

Big Problem, Little Fix

I'd never thought to check the gas cap.

By Tim Jones

RECENTLY, A PROBLEM with our 1931 Town Sedan caused me a lot of concern. For no apparent reason, our car would overheat or start to misfire. Then it would run just fine for awhile, then again start misbehaving. I checked all of the obvious causes that I could think of, but it didn't occur to me to check my gas cap.

I'm writing this because I believe our car's problem may be very common. The problem is caused by missing or blocked gas cap vent holes. Over time, those little holes can become blocked with corrosion and debris.

This will create a slight vacuum in your gas tank as you drive, causing your car to starve for fuel. Running lean can cause other problems like overheating, lack of power, and running rough or misfiring.

SINCE MODEL A'S DON'T HAVE a fuel pump, the system relies on gravity to get the gas from the tank to the carburetor. As that gas is consumed by the engine, the fuel that leaves the tank must be replaced by air entering the tank. Otherwise, it creates in the tank a negative pressure or a slight vacuum. For this reason, Model A's require a vented gas cap. It allows air to enter the tank as the gasoline is used.

The 1928-'29 gas caps are threaded. There are various vent hole patterns on the underside of the cap. But the concept is always the same with vent hole(s) on the underside in the center of the cap and more elongated vent holes on the outer edge. All these holes go into a small chamber under the cap's dome.

The 1930-'31 caps are not threaded, but have small tabs that secure the cap to the gas tank. Sometimes it's hard to see the vent holes, so look under the gasket. If you don't see a hole, drill one. (Don't drill all the way through, just into the inner chamber.)

RECENTLY A CLUB MEMBER was having problems on his '31 Coupe similar to what I'd experienced. I suggested we check his gas cap.

As it turned out, the center vent hole had not been properly drilled by the manufacturer. The hole did not go

His car had been overheating, missing, and lacking power.



Check for dirty or corroded vent holes.

completely into the center chamber, so there could be no air flow into the tank. This was not the first time I'd seen a 1930-'31 gas cap that was missing its vent holes.

His car had been overheating, missing, using large amounts of water, and lacking power on hills. As a test, we simply loosened the gas cap — and the car ran great. He got a drill and fixed the vent hole. Ever since, his Coupe has run fine.

You may also notice that if you have a fuel vent problem, the more full the gas tank, the sooner you experience the problem of engine misfiring and lack of power. If your tank is lower on fuel, it may take several miles before the vacuum in the tank becomes sufficient to restrict the flow of gas. (You may not realize you have a problem if you typically drive only short distances.)

HERE'S WHAT I SUGGEST. Inspect your gas cap to make sure it has vent holes and that they are not blocked with debris or corrosion.

- On the 1930-'31 cap, there should be one small hole on the underside near the center and another one, also on the underside but outside of the gasket toward the edge. The holes need to go into the little chamber under the cap's outer dome. I had to enlarge the holes on mine to about 1/8" to shake and blow out all of the rust. I think the larger hole will be less likely to rust shut again.
- On the 1928-'29 cap, use a piece of wire or a safety pin to clean out the holes around the perimeter, then blow them out with compressed air.
- Add "check gas cap vent holes" to your servicing checklist. ☹

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