

SERVICE BULLETIN



M-1029

December 18, 1992

SAFETY RECALL 081 1990 AND 1991 BIG TWIN (1340 CC) MODELS CARBURETOR FUEL INLET VALVE INSPECTION/REPAIR

General

Harley-Davidson has become aware the possibility exists that the fuel overflow system on some 1990 and 1991 1340cc motorcycles may, at times, release fuel onto the ground beyond the intended design of the system. This fuel release may be caused by the following:

- (1) The seat (inner hole) in some carburetor inlet valve seats may not be concentric with the inside diameter of the inlet valve seat.
- (2) The angle of the chamfer in the hole does not match the angle (taper) of the inlet valve.
- (3) The float assembly chambers could have leaks.
- (4) The inlet valve tip could be damaged.

As a precautionary measure, Harley-Davidson recently elected to initiate a voluntary recall in the interest of motor vehicle safety. The potential problem will be remedied by removing and inspecting all affected carburetors. The inlet valve will be replaced on the majority of carburetors. The small number of carburetors with seat problems will require the complete assembly be replaced.

We have attached a list that contains both registered owners of vehicles and unregistered vehicles delivered to your dealership which are involved in this campaign. To ensure the safety of all affected riders, it is your responsibility to perform the required service on all potentially affected vehicles even if the motorcycle was not purchased from your dealership. We are enclosing sufficient blank Dealer Service Cards for these vehicles.

Additional cards are available through the Harley-Davidson Service Department.

If you are not sure that a safety recall has been completed on a particular motorcycle, contact the Harley-Davidson Recall Information Line at 1-800-448-1708 for a computer check of our recall records.

IMPORTANT NOTE

Because only registered owners, as shown on the attached list, will receive notification from us, we request that you contact any owners of vehicles still listed as unregistered. Advise them of the safety recall and make arrangements for them to come in for recall service. We also require that you provide us with their names and addresses and VIN's as soon as possible to enable us to mail them an owner's letter as required by the National Traffic and Motor Vehicle Safety Act as amended.

Partial shipment of your required carburetor inlet valve kits, Part No. 93683, should begin on January 7, 1992. The kit will contain a carburetor inlet valve, Part No. 27886-78A, and a hose clamp, Part No. 10014. If you need additional kits, fill out and return the attached order form. All kits ordered on this form will also be shipped no charge, transportation paid.

See Figure 1 and Table 1 to identify replacement carburetors. Only replace carburetors that have improperly machined inlet valve seats.

| ROUTING | SERVICE MANAGER | SALES MANAGER | PARTS MANAGER | LEAD TECHNICIAN | TECHNICIAN NO. 1 | TECHNICIAN NO. 2 | TECHNICIAN NO. 3 | TECHNICIAN NO. 4 | RETURN THIS TO |
|--------------|--------------------|------------------|------------------|--------------------|---------------------|---------------------|---------------------|---------------------|-------------------|
| INITIAL HERE | | | | | | | | | |

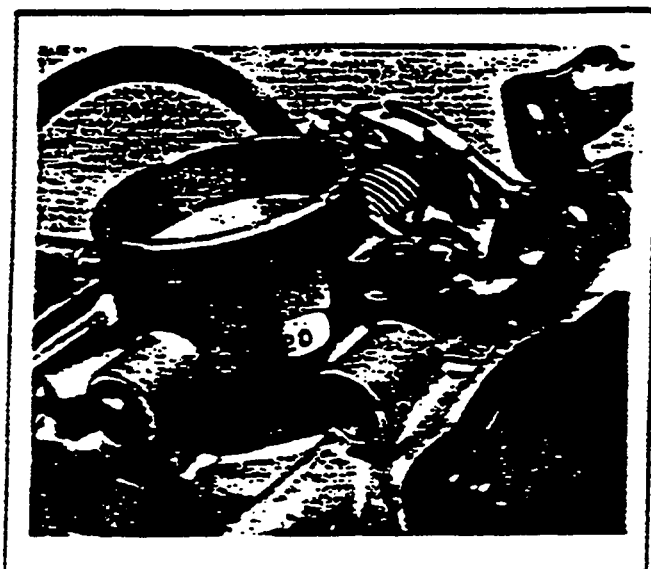


Figure 1. Location Of Carburetor Part No.

Procedure

WARNING

Gasoline is extremely flammable and high explosive under certain conditions. Do not smoke, allow open flame or sparks anywhere in the area when servicing the fuel system. Make sure the area is well ventilated.

