

## GM Steering Intermediate Shaft Lube Procedure

This is the procedure for TSB 00-02-35-003D. This problem plagues every full sized GM truck from '99 to '03 ('01 to '03 Suburbans and Tahoes) with the reticulating ball-type steering, I thought this might be helpful.

**Update:** The latest revision of the TSB is rev F. This calls for the replacement of the upper intermediate shaft with P/N 88963611. This procedure is intended to be an alternative to the shaft replacement. A revision G (October 22, 2004) calls for the lube procedure until an ample stock of replacement shafts is available.

The symptoms of this problem are a dull thump felt in the steering wheel when the steering wheel is slightly turned while going over bumps. Sometimes a clunking noise can be heard, but due to the thumping of the steering, appear to be louder than it actually is.

Here are the parts that you will need:



Steering Column Intermediate Shaft Lube Kit GM p/n 26098419

This is the content of the bag:



It comes with the grease tube, a plug, and the instructions.

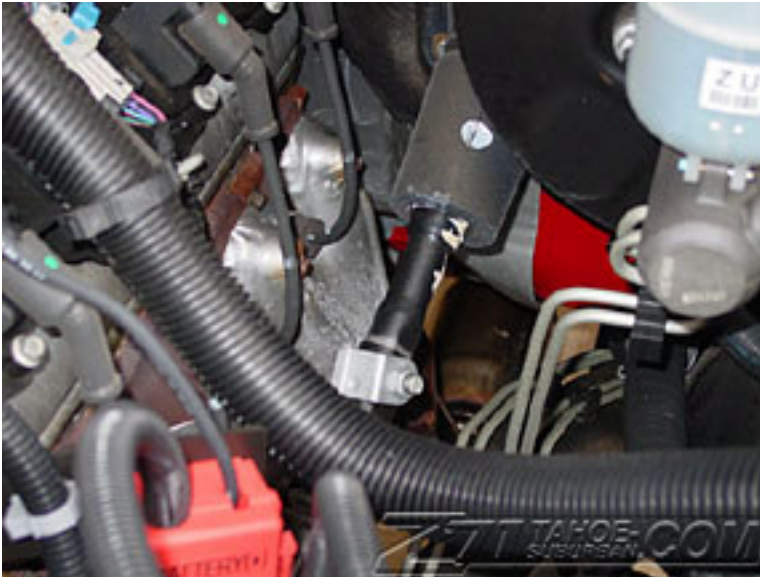
Here are the tools that you will need:



Torque wrench, 2 - 17 mm wrenches (having at least 1 socket wrench will help ease things along), and a pair of needle nose pliers (must have fairly narrow tip to reach inside tube to release clip).

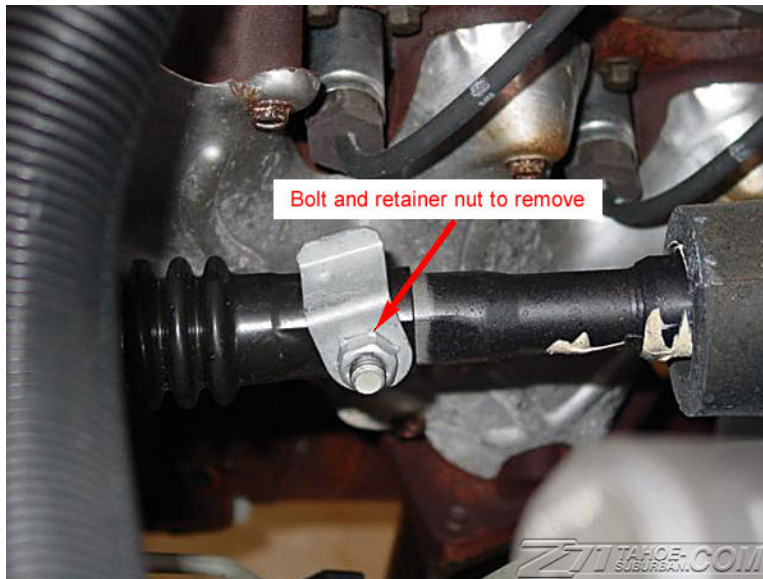
**Update:** rev C and newer calls for an additional tool J 42640 for 2002 and newer vehicles to lock the steering column. It can be done in the newer vehicles without this tool, but extra precautions must be taken to *not* turn the steering wheel or you will damage the clockspring in the steering column. In 2001 and previous, make sure that you lock the steering column.

Once you have all of this, locate the 2 screws holding the intermediate shaft. One is under the hood. The second is under the dash just above the brake pedal.



This is the one under the hood.

Here is a close-up of the bolt and retainer.



Here is the upper shaft from under the dash.



**Important Step:** --Make sure you turn the steering wheel and the wheels to the straight position before removing the bolts! It will be much easier to align later when putting things back together.

Once you have the wheel straightened, remove the bolts. You will need the 2-17 mm wrenches to remove the bolt/retainer from under the hood. You will only need one of the 17 mm wrenches to remove the nut from the shaft under the dash. This bolt/retainer has a rounded head. At this point, you would use the J 42640 tool (insert into hole in bottom plastic shroud at the bottom of the steering column--underneath where the shifter is). Once the bolts are removed, disengage the upper shaft by pushing the entire joint towards the firewall.

