Product End-of-Life Disassembly Instructions

Product Category: Data Storage System
Marketing Name / Model
SCS-4106

Purpose: The document is intended for use by end-of-life recyclers or treatment facilities. It provides the basic instructions for the disassembly of Seagate products to remove components and materials requiring selective treatment, as defined by EU directive 2012/96/EC, Waste Electrical and Electronic Equipment (WEEE).

1.0 Items Requiring Selective Treatment

Items listed below are classified as requiring selective treatment.

Item Description	Notes	Quantity of items included in product
Printed Circuit Boards (PCB) or Printed Circuit Assemblies (PCA)	With a surface greater than 10 sq cm. 1 in each of 2 I/O modules (IOMs) 1 in each of 2 power cooling modules 1 in 24-HDD baseplane in each of 4 PCBAs 1 in 10-HDD baseplane 1 in each of 4 expander riser cards 1 in each of 8 expanders 1 in each of 2 passthrough cards 1 in EBOD PCBA 1 in midplane PCBA	25 max
Batteries		0
Mercury-containing components	For example, mercury in lamps, display backlights, scanner lamps, switches, batteries	0
Liquid Crystal Displays (LCD) with a surface greater than 100 sq cm	Includes background illuminated displays with gas discharge lamps	0
Cathode Ray Tubes (CRT)		0
Capacitors / condensers (Containing PCB/PCT)		0
Electrolytic Capacitors / Condensers measuring greater than 2.5 cm in diameter or height	1 capacitor in each of 2 power supplies.	2
External electrical cables and cords	1 power cord for each of 2 power supplies. 4 SAS expansion cables for each of 2 IOMs. 1 RJ45 cable for each of 2 IOMs.	12 max
Gas Discharge Lamps		0
Plastics containing Brominated Flame Retardants weighing > 25 grams (not including PCBs or PCAs already listed as a separate item above)		0
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.	0
Components and waste containing asbestos		0

Item Description	Notes	Quantity of items included in product
Components, parts and materials containing refractory ceramic fibers		0
Components, parts and materials containing radioactive substances		0

2.0 Tools Required

This section lists the type and size of tools typically used to disassemble the product to a point where components and materials requiring selective treatment can be removed.

Tool Description	Tool Size (if applicable)
Phillips driver	#0, #1, #2
Torx driver	T10, T15
Pliers	Small
Drill	Standard

3.0 Product Disassembly Process

1. Remove the top drive bay cover.
2. Remove the bezel and hubcaps from the front of the enclosure.
3. Remove all disk drives.
4. For each disk drive, remove the disk from the plastic carrier.
5. Remove both power cooling modules (PCMs).
6. Remove both IOMs.
7. Remove each rear fan module.
8. Remove both controller fans.
9. Disassemble each PCM. See the PCM disassembly procedure.
10. Disassemble each IOM. See the IOM disassembly procedure.
11. Disassemble each rear fan. See the rear fan disassembly procedure.
12. Disassemble each controller fan. See the controller fan disassembly procedure.
13. Disassemble the chassis. See the chassis disassembly procedure.

PCM disassembly procedure – 2000W PSU

Artesyn PSU – RMN: 700-014575-XXXX
(where XXXX- can be any alphanumeric combination which does not affect safety)

1. Remove the eight casing screws using a Philips #1 bit screwdriver and slide the casing in the direction shown by the red arrow.

2. Remove the three screws and the LED connector from the marked locations, and then remove the PCA from the enclosure.

Bel Power PSU – RMN: SPASGAT-02

1. Remove the three casing screws shown by the red circles in the images below. Free the crimps marked by the yellow boxes using a protruding tool and then pull up the top cover.

2. Remove the LED connector from the connector marked in the image.

IOM disassembly procedure – RMN: ELD

1. Remove the casing screws using a Philips #1 bit and pull the top cover in the direction shown by the red arrows.
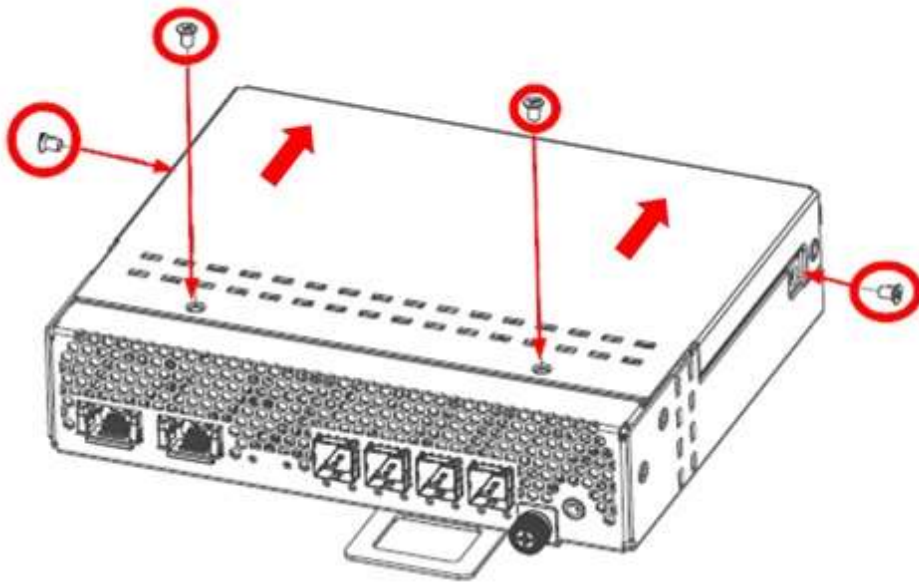
2. Use a Philips #1 bit to remove the four screws connecting the PCBA to the metal enclosure.

3. Slide the PCBA away from the PSU in the direction shown by the red arrows.
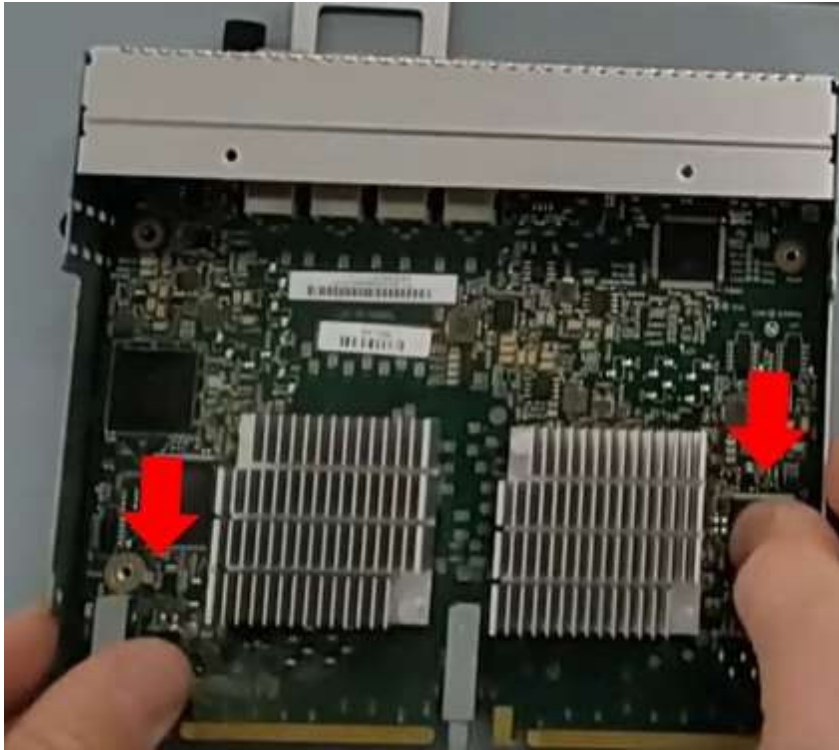
4. Remove the heatsink by removing its pushpin. To remove a pushpin, compress it from the top and use pliers to pull out the other end.

Compress push pin

Squeeze end with pliers
and pull up on pushpin
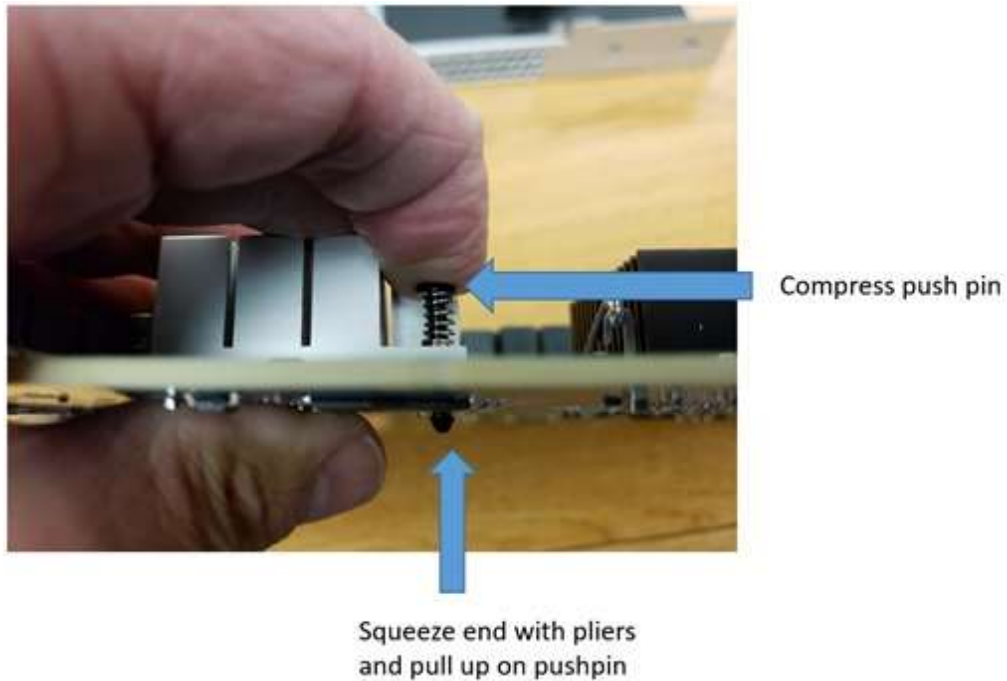
5. Remove the EMI Gasket from the metal base.

