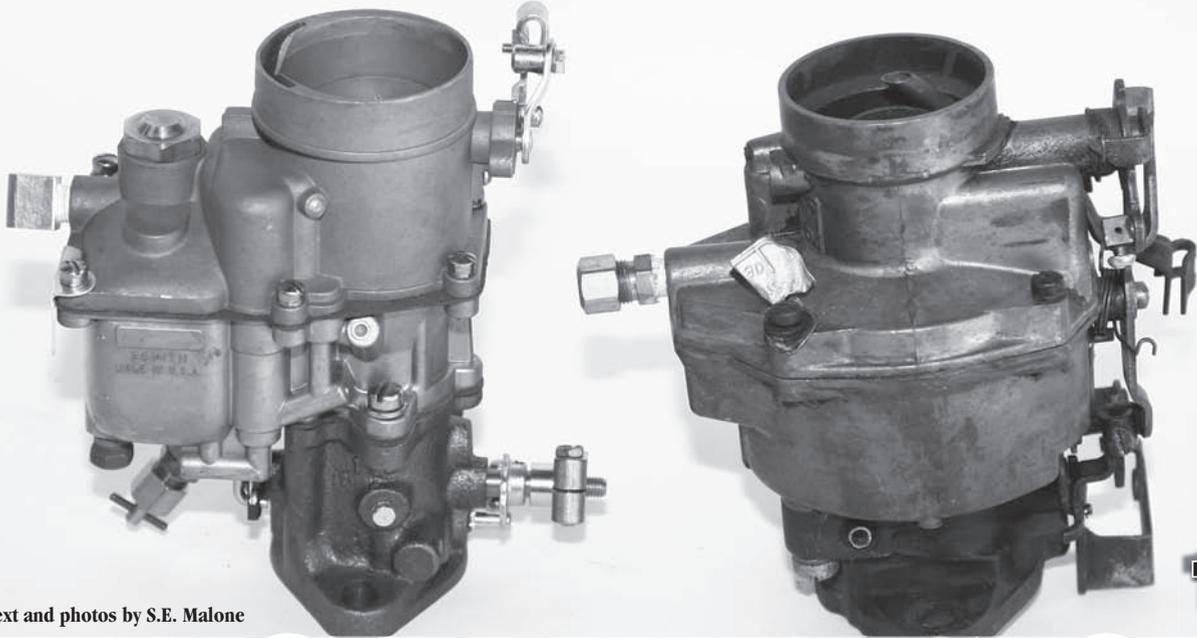




Zenith Carburetors

New and old. The Zenith on the left looks smaller, but it has the same airflow capacity as the old Rochester. It even uses the same size air filter.

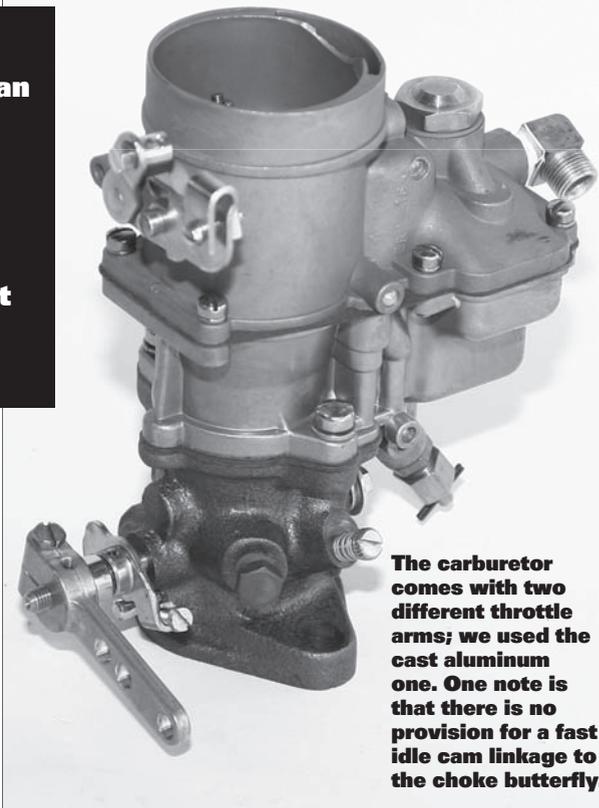


Text and photos by S.E. Malone

THEY STILL MAKE THESE?