**Note:** If you do not use the J 42640 tool for the '02 and up models, make absolutely sure you do not move the steering wheel or it will damage the clockspring in the steering column.



Then disengage the lower shaft by pushing up towards the firewall.



Remove the entire shaft assembly from underneath the dash.



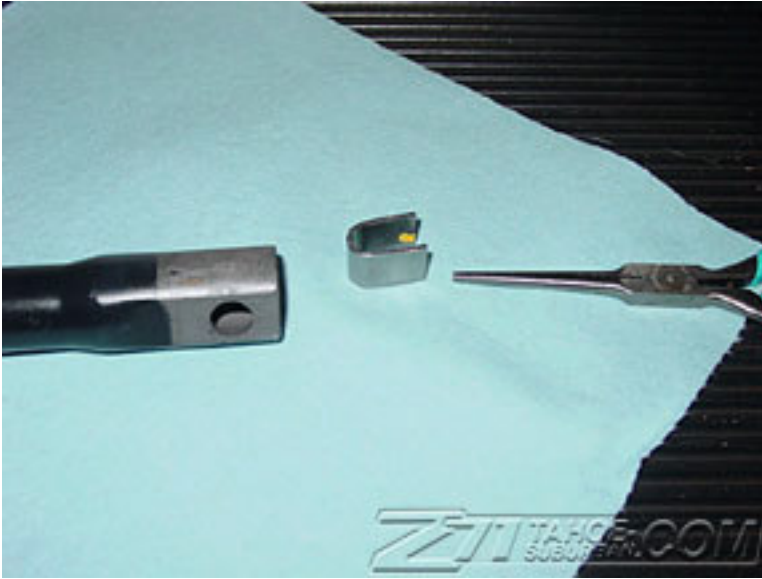
Here is what the entire shaft looks like:



Next, remove the clip the end of the lower shaft with needle nose pliers.



Here is what the clip looks like removed from the shaft.



With the shaft, fully extended, there was just a tiny bit of white grease on the shaft. Next, you should inject the entire grease tube from the kit as deep as possible to the fully extended shaft. The grease in the kit is black.

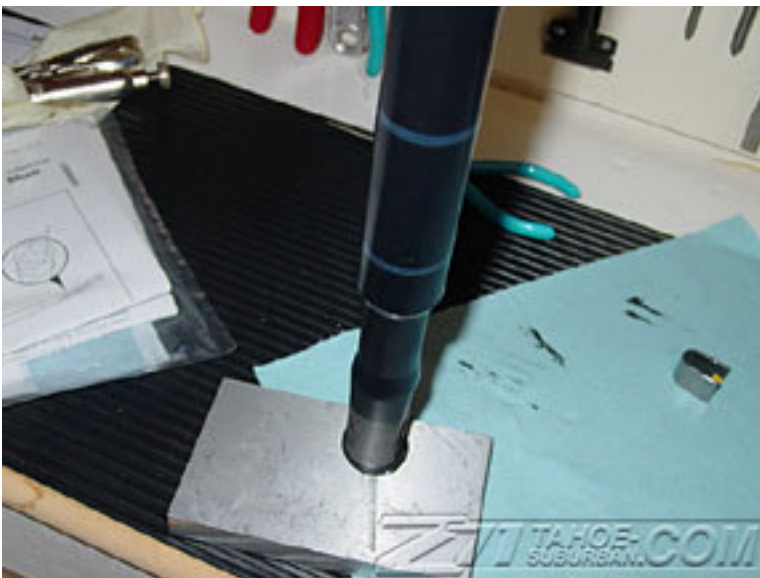


Next insert the plug from the kit into the end of the shaft you just squirted the grease.



Make sure once the plug is in place, tighten the wingnut on the end. This squeezes the sealing ring so that the grease doesn't squirt out in the next step.

Next, take the shaft and push down on the plug on a hard surface to collapse the shaft. This will force the grease up the splines.



Fully extend the shafts out again. You should have at least 1/2" of grease on the silver shaft.



If you don't have at least 1/2" of grease on the silver shaft, repeat the collapsing of the shaft again until you have at least 1/2" of grease on the silver shaft.

You are just about done here. Next you have to reinsert the clip back to the open end of the intermediate shaft. The clip may have to be spread if collapsed too much. Just make sure that the clip is not loose in the shaft. The clip should be positioned flush to about 1/4" from the outer lip.

Once you get the clip back into place, carefully feed the shaft back from underneath the dash. Extend the shafts back out and reconnect the lower shaft to the steering gear coupling shaft, install the bolt and reconnect the steering wheel to the upper shaft and install the bolt. Since this is a safety critical item, make sure that you torque the lower shaft (underhood) bolt/nut to 37 ft-lbs and the upper shaft (dash) nut to 35 ft-lbs.

Once you do this you are pretty much done. Just make sure to clean the excess grease off the lower shaft. Then sit back and enjoy driving without the dreaded clunk. Overall, this entire procedure took less than an hour to complete.



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