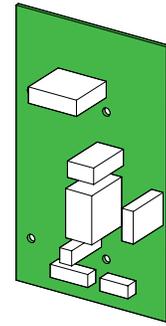


# Rotary SPI PCB Spare

## Remove & Replace Instructions



### Overview & Notes

**IMPORTANT:** Overland Storage requires that all NEO Series parts be removed and replaced by an Overland Storage authorized service provider. Improper installation may result in damage which voids existing warranties.

This document describes how to remove and replace the Rotary SPI Printed Circuit Board (PCB) in a NEO 8000 Library from Overland Storage.

**WARNING:** The GUI touch screen does not completely shut off NEO 8000 system power. To reduce the risk of electric shock or damage, unplug both power cords.

#### Unpacking the Spare

Carefully unpack and verify that you have all the parts:

- Rotary SPI PCB
- Cable ties
- 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.

### Preparing a Library for Access

To access the Rotary SPI PCB, it is necessary to remove some drives and an access panel.

1. **Power down** the library at the front panel.
2. At the rear, set the library circuit breakers to the **OFF** (“O”) position.
3. Remove and retain the **power cords**.
4. Remove the **drives** (or drive covers) and dividers in drive bays 1–4 and set aside (Figure 1).
5. Remove the **lower right** rear access panel.

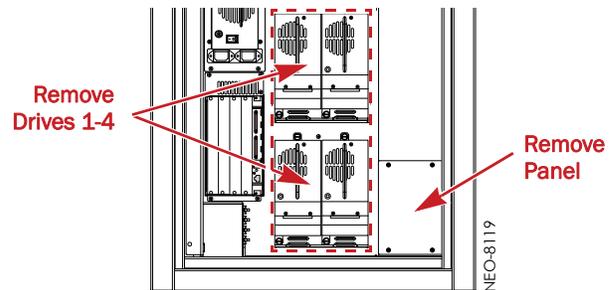


Figure 1. Accessing the Rotary SPI

### Removing the Old PCB

1. Working through the access and drive bays, remove these **six connectors** from the PCB:
  - J1 – Primary Card Cage
  - J2 – Robotics Power Supply
  - J3 – Robot Shuttle Power
  - J4 – Robot Shuttle Signal
  - J6 – Rotary Motor
  - J7 – Rotary Opto Sensor

The J5 connector is not used.
2. At the top of the Rotary SPI mounting bracket, remove and retain the **cable clip** holding the signal cables (Figure 2).

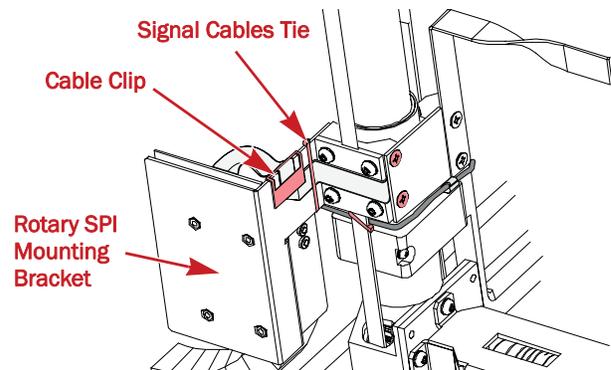


Figure 2. Reverse Angle of Rear Z-Axis Assembly

- Remove the **grounding lug** for the Baseplate Power/Control flex chain.

**NOTE:** Early models had a self-locking 7mm hex nut on the other side of the mounting bracket. Remove and retain.

- Cut both the **mounting bracket** and **flex chain** cable ties (Figure 3).
- Moving the cables aside, remove and retain the **two screws** holding the flex chain.

**NOTE:** Early models had a self-locking 7mm hex nut on the other side of the mounting bracket. Remove and retain.

- Remove and retain the two M4x8MM flat-head screws holding the mounting bracket to the Z-Axis assembly.
- Pulling the mounting bracket toward the rear, remove and retain the four M3x8mm pan-head screws holding the PCB.
- Set the PCB aside for return.

