SECTION 4. WALBRO CARBURETORS

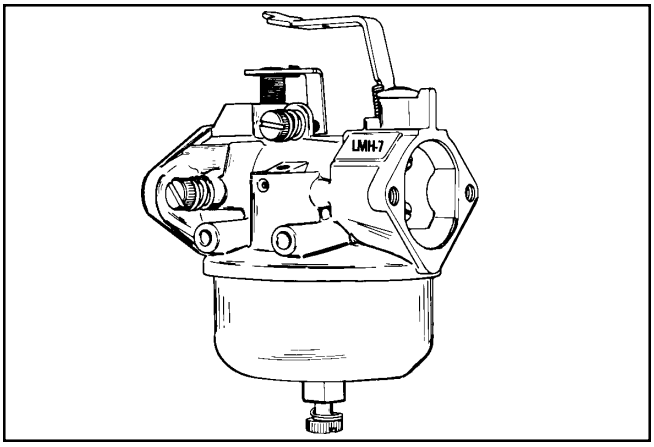
HH80 - 120, VH80 - 100

WALBRO CARBURETORS. Following are initial carburetor adjustments to be used to start the engine. After the engine has reached operating temperature, make final adjustments.

Main Adjustment Screw	HH80, 100, 120 VH80, 100, 1-1/2 turns off seat
Idle Adjustment Screw	HH80, 100 120 VH80 100 1-1/4 turns off seat

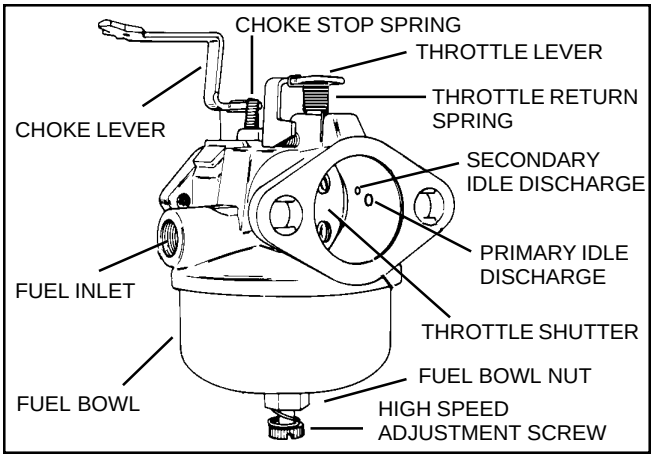
For proper carburetion the atmospheric vent MUST be open. Examine and clean if necessary.

A sluggish engine speed control may at times be caused by dirt or paint on the throttle return spring. Clean if required.

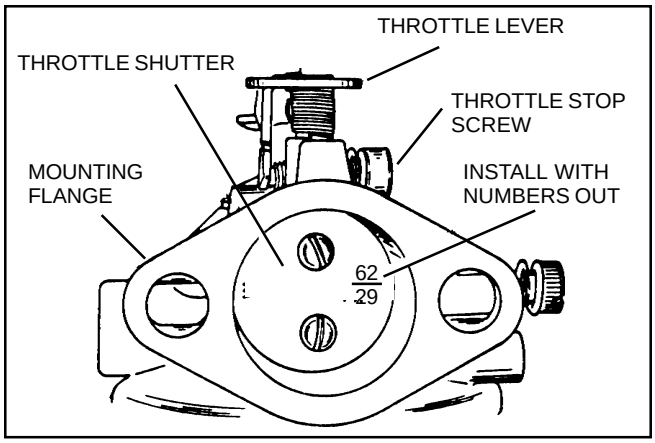


Choke lever positioning is maintained by the stop spring, replace if damaged.

The fuel inlet fitting should be checked if leakage is detected in the carburetor area. Do not screw in too tight, this may crack the carburetor body. The fuel bowl drain should also be examined in event fuel leakage is detected. It may be necessary at times to replace the internal rubber seat. Examine the throttle return spring if slow engine response is noted during operation. Correct by cleaning the throttle return or realigning the throttle plate.

