



CHAPTER 4

Removal and Replacement Procedures

This chapter describes how to perform the following removal and replacement procedures for the Cisco ME 6524 Ethernet switch field-replaceable units (FRUs) and contains these sections:

- [Removing and Installing the DC-Input Power Supply, page 4-1](#)
- [Removing and Installing the AC-Input Power Supply, page 4-6](#)
- [Removing and Installing the Fan Tray, page 4-8](#)
- [Upgrading the Memory, page 4-10](#)



Warning

Only trained and qualified personnel should be allowed to install, replace, or service this equipment.
Statement 1030

Removing and Installing the DC-Input Power Supply

This section describes how to remove and install the DC-input power supplies in the Cisco ME 6524 Ethernet switch chassis and contains these subsections:

- [Required Tools, page 4-2](#)
- [Removing the DC-Input Power Supply, page 4-2](#)
- [Installing the DC-Input Power Supply, page 4-4](#)



Caution

Installation of the equipment must comply with local and national electrical codes.



Caution

Ensure that the DC return remains isolated from the system frame and the chassis (DC-I).



Note

You can use the grounding lug to attach a wrist strap for ESD protection during servicing.

**Warning**

Before performing any of the following procedures, ensure that power is removed from the DC circuits. To ensure that all power is removed, locate the circuit breakers or fuses on the DC power lines that service the DC circuits. Turn OFF the DC power line circuit breakers and remove the DC power line fuses. Statement 322

**Warning**

When installing or replacing the unit, the ground connection must always be made first and disconnected last. Statement 1046

Required Tools

To perform this procedure, you will need a Number 2 Phillips screwdriver.

Removing the DC-Input Power Supply

To remove a DC-input power supply, follow these steps:


