



# Troubleshooting

To better help our customers - this HP Laserjet 2400 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).

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# Correcting print-quality problems

This section helps you define print-quality problems and what to do to correct them. Often print-quality problems can be handled easily by making sure that the printer is correctly maintained, using print media that meets HP specifications, or running a cleaning page.

## Print-quality checklist

General print-quality problems can be solved by following the checklist below.

- Check the printer driver to make sure that you are using the best available print-quality option (see the user guide).
- Try printing with one of the alternative printer drivers. The most recent printer drivers are available for download from [www.hp.com/go/lj2410\\_software](http://www.hp.com/go/lj2410_software), [www.hp.com/go/lj2420\\_software](http://www.hp.com/go/lj2420_software), or [www.hp.com/go/lj2430\\_software](http://www.hp.com/go/lj2430_software).
- Clean the inside of the printer (see [Cleaning the printer](#)).
- Check the paper type and quality (see [Media specifications](#)).
- Check to make sure that EconoMode is off in the software.
- Troubleshoot general printing problems (see [Solving general printing problems](#)).
- Install a new HP print cartridge, and then check the print quality again. (See the instructions provided with the print cartridge.)

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### NOTE

If the page is totally blank (all white) check to make sure that the sealing tape is removed from the print cartridge and ensure that the print cartridge is installed correctly. Newer printers have been optimized to print characters more accurately. This might result in characters that look lighter or thinner than you are used to from your older printer. If the page is printing images darker than those from an older printer, and you want the images to match the older printer, make these changes in your printer driver: on the **Finishing** tab, select **Print Quality**, select **Custom**, click **Details**, and select the check box for **Print Images Lighter**.

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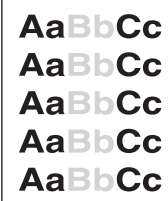

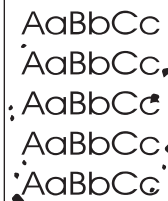
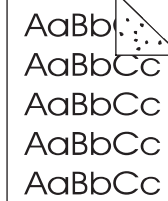



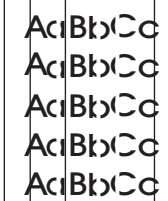


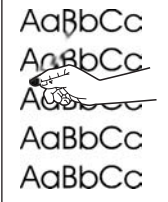

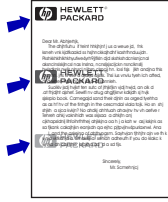

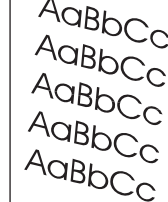
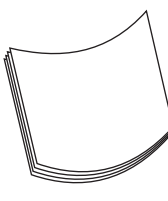
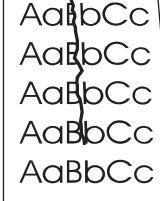


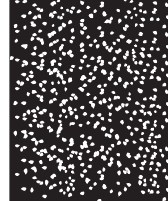
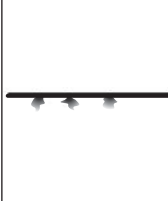
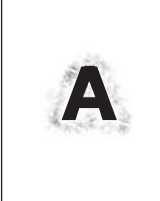


## Image-defect examples

Use the examples in this image-defect table to determine which print-quality problem you are experiencing, and then see the corresponding reference pages to troubleshoot the problem. These examples identify the most common print-quality problems.

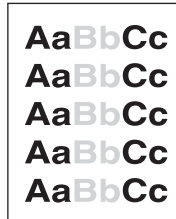
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### NOTE

The examples below depict letter-size paper that has passed through the printer short-edge first.

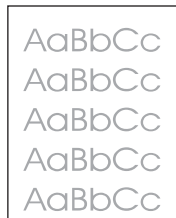
				
<p>See <a href="#">Light print (partial page)</a></p>	<p>See <a href="#">Light print (entire page)</a></p>	<p>See <a href="#">Specks</a></p>	<p>See <a href="#">Specks</a></p>	<p>See <a href="#">Dropouts</a></p>
				
<p>See <a href="#">Dropouts</a></p>	<p>See <a href="#">Dropouts</a></p>	<p>See <a href="#">Lines</a></p>	<p>See <a href="#">Gray background</a></p>	<p>See <a href="#">Toner smear</a></p>
				
<p>See <a href="#">Loose toner</a></p>	<p>See <a href="#">Repeating defects</a></p>	<p>See <a href="#">Repeating image</a></p>	<p>See <a href="#">Misformed characters</a></p>	<p>See <a href="#">Page skew</a></p>
				
