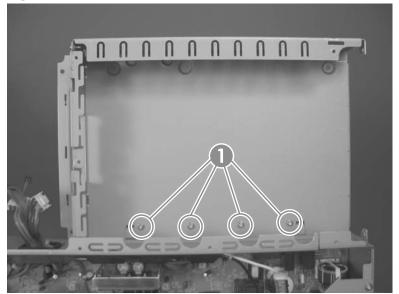
8. Remove four screws (callout 1), and then separate the formatter cage from the low-voltage power supply.

Figure 1-227 Remove the LVPS (8 of 8)



Delivery fan, cartridge fan, and environmental sensor

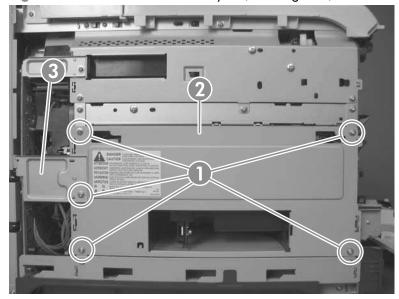
Before proceeding, remove the following components:

- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Left cover. See <u>Left cover on page 92</u>.

Remove the delivery fan, cartridge fan, and environmental sensor

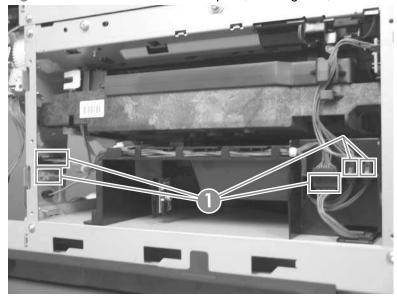
- 1. Remove five screws (callout 1), and then remove the sheet-metal plate (callout 2).
- NOTE: Release the small sheet-metal plate (callout 3) to allow access to the larger sheet-metal plate behind it. Leave the smaller plate attached to the chassis.



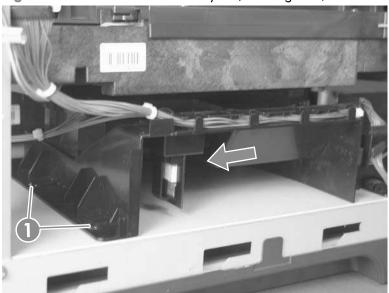


- 2. Disconnect five connectors (callout 1).
- NOTE: Disconnect the larger connector on the right side from the bottom. Disconnect the two smaller connectors on the right side from the top.

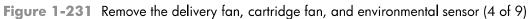
Figure 1-229 Remove the delivery fan, cartridge fan, and environmental sensor (2 of 9)



- 3. Release two tabs (callout 1), and then slide the delivery-fan and cartridge-fan assembly toward the power-supply side of the product to release it.
 - Figure 1-230 Remove the delivery fan, cartridge fan, and environmental sensor (3 of 9)



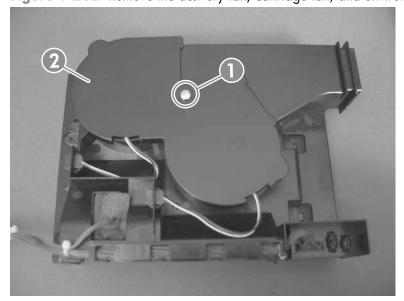
4. Pull the assembly slightly out of the product, disconnect two connectors (callout 1), and then remove the assembly.





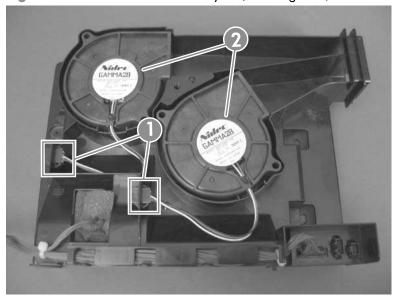
5. Remove one screw (callout 1), and then remove the cover (callout 2).

Figure 1-232 Remove the delivery fan, cartridge fan, and environmental sensor (5 of 9)



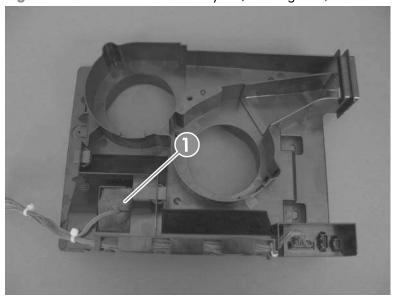
6. Disconnect two connectors (callout 1), and then remove the fans (callout 2).





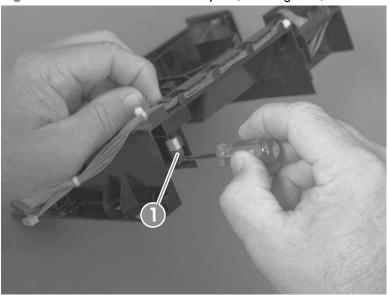
7. Remove the antistatic foam (callout 1).

Figure 1-234 Remove the delivery fan, cartridge fan, and environmental sensor (7 of 9)



8. Release one tab (callout 1).

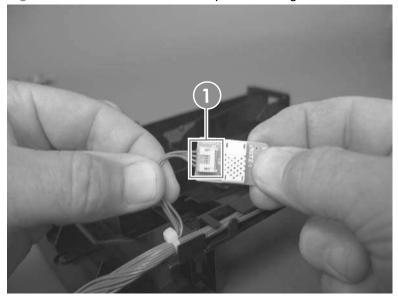
Figure 1-235 Remove the delivery fan, cartridge fan, and environmental sensor (8 of 9)



9. Disconnect one connector (callout 1), and then remove the environmental sensor.

△ CAUTION: ESD-sensitive part.

Figure 1-236 Remove the delivery fan, cartridge fan, and environmental sensor (9 of 9)



Toner-collection sensor

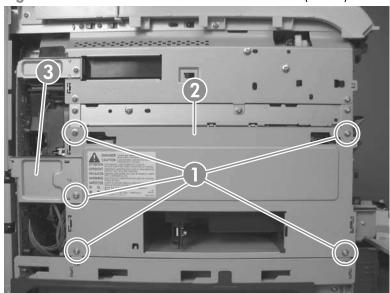
Before proceeding, remove the following components:

- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Left cover. See Left cover on page 92.

Remove the toner-collection sensor

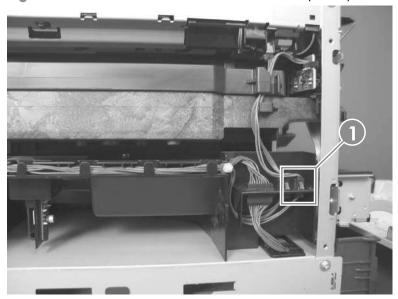
- 1. Remove five screws (callout 1), and then remove the sheet-metal plate (callout 2).
- NOTE: Release the small sheet-metal plate (callout 3) to allow access to the larger sheet-metal plate behind it. Leave the smaller plate attached to the chassis.

Figure 1-237 Remove the toner-collection sensor (1 of 4)



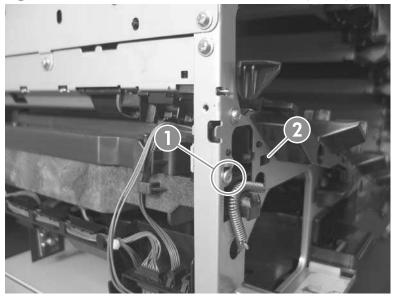
2. Disconnect one connector (callout 1).

Figure 1-238 Remove the toner-collection sensor (2 of 4)



- 3. Remove one screw (callout 1).
- Reinstallation tip When you reinstall the sensor, make sure that the tab (callout 2) on the sensor body completely engages the slot in the product chassis.

Figure 1-239 Remove the toner-collection sensor (3 of 4)



4. Remove the toner-collection sensor.

Figure 1-240 Remove the toner-collection sensor (4 of 4)



Residual-toner-feed motor

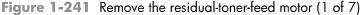
Before proceeding, remove the following components:

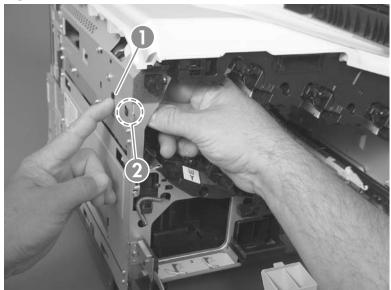
- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Intermediate transfer belt (ITB). See Intermediate transfer belt (ITB) on page 34.
- Left cover. See <u>Left cover on page 92</u>.

Remove the residual-toner-feed motor

NOTE: Be careful. Do not dislodge the residual-toner collection door when you remove the assembly. If the door becomes dislodged, see Reinstall the residual-toner collection door on page 170 to reinstall it.

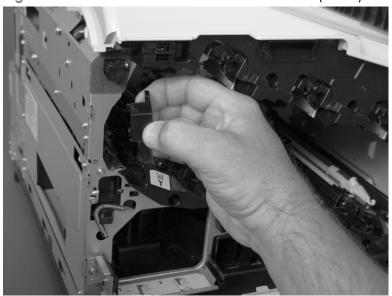
1. Release one tab (callout 1) while you support the cover (callout 2).





2. Remove the cover.

Figure 1-242 Remove the residual-toner-feed motor (2 of 7)

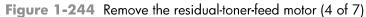


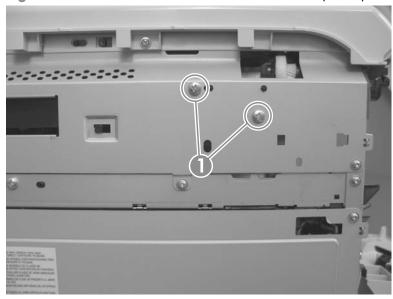
3. Disconnect one connector (callout 1).

Figure 1-243 Remove the residual-toner-feed motor (3 of 7)



4. Support the assembly, and then remove two screws (callout 1).





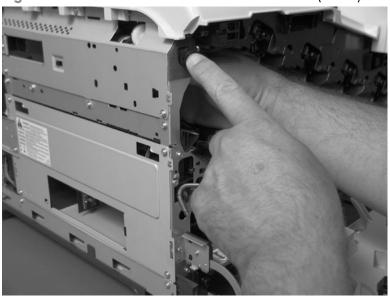
5. Be careful. Do not dislodge the residual-toner collection door when you remove the assembly. If the door becomes dislodged, see Reinstall the residual-toner collection door on page 170 to reinstall it.

Figure 1-245 Remove the residual-toner-feed motor (5 of 7)



6. Push the assembly into the product to release it.

Figure 1-246 Remove the residual-toner-feed motor (6 of 7)



7. Remove the motor.

Figure 1-247 Remove the residual-toner-feed motor (7 of 7)



Reinstall the residual-toner collection door

Snap the residual-toner collection door into the holders on the assembly. Make sure that the spring is correctly installed.





Secondary transfer assembly

The secondary transfer assembly includes the transfer roller.

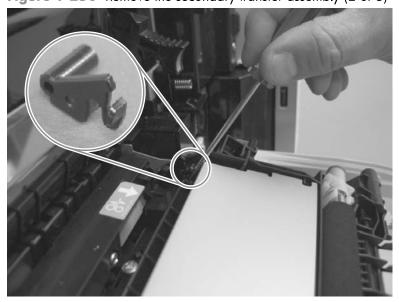
- 1. Open the right-door assembly.
- 2. Use the blue lever (callout 1) to lower the secondary transfer assembly.