NOTE

Check that carburetor is an original equipment carburetor. If vehicle is equipped with other than a stock carburetor, refer to the "CREDIT PROCEDURE" for further directions.

REMOVING CARBURETOR

1. Turn fuel supply valve off.
2. Remove air cleaner cover, air cleaner, and backplate.
3. Cut hose clamp off fuel line at carburetor, remove fuel line, and drain gasoline from hose into a suitable container.
4. Completely loosen both throttle cables.
5. Loosen enrichener cable nut on left side of motorcycle and remove enrichener cable from bracket.

NOTE

Do not pull enrichener cable through frame and to right side. Cable should be removed from carburetor following instructions in step 7.

6. Gently pull carburetor from manifold and remove throttle cables from carburetor.
7. Remove VOES vacuum line and enrichener cable at carburetor.
8. Loosen float bowl drain screw and drain gasoline into a suitable container.

Table 1. Carburetor Part No.

| MODEL YEAR | MODEL | REPLACEMENT CARBURETOR PART NO. |
|-------------|----------------------------|---------------------------------|
| 1990 & 1991 | FLT's, 49-state | 27039-90A |
| 1990 & 1991 | FLT's, California | 27026-90A |
| 1990 & 1991 | FLT's, HDI/Swiss | 27029-90A |
| 1990 & 1991 | All other 1340, 49-state | 27038-90A |
| 1990 & 1991 | All other 1340, California | 27035-90A |
| 1990 & 1991 | All other 1340, HDI/Swiss | 27025-90A |

DISASSEMBLING AND INSPECTING CARBURETOR

1. See Figure 2.
2. Use a needle nose VISE-GRIP® to loosen the four screws and washers (1) that secure the float bowl (2) to the carburetor body (3).
3. Remove the four screws loosened in Step 2, and remove float bowl.
4. Check float level. If inlet valve has 3-sides, see Figure 3. If inlet valve has 4-sides, see Figure 5.
5. See Figure 2. Remove float pin (4), float (5), and inlet valve (6).
6. See Figure 4. Visually inspect the inlet valve seat to verify that the small hole in the seat is concentric (centered) with the large hole. Also visually verify that the chamfer on the small hole matches the taper of the inlet valve (needle).

NOTE

If the inlet valve seat is not machined properly, the carburetor must be replaced. Refer to Table 1 and the Credit Procedure in this Bulletin for instructions on obtaining a replacement carburetor. Install replacement carburetor following instructions given in the applicable Service Manual. If the inlet valve seat passed the inspection given in step 6 continue at step 7.

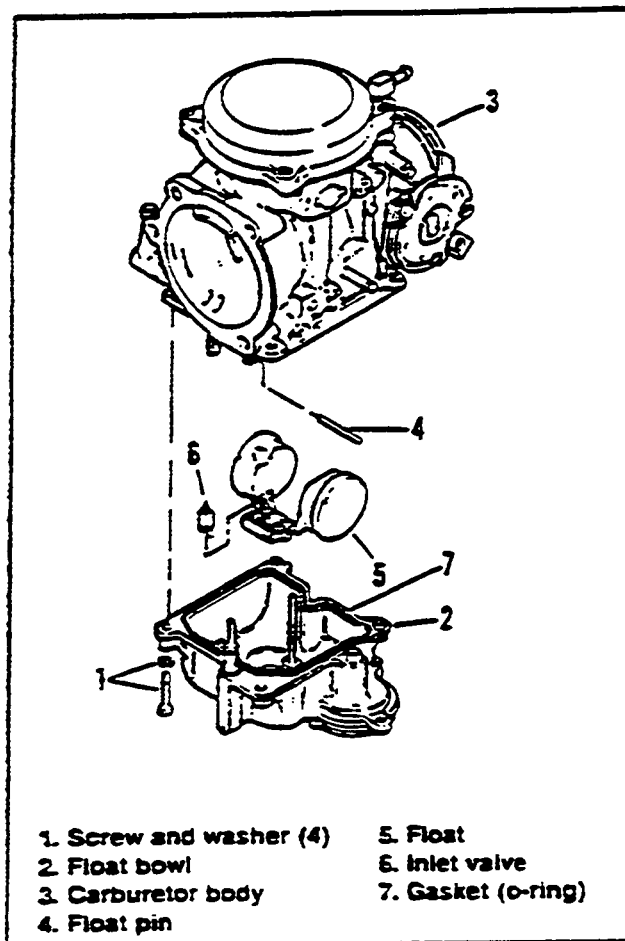


Figure 2. Carburetor Disassembly

7. Inspect the float for cracks or leakage. If cracks or gasoline leakage into the float chambers is found the float must be replaced. See Credit Procedure in this Bulletin for instructions on obtaining a replacement float.
8. Inspect the inlet valve. If inlet valve has 3-sides, discard it. All 3-sided inlet valves will be replaced with a current production 4-sided valve. If the carburetor is already equipped with a 4-sided valve inspect the tapered point of the valve for grooves or damage on the sealing surface. If sealing surface is damaged replace the valve with a new one. If sealing surface is undamaged the valve may be reinstalled in the carburetor.

