

## Power Systems

*Control panel for the 9009-41A,  
9009-41G, 9009-42A, 9009-42G,  
9223-42H, or 9223-42S*



**Note**

Before using this information and the product it supports, read the information in [“Safety notices” on page v](#), [“Notices” on page 145](#), the *IBM Systems Safety Notices* manual, G229-9054, and the *IBM Environmental Notices and User Guide*, Z125-5823.

This edition applies to IBM® Power Systems servers that contain the POWER9™ processor and to all associated models.

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# Safety notices

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Safety notices may be printed throughout this guide:

- **DANGER** notices call attention to a situation that is potentially lethal or extremely hazardous to people.
- **CAUTION** notices call attention to a situation that is potentially hazardous to people because of some existing condition.
- **Attention** notices call attention to the possibility of damage to a program, device, system, or data.

## World Trade safety information

Several countries require the safety information contained in product publications to be presented in their national languages. If this requirement applies to your country, safety information documentation is included in the publications package (such as in printed documentation, on DVD, or as part of the product) shipped with the product. The documentation contains the safety information in your national language with references to the U.S. English source. Before using a U.S. English publication to install, operate, or service this product, you must first become familiar with the related safety information documentation. You should also refer to the safety information documentation any time you do not clearly understand any safety information in the U.S. English publications.

Replacement or additional copies of safety information documentation can be obtained by calling the IBM Hotline at 1-800-300-8751.

## German safety information

Das Produkt ist nicht für den Einsatz an Bildschirmarbeitsplätzen im Sinne § 2 der Bildschirmarbeitsverordnung geeignet.

## Laser safety information

IBM servers can use I/O cards or features that are fiber-optic based and that utilize lasers or LEDs.

## Laser compliance

IBM servers may be installed inside or outside of an IT equipment rack.



**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:

- If IBM supplied the power cord(s), connect power to this unit only with the IBM provided power cord. Do not use the IBM 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.
  - For AC power, disconnect all power cords from their AC power source.
  - For racks with a DC power distribution panel (PDP), disconnect the customer's DC power source to the PDP.
- When connecting power to the product ensure all power cables are properly connected.
  - For racks with AC power, 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.

- For racks with a DC power distribution panel (PDP), connect the customer’s DC power source to the PDP. Ensure that the proper polarity is used when attaching the DC power and DC power return wiring.
- 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.
- Do not attempt to switch on power to the machine until all possible unsafe conditions are corrected.
- Assume that an electrical safety hazard is present. Perform all continuity, grounding, and power checks specified during the subsystem installation procedures to ensure that the machine meets safety requirements.
- Do not continue with the inspection if any unsafe conditions are present.
- Before you open the device covers, unless instructed otherwise in the installation and configuration procedures: Disconnect the attached AC power cords, turn off the applicable circuit breakers located in the rack power distribution panel (PDP), and disconnect any telecommunications systems, networks, and modems.



**DANGER:**

- 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. For AC power, remove the power cords from the outlets.
3. For racks with a DC power distribution panel (PDP), turn off the circuit breakers located in the PDP and remove the power from the Customer's DC power source.
4. Remove the signal cables from the connectors.
5. 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. For AC power, attach the power cords to the outlets.
5. For racks with a DC power distribution panel (PDP), restore the power from the Customer's DC power source and turn on the circuit breakers located in the PDP.
6. Turn on the devices.

Sharp edges, corners and joints may be present in and around the system. Use care when handling equipment to avoid cuts, scrapes and pinching. (D005)

**(R001 part 1 of 2):**



**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 if provided, unless the earthquake option is to be installed..
- 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. In addition, do not lean on rack mounted devices and do not use them to stabilize your body position (for example, when working from a ladder).



- Stability hazard:
  - The rack may tip over causing serious personal injury.
  - Before extending the rack to the installation position, read the installation instructions.
  - Do not put any load on the slide-rail mounted equipment mounted in the installation position.
  - Do not leave the slide-rail mounted equipment in the installation position.
- Each rack cabinet might have more than one power cord.
  - For AC powered racks, be sure to disconnect all power cords in the rack cabinet when directed to disconnect power during servicing.
  - For racks with a DC power distribution panel (PDP), turn off the circuit breaker that controls the power to the system unit(s), or disconnect the customer's DC power source, 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. (R001 part 1 of 2)

**(R001 part 2 of 2):**



**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 or if the rack is not bolted to the floor. 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 part 2 of 2)



**CAUTION:** Removing components from the upper positions in the rack cabinet improves rack stability during relocation. Follow these general guidelines whenever you relocate a populated rack cabinet within a room or building.

- Reduce the weight of the rack cabinet by removing equipment starting at the top of the rack cabinet. When possible, restore the rack cabinet to the configuration of the rack cabinet as you received it. If this configuration is not known, you must observe the following precautions:
  - Remove all devices in the 32U position and above.
  - Ensure that the heaviest devices are installed in the bottom of the rack cabinet.
  - Ensure that there are little-to-no empty U-levels between devices installed in the rack cabinet below the 32U level, unless the received configuration specifically allowed it.
- If the rack cabinet you are relocating is part of a suite of rack cabinets, detach the rack cabinet from the suite.
- If the rack cabinet you are relocating was supplied with removable outriggers they must be reinstalled before the cabinet is relocated.
- Inspect the route that you plan to take to eliminate potential hazards.
- Verify that the route that you choose can support the weight of the loaded rack cabinet. Refer to the documentation that comes with your rack cabinet for the weight of a loaded rack cabinet.
- Verify that all door openings are at least 760 x 2083 mm (30 x 82 in.).
- Ensure that all devices, shelves, drawers, doors, and cables are secure.
- Ensure that the four leveling pads are raised to their highest position.
- Ensure that there is no stabilizer bracket installed on the rack cabinet during movement.
- Do not use a ramp inclined at more than 10 degrees.
- When the rack cabinet is in the new location, complete the following steps:
  - Lower the four leveling pads.
  - Install stabilizer brackets on the rack cabinet or in an earthquake environment bolt the rack to the floor.
  - If you removed any devices from the rack cabinet, repopulate the rack cabinet from the lowest position to the highest position.
- If a long-distance relocation is required, restore the rack cabinet to the configuration of the rack cabinet as you received it. Pack the rack cabinet in the original packaging material, or equivalent. Also lower the leveling pads to raise the casters off of the pallet and bolt the rack cabinet to the pallet.

(R002)

**(L001)**



**DANGER:** Hazardous voltage, current, or energy levels are present inside any component that has this label attached. Do not open any cover or barrier that contains this label. (L001)

**(L002)**



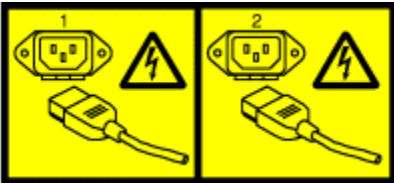


**DANGER:** Rack-mounted devices are not to be used as shelves or work spaces. Do not place objects on top of rack-mounted devices. In addition, do not lean on rack-mounted devices and do not use them to stabilize your body position (for example, when working from a ladder). Stability hazard:

- The rack may tip over causing serious personal injury.
- Before extending the rack to the installation position, read the installation instructions.
- Do not put any load on the slide-rail mounted equipment mounted in the installation position.
- Do not leave the slide-rail mounted equipment in the installation position.

(L002)

(L003)



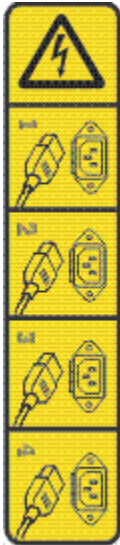
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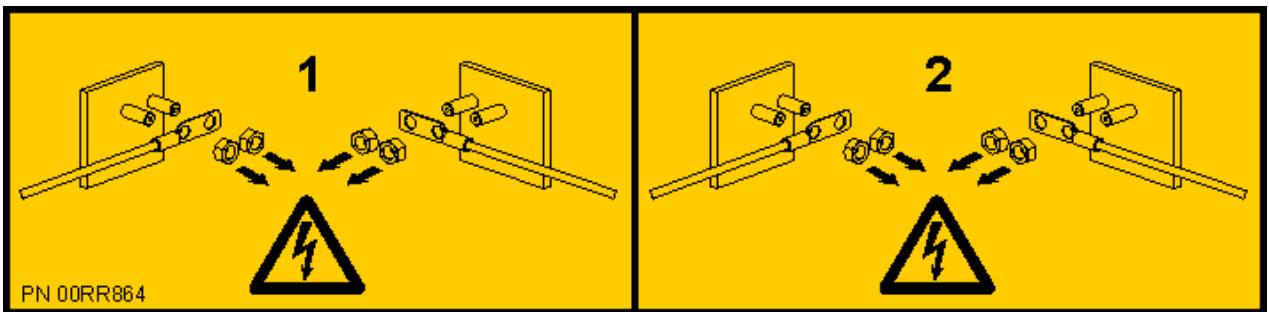
or




or




or



 **DANGER:** Multiple power cords. The product might be equipped with multiple AC power cords or multiple DC power cables. To remove all hazardous voltages, disconnect all power cords and power cables. (L003)


(L007)




 **CAUTION:** A hot surface nearby. (L007)

(L008)




 **CAUTION:** Hazardous moving parts nearby. (L008)


All lasers are certified in the U.S. to conform to the requirements of DHHS 21 CFR Subchapter J for class 1 laser products. Outside the U.S., they are certified to be in compliance with IEC 60825 as a class 1 laser product. Consult the label on each part for laser certification numbers and approval information.


 **CAUTION:** This product might contain one or more of the following devices: CD-ROM drive, DVD-ROM drive, DVD-RAM drive, or laser module, which are Class 1 laser products. Note the following information:

- Do not remove the covers. Removing the covers of the laser product could result in exposure to hazardous laser radiation. There are no serviceable parts inside the device.
- Use of the controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.

(C026)


 **CAUTION:** Data processing environments can contain equipment transmitting on system links with laser modules that operate at greater than Class 1 power levels. For this reason, never look into the end of an optical fiber cable or open receptacle. Although shining light into one end and looking into the other end of a disconnected optical fiber to verify the continuity of optic fibers may not injure the eye, this procedure is potentially dangerous. Therefore, verifying the continuity of optical fibers by shining light into one end and looking at the other end is not recommended. To verify continuity of a fiber optic cable, use an optical light source and power meter. (C027)

 **CAUTION:** This product contains a Class 1M laser. Do not view directly with optical instruments. (C028)

 **CAUTION:** Some laser products contain an embedded Class 3A or Class 3B laser diode. Note the following information:

- Laser radiation when open.
- Do not stare into the beam, do not view directly with optical instruments, and avoid direct exposure to the beam. (C030)


(C030)

 **CAUTION:** The battery contains lithium. To avoid possible explosion, do not burn or charge the battery.

*Do Not:*

- Throw or immerse into water
- Heat to more than 100 degrees C (212 degrees F)
- Repair or disassemble

Exchange only with the IBM-approved part. Recycle or discard the battery as instructed by local regulations. In the United States, IBM has a process for the collection of this battery. For information, call 1-800-426-4333. Have the IBM part number for the battery unit available when you call. (C003)

 **CAUTION:** Regarding IBM provided VENDOR LIFT TOOL:

- Operation of LIFT TOOL by authorized personnel only.

- LIFT TOOL intended for use to assist, lift, install, remove units (load) up into rack elevations. It is not to be used loaded transporting over major ramps nor as a replacement for such designated tools like pallet jacks, walkies, fork trucks and such related relocation practices. When this is not practicable, specially trained persons or services must be used (for instance, riggers or movers).
- Read and completely understand the contents of LIFT TOOL operator's manual before using. Failure to read, understand, obey safety rules, and follow instructions may result in property damage and/or personal injury. If there are questions, contact the vendor's service and support. Local paper manual must remain with machine in provided storage sleeve area. Latest revision manual available on vendor's web site.
- Test verify stabilizer brake function before each use. Do not over-force moving or rolling the LIFT TOOL with stabilizer brake engaged.
- Do not raise, lower or slide platform load shelf unless stabilizer (brake pedal jack) is fully engaged. Keep stabilizer brake engaged when not in use or motion.
- Do not move LIFT TOOL while platform is raised, except for minor positioning.
- Do not exceed rated load capacity. See LOAD CAPACITY CHART regarding maximum loads at center versus edge of extended platform.
- Only raise load if properly centered on platform. Do not place more than 200 lb (91 kg) on edge of sliding platform shelf also considering the load's center of mass/gravity (CoG).
- Do not corner load the platforms, tilt riser, angled unit install wedge or other such accessory options. Secure such platforms -- riser tilt, wedge, etc options to main lift shelf or forks in all four (4x or all other provisioned mounting) locations with provided hardware only, prior to use. Load objects are designed to slide on/off smooth platforms without appreciable force, so take care not to push or lean. Keep riser tilt [adjustable angling platform] option flat at all times except for final minor angle adjustment when needed.
- Do not stand under overhanging load.
- Do not use on uneven surface, incline or decline (major ramps).
- Do not stack loads.
- Do not operate while under the influence of drugs or alcohol.
- Do not support ladder against LIFT TOOL (unless the specific allowance is provided for one following qualified procedures for working at elevations with this TOOL).
- Tipping hazard. Do not push or lean against load with raised platform.
- Do not use as a personnel lifting platform or step. No riders.
- Do not stand on any part of lift. Not a step.
- Do not climb on mast.
- Do not operate a damaged or malfunctioning LIFT TOOL machine.
- Crush and pinch point hazard below platform. Only lower load in areas clear of personnel and obstructions. Keep hands and feet clear during operation.
- No Forks. Never lift or move bare LIFT TOOL MACHINE with pallet truck, jack or fork lift.
- Mast extends higher than platform. Be aware of ceiling height, cable trays, sprinklers, lights, and other overhead objects.
- Do not leave LIFT TOOL machine unattended with an elevated load.
- Watch and keep hands, fingers, and clothing clear when equipment is in motion.
- Turn Winch with hand power only. If winch handle cannot be cranked easily with one hand, it is probably over-loaded. Do not continue to turn winch past top or bottom of platform travel. Excessive unwinding will detach handle and damage cable. Always hold handle when lowering, unwinding. Always assure self that winch is holding load before releasing winch handle.
- A winch accident could cause serious injury. Not for moving humans. Make certain clicking sound is heard as the equipment is being raised. Be sure winch is locked in position before releasing handle. Read instruction page before operating this winch. Never allow winch to unwind freely.

Freewheeling will cause uneven cable wrapping around winch drum, damage cable, and may cause serious injury.

- This TOOL must be maintained correctly for IBM Service personnel to use it. IBM shall inspect condition and verify maintenance history before operation. Personnel reserve the right not to use TOOL if inadequate. (C048)

### **Power and cabling information for NEBS (Network Equipment-Building System) GR-1089-CORE**

The following comments apply to the IBM servers that have been designated as conforming to NEBS (Network Equipment-Building System) GR-1089-CORE:

The equipment is suitable for installation in the following:

- Network telecommunications facilities
- Locations where the NEC (National Electrical Code) applies

The intrabuilding ports of this equipment are suitable for connection to intrabuilding or unexposed wiring or cabling only. The intrabuilding ports of this equipment *must not* be metallically connected to the interfaces that connect to the OSP (outside plant) or its wiring. These interfaces are designed for use as intrabuilding interfaces only (Type 2 or Type 4 ports as described in GR-1089-CORE) and require isolation from the exposed OSP cabling. The addition of primary protectors is not sufficient protection to connect these interfaces metallically to OSP wiring.

**Note:** All Ethernet cables must be shielded and grounded at both ends.

The ac-powered system does not require the use of an external surge protection device (SPD).

The dc-powered system employs an isolated DC return (DC-I) design. The DC battery return terminal *shall not* be connected to the chassis or frame ground.

The dc-powered system is intended to be installed in a common bonding network (CBN) as described in GR-1089-CORE.



# Control panel and control panel display for the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S

Find information about removing and replacing the control panel and control panel display for the IBM Power® System S914 (9009-41A and 9009-41G), IBM Power System S924 (9009-42A and 9009-42G), IBM Power System H924 (9223-42H), or IBM Power System H924S (9223-42S) server.

Figure 1 on page 1 and Figure 2 on page 2 show the control panel (A) and the control panel display (B).

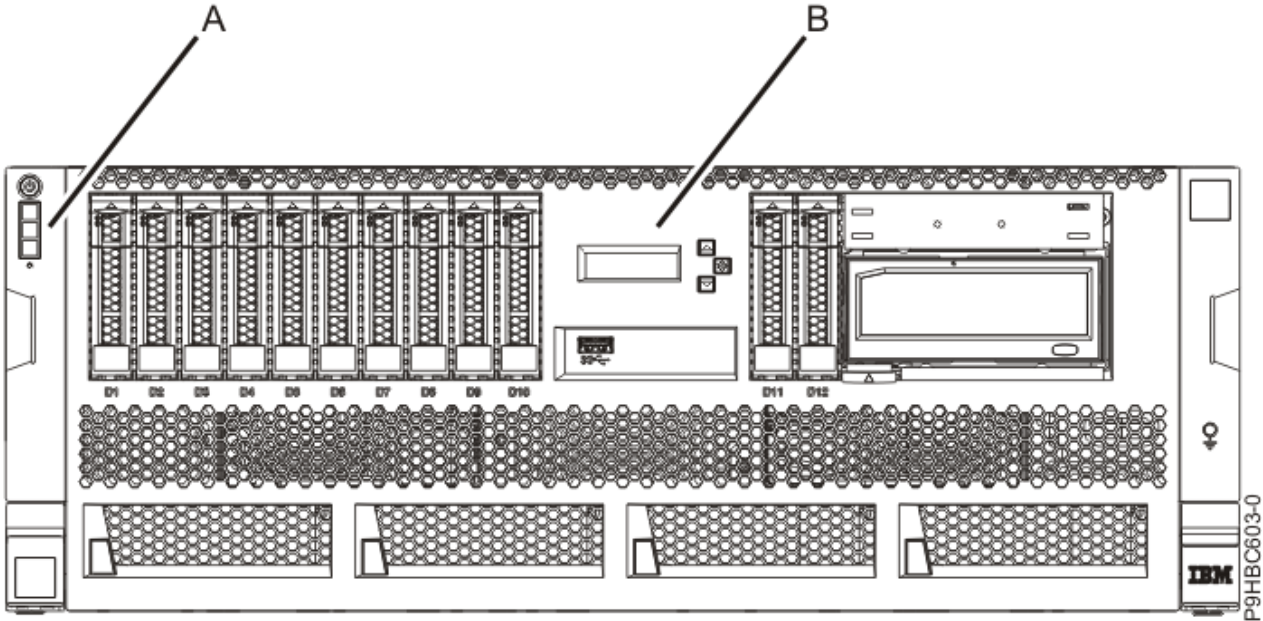
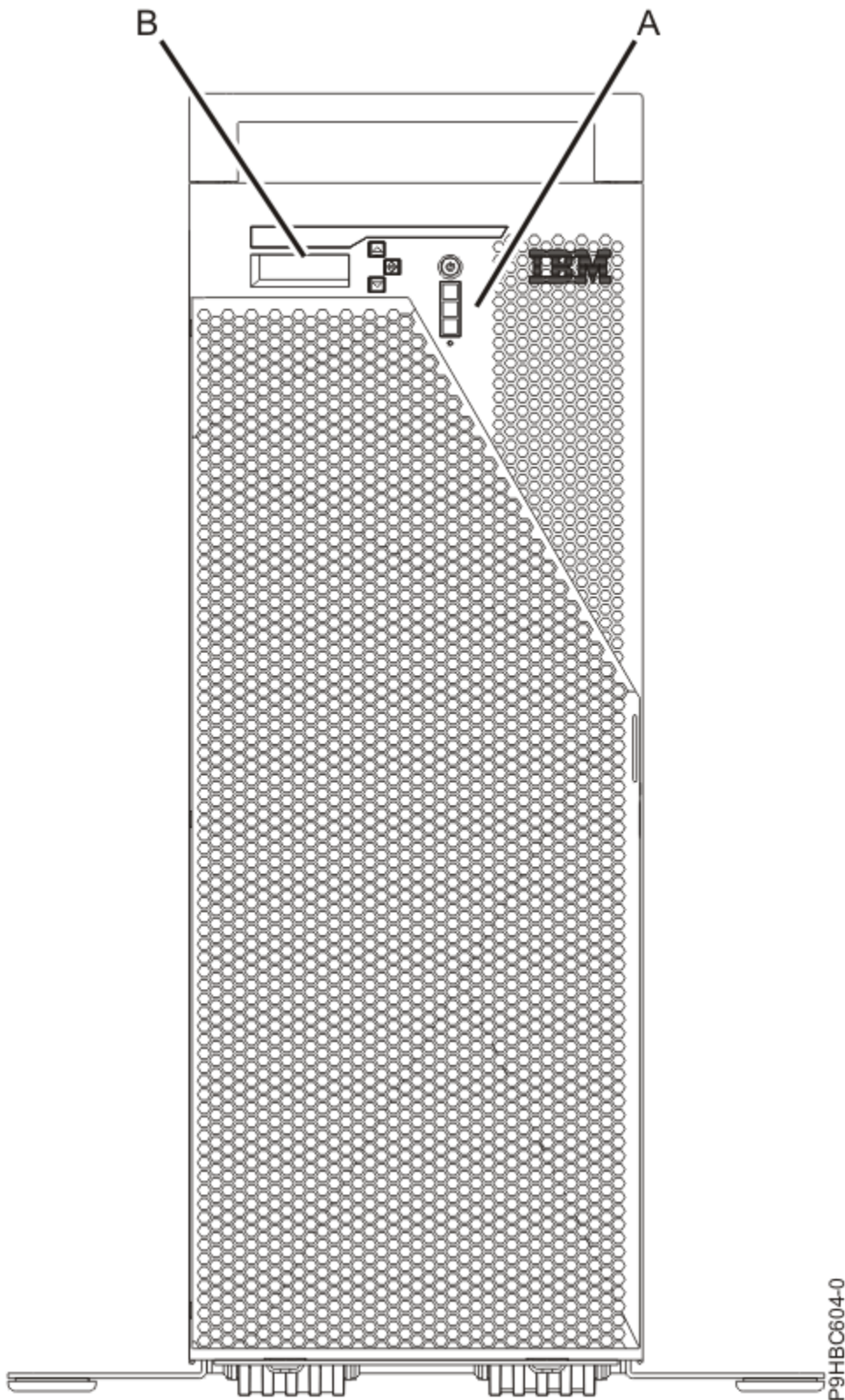


Figure 1. Control panels in the rack-mounted system



*Figure 2. Control panels in the stand-alone system*

You must have at least one control panel display.

- The control panel display is required in the stand-alone tower system.
- In the rack-mounted system, a control panel display is required in one of the systems in that rack.



- If multiple systems are installed in multiple racks, a minimum of one control panel display is required in each rack that contains the systems.

## Removing and replacing the control panel in the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S

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Find information about removing and replacing the control panel in the IBM Power System S914 (9009-41A and 9009-41G), IBM Power System S924 (9009-42A and 9009-42G), IBM Power System H924 (9223-42H), or IBM Power System H924S (9223-42S) server.

### About this task

**Note:** Removing or replacing this feature is a customer task. You can complete this task yourself, or contact a service provider to complete the task for you. You might be charged a fee by the service provider for this service.

If your system is managed by the Hardware Management Console (HMC), use the HMC to repair a part in the system. For instructions, see [Repairing a part by using the HMC](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj_hmc_repair.htm) (www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj\_hmc\_repair.htm).

If you do not have an HMC, use the following procedures to remove and replace the control panel.

### Preparing the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system to remove and replace the control panel

To prepare the system to remove and replace a control panel, complete the steps in this procedure.

#### Procedure

1. Identify the part and the system that you are working on. For instructions, see [Identifying a part](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/sal.htm) (www.ibm.com/support/knowledgecenter/POWER9/p9haj/sal.htm).  
Use the blue identify LED on the enclosure to locate the system. Ensure that the serial number of the system matches the serial number to be serviced.
2. Stop the system. For instructions, see [Stopping a system](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustopsys.htm) (www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustopsys.htm).
3. Label and disconnect the power cords from the system unit.  
See [Figure 3 on page 4](#) or [Figure 4 on page 5](#).

#### Notes:

- This system might be equipped with two or more power supplies. If the removing and replacing procedures require the system power to be turned off, ensure that all the power sources to the system are disconnected.
- The power cord **(B)** is fastened to the system with hook-and-loop fastener **(A)**. If you are placing the system in a service position after you disconnect the power cords, ensure that you unstrap the fastener.

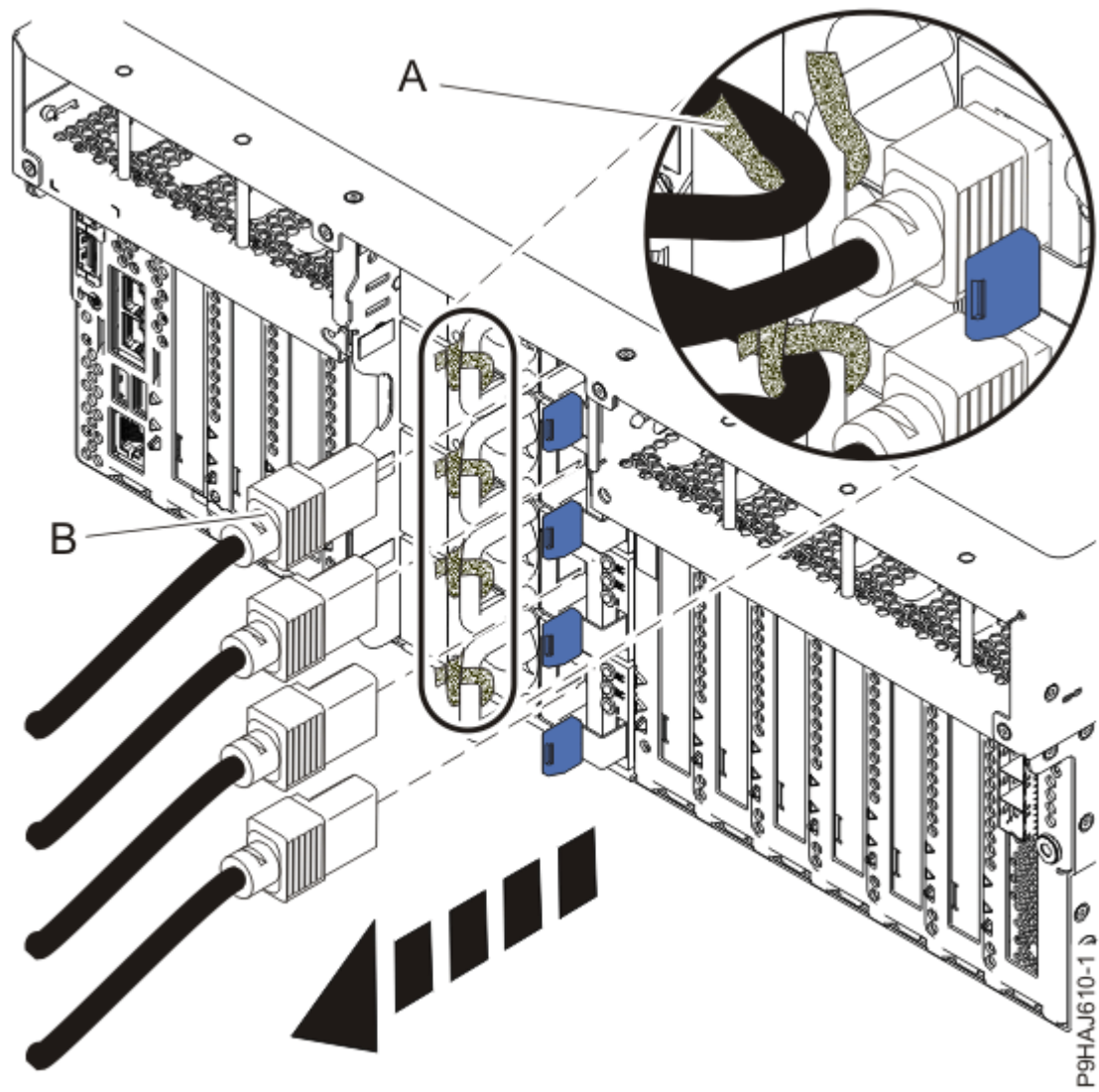


Figure 3. Removing the power cords from a rack-mounted server

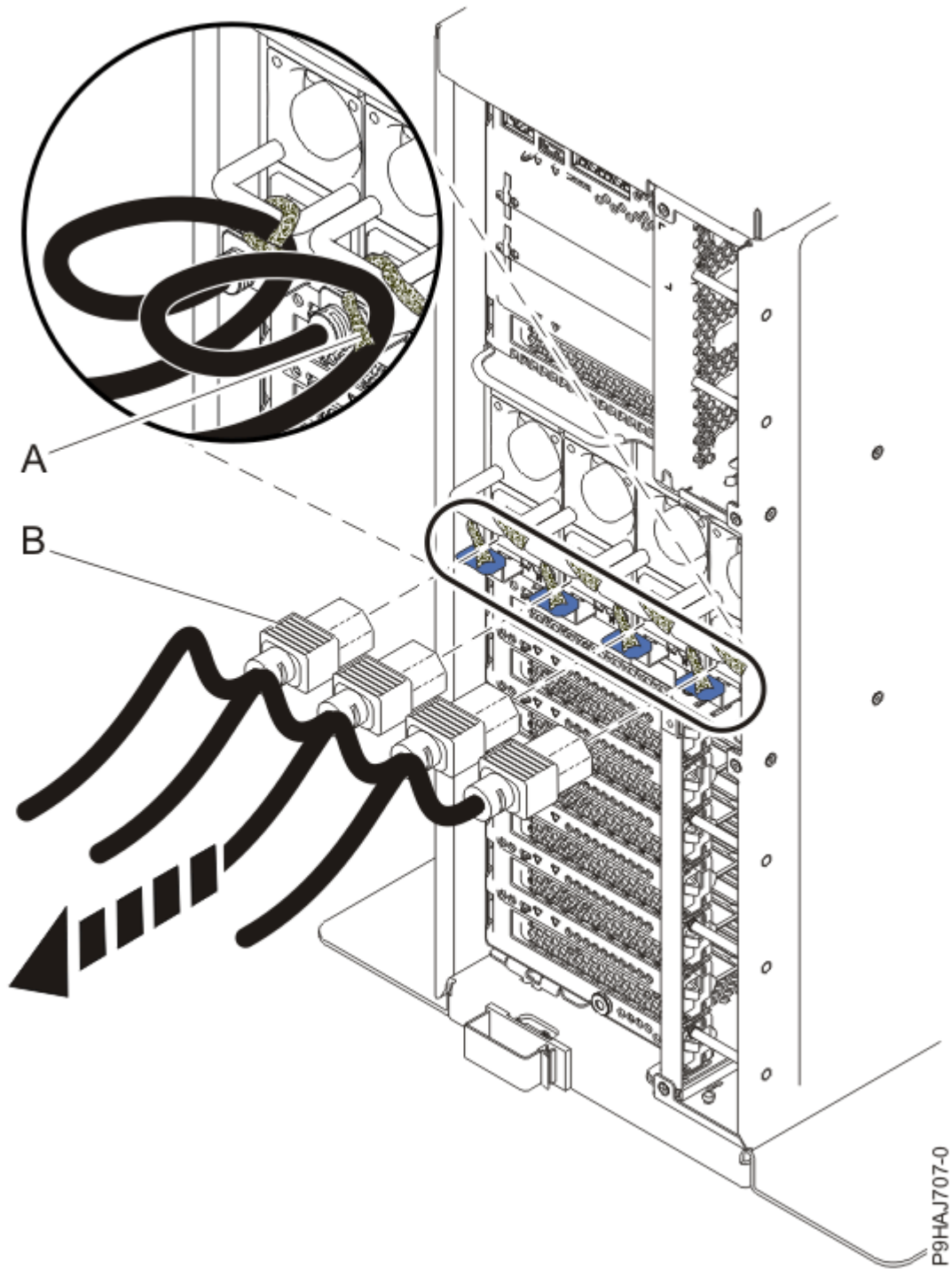
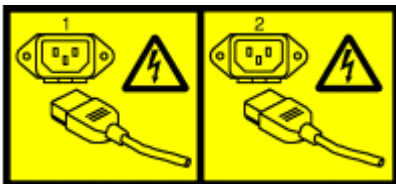


Figure 4. Removing the power cords from a stand-alone server

(L003)



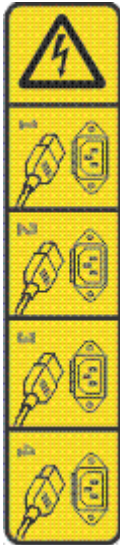
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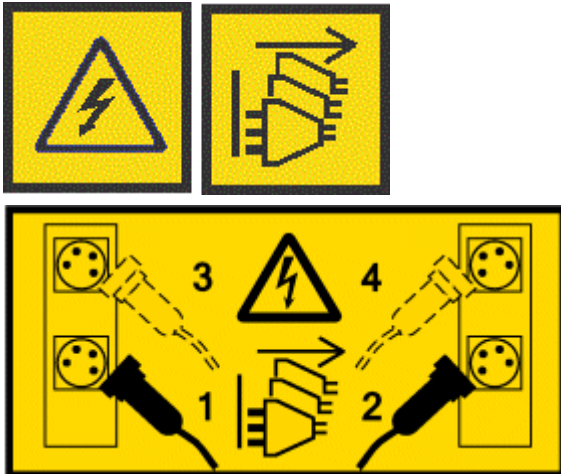
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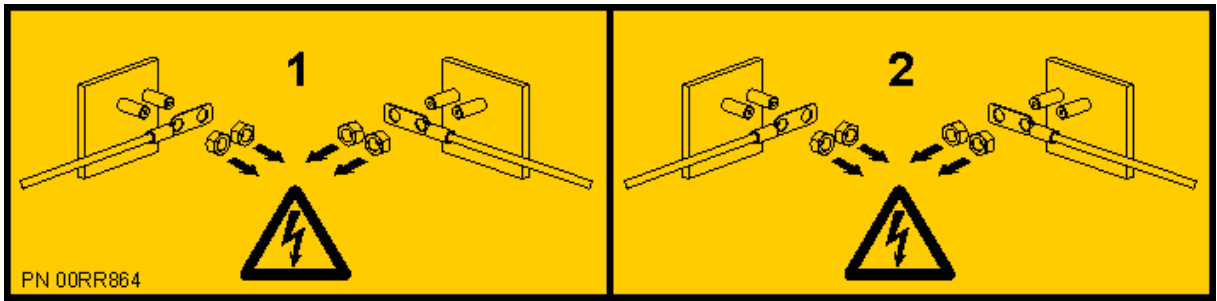


or



or





**DANGER:** Multiple power cords. The product might be equipped with multiple AC power cords or multiple DC power cables. To remove all hazardous voltages, disconnect all power cords and power cables. (L003)

4. For a rack-mounted system, remove the front cover by pulling it away from the system. The cover has indentations (**A**) where you can hold it more easily. See Figure 5 on page 7.

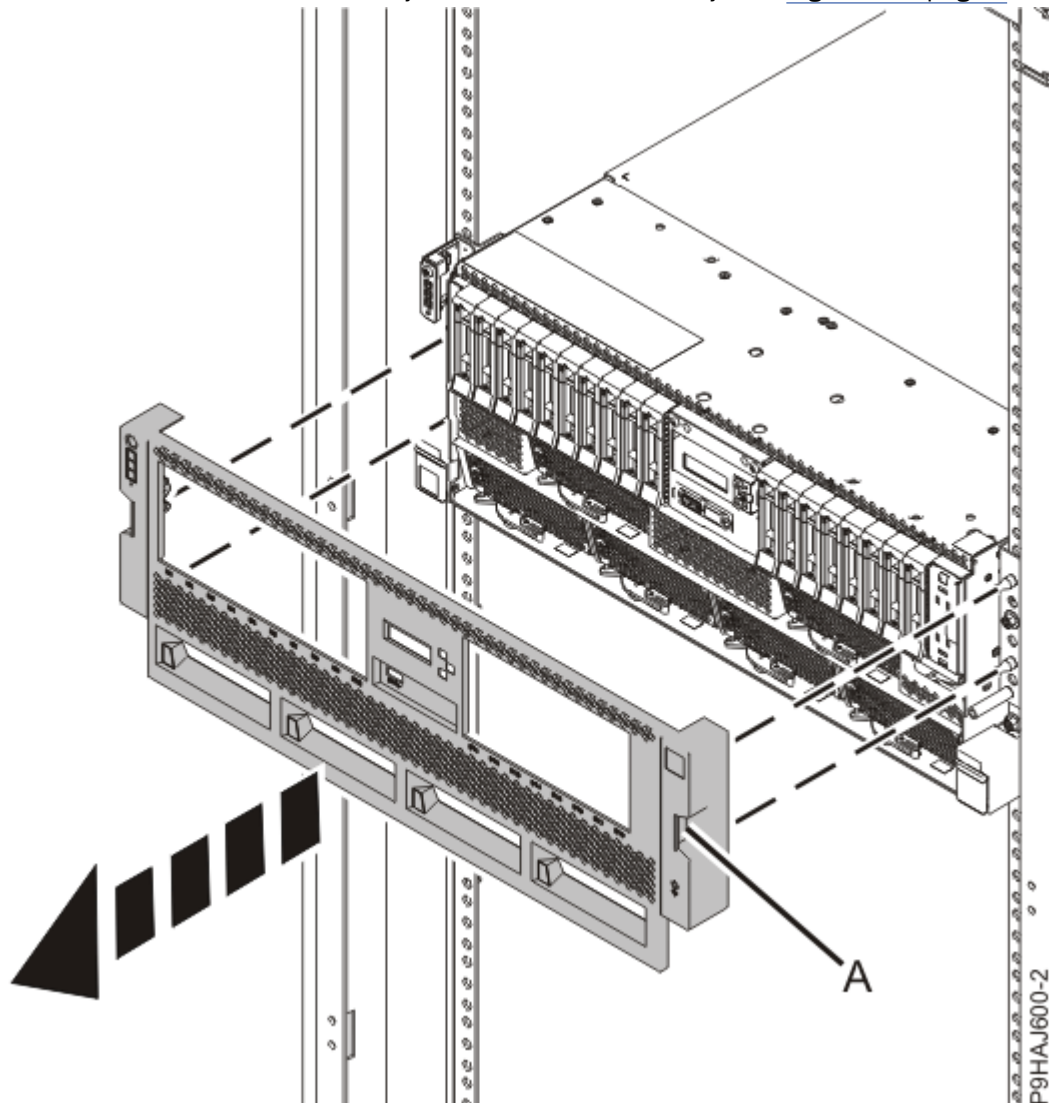
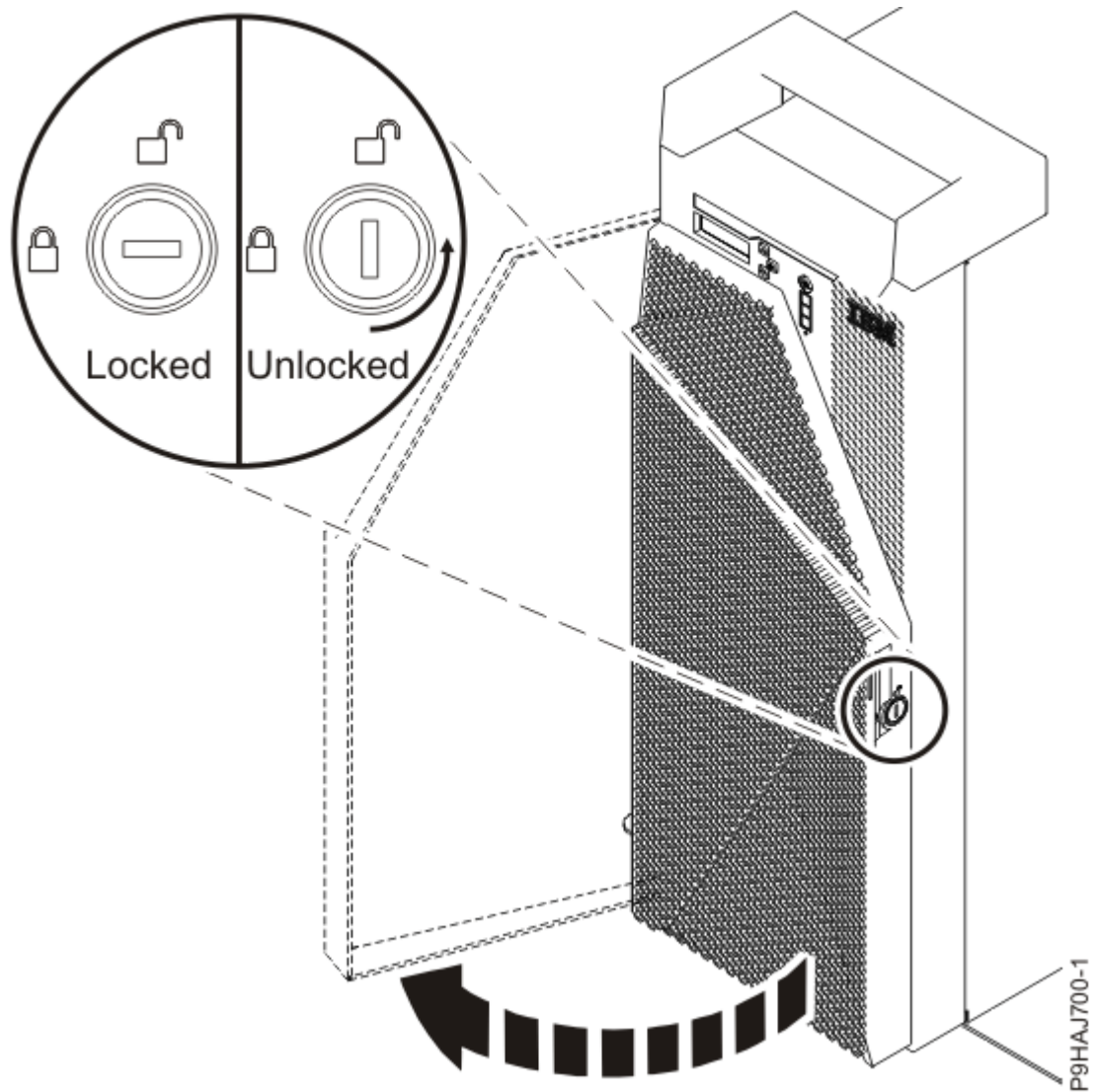


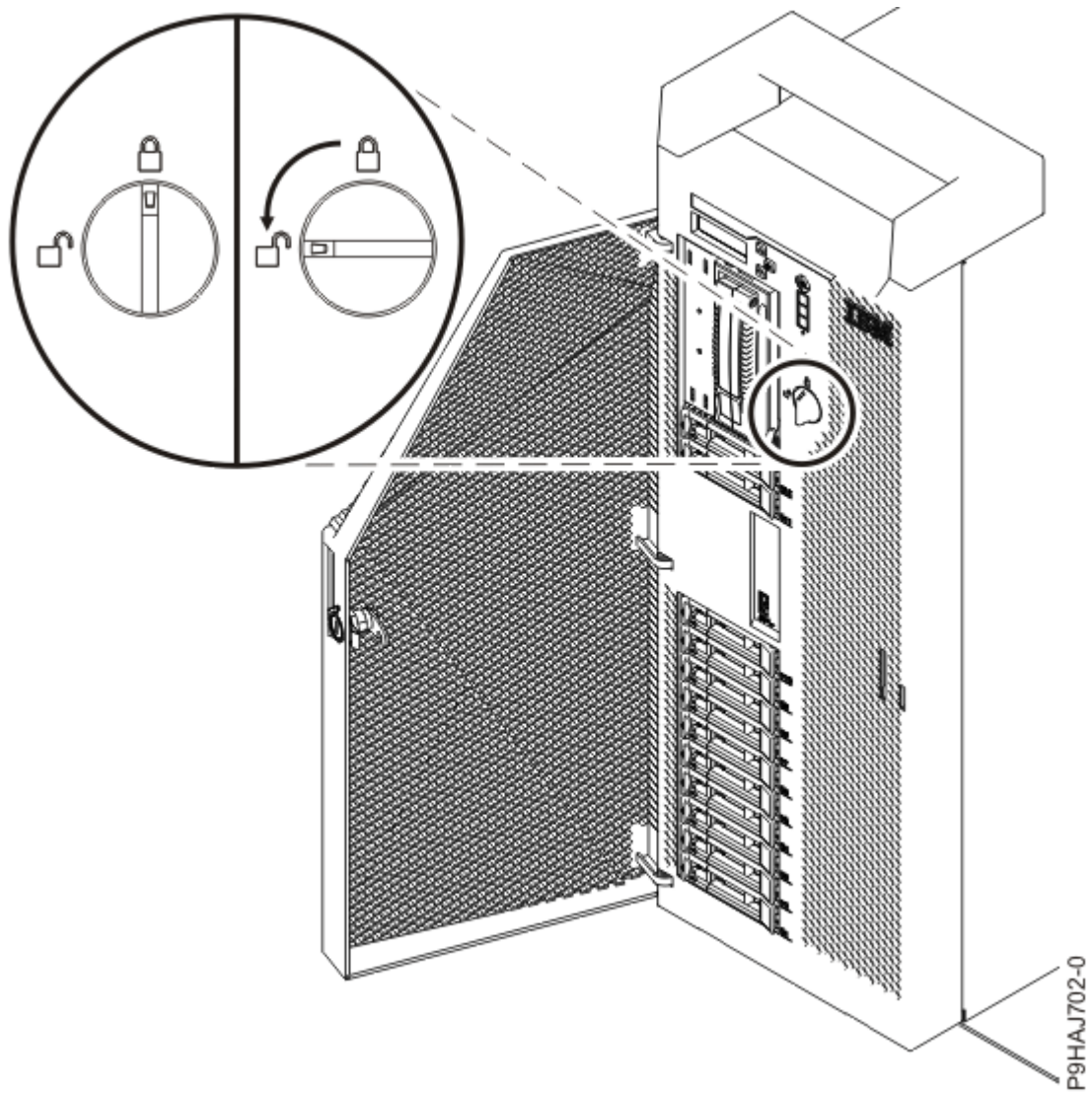
Figure 5. Removing the front cover

5. For a stand-alone system, remove the front cover and door by completing these steps.
  - a) Insert the front door key into the lock as shown in Figure 6 on page 8. Twist the key to the left (counterclockwise) to unlock the door. Horizontal is locked; vertical is unlocked. Open the front door.



*Figure 6. Unlocking the front door*

- b) Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
- c) Twist the cover latch to the left (counterclockwise) to unlock the cover as shown in [Figure 7](#) on [page 9](#).  
Vertical is locked; horizontal is unlocked.



*Figure 7. Opening the front cover latch*

- d) Pull the cover away from the system as shown in [Figure 8 on page 10](#).  
The cover has an indentation where you can hold onto it more easily.





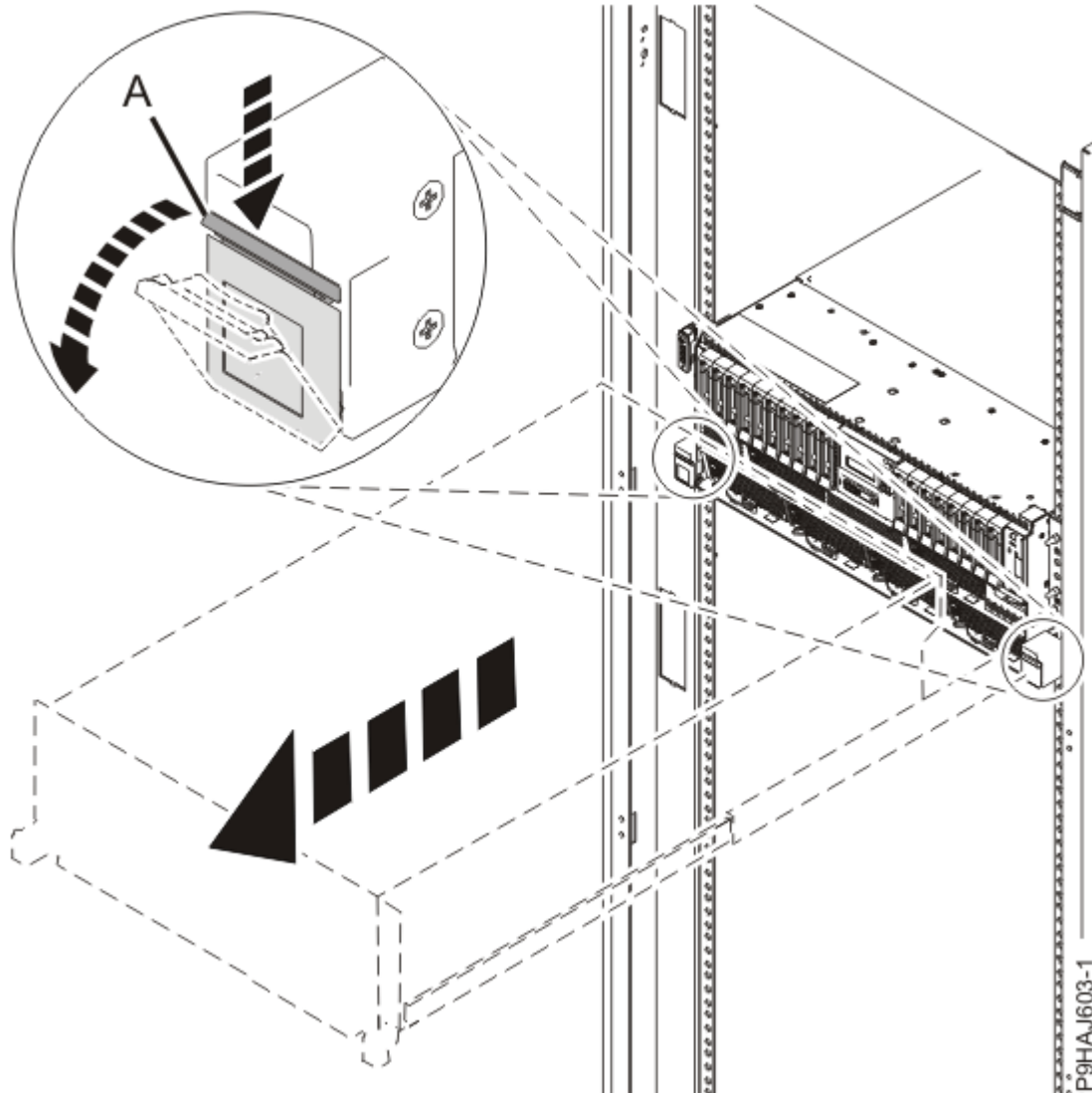


Figure 9. Releasing the side latches

7. Attach the electrostatic discharge (ESD) wrist strap. Your system has ESD jacks on the front and on the rear of the system as shown in the following figure. Plug the ESD wrist strap into the ESD jack.



**Attention:**

- Attach an electrostatic discharge (ESD) wrist strap to the front ESD jack, to the rear ESD jack, or to an unpainted metal surface of your hardware to prevent the electrostatic discharge from damaging your hardware.

- When you use an ESD wrist strap, follow all electrical safety procedures. An ESD wrist strap is used for static control. It does not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.
- If you do not have an ESD wrist strap, just prior to removing the product from ESD packaging and installing or replacing hardware, touch an unpainted metal surface of the system for a minimum of 5 seconds.

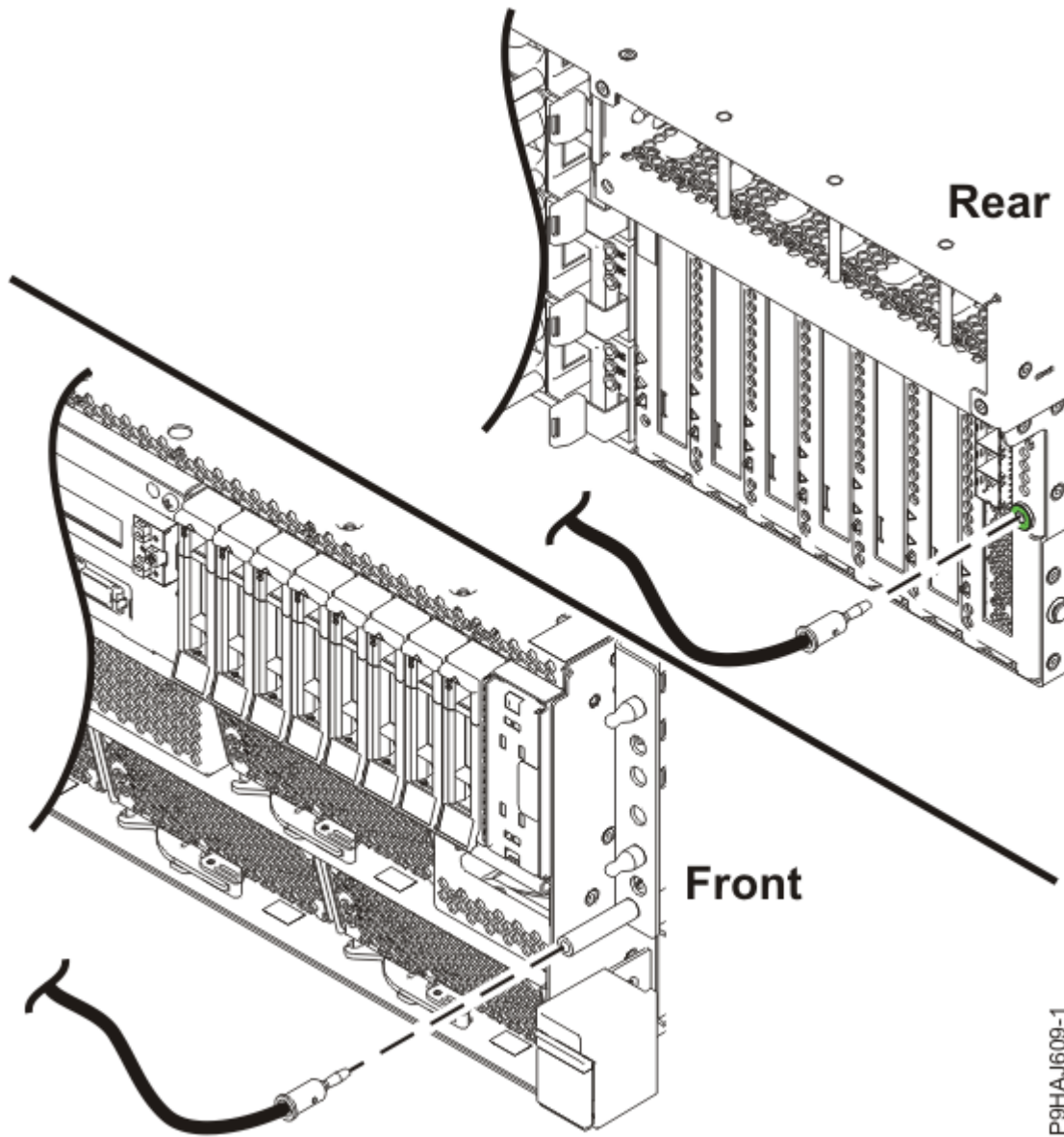


Figure 10. Location of ESD plugs

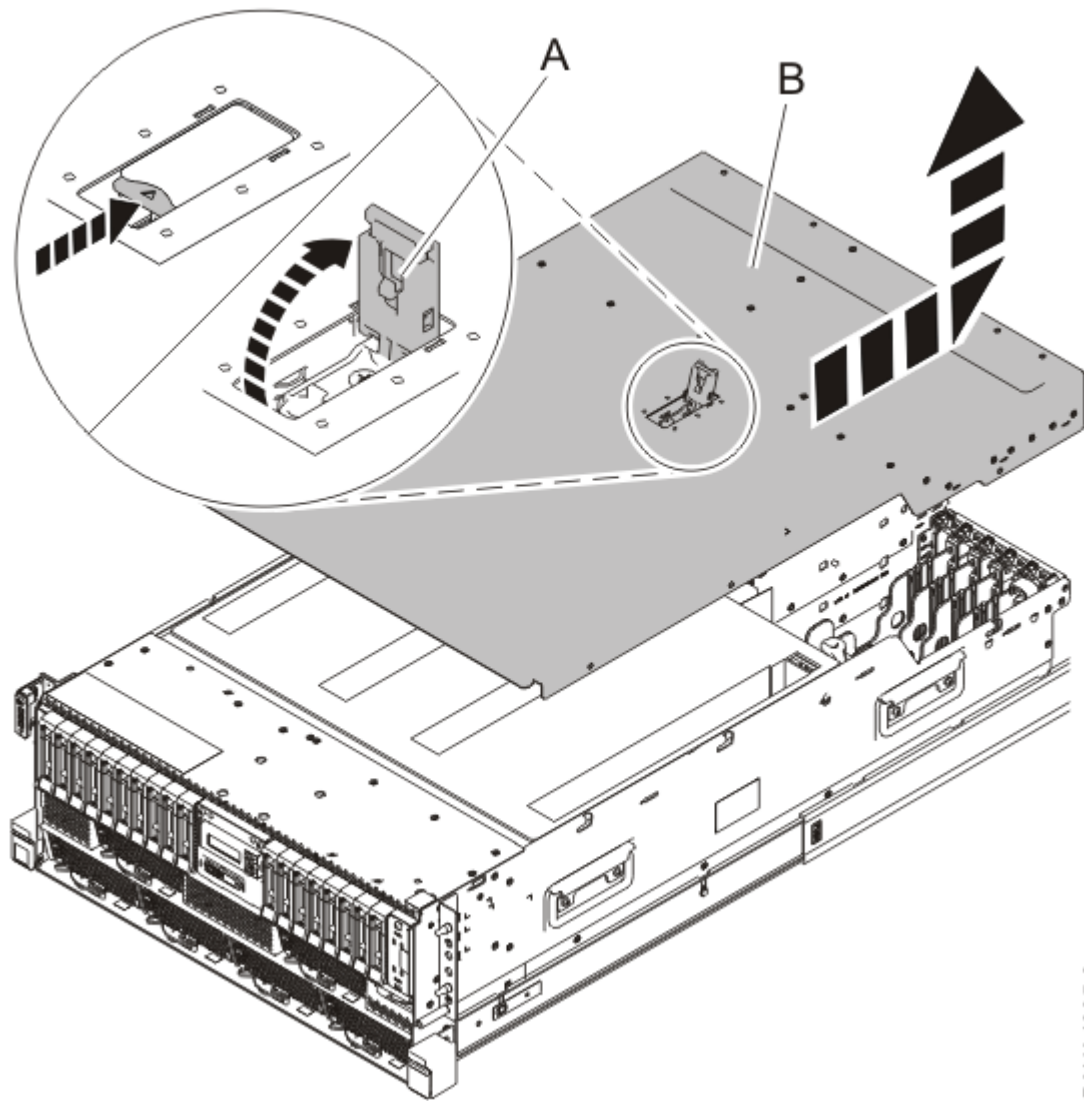
8. Remove the service access cover.

For a rack-mounted system, complete the following steps. Refer to [Figure 11 on page 13](#).



**Attention:** Operating the system without the service access cover on for more than 10 minutes when the system power is turned on might damage the system components.

- a. Release the service cover latch by pushing the release latch **(A)** in the direction shown.
- b. Slide the cover **(B)** off 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.



P9HAJ605-2

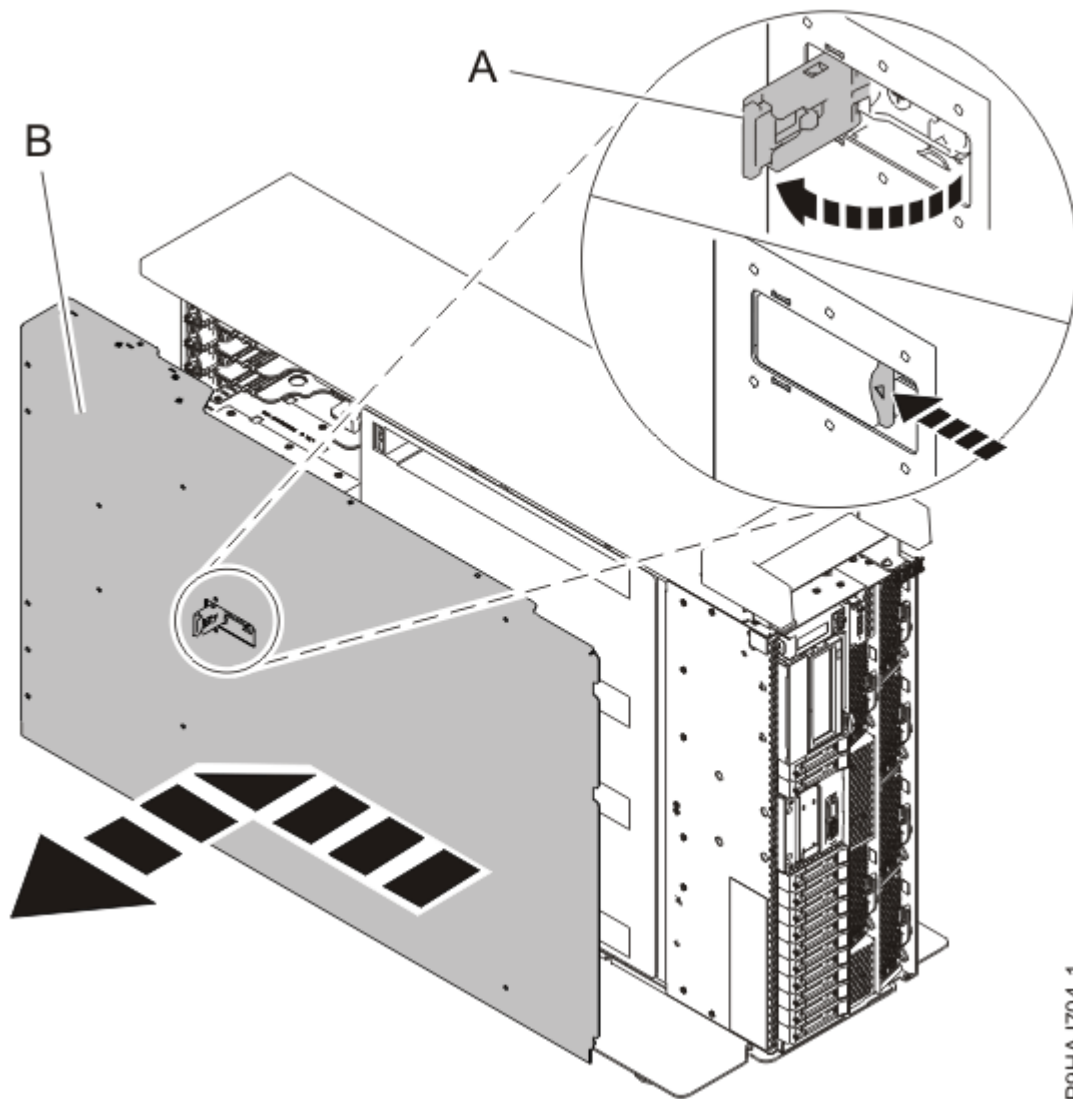
Figure 11. Removing the service access cover from a rack-mounted system

For a stand-alone system, complete the following steps. Refer to [Figure 12 on page 14](#).



**Attention:** Operating the system without the service access cover on for more than 10 minutes when the system power is turned on might damage the system components.

- a. Release the latch by pushing the release latch **(A)** in the direction shown.
- b. Slide the cover **(B)** off the system unit. When the front of the service access cover has cleared the upper frame ledge, lift the cover up and off the system unit.

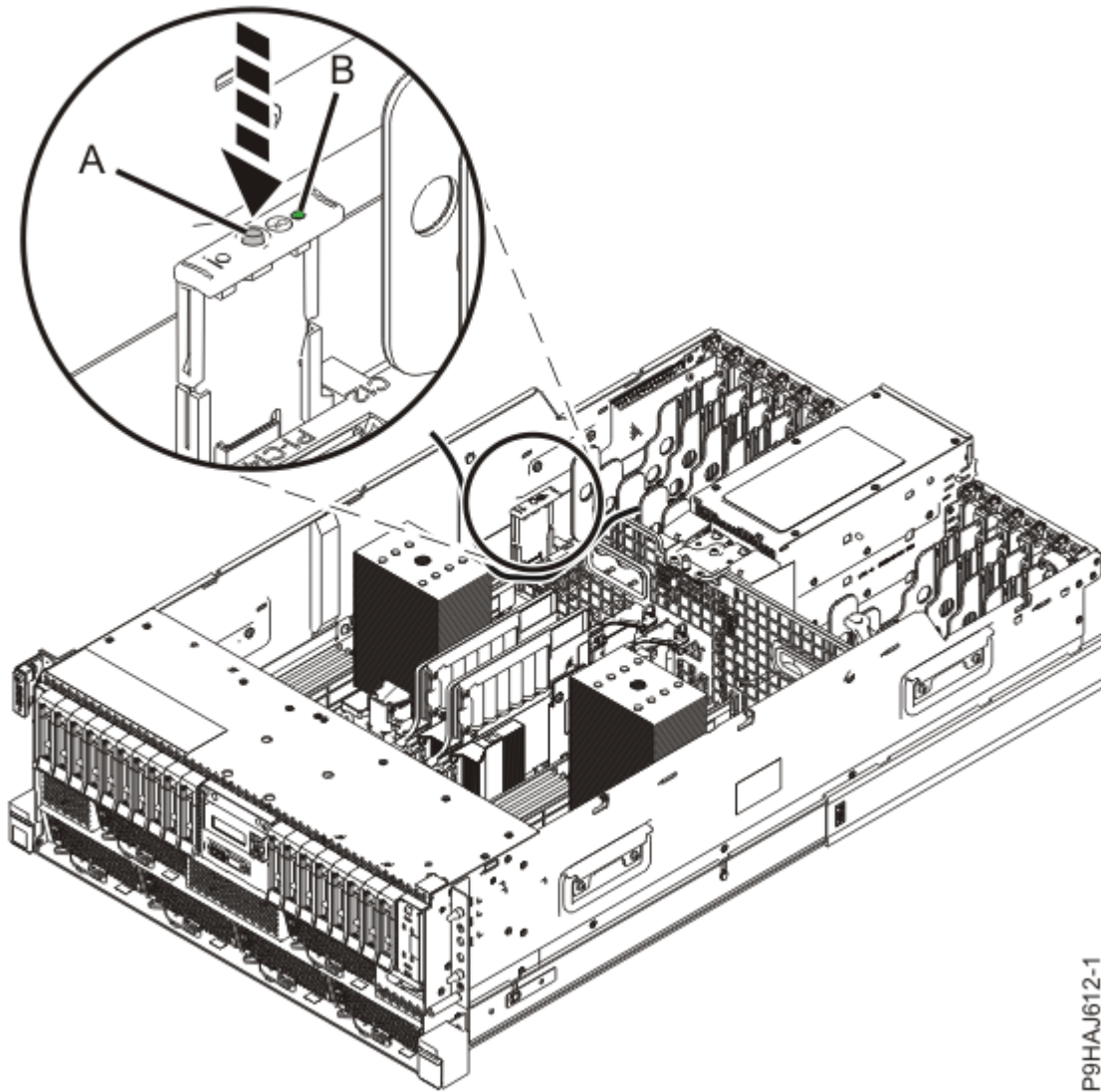


P9HAJ704-1

*Figure 12. Removing the service access cover*

9. Press and hold the push-button **(A)** on the trusted platform module card to activate the identify LED for the faulty part as shown in the following figure.

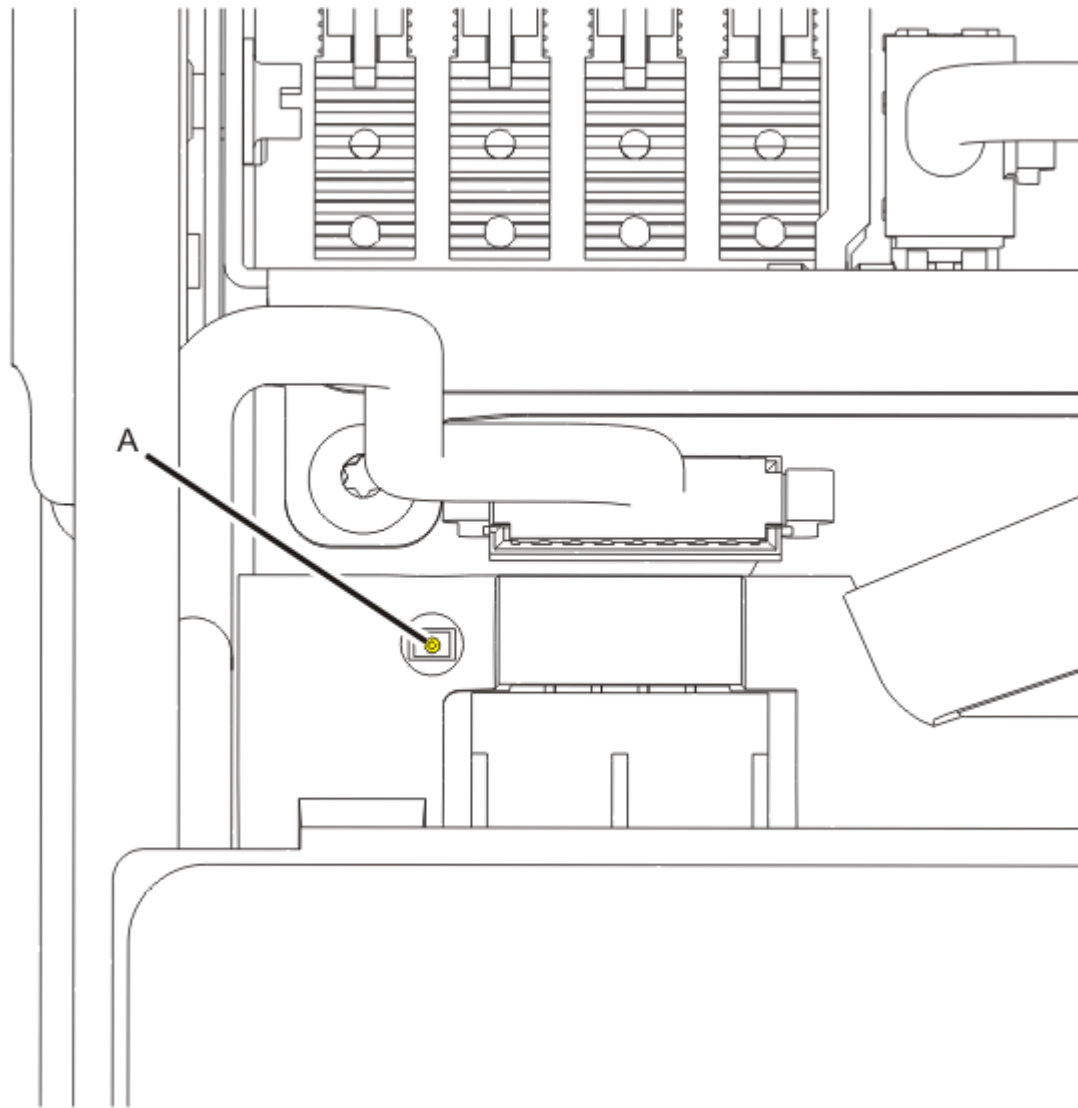
Verify that the LED **(B)** is lit, which indicates that sufficient power exists for the identify LED. If the LED **(B)** is not lit, use the location code to find the physical location by using the service label.



