Event log messages

Print an event log

Use the event log to help diagnose and solve product problems.

1. Press Menu .
2. Press the down arrow ▼ to highlight **DIAGNOSTICS**, and then press OK.
3. Press the down arrow ▼ to highlight **PRINT EVENT LOG**, and then press OK to print the pages.

NOTE: For information about clearing the event log, see Service menu on page 337.

Show an event log

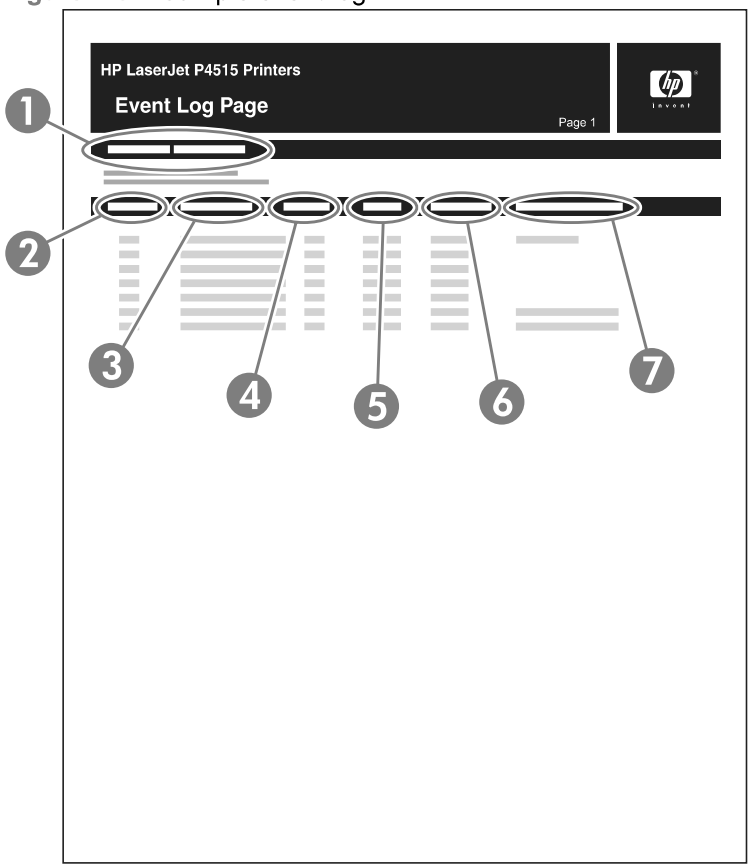
Use the control panel to view the event log.

1. Press Menu .
2. Press the down arrow ▼ to highlight **DIAGNOSTICS**, and then press OK.
3. Press the down arrow ▼ to highlight **SHOW EVENT LOG**, and then press OK to print the pages.

NOTE: For information about clearing the event log, see Service menu on page 337.

Sample event log

Figure 7-32 Sample event log



1	Product information
2	Event number
3	Date and time
4	Engine cycles
5	Event log code
6	Firmware version number
7	Description or personality

Paper-handling problems

Jams

The product closely monitors the paper path for jams. The product displays a jam error message when one of the following conditions occurs.

- Paper is detected at a paper path sensor when paper is not expected.
- Paper fails to clear a sensor within a specified time period.
- Paper fails to arrive at a sensor within a specified time period.

If the product is experiencing frequent jams, use the following steps to assist you in resolving the causes of the jam.

- Review the event log to determine a cause for the jams.
- Inspect each of the paper path sensors to determine if the sensor flags are free from obstructions and functioning correctly. See Sensor test (interactive) on page 250.
- Use the manual sensor diagnostic test to determine if all paper path motors and solenoids are functioning correctly.
-

The sensors below monitor the product paper path.

- PS102, pre-feed sensor
- PS103, top-of-page sensor
- PS106, media-width sensor
- PS108, media-width sensor
- PS700, fusing delivery sensor
- PS1603, optional 500-sheet feeder media path sensors
- PS1502, duplex sensor
- PS1704, optional 1,500-sheet feeder media path sensors

NOTE: To locate the sensors listed above, see Figure 7-2 Paper sensors on page 249.

Common causes of jams

Many jams are caused by using paper that does not meet HP specifications. For complete paper specifications for all HP LaserJet products, see the *HP LaserJet Printer Family Print Media Guide*. This guide is available at www.hp.com/support/ljpaperguide.

The product is jammed.[1]

Cause	Solution
The paper does not meet specifications.	Use only paper that meets HP specifications. See Paper and print media on page 47.

The product is jammed.[1]

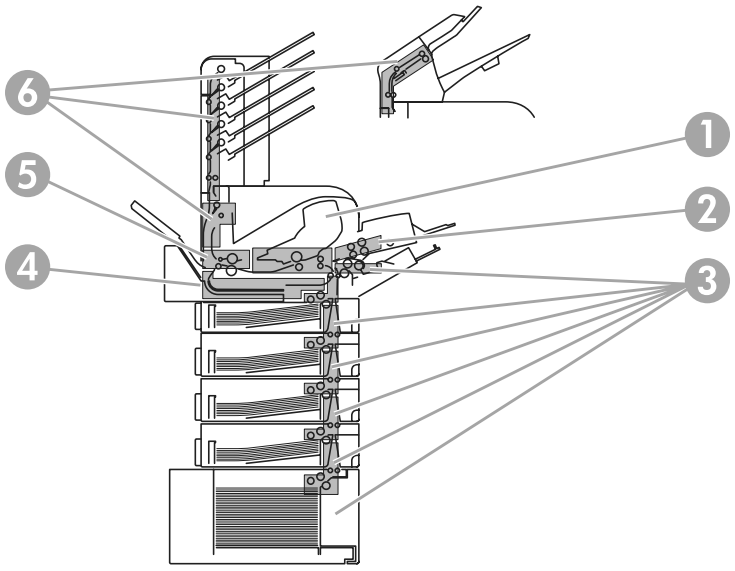
Cause	Solution
A component is installed incorrectly.	Verify that all print cartridges, the transfer unit, and the fuser are correctly installed.
You are using paper that has already passed through a product or copier.	Do not use paper that has been previously printed on or copied.
A tray is loaded incorrectly.	Remove any excess paper from the tray. Make sure that the stack is below the maximum stack height mark in the tray. See Load trays on page 54.
The paper is skewed.	The tray guides are not adjusted correctly. Adjust them so they hold the stack firmly in place without bending it.
The paper is binding or sticking together.	Remove the paper, flex it, rotate it 180°, or flip it over. Reload the paper into the tray. **NOTE:** Do not fan paper. Fanning can create static electricity, which can cause paper to stick together.
The paper is removed before it settles into the output bin.	Reset the product. Wait until the page completely settles in the output bin before removing it.
During two-sided printing, you removed the paper before the second side of the document was printed.	Reset the product and print the document again. Wait until the page completely settles in the output bin before removing it.
The paper is in poor condition.	Replace the paper.
The internal rollers from the tray are not picking up the paper.	Remove the top sheet of paper. If the paper is too heavy, it might not be picked from the tray.
The paper has rough or jagged edges.	Replace the paper.
The paper is perforated or embossed.	Perforated or embossed paper does not separate easily. Feed single sheets from Tray 1.
Product supply items have reached the end of their useful life.	Check the product control panel for messages prompting you to replace supplies, or print a supplies status page to verify the remaining life of the supplies. See Print the information and show-me-how pages on page 66.
Paper was not stored correctly.	Replace the paper in the trays. Paper should be stored in the original packaging in a controlled environment.

[1] If the product continues to jam, contact HP Customer Support or your authorized HP service provider.

Jam locations

If a jam message appears on the control-panel display, look for jammed paper or other print media in the locations that are indicated in the following illustration. Then follow the procedure for clearing the jam. You might need to look for paper in other locations than those that are indicated in the jam message. If the location of the jam is not obvious, look first in the top-cover area underneath the print cartridge.

When clearing jams, be very careful not to tear jammed paper. If a small piece of paper is left in the product, it could cause additional jams.



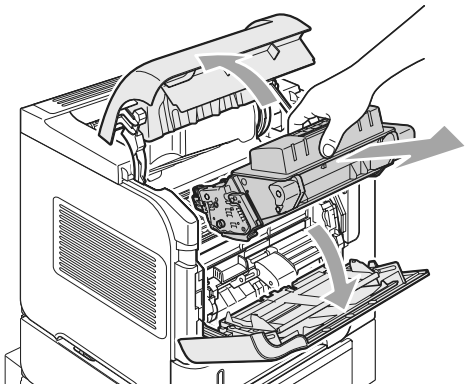
1	Top-cover and print-cartridge areas
2	Optional envelope feeder
3	Tray areas (Tray 1, Tray 2, and optional trays)
4	Optional duplexer
5	Fuser area
6	Output areas (top bin; rear bin; and optional stacker, stapler/stacker, or 5-bin mailbox)

NOTE: Loose toner might remain in the product after a jam and cause temporary print-quality problems. These problems should clear up within a few pages.

Clear jams

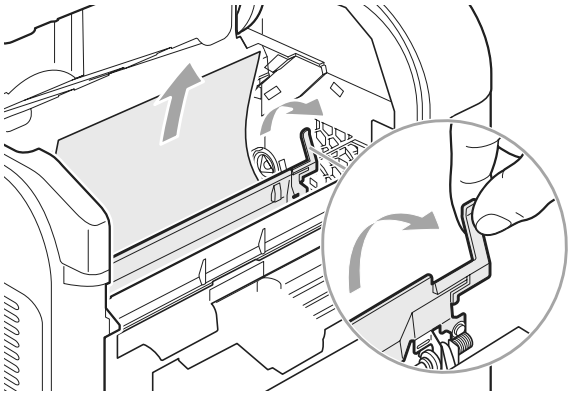
Clear jams from the top-cover and print-cartridge areas

1. Open the top cover and remove the print cartridge.

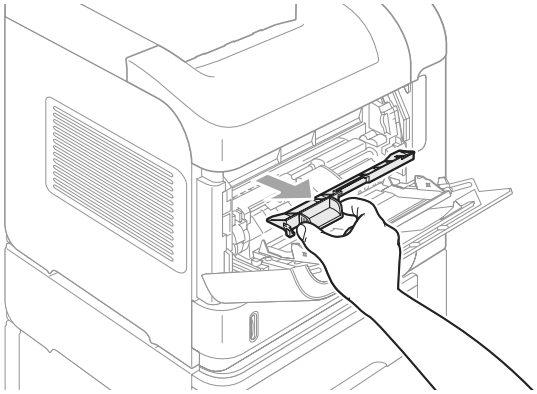


△ **CAUTION:** To prevent damage to the print cartridge, do not expose it to light for more than a few minutes. Cover the print cartridge with a sheet of paper while it is outside of the product.

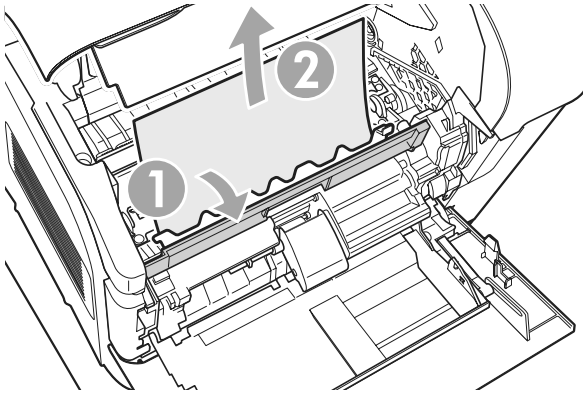
2. Use the green handle to lift the paper-access plate. Slowly pull the jammed paper out of the product. Do not tear the paper. If paper is difficult to remove, try clearing it from the tray area. See Clear jams from the trays on page 311.



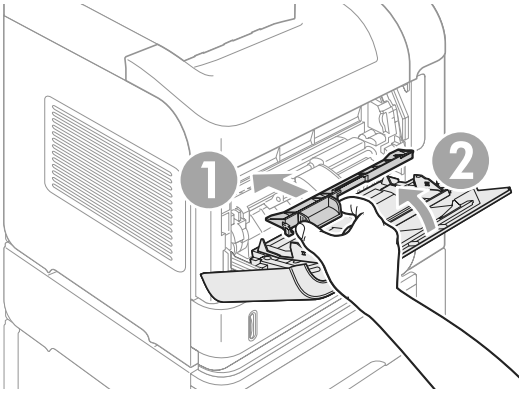
3. Open Tray 1 and remove the envelope accessory cover. If paper is present, remove it.



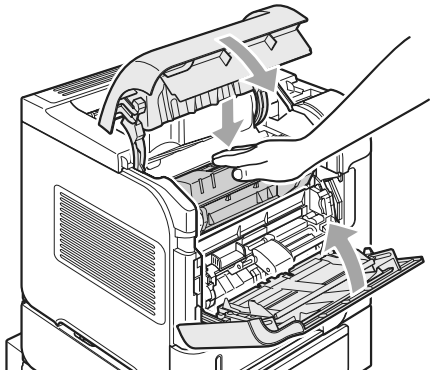
4. Rotate the paper guide to check for additional jammed paper underneath. If jammed paper is present, remove it.



5. Replace the envelope accessory cover and close Tray 1.



6. Reinstall the print cartridge and close the top cover.

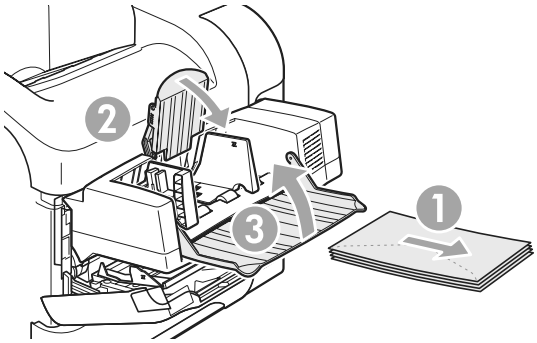


7. If a jam message persists, jammed paper is still in the product. Look for the jam in another location. See Jam locations on page 306.

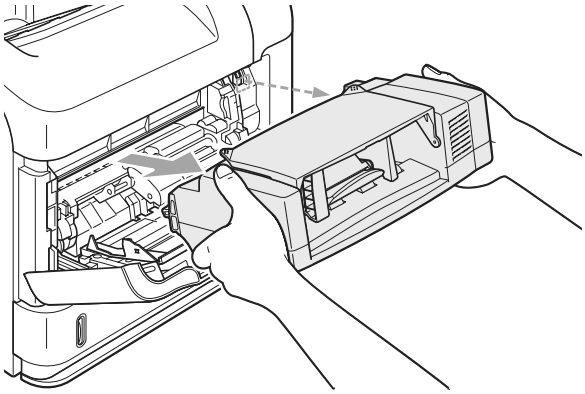
Clear jams from the optional envelope feeder

This procedure applies only to jams that occur when you are using an optional envelope feeder.

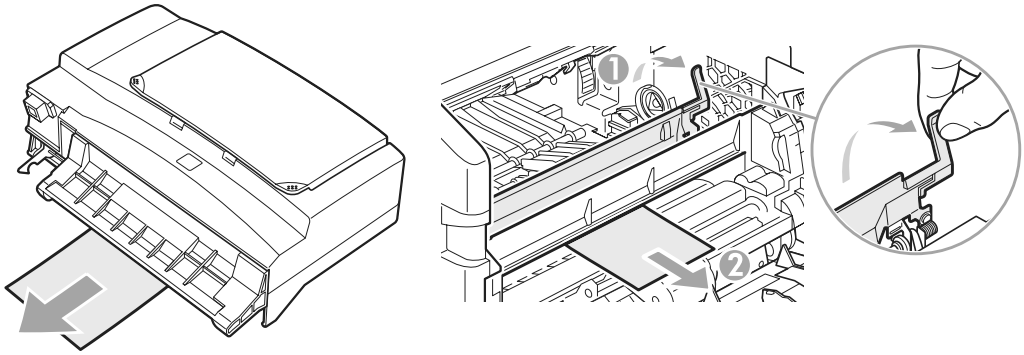
1. Remove any envelopes that are loaded in the optional envelope feeder. Lower the envelope weight and lift the tray extension up, to the closed position.



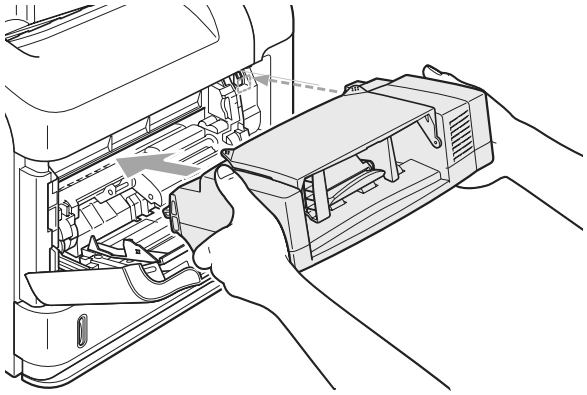
2. Grasp both sides of the optional envelope feeder and carefully pull it out of the product.



3. Slowly remove any jammed envelopes from the optional envelope feeder and the product.



4. Reinstall the envelope feeder.



5. Press OK to clear the jam message.

6. If a jam message persists, an envelope is still jammed in the product. Look for the jam in another location. See Jam locations on page 306.

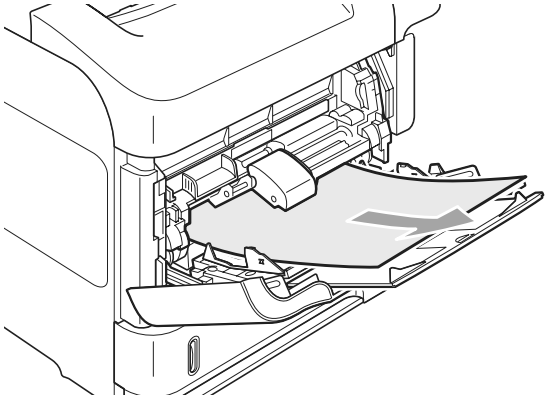
7. Replace the envelopes, making sure that you push the bottom envelopes in slightly further than the top envelopes.

Clear jams from the trays

Use these procedures to clear jams from the trays. Also see Clear jams from the optional envelope feeder on page 309.

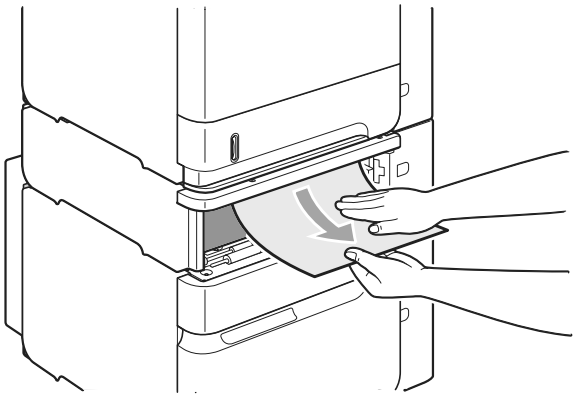
Clear jams from Tray 1

Slowly pull the jammed paper or other print media out of the product. If part of the paper has already been pulled into the product, see Clear jams from the top-cover and print-cartridge areas on page 307.

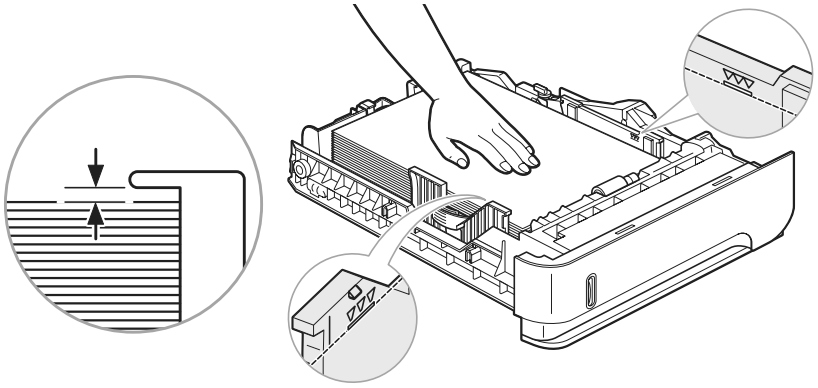


Clear jams from Tray 2 or an optional 500-sheet tray

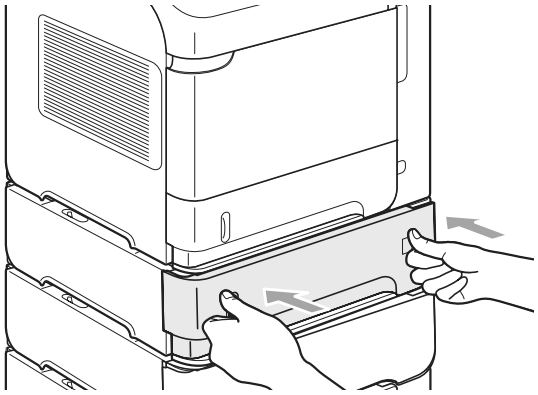
1. Slide the tray out of the product, lift it slightly, and remove any damaged paper from the tray.
2. If the edge of the jammed paper is visible in the feed area, slowly pull the paper down and out of the product. (Do not pull the paper straight out, or it will tear.) If the paper is not visible, look in the next tray or in the top-cover area. See Clear jams from the top-cover and print-cartridge areas on page 307.



3. Make sure that the paper is flat in the tray at all four corners and below the maximum-height indicators.



4. Slide the tray into the product.

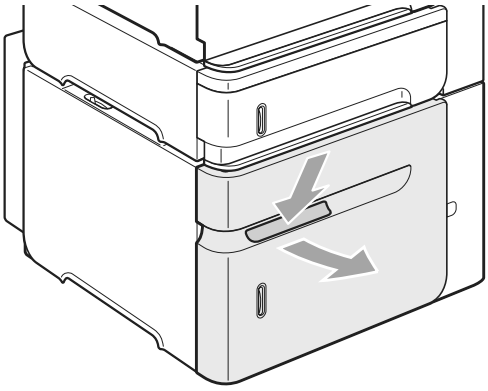


5. Press OK to clear the jam message.

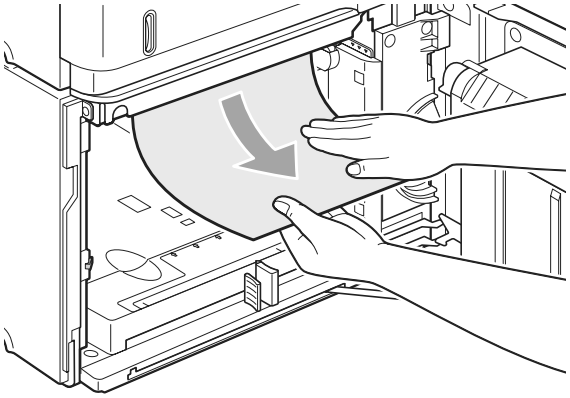
6. If a jam message persists, a sheet is still jammed in the product. Look for the jam in another location. See Jam locations on page 306.

