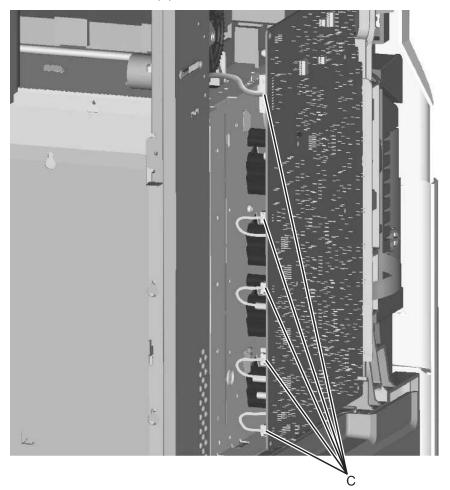
4. Disconnect the five connectors (C) from the HVPS.







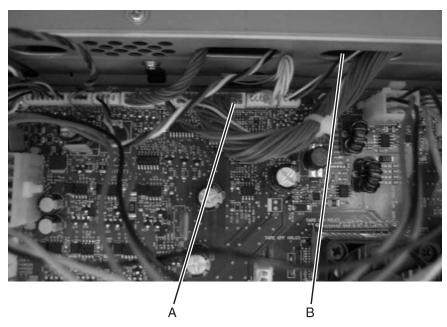
Installation notes:

- Make sure to replace the spring when replacing the HVPS.
- There are two types of spring forces on the cartridge contacts. Make sure to put the springs in their appropriate slots and in the proper orientation as shown below.



High-voltage power supply (HVPS) cable removal

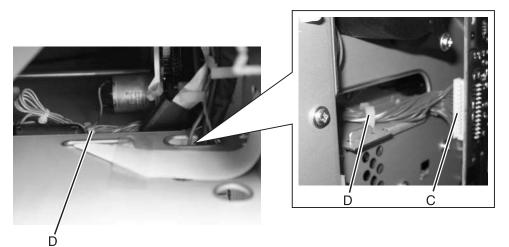
- 1. Remove the top cover assembly. See "Top cover assembly removal" on page 4-44.
- 2. Disconnect the cable connector at JHVPS1 (A) on the system board, and extract the cable through the opening (B) in the frame.







- 3. Disconnect the cable connector (C) from the back of the HVPS.
- **4.** Remove the cable from the two cable restraints (D).



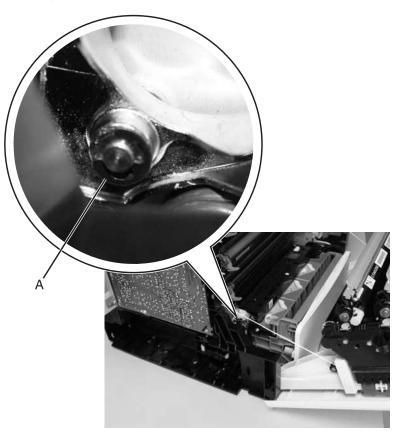




Left belicrank assembly removal

See "Left bellcrank assembly, with spring" on page 7-5 for the part number.

- 1. Remove the left cover. See "Left cover removal" on page 4-24.
- 2. Remove the C-clip (A).



3. Remove the left bellcrank assembly.



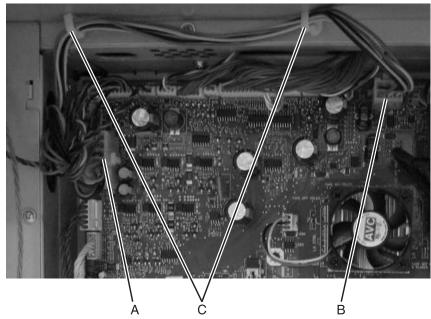


Low-voltage power supply (LVPS) removal

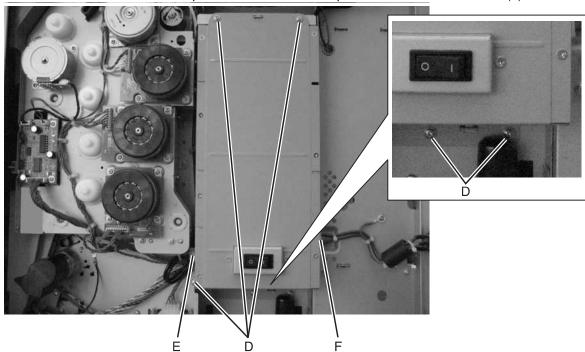
See "Low-voltage power supply" on page 7-7 for the part number.



- 1. Remove the right cover. See "Right cover removal" on page 4-38.
- 2. Remove the rear frame cover. See "Rear frame cover removal" on page 4-37.
- 3. Disconnect the connector at JLVPS1 connector (A) and at JLVPS2 (B) on the system board.
- **4.** Remove the cable from the cable restraints (C).



- **d.** Remove the five LVPS mounting screws (D).
- e. Press the latch and pull back to disconnect the fuser AC cable from the LVPS (E).
- f. Press the latch and pull back to disconnect the power AC cable from the LVPS (F).

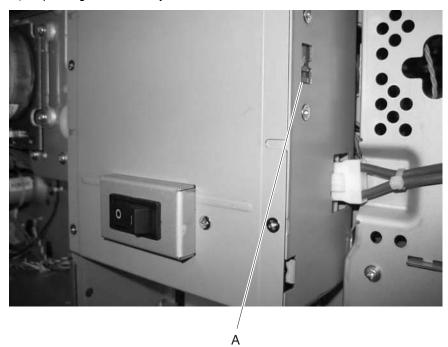






Installation notes:

When installing the new LVPS, make sure the voltage switch (A) is set for the proper value (115 V or 230 V), depending on the country.



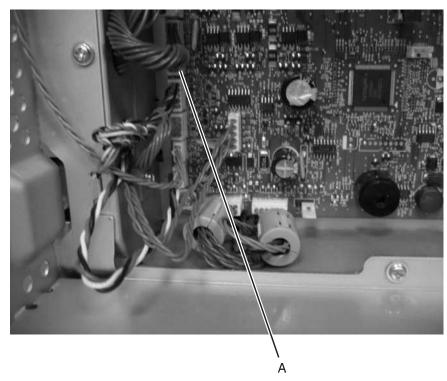
- Install the LVPS, and make sure the fuser AC cable is in the cable guides, and not behind the LVPS.
- Reconnect the fuser AC cable to the LVPS.
- Replace the five LVPS mounting screws.
- Reconnect the cable in connector JLVPS1 on the system board.



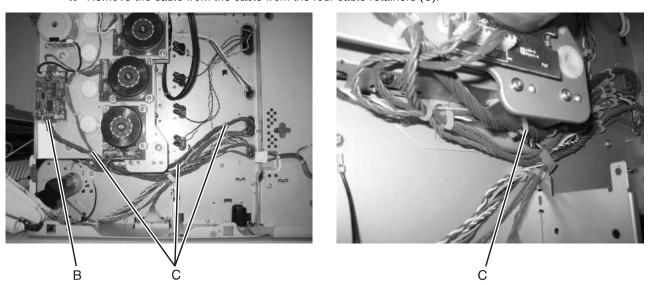


Motor driver cable removal

- 1. Remove the LVPS. See "Low-voltage power supply (LVPS) removal" on page 4-115.
- 2. Disconnect the connector in JDVR1 (A) on the system board.



- 3. Disconnect the connector on the motor driver card (B).
- **4.** Remove the cable from the cable from the four cable retainers (C).



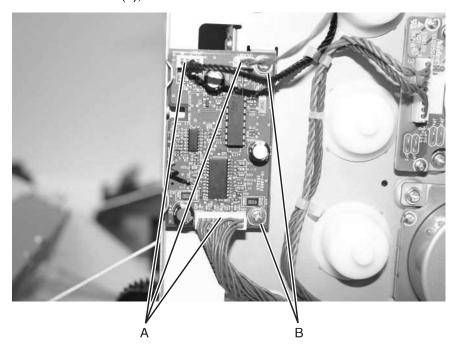
Installation note: Pay attention to the routing of the cable and the cable retainers.





Motor driver card removal

- 1. Remove the right cover. See "Right cover removal" on page 4-38.
- 2. Disconnect the three cables (A).
- 3. Remove the two screws (B), and remove the motor driver card.

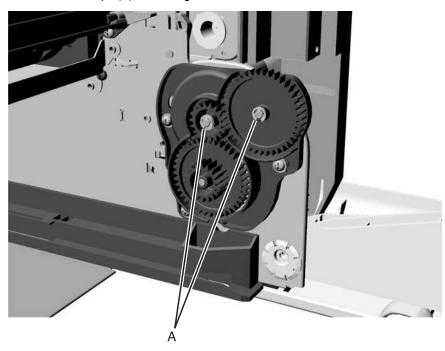




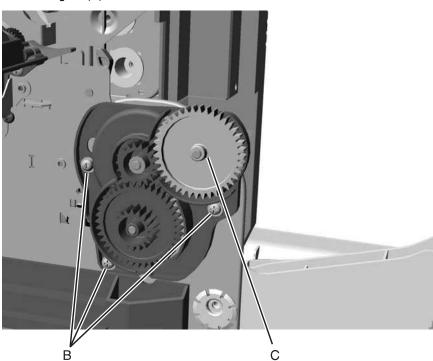


Multipurpose feeder (MPF)/duplex gear and housing removal

- 1. Remove the paper pick mechanism assembly. See "Paper pick mechanism assembly removal" on page 4-130.
- 2. Remove the two E-clips (A) from the gears.



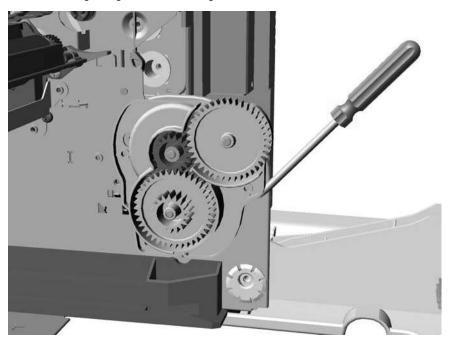
- **3.** Remove the three screws (B).
- 4. Slide the front gear (C) off.







- **5.** Slide a flathead screwdriver up and under the front cover.
- **6.** Slide the remaining two gears and housings off.



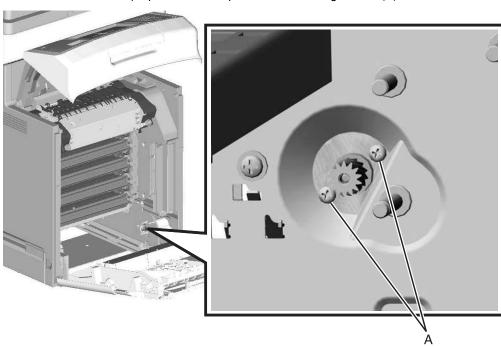




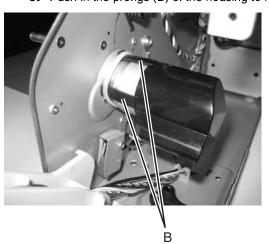
Multipurpose feeder (MPF)/duplex motor assembly removal

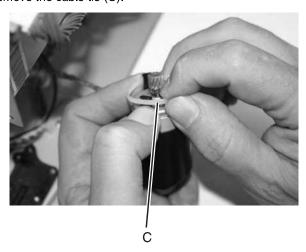
See "MP feeder/duplex motor" on page 7-7 for the part number.

- 1. Remove the low-voltage power supply (LVPS). See "Low-voltage power supply (LVPS) removal" on page 4-115.
- 2. Remove the multipurpose feeder/duplex gear and housing. See "Multipurpose feeder (MPF)/duplex gear and housing removal" on page 4-119
- **3.** Remove the two multipurpose feeder/duplex motor mounting screws (A).



- **4.** Remove the multipurpose/duplex motor from the printer.
- **5.** Push in the prongs (B) of the housing to remove the cable tie (C).







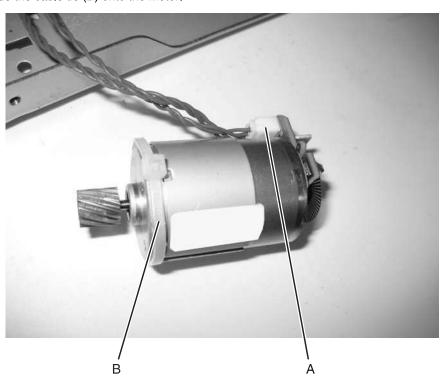


- **6.** Slide the motor out of the housing.
- 7. Disconnect the connector (D) from the motor.



Installation notes:

- 1. Connect the cable (A) at the motor.
- 2. Slide the cable tie (B) onto the motor.



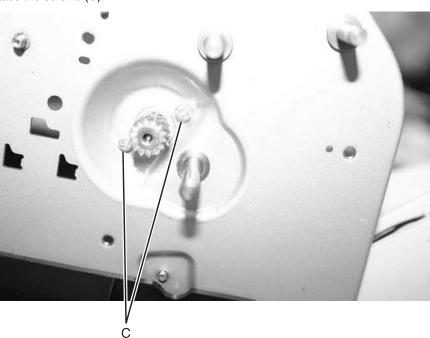




3. Insert the motor into the frame.



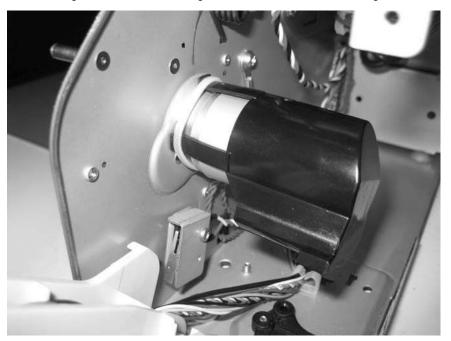
4. Replace the screws (C).







5. Slide the housing onto the motor, making sure the four tabs of the housing slide under the cable tie.



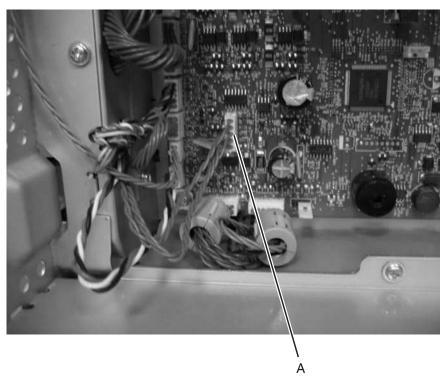
6. Replace the multipurpose feeder/duplex gear and housing assembly.



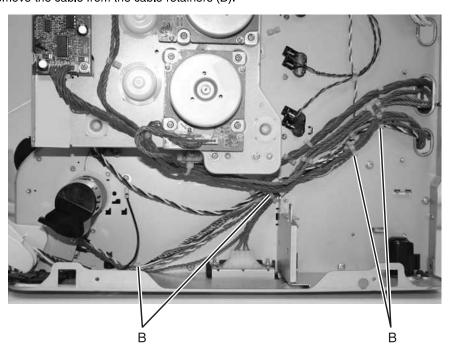


Multipurpose feeder (MPF)/duplex motor cable removal

- 1. Remove the multipurpose feeder/duplex motor. See "Multipurpose feeder (MPF)/duplex motor cable removal" on page 4-125.
- 2. Disconnect the connector from JDX1 (A) on the system board.



