VULCAN®
ON-BOARD SCALES

# TECHNICAL BULLETIN
## 1-800-237-0022



**Stock No. H01 - 15" LOAD CELL MOUNTING KIT**

**Stock No. H10 - 17" LOAD CELL MOUNTING KIT, SINGLE POINT**

**Stock No. H11 - 19" LOAD CELL MOUNTING KIT, 5TH WHEEL**

**Stock No. H13 - 26" LOAD CELL MOUNTING KIT**

**Stock No. H25 - 26" LOAD CELL MOUNTING KIT**

**Stock No. H30 - 28" LOAD CELL MOUNTING KIT, EXTRA HEAVY DUTY**

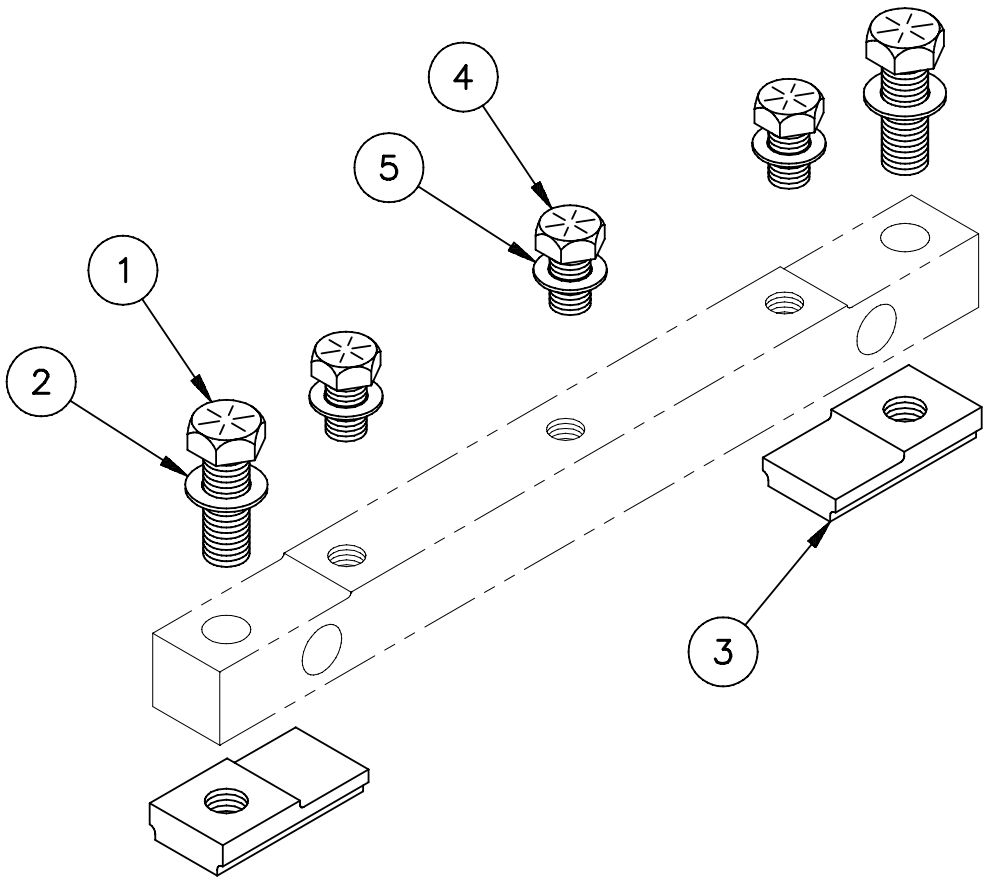


FIG 121-A

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**Stress-Tek, Inc. Canada,** 11-1642 Langan Avenue, Pt. Coquitlam, BC V3C 1K5 604-944-1481 FAX: 604-944-1482

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| Item | Description | Part No. | Stock Numbers | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | H01 | H10 | H11 | H13 | H25 | H30 |
| 1 | 1-1/8" X 3-1/4" Cap Screw | 30-14023-304 | 2 | 2 | - | 2 | 2 | - |
| 1 | 1-1/8" X 2-1/2" Cap Screw | 30-14023-208 | - | - | 2 | - | - | - |
| 1 | 1-1/4" X 3-3/4" Cap Screw | 30-90020-001 | - | - | - | - | - | 2 |
| 2 | 1-1/8" Hardened Washer | 30-70001-026 | 2 | - | 2 | 2 | 2 | - |
| 2 | 1-1/4" Hardened Washer | 30-70001-028 | - | - | - | - | - | 2 |
| 2 | Custom Washer | 52-30220-001 | - | 2 | - | - | - | - |
| 3 | Bearing Pad | 52-20123-001 | 2 | 2 | 2 | 2 | 2 | - |
| 3 | Bearing Pad, Extra HD | 52-20123-002 | - | - | - | - | - | 2 |
| 4 | 1" X 1-3/4" Cap Screw | 30-14021-112 | 2 | - | - | 3 | - | - |
| 4 | 1" X 2" Cap Screw | 30-14221-200 | - | - | - | - | 3 | - |
| 5 | 1" Hardened Washer | 30-70001-024 | 2 | - | - | 3 | 3 | - |

**Note:** The three 1-1/8" Pressure Bar cap screws are not supplied by Stress-Tek, Inc. for the H30 mounting kit as a result of varying bridge beam thicknesses.

1. MOUNTING FASTENERS: **It is the installer's responsibility to ensure all 1-14 UNS fasteners (item 4) have 7/8" to 1" thread engagement into the load cell.** If the thread engagement is over 1", provide hardened washer(s) under the cap screw head. If the thread engagement is less than 7/8", obtain the proper length 1-14UNS Grade 8, hex cap screw to meet the requirement.

2. For installing load cells, check for proper fit between the load cell and the bearing pad(s). If load cell mounting brackets or bearing pads 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.**

   **Note:** All welding and welding procedures must meet the American Welding Society specifications.

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3. When assembling load cell to mounting 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 on the next page.

| Mounting Kit | 1" Cap Screw | 1-1/8" Cap Screw | 1-1/4" Cap Screw |
|---|---|---|---|
| H01 15" Mounting Kit with Bearing Pad. | 650-890 lb-ft | 1000-1400 lb-ft | Not Applicable |
| H10 17" Mounting Kit with Bearing Pad. | Not Applicable | 1000-1400 lb-ft | Not Applicable |
| H11 19" Mounting Kit with Bearing Pad. | Not Applicable | 1000-1400 lb-ft | Not Applicable |
| H13 26" Mounting Kit with Bearing Pad. | 650-890 lb-ft | 1000-1400 lb-ft | Not Applicable |
| H25 26" Mounting Kit with Bearing Pad. | 650-890 lb-ft | 1000-1400 lb-ft | Not Applicable |
| H30 28" Mounting Kit with Bearing Pad. | Not Applicable | 1000-1400 lb-ft | 1450-1780 lb-ft |

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

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 ± 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.

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4. 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.

5. Additional electronic installation notes and system operational procedures can be found in your *"Vulcan Operations and Maintenance Manual"* for V200 and V400 systems and the *"Owner's Manual"* for the V500 and V600 systems.

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