

# Hardware Information

Fans

ESCALA POWER5



REFERENCE  
86 A1 16EW 00



# ESCALA POWER5

## Hardware Information

### Fans

#### **Hardware**

July 2006

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FRANCE

#### **REFERENCE**

86 A1 16EW 00

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## Fans

The following procedures describe the removal and replacement of system fans.

Replacing this feature is a customer task. You can perform this task yourself, or contact an authorized service provider to perform the task for you. You might be charged a fee by the authorized service provider for this service.

- **Remove and replace the model ESCALA PL 245T/R system unit air baffle**  
The air baffle covers the system board and most of the internal components, and might need to be opened or removed as a part of many other procedures.
  - **Remove and replace the model ESCALA PL 245T/R system unit fans**  
The system unit electronics are cooled with three system unit cooling fans.
  - **Model server system unit fans**
  - **Model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ system unit fans**
  - **Model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fans and fan tray assembly**  
The following procedures describe the removal and replacement of the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fans and fan tray assembly.
  - **Remove and replace model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fans**  
The following procedures describe the removal and replacement of the model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fans. This system unit supports replacement of the fans with the system unit power on and redundant cooling. The system unit electronics are cooled with four system unit cooling fans.
  - **Model ESCALA PL 1650R-L+, or ESCALA PL 850R/PL 1650R/R+ system unit fans**  
The following procedures describe the removal and replacement of the model ESCALA PL 1650R-L+, or ESCALA PL 850R/PL 1650R/R+ system unit fans.
- 

## Remove and replace the model ESCALA PL 245T/R system unit air baffle

The air baffle covers the system board and most of the internal components, and might need to be opened or removed as a part of many other procedures.

Use these instructions to open or remove a model ESCALA PL 245T/R system unit air baffle.

- **Open or remove the model ESCALA PL 245T/R system unit air baffle**
- **Replace the model ESCALA PL 245T/R system unit air baffle**

Parent topic: [Fans](#)

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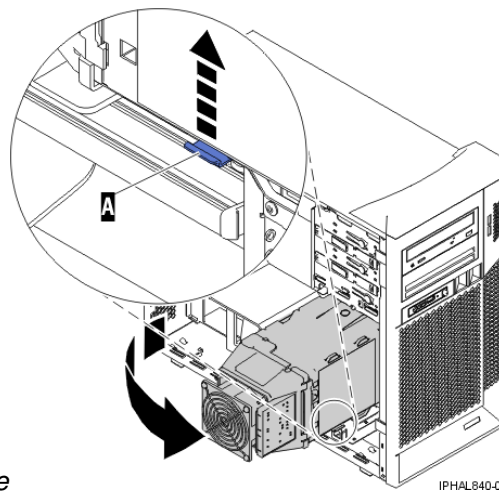
## Open or remove the model ESCALA PL 245T/R system unit air baffle

The model ESCALA PL 245T/R system unit air baffle has a door on top. Removing this door to open the air baffle is all that is needed for most service procedures.

To remove a model ESCALA PL 245T/R system unit air baffle, complete these steps:

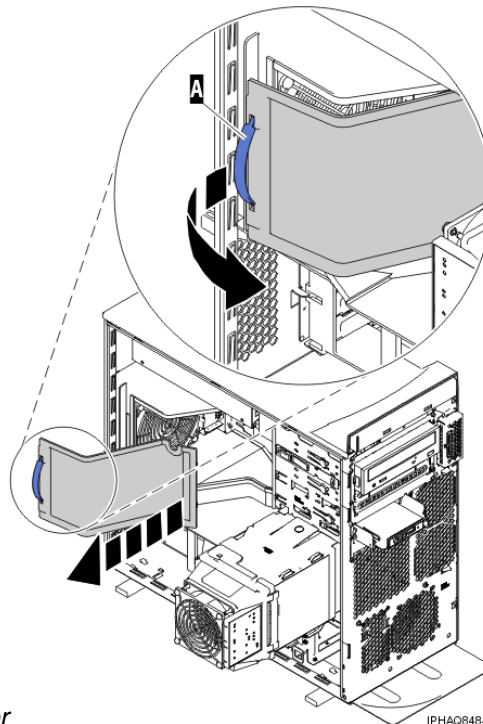
1. Perform the prerequisite tasks described in [Before you begin](#).
2. Stop the system ([Stop the system or logical partition](#)).
3. Remove the side cover ([Remove and replace model ESCALA PL 245T/R covers and doors](#)).
4. Lift the disk drive cage release lever A, and then rotate the disk drive cage all the way out of the

system unit until it locks into place.



*Figure 1. Open the disk drive cage*

5. Lift the tab on the top of the air baffle door and detach it from the baffle.
6. Lift the air baffle door out of the system.



*Figure 2. Removing the air baffle door*

7. Disconnect and label any cables or cords connected through the air baffle door and cable guide.
8. Remove any cables or cords from obstructing the air baffle.
9. Press the baffle forward until it is disengaged from the lip of the back of the system unit.
10. Lift the baffle up from the back of the system unit and pull it out of the system as shown in the following figure.

**Important:** Make sure all cables and cords are clear when removing the air baffle from the server.

*Figure 3. Removing the model ESCALA PL 245T/R system unit air baffle in a rack-mounted system*



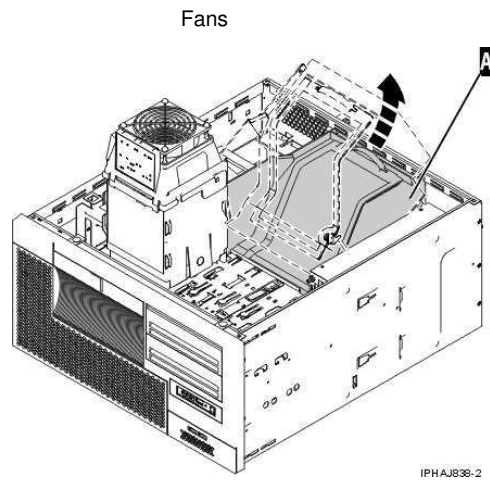
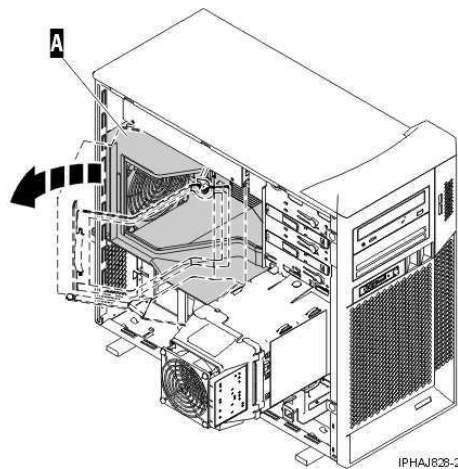


Figure 4. Removing the model ESCALA PL 245T/R system unit air baffle in a stand-alone system



If you are removing the air baffle as a part of another procedure return to that procedure now.

**Parent topic:** [Remove and replace the model ESCALA PL 245T/R system unit air baffle](#)

## Stop the system or logical partition

Learn how to stop a system or logical partition.

**Attention:** Using either the power-on button on the control panel or entering commands at the Hardware Management Console (HMC) to stop the system can cause unpredictable results in the data files. Also, the next time you start the system, it might take longer if all applications are not ended before stopping the system.

To stop the system or logical partition, select the appropriate procedure:

- [Stop the system that is not managed by a Hardware Management Console](#)

- [Stop the system or logical partition using the Hardware Management Console](#)

Parent topic: [Start or stop the system or logical partition](#)

## Related tasks

[Start the system or logical partition](#)

# Stop the system that is not managed by a Hardware Management Console

The following procedure describes how to stop a system that is not managed by a Hardware Management Console (HMC).

## Prepare to stop the system

Before you stop the system, do the following:

1. Ensure that all jobs are completed and end all applications.
2. Ensure that the operating system is stopped. Failure to do so can result in the loss of data.
3. Write down the information displayed on the control panel if you are stopping your system due to an error or to make a repair. For more information, see [Collecting reference codes and system information](#).

## Stop the system

To stop a system, follow these steps:

1. Log in to the system as a user with the authority to run the `shutdown` or `pwrdownsys` (Power Down System) command.
2. At the command line, enter one of the following commands:
  - ◆ If your system is running AIX, type `shutdown`.
  - ◆ If your system is running Linux, type `shutdown -h now`.

The command stops the operating system. The system power turns off, the power-on light begins to slowly blink, and the system goes into a standby state.
3. Set the power switches of any devices connected to the system to off.
4. Unplug any power cables that are attached to the unit from electrical outlets. Ensure that you unplug power cables from peripheral devices, such as printers and expansion units.

**Important:** The system might be equipped with a second power supply. Before continuing with this procedure, ensure that all power sources to the system have been completely disconnected.

### (L003)



or



Parent topic: [Stop the system or logical partition](#)

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## Stop the system or logical partition using the Hardware Management Console

You can use the Hardware Management Console (HMC) user interface to stop the system or a logical partition. For instructions on stopping the system, see [Powering off the managed system](#).

Parent topic: [Stop the system or logical partition](#)

---

## Replace the model ESCALA PL 245T/R system unit air baffle

To replace a model ESCALA PL 245T/R system unit air baffle, complete these steps:

**Note:** If you are just replacing the baffle door begin with step 6.

1. Perform the prerequisite tasks described in [Before you begin](#).
2. As shown in [Figure 1](#), place the baffle into the system unit A until it reaches the back of the system.

**Note:** Be sure no cables or cords catch or bind as you set the baffle into place.

3. Place the front of the baffle onto the ledge at the front of the system unit.
4. Lower the back of the baffle until it can fit under the lip at the back of the system unit.

*Figure 1. Replacing the model ESCALA PL 245T/R system unit air baffle in a stand alone system unit.*

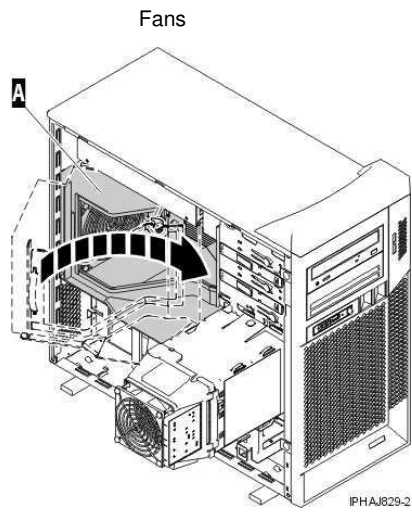
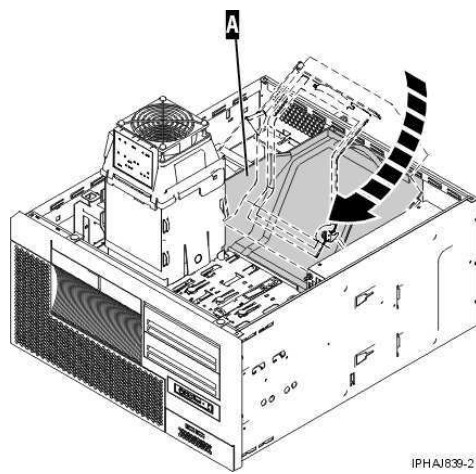
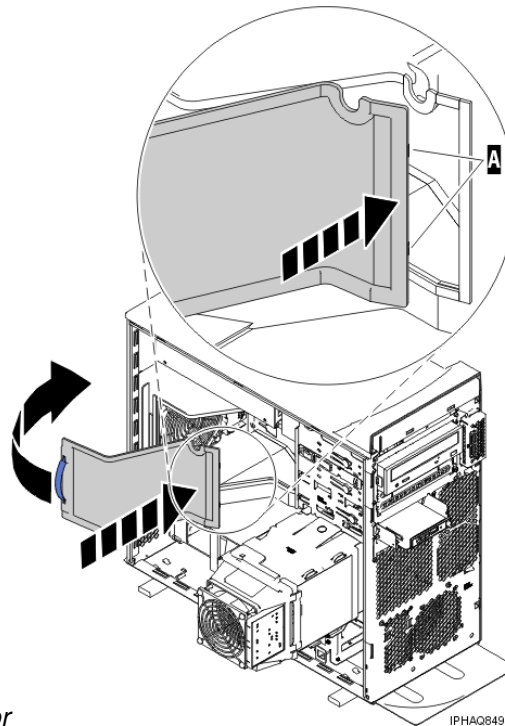


Figure 2. Replacing the model ESCALA PL 245T/R system unit air baffle in a rack mounted system.

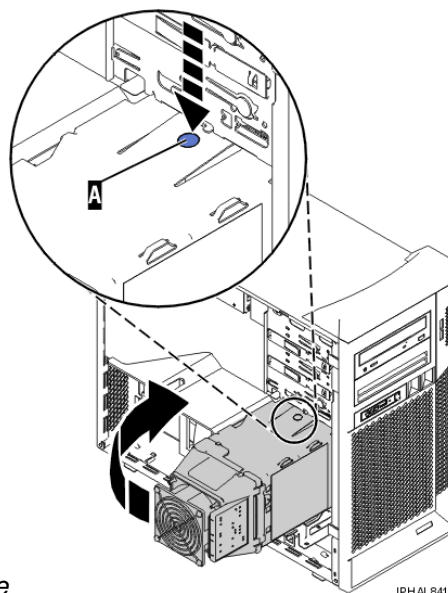


5. Slide the top of the baffle under the lip at the back of the system unit.
6. Connect all the cables and cords through the top door of the baffle and secure them to the cable guide on the side of the baffle.
7. Place the bottom of the baffle door into the slot on the baffle.



*Figure 3. Attaching the air baffle door*

8. Press the top of the baffle door forward until it attaches to the air baffle securely.
9. Push the drive cage slightly forward, press in on the drive-cage release tab, and rotate the drive cage back into the system unit.



*Figure 4. Closing the disk drive cage*

10. Close the side cover. See [Remove and replace model ESCALA PL 245T/R covers and doors](#).

If you are replacing the baffle as a part of another procedure, return to that procedure now.

**Parent topic:** [Remove and replace the model ESCALA PL 245T/R system unit air baffle](#)

## Remove and replace the model ESCALA PL 245T/R system unit fans

The system unit electronics are cooled with three system unit cooling fans.

- [Remove the model ESCALA PL 245T/R system unit fans](#)
- [Replace the model ESCALA PL 245T/R system unit fans](#)

Parent topic: [Fans](#)

---

## Remove the model ESCALA PL 245T/R system unit fans

There are three fans in the model ESCALA PL 245T/R. From the following list complete the task for the fan that you want to remove:

- [Remove the main system cooling fan](#). This fan cools the system processor and system board and is located at the back of the system.
- [Remove the disk drives fan](#). This fan cools the disk drive cage and is directly attached to the cage.
- [Remove the PCI adapter fan](#). This fan cools the PCI adapters and is located at the front of the system unit, directly in front of the PCI adapter slots.

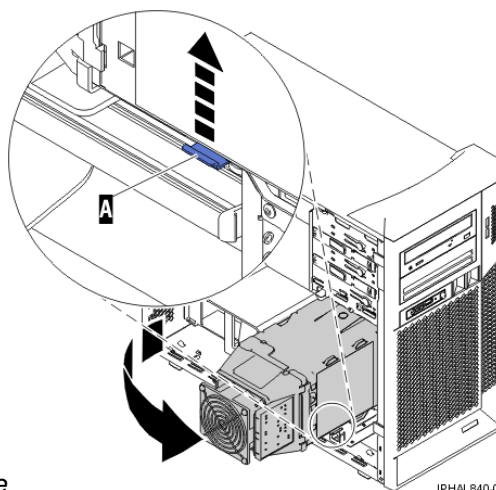
Parent topic: [Remove and replace the model ESCALA PL 245T/R system unit fans](#)

### Remove the main system cooling fan

This fan cools the system processor and system board and is located at the back of the system. When installed, this fan is covered with a large air baffle to direct air from the fan to the system board.

To remove a model ESCALA PL 245T/R system unit fan, follow these steps:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. [Identify a failing part](#).
3. Stop the system. See [Stop the system or logical partition](#).
4. Remove the side cover. See [Remove and replace model ESCALA PL 245T/R covers and doors](#).
5. Lift the disk drive cage release tab and pull the drive cage up until it locks into place as shown in the following figure.



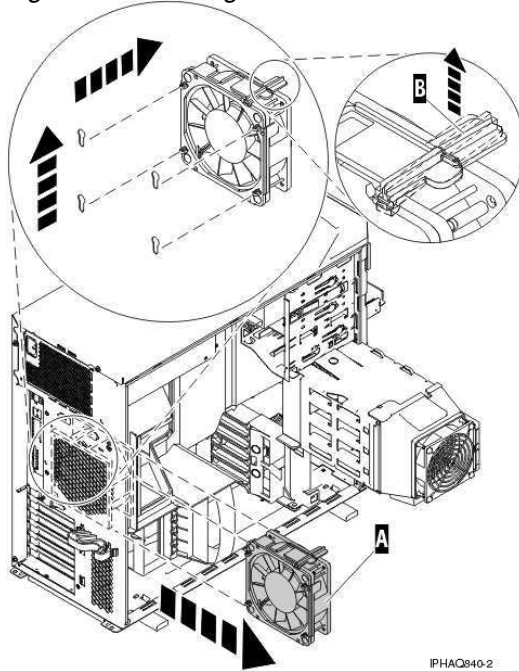
*Figure 1. Lifting the disk drive cage*

6. Open the air baffle door by grasping the tab on the top of the door and pulling the door off of the air baffle.
7. Unplug the fan power connector from the system board.

**Note:** Make note of the location of the fan power, you will need to reconnect the fan.

8. Push the release lever B toward the top of the system until the fan is released from the back of the system.
9. Lift the fan up and remove the fan from the system unit.

Figure 2. Removing the model ESCALA PL 245T/R system unit fan in a stand-alone system

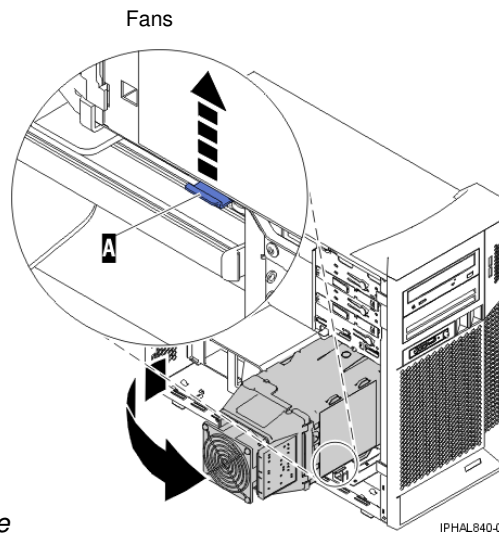


### Remove the disk drives fan

This fan cools the disk drive cage and is directly attached to the cage.

To remove a model ESCALA PL 245T/R disk drive fan, follow these steps:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. Identify the failing fan for instructions see, [Identify a failing part](#).
3. [Stop the system or logical partition](#).
4. Remove the side cover, [Remove and replace model ESCALA PL 245T/R covers and doors](#).
5. Lift the disk drive cage release tab and pull the drive cage up until it locks into place as shown in the following figure.



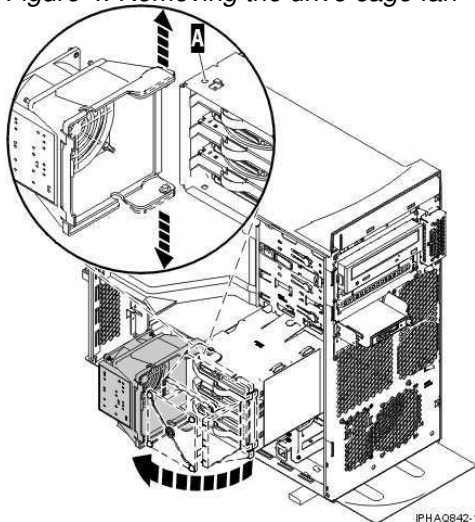
*Figure 3. Lifting the disk drive cage*

6. Press in on the tab at the front of the light path diagnostic card on the fan to release it from the fan baffle.
7. Lift the front of the light path diagnostic card and detach it from the fan baffle. Place the panel on a safe surface.

**Note:** Use care not to disconnect the service light panel from the system board.

8. Lift up on the tab on the front of the fan until it opens.

*Figure 4. Removing the drive cage fan*



9. **Open or remove the model ESCALA PL 245T/R system unit air baffle.**
10. Disconnect the power connector for the fan. Make note of the fan power connector location as you will need it to install the new fan.
11. Pull out on the sides of the fan connected to the disk drive cage A to dislodge the pins from the holes on the disk drive cage.
12. Remove the fan from the system unit.

