



THOUGHTS FROM THE MODEL T GARAGE...

By Ed Moran

In our last issue, I talked about one part of the Model "T" ignition system. Various timers were discussed and I recommended the Anderson Timer that is now being manufactured by Bob Thompson. There are two other things which are vital to the smooth operation of the original system the "T" used. They are the magneto and the coils.

There's a lot of discussion about whether the original coil/timer system can work as well as an after-market distributor. Having run both systems in my 12 and 22 T's, I can tell you that my personal feeling is the original coil/timer system can work just as reliably and with no more adjustment than a distributor system IF the coils have a good condenser, are adjusted correctly and the magneto puts out enough voltage OR you use a 12 volt battery! We'll talk about the 12 volt option further down the page.

Let's talk briefly about the magneto. To have a sweet running coil system you must have a magneto that will put out about 7 volts while idling and about 25 volts or more when driving down the road. A number of factors can effect the magneto's output. The most common problem is probably magnets which over a period of 75 years have lost much of their magnetism due to heat and vibration. While it is certainly better to recharge low magnets while out of the engine, I have recharged them successfully using three 12 volt batteries in series and carefully lining up the magnets using a compass. The method is described in a number of publications so I won't go into details here.

Another cause of low voltage from the magneto is wear on the engine's main bearings! As the bearings wear the space between the magnets and the coils increases and the voltage drops rapidly! During the Model "T" era, a number of companies offered gadgets designed to control the end-play to keep the magnets near the magneto coils but I know of none that are available today. About the only solution I know of is to rebuild the engine and set the clearance correctly when you reassemble.

The last set of problems we can run across with the magneto are no voltage at all! This will generally be caused by a shorted or open magneto coil. The magneto coils have to withstand a very hostile environment. They are constantly bombarded with very hot oil which has minute particle of metal in it! If some of these particles work their way through the insulation a short may result. Sometimes it is possible to burn a short off by using the same setup we use to recharge the magnets. A heavy jolt of high amperage current for 10 to 15 seconds may burn off the shorting material. This method is not for



the "faint of heart" though.

An open magneto coil system is also a possibility. Unfortunately, this usually can not be repaired without disassembling the engine.

And one last place to check when you have no or low voltage is the magneto contact terminal on the top of the hogshead. Sometimes fluff from the bands will build up here and work its way between the solder point on the coil assembly and the contact point of the terminal. It's easy to check and should be the first thing you look at if you have a low output problem. Just take out the contact terminal and look for fluffy material on the solder point and contact point. Clean them and cross your fingers.

You can check the voltage with an inexpensive AC voltmeter. Yep! the magneto is alternating current not direct current like the battery. And by the way... The alternating current means that the spark lever should be set slightly differently for magneto running than for battery running. By careful experimentation, you'll notice a definite "sweet spot" for the spark lever that the magneto and coils really like. Look for it! It's well worth finding.

If your magneto just won't "cut the mustard", don't give up! A 12 volt battery will make the old "T" run just about as well as the magneto and will actually run a little better at slow speeds because the magneto drops to 6 or 7 volts when crawling along in the parades.

See you down the road☐