

1978 Holley Carburetors

HOLLEY MODEL 2245 2-BARREL

VEHICLE APPLICATION

CHRYSLER CORP.

Application	Man. Trans.	Holley Carb. No.	Auto. Trans.
360" V8 Federal & Canada	R-7991A, R-8326A	

CARBURETOR IDENTIFICATION

Holley part number is stamped on fuel bowl.

DESCRIPTION

The Holley model 2245 dual venturi carburetor utilizes five basic fuel metering systems. The idle system provides mixture for idle and low speed operation. The idle enrichment system provides a richer mixture for a short period when engine is started cold. The accelerator pump system provides additional fuel for acceleration. The main metering system provides an economical mixture for normal cruising. The power enrichment system provides a richer mixture when high power output is required.

In addition to these fuel systems, the carburetor uses an automatic choke and choke diaphragm. Automatic choke is assisted by an electric heating element, to provide for shorter choke duration in warm weather. Choke diaphragm prevents overchoking by opening choke valve when engine is being cranked.

ADJUSTMENT

HOT (SLOW) IDLE RPM

See appropriate article in TUNE-UP Section.

IDLE MIXTURE

See appropriate article in TUNE-UP Section.

COLD (FAST) IDLE RPM

See appropriate article in TUNE-UP Section.

FLOAT LEVEL ADJUSTMENT

- 1) Remove air horn from carburetor.
- 2) Turn air horn upside-down. Allow weight of float to press needle against its seat.
- 3) Measure clearance between top of float and float stop.
- 4) Clearance should be $\frac{3}{16}'' \pm \frac{1}{32}''$.
NOTE — Be sure gauge is held level when measuring.
- 5) Adjust by bending float tab toward or away from needle until correct clearance is reached.
NOTE — Do not force needle against seat when adjusting.
- 6) Proceed to float drop measurement.

