

HOLLEY MODEL 1945 & 1946 SINGLE BARREL

VEHICLE APPLICATION

CHRYSLER CORP. (225" 6 Cyl.)

| Application | Man. Trans. | Chrysler Carb. No. | Auto. Trans. |
|---------------------|---------------|--------------------|--------------|
| Federal | R-7988A | R-7989A | |
| California | | R-8010A | |
| High Altitude | | R-8008A | |
| Canada | R-7988A | R-8394A | |

FORD MOTOR CO. (200" 6 Cyl.) FAIRMONT & ZEPHYR

| Application | Man. Trans. | Ford Carb. No. | Auto. Trans. |
|---------------------|---------------|----------------|--------------|
| Federal | D8BE-VA | D8BE-AAA① | |
| | | D8BE-RA② | |
| California | | D8BE-UC② | |
| High Altitude | | D8BE-AB | |

- ① — With C4 Transmission.
② — With C3 Transmission.

CARBURETOR IDENTIFICATION

Part number is stamped in float bowl body or on tag attached to carburetor.

DESCRIPTION

The Holley Model 1945 and 1946 carburetors are single venturi downdraft designs. Unit is made up of three major sub-assemblies; air horn, main body and throttle body.

Both carburetor models are similar. Some differences are found in external attachments according to manufacturer. Ford models use a Throttle Solenoid Positioner to prevent dieseling when engine is shut off, and an electrically assisted choke.

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 carburetor from vehicle.
- 2) Remove air horn from carburetor.
- 3) On Chrysler models, leave gasket in place on top of fuel bowl assembly and turn assembly upside-down.
- 4) On Ford Motor Co. models, remove gasket from fuel bowl and turn assembly upside-down.
CAUTION — Catch pump check ball and weight as they fall out. Hold finger over float hinge pin retainer to hold float in place.
- 5) With float bowl inverted, place straight edge across gasket surface. See Fig. 2.