To install the new fan see, [Install the disk drives fan.](#)

#### **Remove the PCI adapter fan**

This fan cools the PCI adapters attached to the system unit and is located at the front of the system unit, directly in front of the PCI adapter slots.



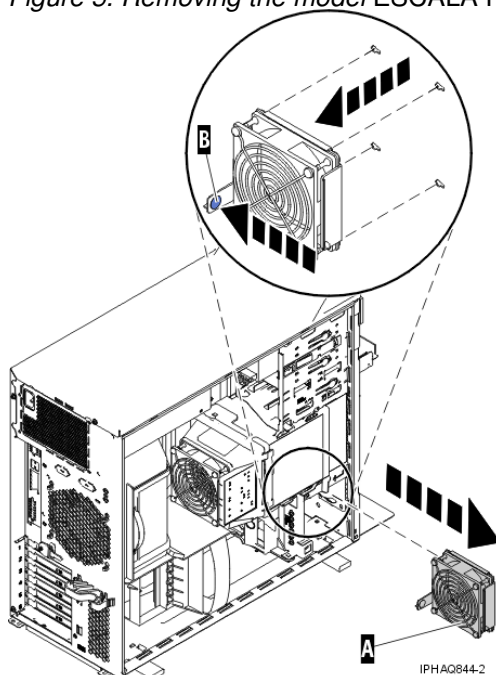
To remove a model ESCALA PL 245T/R PCI adapters fan, follow these steps:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. Identify the failing part, for instructions see, [Identify a failing part](#).
3. Stop the system (see [Stop the system or logical partition](#)).
4. Remove the side cover and the front cover. For instructions see, [Remove and replace model ESCALA PL 245T/R covers and doors](#).
5. Unplug the fan power connector from the system board.

**Note:** Make note of the power connector location you will need it to install the fan.

6. Press down on the fan release tab with one hand and release the fan from the system unit.
7. Pull the fan out of the system unit.

Figure 5. Removing the model ESCALA PL 245T/R PCI adapter fan



To replace the fan see, [Install the PCI adapter fan](#)

## Replace the model ESCALA PL 245T/R system unit fans

There are three fans in the model ESCALA PL 245T/R. Choose the fan you are replacing from this list:

- [Install the main system cooling fan](#). This fan cools the system processor and system board and is located at the back of the system.
- [Install the disk drives fan](#). This fan cools the disk drive cage and is directly attached to the cage.
- [Install the PCI adapter fan](#). This fan cools the PCI adapters and is located at the front of the system unit directly in front of the PCI adapter slots.

**Parent topic:** [Remove and replace the model ESCALA PL 245T/R system unit fans](#)

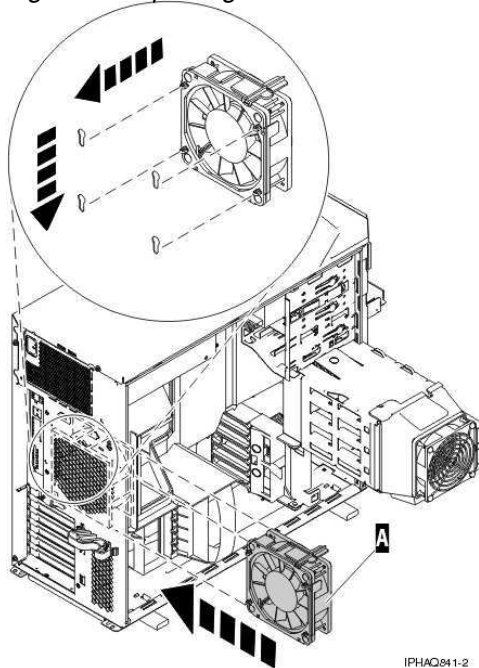
## Install the main system cooling fan

This fan cools the system processor and system board, and is located at the back of the system. When installed, this fan is covered with a large air baffle to direct air from the fan to the system board.

To replace a model ESCALA PL 245T/R system unit fan, follow these steps:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. Remove the failing fan from the system unit as described in [Remove the model ESCALA PL 245T/R system unit fans](#).
3. Align the fan posts with the mounting holes on the back of the system unit.
4. Place the fan posts into the mounting holes and lower the fan into place.
5. Press down on the fan until it locks into place.

Figure 1. Replacing the model ESCALA PL 245T/R system unit fan in a stand-alone system



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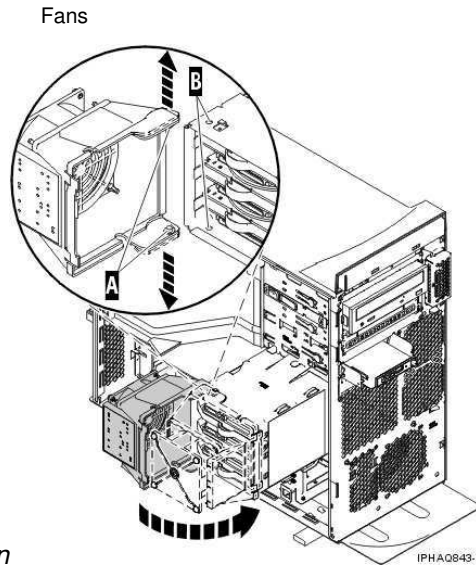
6. Plug in the fan power connector see, [Figure 4](#) for connector location on system board.
7. Insert the bottom of the air baffle door into the slot on the baffle and lower the door into place.
8. Reattach the covers as described in [Remove and replace model ESCALA PL 245T/R covers and doors](#).
9. Start the system. See [Start the system or logical partition](#).
10. Verify that the new fan is functional. Refer to [Verify the installed part](#).

## Install the disk drives fan

This fan cools the disk drive enclosure, and is directly attached to the enclosure.

To replace a model ESCALA PL 245T/R disk drives fan, follow these steps:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. Remove the failing fan from the system unit as described in [Remove the disk drives fan](#).
3. Align the fan baffle mounting posts A with the holes on the disk drive enclosure B and attach them.



*Figure 2. Attaching the disk drive cage fan*

4. Plug in the fan power connector see, [Figure 4](#) for the connector location on the system board.
5. Lower the fan baffle until it covers the enclosure and snaps into place.
6. Press the two mounting pins on the light path diagnostic card into the holes on the top of the fan baffle and lower the card until it snaps into place.
7. Push the drive cage outward, and press the drive-cage release tab inward, then rotate the drive cage back into the system unit.
8. Attach the service cover. For instructions see, [Remove and replace model ESCALA PL 245T/R covers and doors](#).
9. Start the system. See [Start the system or logical partition](#).
10. Verify that the new fan is functional. Refer to [Verify the installed part](#).

#### Install the PCI adapter fan

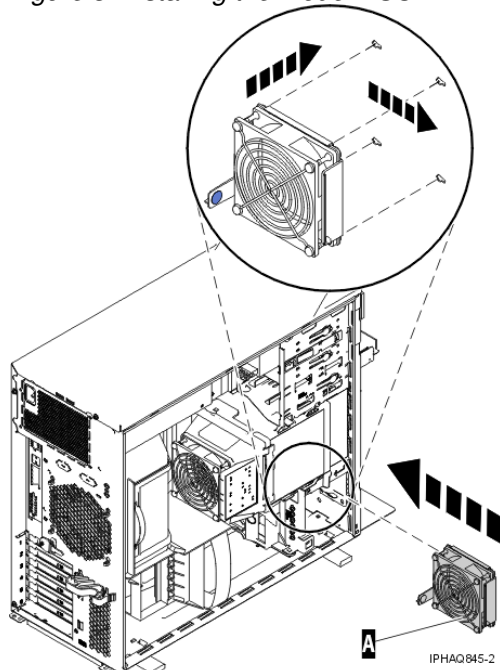
This fan cools the PCI adapters attached to the server, and is located at the front of the system unit directly in front of the PCI adapter slots.

To replace a model ESCALA PL 245T/R PCI adapters fan, follow these steps:

**Perform the prerequisite tasks described in [Before you begin](#).**

**Remove the failing fan from the system unit as described in [Remove the model ESCALA PL 245T/R system unit fans](#). Place the fan into the slot as shown in [Figure 3](#)**

*Figure 3. Installing the model ESCALA PL 245T/R PCI adapter fan*



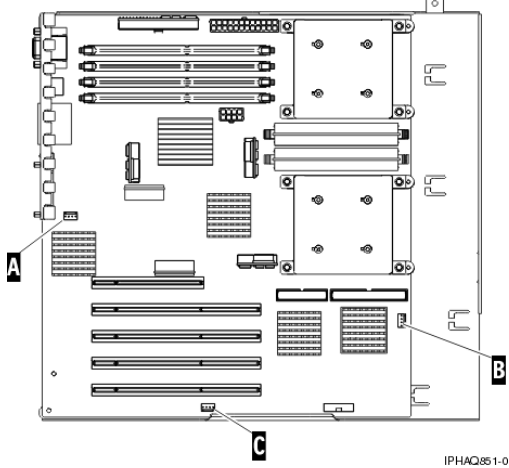
**Push the fan down into the brackets.**

**Plug in the fan power connector see, [Figure 4](#) for the connector location on the system board. Secure the fan by pushing the release lever into the secure position.**

Replace the service access panel. For instructions see, [Remove and replace model ESCALA PL 245T/R covers and doors](#). Start the system. See [Start the system or logical partition](#). Verify that the new fan is functional. Refer to [Verify the installed part](#).

Use the following to note the locations of the fan power plugs:  
 Main system fan A power connection  
 Disk drive cage fan B power connection  
 PCI adapter fan C power connection

Figure 4. Fan power connector locations



## Start the system or logical partition

Use these instructions to start a system or logical partition.

- [Start a system that is not managed by a Hardware Management Console](#)
- [Start the system or logical partition using the Hardware Management Console](#)

Parent topic: [Start or stop the system or logical partition](#)

### Related tasks

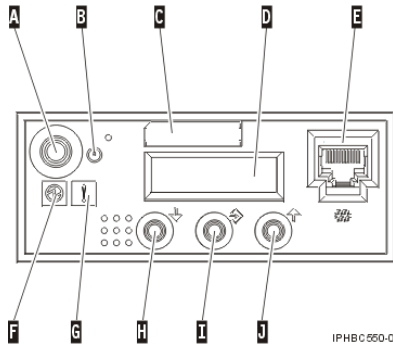
[Stop the system or logical partition](#)

## Start a system that is not managed by a Hardware Management Console

To start a system that is not managed by a Hardware Management Console (HMC), follow these steps:

1. On a rack-mounted system unit, open the front rack door, if necessary. On a stand-alone system unit, open the front door.

2. Before you press the power button on the control panel, ensure that power is connected to the system unit as follows:
  - ◆ All system power cables are connected to a power source.
  - ◆ The power-on light F, as shown in the following figure, is slowly blinking.
  - ◆ The top of the display D, as shown in the following figure, contains 01 V=F.



**Tip:** The system attention light G, as shown in the previous figure, does not appear on the control panel on the model ESCALA PL 850R/PL 1650R/R+.

3. Press the power button A, as shown in the following figure, on the control panel.

**Note:** On the 7/10 or model ESCALA PL 250R-L, the power button is on the operations panel.

4. Observe the following after pressing the power button:
  - ◆ The power-on light begins to blink visibly faster.
  - ◆ The system cooling fans are activated after approximately 30 seconds and begin to accelerate to operating speed.
  - ◆ Progress indicators, also referred to as checkpoints, appear on the control panel display while the system is being started. The power-on light on the control panel stops blinking and remains on, indicating that system power is on.

**Tip:** If pressing the power button does not start the system, use the following instructions to start the system using the Advanced System Management Interface (ASMI).

- Set up access to the ASMI. For instructions, see [Accessing the ASMI](#).
- Start the system using the ASMI. For instructions, see [Powering the system on and off](#).

**Parent topic:** [Start the system or logical partition](#)

## Start the system or logical partition using the Hardware Management Console

After the required cables are installed and the power cables are connected to a power source, you can use the Hardware Management Console (HMC) user interface to start the system or logical partition.

For instructions on working with the HMC, see [Managing the Hardware Management Console](#). For instructions on starting a logical partition, see [Activating a partition profile](#). For instructions on starting the system, see [Powering on the managed system](#).

Progress indicators, also referred to as checkpoints, appear on the control panel display while the system is being started. The power-on light on the control panel stops blinking and remains on, indicating that system power is on.

**Parent topic:** [Start the system or logical partition](#)

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## Model server system unit fans

The following procedures describe the removal and replacement of the model ESCALA PL 250R-VL or ESCALA PL 450R-XS system unit fans.

This system unit supports replacement of the fans with the system unit power on and redundant cooling. The system unit electronics are cooled with four system unit cooling fans.

- [Remove a model ESCALA PL 250R-VL or ESCALA PL 450R-XS system unit fan](#)
- [Replace a model ESCALA PL 250R-VL or ESCALA PL 450R-XS system unit fan](#)

**Parent topic:** [Fans](#)

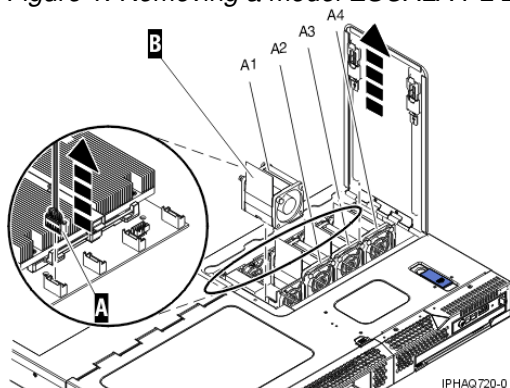
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## Remove a model ESCALA PL 250R-VL or ESCALA PL 450R-XS system unit fan

To remove a model ESCALA PL 250R-VL or ESCALA PL 450R-XS system unit fan, do the following:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. To identify the failing part, see [Identify a failing part](#).
3. Open the service access panel. See [Open the model ESCALA PL 250R-VL or ESCALA PL 450R-XS service access panel](#).
4. Disconnect the fan power connector A for the failing fan.
5. Grasp the tab B on the top of the failing fan and lift the fan out of the system.

*Figure 1. Removing a model ESCALA PL 250R-VL or ESCALA PL 450R-XS fan*



Parent topic: [Model server system unit fans](#)

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## Replace a model ESCALA PL 250R-VL or ESCALA PL 450R-XS system unit fan

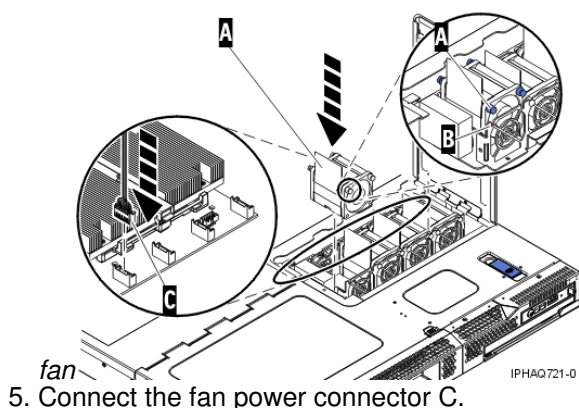
To replace a model ESCALA PL 250R-VL or ESCALA PL 450R-XS system unit fan, do the following:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. Remove the failing fan from the system unit as described in: [Remove a model ESCALA PL 250R-VL or ESCALA PL 450R-XS system unit fan](#).
3. Align the fan with the slot C in the system.

**Tip:** The tab on the top of the fan indicates air flow direction. Be sure the air flow arrow is pointed to the back of the unit.

4. Place the fan into the system and press each of the mounting posts into place.

Figure 1. Installing a model ESCALA PL 250R-VL or ESCALA PL 450R-XS



**Note:** The fan starts to run when it is properly installed.

6. Close the service access panel and return the system to the operating position. See [Open the model ESCALA PL 250R-VL or ESCALA PL 450R-XS service access panel](#)

Parent topic: [Model server system unit fans](#)

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## Model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ system unit fans

The following procedures describe the removal and replacement of the model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ system unit fans.



This system unit supports replacement of the fans with the system unit power on and redundant cooling. The system unit electronics are cooled with two system unit cooling fans.

Each fan unit has two light emitting diodes (LEDs) on the cover. The green LED indicates the fan is operating properly. The amber LED indicates a fan failure.

- [Remove a model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ system unit fan](#)
- [Replace a model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ system unit fan](#)

Parent topic: [Fans](#)

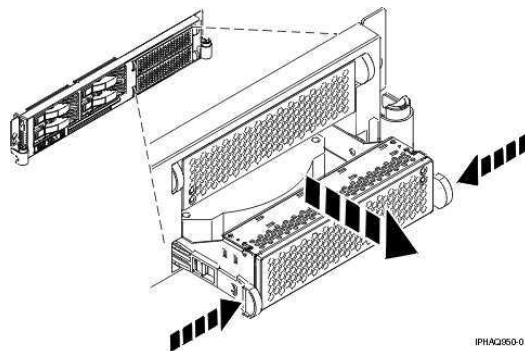
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## Remove a model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ system unit fan

To remove a model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ system unit fan, do the following:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. To identify the failing part, see [Identify a failing part](#).
3. Remove the front cover, as described in [Remove the front cover from the model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+](#).
4. As shown in [Figure 1](#), squeeze the orange tabs on the sides of the failing fan and hold them in the open position.
5. Slide the failing fan unit out of the system.

*Figure 1. Model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ rack-mounted system unit fan removal*



Parent topic: [Model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ system unit fans](#)

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## Replace a model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ system unit fan

To replace a model 7/10 or ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ system unit fan, do the following:

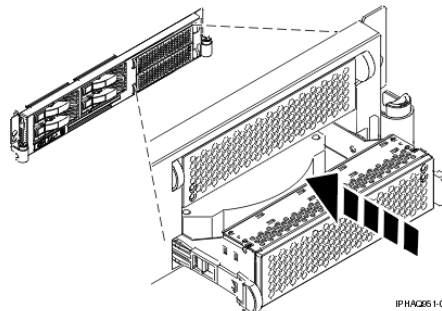
1. Perform the prerequisite tasks described in [Before you begin](#).



2. Remove the failing fan from the system unit as described in [Remove a model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ system unit fan](#).
3. Align the fan with the slot in the system.
4. As shown in [Figure 1](#), hold the tabs in the open position as you place the fan into the system.
5. Press on the fan to ensure that the locking tabs lock in place.

**Note:** The fan starts to run when it is properly installed.

*Figure 1. Model 7/10 or ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ rack-mounted system unit fan replacement*



6. Replace the front cover, as described in [Install the front cover on the model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ .](#)

**Parent topic:** [Model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ system unit fans](#)

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## Model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fans and fan tray assembly

The following procedures describe the removal and replacement of the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fans and fan tray assembly.

- **[Remove and replace the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fans](#)**  
This system unit supports replacement of the fans with the system unit power on and redundant cooling. The system unit electronics are cooled with three system unit cooling fans.
- **[Remove and replace the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly](#)**  
The following procedures describe the removal and replacement of the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly. The three system cooling fans are present in the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray. The fans can remain in the tray when the tray is removed or replaced as part of another procedure.

**Parent topic:** [Fans](#)

---

## Remove and replace the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fans

This system unit supports replacement of the fans with the system unit power on and redundant cooling. The system unit electronics are cooled with three system unit cooling fans.

**Note:** Each fan unit has two light emitting diodes (LEDs) on the top cover. The green LED indicates the fan is operating properly. The amber LED indicates a fan failure.

- **Remove the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fan**
- **Replace the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fan**

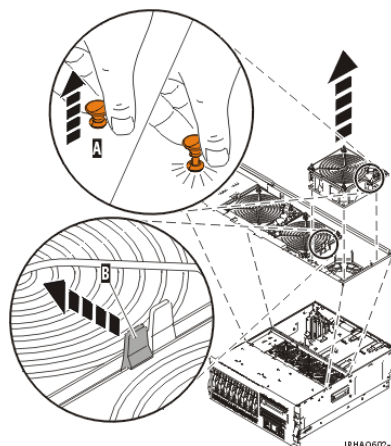
**Parent topic:** [Model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fans and fan tray assembly](#)

## Remove the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fan

If your system is managed by the Hardware Management Console (HMC), you can use the HMC to complete the steps for removing a system unit fan. For instructions, see [Remove a part using the Hardware Management Console](#).

