# Product End-of-Life Disassembly Instructions

| Marketing Name / Model<br>[List multiple models if applicable.] | Product Category - Servers |
|---|---|
| Product Name | HP Integrity Superdome X |
| Model: | BL920s Gen9 |
| | |

**Purpose:** The document is intended for use by end-of-life recyclers or treatment facilities. It provides the basic instructions for the disassembly of HP products to remove components and materials requiring selective treatment.

## 1.0 Items Requiring Selective Treatment

1.1 Items listed below are classified as requiring selective treatment.
1.2 Enter the quantity of items contained within the product which require selective treatment in the right column, as applicable.

| Item Description | Notes | Quantity of items included in product |
|---|---|---|
| Printed Circuit Boards (PCB) or Printed Circuit Assemblies (PCA) | Server is configurable and may contain some of the following assemblies.<br>AT068-2001G(AT068A)<br>A0R69-60101(A0S01A)<br>743824-001, IVB-EX E7-2890v2 2.8GHz/15 Core/37.5M<br>731932-001, IVB-EX E7-8891 v2 10-core/3.2GHz/155W/37.5M<br>729443-001, IVB-EX E7-4830 v2 10-core/2.2GHz/105W/20M<br>743825-001, IVB-EX E7-2880 v2 15-core/2.5GHz/130W/37.5M<br>731932-002, IVB-EX E7- 8893v2 12 core/3.4GHz/155W/37.5M<br>712384-081 DIMM,32GB PC3-14900L<br>752371-081 DIMM,16GB PC4-2133P-L<br>655639-B21 BLOM 10Gb NIC<br>700741-B21 BLOM 10Gb 2P 534FLB<br>655637-001 BLOM PCIeG2x8 2p 10Gb KR<br>665244-001 PCA MEZZ PCIeG2x8 2p 10GE<br>665246-B21 HP Ethernet 10Gb 2P 560M Adptr<br>710608-B21 HP QMH2672 16Gb FC HBA<br>AH337-60502, Upper Midplane<br>013585-001, Lower Signal Midplane<br>AH337-60405, DVD Module<br>AH337-60604, GPSM<br>408439-502, Assy Fan PCA<br>012913-502, PCA, PWR MOD<br>012958-502, PCA, LCD Blindmate Paddle<br>012955-601, PCA, LCD Pass Thru Crd-Edge<br>407295-502, Assy, Management Sleeve<br>AH341-60401, XFM<br>AH389-60003, Onboard Administrator<br>C8S47-63001 Interconnect<br>538113-B21 Interconnect<br>711307-B21 Interconnect<br>658247-B21 Interconnect HP 6125G Blade Switch | 310 (maximum) |
| Batteries | All types including standard alkaline and lithium coin or button style batteries<br>1420-0524 (NVRAM) Blade<br>M4T28-BR12SH1TR OA | 20 (maximum) |
| Mercury-containing components | For example, mercury in lamps, display backlights, scanner lamps, switches, batteries | |
| Liquid Crystal Displays (LCD) with a surface greater than 100 sq cm | Includes background illuminated displays with gas discharge lamps | |
| Cathode Ray Tubes (CRT) | | |
| Capacitors / condensers (Containing PCB / PCT) | | |
| Electrolytic Capacitors / Condensers measuring greater than 2.5 cm in diameter or height | Per Power Supply | 2 or 4 |
| External electrical cables and cords | | |
| Gas Discharge Lamps | | |
| Plastics containing Brominated Flame Retardants | | |
| Components and parts containing toner and ink, including liquids, semi-liquids (gel/paste) and toner | Include the cartridges, print heads, tubes, vent chambers, and service stations. | |
| Components and waste containing asbestos | | |
| Components, parts and materials containing refractory ceramic fibers | | |
| Components, parts and materials containing radioactive substances | | |

## 2.0 Tools Required

List the type and size of the tools that would typically be used to disassemble the product to a point where components and materials requiring selective treatment can be removed.

| Tool Description | Tool Size (if applicable) |
|---|---|
| Torx screw drivers | T6, T10, T15 & T25 |
| Flat Blade Screwdriver | |
| Description #3 | |
| Description #4 | |
| Description #5 | |

## 3.0 Product Disassembly Process

3.1 List the basic steps that should typically be followed to remove components and materials requiring selective treatment:

1. Compute enclosure front components (See Figure 1)
2. Compute Enclosure Rear Components (See Figure 2)
3. Remove power supplies

    - Press the release button
    - Pull down the handle
    - Remove the power supply (quantity 12) (SEE Figure 3)

4. Removing DVD Module

    - Remove USB cables from DVD to OA
    - Remove the DVD module bezel
    - Press the button on the front of the DVD module to release handle
    - Pull the handle and slide the DVD module out enclosure (SEE Figure 4)

5. Remove the Server Blades(s)

    - **CAUTION:** After you press the release buttons, the server blade is unlocked from the enclosure. Use both hands to support the server blade when you remove it from the enclosure. The Server Blade weighs approximately 15.4 kg (34 lb) (SEE Figure 5)
    - Lay Server Blade on flat surface
    - Remove the access panel by lifting it straight up and off the server Blade (SEE Figure 6)
    - Locate the two processors
        - Remove the processor heat sink: (SEE Figure 7)
            - Lift the load bail (1).
            - Lift the load bar (2).
            - If necessary, break thermal interface between the heat sink base and processor. If necessary use a small screw driver (3).
            - Lift the heat sink (4).
        - Remove the processor: (SEE Figure 7)
            - Open the load bar (1).
            - Open the load bails (2).
            - Lift the load plates (3).
        - Remove the DIMMs, maximum quantity 32 (SEE Figure 8)
        - Remove the one battery using a nonconductive tool small enough to fit into the battery slot as leverage, and lift the battery from the front of the holder. (SEE Figure 9)

6. Remove the active cool fans, quantity 15

    - Turn the handle counterclockwise
    - Remove the fan

7. Remove the interconnect switch (maximum quantity 8)

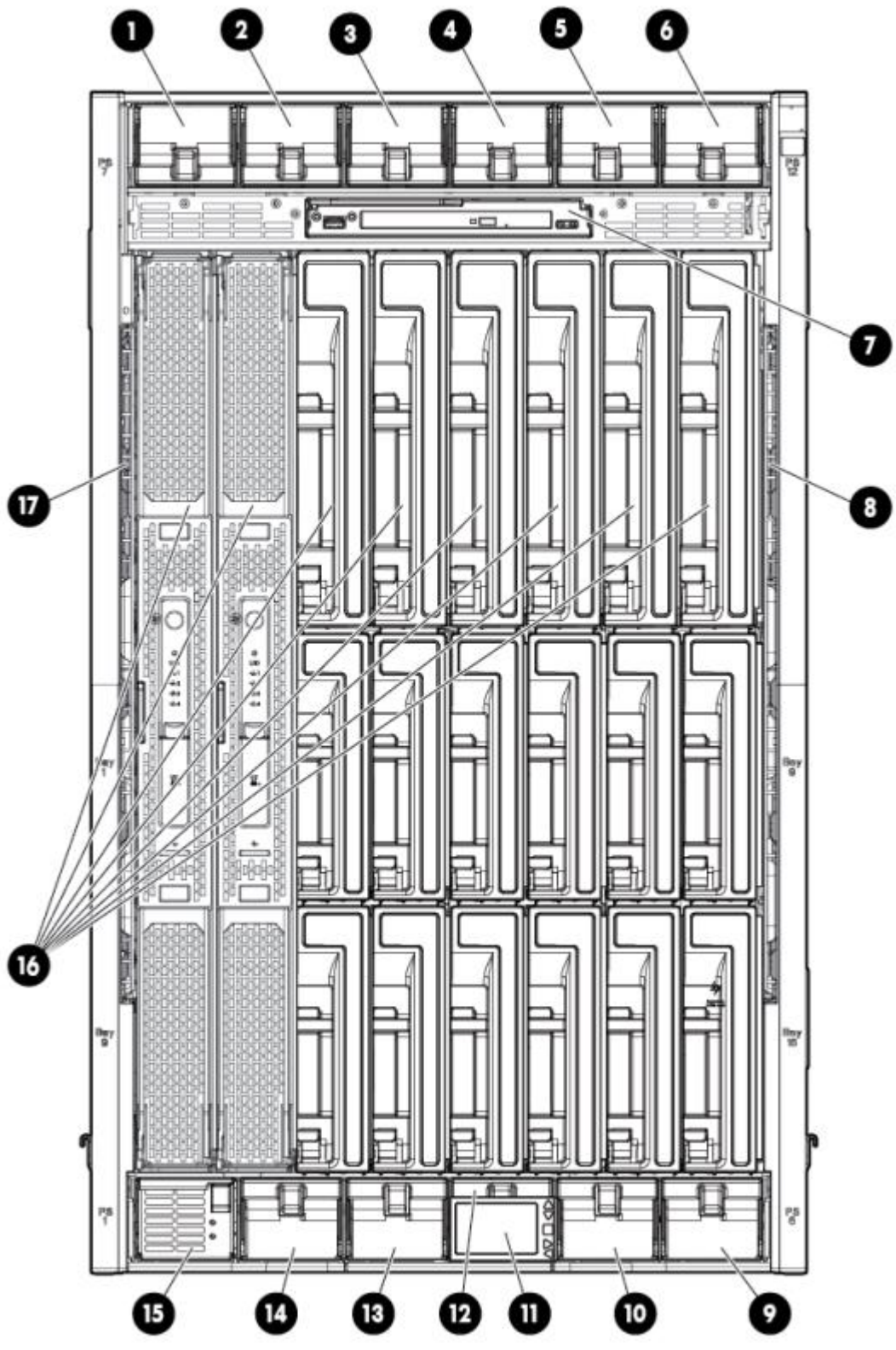
    - Disconnect all cables from component
    - Press the release tab
    - Open the handle
    - Remove the interconnect switch (See figure 2 for location)

8. Remove Onboard Administrator modules (quantity 2) and Onboard Administrator tray
    - Disconnect all cables
    - Press the release tab and open handle and remove onboard administrator; quantity 2 (See Figure 2 for location)
    - On the Onboard Administrator Modules that were removed, depress the button in the center and remove the top panel.
        - Remove the PCB and look for the Yellow battery. This battery can be removed from its corresponding IC by using your fingers. (See Figure 10)
    - Press the release handle on the onboard administrator tray and open handle. Note: This is the assembly that the onboard administrator installs into (See Figure 11)
9. Remove the GPSMs
    - Disconnect all cables
    - Press the button on the front of the GPSM to release handle
    - Pull the handle and slide the GPSM out of the enclosure
10. Remove the XFM; quantity of 4
    - Disconnect all X-Bar Flex-connect cables
    - Press buttons on the front of the XFM to release the handles
    - Pull the handles and slide the XFM out of the enclosure
11. Remove the ac input modules
    - Completely unscrew the three thumbscrews that secure the ac input module. The screws remain captive after they are unscrewed
    - Remove the ac input modules (See Figure 2 for location; See Figure 12 for component removal)
12. Remove the I/O Chassis (Enclosure tear down)

