Spare Track Assembly Instructions
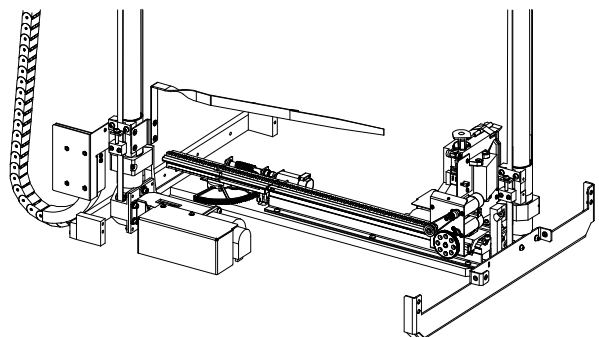
This document describes how to remove and replace a track assembly in a NEO 8000e library from Overland Storage.

⚠️ **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.

⚠️ **CAUTION:** NEVER handle the belt drive assembly (BDA) with your bare hands. Contamination from the oils on your skin can cause the BDA to stick. Always wear cotton gloves.
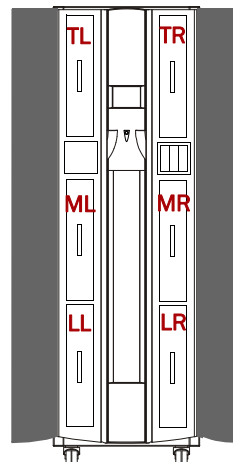
Prepare the Library

Prepare Media Drawers for Removal

To simplify the replacement of the motor, remove the media drawers to provide easier access to the inside of the library.

⚠️ **WARNING:** Exercise care when removing the media drawers from the library units. Fully-loaded drawers weigh approximately 58 pounds (26.3 kg). Also, when the drawers are removed, the inner rails extend several inches beyond the back of the drawers. Tilting the drawers can result in the tapes falling out. Opening several drawers at once is a tip hazard.

⚠️ **AVERTISSEMENT:** Soyez prudent lorsque vous retirez les tiroirs de support des unités de bibliothèque. À pleine charge tiroirs pèsent environ 26,3 kg. En outre, lorsque les tiroirs sont enlevés, les rails intérieurs s'étendent au-delà de quelques centimètres à l'arrière des tiroirs. Inclinant les tiroirs peuvent se traduire par des bandes de tomber. Ouverture de plusieurs tiroirs à la fois un danger pointe.

1. Open the **front doors** to expose the media drawers.
2. **Label** all the drawers as shown so they can be returned to their correct positions.
   - Left Drawers:
     - Top Left (TL)
     - Middle Left (ML)
     - Lower Left (LL)
   - Right Drawers:
     - Top Right (TR)
     - Middle Right (MR)
     - Lower Right (LR)

Power Off and Disconnect

1. At the front panel, select **Drawer Access** (and password, if active) **> Unlock All** to release all the media drawers.
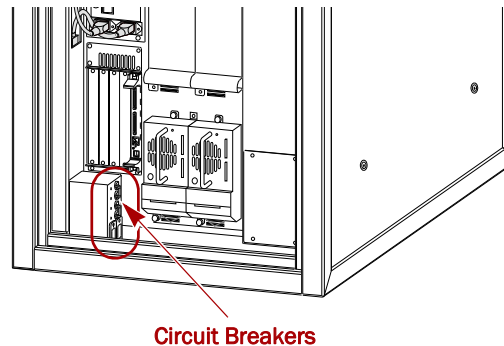
   NOTE: If the library is partitioned, the partition selection option is displayed before the access option screen.

2. On the front GUI panel, press **Power** to turn the library OFF.

   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 finishes drifting to the bottom automatically.