3. Remove the cable from the cable retainers (B).

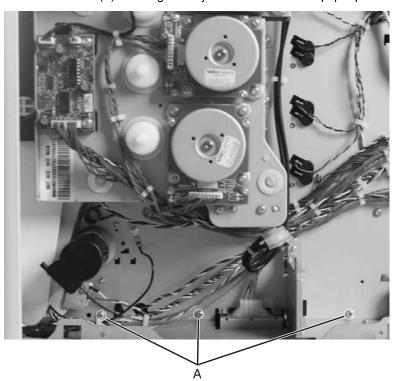






Multipurpose feeder (MPF) paper present sensor

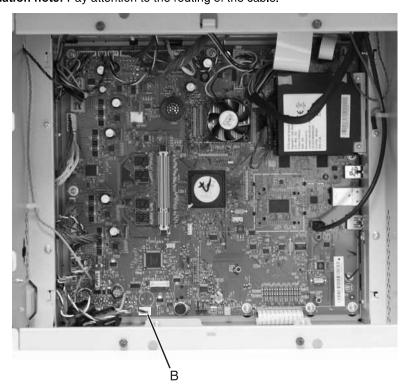
- 1. Remove the right cover. See "Right cover removal" on page 4-38.
- 2. Remove the standard 550-sheet input tray.
- 3. Remove the rear frame cover. See "Rear frame cover removal" on page 4-37.
- 4. Remove the Low-voltage power supply (LVPS). See "Low-voltage power supply (LVPS) removal" on page 4-115.
- **5.** Remove the three screws (A) securing the tray rail that contains the paper present sensor.







6. Remove the JMPFPP1 connector (B) from the system board, then remove the cable. Installation note: Pay attention to the routing of the cable.



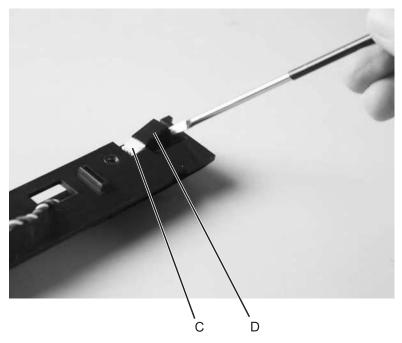
7. Remove the MPF paper sensor bracket from the machine.







8. Pry the sensor off the bracket, then disconnect the sensor (C) from the cable (D).

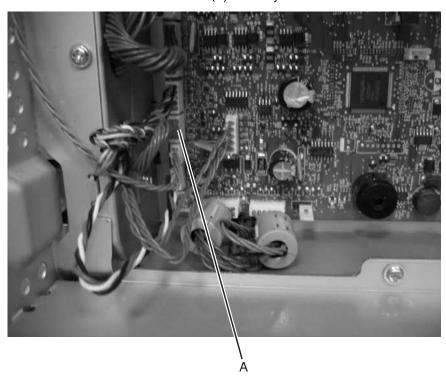


9. Remove the cable from the bracket.

Installation note: Pay attention to the routing of the cable.

Option cable removal

- 1. Remove the LVPS. See "Low-voltage power supply (LVPS) removal" on page 4-115.
- 2. Disconnect the cable connector at JOPT2 (A) on the system board.

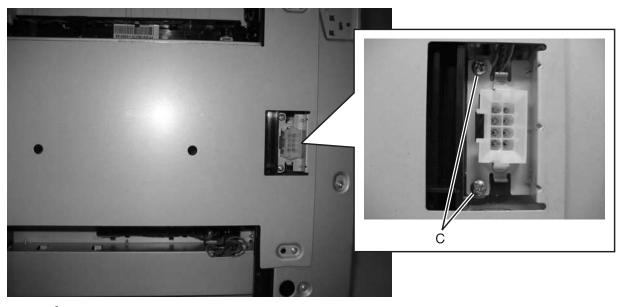


3. Replace the rear frame cover to protect the system board.

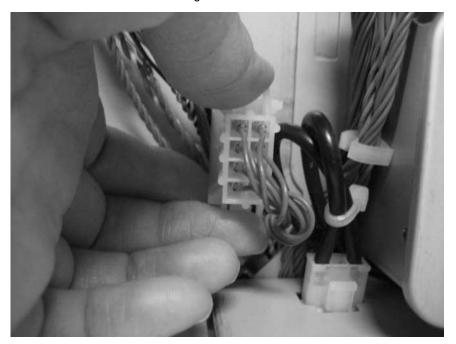




- **4.** Position the printer on its back.
- **5.** Remove the two screws (B).



6. Press the tabs together to remove the option cable connector. Note: Be sure to note the cable routing for reinstallation.



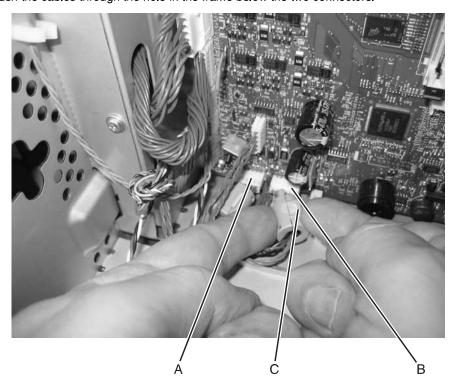




Paper pick mechanism assembly removal

See "Paper pick assembly" on page 7-5 for the part number.

- **1.** Remove the paper tray.
- 2. Remove the waste toner assembly. See "Waste toner assembly removal".
- 3. Remove the rear frame cover. See "Rear frame cover removal" on page 4-37.
- **4.** Disconnect the connector in JFDPCK1 (A) and JTRAY1 (B) on the system board.
- **5.** Open the latch (C) to remove the toroids from the cables.
- **6.** Push the cables through the hole in the frame below the two connectors.



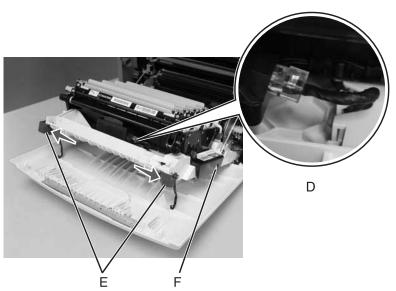




- 7. Open the front access cover.
- **8.** Disconnect the transfer module cable (D).
- **9.** Press the two tabs (E) to release the front access cover assembly.
- 10. Press the two tabs (F) on either side of the transfer module, and lift out the transfer module.

Note: Leave the photoconductor units on the transport belt when removing.

Warning: To avoid damaging the photoconductor drum, place the transfer module with the photoconductor units on a clean surface. Never expose the photoconductor units to light for a prolonged period of time. Place a clean, dry cloth over the transfer module and photoconductor units until they are required. Lower the front access door cover.

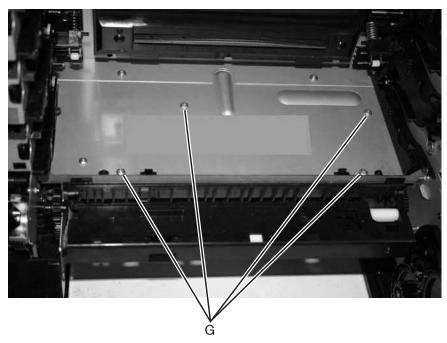


11. Remove the toner cartridges.

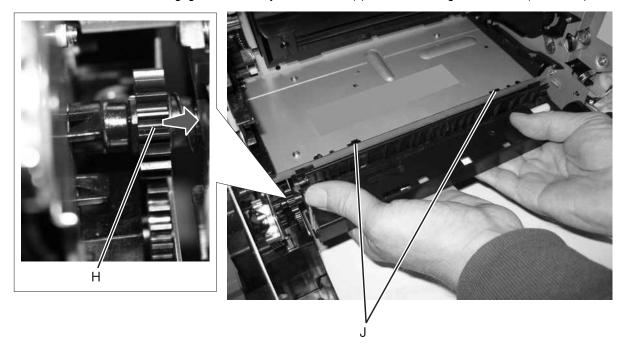




12. Remove the four screws (G) from the bottom pan.



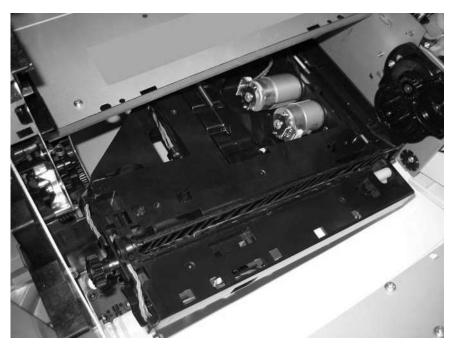
13. With one hand, disengage the gear (H), then grasp the paper pick assembly, and pull forward and downward to disengage the assembly until the front (J) and rear locking tabs release (not visible).





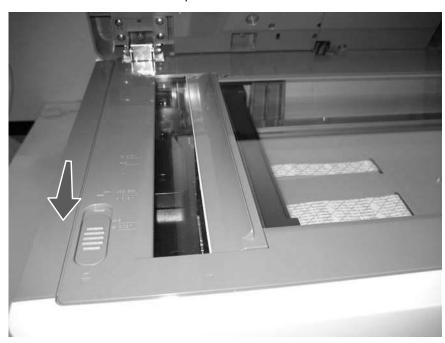


14. Lower the paper pick mechanism, and remove through the front of the printer. Note: Make sure the JTRAY1 and JTRAY2 connectors do not bind when passing through the frame access hole.



Installation notes:

- 1. Remove the waste toner assembly. See "Waste toner assembly removal" on page 4-191.
- **2.** Replace the rear frame cover to protect the system board.
- 3. Slide the scanner lock to the forward position to lock the flatbed CCD carrier module in the home position.

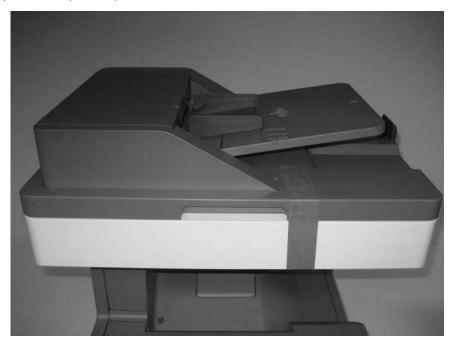




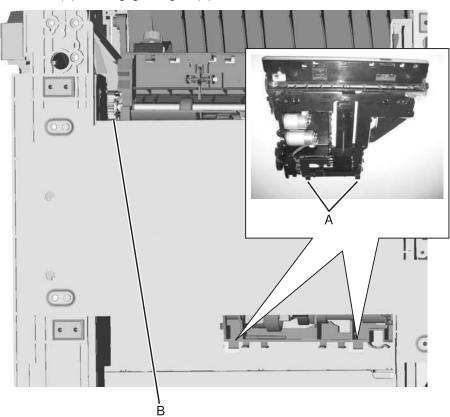




4. Tape the ADF (scanner) cover to the flatbed scanner.



- **5.** Turn the printer on its back.
- **6.** Slide the paper pick assembly toward the back of the printer, and down to engage the tabs (A).
- 7. Slide the tabs (A), and engage the gear (B).



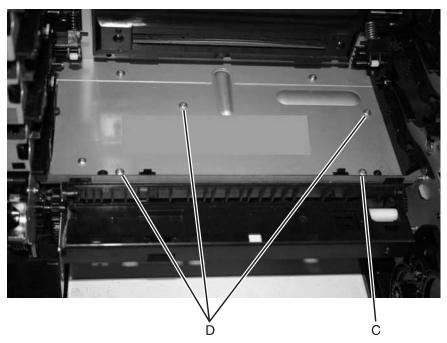
- 8. Reach into the printer, and replace the front right screw (C) to secure the paper pick assembly.
- **9.** Set the printer upright.



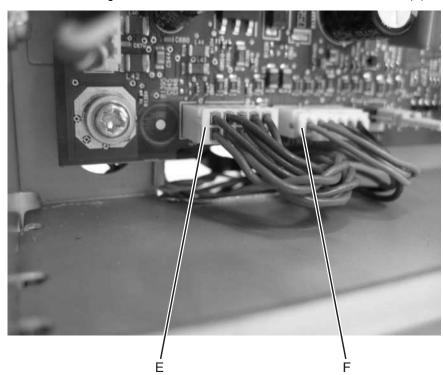




10. Secure the remaining three screws (D).



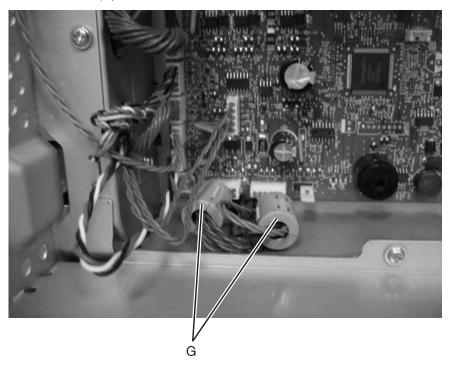
- 11. Remove the rear frame cover.
- 12. Route the cables through the hole in the frame, and connect them to JFDPCK1 (E) and JTRAY1 (F).







13. Reattach the toroids (G) to the cables.



- **14.** Replace the rear frame cover.
- **15.** Replace the waste toner assembly.
- **16.** Replace the toner cartridges.
- 17. Replace the transfer module with the photoconductor units.
- **18.** Close the front access cover.
- **19.** Replace the paper tray.
- **20.** Open the ADF (scanner) cover and slide the scanner lock to the open position.



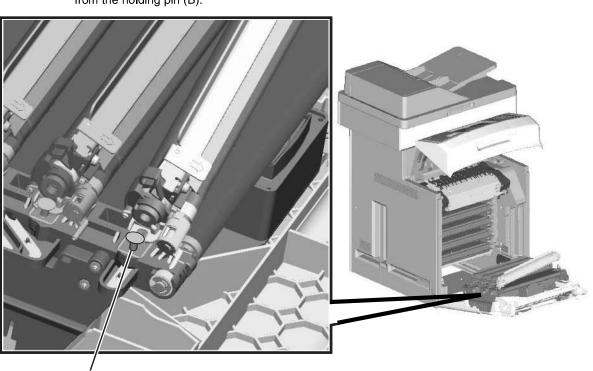


Photoconductor unit removal

Note: This is not a FRU.

Warning: To avoid damaging the photoconductor drum, hold the photoconductor units by their handle and place the photoconductor units on a clean surface. See "Handing the photoconductor unit" on page 4-3 for additional information.

- **1.** Open the front access door.
- 2. Lift the right end handle (A) of the photoconductor unit, releasing from the mount.
- 3. Lift the unit up and away from the left side of printer, ensuring the left end of the photoconductor is released from the holding pin (B).



Installation note: If a new photoconductor unit is installed, reset the life count value in the printer memory.

- If a message appears on the operator panel:
 - **1.** When 84 <*color*> PC Unit Life Warning or 84 Replace <*color*> PC Unit appears, touch Supply Replaced.

Replace Supply displays.

- 2. Touch Cyan PC Unit, Magenta PC Unit, Yellow PC Unit, or Black PC Unit based on the photoconductor unit that was just replaced. <color> PC Unit Replaced displays.
- 3. Touch Yes to clear the message.
- If no message appears:
 - 1. Touch Menus.
 - 2. Touch Supplies Menu.
 - 3. Touch Replace Supply.
 - 4. Touch Cyan PC Unit, Magenta PC Unit, Yellow PC Unit, or Black PC Unit based on the photoconductor unit that was just replaced.

<color> PC Unit Replaced displays.

Touch Yes.





