

# 1975-79 FUEL SYSTEMS

## Holley 2300G 2-Barrel Carburetor

### 1977 International Harvester

## CARBURETOR IDENTIFICATION

### INTERNATIONAL HARVESTER

Application	Holley Carb. No.
304" H.D.	
All Models	R-6623A, R-6623-1A R-6801A, R-6801-A
345" H.D.	
California	R-7656A

## DESCRIPTION

Holley 2300G is a 2-barrel downdraft type carburetor. Carburetor number is located on vertical front surface of air horn. Both barrels draw fuel through a common inlet. Each barrel is equipped with its own venturi, idle system, main metering system, booster venturi and throttle plate. The metering body or block contains all the fuel metering passages for the fuel metering systems. Accelerator pump is of the diaphragm type and is located on the bottom of the fuel bowl. Some models are equipped with either a dashpot, or deceleration throttle modulator or a combination of systems, depending on application. All 2300G carburetors are equipped with governors.

## ADJUSTMENTS

### HOT (SLOW) IDLE RPM

See appropriate article in TUNE-UP PROCEDURES section.

### COLD (FAST) IDLE RPM

See appropriate article in TUNE-UP PROCEDURES section.

### IDLE MIXTURE

See appropriate article in TUNE-UP PROCEDURES section.

## THROTTLE PLATE CLEARANCE

**NOTE:** This procedure is used when assembling carburetor after throttle body has been taken apart. If throttle body has not been disassembled, the same clearances apply to check throttle plate clearance from throttle plate to bore wall.

**Bench Adjustment** - 1) Ensure carburetor is completely assembled. Open throttle and close choke plate. Turn carburetor upside-down. Place pin gauge or drill bit between throttle plate and throttle body bore. See THROTTLE PLATE CLEARANCE SPECIFICATIONS table. See Fig. 1.

2) Adjust fast idle screw until it touches fast idle cam. After unit is installed on engine, check fast idle with tachometer.

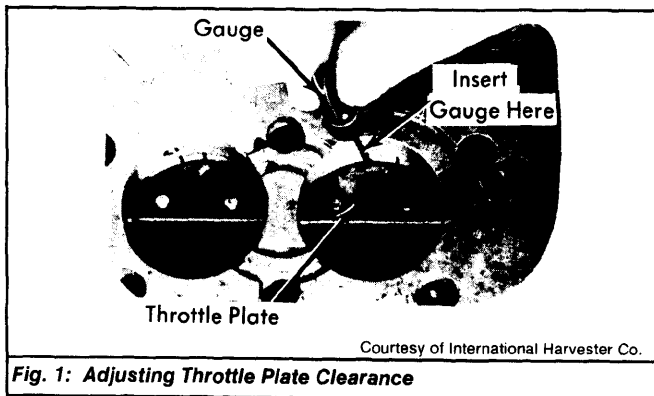


Fig. 1: Adjusting Throttle Plate Clearance

## THROTTLE PLATE CLEARANCE SPECIFICATIONS

Application	Federal	California
304" V8	.030"	
345" V8	.030"	.034"

## THROTTLE MODULATOR

1) Apply sufficient vacuum to modulator to extend modulator stem into operating position. With tachometer installed on engine, check RPM at which modulator holds throttle in position. Engine speed should be 1300-1400 RPM for Federal models or 1400-1500 RPM for California models.

2) If RPM is not within specifications, adjustment is needed. Loosen modulator lock nut and screw modulator in or out until correct speed is obtained.

## FLOAT LEVEL

**NOTE:** Float level can be set approximately with carburetor disassembled. Final fuel level adjustment must be made with unit on engine and engine running.

**Bench Adjustment** - 1) Float bowl must be completely assembled. Loosen lock screw on top of float bowl. Adjusting nut should be able to turn freely (do not remove lock screw).

2) Turn float bowl upside-down. Slowly turn adjusting nut until float arm (lever) is level with float bowl surface. See Fig. 2. Tighten lock screw when correct position has been reached.

