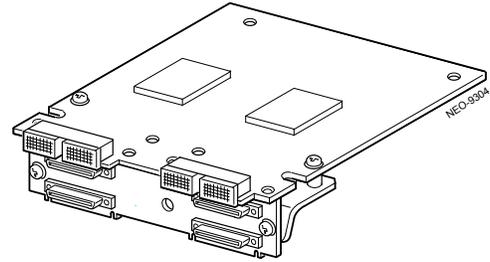


# U320 Hot Swap Assembly

## Upgrade Instructions



### Overview & Notes

**IMPORTANT:** Overland Storage strongly recommends that the U320 Hot Swap assembly be removed and replaced by an Overland Storage authorized service provider. Improper installation may result in damage which voids any and all existing warranties!

This document describes how to upgrade a Hot Swap assembly in a NEO 2000 or 4000 from Overland to an Ultra320 (U320) assembly by replacing the SCSI I/O and the VHDCI Plug boards.

#### Unpacking

Carefully unpack and verify that you have all the parts:

- Hot Swap Assembly in anti-static bag
- Hardware packet containing:
  - Two M3x6 flathead Phillips screws
  - Eight M3x10 flathead Phillips screws
  - Six M3x6 panhead Phillips screws
  - Six M3 nylon washers
  - Eight M2/M2 jackscrews
- These remove & replace instructions

**NOTE:** A #1 Phillips long-shaft screwdriver is also needed.

**WARNING:** To reduce the risk of electric shock or damage to equipment, disconnect the power by unplugging the power cord.

**WARNING:** It is recommended that a mechanical lifter (or at least two people) be used to prevent injury during rack installation or removal.

#### Electrostatic Discharge Information

A discharge of static electricity can damage micro-circuitry or static-sensitive devices. To help prevent electrostatic damage, observe the following precautions:

- Transport and store items in static-safe containers.
- Keep electrostatic-sensitive parts in their containers.
- Use properly-grounded tools.
- Make sure you are always properly grounded.
- Keep the work area free of non-conductive materials.
- Avoid touching pins, leads, or circuitry.

### Prepare the Library

1. If the library is operational, remove any cartridges in the drives using the Graphical User Interface (GUI) or application software. Exit the application software and halt the operating system if necessary.
2. Power off the library as follows (Figure 1):
  - a. Use the GUI to power down the library.
  - b. Turn the Master Power Switch at the rear to Off (O).
  - c. Remove the power cord.
3. Remove all SCSI cables and terminators.

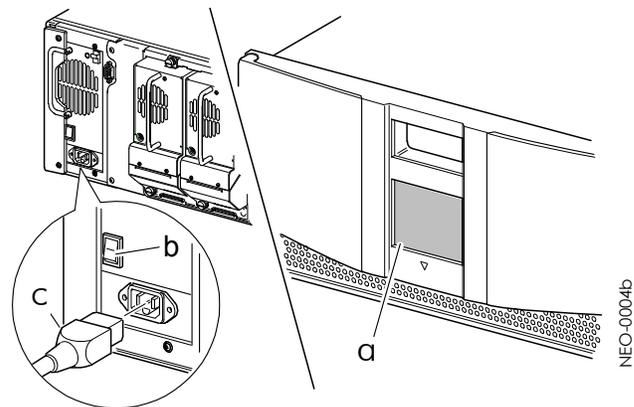


Figure 1. Powering Down the Library

- Remove all drive assemblies from the drive bay being upgraded (Figure 2).

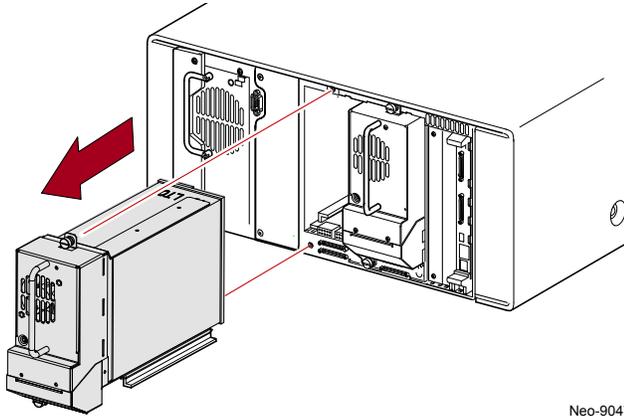


Figure 2. Removing Drive Assemblies

Neo-9047

- Using a mechanical lifter (or two people), remove the unit from the rack and place on a secure ESD surface.
- Remove and retain the 11 screws that secure the Fan Cover assembly to the library chassis (Figure 3).