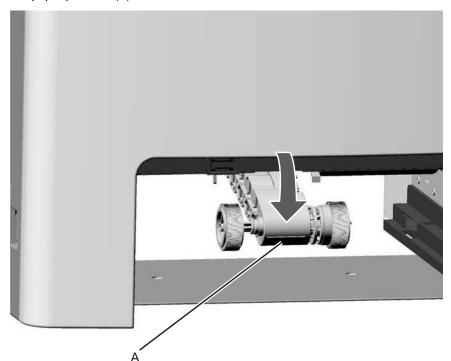
Pick tires removal and replacement

See for the part number.

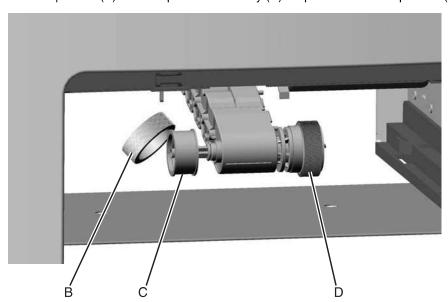
The autocompensator pick roll tires are located in the base printer. There are also tires in all input options. If you have additional input options, and you are having problems with media picking, replace these tires also. Always replace the pick tires in pairs. The tires come in a package of two.

Warning: Remove only the rubber tires and not the pick tire assembly to avoid losing small parts.

- **1.** Remove the paper tray.
- 2. Pull the paper pick arm (A) down.



3. Remove the pick tire (B) from the pick tire assembly (C). Repeat for the other pick tire (D).



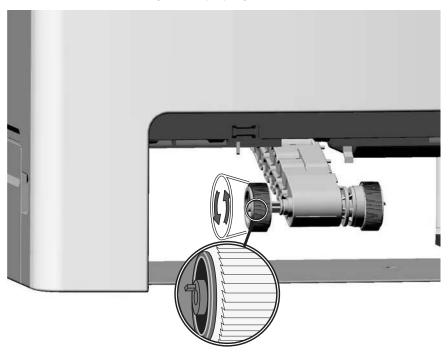






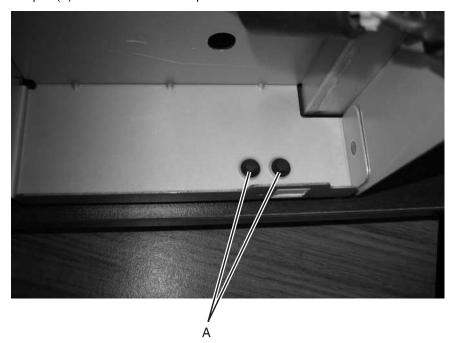
Installation notes: Install the new rubber tires with the surface texture turning in the direction as shown.

Note: Feel the rubber surface to verify it turns properly in the direction shown.



Printer pad removal

- 1. Slide the corner of the printer containing the damaged pad over the corner of the table.
- 2. Remove the side cover that corresponds to the damaged pad so you can see if the pad fully seats in the installation holes.
- **3.** Pull the pad (A) from the bottom of the printer. There are two rubber connectors.



Installation note: Verify that the pad fully seats in the installation holes.





Printhead removal, installation, and adjustment

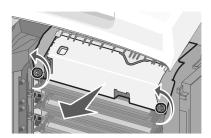
See "Printhead assembly" on page 7-9 for the part number.

Service tip—Testing the new printhead

See "Printhead verification" on page 3-52 for quick way to verify that the NVRAM on a printhead is good before you install the printhead.

Printhead removal

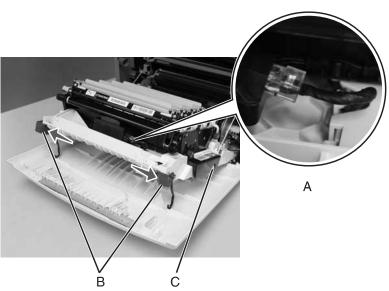
- **1.** Turn the printer off.
- 2. Disconnect the power cord from the electrical outlet and from the printer.
- **3.** Remove the paper tray.
- **4.** Open the top access door.
- **5.** Open the front access door.
- **6.** Remove the fuser.



- 7. Remove the transfer module and photoconductor units.
 - a. Disconnect the transfer module cable (A).
 - **b.** Press the two tabs (B) to release the front access cover assembly.
 - **c.** Press the two tabs (C) on either side of the transfer module, and lift out the transfer module.

Note: Leave the photoconductor units on the transport belt when removing.

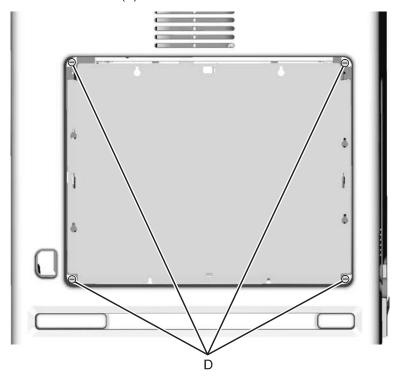
Warning: To avoid damaging the photoconductor drum, place the transfer module with the photoconductor units on a clean surface. Never expose the photoconductor units to light for a prolonged period of time. You can place a clean, dry cloth over the transfer module and photoconductor units until they are required.



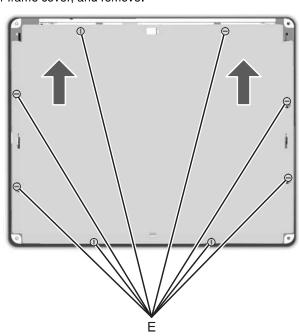




- 8. Remove all of the toner cartridges.
 - a. Remove the four screws (D).



- **b.** Lift the rear cover and remove it.
- **9.** Remove the rear frame cover.
 - a. Loosen the eight screws (E).
 - **b.** Lift the rear frame cover, and remove.



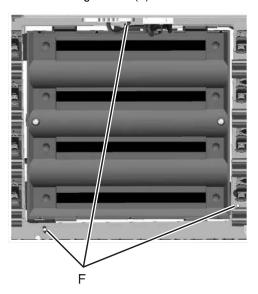
- 10. Remove the right cover. See "Right cover removal" on page 4-38.
- 11. Remove the left cover with the left door cover attached. See "Left cover removal" on page 4-24.
- 12. Remove the system board support shield. See "System board support shield removal" on page 4-163.





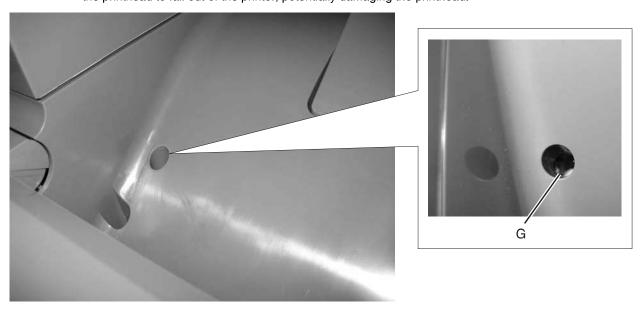


- **13.** Remove the printhead.
 - a. Remove the printhead mounting screws (F).



b. While holding the printhead in place, loosen the printhead alignment screw (G) until the printhead comes out easily.

Warning: Secure the printhead when loosening the printhead alignment screw. Failure to do this allows the printhead to fall out of the printer, potentially damaging the printhead.



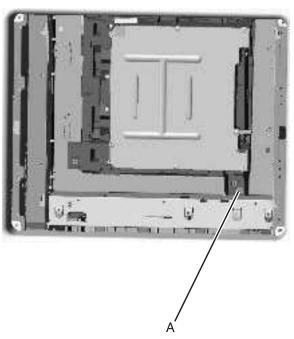




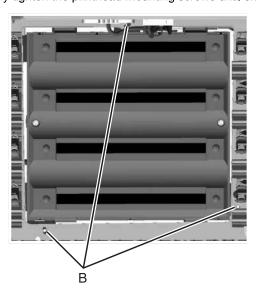
Install the printhead and replace parts

Warning:

- When reinstalling the printhead, it is important to keep in mind that the printhead mounting screws should be initially tightened just enough to hold the printhead in the printer. The printer parts are installed with the printhead mounting screws loose so you can print the pages that will be used to align the black plane to the printer frame. This also allows the black skew adjustment with the printhead alignment screw.
- Once the black skew is aligned, the mounting screws will be fully tightened, and the next steps of alignment can be completed.
- 1. When installing the printhead, visually center the printhead and center the hole in the frame (A).



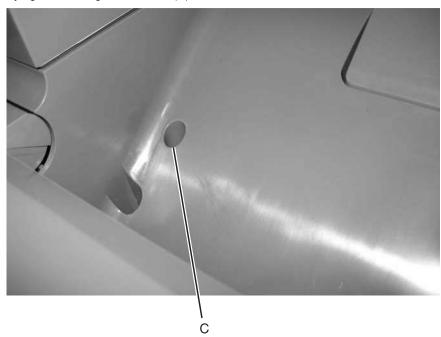
2. Loosely attach the printhead mounting screws (B). Warning: Do not fully tighten the printhead mounting screws until skew has been adjusted.







3. Lightly tighten the alignment screw (C).

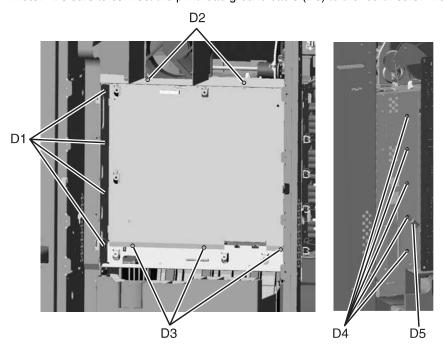


- **4.** Feed the ground cable through the hole in bottom left side of the frame.
- **5.** Replace the system board support shield.
 - **a.** Loosely attache the two mounting screws (D2).
 - **b.** Set the system board shield in place.

Note: Check that the ribbon cables do not rub against the edges of the frame.

- **C.** Replace the remaining system board shield screws (D) in the following order:
 - Replace the five screws (D1) from the inner right side of the support shield.
 - Replace the two mounting screws (D2) to the top of the support shield.
 - Replace the three screws (D3) from the bottom of the support shield.
 - Replace the five mounting screws (D4) to the outer left side of the printer.

Note: Be sure to connect the printhead ground cable (D5) to the fourth screw from the top.







- 6. Replace the system board.
 - **a.** Place the system board in position.

Note: Check that the mirror motor cable, printhead, and UICC cables do not rub against the edges of the frame.

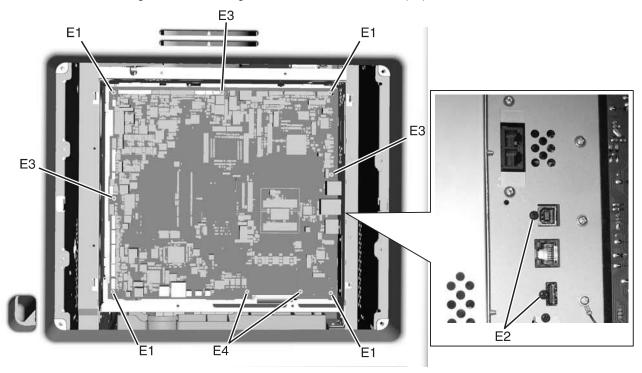
- **b.** Replace the nine screws (E) in the system board in the following order:
 - Loosely attach the four corners (E1) in a clockwise order, beginning with the left top center.
 - Replace the USB connector screw (E2).
 - Replace the top center, right center side, and left center side (E3)
 - Tighten the top left corner and the top right corner.
 - Replace the two screws on the center bottom (E4)
 - Tighten the bottom right and the bottom left corners (E1).





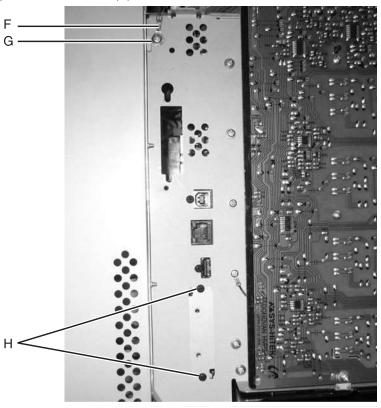






C. Route the cables through the access holes on the right side of the printer.

- **d.** Replace the ground strap (F) on the screw (G), and tighten the screw.
- e. Replace the two screws (H) for the hard disk shield.



f. Reconnect all the connectors to the system board. Use the diagram below for a guideline. Warning: Be careful reconnecting the printhead ribbon cable (J) and the UICC cable (K). Ribbon cables can be damaged easily and should be handled carefully.







- g. Replace the fax modem card and/or the hard disk, if appropriate.
- **7.** Replace the LVPS.
 - a. Install the LVPS.
 - **b.** Replace the five LVPS mounting screws.
 - C. Reconnect the AC LVPS cable to the LVPS.
 - **d.** Reconnect the AC power cable to the LVPS.
 - e. Reconnect the AC LVPS cable to the JLVPS1 connector on the system board.
- 8. Replace the right cover.
 - a. Slide the right cover up until it locks into position.
 - **b.** Replace the three screws.
- 9. Replace the left cover.
 - a. Place the printer on the table with the left side edge hanging over slightly.
 - **b.** Slide the cover up until it locks into position.
 - C. Replace the three screws.
- **10.** Replace the rear frame cover.
 - a. Replace the rear frame cover.
 - **b.** Tighten the eight screws.
- 11. Replace the rear cover.
 - a. Place the two top tabs in the slots.
 - **b.** Replace the four screws.
- **12.** Reinstall the transfer module with the photoconductor units still attached.
- **13.** Reconnect the transfer module cable.
- **14.** Replace the toner cartridges.
- **15.** Replace the fuser.
- 16. Close the front access door.
- **17.** Close the top access door.
- **18.** Replace the paper tray.

Printhead alignment

Note: The printhead mounting screws should be initially tightened just enough to hold the printhead in the printer.

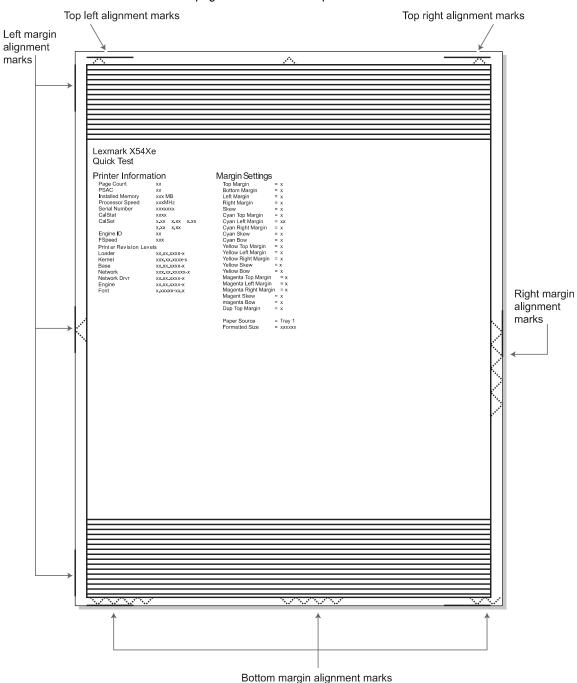
There is one printhead that houses the four color planes. The black plane is aligned to the printer, and the color planes are internally aligned to black. Electrical alignment is done to fine tune the alignment of the color planes to the black plane after the printhead is installed and black skew is adjusted using the alignment screw.





