



THOUGHTS FROM THE MODEL T GARAGE...

By Ed Moran

Howdy Fellow Model T'ers! Summer is certainly here and the hot weather can be a challenge for our Model T's so let's talk about Henry's cooling system and the after-market water pump.

Henry's first Model T's used a water pump. After the first couple of hundred cars, the water pump was eliminated and the T's from then on relied on a thermo-siphon system for cooling. This worked reasonably well when the cars were new and the blocks and radiators were clean. The "Copperheads" were more likely to boil than the later black radiators with their slightly larger capacity.

Lots of after-market manufacturers made a good living supplying water pumps for the T's and a lot of folks use them today but are they really needed? A T with a clean block, good radiator and properly adjusted fan can run on the hottest days without boiling over! In most cases, a water pump is covering over the problem and not really fixing the source. If you talk to an owner with a pump, you'll almost always hear two complaints. The pump leaks and the fan belt won't stay on the pulleys. Most will agree that water pumps are a doggone nuisance! They keep them because they keep the water moving so fast it has less chance to boil.

Let's look at the cooling system and see what is causing it to overheat and what we can do to eliminate the problem without using a water pump. First, let's look at the things that can cause a T to run hot.

- 1.** Running with the spark lever too far retarded or too far advanced will cause overheating. Murray Fahnstock once said that for every speed there is only one correct instant for the plugs to fire. Too retarded and the gas is ignited too late as the piston travels down on the power stroke. This wastes power and causes the engine to work harder. Too advanced and the gas is ignited before the piston as started down on the power stroke. Not only does this waste power but it is hard on the rod and main bearings! So get in the habit of moving the spark lever to the spot where the car pulls the best but doesn't knock.
- 2.** A head and block that are not clean will certainly contribute to overheating. Flushing with chemical cleaner and then always using an anti-rust solution or antifreeze to keep it clean will help this area.
- 3.** Probably the biggest cause of overheating is the radiator. Just because the radiator



looks good doesn't mean it cools well! If the radiator is the original or had been on the car for many years, vibration and continued heating and cooling will have caused the fins to loosen on the tubes and the radiator can not transfer the heat! A radiator with good flow but loose fins will NOT cool a T! The choice is to either replace the core or buy a new radiator. In almost every case, this will fix the overheating problem and a pump will not be necessary.

When replacing the radiator, we now have a choice of either the original round tubes which should be used on a show car or the modern flat tubes which have superior cooling ability. If you're going to tour, choose the flat tubes. They do make a difference and look very good.

4. The fan belt tension also plays an important part in cooling. Too loose and the fan will slip and not do its job. This is especially true if you're using a water pump. Too tight and the belt and fan bearings will wear rapidly.

It's not a bad idea to use a 50/50 mixture of anti-freeze all year round. Contrary to some folks, anti-freeze does not leak worse than water. You can just see it better since it doesn't evaporate as quickly. It does raise the boiling point and that's helpful in our engines where we don't have too many degrees to play with. I would suggest replacing anti-freeze every year or two.

See you down the road..