Troubleshooting

To better help our customers - this HP Laserjet 1600 series troubleshooting page is simply a guide / additional information for your convenience, as you search for assistance in repairing your machine. Although this information is provided for your convenience it is recommended, for the most part, that a technician inspects your office equipment.

It is recommended to consult with a professional when ordering your printer part(s).

Chapter contents

Shop with us while you troubleshoot.

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Removal and replacement

This chapter contains information about the following topics.

- [Overview](#)

- [Service approach](#)

- [Removal and replacement procedures](#)

Overview

Removal and replacement strategy

Replace parts in the reverse order of their removal. Directions for difficult or critical replacement procedures are included in this section.

> ⚠️ **WARNING!**   The sheet-metal edges of the product can be sharp. Use caution when working on the product.

> 📝 **NOTE**   Note the length, diameter, color, type, and location of each screw. Be sure to return each screw to its original location during reassembly. Incorrectly routed or loose wire harnesses can interfere with other internal components and can become damaged or broken. Frayed or pinched harness wires can be difficult to locate. When replacing wire harnesses, always use the provided wire loops, lance points, or wire harness guides.

Electrostatic discharge

The printer contains parts that are sensitive to electrostatic discharge (ESD). Watch for the ESD reminder shown at the left when removing printer parts. Protect the parts that are sensitive to ESD with protective ESD pouches.

User-replaceable parts

Table 5-1 User-replaceable parts

Product name	Description	Part number
Separation pad and pickup rollers	Replace when the printer is picking up multiple sheets or no sheets. Trying different paper did not resolve the problem.	Q5956-67902
Paper tray	A 250-sheet paper cassette.	Q5956-67901
Dust cover	Protects the output of paper cassette from dust.	Q5956-67903
Output tray extender	An extension for supporting paper in the output bin.	Q5956-67904

Required tools

Before servicing the printer, gather the following tools:

- Phillips #2 magnetized screwdriver (152 mm (6 inch) shaft)

- Small flat-blade screwdriver

- Small needle-nose pliers

- ESD strap

- Penlight (optional)

Service approach

Field Service on this printer is limited to a recommended time of 30 minutes, which includes troubleshooting, teardown, and repair. Repairs that require more time should not be made and the printer should be replaced.

The following are the major internal assemblies that can be replaced on this printer.

- Fuser

- ETB

- DC Controller

- Formatter

- Control Panel display

If troubleshooting or a Control Panel message determines that the failure is not associated with one of these parts, do not attempt to repair the printer, but replace the unit. For more information on messages that would indicate a printer needs to be replaced, refer to the Critical error messages on page 109 table and the Replaceable parts on page *** table.

Pre-service procedures

Follow the pre-service procedures before you perform service.

1. Turn off the printer.

2. Remove all media from the product.

3. Place the product on an ESD mat. If an ESD mat or an ESD-protected workstation is not available, discharge body static and ground the product chassis before servicing the product.

4. Remove the print cartridges.

5. Unplug the power cord and the interface cable.

6. Lift the printer off of optional Tray 3 (if it is installed).

Removal and replacement procedures

Print cartridge replacement

1. Open the front door.

> ⚠ **CAUTION**   **Do not place anything on the transfer belt (ETB), which is located on the inside of the front door.**
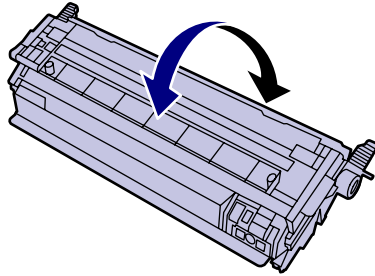
2. Remove the used print cartridge from the printer.

3. Remove the new print cartridge from the bag. Place the used print cartridge in the bag for recycling.
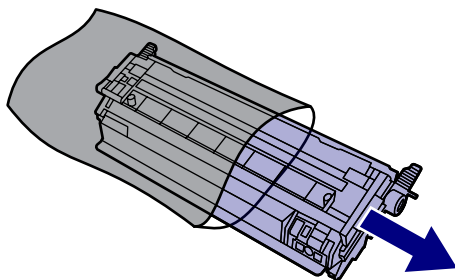
4. Grasp both sides of the print cartridge by the blue handles and distribute the toner by gently rocking the print cartridge from back to front.

> ⚠️ **CAUTION**   Do not touch the shutter or the surface of the roller.

5. Remove the orange shipping locks and the orange shipping tape from the new print cartridge. Discard the shipping tape and shipping locks according to local regulations.
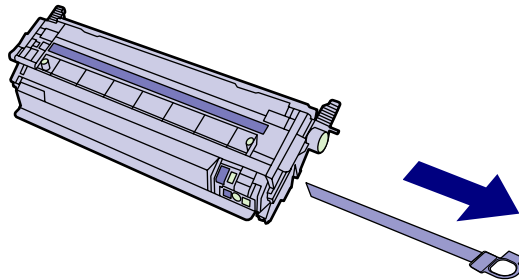
6. Align the print cartridge with the tracks inside the printer, and using the handles, insert the print cartridge until it is firmly seated.

7. Firmly close the front door.

After a short time, the control panel should display **Ready**.

> 📝 **NOTE** If a cartridge is in the wrong slot or is the wrong type for the printer, the control panel will display one of the following messages: **Incorrect yellow**, **Incorrect magenta**, **Incorrect cyan**, or **Incorrect black**.

8. Installation is complete. Place the used print cartridge in the box in which the new cartridge arrived. See the enclosed recycling guide for recycling instructions.

9. If you are using a non-HP print cartridge, check the printer control panel for further instructions.

> 📝 **NOTE** When replacing or changing a black print cartridge, a cleaning page will automatically print. This helps prevent speckles on the front or back of printed documents. For a more thorough cleaning, see Cleaning the printer on page 32.

ETB removal and replacement

Use the following procedure to remove the ETB (RM1–1881–000CN).

