Spare Base Module Instructions

This document describes how to remove and replace a Base Module in a NEOxl 40 (3U) tape library from Overland Storage.

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 40 Base Module weighs more than 44 lbs (20 kg) without drives or tapes, and more than 77 lbs (35 kg) with three tape drives and 40 tapes.

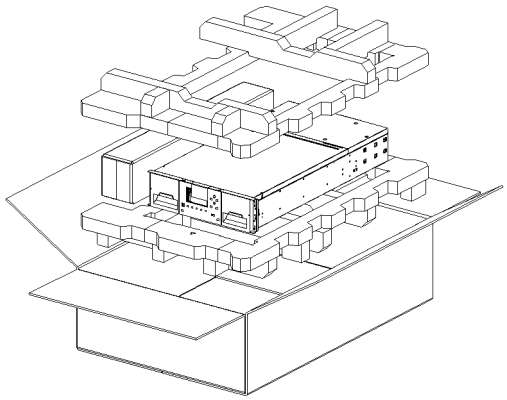
Before moving or lifting the Base Module, remove all tape drives and tapes to reduce the weight (see below).

Overview

To replace an existing Base Module, the steps include:

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

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

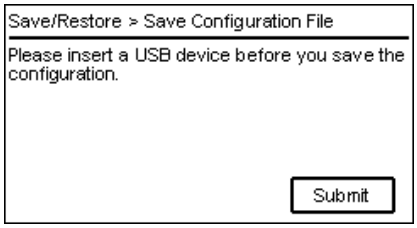


Prepare the Library

Save the Library Configuration

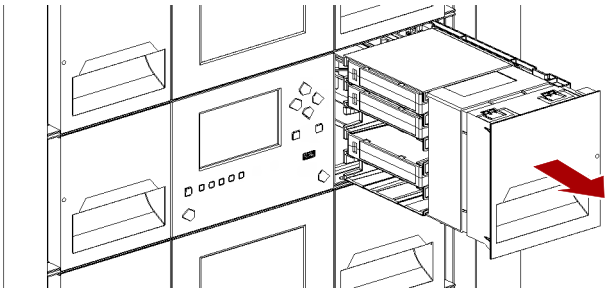
IMPORTANT: The library configuration settings are saved on the Base Module controller. It is recommended to save the configuration settings as a precaution before removing it.

1. Insert a **USB device** in the front USB port.
2. At the OCP, select **Configuration > Save/Restore > Save Configuration File** and press **Submit**.
3. At the confirmation message, click **Close**.
4. Remove the **USB device**.



Remove Tape Magazines

Make sure all activities are completed and all backup software services are stopped. Remove the tape magazines from the Base Module being replaced.

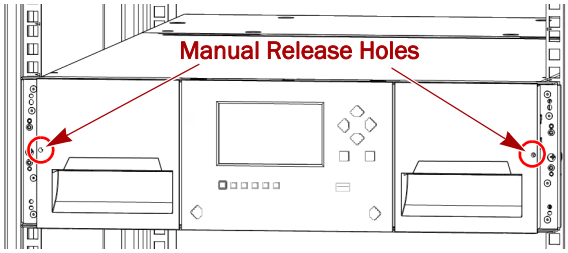


NOTE: If a magazine needs to be removed when the power to the device is off, refer to the Manual Release Process below.

1. From the OCP or RMI, first select the right magazine and then select **Open Magazine**.
2. Using the right magazine **access handle** and supporting it underneath, pull the magazine out of the library.
3. Place the magazine on a secure surface.
4. Repeat Steps 1–2 for the left magazine.

Manual Release Process

If power is not available on the Base Module, the magazines can be released using the manual release hole on the side of the magazine. Insert a small flat head screwdriver or Torx driver into the appropriate magazine release hole and gently push the tab in.



IMPORTANT: Do not continue to exert force once you encounter resistance. Doing so can damage the device.

Power Off Library

If still running, power off the library from the Base Module front panel by pressing and holding down the power button for three (3) seconds.

