

HUCK FASTENERS

STAR FASTENERS

Joint Slip, Side Slide and Vibration – Huck® Fasteners, combating the effects of vibration

Why do threaded Fasteners experience self-loosening? There are quite a few reasons why they fail, but generally it's that there isn't sufficient clamp force present on the joint interface (where two or more parts interact) to movement between the bolt head or nut and the joint. Transversely applied alternating forces, also known as vibration, generates the most severe conditions for self-loosening. Firstly, the joining materials slip, the threaded fasteners friction is then reduced on the surface of the material it's joining, then torque acting on the fastener coupled with the vibration (Jost Effect) results in self-loosening occurring.

How can Huck® fasteners help? "Huck LockBolt® and structural blind fasteners are designed to provide permanent, vibration-resistant, superior-quality joining solutions for use in industrial applications. Huck fasteners offer relatively high tensile, shear and clamp properties they are suited to applications where the joints are integral to the structure. Offering a clean and safe alternative to welding and a more efficient fastening method than standard nuts and bolts, Huck fasteners offer benefits which other fastening methods cannot, including quick and easy installation, elimination of re-checking / replacement, and ultimately cost reductions."

Eliminating the effects of vibration.

HuckBolts® are a two-piece fastening system made up of a Pin and Collar. Huck Lockbolt technology works on a different principle to regular bolting, where instead of a threaded nut, a cylindrical 'collar' with a smooth internal bore is used. The collar is placed over a pin with locking grooves that either follow the form of annular grooves or a special form helical thread. During installation this collar is 'swaged' permanently.

Huck Structural Blind fastener range has excellent gap pull-out and high retained clamp. The tensile strength of structural blind fasteners differs to that of Lockbolt's, as they form a blind side positive lock either



Huck® LockBolt Fastener Range

by bulbing or expanding of the sleeve. The sleeve, assisted by the permanently secured pin, therefore resists failure.

Alternatives to welding and threaded fasteners. This joining process offers a number of significant advantages over regular bolting. The joint is maintenance free as once the collar is 'swaged', it will not loosen under vibration. This provides major savings in labour costs by eliminating the need to re-torque bolts periodically in order to ensure joint integrity. The major safety benefit is that the joint is guaranteed to maintain clamp and not become compromised over time. HuckBolts can be effectively used with virtually any metal, and dissimilar metals with dissimilar coefficients of thermal expansion present no problems. Varying material thicknesses in a joint are readily accommodated, and surface finishes are not damaged.

Most importantly, HuckBolts are proven to hold up over years of service in demanding high-stress, high-vibration environments. Industries using HuckBolts include heavy-duty trucks, commercial vehicles, their chassis and trailers, rail track, crossings, railcar and locomotives, agricultural equipment and implements, aerospace, mining shaker screens and shaft construction, defence vehicles



Huck® Blind Fastener Range

and oilfield equipment – some really challenging fastening applications!

Over the years the Huck Lockbolt fastener range has evolved. The traditional C6L® and C50L® Lockbolt has advanced to an innovative pintail-less design of the Huck BobTail®. It offers up to 10 times the fatigue strength of conventional nuts and bolts, and delivers ultimate strength, installation speed and vibration resistance. In addition, the pintail-less design of the BobTail means that there is a reduction in noise during installation, there is no waste through breaking of the pin and there is an improvement in corrosion resistance by eliminating the exposed surface resulting from the pintail break.

Specialists in the supply of Huck Fasteners, Star Fasteners are proud to be the UK's largest Huck fastener distributor. Working with a diverse range of end users and distributors from across a number of industries.

Star Fasteners are also an accredited Huck tool service and repair centre; expert technical knowledge and a large tool hire fleet complements the service.

For more information about Star Fasteners unique value-added services visit starfasteners.co.uk.