

Protect your STRUCTURAL FASTENERS

By Bill Germuga

Structural Fasteners include, but are not limited to Heavy-hex structural bolts ASTM A325 & A490, as well as F2280(A490) & F1852(A325) Tension Control Bolts and the suitable nuts & washers for those bolts.

When protection is discussed in the structural fastener community, there is not just a concern with lot integrity or theft, there is more concern that the bolts remain as close as possible to the as-manufactured condition until they are fully installed in the work.

The RCSC (Research Council on Structural Connections) defines protected storage as: The continuous protection of fastener components in closed containers in a protected shelter.

Why is it important to know what protection means?

Keeping the structural bolts, nuts and washers from any exposure where the as-received condition could be altered is critical to the performance of the components and to achieving proper pretensioned tensions. If the bolts, nuts or washers become dirty or rusty, they may not pass pre-installation verification testing and may become unsuitable for installation.

How do you protect the fasteners?

The best options are a protected shelter, indoor building or a weather proof Conex type container. There are also many manufacturers making portable weather proof job site storage boxes

that could be utilized. Simply covering the parts with a tarp while keeping rain off of the parts may actually cause more harm, as condensation under the tarp can form and drip back onto containers and the parts inside.



The actual bolt kegs (containers parts are shipped in) can be just as important. It is not recommended to store unprotected outdoors. Parts should be kept in weather tight kegs without seams to assure that moisture does not creep in. Some manufacturers are now shipping in Rigid Polyethylene Kegs, these containers can have a rubber gasket installed under the lid which creates a weather resistant seal. The lids on these types of containers make it

easier to take on and off. Other benefits include tamper proof lids, reusable, smooth edges (as apposed to the more traditional metal kegs), and built in handles. These kegs are 100% recyclable.

What action should you take if parts become dirty or rusty?

The RCSC states, Except for ASTM F1852 and F2280 twist-off-type tension-control bolt assemblies (Section 2.7) and some alternative-design fasteners (Section 2.8), fastener components can be cleaned and lubricated by the fabricator or the erector. Because the acceptability of their installation is dependent upon specific lubrication, ASTM F1852 and F2280 twist-off-type tension-control bolt assemblies and some alternative design fasteners are suitable only if the manufacturer lubricates them. After cleaning and lubrication, the fastener assemblies have to be retested to verify that pretensioned loads can be achieved by whichever tightening method is being used.

For a successful project keep your fastener components protected.



Specification for Structural Joints Using High-Strength Bolts, August 1, 2014 can be downloaded for free on the RCSC website boltcouncil.org

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