



Spectra Tape Series Libraries

Replacing a DBA or TBA

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Introduction

This document covers replacing a Drive Bay Assembly (DBA) or TeraPack Bay Assembly (TBA) in Spectra Tape Series libraries. The Drive Bay Assembly provides power and data connections for drives installed in the library. The TeraPack Bay Assembly provides storage for up to four TeraPack magazines.

Replacing a DBA or TBA takes approximately 30 to 60 minutes.

- Notes:**
- The T200, T380 and T680 do not use TBAs.
 - This document does not apply to T50, T50e or T120 libraries, which do not use DBAs or TBAs.

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Complete the Replacement	page 42

PREPARE FOR MAINTENANCE

Before beginning the replacement procedure, make sure you have satisfied all of the prerequisites in this section.

Materials and Tools

You must have the following to complete this procedure:

- #2 Phillips screwdriver
- ESD protection
- Replacement DBA or TBA from Spectra Logic



Figure 1 The Drive Bay Assembly (DBA).

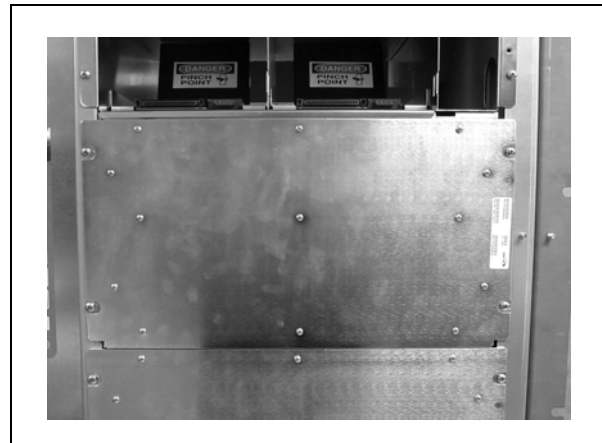


Figure 2 The TeraPack Bay Assembly (TBA).

Note: After unpacking the replacement DBA or TBA, keep the packaging to return the failed unit to Spectra Logic. See [Return the Component](#) on page 44.

Ensure ESD Protection

The repair environment for the library must be free of conditions that could cause electrostatic discharge (ESD). To protect the library from ESD, follow these procedures when repairing or testing the library:

- Place a static protection mat on the work surface used while removing and installing library components. Use a 1-megohm resistor to ground the static protection mat.
- Wear a static protection wristband or grounding foot strap whenever you handle library components that have been removed from their anti-static bags. Connect the wristband to the static protection mat or to other suitable ESD grounding.
- Keep all components in anti-static bags when not in use.

Discontinue Backups and Power Off the Library

1. Use your backup software to stop all backup and restore operations to the library.
2. Use your backup software to move any cartridges that are currently in drives back to their storage location. If you cannot use your backup software, then move the cartridges using the BlueScale interface as described in your library *User Guide*.
3. Pause PostScan if it is running as described in your library *User Guide*. Any tapes currently being scanned are returned to their storage locations.
4. Power off the library from the front panel.

Note: Refer to the *User Guide* for your library for instructions if the BlueScale Soft Power option is enabled.

- a. Press the front panel power button for approximately six seconds or until the button's LED starts flashing.
- b. Wait for the power-off sequence to complete. It takes from one minute to five minutes (depending on the library) while the library allows the BlueScale software to shut down gracefully.

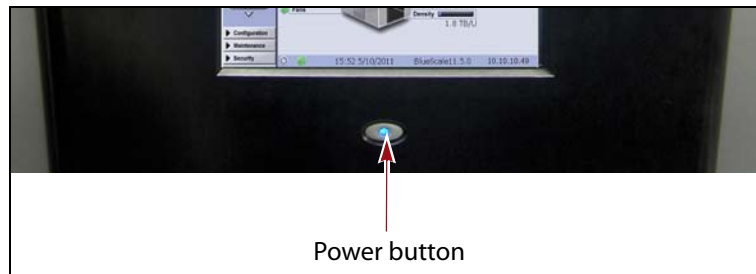


Figure 3 Press and hold the front panel power button.

Replacing a DBA in a T200, T380, or T680 Library

This chapter describes the procedure for replacing a Drive Bay Assembly (DBA) in a Spectra T200, T380, or T680 library. The DBA provides power and data connections for drives installed in the library. Replacing a DBA takes approximately thirty minutes.

PREPARE FOR THE REPLACEMENT

1. Power off the library (see [Discontinue Backups and Power Off the Library](#) on page 5).
2. Set the main power switches on the library back panel to the off position and disconnect the AC power cords.

- Notes:**
- If you have redundant power supplies installed, make sure you turn off both power switches.
 - If you have cable locks installed on the power cords, it is easier to disconnect the cords from the AC outlets at the wall.

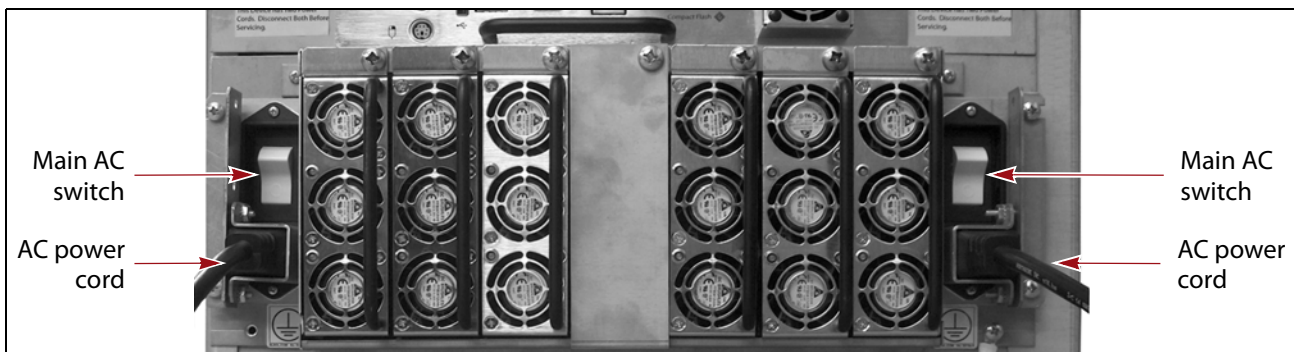


Figure 4 Turn off the library AC power switches and disconnect the power cords.

PERFORM THE REPLACEMENT

The DBAs are located in the rear of the library. A minimum of one DBA must be installed in the library. Depending on library type, there may be up to two additional DBAs installed in the flex bays above the first DBA. Flex bays that do not have a DBA installed contain media shelves.

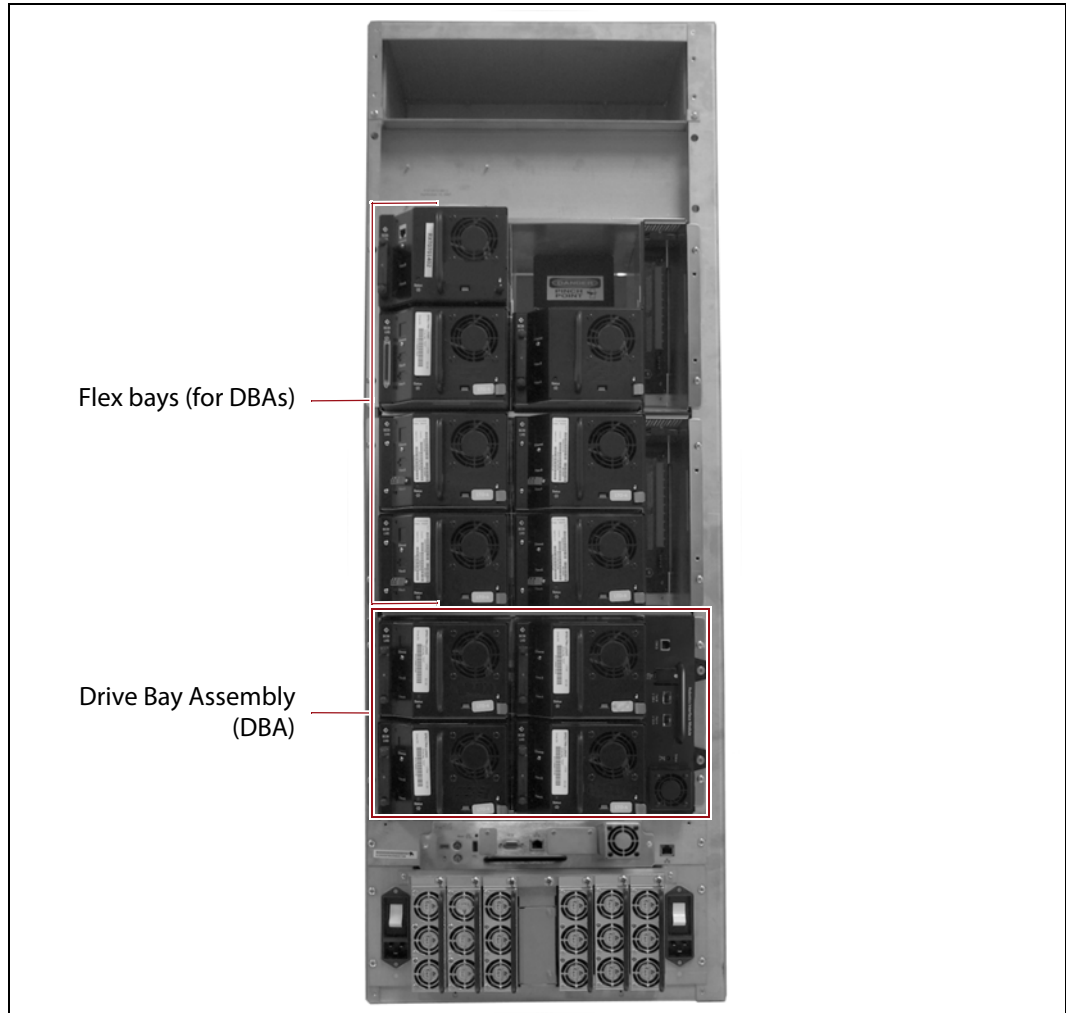


Figure 5 Flex bay configuration in a Boa library (T680 with 3 DBAs shown).

Remove Drives, Interface Controllers and Covers

1. Identify all DBAs to remove. The DBAs in the library are numbered from one to three, with DBA 1 at the bottom of the library. The DBAs must be removed successively from top to bottom. To access the bottom DBA, you must remove any DBAs above it.
2. Label all drives and interface controllers in DBAs that will be removed so that they can be reinstalled in the same location.



Caution

Putting a drive in a different position than the one you removed it from may cause backup failures.

3. Label all fiber or SCSI cables attached to the drives and interface controllers that will be removed so that you can plug these cables back into the same location after the replacement procedure.
4. Remove drives.
 - a. With one hand gripping the rear handle, depress the latch that secures the drive in the DBA. Unlock the drive by pushing the drive lock inward.

Note: Depending on the type of drive, the drive lock may look different from the one shown in [Figure 6](#).

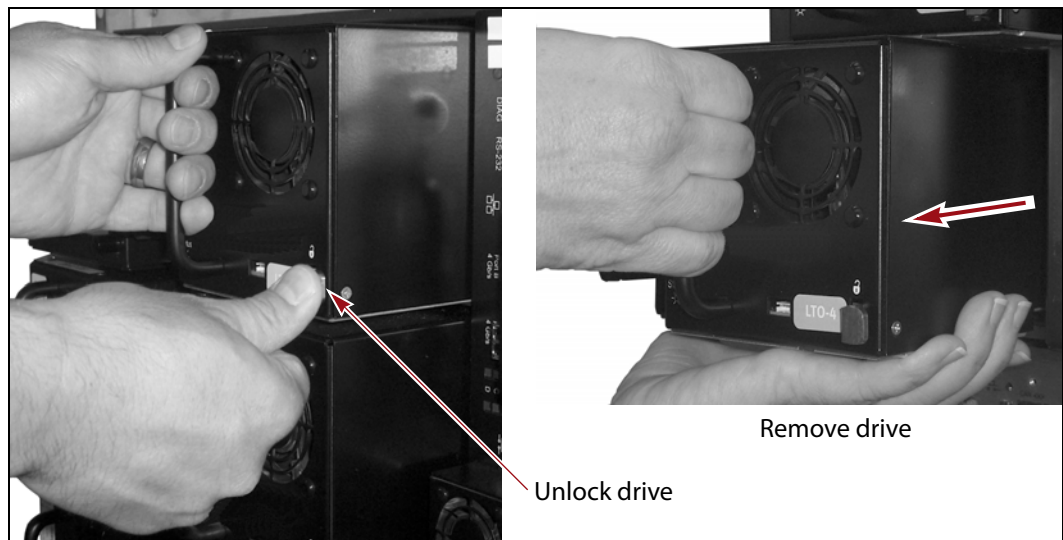


Figure 6 Release the drive lock and remove the drive.

