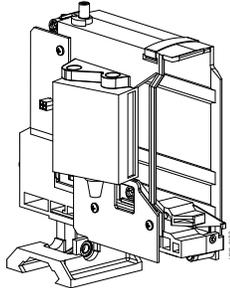


Replacing a Shuttle Assembly

This document describes how to remove and replace the shuttle assembly in a NEO 8000 Series library.



It is **required** that the work be done by an Authorized Service Provider. Improper installation may result in damage which voids existing warranties.

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

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 unit, observe standard Electrostatic Discharge (ESD) precautions to prevent damage to micro-circuitry or static-sensitive devices.

Prepare the Appliance

Power Down the Library

1. At the front GUI panel, press **Power** to turn the library OFF.

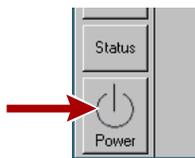
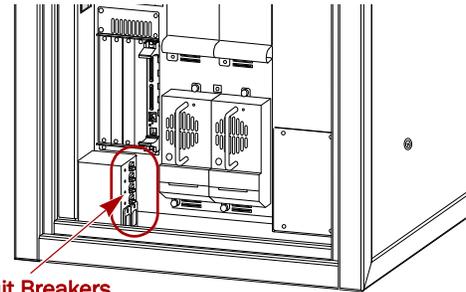


Figure 1. Front GUI Panel

The shuttle/track assembly moves to the library floor as the unit shuts down.

NOTE: If the library is non-functional, wait until the shuttle/track assembly drifts automatically to the bottom.

2. At the rear (Figure 2), in the bottom left corner, turn OFF the **circuit breakers**.
3. Remove and retain all **power cords**.



Circuit Breakers

Figure 2. Location of Circuit Breakers in Rear

Provide Shuttle Assembly Access

WARNING: To prevent injury due to the weight of a loaded drawer, **DO NOT** fully remove the media drawers. Leave them in the open position.

AVERTISSEMENT: Pour éviter toute blessure due au poids d'un tiroir chargé, **NE PAS** retirer complètement les tiroirs des médias. Laissez-les en position ouverte.

IMPORTANT: If access through the left panel is not available, this procedure can still be used by accessing the component from the front and rear. Go to the Overland Knowledge Base (<http://support.overlandstorage.com/kb>) and search for the NEO 8000 Limited Access Procedure.

1. Remove and retain the **screws** securing the **left side panel**, and remove the panel.
2. Open the **left door** of the library.
3. From the left side, at the back of the bottom-left media drawer, press the door's **latch release** (Figure 3) and push the **media drawer** forward.

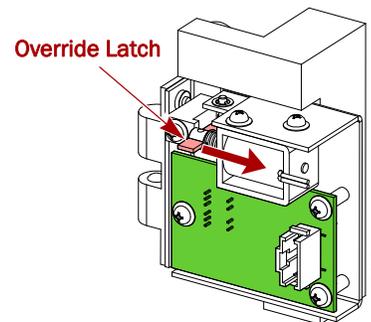


Figure 3. Media Drawer Latch Release, Rear View

4. From the front, pull out the bottom-left **media drawer** until it latches in the open position.
5. Repeat **Steps 3–4** for the **middle-left** media drawer.

Replace the Shuttle Assembly

Disconnect Shuttle Cables

1. On the shuttle, locate the **Shuttle PWA** (Figure 4) and release the **shuttle cables**:
 - a. If a **cable clamp** is installed, release the clamp.
 - b. Disconnect the **Power cable** from the **J2** connector.
 - c. Disconnect the **Signal Controller cable** from the **J4** connector.

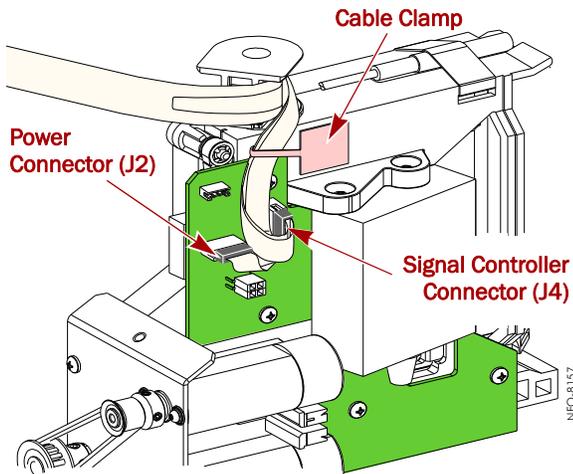


Figure 4. Shuttle PWA and Cables (Front View)

2. Use the Phillips screwdriver, unscrew and detach the **spooler head** with the cable assembly still attached (Figure 5).