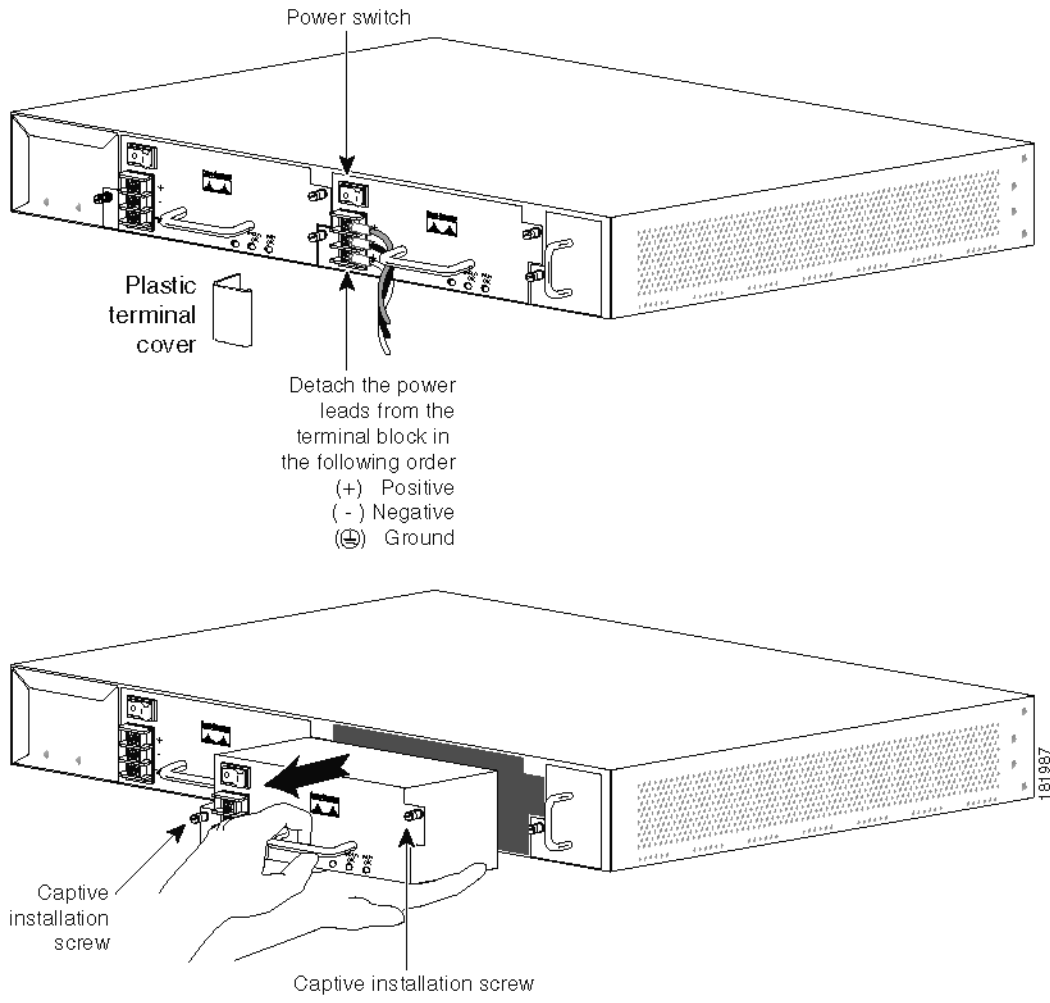
-
- Step 1** Set the power switch to the off (0) position on the power supply that you are removing.
- Step 2** Verify that power is off to the DC circuit that feeds the power supply that you are removing.
- As an added precaution, place the appropriate safety flag and lockout devices at the source power circuit breaker, or place a piece of adhesive tape over the circuit breaker handle to prevent accidental power restoration while you are working on the circuit.
- Step 3** Remove the clear plastic terminal block cover from the power supply terminal block.
- Step 4** Disconnect the DC-input cables from the power supply terminal block in this order (See [Figure 4-1](#), top view):
1. Positive (+) source DC cable from the positive (+) terminal
 2. Negative (-) source DC cable from the negative (-) terminal
 3. Ground cable from the ground terminal
- Step 5** Loosen the two captive installation screws on the power supply.
- Step 6** Grasp the power supply handle with one hand, and slide the power supply halfway out of the chassis. Place your other hand underneath the power supply, as shown in [Figure 4-1](#) (bottom view), and slide the power supply completely out of the chassis. Set the power supply aside.
-  **Note** The DC power supply is equipped with an EMI gasket on the top, bottom, and sides (on the front edge) of the power supply. When sliding the power supply into or out of the power supply bay, be careful not to damage the EMI gaskets.
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- Step 7** If the power supply bay is to remain empty, install a blank faceplate (Cisco part number 700-20988-xx) over the opening, and secure it with the two captive installation screws.

Figure 4-1 Removing the DC-Input Power Supply



Installing the DC-Input Power Supply



Warning

Before performing any of the following procedures, ensure that power is removed from the DC circuits. To ensure that all power is removed, locate the circuit breakers or fuses on the DC power lines that service the DC circuits. Turn OFF the DC power line circuit breakers and remove the DC power line fuses. Statement 322



Warning

When installing or replacing the unit, the ground connection must always be made first and disconnected last. Statement 1046

To install a DC-input power supply, follow these steps:

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- Step 1** Ensure that the system (earth) ground chassis connection has been made.
- Step 2** Verify that power is off to the DC circuit that feeds the power supply that you are installing.
- As an added precaution, place the appropriate safety flag and lockout devices at the source power circuit breaker, or place a piece of adhesive tape over the circuit breaker handle to prevent accidental power restoration while you are working on the circuit.
- Step 3** Remove the new DC-input power supply from its protective packaging.
- Step 4** Verify that the power switch is in the off (0) position on the power supply that you are installing.
- Step 5** Grasp the power supply handle with one hand, and place your other hand underneath the power supply. Slide the power supply into the power supply bay. Make sure that the power supply is fully seated in the bay. (See [Figure 4-2](#).)
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- Step 6** Tighten the two power supply captive installation screws.
- Step 7** Remove the plastic cover from the terminal block.
- Step 8** Attach the appropriate lugs to the source DC wires. The maximum width of a lug is 0.300 inch (7.6 mm). Either insulated crimp-on spade lugs or insulated crimp-on ring connectors can be used on the source DC cables. They should be sized according to local and national installation requirements and electrical codes.