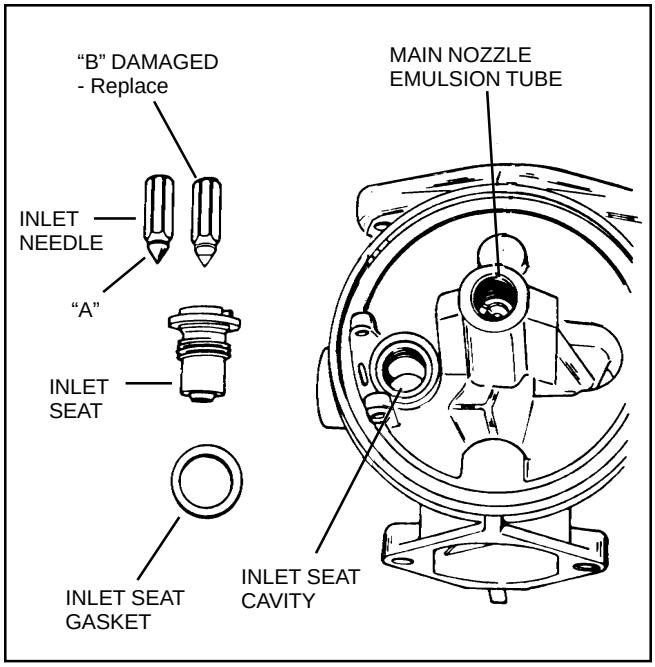


Install the throttle plate with the numbers (if present) facing out when closed. Move the throttle shaft to the closed position, place the throttle plate on the shaft and secure with the retaining screws. The throttle should move freely. If binding is present, correct by loosening screws and repositioning throttle plate.

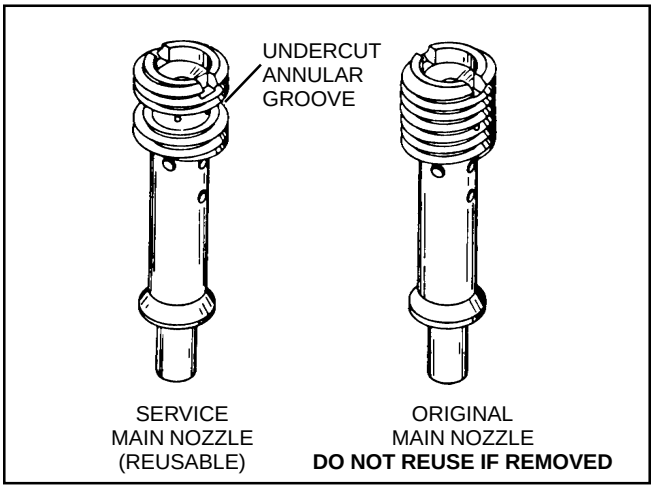


Examine the inlet needle. “A” is a needle that is serviceable, if the tip appears damaged as “B”, replace needle and seat assembly. Tighten the inlet seat to 40 to 50 inch pounds (4.5 - 5.7 Nm). Always use a new gasket. Clean all dirt from the inlet seat cavity.

Normally the main nozzle should not be removed. It is possible to clean the carburetor with solvent and compressed air. Remove and replace the main nozzle only if the high speed needle seat is damaged or because of excessive dirt.

