



General Instructions

- Take lots of pictures as you take your carburetor apart. This will give you a reference of where things go.
- Using a cookie sheet with folded up sides will help keep parts from falling on the floor.
- We suggest not removing the throttle shaft, valves, or choke shaft unless they are corroded, or very dirty. These parts can be easily damaged and are difficult to re-assemble.
- Instruction sheets that come with our carburetor kits are somewhat generic. It may not match your parts exactly.
- Do NOT use WD-40 around your carburetor. It reacts with ethanol.
- Using Silicon Spray Lubricant on the gaskets will help with sticking in case you need to take the carburetor apart again.
- Be careful after taking the top of the carburetor off. Turning the carburetor upside down may cause parts to fall out and you won't know where they were.
- Screws and jets that are frozen can often be removed after heating outside the screw or jet.
- Stuck check balls can be removed by heating the outside of where the check ball resides and tapping the carburetor on the work bench.
- Do not discard any parts until complete done. You may have to refer for size, or matching.

Cleaning:

- Clean with carburetor dis-assembled.
- Soak all parts except rubber & electrical in Simple Green for 2 hours. Aluminum parts will get discolored if left longer.
- Wash parts with hot water if available to remove all chemicals.
- Blow out each passage way taking special notice of the smaller ones. Test each passage that air goes through the entire passage.
- Blow out the idle mixture hole.

- Check any hole above the idle mixture hole (inside the bore). This is the idle discharge and often becomes plugged.
- A tooth brush can facilitate cleaning parts.
- Soda blasting, then washing again will make the carburetor look good any will clean any minor deposits.
- Any corrosion, or deposits that are hard to remove may indicate the passages are also corroded and the carburetor should be replaced.
- If your engine has been sitting for 6 months or more, the gas has probably turned, and the gas tank will need to be cleaned as well as the fuel lines. Flushing new gas through the tank will not be enough.

Assembly:

- Do NOT apply any gasket sealant on any of the gaskets. Gas will break sealant part and the particles will clog the small passages.
- Test your float.
 - Brass floats should be immersed into hot water. As the air inside expands any leak will be noticeable with air bubbles.
 - Plastic, or Nitrophyl floats should be weighed. The weight is in grams. Check our technical pages for any weight specification that we may have.
- Most gaskets will fit as expected, but you may have to trim some, especially under the venturis.
- Your kit may include multiple gaskets in order to get better coverage out of the kit. Use the one that fits the best. Look for any opening the gasket may leave allowing air into the carburetor. Some holes may be casting holes that don't lead to anything and do not have to be covered.
- Mounting gaskets for multiple bore carburetors do not have to have matching holes. Example a four-barrel gasket can be open in the middle instead of 4 holes as long as the carburetor has some kind of passage between bores. The passage is between primary, or secondary, not both.
- When adjusting the float be careful not to put any pressure on the needle. The viton tip is easily damaged.
- Most idle mixture screws can be cleaned using a soft wire wheel. Inspect for any scoring, which would indicate over tightening. Screw with scoring should be replaced.

Accelerator Pumps:

- On leather cups run your finger around the inside of the cup to break any manufacturer sealant.
- Apply 2 drops of oil to cups (leather, or rubber) before inserting into carburetor. Do not soak the cup in oil. The swelling of the cup needs to happen inside the carburetor. Allow the 2 drops of oil and the gas to do its job naturally.
- Twist the pump as you are inserting to help keep the cup from curling or folding over.
- Test your accelerator pump circuit before putting the top of the carburetor back on. Our technical pages have instructions on how to do this for most carburetor types.
- Pump wells are usually slight tapered, and the pump will not seal until it gets towards the bottom.

Instructions for Adjusting *Zenith Carburetors*

With Priming Plug Type Idle System

PRELIMINARY ADJUSTMENTS. Before installing the carburetor make the following temporary adjustments:

✓ Hold the throttle in closed position and set the throttle stop screw at 1 1/2 full turns from the completely closed throttle position. (The throttle plate must be slightly open to permit the engine to run).

✓ Set the idle adjusting needle at one full turn open.

✓ Set the main jet adjusting needle at 1 1/2 to 2 full turns open. (Some models do not have a main jet adjustment).

INSTALL THE CARBURETOR, then start the engine and let it run a few minutes until it is warm enough for final adjustments as follows:

✓ Set the throttle stop screw for the desired idling speed.

✓ Set the idle adjusting needle for smooth idling. Turning the needle in (clockwise) reduces air and makes the mixture richer, while turning it out (counterclockwise) admits more air into the mixture and makes it leaner. (Avoid using a mixture that is too lean for fuel economy).

✓ To set the main jet adjustment on those carburetors regularly furnished with an adjustment, hold the throttle in position equivalent to a road speed of about 40 miles per hour. Turn the adjusting needle toward its seat until it causes the engine to give evidence of a lean mixture by running irregularly. Then turn the needle away from its seat carefully, counting the turns made, until the engine shows a trace of rich mixture. Set the adjustment, then, at just about half way between the lean point and the rich point. Hold the adjustment at this point and tighten the packing nut so there is no leakage of fuel around the adjusting needle.

NOTE: Check all fuel line connections so there is no leakage. Look at distributor points and make sure they are not pitted and that they are adjusted to proper gap. Inspect spark plugs to be sure they are clean and that their points are properly spaced.

Instructions for Adjusting *Zenith Carburetors* With Two-Hole Idle System

Zenith carburetors with two-hole idle systems are identified by the absence of the brass priming plug and the idle adjusting needle is located in the throttle body close to the throttle plate.

Only the idle adjustment instructions differ from Priming Plug Type Idle System, because in the two-hole idle system the idle adjusting needle controls a fuel emulsion instead of only air.

Turning the needle in (clockwise) cuts off fuel, making the mixture leaner, while turning it out (counterclockwise) permits more fuel to enter the air stream and makes the mixture richer.

Set the idle adjusting needle to obtain a smooth idle. Avoid using too lean a mixture, as good performance and fuel economy require a good idling mixture.

Refer to Priming Plug Type Idle System for main jet adjustment instructions, etc.

NOTE: For a carburetor equipped with automatic choke, the electrical connector must be to the ignition switch so that the current will flow only when the switch is turned on.