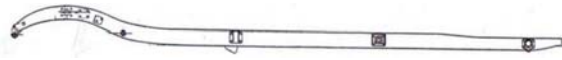


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Tech Tips:

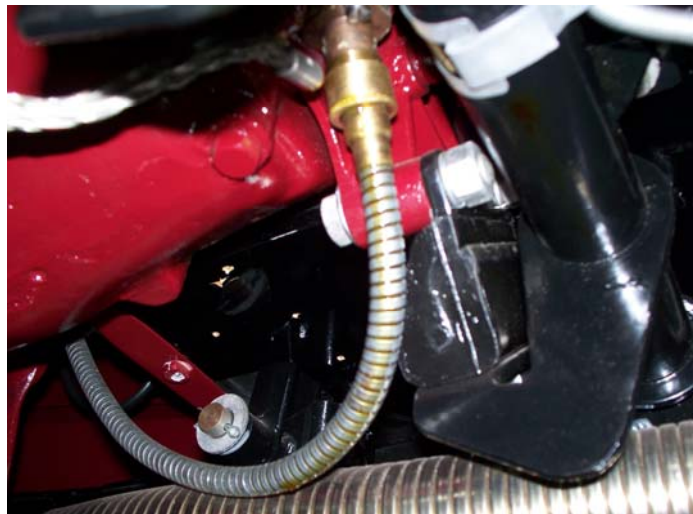
GE185 – Speedo Pinion Housing

Solving the Gearbox Speedo Pinion Housing Oil Leak

During the course of the 4 year restoration of TC7670, there was great care taken to eliminate any of the problematic oil leaks common to the TC. So, it was devastating to find oil on the garage floor shortly after the “rebirth” of the car.

Now, where was the oil coming from? Rear axles, differential, engine, brakes, where....? What, the speedo cable!

How can this be?



Although this particular leak does not get the same widespread attention as the other common oil leaks, it remains one of the most persistent. And, it not just isolated to the TB/TC. It is also common to the TD & TF gearboxes as well. This is because of the common design between each of these gear boxes. But, why does it leak?

The problem lies within the speedo housing. The housing was machined to a close tolerance to accept the speedo pinion shaft and retard any leakage. In order to preclude any further leakage, the housing was also machined with a reverse scroll inside to draw the oil back into the gearbox as the shaft turned. The speedo pinion housing was also made of brass. Because of this, it is softer than the steel pinion shaft and has a tendency to wear quicker. The “reverse scroll” was a common engineering method for our cars and was used in other applications for the same purpose. Examples include the rear axle shaft oil return bushings or the reverse scrolls in the differential pinion cap. As we have now discovered, after 60 years, all of these housings / bushings have worn and the result is continuous “weepage”. So can the speedo pinion housing be replaced?

You may get lucky, but the housing is not a readily available replacement item. You might be able to salvage a better used housing from another model car as the housing itself is the same for all models. However, the pinion gears are different. The TC/TB pinion gear is distinguishable by having 9 teeth and is stamped "AA" on the end. The TD/TF pinion gear can be identified by having 15 teeth and are normally stamped "T" on the end of the gears. So check to make sure the gearing is correct for your car. But if the replacement housing still leaks what is left?



After months of different attempts to solving this problem, a permanent solution has been found, which is to modify an original pinion housing core to accept a modern O-ring, deep inside the housing core. These modified housings are now available from FTFU on an exchange basis to help those that are experiencing this habitual problem. This converted housing will work for the TB/TC/TD&TF. Installation is simply to remove the cable end cap and then the 2 retainer screws and reverse install the new housing with a little sealant around the flange.

So there is finally a solution and the days of the dripping speedo cable are now over.

As always, comments are welcome. Info@FromTheFrameUp.com

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