



Troubleshooting

To better help our customers - this HP Laserjet 2605 series troubleshooting page is simply a guide / additional information for your convenience, as you search for assistance in repairing your machine. Although this information is provided for your convenience it is recommended, for the most part, that a technician inspects your office equipment.

It is recommended to consult with a professional when ordering your printer part(s).

Chapter contents

Troubleshooting

- Troubleshooting process
- Control-panel messages
- Clearing jams
- E-Label reader guide pin damage
- Print problems
- Functional tests (SERVICE ONLY)
- Service mode functions (SERVICE ONLY)
- Troubleshooting tools
- HP ToolboxFX
- Diagnostic resources
- Repetitive-image-defect ruler

Shop with us while you troubleshoot.

- * HP oem parts
- * HP LaserJet maintenance kits
- * Toners for your printer
- * HP fuser assembly units
- * HP fuser kit 110v & 220v
- * Parts assemblies for printers
- * Service maintenance parts
- * Color laserJet printers
- * LaserJet printers and parts
- * Hard to find officejet parts
- * Hard to find deskjet parts

User-friendly [SmartSearch!](#)

Troubleshooting

This troubleshooting information is organized to help you resolve printing problems. Choose the general topic or type of problem from the following list.

- [Troubleshooting process](#)
- [Control-panel messages](#)
- [Clearing jams](#)
- [E-Label reader guide pin damage](#)
- [Print problems](#)
- [Functional tests \(SERVICE ONLY\)](#)
- [Service mode functions \(SERVICE ONLY\)](#)
- [Troubleshooting tools](#)
- [HP ToolboxFX](#)
- [Diagnostic resources](#)
- [Repetitive-image-defect ruler](#)
- [Firmware and software updates](#)

Troubleshooting process

Use the troubleshooting checklist to solve issues with the device.

Troubleshooting checklist

Follow the steps below when trying to solve a problem with the device.

Table 6-1 Troubleshooting checklist

Step number	Verification step	Possible problems	Solutions
1	<p>Is the power on?</p> <p>When the device is connected to a grounded power source, the control panel shows Hewlett-Packard with both the Ready and Attention lights blinking. The control panel will then display Initializing and then Ready, at which time only the green light will be on.</p>	No power due to failed power source, cable, switch, or fuse.	<ol style="list-style-type: none"> 1. Verify that the device is plugged in. 2. Verify that the power cable is functional and that the power switch is on. 3. Check the power source by plugging the device directly into the wall or into a different outlet. 4. Test the outlet or connect another device to the outlet to verify that the outlet is functioning.
2	<p>Does Ready appear in the device control panel?</p> <p>The control panel should function without error messages.</p>	Control panel shows an error.	See Control-panel messages on page 136 for a list of common messages that will help you correct the error.
3	<p>Do information pages print?</p> <p>Print a Configuration page.</p>	<p>Control panel displays an error message.</p> <hr/> <p>Media does not move smoothly through the device paper path.</p> <hr/> <p>Poor print quality.</p>	<p>See Control-panel messages on page 136 for a list of common messages that will help you correct the error.</p> <hr/> <p>Clean the paper path.</p> <hr/> <p>For information, see General print quality issues on page 154.</p>
4	<p>Does the device print from the computer?</p> <p>Connect the network cable or USB cable to the device and the computer. Use a word-processing application to send a print job to the device.</p>	<p>Software is not installed correctly or an error occurred during software installation.</p> <hr/> <p>The cable is not connected correctly.</p> <hr/> <p>An incorrect driver is selected.</p> <hr/> <p>Other devices are connected to the USB port.</p> <hr/> <p>There is a port driver problem in Microsoft Windows.</p>	<p>Uninstall and then reinstall the device software. Verify that you are using the correct installation procedure and the correct port setting.</p> <hr/> <p>Reconnect the cable.</p> <hr/> <p>Select the proper driver.</p> <hr/> <p>Disconnect the other devices and try again to print.</p> <hr/> <p>Uninstall and then reinstall the device software. Verify that you are using the correct installation procedure and the correct port setting.</p> <hr/> <p>If the error persists, see the support flyer that came in the device box.</p>

Control-panel messages

The majority of the control-panel messages are intended to guide the user through typical operation. The control-panel messages indicate the status of the current operation, and include a page count on the second line of the display, if appropriate. When the device is printing data, control-panel messages indicate this status. In addition, alert messages, warning messages, and critical error messages indicate situations that might require some action.

Alert and warning messages

Control panel message	Description	Recommended action
<p>One of the following messages may display:</p> <p>Incorrect black</p> <p>Incorrect cyan</p> <p>Incorrect magenta</p> <p>Incorrect yellow</p>	<p>The <color> print cartridge not installed correctly.</p>	<p>Reinstall the <color> print cartridge.</p>
<p>One of the following messages may display:</p> <p>Install black cartridge</p> <p>Install cyan cartridge</p> <p>Install magenta cartridge</p> <p>Install yellow cartridge</p> <p>The supplies gauge will display the consumption levels of print cartridges.</p>	<p>The out threshold has been reached.</p>	<p>The supply must be replaced before printing can continue.</p>
<p>One of the following messages may display:</p> <p>Non HP black installed</p> <p>Non HP cyan installed</p> <p>Non HP magenta installed</p> <p>Non HP yellow installed</p> <p>alternates with</p> <p>To accept</p> <p>Press ✓</p>	<p>A non-HP <color> cartridge is installed.</p>	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;">  </div> <div> <p>NOTE Any printer repair required as a result of using a non-HP or unauthorized supply is not covered under warranty.</p> </div> </div> <p>To use this cartridge, override by pressing the <input checked="" type="checkbox"/> (Select) button on the control panel.</p>
<p>One of the following messages may display:</p> <p>Order black</p>	<p>The <color> print cartridge low threshold has been reached.</p>	<p>For more information go to the HP Color LaserJet 2605 Series toolbox and click Supplies Status. To order supplies online, click Order Supplies.</p>

Control panel message	Description	Recommended action
<p>cartridge,</p> <p>Order cyan</p> <p>cartridge,</p> <p>Order magenta</p> <p>cartridge, or</p> <p>Order yellow</p> <p>cartridge</p> <p>alternates with</p> <p>Ready</p> <p>The supplies gauge will display the consumption levels of print cartridges.</p>		
<p>One of the following messages may display:</p> <p>Replace black cartridge</p> <p>Replace cyan cartridge</p> <p>Replace magenta cartridge</p> <p>Replace yellow cartridge</p>	<p>The cartridge threshold has been reached.</p>	<p>The supply must be replaced before printing can continue.</p>
<p>One of the following messages may display:</p> <p>Unauthorized yellow</p> <p>Unauthorized magenta</p> <p>Unauthorized cyan</p> <p>Unauthorized black</p>	<p>A new supply has been installed that is not made by HP. One of these four messages is displayed until an HP supply is installed or  (Select) is pressed.</p>	<p>If you believe you purchased an HP supply, please call the HP fraud hotline at 1-877-219-3183. Service or repairs required as a result of using non-HP supplies is not covered under HP warranty.</p> <p>To continue printing, press  (Select).</p>
<p>10.000x Supply error</p>	<p>E-label cannot be read or print cartridge is not properly installed.</p> <p>10.0000 = Black print cartridge</p> <p>10.0001 = Cyan print cartridge</p> <p>10.0002 = Magenta print cartridge</p> <p>10.0003 = Yellow print cartridge</p>	<ol style="list-style-type: none"> 1. Remove the print cartridge and verify that the E-label reader guide pin is not broken. See Print cartridge replacement on page 86 or E-Label reader guide pin damage on page 150 for more information on the E-label reader guide pin. 2. Reinstall print cartridge. 3. Turn on the printer. 4. If the problem is not solved, replace the cartridge.
<p>10.100x Supply error</p> <p>alternates with</p> <p>Reinstall</p> <p>The supplies gauge will display the consumption levels of print cartridges.</p>	<p>A print cartridge is missing.</p> <p>10.1000 = Black print cartridge</p> <p>10.1001 = Cyan print cartridge</p> <p>10.1002 = Magenta print cartridge</p> <p>10.1003 = Yellow print cartridge</p>	<p>Install the correct print cartridge.</p>