- Unscrew the ten thumbscrews and open the hinges completely
- Use the handles to extend the I/O chassis until the release levers engage on both sides of the I/O Chassis
- Grasp the handholds below the release levers
- Disengage the release levers on both sides of the rear chassis
    - **CAUTION:** When removing and lifting the I/O chassis, always grasp the handholds as far forward as possible. The frontend of the I/O chassis is heavy and the handholds provide a more balanced location to distribute the weight
- Use the handholds to extend and remove the I/O Chassis from the enclosure (See figure 13)

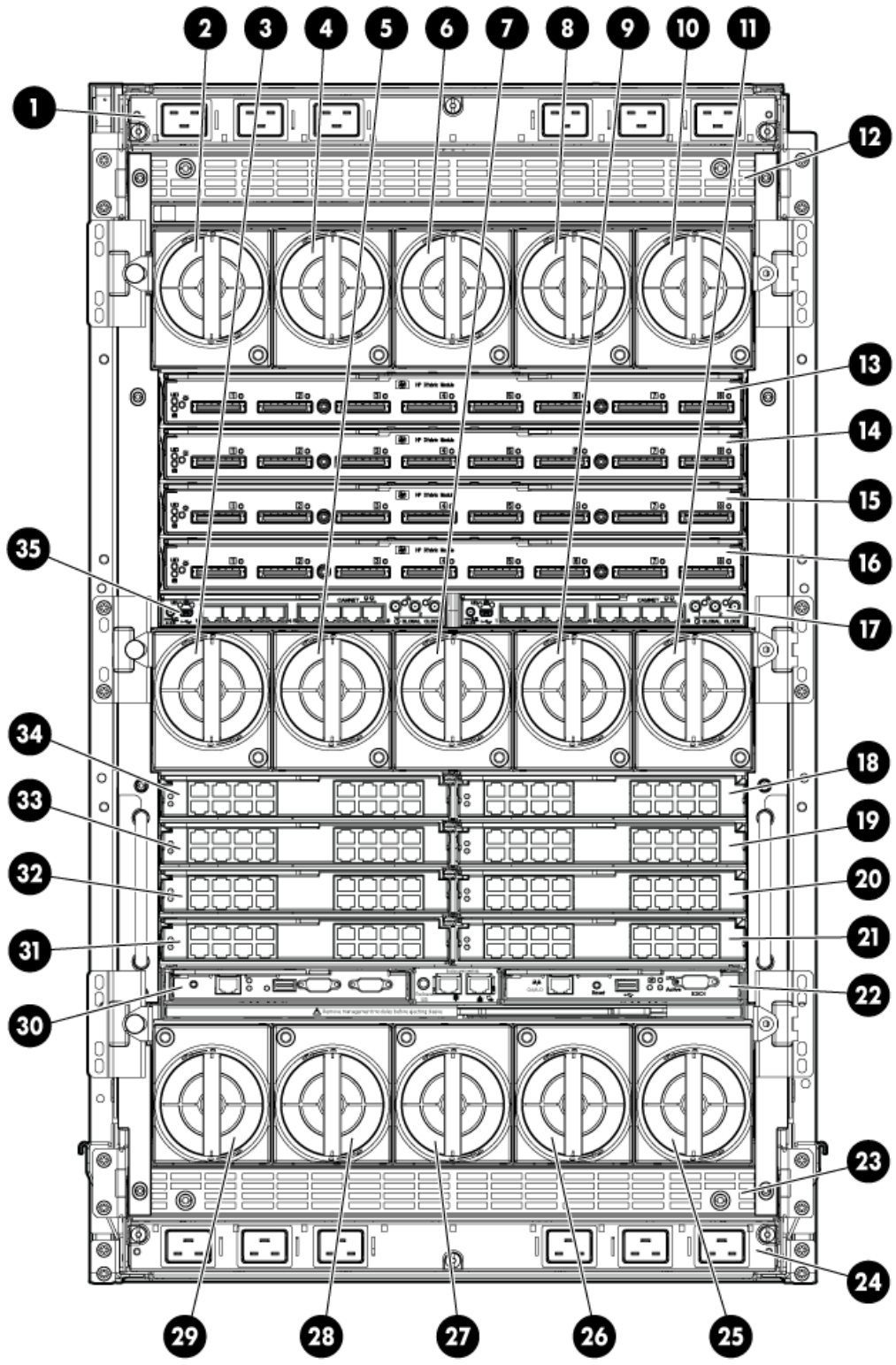
13. Remove the midplane brick assembly
    - **WARNING:** At least two people are required to safely move the midplane to avoid personal injury
    - Pull the plunger pins in each corner and rotate ¼ turn to lock them in position
    - Use the handles to extend and remove the midplane assembly from the enclosure (See figure 14)
    - Place midplane brick flat on table to allow disassembly
14. Disassemble midplane brick
    - Remove status panel PCA (See Figure 15)
    - Remove Air Valve assemblies
        - Remove 3 screws from each side. Lift out the air valve assemblies (See Figure 16)
    - Remove Fan PCAs
        - Disconnect cables to the 3 Fan PCA's. Remove 3 screws from each fan PCA.
        - Remove PCAs (See Figure 17)
    - Unlatch DVD Cable (See Figure 18)
    - Remove Airframe screws (See Figure 19)
    - Remove Airframes and midplanes (See Figure 20)
    - Remove the busbar assemblies (Figure 21)
    - Remove power PCAs from busbar assemblies (Figure 22)
15. Remove power Supply covers
    - Locate Capacitors greater than 2.5cm (Figure 23)
    - Using a flat blade screwdriver pry capacitors from the supply; there will either be 2 or 4 per supply
    - Note: There are two types of supplies and three vendors, Figure 23 will have examples of all

3.2 Optional Graphic. If the disassembly process is complex, insert a graphic illustration below to identify the items contained in the product that require selective treatment (with descriptions and arrows identifying locations).



| Item | Description |
|---|---|
| 1 thru 6 | Power Supply Bay 7-12 |
| 7 | DVD Module |
| 9 & 10 | Power Supply Bay 6-5 |
| 11 | Insight Display |
| 12 thru 15 | Power Supply Bay 4 – 1 |
| 16 | Blade slots |

**FIGURE 1**




| Item | Description |
|---|---|
| 1 | AC power connectors (upper) |
| 2-11 | Fan bay 1 – 10 |
| 13 – 16 | XFM Bay 1 – 4 |
| 17 | GPSM 2 |
| 18 – 21 | Interconnect Bay 2, 4, 6 & 8 |
| 22 | Onboard Administrator 2 |
| 24 | Ac power connectors (lower) |
| 25 – 29 | Fan bay 11 – 15 |
| 30 | Onboard Administrator 1 |
| 31 – 34 | Interconnect bay 1, 3, 5, 7 |
| 35 | GPSM 1 |

