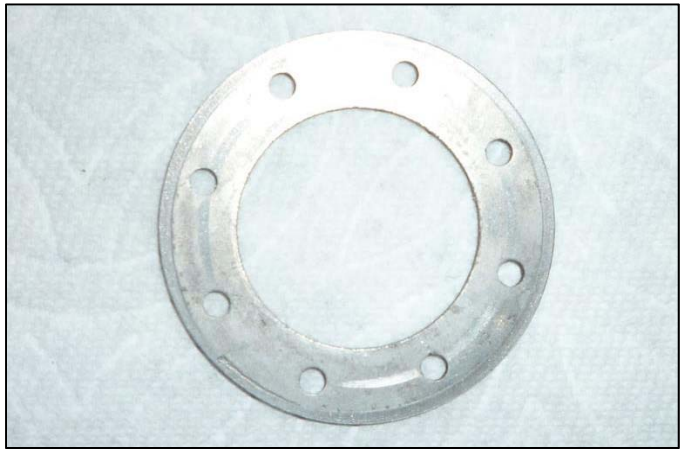


# Outer Space

by Tom Endy

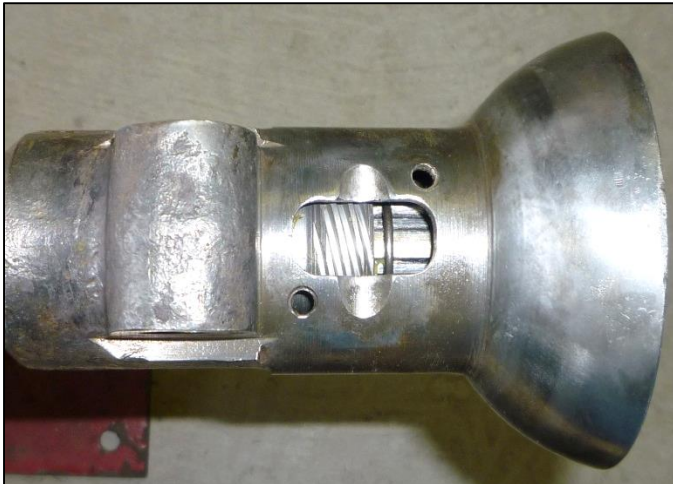
Quite often while overhauling a rear axle assembly I will discover that someone has added a spacer or a second thrust washer to the assembly at the front of the torque tube where the speedo drive gear and the roller bearing reside. The reason for this is a concern about the space observed between the speedo drive gear and the snap ring. I have also heard and read about people's concern about this space.



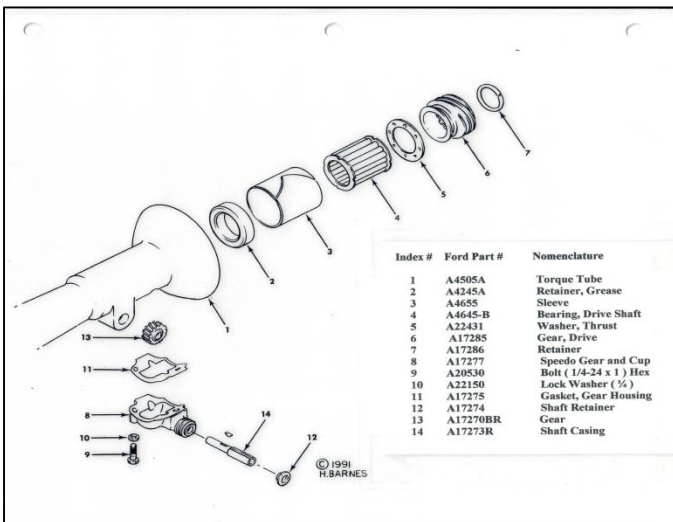
**The thrust washer with holes around the circumference**

The snap ring serves no purpose once the speedo housing with speedo gear and cap is attached to the bottom of the torque tube as it will center the speedo drive gear and lock it into place.

I am of the opinion that the only reason the snap ring was included in the assembly was to facilitate assembly line production. More than likely the complete rear axle assembly traveled to the area where it was installed in a car by way of an overhead conveyer with the assembly hanging down in a T-shape formation without the speedo gear housing attached. The snap ring would then prevent the speedo drive gear, spacer, and rolled bearing from falling out.



**The area of concern is a space of about 1/8" that is observed between the speedo drive gear and the snap ring.**



It should be noted that the thrust washer has a series of holes drilled through it around the circumference. The purpose is to allow grease pumped in through the grease fitting that lubes the U-joint to also travel to the roller bearing. If an additional washer is placed in this area it will block the flow of grease to the roller bearing.



**The end cap of an original roller bearing is also notched to allow grease to migrate in.**



**This photo shows the sequence of installed parts. From left to right the grease seal, the roller bearing, the thrust washer, the speedo drive gear, and the snap ring retainer.**



**This photo shows the positioning of the thrust washer behind the speedo drive gear. The holes around the circumference allow grease pumped in the grease fitting to lube the U-joint to allow it to also flow to the roller bearing.**



**The bearing sleeve (race) is shown positioned above where it would reside in the sequence inside the torque tube.**



**This photo shows the space between the snap ring retainer and the speedo drive gear. This nominal spacing is inherent in all Model A rear axle assemblies.**



**The sleeve is shown positioned around the roller bearing. Note the dimple in the sleeve.**

Inside the torque tube there is a machined stop where the seal comes to rest when it is driven in. The bearing sleeve is inserted next and it comes to rest near the top outer structure of the seal and is also positioned inside the torque tube by the dimple in the sleeve that locks into a recess inside the torque tube. The roller bearing is then installed inside the sleeve. The thrust washer is installed next and it comes to rest against the front edge of the sleeve. The speedo drive gear is then slid on and the snap ring retainer installed. There is always a space between the gear and the snap ring.