

Motors and fans

Pickup motor

- 1 Remove the ADF back cover. See page 154.
- 2 Loosen, but do not remove, three screws on the motor mount (callout 1).

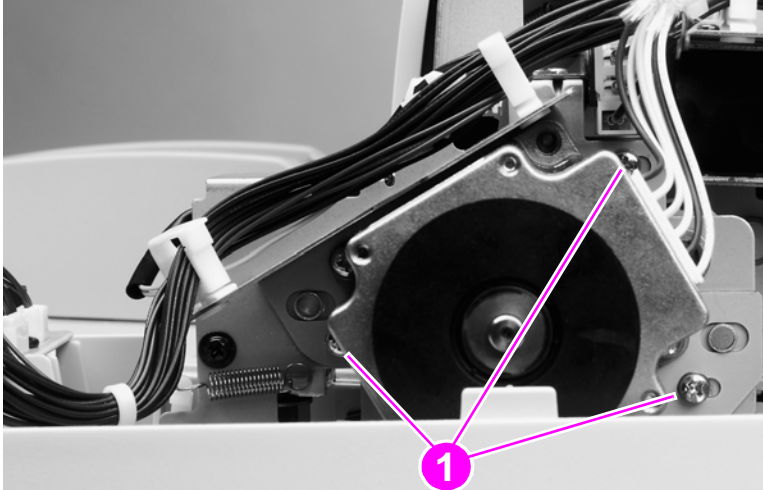


Figure 133. Pickup motor (1 of 2)

- 3 Slide the motor toward the right to loosen belt tension.
- 4 Retighten the three screws on the motor mount.
- 5 Disconnect one connector (callout 2) and remove two screws (callout 3).
- 6 Remove the pickup motor.

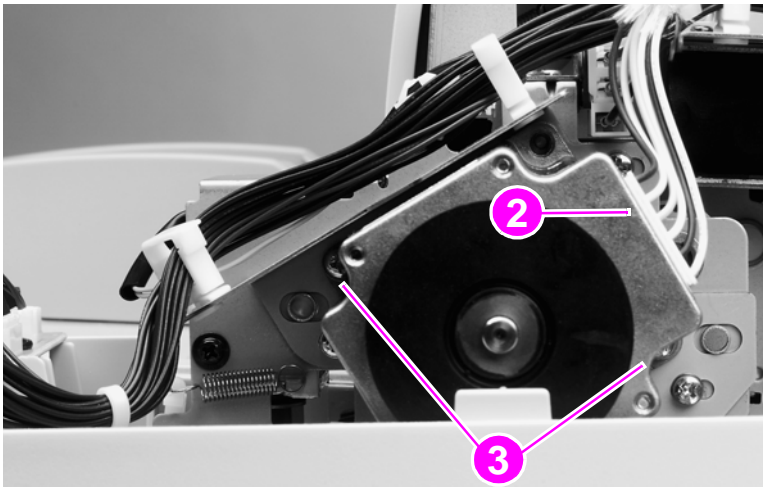


Figure 134. Pickup motor (2 of 2)

To reinstall

Loosen the three screws on the motor mount, and allow the spring to adjust the position of the motor before retightening the screws. After replacing this motor, perform the motor speed calibration and ADF scaling operation in chapter 7. See “ADF calibrations” on page 274.

Note

After replacing this motor, perform the motor speed calibration and ADF scaling operation in chapter 7. See “ADF calibrations” on page 274.

Note

Make sure the belt is captured on the motor gear.

Delivery motor

- 1 Remove the ADF back cover. See page 154.
- 2 Use needlenose pliers to remove one spring (callout 1).
- 3 Remove one screw (callout 2) and one cable clamp.

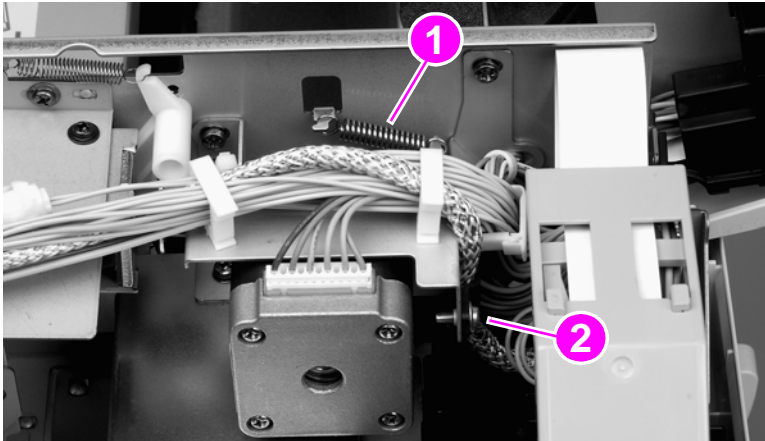


Figure 135. Delivery motor (1 of 2)

- 4 Remove three cable ties (callout 3) and disconnect one connector (callout 4).
- 5 Remove three screws (callout 5).

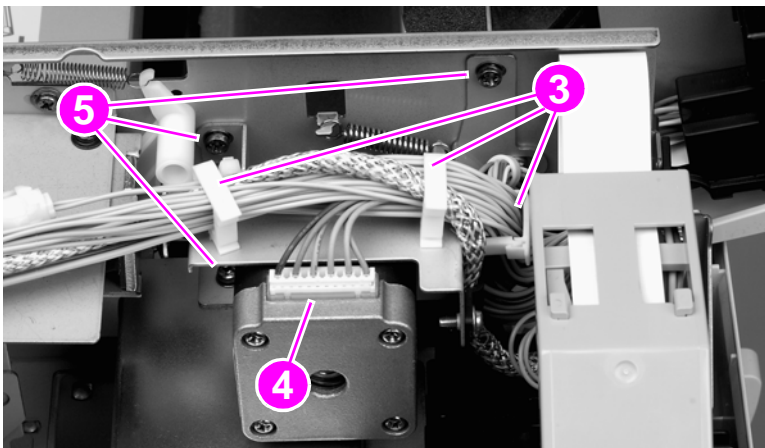


Figure 136. Delivery motor (2 of 2)

- 6 Slide the delivery motor to the right.
- 7 Remove the delivery motor with the motor mount.
- 8 Remove two screws from the back of the mount.
- 9 Remove the delivery motor from the motor mount.

To reinstall

Install the three motor mount screws but do not tighten them. Reinstall the tension spring, and allow the spring to position the motor and mount before tightening the mount screws. After replacing this motor, perform the glass scaling calibration and motor speed calibration in chapter 7. See “Glass calibrations” on page 282 and “ADF calibrations” on page 274.

Note

After replacing this motor, perform the glass scaling calibration and motor speed calibration in chapter 7. See “Glass calibrations” on page 282 and “ADF calibrations” on page 274.

Note

Make sure the belt is captured on the motor gear.

Flatbed motor

- 1 Remove the flatbed back cover. See page 160.
- 2 Remove the flatbed right cover. See page 161.
- 3 Remove three screws (callout 1) and one reinforcement plate (callout 2).

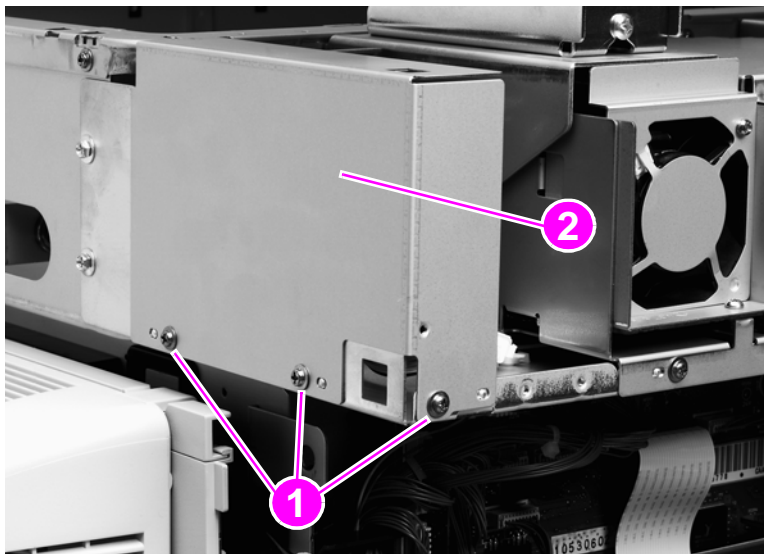


Figure 137. Flatbed motor (1 of 3)

- 4 Loosen two screws (callout 3).

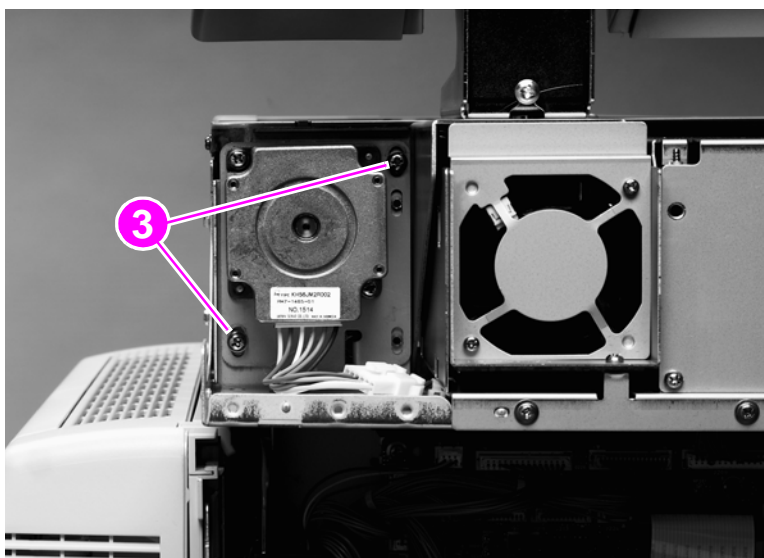


Figure 138. Flatbed motor (2 of 3)

- 5 Slide the motor down to loosen tension on the belt.
- 6 Retighten the two screws.
- 7 Remove two screws (callout 4).
- 8 Remove the flatbed motor.

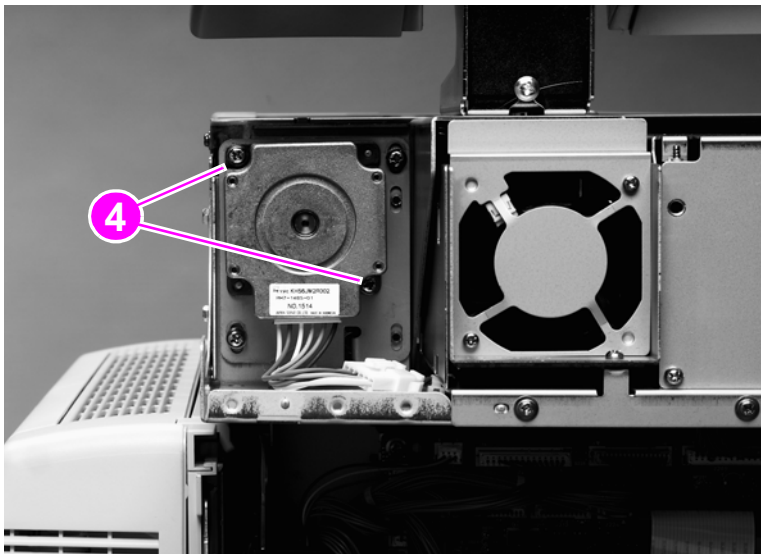


Figure 139. Flatbed motor (3 of 3)

To reinstall

Loosen two screws on the motor mount, and allow the spring to adjust the position of the motor before retightening the screws. After replacing this motor, perform the scanner/ADF scaling calibration and motor speed calibration in chapter 7. See “Scanner/ADF calibration simplified” on page 271.

Note Make sure the belt is captured on the motor gear.

Power supply assembly

- 1 Remove the flatbed back cover. See page 160.
- 2 Disconnect the power supply connector (callout 1).

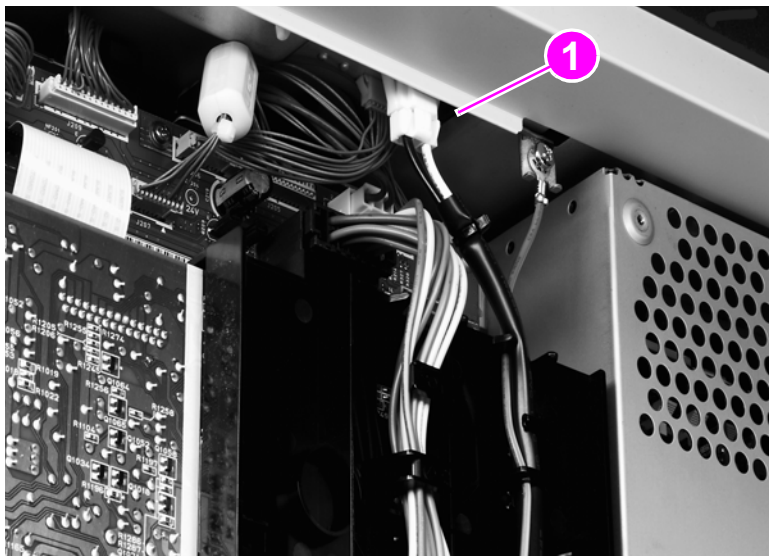


Figure 140. Power supply assembly (1 of 6)

- 3 Remove two screws (callout 2) and remove the upper rail (callout 3).

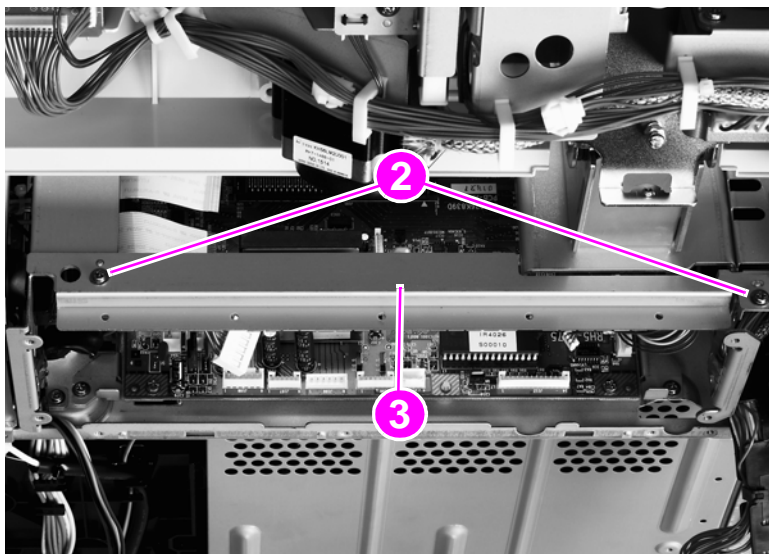


Figure 141. Power supply assembly (2 of 6)

- 4 Remove five screws (callout 4) and remove the RFI shield plate (callout 5).