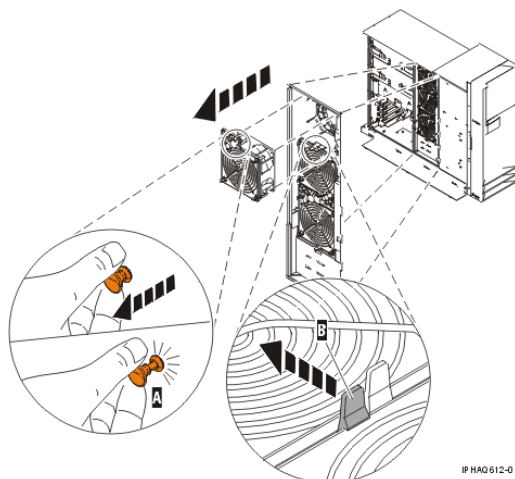
To remove a model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ or, 112/85 system unit fan, do the following:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. To identify the failing part, see [Identify a failing part](#).
3. If you are servicing a rack-mounted system unit, [Place the rack-mounted system or expansion unit in the service position](#). If you are servicing a stand-alone system unit, continue to the next step.
4. Remove the front cover (see [Remove the service access cover from the model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,](#) ).
5. As shown in [Figure 1](#) and [Figure 2](#), pull on the locking knob A of the failing fan until you feel it unlock.
6. Press and hold the plastic tab B that is attached to the fan tray away from the system unit fan.
7. Pull on the locking knob of the failing fan again until you feel the fan pull away from its connector.
8. Lift the failing fan unit out of the fan tray.



*Figure 1. Removing the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fan in a rack-mounted system*

Figure 2. Removing the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ or, 112/85 system unit fan unit in a stand-alone system



9. Replace the system unit fan. For instructions, see [Replace the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fan](#).

**Parent topic:** [Remove and replace the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fans](#)

## Replace the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fan

If your system is managed by the Hardware Management Console (HMC), you can use the HMC to complete the steps for replacing a system unit fan. For instructions, see [Replace a part using the Hardware Management Console](#).

To replace a model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fan, do the following:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. Remove the failing fan from the system unit as described in [Remove the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fan](#).
3. As shown in [Figure 1](#) and [Figure 2](#), pull up on the locking knob on the replacement fan to ensure that it is in the unlocked position A.
4. Align the fan with the slot in the fan tray assembly with the fan power plug over the connector.
5. Place the fan into the fan tray.
6. Press down on the fan to ensure that the power plug is connected.

**Note:** The fan starts to run when the power plug is connected.

7. Press the locking knob down until you feel it lock into position B.

Figure 1. Replacing the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fan in a rack-mounted system

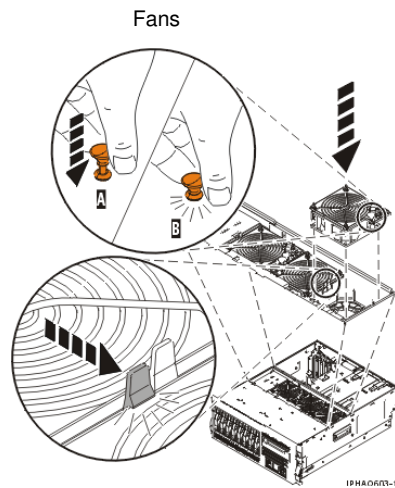
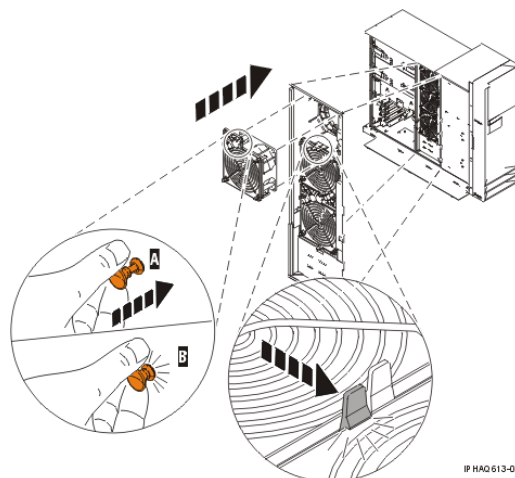


Figure 2. Replacing the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fan in a stand-alone system



8. Install the service access cover on the model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, .
9. If you are servicing a rack-mounted system unit, Place the rack-mounted system or expansion unit in the operating position.
10. Verify that the new resource is functional. Refer to [Verify the installed part](#).

**Parent topic:** [Remove and replace the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fans](#)

## Remove and replace the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly

The following procedures describe the removal and replacement of the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly. The three system cooling fans are present in the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray. The fans can remain in the tray when the tray is removed or replaced as part of another procedure.

To complete these procedures, you need to print the following instructions from the [Select by feature or part](#) topic, and then return here. If this information is available on a PC or a notebook that is close to the system on which you are installing or replacing parts, you can use the online version of these procedures.

- Media device backplane and enclosure
- Control panel and signal cable

- [Remove the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly](#)
- [Replace the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly](#)

**Parent topic:** [Model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fans and fan tray assembly](#)

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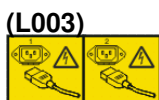
## Remove the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly

If your system is managed by the Hardware Management Console (HMC), you can use the HMC to complete the steps for removing a fan tray assembly. For instructions, see [Remove a part using the Hardware Management Console](#).

To remove the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly, do the following:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. If you are removing the fan tray assembly as part of another procedure, continue to the next step. If you are removing the assembly because it is not operational, you can identify the failing part. See [Identify a failing part](#).
3. Stop the system (see [Stop the system or logical partition](#)).
4. Disconnect the power source from the system by unplugging the system.

**Note:** This system may be equipped with a second power supply. Before continuing with this procedure, ensure that the power source to the system has been completely disconnected.



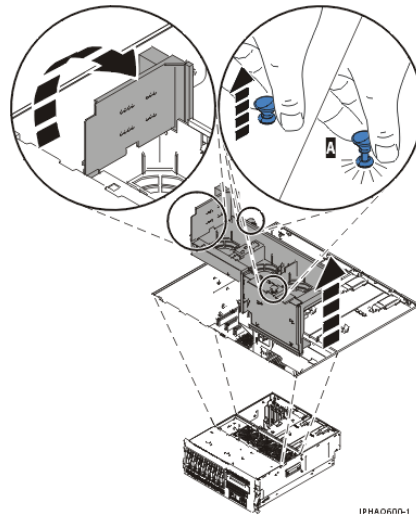
or



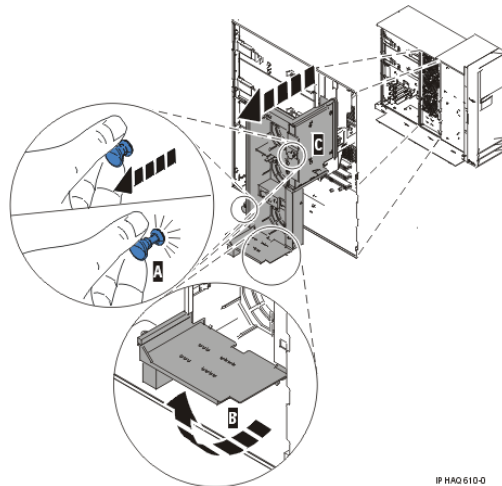
5. If you are servicing a rack-mounted system unit, [Place the rack-mounted system or expansion unit in the service position](#). If you are servicing a stand-alone system unit, continue to the next step.
6. Remove the service access cover. For instructions, see [Remove the service access cover from the model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, .](#)
7. If your system does not contain a SCSI media device in the SCSI media-device enclosure, go to the next step. If your system does contain a SCSI media device, do the following:
  - a. Remove the front cover. For instructions, see [Remove the front cover from the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, or the 05/95 expansion unit](#).
  - b. Press the blue media-device enclosure latches and pull the enclosure forward in the system chassis, but do not remove it from the system chassis. For more information about the media-device enclosure, see "Media device backplane and enclosure" located in the [Select by feature or part](#) topic.
8. Locate the fan tray.

9. As shown in figure [Figure 1](#) and [Figure 2](#), release the LED light-pipe plate B attached to the fan tray by pressing the latch attached to the disk drive backplane and rotating the plate up and off of the LED light pipes.
10. Pull up on the two blue locking knobs A located at either end of the fan tray until you feel them unlock.
11. While holding the blue plastic tab on the back of the disk drive backplane, lift up on the end of the fan tray that is next to the tab until it clears the tab.
12. Using the two blue locking knobs at either end of the fan tray assembly, lift the assembly C straight up and out of the system unit.

*Figure 1. Removing the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly in a rack-mounted system removal*



*Figure 2. Removing the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly from a stand-alone system*



13. If you are removing the fan tray as part of another procedure, return to that procedure. If you are removing the fan tray because the fan tray itself is damaged or failing to operate correctly, remove the three system fans from the fan tray. For information on removing and replacing fans, see [Model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ system unit fans and fan tray assembly](#).
14. Replace the fan tray assembly. For instructions, see [Replace the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly](#).

**Parent topic:** [Remove and replace the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly](#)

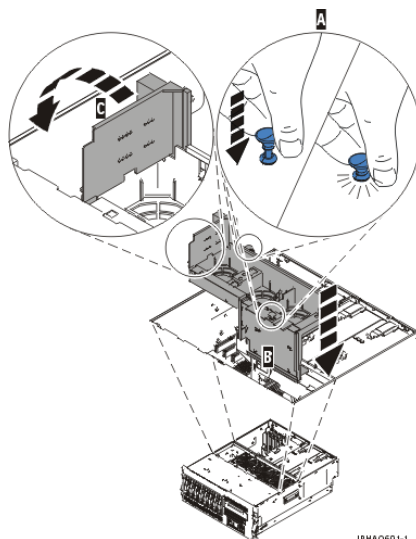
## Replace the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly

If your system is managed by the Hardware Management Console (HMC), you can use the HMC to complete the steps for replacing a fan tray assembly. For instructions, see [Replace a part using the Hardware Management Console](#).

To replace the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray, do the following:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. Remove the fan tray assembly. For instructions, see [Remove the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly](#).
3. If you are placing the fan tray assembly into the system as part of another procedure, continue to the next step. If you are replacing a failing or damaged fan tray with a new fan tray, place the three system fans into the fan tray before you continue to the next step.
4. Pull the locking knobs attached to the fan tray to ensure the knobs are in the unlocked position.
5. As shown in figure [Figure 1](#) and [Figure 2](#), align the guides on the front of the fan tray B with the guide rails in the system chassis.
6. Lower the fan tray into the system, with the LED light-pipe cover plate toward the LED light pipes, and press the fan tray down into place.
7. Press the locking knobs A down until you feel them lock.
8. Press the LED light-pipe cover plate C down over the latch and LED light pipes until you feel it lock into place. Ensure the LED light pipes align with the appropriate holes in the LED light-pipe plate.

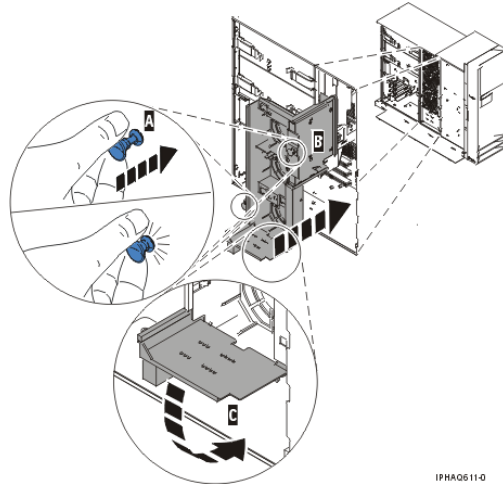
*Figure 1. Replacing the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly in a rack-mounted system*



*Figure 2. Replacing the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly in a stand-alone system*



## Fans



IPHA0611-0

9. If your system does not contain a SCSI media device, go to the next step. If your system does contain SCSI media device, do the following
  - a. Press the media-device enclosure into place until you feel the latches lock.
  - b. [Install the front cover on the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, or the 05/95 expansion unit](#)
10. Install the front cover. For instructions, see [Install the service access cover on the model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, .](#)
11. Reconnect all system power cables.
12. If you are servicing a rack-mounted system unit , place the system unit in the operating position. For instructions, see [Place the rack-mounted system or expansion unit in the operating position](#).
13. Start the system (see [Start the system or logical partition](#)).
14. If you replaced the fan tray assembly as part of another procedure, return to that procedure now. If you replaced the assembly because it was not operational, verify that the new resource is functional using the Hardware Management Console (HMC) or the operating system that owns the resource by doing the following:
  - ◆ If your system is managed by the HMC, see [Viewing information about the managed system using the HMC](#) for information about verifying the resource.
  - ◆ If your system is not managed by the HMC, do the following:
    - a. Use the operating system to access the service action log to deactivate the failing item indicator.
    - b. Close the service action log entry.
    - c. Check to see if any new errors are logged. Refer to [Identify a failing part](#).
    - d. Use Hardware Service Manager (HSM) to verify the new resource. Refer to [Verify the installed part](#).

**Parent topic:** [Remove and replace the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ fan tray assembly](#)

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## Remove and replace model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fans

The following procedures describe the removal and replacement of the model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fans. This system unit supports replacement of the fans with the system unit power on and redundant cooling. The system unit electronics are cooled with four system unit cooling fans.

- [Remove a model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fan](#)
- [Replace the model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fan](#)

**Parent topic:** [Fans](#)

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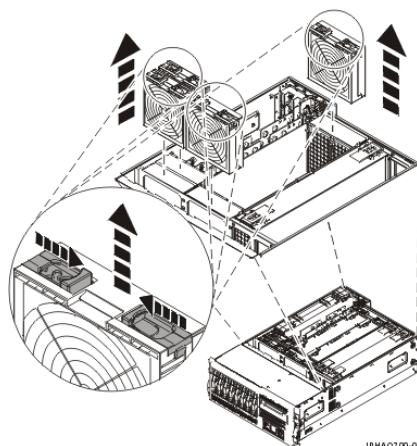
## Remove a model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fan

If your system is managed by the Hardware Management Console (HMC), you can use the HMC to complete the steps for removing a system unit fan. For instructions, see [Remove a part using the Hardware Management Console](#).

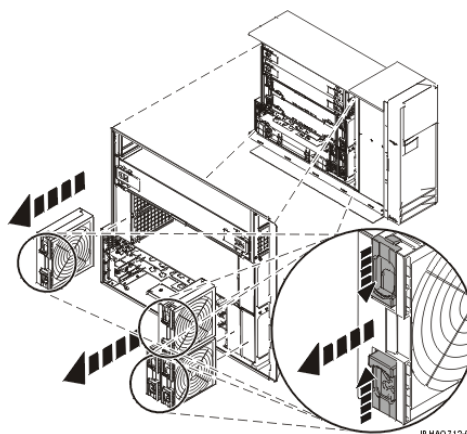
To remove a model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fan, do the following:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. To identify the failing part, see [Identify a failing part](#).
3. If you are servicing a rack-mounted system unit, place the system in the service position as described in [Place the rack-mounted system or expansion unit in the service position](#). If you are servicing a stand-alone system unit, continue to the next step.
4. Remove the service access cover, as described in [Remove the service access cover from the model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, .](#)
5. As shown in [Figure 1](#) and [Figure 2](#), unlock the locking tabs on top of the failing fan and hold them in the open position.
6. Lift the failing fan unit out of the system.

*Figure 1. Removing the model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fan in a rack-mounted system*



*Figure 2. Removing the model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fan in a stand-alone system*



7. Replace the system unit fan, as described in [Replace the model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fan](#).

**Parent topic:** [Remove and replace model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fans](#)

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## Replace the model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fan

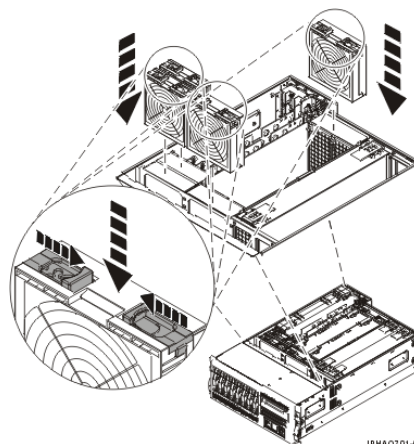
If your system is managed by the Hardware Management Console (HMC), you can use the HMC to complete the steps for replacing a system unit fan. For instructions, see [Replace a part using the Hardware Management Console](#).

To replace a model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fan, do the following:

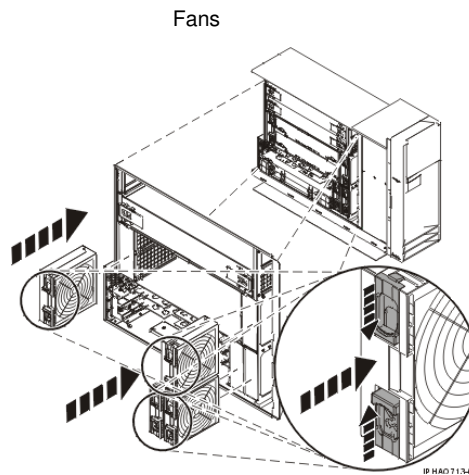
1. Perform the prerequisite tasks described in [Before you begin](#).
2. Remove the system unit fan. See [Remove a model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fan](#) for instructions.
3. Align the fan with the slot in the system with the fan power plug over the connector.
4. As shown in [Figure 1](#) and [Figure 2](#), hold the locking tabs in the open position as you place the fan into the system.
5. Press down on the fan to ensure that the power plug is connected and that the locking tabs lock in place.

**Note:** The fan starts to run when the power plug is connected.

*Figure 1. Replacing the model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fan in a rack-mounted system*



*Figure 2. Replacing the model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fan in a stand-alone system*



6. Replace the service access cover, as described in [Install the service access cover on the model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, .](#)
7. If you are servicing a rack-mounted system unit, return the system to the operating position as described in [Place the rack-mounted system or expansion unit in the operating position.](#)
8. Verify that the new resource is functional. Refer to [Verify the installed part.](#)

**Parent topic:** [Remove and replace model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ system unit fans](#)

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## Model ESCALA PL 1650R-L+, or ESCALA PL 850R/PL 1650R/R+ system unit fans

The following procedures describe the removal and replacement of the model ESCALA PL 1650R-L+, or ESCALA PL 850R/PL 1650R/R+ system unit fans.

- **[Remove and replace model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fans with the system power on](#)**  
The following procedures describe the removal and replacement of the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fans with the system power on.
- **[Remove and replace model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fans with the system power off](#)**  
The following procedures describe the removal and replacement of the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fans with the system power off.

**Parent topic:** [Fans](#)

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## Remove and replace model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fans with the system power on

The following procedures describe the removal and replacement of the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fans with the system power on.

To complete these procedures, you need to print the following instructions from the [Select by feature or part](#) topic, and then return here. If the ESCALA Power5 Hardware Information is available on a PC or a notebook that is close to the system on which you are installing or replacing parts, you can use the online version of these procedures.

- Media device backplane and enclosure
- Control panel and signal cable

- **Remove the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan with the system power on**

The following procedure describes the removal of the model ESCALA PL 850R/PL 1650R/R+ system unit fans with the system power on. Be sure you read these instructions carefully and understand the complexity of the power on procedure before you begin.

- **Replace the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan with the system power on**

The following procedure describes the replacement of the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fans with the system power on. Be sure you read these instructions carefully and understand the complexity of the power on procedure before you begin.

**Parent topic:** [Model ESCALA PL 1650R-L+, or ESCALA PL 850R/PL 1650R/R+ system unit fans](#)

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## Remove the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan with the system power on

The following procedure describes the removal of the model ESCALA PL 850R/PL 1650R/R+ system unit fans with the system power on. Be sure you read these instructions carefully and understand the complexity of the power on procedure before you begin.

Be sure you read these instructions carefully and understand the complexity of the power on procedure before you begin. If you do not feel comfortable using this procedure, go to [Remove the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan with the system power off](#).

**Attention:** Failure to follow these instructions could result in damage to the media device or to the system unit and could result in loss of data.

If your system is managed by the Hardware Management Console (HMC), you can use the HMC to complete the steps for removing a system unit fan. For instructions, see [Remove a part using the Hardware Management Console](#).

### Prerequisites

To remove a system unit fan with the power on, you must first complete the following items:

- Gain access to the Advanced System Management Interface (ASMI). See [Accessing the Advanced System Management Interface](#) for instructions.
- Determine if your system has the level of firmware needed to support the procedure. To determine the level of the system firmware, see [View existing levels of server firmware](#). If the first 4 characters of the 9 character firmware release number are SF22 (SF22xxxx), the control panel can be serviced with the system power on. If the first 4 characters of the 9 character firmware release number are SF21 (SF21xxxx), the control panel must be serviced with the system power off.

