This chapter describes the removal and replacement of field-replaceable units (FRUs) only.

- Removal and replacement strategy
- User-replaceable parts
- Covers
- Internal assemblies
Removal and replacement strategy

This chapter contains detailed steps and images that show parts removal. Replacement is generally the reverse of removal. Occasionally, notes are included to provide directions for difficult or critical replacement procedures.

⚠️ WARNING! Remove the power cord before attempting to service the product. If this warning is not followed, severe injury can result, as well as damage to the device. Certain functional checks during troubleshooting must be performed with power supplied to the product. However, the power supply should be disconnected during removal of any parts.

Sheet metal and plastic edges in the product can be sharp. Use caution when working on the product.

Never operate or service the printer with the protective cover removed from the laser/scanner assembly. The reflected beam, although invisible, can damage your eyes.

⚠️ CAUTION Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation. If an ESD-protected workstation is not available, ground yourself by touching the sheet-metal chassis before touching an ESD-sensitive part.

🔍 NOTE To install a self-tapping screw, first turn it counterclockwise to align it with the existing thread pattern, and then carefully turn it clockwise to tighten. Do not overtighten. If a self-tapping screw-hole becomes stripped, repair the screw-hole or replace the affected assembly.

Required tools

- #2 Phillips screwdriver with magnetic tip
- Small flat-blade screwdriver
- Needle-nose pliers
- ESD mat

⚠️ CAUTION Do not use a pozidrive screwdriver or any motorized screwdriver. These can damage screws or screw threads on the product.

⚠️ CAUTION Do not pull directly on the wires when a connector is disconnected. Always pull on the plastic body of a connector to avoid damaging the connector wires.

Before performing service

- Remove all media.
- Unplug the power cable.
- Place the product on an ESD mat (if one is available).
- Remove the input-tray cover.
- Remove the print cartridge.
Print cartridge

1. Open the print-cartridge door on the top of the printer.
2. Remove the print cartridge.

⚠️ **CAUTION**  To prevent damage, do not expose the print cartridge to light. Cover it with a piece of paper.

![Figure 5-1 Removing the print cartridge](image-url)
Differences between the HP LJ 1010 series printer models

With the exception of the nameplate and interface connectors, there are no physical differences between the HP LaserJet 1010 and HP LaserJet 1012 printers (these printers only have a USB connector). Only the firmware functionality is different.

The HP LaserJet 1015 printer has a parallel port (callout 1) in addition to the USB port.

NOTE The HP LaserJet 1020 printer has only a USB port.

Figure 5-2 HP LaserJet 1015 parallel port
**Parts removal order**

Use the following illustration to determine which parts must be removed before removing other parts.

**Figure 5-3** Parts-removal block diagram
User-replaceable parts

To order a new pickup roller or separation pad, go to www.partsdirect.hp.com.

Replacing the pickup roller

If the printer regularly misfeeds (no media feeds through) and cleaning the pickup roller does not fix the problem, replace the pickup roller.

⚠️ CAUTION  Failure to complete all of the steps in this procedure might damage the product.

1. Turn off the printer, unplug and remove the power cord. Wait for the printer to cool.

2. Open the print-cartridge door, and remove the print cartridge (HP LJ 1010 series printer shown).

3. Locate the pickup roller (HP LJ 1010 series printer shown).
4 Gently release the small, white tabs on each side of the pickup roller by pushing them away from the roller, and then rotate the pickup roller toward the front.

⚠️ **CAUTION** Use gentle pressure to release the small, white tabs to avoid breaking them.

5 Gently pull the pickup roller up and out.

6 Position the new pickup roller in the slot of the previous pickup roller.

💡 **NOTE** Circular and rectangular pegs on each side prevent you from incorrectly positioning the pickup roller.

7 Rotate the top of the new pickup roller into position until the white tabs on each side of the roller snap the roller into place.
8 Reinstall the print cartridge, and close the print-cartridge door.

9 Plug in the printer, and then turn it on.
Replacing the separation pad

If the printer regularly pulls multiple sheets of media at a time, you might need to change the separation pad. Recurring feed problems might indicate that the separation pad is worn.

Normal use with good-quality media causes wear. The use of poor media might require more frequent replacement of the separation pad.

NOTE Before you change the separation pad, clean the pickup roller. See Cleaning the pickup roller on page 34. To order parts, go to www.partsdirect.hp.com.

1. Turn off the printer, unplug and remove the power cord. Wait for the printer to cool.

2. At the back of the printer, use a #2 Phillips screwdriver to unscrew the two screws that hold the separation pad in place.

