# Spare Chassis Replacement Instructions

This document describes how to remove and replace either a Base Module or Expansion Module in a NEOxl 80 Tape Library from Overland-Tandberg.


**WARNING:** To reduce the risk of electric shock or damage to equipment, always remove any power cords while working with the library.

**WARNUNG:** Um das Risiko eines elektrischen Schlags oder Schäden am Gerät zu vermeiden, ziehen Sie stets den Netzstecker, bevor Sie an der Einheit arbeiten.

**AVERTISSEMENT:** Pour réduire le risque de choc électrique ou endommagement de l'équipement, retirez toujours les cordons électriques en travaillant avec l'appareil.

**CAUTION:** While working with the library, observe standard Electrostatic Discharge (ESD) precautions to prevent damage to micro-circuitry or static-sensitive devices.

## Special Handling Notice

Each NEOxl 80 Base Module weighs more than 90 lbs (44kg) without drives or tapes, and more than 156 lbs (70kg) with six tape drives and 80 tapes.

Before moving or lifting the Base Module, remove all tape drives and tapes to reduce the weight (see below).

## Overview

**CAUTION:** In the NEOxl 80 Tape Library, do not replace both the library controller and the Base Module chassis at the same time as the serial numbers for both cannot be updated when both are replaced simultaneously. If you receive a new library controller and chassis for the Base Module, first install the new library controller in the old Base Module as directed in the Spare Library Controller Replacement Instructions, then follow these instructions to replace the Base Module chassis.

To replace an existing NEOxl 80 Tape Library module, the steps include:

1. Save the library configuration.
2. After removing the tape cartridges and drives, remove the old module from the rack.
3. If necessary, transfer the top and/or bottom cover from the old module to the new one.
4. Move the power supplies, DC-DC board, and controller from the old module to the new one.
5. Install the new module in the rack and align the module with the rest of the library.
6. Reinstall tape cartridges and drives into the new module in the same locations.
7. Reconnect the cables and verify the installation.

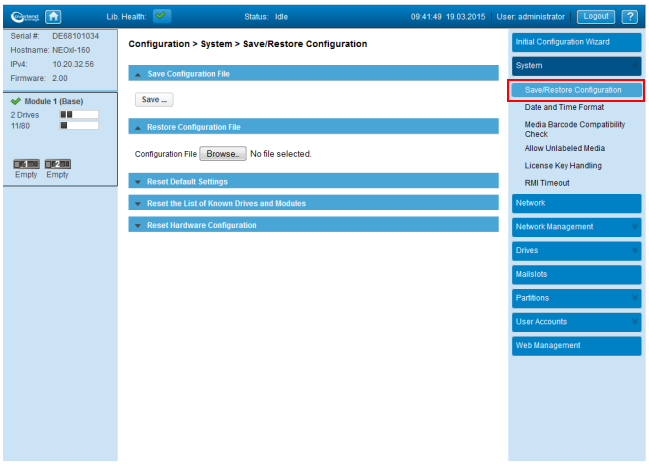
You will need a small flat head or Torx screwdriver and a #2 Phillips screwdriver.

# Prepare the Library

## Save the Configuration

This process is only needed for the NEOxl Base Module.

1. If you are saving the configuration file to a **USB drive**, insert the drive into one of the ports on the Base Module.
2. Navigate to the **Configuration > System > Save/Restore Configuration** screen.
3. Select the **destination** location for the download:
   - **RMI**: Downloads the file to the browser or system running the RMI.
   - **USB Device Front**: Downloads the file to the USB drive inserted into the front USB port.
   - **USB Device Rear**: Downloads the file to the USB drive inserted into the rear USB port.
4. Click **Save**.

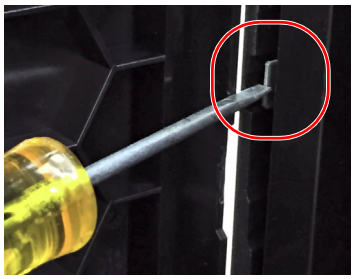


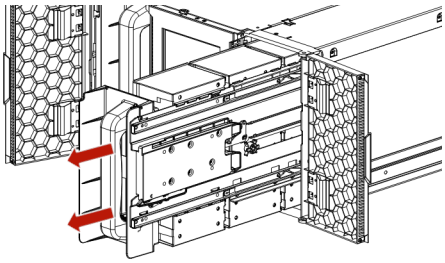

## Remove Tape Cartridges

Remove the tape cartridges from just the Base Module or Expansion Module being replaced.