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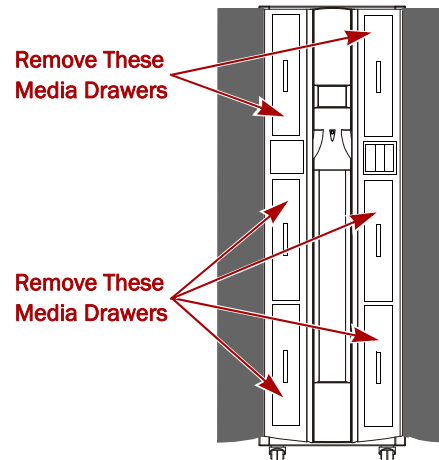
4. Remove and retain all **power cords.**

Circuit Breakers

Remove Media Drawers

1. To remove **each** media drawer:

   IMPORTANT: When **removing tapes** to minimize the weight of a drawer, be sure to keep them together on a secure surface and labeled so they can be returned to the same drawer.
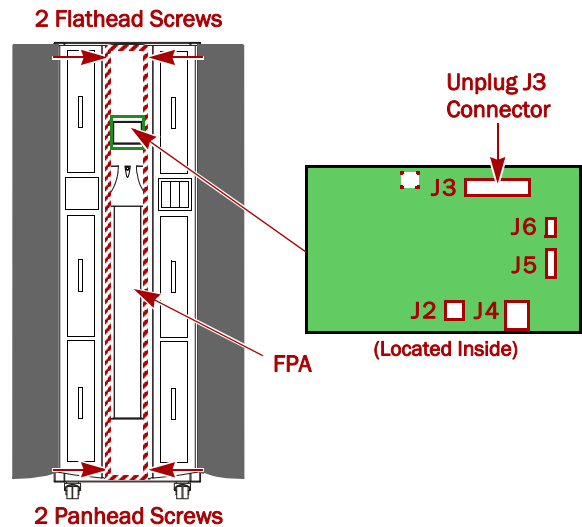
   a. Pull the **drawer** out about 2 inches (5cm) until it stops.
   b. Press the **drawer release** and slide the drawer out a couple more inches.
   c. Label and remove the **tapes** from the drawer.
   d. Carefully remove the **drawer** and set it aside.

2. For safety, slide the **rails** back into the unit using the rear release buttons on the rails.

Remove These Media Drawers

Remove These Media Drawers

Beta

Front Panel Assembly Removal

The Front Panel Assembly (FPA) must be removed to get access to remove and replace the track assembly. The FPA is held in place with four screws; the two screws at the bottom are panhead screws and the two at the top are flathead.

1. At the bottom on the **left** side of the FPA (in front of the bottom trim) remove the **bottom screw**.

2. Repeat Step 1 for the right-side **bottom FPA screw**.

3. Also on the right, remove the **top FPA screw**.

4. While holding the FPA to prevent stress on the inside cables, carefully remove the left-side **top FPA screw**

5. Carefully move the FPA out and reach inside to disconnect the **J3 Connector** from the top of the old controller card.

6. Open the **retainer clamps** above the controller card to release the J3 cable from the FPA.

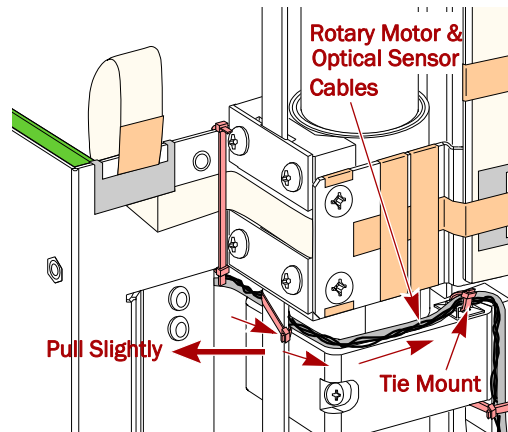7. Carefully remove the **FPA** and set it on a secure surface.

2 Flathead Screws

Unplug J3 Connector

J3

J6

J5

J2 J4

(Located Inside)

FPA

2 Panhead Screws

Remove Original Track Assembly

Disconnect Cables

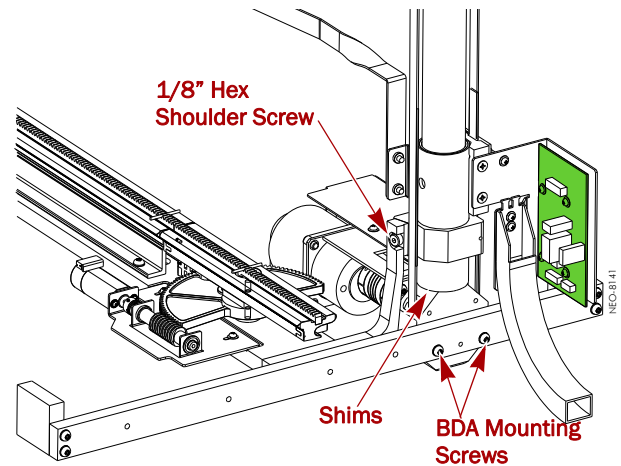1. Put on the supplied **cotton gloves**.