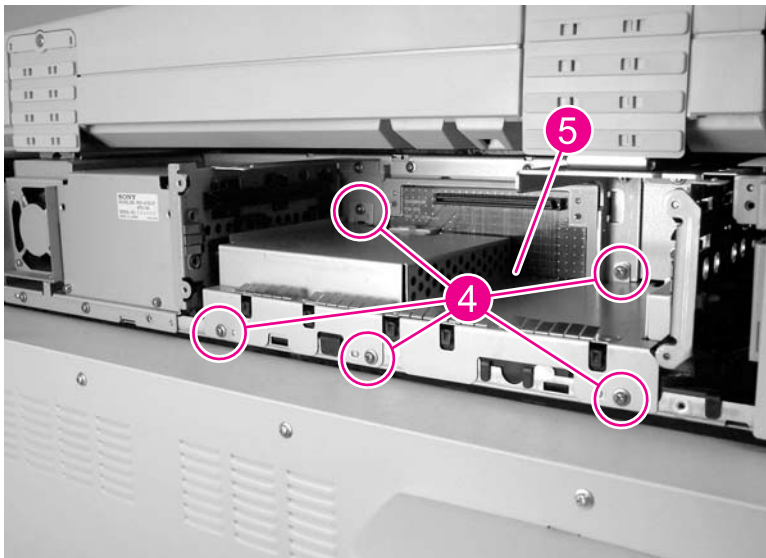


Figure 142. Power supply assembly (3 of 6)

- 5 Unlock the connector guide claw (callout 6).

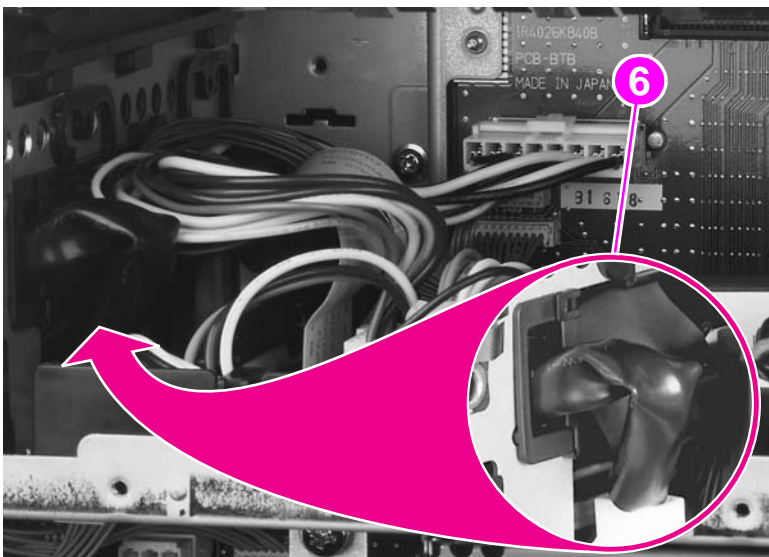


Figure 143. Power supply assembly (4 of 6)

- 6 Remove two screws (callout 7) and remove the left shield plate (callout 8).

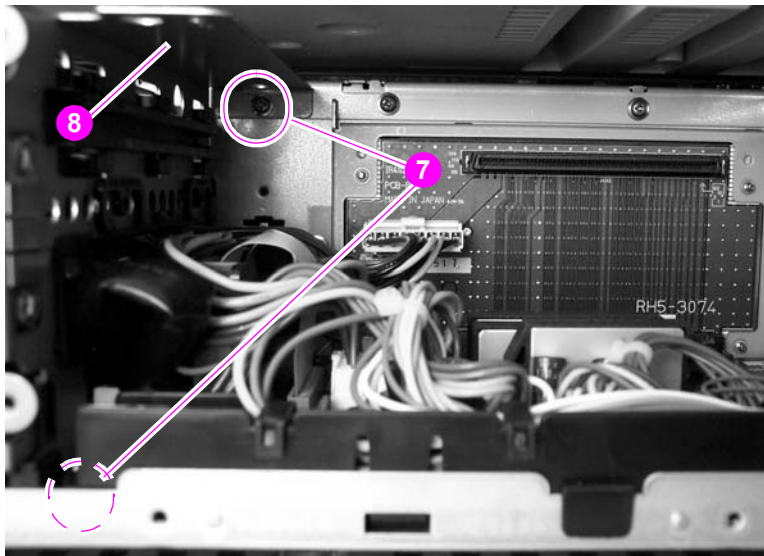


Figure 144. Power supply assembly (5 of 6)

- 7 Remove two screws (callout 9).

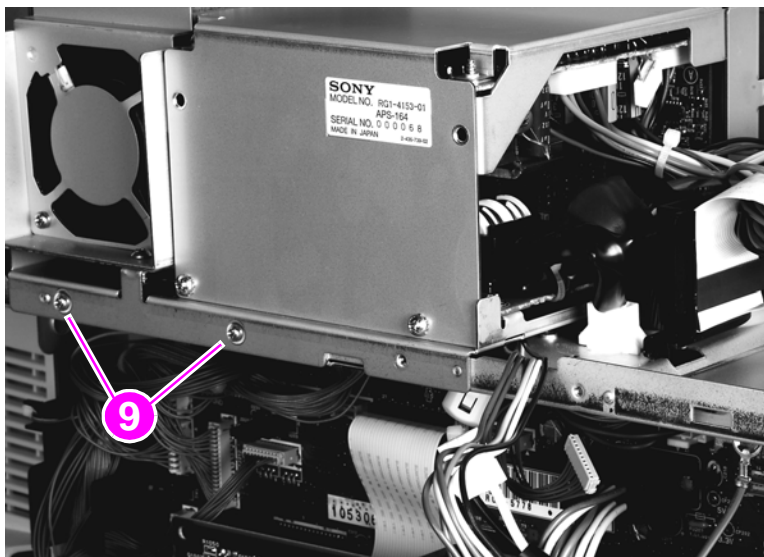


Figure 145. Power supply assembly (6 of 6)

- 8 Slide the power supply assembly out slightly.
- 9 Disconnect two connectors: one from the scanner controller board (SCB) and one from the intermediate PCB.
- 10 Thread the power supply connector up through the sheet metal.
- 11 Remove the power supply assembly.

To reinstall

Make sure not to pinch any cables when reinstalling the left shield plate. When reinstalling the power supply assembly, replace the two screws in the left and center holes.

ADF fan assembly

Note

The ADF fan is an intake fan.

- 1 Remove the ADF back cover. See page 154.
- 2 Remove two screws (callout 1) in the plastic fan housing.
- 3 Lift out the ADF fan and housing.

Note

You might have to lift up the cable guide assembly (callout 2) to remove the ADF fan.

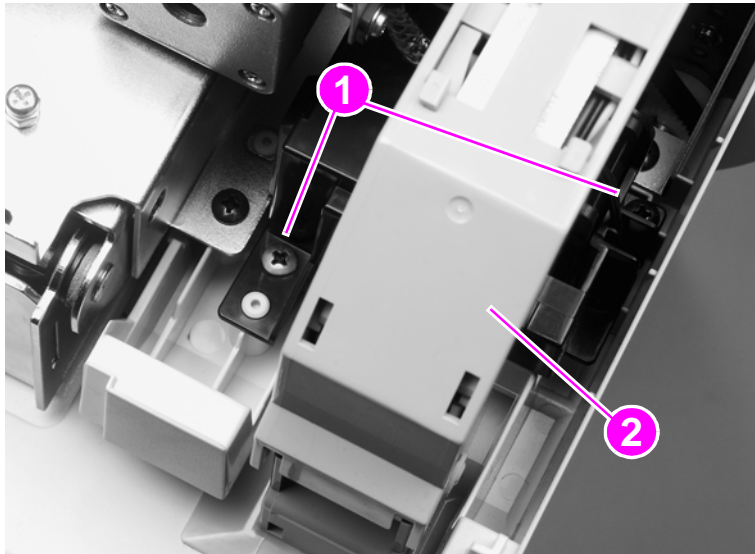


Figure 146. ADF fan

- 4 Disconnect one connector from the ADF fan.
- 5 Remove the ADF fan from the housing.

To reinstall

When reinstalling the ADF fan, make sure the direction of the airflow arrow marked on the fan matches the airflow arrow on the housing.

Flatbed fan assembly

Note

The flatbed fan is an intake fan.

- 1 Remove the flatbed left cover. See page 162.
- 2 Remove two screws (callout 1).

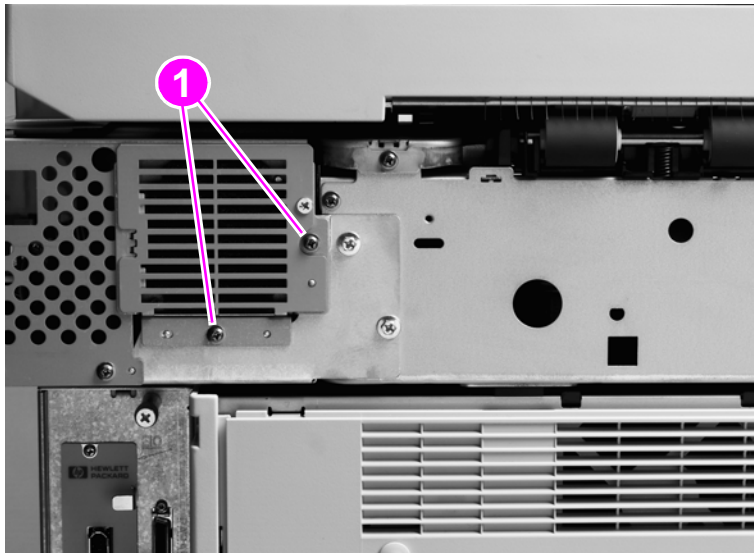


Figure 147. Flatbed fan assembly

- 3 Remove the flatbed fan assembly.
- 4 Disconnect one connector.

PCB assemblies



ADF analog processor PCB (HP LJ 9000mfp/9000Lmfp only)

- 1 Disconnect one ribbon cable (callout 1).
- 2 Remove four mount screws (callout 2).
- 3 Lift the ADF analog processor PCB to remove it.

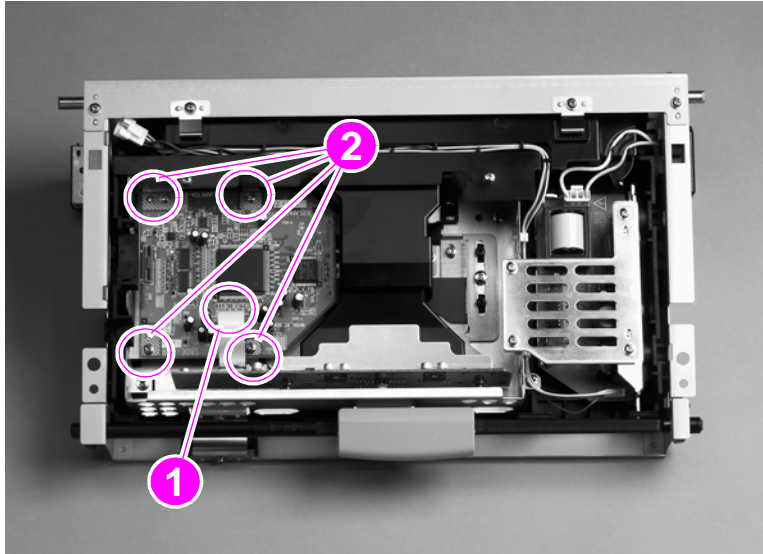


Figure 148. ADF analog processor PCB

To reinstall

Make sure that the mount pins are aligned correctly before securing the PCB with the mount screws.

ADF inverter PCB (HP LJ 9000mfp/9000Lmfp only)

Note

For the HP LJ 9040mfp/9050mfp/9500mfp, replace the entire optical assembly. The inverter for these MFPs is not a field replaceable unit.

- 1 Remove four screws (callout 1) and remove the inverter retaining plate (callout 2).

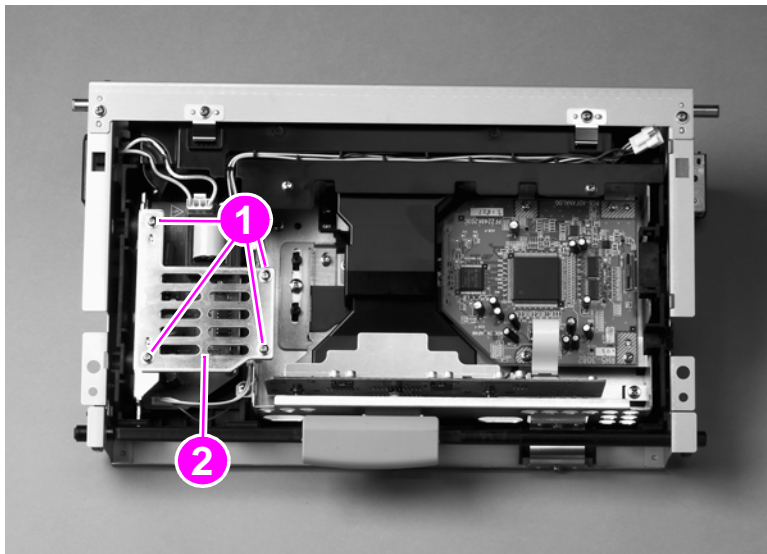


Figure 149. ADF inverter PCB (1 of 2)

- 2 Disconnect two connectors (callout 3).
- 3 Remove three screws (callout 4).
- 4 Slide the ADF inverter PCB assembly (callout 5) up and lift to remove it.

