FROM THE BENCH BY CHRIS WICKERSHAM

DRIVING WITH A TACHOMETER

Most of us have been driving Model A Fords for many years and I am sure we all know how much throttle to use and when to shift gears for the best overall performance and reliability of our cars. Just before the Lost Coast Tour in 2016, I installed a tachometer in the Tudor I use for touring. I mostly just wanted to have one more instrument to watch while driving down the road but I was also interested in knowing if I was operating the engine within the RPM range that I felt was best for overall performance, economy and reliability. With over 65 years driving all sorts of vehicles and with tens of thousands of miles driving Model A Fords, I was sure there was actually very little I could learn from driving with a tachometer.

Off we go on the Lost Coast Tour with the route taking us up Angeles Crest Highway and on to our first stop in Lancaster. With a lot of mountain driving, I soon found out that if I watched the tach, I could more easily know when to up shift or down shift and when it would be advantageous to use the Mitchell Overdrive as a gear splitter, running in second/overdrive as opposed to just second or third gear etc. I was having fun choosing the proper gear and I felt overall that the engine was under less stress.

After our stop in Lancaster, we started north on Sierra Highway and then turned west on Backus Road to pick up Tehachapi Willow Springs Road which would take us on to Tehachapi and our lunch stop. Backus Road is mostly straight with no obvious hills as the desert in this area appears to be flat. As we started west on Backus Road, I was driving along at about 50 MPH in overdrive. Even though it appeared we were driving on lever ground, the road was actually going slightly uphill and I soon found I had to use full throttle just to maintain speed. I slowed a bit, shifted the Mitchell into direct and continued on at about 45 mph. I continued to drive along watching the Model A's in front of me and not paying attention to the tachometer. After a few more miles, I once again was at full throttle and my speed had dropped to less than 40 MPH. The tach was now indicating 1500 RPM. I immediately down shifted to second and put the Mitchell into overdrive. I had not been watching the tach and did not realize the incline of the road had increased and we were also driving right into a very strong headwind. I quickly learned I needed to pay closer attention to the tachometer.

The best operating range for a Model A engine is between about 1750 and 2300 RPM. With continuous highway driving, a good range of RPM is somewhere between 1900 and 2100. Continuous running at full throttle below 1750 RPM is hard on a Model A engine. The crank bearings are very heavily loaded and the crankshaft itself is under a lot of stress. The oil pump is turning a bit slower so there is less oil available for lubricating the engine and the cooling system has to work harder than necessary.

Over revving is equally hard on the Model A engine. With the long stroke, piston speeds become very high causing increased wear on the pistons and bores, the rods are more prone to failure at high engine speeds and the engine in general is overworking itself.

If you limit the engine speed to no more than 2300 for up-shifts and no less than 1750 for down-shifts and cruise in the 1900-2100 RPM range, you will find your engine is working a lot less and will last longer. You may also find your fuel economy has improved. One thing you should always remember is, DO NOT LUG THE ENGINE. Do not continuously run your Model A at full throttle with engine speeds less than 1750 RPM.

A tachometer is not only fun to watch but is a very useful tool to help you operate your Model A at more optimum engine speeds.

TECH TIP

There are several tachometers available for your Model A. However, one I like to recommend is the Tiny-Tach, an economical, easy to install, small self contained digital combination tachometer and hour meter. The Tiny-Tach is small enough so it can be mounted to the dash using two sided foam tape or you can easily make a bracket that would mount under one of the dash screws. Tiny-Tach has its own internal battery supply so it does not require any hook up to your Model A's electrical system. There are only 2 wires to deal with, a ground wire and a signal wire that just wraps around the ignition coil wire. Tiny-Tachs have a battery life of about seven years but the battery is not replicable so the whole unit must be replaced. The hour meter function is handy when keeping maintenance records. I have a Tiny-Tach installed in both of my Model A's.

Tiny-tacks are available for $48.00 plus shipping by ordering on line from www.tinytach.com. Order a tachometer for a "Gasoline Engine" and at the bottom of the shipping address page in the Check-Out procedure, in the "Special Requests" box, type in "Model A Ford, 1931, 4 cylinder, coil wire signal, 2 sparks per engine revolution".