Note

The DC power supply is equipped with an EMI gasket on the top, bottom, and sides (on the front edge) of the power supply. When sliding the power supply into the power supply bay, be careful not to damage the EMI gaskets.



Note

The wire should be sized according to local and national installation requirements and electrical codes. Use only copper wire.

- Step 9** Connect the DC-input wires to the terminal block in this order:
1. Ground cable to the ground connector on the terminal block
 2. Negative (–) source DC cable to the negative (–) connector on the terminal block
 3. Positive (+) source DC cable to the positive (+) connector on the terminal block

Step 10 After ensuring that all wire connections are secure, reinstall the plastic terminal block cover.



Caution To prevent a short circuit or shock hazard after wiring the DC-input power supply, you must reinstall the terminal block cover.



Caution In a system with dual power supplies, connect each power supply to a separate power source. In case of a power source failure to one supply, the second power source should still be available.

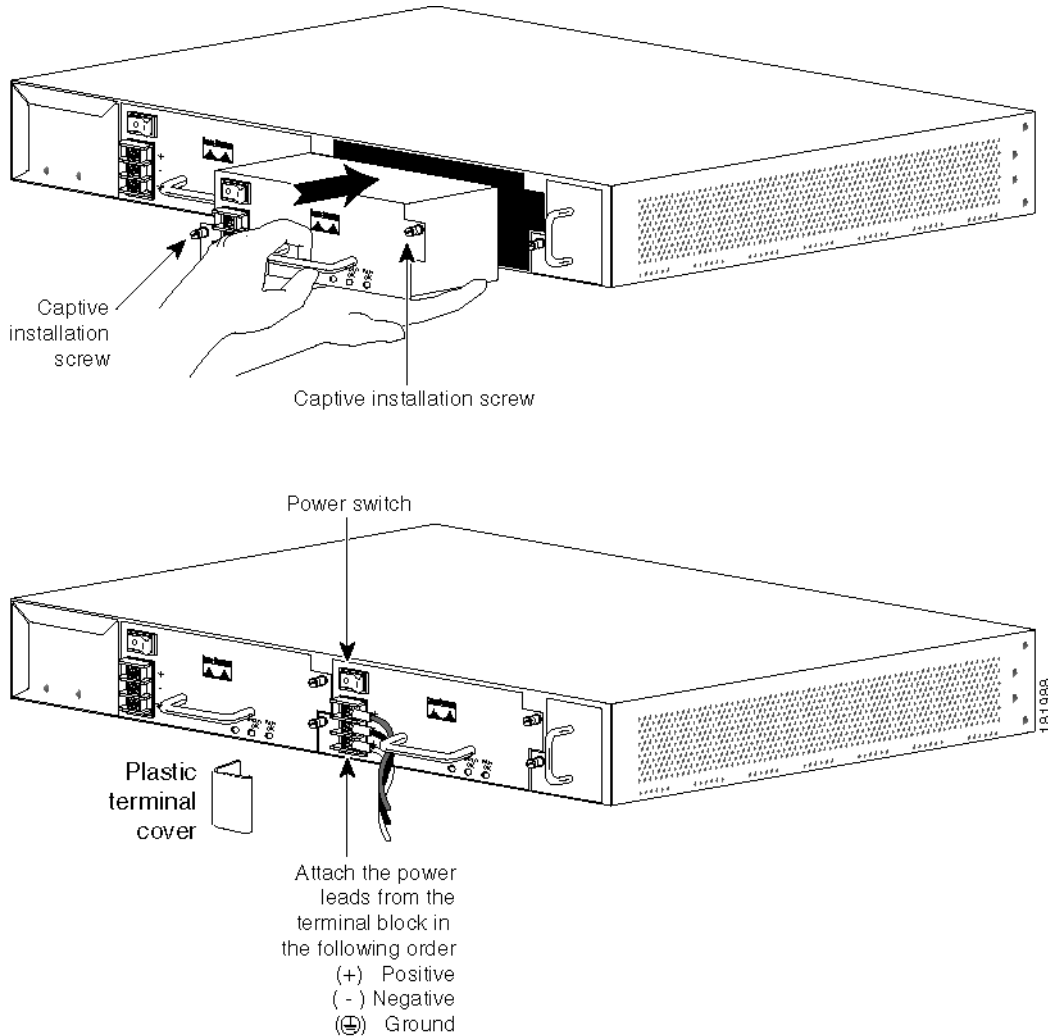
Step 11 Remove any safety flag and lockout devices or any tape from the circuit breaker switch handle, and restore power by moving the circuit breaker switch handle to the on (I) position.