1. Remove or slightly pull out Tray 2 (RM1–1916–000CN).

2. Remove three (3) screws, two (2) from the right cover assembly and one (1) from the left cover assembly.
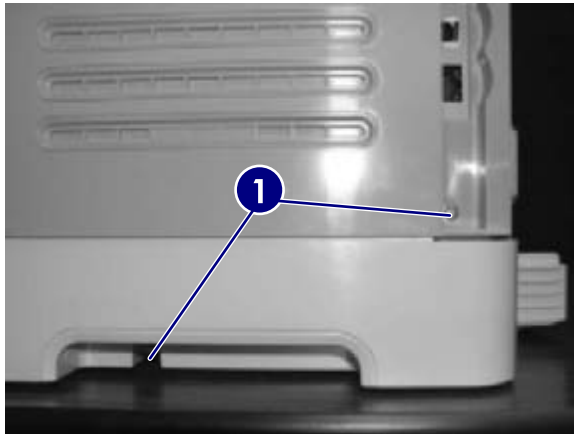
| 1 | Two (2) screws on right cover assembly |

| 1 | One (1) screw on left cover assembly |
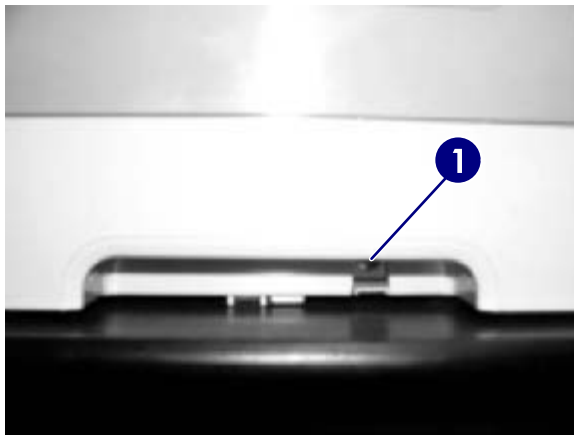
3. Open the front door.

4. Remove the right cover (RM1–1858–000CN), carefully twisting the front edges of the side covers outward to remove.
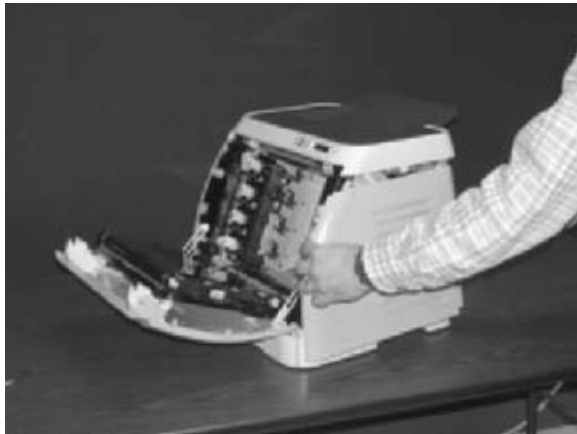
NOTE To make the removal of the right cover assembly easier, release the tab on the inside of the cover.
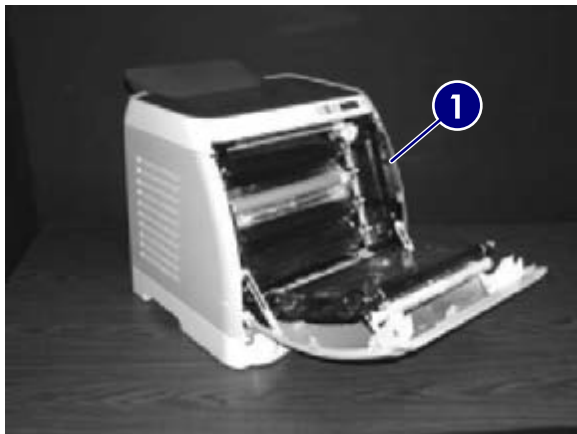
| 1 | Release tab |

5. Remove the left cover.
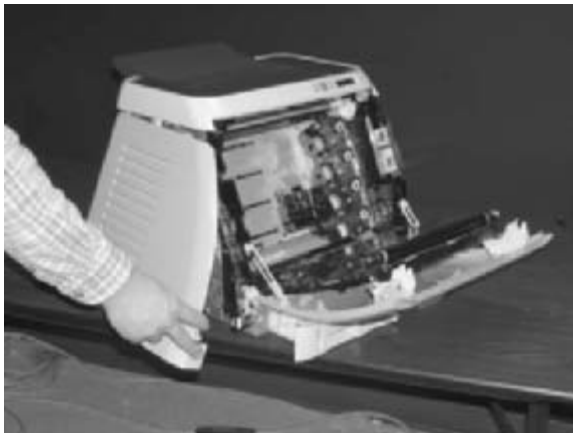
6. Squeeze the white link lever on the left side.
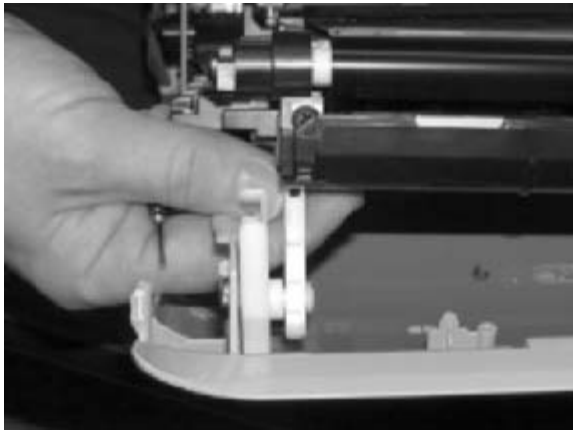
7. Remove the screw on the right white plastic catch, and then remove the plastic catch.

8. Close the ETB.
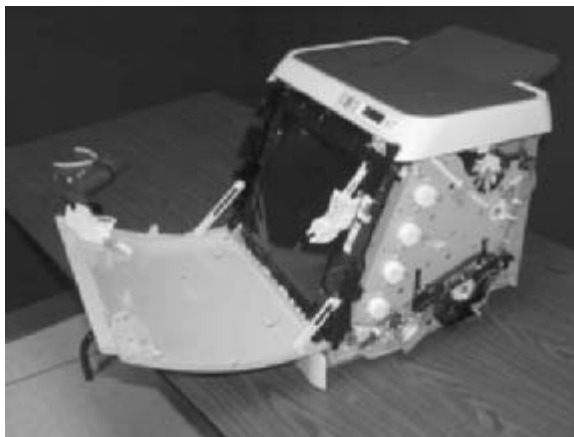
9. Remove the small black cable cover (RC1–5147–000CN) on the left side of the printer by carefully snapping it out of place.

