Overland
S T O R A G E®

NEO® 2000ᴇ / 4000ᴇ

Spare Tape Drive Assembly

Add-On/Remove & Replace Instructions
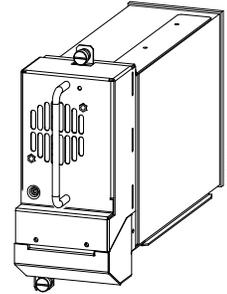
Overview & Notes

⚠ **CAUTION:** Verify that the drive type (SCSI, FC, or SAS) is the same as the Hot Swap assembly inside the drive bay by checking the labels. Failure to match the Drive to the Hot Swap assembly will result in damage to the drive connectors.

This document describes how to add a new or replace an existing tape drive assembly in a NEO 2000ᴇ or 4000ᴇ library from Overland. It covers all three types of drives:

- SCSI tape drive
- Fibre Channel (FC) tape drive
- SAS tape drive

⚠ **WARNING: The GUI touch screen does not completely shut off NEO SERIES system power. To reduce the risk of electric shock or damage, unplug the power cords.**

Unpacking the Spare

Carefully unpack and verify that you have all the parts:

- Tape Drive Assembly (SCSI, FC or SAS)
- These instructions

Electrostatic Discharge Information

A discharge of static electricity can damage micro-circuitry or static-sensitive devices. To help prevent Electrostatic Discharge (ESD), observe standard ESD precautions.

First Things First – Activate Your New Drive Warranty!

When installing a **new tape drive**, it is essential that you re-register your product adding the drive. Technical and warranty support are not available until this is done:

1. Go to the **Overland Technical Support** web site at: http://support.overlandstorage.com/
2. At the MEMBER LOGIN (Figure 1), **log in** to the site.

Figure 1. MEMBER LOGIN Section

NOTE: If you are not yet a member, click the New member? link and follow the instructions. It's free and easy!

3. At the Support Home page menu on the left, select **My Products > Manage Your Products**.
4. From the **Product Selector** drop-down list, select your NEO product.
5. At the bottom of the page, click **Add a Component**.
6. From the drop-down component list (Figure 2), select the **drive assembly** being installed.
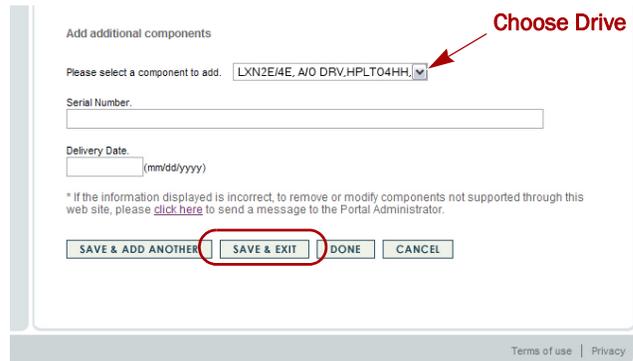
Figure 2. Add Component Knowledge Base Page

For example, to add an LTO4 half-height drive, choose "LXN2E/4E A/O DRV,HPLTO4HH,SCSI" from the list.

7. Enter the **serial number** of the new drive.
8. Click **Save & Exit**.

Removing a Cover or Drive

Before installing the new drive, you must remove either the cover plate where the new drive goes or the old drive that is being replaced. Use the appropriate process:

- "Removing a Drive Cover Plate"
- "Removing an Existing Drive"

Removing a Drive Cover Plate

> ➡ **IMPORTANT:** New drives must be installed in sequence with the other drives (see Figure 3).

1. At the appropriate drive bay cover plate, remove and retain both **retaining screws**.
2. **Store** the cover plate and screws for future use.
3. Proceed to "Installing the Drive Assembly."
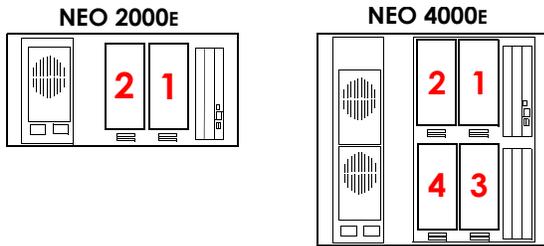
Figure 3. Drive Sequences by Library Type

Removing an Existing Drive

1. Unload any **cartridges in the drive** being removed.

   Use either the backup application software or the GUI.