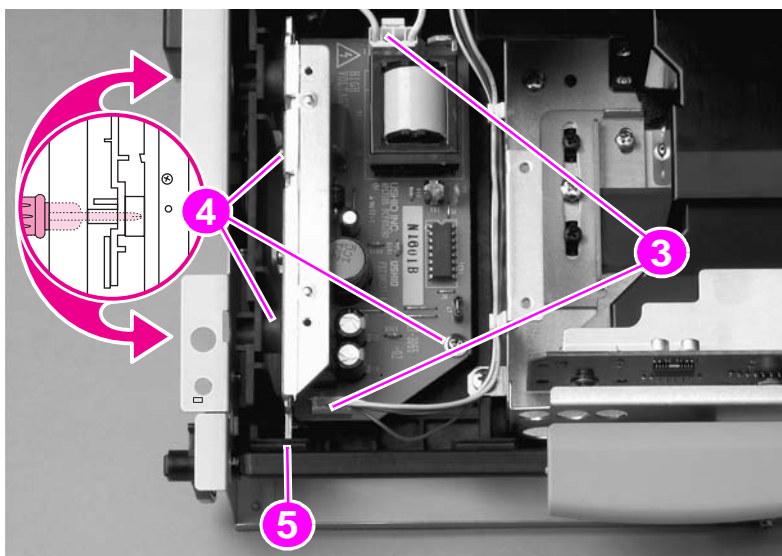


Figure 150. ADF inverter PCB (2 of 2)

ADF width detection sensor assembly

- 1 Remove the white board. See page 157.
- 2 Remove two screws (callout 1).
- 3 Remove the sheet metal plate while holding the plastic assembly in place.
- 4 Replace the two screws.
- 5 Remove two screws (callout 2).
- 6 Remove one connector (callout 3).
- 7 Remove the ADF width detection sensor assembly.

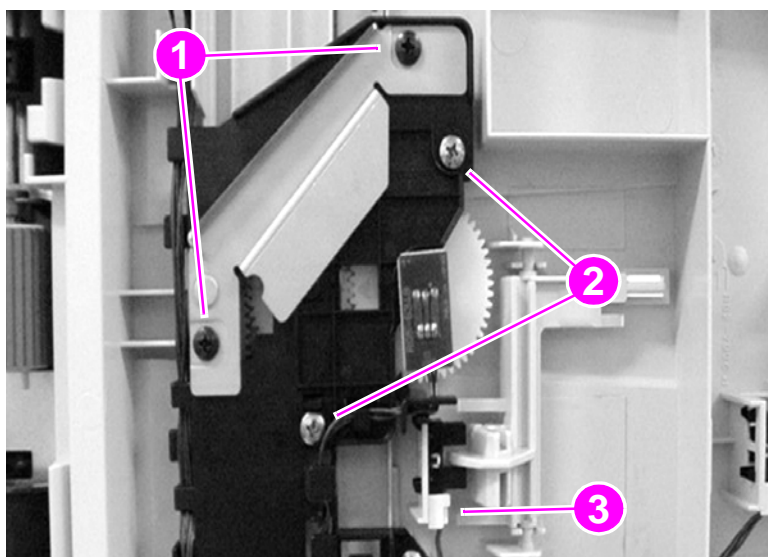


Figure 152. ADF width detection sensor assembly

To reinstall

Make sure you replace the sheet metal plate.

Make sure to correctly align the arrows on the three gears. When the ADF width guides are extended to the maximum width, the arrow of each gear should be pointing to the left. If the gears are not properly aligned, they will not report the correct width values.

Make sure to perform the ADF width calibration procedure in the service menu.

Note

By not removing the larger, plastic assembly, you will not have to reinstall all three gears. If you accidentally remove the larger assembly, make sure you realign all three gears. Perform the ADF width calibration procedure from the control-panel service menu. See “Service menu (CLJ 9500mfp)” on page 85.

Flatbed inverter PCB (HP LJ 9000mfp/9000Lmfp only)

Note

For the HP LJ 9040mfp/9050mfp/9500mfp, replace the entire flatbed optical assembly. The inverter for these MFPs is not a field replaceable unit.

- 1 Remove the flatbed optical unit. See page 188.
- 2 Grasp the ends of the mirror cover (callout 1) and lift to remove it.

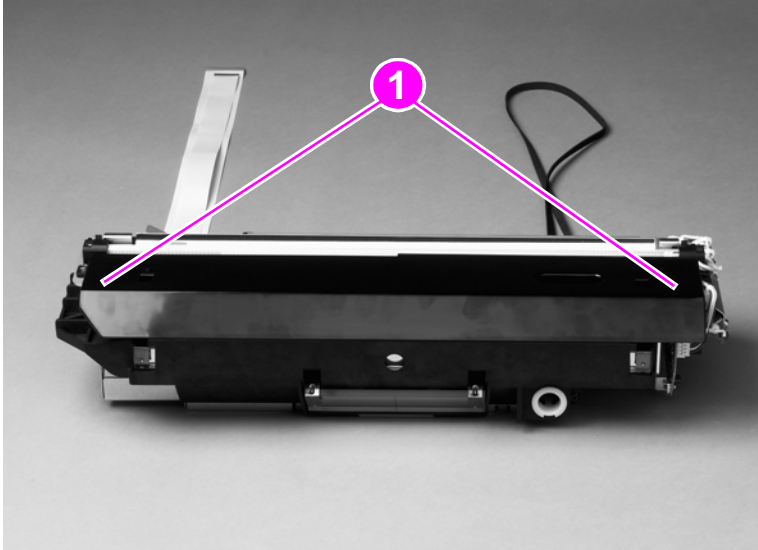
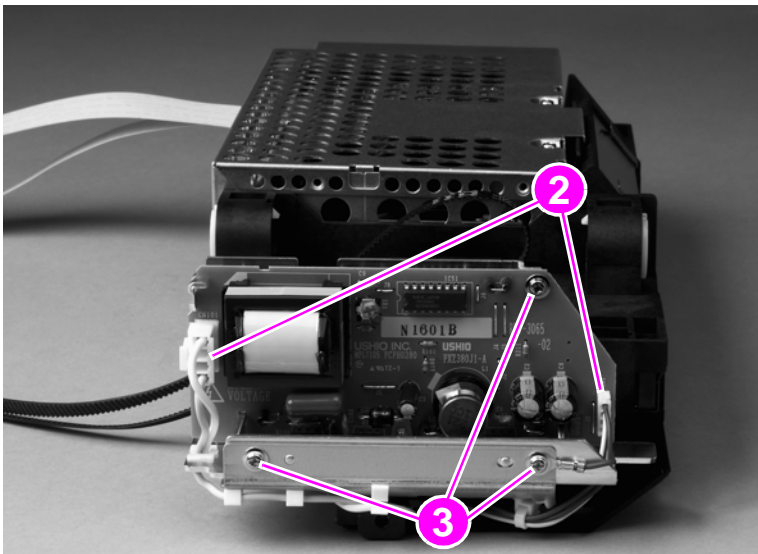


Figure 153. Flatbed inverter PCB (1 of 2)

- 3 Disconnect two connectors (callout 2).
- 4 Remove three screws (callout 3) and remove the flatbed inverter PCB assembly.



Flatbed inverter PCB (2 of 2)

Flatbed intermediate PCB)

- 1 Remove the following components:
 - flatbed right cover—See page 161.
 - flatbed left cover—See page 162.
 - glass—See page 165.
- 2 Remove two screws (callout 1) and remove the flatbed-mount cover (callout 2).

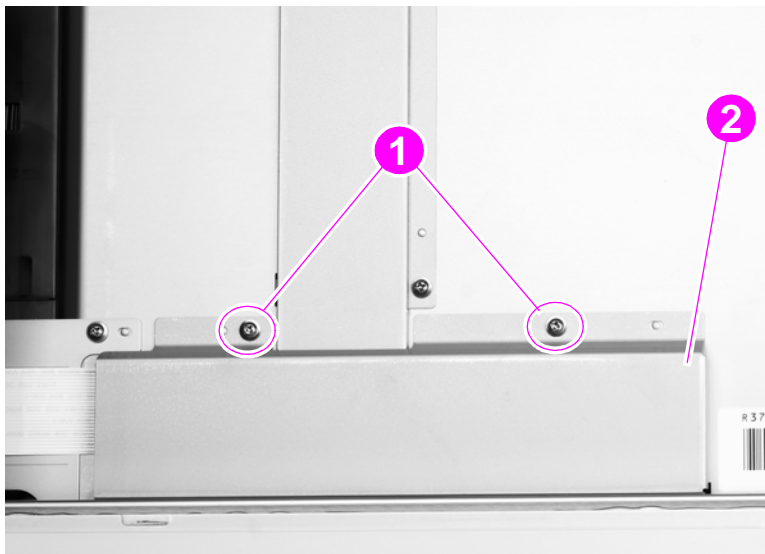


Figure 154. Flatbed intermediate PCB (1 of 2)

- 3 Disconnect four ribbon cables.

Note Two of the cables are ZIF cables, and the connectors do not have retaining clips.

CAUTION The retaining clips on the two center connectors are fragile and can break easily.

- 4 Remove one screw (callout 3).

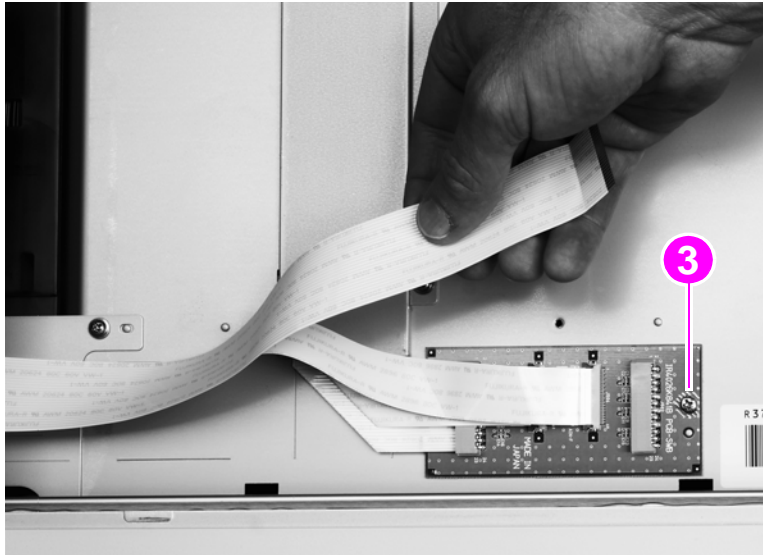


Figure 155. Flatbed intermediate PCB (2 of 2)

- 5 Remove the flatbed intermediate PCB.

Scanner controller board

- 1 Remove the copy connect board. See page 158.
- 2 Remove the flatbed back cover. See page 160.
- 3 Remove two screws (callout 1) and the upper rail (callout 2).

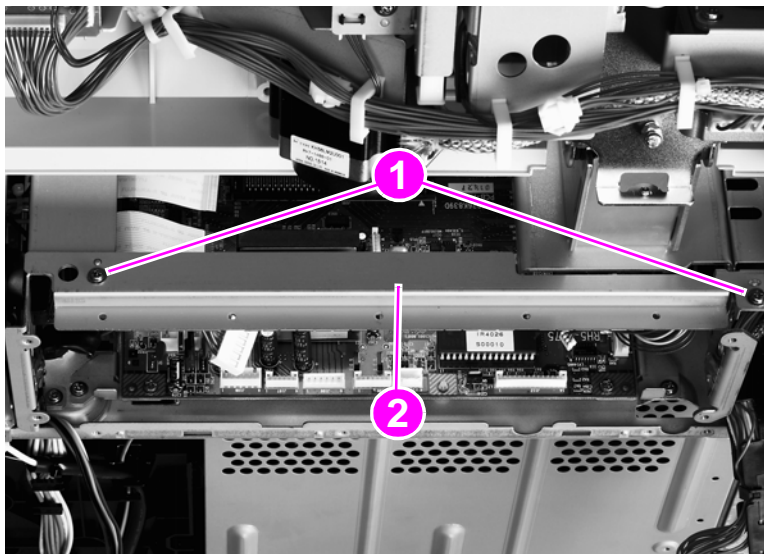


Figure 156. Scanner controller board (1 of 5)

- 4 Remove five screws (callout 3) and remove the RFI shield plate (callout 4).

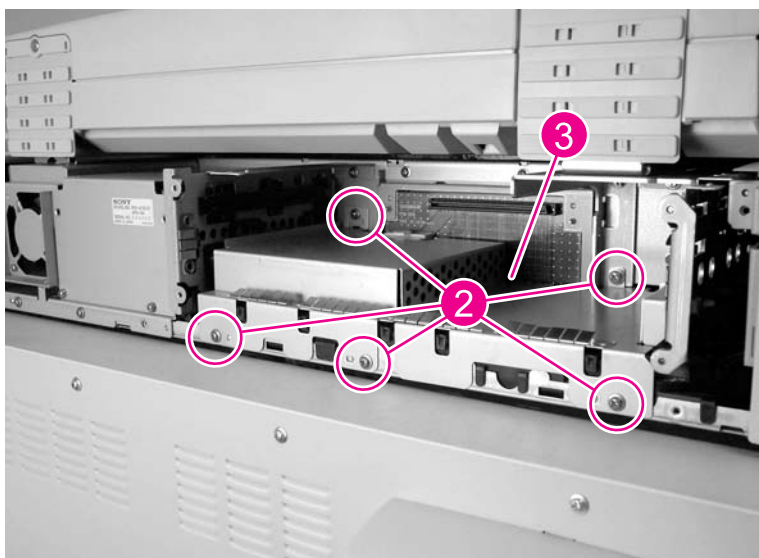


Figure 157. Scanner controller board (2 of 5)

- 5 Disconnect 11 connectors and three ribbon cables.
- 6 Release two tabs (callout 3) and remove one cable guide (callout 4).

Hint

It is not necessary to remove the cables from the cable guide.

