DIR>01-19-199415:42:01
EMULATE.<DIR>01-19-199415:42:01
DIAGS.<DIR>01-19-199415:43:01
NVR.<DIR>01-19-199415:43:01
ACC.BAK688401-21-199414:13:01
```

## **Renaming a File**

**Command**    `rename (mv)`

**Purpose**      Change the current name of a file to a new name. If the new name specifies a different directory, the file is moved to that directory.

**Mode**        `admin`

**Notes**       The new directory must already exist. If it does not exist you will receive a `file name is invalid` error message, in which case you need to create the directory using FTP.  
The command works on files only. Directories cannot be renamed with this command.

You may use the following shortcut to copy all files from one directory to another:

```
cp source_directory/* destination
_directory
```

The file to be renamed must be in one of the following directories: `FLP0:` or `DSK#:/USR/xxxxxxx` directory. (`#` represents a disk in the range of 1 to 7 and `xxxxxxx` represents a user created subdirectory.) This command displays only if a disk drive is available on the printer you are using.

**Example**      Rename file `acc.bak` to `acc.old` in the same directory:  
`admin->mv acc.bak acc.old`

Rename file `acc.bak` to `acc.old` and move it to the parent directory:  
`admin->mv acc.bak ../acc.old`

Move the file `acc.bak` to subdirectory `backup` without changing its name:  
`admin->mv acc.bak backup/acc.bak`

## **Deleting a File**

<b>Command</b>	del (rm)
<b>Purpose</b>	Delete a file.
<b>Mode</b>	admin
<b>Notes</b>	<p>This command works in the FLP0: or DSK#./USR/xxxxxxx directory. (# represents a disk in the range of 1 to 7 and xxxxxxxx represents a user created subdirectory.)</p> <p>This command displays only if a disk drive is available on the printer you are using.</p>
<b>Example</b>	admin->del acc.bak↵

## **Formatting a Hard Disk**

<b>Command</b>	format
<b>Purpose</b>	Format a hard disk.
<b>Mode</b>	admin
<b>Notes</b>	The value in brackets [ ] is the current value for the selection.
<b>Example</b>	<p>Format a hard disk in SCSI DSK:6:</p> <pre>admin-&gt;format↵ Format disk:DSK6 Continue (N=no, Y=yes) [N]:y↵ Formatting... Format complete admin-&gt;Idle</pre>

Press the Return key or type n↵ or N↵ to abort the **format** command:

## **System Setting Commands**

### **Setting the System Clock Time**

<b>Command</b>	settime
<b>Purpose</b>	Set the date and time of the system clock.
<b>Mode</b>	admin
<b>Notes</b>	The value in brackets [ ] is the current value for the selection.

**Example**     admin->settime↵  
                 Date of Month (1 - 31)  
                 Enter value [20]:21↵  
                 Month (1 - 12)  
                 Enter value [1]:2↵  
                 Year (1990 - 2089)  
                 Enter value [1997]:1997↵  
                 Weekday (1=Mon, 2=Tue, ..., 7=Sun)  
                 Enter value [4]:1↵  
                 Hour (0 - 23)  
                 Enter value [15]:↵  
                 Minute (0 - 59)  
                 Enter value [48]:↵  
                 Second (0 - 59)  
                 Enter value [58]:↵  
                 admin->Idle  
                 admin->  
                 admin->Idle

Enter the **time** command to verify the new time:

```
admin->time↵
Thur Feb 21, 1997 15:48:12
admin->Idle
```

## **Setting the Console to Normal Message Display Mode**

<b>Command</b>	normal (n)
<b>Purpose</b>	Set the console to normal message display mode to display any message the system reports to the console. See "Message Display and Console Modes" on page 6-9.
<b>Mode</b>	user, offline, admin
<b>Example</b>	QMS 4060 Print System->normal↵

## **Setting the Console to Silent Message Display Mode**

<b>Command</b>	silent (s)
<b>Purpose</b>	Set the console to silent message display mode to ignore any message the system reports to the console. See "Message Display and Console Modes" on page 6-9.
<b>Mode</b>	user, offline, admin
<b>Example</b>	QMS 4060 Print System->silent↵

## **Removing All Accounting Records**

<b>Command</b>	resetaccount (ra)
<b>Purpose</b>	Remove all accounting records from the system.
<b>Mode</b>	admin
<b>Notes</b>	The value in brackets [ ] is the current value for the selection.
<b>Example</b>	<pre>admin-&gt;resetaccount.↵ Reset accounting information (y/n) [n]:y↵ admin-&gt;Idle admin-&gt; *** Resetting accounting... *** Creating accounting job file(s), please wait ... *** Created file *** Creating paper accounting file, please wait ... *** Created file</pre>

## **Resetting to Factory Default Settings**

<b>Command</b>	reset
<b>Purpose</b>	Reboot the system and reset the system configuration to factory default settings. All console sessions are terminated and the terminals are frozen until the system is back on line.
<b>Mode</b>	admin
<b>Notes</b>	Any job in the system is lost after the reboot, and the current system configuration settings are replaced with factory default settings. The value in brackets [ ] is the current value for the selection.
<b>Example</b>	<pre>admin-&gt;reset.↵ Reset printer configuration (y/n) [n]: y↵ Printer configuration reset admin-&gt;Idle admin-&gt; Connection closed by foreign host. [b@boris, 36]</pre>



## **Accessing the Printer Configuration Menu**

<b>Command</b>	config (menu)
<b>Purpose</b>	Access the printer configuration menu to review and change settings.
<b>Mode</b>	admin
<b>Notes</b>	The value in brackets [ ] is the current value for the selection. If you want to change that value, enter the desired value after the colon (:). The higher-level menu defaults are 0's. This allows you to exit from the menu in the same order as you entered it.

Passwords can only be set or changed through the printer's control panel. Also, if you are at a local console, the password does not appear on the screen as you type it.

The **config** command accesses the printer configuration menu, which may vary depending on your printer (not all options are available on all QMS printers). It accesses the same printer configuration menu that is available through the control panel for your specific printer. When you are in the printer configuration menu, you can press the Return key to return to the user mode or you can press the Return key to advance one menu level with the following exception: when the data type for a field is a character string. In this case, anything you enter is accepted as data for that field.

See the *Reference* manual for more information on passwords and the configuration menu options that are available on the printer.

**Example**     Use **config** to enter the configuration menu:  
admin->config↵

Configure the operator control menu options:

Printer Configuration

1. Operator Control

2. Administration

0. Exit menu

Choose one [0]: 1↵

Type 1, and the operator control options appear:

Operator Control

1. Copies

2. Duplex

3. Collation

4. Orientation

5. Inputbin

6. Outputbin

7. Custom Inputbins

8. Accounting

0. Exit menu

Choose one [0]:

If an operator control menu password is enabled, you  
are prompted to enter it:

Printer Configuration

1. Operator Control

2. Administration

0. Exit menu

Choose one [0]: 1

Enter Password:

Enter value [ ]:

Configure the administration menu options:

Printer Configuration

- 1. Operator Control
- 2. Administration
- 0. Exit menu

Choose one [0]: 2↵

Type 2, and the Administration menu options appear:

Administration

- 1. Communications
- 2. Emulations
- 3. Special Pages
- 4. Startup Options
- 5. Memory
- 6. Engine
- 7. Miscellaneous
- 8. Disk Operations
- 0. Exit menu

Choose one (0):

If administration password protection is enabled, you are prompted to enter the administration password:

Printer Configuration

- 1. Operator Control
- 2. Administration
- 0. Exit menu

Choose one [0]: 2↵

Enter Password:

Enter value [ ]:

## **System Console Mode Switching Commands**

### **Putting the System Off Line (from User Mode)**

<b>Command</b>	offline (o)
<b>Purpose</b>	Switch the console from user mode to offline mode and take the system off line.
<b>Mode</b>	user
<b>Notes</b>	Entering the <b>online</b> command returns you to user mode.
<b>Example</b>	QMS 4060 Print System->offline↵ offline->Idle

If the system is busy, the following message appears:

```
Waiting for idle...Enter "online" to return to operator mode
online
QMS 4060 Print System->
```

### **Putting the System On Line (from Offline Mode)**

<b>Command</b>	online
<b>Purpose</b>	Switch the console from offline mode to user mode and put the system on line.
<b>Mode</b>	offline
<b>Example</b>	offline->online↵ QMS 4060 Print System->idle

## **Putting the System Off Line, Going to Admin Mode**

**Command**    admin

**Purpose**        Switch the console from user/offline mode to admin mode and take the system off line.

**Mode**            admin

**Notes**           Passwords can only be set or changed through the printer's control panel. Also, if you are at a local console, the password does not appear on the screen as you type it.

### Example

From user mode to admin mode:

```
QMS 4060 Print System->admin↵  
admin->Idle
```

From offline mode to admin mode:

```
offline->admin  
admin->idle
```

If the system is busy, the following message appears:

```
Waiting for idle...Enter "online" to  
return to operator mode  
QMS 4060 Print System->
```

Use **online** to return to user mode:

```
QMS 4060 Print System->online↵  
QMS 4060 Print System->
```

If administration password protection is enabled, a password entry prompt appears. Entering a wrong password puts the console in offline mode. You can try again with the **admin** command or return to user mode with the **online** command:

```
QMS 4060 Print System->admin↵  
Enter Password:00aaa↵  
*** Invalid password ***  
offline->Idle  
offline->online
```

Entering the password again:

```
QMS 4060 Print System->Idle  
QMS 4060 Print System->admin↵  
Enter Password:00AAA↵  
admin->Idle  
admin->
```

## **Put the System On Line in Admin Mode**

<b>Command</b>	exit (x)
<b>Purpose</b>	Switch the console from admin mode to user mode and put the system on line.
<b>Mode</b>	admin
<b>Notes</b>	When you exit from the admin mode, the offline prompt changes to the general remote console user/offline prompt, as shown in the example below.
<b>Example</b>	admin->exit↵ QMS 4060 Print System->idle

## **Session Termination Commands**

Session Termination commands allow you to terminate the console session or reboot the whole system.

### **Terminating the Console Session**

<b>Command</b>	quit (q)
<b>Purpose</b>	Terminate the current console session.
<b>Mode</b>	user, offline, admin
<b>Notes</b>	When you quit a remote console session, a message displays that tells you the connection is closed and who closed it. In this example, b@venus closed the session. If you do not quit the session, it is automatically closed when the system is turned off.  For VMS users, when you quit the session, it may take several seconds for the remote link to disconnect.
<b>Example</b>	QMS 4060 Print System->quit↵ Connection closed by foreign host. [b@venus, 42]

## **Rebooting the System**

<b>Command</b>	reboot
<b>Purpose</b>	Reboot the system and terminate all console sessions. This is similar to the <b>reset</b> command, except that it does not reset the system configuration to factory default.
<b>Mode</b>	admin
<b>Notes</b>	The value in brackets [ ] is the current value for the selection. Any job in the system is lost after the reboot.
<b>Example</b>	<pre>admin-&gt;reboot↵ Reset printer configuration (y/n) [n]: y↵ Printer configuration reset admin-&gt;Idle admin-&gt;</pre>

## **Forced Console Termination**

A system may have a daughterboard that supports a remote console connection timeout option. This option sets a console idle time limit. If no activity is detected for a session within the time limit, the session is terminated.

Certain printer configuration menu options, like memory configuration, require a system reboot to take effect. Changing these options causes the system to reboot and terminate all sessions when the user leaves the configuration menu.

## **Local Console Override**

Some systems may have a directly linked console called the local console. There are two differences between operation with a local console and operation through a remote console:

- The **quit** command has no effect on a local console.
- You cannot enter any command from a remote console when it is in blocked mode.



However, you can enter the **online**, **offline**, and **reboot** commands from a local console when it is in blocked mode. The effects are as follows:

<b>online</b>	Puts all console sessions in user mode and puts the system on line.
<b>offline</b>	Puts the local console in offline mode and all other consoles in blocked mode. The system remains off line.
<b>reboot</b>	Terminates all console sessions and reboots the system. All jobs in the system are lost.





# 7

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## Print Quality

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### In This Chapter . . .

- “About Halftone Types” on page 7-2
  - “About Intensity” on page 7-3
  - “About Print Density” on page 7-3
  - “About Print Resolution” on page 7-4
-

# Introduction

Density and print resolution are some of the factors that affect print quality. High-resolution technology, while more complex, gives you more flexibility to control the print quality factors. This chapter will aid you in setting your printer up for maximum performance. For a more detailed explanation of factors that affect your printer's output, refer to chapter 5, "Additional Technical Information," in your *Reference* guide.

## About Halftone Types

The ability of the printer to produce halftones allows you to add scanned images or halftone graphics to your documents.

Your printer provides three different types of halftones—basic, advanced, and standard.

<b>Menu</b>	Administration/Emulations/PostScript/Halftone Type
<b>Choices</b>	Basic Standard Advanced
<b>Default</b>	Standard

These options allow you to customize the smoothness of the printed image according to the number of grayscales it uses. The number of gray levels increases by increasing the halftone type and the printer resolution.

See chapter 5, "Additional Technical Information," in the *Reference*, for more detailed information on halftones and how to change their characteristics via the printer configuration menu.

# About Intensity

Sets the intensity for PostScript printing.

Menu	Administration/Emulations/PostScript/Intensity
Choices	Nominal, Darkest, Darker, Lighter, Lightest
Default	Nominal
Notes	Intensity uses the PostScript settransfer operator's functionality to make the print lighter or darker.

# About Print Density

Print density is the amount of toner placed on each dot, making the print appear lighter or darker. The higher the density, the darker the print looks and the higher the contrast is on the page.

- » **Note:** *If the print density is too light, make sure that the Administration/Engine/Print Quality/Normal option is turned on before making any adjustments. The Conserve Toner option saves toner by simulating draft-quality printing. (See chapter 4, "Printer Configuration," of the Reference for more information.)*

Adjust the print density using the Administration/Engine/Toner Density setting.

Menu	Administration/Engine/Toner Density	
Choices	<div><div><div>L D</div><div>.....^..... .....</div></div><div>L D</div><div> .....^.....</div></div> <div><div>L D</div><div>.....^..... </div></div>	<div>—This is a sliding scale that you move left or right with the Previous and Next buttons</div> <div>—The lightest available setting</div> <div>—The darkest available setting</div>

# About Print Resolution

Another way to sharpen the images printed on your pages is through setting the print resolution. Your printer is capable of printing at 300 and 600 dpi. This choice of resolutions allows you to customize the quality of your output according to its use. For pages requiring the best quality your printer can provide, set the printer resolution to 600 dpi.

## Setting the Resolution

You can set the default resolution of your printer through the Administration/Engine/Def Resolution menu.

<b>Menu</b>	Administration/Engine/Def Resolution
<b>Choices</b>	300 dpi—300x300 dpi resolution. 600 dpi—600x600 dpi resolution.
<b>Default</b>	600 dpi



# 8

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## **CrownView Printer Web Page**

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### **In This Chapter . . .**

- “CrownView Printer Web Page” on page 8-2
- “Setting up the Printer Web Page” on page 8-2
- “Printer Home Page” on page 8-7

# **CrownView Printer Web Page**

QMS CrownView is a printer-based application using the World Wide Web portion of the Internet as a framework for the QMS 4060 Print System. This feature allows you to monitor printer consumables, configure the printer to send you email, and access information that is normally available only by printing a status page.

Inside your new QMS printer resides an HTTP (Hyper-Text Transfer Protocol) based web page that can be accessed from the most common web-browser software, Netscape Navigator and Microsoft Internet Explorer. This web page gives you access to the most frequently accessed printer configurations and gives you instant access to printer status. Anyone on your company intranet can access the QMS printer through their web-browser software.

- » **Note:** *The sample windows and dialog boxes shown in this chapter are as they appear in Netscape Navigator and Microsoft Explorer, and coincide with the step-by-step instructions provided.*

This section provides you with details on

- Setting up and using the web page
- Configuring the printer to send email
- The different types of pages in the printer
- Accessing the QMS web site and online help

## **Setting up the Printer Web Page**

Setting up the printer web page to run on your intranet involves two basic steps:

- Setting up the “no proxy” preferences in your browser software

### **Setting Up Your Browser Software**

Since your printer will reside on your intranet and will not be accessible beyond the firewall of your network, you must set up the proper “preferences” in your browser software. Your printer IP address must

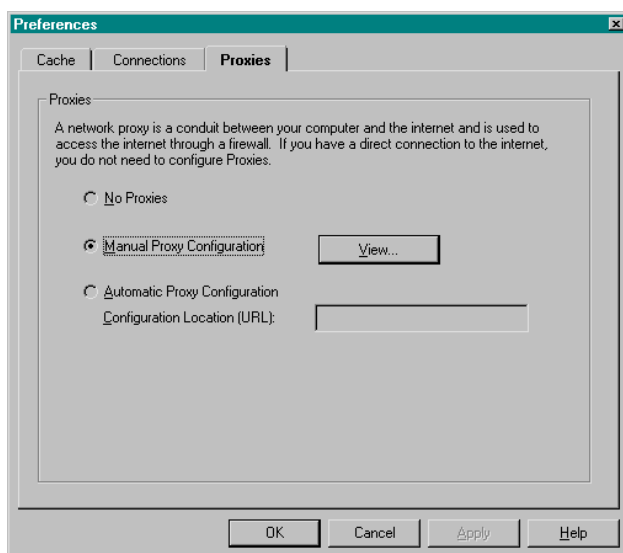


be added to the “no proxy” list in the preferences dialog box of the browser.

» **Note:** *You need to do this procedure only once.*

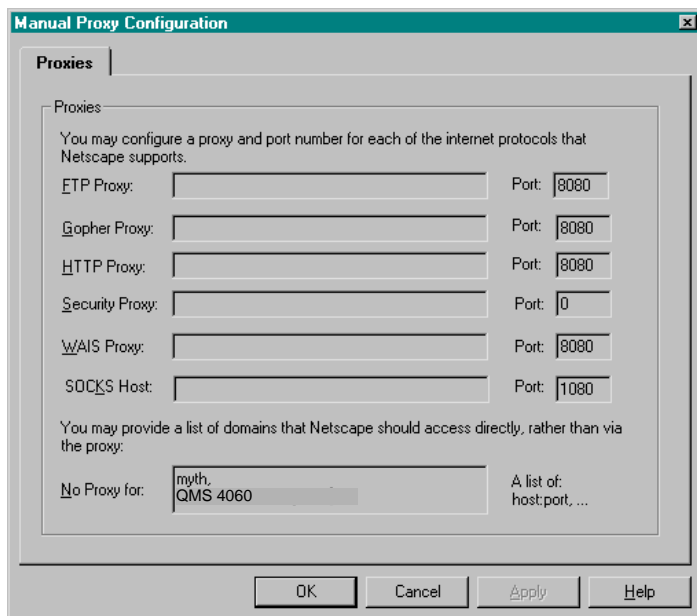
## **For Netscape**

- 1 Start your web-browser.**
- 2 Access the Options menu and choose Network Preferences.**
- 3 Select the Proxies tab in the dialog box.**

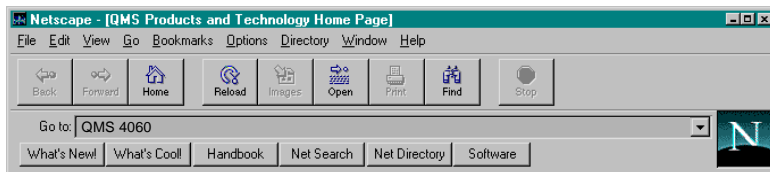


- 4 Select the Manual Proxy Configuration radio button and press the View... button.**

- 5 In the No Proxy For: text box, type a comma after the last entry and then type the IP address of your QMS 4060.



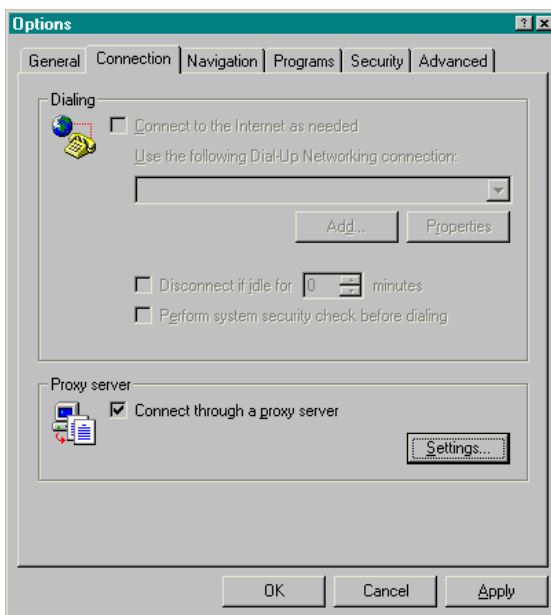
- 6 Choose OK.
- 7 Enter the printer IP address in the Go to: URL address box to access the printer home page.



## **For Microsoft Explorer**

- 1 Start your web browser.
- 2 Access the View menu and choose Options.

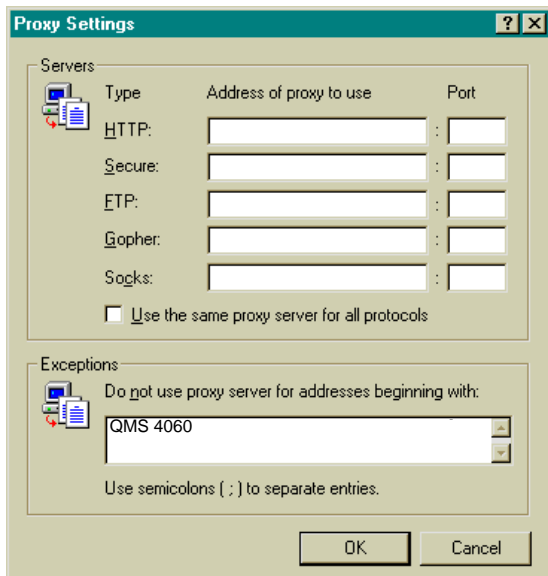
- 3 Select the Connection tab on the dialog box.



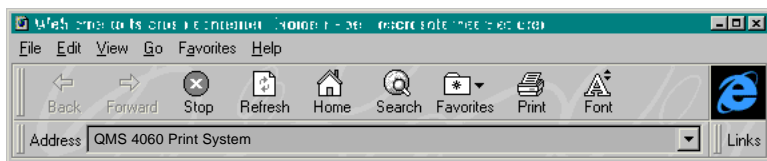
- 4 Click the Settings button to display the Proxy Settings dialog box.

- 5 In the Exceptions text box, type a comma after the last entry and then type the printer name or IP address.

» **Note:** The printer name is entered in the network protocol menu that you're using. The default name is the model number of the printer. See the QMS CrownNet System Administrator's Manual for information on changing the printer name.

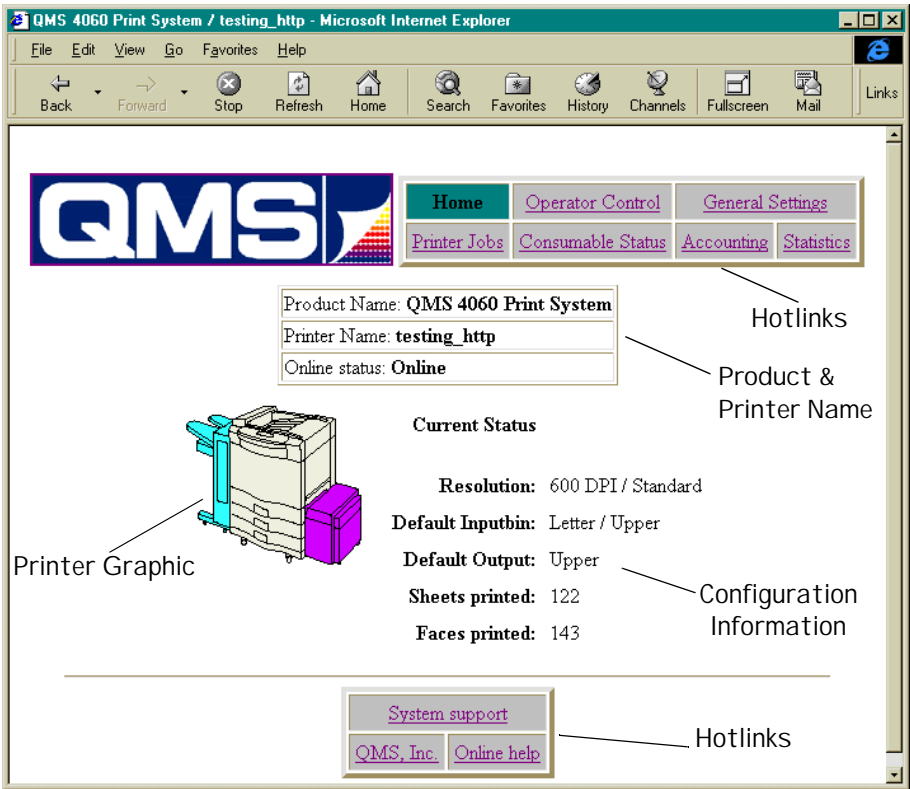


- 6 Click OK to save changes in the dialog boxes.
- 7 Now you should be able to enter the printer name in the URL address box to access the printer home page.



## Printer Home Page

The Home Page is the starting point for all access to the printer web pages. On this page you will find hotlinks to all of the supporting web pages for your printer.



The printer home page provides the following information.

<b>Product Name</b>	Identifies the particular printer that you are browsing. This printer is pictured in the graphic with all installed paper handling options.
	<b>Configuration Menu:</b> No equivalent
<b>Printer Name</b>	Shows the name you have assigned to your printer. The default printer name is the same as the product name.
	<b>Configuration Menu:</b> Administration/Communications/Networkx/CrownNet/NetWare/Printer Name menu or the Administration/Communications/Networkx/CrownNet/LanManager/Printer Name menu
<b>Current Status</b>	Echoes the status message in the printer control panel message window.
	<b>Configuration Menu:</b> No equivalent
<b>Resolution</b>	Identifies the resolution and halftone.
	<b>Configuration Menu:</b> Administration/Engine/Def Resolution
<b>Default Inputbin</b>	Identifies the input tray or tray, the media size, and the percent filled with media.
	<b>Configuration Menu:</b> Operator Control/Inputbin
<b>Sheets Printed</b>	Lists the number of sheets of media printed to date during the current consumables tracking period (Administration/Consumables/Start Period menu).
	» <b>Note:</b> <i>This number differs from the number of sheets printed statistics on the printer's start-up and status pages, which refer to the total number of sheets of media printed during the life of the printer.</i>
	<b>Configuration Menu:</b> No equivalent

<b>Faces Printed</b>	Lists the number of page faces printed to date.  » <b>Note:</b> <i>This number differs from the number of faces printed statistics on the printer's start-up and status pages, which refer to the total number of page faces printed during the life of the printer.</i>
	<b>Configuration Menu:</b> No equivalent
<b>Hotlinks</b>	Take you to other pages of status, configurations, or help information. Each of these hotlinks is fully explained in this chapter.
	<b>Configuration Menu:</b> No equivalent

## **Home**

The Home hotlink simply returns you to the printer home page when it is selected.

## Operator Control

The Operator Control hotlink on the home page jumps to the Operator Control page. This page contains a form which allows you to configure settings in your printer.

After you make your choices, choose the Submit button to make them take effect.

Configuration Form

The Operator Control page contains the following options. For complete information on any options see chapter 4, “Printer Configuration,” of the *Reference* manual.

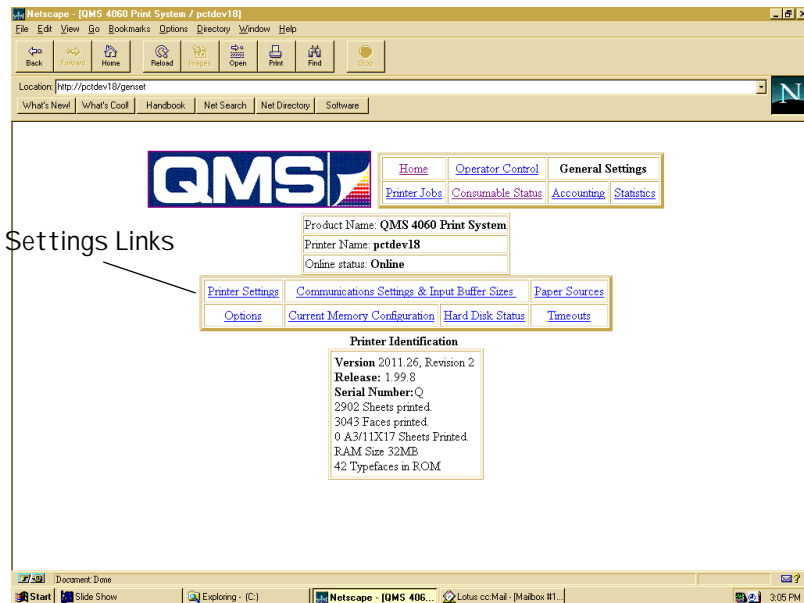
<b>Copies</b>	Allows you to enter the number of copies to print.
	<b>Configuration Menu:</b> Operator Control/Copies
<b>Collation</b>	Allows you to turn collation Off or On.
	<b>Configuration Menu:</b> Operator Control/Collation



<b>Orientation</b>	Allows you to select Portrait or Landscape orientation.
	<b>Configuration Menu:</b> Operator Control/ Orientation
<b>Inputbin</b>	Allows you to choose Upper or Optional as the input source.
	<b>Configuration Menu:</b> Operator Control/Inputbin
<b>Chain Inputbins</b>	Allows you to set input bin chaining to Off, On, or On Any.
	<b>Configuration Menu:</b> Operator Control/Chain Option/(Optional, Upper, Middle, or Lower)
<b>Upper Bin Media</b>	Allows you to specify the type of media in the upper (standard) tray so the printer can optimize output for that media type.
	<b>Configuration Menu:</b> Operator Control/Media/For Upper Bin
<b>Optional Bin Media</b>	Allows you to specify the type of media in the optional lower input feeder so the printer can optimize output for that media type.
	<b>Configuration Menu:</b> Operator Control/Media/For Optional Bin
<b>Upper Custom Tray</b>	Specifies the media size in the upper (standard) tray if it's something other than A4, Legal, or Letter (the typical sizes the trays expect)
	<b>Configuration Menu:</b> Operator Control/Custom Bin/Upper
<b>Optional Custom Tray</b>	Specifies the media size in the optional lower input feeder if it's something other than A4, Legal, or Letter (the typical sizes the trays expect)
	<b>Configuration Menu:</b> Operator Control/Custom Bin/Optional

## General Settings

The General Settings hotlink takes you to the General Settings page.



This page provides hotlinks to several groups of printer configuration settings. Each is described in more detail in the following pages:

- "Printer Setting" on page 8-13
- "Communication Settings & Input Buffer Sizes" on page 8-14
- "Paper Sources" on page 8-15
- "Options" on page 8-16
- "Current Memory Configuration" on page 8-16
- "Hard Disk Status" on page 8-18
- "Timeouts" on page 8-18

You can view this information to see the status of the printer, but you can change it only by accessing the printer's configuration menu through the printer control panel, a remote or local console, or CrownAdmin 3.

## **Printer Setting**

This table provides you with data relative to the settings of the printer.

<b>Compatibility Level</b>	Identifies the PostScript emulation level.
	<b>Configuration Menu:</b> No equivalent
<b>Do Start-up Page</b>	Identifies whether the printer start-up page is turned on or off.
	<b>Configuration Menu:</b> Administration/Startup Options/Do Start Page
<b>Do Error Handler</b>	Identifies whether the PostScript Error Handler is on or off. Error Handler is a diagnostic tool that identifies PostScript errors encountered during a print job.
	<b>Configuration Menu:</b> Administration/Startup Options/Do Error Handler
<b>Do Sys/Start</b>	Identifies whether the printer controller checks the hard disk for a PostScript file named SYS\START and then executes the file. This file does not print.
	<b>Configuration Menu:</b> Administration/Startup Options/Do Sys Start
<b>Is Password 0?</b>	Identifies whether the Administration menu password is set. 0=Off
	<b>Configuration Menu:</b> Installation/Use Admin Pwd

<b>Default Chaining</b>	Identifies whether tray chaining is enabled or disabled. Tray chaining allows the printer to draw media from another input source with either the same or any size and type of media (dependent on the choice selected) automatically when the first input source empties.
	<b>Configuration Menu:</b> Operator Control/Chain Inputbins
<b>Default Paper Tray</b>	Tells you which input source is the default.
	<b>Configuration Menu:</b> Operator Control/Inputbin
<b>Number of Paper Trays</b>	Tells you the number of input sources available on your printer.
	<b>Configuration Menu:</b> No equivalent.
<b>Left Margin</b>	Identifies the amount (in .01" increments) the image is adjusted horizontally on the page.
	<b>Configuration Menu:</b> Administration/Engine/Image Alignment/Horiz Offset
<b>Top Margin</b>	Identifies the amount (in .01" increments) the image is adjusted vertically on the page.
	<b>Configuration Menu:</b> Administration/Engine/Image Alignment/Vertical Offset
<b>Resolution</b>	Identifies the printer resolution.
	<b>Configuration Menu:</b> Administration/Engine/Def. Resolution

## **Communication Settings & Input Buffer Sizes**

This hotlink displays a screen that shows the communications settings of the printer.

<b>Serial IF</b>	Identifies the settings for the serial interface.
	<b>Configuration Menu:</b> Administration/Communications/Serial

<b>Parallel IF</b>	Identifies the settings for the parallel interface.
	<b>Configuration Menu:</b> Administration/ Communications/Parallel
<b>IF 1</b>	Identifies the settings for the optional Network1 interface.
	<b>Configuration Menu:</b> Administration/ Communications/Network1
<b>IF 2</b>	Identifies the settings for the Network2 (CrownNet Ethernet) interface.
	<b>Configuration Menu:</b> Administration/ Communications/Network2
<b>Shared Spooling Space</b>	Identifies the total amount of spooling space shared by the interfaces
	<b>Configuration Menu:</b> No equivalent.

## **Paper Sources**

This hotlink provides media source information.

<b>Upper</b>	Identifies the size and type of media currently installed in the upper tray.
	<b>Configuration Menus:</b> Operator Control/Custom Bin/Upper, Operator Control/Media/For Upper Bin
<b>Optional</b>	Identifies the size and type of media currently installed in the optional lower input feeder.
	<b>Configuration Menu:</b> Operator Control/Custom Bin/Optional, Operator Control/Media/For Optional Bin

## Options

<b>Disk(s)</b>	Identifies how many hard disks are attached to the printer and what their addresses are.
	<b>Configuration Menu:</b> No equivalent
<b>Emulations</b>	Identifies the installed emulations.
	<b>Configuration Menu:</b> No equivalent

## Current Memory Configuration

Memory configuration affects the number of jobs that can be accepted by the printer, the number of options available simultaneously, the number of downloadable fonts and emulations that can be stored, and overall printer performance.

<b>Host Input Spool</b>	Shows the size (in KB) of the Host Input field, also known as K Mem for Spool. This memory client stores incoming data from all the interfaces until the emulation can process the print job.
	<b>Configuration Menu:</b> Administration/Memory/Manual Config/K Mem for Spool
<b>Display List</b>	Shows the size (in KB) of the Display List, also known as K Mem Display. This client stores compressed representations, or blocks, of the pages to be printed.
	<b>Configuration Menu:</b> Administration/Memory/Manual/Config/K/Mem Display
<b>PostScript Font Cache</b>	Shows the size (in KB) of the Font Cache, also known as K Mem for PS Fonts. This memory client stores bitmapped representations of previously scaled PostScript fonts.
	<b>Configuration Menu:</b> Administration/Memory/Manual Config/K Mem for PS Fonts

<b>PostScript Heap</b>	Shows the size (in KB) of the Heap, also known as K Mem for PSHeap, PostScript VM, and Virtual Memory. This client holds downloaded fonts, PostScript operators, and forms.
	<b>Configuration Menu:</b> Administration/Memory/Manual Config/K Menu for PSHeap
<b>Framebuffer</b>	Shows the size (in KB) of the Frame Buffer. This client holds rasterized or bitmapped images of page faces which are ready to be sent to the print engine.
	<b>Configuration Menu:</b> Administration/Memory/Manual Config/Framebuffer
<b>Emulation</b>	Shows the size (in KB) of the Emulation client, also known as K Mem Emulation. This client is used to store any optional emulations, such as LN03 Plus.
	<b>Configuration Menu:</b> Administration/Memory/Manual Config/K Mem Emulation
<b>Emulation Temporary</b>	Shows the size (in KB) of the Emulation Temporary client. This client is used by non-PostScript emulations for storing downloaded (soft) fonts, forms, or macros.
	<b>Configuration Menu:</b> Administration/Memory/Manual Config/K Mem Emulation Temp
<b>Disk Cache</b>	Shows the size (in KB) of the Disk Cache. This memory client stores frequently used data in system memory instead of continually storing and retrieving it from a hard disk.
	<b>Configuration Menu:</b> Administration/Memory/Manual Config/K Mem /Disk Cache

<b>System Use</b>	Shows the size (in KB) of the System Use. Also known as System Memory, this non-configurable client is the amount of RAM used to run the printer's operating system. It's never increased or decreased. The system memory subtracted from the total amount of RAM identifies the amount of RAM available for all the other memory clients.
	<b>Configuration Menu:</b> No equivalent
<b>Printer Memory</b>	Shows the size (in KB) of the total amount of RAM that your printer has.
	<b>Configuration Menu:</b> Administration/Memory/Manual Config/MB Printer Mem

## **Hard Disk Status**

This hotlink provides the status of the hard disk.

<b>%Disk7%</b>	Provides the name, size, and free space on all attached hard disks.
	<b>Configuration Menu:</b> No equivalent
<b>Total</b>	Identifies the total space and free space on all attached hard disks.
	<b>Configuration Menu:</b> No equivalent

## **Timeouts**

This hotlink provides the status on established timeouts.

<b>Wait</b>	Shows the maximum number of seconds the PostScript emulation waits for incoming data.
	<b>Configuration Menu:</b> Administration/Communications/Timeouts/PS Wait Timeout
<b>Job</b>	This shows the maximum number of seconds the printer processes a print job before it ends the job.
	<b>Configuration Menu:</b> Administration/Communications/Timeouts/Job Timeout



<b>Emulation</b>	Shows the maximum number of seconds emulations other than PostScript wait for incoming data.
	<b>Configuration Menu:</b> Administration/Communications/Timeouts/Emulation Timeout
<b>ESP</b>	Shows the maximum number of seconds the printer uses to match an emulation before printing the job in the default emulation.
	<b>Configuration Menu:</b> Administration/Communications/Timeouts/ESP Timeout

## Printer Jobs

The Printer Jobs hotlink on the home page jumps to the Printer Jobs page. This page contains information about the current jobs the printer is processing and information on the previous five jobs printed.

Product Name: QMS 4060 Print System  
Printer Name: testing\_http  
Online status: Offline

**Current Job Status**

**Current Jobs**  
No Current Jobs

**Previous Job Status**

**Previous Jobs**

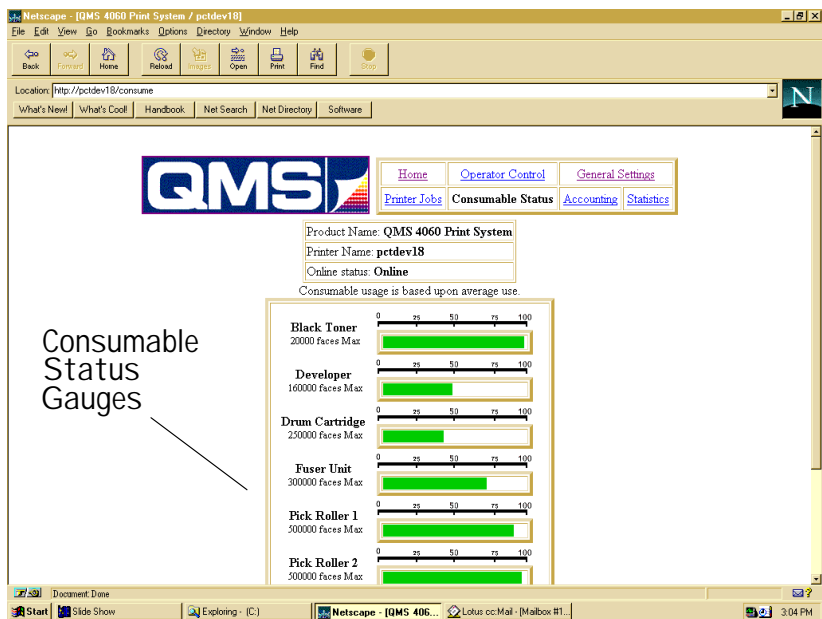
Job	Status	Prio	Owner	Title	Interface	Sheet	Page
1	Printed	1	Unknown	Untitled	Ethernet-2	0	0
2	Printed	1	munikarh	bugs	Ethernet-2	33	33
3	Printed	1	munikarh	courageous.feedback.ps	Ethernet-2	4	2

<b>Job</b>	Indicates the job number of the current print jobs and up to five previous print jobs.
	<b>Configuration Menu:</b> No equivalent.
<b>Status</b>	Indicates the status of each job. (Interpreting, Spooling, Spooled, Printing, Printed)
	<b>Configuration Menu:</b> No equivalent
<b>Prio[rity]</b>	Shows the priority of each job.
	<b>Configuration Menu:</b> No equivalent
<b>Owner</b>	Shows the name of the owner of each current job.
	<b>Configuration Menu:</b> No equivalent
<b>Title</b>	Shows the title of each job.
	<b>Configuration Menu:</b> No equivalent
<b>Interface</b>	Identifies the interface over which the job was sent to the printer.
	<b>Configuration Menu:</b> No equivalent
<b>Sheet</b>	Shows the number of physical sheets of media printed for each job.
	<b>Configuration Menu:</b> No equivalent.
<b>Page</b>	Indicates the number of pages printed for each job.
	<b>Configuration Menu:</b> No equivalent

## **Consumable Status**

The Consumable Status hotlink on the home page jumps to the Consumable Status page. This page contains information about the level of usage of all of the printers' consumables.

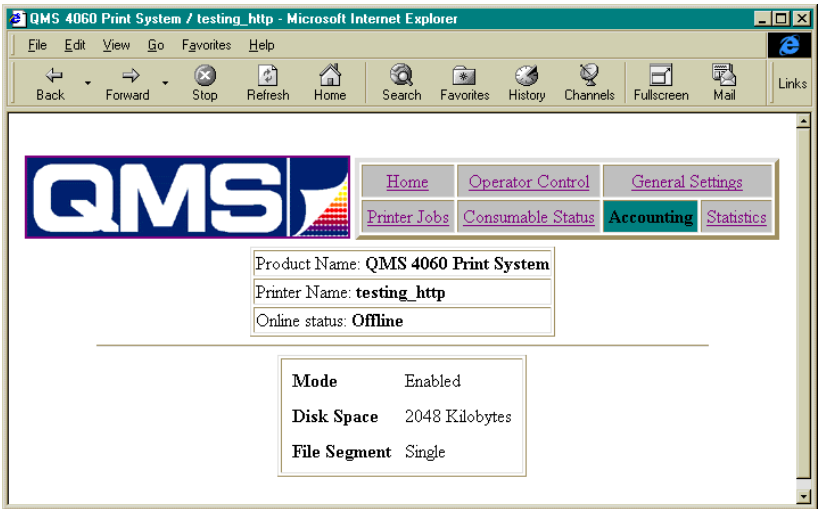
» **Note:** The scales are an estimate, reported as a percentage, and do not indicate the exact amount of consumables used. In addition, the life expectancy of each consumable is based on printing under specific operating conditions, such as media type, number of color planes, page size, and page coverage (usually 5% coverage of letter/ A4-size media). The actual life expectancy will vary depending on these and other printing variables, including continuous or intermittent printing, ambient temperature, and humidity.



<b>Consumable Name</b>	Identifies the consumable (for example, Black Toner or Developer).
	<b>Configuration Menus:</b> Operator Control/Consumables and Administration/Consumables
<b>Consumable Max Number</b>	Shows the maximum capacity of the consumable (for example, 10000 planes or 120000 sheets).
	<b>Configuration Menus:</b> Operator Control/Consumables and Administration/Consumables
<b>Consumable Usage Gauges</b>	Shows the remaining amount of the consumable (in percentages, not planes, faces, or sheets).
	<b>Configuration Menus:</b> Operator Control/Consumables and Administration/Consumables

Accounting

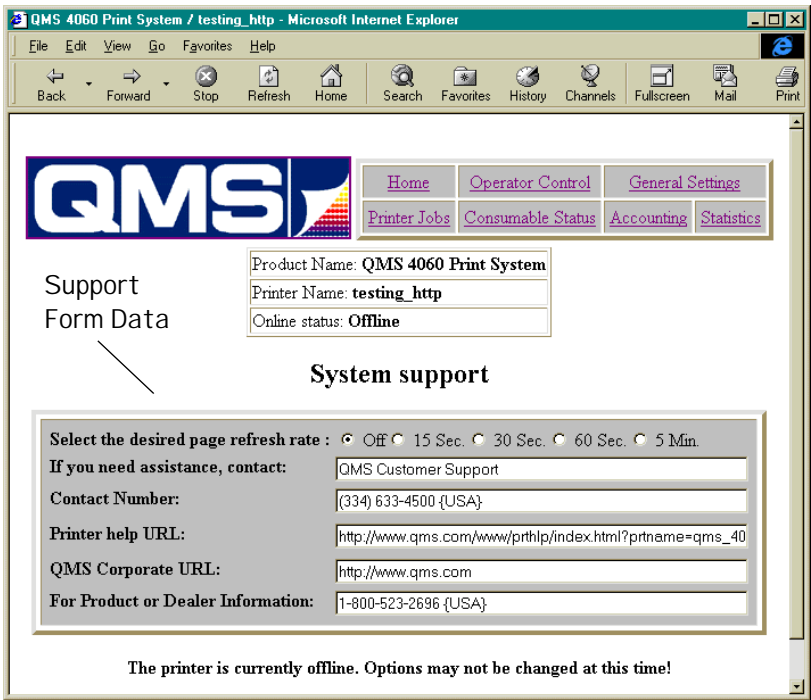
The Accounting hotlink on the home page jumps to the Accounting page, which contains information about accounting configuration settings.



Mode	Shows whether accounting is enabled or disabled.
	<b>Configuration Menu:</b> Operator Control/ Accounting/Mode