Skew (black)

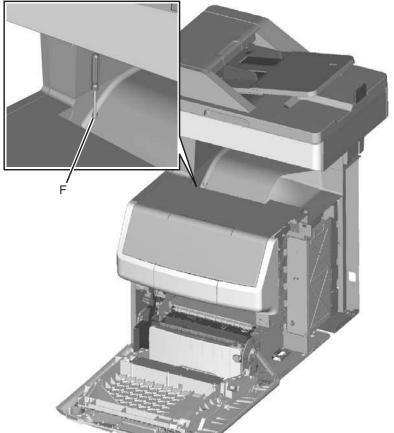
- 1. Connect the electrical cord into the printer.
- 2. Connect the electrical cord into the outlet.
- 3. Set the skew for black.
 - a. Open the top access cover.
 - **b.** Open the front access cover.
 - **C.** Enter Diagnostic mode (turn off the printer, press and hold 3 and 6, turn on the printer, and release the buttons when the progress bar appears).
 - d. Select Registration.
 - e. Adjust the value beside Skew to zero with the left and right arrows, and touch Submit.
 - **f.** Touch **Quick Test**. A page similar to this one prints:







g. Adjust the printhead alignment screw (A) to adjust the skew and straighten the image on the printout.

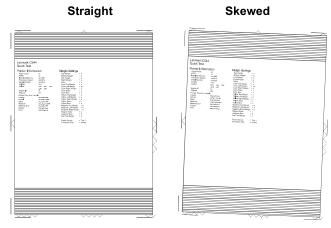


If the top right alignment marks are lower than the top left alignment marks, rotate the alignment screw counterclockwise a full revolution, and print the Quick Test page. Repeat adjusting the screw

Note: One rotation of the printhead alignment screw equals approximately 0.5 millimeter movement of the top edge print alignment marks.

and printing the Quick Test page until the top alignment marks are the same distance from the top of

h. When the top right and top left alignment marks are both showing and are even on the page, the skew is aligned.



- **4.** Tighten the printhead mounting screws.
 - a. Turn off the printer.

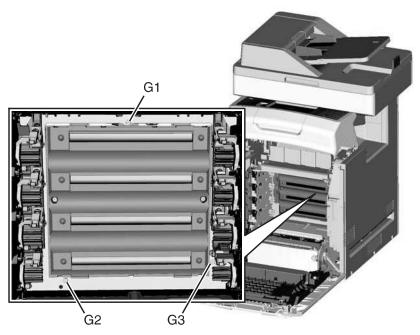
the media.

b. Disconnect the power cord from the electrical outlet.





- **C.** Disconnect the transfer module cable.
- **d.** Press the two tabs on either side of the transfer module, and lift out the transfer module with the photoconductor units in place.
- e. Remove all of the toner cartridges.
- f. Tighten the printhead mounting screws in the following order: G1, G2, and G3.



- **5.** Replace the toner cartridges.
- **6.** Reinstall the transfer module and the photoconductor units.
- 7. Connect the transfer module cable.

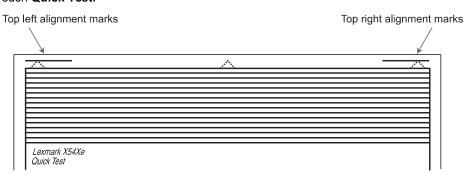




Registration (black)

Top Margin

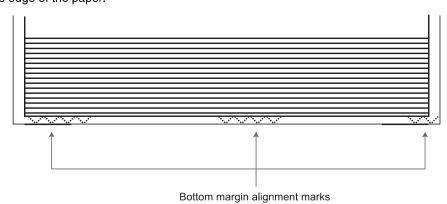
- 1. Reconnect the power cord to the electrical outlet, but do not turn on the printer yet.
- 2. Enter Diagnostic mode (press and hold 3 and 6, turn on the printer, and release the buttons when the progress bar appears).
- 3. Touch Registration.
- 4. Touch Quick Test.



- **5.** Beside **Top Margin**, use the arrows to change the values.
 - a. Adjust the values until both top alignment marks are on the top edge of the print.
 - The right arrow increases the value and moves the top alignment marks down the page.
 - The left arrow decreases the value and moves the top alignment marks up the page.
 - b. Touch Submit to save the changes in value, and then touch Registration to return to the Registration menu.
- 6. Print the Quick Test page, and check the top alignment marks. Repeat adjustment of the top margin and printing of the Quick Test page until top margin is set.

Bottom Margin

1. Adjust the bottom margin until the points of the bottom margin alignment marks are visible and touching the edge of the paper.



- The right arrow increases the value and moves the bottom alignment marks up the page.
- The left arrow decreases the value and moves the bottom alignment marks down the page.
- 2. Touch Submit to save the changes in values.
- 3. Print the Quick Test page, and repeat this process until the bottom margin is adjusted.





Left Margin

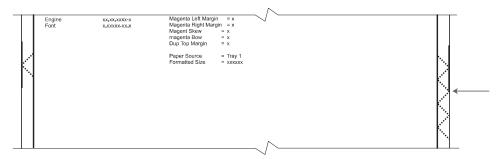
1. Adjust the left margin until the points of the left alignment marks touch the edge of the page.



- The right arrow increases the value and moves the left side alignment marks to the right.
- The left arrow decreases the value and moves the left side alignment marks to the left.
- 2. Press Submit to save the changes in values.
- 3. Print the Quick Test page, and check the left alignment marks each time until you are satisfied.

Right Margin

1. Adjust the right margin until the points of the left alignment marks touch the edge of the page.



- The right arrow increases the value and moves the right side alignment marks to the left.
- The left arrow decreases the value and moves the right side alignment marks to the right.
- 2. Touch Submit to save the changes in values.
- **3.** Print the Quick Test page, and check the results. Repeat if necessary.
- **4.** When the registration is complete, proceed to the color alignments.

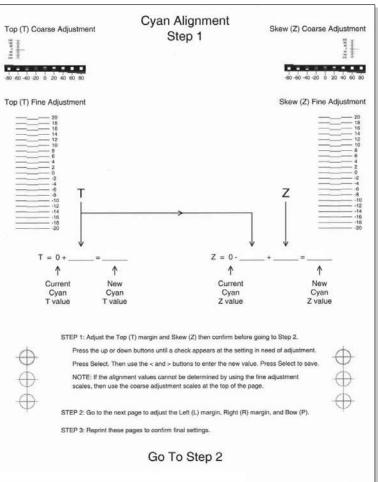
Alignment (cyan, yellow, and magenta)

- 1. Touch Back until you reach the top menu, and touch Alignment Menu.
- 2. Select Cyan.
- **3.** Touch the left or right arrows to set **Top Margin** to zero.
- 4. Do the same for Left Margin, Right Margin, Bottom Margin, Skew, and Bow.
- 5. Touch Submit to enter all the values.
 - It is important to set all the values to zero before starting.
- 6. Touch Quick Test in the Cyan menu.





Two pages print. You may have to print these pages several times until you get T (Top Margin) and Z (Skew) aligned. Do not go to step 2 until T and Z are aligned. The first page is similar to the following:

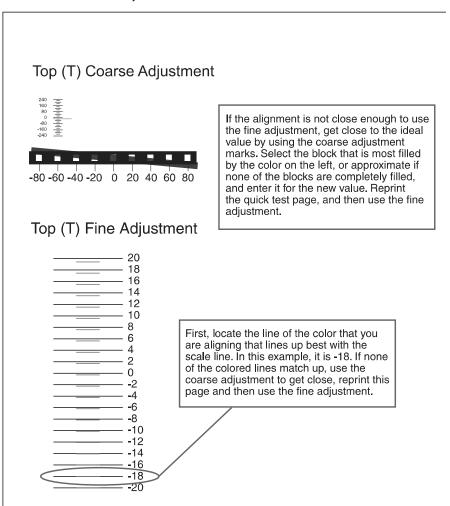




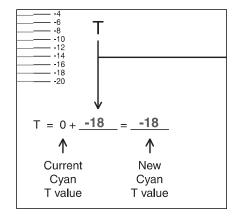




7. Determine the line under Fine Adjustment that is closest. If the value is beyond the Fine Adjustment scale, use either of the Coarse Adjustment scales.



8. Enter the number determined from the Fine Adjustment scale or the Coarse Adjustment scales on the part of the page for the "T" value. The current value is automatically entered on the sheet. At this point, it should be zero.



- **9.** Enter the "New Cyan T value" on the operator panel using the left and right arrows, and press **Submit** to save the value.
- 10. Reprint the Quick Test, and evaluate whether you are at zero changes.



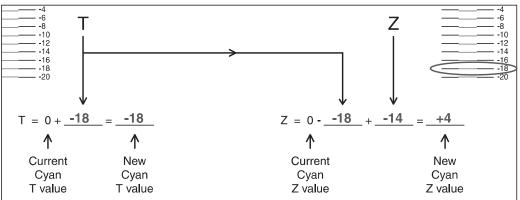


Previous

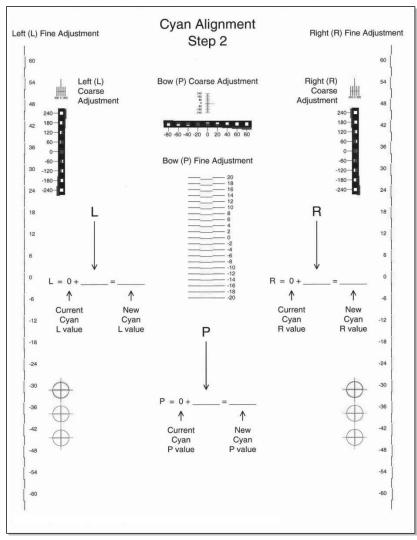
Go Back

11. Repeat this process for skew (Z). Don't forget to subtract the T value and add the current cyan Z value to obtain the new skew (Z) value.

An example is shown below:



12. Continue to follow the directions on the bottom of the first page to find the Cyan Top Margin (T), the Skew (Z), and on the second page of the Quick Test page, the Left Margin (L), Right Margin (R), and Bow (P).



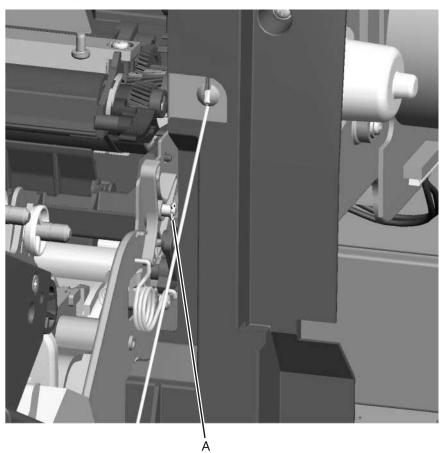
13. Repeat steps 2 through 11 for yellow and magenta.

Note: Start each color group by setting the Top Margin, Left Margin, Right Margin, Bottom Margin, Skew, and Bow to zero.

Right bellcrank assembly removal

See "Right bellcrank assembly, with spring" on page 7-5 for the part number.

- 1. Remove the right cover. See "Right cover removal" on page 4-38.
- 2. Remove the C-clip (A).



3. Remove the right bellcrank assembly.





System board removal

See the system board part number for the model you need on page 7-9.



CAUTION

This product contains a lithium battery. THERE IS A RISK OF EXPLOSION IF THE BATTERY IS REPLACED BY AN INCORRECT TYPE. Discard used batteries according to the battery manufacturer's instructions and local regulations.

Previous





Warning: This part might contain customer confidential information. See "Data Security Notice" on page 4-1 for more details. After removing this part, return it to your next level of support so any data can be removed. If the customer requests to keep the part, they must sign a confirmation of memory device retention form.

Warning: When replacing any one of the following components:

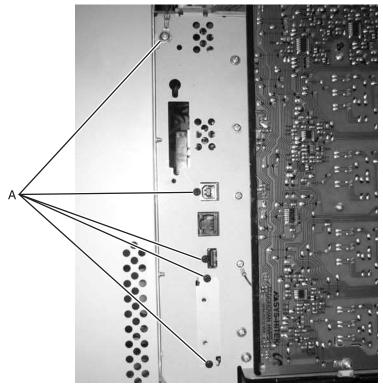
- Scanner MDC card
- System board

Only replace one component at a time. Replace the required component, and perform a POR before replacing a second component listed above. If this procedure is not followed, the printer will be rendered inoperable.

Warning: Be careful not to damage the ribbon cables when removing the system board.

- 1. Remove the left cover. See "Left cover removal" on page 4-24.
- 2. Remove the rear frame cover. See "Rear frame cover removal" on page 4-37.
- 3. Remove the hard disk if one is installed. See "Hard drive assembly removal" on page 4-108.
- 4. Remove the wireless network card if one is installed. See "Wireless network card removal" on page 4-206.
- 5. Remove the fax modern if one is installed. See "Fax modern removal" on page 4-91.
- **6.** Remove all the screws (A) from the left side of the printer so you can remove the system board, including:
 - USB port connector (1 screw)
 - Ethernet port connector (1 screws)
 - Modem shield (1 screws)
 - Hard disk shield (2 screws)

Ground screw (1 screw)



7. Disconnect all the cables from the system board.

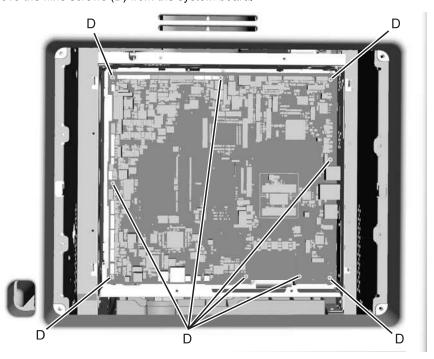




Warning: Do not use tools to remove the UICC cable (B) or the printhead ribbon cable (C). Flat ribbon cables can be damaged and should be removed gently by hand. When installing, carefully line up the cable, and press straight into the connector.



 $oldsymbol{8}_{oldsymbol{ \bullet }}$ Remove the nine screws (D) from the system board.



9. Remove the system board.



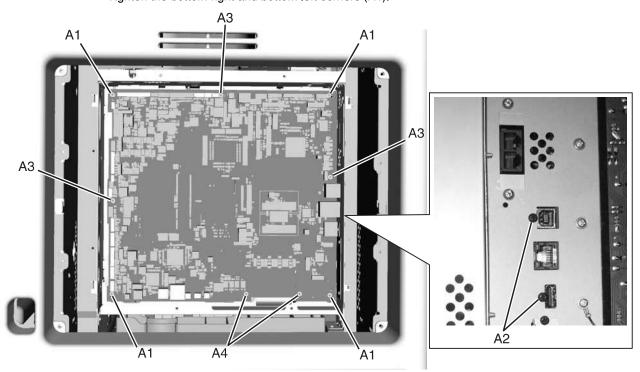


Installation notes:

1. Place the system board in position.

Note: Check that the mirror motor cable and the printhead cable do not rub against the edges of the frame.

- **2.** Replace the nine screws (A) in the system board in the following order:
 - Loosely attach the four corners (A1) in a clockwise order, beginning with the left top corner.
 - Replace the USB connector screw (A2).
 - Replace the top center, right center side, and left center side (A3).
 - Tighten the top left corner and top right corner.
 - Replace the two screws on the center bottom (A4).
 - Tighten the bottom right and bottom left corners (A1).