Control panel message	Description	Recommended action
50.1 Fuser Error	The device has experienced an internal hardware error.	Turn off the device, wait at least 25 minutes, and then turn on the device.
50.2 Fuser Error	50.1 Fuser Error —low temperature 50.3 Fuser Error —slow fuser 50.2 Fuser Error —high temperature	If a surge protector is being used, remove it. Plug the device directly into the wall socket. Use the power switch to turn on the device. If this does not clear the error, replace the fuser.
50.3 Fuser Error		
51.20 Error	The device has experienced an internal hardware error.	Turn off the power by using the power switch, wait at least 30 seconds, and then turn on the power and wait for the device to initialize. If a surge protector is being used, remove it. Plug the device directly into the wall socket. Use the power switch to turn the device on. Laser scanners are not replaceable. Replace the engine.
51.21 Error	51.20 Error —black scanner error	
51.22 Error	51.21 Error —cyan scanner error	
51.23 Error	51.22 Error —magenta scanner error 51.23 Error —yellow scanner error	
55.1 Error	DC controller error. The device has experienced an internal hardware error.	Turn off the power by using the power switch, wait at least 30 seconds, and then turn on the power and wait for the device to initialize. If a surge protector is being used, remove it. Plug the device directly into the wall socket. Use the power switch to turn the device on. Check the engine (DCC) firmware version. Update if needed. Replace the DCC if a firmware upgrade does not resolve the issue.
57 Fan Error	The device has experienced a problem with its internal fan.	Turn off the power by using the power switch, wait at least 30 seconds, and then turn on the power and wait for the device to initialize. The fan is not replaceable. Replace the engine.
Turn off then on		
Calibrating...	The printer is calibrating.	No action is required.
Cleaning...	The printer is in cleaning mode.	No action is required.
Device error	An internal error occurred in the device.	Press  (Select) to resume the job.
Press ✓		
Door open	The printer door is open.	The door must be closed before printing can continue.
Engine comm. error	The device experienced an internal communication error.	This is a warning message only. Job output might be affected.
HP supplies installed	The printer transitioned from having one or more non-HP supplies to having all HP supplies installed.	No action required.

Control panel message	Description	Recommended action
Install supplies The supplies gauge will display the consumption levels of print cartridges.	Multiple supplies are not installed.	Install correct print cartridges.
Invalid driver	You are using the incorrect printer driver.	Reselect the printer driver appropriate for your device.
Invalid entry	Invalid data or response.	Correct the entry.
Jam in Cartridge area Jam in Output bin	A jam has occurred in the print path.	Open the door and clear the jam. Then press the  (Select) button on the control panel.
Jam in print paper path Jam in tray 2	A jam has occurred in the output area.	Clear the jam, and then press the  (Select) button on the control panel.
Jam in tray 3 Load paper	A jam has occurred in the print path.	Open the door and clear the jam. Then press the  (Select) button on the control panel.
Load Tray X [TYPE] [SIZE] Manual feed Press ✓	A jam has occurred in Tray 2.	Clear the jam, and then press the  (Select) button on the control panel.
Memory is low Press ✓ Misprint Press ✓	A jam has occurred in Tray 3.	Clear the jam, and then press the  (Select) button on the control panel.
No paper pickup Press ✓ Non HP supply	The HP Color LaserJet 2605, 2605dn, or 2605dtn printer is out of paper.	Please load specified paper type into the tray indicated.
	The printer is processing job, but the tray indicated is empty.	Please load specified paper type and size into the tray indicated.
	The printer is waiting for paper in the tray indicated.	Load the paper as indicated.
	The device memory has been almost completely filled.	Allow the device to finish the job, or press  (Select) to cancel the job. Break the job into smaller jobs that contain fewer pages.
	The printed pages have been incorrectly placed on the paper.	To continue, press the  (Select) button on the control panel.
	The print engine has failed to pick up a piece of media.	In Tray 1, verify that the media was inserted far enough into the tray. In Tray 2 or optional Tray 3, verify that the paper-length guide is in the correct position for the media size that you are using. Reload the media in the input tray and press  (Select) to continue the job.
	A non-HP (cloned or refilled) supply has been installed and was overridden.	If you believe you purchased an HP supply, please call the HP fraud hotline at

Control panel message	Description	Recommended action
<p>in use</p> <p>alternates with</p> <p>Ready</p> <p>The supplies gauge will display the consumption levels of print cartridges.</p>		<p>1-877-219-3183. Service or repairs required as a result of using non-HP supplies is not covered under HP warranty.</p>
<p>ORDER SUPPLIES</p> <p>alternates with</p> <p>Ready</p> <p>The supplies gauge will display the consumption levels of print cartridges.</p>	<p>Multiple supplies are low.</p>	<p>For more information go to the HP Color LaserJet 2605 Series toolbox and click Supplies Status. To order supplies online, click Order Supplies.</p>
<p>Replace Supplies</p> <p>The supplies gauge will display the consumption levels of print cartridges.</p>	<p>The cartridge threshold has been reached.</p>	<p>The supply must be replaced before printing can continue.</p>
<p>Replace supplies</p> <p>Override in use</p> <p>alternates with</p> <p>Ready</p> <p>The supplies gauge will display the consumption levels of print cartridges.</p>	<p>Supply override in use. The user has decided to continue printing beyond the out point. A supply is low and using Override may result in unsatisfactory print quality.</p>	<p>Replace the supply that is low.</p>
<p>Replace supply.</p> <p>Override in use</p> <p>alternates with</p> <p>Ready</p> <p>The supplies gauge will display the consumption levels of print cartridges.</p>	<p>Supply override in use. The user has decided to continue printing beyond the out point. A supply is low and using Override may result in unsatisfactory print quality.</p>	<p>Replace the supply that is low.</p>
<p>Unauthorized supply in use</p> <p>alternates with</p> <p>Ready</p> <p>The supplies gauge will display the consumption levels of print cartridges.</p>	<p>A new non-HP supply has been installed and was overridden.</p>	<p>If you believe you purchased an HP supply, please call the HP fraud hotline at 1-877-219-3183. Service or repairs required as a result of using non-HP supplies is not covered under HP warranty.</p>
<p>Unexpected size in tray X</p>	<p>Unexpected paper size error. The media size loaded in the tray does not match the media size configured for the tray.</p>	<p>Verify that the print settings are set to the specified media in the tray.</p>

Status-log messages

The following messages are not displayed on the control panel. They are printed on the Status log.

Table 6-2 Status-log messages

Error-log code	Description
54.06	Color density sensor error
54.10	Color-plane registration sensor(s) error
54.11	Yellow density out of range
54.12	Magenta density out of range
54.13	Cyan density out of range
54.14	Black density out of range

Clearing jams

Occasionally, paper or other print media can become jammed during a print job. Some causes include the following events:

- The input trays are loaded improperly or overfilled.
- Tray 2 or optional Tray 3 is opened during a print job.
- Too many sheets accumulated in the output area or sheets blocked the output area.
- The print media that is being used does not meet HP specifications. See [Print-media specifications on page 9](#).
- The environment in which the print media was stored is too humid or too dry. See [Print-media specifications on page 9](#).

Where to look for jams

Jams can occur in these locations:

- Inside the printer. See [To clear jams from inside the printer on page 143](#).
- In input areas. See [To clear jams from Tray 2 or optional Tray 3 on page 149](#).
- In the output area. See [To clear jams from the top bin \(HP Color LaserJet 2605\) on page 146](#).

Find and remove the jam by using the instructions on the following pages. If the location of the jam is not obvious, first look inside the printer.

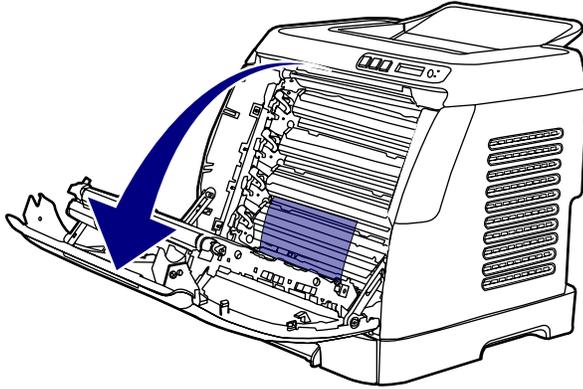
Loose toner might remain in the printer after a jam. This problem should resolve itself after a few sheets have been printed.

Each of the following sections correspond to an area where a jam could occur. Use the following procedures to clear the jam. In all cases, grasp the jammed media by both corners and pull slowly to remove it.

To clear jams from inside the printer

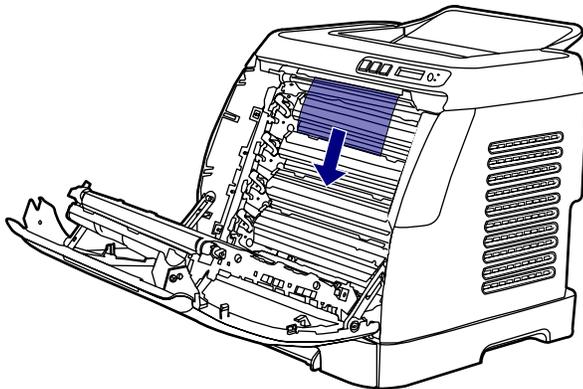
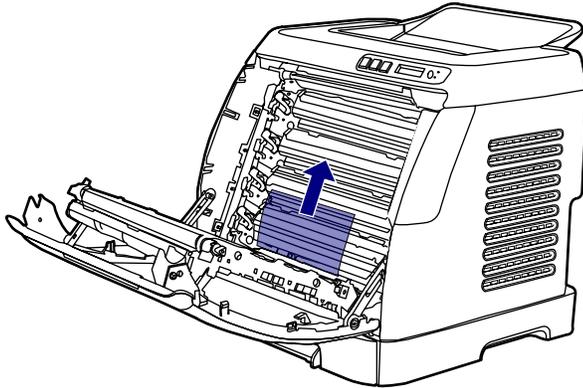
△ CAUTION Jams in this area might result in loose toner on the page. If you get toner on your clothes or hands, wash them in cold water. (Hot water will set the toner into the fabric.)