SCALE 1.200
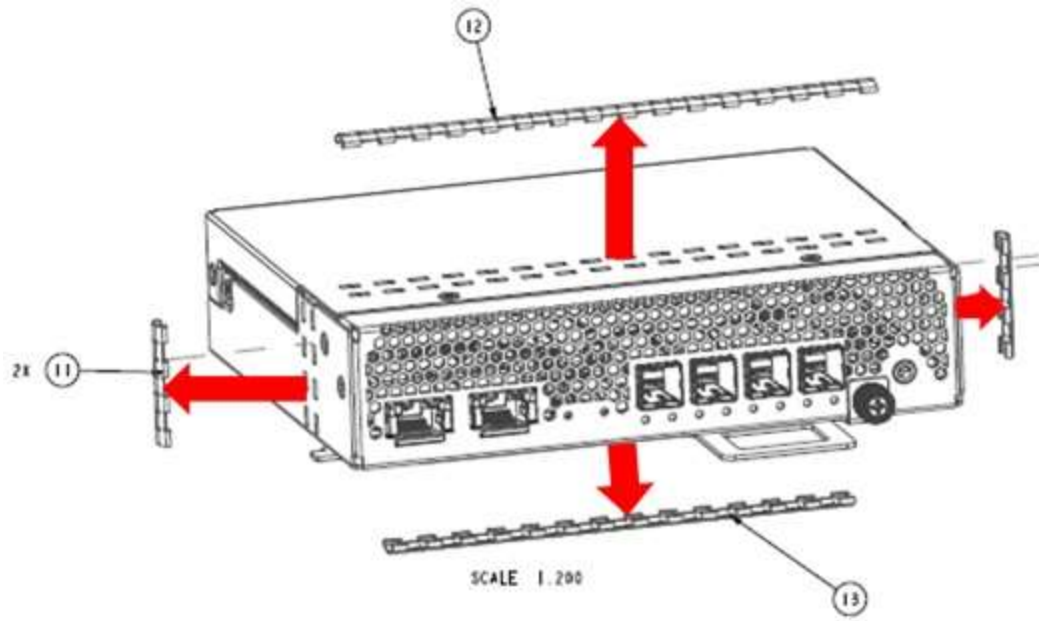
Rear fan disassembly procedure

1. Remove the connector from the frame by pushing the connector as shown by the arrows in the image below.

2. Remove the six screws as shown in the image below using a Phillips #1 bit. Then pull out the metal frame as shown by the arrow.
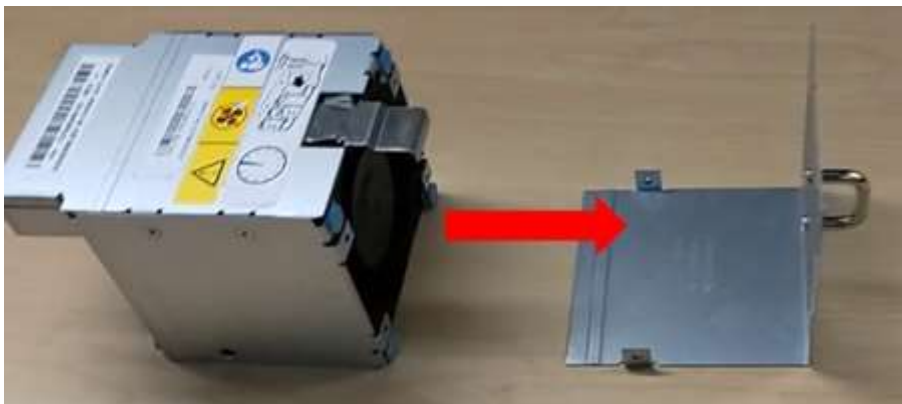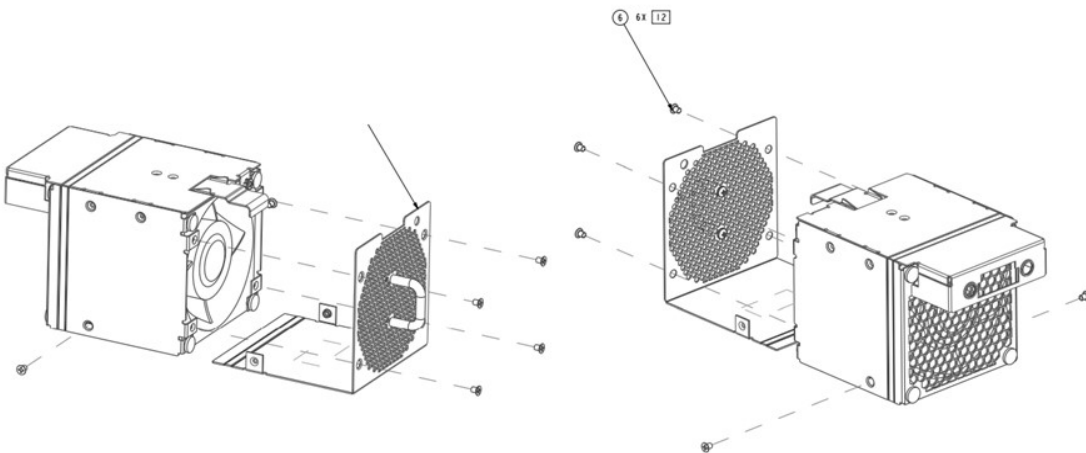
3. Remove the four screws as shown in the image below using a Phillips #1 bit. Then remove the fan latch lid as shown by the red arrow.
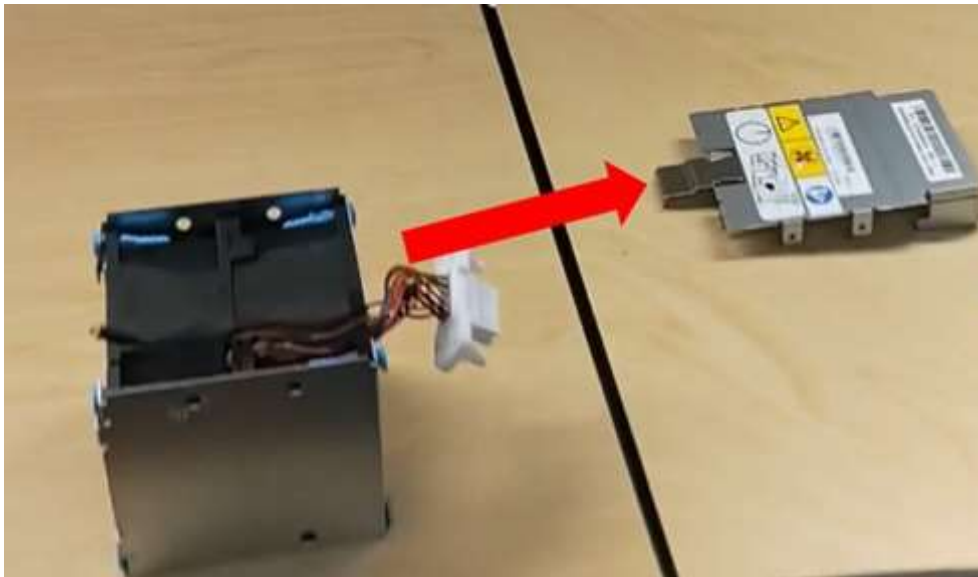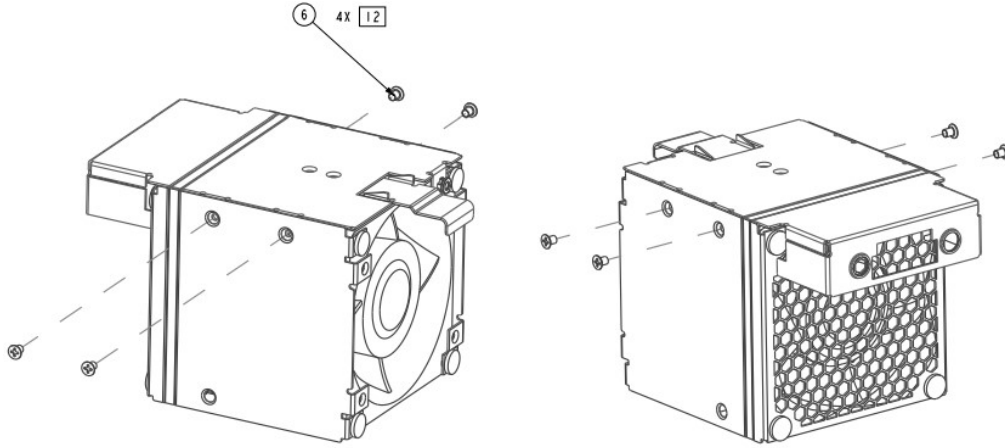
4. Remove the eight rubber isolators shown in the image below. Then gently remove the fan module from the metal housing as shown by the red arrow.
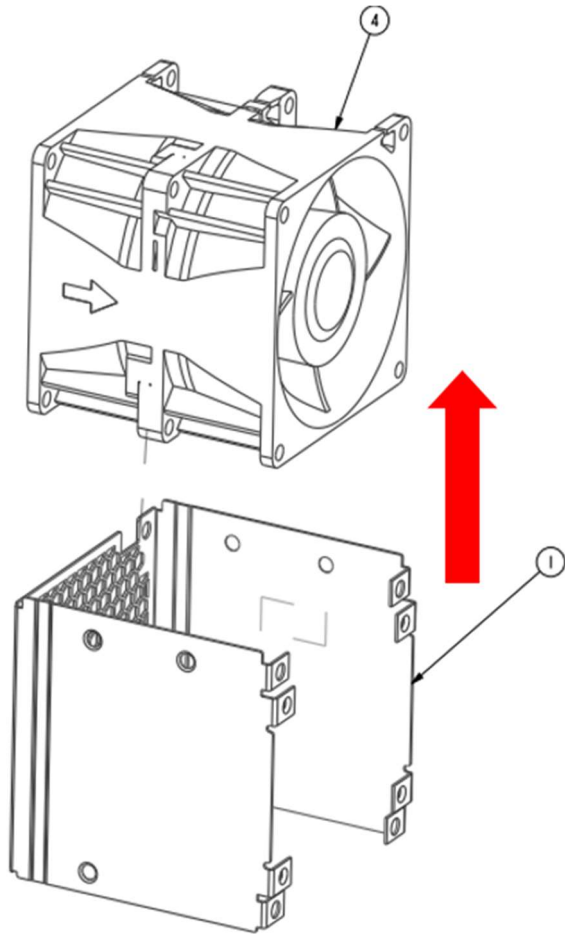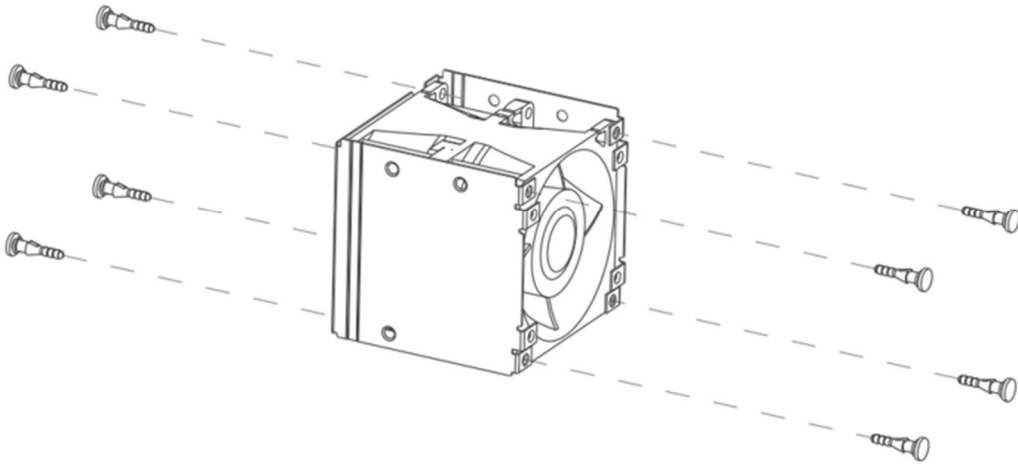
5. Remove the fan handle by removing the two screws attached to the sheet metal using a Phillips #2 bit.
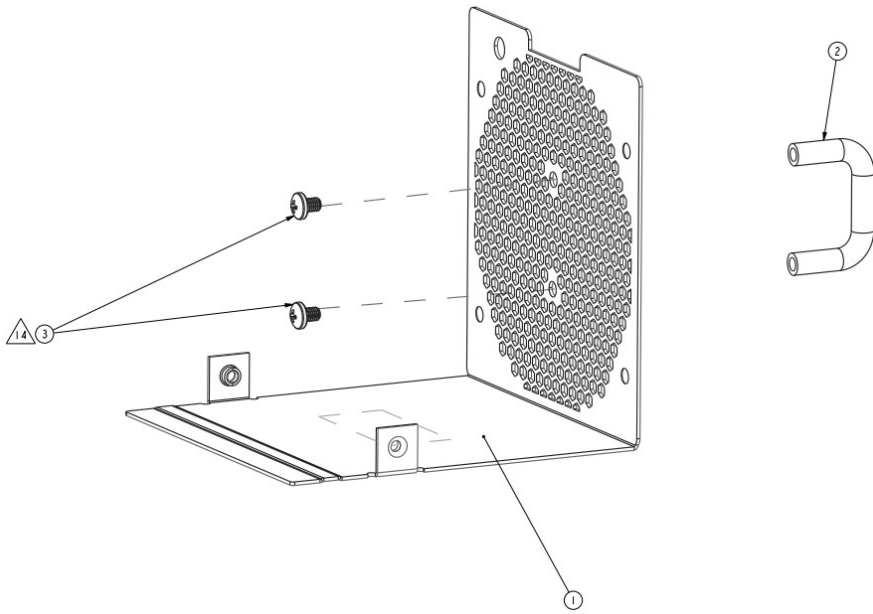
Controller fan disassembly procedure