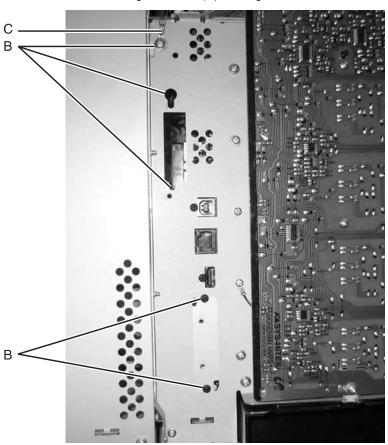
3. Route the cables through the access holes on the right side of the printer.





- **4.** Replace all the screws (B) from the left side of the printer, including:
 - Ethernet port connector (1 screws)
 - Modem shield (1 screws)
 - Hard disk shield (2 screws)
 - Ground screw (1 screw)

Note: Be sure to attach the ground wire (C) to the ground screw.







5. Reconnect all the connectors to the system board. Use the diagram below for a guideline. Warning: Be careful reconnecting the printhead ribbon cable (D) and the MDC cable (E). Ribbon cables can be damaged easily and should be handled carefully.



- 6. Install the toroids, hard disk, modem, and wireless network card, if appropriate.
- **7.** Replace the rear cover, rear frame cover, and the left cover.







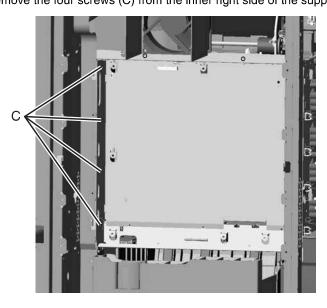
System board support shield removal

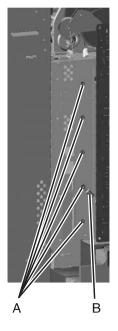
later installation.

See "System board support shield" on page 7-9 for the part number.

- 1. Remove the system board. See "System board removal" on page 4-157.
- 2. Remove the right cover. See "Right cover removal" on page 4-38.
- 3. Pull the cables through the access holes on the right side of the printer.
- **4.** Remove the five mounting screws (A) from the outer left side of the printer. Note: Make a note of the attachment of the printhead ground cable (B) to the fourth screw from the top for

5. Remove the four screws (C) from the inner right side of the support shield.

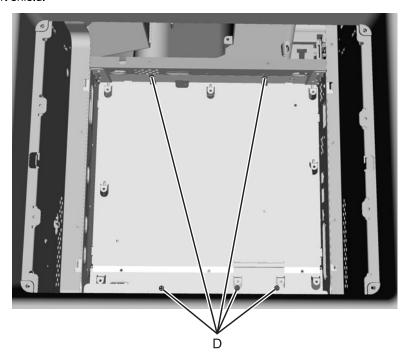








6. Remove the five mounting screws (D) from the top and bottom of the support shield. Note: Only the ribbon and mirror motor cables come through the access holes in the system board support shield.



7. Lower and remove the support shield.

Note: Be careful not to damage the ribbon cables that route through the top and bottom frame of the printer.







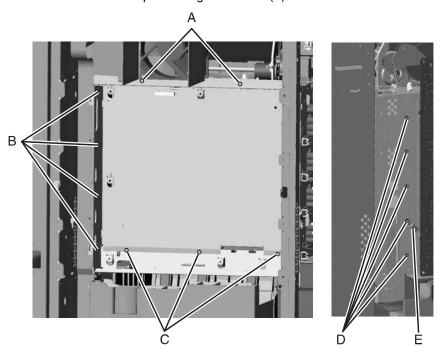
Installation notes:

- **1.** Loosely attach the two mounting screws (A).
- **2.** Set the system board shield in place.

Note: Check that the ribbon cables do not rub against the edges of the frame.

- **3.** Replace the remaining system board shield screws in the following order:
 - Replace the five screws (B) from the inner right side of the support shield.
 - Tighten the two mounting screws (A) to the top of the support shield.
 - Replace the three screws (C) from the bottom of the support shield.
 - Replace the five mounting screws (D) to the outer left side of the printer.

Note: Be sure to connect the printhead ground cable (E) to the fourth screw from the top.



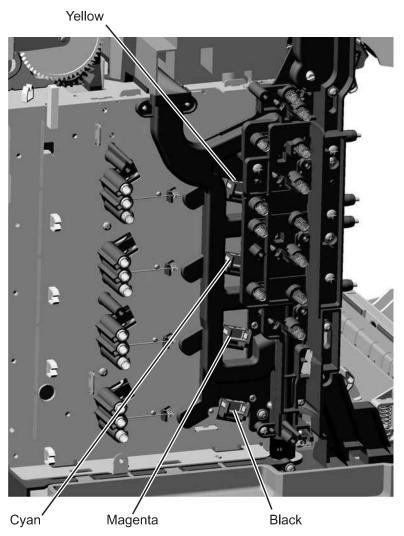




Toner level sensor removal

See "Toner level sensor" on page 7-11 for the part number.

Note the locations of the toner sensors.



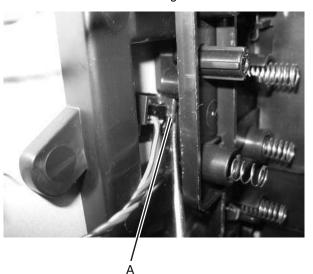


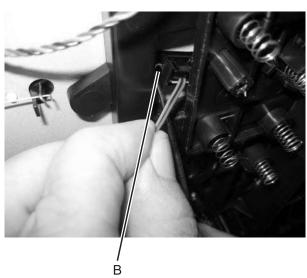


- 1. Remove the HVPS. See "High-voltage power supply (HVPS) cable removal" on page 4-112.
- 2. For the upper two sensors: These sensors are more difficult to reach because the toner is difficult to

It is difficult to press both locking tabs at the same time. Using a spring hook, press the locking tab (A), and disengage the sensor on that side. Press the other locking tab (B), and remove the sensor.

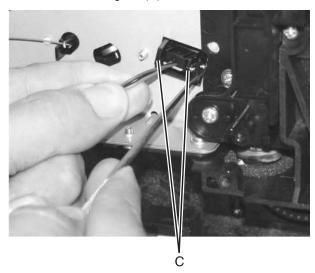
Note: Use a slight pressure on the cable to keep the first locking tab from relatching, while you disconnect the second locking tab.

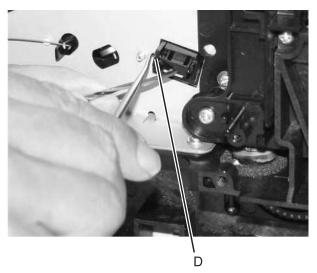




For the lower two sensors:

Using a spring hook, press the locking tab (C), and disengage the sensor on that side. Press the other locking tab (D), and remove the sensor.







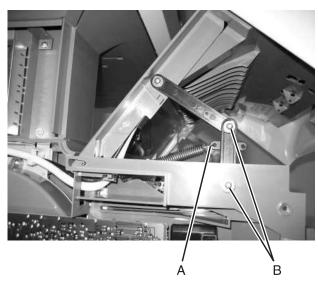


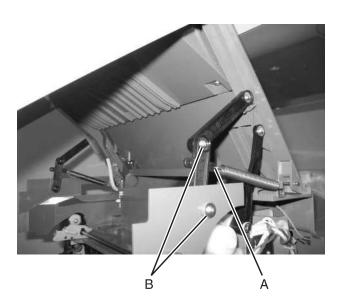
Top access cover links removal

Links come two in a package and fit either the right or the left.

Lower links

- 1. Open the top access cover.
- **2.** Remove the side cover that corresponds to the link you need to replace. For example, if you are replacing the right lower link, remove the right cover.
- **3.** Disconnect the spring (A).
- 4. Remove the two screws (B).

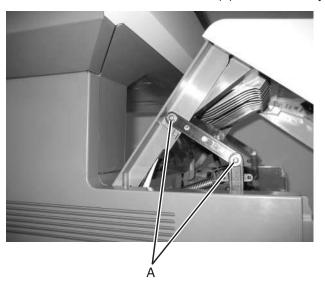




5. Remove the link.

Upper links

- 1. Open the top access cover.
- 2. Remove the two screws (A) on the link that you need to replace.





3. Remove the link.

Previous



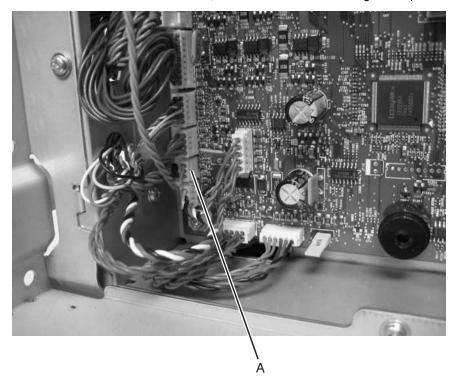
Novt



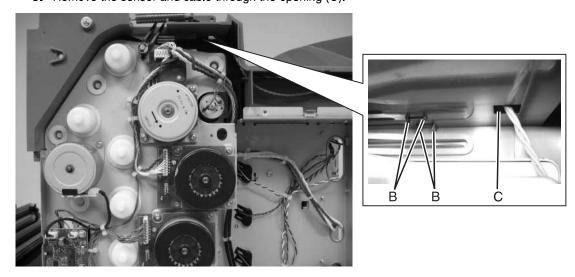
Top access cover sensor removal

This cable is gray.

- 1. Remove the rear frame cover. See "Rear frame cover removal" on page 4-37
- 2. Disconnect the cable in connector JFDS1, and remove the cable through the top left frame.



- 3. Remove the right cover. See "Right cover removal" on page 4-38.
- 4. Squeeze the latches (B) to disconnect the sensor from the top access cover.
- **5.** Remove the sensor and cable through the opening (C).







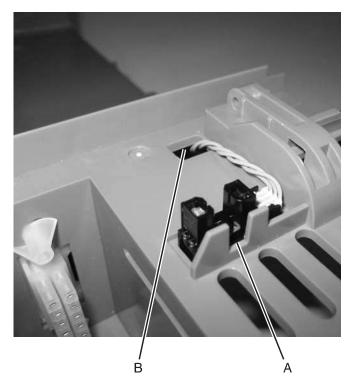


Installation notes:

- 1. Turn over the top access cover.
- 2. Snap the sensor into place.

Note: Make sure the sensor is replaced with the slot (A) in the center aligned with the gap in the top cover frame. Also note the placement of the cable connector.

3. Route the cable through the opening (B), and through the openings in the other side of the top cover assembly.







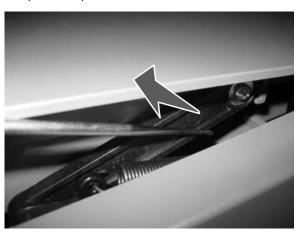


Top access cover springs removal

If the cover will not open

Lift the top access cover as far as you can, slip the spring hook into the opening between the top access cover and the side cover, hook the link, and pull on the link to open the top access cover.





Replacing the right spring

1. Open the top access cover.

Note: If the top access cover will not open, see "If the cover will not open" on page 4-171.

2. With a spring hook, remove the right spring from the link. Note: Depending on the orientation of the spring, the spring will attach from either the inside or the ouside.





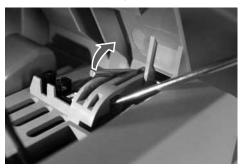






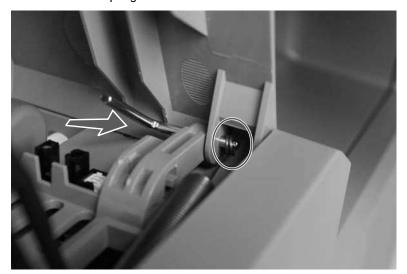
3. Pull the pivot upward to unlatch it from the frame then slide the pivot out of the frame and outer top access cover holes.

Note: Do not remove the pivot from the inner hole.

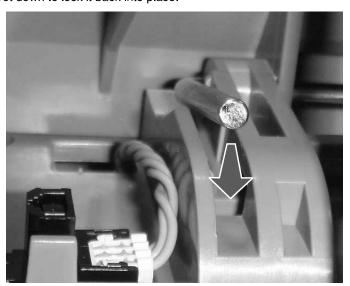




- 4. Slide out and remove the spring out of the pivot.
- 5. Insert the new spring in place to hook onto the pivot, and push the pivot back into the outer top access cover holes to secure the spring.



6. Push the pivot down to lock it back into place.









7. Attach the other end of the spring onto the link. Note: Depending on the orientation of the spring, the spring will attach from either the inside or outside.





Previous





Replacing the left spring

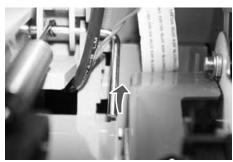
- 1. Open the top access cover.
- 2. With a spring hook, detach the spring from the left link.

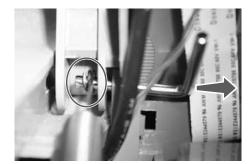
Note: Depending on the orientation of the spring, the spring will attach from the inside or the outside.



3. Pull the pivot upward to unlatch it from the frame then slide the pivot out of the frame and outer top access cover holes.

Note: Do not remove the pivot from the inner hole



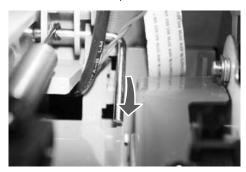


4. Slide out and remove the spring from the pivot.

5. Place the new spring in place to hook onto the pivot, and push the pivot back into the outer top access cover holes to secure the spring.



6. Push the pivot back into the slot to lock it in place.



7. Attach the other end of the spring to the top access cover link.

Note: Depending on the orientation of the spring, the spring will attach from either the inside or outside.



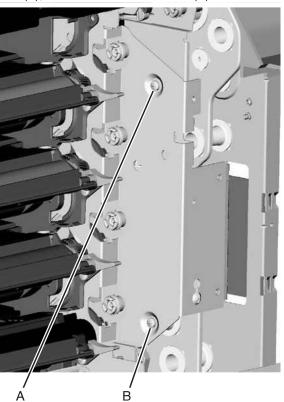




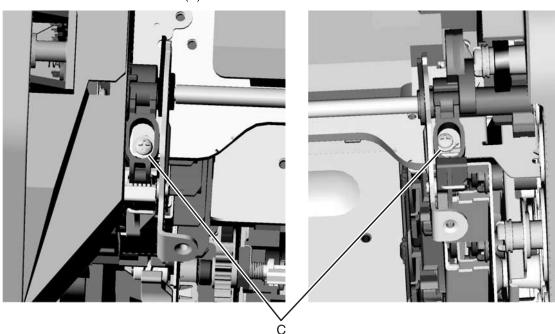
Top cover camshaft assembly removal

See "Top cover camshaft assembly" on page 7-12 for the part number.

- 1. Remove the top access cover. See "Top access cover assembly removal" on page 4-40.
- 2. Remove the fuser. See "Fuser assembly removal" on page 4-104.
- 3. Remove the top screw (A), and loosen the other screw (B). This will allow you to flex the EP drive.



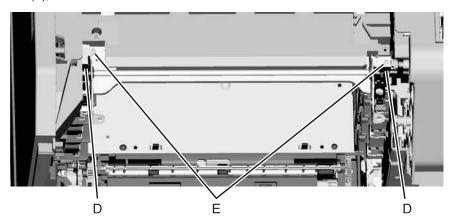
4. Remove the two screws (C).



