IBM
Power System S822LC for
Big Data (8001-22C) Quick
Install
Guide

IBM

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The IBM Knowledge Center is available online from: http://www.ibm.com/support/knowledgecenter/
POWER8/p8hdx/8001_22c_landing.htm.

- Read all precautions and instructions before you start working on key parts.
- Use normal electrostatic discharge (ESD) procedures when working on the system and parts. IBM recommends wearing gloves and an anti-static wrist strap to avoid possible damage to the equipment.

8001-22C information: https://ibm.biz/8001-22CQR

8001-22C or 8005-22N parts

Use this information to find the field-replaceable unit (FRU) part number.

After you identify the part number of the part that you want to order, go to Advanced Part Exchange Warranty Service. Registration is required. If you are not able to identify the part number, go to Contacting IBM® service and support.

Rack final assembly
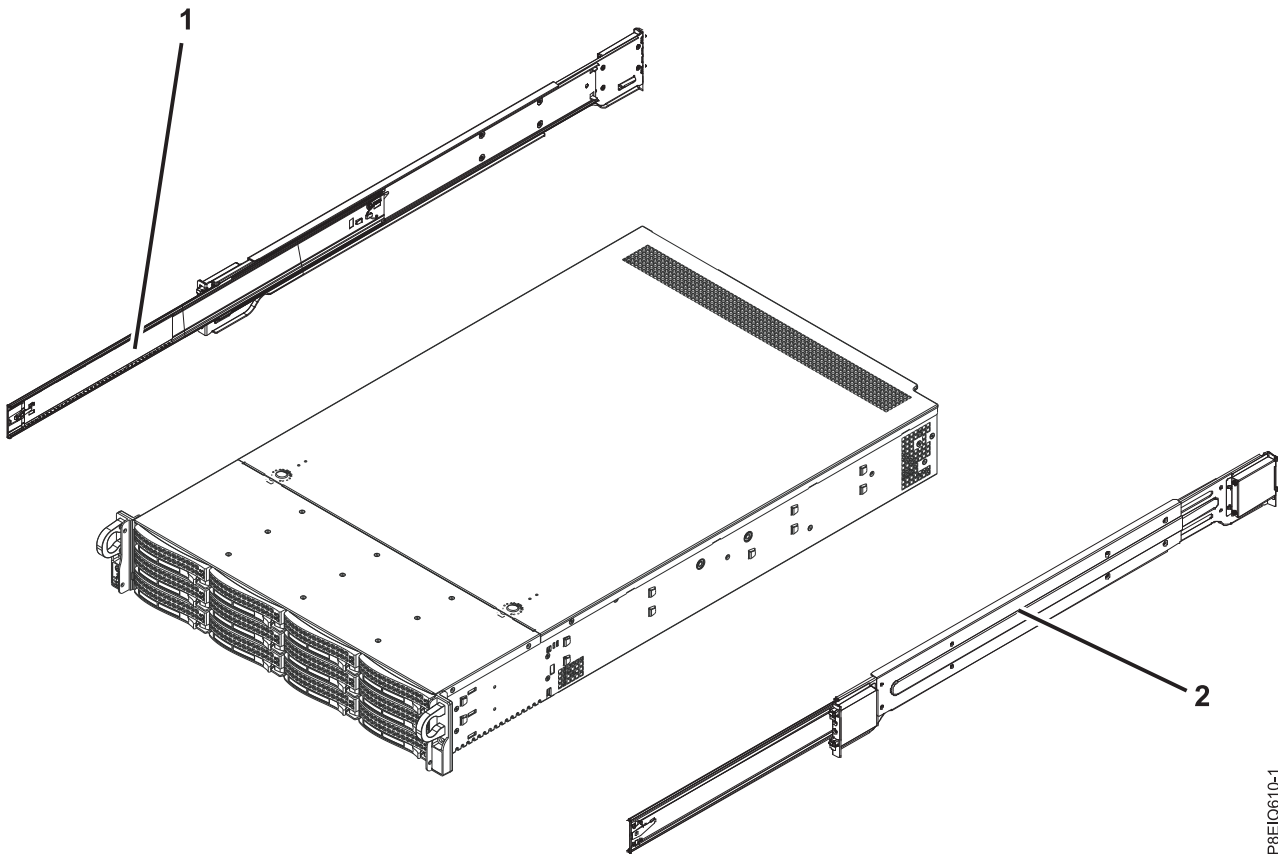
Figure 1. Rack final assembly

Table 1. Rack final assembly part numbers

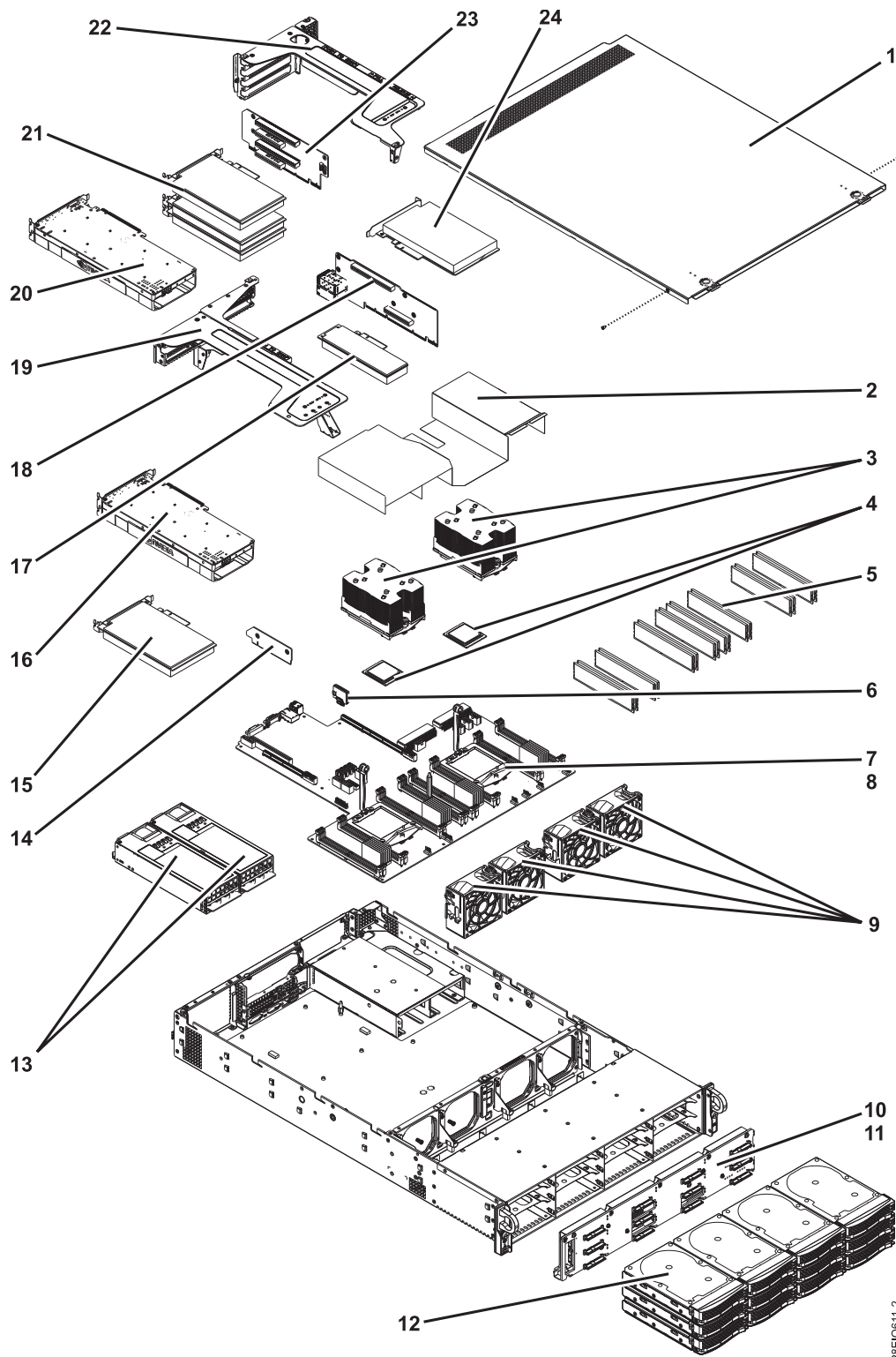| Index number	Part number	Units per assembly	Description
1	MCP-290-00057-0N	1	Slide rail kit - contains left and right slide rails and attaching screws
2	MCP-290-00057-0N	1	Slide rail kit - contains left and right slide rails and attaching screws

