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Checking Your Load Cell in the Field

When diagnosing a load cell or cable be sure the electrical power on the panel is ON and the HOA switch is in the OFF position. The polish rod needs to be placed at the bottom of the stroke for easier diagnosing of the load cell and cable. We checked resistance of the load cell at the POC (pump off controller) to check if readings were within specs.

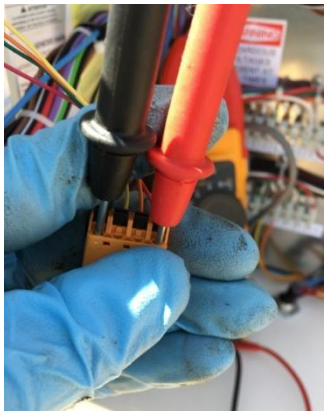


Figure 1 Excitation Check

In the Figure 1 we checked the resistance of the load cell through the Excitation wires using a standard Fluke meter. This load cell and cable on the Excitation side of the circuit ohm out at 744 ohms (this side of the cable and load are within specs for this load cell). We measured the resistance through the RED and GREEN wires for this side of the circuit.

You may need to check with the manufacturer or supplier to know the typical readings for your load cell brand and type.

NOTE: (wire colors will change with load cell cable manufacture).

The table at the end of this article provides some expected resistance readings for a few different types of load cells. You will notice the range is quite different based on the brand and type. So, make sure to check with your supplier for the correct specs.

In the Figure 2 below we checked the resistance of the load cell, and cable through the Signal wires. This load cell and cable on the Signal side of the circuit ohm out at 705 ohms (this side of the cable and load are also within specs for this load cell type). We measured the resistance through the ORANGE and YELLOW wires for this side of the circuit.

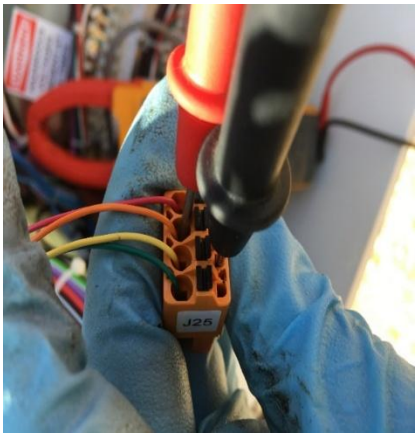


Figure 2 Resistance Check

If Readings Are Out of Specs…

Had the readings been outside the range recommended by the supplier, then you would need to try a different load cell. You may also need to check the cable.

You may also be able to check the load cell in your workshop before you take the unit to the field by performing a similar test in the office. Testing in the office may save you time and an extra trip if you can identify a bad load cell before you head to the field to install it.

The table below gives typical resistance readings for different load cell brands. Check with your load cell supplier for specs on your units in the field.

Load Cell	Excitation +/- (ohms)	Signal +/- (ohms)	Load Cell Color
Interface 1	385 ± 5 ohms	350 ± 5 ohms	Red
Interface 2	725 ± 25 ohms	700 ± 5 ohms	Red
Flintec	800 ± 50 ohms	700 ± 5 ohms	Stainless
GroupFour	700 ± 25 ohms	700 ± 5 ohms	Stainless