Disk Space	Shows how much disk space is allocated to job accounting files.
	<b>Configuration Menu:</b> Operator Control/ Accounting/Disk Space
File Segment	Shows whether accounting information is stored in the printer in a single file or in multiple files.
	<b>Configuration Menu:</b> Operator Control/ Accounting/File Segment

System Support Page

The System Support hotlink on the home page jumps to the System Support page. This page can be used to set up internal support for the printer as well as to link to the QMS web site.



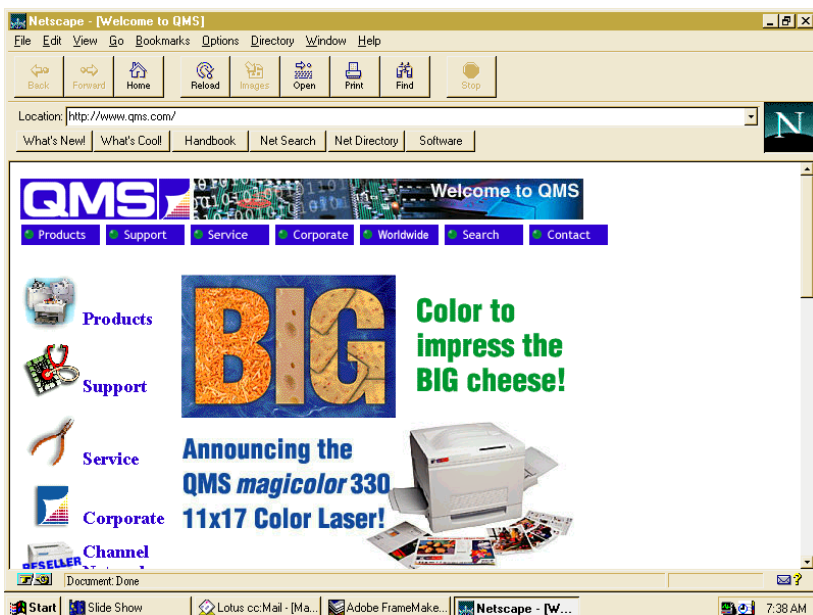
<b>Page refresh rate</b>	The rate at which information in the form is reset to the current printer settings.
<b>If you need assistance, contact</b>	A text box for entering the name of a local expert
	<b>Configuration Menu:</b> No equivalent
<b>Contact Number</b>	A text box for entering a local or QMS contact number
	<b>Configuration Menu:</b> No equivalent
<b>Printer Help URL</b>	A text box for entering a local or QMS printer help URL (web address)
	<b>Configuration Menu:</b> No equivalent
<b>QMS Corporate URL</b>	The QMS corporate URL (web address)
	<b>Configuration Menu:</b> No equivalent
<b>To order supplies and accessories</b>	A text box for entering a local or QMS contact number
	<b>Configuration Menu:</b> No equivalent

Once you've made the necessary changes, choose Submit.

- » **Note:** *If the page refresh rate is set to too small a time interval, you may lose your changes before you choose the Submit button.*

## **QMS, Inc. Page**

The QMS, Inc. hotlink on the home page jumps to the QMS web site configured on the System Support page (QMS Corporate URL). From the QMS web site you can access information about other QMS printers, contact information, a FAQ database, printer manuals, and online performance support.



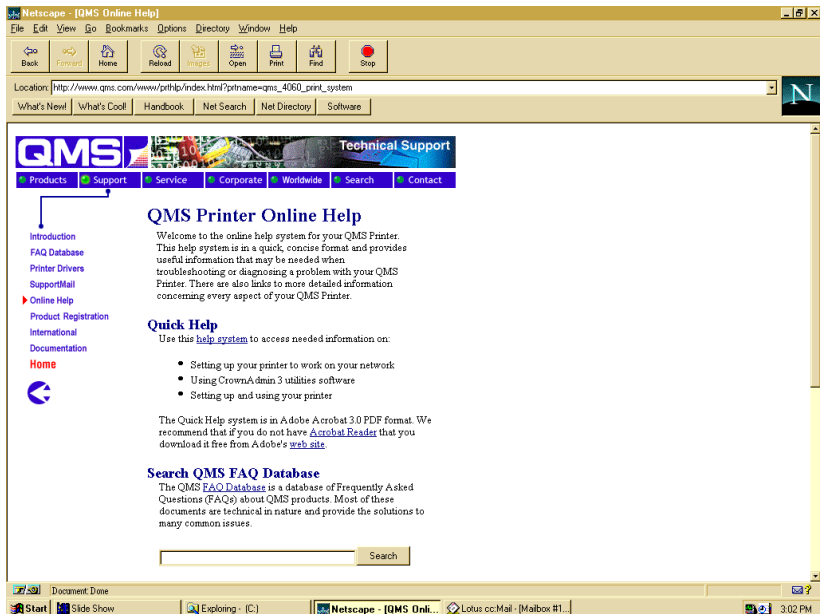
## **Online Help Page**

The Online Help hotlink on the home page jumps to any help information that has been configured on the System Support page (Printer Help URL). You can configure this to jump to your own help web site set up on your local intranet or to the QMS online performance support information for your QMS print system.



## Web Page Help System

Your printer web page is supported with help and support tools located at the QMS web site. If you typed in the QMS online help address on the System Support page (Printer Help URL), when you click on the Online Help button on the printer home page you'll be linked to an HTML page located at the QMS web site. From here you can link to a topic which applies to your specific problem. You can also access a list of current FAQs (Frequently Asked Questions) about your print system.





# 9

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## Troubleshooting Printer Problems

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### **In This chapter . . .**

- “Status Messages” on page 9-2
  - “Internal Hard Disk Problems” on page 9-20
  - “Testing PC Printer Communication” on page 9-24
  - “Miscellaneous Problems” on page 9-26
  - “CrownNet Problems” on page 9-28
  - “Print Quality Problems” on page 9-30
  - “Troubleshooting CrownCopy” on page 9-67
  - “Placing a Service Call” on page 9-68
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# Introduction

This chapter provides information to aid you in resolving printer problems you may encounter, or at least guide you to the proper sources for help. You'll find in this chapter tables of common status messages, a problem checklist, and actions you should take when a specific problem occurs. There are step-by-step instructions for removing paper jams from key locations along the paper path, as well as descriptions of common print quality problems with corresponding solutions. You'll also find what information you'll need to have before placing a service call if one becomes necessary.

## Status Messages

Printer control panel messages help you locate many problems. When the printer needs operator assistance, the message window displays one of the following messages

- » **Note:** *Status messages don't display when you're in the Copier menu. However, they will display again when you exit from the menu and put the printer back on line.:*

This status message...	means...	do this...
ACC DISABLED	The accounting option has been disabled.	No action necessary.
ACC ENABLED	The accounting option has been enabled.	No action necessary.

<b>This status message...</b>	<b>means...</b>	<b>do this...</b>
ACC FILES GOT REMOVED	The accounting option is disabled and the accounting files are empty. After a reset, the files are removed. This prevents you from wasting disk space with empty accounting files.	No action necessary.
ACC XXXXXXXXX FILE FULL	The specified file is full.	(XXXXXXX represents the specified accounting file—Job Accounting file or Paper Accounting file.) If you want accounting enabled, copy these files to floppy disk/s or transfer them to your host computer using ftp (if available). Then reset the accounting files so that new jobs can be accepted. If you do not want to use accounting, you can disable it. Use the Operator Control/Accounting/ResetAccounting menu.
ACC FILE IS XXX % FULL	The Job Accounting File is 80% or more full (xxx represents the percentage full in increments of 5%.	See ACC XXXXXXXXX FILE FULL error for recovery information.

## Status Messages

This status message...	means...	do this...
ACC FILES NOT EMPTY, CANNOT SHRINK, KEEPING OLD SIZE	The Job Accounting file can be reduced in size only after a reset when the file is empty.	No action necessary.
x ACTIVE JOBS	The printer is on line. x identifies the number of jobs in process.	No action necessary.
ADJUST INPUTBIN BIN	The specified input bin (TRAY) is not inserted correctly.	Adjust the tray.
CALL FOR SERVICE ENGINE ERROR x	The printer has detected a hardware failure.	Call for service or see "Service Messages" on page 9-11 for details.
COMPLETE ENGINE DEVELOPER MAINT.	The developer maintenance procedure is not complete.	Refer to chapter 2, "Consumables" for details on developer maintenance.
CREATED FILE	The accounting file is being created.	No action necessary.
CREATING XXXXXXXXXXXX FILE, PLEASE WAIT	The specified accounting file is created when accounting is enabled and the files are not in existence or these files are created following a Reset Accounting. (XXXXXXXXXXXX represents the Job Accounting or Paper Accounting file.	No action necessary.

<b>This status message...</b>	<b>means...</b>	<b>do this...</b>
CLOSE ENGINE DOOR(S)	One or more of the front or side covers is open and must be closed.	Close the front or side covers.
PURGE DEVELOPER	The developer is beginning its discharge cycle.	Wait for the cycle to complete.
REPLACE DEVELOPER	The developer has reached its useful life and should be replaced.	Replace the developer. Refer to chapter 2, "Consumables" for details.
DRUM UNIT INTERLOCK	The drum unit was not pushed all the way in after the last maintenance.	Push the drum unit in all the way and secure with thumbscrew. Refer to chapter 2, "Consumables," for details.
DUPLEX JAM	Paper has jammed while passing through the duplexer.	Check area 6 inside the front door. See chapter 4, "Printer Jams,"
DUPLEX JAM	Paper has jammed while passing through the duplexer.	Check areas 3-6 inside the front door. See chapter 4, "Printer Jams,"
EXTENDED ACCOUNTING FILE SIZE	The size of the non-empty accounting file has been increased successfully.	No action necessary.
FEED PATH JAM	Paper has jammed in the feed path.	Check areas 1 & 2 inside the front door. See chapter 4, "Printer Jams,"

## Status Messages

This status message...	means...	do this...
FEED PATH JAM	Paper has jammed in the feed path.	Check areas 2 & 3 inside the front door. See chapter 4, "Printer Jams,"
FRONT DOOR OPEN	The front door is open or not completely closed	Close the front door until it latches. Check that the maintenance items inside are in place.
FUSER INTERLOCK	The fuser was not properly seated after the last maintenance.	Push the fuser in while turning the decurler roller knob clockwise and secure with thumbscrew. Refer to chapter 2, "Consumables," for details.
IDLE	The printer is on line, but no jobs are in process.	No action necessary.
INITIALIZING	The printer is getting ready to go on line.	No action necessary.
INPUT IDLE PRINTING	The printer is on line and printing jobs already in the queue. No new jobs are arriving at the communication interfaces.	No action necessary.
INPUTBIN BIN JAM	Paper has jammed while being pulled from the specified input bin.	Clear jam from the specified input bin. See chapter 4, "Printer Jams,"



<b>This status message...</b>	<b>means...</b>	<b>do this...</b>
LOWER RIGHT DOOR OPEN	The lower right door is open or not completely closed	Close the front door until it latches.
OPTIONAL INPUT BIN DOOR OPEN	The LCIF door is open or not completely closed	Close the LCIF door until it latches.
<i>OUTPUTBIN</i> <i>OUTPUTBIN</i> FULL	The specified output bin is full.	
OUTPUT BIN JAM	Paper has jammed in the output path.	Check areas 4 & 5 inside the front door. See chapter 4, "Printer Jams,"
EJECTION UTIN JAM	Paper has jammed in the output path.	Check area 5 inside the front door and the LCOS or ejection unit. See chapter 4, "Printer Jams,"
<i>OUTPUTBIN</i> <i>OUTPUTBIN</i> JAM	Paper has jammed between the print engine and the specified output bin (tray).	Locate and remove the jam. See chapter 4, "Printer Jams,"

## Status Messages

This status message...	means...	do this...
PUT <i>SIZE</i> PAPER IN <i>INPUTBIN</i> BIN	The Operator Control/ Chain Inputbins is set to Off and the displayed tray or tray is empty. Refill it with the specified size paper. In the case of a tray, <i>SIZE</i> is the paper size detected by the engine. In the case of the custom tray, the <i>SIZE</i> is the paper size of the tray configured in the Operator Control Custom Tray menu. <i>INPUTBIN</i> is the empty tray or tray (the default input bin set the Administration/Engine/ Inputbin # menu).	Refill the empty tray with the specified paper size.
PUT SIZE PAPER IN ANY BIN » <b>Note:</b> <i>This is true only if you're in ANY.</i>	The Operator Control/ Chain Inputbins menu is set to On and a chained inputbin is empty.	Refill the empty inputbin with the specified paper size.
REPLACE DEVELOPER	The developer has reached its useful life and should be replaced.	Replace the developer. Refer to chapter 2, "Consumables," for details.

<b>This status message...</b>	<b>means...</b>	<b>do this...</b>
REPLACE DRUM UNIT	The drum unit has reached its useful life and should be replaced.	Replace the drum unit. Refer to chapter 2, "Consumables," for details. Do not simply reseal the drum. This could cause poor print quality and damage the printer.
REPLACE FUSER	The fuser has reached its useful life and should be replaced.	Replace the fuser. Refer to chapter 2, "Consumables," for details.
REPLACE PICK UNIT 1	The pick rollers for the upper tray have reached their useful life and should be replaced.	Replace the pick roller for the upper tray. Refer to chapter 2, "Consumables," for details.
REPLACE PICK UNIT 2	The pick rollers for the middle tray have reached their useful life and should be replaced.	Replace the pick roller for the middle tray. Refer to chapter 2, "Consumables," for details.
REPLACE PICK UNIT 3	The pick rollers for the lower tray have reached their useful life and should be replaced.	Replace the pick roller for the lower tray. Refer to chapter 2, "Consumables," for details.
REPLACE LCIF PICK	The pick rollers for the LCIF tray have reached their useful life and should be replaced.	Replace the pick roller for the LCIF. Refer to chapter 2, "Consumables," for details.

## Status Messages

This status message...	means...	do this...
REPLACE WASTE TONER BOTTLE	The waste toner bottle is full and should be replaced.	Replace the waste toner bottle. Refer to chapter 2, "Consumables," for details.
RESETTING ACCOUNTING	The reset accounting operation is in process.	
STACKER PATH JAM	Paper has jammed while passing through the stacker (LCOS).	Check the LCOS area inside the door. See chapter 4, "Printer Jams."
TONER LOW	The toner is low. There is enough toner to print up to 100 more pages depending on the type of paper used.	Replace the toner. Refer to chapter 2, "Consumables," for details.
TONER OUT	The toner hopper is completely out of toner.	Replace the toner. Refer to chapter 2, "Consumables," for details.
UPPER DOOR OPEN	The upper output door is open or not completely closed	Close the upper output door until it latches.
UPPER RIGHT DOOR OPEN	The upper right door is open or not completely closed	Close the upper right door until it latches.
XXXX JAM	Paper has jammed in the specified location in the printer.	Locate and remove the jam. See chapter 4, "Printer Jams," for locations.
WAITING FOR IDLE	An active job is in process. Access to the menu is not allowed until the job is finished.	Wait until the print job is finished and the printer goes idle.

<b>This status message...</b>	<b>means...</b>	<b>do this...</b>
WAITING ON INPUT END JOB?	The compiler is waiting on incoming data for the first job in the queue. The job may not have an end-of-job indicator and therefore cannot end. The message clears if the job timeout is reached or more input arrives from the port or if you press the Cance-Next-Select buttons. No other jobs can be printed until this job has ended.	Wait until the job is finished and the printer goes idle to access the configuration menu.
WARMING UP	The printer is warming up.	Wait until the IDLE message displays before printing.
WASTE DEVELOPER BOTTLE NOT REPLACED	The developer waste bottle is not in.	Insert the developer waste bottle. Refer to chapter 2, "Consumables," for details.
WASTE DEVELOPER BOTTLE NOT SET	The developer waste bottle is not set properly.	Take the developer waste bottle out and then reinsert it. Refer to chapter 2, "Consumables," for details.

## **Service Messages**

When the printer requires service, operation stops and the message window displays **CALL FOR SERVICE** followed by the error number. Have this information available when you call for service.

## Status Messages

- » **Note:** A service message sometimes occurs as a result of an unusual combination of events, not because of an actual problem. When the printer stops and a service message displays in the message window, turn the printer off and back on. This often clears the service message indicator and printer operation resumes. Always try this before making a service call.

Some typical actions you should try before calling service are listed below for each service error code. Follow these suggestions before calling for service.

- ▲ **Caution:** Do not attempt to service your QMS 4060 print system. Service should only be done by qualified QMS service representative. See appendix A, "QMS Customer Support", for information on contacting QMS for service.

This service message...	means...	try this...
CALL FOR SERVICE ENGINE ERROR 8	Pick up motor for upper tray failed.	Turn the power off then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 9	Pick up motor for middle tray failed.	Turn the power off then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 10	Pick up motor for lower tray failed.	Turn the power off then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 11	Switch back motor in duplexer failed.	Turn the power off then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 13	Feed motor failed.	Turn the power off then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 14	Stacker select solenoid failed	Turn the power off then on again. If the message returns, call for service.

<b>This service message...</b>	<b>means...</b>	<b>try this...</b>
CALL FOR SERVICE ENGINE ERROR 15	Duplex motor failed.	Turn the power off then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 39	The fuser did not warm up to the proper temperature.	Check that the fuser is properly installed and the front door is closed. Turn the power off then on again. If message returns, replace the fuser. If the message still returns, call for service.
CALL FOR SERVICE ENGINE ERROR 40	The fuser temperature is higher than normal.	Check that the printer doors are closed. Turn the power off then on again. If message returns, replace the fuser. If the message still returns, call for service.
CALL FOR SERVICE ENGINE ERROR 41	The fuser temperature is lower than normal.	Check that the printer doors are closed. Turn the power off then on again. If message returns, replace the fuser. If the message still returns, call for service.
CALL FOR SERVICE ENGINE ERROR 80	The toner motor that adds toner to the developer failed.	Turn the power off then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 81	The waste toner screw motor failed.	Turn the power off then on again. If the message returns, call for service.

## Status Messages

This service message...	means...	try this...
CALL FOR SERVICE ENGINE ERROR 82	During the developer maintenance the old developer could not be purged properly.	Turn the power off then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 84	During the developer maintenance the shutter releasing the old developer could not be opened properly.	Turn the power off then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 86	After the developer maintenance automatic toner adjustment could not be completed properly.	Purge the developer and try again with new developer. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 87	The mixture of toner with developer is too high.	Purge the developer and try again with new developer. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 88	The mixture of toner with developer is too low.	Purge the developer and try again with new developer. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 89	The voltage which measures the mixture of toner with developer is too high.	Purge the developer and try again with new developer. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 90	The voltage which measures the mixture of toner with developer is too low.	Purge the developer and try again with new developer. If the message returns, call for service.



<b>This service message...</b>	<b>means...</b>	<b>try this...</b>
CALL FOR SERVICE ENGINE ERROR 91	The toner hopper is not detecting toner or the hopper is empty.	If the hopper is empty try adding toner. Turn the power off then on. If the message returns, call for service. If you just added toner and the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 105	The main motor did not reach its normal speed.	Check that the drum unit and fuser are properly installed and all the doors are closed. Turn the power off then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 111	The high voltage did not reach its normal level.	Clean the transfer assembly. If the message returns replace the transfer assembly. Turn the power off then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 121	The optical unit motor did not reach its normal speed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 122	One of the laser detection sensors failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 123	One of the laser detection sensors failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.

## Status Messages

This service message...	means...	try this...
CALL FOR SERVICE ENGINE ERROR 124	One of the laser detection sensors failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 125	One of the laser detection sensors failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 126	The laser diode failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 160	One of the cooling fans failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 161	One of the cooling fans failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 165	One of the cooling fans failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 166	One of the cooling fans failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 176	A timer circuit on the printer controller failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.

<b>This service message...</b>	<b>means...</b>	<b>try this...</b>
CALL FOR SERVICE ENGINE ERROR 177	A timer circuit on the printer controller failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 179	Communication between controllers inside the printer failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 180	A memory circuit on the printer controller failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 181	A communication signal on the printer controller failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 182	A communication signal on the printer controller failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 183	A communication signal on the printer controller failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 184	A communication signal on the printer controller failed.	Turn the power off for at least 30 seconds then on again. If the message returns, call for service.

## Status Messages

This service message...	means...	try this...
CALL FOR SERVICE ENGINE ERROR 196	An error signal occurred while the LCIF tray was moving.	Carefully look for jams that may be stuck in the LCIF. Refer to chapter 4, "Printer Jams," for procedures. Turn the power off then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 197	An error signal occurred while the LCIF tray was moving.	Carefully look for jams that may be stuck in the LCIF. Refer to chapter 4, "Printer Jams," for procedures. Turn the power off then on again. If the message returns, call for service.
CALL FOR SERVICE ENGINE ERROR 216	An error signal occurred with the optional LCOS (stacker).	Check that the interface cable to the LCOS is properly installed, the power cable is in, and the power switch is on. Turn the power off then on again. If the message returns, call for service. You can disconnect the LCOS and the interface cable and continue using the printer alone.

## **HP-GL Error Codes and PCL Error Codes**

The following tables list error codes that could appear in the printer message window when running HP-GL or PCL emulations.

The following errors may occur when using the designated (HP-GL or PCL) emulation.

<b>HP-GL Error Code</b>	<b>Description</b>
0	Not enough memory for job.
1	Too many transformations.
2	Math error.
3	Job aborted.
4	Instruction not recognized.
5	Wrong number of parameters.
6	Out of range parameter, or illegal character.
7	Not used.
8	Unknown character set.
9	Position overflow.
10	Buffer overflow.

<b>PCL Error Codes</b>	<b>Description</b>
0	Not enough memory for job.
1	State lost.
2	Math error.
3	Job aborted.
4	Out of memory for macros.
5	Disk full. Cannot store fonts.
6 - 13	Internal error 1 - 8.

# Internal Hard Disk Problems

Your QMS 4060 Print System stores its internal operating system on the internal hard disk and loads the operating system when the power is turned on. If the internal hard disk should ever fail, you need to be able to format the disk and then reload the system software.

## Hard disk Failure Messages

When the internal hard disk fails one of the following messages appears at the bottom of the LCD panel.

DISK FAILURE

or

DISK WRITE FAILURE

or

DISK READ FAILURE

or

DRIVE NOT READY

If you get any of these messages, try turning off the printer and then turning it back on to clear the error. If this doesn't work then you need to reformat the disk and reload the system software.

## Reformatting the Drive and Reloading System Software

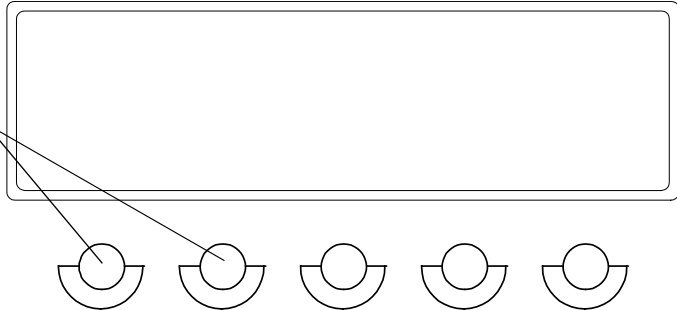
**Caution:** *Any data on the hard disk, including system code will be lost when the hard disk is reformatted. You must have the system software on hand to reboot the system after formatting. Contact your QMS Support representative to obtain the system software for your printer.*

When the disk has failed you will need to reformat it and reload the system software. Follow this procedure.

- 1 Turn off the printer.

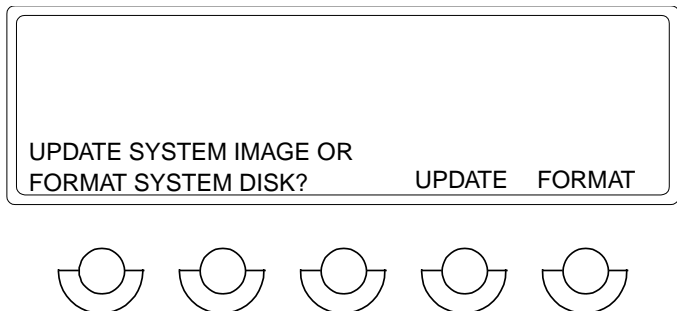
- 2 Hold any two buttons down and turn on the printer.**

Press Any Two  
Buttons While  
Turning On  
The Printer



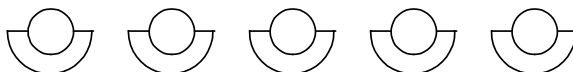
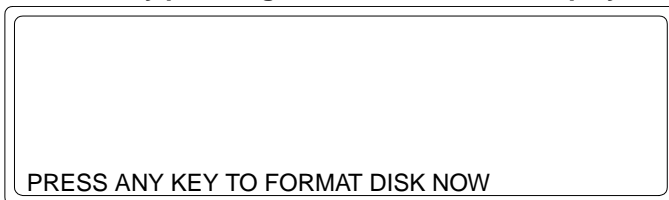
- 3 A short boot menu appears on the display. The last two buttons on the control panel give you the choice to format or update system.**

▲ **Caution:** Any data on the hard disk, including system code will be lost when the hard disk is reformatted. You must have the system software on hand to reboot the system after formatting. Contact your QMS Support representative to obtain the system software for you printer.

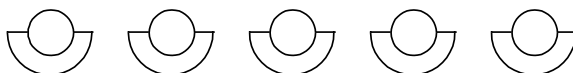
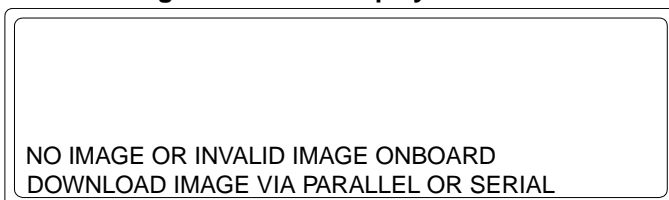


## Internal Hard Disk Problems

- 4 Select Format by pressing the last button. The display shows



- 5 Press any button and wait for the printer to reformat the disk.
- 6 After reformatting the disk the display shows:



- 7 At this point you need to download the system software through the parallel port or by the optional serial port. Use the diskettes containing the system software included with your printer.

Use the following procedure to update the system software in system memory through the parallel port. Refer to chapter 5, "New System Software," in the *Options* manual for information on downloading system software through the serial port.



## **Decompressing the System Software**

Before the printer system software can be downloaded, it must be decompressed on your PC's hard disk.

- 1 Switch to an MS-DOS prompt.**
- 2 Create a new directory on your work station.**
- 3 Change to this directory.**
- 4 Insert the printer system software disk in your work station's 3.5" disk drive.**
- 5 Type `x:pkunzip x:system.` where *x* is the name of the disk drive in which you inserted the system software disk.**
- 6 Follow the prompts.**

They instruct you to insert the system software disks in the following order:

- a Last disk (system software disk 4)
- b Disk 1 (system software disk 1)
- c Disk 2 (system software disk 2)
- d Disk 3 (system software disk 3)
- e Disk 4 (system software disk 4)

## **Downloading the System Software—Parallel**

- 1 Send the new image to the printer.**

- Type the following:

