

Don't Let Your Nuts Fall Off!

By Shelly Horan

American motorcycles are notorious for their vibration... women may like it, but bikes can literally fall apart. There is a solution! Basically, locking the threads of nuts and bolts through a heat and vibration resistant sealant, such as Loctite®; most famous to the consumer for Super Glue. However, there is a proper way to apply this miracle liquid.

Terry "Torque Master" Mishler of Mishler Enterprises (Humble, Texas) left the airline industry after he saw a decreasing interest in high quality maintenance on vehicles that carry thousands of people daily. He took his love of motorcycles, and his desire to keep even one person safe at a time, and started working on friends' bikes. Now he has a thriving home business, all built word of mouth... and built on the solid foundation of high quality service.

Over the years, he has seen shops of all kinds (dealerships & independents), along with the home mechanic, improperly use the popular threadlocker, Loctite. Fed up with seeing thousands of dollars in damage to friends' rides, Mishler decided to hold a class for his riding group, NE Houston Roadrunners (MeetUp.com/NE-Houston-Road-Runners). Inviting a Loctite representative in to talk to about 12 attendees, Mishler provided the opportunity to get valuable information straight from the horse's mouth!

a liquid bonding resin that hardened in the absence of air. By 1956, Loctite was on the shelves, solving the problem of those loose nuts and bolts that everyone simply accepted as a "fact of life."

Little did I know, but there's a lot to this simple idea of "locking" threads. Do you use a cleaner? Do you have to apply a primer? How much do you put on? Which formula do you use? Should you use a liquid, gel, or stick? And on... Since I'm not the airline mechanic Mishler is, I resorted to using Loctite.com's own information to get the basics here then refer you to Loctite's website for the nitty-gritty details.

What exactly is Loctite? It is a liquid that cures to a hard thermoset plastic that locks threads together, filling gaps left by even the best machining. This prevents unwanted movement, loosening, leaks, and/or corrosion. Loctite started in liquid form due to the formula's reactivity; in liquid form, it remains stable and ready for use (longer shelf life). Technological breakthroughs have led to new stable, semisolid stick formulas. The sticks allow direct contact, placing it exactly where needed and staying in place as the parts are positioned and assembled. Additionally, the stick is great for carrying on your ride for emergency roadside maintenance. No threadlocker is permanent; checking these seals when doing standard maintenance and oil changes is recommended. Bolts can be reused by simply removing the Loctite material, applying new product, and reassembling.

There are four basic grades of Loctite available:

LOW STRENGTH - Purple in color, this formula is removable with hand tools. It is good for adjustment screws, calibration screws, meters and gauges, and for fasteners up to 1/4" in diameter.

MEDIUM STRENGTH - Blue in color, this is the must have in every do-it-yourself mechanic's toolbox. It is removable with hand tools. It is good for pumps and compressors, mounting bolts, gearboxes, and for fasteners up to 3/4" in diameter. This is the one that will keep the smaller and non-structural pieces in place on your ride.

HIGH STRENGTH - Red in color, the next most common version you'll find in professional mechanic's toolboxes. This version is best for permanent assemblies, suspension bolts, motor and pump mounts, and for

fasteners up to 1" and larger in diameter. It can be removed with hand tools, but with a good amount of strength - heat helps. This is the version you'll use on your engine mounts and vital, structural pieces - those pieces that if you lose them, you're stuck on the side of the road.

WICKING - Green in color. This is a stronger formula; removal requires the use of heat and hand tools. Best for pre-assemble fasteners, carburetors, and fasteners up to 1/2" in diameter.

Factors to consider when choosing a thread sealant:

- Plastic, metal or combination of threads?
- Will the sealant be in contact with harsh chemicals?
- What type of threading, fine or large?
- What kind of temperature ranges will be involved?

Most Loctite formulas fully cure in 24 hours. Primers are generally not necessary, but can speed up cure time. However, they are recommended by Loctite for use on inactive metals, such as stainless steel, anodized aluminum, zinc, titanium, etc. From those four grades there are a host of different options, such as heat resistant, gel or stick, chemical resistant, etc. Loctite.com offers a very handy online catalogs to help you determine exactly which formula to use; what primer to use, if applicable; and how to apply the product.

Loctite is available at most hardware stores and good bike shops, and is a safety necessity if you work on your motorcycle. If you have a bike that keeps disassembling itself on the highway, and you are certain that you have been using Loctite properly, you might have other issues with your bike, like excessive vibrations from a poorly balanced engine. In this case, no amount of Loctite will make a difference and a qualified motorcycle mechanic should be consulted.

"Great class I did not know Loctite did that many things. Thanks Terry & Ruth for having this at your house."

Thunder Roads Texas Motorcycle Magazine does not offer this information as a product endorsement. There are other brands of similar products. We choose to offer information on Loctite® because of the class experience offered by Mishler Enterprises.



In 1953, Dr. Vernon Kriebel of Trinity College in Hartford, Connecticut developed