Step 12 Set the power switch to the on (I) position on the power supply.

Step 13 Verify the power supply operation by ensuring that the power supply front panel LEDs are in these states:

- INPUT OK LED is green
- FAN OK LED is green
- OUTPUT OK is green

Figure 4-2 Installing the DC-Input Power Supply



Removing and Installing the AC-Input Power Supply

This section describes how to remove and install the AC-input power supply in the Cisco ME 6524 Ethernet switch chassis and contains the following subsections:

- [Required Tools, page 4-6](#)
- [Removing the AC-Input Power Supply, page 4-7](#)
- [Installing the AC-Input Power Supply, page 4-8](#)

Required Tools

You might need a No.2 Phillips screwdriver to loosen or tighten the captive installation screws.

Removing the AC-Input Power Supply

To remove the AC-input power supply from the chassis, follow these steps:

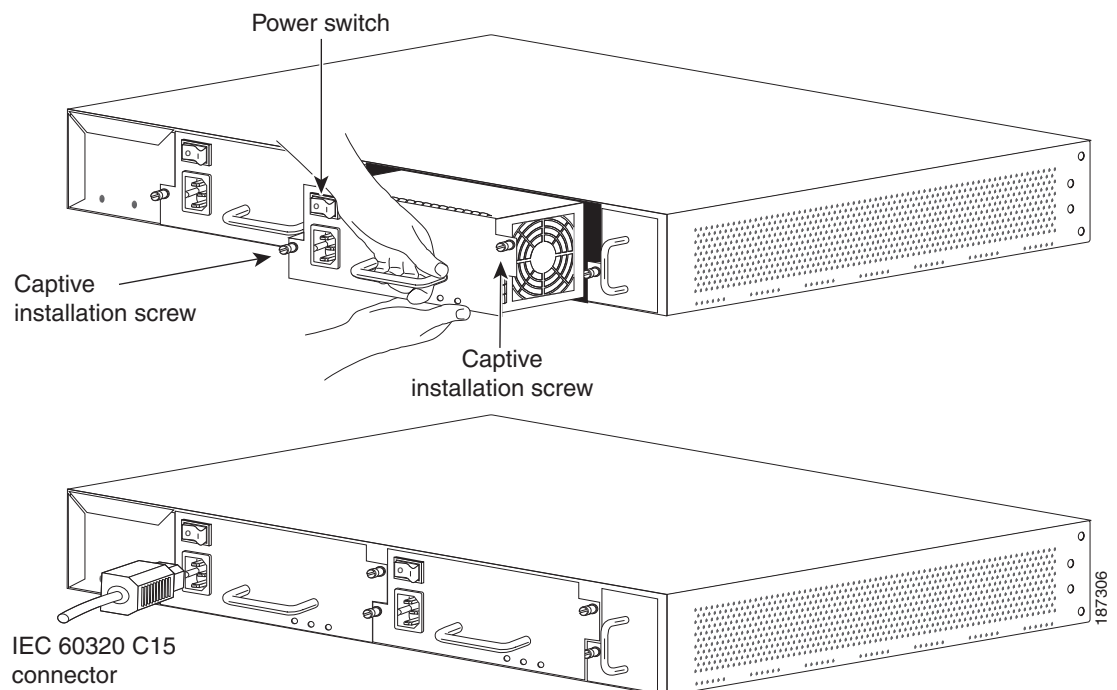
- Step 1** Set the power switch to the off (0) position on the power supply that you are removing.
- Step 2** Disconnect the AC power cord from source AC and from the AC-in connector on the power supply. Set the power cord aside.
- Step 3** Loosen the two captive installation screws on the power supply.
- Step 4** Grasp the power supply handle with one hand, and slide the power supply halfway out of the chassis. Place your other hand underneath the power supply and slide the power supply completely out of the chassis. Set the power supply aside.