P9HAJ612-1

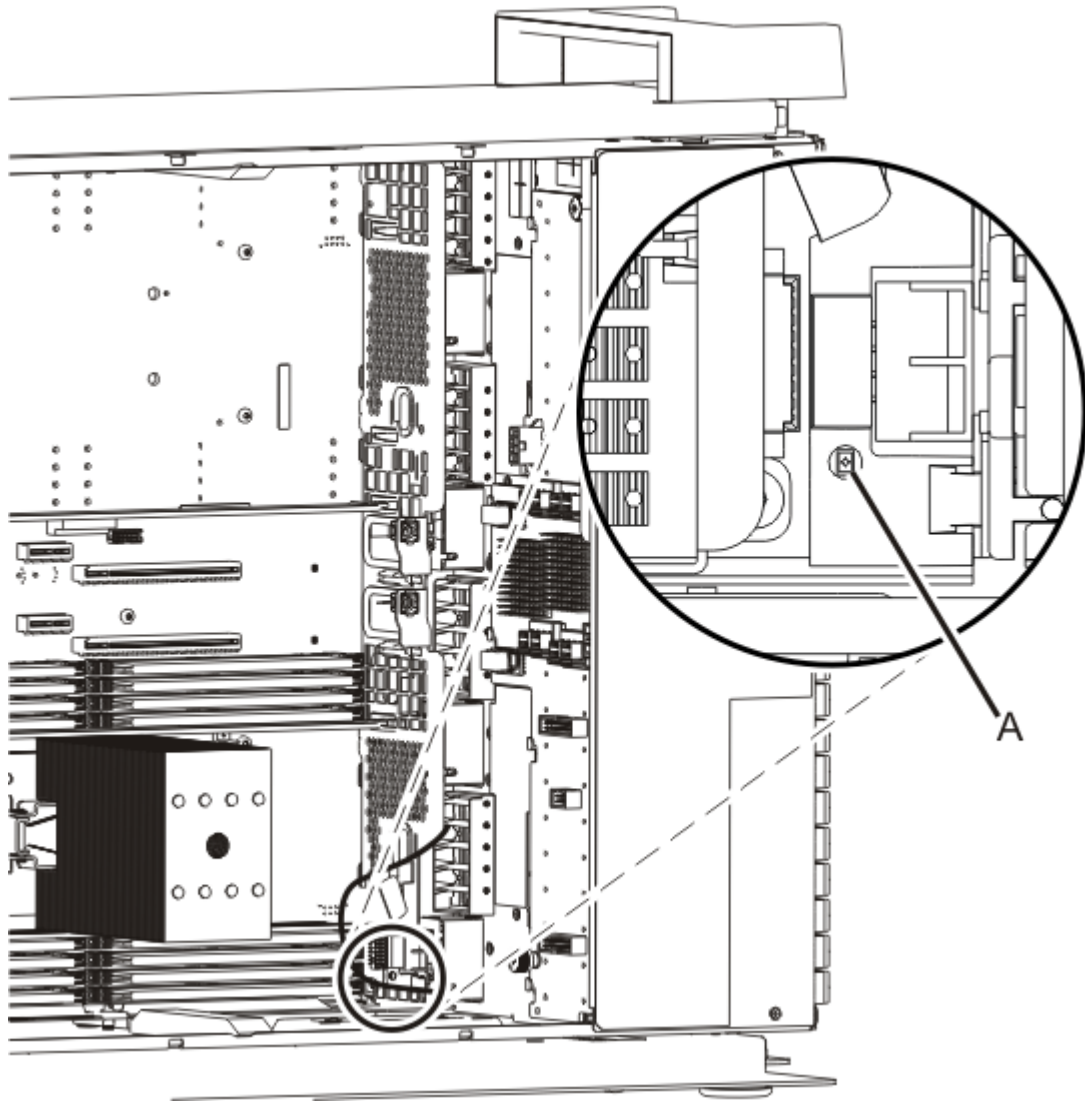
*Figure 13. Activating the identify LED*

10. Look for the amber fault LED **(A)** to identify the failed control panel as shown in [Figure 14](#) on page 16 and [Figure 15](#) on page 17.



P9HBC522-0

Figure 14. Location of the control panel LED in a rack-mounted system



P9HBC548-0

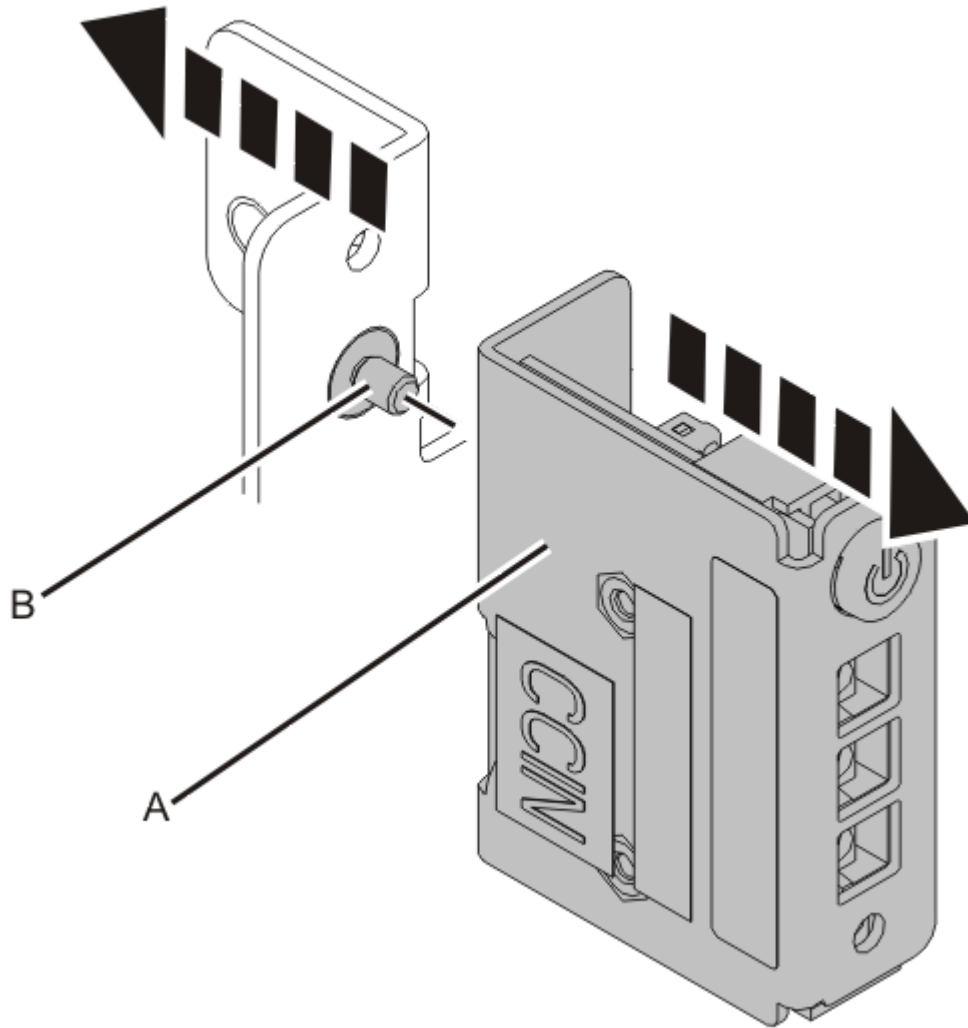
Figure 15. Location of the control panel LED in a stand-alone system

### Removing the control panel from the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system

To remove a control panel, complete the steps in this procedure.

#### Procedure

1. Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
2. For a rack-mounted system, loosen the screw **(B)** that secures the control panel **(A)** to the bracket as shown in [Figure 16](#) on page 18.

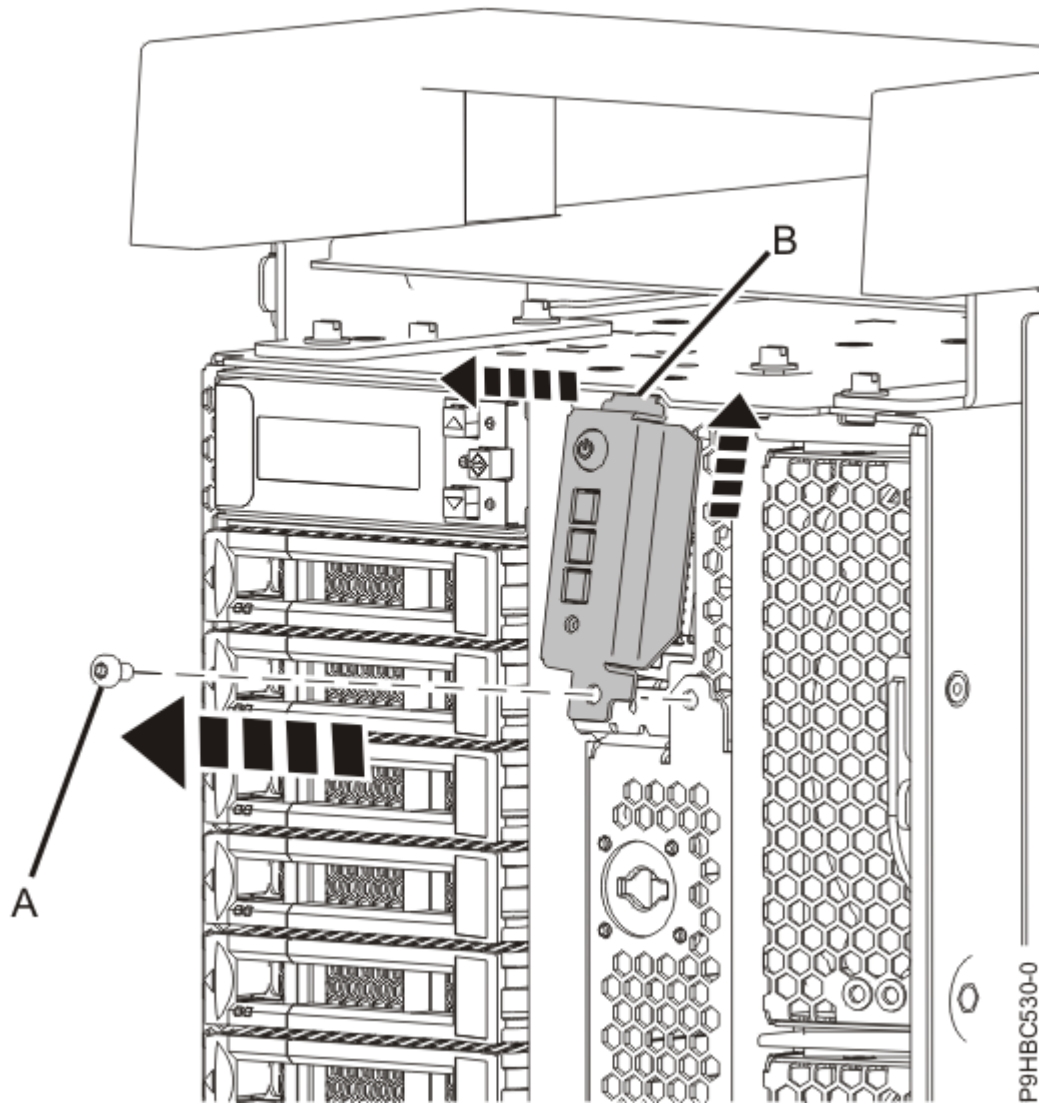


*Figure 16. Removing the control panel from the bracket for a rack-mounted system*

3. Complete the following steps for a stand-alone system.

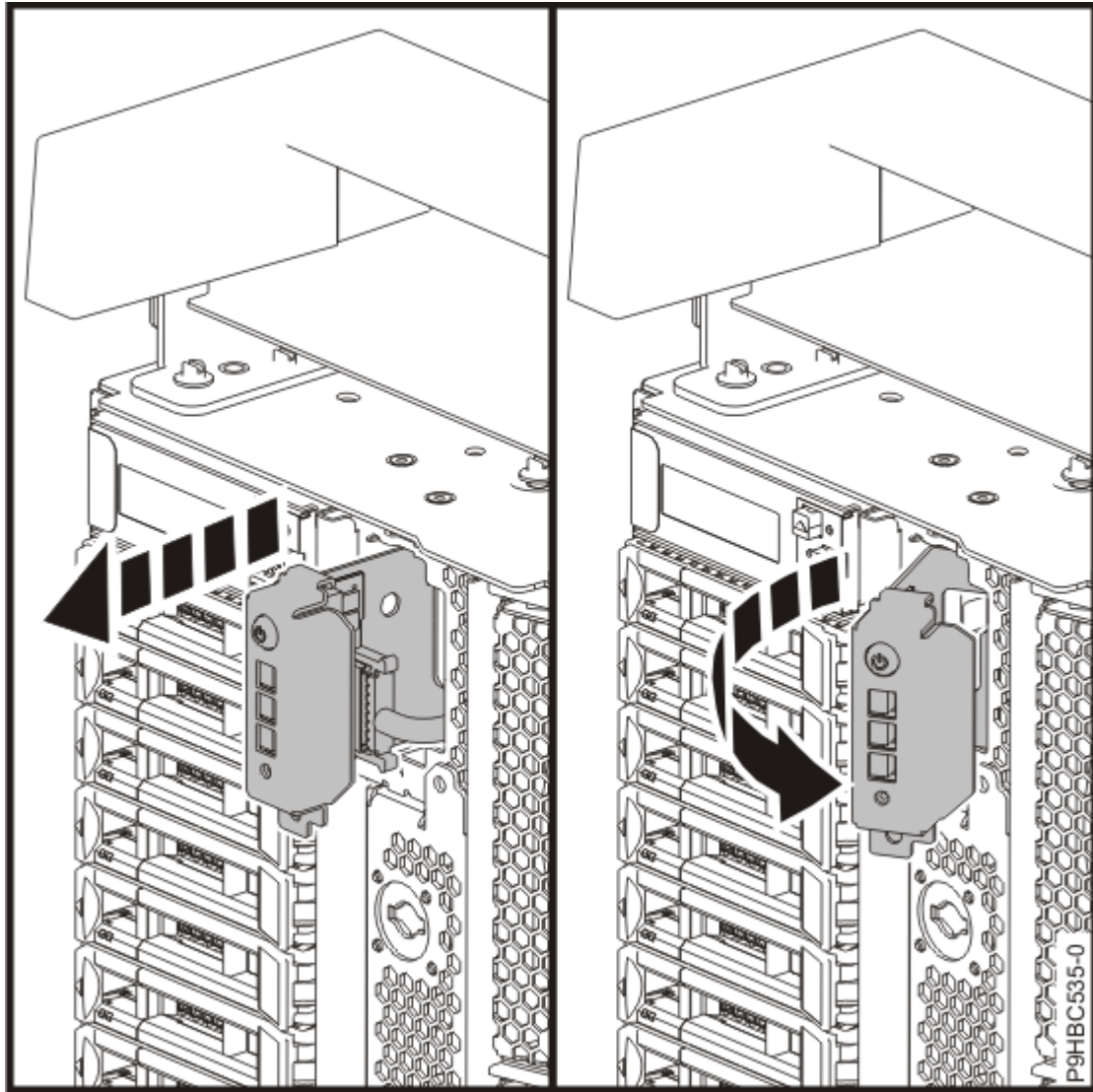
- a) Remove the screw **(A)** that secures the control panel to the system as shown in [Figure 17](#) on page [19](#), then pivot the control panel up to release the top tab **(B)**.





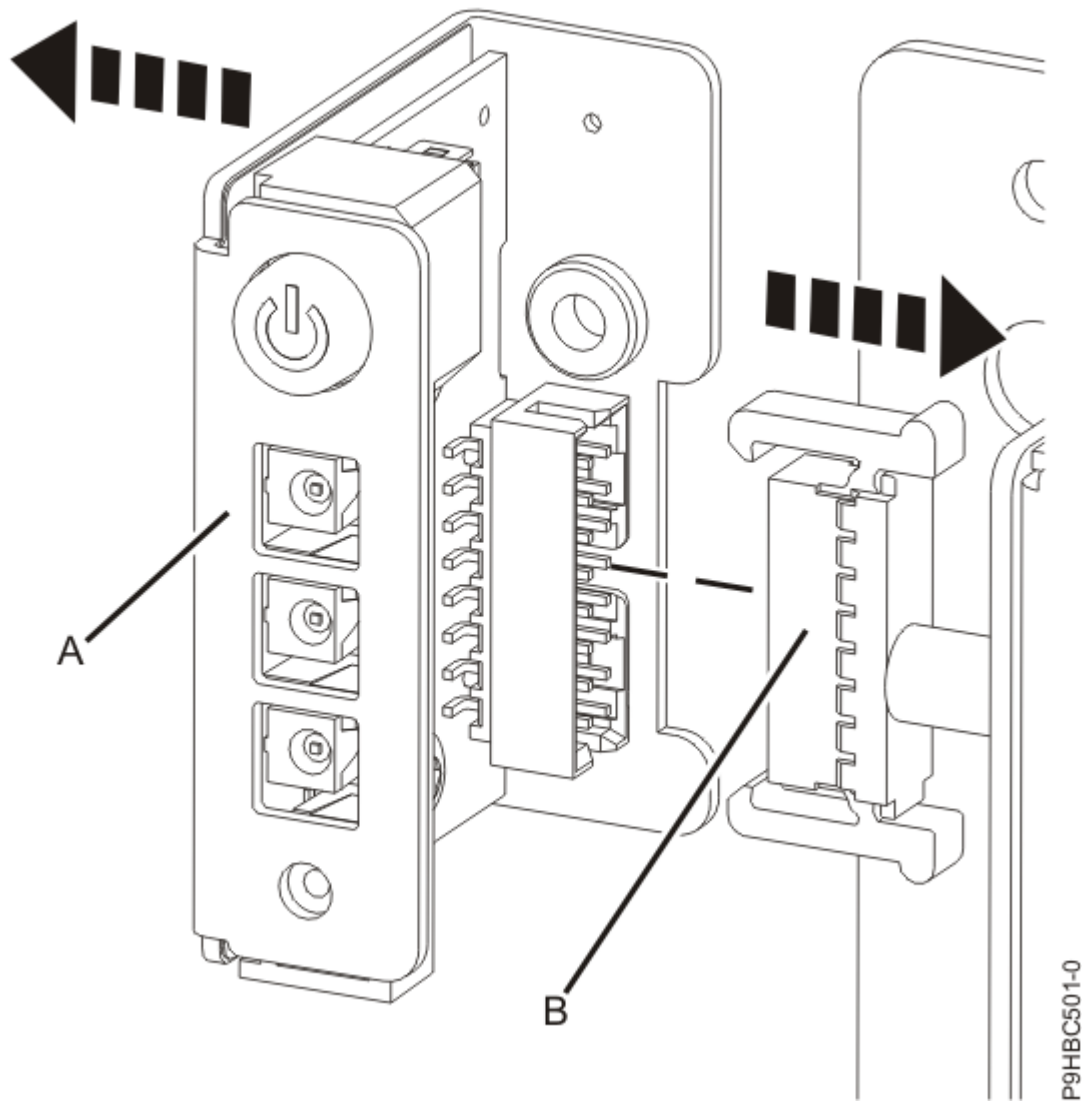
*Figure 17. Unscrewing the control panel from a stand-alone system*

- b) Remove the control panel from the system by pivoting the control panel to the left as shown in [Figure 18 on page 20](#).



*Figure 18. Removing the control panel from a stand-alone system*

4. Disconnect the control panel **(A)** from the cable **(B)** as shown in [Figure 19 on page 21](#) or [Figure 20 on page 22](#).



P9HBC501-0

Figure 19. Disconnecting the control panel from the cable for a rack-mounted system

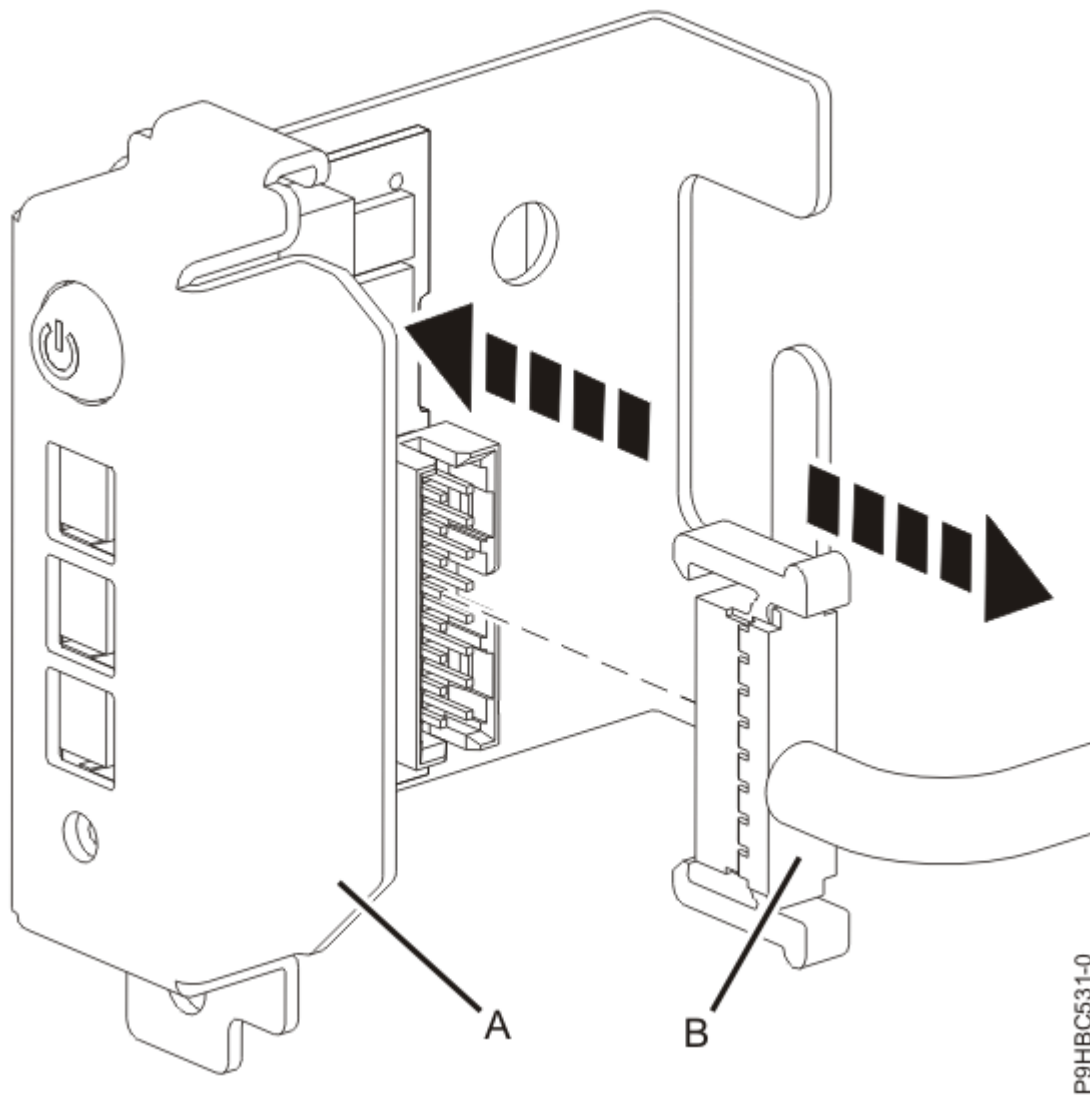


Figure 20. Disconnecting the control panel from the cable for a stand-alone system

### Replacing the control panel in the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system

To replace a control panel, complete the steps in this procedure.

#### Procedure

1. Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
2. Connect the control panel (**A**) to the control panel cable (**B**) as shown in [Figure 21 on page 23](#) or [Figure 22 on page 24](#).

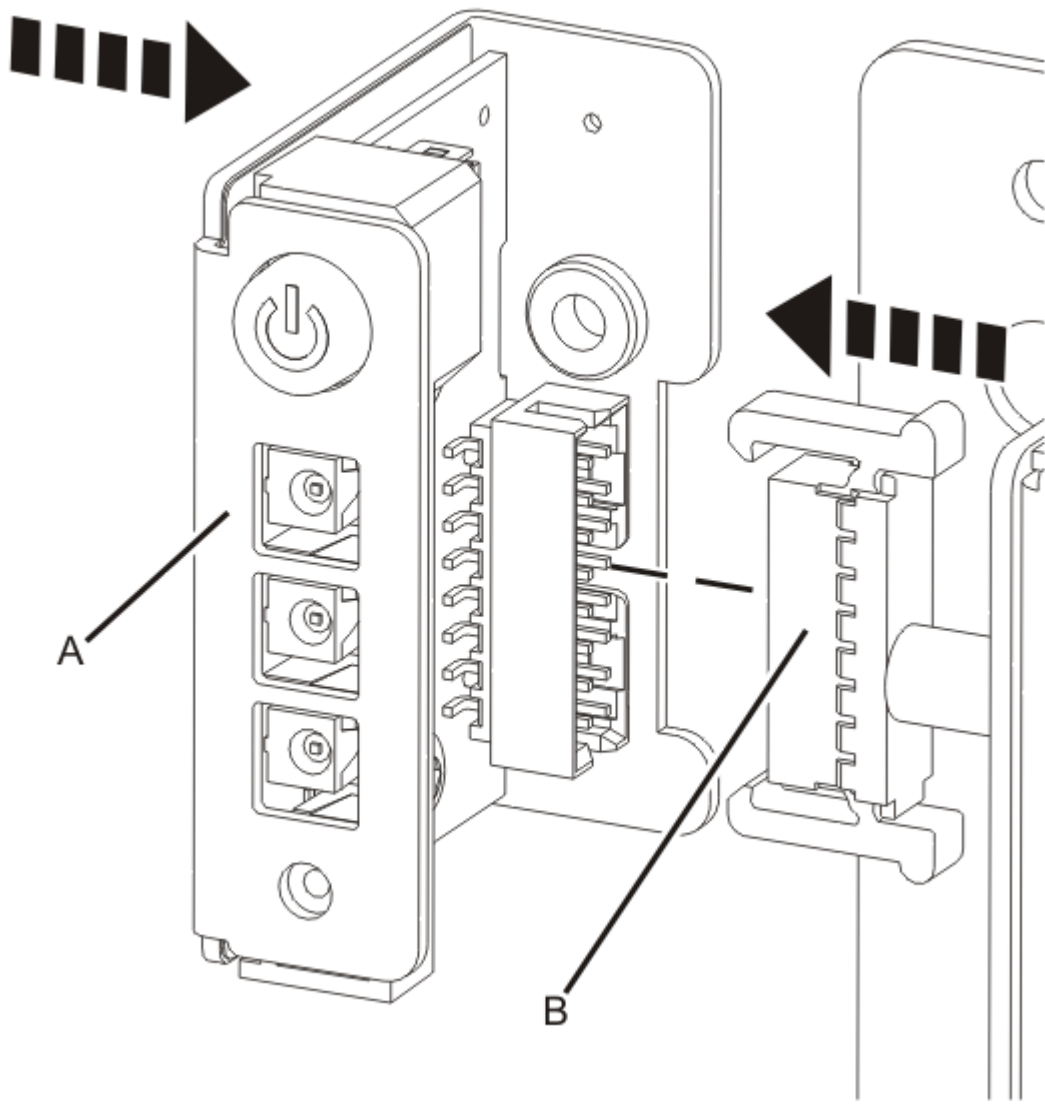


Figure 21. Connecting the control panel and cable for a rack-mounted system

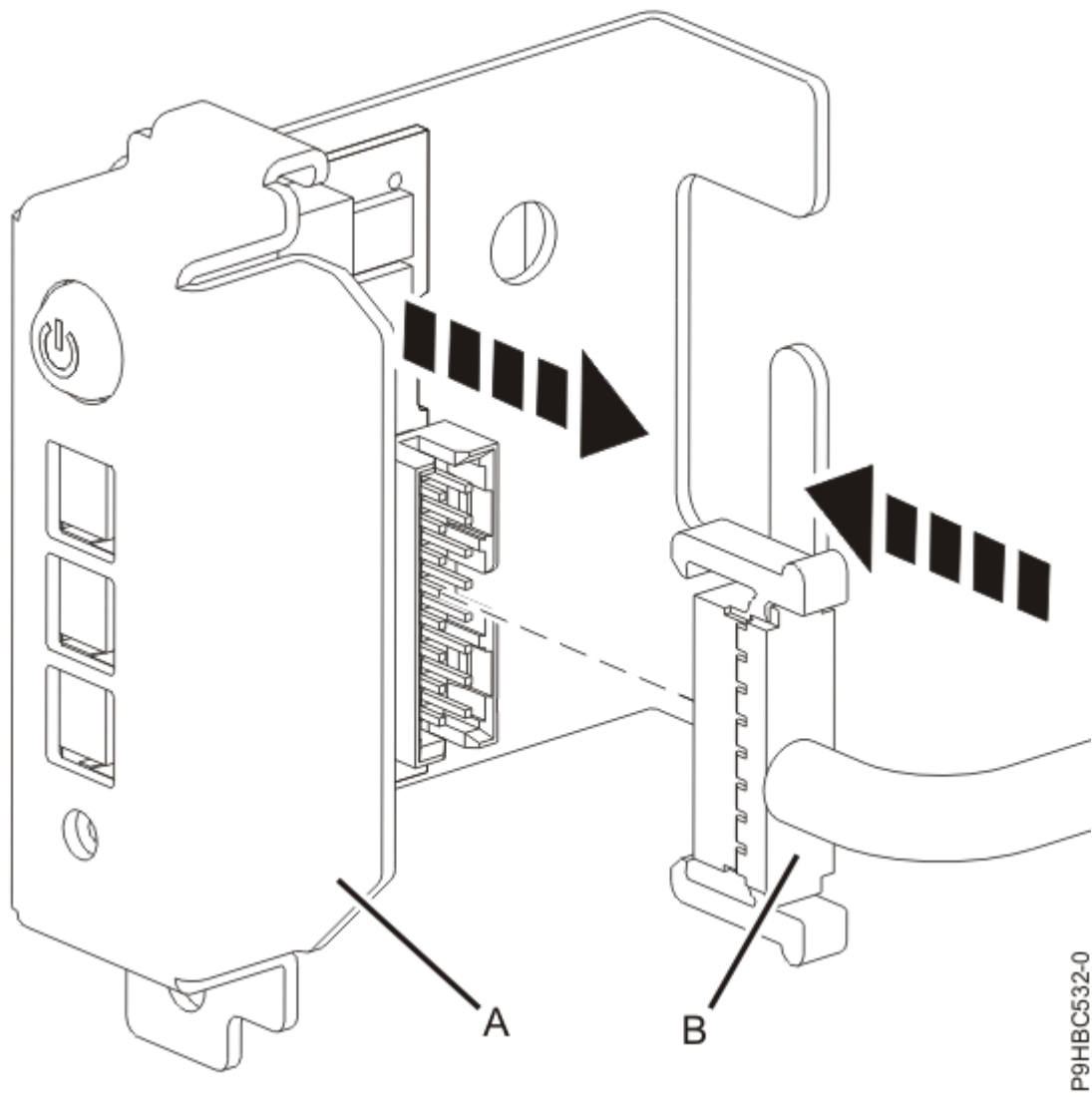
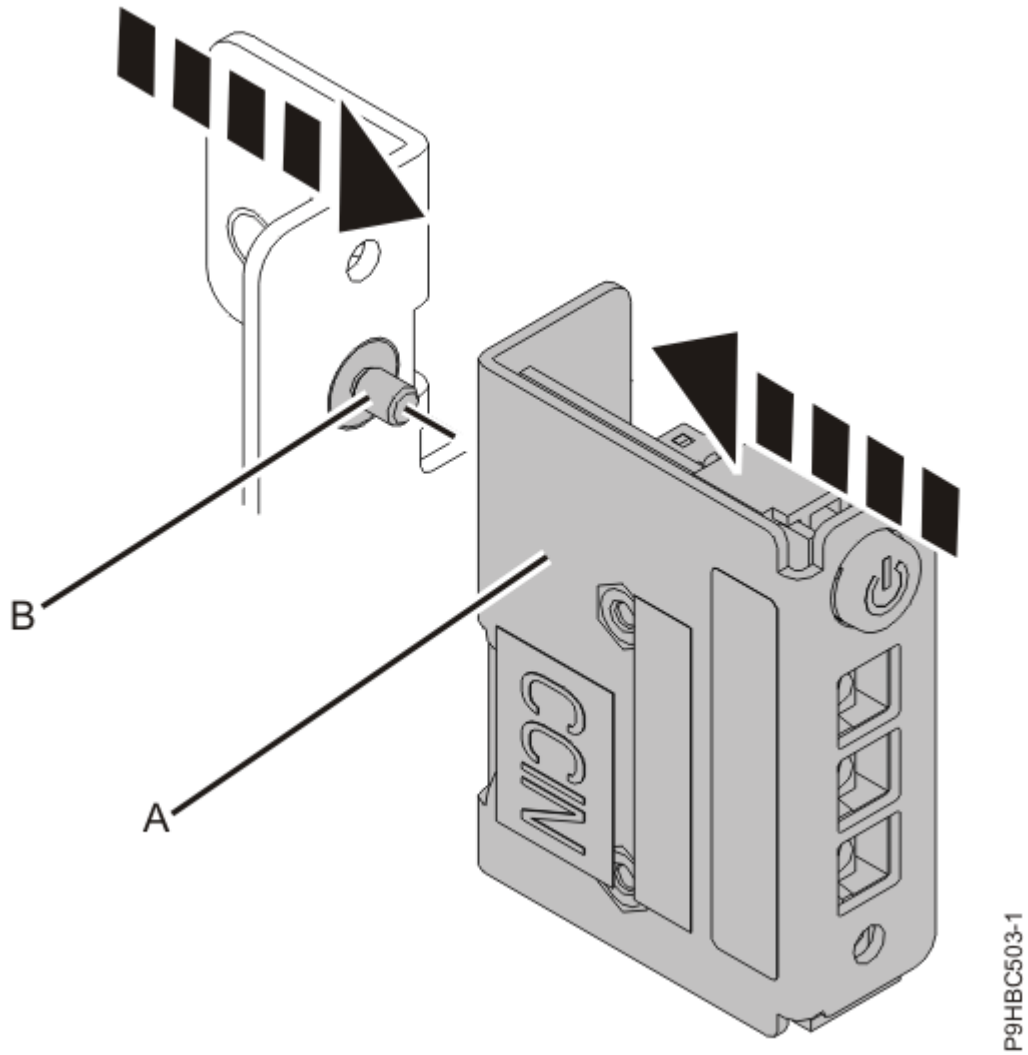


Figure 22. Connecting the control panel and cable for a stand-alone system

3. For a rack-mounted system, attach the control panel (A) to the bracket with screw (B) as shown in [Figure 23 on page 25](#).

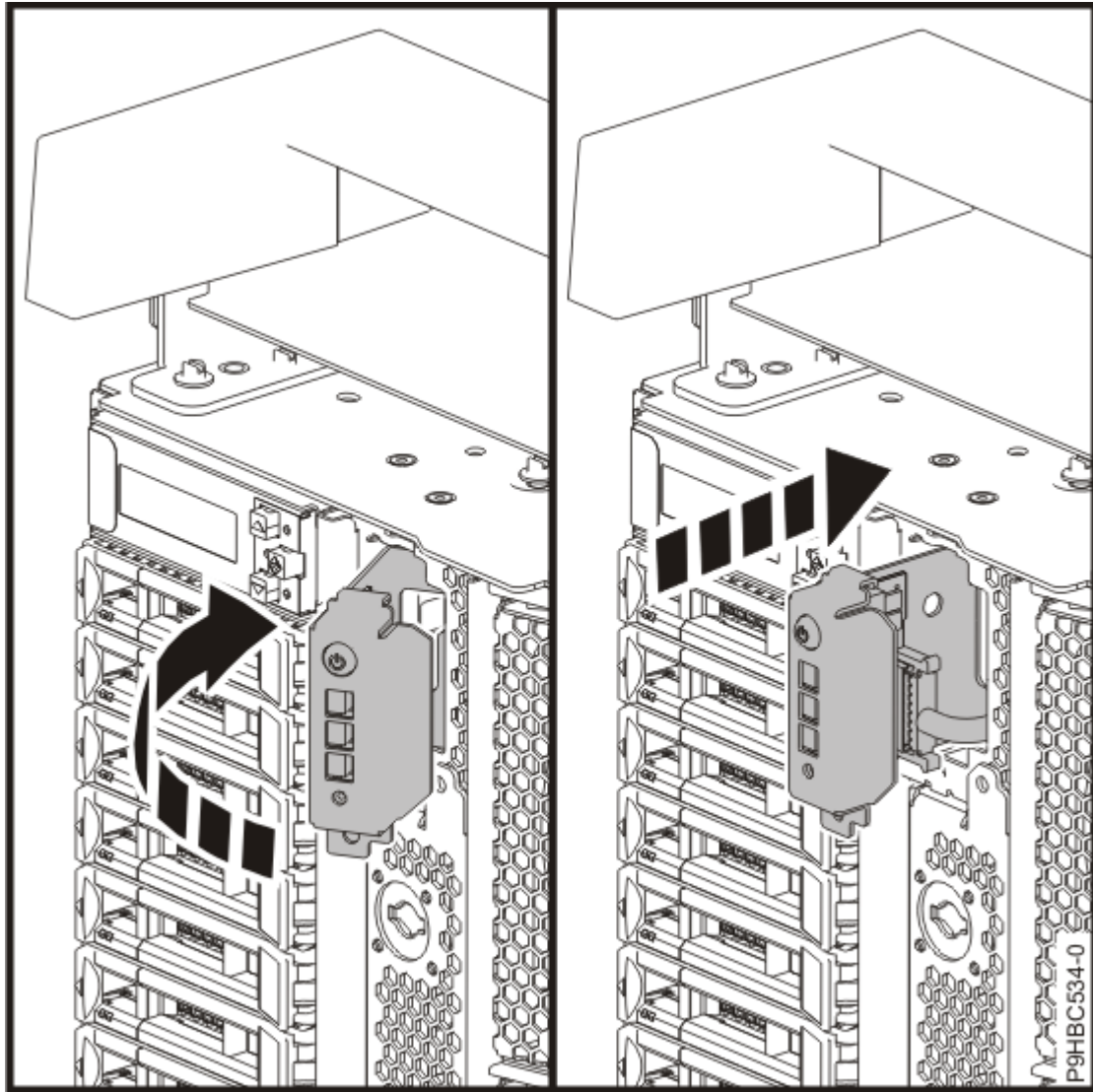
Ensure that the control panel pins align with the bracket holes.



*Figure 23. Replacing the control panel onto the bracket for a rack-mounted system*

4. Complete the following steps for a stand-alone system.

- a) Replace the control panel into the system by pivoting the control panel to the right as shown in [Figure 24 on page 26](#).



*Figure 24. Replacing the control panel in a stand-alone system*

- b) Pivot the control panel up to secure the top tab **(A)** as shown in [Figure 25](#) on page 27, then replace the screw **(B)** that secures the control panel to the system.



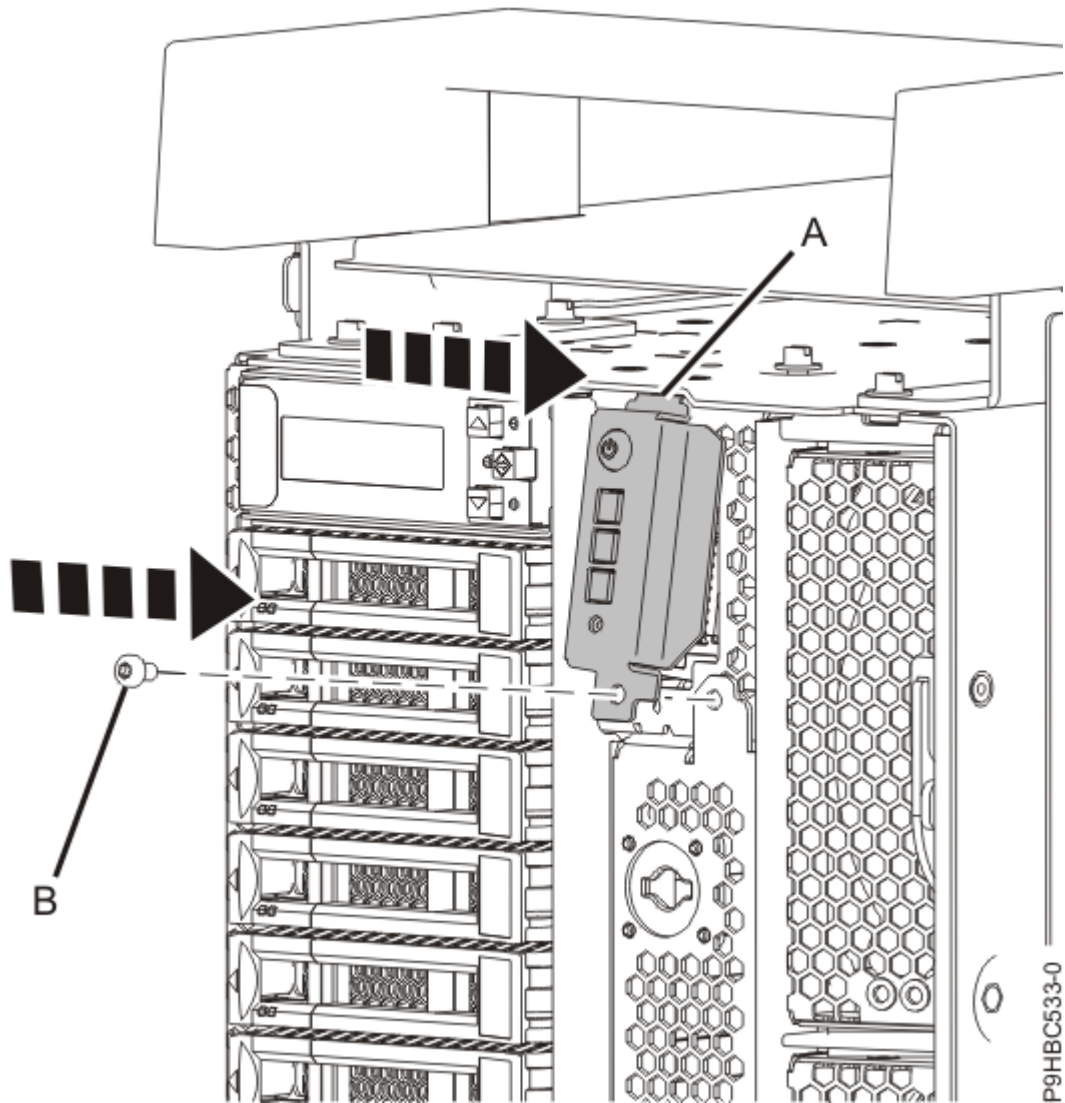


Figure 25. Securing the control panel to a stand-alone system

### Preparing the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system for operation after removing and replacing the control panel

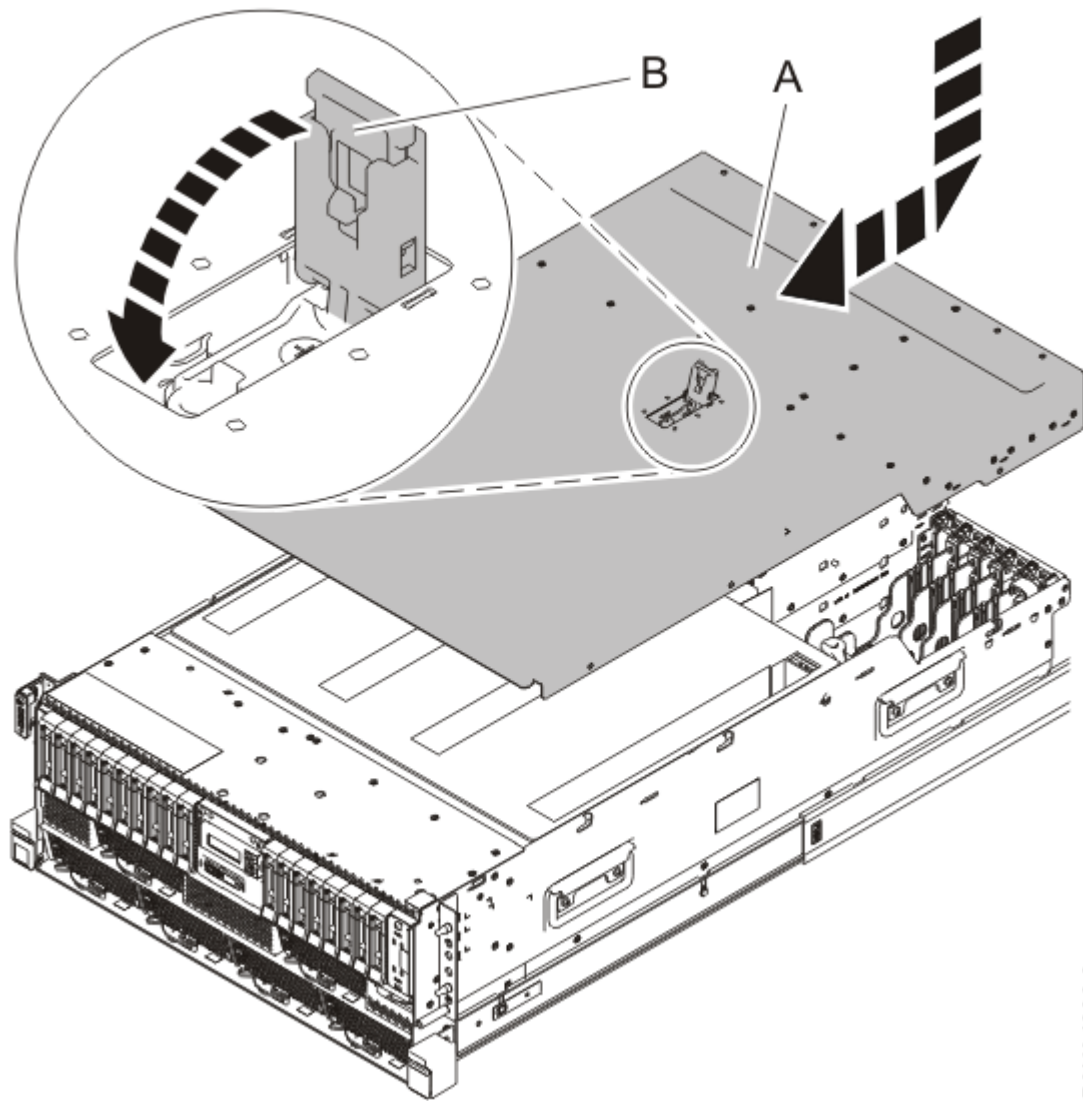
To prepare the system for operation after removing and replacing a control panel, complete the steps in this procedure.

#### Procedure

1. Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
2. Replace the service access cover.

For a rack-mounted system, complete the following steps. Refer to [Figure 26](#) on page 28.

- a. Slide the cover **(A)** onto the system unit.
- b. Close the release latch **(B)** by pushing it in the direction shown.

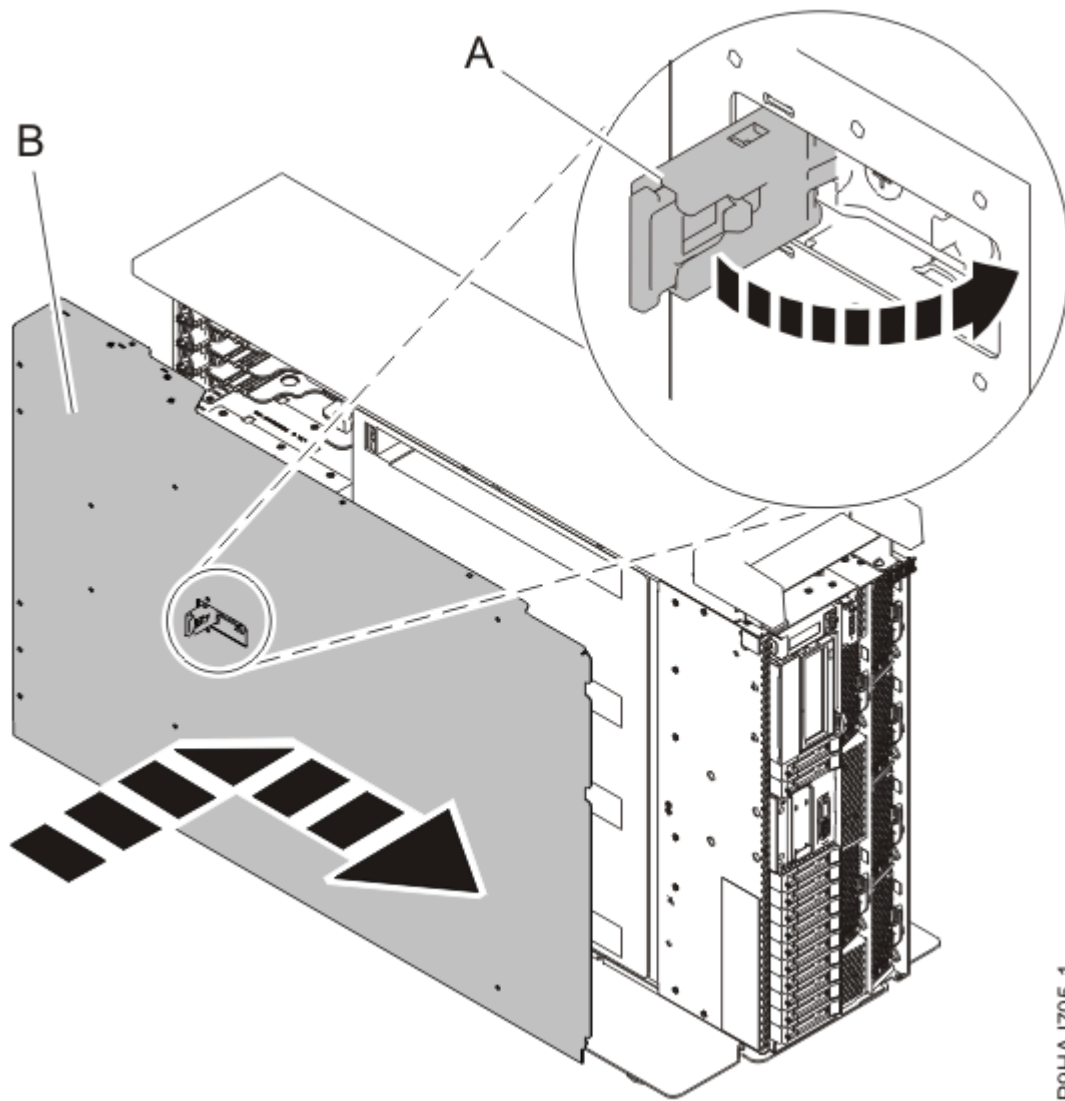


P9HAJ606-2

*Figure 26. Installing the service access cover*

For a stand-alone system, complete the following steps. Refer to [Figure 27 on page 29](#).

- a. Slide the cover **(B)** on to the system unit as shown.
- b. Close the latch release **(A)** by pushing it in the direction shown.

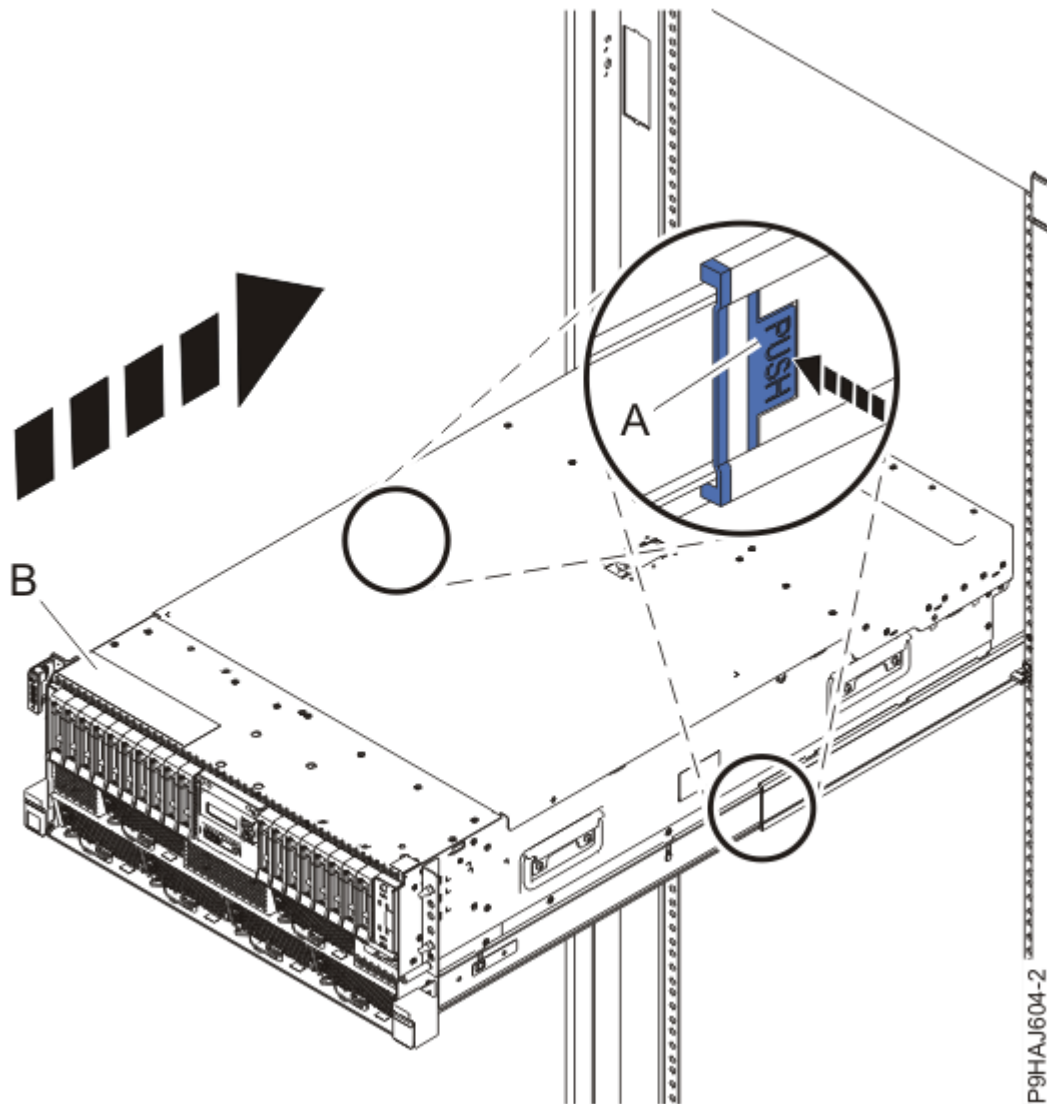


P9HAJ705-1

*Figure 27. Installing the service access cover*

3. For a rack-mounted system, unlock the blue rail safety latches (**A**) as shown in [Figure 28 on page 30](#) by pushing them inward.

Ensure that the cable management arms can move freely. Ensure that the cables at the rear of the unit do not catch or bind as you push the unit into the operating position.

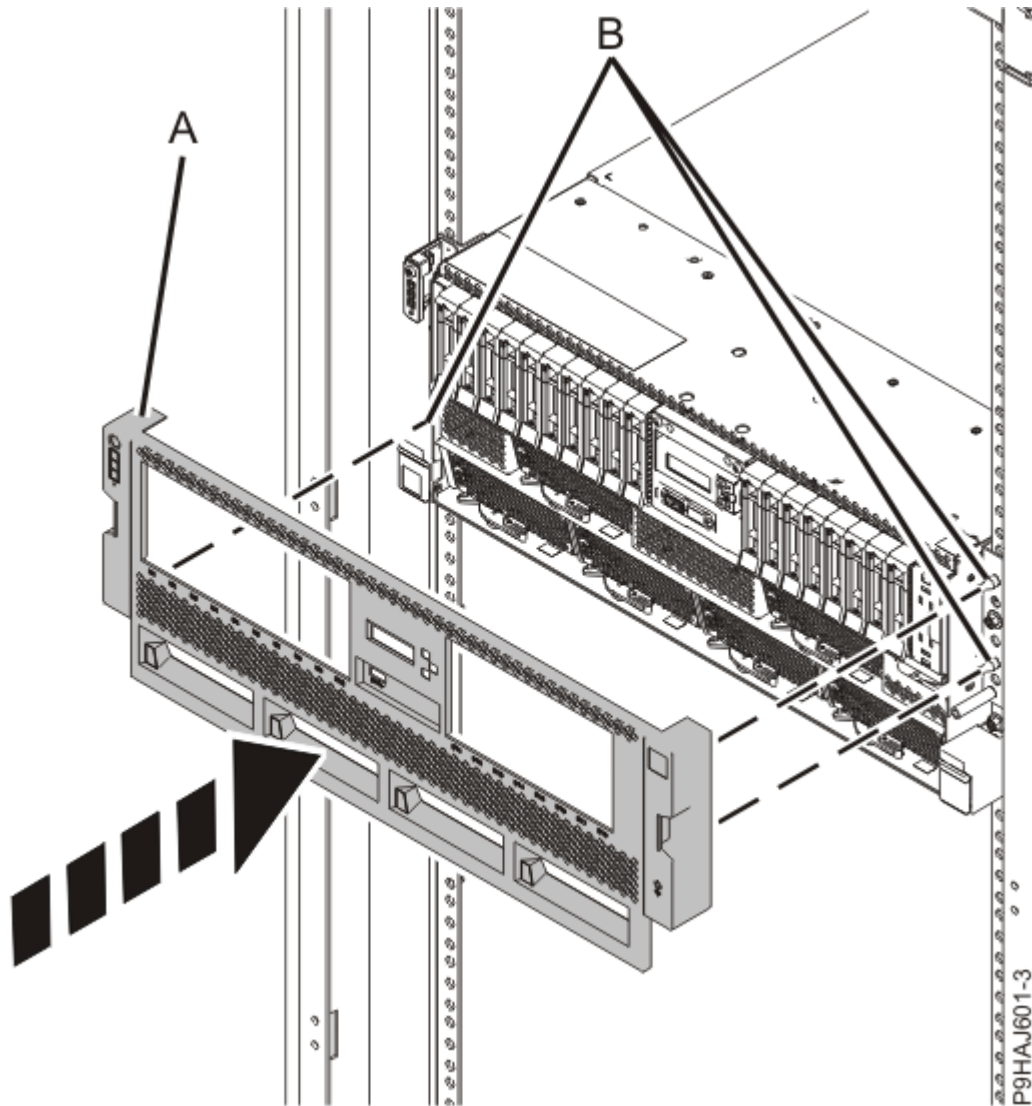


*Figure 28. Placing the system into the operating position*

4. For a rack-mounted system, push the system unit **(B)** as shown in the previous figure back into the rack until both release latches lock the system into position.

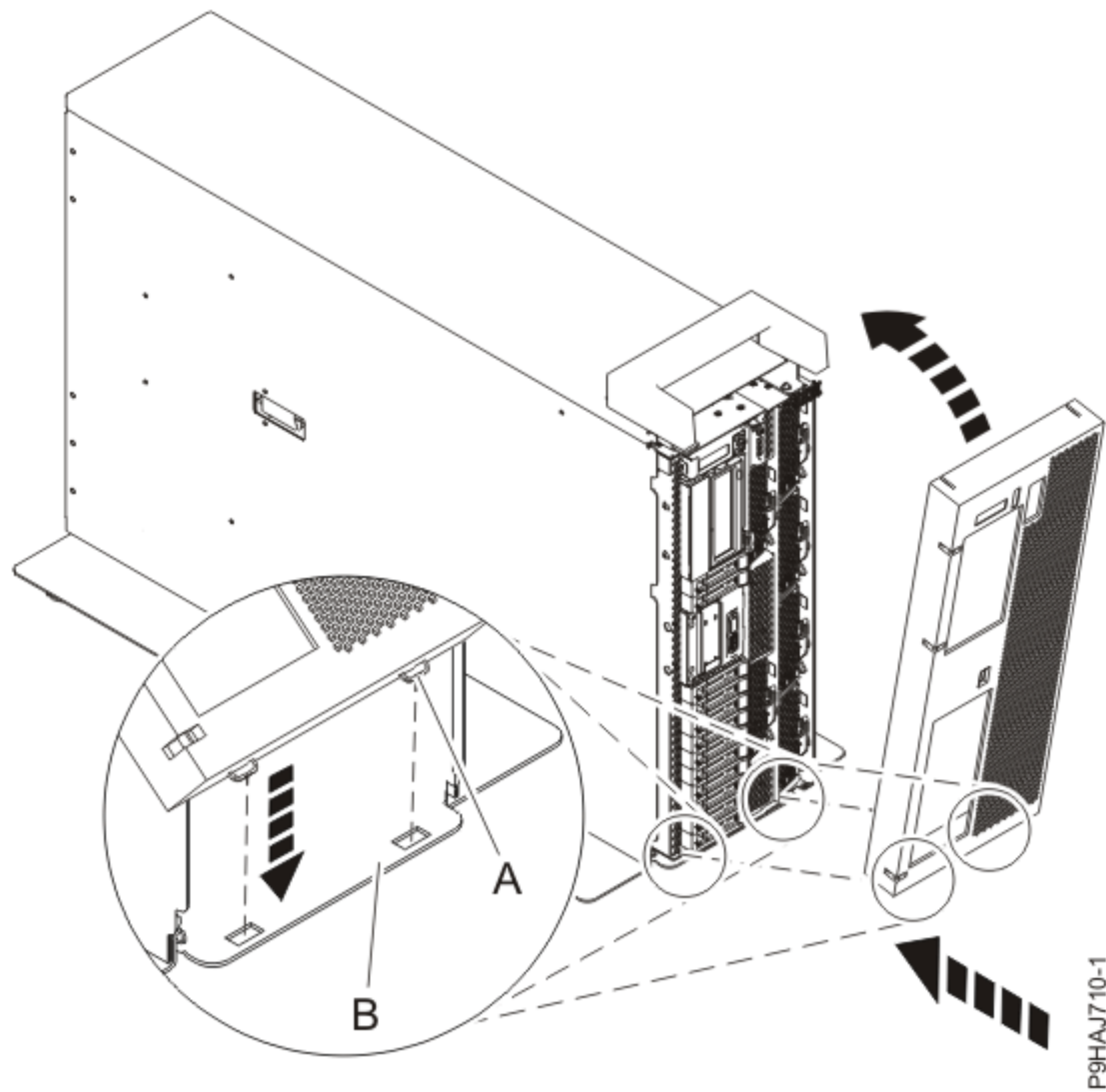
Secure the cable management arm with hook-and-loop fasteners around the back side of the cable management arm, but not around the cables.

5. For a rack-mounted system, gently push the front cover **(A)** in until the cover snaps into place. The cover has indentations where you can hold it more easily. Use the alignment pins **(B)** to secure the cover to the system as shown in [Figure 29 on page 31](#).



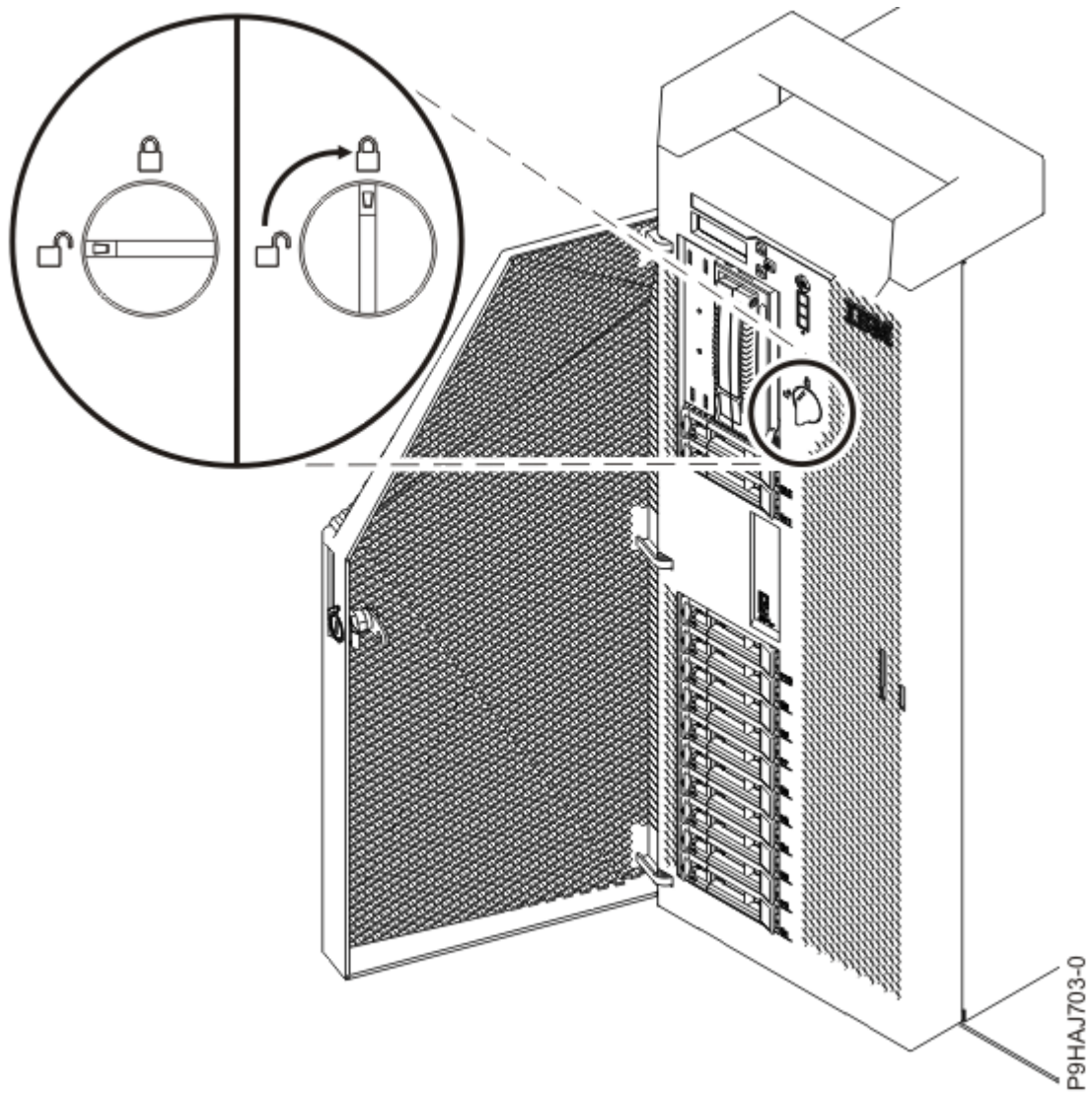
*Figure 29. Installing the front cover*

6. For a stand-alone system, install the front cover and door by completing these steps.
  - a) Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
  - b) Align the cover until the two cover tabs (**A**) are seated into the slots on the base plate (**B**) as shown in [Figure 30 on page 32](#).



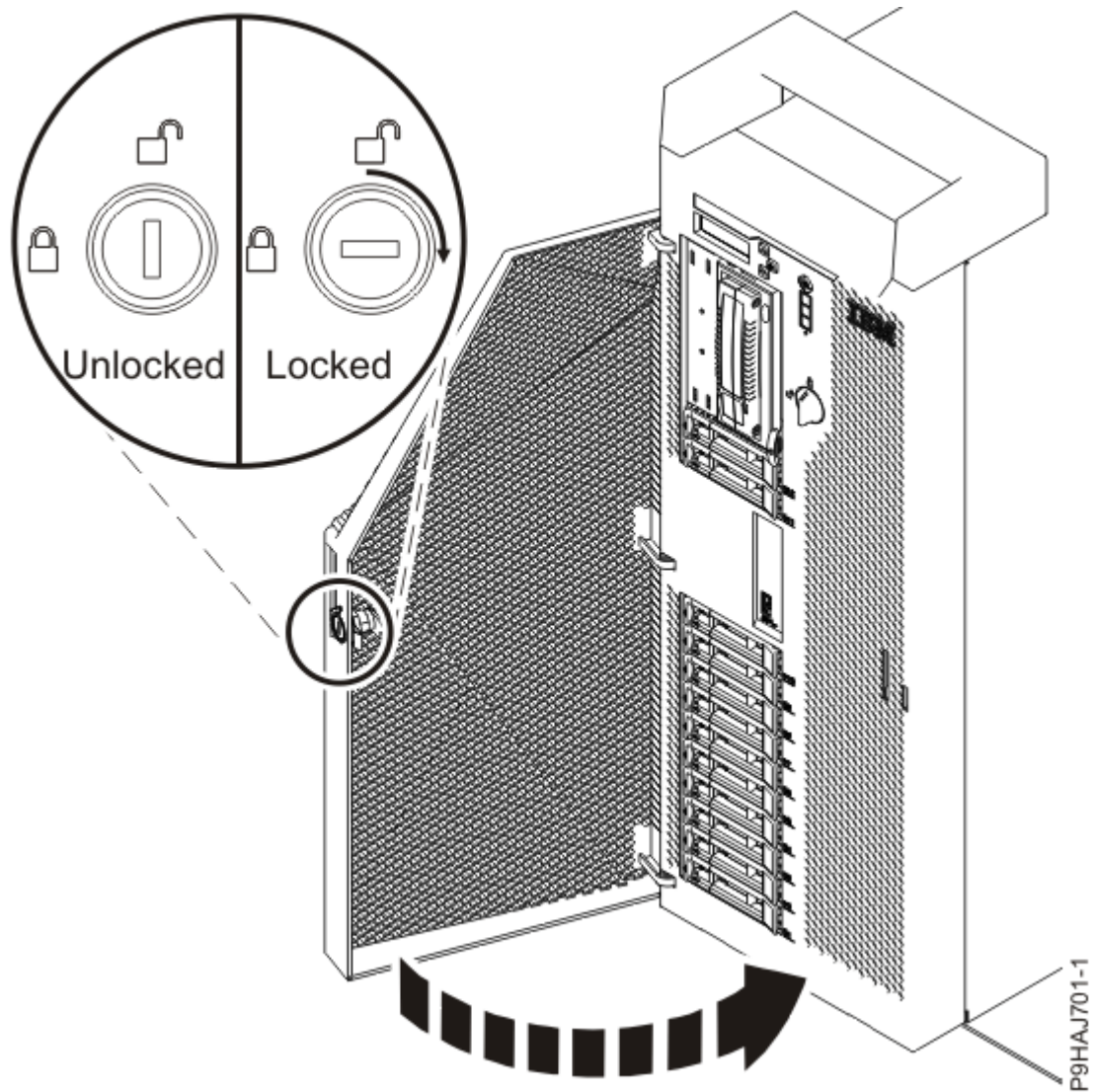
*Figure 30. Installing the front cover and door*

- c) Rotate the cover up and towards the system until the release latch is seated into its respective slot.
- d) Twist the cover latch to the right (clockwise) to lock the cover as shown in [Figure 31](#) on page 33. Vertical is locked; horizontal is unlocked.



