

## How to Prevent Thread Galling

We've had customers call in and ask us how they can prevent their turnbuckles from galling in their sail shade projects. So, we thought a blog on how to prevent thread galling was in order. Turnbuckles, nuts, bolts and other threaded fasteners can all experience thread galling. If you've ever experienced thread galling, you know how frustrating it can be to deal with seized bolts, broken fasteners, difficult removal efforts and weakened joints. We'll explain exactly what thread galling is and how it occurs, plus our top tips on ways to prevent it. Let's get started.

### What Is Thread Galling?

Galling is a form of abrasive wear that is caused by friction between two surfaces that slide against each other. Thread galling is when this happens with metal components. Thread galling can occur with any type of metal, but metals including stainless steel, aluminum, titanium and other similar soft metals are most vulnerable. Thread galling is less common in hard metals, though it can happen.

When metal surfaces rub against each other, they begin to wear down. This is especially true in cases where there is a large amount of force compressing the surfaces together. When galling occurs, it can leave some material stuck or even friction welded to the other surface. Friction creates heat, and the more they rub against each other a marred or gouged surface will begin to form on the metals. You might even notice torn lumps of material stuck to the metal surface.

### Ways to Prevent Thread Galling

Here's a quick list of ways you can prevent thread galling from happening on your turnbuckles, nuts, bolts and other metal fastener components.

**1. Use lubricant.** An anti-seize compound will lubricate the metal components. This is the most efficient way to minimize the risk of thread galling. In our three-sided (#300183XHT) and four-sided (#300410XHT) shade sail how-to videos, we used anti-seize compound to lubricate the threads before tightening the turnbuckles and tensioning the shade sails.

- 2. Keep threads clean and free of nicks.** Fastener surfaces should be smooth and clean from dirt and dust that can settle between surfaces.
- 3. Work slowly.** Friction creates heat. And heat is a significant factor in thread galling. During installation and removal, work slowly as you tighten and screw together your metal components.

We hope this quick-read has been useful and answered your questions about thread galling. At Sailrite, we carry a wide selection of awning and shade hardware, including turnbuckles, wire rope, grommets, shackles, brackets and more, for creating DIY shade sails, wire-hung canopies and awnings. Pair our top-quality hardware with long-lasting shade fabrics for an outdoor shade application that will last for years.



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