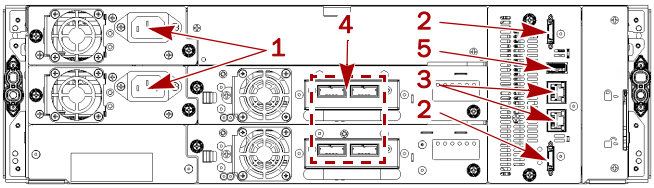
NOTE: If the library does not perform a soft shutdown, press and hold the power button for 10 seconds.

Verify that the Robotic Assembly is in its parked position and that all host processes are idle.

Remove Old Base Module

Remove Cords and Cables

Disconnect all cables and cords, noting where they connect.

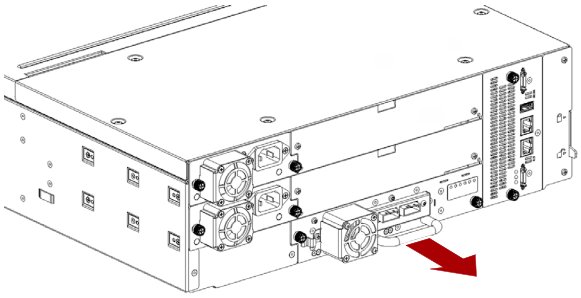


1. Unplug any **AC power cords** (1).
2. Remove the **expansion interconnect cables** (2) from the Base Module and any Expansion Modules to which it is connected.

   NOTE: Completely removing the cables from both ends prevents damaging the expansion interconnect cables during module removal and replacement.
3. Label and remove any Ethernet **management cables** (3).
4. Label and remove any **SAS/FC cables** (4) from the tape drives.
5. 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.



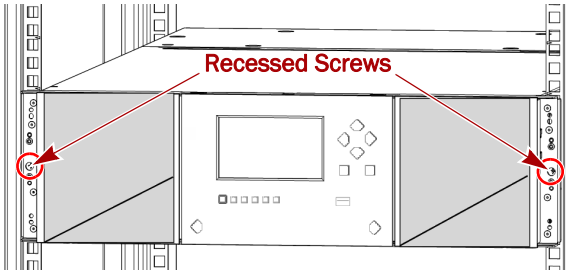
1. Use your fingers to loosen the **blue thumbscrews** on the tape drive.
2. While supporting the bottom of the drive, pull straight back on the tape **drive handle** to remove it from the module.

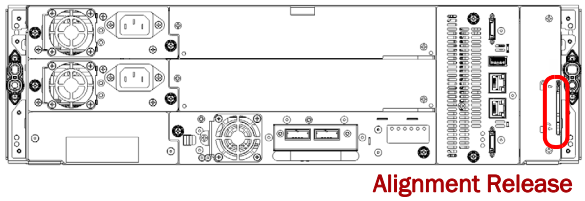
> **CAUTION:** Support the bottom of the tape drive when removing it to avoid damaging any internal connections.

3. Place the drive on a secure **ESD surface**.
4. Repeat Steps 1–3 for any **additional drives**.

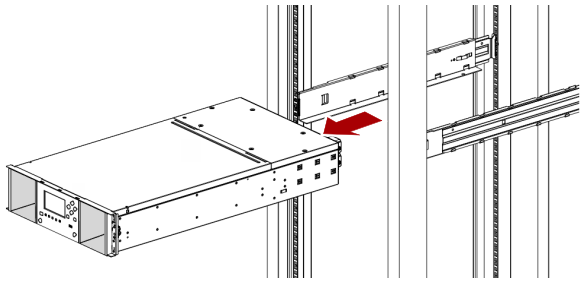
Remove Base Module from the Rack

> **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.