10. Remove one (1) grounding screw from the ETB harness.
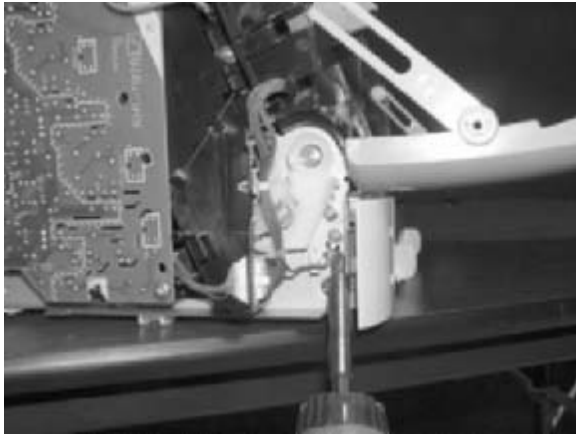
11. Pull out the white wire holder by pushing it up.
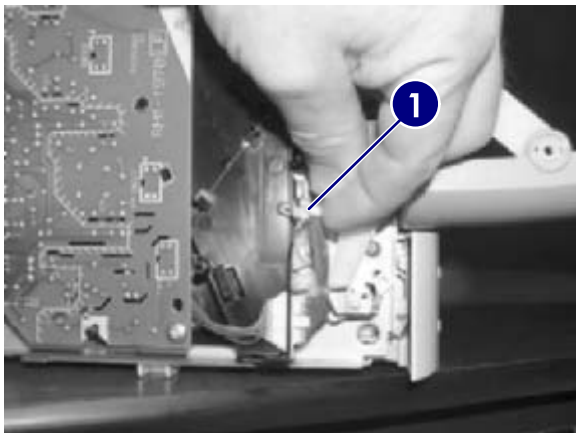
1	White wire holder

12. Pull out the ETB connector.
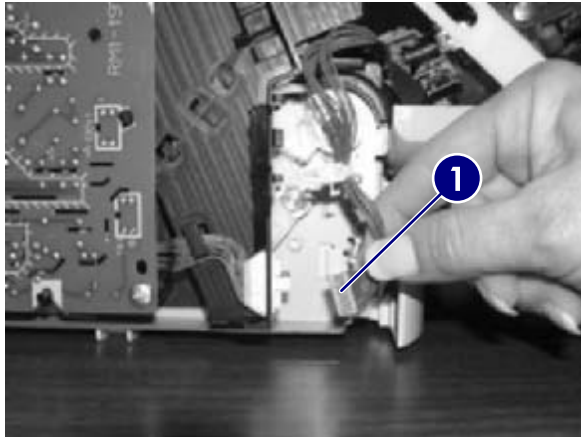
1	ETB connector

13. Remove one (1) screw from each hinge cam on both sides.
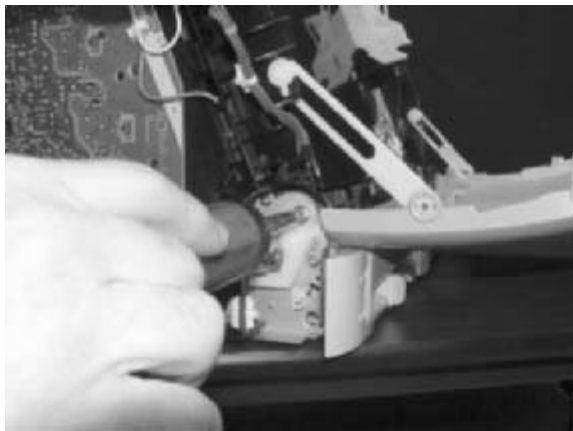
14. Using needle-nose pliers, remove the hinge left cam (RC1–4249–000CN) and the right hinge cam (RC1–5311–000CN).
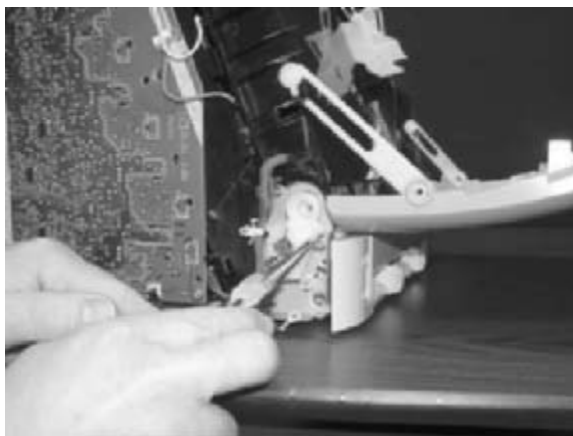
15. Remove the ETB.

Use the following procedure to replace the ETB.

1. Align each foot of the ETB with the respective holes, securing the right side first, and then the left side.

1	Alignment location

2. Complete replacement by following steps 1 through 14 above in reverse order.

> **NOTE** When replacing the right cover, align the tabs on the upper edge of the right cover and lower edge of the face-down cover with their respective slots.
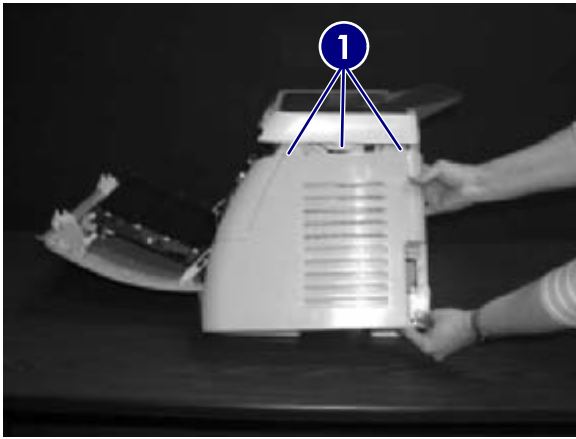
| 1 | Tabs |

Fuser removal and replacement

Use the following procedure to remove the fuser.