<p>See <a href="#">Curl or wave</a></p>	<p>See <a href="#">Wrinkles or creases</a></p>	<p>See <a href="#">Vertical white lines</a></p>	<p>See <a href="#">Tire tracks</a></p>	<p>See <a href="#">White spots on black</a></p>
				
<p>See <a href="#">Scattered lines.</a></p>	<p>See <a href="#">Blurred print.</a></p>	<p>See <a href="#">Random image repetition (dark)</a></p>	<p>See <a href="#">Random image repetition (light)</a></p>	

## Light print (partial page)



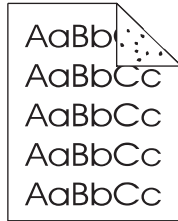
1. Make sure that the print cartridge is fully installed.
2. The toner level in the print cartridge might be low. Replace the print cartridge.
3. The media might not meet HP specifications (for example, the paper is too moist or too rough). See [Media specifications](#).
4. The transfer roller might be worn or contaminated. Replace the transfer roller (see [Transfer roller](#)).

## Light print (entire page)



1. Make sure that the print cartridge is fully installed.
2. Make sure that the EconoMode setting is turned off at the control panel and in the printer driver.
3. Open the Configure Device menu at the printer control panel. Open the Print Quality submenu and increase the TONER DENSITY setting. See the user guide.
4. Try using a different type of media.
5. The print cartridge might be almost empty. Replace the print cartridge.
6. The print cartridge might be installed incorrectly. Reseat the print cartridge.
7. The transfer roller might be defective or installed incorrectly. Verify that the transfer roller is installed correctly. If the transfer roller is damaged, replace it.
8. The power supply might be defective. Replace the power supply (see [Power supply](#)).

## Specks



Specks might appear on a page after a jam has been cleared.

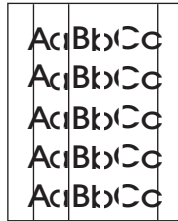
1. Print a few more pages to see if the problem corrects itself.
2. Clean the inside of the printer and run a cleaning page to clean the fuser. (See [Cleaning the printer.](#))
3. Try using a different type of media.
4. Check the print cartridge for leaks. If the print cartridge is leaking, replace it.
5. The fuser might be defective. Replace the fuser [Fuser.](#)

## Dropouts



1. Make sure that the environmental specifications for the printer are being met. (See [Operating environment.](#))
2. If the paper is rough, and the toner easily rubs off, open the Configure Device menu at the printer control panel. Open the Print Quality submenu, select **FUSER MODES**, and then select the paper type that you are using. Change the setting to HIGH 1 or HIGH 2, which helps the toner fuse more completely onto the paper. (See the user guide.)
3. Try using a smoother paper.
4. The print cartridge might be defective. Replace the print cartridge.
5. Fuser rollers might be dirty. Run a cleaning page (several pages might be required if the fuser is very dirty). If the image defect persists, replace the fuser (see [Fuser.](#))
6. The transfer roller might be damaged, dirty, or worn. Try cleaning the transfer roller by using a dry, lint-free cloth. If the image defect persists, replace the transfer roller.
7. The power supply might be defective. Replace the power supply (see [Power supply.](#))

## Lines



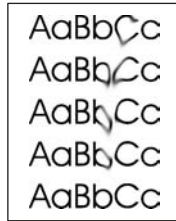
1. Print a few more pages to see if the problem corrects itself.
2. Clean the inside of the printer and run a cleaning page to clean the fuser. (See [Cleaning the printer.](#))
3. Replace the print cartridge.

## Gray background



1. Do not use media that has already been run through the printer.
2. Try using a different type of media.
3. Print a few more pages to see if the problem corrects itself.
4. Turn over the stack of media in the tray. Also, try rotating the stack 180°.
5. Open the Configure Device menu at the printer control panel. On the Print Quality submenu, increase the **TONER DENSITY** setting. See the user guide.
6. Make sure that the environmental specifications for the printer are being met. (See [Operating environment.](#))
7. Replace the print cartridge.
8. The power supply might be defective. Replace the power supply (see [Power supply.](#))

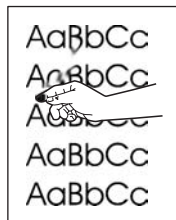
## Toner smear



1. Print a few more pages to see if the problem corrects itself.
2. Try using a different type of media.
3. Make sure that the environmental specifications for the printer are being met. (See [Operating environment](#).)
4. Clean the inside of the printer and run a cleaning page to clean the fuser. (See [Cleaning the printer](#).)
5. Replace the print cartridge.
6. The fuser might be defective. Replace the fuser (see [Fuser](#)).
7. The ECU might be defective. Replace the ECU (see [ECU](#)).

Also see [Loose toner](#).