**On Vehicle** - 1) Ensure fuel pump pressure is correct. Turn ignition OFF. Remove air cleaner. Remove lower fuel bowl mounting screw (one farthest from fuel inlet) and allow fuel to drain from fuel bowl into a container.

2) Reinstall bowl screw. Start engine. Unscrew sight plug from side of fuel bowl. Do not lose gasket. Fuel level should be level with bottom of sight plug threaded opening. Fuel should not spill from fuel bowl. If fuel spillage occurs, float level is too high. If fuel level is below edge of sight plug hole, fuel level is too low.

3) Loosen lock screw slightly with screwdriver. Turn adjusting nut with 5/8" wrench clockwise to lower fuel level or counterclockwise to raise fuel level. When correct level has been obtained, tighten lock screw. Operate engine until fuel level has stabilized, then recheck level at sight plug hole. After adjustment is completed, reinstall sight plug and gasket. Check for leaks.

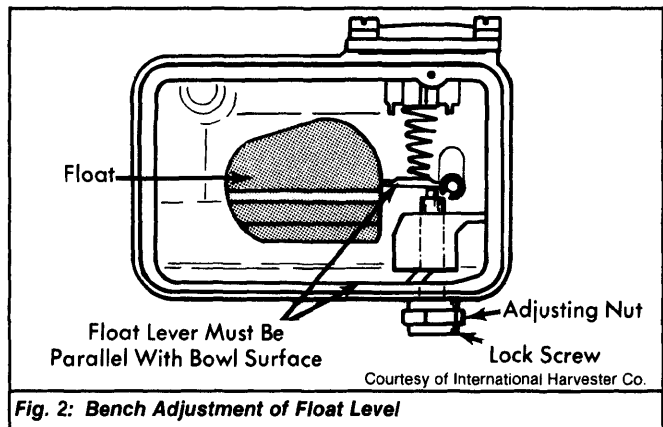


Fig. 2: Bench Adjustment of Float Level

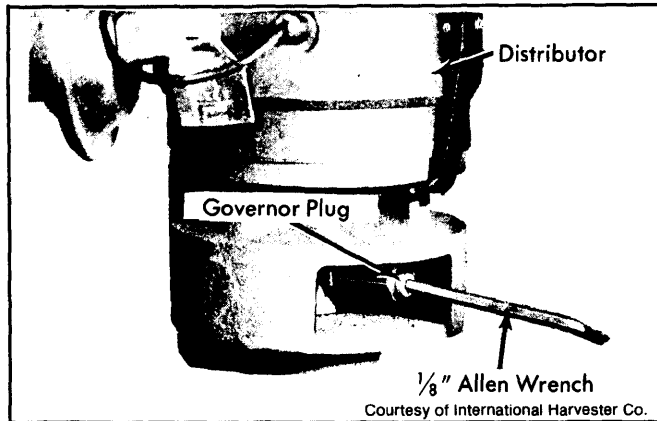
## GOVERNOR ADJUSTMENT

**NOTE:** Governor spinner should be adjusted so that engine speed will cut-off within the engine no-load cut-off range as specified.

1) Turn ignition OFF. Remove governor clamp and gasket assembly from distributor. With ignition, turn engine over until adjusting screw hole plug appears in opening. See Fig. 3.

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**Fig. 3: Removing Governor Adjusting Screw Plug**

2) Remove Allen plug with 1/8" Allen wrench. Insert slotted end of Governor Adjuster (SE-2072-2) firmly in hole and engage adjusting tang. See Fig. 4. Turn clockwise to decrease speed and counterclockwise to increase speed. 1/4 turn will change speed about 100 RPM.

