



Encoder Test 1

Dual Planetary Gear Motor Sync
with Control Box 1510000199

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#82-S0531, Rev. 0B

Bunk Lift In-wall Encoder Testing

Read, understand, and follow all instructions in this test before starting.

Test 1: Use this test only if the slide out room can be moved while in override mode (see manual #3010002675). **To enter Override mode:**

1. Write down the number of flashes indicated by the red and green led's on the touch pad for reference later.
2. Remove the touch pad from the wall.
3. Press and hold the "sets stops/clear fault" button on the back of the touch pad for 5 seconds. Both led's will come on solid, after 5 seconds the Green LED will flash and Red will stay solid.
4. Press and hold **all** the motor buttons on the back of the touch pad. Press the UP or DOWN button on the front of the touch pad until the room moves at least 12" in either direction. Once the room is moved 12", release the UP or DOWN button. **The Bunk Lift Control box times out after 2 minutes of no movement. If it times out, start process over beginning with step 3.**

5. If the room will not operate in override mode, proceed to Test 2 (document number 82-S0532), or contact Power Gear at www.powergearus.com.

Note: All the harnesses need to stay plugged in during this test.

! WARNING

Always make sure that the bunk lift path is clear of people and objects before and during operation of the bunk lift. Always keep away from the bunk lift rails when room is being operated. The gear assembly may pinch or catch on loose clothing

! CAUTION

During override mode the control has no stop locations. Damage to the bunk can occur during over travel of the bunk lift rails. Do not allow rails to become too far out of sync with each other. This will cause the bunk to bind and may cause damage to the bunk lift rail.

! WARNING

If the bunk was moved while the encoder was unplugged, the bunk stops will need to be reset. Consult the correct manual or TIP Sheet for the proper procedure.



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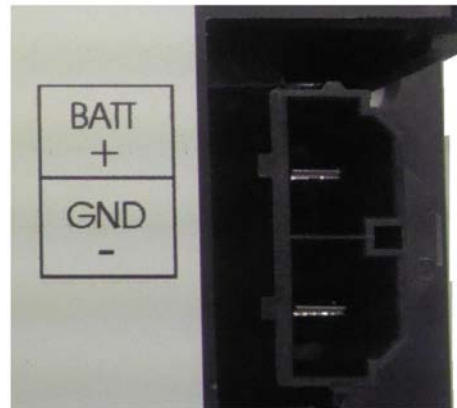
Step 1: Verifying incoming voltage and ground to the control box.

The slide out control main power connector needs a minimum of +12 VDC and a good ground to operate correctly. **This requires the coach engine to be running.** See note to left.

To test the 1510000199 control, back probe the power connector using a multi-meter and check for a minimum of +12 VDC at the main power connection. probe between the "BATT +" and "GND -" See Figure 1

If no power or ground or less than 12 DC Volts is measured between the pins, contact the OEM for the power and ground sources.

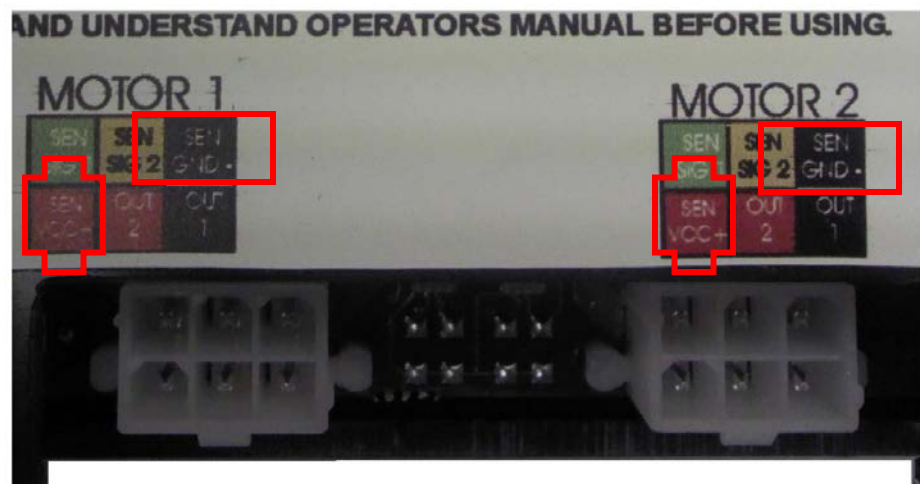
Figure 1



Step 2: Verifying the control box is sending power and ground to the encoder. See note to left.