**IMPORTANT:** Overland recommends that you remove the cartridges to reduce the unit's weight prior to removal.

1. Open the **left door**.
2. Using a small flat head screwdriver or Torx driver, gently push in the release tab located in the middle next to the door.





**CAUTION:** Do not exert force once you encounter resistance. Doing so can damage the device.

3. Slowly **pull the magazine** free of the latch.
4. Remove **cartridges** from the magazine noting the slot from which each cartridge was removed.
5. Reinsert the **empty magazine** and close the door.
6. If the **right magazine** is present, open the right door and repeat Steps 2–4 for the right magazine.

Left Magazine

| | | | |
|---|---|---|---|
| 1 | 11 | 21 | 31 |
| 2 | 12 | 22 | 32 |
| 3 | 13 | 23 | 33 |
| 4 | 14 | 24 | 34 |
| 5 | 15 | 25 | 35 |
| 6 | 16 | 26 | 36 |
| 7 | 17 | 27 | 37 |
| 8 | 18 | 28 | 38 |
| 9 | 19 | 29 | 39 |
| 10 | 20 | 30 | 40 |

Optional Right Magazine

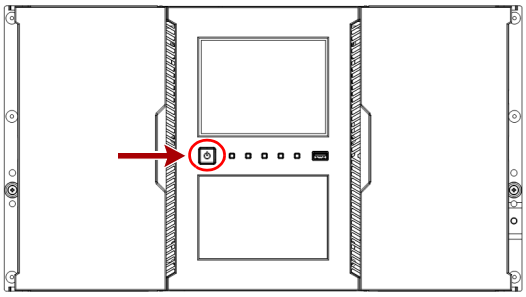
| | | | |
|---|---|---|---|
| 41 | 51 | 61 | 71 |
| 42 | 52 | 62 | 72 |
| 43 | 53 | 63 | 73 |
| 44 | 54 | 64 | 74 |
| 45 | 55 | 65 | 75 |
| 46 | 56 | 66 | 76 |
| 47 | 57 | 67 | 77 |
| 48 | 58 | 68 | 78 |
| 49 | 59 | 69 | 79 |
| 50 | 60 | 70 | 80 |

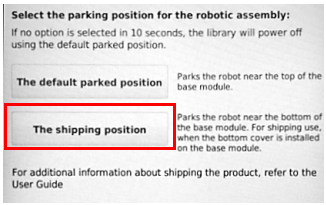
*NOTE: Depending on the model, the optional right magazine may have 20 or 40 cartridges and may or may not have Mail Slots configured. The example provided here shows all 80 slots with no mail slots configured.*

## Power Off the Library

1. Power off the library from the front panel by pressing and holding down the **power button** for three (3) seconds.
2. During the shutdown, when you are given a choice of where to position the robotics, select the **Shipping Position**.

   *NOTE: If the library does not perform a soft shutdown, press and hold the power button for 10 seconds.*
3. Verify:
   - The Robotic Assembly is in its **shipping position**.
   - That all host processes are **idle**.





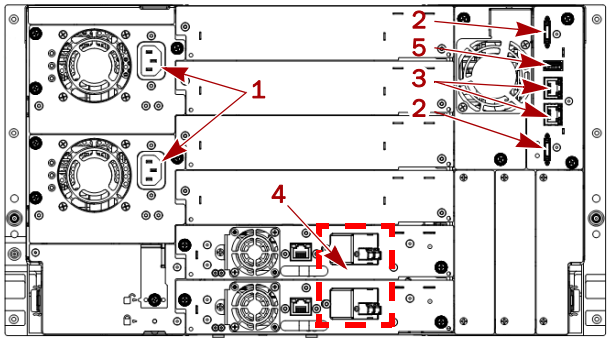

# Remove Old Module

## Remove Cords and Cables

Disconnect all cables and cords, noting where they connect.

1. Unplug any **AC power cords** (1).
2. Remove the **expansion interconnect cables** (2) from any Base Module and Expansion Modules to which the old module is connected.

   *NOTE: Completely remove the expansion interconnect cables from the modules to prevent damaging the cables during module removal and replacement.*
3. On a Base Module:
   a. Label and remove any Ethernet **management cables** (3) from the controller.
   b. Label and remove any **SAS/FC cables** (4) from the tape drives.
   c. If present, remove the optional **USB device** (5).