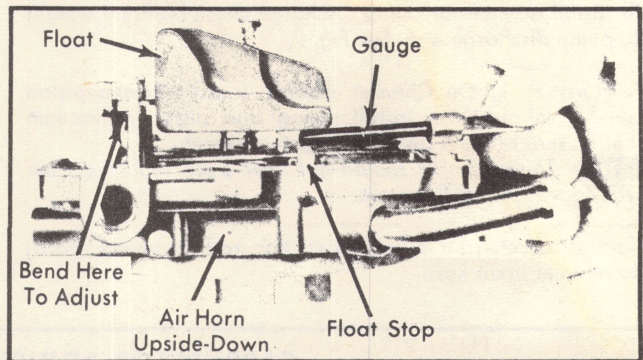


Fig. 2 Using Gauge To Measure Float Clearance With Air Horn Inverted

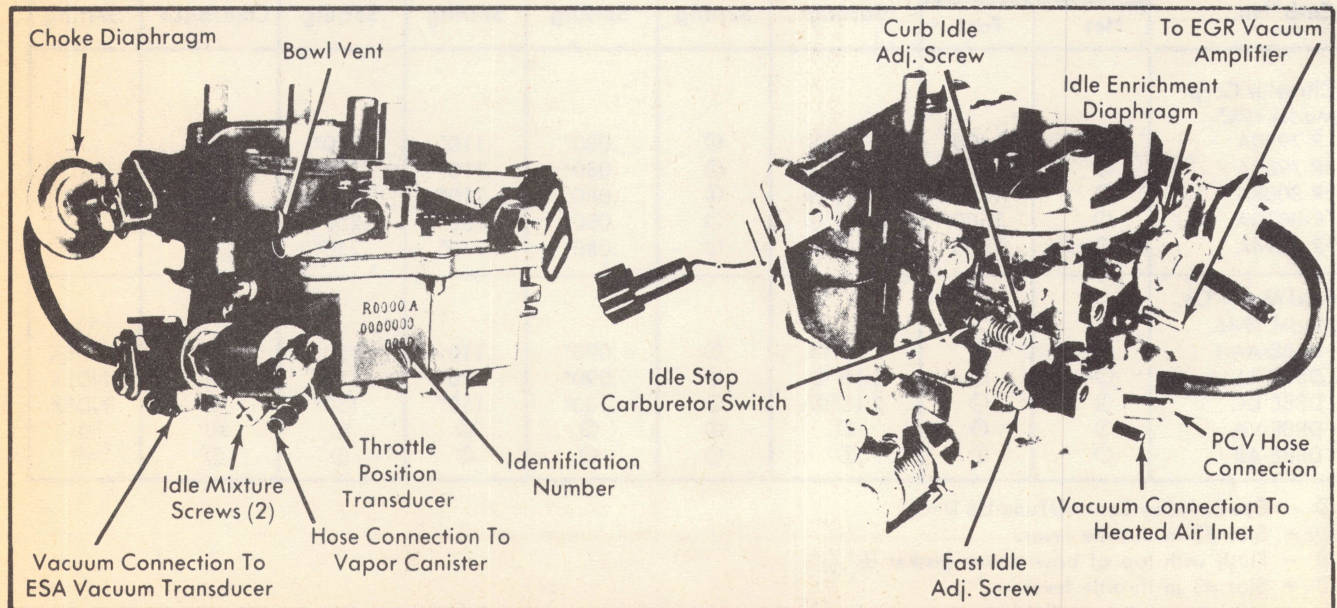


Fig. 1 External Views Of Holley 2245 Carburetor Showing Vacuum Pickup & Major Adjustment Locations

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FLOAT DROP ADJUSTMENT

- 1) Hold air horn in upright position.
- 2) Allow float to hang by its own weight.
- 3) Bottom edge of float should be parallel to underside (gasket) surface of air horn.
- 4) Adjust by bending tang on float arm.
- 5) Install fuel baffle to air horn.
- 6) Install air horn on carburetor.

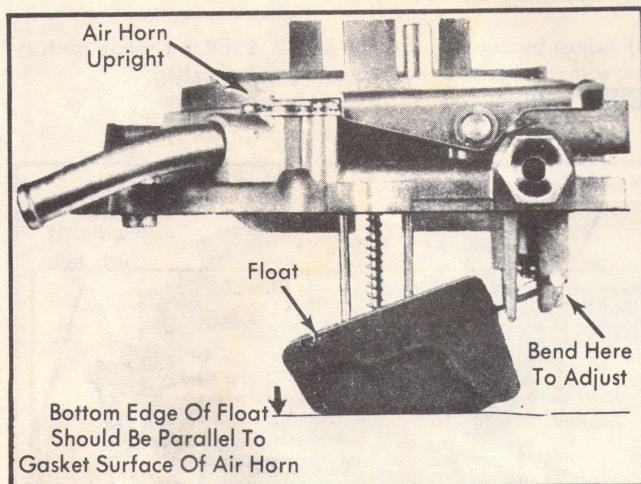


Fig. 3 Checking Float Drop With Air Horn In Upright Position

ACCELERATOR PUMP STROKE ADJUSTMENT

NOTE — This adjustment is performed with curb idle throttle position used as a starting point.