**FIGURE 2**

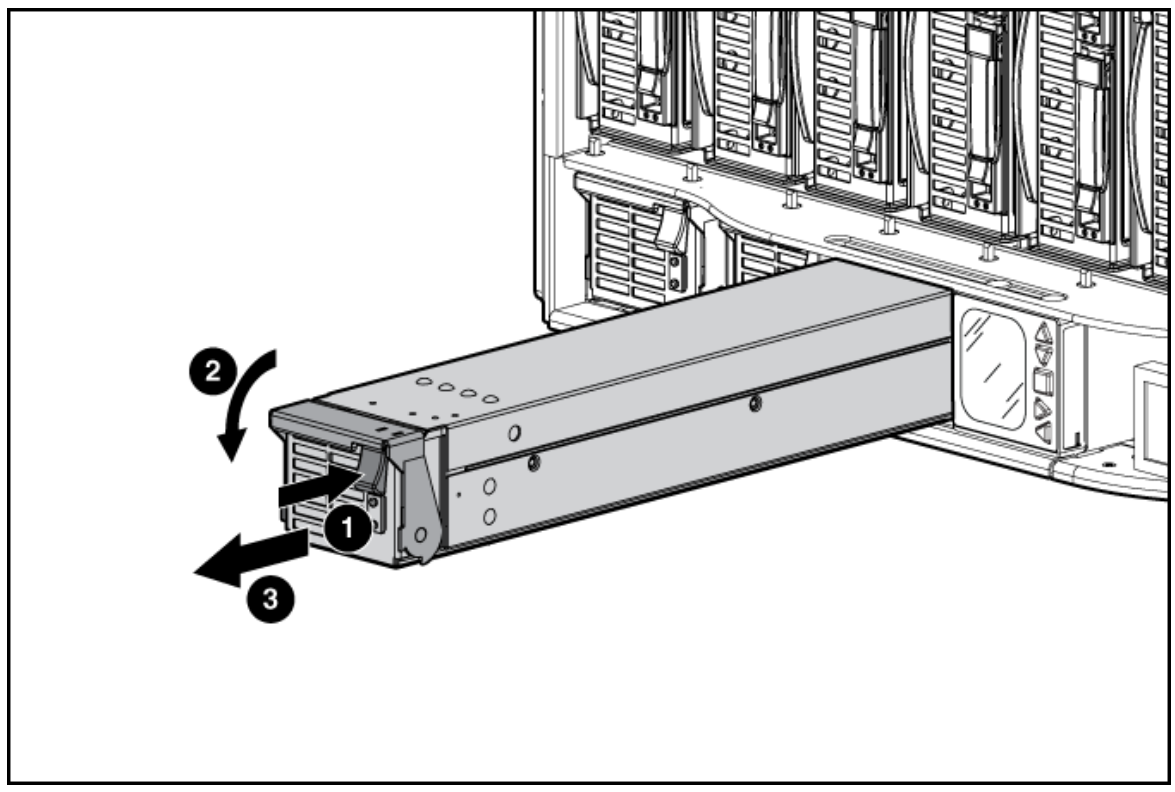



**FIGURE 3**

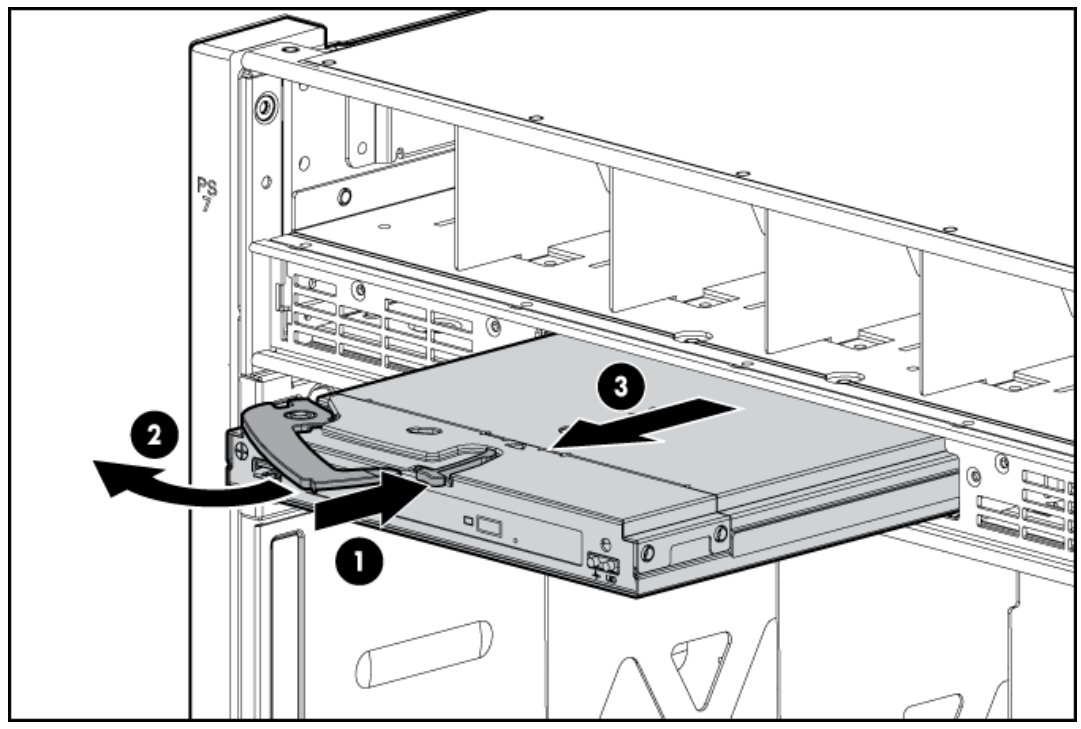



**FIGURE 4**

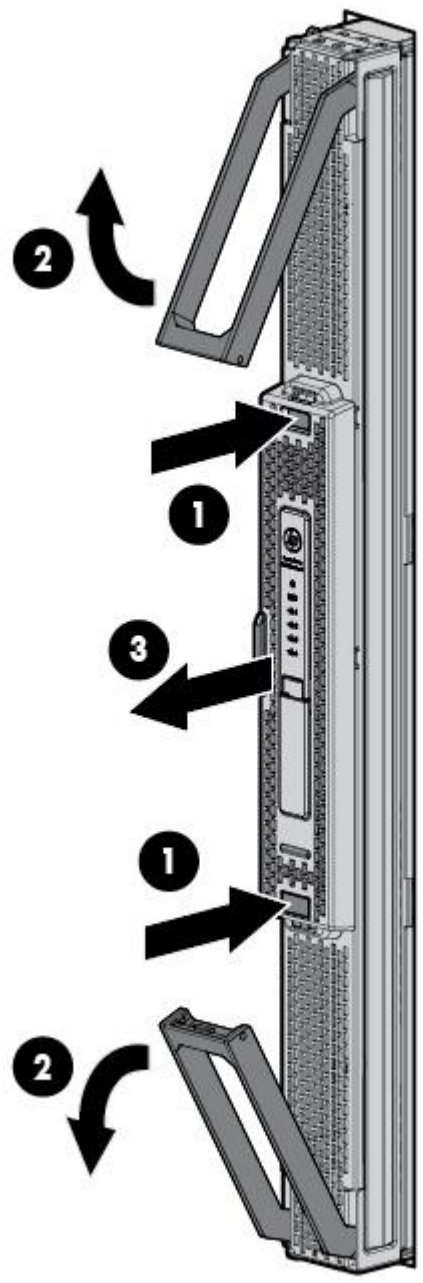



**FIGURE 5**

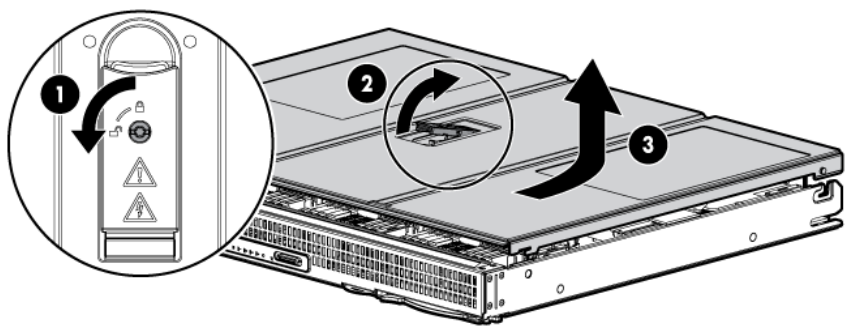



**FIGURE 6**

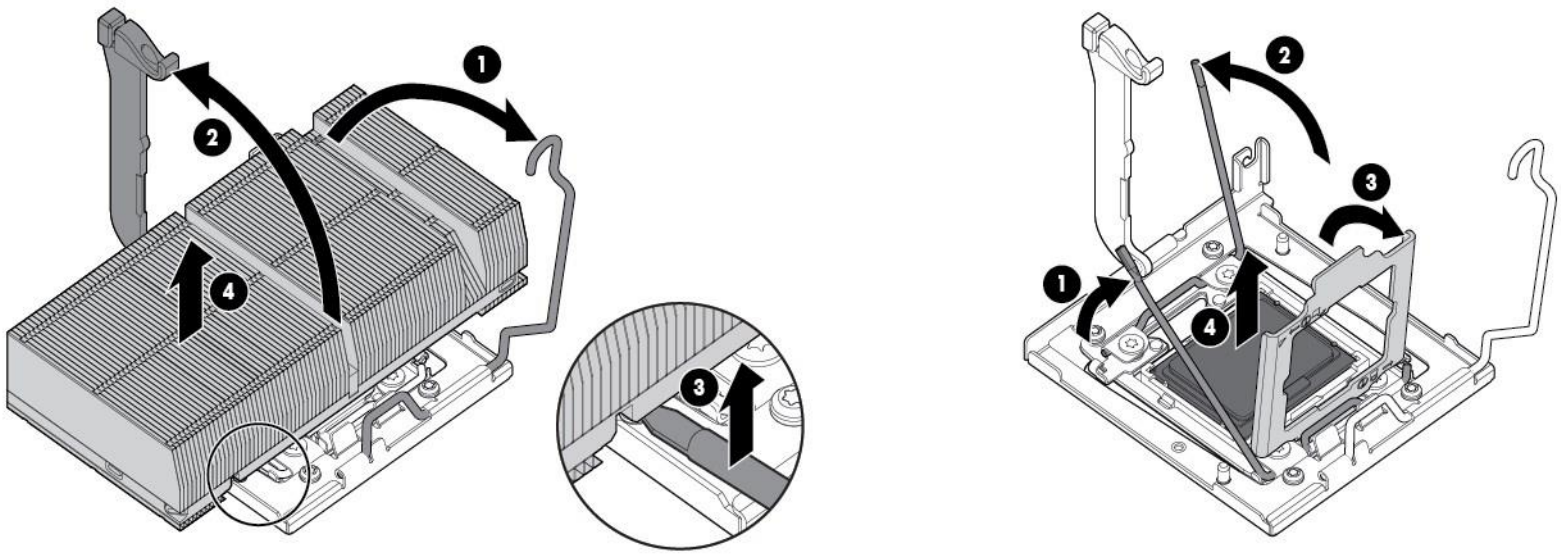



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**FIGURE 7**

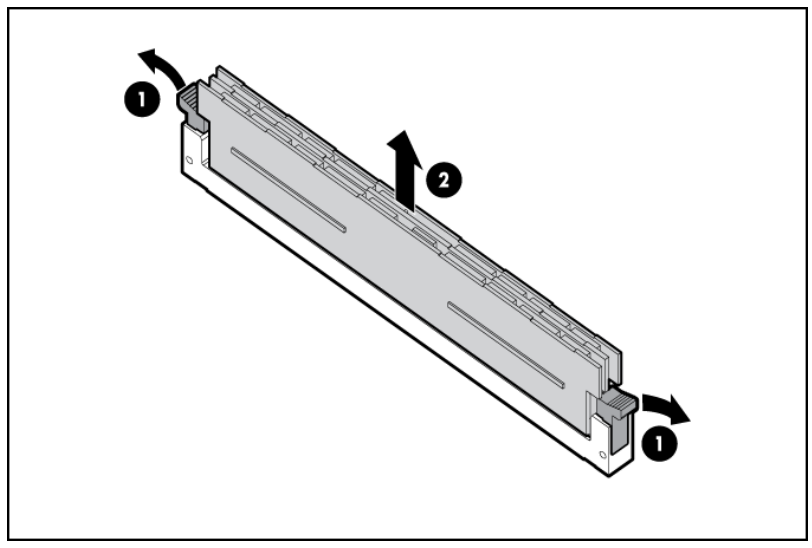
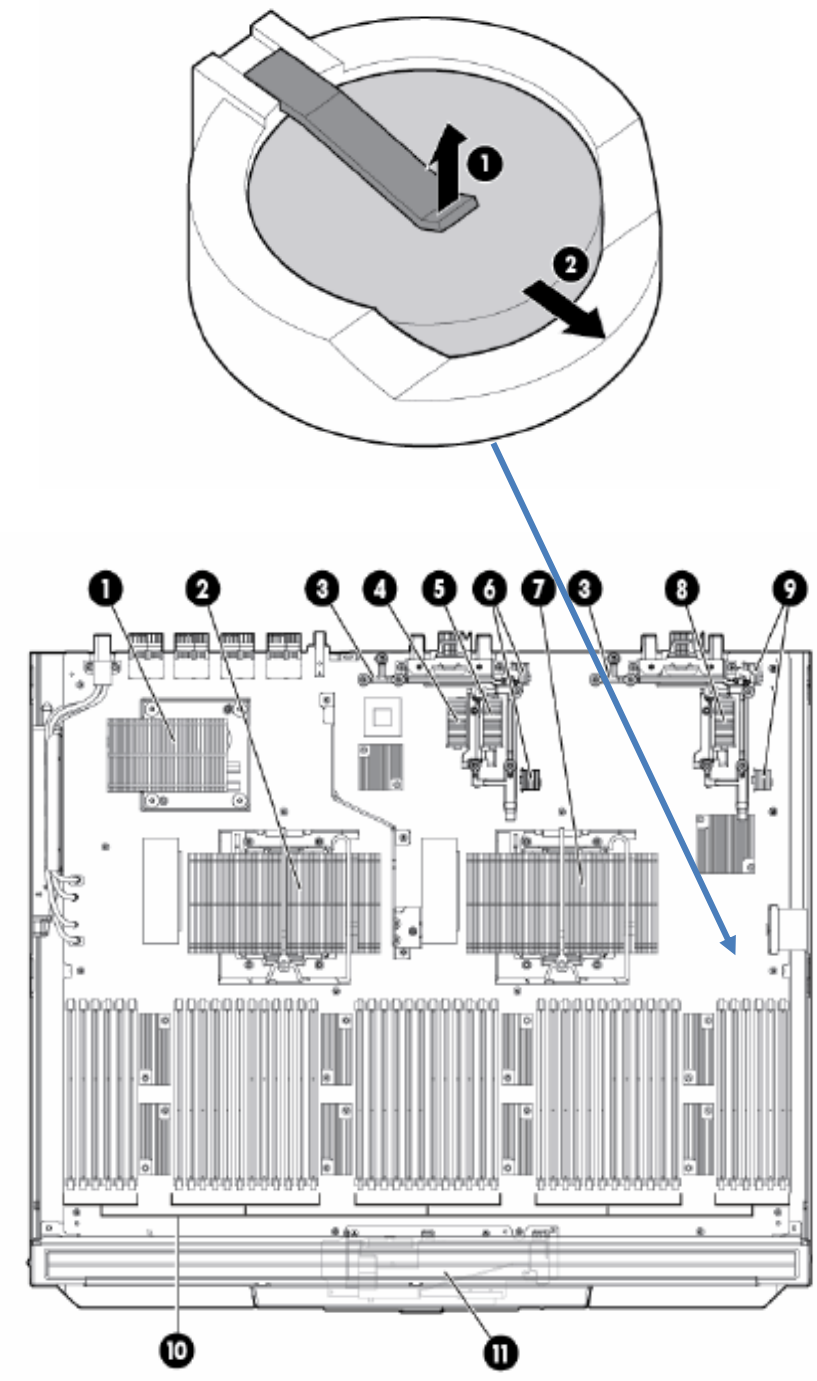