   IMPORTANT: Always wear cotton gloves while working around the Belt Drive Assembly (BDA) to prevent contamination of the guide pole.

2. From the **Rear Z-Axis**, disconnect the cable for the rotary motor and optical sensor cable.

3. Carefully remove the **Rotary Motor** and **Optical Sensor cables** from the Shuttle Mount Assembly (SMA) and move them to the front, removing them from the D-clamp or cutting the cable tie from the mount.

Rotary Motor & Optical Sensor Cables
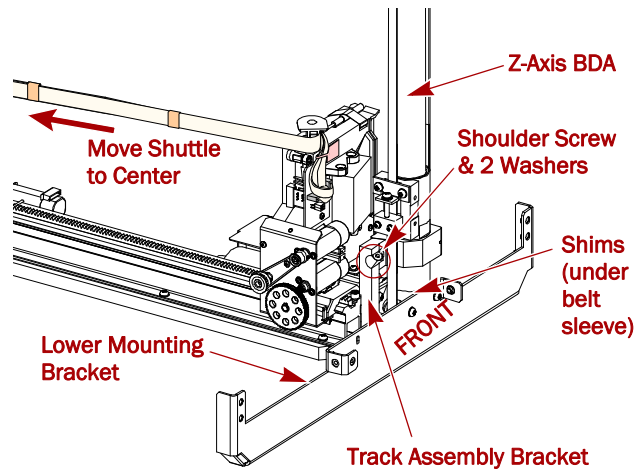
Pull Slightly

Tie Mount

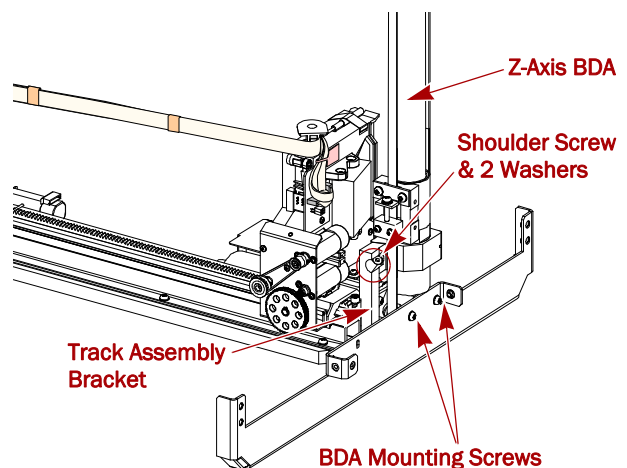## Remove the Track Assembly Bracket from the Rear BDA

1. If necessary, push the **shuttle assembly** to the center of the track assembly to provide room.
2. Using the 1/8-inch hex key, remove and discard the **shoulder screw assembly**.
3. Set the **track assembly** on the floor of the library.

Remove the Track Assembly Bracket from the Front BDA

1. If necessary, push the **shuttle assembly** to the center of the track assembly to provide room.
2. Using the 1/8-inch hex key, remove and discard the **shoulder screw assembly**.
3. Set the **track assembly** on the floor of the library.
4. Carefully remove the **old track assembly** from the library.
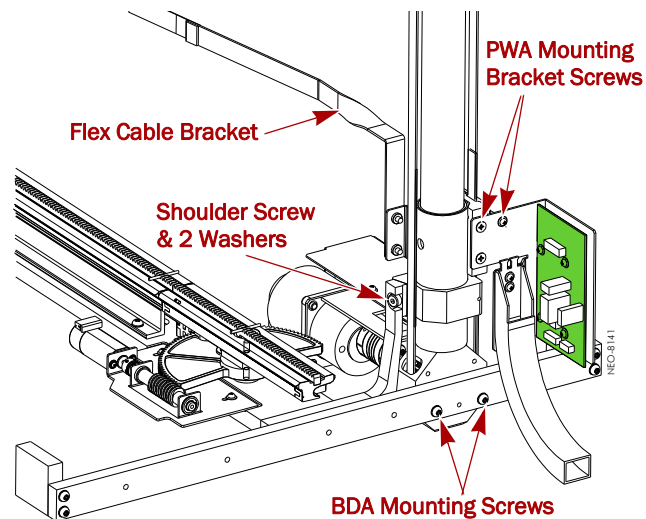

