Back Flush!

by Tom Endy

The cooling system on a Model A Ford can get pretty crudded up with rust, calcium, and also with grease from the water pump. If the radiator has been in service for a long time it is best to remove it and take it to a radiator shop (preferably to one that is knowledgeable of Model A radiators) and have it rodded out.

The engine block and the head are also usually crudded up, especially with rust. This is where a technique called back flushing can be affective. Back flushing of the radiator can also be affective if the cooling tubes are not hopelessly plugged up. The trick is to force water through the system backwards to the direction it normally flows.

Various cleaning solutions have been suggested for use in dislodging the cooling system crud. Some have suggested a combination of oxalic acid with a baking soda rinse. Others have suggested liquid Cascade dishwasher solution. There are also commercial cooling system cleaning agents available from most auto parts stores. Whatever cleaning agent is used, it is best to finish up by back flushing the system.

It has also been suggested that a newly overhauled engine should be back flushed before being connected up to the radiator. A considerable amount of rust can become dislodged inside the water jackets when the engine was hot tanked and in all likelihood is still inside the water jackets, as well as machining chips. If the engine is immediately connected up to the radiator all the loose particles will be dumped into the radiator.

In order to back flush the Model A cooling system some special adapters need to be fabricated. Two plugs with a hole drilled in them must be made up, one to fit the large upper radiator hose, the other to fit the smaller lower radiator hose. The holes in the plugs should be tapped with a pipe thread. The plugs are then fitted to provide garden hose connections. The two plugs can be cut from steel or aluminum round stock.

All the other hardware can be obtained from a local hardware store. Standard Model A radiator hoses and clamps are used to connect up the flushing apparatus.

To back flush the radiator, connect the adapters to the two radiator hose bibs. With a garden hose connected to the bottom hose bib adapter run water though the radiator backwards to the normal flow. Be sure to put the radiator cap on. A suggestion, connect the garden hose to your laundry machine hot water spigot and back flush with hot water. A second garden hose may be connected to the top radiator hose bib adapter to carry the exiting water to a suitable drain.

To back flush the engine, disconnect the radiator from the engine and install the two adapters to the engine. The large adapter is connected to the water outlet on top of the head. The small adapter is attached to the water inlet on the left side of the block. It is also suggested that the water pump be removed and a blanking plate be installed over the opening in the head. Connect a garden hose from the hot water spigot to the large adapter on top of the head. Connect a second hose to the smaller adapter on the side of the block and lead it off to a drain. Begin the back flushing. You can also start the engine up to add some vibration if desired. The hot water will not only aid in flushing the engine, it will also prevent the possibility of cracking the block with the use of cold water if you run the engine. ☺

Shown above are the two adapters and the water pump blanking plate. The long hose is the upper (larger diameter) hose. The short hose is the lower (smaller diameter) hose.