**FIGURE 8**



| Item | Description |
|---|---|
| 1 | sx3000 crossbar fabric ASIC (referred to as XNC by the Health Repository and in event logs) |
| 2 | CPU 1 |
| 3 | Mezzanine bracket |
| 4 | Mezzanine connector 1 Type A |
| 5 | Mezzanine connector 2 Type A/B |
| 6 | FlexLOM slot 2 |
| 7 | CPU 0 |
| 8 | Mezzanine connector 3 Type A/B |
| 9 | FlexLOM slot 1 |
| 10 | DDR3 DIMM slots (48) |
| 11 | SUV board |

**FIGURE 9**

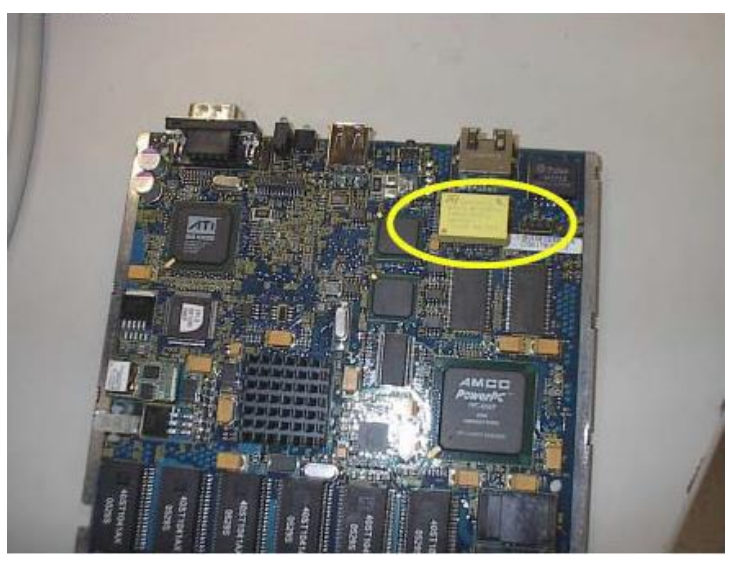



**FIGURE 10**

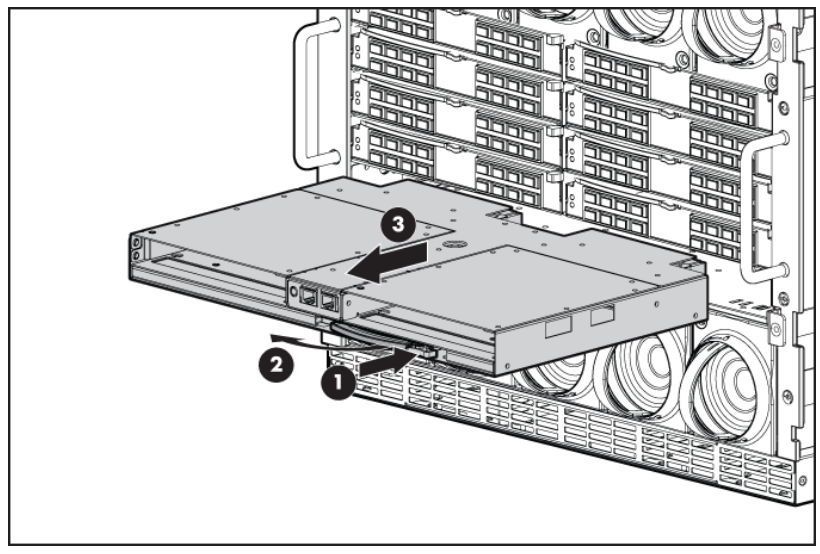
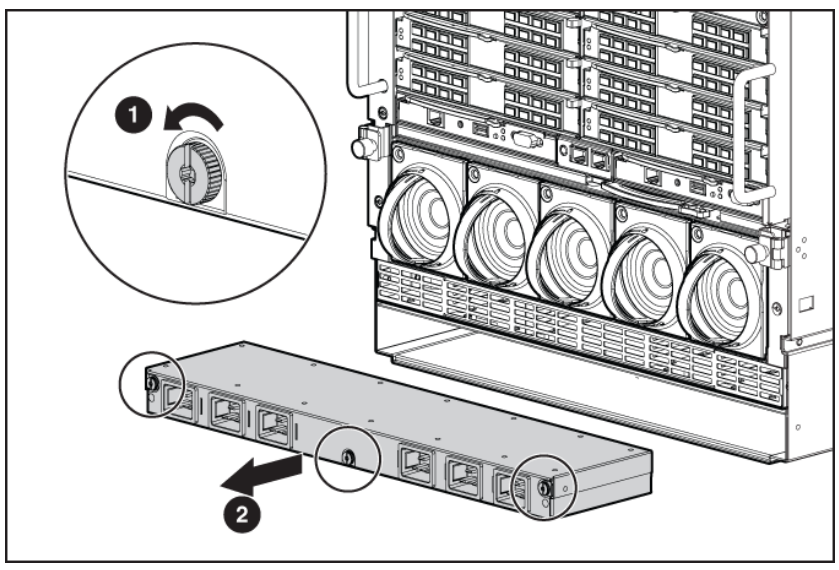



