



## TECHNICAL BULLETIN

### 1-800-237-0022

**Stock No. L01\* - 15" DOUBLE SHEAR BEAM LOAD CELL, END CONNECTOR**

**Stock No. L02\* - 15" DOUBLE SHEAR BEAM LOAD CELL, SIDE CONNECTOR**

#### CONCEPT:

These load cells were designed to fit a variety of trucks throughout the U. S. and Canada that use either tipping or fixed bodies.

#### APPLICATION:

- A typical system includes four or six VULCAN load cells and four or six VULCAN mounting kits (Stock No. H01, H02, H03, H04).

#### SPECIFICATIONS:

- CAPACITY: L01\* 15,000 lb  
L02\* 15,000 lb
- SAFE OVERLOAD: 300% capacity.
- OUTPUT: .9 mV/V at 15,000 lb
- ACCURACY: Typical system error less than .5% full scale.
- MATERIAL: Customized 4340 steel, heat-treated for optimum strength.
- PLATING: Vulcan load cells are plated for increased rust protection.
- MOUNTING FASTENERS: **It is the installer's responsibility to ensure all 1-14 UNS fasteners have 7/8" to 1" thread engagement into the load cell.** If the thread engagement is over 1", provide suitable bracket thickness or hardened washer(s) under the cap screw head. If the thread engagement is less than 7/8", obtain the proper length of 1-14 UNS Grade 8, hex cap screw to meet the requirement.

**TECHNICAL BULLETIN**  
**1-800-237-0022**

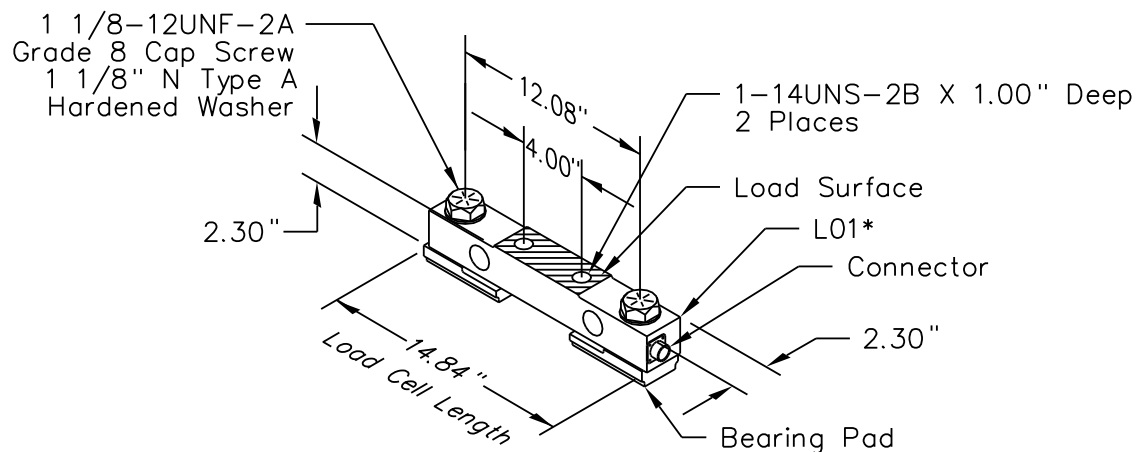
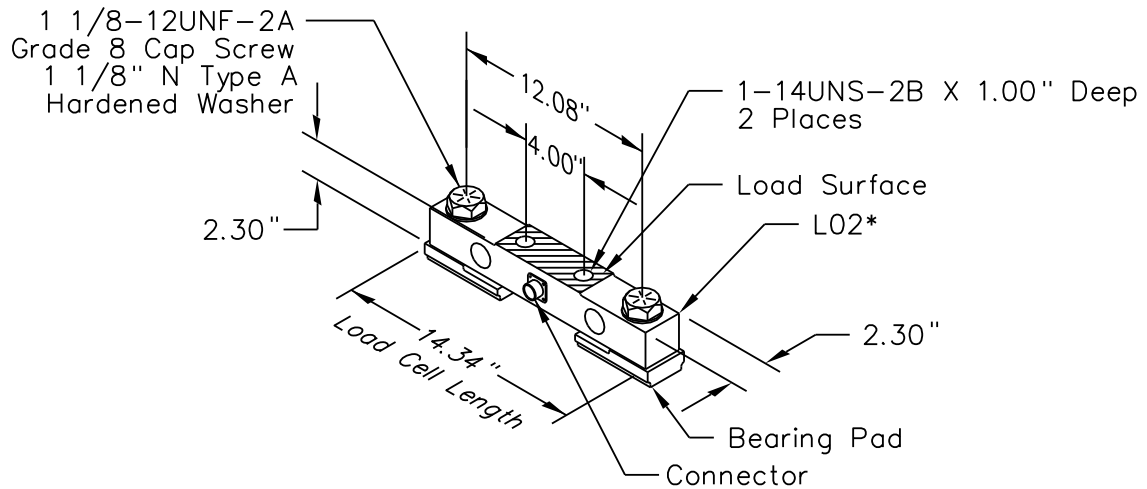