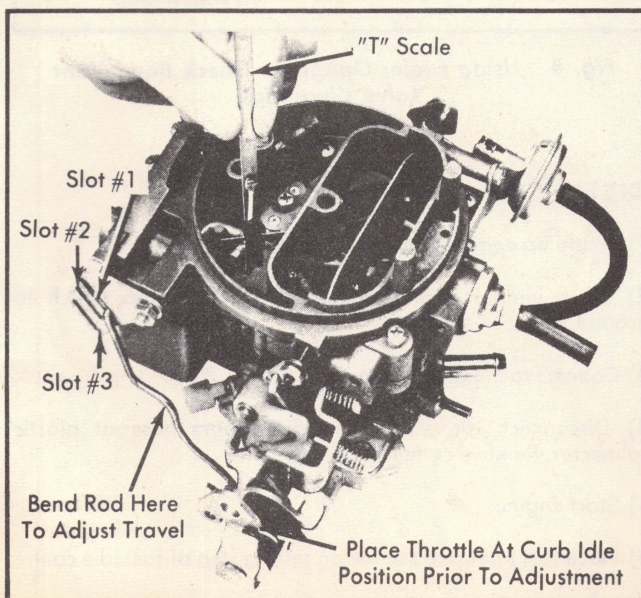


Fig. 4 Using "T" Scale To Measure Pump Travel

- 1) Place pump connector rod in Slot #1 of pump arm.
NOTE — Pump arm has three slots. Slot #1 is TOP slot.

- 2) Measure travel (drop) of accelerator pump plunger between curb idle position and wide open throttle position.
- 3) Total travel of pump plunger should be $1\frac{1}{64}$ ".
- 4) Adjust by bending operating rod until correct travel has been reached. See Fig. 4.

FAST IDLE CAM ADJUSTMENT

- 1) Place fast idle speed screw on SECOND highest step of fast idle cam.
- 2) Move choke valve towards closed position by pressing lightly on choke shaft lever. See Fig. 5.
- 3) Insert correct size gauge (.110") between upper edge of choke valve and air horn wall on throttle lever side.
- 4) Adjust by bending fast idle connector rod at angle until correct choke valve opening (.110") is obtained.

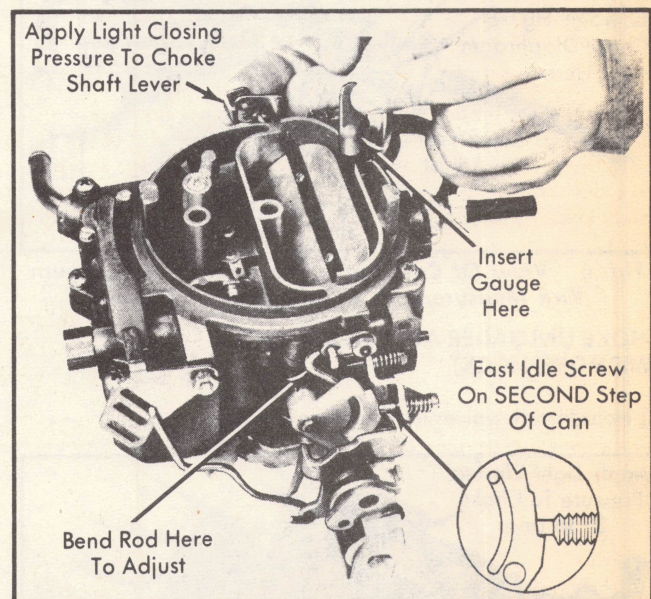


Fig. 5 Using Gauge To Measure Choke Valve Clearance For Fast Idle Cam Adjustment

CHOKE VACUUM KICK ADJUSTMENT

- 1) Open throttle (engine OFF).
- 2) Close choke valve and release throttle to trap fast idle cam in closed choke position.
- 3) Connect outside vacuum source of at least 15 in. Hg to choke diaphragm. See Fig. 6.
- 4) Press hard enough on choke lever to fully compress spring in diaphragm stem without distorting linkage.
NOTE — Diaphragm stem will hit a stop as spring compresses.

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- 5) With vacuum applied, insert correct size gauge between upper edge of choke valve and air horn wall at throttle lever side.
- 6) Measurement should be .110".
- 7) Adjust by bending diaphragm link at "U" shaped bend to change length of link.
- 8) Check linkage for freedom of movement from open to adjusted position.
- 9) Remove outside vacuum source. Connect original vacuum tube to choke diaphragm.