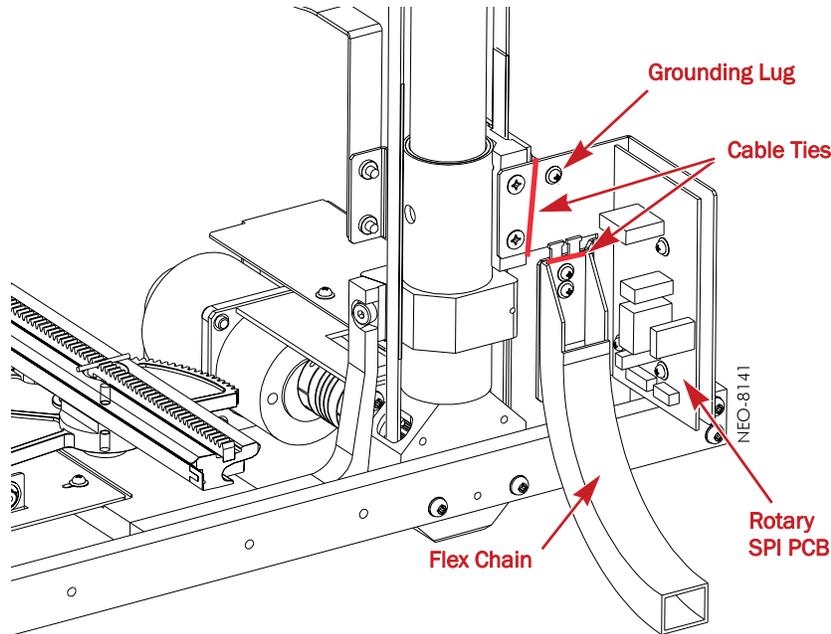


Figure 3. PCB Location on Rear Z-Axis Assembly

## Installing the New PCB

- Using the retained screws, attach the **new PCB** to the mounting bracket.
- Using the retained screws, reattach the **mounting bracket** to the Z-Axis assembly.
- Using the retained screws, reattach the **flex chain** to the bracket. For older units, reuse the hex nuts.
- With the flex chain cables positioned at the top next to the two tabs, secure the cables with a new **cable tie**.
- Reattach the **grounding lug** to the bracket. For older units, reuse the hex nut.
- Connect the **six cables** to the new PCB (Figure 4):
  - J1 – Primary Card Cage
  - J2 – Robotics Power Supply
  - J3 – Robot Shuttle Power
  - J4 – Robot Shuttle Signal
  - J6 – Rotary Motor
  - J7 – Rotary Opto Sensor
- Position the **signal cables** against the back of the mounting bracket and secure it with a new **cable tie**.
- Position the **signal cables** over the top of the bracket and secure them with the retained **cable clip**.

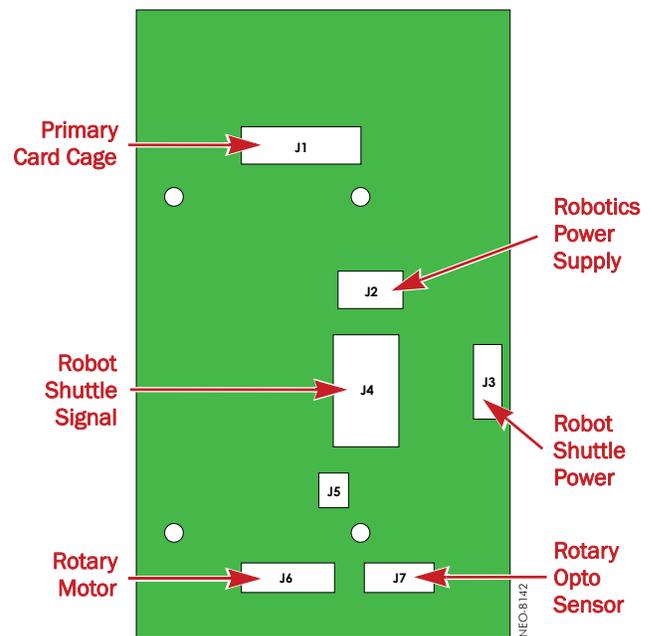


Figure 4. Rotary SPI PCB Connections

## Reassemble Library for Use

1. Reattach the **lower right** rear access panel.
2. Reinstall the **drives** (or drive covers) and dividers in drive bays 1–4 and set aside.
3. Reattach the **power cords**.
4. Set the library circuit breakers to the **ON** (“|”) position. Wait while the library completes its POST program.

## Verify Library Operation

Once the new parts are installed and the system powered up, validate the system functionality using the Cartridge Cycle Diagnostic test.

**NOTE:** *This test randomly moves and redistributes the tape cartridges in the library requiring that it be re-inventoried before putting it back in service. In lieu of this automated test, you can manually move selected tapes to validate the functionality of the library.*

1. Verify that **5 or more cartridges** are available from an enabled drawer or Mail Slot.
2. Select **Menu > Diagnostics > Cartridge Cycle > Start**.
3. Allow the test to run for **30 minutes** or 20-25 cartridge move iterations.

**NOTE:** *If the test fails, contact Overland Storage Technical Support.*

### 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).

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