Note The AC power supply is equipped with an EMI gasket on the top, bottom, and sides (on the front edge) of the power supply. When sliding the power supply into or out of the power supply bay, be careful not to damage the EMI gaskets.

- Step 5** If the power supply bay is to remain empty, install a blank faceplate (Cisco part number 700-20988-xx) over the opening, and secure it with the two captive installation screws.

Figure 4-3 Removing and Installing an AC-Input Power Supply



Installing the AC-Input Power Supply

To install an AC-input power supply in the chassis, follow these steps:

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- Step 1** Remove the new AC-input power supply from its protective packaging and set the packaging aside.
 - Step 2** Loosen the two captive installation screws and remove the blank faceplate (Cisco part number 700-20988-xx) covering the empty power supply bay opening.
 - Step 3** Verify that the power switch is in the off (0) position on the power supply that you are installing.
 - Step 4** Grasp the power supply handle with one hand, and place your other hand underneath the power supply. Slide the power supply into the power supply bay. Make sure that the power supply is fully seated in the power supply bay.



Note The AC power supply is equipped with an EMI gasket on the top, bottom, and sides (on the front edge) of the power supply. When sliding the power supply into the power supply bay, be careful not to damage the EMI gaskets.

- Step 5** Tighten the two power supply captive installation screws.
- Step 6** Plug the AC power cord appliance connector (C15 connector) into the AC-in receptacle on the power supply.
- Step 7** Plug the other end of the AC power cord into the source AC outlet.
- Step 8** Switch the power supply on/off switch to on. Verify the power supply operation by ensuring that the power supply front panel LEDs are in the following states:
 - INPUT OK LED is green
 - FAN OK LED is green
 - OUTPUT OK is green

As an added check, verify that you can hear the power supply fan operating.

Removing and Installing the Fan Tray

This section describes how to remove and install the fan tray in the Cisco ME 6524 Ethernet switch chassis and contains these subsections:

- [Required Tools, page 4-8](#)
- [Removing the Fan Tray, page 4-9](#)
- [Installing the Fan Tray, page 4-9](#)

Required Tools

You might need a flat-blade or number 2 Phillips-head screwdriver to loosen or tighten the captive installation screw on the fan tray.

Removing the Fan Tray

The fan assembly can be removed and replaced while the system is operating without presenting an electrical hazard to the user or damage to the system.

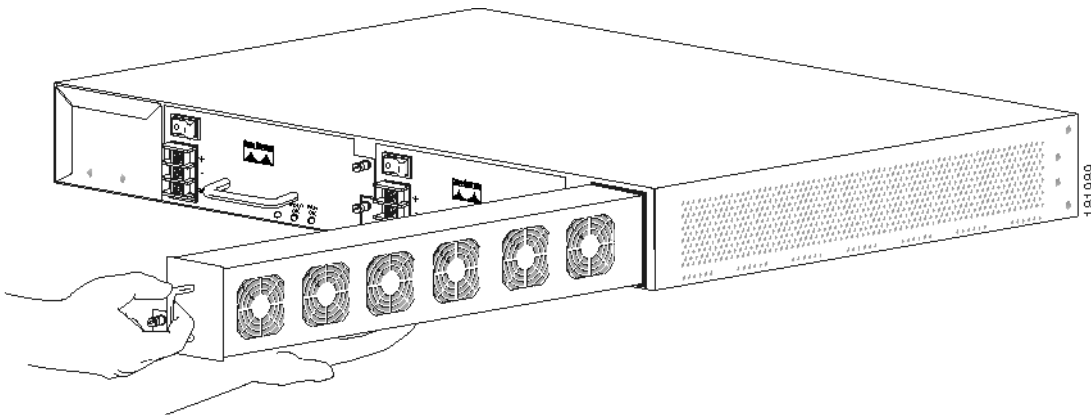
**Warning**

When removing the fan tray, keep your hands and fingers away from the spinning fan blades. Let the fan blades completely stop before you remove the fan tray. Statement 258