Clear jams from the optional 1,500-sheet tray

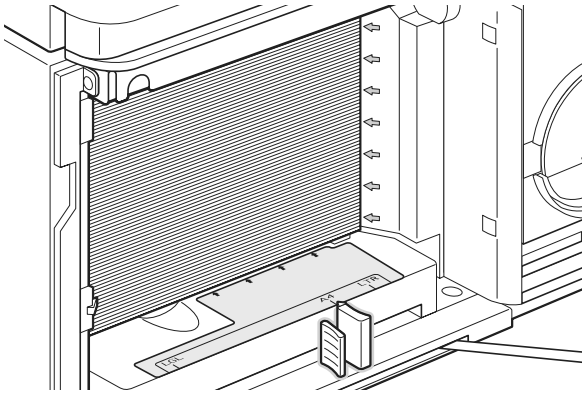
1. Open the front door of the tray.



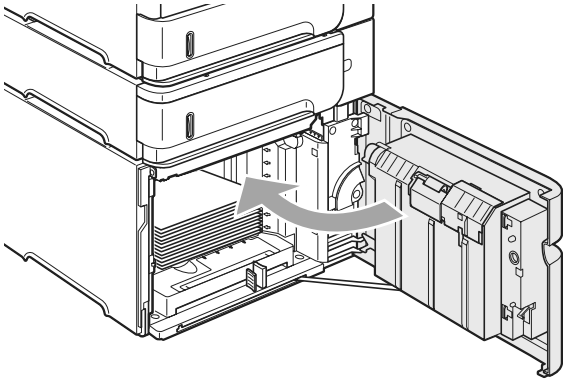
2. If the edge of the jammed paper is visible in the feed area, slowly pull the paper down and out of the product. (Do not pull the paper straight out, or it will tear.) If the paper is not visible, look in the top-cover area. See Clear jams from the top-cover and print-cartridge areas on page 307.



3. Make sure that the paper does not exceed the fill marks on the paper guides, and that the front edge of the stack is aligned with the arrows.



4. Close the front door of the tray.

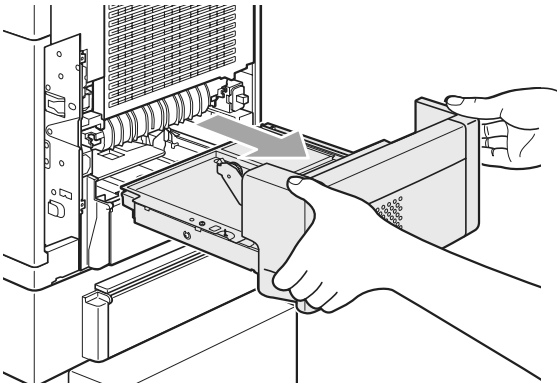


5. Press OK to clear the jam message.

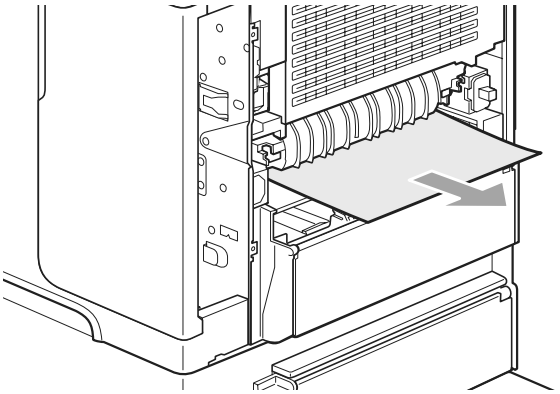
6. If a jam message persists, a sheet is still jammed in the product. Look for the jam in another location. See Jam locations on page 306.

Clear jams from the optional duplexer

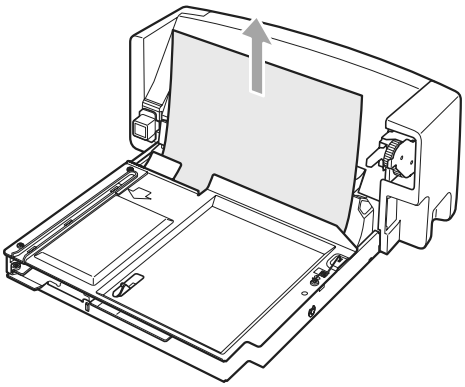
1. Lift the optional duplexer up and then pull it out to remove it.

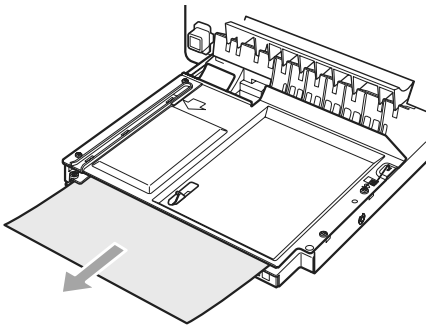


2. Remove any paper that is on top of Tray 2. (You might need to reach inside the product.)

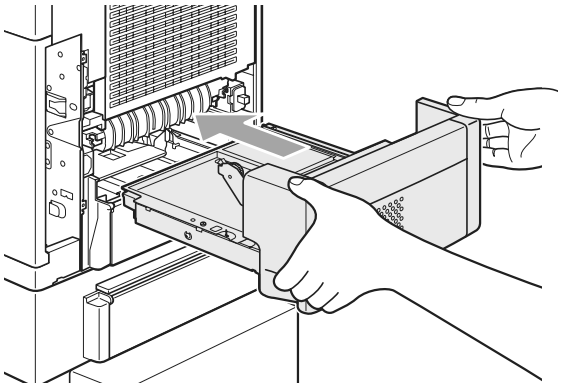


3. Slowly pull any paper out of the optional duplexer.





4. Insert the optional duplexer into the product.



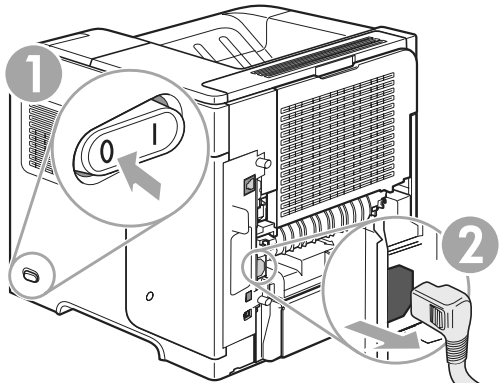
5. If a jam message persists, a sheet is still jammed in the product. Look for jam in another location. See Jam locations on page 306.

Clear jams from the fuser area

Use this procedure only in these situations:

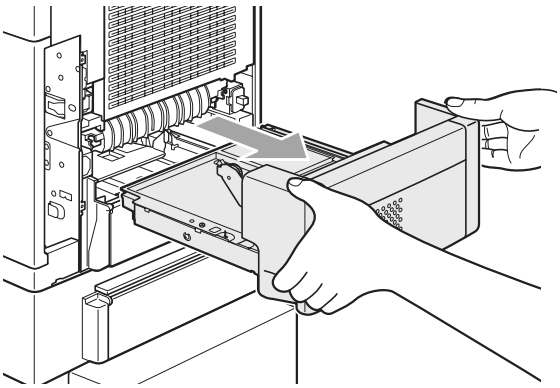
- Paper has jammed inside the fuser and cannot be removed from the top-cover area or the rear-output area.
- A sheet of paper has torn while you were trying to clear a jam from the fuser.

1. Turn the product off and unplug the power cord from the product.

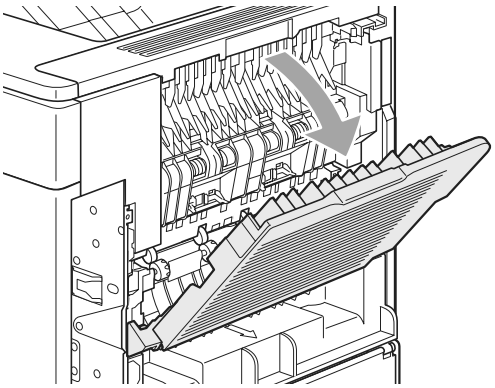


⚠ **WARNING!** The fuser is very hot. To avoid minor burns, wait 30 minutes for the fuser to cool before removing it from the product.

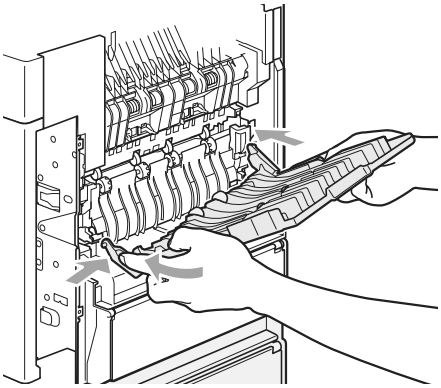
2. Rotate the product so the rear is facing you. If an optional duplexer is installed, lift it and pull it straight out. Set it aside.



3. Open the rear output bin.

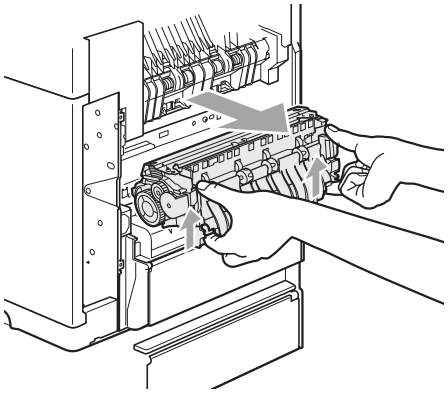


4. Remove the rear output bin. Place your finger near the left-side hinge, and push firmly to the right until the hinge-pin clears the hole inside the product. Rotate the output bin outward to remove it.

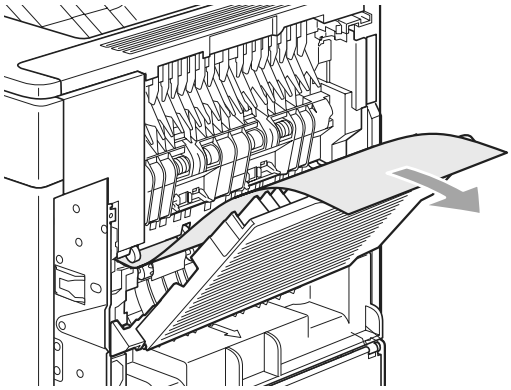


5. If paper is visible, remove it.

   If paper is not visible, push up on the two blue levers on the sides of the fuser, and pull the fuser straight out.

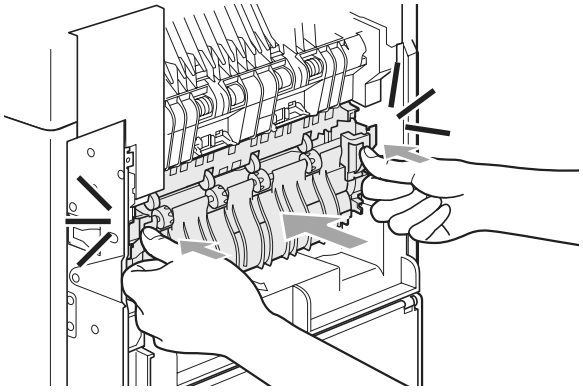


6. Remove the jammed paper. If necessary, lift the black plastic guide that is located on the top of the fuser to gain access to the jammed sheet.

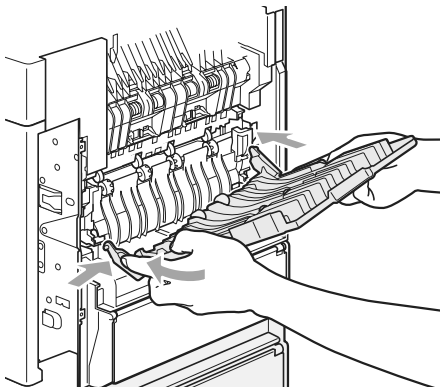


△ **CAUTION:** Do not use a sharp or metal object to clear paper from the fuser area. You might damage the fuser.

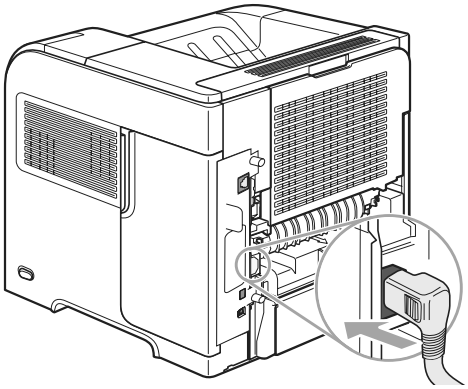
7. Push the fuser firmly into the product until the blue levers on both sides click into place.



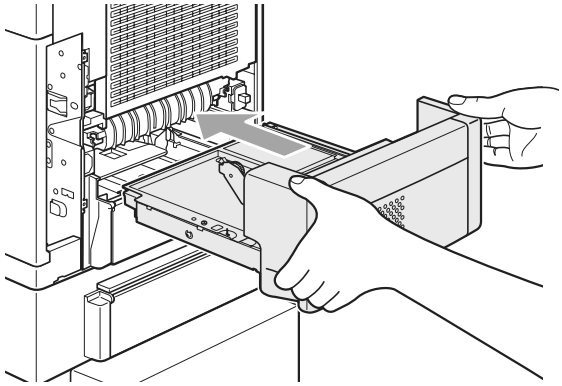
8. Reinstall the rear output bin. Insert the right hinge-pin into the hole inside the product. Push inward on the left hinge, and slide it into the hole inside the product. Close the rear output bin.



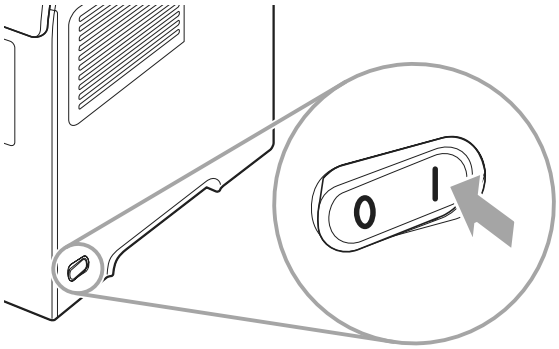
9. Plug the power cord into the product.



10. Replace the optional duplexer, if it was removed.



11. Turn the product on.



12. If a jam message persists, a sheet is still jammed in the product. Look for the jam in another location. See Jam locations on page 306.

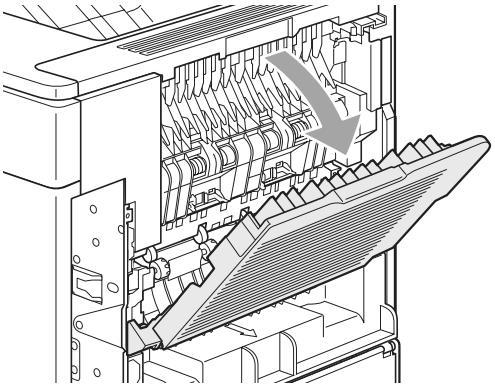
After clearing all jams, you need to send the print job again because the product power has been turned off.

Clear jams from the output areas

Use these procedures to clear jams that occur in the rear output bin or in the optional stacker, stapler/stacker, or 5-bin mailbox.

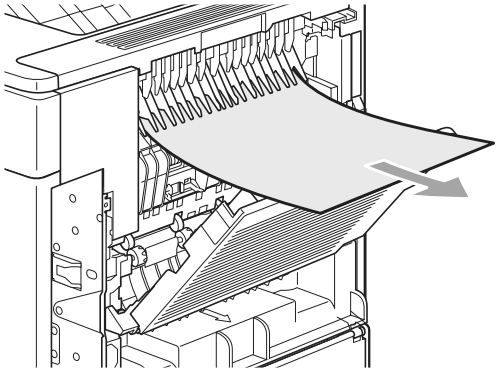
Clear jams from the rear output bin

1. Open the rear output bin.



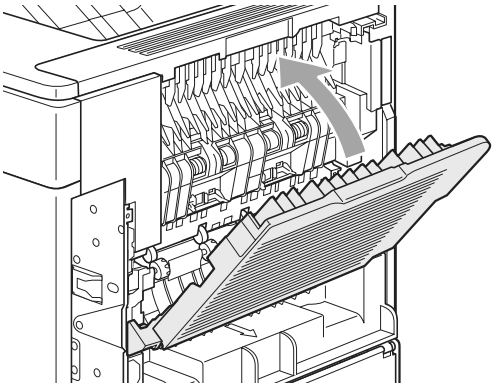
NOTE: If most of the paper is still inside the product, it might be easier to remove it through the top-cover area. See Clear jams from the top-cover and print-cartridge areas on page 307.

2. Grasp both sides of the paper, and slowly pull the paper out of the product. Loose toner might be on the sheet. Be careful not to spill it on yourself or into the product.



NOTE: If the jammed paper is difficult to remove, try opening the top cover all the way to release pressure on the paper. If the sheet has torn, or if you still cannot remove it, see Clear jams from the fuser area on page 315.

3. Close the rear output bin.



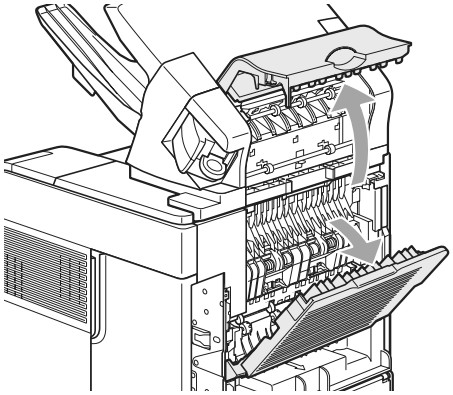
4. If a jam message persists, a sheet is still jammed in the product. Look for the jam in another location. See Jam locations on page 306.

Clear jams from the optional stacker or stapler/stacker

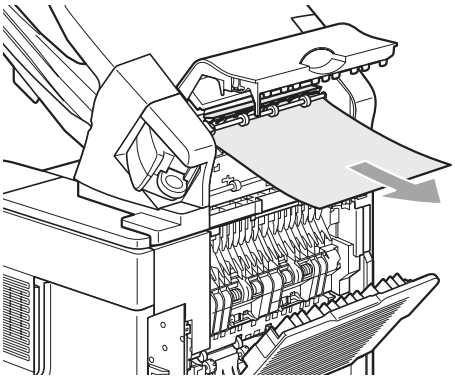
Paper jams can occur in the optional stacker or the optional stapler/stacker. Staple jams can occur only in the optional stapler/stacker.

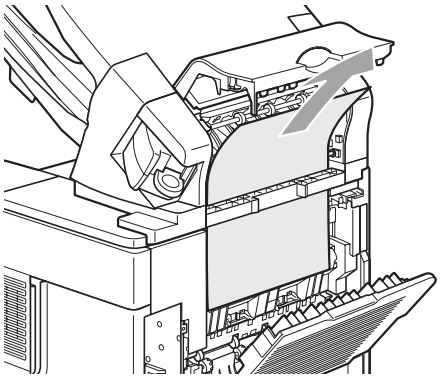
Clear paper jams from the optional stacker or stapler/stacker

1. At the back of the product, open the door on the stacker or stapler/stacker, and open the rear output bin.

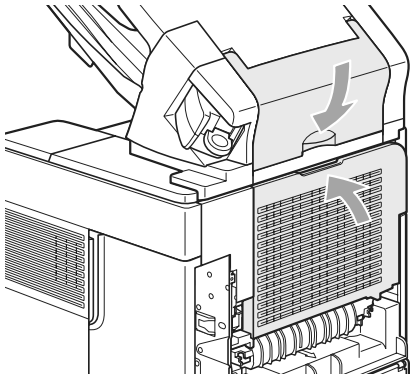


2. Carefully remove any jammed paper.





3. Close the door on the stacker or stapler/stacker, and close the rear output bin.



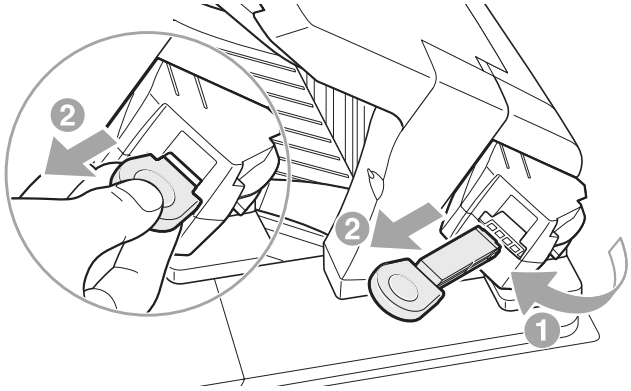
4. If a jam message persists, a sheet is still jammed. Look for it in another location. Check the front of the accessory and carefully remove any jammed paper. See Jam locations on page 306.

NOTE: The output bin must be pushed down into the lowest position for printing to continue.

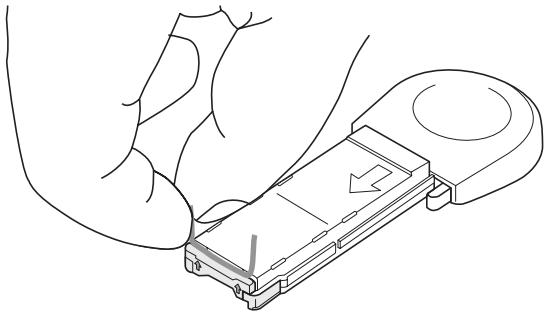
Clear staple jams from the optional stapler/stacker

NOTE: Clear staple jams when the message **JAM IN STAPLER** appears on the product control-panel display.

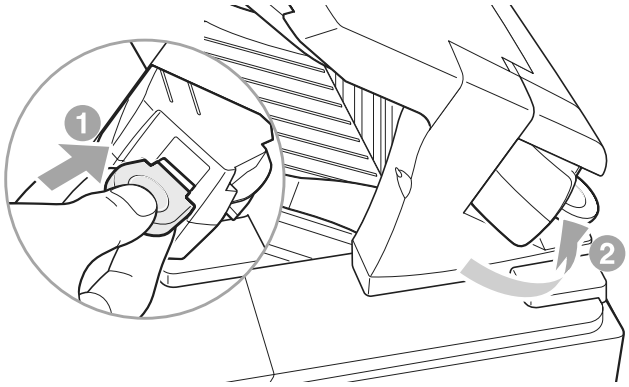
1. On the right side of the stapler/stacker, turn the stapler unit toward the front of the product until the unit clicks into the open position. Pull outward on the blue staple cartridge to remove it.



2. Rotate the green cover on the end of the staple cartridge upward, and remove the jammed staple.



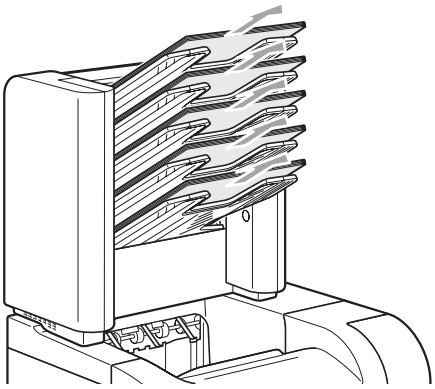
3. Insert the staple cartridge into the stapler unit, and rotate the stapler unit toward the rear of the product until the unit snaps into place.



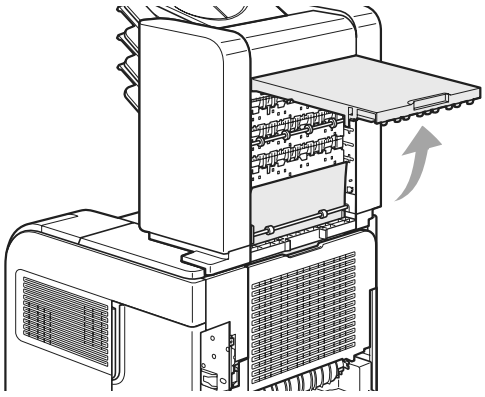
The stapler needs to reload after clearing a staple jam, so the first few documents might not be stapled. If a print job is sent and the stapler is jammed or is out of staples, the job will still print as long as the path to the stacker bin is not blocked.

