

Electrical Safety Testing a Denver Vibrator High-Cycle Concrete Vibrator

The following tests are performed without power supplied to the unit.

The unit should be assembled the way it came from the factory.

- No loose or broken clamps.
- No screws loose or missing in the switch cover.
- All connectors are tight (LH Threads).
- The power cord and plug end should show no damage.
- Assembly joints in vibrator head appear tight, no gaps.

Set the switch to the “**ON**” or “**START**” position. The rocker switch is “ON” when pushed at the end of the gasket toward the head. This closes all the circuits.

Continuity Test: Use a test light, or ohm meter to test the plug prongs, Check for continuity between the three shorter prongs.

- **X** to **Y**
- **X** to **Z**
- **Y** to **Z**

They should all show continuity.

If there is not continuity, verify that the switch is “ON”. Re-test if necessary.

- The **W** prong is the longer one, which serves as the ground and should not show any continuity to the other prongs. Check for **no** continuity from the **W** prong to prongs **X**, **Y** and **Z**.
- Test the **W** prong for continuity to the brass switch box, and to a clean metal spot on the vibrator head. These should both show continuity.

Sectional Assembly wiring: Sectional electrical connectors are twist-lock style and unit may fail continuity tests if loose.

To check twist-lock electrical connections, you must un-couple the individual waterproof connectors. Waterproof connectors are LH threaded and include an “O” ring. Inspect “O” rings prior to re-assembly and replace as necessary.

After passing the Continuity Test:

HI POT Test:

- Set HI POT tester to 1200V and set time to 1 second (minimum) if so equipped.
- Hook the leads to the **W** prong, and to the **X** prong.
- Perform HI POT test according to the unit’s operation.

The Standard Assembly wiring is:

GREEN to **W** at the plug, hooked to screws in the switch box, then to a screw at the head.

RED to **X**, and is routed through the switch box to the red motor lead.

YELLOW (or White) to **Y**, is connected through one side of the switch, and then from the corresponding switch terminal to the yellow (or white) motor lead.

BLACK to **Z**, is connected to one side of the switch, and then from the corresponding switch terminal to the black motor lead wire.

Sectional Assembly wiring: Sectional electrical connectors are twist-lock style and unit may fail continuity tests if loose.

Sectional assembly wiring is the same as standard wiring except that at each sectional plug and connector assembly the wires terminate as follows:

- #1 Green
- #3 Yellow or White
- #5 Red
- #7 Black

Waterproof Connectors are LH threaded and include an "O" ring. Inspect "O" rings prior to re-assembly and replace as necessary.