- b. While supporting the bottom of the drive sled, pull outward on the drive sled handle to remove the drive from the library ([Figure 6](#)).



Caution

The drive sled weighs approximately 15 lb (7 kg). Be careful not to drop it.

5. Remove interface controllers.

- a.** Using a #2 Phillips screwdriver, loosen the two captive screws that secure the interface controller (QIP, RIM or BEM) to the DBA.

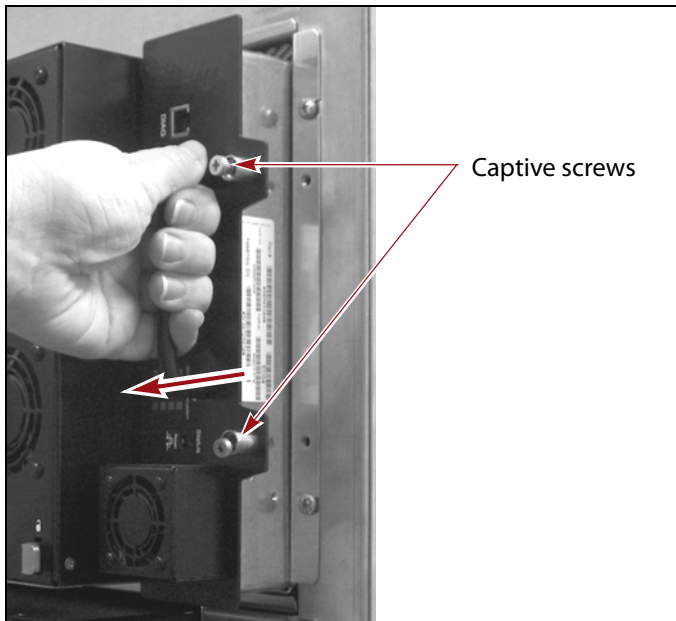


Figure 7 Remove a QIP, RIM or BEM.

- b.** Grasp the handle of the interface controller and pull it firmly out of the library (Figure 7).

6. Remove drive bay and interface controller bay covers, if present (Figure 8).

- To remove the drive bay cover, use a #2 Phillips screwdriver to remove the single screw that secures the cover to the DBA.
- To remove the interface cover, use a #2 Phillips screwdriver to remove the two screws that secure the cover to the DBA.



Figure 8 Remove drive bay or interface bay cover screws

Remove Media Shelves above the Top DBA

The top DBA's power and CAN connector cables are difficult to reach and manipulate. Removing the media shelves above the top DBA provides easier access to the connectors.

1. Using a #2 Phillips screwdriver, remove the four screws securing the shelf cover above the top DBA.



Figure 9 Remove the shelf cover screws.

2. Angle one side of the shelf cover out from the back of the library first to clear the edge of the chassis and then pull the cover out of the library.

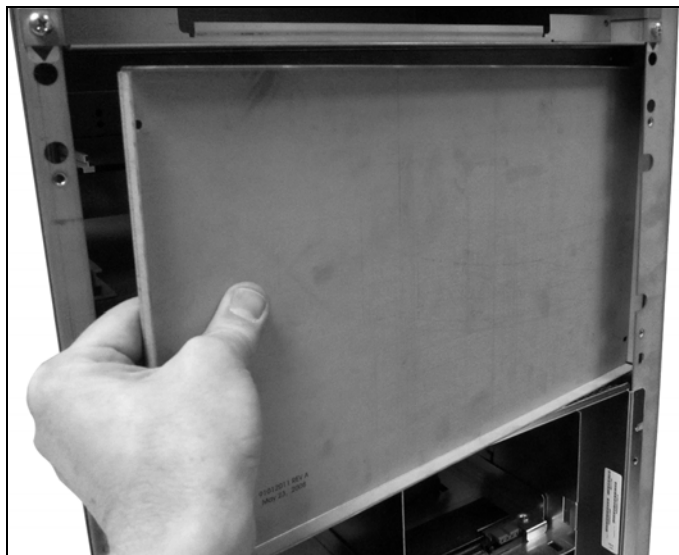


Figure 10 Remove the shelf cover.

3. Carefully remove any magazines from the exposed media shelves. If possible, cover each magazine with the optional dust cover while the magazines are out of the library.

4. Remove both shelves
 - a. Slide the far left and far right media guides forward and toward the center of the shelf to release them. Lift the guides off the shelf.
 - b. Pull the shelf straight out toward you and set it aside.



Important Make sure that you do not lose any of the media guides.

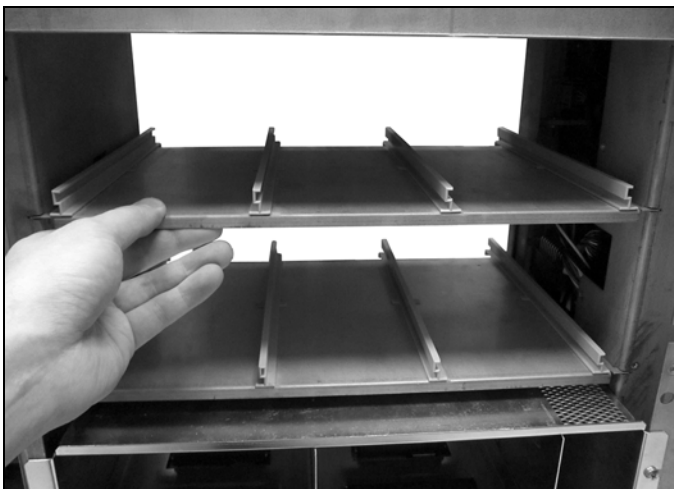


Figure 11 Remove the media shelves.

Remove a DBA

Use the following steps to remove each DBA from the library.

1. Locate the DBA power and CAN cable connectors inside the right side of the library, as viewed from the rear.

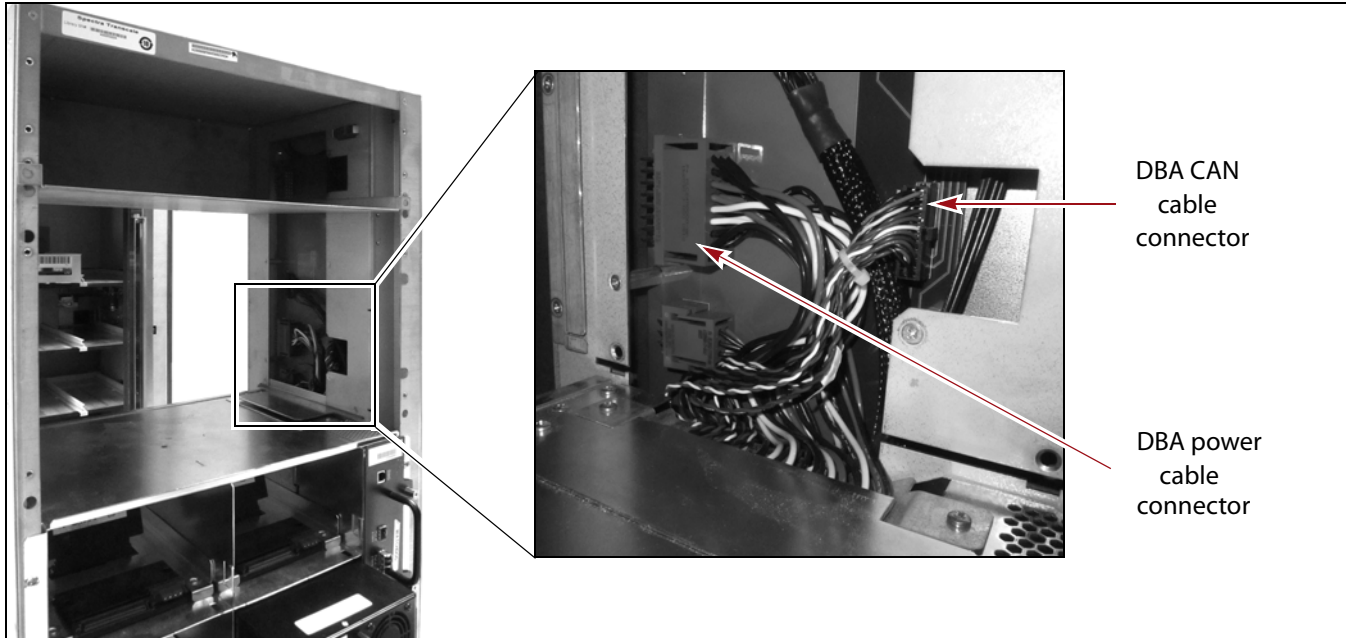


Figure 12 DBA Power and CAN cable connectors.

2. Unplug the DBA CAN cable. Press and hold the latch that secures the cable connector and pull it away from the CAN board.

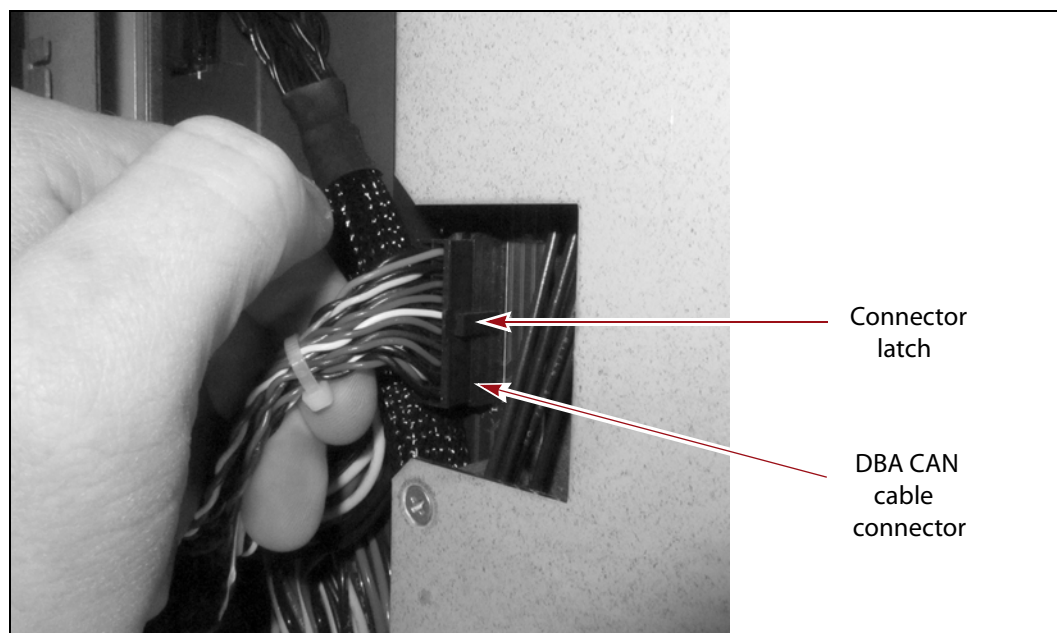


Figure 13 Unplug the DBA CAN cable.

3. Unplug the DBA power cable. Pinch the top and bottom sides of the cable connector and pull it away from the power socket.

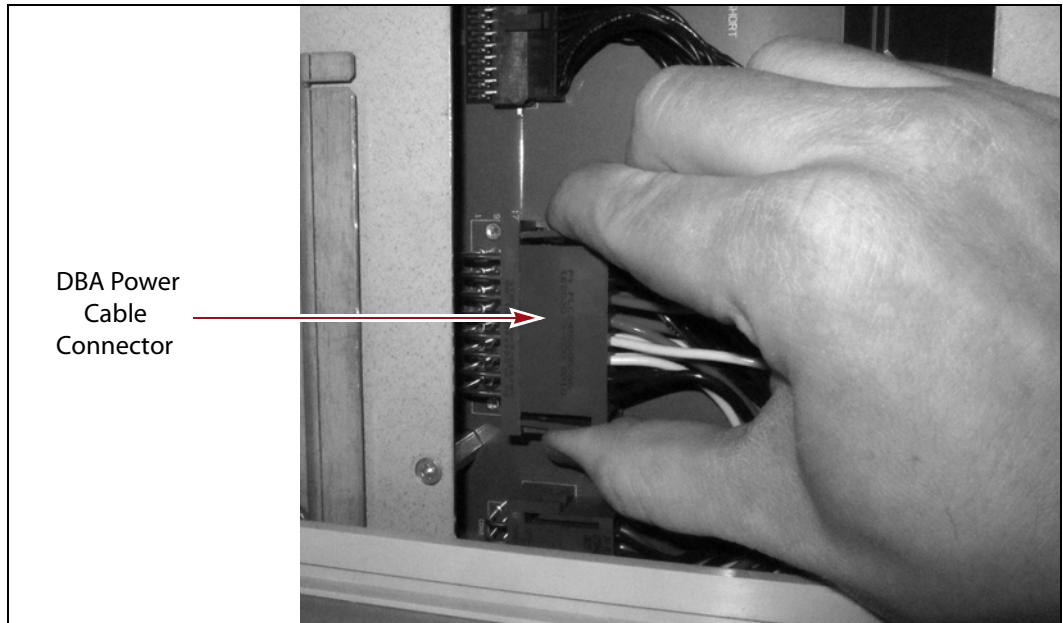


Figure 14 Unplug the DBA Power cable.