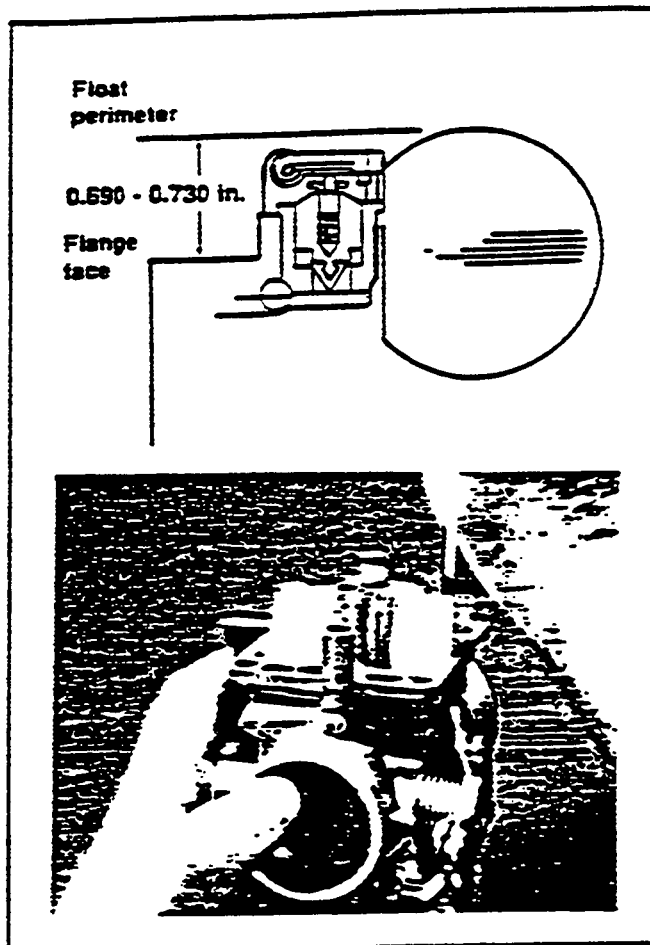


Figure 3. Float Level With 3-Sided Inlet Valve

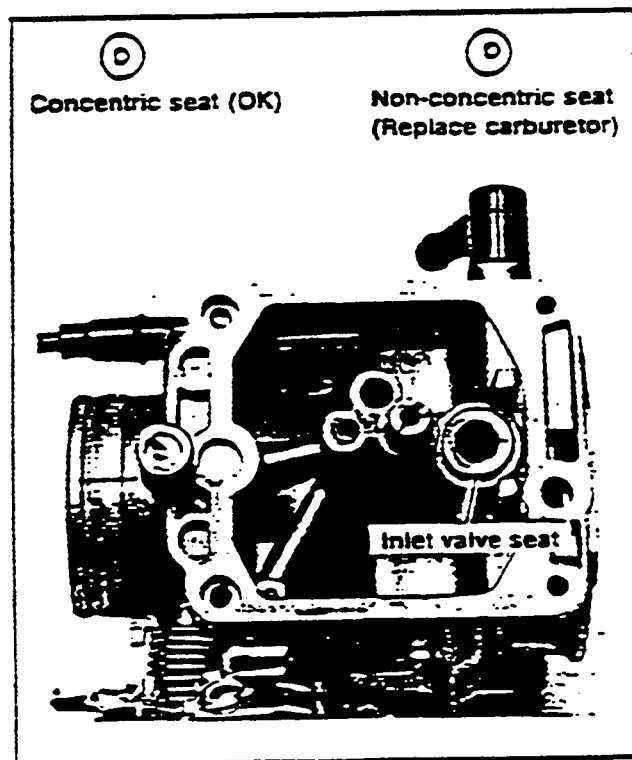


Figure 4. Bottom View Of Carburetor

9. See Figure 2. Check float bowl o-ring (7). If o-ring is damaged it must be replaced.

INSTALLING AND ADJUSTING 4-SIDED INLET VALVE

1. See Figure 2. Place clip on inlet valve on float tab. Install inlet valve in valve seat and install float pin (4).

CAUTION

After installation of 4-sided fuel inlet valve, it is important that the float be adjusted using the following procedure. Incorrect float adjustment could cause a very lean or rich carburetor condition.