1. Open the front door.

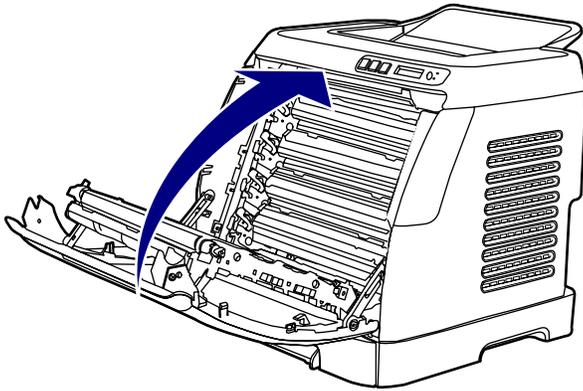


△ CAUTION Do not place anything on the transfer belt, which is located on the inside of the front door. Otherwise, the printer may be damaged, adversely affecting print quality.

2. Carefully grasp the jammed page by both corners and pull slowly to remove the paper.

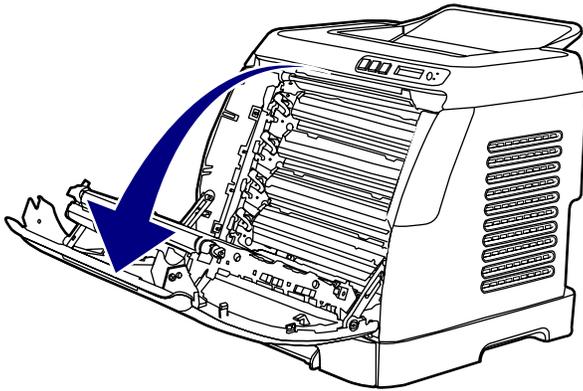


3. Close the front door.



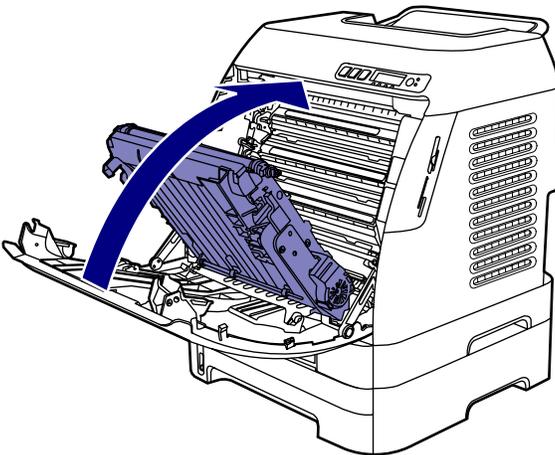
To clear jams from the duplex area (HP Color LaserJet 2605dn and 2605dtn models only)

1. Open the front door completely.

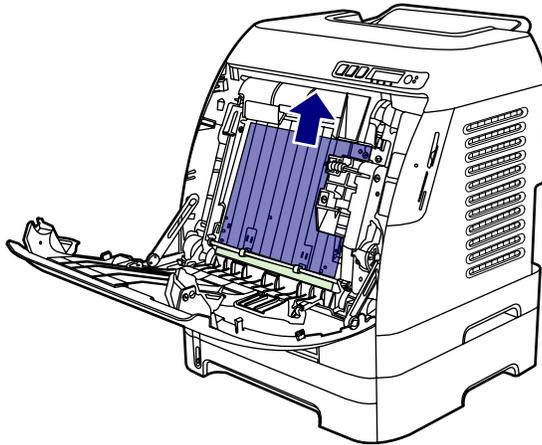


 **CAUTION** Do not place anything on the transfer belt, which is located on the inside of the front door. Otherwise, the printer may be damaged, adversely affecting print quality.

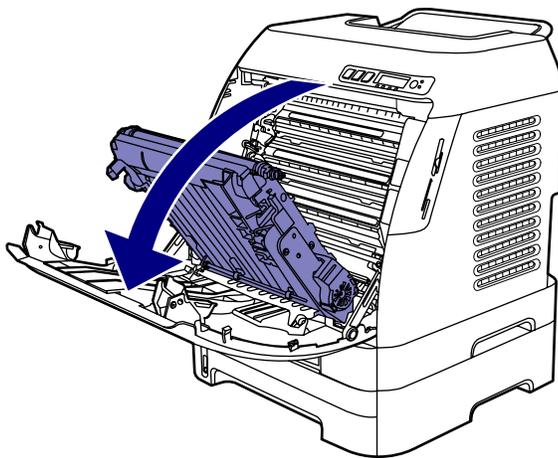
2. Lift the ETB



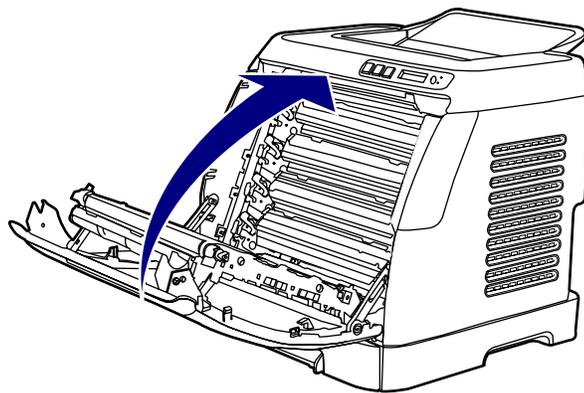
3. Remove any jammed media.



4. Close the ETB.



5. Close the front door.



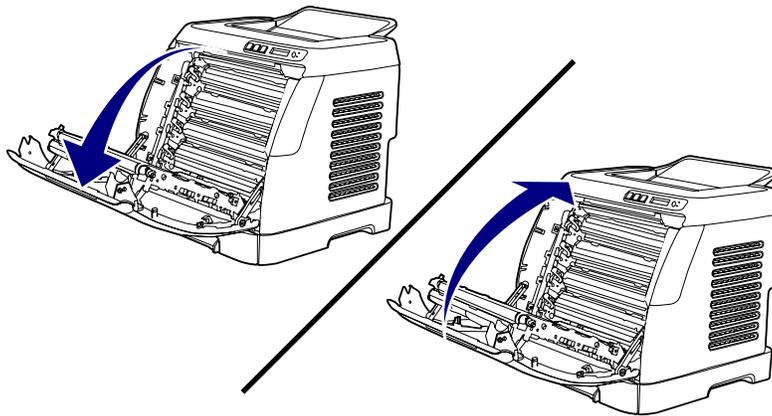
To clear jams from the top bin (HP Color LaserJet 2605)

 **CAUTION** Jams in these areas might result in loose toner on the page. If you get toner on your clothes or hands, wash them in cold water. (Hot water will set the toner into the fabric.)

1. Carefully grasp the jammed page by both corners and pull slowly to remove the paper from the top bin.

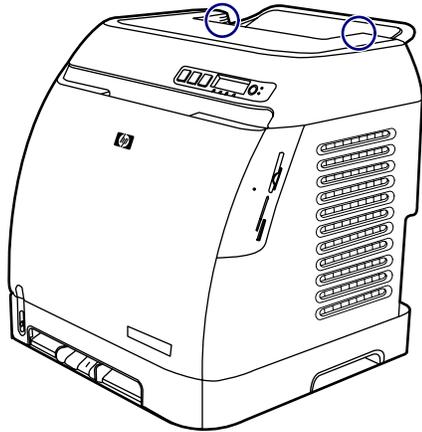


2. Open and close the front door.

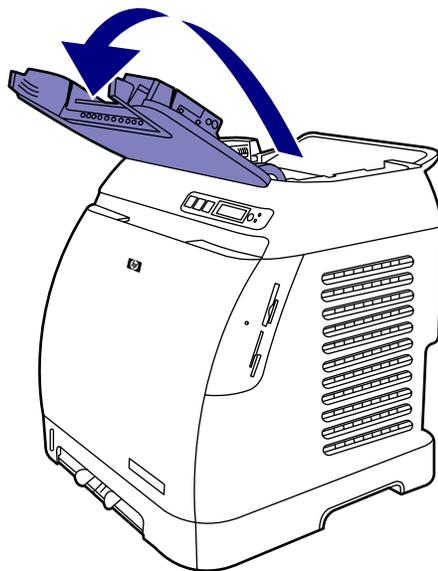


To clear jams from the top output area (HP Color LaserJet 2605dn and 2605dtn models only)