*Figure 31. Closing the front cover latch*

- e) Close the front door. Insert the front door key into the lock as shown in [Figure 32](#) on [page 34](#). Twist the key to the right (clockwise) to lock the door. Horizontal is locked; vertical is unlocked.



*Figure 32. Locking the front door*

7. Using your labels, reconnect the power cords **(A)** to the system unit.

Fasten the power cords **(A)** to the system using the hook-and-loop fasteners **(B)** as shown in [Figure 33 on page 35](#) or [Figure 34 on page 36](#).



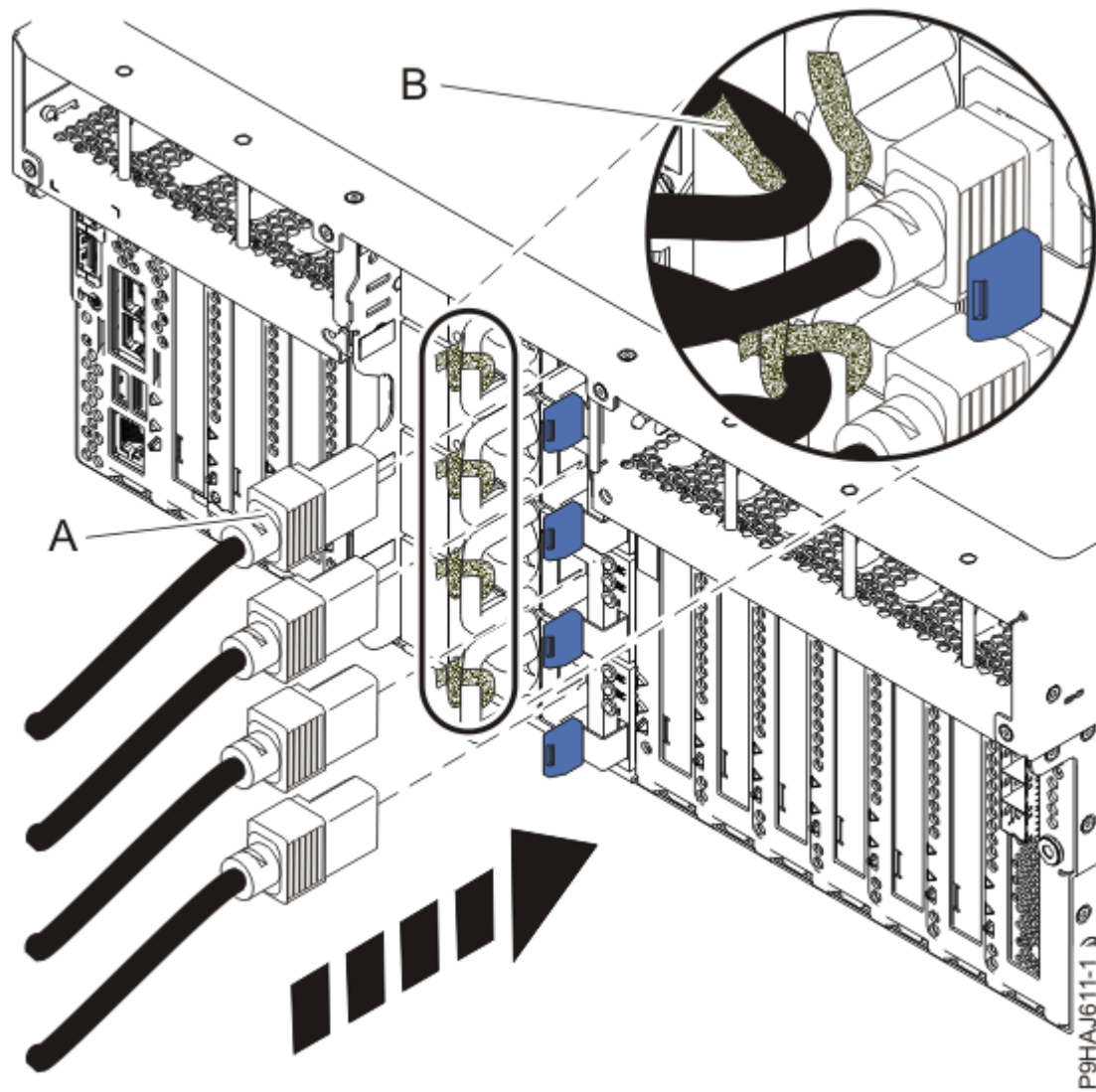


Figure 33. Connecting the power cords to a rack-mounted system

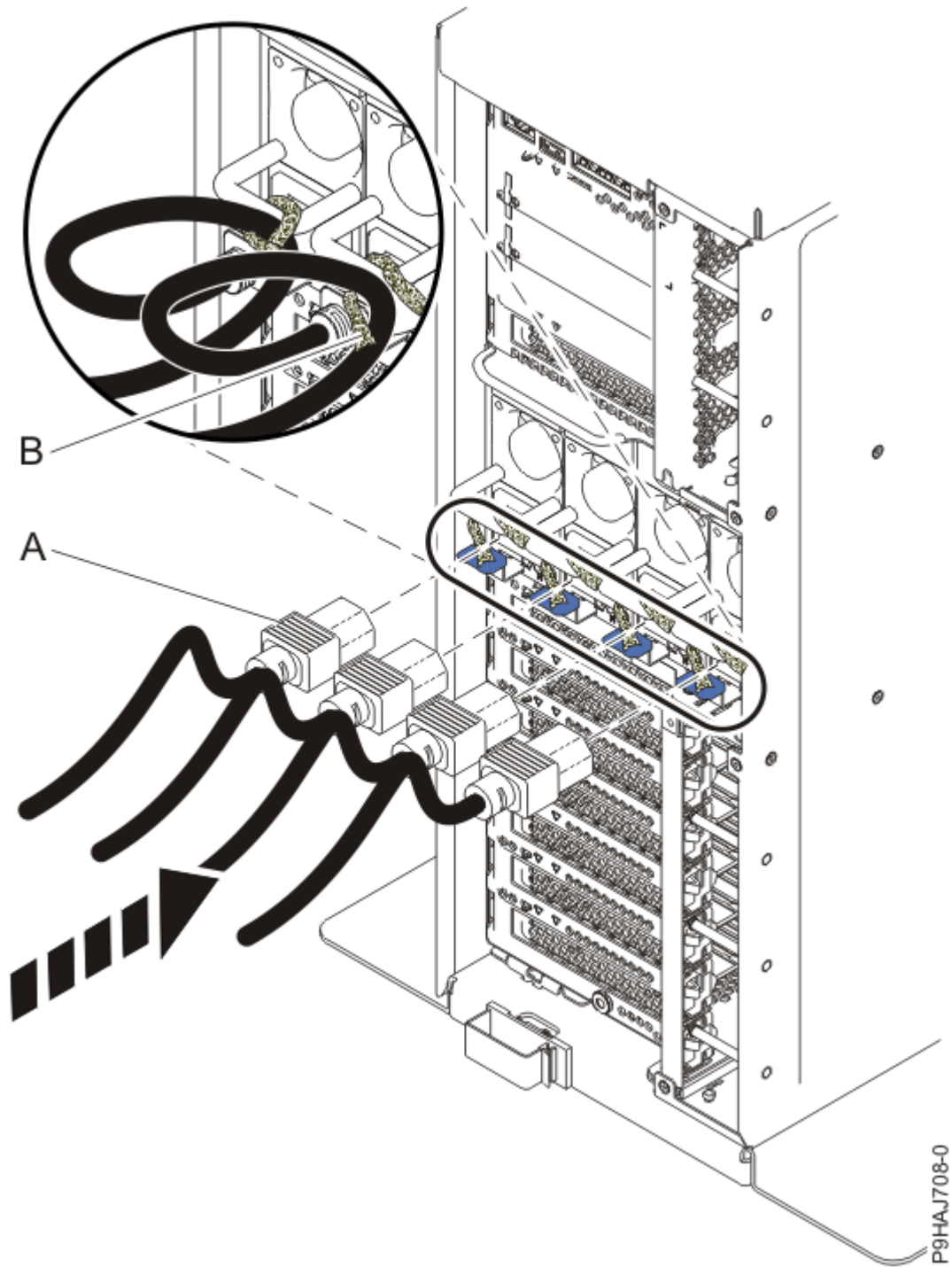


Figure 34. Connecting the power cords to a stand-alone system  
8. Check that the power LED **(A)**, as shown in the following figure, is flashing.

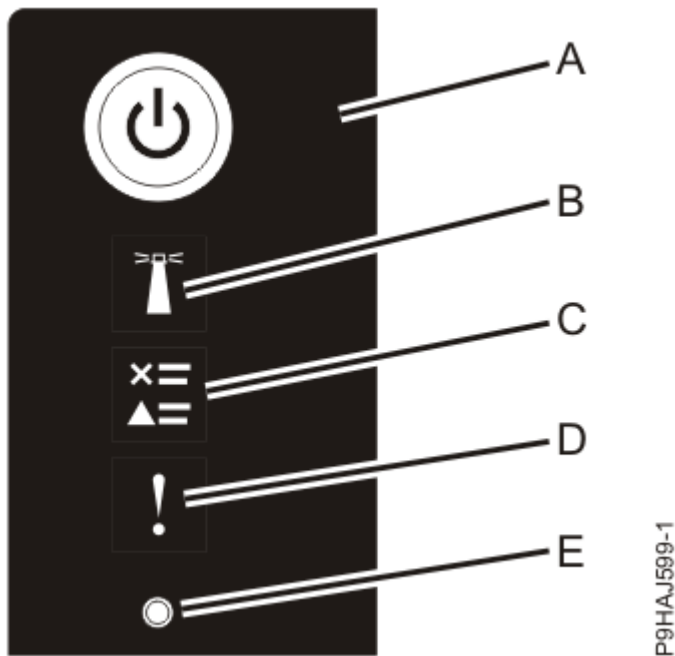


Figure 35. Control panel LEDs

9. Start the system. For instructions, see [Starting a system](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustartsys.htm) (www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustartsys.htm).
10. Turn off the identify LED. For instructions, see [Deactivating an identify LED](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj_turn_off_identify_led.htm) (www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj\_turn\_off\_identify\_led.htm).

## Removing and replacing the control panel display in the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S

Find information about removing and replacing the control panel display in the IBM Power System S914 (9009-41A and 9009-41G), IBM Power System S924 (9009-42A and 9009-42G), IBM Power System H924 (9223-42H), or IBM Power System H924S (9223-42S) server.

### About this task

**Note:** Removing or replacing this feature is a customer task. You can complete this task yourself, or contact a service provider to complete the task for you. You might be charged a fee by the service provider for this service.

If your system is managed by the Hardware Management Console (HMC), use the HMC to repair a part in the system. For instructions, see [Repairing a part by using the HMC](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj_hmc_repair.htm) (www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj\_hmc\_repair.htm).

If you do not have an HMC, use the following procedures to remove and replace the control panel display.

### Preparing the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system to remove and replace the control panel display

To prepare the system to remove and replace a control panel display, complete the steps in this procedure.

#### Procedure

1. Identify the part and the system that you are working on. For instructions, see [Identifying a part](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/sal.htm) (www.ibm.com/support/knowledgecenter/POWER9/p9haj/sal.htm).

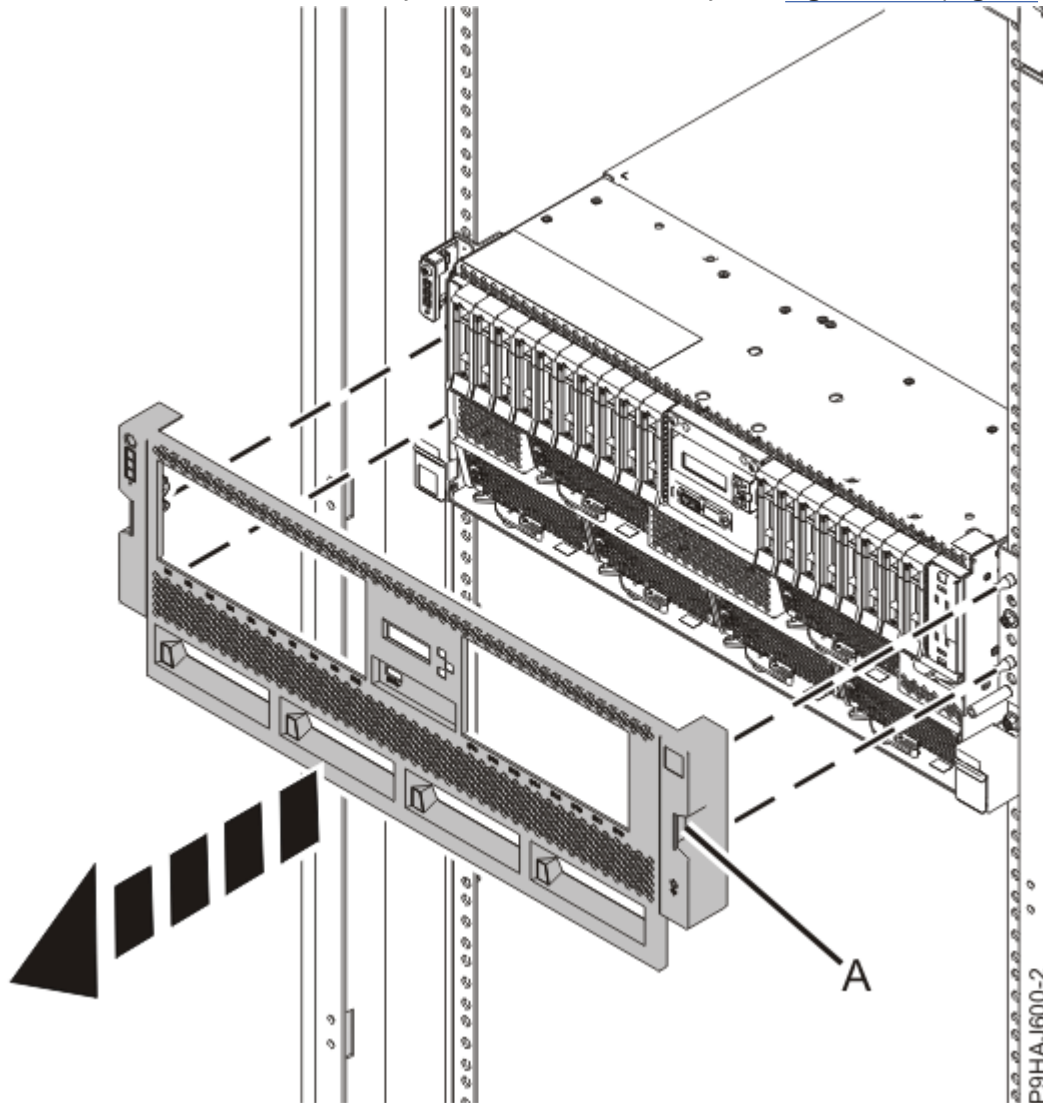
Use the blue identify LED on the enclosure to locate the system. Ensure that the serial number of the system matches the serial number to be serviced.

2. The control panel display can be replaced with the system powered on. If you choose to power off the system to complete the repair operation, complete the following steps:

- a) Stop the system. For instructions, see [Stopping a system](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustopsys.htm) ([www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustopsys.htm](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustopsys.htm)).

3. For a rack-mounted system, remove the front cover by pulling it away from the system.

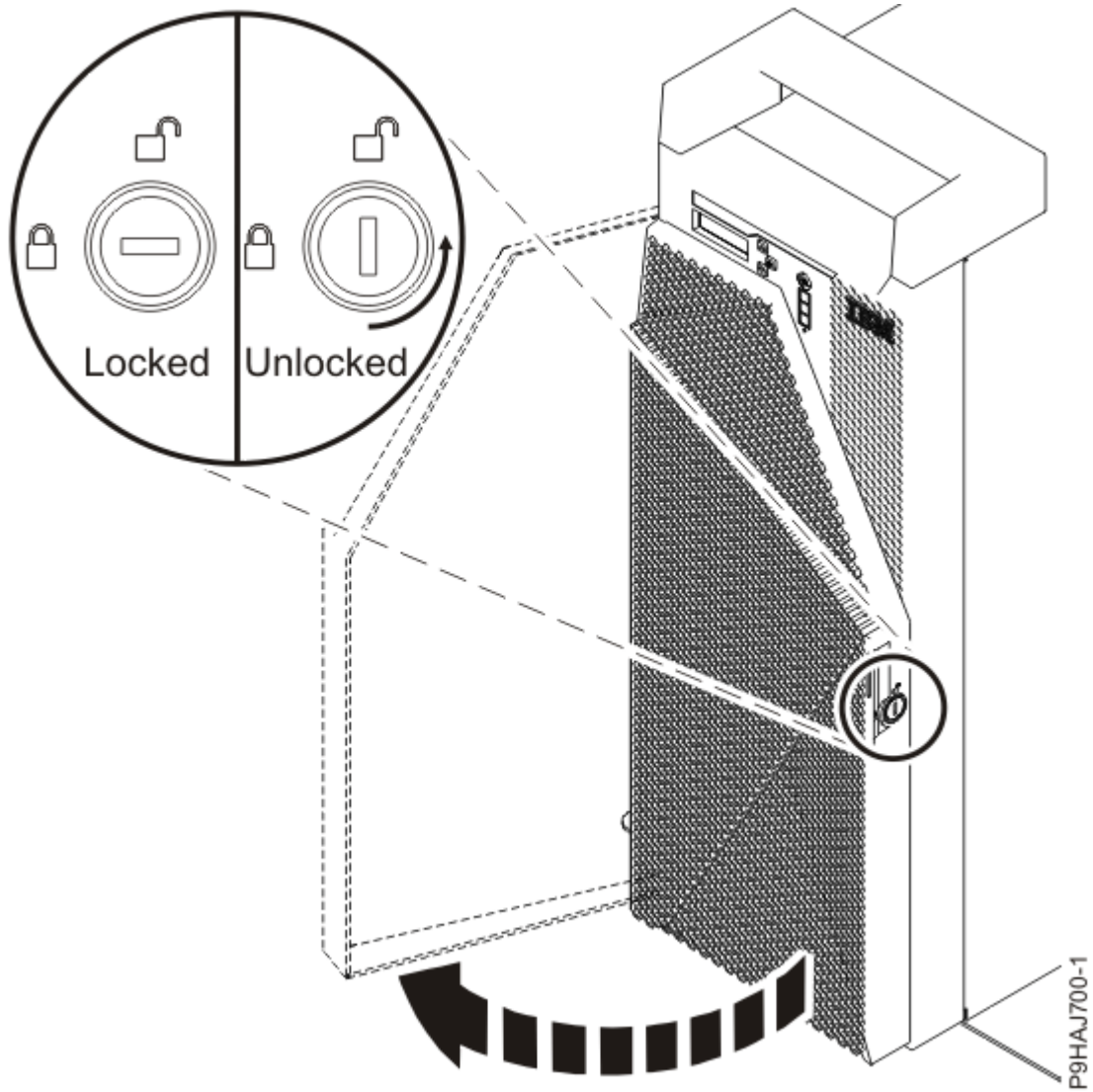
The cover has indentations (**A**) where you can hold it more easily. See [Figure 36](#) on page 38.



*Figure 36. Removing the front cover*

4. For a stand-alone system, remove the front cover and door by completing these steps.

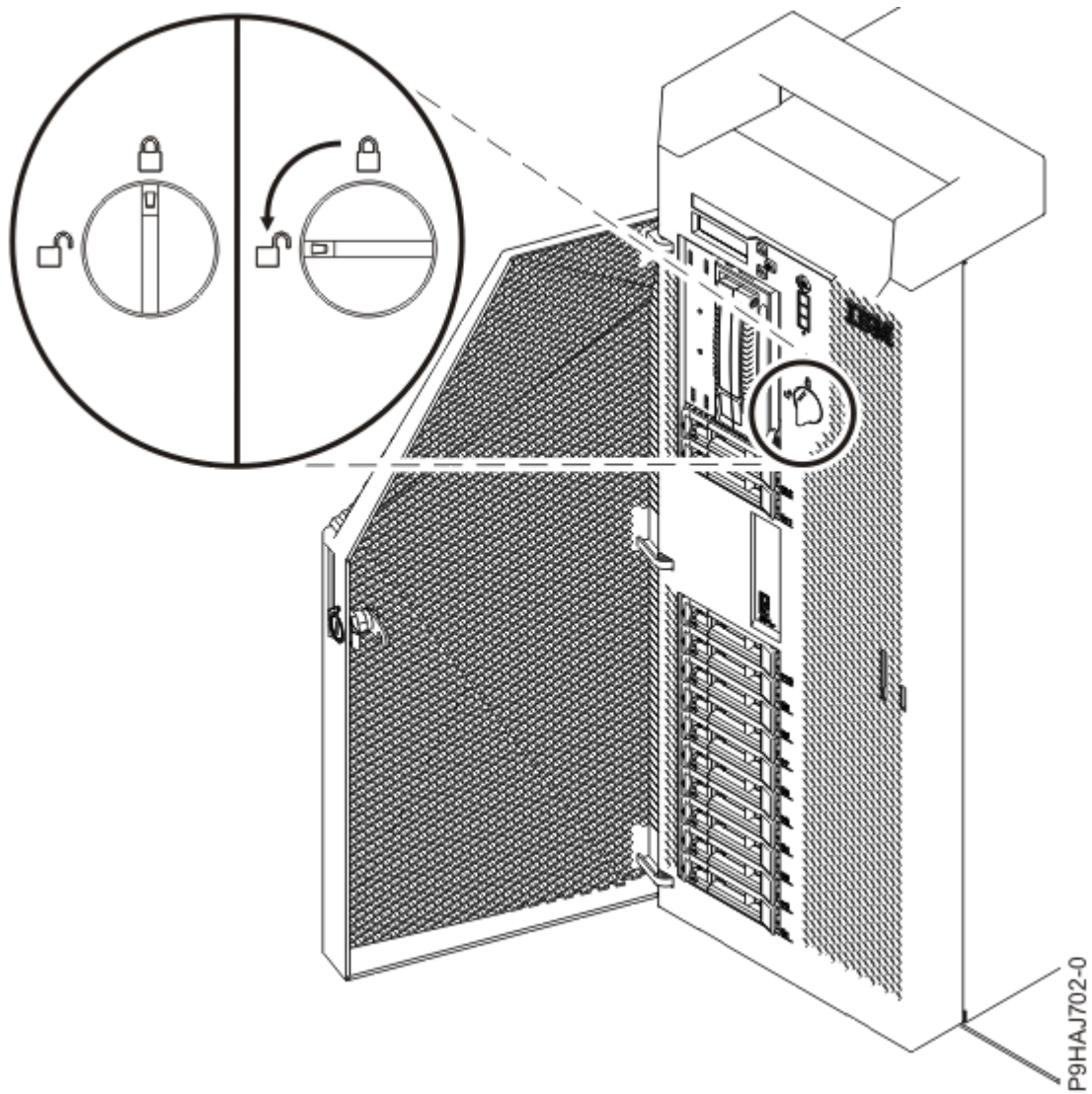
- a) Insert the front door key into the lock as shown in [Figure 37](#) on page 39. Twist the key to the left (counterclockwise) to unlock the door. Horizontal is locked; vertical is unlocked. Open the front door.



*Figure 37. Unlocking the front door*

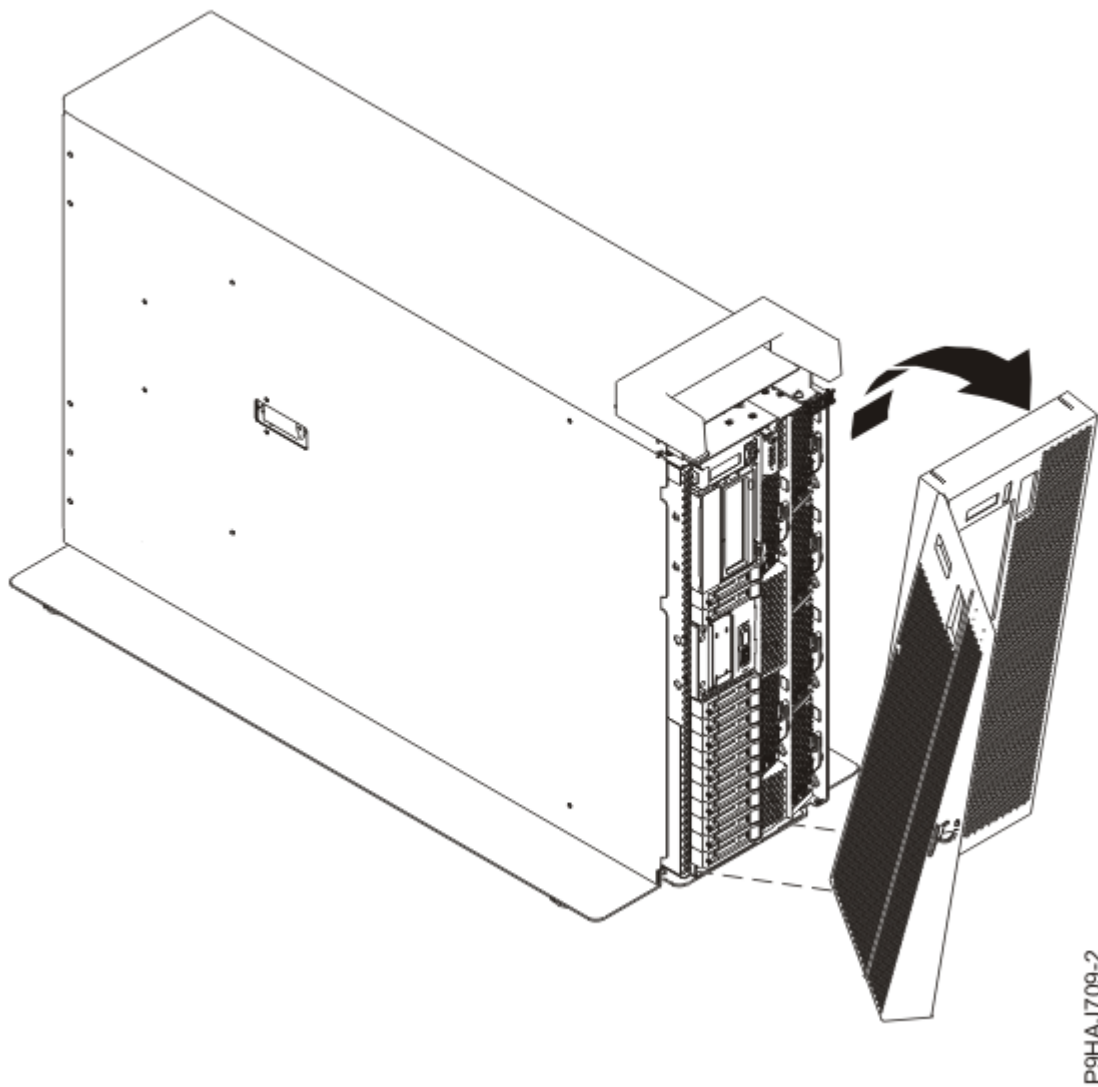
- b) Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
- c) Twist the cover latch to the left (counterclockwise) to unlock the cover as shown in [Figure 38](#) on [page 40](#).

Vertical is locked; horizontal is unlocked.



*Figure 38. Opening the front cover latch*

- d) Pull the cover away from the system as shown in [Figure 39](#) on page 41. The cover has an indentation where you can hold onto it more easily.



*Figure 39. Removing the front cover*

5. Attach the electrostatic discharge (ESD) wrist strap. Your system has ESD jacks on the front and on the rear of the system as shown in the following figure. Plug the ESD wrist strap into the ESD jack.



**Attention:**

- Attach an electrostatic discharge (ESD) wrist strap to the front ESD jack, to the rear ESD jack, or to an unpainted metal surface of your hardware to prevent the electrostatic discharge from damaging your hardware.
- When you use an ESD wrist strap, follow all electrical safety procedures. An ESD wrist strap is used for static control. It does not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.
- If you do not have an ESD wrist strap, just prior to removing the product from ESD packaging and installing or replacing hardware, touch an unpainted metal surface of the system for a minimum of 5 seconds.

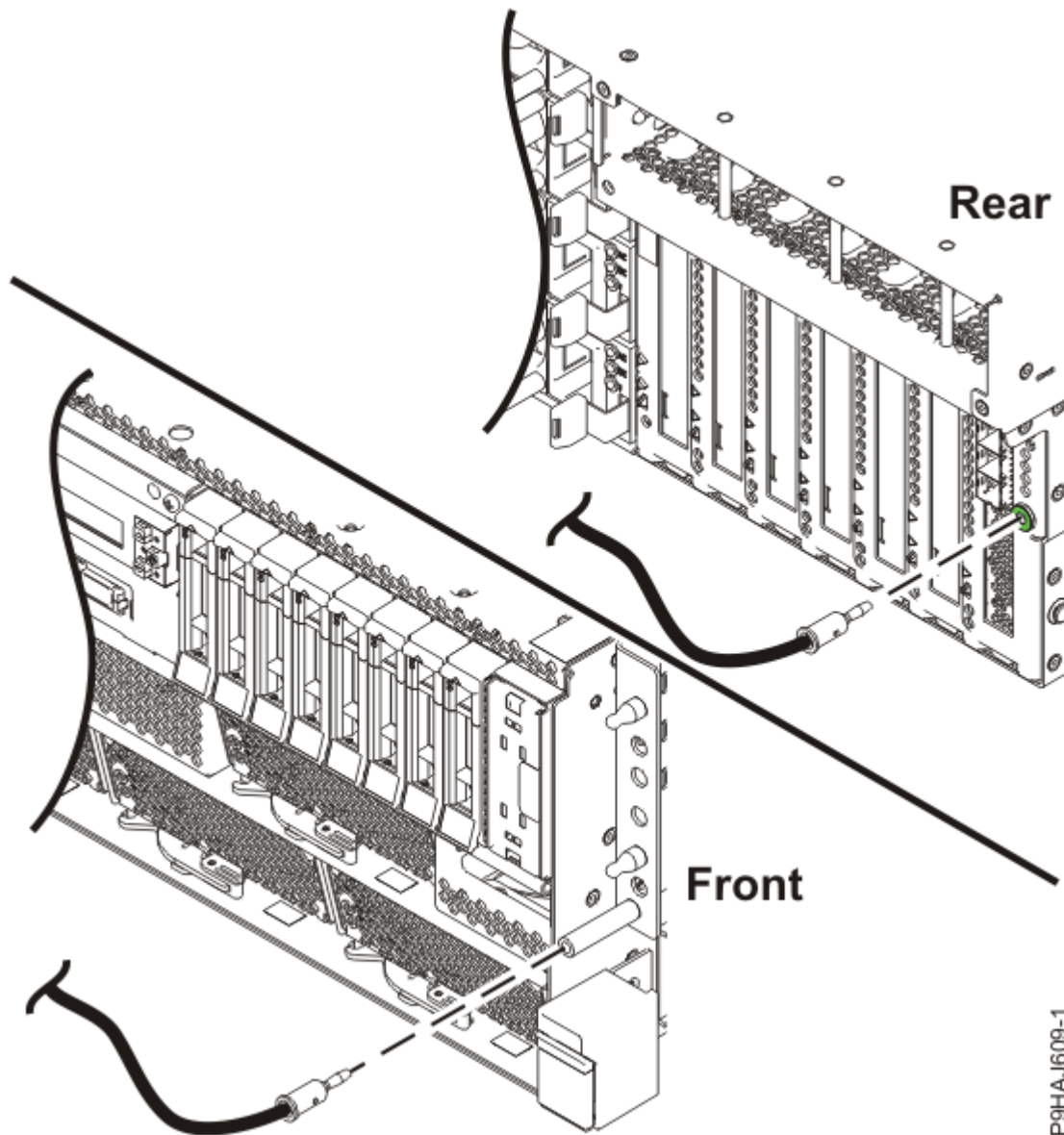


Figure 40. Location of ESD plugs

P9HAJ609-1

## Removing the control panel display from the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system

To remove a control panel display, complete the steps in this procedure.

### About this task

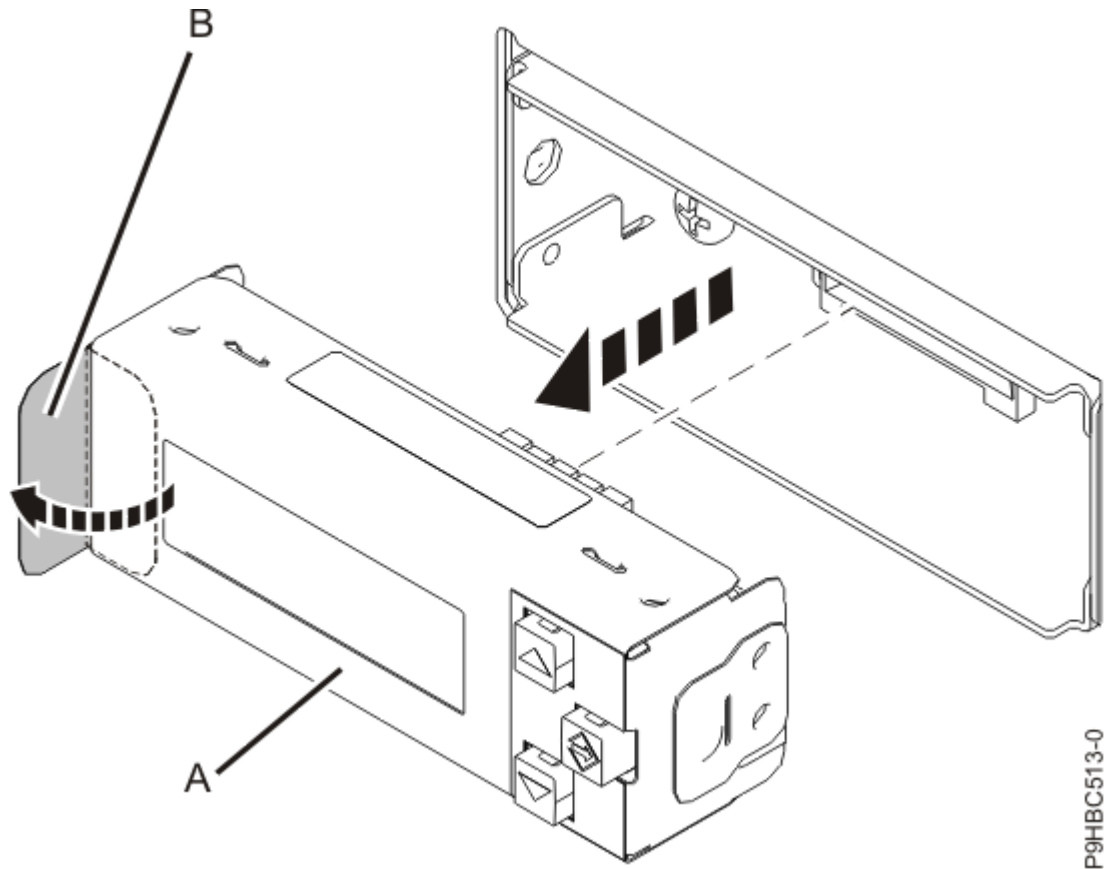
You must have at least one control panel display.

- The control panel display is required in the stand-alone tower system.
- In the rack-mounted system, a control panel display is required in one of the systems in that rack.
- If multiple systems are installed in multiple racks, a minimum of one control panel display is required in each rack that contains the systems.

### Procedure

1. Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
2. Remove the control panel display **(A)** by pulling the tab **(B)** as shown in [Figure 41 on page 43](#).





*Figure 41. Removing the control panel display*

3. If you are moving the control panel display to another system, replace the display with a filler as shown in [Figure 42](#) on page 44.

You can also place a plastic cover on the front cover, over the filler.

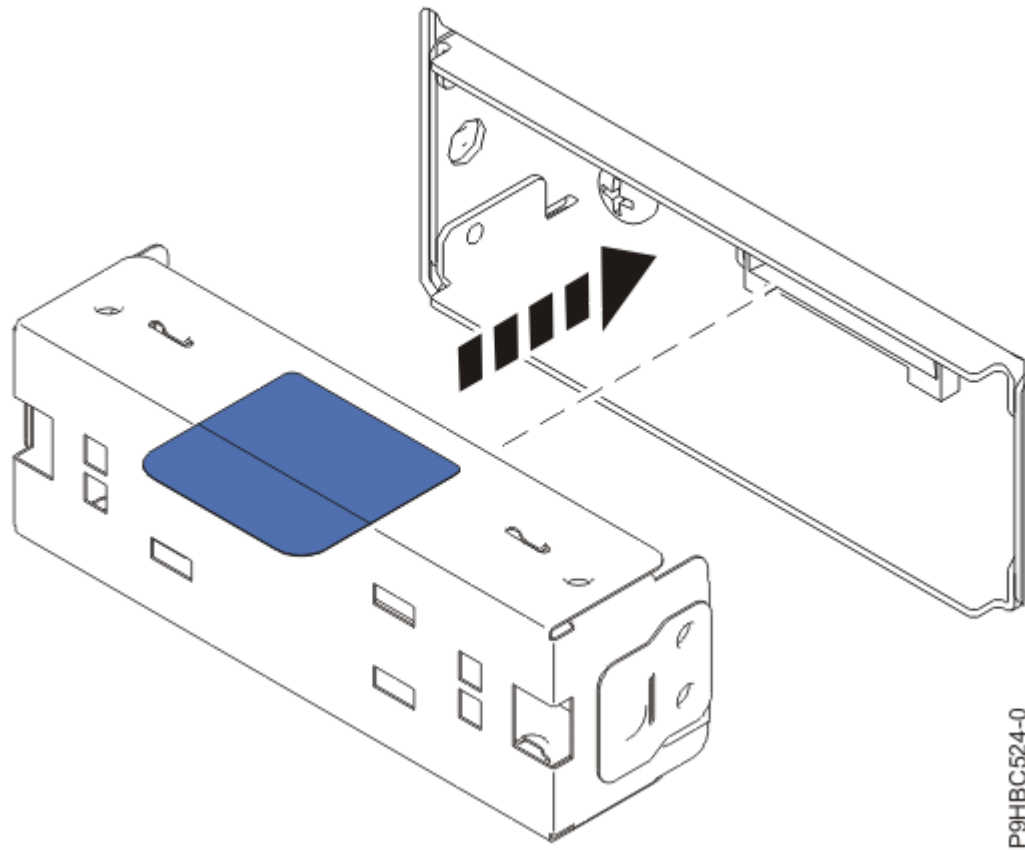


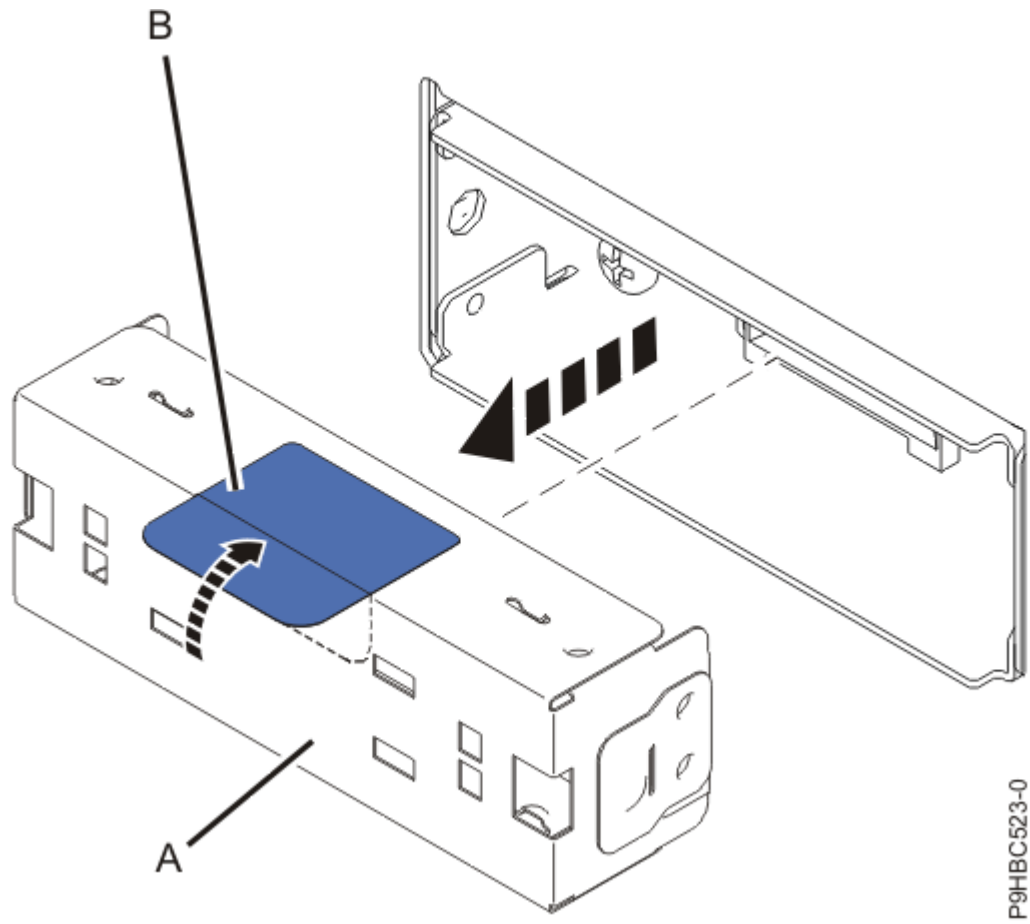
Figure 42. Inserting a display filler

### Replacing the control panel display in the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system

To replace a control panel display, complete the steps in this procedure.

#### Procedure

1. Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
2. If needed, remove the display filler **(A)** using tab **(B)** as shown in [Figure 43 on page 45](#).  
If a plastic cover is in the front cover, remove the plastic cover to view the display.



*Figure 43. Removing a display filler*

3. **Note:** Ensure that you wait at least 30 seconds after removing the old control panel display, then install the new display.

Insert the control panel display by pushing it into the housing as shown in [Figure 44 on page 46](#). It clicks into place.

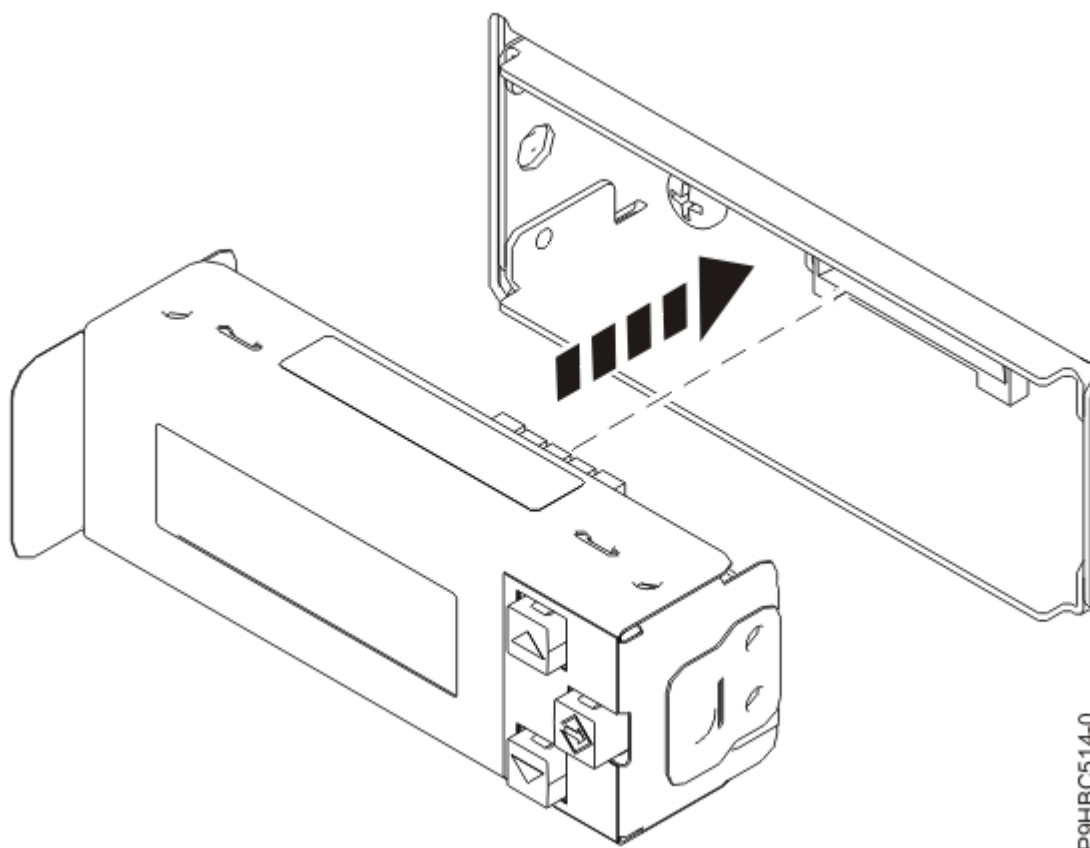


Figure 44. Inserting the control panel display

### Preparing the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system for operation after removing and replacing the control panel display

To prepare the system for operation after removing and replacing a control panel display, complete the steps in this procedure.

#### Procedure

1. Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
2. If you removed the power cords, connect all power cords to the system that you are servicing.
3. If you needed to power off the server to complete the repair operation, start the system. For instructions, see [Starting a system](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustartsys.htm) ([www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustartsys.htm](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustartsys.htm)).
4. Turn off the identify LED. For instructions, see [Deactivating an identify LED](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj_turn_off_identify_led.htm) ([www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj\\_turn\\_off\\_identify\\_led.htm](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj_turn_off_identify_led.htm)).
5. Verify whether the control panel display is operational by checking the progress codes.
6. For a rack-mounted system, gently push the front cover **(A)** in until the cover snaps into place. The cover has indentations where you can hold it more easily. Use the alignment pins **(B)** to secure the cover to the system as shown in [Figure 45](#) on page 47.

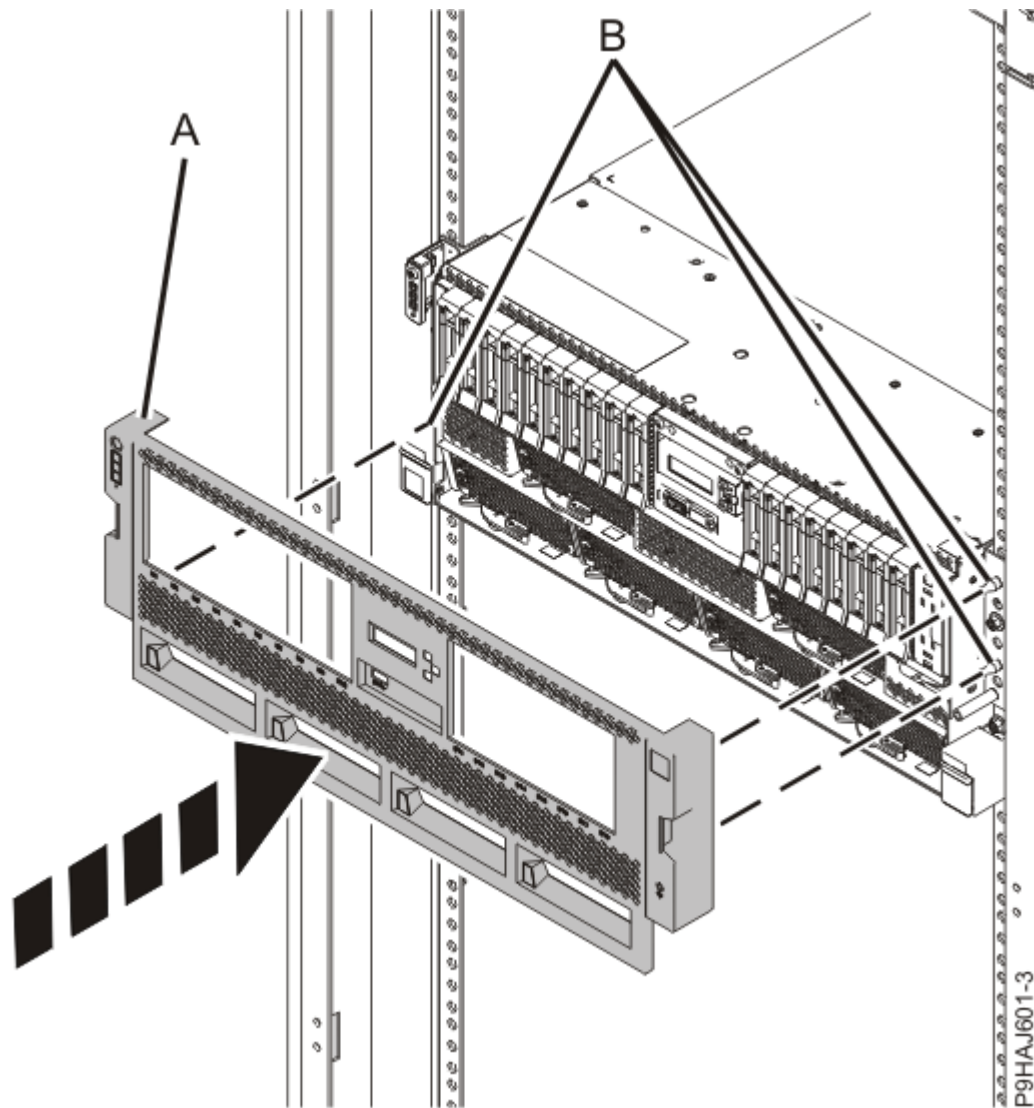
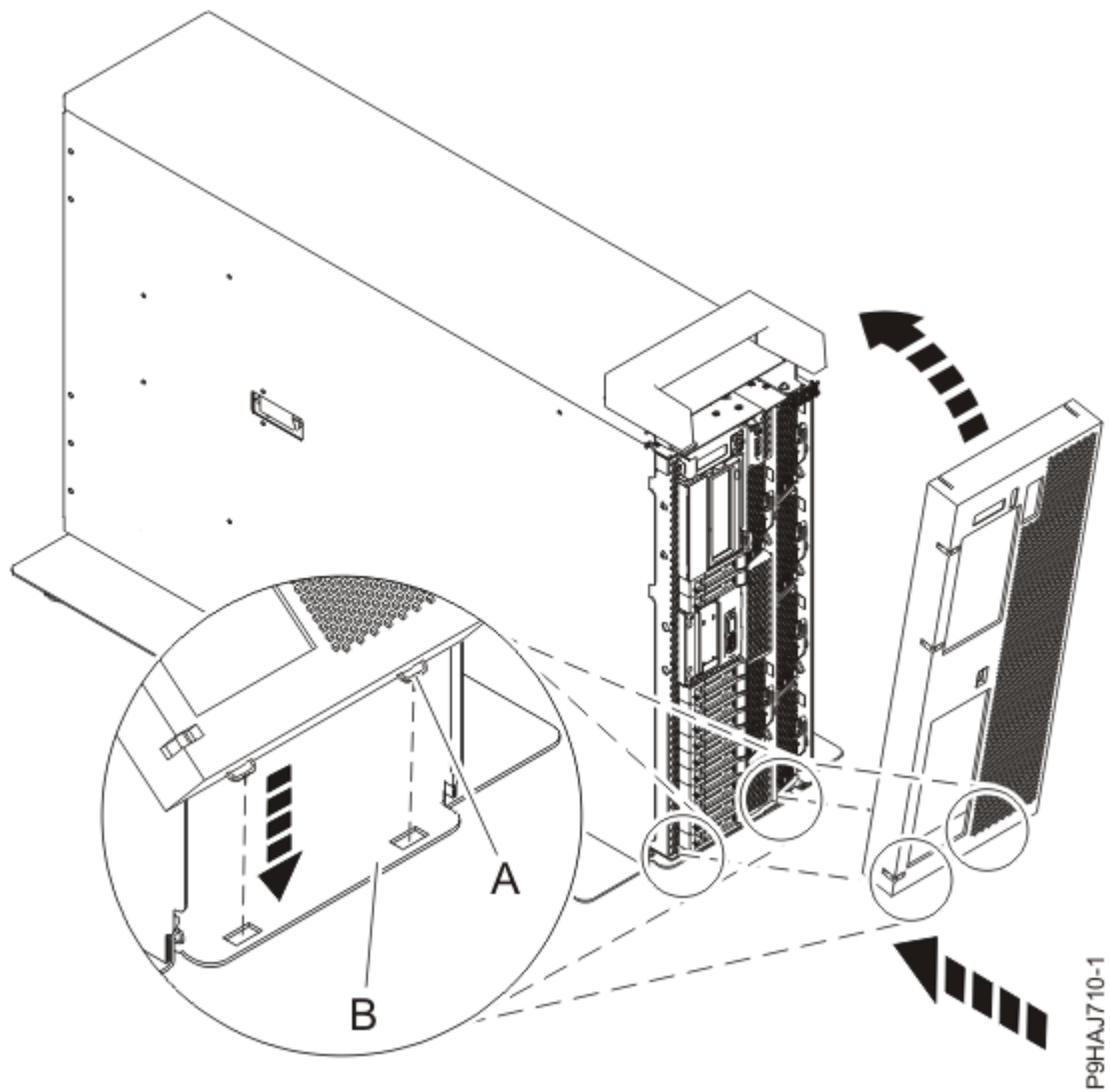


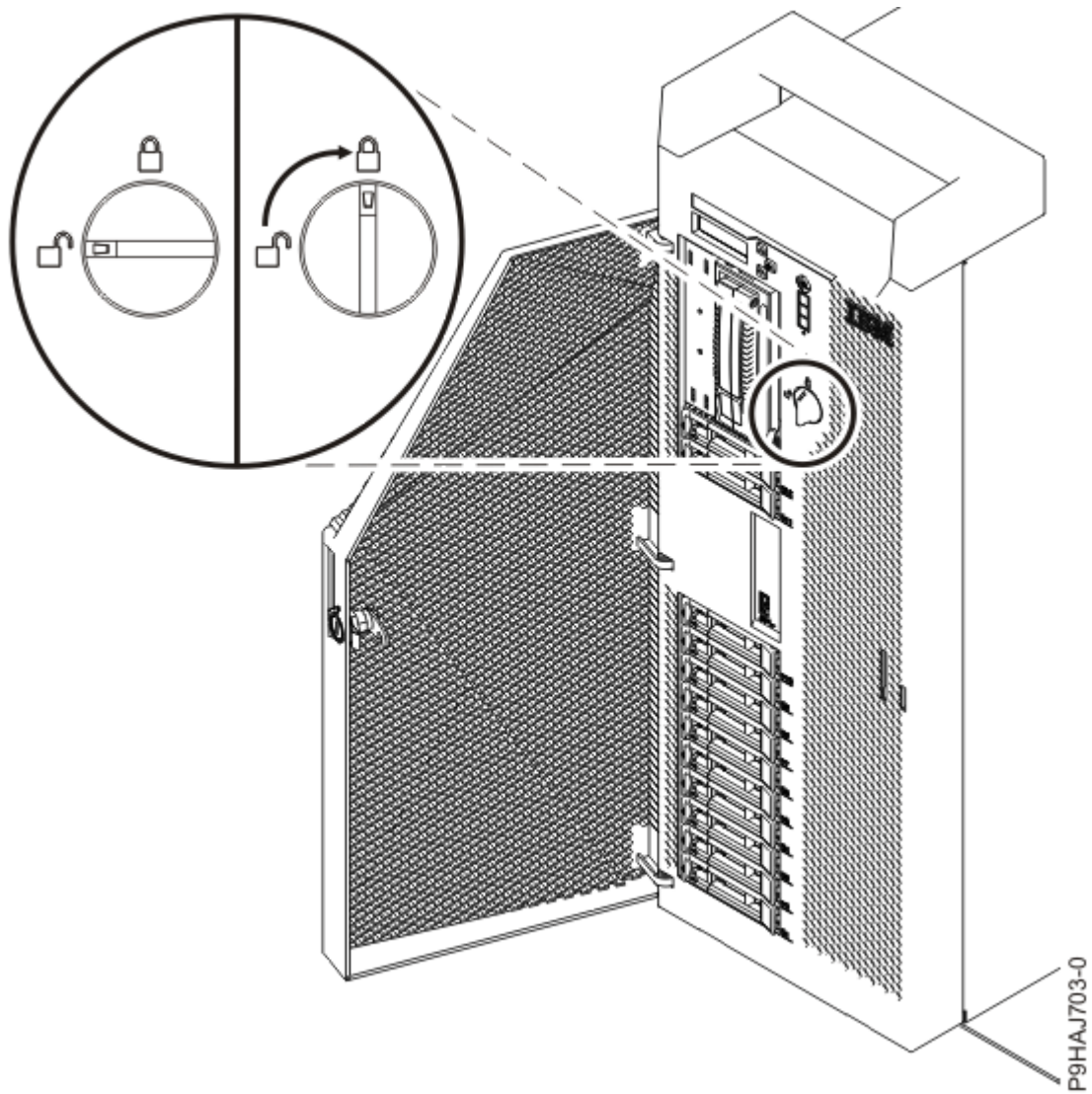
Figure 45. Installing the front cover

7. For a stand-alone system, install the front cover and door by completing these steps.
  - a) Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
  - b) Align the cover until the two cover tabs **(A)** are seated into the slots on the base plate **(B)** as shown in [Figure 46 on page 48](#).



*Figure 46. Installing the front cover and door*

- c) Rotate the cover up and towards the system until the release latch is seated into its respective slot.
- d) Twist the cover latch to the right (clockwise) to lock the cover as shown in [Figure 47](#) on page 49. Vertical is locked; horizontal is unlocked.



*Figure 47. Closing the front cover latch*

- e) Close the front door. Insert the front door key into the lock as shown in [Figure 48](#) on page 50. Twist the key to the right (clockwise) to lock the door. Horizontal is locked; vertical is unlocked.

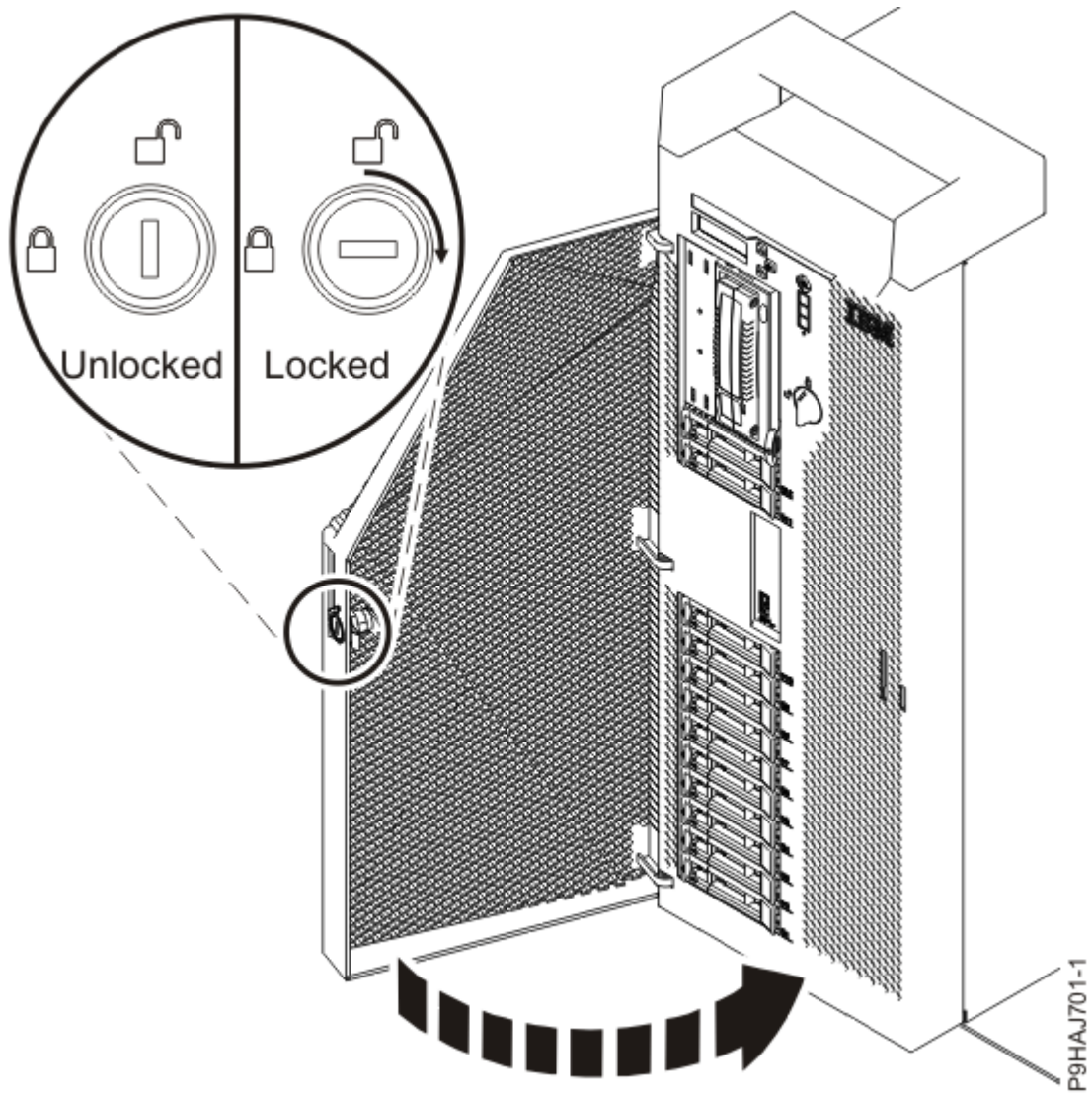


Figure 48. Locking the front door



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# Control panel cables for the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S

Find information about removing and replacing the control panel cables in the IBM Power System S914 (9009-41A and 9009-41G), IBM Power System S924 (9009-42A and 9009-42G), IBM Power System H924 (9223-42H), or IBM Power System H924S (9223-42S) server.

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## Removing and replacing the control panel cable in the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S

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Find information about removing and replacing the control panel cable in the IBM Power System S914 (9009-41A and 9009-41G), IBM Power System S924 (9009-42A and 9009-42G), IBM Power System H924 (9223-42H), or IBM Power System H924S (9223-42S) server.

### About this task

**Note:** Removing or replacing this feature is a customer task. You can complete this task yourself, or contact a service provider to complete the task for you. You might be charged a fee by the service provider for this service.

If your system is managed by the Hardware Management Console (HMC), use the HMC to repair a part in the system. For instructions, see [Repairing a part by using the HMC](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj_hmc_repair.htm) (www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj\_hmc\_repair.htm).

If you do not have an HMC, use the following procedures to remove and replace the control panel cable.

### Preparing the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system to remove and replace the control panel cable

To prepare the system to remove and replace a control panel cable, complete the steps in this procedure.

#### Procedure

1. Stop the system. For instructions, see [Stopping a system](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustopsys.htm) (www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustopsys.htm).
2. Identify the part and the system that you are working on. For instructions, see [Identifying a part](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/sal.htm) (www.ibm.com/support/knowledgecenter/POWER9/p9haj/sal.htm).  
Use the blue identify LED on the enclosure to locate the system. Ensure that the serial number of the system matches the serial number to be serviced.
3. Use the blue LED to identify the server.  
Ensure that the serial number of the system matches the serial number to be serviced.
4. Label and disconnect the power cords from the system unit.  
See [Figure 49 on page 52](#) or [Figure 50 on page 53](#).

#### Notes:

- This system might be equipped with two or more power supplies. If the removing and replacing procedures require the system power to be turned off, ensure that all the power sources to the system are disconnected.
- The power cord **(B)** is fastened to the system with hook-and-loop fastener **(A)**. If you are placing the system in a service position after you disconnect the power cords, ensure that you unstrap the fastener.