System parts

Figure 2. System parts

Table 2. System parts

Index number	Part number	Units per assembly	Description
1		1	Top cover assembly
		2	Screws
2	MCP-310-82914-0B	1	CPU air baffle (8001-22C)
2	MCP-310-82908-0B	1	CPU air baffle (8005-22N)
3	SNK-P0053P-IB001	2	Heat sink kit (includes heat sink and thermal interface material)
4	CPU-KIT-01EM062-IB001	2	8 core 3.325 GHz system processor module kit (includes system processor, tray, and vacuum pen) (8001-22C)
	CPU-KIT-01EM063-IB001	2	10 core 2.926 GHz system processor module kit (includes system processor, tray, and vacuum pen) (8001-22C)
	PP8-MP00UL010-11C, MCP-74Y4912-IB001, and MCP-01AF132-IB001	2	11 core 2.893 GHz system processor module kit (includes system processor, tray, and vacuum pen) **Note:** You must order all three part numbers to receive all of the kit contents.
5	MTA9ASF51272PZ-2G3B1	16	4 GB, 2400 MHz 1RX8 DDR4 RDIMM (Micron Technology, Inc.)* (8001-22C)
5	MTA9ASF1G72PZ-2G3B1	16	8 GB, 2400 MHz 1RX8 DDR4 RDIMM (Micron Technology, Inc.)* (8001-22C)
5	MTA18ASF2G72PZ-2G3B1	16	16 GB, 2400 MHz 1RX4 DDR4 RDIMM (Micron Technology, Inc.)* (8001-22C)
5	MTA36ASF4G72PZ-2G3A1	16	32 GB, 2400 MHz 2RX4 DDR4 RDIMM (Micron Technology, Inc.)* (8001-22C)
5	M393A1G40DB0-CPB	16	8 GB, 2133 MHz 1RX4 DDR4 RDIMM (Samsung Electronics Co., Ltd.)* (8001-22C)
5	M393A2G40DB0-CPB	16	16 GB, 2133 MHz 2RX4 DDR4 RDIMM (Samsung Electronics Co., Ltd.)* (8001-22C)
5	M393A4K40BB0-CPB	16	32 GB, 2133 MHz 2RX4 DDR4 RDIMM (Samsung Electronics Co., Ltd.)* (8001-22C)
5	HMA41GR7AFR4N-TF	16	8 GB, 2133 MHz 1RX4 DDR4 RDIMM (SK hynix, Inc.)* (8001-22C)
5	HMA42GR7AFR4N-TF	16	16 GB, 2133 MHz 2RX4 DDR4 RDIMM (SK hynix, Inc.)* (8001-22C)
5	HMA84GR7MFR4N-TFT1	16	32 GB, 2133 MHz 2RX4 DDR4 RDIMM (SK hynix, Inc.)* (8001-22C)
5	MEM-DR416L-CL03-ER24, MEM-DR416L-SL01-ER21, or MEM-DR416L-HL02-ER21	16	16 GB, 2133 MHz 2RX4 DDR4 ISRDIMM (Super Micro Computer, Inc.)*
5	MEM-DR432L-SL01-ER21, MEM-DR432L-CL01-ER24, MEM-DR432L-HL01-ER21	16	32 GB, 2133 MHz 2RX4 DDR4 ISRDIMM (Super Micro Computer, Inc.)*

Table 2. System parts (continued)

Index number	Part number	Units per assembly	Description
6	SSD-DM064-PHI	2	64 GB SATA drive on module (DOM) (8001-22C)
6	SSD-DM064-SMCMVN1	2	64 GB SATA drive on module (DOM) (8005-22N)
6	SSD-DM128-SMCMVN1	2	128 GB SATA drive on module (DOM) (8001-22C)
7	MBD-P8DTU-2U-IB001, MCP-74Y4912-IB001, and MCP-01AF132-IB001	1	System backplane kit (includes system backplane, tray, and vacuum pen) **Note:** You must order all three part numbers to receive all of the kit contents.
8		10	Screws
9	FAN-0166L4	4	Fan
10	BPN-SAS3-826A	1	Disk drive backplane (supports 12 SAS or SATA drives)
	BPN-SAS3-826EL1-N4	1	Disk drive backplane (supports 8 SAS or SATA drives and 4 SAS, SATA, or NVMe drives) (8001-22C)
11		7	Screws
12	HDD-A2000-ST2000NM003401	12	2 TB 3.5 inch SAS disk drive (8001-22C)
12	HDD-A4000-ST4000NM003401 or HDD-A4TB-HUS726040AL5210	12	4 TB 3.5 inch SAS disk drive (8001-22C)
12	HDD-A6000-ST6000NM003401	12	6 TB 3.5 inch SAS disk drive (8001-22C)
12	HDD-A8000-ST8000NM0075	12	8 TB 3.5 inch SAS disk drive (8001-22C)
12	HDD-A4000-ST4000NM0075	12	4 TB 3.5 inch self-encrypting SAS disk drive (8001-22C)
12	HDD-A8000-ST8000NM0095	12	8 TB 3.5 inch self-encrypting SAS disk drive (8001-22C)
12	HDD-T2000-ST2000NM002401	12	2 TB 3.5 inch SATA disk drive (8001-22C)
12	HDD-T4000-ST4000NM002401	12	4 TB 3.5 inch SATA disk drive (8001-22C)
12	HDD-T6000-ST6000NM002401	12	6 TB 3.5 inch SATA disk drive (8001-22C)
12	HDD-T8000-ST8000NM0055	12	8 TB 3.5 inch SATA disk drive (8001-22C)
12	HDS-KIT-2A-1920-IB001	12	1.9 TB small form factor SAS solid-state drive (1 drive write per day) (8001-22C)
12	HDS-KIT-2A-3840-IB001	12	3.8 TB small form factor SAS solid-state drive (1 drive write per day) (8001-22C)
12	HDS-KIT-2T-160-IB001	12	160 GB 2.5 inch small form factor SATA solid-state drive (8001-22C)
12	HDS-KIT-2T-240-IB001	12	240 GB 2.5 inch small form factor SATA solid-state drive (8001-22C)

