HARLEY-DAVIDSON MOTOR CYCLES Service

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SPORTSTER CARBURETOR FLOAT VALVE

Model DC-1 carburetor for standard XL Motorcycle
Model DC-1M carburetor for military XLA Motorcycle

This service bulletin contains information needed for proper assembly and adjustment of DC model carburetor float valve. Ordinarily, faulty carburetion is due to improper fuel mixture adjustment, therefore, before taking the carburetor apart to check or adjust the float valve, high and low speed needle settings should be checked and adjusted as directed in the Maintenance section of the Sportster Rider's Handbook. Also, before any carburetor internal adjustments are made, be sure to eliminate other possible causes for poor engine performance such as bad spark plugs, improper spark timing, misadjusted tappets, or dirty air cleaner, which in some cases have similar symptoms, so that the trouble is definitely isolated to the carburetor.

CHECKING AND SETTING FLOAT ROD

Remove four bowl attaching screws and washers. Tap bowl lightly to break free from gasket to remove from carburetor. Unscrew flat speed nut from float rod and remove float. Check to see that lower fingers on extreme end of nylon float lever register in groove of valve stem as shown in Figure 1.

Note:
If for any reason fingers are not properly engaged in valve stem groove, assemble properly as outlined under paragraph headed, "ASSEMBLING FLOAT VALVE AND SEAT" on page 2 of this bulletin.

Check float lever setting with carburetor bowl held upside down, measuring the distance from top of float rod to outer edge of bowl flange opposite fuel inlet fitting as shown in Figure 2. This measurement should be taken when lever is at the point where float valve seats lightly (move float lever up and down to determine this seating point). Note that measurement is taken from outer edge of bowl opposite the fuel inlet fitting. Float rod position from edge should be 1 inch plus or minus 1/64 inch.

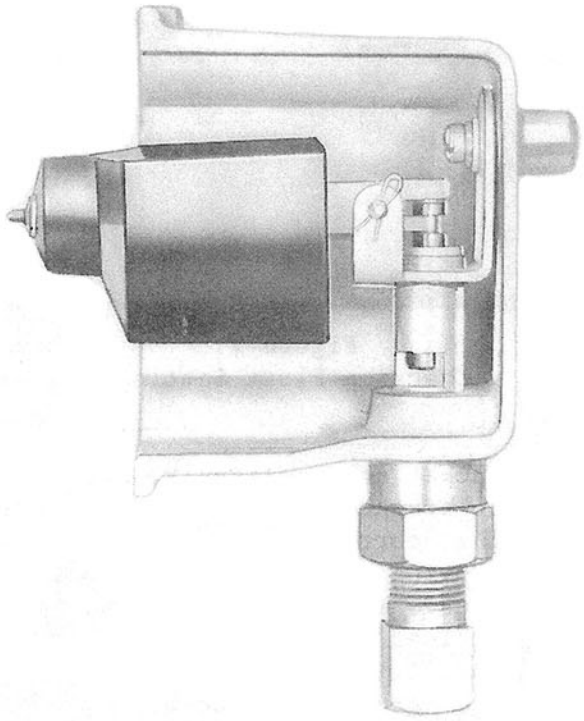

Figure 1.
Cutaway View - Float Valve Assembled

If setting is not 1 inch with float valve closed, proceed to adjust float lever bracket as follows. Float bracket is fastened to inside rear wall of bowl with one 6-32 screw with lockwasher and plain washer. Bracket is slotted to permit adjustment of bracket up or down with a corresponding change in height of float rod.