**FIGURE 11**




There are ac input modules at the top and bottom of the enclosure

**FIGURE 12**

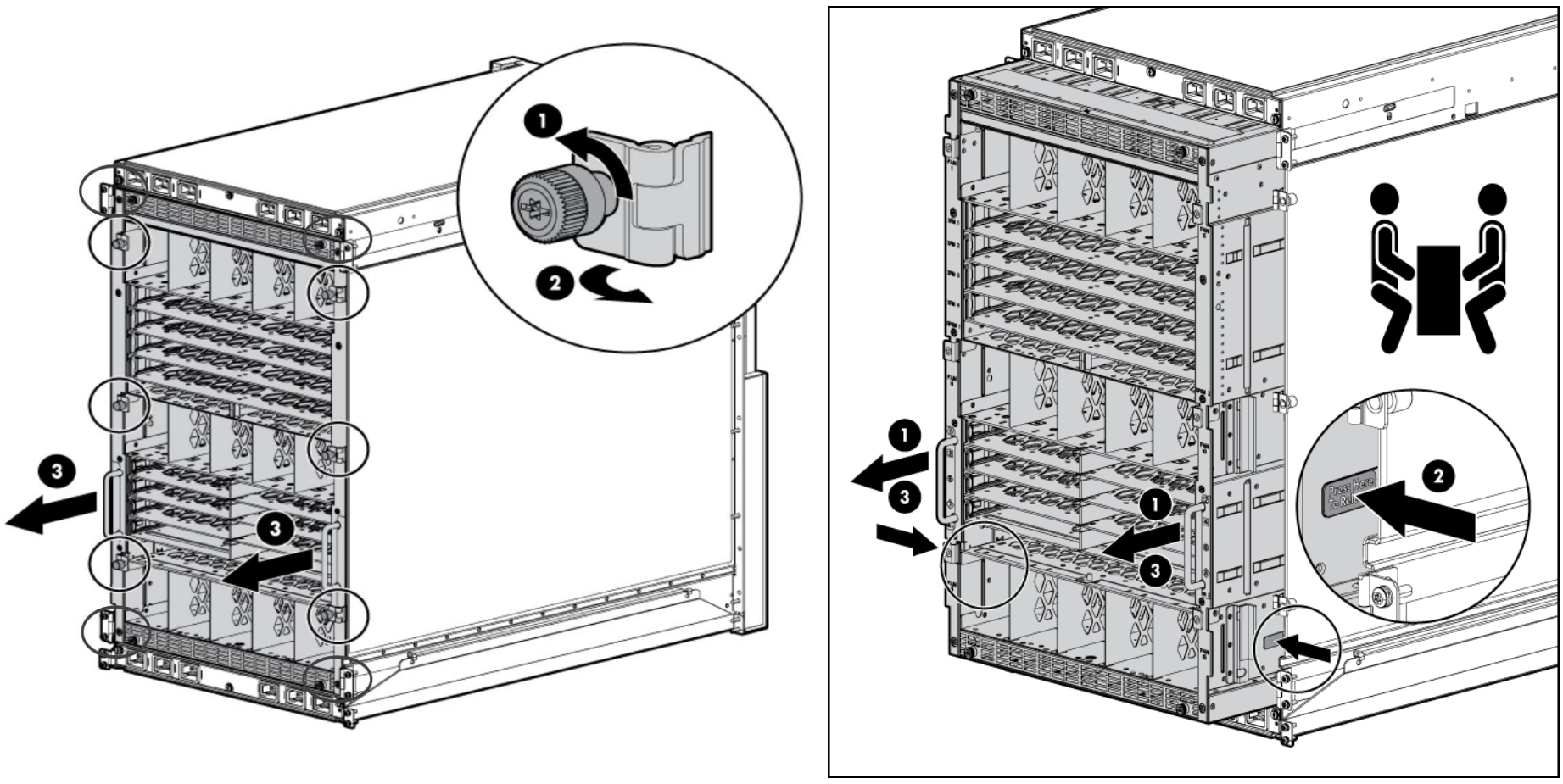



**FIGURE 13**

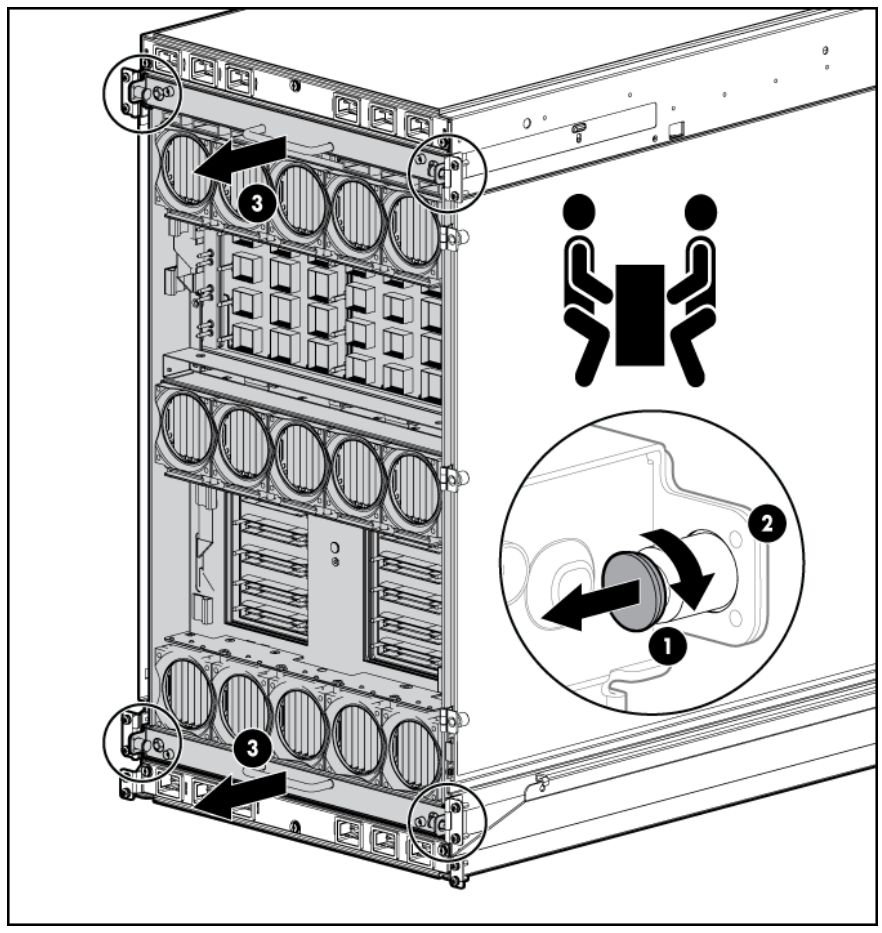



**FIGURE 14**

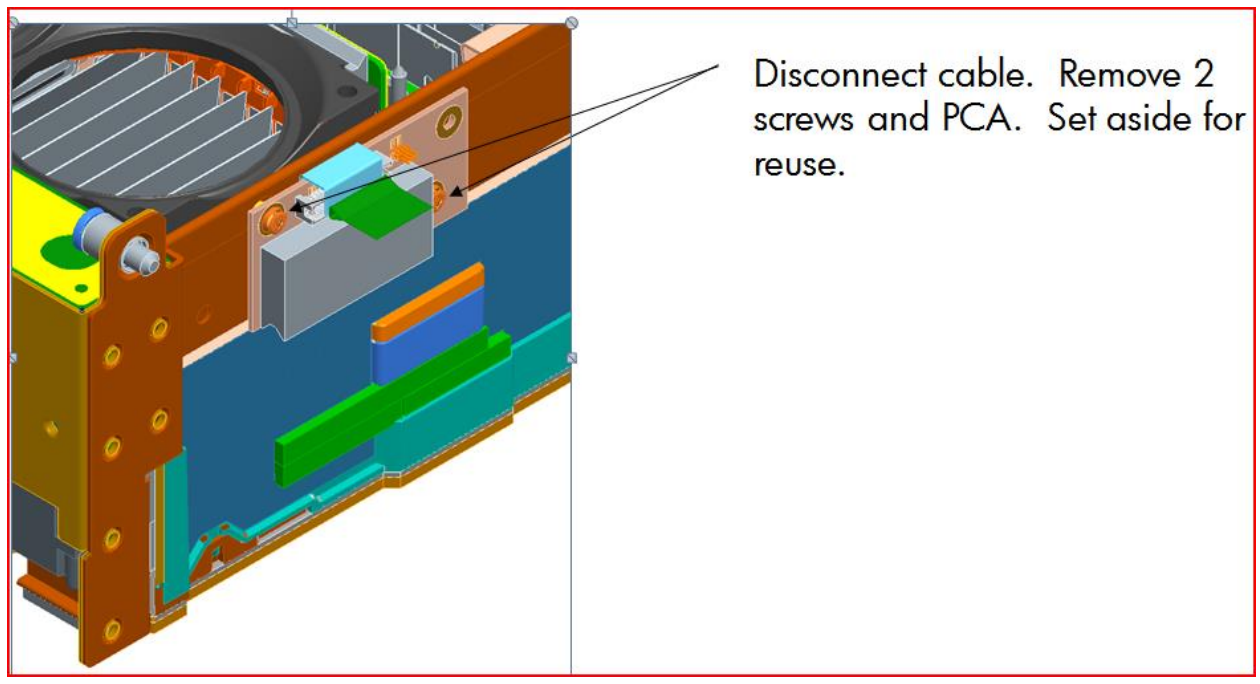