2. Prepare the **library** for removal of the drive:
   - If the library can be turned **OFF**, power down the library and remove the power cords.
   - If the library needs to remain **ON**, deactivate the drive being replaced by pressing on the GUI:

     Menu > Maintenance > Replace Drive > Deactivate Drive n.

3. For FC or SAS, remove the **cable** from the drive.
4. Loosen the captive retainer **thumbscrews** at the top and bottom of the drive assembly.
5. Using the handle and fully supporting the assembly, pull the **drive assembly** to remove it (Figure 4).
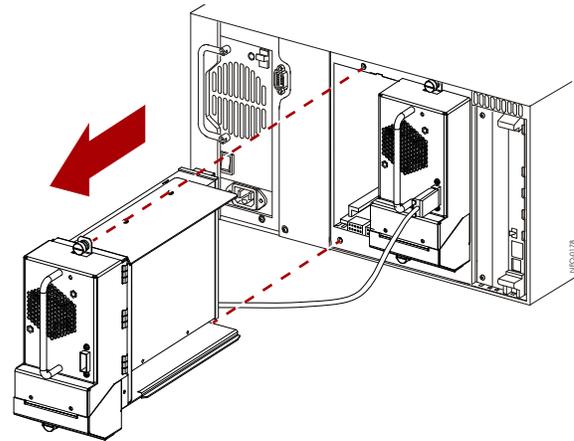
Figure 4. Removing a Drive (NEO 2000E)

> *NOTE:* Some effort may be required to overcome the initial resistance of unplugging the module from the receiver.

Installing the Drive Assembly

> ⚠ **CAUTION:** Verify the new drive type matches Hot Swap assembly by validating that the label on top of drive matches the label on Hot Swap assembly guide plate. Installing the wrong drive type damages the drive.

1. At the open drive bay, line up the **new drive** assembly.
2. Slowly push the drive assembly into the **drive bay** until it seats firmly against the backplane (Figure 5).

> ⚠ **CAUTION:** When inserting the drive assembly into the drive bay, push evenly on both the handle and bottom portion of the assembly until it is seated. Do not lift the drive while pushing as damage to the connector pins can occur.

3. Tighten the two captive retainer **thumbscrews** to secure the drive assembly in the library.
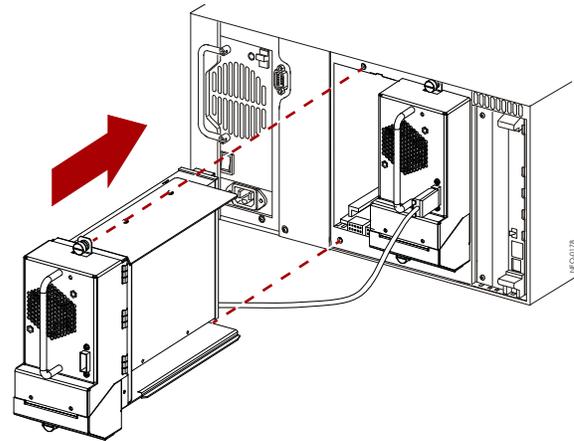
Figure 5. Installing a Drive (NEO 2000E)

Drive Cabling

When adding a **new drive to an empty drive bay**, the NEO SERIES library cabling configuration must also be updated to support that drive. The following figures show some common cabling configurations. Refer to your NEO SERIES user guide for more information.