1. Unplug the power cable.

2. Remove the paper delivery tray assembly (RM1–1859–000CN).

3. Remove two (2) screws from the right cover assembly (RM1–1858–000CN).
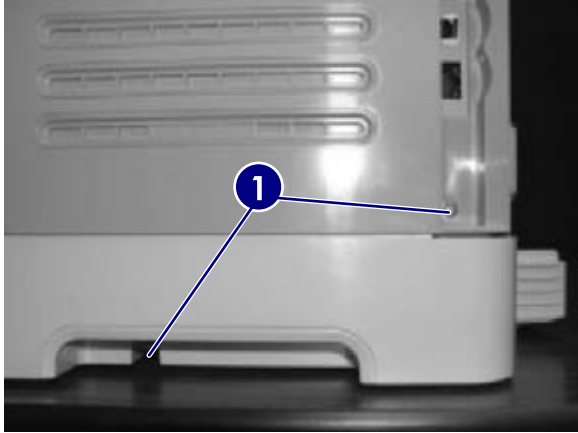
| 1 | Two (2) screws |

4. Remove the right cover assembly, carefully disengaging the catches.
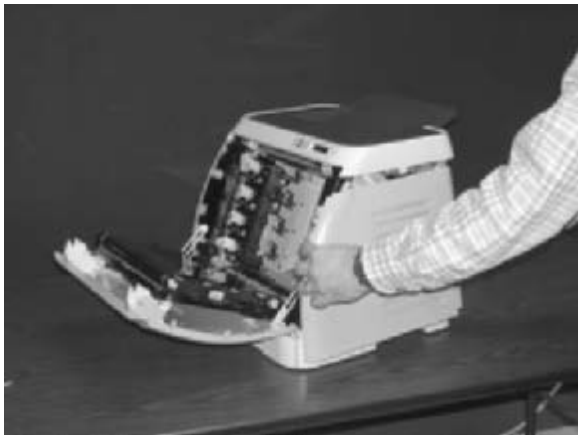
5. Unplug the control panel cable.

6. Insert a screwdriver to loosen the release tab on each side of the upper face cover.

7. Remove the upper face cover (RC1–5174–000CN).

8. Remove four (4) screws from the upper cover (RC1–5176–000CN).

9. Lift up and remove the face-down cover (RC1–5173–000CN).

10. Remove the output tray by releasing the tabs.
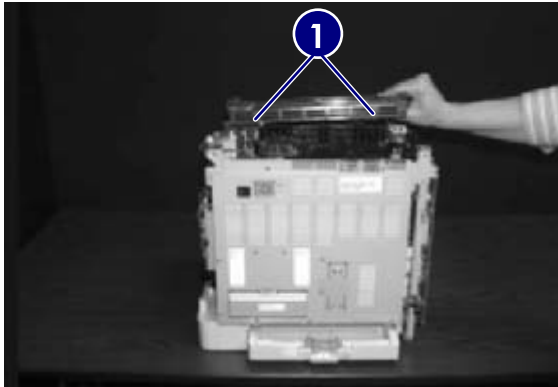
1	Release tabs

11. Unplug the harness from the fuser motor.
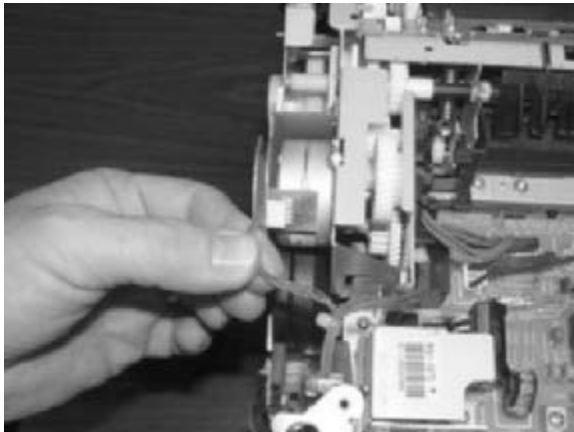
12. Open two (2) clips and remove one (1) clip to remove the fuser connector.
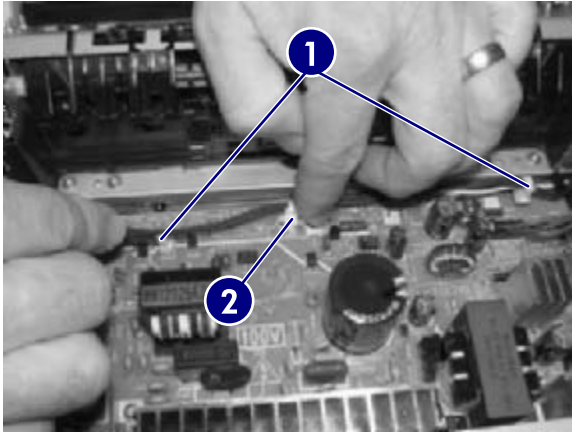
1	Open clips
2	Remove clip
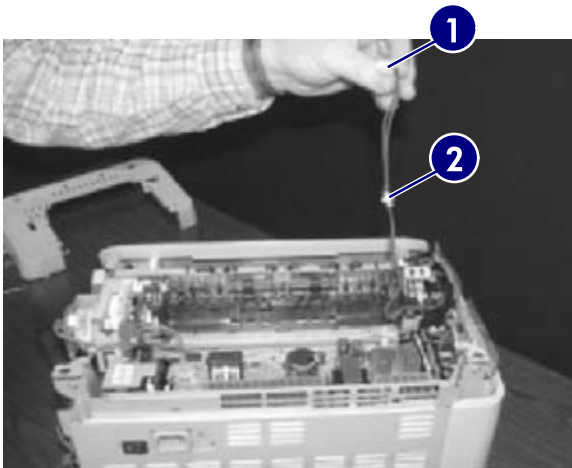
1	Fuser connector
2	Remove clip from the board by pulling up

13. Unplug two (2) 3-pin optical encoder wires.
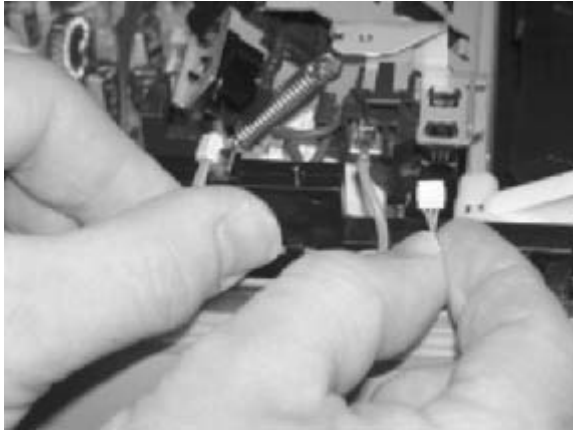
14. Unplug the red high-voltage bias wire.
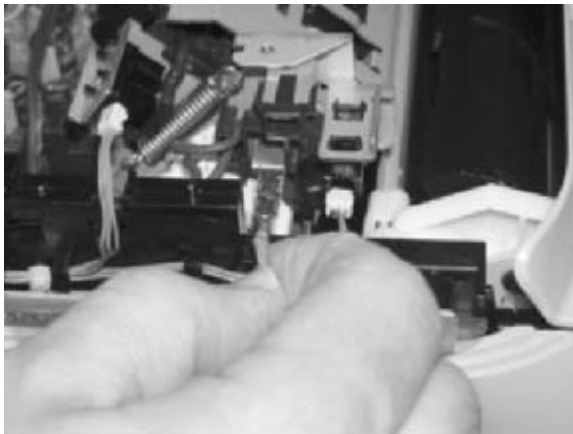
15. Remove the thermistor wire.
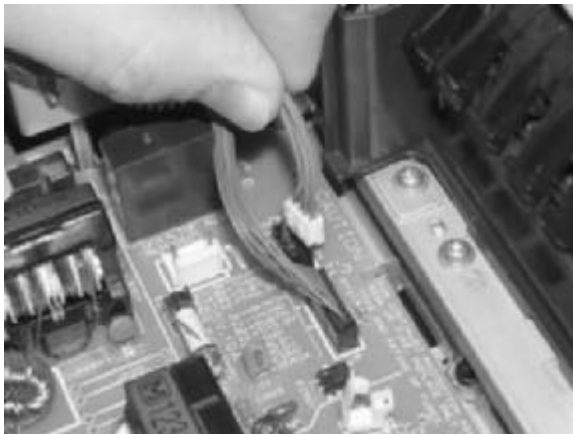
16. Remove the wiring harness.