**FIGURE 15**

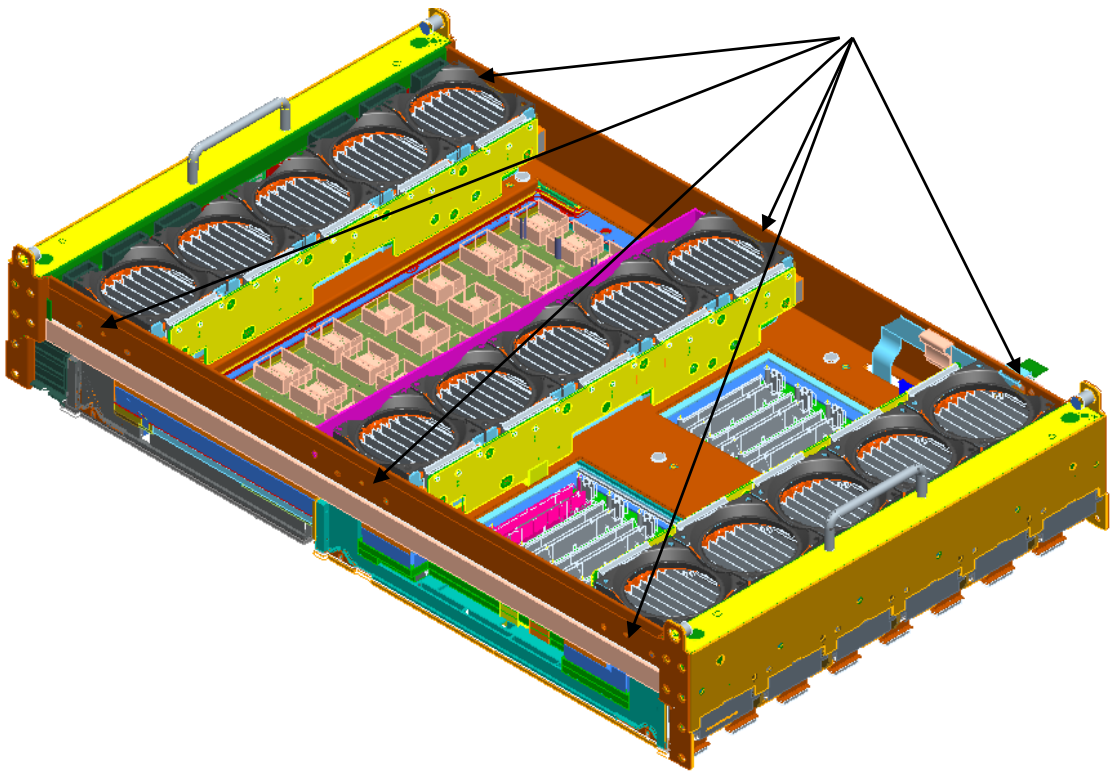


**FIGURE 16**

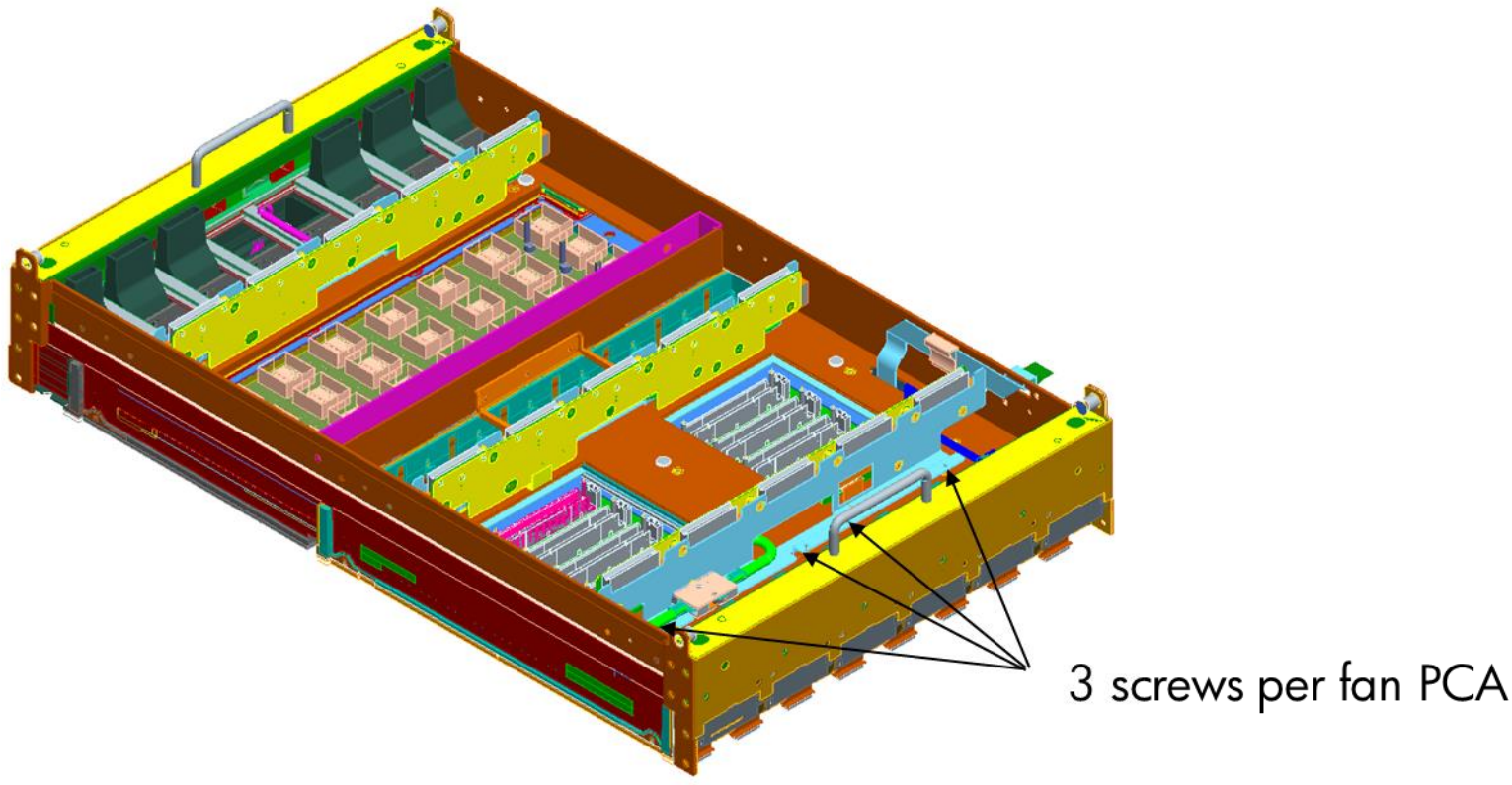



**FIGURE 17**

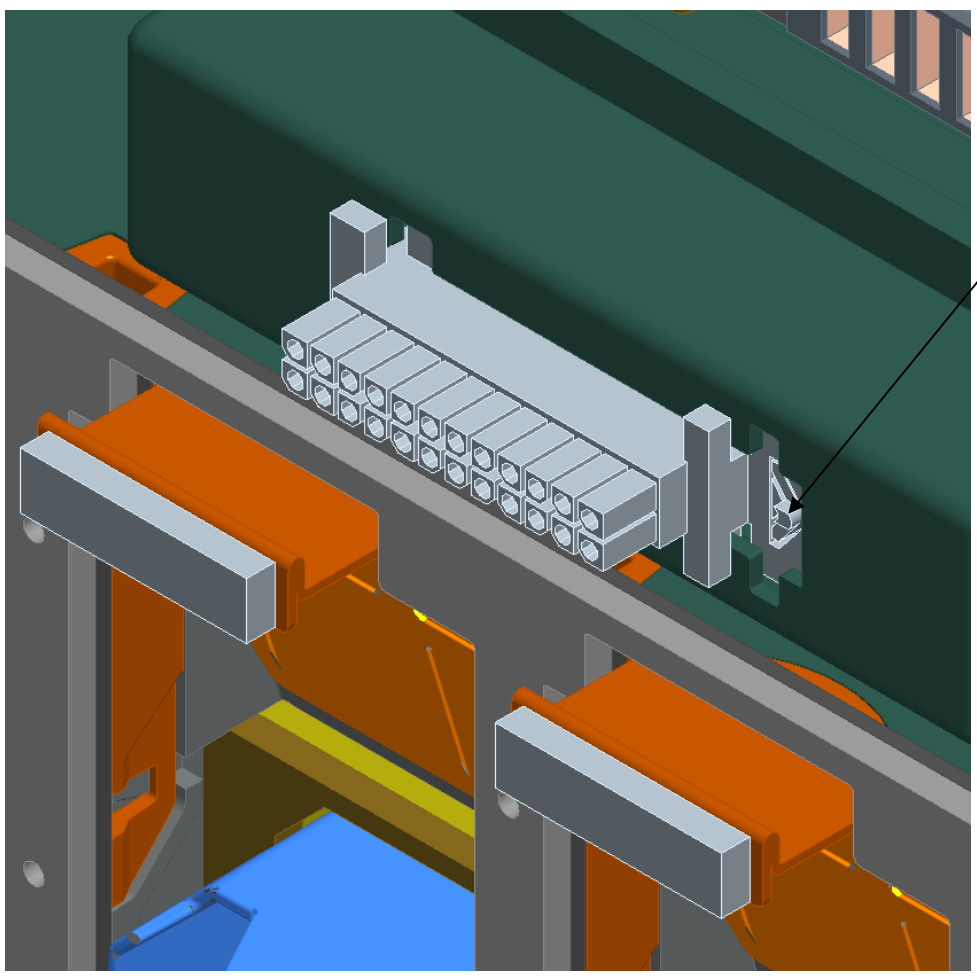
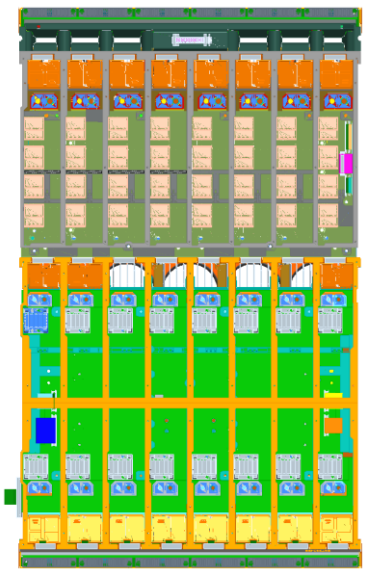
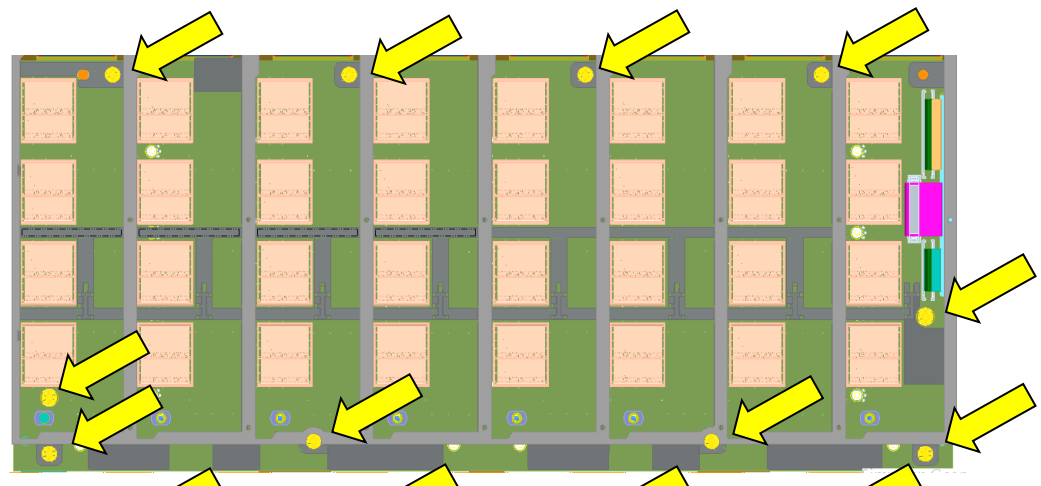
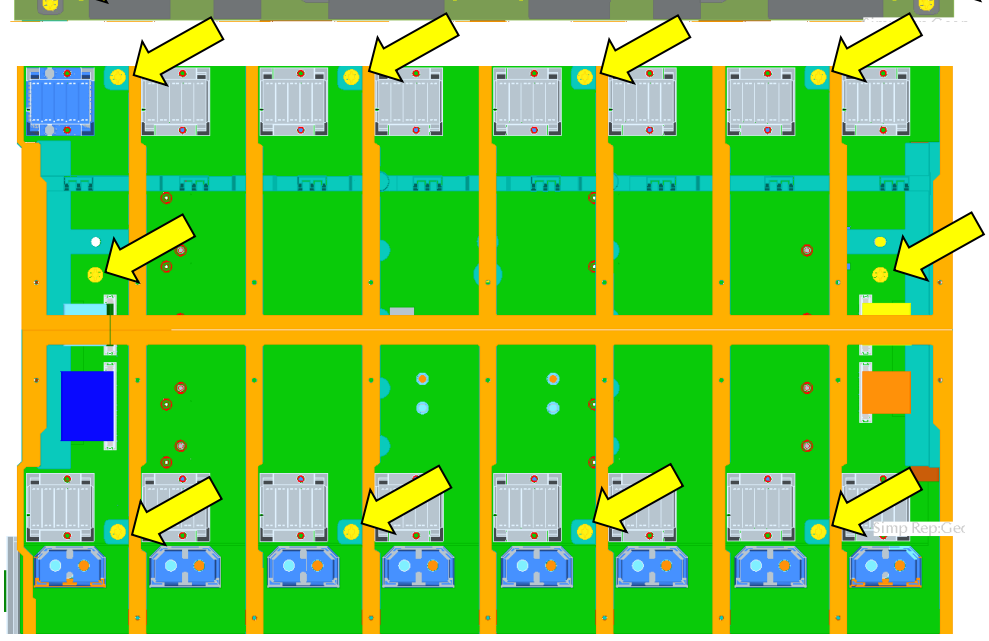