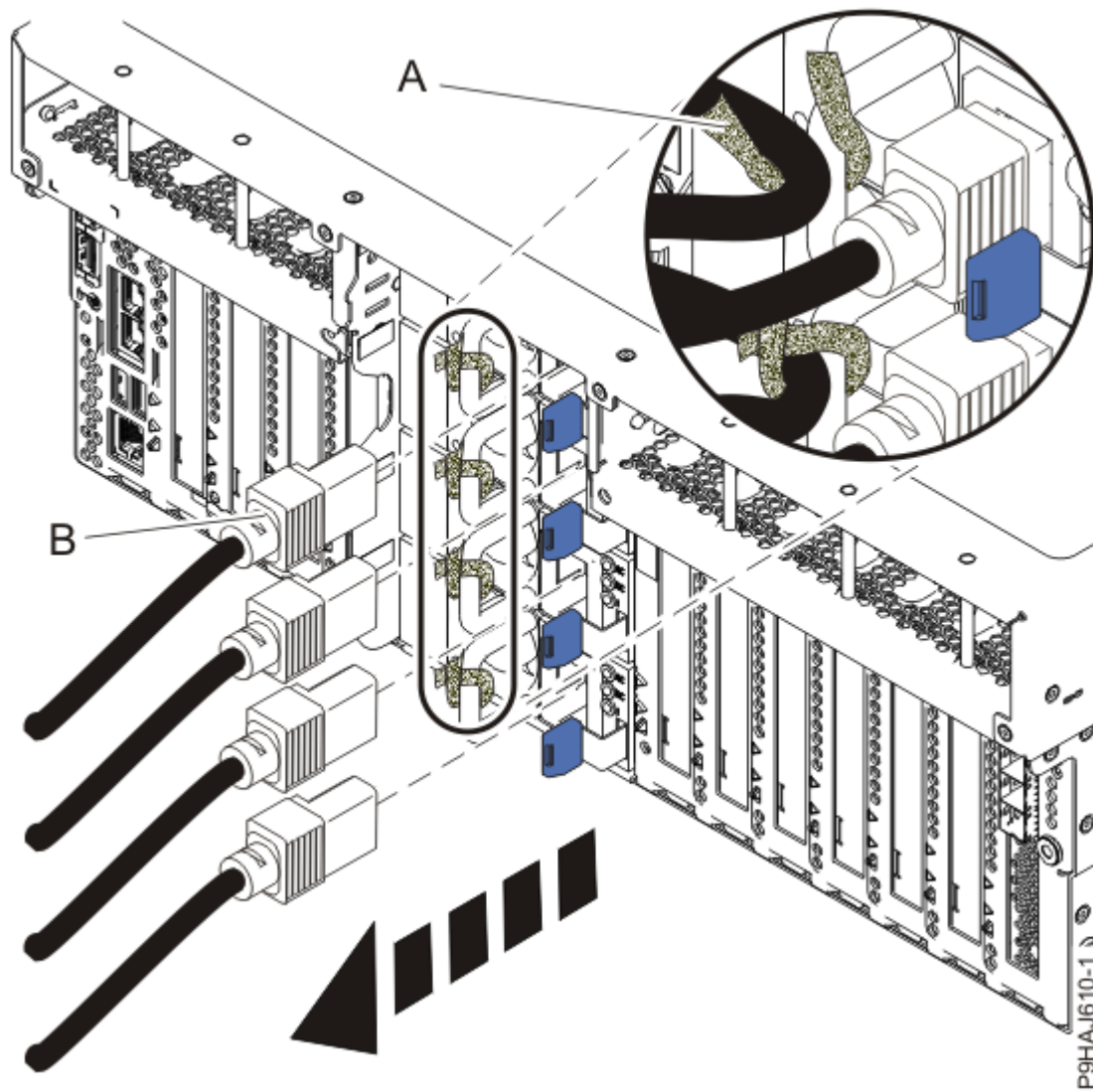


Figure 49. Removing the power cords from a rack-mounted server

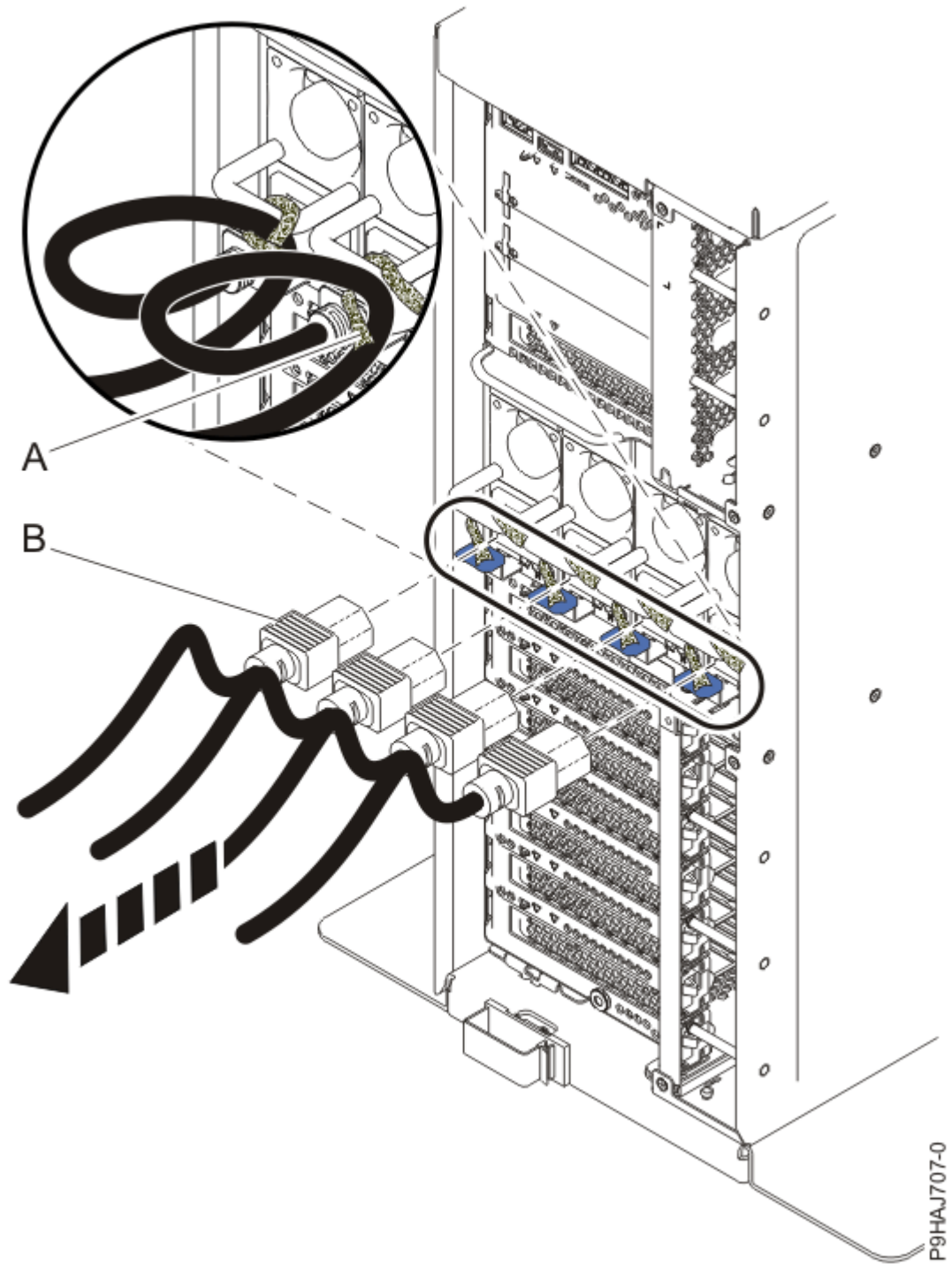
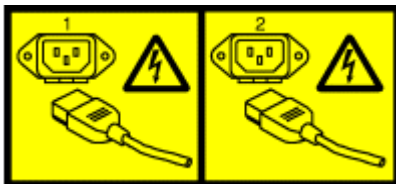


Figure 50. Removing the power cords from a stand-alone server

(L003)



or



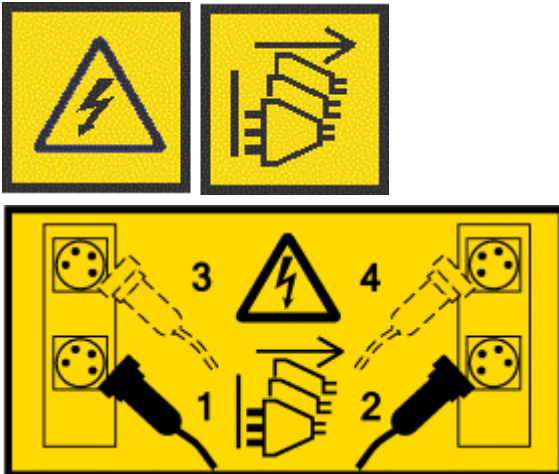
or

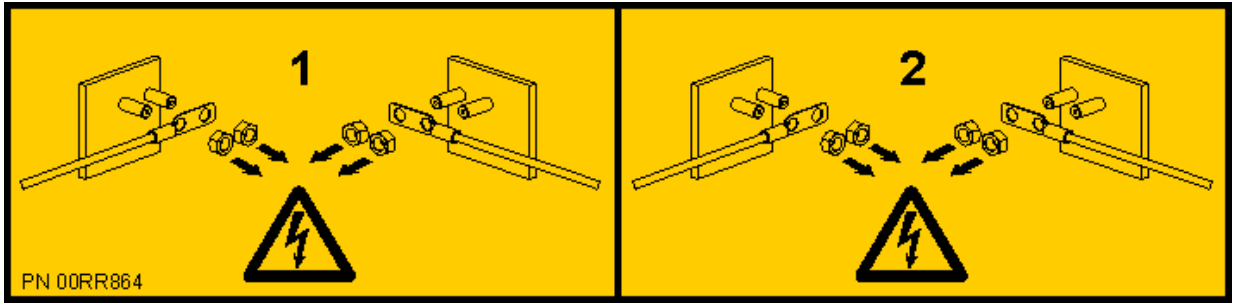


or



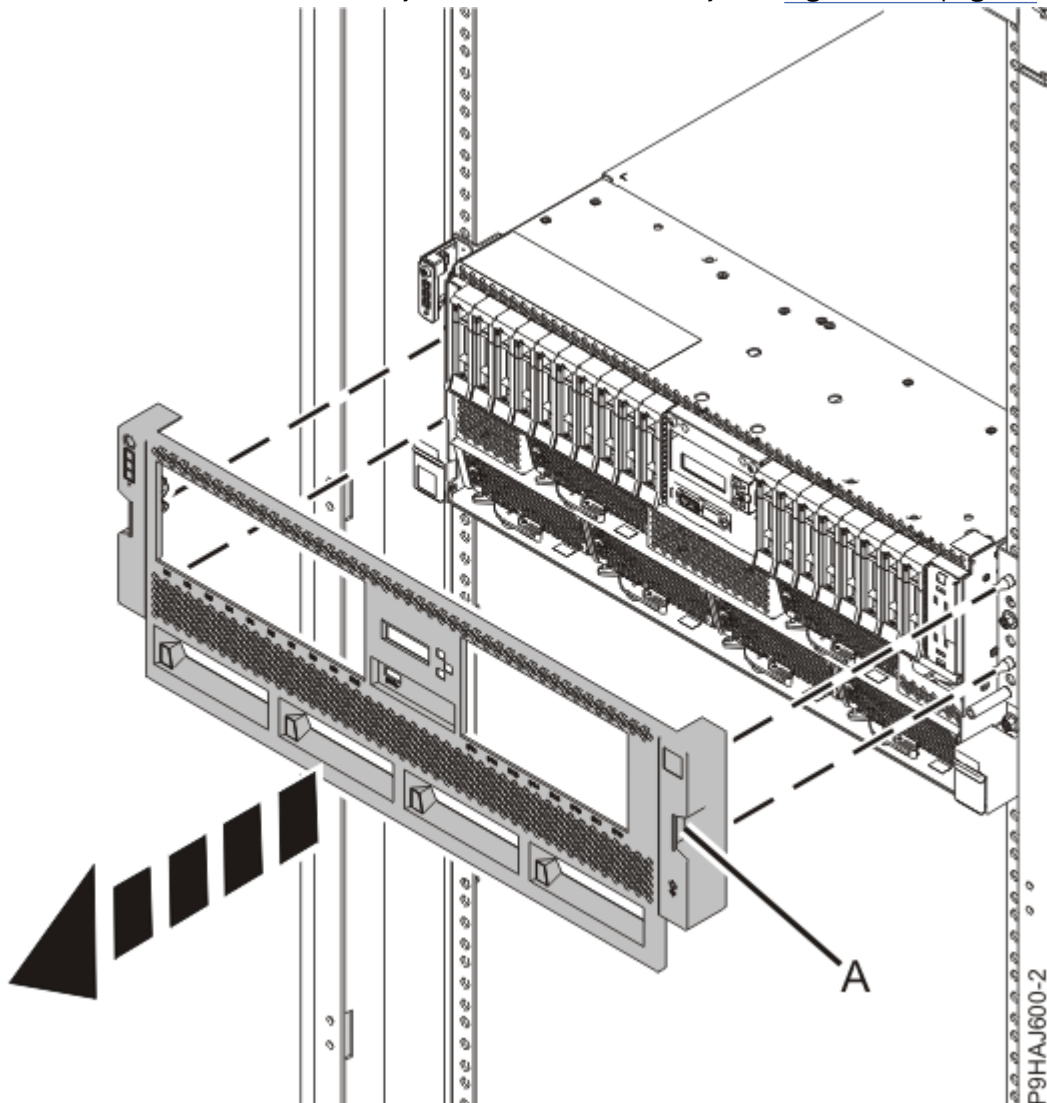
or





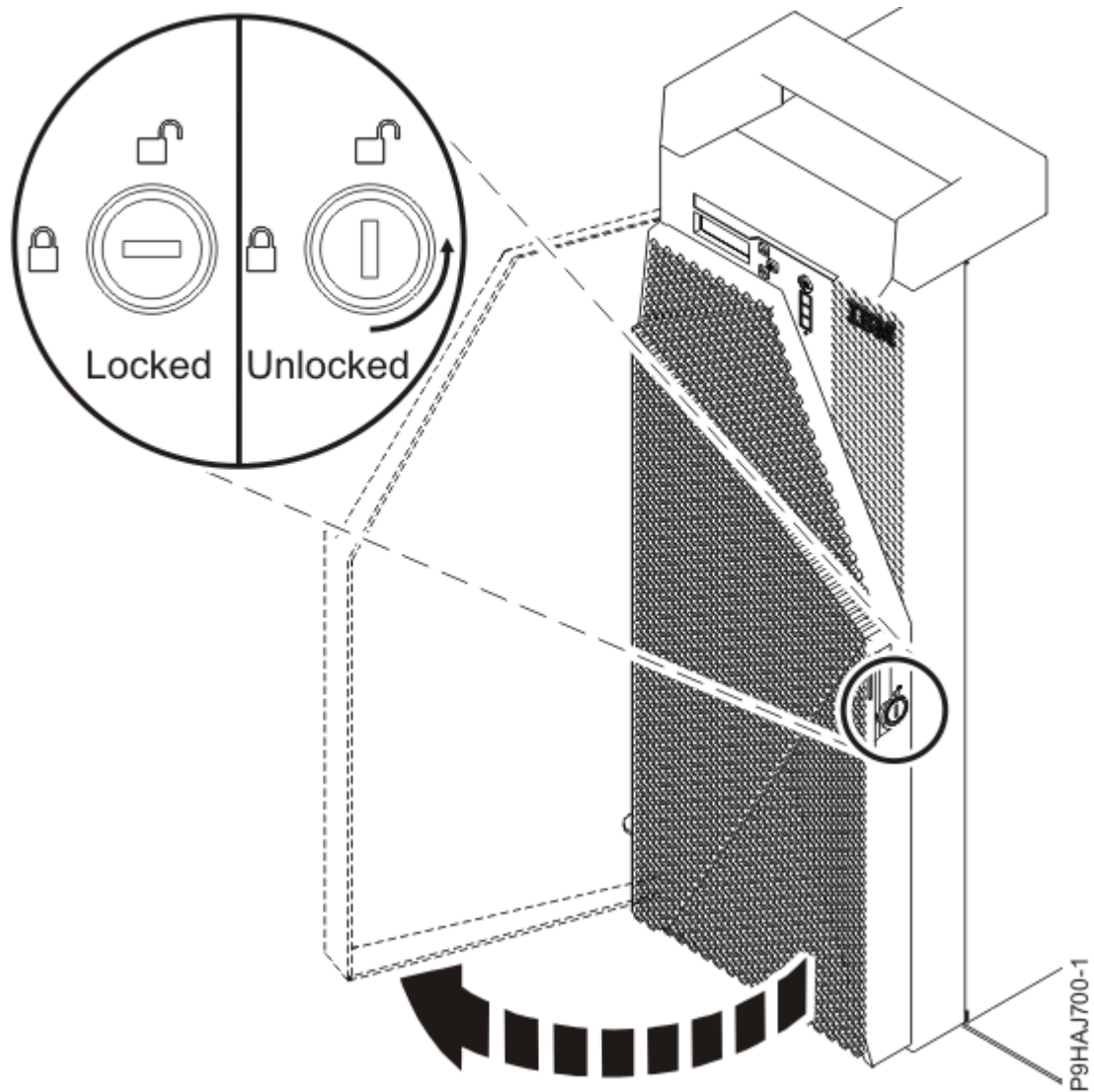
**⚠ DANGER:** Multiple power cords. The product might be equipped with multiple AC power cords or multiple DC power cables. To remove all hazardous voltages, disconnect all power cords and power cables. (L003)

5. For a rack-mounted system, remove the front cover by pulling it away from the system. The cover has indentations **(A)** where you can hold it more easily. See [Figure 51](#) on page 55.



*Figure 51. Removing the front cover*

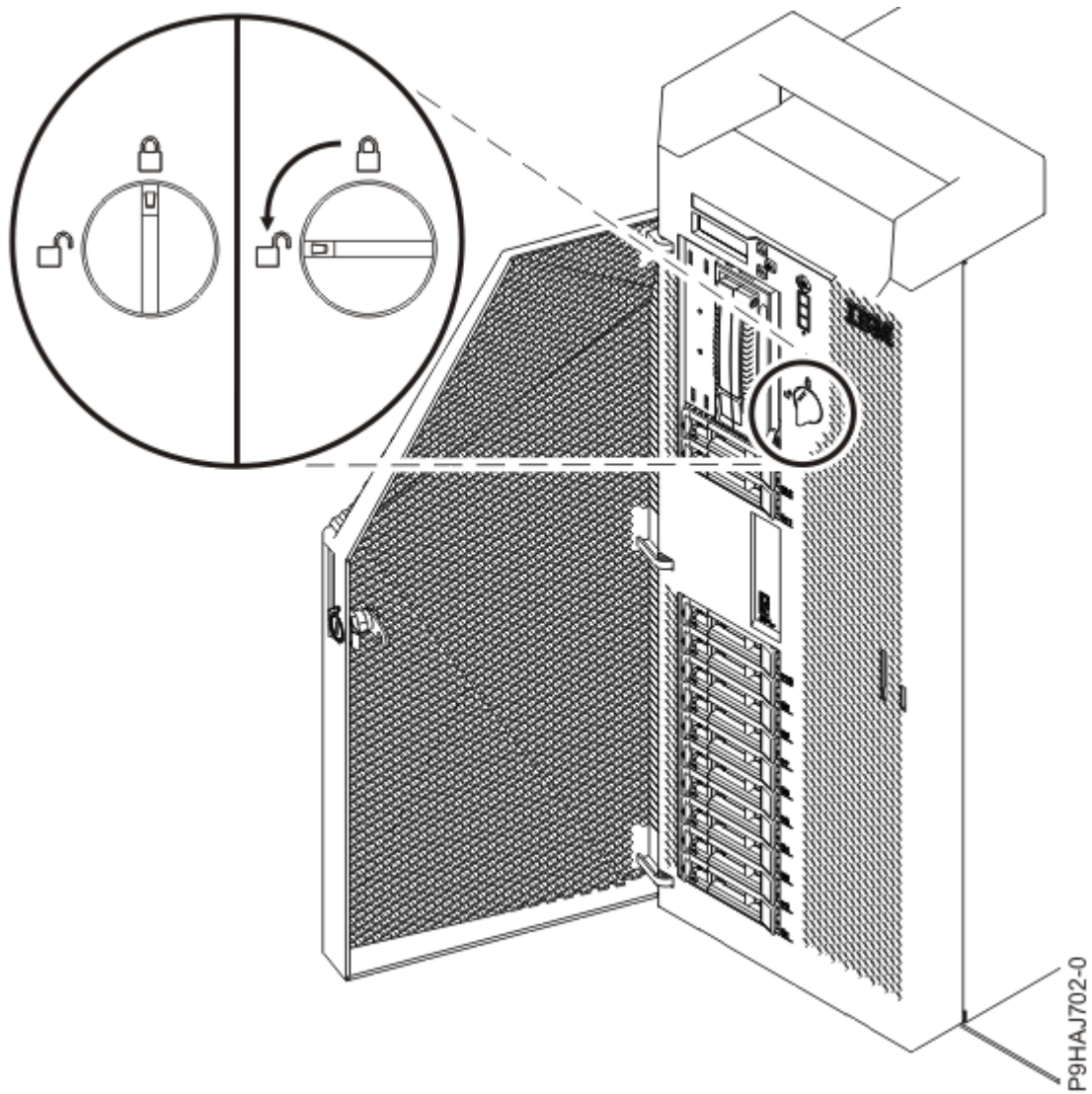
6. For a stand-alone system, remove the front cover and door by completing these steps.
  - a) Insert the front door key into the lock as shown in [Figure 52](#) on page 56. Twist the key to the left (counterclockwise) to unlock the door. Horizontal is locked; vertical is unlocked. Open the front door.



*Figure 52. Unlocking the front door*

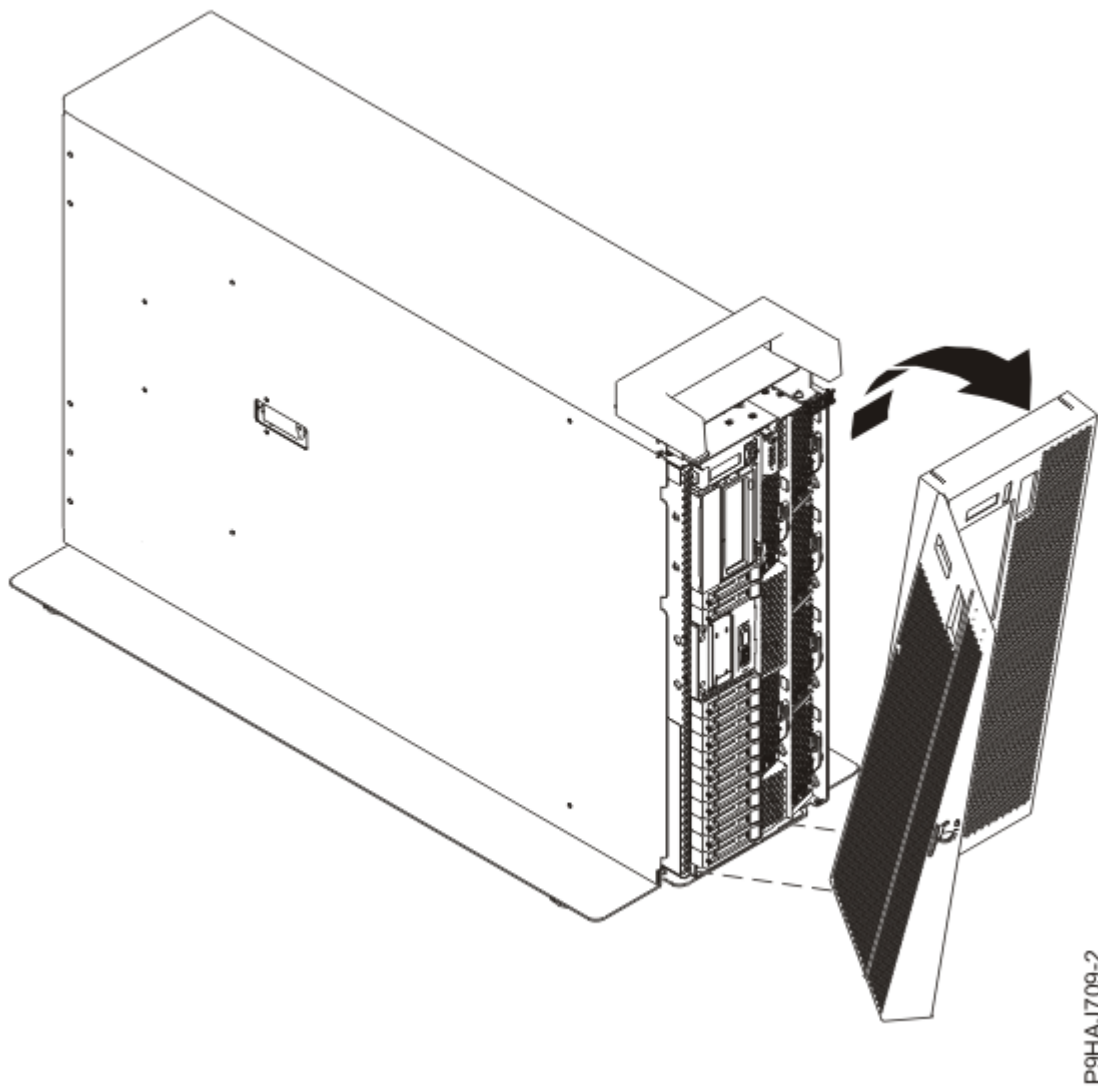
- b) Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
- c) Twist the cover latch to the left (counterclockwise) to unlock the cover as shown in [Figure 53](#) on [page 57](#).

Vertical is locked; horizontal is unlocked.



*Figure 53. Opening the front cover latch*

- d) Pull the cover away from the system as shown in [Figure 54](#) on page 58.  
The cover has an indentation where you can hold onto it more easily.



*Figure 54. Removing the front cover*

7. For a rack-mounted system, open the side latches **(A)** and pull the latches to slide the system unit fully into the service position until the slides click and hold the system unit securely. Ensure that the screws inside the latches are not secured to the rack.

See the following figure.

Remove the hook-and-loop fasteners that secure the cable management arms. Ensure that the cable management arms can move freely. Ensure that the cables at the rear of the system do not catch or bind as you pull the system unit into the service position.

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.



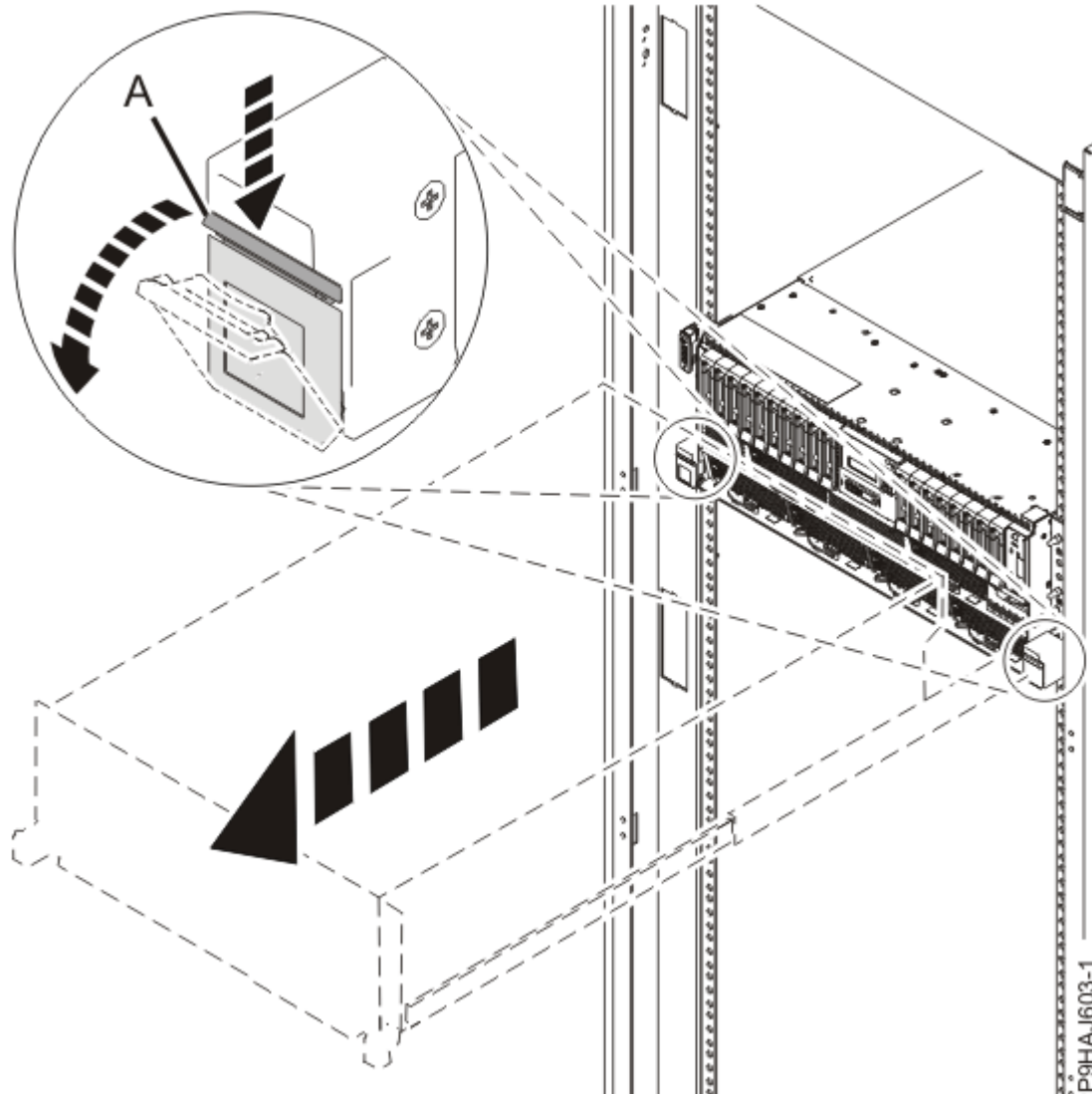


Figure 55. Releasing the side latches

8. Attach the electrostatic discharge (ESD) wrist strap. Your system has ESD jacks on the front and on the rear of the system as shown in the following figure. Plug the ESD wrist strap into the ESD jack.

 **Attention:**

- Attach an electrostatic discharge (ESD) wrist strap to the front ESD jack, to the rear ESD jack, or to an unpainted metal surface of your hardware to prevent the electrostatic discharge from damaging your hardware.

- When you use an ESD wrist strap, follow all electrical safety procedures. An ESD wrist strap is used for static control. It does not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.
- If you do not have an ESD wrist strap, just prior to removing the product from ESD packaging and installing or replacing hardware, touch an unpainted metal surface of the system for a minimum of 5 seconds.

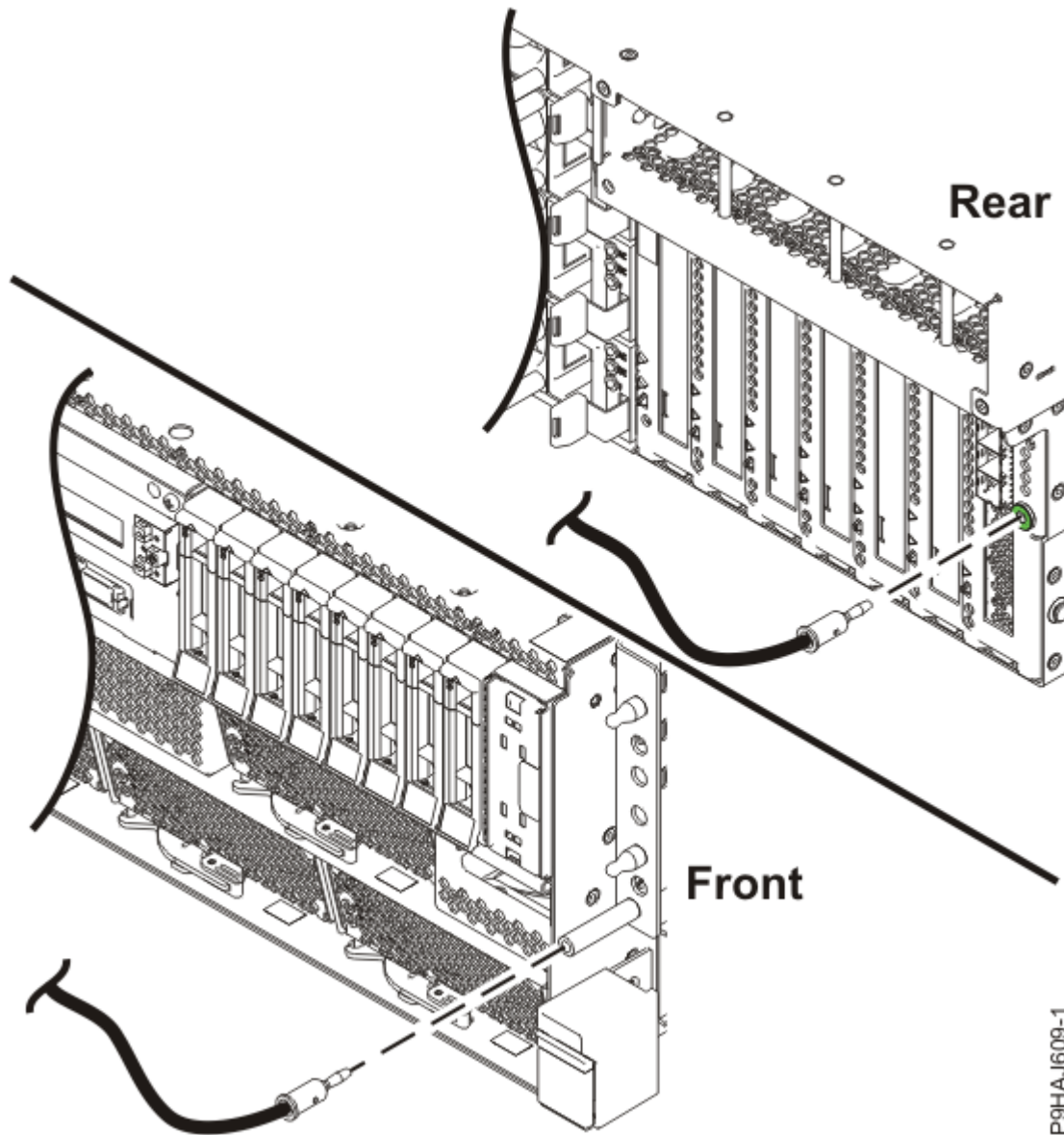


Figure 56. Location of ESD plugs

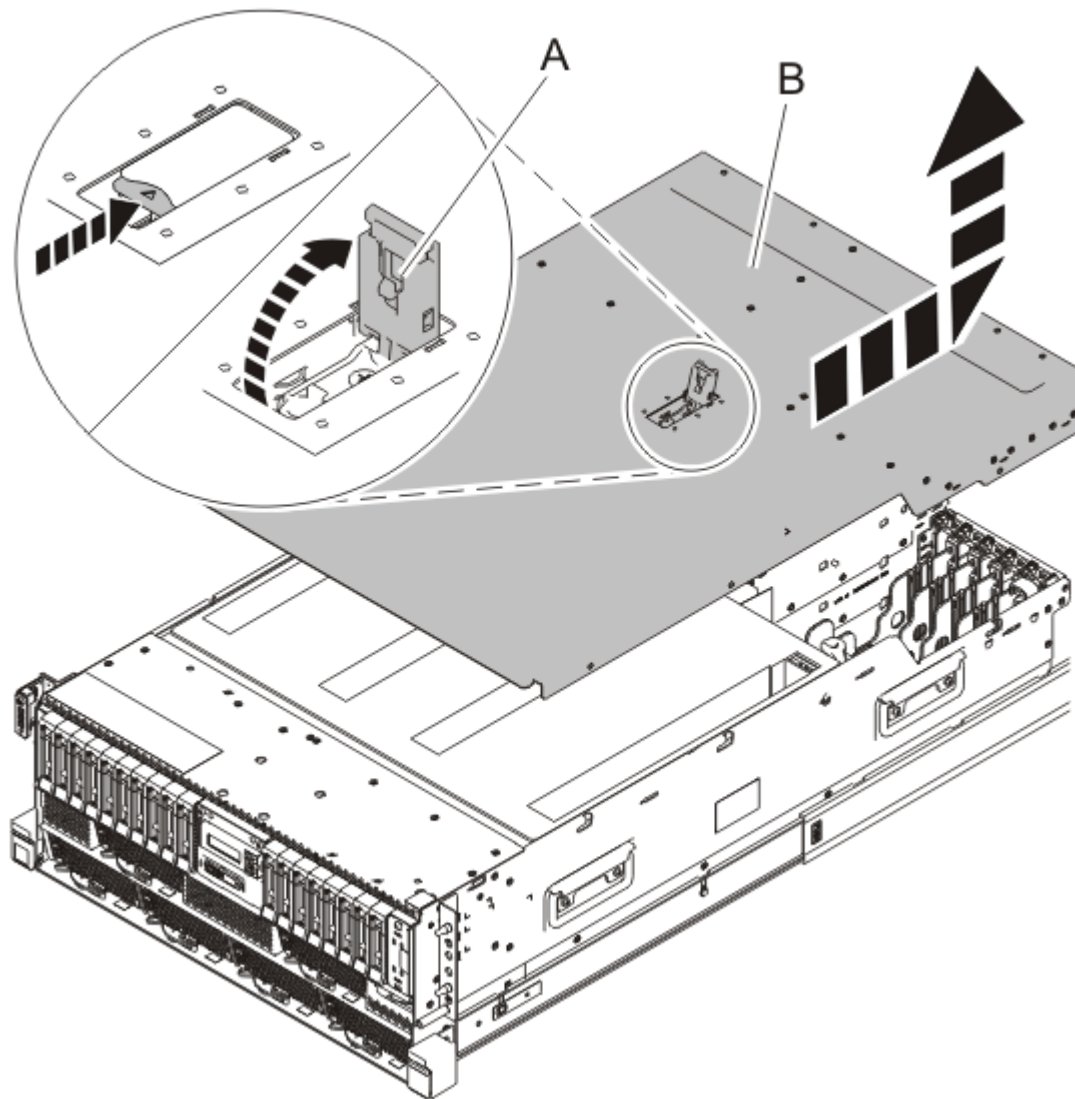
9. Remove the service access cover.

For a rack-mounted system, complete the following steps. Refer to [Figure 57](#) on page 61.



**Attention:** Operating the system without the service access cover on for more than 10 minutes when the system power is turned on might damage the system components.

- Release the service cover latch by pushing the release latch **(A)** in the direction shown.
- Slide the cover **(B)** off 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.



P9HAJ605-2

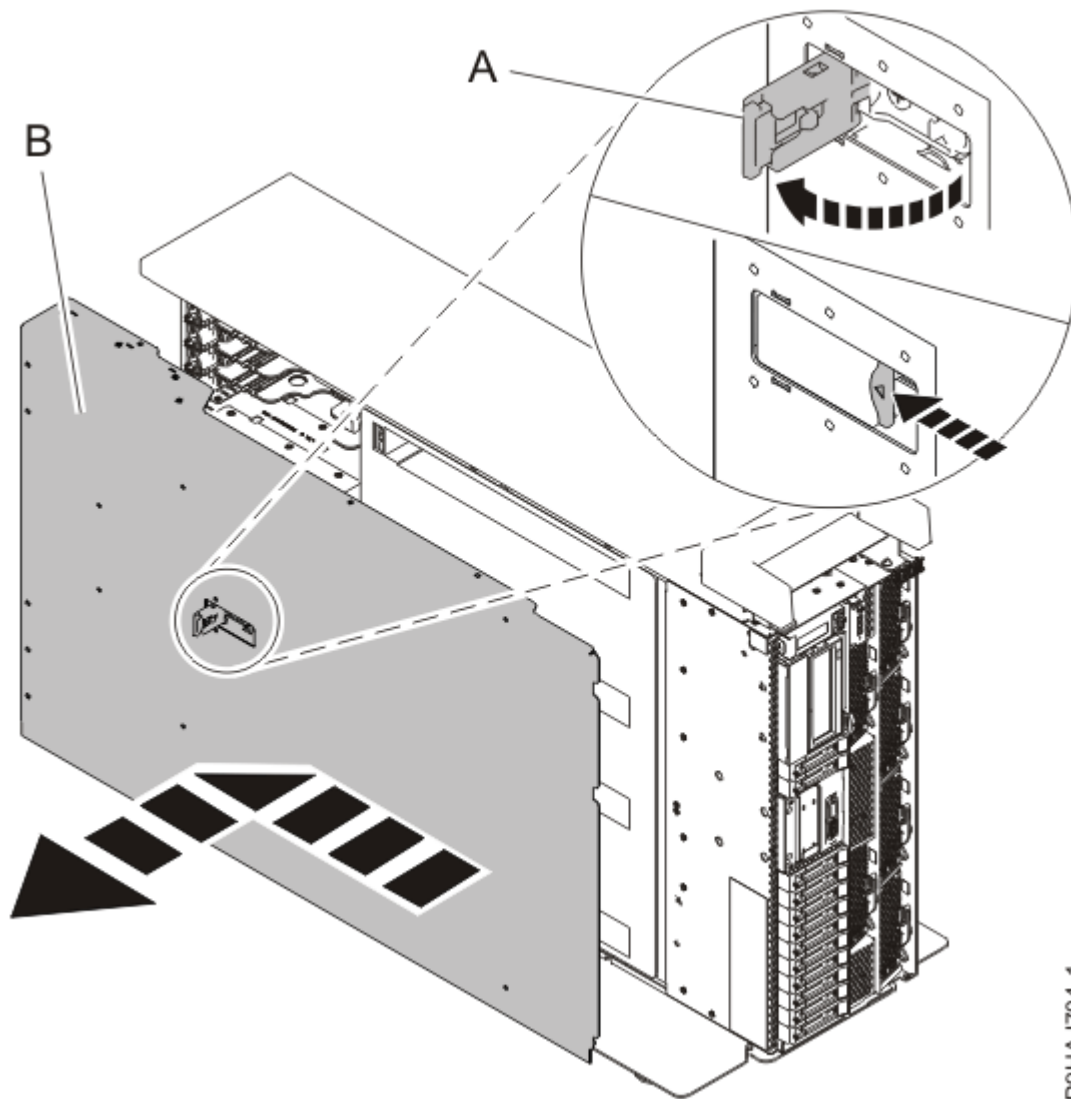
Figure 57. Removing the service access cover from a rack-mounted system

For a stand-alone system, complete the following steps. Refer to [Figure 58](#) on [page 62](#).



**Attention:** Operating the system without the service access cover on for more than 10 minutes when the system power is turned on might damage the system components.

- a. Release the latch by pushing the release latch **(A)** in the direction shown.
- b. Slide the cover **(B)** off the system unit. When the front of the service access cover has cleared the upper frame ledge, lift the cover up and off the system unit.



P9HAJ704-1

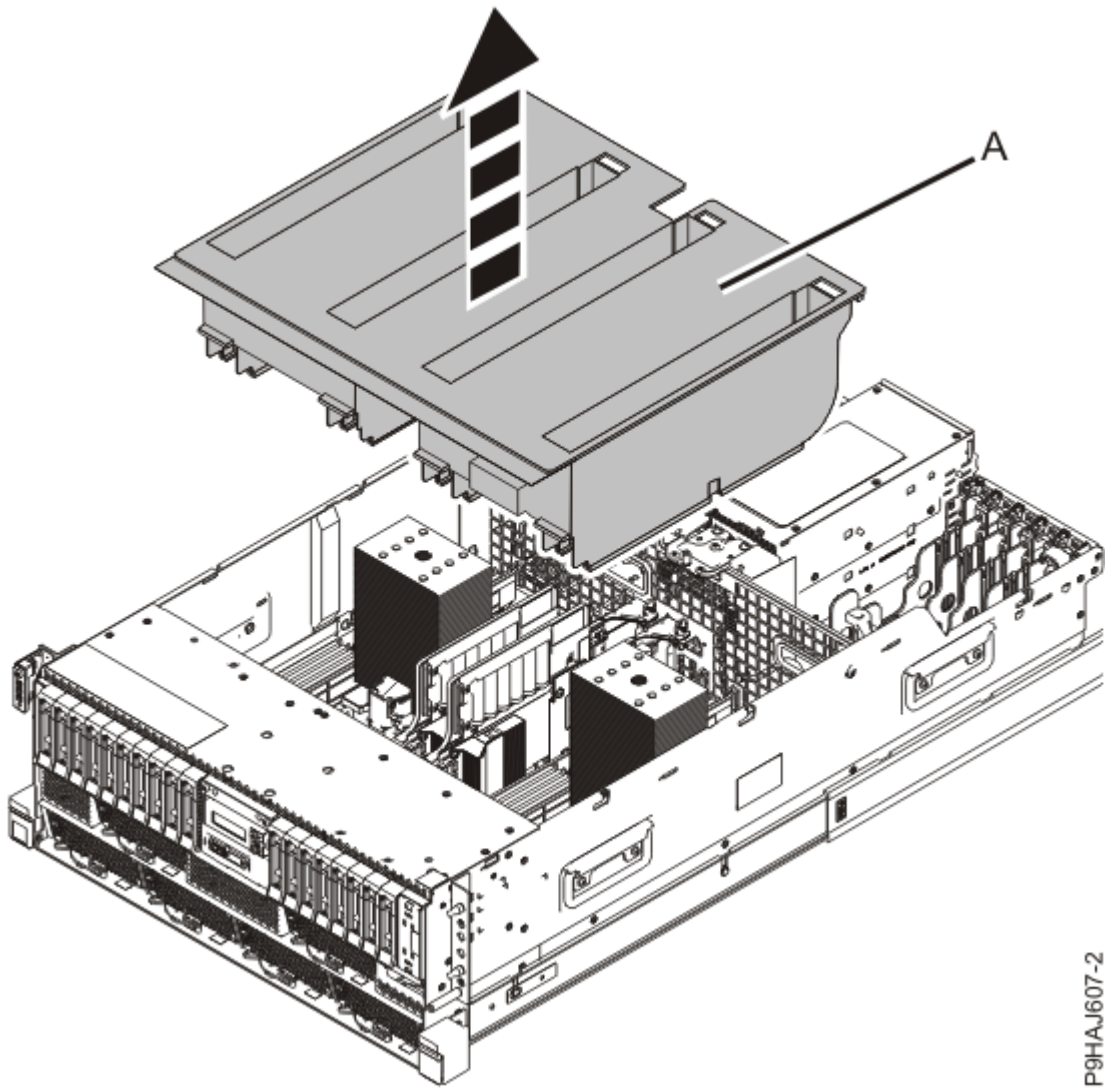
Figure 58. Removing the service access cover

### Removing the control panel cable from the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system

To remove a control panel cable, complete the steps in this procedure.

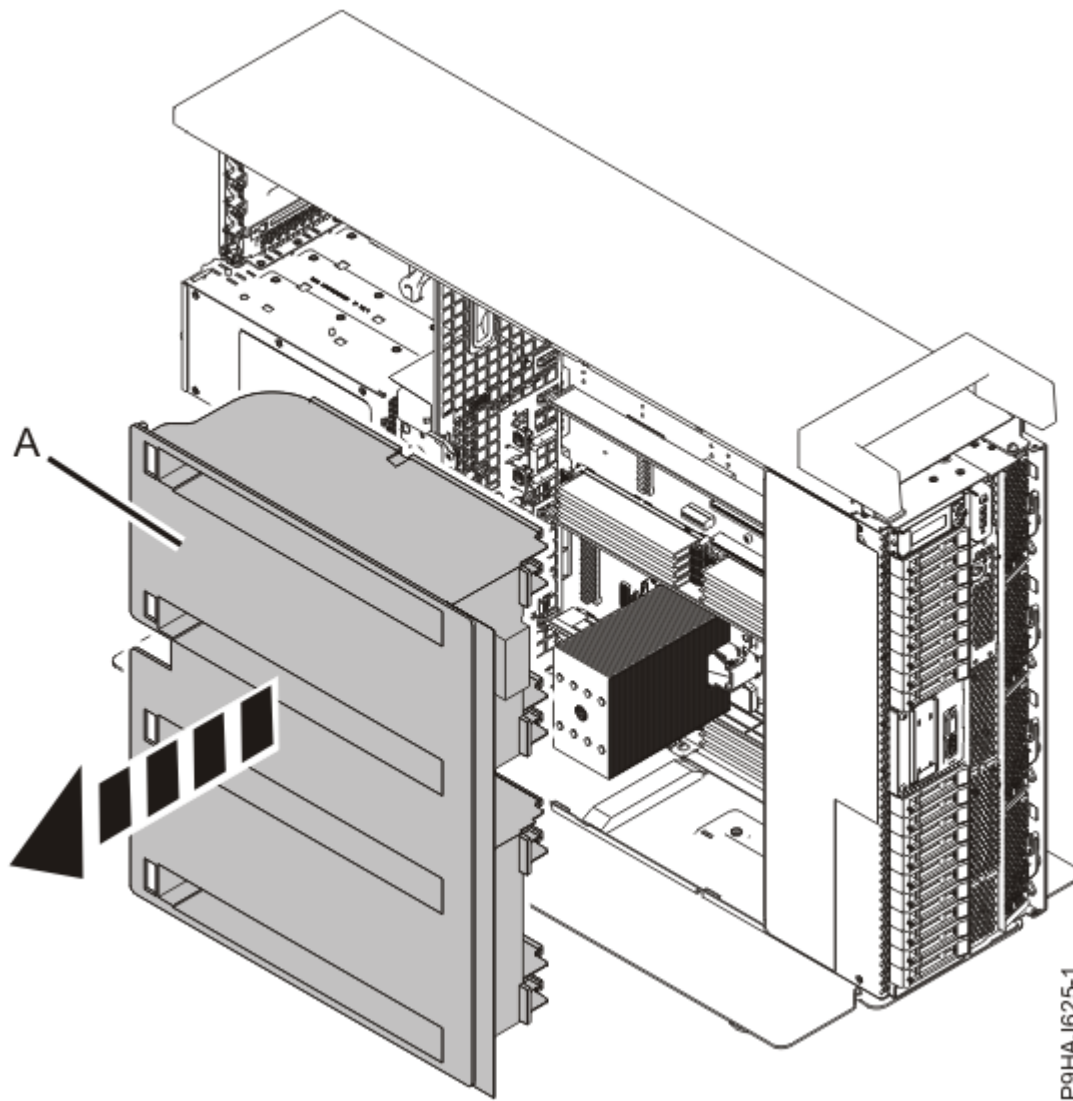
#### Procedure

1. Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
2. For a rack-mounted system, lift the air baffle (A) straight up as shown in [Figure 59 on page 63](#).  
For a stand-alone system, remove the air baffle (A) straight out as shown in [Figure 60 on page 64](#).  
Place the air baffle upside down on a clean area.



P9HAJ607-2

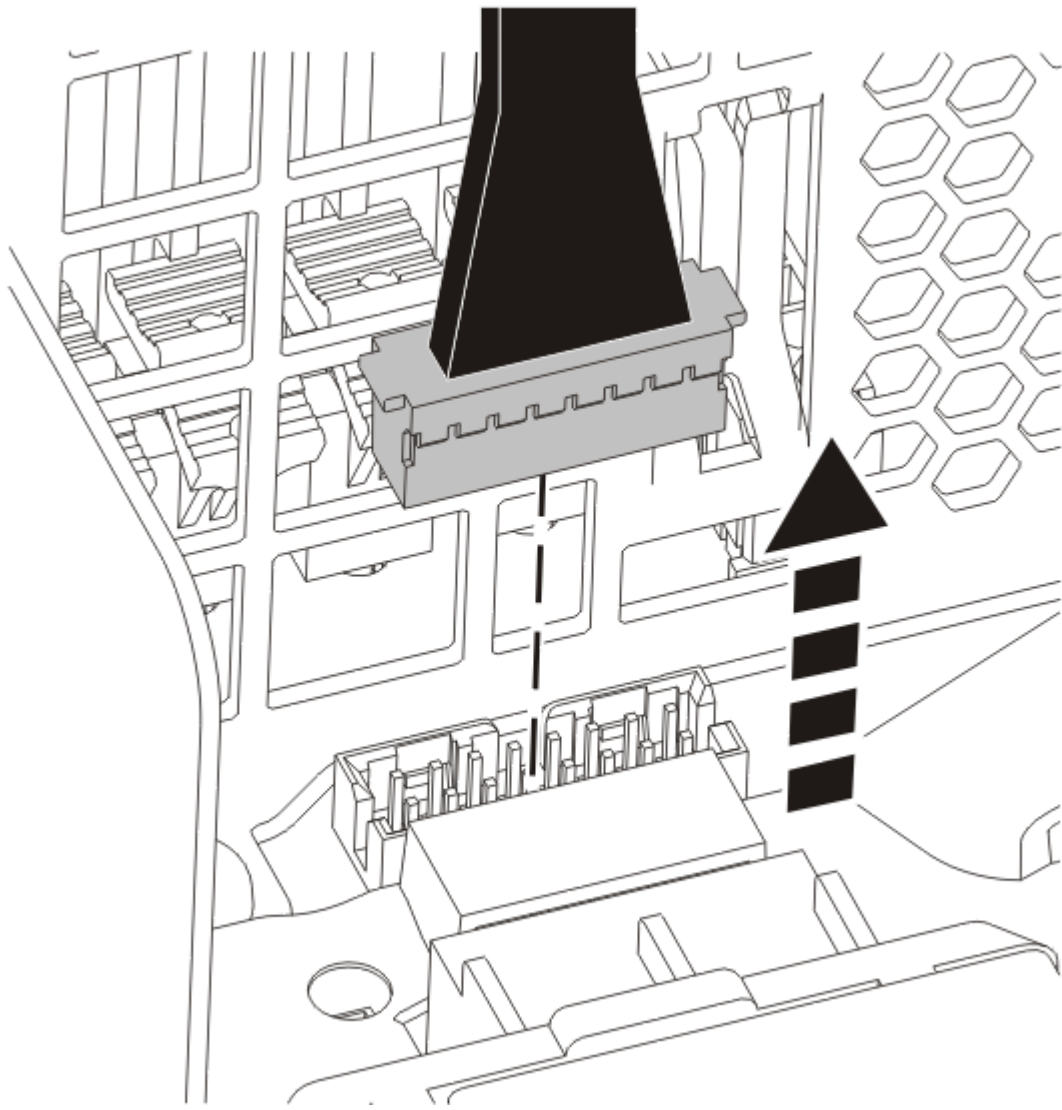
Figure 59. Removing the air baffle from a rack-mounted system



*Figure 60. Removing the air baffle from a stand-alone system*

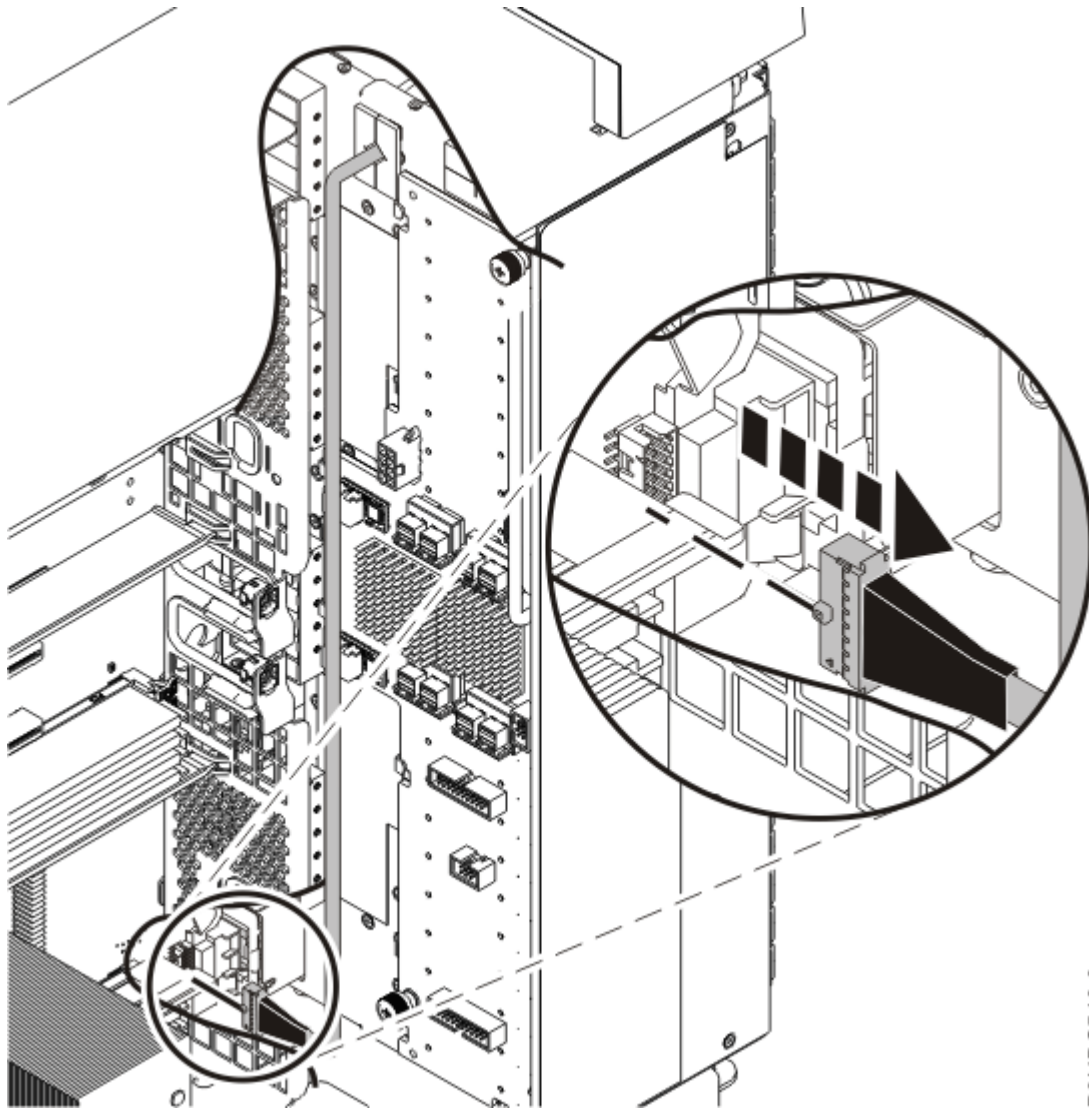
3. Unplug the control panel cable from the system backplane as shown in [Figure 61 on page 65](#) or [Figure 62 on page 66](#).

As you face the chassis, the connector is in the left front corner. You can pull the cable from the system backplane by using the cable cover near the plug.



P9HBC504-1

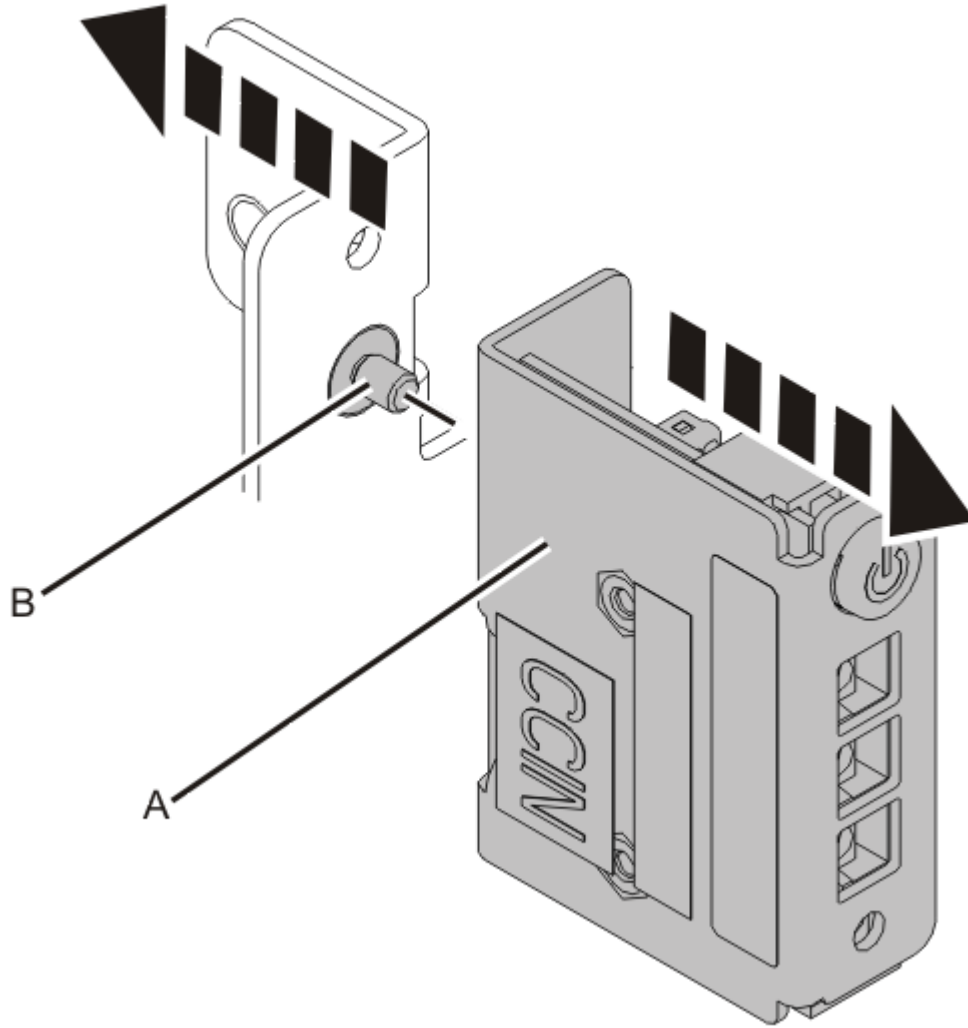
Figure 61. Disconnecting the control panel cable from the system backplane for a rack-mounted system



P9HBC540-0

*Figure 62. Disconnecting the control panel cable from the system backplane for a stand-alone system*  
4. For a rack-mounted system, loosen the screw **(B)** that secures the control panel **(A)** to the bracket as shown in [Figure 63](#) on page 67.





P9HBC500-1

*Figure 63. Removing the control panel from the bracket for a rack-mounted system*

5. For the rack-mounted system, remove the screws **(A)** that secures the bracket **(B)** to the side of the system as shown in [Figure 64](#) on [page 68](#) and remove the bracket.

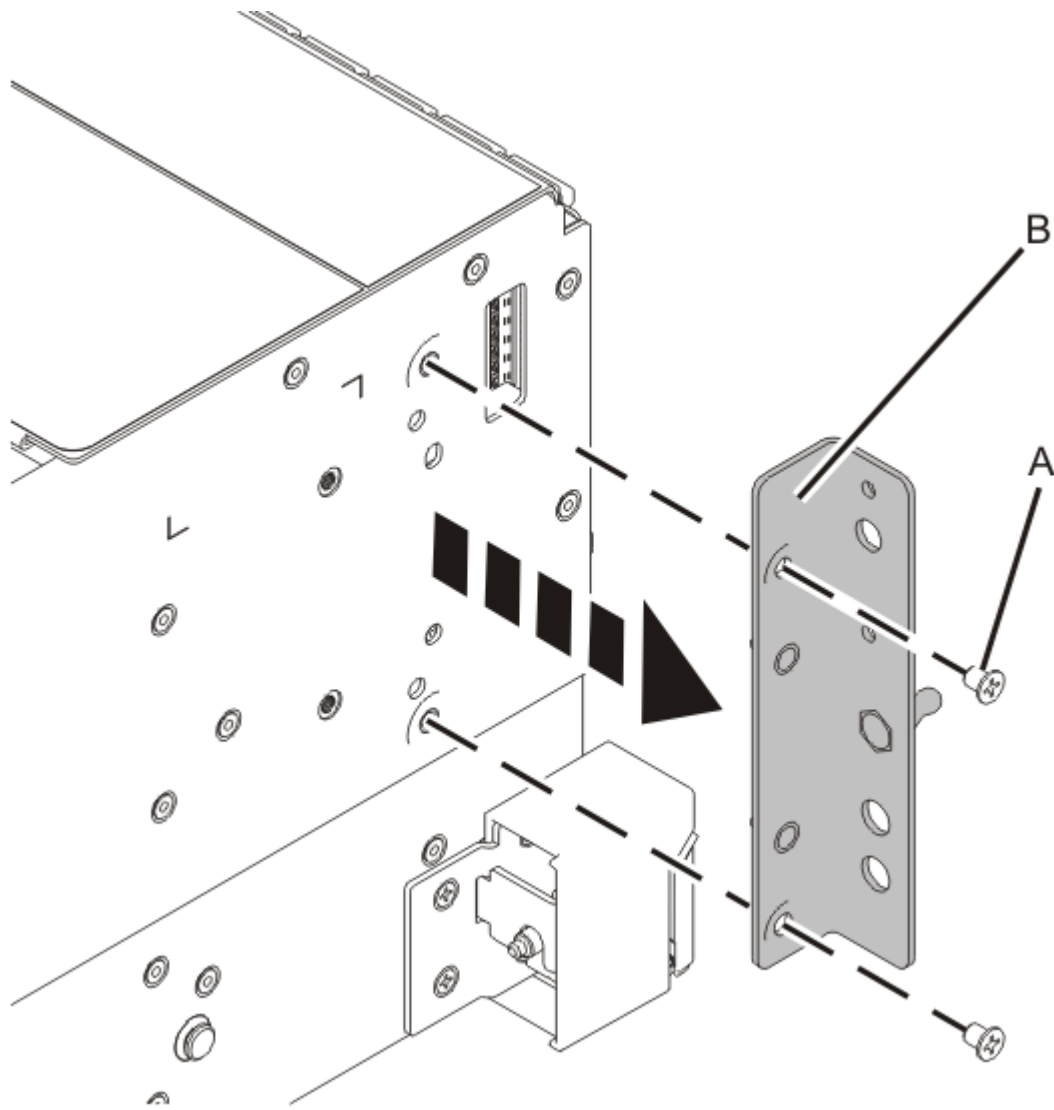
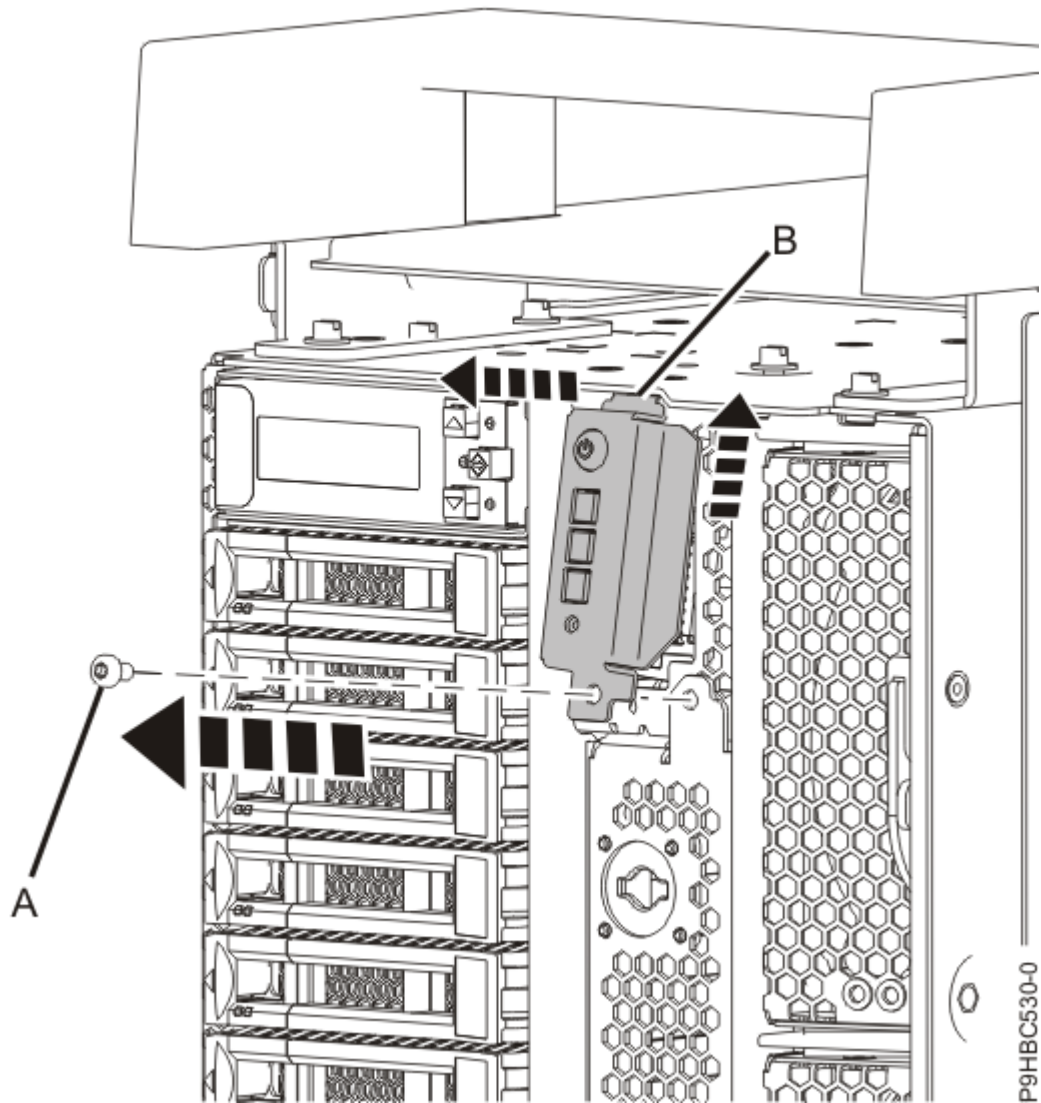


Figure 64. Removing the control panel bracket from a rack-mounted system

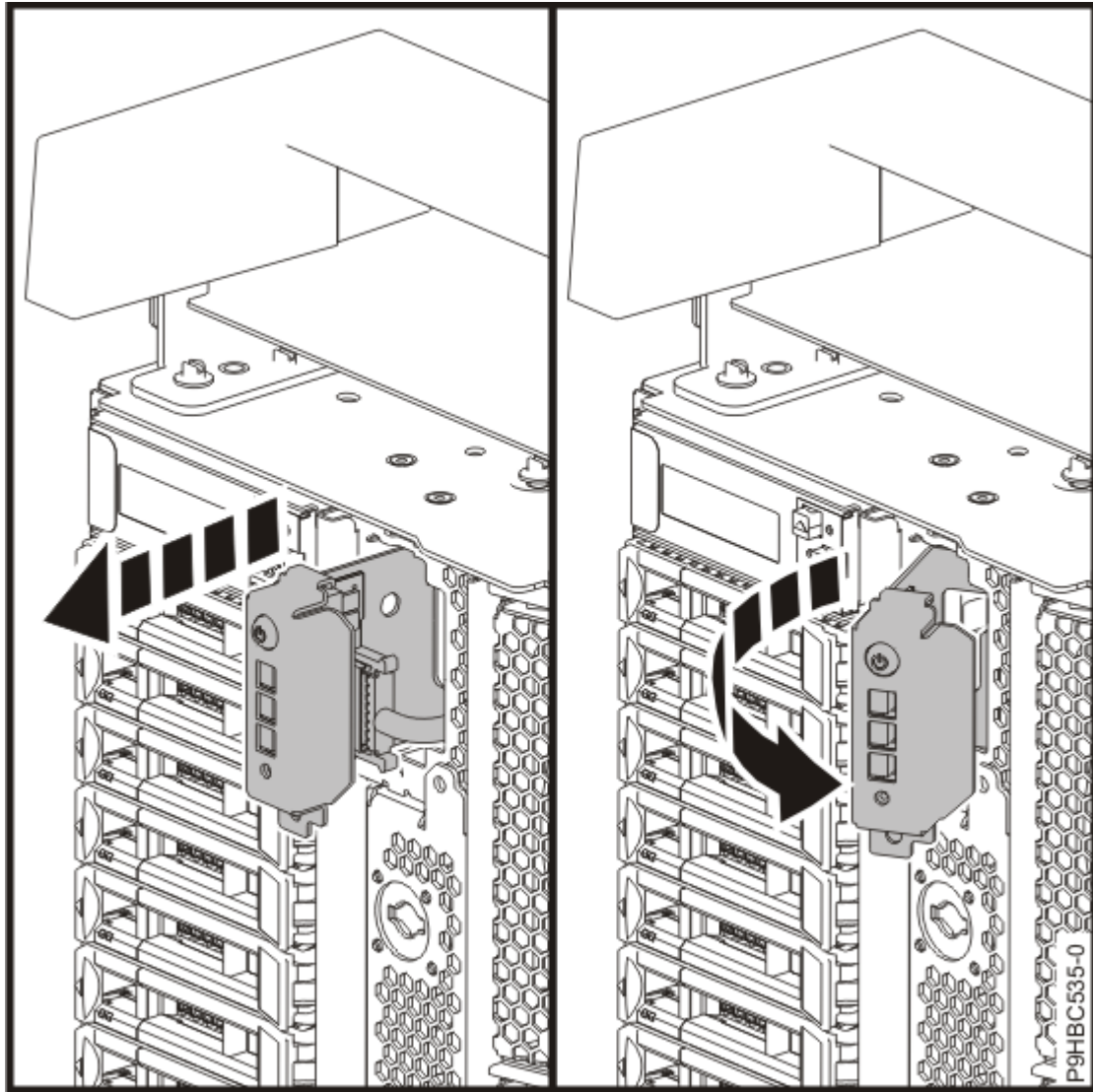
6. Complete the following steps for a stand-alone system.

- a) Remove the screw **(A)** that secures the control panel to the system as shown in [Figure 65 on page 69](#), then pivot the control panel up to release the top tab **(B)**.



*Figure 65. Unscrewing the control panel from a stand-alone system*

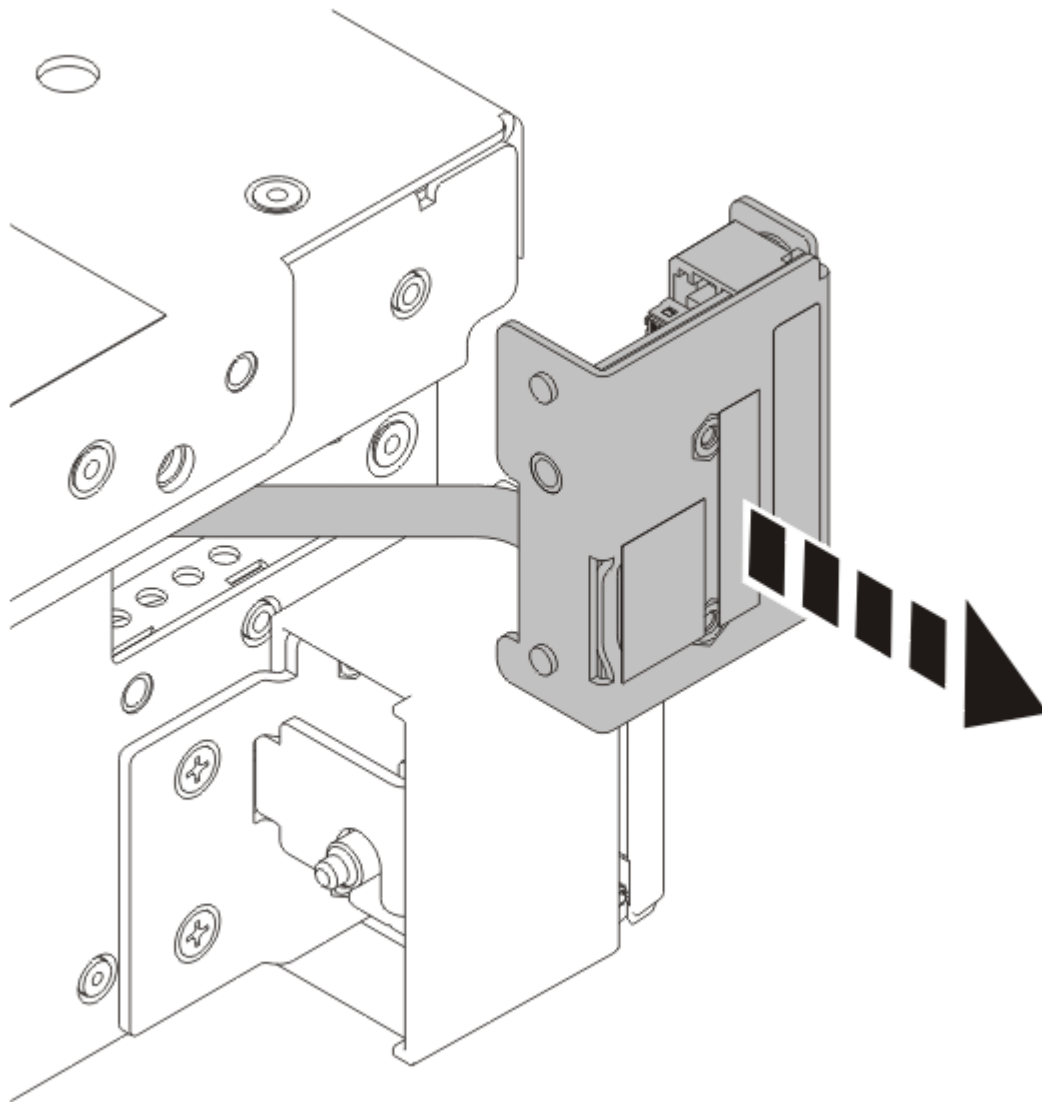
- b) Remove the control panel from the system by pivoting the control panel to the left as shown in [Figure 66 on page 70](#).