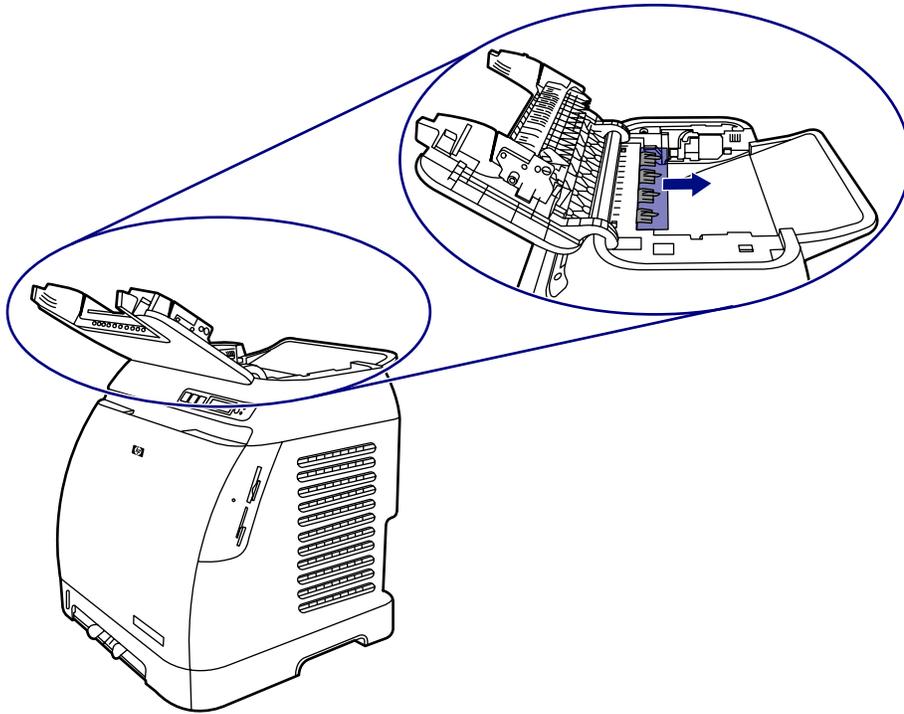
1. Grip the top cover.



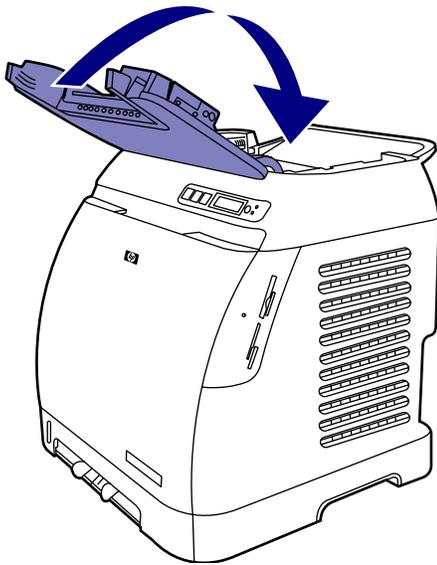
2. Open the top cover.



3. Remove any jammed media.



4. Close the top cover.

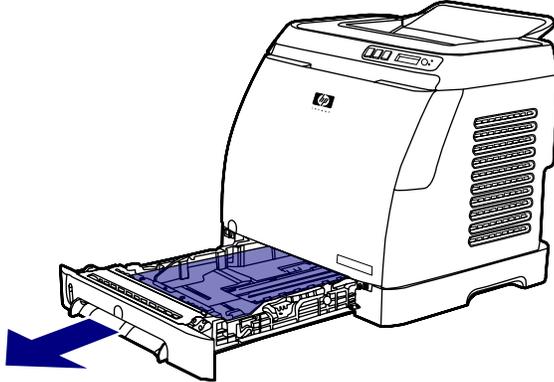


To clear jams from Tray 2 or optional Tray 3

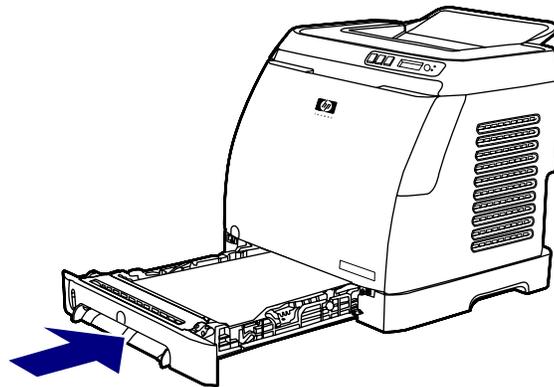


NOTE Before attempting to clear jams from Tray 2 or optional Tray 3, remove any jams inside the printer.

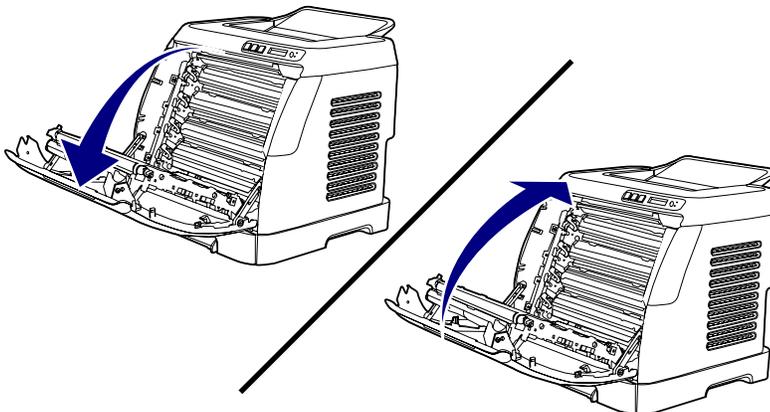
1. Pull Tray 2 or optional Tray 3 out of the printer.



2. Carefully grasp the jammed page by both corners and pull slowly to remove it.
3. Slide the tray into the printer.



4. Open and close the front door.



E-Label reader guide pin damage

When installing a print cartridge, be sure to insert the cartridge straight into the cartridge guides.



Installing the cartridge at an angle can damage or break the E-label reader guide pin.

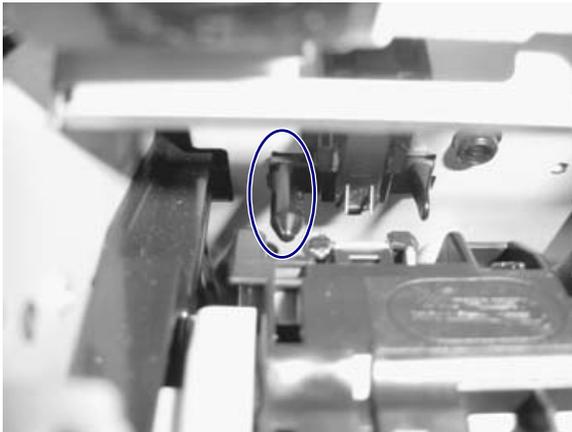


Figure 6-1 E-label reader guide pin

If the E-label reader guide pin is damaged or broken, the control panel displays a 10.00X supply error. No service parts are available for the E-label assembly, so a whole-unit replacement or exchange is required. See [Table 7-1 Replaceable parts on page 178](#) for replacement-unit and refurbished-unit part numbers.

Print problems

Printed image quality problems

Improving print quality

Use the print-quality settings in the HP ToolboxFX to improve print-quality problems. To access the HP ToolboxFX, see [HP ToolboxFX on page 171](#). The following menus contain paper type, print mode, and print-quality settings. To restore the default settings, open the HP ToolboxFX and click **Device Settings**. Then click **Settings**, **Service**, and in **Restore Factory Settings**, click **Restore**.

Paper Types menu

The purpose of this menu is to specify the print mode for paper types which are non-specific.

To make changes in the **Paper Types** menu, make the desired selections and click **Apply**.

Table 6-3 Print modes for paper types

Print Modes for paper types	Weight	Default media types
Normal mode	75-89 g/m ²	Plain, color, preprinted, prepunched, recycled
Transparency		Transparencies
Labels		Labels
Light	75-89 g/m ²	Light
Heavy	90-105 g/m ²	Heavy
Cardstock	106-163 g/m ²	Cardstock, bond
Light Glossy	75-105 g/m ²	Light Glossy
Glossy	106-120 g/m ²	Glossy
Heavy Glossy	121-163 g/m ²	Heavy Glossy
HP Tough paper		HP Tough paper
Envelope		Envelopes

Print Modes menu

Under the **Print Modes** menu in HP ToolboxFX, each media type has a **Fusing** menu, a **Transfer** menu, and a **Toner** menu. Select a setting for each menu item.