Figure 1-249 Remove the transfer roller (1 of 3)



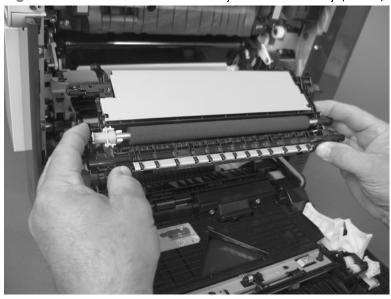
- 3. Release one tab and carefully remove the stopper.
- NOTE: You might have to slightly lift up on the corner of the assembly to release the stopper pin from the hole in the chassis.

Figure 1-250 Remove the secondary transfer assembly (2 of 3)



4. Remove the secondary transfer assembly.

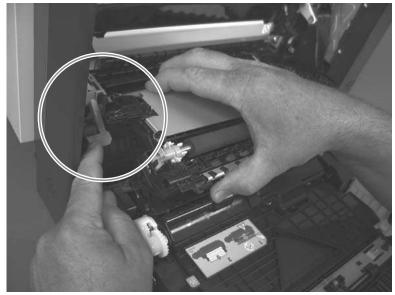
Figure 1-251 Remove the secondary transfer assembly (3 of 3)



Reinstall the secondary transfer assembly

Press and hold down the blue release lever when you reinstall the assembly.

Figure 1-252 Reinstall the secondary transfer assembly

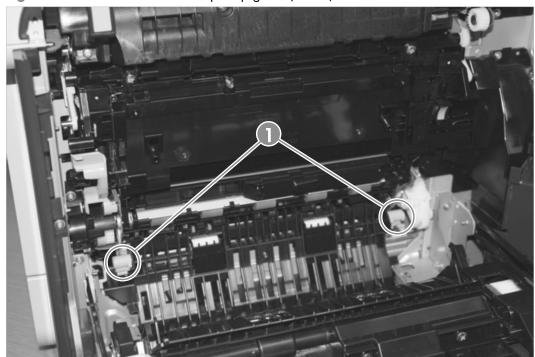


Lower pickup guide

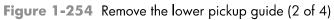
Remove the lower pickup guide

- 1. Open the right-door assembly.
- 2. Locate the lower pickup guide directly below the registration assembly. The guide is locked into place by two green circular knobs (callout 1).

Figure 1-253 Remove the lower pickup guide (1 of 4)

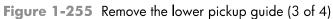


3. Lift the green circular knobs simultaneously to release the assembly.



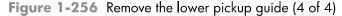


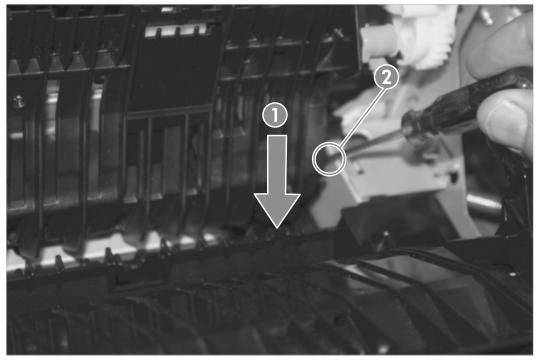
4. Raise the guide, and then loosen, but do not remove, one screw (callout 1) on the paper entrance guide.





5. While pushing down on the paper entrance guide (callout 1), use a flat blade screwdriver to press in on the hinge pin (callout 2) and release it from the product. Rotate the assembly counterclockwise away from the product to remove it.





Reinstall the lower pickup guide

Insert the front pin of the assembly into the hole at the front of the chassis. Slightly press down on the rear hinge pin and insert it into the hole at the rear of the chassis. Rotate the guide toward the product until the green knobs snap back into place. Tighten the screw on the paper entrance guide.

Registration density (RD) sensor assembly

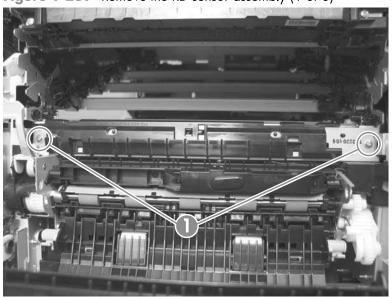
Before proceeding, remove the following components:

- Intermediate transfer belt (ITB). See Intermediate transfer belt (ITB) on page 34.
- Secondary transfer assembly. See <u>Secondary transfer assembly on page 171</u>.

Remove the RD sensor assembly

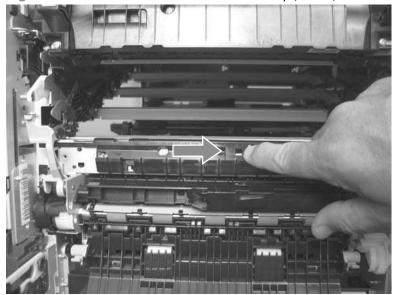
1. Remove two screws (callout 1).

Figure 1-257 Remove the RD sensor assembly (1 of 6)



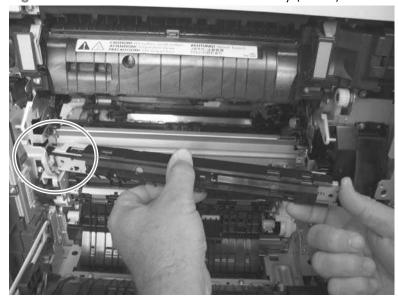
2. Slide the shutter toward the right side of the product. Keep the shutter in this position for the following step.

Figure 1-258 Remove the RD sensor assembly (2 of 6)



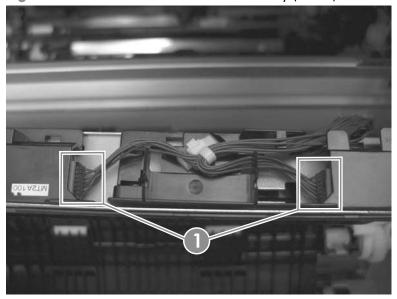
- 3. Carefully separate the assembly from the product. The assembly wire harnesses are still attached to the product.
 - CAUTION: Do not damage the shutter as it passes through the chassis.

Figure 1-259 Remove the RD sensor assembly (3 of 6)



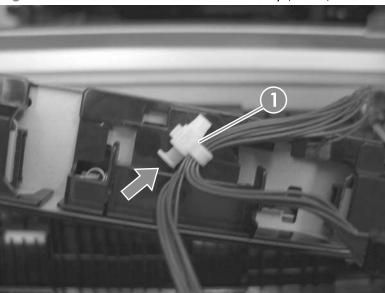
4. Disconnect two connectors (callout 1) on the back side of the assembly.

Figure 1-260 Remove the RD sensor assembly (4 of 6)



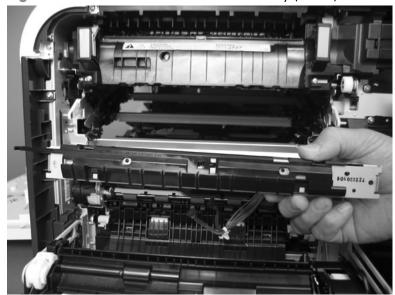
- 5. Push in on the locking tab to release the retainer (callout 1), and then separate the retainer from the assembly.
- NOTE: The retainer remains attached to the wire harness, and disengages from the assembly.

Figure 1-261 Remove the RD sensor assembly (5 of 6)



6. Remove the assembly.

Figure 1-262 Remove the RD sensor assembly (6 of 6)



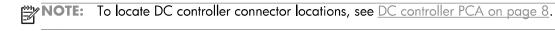
Power-supply fan and fan duct

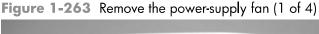
Before proceeding, remove the following components:

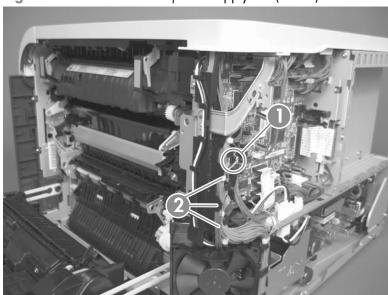
- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Right-rear cover. See Right-rear cover on page 90.
- Left cover. See Left cover on page 92.
- Rear-upper cover. See Rear-upper cover on page 95.
- Rear cover. See Rear cover on page 98.

Remove the power-supply fan and fan duct

1. Disconnect one connector (callout 1; J119) and release the wire harnesses from the guide (callout 2).

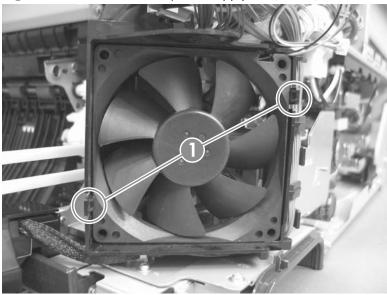






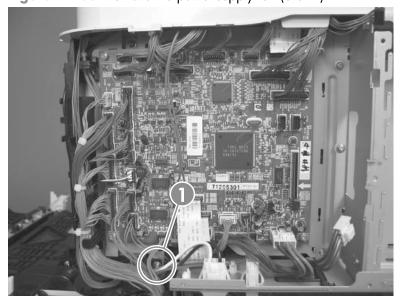
- 2. To remove the fan only: Release two tabs (callout 1), and then remove the fan from the fan duct.
- Reinstallation tip When the fan is reinstalled, the air must flow into the product. Look at the arrows embossed on the fan frame that indicate air flow direction.

Figure 1-264 Remove the power-supply fan (2 of 4)

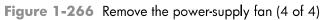


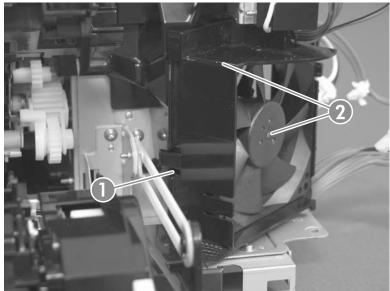
3. To remove the fan and fan duct: Remove one screw (callout 1), and then release the wire harnesses from the guides on the fan duct.

Figure 1-265 Remove the power-supply fan (3 of 4)



4. To remove the fan and fan duct: Release one tab (callout 1), and then remove the fan and fan duct (callout 2).





Registration assembly

Before proceeding, remove the following components:

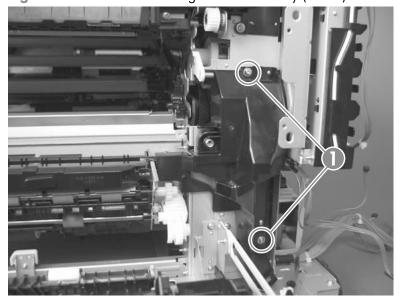
- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Intermediate transfer belt (ITB). See Intermediate transfer belt (ITB) on page 34.
- Right-rear cover. See <u>Right-rear cover on page 90</u>.
- Left cover. See <u>Left cover on page 92</u>.
- Rear-upper cover. See <u>Rear-upper cover on page 95</u>.
- Rear cover. See Rear cover on page 98.
- Registration density (RD) sensor assembly. See <u>Registration density (RD) sensor assembly</u> on page 177.
- TIP: Removing the RD sensor assembly makes it much easier to reinstall the registration assembly.
- Power-supply fan and fan duct. See <u>Power-supply fan and fan duct on page 181</u>.
- Secondary transfer assembly. See <u>Secondary transfer assembly on page 171</u>.

