

Loadcells Tiedowns Calibration Form

NAIC AO, Iquintero, ocolon, wiguina, 20 Jun 2019

from: http://www.naic.edu/~phil/td/ldcell_calibration_form.html

Loadcell Tiedown – Position	12-1	12-2	4-1	4-2	8-1	8-2
LOADCELL PARAMETERS						
Loadcell Serial Number	263010	90409	90410	263011	263012	253850
Compression @ 80kips increment (mV/V)	1.0033			1.0463	0.9734	1.0352
Compression @ 80kips decrement (mV/V)	1.0039			1.0503	0.9773	1.0368
Compression @ 80kips average (mV/V)	1.0036	1.0413	1.0119	1.0483	0.97535	1.036
Shunt Cal. @ 87.325kOhm – Load (%)	49.79			48.25	51.34	48.41
Shunt Cal. @ 87.325kOhm – Load (kips)	79.66567	77.9328	80.5632	77.20452	82.14524	77.44984
ON-OFF Volt. Expected (V)	2.431	2.378	2.459	2.356	2.507	2.364
ON-OFF Counts expected	3983.3	3896.6	4028.2	3860.2	4107.3	3872.5
MEASUREMENTS						
Ex+ to Sig- / Brown-Red (Ohm)	267.6	267.5* / 267.5	267.3** / 298.5	266.3	267.2	267.9
Ex+ to Sig+ / Brown-Orange (Ohm)	267.1	267.2* / 267.2	268.7** / 266.4	266.8	267.0	268.0
Ex- to Sig- / Yellow-Red (Ohm)	268.5	268.4* / 267.2	267.8** / 315.0	266.3	267.1	266.9
Ex- to Sig+ / Yellow-Orange (Ohm)	267.5	267.5* / 285.0	267.5** / 285.0	266.5	267.0	267.1
Excitation Volt. / Brown-Yellow (V)	10.00	9.99	9.98	9.98	9.99	9.99
Cal OFF Volts(V)	0.004	0.003	0.003	0.003	0.003	0.004
Cal ON Volts (V)	2.430	2.378	2.459	2.356	2.507	2.364
CALCULATIONS						
ON-OFF volts (V)	2.426	2.375	2.456	2.353	2.504	2.360
Error ON-OFF Volts (%)	0.21	0.14	0.11	0.13	0.11	0.15
Cal ON tension (kips)	78.30	74.90	79.15	76.00	80.49	75.70
Error Cal (%)	1.71	3.89	1.75	1.56	2.02	2.26

* on 09 Jun 2011 from <http://www.naic.edu/~phil/td/loadcells.html>

* on 17 Jan 2005 from <http://www.naic.edu/~phil/td/loadcells.html>

NOTES:

1kips = 1000lb

Criteria: 1 count per 0.02kips

Counts per 1 kips

Full Range ADC Volts

Full Range ADC Counts

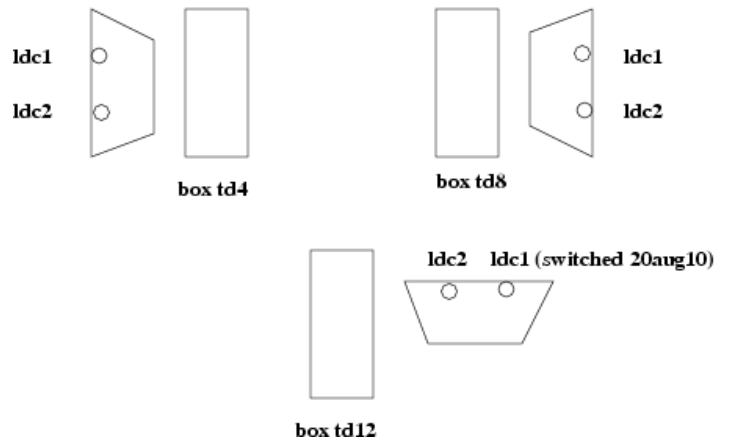
Volts per kips ratio

kips at full ADC Counts

0.02
50
2.5
4096
0.0305175781
81.92

kips/cnt
cnt/kips
V
Counts
V/kips
kips

Load cell naming conventions



Loadcell Signal

Ex+ Brown
Ex- Yellow
Sig+ Orange
Sig- Red

Tiedown

Azimuth Position
12 360°
4 120° or 480°
8 240° or 600°