One of the hardest parts of building a hot rod is getting it to run right. We don't mean just going fast; no, it's about making the motor responsive to the throttle pedal. Nothing seems worse than when you're in stop-and-go traffic and your motor hesitates every time you push down on the gas pedal. I don't know about you, but times like that bring out the best in my crude language skills.

Poor driveability can be caused by lots of things: incorrect ignition timing; intake manifold air leaks; or a worn-out carburetor. The timing and manifold leaking problems are fairly easy to solve, but the worn-out carburetor can be a real headache. Most of the motors we are dealing with are older than dirt, and the carburetors we get with them have either been run into the ground or sitting so long that their components are rusty and corroded. A lot can be done to clean them up and get them to where they will get your motor started, but they can no longer correctly meter and mix the gas and air. There are almost as many reasons for this as there are parts in the carburetor: leaking

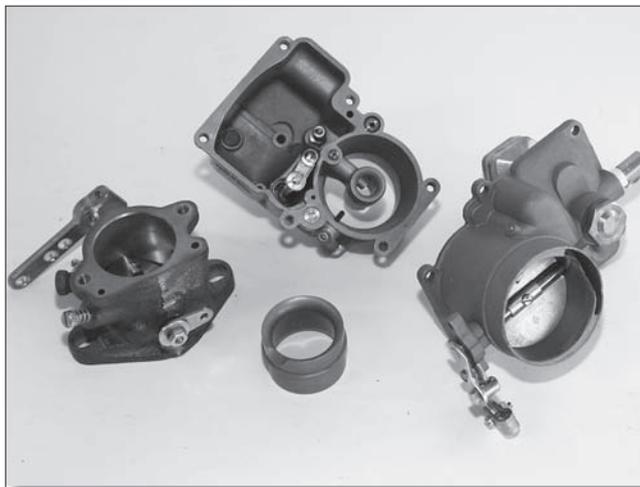
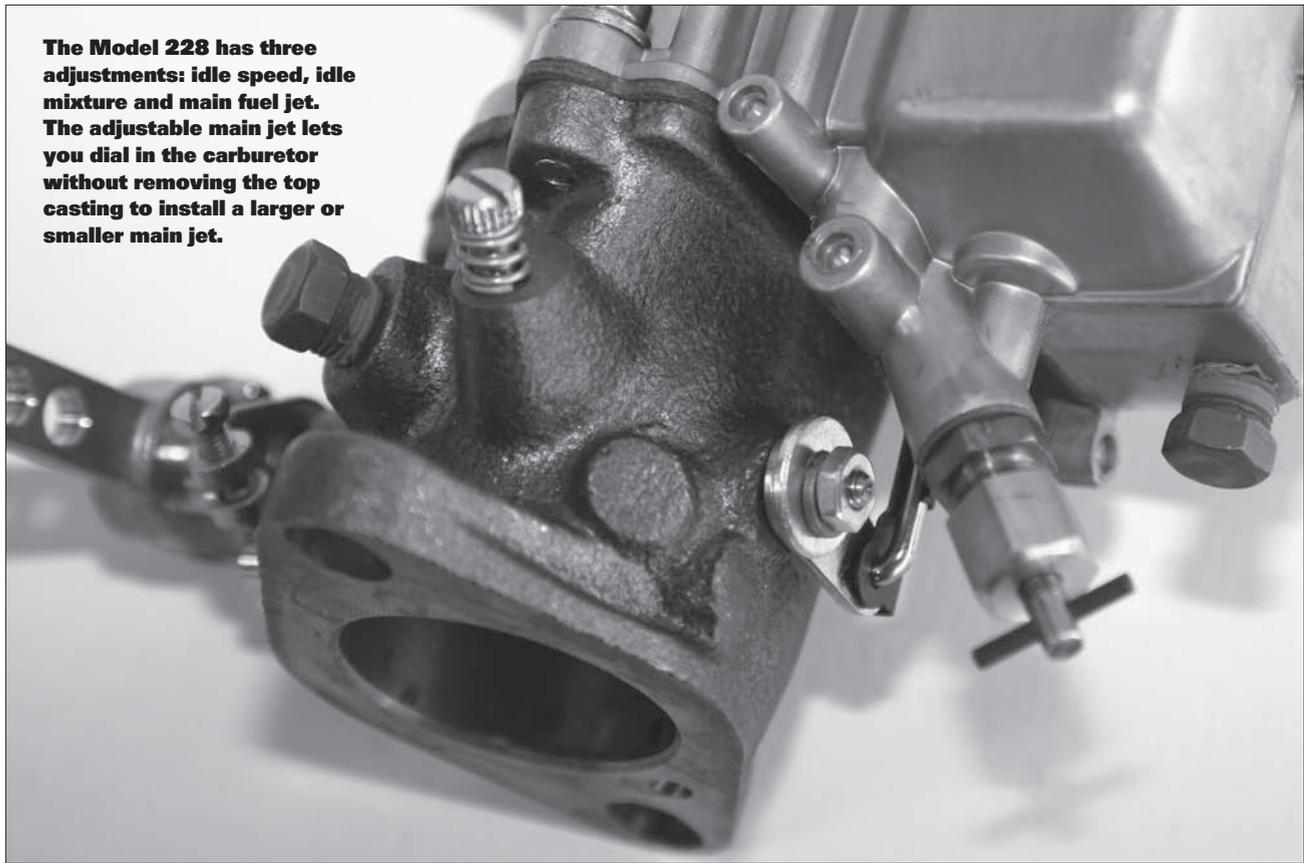


