

1975-79 FUEL SYSTEMS

Holley 4150-G 4-Barrel Carburetor

1977 International Harvester

CARBURETOR APPLICATION

INTERNATIONAL HARVESTER CO.

Application	Holley Carb. No.
345"	
California	R-7251A
392"	
Federal	R-6803A, R-6803-1A
California	R-6803-2A, R-6803-3
California	R-7579A

CARBURETOR IDENTIFICATION

A carburetor identification is stamped on carburetor air horn or on a tag attached to carburetor. The tag contains part number prefix and suffix.

DESCRIPTION

The Holley 4150-G carburetor consists of 4 main components. The primary fuel bowl, secondary fuel bowl, main throttle body and governor assembly. Both primary and secondary fuel bowl assemblies are connected to the main fuel inlet system.

ADJUSTMENTS

HOT (SLOW) IDLE RPM

See appropriate article in TUNE-UP PROCEDURES section.

IDLE MIXTURE

See appropriate article in TUNE-UP PROCEDURES section.

COLD (FAST) IDLE RPM

See appropriate article in TUNE-UP PROCEDURES section.

FLOAT LEVEL (DRY SETTING)

NOTE: Dry float setting is a preliminary adjustment only. Final adjustment (wet setting) must be made after carburetor is installed on vehicle.

Remove float bowl. Hold carburetor upside-down. Float is adjusted correctly if top of float is parallel with float bowl. See Fig. 1. To adjust, loosen lock nut and turn adjusting nut until float is parallel.

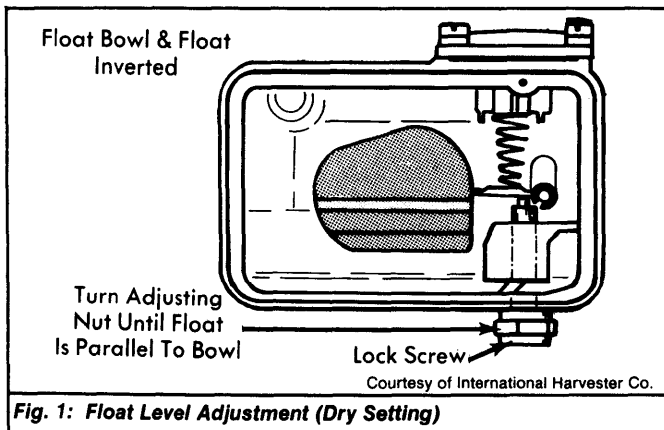


Fig. 1: Float Level Adjustment (Dry Setting)

FLOAT LEVEL (WET SETTING)

1) With engine at normal operating temperature, place vehicle on a flat, level surface. Remove air cleaner. Check fuel level at each float bowl separately. See Fig. 2.

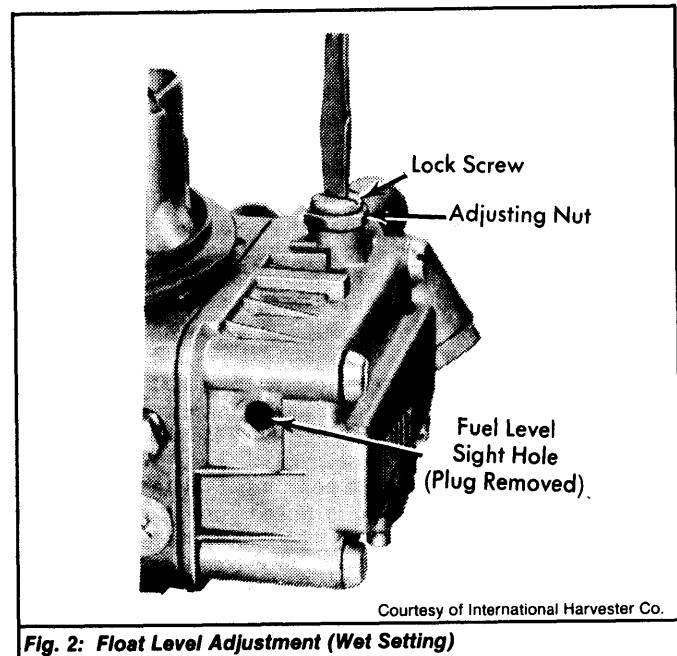


Fig. 2: Float Level Adjustment (Wet Setting)

2) Place a container under primary float bowl sight plug. With engine running, remove plug and gasket. Fuel level should be at lower edge of plug opening.