4. If installed, remove the bay support shelf above the DBA.
 - a. Using a #2 Phillips screwdriver, remove the two screws that secure the support shelf to the library.
 - b. Angle the support shelf up and pull to the left to remove the shelf from the library.

Note: The T200 library does not have a bay support shelf.

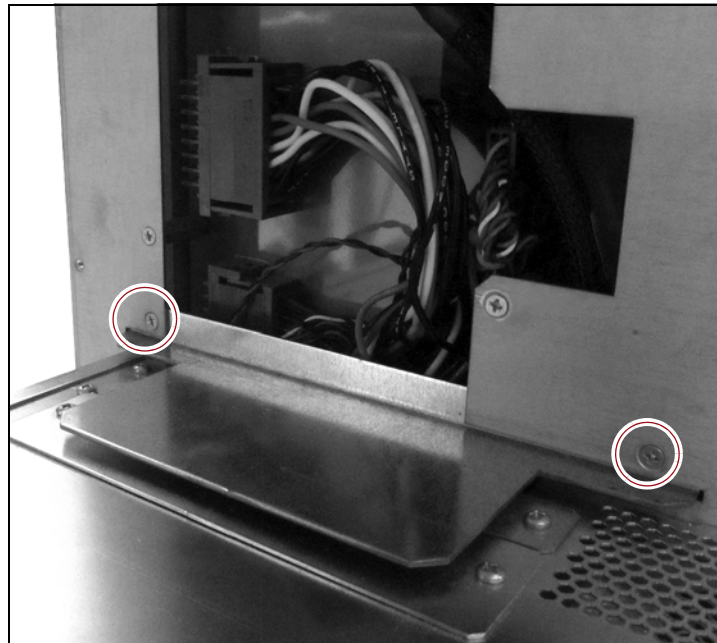


Figure 15 Remove the bay support shelf.

- Using a #2 Phillips screwdriver, remove the four screws securing the DBA to the library.



Figure 16 Remove the DBA screws.

- If you are removing a DBA other than the bottom DBA, skip to [Step 8](#). If you are removing the bottom DBA, continue to [Step 7](#).
- Remove the LCM shield bracket. The bracket is located below the bottom DBA and just above the LCM. Remove the two screws using a #2 Phillips screwdriver and lift the bracket up and off.

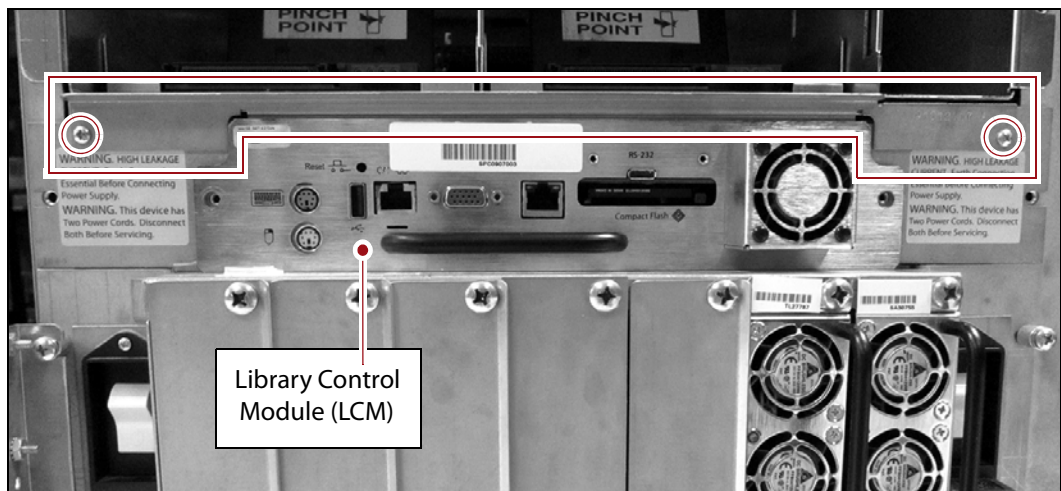


Figure 17 Remove the LCM shield from the library.

8. Remove the DBA from the library.
 - a. Bend the CAN and power cables attached to the DBA away from the library frame (Figure 18).
 - b. Firmly grasp the dividers in the center of the DBA and pull the unit partially out of the library (Figure 19).
 - c. Using both hands, lift the DBA out of the library.

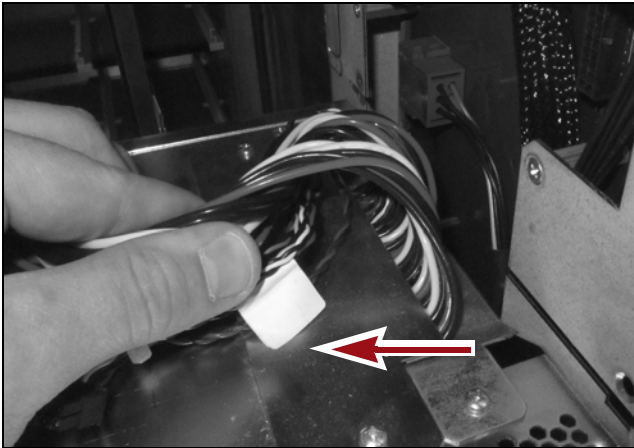


Figure 18 Pull the cables away from library frame.



Figure 19 Remove the DBA from the library.



Warning

To avoid being pinched, do not reach into the drive bays in the DBA.

Warnung: Greifen Sie nicht in die Laufwerksschächte in den DBA.

9. If you need to remove an additional DBA, repeat [Step 1](#) on page 12 through [Step 8](#) as needed to remove the failed DBA. Set the failed DBA aside for return to Spectra Logic. See [Return the Component](#) on page 44.

Install a DBA

Use the following steps to install a DBA into the library.

1. Orient the DBA with the power and CAN cables toward the top left.
2. Carefully place the DBA into the library, making sure that you do not pinch any cables between the DBA and the library chassis.



Figure 20 Install the DBA.

3. Connect the power cable connector to the power socket inside the library. An audible click indicates the connector is fully seated.

Note: The connector is keyed to only fit one way; do not force it.

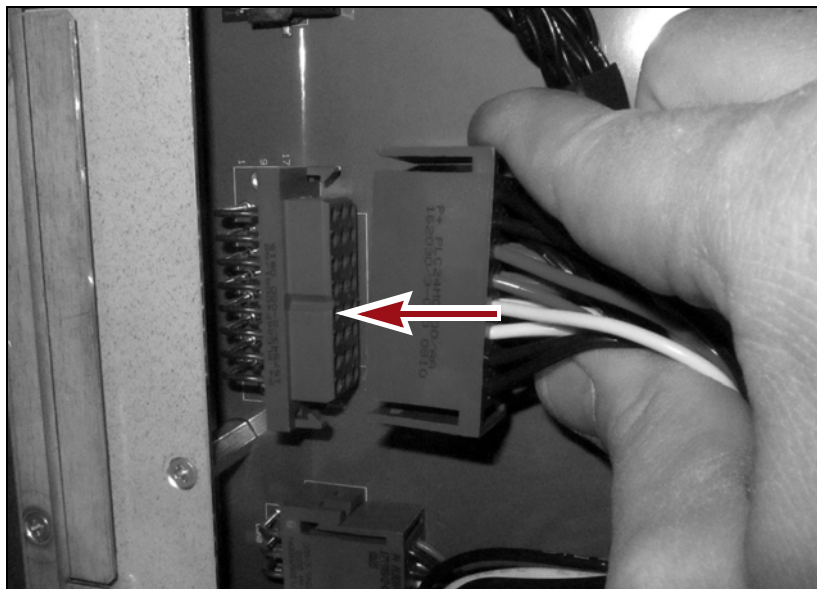


Figure 21 Connect the power cable.

4. Connect the CAN cable to the CAN board inside the library. Pull on the connector gently to ensure it is fully seated.

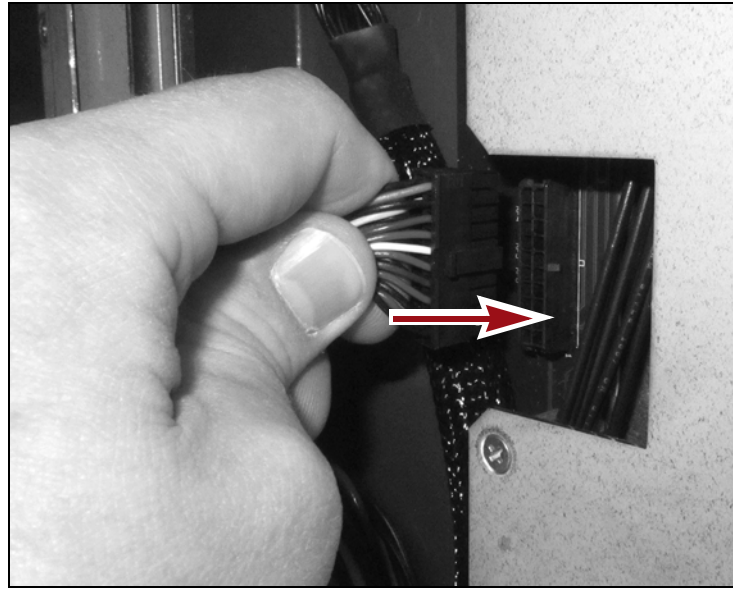


Figure 22 Connect the CAN cable.

5. Push the excess length of the power and CAN cables into the gap along the right side of the library chassis under the cable connectors.

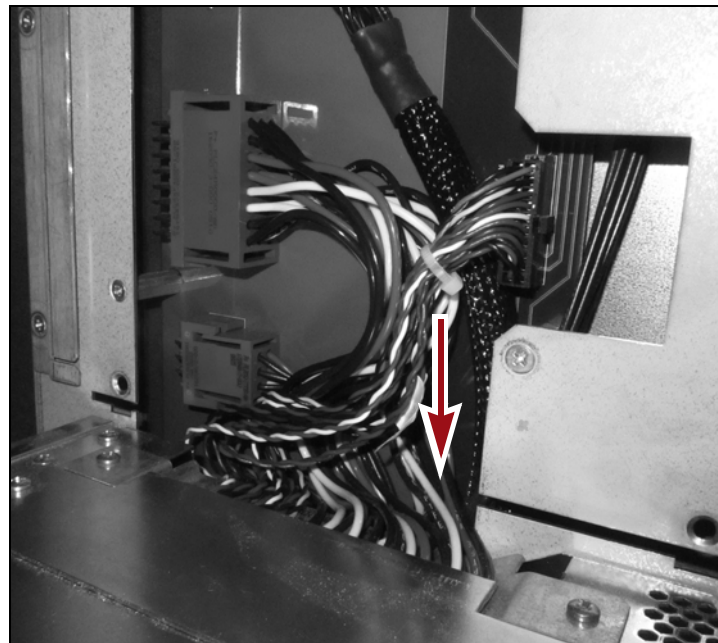


Figure 23 Push excess cable length into the gap under the cable connectors.

6. Using a #2 Phillips screwdriver, install the four screws that secure the DBA in the library (see [Figure 16](#) on page 14).

7. If you removed the bay support shelf, install the shelf in the library.
 - a. Angle the short edge of the support shelf into the cutouts in the right side of the library as viewed from the rear.
 - b. Rotate the shelf downward until it rests in a horizontal position.
 - c. Using a #2 Phillips screwdriver, install the two screws that secure the support shelf to the library.

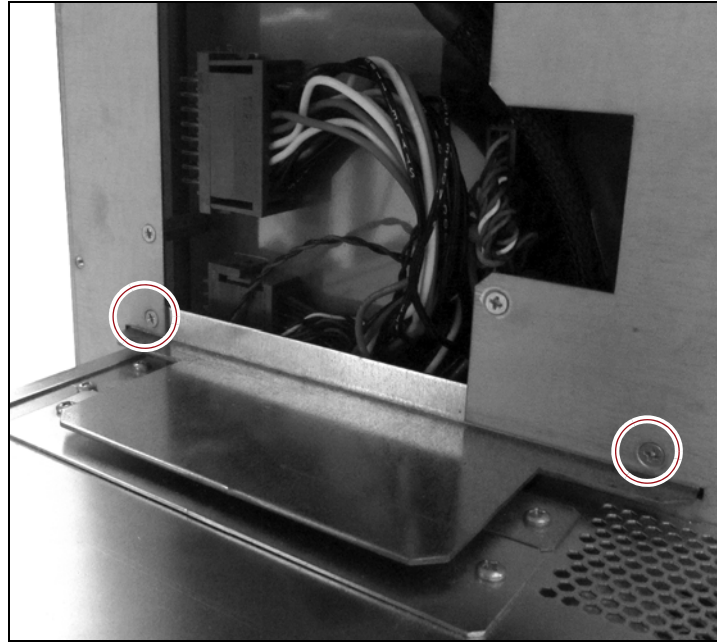


Figure 24 Install the bay support shelf.

