



2010 43QGP Allegro Bus

3/31/2016

ONE-HUNDRED-TWENTY-FIFTH - coach modification – MODIFICATION TO PREVENT COACH STEP SHOULDER BOLT FROM BREAKING.

Thinking about this modification over several years I finally got around to making the modification happen.



The above photo is the Shoulder Bolt from our coach. It is easy to see how the metal has been scoured over the years this photo was taken after the bolt had been cleaned to remove sand and rust from five years of use. The tack weld used to secure the bolt had broken many years ago, since that time I checked and tightened the bolt when needed.

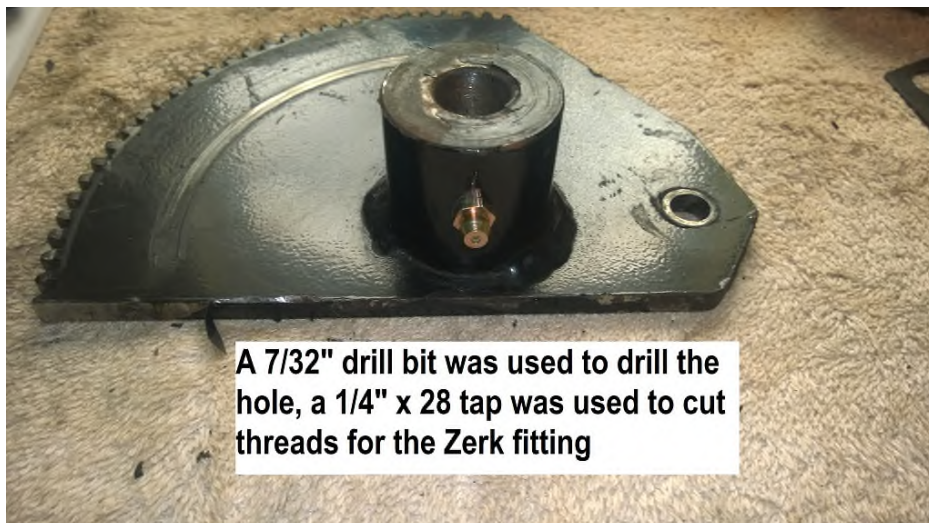


After removing the shoulder bolt, fan gear and step motor the Coach Step mount was thoroughly cleaned before running a 1/2" x 13 tap thru the shoulder bolt mounting hole this was done to clean the threads. The threads on the shoulder bolt were first cleaned with a wire brush then chased with a 1/2" x 13 die to finish cleaning the bolts threads.



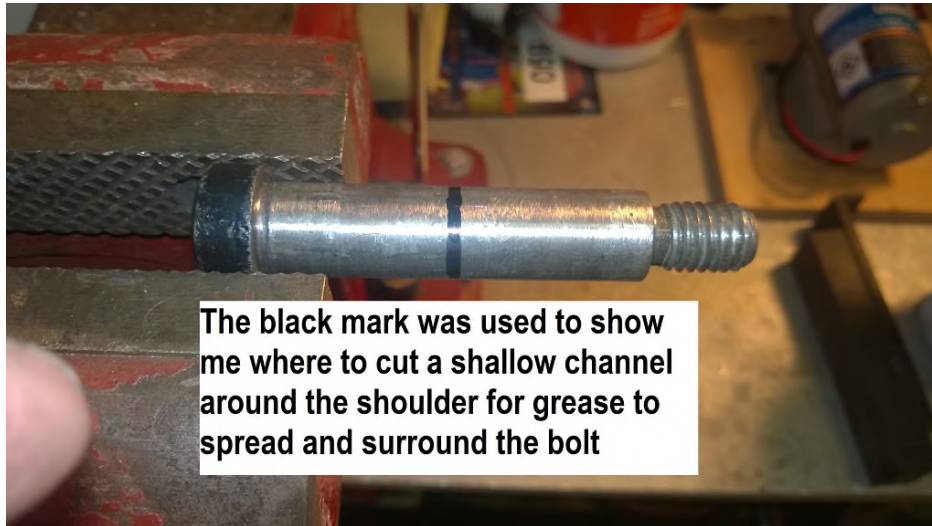
1/2" x 13 Tap and Die used to chase/clean the threads

The fan gear was installed in my six position 6" vise mounted to a 17 speed drill press. After leveling the fan gear in horizontal and vertical planes a 7/32" hole was drilled equidistant thru the side of the shoulder bolts mount. After the hole had been drilled a 1/4" x 28 TPI (threads per inch) tap was used to create threads so a Zerk fitting could be installed thus allowing the shoulder bolt and its mount to be lubricated.



A 7/32" drill bit was used to drill the hole, a 1/4" x 28 tap was used to cut threads for the Zerk fitting

The next step was to cut a small channel around the shoulder bolt where the grease could flow around and between the shoulder bolt and the fan gear mount.



After reassembly the Zerk fitting allowed grease to be pumped into the small cavity between shoulder bolt and fan gear mount.



The shoulder bolt was securely tightened using an 8MM hex head “T” wrench. The bolt was tighten to the limit of my strength as the shoulder on the bolt when completely tightened allows enough clearance between the mounting plate and fan gear to allow smooth operation of the step mechanism. One of the problems I was faced with was the sand and other

grit that was allowed entry into the cavity between shoulder bolt and fan gear mount. How does it enter it appears over time the shoulder bolt threads allow water, sand and other grit to move down the threads into the shoulder bolt cavity where it plays havoc with the shoulder bolt.

I know many owners park their coach in one location for months at a time, most often when they do the steps are either retracted and they use some other form of steps to enter exit the coach or their steps are extended and locked in the extended position for months.

As with everything as it ages lack of use cause problems, not using the steps for months at a time will cause problems.



In an effort to prevent water, dirt or other debris from entering the shoulder bolt cavity by slipping past the bolt threads I sealed the top of the bolt threads with clear silicone, I know when CURED the silicone will be clear.