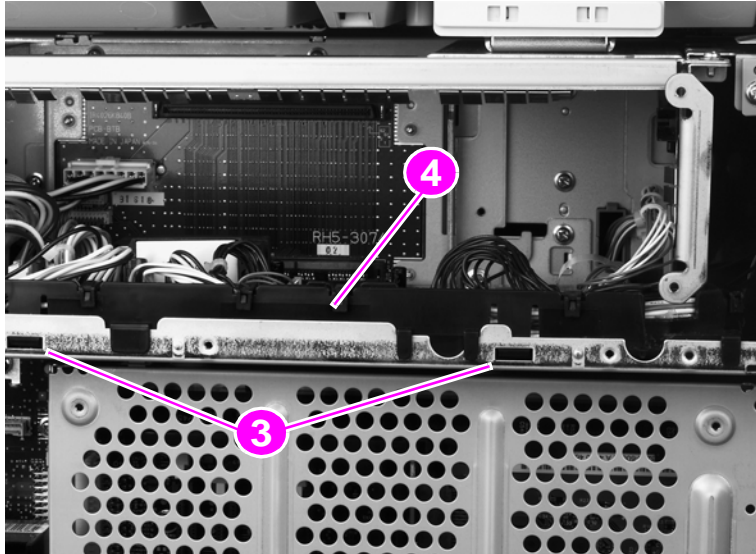


Figure 158. Scanner controller board (3 of 5)

Note

Remove the two screws in the sheet metal. Do not remove the screws in the SCB.

- 7 Remove two screws (callout 5).

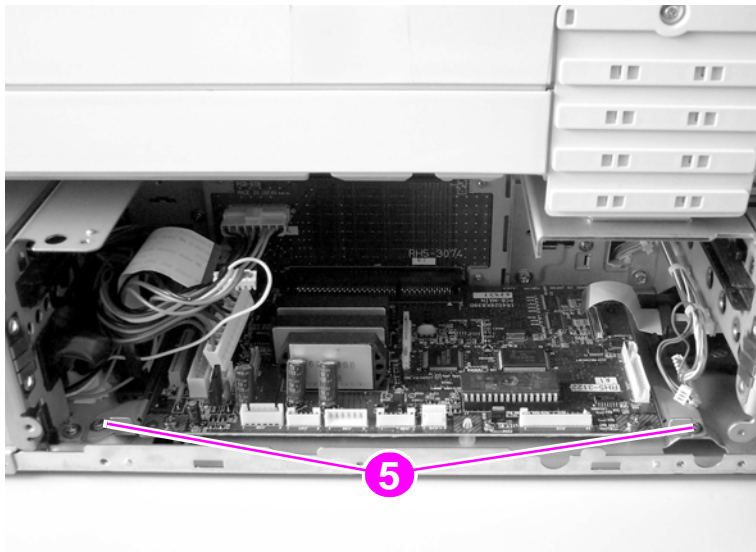


Figure 159. Scanner controller board (4 of 5)

- 8 Slide the SCB toward you to remove it.
- 9 Remove four screws (callout 6) and remove the SCB from the mounting brackets.

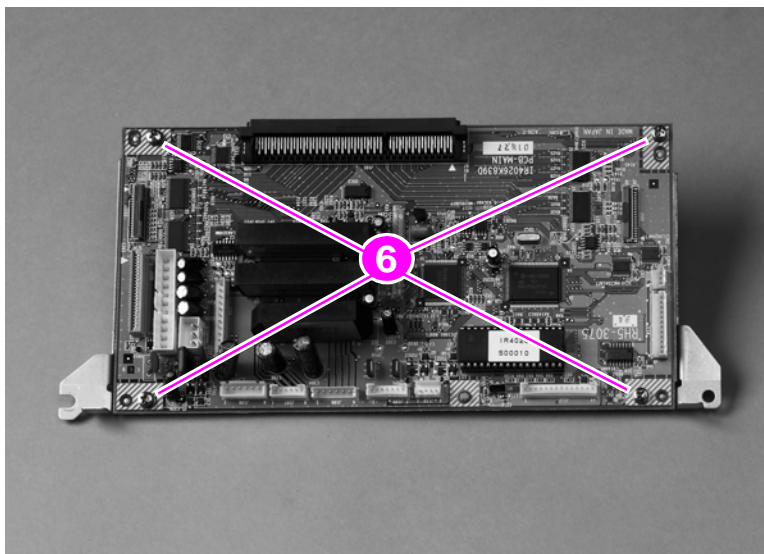


Figure 160. Scanner controller board (5 of 5)

Intermediate PCB assembly

- 1 Remove the scanner controller PCB. See page 214.
- 2 Remove one screw (callout 1) and disconnect three connectors (callout 2).
- 3 Remove the intermediate PCB assembly.

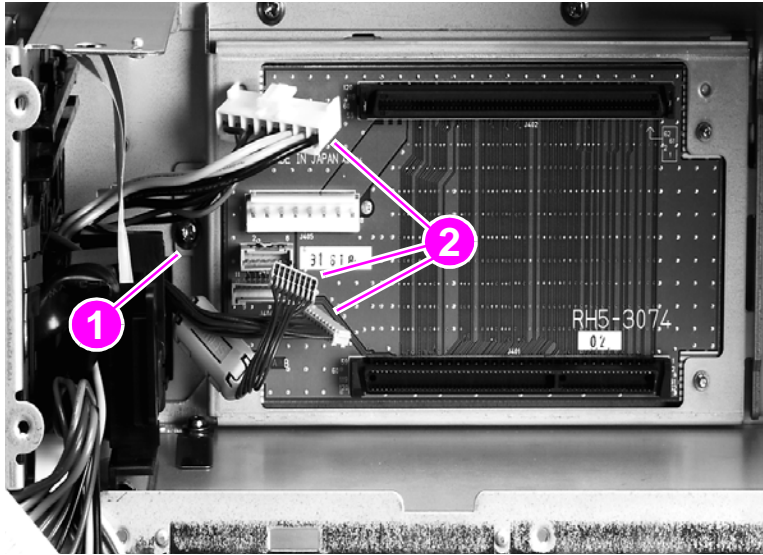


Figure 161. Intermediate PCB assembly

Note

When the ADF optic assembly is reinstalled, make sure the bushings and spring are in the correct order, and that the spring ends fit into the slots on the chassis. Make sure that the white gear is engaged with the black drive gear. See “Reinstalling the ADF optic assembly (1 of 2)” on page 217 and “Reinstalling the ADF optic assembly (2 of 2)” on page 218.

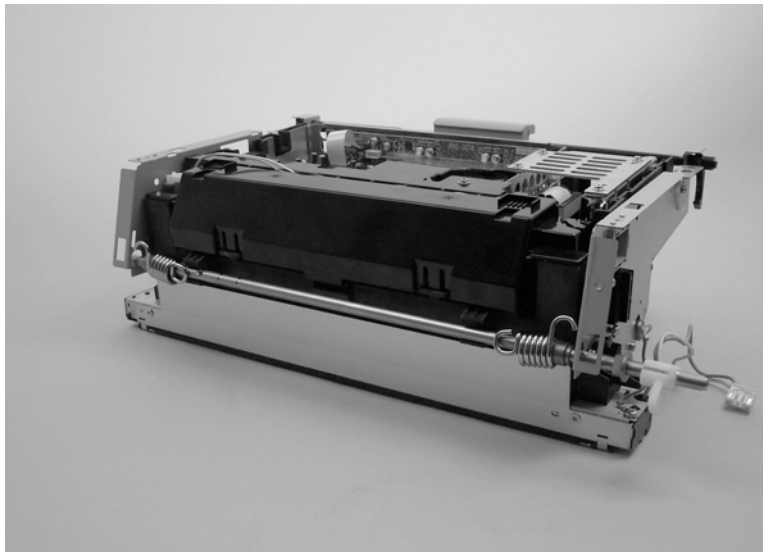


Figure 162. Reinstalling the ADF optic assembly (1 of 2)

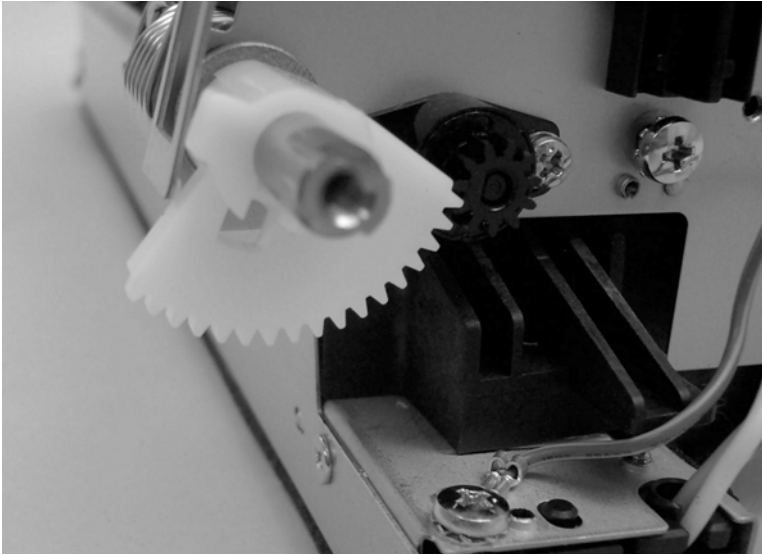


Figure 163. Reinstalling the ADF optic assembly (2 of 2)

Power supply assembly

- 1 Remove the flatbed back cover. See page 160.
- 2 Disconnect the power supply connector (callout 1).

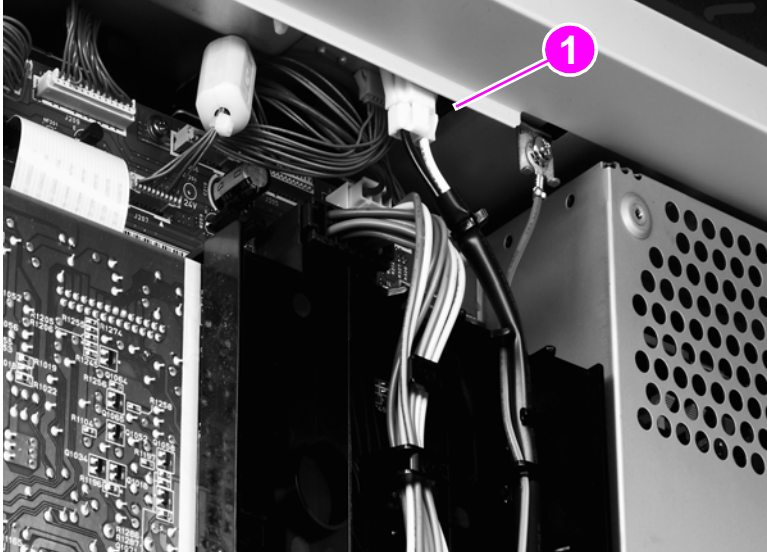


Figure 164. Power supply assembly (1 of 6)

- 3 Remove two screws (callout 2) and remove the upper rail (callout 3).

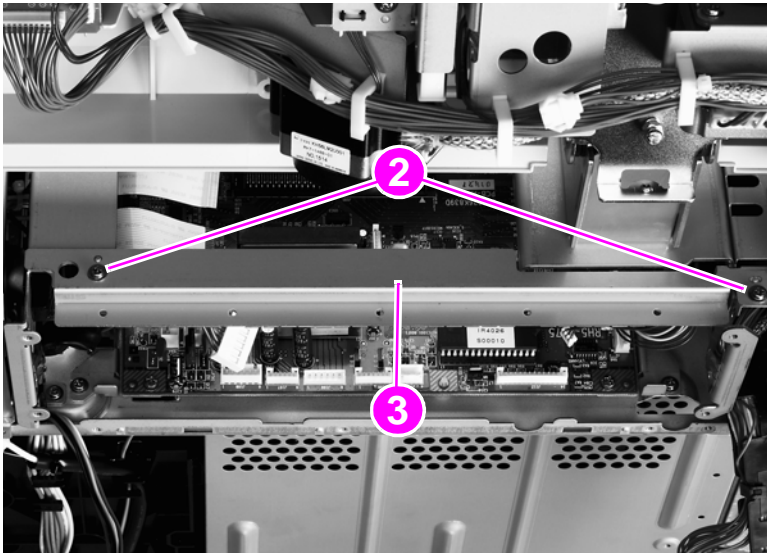


Figure 165. Power supply assembly (2 of 6)

- 4 Remove five screws (callout 4) and remove the RFI shield plate (callout 5).

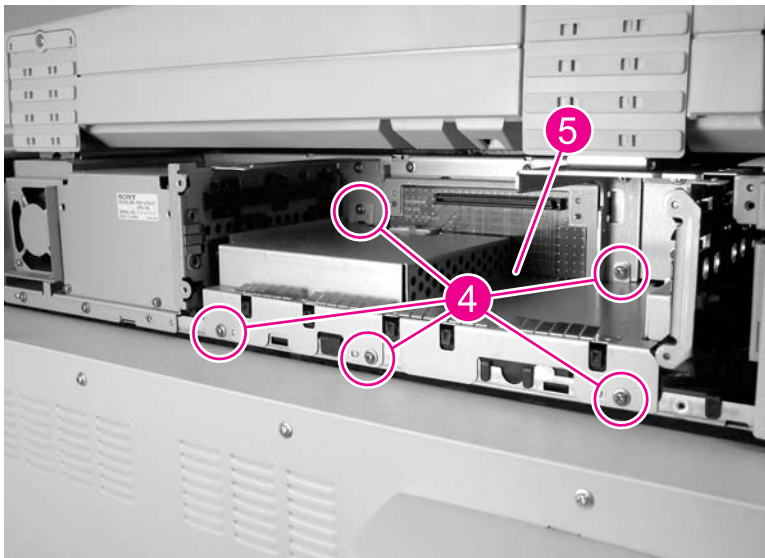


Figure 166. Power supply assembly (3 of 6)

- 5 Unlock the connector guide claw (callout 6).