8. If you removed additional DBAs, repeat steps [Step 2 on page 16](#) through [Step 7](#) as needed to install the remaining DBAs.
9. If you did not remove the LCM shield bracket in [Step 7 on page 14](#), skip to [Reinstall Components](#). Otherwise, do the following to install the bracket.
 - a. Position the bracket above the LCM.
 - b. Slide the bracket down behind the LCM face plate and over the bottom edge of the lowest DBA.
 - c. Using a #2 Phillips screwdriver, install the two screws to secure the bracket to the library (see [Figure 17 on page 14](#)).

REINSTALL COMPONENTS

Reinstall the Chamber Shelves Above the DBA

1. Reinstall each shelf that you removed.
 - a. (Optional) Remove the outer guide from each side of the shelf (see [Figure 25](#)).

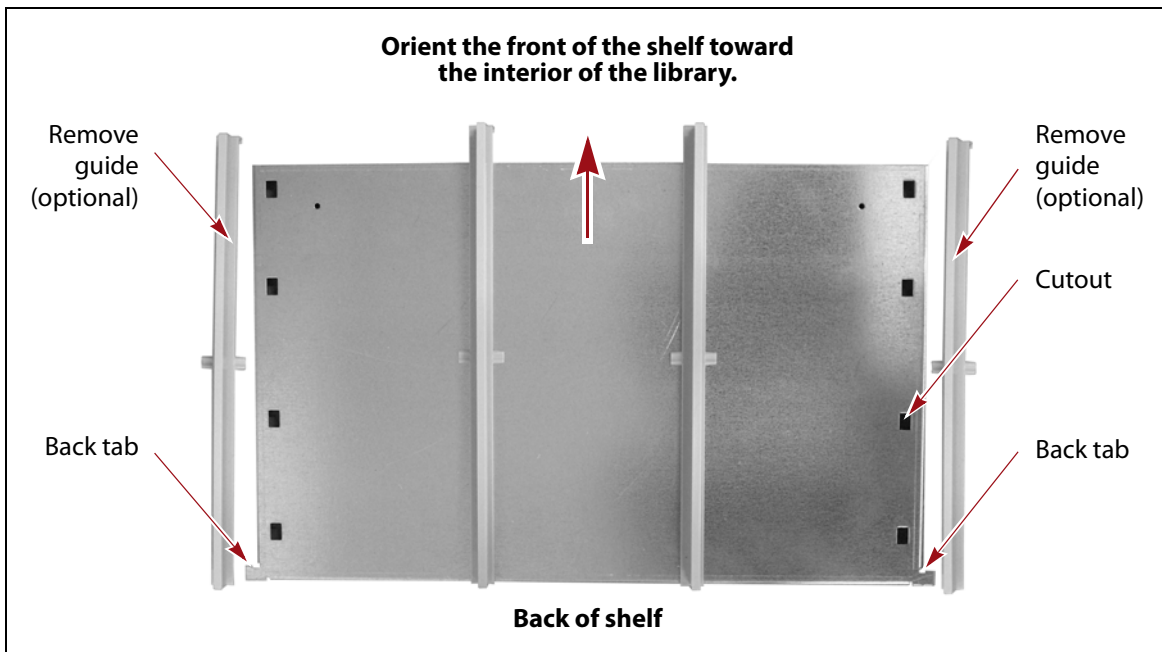


Figure 25 Remove/replace the outer guides from the shelf.

- b. Orient the front of the shelf toward the interior of the library with the left edge angled slightly upward so that the right front tab clears the rear edge of the chassis.
- c. Slide the shelf into the chassis so that the top edges fit into the slots in the mounting tabs and the back tabs fit into the slots in the rear of the chassis.

**Caution**

Make sure that the front top edge of the shelf fits into the slots in both of the mounting tabs. Incorrectly installing a shelf will cause motion failures.

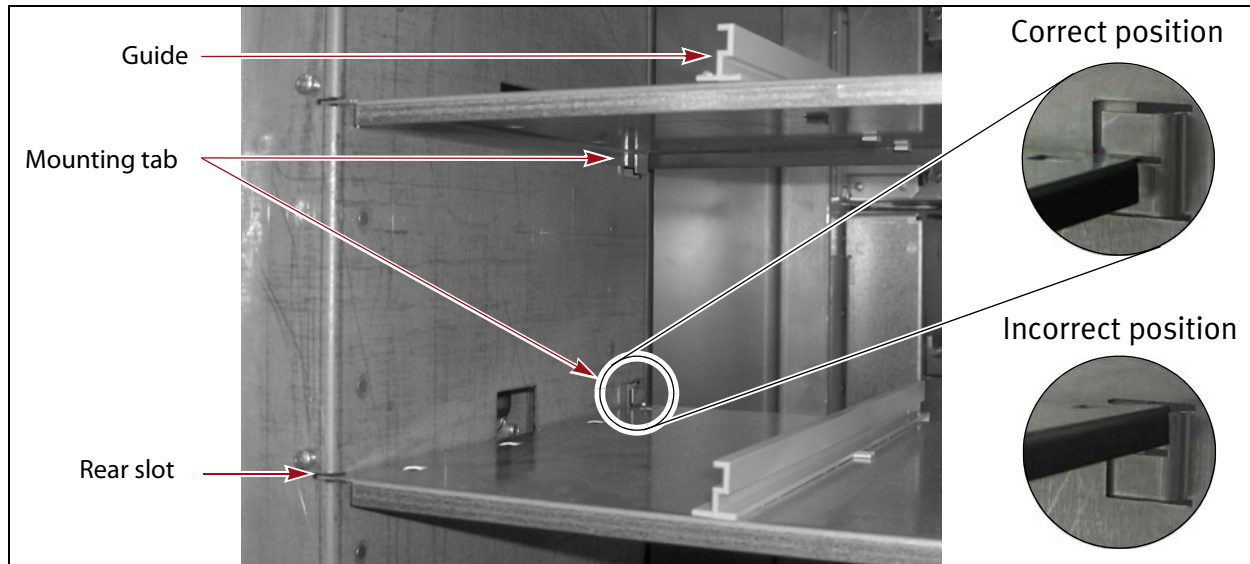


Figure 26 Install a chamber shelf and correctly position it in the mounting tabs.

- d. If you removed the guides on each side of the shelf, reinstall them. The tabs on the bottom edge of each guide fit into cutouts in the shelf. Make sure that the guides are oriented correctly.

**Caution**

Do not install TeraPack magazines in the empty shelves. Incorrectly placed magazines can result in robotic motion failures and mixing of media across partitions. Magazines will be imported at the end of the procedure.

2. Reinstall the media shelf cover. Angle one side of the cover behind the edge of the chassis and then rotate the other side into place.

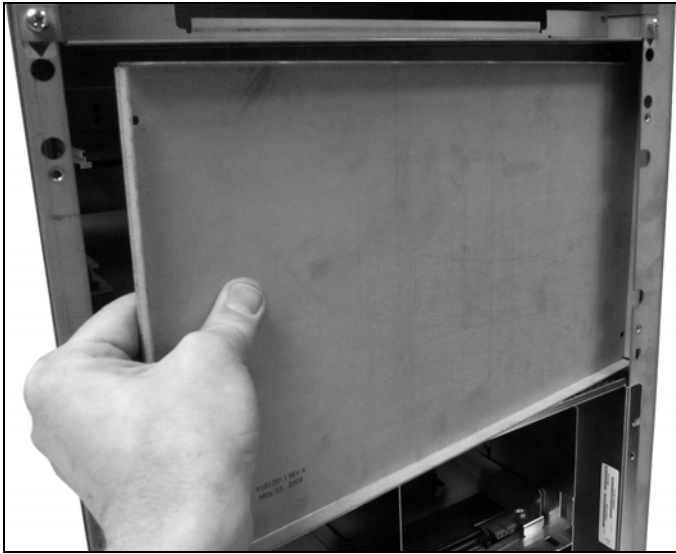


Figure 27 Install the media shelf cover.

3. Using a #2 Phillips screwdriver, install the four screws securing the media shelf cover to the library (see [Figure 9](#) on page 10).

Install Drives, Interface Controllers and Covers.

Reinstall the drives, any interface controllers and bay covers removed during the replacement process. Install the drives in the location you made note of in [Remove Drives, Interface Controllers and Covers](#) on page 8.

**Caution**

Putting a drive in a different position than the one you removed it from may cause backup failures.

1. Install drives

- a. While supporting the bottom of the drive sled, push inward on the drive sled handle to install the drive into the library. The locking latch will click when the drive is fully seated.

**Caution**

The drive sled weighs approximately 15 lb (7 kg). Be careful not to drop it.

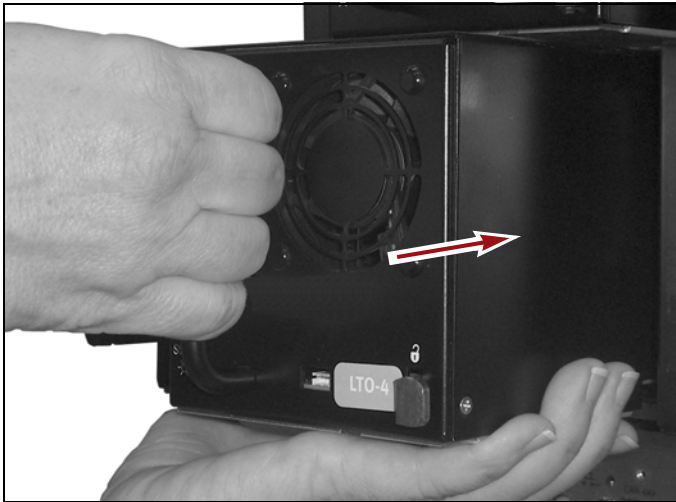


Figure 28 Install the drive.

- b. Pull gently on the handle of the drive to confirm the drive is locked in place.
- c. Repeat for each additional drive.

2. Install interface controllers

- a. Orient the interface controller (QIP, RIM or BEM) so that the captive screws are facing to the right.

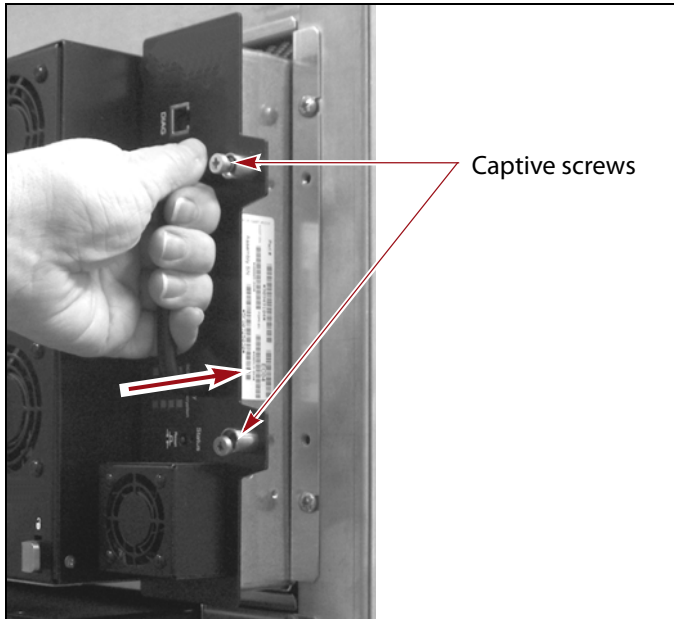


Figure 29 Install a QIP, RIM or BEM.

- b. Firmly slide the interface controller into the controller bay.
 - c. Using a #2 Phillips screwdriver, tighten the captive screws to secure the interface controller to the DBA.
 - d. Repeat for each additional controller.
3. Install bay covers. If you removed any drive or interface bay covers, reinstall them back in the same location.
 - a. Orient the cover over the open bay.
 - b. Use a #2 Phillips screwdriver to install the screws to secure the covers to the DBA.
 - c. Repeat for each additional cover.
 4. Connect cables
 - a. Reconnect fiber or SCSI cables to the same drive or interface controller you disconnected it from.
 - b. Pull gently on each cable connector to confirm it is fully seated.
 - c. Repeat for each additional cable.

To complete the replacement, skip to [Complete the Replacement on page 42](#).

Replacing a DBA or TBA in a T950 or TFinity library

This chapter describes the procedure for replacing a Drive Bay Assembly (DBA) or TeraPack Bay Assembly (TBA) in a Spectra T950 or TFinity library. The Drive Bay Assembly provides power and data connections for drives installed in the library. The TeraPack Bay Assembly provides storage for up to four TeraPack magazines. Replacing a DBA or TBA takes approximately 60 minutes.