### Remove the system unit fan

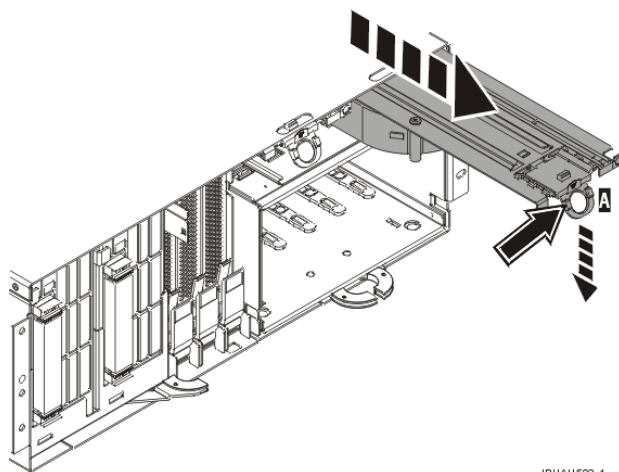
To remove a model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan, do the following:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. To help identify the failing part, see [Identify a failing part](#).
3. Remove the front cover. See [Remove the front cover from the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+](#) for instructions.
4. Remove the control panel. For instructions, see [Remove the control panel with the power on](#).
5. Remove the media-device enclosure. See [Remove the media-device enclosure](#) for instructions.
6. As shown in [Figure 1](#), locate the ring A attached to the fan.

**Note:** Each fan unit has two light emitting diodes (LEDs) on the top cover. The green LED indicates the fan is operating properly. The amber LED indicates a fan failure.

7. Pull the ring downward to disengage it from the system chassis.
8. Using the ring, pull the fan out of the system unit.

Figure 1. Removing the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan



9. Replace the system unit fan as described in [Replace the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan with the system power on](#).

**Parent topic:** [Remove and replace model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fans with the system power on](#)

## Replace the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan with the system power on

The following procedure describes the replacement of the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fans with the system power on. Be sure you read these instructions carefully and understand the complexity of the power on procedure before you begin.

### Prerequisites

To replace a system unit fan with the system power on, you must first complete the following items:

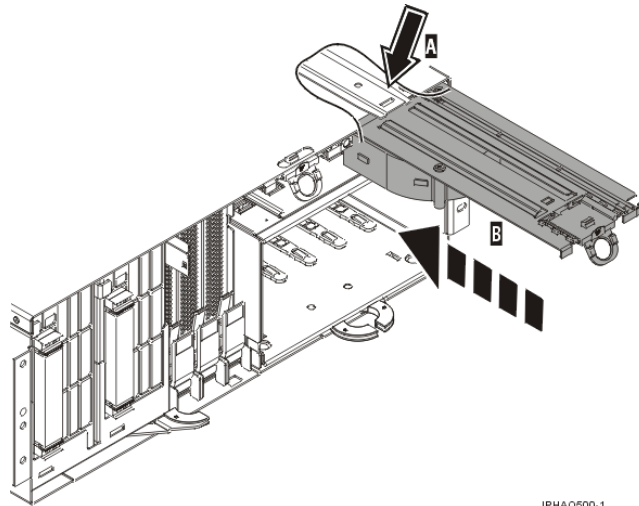
- Gain access to the Advanced System Management Interface (ASMI). See [Accessing the Advanced System Management Interface](#) for instructions.
- Determine if your system has the level of firmware needed to support the procedure. To determine the level of the system firmware, see [View existing levels of server firmware](#). If the first 4 characters of the 9 character firmware release number are SF22 (SF22xxxx), the control panel can be serviced with the system power on. If the first 4 characters of the 9 character firmware release number are SF21 (SF21xxxx), the control panel must be serviced with the system power off.

### Replace the system unit fan

To replace a model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan, do the following:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. Remove the failing fan from the system unit as described in [Remove the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan with the system power on](#).
3. As shown in [Figure 1](#), align the replacement fan B with the guide rails A inside the fan slot.
4. Push the fan all the way into the fan slot.
5. Lift the attached ring up to lock the fan into place.

Figure 1. Model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ fan replacement



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6. Replace the media-device enclosure. See [Replace the media-device enclosure](#) for instructions.
7. Replace the control panel, as described in [Replace the control panel with the power on](#).
8. Install the front cover. For instructions, see [Install the front cover on the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+](#).

**Parent topic:** [Remove and replace model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fans with the system power on](#)

## Remove and replace model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fans with the system power off

The following procedures describe the removal and replacement of the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fans with the system power off.

To complete these procedures, you need to print the following instructions from the [Select by feature or part](#) topic, and then return here. If the ESCALA Power5 Hardware Information is available on a PC or a notebook that is close to the system on which you are installing or replacing parts, you can use the online version of these procedures.

- Media device backplane and enclosure
- Control panel and signal cable
- [Remove the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan with the system power off](#)
- [Replace the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan with the system power off](#)

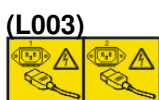
**Parent topic:** [Model ESCALA PL 1650R-L+, or ESCALA PL 850R/PL 1650R/R+ system unit fans](#)

## Remove the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan with the system power off

To remove a model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan with the system power off, do the following:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. To help identify the failing part, see [Identify a failing part](#).
3. Stop the system (see [Stop the system or logical partition](#)).
4. Disconnect the power source from the system by unplugging the system.

**Note:** This system may be equipped with a second power supply. Before continuing with this procedure, ensure that the power source to the system has been completely disconnected.



or



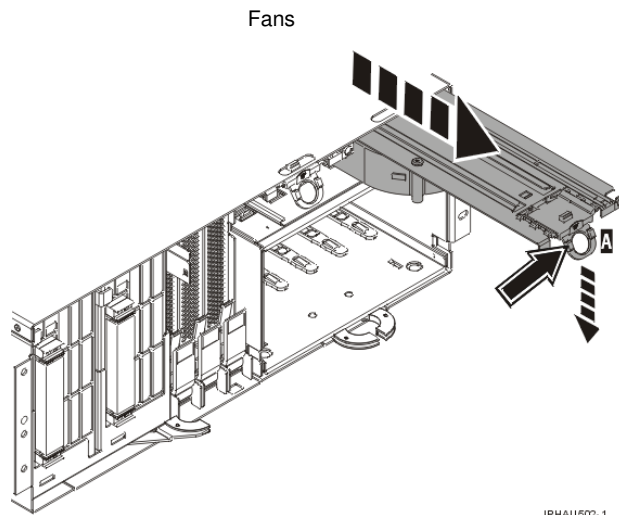
5. Remove the front cover. For instructions, see [Remove the front cover from the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+](#).
6. Remove the control panel, as described in [Remove the control panel with the power off](#).
7. Remove the media-device enclosure, as described in [Remove the media-device enclosure](#).
8. As shown in [Figure 1](#), locate the ring A attached to the fan.

**Note:** Each fan unit has two LEDs on the top cover. The green LED indicates the fan is operating properly. The amber LED indicates a fan failure.

9. Pull the ring downward to disengage it from the system chassis.
10. Using the ring, pull the fan out of the system unit.

*Figure 1. Model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ fan removal*





11. Replace the system unit fan. For instructions, see [Replace the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan with the system power off](#).

**Parent topic:** [Remove and replace model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fans with the system power off](#)

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## Replace the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan with the system power off

If your system is managed by the Hardware Management Console (HMC), you can use the HMC to complete the steps for replacing a system unit fan. For instructions, see [Replace a part using the Hardware Management Console](#).

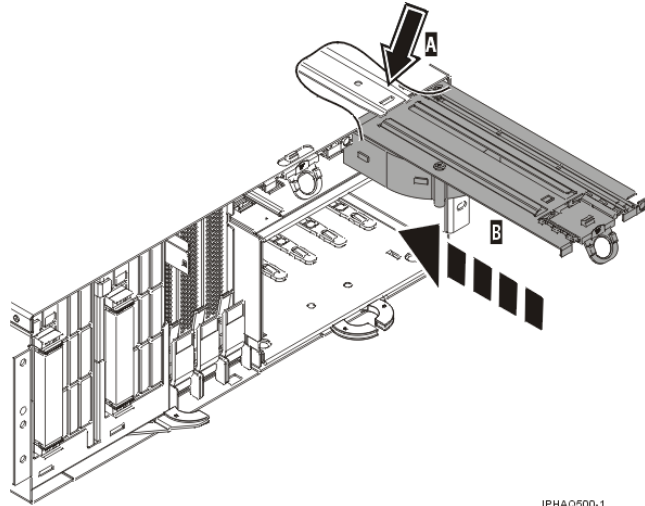
To replace a model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan, do the following:

1. Perform the prerequisite tasks described in [Before you begin](#).
2. If you have not already done so, remove the failing fan from the system unit as described in [Remove the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fan with the system power off](#).
3. As shown in [Figure 1](#), align the fan B with the guide rails A inside of the fan slot and install the fan.
4. Push the fan all the way into the fan slot.
5. Lift the attached ring up to lock the fan into place.

*Figure 1. Model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ fan replacement*



## Fans



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6. Replace the media-device enclosure, as described in [Replace the media-device enclosure](#).
7. Replace the control panel, as described in [Replace the control panel with the power off](#).
8. Replace the front cover. For instructions, see [Install the front cover on the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+](#).
9. Reconnect the power source to the system.
10. Start the system (see [Start the system or logical partition](#)).

**Parent topic:** [Remove and replace model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system unit fans with the system power off](#)

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## Fans

## Related procedures

- **Before you begin**  
Understand prerequisites for installing, removing, or replacing features and parts.
  - **Start or stop the system or logical partition**  
Learn how to start or stop a system or logical partition.
  - **Place the rack-mounted system or expansion unit in the service position or operating position**
  - **Place the rack-mounted model ESCALA PL 245T/R in the service position or operating position**
  - **Open the model ESCALA PL 250R-VL or ESCALA PL 450R-XS service access panel**
  - **Model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, service access cover**  
This topic describes how to remove and install the service access cover for the model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, 7/10, .
  - **Front cover**  
The following procedures describe how to remove and install the front cover of the system or expansion unit.
  - **Model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, door**  
Learn how to remove and replace the front door of the stand-alone model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, .
  - **Verify the installed part**
  - **Install a feature using the Hardware Management Console**
  - **Remove a part using the Hardware Management Console**
  - **Replace a part using the Hardware Management Console**
  - **Identify a failing part**  
The following procedures describe how to locate and identify a failing part on your system or expansion unit.
  - **Remove the front cover from the model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+**
  - **Install the front cover on the model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+**
  - **Gain access to the model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ control panels**
- 

## Start or stop the system or logical partition

Learn how to start or stop a system or logical partition.

- **Start the system or logical partition**  
Use these instructions to start a system or logical partition.
- **Stop the system or logical partition**  
Learn how to stop a system or logical partition.

**Parent topic:** [Related procedures](#)

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## Before you begin

Understand prerequisites for installing, removing, or replacing features and parts.

## **DANGER**When working on or around the system, observe the following precautions:

Electrical voltage and current from power, telephone, and communication cables are hazardous. To avoid a shock hazard:

- Connect power to this unit only with the provided power cord. Do not use the provided power cord for any other product.
- Do not open or service any power supply assembly.

- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- The product might be equipped with multiple power cords. To remove all hazardous voltages, disconnect all power cords.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure that the outlet supplies proper voltage and phase rotation according to the system rating plate.
- Connect any equipment that will be attached to this product to properly wired outlets.
- When possible, use one hand only to connect or disconnect signal cables.
- Never turn on any equipment when there is evidence of fire, water, or structural damage.
- Disconnect the attached power cords, telecommunications systems, networks, and modems before you open the device covers, unless instructed otherwise in the installation and configuration procedures.
- Connect and disconnect cables as described in the following procedures when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

1. Turn off everything (unless instructed otherwise).
2. Remove the power cords from the outlets.
3. Remove the signal cables from the connectors.
4. Remove all cables from the devices

To Connect:

1. Turn off everything (unless instructed otherwise).
2. Attach all cables to the devices.
3. Attach the signal cables to the connectors.
4. Attach the power cords to the outlets.
5. Turn on the devices.

(D005)

## **DANGER** Observe the following precautions when working on or around your IT rack system:

- Heavy equipment – personal injury or equipment damage might result if mishandled.
- Always lower the leveling pads on the rack cabinet.
- Always install stabilizer brackets on the rack cabinet.
- To avoid hazardous conditions due to uneven mechanical loading, always install the heaviest devices in the bottom of the rack cabinet. Always install servers and optional devices starting from the bottom of the rack cabinet.
- Rack-mounted devices are not to be used as shelves or work spaces. Do not place objects on top of rack-mounted devices.



- Each rack cabinet might have more than one power cord. Be sure to disconnect all power cords in the rack cabinet when directed to disconnect power during servicing.
- Connect all devices installed in a rack cabinet to power devices installed in the same rack cabinet. Do not plug a power cord from a device installed in one rack cabinet into a power device installed in a different rack cabinet.
- An electrical outlet that is not correctly wired could place hazardous voltage on the metal parts of the system or the devices that attach to the system. It is the responsibility of the customer to ensure that the outlet is correctly wired and grounded to prevent an electrical shock.

## **CAUTION**

- Do not install a unit in a rack where the internal rack ambient temperatures will exceed the manufacturer's recommended ambient temperature for all your rack-mounted devices.
- Do not install a unit in a rack where the air flow is compromised. Ensure that air flow is not blocked or reduced on any side, front, or back of a unit used for air flow through the unit.
- Consideration should be given to the connection of the equipment to the supply circuit so that overloading of the circuits does not compromise the supply wiring or overcurrent protection. To provide the correct power connection to a rack, refer to the rating labels located on the equipment in the rack to determine the total power requirement of the supply circuit.

- *(For sliding drawers.)* Do not pull out or install any drawer or feature if the rack stabilizer brackets are not attached to the rack. Do not pull out more than one drawer at a time. The rack might become unstable if you pull out more than one drawer at a time.
- *(For fixed drawers.)* This drawer is a fixed drawer and must not be moved for servicing unless specified by the manufacturer. Attempting to move the drawer partially or completely out of the rack might cause the rack to become unstable or cause the drawer to fall out of the rack.

(R001)

Before you begin a replacement or installation procedure, perform these tasks:

1. If you are installing a new feature, ensure that you have the software required to support the new feature and determine if there are any existing PTF prerequisites.
2. If you are performing an installation or replacement procedure that might put your data at risk, ensure, wherever possible, that you have a current backup of your system or logical partition (including operating systems, licensed programs, and data).

For information on backing up your system or logical partition, select from the following:

- ◆ [AIX backup](#)
  - ◆ [Linux backup](#)
3. Review the installation or replacement procedure for the feature or part.
  4. Note the significance of color on your system.

Blue or terra-cotta on a part of the hardware indicates a touch point where you can grip the hardware to remove it from or install it in the system, open or close a latch, and so on. Terra-cotta might also indicate that the part can be removed and replaced with the system or logical partition power on.

5. Ensure that you have access to a medium, flat-blade screwdriver.
6. If parts are incorrect, missing, or visibly damaged, do the following:
  - ◆ If you are replacing a part, contact your service provider or next level of support.
  - ◆ If you are installing a feature, contact one of the following:
    - ◇ Your service provider or next level of support.
7. If you encounter difficulties during the installation, contact your service provider, or your next level of support.
8. If you are installing new hardware in a logical partition, you need to understand and plan for the implications of partitioning your system. For information, see [Partitioning the server](#), and then return to these instructions.

Parent topic: [Related procedures](#)

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## Place the rack-mounted system or expansion unit in the service position or operating position

Learn how to place a rack-mounted system or expansion unit into the service position or the operating position.

- **[Place the rack-mounted system or expansion unit in the service position](#)**  
By placing the rack-mounted system or expansion unit in the service position, you can access the inside of the unit.
- **[Place the rack-mounted system or expansion unit in the operating position](#)**  
By placing the rack-mounted system or expansion unit in the operating position, you make the unit available for use.

Parent topic: [Related procedures](#)

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## Place the rack-mounted system or expansion unit in the service position

By placing the rack-mounted system or expansion unit in the service position, you can access the inside of the unit.

**Note:** Some of the figures in these procedures might not look exactly like the system or expansion unit that you have. However, the steps to perform the task are the same.

### **DANGER**When working on or around the system, observe the following precautions:

Electrical voltage and current from power, telephone, and communication cables are hazardous. To avoid a shock hazard:

- Connect power to this unit only with the provided power cord. Do not use the provided power cord for any other product.
- Do not open or service any power supply assembly.
- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- The product might be equipped with multiple power cords. To remove all hazardous voltages, disconnect all power cords.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure that the outlet supplies proper voltage and phase rotation according to the system rating plate.
- Connect any equipment that will be attached to this product to properly wired outlets.
- When possible, use one hand only to connect or disconnect signal cables.
- Never turn on any equipment when there is evidence of fire, water, or structural damage.
- Disconnect the attached power cords, telecommunications systems, networks, and modems before you open the device covers, unless instructed otherwise in the installation and configuration procedures.
- Connect and disconnect cables as described in the following procedures when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

1. Turn off everything (unless instructed otherwise).
2. Remove the power cords from the outlets.
3. Remove the signal cables from the connectors.
4. Remove all cables from the devices

To Connect:

1. Turn off everything (unless instructed otherwise).
2. Attach all cables to the devices.
3. Attach the signal cables to the connectors.
4. Attach the power cords to the outlets.
5. Turn on the devices.

(D005)

### **DANGER**Observe the following precautions when working on or around your IT rack system:

- Heavy equipment personal injury or equipment damage might result if mishandled.
- Always lower the leveling pads on the rack cabinet.
- Always install stabilizer brackets on the rack cabinet.

- To avoid hazardous conditions due to uneven mechanical loading, always install the heaviest devices in the bottom of the rack cabinet. Always install servers and optional devices starting from the bottom of the rack cabinet.
- Rack-mounted devices are not to be used as shelves or work spaces. Do not place objects on top of rack-mounted devices.



- Each rack cabinet might have more than one power cord. Be sure to disconnect all power cords in the rack cabinet when directed to disconnect power during servicing.
- Connect all devices installed in a rack cabinet to power devices installed in the same rack cabinet. Do not plug a power cord from a device installed in one rack cabinet into a power device installed in a different rack cabinet.
- An electrical outlet that is not correctly wired could place hazardous voltage on the metal parts of the system or the devices that attach to the system. It is the responsibility of the customer to ensure that the outlet is correctly wired and grounded to prevent an electrical shock.

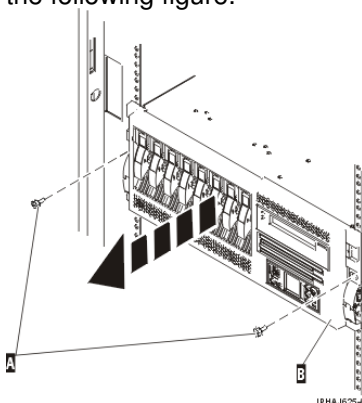
## CAUTION

- Do not install a unit in a rack where the internal rack ambient temperatures will exceed the manufacturer's recommended ambient temperature for all your rack-mounted devices.
- Do not install a unit in a rack where the air flow is compromised. Ensure that air flow is not blocked or reduced on any side, front, or back of a unit used for air flow through the unit.
- Consideration should be given to the connection of the equipment to the supply circuit so that overloading of the circuits does not compromise the supply wiring or overcurrent protection. To provide the correct power connection to a rack, refer to the rating labels located on the equipment in the rack to determine the total power requirement of the supply circuit.
- *(For sliding drawers.)* Do not pull out or install any drawer or feature if the rack stabilizer brackets are not attached to the rack. Do not pull out more than one drawer at a time. The rack might become unstable if you pull out more than one drawer at a time.
- *(For fixed drawers.)* This drawer is a fixed drawer and must not be moved for servicing unless specified by the manufacturer. Attempting to move the drawer partially or completely out of the rack might cause the rack to become unstable or cause the drawer to fall out of the rack.