Clear jams from the optional 5-bin mailbox

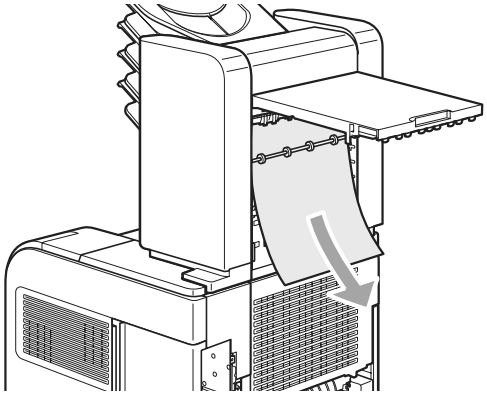
1. Remove any paper that is in the output bins.



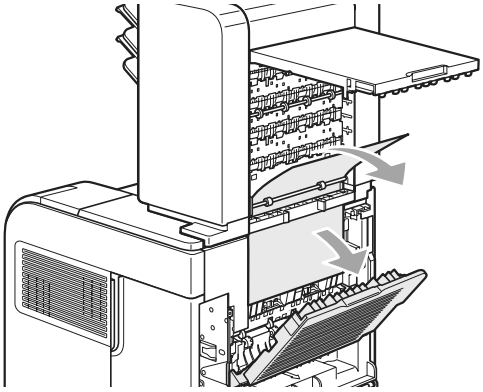
2. On the back of the 5-bin mailbox, open the jam-access door.



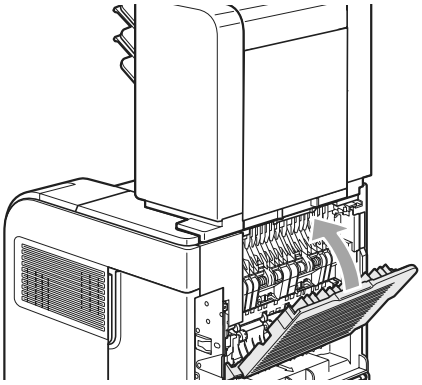
3. If the paper is jammed at the top of the 5-bin mailbox, pull it straight down to remove it.



4. If the paper is jammed at the bottom of the 5-bin mailbox, open the rear output bin, and then pull straight up on the paper to remove it.



5. Close the jam-access door and the rear output bin.



Jam recovery

This product provides jam recovery, a feature that you can use to reprint jammed pages. The following options are available:

- **AUTO** — The product attempts to reprint jammed pages when sufficient memory is available.
- **OFF** — The product does not attempt to reprint jammed pages. Because no memory is used to store the most recent pages, performance is optimal.

  NOTE: When using this option, if the product runs out of paper and the job is being printed on both sides, some pages can be lost.

- **ON** — The product always reprints jammed pages. Additional memory is allocated to store the last few pages printed. This might cause overall performance to suffer.

Set the jam recovery feature

1. Press Menu.
2. Press the down arrow ▼ to highlight **CONFIGURE DEVICE**, and then press OK.
3. Press the down arrow ▼ to highlight **SYSTEM SETUP**, and then press OK.
4. Press the down arrow ▼ to highlight **JAM RECOVERY**, and then press OK.
5. Press the down arrow ▼ or the up arrow ▲ to highlight the appropriate setting, and then press OK.

Product feeds incorrect page size

Product feeds incorrect page size

Cause	Solution
The correct size paper is not loaded in the input tray.	Load the correct size paper in the input tray.
The correct size paper is not selected in the software program or printer driver.	Confirm that the settings in the software program and printer driver are correct, because the software program settings override the printer driver and control panel settings, and the printer driver settings override the control panel settings. For more information, see user guide.
The correct size paper for the tray is not selected in the product control panel.	From the control panel, select the correct size paper for the tray.
The paper size is not configured correctly for the input tray.	Print a configuration page or use the control panel to determine the paper size for which the tray is configured.
The guides in the tray are not against the paper.	Verify that the paper guides are touching the paper.

Output is curled or wrinkled

Output is curled or wrinkled

Cause	Solution
Paper does not meet the specifications for this product.	Use only paper that meets the HP paper specifications for this product.
Paper is damaged or in poor condition.	Remove paper from the input tray and load paper that is in good condition.
Product is operating in an excessively humid environment.	Verify that the printing environment is within humidity specifications.
You are printing large, solid-filled areas.	Large, solid-filled areas can cause excessive curl. Try using a different pattern.
Paper used was not stored correctly and might have absorbed moisture.	Remove paper and replace it with paper from a fresh, unopened package.
Paper has poorly cut edges.	Remove paper, flex it, rotate it 180 degrees or turn it over, and then reload it into the input tray. Do not fan paper. If the problem persists, replace the paper.
The specific paper type was not configured for the tray or selected in the software.	Configure the software for the paper (see the software documentation). Configure the tray for the paper, see Load trays on page 54.
The paper has previously been used for a print job.	Do not re-use paper.

Product will not duplex or duplexes incorrectly

Product will not duplex (print 2-sided jobs) or duplexes incorrectly

Cause	Solution
You are trying to duplex on unsupported paper.	Verify that the paper is supported for duplex printing.
The printer driver is not set up for duplex printing.	Set up the printer driver to enable duplex printing.
The first page is printing on the back of preprinted forms or letterhead.	Load preprinted forms and letterhead in Tray 1 with the letterhead or printed side down, with the top of the page toward the back of the product. For Tray 2, 3, 4 and 5, load the paper printed side up with the top of the page toward the back of the product.
The product model does not support automatic 2-sided printing.	Print a configuration page to verify that a duplex accessory is installed and enabled.
The product configuration is not set for duplexing.	In Windows, run the automatic configuration feature: 1. Click the **Start** button, point to **Settings**, and then click **Printers** (for Windows 2000) or **Printers and Faxes** (for Windows XP). 2. Right-click the HP product icon, and then click **Properties** or **Printing Preferences**. 3. Click the **Device Settings** tab. 4. Under **Installable Options**, click **Update Now** in the **Automatic Configuration** list.

Solve image quality problems

Image defects

These examples identify the most common print-quality problems. If you still have problems after trying the suggested solutions, contact HP Customer Support.

Table 7-9 Image defect examples

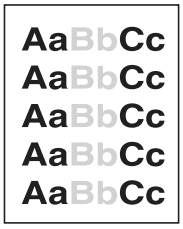
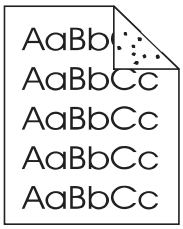
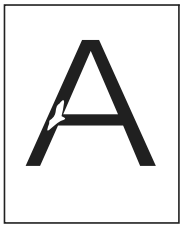
Problem	Image example	Solution
Light print (partial page)		1. Make sure that the print cartridge is fully installed. 2. The toner level in the print cartridge might be low. Replace the print cartridge. 3. The paper might not meet HP specifications (for example, the paper is too moist or too rough). See Paper and print media on page 47.
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 product control panel. Open the **PRIT QUALITY** submenu and increase the **TONER DENSITY** setting. See Print Quality submenu on page 30. 4. Try using a different type of paper. 5. The print cartridge might be almost empty. Replace the print cartridge. 6. Clean the product paper path. 7. Replace the transfer roller.
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 product and run a cleaning page to clean the fuser. (See Clean the paper path on page 95.) 3. Try using a different type of paper. 4. Check the print cartridge for leaks. If the print cartridge is leaking, replace it. 5. Clean the product paper path several times.
Dropouts		1. Make sure that the environmental specifications for the product are being met. (See Operating environment on page 504.) 2. If the paper is rough, and the toner easily rubs off, open the **CONFIGURE DEVICE** menu at the product control panel. Open the **PRINT QUALITY** submenu, select **FUSER MODES**, and then select the paper type you are using. Change the setting to **HIGH1** or **HIGH2**, which helps the toner fuse more completely onto the paper. (See Print Quality submenu on page 30.) 3. Try using a smoother paper that you know will work in the product. 4. Replace the transfer roller.

Table 7-9 **Image defect examples (continued)**

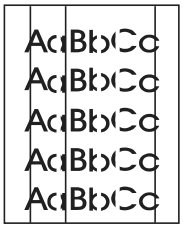
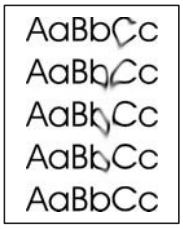
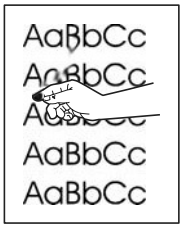
Problem	Image example	Solution
Lines		1. Print a few more pages to see if the problem corrects itself. 2. Clean the inside of the product and run a cleaning page to clean the fuser. (See Clean the product on page 95.) 3. Replace the print cartridge.
Gray background		1. Do not use paper that has already been run through the product. 2. Try using a different type of paper. 3. Print a few more pages to see if the problem corrects itself. 4. Turn over the paper in the tray. Also, try rotating the paper 180°. 5. Open the **CONFIGURE DEVICE** menu at the product control panel. On the **PRINT QUALITY** submenu, increase the **TONER DENSITY** setting. See Print Quality submenu on page 30. 6. Make sure that the environmental specifications for the product are being met. (See Operating environment on page 504.) 7. Clean the product paper path. 8. Replace the print cartridge.
Toner smear		1. Print a few more pages to see if the problem corrects itself. 2. Try using a different type of paper. 3. Make sure that the environmental specifications for the product are being met. (See Operating environment on page 504.) 4. Clean the inside of the product and run a cleaning page to clean the fuser. (See Clean the product on page 95.) 5. Replace the print cartridge.
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 product control panel. On the **PRINT QUALITY** submenu, select **FUSER MODES**, and then select the paper type you are using. Change the setting to **HIGH1** or **HIGH2**, which helps the toner fuse more completely onto the paper. (See Print Quality submenu on page 30.) You must also set the type of paper for the tray you are using. (See Select the paper by source, type, or size on page 62.) 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 product are being met. (See Operating environment on page 504.) 4. Make sure that the type and quality of the paper you are using meet HP specifications. (See Paper and print media on page 47.)

Table 7-9 Image defect examples (continued)

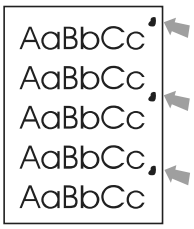
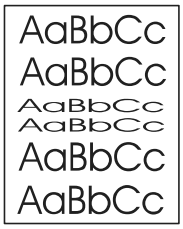
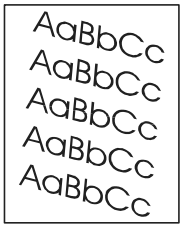
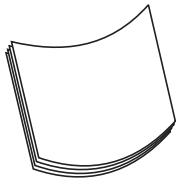
Problem	Image example	Solution
Repeat defects		1. Print a few more pages to see if the problem corrects itself. 2. Clean the inside of the product and run a cleaning page to clean the fuser. (See Clean the product on page 95.) 3. The print cartridge might need to be replaced. If the error persists, see Repetitive image defect ruler on page 280.
Repeat 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. Make sure that the type and quality of the paper you are using meet HP specifications. (See Paper and print media on page 47.) 3. The print cartridge might need to be replaced. If the error persists, see Repetitive image defect ruler on page 280.
Misformed characters		1. Print a few more pages to see if the problem corrects itself. 2. Make sure that the environmental specifications for the product are being met. (See Operating environment on page 504.) 3. Make sure that the type and quality of the paper you are using meet HP specifications. (See Paper and print media on page 47.) 4. Try using another input tray.
Page skew		1. Print a few more pages to see if the problem corrects itself. 2. Verify that no torn pieces of paper are inside the product. 3. Make sure that paper is loaded correctly and that all adjustments have been made. (See Load trays on page 54.) Make sure that the guides in the tray are not too tight or too loose against the paper. 4. Turn over the paper in the tray. Also, try rotating the paper 180°. 5. Make sure that the type and quality of the paper you are using meet HP specifications. (See Paper and print media on page 47.) 6. Make sure that the environmental specifications for the product are being met. (See Operating environment on page 504.) 7. If the error persists, replace the registration assembly.
Curl or wave		1. Turn over the paper in the tray. Also, try rotating the paper 180°. 2. Make sure that the type and quality of the paper you are using meet HP specifications. (See Paper and print media on page 47.) 3. Make sure that the environmental specifications for the product are being met. (See Operating environment on page 504.) 4. Try printing to a different output bin. 5. If paper is lightweight and smooth, open the **CONFIGURE DEVICE** menu at the product control panel. On the **PRINT QUALITY** submenu, select **FUSER MODES**, and then select the paper type you are using. Change the setting to **LOW**, which helps reduce the heat in the fusing process. (See Print Quality

Table 7-9 **Image defect examples (continued)**

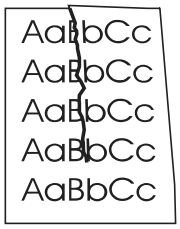
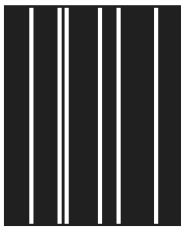
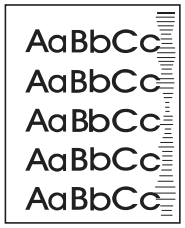
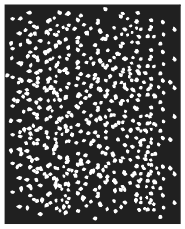
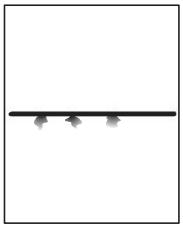
Problem	Image example	Solution
		submenu on page 30.) You must also set the type of paper for the tray you are using. (See Select the paper by source, type, or size on page 62.)
Wrinkles or creases		1. Print a few more pages to see if the problem corrects itself. 2. Make sure that the environmental specifications for the product are being met. (See Operating environment on page 504.) 3. Turn over the paper in the tray. Also, try rotating the paper 180°. 4. Make sure that paper is loaded correctly and all adjustments have been made. (See Load trays on page 54.) 5. Make sure that the type and quality of the paper you are using meet HP specifications. (See Paper and print media on page 47.) 6. Try using another input tray. 7. If envelopes are creasing, try storing envelopes so that they lie flat. 8. If paper is lightweight and smooth, open the **CONFIGURE DEVICE** menu at the product control panel. On the **PRINT QUALITY** submenu, select **FUSER MODES**, and then select the paper type you are using. Change the setting to **LOW**, which helps reduce the heat in the fusing process. (See Print Quality submenu on page 30.) You must also set the type of paper for the tray you are using. (See Select the paper by source, type, or size on page 62.)
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 paper you are using meet HP specifications. (See Paper and print media on page 47.) 3. Replace the print cartridge.
Tire tracks		This defect typically occurs when the print cartridge has far exceeded its rated life. For example, if you are printing a very large quantity of pages with very little toner coverage. 1. Replace the print cartridge. 2. Reduce the number of pages that you print with very low toner coverage.
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 paper you are using meet HP specifications. (See Paper and print media on page 47.) 3. Make sure that the environmental specifications for the product are being met. (See Operating environment on page 504.) 4. Clean the product paper path. 5. Replace the print cartridge.

Table 7-9 **Image defect examples (continued)**

Problem	Image example	Solution
Scattered lines		1. Make sure that the type and quality of the paper you are using meet HP specifications. (See Paper and print media on page 47.) 2. Make sure that the environmental specifications for the product are being met. (See Operating environment on page 504.) 3. Turn over the paper in the tray. Also, try rotating the paper 180°. 4. Open the **CONFIGURE DEVICE** menu at the product control panel. Open the **PRINT QUALITY** submenu and change the **TONER DENSITY** setting. (See Print Quality submenu on page 30.) 5. Open the **CONFIGURE DEVICE** menu at the product 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 paper you are using meet HP specifications. (See Paper and print media on page 47.) 2. Make sure that the environmental specifications for the product are being met. (See Operating environment on page 504.) 3. Turn over the paper in the tray. Also, try rotating the paper 180°. 4. Do not use paper that already has been run through the product. 5. Decrease the toner density. Open the **CONFIGURE DEVICE** menu at the product control panel. Open the **PRINT QUALITY** submenu and change the **TONER DENSITY** setting. (See Print Quality submenu on page 30.) 6. Open the **CONFIGURE DEVICE** menu at the product control panel. On the **PRINT QUALITY** submenu, open **OPTIMIZE** and set **HIGH TRANSFER=ON**. (See Print Quality submenu on page 30.)
Random image repetition		If an image that appears at the top of the page (in solid black) repeats further 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.) • Print the job several times to determine if the problem persists. • 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 your software program, rotate the whole page 180° to print the lighter image first. • If the defect occurs later in a print job, turn the product off for 10 minutes, and then turn it on to restart the print job.

Solve performance problems

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 product might be malfunctioning.	To check the product, 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 can print slowly.	Proper fusing may require a slower print speed to ensure the best print quality.
	If printed in large batches, narrow paper can slow the print job.	Print on a different paper size or in smaller batches.
Pages did not print.	The product might not be pulling media correctly.	Make sure paper is loaded in the tray correctly. If the problem persists, you might need to replace the pickup rollers and the separation roller. See Removal and replacement on page 129.
	The media is jamming in the product.	Clear the jam. See Jams on page 304.
	The USB cable or network cable might be defective or incorrectly connected.	• Disconnect the cable at both ends and reconnect it. • Try printing a job that has printed in the past. • Try using a different cable.
	Other devices are running on your computer.	The product 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 product, the other device might be interfering. To connect and use the product, you must disconnect the other device or you must use two USB ports on the computer.

Solve connectivity problems

Solve direct-connect problems

If you have connected the product directly to a computer, check the USB cable.

- Verify that the cable is connected to the computer and to the product.
- Verify that the cable is not longer than 2 meters (6 feet). Replace the cable if necessary.
- Verify that the cable is working correctly by connecting it to another product. Replace the cable if necessary.

Solve network connectivity problems

If the product is having problems communicating with the network, use the information in this section to resolve the problem.

Solve network printing problems

NOTE: HP recommends that you use the product CD to install and set up the product on a network.

- Make sure that the network cable is securely seated into the product's RJ45 connector.
- Make sure that the Link LED on the formatter is lit. See Understand lights on the formatter on page 245.
- Make sure that the I/O card is ready. Print a configuration page (see Print the information and show-me-how pages on page 66). If an HP Jetdirect print server is installed, printing a configuration page also prints a second page that shows the network settings and status.

  NOTE: The HP Jetdirect print server supports various network protocols (TCP/IP, IPX/SPX, Novell NetWare, AppleTalk, and DCL/LLC). Make sure that the correct protocols and network parameters are set correctly.

  On the HP Jetdirect configuration page, verify the following items for your protocol:

  - Under HP Jetdirect Configuration, the status is "I/O Card Ready."
  - Protocol status is "Ready."
  - An IP address is listed.
  - The configuration method (Config by:) is listed correctly. See the network administrator if you are not sure which method is correct.
  - The domain name is listed correctly.
- Try printing the job from another computer.
- To verify that a product works with a computer, use a USB cable to connect it directly to a computer. You will have to reinstall the printing software. Print a document from a program that has printed correctly in the past. If this works, a problem with the network might exist.
- Contact your network administrator for assistance.

Ping test

If the HP Jetdirect configuration page shows an IP address for the product, use this procedure to verify that you can communicate with the product over the network.

1. Press Menu .
2. Press the down arrow ▼ to highlight **CONFIGURE DEVICE**, and then press OK.
3. Press the down arrow ▼ to highlight **I/O**, and then press OK.
4. Press the down arrow ▼ to highlight **EMBEDDED JETDIRECT MENU**, and then press OK.
5. Press the down arrow ▼ to highlight **DIAGNOSTICS**, and then press OK.
6. Press the down arrow ▼ to highlight **PING TEST**, and then press OK.
7. Set the appropriate options for each of the menu items:
   - **DEST TYPE**=IPv4 or IPv6
   - **DEST IP**=XXX.XXX.XXX.XXX
   - **PACKET SIZE**=64
   - **TIMEOUT**=1 second
   - **COUNT**=4
   - **PRINT RESULTS**=YES
   - **EXECUTE**=YES

   After setting **EXECUTE**=YES, the ping test starts. If you selected to print the results, the product prints a page that lists the ping statistics. If the page prints, the test was successful.

Service mode functions

Service menu

The **SERVICE** menu is PIN-protected for added security. Only authorized service people have access to the **SERVICE** menu. When you select **SERVICE** from the list of menus, the product prompts you to enter an eight-digit PIN number.

- The PIN for the HP LaserJet P4014 models is 05401408.
- The PIN for the HP LaserJet P4015 models is 05401508.
- The PIN for the HP LaserJet P4515 models is 05451508.

1. Press Menu .
2. Press the down arrow ▼ to highlight **SERVICE**, and then press OK.
3. Enter the PIN using the alphanumeric keypad.
4. Press OK to enter the PIN and open the **SERVICE** menu.

The following menu items appear in the **SERVICE** menu:

- **CLEAR EVENT LOG**: Use this item to clear the product event log.
- **CLEAR BOOTLOADER PASSWORD**: Use this item to clear the password that was set to prevent someone from performing an unauthorized cold reset on the product.
- **TOTAL PAGE COUNT**: After replacing the formatter, use this item to reset the page count so that the figure continues to represent the page count for the product engine. See Reset page counts on page 339.
- **REFURBISH CYCLE COUNT**: Use this item to record the page count when the product was refurbished.
- **MAINTENANCE COUNT**: Use this item to set the number of pages that have been printed since the last maintenance kit was installed or the total number of pages that have been printed on the product if a maintenance kit has not yet been installed.
- **MAINTENANCE INTERVAL**: Use this item to specify the number of pages that can be printed before a maintenance kit message appears on the control panel to indicate that a maintenance kit is required.
- **SERIAL NUMBER**: After replacing the formatter, use this item to reset the product serial number.
- **SERVICE ID**: See Service ID on page 339.
- **COLD RESET PAPER**: See Cold reset paper on page 339.

Product resets

Restore factory-set defaults

Restoring the product to the factory-set defaults performs a simple reset and restores most of the factory (default) settings. This item also clears the input buffer for the active I/O.

1. Press Menu .
2. Press the down arrow ▼ to highlight **CONFIGURE DEVICE**, and then press OK.
3. Press the down arrow ▼ to highlight **RESETS**, and then press OK.
4. Press the down arrow ▼ to highlight **RESTORE FACTORY SETTINGS**, and then press OK.

Hard disk initialization

A hard disk initialization will erase and reformat the product's hard disk. Perform hard disk initialization only if an error code displays on the control panel indicating a disk error. Always try initializing the hard disk before replacing it.

1. Turn the product on.
2. As the product performs its power-on sequence, press and hold the Menu button until all three lights on the control panel are lit.
3. Press the back arrow ⮌. The message **INITIALIZE DISC** displays on the control panel.
4. Press OK. The product initializes the hard disk and continues the power-on sequence.

NVRAM initialization

△ **CAUTION:** Initializing NVRAM resets the serial number, the event log, the page counts, the calibration settings, and the EIO card. Use the **SERVICE** menu to restore the serial number and page counts. You also need to reconfigure any computers that print to this product to recognize the product. Initialize NVRAM only when absolutely necessary. In most situations, use a cold reset to reset product variables but still retain the needed values in the **SERVICE** menu.