Remove the registration assembly

NOTE: If a replacement registration assembly is installed, you must use the control-panel menus to reset the registration-roller count.

Remove two screws (callout 1).

Figure 1-267 Remove the registration assembly (1 of 8)



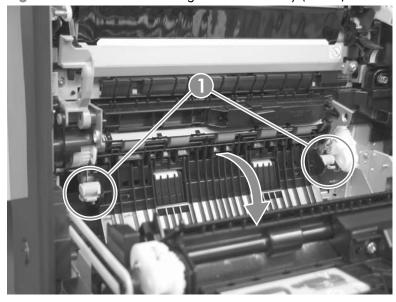
2. Pull down on the cover to release one tab, and then rotate the cover away from the product to remove it.

Figure 1-268 Remove the registration assembly (2 of 8)



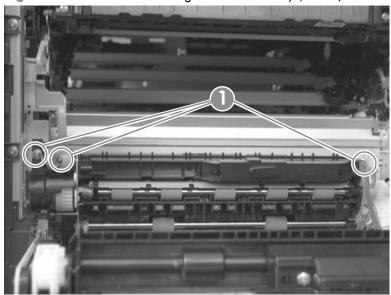
- 3. Release two green latches (callout 1), and then lower the feed guide.
- Reinstallation tip Make sure that the feed guide snaps into the closed position when you reinstall the registration assembly.

Figure 1-269 Remove the registration assembly (3 of 8)



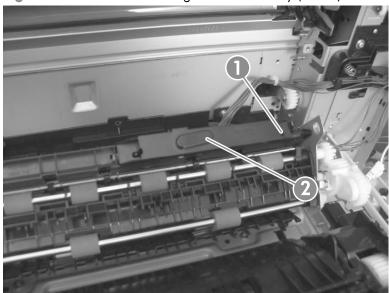
4. Remove three screws (callout 1).

Figure 1-270 Remove the registration assembly (4 of 8)



- 5. Separate the assembly from the product, release one tab (callout 1), and then remove the cover (callout 2).
 - CAUTION: The assembly is still attached to the product by the wire harnesses.

Figure 1-271 Remove the registration assembly (5 of 8)



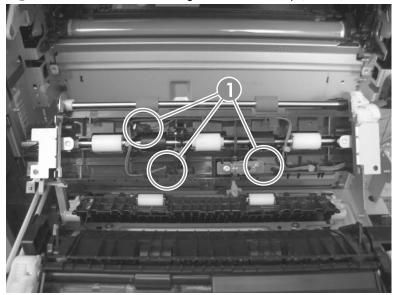
6. Disconnect one connector (callout 1), and then release the wire harness from the retainer.

Figure 1-272 Remove the registration assembly (6 of 8)



7. Disconnect three connectors (callout 1) on the back side of the assembly, and then release the wires from the retainers.

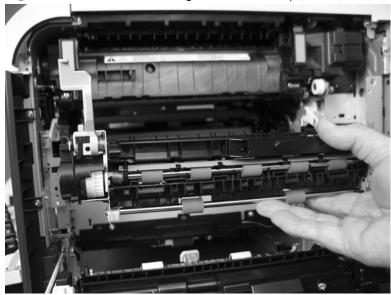
Figure 1-273 Remove the registration assembly (7 of 8)



8. Remove the assembly.

Reinstallation tip When you reinstall the registration assembly, make sure that it is correctly positioned in the product. The tabs on the assembly must fit into the slots in the product chassis and the assembly should fit securely up against the product chassis.

Figure 1-274 Remove the registration assembly (8 of 8)



High-voltage power supply lower

Before proceeding, remove the following components:

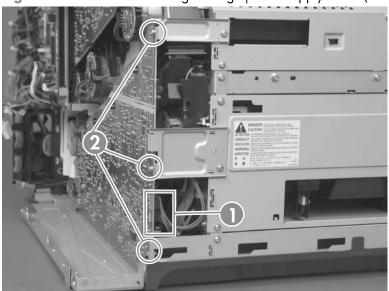
- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Formatter PCA. See Formatter PCA on page 17.
- Right-rear cover. See <u>Right-rear cover on page 90</u>.
- Left cover. See <u>Left cover on page 92</u>.
- Rear-upper cover. See Rear-upper cover on page 95.
- Rear cover. See Rear cover on page 98.
- Interconnect board (ICB). See <u>Interconnect board (ICB) on page 148</u>.
- Low-voltage power supply (LVPS). See <u>Low-voltage power supply (LVPS) on page 153</u>.

Remove the high-voltage power supply lower



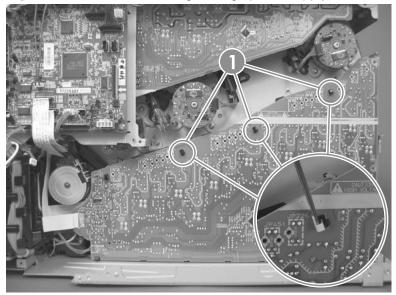
1. Disconnect two connectors (callout 1), and then remove three screws (callout 2).

Figure 1-275 Remove the high-voltage power supply lower (1 of 4)



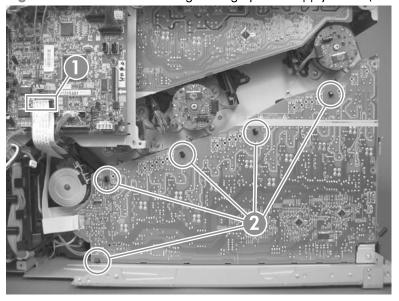
- 2. Use a small flat blade screwdriver to carefully remove three locking clips (callout 1).
 - CAUTION: Do not damage the PCA with the screwdriver.

Figure 1-276 Remove the high-voltage power supply lower (2 of 4)

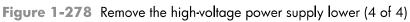


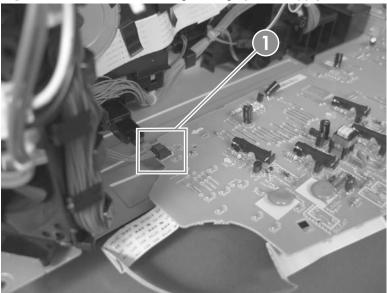
- 3. Disconnect one connector (callout 1; J114), and then release five clips (callout 2).
- NOTE: To locate DC controller connector locations, see DC controller PCA on page 8.

Figure 1-277 Remove the high-voltage power supply lower (3 of 4)



4. Rotate the top of the power supply away from the chassis, and then disconnect one connector (callout 1). Remove the power supply

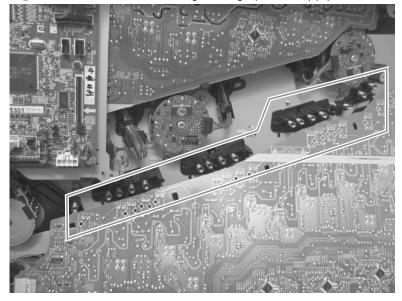




Reinstall the high-voltage power supply lower

When you reinstall the power supply, look through the holes in the PCA and make sure that the high-voltage contact springs are correctly seated against the PCA.

Figure 1-279 Reinstall the high-voltage power supply lower



Developing-disengagement motor

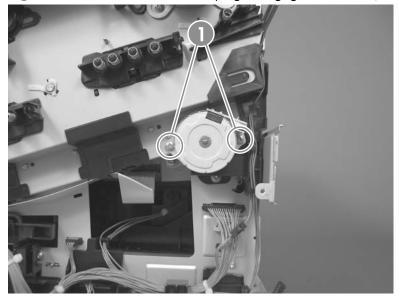
Before proceeding, remove the following components:

- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Formatter PCA. See Formatter PCA on page 17.
- Right-rear cover. See <u>Right-rear cover on page 90</u>.
- Left cover. See <u>Left cover on page 92</u>.
- Rear-upper cover. See Rear-upper cover on page 95.
- Rear cover. See Rear cover on page 98.
- Interconnect board (ICB). See Interconnect board (ICB) on page 148.
- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 153.
- High-voltage power supply lower. See <u>High-voltage power supply lower on page 189</u>.

Remove the developing-disengagement motor

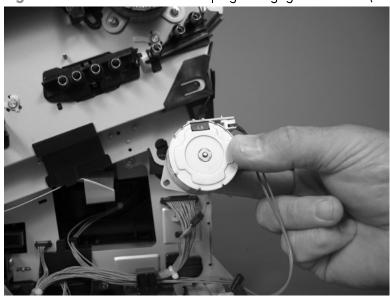
1. Remove two screws (callout 1).

Figure 1-280 Remove the developing-disengagement motor (1 of 2)



2. Remove the motor.

Figure 1-281 Remove the developing-disengagement motor (2 of 2)



Reinstallation tip Make sure the motor is installed correctly. The PCA on the motor should be on top when the installation is complete.

Pickup motor

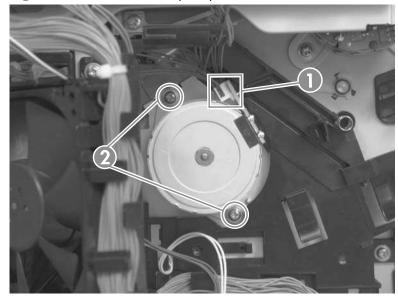
Before proceeding, remove the following components:

- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Formatter PCA. See Formatter PCA on page 17.
- Right-rear cover. See <u>Right-rear cover on page 90</u>.
- Left cover. See <u>Left cover on page 92</u>.
- Rear-upper cover. See Rear-upper cover on page 95.
- Rear cover. See Rear cover on page 98.
- Interconnect board (ICB). See <u>Interconnect board (ICB) on page 148</u>.
- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 153.
- High-voltage power supply lower. See <u>High-voltage power supply lower on page 189</u>.

Remove the pickup motor

Disconnect one connector (callout 1), remove two screws (callout 2), and then remove the motor.

Figure 1-282 Remove the pickup motor



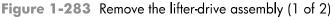
Lifter-drive assembly

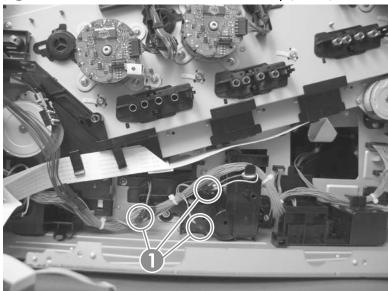
Before proceeding, remove the following components:

- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Formatter PCA. See <u>Formatter PCA on page 17</u>.
- Right-rear cover. See <u>Right-rear cover on page 90</u>.
- Left cover. See <u>Left cover on page 92</u>.
- Rear-upper cover. See Rear-upper cover on page 95.
- Rear cover. See Rear cover on page 98.
- Interconnect board (ICB). See <u>Interconnect board (ICB) on page 148</u>.
- Low-voltage power supply (LVPS). See <u>Low-voltage power supply (LVPS) on page 153</u>.
- High-voltage power supply lower. See <u>High-voltage power supply lower on page 189</u>.