*Figure 66. Removing the control panel from a stand-alone system*

7. Remove the control panel and cable from the system as shown in [Figure 67](#) on page 71 or [Figure 68](#) on page 72.

Remove the cable towards the front of the system. Ensure that the cable does not catch on any components while you are removing it. If needed, label and remove some of the leftmost storage drives to help remove the cable.



P9HBC506-0

Figure 67. Removing the control panel and cable from a rack-mounted system

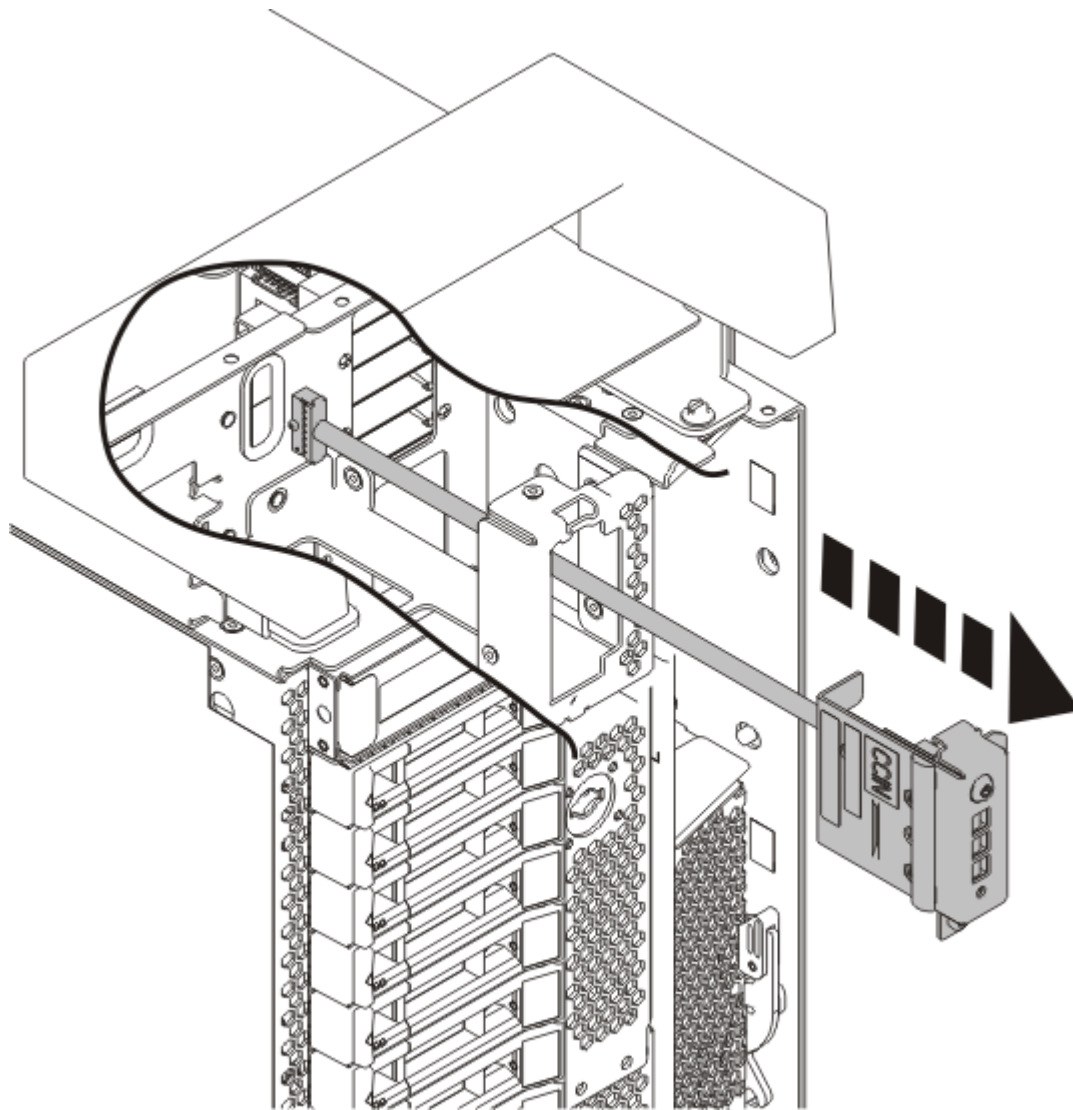


Figure 68. Removing the control panel and cable from a stand-alone system

8. Disconnect the control panel (A) from the cable (B) as shown in [Figure 69 on page 73](#) or [Figure 70 on page 74](#).

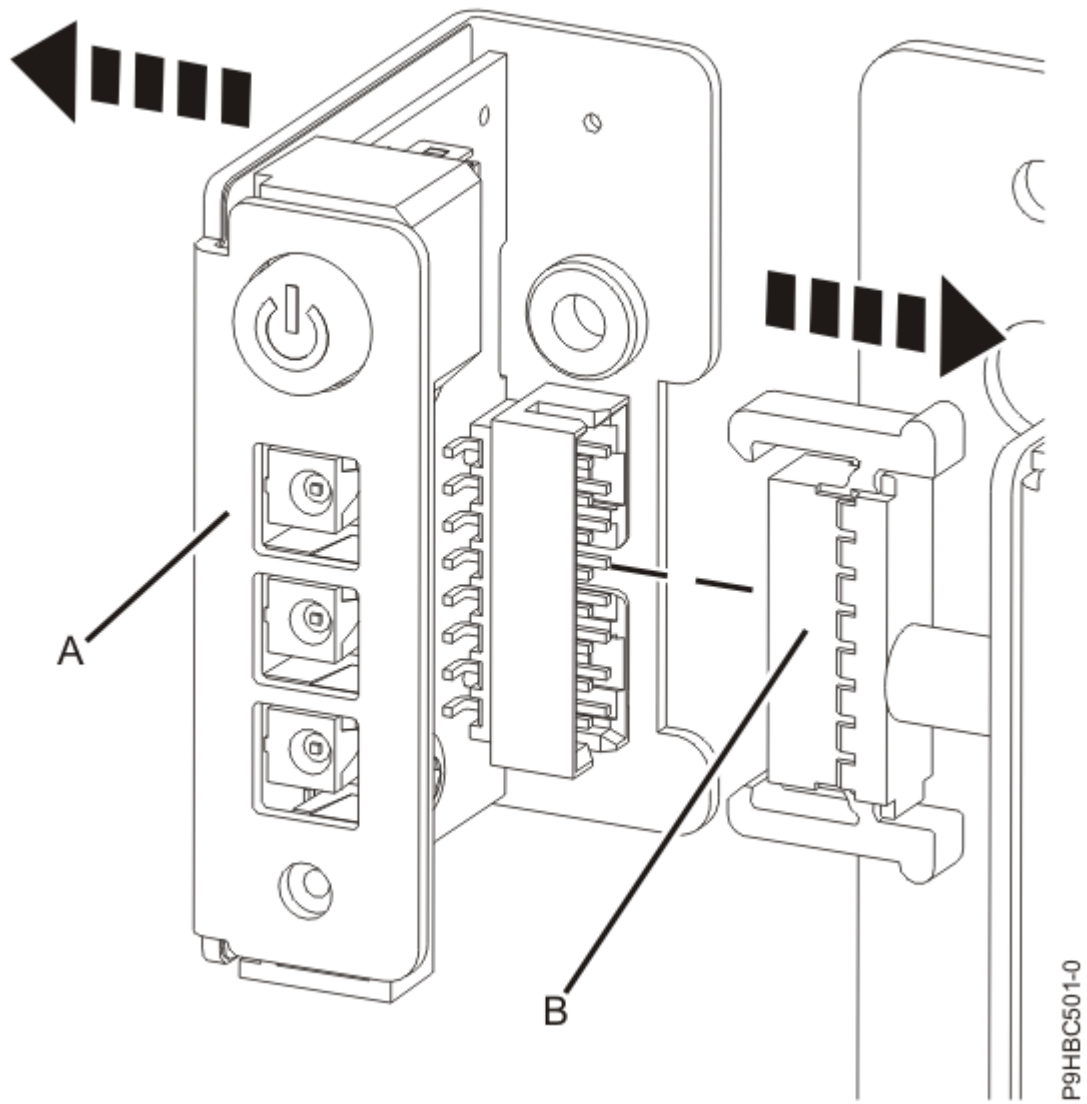


Figure 69. Disconnecting the control panel from the cable for a rack-mounted system

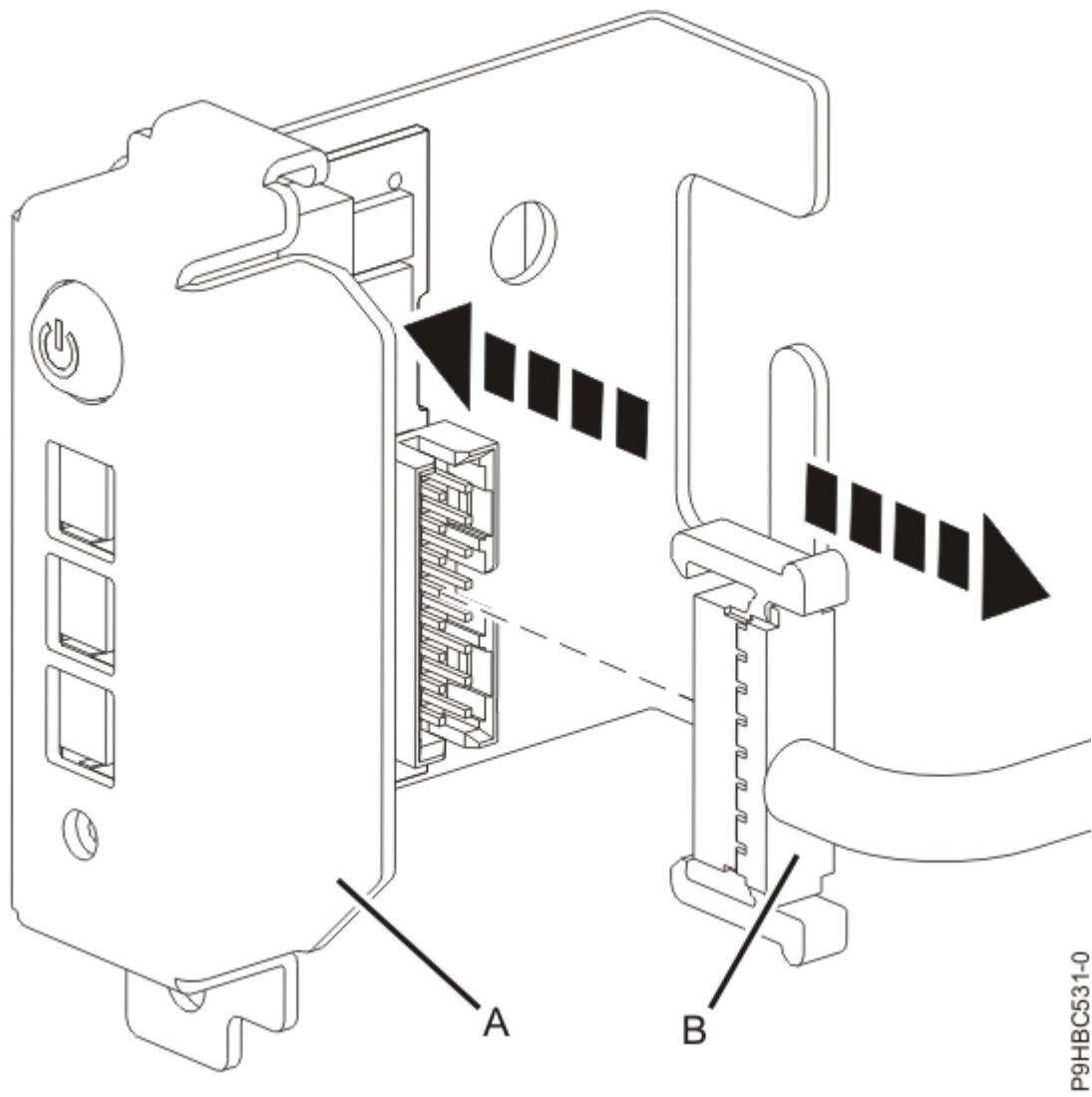


Figure 70. Disconnecting the control panel from the cable for a stand-alone system

**Replacing the control panel cable in the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system**

To replace a control panel cable, complete the steps in this procedure.

**Procedure**

1. Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
2. Connect the control panel **(A)** to the control panel cable **(B)** as shown in [Figure 71 on page 75](#) or [Figure 72 on page 76](#).



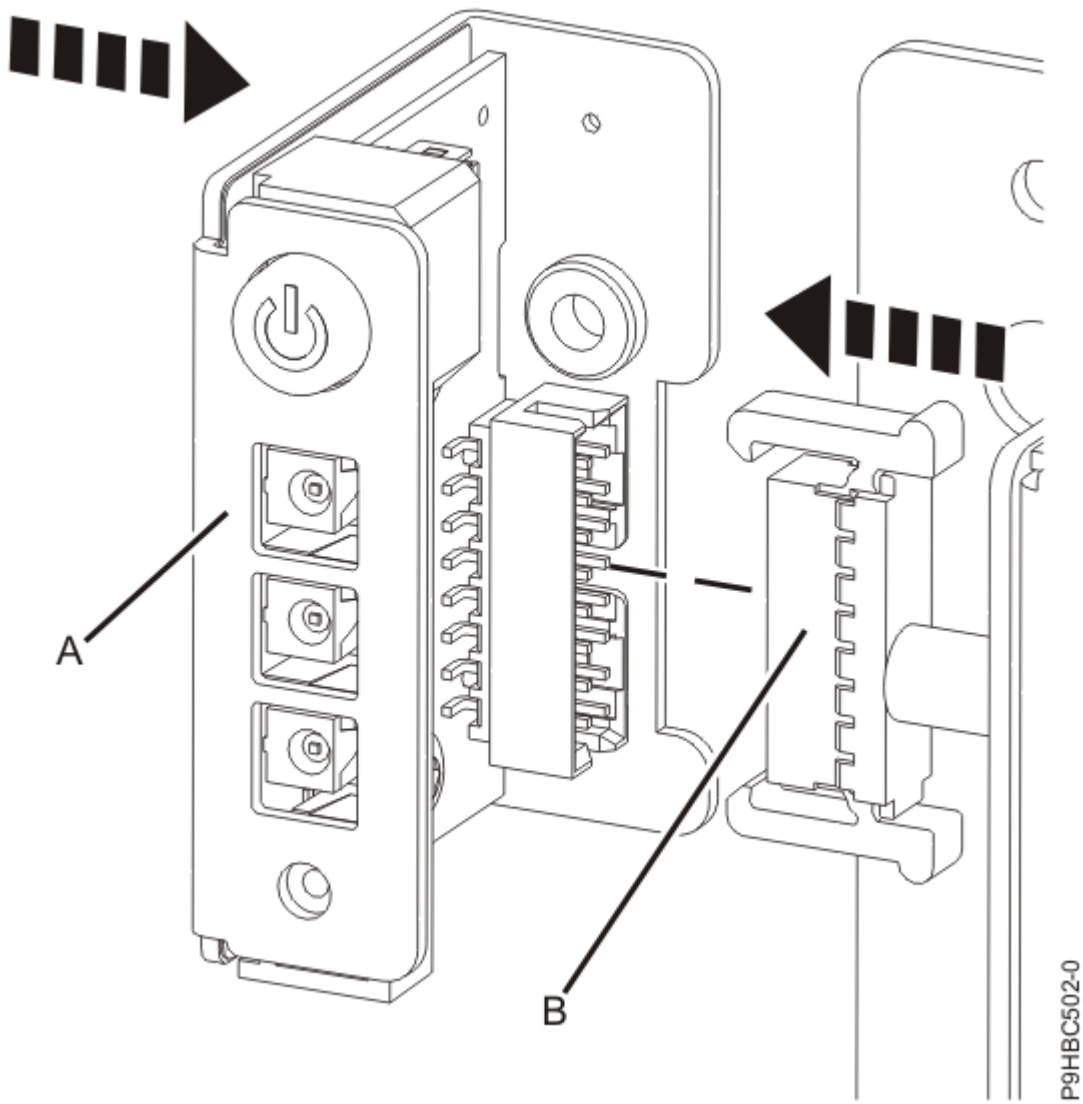
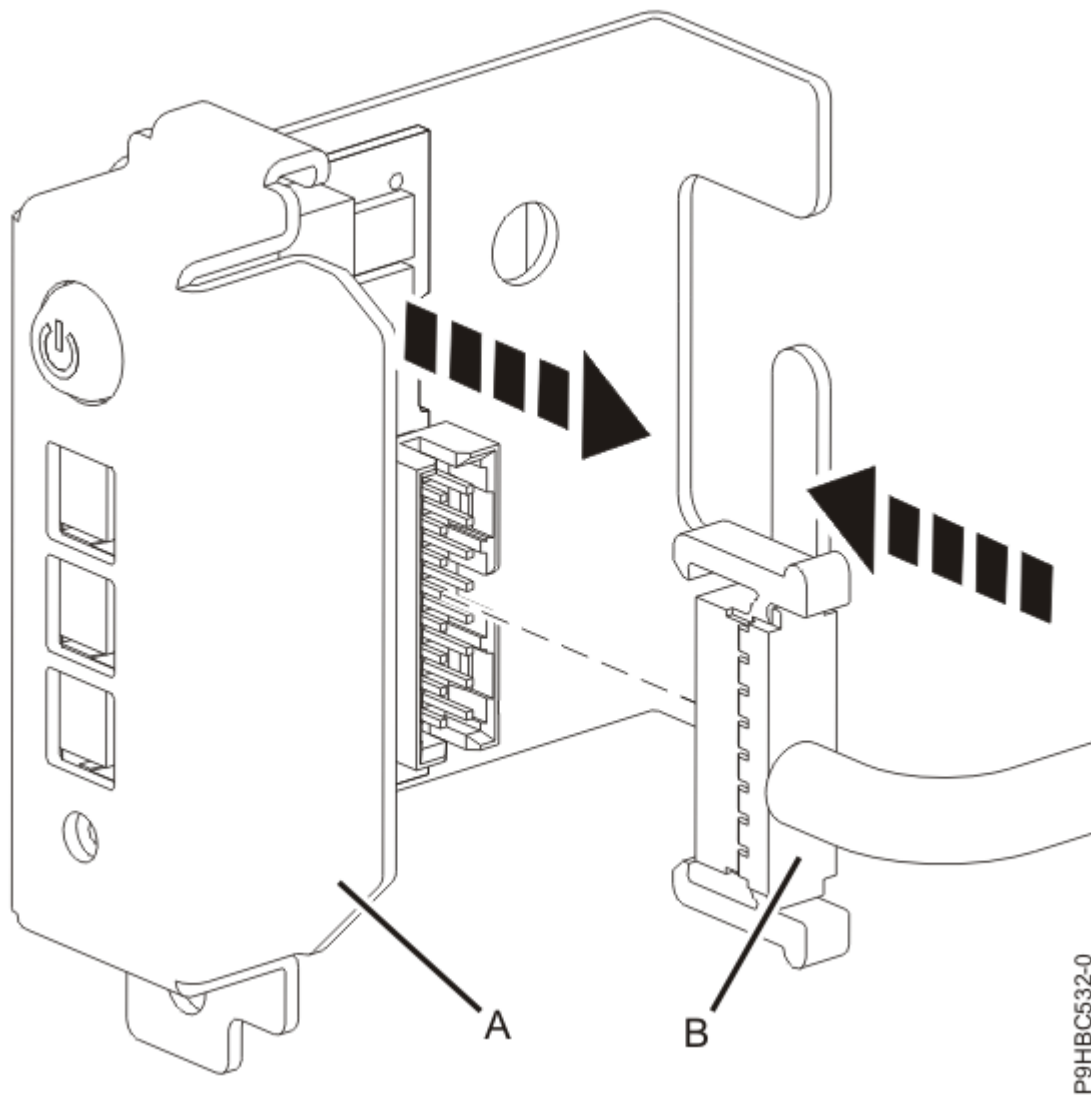


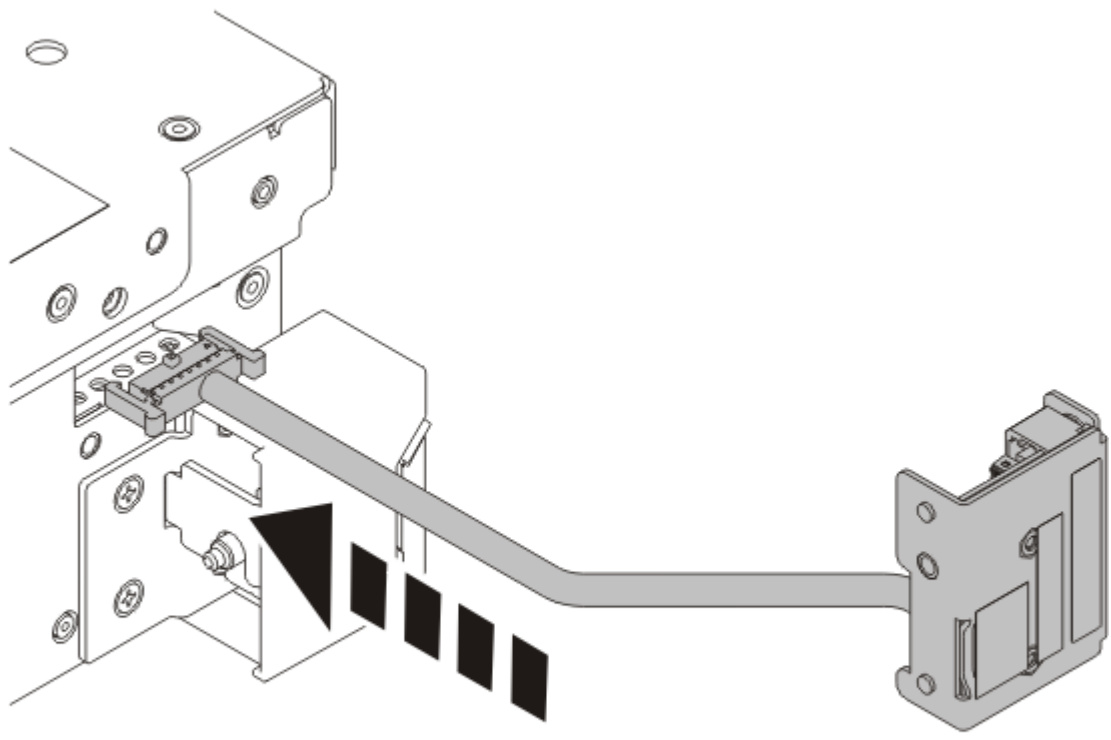
Figure 71. Connecting the control panel and cable for a rack-mounted system



*Figure 72. Connecting the control panel and cable for a stand-alone system*

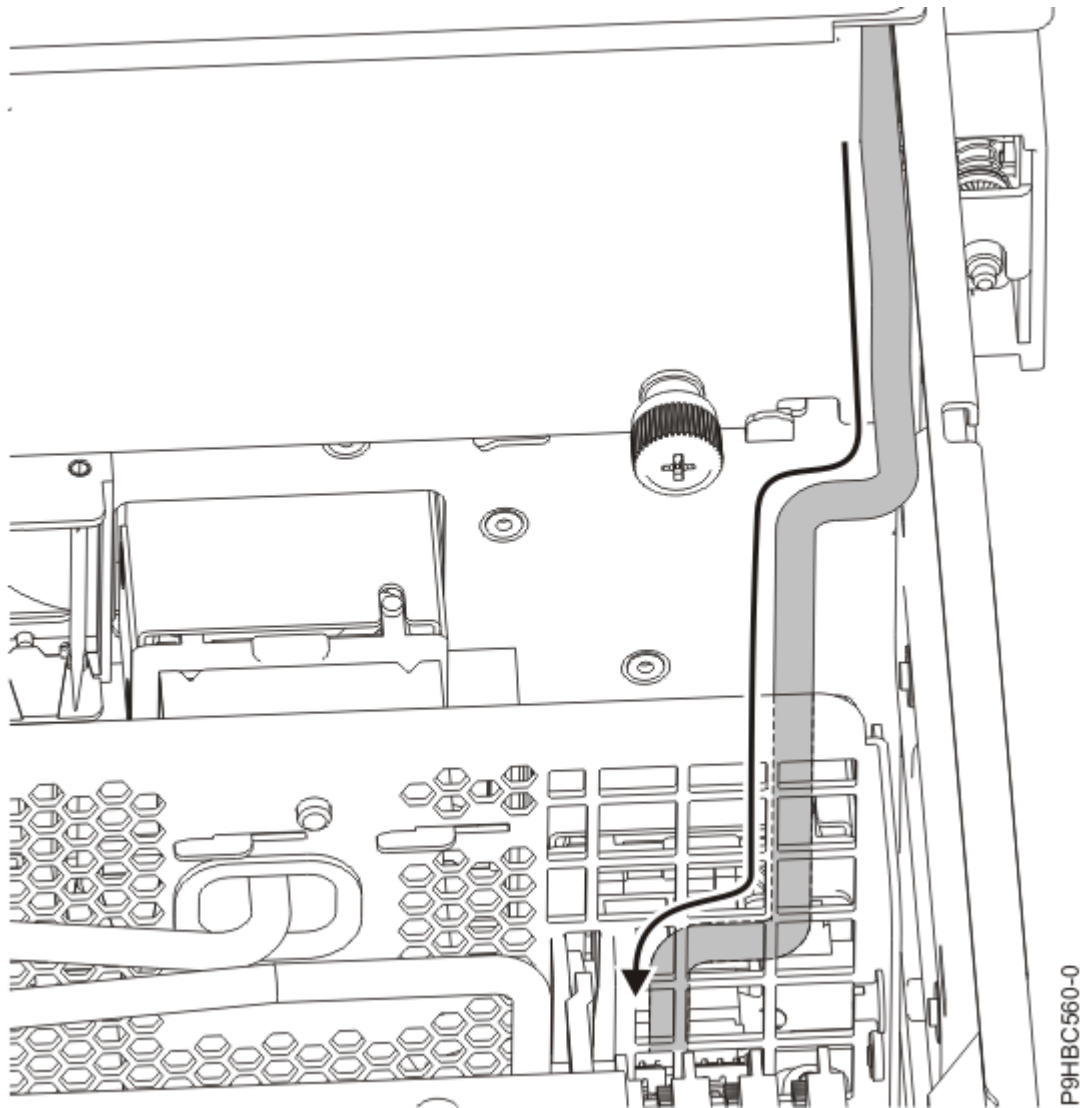
3. For a rack-mounted system, insert the control panel and cable into the system as shown in [Figure 73](#) on page 77 and [Figure 74](#) on page 78.

If needed, label and remove two or three leftmost drives, to allow you to route the cable along the side of the chassis. Pass the cable through the channel along the side of the chassis, being careful not to catch the cable on any components as you insert it.



P9HBC509-0

Figure 73. Inserting the control panel and cable for a rack-mounted system



*Figure 74. Control panel cable path for a rack-mounted system*

4. For a stand-alone system, insert the control panel and cable into the system as shown in [Figure 75](#) on page 79 and [Figure 76](#) on page 80.

Pass the cable along the channel next to the disk drive backplane. Secure the cable into the clips along the channel.

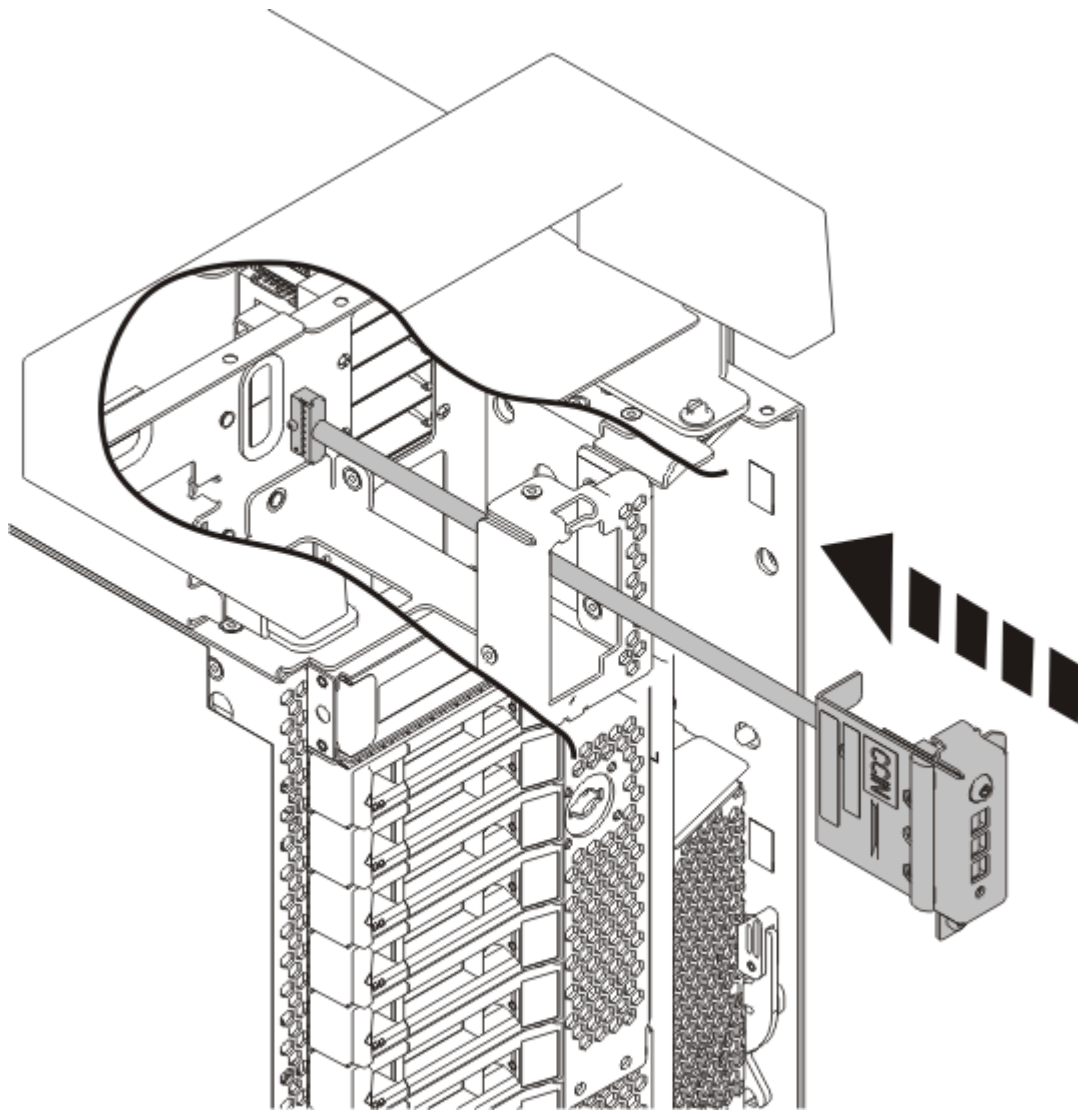
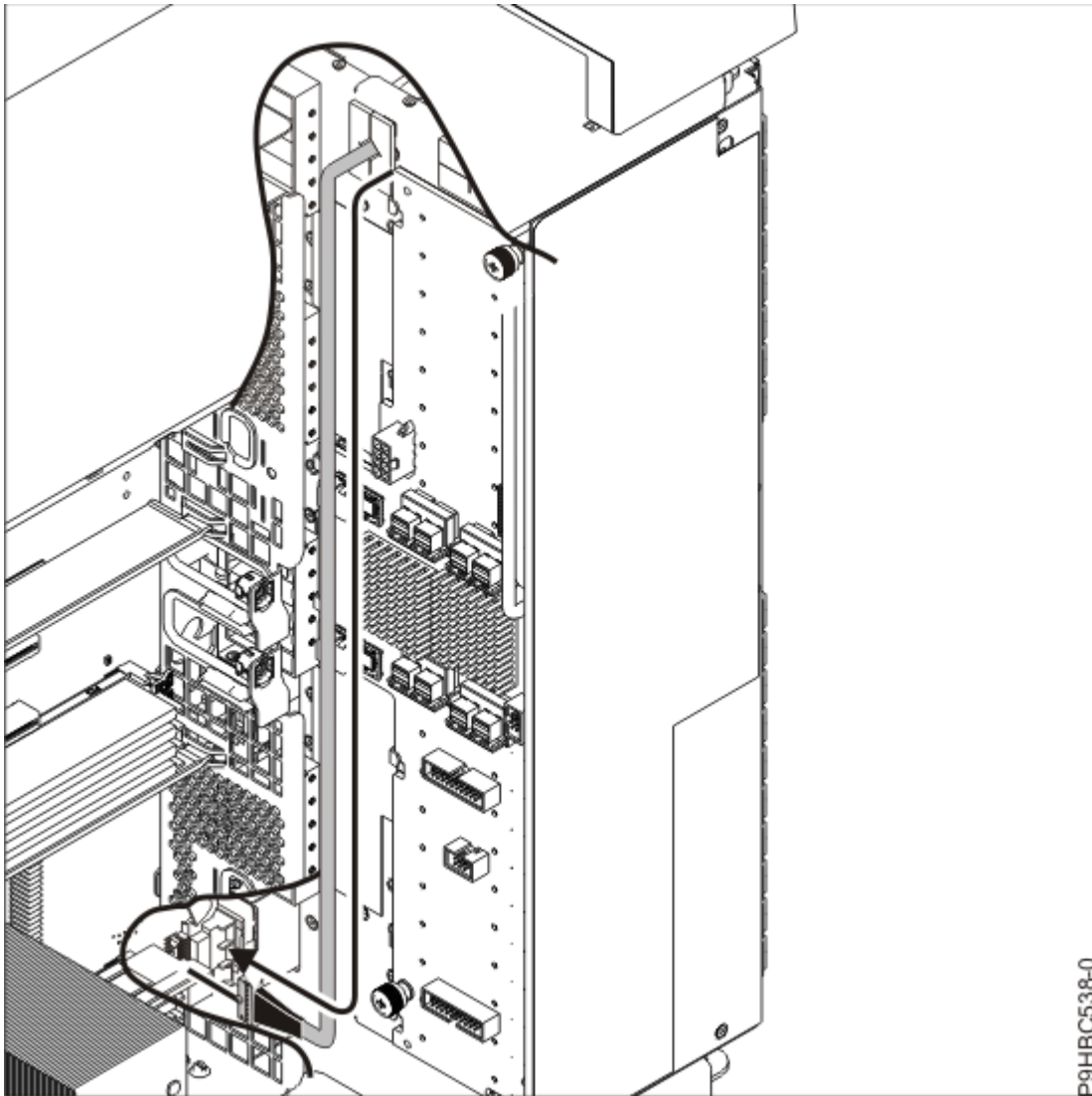
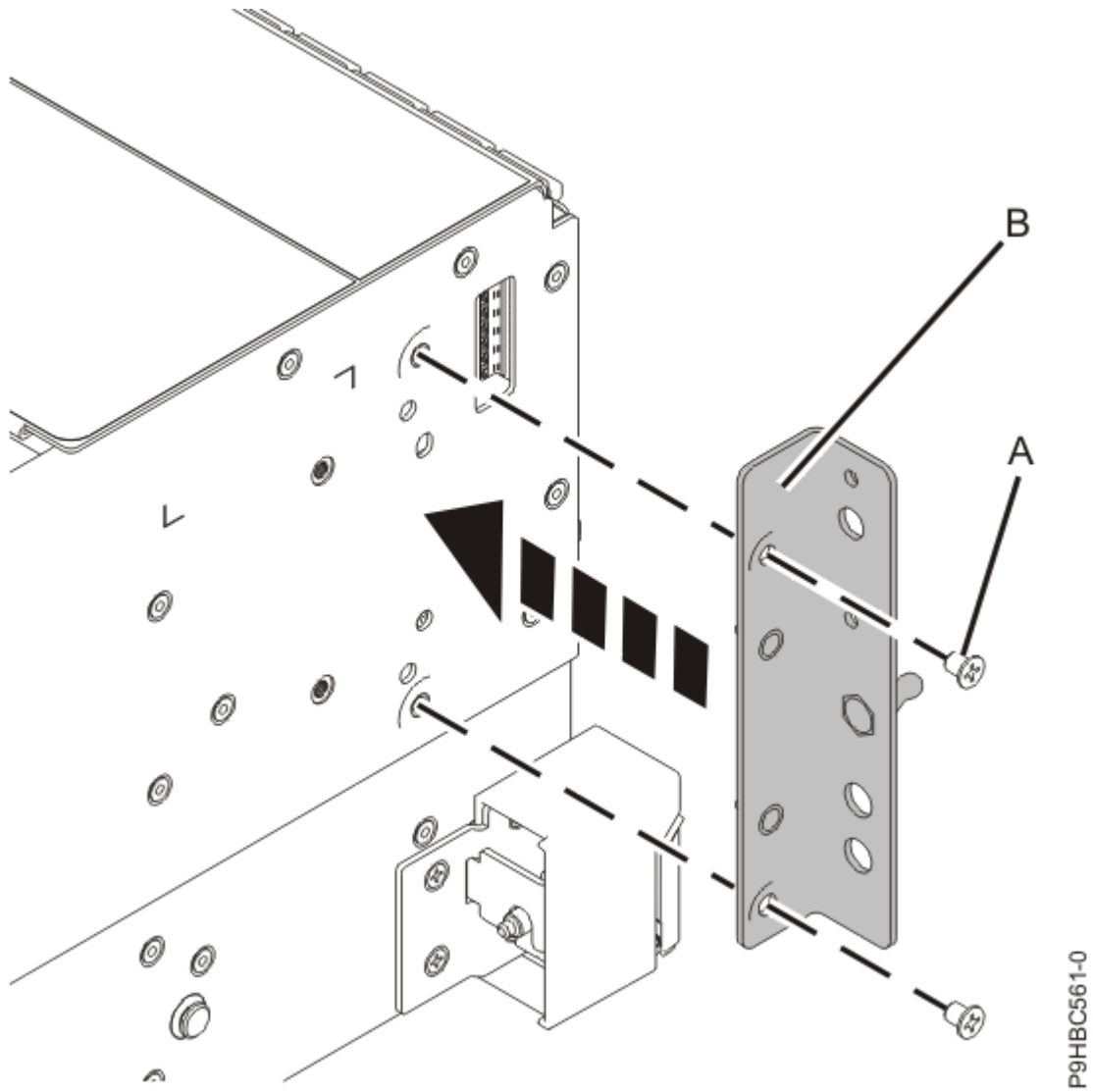


Figure 75. Inserting the control panel and cable for a stand-alone system



*Figure 76. Control panel cable path for a stand-alone system*

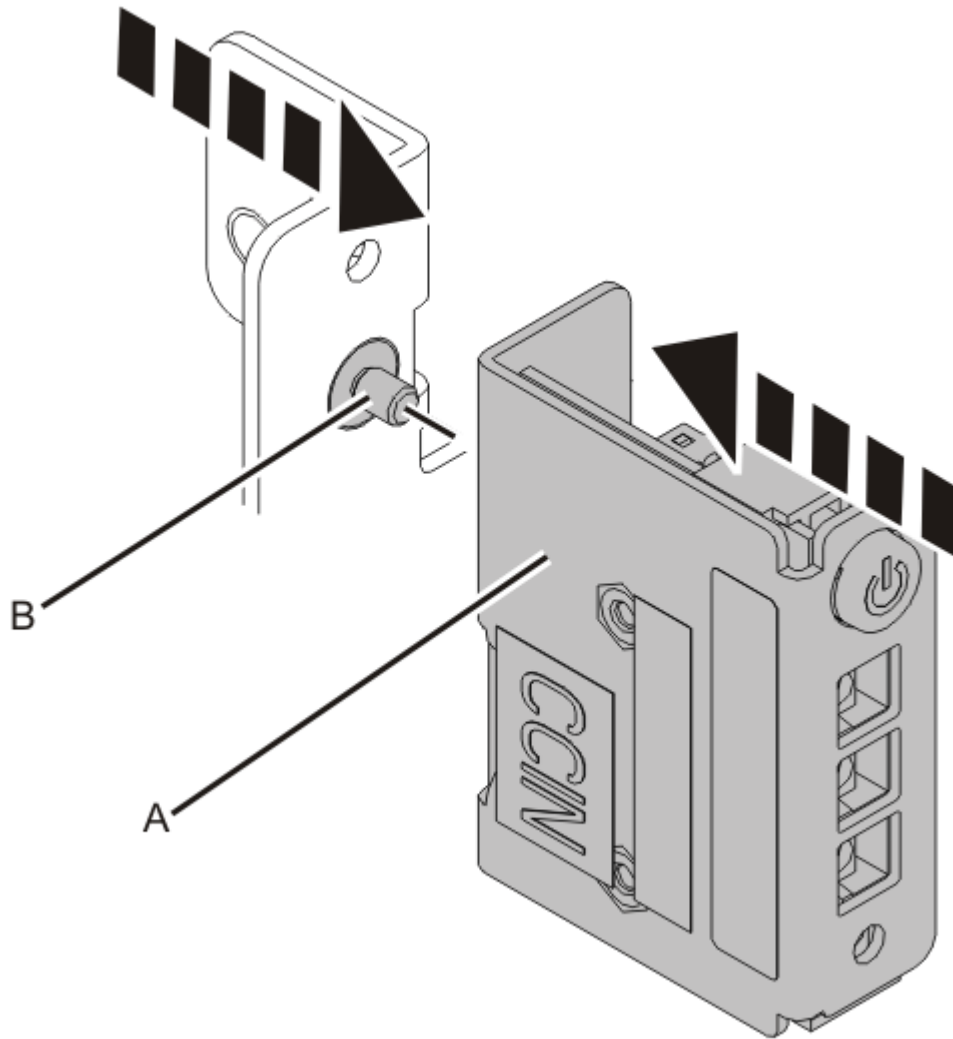
5. For the rack-mounted system, attach the bracket **(B)** to the side of the system with two screws **(A)** as shown in [Figure 77](#) on page 81.



*Figure 77. Replacing the control panel bracket*

6. For a rack-mounted system, attach the control panel **(A)** to the bracket with screw **(B)** as shown in [Figure 78 on page 82](#).

Ensure that the control panel pins align with the bracket holes.



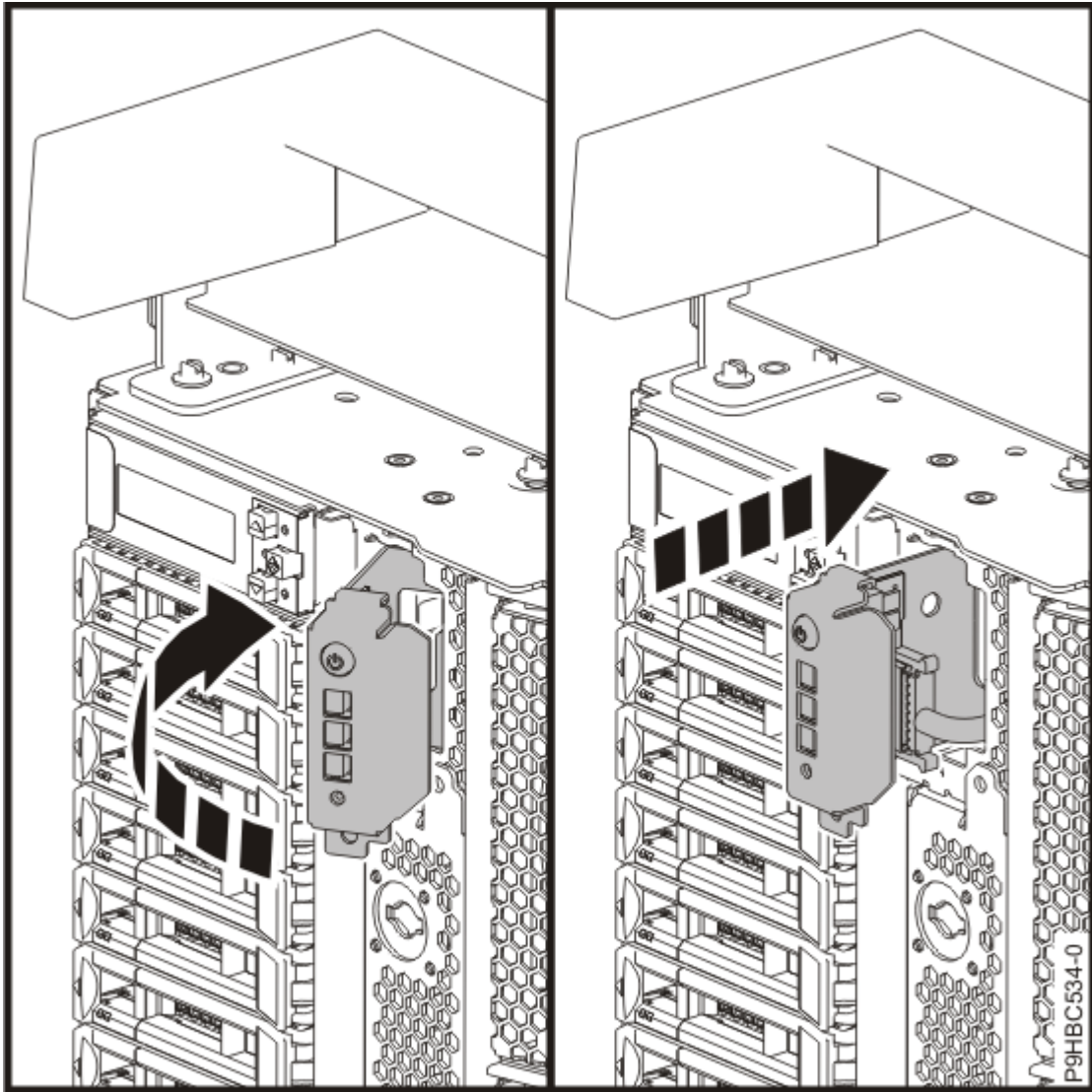
P9HBC503-1

*Figure 78. Replacing the control panel onto the bracket for a rack-mounted system*

7. Complete the following steps for a stand-alone system.

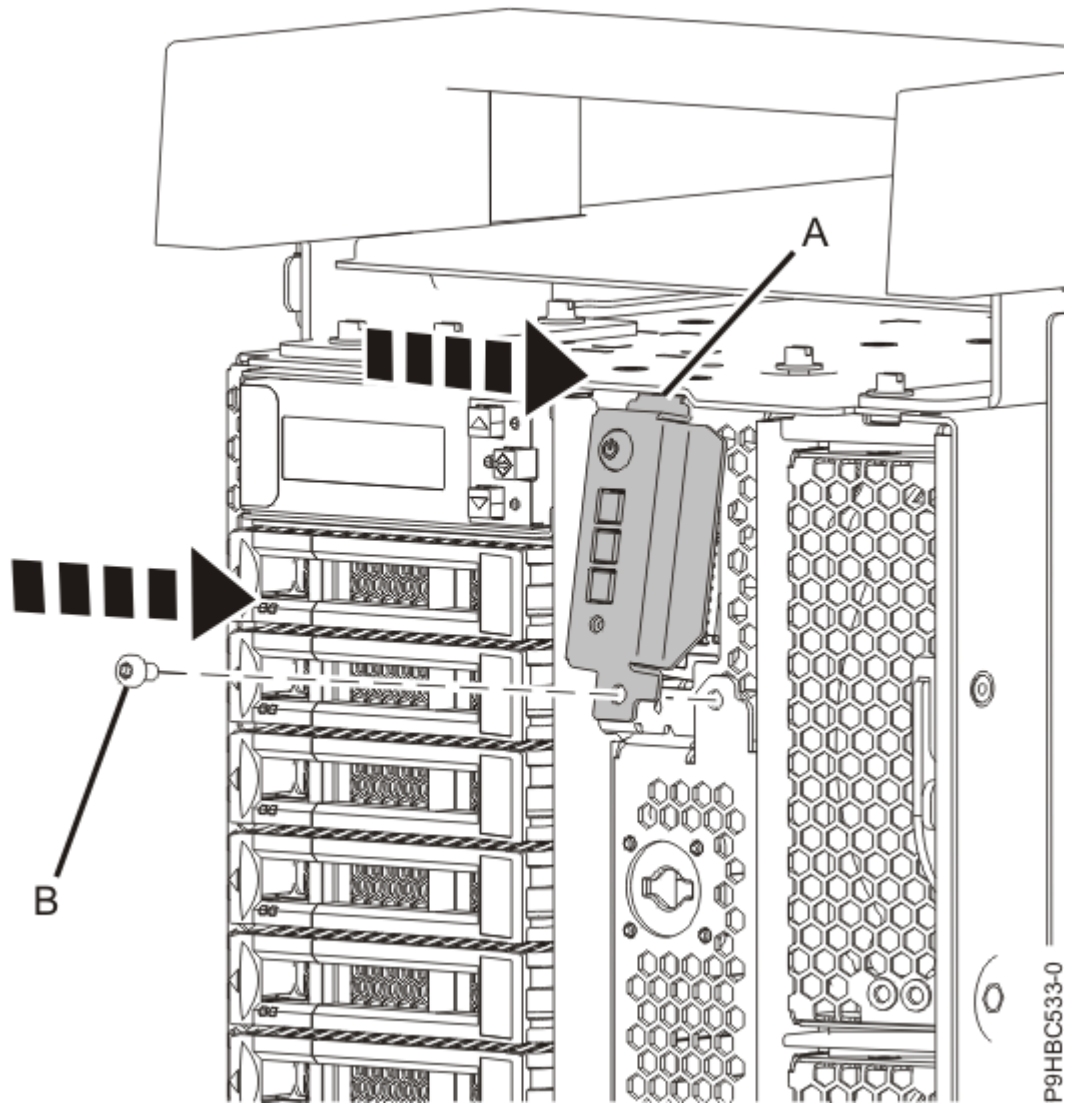
- a) Replace the control panel into the system by pivoting the control panel to the right as shown in [Figure 79 on page 83](#).





*Figure 79. Replacing the control panel in a stand-alone system*

- b) Pivot the control panel up to secure the top tab **(A)** as shown in [Figure 80](#) on page 84, then replace the screw **(B)** that secures the control panel to the system.



*Figure 80. Securing the control panel to a stand-alone system*

8. Connect the control panel cable to the system backplane as shown in [Figure 81 on page 85](#) or [Figure 82 on page 86](#).

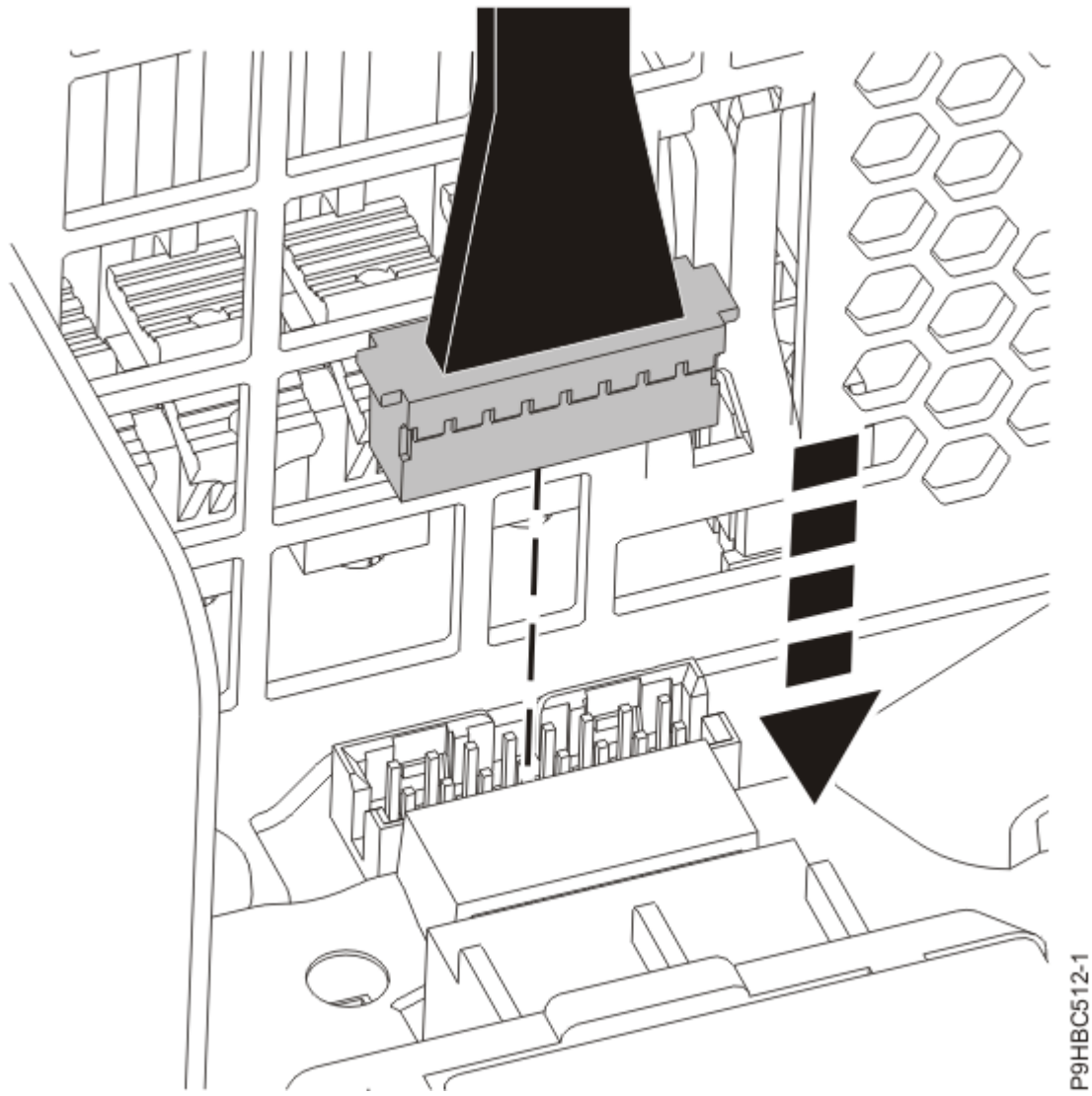
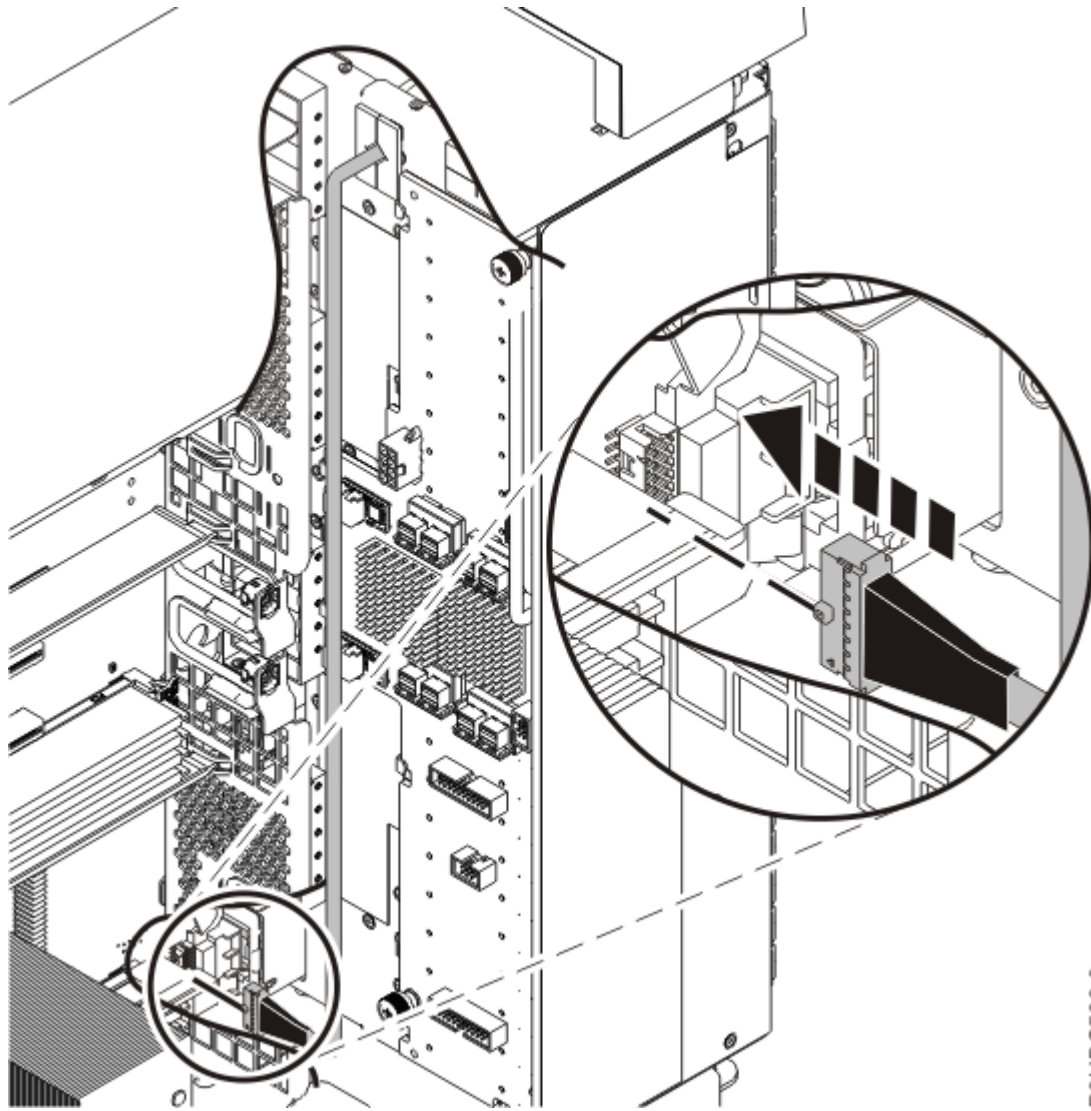


Figure 81. Connecting the control panel cable to the system backplane for a rack-mounted system

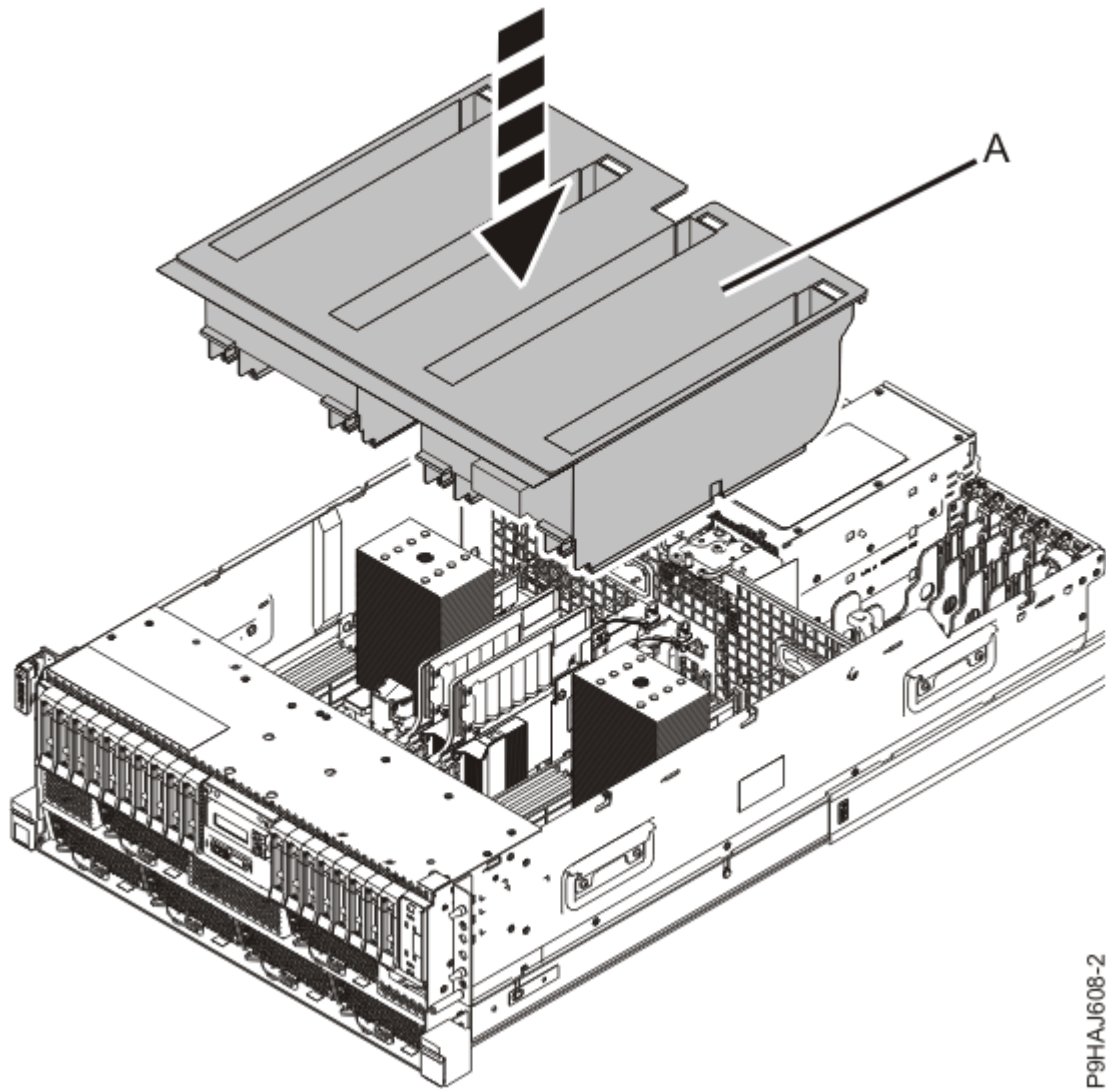


*Figure 82. Connecting the control panel cable to the system backplane for a stand-alone system*

9. If you removed any drives while replacing the control panel cable, using your labels, replace the drives.
10. For a rack-mounted system, replace the air baffle **(A)** straight down into the chassis as shown in [Figure 83 on page 87](#).

For a stand-alone system, replace the air baffle **(A)** straight into the side of the chassis as shown in [Figure 84 on page 88](#).

Ensure that the front flap tucks under the front chassis.



P9HAJ608-2

Figure 83. Replacing the air baffle in a rack-mounted system

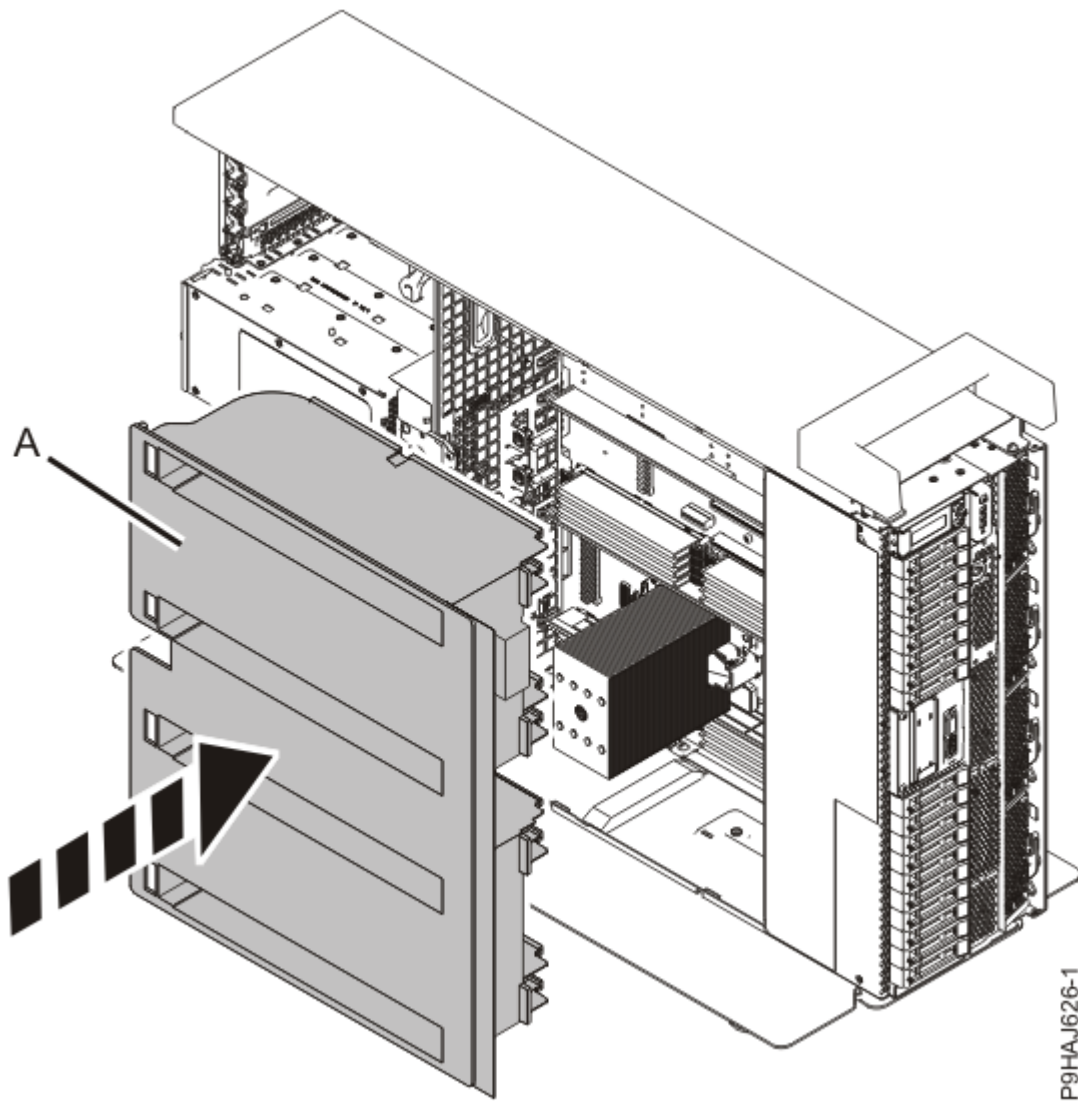


Figure 84. Replacing the air baffle in a stand-alone system

### Preparing the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system for operation after removing and replacing the control panel cable

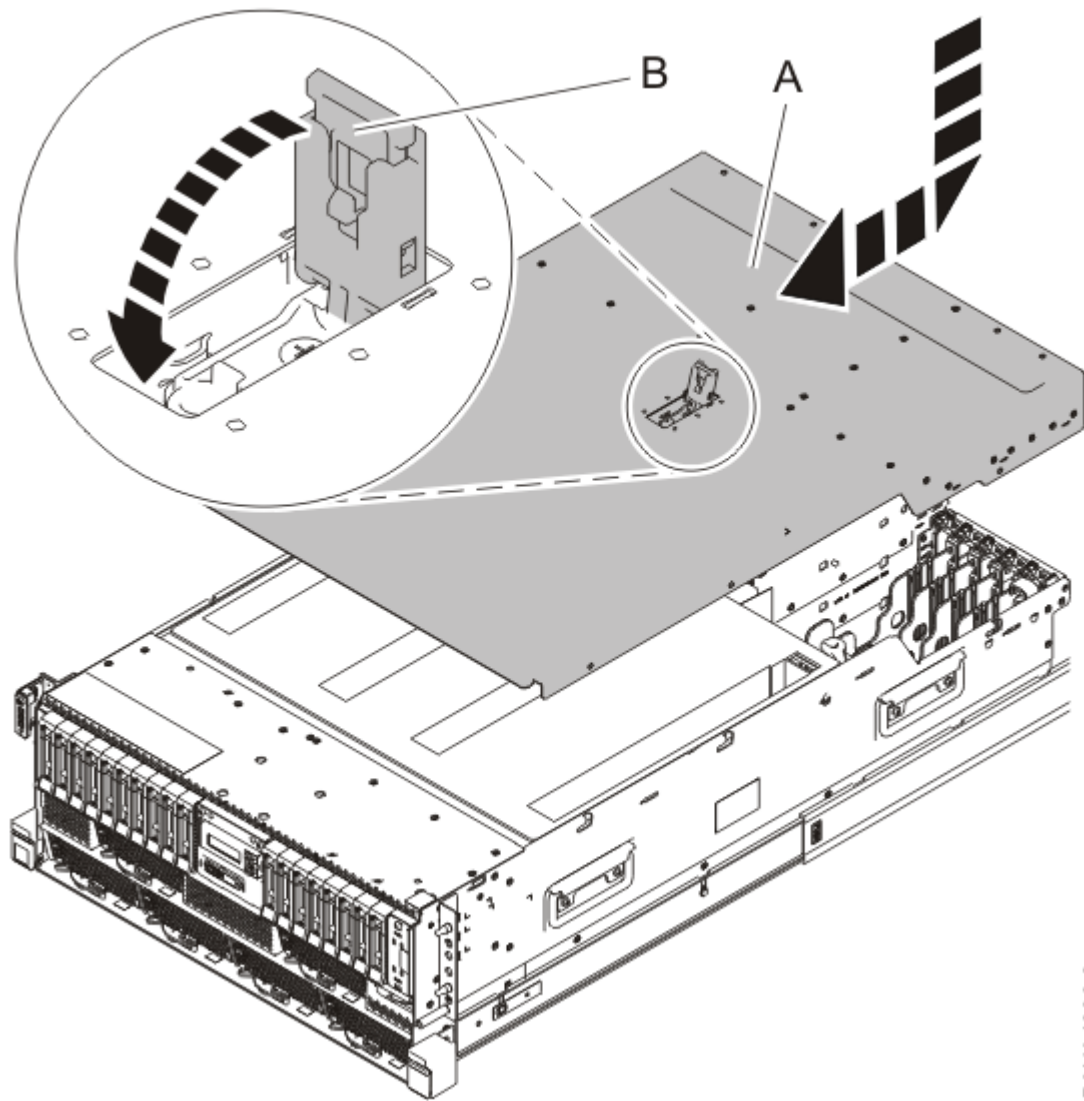
To prepare the system for operation after removing and replacing a control panel cable, complete the steps in this procedure.

#### Procedure

1. Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
2. Replace the service access cover.

For a rack-mounted system, complete the following steps. Refer to [Figure 85 on page 89](#).