1. Remove the connector from the fan's sheet metal by sliding the connector in the direction shown by the red arrow, and then by pushing it inside in the direction shown by the green arrow.

2. Remove the two screws located at the positions marked by the red circles in the image below.

3. Remove the eight screws between the outlet sheet metal and the fan unit using a Phillips #2 bit (screws not shown).

4. Separate the fan from the metal sheets.

5. Remove the fan handle by using a Phillips #2 bit to remove the two screws marked below.
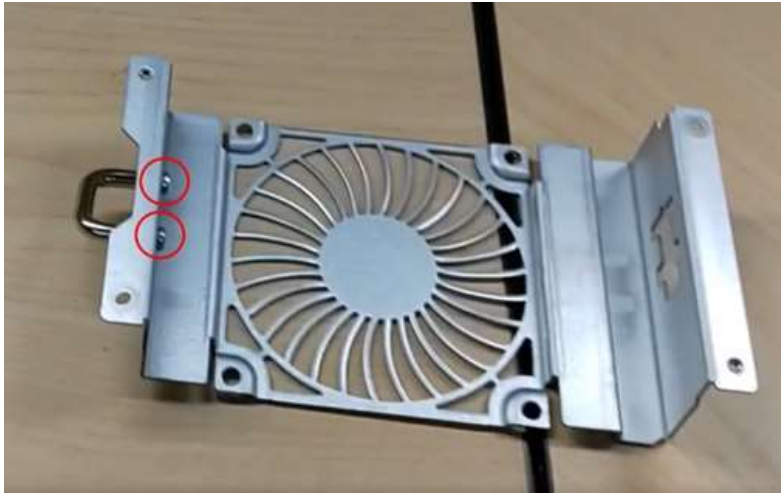
Chassis disassembly procedure

