

# Important – Please Read

## Lorry Loader Crane Mounting Studs and Weldable Drilled Blocks

### General

The mounting on vehicles of lorry loader cranes should only be carried out by suitably qualified personnel and according to the recommended methods of the particular crane manufacturer.

The crane mounting studs supplied are a high quality, high tensile product specifically manufactured for loader crane mounting applications with rolled threads in 42 cr MO54 material, hardened and tempered. This material can be cut to length using normal methods, except abrasive discs which may cause local heating of the stud. The studs must not be heated or welded to during or after installation. The unused centre part of the thread should be painted with a non etch type primer prior to installation. In no circumstances should the studs be electro-plated or dip plated.

Nuts supplied with mounting studs are high tensile steel, hardened and tempered. In no circumstances should ordinary commercial grade items be used in their place.

When tightening the nuts, the appropriate torque should be applied to a single nut which should then be locked with an additional nut whilst holding the previously torqued nut.

Suitable washers or bridging pieces should be used where required, across slots and oversize holes.

Weldable drilled blocks are manufactured from BS 43 A material commonly referred to as “mild steel”. They are designed to have sufficient length to hole size ratio to ensure that when correctly welded the attachment has a suitable safety margin in relation to the ultimate stud strength. It is essential that the specification of the material to which the block is to be welded is known and that a suitable welding procedure is carried out. Attention should be paid to the weld fillet size and the welding position. Mounting blocks are end faced to provide an accurate 90 degree to length face for the securing nuts. Therefore it is important that the blocks are carefully positioned and welded. Tightening nuts up on an “out of true” surface will impose extra stress on the nut and stud, and must be avoided.

The table gives a guide to the maximum recommended torque of the different sizes of nuts and stud and this must not be exceeded. The torque settings should be checked after the loader crane has been proof load tested. If any significant tightening is required then it should be checked that the stud is of the required size for the application.

In service, nuts should be occasionally checked for security but if it is found that significant tightening is required the cause of this should be investigated and if the stud elongation is suspected, the reason for this must be identified and rectified. Elongated studs and nuts should be discarded and never used for the re-mounting of lorry loader cranes.

### Maximum Recommended Tightening Torque – Threads Lubricated (These are not the crane manufactures recommended settings)

Stud Size	Max Torque Nm
18mm	125
20mm	175
22mm	250
24mm	350
27mm	500
30mm	600
33mm	1000
36mm	1250
39mm	1600