

## **Troubleshooting Load Cells**

All Load Cells used by AEC are rated at 2 millivolts per volt DC.

This means that the load cell will output 2 millivolts for every 1 volt inputted to the load cell.

The excitation voltage is 10 volts DC. to check this use a meter and check between the BLACK and GREEN wire of the load cell

If your excitation voltage is 10VDC the output of the load cell will be 20mVDC with a full load. To find your excitation voltage measure between the green and black wire on the load cell. To find your signal measure between the red and white wire.

To determine if your load cell is working properly determine the KG value of the load cell (stamped on the load cell). Place the calibration weight on the load cell and measure the millivolt reading. Now formulate the value that the load cell should read as follows.

KG rating x 2.2 pounds=pound rating of load cell

20 Millivolts / Pound rating of load cell = millivolt per pound rating

Pounds per millivolt x calibration weight plus .75 pounds (weight of bracket) = millivolt reading.

### **Example:**

Load cell rated at 5kg

Calibration weight = 6.5 pounds

$5 \times 2.2 = 11$  pounds

$20\text{mVDC} / 11 \text{ pounds} = 1.82$  millivolts per pound

$1.82 (6.5 + .75) = 13.18$  millivolts

You would expect to see 13.18mVDC the value you see should be within 10% of the calculated value or the load cell is bad.