

Common Problems Encountered with Direct Tension Indicators

Dry or Rusty Threads

Usually caused by poor storage conditions, dry or rusty bolts and nuts should not be permitted. Ideally - nuts, bolts, washers and DTIs should be kept in dry storage and their containers not opened until immediately before use. Rust significantly increases the amount of torque required to tension a bolt. When assembling bolts, always use a lubricant. A molybdenum disulfide based lubricant with approximately 70% solids is recommended for most applications. Such lubricants are available at Fastorq Bolting Systems. When applying lubricant, make sure to lubricate the underside of the nut that will be turning as well as the washer surface upon which the nut will be turning. Do not lubricate either surface of the DTI or the side of the washer making contact with the DTI.

Damaged Threads

Usually caused by forcing the bolt through misaligned holes -this will cause the nut to freeze.

Trapped Bolts

Usually caused by slippage in the joint as a result of flanges slipping out of alignment after the bolts have been installed. Trapped bolts cannot develop tension along their entire length. Securing the flanges by partially loading four or more bolts after careful alignment should prevent this problem.

Hardened Washers Under the Turned Element

The use of hardened washers under the turned element significantly reduces the torque required to tension a bolt and is recommended by FASTORQ when using DTIs.

Hardened Washers Under the DTI

When the surface of the flange making contact with the DTI is rough or uneven, place a hardened 1/4" thick washer under the DTI. This will ensure accurate measurement of the gap between the DTI and the nut.