**FIGURE 18**



Upper
Midplane
Qty 10

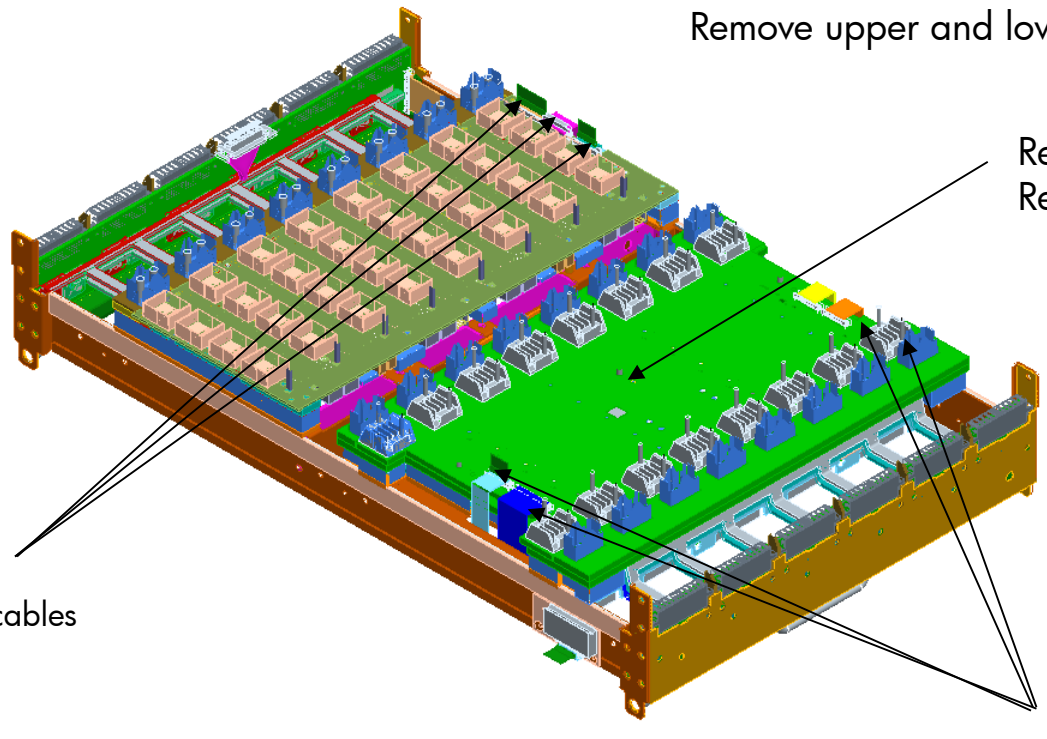




Lower
Midplane
Qty 10

Remove screws and set aside for reuse.

**FIGURE 19**

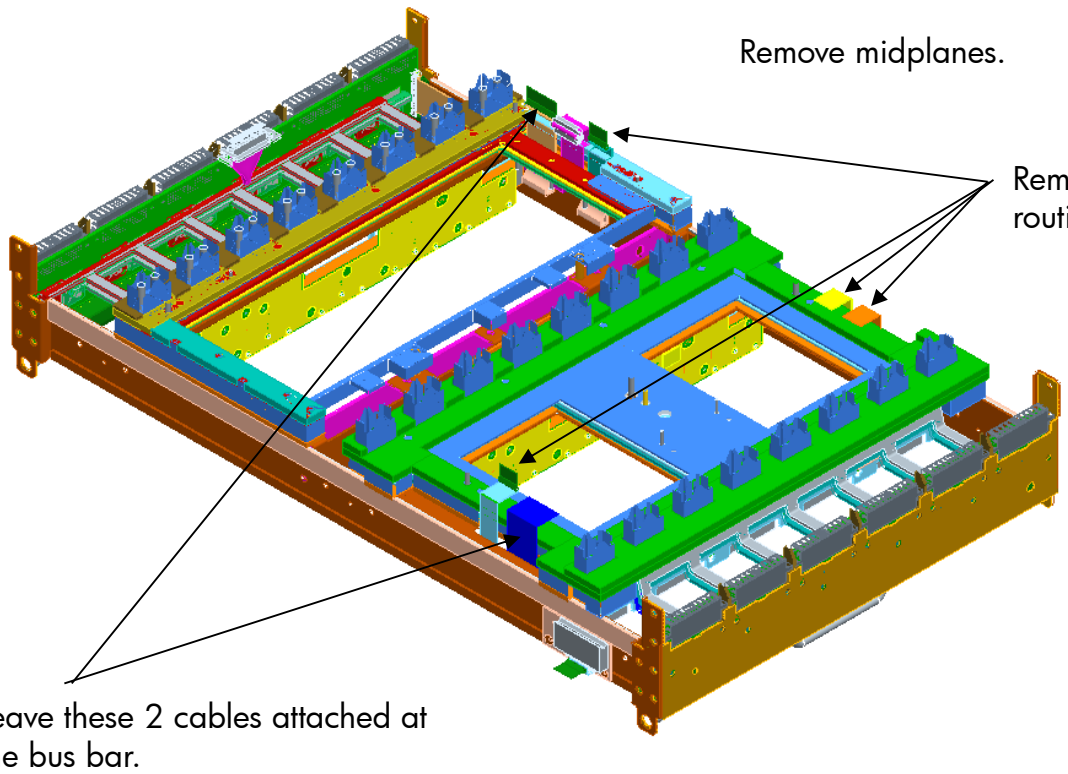


Remove upper and lower airframes.

Remove last midplane screw.
Remove midplanes

Unplug cables
(3 plc)

Unplug cables
(4 plc)



Remove midplanes.

Remove these four cables. Note the cable routing through the cable clips.

Leave these 2 cables attached at the bus bar.