PREPARE FOR THE REPLACEMENT

1. Power off the library (see [Discontinue Backups and Power Off the Library on page 5](#)).
2. Open the rear access doors on the main frame and each drive frame by lifting and rotating the latch a quarter turn. Pull the doors open.

Note: You may need to unlock the latch before you can open it.

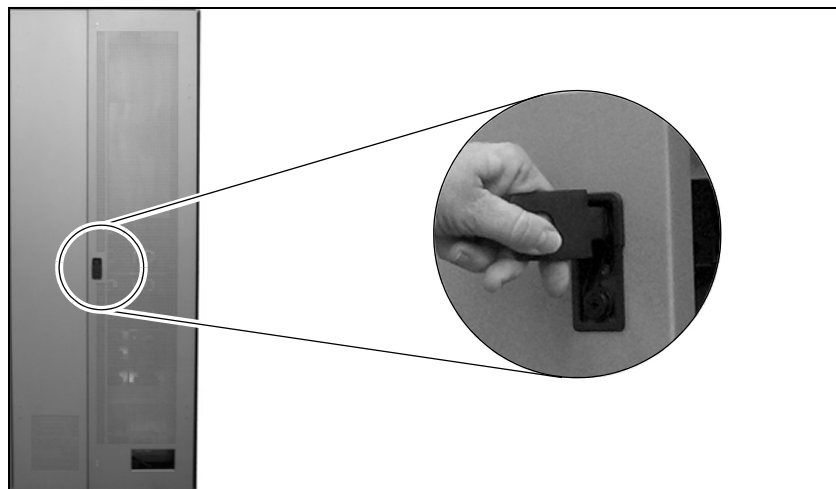


Figure 30 Open the access doors on the main frame and drive frames.

3. Set the AC breaker switches on the back of the library main frame and drive frames to the off position (see [Figure 31](#)).

Note: If you have redundant power supplies installed, make sure you turn off both breaker switches.

4. Disconnect the power cords from the library main frame and drive frames.
5. If the AC breaker lock is present, install the AC breaker locking plate over the breaker switches and install the padlock (see [Figure 32](#)).

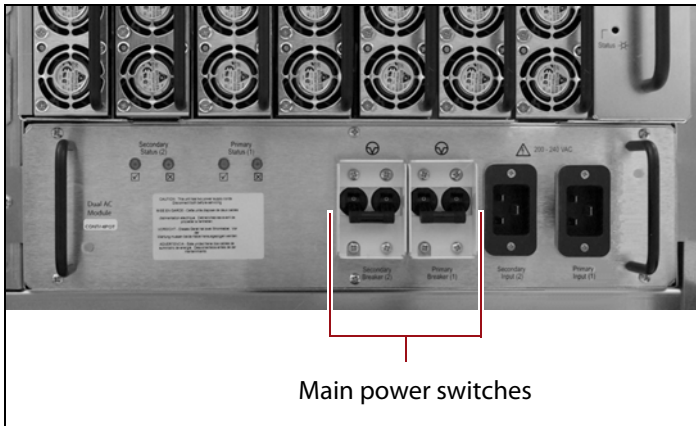


Figure 31 Turn off AC breaker switches on the main frame and drive frames.

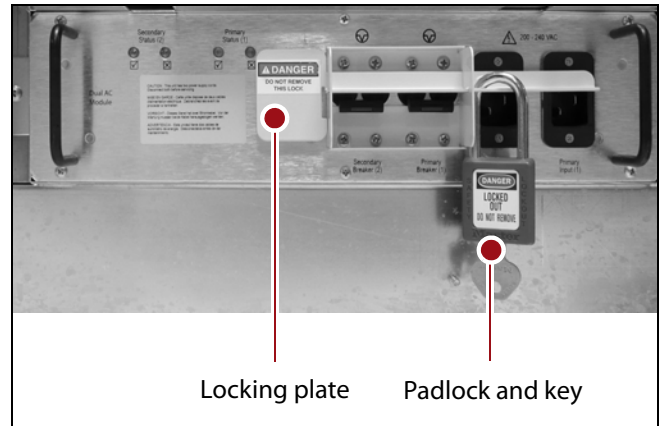


Figure 32 Slide the locking plate through the lock base plate so that it covers the breaker switches and install the padlock.

PERFORM THE REPLACEMENT

Drive Bay Assemblies and TeraPack Bay Assemblies are located in the main frame and drive expansion frames in the library. Media expansion, bulk TAP, and service frames do not have DBAs or TBAs. Main and drive expansion frames in the library accommodate either six DBAs or a combination of DBAs and TBAs in flex bays.

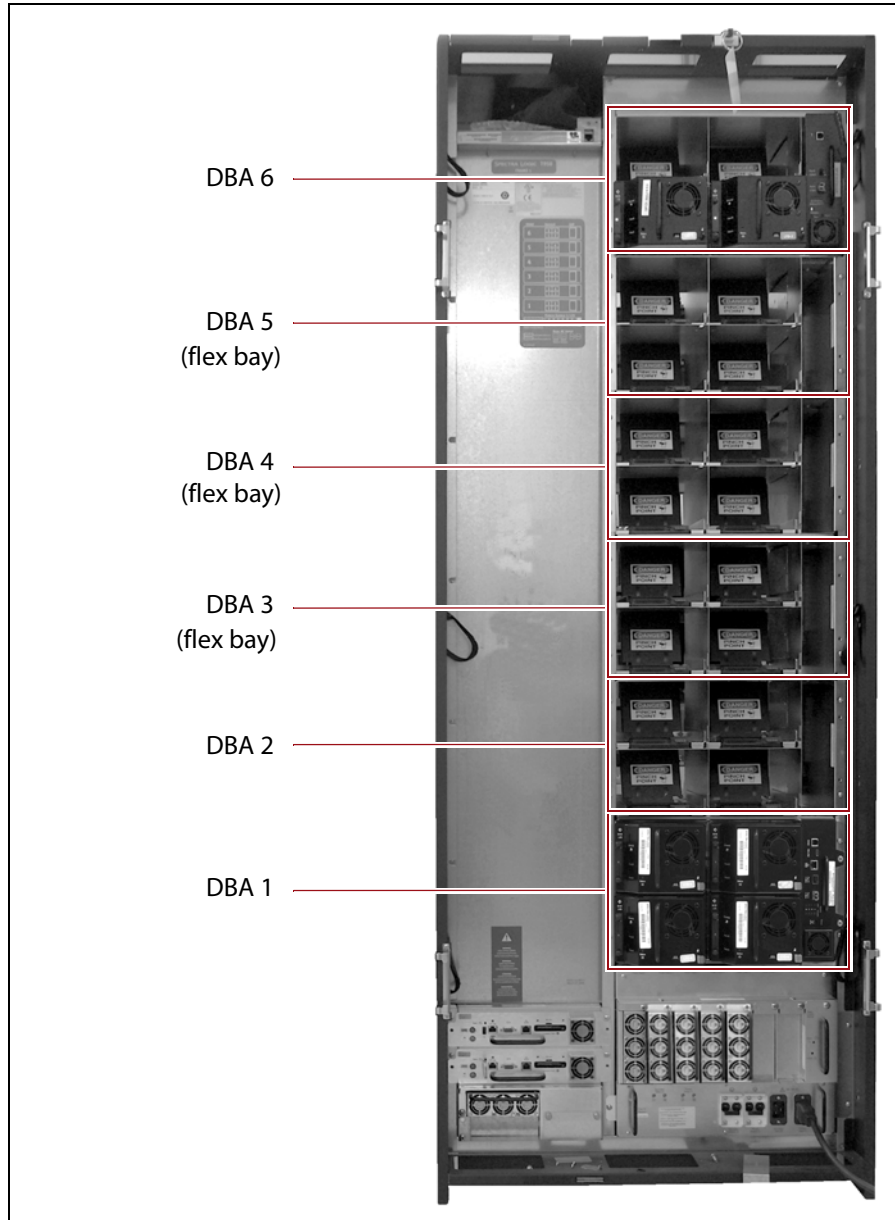


Figure 33 Bay assemblies in a T950 main frame (6 DBAs shown). TBAs may be installed in the flex bays.

Remove Drives, Interface Controllers and Covers

1. Identify all DBAs to remove. The bay assemblies in the library are numbered from one to six, with DBA 1 at the bottom of the library. The bay assemblies must be removed from top to bottom. To access the bottom DBA, you must remove any bay assemblies above it.
2. Label all drives and interface controllers in DBAs that will be removed so that they can be reinstalled in the same location.



Caution

Putting a drive in a different position than the one you removed it from may cause backup failures.

3. Label all fiber cables attached to drives and interface controllers that will be removed so that you can plug these cables back into the same location after the replacement procedure.
4. Remove drives.
 - a. With one hand gripping the rear handle, depress the latch that secures the drive in the DBA. Unlock the drive by pushing the drive lock inward.

Note: Depending on the type of drive, the drive lock may look different from the one shown in [Figure 34](#).

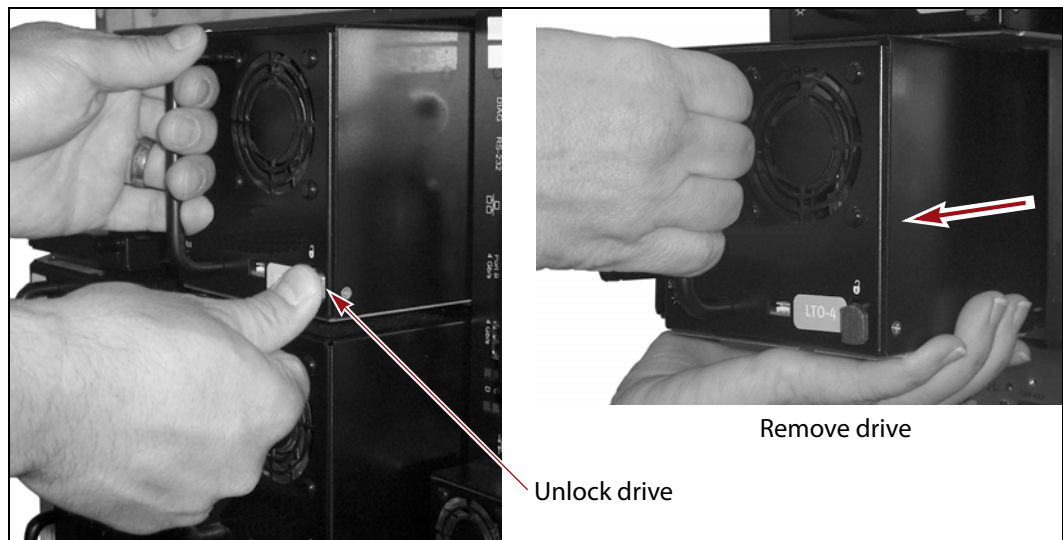


Figure 34 Release the drive lock and remove the drive.

- b. While supporting the bottom of the drive sled, pull outward on the drive sled handle to remove the drive from the library ([Figure 34](#)).



Caution

The drive sled weighs approximately 15 lb (7 kg). Be careful not to drop it.

5. Remove interface controllers.

- a.** Using a #2 Phillips screwdriver, loosen the two captive screws that secure the interface controller (QIP or RIM) to the DBA.

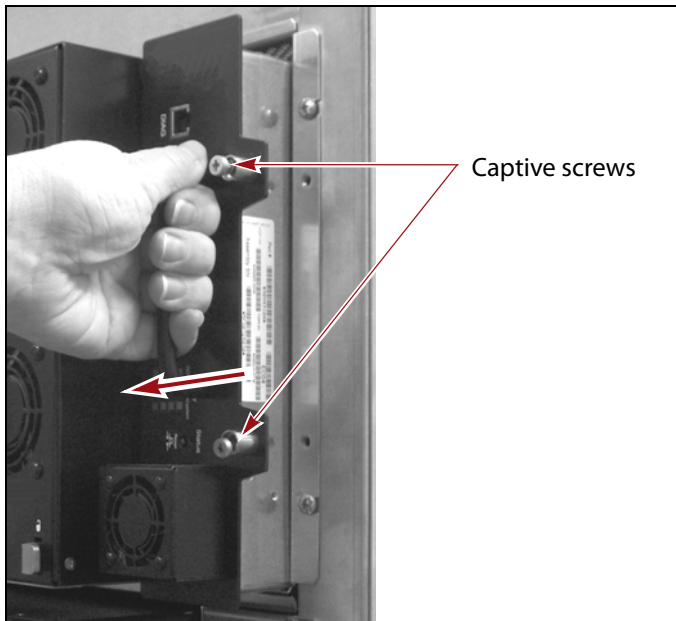


Figure 35 Remove a QIP or RIM.

- b.** Grasp the handle of the interface controller and pull it firmly out of the library (Figure 35).