The carburetor comes with two different throttle arms; we used the cast aluminum one. One note is that there is no provision for a fast idle cam linkage to the choke butterfly.

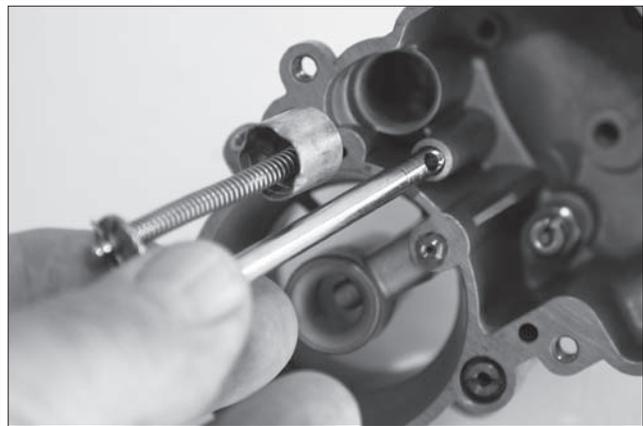




The Model 228 has three adjustments: idle speed, idle mixture and main fuel jet. The adjustable main jet lets you dial in the carburetor without removing the top casting to install a larger or smaller main jet.



The main parts of the carburetor are: throttle body, float bowl casting, air horn casting and venturi sleeve.



The accelerator pump uses a precision-fit metal piston instead of the usual rubber lip seal type. This design makes for a much more positive response to fuel flow when the throttle is opened.

butterfly shafts, pitted accelerator pump wells or warped castings; the list is endless.

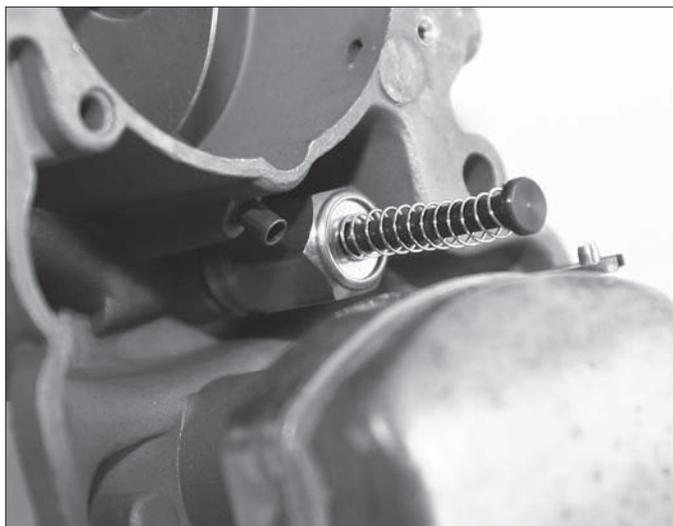
The correct fix is to buy a new carburetor, which, in the case of you guys running 4-barrel carburetors, is really straightforward: buy one from Berry Grant, Holley or Edelbrock. The 2-barrel carburetor is even looking up; Berry Grant and Holley have the square bolt pattern lineup covered, while the 3-bolt carburetors can now be replaced by Berry Grant's Model 98 and the new Stromberg 97s from England and Speedway Motors.