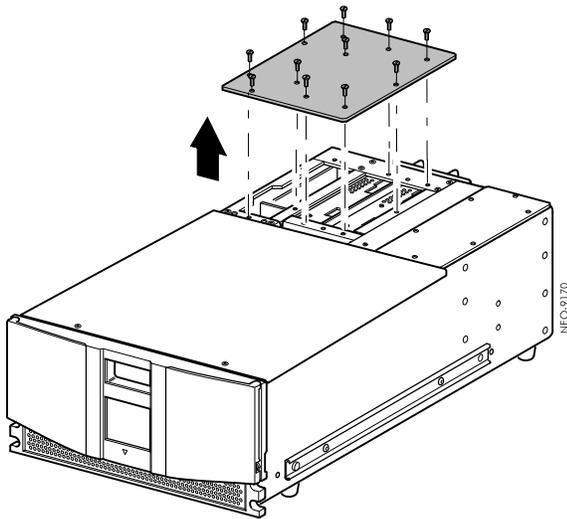


Figure 3. Remove Fan Cover Screws

NEO-9170

**IMPORTANT:** If you have an older library that used M4x8 screws, you must retain those screws to reinstall the cover.

- Lift the inside edge of the Fan Cover assembly and disconnect the cooling fan (Figure 4).

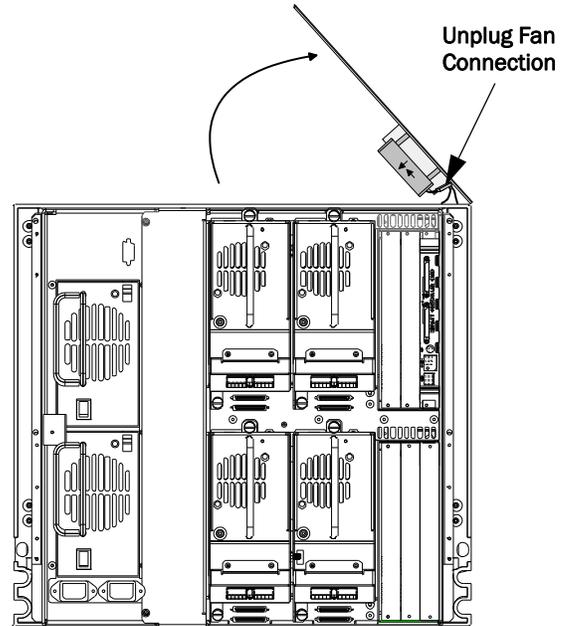


Figure 4. Cooling Fan Disconnect

- Lift the cover up and away from the library.

## Remove the Old Assembly

The SCSI I/O Board and Plug Assembly are located at the rear of the library beneath the drive bays. The two boards interconnect on the underside of the SCSI I/O Board with two 72-pin connectors. The drive SCSI cables, terminators, and drives must be removed to access these parts.

- Remove two flat-head screws from the top of the Tape Drive Shield between Drive Bays 1 and 2.
- With the Tape Drive Shield leaning into Drive Bay 2, remove four screws holding the Drive 1 Guide, and then remove the guide (Figure 5).

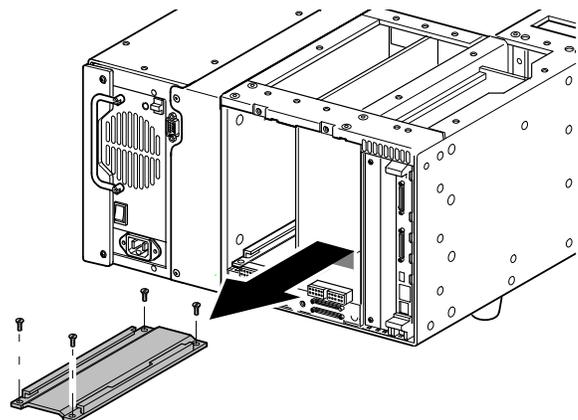
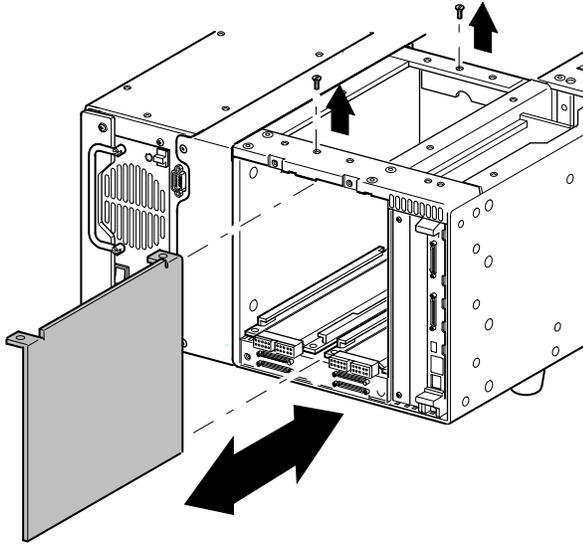