Table 2. System parts (continued)

Index number	Part number	Units per assembly	Description
12	HDS-KIT-2T-960-IB001	12	960 GB 2.5 inch small form factor SATA solid-state drive (8001-22C)
12	HDS-KIT-2T-1900-IB001	12	1.9 TB 2.5 inch small form factor SATA solid-state drive (8001-22C)
12	HDS-KIT-2T-3800-IB001	12	3.8 TB 2.5 inch small form factor SATA solid-state drive (8001-22C)
12	HDS-KIT-3N-800-IB001	4	800 GB 2.5 inch small form factor NVMe drive (3 drive writes per day) (8001-22C)
12	HDS-KIT-3N-1200-IB001	4	1.2 TB 2.5 inch small form factor NVMe drive (3 drive writes per day) (8001-22C)
12	HDS-KIT-3N-1600-IB001	4	1.6 TB 2.5 inch small form factor NVMe drive (3 drive writes per day) (8001-22C)
12	HDS-KIT-3N-2000-IB001	4	2.0 TB 2.5 inch small form factor NVMe drive (3 drive writes per day) (8001-22C)
12	HDS-KIT-5N-800-IB001	4	800 GB 2.5 inch small form factor NVMe drive (5 drive writes per day) (8001-22C)
12	HDS-KIT-5N-3200-IB001	4	3.2 TB 2.5 inch small form factor NVMe drive (5 drive writes per day) (8001-22C)
12	HDS-KIT-2T-480-IB001	4	480 GB 2.5 inch SATA solid-state drive (3.5 drive writes per day) (8005-22N)
12	HDS-KIT-2T-960S-IB001	4	960 GB 2.5 inch SATA solid-state drive (3.5 drive writes per day) (8005-22N)
12	HDS-KIT-2T-1920-IB001	4	1.92 TB 2.5 inch SATA solid-state drive (3.5 drive writes per day) (8005-22N)
13	PWS-1K62A-1R	2	Power supply
14	RSC-R1UW-E8R	1	PCIe riser for PCIe adapter 3 (PLX Slot1)
15		1	PCI adapter. Use the feature type of the adapter to find the FRU number in PCIe adapter information by feature type for the 8001-22C or 8005-22N.
16		1	GPU. Use the feature type of the GPU to find the FRU number in PCIe adapter information by feature type for the 8001-22C or 8005-22N. **Note:** 8005-22N systems do not support GPUs.
17		1	PCI adapter. Use the feature type of the adapter to find the FRU number in PCIe adapter information by feature type for the 8001-22C or 8005-22N. **Note:** 8005-22N systems do not support this PCIe adapter.
18	AOC-2UR66-i4XTF	1	2U UIO NIC PCIe adapter with integrated 4-port 10 GbE Base-T, Intel XL710, and CAPI **Note:** This PCIe adapter is also a PCIe riser.
19		1	PCIe cage
20		1	GPU. Use the feature type of the GPU to find the FRU number in PCIe adapter information by feature type for the 8001-22C or 8005-22N. **Note:** 8005-22N systems do not support GPUs.

Table 2. System parts (continued)

Index number	Part number	Units per assembly	Description
21		3	PCIe adapters. Use the feature type of the adapter to find the FRU number in PCIe adapter information by feature type for the 8001-22C or 8005-22N. **Note:** 8005-22N systems do not support this PCIe adapter.
22		1	PCIe riser
23	RSC-W2-688P	1	PCIe riser PCIe adapter 4 or GPU 2 (WIO Slot1), PCIe adapter 5 (WIO Slot2), and PCIe adapter 6 (WIO Slot3) **Note:** 8005-22N systems do not support GPUs.
24		1	PCI adapter. Use the feature type of the adapter to find the FRU number in PCIe adapter information by feature type for the 8001-22C or 8005-22N.

*All of the memory in a 8001-22C system must be the same size and from the same supplier. The 8001-22C system does not support mixing different sizes of memory or mixing memory from different suppliers. All of the memory in a 8005-22N system must be the same size and from the same supplier. The 8005-22N system does not support mixing different sizes of memory or mixing memory from different suppliers.

Rear ports
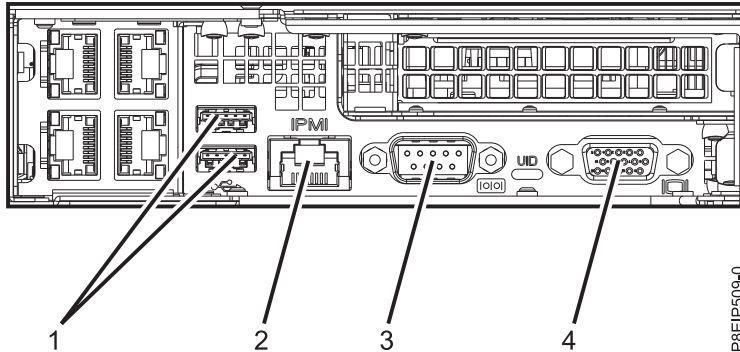
Figure 3. Rear ports

Table 3. Input and output ports

Identifier	Description
1	USB 2.0 used for keyboard and mouse. Certain USB drives might be too wide to fit properly into the USB ports on the rear of the system. Test the fit your USB drive before proceeding.
2	Ethernet Intelligent Platform Management Interface (IPMI)
3	Serial IPMI

Table 3. Input and output ports (continued)

Identifier	Description
4	Video Graphics Array (VGA) used for monitor. Only the 1024 x 768 at 60 Hz VGA setting is supported. Only up to a 3-meter cable is supported. Text based capability is only supported at this time.