Set multi-meter to DC volts, and back probe at the "motor 1" and "motor 2" connectors. To test motor 1 encoder, probe between "SEN-VCC" (power) and "SEN-GND" (ground) at motor 1 connector. To test motor 2 encoder, probe between "SEN-VCC" (power) and "SEN-GND" (ground) at motor 2 connector. This voltage should read 10-12VDC. See Figure 2

Figure 2



! NOTE

Note: All the harnesses need to stay plugged in during this test.

! CAUTION

During emergency retract mode the control has no stop locations. Damage to the bunk can occur during over travel of the bunk lift rails. Do not allow rails to become too far out of sync with each other. This will cause the bunk to bind and may cause damage to the slide out rail.

! WARNING

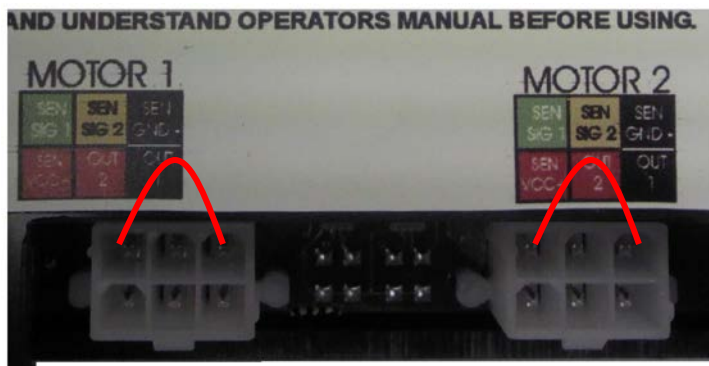
If the bunk was moved while the encoder was unplugged, the room stops will need to be reset. Consult the correct manual or TIP Sheet for the proper procedure

Step 3: Checking the first encoder signal. There are 2 signal wires per encoder. See note to left.

Set multi-meter to AC Volts, and while the room (use override mode) is moving back probe at the controller sensor connection. For the motor 1 encoder, probe between the "SEN-GND" and "SEN SIG 1" at motor 1 connector. For the motor 2 encoder probe between the "SEN -GND" and "SEN SIG 1" at motor 2 connector.

See Figure 3. This should be a steady AC signal. If there is a steady AC Voltage, proceed to step 5.

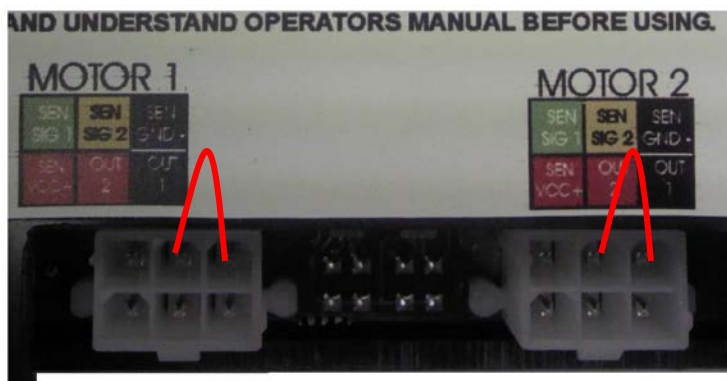
Figure 3



Step 3 Continued: Checking for the second encoder signal.

Set multi-meter to AC Volts, and while the room (use override mode) is moving, back probe at the controller sensor connection. For motor 1 encoder probe between the "SEN-GND" and "SEN SIG 2" at motor 1 connector. For motor 2 encoder, probe between the "SEN-GND" and "SEN SIG 2" at motor 2 connector. See Figure 4. This should be a steady AC signal. If there is a steady AC Voltage, proceed to step 5.

Figure 4



Step 4: Checking the harness continuity and all connections.

If there is no voltage reading from the encoder or the AC Voltage reading was **NOT** steady, check the following:

A: Check the continuity of the harness between the control box encoder pins and the motor encoder pins. If the harness does not have continuity, then replace the bad wire, or the harness. The harness can also be checked from pin to pin for continuity, and from each pin to ground. There should not be continuity to ground, or pin to pin.

B: Check the connections at the motor and control box. Repair any loose connections or loose pins. If the continuity of all the harness wires tests good, and connections are good, then replace the motor assembly. See the motor label for the Power Gear part number for replacement.

Step 5: If the tests in step 3 show a steady AC Voltage at the controller sensor connection, please contact Power Gear at www.powergearus.com for further diagnostic.



Additional Reference Information located At www.powergearus.com

<u>Document #</u>	<u>Description</u>
3010002678	Owner's manual Slim Rack Bunk Lift system with control box part number 1510000199
3010002675	Installation and service manual Slim Rack Bunk Lift system with control box 1510000199
82-S0530	Trouble shooting bunk lift control box 1510000199 for in-wall slim rack systems
82-S0532	Encoder test 2 dual planetary gear motor sync with control box 1510000199