2. See Figure 5. Place carburetor on a flat, clean surface on engine manifold side. This is the "base". Tilt carburetor counterclockwise 15 to 20° from base until float comes to rest.

NOTE

If carburetor is tilted less than 15° or more than 20°, your measurements will be incorrect.

3. Use a vernier or dial caliper depth gauge to measure from the carburetor flange face to the perimeter of the float. Be careful not to push on float while measuring.

4. Check measurement.

On 1990 and 1991 CV carburetors, the measurement should be 0.690 - 0.730 in.

5. If measurement is not within given dimension, carefully bend tab on float to position float at proper level.

6. Install float bowl, enricher cable, and VOES vacuum line on carburetor. Tighten the four float bowl screws (1, Figure 2) to 18 ± 3 in-lbs. Tighten float bowl drain screw.

7. Install carburetor on intake manifold, connect throttle cables and fuel line to carburetor.

8. Check adjustment of enricher cable in accordance with applicable Service Manual.

CAUTION

Do not over-tighten plastic nut on enricher control as threads will be damaged.

9. Install air cleaner back plate, place enricher cable in bracket and tighten cable nut.
10. Adjust throttle cables in accordance with applicable service Manual.

11. Start engine and check for proper throttle cable and enricher cable operation.

Credit Procedure

INSPECTION

If the motorcycle is not equipped with a Harley-Davidson carburetor, put an "T" in the letter box and a "0" in the Quantity box. Send the Dealer Service Card directly to the Service Department. You will be paid 0.2 hr.

INSPECTION/REPLACEMENT OF INLET VALVE ONLY

If the carburetor passed the visual inspections and is already equipped with a 4-sided inlet valve that is undamaged and does not require replacement, completely fill out the special Dealer Service Card. For each vehicle inspected, place a "C" in the Letter box and a "1" in the Quantity box. Fill in your dealer account number, the Service Code "081", the Vehicle Identification Number, and your dealership name and address along with the owner information, if blank. Send the Dealer Service Card directly to the Service Department.

For each vehicle which required installation of a 4-sided inlet valve, completely fill out the Dealer Service Card as indicated above. Place a "C" in the Letter box and a "1" in the Quantity box. Discard all 3-sided inlet valves. Send the Dealer Service Card directly to the Service Department.

If a new float and /or o-ring is required for either of the situations described above, and you do not have them in stock, order replacements through the Parts and Accessories Department. Fill out a Warranty Claim Form for the float and/or o-ring and attach the properly completed Dealer Service Card to the claim.

Upon receipt of each properly completed Dealer Service Card and Warranty Claim Form, if float and/or o-ring were replaced, you will be credited for 0.7 hours labor. Credit for the inlet valves will not be issued as they were sent no charge. If float and/or o-ring replacement was required, you will be paid dealer net plus 25 % from your Warranty Claim Form. All time allowances include 0.1 hour for dealer administrative time.

CARBURETOR REPLACEMENT

If during inspection, a carburetor is found with the inlet valve seat mismachined and the inlet valve seat is not capable of providing a reliable seal, the carburetor must be replaced. The appropriate replacement carburetor, listed in Table 1, must be ordered through the Parts and Accessories Department if you do not have the correct carburetor in stock.

For each vehicle which required installation of a new carburetor, completely fill out the Dealer Service Card as stated in this Bulletin. Place a "C" in the Letter box and a "1" in the Quantity box. In addition, fill out a Warranty Claim Form for the carburetor. Attach the Dealer Service Card to the Warranty Claim Form. Package the original carburetor along with the Dealer Service Card and the Warranty Claim Form. Attach a return address P-Label, Form Number 1248, to the outside of the package.

Upon receipt of each properly completed Dealer Service Card and Warranty Claim Form, if float and/or o-ring were replaced, you will be credited for 0.7 hour labor. Credit for the carburetor will be issued from the Warranty Claim Form for dealer net plus 25%, and all shipping costs incurred.

Dealer Inventory

If you have any of the following carburetors in your stock, return them to Harley-Davidson. Fill out a Warranty Claim Form for all of the carburetors. Indicate "Code 081-Part From Stock" on the claim form. Package the carburetor(s) along with the Warranty Claim Form. Attach a return address P-Label, Form Number 1248, to the outside of the package. Upon receipt of the properly completed Warranty Claim Form and carburetors, you will be credited for dealer net plus 25%, and all shipping costs incurred.