Installing and Removing
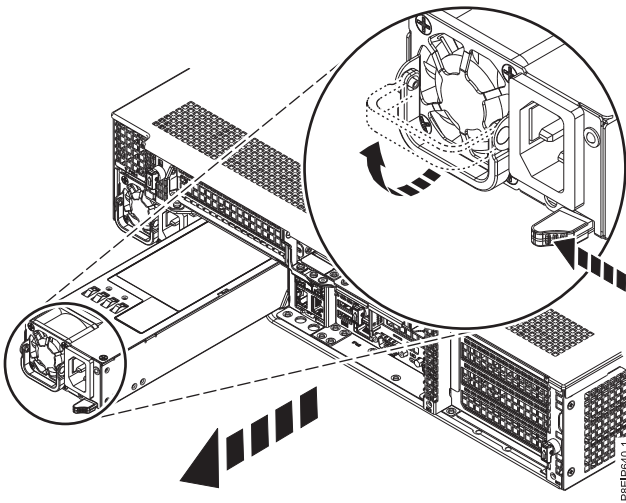
Figure 4. Removing a power supply from the system
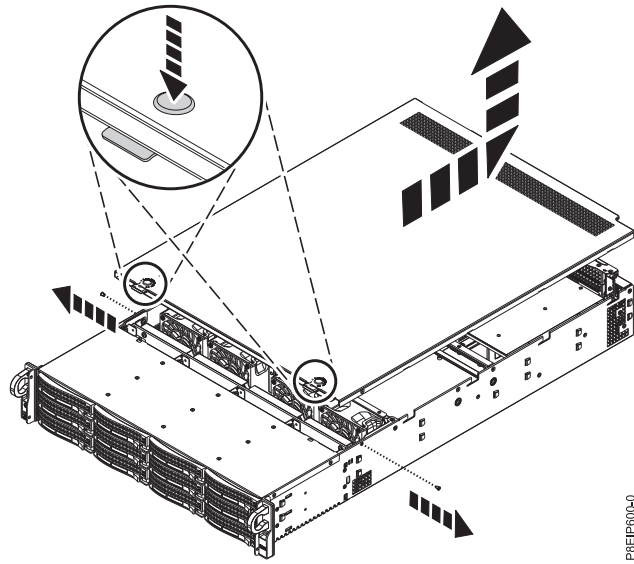
Figure 5. Releasing and opening the cover
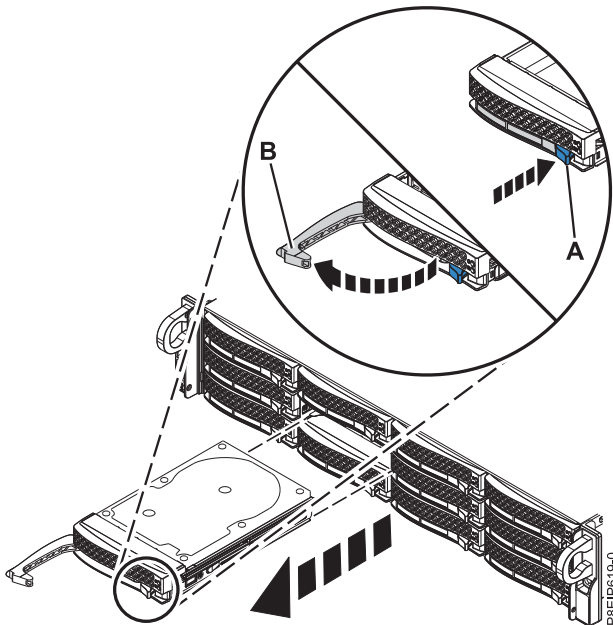
Figure 6. Removing a drive
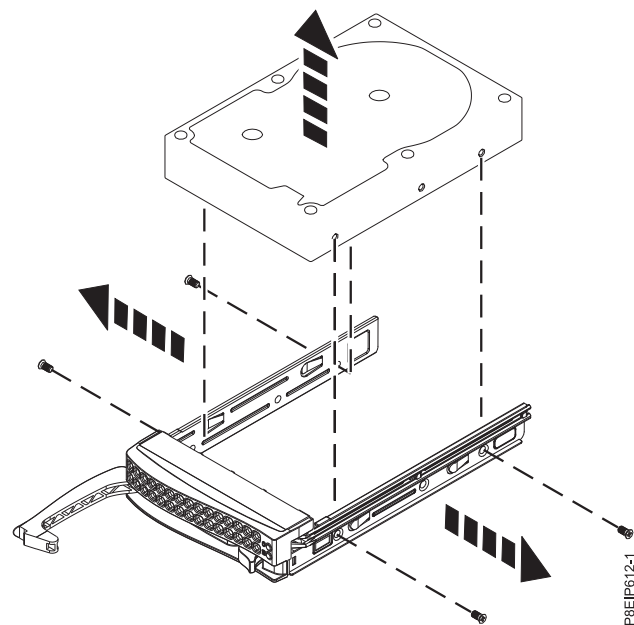
Figure 7. Removing the 3.5-inch drive from the tray
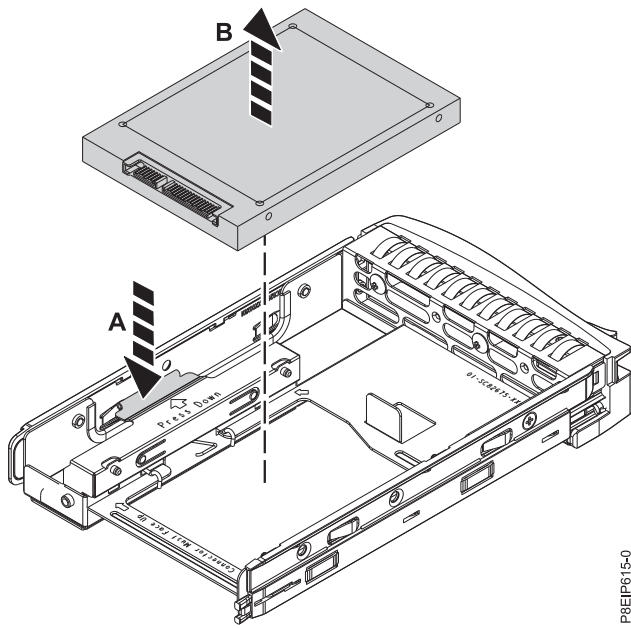
Figure 8. Removing the 2.5-inch drive from the tray
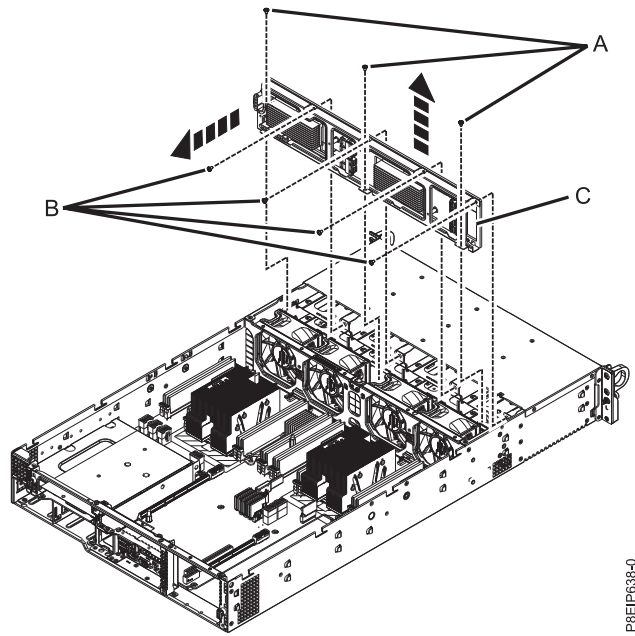
Figure 9. Removing the disk drive backplane and screws
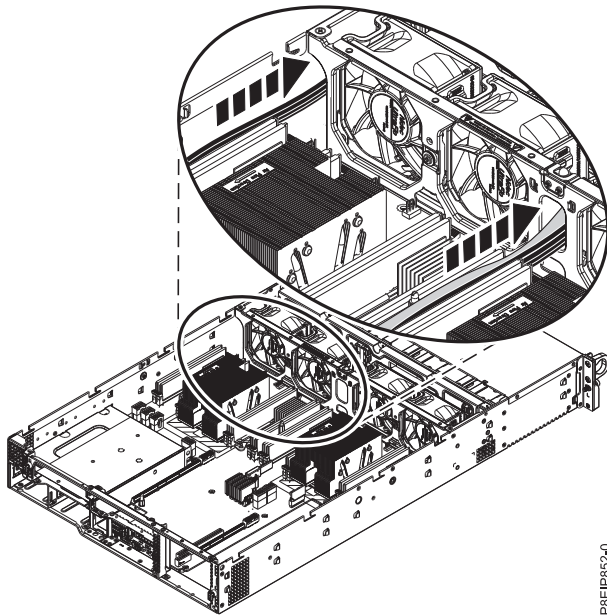
Figure 10. Removing the disk drive backplane cables
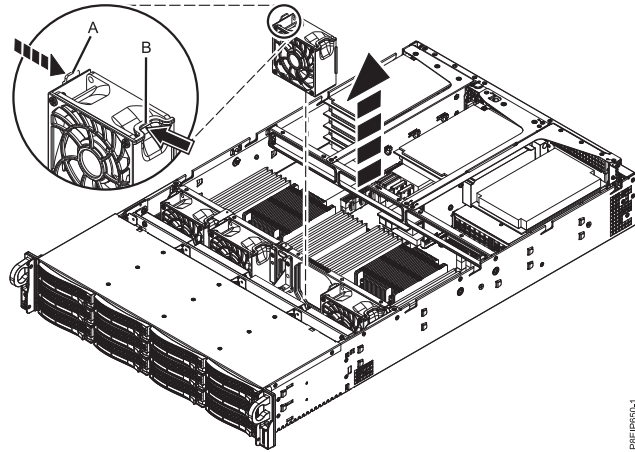
Figure 11. Removing a fan
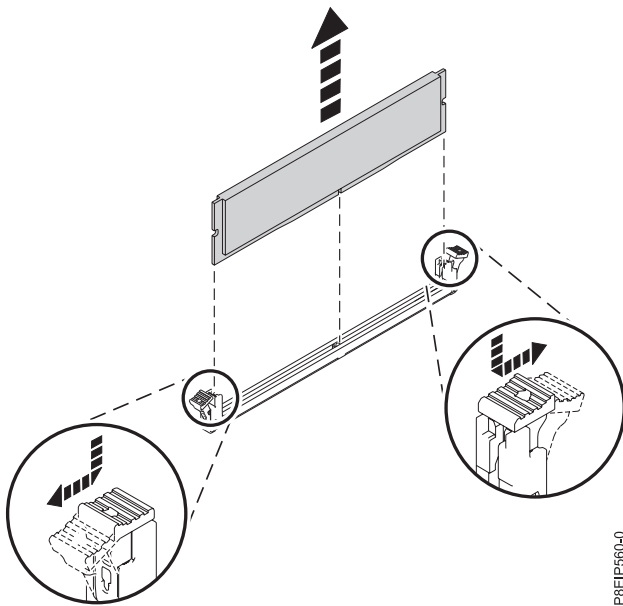
Figure 12. Removing the memory DIMM