```
copy /b *.dl lpt#<
```

where # is 1 to 4. (/b refers to binary files.)

- 2 While the system software is loading, the display shows**

```
Downloading image  
via parallel port.
```

## Testing PC Printer Communication

- 3 After the updated system software has been written to hard disk the printer initializes to activate the new system software.

After you have formatted the disk and loaded the system software, the printer should return to its normal operating state. If you had special configurations or passwords on the printer, you need to reconfigure these. With new software the printer returns to all of the factory settings within the menu.

If you get the same disk failure messages again, even after reformatting and reloading system software, you need to call QMS service. See appendix A, "QMS Customer Support", for information on contacting QMS for service.

# Testing PC Printer Communication

To test communication between your printer and your PC, first create a short file that ejects a page from the printer. Then send the file to the printer.

## Creating the Test File

To create the test file, type the following commands at a DOS prompt:

```
copy con printest.ps↵
showpage↵
^D^Z↵
```

(All commands above except the DOS **copy** command are case sensitive and must be typed exactly as shown.) **showpage** is a PostScript command that prints a blank page. The ↵ symbol means to press the Enter key. To produce the ^D and ^Z, press and hold down the Ctrl key while you type the appropriate letters (d and z). These characters signify the end of the file and must always be included.

## **Sending the Test File**

- 1 To send the PRINTEST.PS file you just created to the printer, type**

```
copy /b printest.ps lpt1↵
```

»

**Note:** *If the computer has more than one parallel port, they're probably labeled. If not, check the computer documentation for the LPT port names.*

- 2 If the printer and PC are communicating, a blank page ejects from the printer. Skip ahead to “PC Printing Software” to finish connecting the printer.**

If a blank page doesn't eject and you typed the file correctly, you may want to check your AUTOEXEC.BAT file to see if LPT1 (the parallel port) is being directed to COM1 (the serial port):

- a If the AUTOEXEC.BAT file contains the line

