

## DUAL FLOW PCV VALVE DF-17 FUEL INJECTION INSTALLATION

By Bob Brown

This installation is in a 1994 Corvette LT-1 engine but applies to many GM engines 92-96. It will also have similarities to later model fuel injected engines. This application is in a slightly modified 1927 Ford Roadster with paddle shifters, electric power brakes, all steel body, etc.



The reason for the installation was high pressure in the valve covers and oil pan causing oil seepage on longer runs. The original PCV valve was replaced several times and nothing seemed to help until the M/E Wagner Dual Flow valve came along!

### STEP 1

After reading the Shop Manual and discussions with Mr. Wagner, I added a fresh air vent on the passenger side where the original GM air flow was located See pictures before and after.



Before



After Showing new air vent

## STEP 2

The original PCV was a loop as you can see in the photo. It was removed and replaced by a 1" rubber plug. The next photo shows that the vacuum hose connection for the original PCV is now being used to connect to the new Dual Flow Valve.



Before



After

## STEP 3

If necessary, drill a hole in the valve cover and prepare a baffle to be below the Dual Flow valve. Instructions for this baffle are included in the material provided by M/E Wagner INSTALLATION CHECKLIST. It shows that the baffle, if not already in the valve cover, needs to have at least a 3/8" gap from the underside of the PCV. This piece of metal turned out to be 3"x3" and has a 1/2 gap to the base of the PCV. The existing valve cover on the driver side didn't have any holes so a new hole was drilled and a grommet was purchased that fit the new Dual Flow PCV and the hole. See pictures of the baffle and installed Dual PCV.



#### **STEP 4**

Selecting a tuning method. In this case there was a constant 15" of vacuum at idle and 17" at high speed. This indicates the use of the high vacuum spring that comes installed in the valve. After idling and warming up, the valve was removed and the vacuum adaptor fitting was installed and the vacuum gauge was connected to the fitting for tuning. The valve was put back in far enough to allow the adaptor and the gauge at idle read 0. Turning clockwise it only took about two turns until it transitioned to 4" indicating cruise mode. Then the cruise screw was turned counterclockwise until the valve transitioned back to idle and the gauge changed to 0. The final setting was accomplished by turning the cruise screw counterclockwise an additional  $\frac{3}{4}$  turn. Now when quick acceleration is done the gauge jumps to 4 and then quickly back to 0.

#### **SUMMARY**

The engine is now much more responsive, noticeable when accelerating at start or at any speed. No leaks and smooth idle. I am a skeptic and you may notice that I added a vent screw on the valve cover to be able to test for crankcase pressure and there was none, nada, zip, zero!! I highly recommend the Dual Flow Valve.