Before initializing NVRAM, print a configuration page and a supplies status page to gather the following information:

- Total page count
- Serial number

1. Turn the product on and watch the control panel display.
2. When the display shows the memory count, press and hold the down arrow ▼ until all three lights on the control panel are lit.
3. Press the up arrow ▲.
4. Press Menu . The message **SKIP DISK LOAD** displays on the control panel.
5. Press the up arrow ▲ until **NVRAM INIT** is highlighted, and then press OK. The product initializes NVRAM and then continues its power-on sequence.

Service ID

Use this item to show the date that the product was first used on the control panel. This eliminates the need for users to keep paper receipts for proof of warranty.

Restore the service ID

If you replace the formatter, the date is lost. Use this menu item to reset the date to the original date that the product was first used. The date format is YYDDD. Use the following formula to calculate the dates:

1. To calculate YY, subtract 1990 from the calendar year. For instance, if the product was first used in 2002, calculate YY as follows: 2002 - 1990 = 12. YY = 12.
2. Subtract 1 from 10 (October is the tenth month of the year): 10 - 1 = 9.

   Multiply 9 by 30: 9 x 30 = 270.

   -or-

   Add 17 to 270: 270 + 17 = 287. Thus, DDD = 287.

Convert the service ID to an actual date

You can use the product Service ID number to determine whether the product is still under warranty. Use the following formula to convert the Service ID into the installation date as follows:

1. Add 1990 to YY to get the actual year that the product was installed.
2. Divide DDD by 30. If there is a remainder, add 1 to the result. This is the month.
3. The remainder from the calculation in step 2 is the date.

Using the Service ID 12287 as an example, the date conversion is as follows:

1. 12 + 1990 = 2002, so the year is 2002.
2. 287 divided by 30 = 9 with a remainder of 17. Since there is a remainder, add 1 to 9 to get 10, which represents October.
3. The remainder in step 2 is 17, so that is the date.
4. The complete date is 17-October-2002.

NOTE: A six-day grace period is built into the date system.

Reset page counts

The page count that is stored in NVRAM and printed on the configuration page represents the number of pages that the formatter has formatted (not including engine-test prints). If you install a new formatter when repairing a product, use this menu item to reset the page count to the previous value. In this way, the page count reflects the number of pages that the engine has printed rather than restarting the count for the new formatter.

Cold reset paper

When you perform a cold reset, the paper size that is stored in NVRAM is reset to the default factory setting. If you replace a formatter board in a country/region that uses A4 as the standard paper size, use this menu to reset the default paper size to A4. LETTER and A4 are the only available values.

8 Parts

- Order parts, accessories, and supplies
- Order replacement parts
- How to use the parts lists and diagrams
- Customer/field-replaceable units
- Assembly locations
- Covers
- Internal components
- PCAs
- Input devices
- Output devices
- Alphabetical parts list
- Numerical parts list

In the HP Service Manual for the
P4014/4015/4515, the information about fans and
correct information on these errors
57.01 FN102 Right side, toward the rear RK2-1992
57.03 FN103 Right side, toward the front RK2-1989
57.04 FN101 Left side, toward the rear RK2-1988
57.05 Duplex Fan In Duplexer (CB519A) or CB519-67901)
N/A. The duplex fan is not available as a separate part. These part numbers are for the entire duplexer.
57.07 FN301 Left side, toward the front RK2-1991

Order parts, accessories, and supplies

Several methods are available for ordering parts, supplies, and accessories.

Order directly from HP

You can obtain the following items directly from HP:

- **Replacement parts:** To order replacement parts in the U.S., go to www.hp.com/go/hpparts. Outside the United States, order parts by contacting your local authorized HP service center.
- **Supplies and accessories:** To order supplies in the U.S., go to www.hp.com/go/ljsupplies. To order supplies worldwide, go to www.hp.com/ghp/buyonline.html. To order accessories, go to www.hp.com/support/hpljp4010series or www.hp.com/support/hpljp4510series.

Order through service or support providers

To order a part or accessory, contact an HP-authorized service or support provider.

Order directly through the HP Easy Printer Care software

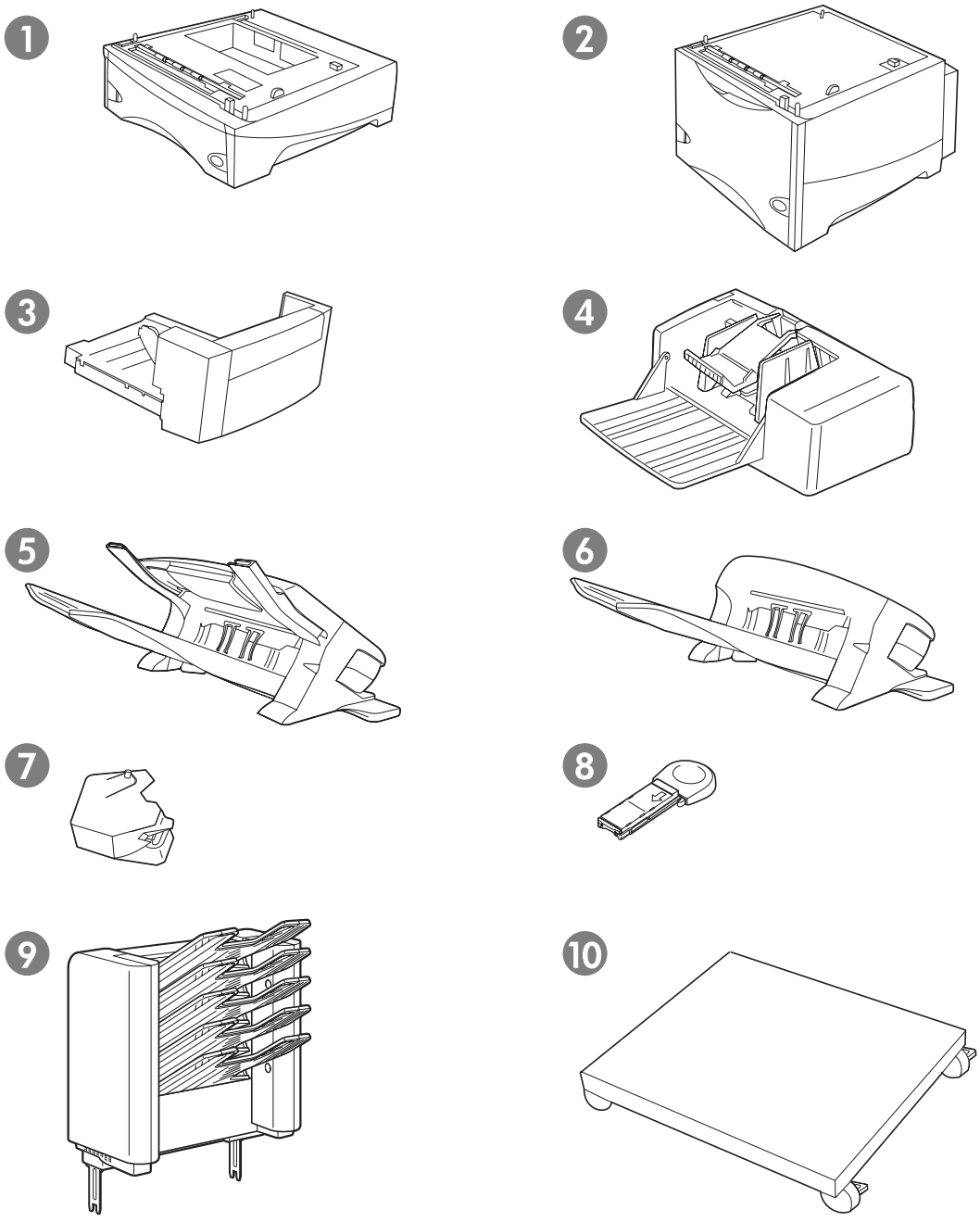
HP Easy Printer Care software is a product management tool designed to make product configuration, monitoring, supplies ordering, troubleshooting, and updating as simple and efficient as possible. For more information about HP Easy Printer Care software, see Use the HP Easy Printer Care software on page 68.

Order replacement parts

The following list of accessories was current at the time of printing. Ordering information and availability of the accessories might change during the life of the product

Paper-handling accessories

Figure 8-1 Paper-handling accessories



Ref	Item	Description	Product number	Part number
1	Optional 500-sheet feeder	Optional tray to increase paper capacity. Holds Letter, A4, Legal, A5, B5 (JIS), Executive, and 8.5 x 13 inch paper sizes. The product can accommodate up to four optional 500-sheet feeders.	CB518A	CB518-67901

Ref	Item	Description	Product number	Part number
2	Optional 1,500-sheet feeder	Optional tray to increase paper capacity. Holds Letter, Legal, and A4 paper sizes.	CB523A	CB523-67901
3	Duplexer (duplex printing accessory)	Allows automatic printing on both sides of the paper.	CB519A	CB519-67901
4	Envelope feeder	Holds up to 75 envelopes.	CB524A	CB524-67901
5	500-sheet stapler/ stacker	Allows for high-volume output with automatic job finishing. Staples up to 15 sheets of paper.	CB522A	CB522-67901
6	500-sheet stacker	Provides an additional output bin that holds 500 sheets.	CB521A	CB521-67901
7	Stapler unit	Holds the stapler cartridge and the stapler head. Order the stapler unit if you are experiencing stapler failure and an HP-authorized service or support provider advises you to replace the unit. NOTE: The staple cartridge is not included with the stapler unit and must be ordered separately, when it needs to be replaced.		Q3216-60501
8	1,000-staple cartridge	Provides three staple cartridges.	Q3216A	Q3216-60500
9	HP 5-bin mailbox	Provides five output bins that you can use to sort jobs.	CB520A	CB520-67901
10	Printer stand	Provides stability when multiple optional trays are installed. The stand has casters so you can easily move the product.	CB525A	

Print cartridges

Item	Description	Product number	Part number
HP LaserJet print cartridge	10,000-page cartridge	CC364A	CC364-67901
	24,000-page cartridge	CC364X	CC364-67902

Maintenance kits

Item	Description	Product number	Part number
Preventive maintenance kit	Contains a replacement fuser, a transfer roller, a transfer-roller tool, eight feed rollers, and one pair of disposable gloves. Includes instructions for installing each component. The preventive maintenance kit is a consumable item, and its cost is not covered under the warranty or most extended warranty options.	CB388A (110 V) CB389A (220 V)	
Multipurpose tray kit (Tray 1)	Contains a pickup roller, a feed roller, and a separation roller.		CB506-67905
Product roller kit (Trays 2, 3, 4, 5, 6)	Contains a pickup roller, a feed roller, and a separation roller.		CB506-67904

Item	Description	Product number	Part number
Transfer roller kit	Contains one transfer roller.		CB506-67903
Fusing kit	Contains one fuser assembly.		CB506-67901 (110 V) CB506-67902 (220 V)

Memory

Item	Description	Product number	Part number
44 x 32-pin DDR2 memory DIMM (dual inline memory module) Boosts the ability of the product to handle large or complex print jobs.	64 MB	CC413A	CC413-67901
	128 MB	CC414A	CC414-67901
	256 MB	CC415A	CC415-67901
	512 MB	CE483A	CE483-67901

Cables and interfaces

Item	Description	Product number	Part number
Enhanced I/O (EIO) cards	HP High Performance Serial ATA EIO Hard Disk	J6073G	CB506-67907
HP Jetdirect print server multi-protocol EIO network cards	1284B parallel adaptor	J7972G	J7972-61001
	HP Jetdirect EIO wireless 690n (IPv6/IPsec)	J8007G	
	HP Jetdirect en3700	J7942G	J7942-61031
	HP Jetdirect en1700	J7988G	J7988-61001
	HP Jetdirect ew2400 USB wireless print server	J7951G	J7951-61021
	HP Jetdirect 630n EIO networking card (IPv6/gigabit)	J7997G	J7997-61001
	HP Jetdirect 635n EIO networking card (IPv6/IPsec)	J7961G	J7961-69011
USB cable	2-meter A to B cable	C6518A	

Paper

For more information about paper, go to http://www.hp.com/go/ljsupplies.

Item	Description	Product number
HP Soft Gloss laser paper For use with HP LaserJet printers. Coated paper, good for business documents with high impact, such as brochures, sales material, and documents with graphics and photographic images. Specifications: 32 lb (120 g/m^2).	Letter (220 x 280 mm), 50 sheets/box	C4179A/Asia-Pacific countries/regions
	A4 (210 x 297 mm), 50 sheets/box	C4179B/Asia-Pacific countries/regions and Europe
HP LaserJet tough paper For use with HP LaserJet printers. This satin-finish paper is waterproof and tear-proof, yet doesn't compromise on print quality or performance. Use it for signs, maps, menus, and other business applications.	Letter (8.5 x 11 inch), 50 sheets to a carton	Q1298A/North America
	A4 (210 x 297 mm), 50 sheets to a carton	Q1298B/Asia-Pacific countries/regions and Europe
HP Premium Choice LaserJet paper HP's brightest LaserJet paper. Expect spectacular color and crisp black from this paper that is extra smooth and brilliantly white. Ideal for presentations, business plans, external correspondence and other high-value documents Specifications: 98 bright, 32 lb. (75 g/m^2).	Letter (8.5 x 11 inch), 500 sheets/ream, 10-ream carton	HPU1132/North America
	Letter (8.5 x 11 inch), 250 sheets/ream, 6-ream carton	HPU1732 North America
	A4 (210 x 297 mm), 5-ream carton	Q2397A/Asia-Pacific countries/regions
	A4 (210 x 297 mm), 250 sheet/ream, 5-ream carton	CHP412/Europe
	A4 (210 x 297 mm), 500 sheet/ream, 5-ream carton	CHP410/Europe
	A4 (210 x 297 mm), 160 g/m^2, 500 sheet/ream, 5-ream carton	CHP413/Europe
HP LaserJet paper For use with HP LaserJet printers. Good for letterhead, high-value memos, legal documents, direct mail, and correspondence. Specifications: 96 bright, 24 lb (90 g/m^2).	Letter (8.5 x 11 inch), 500 sheets/ream, 10-ream carton	HPJ1124/North America
	Legal (8.5 x 14 inch), 500 sheets/ream, 10-ream carton	HPJ1424/North America
	A Letter (220 x 280 mm), 500 sheets/ream, 5-ream carton	Q2398A/Asia-Pacific countries/regions
	A4 (210 x 297 mm), 500 sheets/ream, 5-ream carton	Q2400A/Asia-Pacific countries/regions
	A4 (210 x 297 mm), 500 sheets/ream	CHP310/Europe

Item	Description	Product number
HP Printing paper For use with HP LaserJet and inkjet printers. Created especially for small and home offices. Heavier and brighter than copier paper. Specifications: 92 bright, 22 lb.	Letter (8.5 x 11 inch), 500 sheets/ream, 10-ream carton	HPP1122/North America and Mexico
	Letter (8.5 x 11 inch), 500 sheets/ream, 3-ream carton	HPP113R/North America
	A4 (210 x 297 mm), 500 sheets/ream, 5-ream carton	CHP210/Europe
	A4 (210 x 297 mm), 300 sheets/ream, 5-ream carton	CHP213/Europe
HP Multipurpose paper For use with all office equipment-laser and inkjet printers, copiers, and fax machines. Created for businesses that want one paper for all their office needs. Brighter and smoother than other office papers. Specifications: 90 bright, 20 lb (75 g/m^2).	Letter (8.5 x 11 inch), 500 sheets/ream, 10-ream carton Letter (8.5 x 11 inch), 500 sheets/ream, 5-ream carton Letter (8.5 x 11 inch), 250 sheets/ream, 12-ream carton Letter (8.5 x 11 inch), 3-hole, 500 sheets/ream, 10-ream carton Legal (8.5 x 14 inch), 500 sheets/ream, 10-ream carton	HPM1120/North America HPM115R/North America HP25011/North America HPM113H/North America HPM1420/North America
HP Office paper For use with all office equipment-laser and inkjet printers, copiers, and fax machines. Good for high-volume printing. Specifications: 84 bright, 20 lb (75 g/m^2).	Letter (8.5 x 11 inch), 500 sheets/ream, 10-ream carton	HPC8511/North America and Mexico
	Letter (8.5 x 11 inch), 3-hole, 500 sheets/ream, 10-ream carton	HPC3HP/North America
	Legal (8.5 x 14 inch), 500 sheets/ream, 10-ream carton	HPC8514/North America
	Letter (8.5 x 11 inch), Quick Pack; 2,500-sheet carton	HP2500S/North America and Mexico
	Letter (8.5 x 11 inch), Quick Pack 3-hole; 2,500-sheet carton	HP2500P/North America
	A Letter (220 x 280 mm), 500 sheets/ream, 5-ream carton	Q2408A/Asia-Pacific countries/regions
	A4 (210 x 297 mm), 500 sheets/ream, 5-ream carton	Q2407A/Asia-Pacific countries/regions
	A4 (210 x 297 mm), 500 sheets/ream, 5-ream carton	CHP110/Europe
	A4 (210 x 297 mm), Quick Pack; 2500 sheets/ream, 5-ream carton	CHP113/Europe

Item	Description	Product number
HP Office recycled paper For use with all office equipment-laser and inkjet printers, copiers, and fax machines. Good for high-volume printing. Satisfies U.S. Executive Order 13101 for environmentally preferable products. Specifications: 84 bright, 20 lb, 30% post-consumer content.	Letter (8.5 x 11 inch), 500 sheets/ream, 10-ream carton	HPE1120/North America
	Letter (8.5 x 11 inch), 3-hole, 500 sheets/ream, 10-ream carton	HPE113H/North America
	Legal (8.5 x 14 inch), 500 sheets/ream, 10-ream carton	HPE1420/North America
HP LaserJet transparencies For use only with HP LaserJet monochrome printers. For crisp, sharp text and graphics, rely on the only transparencies specifically designed and tested to work with monochrome HP LaserJet printers. Specifications: 4.3-mil thickness.	Letter (8.5 x 11 inch), 50 sheets to a carton	92296T/North America, Asia-Pacific countries/regions, and Europe
	A4 (210 x 297 mm), 50 sheets to a carton	922296U/Asia-Pacific countries/regions and Europe

How to use the parts lists and diagrams

The figures in this chapter show the major subassemblies in the product and their component parts. A parts list table follows each exploded view assembly diagram. Each table lists the item number, the associated part number, and the description of each part. If a part is not listed in the table, then it is not a field replacement unit (FRU).

△ **CAUTION:** Be sure to order the correct part. When looking for part numbers for electrical components, pay careful attention to the voltage that is listed. Doing so will ensure that the part number selected is for the correct model.

NOTE: In this manual, the abbreviation “PCA” stands for “printed circuit-board assembly.” Components described as a PCA might consist of a single circuit board or a circuit board plus other parts, such as cables and sensors.

Customer/field-replaceable units

Part	Part number
Fusing assembly (110 V)	CB506-67901
Fusing assembly (220 V)	CB506-67902
500-sheet paper cassette	RM1-4559-000CN
Transfer roller	CB506-67903
Formatter cover (P4015/P4515)	RC2-2468-000CN
Formatter cover (P4014)	RC2-5757-000CN
Formatter (P4014, base model)	CB437-69001
Formatter (network models)	CB438-69001
Option cover	RC2-2459-000CN
Face-up tray assembly (P4015/4515)	RMI-4531-000CN
Face-up tray assembly (P4014)	RMI-5448-000CN
Paper pickup roller	RM1-0036-000CN
Paper feed roller	RM1-0037-020CN
~~Feed roller (separation roller)~~	~~RMI-4571-000CN~~
Cassette torque limiter	RC2-5262-000CN
Duplexing outer cover (P4015/4515)	RC2-2510-000CN
Duplexing outer cover (P4014)	RC2-5760-000CN
Envelope cover	RL1-1667-000CN
Envelope connector cover (P4015/4515)	RC2-2476-000CN
Envelope connector cover (P4014)	RC2-5759-000CN
Optional 500-sheet feeder (plus tray)	CB518-67901
Optional envelope feeder	CB524-67901
Optional duplex accessory	CB519-67901
Optional 500-sheet stacker	CB521-67901
Optional 500-sheet stapler/stacker	CB522-67901
Optional 1,500-sheet feeder	CB523-67901
Optional 5-bin mailbox	CB520-67901
Optional printer stand	CB525A
Tray 1 feed roller	RL1-1663-000CN
Tray 1 pickup roller	RL1-1641-000CN
Tray 1 separation roller	RL1-1654-000CN
Legal tray cover (P4015/4515)	RC2-5239-000CN
Legal tray cover (P4014)	RC2-5761-000CN

Part	Part number
Control-panel overlay (P4015/4515)	CB509-60102 (French/Spanish)
	CB509-60103 (German/French/Italian)
	CB509-60104 (Norwegian/Swedish/Finnish/Estonian/Latvian/Lithuanian)
	CB509-60105 (German/French/Italian/Spanish/Portuguese/Dutch/Catalan)
	CB509-60106 (Czech/Hungarian/Polish/Slovak/Croatian/Romanian/Serbian)
	CB509-60107 (Russian/Ukrainian/Bulgarian/Kazakh/Turkish/Greek)
Control-panel overlay (P4014)	CB508-60102 (French/Spanish)
	CB508-60103 (German/French/Italian)
	CB508-60104 (Norwegian/Swedish/Finnish/Estonian/Latvian/Lithuanian)
	CB508-60105 (German/French/Italian/Spanish/Portuguese/Dutch/Catalan)
	CB508-60106 (Czech/Hungarian/Polish/Slovak/Croatian/Romanian/Serbian)
	CB508-60107 (Russian/Ukrainian/Bulgarian/Kazakh/Turkish/Greek)
Maintenance kit	CB388A (110 V)
	CB389A (220 V)
Memory	CC413-67901 (64 MB)
	CC414-67901 (128 MB)
	CC415-67901 (256 MB)
	CC483-67901 (512 MB)
EIO hard disk drive (20 GB)	CB506-67907
USB cable (2-meter, A to B)	C6518A
EIO card 1248B parallel adaptor	J7972G
JetDirect EIO wireless 690n (IPv6/IPsec)	J8007G
JetDirect EIO en3700	J7942G
JetDirect EIO en1700	J7988G
JetDirect EIO en2400 USB wireless	J7951G
JetDirect 630n EIO networking card (IPv6/IPsec)	J7997G
JetDirect 635n EIO networking card	J7961G
1,000-staple cartridge	Q3216-60500
Print cartridge	CC364-67901 (10,000 pages)
	CC364-67902 (24,000 pages)

Assembly locations

Figure 8-2 Assembly locations—base unit

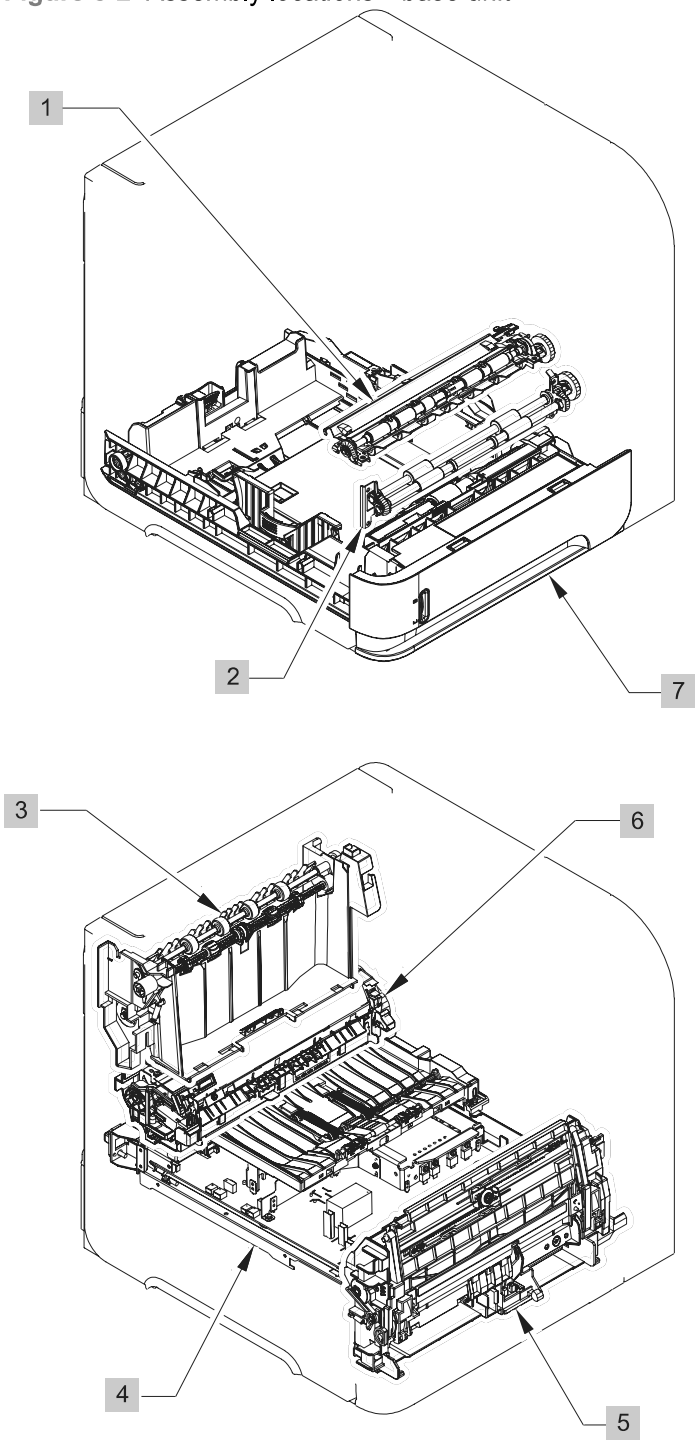


Table 8-1 **Assembly locations—base unit**

Ref.	Description	Details
1	Registration assembly	See Figure 8-6 Internal components (1 of 3) on page 358.