It appeared that the only guys who had to fend for themselves were those that ran the single-barrel, two-bolt carburetors, which

was all of us with an inline 4-, 6- and 8-cylinder motor. Ford, Chevrolet, Chrysler and almost every other car company made Inline motors from about the beginning of time till the mid 1960s. They came fitted with single barrel carburetors from Ball & Ball, Carter, Rochester, Stromberg and Zenith.

Well, all is not lost. Carlos, our local carburetor wizard at BFIC in Burbank, California, turned us on to the Zenith Model 228 universal single barrel carburetor. This is a modern version of the Zenith Model 28 carburetor, which was used on GMC 6-cylinder truck motors from 1946 until 1962. The good news is that the Zenith Model 228 is a current production carburetor. They still make them,

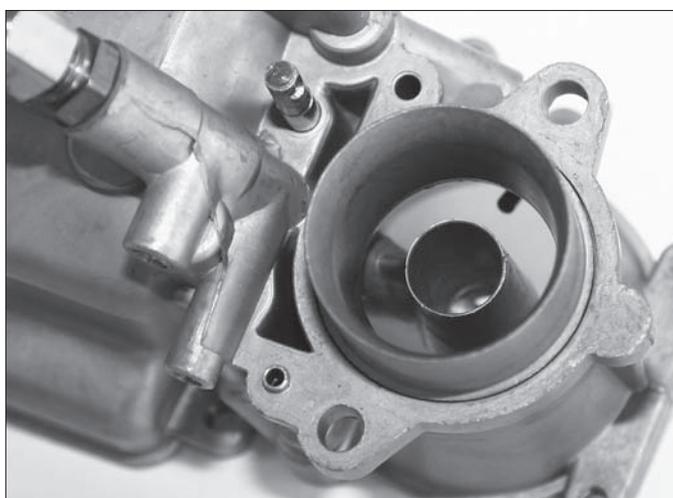




The key to the Zenith's accurate fuel metering is in its power valve design. Because it is vacuum operated, additional fuel is only added when the motor is under heavy load.



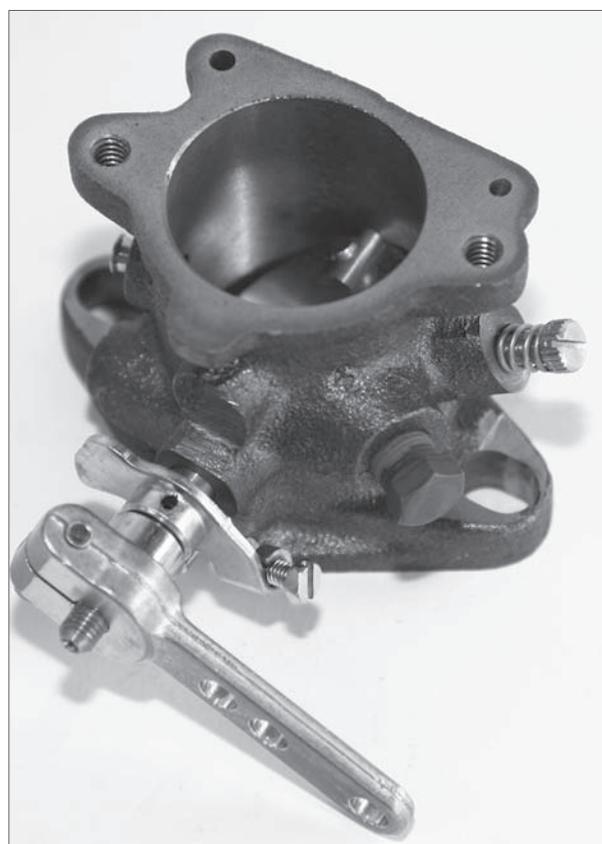
The carburetor's venturi sleeve is easily removed from the bottom of the float bowl casting.