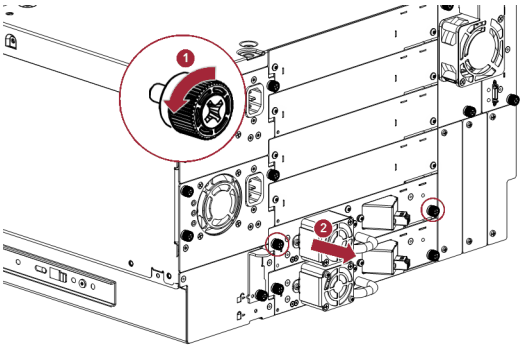



## Remove Tape Drives

*NOTE: Because the library tracks the drive locations and issues events if the drives aren't in the expected locations, label the drives so they can be reinstalled in the same drive bays.*

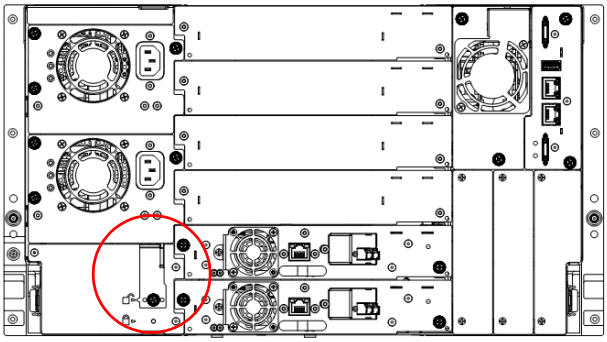
1. Use your fingers to loosen the **blue thumbscrews** on the tape drive.
2. While supporting the bottom of the drive, pull straight back on the tape **drive handle** to remove it from the module.

   **CAUTION:** Support the bottom of the tape drive when removing it to avoid damaging any internal connections.
3. Place the drive on a secure **ESD surface**.
4. Repeat Steps 1–3 for any **additional drives**.



## Disconnect Modules

If the NEOxl 80 Tape Library is comprised of more than one module, you need to disconnect the modules from the unit you are replacing.



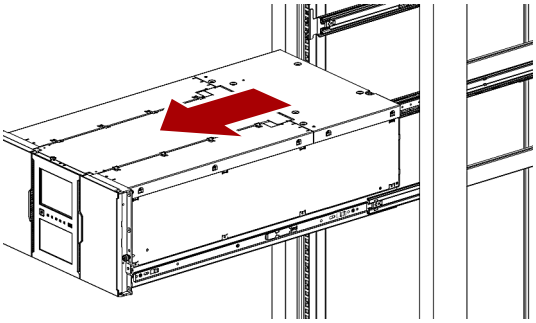
1. From the front of the library, loosen the **thumbscrews** on the flanges two full turns of any modules above and below plus the module being replaced.
2. Release the **alignment mechanism** on the module being replaced:
   a. Loosen the **thumbscrew** on the module alignment mechanism.
   b. Raise the **alignment mechanism**.
   c. With the alignment mechanism in the **unlocked position**, retighten the thumbscrew.

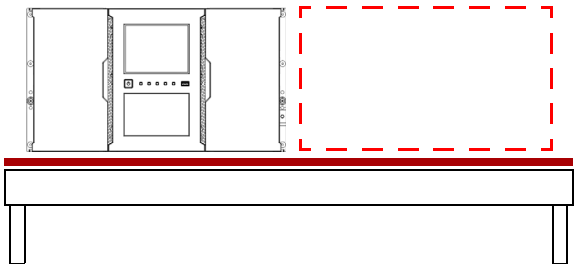
## Remove Module from the Rack

**WARNING:** To avoid injury, it is recommended that a mechanical lifter (or at least two people) be used for rack installation or removal. Use care during rack installation or removal to avoid accidentally tilting or tipping the rack, causing damage or personal injury.

**WARNUNG:** Um Verletzungen zu vermeiden, empfehlen wir zur Rack-Installation oder -Deinstallation die Nutzung einer mechanischen Hebehilfe (oder mindestens zwei Personen). Seien Sie vorsichtig bei der Rack-Installation oder -Entnahme, um ein versehentliches Kippen des Racks zu vermeiden und das Rack nicht zu beschädigen bzw. sich selbst zu verletzen.