```
MODE LPT1:=COM1:
```

delete it.

- b Then type

```
MODE LPT1: , P↵
```

The “P” represents infinite retry and it tells the PC to send print jobs until the printer accepts them.

- c Restart the PC and retry the communication test.

Refer to your DOS documentation for more information.

# **Miscellaneous Problems**

## **No Advanced Status Page**

If your printer prints a standard status page even though you've configured the printer in the Administration/Special Pages/Status Page Type menu to print an advanced status page, your printer probably doesn't have enough free memory available. To print an advanced status page you may need to reduce the amount of memory assigned to one or more of the memory clients (see the "Memory" section in chapter 5, "Additional Technical Information," of the *Reference* guide for information about memory clients).

## **No Start-up Page**

If the Ready indicator is on, but no start-up page prints, check the following:

### **1 Has the start-up page been disabled?**

Use the control panel to make sure the start-up page is on.

### **2 Turn the printer off. From a cold start, the printer takes 2 minutes or longer to warm up.**

Be sure you wait long enough for a start-up page before suspecting a problem.

### **3 Check to be sure the paper trays are loaded with paper, in place and secure.**

### **4 Open the doors of the printer and check for a paper jam.**

If you still have not solved the problem, you need to call your QMS vendor for help. Go to the last section of this chapter, "Placing a Service Call."

## **Paper Jam Message Stays On**

If a paper jam message stays on, open the printer and clear the jam. If the message is still there, try opening and closing the top of the printer again. See chapter 4, “Printer Jams,” for more information.

## **Printer Resets**

Occasionally, Macintosh applications interfere with each other. Applications send a printer prep file to the printer at the beginning of each document. Other prep files cannot be sent without resetting the printer. Monitor your activities to see if there is a correlation between your use of a certain application and the printer resetting.

## **PostScript Errors**

If your printer is having trouble printing when using PostScript emulation, you should turn on the Error Handler in the control panel menu. Error Handler is a diagnostic tool that identifies PostScript errors encountered during a print job.

<b>Menu</b>	Administration/Startup Options/Do Error Handler
<b>Choices</b>	Yes—Load the Error Handler. No—Don't load the Error Handler.
<b>Default</b>	No
<b>Notes</b>	<p>The Error Handler will load the next time the printer is turned back on. Turn the printer off then on to enable the Error Handler.</p> <p>Refer to the <i>PostScript Language Reference Manual</i> (Adobe Systems Incorporated, Reading, PA: Addison-Wesley, 1990, ISBN 0-201-18127-4) for information on PostScript errors.</p>

## **CrownNet Problems**

If you have trouble installing and setting up your QMS CrownNet interface, check the following:

- If the printer is using a network interface card, is it correctly installed in the printer?
- Is the printer connected to the network?
- Is the printer plugged in, turned on, and correctly configured?
- Do the printer start-up and status pages list the interface? Is the configuration information correct?
- Is the interface enabled?
- Is the appropriate protocol (or protocols) enabled?
- Are all printer and protocol addresses configured correctly?
- Does the printer show up in the list in the CrownAdmin window?

Check the *QMS CrownNet Setup Guide* or the *QMS CrownNet System Administrator's Guide* for more information.

## **Windows Driver Problems**

### **Printer Description Files**

If you experience problems either when installing or using printer description files on a PC, see “Notes on Installing Printer Description Files,” in chapter 3, “Connecting to a PC,” in the *Getting Started* manual.

# **Output Problems**

## **Not All Pages Print**

If the printer stops printing in the middle of your file, try the following:

**1 Check your cable.**

You could have the wrong kind of cable, or your printer may not be configured for the correct cable and port.

**2 Make sure no one pressed the Cancel button while your job was printing.**

**3 Check the message window to see if the tray you are using needs more paper.**

## **Paper Jams Always Occur**

**1 Check that the paper does not exceed the paper limit mark.**

Make sure that the stack does not exceed the paper limit mark on the paper tray.

**2 Check that the paper stack is correctly aligned.**

Make sure that the stack is correctly aligned in the paper tray or in the multipurpose tray.

**3 Check the printer for residual jammed paper.**

**4 Remove any jammed paper remaining inside the printer by checking the locations in chapter 4, "Printer Jams."**

**5 Make sure the tray paper size tabs match the type of paper that is loaded. Check the display panel to see what the paper size is for each tray.**

# **Print Quality Problems**

Print quality problems are those related to the appearance of the pages you print. Print quality problems include white lines on the page, blacks lines, and other print distortions.

First, refer to the appendix B, “Technical Specifications,” in your *Reference* guide for recommended paper types. If you are using a high-quality brand paper type and continue to have problems with the quality of your printed pages, try this quick-check procedure:

**1 Try another brand of paper.**

See appendix B, “Technical Specifications,” in the *Reference*, for paper specifications.

**2 Check that there is enough toner in the printer.**

If the **TONER LOW** message appears in the message window, add more toner.

**3 Check that toner recycling mode is turned off. See “Enabling Toner Recycling Mode” on page 9-31.**

**4 Check that Conserve Toner mode is disabled under the Administration/Engine/Print Quality configuration menu.**

**5 Check the Toner Density setting in the Administration/Engine/Toner Density configuration menu.**

**6 See “Image Defects” on page 9-32 for information on troubleshooting specific image quality problems.**

**7 Place a service call to your QMS vendor.**



## **Enabling Toner Recycling Mode**

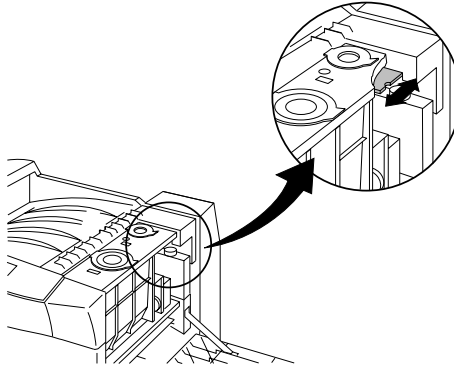
Toner recycling can be enabled in one of three ways on your printer. The print quality in toner recycling mode can cause small voids or lighter print to occur on your paper output. The three ways to enable toner recycling are

- Moving a plastic slide over the toner waste bottle to the toner recycling position.
- Removing the waste toner bottle and not replacing it.
- Allowing the waste toner bottle to fill up.

## **Recovering From Toner Recycling Mode**

To recover from toner recycling mode, you have to perform the following steps:

- 1 Ensure that the plastic slide over the toner waste bottle is moved to the forward position, turning off toner recycling.**



- 2 Completely use all the toner that is stored in the toner hopper.**
  - a Select Continue on the Administration/Engine/Toner Low Act menu.
  - b Run the printer until you get a **TONER LOW** message appears on the control panel.

## **Print Quality Problems**

- c Continue running the printer until you get a **TONER OUT** message on the control panel.
- 3 Purge the developer unit and add new developer.**
  - a Access the Administration/Consumables,/Developer menu.
  - b Follow the procedures and prompts to add new developer. See chapter 2, “Consumables,” for procedures on adding new developer.
- 4 Add new toner. Follow the procedures in chapter 2, “Consumables,” for procedures on adding new toner.**
- 5 Replace the toner waste bottle.**

## **Image Defects**

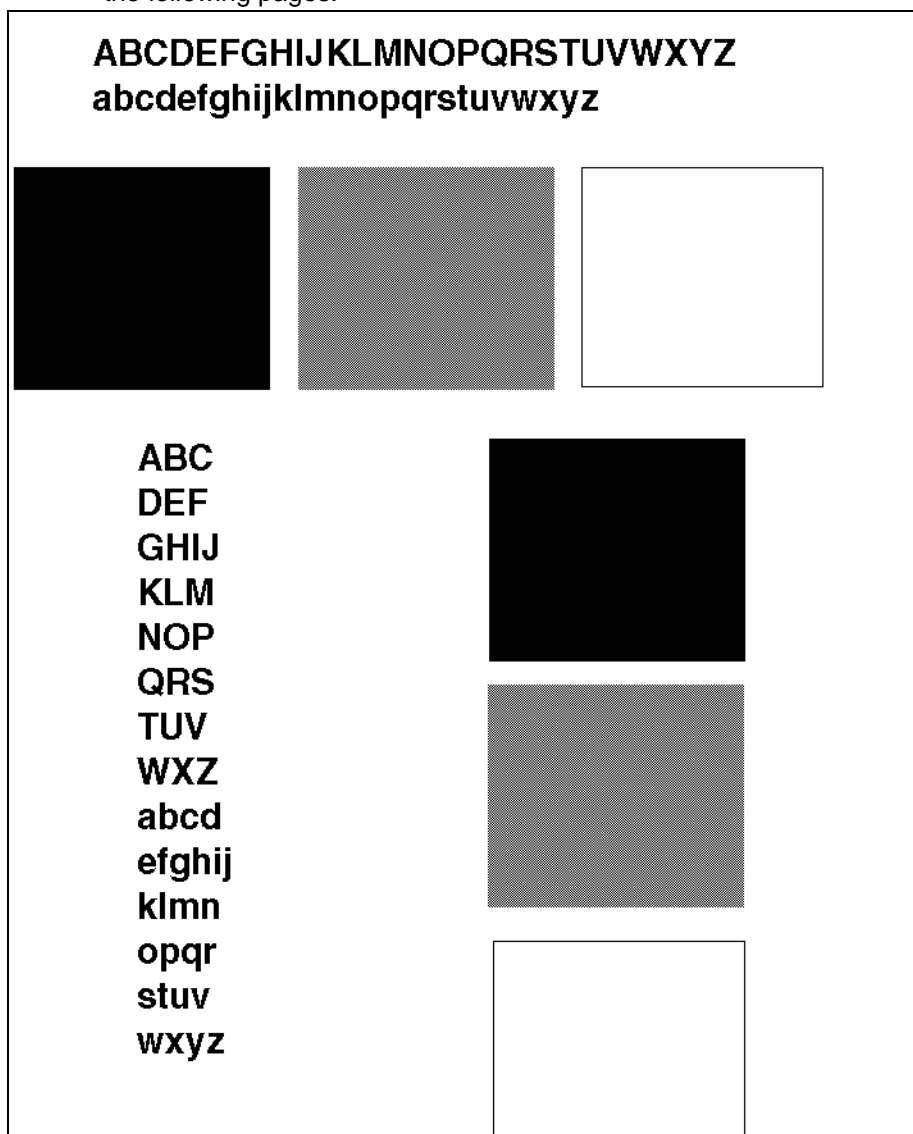
This section includes several image defects with some possible guidelines. If you try the suggested guidelines and your problem is still present contact QMS. See Appendix A, “QMS Customer Support”, for contact information.

Try to solve your image problem first by performing a few simple procedures.

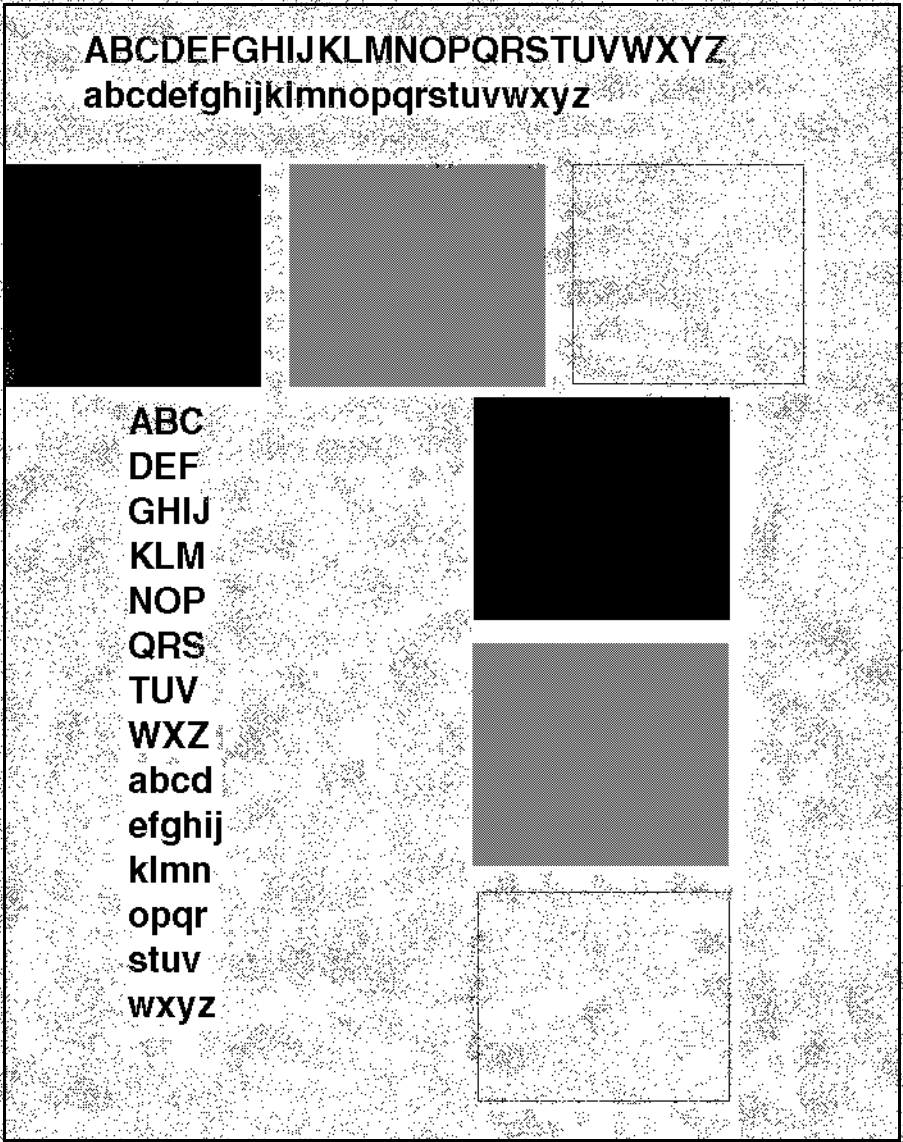
- Clean your printer thoroughly. See chapter 3, “Printer Care,” for information on cleaning.
- Complete all of the weekly and monthly maintenance procedures. See chapter 2, “Consumables,” for information on maintenance.

## **Typical Page Sample**

Use this typical page as a reference for some of the image defects on the following pages.



**Background on the Page**



## **Troubleshooting Background Printing**

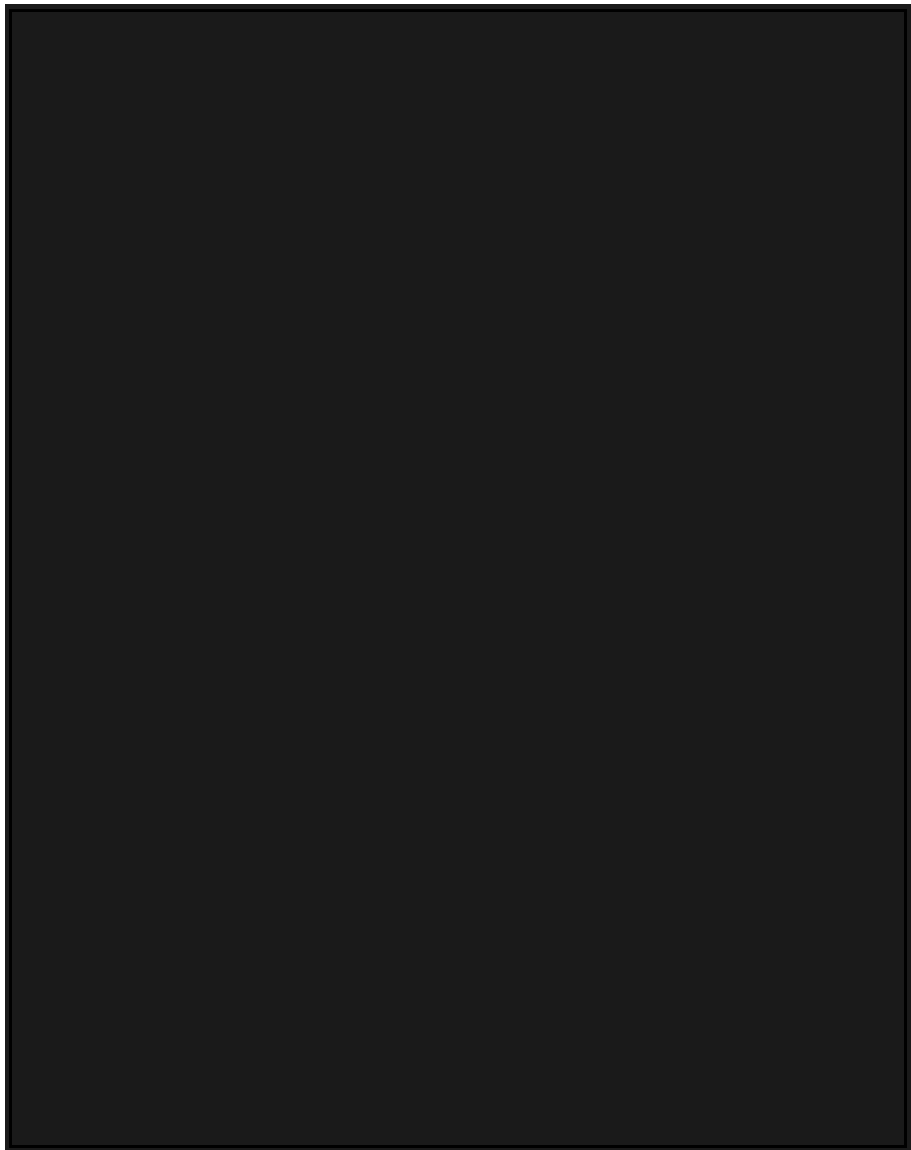
The page contains specks of toner in patterns in the white areas of the page.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Check the toner recycle switch. Set it to OFF and install waste toner bottle. See “Enabling Toner Recycling Mode” on page 9-31 for information.
- Check the Toner Density setting in the Administration/Engine/Toner Density configuration menu.
- Check consumables to see if they have reached end of life. If so, then replace. See chapter 2, “Consumables,” for information.
- Clean the precharger. See chapter 2, “Consumables,” for information.
- Clean the transfer charger. See chapter 2, “Consumables,” for information.
- Clean all of the paper feed paths in the printer, around the drum and the developer unit.
- Print 10 pages for a test.
- Replace the developer. See chapter 2, “Consumables,” for information.
- Replace the drum unit. See chapter 2, “Consumables,” for information.

If you have tried these actions and your print quality is still not satisfactory, see “Placing a Service Call” on page 9-68.

## **Black or Dark Pages**



## **Troubleshooting Black or Dark Pages**

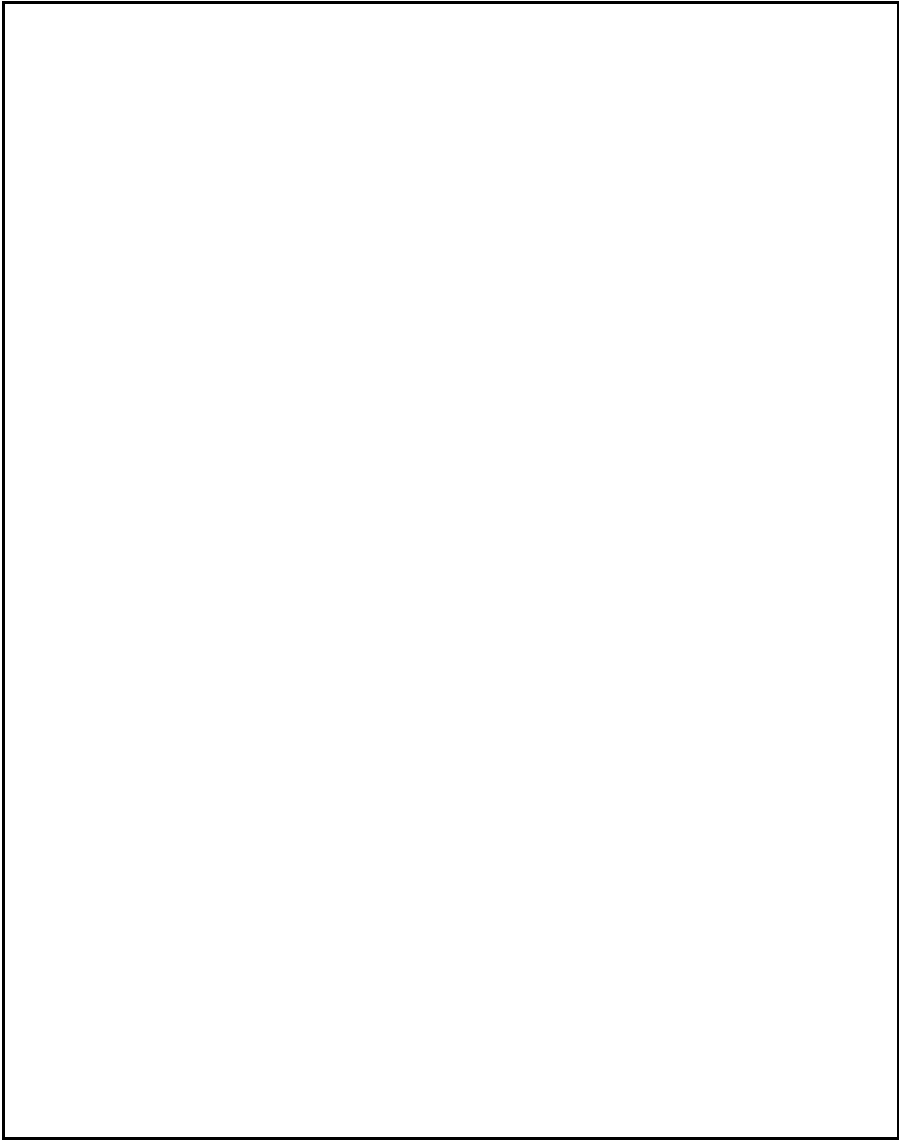
The page is very dark or black with no visible images.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Replace the drum unit. See chapter 2, “Consumables,” for information.
- Print 10 pages for a test.
- Replace the developer. See chapter 2, “Consumables,” for information.

If you have tried these actions and your print quality is still not satisfactory, see “Placing a Service Call” on page 9-68.

**Blank Pages**





## **Troubleshooting Blank Printing**

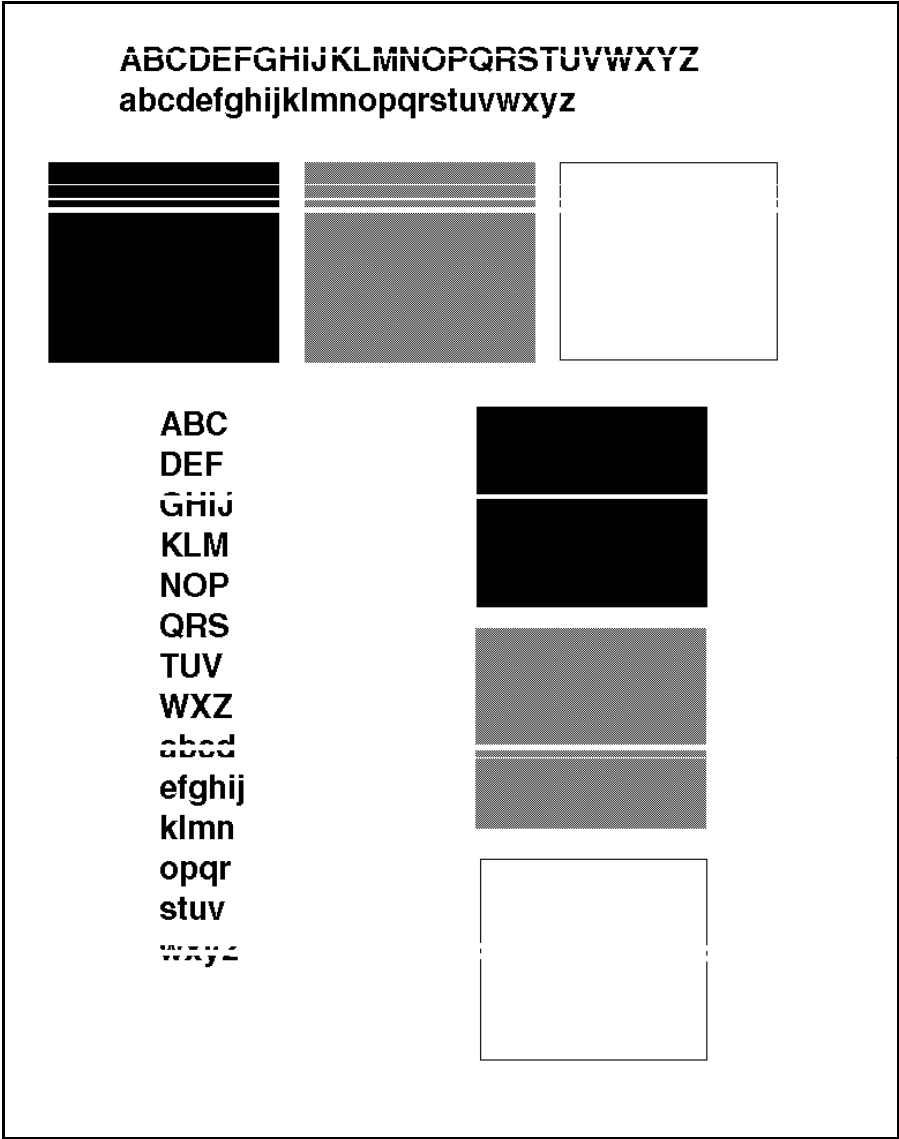
No images or characters appear on the page and the paper is not discolored.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Check consumables to see if they have reached end of life. If so, then replace them. See chapter 2, "Consumables," for information.
- Print 1 page for a test.
- Print 20 pages for a test.

If you have tried these actions and your print quality is still not satisfactory, see "Placing a Service Call" on page 9-68.

Blank Bands on the Page



## **Troubleshooting Blank Bands on the Page**

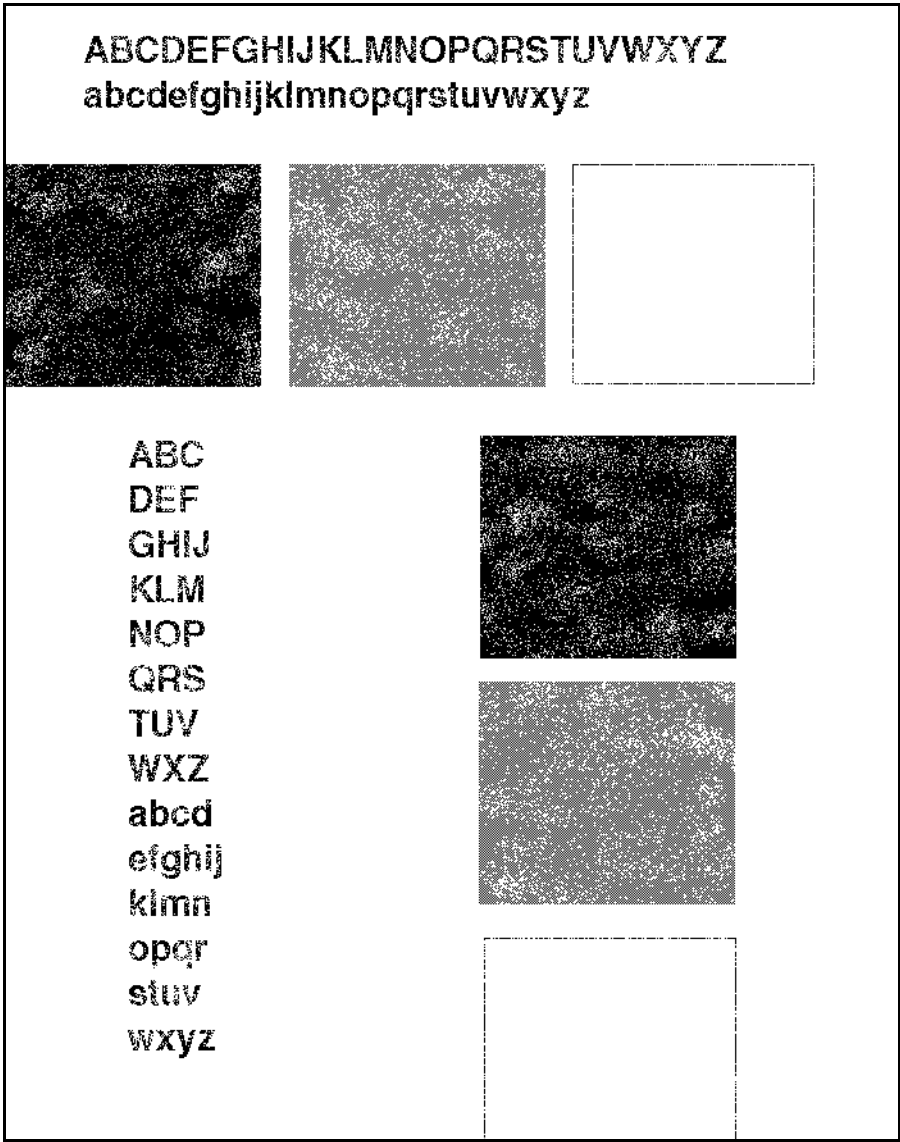
One or more blank lines of varying width in the direction of the paper feed.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Check consumables to see if they have reached end of life. If so, then replace them. See chapter 2, “Consumables,” for information.
- Print 10 pages for a test.