To remove the installed fan assembly, follow these steps:

- Step 1** Loosen the captive installation screw.
- Step 2** Grasp the fan assembly handle, and pull it outward; rock it gently, if necessary, to unseat the fan tray power connector from the chassis connector. (See [Figure 4-4](#).)
- Step 3** Place your free hand under the fan tray to support it. Pull the fan assembly clear of the chassis, and put it in a safe place. (See [Figure 4-4](#).)

Figure 4-4 Removing and Installing the Fan Tray



Installing the Fan Tray

To install the new fan tray, follow these steps:

- Step 1** Remove the replacement fan tray from its shipping packaging.
- Step 2** Position the fan assembly in front of the fan tray bay at the rear of the chassis. (See [Figure 4-4](#).)
- Step 3** Slide the fan tray into the fan tray bay until the power connector seats in the chassis fan connector and the captive installation screw makes contact with the chassis.
- Step 4** Tighten the captive installation screw.

Upgrading the Memory

This section describes how upgrade the switch processor (SP) and the route processor (RP) memory in the chassis. Both models of the ME 6524 Ethernet switch chassis ship with 256 MB DRAM (SP memory) and 512 MB DRAM (RP memory) as the default. You can upgrade both the SP and the RP memory with the following kits:

- SP memory upgrade kits
 - MEM-XCEF720-512= (Upgrades the SP memory from 256 MB to 512 MB)
 - MEM-XCEF-1GB= (Upgrades the SP memory from 256 MB to 1 GB)
- RP memory upgrade kits
 - MEM-MSFC3-1GB= (Upgrades the RP memory from 512 MB to 1 GB)