- a. Slide the cover **(A)** onto the system unit.
- b. Close the release latch **(B)** by pushing it in the direction shown.

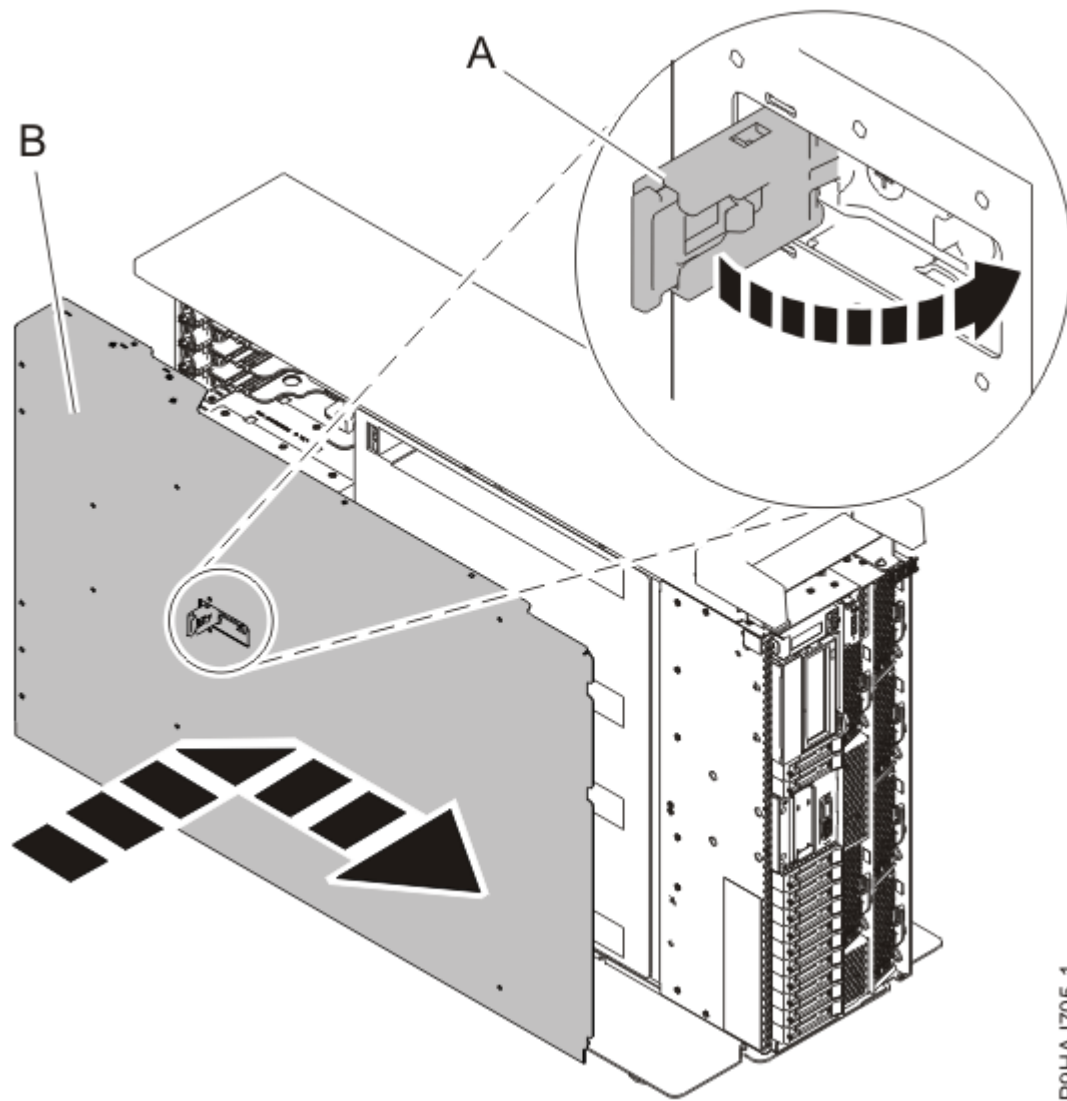


P9HAJ606-2

*Figure 85. Installing the service access cover*

For a stand-alone system, complete the following steps. Refer to [Figure 86 on page 90](#).

- a. Slide the cover **(B)** on to the system unit as shown.
- b. Close the latch release **(A)** by pushing it in the direction shown.



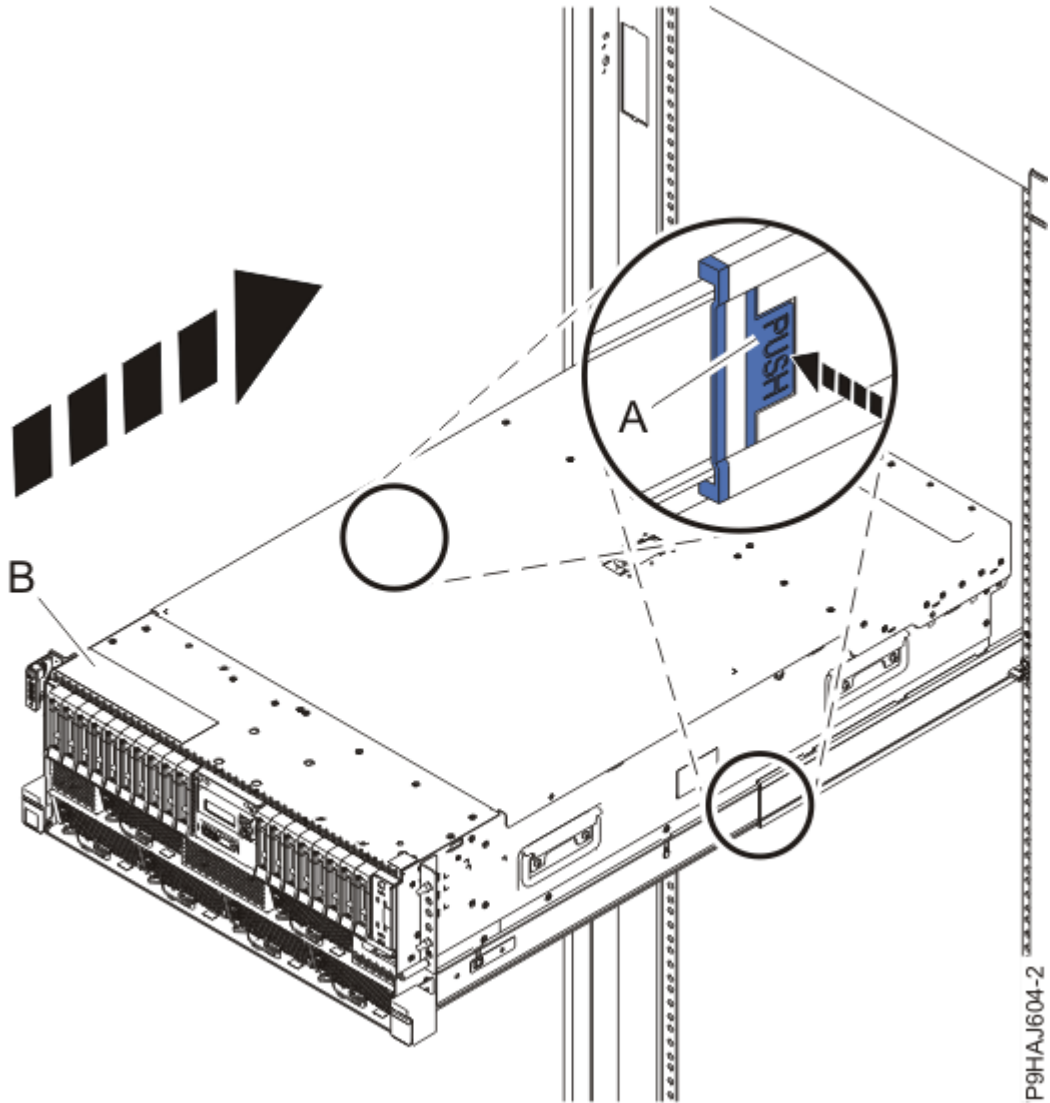
P9HAJ705-1

*Figure 86. Installing the service access cover*

3. For a rack-mounted system, unlock the blue rail safety latches (**A**) as shown in [Figure 87](#) on page 91 by pushing them inward.

Ensure that the cable management arms can move freely. Ensure that the cables at the rear of the unit do not catch or bind as you push the unit into the operating position.



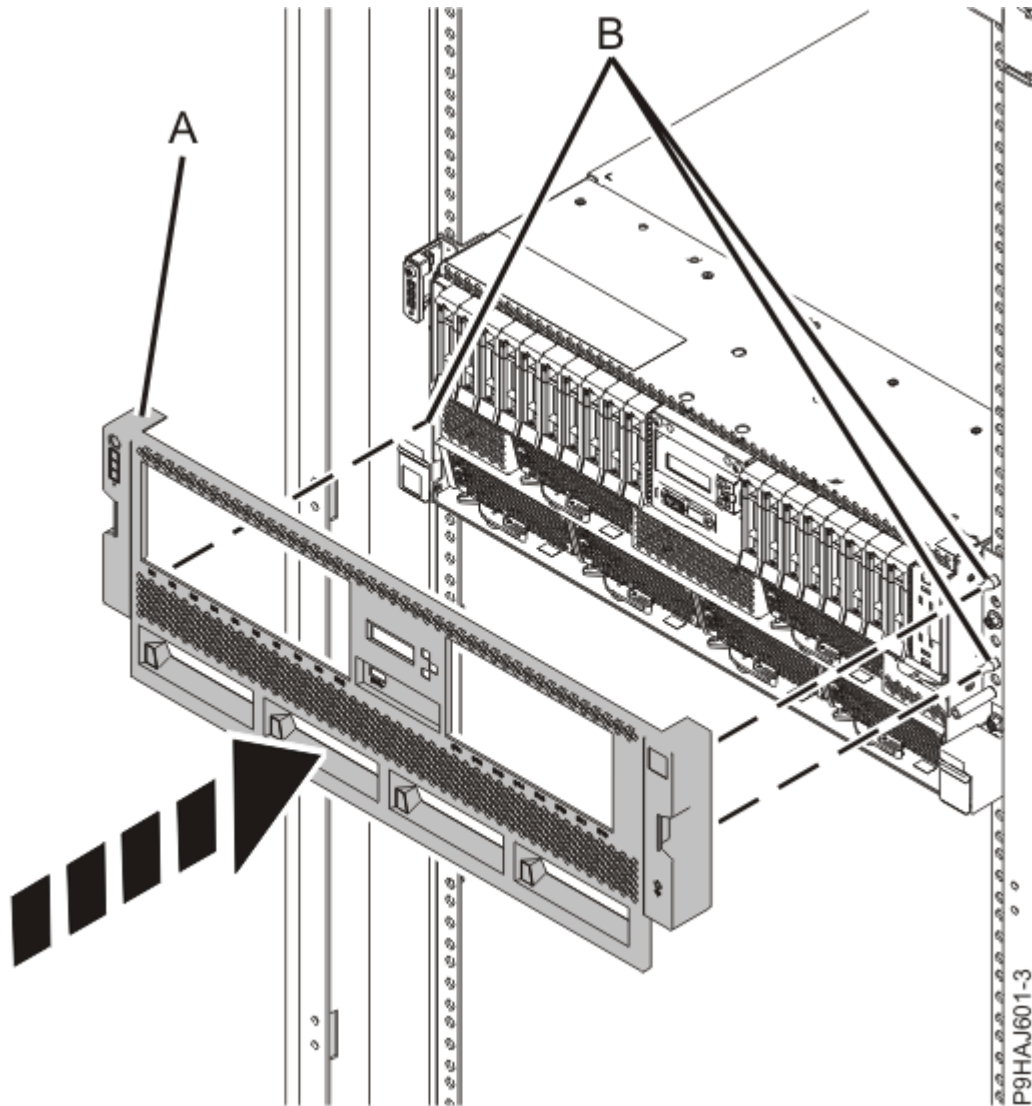


*Figure 87. Placing the system into the operating position*

4. For a rack-mounted system, push the system unit **(B)** as shown in the previous figure back into the rack until both release latches lock the system into position.

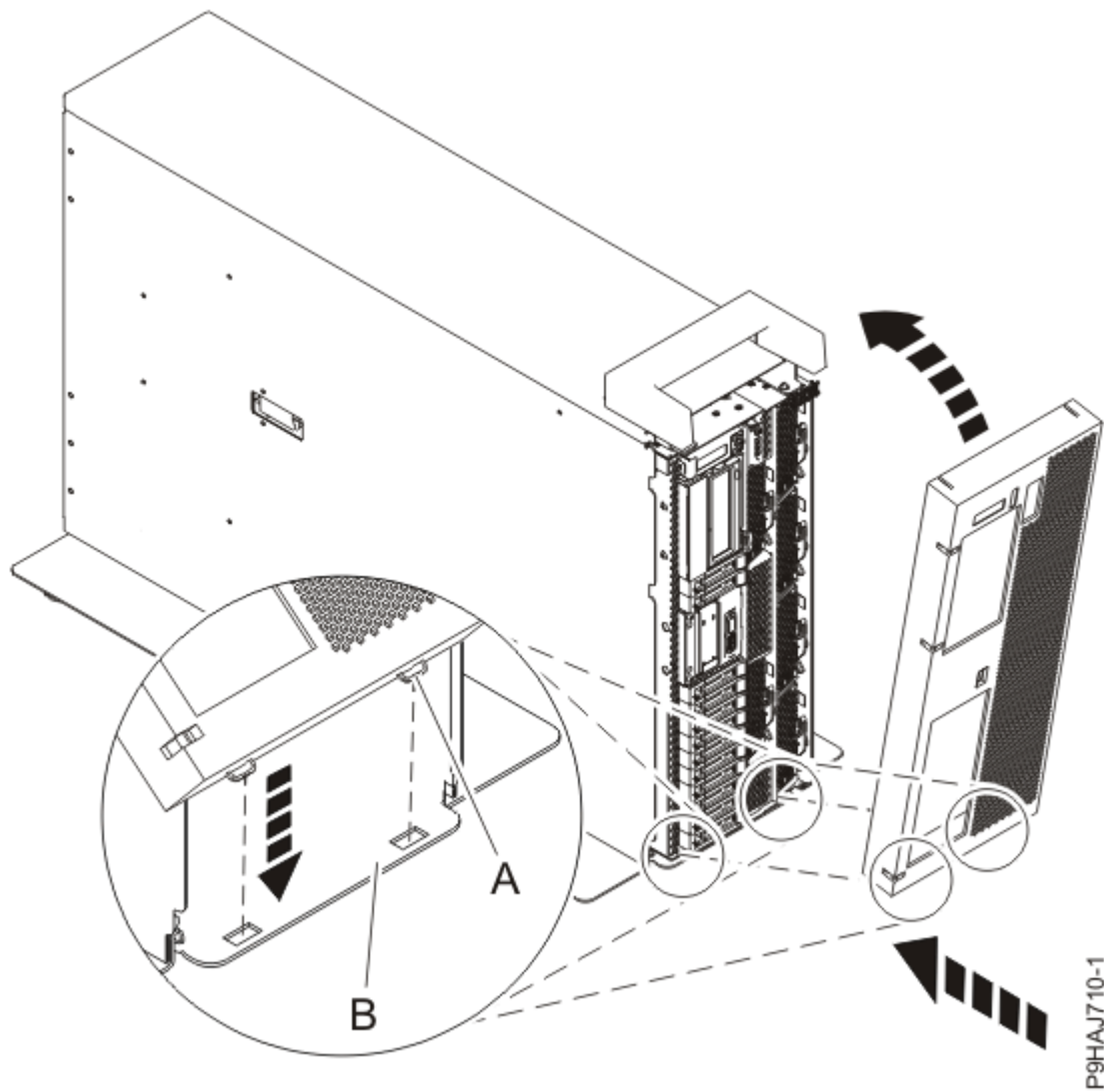
Secure the cable management arm with hook-and-loop fasteners around the back side of the cable management arm, but not around the cables.

5. For a rack-mounted system, gently push the front cover **(A)** in until the cover snaps into place. The cover has indentations where you can hold it more easily. Use the alignment pins **(B)** to secure the cover to the system as shown in [Figure 88 on page 92](#).



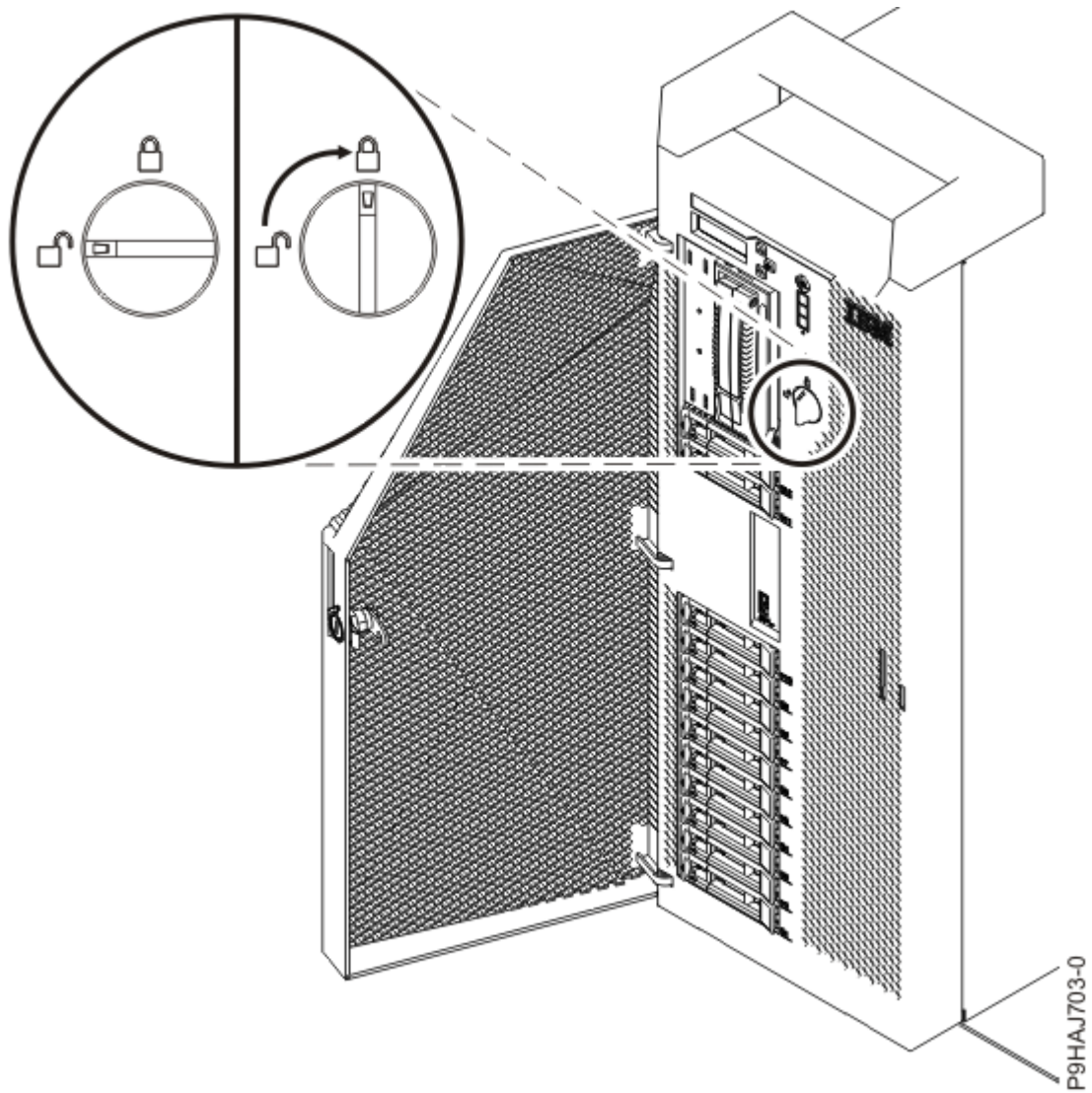
*Figure 88. Installing the front cover*

6. For a stand-alone system, install the front cover and door by completing these steps.
  - a) Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
  - b) Align the cover until the two cover tabs **(A)** are seated into the slots on the base plate **(B)** as shown in [Figure 89](#) on page 93.



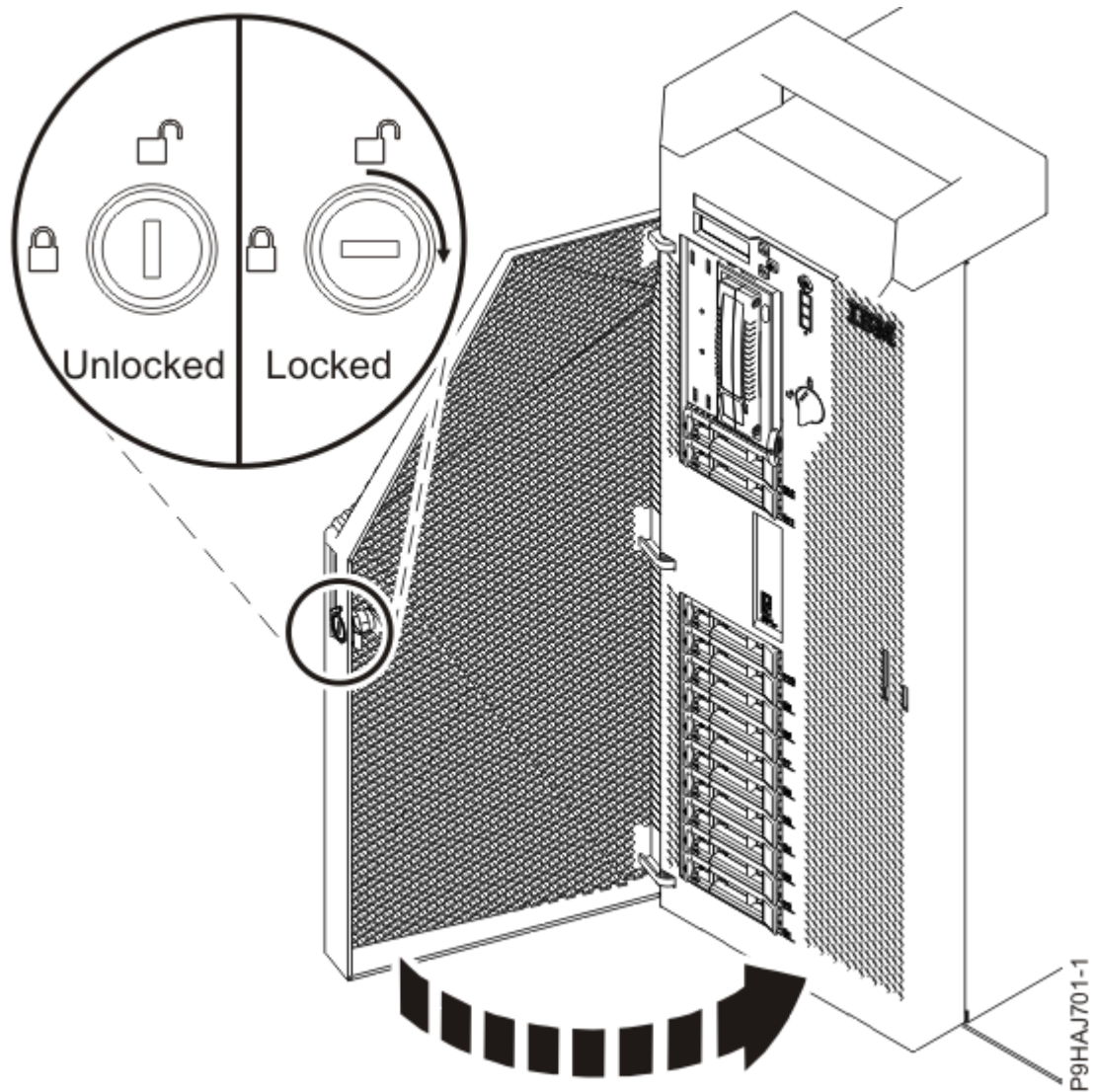
*Figure 89. Installing the front cover and door*

- c) Rotate the cover up and towards the system until the release latch is seated into its respective slot.
- d) Twist the cover latch to the right (clockwise) to lock the cover as shown in [Figure 90](#) on page 94. Vertical is locked; horizontal is unlocked.



*Figure 90. Closing the front cover latch*

- e) Close the front door. Insert the front door key into the lock as shown in Figure 91 on page 95. Twist the key to the right (clockwise) to lock the door. Horizontal is locked; vertical is unlocked.



*Figure 91. Locking the front door*

7. Using your labels, reconnect the power cords **(A)** to the system unit.

Fasten the power cords **(A)** to the system using the hook-and-loop fasteners **(B)** as shown in [Figure 92 on page 96](#) or [Figure 93 on page 97](#).

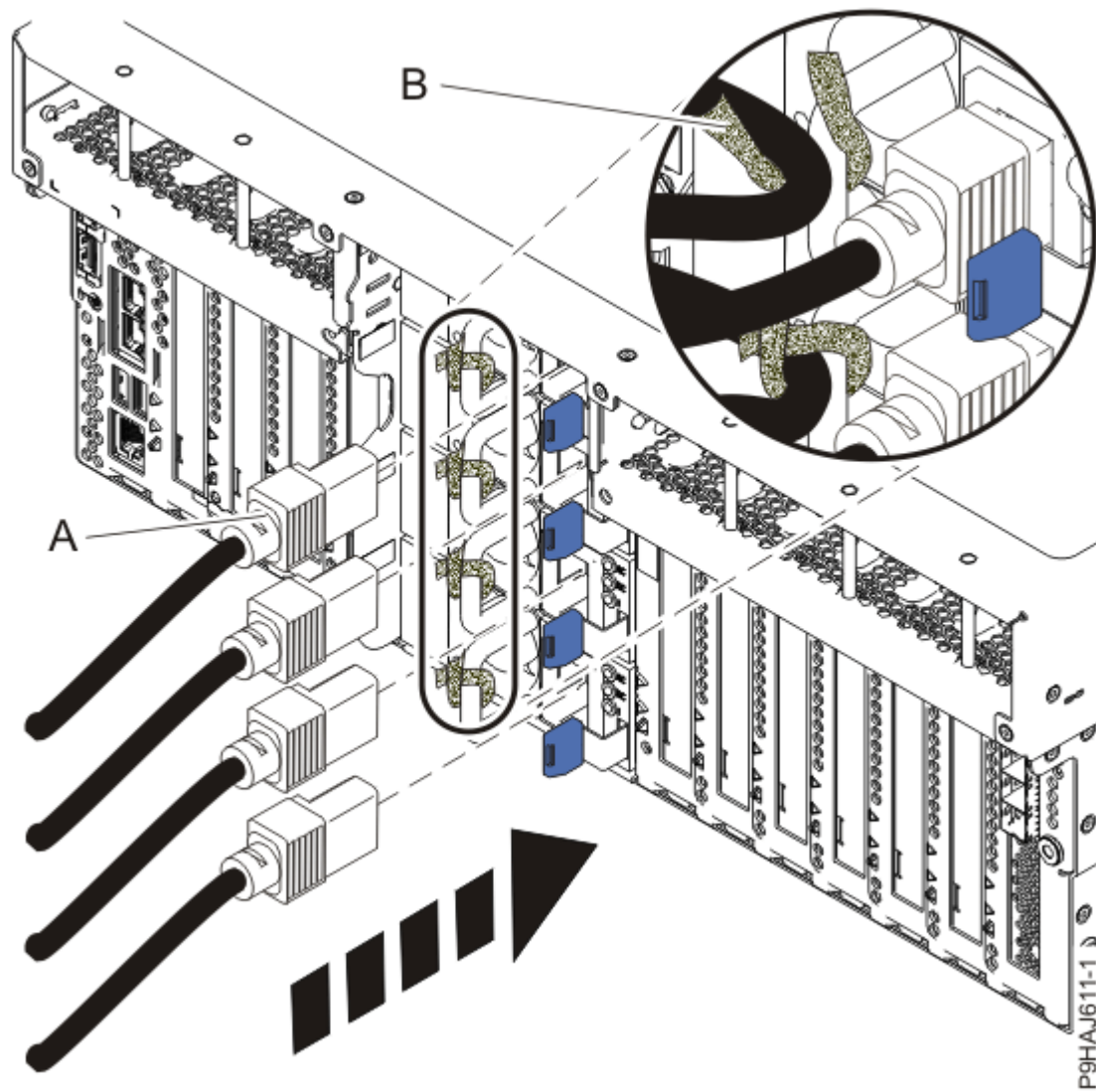


Figure 92. Connecting the power cords to a rack-mounted system

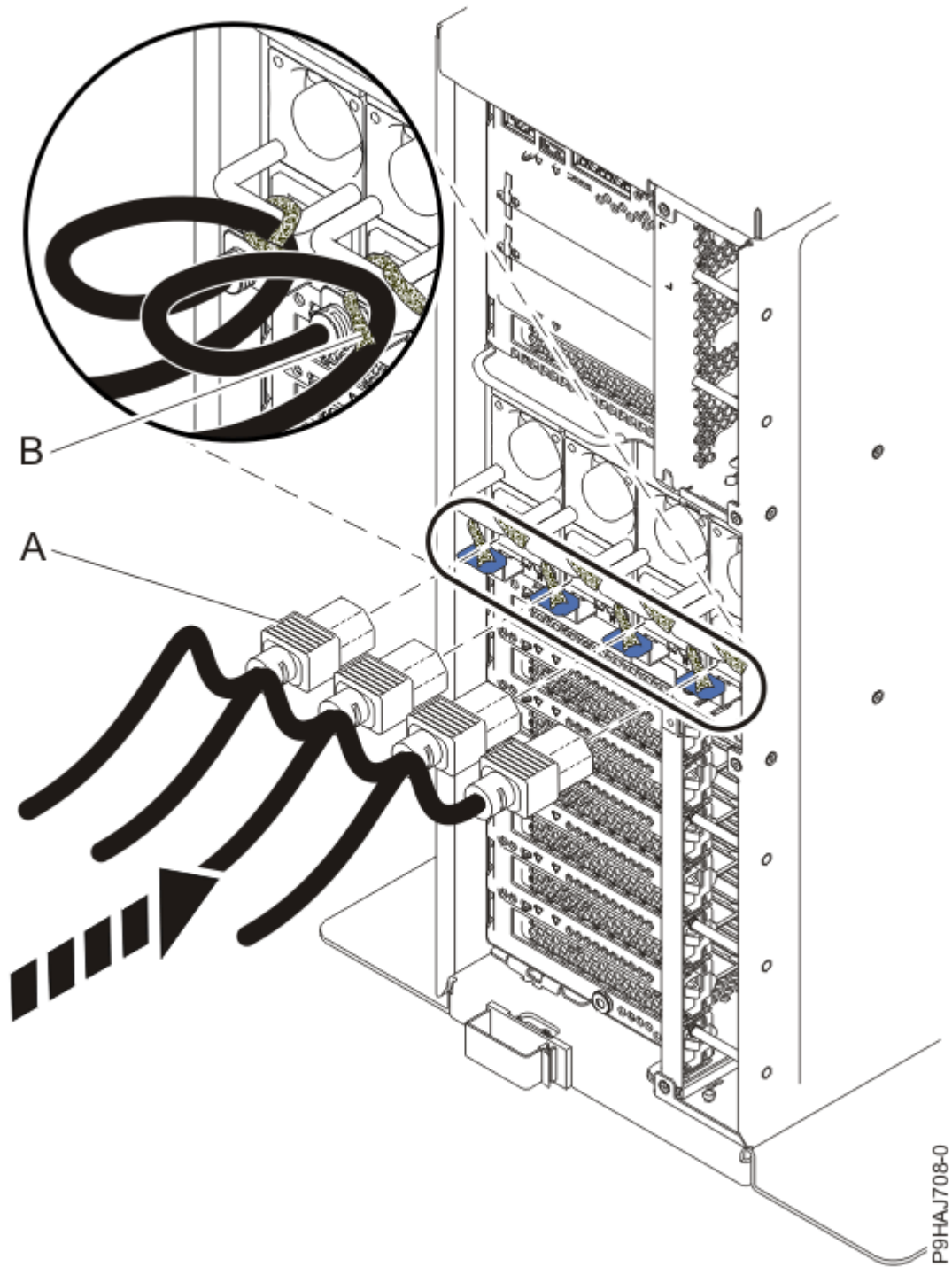


Figure 93. Connecting the power cords to a stand-alone system  
8. Check that the power LED **(A)**, as shown in the following figure, is flashing.

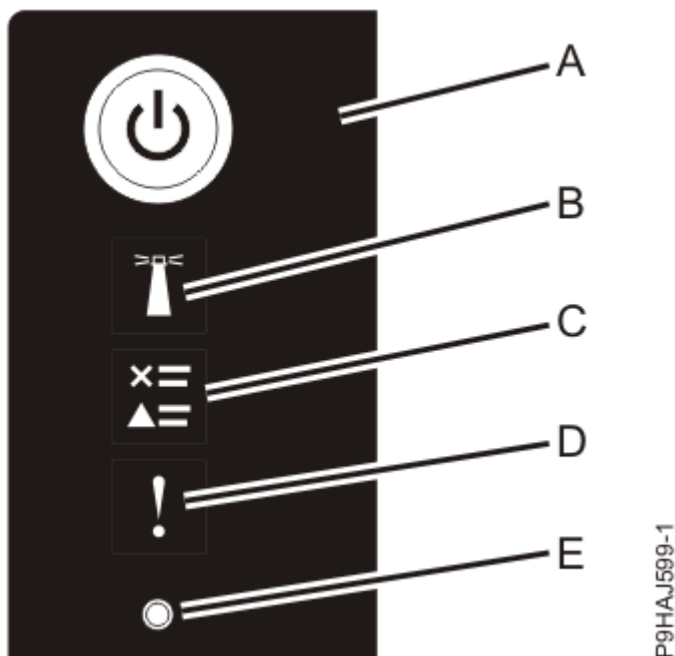


Figure 94. Control panel LEDs

9. Start the system. For instructions, see [Starting a system](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustartsys.htm) (www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustartsys.htm).
10. Turn off the identify LED. For instructions, see [Deactivating an identify LED](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj_turn_off_identify_led.htm) (www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj\_turn\_off\_identify\_led.htm).

## Removing and replacing the control panel display cable in the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S

Find information about removing and replacing the control panel display cable in the IBM Power System S914 (9009-41A and 9009-41G), IBM Power System S924 (9009-42A and 9009-42G), IBM Power System H924 (9223-42H), or IBM Power System H924S (9223-42S) server.

### About this task

**Note:** Removing or replacing this feature is a customer task. You can complete this task yourself, or contact a service provider to complete the task for you. You might be charged a fee by the service provider for this service.

If your system is managed by the Hardware Management Console (HMC), use the HMC to repair a part in the system. For instructions, see [Repairing a part by using the HMC](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj_hmc_repair.htm) (www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj\_hmc\_repair.htm).

If you do not have an HMC, use the following procedures to remove and replace the control panel display cable.

### Preparing the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system to remove and replace the control panel display cable

To prepare the system to remove and replace a control panel display cable, complete the steps in this procedure.

#### Procedure

1. Stop the system. For instructions, see [Stopping a system](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustopsys.htm) (www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustopsys.htm).



2. Identify the part and the system that you are working on. For instructions, see [Identifying a part](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/sal.htm) ([www.ibm.com/support/knowledgecenter/POWER9/p9haj/sal.htm](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/sal.htm)).

Use the blue identify LED on the enclosure to locate the system. Ensure that the serial number of the system matches the serial number to be serviced.

3. Use the blue LED to identify the server.

Ensure that the serial number of the system matches the serial number to be serviced.

4. Label and disconnect the power cords from the system unit.

See [Figure 95](#) on page 99 or [Figure 96](#) on page 100.

**Notes:**

- This system might be equipped with two or more power supplies. If the removing and replacing procedures require the system power to be turned off, ensure that all the power sources to the system are disconnected.
- The power cord (**B**) is fastened to the system with hook-and-loop fastener (**A**). If you are placing the system in a service position after you disconnect the power cords, ensure that you unstrap the fastener.

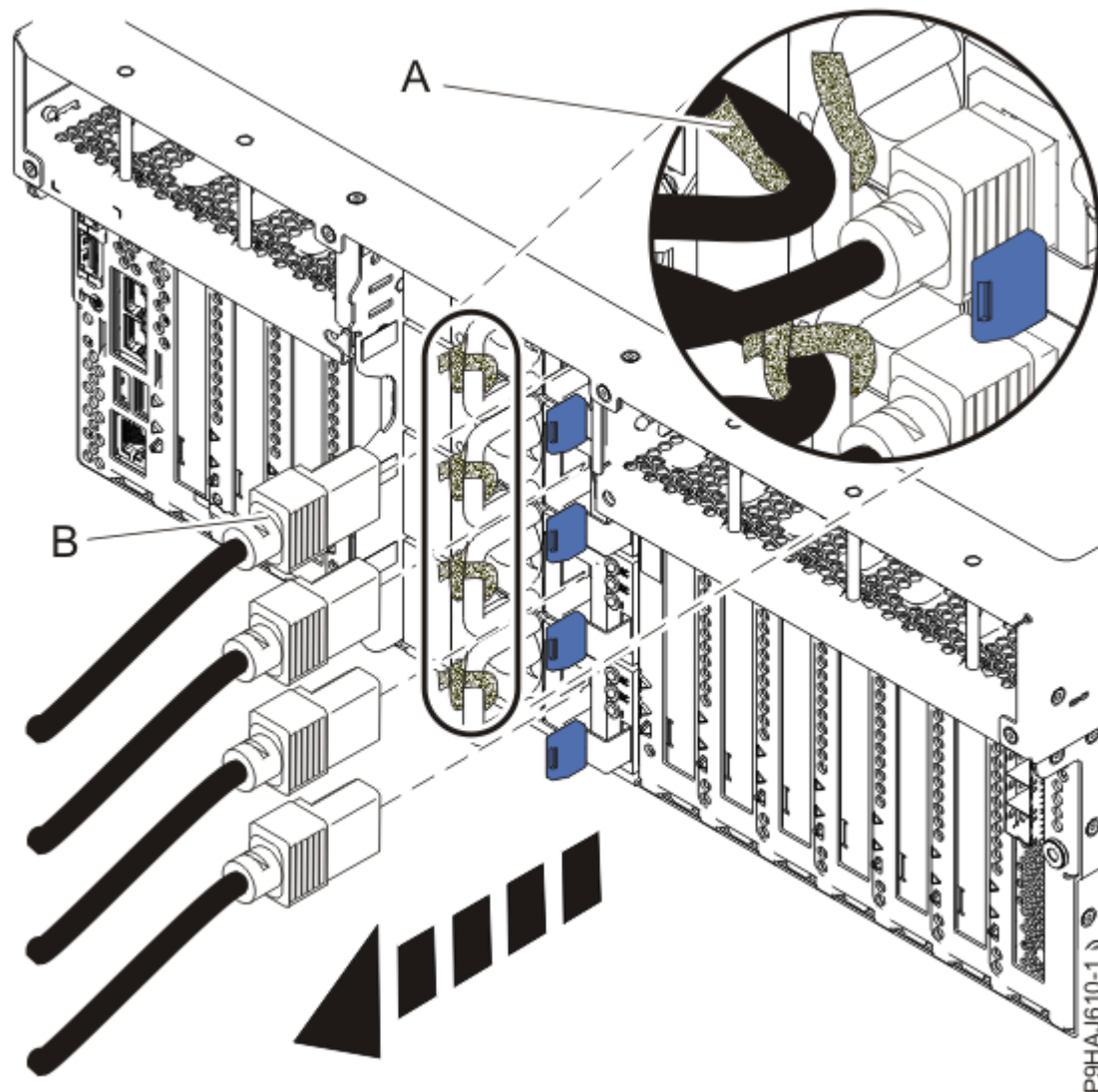


Figure 95. Removing the power cords from a rack-mounted server

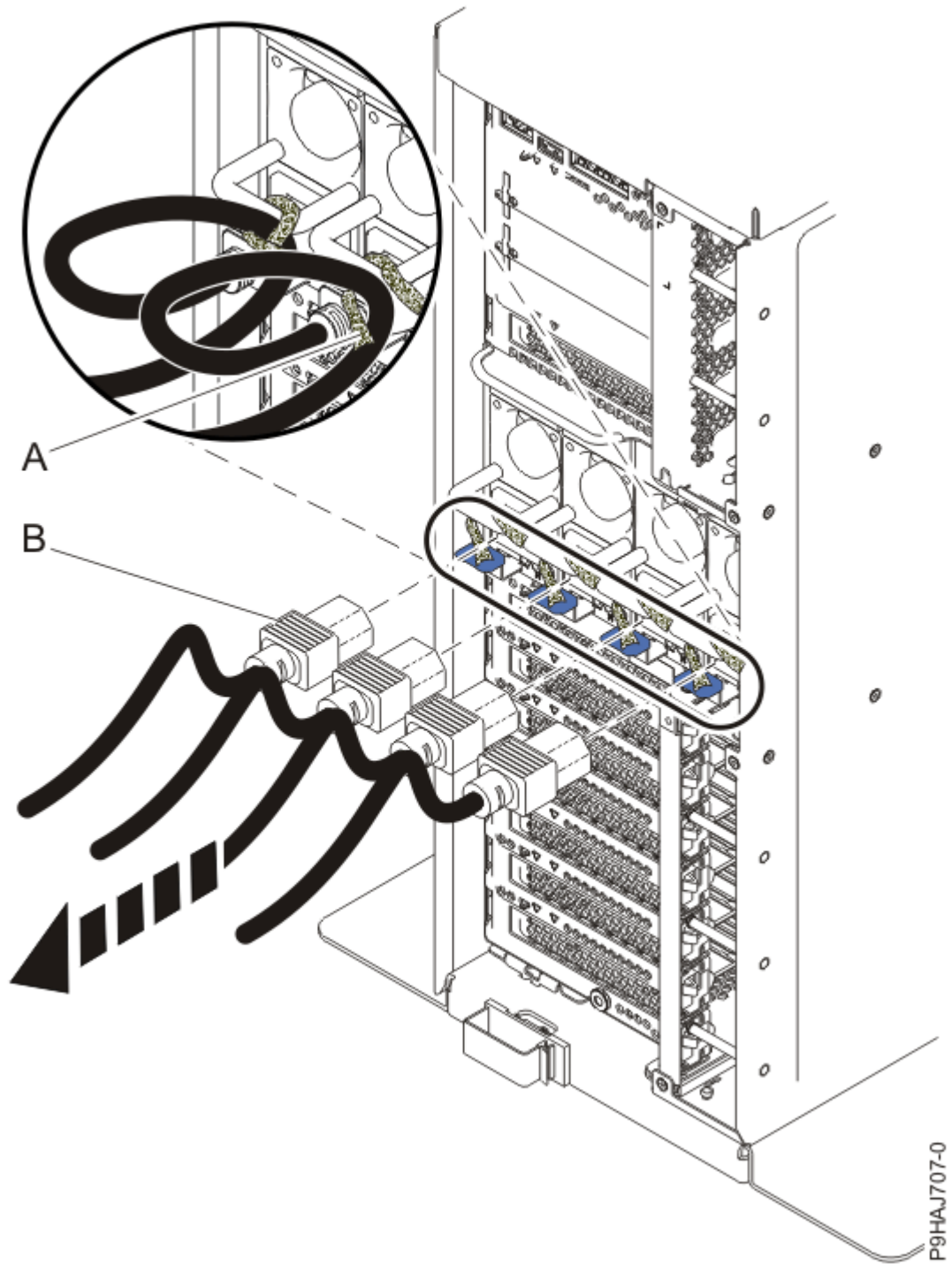
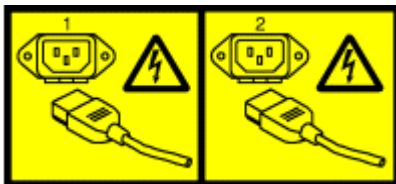


Figure 96. Removing the power cords from a stand-alone server

(L003)



or



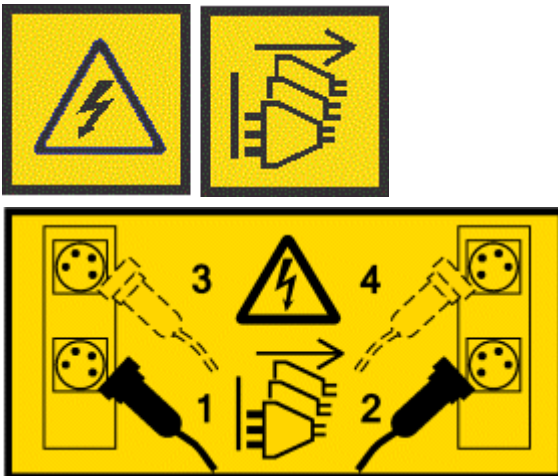
or

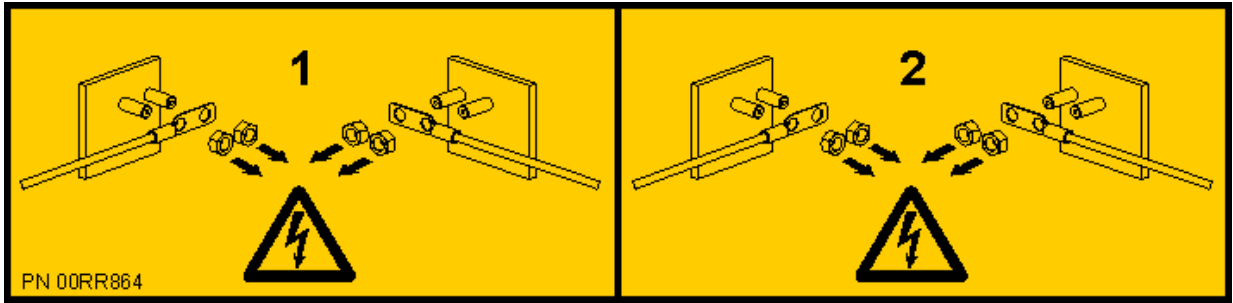


or



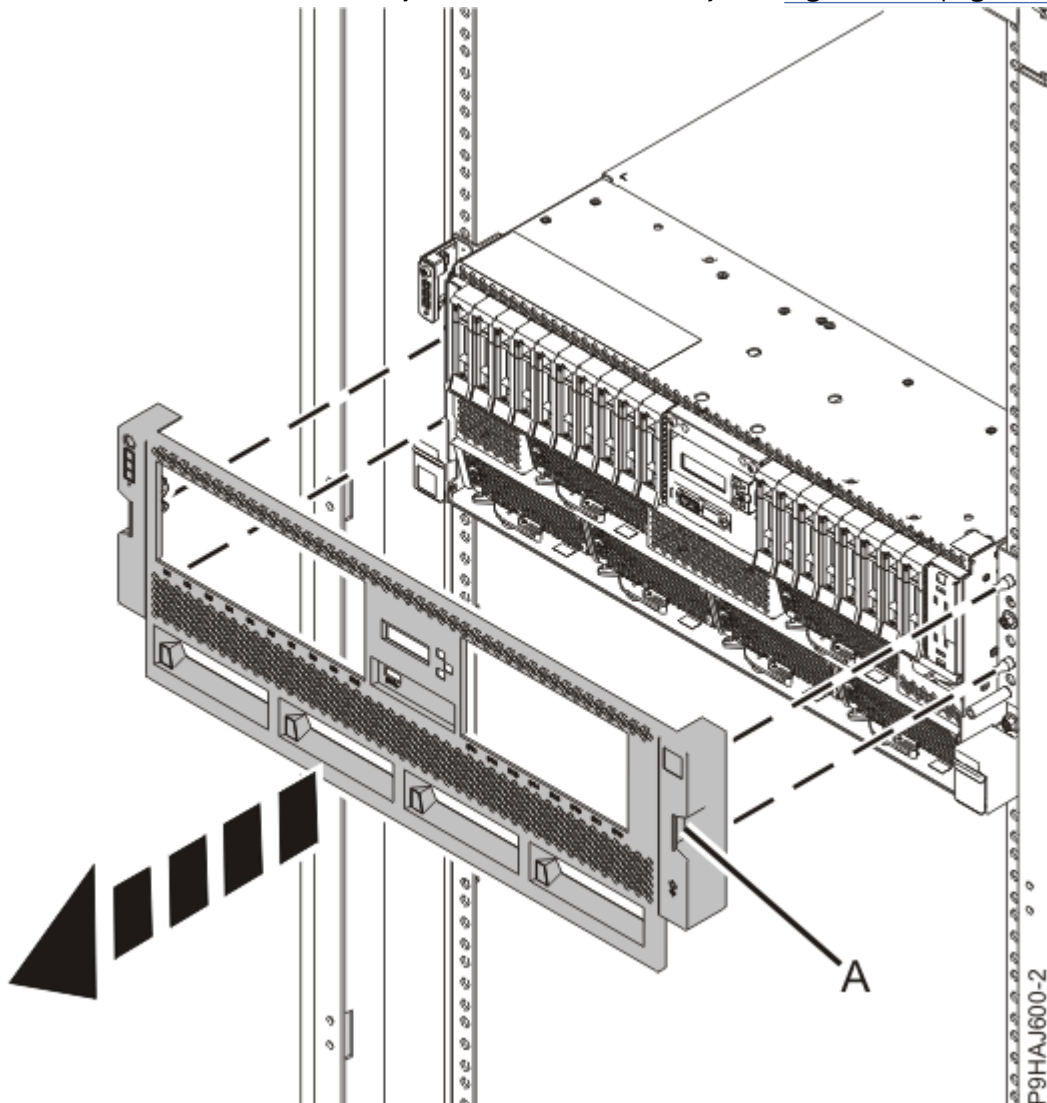
or





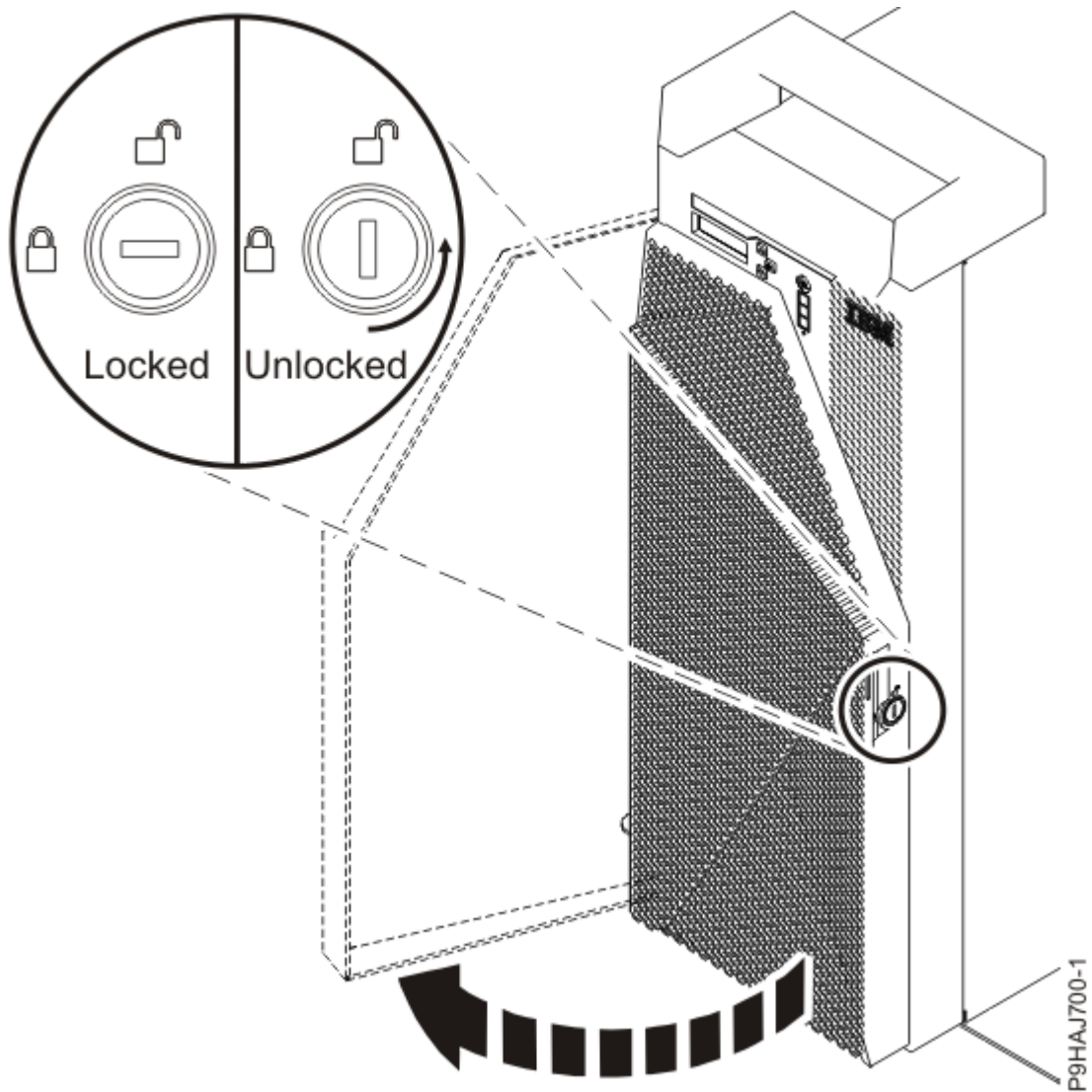
**⚠ DANGER:** Multiple power cords. The product might be equipped with multiple AC power cords or multiple DC power cables. To remove all hazardous voltages, disconnect all power cords and power cables. (L003)

5. For a rack-mounted system, remove the front cover by pulling it away from the system. The cover has indentations **(A)** where you can hold it more easily. See [Figure 97](#) on page 102.



*Figure 97. Removing the front cover*

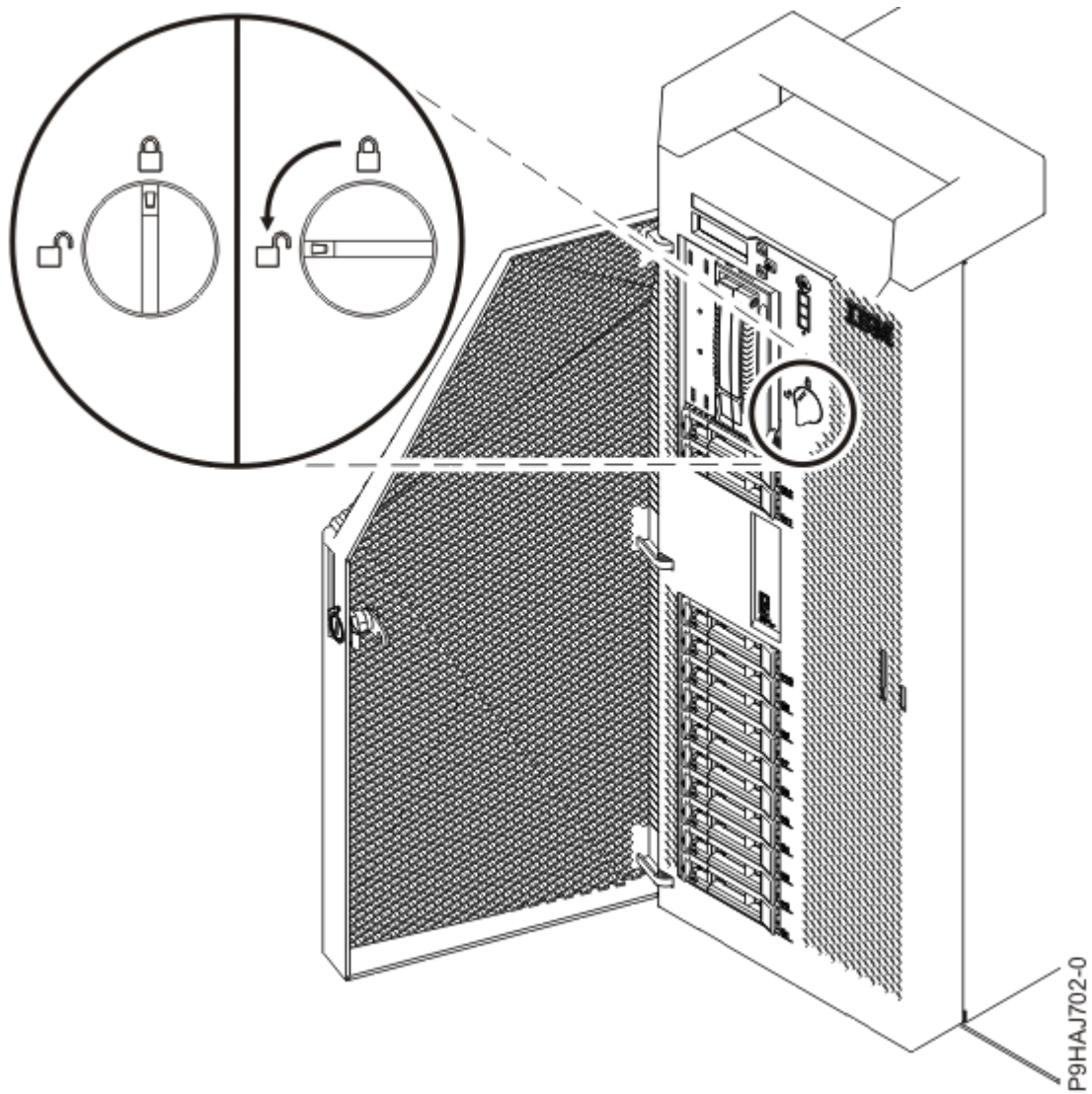
6. For a stand-alone system, remove the front cover and door by completing these steps.
  - a) Insert the front door key into the lock as shown in [Figure 98](#) on page 103. Twist the key to the left (counterclockwise) to unlock the door. Horizontal is locked; vertical is unlocked. Open the front door.



*Figure 98. Unlocking the front door*

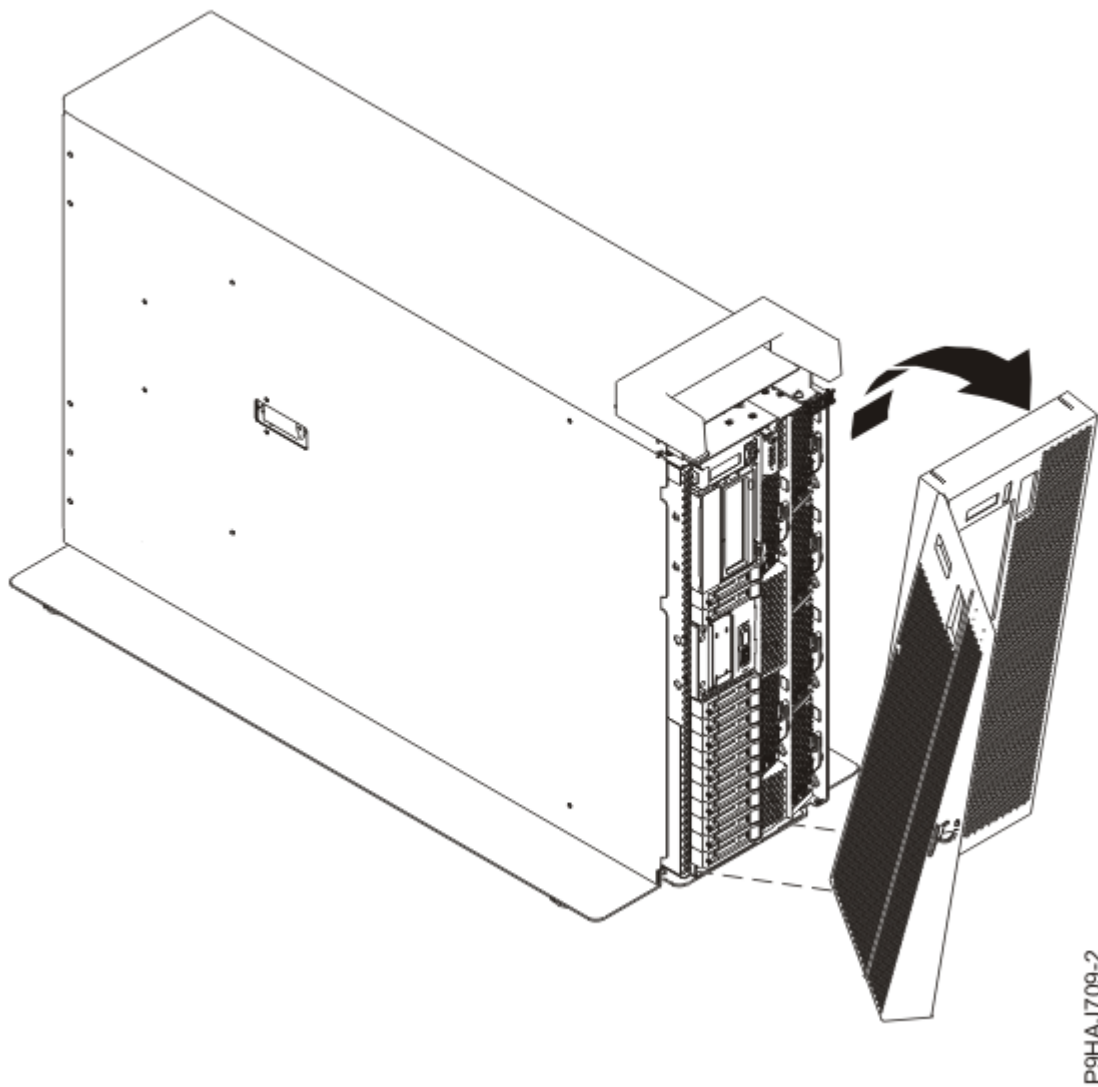
- b) Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
- c) Twist the cover latch to the left (counterclockwise) to unlock the cover as shown in [Figure 99](#) on [page 104](#).

Vertical is locked; horizontal is unlocked.



*Figure 99. Opening the front cover latch*

- d) Pull the cover away from the system as shown in [Figure 100](#) on page 105. The cover has an indentation where you can hold onto it more easily.



*Figure 100. Removing the front cover*

7. For a rack-mounted system, open the side latches **(A)** and pull the latches to slide the system unit fully into the service position until the slides click and hold the system unit securely. Ensure that the screws inside the latches are not secured to the rack.

See the following figure.

Remove the hook-and-loop fasteners that secure the cable management arms. Ensure that the cable management arms can move freely. Ensure that the cables at the rear of the system do not catch or bind as you pull the system unit into the service position.

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.

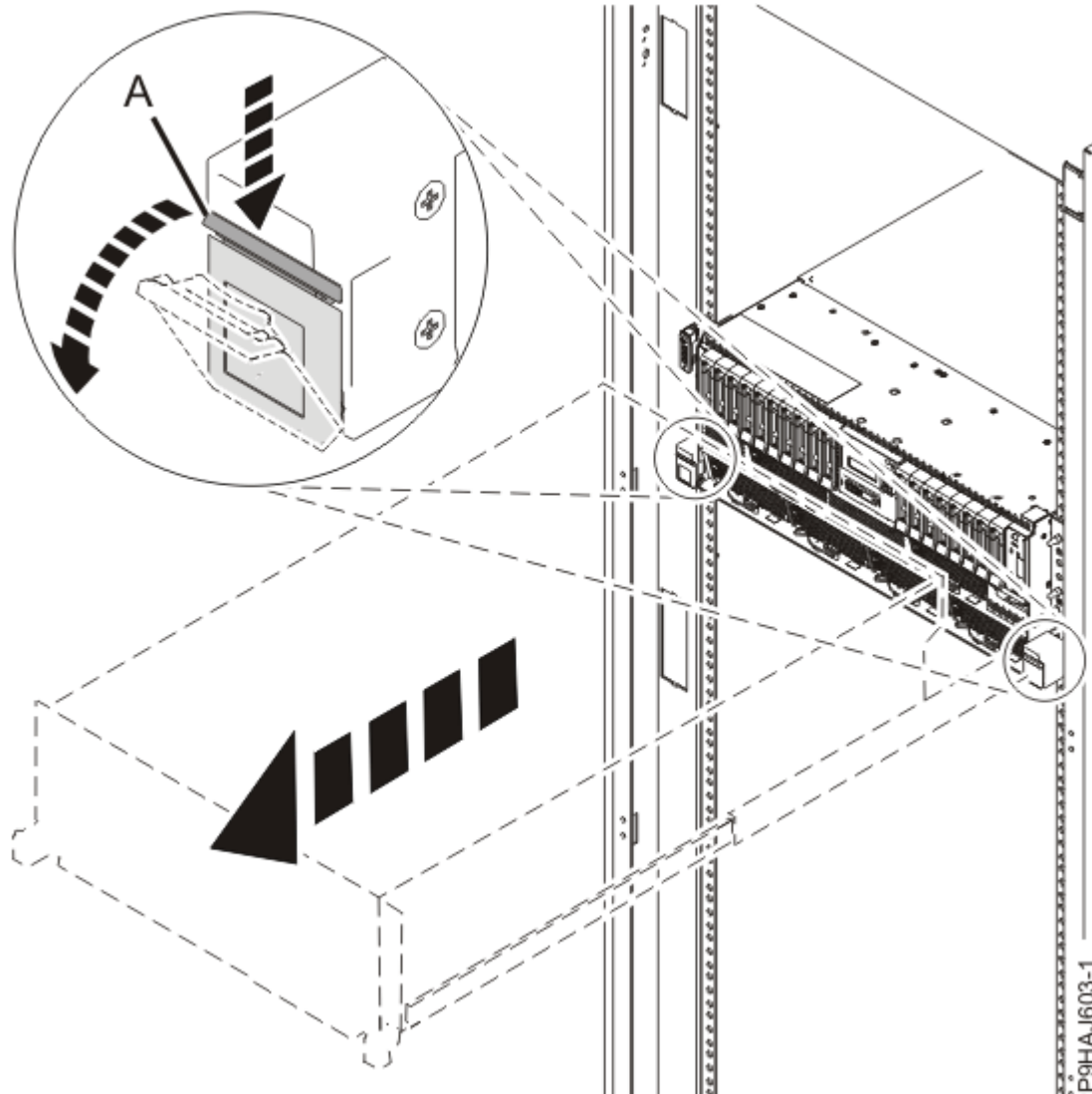


Figure 101. Releasing the side latches

8. Attach the electrostatic discharge (ESD) wrist strap. Your system has ESD jacks on the front and on the rear of the system as shown in the following figure. Plug the ESD wrist strap into the ESD jack.

 **Attention:**

- Attach an electrostatic discharge (ESD) wrist strap to the front ESD jack, to the rear ESD jack, or to an unpainted metal surface of your hardware to prevent the electrostatic discharge from damaging your hardware.



- When you use an ESD wrist strap, follow all electrical safety procedures. An ESD wrist strap is used for static control. It does not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.
- If you do not have an ESD wrist strap, just prior to removing the product from ESD packaging and installing or replacing hardware, touch an unpainted metal surface of the system for a minimum of 5 seconds.

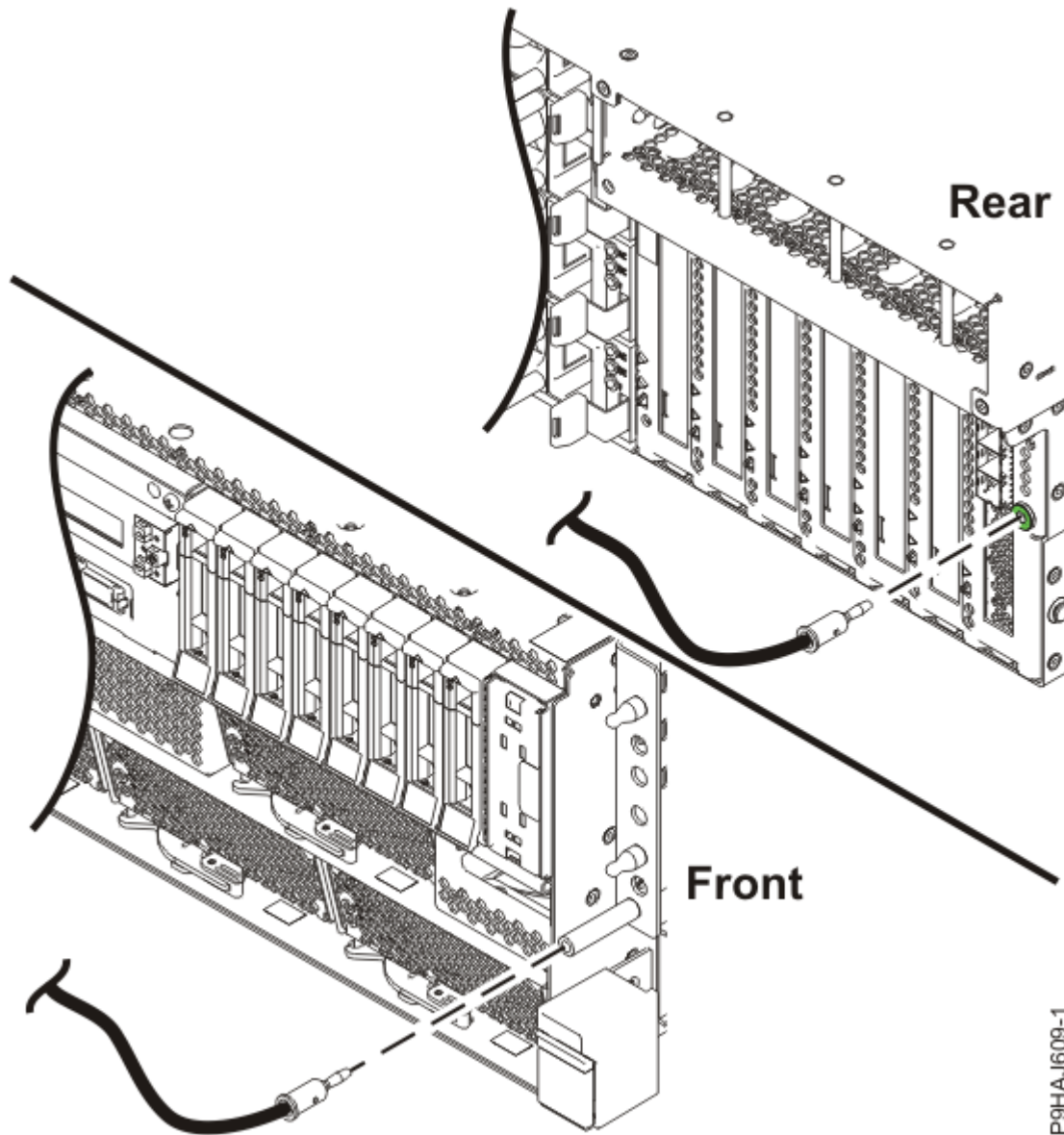


Figure 102. Location of ESD plugs

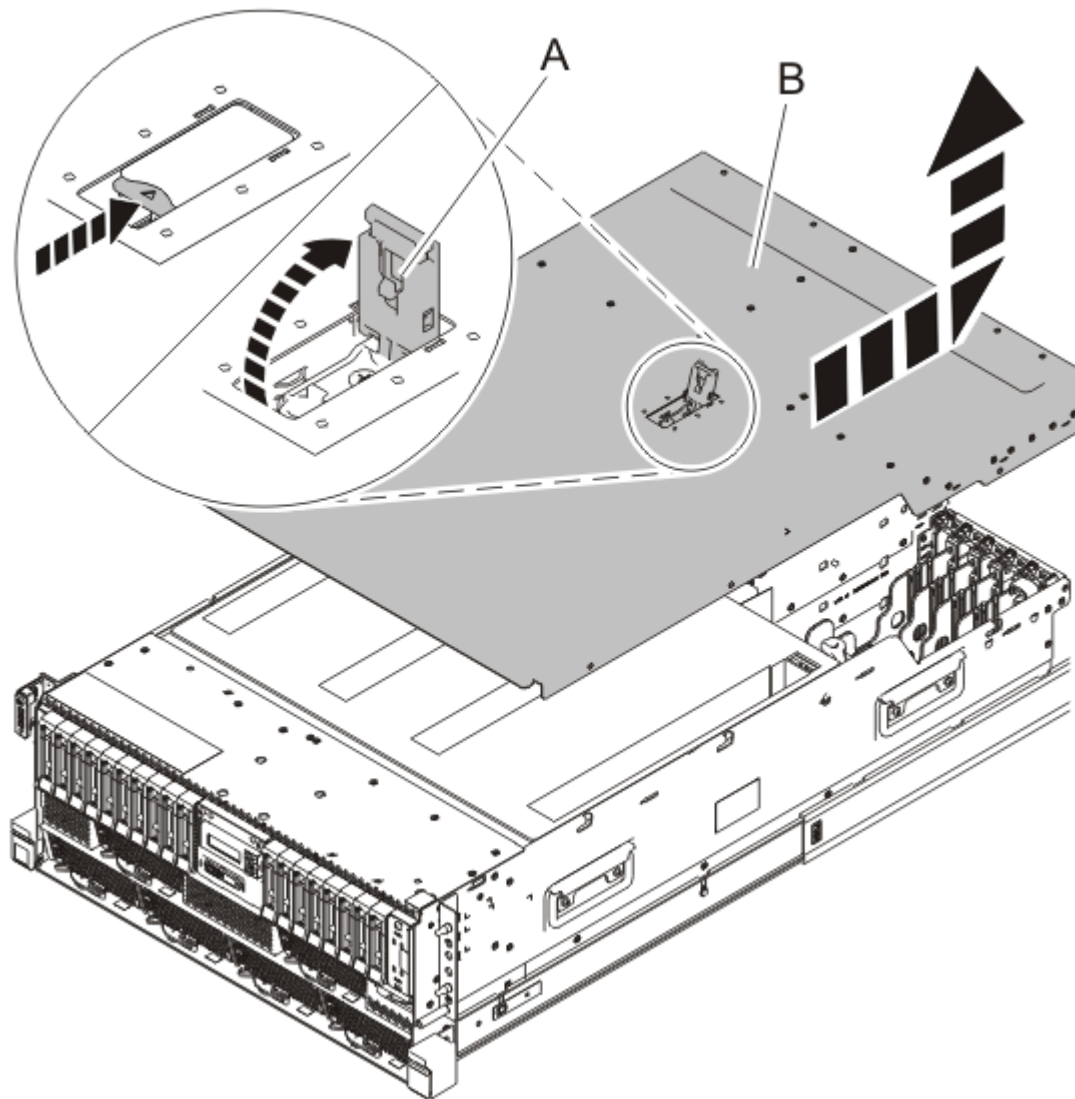
9. Remove the service access cover.