17. Remove three (3) screws from the fuser chassis.
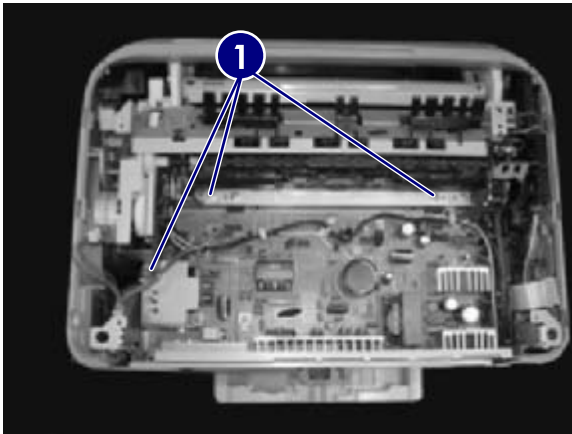
1	Three (3) screws

18. Gently rocking if necessary, roll the fuser (RM1–1820–00CN for 110V) or (RM1–1821–000CB for 220V) forward to remove.
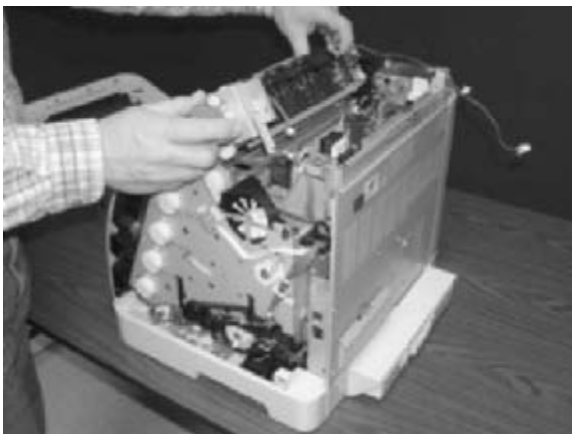
Use the following procedure to replace the fuser.

1. Align the fuser tabs with their respective holes.
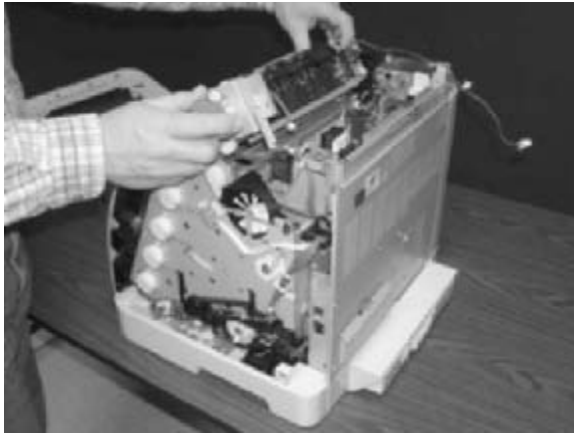
2. Complete replacement by following steps 1 through 18 above in reverse order.

> 📝 **NOTE** When replacing the right cover, align the tabs on the upper edge of the right cover and lower edge of the face-down cover with their respective slots.
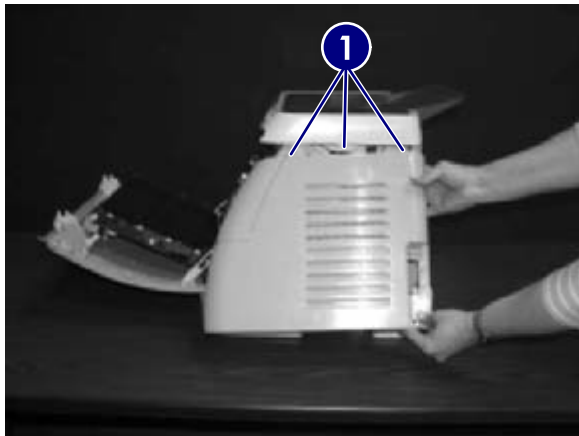
1	Tabs

> 📝 **NOTE** Connect the control panel cable before replacing the right cover.

Formatter removal and replacement

Use the following procedure to remove the formatter.

