

# TENSION GENERATING, ANTI-LOOSENING TWISTED TOOTH LOCKWASHERS



Apex Fasteners is a leading supplier of the world's largest and most diverse line of tapered, twisted tooth locking washers. Shakeproof lockwashers are the best anti-vibration, anti-loosening mechanical fastening devices available. These resilient washers stand up to high torques and heavy loads. Various styles of economical, standard tooth washers fit all conventional screw types and accommodate a wide range of hole configurations, including countersunk and oversized holes.

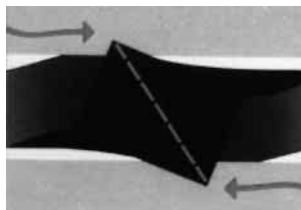
The twisted teeth on the Shakeproof lockwasher compress as torque is applied to the fastening. A strong spring reaction is set up as the specially heat treated teeth seek to return to their fully twisted position. These unique washers make a significant contribution to the integrity of an assembly:

1. Maintain essential tension.
2. React instantly to any loosening influence, setting up a strut action that strongly opposes the loosening rotation of the fastener.
3. Flexed teeth absorb shock and vibration.
4. Resilient teeth absorb high torques and prevent slipping.

**Powerful Spring Reaction**



**Powerful Strut Reaction**



## MILITARY SPECIFICATIONS

MS16213-, MS35333-, MS35334-, MS35335-, Some MS35336-, MS45904-, MS541413-, MS51414-

## MATERIALS

Carbon Steel - SAE 1050 - 1065

Stainless Steel - SAE 301 - 305, SAE - 316, SAE - 410

Bronze (Copper Alloy) - ASMB 591, Type 425

## FINISHES

All types of finishes are in stock or available. Contact Apex Fasteners for details.