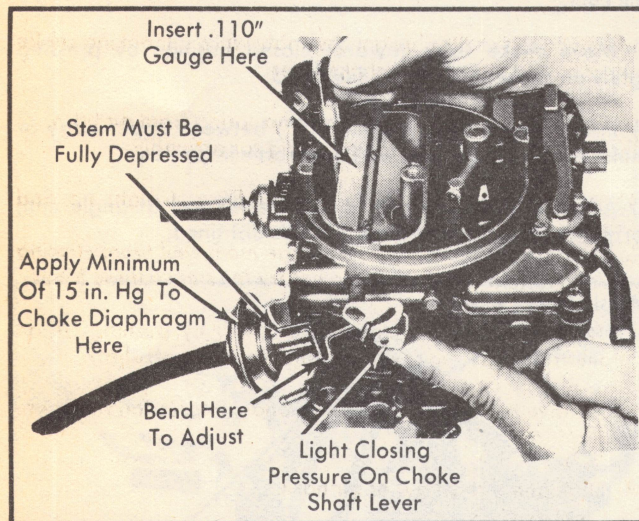


Fig. 6 View Of Carburetor Showing Choke Vacuum Kick Measurement & Adjustment Locations

CHOKE UNLOADER ADJUSTMENT (WIDE OPEN KICK)

- 1) Hold throttle valves in wide open position.

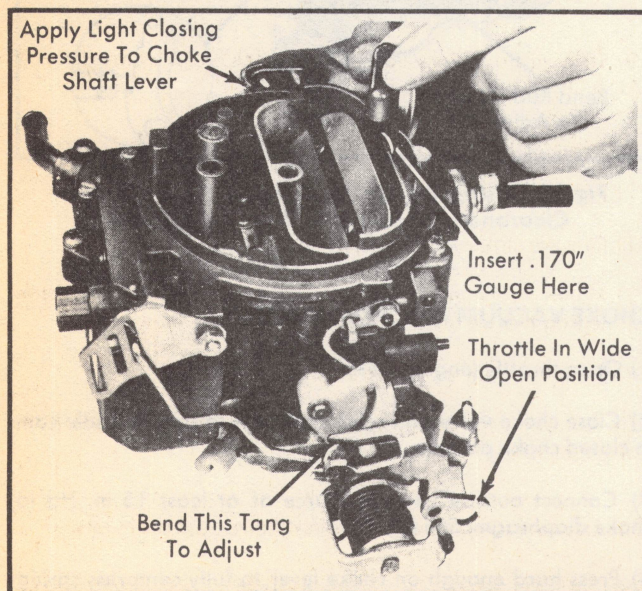


Fig. 7 Measuring Choke Valve For Carburetor Choke Unloader Adjustment

- 2) Move choke valve towards closed position by pressing gently on choke shaft lever.
- 3) Insert correct size gauge (.170") between upper edge of choke valve and air horn wall on throttle lever side.
- 4) Adjust by bending tang on throttle lever. See Fig. 7.

BOWL VENT VALVE ADJUSTMENT

- 1) Place throttle valves at curb idle position.
 - 2) Insert .025" feeler gauge between vent valve plunger stem and operating rod. See Fig. 8.
 - 3) Adjust by bending tang on PUMP LEVER to change contact arc with throttle lever until correct gap is reached.
- NOTE** — Do not bend end of vent operating rod.