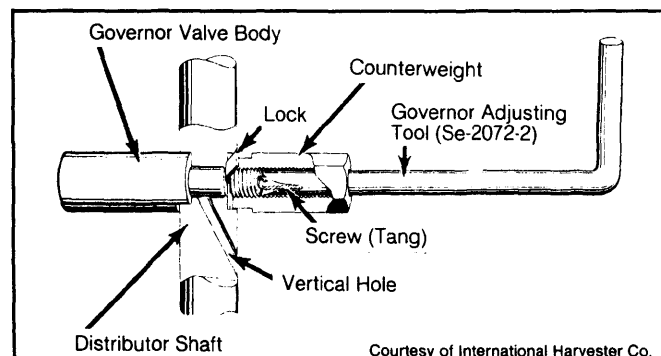
**NOTE: Adjuster is of special design and must be used. Governor spinner cannot be adjusted with a screwdriver.**

3) Reinstall plug with 1/8" Allen wrench before checking governor speed. If speed is correct, replace governor clamp and gasket assembly on distributor.

4) Reinstall governor seal. Ensure governor spinner valve air cleaner (if equipped) is cleaned at regular intervals.

### GOVERNOR SPECIFICATIONS

Application	Specification
Governor Spring Color .....	Green
Governor Spring Post Position .....	No. 2
Governed Speed (RPM)	
Full Speed/No Load .....	4000
Full Speed/Full Load .....	3800



**Fig. 4: Governor Adjustment on 2300G Holley Carburetor**

### ACCELERATOR PUMP

1) Hold choke wide open. Place throttle at curb idle position. Back off pump adjusting bolt until it is clear of pump diaphragm lever.

2) Now turn adjusting bolt in opposite direction until it just contacts pump diaphragm lever. Ensure slack is removed from linkage. Turn bolt in lengthening direction 1/2 additional turn.

### OVERHAUL

#### CARBURETOR

**Disassembly** - 1) Remove 4 fuel bowl screws. Separate fuel bowl and metering body from main body. See Fig. 6. Separate fuel bowl from metering body and discard gaskets.

2) Turn carburetor upside-down and remove 5 throttle body to main body screws. Remove governor cover plate and governor-to-throttle body mounting screws. Separate assemblies and discard gaskets.

3) Remove the float and hinge retainer from fuel bowl. Slide float, hinge assembly and float spring from fuel bowl. Remove fuel inlet baffle.

4) Remove fuel inlet seat adjusting lock screw. Unscrew inlet needle and seat assembly and remove. Do not disassemble needle and seat assembly further.

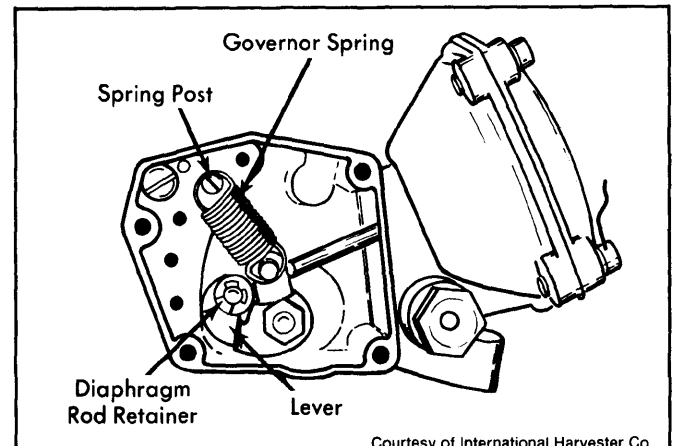
5) Remove 4 accelerator pump cover screws. Lift off diaphragm cover, diaphragm and spring. If equipped with accelerator pump synthetic valve, grasp it firmly and pull it out. If tip breaks off, remember to remove it from fuel bowl.

6) Remove fuel inlet fitting and discard gasket. Take out filter screen assembly. Remove fuel level sight plug and gasket. Remove bowl vent baffle from metering body. Remove main jets from metering body with Jet Remover/Installer (SE-1772-6). Use Power Valve Socket (SE-1772-1) to remove power valve assembly. Discard gasket.