**FIGURE 20**

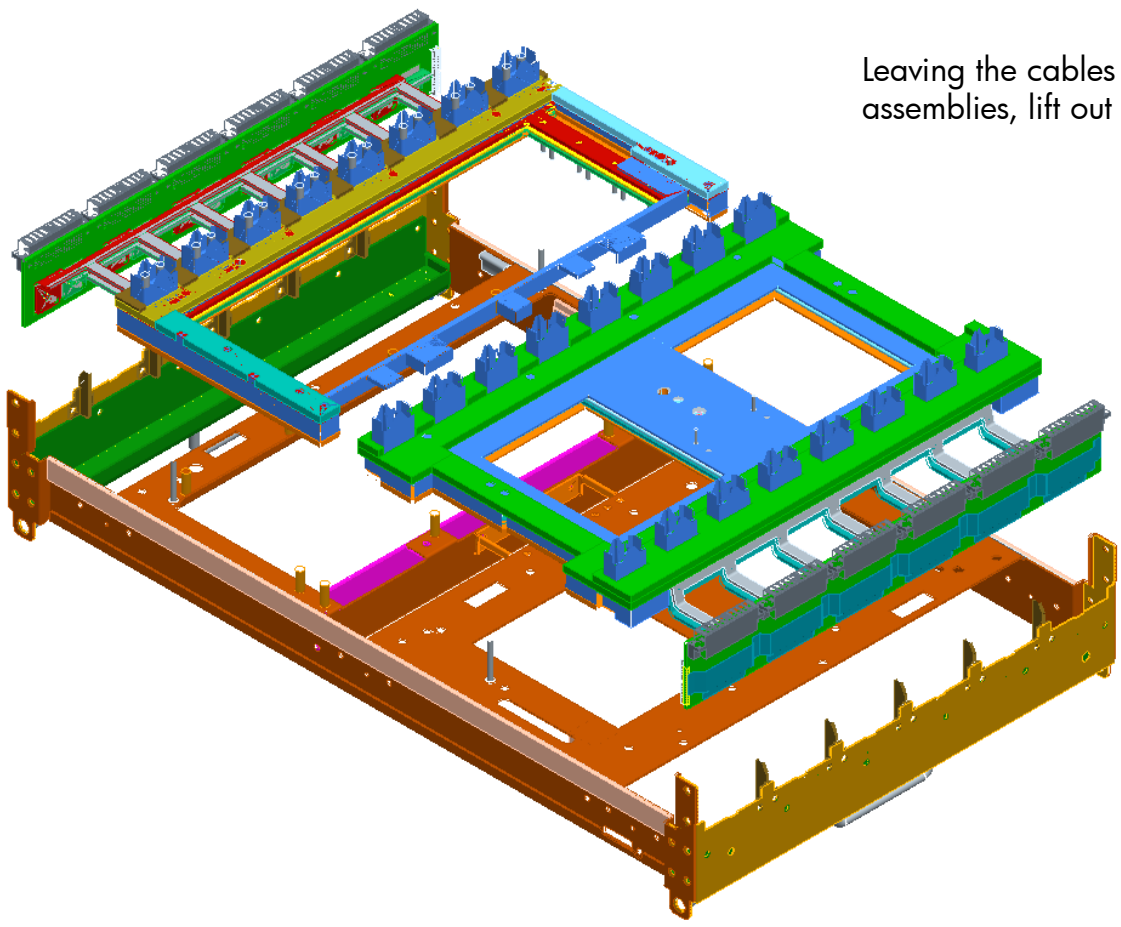



**FIGURE 21**

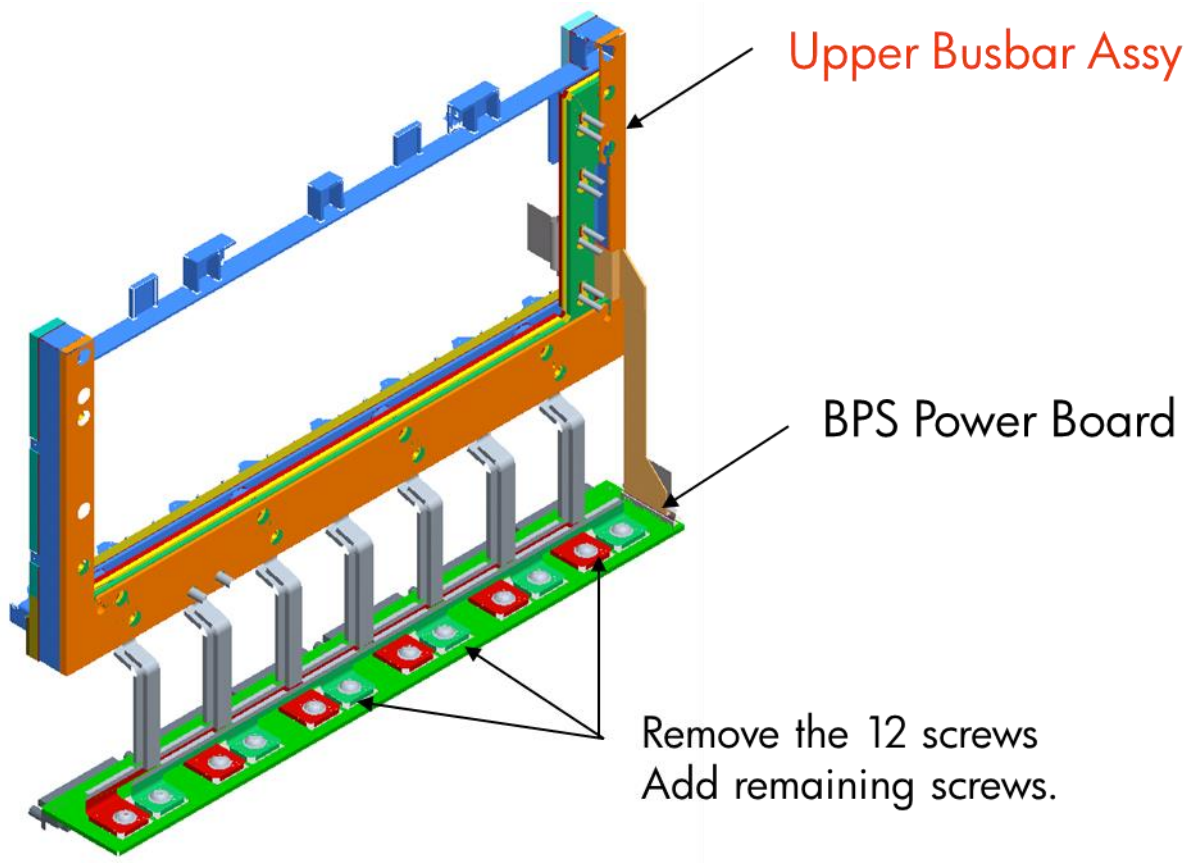
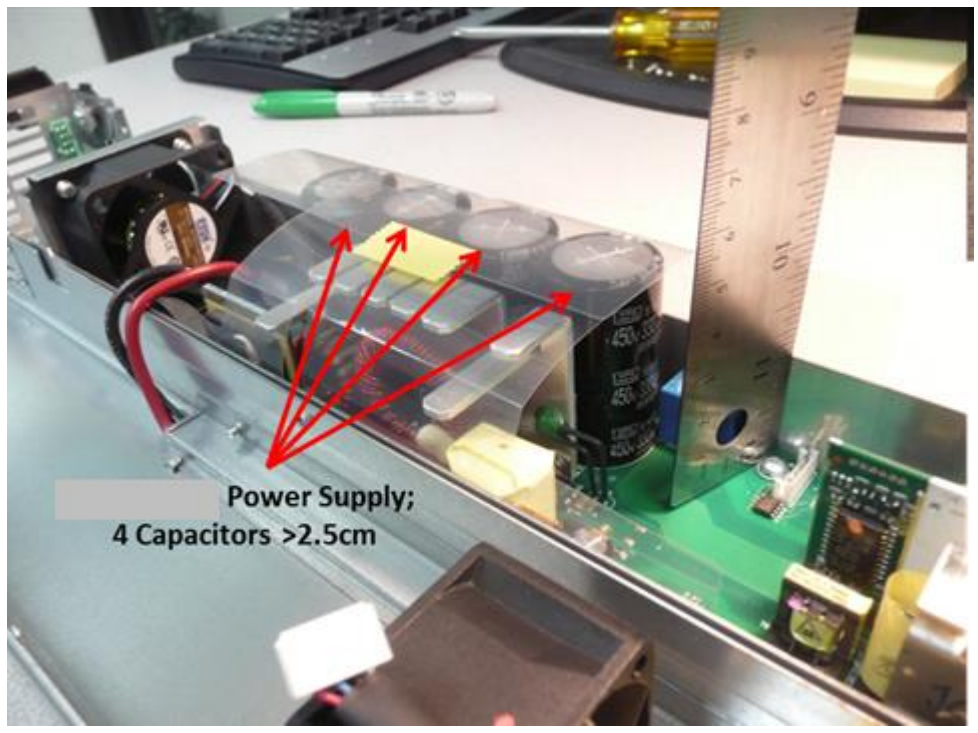
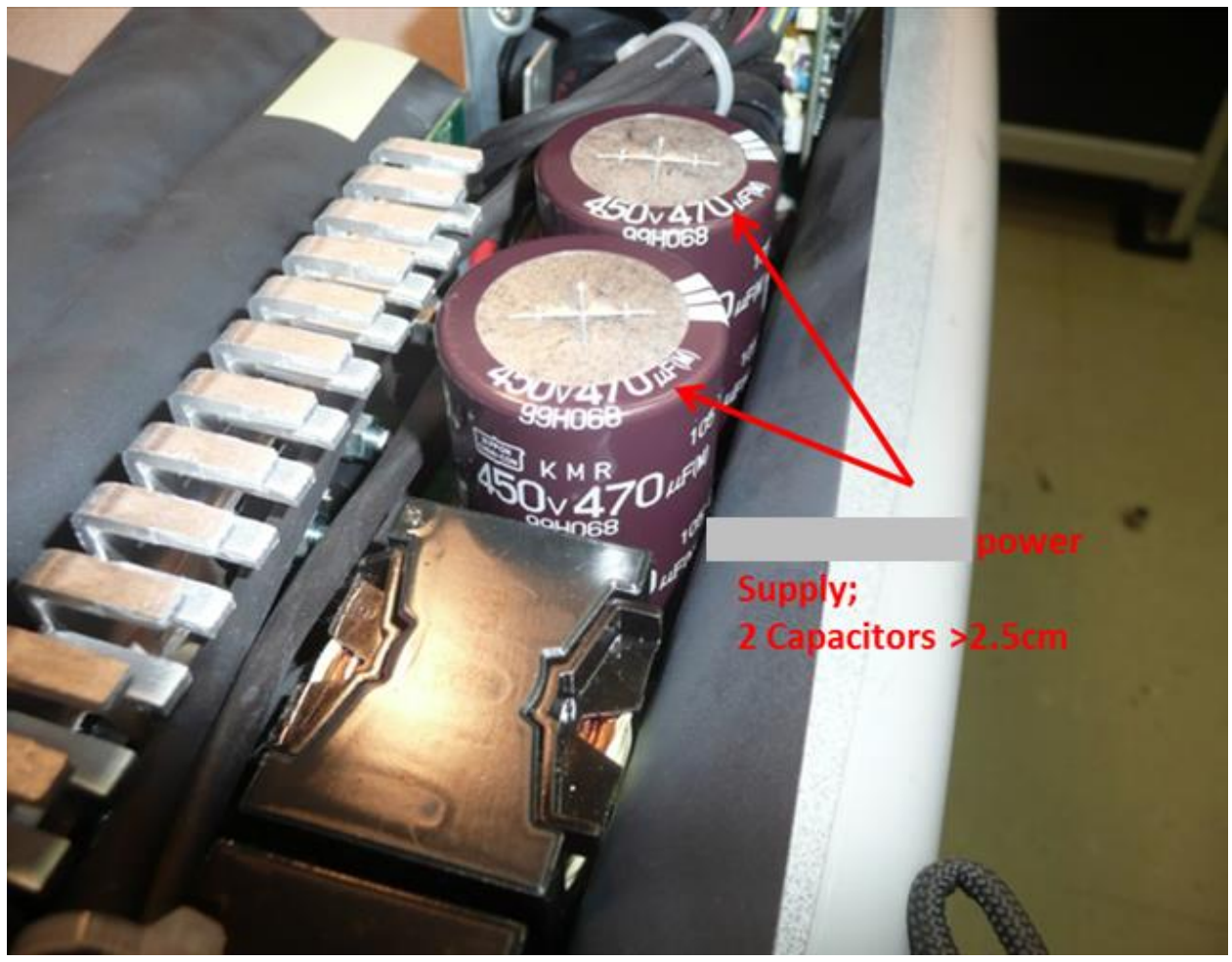



**FIGURE 22**


Power Supply;
4 Capacitors >2.5cm


450v470
99H068
KMR
450v470
power
Supply;
2 Capacitors >2.5cm

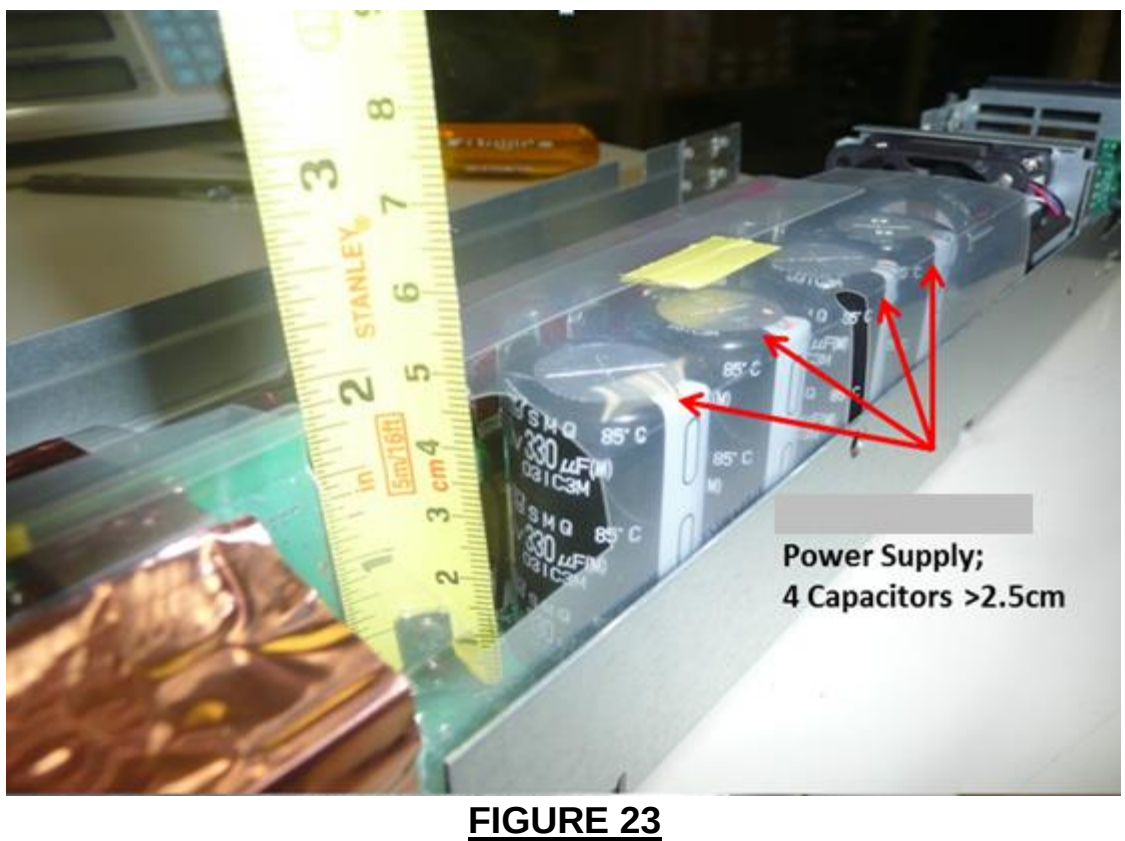

STANLEY
Power Supply;
4 Capacitors >2.5cm

**FIGURE 23**