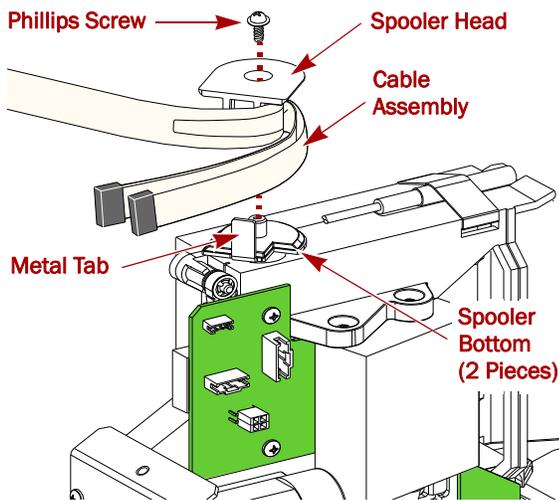


Figure 5. Removing the Cable from the Spooler Head

3. Remove and retain the two **Spooler bottom pieces**.

Swap Out Shuttle Assembly

1. Using the track gear, turn the **rear** section of the track 90° to the side (Figure 6).

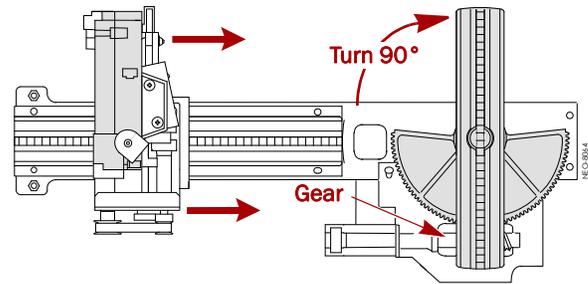


Figure 6. Shuttle and Track Assembly

2. Carefully slide the **old Shuttle** assembly rearward and off the track.
3. Position the **new Shuttle** assembly the same direction as the old part and slide it onto the track.

Reattach Spooler Head

1. Reattach the two **Spooler bottom pieces** onto the shuttle spindle.
2. Slide the **spooler head** onto the bottom pieces, aligning the flat side slot with the metal tab (Figure 5).

CAUTION: Be sure there are no other twists in the cable between the metal guide and the spooler (Figure 7). If necessary, slide the shuttle to the front of the track plate to extend the flex cable.

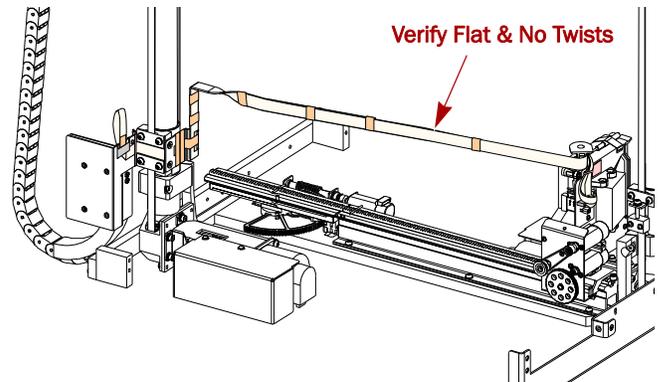


Figure 7. Final Position of Cable Assembly

3. Use the new supplied **panhead Phillips screw** to reattach the spooler head to the shuttle spindle.

CAUTION: To prevent damage to the plastic spooler head, do not overtighten the panhead screw.

NOTE: The newer Shuttles have the Flex Cable Retainer positioned with its flat edge at a slight angle to the side of the Shuttle. This is different from some earlier models where the retainer flat edge was flush with the side of the Shuttle (Figure 8 on page 3).

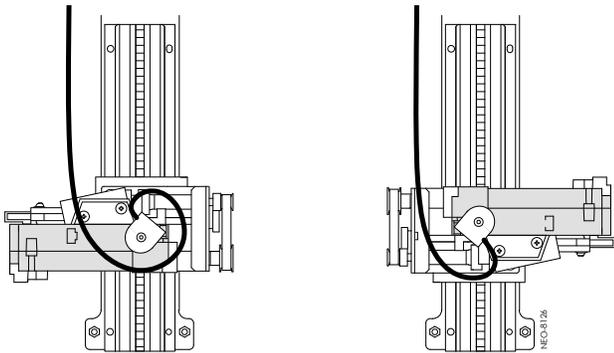


Figure 8. Wrapping the Shuttle Cable Around the Flex Cable Retainer

Connect the Shuttle PWA Cables

Attach the cables from the spooler to the shuttle PWA:

1. With the **plastic-coated clamp** arm pointing out, attach it to the shuttle just above the bar code reader next to the Shuttle PWA (Figure 9).

If an older wire clip is there, remove it first.