ABOVE: Our carburetors came with a 30mm venturi installed. Zenith offers the sleeves in 22mm to 34mm sizes, in 1 mm increments.

RIGHT: To protect against dirt and wear, the cast-iron throttle body uses lip seals on the throttle shafts.

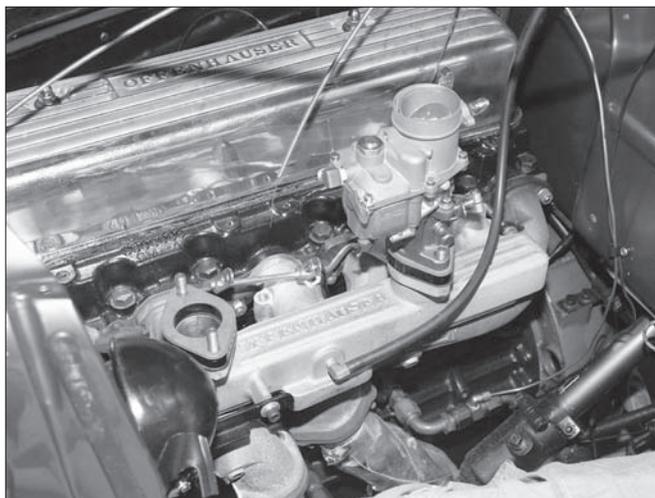
BELOW: Our Chevy 6-cylinder motor has an Offenhauser dual intake manifold. We had two of the Rochester B1 carburetors on it; they did not like heavy traffic.



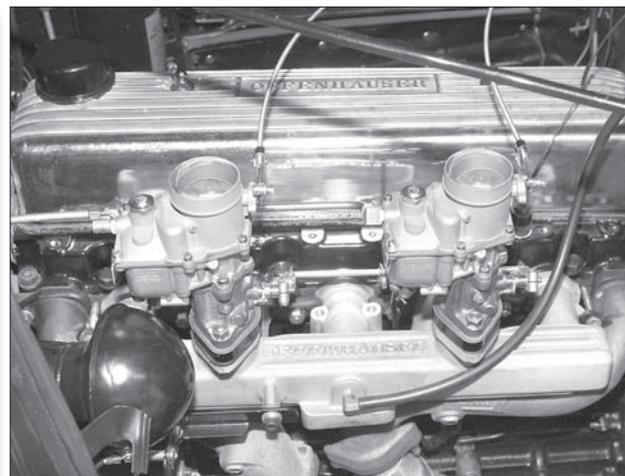
right here in the USA (in Bristol, Virginia). The Model 228 has a manual choke, comes in four throttle bore sizes and features interchangeable venturi sleeves. For ease of tuning, Zenith offers a wide range of jet and power valve sizes. It comes with throttle levers and air filter adapter that allow it to cover most of the original one barrel carburetors.

We bought two Model 228 with the 1.535-inch throttle bore and #30 venturi to replace a pair of worn-out Rochester Model B1 carburetors on our Chevrolet 261-inch 6-cylinder motor. The carburetors came with two styles of adjustable throttle arms,

