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# Load Stand II Sensor Replacement

## SENSOR REMOVAL

1. Remove the load stand sunshield. Retain sunshield and mounting hardware for re-installation later.
2. The removal of the junction box may also be necessary if the defective sensor to be replaced is situated behind the junction box. Retain junction box mounting hardware for re-installation later.
3. Remove the sensor cover. If the cover is damaged during removal, discard. Retain sensor cover mounting hardware for re-use later. The sensor covers are sealed with RTV; a knife may be required to cut this seal to remove the cover.
4. With the cover removed and the sensor exposed, remove the thermal compound that filled the sensor mounting cavity (counter-bored hole).
5. After the removal of the thermal compound, remove the sensor by unscrewing the two mounting screws that hold the sensor in place.
6. Do not disconnect the sensor from the junction box until you are prepared to wire the new sensor.
7. Clean the sensor mounting cavity completely. Verify that it is free of dirt and grease in preparation for the sensor installation.

## SENSOR INSTALLATION

1. Take exceptional care to ensure that the sensor mounting surface is free from contamination.
2. Apply a thin layer of thermal compound to the bare metal of the load stand sensor mounting surface.
3. Measure the sensor output using a Kistler-Morse test meter or a digital volt meter. The output at 12VDC must be within +/- 50mV of zero or the sensor may be damaged.
4. Remove the backing from the sensor PCB and adhere the PCB to the load stand.
5. Gently holding the sensor on the load stand mounting surface, align the sensor mounting holes to the load stand's tapped holes and install the mounting screws finger tight only.
6. Using the supplied T-handle driver, tighten the sensor mounting screws until the shaft of the driver flexes in torsion, 1/4 turn past the point that the bolt stops turning. Repeat this several times to ensure that the bolts are tight. The sensor output, in this state must be within +/- 50 mV of zero, as noted above (i.e. as close as possible to the output noted in the uninstalled condition).

NOTE: Carefully monitor the output of the sensor while tightening the sensor screws. Never exceed +/-500mV at any time during this process. Over tightening or excessive force can result in damaged sensors.

7. With the sensor bolted down tight in place, the sensor cover is ready to be installed.

## SENSOR COVER INSTALLATION

1. Fill the sensor mounting cavity (counter-bored hole) with the supplied thermal compound.
2. Inspect the mating surface between the sensor cover and the load stand for contaminants. Make sure that the mating surface is clean.
3. Apply a thin coating, 1/16 in., of RTV sealant (supplied) to the cover mounting flange.
4. Position the cover on the weldment, aligning the cover mounting holes to the load stand tapped holes for sensor cover, and install the cover using the two (2) mounting screws (saved earlier) for cover installation.
5. Add a continuous bead of sealant all around the cover.
6. Inspect the installed cover to verify that there is a continuous bead of sealant all around it and no gaps are present.
7. Clean the cover and load stand of any excess RTV sealant.

## WIRING THE SENSOR TO THE JUNCTION BOX

1. Disconnect the defective sensor from the junction box and discard. Note how the sensor cable was routed and terminated.
2. Connect the new sensor to the junction box, following the same cable routing and termination of the defective sensor. Refer to Figures 1, 2 and 3.
3. Tighten the cord grip fitting on the junction box to ensure a water-tight seal around the sensor cable.
4. Reinstall load stand sunshield.