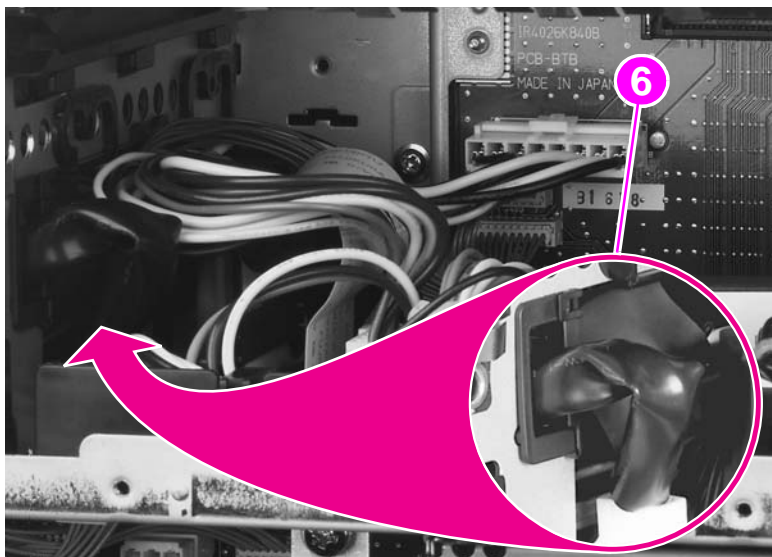


Figure 167. Power supply assembly (4 of 6)

- 6 Remove two screws (callout 7) and remove the left shield plate (callout 8).

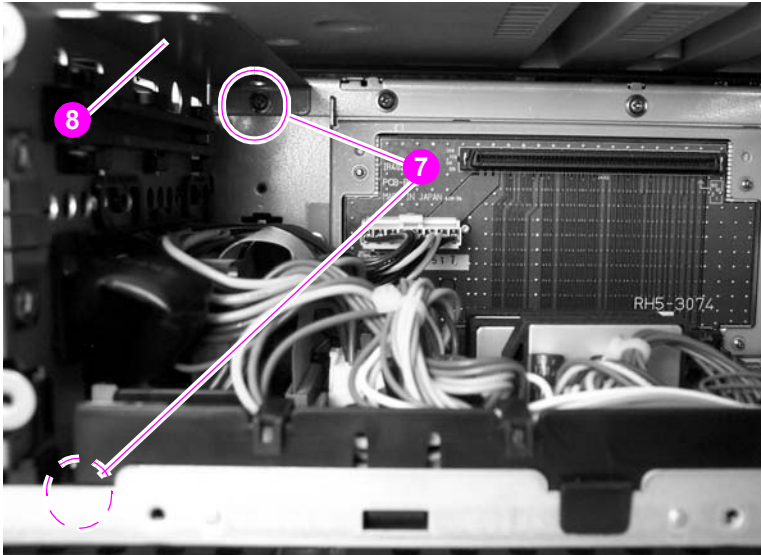


Figure 168. Power supply assembly (5 of 6)

- 7 Remove two screws (callout 9).

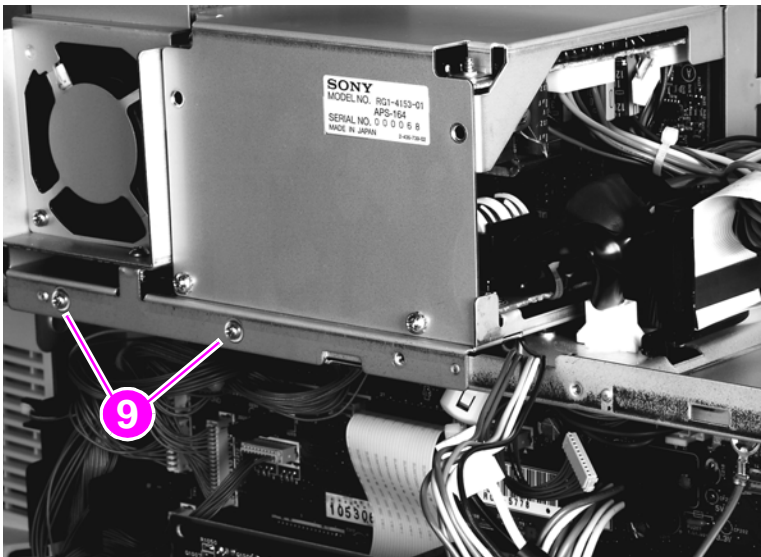


Figure 169. Power supply assembly (6 of 6)

- 8 Slide the power supply assembly out slightly.
- 9 Disconnect two connectors: one from the scanner controller board (SCB) and one from the intermediate PCB.
- 10 Thread the power supply connector up through the sheet metal.
- 11 Remove the power supply assembly.

To reinstall

Make sure not to pinch any cables when reinstalling the left shield plate. When reinstalling the power supply assembly, replace the two screws in the left and center holes.

Rollers and belts

Pickup roller (D-roller)

- 1 Remove the white board. See page 157.
- 2 Pull the tab outside of the shaft (callout 1) while sliding the pickup roller (callout 2) down to remove it.

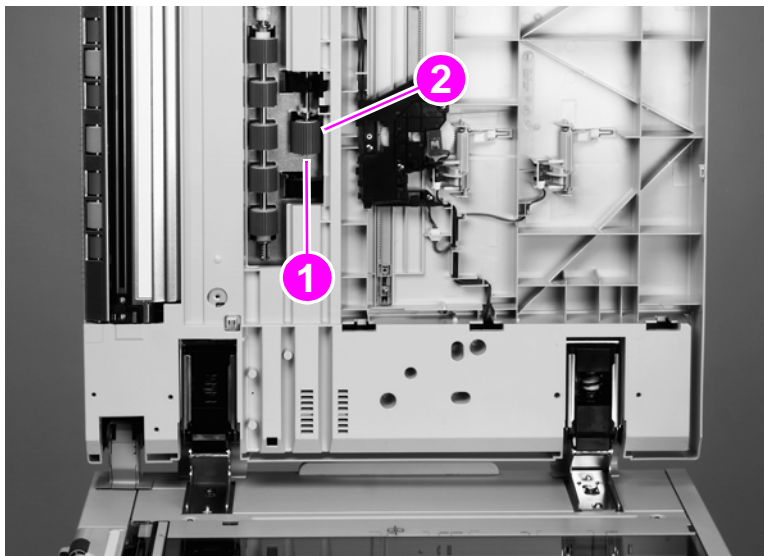


Figure 170. Pickup roller

Pickup roller assembly

- 1 Remove the pickup roller. See page 222.
- 2 Rotate the gear manually until the tab on the black circular sensor flag (callout 1) is pointing out.
- 3 Remove the lower c-clip (callout 2).
- 4 Hold the gear (callout 3) with one hand and remove the pickup roller assembly. Make sure you hold the bushing with your other hand.

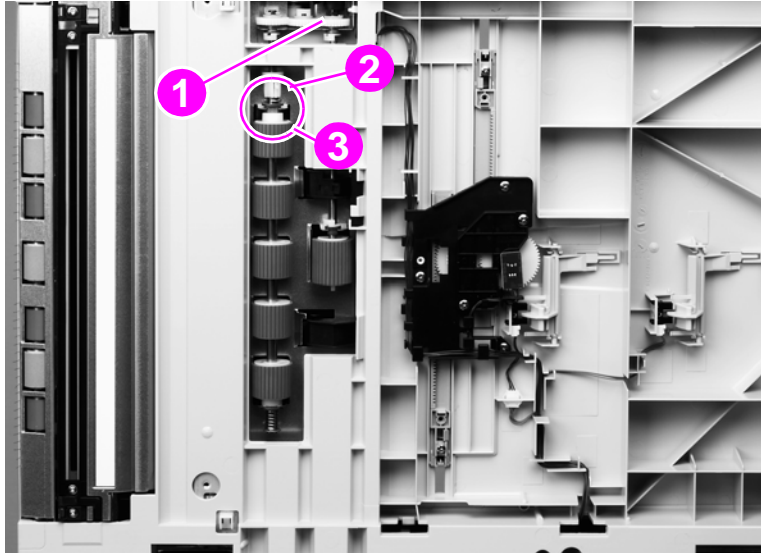


Figure 171. Pickup roller assembly

Feed roller assembly

- 1 Remove the white board. See page 157.
- 2 Disengage the locking tab and slide the collar (callout 1) up.
- 3 Push the bottom brass bushing (callout 2) down and tilt the roller assembly out to remove it.

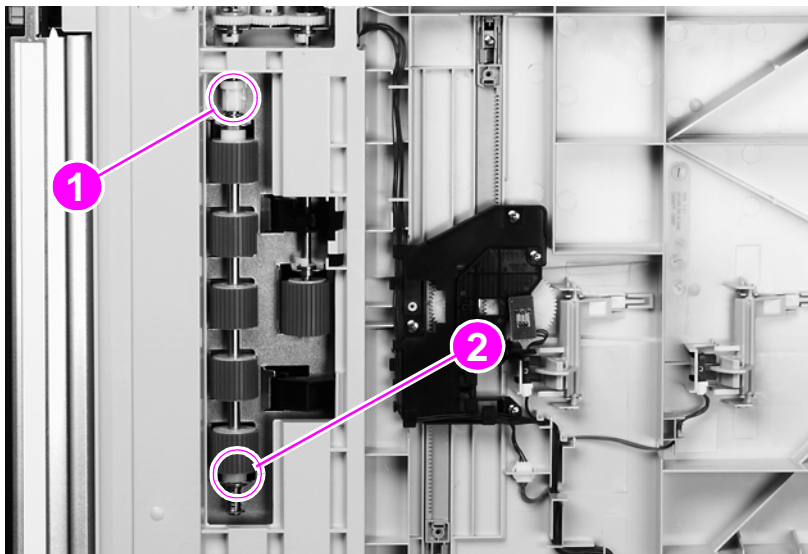


Figure 172. Feed roller assembly

Lower registration roller assembly

- 1 Remove the ADF base cover assembly. See page 165.
- 2 Disconnect the shutter solenoid connector (callout 1).
- 3 Disconnect one connector on the feeder cover detection switch (callout 2).
- 4 Disconnect one connector from the weight solenoid (callout 3).
- 5 Disconnect the paper loaded sensor connector (callout 4).

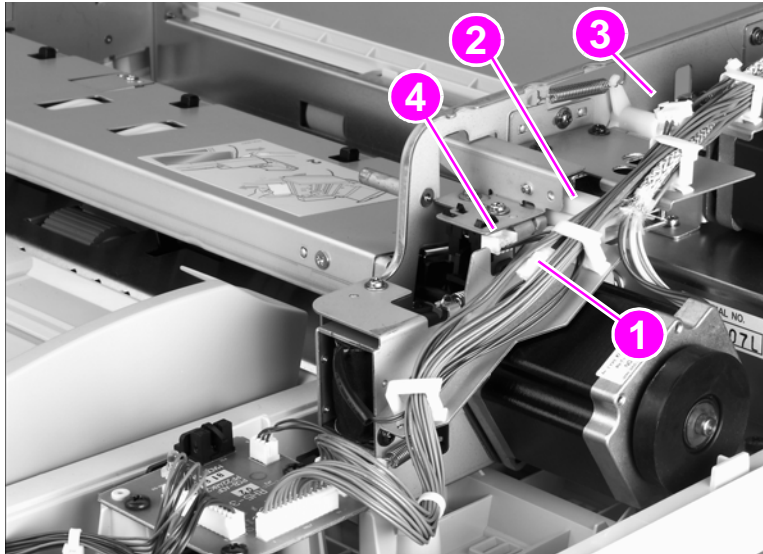


Figure 173. Lower registration roller assembly (1 of 10)

- 6 Disconnect the delivery motor connector (callout 5).
- 7 Open six cable guides and remove the cables.

Hint The six cable guides are located on the following: one from the shutter solenoid, two from the feeder cover detection switch, one from the weight solenoid, and two from the motor.

- 8 Remove one screw, and the cable clamp on the shielded cable (callout 6).

Note When reinstalling the lower registration roller assembly, one end of the cable clamp goes into the sheet metal.

- 9 Remove the tie wrap from the motor mount (callout 7), but keep the cables captured in the tie wrap.
- 10 Remove one screw (callout 8).
- 11 Push the cable cover to your right to disengage four claws (callout 9).
- 12 Tilt the cable cover up and remove it.

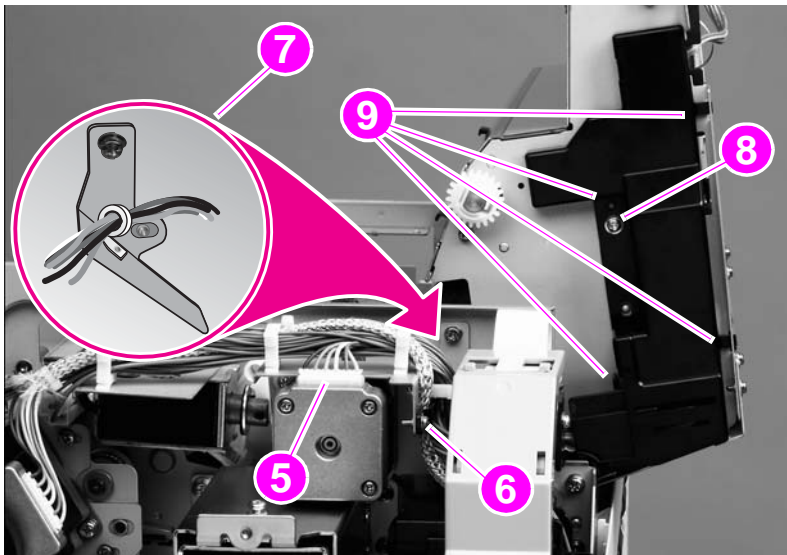


Figure 174. Lower registration roller assembly (2 of 10)

13 Remove one grounding screw (callout 10).

Hint

Twist the cable ties to disengage them, and depress the tabs to disengage the saddle clamps.