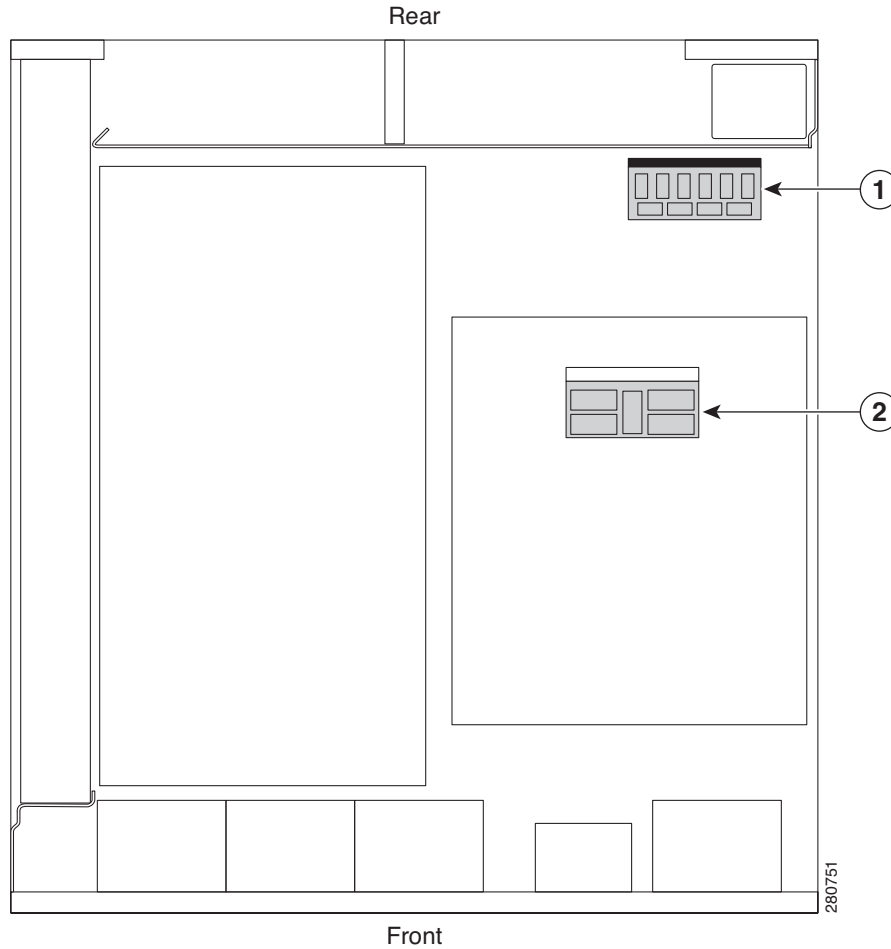
**Note**

In order to remove the cover from the chassis, you must first remove both power supplies from the chassis.

To upgrade the SP and the RP memory on the Cisco ME 6524 Ethernet switch, follow these steps:

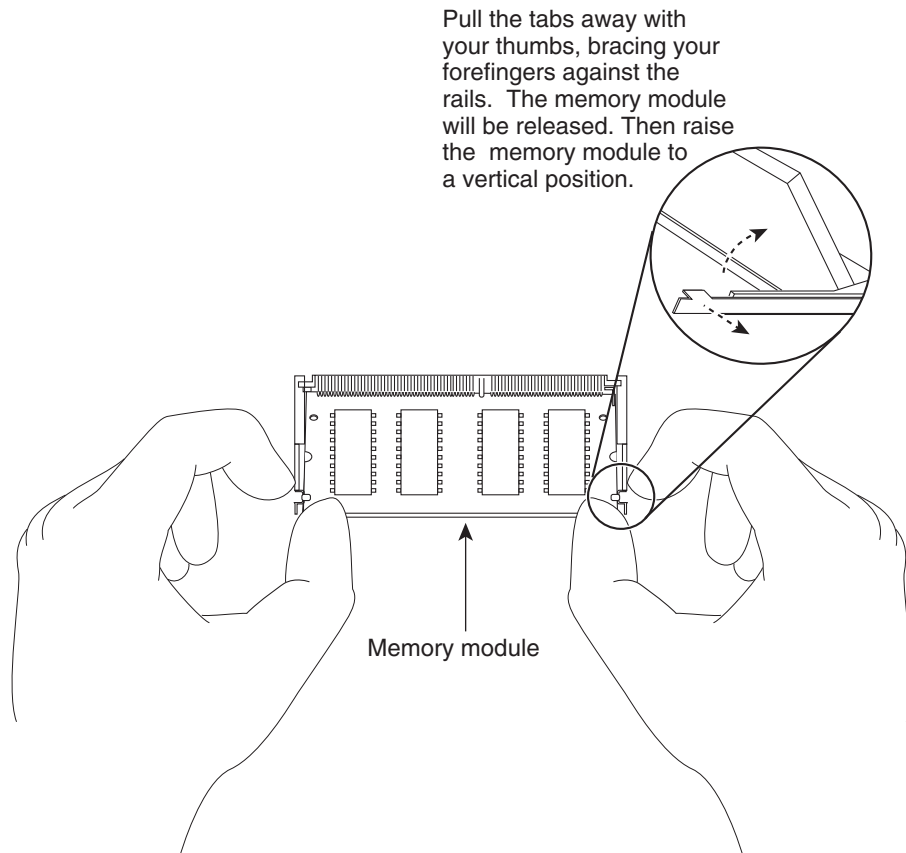
- Step 1** If your chassis is equipped with one or two DC-input power supplies, remove them from the chassis. Refer to the [“Removing and Installing the DC-Input Power Supply”](#) section on page 4-1 for the procedure.
- Step 2** If your chassis is equipped with one or two AC-input power supplies, remove them from the chassis. Refer to [“Removing the AC-Input Power Supply”](#) section on page 4-7 for the procedure.
- Step 3** Remove the fourteen screws that secure the top cover to the chassis. Remove the top cover and set it and the fourteen screws aside.
- Step 4** Attach an ESD grounding strap to your wrist and to ground.
If you are unsure about the correct way to attach an ESD grounding strap, refer to the [“Preventing Electrostatic Discharge Damage”](#) section on page 2-7
- Step 5** Locate the SP DRAM DIMM in its socket on the main board. (See [Figure 4-5](#) for the locations of the SP and the RP DRAM DIMMs.)