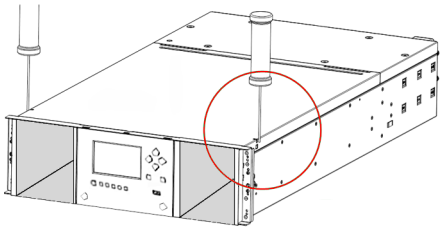
1. If there is **module** immediately above and/or below it:
   - From the front of the library, use a screwdriver Phillips #2 to loosen the screws two full turns on the Base Module and the adjacent modules.
   - From the back of the library, unlock the alignment mechanisms connecting the Base Module with all adjacent modules.
2. Position the **mechanical lifter** in front of and even with the Base Module.
3. Slide the Base Module out of the rack onto the lifter.
4. Place the module on a secure **ESD surface**.
5. Unpack the **new** Base Module and place in on the surface next to the old module.
6. Remove the **tape magazines** from the new unit using the Manual Release Process.

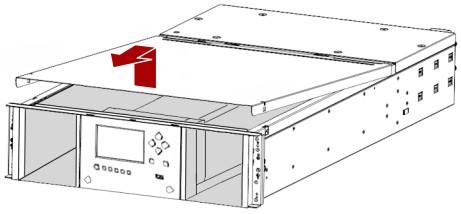


Swap Components

Move Covers

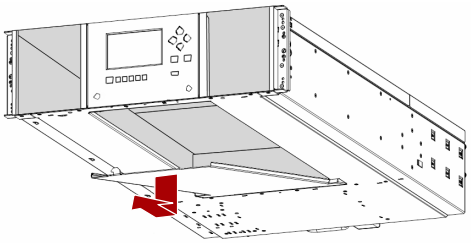
IMPORTANT: When replacing an Base Module in either the top or bottom position, you must move the cover from the old Base Module to the new one.





To move a **top** cover:

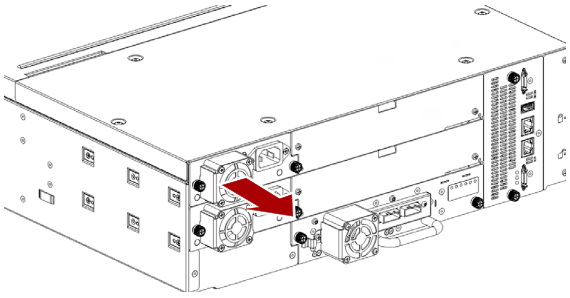
1. At the old Base Module, unlock the top cover by pushing **two small screwdrivers** down and inward in both slots.
2. Lift the top cover **front edge** by about 4.75 in. (12cm) and pull the cover gently forward to disengage from the pivot point at the module center.
3. At the new Base Module, with the cover at the same angle, reengage the **rear of the cover** at the pivot point.
4. Lower the front of the top cover until the **latches** engage on both sides.



To move a **bottom** cover:

1. Place both Base Modules **upside-down**.
2. At the old Base Module, insert a small flathead or Torx **screwdriver** into the release hole and slide it about 1/4 in. (4mm) sidewards to unlock the spring loaded lock.
3. Raise the **cover front end** by about 4 in. (10cm) and gently pull it forward to disengage from the pivot point at module center and remove.
4. At the new Base Module, with the cover at the same angle, reengage the **rear of the cover** at the pivot point.
5. Lower the front of the cover until the **latch** engages.

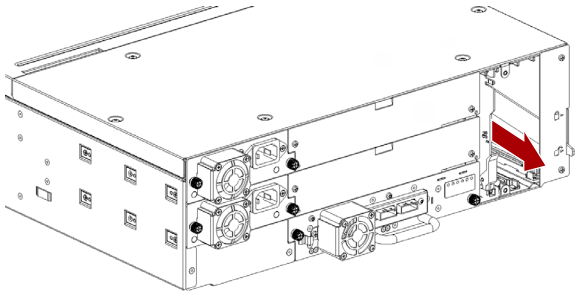
Move Power Supplies



1. At the **new** Base Module, remove the appropriate power supply **covers**.
2. At the **old** Base Module, loosen the **two blue captive thumbscrews** with your fingers on the power supply.
3. While supporting the bottom, pull the **power supply** straight back to remove it from the module.
4. At the **new** Base Module, position the power supply onto the **alignment rails**.
5. Slide the power supply into the **module** until it is flush with the back panel of the module.
6. Tighten the **thumbscrews** with your fingers to secure it.
7. If necessary, repeat these steps for a **redundant power supply**.
8. Install the removed power supply **covers** on the **old** Base Module.