Media types are listed with the plain papers together, glossy papers together, and special media at the end. To make changes in the **Print Modes** menu, make the desired selections and click **Apply**.

Table 6-4 Extended print modes

HP ToolboxFX extended print mode	Printer adjustment	Change in printer setting
Paper curl	Fusing adjustment	Reduced fuser temperature for less negative paper curl

Table 6-4 Extended print modes (continued)

HP ToolboxFX extended print mode	Printer adjustment	Change in printer setting
Heavy coverage	Fusing adjustment	Increased fuser temperature for less positive paper curl with heavy toner coverage
Toner offset	Fusing adjustment	Reduced fuser temperature for less toner offset
Flap sealing	Fusing adjustment	Reduced fuser temperature to keep envelope flaps from sealing
Less fusing	Fusing adjustment	Reduced fuser temperature
More fusing	Fusing adjustment	Increased fuser temperature
Dry paper	Transfer adjustment	Increased transfer bias for high resistivity paper
Humid paper	Transfer adjustment	Decreased transfer bias for high resistivity paper
Rough paper	Transfer adjustment	Increased transfer bias for high resistivity paper
Less transfer current	Transfer adjustment	Reduced transfer bias
More transfer current	Transfer adjustment	Increased transfer bias
Less toner	Toner adjustment	Tone curve is scaled back so that solid is not 100% halftone

Print quality menu

Under the **Print Quality** menu in HP ToolboxFX, there will be an Optimize section containing a number of On/Off adjustments which will apply to all media types.

Table 6-5 Optimize menu

Adjustment type	Default setting	Extended print mode	Description
Background Toner	Off	EEC95-9	Will reduce the developer DC bias
Extra Cleaning	Off	EEC93-11	Increases rotations of the ETB
Trailing Edge Over? development (full?speed)	Off	EEC95-14	
Trailing Edge Over? development (half?speed)	Off	EEC95-14	
Mottle Prevention	Off	EEC96-12	Will increase the developer DC bias
Less Duplex Transfer Current	Off	EEC68-10 EEC91>16h* EEC92>-1**	Decreases transfer bias on the 2nd side of duplex jobs. For media that has low resistivity after fusing.
More Duplex Transfer Current	Off	EEC68-10	Increases transfer bias on the second side of duplex

Table 6-5 Optimize menu (continued)

Adjustment type	Default setting	Extended print mode	Description
		EEC91>16h*	jobs. For media that has high resistivity after fusing.
		EEC92>+1**	

* > means write xxh to bits 11–15

** > means +/-y to bits 9–15

Understanding print-quality settings

Print-quality settings affect how light or dark the print is on the page and the style in which the graphics are printed. You can also use the print-quality settings to optimize the print quality for a specific media type.

You can change the settings in the device properties to accommodate the types of jobs that you are printing. The following settings are available, depending on the printer driver that you are using:

- Draft (600 dpi)
- Normal (Image REt 2400)



NOTE Changing the resolution can change the formatting of your text.

To temporarily change print-quality settings

To change the print-quality settings only for the current software program, open the properties through the **Print Setup** menu in the program that you are using to print.

To change print-quality settings for all future jobs

For Windows 98, Windows 2000, and Windows Me:

1. In the Windows system tray, click **Start**, select **Settings**, and then click **Printers**.
2. Right-click the device icon.
3. Click **Properties** (in Windows 2000, you can also click **Printing Preferences**).
4. Change the settings, and click **OK**.

For Windows XP (Classic view):

1. In the Windows system tray, click **Start**, and then click **Printers and Faxes**.
2. Right-click the device icon.
3. Click **Properties**, or click **Printing Preferences**.
4. Change the settings, and click **OK**.

Identifying and correcting printed image defects

Use the checklist and print-quality issues charts in this section to solve print-quality problems.

Print-quality checklist

General print-quality problems can be solved by using the following checklist:

1. Make sure that the paper or print media that you are using meets specifications. Generally, smoother paper provides better results.
2. If you are using a special print media such as labels, transparencies, glossy, or letterhead, ensure that you have printed by type.
3. Print a Configuration page and Supplies Status page at the device.
 - Check the Supplies Status page to see if any supplies are low or empty. No information is provided for non-HP print cartridges.
 - If the pages do not print correctly, the problem is with the hardware.
4. Print a Demo page from the HP ToolboxFX. If the page prints, the problem is with the printer driver.
5. Try printing from a different program. If the page prints correctly, the problem is with the program from which you were printing.
6. Restart the computer and the device and try printing again. If the problem is not resolved, choose one of these options:
 - If the problem is affecting all printed pages, see [General print quality issues on page 154](#).
 - If the problem is affecting only pages printed in color, see [Solving issues with color documents on page 158](#).

General print quality issues

The following examples depict letter-size paper that has passed through the device short-edge-first. These examples illustrate problems that would affect all of the pages that you print, whether you print in color or in black only. The topics that follow list the typical cause and solution for each of these examples.

Table 6-6 General print quality issues

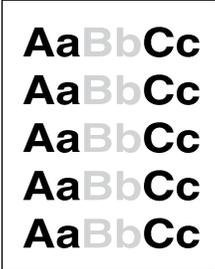
Problem	Cause	Solution
Print is light or faded.	The media might not meet HP specifications.	Use media that meets HP specifications.
	One or more print cartridges might be low. If you are using non-HP print cartridges, no messages appear on the device control panel or in the HP ToolboxFX.	Replace any low print cartridges. If none of the print cartridges is low or empty, remove the print cartridges one at a time and inspect the toner roller in each to see if the roller is damaged. If so, replace the print cartridge.
		Print the Supplies Status page to check the remaining life.

Table 6-6 General print quality issues (continued)

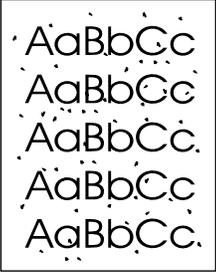
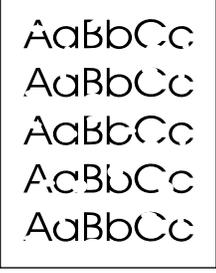
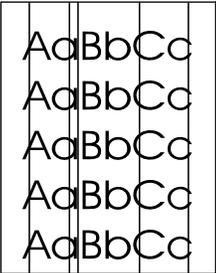
Problem	Cause	Solution
<p>Toner specks appear.</p> 	<p>The media might not meet HP specifications.</p>	<p>Use media that meets HP specifications.</p>
	<p>The paper path might need cleaning.</p>	<p>Clean the paper path. See the HP ToolboxFX online Help.</p>
<p>Dropouts appear.</p> 	<p>A single sheet of print media might be defective.</p>	<p>Try reprinting the job.</p>
	<p>The moisture content of the paper is uneven or the paper has moist spots on its surface.</p>	<p>Try different paper, such as high-quality paper that is intended for color laser printers.</p>
	<p>The paper lot is flawed. The manufacturing processes can cause some areas to reject toner.</p>	<p>Try different paper, such as high-quality paper that is intended for color laser printers.</p>
<p>Vertical streaks or bands appear on the page.</p> 	<p>One or more print cartridges might be low or defective. If you are using non-HP print cartridges, no messages appear on the device control panel or in the HP ToolboxFX.</p>	<p>Replace any low print cartridges.</p>
<p>The amount of background toner shading becomes unacceptable.</p> 	<p>The media might not meet HP specifications.</p>	<p>Use a different paper with a lighter basis weight.</p>
	<p>Very dry (low humidity) conditions can increase the amount of background shading.</p>	<p>Check the device environment.</p>
	<p>One or more print cartridges might be low. If you are using non-HP print cartridges, no messages appear on the device control panel or in the HP ToolboxFX.</p>	<p>Replace any low print cartridges.</p>

Table 6-6 General print quality issues (continued)