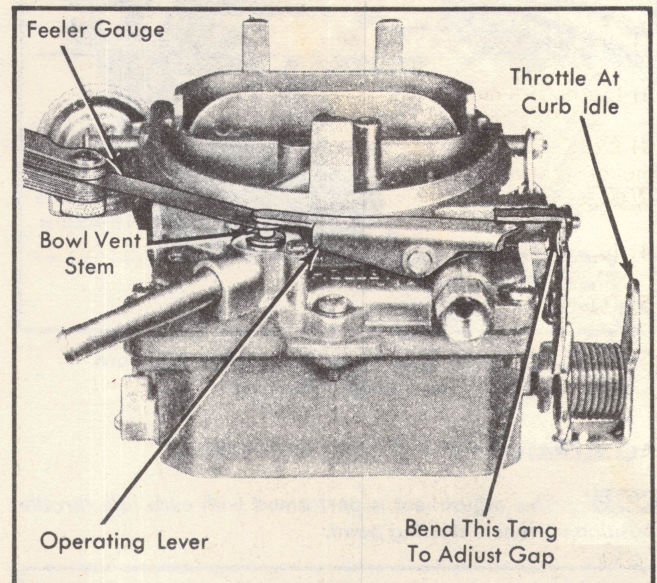


Fig. 8 Using Feeler Gauge To Check Bowl Vent Valve Clearance

IDLE ENRICHMENT VALVE CHECK

- 1) Warm up engine and remove air cleaner cover.
- 2) Place jumper wire from carburetor idle stop switch to ground.
- 3) Connect tachometer to engine.
- 4) Disconnect idle enrichment diaphragm hose at plastic connector. Remove connector.
- 5) Start engine.
- 6) Place fast idle speed screw on setting step of fast idle cam.
- 7) Connect outside vacuum source of at least 15 in. Hg to idle enrichment valve diaphragm with 3 or 4 feet of tubing.

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- 8) Apply vacuum and check for engine speed change.
- 9) If speed can be controlled by varying vacuum, diaphragm and air valve are okay.
- 10) If not, plug air inlet passage and check for speed change. If speed can be controlled in this way, diaphragm is leaking or air valve is stuck open.
- 11) If speed cannot be controlled, air valve is stuck closed. Clean air valve and repeat step 8).
- 12) If speed still cannot be controlled, replace diaphragm.

THROTTLE POSITION TRANSDUCER ADJUSTMENT

NOTE — Chrysler tool P/N C-4522 checks all transducers, Carter or Holley. There are three color coded transducers in use and tool is color coded to match particular transducer. Adjust RED transducers to .685" ±.005"; BLACK transducers to .540" ±.005"; and BLUE transducers to .240" ±.005".

- 1) Disconnect wiring at transducer.
 - 2) Loosen lock nut.
 - 3) Place tool (C-4522 or equivalent) between transducer and mounting bracket.
- NOTE** — Use matching color code on gauge.
- 4) Turn transducer in or out until correct clearance is reached.
 - 5) Tighten lock nut.

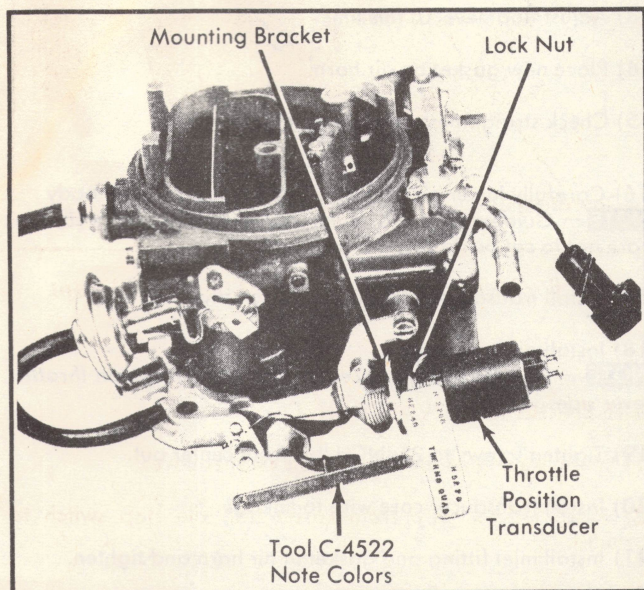


Fig. 9 Using Measuring Tool C-4522 To Measure Transducer Clearance

OVERHAUL

DISASSEMBLY

- 1) Place carburetor on suitable repair stand to avoid throttle valve damage.