FIG. 122-A

**INSTALLATION:**

This load cell can be implemented in a wide range of mountings and incorporated in a variety of suspension systems. Applications include tank weighing, feed mixing, and refuse. Because there is a wide variety of material types and thicknesses used in body and truck manufacturing, it is the responsibility of the installer to ensure that modifications of the vehicle or structure do not weaken its capacity. Consult body manufacturer and/or Stress-Tek factory for further assistance.



## TECHNICAL BULLETIN

### 1-800-237-0022

1. For installing load cells, check for proper fit between the load cell and the bearing pad(s). If load cell brackets require welding, remove load cell from bracket before welding. **Do not exceed 140 degrees Fahrenheit (60 C) on the load cell. Arcing on the body of the load cell may seriously damage the load cell's structural integrity and must NOT be installed if this occurs. This also voids manufacturer's warranty.**
2. When assembling load cell to bracket and bearing pad(s), use "Never-Seize" or equivalent thread lubricant on all mounting cap screws. **DO NOT use the "Never Seize" on the load cell connectors.** *Torque all the cap screws* to torque specifications listed below:

**Note:** Stress-Tek has written detailed installation manuals for certain body types and can be consulted on installation practices.

Mounting Kit	1" Cap Screw	1-1/8" Cap Screw
H01 Mounting Kit with Bearing Pad.	650-890 lb-ft	1000-1400 lb-ft
H02 Spring Kit with Bearing Pad.	Tighten cap screws to compress springs 1/4". Bend tabs on screw lock.	Not Included, Refer to H01
H03 Mounting Kit with Monoblock.	650-890 lb-ft	450-500 lb-ft
H04 Pillow Block Kit with Bearing Pad.	650-890 lb-ft Bend tabs on screw lock.	Not Included, Refer to H01



## TECHNICAL BULLETIN

### 1-800-237-0022

Pre-loads may be induced in the load cell when torquing down the cap screws. Pre-loads can be monitored on the meter by making all the electrical connections, setting the meter calibration number to 2050, and setting the meter display to read zero by adjusting the Tare Weight on the appropriate channel *before* torquing the cap screws. The allowable pre-load after all the cap screws are torqued is  $\pm 800$  lb per load cell. If more than 800 lb of preload is seen, the mounting surfaces are not flat and parallel. Check surfaces for warpage, and shim or straighten as necessary. If you still have problems reducing preload, consult Stress-Tek factory.

3. Load cells are designed to measure vertical forces. If the load cell is mounted in a manner that results in torsional forces in the load cell, its accuracy and life can be reduced. To prevent this, it is **important** that upper and lower mounting surfaces remain flat and parallel under load. This means that both upper and lower mounting surfaces must be stiff enough not to rotate when loaded, properly gusseted and supported upper and lower mounting brackets will eliminate the chance of a load cell failure under torsional (twisting) forces.
4. **Note: Do not** grease or lubricate inside the VULCAN load cell connector or Vulcoder connector. These components are highly sensitive to foreign substances and inaccurate readings will occur if these components are contaminated. **Your manufacturer's warranty does not cover the failure of VULCAN components due to contamination (use of grease or other conductive substance) in either of these component connectors.**
5. VULCAN load cells are plated for increased rust protection. Certain minimum maintenance will be necessary to claim warranty of load cells. Apply a high quality paint to the load cells, bearing pads and mounting brackets. For environments where high concentrations of salts are used on road surfaces, undercoating is recommended (3M, Universal Rubberized Undercoating, 3M P/N: 8883). Spray undercoating when load cells are connected to electronics and fully assembled with bearing pads and brackets. See "*Vulcan Load Cell Maintenance*" document 44-20006-001 for further details.
6. For additional electronic installation notes and system operational procedures, see the "*Vulcan Operation And Maintenance Manual*".