

# NOTICE FOR INSERT BOLTS!

## Insert bolt and nut tightening procedure

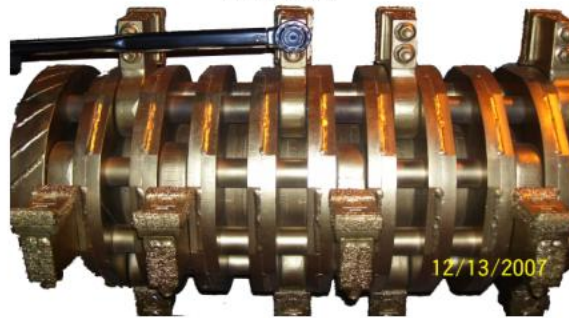
(Torque Wrench)

Bolt Torque Spec

5/8-212 ft.lbs

3/4-376 ft.lbs

7/8-606ft.lbs



Some factors affecting the performance of bolted joints:

- 1) Properly Torqued
  - a. Use a hand torque wrench to tighten to specifications per your manual.
  - b. Improperly torqued joints can result in stretched bolts, or insufficient clamp loads.
- 2) Condition of Interacting Surfaces
  - a. Mating Surfaces
    - i. Should be parallel, clean, and free from debris.
  - b. Threaded Fasteners
    - i. Threads should be free from oils and other lubricants.
    - ii. The presence of oils/lubricants can affect the amount of clamp load achieved at a given torque.
- 3) Bolted Joint Stack-up
  - a. To insure proper engagement between the prevailing torque nut and the bolt, a minimum of three (3) threads should extend out from the backside of the nut.
  - b. Nut manufacturing tolerances allow for variations in nut height.
- 4) Repeated Use of Prevailing Torque Nuts
  - a. As the nuts are reused, the prevailing torque value of the nut drastically reduces.
  - b. Morbark recommends that prevailing torque nuts not be reused.

There are a number of other factors that affect the performance of bolted joints, but the list above gives a good sampling of areas to look at when addressing bolted joints.