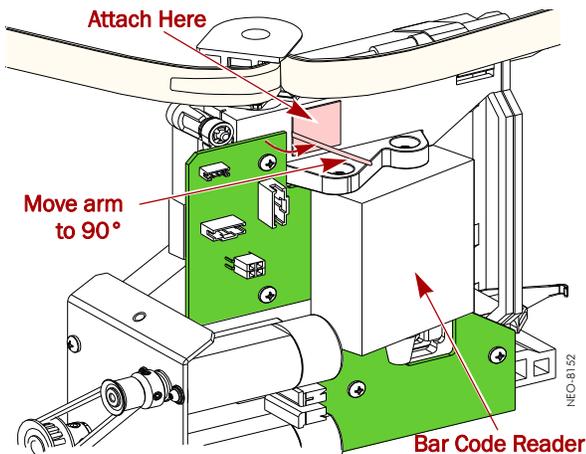


Figure 9. Attach the Clamp

2. Loop and connect the **signal controller cable** to J4 (Figure 10).

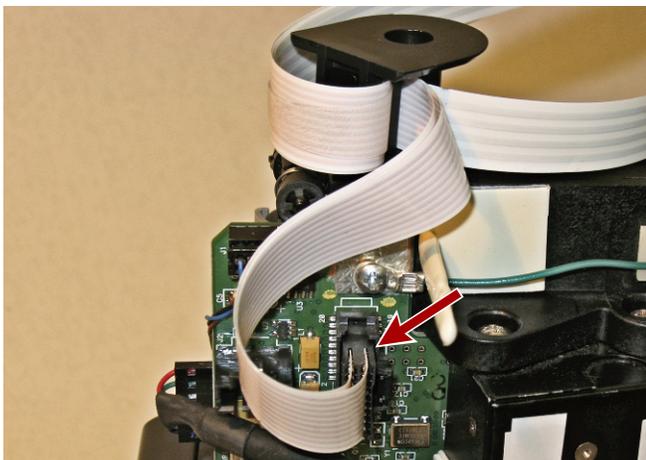


Figure 10. Connect the Signal Controller Cable

3. Connect the **shuttle power cable** to J2:

- a. With the **Power cable** flat against the Signal cable, insert the Power cable through the Signal cable loop (Figure 11).

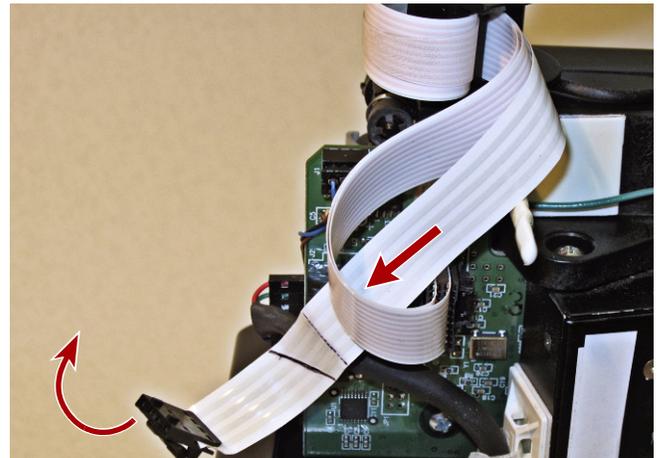


Figure 11. Insert Power Cable Through Signal Cable Loop

- b. Loop the **Power cable** upwards.
- c. Carefully, without bending the cable, insert the **Power connector** into J2 (Figure 12).

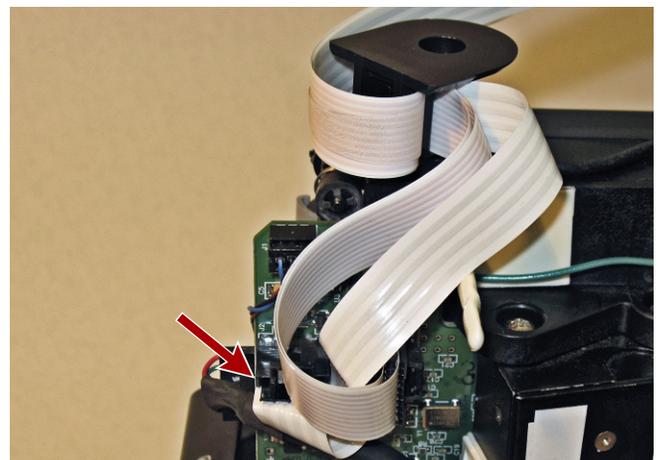


Figure 12. Connect the Power Cable

- d. Verify the following:
 - The **first bend** on the Power cable is near the top of the Signal plug.
 - The Power cable is tilted at a **45° angle** inside the Signal cable loop with the high side next to the Signal plug.
 - There is **no bend in the cable** where the plug enters the Power connector.

