

# Modified Zenith

by Tom Endy

The Zenith carburetor shown in the following series of photos has been extensively modified. It is reported that the purpose of the modification is to provide equalized air venting when some type of air cleaner is attached to the carburetor. The theory is that with the modification the air pressure in the fuel reservoir will then be the same as the air pressure behind the air cleaner. There is a theory that adding an air cleaner to an unmodified carburetor will cause the car to run rich because of the imbalance of air pressure.



Note the slot milled into the casting right above the secondary well (threaded hole) located on the left. A hole has also been drilled into the casting in the forward area of where the venturi installs. The hole goes through to the throat of the carburetor where air is introduced. The two original vent holes on the right have been plugged off with a threaded brass plug.





**The venturi has been machined to create a groove around its circumference to allow the air coming through the drilled hole to continue to the fuel reservoir.**





**Note how the venturi with the groove machined in it accommodates the slot of the milled casting and allows air to pass around it.**

**The brass plug on the right is long enough to also plug off the 1/8" vent hole that was added to the later castings.**





**Note the secondary well installed on the left has had the top slightly milled so that the top is below the bottom of the slot milled into the casting.**

#### **Comment:**

**The Model A Ford was not delivered with an air cleaner. The carburetor on a Model A is an updraft and is fed fuel by gravity from the fuel tank that is located above it. Carburetors on a Model A can and will leak fuel occasionally for a number of reasons including faulty tank valves and float valves. If an air cleaner is attached with a paper or foam filter it could become soaked in fuel and should there be a backfire on starting, there could possibly be a fire.**

**Tom Endy**