6. Remove drive bay and interface controller bay covers, if present (Figure 36).

- To remove the drive bay cover, use a #2 Phillips screwdriver to remove the single screw that secures the cover to the DBA.
- To remove the interface cover, use a #2 Phillips screwdriver to remove the two screws that secure the cover to the DBA.



Figure 36 Remove drive bay or interface bay cover screws

Remove a DBA

Use the following steps to remove a DBA from the library.

If you are removing DBA 6 at the top of the library, skip to [Step 3 on page 30](#), otherwise, continue to [Step 1](#).

1. Using a #2 Phillips screwdriver, remove the two screws securing the bay support shelf to the right side of the library as viewed from the rear.

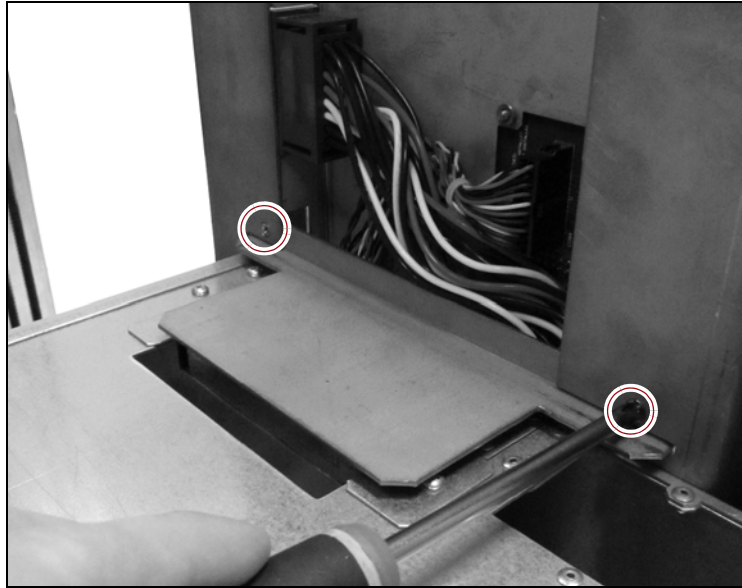


Figure 37 Remove the bay support shelf screws.

2. Angle the support shelf up and pull to the left to remove the shelf from the library.



Figure 38 Pull the bay support shelf out of the library.

3. Locate the DBA power and CAN cable connectors on the CAN board inside the right side of the library, as viewed from the rear.

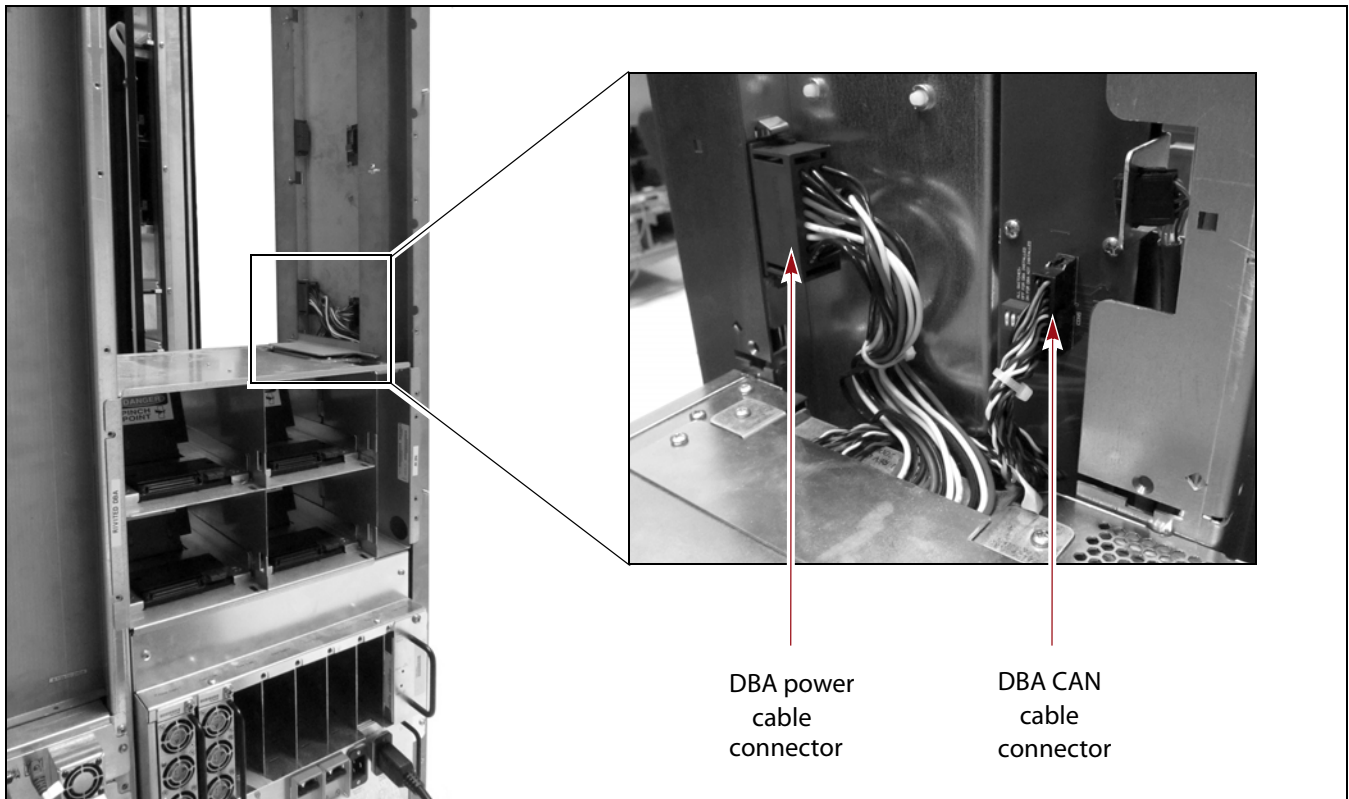


Figure 39 DBA Power and CAN cable connectors.

4. Unplug the DBA power cable. Pinch the top and bottom sides of the cable connector and pull it away from the power socket.

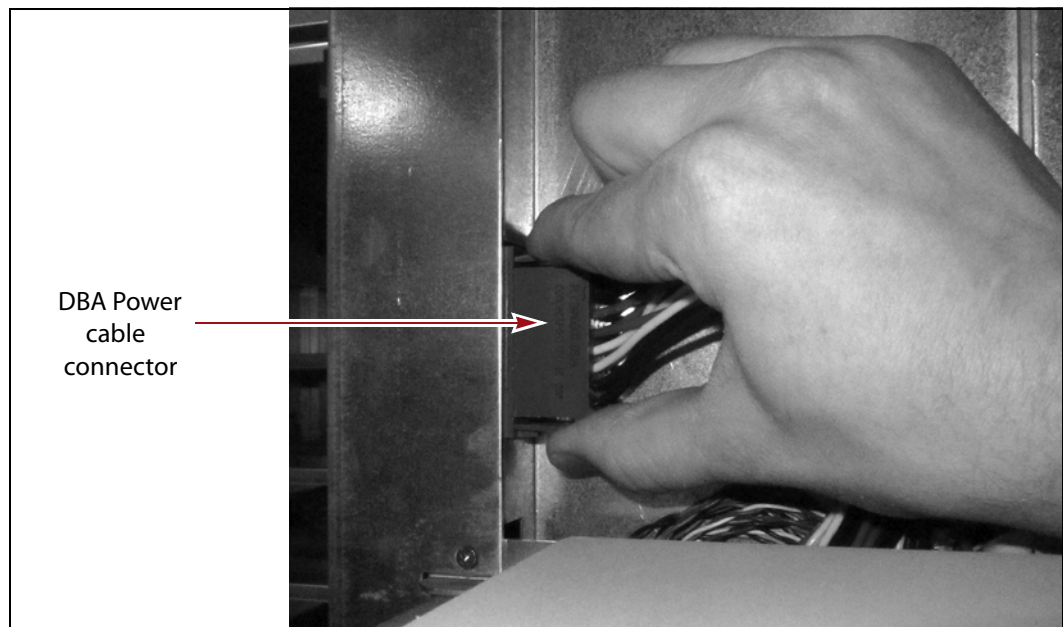


Figure 40 Unplug the DBA power cable.

5. Unplug the DBA CAN cable. Press and hold the latch that secures the cable connector and pull the connector away from the CAN board.

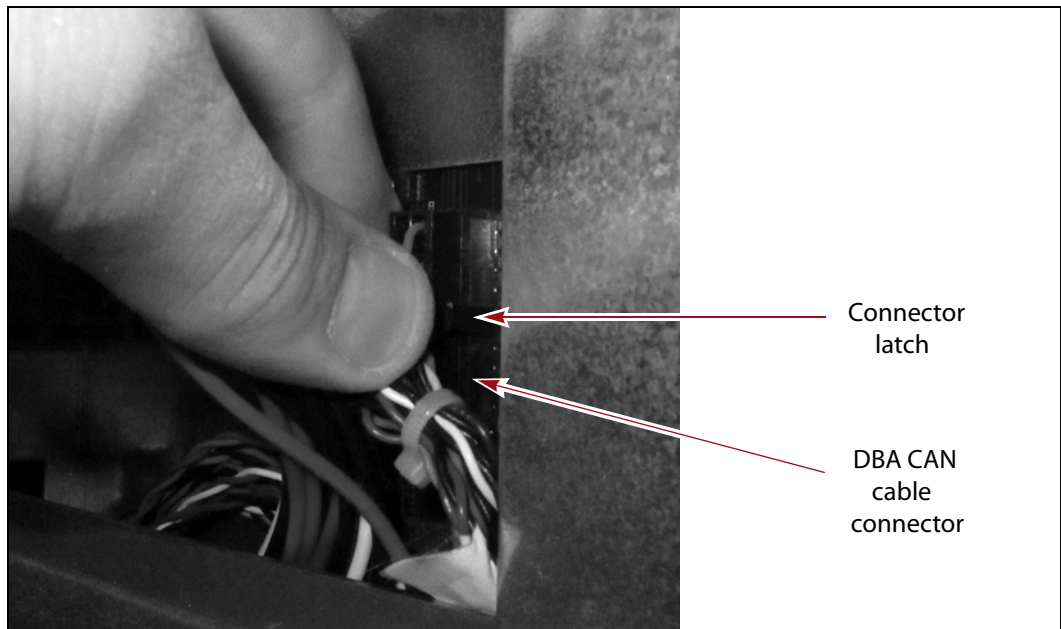


Figure 41 Unplug the DBA CAN cable.

6. Using a #2 Phillips screwdriver, remove the four screws securing the DBA to the library.



Figure 42 Remove the DBA screws.

7. Remove the DBA from the library.
 - a. Bend the CAN and power cables attached to the DBA away from the library frame (see [Figure 43](#))
 - b. Firmly grasp the dividers in the center of the DBA and pull the unit partially out of the library.
 - c. Using both hands, lift the DBA out of the library.

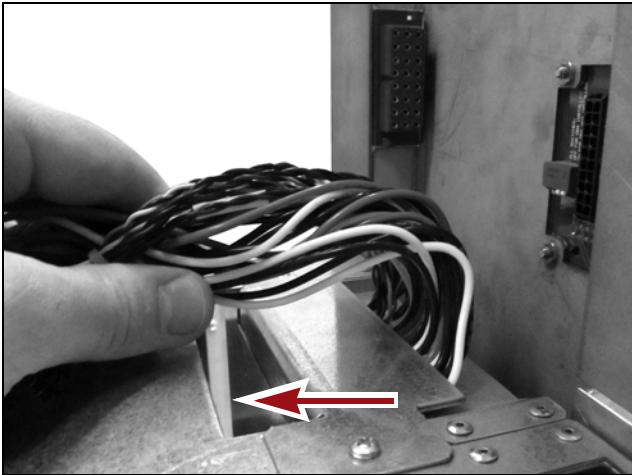


Figure 43 Pull cables away from library frame.



Figure 44 Remove the DBA from the library.



Warning

To avoid being pinched, do not reach into the drive bays in the DBA.

Warnung: Greifen Sie nicht in die Laufwerksschächte in den DBA.

8. If you need to remove additional DBAs repeat [Step 1 on page 29](#) through [Step 7](#) as needed to remove the failed bay assembly. Set the failed DBA aside for return to Spectra Logic. See [Return the Component on page 44](#).
 - If you are replacing the DBA you just removed, skip to [Install a DBA on page 34](#)
 - If you need to remove a TBA to access the failed bay assembly, continue to [Remove a TBA on page 33](#).

Remove a TBA

Use the following steps to remove a TBA from the library.

Note: You will need to remove the TBA with its TeraPack magazines still installed in the assembly.