Table 8-1 **Assembly locations—base unit (continued)**

Ref.	Description	Details
2	Paper feed roller assembly	See Figure 8-6 Internal components (1 of 3) on page 358.
3	Paper delivery assembly	See Figure 8-12 Paper delivery assembly on page 380.
4	Power supply assembly	See Figure 8-9 Power supply assembly on page 370.
5	Multipurpose tray (Tray 1) pickup assembly	See Figure 8-11 Multipurpose pickup assembly on page 376.
6	Fuser assembly	See Figure 8-13 Fusing assembly on page 382.
7	500-sheet cassette (Tray 2)	See Figure 8-10 500-sheet cassette on page 372.

Figure 8-3 Assembly location—optional 500-sheet paper feeder

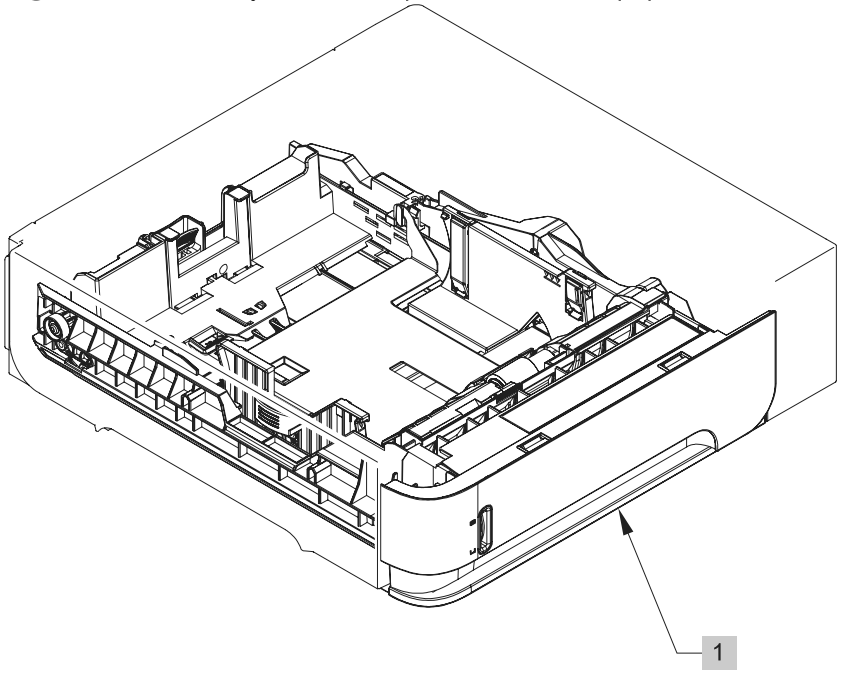


Table 8-2 **Assembly location—optional 500-sheet paper feeder**

Ref.	Description	Details
1	Optional 500-sheet paper feeder	See Input devices on page 392.

Figure 8-4 Assembly locations—optional 1,500-sheet paper feeder

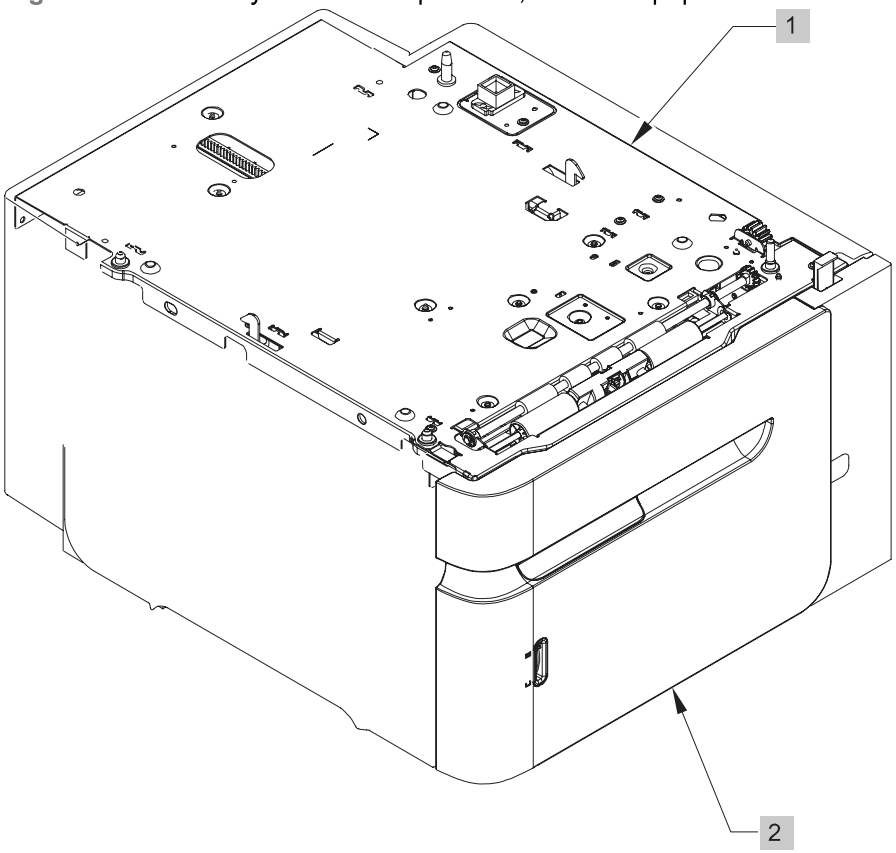


Table 8-3 **Assembly locations—optional 1,500-sheet paper feeder**

Ref.	Description	Details
1	Paper pickup assembly	See Figure 8-23 Optional 1,500-sheet feeder paper pickup assembly on page 412.
2	Front door assembly	See Figure 8-20 Optional 1,500-sheet feeder front door assembly on page 402.

Covers

Figure 8-5 Covers—base unit

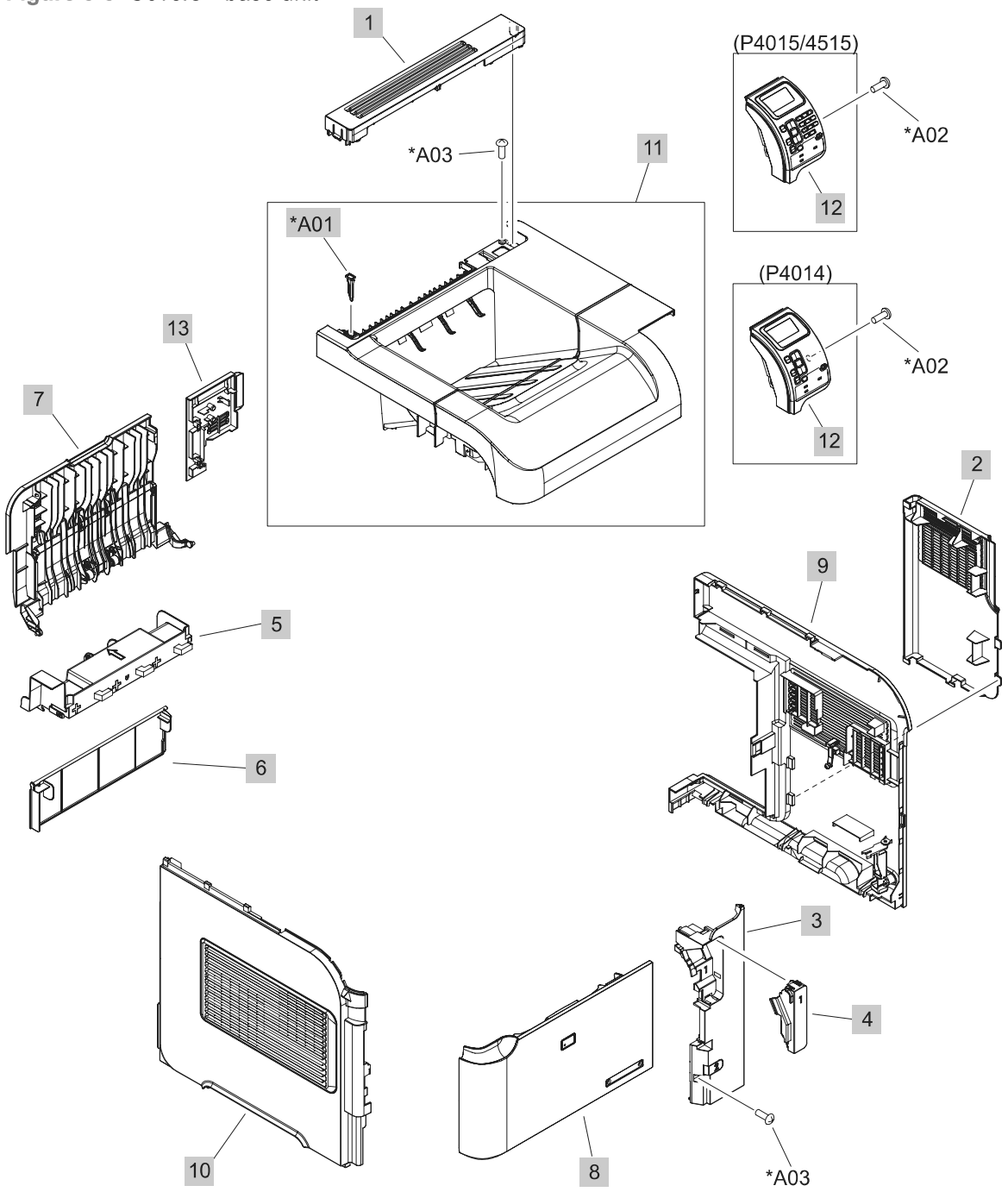


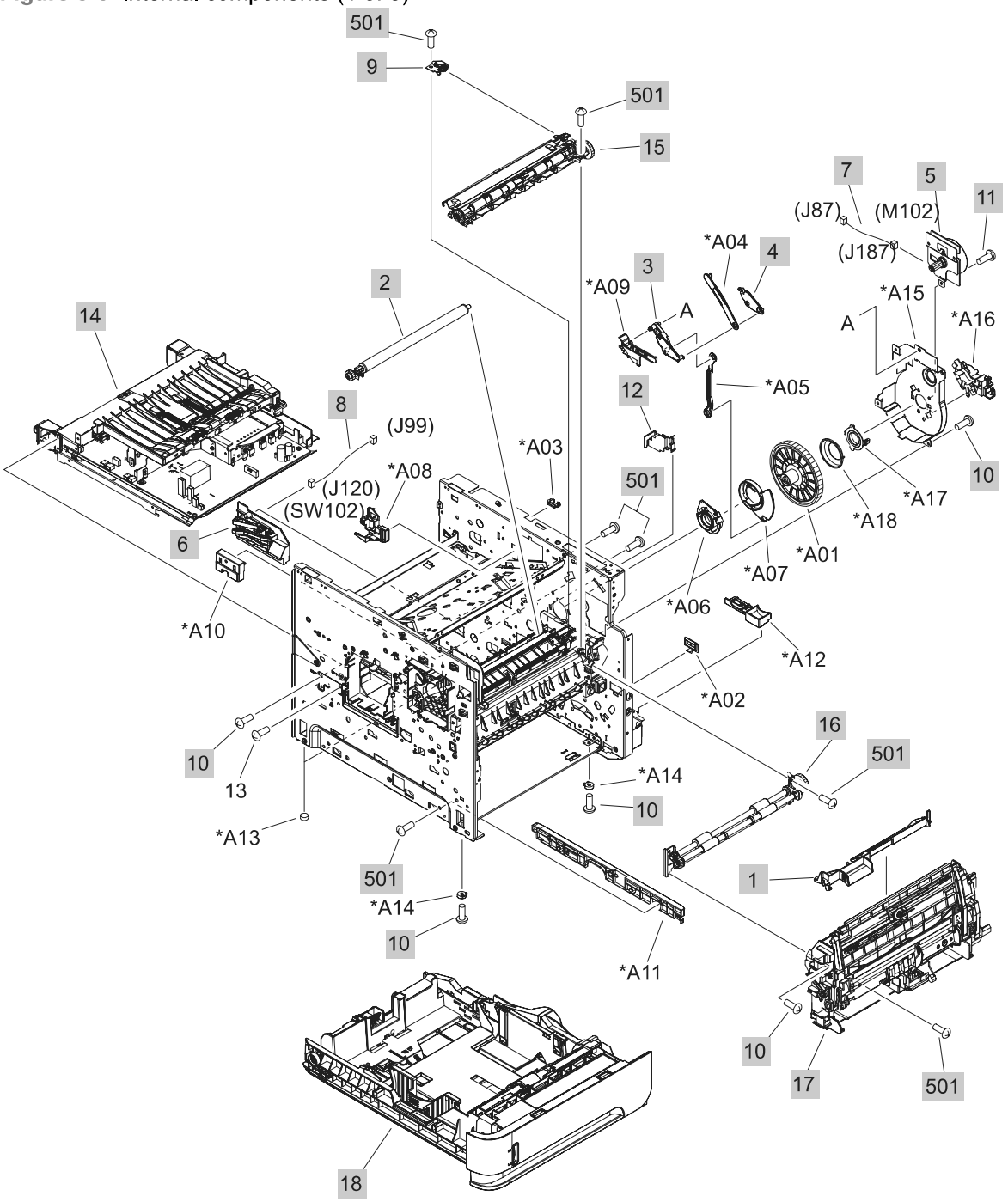
Table 8-4 Covers—base unit

Ref	Description	Part number	Qty
1	Cover, option	RC2-2459-000CN	1
2	Cover, formatter (P4015/P4515)	RC2-2468-000CN	1
2	Cover, formatter (P4014)	RC2-5757-000CN	1
3	Cover, right front (P4015/P4515)	RC2-2475-000CN	1
3	Cover, right front (P4014)	RC2-5758-000CN	1
4	Cover, envelope connector (P4015/P4515)	RC2-2476-000CN	1
4	Cover, envelope connector (P4014)	RC2-5759-000CN	1
5	Cover, duplexing outer (P4015/P4515)	RC2-2510-000CN	1
5	Cover, duplexing outer (P4014)	RC2-5760-000CN	1
6	Cover, legal (P4015/P4515)	RC2-5239-000CN	1
6	Cover, legal (P4014)	RC2-5761-000CN	1
7	Face-up tray assembly (P4015/P4515)	RM1-4531-000CN	1
7	Face-up tray assembly (P4014)	RM1-5448-000CN	1
8	Front cover assembly	RM1-4534-000CN	1
9	Right cover assembly (P4015/P4515)	RM1-4550-000CN	1
9	Right cover assembly (P4014)	RM1-5449-000CN	1
10	Left cover assembly (P4015/P4515)	RM1-4551-000CN	1
10	Left cover assembly (P4014)	RM1-5450-000CN	1
11	Top cover assembly (P4015/P4515)	RM1-4552-000CN	1
11	Top cover assembly (P4014)	RM1-5250-000CN	1
12	Control panel assembly (P4015/P4515)	RM1-5059-000CN	1
12	Control panel assembly (P4014)	RM1-5060-000CN	1
13	Cover, right rear (P4015/P4515)	RC2-2478-000CN	1
13	Cover, right rear (P4014)	RC2-5768-000CN	1
A01	Pin, option	RC1-0306-000CN	1
A02	Screw, tapping, pan head, M4x10		3
A03	Screw, D, M3x8		6

[1] Only orderable parts have part numbers.

Internal components

Figure 8-6 Internal components (1 of 3)



drum drive assembly #RC2-2484-000

Table 8-5 **Internal components (1 of 3)**

Ref	Description	Part number	Qty
1	Cover, envelope	RL1-1667-000CN	1
2	Transfer roller assembly	CB506-67903	1
3	Arm, release, A	RC2-2480-000CN	1
4	Arm, release, B	RC2-2481-000CN	1
5	Motor, DC, 24 V, drum drive	RL1-1659-000CN	1
6	Size detect assembly	RM1-4525-000CN	1
7	Cable, drum motor	RM1-5090-000CN	1
8	Cable, size sensor	RM1-5091-000CN	1
9	Grounding plate assembly	RM1-5461-000CN	1
10	Screw, D, M3x8	XA9-1671-000CN	18
11	Screw, tap, M3x6	XA9-1503-000CN	3
12	Guide, connecting cable	RC1-0386-000CN	1
13	Screw, M4x5		2
14	Power-supply assembly, 110-127 V (see Figure 8-9 Power supply assembly on page 370)		1
14	Power-supply assembly, 220-240 V (see Figure 8-9 Power supply assembly on page 370)		1
15	Registration assembly	RM1-5460-000CN	1
16	Paper feed roller assembly	RM1-4527-000CN	1
17	Multipurpose tray pickup assembly	RM1-4563-000CN	1
18	500-sheet tray cassette	RM1-4559-000CN	1
501	Screw, tapping, pan head, M4x10	XB4-7401-007CN	24
A01	Gear, 193T	ru6-0190	1
A02	Guard, edge		1
A03	Clamp, cord		1
A04	Rod, release, upper		1
A05	Rod, release, lower		1
A06	Guide, gear shift, A		1
A07	Guide, gear shift, B		1
A08	Guide, scanner cable		1
A09	Guide, gear		1
A10	Guide, cassette right, rear		1
A11	Guide, cassette left, rear		1
A12	Support, power supply switch		1
A13	Foot		2

Table 8-5 **Internal components (1 of 3) (continued)**

Ref	Description	Part number	Qty
A14	Spacer, frame		2
A15	Side plate, drum drive		1
A16	Cap, drum gear		1
A17	Bushing		1
A18	Spring, compression		1

[1] Only orderable parts have part numbers.