Install New Track Assembly

Attach the New Track Assembly to the Front BDA

1. Be sure there are **two 1/4-inch washers** on the new bracket shoulder screw.
2. Apply **LOCTITE** to the threads of the **new 1/4 x 5/16-inch shoulder screw**.
3. Using the 1/8-inch hex key and the new screw and washers, attach the **track assembly bracket** to the BDA.
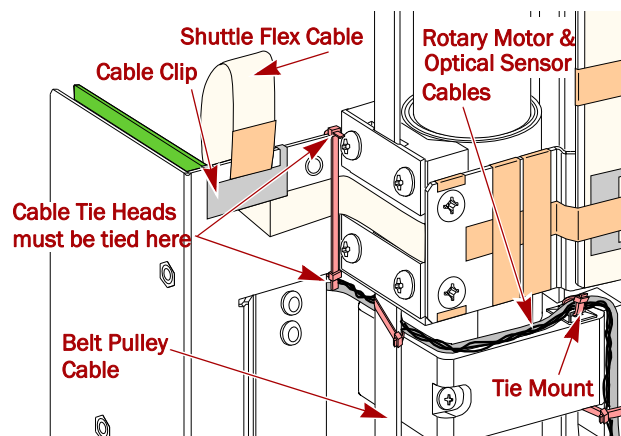
Beta

Attach the New Track Assembly to the Rear BDA

1. Be sure there are two **1/4-inch washers** on the new bracket shoulder screw.

2. Apply **LOCTITE** to the threads of the **new 1/4 x 5/16-inch shoulder screw**.

3. Using the 1/8-inch hex key and the new screw and washers, attach the **track assembly bracket** to the BDA.

Reattach the Cables
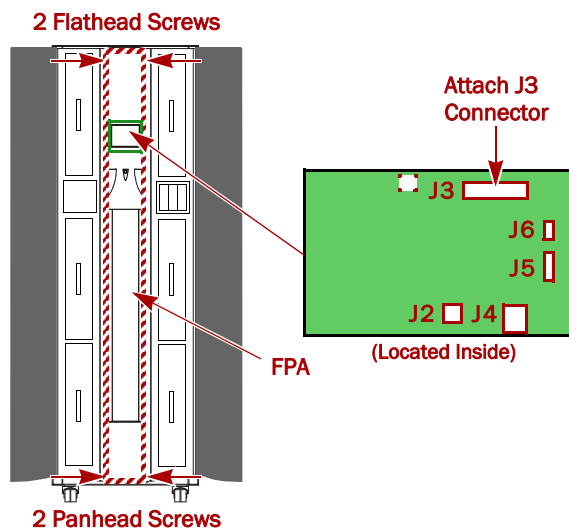
1. Carefully route the **Rotary Motor and Optical Sensor cables** under the SMA and to the rear under the belt.

2. Using a new 2.8" cable tie around the belt pulley cable (where it attaches the SMA) and **Rotary Motor and Optical Sensor cables**.

Reassemble the Library & Test

Reattach the FPA

1. At the front of the library, position the **FPA** in front of the center opening.

2. Reach inside and reattach the **J3 cable** to the top of the controller card.

3. Close the **retainer clamps** over the J3 cable to secure it.

4. Move the J3 cable **behind** the BDA top tensioner to keep it out of the way of the robotics.

   Check that the cable is flat against the FPA.

5. Position the FPA so that the **screw holes** are visible.

6. At the top of the FPA, reinstall the **two flathead screws**.

7. At the bottom of the FPA reinstall the **two panhead screws**.

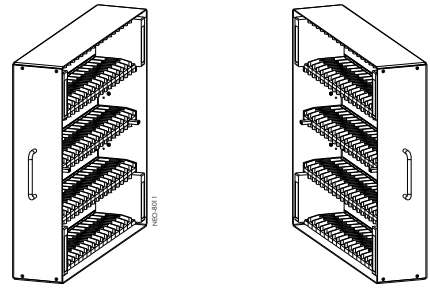8. When the entire FPA is reinstalled, remove the **gloves**.