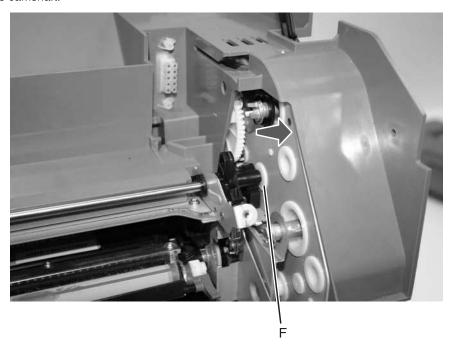




5. Rotate the camshaft up using the camshaft actuator handle (D) so you can access the other two screws (E), and remove them.



6. Flex the EP drive assembly to remove the right side of the camshaft from the boss (F) and lift to remove the camshaft.



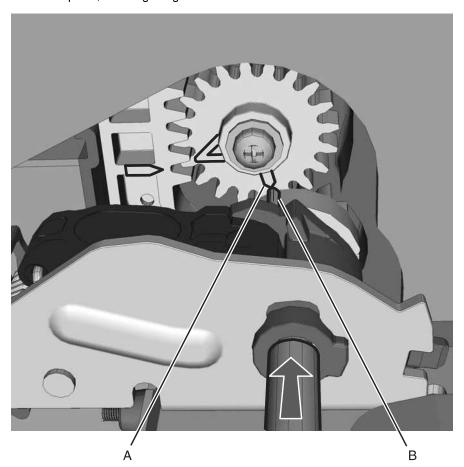






Installation notes:

1. On the left side, align the mark on the idler gear (A) with the mark on the camshaft gear (B), and slide the camshaft into place, meshing the gears on the left side.



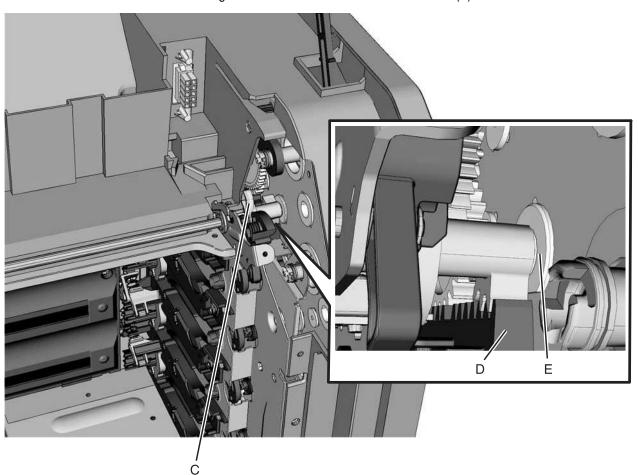




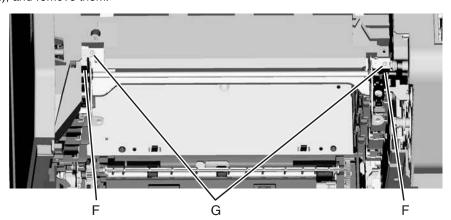
2. Rotate the camshaft up using the camshaft actuator handle (C), and make sure the gears on the right side mesh so the first gear tooth of the camshaft aligns with the first two gear teeth of the EP drive actuator rack (D).

Note: Make sure the actuator rack on the EP drive is all the way back.

3. Flex the EP drive on the right to seat the end of the shaft into the boss (E) on the EP drive.



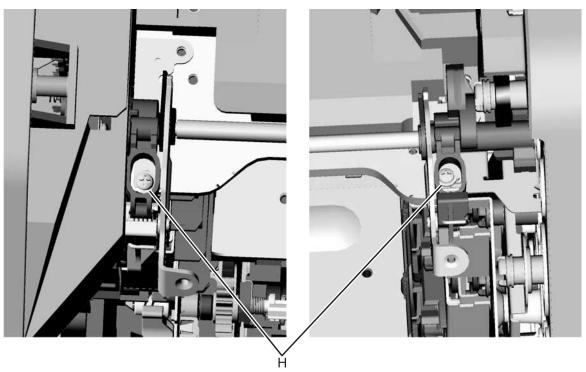
4. Rotate the camshaft up using the camshaft actuator handle (F) so you can access the other two screws (G), and remove them.







5. Rotate the camshaft using the camshaft actuator handle, and replace the two screws (H).



- 6. Replace the screw in the EP drive that allowed you to flex the EP drive, and tighten the other screw (see step 4 of the removal).
- 7. Replace the top access cover assembly
- **8.** Replace the fuser, the cartridges, and close the covers.





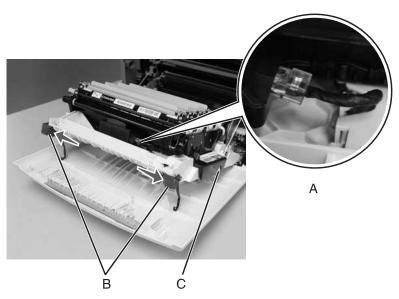
Transfer module removal

See "Transfer module" on page 7-5 for the part number.

- 1. Open the top access cover.
- 2. Open the front access door.
- **3.** Disconnect the transfer module cable (A).
- **4.** Press the two tabs (B) to release the front access cover assembly.
- 5. Press the two tabs (C) on either side of the transfer module, and lift out the transfer module.

Note: Leave the photoconductor units on the transport belt when removing.

Warning: To avoid damaging the photoconductor drum, place the transfer module with the photoconductor units on a clean surface. Never expose the photoconductor units to light for a prolonged period of time. Place a clean, dry cloth over the transfer module and photoconductor units until they are required.Lower the front access door cover.

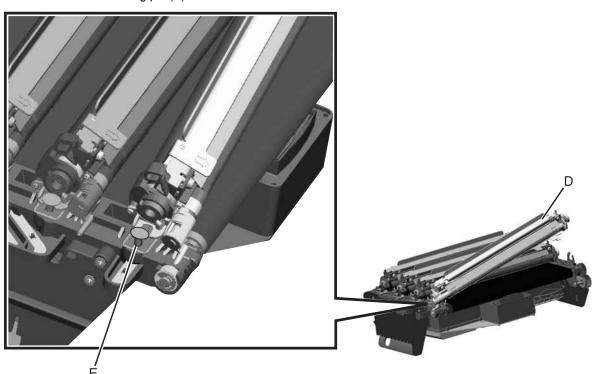


Note: If you are removing the transfer module to access another part, leave the photoconductor units attached, and you are done. If you need to replace the transport belt, continue with the next step to remove the separate photoconductor units.





- 6. Remove the photoconductor units. Lift the right end handle (D) of the photoconductor unit, releasing from the mount.
- 7. Lift the unit up and away from the left side of printer, ensuring the left end of the photoconductor is released from the holding pin (E).





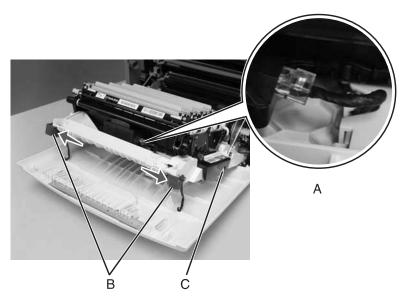


Transport cable removal

- 1. Remove the LVPS. See "Low-voltage power supply (LVPS) removal" on page 4-115.
- 2. Disconnect the transfer module cable (transport cable) (A).
- **3.** Press the two tabs (B) to release the front access cover assembly.
- 4. Press the two tabs (C) on either side of the transfer module, and lift out the transfer module.

Note: Leave the photoconductor units on the transport belt when removing.

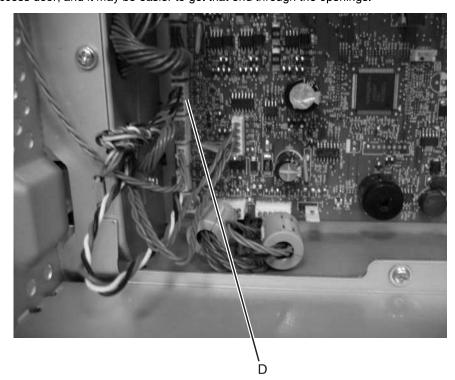
Warning: To avoid damaging the photoconductor drum, place the transfer module with the photoconductor units on a clean surface. Never expose the photoconductor units to light for a prolonged period of time. Place a clean, dry cloth over the transfer module and photoconductor units until they are required. Lower the front access door cover.



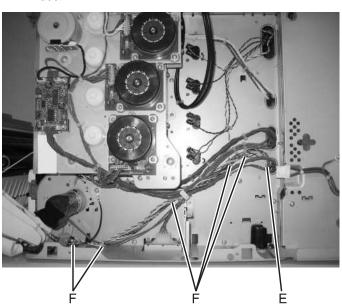


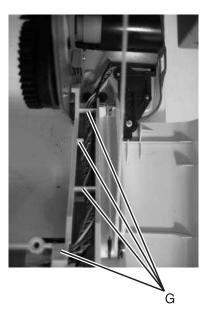


5. Disconnect the transport cable from the system board at JTPS1 connector (D). Note: The cable connector on the system board end of the cable is smaller than the connector on the front access door, and it may be easier to get that end through the openings.



- **6.** Extract the cable through the opening in the frame to the right side of the printer (E).
- 7. Remove the cable from the five cable restraints (F).
- 8. Remove the cable from the three openings in the cable channel (G) on the right side of the front access door.



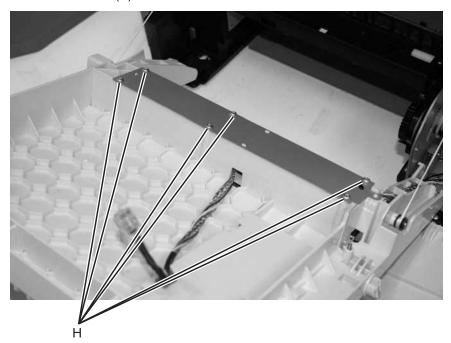




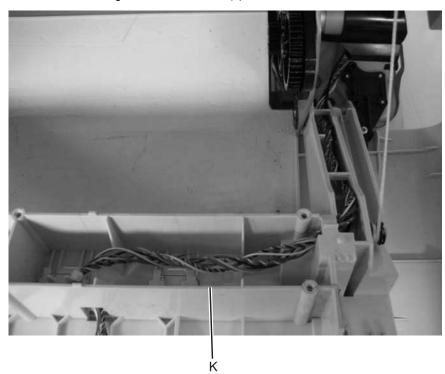




9. Remove the six screws (H) from the cable shield.



10. Remove the cable through the cable channel (J).

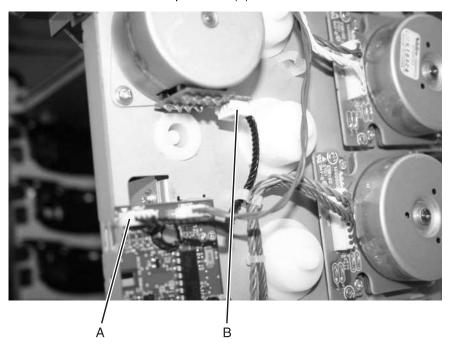






Transport motor cable removal

- 1. Remove the right cover. See "Right cover removal" on page 4-38.
- **2.** Disconnect the cable from the transport motor drive (A).
- **3.** Disconnect the cable from the transport motor (B).



4. Remove the cable.

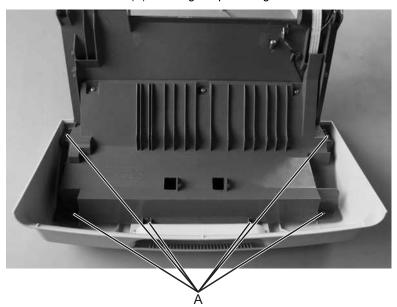




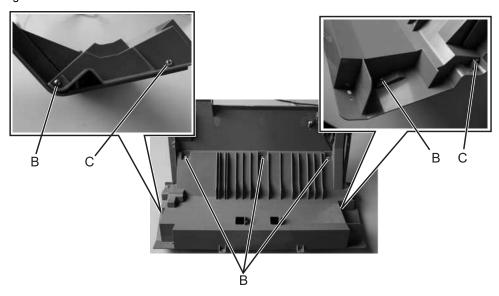
UICC card removal

Warning: This part might contain customer confidential information. See "Data Security Notice" on page 4-1 for more details. After removing this part, return it to your next level of support so any data can be removed. If the customer requests to keep the part, they must sign a confirmation of memory device retention form.

- 1. Remove the top access cover assembly. See "Top access cover assembly removal" on page 4-40.
- 2. Place the top access assembly on a soft lint-free cloth with the touchscreen facing down.
- 3. Remove the six smaller screws (A) securing the position guide cover.



4. Remove the five larger screws (B) and the two smaller screws on the side (C), then remove the position guide cover to access the cables.

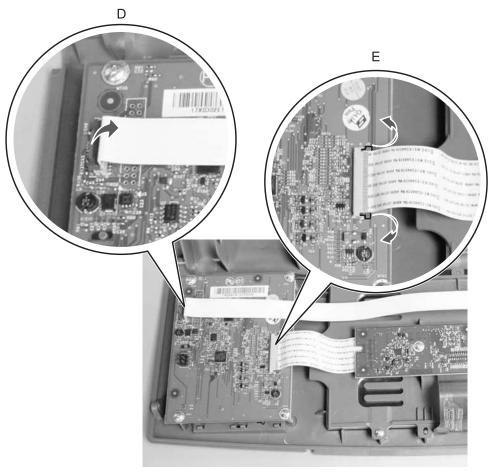








5. Flip open the lock on the UICC cable (D) and LCD interface card cable (E) connectors, then disconnect the cables from the connector.



6. Remove the four screws (F) securing the UICC card.



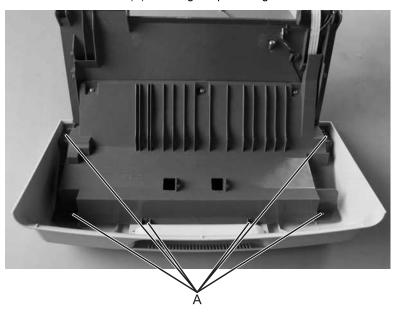
7. Remove the UICC card.



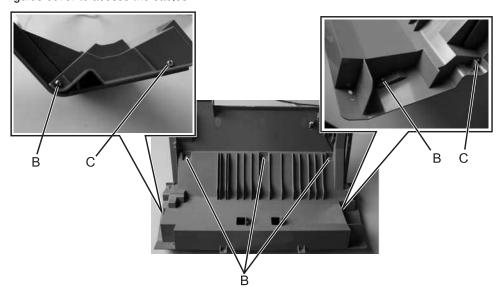


UICC cable removal

- 1. Remove the top access cover assembly. See "Top access cover assembly removal" on page 4-40.
- 2. Place the top access assembly on a soft lint-free cloth with the touchscreen facing down.
- **3.** Remove the six smaller screws (A) securing the position guide cover.



4. Remove the five larger screws (B) and the two smaller screws on the side (C), then remove the position guide cover to access the cables.

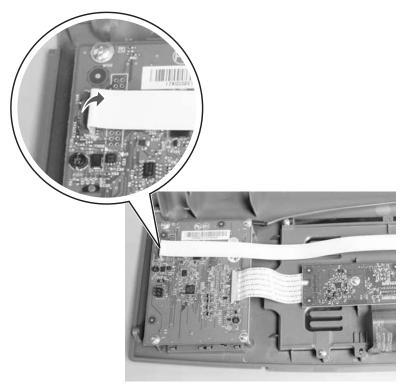








5. Flip open the lock on the UICC cable, then disconnect the cable from the connector.

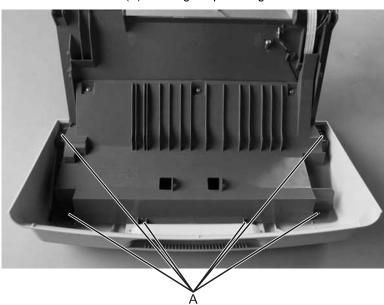


Remove the UICC cable.