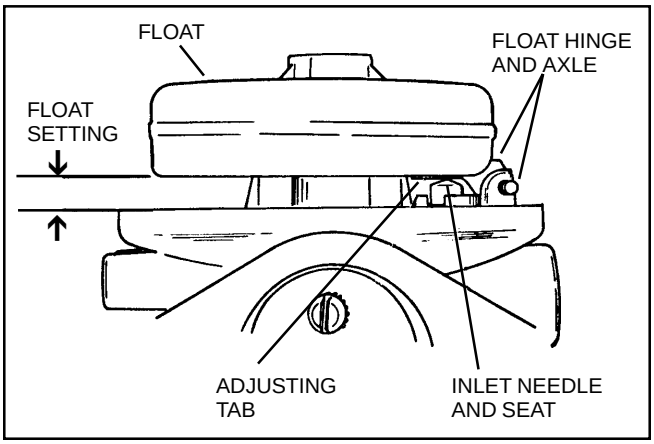


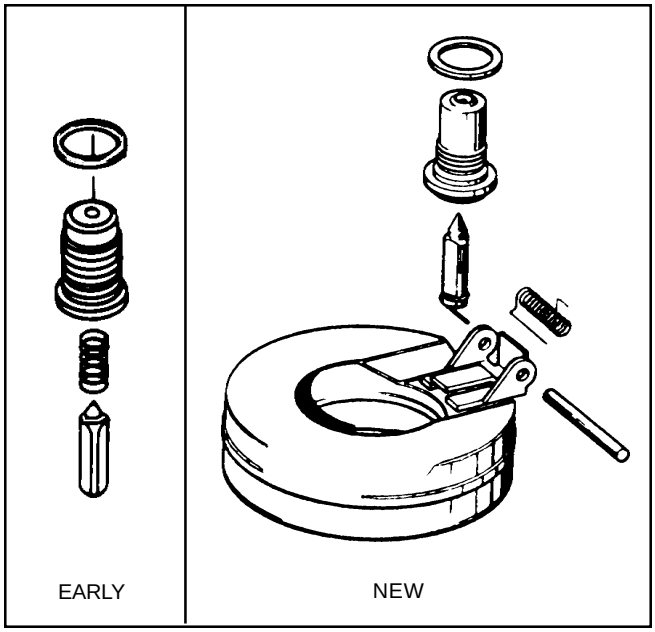
Do not remove the main nozzle. If it is necessary to remove the main nozzle to aid in cleaning, discard the main nozzle and use a service replacement nozzle with an under cut in the thread area. If the nozzle removed is under cut it can be reused. This procedure must be followed to assure delivery of fuel to the idle system.



Float settings are measured opposite the float hinge. Remove float by pulling out float axle. Bend adjusting tab to correct setting. Always remove the float to make adjustments.

Examine the float hinge and axle for wear. If evident replace the parts.





This shows early and new needle valve, seat, gasket, and spring assembly for large horsepower engine carburetors.

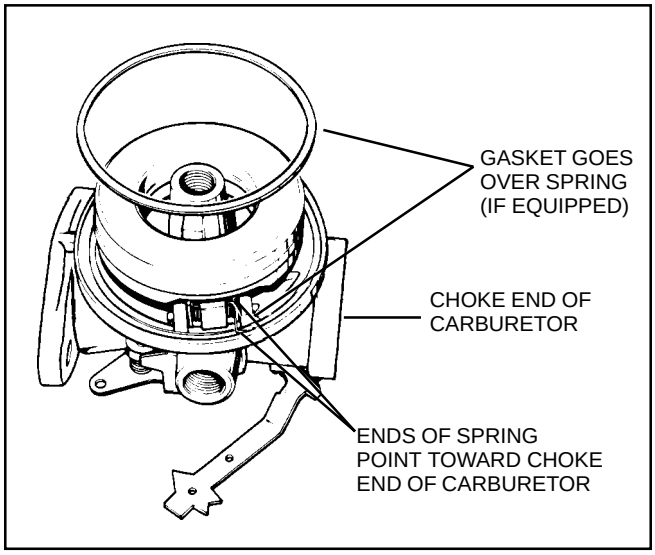
Early carburetors have a metal-to-metal needle and seat contact. The float setting for this model will be .110'' - .130'' (2.794 - 3.362 mm).

New carburetors contain a viton seal in the seat and a spring on the needle. For engines with the new carburetor and having a fuel pump, the float setting is .140 (3.556 mm).

For engines with the new carburetor, without a fuel pump, the float setting is .075 (1.905 mm).

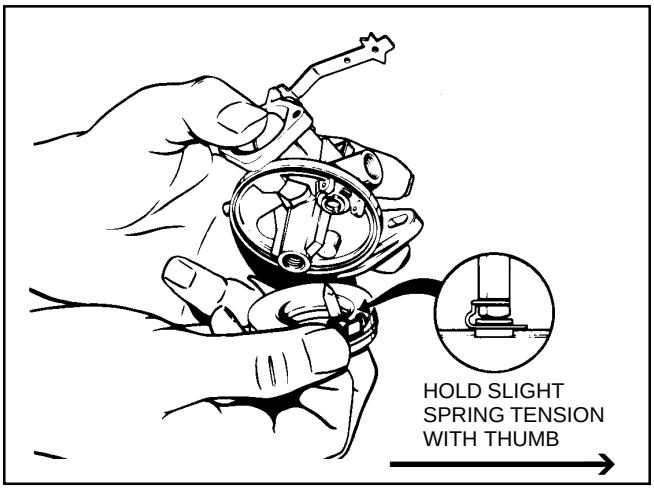
The float setting on carburetors used on vertical 8 and 10 H.P. engines is .070'' to .110'' (1.778 - 2.794 mm). No variance for carburetor having a fuel pump.

The gasket must fit over the float spring as shown to avoid cutting by the spring when assembled.



When assembling the float to the carburetor body, position the needle spring on the adjusting tag so that it hangs down. Hold the float spring under tension until the carburetor body will support the slight spring tension.