Figure 1: Sensor Installation

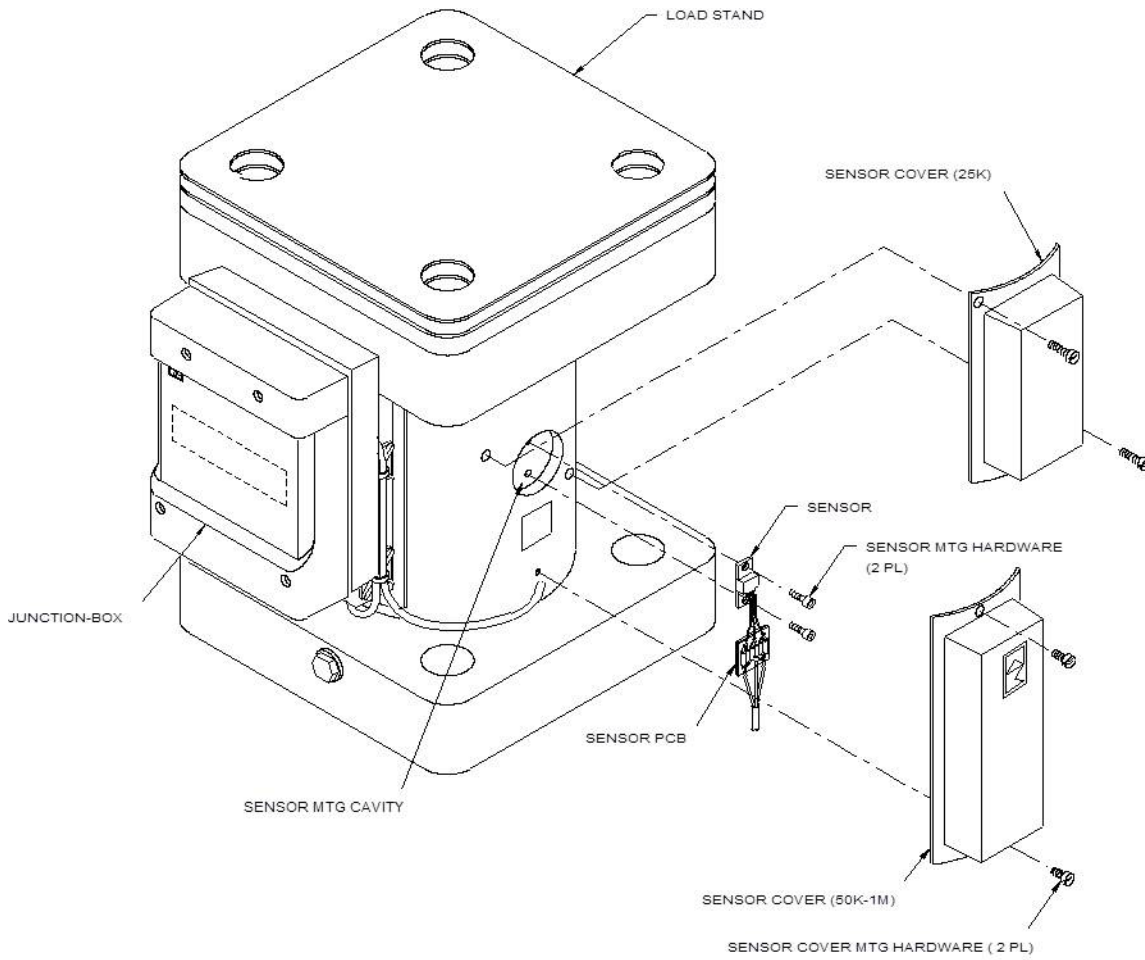


Figure 2: Wiring Detail for Junction Box Board

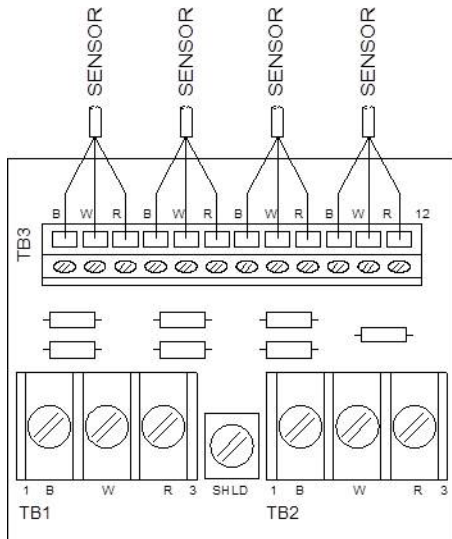


Figure 3: Sensor Locations on Load Stand