Figure 8-7 Internal components (2 of 3)

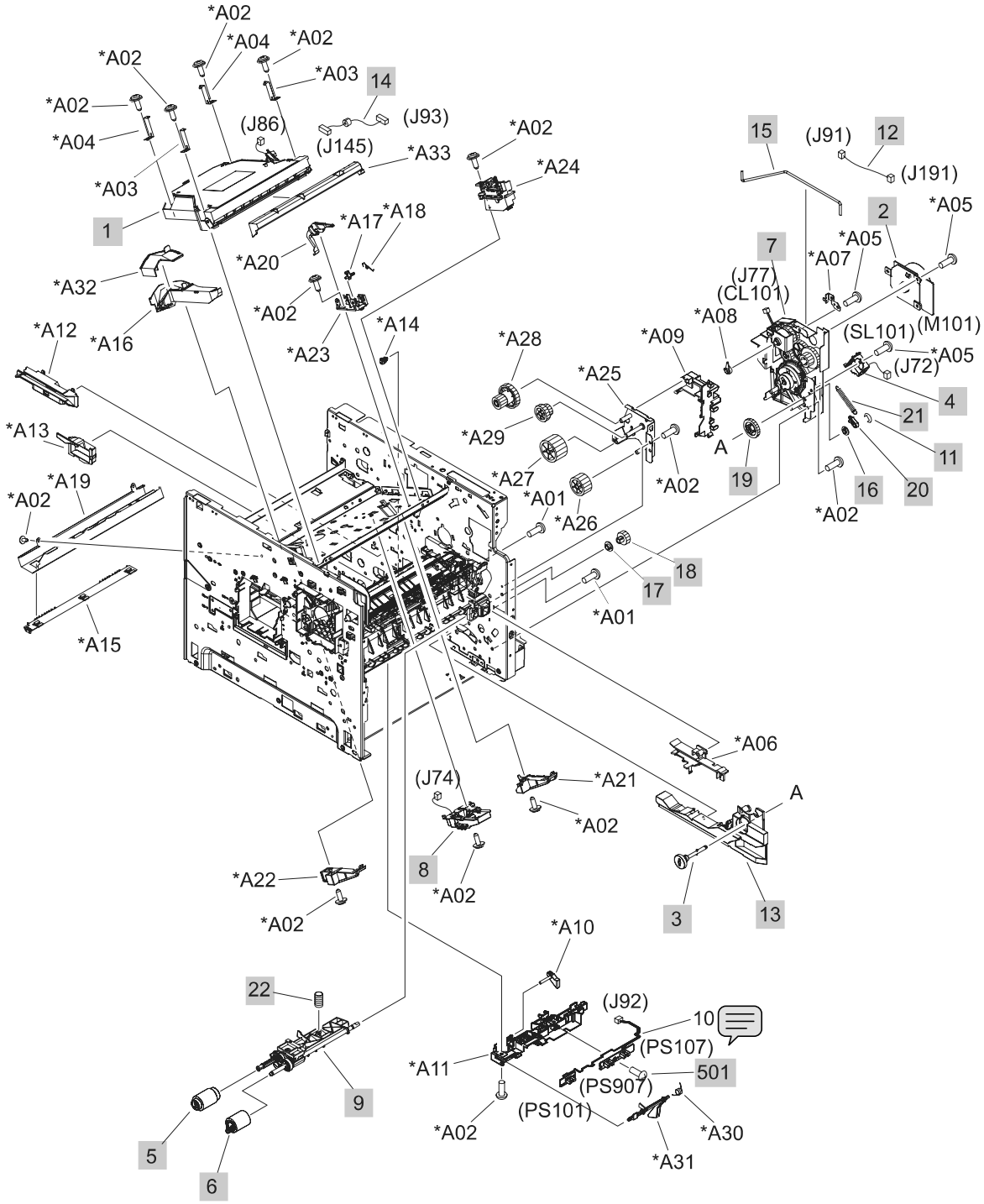


Table 8-6 **Internal components (2 of 3)**

Ref	Description	Part number	Qty
1	Laser scanner assembly	RM1-5465-000CN	1
2	Motor, DC, 24 V, main drive	RL1-1657-000CN	1
3	Shaft, retard drive	RL1-1658-000CN	1
4	Solenoid	RK2-0270-000CN	1
5	Paper pickup roller assembly	RM1-0036-020CN	1
6	Paper feed roller assembly	RM1-0037-020CN	1
7	Paper pickup drive assembly	RM1-4532-000CN	1
8	Tag holder assembly	RM1-4539-000CN	1
9	Paper feed shaft Z assembly	RM1-4562-000CN	1
10	Feeder sensor cable assembly		1
11	Ring, E	XD9-0232-000CN	1
12	Cable, feed motor	RM1-5089-000CN	1
13	Right front guide assembly	RM1-4576-000CN	1
14	Cable, laser	RM1-5087-000CN	1
15	Rod, switch	RC2-2667-000CN	1
16	Bushing	RC1-0206-000CN	1
17	Bushing, feed shaft	RC1-0264-000CN	1
18	Gear, 18T	RU5-0045-020CN	1
19	Gear, 23T	RU6-0159-000CN	1
20	Bushing	RC2-5783-000CN	2
21	Spring, tension	RU6-2115-000CN	2
22	Spring, compression	RC1-0213-000CN	1
501	Screw, tap, binding head, M3x8	XB4-7300-809CN	2
A01	Screw, tap, pan head, M4x10		1
A02	Screw, D, M3x8		28
A03	Spacer, scanner, front		1
A04	Spacer, scanner, rear		1
A05	Screw, tap, M3x6		10
A06	Guide, front		1
A07	Support, DCU		1
A08	Bushing		1
A09	Guide, cable, right front		1
A10	Lever, height prevention		1
A11	Holder, sheet sensor		1

Table 8-6 **Internal components (2 of 3) (continued)**

Ref	Description	Part number	Qty
A12	Guide, EPU, rear		1
A13	Clip, cable		1
A14	Saddle, wire		1
A15	Guide, lower		1
A16	Duct, scanner protective, 1		1
A17	Flag, shutter		1
A18	Spring, torsion		1
A19	Plate, RW crossmember		1
A20	Lever, lens		1
A21	Stopper, C right (P4015/P4515)		1
A21	Stopper, C right (P4014)		1
A22	Stopper, C left (P4015/P4515)		1
A22	Stopper, C left (P4014)		1
A23	Mount, lever		1
A24	Right stopper assembly		1
A25	Side plate, paper feed drive		1
A26	Gear, 29T		1
A27	Gear, 35T		1
A28	Gear, 37T/18T		1
A29	Gear, 17T/25T		1
A30	Spring, torsion		1
A31	Flag, paper presence detect		1
A32	Lid, scanner protective duct		1
A33	Duct, scanner protective, 2		1

[1] Only orderable parts have part numbers.

Figure 8-8 Internal components (3 of 3)

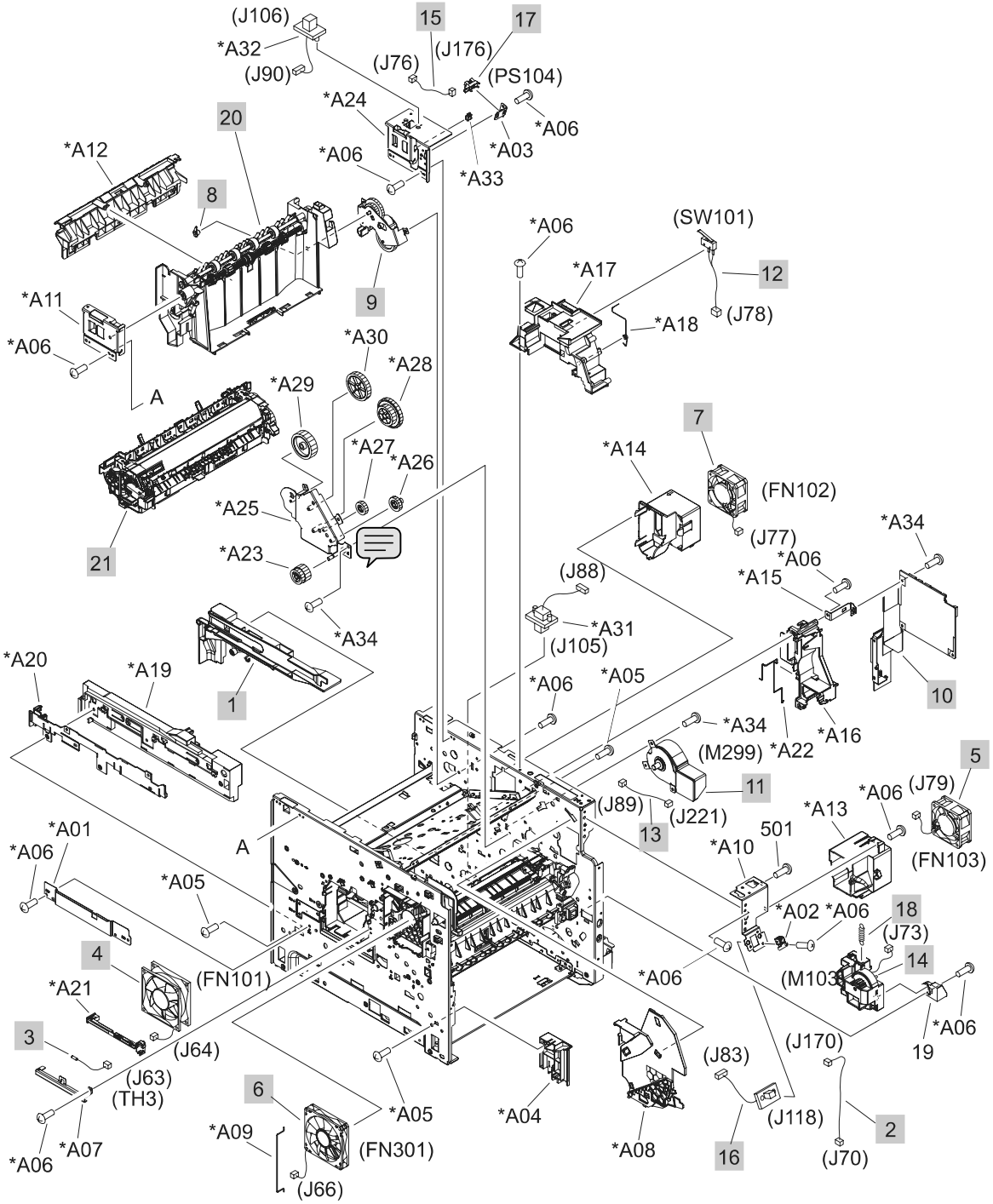


Table 8-7 **Internal components (3 of 3)**

Ref	Description	Part number	Qty
1	Right guide assembly (P4015/P4515)	RM1-4558-000CN	1
1	Right guide assembly (P4014)	RM1-5451-000CN	1
2	Cable, panel	RM1-5082-000CN	1
3	Thermistor unit	RK2-0359-000CN	1
4	Fan fn101	RK2-1988-000CN	1
5	Fan fn103	RK2-1989-000CN	1
6	Fan fn301	RK2-1991-000CN	1
7	Fan fn102	RK2-1992-000CN	1
8	Bushing, paper delivery	RC1-0136-000CN	1
9	Paper delivery drive assembly	RM1-4526-000CN	1
10	DC controller PCA	RM1-4582-000CN	1
11	Fuser motor assembly	RM1-5051-000CN	1
12	Cable, door switch	RM1-5080-000CN	1
13	Cable, fuser motor	RM1-5088-000CN	1
14	Lifter drive assembly	RM1-4585-000CN	1
15	Cable, full sensor	RM1-5081-000CN	1
16	Cable, envelope feeder	RM1-5085-000CN	1
17	IC, photo interrupter	WG8-5624-000CN	1
18	Spring, tension	RC1-0198-000CN	1
19	Support, lifter drive assembly		1
20	Paper delivery assembly (also see Figure 8-12 Paper delivery assembly on page 380)	RM1-4529-000CN	1
21	Fuser assembly (110-127 V) (also see Figure 8-13 Fusing assembly on page 382)	CB506-67901	1
21	Fuser assembly (220-240 V) (also see Figure 8-13 Fusing assembly on page 382)	CB506-67902	1
501	Screw, with washer, M3x6	XB2-7300-607CN	2
A01	Cover, connector		1
A02	Case, envelope		1
A03	Holder, sensor		1
A04	Front cassette LF guide assembly		1
A05	Screw, tap, pan head, M4x10		6
A06	Screw, D, M3x8		28
A07	Holder, sensor		1
A08	Guide, cartridge, right		1
A09	Rod, third fan		1

Table 8-7 **Internal components (3 of 3) (continued)**

Ref	Description	Part number	Qty
A10	Crossmember, front		1
A11	Crossmember, option, left		1
A12	Guide, rear		1
A13	Duct, second fan		1
A14	Duct, fourth fan		1
A15	Holder, DCU		1
A16	Guide, flat flexible cable		1
A17	Holder, check pin		1
A18	Spring, grounding		1
A19	Guide, left		1
A20	Guide, left, upper		1
A21	Holder, sensor		1
A22	Rod, din board		1
A23	Gear, 23T/19T		1
A24	Crossmember, option, right		1
A25	Side plate, fuser drive		1
A26	Gear, 17T		1
A27	Gear, 15T		1
A28	Gear, 25T/91T		1
A29	Gear, 33T		1
A30	Gear 35T		1
A31	Cable, option feeder		1
A32	Cable, OPT DEL		1
A33	Clamp, cable		1
A34	Screw, tap, M3x6		5

[1] Only orderable parts have part numbers.

Gears for fuser drive side plate assy A29 33t gear RU6-0171 A30 35t gear RU6-0172 A28 25t/91t gear RU6-0170

Figure 8-9 Power supply assembly

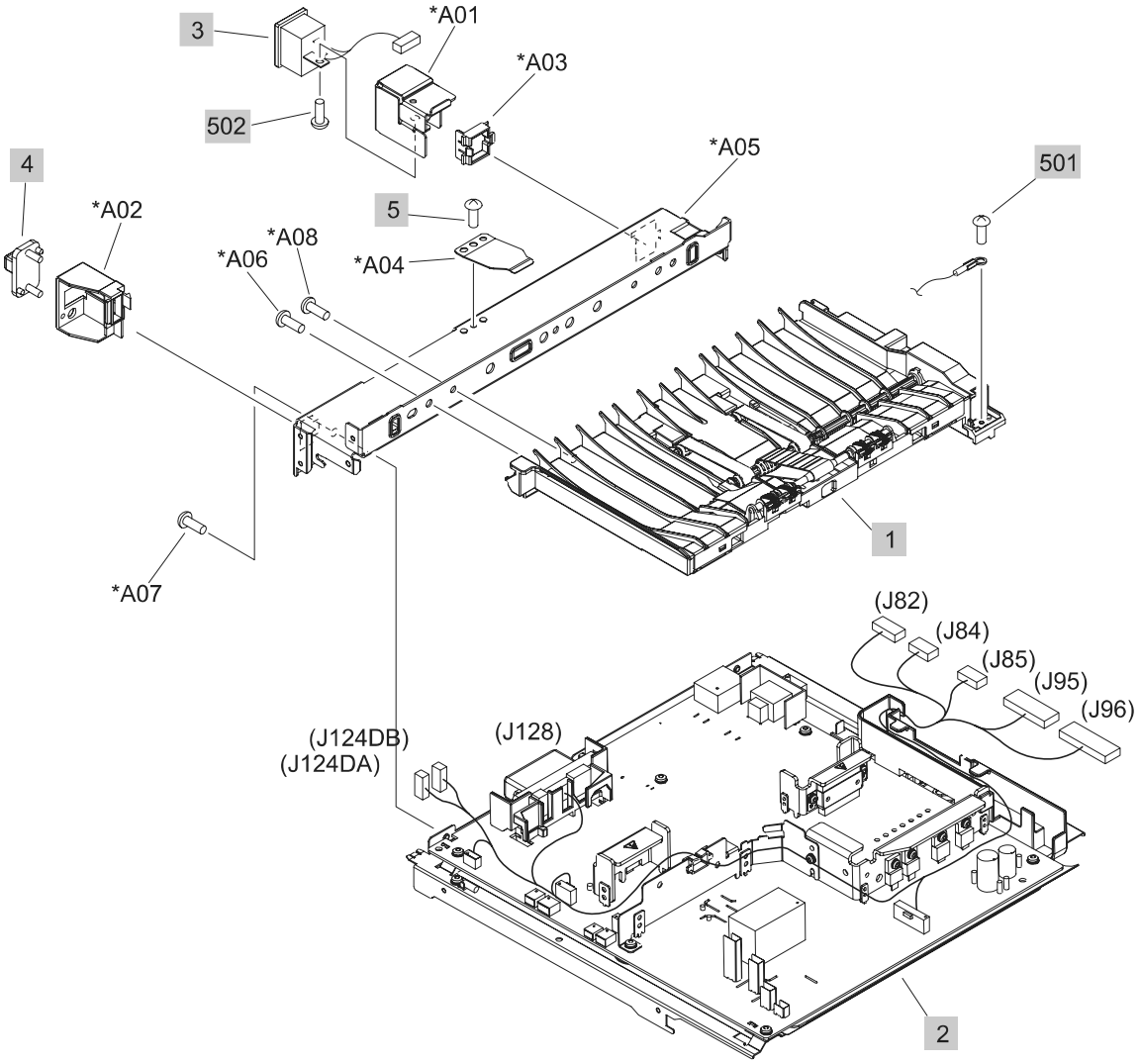


Table 8-8 Power supply assembly

Ref	Description	Part number	Qty
1	Paper feed assembly	RM1-4548-000CN	1
2	Electrical components assembly (110-127 V)	RM1-4549-000CN	1
2	Electrical components assembly (220-240 V)	RM1-4578-000CN	1
3	Cable, inlet (110-127 V)	RM1-5078-000CN	1
3	Cable, inlet (220-240 V)	RM1-5079-000CN	1
4	Connector, drawer, 6P	VS1-7514-006CN	1
5	Screw, flat head RS, M3x6	XA9-1464-000CN	1
501	Screw, machine, pan head, M3x6	XB1-1300-605CN	1
502	Screw, with washer, M4x6	XB2-7400-606CN	1
A01	Holder, inlet		1
A02	Holder, connector		1
A03	Guard, edge		1
A04	Spring, leaf		1
A05	Crossmember, fusing		1
A06	Screw, tap, pan head, M4x10		2
A07	Screw, D, M3x8		3
A08	Screw, with washer, M3x6		3

[1] Only orderable parts have part numbers.

Figure 8-10 500-sheet cassette

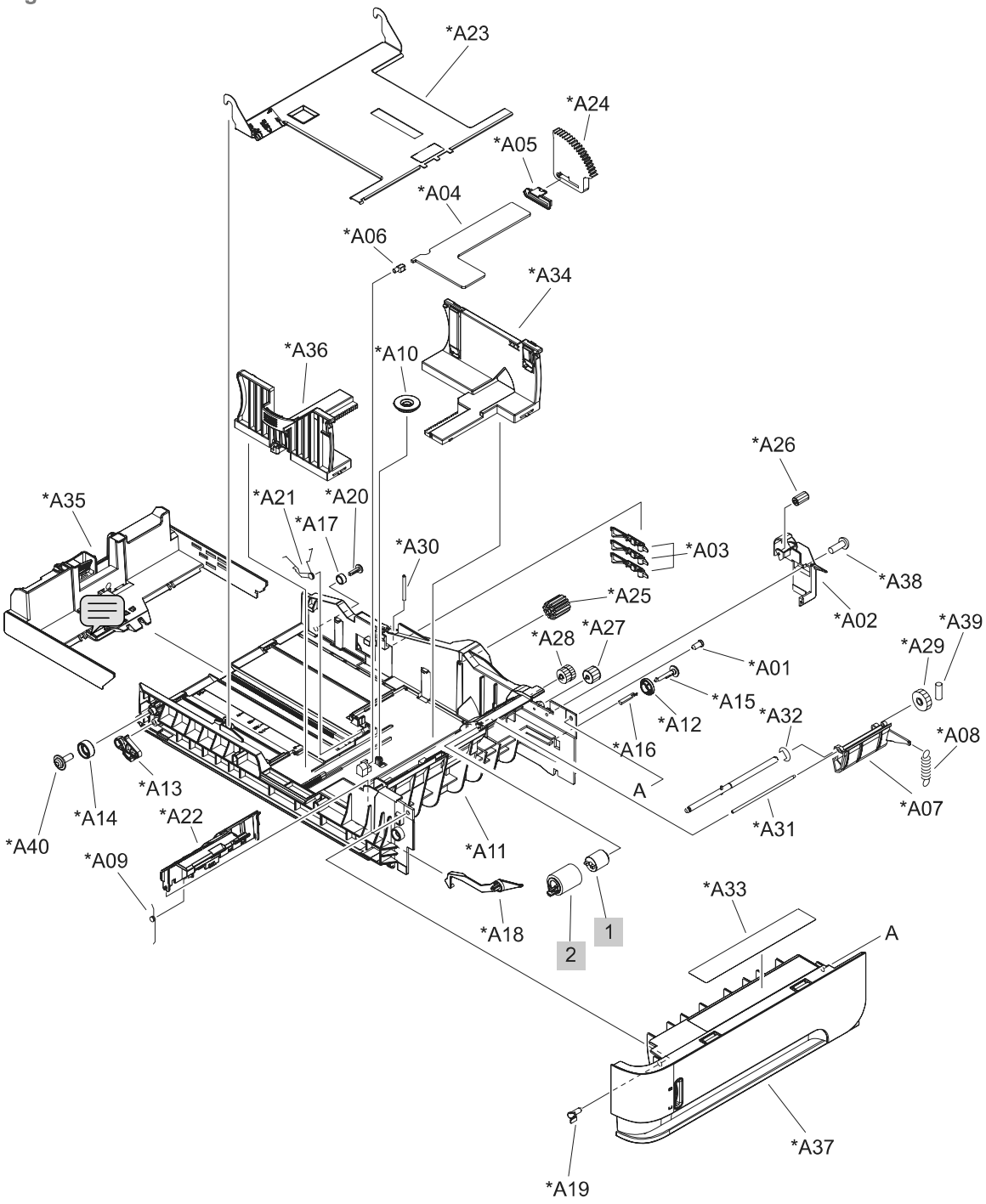


Table 8-9 **500-sheet cassette**

Ref	Description	Part number	Qty
	500-sheet cassette	RM1-4559-000CN	1
1	Limiter, cassette torque	RC2-5262-000CN	1
2	Paper feed roller assembly	RM1-0037-020CN	1
A01	Pin, front guide lock, right		1
A02	Cover, gear		1
A03	Flag, size sensing		1
A04	Arm, lifter		1
A05	Support, lifter arm		1
A6	Bushing, lift arm		1
A07	Holder, retard gear		1
A08	Spring, tension		1
A09	Spring, tension		1
A10	Gear, 20T		1
A11	Body, cassette		1
A12	Roller, positioning		1
A13	Claw, cassette		1
A14	Roller, LU		1
A15	Flange, positioning roller, right		1
A16	Shaft, positioning roller auxiliary		1
A17	Roller, RD		1
A18	Gauge, fuel		1
A19	Pin, cassette lock, left		1
A20	Shaft, RD roller		1
A21	Spring, torsion		1
A22	Guide, nip		1
A23	Plate, paper lifting		1
A24	Gear, 88T		1
A25	Gear, 14T		1
A26	Gear, 14T		1
A27	Gear, 14T		1
A28	Gear, 15T/25T		1
A29	Gear, 37T		1
A30	Shaft, size sensing		1
A31	Shaft, retard gear holder		1

Table 8-9 **500-sheet cassette (continued)**

Ref	Description	Part number	Qty
A32	Ring, E		1
A33	Label, cassette operation		1
A34	Right side end support assembly		1
A35	Cassette rear assembly		1
A36	Left side end support assembly		1
A37	Front cassette assembly		1
A38	Screw, tap, pan head, M4x10		1
A39	Pin, dowel		1
A40	Screw, tap, M4x12		1

[1] Only orderable parts have part numbers.

