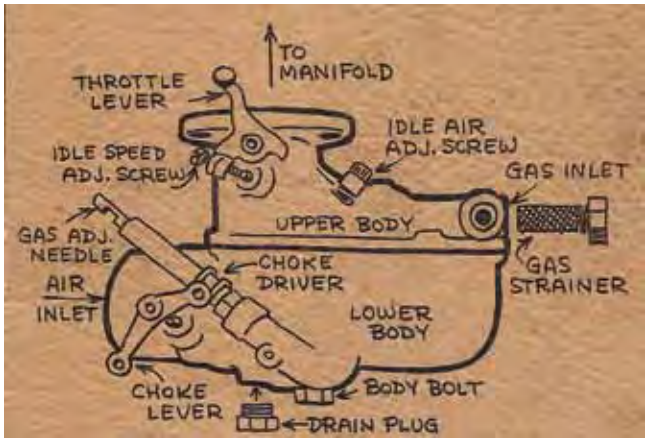
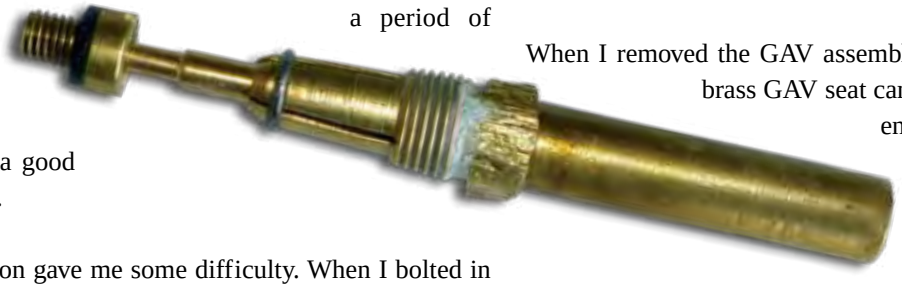


A Zenith clitch

By Tom Endy, , Westminster, California

Model A Ford Zenith carburetors can be very troublesome. This is why I make it a practice to thoroughly road test any Zenith I restore before it ever leaves the shop. I install them on my Victoria that is a very good running car. If the car does not run well with the test Zenith, I immediately know it is the carburetor and not the car. I usually put at least 20-30 miles on it over a period of a number of days of daily driving before it is pronounced a good functional Zenith.



A recent restoration gave me some difficulty. When I bolted in onto the Victoria it started right up, idled well, did not stall at a stop, and when I could get it up to high speed it ran fine. The problem was getting it up to high speed.

It would hesitate when accelerated, cough and sputter and carry on. Once it was warmed up it ran much better, but it was still not right. Opening and closing the Gas Adjusting Valve (GAV) control to different positions did not help any.

I took the Zenith back off and blew all the jets out, separated the castings, and checked it over and could not find anything obviously wrong. I reinstalled it back on the car and it functioned the same.

The Zenith had been gone through extensively. The throttle bosses had been drilled out, new bushings installed and reamed to accept a new throttle shaft. Both castings had been bead blasted and painted. All the passageways had been run through with a paperclip. The four jets had been flow tested and re-sized. One thing I did note was that the Zenith was an early version that has the brass GAV valve seat that screws into the base of the GAV tunnel. I had made a note of it and replaced it with a new reproduction one during the assembly process.

When installed back on the car it performed the same. My thinking was that the problem has to be in the secondary circuit. This involves the comp jet, the cap jet, and the GAV circuit. Something must be plugging somewhere, either in a passageway or a jet. The resolve was to once again remove it and completely disassemble it and check every thing.

When I removed the GAV assembly from the GAV tunnel the brass GAV seat came out with it stuck onto the end of the needle valve.

Over the years I have heard the story that Ford instructed Zenith to discontinue the removable brass GAV valve seat in favor of the seat being cast into the housing. The reason given was that some Model A owners were turning the GAV control down tight and when they backed it off instead of the valve opening the brass GAV valve seat unscrewed because the two brass parts had seized together.

And that is exactly what happened. Only in my case, I had not screwed it down tight, all I did was bottom the needle in the valve slightly, and then backed it out. Apparently the reproduction GAV valve seat I installed had a burr on it.

I have worked on many Zeniths of the early version with the brass GAV valve seat, but this is the first I have seen of the needle valve seizing and the brass GAV valve seat backing out.

The brass GAV valve seat is seized very tightly onto the end of the brass needle valve. It would screw out and screw in each time the GAV control was adjusted without actually opening the valve and porting fuel into the secondary circuit.

I replaced the brass GAV valve seat with an original one and the entire GAV assembly as well. Once back on the Victoria and out on the road the Zenith performed perfectly, just as Henry ordered.