1. Using a #2 Phillips screwdriver, remove the four screws securing the TBA to the library.

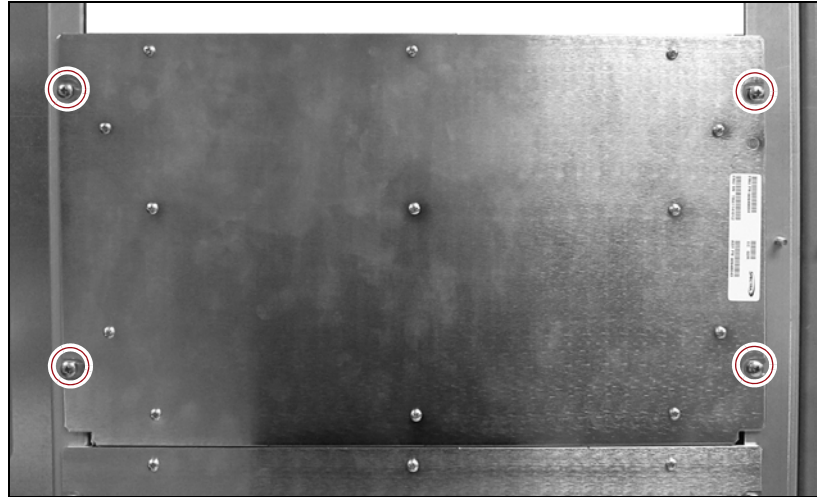


Figure 45 Remove the TBA screws.

2. Gently remove the TBA from the library.
 - a. Pull on the top edge of the assembly and tilt the top of the assembly towards you.



Caution

Be careful that the magazines do not fall out of the open end of the TBA when removing it from the library. Severe damage can occur to both the library internal components and the TeraPack magazines and media.

- b. With both hands, grab the sides of the TBA and tilt the interior side of the TBA upwards, and lift it out of the library.

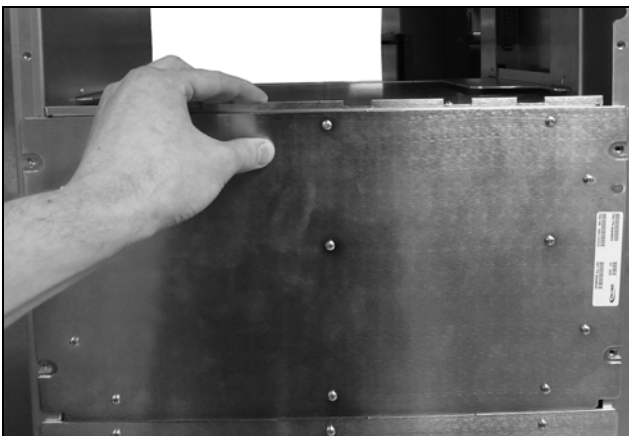


Figure 46 Pull the TBA out of the library.



Figure 47 Angle the interior side of the TBA upwards during removal.

3. Once the failed TBA has been removed from the library, set it aside for return to Spectra Logic. See [Return the Component on page 44](#).
 - a. Remove the magazines from the TBA and set them in a safe location until the end of the replacement.
 - b. Cover the magazines with the optional dust cover, if available.
4. If you need to remove additional TBAs, repeat [Step 1 on page 33](#) through [Step 3](#) as needed.
 - If you are replacing the TBA you just removed, skip to [Install a TBA on page 38](#).
 - If you need to remove a DBA 1 or 2, go back to [Remove a DBA on page 29](#).

Install a DBA

Use the following steps to install the replacement DBA into the library.

1. Place the DBA inside the library, but do not fully seat it.



Warning

To avoid being pinched, do not reach into the drive bays in the DBA.

Warnung: Greifen Sie nicht in die Laufwerksschächte in den DBA.

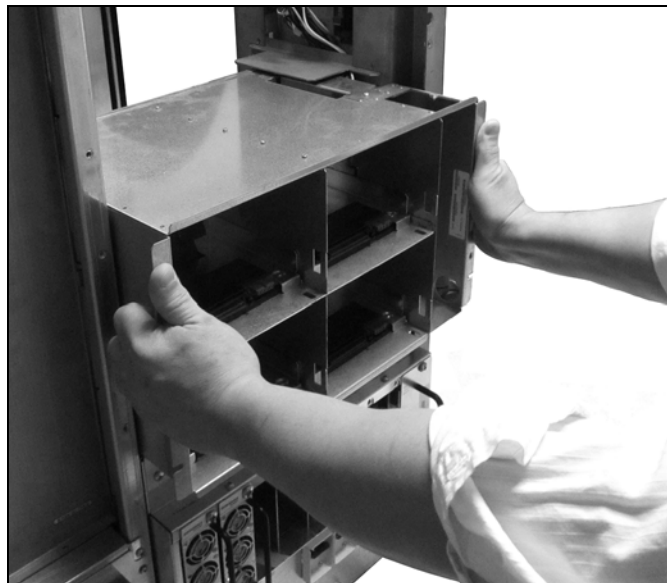


Figure 48 Install the DBA.

2. Connect the power cable connector to the power socket inside the library. An audible click indicates the connector is fully seated. The connector is keyed to only fit one way, do not force it.



Figure 49 Connect the power cable.

3. Connect the CAN cable to the CAN board inside the library. Pull on the connector gently to ensure it is fully seated.

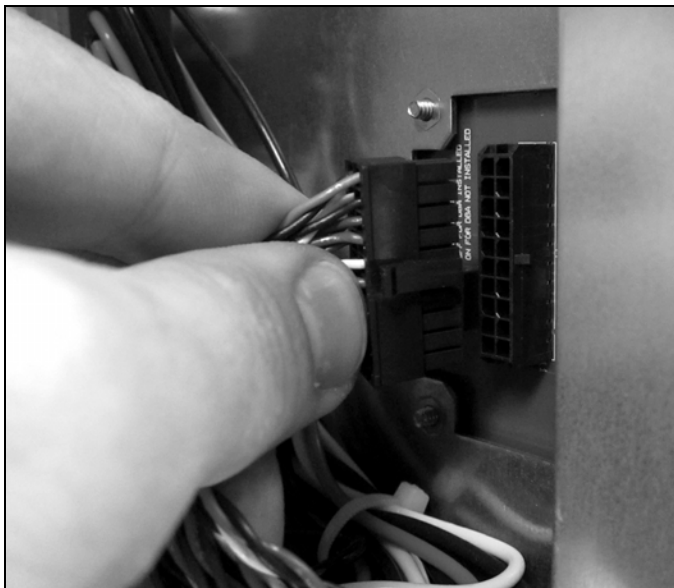


Figure 50 Connect the CAN cable.

4. Push the excess length of the power and CAN cables into the gap along the right side of the library chassis under the cable connectors.

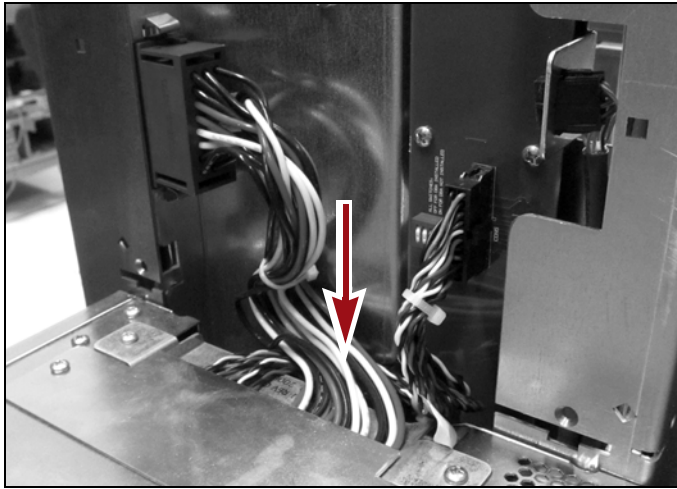


Figure 51 Push excess cable length into the gap under the cable connectors.

5. Fully seat the DBA in the library and using a #2 Phillips screwdriver, install the four screws that secure the DBA in the library.
6. Verify the rocker switch settings. The rocker switches are located just above the DBA. Confirm the switches are in the proper position for a DBA (see [Figure 52](#) and [Figure 53](#)).

Note: Depending on when your library was manufactured, one of two styles of rocker switches will be present in the library.

- On older rocker switches, all switches are pulled out (open position).
- On newer rocker switches, all switches are pressed in at the top end of the switch (open position).



Caution

Incorrectly set rocker switches will cause motion failures and backup operations to fail.

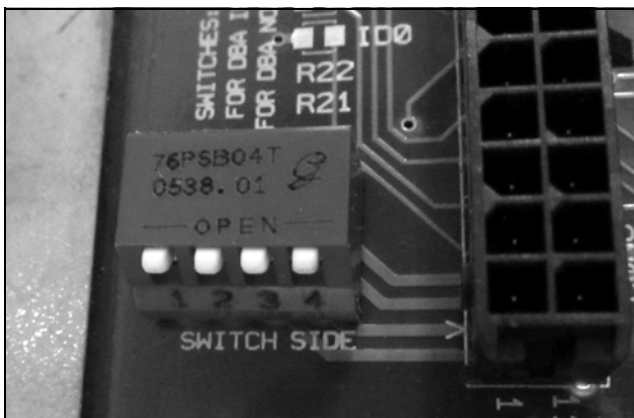


Figure 52 Older style rocker switches set for a DBA with the switches set in the open position.

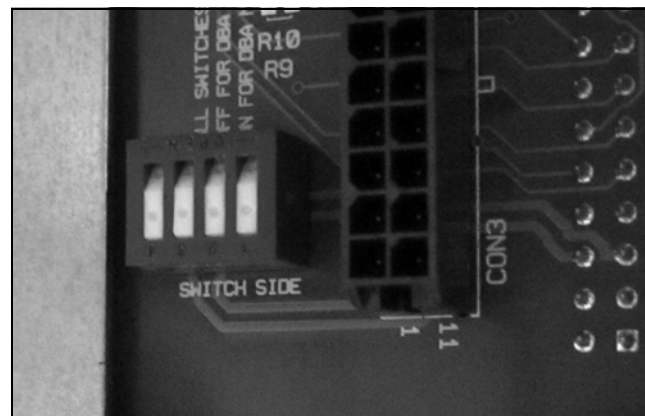


Figure 53 Newer style rocker switches set for a DBA with the switches set in the open position.

7. Install the support shelf above the DBA.
 - a. Angle the short edge of the support shelf into the cutouts in the right side of the library as viewed from the rear.
 - b. Rotate the shelf downward until it rests in a horizontal position.
 - c. Using a #2 Phillips screwdriver, install the two screws that secure the support shelf to the library.

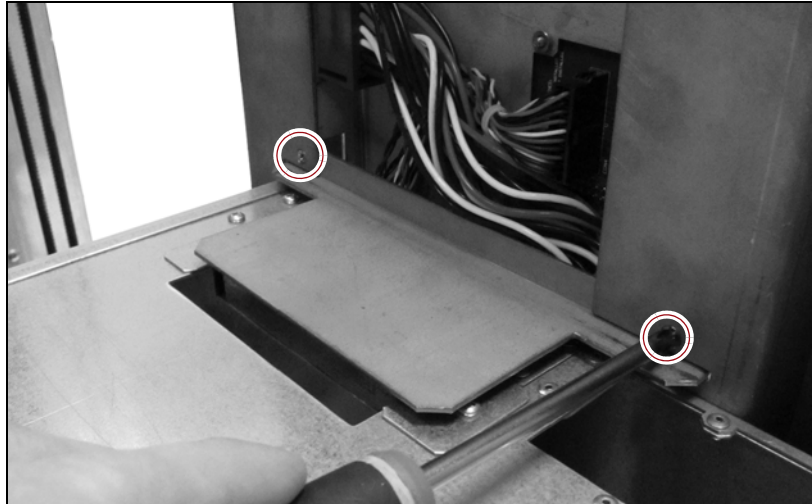


Figure 54 Install the support shelf screws.

8. If you removed additional DBAs to install the replacement DBA, repeat [Step 1 on page 34](#) through [Step 7](#) as needed to install the remaining DBAs.
9. If you are installing the topmost DBA (DBA 6) in a library frame that includes a BlueScale Vision camera, make sure that the camera power cable is resting on top of the DBA and not hanging in front of it.

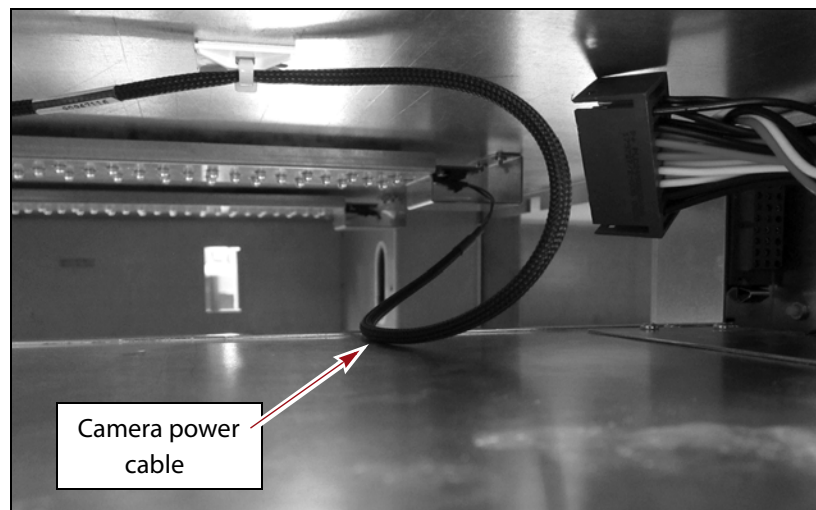


Figure 55 The camera power cable resting on the top DBA.