Installation note: Pay attention to the routing of the UICC cable. and make sure it is properly connected to the UICC connector.

USB connector cable removal (front panel)

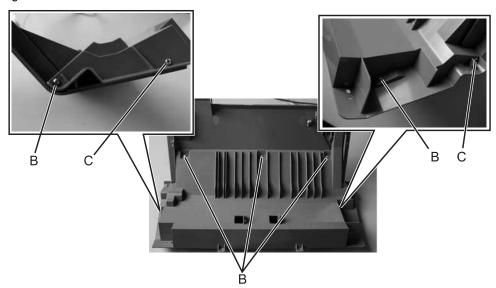
- 1. Remove the top access cover. See "Top access cover assembly removal" on page 4-40.
- **2.** Place the top access assembly on a soft lint-free cloth with the touchscreen facing down.
- 3. Remove the six smaller screws (A) securing the position guide cover.





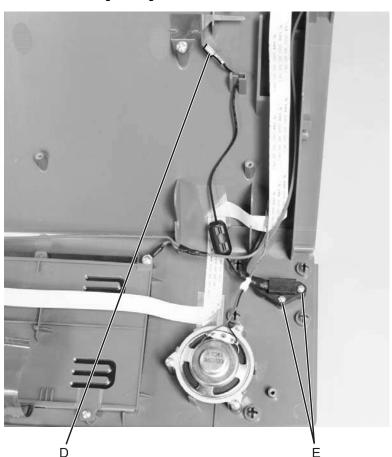


4. Remove the five larger screws (B) and the two smaller screws on the side (C), then remove the position guide cover to access the cables.



5. Disconnect the USB ground cable (D) and remove the screw (E) securing the USB connector.

Note: Pay attention to the routing of the ground cable



6. Remove the USB connector cable with the ground cable

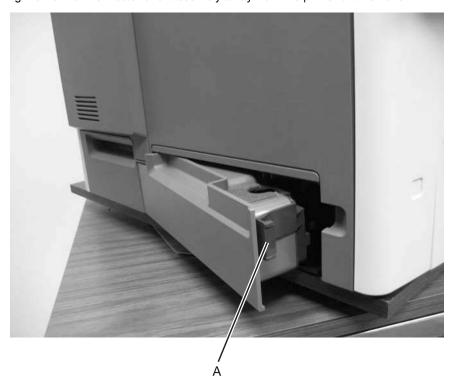




Waste toner assembly removal

Note: This is not a FRU.

- **1.** Press the waste toner release latch (A).
- **2.** Swing the front of the waste toner assembly away from the printer and remove.





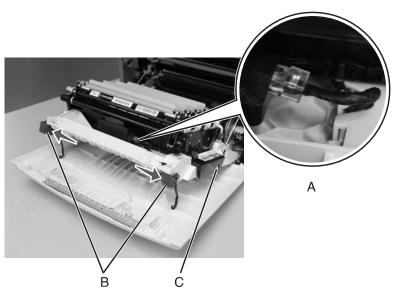


Waste toner HV contact assembly removal

- **1.** Disconnect the transfer module cable (A).
- 2. Press the two tabs (B) to release the front access cover assembly.
- 3. Press the two tabs (C) on either side of the transfer module, and lift out the transfer module.

Note: Leave the photoconductor units on the transport belt when removing.

Warning: To avoid damaging the photoconductor drum, place the transfer module with the photoconductor units on a clean surface. Never expose the photoconductor units to light for a prolonged period of time. Place a clean, dry cloth over the transfer module and photoconductor units until they are required.

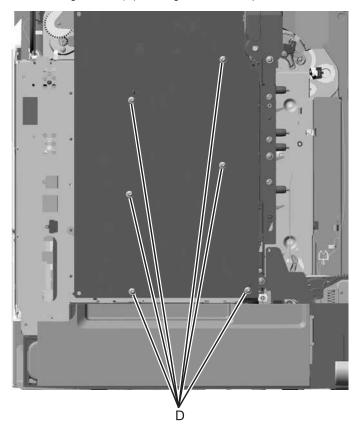


4. Remove the left cover. See "Left cover removal" on page 4-24.

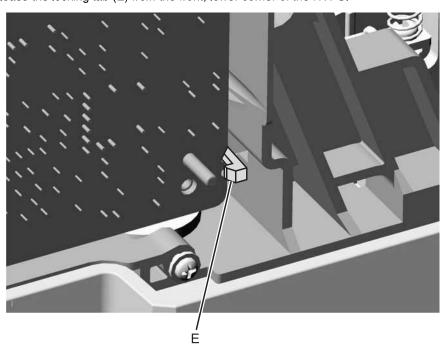




5. Remove the six mounting screws (D) holding the HVPS in place.



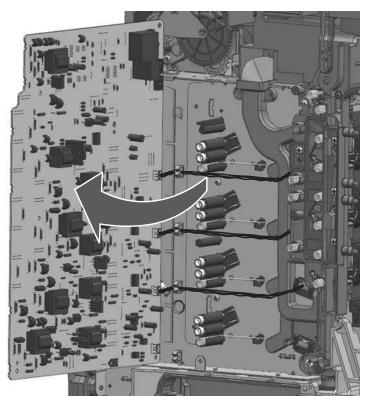
6. Release the locking tab (E) from the front, lower corner of the HVPS.



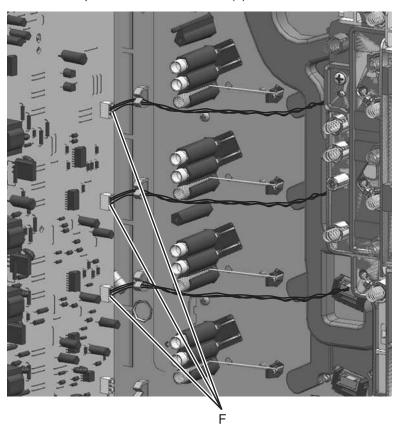




7. Lay the board to the left.



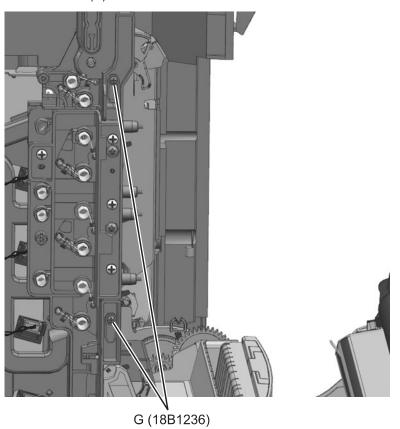
 $\pmb{8}_{\bullet}$ Disconnect the three top toner level sensor cables (F) from the HVPS.







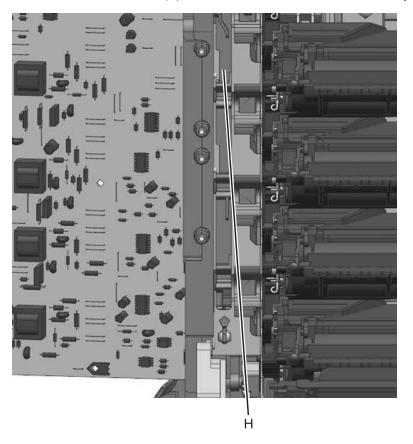
9. Remove the two screws (G).







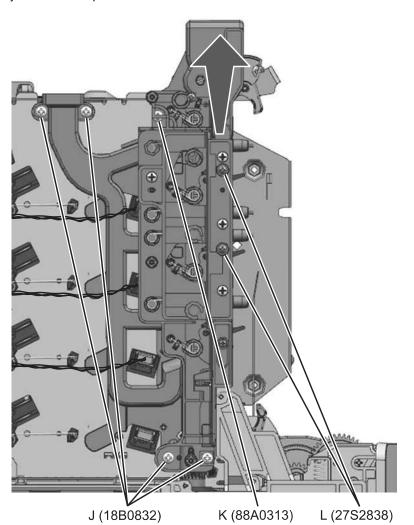
10. Remove the cleaner shutter actuator (H) from the waste toner HV contact assembly.







11. Remove the four screws (J), the two screws (K), and the screw (L). Tilt the Waste toner HV contact assembly forward and up to remove it.

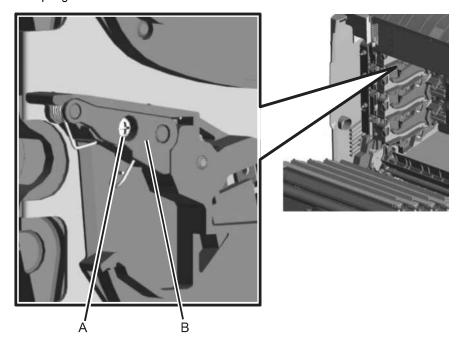




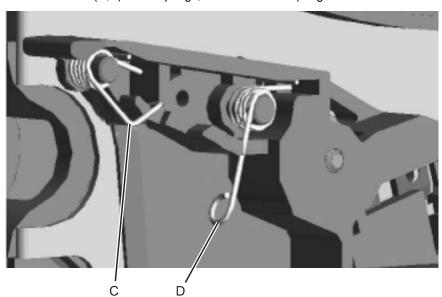


Installation note: Do the following procedures when re-installing the waste tone HV contact assembly:

- **1.** Remove the fuser.
- 2. Remove all four toner cartridges
- 3. Remove the four sets of torsion springs. Remove the screw (A) and the spring cap (B) of the appropriate contact spring.



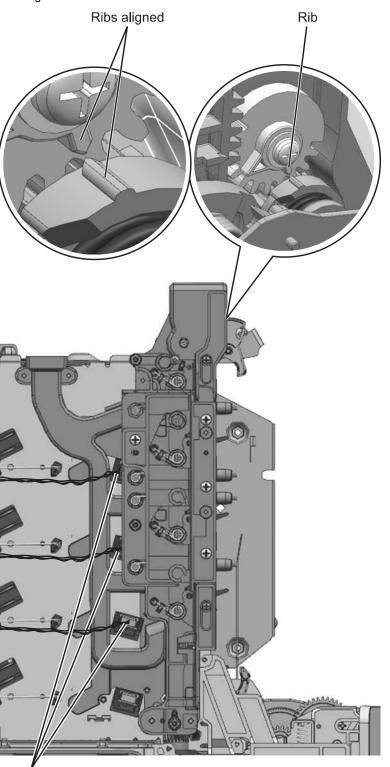
4. Press the lower half (C,D) of the springs, and remove the springs.







5. Install the waste toner HV contact assembly into place. Route the toner level sensor cables (E) through the holes in the waste toner HV contact assembly while positioning the assembly. Make sure the aligner shaft worm gear is aligned as shown.

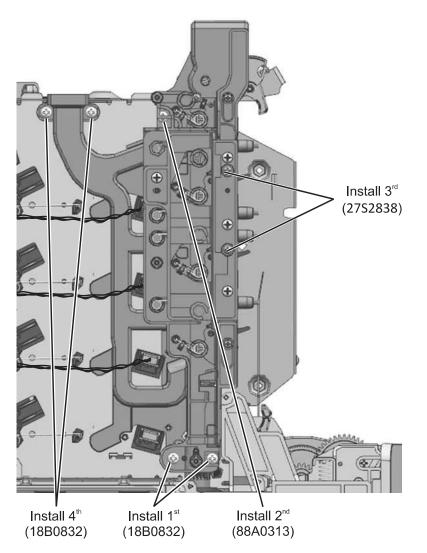








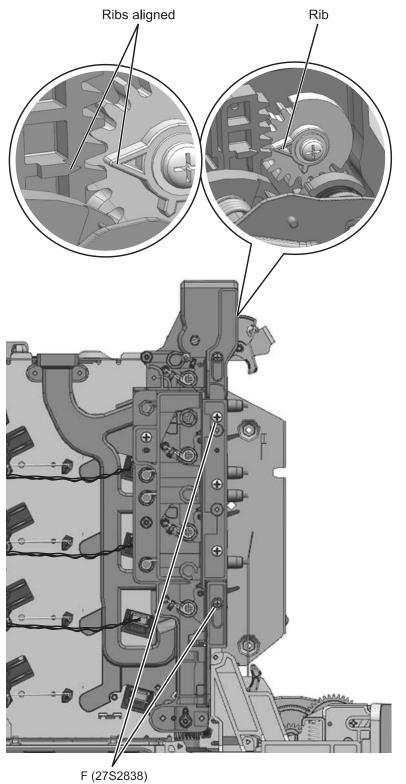
6. Install the seven screws in the order shown below.







7. Use two screws (F) to attach the cleaner shutter actuator to the Waste toner HV contact assembly. Make sure the gear aligns as shown.

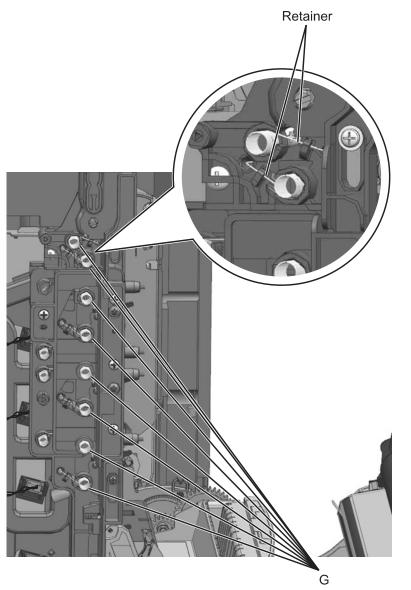








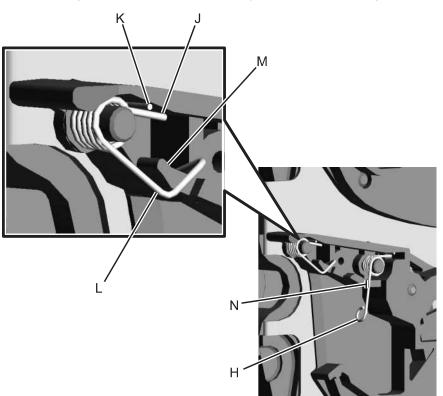
8. Attach the eight springs (G) to the Waste toner HV contact assembly as shown. Make sure the springs are behind the retainers.







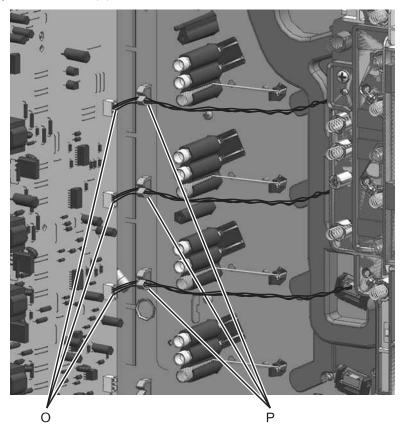
9. Install the contact springs. When installing each contact spring, make sure the top half (H) of the spring is under the straight spring (J). This is typical for both types of springs. Also make sure that the bottom half (K,L) of both springs are compressed and locked by the appropriate locking tabs (M,N).







10. Connect the three top toner level sensor cables to the HVPS, making sure the cables (O) are attached properly to the retainers (P).