1. Remove the top cover and then remove all the disk drives and controller fans from the chassis.

2. Remove the PSUs, rear fans, and controllers from the chassis using the latches marked in the image below.
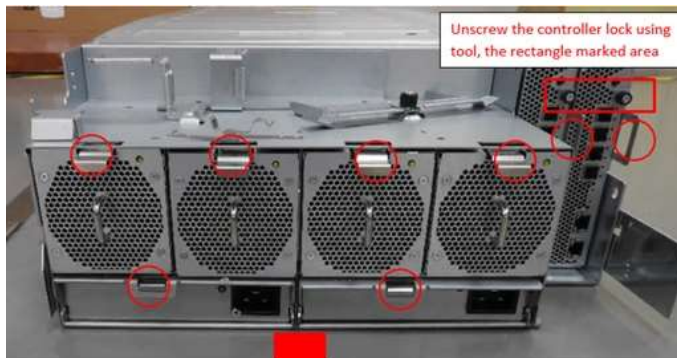
3. Remove all eight expander cards marked by the red circles. Pull the plastic handles the direction as shown by the red arrows in the second image.
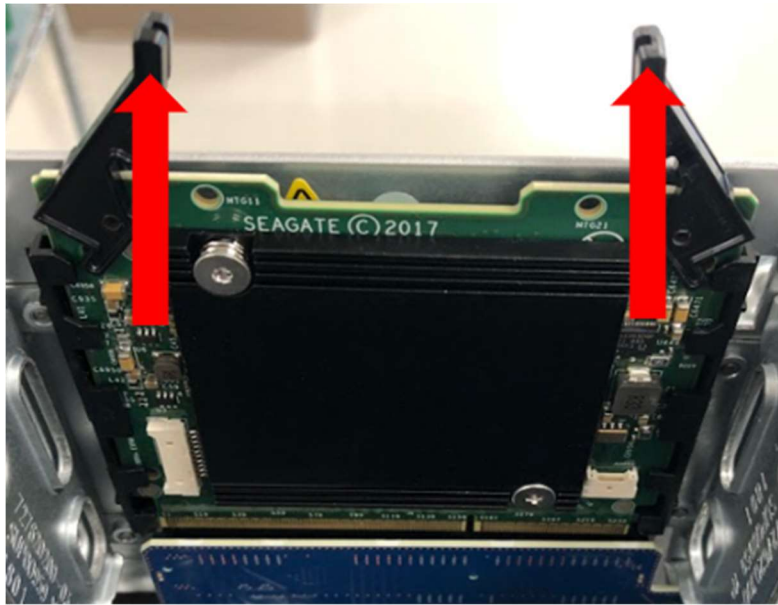
4. To remove the cable guide by hand or by using a tool, slide the metal plate in the direction shown by the red arrow.
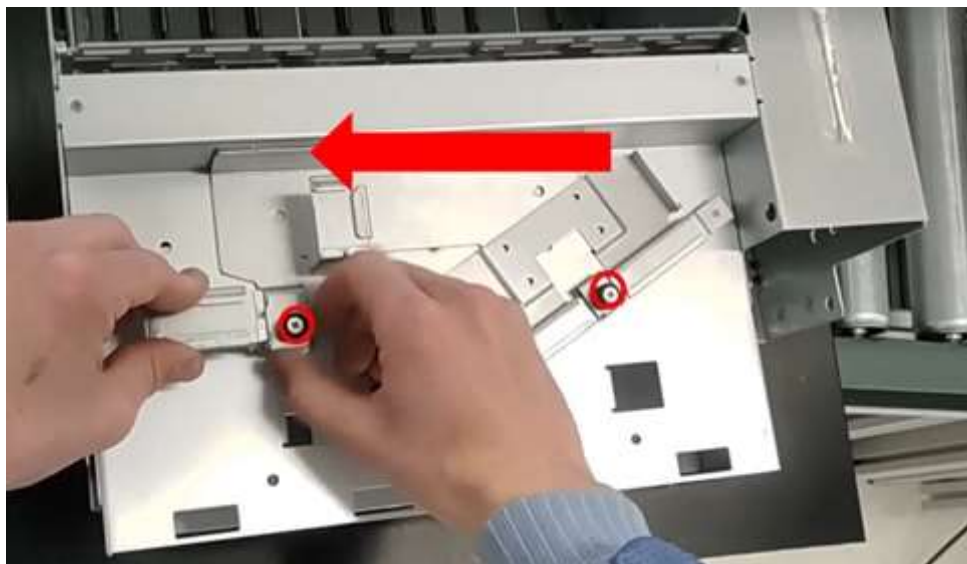
5. Remove the screws connecting the CML shelf using Philips #1 bit as shown by the red circles.
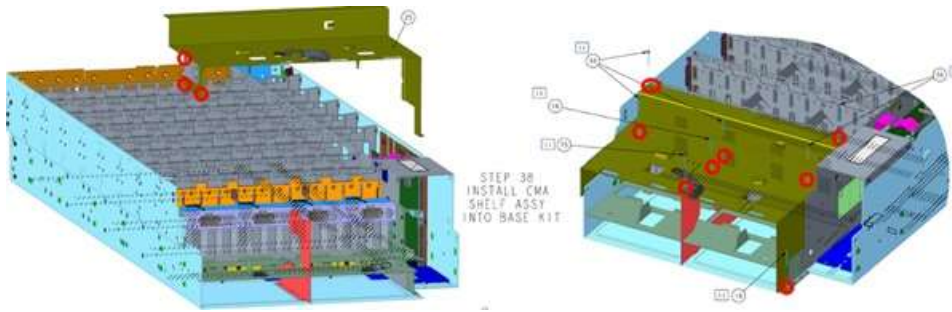
6. Remove each fan connection cable from the chassis by pushing the connector in the direction shown by the green arrow and then removing the connector from the power midplane marked by the red circle.
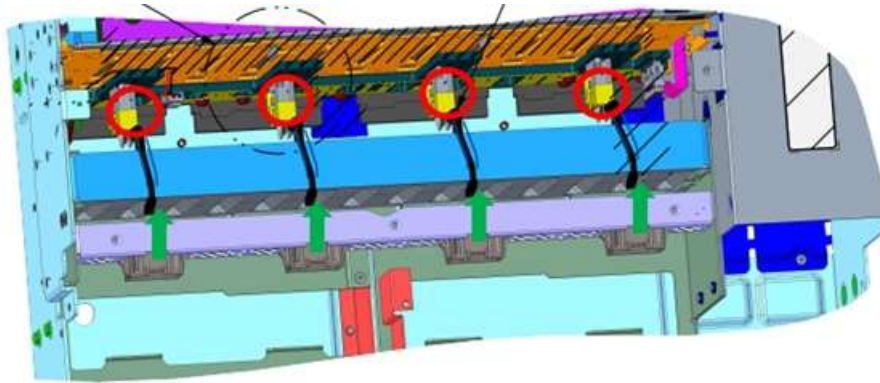
7. Remove the baffle between the power midplane and rear end as shown by the red arrows.
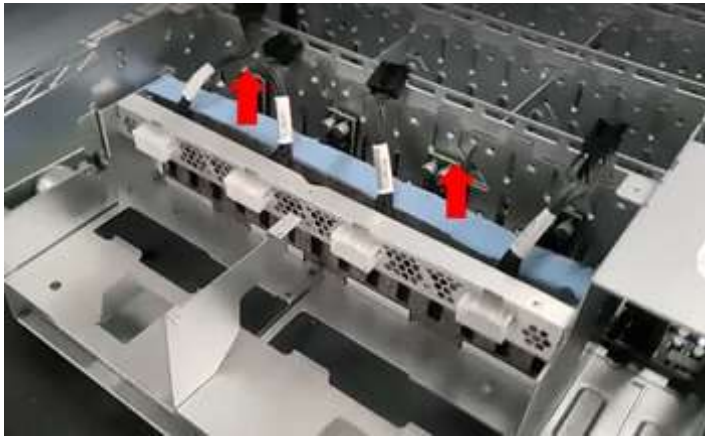
8. Remove the ribbon cable connecting the midplane to the IOM passthrough card.
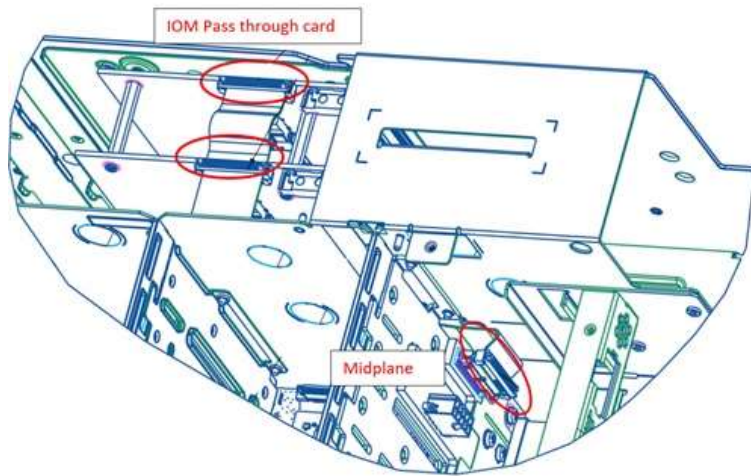
9. Use a Philips #1 bit to remove the six screws marked in the image below to remove the PSU divider assembly from the base chassis.

Left side

Right side
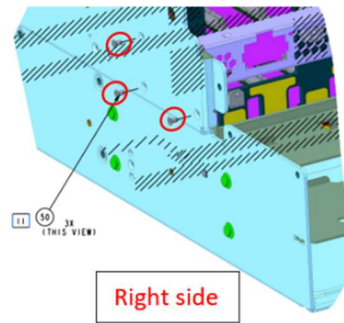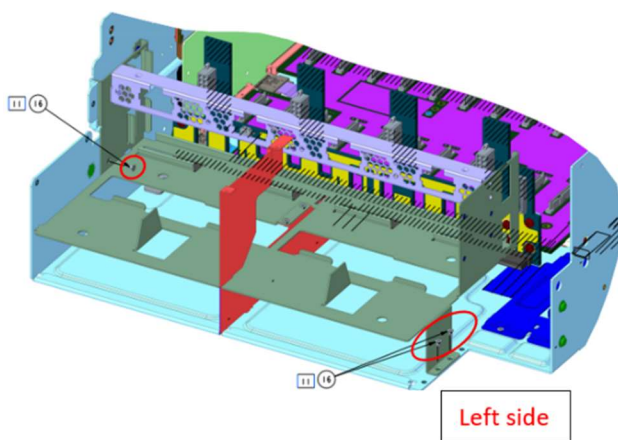
10. Use a Philips #1 bit to remove the three screws marked in the image below from the bottom of the chassis to remove the PSU divider.


Bottom side
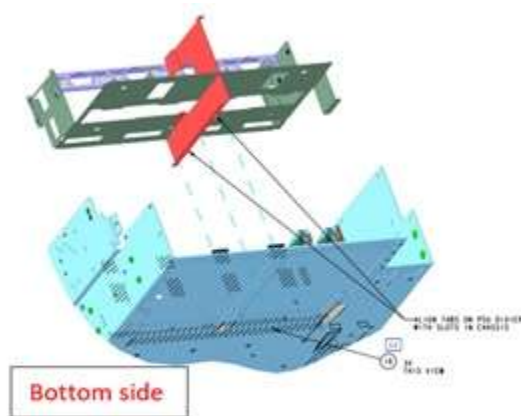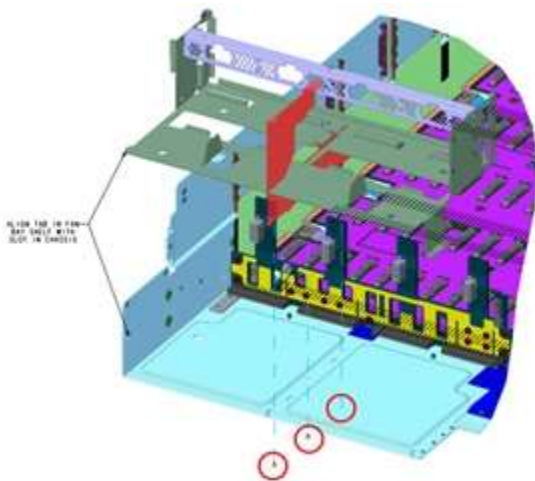
11. Use a Philips #1 bit to remove the two screws from the top side of the divider assembly to remove the divider.