Front

4 2 4 2 3 1 3 1
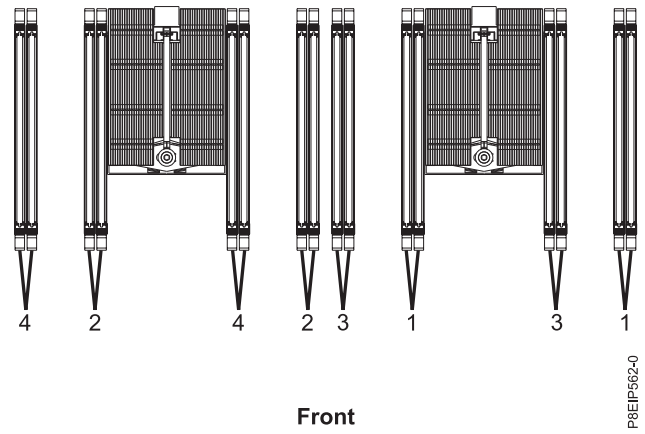
Figure 13. Memory slot locations and plugging sequence

2 3 1 4 5 6 7 8
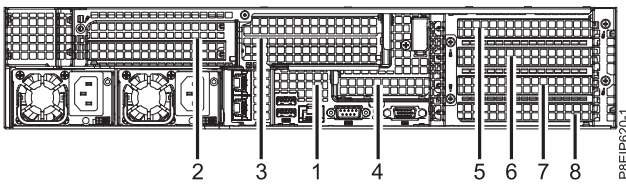
Figure 14. 8001-22C PCIe adapter positions
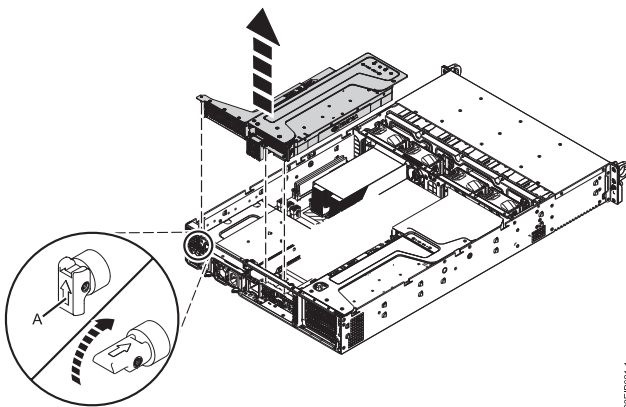
Figure 15. Removing the PCIe riser
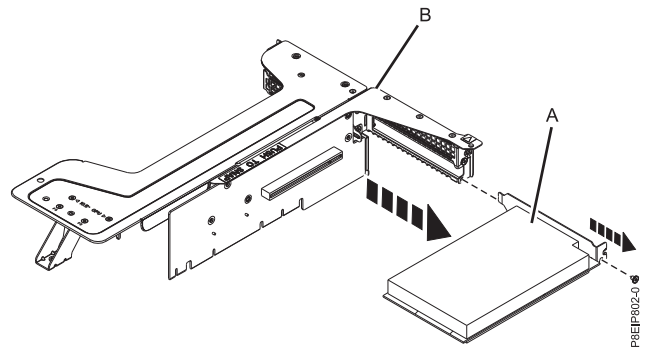
Figure 16. Removing a position 2 adapter from the riser
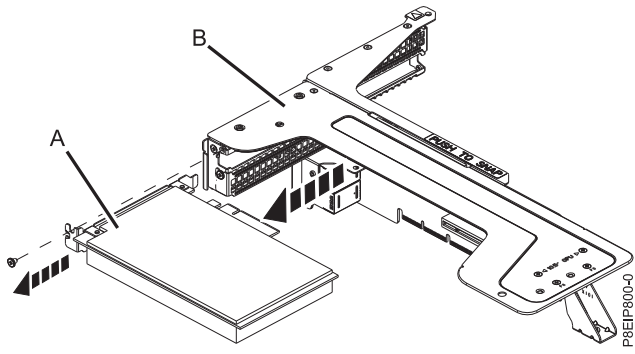
Figure 17. Removing a position 3 adapter from the riser
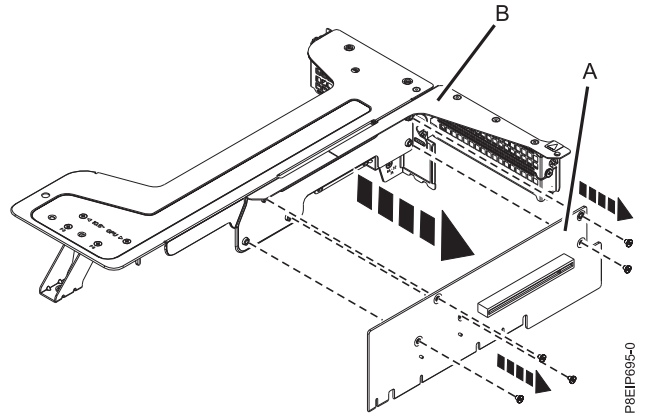
Figure 18. Removing position 1 riser card
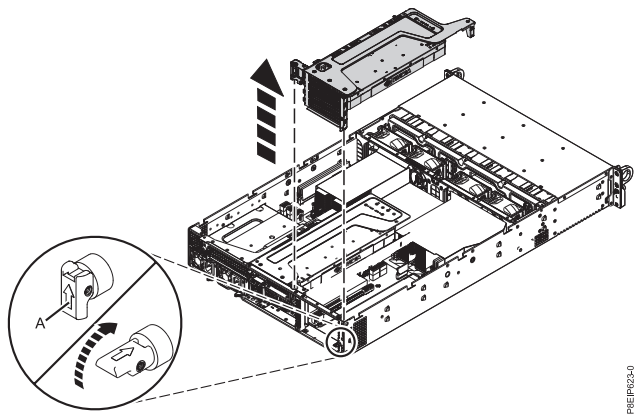
Figure 19. Removing the PCIe riser
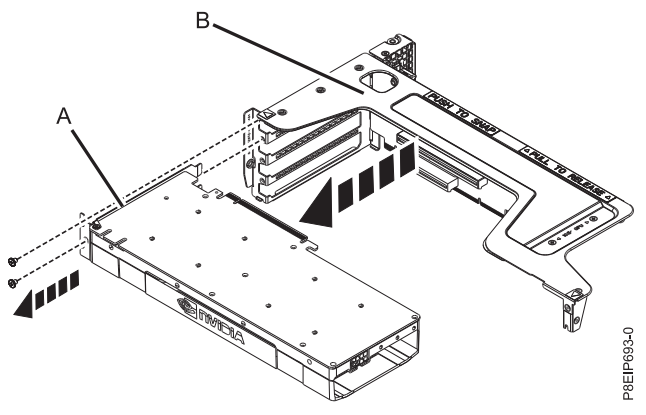
Figure 20. Removing the GPU from the riser
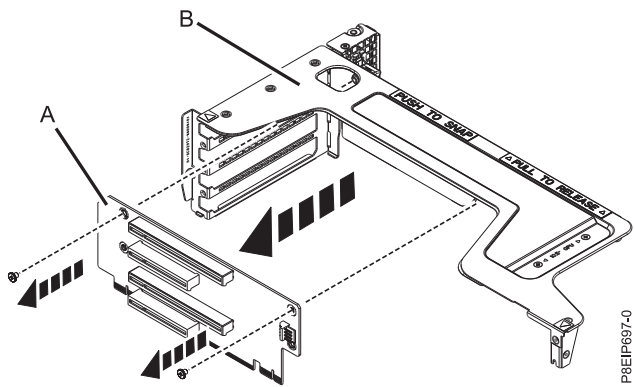
Figure 21. Removing position 5, 6, 7, and 8 riser card
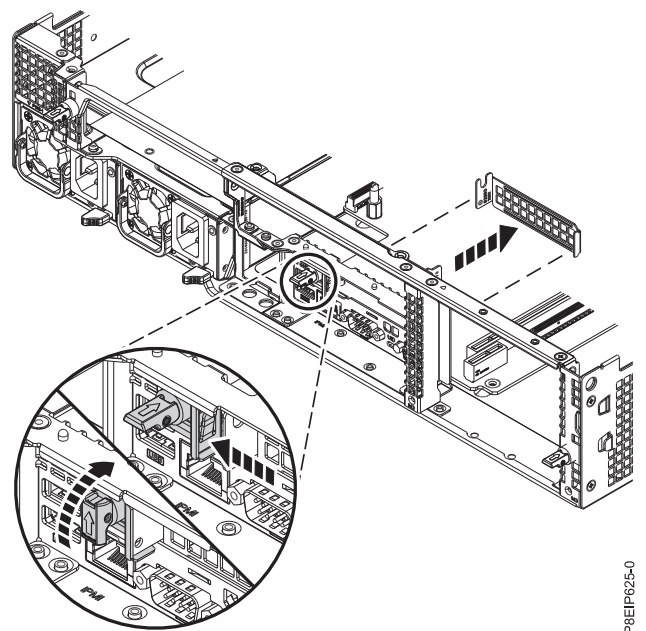
Figure 22. Releasing the tail-stock