Move Controller

1. At the **old** Base Module, loosen the **two blue captive thumbscrews** on the controller and slowly remove it from the Base Module, setting it aside.
2. If a **drive power board** is installed, also move it:
   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 Base 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.
3. At the **new** Base Module, position the **controller** on the alignment rails and slide it in until it is flush with the back panel of the module.
4. Tighten the **thumbscrews** with your fingers to secure it to the module.



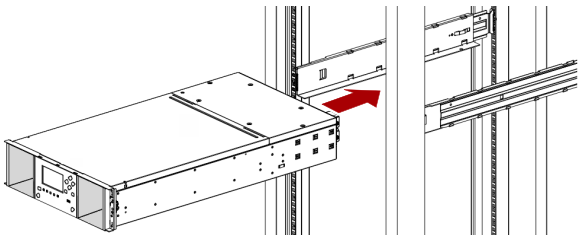
Install New Base Module

Insert the Module in Rack

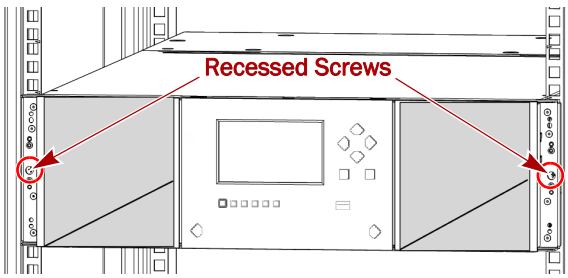
WARNING: To avoid injury, it is recommended that a mechanical lifter (or at least two people) be used for rack installation or removal.

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. Using the mechanical lifter, position the **module** in front, aligned with the rack rails.
2. Slide the module onto the **rail flanges** and into the rack.
3. Tighten the **recessed screws** only one turn to hold it.



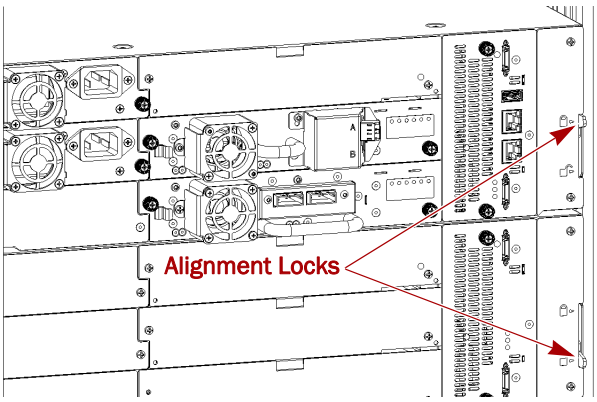
Aligning and Connecting the Module

Aligning the Base Module with the library ensures that the robot 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 Base Module to the modules to which it connects.

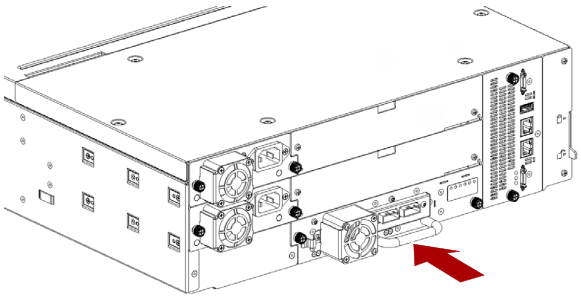
   If you encounter resistance, adjust the upper module so that the alignment mechanism pin moves into the mating hole in the lower module.
2. Verify that, for the **lowest** module in the library, its alignment mechanism is in the **unlocked position**.
3. From the front of the library, tighten the **Phillips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