14 Remove one cable tie and two saddle clamps (callout 11).

15 Disconnect one connector and unseat one connector (callout 12).

16 Unlace and remove the cables from the cable harness (callout 13).

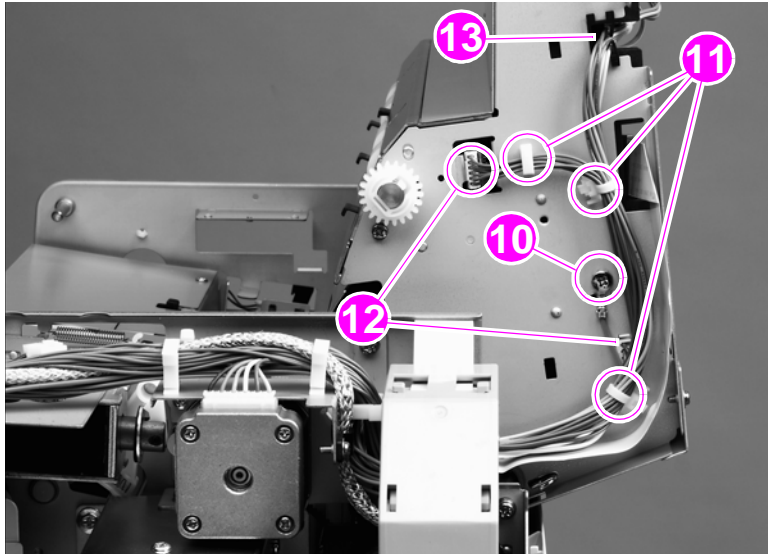


Figure 175. Lower registration roller assembly (3 of 10)

17 Remove one screw (callout 14) from the flatbed cable cover.

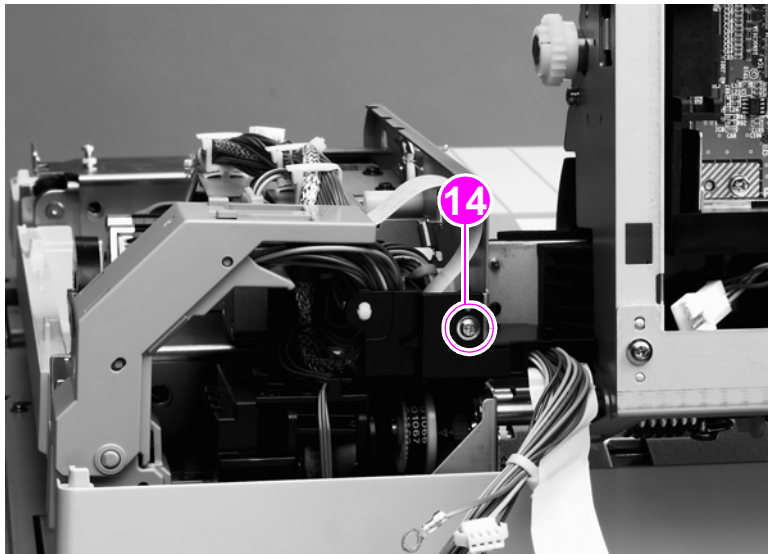


Figure 176. Lower registration roller assembly (4 of 10)

- 18 Remove one screw and the locking plate on the left hinge. Remove the ADF main assembly and place it on an ESD mat.

CAUTION

To loosen the locking plate, insert a small flatblade screwdriver in the screw hole and wiggle it back and forth to work the locking plate free. Do not use a screwdriver to pry the locking plate or it will bend.

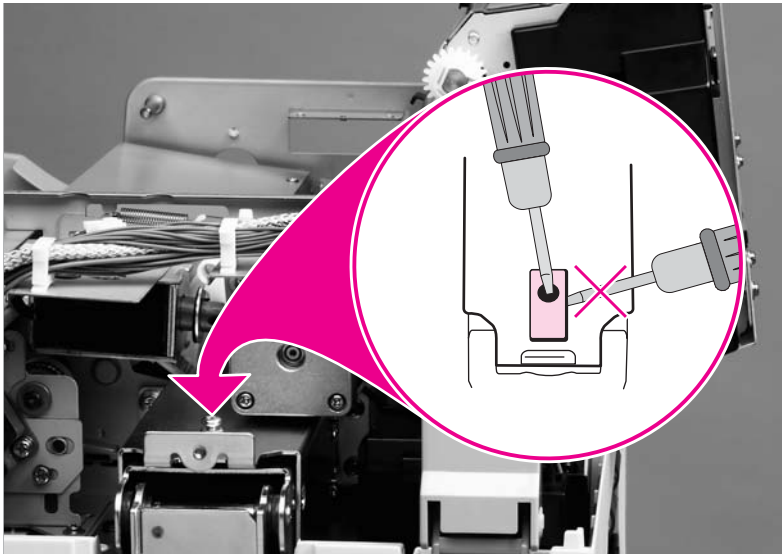


Figure 177. Lower registration roller assembly (5 of 10)

- 19 Remove five screws (callout 15), and then remove the right hinge from the ADF main assembly.

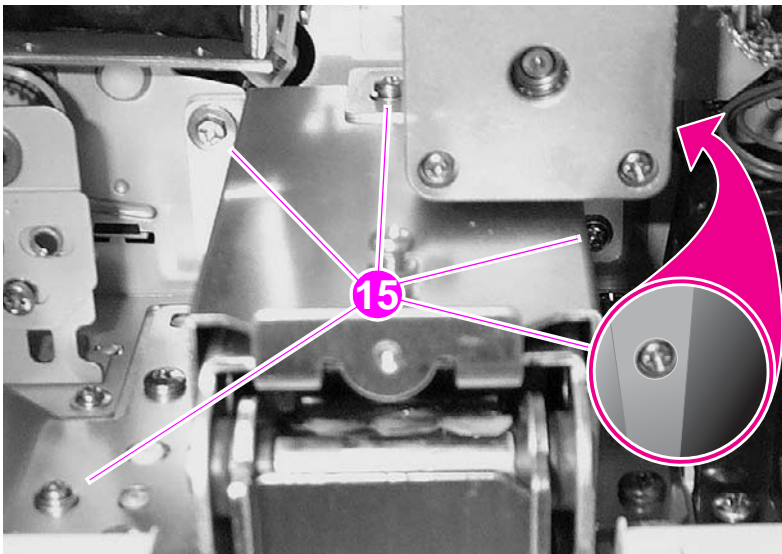


Figure 178. Lower registration roller assembly (6 of 10)

20 Use a long screwdriver to remove two screws (callout 16) in the brass plate.

CAUTION

Remove the two screws with the ADF feeder closed to prevent stripping the screws.

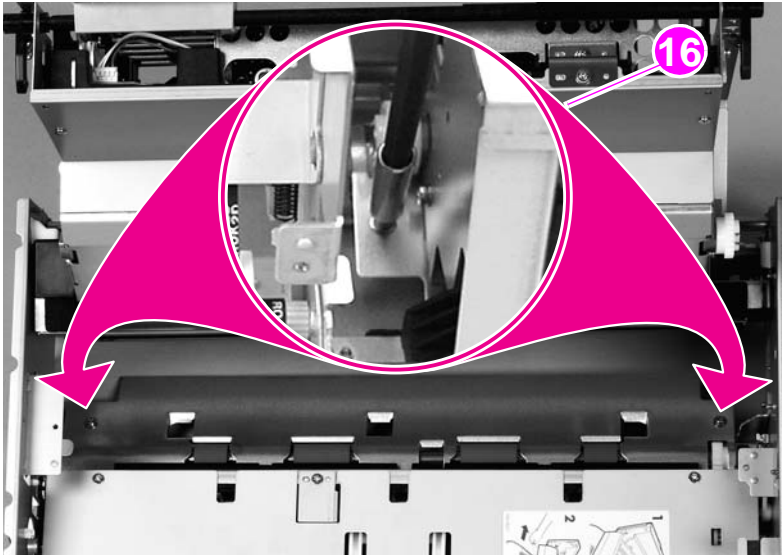


Figure 179. Lower registration roller assembly (7 of 10)

21 Remove three screws (callout 17) from the side of the ADF main assembly with the motors.

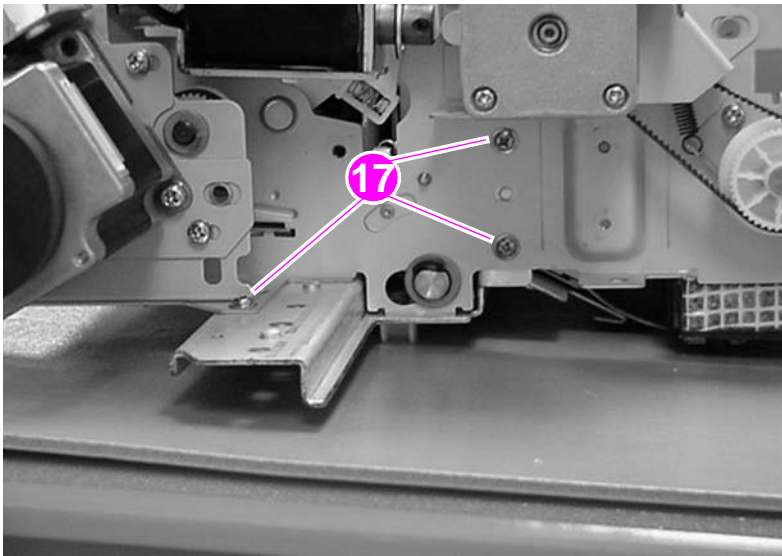


Figure 180. Lower registration roller assembly (8 of 10)

22 Remove two screws (callout 18), and remove the reinforcement rail.

Note

You might have to work the rail loose.

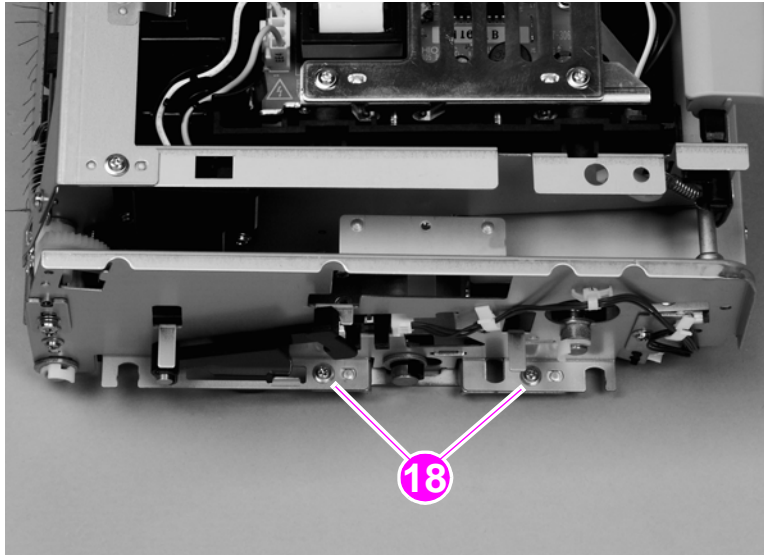


Figure 181. Lower registration roller assembly (9 of 10)

23 With the assembly open, loosen one screw (callout 19) on the registration belt tension plate.

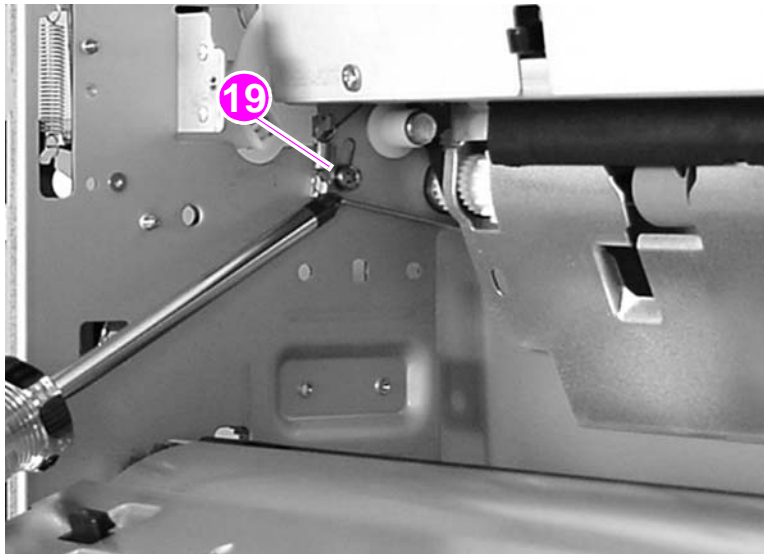


Figure 182. Lower registration roller assembly (10 of 10)

24 Rotate the plate to release tension on the registration belt.

25 Retighten the screw.

26 Remove two c-clips (one on each end of the shaft).

27 Slide off two bushings (one on each end of the shaft).

28 Slide out the lower registration assembly with the gear.

To reinstall

When reinstalling, remember to apply tension to the registration belt (loosen the screw, rotate the plate back, and tighten the screw).

Lower delivery roller

Note

When removing the delivery rollers, be sure to hold the springs (callout 1). The springs are under tension and will eject from the MFP.

- 1 Remove the lower delivery roller cover. See page 156.

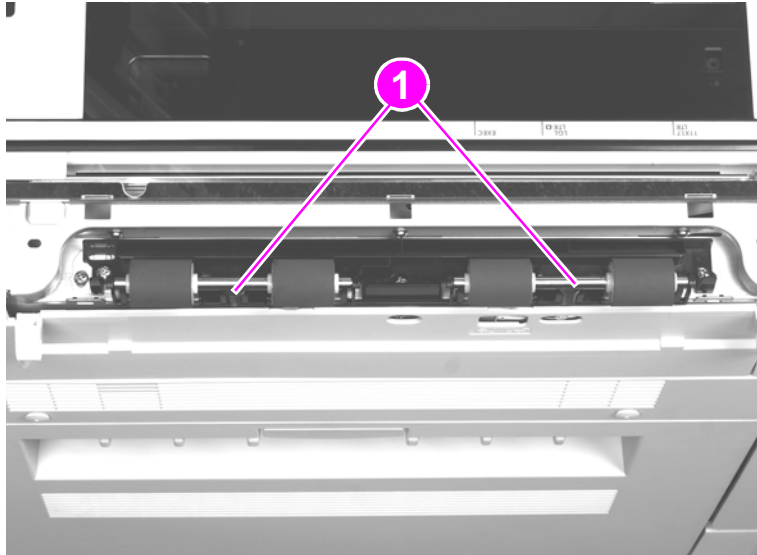


Figure 183. Lower delivery roller (1 of 2)

Note

There is lubricant on the shafts. If lubricant gets on a roller, clean the roller. See “Cleaning the MFP and accessories” in chapter 4.

- 2 Disengage the four claws (callout 2) and remove the delivery rollers with shafts (callout 3).