Remove the lifter-drive assembly

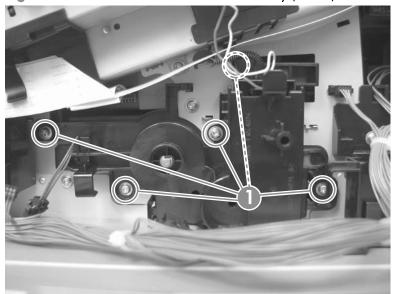
1. Disconnect three connectors (callout 1), and then release the wire harness from the retainers.





2. Remove five screws (callout 1), and then remove the assembly.





Tray-pickup drive assembly

Before proceeding, remove the following components:

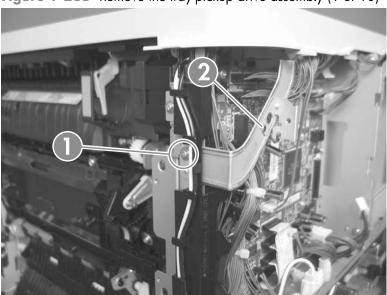
- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Formatter PCA. See Formatter PCA on page 17.
- Right-rear cover. See <u>Right-rear cover on page 90</u>.
- Left cover. See <u>Left cover on page 92</u>.
- Rear-upper cover. See Rear-upper cover on page 95.
- Rear cover. See Rear cover on page 98.
- Interconnect board (ICB). See <u>Interconnect board (ICB) on page 148</u>.
- Low-voltage power supply (LVPS). See <u>Low-voltage power supply (LVPS) on page 153</u>.
- High-voltage power supply lower. See <u>High-voltage power supply lower on page 189</u>.

Remove the tray-pickup drive assembly

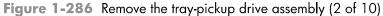
NOTE: To remove the pickup motor only, see Pickup motor on page 194.

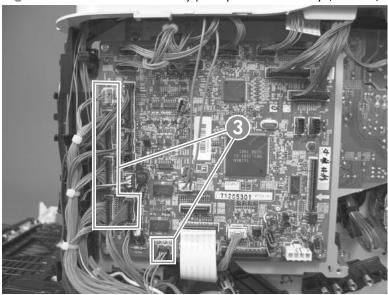
1. Remove one screw (callout 1), and then remove the sheet-metal bracket (callout 2).

Figure 1-285 Remove the tray-pickup drive assembly (1 of 10)

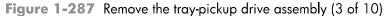


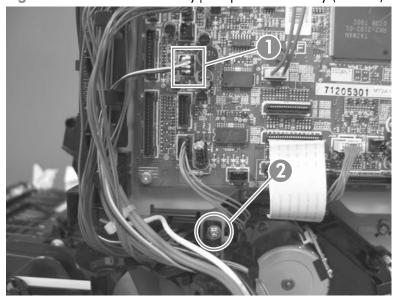
- 2. Disconnect six connectors (callout 1; J106, J107, J108, J137, J138, J140).
 - NOTE: To locate DC controller connector locations, see DC controller PCA on page 8.



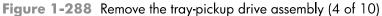


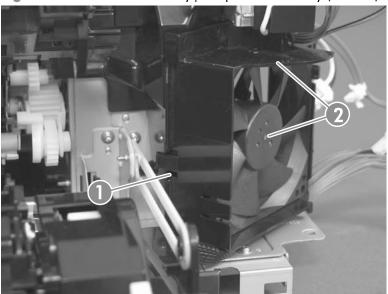
- 3. Disconnect one connector (callout 1; J119), remove one screw (callout 2), and then release the wire harness from the guides.
- NOTE: To locate DC controller connector locations, see DC controller PCA on page 8.





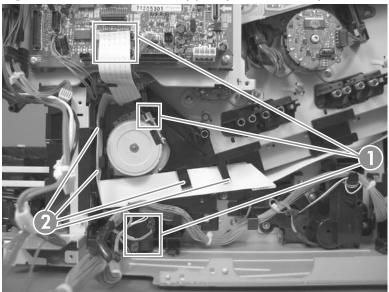
4. Release one tab (callout 1), and then remove the fan and fan duct (callout 2).





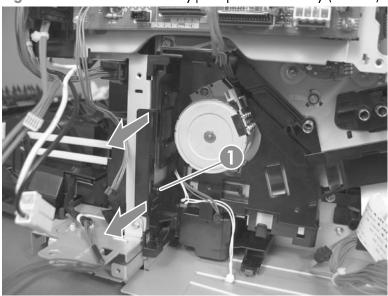
- 5. Disconnect five connectors (callout 1; J110, J111 on the DC controller PCA), release the FFCs from the guide (callout 2), and then release the wire harnesses from the guides.
- NOTE: To locate DC controller connector locations, see DC controller PCA on page 8.

Figure 1-289 Remove the tray-pickup drive assembly (5 of 10)



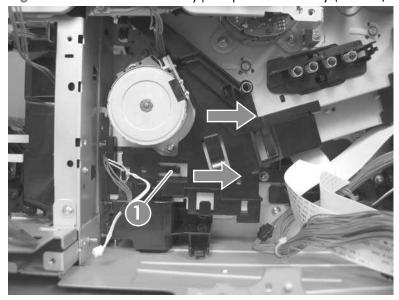
6. Release one tab (callout 1), and then remove the guide.

Figure 1-290 Remove the tray-pickup drive assembly (6 of 10)



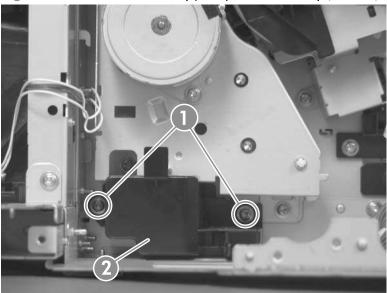
7. Release one tab (callout 1), and then remove the guide.

Figure 1-291 Remove the tray-pickup drive assembly (7 of 10)



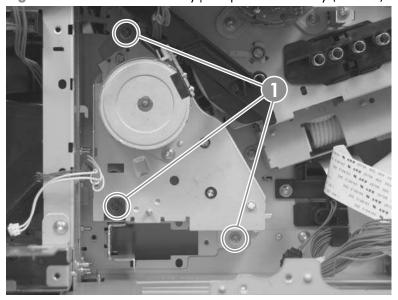
8. Remove two screws (callout 1), and then remove the high-voltage bracket (callout 2).

Figure 1-292 Remove the tray-pickup drive assembly (8 of 10)



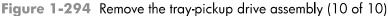
9. Remove three screws (callout 1).

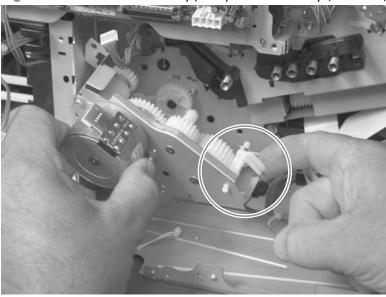
Figure 1-293 Remove the tray-pickup drive assembly (9 of 10)



10. Carefully remove the assembly.

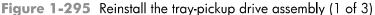
CAUTION: The gears, arm, and spring on the assembly are not captive. Use your finger to secure the arm and spring as you remove the assembly. If the gears, arm, or spring become dislodged, see Reinstall the tray-pickup drive assembly on page 202.

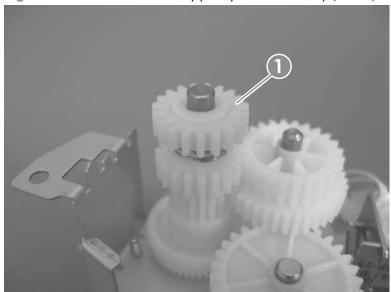




Reinstall the tray-pickup drive assembly

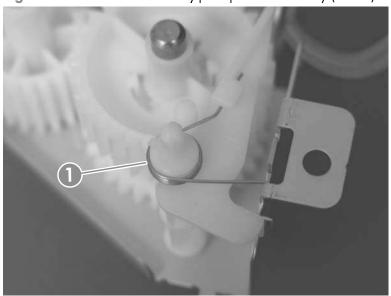
1. Make sure that the spring-loaded gear (callout 1) is correctly installed.





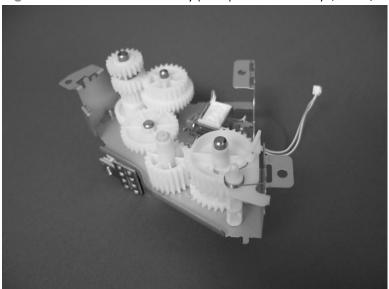
2. Make sure that the spring (callout 1) is correctly installed.

Figure 1-296 Reinstall the tray-pickup drive assembly (2 of 3)



3. Make sure that the gears, arm, and spring are correctly installed.

Figure 1-297 Reinstall the tray-pickup drive assembly (3 of 3)



Tray-pickup assembly

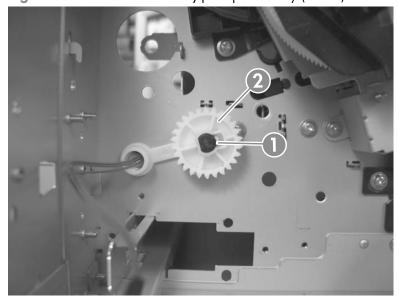
Before proceeding, remove the following components:

- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Formatter PCA. See Formatter PCA on page 17.
- Right-rear cover. See <u>Right-rear cover on page 90</u>.
- Left cover. See <u>Left cover on page 92</u>.
- Rear-upper cover. See Rear-upper cover on page 95.
- Rear cover. See Rear cover on page 98.
- Interconnect board (ICB). See <u>Interconnect board (ICB) on page 148</u>.
- Low-voltage power supply (LVPS). See <u>Low-voltage power supply (LVPS) on page 153</u>.
- Registration density (RD) sensor assembly. See <u>Registration density (RD) sensor assembly</u> on page 177.
- High-voltage power supply lower. See <u>High-voltage power supply lower on page 189</u>.
- Tray-pickup drive assembly. See Tray-pickup drive assembly on page 197.

Remove the tray-pickup assembly

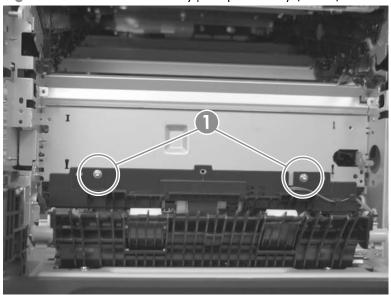
1. Release one tab (callout 1), and then remove the gear (callout 2).





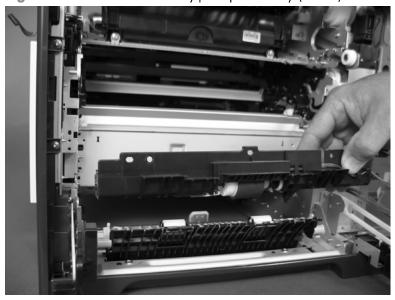
2. Remove two screws (callout 1).

Figure 1-299 Remove the tray-pickup assembly (2 of 3)



3. Remove the assembly.

Figure 1-300 Remove the tray-pickup assembly (3 of 3)



Laser/scanner assembly (Y/M)

Before proceeding, remove the following components:

- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Formatter PCA. See Formatter PCA on page 17.
- Right-rear cover. See <u>Right-rear cover on page 90</u>.
- Left cover. See Left cover on page 92.
- Rear-upper cover. See Rear-upper cover on page 95.
- Rear cover. See Rear cover on page 98.
- Interconnect board (ICB). See Interconnect board (ICB) on page 148.
- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 153.
- High-voltage power supply lower. See <u>High-voltage power supply lower on page 189</u>.