- Clean the precharger. See chapter 2, “Consumables,” for information.
- Clean the transfer charger. See chapter 2, “Consumables,” for information.
- Clean all of the paper feed paths in the printer, around the drum and the developer unit.
- Print 1 test page.
- Replace the cleaning roller on the fuser.
- Print 1 test page.
- Replace the developer. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the drum unit. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the fuser. See chapter 2, “Consumables,” for information.

If you have tried these actions and your print quality is still not satisfactory, see “Placing a Service Call” on page 9-68.

**Blurred Images or Characters on the Page**



## **Troubleshooting Blurred Images or Characters**

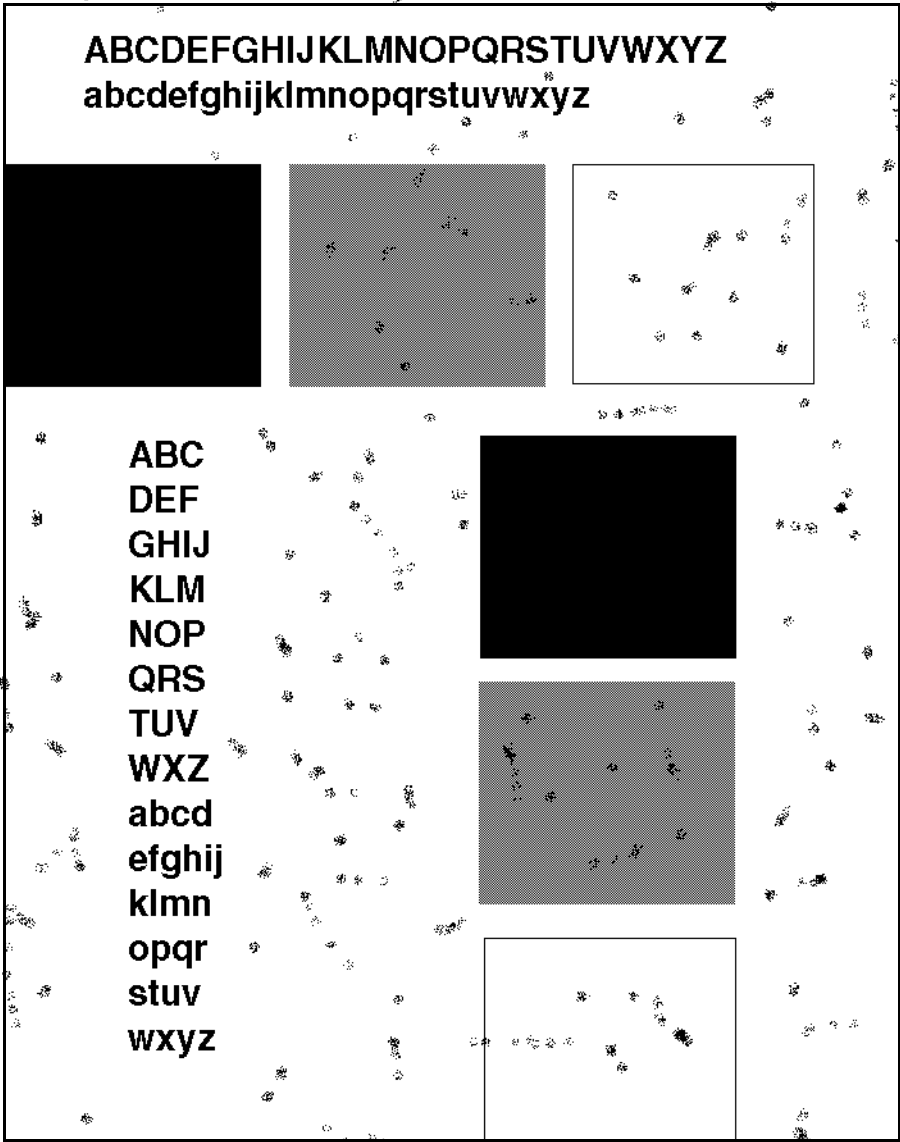
The edges of the images or characters are not sharp and crisp.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Check if Conserve Toner mode is enabled in the Administration/Engine/Print Quality configuration menu. If so, turn it off.
- Check the toner recycle switch. Set it to OFF and install waste toner bottle. See “Enabling Toner Recycling Mode” on page 9-31 for information.
- Check the Toner Density setting in the Administration/Engine/Toner Density configuration menu.
- Check consumables to see if they have reached end of life. If so, then replace them. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Clean the precharger. See chapter 2, “Consumables,” for information.
- Clean the transfer charger. See chapter 2, “Consumables,” for information.
- Clean all of the paper feed paths in the printer, around the drum and the developer unit.
- Replace the developer. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the drum unit. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the fuser. See chapter 2, “Consumables,” for information.

If you have tried these actions and your print quality is still not satisfactory, see “Placing a Service Call” on page 9-68.

**Dark Specks, Lines, or Dark Areas**



## **Troubleshooting Dark Specks, Lines, or Dark Areas**

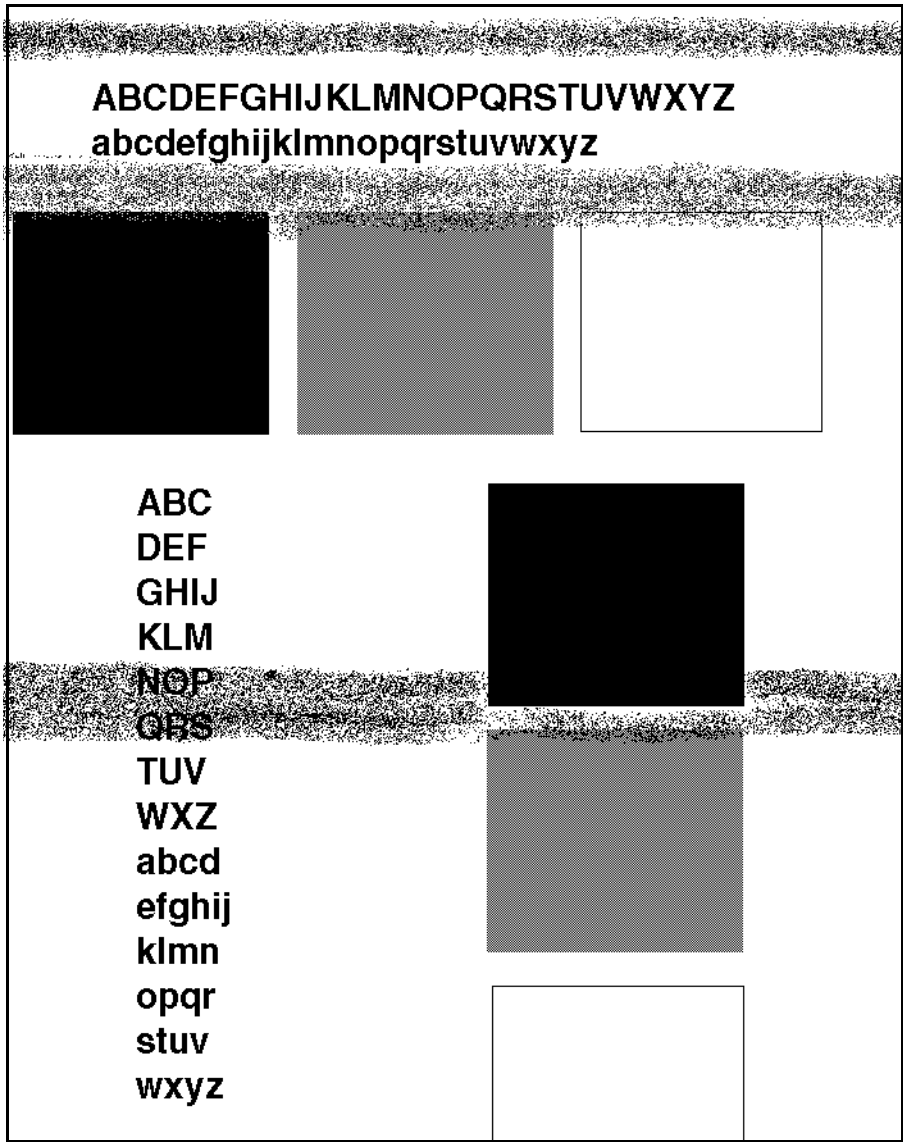
Dark specks or lines resembling scratches appear on the same place on each page.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Check consumables to see if they have reached end of life. If so, then replace them. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Clean the precharger. See chapter 2, “Consumables,” for information.
- Clean the transfer charger. See chapter 2, “Consumables,” for information.
- Clean all of the paper feed paths in the printer, around the drum and the developer unit.
- Print 1 test page.
- Replace the cleaning roller on the fuser. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the developer. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the drum unit. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the fuser. See chapter 2, “Consumables,” for information.

If you have tried these actions and your print quality is still not satisfactory, see “Placing a Service Call” on page 9-68.

Dark Lines on the Page





## **Troubleshooting Dark Lines on the Page**

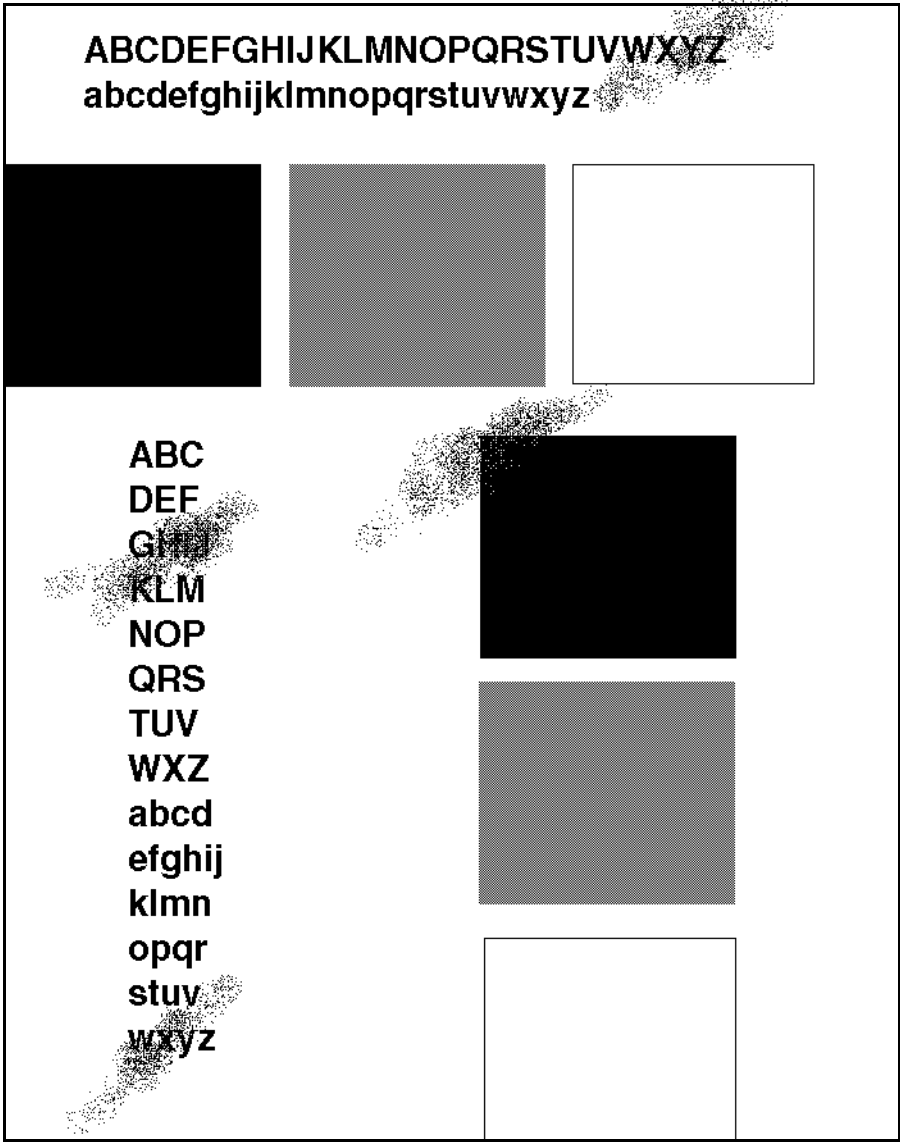
The page contains one or more dark lines of varying width and density in the paper feed direction.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Check consumables to see if they have reached end of life. If so, then replace them. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Clean the precharger. See chapter 2, “Consumables,” for information.
- Clean the transfer charger. See chapter 2, “Consumables,” for information.
- Clean all of the paper feed paths in the printer, around the drum and the developer unit.
- Print 1 test page.
- Replace the drum unit. See chapter 2, “Consumables,” for information.

If you have tried these actions and your print quality is still not satisfactory, see “Placing a Service Call” on page 9-68.

Fusing Problems on the Page



## **Troubleshooting Fusing Problems**

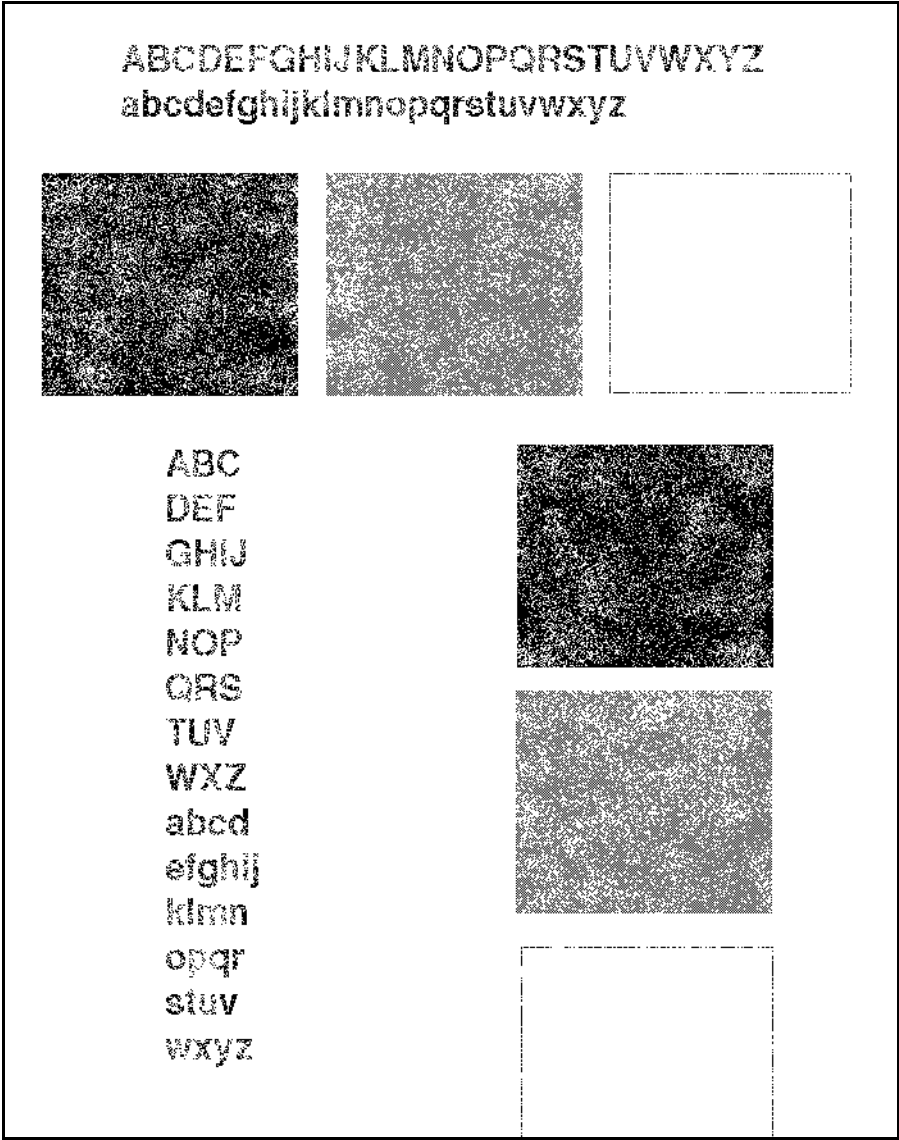
Images or characters rub off the page very easily.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Check that lever 4 on the fuser is in the closed position (up). See chapter 2, "Consumables," for information.
- Print 1 test page.
- Replace the fuser. See chapter 2, "Consumables," for information.

If you have tried these actions and your print quality is still not satisfactory, see "Placing a Service Call" on page 9-68.

Light Print



## **Troubleshooting Light Print**

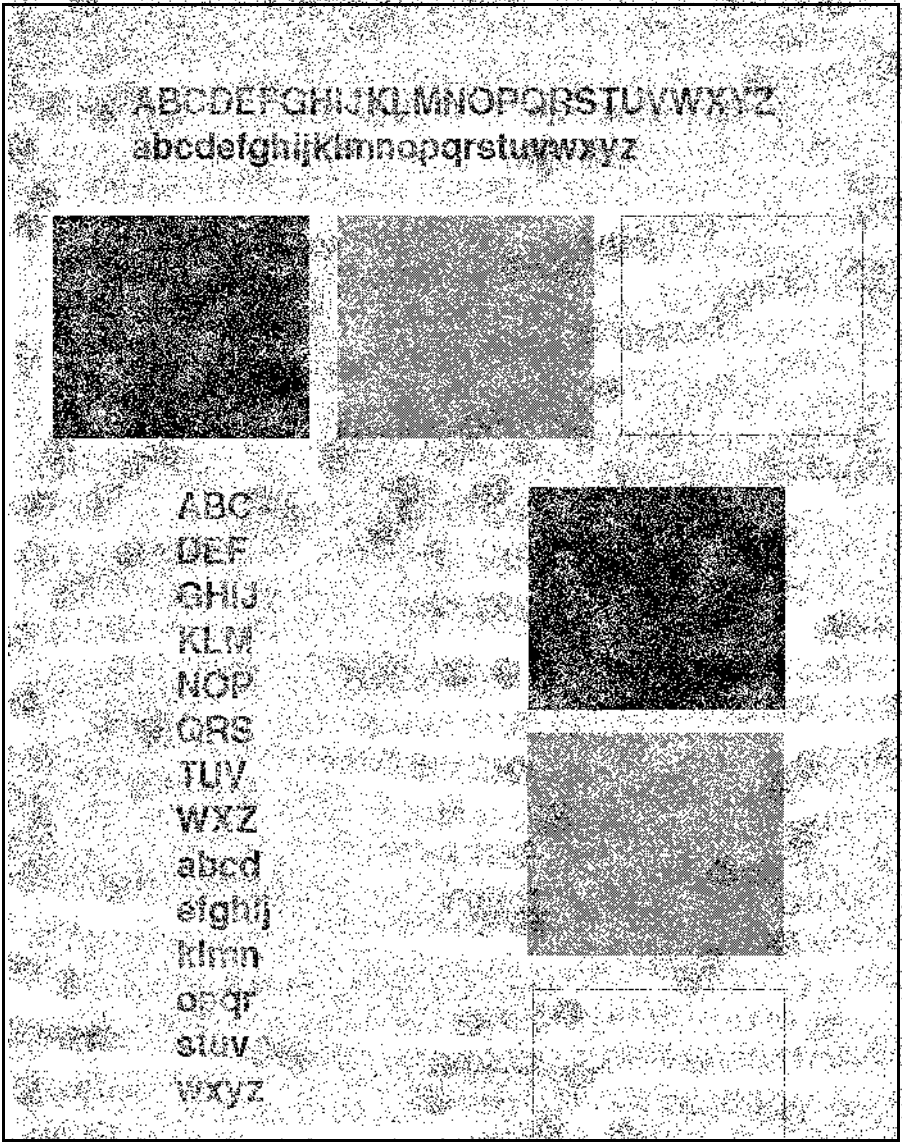
Images or characters on the page are lighter than normal.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Check if Conserve Toner mode is enabled in the Administration/Engine/Print Quality configuration menu. If so, turn it off.
- Check the toner recycle switch. Set it to OFF and install a waste toner bottle. See “Enabling Toner Recycling Mode” on page 9-31 for information.
- Check the Toner Density setting in the Administration/Engine/Toner Density configuration menu.
- Print 1 test page.
- Check consumables to see if they have reached end of life. If so, then replace them. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Clean the precharger. See chapter 2, “Consumables,” for information.
- Clean the transfer charger. See chapter 2, “Consumables,” for information.
- Clean all of the paper feed paths in the printer, around the drum and the developer unit.
- Print 1 test page.
- Replace the developer. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the drum unit. See chapter 2, “Consumables,” for information.

If you have tried these actions and your print quality is still not satisfactory, see “Placing a Service Call” on page 9-68.

Light Print with Background



## **Troubleshooting Light Print with Background**

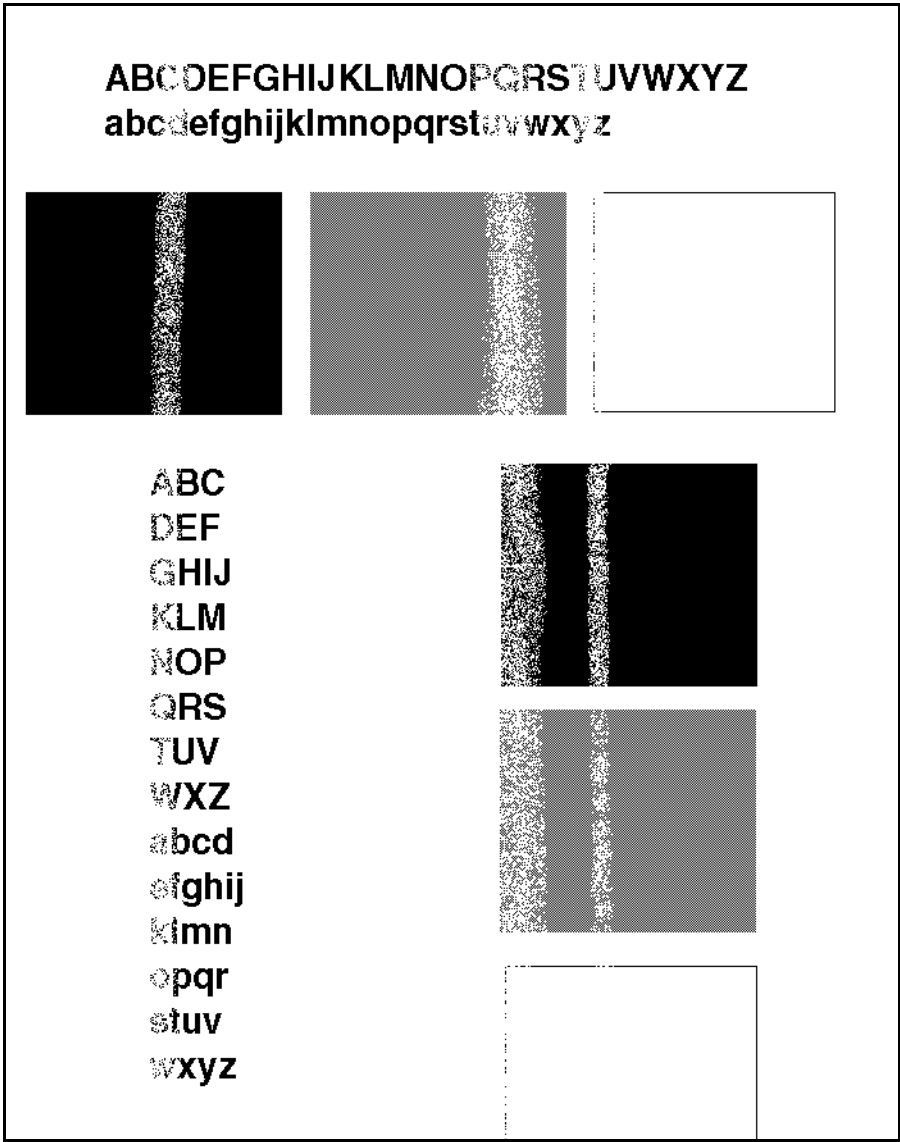
Images or characters on the page are lighter than normal and the background contains dark specks.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Check consumables to see if they have reached end of life. If so, then replace them. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Check the toner recycle switch. Set it to OFF and install a waste toner bottle. See “Enabling Toner Recycling Mode” on page 9-31 for information.
- Check the Toner Density setting in the Administration/Engine/Toner Density configuration menu.
- Print 1 test page.
- Clean the precharger. See chapter 2, “Consumables,” for information.
- Clean the transfer charger. See chapter 2, “Consumables,” for information.
- Clean all of the paper feed paths in the printer, around the drum and the developer unit.
- Print 1 test page.
- Replace the developer. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the drum unit. See chapter 2, “Consumables,” for information.

If you have tried these actions and your print quality is still not satisfactory, see “Placing a Service Call” on page 9-68.

Light Bands





## **Troubleshooting Light Bands**

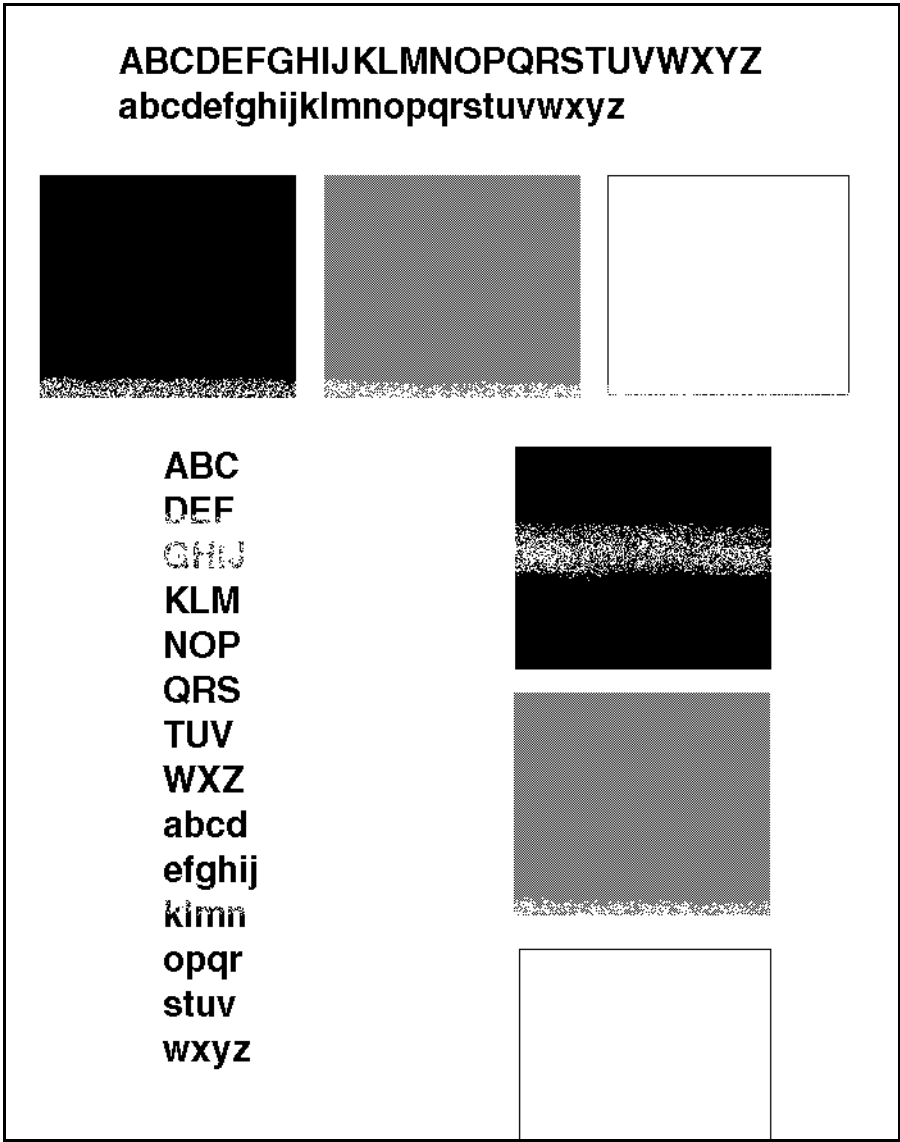
The page contains one or more light bands that are perpendicular to the paper feed direction.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Check consumables to see if they have reached end of life. If so, then replace them. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Check the toner recycle switch. Set it to OFF and install a waste toner bottle. See “Enabling Toner Recycling Mode” on page 9-31 for information.
- Print 1 test page.
- Clean the precharger. See chapter 2, “Consumables,” for information.
- Clean the transfer charger. See chapter 2, “Consumables,” for information.
- Clean all of the paper feed paths in the printer, around the drum and the developer unit.
- Print 1 test page.
- Replace the drum unit. See chapter 2, “Consumables,” for information.

If you have tried these actions and your print quality is still not satisfactory, see “Placing a Service Call” on page 9-68.

**Light Streaks**



## **Troubleshooting Light Streaks**

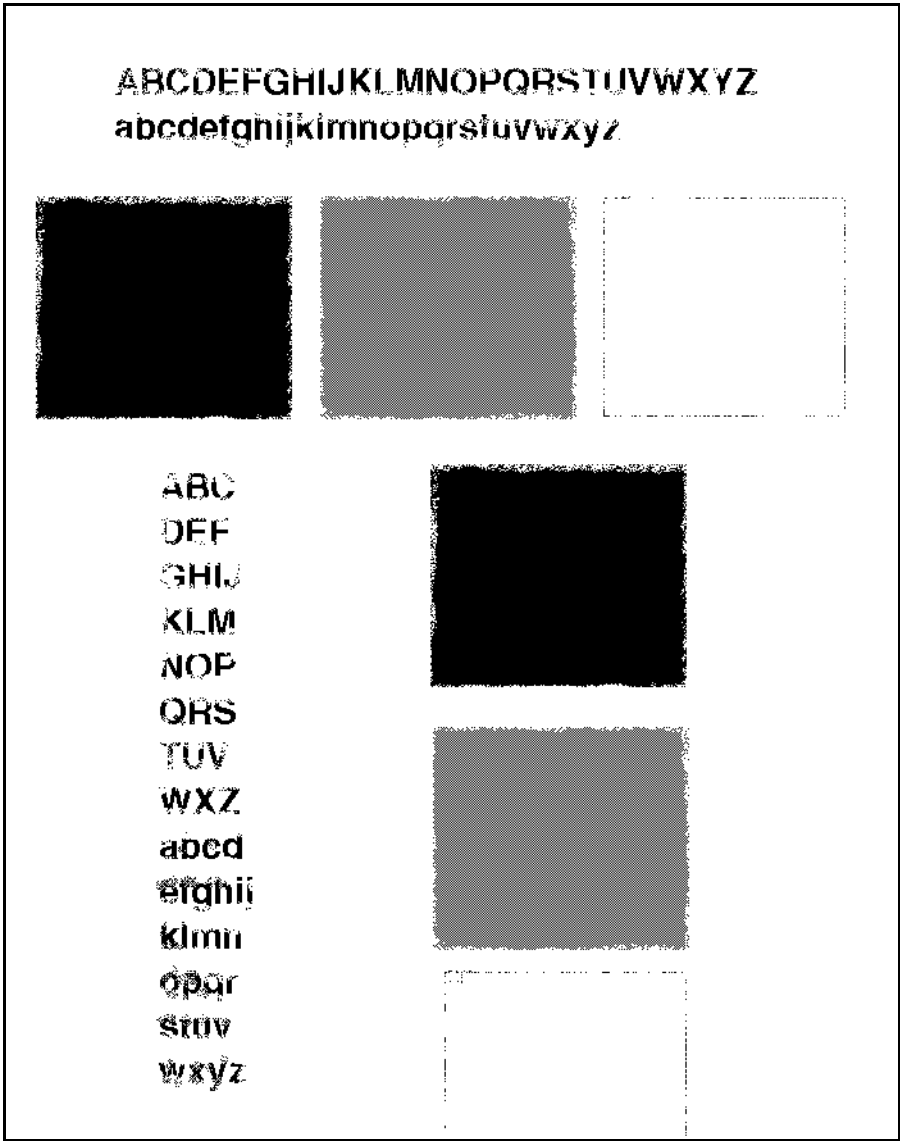
The page contains one or more light streaks or bands of varying intensity in the direction of the paper feed.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Check consumables to see if they have reached end of life. If so, then replace them. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Clean the precharger. See chapter 2, “Consumables,” for information.
- Clean the transfer charger. See chapter 2, “Consumables,” for information.
- Clean all of the paper feed paths in the printer, around the drum and the developer unit.
- Print 1 test page.
- Replace the cleaning roller on the fuser. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the developer. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the drum unit. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the fuser. See chapter 2, “Consumables,” for information.

If you have tried these actions and your print quality is still not satisfactory, see “Placing a Service Call” on page 9-68.

Overtone



## **Troubleshooting Overtone Printing**

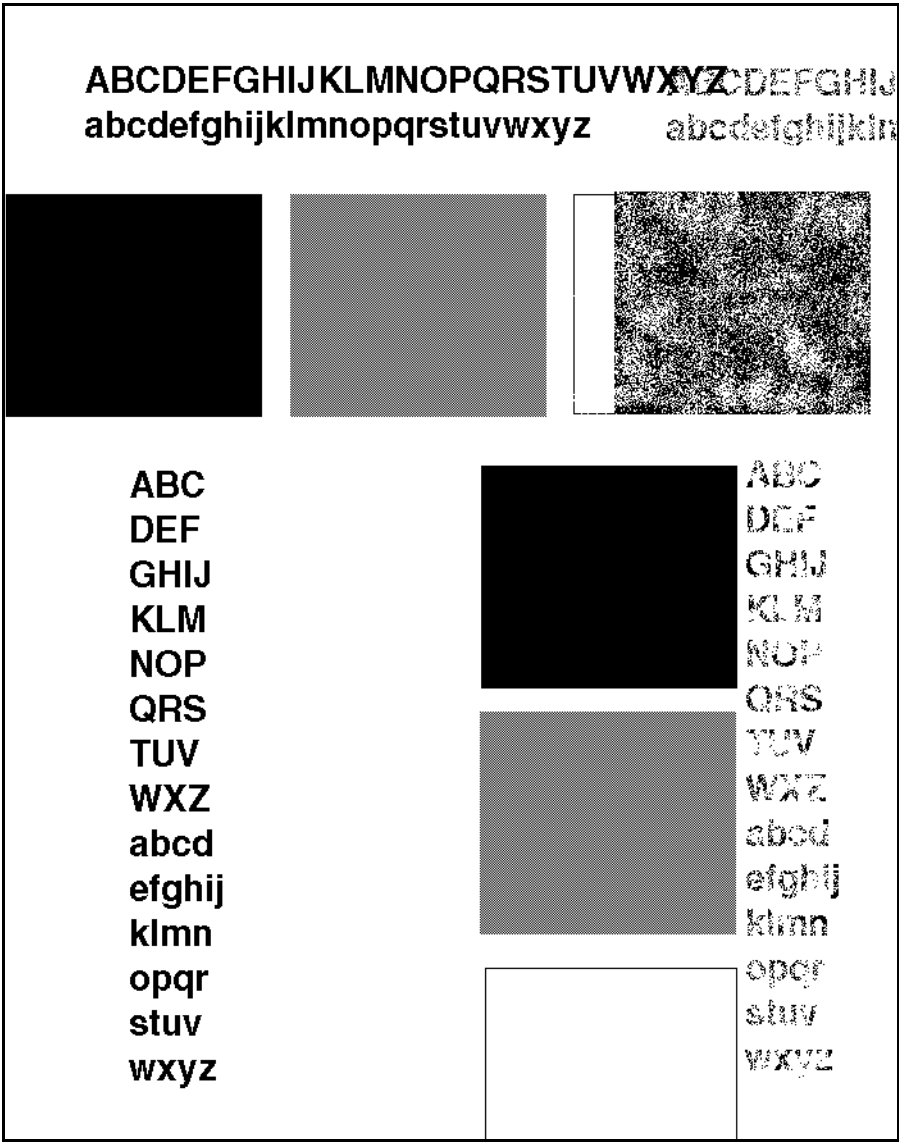
Narrow gaps between letters and images may be dark (filled with toner). Excess toner may be on the surface or background of the page.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Clean the precharger. See chapter 2, "Consumables," for information.
- Clean the transfer charger. See chapter 2, "Consumables," for information.
- Clean all of the paper feed paths in the printer, around the drum and the developer unit.
- Print 1 test page.
- Replace the developer. See chapter 2, "Consumables," for information.
- Print 1 test page.
- Replace the drum unit. See chapter 2, "Consumables," for information.

If you have tried these actions and your print quality is still not satisfactory, see "Placing a Service Call" on page 9-68.

Residual Images on the Page



## **Troubleshooting Residual Images on the Page**

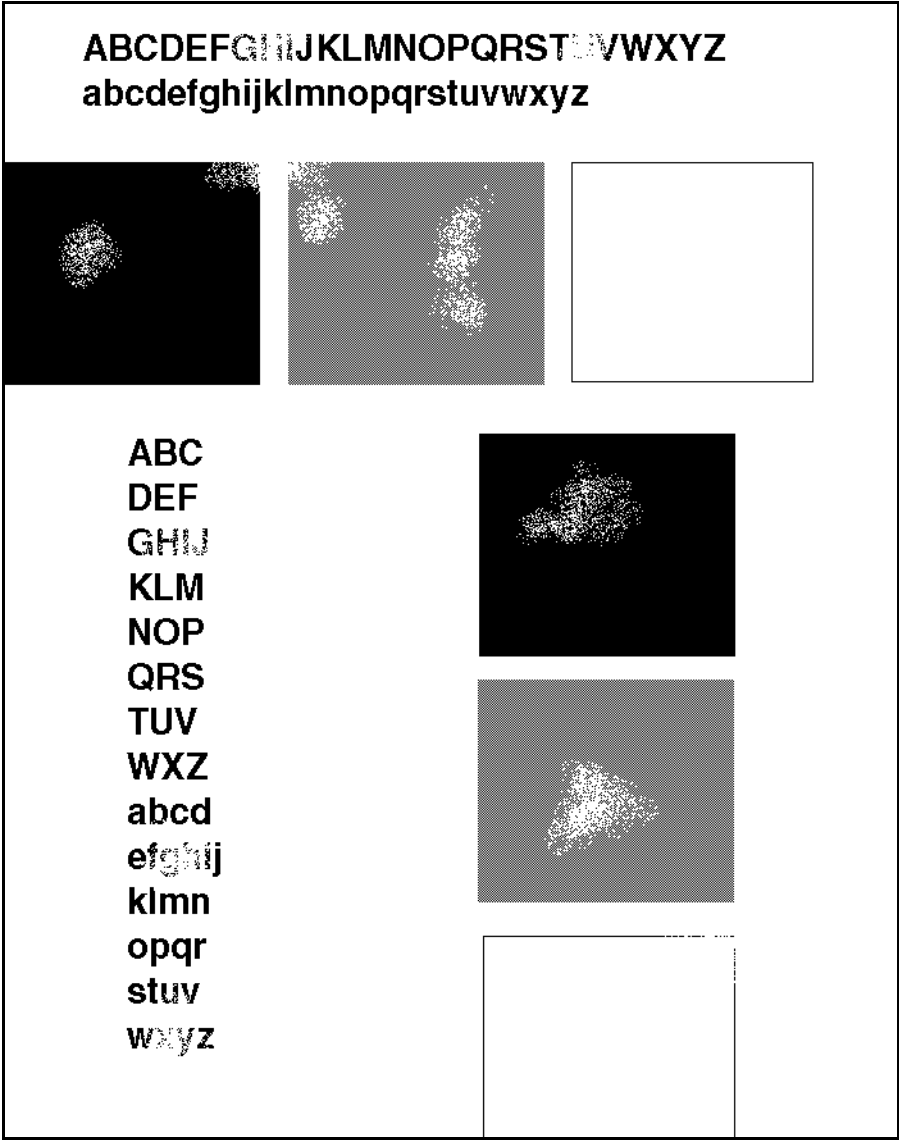
Images from a previous page are visible on the page.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Check consumables to see if they have reached end of life. If so, then replace them. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Clean the precharger. See chapter 2, “Consumables,” for information.
- Clean the transfer charger. See chapter 2, “Consumables,” for information.
- Clean all of the paper feed paths in the printer, around the drum and the developer unit.
- Print 1 test page.
- Replace the cleaning roller on the fuser. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the drum unit. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the fuser. See chapter 2, “Consumables,” for information.

If you have tried these actions and your print quality is still not satisfactory, see “Placing a Service Call” on page 9-68.

Voids or White Spots on the Page





## **Troubleshooting Voids or White Spots**

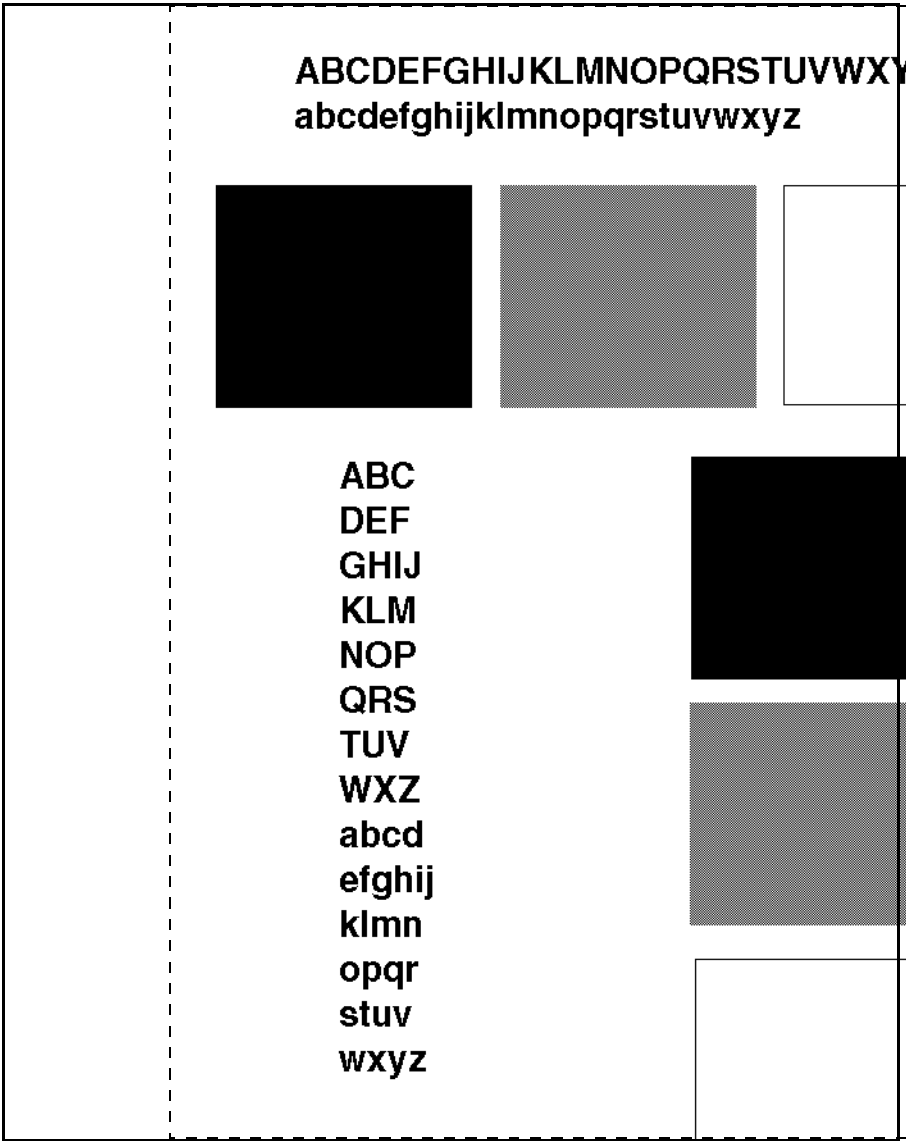
The page contains white spots or voids on the images.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Check consumables to see if they have reached end of life. If so, then replace them. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Check the toner recycle switch. Set it to OFF and install a waste toner bottle. See “Enabling Toner Recycling Mode” on page 9-31 for information.