1. Remove the cassette dust cover (RC1–5200–000CN).

2. Remove nine (9) screws from the rear plate (RC1–5227–000CN).
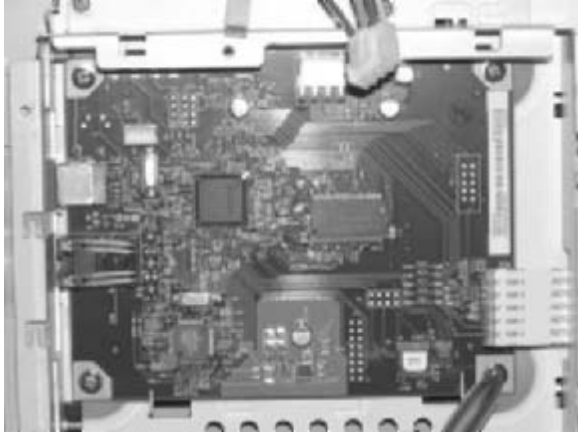
3. Remove the rear plate.
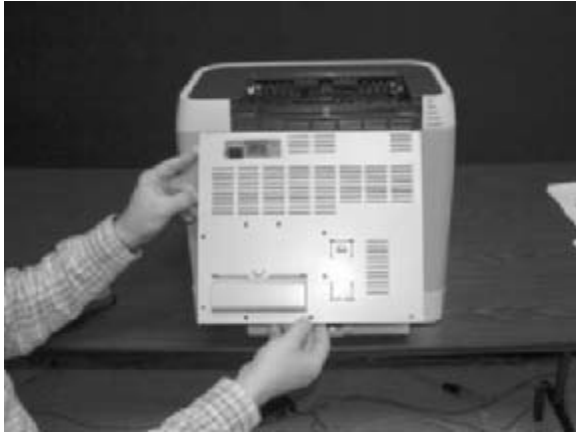
4. Unplug three (3) connectors: two (2) data connectors and one (1) power connector.
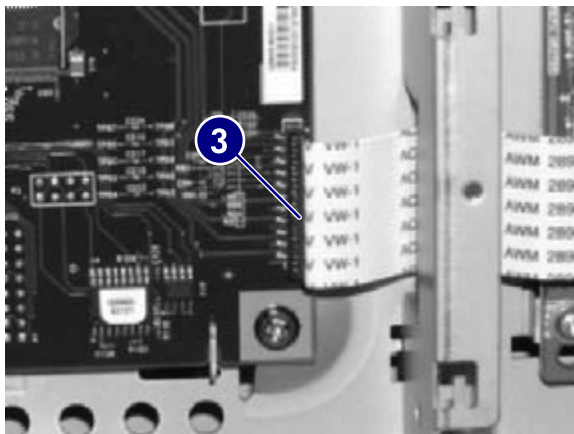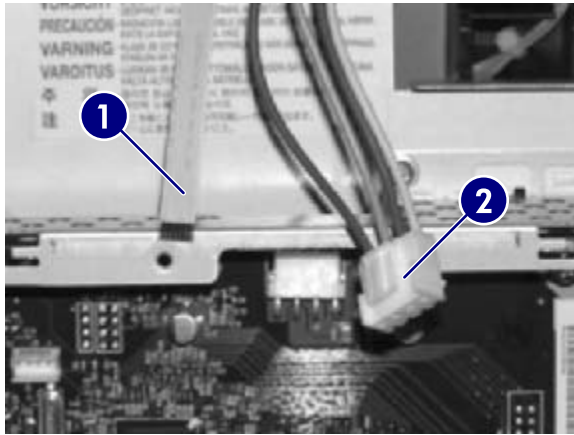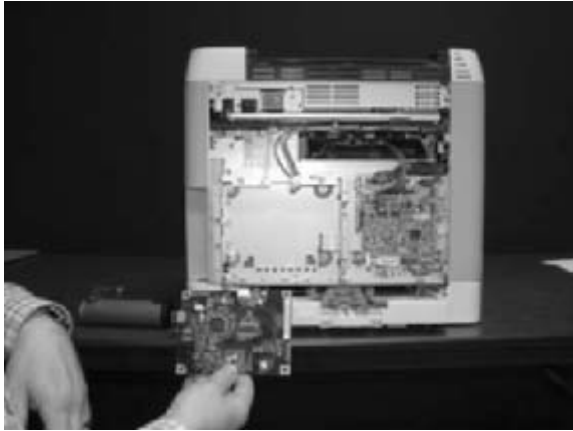

1	Flat cable
2	Power cables
3	VW-1 flat cable

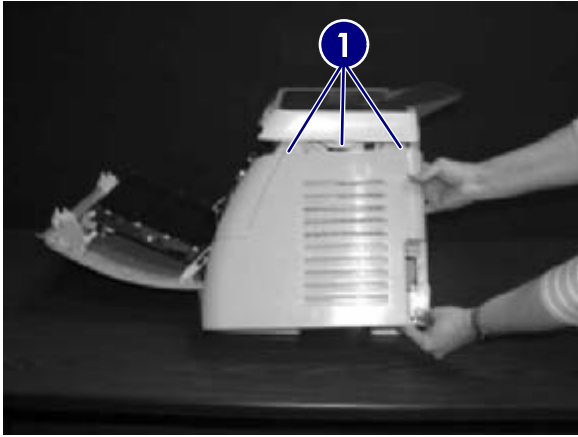**5.** Remove four (4) screws from the formatter.

6. Lifting it up, remove the formatter.

To replace the formatter, follow steps 1 through 6 above in reverse order.

NOTE When replacing the right cover, align the tabs on the upper edge of the right cover and lower edge of the face-down cover with their respective slots.

| 1 | Tabs |

DC controller removal and replacement
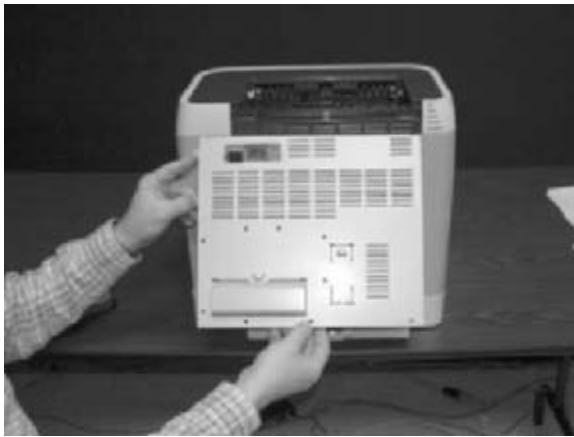
Use the following procedure to remove the DC controller.

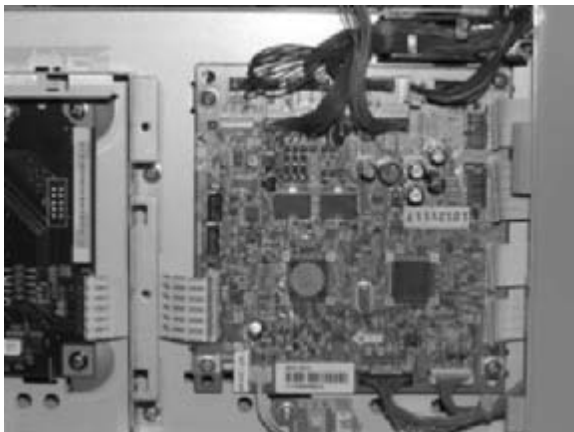**1.** Remove the cassette dust cover (RC1–5200–000CN).