NOTE: THE SPRING ENDS MUST POINT TOWARD THE CARBURETOR CHOKE END.



Position the choke shaft and shutter in the closed position prior to tightening the screws. Hard starting may be due to insufficient choking action because of a misaligned choke plate. Correct by readjusting choke plate to close completely.

A typical choke shutter found on horizontal engines is shown in the figure below. The full choke position of choke lever is counterclockwise when viewed from top of the carburetor. Note cut-out position of choke shutter.

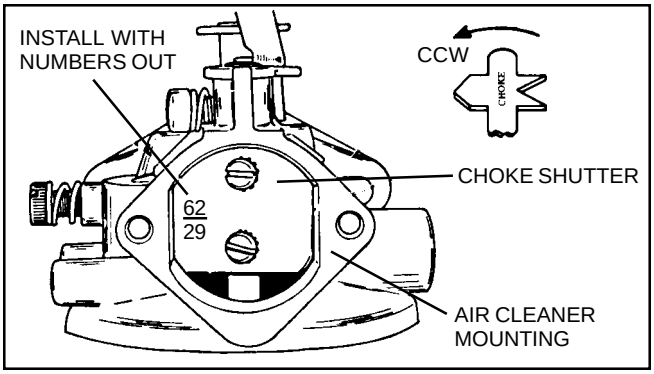
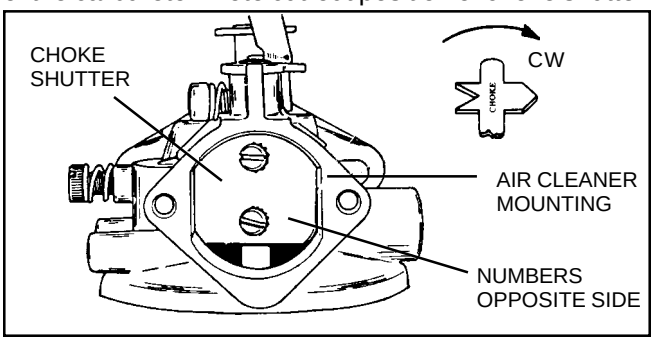
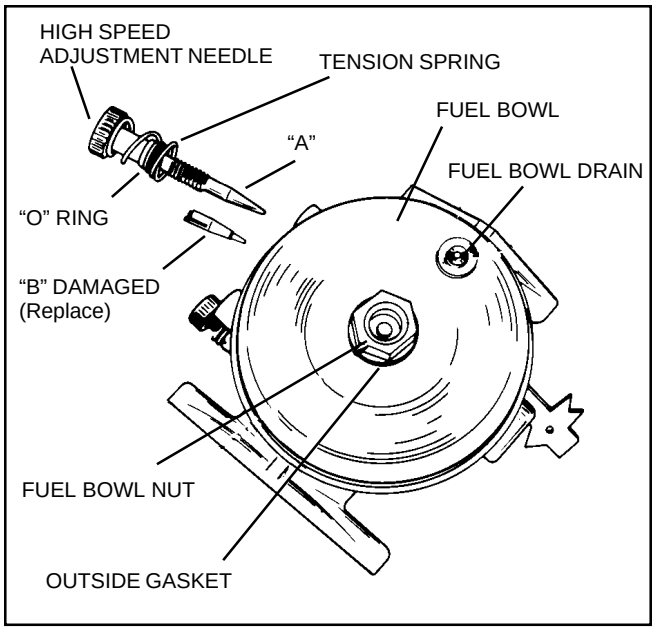


Figure below shows a typical choke shutter found on vertical engines. The full choke position of the choke lever is clockwise when viewing from the top of the carburetor. Note cut-out position of choke shutter.



Prior to removing the fuel bowl nut, remove the high speed adjustment needle. Use a 7/16'' box end wrench or socket to remove the fuel bowl nut. When replacing the fuel bowl nut be sure to position the fiber gasket under the nut and tighten securely.

Examine the tip of the high speed needle, if it appears as illustrated, replace. If the tip of the high speed adjustment needle is damaged, the seat is probably damaged. The seat is part of the main nozzle. When replacing the high speed needle the main nozzle should also be replaced.



Use new gaskets when rebuilding the carburetor. If the fuel bowl to carburetor body gasket does not seat, enlarge by stretching with 4 or 5 quick short strokes. Fiber gasket must be used between center of fuel bowl and carburetor body.

The fuel pick up passage must be clean to assure adequate fuel flow from the fuel bowl to the metering systems.