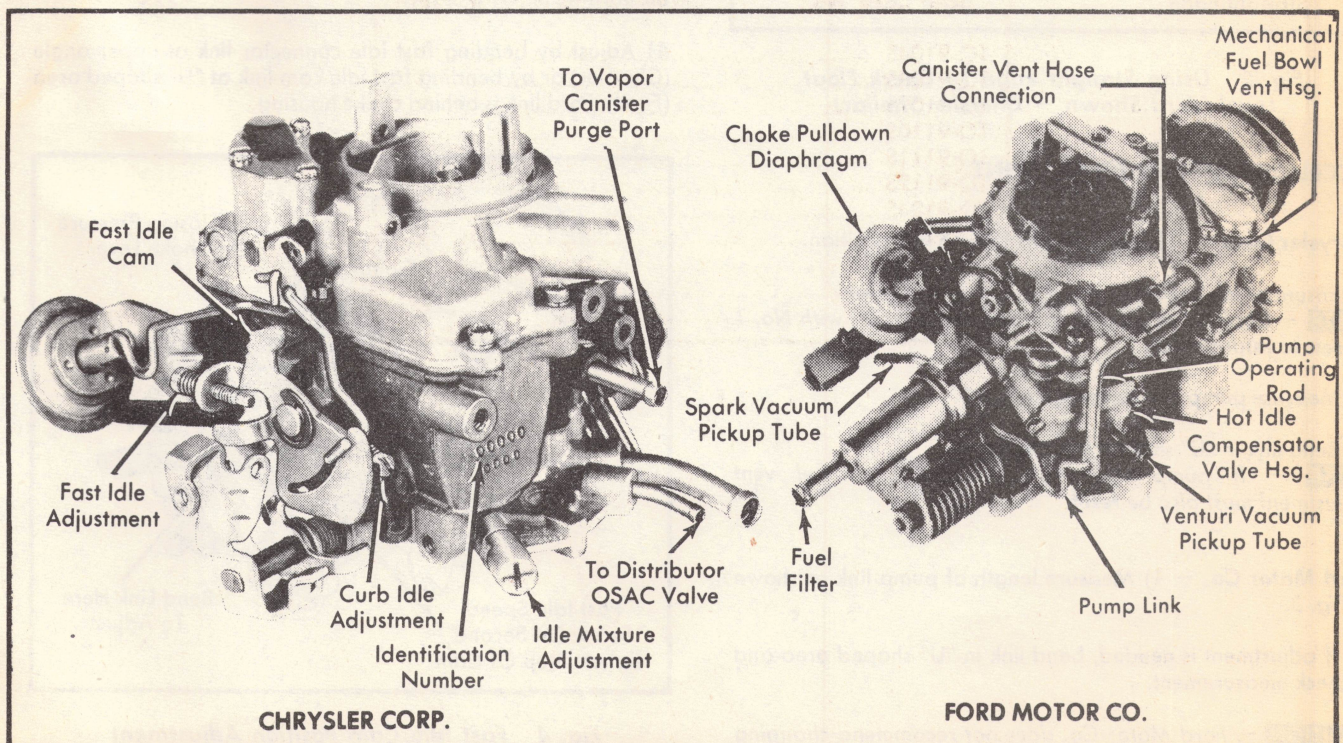


Fig. 1 External Views Of Holley Model 1945 (Chrysler) & Model 1946 (Ford) Carburetors Showing Adjustment Locations & Attachments

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6) Portion of floats, farthest from fuel inlet, should just touch straight edge.

NOTE — On Ford Motor Co. California applications, floats should touch straight edge at heel or stepped area of floats. See Fig. 2.

7) Adjust by bending float tang.

8) Turn fuel bowl right side up.

9) Reinstall pump discharge check ball and weight (Ford).

10) Check alignment of floats and align if needed.

11) Reinstall gasket (Ford) and install air horn assembly to main body.

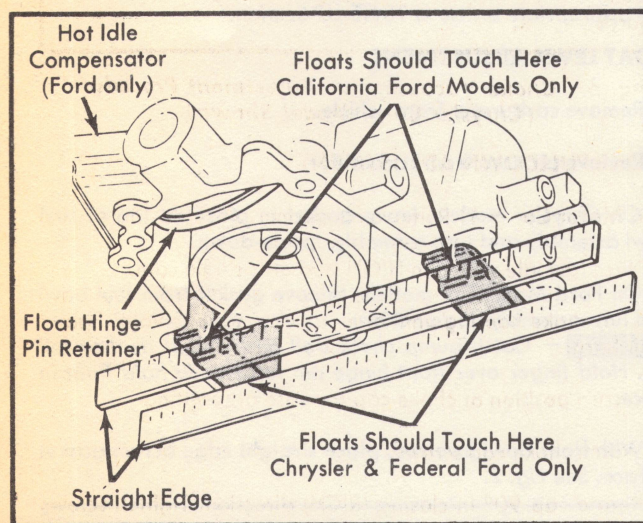


Fig. 2 Using Straight Edge To Check Float Level (Ford Shown — Chrysler Similar)

ACCELERATOR PUMP ADJUSTMENT

Chrysler Corp. — 1) Place throttle in curb idle position.

2) Ensure pump link is in correct slot in throttle lever.

NOTE — Chrysler vehicles have three slots in lever with No. 1 closest to return spring.

3) Measure pump link as shown in Fig. 3.

4) Bend link in "U" shaped area to adjust.

NOTE — If pump adjustment is changed, bowl vent adjustment must also be reset.

Ford Motor Co. — 1) Measure length of pump link as shown in Fig. 3.

2) If adjustment is needed, bend link in "U" shaped area and recheck measurement.

CAUTION — Ford Motor Co. does not recommend changing accelerator pump stroke to improve driveability. This adjustment is preset at factory.

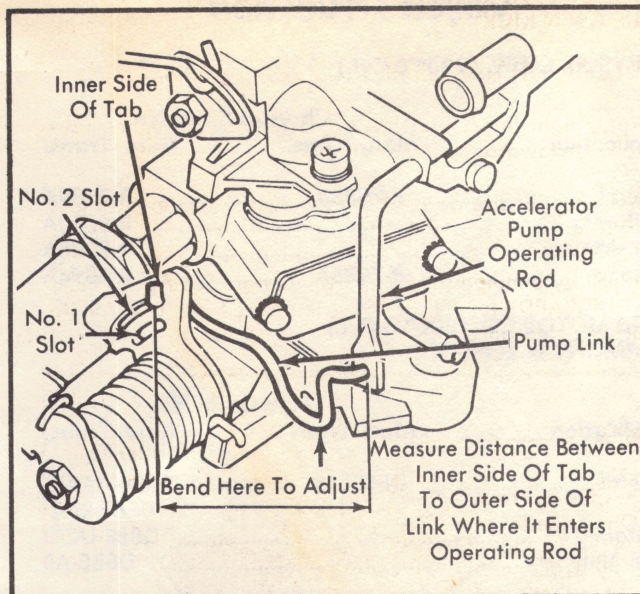


Fig. 3 View Of Accelerator Pump Operating Link Showing Measurement Points (Ford)

FAST IDLE CAM POSITION ADJUSTMENT

All Models — 1) Place fast idle speed screw on SECOND (kickdown) step of fast idle cam.