7) Scribe a line on choke plate beside choke shaft to mark positioning for reassembly. Carefully file off staking from choke plate retaining screws. Remove 2 choke plate screws, slide choke plate out of choke shaft.

8) Slide choke shaft from main body. Note choke lever override spring on end of shaft. Remove pump discharge nozzle screw, nozzle and gaskets. Discard gaskets. Turn main body upside-down and catch pump discharge needle. Needle should drop out. If not, it can be shaken out.

9) On throttle body, remove 4 seal wire screws, cover, gasket and governor spring. Remove governor diaphragm retainer, lever nut and lockwasher.



Courtesy of International Harvester Co.

**Fig. 5: Governor Housing Assembly**

10) Remove 3 governor housing screws. Take governor housing off of throttle body and shaft. See Fig. 5. Remove and discard governor body seal and gasket.

11) Remove governor line fitting, diaphragm cover safety wire and seal. Remove 4 governor diaphragm cover screws, lock washers, cover and diaphragm assembly. Remove 2 by-pass jets from back of governor.

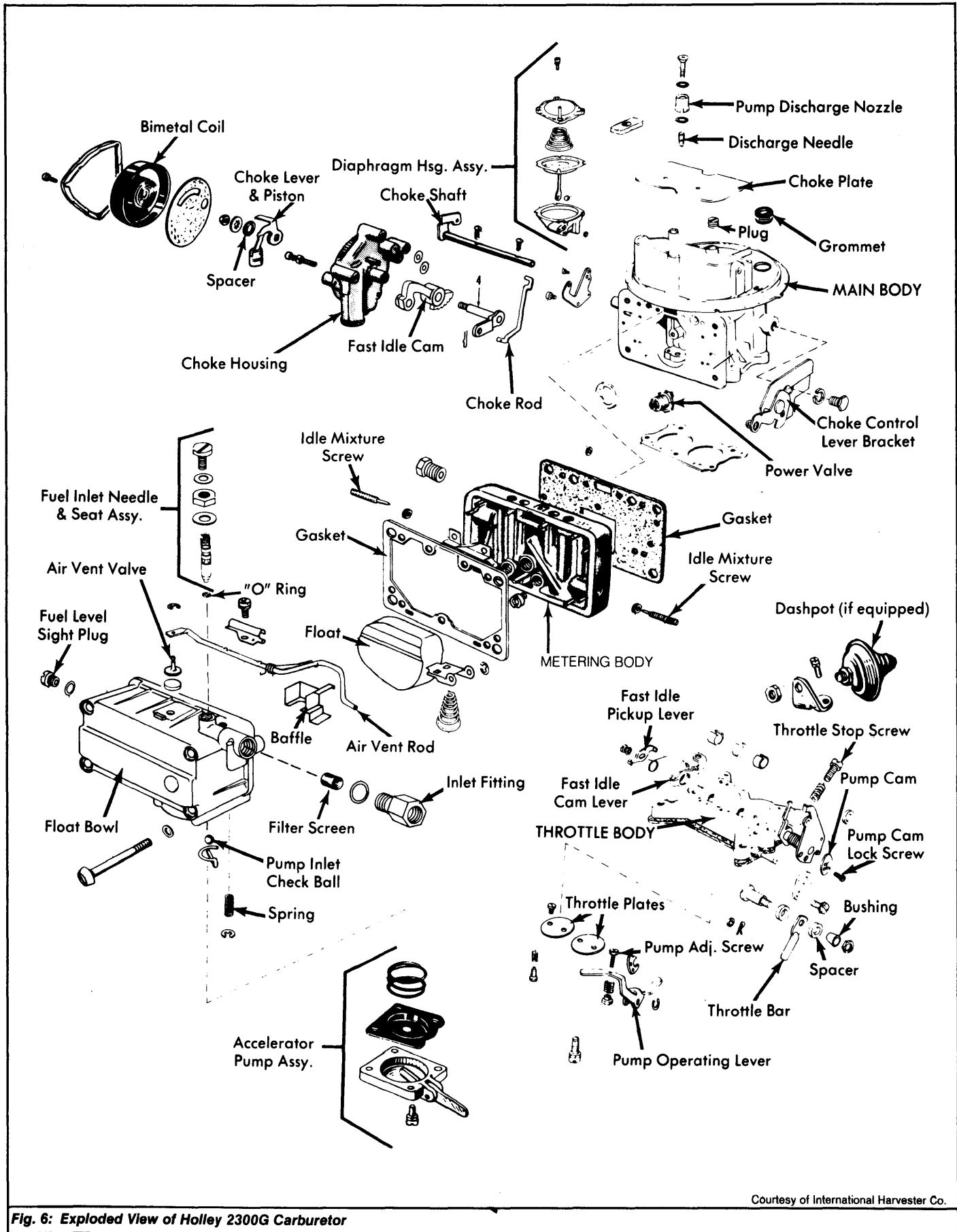
12) Remove 4 screws from accelerator pump cover. Remove cover. Take off pump lever retainer and slide lever off its stud. Remove 2 throttle operating housing screws. Lift off throttle housing assembly. Remove back up plate assembly.

