

Thread Galling

What Is Thread Galling?

**Thread "Galling" occurs during installation when pressure and friction causes the threads on a bolt (Male thread) to seize to the threads on the mating not OR tapped hole (Female Thread)
Also known as "Cold Welding"**

**Once a fastener has seized up from "Galling" it is typically impossible to remove without
(A) Cutting the bolt OR (2) Splitting the nut**

What Fasteners Are Susceptible To Galling?

**Galling most often occurs in "Stainless Steel" when the use of a Nylon insert or prevailing torque nuts are used when a large amount of friction and heat occurs during installation
Galling can also occur on "Aluminium AND Titanium fasteners and compounded when fasteners have damaged OR fine threads**

How To Prevent Galling

**Special Anti-seize OR Anti-galling lubricants can be used to dramatically reduce the chance of Galling
Even a standard WD-40 can help reduce friction
OR AG-90 Anti-galling Lubricant**

Use dissimilar materials. If you use an A4 Nut on an A2 Bolt the different grade of materials have different hardnesses and potentially have damaged levels to their oxide layers under friction reducing the bare mating surfaces that can be fuse

**Slow down the installation speed to eliminate the heat generated by friction
This can prevent Galling but if there is still a problem use lubricants OR hand assemble**

**Do not use Bolts OR Screws to pull joints together by doing so could drastically increase the chance of "Galling"
The materials being bolted should be in place so a nut can be spun down by hand until final tightening**

If a Fastener begins to "Bind" STOP and allow any heat to dissipate, back the fastener off and inspect the threads for any damage then retry with a new nut



Bolt "Male Thread" showing "Galling" after a seized Nut "Female Thread" has been removed