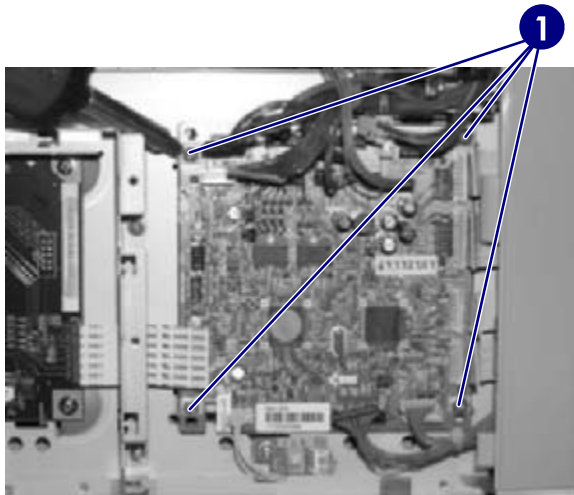**2.** Remove nine (9) screws from the rear plate (RC1–5227–000CN).

3. Remove the rear plate.
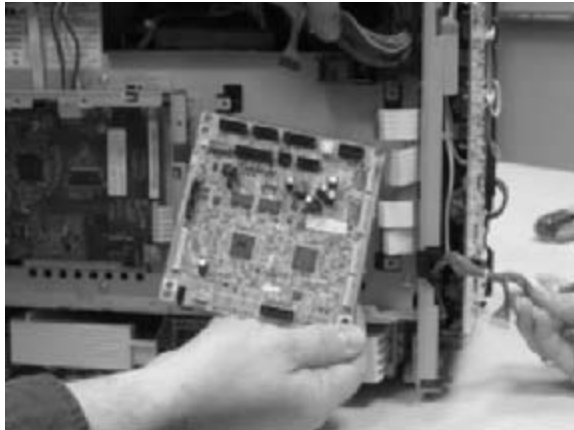

4. Gently unplug 16 connectors.

5. Remove four (4) screws from the DC controller.

1	Four (4) screws

6. Remove the DC controller PCB assembly (RM1–1975–000CN).

To replace the DC controller, follow steps 1 through 6 above in reverse order.

Separation pad removal and replacement

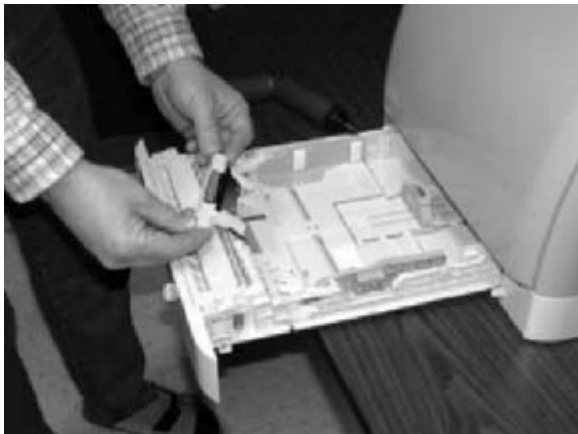Use the following procedure to remove the separation pad.

1. Remove Tray 2 (shown) or optional Tray 3.

2. Remove two (2) screws that attach the separation pad.

3. Remove the separation pad assembly (RC1–5356–000CN).

To replace the separation pad, follow steps 1 through 3 above in reverse order.

NOTE Align the tabs with the two (2) slots and then replace the separation pad.

Paper pickup roller removal and replacement

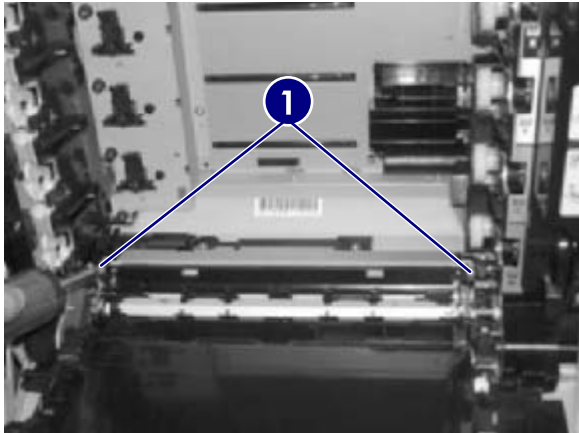Use the following procedures to remove the paper pickup roller.

1. Open the front door.
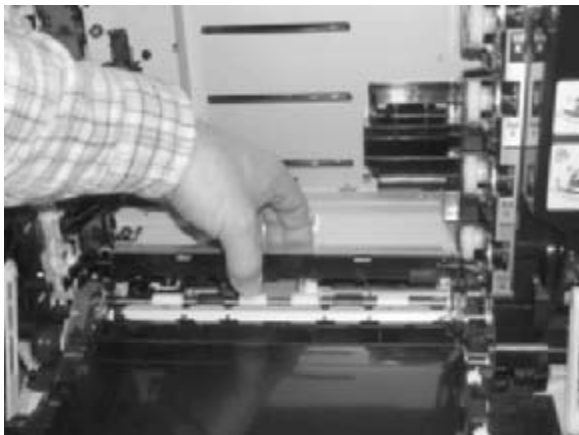

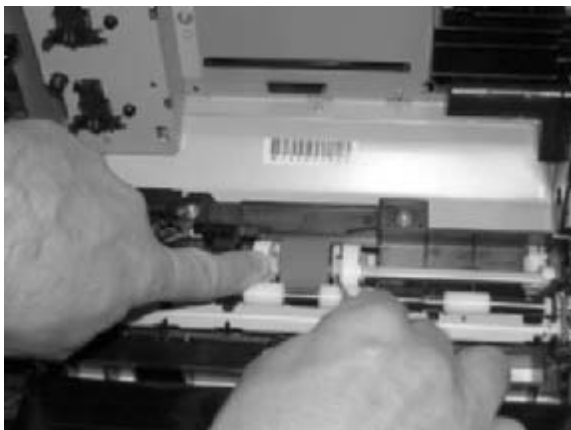**2.** Remove the print cartridges.

