



## **TECHNICAL**

## **Plow Bolts - Tensile and Torque**

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Tensile Stress, Ultimate Tensile Load and Tightening Torque

| PLOW BOLTS - MIMIMUM TENSILE STRESS (lbf/in²) |     |             |         |  |  |
|---|-----|-------------|---------|--|--|
| Nominal                                       | TPI | Stress Area | Grade   |  |  |
| Size  |     | in²         | 9       |  |  |
| 5/8"UNC                                       | 11  | 0.226       | 170,000 |  |  |
| 3/4"UNC                                       | 10  | 0.334       | 170,000 |  |  |
| 7/8"UNC                                       | 9   | 0.462       | 170,000 |  |  |
| 1"UNC   | 8   | 0.606       | 170,000 |  |  |
| 1-1/8"UNC                                     | 7   | 0.763       | 170,000 |  |  |
| 1-1/4"UNC                                     | 7   | 0.969       | 170,000 |  |  |
| 1-3/8"UNC                                     | 6   | 1.155       | 170,000 |  |  |
|   |     |             |         |  |  |



| PLOW BOLTS - MIMIMUM ULTIMATE TENSILE LOAD (lbf/in <sup>2</sup> | ) |
|---|---|
|   |   |

| Nominal   | TPI | Stress Area | Grade   |
|-----------|-----|-------------|---------|
| Size      |     | in²         | 9       |
| 5/8"UNC   | 11  | 0.226       | 38,420  |
| 3/4"UNC   | 10  | 0.334       | 56,780  |
| 7/8"UNC   | 9   | 0.462       | 78,540  |
| 1"UNC     | 8   | 0.606       | 103,020 |
| 1-1/8"UNC | 7   | 0.763       | 129,710 |
| 1-1/4"UNC | 7   | 0.969       | 164,730 |
| 1-3/8"UNC | 6   | 1.155       | 196,350 |

| PLOW BOLTS - GUIDE TO TIGHTENING TORQUES (lbf.ft) ** SEE NOTE ** |     |             |        |  |  |
|--|-----|-------------|--------|--|--|
| Nominal  | TPI | Stress Area | Grade  |  |  |
| Size   |     | in²         | 9      |  |  |
| 5/8"UNC  | 11  | 0.226       | 238.4  |  |  |
| 3/4"UNC  | 10  | 0.334       | 422.7  |  |  |
| 7/8"UNC  | 9   | 0.462       | 682.2  |  |  |
| 1"UNC  | 8   | 0.606       | 1022.6 |  |  |
| 1-1/8"UNC  | 7   | 0.763       | 1448.5 |  |  |
| 1-1/4"UNC  | 7   | 0.969       | 2044.0 |  |  |
| 1-3/8"UNC  | 6   | 1.155       | 2670.2 |  |  |
| 1-3/8"UNC  | 6   | 1.155       | 2670.2 |  |  |

k Factor = 0.2

The induced load is calculated at 75% proof load stress

## Note:

The tightening torque values given in the above table serve only as a guide. Ak factor of 0.2 has been used which assumes threads are plain finish, burr free with a light oil coating. It should be noted that these figures are based on the first tightening of single assemblies in isolation.

Bolt Tension | Anti-Vibration | Product Reliability | Traceability