Remove the laser/scanner assembly (Y/M)

1. Remove five screws (callout 1), and then remove the sheet-metal plate (callout 2).

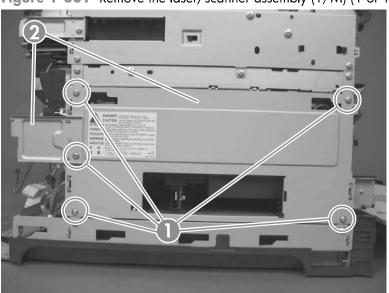
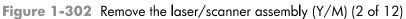
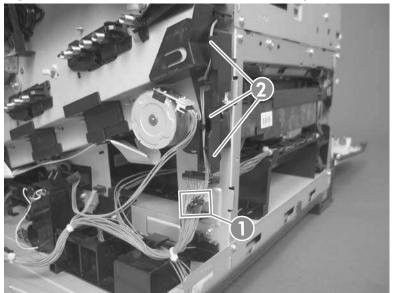


Figure 1-301 Remove the laser/scanner assembly (Y/M) (1 of 12)

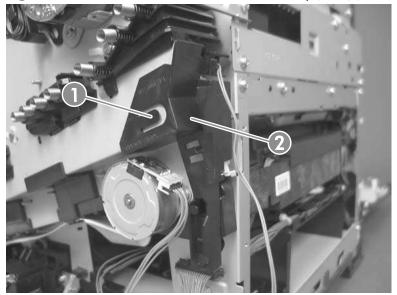
2. Disconnect in-line one connector (callout 1), and then release the wire harnesses from the guide (callout 2).





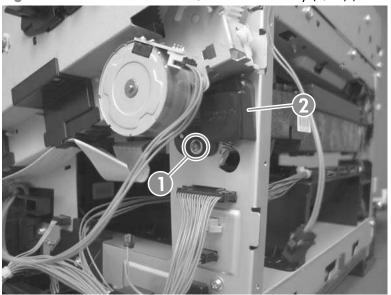
3. Release one tab (callout 1), and then remove the guide (callout 2).

Figure 1-303 Remove the laser/scanner assembly (Y/M) (3 of 12)



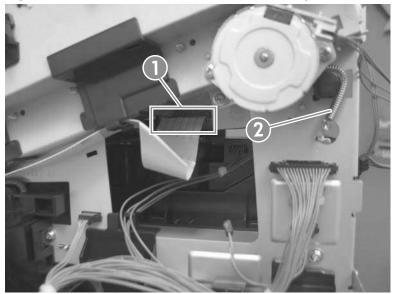
4. Remove one screw (callout 1), and then remove the cover (callout 2).

Figure 1-304 Remove the laser/scanner assembly (Y/M) (4 of 12)



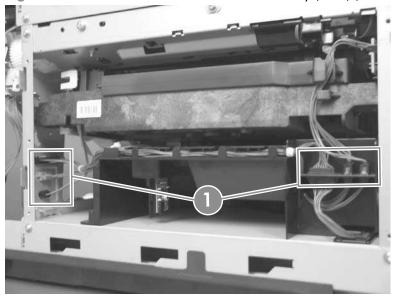
- 5. Disconnect one FFC (callout 1), and then release one spring (callout 2).
- CAUTION: The spring is not captive. Do not lose the spring when it is removed. Use a pair of needle-nose pliers to safely retain the spring when it is removed. Do not use a flat blade screwdriver to remove the spring; the spring could forcibly leave the product and strike you.
- Reinstallation tip When you reinstall the spring, make sure that the laser/scanner fits tightly up against the product chassis, and make sure that the FFC is fully seated in the connector. The locator tabs on the front and rear of the scanner must be firmly seated in the slots in the chassis.

Figure 1-305 Remove the laser/scanner assembly (Y/M) (5 of 12)



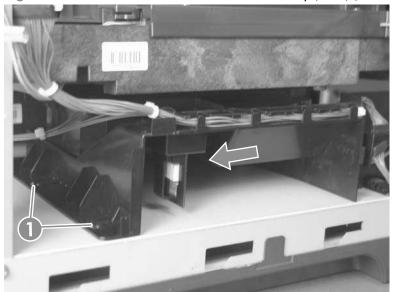
- 6. Disconnect six connectors (callout 1).
- NOTE: Disconnect the larger connector on the right side from the bottom. Disconnect the two smaller connectors on the right side from the top.

Figure 1-306 Remove the laser/scanner assembly (Y/M) (6 of 12)



7. Release two tabs (callout 1), and then slide the fan assembly toward the power-supply side of the product to release it.



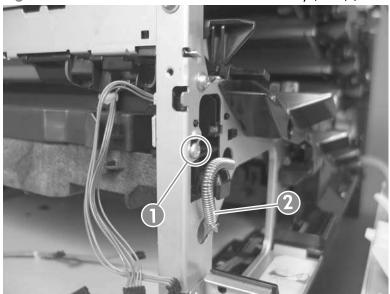


- **8.** Pull the fan assembly slightly out of the product, disconnect two connectors (callout 1), and then remove the assembly.
 - Figure 1-308 Remove the laser/scanner assembly (Y/M) (8 of 12)



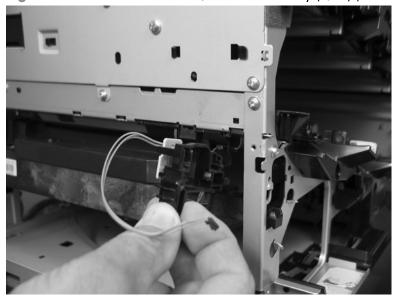
- 9. Remove one screw (callout 1), and then release one spring (callout 2).
 - CAUTION: The spring is not captive. Do not lose the spring when it is removed. Use a pair of needle-nose pliers to safely retain the spring when it is removed. Do not use a flat blade screwdriver to remove the spring; the spring could forcibly leave the product and strike you.
 - Reinstallation tip When the laser/scanner is properly positioned in the chassis, the plastic parts which protrude at the front and rear of the product will be firmly seated against the locator tabs on the chassis. Verify that the assembly is correctly seated, and then install the spring.

Figure 1-309 Remove the laser/scanner assembly (Y/M) (9 of 12)



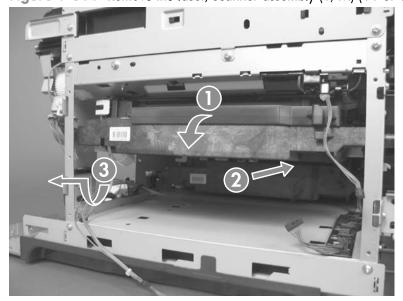
10. Remove the toner collection sensor.

Figure 1-310 Remove the laser/scanner assembly (Y/M) (10 of 12)



11. Rotate the front of the laser/scanner assembly down (callout 1), and then slide it toward the right (callout 2). Lower the left corner, and then rotate the left corner out of the product (callout 3).

Figure 1-311 Remove the laser/scanner assembly (Y/M) (11 of 12)



12. Pull the laser/scanner assembly straight out of the product to remove it.





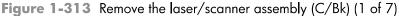
Laser/scanner assembly (C/Bk)

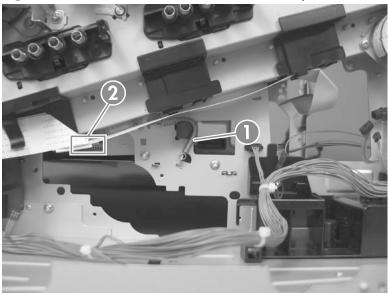
Before proceeding, remove the following components:

- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Formatter PCA. See Formatter PCA on page 17.
- Right-rear cover. See <u>Right-rear cover on page 90</u>.
- Left cover. See <u>Left cover on page 92</u>.
- Rear-upper cover. See Rear-upper cover on page 95.
- Rear cover. See Rear cover on page 98.
- Interconnect board (ICB). See <u>Interconnect board (ICB) on page 148</u>.
- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 153.
- High-voltage power supply lower. See <u>High-voltage power supply lower on page 189</u>.
- Lifter drive assembly. See <u>Lifter-drive assembly on page 195</u>.
- Laser/scanner assembly (Y/M). See <u>Laser/scanner assembly (Y/M) on page 206</u>.

Remove the laser/scanner assembly (C/Bk)

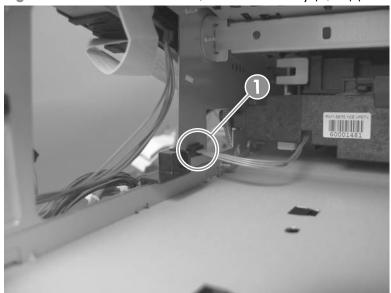
- 1. Release one spring (callout 1), and then disconnect one connector (callout 2).
- CAUTION: The spring is not captive. Do not lose the spring when it is removed. Use a pair of needle-nose pliers to safely retain the spring when it is removed. Do not use a flat blade screwdriver to remove the spring; the spring could forcibly leave the product and strike you.
- Reinstallation tip When you reinstall the spring, make sure that the laser/scanner fits tightly up against the product chassis, and make sure that the FFC is fully seated in the connector. The locator tabs on the front of the scanner must be firmly seated in the slots in the chassis.





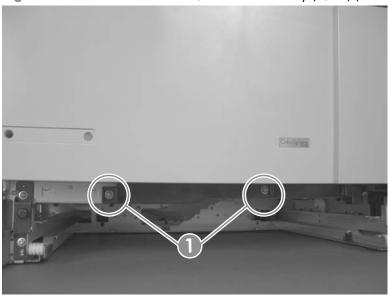
Disconnect one connector (callout 1).

Figure 1-314 Remove the laser/scanner assembly (C/Bk) (2 of 7)



3. Remove two screws (callout 1) located below the front door.

Figure 1-315 Remove the laser/scanner assembly (C/Bk) (3 of 7)



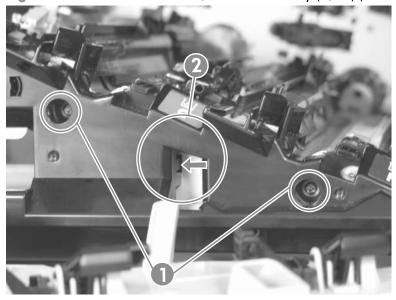
4. Open the front door, and then remove one screw (callout 1) and the cover (callout 2).

Figure 1-316 Remove the laser/scanner assembly (C/Bk) (4 of 7)



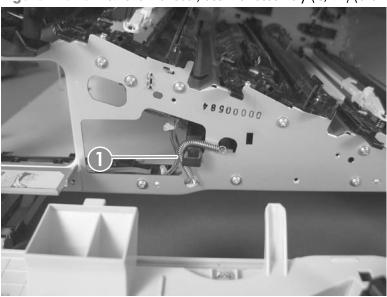
- 5. Remove two screws (callout 1). Use your finger to release the locking tab (callout 2), and then remove the cover.
 - CAUTION: Be careful. The PGC actuators are easily dislodged when the cover is removed. See Figure 1-320 Reinstall the PGC actuators (1 of 5) on page 218. To reinstall the actuators, see Reinstall the protective glass cleaner (PGC) actuators on page 218.

