Model A Gas Cap

by Tom Endy

Reproduction 30-31 gas caps have a quality issue that can cause you some amount of grief. A large single rivet in the center on the bottom of the cap holds the assembly together. The rivet goes through the bottom metal grabbing device, a red colored gasket, and a brass flat washer. Off to the side of the rivet is drilled a vent hole that goes through all three parts. It vents to the outside edge of the cap. Without a vent hole the tank would experience a vacuum lock as the gas in the tank is depleted. Eventually it would stop the gravity flow of gas to the carburetor and the car would appear to run out of gas.

It is possible, and extremely likely, that as the cap is twisted on and off the tank numerous times, one or more of the three parts will rotate out of position on the center rivet. When this happens the vent hole will be blocked off and the vacuum thing will happen. When you remove the cap you are liable to hear a "Whoosh" sound as air rushes into the tank to equalize the vacuum.



Before you allow the vent hole to become blocked it is a good idea to modify the cap. Drill a second hole through the three pieces. Be careful not to drill clear through the top of the cap, just the three pieces. Tap the hole for a 6-32 screw. Lock-tight or epoxy it in place so it won't fall out into the gas tank. The screw will prevent the three parts from rotating out of position and the vent hole will maintain alignment through the three separate parts.

30-31 modified gas cap with a 6-32 screw epoxied into place opposite from the vent hole.

A better option is to procure a gas cap that is more like the original cap that Henry ordered. They are available from Snyders and are describe as an Eaton gas cap. The center section is secured with two rivets to prevent any of the parts from rotating out of position. There are two vent holes that are incorporated into the metal disk just above the rivets. One is located at the top to the left of the locking tab, the other is located at the bottom to the right of the locking tab.

Vented gas caps were outlawed on new cars about 1970 for safety and environmental considerations. All gas caps from that time on had to be non-vented. Gas tanks were then vented through a pipe running from the tank to a charcoal canister. If you put a non-vented gas cap on an older car requiring a vented cap, you will not only run out of gas, but a mechanical fuel pump has enough strength to crumple the gas tank.



30-31 Eaton style vented gas cap