ALIGN TAB ON PSU DIVIDER
WITH SLOT IN FAN BAY SHELF
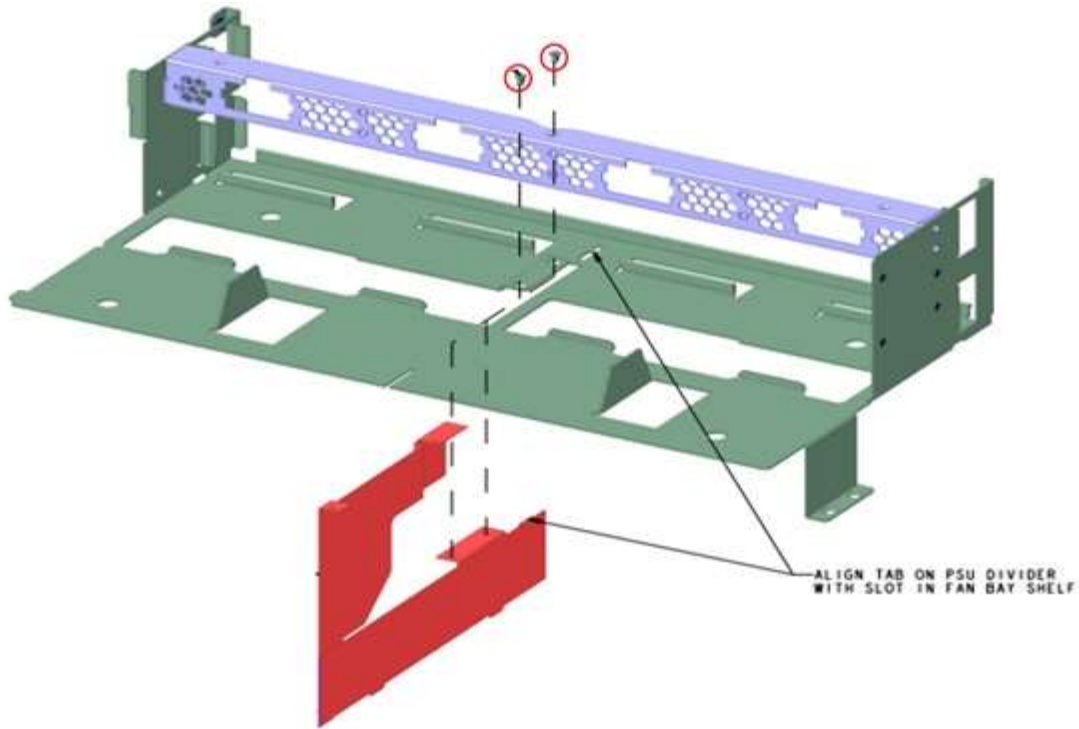
12. Use a Phillips #2 bit to remove the 32 screws from the right side and 20 screws from left side of the base chassis to remove the drive bay wall.


Right side

Left side
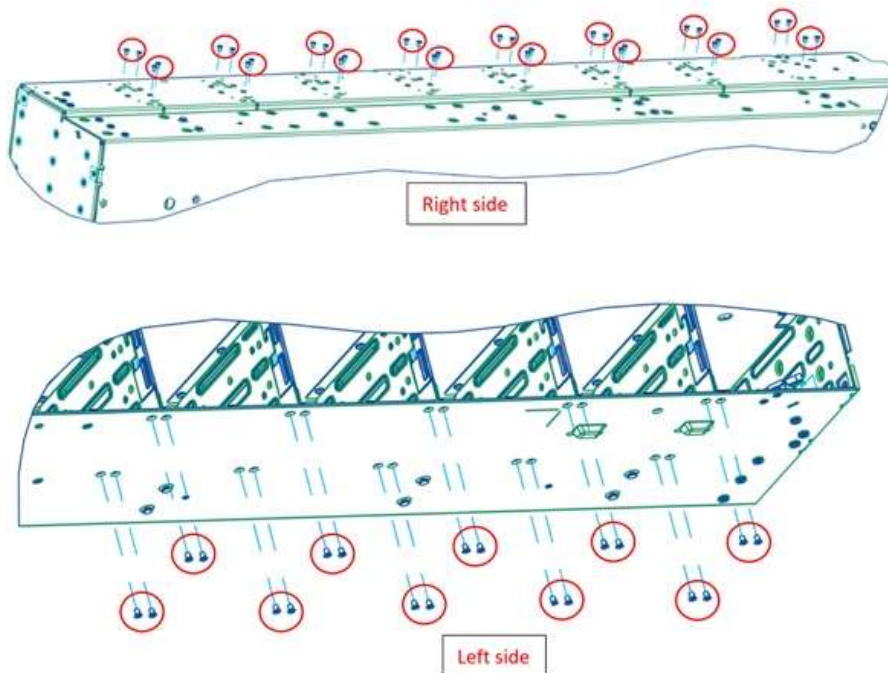
13. Use a Phillips #2 bit to remove the seven screws from the left edge side of the base chassis to remove the drive bay wall from the base chassis.
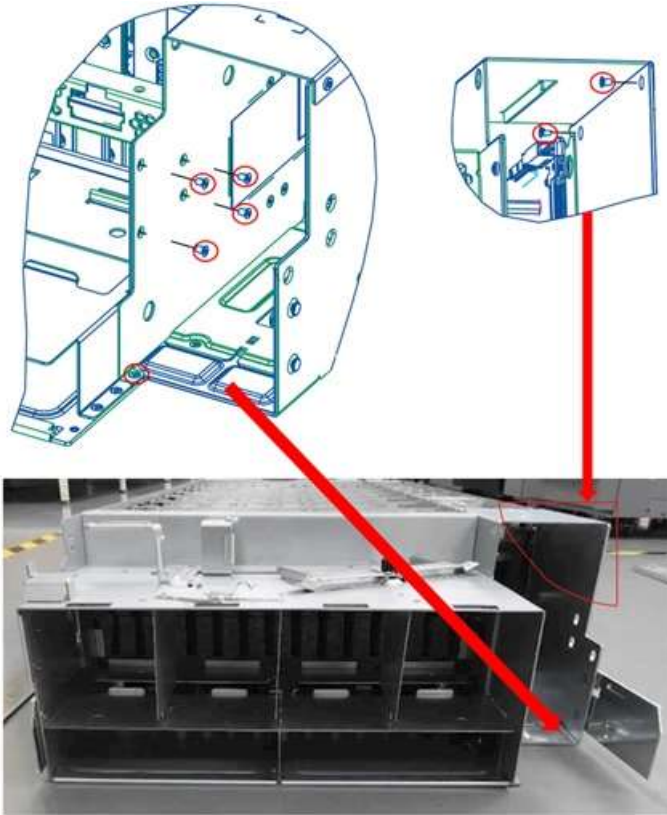
14. Use a Phillips #2 bit to remove the two screws connecting the drive bay to the front base chassis to remove the drive bay wall from the base chassis.
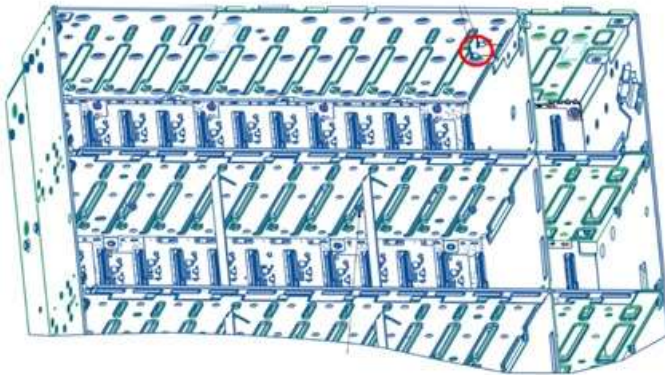
15. Use a Phillips #2 bit to remove the 34 screws from the drive bay connecting the drive bay PCBA marked in the image below to remove the drive bay wall from the base chassis. The below image is marked for the first-row screw location. Repeat this step for each row.
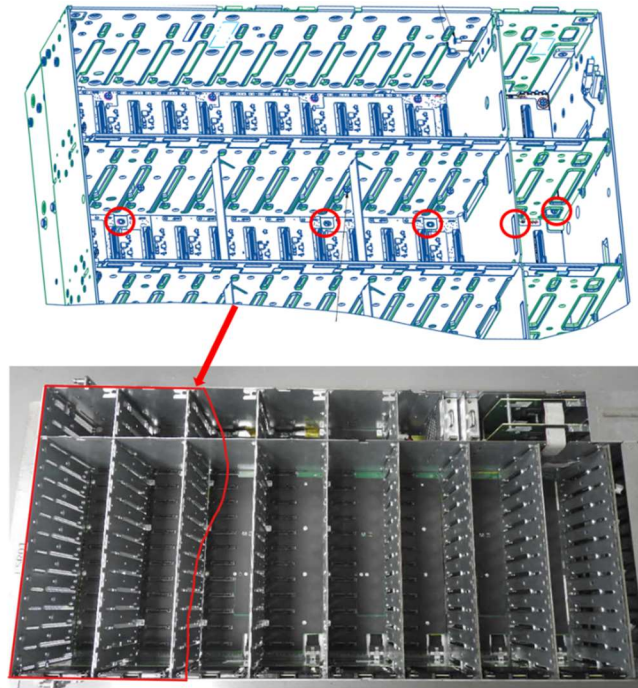