**AVERTISSEMENT:** Afin d'éviter des blessures pendant l'installation, il est recommande d'utiliser un monte-charge (ou au moins deux personnes) pour élever ou aligner l'module. Faites attention lorsque vous insérez ou retirez l'module d'un support, pour empêcher le déversement accidentel de la crémaillère causant des dommages et des blessures.



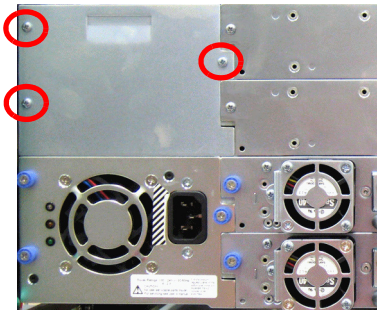


1. Release the **captive screws** on the bottom of the module flanges that secure the it to the rack.
2. Position the **mechanical lifter** in front of and even with the module.
3. Slide the **module** out of the rack onto the **lifter**.
4. Place the old module on a secure **ESD surface**.

   Leave enough room to place the new module next to it.
5. Unpack the **chassis replacement** and place it next to the old module.

## Remove the Power Supply Cover Plate

If you need to install two power supplies in the new chassis, you will need to remove the second bay cover plate.

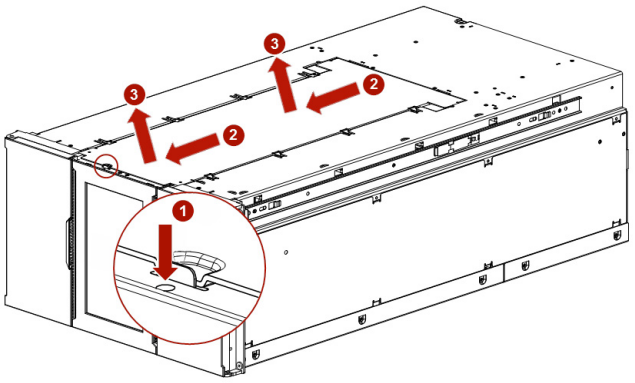


1. At the new chassis, using a Phillips screwdriver, remove and retain the **three screws** securing the power supply cover plate.
2. Set the **cover plate** on a secure surface.

# Swap Components

## Move Covers

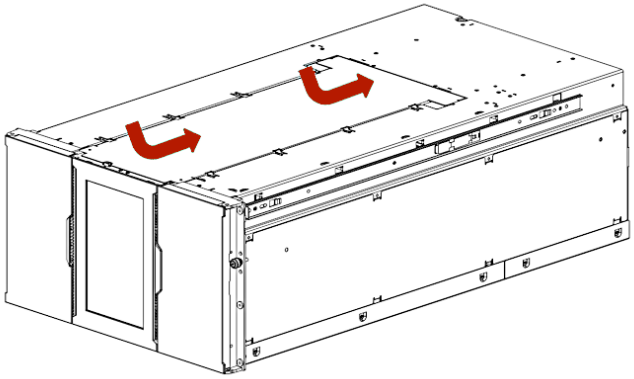
**IMPORTANT:** When replacing an module in either the top or bottom position, you must move the cover from the old module to the new one.



If necessary, move a **top** cover:

1. At the old module, insert a small flathead screwdriver or Torx screwdriver into the front hole (1) to retract the **spring lock**, slide the **cover** forward (2) until it reaches the tool, remove the tool, and then continue sliding the cover to the front of the module until all the tabs are released.
2. Remove the **cover** (3) from the existing module.
3. At the new module, install the **cover**.

   Align all cover tabs with the slots, gently push it down, and then slide the cover towards the rear until the spring lock engages.

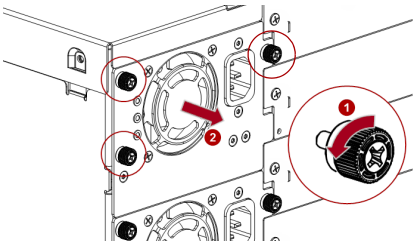


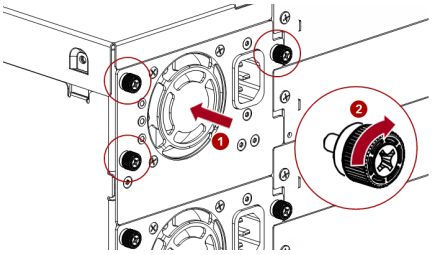
If necessary, move a **bottom** cover:

1. Gently turn both modules **upside-down**.
2. At the old module, insert a small flathead screwdriver or Torx screwdriver into the front hole (1) to retract the **spring lock**, slide the **cover** forward (2) until it reaches the tool, remove the tool, and then continue sliding the cover to the front of the module until all the tabs are released.
3. Remove the **cover** (3) from the existing module.
4. At the new module, install the **cover**.