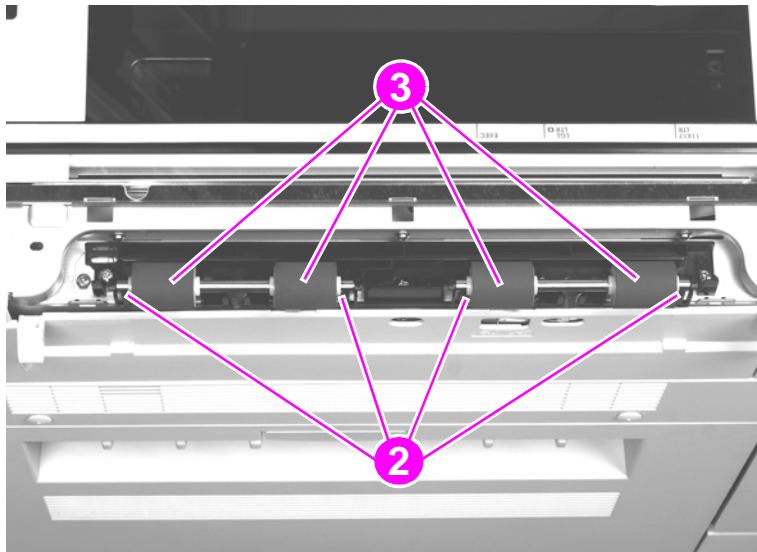


Figure 184. Lower delivery roller (2 of 2)

To reinstall

When replacing the lower delivery rollers, be sure that the keyed end of each shaft is inserted in the keyed claw. The innermost claws are the keyed claws.

Upper delivery roller assembly

- 1 Remove the ADF base cover assembly. See page 165.
- 2 Remove two c-clips (one from each end of the shaft).
- 3 Remove one gear (callout 1).
- 4 Slide off two bushings (one on each end of the shaft).
- 5 Remove two screws (callout 2) and remove the ESD strip (callout 3).

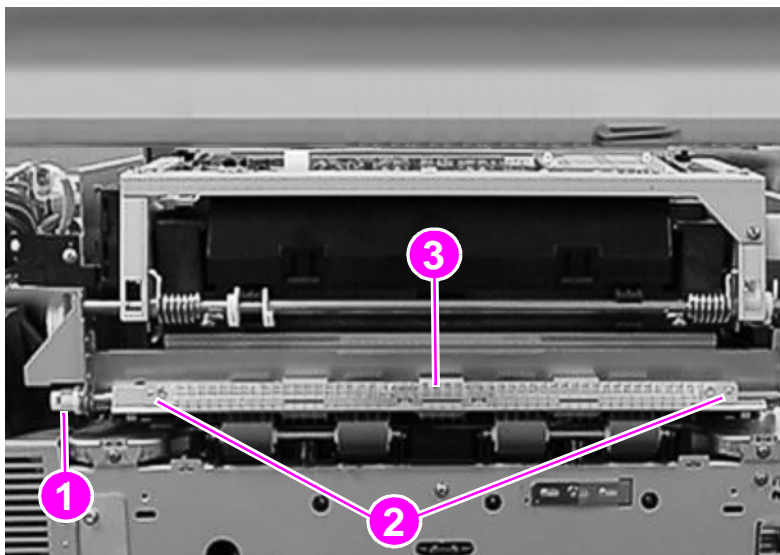


Figure 185. Upper delivery roller

- 6 Remove the upper delivery roller assembly.

Note

Slightly lift up the ADF to help in removing the upper delivery roller assembly.

To reinstall

When reinstalling, make sure the end of the shaft with the longer keyed end is toward the back of the MFP.

Separation belt assembly

Note

The separation belt assembly is not a replaceable assembly. You must replace the necessary components of the assembly.

- 1 Remove the following covers:
 - ADF back cover. See page 154.
 - ADF front cover. See page 155.
- 2 Remove four screws (callout 1) and lift off the separation belt assembly cover (callout 2).

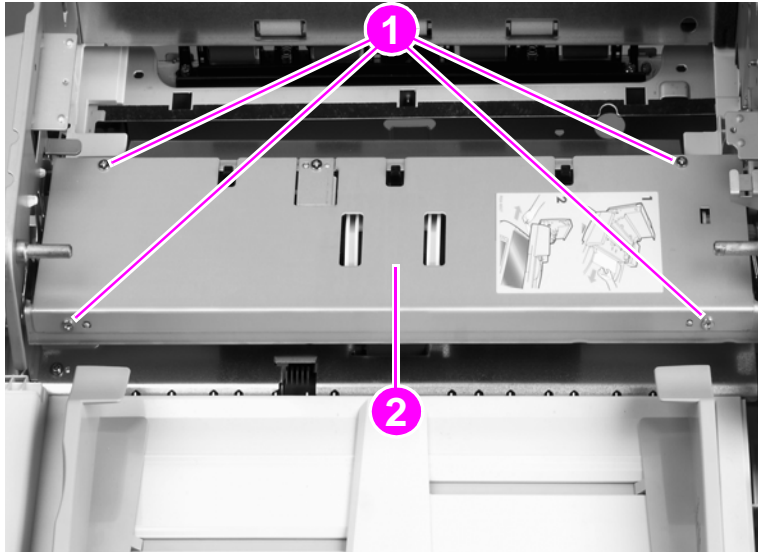


Figure 186. Separation belt assembly (1 of 6)

CAUTION

Do not touch the retaining screws (callout 3) on the gap adjustment roller. This is a factory setting and it cannot be adjusted in the field.

Hint

The retaining screws are marked with blue paint.

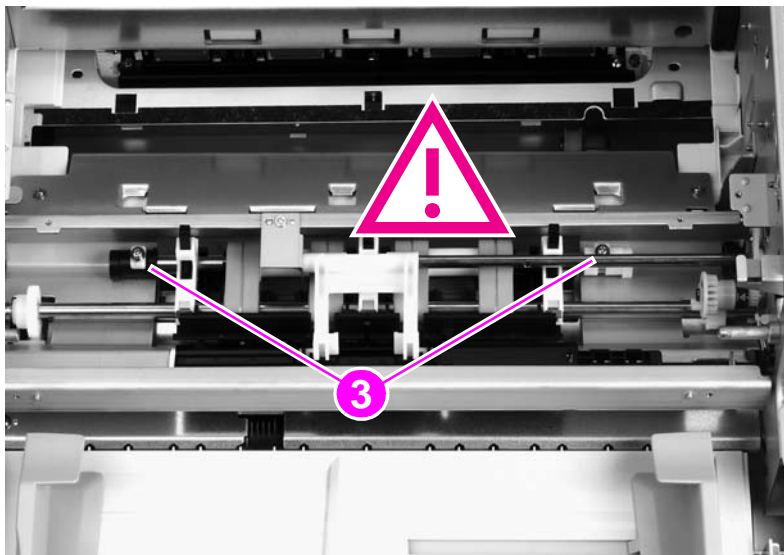


Figure 187. Separation belt assembly (2 of 6)

- 3 Remove one screw (callout 4) and lift off the weight-arm retaining plate (callout 5).

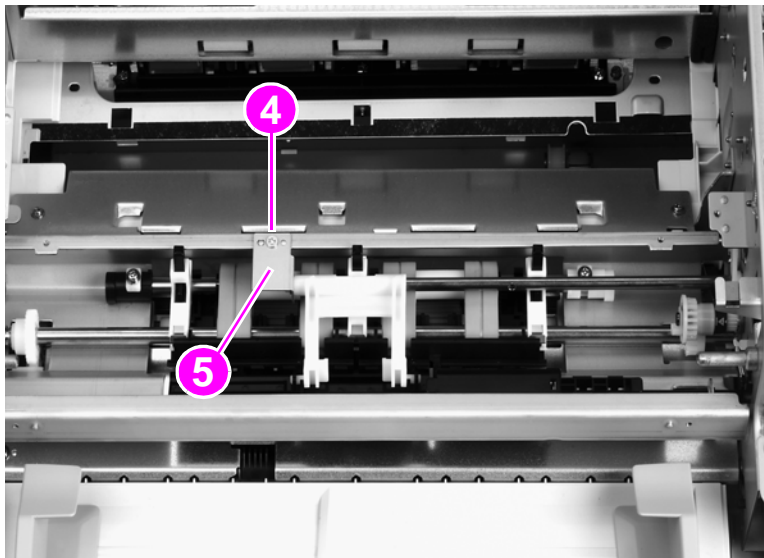


Figure 188. Separation belt assembly (3 of 6)

- 4 Tilt the end of the weight arm (callout 6) to disengage the weight arm from the solenoid lever, and remove it.

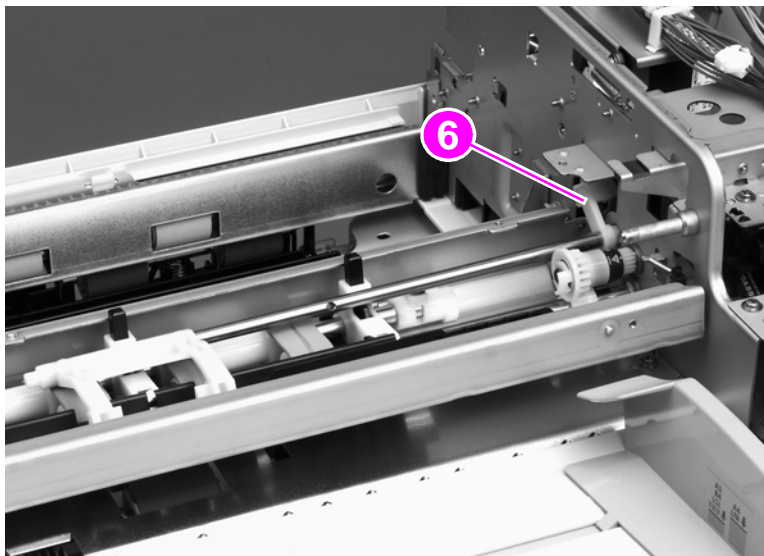


Figure 189. Separation belt assembly (4 of 6)

- 5 Remove the u-ring (callout 7) and pull off the drive gear (callout 8).

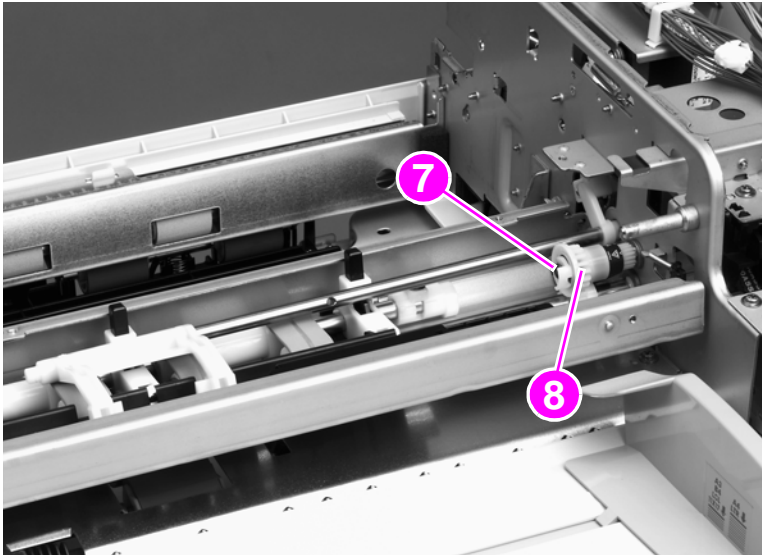


Figure 190. Separation belt assembly (5 of 6)

- 6 Push the bushing (callout 9) inward and lift out the separation belt assembly.

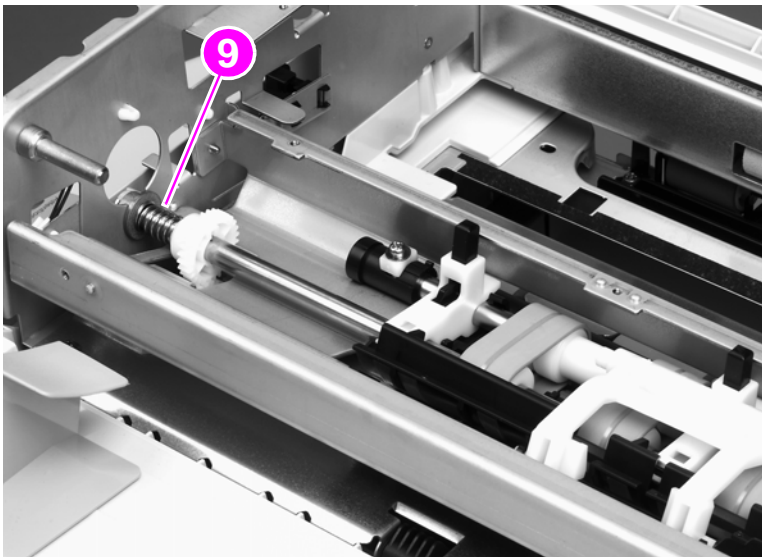


Figure 191. Separation belt assembly (6 of 6)

To reinstall

Be sure to align the pin on the shaft of the weight arm with the arm-stop hole on the solenoid lever. See figure 189.

Separation belts

Note

The separation unit is structured with four belts. When replacing the belts, be sure to replace only two on the same side at one time. It is very difficult to reassemble the unit if all four belts are removed at the same time.

- 1 Remove the separation belt assembly. See page 233.
- 2 Unhook two claws (callout 1) and remove the document guide (callout 2).

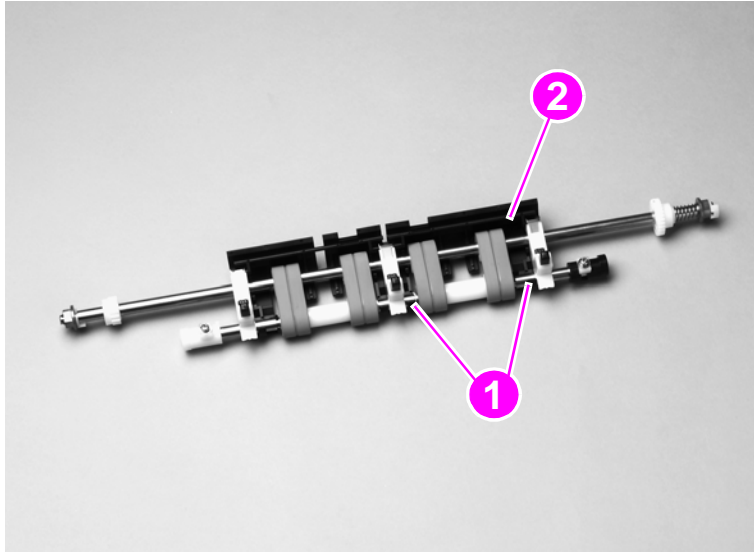


Figure 192. Separation belts (1 of 3)

- 3 Lift the end of the shaft holder (callout 3) and pull to remove it.