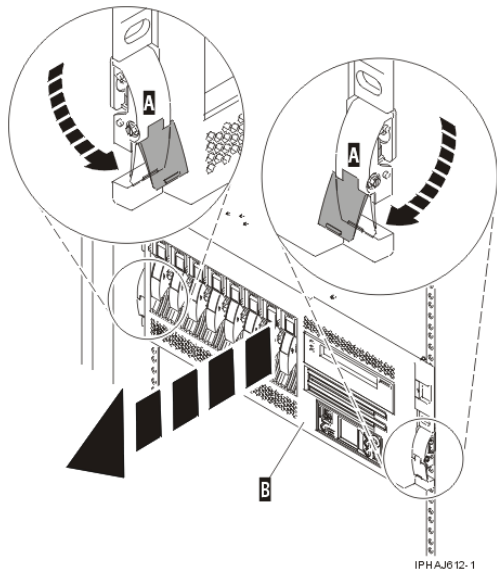
(R001)

To place the rack-mounted system or expansion unit into the service position, follow these steps:

1. If necessary, open the front rack door.
2. Remove the two thumbscrews A that secure the system or expansion unit B to the rack as shown in the following figure.



3. Release the rack latches A on both the left and right sides as shown in the following figure.



- Review the following note, and then slowly pull the system or expansion unit out from the rack until the rails are fully extended and locked.

**Note:**

- ◆ If the procedure you are performing requires you to unplug cables from the back of the system or expansion unit, do so before you pull the unit out from the rack.
- ◆ Ensure that the cables at the rear of the system or expansion unit do not catch or bind as you pull the unit out from the rack.
- ◆ Ensure the rails are fully extended. When the rails are fully extended, the rail safety latches lock into place. This action prevents the system or expansion unit from being pulled out too far.

**Parent topic:** [Place the rack-mounted system or expansion unit in the service position or operating position](#)

## Place the rack-mounted system or expansion unit in the operating position

By placing the rack-mounted system or expansion unit in the operating position, you make the unit available for use.

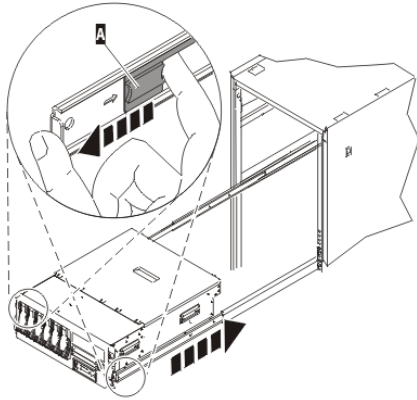
**Tip:** Some of the figures in these procedures might not look exactly like the system or expansion unit that you have. However, the steps to perform the task are the same.

To place the rack-mounted system or expansion unit into the operating position, follow these steps:

- Simultaneously release the blue rail safety latches A, located near the front of each rail, and push the system or expansion unit into the rack as shown in the following figure.

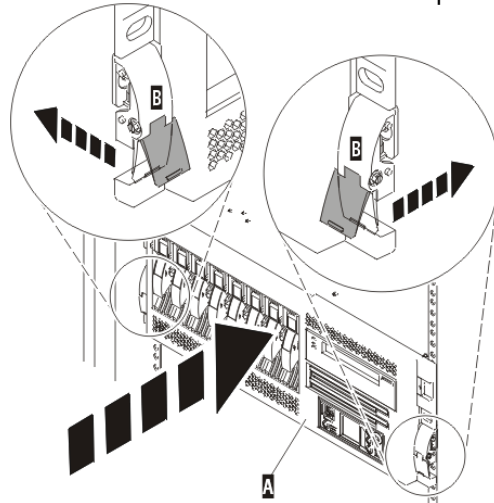
**Note:** Ensure that the cables at the rear of the system or expansion unit do not catch or bind as you push the unit back into the rack.





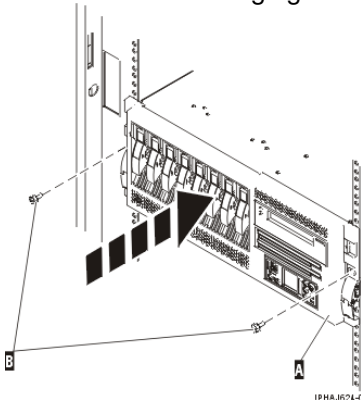
IPH RFR06L-1

a. Both rack latches B should lock into position as shown in the following figure.



IPH AJ6 13-1

2. Replace and tighten the two thumbscrews B that secure the system or expansion unit A to the rack as shown in the following figure.



IPH AJ6 14-1

3. Close the front rack door.

**Parent topic:** [Place the rack-mounted system or expansion unit in the service position or operating position](#)

## Place the rack-mounted model ESCALA PL 245T/R in the service position or operating position

Learn how to place a rack-mounted model ESCALA PL 245T/R into the service position or the operating position.

- **Place the rack-mounted model ESCALA PL 245T/R in the service position**

By placing the rack-mounted system unit in the service position, you can access the inside of the unit.

- **Place the rack-mounted model ESCALA PL 245T/R in the operating position**

By placing the rack-mounted system unit in the operating position, you make the unit available for use.

Parent topic: [Related procedures](#)

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## Place the rack-mounted model ESCALA PL 245T/R in the service position

By placing the rack-mounted system unit in the service position, you can access the inside of the unit.

**Tip:** Some of the figures in these procedures might not look exactly like the system unit that you have. However, the steps to perform the task are the same.

To place the rack-mounted system unit into the service position, follow these steps.

### **DANGER**When working on or around the system, observe the following precautions:

Electrical voltage and current from power, telephone, and communication cables are hazardous. To avoid a shock hazard:

- Connect power to this unit only with the provided power cord. Do not use the provided power cord for any other product.
- Do not open or service any power supply assembly.
- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- The product might be equipped with multiple power cords. To remove all hazardous voltages, disconnect all power cords.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure that the outlet supplies proper voltage and phase rotation according to the system rating plate.
- Connect any equipment that will be attached to this product to properly wired outlets.
- When possible, use one hand only to connect or disconnect signal cables.
- Never turn on any equipment when there is evidence of fire, water, or structural damage.
- Disconnect the attached power cords, telecommunications systems, networks, and modems before you open the device covers, unless instructed otherwise in the installation and configuration procedures.
- Connect and disconnect cables as described in the following procedures when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

1. Turn off everything (unless instructed otherwise).
2. Remove the power cords from the outlets.
3. Remove the signal cables from the connectors.
4. Remove all cables from the devices


To Connect:

1. Turn off everything (unless instructed otherwise).

2. Attach all cables to the devices.
3. Attach the signal cables to the connectors.
4. Attach the power cords to the outlets.
5. Turn on the devices.

(D005)

**DANGER** Observe the following precautions when working on or around your IT rack system:

- Heavy equipment personal injury or equipment damage might result if mishandled.
  - Always lower the leveling pads on the rack cabinet.
  - Always install stabilizer brackets on the rack cabinet.
  - To avoid hazardous conditions due to uneven mechanical loading, always install the heaviest devices in the bottom of the rack cabinet. Always install servers and optional devices starting from the bottom of the rack cabinet.
  - Rack-mounted devices are not to be used as shelves or work spaces. Do not place objects on top of rack-mounted devices.
- 
- Each rack cabinet might have more than one power cord. Be sure to disconnect all power cords in the rack cabinet when directed to disconnect power during servicing.
  - Connect all devices installed in a rack cabinet to power devices installed in the same rack cabinet. Do not plug a power cord from a device installed in one rack cabinet into a power device installed in a different rack cabinet.
  - An electrical outlet that is not correctly wired could place hazardous voltage on the metal parts of the system or the devices that attach to the system. It is the responsibility of the customer to ensure that the outlet is correctly wired and grounded to prevent an electrical shock.

**CAUTION**

- Do not install a unit in a rack where the internal rack ambient temperatures will exceed the manufacturer's recommended ambient temperature for all your rack-mounted devices.
- Do not install a unit in a rack where the air flow is compromised. Ensure that air flow is not blocked or reduced on any side, front, or back of a unit used for air flow through the unit.
- Consideration should be given to the connection of the equipment to the supply circuit so that overloading of the circuits does not compromise the supply wiring or overcurrent protection. To provide the correct power connection to a rack, refer to the rating labels located on the equipment in the rack to determine the total power requirement of the supply circuit.
- *(For sliding drawers.)* Do not pull out or install any drawer or feature if the rack stabilizer brackets are not attached to the rack. Do not pull out more than one drawer at a time. The rack might become unstable if you pull out more than one drawer at a time.
- *(For fixed drawers.)* This drawer is a fixed drawer and must not be moved for servicing unless specified by the manufacturer. Attempting to move the drawer partially or completely out of the rack might cause the rack to become unstable or cause the drawer to fall out of the rack.

(R001)

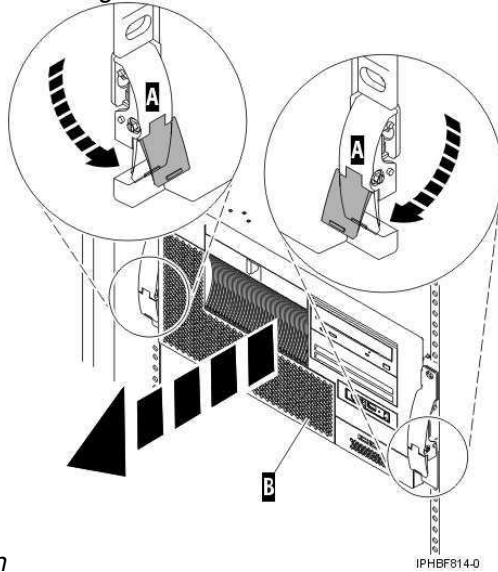
1. If necessary, open the front rack door.
2. Release the rack latches A on both the left and right sides as shown in the following figure.
3. Review the following note, and then slowly pull the system unit B out from the rack until the rails are fully extended and locked.

**Note:**

- ◆ If the procedure you are performing requires you to unplug cables from the back of the system unit, do so before you pull the unit out from the rack.
- ◆ Ensure that the cables at the rear of the system unit do not catch or bind as you pull the unit out from the rack.

- ◆ Ensure the rails are fully extended. When the rails are fully extended, the rail safety latches lock into place. This action prevents the system unit from being pulled out too far.

Figure 1. Placing the model ESCALA PL 245T/R in the service



**Parent topic:** [Place the rack-mounted model ESCALA PL 245T/R in the service position or operating position](#)

## Place the rack-mounted model ESCALA PL 245T/R in the operating position

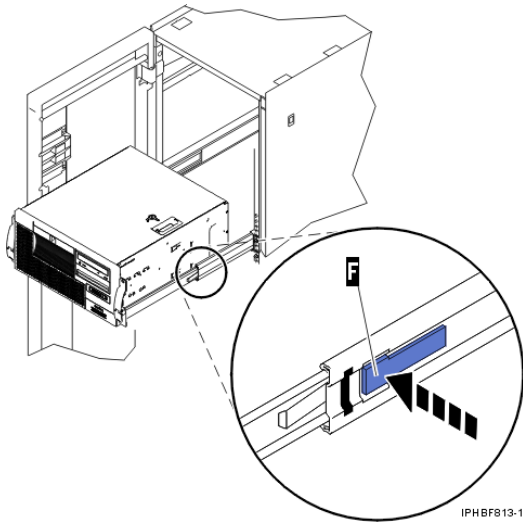
By placing the rack-mounted system unit in the operating position, you make the unit available for use.

**Note:** Some of the figures in these procedures might not look exactly like the system unit that you have. However, the steps to perform the task are the same.

To place the rack-mounted system unit into the operating position, follow these steps:

1. Simultaneously release the blue rail safety latches F located near the front of each rail, and push the system or expansion unit into the rack as shown in the following figure.

**Note:** Ensure that the cables at the rear of the unit do not catch or bind as you push the unit back into the rack.



- a. Both rack latches should lock into position.
2. Replace and tighten the two thumbscrews that secure the system unit to the rack.
3. Close the front rack door.

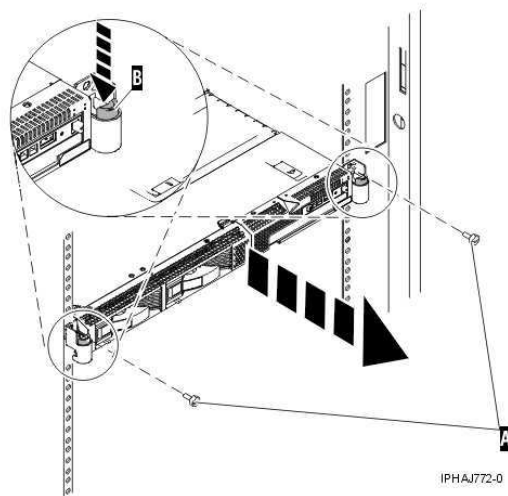
**Parent topic:** [Place the rack-mounted model ESCALA PL 245T/R in the service position or operating position](#)

## Open the model ESCALA PL 250R-VL or ESCALA PL 450R-XS service access panel

To open the service access panel on a rack-mounted model ESCALA PL 250R-VL or ESCALA PL 450R-XS follow these steps:

1. If necessary, open the front rack door.
2. If they are present, remove the two thumbscrews A that secure the system unit to the rack as shown in the following figure.

*Figure 1. Remove thumbscrews from model ESCALA PL 250R-VL or ESCALA PL*



3. Release the rack latches B on both the left and right sides as shown in the previous figure.

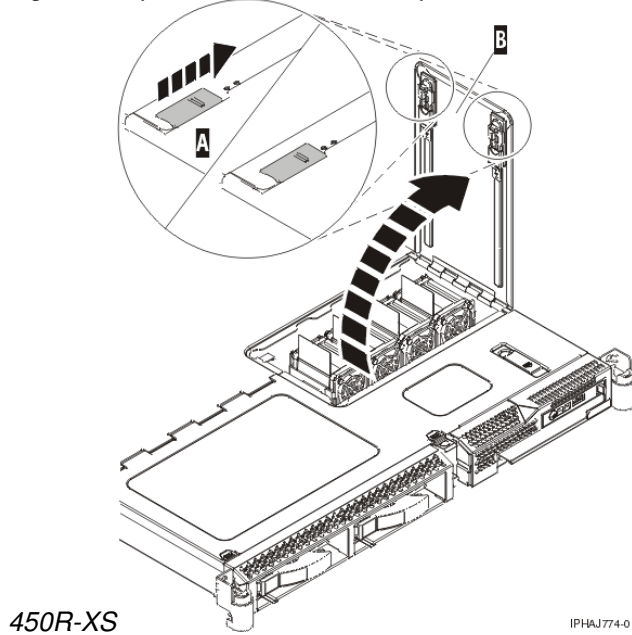
### Note:

Open the model ESCALA PL 250R-VL or ESCALA PL 450R-XS service access panel

- ◆ Ensure that the cables at the rear of the system unit do not catch or bind as you pull the unit out from the rack.
- ◆ When the rails are fully extended, the rail safety latches lock into place. This action prevents the system unit from being pulled out too far.

4. Slowly pull the system unit out from the rack until the service access panel is completely exposed.
5. Push the panel release tabs A until you can open the panel lid, as shown in the following figure.
6. Lift the panel lid B to its fully opened position.

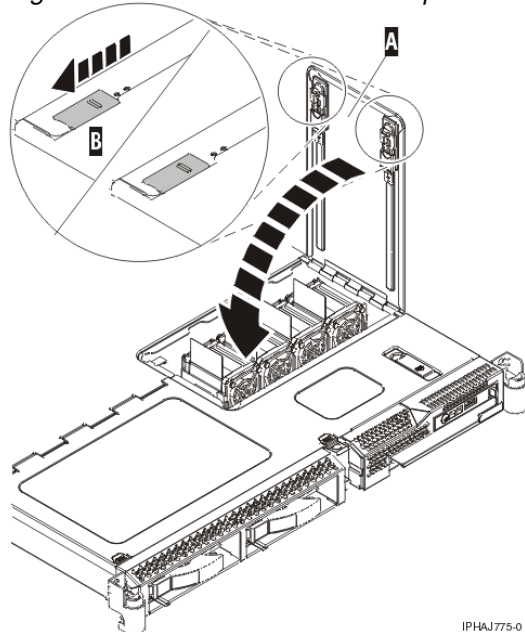
Figure 2. Open the service access panel on model ESCALA PL 250R-VL or ESCALA PL



Complete the following steps to close the service access panel:

1. Close the panel lid A, as shown in the following figure.

Figure 3. Close the service access panel on model ESCALA PL 250R-VL or ESCALA PL 450R-XS.



2. Push the panel release tabs B back into the locked position.

3. Gently push the server back into the rack until the rack latches lock into place.
4. Replace the thumbscrews if necessary.

Parent topic: [Related procedures](#)

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## **Model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, 7/10, service access cover**

This topic describes how to remove and install the service access cover for the model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, 7/10, .

- **Remove the service access cover from the model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,**

The following procedures describe how to remove the service access cover for the rack-mounted and stand-alone model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, 7/10, .

- **Install the service access cover on the model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,**

The following procedures describe how to install the service access cover on the rack-mounted and stand-alone model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, 7/10, .

Parent topic: [Related procedures](#)

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## **Remove the service access cover from the model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, 7/10,**

The following procedures describe how to remove the service access cover for the rack-mounted and stand-alone model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, 7/10, .

**Tip:** Some of the figures in these procedures may not look exactly like the system unit that you have. However, the steps to perform the task are the same.

- **Remove the service access cover from the rack-mounted model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,**
- **Remove the service access cover from the stand-alone model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,**

Parent topic: [Model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, service access cover](#)

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Fans



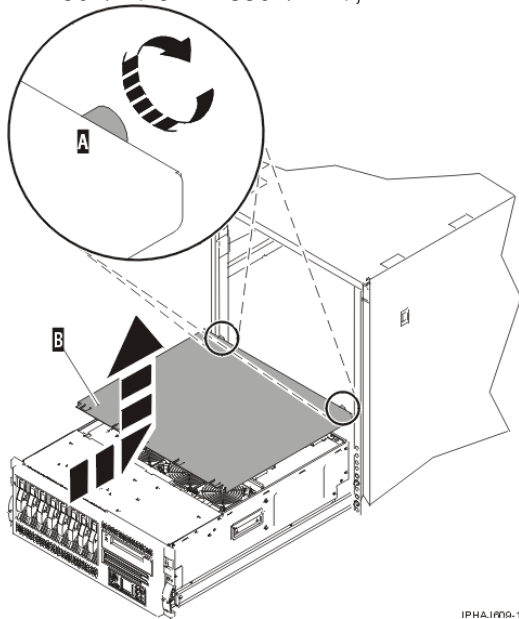
## Remove the service access cover from the rack-mounted model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, 7/10,

To remove the service access cover from a rack-mounted model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, 7/10, , refer to [Figure 1](#) and [Figure 2](#) , and follow these steps:

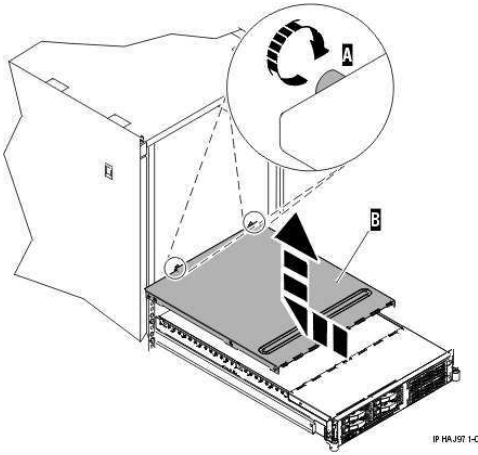
1. Place the rack-mounted system or expansion unit in the service position.
2. Loosen the two thumbscrews located at the back of the cover.
3. Slide the cover toward the back of the system unit. When the front of the service access cover clears the upper frame ledge, lift the cover up and off the system unit.

**Attention:** For proper cooling and airflow, install the cover before starting the system. Operating the system without the cover for more than 30 minutes could damage the system components.

*Figure 1. Remove the service access cover from the rack-mounted ESCALA PL 250T/R, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,*



*Figure 2. Remove the service access cover from the ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ or 7/10*

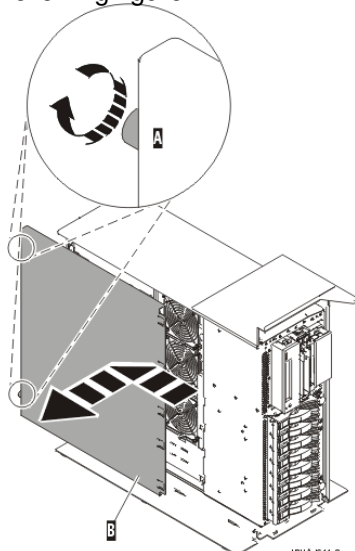


**Parent topic:** Remove the service access cover from the model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,

## Remove the service access cover from the stand-alone model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,

To remove the service access cover from a stand-alone model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, , do the following:

1. Loosen the two thumbscrews located at the back of the service access cover as shown in the following figure.



2. Slide the service access cover toward the back of the system unit. When the front of the cover clears the front frame ledge, lift the cover off the system unit.