   Align all cover tabs with the slots, gently push it down, and then slide the cover towards the rear until the spring lock engages.
5. Gently turn both modules **back over**.

## Move Power Supplies



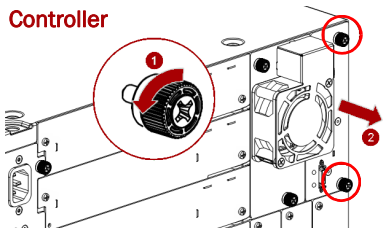


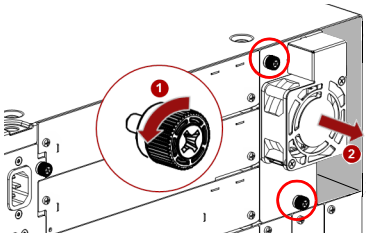
1. At the old module, loosen the **three blue thumbscrews** on the power supply.
2. Using the thumbscrews, slowly pull the **power supply** approximately 4 inches (10 cm) out of the library.
3. While supporting the bottom of the power supply with one hand, use the other hand to completely **remove** the **power supply** from the module.
4. At the new module, position the **power supply** onto the alignment rails.
5. Slide the **power supply** into the library until it is flush with the rear panel of the library.
6. Finger-tighten the **three blue thumbscrews** to secure the power supply to the library.
7. Repeat Steps 1–6 to remove any other **power supply**.

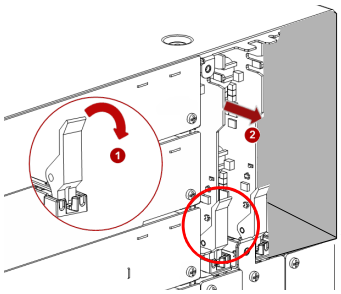
## Move Controller, Fan Assembly, & Drive Power Board

Located at the upper right of the rear panel are a controller card and a fan assembly. If tape drives are installed, a drive power board is located behind the fan.

1. At the **old** module, loosen the **two blue thumbscrews** and slowly remove the controller from the module, setting it on an ESD surface.
2. Loosen the **two blue thumbscrews** and slowly remove the fan assembly, setting it on an ESD surface.
3. If present, move the **drive power board**:
   a. Push down the drive power board **latch** to release it.
   b. Slowly slide the **drive power board** out of the module.
   c. At the **new** module, position the drive power board onto the **alignment rails**.
   d. Slide the **drive power board** in until seated firmly.
   e. Push the board **latch** up until it snaps into place.
4. Position the **fan assembly** on the alignment rails, slide it in until it is flush with the rear panel, and finger-tighten the **thumbscrews** to secure it.
5. Position the **controller** on the alignment rails, slide it in until it is flush with the rear panel, and finger-tighten the **thumbscrews** to secure it.



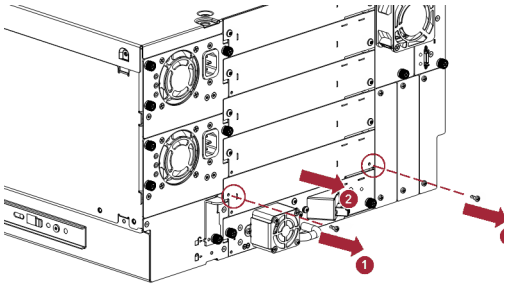


## Move Covers

If any tape drives were removed from the old module, the same drive bay covers from the new module need to be removed and installed on the old module covering all the now empty tape drive bays.

*NOTE: The bottom bay of a Base Module doesn't have a cover.*

If a second power supply was present and the cover removed from the new module, install it on the old module.