Figure 1-317 Remove the laser/scanner assembly (C/Bk) (5 of 7)



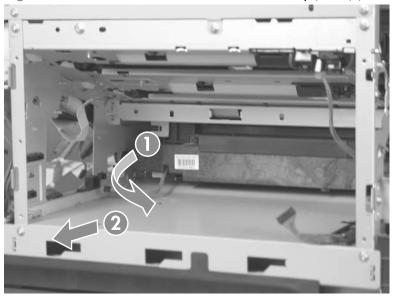
- Release one spring (callout 1).
- CAUTION: The spring is not captive. Do not lose the spring when it is removed. Use a pair of needle-nose pliers to safely retain the spring when it is removed. Do not use a flat blade screwdriver to remove the spring; the spring could forcibly leave the product and strike you.
- Reinstallation tip When you reinstall the spring, make sure that the laser/scanner fits tightly up against the product chassis.

Figure 1-318 Remove the laser/scanner assembly (C/Bk) (6 of 7)



- **7.** Rotate the corner of the assembly away from the product until you can see the PCA, and then remove the assembly from the product.
- Reinstallation tip When the laser/scanner is properly positioned in the chassis, the plastic parts which protrude at the front and rear of the product will be firmly seated against the locator tabs on the chassis. Verify that the assembly is correctly seated, and then install the spring.

Figure 1-319 Remove the laser/scanner assembly (C/Bk) (7 of 7)



Reinstall the protective glass cleaner (PGC) actuators

- 1. The following figure shows a dislodged PGC actuator.
- TIP: If the actuator and spring are only slightly dislodged, you might be able to easily push them back into place.

Figure 1-320 Reinstall the PGC actuators (1 of 5)



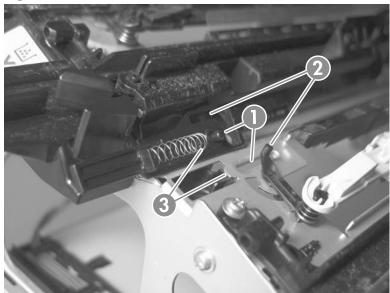
2. Remove the actuator and spring from the product. Install the spring on the actuator.

Figure 1-321 Reinstall the PGC actuators (2 of 5)



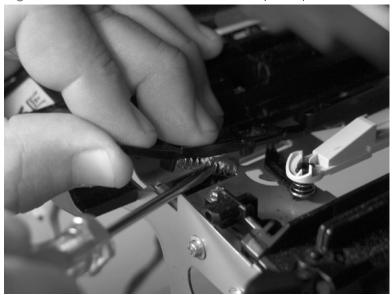
- 3. Before proceeding, take note of the following:
 - Callout 1: The pin on the actuator will be installed into the slot in the chassis.
 - Callout 2: The pin on the pivot arm will be installed into the slot on the actuator.
 - Callout 3: The end of the spring will be installed onto the tab on the chassis.

Figure 1-322 Reinstall the PGC actuators (3 of 5)



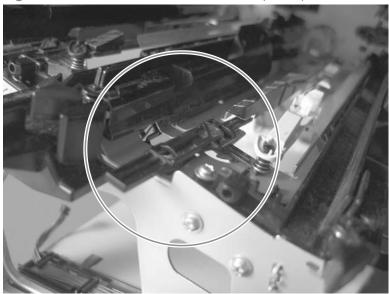
4. Place the end of the actuator into the PGC rod, and then use a small flat blade screw driver to fasten the end of the spring on the tab on the chassis.





5. Push down on the actuator to seat it into place. Verify that the actuators is correctly installed. The PGC actuator should freely move when you push in on the actuator.

Figure 1-324 Reinstall the PGC actuators (5 of 5)



High-voltage power supply upper

Before proceeding, remove the following components:

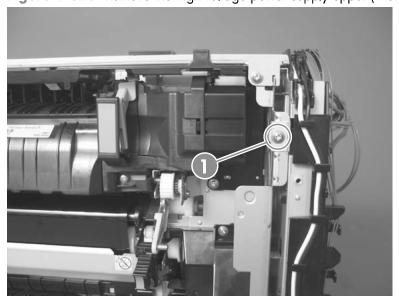
- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Formatter PCA. See Formatter PCA on page 17.
- Right-rear cover. See <u>Right-rear cover on page 90</u>.
- Left cover. See <u>Left cover on page 92</u>.
- Rear-upper cover. See Rear-upper cover on page 95.
- Rear cover. See Rear cover on page 98.
- Interconnect board (ICB). See <u>Interconnect board (ICB) on page 148</u>.
- DC controller. See <u>DC controller PCA and tray on page 150</u>.
- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 153.

Remove the high-voltage power supply upper

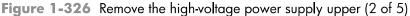


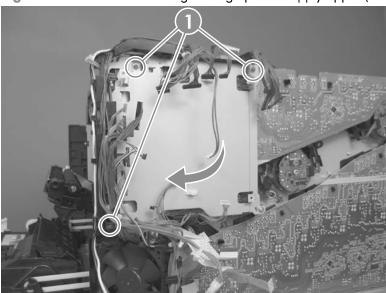
1. Remove one screw (callout 1).

Figure 1-325 Remove the high-voltage power supply upper (1 of 5)



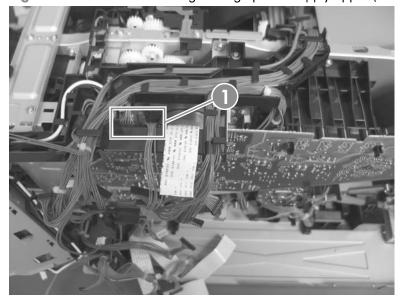
- 2. Remove four screws (callout 1), and then rotate the sheet-metal plate away from the power supply.
 - NOTE: You do not need to completely remove the sheet-metal plate to access the power supply.





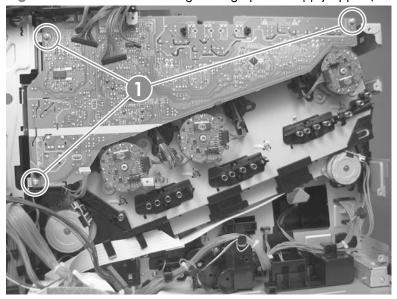
- 3. Disconnect two connectors (callout 1; J201, J202) from the back side of the power supply.
- NOTE: For clarity, the figure in this step shows the document feeder and scanner removed. Carefully reach under these components to access the two connectors.

Figure 1-327 Remove the high-voltage power supply upper (3 of 5)



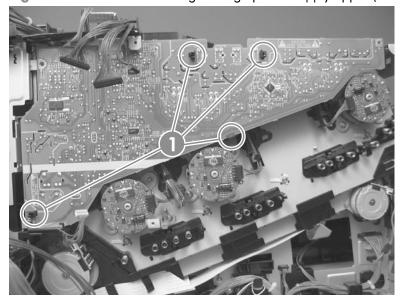
4. Remove three screws (callout 1).

Figure 1-328 Remove the high-voltage power supply upper (4 of 5)



5. Release four tabs (callout 1), and then remove the power supply.

Figure 1-329 Remove the high-voltage power supply upper (5 of 5)



Reinstall the high-voltage power supply upper

When you reinstall the power supply, look through the holes in the PCA and make sure that the high-voltage contact springs are correctly seated against the PCA.

NOTE: One wire harness (callout 1) is disconnected at both ends. Do not lose the wire harness.

Position the FFC (callout 2) over the cable guide when you reinstall the power supply.

Figure 1-330 Reinstall the high-voltage power supply upper



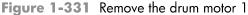
Drum motor 1

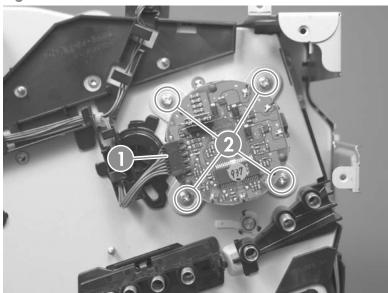
Before proceeding, remove the following components:

- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Right-rear cover. See <u>Right-rear cover on page 90</u>.
- Left cover. See <u>Left cover on page 92</u>.
- Rear-upper cover. See Rear-upper cover on page 95.
- Rear cover. See Rear cover on page 98.
- Interconnect board (ICB). See Interconnect board (ICB) on page 148.
- DC controller. See <u>DC controller PCA and tray on page 150</u>.
- Low-voltage power supply (LVPS). See <u>Low-voltage power supply (LVPS) on page 153</u>.
- High-voltage power supply upper. See <u>High-voltage power supply upper on page 221</u>.

Remove the drum motor 1

▲ Disconnect one connector (callout 1), remove four screws (callout 2), and then remove the motor.





Drum motor 2 or drum motor 3

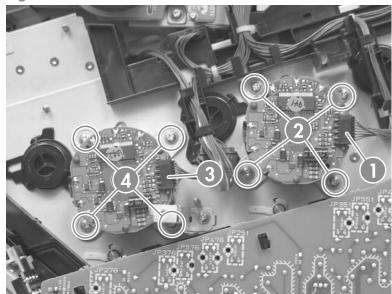
Before proceeding, remove the following components:

- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Right-rear cover. See <u>Right-rear cover on page 90</u>.
- Left cover. See <u>Left cover on page 92</u>.
- Rear-upper cover. See Rear-upper cover on page 95.
- Rear cover. See Rear cover on page 98.
- Interconnect board (ICB). See <u>Interconnect board (ICB) on page 148</u>.
- DC controller. See <u>DC controller PCA and tray on page 150</u>.
- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 153.
- High-voltage power supply upper. See <u>High-voltage power supply upper on page 221</u>.

Remove the drum motor 2 or drum motor 3

- Do one of the following:
 - Remove drum motor 2: Disconnect one connector (callout 1), remove four screws (callout 2), and then remove the motor.
 - Remove drum motor 3: Disconnect one connector (callout 3), remove four screws (callout 4), and then remove the motor.

Figure 1-332 Remove the drum motor 2 or drum motor 3



Fuser motor

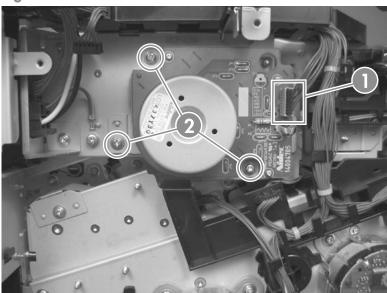
Before proceeding, remove the following components:

- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Formatter PCA. See <u>Formatter PCA on page 17</u>.
- Right-rear cover. See <u>Right-rear cover on page 90</u>.
- Left cover. See <u>Left cover on page 92</u>.
- Rear-upper cover. See Rear-upper cover on page 95.
- Rear cover. See Rear cover on page 98.
- Interconnect board (ICB). See <u>Interconnect board (ICB) on page 148</u>.
- DC controller. See <u>DC controller PCA and tray on page 150</u>.
- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 153.
- High-voltage power supply upper. See <u>High-voltage power supply upper on page 221</u>.

