LOCKBOLTS®

STAR FASTENERS

Consistent joint performance

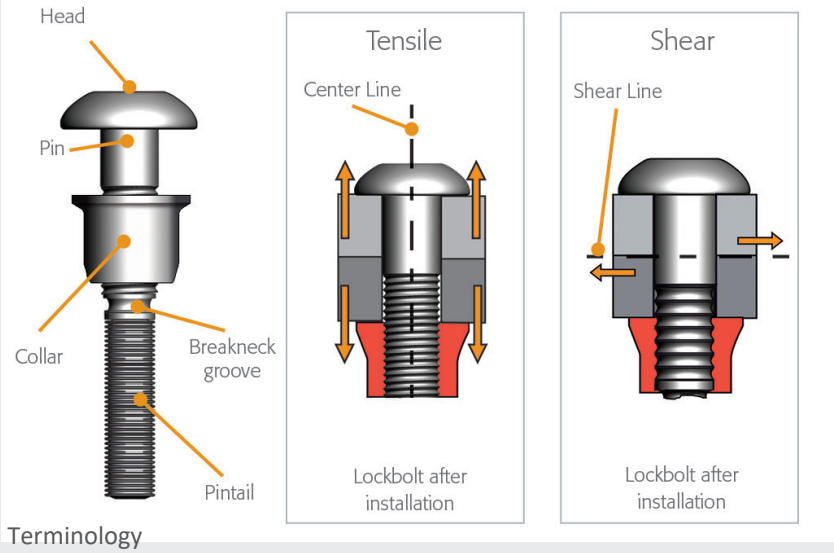
WHAT ARE THEY AND HOW DO THEY WORK?

HuckBolts®, also known as LockBolts are neither a threaded bolt or a rivet, but combine the desirable features of both. They have been used in many critical joint applications for decades, including widespread usage 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 and oilfield equipment – some really challenging environmental conditions.

Often the most vulnerable point on a design is where there is an interface or join between components; the availability of carbon steel, aluminium, and stainless-steel variations make LockBolts fasteners a viable option for joining a multitude of material. 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.

HuckBolts such as C6L® and C50L® have been on the market for many decades and are well known and used. Others such as the Huck BobTail® are less well known but offer significant advantages; up to 10 times the fatigue strength of conventional nuts and bolts, they deliver ultimate strength, installation speed and vibration resistance.

The pintail-less design of the BobTail has been developed to deliver the highest levels of performance and reliability. BobTail LockBolts offer safe, quiet installation technology in an advanced HuckBolt design. There is no waste through break off of the pintail and corrosion performance is significantly improved by eliminating the exposed surface resulting from a pintail break-off. BobTail also has a fit-up function where the collar can be pre-fitted over the pin using helical grooves, allowing the fasteners to be positioned without the possibility of collar movement. This allows projects to be lined-up before final installation.



Terminology

HOW DO LOCKBOLTS WORK?

LockBolts consist of a headed pin and a collar that is swaged over locking grooves in the pin. The pin is made with a series of pulling grooves at its tail end. The installation tool (driven by pneumatic, hydraulic or battery power) grips these grooves, pulls the work together, the conical shaped cavity of the nose assembly is forced down the collar. This progressively cold forms (swages) it into the grooves of the harder pin. The squeezing action reduces the diameter of the collar, increasing its length. This in turn stretches the pin, generating a clamp force over the joint. The pin and swaged collar combine to form the installed fastener providing a permanent and completely vibration resistant joint.

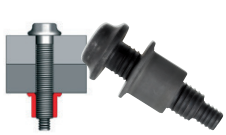
Once installed, the fastener will perform consistently for the lifetime of the joint without requiring checking or retorquing.

PREPARATION OF MATERIAL FOR HUCK LOCKBOLTS AND RECOMMENDED DRILLING PROCEDURE: -

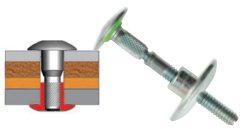
To get a positive, ridged, fatigue-resistant joint to withstand vibration and reversals of stress good work-piece preparation is recommended. The hole should be round (drilled, pre-punched or lazered) and within tolerance of the recommended hole size specified by the data sheet. To prevent swarf and debris lodging between them, the sheets should ideally be clamped together while drilling.

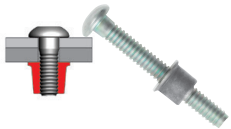
1. Pre-drill – using a drill slightly smaller in diameter to the required hole size.

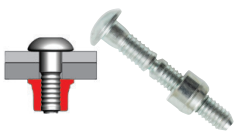
2. Size-drill – to LockBolt hole diameter.


BobTail®

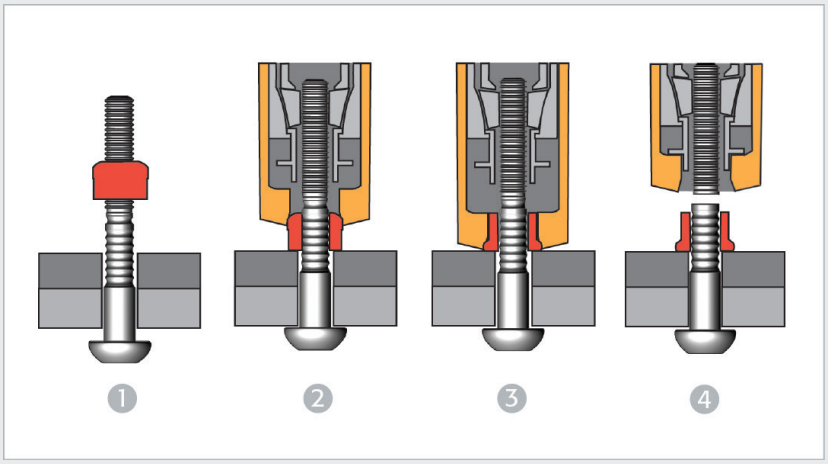

C50L®


Hucktainer®


Magna-Grip®


C6L/C120L®

LOCKBOLT INSTALLATION SEQUENCE



1. Pin placed into prepared hole - Collar placed over pin

2. Tool is placed over the fastener pintail and activated
   - o Pin head pulled against material
   - o Anvil pushes collar against joint
   - o Initial clamp generated

3. Tool swages collar, increasing clamp

4. Pintail breaks, installation complete

HOW TO REMOVE LOCKBOLTS

Collars can be removed by splitting axially with a chisel, with a nut splitter, or by a collar splitting nose assembly fitted to an appropriate Huck tool.

Where removal is necessary, another HuckBolt fastener of the same diameter may be used as a replacement. It is possible to make several replacements in the same hole and still maintain an interference fit.

Available in a wide range of sizes and grades, LockBolts offer quick and easy installation. When considering the cost of the fasteners with installation and inspection labour, LockBolt fastening systems can provide an overall lower installed cost.

Star Fasteners are the UK's largest Huck fastener and tooling distributor. Together with a hire tool fleet and an approved in-house tool maintenance repair department, an all-encompassing service can be relied upon.

Star Fasteners have a wealth of application and fastener knowledge that can make the impossible, possible. A standard fastener in the Huck range may provide your answer. If not, help with a cost-effective tailor-made solution is made available to all.

For more information on our products and services, potential applications, tips, ideas and product news, follow along on our social media platforms Facebook: @starfastenersuk and @starfasteners LinkedIn, Twitter, Instagram.

Huck 2025LB Pneudraulic Tool

Huck RangeForce Battery Tool