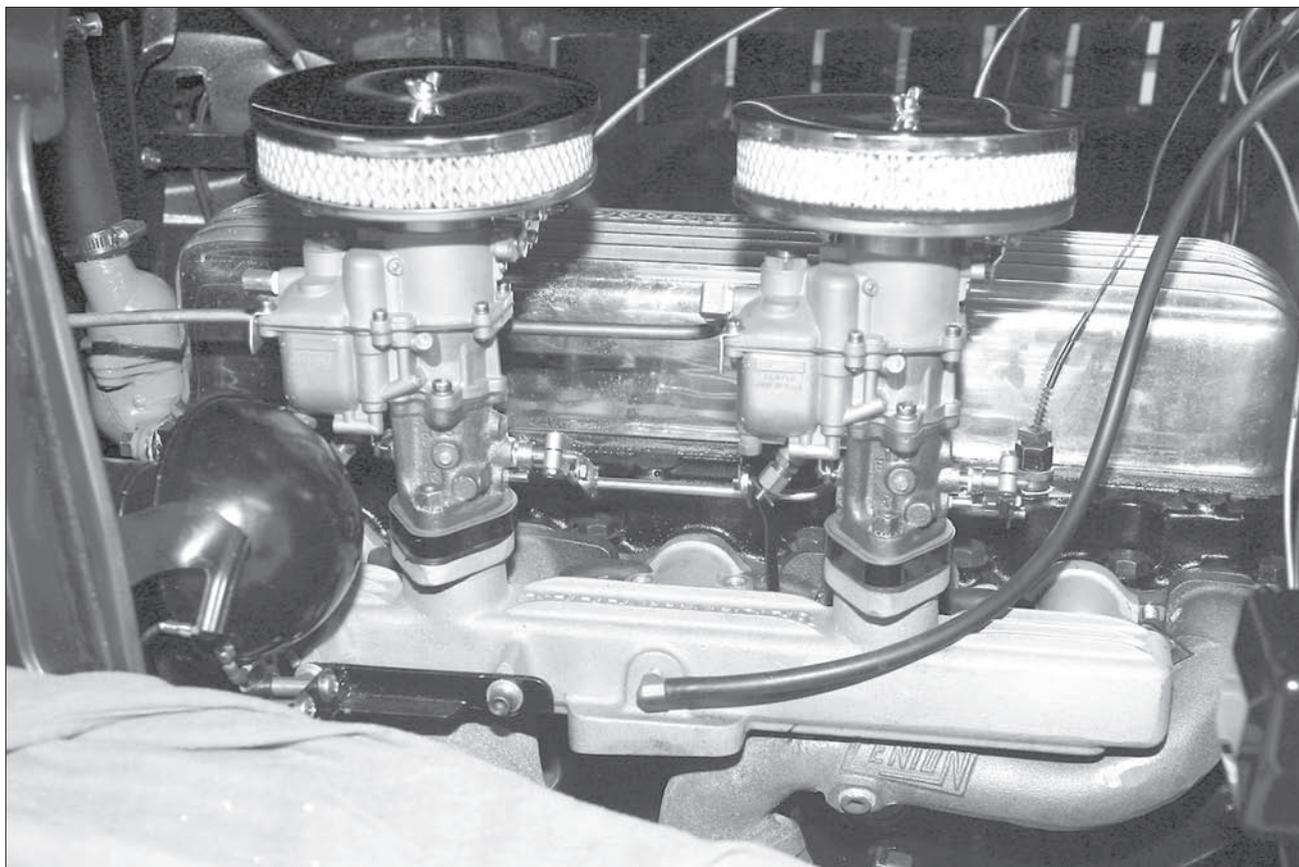




We started the installation with the rear carburetor. We set in on the manifold and adjusted the throttle arm so that it lined up with our original throttle linkage.



After we bolted on the second carburetor, we fitted the choke cables and fuel lines. At this point we started the motor, warmed it up and adjusted the carburetors per the instructions that came with them.



one of which was a perfect match to the ones on the old Rochester carburetors. The new carburetors' fuel inlet is a standard 1/8-inch pipe thread that is in almost the same place as the one on the old carburetors; we had to shorten the main fuel line about 3/4-inch. Other than shortening the line, the carburetors were a bolt-on deal.

The new Zeniths changed the whole way we drive the old Chevy; now you push down on the gas pedal and the motor responds. It probably doesn't go any faster at top speed, but it pulls away from stoplights much more smoothly. The new Zenith carburetors have taken a lot of hassle out of driving in traffic.

ABOVE: The finished installation. The motor has never run so good. Now we can cuss at other drivers instead of our motor's shortcomings.

SOURCES

BFIC Fuel Systems
818-845-9000 • www.carbsonly.com

Zenith Fuel Systems
276-669-5555 • www.zenithfuelsystems.com