Reinsert Media Drawers

NOTE: *Verify that the tape media is flush in the drawers before pushing them into the library.*
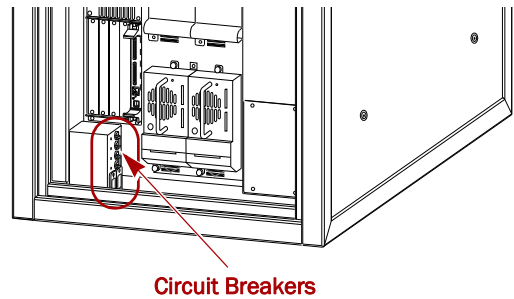
For **each** drawer:

1. Extend the **rails** for the appropriate drawer and move the **bearings** to the front.
2. Using the identifying label, reinsert the **appropriate drawer** onto the rails.
3. **Carefully and slowly** slide the drawer **80%** into the library and back out to check it.
4. **Reload** the tapes into their original locations within the drawer.
5. Push the **drawer** all the way in until it locks.

Power On the Library

1. **Reattach** all the power cords.
2. Set the library circuit breakers to the **ON** ("|") position.

   The library automatically powers on and completes a POST.

The touchscreen should show the POST progress indicating it is fully functioning. If not, contact Overland Technical Support.

Circuit Breakers

Calibration Test

NOTE: The library uses Calibration Fiducial labels to accurately locate reference points on the Drawer Assemblies, the Fixed Drawer Assembly and the Mail Slot Track Assembly.

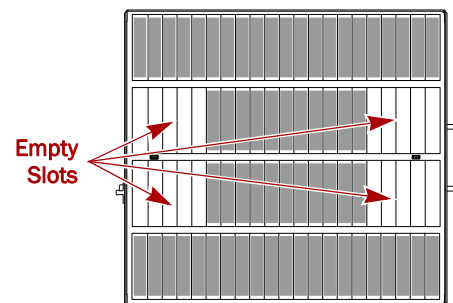Calibration Fiducial Label locations:

- Two on the drive bay bulkhead
- Two on each Drawer
- Two on the Fixed Slots
- Two on the Mail Slot track

NEO 8000e libraries uses the picker to touch these fiducial label posts during a calibration routine to establish the reference points it needs.
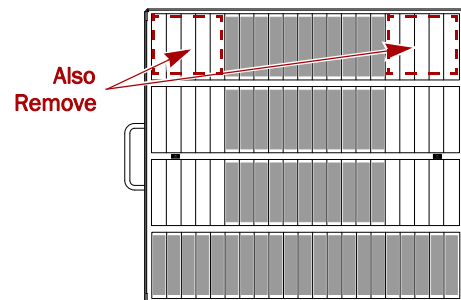
1. Cartridges in the immediate area of the Fiducial labels must be removed to avoid any interference when touching or reading the labels:
   - Remove the cartridges in the first five and last five slots in rows numbered two and three in **each drawer** that has cartridges.
     - In addition, for the **middle-left drawer**, remove the first five and last five cartridges in the top row.
     - Also, for the **middle-right drawer**, remove all the cartridges in the top row.
   - Remove the cartridges in the first five and last five slots in the **Fixed Slots**.
   - Remove the **Mail Slot Magazine**.
2. At the default front panel menu, press **Maintenance > Calibrate Robot**.
3. Leave all elements **checked** for a full calibration of all drawers and magazines.
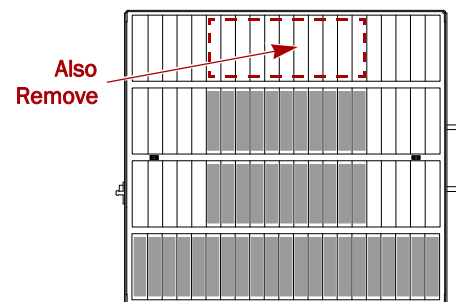
   Test requires 30-35 minutes to complete.

Media Drawers

Empty Slots

Middle-left Drawer

Also Remove

Middle-right Drawer

Also Remove

Return Old Parts to Overland

1. Place the **old part** in the anti-static bag and put it in the replacement part's box.
2. Use the existing **packing materials** 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