3) If float level is too high, stop engine and drain fuel bowl by removing one of the lower float bowl screws. Drain fuel into a container. Tighten fuel bowl screw.

NOTE: Engine should be restarted to fill fuel bowl. This will make sure that foreign material did not cause a temporary flooding condition.

4) If float level is still too high, it should be lowered then raised to correct level. Remove both secondary and primary sight plugs and gaskets.

5) Loosen float adjustment lock screw on top of primary float bowl. Turn adjustment nut clockwise to lower fuel level below sight plug opening.

6) Now turn adjustment nut counterclockwise until fuel level just reaches lower edge of sight plug hole. Tighten lock screw. Allow fuel level to stabilize to check for correct level. Install sight plug and gasket.

7) If the float level was too low during original checking procedure, follow step 6).

ACCELERATOR PUMP LEVER

1) Open throttle valves wide open. Using a feeler gauge, measure specified clearance (.015") between the lever adjustment screw head and pump arm with the pump arm manually open. See Fig. 3.

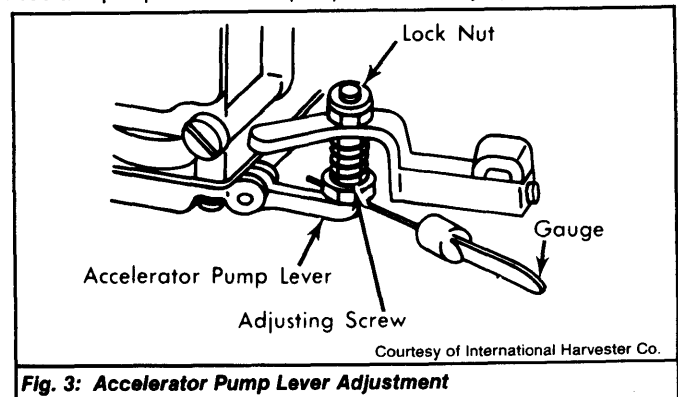


Fig. 3: Accelerator Pump Lever Adjustment

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2) To adjust, loosen adjustment screw lock nut. Turn adjusting screw in to increase clearance and out to decrease clearance. Tighten lock nut.

NOTE: One-half turn of adjustment screw is equal to .015".

ACCELERATOR PUMP STROKE

1) Accelerator pump stroke can be adjusted for different climates. Bottom hole (No. 2) in pump cam and throttle lever provides maximum pump delivery. Top hole (No. 1) provides minimum pump delivery.

2) To change pump cam position, remove retaining screw and move pump cam to desired position. Ensure that numbered holes are correctly matched.