**Attention:** For proper cooling and airflow, install the cover before starting the system. Operating the system without the cover for more than 30 minutes could damage the system components.

**Parent topic:** [Remove the service access cover from the model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,](#)

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## **Install the service access cover on the model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, 7/10,**

The following procedures describe how to install the service access cover on the rack-mounted and stand-alone model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, 7/10, .

- **[Install the service access cover on the rack-mounted model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,](#)**
- **[Install the service access cover on the stand-alone model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,](#)**

**Parent topic:** [Model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, service access cover](#)

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## **Install the service access cover on the rack-mounted model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, 7/10,**

To install the service access cover on a rack-mounted model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, 7/10, , refer to [Figure 1](#) and [Figure 2](#), and follow these steps:

1. Place the service access cover A on the top of the system unit, approximately 25 mm (1 in.) from the front of the system unit.
2. Hold the service access cover against the system unit, and slide it toward the front of the system. Ensure that the fan LED cables do not get caught on the front edge of the service access cover as you move it forward. The tabs on the service access cover slide beneath the upper chassis ledge, and the two thumbscrews align with the screw holes at the back of the system unit.
3. Tighten the thumbscrews B located at the back of the cover.

*Figure 1. Install the service access cover on the rack-mounted model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,*

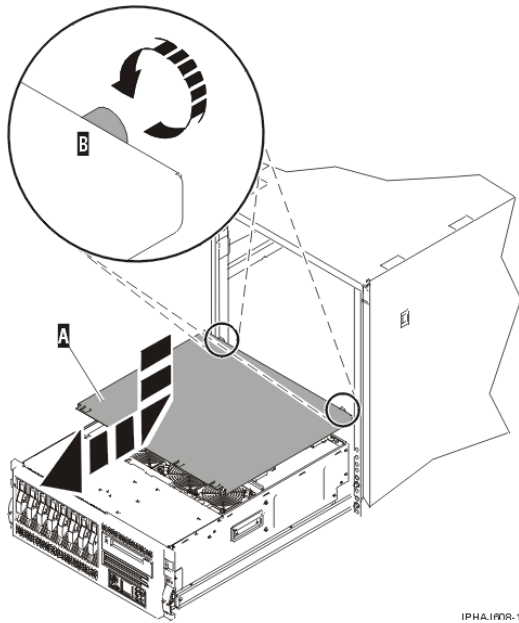
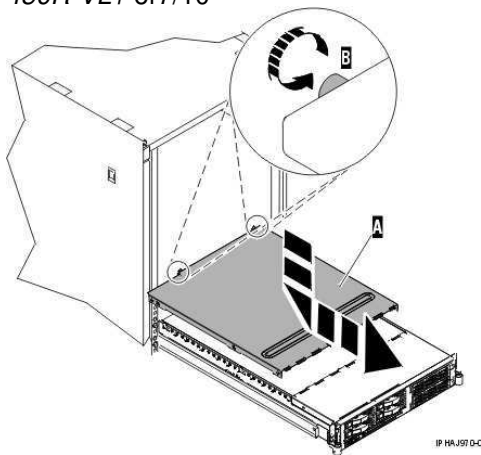


Figure 2. Install the service access cover on the model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ or 7/10

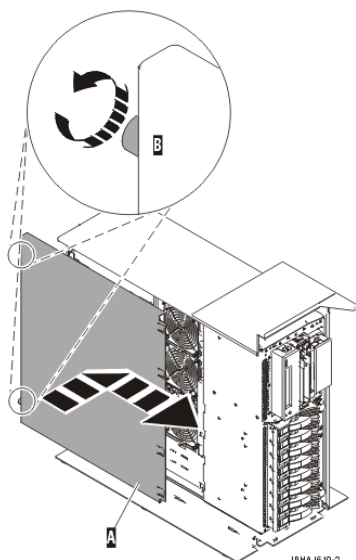


**Parent topic:** [Install the service access cover on the model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,](#)

## Install the service access cover on the stand-alone model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,

To install the service access cover on a stand-alone model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, , follow these steps:

1. Align the service access cover pins with the slots in the system. The flanges on the top and bottom of the cover wrap around the system frame, as shown in the following figure.
2. Hold the service access cover against the system unit A and slide it toward the front of the system.
3. Tighten the two thumbscrews B located at the back of the cover.



**Parent topic:** [Install the service access cover on the model 112/85, ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,](#)

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## Front cover

The following procedures describe how to remove and install the front cover of the system or expansion unit.

- **[Remove and replace model ESCALA PL 245T/R covers and doors](#)**  
Learn how to remove and replace covers and doors.
- **[Front cover for models ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, and the 05/95 expansion unit](#)**  
The following procedures describe how to remove and install the front cover of the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, , or the 05/95 expansion unit.
- **[Front cover for the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+](#)**  
The following procedures describe how to remove and install the front cover for rack-mounted ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system units.

**Parent topic:** [Related procedures](#)

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## Remove and replace model ESCALA PL 245T/R covers and doors

Learn how to remove and replace covers and doors.

- **[Remove and replace the model ESCALA PL 245T/R front cover](#)**
- **[Remove and replace the model ESCALA PL 245T/R acoustic-feature back cover](#)**  
The model ESCALA PL 245T/R has a removable back cover only if you have ordered the acoustic covers feature.
- **[Remove and replace the model ESCALA PL 245T/R side cover](#)**

**Parent topic:** [Front cover](#)

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## Remove and replace the model ESCALA PL 245T/R front cover

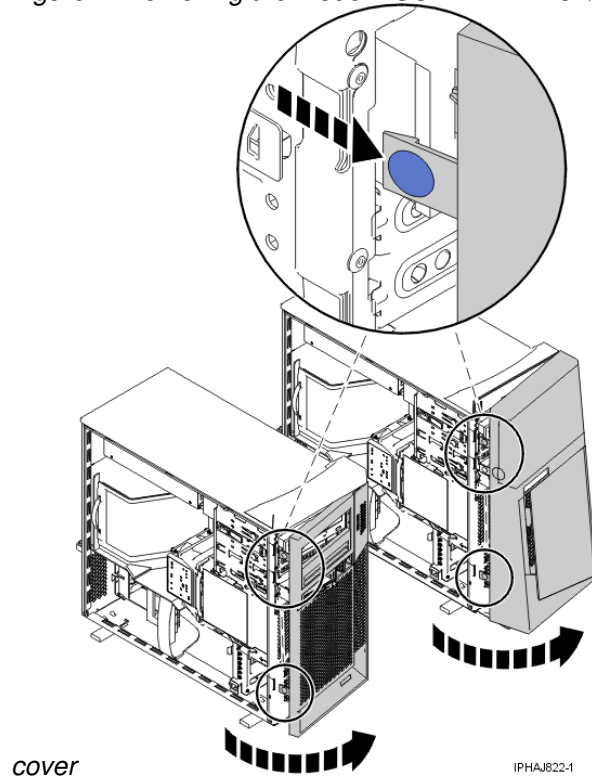
To remove the front cover from the model ESCALA PL 245T/R, follow these steps:

1. Remove the side cover. See, [Remove and replace the model ESCALA PL 245T/R side cover](#)
2. Lift each of the tabs on the front cover until it is released from the system unit, as shown in the following figure.

**Tip:** On the open face cover there are two tabs to release. On the acoustic feature front cover there are three tabs to release.

3. Pull the cover open until it can be removed from the system unit.

Figure 1. Removing the model ESCALA PL 245T/R front



**Parent topic:** [Remove and replace model ESCALA PL 245T/R covers and doors](#)

## Remove and replace the model ESCALA PL 245T/R acoustic-feature back cover

The model ESCALA PL 245T/R has a removable back cover only if you have ordered the acoustic covers feature.

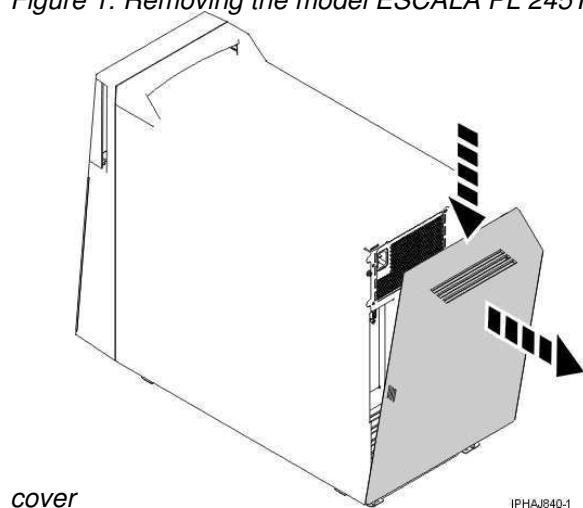
To remove the back cover from the model ESCALA PL 245T/R, follow these steps:

1. Press down on the center tab of the cover until you unseat it from the back of the system unit, as shown in the following figure.

**Remember:** Use care not to dislodge any of the cables or cords attached to the system unit during this procedure.

2. Lift the top of the cover until the pins on the bottom clear the holes and the cover can be removed.

*Figure 1. Removing the model ESCALA PL 245T/R back*

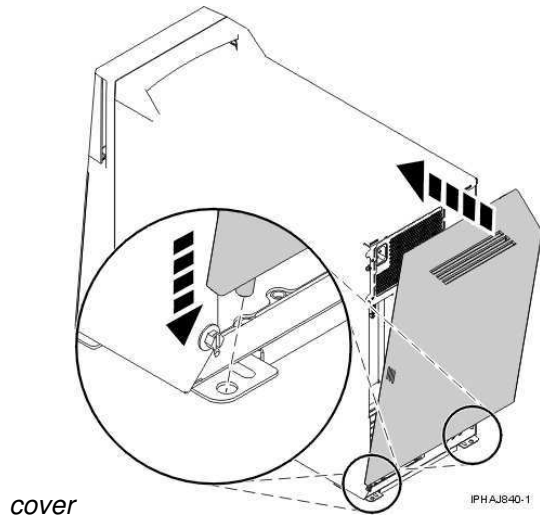


To replace the back cover from the model ESCALA PL 245T/R, follow these steps:

1. Attach all cables and cords.
2. Place the pins on the bottom of the cover into the slot at the bottom of the system unit, as shown in the following figure.
3. Rotate the cover until it snaps into place on the back of the system unit.

**Remember:** Use care not to dislodge any of the cables or cords attached to the system unit during this procedure.

*Figure 2. Replacing the model ESCALA PL 245T/R back*

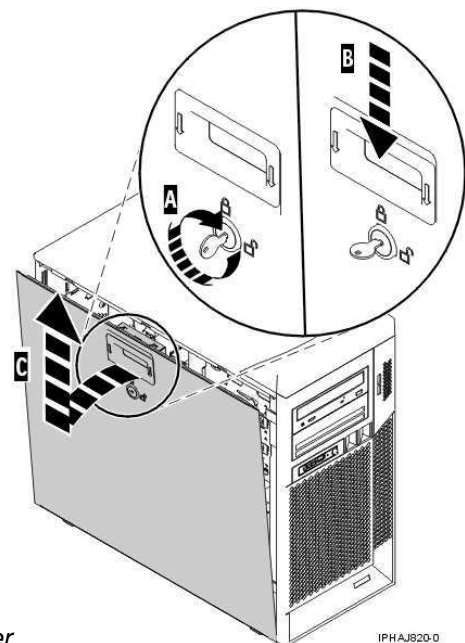


**Parent topic:** [Remove and replace model ESCALA PL 245T/R covers and doors](#)

## Remove and replace the model ESCALA PL 245T/R side cover

To remove the side cover from the model ESCALA PL 245T/R, follow these steps:

1. Unlock the security lock A if it is locked, as shown in the following figure.
2. Press down on the latch B to open the cover and pull it away from the system unit.
3. Lift the panel out of the ledge on the bottom of the system unit.



*Figure 1. Removing the model ESCALA PL 245T/R side cover*

**Parent topic:** [Remove and replace model ESCALA PL 245T/R covers and doors](#)



**Replace the side cover in a model ESCALA PL 245T/R**

To replace the side cover on the model ESCALA PL 245T/R, follow these steps:

1. Insert the bottom lip of the cover into the ledge on the bottom of the system unit.
2. Rotate the panel up A until the latch snaps into place B, as shown in the following figure.

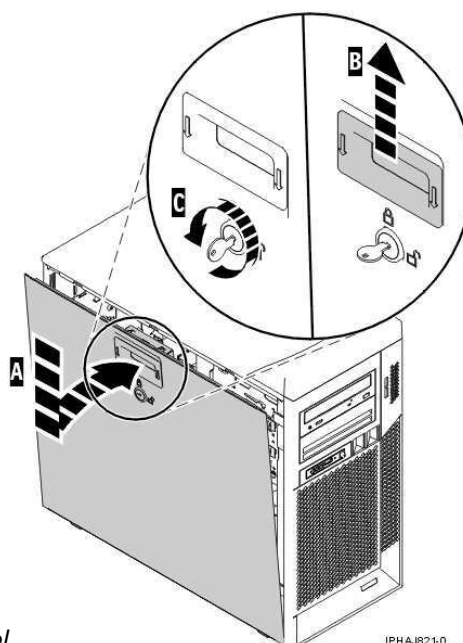


Figure 2. Replacing the service panel  
3. Lock the security lock C if needed.

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## Front cover for models 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, and the 05/95 expansion unit

The following procedures describe how to remove and install the front cover of the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, , or the 05/95 expansion unit.

- **Remove the front cover from the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, or the 05/95 expansion unit**  
The following procedures describe how to remove the front cover of the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, or the 05/95 expansion unit.
- **Install the front cover on the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, or the 05/95 expansion unit**  
The following procedures describe how to install the front cover for the rack-mounted and stand-alone model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, or the 05/95 expansion unit.

Parent topic: [Front cover](#)

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## **Remove the front cover from the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, or the 05/95 expansion unit**

The following procedures describe how to remove the front cover of the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, or the 05/95 expansion unit.

- **Remove the front cover from the rack-mounted model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, and the 05/95 expansion unit**
- **Remove the front cover from the stand-alone model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,**

**Parent topic:** [Front cover for models ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, and the 05/95 expansion unit](#)

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## **Remove the front cover from the rack-mounted model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, and the 05/95 expansion unit**

To remove the rack-mounted system or expansion unit front cover, follow these steps:

1. Open the front rack door.
2. Remove the two thumbscrews A that secure the system or expansion unit B to the rack as shown in the following figure.
3. Push both cover-release latches C in the direction of the arrows to release the cover from the system or expansion unit.
4. Pull the cover out and away from the system or expansion unit.

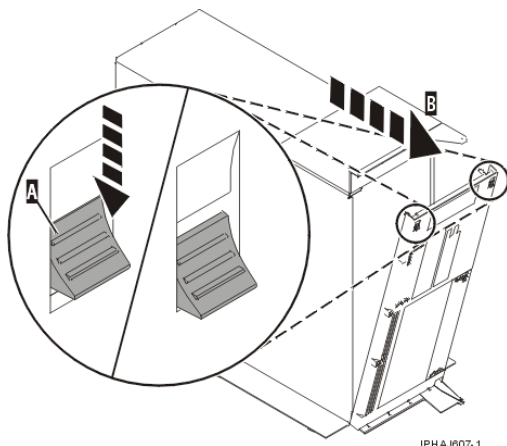
**Parent topic:** [Remove the front cover from the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, or the 05/95 expansion unit](#)

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## **Remove the front cover from the stand-alone model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,**

To remove the stand-alone model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, front cover, follow these steps:

1. [Remove the door from the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, .](#)
2. Press down on the two cover-release levers.
3. Pull the top of the cover out and away from the system as shown in the following figure.



4. Gently pull the cover up and off the base, releasing the lower cover-locking tabs.

**Parent topic:** [Remove the front cover from the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, or the 05/95 expansion unit](#)

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## Install the front cover on the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, or the 05/95 expansion unit

The following procedures describe how to install the front cover for the rack-mounted and stand-alone model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, or the 05/95 expansion unit.

- [Install the front cover on the rack-mounted model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, , or the 05/95 expansion unit](#)
- [Install the front cover on the stand-alone model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,](#)

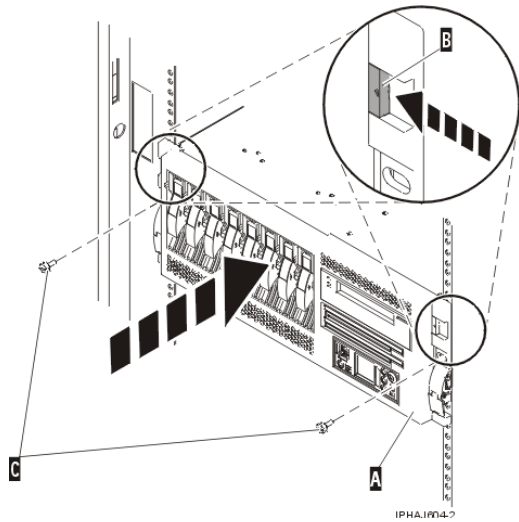
**Parent topic:** [Front cover for models ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, and the 05/95 expansion unit](#)

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## Install the front cover on the rack-mounted model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, , or the 05/95 expansion unit

To install the front cover on a rack-mounted model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, or the 05/95, follow these steps:

1. Position the cover on the front of the system or expansion unit so that the two thumbscrews C align with the screw holes on the front of the system or expansion unit A, as shown in the following figure.
2. Push the cover-release latches B in the direction of the arrows to attach the cover to the front of the system or expansion unit. The latches will hold the cover in place.



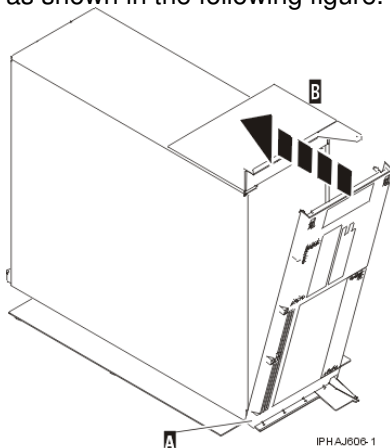
3. Tighten the thumbscrews.
4. Close the front rack door.

**Parent topic:** [Install the front cover on the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, or the 05/95 expansion unit](#)

## Install the front cover on the stand-alone model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,

To install the stand-alone model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, front cover, follow these steps:

1. Place the two lower cover-locking tabs into the retaining slots located on the base of the system unit as shown in the following figure.



2. Rotate the cover up toward the top of the system, ensuring that the aligning pins are aligned with their matching slots located on the system.
3. Gently push the cover in until the two cover-release levers are seated in their respective slots.
4. [Install or replace the door on the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, .](#)

**Parent topic:** [Install the front cover on the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, or the 05/95 expansion unit](#)

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## Front cover for the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+

The following procedures describe how to remove and install the front cover for rack-mounted ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+ system units.

- [Remove the front cover from the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+](#)
- [Install the front cover on the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+](#)

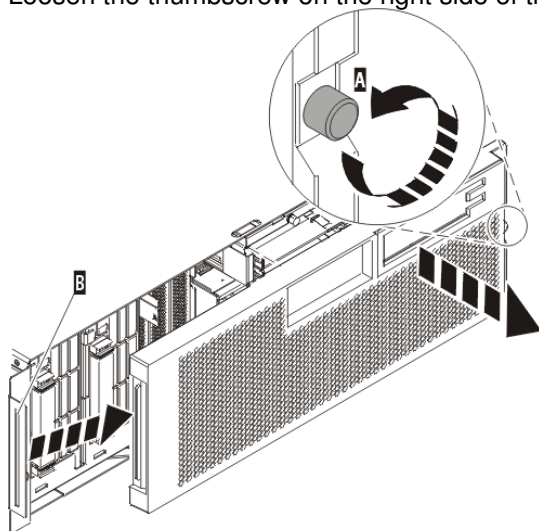
**Parent topic:** [Front cover](#)

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## Remove the front cover from the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+

To remove the front cover from the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+, follow these steps:

1. If necessary, open the front rack door.
2. Loosen the thumbscrew on the right side of the cover as shown in the following figure.