- Print 1 test page.
- Clean the precharger. See chapter 2, “Consumables,” for information.
- Clean the transfer charger. See chapter 2, “Consumables,” for information.
- Clean all of the paper feed paths in the printer, around the drum and the developer unit.
- Print 1 test page.
- Replace the developer. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the drum unit. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the fuser. See chapter 2, “Consumables,” for information.

If you have tried these actions and your print quality is still not satisfactory, see “Placing a Service Call” on page 9-68.

Misregistration of the Page



## **Troubleshooting Misregistration**

The entire image is not correctly located on the page and part of the image may be missing.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Check if the paper size setting matches the paper size. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Realign the paper in the trays or LCIF. See “Enabling Toner Recycling Mode” on page 9-31 for information.
- Print 1 test page.
- Replace the paper with a newly opened stack. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Clean all of the paper feed paths in the printer, around the drum and the developer unit.

If you have tried these actions and your print quality is still not satisfactory, see “Placing a Service Call” on page 9-68.

Skewed Printing



## **Troubleshooting Skewed Printing**

The entire image is not placed squarely on the page.

Follow this check list to troubleshoot this image defect. After each action try a test page to see if you solved your problem.

- Realign the paper in the trays or LCIF. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Replace the paper with a newly opened stack. See chapter 2, “Consumables,” for information.
- Print 1 test page.
- Clean all of the paper feed paths in the printer, around the drum and the developer unit.
- Replace the pick roller kit in the tray that is skewing the paper. See chapter 2, “Consumables,” for information.
- Print 1 test page.

If you have tried these actions and your print quality is still not satisfactory, see “Placing a Service Call” on page 9-68.

# **Troubleshooting CrownCopy**

Refer to the “Troubleshooting” section of chapter 7, “CrownCopy,” in the *Options* manual for information on troubleshooting CrownCopy.

## **Placing a Service Call**

If you have a problem you cannot resolve, contact QMS. QMS is best equipped to immediately handle any problem you may encounter.

If you have technical questions you can call or fax questions to the QMS Customer Response Center (See Appendix A, "QMS Customer Support," for information on contacting the QMS Customer Response Center.) If you've determined your printer needs to be examined by a QMS service technician, contact QMS National Service for work inside the US, or one of the QMS international offices for work outside of the US. (National and international contacts are listed in appendix A, "QMS Customer Support.") Before calling, be sure you have the answers to these questions handy to help our technicians serve you more quickly:

- 1 What is your printer model and serial number?**
- 2 What kind of host computer do you have?**
- 3 What operating system do you have and what version?**
- 4 What interface are you using? If serial, what protocol?**
- 5 What application are you using?**
- 6 What is the emulation of the file you're trying to print? In what emulation mode is the port?**
- 7 What is the firmware revision number for your printer? (It is listed on both the status and start-up pages.)**
- 8 If you can print, have a status page available.**

Your service representative needs to know these things prior to helping you.



# A

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## **QMS Customer Support**

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### **In This Appendix . . .**

- “Sources of Support” on page A-2
- “QMS World-wide Offices” on page A-5

# Sources of Support

Several sources of help and information are available, depending on the type of help you need:

## **Your QMS Vendor**

Your local vendor (the one from whom you bought the printer) may be best equipped to help you. Your vendor has specially trained service technicians available to answer questions, and the equipment to analyze your printer problems.

## **Your Application Vendor**

Often, “printing” problems have more to do with the application being used than with the printer. In this case, the application manufacturer is the best source of help.

## **Q-FAX**

Q-FAX, a QMS information retrieval service, provides application notes, technical support notes on common printing problems, and information about printer specifications, options, accessories, consumables, and prices.

In the United States and Canada, call (800) 633-7213 to reach Q-FAX. In all other countries, call (334) 633-3850. Have your fax number handy when you call (or place the call from your fax machine's handset).

You can choose to have either a directory (a list of currently available documents) or a specific document sent to you. The first time you call, request the directory (press 2 on your phone or fax keypad when prompted). Then call back to request specific documents. You can order up to three documents per call.



## **CompuServe**

Through CompuServe, you ask general (non-technical) questions, share information with other users, and access printing information and programs. When you use CompuServe, type `go qmsprint` to go directly to the forum where QMS is located. The QMS library section contains application notes, printer drivers, utilities, technical information, and announcement files.

## **Internet**

The QMS server provides access to technical reports, new product announcements, a trade show schedule, and other general information about QMS.

If you have access to the World Wide Web, you can view the QMS home page at <http://www.qms.com/>. The QMS ftp resource is <ftp.qms.com>.

## **QMS Customer Response Center (CRC)**

You can contact the QMS Customer Response Center (CRC) in three different ways:

- **Telephone**—You can call the CRC at (334) 633-4500 (US) Monday–Friday, 7:00 am–6:00 pm, Central Time.

» **Note:** *If you call for assistance, have the following information ready so our technicians can help you more quickly:*

- ☒ Your phone number, fax number, and shipping address
- ☒ A description of the problem
- ☒ The printer model
- ☒ The type of host computer you're using
- ☒ The type and version of operating system you're using
- ☒ The interface you're using, and, if serial, the protocol (for example, XON/XOFF)
- ☒ The application and version you're using

## Sources of Support

- ☒ The emulation you're using
- ☒ Your printer firmware version (listed on the status/start-up pages)
- **Fax**—You can fax questions to the CRC at (334) 633-3716 (US). Provide the same information as listed above, and indicate whether you would like a faxed or a phoned reply.
- **Internet**—If you have access to the World Wide Web, you can access the CRC through the QMS home page at <http://www.qms.com/>

# **QMS World-wide Offices**

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## **QMS United States and Latin America**

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### **General Contact**

1 (334) 633-4300

Fax 1 (334) 633-4866

Email [info@qms.com](mailto:info@qms.com)

Internet <http://www.qms.com>

Information on QMS products, supplies, and accessories, and on the authorized QMS remarketer or service provider nearest you

1 (800) 523-2696

### **Customer Response Center (CRC)**

Technical Assistance

1 (334) 633-4500

7:00 am–6:00 pm Central Time

Fax 1 (334) 633-3716

Internet <http://www.qms.com>

### **Latin America Fax**

1 (334) 639-3347

### **National Service**

Service Information, Installation, and Maintenance Pricing

1 (800) 762-8894

On-Site Service and Depot Repair Information

1 (800) 858-1597

7:00 am–7:00 pm Central Time

Spare Parts Ordering and Information

1 (334) 633-4300 x2530

8:00 am–5:00 pm Central Time

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## **QMS Canada**

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### **General Contact**

1 (514) 333-5940

Fax 1 (514) 333-5949

Supplies and Accessories

1 (800) 268-0343 x223

### **National Service**

On-Site Service and Depot Repair Information

1 (800) 268-4969

8:30 am–7:00 pm Eastern Time

Spare Parts Ordering and Information

1 (905) 206-9234 x238

8:30 am–5:00 pm Eastern Time

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## **QMS in Japan**

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### **General Contact**

(+81)-3 3779-9600

Fax (+81)-3 3779-9650

Internet <http://www.qmsj.co.jp>

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## **QMS in Latin America**

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### **General Contact**

Cra 43 DD#8-42

Oficina 201

Medellin, Colombia

(+57) (4) 312 13 70

Fax (+57) (4) 268 92 97

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## **QMS EMEA**

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### **QMS Australia**

Anitech

Sydney Business & Tech. Centre

52/2 Railway Parade

2141 Lidcombe NSW

Australia

(+61) 2-9901 3235

Fax (+61) 2-9901 3273

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### **QMS Benelux**

**Belgium, Nether-  
lands, and all  
unlisted countries**

Planetenbaan 60 'Corner Plaza'

3606 AK Maarssen

The Netherlands

(+31) 346-551333

Fax (+31) 346-550170

Internet <http://www.qms.nl>

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### **QMS France**

Vélizy Plus

1 Bis, Rue du Petit Clamart

78142 Vélizy Cedex

France

(+33) 1-410 79 393

Fax (+33) 1-408 30 110

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### **QMS GmbH**

**Germany and  
Austria**

Gustav Heinemann Ring 212

D-81739 Munich

Germany

(+49) 89 63 02 67 0

Fax (+49) 89 63 02 67 67

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<b>QMS Italy</b>	Via della Repubblica 56 43100 Parma Italy (+39) 52–1231 998 Fax (+39) 52–1232 902
<b>QMS Nordic</b> <b>Sweden, Finland, Norway, and Denmark</b>	Arenavägen 41, 6th floor 121 77 Johanneshov Sweden (+46) 8–600 01 30 Fax (+46) 8–600 01 33
<b>QMS South Africa</b>	Saskay House Unit 24 Sunninghill Business Park Peltier Road, Sunninghill, Johannesburg Republic of South Africa (+27) 11–807 6957 Fax (+27) 11–807 6960
<b>QMS UK</b> <b>United Kingdom and Ireland</b>	Old Bridge House, The Hythe Staines, Middlesex TW18 3JF United Kingdom (+44) 1784–442255 Fax (+44) 1784–461641





# B

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## Configuration Menu

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### In This Appendix . . .

- “Installation Menu” on page B-3
- “Operator Control Menu” on page B-4
- “Administration Menu” on page B-5

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# Introduction