For a rack-mounted system, complete the following steps. Refer to [Figure 103](#) on page 108.



**Attention:** Operating the system without the service access cover on for more than 10 minutes when the system power is turned on might damage the system components.

- Release the service cover latch by pushing the release latch **(A)** in the direction shown.
- Slide the cover **(B)** off 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.



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Figure 103. Removing the service access cover from a rack-mounted system

For a stand-alone system, complete the following steps. Refer to [Figure 104](#) on page 109.



**Attention:** Operating the system without the service access cover on for more than 10 minutes when the system power is turned on might damage the system components.

- a. Release the latch by pushing the release latch **(A)** in the direction shown.
- b. Slide the cover **(B)** off the system unit. When the front of the service access cover has cleared the upper frame ledge, lift the cover up and off the system unit.

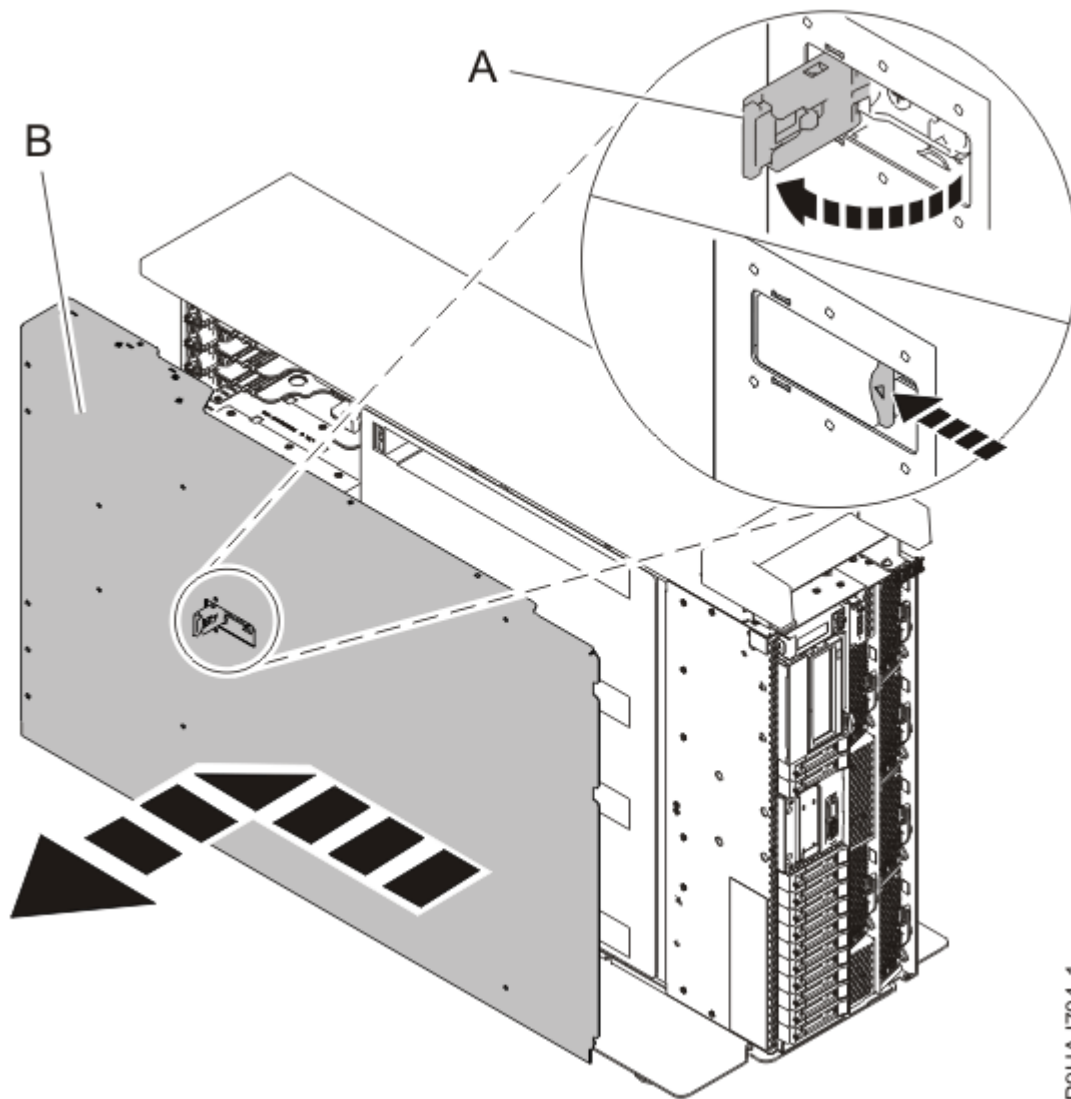


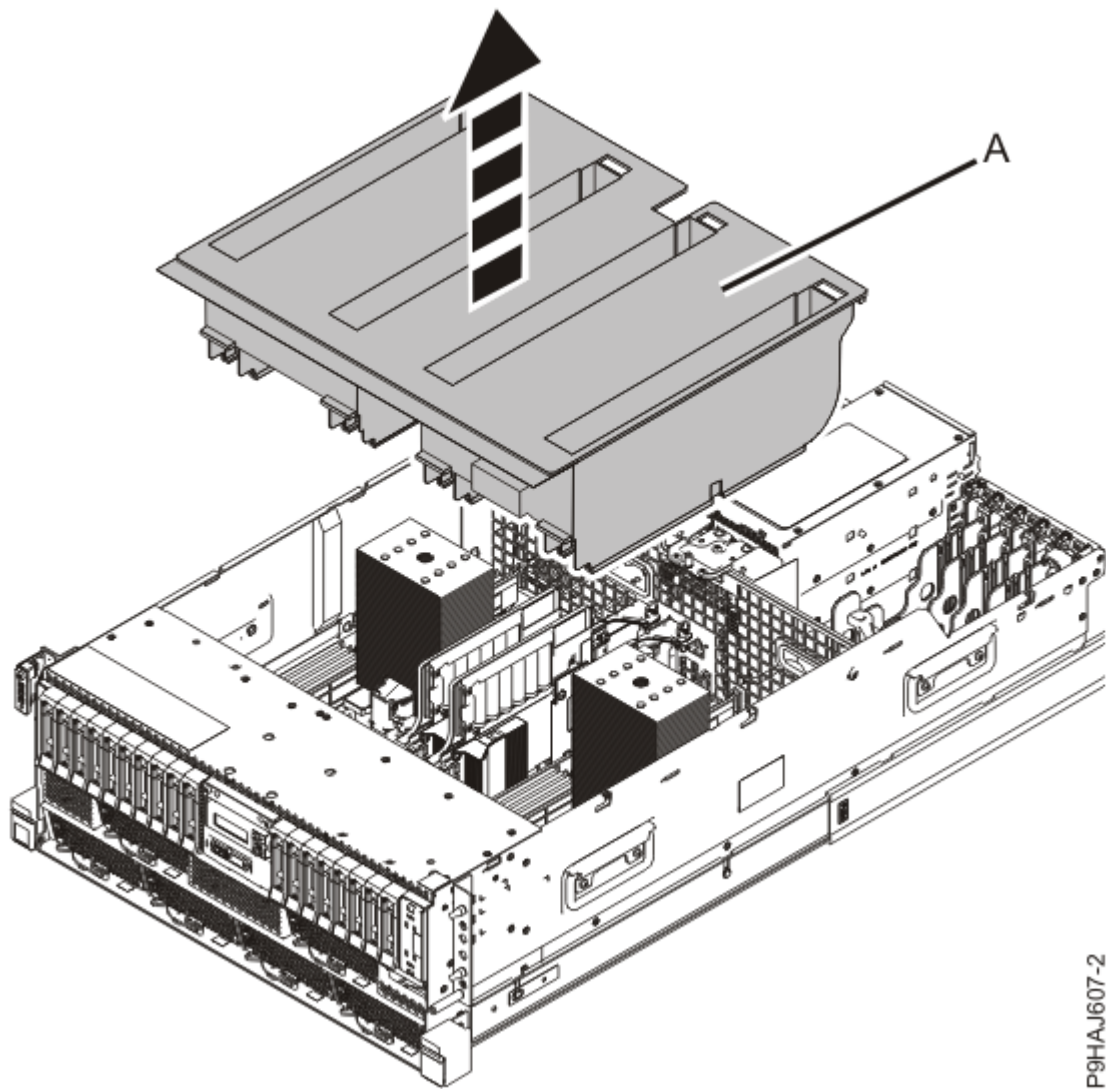
Figure 104. Removing the service access cover

### Removing the control panel display cable from the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system

To remove a control panel display cable, complete the steps in this procedure.

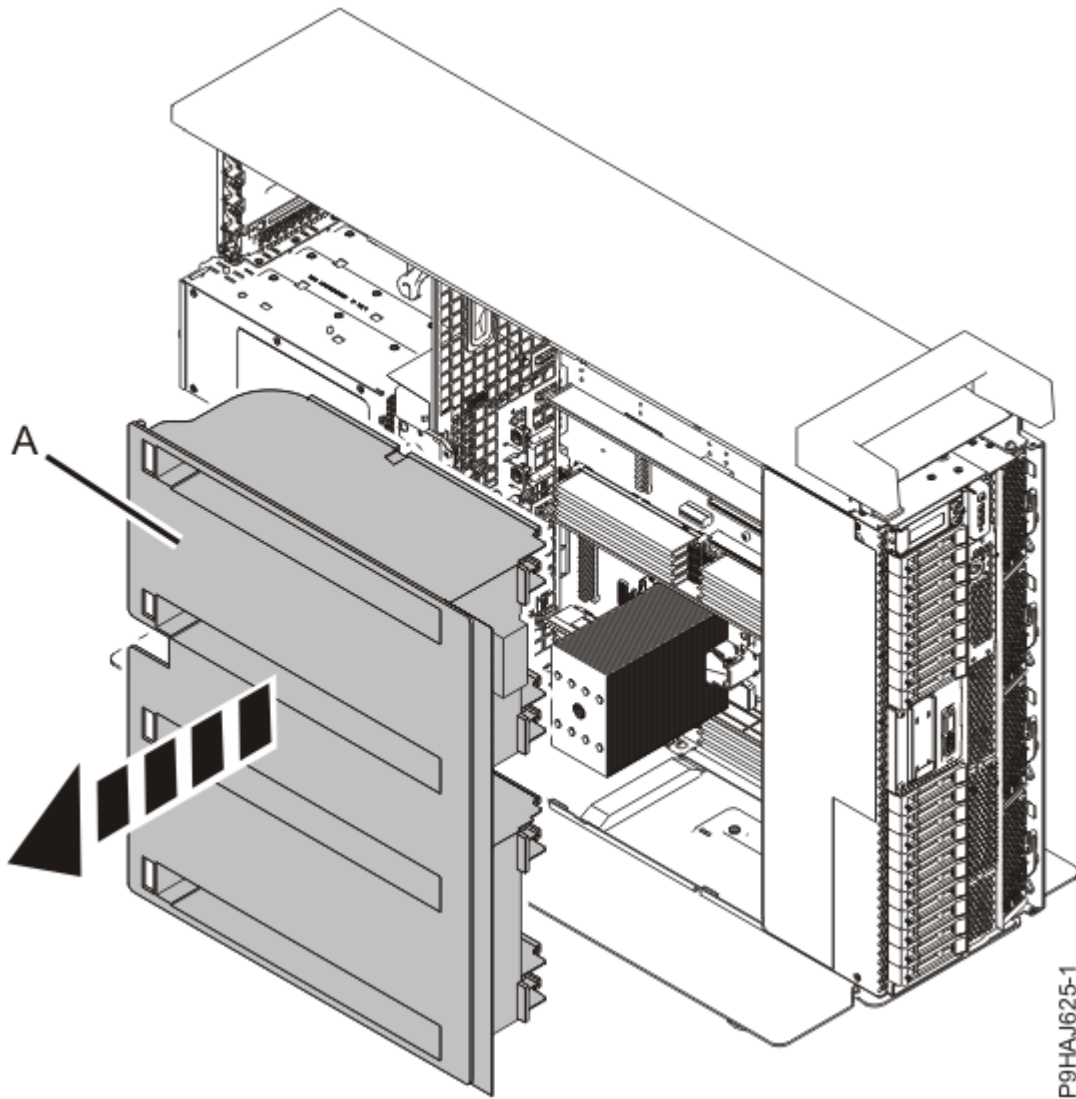
#### Procedure

1. Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
2. For a rack-mounted system, lift the air baffle **(A)** straight up as shown in [Figure 105 on page 110](#).  
For a stand-alone system, remove the air baffle **(A)** straight out as shown in [Figure 106 on page 111](#).  
Place the air baffle upside down on a clean area.



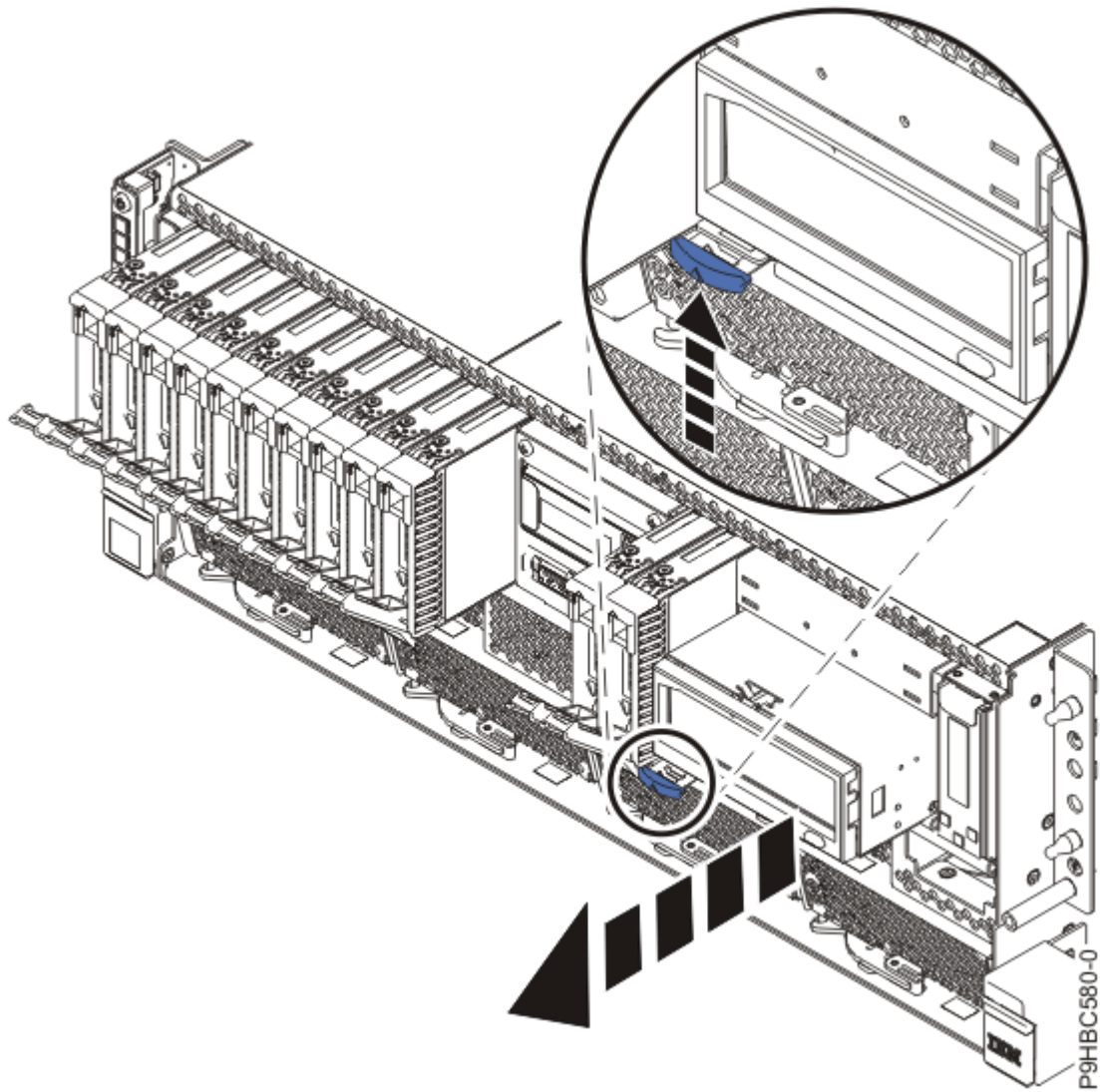
P9HAJ607-2

Figure 105. Removing the air baffle from a rack-mounted system



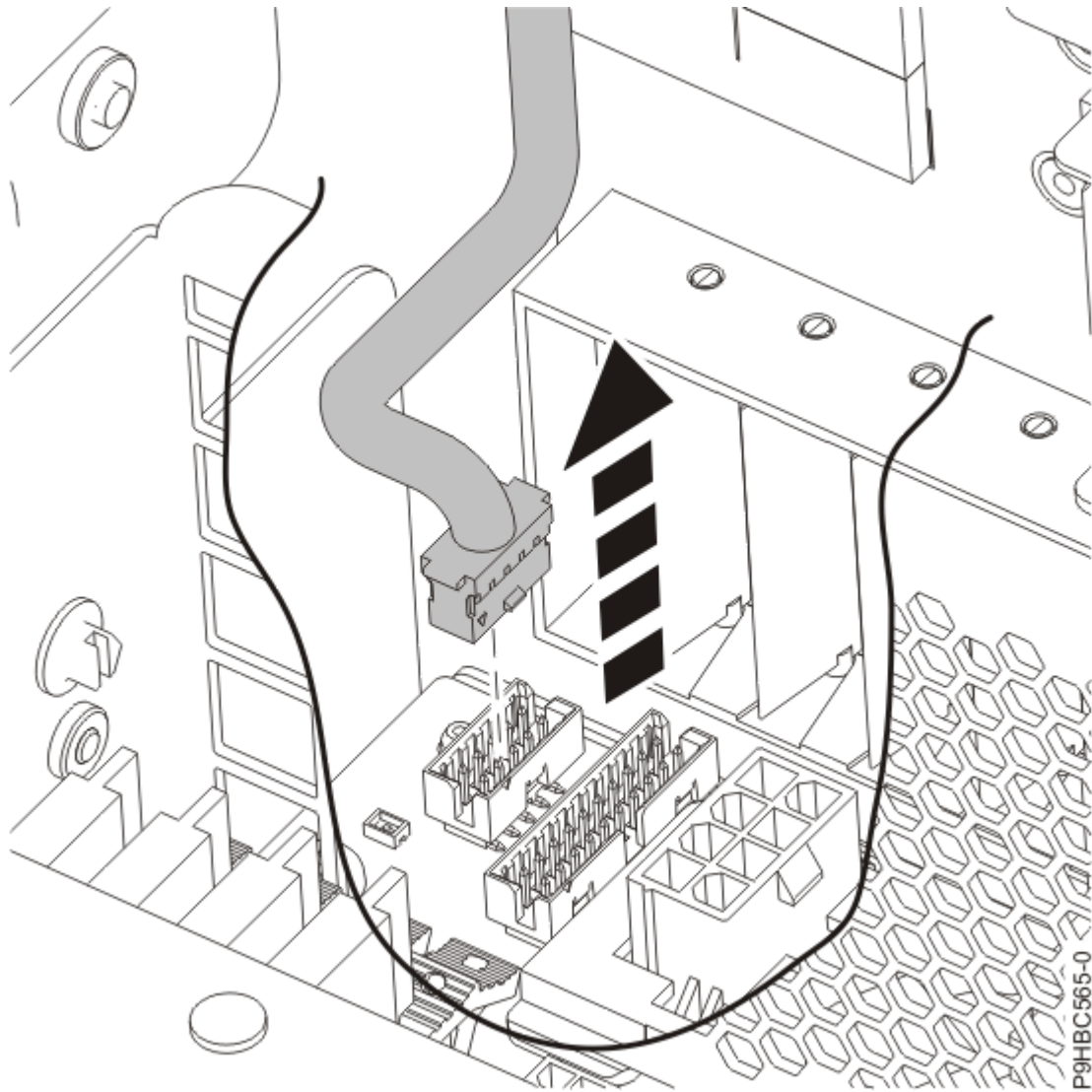
*Figure 106. Removing the air baffle from a stand-alone system*

3. If the server has an RDX drive, partially remove the RDX docking station.
  - a) Push the RDX docking station latch upwards in the direction of the arrow as shown in [Figure 107](#) on page 112.
  - b) Slide the RDX docking station about 1 in (2.5 cm) from of the system.

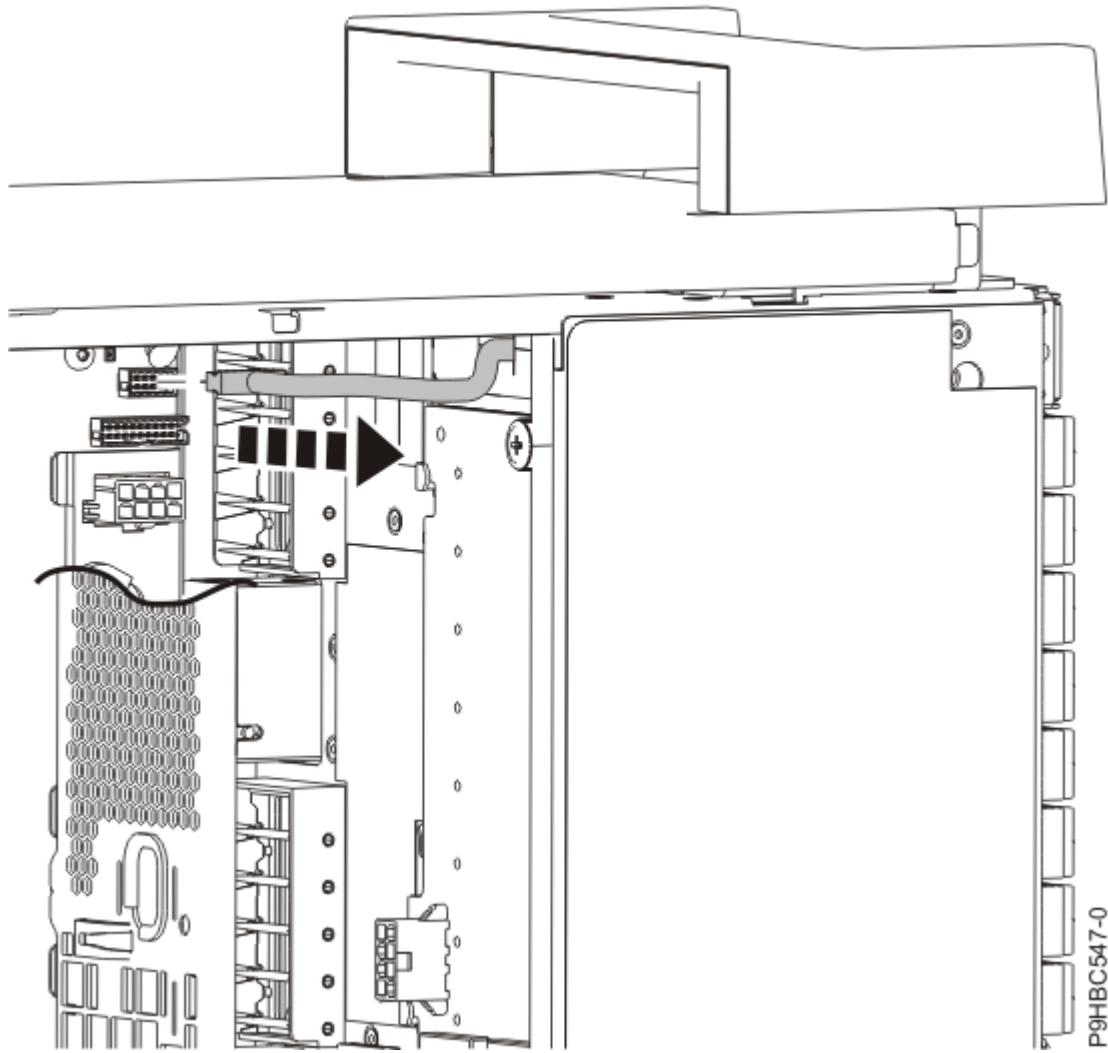


*Figure 107. Partially removing the RDX docking station*

4. Unplug the control panel display cable from the system backplane as shown in [Figure 108](#) on page 113 or [Figure 109](#) on page 114.



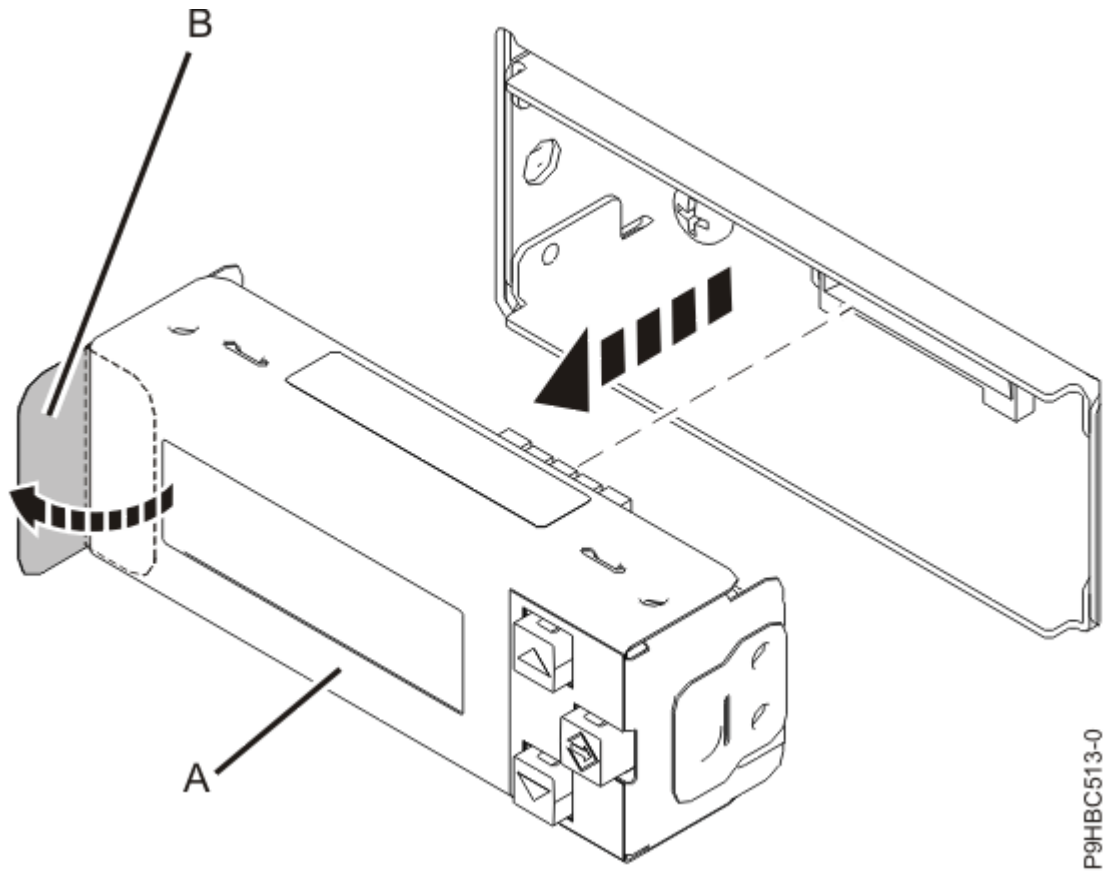
*Figure 108. Disconnecting the control panel display cable from the system backplane for a rack-mounted system*



*Figure 109. Disconnecting the control panel display cable from the system backplane for a stand-alone system*

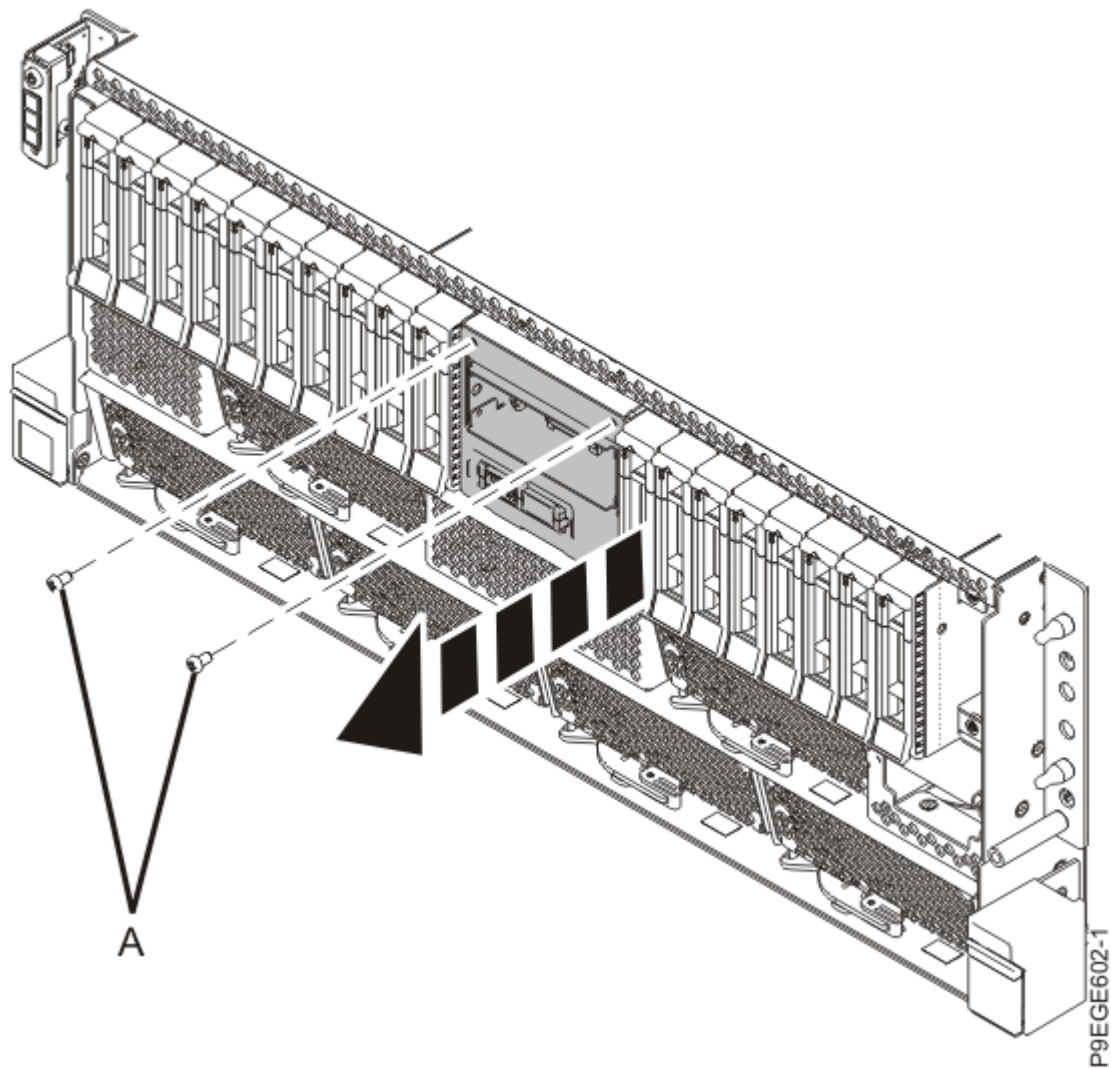
5. Remove the control panel display **(A)** by pulling the tab **(B)** as shown in [Figure 110](#) on page 115.





*Figure 110. Removing the control panel display*

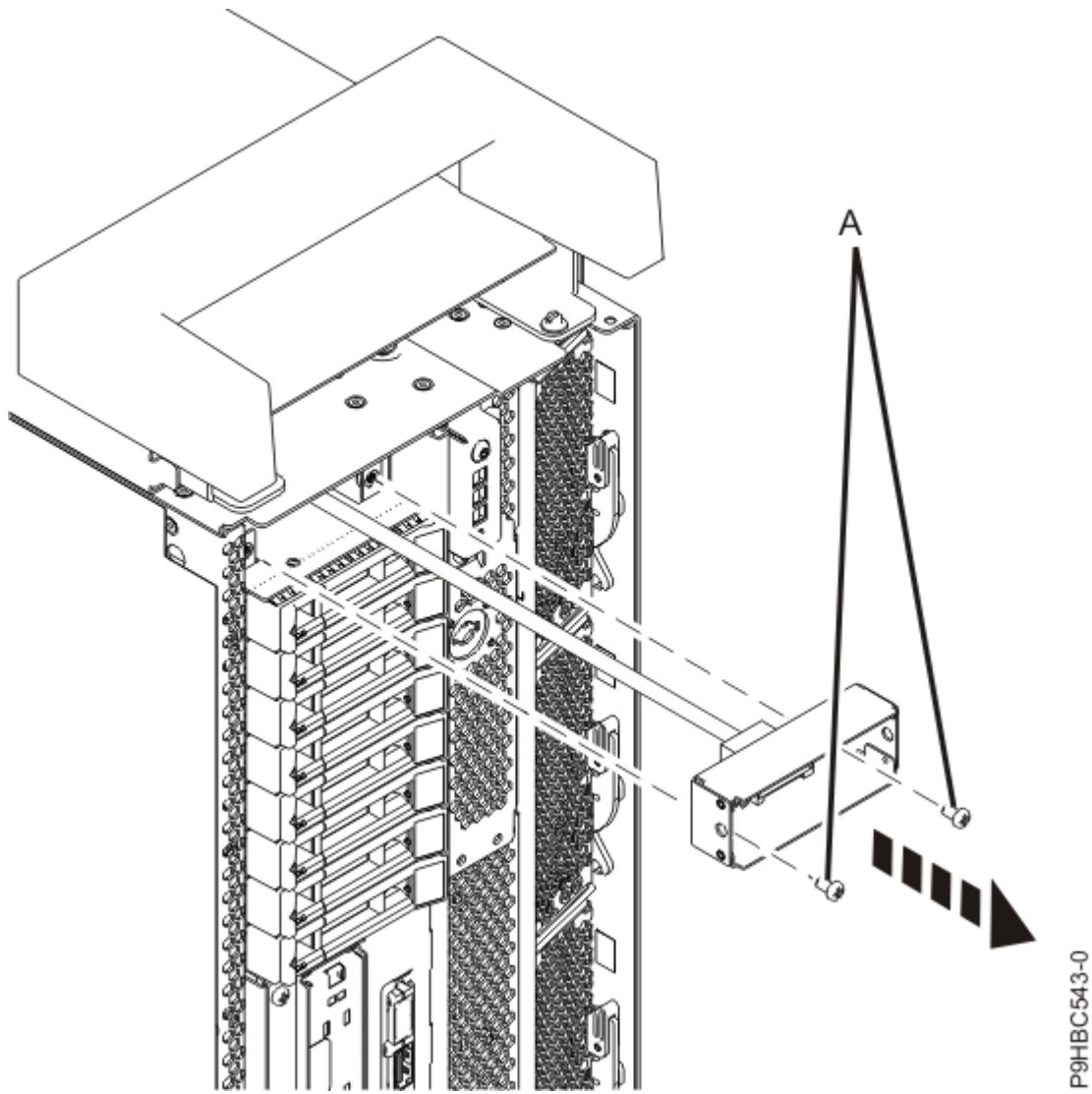
6. For the rack-mounted system, remove the two screws **(A)** that secure the control panel display holder to the chassis as shown in [Figure 111](#) on page 116.



*Figure 111. Removing the control panel display holder from the bracket for a rack-mounted system*

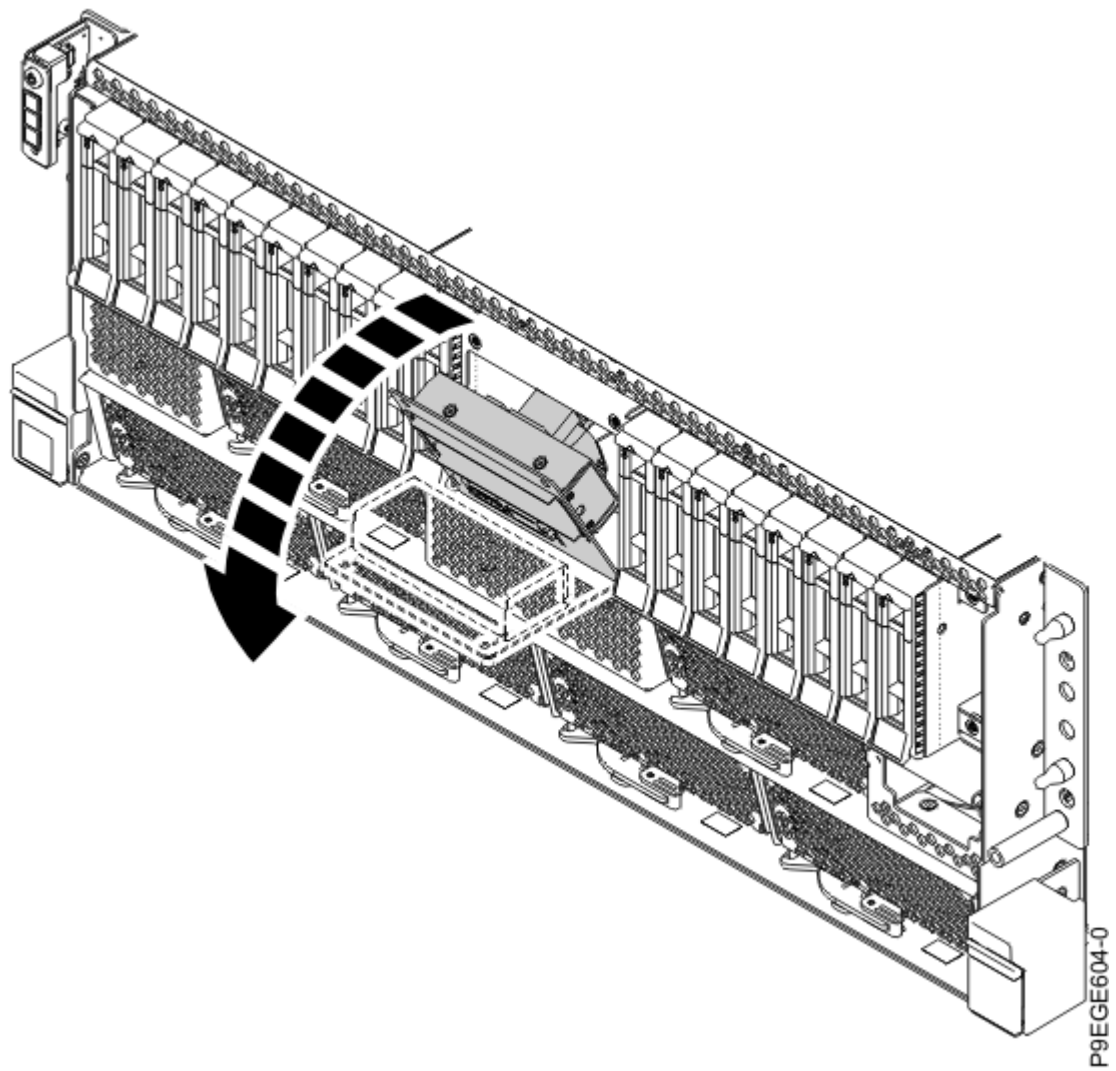
7. For the stand-alone system, remove the two screws **(A)** that secure the control panel display holder to the chassis as shown in [Figure 111](#) on page 116.

Remove the control panel display housing and cable from the system. Ensure that the cable does not catch on any components while you are removing it.



*Figure 112. Removing the control panel display holder from the bracket for a rack-mounted system*

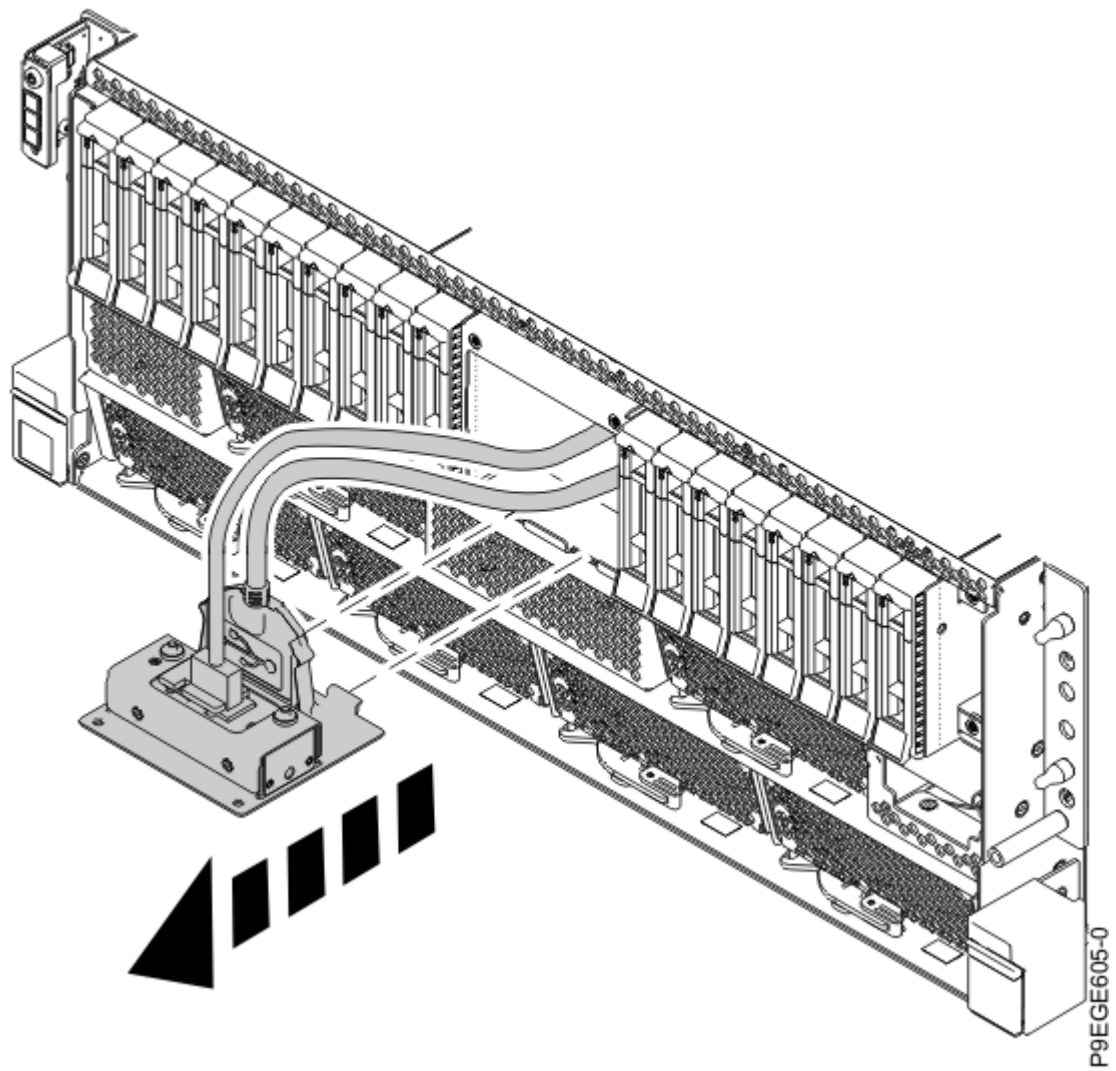
8. For the rack-mounted system, open the control panel display holder as shown in [Figure 113 on page 118](#).



*Figure 113. Opening the control panel display holder for a rack-mounted system*

9. For the rack-mounted system, remove the control panel display housing and cable from the system as shown in [Figure 114](#) on page 119.

Ensure that the cable does not catch on any components while you are removing it.



*Figure 114. Removing the control panel display housing and cable for a rack-mounted system*

10. For the rack-mounted system, remove the control panel display cable from the housing using the two screws **(A)** as shown in [Figure 115 on page 120](#).

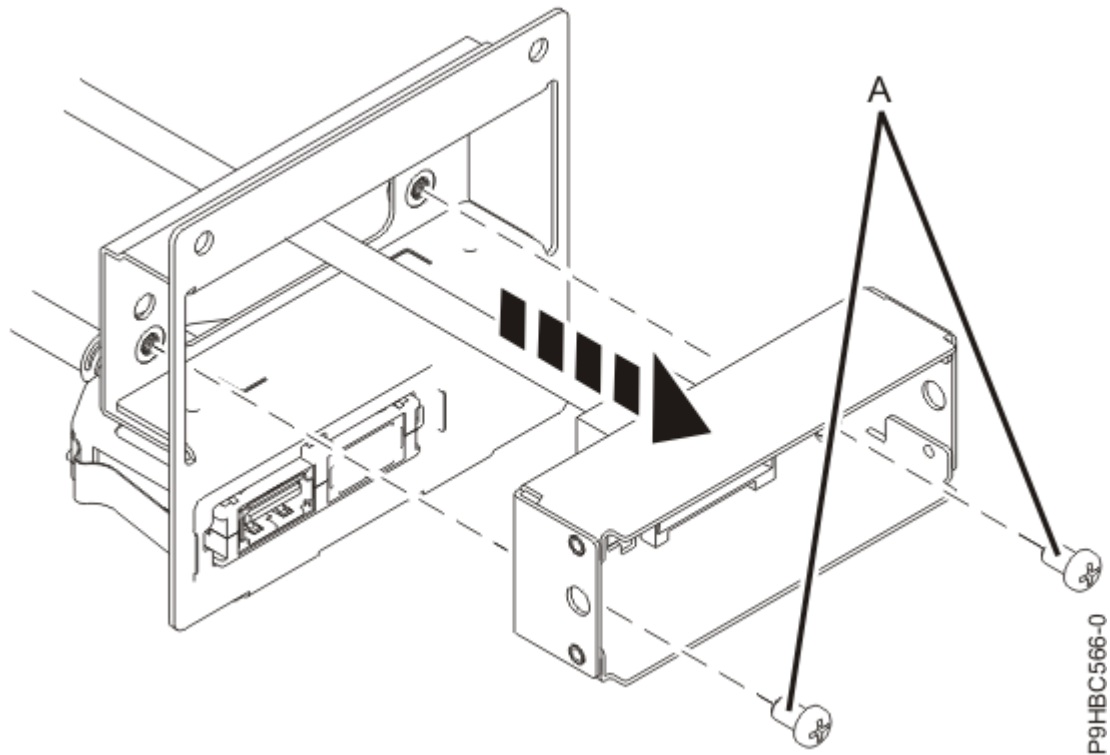


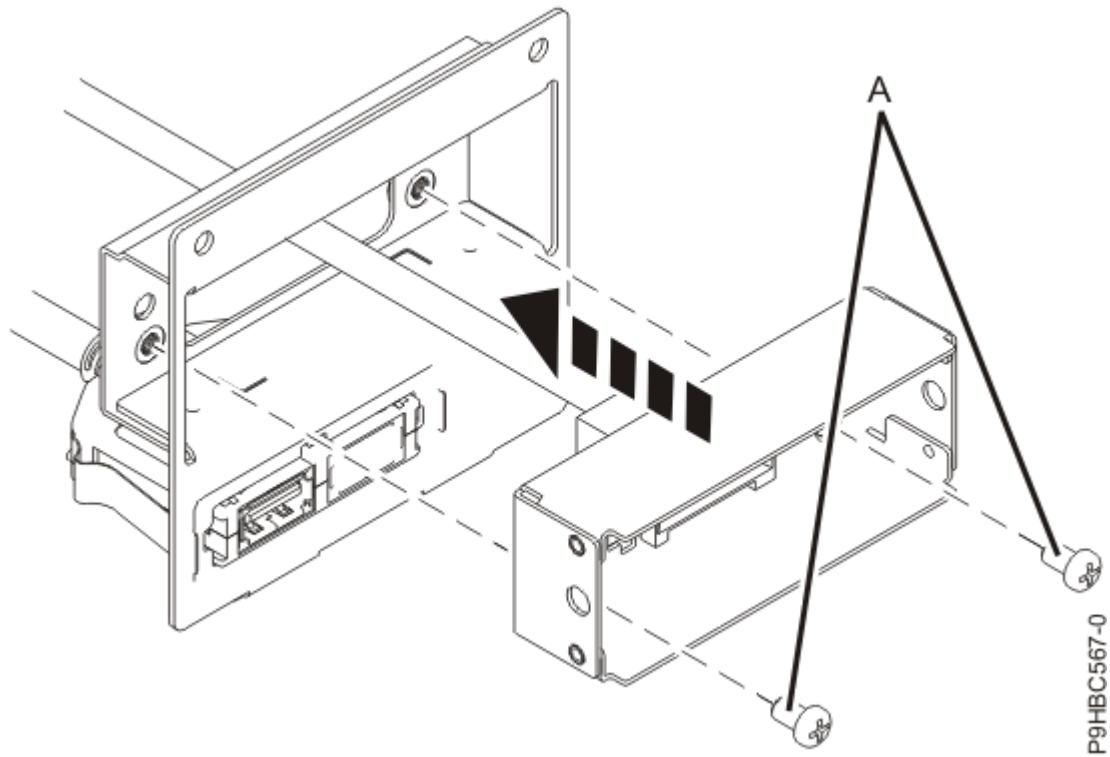
Figure 115. Removing the control panel display cable from the housing for a rack-mounted system

### Replacing the control panel display cable in the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system

To replace a control panel display cable, complete the steps in this procedure.

#### Procedure

1. Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
2. For the rack-mounted system, install the control panel display cable to the housing using the two screws **(A)** as shown in [Figure 116 on page 121](#).



*Figure 116. Installing the control panel display cable into the housing for a rack-mounted system*

3. For a rack-mounted system, insert the control panel display cable into the system as shown in [Figure 117 on page 122](#), [Figure 118 on page 123](#), [Figure 119 on page 124](#), and [Figure 120 on page 125](#). Pass the cable through the channel along the side of the chassis, being careful not to catch the cable on any components as you insert it.

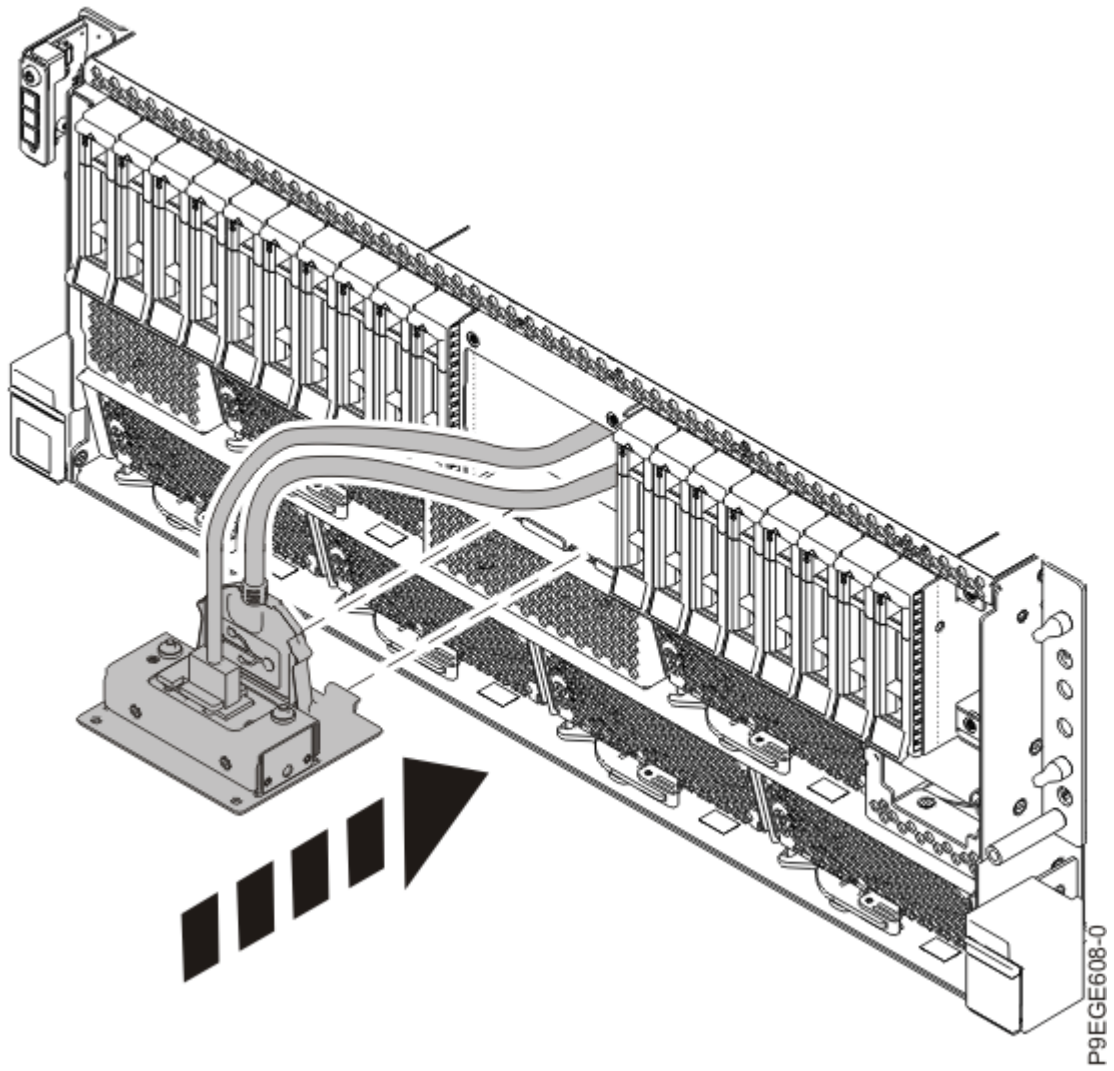


Figure 117. Inserting the control panel display cable for a rack-mounted system



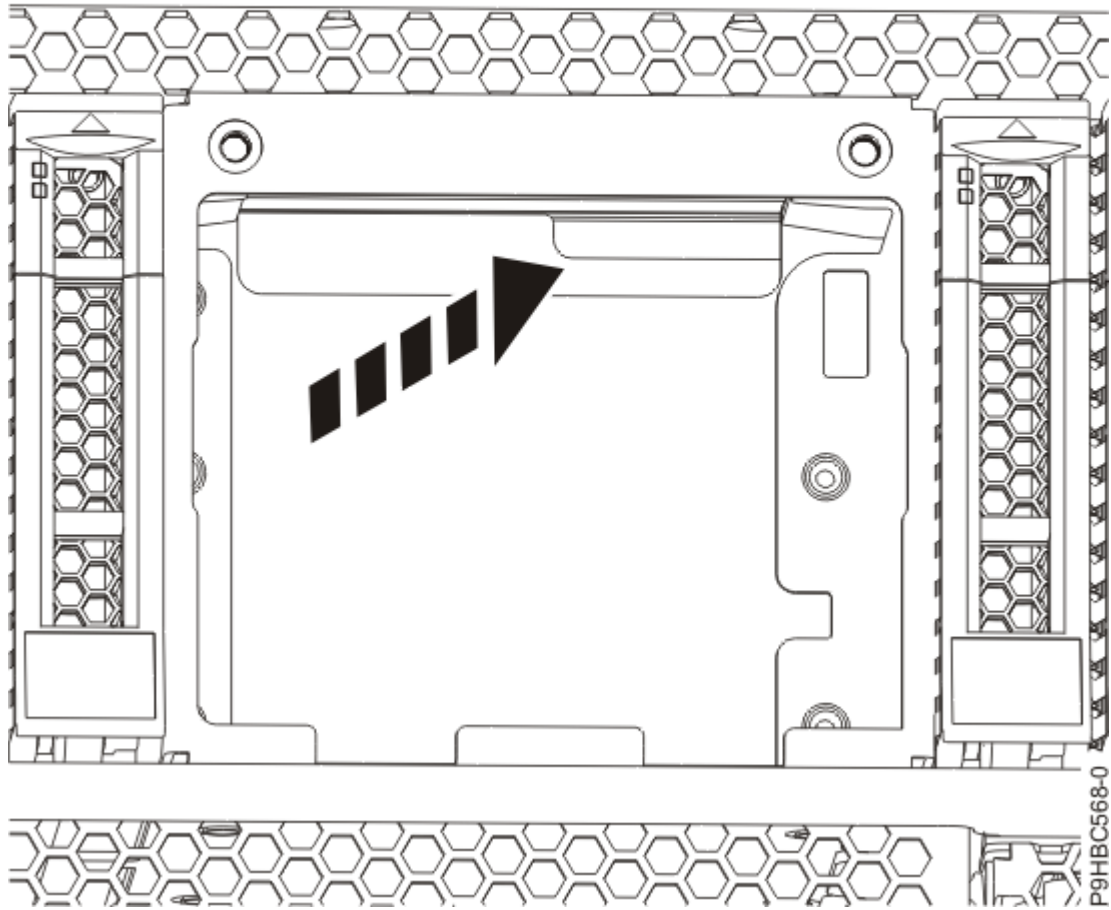


Figure 118. Route the cable through this hole in the chassis for a rack-mounted system

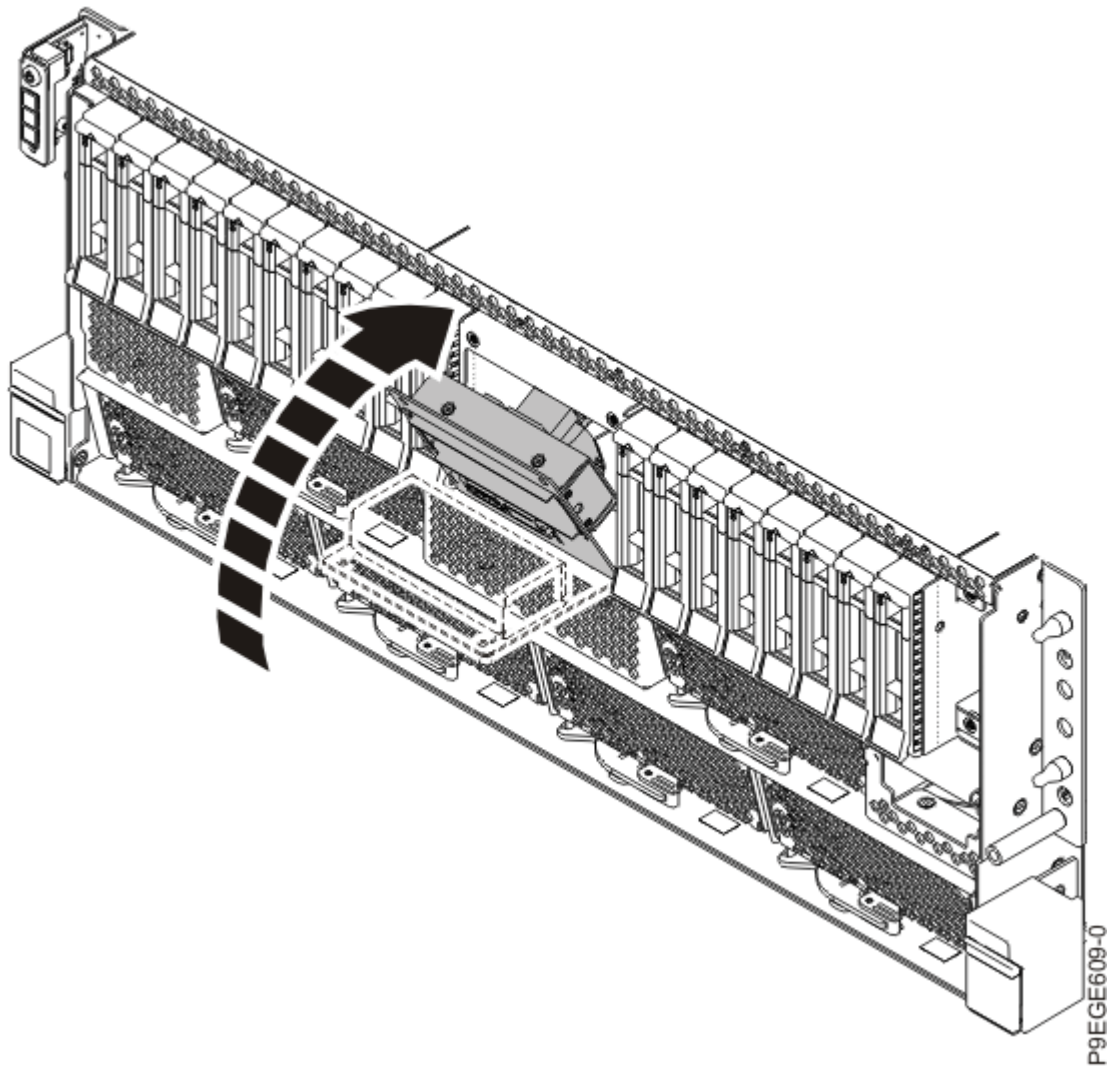
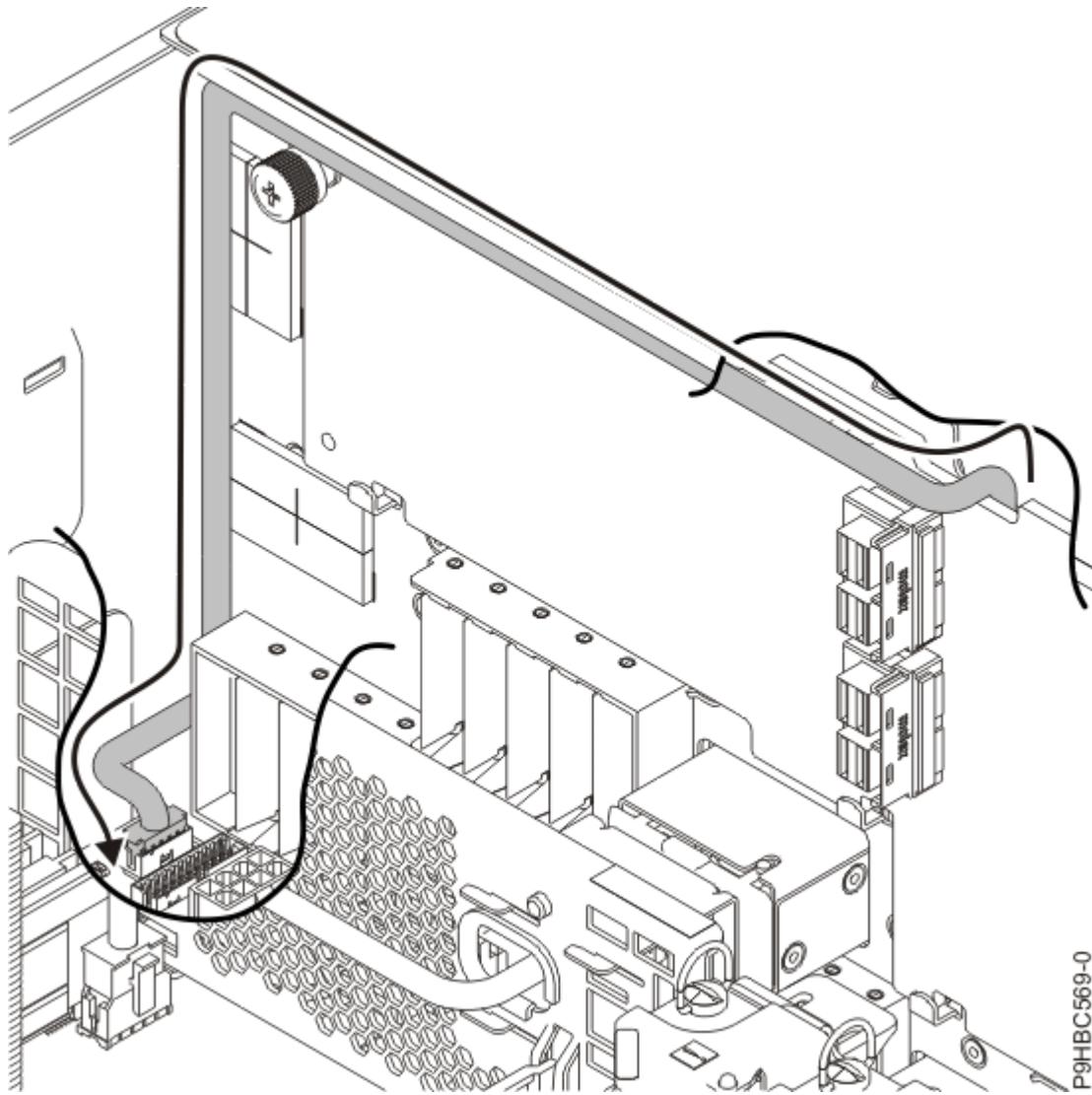
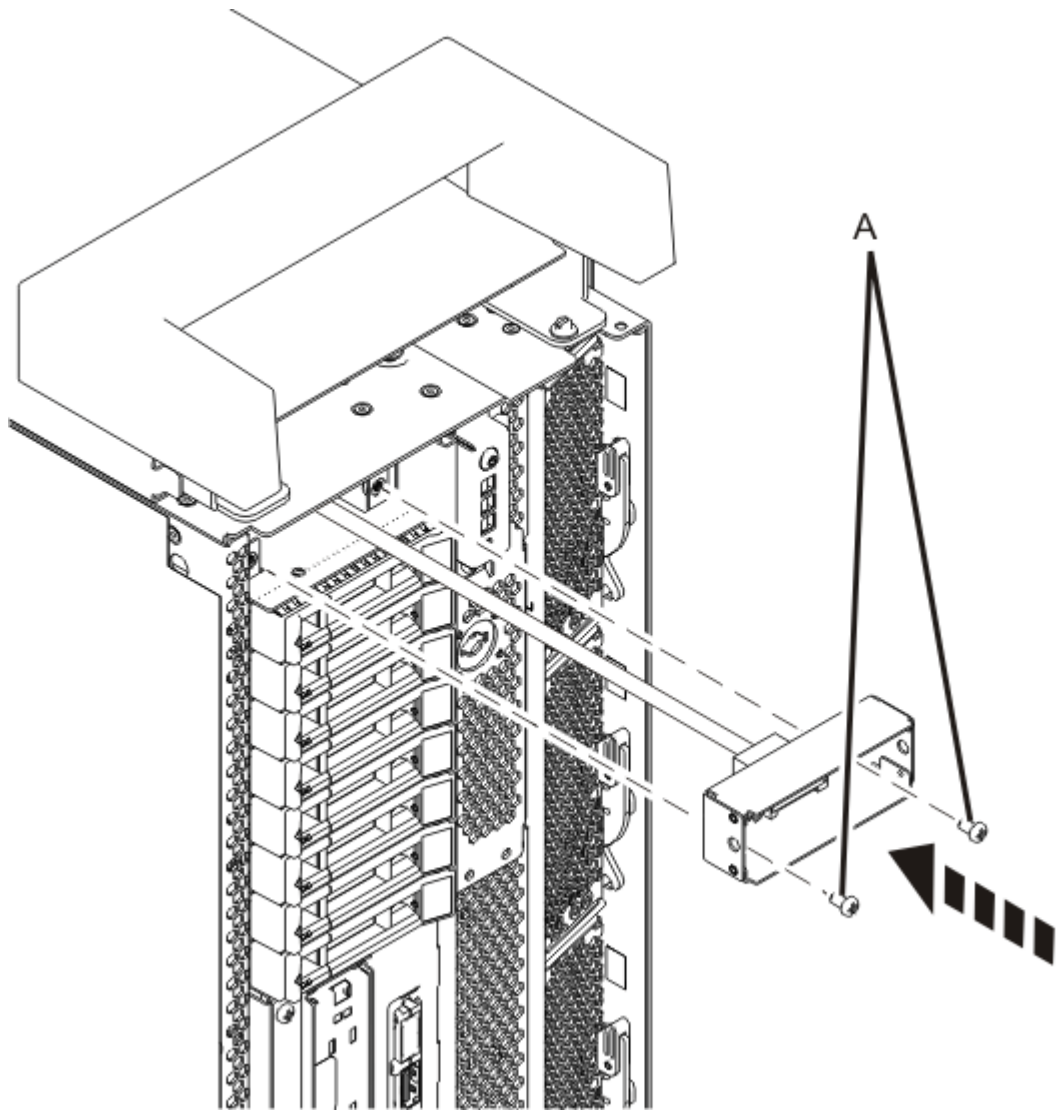


Figure 119. Closing the control panel display holder for a rack-mounted system



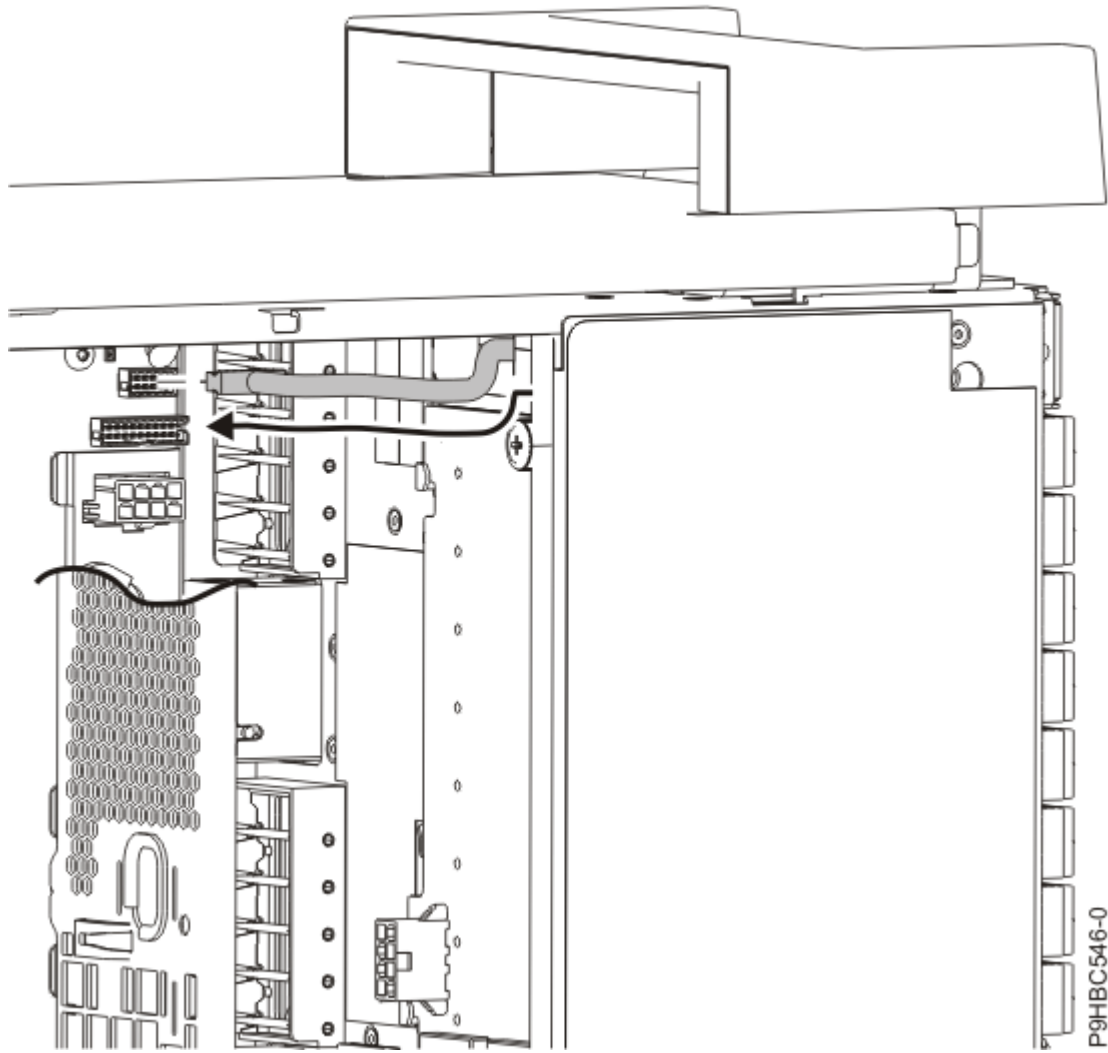
*Figure 120. Control panel display cable path for a rack-mounted system*

4. For the stand-alone system, insert the control panel display cable into the system as shown in [Figure 121](#) on page 126 and [Figure 122](#) on page 127.
  - a) Pull any cable slack inside the system in the direction shown in [Figure 122](#) on page 127 to prevent the cable from interfering with the fan.
5. Secure the control panel display housing to the system using the two screws **(A)** as shown in [Figure 121](#) on page 126.