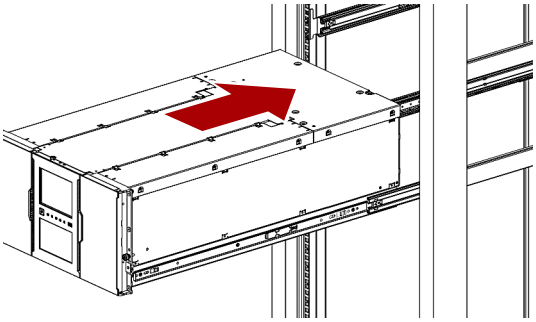
## Insert Module in Rack

**WARNING:** To avoid injury, it is recommended that a mechanical lifter (or at least two people) be used for rack installation or removal.

**WARNUNG:** Um Verletzungen zu vermeiden, empfehlen wir zur Rack-Installation oder -Deinstallation die Nutzung einer mechanischen Hebehilfe (oder mindestens zwei Personen).

**AVERTISSEMENT:** Afin d'éviter des blessures pendant l'installation, il est recommande d'utiliser un monte-charge (ou au moins deux personnes) pour élever ou aligner l'module.

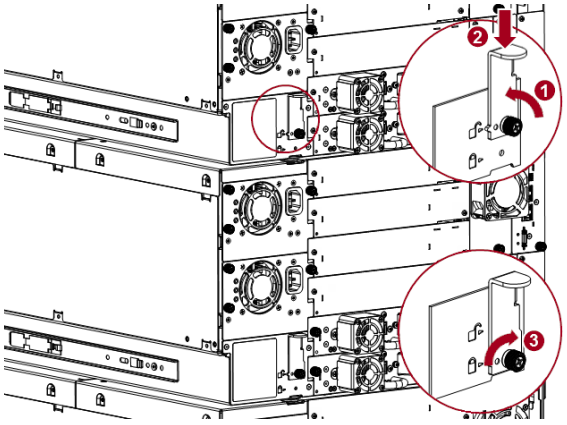
1. Slide out the **middle** slide rails on both sides.
2. Using the mechanical lifter, position the **module** in front of the rack.
3. Insert the library **inner rails** into the middle rails and slide the module into the rack.
4. Tighten the **captive screws** on the bottom of the library flanges to secure it.



## Aligning and Connecting the Module

Aligning the modules ensures that the robotics can move freely between the modules.

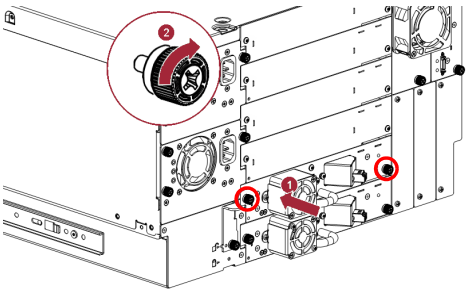
*NOTE: The library will not operate unless the alignment mechanism is in the locked position (except the bottom module).*



1. At the back of the library, using the **alignment lock lever**, align and lock the new module to the modules to which it connects.

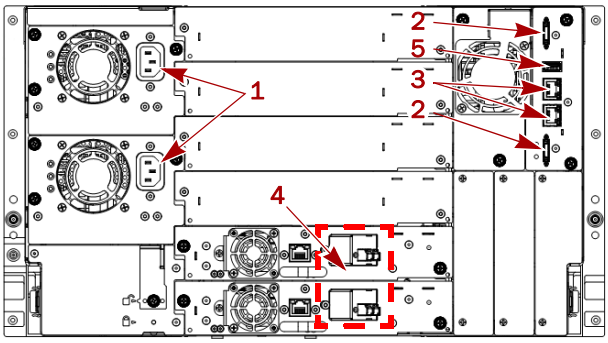
   If you encounter resistance, adjust the upper module so that the alignment mechanism pin moves into the mating hole in the lower module.
2. Verify that, for the **lowest** module in the library, its alignment mechanism is in the **unlocked position**.
3. From the front of the library, tighten the **recessed flange screws** on the new module and the adjacent modules to secure them all to the rack.

## Reinstall Tape Drives



1. Holding a **tape drive** by the handle and supporting it from the bottom, position it on the alignment rails in front of the appropriate bay.
2. Slowly slide the tape drive into the **drive bay** until it is flush with the rear of the library.
3. Finger-tighten the **blue thumbscrews** to secure it.
4. Repeat Steps 1–3 for any additional tape drives.