Figure 8-11 Multipurpose pickup assembly

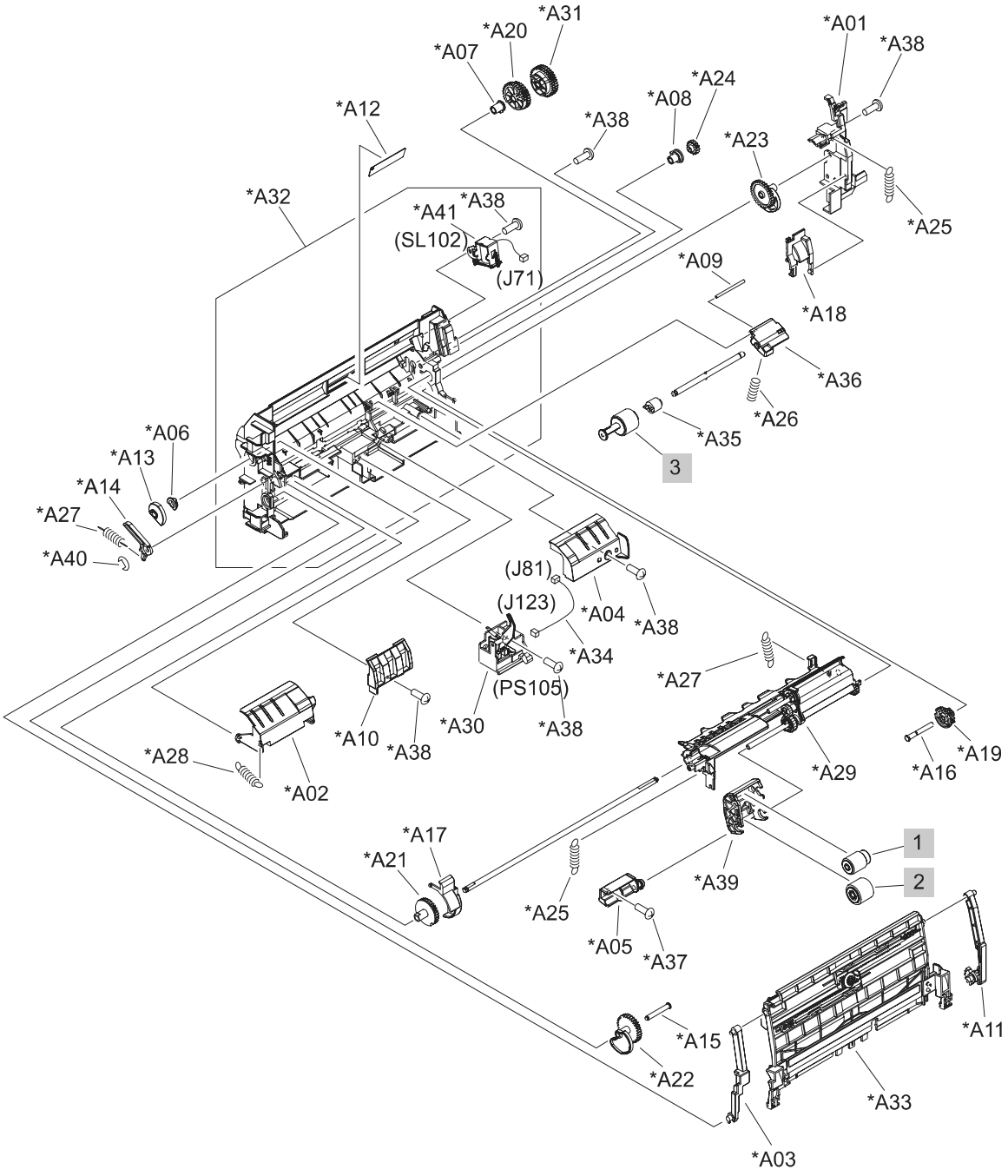


Table 8-10 **Multipurpose pickup assembly**

Ref	Description	Part number	Qty
	Multipurpose pickup assembly	RM1-4563-000CN	1
	Multipurpose tray kit (contains 1 pickup roller, 1 feed roller, 1 separation roller)	CB506-67905	1
1	Roller, pickup	RL1-1641-000CN	1
2	Roller, feed	RL1-1663-000CN	1
3	Roller, separation	RL1-1654-000CN	1
A01	Frame, multi, right		1
A02	Guide, nip, left		1
A03	Guide, nip, center		1
A04	Guide, nip, right		1
A05	Bushing		1
A6	Bushing		1
A07	Bushing		1
A08	Bushing		1
A09	Shaft, size sensing		1
A10	Hinge, multi, left		1
A11	Hinge, multi, right		1
A12	label, jam clear envelope		1
A13	Cam		1
A14	Lever		1
A15	Shaft, multipurpose cam, left		1
A16	Shaft, multipurpose cam, right		1
A17	Cover, multipurpose spring, left		1
A18	Cover, multipurpose spring, right		1
A19	Gear, 15T/21T		1
A20	Gear, 30T/34T		1
A21	Gear, 30T		1
A22	Cam/gear, 30T		1
A23	Cam/gear, 30T		1
A24	Gear, 14T		1
A25	Spring, tension		2
A26	Spring, compression		1
A27	Spring, tension		2
A28	Spring, tension		1
A29	Multipurpose guide assembly		1

Table 8-10 **Multipurpose pickup assembly (continued)**

Ref	Description	Part number	Qty
A30	Presence sensor holder assembly		1
A31	Multipurpose pickup gear assembly		1
A32	Multipurpose frame assembly		1
A33	Multipurpose tray assembly		1
A34	Cable, multipurpose sensor		1
A35	Limiter, multipurpose torque		1
A36	Holder, separation		1
A37	Screw, D, M3x8		1
A38	Screw, tap, pan head, M4x10		7
A39	Cover, roller		1
A40	Ring, E		1
A41	Multipurpose solenoid assembly		1

[1] Only orderable parts have part numbers.

Figure 8-12 Paper delivery assembly

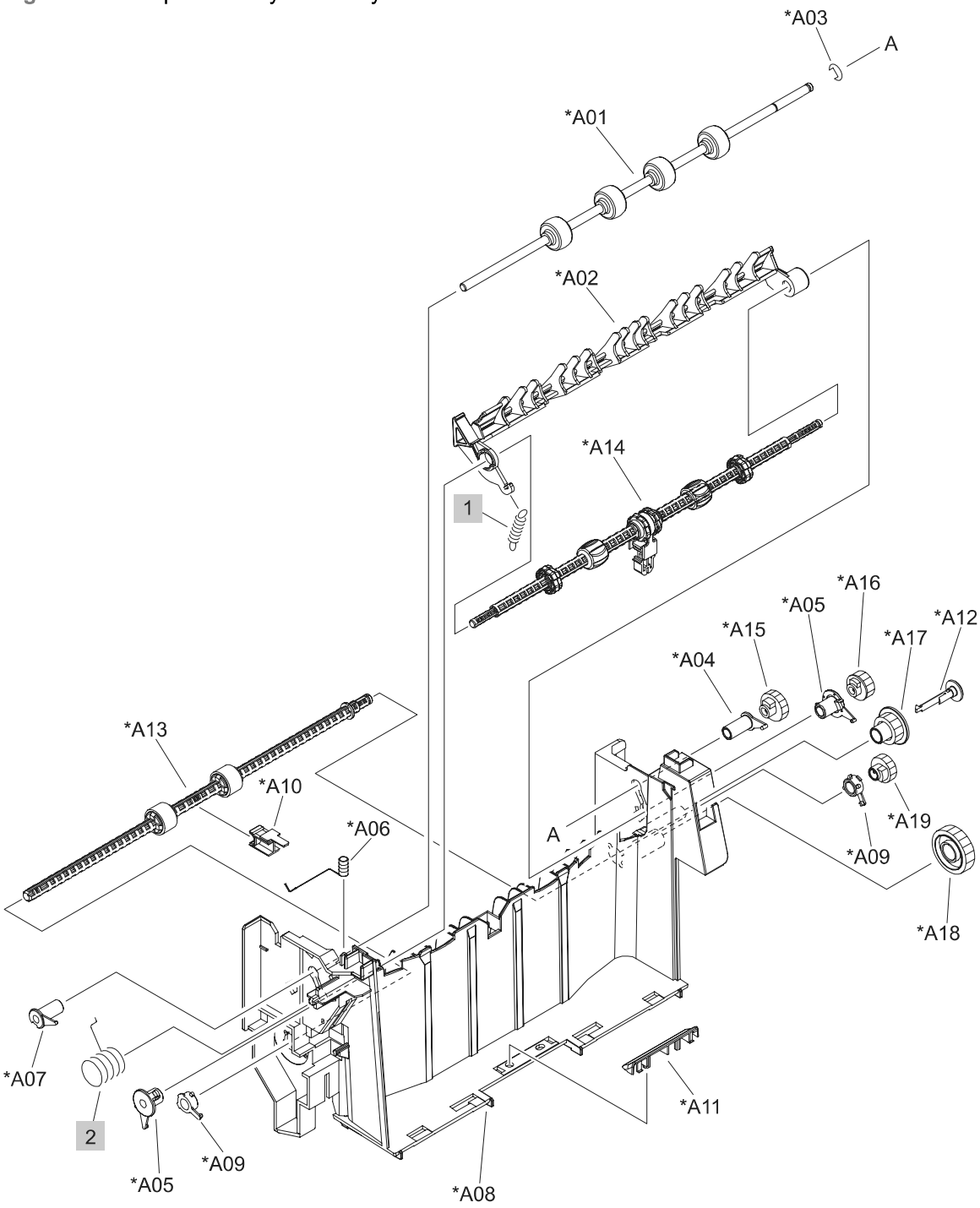


Table 8-11 Paper delivery assembly

Ref	Description	Part number	Qty
	Paper delivery assembly	RM1-4529-000CN	1
1	Spring, tension	RC1-0133-000CN	1
2	Spring, grounding	RU6-2105-000CN	1
A01	Roller, face-down, upper		1
A02	Deflector, delivery		1
A03	Ring, E		1
A04	Bushing, paper delivery, upper		1
A05	Bushing		2
A6	Spring, grounding		1
A07	Bushing, paper delivery, upper		1
A08	Frame, face-down		1
A09	Bushing		2
A10	Bushing		1
A11	Guide, paper delivery		1
A12	Flange, positioning roller, right		1
A13	Roller, delivery intermediate		1
A14	Roller, face-down, lower		1
A15	Gear, 21T		1
A16	Gear, 17T		1
A17	Gear, 20T		1
A18	Gear, 33T		1
A19	Gear, 18T		1

[1] Only orderable parts have part numbers.

Figure 8-13 Fusing assembly

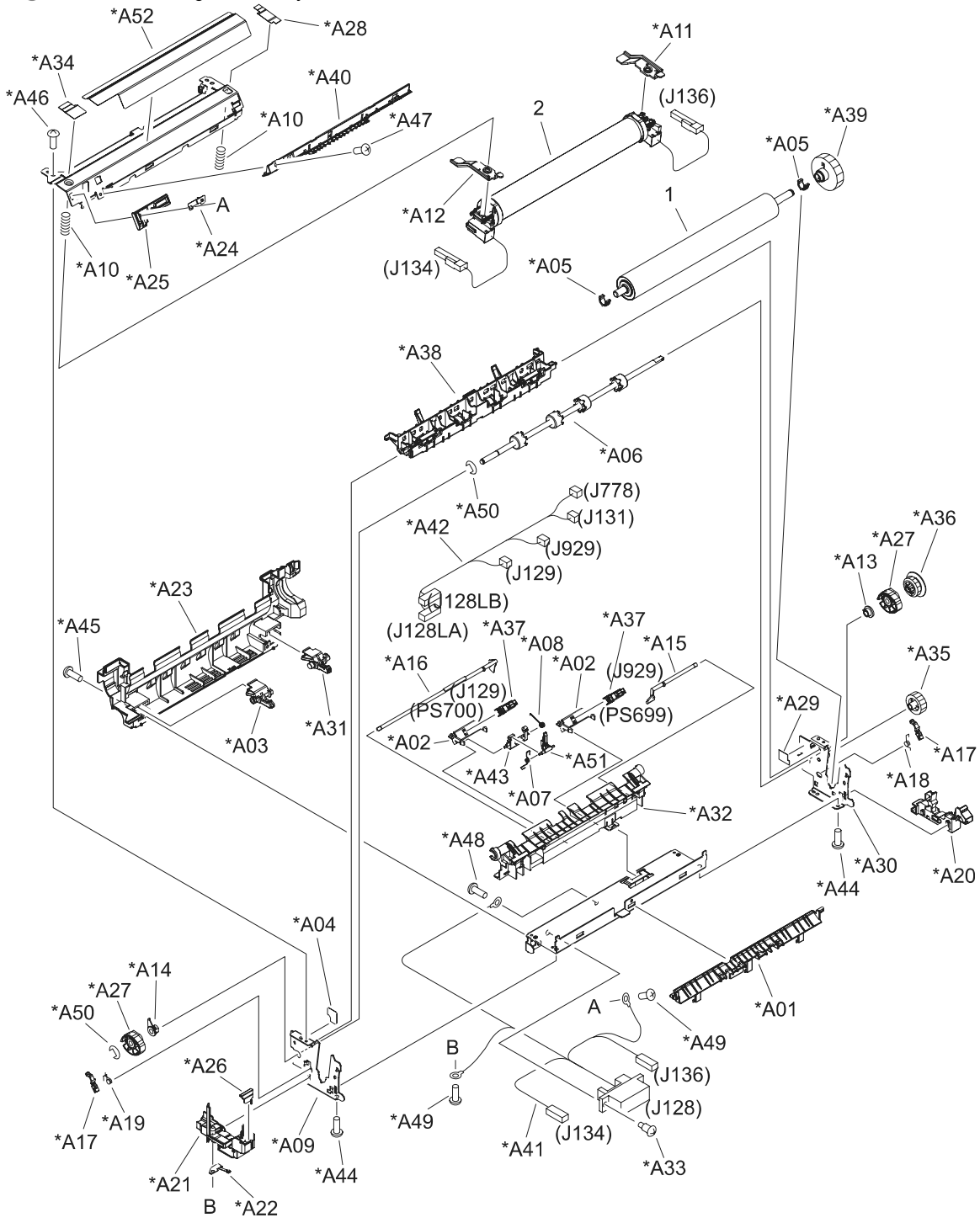


Table 8-12 **Fusing assembly**

Ref	Description	Part number	Qty
	Fusing assembly (110-127 V)	CB506-67901	1
	Fusing assembly (220-240 V)	CB506-67902	1
1	Roller, pressure		1
2	Sleeve guide assembly (110-127 V)		1
2	Sleeve guide assembly (220-240 V)		1
A01	Guide, paper inlet, lower		1
A02	Holder, fusing sensor		2
A03	Lever, release, left		1
A04	Sheet, fusing protective		1
A05	Bushing		2
A6	Roller, face-up		1
A07	Spring, torsion		1
A08	Spring, torsion		1
A09	Side plate, fusing, left		1
A10	Spring, compression		2
A11	Plate, pressure, right		1
A12	Plate, pressure, left		1
A13	Bushing		1
A14	Bushing		1
A15	Flag, sensor, right		1
A16	Flag, sensor, left		1
A17	Lever, sensor		2
A18	Spring, torsion		1
A19	Spring, torsion		1
A20	Guide, cable, right		1
A21	Guide, cable, left		1
A22	Spring, leaf		1
A23	Bar, filter, rear		1
A24	Eliminator		1
A25	Holder, brush		1
A26	Rib, cable guide		1
A27	Cam		2
A28	Sheet, protective, right upper		1
A29	Sheet, protective, right lower		1

Table 8-12 **Fusing assembly (continued)**

Ref	Description	Part number	Qty
A30	Side plate, fusing, right		1
A31	Lever, release, right		1
A32	Guide, paper delivery, lower		1
A33	Screw, stepped		2
A34	Sheet, protective, left		1
A35	Gear, 18T		1
A36	Gear, 17T		1
A37	IC, photo interrupter		2
A38	Guide, paper delivery guide, upper		1
A39	Pressure roller gear assembly		1
A40	Upper entrance guide assembly		1
A41	Cable, FSR AC		1
A42	Cable, FSR DC		1
A43	Holder, fusing lever		1
A44	Screw, M3x8		4
A45	Screw, RS, M3x8		2
A46	Screw, D, M3x8		2
A47	Screw with washer, M3x6		1
A48	Screw with washer, M3x6		1
A49	Screw, tap, S		2
A50	Ring, E		2
A51	Lever, paper delivery sensor		1
A52	Label, “Caution, high temp.”		1

[1] Only orderable parts have part numbers.

PCAs

Figure 8-14 PCAs—base unit

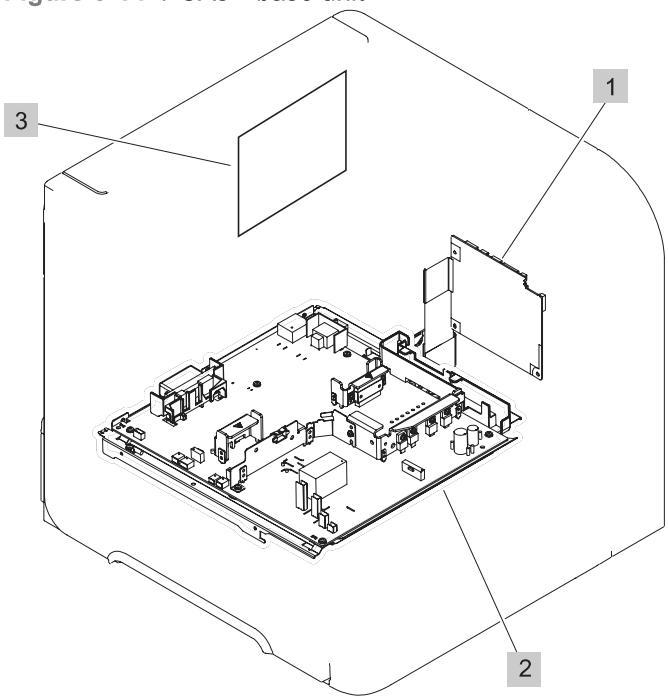


Table 8-13 **PCAs—base unit**

Ref	Description	Part number	Qty
1	DC controller PCA	RM1-4582-000CN	1
2	Electrical components assembly (110-127 V)	RM1-4549-000CN	1
2	Electrical components assembly (220-240 V)	RM1-4578-000CN	1
3	Formatter assembly (base models)	CB437-69001 (exchange)	1
3	Formatter assembly (network models)	CB438-69001 (exchange)	1
3	Formatter assembly (base models)	CB437-67901 (new)	1
3	Formatter assembly (network models)	CB438-67901 (new)	1

Figure 8-15 Optional 1,500-sheet feeder PCA

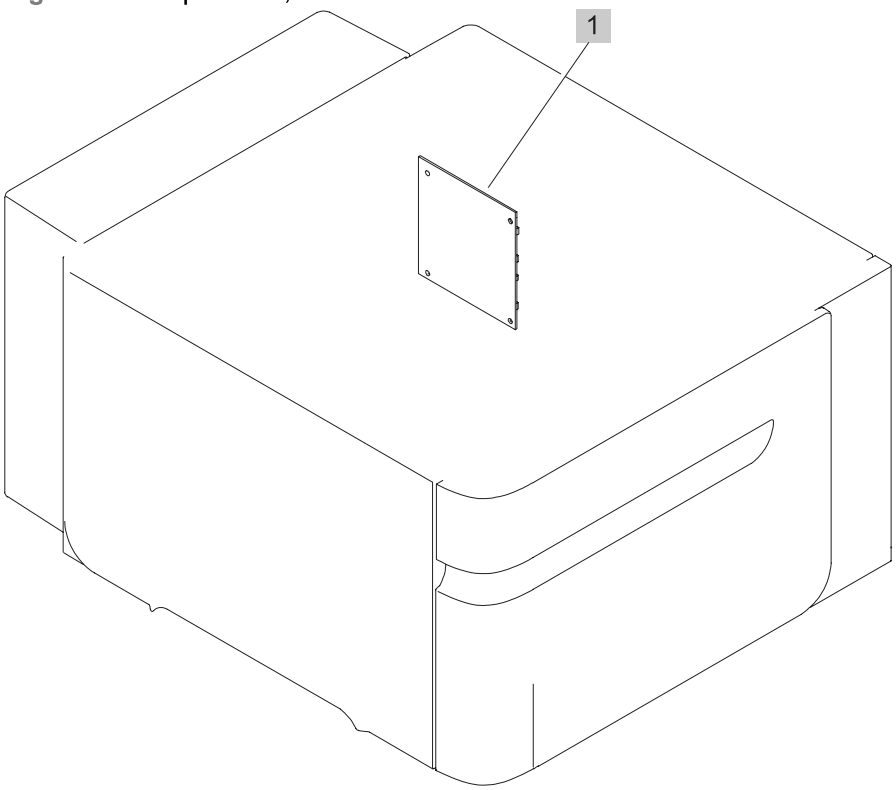


Table 8-14 Optional 1,500-sheet feeder PCA

Ref	Description	Part number	Qty
1	1,500-sheet feeder driver PCA	RM1-6214-000CN	1

Figure 8-16 Multi-bin mailbox PCA

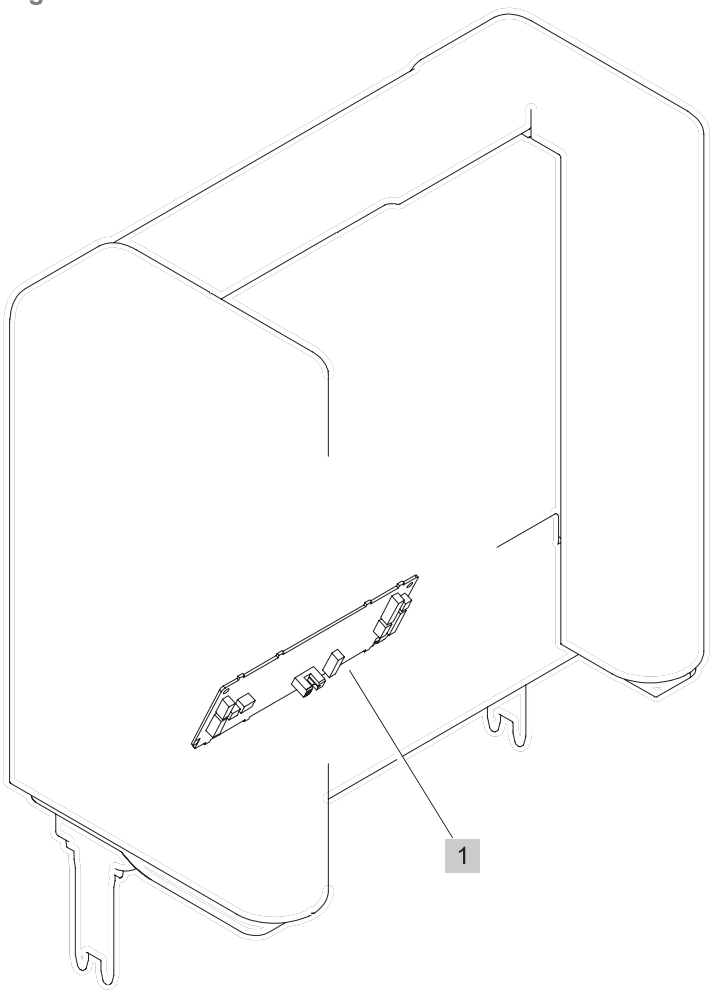


Table 8-15 **Multi-bin mailbox PCA**

Ref	Description	Part number	Qty
1	Multi-bin mailbox PCA	RM1-6224-000CN	1

Input devices

Figure 8-17 Optional 500-sheet paper feeder main body

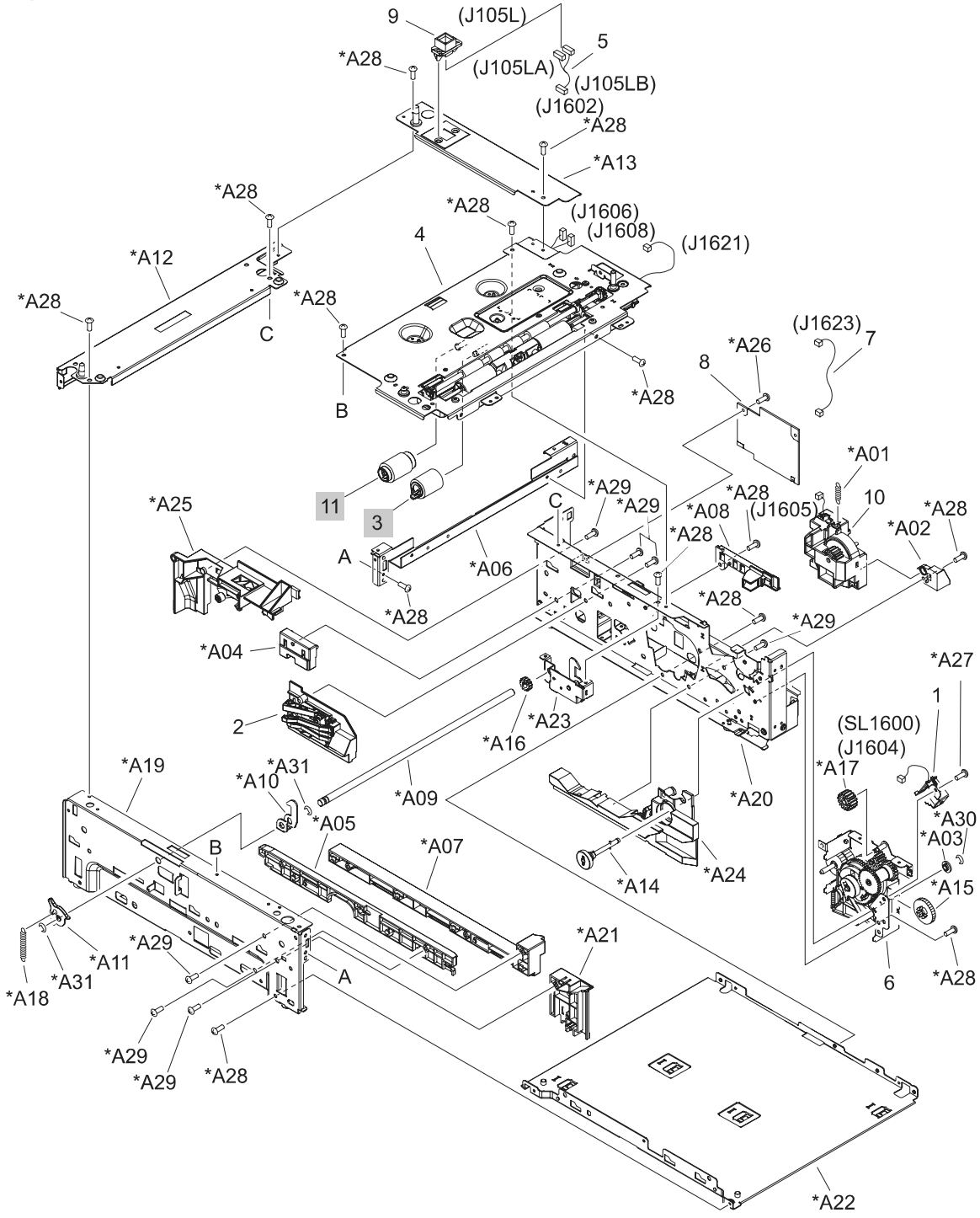


Table 8-16 **Optional 500-sheet paper feeder main body**

Ref	Description	Part number	Qty
	Product roller kit (contains 2 feed rollers, 1 pickup roller)	CB506-67904	1
1	Solenoid		1
2	Size detect assembly		1
3	Paper feed roller assembly	RM1-0037-020CN	1
4	Front top plate assembly		1
5	Cable, interface, upper		1
6	Pickup drive side plate		1
7	Cable, size sensor		1
8	500-page feeder driver PCA		1
9	Connector, drawer, 6P		1
10	Lifter driver assembly		1
11	Paper pickup roller assembly	RM1-0036-020CN	1
A01	Spring, tension		1
A02	Support, lifter drive assembly		1
A03	Bushing		1
A04	Guide, cassette right, rear		1
A05	Guide, cassette left, rear		1
A06	Plate, reinforcement		1
A07	Guide, left		1
A08	Guide, cable		1
A09	Shaft, lock joint		1
A10	Arm, lock		1
A11	Lever, lock		1
A12	Upper plate, rear		1
A13	Upper plate, right		1
A14	Shaft, retard drive		1
A15	Gear, 23T		1
A16	Gear, 14T		1
A17	Gear, 16T		1
A18	Spring, tension		1
A19	Left frame assembly		1
A20	Right frame assembly		1
A21	Front cassette left guide assembly		1
A22	Lower frame assembly		1