IPHAI/P01-1

3. Slide the cover to the right and remove it from the system unit.

**Parent topic:** [Front cover for the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+](#)

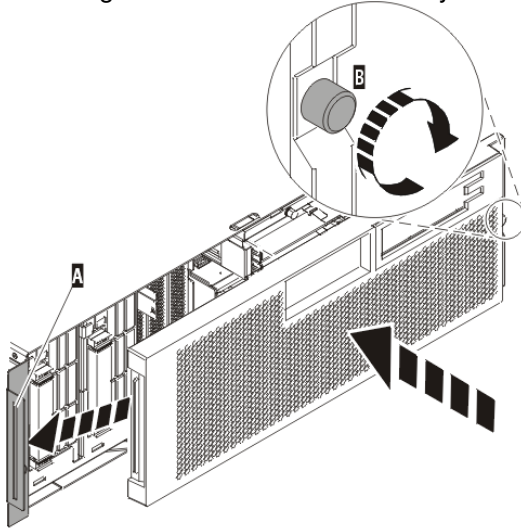
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## Install the front cover on the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+

To install the front cover on the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+, follow

these steps:

1. Position the cover on the front of the system unit so that the tab on the left side of the cover is in the matching slot on the left side of the system unit as shown in the following figure.



IPHA1500.1

2. Tighten the thumbscrew on the right side of the cover.
3. Close the front rack door.

**Parent topic:** [Front cover for the model ESCALA PL 1650R-L+ or ESCALA PL 850R/PL 1650R/R+](#)

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## Model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, door

Learn how to remove and replace the front door of the stand-alone model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, .

- [Remove the door from the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,](#)
- [Install or replace the door on the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,](#)

**Parent topic:** [Related procedures](#)

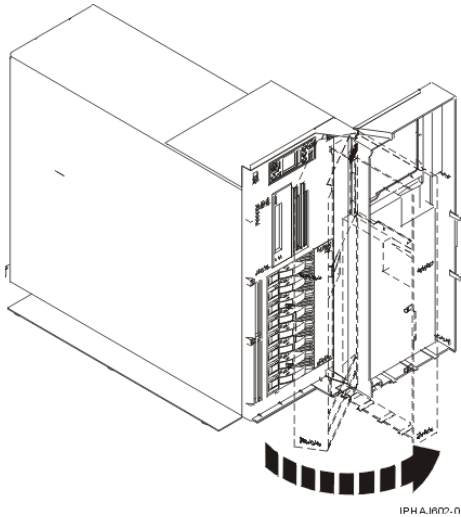
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## Remove the door from the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,

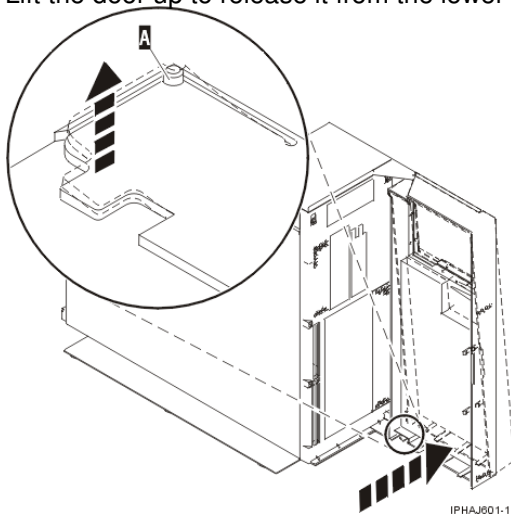
To remove the door from the model 112/85 or ESCALA PL 250T/R+ or ESCALA PL 450T/R-L+ see, [Remove the door from the model ESCALA PL 250T/R+ or ESCALA PL 450T/R-L+.](#)

To remove the ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, door, do the following:

1. Open the front door by grasping the door handle and pulling the door out and away from the system unit as shown in the following figure.



2. To remove the door, press down on the top back edge of the door.
3. Gently swivel the top back edge of the door forward and out past the top of the system unit.
4. Lift the door up to release it from the lower retaining post.



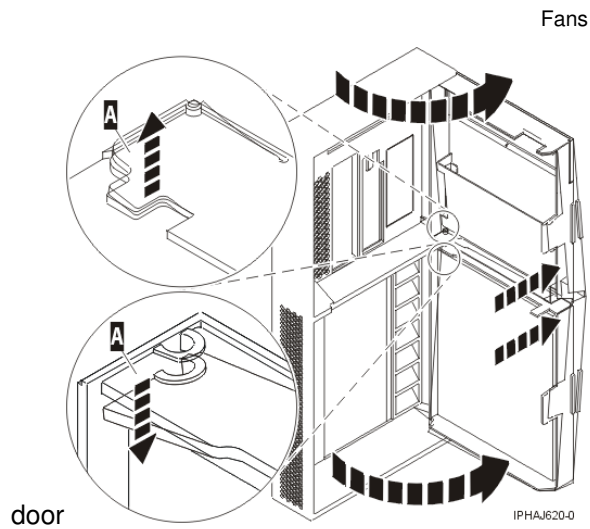
**Parent topic:** [Model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, door](#)

#### **Remove the door from the model ESCALA PL 250T/R+ or ESCALA PL 450T/R-L+**

The model 112/85 or ESCALA PL 250T/R+ or ESCALA PL 450T/R-L+ has two doors. The top door allows access to the media and the bottom allows access to the DASD. Use the following procedure for removing both doors.

1. Open the door that you want to remove and release the tab at the center hinge point as shown in the following figure.
  - a. Lift up the bottom tab at hinge A to release the top door.
  - b. Press down on the top tab at the hinge A to release the bottom door
2. Gently swivel the top back edge of the door forward until it releases from the system unit.

*Figure 1. Removing the model ESCALA PL 250T/R+ or ESCALA PL 450T/R-L+*



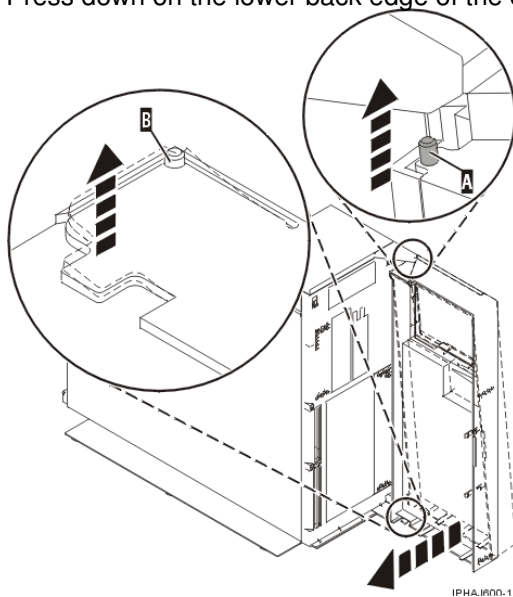

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## Install or replace the door on the model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+,

To install the model ESCALA PL 250T/R+ or ESCALA PL 450T/R-L+ with acoustic feature front door see, [Install the door on the model ESCALA PL 250T/R+ or ESCALA PL 450T/R-L+](#)

To install the model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, front door, do the following:

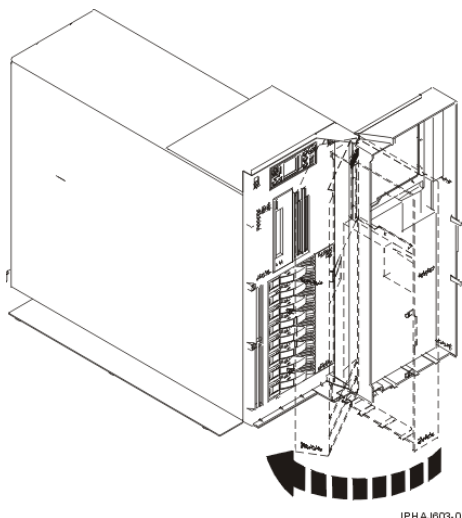
1. Set the door on the lower retaining post B, as shown in the following figure.
2. Rotate the door toward the top of the system unit.
3. Press down on the lower back edge of the door, and seat the top post A into its matching slot.



4. Close the door.



## Fans

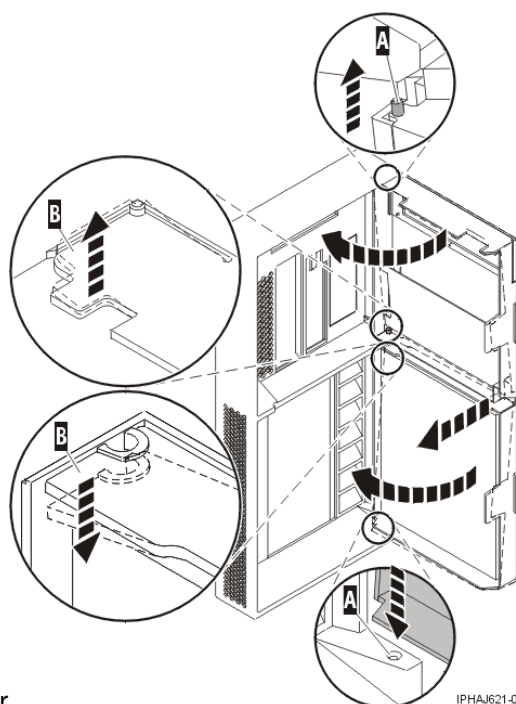


**Parent topic:** [Model 112/85, ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+, ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+, door](#)

### Install the door on the model ESCALA PL 250T/R+ or ESCALA PL 450T/R-L+

The model 112/85 or ESCALA PL 250T/R+ or ESCALA PL 450T/R-L+ has two doors. The top door covers the media bays, and the bottom door covers the DASD bays.

1. Set the door into the retaining post A.



*Figure 1. Installing the model 112/85 door*

2. Rotate the door toward the system unit.
3. Press down on the back edge of the door, and seat the post B into its matching slot.
4. Close the door.

## Verify the installed part

This topic describes how to verify a newly installed or replaced part on your system, logical partition, or expansion unit. Verify an installed feature or replaced part by selecting the appropriate procedure for the operating system or for the console as follows.

- [Verify an installed feature or replaced part on an AIX system or logical partition](#)
- [Verify the installed part on a Linux system or logical partition \(run AIX diagnostics\)](#)
- [Verify the presence of an installed part using Hardware Management Console \(HMC\)](#)  
Use these instructions to verify an installed part using the Hardware Management Console (HMC). If you have reference codes, symptoms, or location codes that you used during the service action, locate the records to use during this procedure.
- [Verify the presence of an installed part using the Advanced System Management Interface \(ASMI\)](#)  
Use these instructions to verify a newly installed part or replaced part using the Advanced System Management Interface (ASMI).

Parent topic: [Related procedures](#)

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## Verify an installed feature or replaced part on an AIX system or logical partition

To verify the operation of a newly installed feature or replacement part, select the appropriate procedure:

- [Verify the installed feature using AIX](#)
- [Verifying the replaced part using AIX](#)

Verify the installed feature using AIX:

1. Log in as root user.
2. At the command line, type `diag` and press Enter.
3. Select **Advanced Diagnostics Routines**. Press Enter.
4. From the **Diagnostic Mode Selection** menu, select **System Verification**. Press Enter.
5. When the **Advanced Diagnostic Selection** menu appears, do one of the following:
  - ◆ To test a single resource, select the resource that you just installed from the list of resources and press Enter.
  - ◆ To test all the resources available to the operating system, select **All Resources** and press Enter.
6. Select **Commit**, and wait until the diagnostic programs run to completion, responding to any prompts that appear.
7. Did the diagnostics run to completion and display the message `No trouble was found`?
  - ◆ **No:** If a service request number (SRN) or other reference code is displayed, suspect a loose adapter or cable connection. You can learn more about these codes in [Reference codes](#). Review the installation procedures to ensure that the new feature is installed correctly. If you cannot correct the problem, collect all SRNs or any other reference code information that you see. If the system is running in LPAR mode, note the logical partition in which you installed the feature. Contact your service provider for assistance.
  - ◆ **Yes:** The new device is installed correctly. Exit the diagnostic programs and return the system to normal operations.

Verify the replacement part using AIX

To verify the operation of a newly installed feature or replacement part, follow these steps:

1. Did you replace the part using either AIX or the online diagnostics service aid's concurrent (hot-swap) service operation?
  - ◆ **No:** Go to step 2.

- ◆ **Yes:** Go to step 5.
2. Is the system powered off?
- ◆ **Yes:** If the system supports slow boot, set the system to perform a slow boot. For information, see [Performing a slow boot](#).
  - ◆ **No:** Go to step 4.
3. Start the system and wait until the AIX operating system login prompt displays or until apparent system activity on the operator panel or display has stopped.
- Did the AIX login prompt display?
- ◆ **Yes:** Go to step 4
  - ◆ **No:** If an SRN or other reference code is displayed, suspect a loose adapter or cable connection. You can learn more about these codes in the [Reference codes](#). Review the procedures for the part that you replaced to ensure that the new part is installed correctly. If you cannot correct the problem, collect all SRNs or any other reference code information that you see. If the system does not start or you have no login prompt, see: [Problems with loading and starting the operating system](#).
- If the system is partitioned, note the logical partition in which you replaced the part. Contact your service provider for assistance.
4. At the command prompt, type `diag a` and press Enter to check for missing resources. If you see a command prompt, go to step 5.

If the **Diagnostic selection** menu is shown with **M** appearing next to any resource, follow these steps:

- a. Select the resource and press Enter.
  - b. Select **Commit**.
  - c. Follow any instructions that are shown.
  - d. If a *Do you want to review the previously displayed error?* message is shown, select **Yes** and press Enter.
  - e. If an SRN is shown, suspect a loose card or connection. If no obvious problem is shown, record the SRN .
  - f. If no SRN is shown, go to 5.
5. Test the part by doing the following:
- a. At the command line, type `diag` and press Enter.
  - b. From the **Function Selection** menu, select **Advanced Diagnostics Routines**. Press Enter.
  - c. From the **Diagnostic Mode Selection** menu, select **System Verification**. Press Enter.
  - d. Select **All Resources**, or select the diagnostics for the individual part to test only the part you replaced, and any devices that are attached to the part you replaced. Press Enter.
- Did the **Resource Repair Action** menu appear?
- ◆ **No:** Go to step 6.
  - ◆ **Yes:** Go to step 7.
6. Did the *Testing Complete, No trouble was found* message appear?
- ◆ **No:** There is still a problem. Contact your service provider. **This ends the procedure.**
  - ◆ **Yes:** Select **Log Repair Action**, if not previously logged, from the **Task Selection** menu to update the AIX error log. If the repair action was reseating a cable or adapter, select the resource associated with that repair action. If the resource associated with your action is not displayed on the Resource List, select **sysplanar0**. Press Enter.

**Tip:** This action changes the indicator light for the part from the fault state to the normal state.

Go to step 9

7. When a test is run on a resource in system verification mode, and that resource has an entry in the AIX error log, if the test on the resource was successful, the *Resource Repair Action* menu appears. After replacing a part, you must select the resource for that part from the *Resource Repair Action* menu. This updates the AIX error log to indicate that a system-detectable part has been replaced.

**Note:** On systems with a indicator light for the failing part, this changes the indicator light to the normal state.

Follow these steps:

- a. Select the resource that has been replaced from the *Resource Repair Action* menu. If the repair action was reseating a cable or adapter, select the resource associated with that repair action. If the resource associated with your action does not appear on the Resource List, select **sysplanar0**. Press Enter.
  - b. Select **Commit** after you make your selections. Did another *Resource Repair Action* display appear?
    - ◆ **No:** If the *No Trouble Found* display appears, go to step 9
    - ◆ **Yes:** Go to step 8.
8. The parent or child of the resource you just replaced may also require that you run the Resource Repair Action option on it. When a test is run on a resource in system verification mode, and that resource has an entry in the AIX error log, if the test on the resource was successful, the *Resource Repair Action* menu appears. After replacing that part, you must select the resource for that part from the *Resource Repair Action* menu. This updates the AIX error log to indicate that a system-detectable part has been replaced.

**Note:** This changes the indicator light for the part from the fault state to the normal state.

Follow these steps:

- a. From the *Resource Repair Action* menu, select the parent or child of the resource that has been replaced. If the repair action was to reseat a cable or adapter, select the resource associated with that repair action. If the resource associated with your action does not appear on the Resource List, select **sysplanar0**. Press Enter.
  - b. Select **Commit** after you make your selections.
  - c. If the *No Trouble Found* display appears, go to step 9.
9. If you changed the service processor or network settings, as instructed in previous procedures, restore the settings to the value they had prior to servicing the system.
10. Did you do any hot-plug procedures before doing this procedure?
  - ◆ **No:** Go to step 11.
  - ◆ **Yes:** Go to step 12.
11. Start the operating system, with the system or logical partition in normal mode. Were you able to start the operating system?
  - ◆ **No:** Contact your service provider. **This ends the procedure.**
  - ◆ **Yes:** Go to step 12.
12. Are the indicator lights still on?
  - ◆ **No. This ends the procedure.**
  - ◆ **Yes.** Turn off the lights. See one of the following for instructions:
    - ◇ [Identify a failing part using stand-alone diagnostics](#)
    - ◇ [Running the stand-alone diagnostics from a Network Installation Management server](#)
    - ◇ [Changing service indicators with the ASMI menus](#)

Parent topic: [Verify the installed part](#)

---

## Verify the installed part on a Linux system or logical partition (run AIX diagnostics)

To verify the newly installed or replaced part, choose one of the following:

- [Verify the presence of an installed part using the Advanced System Management Interface \(ASMI\)](#)
- [Verify an installed part using the stand-alone diagnostics](#)  
Use these instructions to verify an installed part in a Linux system, expansion unit, or logical partition.

## Verify an installed part using the stand-alone diagnostics

Use these instructions to verify an installed part in a Linux system, expansion unit, or logical partition.

You can use stand-alone diagnostics to verify an installed part in a Linux system, expansion unit, or logical partition. You access these diagnostics from a CD-ROM or from the Network Installation Management (NIM) server. This procedure describes how to use the diagnostics from a CD-ROM. For information on running diagnostics from the Network Installation Management (NIM) server, see [Running the stand-alone diagnostics from a Network Installation Management server](#).

### Prerequisites

- If this server is directly attached to another server or attached to a network, be sure communication with the other servers is stopped.
- stand-alone diagnostics require use of all of the logical partition resources. No other activity can be running on the logical partition.
- stand-alone diagnostics require access to the system console.

To use stand-alone diagnostics, follow these steps:

1. Stop all jobs and applications and then stop the operating system on the system or logical partition.
2. Remove all tapes, diskettes, and CD-ROM.
3. Turn off the system unit power. The next step boots the server or logical partition from the stand-alone diagnostics CD-ROM. If the optical drive is not available as the boot device on the server or logical partition on which you are working, follow these steps:
  - a. Access the ASMI. See [Managing your server using the Advanced System Management Interface](#) for information on using the ASMI.
  - b. On the ASMI main menu, click on **Power/Restart Control**.
  - c. Click on Power On/Off System.
  - d. Select the **Service mode boot from default boot list** option in the AIX/Linux logical partition mode boot drop-down menu.
  - e. Click on **Save settings and power on**. As soon as the optical drive has power, insert the standalone diagnostic CD-ROM.
  - f. Go to step 5.
4. Turn on the system unit power and immediately insert the diagnostics CD-ROM into the optical drive.
5. After the **keyboard** POST indicator displays on the system console and before the last POST indicator (**speaker**) displays, press the numeric 5 key on the system console to indicate that a service mode boot should be initiated using the default service mode boot list.
6. Enter any requested password.
7. At the *Diagnostic Operating Instructions* display, press Enter.

**Note:** If an SRN or other reference code is displayed, suspect a loose adapter or cable connection. Review the procedures for the part that you replaced to ensure that the new part is installed correctly. If you cannot correct the problem, collect all SRNs or any other reference code information that you see. If the system will not boot or you have no login prompt go to [Problems with loading and starting the operating system](#).

**Note:** If you received an SRN or any other reference code when you attempted to start the system, you can learn more about these codes in [Reference codes](#).

8. If the terminal type is requested, you must use the **Initialize Terminal** option on the *Function Selection* menu to initialize the operating system before you can continue.
9. From the Function Selection menu, select **Advanced Diagnostics Routines**. Press Enter.
10. From the Diagnostic Mode Selection menu, select **System Verification**. Press Enter.
11. When the Advanced Diagnostic Selection menu appears, select **All Resources**, or test only the part you replaced, and any devices that are attached to the part you replaced, by selecting the diagnostics for the individual part. Press Enter.
12. Did the *Testing Complete, No trouble was found* message appear?
  - ◆ **No:** There is still a problem. Contact your service provider.
  - ◆ **Yes:** Go to step 13.
13. If you changed the service processor or network settings, as instructed in previous procedures, restore the settings to the value they had prior to servicing the system.
14. If the indicator lights are still on, follow these steps:
  - a. Select **Identify and Attention Indicators** from the *Task Selection* menu to turn off the system attention and indicator lights. Press Enter.
  - b. Select **Set System Attention Indicator to NORMAL** and press Enter.
  - c. Select **Set All Identify Indicators to NORMAL** and press Enter.
  - d. Choose **Commit**.