3. Remove the separation pad.
4 Insert the new separation pad, and screw it in place.

5 Plug the printer in, and then turn it on.
Replacing the main input tray (paper-pickup tray assembly)

If you break or damage the main input tray (also called the paper-pickup tray assembly), you can replace it. To order parts, go to www.partsdirect.hp.com.

1. Carefully flex the main input tray just enough to release one side.

   **NOTE** Be careful not to break the hinge points.

2. Remove the main input tray.

   **Figure 5-4** Main input tray (HP LaserJet 1020 printer shown)
Replacing the output-bin extension (delivery-tray assembly)

If you break or damage the output-bin extension (also called the delivery-tray assembly), you can replace it. To order parts, go to www.partsdirect.hp.com.

1. Carefully flex the output-bin extension just enough to release the hinge pins.

   **NOTE** Be careful not to break the hinge pins (callout 1).

2. Remove the output-bin extension.

![Figure 5-5 Output-bin extension](image-url)
Covers

Remove the covers to gain access to the internal replaceable parts.

Right-side cover

1. Before removing the cover, examine Figure 5-6 Remove the right-side cover (1 of 4; HP LJ 1020 printer shown) on page 75 and note the location of tabs on the cover.

2. Remove one screw (callout 1) and then release one tab (callout 2).

Figure 5-6 Remove the right-side cover (1 of 4; HP LJ 1020 printer shown)

Figure 5-7 Remove the right-side cover (2 of 4; HP LJ 1020 printer shown)
3  Open the print-cartridge door. Grasp the cover, and carefully pry up on the cover to release one tab.

![Figure 5-8](image1.png)

Figure 5-8  Remove the right-side cover (3 of 4; HP LJ 1020 printer shown)

4  Slightly rotate the back of the cover away from the product, and then slide the cover forward to remove it.

![NOTE](image2.png)

NOTE     If the cover cannot be removed easily, release one additional tab that is located on the bottom of the printer near the center of the cover.

![Figure 5-9](image3.png)

Figure 5-9  Remove the right-side cover (4 of 4; HP LJ 1020 printer shown)
**Left-side cover**

Removing the left-side cover is similar to removing the right-side cover. Use the steps and figures for removing the right-side cover, except start the procedure by examining the tabs on the left side and removing the screw on the left side.

*NOTE* If the cover cannot be removed easily, release one additional tab that is located on the bottom of the printer near the center of the cover.

**Rear panel and top-cover assembly**

*NOTE* This procedure removes the rear panel and the top-cover assembly (the assembly consists of the print-cartridge door and the fuser cover).

1. Remove the following assemblies.
   - Right-side cover. See Right-side cover on page 75.
   - Left-side cover. See Left-side cover on page 77.

2. Open the print-cartridge door.

3. Remove two screws from the top of the printer (callout 1).

![Figure 5-10](image-url) Remove the rear panel and top-cover assembly (1 of 6)
4 Squeeze the two retaining tabs on the plastic door-link clip to release it from the hinge arm on the print-cartridge door.

**CAUTION** Do not drop the clip into the gear assembly that is on the side of the printer.

![Figure 5-11](image1.png) Remove the rear panel and top-cover assembly (2 of 6)

**Hint** Reinsert the plastic door-link clip in the hinge arm or store it with the screws to prevent losing it.

![Figure 5-12](image2.png) Remove the rear panel and top-cover assembly (3 of 6)
5 Remove one screw (callout 2) from the back of the product.

![Figure 5-13](image1.png)

**Figure 5-13** Remove the rear panel and top-cover assembly (4 of 6; HP LJ 1020 printer shown)

6 The top-cover assembly and metal rear-panel are interlocked with plastic tabs. Plastic tabs also secure the metal rear-panel at the bottom. Lift up the fuser cover at the top and pull it back slightly. Lift the rear panel up and off the tabs on the bottom.

![Figure 5-14](image2.png)

**Figure 5-14** Remove the rear panel and top-cover assembly (5 of 6)
7 Lift up on the top-cover assembly to remove it.

![Figure 5-15 Remove the rear panel and top-cover assembly (6 of 6)](image)

**Figure 5-15** Remove the rear panel and top-cover assembly (6 of 6)

**Reinstalling the top-cover assembly**

1 To reinstall the top-cover assembly, raise the two pressure-release levers.

![Figure 5-16 Reinstall the top-cover assembly (1 of 2)](image)

**Figure 5-16** Reinstall the top-cover assembly (1 of 2)
2 Position the top-cover assembly over the pressure-release levers (callout 1), and lower it onto the chassis. Make sure that the pressure-release levers are inserted through the slots (callout 2) on the top-cover assembly.