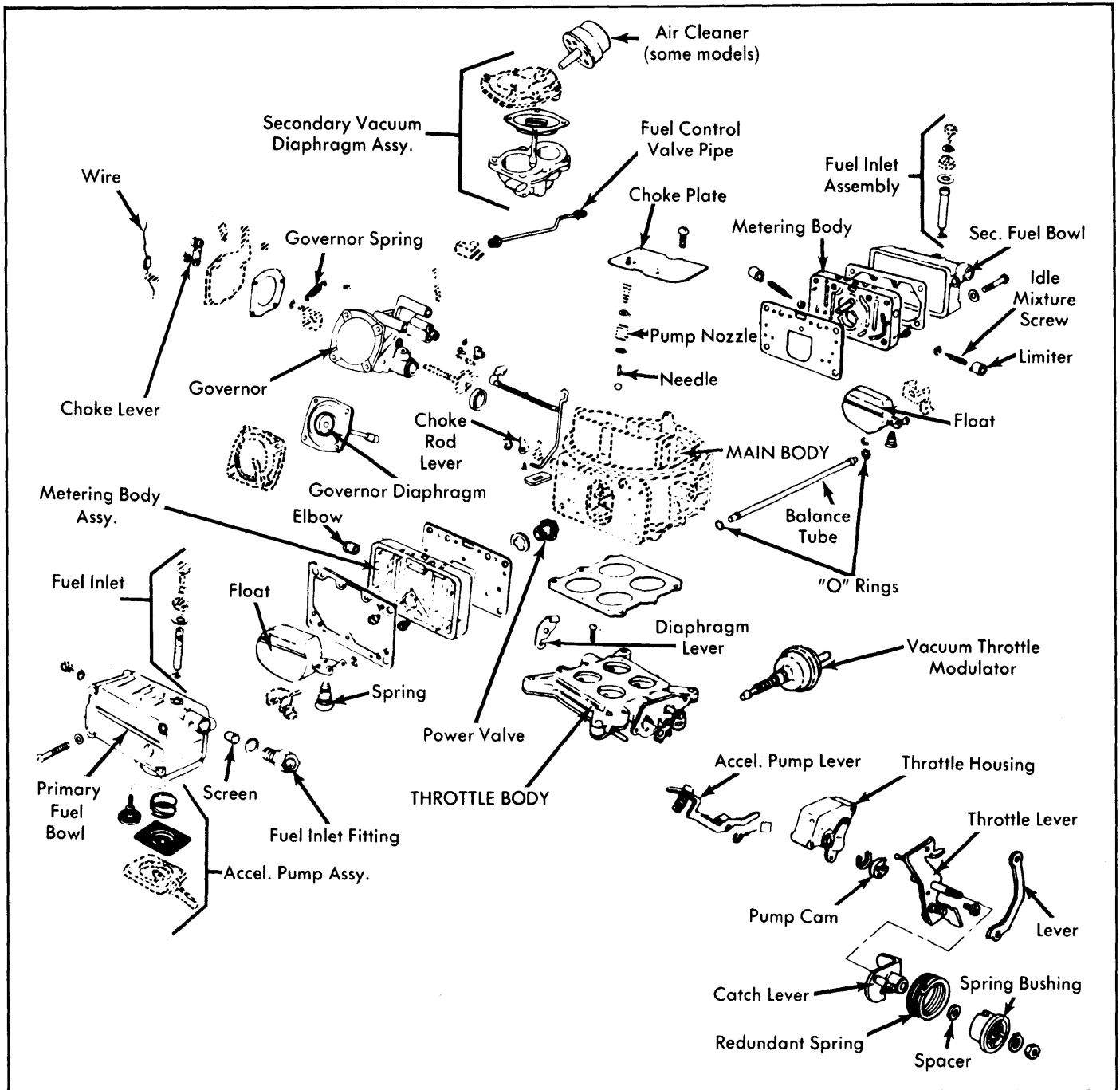
FAST IDLE CAM

Ensure curb idle speed is set correctly. Hold choke in wide open position. Clearance between top screw and fast idle cam should be .015-.020" on California models with 392" engines. All other models are set using fast idle RPM specification. See CARBURETOR SPECIFICATIONS table.

OVERHAUL

CARBURETOR

Disassembly (Primary Fuel Bowl & Metering Block) - 1 Remove primary fuel bowl and gasket. Remove metering block and gasket. Remove pump transfer tube and "O" rings from main body if it was not removed with metering block.



Courtesy of International Harvester Co.

Fig. 4: Exploded View of Holley Model 4150-G 4-Barrel Carburetor

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2) Remove fuel line tube and "O" rings. Remove balance tube, washer and "O" ring seal. Remove idle mixture screws and gaskets. Remove main jets and power valve from metering block.

3) Remove fuel level adjustment lock screw and gasket. Turn adjusting nut counterclockwise and remove nut and gasket. Remove fuel inlet needle and seat assembly. Do not disassemble needle and seat, they are replaced as an assembly.

4) Remove float retainer using a pair of needle nose pliers. Slide float off shaft and remove spring from float. Remove baffle plate from fuel bowl. Remove fuel level sight plug and gasket. Remove fuel inlet fitting, gasket and screen.

5) Invert fuel bowl. Remove accelerator pump cover, diaphragm and spring. Do not remove accelerator pump inlet check ball.