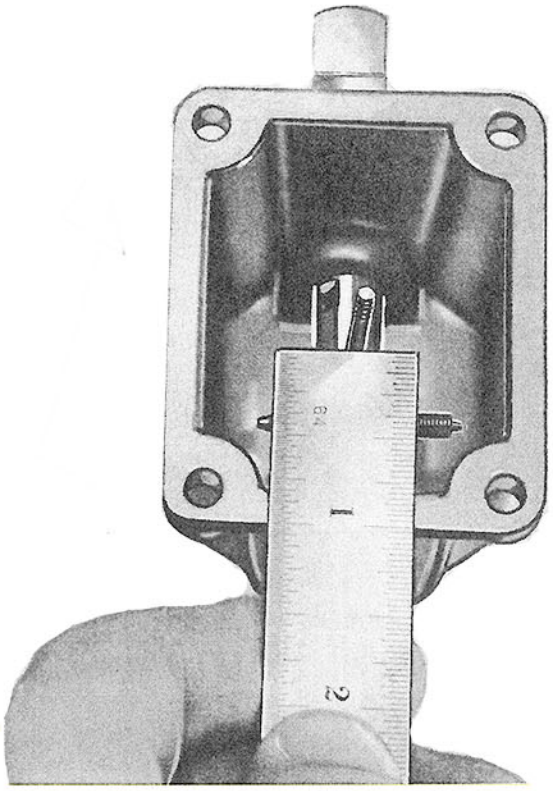

Figure 2.
Checking Float Setting

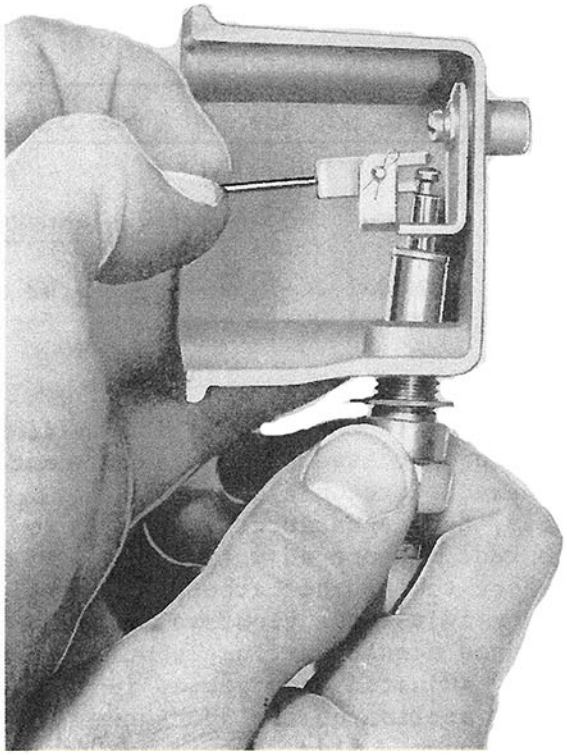

Figure 3.
Engaging Float Lever in Valve Stem Groove

Loosen bracket screw slightly, but do not remove, so bracket can be moved up or down as needed to correct lever rod setting to 1 inch. Moving bracket toward float valve seat increases measurement, moving bracket away from float valve seat decreases measurement. Total range of rod adjustment is from 3/4 inch to 1¼ inches.

When desired position of float rod is obtained, retighten bracket screw securely and recheck setting of float rod. Install float on rod, flat side up, fastening with speed nut. Reassemble bowl to carburetor body using new bowl gasket.

ASSEMBLING FLOAT VALVE AND SEAT

Carburetor bowl must be removed from carburetor body. Using a 5/8 inch wrench, unscrew and remove brass valve seat fitting from bottom of bowl which contains float valve.

If float lever assembly has been removed from bowl for any reason, it should be installed at this time. Leave float lever bracket screw loose, so that bracket can be shifted if necessary.

With valve stem protruding from valve seat fitting about half way, insert into bowl. Position float rod at same time so as to permit easy engagement of nylon lever fingers in float valve stem groove, as shown in Figure 3.

After making sure that float lever fingers are properly engaged in valve stem groove, finish turning fitting into bowl and tighten against gasket securely. Tighten float lever bracket securely.

Under no conditions, screw valve seat fitting with valve into bowl without first removing bowl from carburetor body and proceeding according to previous instructions, because fingers of nylon lever will be damaged if not properly engaged.

Note:
After float valve and seat have been assembled, it will be necessary to recheck setting as outlined in paragraph headed, "CHECKING AND SETTING FLOAT ROD".

HARLEY-DAVIDSON MOTOR CO.
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