Figure 4-5 Location of SP and RP DRAM DIMMs

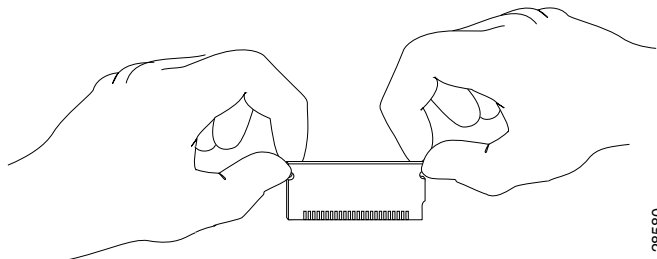


1	SP DRAM DIMM and socket	2	RP DRAM DIMM and socket
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Step 6 Release the old DRAM DIMM from its socket by simultaneously bending the locking spring tab on each side of the socket outward and then pivot the DRAM DIMM up away from the tabs. Be careful not to bend the locking spring tabs too far, because you can break them. (See [Figure 4-6](#).)

Figure 4-6 Releasing the DIMM Socket Spring Clips

- Step 7** Holding the old DRAM DIMM by its edges, gently rock and lift the DIMM to disconnect it from the DIMM socket. (See [Figure 4-7](#).) Immediately place the old DRAM DIMM on an antistatic mat or place it in an antistatic bag.

Figure 4-7 Handling the DRAM DIMM

- Step 8** Carefully remove the new DRAM DIMM from its shipping packaging.
- Step 9** Holding the new DRAM DIMM between your thumbs and forefingers, with the connector edge (the metal fingers) down, carefully slide the DIMM into the DIMM socket. Make sure that you fully insert the connector edge of the DIMM into the socket connector.



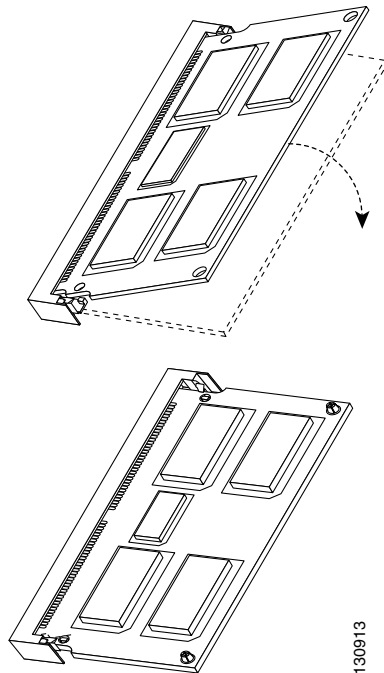
Note A notch (key) is located on the left connector edge of the DIMM. This notch key ensures that the DIMM is correctly oriented in the socket.

**Caution**

When inserting the DIMM, use firm but not excessive pressure. If you damage a socket, you will have to return the main board to Cisco for repair.

- Step 10** Press down on the edges of the DRAM DIMM until the DIMM socket tabs click into place on both sides of the DRAM DIMM locking the DIMM in place.

Figure 4-8 *Installing the DRAM DIMM in the DIMM Socket*



- Step 11** Locate the RP DRAM DIMM in its socket on the MSFC daughter card. (See [Figure 4-5](#) for the location of the RP DRAM DIMM.)
- Step 12** Repeat the DRAM DIMM removal and installation process for the RP DRAM DIMM by completing steps 4 through 8.
- Step 13** After replacing both DRAM DIMMs, position the chassis top cover over the chassis and lower it into position. Secure the cover to the chassis with the fourteen screws.
- Step 14** Reinstall the power supplies in the chassis. If you are reinstalling DC-input power supplies, refer to [“Installing the DC-Input Power Supply”](#) section on page 4-4 for the procedure. If you are reinstalling AC-input power supplies, refer to [“Installing the AC-Input Power Supply”](#) section on page 4-8 for the procedure.