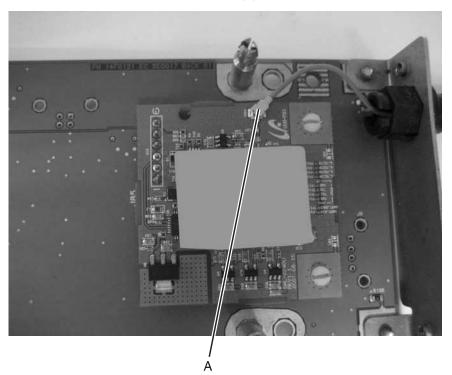
11. Reassemble the rest of the printer.



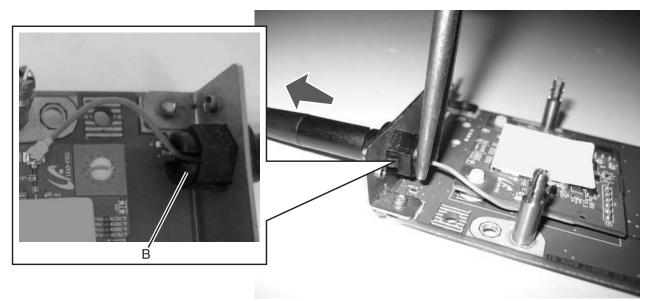


Wireless network antenna removal

- 1. Remove the wireless network card. see "Wireless network card removal" on page 4-206.
- 2. Disconnect the wireless network antenna cable (A) from the wireless network card.



3. With pliers, squeeze the inner tabs (B), and pull the antenna out.



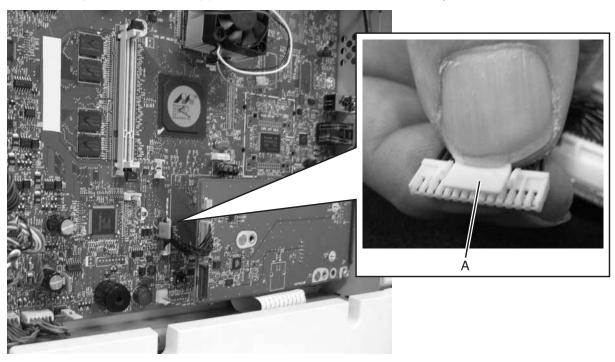
4. Pull the cable through, and remove the antenna with the cable.



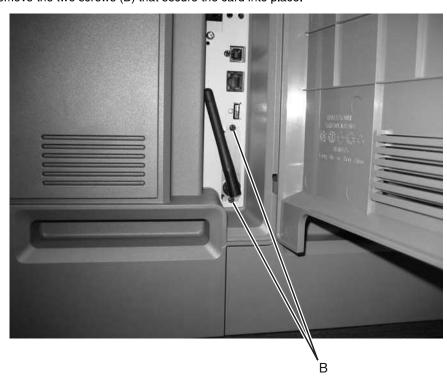


Wireless network card removal

- 1. Remove the rear frame cover. See "Rear frame cover removal" on page 4-37.
- 2. Squeeze the connector (A) to disconnect the wireless cable from the system board at J5.



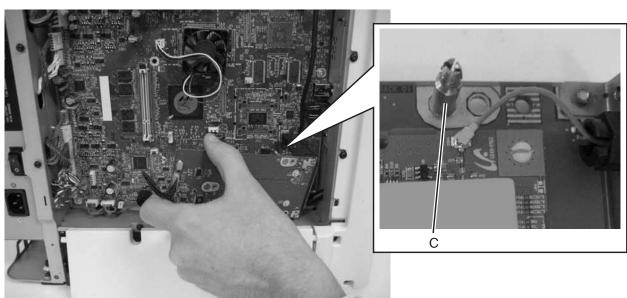
- 3. Open the left door cover.
- 4. Remove the two screws (B) that secure the card into place.







5. *Pop* the posts (C) on the card from the sockets (holes) in the system board.



Note: If you are removing the wireless network card to access another part, leave the antenna attached to the card, and you are done. If you need to replace the wireless network card FRU, continue with the next step to remove the separate wireless network antenna FRU.

6. Remove the wireless network antenna. See "Wireless network antenna removal" on page 4-205.



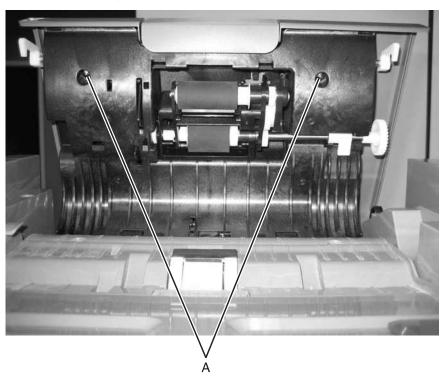




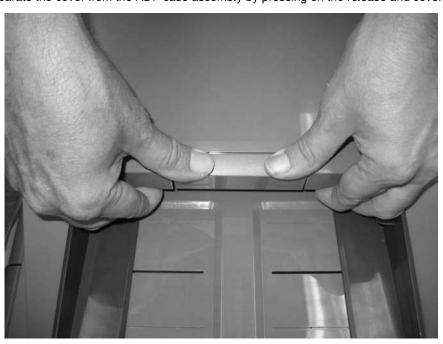
Scanner flatbed and automatic document feeder (ADF)

ADF front cover removal

- 1. Open the ADF front cover.
- 2. Remove the two screws (A).



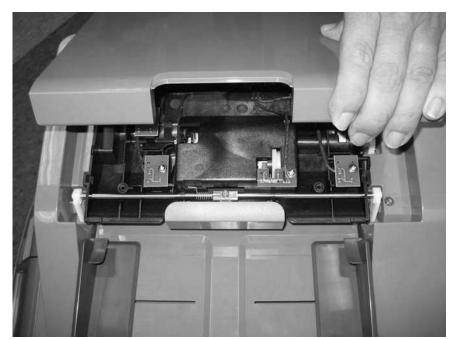
- **3.** Close the ADF front cover.
- **4.** Separate the cover from the ADF case assembly by pressing on the release and cover.







5. Lift the cover from the ADF.

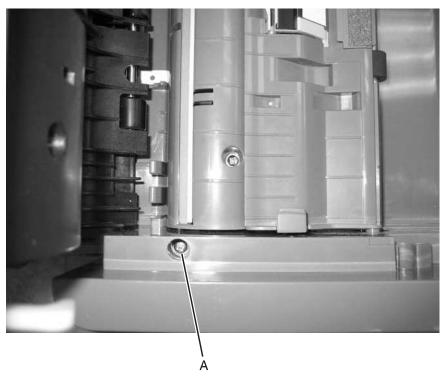






ADF front side cover removal

- 1. Remove the input tray. See "Input tray removal" on page 4-222.
- 2. Open the ADF front cover.
- 3. Remove the screw (A).



4. Lift the cover to remove.





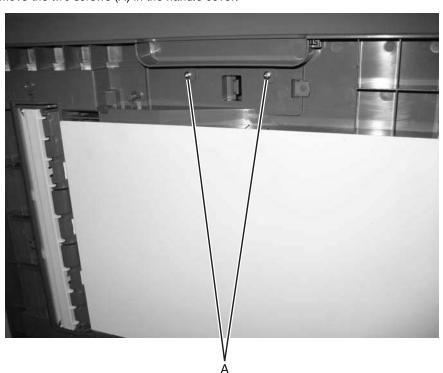


Installation notes: Insert the tab into the slot, and lower it into place.



ADF handle cover removal

- 1. Open the ADF.
- 2. Remove the two screws (A) in the handle cover.



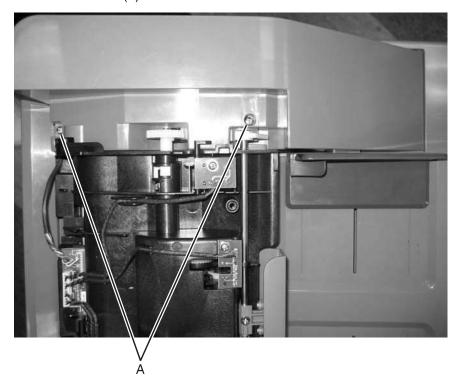
3. Remove the handle cover.





ADF motor side cover removal

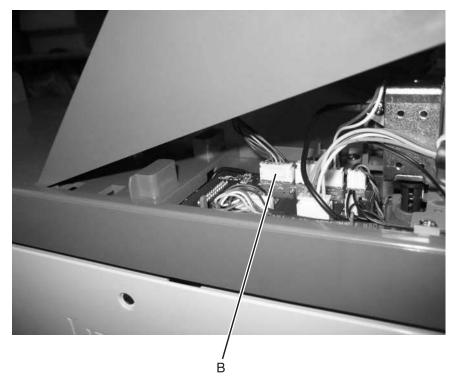
- 1. Remove the input tray. See "Input tray removal" on page 4-222.
- 2. Remove the ADF front cover. See "ADF front cover removal" on page 4-208.
- **3.** Open the ADF case assembly.
- 4. Remove the two screws (A).





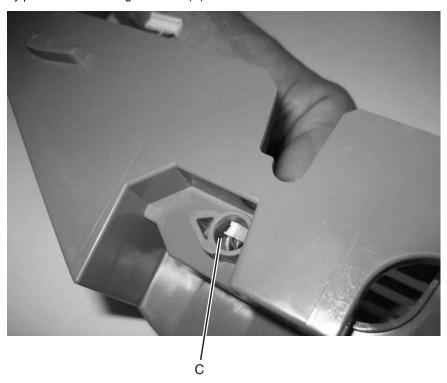


5. Lift the ADF motor side cover, and disconnect the tray connector (B).



Note: If you are removing the ADF motor side cover to access another part, leave the cable attached, and you are done. If you need to replace the ADF motor side cover FRU, continue with the next step to remove the separate left door cover FRU. Reinstall the cable in the new ADF motor side cover.

6. Gently pull the cable through the hole (C) in the side of the ADF motor side cover.







7. Remove the screw (D) to remove the cable from the ADF motor side cover.



Installation notes:

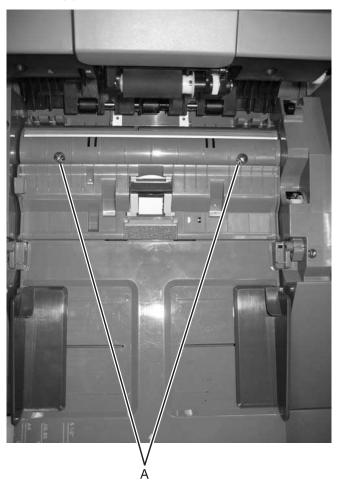
- Install the cable from the old FRU in the new FRU.
- Be sure to route the cable through the hole. The smaller connector goes through the hole.
- Insert the tab though into the slot, and then lower the ADF motor side cover into place.





ADF upper case cover removal

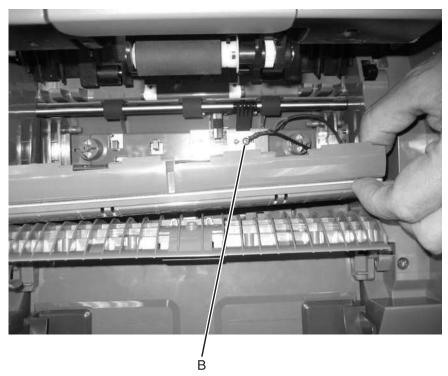
- **1.** Open the ADF cover.
- 2. Remove the two screws (A).





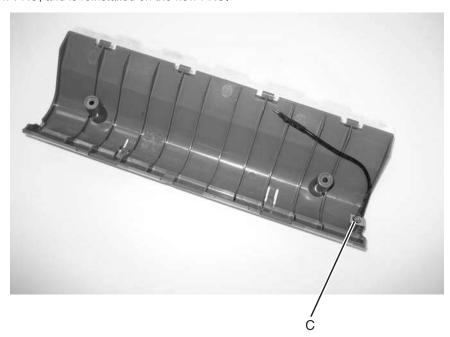


3. Lift the ADF upper case cover up to access the ground screw, and remove the ground screw (B).



Note: If you are removing the ADF upper case cover to access another part, leave the cable attached, and you are done. If you need to replace the ADF upper case cover, continue with the next step to remove the separate cable.

4. Remove the screw (C) holding the ground cable on the ADF upper case cover. The cable is not part of the new FRU, and is reinstalled on the new FRU.



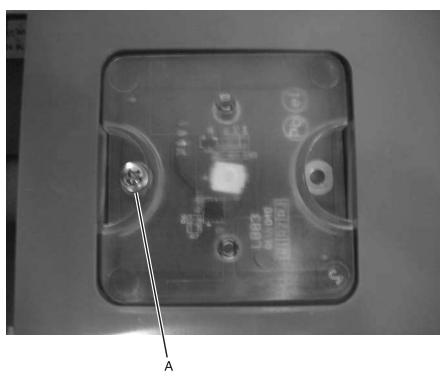




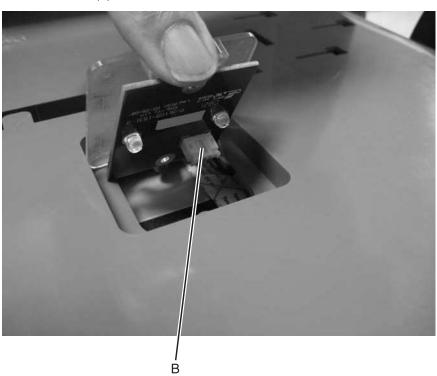
Flatbed cave LED card and cover removal

The flatbed cave LED card and the flatbed cave LED cover are separate FRUs. The removal for each is the same.

1. Remove the screw (A).



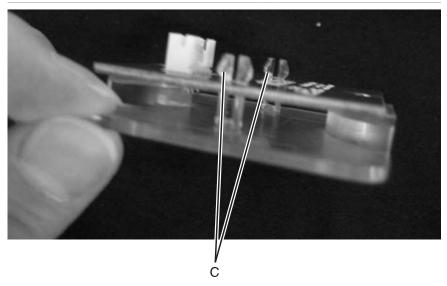
- 2. Pull the assembly down.
- 3. Disconnect the cable (B).



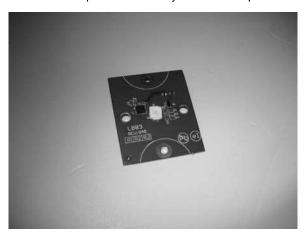




4. Pinch each of the two clear posts (C), separate the flatbed cave LED cover from the flatbed cave LED card.



5. Separate the FRU you need to replace.



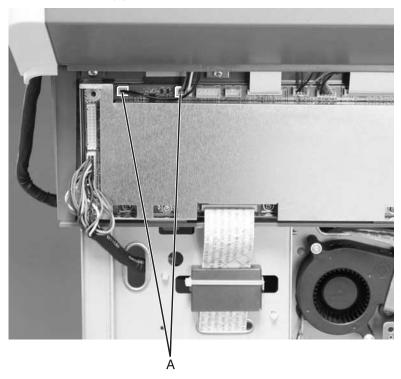






Flatbed with glass cover removal

- 1. Remove the ADF. See "ADF removal (entire)" on page 4-228.
- 2. Disconnect the two cables (A).



- 3. Remove the scanner left cover. See "Scanner left cover removal" on page 4-224.
- 4. Remove the scanner right cover. See "Scanner right cover removal" on page 4-226.
- **5.** Remove the four screws (B).