- 2) Remove AIR CLEANER BOLT from carburetor.
 - 3) Remove transducer core wire from linkage.
 - 4) Remove transducer and bracket assembly.
 - 5) Remove idle enrichment diaphragm.
 - 6) Remove accelerator pump rocker arm. Disengage pump rod from arm and throttle lever.
 - 7) Remove nut and washer attaching choke lever to shake shaft. Disengage fast idle rod from lever and fast idle cam.
 - 8) Remove vacuum diaphragm hose.
 - 9) Remove choke diaphragm assembly while unhooking choke operating link from slot in choke lever.
 - 10) Remove bowl vent valve lever and spring from air horn.
- NOTE** — Remember position of spring for assembly.
- 11) Remove air horn screws. Lift air horn straight up and away from main body.
- CAUTION** — Use care not to damage main well tubes sticking out from bottom of air horn. Do not try to remove these tubes.
- 12) Disengage pump plunger from shaft by pushing UP on bottom of plunger, tilt toward center and slide off shaft.
 - 13) Remove plunger stem, washer and compression ring from air horn.
 - 14) Slide pump shaft out of air horn.
 - 15) Remove inlet fitting and gasket.
 - 16) Turn air horn upside-down.
 - 17) Remove fuel baffle screw.
 - 18) Slide nylon float fulcrum pin out of air horn and remove float.
 - 19) Turn air horn right side up and catch fuel inlet needle as it FALLS OUT.
 - 20) Remove fuel inlet needle valve seat and gasket.
 - 21) Remove air horn gasket and discard.
 - 22) Remove staking around power piston retaining ring.
 - 23) Remove vacuum piston from air horn by depressing piston and letting it snap back up against retaining ring.
 - 24) Remove bowl vent valve cover.
 - 25) Remove vent valve, spring and seal. Remove seal from bottom of valve.
 - 26) Use tool (C-3748 or equivalent) to remove main jets.
 - 27) Use tool (C-4231 or equivalent) to remove power valve assembly.

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28) Turn main body upside down and catch pump discharge check needle as it FALLS OUT.

29) Remove throttle body-to-main body screws and separate assemblies.

30) Remove fast idle cam.

31) Remove idle limiter caps carefully. Do not bend screws during removal.

32) Remove idle mixture screws (2) and springs (2) from throttle body.

33) Remove idle stop carburetor switch from main body. Remove roll pin that retains ground wire and push brass ground switch head through plastic insulator.

34) Remove insulator and wire from main body.

CLEANING & INSPECTION

- Do not clean rubber or plastic parts in solvent.
- Check parts for cracks, warpage, stripped threads, or damaged gasket surfaces.
- Do not use wire, drill bit or hard parts to clean carburetor passages. Blow out with compressed air only.
- Check all gaskets for proper fit. Ensure all parts are clean and ready for assembly.

REASSEMBLY

Throttle Body — 1) Install mixture screws and springs into throttle body.

2) Seat screws gently with fingers.

3) Turn both screws ONE FULL TURN COUNTERCLOCKWISE as a starting point. Final mixture adjustment must be made on vehicle.

Main Body — 1) Install fast idle cam with steps toward fast idle screw. Install "E" clip.

2) Install idle stop carburetor switch insulator, wire and brass contact. Install roll pin.

3) Turn main body upside-down.

4) Install new main body-to-throttle body gasket in position.

5) Mount throttle body to main body and tighten screws to 30 INCH lbs.

6) Install pump discharge check needle in discharge passage. Use clean fuel to check pump and check needle operation.

7) Install power valve with suitable tool (C-4231 or equivalent) and tighten.

8) Install main metering jets with suitable tool (C-3748) and tighten to 25 INCH lbs.

Air Horn — 1) Check choke mechanism for binding or sticking. Clean as required.

2) Install vacuum power piston in its cylinder.

3) Place retaining washer over piston stem and carefully seat using suitable tool (C-4206 or equivalent).

4) Stake retaining ring in place in three places.

5) Check piston operation for binding or sticking. Replace as necessary.

6) Slide pump plunger spring over plunger stem.

NOTE — Small diameter towards plunger.

7) Install washer and pump shaft in air horn.

8) Install plunger in air horn. Be sure to engage with plunger shaft.

9) Install inlet needle valve seat and new gasket in air horn. Tighten seat with wide blade screwdriver.