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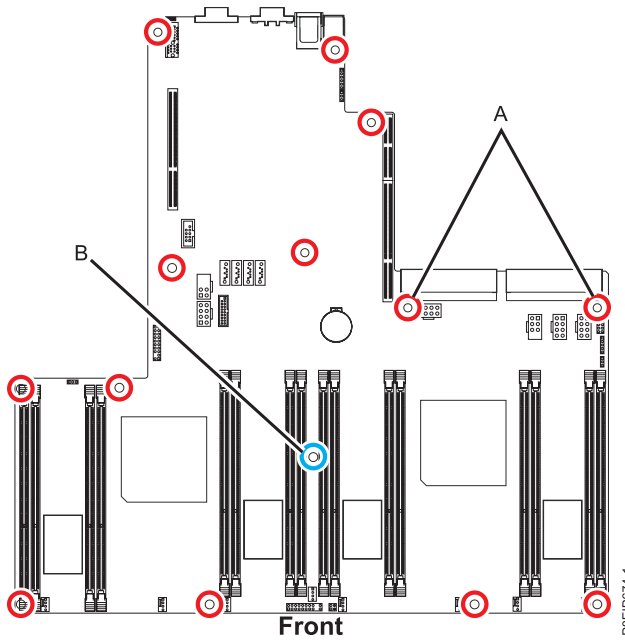
Figure 23. Screw locations
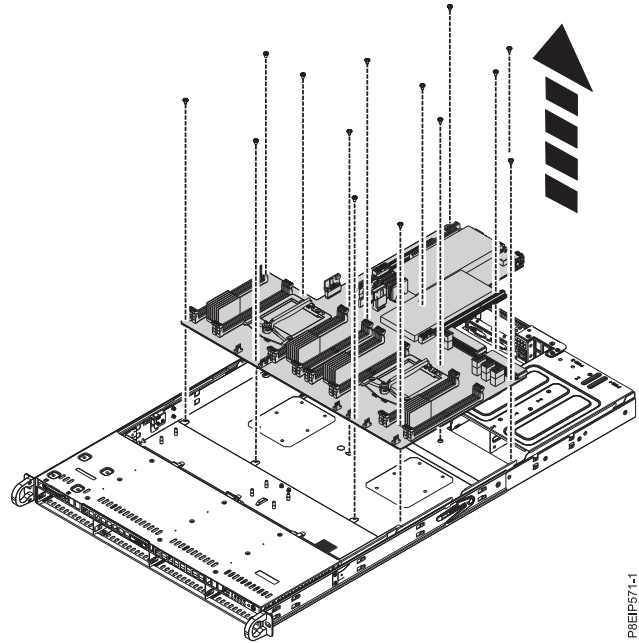
Figure 24. Lifting out the system backplane
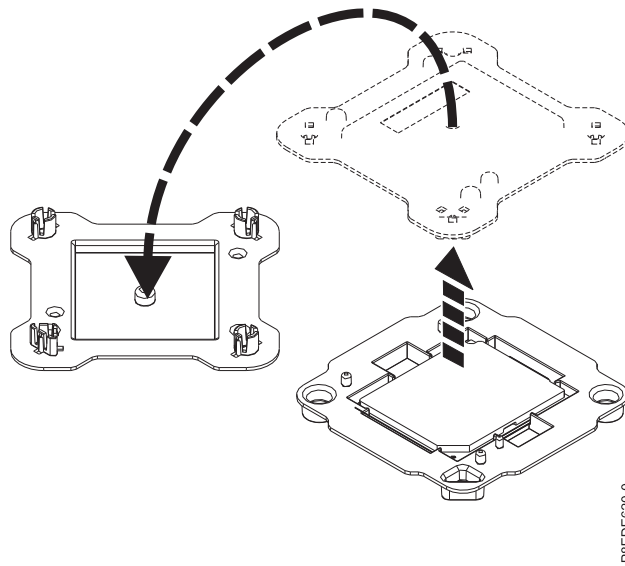
Figure 25. Opening the system processor module packaging
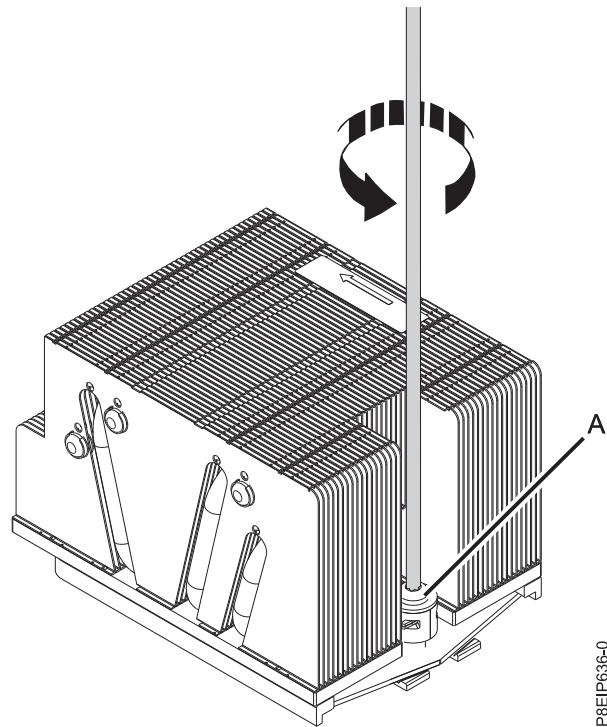
Figure 26. Loosening the load arm screw of the heat sink
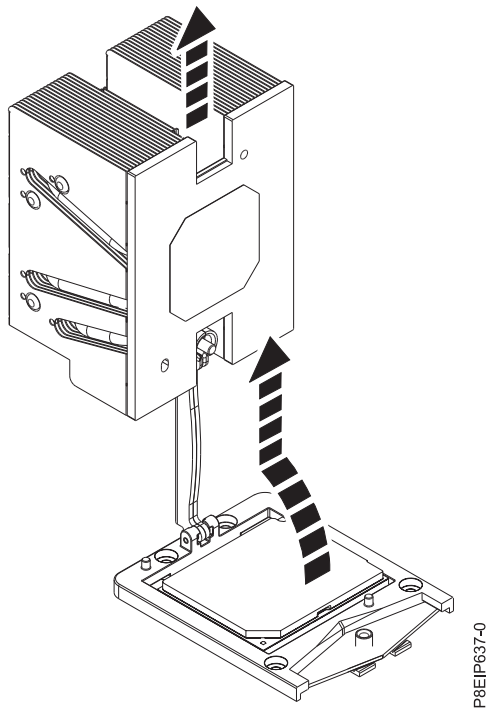
Figure 27. Lifting the heat sink from the load arm
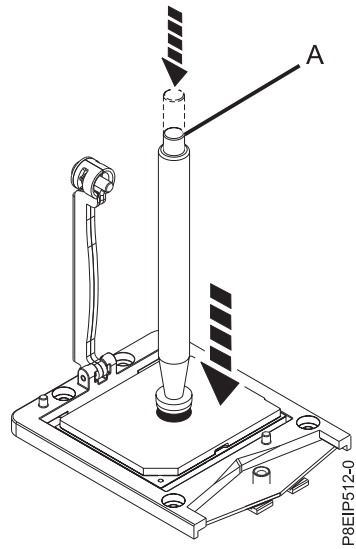
