**FATIGUE COMPARISON**

This chart illustrates the number of cycles required for a variety of nut and bolt types to reach fatigue under vibratory conditions. Notice the BOBTAIL reaches a 2,000,000 cycle run-out limit before fatigue.

**DIRECT TENSION / YIELD STRENGTH**

Because Huck BOBTAIL lockbolts are not subjected to torsion during installation, they can safely be taken to higher preload values than conventional bolts. BOBTAIL installation is under direct tension only, while conventional bolts are under a combination of tension and torsion during installation.

Conventional bolts develop torsional forces from friction and geometric factors between the mating threads, resulting in a reduction of yield and tensile strength of 10% to 20%. The torque-tension relationship is shown in the chart to the left.

For more information, visit alcoafasteners.com/bobtail
An engineer’s-eye view of what makes a BOBTAIL® superior in strength and vibration resistance.

The Huck BOBTAIL® lockbolt is Huck-engineered to deliver superior strength and reliability. Offering 5 to 10 times the fatigue strength of conventional nuts and bolts, the BOBTAIL is preferred for heavy-duty applications where ultimate vibration resistance is critical. Its shallow thread and large root radius increase fatigue strength. And full metal-to-metal contact between the collar wall and the bolt threads eliminates the gap that you find with ordinary nuts and bolts; the kind of gap that can lead to loosening under vibration intensive conditions.

In addition, the Huck BOBTAIL is fast and easy-to-install with light, ergonomic tooling, ensuring efficiency on the manufacturing floor.

The detailed specifications charts and images in this flyer illustrate BOBTAIL performance in more detail, as compared to nuts and bolts.

**Transverse Vibration Comparison**

This chart shows that once vibration begins, clamp load quickly decays with conventional nuts and bolts, while it holds constant with the BOBTAIL.

**Gap Elimination Schematic**

The swaged collar forms over the lock thread, and eliminates the gap. Regular nuts and bolts have gap, which allows for loosening by vibration.

**Collar Design**

The bump crease in the collar flange — a proprietary HUCK design — indicates the BOBTAIL has been fully swaged on. A quick visual inspection is all that is required to ensure complete installation.
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