No Slip Shock Strut Tool

Dear Sergeant Blade,

When working on the Black Hawk's main landing gear shock struts, our mechanics have a tough time with using a socket on the end of the torque wrench because the socket is always slipping off the nut.

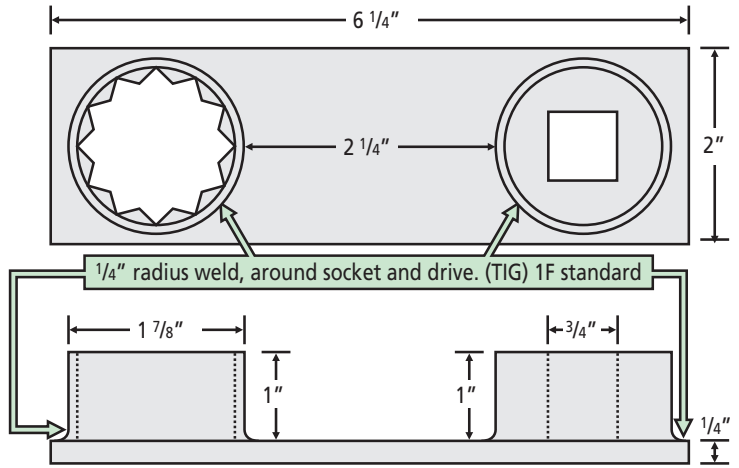
The initial setup in WP 0453 00 of TM 1-1520-237-23-6 calls for a torque wrench. When it's time to use the wrench, we have to work in a very tight space. The nut we are trying to work on is behind the main landing gear drag beam in between the tire and the drag beam.

The torque on the nut is 110-220 lb-ft. If you try to use a socket on the end of a wrench, it slips off the shock strut nut every time. That gets frustrating!

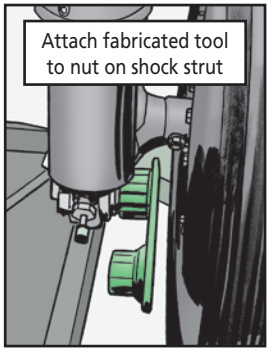
To solve the slippery socket problem, we made a shock strut tool that will not slip off the nut and works every time. Here is how to make it:

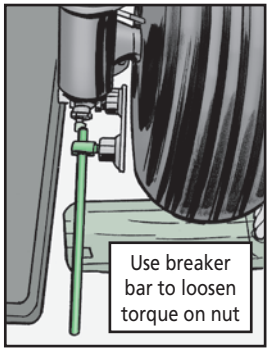
You need some 1/4-in steel stock (MIL-S-6758, comp 4130) and a 12 point, 3/4-in drive, socket, NSN 5120-00-189-7931. Cut the socket in half and then weld (TIG weld using a 1F standard) the halves at the opposite ends of the steel plate as shown in the diagram below.

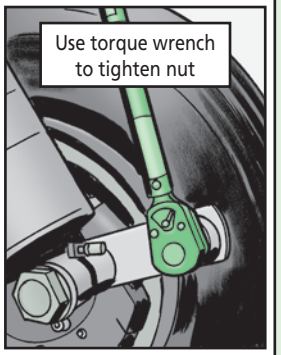
The tool should look like so:



The tool is used at a 90° angle for torque (therefore not adding to the length of the torque wrench nor torque factor). The tool can be used on a breaker bar to loosen the torque on the nut.







This tool saves us time and prevents possible damage to the shock strut nut and our knuckles when removing it.

SGT James Jones
Ft Hood, TX

Dear SGT Jones,

Thanks for the great idea. Now you can do maintenance without slipping. "Rotor" Blade