Remove the fuser motor

Disconnect one connector (callout 1), remove three screws (callout 2), and then remove the motor.

Figure 1-333 Remove the fuser motor



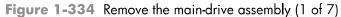
Main-drive assembly

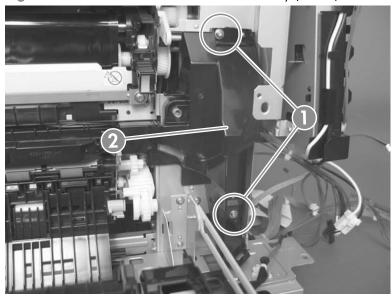
Before proceeding, remove the following components:

- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Formatter PCA. See Formatter PCA on page 17.
- Fuser. See <u>Fuser on page 24</u>.
- Intermediate transfer belt (ITB). See <u>Intermediate transfer belt (ITB) on page 34</u>.
- Front-upper cover. See <u>Front-upper cover on page 83</u>.
- Right-rear cover. See <u>Right-rear cover on page 90</u>.
- Left cover. See <u>Left cover on page 92</u>.
- Rear-upper cover. See Rear-upper cover on page 95.
- Left-upper cover. See <u>Left-upper cover on page 97</u>.
- Rear cover. See Rear cover on page 98.
- Front-top cover. See Front-top cover on page 110.
- Rear-top cover. See Rear-top cover on page 112.
- Document feeder. See <u>Document feeder whole unit on page 127</u>.
- Image scanner. See Image scanner whole unit on page 139.
- Interconnect board (ICB). See Interconnect board (ICB) on page 148.
- DC controller. See <u>DC controller PCA and tray on page 150</u>.
- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 153.
- Secondary transfer assembly. See <u>Secondary transfer assembly on page 171</u>.
- Power-supply fan and fan duct. See <u>Power-supply fan and fan duct on page 181</u>.
- High-voltage power supply lower. See High-voltage power supply lower on page 189.
- High-voltage power supply upper. See <u>High-voltage power supply upper on page 221</u>.

Remove the main-drive assembly

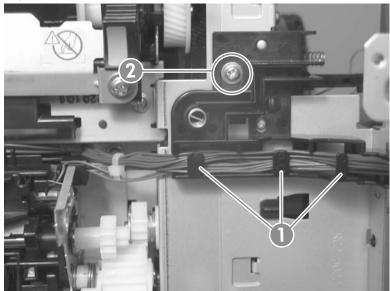
1. Remove two screws (callout 1), and then remove the cover (callout 2).





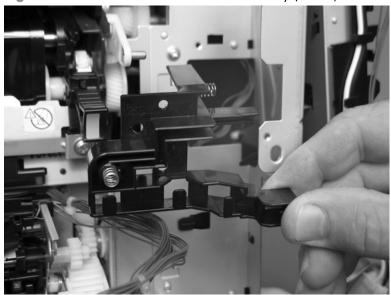
2. Release the wire harnesses from the guide (callout 1), and then remove one screw (callout 2).

Figure 1-335 Remove the main-drive assembly (2 of 7)



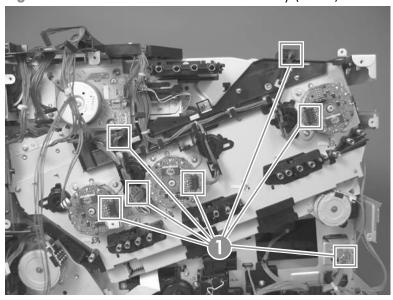
3. Lift the high-voltage bracket up to release it, and then remove the bracket.

Figure 1-336 Remove the main-drive assembly (3 of 7)



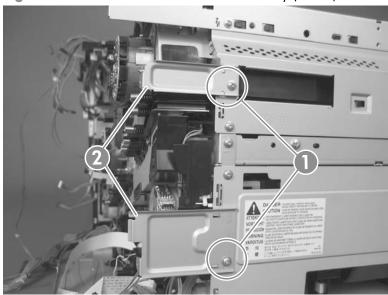
4. Disconnect seven connectors (callout 1), and then release the wire harnesses from the guides.

Figure 1-337 Remove the main-drive assembly (4 of 7)



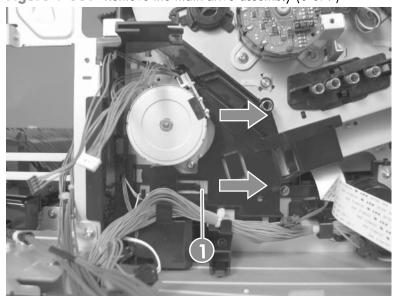
5. Remove two screws (callout 1), and then remove the sheet-metal plates (callout 2).

Figure 1-338 Remove the main-drive assembly (5 of 7)



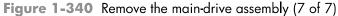
6. Release the FFCs and lower wiring harness from the guide, and then release one tab (callout 1) and remove the guide.

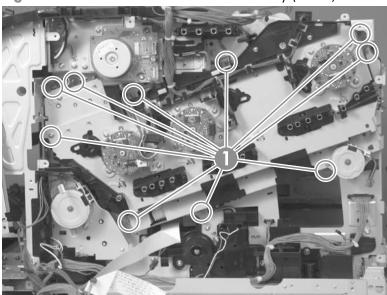
Figure 1-339 Remove the main-drive assembly (6 of 7)



- 7. Remove ten screws (callout 1), and then carefully remove the assembly.
 - CAUTION: Be careful when you remove the assembly. The cams on the backside of the assembly can be dislodged. If the cams become dislodged, install them on the shafts as shown in Figure 1-342 Reinstall the main-drive assembly (2 of 11) on page 233.

The black cam must be installed on the shaft furthest away from the developing-disengagement motor. The white cams are interchangeable.





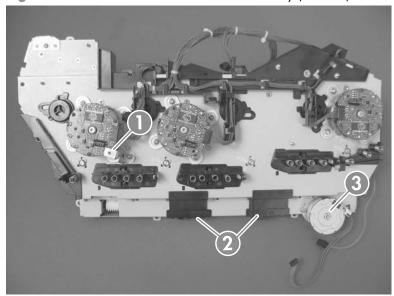
Reinstall the main-drive assembly

1. Remove the bracket (callout 1), two guides (callout 2), and the developing-disengagement motor (callout 3).

Install the bracket and guides on the replacement main-drive assembly.

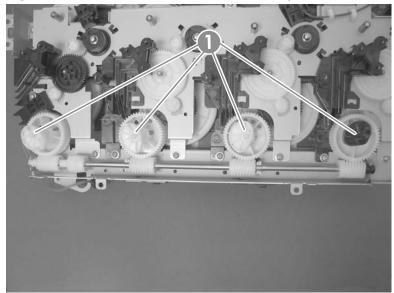
NOTE: Do not install the developing-disengagement motor on the assembly (this motor must be removed from the assembly to align the main-drive cams).

Figure 1-341 Reinstall the main-drive assembly (1 of 11)



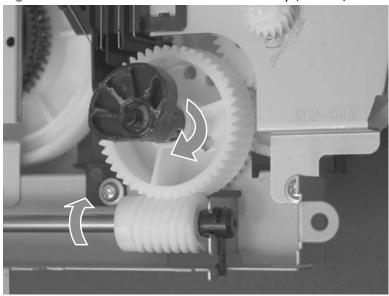
2. Locate the cams (callout 1) on the back side of the assembly.

Figure 1-342 Reinstall the main-drive assembly (2 of 11)



- 3. Slowly rotate the shaft near the black cam.
- **WARNING!** Do not touch the plastic gears or cams. You must not wipe away any of the grease that is applied to these components. Always rotate the gears and cams by rotating the metal drive shaft.

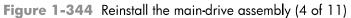
Figure 1-343 Reinstall the main-drive assembly (3 of 11)

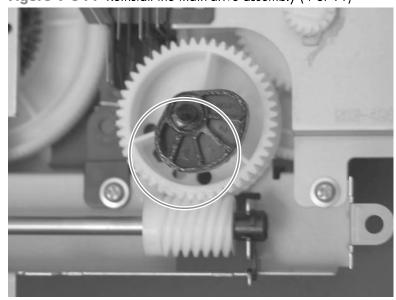


4. Continue to rotate the shaft until the holes in the black-cam gear align as shown below.

When correctly aligned, the *bottom-most* hole in the gear is aligned with a hole in the sheet-metal chassis.

NOTE: The holes in the other cam gears have a different alignment. You must make sure that the holes in the black-cam gear are correctly aligned.





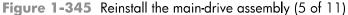
5. Verify that the cams (callout 1) align correctly.

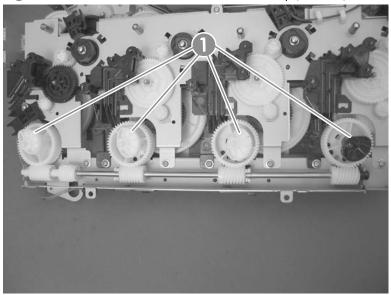
TIP: The second cam in from the right (the white cam to the left of the black cam), should have the second hole aligned with the hole in the sheet-metal chassis.

The third cam in from the right, should have the *third* hole aligned with the hole in the sheet-metal chassis.

The fourth cam in from the right (the cam nearest the developing-disengagement motor), should have the *fourth* hole aligned with the hole in the sheet-metal chassis.

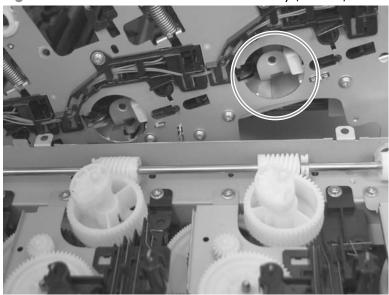
If the second, third, or fourth cams do not correctly align, do the following. Hold the long drive shaft, gently tilt the cam and gear away from the shaft to allow clearance to rotate the gear until the correct hole in the gear aligns with the hole in the chassis.





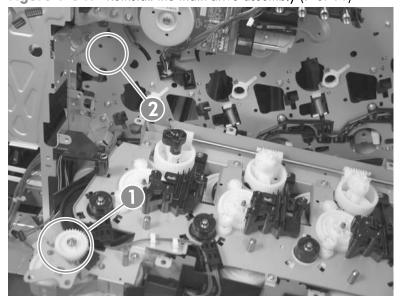
6. When the cams align correctly, they easily fit into the holes in the chassis.

Figure 1-346 Reinstall the main-drive assembly (6 of 11)



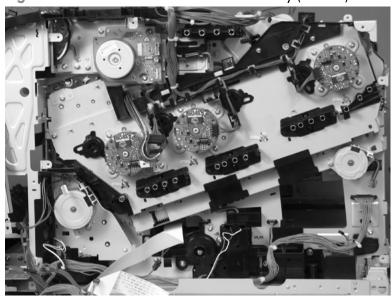
7. When the assembly is placed on the chassis, the pin on the swing gear and on the bracket (callout 1), must align with the holes in the chassis (callout 2).

Figure 1-347 Reinstall the main-drive assembly (7 of 11)



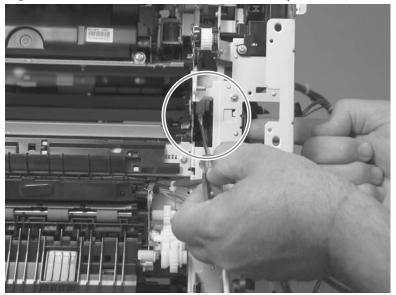
8. Position the assembly on the chassis.