Disassembly (Secondary Fuel Bowl & Metering Block) - 1) Remove fuel bowl. Using a clutch type screwdriver, remove metering block screws. Remove metering block, plate and gasket.

2) Remove balance tube, washer and "O" ring seal. Disassemble fuel bowl by following step 3) through 5) in PRIMARY FUEL BOWL & METERING BLOCK disassembly.

Disassembly (Main Body) - 1) Remove air cleaner stud. Remove secondary diaphragm link retainer. Invert carburetor. Remove throttle body screws and lock washers. Lift throttle body off main body and remove gasket.

2) Remove choke rod retainer from choke housing shaft and lever assembly. Remove choke cover, thermostatic spring and gasket. Remove choke main housing and gaskets. Remove governor assembly.

3) Remove choke housing shaft nut, lock washer and spacer. Remove shaft and fast idle cam. Remove choke piston and lever assembly.

NOTE: If it is necessary to remove choke valve and shaft, tips of choke valve screws may have to be filed as they are staked into shaft.

4) If it is necessary, remove choke valve screws. Remove choke valve and slide out choke shaft. Remove secondary diaphragm housing and gasket. Remove diaphragm housing cover, spring diaphragm and vacuum check ball.

NOTE: The secondary diaphragm housing must be removed before attempting to remove cover.

5) Remove accelerator pump discharge nozzle screw. Lift off discharge nozzle and gasket. Invert main body and catch accelerator pump discharge needle as it falls out of bore in main body.

Disassembly (Governor Housing) - 1) Remove and discard housing seal. Mark governor spring pin hole for reassembly reference. Remove spring and pin. Remove diaphragm rod retainer and governor lever.

2) Remove fitting from governor line. Record governor by-pass jet numbers and their position for reassembly reference. Remove by-pass jets, diaphragm cover and diaphragm.

3) Remove retainer for fast idle cam. Slide fast idle cam and shaft out of housing. Remove cam plunger spring and fast idle pin.

Disassembly (Throttle Body Redundant Linkage) - Use extreme care when removing these springs. Remove redundant safety spring, trip lever and retaining lever. Remove accelerator pump lever and throttle shaft housing.

Disassembly (Throttle Housing) - 1) Straighten locking tab on throttle shaft lock nut and remove nut, lock and washer. Hold redundant spring concentric with throttle shaft and remove spring drum.

2) Remove spacer washer. Release redundant spring from long spring perch and remove spring. Remove catch lever bushing and pin assembly, trip lever, and accelerator pump lever retainer.

3) Remove 2 throttle housing screws and remove housing. Working inside throttle housing, straighten lock tabs on throttle driver. Note position of flats in relation to idle adjusting screw. Remove lever and shaft assembly.

4) Record accelerator pump cam position and hole numbers. Remove accelerator pump cam. Remove hot idle screw and spring.

Cleaning & Inspection - Use a regular carburetor cleaning solution. Soak components long enough to thoroughly clean all surfaces and passages of foreign matter. Do not soak any components containing rubber, leather or plastic. Remove any residue after cleaning by rinsing components in solvent. Blow out all passages with dry compressed air.

Reassembly - To reassemble, reverse disassembly procedures. Ensure all parts are clean and dry. Use new gaskets and seals. Make sure that new gaskets fit correctly and that all holes and slots are punched through and correctly located.

1977 CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Specification
345" V8	1
392" V8	
Fast Idle Speed	2000 RPM
High Idle (Throttle Modulator Activated) Speed	2 1350-1450 RPM
Curb Idle Speed 3	
Federal	650-750 RPM
California	625-675 RPM
Idle Mixture Setting (CO%)	
Federal (Maximum)	2.0
California	0.5-1.5
Governor Spring Color	
Federal	Black
California	Brown
Governor Spring Post Position	
Federal	Number 1
California	Number 2
Governed Engine Speed	
No Load	3800 RPM
Full Load	3800 RPM
Main Jet Number	
Primary	581
Secondary	
Federal	562
California	512

1 - No information available.

2 - California models only.

3 - Transmission in Neutral and A/C off.