

Technical Notes

Zenith Carburetor Information & Areas of Trouble

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I will start with a famous quote from Henry Ford, "Keep the carburetor clean and don't tinker with it". The carburetor gets a lot of blame for problems when it is actually electrical or ignition problems. If the problems in these areas have been eliminated here are some carburetor items to check, along with some valuable information.

Paint the carburetor, sediment bulb, and engine splash pans with lacquer paint. It is more resistant to gasoline and is less likely to dissolve. Do not use enamel as gasoline will easily remove it from metal surfaces.

An old time remedy to stop gasoline leaks is to coat the leak with shellac.

The diameter of carburetor jets can easily be checked using number twist drill bits or pin hole gages.

Jet sizes: main 63 or 64 cap 62 or 63 compensator 65 idle 75

Jet threads are 5mm 75 pitch.

A worn throttle shaft or casting will cause rough idle due to a vacuum leak. (Fig.1)

An incorrect throttle sutter plate angle will also cause a rough idle. (Fig.2) This is due to air leakage.

Fuel leaks between the upper carburetor body and lower carburetor bowl are caused by the following problems:

- Non-parallel surfaces - draw file using a single cut mill bastard file. (Fig.3)
- Bad gasket
- Float level set too high

Drain plug leaks are due to the following:

- Bolt head gasket seat is not smooth. Use a single cut mill bastard file. (Fig.4)
- A loose bolt can cause a leak. Don't over tighten and strip threads.
- Bad gasket

Irregular fuel flow can be caused by the following items:

- Fuel tank valve screen partially clogged.
- Sediment bulb filter partially clogged.
- Fuel strainer on carburetor partially clogged.
- Using a micro-filter screen

Two areas to check on the fuel strainer (A-9559) of the carburetor are:

- Too much solder on the screen. (Fig.5)
- Fuel line not cut at a 15 degree angle causing a slight blockage. (Fig.6)

The adjustment needle and idle mixture screw must seat properly. Check for the following problems. (Fig.7)

- Bent needle
- Scored needle
- Flat spots on needle
- A fuel leak at the gas line to carburetor is usually caused by a rough seat area inside the carburetor housing. This is repaired by using a small hone to smooth the seat. (Fig.8)
- With the float, it is a good idea to test for leaks by submerging in very hot water to see if there are holes or cracks causing leaks.

Zenith Carburetor Trouble Shooting List

Rough Idle

- Compensator jet too large
- Compensator jet clogged
- Vacuum leak at intake manifold

Engine Stalls

- Low idle speed
- Low float level
- Sticking float needle valve
- Vacuum leak
- Incorrect choke adjustment

Loss of Power or Speed

- Main jet size too small
- Main jet partially clogged
- Low float level
- Fuel mixture too lean

Engine Missing

- Main jet too large
- Compensator jet too small
- Fuel restriction

Engine Speed Surges

- Clogged fuel filter at sediment bowl
- Clogged fuel filter at carburetor fuel strainer
- Dirty air filter (Only if one is being used)

Figures are on the next page.



Fig. 1



Fig. 2

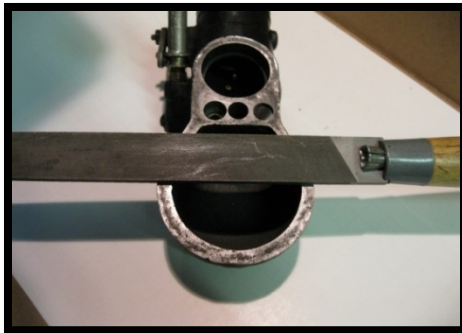


Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8