Figure 1-348 Reinstall the main-drive assembly (8 of 11)



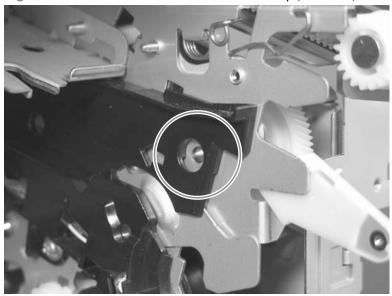
9. Use your finger to push in on the assembly, and use a small flat blade screwdriver to align the pin on the swing gear with the hole in the chassis.

Figure 1-349 Reinstall the main-drive assembly (9 of 11)



10. When the assembly is correctly installed against the chassis, the pin above the swing gear protrudes through the hole in the chassis.

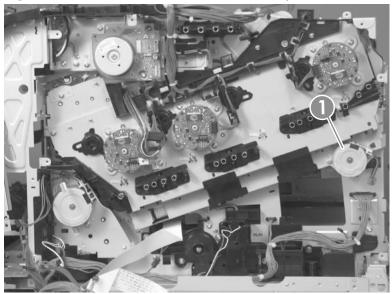




- 11. Install the main-drive assembly mounting screws, and then reinstall the developing-disengagement motor (callout 1).
- TIP: After reassembling the product, print a Color Band Test page.

If the test page shows one or more color planes are not printing (usually in the upper left corner of the page), the cam or cams for the missing color plane are not correctly aligned. Repeat the reinstall the main-drive assembly procedure.

Figure 1-351 Reinstall the main-drive assembly (11 of 11)



Fuser-drive assembly

Before proceeding, remove the following components:

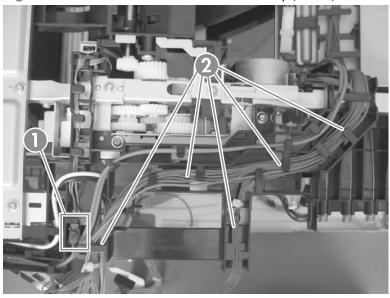
- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Formatter PCA. See Formatter PCA on page 17.
- Fuser. See <u>Fuser on page 24</u>.
- Intermediate transfer belt (ITB). See <u>Intermediate transfer belt (ITB) on page 34</u>.
- Front-upper cover. See <u>Front-upper cover on page 83</u>.
- Stapler cover. See <u>Stapler cover on page 85</u>.
- Right-rear cover. See <u>Right-rear cover on page 90</u>.
- Left-upper cover. See <u>Left-upper cover on page 97</u>.
- Rear-upper cover. See Rear-upper cover on page 95.
- Left-upper cover. See <u>Left-upper cover on page 97</u>.
- Rear cover. See Rear cover on page 98.
- Front-top cover. See Front-top cover on page 110.
- Rear-top cover. See Rear-top cover on page 112.
- Document feeder whole unit. See <u>Document feeder whole unit on page 127</u>.
 - See <u>Document feeder whole unit on page 127</u>.
 - See Document feeder whole unit (M575c model) on page 130.
- Scanner-control board (SCB).
 - See Scanner-control board (SCB) on page 133.
 - See Scanner-control board (SCB; M575c) on page 136.
- Image scanner whole unit. See Image scanner whole unit on page 139.
- Interconnect board (ICB). See Interconnect board (ICB) on page 148.
- DC controller. See DC controller PCA and tray on page 150.
- Low-voltage power supply (LVPS). See <u>Low-voltage power supply (LVPS) on page 153</u>.
- Secondary transfer assembly. See <u>Secondary transfer assembly on page 171</u>.
- Power-supply fan and fan duct. See <u>Power-supply fan and fan duct on page 181</u>.
- High-voltage power supply lower. See High-voltage power supply lower on page 189.

- High-voltage power supply upper. See <u>High-voltage power supply upper on page 221</u>.
- Main-drive assembly. See Main-drive assembly on page 228.

Remove the fuser-drive assembly

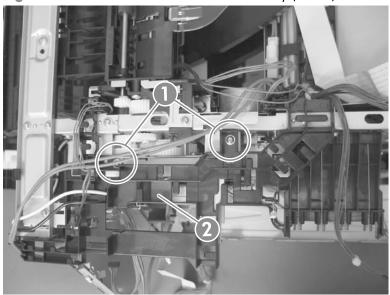
1. Disconnect one connector (callout 1), and then release the wire harnesses from the guide (callout 2).

Figure 1-352 Remove the fuser-drive assembly (1 of 6)



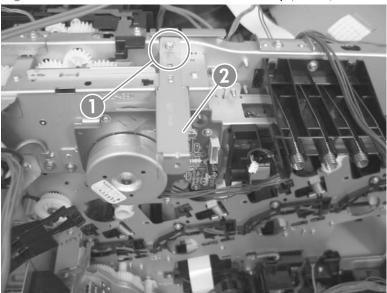
2. Remove two screws (callout 1), and then remove the guide (callout 2).

Figure 1-353 Remove the fuser-drive assembly (2 of 6)



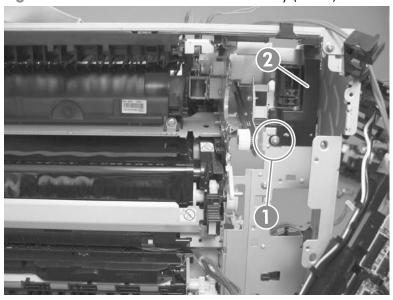
3. Remove one screw (callout 1), and then remove the sheet-metal plate (callout 2).

Figure 1-354 Remove the fuser-drive assembly (3 of 6)



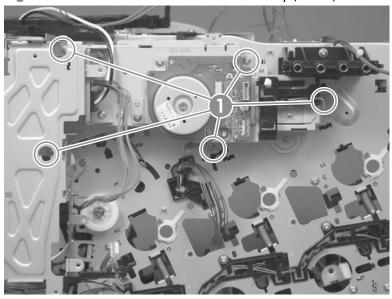
4. Remove one screw (callout 1), and then remove the cover (callout 2).

Figure 1-355 Remove the fuser-drive assembly (4 of 6)



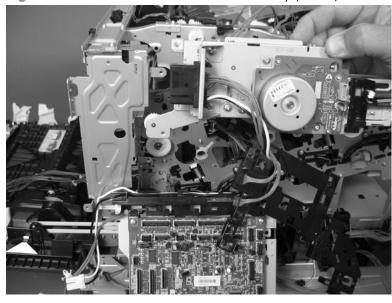
5. Remove five screws (callout 1).

Figure 1-356 Remove the fuser-drive assembly (5 of 6)



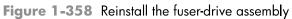
- 6. Carefully remove the assembly.
- CAUTION: A gear on the assembly is not captive. Do not lose the gear when you remove the assembly. If the gear becomes dislodged, see Reinstall the fuser-drive assembly on page 243.

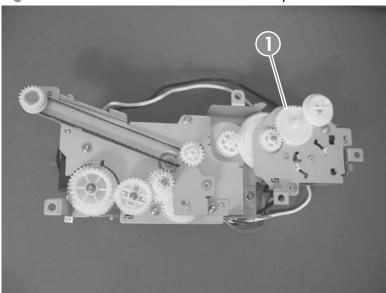
Figure 1-357 Remove the fuser-drive assembly (6 of 6)



Reinstall the fuser-drive assembly

If the gear (callout 1) is dislodged when the assembly is removed, use the figure below to correctly install it on the assembly.





Delivery assembly

Before proceeding, remove the following components:

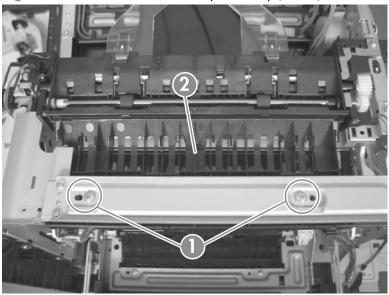
- Toner-collection unit. See <u>Toner-collection unit on page 15</u>.
- Formatter PCA. See Formatter PCA on page 17.
- Fuser. See <u>Fuser on page 24</u>.
- Intermediate transfer belt (ITB). See <u>Intermediate transfer belt (ITB) on page 34</u>.
- Front-upper cover. See <u>Front-upper cover on page 83</u>.
- Left-upper cover. See <u>Left-upper cover on page 97</u>.
- Right-rear cover. See <u>Right-rear cover on page 90</u>.
- Left cover. See Left cover on page 92.
- Stapler cover. See Stapler cover on page 85.
- Rear-upper cover. See Rear-upper cover on page 95.
- Rear cover. See Rear cover on page 98.
- Front-top cover. See Front-top cover on page 110.
- Rear-top cover. See <u>Rear-top cover on page 112</u>.
- Document feeder whole unit.
 - See Document feeder whole unit on page 127.
 - See Document feeder whole unit (M575c model) on page 130.
- Scanner-control board (SCB).
 - See Scanner-control board (SCB) on page 133.
 - See Scanner-control board (SCB; M575c) on page 136.
- Image scanner whole unit. See Image scanner whole unit on page 139.
- Interconnect board (ICB). See Interconnect board (ICB) on page 148.
- DC controller. See <u>DC controller PCA and tray on page 150</u>.
- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 153.
- Secondary transfer assembly. See <u>Secondary transfer assembly on page 171</u>.
- Power-supply fan and fan duct. See <u>Power-supply fan and fan duct on page 181</u>.
- High-voltage power supply lower. See <u>High-voltage power supply lower on page 189</u>.
- High-voltage power supply upper. See High-voltage power supply upper on page 221.

- Main-drive assembly. See Main-drive assembly on page 228.
- Fuser-drive assembly. See Fuser-drive assembly on page 239.

Remove the delivery assembly

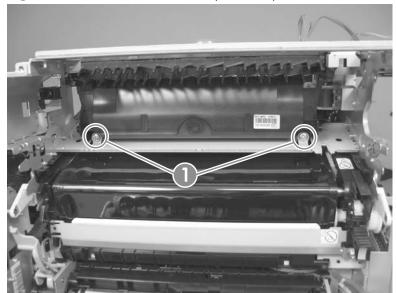
1. Remove two screws (callout 1), and then remove the guide (callout 2).

Figure 1-359 Remove the delivery assembly (1 of 5)



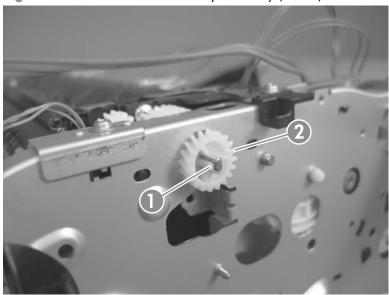
Remove two screws (callout 1).

Figure 1-360 Remove the delivery assembly (2 of 5)



3. Release one tab (callout 1), and then remove the gear (callout 2).

Figure 1-361 Remove the delivery assembly (3 of 5)



4. Release one tab (callout 1), and then rotate the locking clip until the tab on the clip aligns with the slot in the chassis.

Figure 1-362 Remove the delivery assembly (4 of 5)