16. Remove the drive bay wall assembly from the base chassis by pulling it upward as shown below.
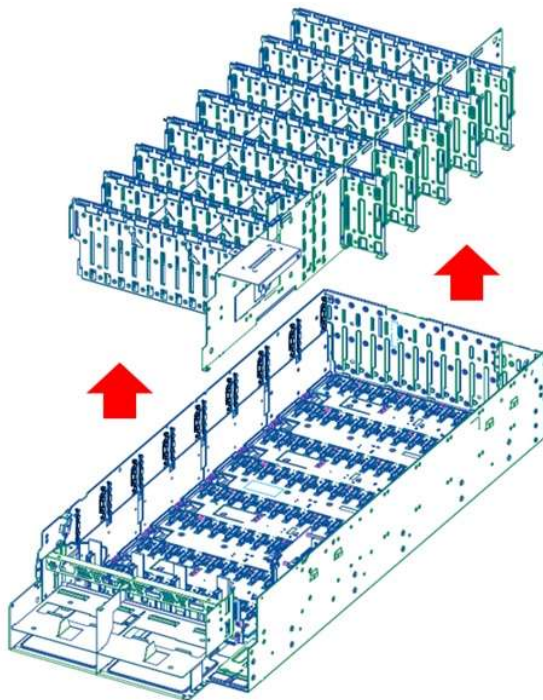
17. Rotate the slide support bar from the drive bay assembly at a 45-degree angle to the horizontal plane until the bar moves freely and then pull the bar as shown below.
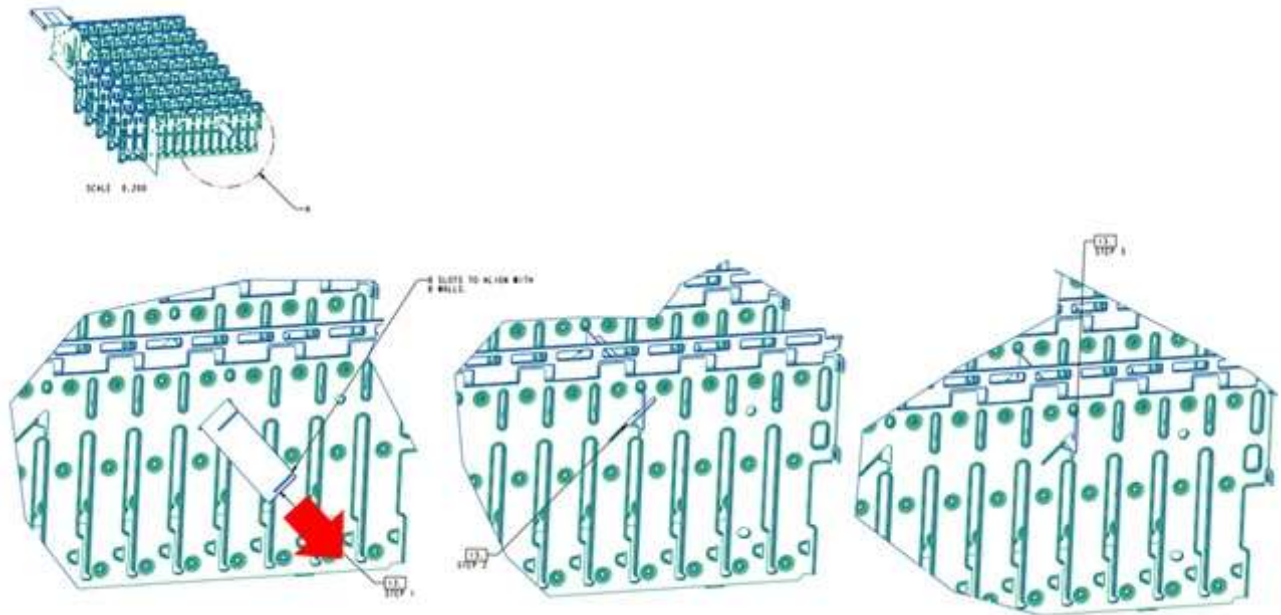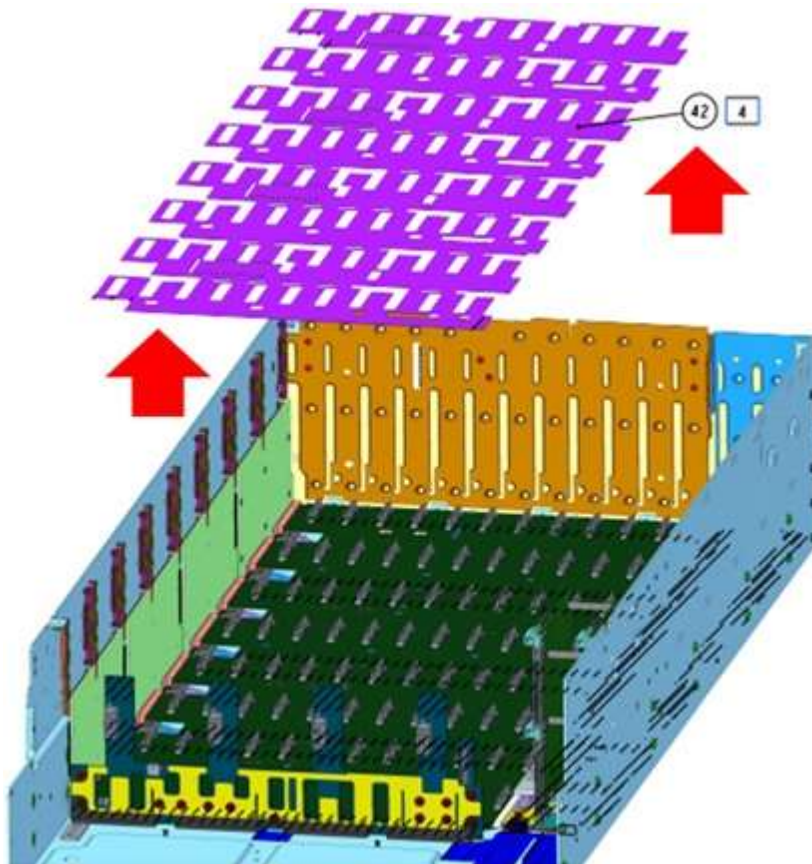

18. To disassemble the wall bay assembly, remove the screws (marked in red) connecting the metal plate using a Philips #2 and Philips #1 bits.
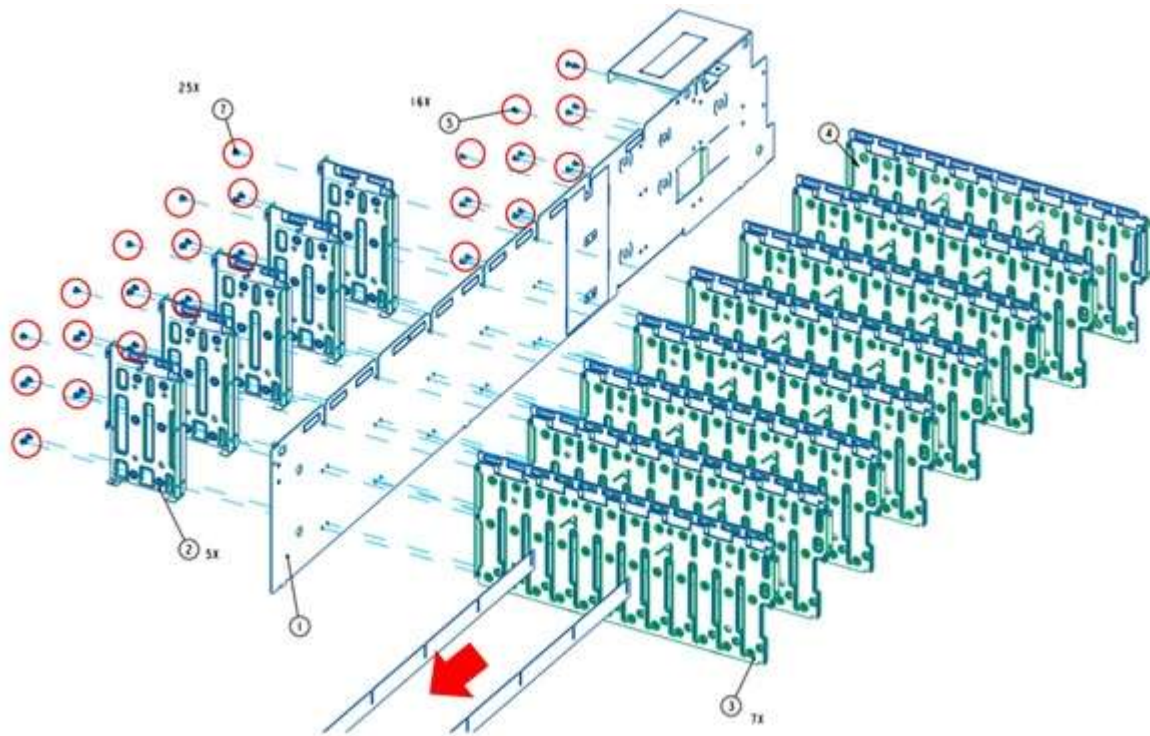
19. To remove the top stabilizer from the walls, slide the stabilizer as shown in the direction shown below. Repeat this step for all walls.
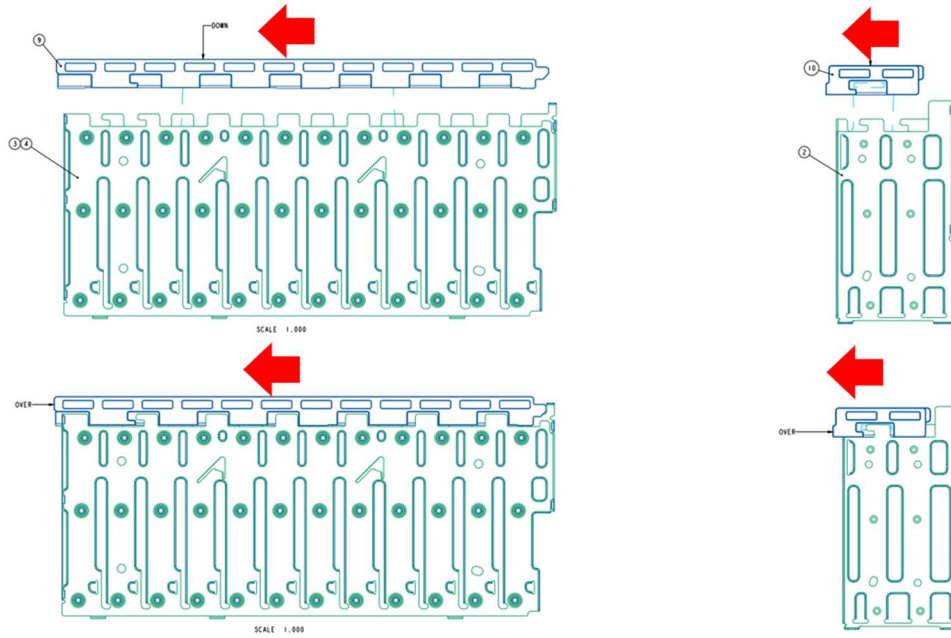

20. Remove the top insulation sheet in the direction shown by the red arrows.

21. Remove the 12 screws (red circled) in the image from the 24-HDD baseplane using a Philips #2 bit. Then remove the eight screws (yellow circled) connecting the 24-HDD baseplane PCBA to the buss bar using a Philips #2 bit.