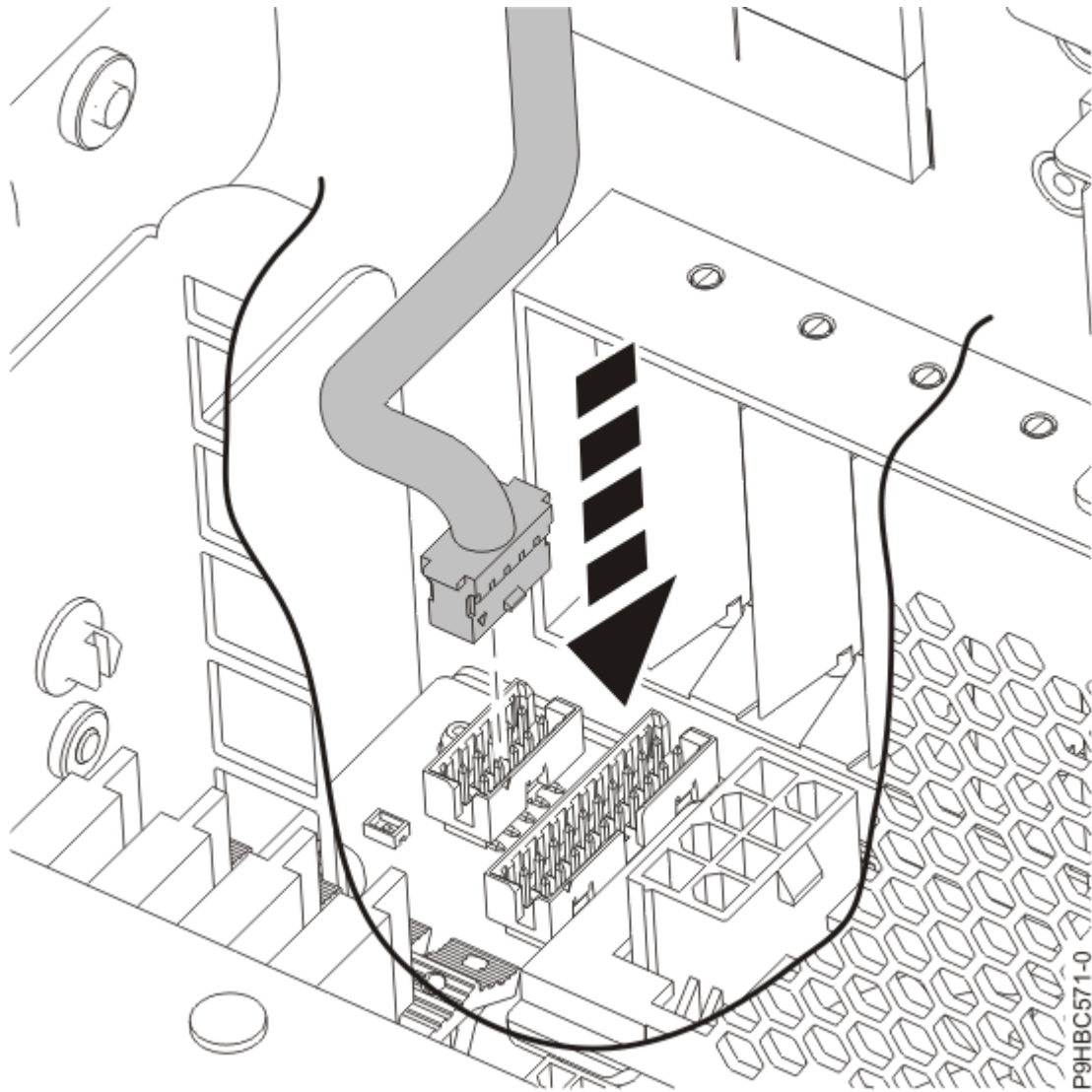
P9HBC544-0

Figure 121. Inserting the control panel display cable for a stand-alone system

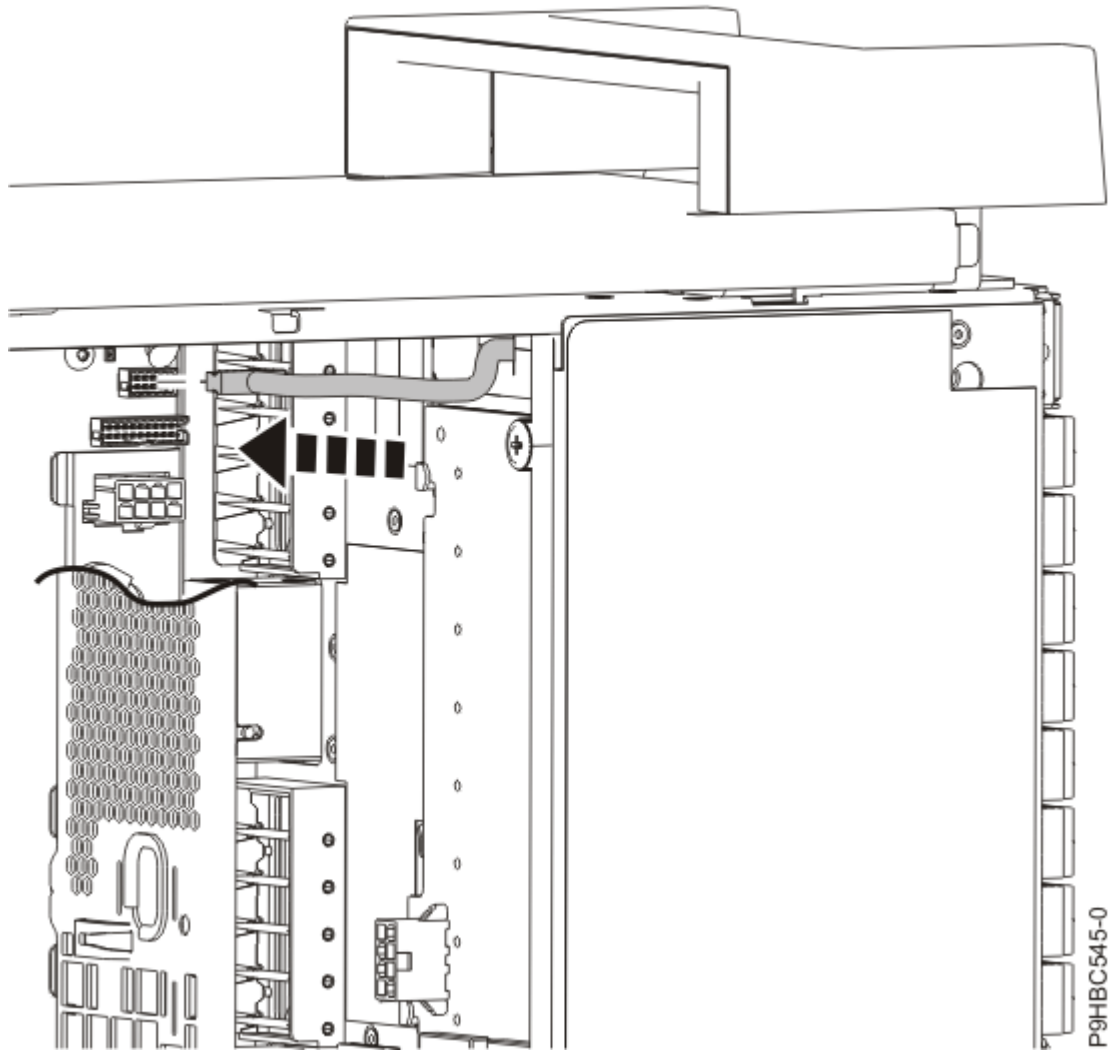


*Figure 122. Control panel display cable path for a stand-alone system*

6. Connect the control panel display cable to the system backplane as shown in [Figure 123](#) on page [128](#).

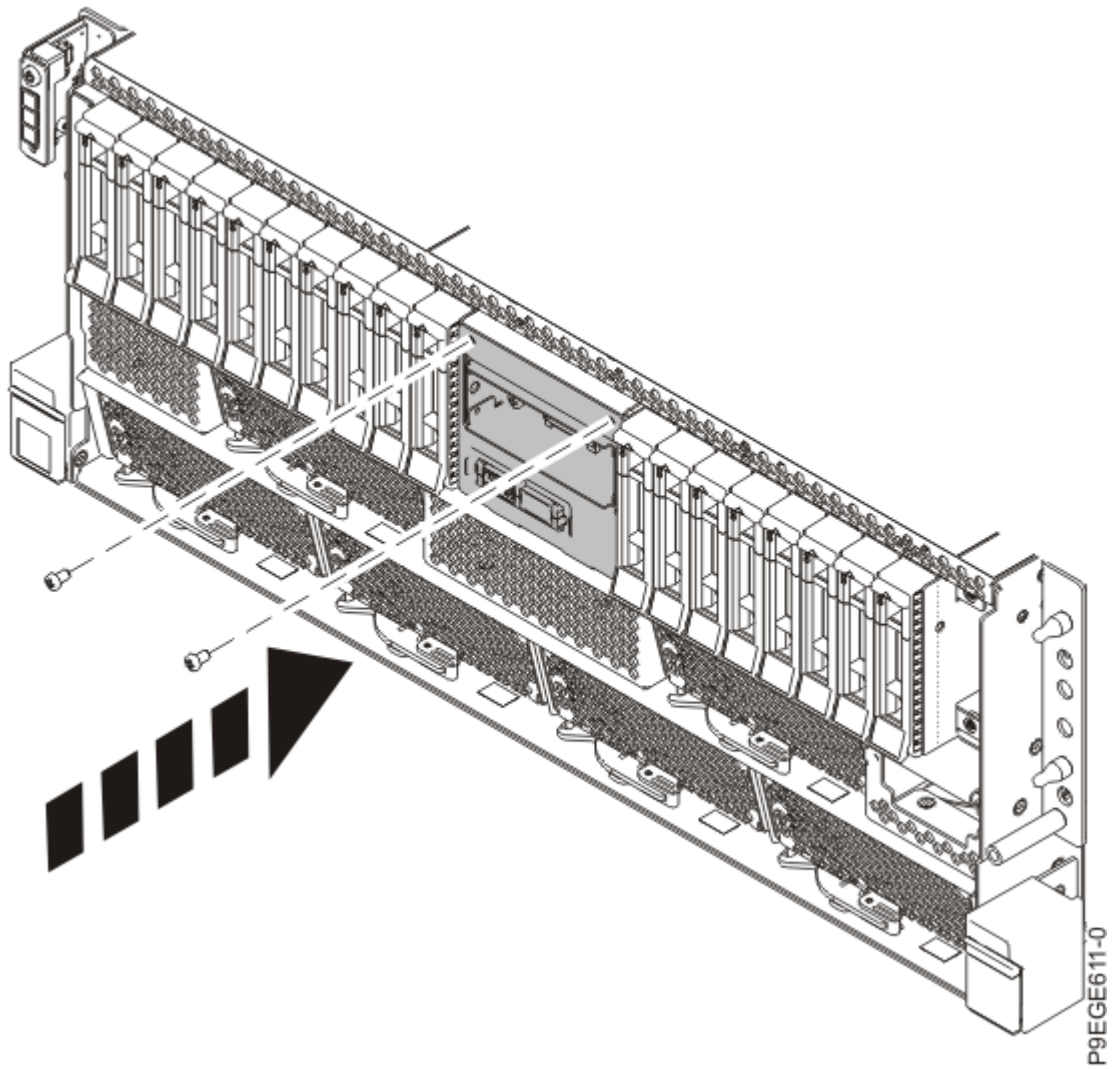


*Figure 123. Connecting the control panel display cable to the system backplane for a rack-mounted system*



*Figure 124. Connecting the control panel display cable to the system backplane for a stand-alone system*

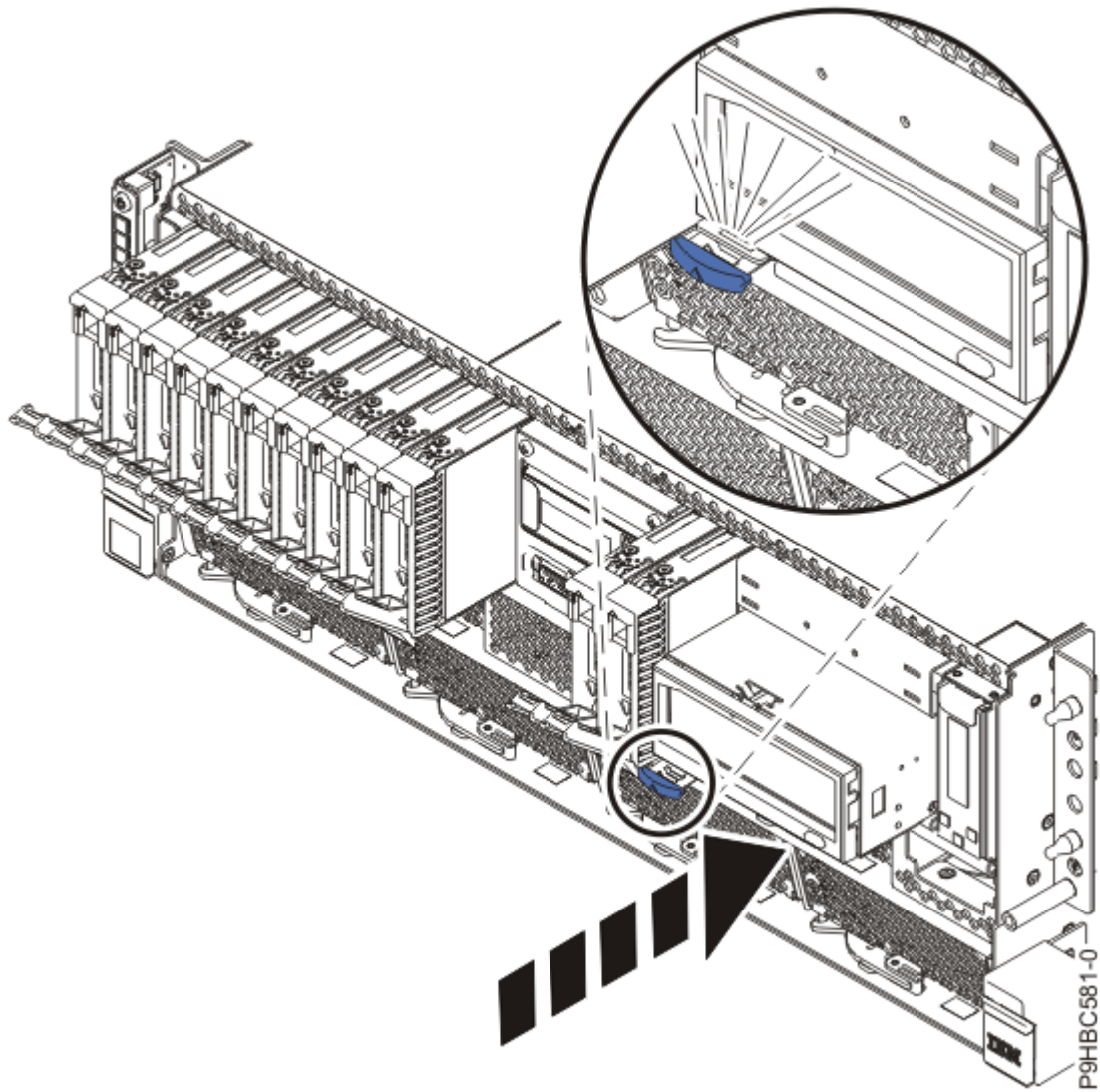
7. For a rack-mounted system, attach the control panel display holder to the system with two screws as shown in [Figure 125](#) on page 130.



*Figure 125. Securing the control panel display cable to the system for a rack-mounted system*

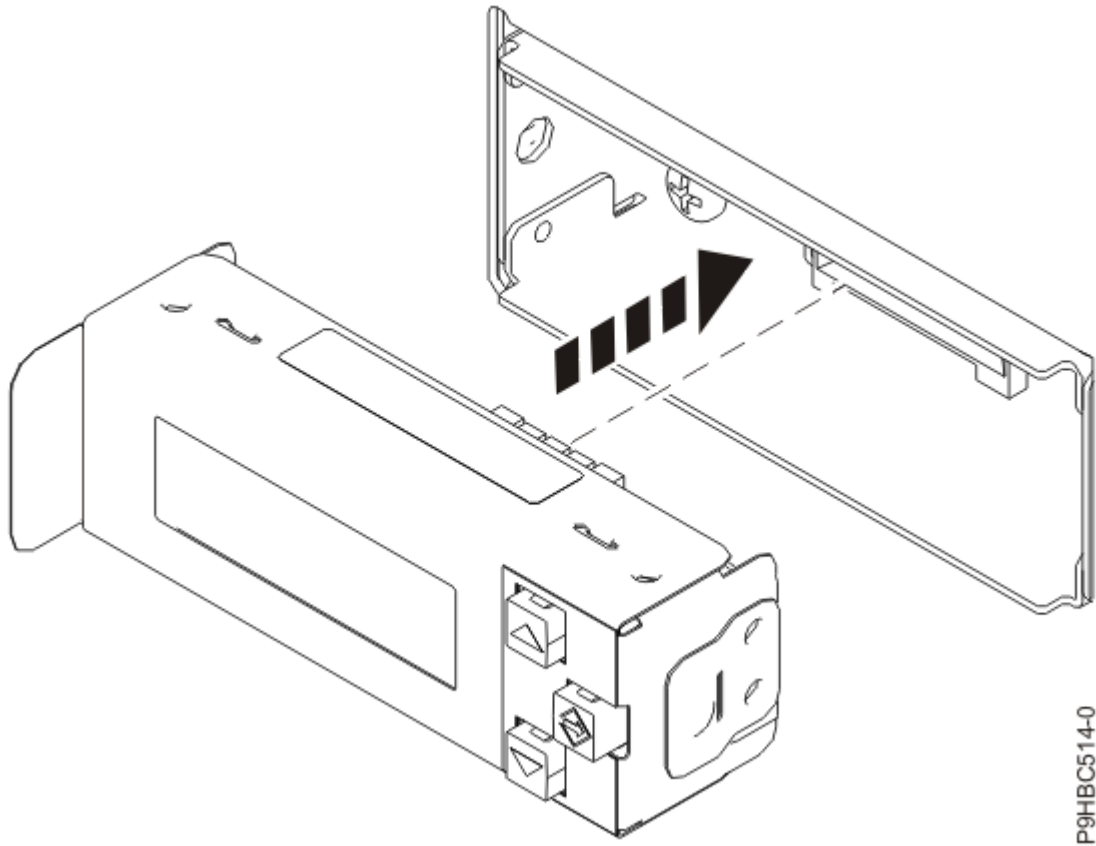
8. If the server has an RDX docking station, push the RDX docking station back into the system until it latches into place as shown in [Figure 126](#) on page 131.





*Figure 126. Replacing the RDX docking station*

9. Insert the control panel display by pushing it into the housing as shown in [Figure 127](#) on page 132. It clicks into place.

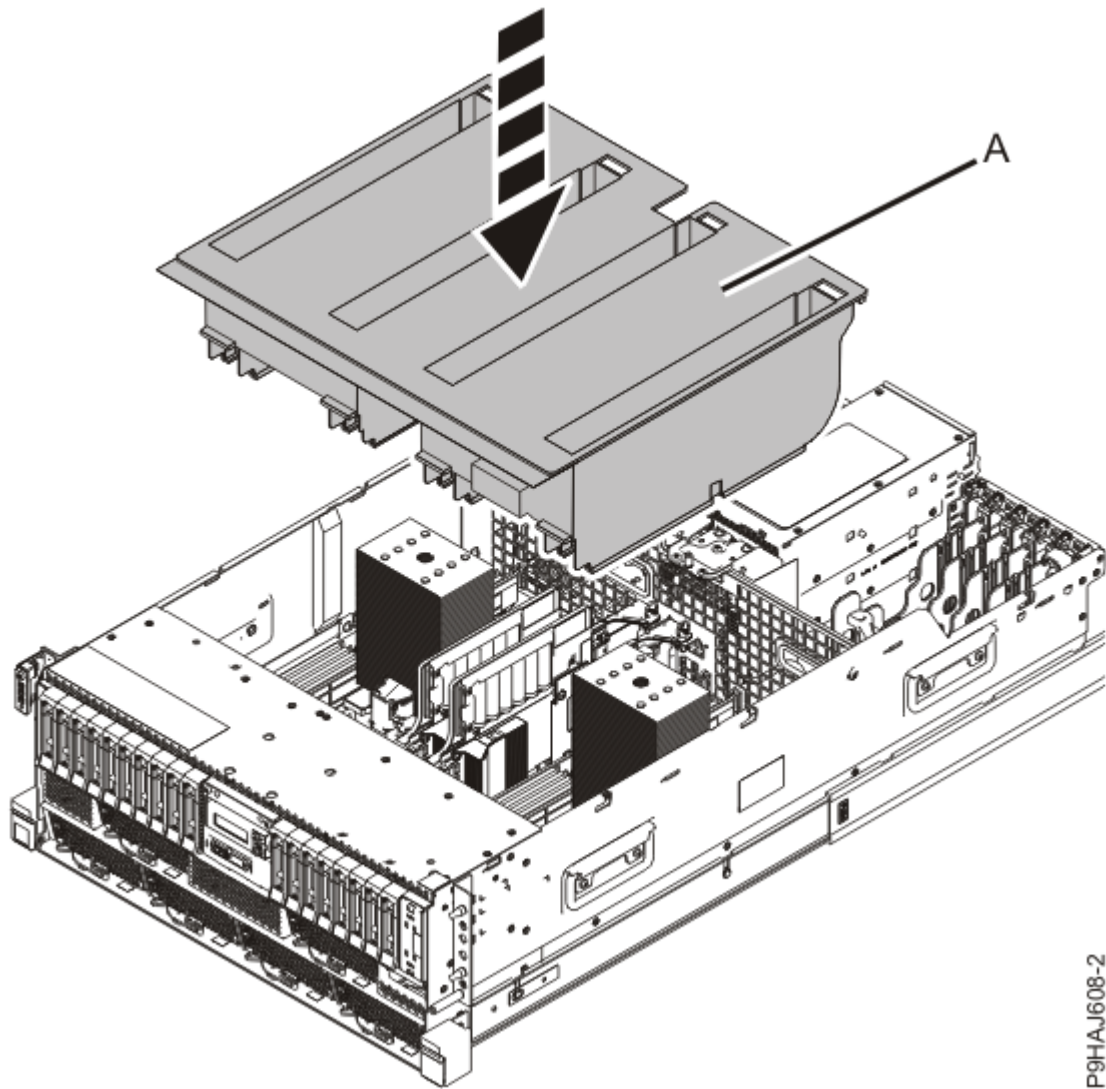


*Figure 127. Inserting the control panel display*

10. For a rack-mounted system, replace the air baffle **(A)** straight down into the chassis as shown in [Figure 128 on page 133](#).

For a stand-alone system, replace the air baffle **(A)** straight into the side of the chassis as shown in [Figure 129 on page 134](#).

Ensure that the front flap tucks under the front chassis.



P9HAJ608-2

Figure 128. Replacing the air baffle in a rack-mounted system

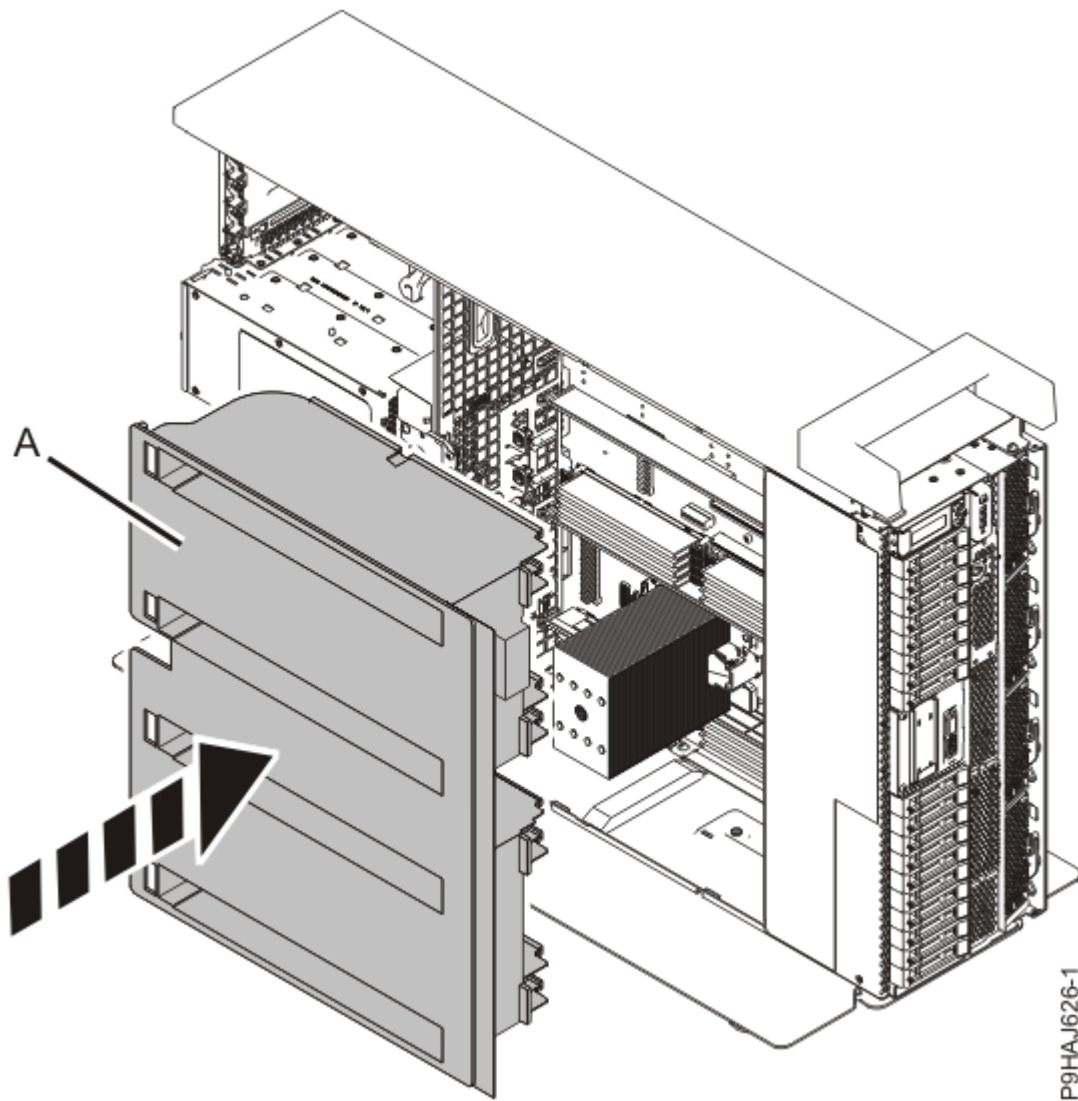


Figure 129. Replacing the air baffle in a stand-alone system

### Preparing the 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system for operation after removing and replacing the control panel display cable

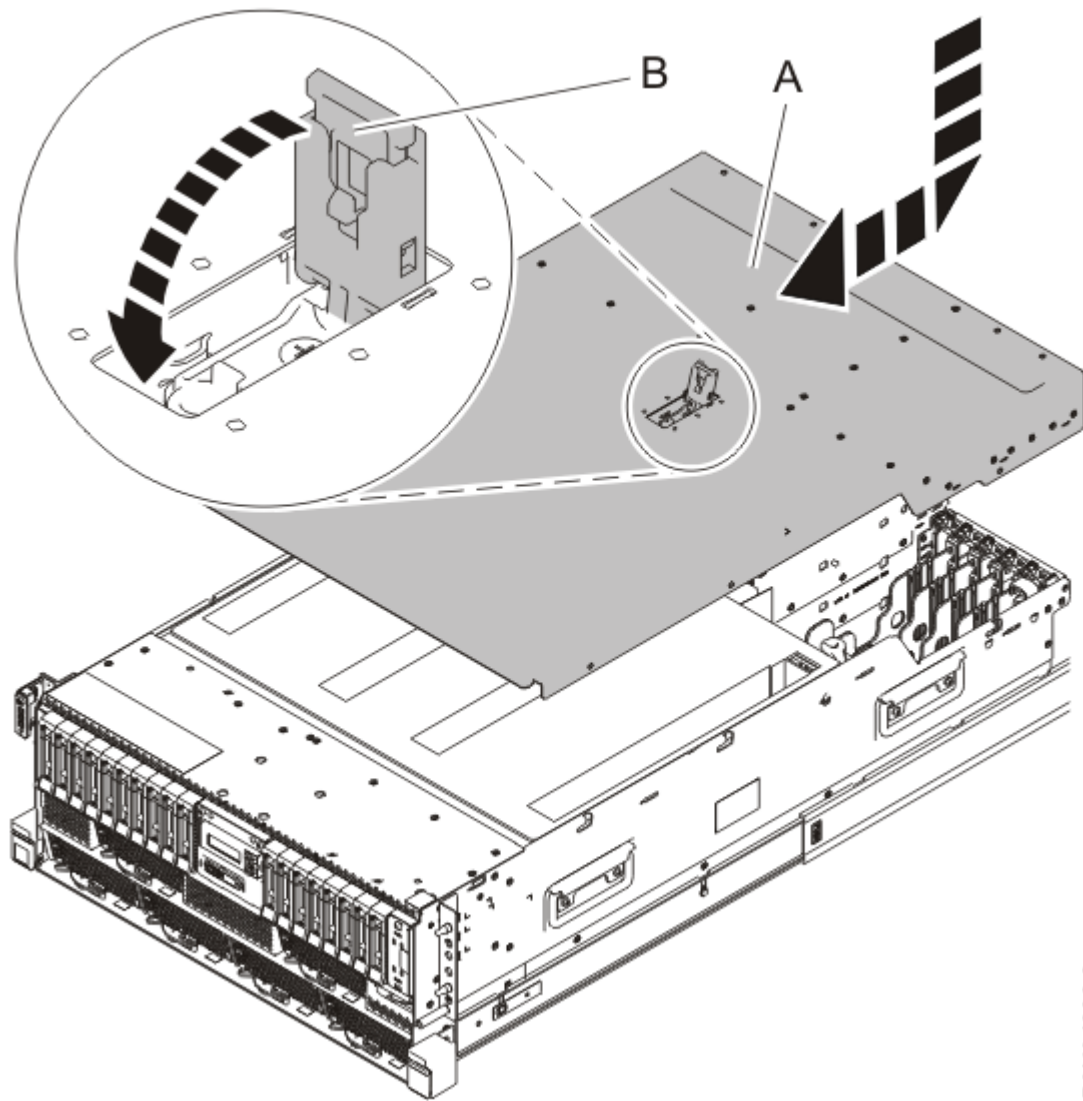
To prepare the system for operation after removing and replacing a control panel display cable, complete the steps in this procedure.

#### Procedure

1. Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
2. Replace the service access cover.

For a rack-mounted system, complete the following steps. Refer to [Figure 130](#) on page 135.

- a. Slide the cover **(A)** onto the system unit.
- b. Close the release latch **(B)** by pushing it in the direction shown.

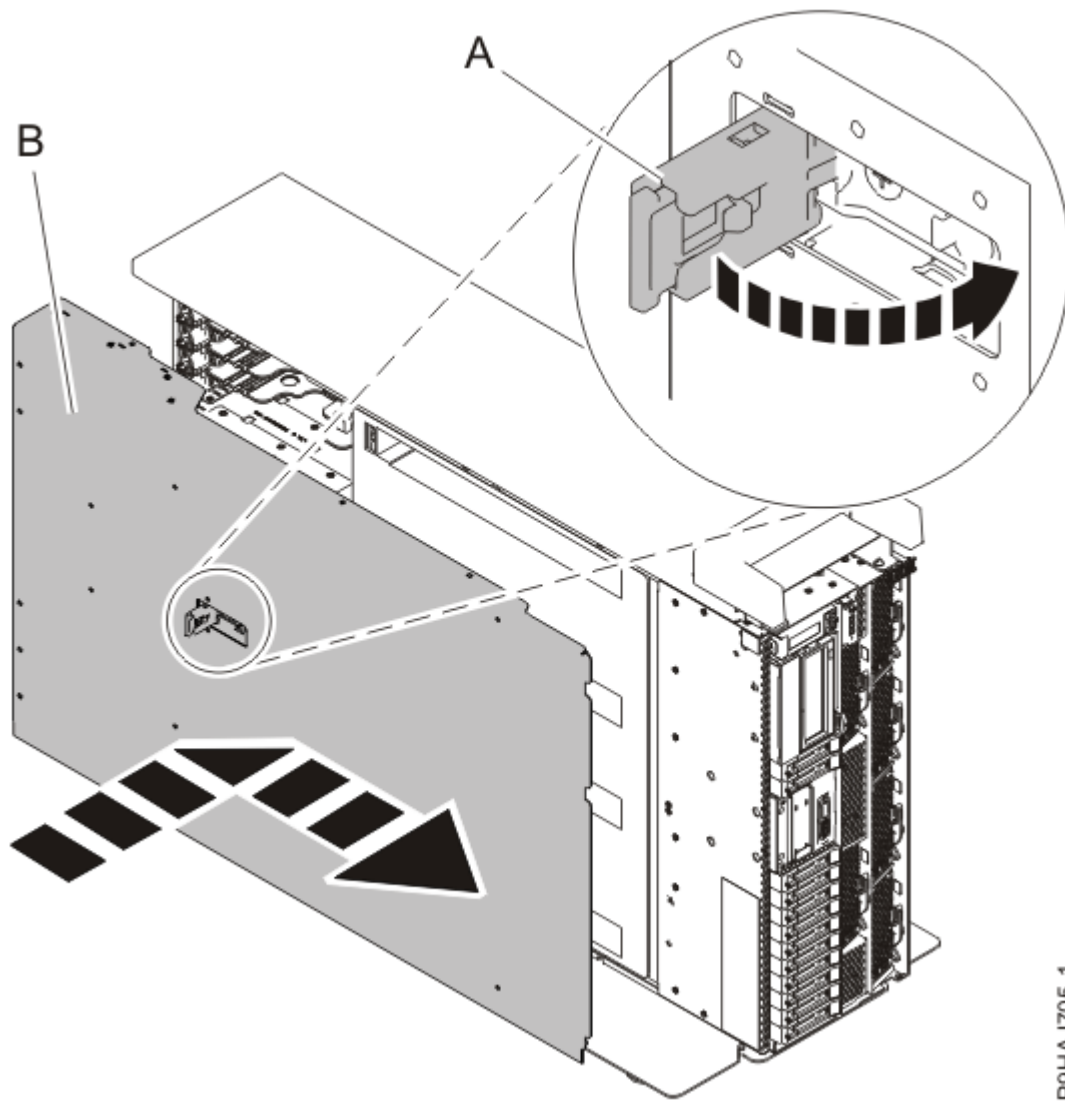


P9HAJ606-2

*Figure 130. Installing the service access cover*

For a stand-alone system, complete the following steps. Refer to [Figure 131](#) on [page 136](#).

- a. Slide the cover **(B)** on to the system unit as shown.
- b. Close the latch release **(A)** by pushing it in the direction shown.

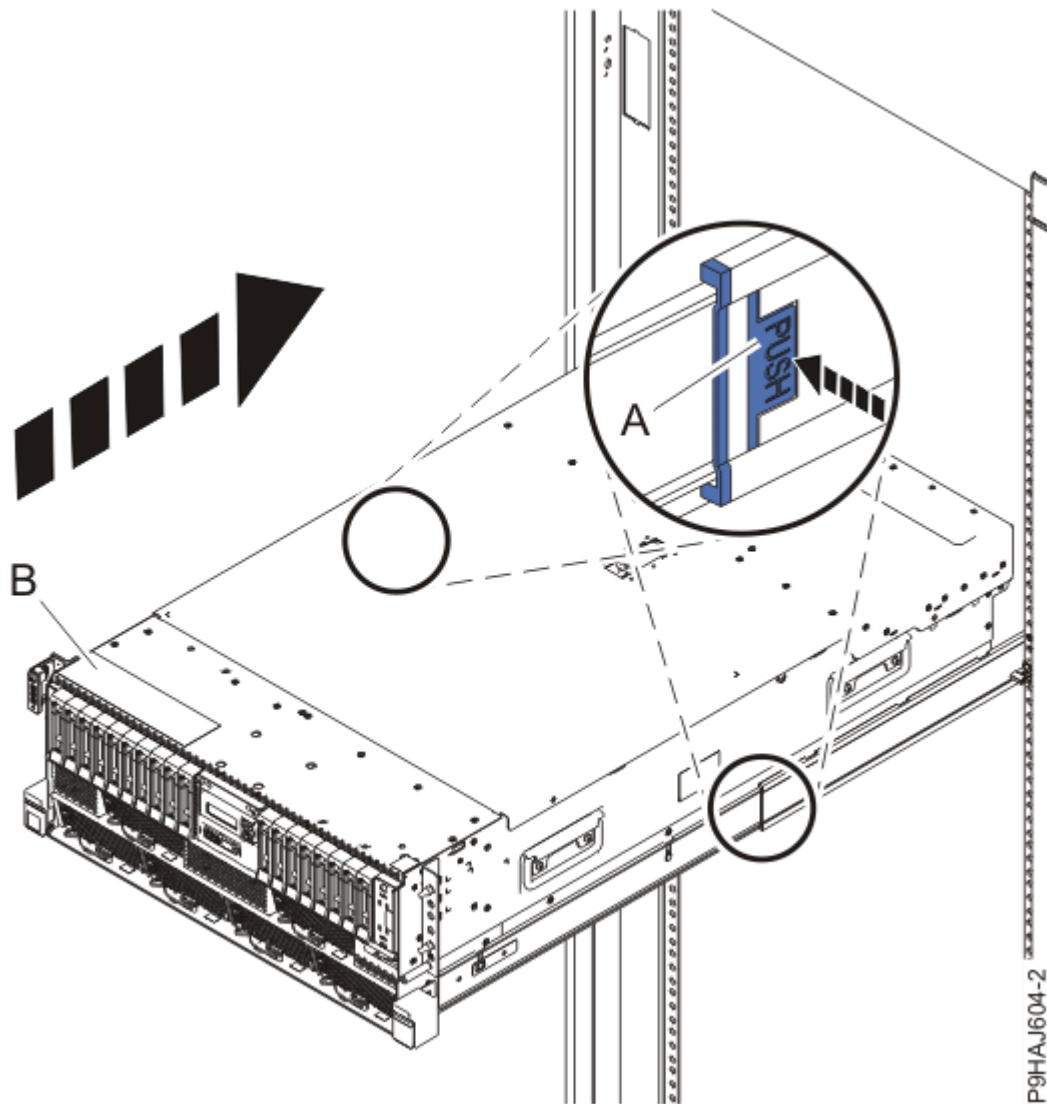


P9HAJ705-1

*Figure 131. Installing the service access cover*

3. For a rack-mounted system, unlock the blue rail safety latches (**A**) as shown in [Figure 132](#) on page [137](#) by pushing them inward.

Ensure that the cable management arms can move freely. Ensure that the cables at the rear of the unit do not catch or bind as you push the unit into the operating position.



*Figure 132. Placing the system into the operating position*

4. For a rack-mounted system, push the system unit **(B)** as shown in the previous figure back into the rack until both release latches lock the system into position.  
Secure the cable management arm with hook-and-loop fasteners around the back side of the cable management arm, but not around the cables.
5. For a rack-mounted system, gently push the front cover **(A)** in until the cover snaps into place.  
The cover has indentations where you can hold it more easily. Use the alignment pins **(B)** to secure the cover to the system as shown in [Figure 133 on page 138](#).

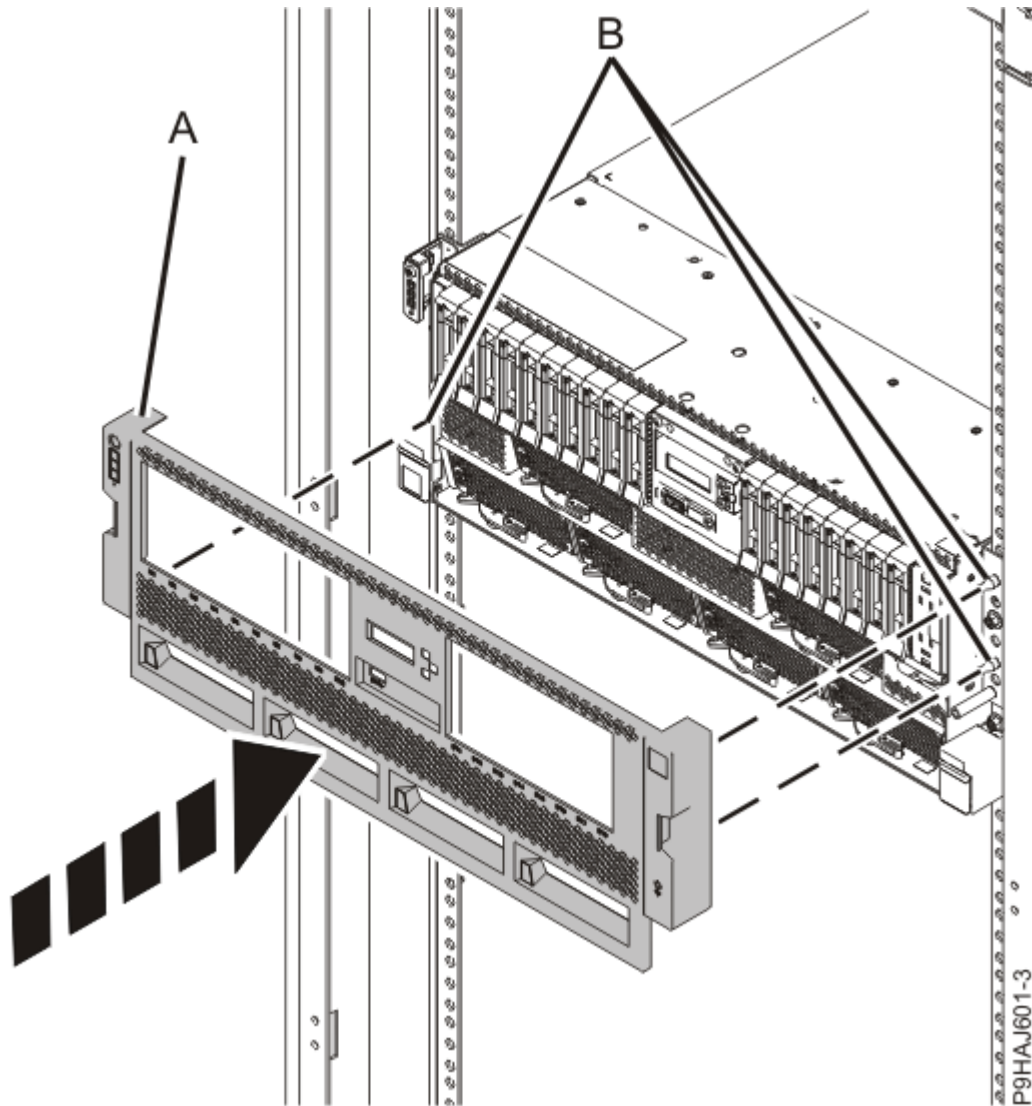
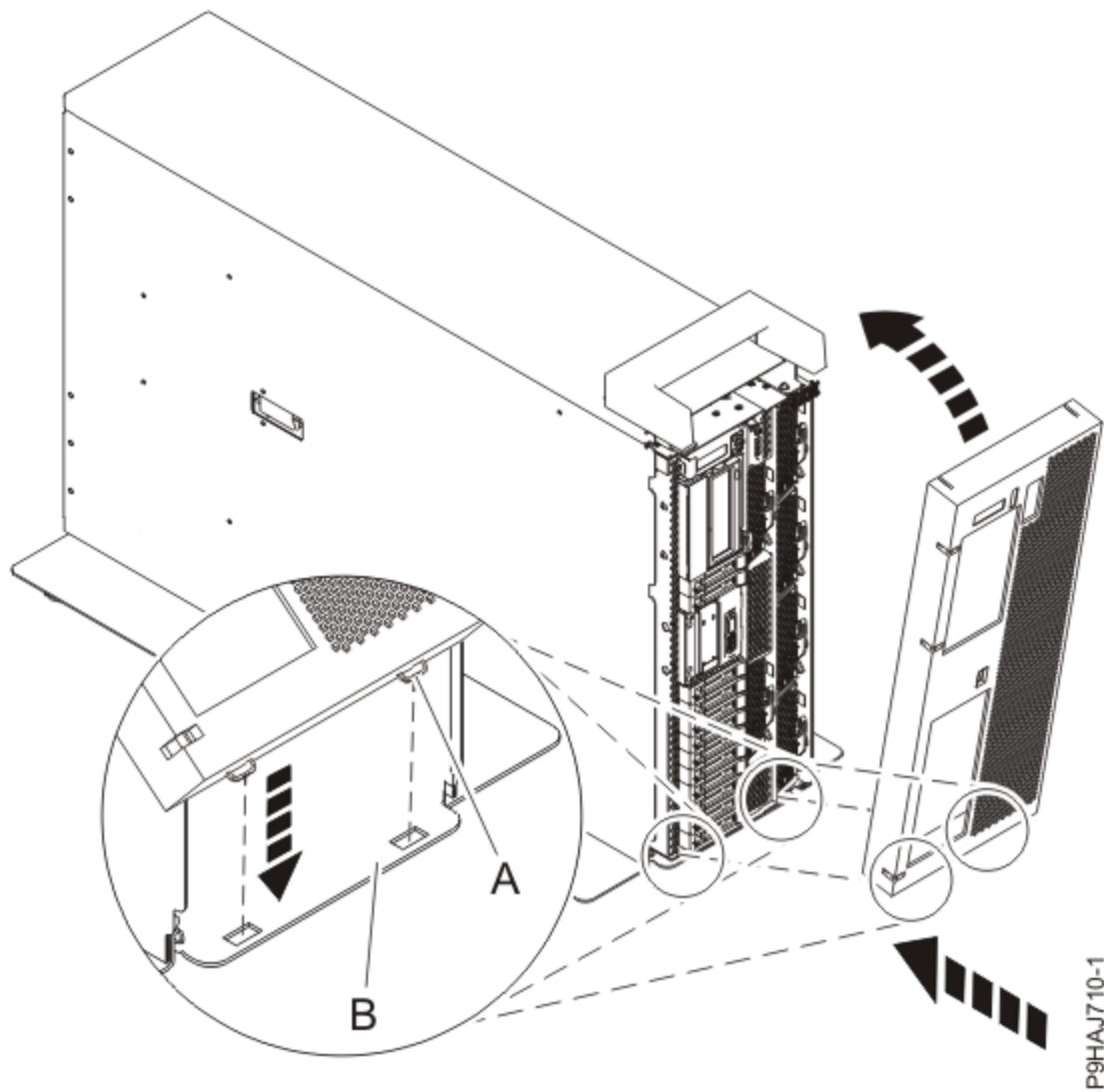


Figure 133. Installing the front cover

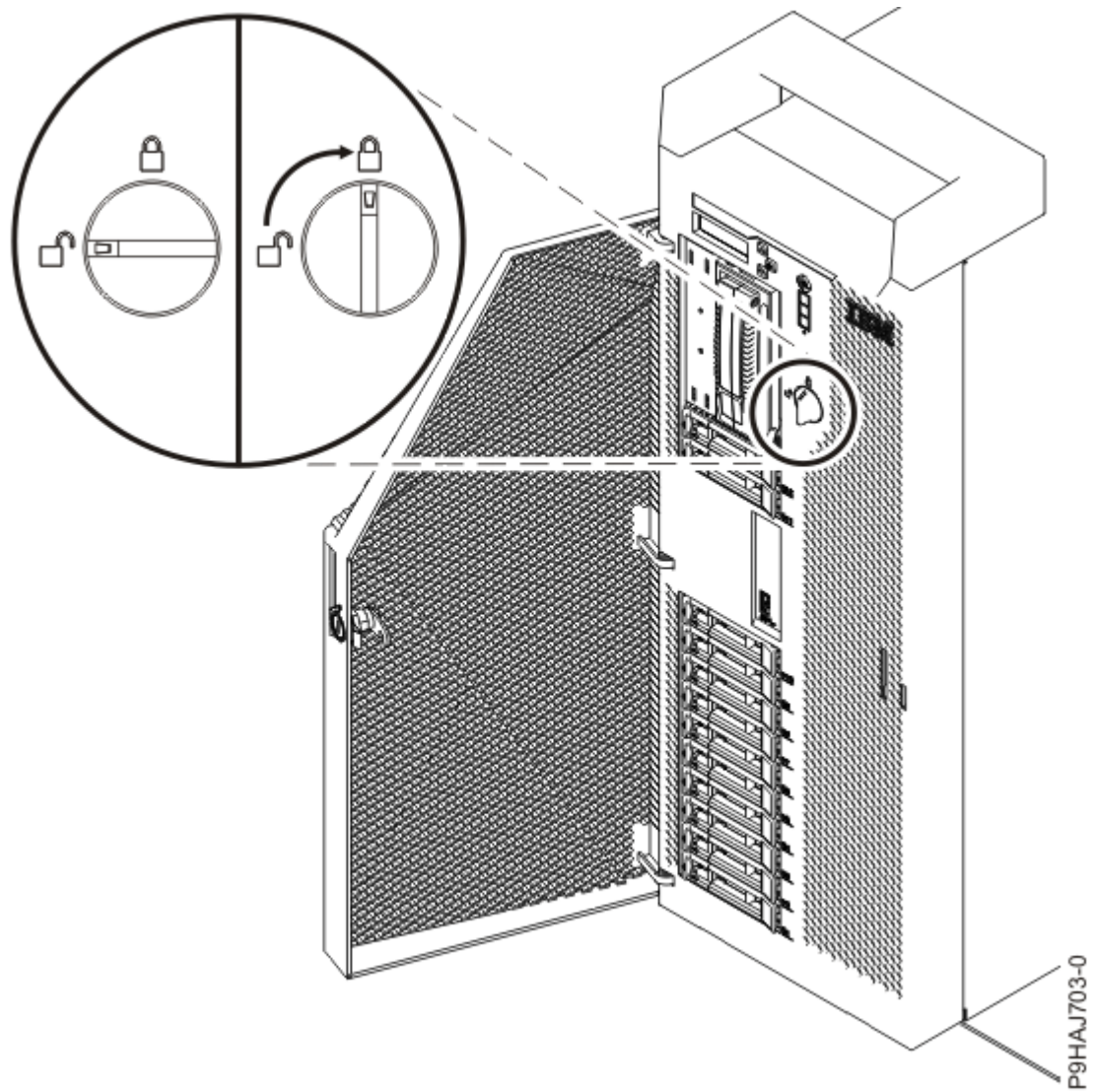
6. For a stand-alone system, install the front cover and door by completing these steps.
  - a) Ensure that you have the electrostatic discharge (ESD) wrist strap on and that the ESD clip is plugged into a ground jack or connected to an unpainted metal surface. If not, do so now.
  - b) Align the cover until the two cover tabs **(A)** are seated into the slots on the base plate **(B)** as shown in [Figure 134](#) on page 139.





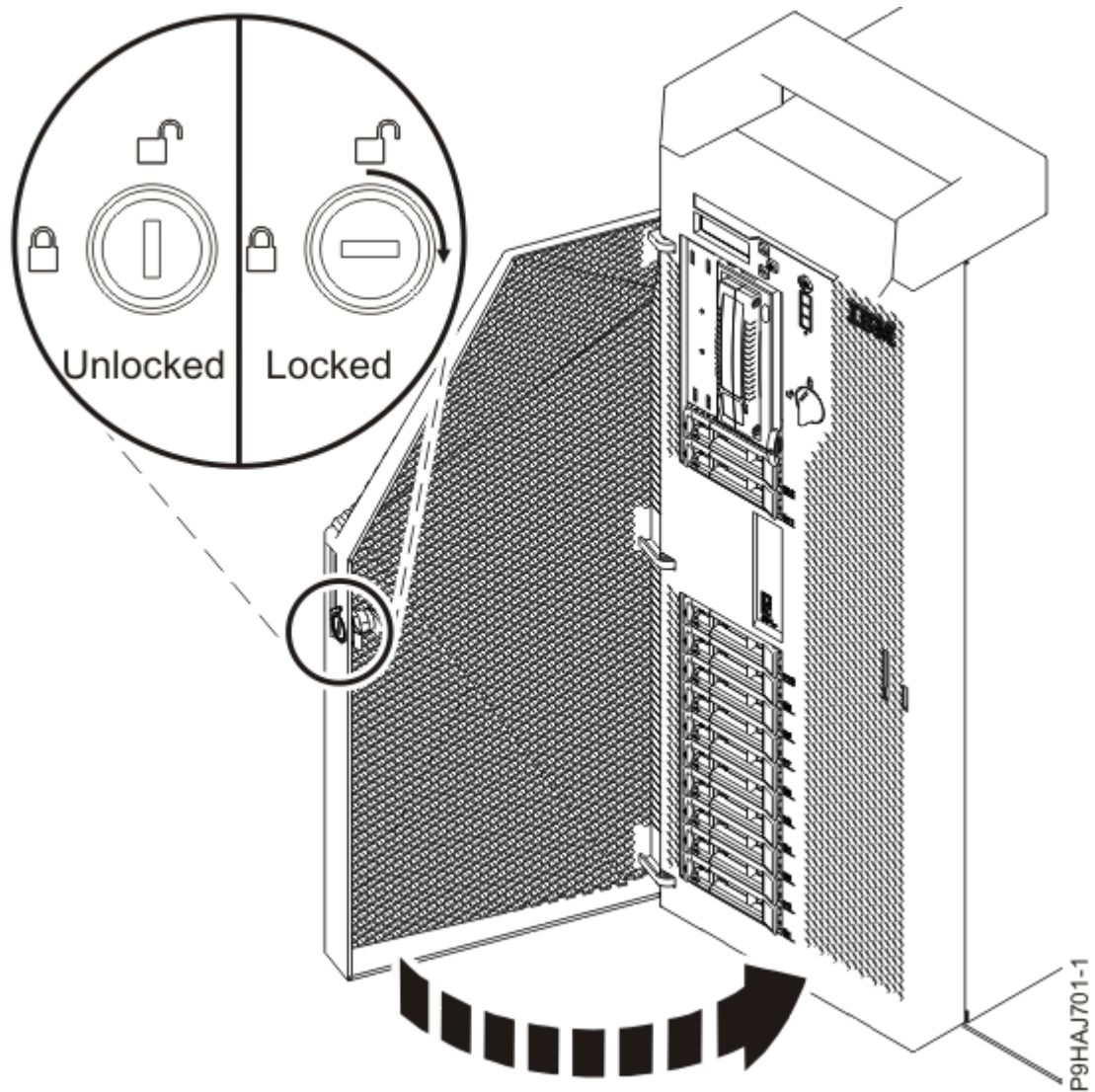
*Figure 134. Installing the front cover and door*

- c) Rotate the cover up and towards the system until the release latch is seated into its respective slot.
- d) Twist the cover latch to the right (clockwise) to lock the cover as shown in [Figure 135](#) on page [140](#).  
Vertical is locked; horizontal is unlocked.



*Figure 135. Closing the front cover latch*

- e) Close the front door. Insert the front door key into the lock as shown in [Figure 136](#) on [page 141](#). Twist the key to the right (clockwise) to lock the door. Horizontal is locked; vertical is unlocked.



*Figure 136. Locking the front door*

7. Using your labels, reconnect the power cords **(A)** to the system unit.

Fasten the power cords **(A)** to the system using the hook-and-loop fasteners **(B)** as shown in [Figure 137 on page 142](#) or [Figure 138 on page 143](#).

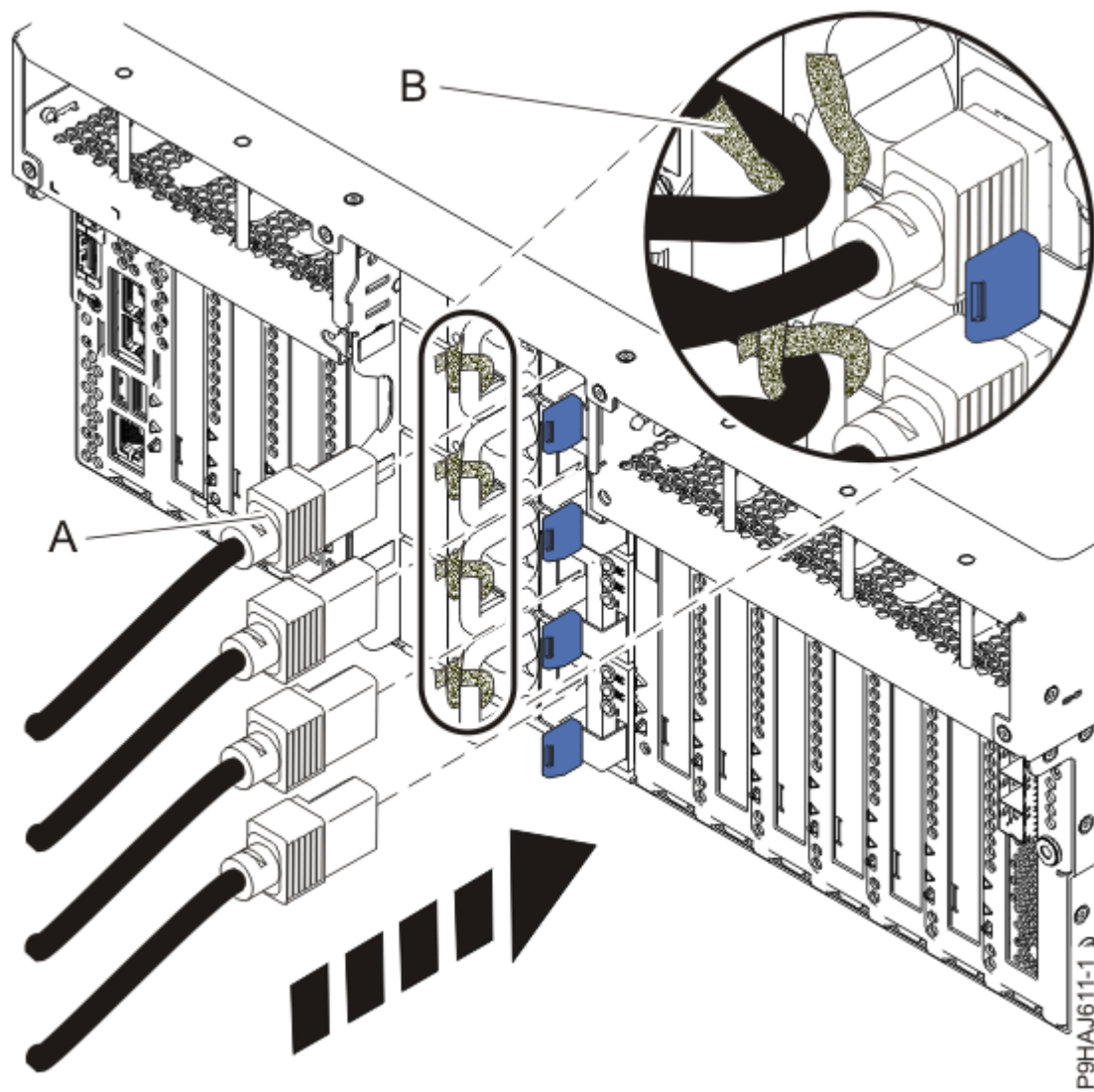


Figure 137. Connecting the power cords to a rack-mounted system

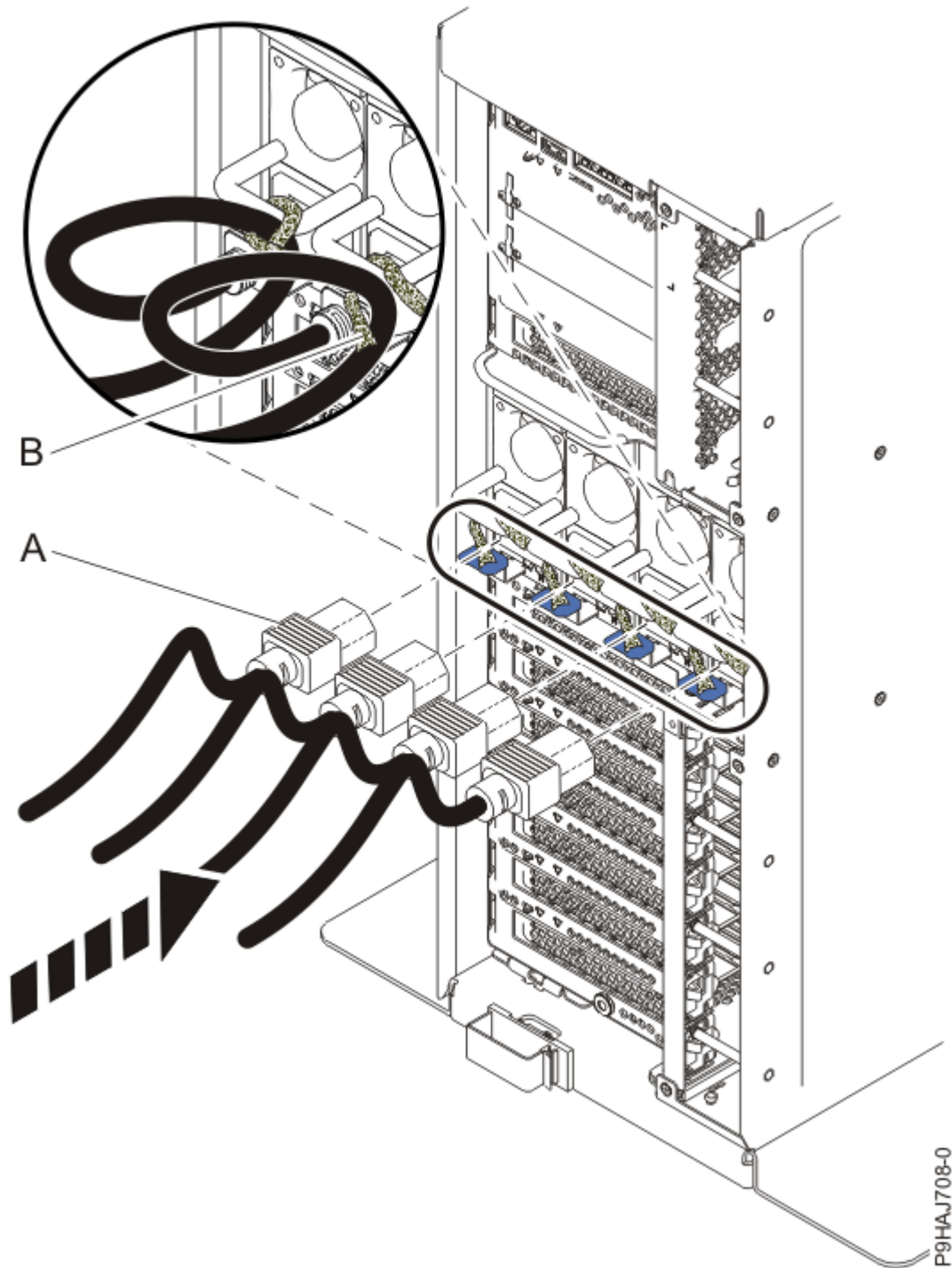


Figure 138. Connecting the power cords to a stand-alone system

8. Start the system. For instructions, see [Starting a system](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustartsys.htm) ([www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustartsys.htm](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/crustartsys.htm)).
9. Turn off the identify LED. For instructions, see [Deactivating an identify LED](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj_turn_off_identify_led.htm) ([www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj\\_turn\\_off\\_identify\\_led.htm](http://www.ibm.com/support/knowledgecenter/POWER9/p9haj/p9haj_turn_off_identify_led.htm)).
10. Verify whether the control panel display is operational by checking the progress codes.



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## **Accessibility features for IBM Power Systems servers**

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Accessibility features assist users who have a disability, such as restricted mobility or limited vision, to use information technology content successfully.

### **Overview**

The IBM Power Systems servers include the following major accessibility features:

- Keyboard-only operation
- Operations that use a screen reader

The IBM Power Systems servers use the latest W3C Standard, [WAI-ARIA 1.0 \(www.w3.org/TR/wai-aria/\)](http://www.w3.org/TR/wai-aria/), to ensure compliance with [US Section 508 \(www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-section-508-standards/section-508-standards\)](http://www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-section-508-standards/section-508-standards) and [Web Content Accessibility Guidelines \(WCAG\) 2.0 \(www.w3.org/TR/WCAG20/\)](http://www.w3.org/TR/WCAG20/). To take advantage of accessibility features, use the latest release of your screen reader and the latest web browser that is supported by the IBM Power Systems servers.

The IBM Power Systems servers online product documentation in IBM Knowledge Center is enabled for accessibility. The accessibility features of IBM Knowledge Center are described in the [Accessibility](http://www.ibm.com/support/knowledgecenter/doc/kc_help.html#accessibility) section of the IBM Knowledge Center help ([www.ibm.com/support/knowledgecenter/doc/kc\\_help.html#accessibility](http://www.ibm.com/support/knowledgecenter/doc/kc_help.html#accessibility)).

### **Keyboard navigation**

This product uses standard navigation keys.

### **Interface information**

The IBM Power Systems servers user interfaces do not have content that flashes 2 - 55 times per second.

The IBM Power Systems servers web user interface relies on cascading style sheets to render content properly and to provide a usable experience. The application provides an equivalent way for low-vision users to use system display settings, including high-contrast mode. You can control font size by using the device or web browser settings.

The IBM Power Systems servers web user interface includes WAI-ARIA navigational landmarks that you can use to quickly navigate to functional areas in the application.



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