You may use this section as a quick reference for understanding and navigating the menu structure of the QMS 4060 Print System. The following menu charts are provided in this section:

- **Installation Menu**  
Shows the configurations available when the security key is used to access the Installation Menu.
- **Operator Control Menu**  
Shows the operator printer configurations.
- **Administration Menu**  
Shows the printer administration configurations.

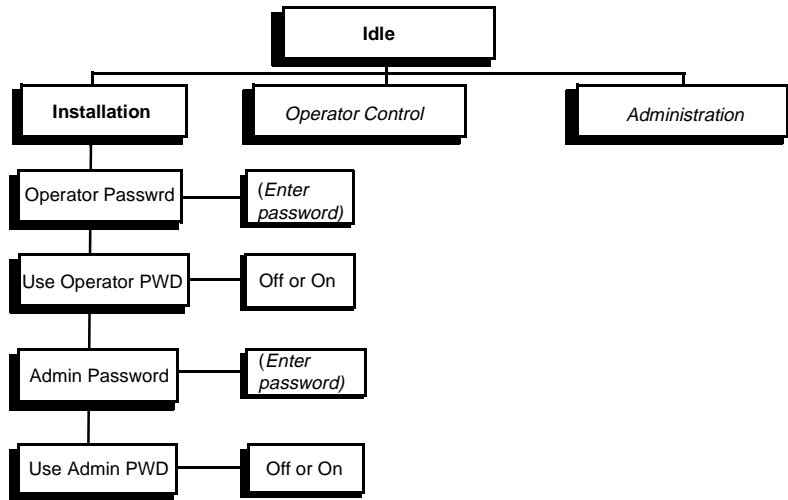
## Menu Chart Conventions

The following conventions are used in the menu charts:

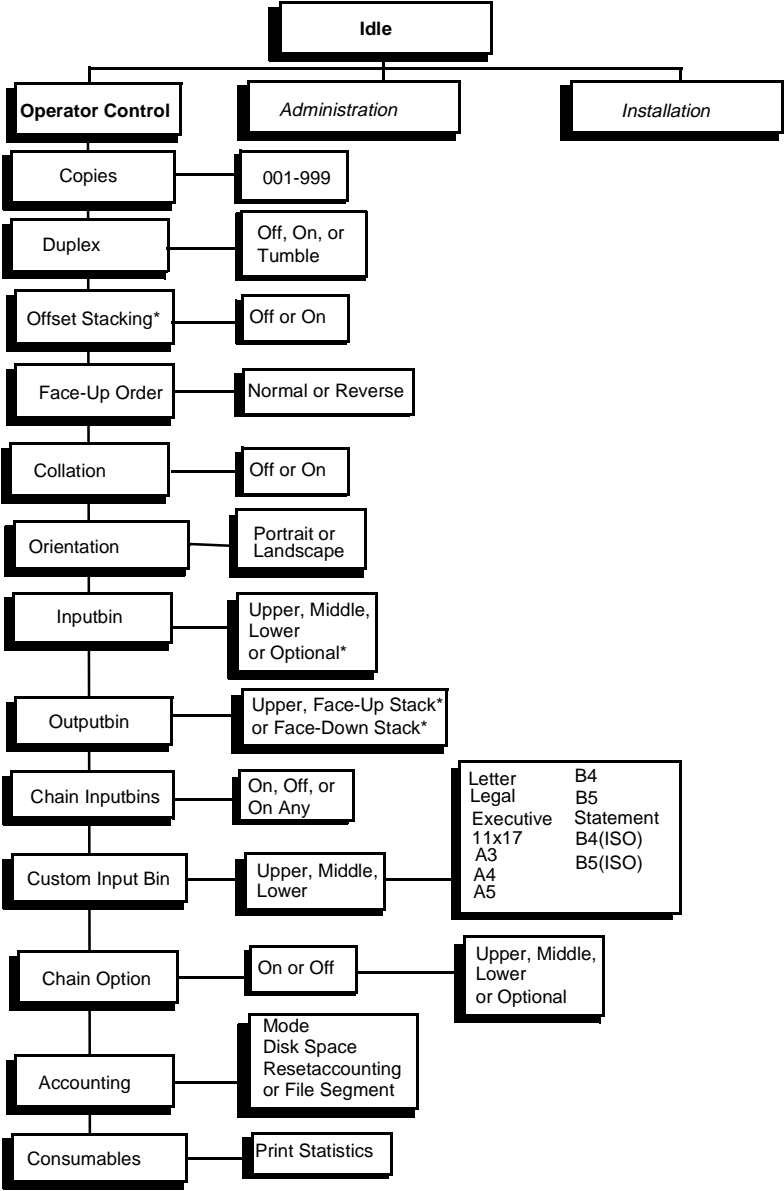
- Some menu selections are marked with an asterisk (\*). These selections will only appear on your print system if the specified option is installed.
- These menu charts show only the top-level menus. See chapter 4, “Printer Configuration,” of the *Reference* guide for detailed information on a menu selections’s options.



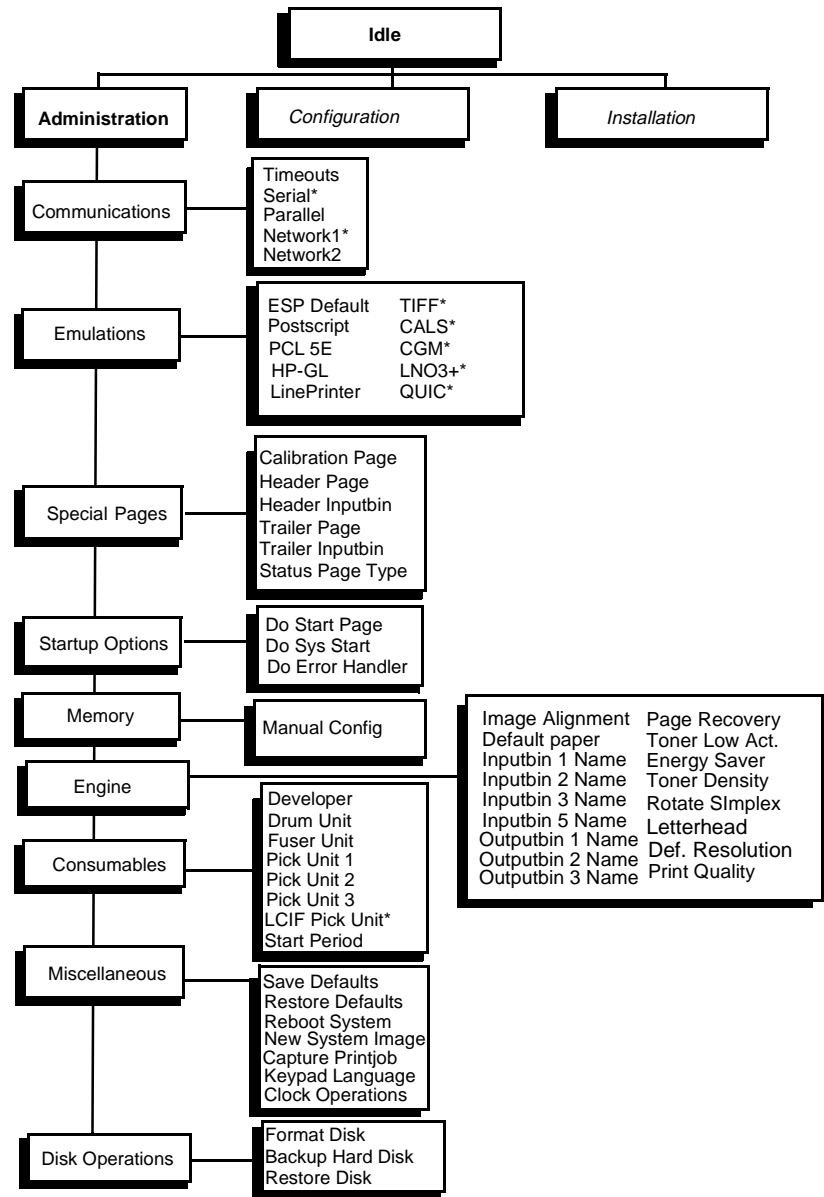
Installation Menu



Operator Control Menu



Administration Menu





# C

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## Repacking the Printer

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### In This Appendix . . .

- “Repacking Consumables” on page C-2
- “Inserting Shipping Restraints” on page C-17
- “Repacking the Options” on page C-27

# Introduction

In some cases, because of mechanical problems or other circumstances you may have to repack your printer to ship it back to QMS. Use this chapter as a guide to help you repack your printer.

- 
- ▲ **Caution:** *Only use the original packing materials to repack your printer. Follow all guidelines in this chapter to prevent damage to your printer. If you need replacement packaging, in the US call QMS National Service at 1 (334) 633-4300 X 2530. If you need to return the printer for service, in the US call QMS Customer Service at 1(334) 633-1072 for an RMA (Return Merchandise Authorization) number **before** shipping the printer. In other countries, refer to appendix A, "QMS Customer Support," for information.*
- 

If your printer has optional units attached, you must remove them and use their original packing materials to repack them. See "Repacking the Options" on page C-27 for information. Turn the power off and unplug the power cord and all interface cables before beginning.

## Repacking Consumables

You must remove all consumables from the printer before repacking and shipping it.

- 
- ▲ **Caution:** *Failure to remove consumables before repacking and shipping will result in damage to the printer.*
- 

The consumables that must be removed are

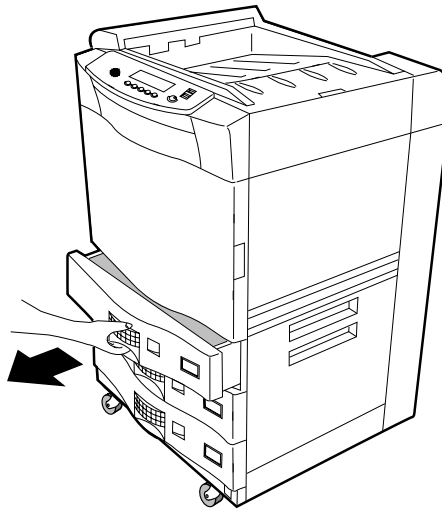
- |             |                     |
|-------------|---------------------|
| ■ Paper     | ■ Transfer Assembly |
| ■ Developer | ■ Drum Unit         |
| ■ Toner     | ■ Fuser             |

The toner in the printer should be as low as possible before repacking and shipping the printer. If possible, run the printer with a waste toner bottle in place and toner recycling disabled. Try to run it until you get the *TONER OUT* message on the display.

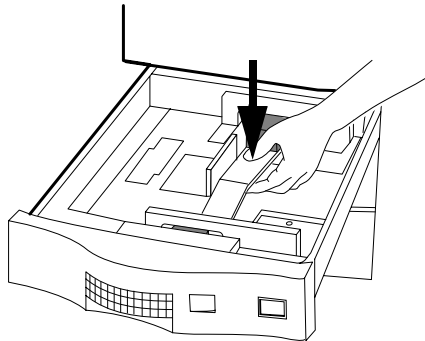
Follow these procedures for removing and repacking consumables.

### **Preparing the Paper Trays**

- 1 **Open each tray and remove all paper.**



- 2 **Reinstall the shipping restraints for each tray.**



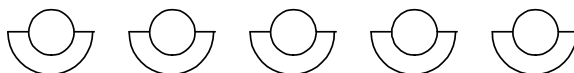
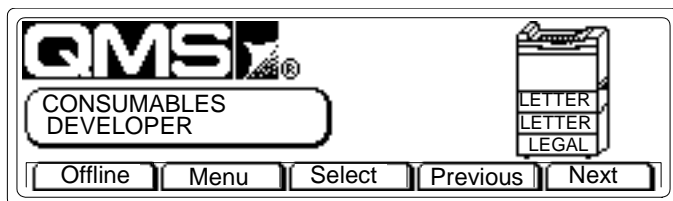
## Repacking Consumables

- 3 Close each tray.
- 4 Use nylon reinforced tape and apply some to each tray to secure for shipping.

### Preparing the Developer

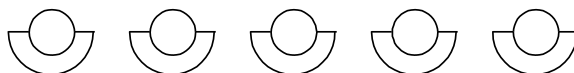
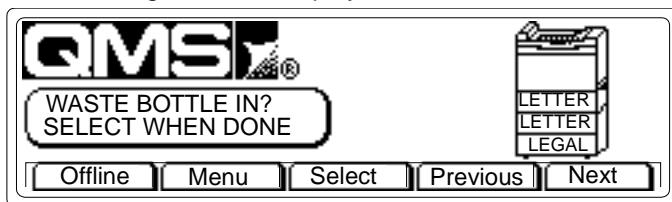
- 1 Turn on the printer.
- 2 Press the Online button to access the Administration/Consumables/Developer menu.

The message window should display



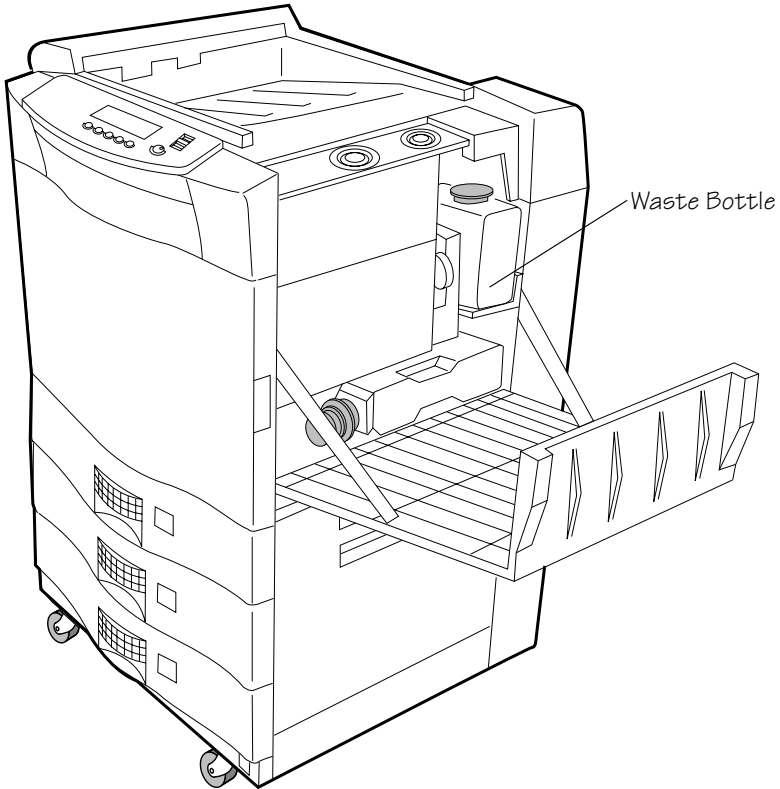
- 3 Press the Select button to tell the printer you are ready to empty the developer.

The message window displays





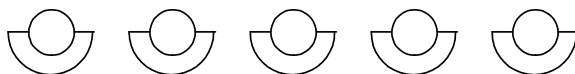
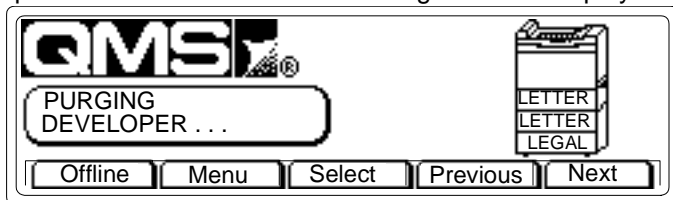
- 4 **Open the right door and check that the developer waste bottle is in place.**



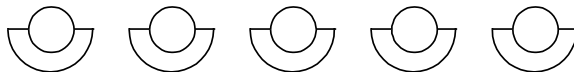
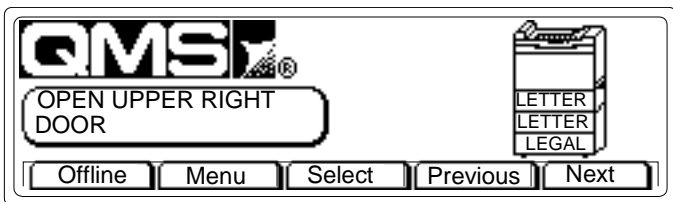
- » **Note:** Make sure the developer waste bottle is in place. The printer will not perform the next step until the bottle is properly set.

- 5 Close the upper door and press the Select button to confirm that the developer waste bottle is in place.**

After you check that the developer waste bottle is in place and press the Select button the message window displays

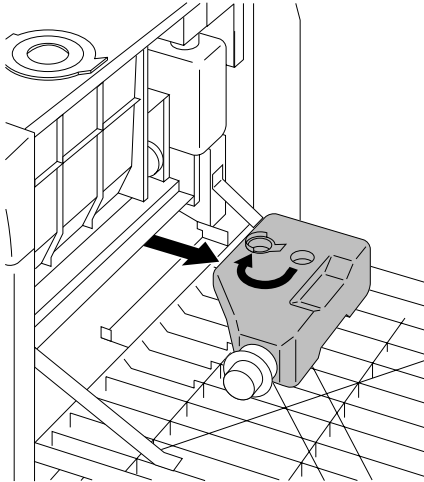


You should hear the developer purging and after about 30 seconds the message window displays



- 6 Open the upper door of the printer.**

- 7 Remove the developer waste bottle and move the cap to the sealed position.



- 8 Store the developer waste bottle for later use.

▲ **Caution:** Do not repack the developer waste bottle. It will spill during shipment. Keep it until the printer is shipped back to you.

---

- 9 Turn off the printer.

### **Removing Toner**

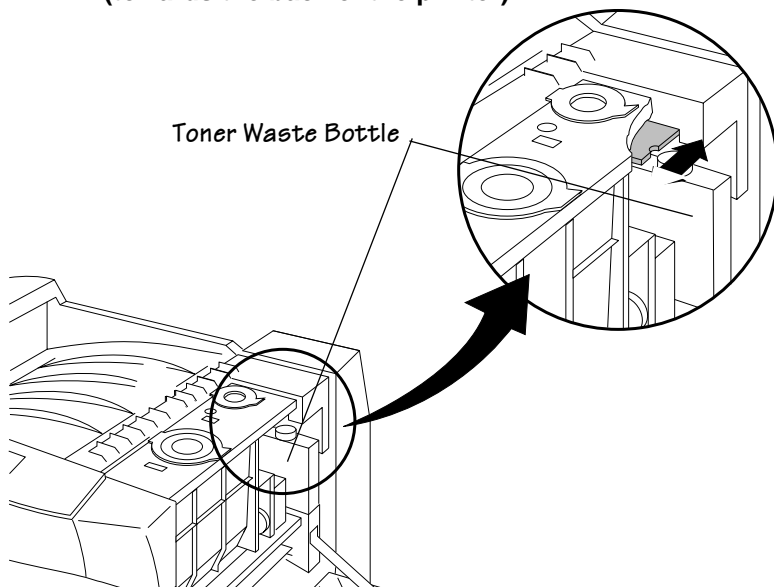
- 1 Before repacking the printer you should ensure the toner hopper is as low as possible.
- 2 Remove the toner waste bottle and store for later use.

▲ **Caution:** Do not repack the waste toner bottle. It will spill during shipment. Keep it until the printer is shipped back to you.

---

## Repacking Consumables

- 3 Move the toner recycling shutter to the closed position (towards the back of the printer).

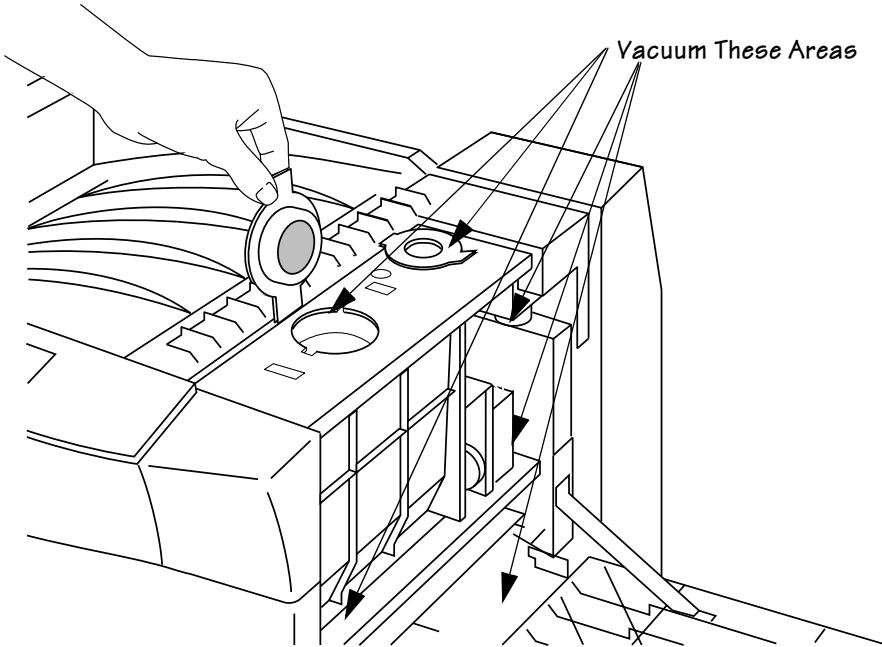


- 4 Open the toner fill lid and use a toner vacuum to remove as much toner as possible from the toner hopper.



**Caution:** Use only a vacuum cleaner designed for toner. Normal vacuum cleaners will only discharge toner into the air.

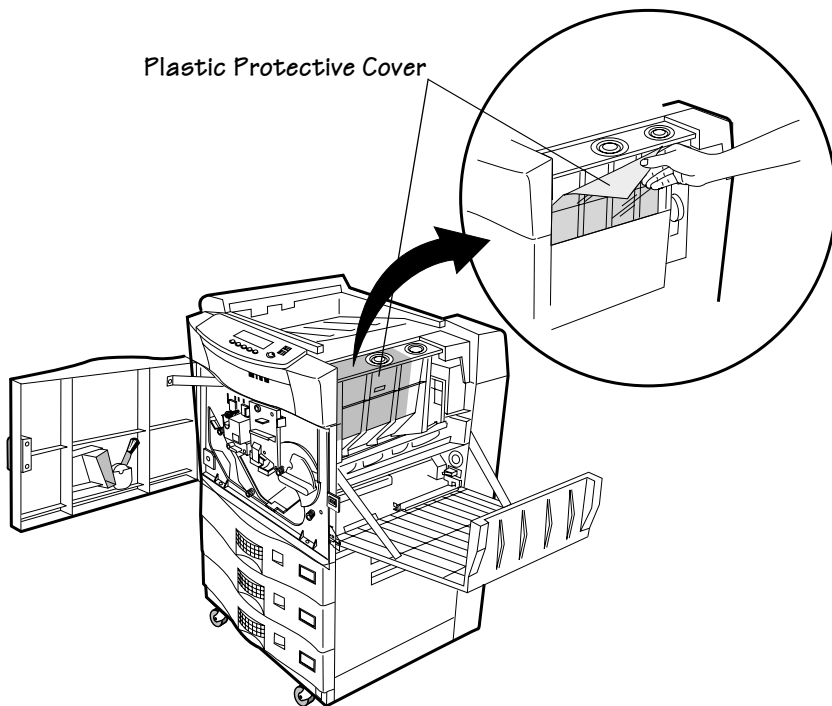
- 5 Use the vacuum to clean up as much toner as possible around the toner and developer areas.



- 6 Use nylon reinforced tape and apply some to the toner fill lid and the developer fill lid to secure for shipping.
- 7 Open the front door of the printer.
- 8 Turn lever b1 to the right to unlock the internal components.

## Repacking Consumables

- 9 Reinstall the plastic protective cover you removed when you unpacked the printer to the developer/toner hopper.

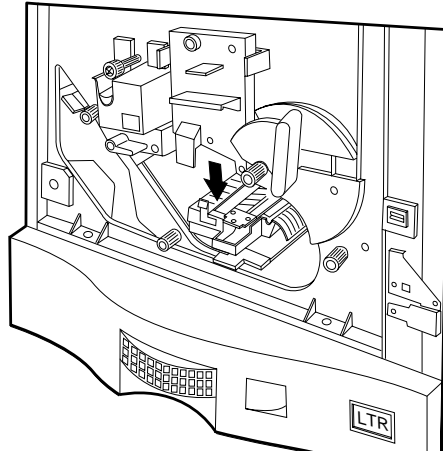


- 10 Turn lever b1 to the left to lock the plastic protective cover in place.
- 11 Close the right door of the printer and secure with nylon reinforced tape for shipping.

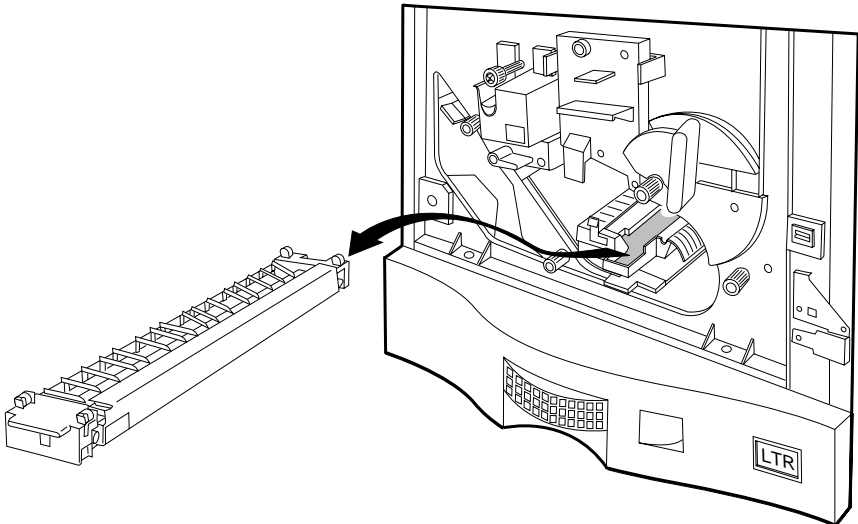
### Removing the Transfer Assembly

- 1 If necessary, open the front door of the printer.

- 2 While pulling down on handle 3, lower the transfer assembly guide.



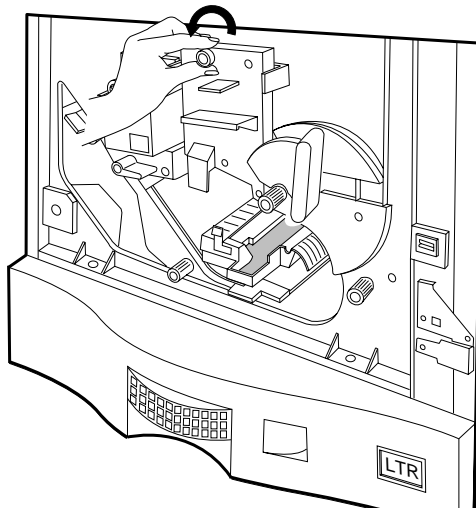
- 3 In one movement, push in, pull up, and then pull out to remove the transfer assembly from the guide assembly.



- 4 Store the transfer assembly away for use later when the printer is returned to you.

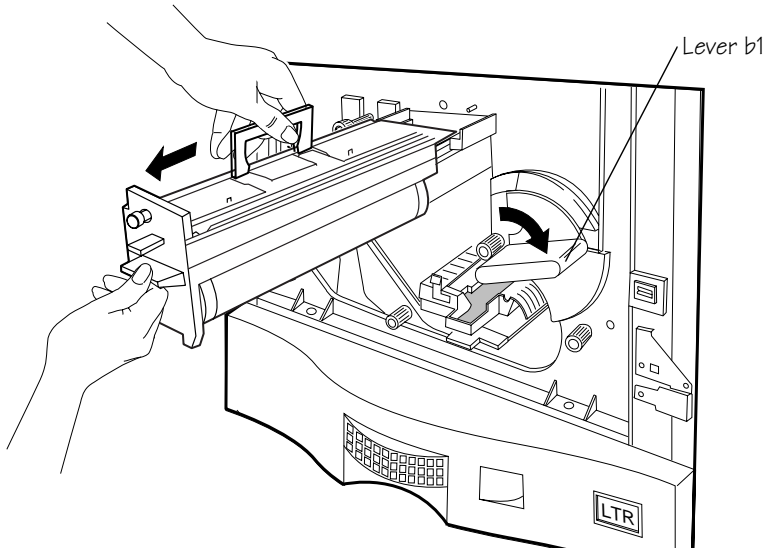
## **Removing the Drum Unit**

- 1 With the front door of the printer open and the transfer assembly guide in the lower position, move lever b1 to the right to unlock the drum unit.
- 2 Turn the drum locking knob counterclockwise to release the drum.

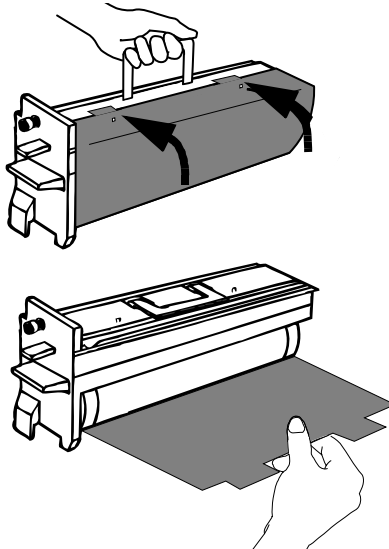




- 3 Use the drum handles on top and front to pull out the drum unit.**

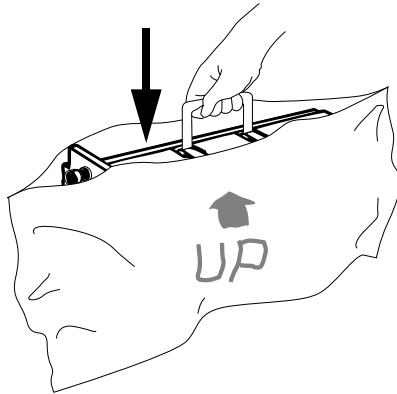


- 4 Carefully reattach the black protective tissue paper to the drum unit.**



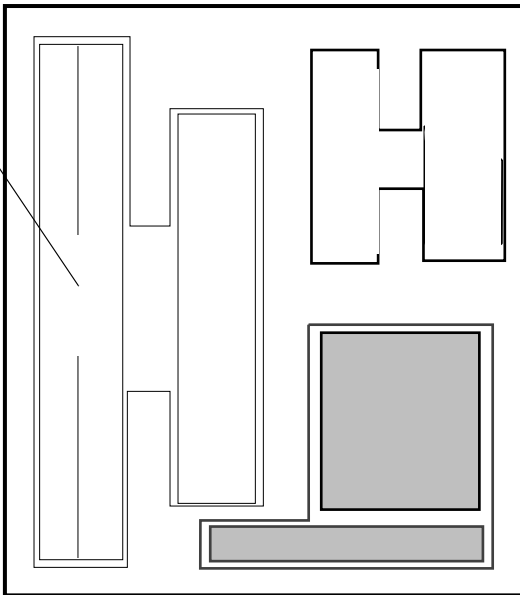
## Repacking Consumables

- 5 Place the drum unit back into the original aluminum protective bag.



- 6 Use nylon reinforced tape to secure the bag for shipping.
- 7 Place the drum unit back into the starter kit box.

Drum Unit



## **Removing the Fuser**

- 1 If necessary, open the front door of the printer.
- 2 Turn lever b1 to the right to unlock the internal printer components.



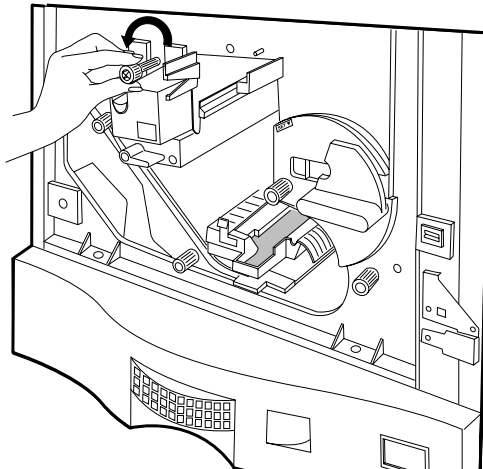
---

**WARNING:** *Be careful; the area around the fuser assembly is hot.*

**ACHTUNG!** *Verletzungsgefahr! Bei Betrieb wird die Umgebung der Fixiereinheit heiß.*

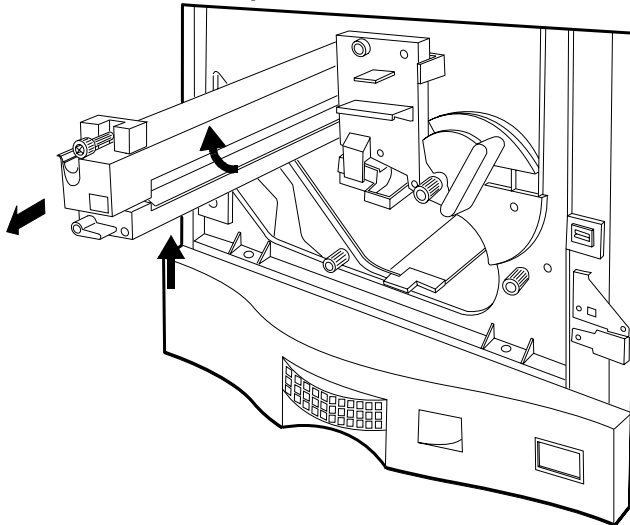
---

- 3 Loosen the thumbscrew by turning it counterclockwise to unlock the old fuser.

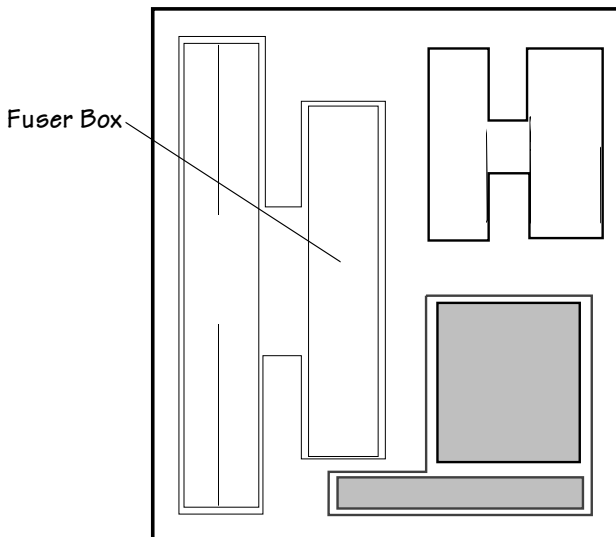


## Repacking Consumables

- 4 Pull the old fuser out and lift up and hold the bottom to remove it from the printer.



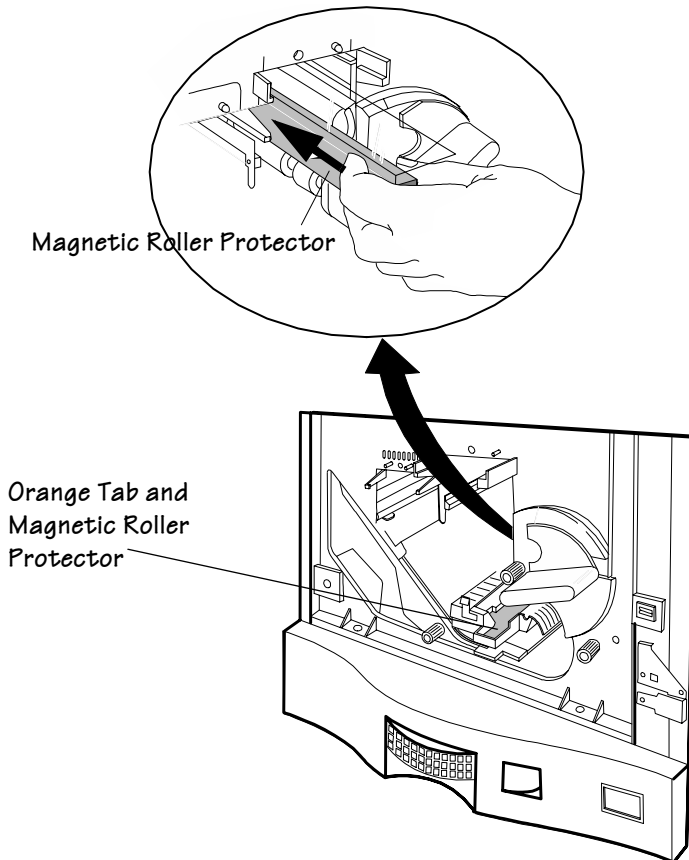
- 5 Repack the fuser in its original box, secure with nylon reinforced tape, and place it back into the starter kit box.



# Inserting Shipping Restraints

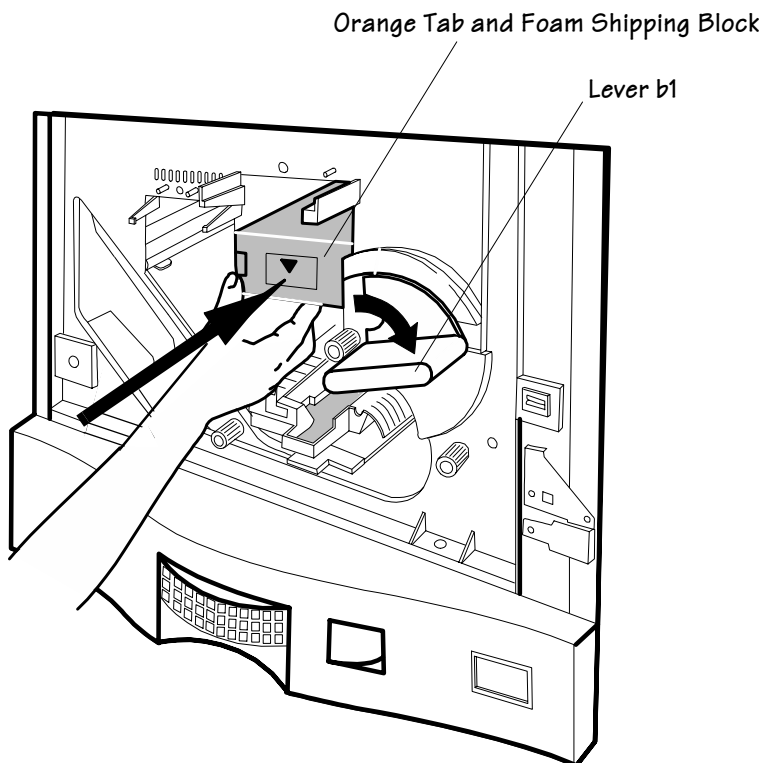
## Reinstalling Shipping Restraints

- 1 With the front door still open, reinstall the magnetic roller protector.



## Inserting Shipping Restraints

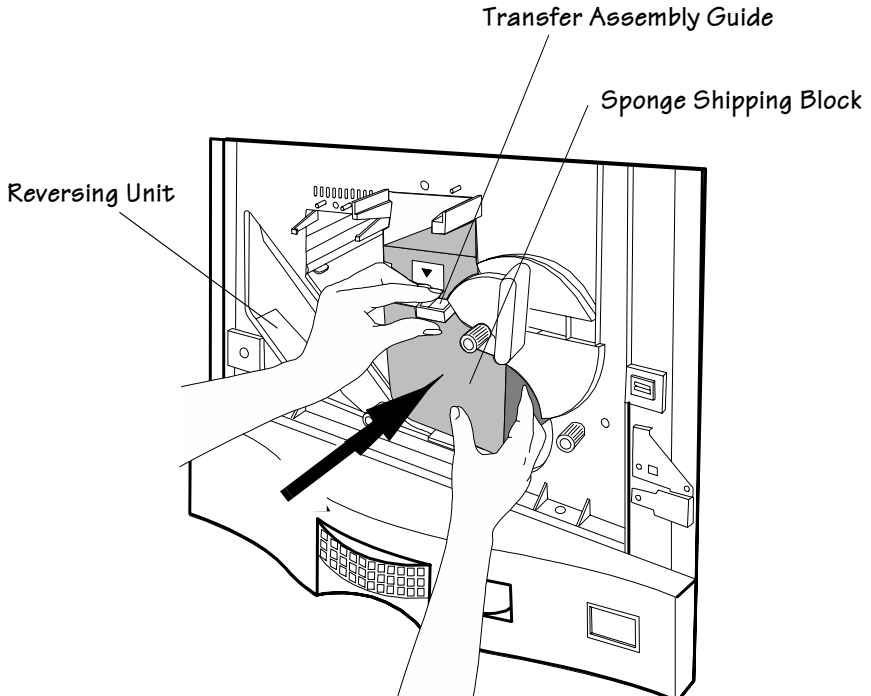
- 2 Turn lever b1 to the right and reinstall the upper foam shipping restraint in the drum unit area.



- 3 Turn lever b1 back to the left.

## Inserting Shipping Restraints

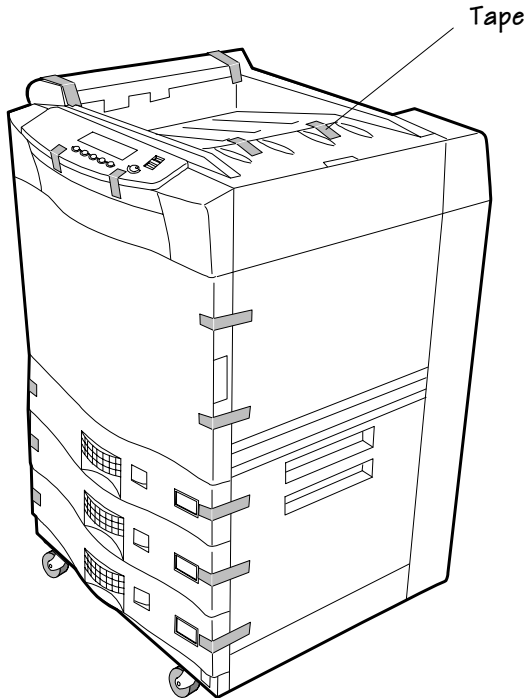
- 4 While holding the transfer assembly guide up, reinstall the sponge shipping block in the lower drum unit area.



- 5 Secure the reversing unit with nylon reinforced tape.
- 6 Close the front door of the printer.

## Inserting Shipping Restraints

- 7 Use nylon reinforced tape to secure all external covers and doors.



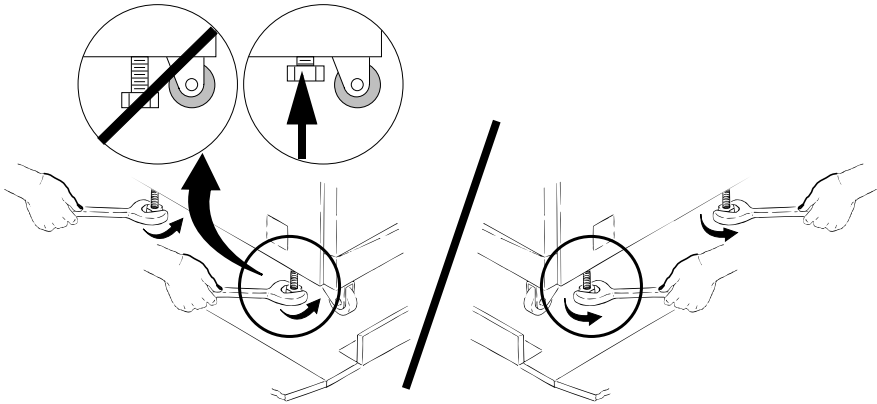
## Final Repacking Steps

After following the preceding procedures you are ready to repack the printer into it's original container.

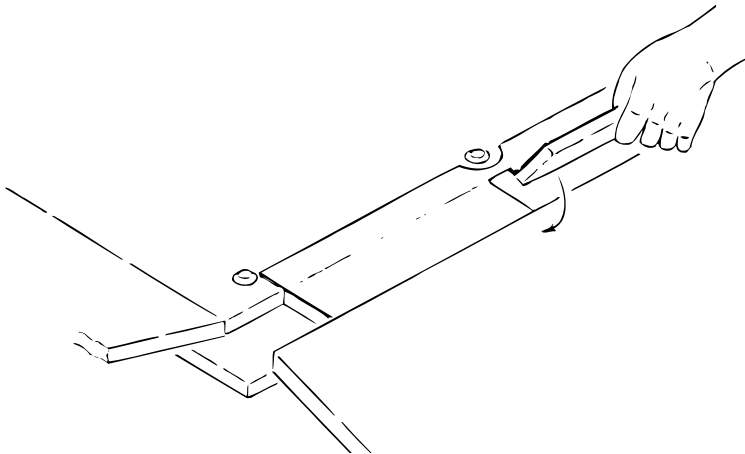


## Inserting Shipping Restraints

- 1 Use a wrench to raise all four leveling bolts by turning the bolts counterclockwise.

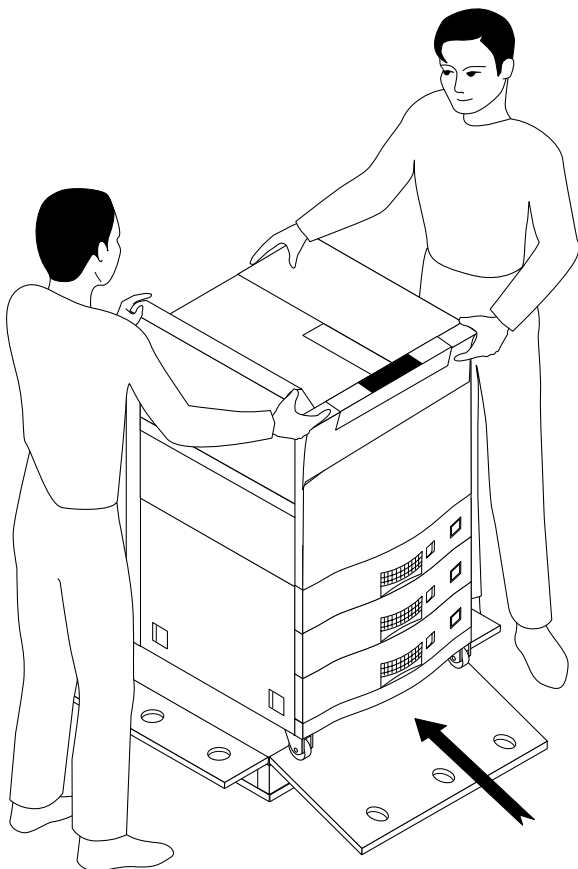


- 2 Flip the two small wood spacers into the groove on the slope edge of the pallet ramp.

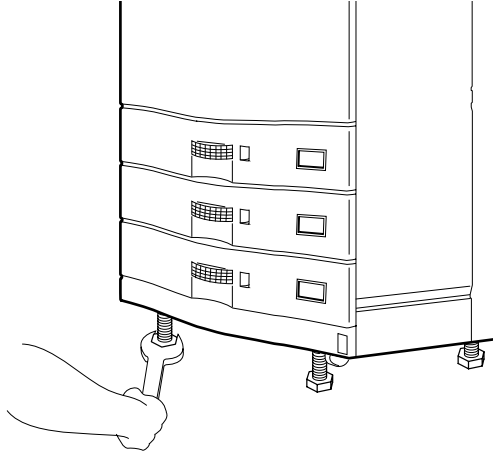


## **Inserting Shipping Restraints**

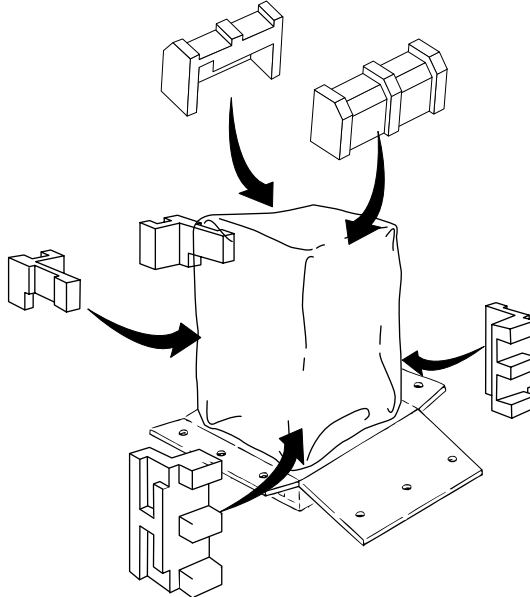
- 3 Load the printer by pushing it up the slope edge of the pallet ramp.**



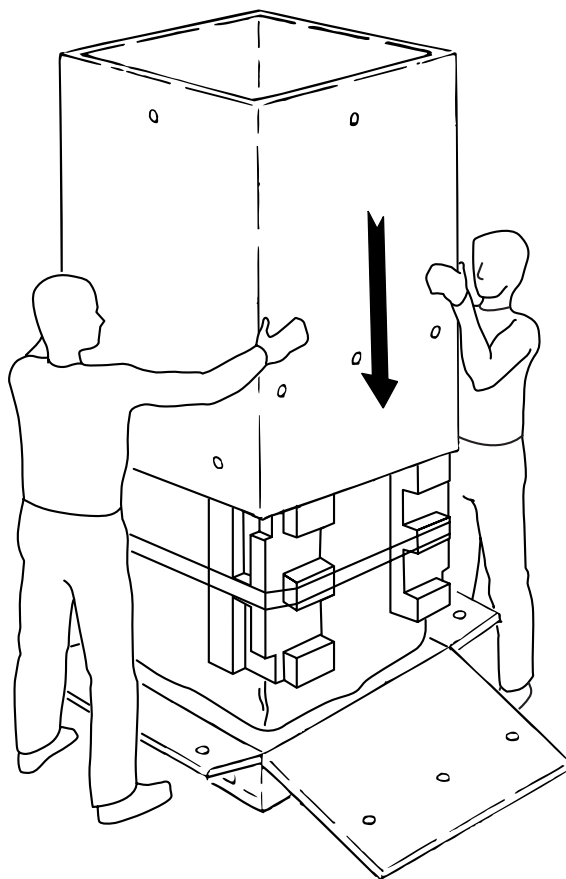
- 4 Use a wrench to lower the leveling bolts until the wheels are just off the pallet.



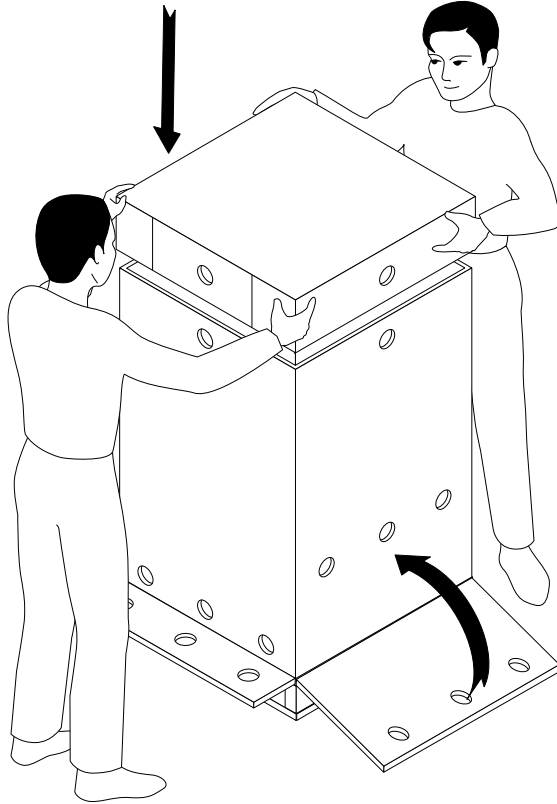
- 5 Replace the plastic cover and all of the foam shipping blocks and secure them with nylon reinforced tape.



**6 Replace the cardboard sleeve.**

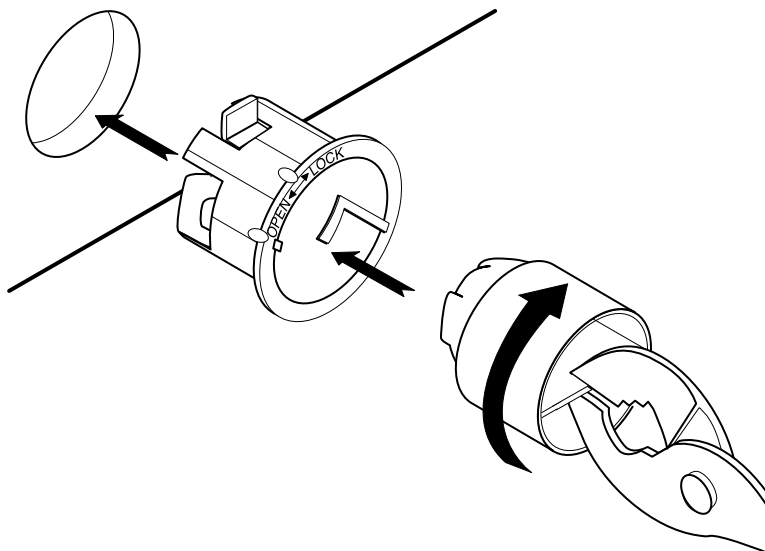


- 7 Replace the starter kit foam box on the top of the printer, replace the lid, and raise the ramp.

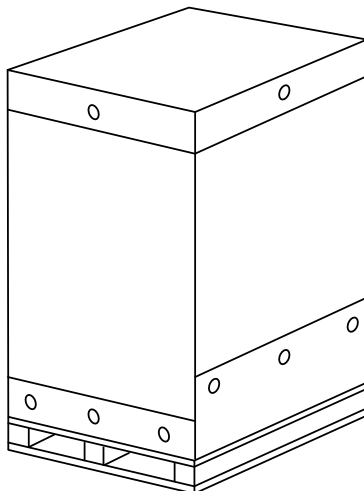


## Inserting Shipping Restraints

- 8 Push in the plastic lock inserts and secure the lock in all of the holes of the shipping box.



- 9 Your printer should now be ready to ship.



# Repacking the Options

If you need to repack the options for your printer, use the original packing materials.

Follow the unpacking instructions in reverse order to repack these units. See Appendix C, “Installing the LCIF and LCOS”, in the *Getting Started* manual for instructions.







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