SCSI Cabling

The NEO SERIES libraries are equipped with SCSI connections permanently mounted beneath each drive bay. Use these connections to hook up the new drive following standard SCSI wiring protocols (see Figure 6 for a two drive/two host configuration sample).
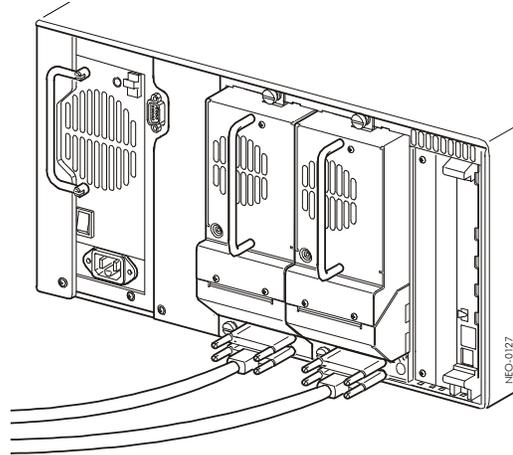
Figure 6. Typical SCSI Network Configuration

Fibre Channel Cabling

When you add a FC drive assembly to a native FC library configuration, a new Fibre connection needs to be added that connects directly to the FC socket on the drive assembly (Figure 7).
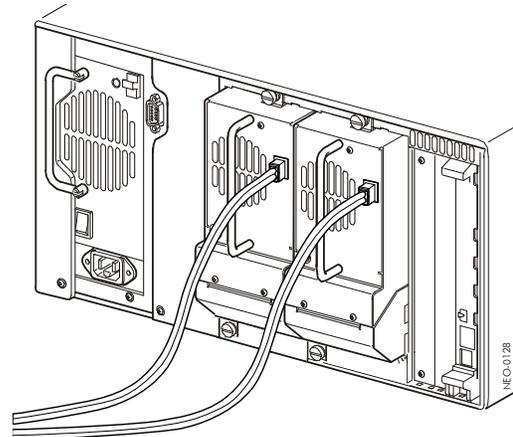
Figure 7. Typical Native FC Configuration

SAS Cabling

When you add a SAS drive to an existing SAS library, a new SAS connection needs to be added that connects directly to the SAS socket on the drive assembly. (Figure 8).
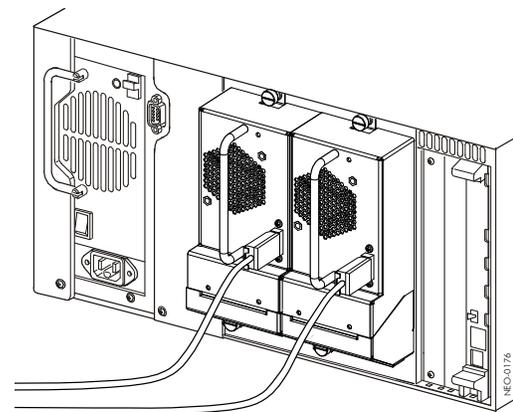
Figure 8. Typical SAS Configuration

Activating the Drive

Activate New Drive

Once the drive is installed, and you have made any necessary cabling updates, the new drive needs to be activated for the library to recognize it.

- If the power was **ON** during this procedure, activate the drive by selecting the appropriate method:
  - If Auto Activate is **OFF**, at the front panel GUI, press **Menu > Maintenance > Replace Drive > Activate Drive n**.
  - If Auto Activate is **ON**, the drive is automatically activated.
- If the power to the library was **OFF** during this procedure, replace the power cords and turn on the library. The drive activates during the initialization of the library.

NOTE: The LED on the rear of the new drive flashes green and then turns solid green when the drive is fully initialized. If you get an amber light, there is a problem with the drive. Contact Overland Storage Technical Support using the information on the last page.

Return Old Drive to Overland

If replacing a defective drive:

1. Place the old drive in the **replacement's box**.
2. Return the **old drive** to Overland Storage.

Additional Help
You can get additional technical support on the Internet at http://support.overlandstorage.com, or call
1-877-654-3429 (toll-free U.S. & Canada), +44 (0) 118-9898050 (Europe), or +1 (858) 571-5555 Option 5 (International).