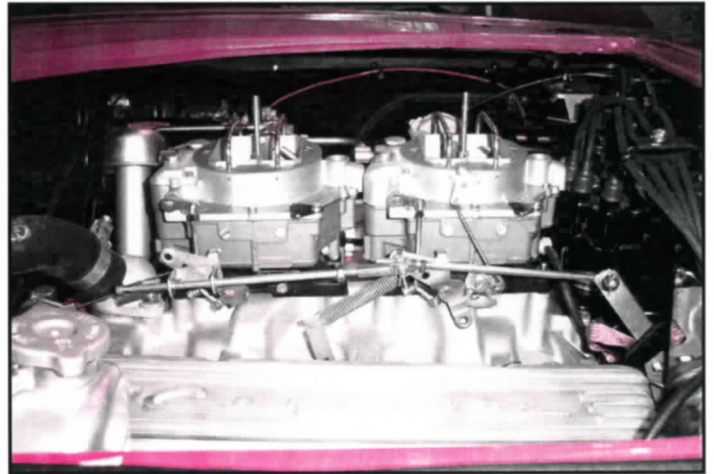


# WCFB SOS

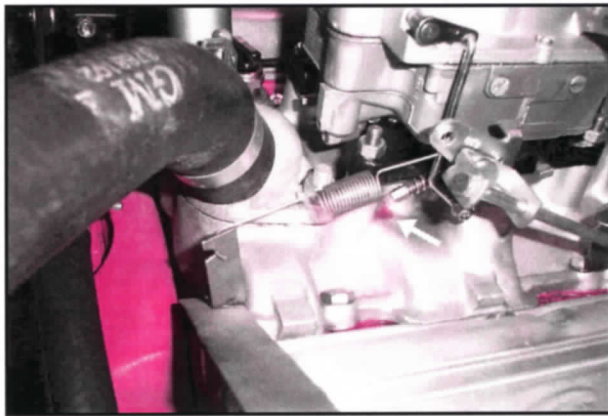
Tom Vollrath

MAC member

I need your help with my WCFB's (2631S & 2614S) please. Ever since Eric Gutscher took me for my first a ride in his brothers 270 hp Corvette back in 1962, I have had a "love hate" relationship with Mr. Will Carter's Four Barrel (WCFB). I restored my 1961, 2 x 4, 270 HP, Corvette and everything is running great. The one exception is the unpredictable 'puddling' of gas at low spots on the intake manifold.



My restored 2 x 4 carburetor set-up was purchased in 2004 from Dick Cantor of Eaglehead Restoration. Mr. Cantor came highly recommended, is very experienced and does beautiful work. Mr. Cantor has helped me diagnose the problem, provided gratis troubleshooting advice and has even rebuilt the secondary carburetor in an attempt to determine what was wrong. No luck.



The problem can best be described as:

1. A small puddle of gas collects at various low points on the intake manifold. It is usually found around the front of the front carb but on occasion has also appeared around the rear carb and is not consistent (see photo with arrow).
2. The puddles appear primarily during cool down. Again they are not consistent.

I have accumulated and gone through the following troubleshooting list many times and in many orders without success:

1. Fuel - Only premium 93 octane gas has been used. I have even tried using an octane additive but it didn't seem to make a difference.
2. Manifold Nuts - The torque (14 - 18 ft lbs) on the carb to manifold nuts has been rechecked numerous times.
3. Horn Screws - The air horn screws (16 ea) have been retightened numerous times (they seem to always be loose?).
4. Gasket - Several new carb to manifold gaskets have been installed.
5. Intake Manifold - The level of the intake manifold has been checked with a straight edge and is 'flat'.
6. Engine Temp - The engine temp gauge has been calibrated with an IR thermometer and the engine is not running "hot".
7. Fuel Pressure - The fuel pressure measures slightly below the 5.25 - 6.5 psi spec.

After none of these solved the 'puddling' problem, I sent a letter detailing the problem to Bob Kunz in St. Louis. Mr. Kunz had been highly recommended by two different MAC members with WCFB's. Mr. Kunz called me several weeks later and explained that he had been sick and couldn't do the work himself but did know the cause and solution. When the engine is shut down, the intake manifold and carburetors are heat soaked and their temperature increases. As a result, the fuel in the bowls heats, expands and due to the WCFB design has no place to go. Mr. Kunz's time tested solution was to lower the float level  $1/8^{\text{th}}$  to  $3/16^{\text{th}}$  inch below spec. I promptly lowered the primary float  $3/16^{\text{th}}$  inch on the secondary WCFB (front) and voila! I had an entire summer of cruising without the first appearance of a puddle.

Unfortunately this is not the end of the story. Midsummer I wrote Mr. Kunz a nice thank you letter but it came back unopened with a "return to sender". And, following my first winter maintenance drive (~3 miles every two weeks) last December the puddles returned. At this point I'm stumped and am sending out an SOS.