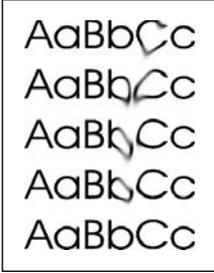
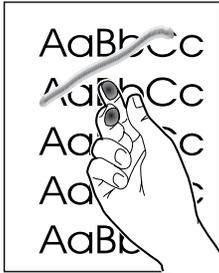
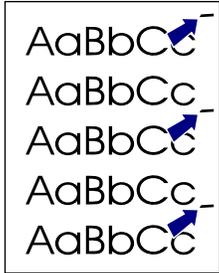
Problem	Cause	Solution
<p>Toner smears appear on the media.</p> 	<p>The media might not meet HP specifications.</p> <p>If toner smears appear on the leading edge of the paper, the media guides are dirty, or debris has accumulated in the print path.</p>	<p>Use media that meets HP specifications.</p> <p>Clean the media guides and the paper path.</p>
<p>The toner smears easily when touched.</p> 	<p>The device is not set to print on the type of media on which you want to print.</p> <p>The media might not meet HP specifications.</p> <p>The paper path might need cleaning.</p>	<p>In the printer driver, select the Paper tab and set Type is to match the type of media on which you are printing. Print speed might be slower if you are using heavy paper.</p> <p>Use media that meets HP specifications.</p> <p>Clean the device.</p>
<p>Marks repeatedly appear at even intervals on the printed side of the page.</p> 	<p>The device is not set to print on the type of media on which you want to print.</p> <p>Internal parts might have toner on them.</p> <p>The paper path might need cleaning.</p> <p>The fuser might be damaged or dirty.</p> <p>A print cartridge may have a problem.</p>	<p>In the printer driver, select the Paper tab and set Type is to match the type of paper on which you are printing. Print speed might be slower if you are using heavy paper.</p> <p>For more information, see Repetitive-image-defect ruler on page 174.</p> <p>The problem typically corrects itself after a few more pages.</p> <p>Clean the device.</p> <p>Clean using instructions in HP ToolboxFX.</p> <p>To determine which cartridge has a problem, print the PQ diagnostics page from HP ToolboxFX.</p>

Table 6-6 General print quality issues (continued)

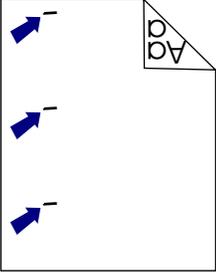
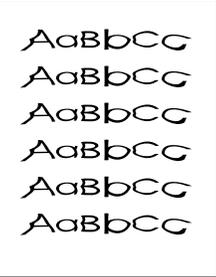
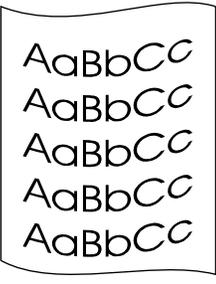
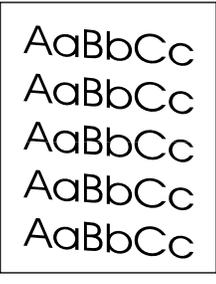
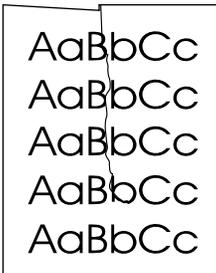
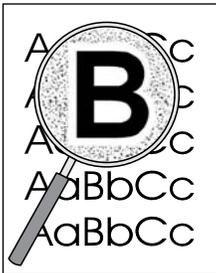
Problem	Cause	Solution
<p>Marks repeatedly appear at even intervals on the unprinted side of the page.</p> 	<p>Internal parts might have toner on them.</p> <hr/> <p>The paper path might need cleaning.</p> <hr/> <p>The fuser might be damaged or dirty.</p>	<p>The problem typically corrects itself after a few more pages.</p> <hr/> <p>Clean the device.</p> <hr/> <p>Clean using instructions in HP ToolboxFX.</p> <p>For more information, see Repetitive-image-defect ruler on page 174.</p>
<p>The printed page contains misformed characters.</p> 	<p>The media might not meet HP specifications.</p> <hr/> <p>If characters are incorrectly formed so that they produce a wavy effect, the laser scanner might need service.</p>	<p>Use a different paper, such as high-quality paper that is intended for color laser printers.</p> <hr/> <p>Verify that the problem also occurs on the Configuration page.</p>
<p>The printed page is curled or wavy.</p> 	<p>The device is not set to print on the type of media on which you want to print.</p> <hr/> <p>The media might not meet HP specifications.</p> <hr/> <p>Both high temperature and humidity can cause paper curl.</p>	<p>In the printer driver, select the Paper tab and set Type is to match the type of paper on which you are printing. Print speed might be slower if you are using heavy paper.</p> <hr/> <p>Use a different paper, such as high-quality paper that is intended for color laser printers.</p> <hr/> <p>Check the device environment.</p>
<p>Text or graphics are skewed on the printed page.</p> 	<p>The media might be loaded incorrectly.</p> <hr/> <p>The media might not meet HP specifications.</p>	<p>Make sure that the paper or other print media is loaded correctly and that the media guides are not too tight or too loose against the stack.</p> <hr/> <p>Use a different paper, such as high-quality paper that is intended for color laser printers.</p>

Table 6-6 General print quality issues (continued)

Problem	Cause	Solution
<p>The printed page contains wrinkles or creases.</p> 	<p>The media might be loaded incorrectly.</p>	<p>Verify that the media is loaded correctly and that the media guides are not too tight or too loose against the stack.</p> <p>Turn over the stack of paper in the input tray, or try rotating the paper 180° in the input tray.</p>
	<p>The media might not meet HP specifications.</p>	<p>Use a different paper, such as high-quality paper that is intended for color laser printers.</p>
<p>Toner appears around the printed characters.</p> 	<p>The media might be loaded incorrectly.</p> <p>If large amounts of toner have scattered around the characters, the paper might have high resistivity.</p>	<p>Turn over the stack of paper in the tray.</p> <p>Use a different paper, such as high-quality paper that is intended for color laser printers.</p>
<p>An image that appears at the top of the page (in solid black) repeats farther down the page (in a gray field).</p> 	<p>Software settings might affect image printing.</p>	<p>In your software program, change the tone (darkness) of the field in which the repeated image appears.</p> <p>In your software program, rotate the whole page 180° to print the lighter image first.</p>
	<p>The order of images printed might affect printing.</p>	<p>Change the order in which the images are printed. For example, have the lighter image at the top of the page, and the darker image farther down the page.</p>
	<p>A power surge might have affected the device.</p>	<p>If the defect occurs later in a print job, turn the device off for 10 minutes, and then turn on the device to restart the print job.</p>

Solving issues with color documents

This section describes issues that can occur when you print in color.

Table 6-7 Color document issues

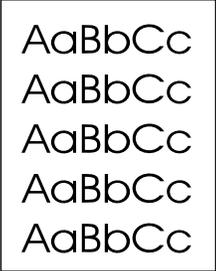
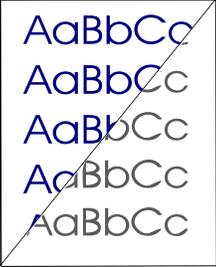
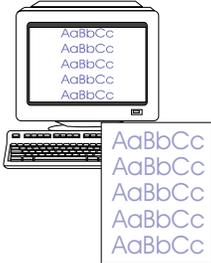
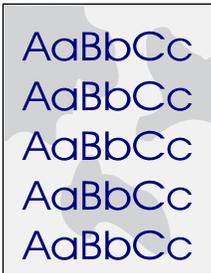
Problem	Cause	Solution
<p>Only black is printing when the document should be printing in color.</p> 	<p>Color mode is not selected in your program or printer driver.</p> <hr/> <p>The correct printer driver might not be selected in the program.</p> <hr/> <p>The device might not be correctly configured.</p>	<p>Select color mode instead of grayscale mode.</p> <hr/> <p>Select the correct printer driver.</p> <hr/> <p>Print a Configuration page.</p>
<p>One or more colors are not printing, or are inaccurate.</p> 	<p>Sealing tape might be on the print cartridges.</p> <hr/> <p>The media might not meet HP specifications.</p> <hr/> <p>The device might be operating in excessively humid conditions.</p> <hr/> <p>One or more print cartridges might be low. If you are using non-HP print cartridges, no messages appear on the device control panel or in the HP ToolboxFX.</p> <hr/> <p>The control panel is set for override.</p>	<p>Verify that the sealing tape has been completely removed from the print cartridges.</p> <hr/> <p>Use a different paper, such as high-quality paper that is intended for color laser printers.</p> <hr/> <p>Verify that the device environment is within humidity specifications.</p> <hr/> <p>Replace any low print cartridges.</p> <hr/> <p>Replace low or empty print cartridges.</p>
<p>A color is printing inconsistently after you load a new print cartridge.</p> 	<p>Another print cartridge might be low. If you are using a non-HP print cartridge, it might be low or empty but you will receive no indication.</p> <hr/> <p>The control panel is set for override.</p>	<p>Remove the print cartridge for the color that is printing inconsistently and reinstall it.</p> <hr/> <p>Replace low or empty print cartridges.</p>

Table 6-7 Color document issues (continued)

Problem	Cause	Solution
<p>The colors on the printed page do not match the colors as they appear on the screen.</p> 	<p>The colors on your computer monitor might differ from the device output.</p> <p>If extremely light colors or extremely dark colors on screen are not printing, your software program might interpret extremely light colors as white or extremely dark colors as black.</p> <p>The media might not meet HP specifications.</p>	<p>Select Screen Match in the Color tab of the printer driver.</p> <p>If possible, avoid using extremely light or extremely dark colors.</p> <p>Use a different paper, such as high-quality paper that is intended for color laser printers.</p>
<p>The finish on the printed color page is inconsistent.</p> 	<p>The media might be too rough.</p>	<p>Use a smooth paper or print media, such as a high-quality paper that is made for color laser printers. Generally, smoother media produces better results.</p>

Paper handling issues

The following sections contains information about paper-handling issues.