3. Remove two (2) screws.

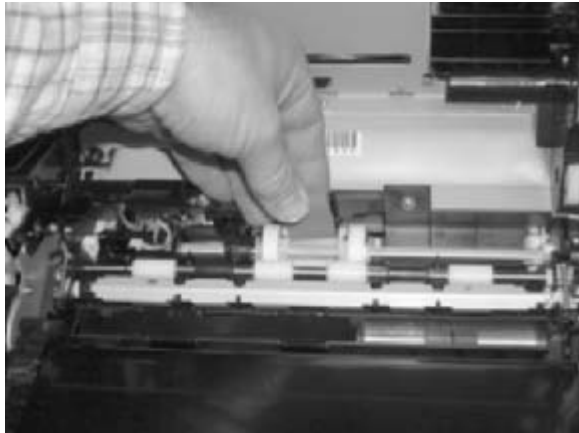| **1**	Two (2) screws

4. Remove the pre-transfer guide (RC1–5419–000CN).

5. Use a small screwdriver to pull back on the tabs.

6. Rotating it towards the back, remove the paper pickup roller (RC1-5440-000CN).
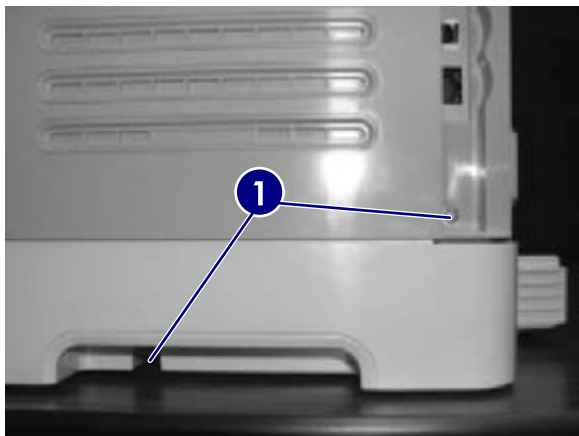

To replace the paper pickup roller, follow steps 1 through 6 above in reverse order.

Control panel removal and replacement

Use the following procedure to remove the control panel.

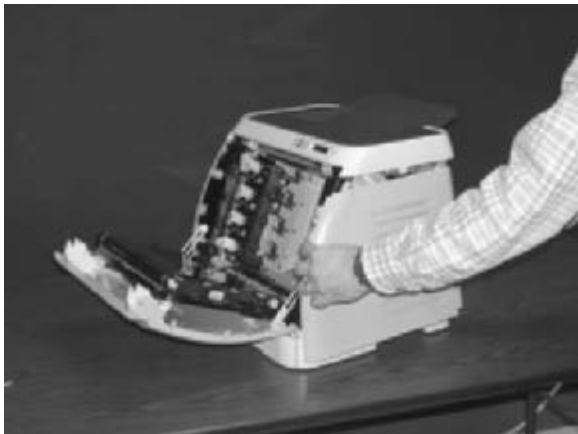**1.** Remove two (2) screws from the right cover assembly.

1	Two (2) screws

2. Remove the paper delivery tray assembly (RM1–1859–000CN).

3. Remove the right cover assembly (RM1–1858–000CN), carefully twisting the front edges of the side covers outward to remove.
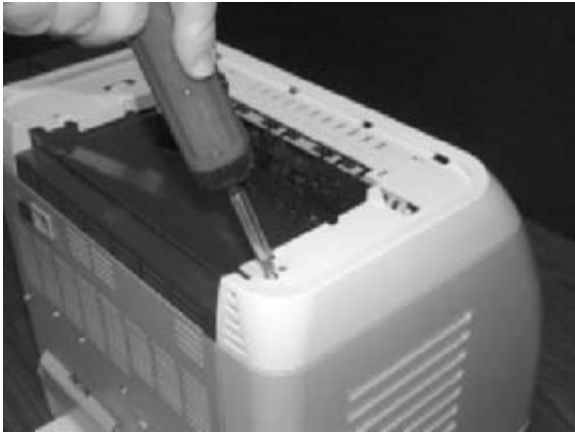

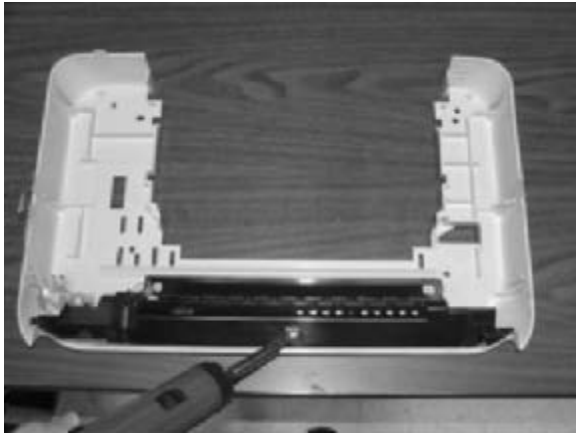**4.** Unplug the control panel cable.

5. Lift up and remove the upper face cover (RC1-5173-000CN).

6. Remove four (4) screws from the upper cover (RC1–5176–000CN).
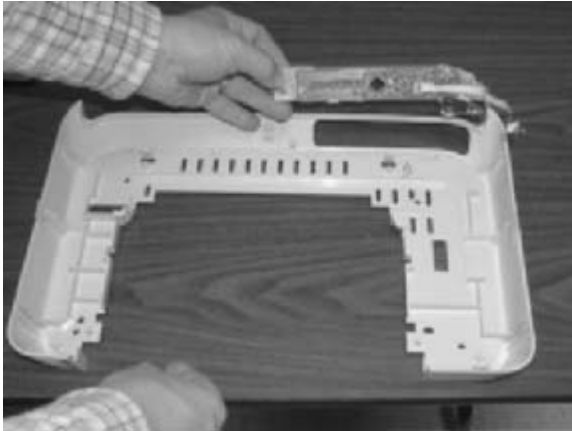
7. Remove one (1) screw from the inside upper cover (RC1–5178–000CN) and then remove the black output guide.

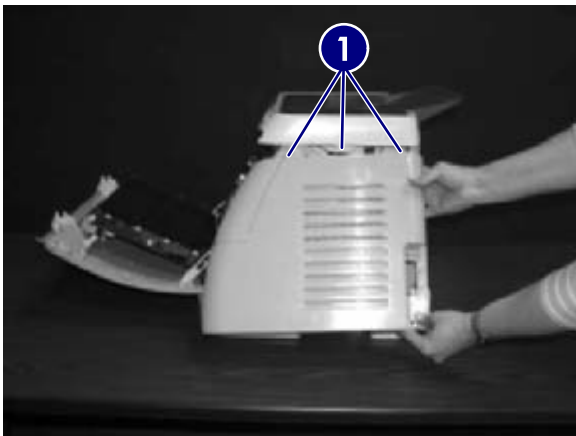**8.** Remove two (2) screws from the control panel.

9. Remove the control panel assembly (RM1–1983–000CN).

To replace the control panel, follow steps 1 through 9 above in reverse order.

NOTE When replacing the right cover, align the tabs on the upper edge of the right cover and lower edge of the face-down cover with their respective slots.

| 1 | Tabs |