10) Install fuel inlet needle in seat.

11) Place float in position. Slide "delrin" fulcrum pin through float hinge to hold float.

NOTE — Check nitrophenyl float for absorption by gently squeezing with fingers. If wetness appears, replace float.

12) Install fuel baffle with slots engaged in lugs. Install screw and tighten.

13) Adjust float level at this time.

14) Place new gasket on air horn.

15) Check straightness of main well tubes.

16) Carefully lower air horn straight down onto main body.

NOTE — Guide accelerator pump plunger into pump well. Use care not to cut pump plunger lip.

17) Install transducer and bracket assembly.

18) Install air horn screws.

NOTE — Long screws go in center and rear corner on throttle lever side.

19) Tighten screws to 25 INCH lbs. from center out.

20) Install transducer core wire to linkage.

21) Install inlet fitting and gasket in air horn and tighten.

22) Engage hooked end of pump rod in throttle lever.

NOTE — Hooked end toward outside.

23) Engage other end of pump rod into correct slot in pump rocker arm.

24) Install washer and rocker arm on flats of pump shaft. Install lockwasher and nut and tighten.

25) Install new seal on bottom of vent valve.

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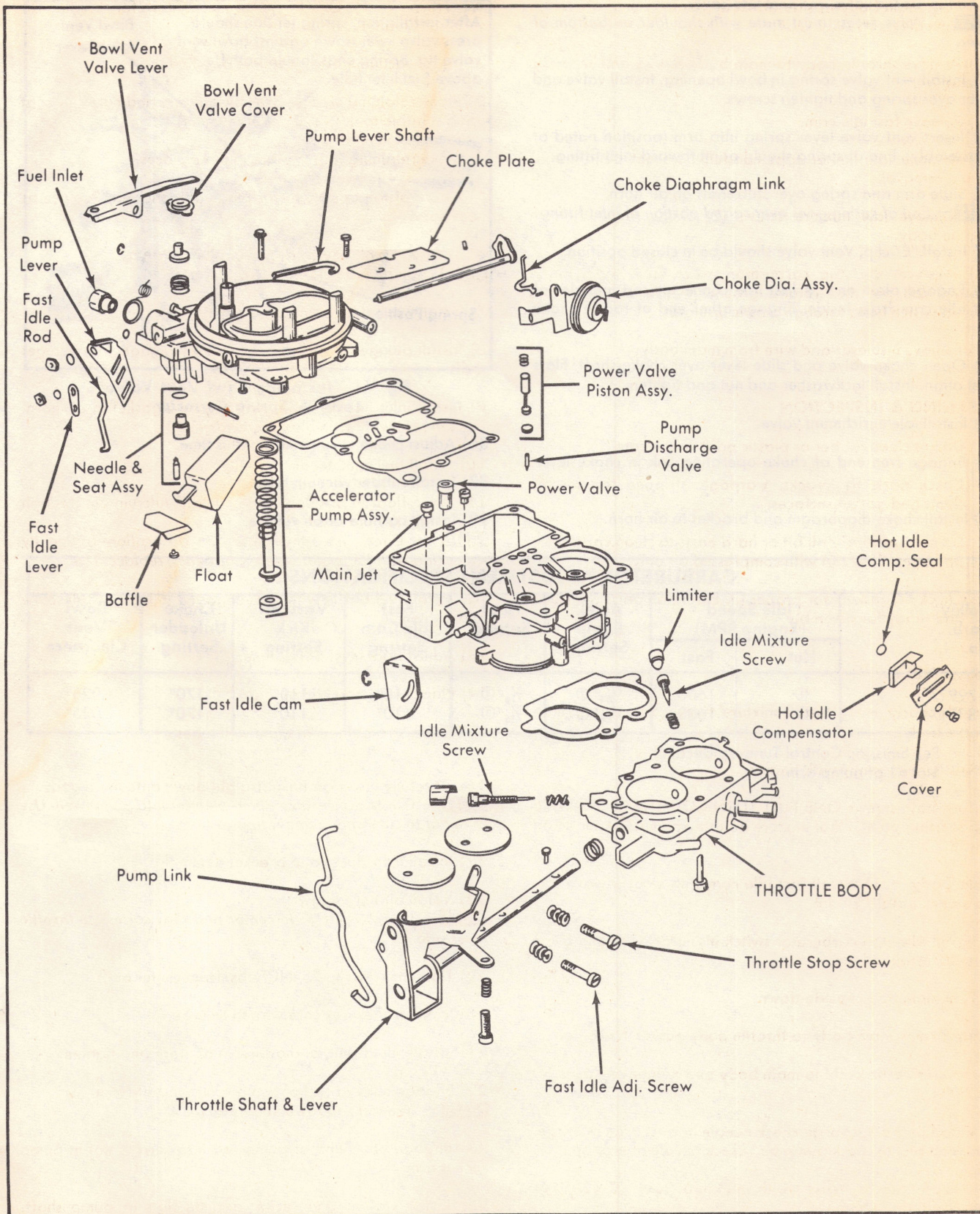