Figure 5-17 Reinstall the top-cover assembly (2 of 2)

⚠️ CAUTION  Make sure that the two plastic antistatic tabs are correctly positioned. The tabs must protrude into the output bin area.
Front cover

1 Remove the following assemblies.
   - Right-side cover. See Right-side cover on page 75.
   - Left-side cover. See Left-side cover on page 77.

2 Before removing the cover, examine Figure 5-18 Remove the front cover (1 of 3) on page 82 and note the locations of the plastic tabs at the top of the front cover. Open the print-cartridge door.

Figure 5-18 Remove the front cover (1 of 3)
3 Release the tab on the bottom right side of the front cover, and then pull the bottom of cover away from the chassis. Repeat this step for the left side of the front cover.

![Figure 5-19](image) Remove the front cover (2 of 3)

4 With the bottom of the front cover released, pull up and back at the top of the cover while gently rocking it to release all of the tabs at the top, and remove the front cover.

![Figure 5-20](image) Remove the front cover (3 of 3)

**Reinstallation tip** When reinstalling the front cover, make sure that the tabs on the top of the cover are securely in place, and then press the bottom of the front cover into place.
Internal assemblies

When replacing internal assemblies, make sure to transfer any component parts that are not provided with the new assembly from the failed assembly to the new assembly. For example, sensor PCBs are not included with the fuser assembly or the paper-pickup assembly. The sensor PCB from the failed assembly must be transferred to the new assembly.

Transfer-roller assembly

Before proceeding, make sure it is absolutely necessary to remove the transfer roller.

⚠️ **CAUTION**  Be very careful not to break the paper guide that is removed during replacement of the transfer roller. This is not a service part. If the paper guide is broken, the entire printer must be replaced.

⚠️ **CAUTION**  Do not touch the black-sponge portion of the transfer roller. Skin oils and finger prints can cause print-quality problems.

1. Open the print-cartridge door, and then release the two tabs on the paper guide and rotate it up.

![Figure 5-21 Remove the transfer roller (1 of 3)](image-url)
2 The clamps on the paper guide fit over the bearings on the right and left ends of the transfer roller. Do not touch the black-sponge portion of the transfer roller. Grasp the right end of the paper guide and pull the clamp off the right bearing. Slide the paper guide slightly to the right, and the left clamp will slide off the left bearing.

![Figure 5-22 Remove the transfer roller (2 of 3)](image)

3 Use needle-nose pliers or your fingers to squeeze the two small tabs on the transfer roller.

![Figure 5-23 Remove the transfer roller (3 of 3)](image)

4 Angle the transfer roller up while holding on to the gear on the right side. Slide the roller toward right side of the printer, and lift both the transfer roller and the transfer-roller guide out of the printer.
Reinstallation tip  A small grounding spring is under the right transfer-roller bearing. When reinstalling the transfer roller, position this spring correctly under the right bearing. Reverse the removal process to install the new transfer roller. Then reinstall the paper guide by gently pressing the two ends of the guide onto the transfer-roller bearings until the clamps snap into place. Rotate the paper guide down until the tabs on both ends engage.
Engine-power assembly

1  Remove the following assemblies
   ●  Right-side cover. See Right-side cover on page 75.
   ●  Left-side cover. See Left-side cover on page 77.
   ●  Top-cover assembly. See Rear panel and top-cover assembly on page 77.
   ●  Front cover. See Front cover on page 82.

2  Disconnect six cables (callout 1) near the top of the power assembly.

   CAUTION  Do not pull directly on the wires when a connector is disconnected. Always pull on the plastic body of a connector to avoid damaging the connector wires.

3  Remove four screws (callout 2).

Figure 5-24  Remove the engine-power assembly (1 of 2; HP LJ 1020 printer shown)
4 Remove two screws from the back of the printer (callout 3), disconnect the high-voltage wire (callout 4) and then remove the engine-power assembly.

**NOTE** Be careful not to lose the two springs that are behind the engine-power assembly.

![Figure 5-25 Remove the engine power assembly (2 of 2)](image)

**Reinstallation tip** When reinstalling the engine-power assembly, make sure that the cable guide is correctly installed by clipping it onto the PCB at the top, back corner and onto the metal casing.
Fuser (fixing) assembly

1 Remove the following assemblies.
   - Right-side cover. See Right-side cover on page 75.
   - Left-side cover. See Left-side cover on page 77.
   - Top-cover assembly. See Rear panel and top-cover assembly on page 77.