Note

When removing the assembly holder, be careful not to lose the leaf spring (callout 4) and holder block (callout 5).

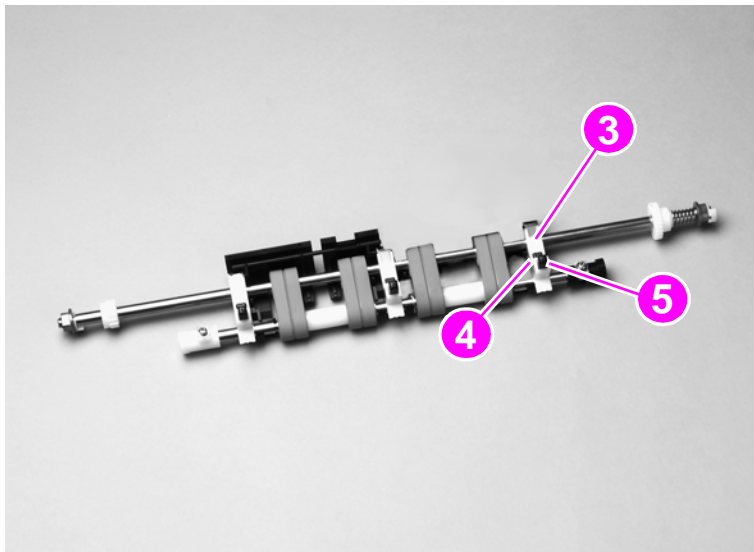


Figure 193. Separation belts (2 of 3)

- Slide off the two separation belts (callout 6) while squeezing the shafts together.

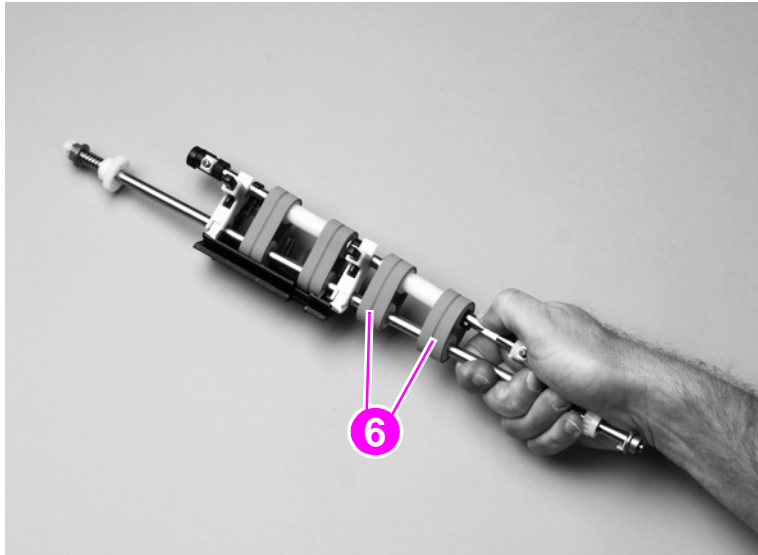


Figure 194. Separation belts (3 of 3)

To reinstall

When installing the new belts, make sure that no grease gets on the belts. After installing the two new belts, repeat for the opposite end of the assembly.

Scan engine

CAUTION

Removing the scan engine assembly requires at least two people. The scan engine assembly is heavy, and cannot be safely removed by one person.

Note

To gain access to certain components in the print engine, such as the laser scanner assembly and the fuser motor, you will have to remove the scan engine.

The illustration in this procedure shows the HP LaserJet 9000mfp/9040mfp/9050mfp series print engine. The HP Color LaserJet 9500mfp print engine will look different, but the removal and installation of the scan engine is similar.

- 1 Remove the following assemblies.
 - HP LJ 9000mfp/9040mfp/9050mfp series. Remove the print engine back cover and the top left print engine cover. See the *HP LaserJet 9000 and 9050mfp Printer Service manual* for removal instructions.
 - HP CLJ 9500mfp. Remove the right upper, left upper, and back covers. See the *HP Color LaserJet 9500 Print Engine Service Manual* for removal instructions.
- 2 Disconnect two connectors (callout 1) and one grounding wire (callout 2) at the back of the MFP.

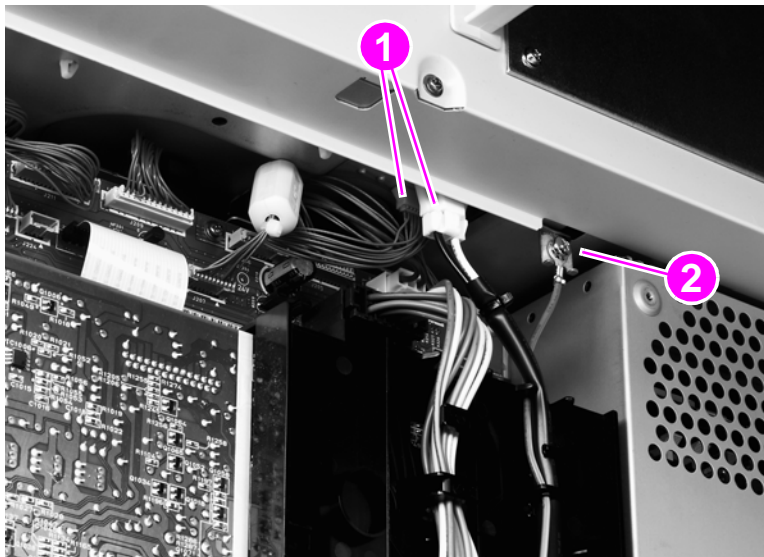


Figure 195. Scan engine (HP LJ 9000mfp/9040mfp/9050mfp shown) (1 of 7)

- 3 Open the print engine right door (HP LJ 9000mfp/9040mfp/9050mfp only).
- 4 Press the tabs on the end of the black strap and disconnect the strap (callout 3; HP LJ 9000/9040mfp/9050mfp only).

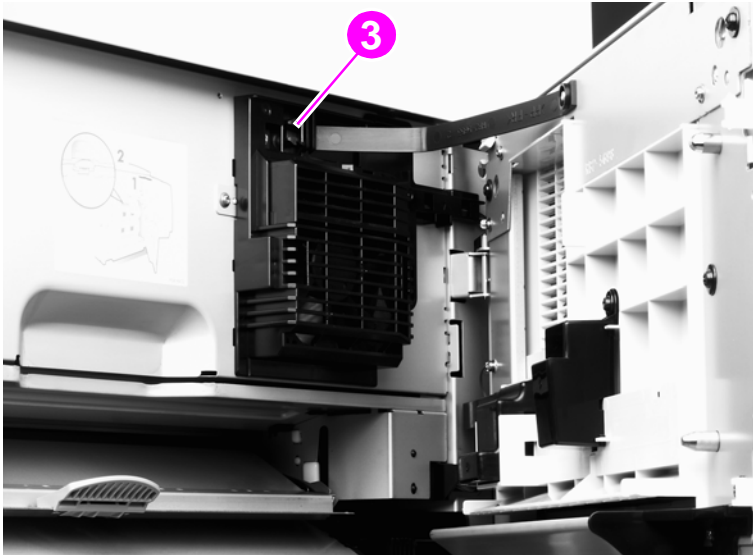


Figure 196. Scan engine (HP LJ 9000/9040mfp/9050mfp shown) (2 of 7)

- 5 Remove one locking clip (callout 4) from the right side.

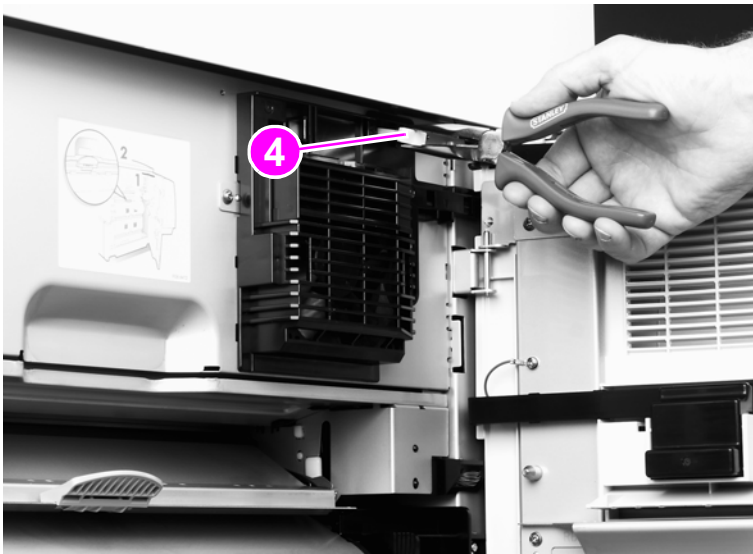


Figure 197. Scan engine (HP LJ 9000/9040mfp/9050mfp shown) (3 of 7)

- 6 Remove the left locking clip (callout 5).

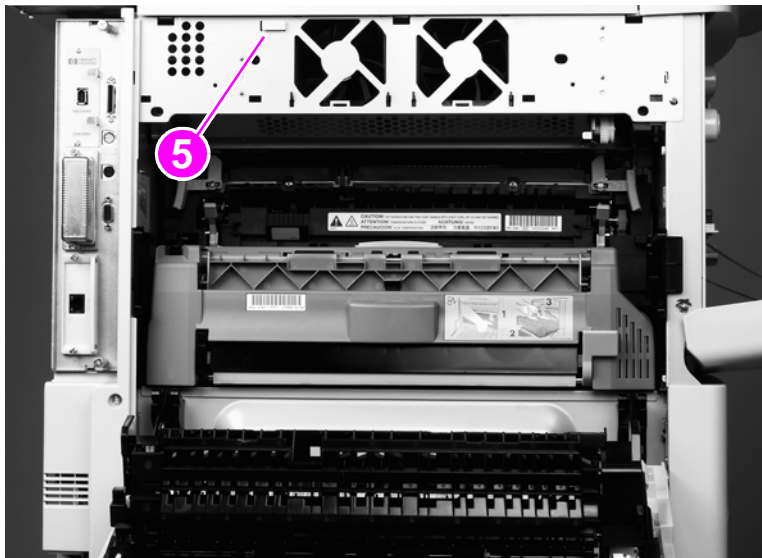


Figure 198. Scan engine (HP LJ 9000/9040mfp/9050mfp shown) (4 of 7)

- 7 Open the print engine front door (for the HP CLJ 9500mfp, open both front doors) and remove two locking clips (callout 6).

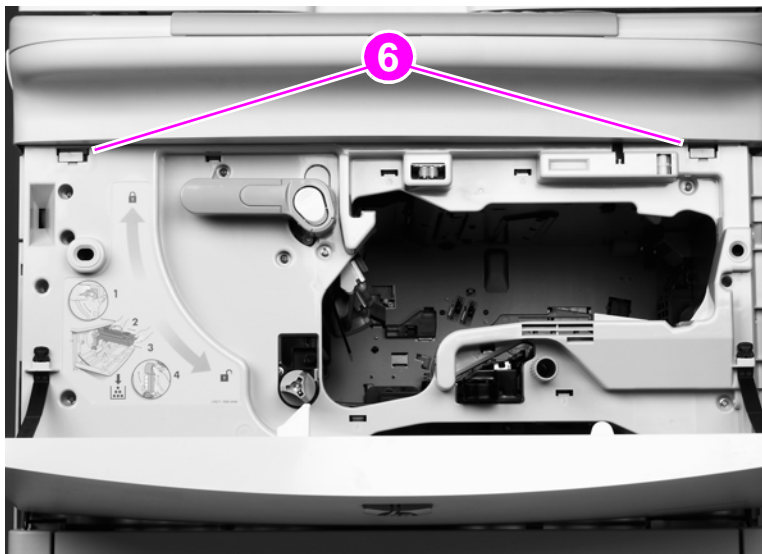


Figure 199. Scan engine (HP LJ 9000/9040mfp/9050mfp shown) (5 of 7)

- 8 Close all exterior doors. Have *two people* lift the copy/scan unit off of the print engine. See figure 200.

WARNING!

The copy/scan unit weighs 36.3 kg (80 lb).

CAUTION

Set the copy/scan unit on a flat, level surface so the ground post does not break.



Figure 200. Scan engine (HP LJ 9000/9040mfp/9050mfp shown) (6 of 7)

To reinstall

Make sure that the seating pegs are lined up with the seating tabs (callout 7) before reinstalling the scan engine.

CAUTION

The seating tabs can become disengaged when removing the copy/scan unit. If a tab becomes disengaged, make sure you replace it before reinstalling the copy/scan unit.

WARNING!

Position your hands carefully when reinstalling the copy/scan unit to prevent pinching your fingers.

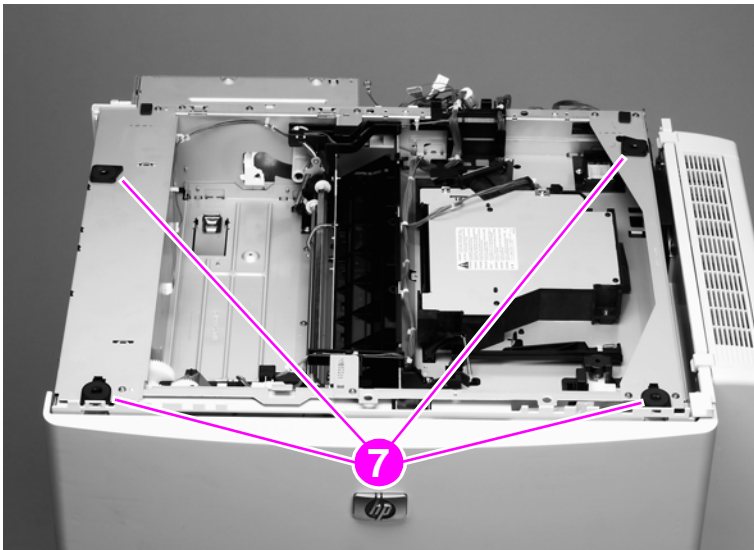


Figure 201. Scan engine (HP LJ 9000/9040mfp/9050mfp shown) (7 of 7)