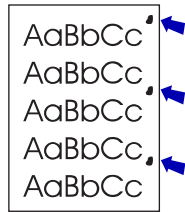
## Loose toner



Loose toner, in this context, is defined as toner that can be rubbed off the page.

1. If paper is heavy or rough, open the Configure Device menu at the printer control panel. On the Print Quality submenu, select **FUSER MODES**, and then select the paper type that you are using. Change the setting to HIGH 1 or HIGH 2, which helps the toner fuse more completely onto the paper. (See the user guide.) You must also set the type of media for the tray that you are using. (See [Printing by type and size of media \(locking trays\)](#).)
2. If you have observed a rougher texture on one side of your paper, try printing on the smoother side.
3. Make sure that the environmental specifications for the printer are being met. (See [Operating environment](#).)
4. Make sure that type and quality of the media that you are using meet HP specifications. (See [Media specifications](#).)
5. The fuser might be defective. Replace the fuser (see [Fuser](#)).
6. The ECU might be defective. Replace the ECU (see [Laser/scanner](#)).

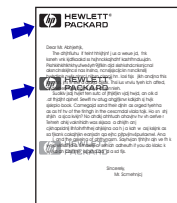
## Repeating defects



1. Print a few more pages to see if the problem corrects itself.
2. Clean the inside of the printer and run a cleaning page to clean the fuser. (See [Cleaning the printer.](#))
3. Measure the distance between two identical defects and see [Repeating defects.](#)

Also see [Repeating image.](#)

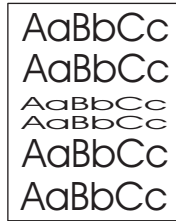
## Repeating image



This type of defect might occur when using preprinted forms or a large quantity of narrow paper.

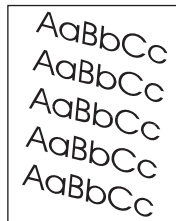
1. Print a few more pages to see if the problem corrects itself.
2. Run a cleaning page, and then print a few more pages to see if the problem persists.
3. Make sure that type and quality of the media that you are using meet HP specifications. (See [Media specifications.](#))
4. If the distance between defects is 38 mm (1.5 inches), 47 mm (1.85 inches), or 94 mm (3.7 inches), the print cartridge might need to be replaced.
5. Measure the distance between two identical defects and see [Repeating defects.](#)

## Misformed characters



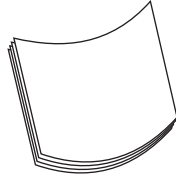
1. Print a few more pages to see if the problem corrects itself.
2. Make sure that the environmental specifications for the printer are being met. (See [Operating environment](#).)
3. Reseat cables that are connected to the laser/scanner.
4. Reseat cables that are connected to the ECU.
5. If the image defect persists, the laser/scanner might be defective. Replace the laser/scanner [Laser/scanner](#).
6. Inspect the gears in the main drive assembly and replace the assembly if gears are damaged (see [Gear assembly](#)).
7. The ECU might be defective. Replace the ECU (see [ECU](#)).

## Page skew



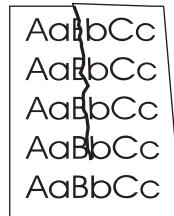
1. Print a few more pages to see if the problem corrects itself.
2. Verify that there are no torn pieces of media inside the printer.
3. Make sure that media is loaded correctly and that all adjustments have been made. (See the user guide.) Make sure that the guides in the tray are not too tight or too loose against the stack.
4. Turn over the stack of paper in the tray. Also, try rotating the stack 180°.
5. Make sure that the type and quality of the media that you are using meet HP specifications. (See [Media specifications](#).)
6. Make sure that the environmental specifications for the printer are being met. (See [Operating environment](#).)
7. The registration assembly might be installed incorrectly or damaged. Make sure that the registration assembly is installed correctly. If necessary, replace the registration assembly (see [Registration assembly](#)).

## Curl or wave



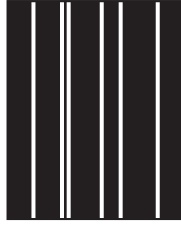
1. Turn over the stack of media in the tray. Also, try rotating the stack 180°.
2. Make sure that the type and quality of the media that you are using meet HP specifications. (See [Media specifications](#).)
3. Make sure that the environmental specifications for the printer are being met. (See [Operating environment](#).)
4. Try printing to a different output bin.
5. If paper is lightweight and smooth, open the Configure Device menu at the printer control panel. On the Print Quality submenu, select **FUSER MODES**, and then select the paper type that you are using. Change the setting to **LOW**, which helps reduce the heat in the fusing process. (See the user guide.) You must also set the type of media for the tray that you are using. (See [Printing by type and size of media \(locking trays\)](#).)

