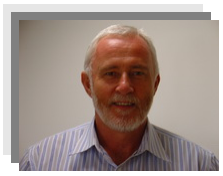
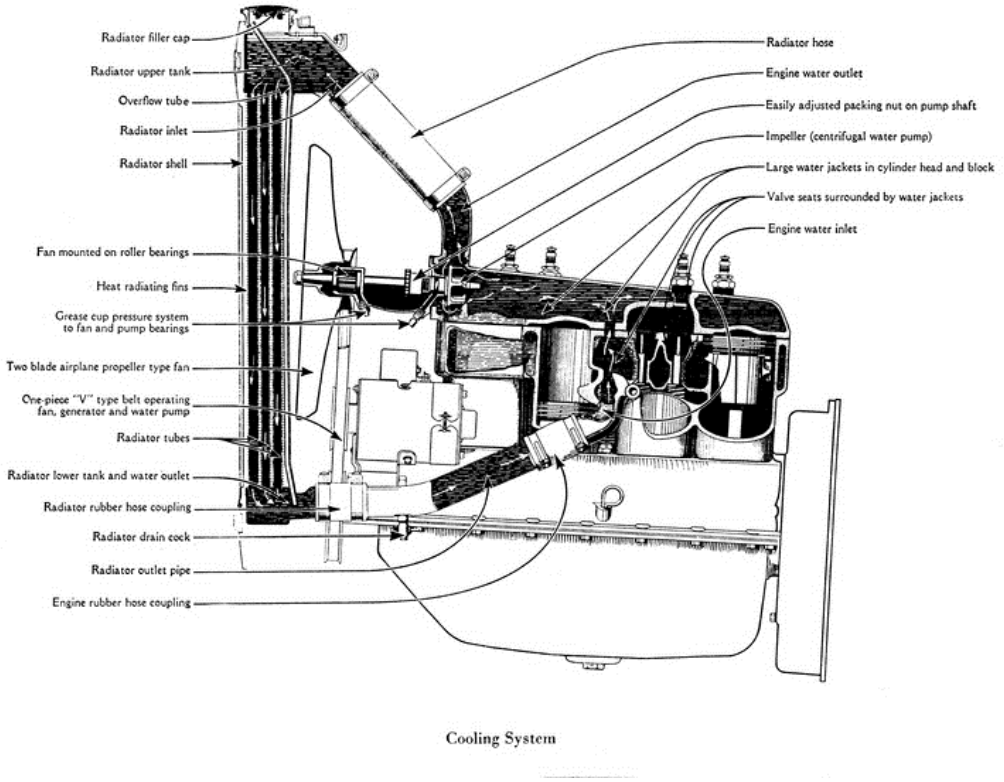


From the Garage

by Paul Hunter

Keeping it Cool – where did the water go?



Cooling System

Photo reprinted form How to Restore Your Model A Second Edition

What would otherwise have been a pleasant outing in your Model A with others may become a less than cooling experience as we find ourselves overheating watching the motometer heading into the red rather than enjoying ourselves.

Engine overheating has been around as long as the automobile and the Model A is not exempt from the problem. A properly working radiator is critical to the health of your Model A Ford engine. The radiator helps the engine stay cool by transferring heat from the coolant mixture to the outside air. The Model A system is an un-pressurised pull (suck) through system, all systems have internal hot spots where the water flashes into steam. In most cases, it condenses back into a liquid as soon as it travels within the water jacket and hits some cooler water, this is normal. With a pull through system, if the radiator is clogged or blocked to some degree and we are travelling at highway speeds, as the pump is pulling the water out of the radiator; it can result in a lower pressure within the engine and head. As the pressure decreases, so does the boiling point, at this stage everything is now against us and heading in the wrong direction.

It has been said many times that the Model A water pump pumps more water than the radiator can handle. This is impossible. The pump gets all of its water from the bottom of the

radiator; any restriction compounds water flow problems. I do think the Model A pump is oversized for the job, so it is very aggressive in trying to get the water out of the engine, that's why we have such a low pressure in the water jacket. Over the years many of us have cut down the size of the impeller on the pump or drilled holes in the vanes to reduce the flow. This is in the right direction since it reduces the size of the pump and in return its ability to draw that low pressure in the engine, just doing that has "fixed" many systems.

I recall returning home from the Taupo Rally with overheating problems and to stop the cooling system and the driver going into the red, coasting down hill in neutral, allowed the flow of water to slow and the temperature would come down, return back to highway speeds, the problems returned. For our car we bit the bullet and fixed the problem by having a new radiator core fitted by Brad Ross of Auto Radiators; now the engine is kept cool and so am I.

Another way of slowing the flow in the cooling circuit is to install a thermostat in the top hose from the engine block to the top tank of the radiator, this not only aids in the getting the water temperature up early, it also assists in reducing the flow and in doing so maintaining "pressure" in the water jacket.

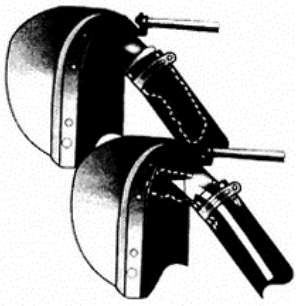
I wonder how many people who experience overheating problems don't have engine pans (some times referred to as "dust pans") installed. There is a belief that the engine pans assist the cooling as more air is directed to the back of the engine. Henry continued to install engine pans into the late 30's and I don't think it was to keep the engine clean.

Here are some tips for keeping cool

The headlight bar seems an ideal please to mount the licence plate, but the plate does block a sizeable chunk of the radiators cooling area. On a hot day, consider flipping the licence plate into a horizontal position to expose more fins to the airstream.

This is an old-time proven method to keep your cooling system free from rust particles that can block and clog-up your radiator. It's real inexpensive and easy to do.

- First get a knee-high nylon stocking. Most wives/girl friends will have these, but may wonder why you would want one.
- Drain about a gallon of water/coolant from the system and remove the upper radiator hose. Insert the stocking toe down into the hose a few inches.
- Next lip the upper section of the stocking over the hose and reattach the hose to the radiator.
- Trim off the excess nylon material.
- Refill radiator.
- When you start the car, water will carry the stocking up into the radiator and act as a filter. It also provides some water restriction for over-efficient water pumps.
- Replace the nylon stocking annually as you flush your cooling system. You'll be amazed how much "junk" it catches.



Old time proven method reprinted from Tiny Tips for Your Model A

Have the cooling system back flushed and use a good quality inhibitor or soluble oil to lubricate the water pump and inhibit corrosion/scale.

Check your water pump packing nut for leaks, check all water hoses for leaks, tighten hose clamps, check for leaking tubes and tanks on the radiator and if needed have repaired sooner than later.

Check that your fan belt is adjusted correctly with approx ½" of movement when pushed inwards.

Check that your engine timing is correct, retarded or over advanced ignition will contribute to overheating problems.

Fill the radiator to the bottom of the baffle, allowing room for expansion and with a good radiator; it seeks its own level

Keeping your Model A cool helps keeps you cool and makes motoring more enjoyable