**Note:** This changes the system attention and identify indicators from the *Fault* state to the *Normal* state.

- e. Exit to the command line.

**Parent topic:** [Verify the installed part on a Linux system or logical partition \(run AIX diagnostics\)](#)

---

## Verify the presence of an installed part using Hardware Management Console (HMC)

Use these instructions to verify an installed part using the Hardware Management Console (HMC). If you have reference codes, symptoms, or location codes that you used during the service action, locate the records to use during this procedure.

Use this procedure to update your HMC records after you have completed a service action on your server. If you have reference codes, symptoms, or location codes that you used during the service action, locate the records to use during this procedure.

1. At the HMC, examine the service action event log for any open service action events. See [Viewing serviceable events](#) for details.
2. Are there any service action events that are open?
  - ◆ **No:** If the system attention LED is still on, use the HMC to turn off the LED. See [Activating and Deactivating LEDs](#). **This ends the procedure.**
  - ◆ **Yes:** Continue with the next step.
3. Record the list of open service action events.
4. Examine the details of the open service action event. Is the error code associated with this service action event the same as you gathered earlier.
  - ◆ **Yes:** Continue with the next step.
  - ◆ **No:** Choose from the following options:
    - ◇ Review the other serviceable events and find one that does match and continue with the next step.
    - ◇ If the log does not match what you had gathered earlier, contact your service provider.
5. Select and highlight the service action event from the Error Associated With This Serviceable Event window.
6. Click **Close Event**.
7. Add comments for the serviceable event. Include any unique additional information. Click **OK**.
8. Did you replace, add, or modify a FRU of the open service action event?

- ◆ **No:** Select the **No FRU Replaced for this Serviceable Event** option and click **OK** to close the service action event.
  - ◆ **Yes:** Perform the following steps:
    - a. From the FRU list, select a FRU that you need to update.
    - b. Double-click the FRU and update the FRU information.
    - c. Click **OK** to close the service action event.
9. If you continue to have problems, contact your service provider.

Parent topic: [Verify the installed part](#)

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## Verify the presence of an installed part using the Advanced System Management Interface (ASMI)

Use these instructions to verify a newly installed part or replaced part using the Advanced System Management Interface (ASMI).

To verify the newly installed or replaced part, follow these steps:

1. If the unit ID does not match the label on the system or expansion unit, update the configuration information.
  - ◆ For information on accessing up the ASMI, refer to [Accessing the Advanced System Management Interface](#)
  - ◆ For information on using the ASMI [Managing your server using the Advanced System Management Interface](#).
2. Turn off the failing part indicator light. For instructions, see [Changing service indicators](#).

Parent topic: [Verify the installed part](#)

---

## Install a feature using the Hardware Management Console

To use the Hardware Management Console user interface to install a feature in a system or expansion unit that is managed by a Hardware Management Console (HMC), follow these steps:

1. In the navigation area, expand **Management Environment**.
2. Expand the managed system into which you are installing a feature.
3. Expand **Service Applications**.
4. Select **Service Focal Point**.
5. In the contents area, select **Install/Add/Remove Hardware**.
6. In the **Install/Add/Remove Hardware** window, highlight system or unit into which you are installing a feature.
7. Click **Selected**.
8. From the Selected menu, select **Add FRU**.
9. In the **Enclosure type** field, select the system or expansion unit into which you are installing a feature.
10. In the FRU types for selected enclosure, select the feature you are installing.
11. Click **Next**.
12. Follow the instructions to install the feature.

**Note:** The HMC might open the ESCALA Power5 Hardware Information instructions for installing the feature. If so, follow these instructions to install the feature.



Parent topic: [Related procedures](#)

---

## Remove a part using the Hardware Management Console

To use the Hardware Management Console user interface to remove a part in a system or expansion unit that is managed by a Hardware Management Console (HMC), follow these steps:

1. In the navigation area, expand the **Management Environment**.
2. Expand the managed system in which you are replacing a part.
3. Expand **Service Applications**.
4. Select **Service Focal Point**.
5. In the contents area, select **Install/Add/Remove Hardware**.
6. In the **Install/Add/Remove Hardware** window, click System Processor.
7. From the Selected menu, select **Remove FRU**.
8. In the **Installed enclosure types** field, select the system or expansion unit from which you are removing a part.
9. In the Available FRU types for selected enclosure, select the part you are removing.
10. Click **Next**.
11. Follow the instructions to remove the part.

**Note:** The HMC might open the ESCALA Power5 Hardware Information instructions for removing the part. If so, follow these instructions to remove the part.

Parent topic: [Related procedures](#)

---

## Replace a part using the Hardware Management Console

To use the Hardware Management Console user interface to replace a part in a system or expansion unit that is managed by a Hardware Management Console (HMC), follow these steps:

1. In the navigation area, expand the **Management Environment**.
2. Expand the managed system in which you are replacing a part.
3. Expand **Service Applications**.
4. Select **Service Focal Point**.
5. In the contents area, select **Repair Serviceable Event**.
6. Select the system and click **OK**.
7. In the window, click the problem number for the part you want to replace.
8. Follow the instructions to replace the part.

**Note:** The HMC might open the ESCALA Power5 Hardware Information instructions for replacing the part. If so, follow these instructions to replace the part.

Parent topic: [Related procedures](#)



## Identify a failing part

The following procedures describe how to locate and identify a failing part on your system or expansion unit.

- [Identify a failing part on a model ESCALA PL 245T/R](#)
- [Identify a failing part on an AIX system or logical partition](#)
- [Identify a failing part on a Linux system or logical partition](#)
- [Identify a failing part using the Advanced System Management Interface](#)

Use this task to identify a failing part if the Linux operating system is running on the system or logical partition.

**Parent topic:** [Related procedures](#)

## Identify a failing part on a model ESCALA PL 245T/R

Light path diagnostics provide a path that you can follow to help you identify the source of an error. The server must be connected to a power source for the light-emitting diodes (LED) inside the server to be lit; the server does not have to be turned on for the LEDs to be lit.

The server is designed so that LEDs remain lit when the server is connected to an ac power source but is not turned on, provided that the power supply is operating correctly. This feature helps you to isolate the problem when the operating system is shut down.

Many errors are first indicated by a lit information LED or system-error LED on the operator information panel on the front of the server. If one or both of these LEDs are lit, one or more LEDs elsewhere in the server might also be lit and can direct you to the source of the error.

To identify a failing part on a model ESCALA PL 245T/R follow these steps:

1. If this is a rack mounted server, [Place the rack-mounted model ESCALA PL 245T/R in the service position or operating position.](#)
2. [Remove and replace the model ESCALA PL 245T/R side cover.](#)
3. Find the light-path diagnostic card on top of the fan attached to the disk drive cage. Use the following figure and table to identify each light on the card.

Figure 1. Light path diagnostic card indicator LED layout

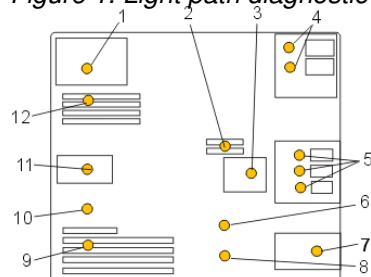


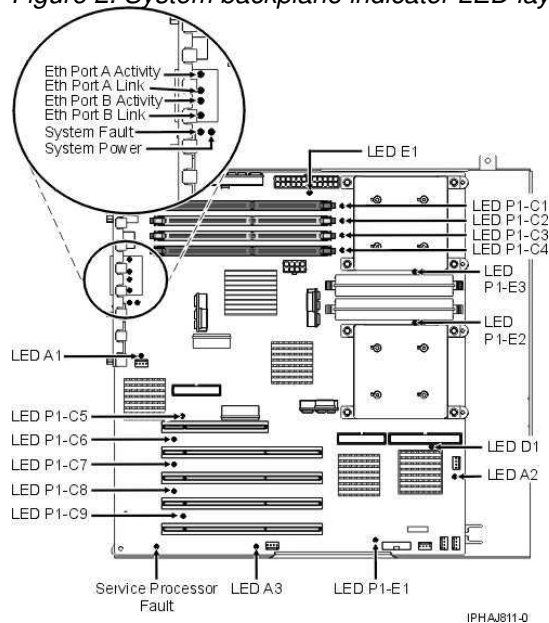
Table 1. ESCALA PL 245T/R Fault-indicator LEDs

<b>1</b> Power supply fault-indicator LED	<b>7</b> Front fan fault-indicator LED
<b>2</b> Voltage-regulator module fault-indicator LED	<b>8</b>

3	Disk-drive bay fan fault-indicator LED	9	Battery fault-indicator LED
4	Optical-media bay fault-indicator LEDs	10	PCI adapter fault-indicator LED
5	Disk-drive bay fault-indicator LEDs	11	Thermal fault-indicator LED
6	System backplane fault-indicator LED	12	Rear fan fault-indicator LED
			Memory fault-indicator LED

4. Refer to the service label on your system or the following figure to locate an LED on the system backplane for replaceable parts.

Figure 2. System backplane indicator LED layout



Parent topic: [Identify a failing part](#)

## Identify a failing part on an AIX system or logical partition

To identify a failing part on a system or logical partition running AIX, you must locate the failing part, and then activate the indicator light for that part.

- [Locate a failing part in an AIX system or logical partition](#)
- [Activate the indicator light for the failing part](#)

Parent topic: [Identify a failing part](#)

## Locate a failing part in an AIX system or logical partition

To locate the failing part in a system or logical partition running AIX, follow these steps:

1. Log in as root user or `celogin-`.
2. At the command line, type `diag` and press Enter.
3. From the **Function Selection** menu, select Task Selection and press Enter.
4. Select Display Previous Diagnostic Results and press Enter.
5. From the **Display Previous Diagnostic Results** display, select Display Diagnostic Log Summary. A **Display Diagnostic Log** display appears. This display contains a chronological list of events.
6. Look in the T column for the most recent S entry. Select this row in the table and press Enter.
7. Choose Commit. The details of this log entry are shown.
8. Record the location information and the SRN value shown near the end of the entry.
9. Exit to the command line.

Use the location information for the failing part to activate the indicator light that identifies the failing part. For instructions, see [Activate the indicator light for the failing part](#).

**Parent topic:** [Identify a failing part on an AIX system or logical partition](#)

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## Activate the indicator light for the failing part

The indicator light helps you locate which part to replace. To activate the indicator light, follow these steps:

1. Log in as root user.
2. At the command line, type `diag` and press Enter.
3. From the **Function Selection** menu, select Task Selection. Press Enter.
4. From the **Task Selection** menu, select Identify and Attention Indicators. Press Enter.
5. From the list of lights, select the location code for the failing part and press Enter.
6. Select Commit. This turns on the system attention and indicator light for the failing part.
7. Exit to the command line.

**Parent topic:** [Identify a failing part on an AIX system or logical partition](#)

---

## Identify a failing part on a Linux system or logical partition

There are a number of methods to identify a failing part on a system or logical partition running Linux.

- **Locate a failing part and activate the indicator light**  
Use this task to locate a failing part if the service aids have been installed.
- **Activate the indicator light for the failing part**  
Use these instructions to activate the indicator light. The indicator light helps you locate which part to replace.
- **Deactivate the failing-part indicator light**  
After replacing a failing part, use this task to deactivate the failing-part indicator light.
- **Identify a failing part using stand-alone diagnostics**  
Use this task if the operating system is stopped or if you need to stop the system or logical partition to replace the failing part.

**Parent topic:** [Identify a failing part](#)

---

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## Locate a failing part and activate the indicator light

Use this task to locate a failing part if the service aids have been installed.

To identify a failing part on a system or logical partition running Linux, you must locate the failing part, and then activate the indicator light for that part.

- **Locate a failing part in a Linux system or logical partition**

Use these instructions if you do not know the location code of the failing part. If you know the location code proceed to the next task to activate the indicator light.

**Parent topic:** [Identify a failing part on a Linux system or logical partition](#)

---

## Locate a failing part in a Linux system or logical partition

Use these instructions if you do not know the location code of the failing part. If you know the location code proceed to the next task to activate the indicator light.

To locate the failing part in a system or logical partition running Linux, follow these steps:

1. Log in as root user.
2. At the command line, type `grep diagela /var/log/platform` and press Enter.
3. Look for the most recent entry that contains a system reference code (SRC).
4. Record the location information.

**Parent topic:** [Locate a failing part and activate the indicator light](#)

---

## Activate the indicator light for the failing part

Use these instructions to activate the indicator light. The indicator light helps you locate which part to replace.

To activate the indicator light, follow these steps:

1. Log in as root user.
2. At the command line, type `/usr/sbin/usysident -s identify -l<location code>` and press Enter. Substituting the location code of the failing unit for `<location code>`.
3. Look for the system attention light to identify the enclosure that contains the failing part.

**Parent topic:** [Identify a failing part on a Linux system or logical partition](#)

---

## Deactivate the failing-part indicator light

After replacing a failing part, use this task to deactivate the failing-part indicator light.

After replacing a failing part, follow these steps to deactivate the failing-part indicator light:

1. Log in as root user.
2. At the command line, type `/usr/sbin/usysident -s normal -l<location code>` and press Enter. Substitute the location code of the failing unit for **<location code>**.
3. Look for the system attention light to identify the enclosure that contains the failing part.

Parent topic: [Identify a failing part on a Linux system or logical partition](#)

---

## Identify a failing part using stand-alone diagnostics

Use this task if the operating system is stopped or if you need to stop the system or logical partition to replace the failing part.

You can use stand-alone diagnostics to identify a failing part in a Linux system, expansion unit, or logical partition. You access these diagnostics from a CD-ROM or from the Network Installation Management (NIM) server. This procedure describes how to use the diagnostics from a CD-ROM. For information on running diagnostics from the Network Installation Management (NIM) Server, see [Running the stand-alone diagnostics from a Network Installation Management server](#).

### Prerequisites:

- If this server is directly attached to another server or attached to a network, be sure communications with the other servers are stopped.
- Ensure that no other activity is running on the logical partition. Stand-alone diagnostics require use of all of the logical partition resources. No other activity can be running on the logical partition.
- You must have access to the system console to use stand-alone diagnostics.

To use stand-alone diagnostics from a CD-ROM, follow these steps:

1. Stop all jobs and applications, and then stop the operating system on the system or logical partition.
2. Remove all tapes, diskettes, and CD-ROM.
3. Turn off the system unit power.

**Note:** The next step starts the server or logical partition from the stand-alone diagnostic CD-ROM. If the CD-ROM or DVD-ROM drive is not available as the startup device on the server or logical partition on which you are working, follow these steps:

- a. Access the Advanced System Management Interface (ASMI). See [Managing your server using the Advanced System Management Interface](#) for information on using the ASMI.
- b. On the ASMI main menu, click **Power/Restart Control**.
- c. Click **Power On/Off System**.
- d. Select the **Service mode boot** from **default boot list** option in the AIX or Linux logical partition mode boot list.
- e. Click **Save settings** and power on the system. As soon as the optical drive has power, insert the AIX diagnostic diskette.
- f. Go to step 5.
4. Turn on the system unit power and insert the diagnostics CD-ROM into the CD-ROM drive.
5. After the keyboard POST indicator displays on the firmware console and before the last POST indicator (speaker) displays, press the 5 key on either the directly attached keyboard or the ASCII

terminal. This indicates that a service mode boot should be initiated using the default service mode boot list.

6. Enter any requested password.
7. At the Diagnostic Operating Instructions display, press Enter.

**Tip:** If the Diagnostic Operating Instructions display does not appear, contact your support center for assistance.

8. If the terminal type is requested, use the **Initialize Terminal** option on the **Function Selection** menu to initialize the operating system.

**Parent topic:** [Identify a failing part on a Linux system or logical partition](#)

---

## Identify a failing part using the Advanced System Management Interface

Use this task to identify a failing part if the Linux operating system is running on the system or logical partition.

To activate the indicator light for a failing part, follow these steps:

1. If the unit ID does not match the label on the system or expansion unit, update the configuration information.
  - ◆ For information on setting up the ASMI refer to [Accessing the Advanced System Management Interface](#).
  - ◆ For information on using the ASMI, refer to [Managing your server using the Advanced System Management Interface](#)
2. Turn on the failing part indicator light. For instructions, see [Changing service indicators](#).

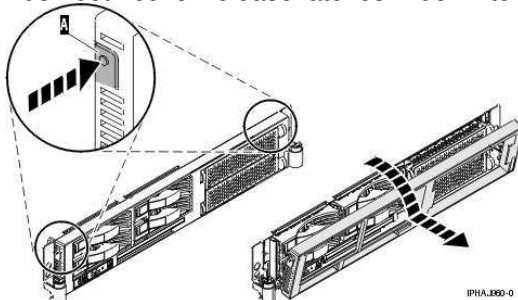
**Parent topic:** [Identify a failing part](#)

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## Remove the front cover from the model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ or 7/10

To remove the front cover, follow these steps:

1. If necessary, open the front rack door.
2. Push both cover-release latches A down to release the cover as shown in the following figure.



3. Pivot the cover from the bottom and swing the top of the cover out.

4. Pull the bottom of the cover up and then away from the system unit. This releases the two tabs located on the bottom of the cover.
5. Put the cover in a safe place.

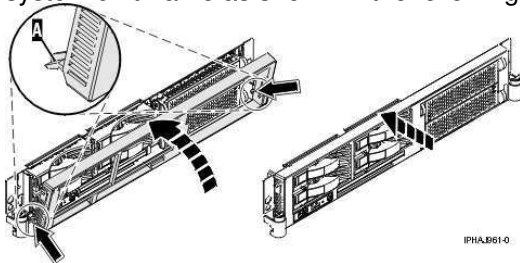
Parent topic: [Related procedures](#)

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## Install the front cover on the model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ or 7/10

To install the front cover, follow these steps:

1. If necessary, open the front rack door.
2. Insert the two tabs A located on the bottom edge of the cover into their locking slots, located on the system unit frame as shown in the following figure.



3. Pivot the front cover up toward the top of the system unit frame.
4. Align the tabs to the matching slots located on the front of the system unit frame.
5. Gently push the tabs into the slots until the cover seats against the front of the system unit.
6. Close the front rack door.

Parent topic: [Related procedures](#)

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## Gain access to the model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ control panels

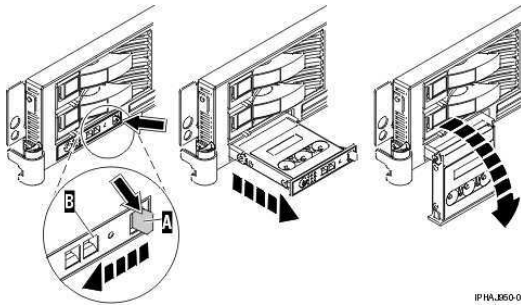
Because only part of the model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ control panels control panel is visible from the front of the server, the following procedure describes how to gain access to all of the control panel's features, including the display.

To access all of the control panel's features, complete the following steps:

1. Press inward on the spring-loaded tab A located on the right side of the control panel B so that it pops out slightly, as shown in the following figure.

*Figure 1. Gain access to the model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ control panels*

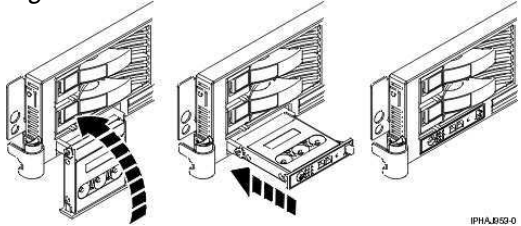




IPHA,B50-0

2. Pull the control panel out, toward the front of the system, until it can be pivoted downward on its hinge.
3. To move the control panel back into the device enclosure, lift the control panel up to align it with the opening and push it into place until you feel the tab lock, as shown in the following figure.

Figure 2. Close the model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ control panels



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Parent topic: [Related procedures](#)

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Fans

## Technical publication remarks form

<b>Title :</b> ESCALA POWER5 Hardware Information Fans
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<b>Reference N° :</b> 86 A1 16EW 00
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**B.P.20845**  
**49008 ANGERS CEDEX 01**  
**FRANCE**

REFERENCE  
**86 A1 16EW 00**