Reinstall Tape Drives

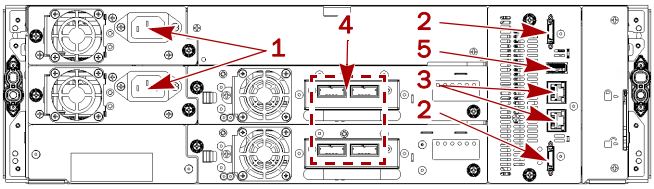
If any tape drives were in the old Base Module:

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



Reattach Cables and Cords

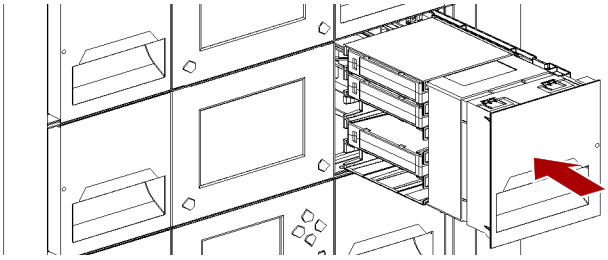
1. Reconnect the **expansion interconnect cables** (2) from the Base Module to any adjacent Expansion Modules.
2. Reconnect any **Ethernet management cables** (3).
3. Reconnect the **SAS/FC cables** (4) to the tape drives.
4. If removed earlier, reinsert the **USB device** (5).
5. Reconnect the **AC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



Reinstall Tape Magazines

Reinstall the previously removed tape magazines into the new Base Module.

1. Using the magazine **access handle** and supporting it underneath, position the magazine on the alignment rails.
2. Slide the **magazine** into the module.
3. Repeat Steps 1–2 for the **other magazine**.
4. Install the **empty tape magazines** from the new unit into the old unit.



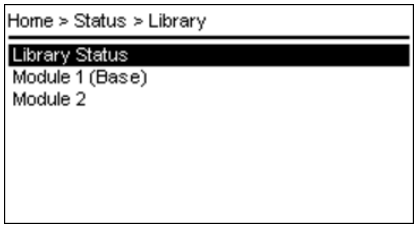
Complete the Procedure

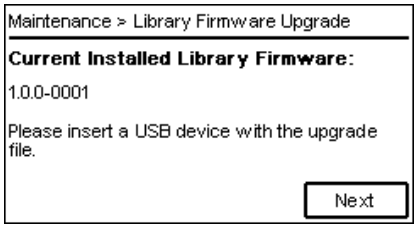
Verifying the Installation and Configuration

Check the following:

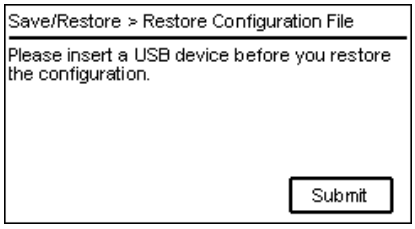
- Verify that the library powers on and initializes correctly, and that the status is Ready.
- From the OCP or RMI, verify that the new Base Module is visible.
- Under normal operation, the library configuration is saved on the Base Module controller. If necessary, restore the configuration using the OCP commands **Configuration > Save/Restore > Restore Configuration File**.

The Base Module operates using the existing library firmware. It is recommended that you always update the library to the latest firmware version. You can update firmware from the RMI or the OCP **Maintenance > Library Firmware Upgrade** screen.





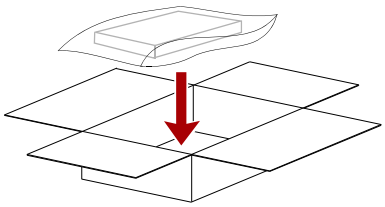
Restore the Library Configuration



Restoring the configuration returns the Base Module to the state it was in before the controller was replaced including network information (mail, notifications, etc.), any unique user account security information, and configured partitions.

1. Insert a **USB device** in the front USB port.
2. At the OCP, select **Configuration > Save/Restore > Restore Configuration File** and press **Submit**.
3. At the confirmation message, click **Close**.
4. Remove the **USB device**.

Return Replaced Part to Overland



For warranty replacements:

1. Place the **replaced part** 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.