22. Slide the 24-HDD baseplanes as marked by red arrows to remove them from the expander riser cards.
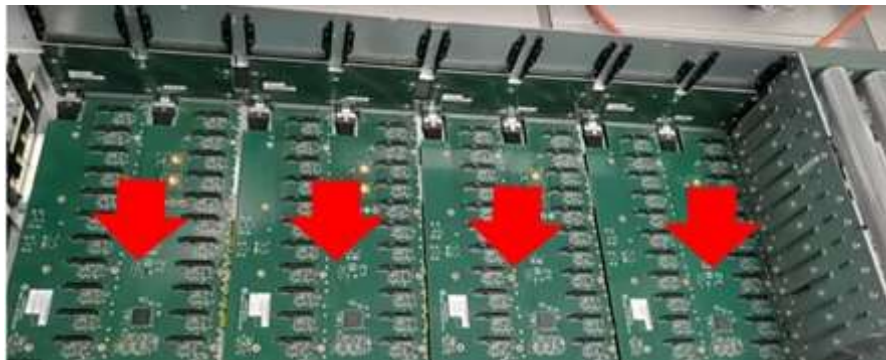
23. Remove the three screws circled red below from the base chassis using a Philips #2 bit.

24. Remove the high-speed connector cable marked with red arrows and the connector connecting the 10-HDD baseplane to the EBOD PCBA marked with green arrows. Remove the 10-HDD baseplane from the base chassis.
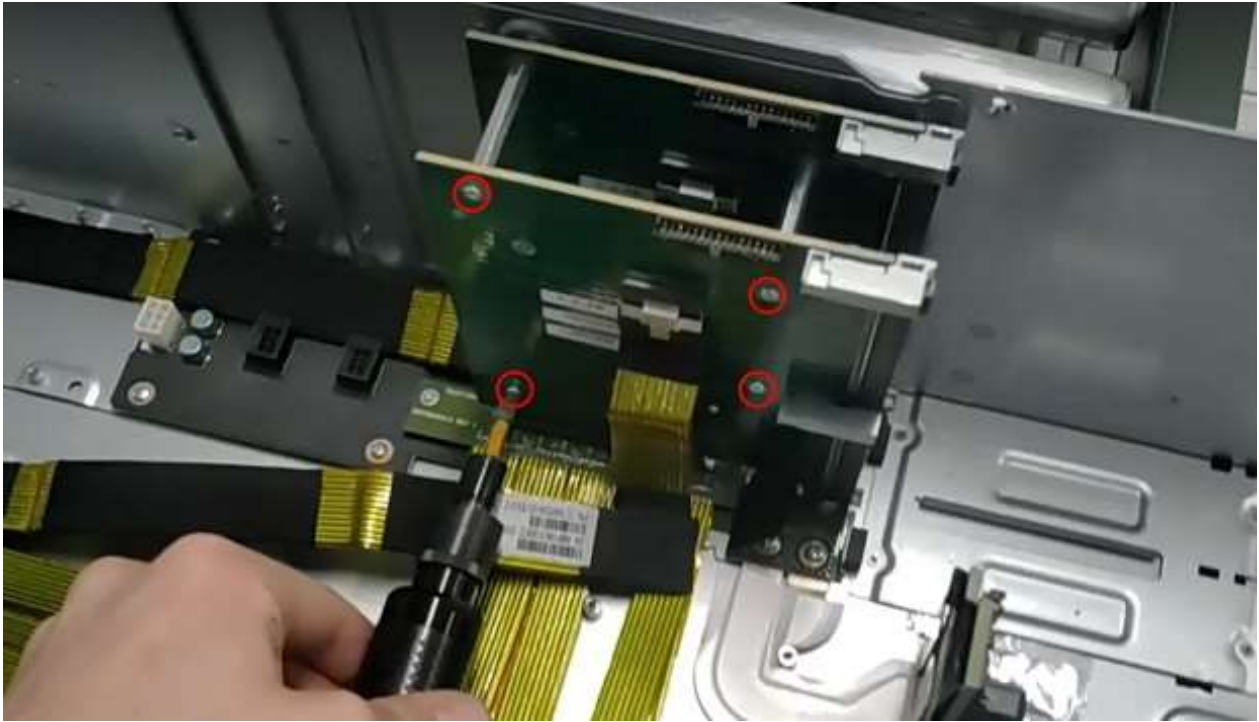

25. Remove the foam divider fitted into PEM holes.
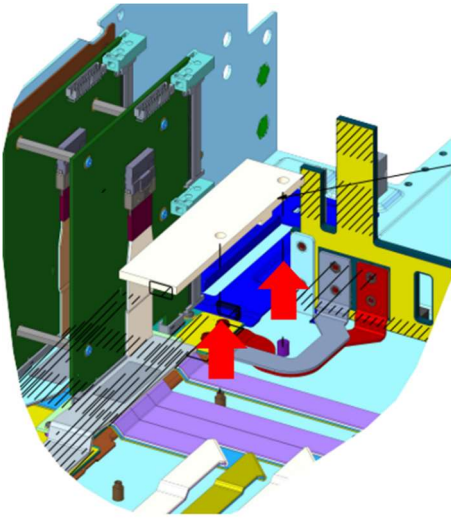
26. Remove the high-speed cable connecting the passthrough card and 10-HDD baseplane by pulling the cable from the connector as shown by the red arrow.
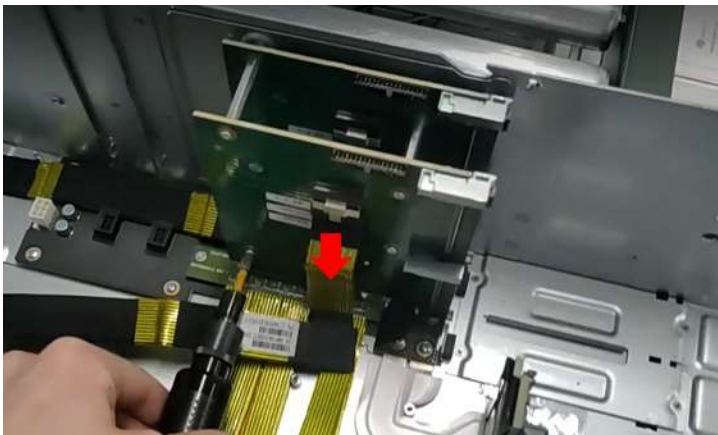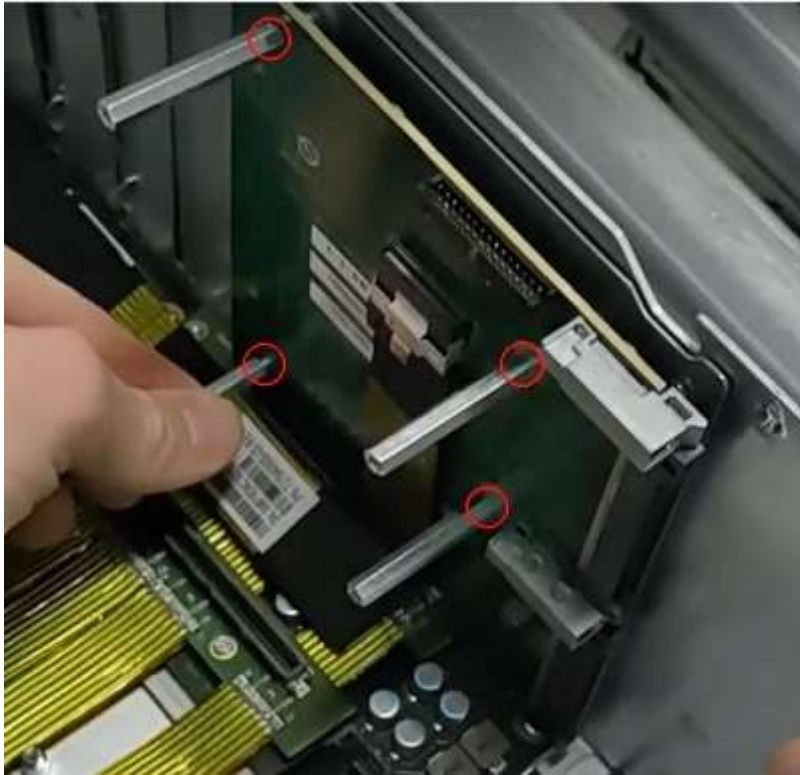
27. Remove the passthrough front PCBA by using a Phillips #1 bit to remove the four screws circled red.