CARBURETOR PART NO.

| | |
|-----------|-----------|
| 27025-90 | 27035-90 |
| 27025-90A | 27035-90A |
| 27026-90 | 27038-90 |
| 27026-90A | 27038-90A |
| 27029-90 | 27039-90 |
| 27029-90A | 27039-90A |

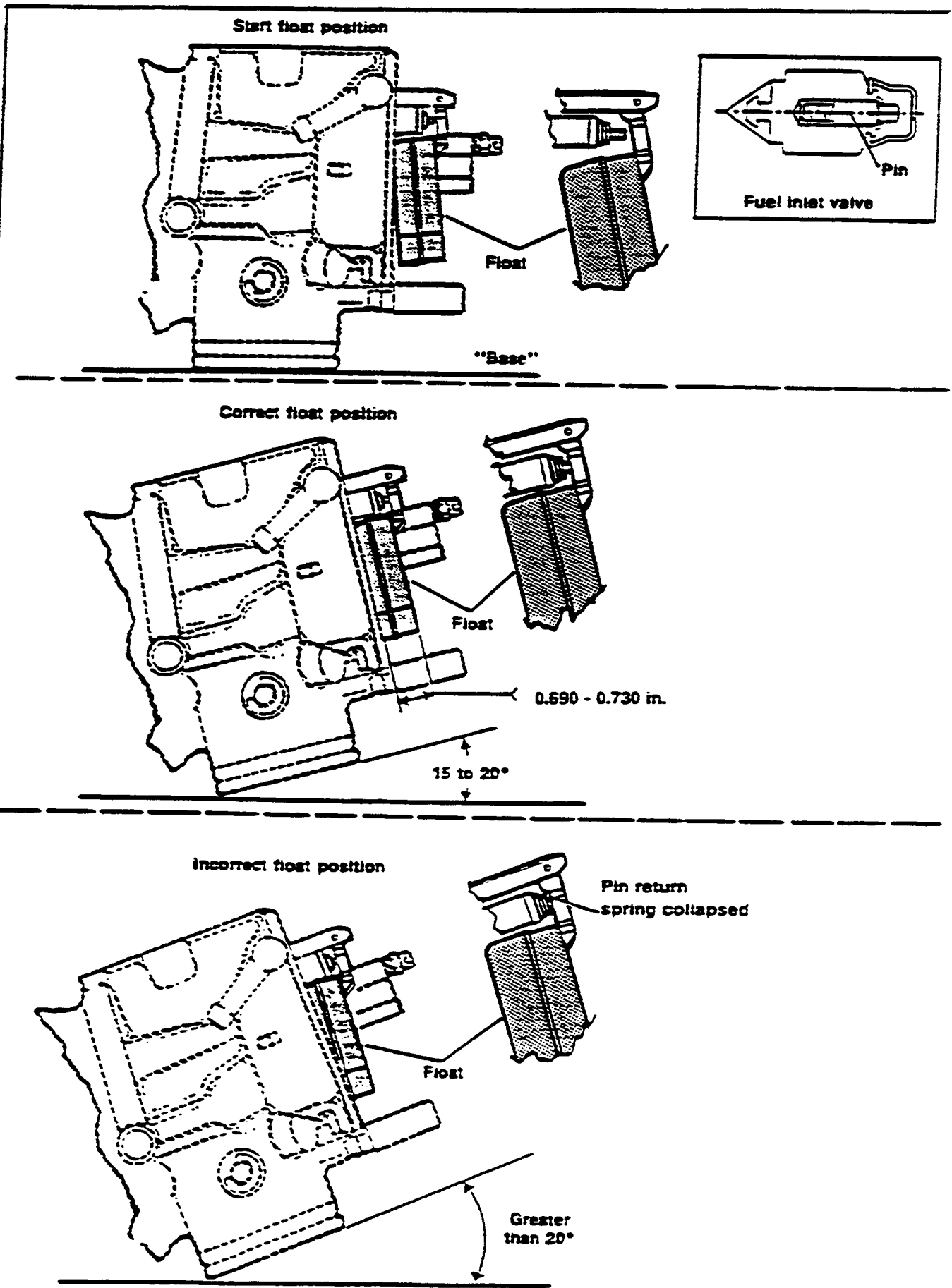


Figure 5. Adjusting Float Level With 4-Sided Inlet Valve