Tech tip

■ *Machinist's Workshop* magazine did a test a few years ago to determine which brand of penetrating oil worked best on rusty bolt/nut combinations ("Testing different types of penetrating oils" by Lloyd Bender). They scientifically rusted the threads on a group of nut/bolt combinations then measured the torque it took to remove the nuts after they had been soaked with *various penetrants*.

Here are the results:

No penetrant	516 pounds
WD-40	238 pounds
PB Blaster	214 pounds
Liquid Wrench	127 pounds
Kano Kroil	106 pounds
ATF/acetone	53 pounds

The ATF/acetone is a homemade machinist's recipe that has been around for more than 60 years. It is made up of 50 percent automatic transmission fluid and acetone (you can buy acetone at any local hardware store). The ATF/acetone mix proved to be the most effective by far and costs the least amount per use. It was also interesting to note that the Liquid Wrench brand worked almost as good as the Kroil brand which costs about 20 percent more.

I put this information here because if you are like me, you have tried most of these brands at one time or another and some seemed to work better than others, but there was no real proof.

It also gives you greater respect for those early day machinists who after much trial and error figured out a simple penetrant recipe that works better than anything available today. If you ever wondered what they used before products like WD-40 and Liquid Wrench were available, now you know.

—Submitted by Randy Rundle, Fifth Avenue Antique Auto Parts, Clay Center, Kan.

ERE