Wrong size/type media

Use the following procedure to troubleshoot and resolve wrong size or type media problems.

1. Make sure that the software program is selecting the correct media size or type.
2. Make sure that the printer driver for the software program is correctly installed, configured, and capable of requesting the desired media size and type.
3. Make sure that the paper guides are touching the edges of the stack of media.
4. If the size of media requested is not loaded in the tray selected, the printer draws media from the next default tray that contains the correct size. Load the correct media in the tray and make sure that the tray is adjusted correctly. Load the tray with enough media to complete the print job. (See the *HP Color LaserJet 2605, 2605dn, 2605dtn User Guide* for information about configuring the input trays.)

Cannot select a tray or feature to use

When you cannot select a tray or feature to use, use the following procedure to troubleshoot and resolve problems.

1. When the size of media requested is not loaded in the tray selected, the printer draws media from the next default tray that contains the correct size. Load the correct media in the tray and make sure that the tray is adjusted correctly. Load the tray with enough media to complete the print job. (See the *HP Color LaserJet 2605, 2605dn, 2605dtn User Guide* for information about configuring the input trays.)
2. Make sure that the driver for the software program is correctly installed, configured, and capable of requesting the desired media size and type, or feature.

Performance problems

Try the tips in this section if pages exit the device but have nothing printed on them, or when the device does not print any pages.

Table 6-8 Performance issues

Problem	Cause	Solution
Pages print but are totally blank.	The sealing tape might still be in the print cartridges.	Verify that the sealing tape has been completely removed from the print cartridges.
	The document might contain blank pages.	Check the document that you are printing to see if content appears on all of the pages.
	The device might be malfunctioning.	To check the device, print a Configuration page.
Pages print very slowly.	Heavier media types can slow the print job.	Print on a different type of media.
	Complex pages will print slower.	Proper fusing may require a slower print speed to ensure the best print quality.
Pages did not print.	The device might not be pulling media correctly.	See Paper handling issues on page 160 .
	The media is jamming in the device.	Clear the jam.
	The USB cable might be defective or incorrectly connected.	<ul style="list-style-type: none">• Disconnect the USB cable at both ends and reconnect it.• Try printing a job that has printed in the past.• Try using a different USB cable.
	Other devices are running on your computer.	The device might not share a USB port. If you have an external hard drive or network switchbox that is connected to the same port as the device, the other device might be interfering. To connect and use the device, you must disconnect the other device or you must use two USB ports on the computer.

Functional tests (SERVICE ONLY)

Engine-test print

The engine-test print is used to confirm whether the printer operates correctly or not. It is performed by the engine controller.

If a malfunction occurs in the printer, perform an engine-test print while the printer is in STBY mode and then press the test-print switch (on the rear side of the printer) once. A one-page test pattern of horizontal lines will print as shown below.

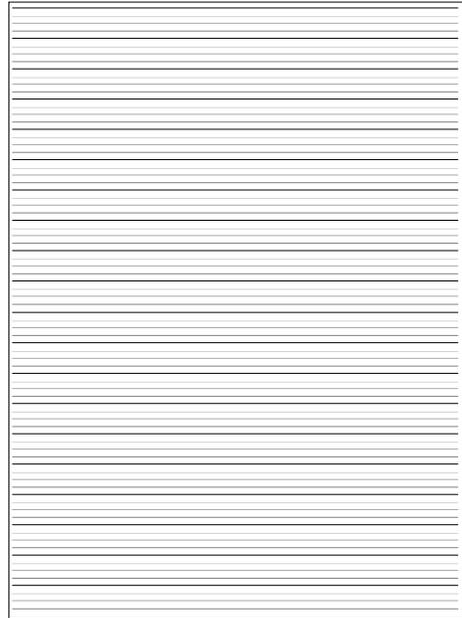
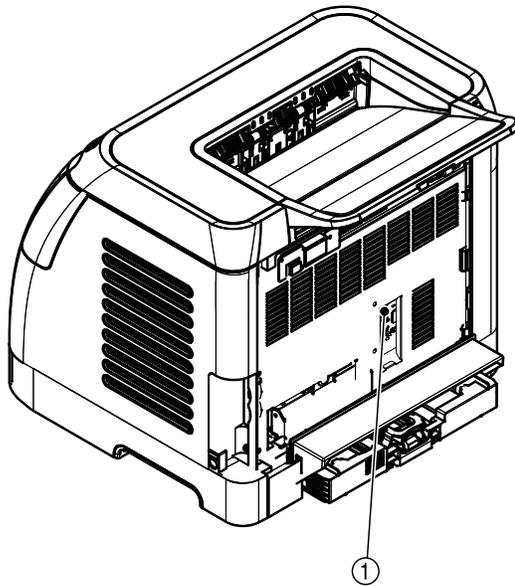


Figure 6-2 Engine-test print switch

- 1 | Engine test print switch

Service mode functions (SERVICE ONLY)

Cold reset

Cold reset, which power-cycles the engine with a special button press, is not supported for this printer. Instead, use the feature “Restore defaults” located in the Service menu to reset default settings. For more information, see [Service menu on page 169](#).

NVRAM initializer



CAUTION NVRAM initialization will erase all network settings. Before performing NVRAM initialization, print a Configuration page, which contains network-setting information.

NVRAM init will perform the following functions:

- Resets all customer-accessible menu settings via control panel and software back to the factory default settings
- Resets the language to the value set at the factory
- Resets the default media size to cold reset media size
- Resets the symbol set to PC-8

Use the following procedure to execute an NVRAM-init.

1. Turn off the printer.
2. Press and hold the  (Select) and  (Cancel Job) buttons simultaneously.
3. Turn on the printer.
4. When you see the message **Permanent storage init** displays, release the  (Select) and  (Cancel Job) buttons.

When the NVRAM init is complete, the printer will return to the Ready state.

Super NVRAM initializer



CAUTION Super NVRAM initialization will erase all network settings. Before performing Super NVRAM initialization, print a Configuration page, which contains network setting information.

When a super NVRAM init is performed, the printer enters the Generic Product Mode, which changes the language and country/region settings to “undefined.”



NOTE Super NVRAM init will erase all data stored in the protected NVRAM settings.

Use the following procedure to execute a super NVRAM init.

1. Turn off the printer.
2. Press and hold the  (Left arrow) and  (Right arrow) buttons simultaneously.

3. Turn on the printer.
4. When you see the message **Permanent storage init** displays, release the  (Left arrow) and  (Right arrow) buttons.

When the super NVRAM init is complete, the printer will return to the Ready state.

Restoring page counts and serial number

A software utility is available on the Service and Support CD-ROM to restore page counts and serial numbers when the formatter is replaced or when any of the following settings are lost:

- Color page count
- Total page count
- Formatter number
- Service ID
- USB serial number

To access the utility on the Service and Support CD-ROM, in the **Library** folder, double-click the **2600config.exe** program. You can run the utility from the CD-ROM or copy it to your computer.



NOTE To use this program, the printer must be directly connected to your computer with a USB cable.

Cleaning the ETB

To clean the ETB, use the following procedure:

1. Enter the Secondary service menu. For more information, see [Secondary service menu on page 169](#).
2. Scroll through the menu and select [Clean ETB](#).
3. Press the  ([Select](#)) button to start the cleaning mode.

Troubleshooting tools

The section describes the tools that can help you solve problems with your device.

Printer pages and reports

This section describes the pages and reports that help you diagnose and solve problems with the device.

Demo page

To verify that your printer is functioning properly, print a Demo page. For more information about the Demo page, see [Demo page on page 40](#).

Configuration page

The Configuration page lists the current settings and properties of the printer. You can use this page to check for color plane registration and cartridge half tones. You can print a Configuration page from the printer or HP ToolboxFX.

For more information about the Configuration page, see [Configuration page on page 40](#).

Supplies Status page

The Supplies Status page lists the remaining life of the HP print cartridges. It also lists the estimated pages remaining, number of pages printed, and other supplies information. You can print a Supplies Status page from the printer or HP ToolboxFX.

For more information about the Supplies Status page, see [Supplies Status page on page 41](#).

Fuser cleaning page

For information about fuser cleaning pages, see [Cleaning page on page 172](#).

Print quality troubleshooting pages

For more information about print quality troubleshooting pages, see [HP ToolboxFX on page 171](#).

Status log

The status log for this printer is located on the Configuration page and lists the last five events. For more information, see [Configuration page on page 167](#).