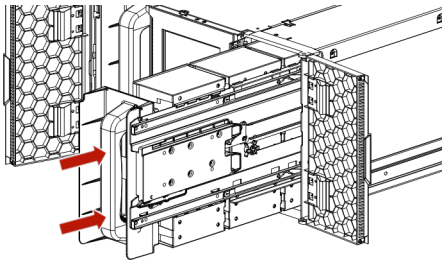
## Reattach Cables and Cords




1. Reconnect the **expansion interconnect cables** (2) from the new module to any adjacent modules.
2. Reconnect any **Ethernet management cables** (3).
3. Reconnect the **SAS/FC cables** (4) to any tape drives.
4. If removed earlier, reinsert the **USB device** (5).
5. Reconnect the **AC power cords** (1).

## Reinsert Tape Cartridges

Reinstall the previously removed tape cartridges.

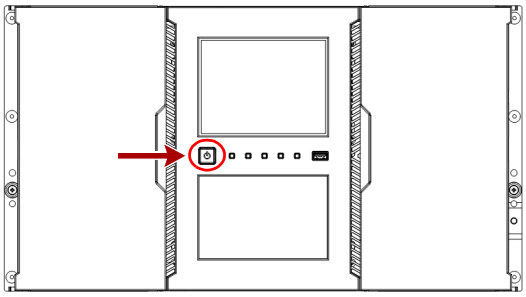


1. Release and pull the **magazine** out until fully extended.
2. Load the **tape cartridges** into the magazine in the same location they were in previously.

   Refer to the number on the assembly.
3. Push the **magazine** slowly in by the handle until the release latch snaps into place.
4. Repeat Steps 1–3 for the **other magazine**.

## Power On the Library

**CAUTION:** After the other components have been moved, the library must be turned on and off before replacing an old controller card with a new one. Replacing the controller before power cycling the library leads to library operation failure.



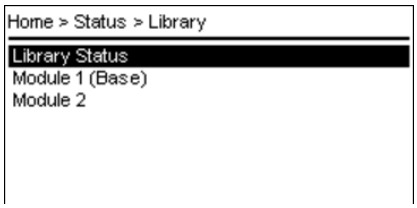
Power on the library from the Base Module front panel by pressing and holding down the power button for three (3) seconds until the green light on the front panel illuminates indicating the status is **Ready**.

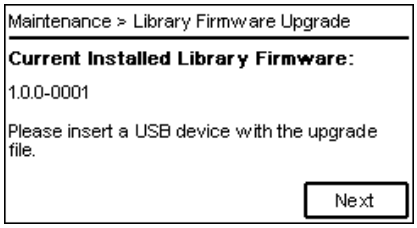
# Complete the Procedure

## Verifying the Installation & Firmware (Base)

From the OCP or RMI, use the **Status** option to verify that the new Base Module with all tape drives and magazines is visible. Before using your library, it is highly recommended that you verify it is running the latest library firmware version:

1. At the **Startup Screen**, note the firmware version.
2. Go to http://ftp.overlandstorage.com/Firmware/Neo_Series/Neo-XL/NEOxl80/ and check if newer firmware is available.
3. If newer firmware is found, download the **firmware** and **Release Notes**.
4. Update the firmware from the OCP or RMU using **Maintenance > Software Upgrades > System Firmware**.



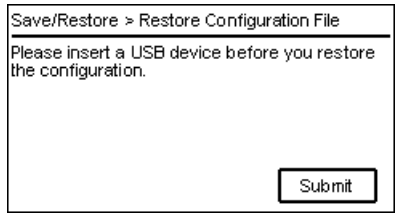




## Verify/Restore the Library Configuration

If necessary, restore the configuration to return the Base Module to the state it was in before this procedure.

*NOTE: Using the RMI is the faster recommended process.*

1. If using the OCP to restore the configuration file, insert the **USB drive** with the saved configuration into one of the USB ports on the Base Module.
2. Navigate to the **restore configuration** screen.
   - If using the RMI, go to **Configuration > Restore Defaults > Save/Restore Config to file** and click **Save**.
   - If using the OCP, go to **Configuration > Save/Restore > Restore Configuration File** and press **Submit**.
3. If using the OCP, remove the **USB device**.




## Warranty Part Returns to Overland

1. Place the **old module** in the anti-static bag and put it in the replacement part's box.
2. Use the existing **packing material** to secure it in the box.
3. Use an RMA to return the part to **Overland Storage**.

   For return shipping details and RMA number, go to: http://docs.overlandstorage.com/return-instructions.