

# The Torque Tube!

by Tom Endy

To replace the grease seal and the roller bearing sleeve in the front end of the torque tube it is necessary to first remove the old ones. This is sometimes a perplexing task for a person new to the Model A hobby. In order to remove either one they both have to come out together.

A technique that has been around for many years is to use a 1 $\frac{1}{16}$ " socket over the end of the drive shaft spline. I have used this procedure for a number of years with complete success. The socket will push against the seal and the seal will push against the sleeve. Both will be pushed out the end of the torque tube together.

My method was to stand a drive shaft vertically on a block of wood on the shop floor with the threaded end resting on the wood. Place the socket on the spline end and slide the torque tube down over it and bounce it several times. It is best to hold a rag over the top to prevent the sleeve, the seal, the socket, and a world of grease and crud from flying all over the shop.

Recently I was working on a late 31 rear end and as I attempted to remove the torque tube sleeve and seal the socket became jammed in the neck of the torque tube. The late 31 torque tubes are apparently narrower at the neck. I had to use a long punch from the top of the torque tube to knock the socket loose. The socket is a garden-variety Craftsman socket that I have been using for many years.

To solve my immediate problem I used my one-inch socket. I stood the torque tube on its head and dropped the socket down onto the seal and used the drive shaft to knock everything loose.

As a result of this encounter I decided that a proper tool was in order. I purchased a grease seal insertion tool from Bratton's (part number 6270, page 158, 2006 catalog, \$6.60). I had the outside diameter of the collar machined down to 1.335", which is the outside diameter of my garden-variety Craftsman one-inch Socket. I screwed the modified tool onto a five-foot length of  $\frac{1}{2}$ " water pipe.

My new technique is to put a piece of newspaper on the shop floor. Stand the torque tube on its head on the newspaper. Slide the tool down through the torque tube and fish it around until the end of the tool goes into the seal. Tap it with a hammer a few times and the whole greasy mess will exit the torque tube and pile up on the newspaper.

When installing the new grease seal and bearing sleeve be sure and install the seal first. If you install the sleeve first you will not be able to get the seal in as the sleeve will be in the way and you will have to destroy the sleeve in order to remove it. ☺



The tool in the top of the photo is a grease seal insertion tool with the flange turned down to 1.335" (arrow indicates flange) and it is attached to a five-foot length of  $\frac{1}{2}$ " water pipe. The tool in the bottom of the photo is a standard grease seal insertion tool attached to a short length of pipe used to install a grease seal into a torque tube.