Figure 28. Locking the vacuum pen to the system processor module
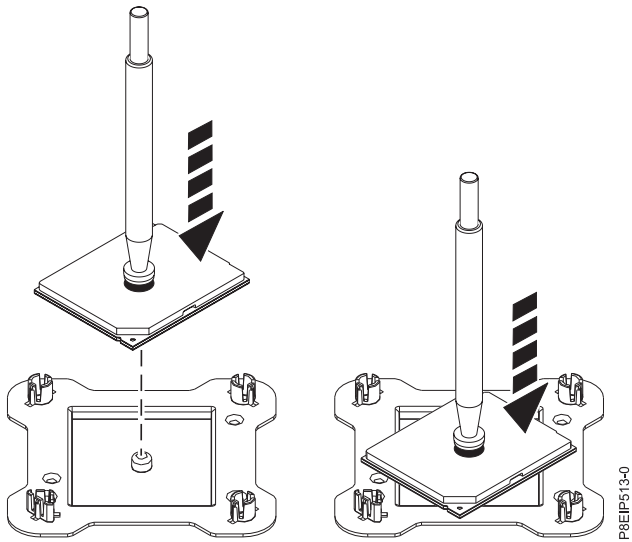
Figure 29. Placing the processor at an angle on the top cover of the packaging
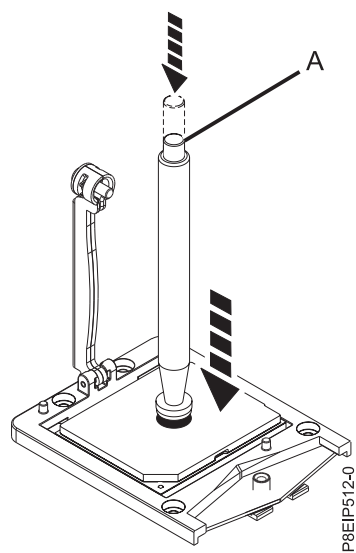
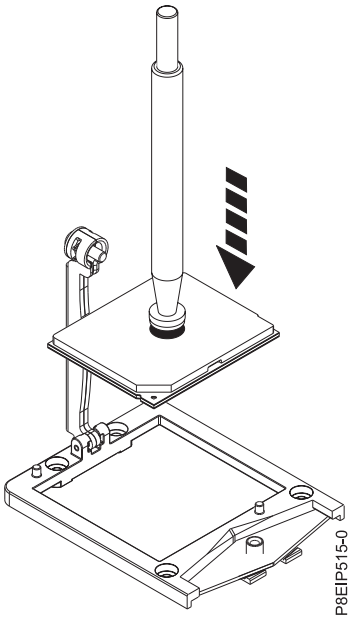Figure 30. Lowering the removal tool onto the system processor module
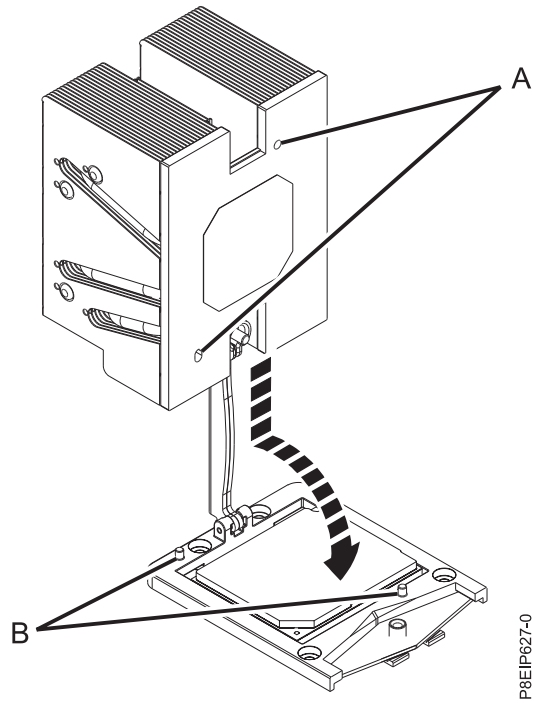
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Figure 31. Lowering the processor into the socket
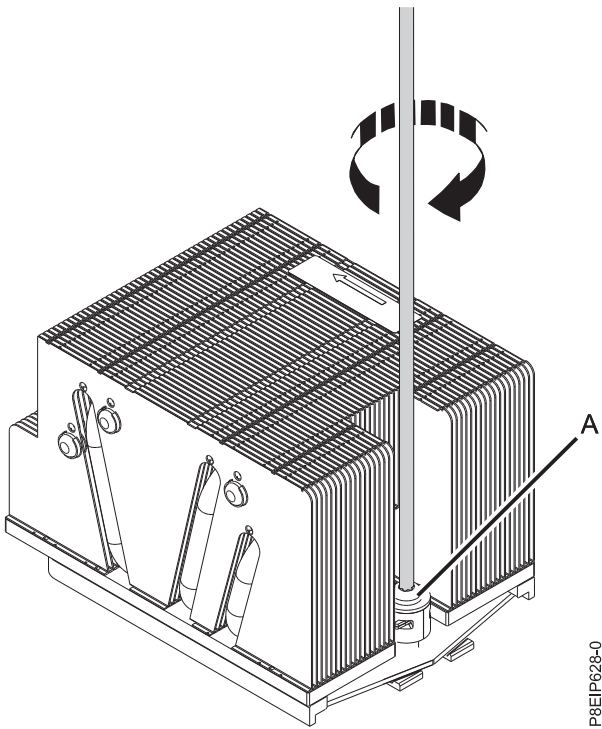