13) Straighten lock tab on throttle operating shaft nut lock washer. Remove nut and washer. Hold redundant spring concentric with throttle shaft and remove spring drum.

14) Remove spacer washer. Disengage redundant spring from long spring perch and remove the spring. Remove catch lever bushing and pin and remove trip lever.

15) Remove retainer from accelerator pump lever assembly. Remove 2 throttle housing screws and take off housing. Inside throttle operating housing, straighten lock tabs on throttle driver.

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Courtesy of International Harvester Co.

Fig. 6: Exploded View of Holley 2300G Carburetor

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16) Position flats of throttle shaft driver in relation with idle adjusting screw. Remove lever and shaft assembly. Remove pump cam retainer screw. Make note of hole position and reference number on cam and lever. Cast numbers on cam face toward throttle housing. Remove cam, but do not place in carburetor cleaner.

17) Remove hot idle screw and spring. Remove limiter caps. Remove idle mixture screws and springs. Do not pry limiter caps off to avoid bending mixture screws.

**Cleaning & Inspection** - Soak all parts except throttle body bushings, dashpot or throttle modulator and pump cam in carburetor cleaner. Blow dry all parts with compressed air after rinsing with hot water. Do not clean passages or jets with a drill or piece of wire. Discard all old gaskets, seal, "O" rings and diaphragms and replace with new ones.

**Reassembly** - 1) To reassemble, reverse disassembly procedure. Install 2 idle mixture screws and springs. Turn screws in gently until they seat. Back screws out 3 complete turns. Install new seal wire and seal on governor diaphragm housing.

2) Place back-up plate on throttle body. Insert choke rod in choke control lever. Hold throttle plate in closed position (throttle lever assembly against stop). Install throttle housing to throttle body.

3) Use scribe marks on choke plate to align plate on shaft. Be sure to align all passages and gaskets.

### CARBURETOR SPECIFICATIONS

Application	Specification
<b>Curb Idle Speed</b>	
Federal .....	<sup>1</sup> 650-700 RPM
California .....	<sup>1</sup> 625-675 RPM
<b>Fast Idle Speed</b>	
Federal .....	2200 RPM
California .....	2000 RPM
<b>Main Jet</b>	
Federal	
304" & 345" .....	No. 56
California	
345" .....	No. 63
<b>Fuel Pressure</b> .....	
	5.5 psi
<b>High Idle RPM with Throttle Modulator Activated</b>	
Federal .....	1300-1400 RPM
California .....	1400-1500 RPM
<b>Idle Mixture CO%</b>	
304"	
Federal .....	2.0 Maximum
345"	
Federal .....	1.5 Maximum
California .....	1.0-3.0

<sup>1</sup> - Transmission in Neutral, A/C off.