If you need to install TBAs to complete the replacement, continue to [Install a TBA on page 38](#). Or, if you have installed all of the bay assemblies you removed, skip to [Reinstall Components on page 40](#).

Install a TBA

1. Install and fully seat the TBA inside the library. Using a #2 Phillips screwdriver, install the four screws that secure the TBA to the library.

**Caution**

Do not install the TBA with magazines in the shelves. Incorrectly placed magazines can result in robotic motion failures and mixing of media across partitions. Magazines will be imported at the end of the procedure.

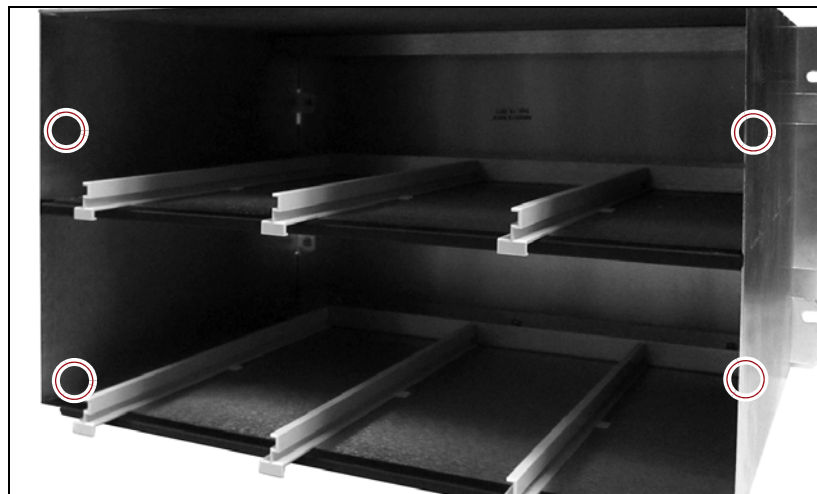


Figure 56 Install the TBA screws.

2. Verify the rocker switch settings. The rocker switches are located just above each TBA. Confirm the switches are in the proper position for a TBA (see [Figure 57](#) and [Figure 58](#)).

Note: Depending on when your library was manufactured, one of two styles of rocker switches will be present in the library.

- On older rocker switches, all switches are pressed in (closed position).
- On newer rocker switches, all switches are pressed in at the bottom of the switch (closed position).



Caution

Incorrectly set rocker switches will cause motion failures and backup operations to fail.

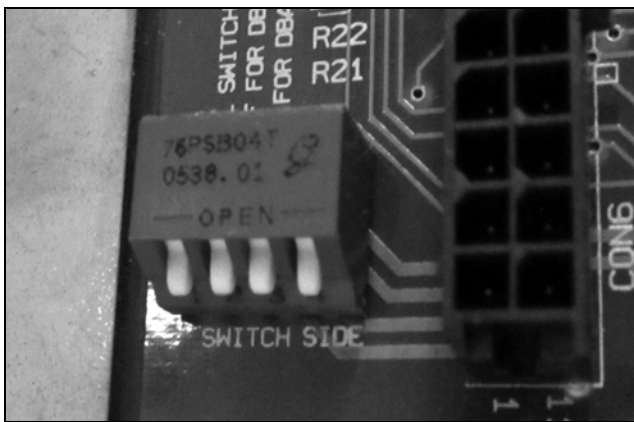


Figure 57 Older style rocker switches set for a TBA with the switches set in the closed position.

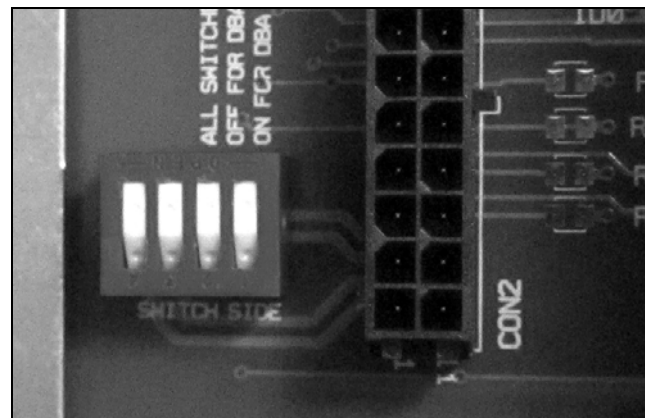


Figure 58 Newer style rocker switches set for a TBA with the switches set in the closed position.

3. If you need to install additional TBAs, repeat [Step 1](#) through [Step 2](#) on [page 39](#) as needed.

REINSTALL COMPONENTS

Install Drives, Interface Controllers and Covers.

Reinstall the drives, any interface controllers and bay covers removed during the replacement process. Install the drives in the location you made note of in [Remove Drives, Interface Controllers and Covers](#) on page 27.

**Caution**

Putting a drive in a different position than the one you removed it from may cause backup failures.

1. Install drives.

- a.** While supporting the bottom of the drive sled, push inward on the drive sled handle to install the drive into the library. The locking latch will click when the drive is fully seated.

**Caution**

The drive sled weighs approximately 15 lb (7 kg). Be careful not to drop it.

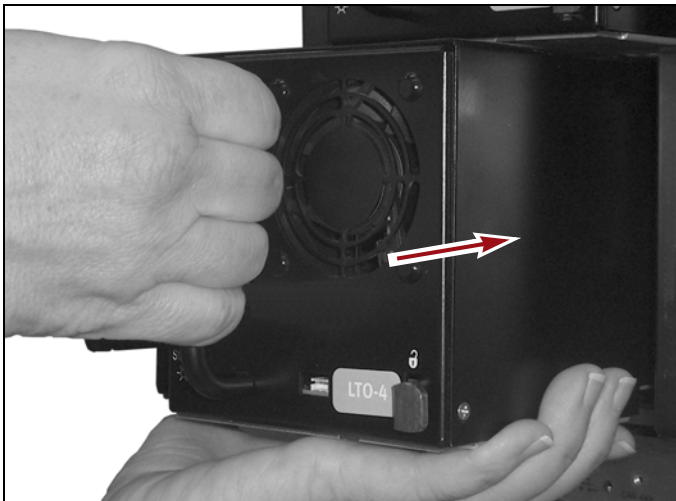


Figure 59 Install the drive.

- b.** Pull gently on the handle of the drive to confirm the drive is locked in place.
- c.** Repeat for each additional drive.

2. Install interface controllers
 - a. Orient the interface controller (QIP or RIM) so that the captive screws are facing to the right.

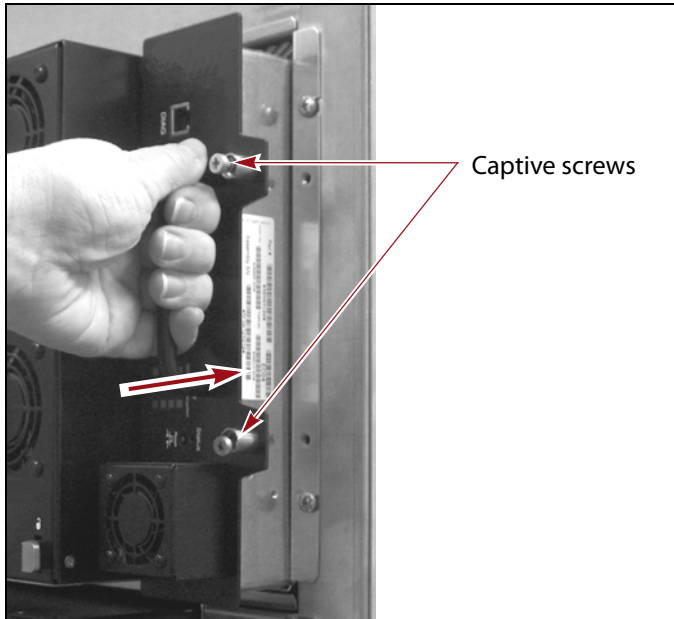


Figure 60 Install a QIP or RIM.

- b. Firmly slide the interface controller into the controller bay.
 - c. Using a #2 Phillips screwdriver, tighten the captive screws to secure the interface controller to the DBA.
 - d. Repeat for each additional controller.
3. Install bay covers. If you removed any drive or interface bay covers, reinstall them back in the same location.
 - a. Orient the cover over the open bay.
 - b. Use a #2 Phillips screwdriver to install the screws to secure the covers to the DBA.
 - c. Repeat for each additional cover.
4. Connect cables
 - a. Reconnect fiber cables to the same drive or interface controller you disconnected it from.
 - b. Pull gently on each cable connector to confirm it is fully seated.
 - c. Repeat for each additional cable.

To complete the replacement, skip to [Complete the Replacement on page 42](#).

Complete the Replacement

This chapter describes the procedure for testing the replacement DBA or TBA as well as instructions for returning the failed component to Spectra Logic.

TEST THE REPLACEMENT

After you install the replacement DBA or TBA, use the following steps to confirm that it is operating properly.

Power on the Library

1. Remove the AC breaker lock if it was installed before you began the replacement procedure.
2. Reconnect power cords.
3. Set the main AC breaker switches on the back of the main frame and each drive frame to the **on** position.
4. Press and hold the front panel power button until the LCD turns on.

Reset Robotics Geometry


1. Log into BlueScale using the operator panel or through the BlueScale web interface using a standard web browser.
2. From the toolbar menu, select **Maintenance**  **Tools**. The Maintenance Tools screen displays.



Figure 61 The Maintenance Tools screen.

3. Select **Utilities**. The Utilities screen displays.
4. Click **Show Advanced**. The Advanced Utilities Confirmation screen displays.

5. Click **Next**. The Utilities screen refreshes to show a list of the advanced utilities.
6. Scroll through the list of advanced utilities and select **Reset Robotics Geometry**. The screen refreshes to show the details for the utility.




Figure 62 Select the Reset Robotics Geometry utility.


7. Click **Run Utility**. A progress screen displays while the utility runs.
8. When the operation is complete, the Utility Results screen displays, showing that the robotics geometry was reset.

Note: After running the utility, the first time the library loads a cartridge into each of the installed drives, it performs a calibration to find the ideal loading position for the drive. This “hunt and peck” behavior is normal.

Run Diagnostics

1. Select **Maintenance**  **Diagnostics**. The Diagnostic screen displays.
2. Click **All Basic Motion Tests**. The screen refreshes to show the details of the diagnostic.
3. Click **Run Diagnostic**. The library will run motion tests to verify there are no blockages in the library. If any motion test fails, contact Spectra Logic for assistance (see [Contacting Spectra Logic on page 2](#)).

Verify Magazine Barcodes

1. From the toolbar menu, select **Maintenance**  **Tools**. The Maintenance Tools screen displays.
2. Select **Utilities**. The Utilities screen displays.

3. Click **Show Advanced**. The Advanced Utilities Confirmation screen displays.
4. Click **Next**. The Utilities screen refreshes to show a list of the advanced utilities.
5. On the Advanced Utilities screen, select **Verify Magazine Barcodes**. The screen refreshes to show the details for the utility.
6. Click **Run Utility**. The library will inventory all TeraPack magazine barcodes. A progress screen displays while the utility runs.

Reimport TeraPack Magazines

If you removed TeraPack magazines from the library during the replacement, use the BlueScale interface to reimport the magazines into the library. See the *User Guide* for your library if you need additional information on importing TeraPack magazines.

RETURN THE COMPONENT

Return Guidelines

Unless Spectra Logic Technical Support informs you otherwise, return the defective component to Spectra Logic following the guidelines in this section. If Spectra Logic Technical Support informs you that the component does not need to be returned, dispose of it in a manner in compliance with your company guidelines.

Return Procedures

After you complete the replacement procedure, return the defective component using ALL of the packaging material shipped with the replacement component (including any anti-static bags or foam inserts).



Caution

Severe damage can occur if the component is not packaged correctly, and you may be invoiced if it is received with damage due to improper or insufficient packaging.

Use the return label and instructions that were included with the replacement component when preparing to ship the replacement part. If you cannot locate these, contact Spectra Logic for another copy (see [Contacting Spectra Logic on page 2](#)). The return label and RMA printed on it are used to associate the returned part with your account. To avoid being invoiced for failure to return the part, do not ship the part back without the RMA return label.