Table 8-16 **Optional 500-sheet paper feeder main body (continued)**

Ref	Description	Part number	Qty
A23	Lock side plate assembly		1
A24	Right front guide assembly		1
A25	Right guide assembly		1
A26	Screw, with washer, M3x6		2
A27	screw, tap, M3x6		1
A28	Screw, D, M3x8		33
A29	Screw, tap, pan head, M4x10		13
A30	Ring, E		1
A31	Ring, E		2

[1] Only orderable parts have part numbers.

Figure 8-18 Optional 500-sheet feeder cassette

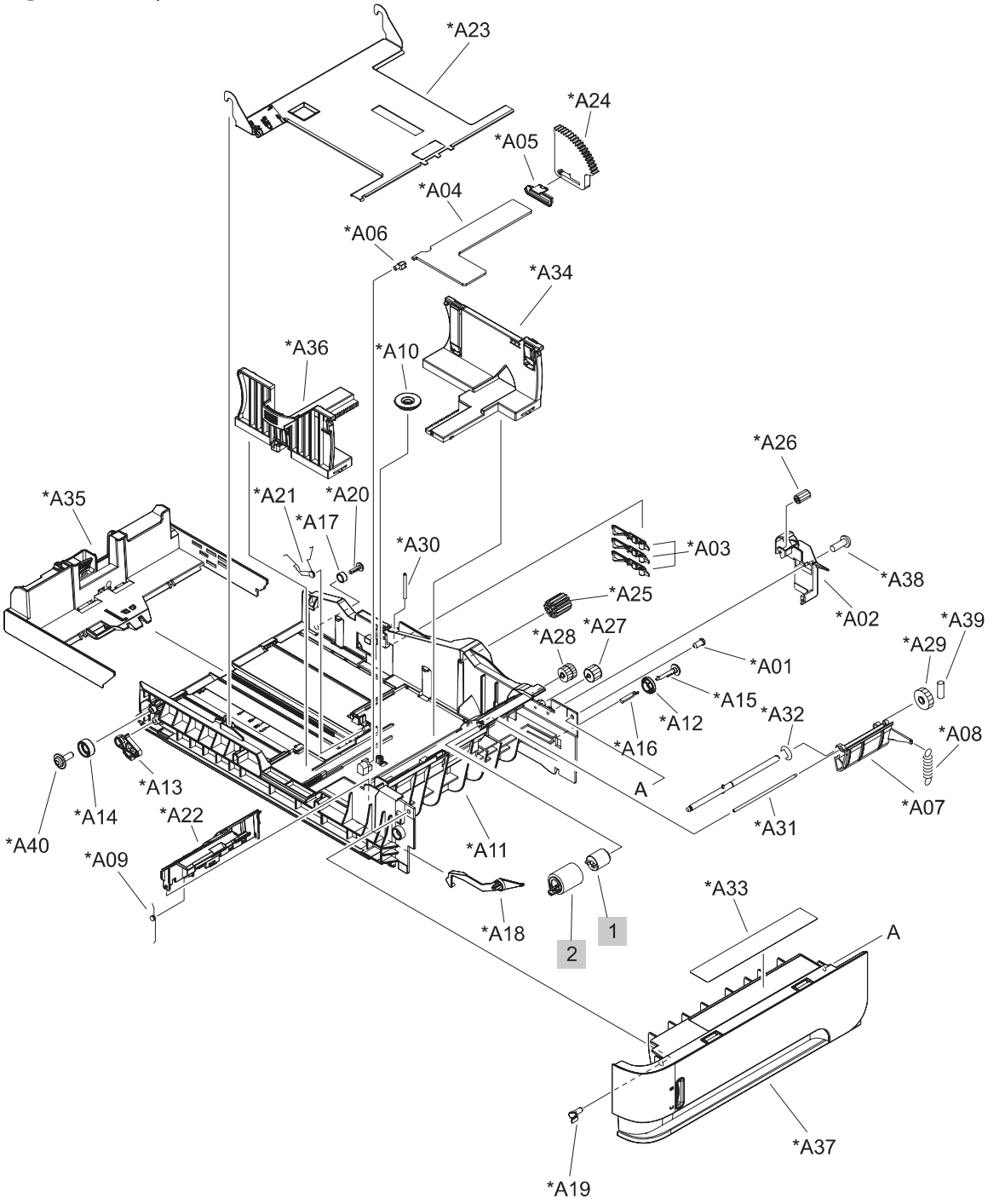


Table 8-17 **Optional 500-sheet feeder cassette**

Ref	Description	Part number	Qty
	Optional 500-sheet feeder cassette	RM1-4559-000CN	1
1	Limiter, cassette torque	RC2-5262-000CN	1
2	Paper feed roller assembly	RM1-0037-020CN	1
	Product roller kit (contains 2 feed rollers, 1 pickup roller)	CB506-67904	1
A01	Pin, front guide lock, right		1
A02	Cover, gear		1
A03	Flag, size sensing		3
A04	Arm, lifter		1
A05	Support, lifter arm		1
A06	Bushing, lifter arm		1
A07	Holder, retard gear		1
A08	Spring, tension		1
A09	Spring, torsion		1
A10	Gear, 20T		1
A11	Body, cassette		1
A12	Roller, positioning		1
A13	Claw, cassette		1
A14	Roller, LU		1
A15	Flange, positioning roller, right		1
A16	Shaft, positioning roller, auxiliary		1
A17	Roller, RD		1
A18	Gauge, fuel		1
A19			1
A20			1
A21	Spring, torsion		1
A22	Guide, nip		1
A23	Plate, paper lifting		1
A24	Gear, 88T		1
A25	Gear, 14T		1
A26	Gear, 14T		1
A27	Gear, 14T		1
A28	Gear, 15T/25T		1
A29	Gear, 37T		1
A30	Shaft, size sensing		1

Table 8-17 **Optional 500-sheet feeder cassette (continued)**

Ref	Description	Part number	Qty
A31	Shaft, retard gear holder		1
A32	Ring, E		1
A33	Label, cassette operation		1
A34	Right side end support assembly		1
A35	Cassette rear assembly		1
A36	Left side end support assembly		1
A37	Front cassette assembly		1
A38	Screw, tap, pan head, M4x10		1
A39	Pin, dowel		1
A40	Screw, tap, M4x12		1

[1] Only orderable parts have part numbers.

Figure 8-19 Optional 1,500-sheet paper feeder covers

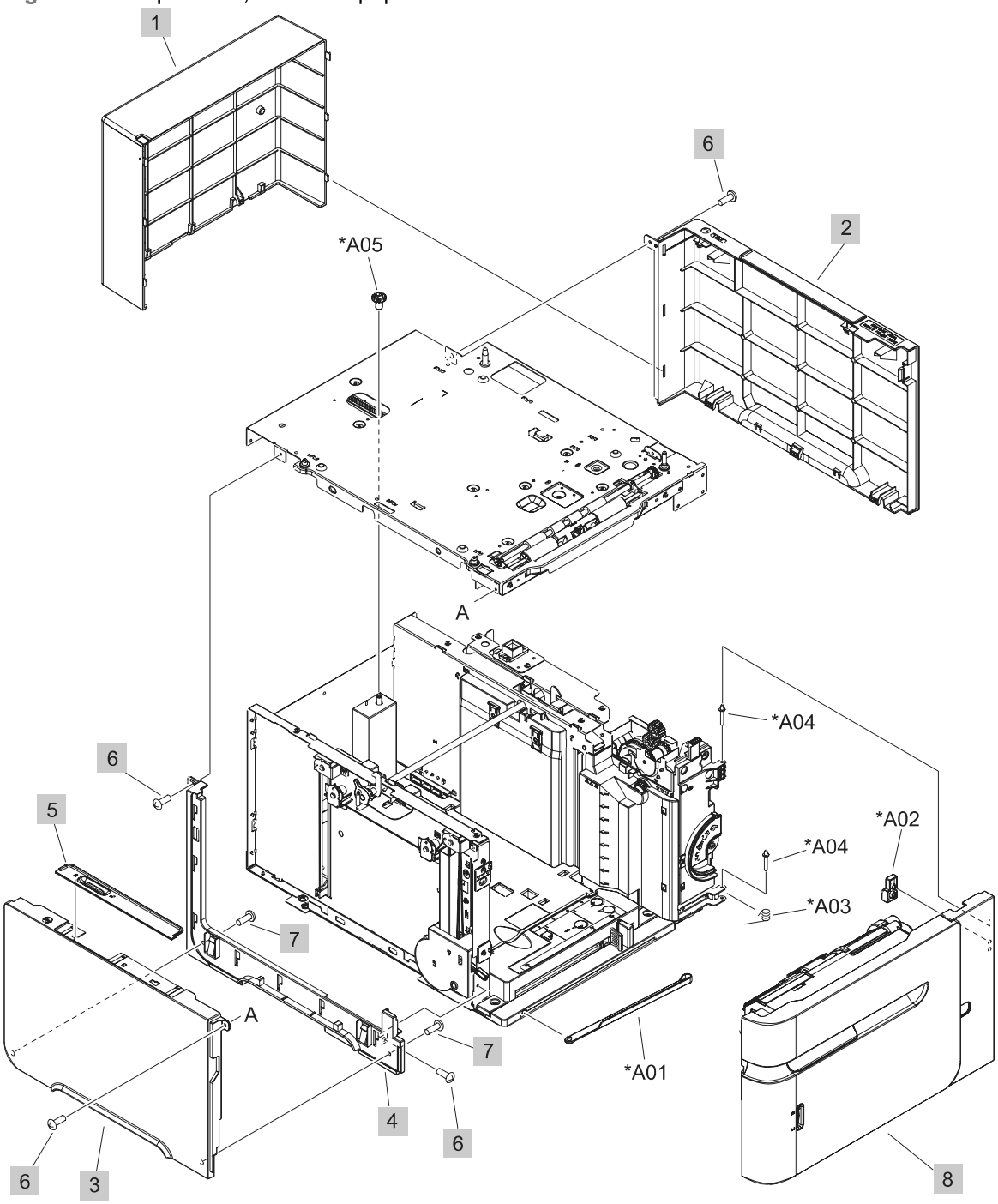


Table 8-18 Optional 1,500-sheet paper feeder covers

Ref	Description	Part number	Qty
1	Cover, rear	RC2-2640-000CN	1
2	Cover, right	RC2-2641-000CN	1
3	Cover, left	RC2-2642-000CN	1
4	Cover, left lower	RC2-2643-000CN	1
5	Cover, lock	RC2-2584-000CN	1
6	Screw, with washer, M3x8	XA9-1420-000CN	4
7	Screw, tap, pan head, M4x10	XB4-7401-007CN	2
8	Front door assembly	RM1-5255-000CN	1
A01	Arm, front cover support		1
A02	Stopper, front door		1
A03	Spring, torsion		1
A04	Shaft, front cover hinge		2
A05	Gear, 16T		1

[1] Only orderable parts have part numbers.

Figure 8-20 Optional 1,500-sheet feeder front door assembly

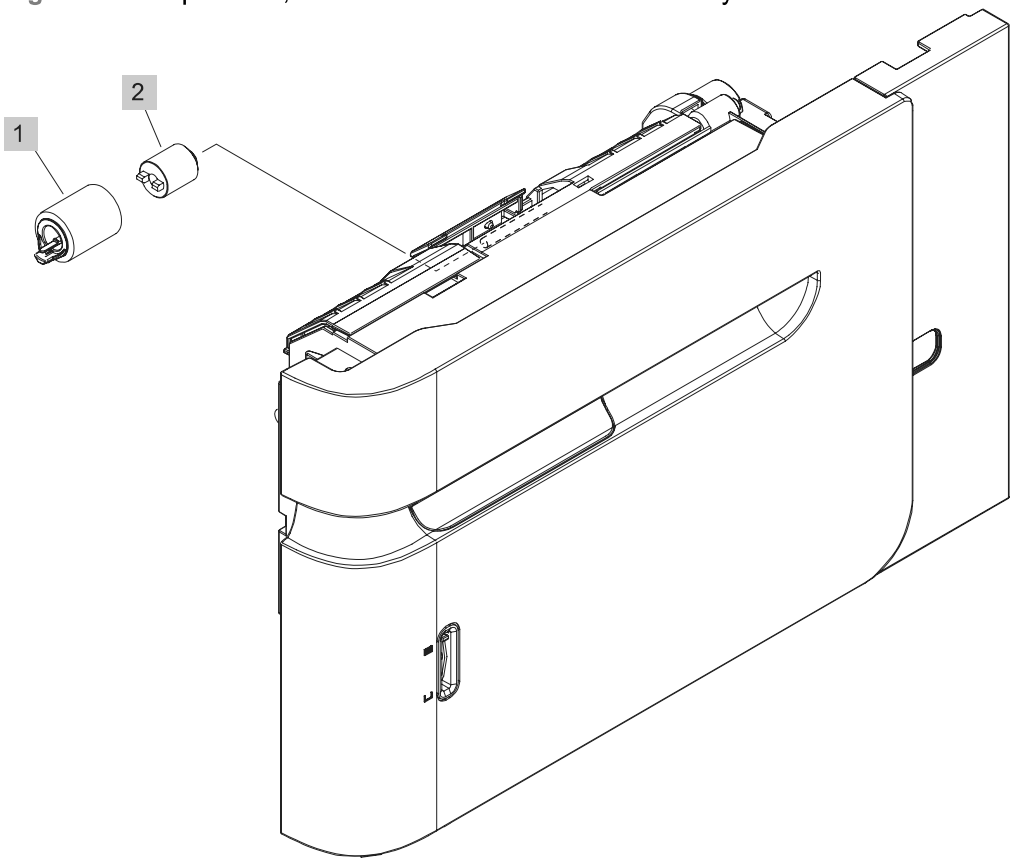


Table 8-19 Optional 1,500-sheet feeder front door assembly

Ref	Description	Part number	Qty
	Optional 1,500-sheet feeder front door assembly	RM1-5255-000CN	1
1	Paper feed roller assembly	RM1-0037-020CN	1
2	Limiter, cassette torque	RC2-5262-000CN	1

Figure 8-21 Optional 1,500-sheet feeder main body (1 of 2)

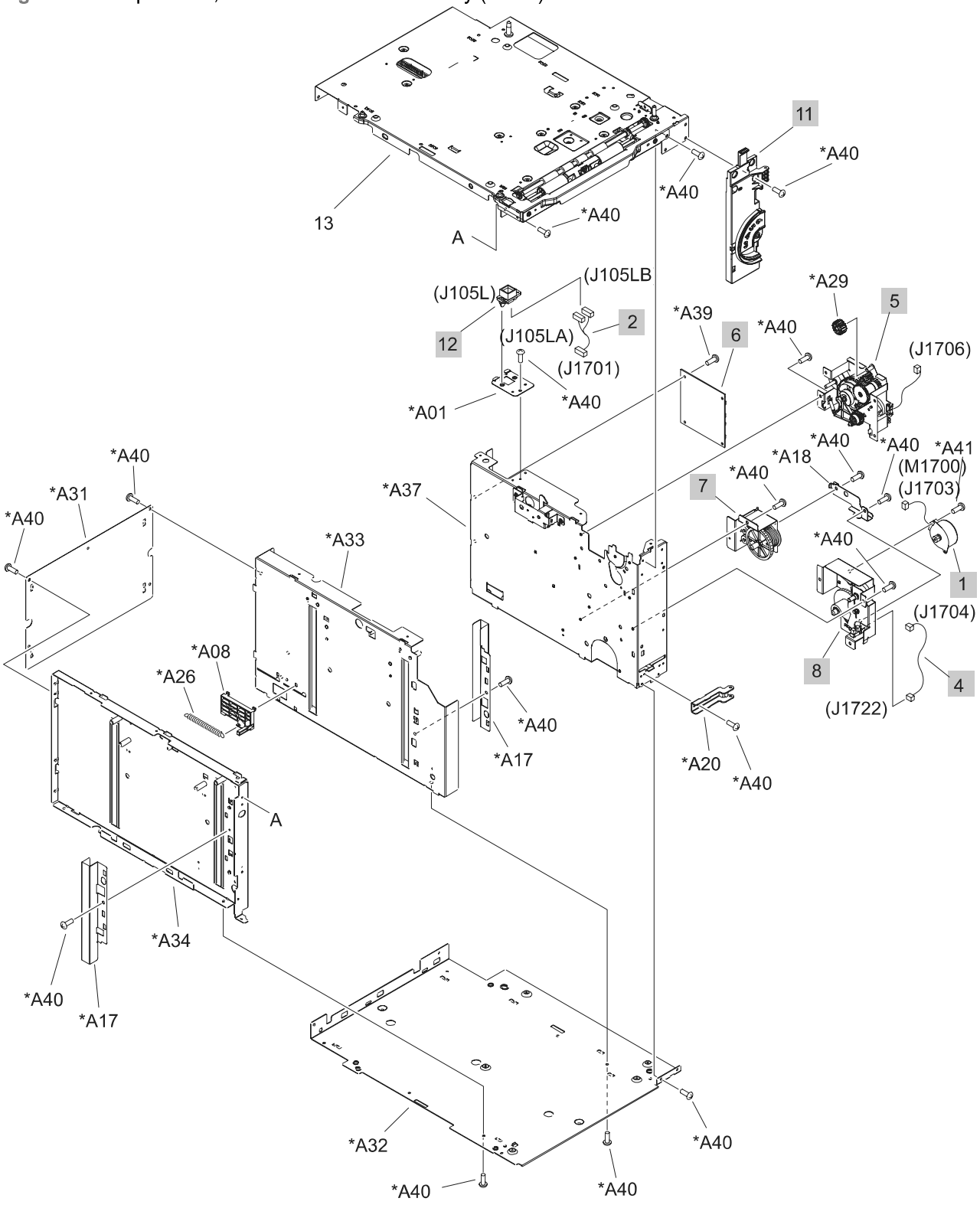


Table 8-20 **Optional 1,500-sheet feeder main body (1 of 2)**

Ref	Description	Part number	Qty
1	Motor, stepping	RH7-1603-020CN	1
2	Cable, interface	RM1-5126-000CN	1
4	Cable, door sensor	RM1-5128-000CN	1
5	Paper pickup drive assembly	RM1-5262-000CN	1
6	1,500-sheet feeder driver PCA	RM1-6214-000CN	1
7	Oil damper assembly	RM1-0289-030CN	1
8	Lifter drive assembly	RM1-1136-000CN	1
11	Numbering assembly	RM1-5265-000CN	1
12	Connector, drawer, 6P	VS1-7500-006CN	1
13	Paper pickup assembly (see Figure 8-23 Optional 1,500-sheet feeder paper pickup assembly on page 412)		1
A01	Holder, connector		1
A02	Pin, lifter tray stopper		1
A03	Sheet, solenoid damper		1
A04	Latch, front cover, upper		1
A05	Block, front cover pushing		1
A06	Guide, paper set, right		1
A07	Guide, paper set, left		1
A08	Block, paper size sensor		1
A09	Reel, lifter wire		2
A10	Cover, lifter wire reel		2
A11	Support, wire pulley		8
A12	Cover, pulley		8
A13	Shaft, lifter drive		1
A14	Pulley, wire, front		2
A15	Pulley, wire, rear		6
A16	Cover, lifter wire reel		2
A17	Plate, lifter wire cover		2
A18	Plate, damper support		1
A19	Support, release hook, left		1
A20	Holder, hinge shaft, lower		1
A21	Guide, paper set, front		1
A22	Bushing		1
A23	Gear, 14T		1
A24	Gear, 15T		1

Table 8-20 **Optional 1,500-sheet feeder main body (1 of 2) (continued)**

Ref	Description	Part number	Qty
A25	Gear, 19T/39T		1
A26	Spring, tension		1
A27	Spring, tension		2
A28	Spring, torsion		1
A29	Gear, 16T		1
A30	Spacer, screw		2
A31	Frame, rear		1
A32	Frame, lower		1
A33	Frame, right		1
A34	Frame, left		1
A35	Saddle, wire		1
A36	Lifter tray assembly		1
A37	Paper pickup side plate assembly		1
A38	Left hook assembly		1
A39	Screw, with washer, M3x8		4
A40	Screw, tap, M3x6		67
A41	Screw, with washer, M3x6		2
A42	Ring, E		2
A43	Ring, E		3
A44	Pin, dowel		3
A45	Foot		2

[1] Only orderable parts have part numbers.