Fig. 10 Exploded View Of Typical Holley 2245 2-Barrel Carburetor Showing Parts Relationships

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26) Slide plastic valve and seal into cover.

NOTE — Valve recess must mate with shoulder on bottom of cover.

27) Install vent valve spring in bowl opening. Install valve and cover over spring and tighten screws.

28) Insert vent valve lever spring into arm (position noted at disassembly). End of spring should point toward inlet fitting.

29) Slide arm and spring over stub shaft on air horn.

NOTE — End of spring goes over raised portion of inlet fitting.

30) Install "E" clip. Vent valve should be in closed position.

31) Engage plain end of fast idle connector rod into slot of fast idle cam from inside. Engage other end of rod in choke lever.

32) Open choke valve and slide lever over choke shaft. Flats must align. Install lockwasher and nut and tighten.

33) Install idle enrichment valve.

34) Engage free end of choke operating link in choke lever slot.

35) Install choke diaphragm and bracket to air horn.

After installation, spring tension should press valve lever down against bowl vent valve tip. Spring ends should both be above fuel inlet hole.

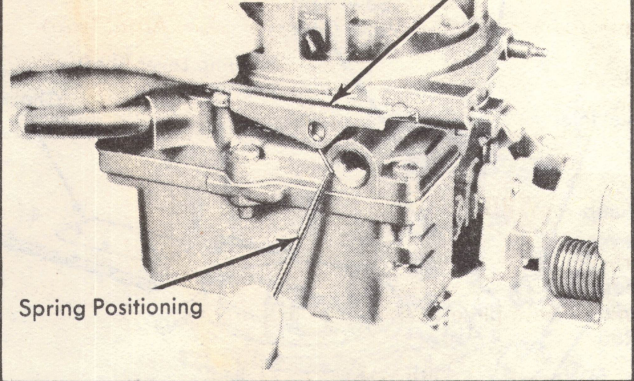


Fig. 11 Installing Bowl Vent Valve Lever & Spring Correctly

36) Adjust choke vacuum kick at this time.

37) Install rubber vacuum hose.

38) Install carburetor on vehicle.

CARBURETOR ADJUSTMENT SPECIFICATIONS

Holley Carb. No.	Idle Speed (Engine RPM)		Accel. Pump Setting	Float Setting	Fast Idle Cam Setting	Vacuum Kick Setting	Choke Unloader Setting	Bowl Vent Clearance
	Hot	Fast						
R-7991A	①	1600	$\frac{17}{64}$ " ②	$\frac{3}{16}$ " ③	.110"	.110"	.170"	.025"
R-8326A	①	1600	$\frac{17}{64}$ " ②	$\frac{3}{16}$ " ③	.110"	.110"	.170"	.025"

① — See Emission Control Tune-Up Decal.

② — Slot #1 of pump arm.

③ — $\pm \frac{1}{32}$ ".