Figure 32. Installing the heat sink

Figure 33. Tightening the load arm screw
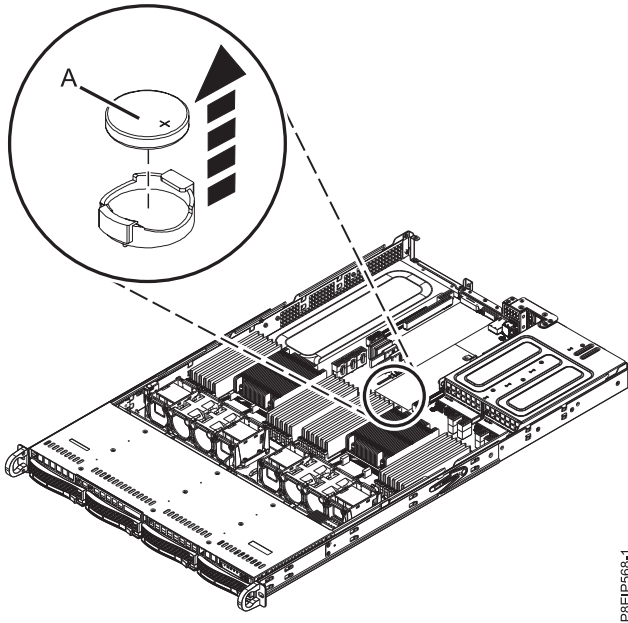
P8EIP568-1

Figure 34. Time-of-day battery location