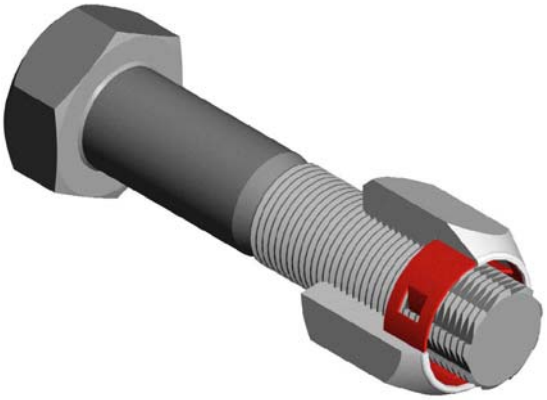
Wurth Service Supply Inc.

## Overview:

For years, numerous fasteners have been developed to attempt to solve one of manufacturing's oldest problems; how to prevent fasteners from loosening clamp load in applications where vibration is present. Until now, most designs relied on creating friction between an internal and external thread by use of mechanical or chemical means. Other fasteners used a special tool to install by tension, but the tooling is costly and heavy and for the most part these fasteners are not reusable. There is however now a fastener that provides positive vibration resistance and requires no special tools for installation. It is the TINELOK FASTENING SYSTEM.

**Figure A**



## What is Tinelok?

Tinelok is a new fastening system designed to go beyond the normal locking fastener and prevent loosening in the harshest environments. This mechanical locking system can be manufactured in a variety of materials and in a variety of sizes.

The system consists of three channels parallel to the center axis of the externally threaded bolt and an internally threaded nut with three tines. See figure A. The tines are positioned to allow the assembler positive locking at a variety of torques to meet the manufacturers design requirements. Once the tines are engaged, the joint is secure.

## Locking Fastener Comparisons

How does Tinelok compare to the standard vibration resistant fasteners on the market today? Actually, there is no comparison. Figure B compares the clamp load retention, in a Junkers Shaker test, between Tinelok and a number of the most widely used systems including nylon insert locknuts and standard fasteners.

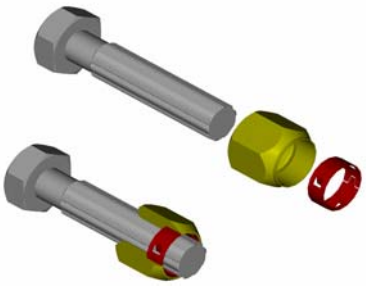
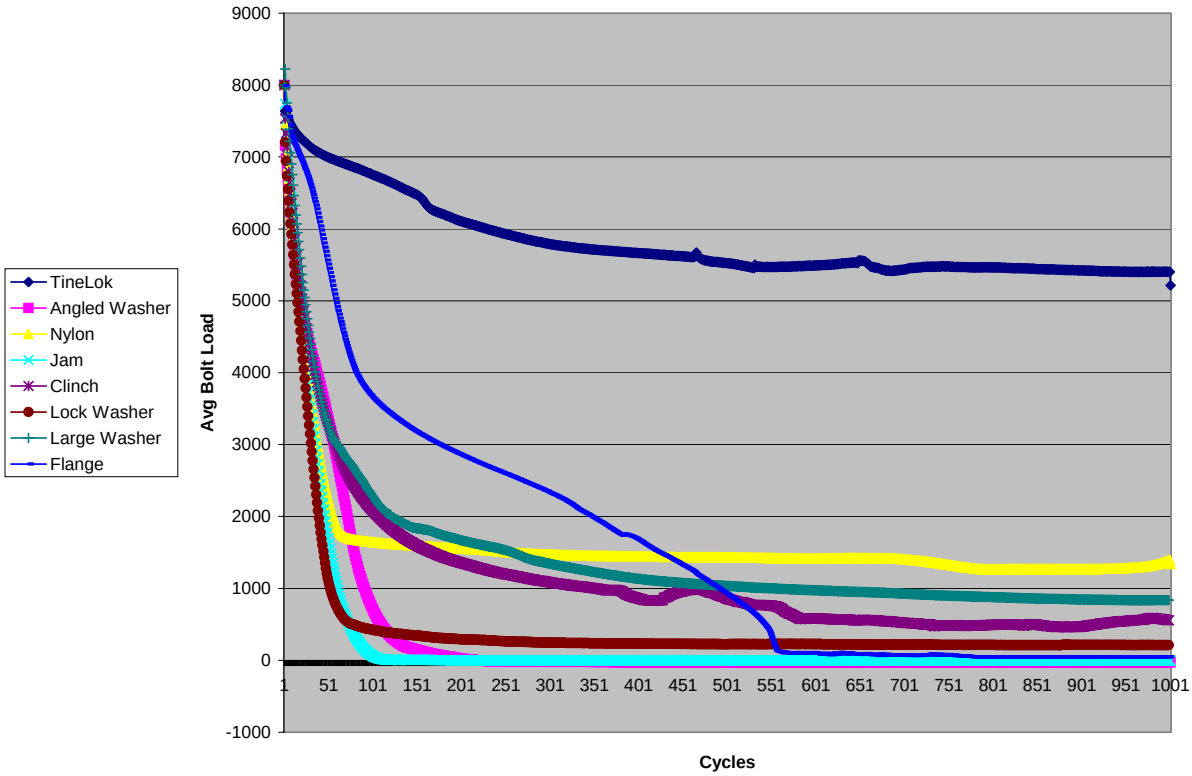


**Figure B**




## Manufactured to Today's Standards

Tinelok is also designed to meet standard mechanical and material specifications such as, SAE J429 and SAE J1199, for externally threaded fasteners as well as, ASTM A 563 and ASTM A 563M, for internally threaded fasteners.

## Features and Benefits

- Locking feature is not clamp load dependent
- Vibration proof which lowers warranty costs
- Prevents failures in hard to service areas
- Visual inspection verifies tines are engaged
- Eliminates Castle Nuts and Cotter Pins improving throughput
- Can be manufactured in a variety of materials
- Can be installed with conventional tools

## Summary

TineLok is available only through Wurth Service Supply, the exclusive distributor of this unique precision engineered product. Three years of intense development and testing now makes this product available to you which provides a highly effective, easily installed and permanent solution to your needs for a vibration proof fastening system. Please contact Wurth Service Supply at (800)428-4686, extension 8646 or tinelok@servicesupply.com for information.