Table 6-9 Status-log messages

Error log code	Description
10.0000	Black e-label error
10.0001	Cyan e-label error
10.0002	Magenta e-label error
10.0003	Yellow e-label error
10.1000	Black e-label missing
10.1001	Cyan e-label missing
10.1002	Magenta e-label missing
10.1003	Yellow e-label missing
10.3000	Non-HP black
10.3001	Non-HP cyan
10.3002	Non-HP magenta
10.3003	Non-HP yellow
13.0000	Paper jam, Tray 1 area
13.0001	Paper jam, Tray 2 area
13.0002	Paper jam, Tray 3 area

Table 6-9 Status-log messages (continued)

Error log code	Description
13.0003	Paper jam, registration drum area
13.0004	Paper jam, drum fuser area
13.0005	Paper jam, fuser output area
20.0000	Memory out
21.0000	Video under run
50.1000	Low temperature fuser error
50.2000	Slow fuser error
50.3000	High temperature fuser error
50.4000	Fuser heater wire failure
50.5000	Fuser low temperature subtherm failure
50.6000	Fuser high temperature subtherm failure
52.0000	Scanner error, black laser failure
52.0100	Scanner error, cyan laser failure
52.0200	Scanner error, magenta laser failure
52.0300	Scanner error, yellow laser failure
54.0600	Density sensor error
54.1000	Color plane registration sensor error
54.2800	Sensor density contaminated
54.2801	Sensor color plane registration contaminated
55.0000	Engine comm fatal error
55.0001	Engine comm critical error
55.1000	DC controller memory error
57.0000	Fan motor error
57.0001	Fan cartridge failure
59.0000	Paper path/ETB rotation failure
59.0001	Paper path/ETB ramp up failure
101.0000	Color plane registration error
102.0000	DMAX calibration error
103.0000	DHALF calibration error

Event log

Information for the last five events is available on the Configuration page under the Status log section. For more information, see [Configuration page on page 167](#).

For a list of messages that only appear in the event log, see [Status-log messages on page 140](#).

Service menu

Use the control-panel **Service** menu to troubleshoot device problems.

Service menu settings

The service menu is used to calibrate, restore factory default settings, and clean the print paper path.

The following service menu items are available:

- **Restore defaults**—used to reset all customer-accessible menu settings back to the factory default settings (except language) via the control panel or software



NOTE This service menu item does not reset factory-settable settings, including formatter number, page counts, factory paper settings, language, and so on.

- **PowerSave**—used to configure the amount of idle time before the engine enters sleep mode
- **Cleaning mode**—used to remove dust and toner from the print paper path

Restoring the factory-set defaults

Restoring the factory-set defaults returns all of the settings to the factory defaults.

To restore the factory-set defaults

1. Use the  (Left arrow) or the  (Right arrow) button to select **Service**, and then press  (Select).
2. Use the  (Left arrow) or the  (Right arrow) button to select **Restore defaults**, and then press  (Select).

The device automatically restarts.

Secondary service menu

The secondary service menu is intended for use by manufacturing engineers, service engineers, developers, and support personnel. This menu provides options to perform various tests and print out special reports.

The following secondary service menu items are available:

- **Service Reports**—used to print out a continuous configuration report, translation report, and error report
- **USB Speed**—enables or disables the ability for the printer to operate in high speed.

The following **USB Speed** setting options are available:

- Auto
- Hi speed
- Full speed
- **Display test**—verifies that all of the characters on the display function correctly by allowing you to manually scroll through the characters

- **Clean ETB**—used to clean the ETB
- **Calibrations**
 - **All Cals**
 - **CPR Cal**
 - **DMAX/DHALF Cal**
 - **DHALF Only Cal**
 - **Test Page**

To enter the secondary service menu, use the following procedure:

1. Confirm that the device is in a **Ready** state.
2. Press the  button (**Select**) to enter the main menu system.
3. Press the  button (**Left arrow**) and the  button (**Cancel Job**) simultaneously.
4. Press the  button (**Select**) to confirm **2ndary Service**.
5. Press the  (**Left arrow**) button and  button (**Right arrow**) to navigate to the secondary service menu.

HP ToolboxFX

HP ToolboxFX

HP ToolboxFX is a Web-based application that you can use for troubleshooting tasks.

To view HP ToolboxFX

Open HP ToolboxFX in one of these ways:

- On the Windows desktop, double-click the HP ToolboxFX icon.
- On the Windows **Start** menu, click **Programs** (**All Programs** in Windows XP), click **HP**, click **HP Color LaserJet 2605 Series**, and then click **HP ToolboxFX**.

Troubleshooting tab

HP ToolboxFX includes a **Troubleshooting** tab that contains links to the following main pages:

- **Control Panel Messages.** View descriptions of printer control-panel messages.
- **Clearing Jams.** View information about locating and clearing jams.
- **Print Problems.** View Help topics that can help you solve print problems.
- **Memory Card Problems.** View Help topics that can help you solve memory-card problems.
- **Connectivity Problems.** View Help topics that can help you solve networking problems.
- **Troubleshooting Tools.** Employ such troubleshooting tools as a cleaning page or a color troubleshooting page to maintain the printer.



NOTE Other tabs on HP ToolboxFX might be helpful in troubleshooting printer problems. For information about the other tabs on HP ToolboxFX, see [HP ToolboxFX on page 44](#).

Print quality troubleshooting pages

The following features are available from the HP ToolboxFX.

Printer calibration

Calibrations are performed at regular intervals. For best print quality, a calibration can be performed from the control panel. For information about calibrating the printer at the control panel, see [Printer calibration on page 81](#).

Calibrating the printer using HP ToolboxFX

Use the following steps to calibrate the printer using HP ToolboxFX.

1. Open the HP ToolboxFX.
2. On the **Troubleshooting** tab, click **Calibrate now**.
3. Click the **Troubleshooting** tab and then click **Troubleshooting Tools** (on the left side of the screen).
4. In the Calibration section, click **CALIBRATE NOW**.

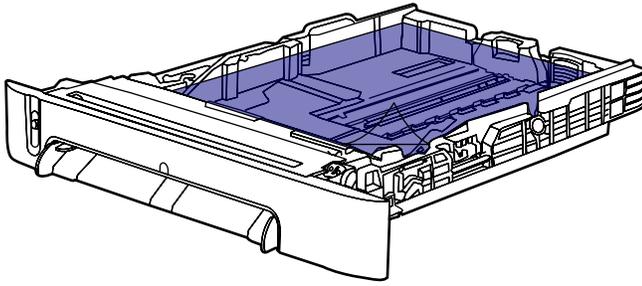
Cleaning page

The device features a special cleaning mode to clean the paper path.



NOTE Use the following procedure to clean the paper path using the HP ToolboxFX. To clean the engine when the computer is running an operating system that does not support HP ToolboxFX, see the late-breaking Readme on the root of the CD-ROM, or visit <http://www.hp.com/support/clj2605>.

1. Make sure that the printer is turned on and in the Ready state.
2. Open the HP ToolboxFX.
3. On the **Troubleshooting** tab, click **Maintenance**, click **Cleaning Page**, and then click **Print**. A page with a pattern prints from the printer.
4. At the printer, remove any print media in Tray 2 or optional Tray 3.
5. Remove the page that printed and load it face-down into Tray 2 or optional Tray 3.



6. At the computer, press **Clean**.

Configuration page

The Configuration page lists the current settings and properties of the printer. You can print a Configuration page from the printer or HP ToolboxFX. To print the Configuration page from the printer, see [Configuration page on page 167](#).

Diagnostic resources

Reports menu

The Reports menu contains the following diagnostic tools:

- Demo page
- Menu structure report
- Configuration report
- Color supplies status

For a more detailed description about the diagnostic tools available from the Reports menu, see [Printer pages and reports on page 166](#).

Network/Web diagnostics tools

For information on available network and Web diagnostic tools, go to <http://www.hp.com/support/clj2605>.

Repetitive-image-defect ruler

Use a repetitive-image-defect ruler to measure occurrences of repetitive image defects. Place the ruler next to the first occurrence of the defect on the page. Find the distance between identical defects and see the [Table 6-10 Repetitive image defects on page 174](#) table to identify the component that is causing the defect.

Table 6-10 Repetitive image defects

Measurement	Component
24.7 mm (0.97 inch)	Developer sleeve
26.7 mm (1.05 inches)	Charge roller
32.9 mm (1.3 inches)	RS roller
37.7 mm (1.48 inches)	Transfer roller
54.5 mm (2.15 inches)	ETB rollers
56.6 mm (2.22 inches)	Fuser sleeve
62.8 mm (2.47 inches)	Pressure roller
75.4 mm (2.97 inches)	OPC

Firmware and software updates

Use the following procedure to periodically check for firmware and software updates.

1. Go to <http://www.hp.com/support/clj2605>.
2. Select **Download drivers and software** and then select the appropriate operating system for your computer.
3. Follow the instructions provided on the download pages.