

06 Mar 2024

Symptoms

Loadcell reading unstable
Loadcells unresponsive to weight change
Loadcell reading climbs very high (example 100 000kg)
Loadcell reading climbs very low (example- 100 000kg)
Loadcells won't calibrate correctly
Unstable sensor readings

Notes

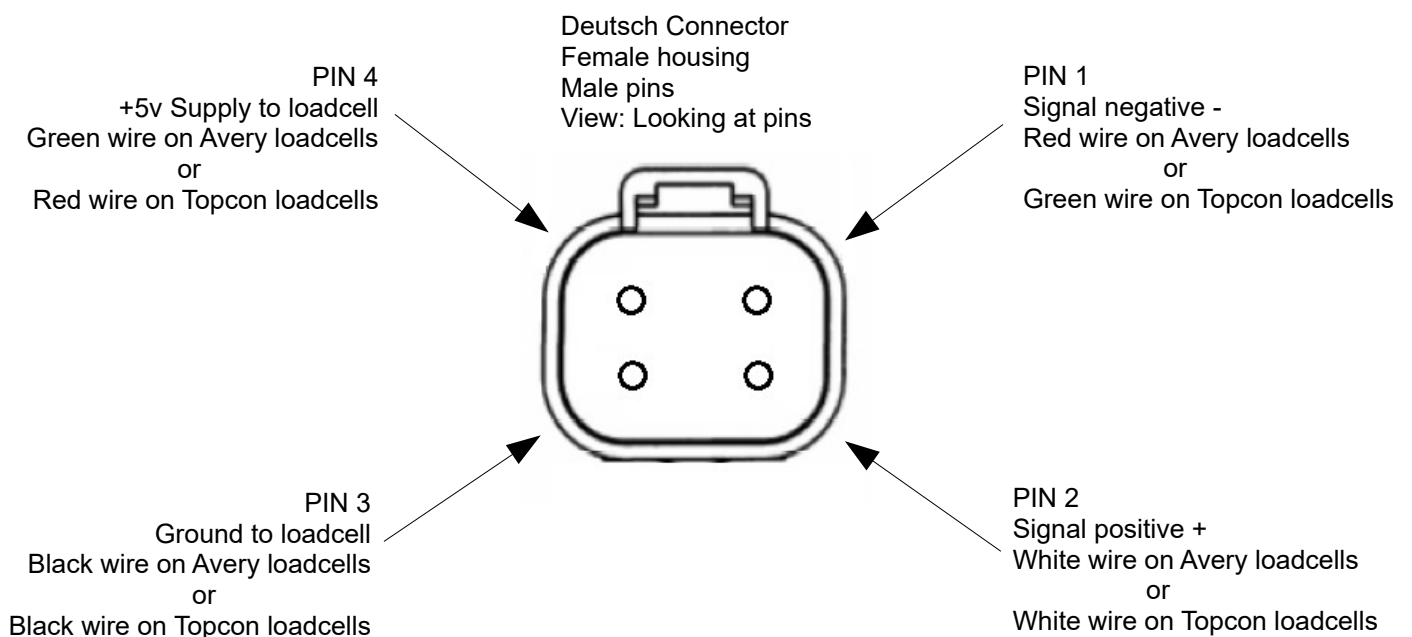
Perform these two diagnostic methods

- Resistance Test
- Diagnostics in the Controller

Method 1: Resistance Test

Use a multimeter to check the resistance across the pins in ohms Ω

- | | | |
|---|-------------------------------------|---|
| 1 | Test resistance between pins 1 to 2 | Result must read between 300-400 Ω |
| 2 | Test resistance between pins 3 to 4 | Result must read between 350-500 Ω |
| 3 | Test resistance between pins 1 to 4 | Result must read between 270-370 Ω |
| 4 | Test resistance between pins 2 to 4 | Result must read between 270-370 Ω |
| 5 | Test resistance between pins 2 to 3 | Result must read between 210-310 Ω |
| 6 | Test resistance between pins 1 to 3 | Result must read between 210-310 Ω |



There must be no connection from each wire to the loadcell case
Remove paint/rust from an area on the case, place the multimeter ground probe on this clean metal area
Connect the other probe to each wire individually
There must be no resistance reading on each wire
If there is a resistance reading on any wire (it is shorted internally to the case) the loadcell must be replaced

- Method 2: Controller Diagnostics
- 1 Open the i4M Tablet app
 - 2 Tap these menus: MACHINE > CHECKS > LOADCELLS
 - 3 The readings for Loadcells 0, 1, 2 must be between 50,000 and 100,000 shown below

EXAMPLE

Loadcell Data			
Item	Value	Unit	Description
Flags	0	Hex	Flags variable from loadcell processor
Channel 0	ON	Status	ADC channel is turned ON or OFF
Channel 1	ON	Status	ADC channel is turned ON or OFF
Channel 2	ON	Status	ADC channel is turned ON or OFF
Channel 3	OFF	Status	ADC channel is turned ON or OFF
Loadcell 0	67233	ADC 24bit	Loadcell reading
Loadcell 1	65609	ADC 24bit	Loadcell reading
Loadcell 2	66069	ADC 24bit	Loadcell reading
Loadcell 3	OFF	ADC 24bit	Loadcell reading

Loadcells OK, they are in the normal working range

Readings below 50,000 or above 100,000 are out of range
There can be many causes, follow the steps in the TROUBLESHOOTING GUIDE online (after the resistance test above)