2 Disconnect cables, as necessary, from near the top of the engine-power assembly, and disconnect the high-voltage wire (callout 1) from the back of the printer.

   △ CAUTION Do not pull directly on the wires when a connector is disconnected. Always pull on the plastic body of a connector to avoid damaging the connector wires.

   Figure 5-26 Remove the fuser (fixing) assembly (1 of 2)

3 Remove the wire harnesses from the plastic harness retainers.
4. Remove three screws (callout 2). (This figure shows the delivery-sensor PCB removed, but it is not necessary to remove this PCB in order to remove the fuser).

![Figure 5-27: Remove the fuser (fixing) assembly (2 of 2)](image)

5. Lift the end of the fuser assembly from the right side of the printer, and remove it.

<table>
<thead>
<tr>
<th>Reinstallation tip</th>
<th>When replacing the fuser assembly, be sure to transfer the delivery sensor PCB from the old fuser to the new one.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOTE</td>
<td>When reinstalling the fuser assembly, be careful not to break the plastic tab on the assembly.</td>
</tr>
</tbody>
</table>
Paper-pickup assembly

1 Remove the following assemblies.
   - Right-side cover. See Right-side cover on page 75.
   - Left-side cover. See Left-side cover on page 77.
   - Top-cover assembly. See Rear panel and top-cover assembly on page 77.
   - Transfer roller. See Transfer-roller assembly on page 84.
   - Fuser (fixing) assembly. See Fuser (fixing) assembly on page 89.

2 Disconnect and unwind any additional wires as necessary to release the paper-pickup assembly. Unplug and unwind the wire from the solenoid to the formatter.
   
   **CAUTION** Do not pull directly on the wires when a connector is disconnected. Always pull on the plastic body of a connector to avoid damaging the connector wires.

3 Remove six screws (callout 1), and then remove the paper-pickup assembly.

![Figure 5-28](image) Remove the paper-pickup assembly

**Reinstallation tip** When replacing the paper-pickup assembly, be sure to transfer the sensor PCB and, if necessary, the separation-pad assembly to the new paper-pickup assembly.
Engine control unit (ECU) assembly

1 Remove the following assemblies.
   - Right-side cover. See Right-side cover on page 75.
   - Left-side cover. See Left-side cover on page 77.
   - Top-cover assembly. See Rear panel and top-cover assembly on page 77.
   - Front cover. See Front cover on page 82.

2 Disconnect the flat flexible (ribbon) cable (callout 1) from the formatter, which is on the right side of the product.

Figure 5-29 Remove the ECU assembly (1 of 6)
3 Disconnect the flat flexible (ribbon) cable (callout 2) from the engine-power assembly.

Figure 5-30 Remove the ECU assembly (2 of 6)

4 Remove four screws (callout 3).

Figure 5-31 Remove the ECU assembly (3 of 6)

5 Lift the ECU cover up just enough to free it, and then tilt it back as far as it will go without forcing it.
6 Two sheet-metal hook hinges (one on each side) secure the cover. Use a screwdriver to push both hooks free, and then remove the ECU cover.

![Figure 5-32](image) Remove the ECU assembly (4 of 6)

7 Release the plastic wire-retainer tab (arrow 1), and rotate the retainer up and away from the chassis (arrow 2).

![Figure 5-33](image) Remove the ECU assembly (5 of 6)
8 Disconnect one flat flexible (ribbon) cable and the connector to the step motor (callout 4). Remove two screws (callout 5). Loosen the tape (callout 6) that secures the cable to the chassis. As you remove the ECU, unplug the additional connector to the laser/scanner assembly.

⚠️ **CAUTION** Do not pull directly on the wires when a connector is disconnected. Always pull on the plastic body of a connector to avoid damaging the connector wires.

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![Figure 5-34](image)

**Figure 5-34** Remove the ECU assembly (6 of 6)

💡 **Reinstallation tip** When reinstalling the ECU metal casing, make sure that the laser/scanner shutter lever is inserted correctly through the plastic guide.
Laser/scanner assembly

1 Remove the following assemblies.
   - Right-side cover. See Right-side cover on page 75.
   - Left-side cover. See Left-side cover on page 77.
   - Top-cover assembly. See Rear panel and top-cover assembly on page 77.
   - Front-cover. See Front cover on page 82.
   - Engine-control unit assembly. See Engine control unit (ECU) assembly on page 92.

2 Remove four screws (callout 1) and then remove the laser/scanner assembly.

Figure 5-35 Remove the laser/scanner assembly

Reinstallation tip When replacing the laser/scanner assembly, be sure to transfer the laser shutter arm from the old assembly to the new one.