## Wrinkles or creases



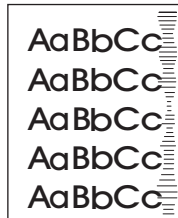
1. Print a few more pages to see if the problem corrects itself.
2. Make sure that the environmental specifications for the printer are being met. (See [Operating environment](#).)
3. Turn over the stack of media in the tray. Also, try rotating the stack 180°.
4. Make sure that media is loaded correctly and all adjustments have been made. (See the user guide.)
5. Make sure that the type and quality of the media that you are using meet HP specifications. (See [Media specifications](#).)
6. If envelopes are creasing, try storing envelopes so that they lie flat.

## Vertical white lines



1. Print a few more pages to see if the problem corrects itself.
2. Make sure that the type and quality of the media that you are using meet HP specifications. (See [Media specifications](#).)
3. Replace the print cartridge.
4. Remove the laser/scanner and check for dirt or other obstructions in the beam path.
5. The fuser might be defective. Replace the fuser (see [Fuser](#)).
6. If the image defect persists, the mirror in the laser/scanner might be dirty. Replace the laser/scanner (see [Laser/scanner](#)).
7. If the image defect persists, replace the ECU (see [ECU](#)).
8. If the image defect persists, replace the formatter (see [Formatter](#)).

## Tire tracks



This defect typically occurs when the print cartridge has far exceeded its rated life of 6,000 (Q6511A) or 12,000 (Q6511X) pages. For example, if you are printing a very large quantity of pages with very little toner coverage.

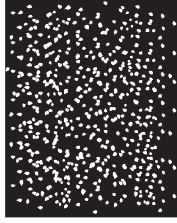
1. Perform a half self-test functional check. If the drum is damaged, replace the print cartridge.
2. Run a cleaning page. If the image defect persists, replace the fuser (see [Fuser](#)).
3. If the image defect persists, check the printer for other sources of contamination or damage in the paper path and clean or replace parts as necessary.

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### NOTE

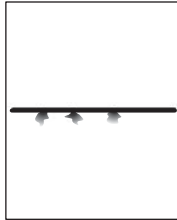
This type of image defect might also be a repetitive defect. See [Repeating defects](#).

## White spots on black



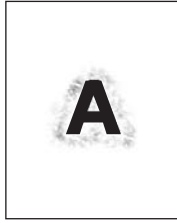
1. Print a few more pages to see if the problem corrects itself.
2. Make sure that the type and quality of the media that you are using meet HP specifications. (See [Media specifications](#).)
3. Make sure that the environmental specifications for the printer are being met. (See [Operating environment](#).)
4. Replace the print cartridge.

## Scattered lines



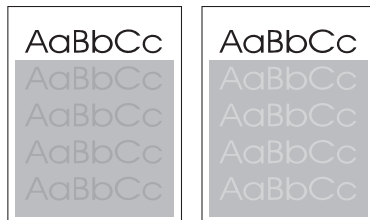
1. Make sure that the type and quality of the media that you are using meet HP specifications. (See [Media specifications](#).)
2. Make sure that the environmental specifications for the printer are being met. (See [Operating environment](#).)
3. Turn over the stack of media in the tray. Also, try rotating the stack 180°.
4. Open the Configure Device menu at the printer control panel. Open the Print Quality submenu and change the **TONER DENSITY** setting. (See the user guide.)
5. Open the Configure Device menu at the printer control panel. On the Print Quality submenu, open **OPTIMIZE** and set **LINE DETAIL=ON**.

## Blurred print



1. Make sure that the type and quality of the media that you are using meet HP specifications. (See [Media specifications](#).)
2. Make sure that the environmental specifications for the printer are being met. (See [Operating environment](#).)
3. Turn over the stack of media in the tray. Also, try rotating the stack 180°.
4. Do not use paper that already has been run through the printer.
5. Decrease the toner density. Open the Configure Device menu at the printer control panel. Open the Print Quality submenu and change the **TONER DENSITY** setting. (See the user guide.)
6. Open the Configure Device menu at the printer control panel. On the Print Quality submenu, open **OPTIMIZE** and set **HIGH TRANSFER=ON**. (See the user guide.)

## Random image repetition



If an image that appears at the top of the page (in solid black) repeats farther down the page (in a gray field), the toner might not have been completely erased from the last job. (The repeated image might be lighter or darker than the field it appears in.)

- Change the tone (darkness) of the field that the repeated image appears in.
- 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.
- From the software application, rotate the whole page 180° to print the lighter image first.
- If the defect occurs later in a print job, turn the printer off for 10 minutes, and then turn the printer on to restart the print job.