4. Bend the **clamp** around both cables (Figure 13 on page 4):

- a. Gather **both cables** together next to the clamp so that they are aligned.
- b. Prebend the clamp 60° about 1/3 down the shaft.
- c. Fold the clamp over the cables and finish bending the top third around the cables.

- d. Position the clamp above the PWA and press it against the shuttle front.

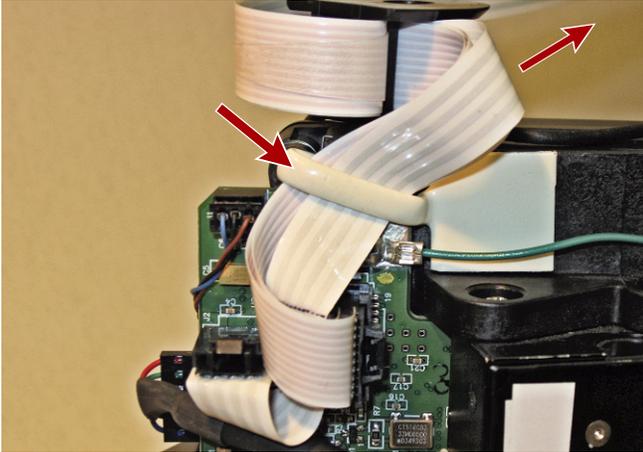


Figure 13. Connecting the Cable to the Shuttle PWA

5. Pull gently on the cables between the clamp and the spooler until the **cable loops** are flush with the bar code reader (Figure 14).

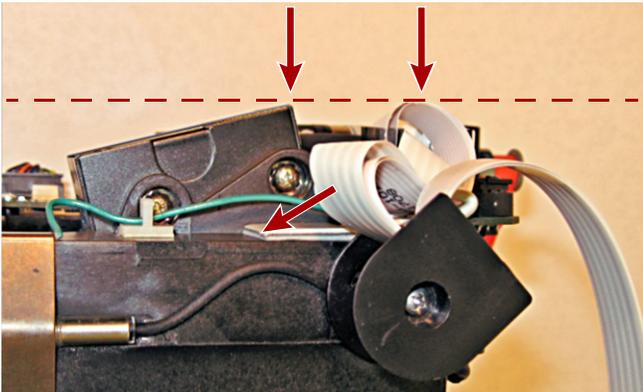


Figure 14. Flex Cable Must NOT Extend Beyond Reader

Examine Cable Assembly

CAUTION: Due to the high-speed movement of this assembly, it is critical that none of the cables stick out in a way that may cause them to come into contact with stationary items.

1. Visually examine and manually move the shuttle assembly to verify that the **cables** do not catch on anything and that the assembly moves freely. The cables at the shuttle should not extend past the edge of the bar code reader (Figure 14).
2. Make sure the cable assembly **metal flex guide and bracket** shape was not altered during installation.

CAUTION: The metal flex guide should be parallel to the side of the library. Verify that the shuttle doesn't hit it.

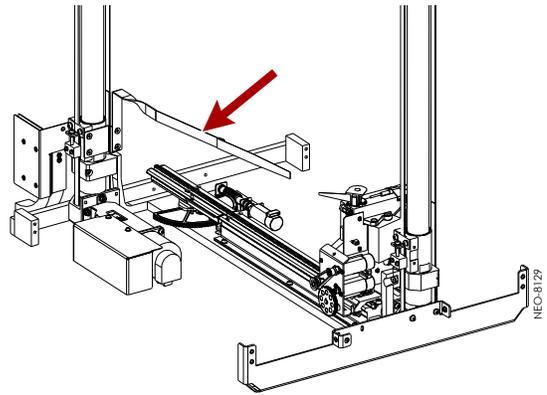


Figure 15. Metal Flex Guide Location (Cable Hidden)

Reassembly the Library

1. Slide the **media drawers** back into the library.
2. Shut the **front left door**.
3. Plug the **power cords** back in.
4. Turn on the **circuit breakers**.

The library boots and runs POST.

NOTE: If the bar code reader is not detected, remove the power cords, recheck the cable connections, and reapply power to the unit.

5. Carefully observe the **POST process** to verify the installation:
 - Watch the **shuttle and track assembly** movement.
 - Make sure that nothing interferes with the **cable assembly** through its full range of motion.

NOTE: If problems occur, contact Overland Technical Support.

6. Using the retained screws, reattach the **left panel** to the library.

IMPORTANT: If following the *NEO 8000 Limited Access Procedure*, reinstall the library panels and components previously removed at this point.

Return Removed Parts to Overland

1. Place the removed part in the anti-static bag and put it in the replacement part's box.
2. Return the old part to Overland Storage.

NOTE: For return shipping details, go to: <http://support.overlandstorage.com/support/support-return-instructions.html>

You can get additional technical support on the Internet at <http://support.overlandstorage.com>, or by contacting Overland Storage using the information found on the [Contact Us](#) page on our web site.