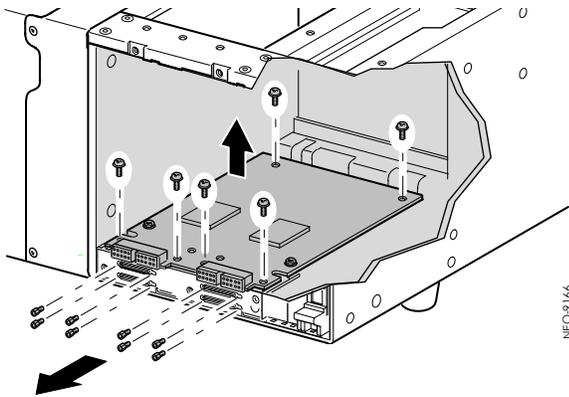
Figure 5. Removing Drive 1 Guide

3. Tilting the Tape Drive Shield to clear the frame, remove it.



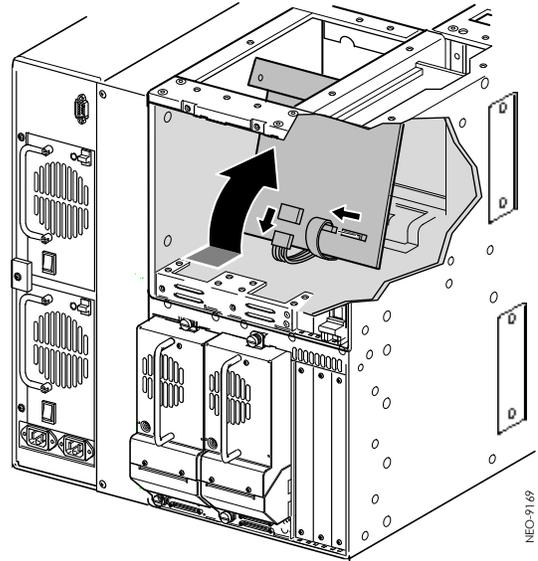
**Figure 6. Removing Drive 1 Guide**

4. Remove four screws holding the Drive 2 Guide, and then remove the guide.
5. Remove the Hot Swap assembly as follows:
  - a. Remove eight jackscrews from the VHDCI connectors (Figure 7).
  - b. Remove six screws that mount the SCSI I/O PCB to the chassis (Figure 7).



**Figure 7. Removing the Hot Swap Assembly Screws**

- c. Slide the Hot Swap assembly toward the front of the library until you can pivot the rear of it up and toward the front to access the bottom of the PCB (Figure 8).
- d. Remove the cables at J1 and J5 (Figure 8), and remove the assembly from the library.



**Figure 8. Removing the Hot Swap Assembly Screws**

6. For a NEO 4000, if upgrading both drive bays, repeat Steps 1–5 for the other bay.

## Install the New Assembly

1. Install the new Hot Swap assembly into the library:
  - a. Vertically positioning the Hot Swap assembly in the drive bay (Figure 8), attach the J1 and J5 cables.
  - b. Rotate the assembly down and slide it toward the back of the library aligning the VHD connector plugs in the appropriate holes (Figure 7).
  - c. Using six new M3x6 panhead screws and nylon washers, secure the SCSI I/O board to the chassis.
  - d. Using eight new M2/M2 jackscrews, secure the VHDCI Plug board to the chassis frame.
2. Using four new stainless steel M3x10 screws, reattach the Drive 2 Guide.
3. Tilting the Tape Drive Shield to clear the frame, reinsert it in the drive bay.
4. Using four new stainless steel M3x10 screws, reattach the Drive 1 Guide.
5. Using two new M3x6 flathead screws, reattach the top of the Tape Drive Shield between Drive Bays 1 and 2.

## Restore the Library to Service



**CAUTION:** The Library must be upgraded to firmware version **6.02** or higher to use LTO-4 tape drives in it.

1. Reattach the Fan Cover Assembly:
  - a. Position the Fan Cover Assembly and reattach the cooling fan cable (Figure 4).
  - b. Using the 11 retained screws, secure the cover to the library chassis.
2. Using a mechanical lifter (or two people), reinstall the unit into the rack.
3. Reinstall all drive assemblies from the drive bay being upgraded.
4. Reattach all SCSI cables and terminators.
5. Reattach the power cable.
6. Turn the Master Power Switch at the rear to On (I) and power on the library.  
Wait while POST completes.

### 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).