28. Remove the front passthrough card connecting connector by pulling up the PCBA as shown by the red arrow.
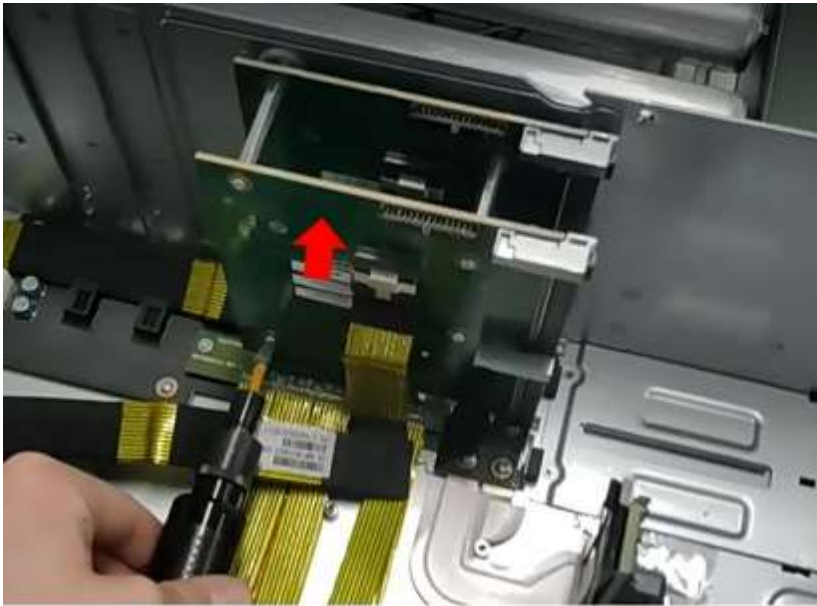
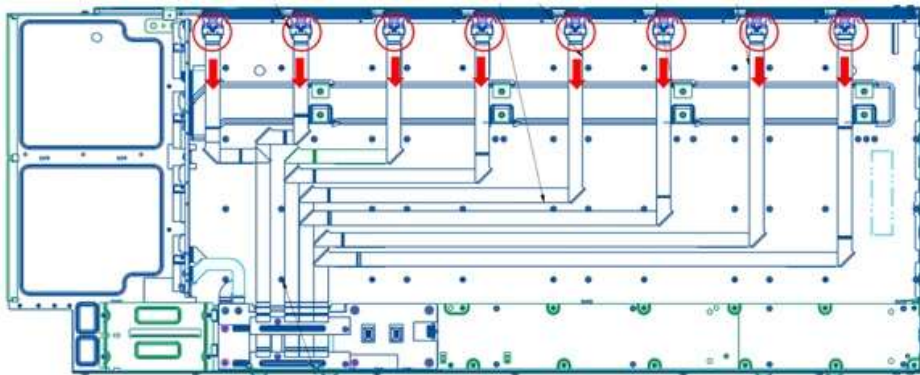29. Remove the four standoffs by hand or by using a wrench.

30. Remove the high-speed cable connector by pulling it as shown by the red arrow and remove the second passthrough card by pulling up the PCBA as shown by the green arrow.

31. Use a Phillips #1 bit to remove the four screws on the PEMs.

32. Remove the cables from the expander riser card as shown in the image below.
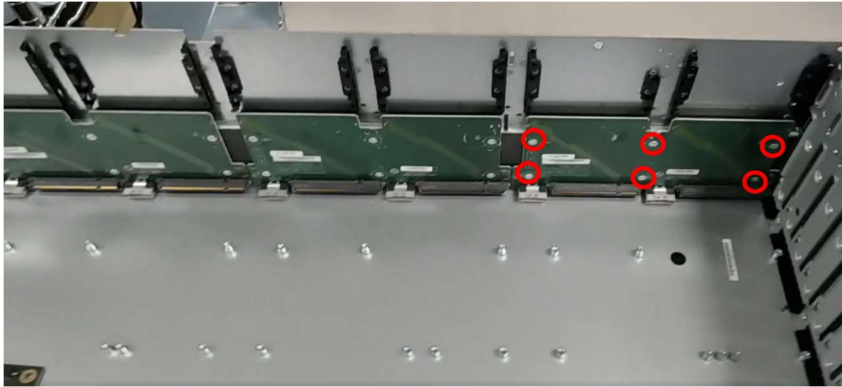
33. Remove the EBOD PCBA by using a Phillips #1 bit to remove the six screws (circled red) and using a Phillips #2 bit to remove the two screws (circled yellow).


34. Remove the midplane PCBA by using a Phillips #2 bit to remove the five screws (circled red) connecting base sheet metal and the eight screws (circled yellow) connecting the buss bar.
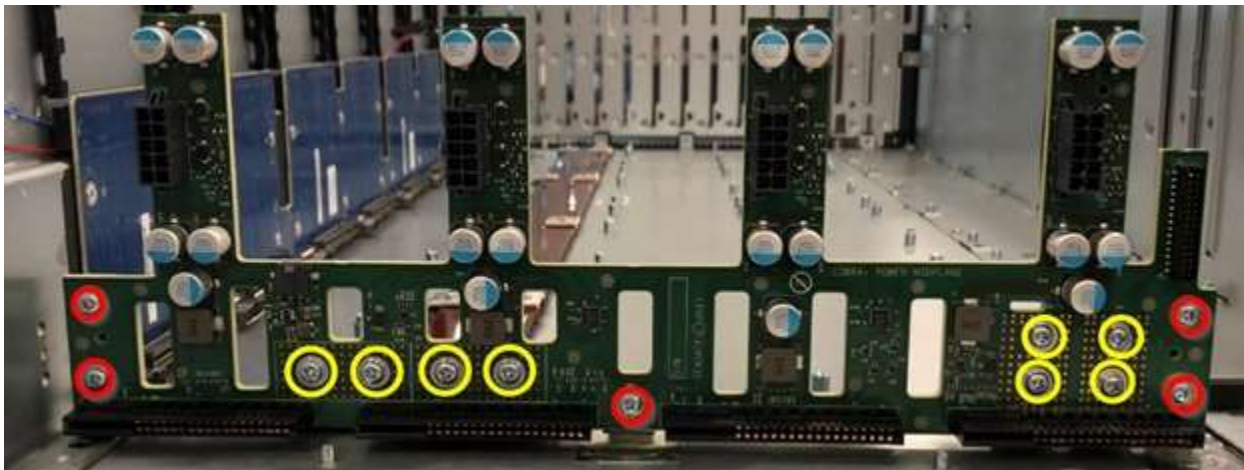
35. Remove the expander riser card from the base metal chassis by using a T10 bit to remove the six screws (circled red) from the expander riser card. Repeat this step for all the remaining expander riser cards and remove all the PCBAs from the chassis.

36. Use a Phillips #1 bit to remove the SAS expander guide from the chassis.
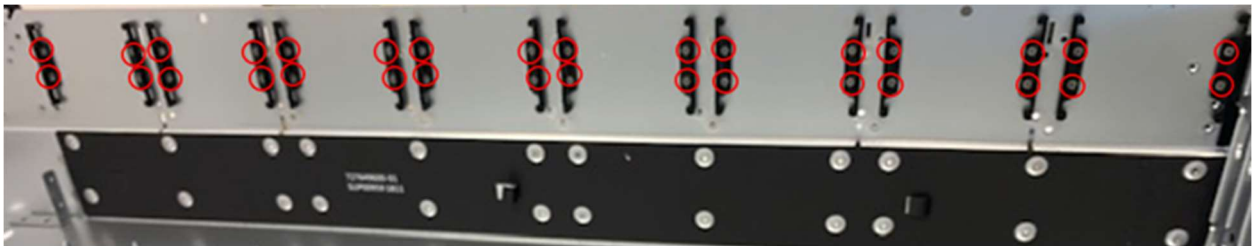
37. Remove the side handles by using a Phillips #2 bit to remove the screws marked below. Repeat on both sides.
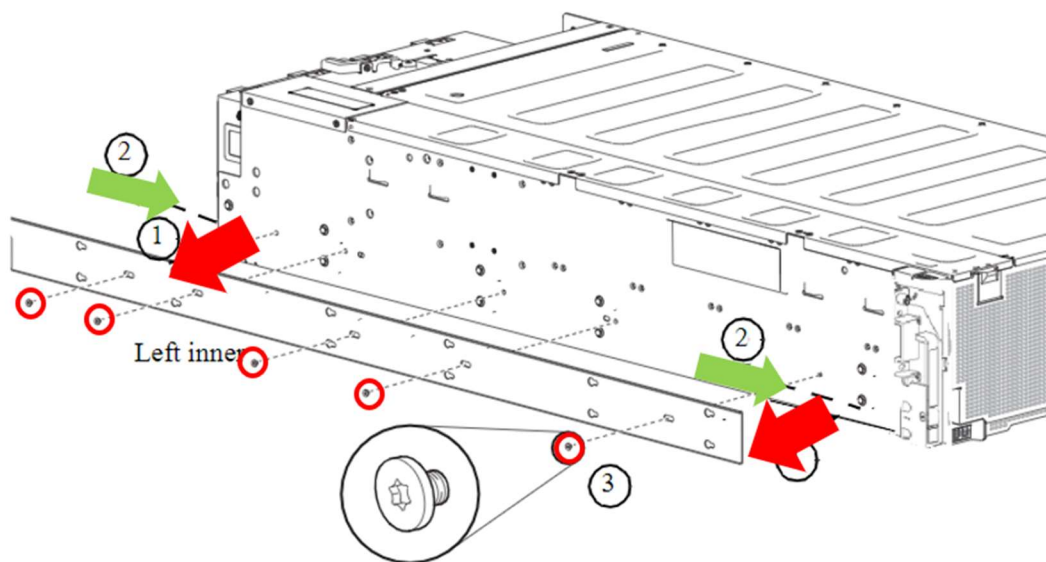
38. If the rails are mounted from inside chassis: Remove the three screws marked below from the inside chassis and slide as indicated by the green arrows to release from the T pins.

OR

If the rails are mounted externally: Remove the five screws from the marked position that holds the inner rail, then slide as indicated by the green arrows to release from the T pins.

Repeat this step for the right inner rail.