2) Apply light closing pressure on choke valve to remove play in linkage.

3) Measure clearance between TOP edge of choke valve and air horn wall.

4) Adjust by bending fast idle connector link at upper angle (Chrysler) or by bending fast idle cam link at "U" shaped area (Ford). Ford link is behind choke housing.

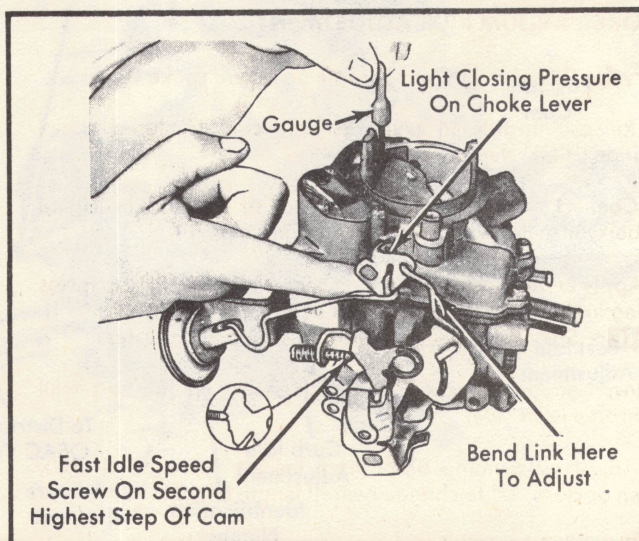


Fig. 4 Fast Idle Cam Position Adjustment Procedure On Chrysler Models (Ford Similar But Have "U" Shaped Link)

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CHOKE UNLOADER/DECHOKE ADJUSTMENT (WIDE OPEN KICK)

- All Models —** 1) Hold throttle in wide open position.
- 2) Apply light finger pressure against control lever to move choke valve towards closed position.
- 3) Insert proper size gauge between TOP of choke valve and air horn wall.
- 4) Adjust by bending tang on throttle lever. See Fig. 5. Bend tang UPWARD to INCREASE clearance, or DOWN to DECREASE clearance.

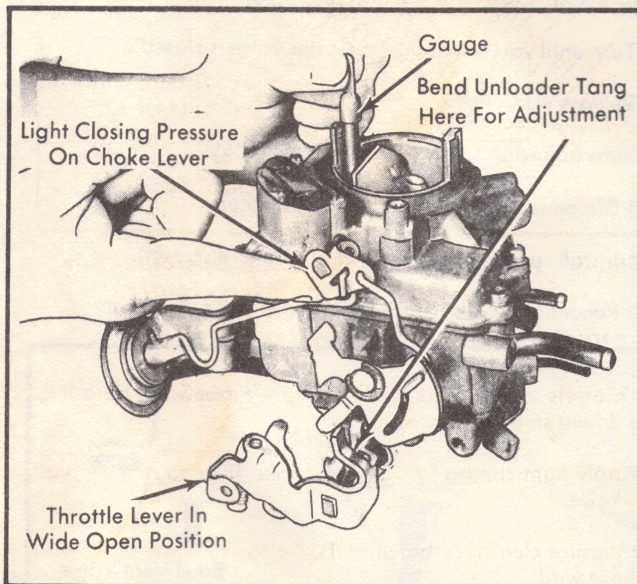


Fig. 5 Choke Unloader/Dechoke Adjustment
(Chrysler Pictured — Ford Similar)

CHOKE VACUUM KICK ADJUSTMENT

- Chrysler Corp. —** 1) Open throttle and close choke valve.
- 2) Release throttle to trap fast idle cam in closed choke position (HIGH step of cam).
- 3) Connect outside vacuum source of at least 15 in. Hg to carburetor pulldown diaphragm housing nipple.
- 4) Apply enough closing force on choke lever to fully compress spring in diaphragm stem without bending linkage.
- NOTE** — Stem will pull in to a stop as spring compresses.
- 5) Insert gauge between TOP of choke valve and air horn wall at throttle lever side.
- 6) Adjust by bending diaphragm link at "U" shaped area. Open or close "U" to change overall length of link.
- 7) Check linkage for freedom of movement, binding or parts interference.
- 8) Remove vacuum source and reconnect carburetor vacuum hose.

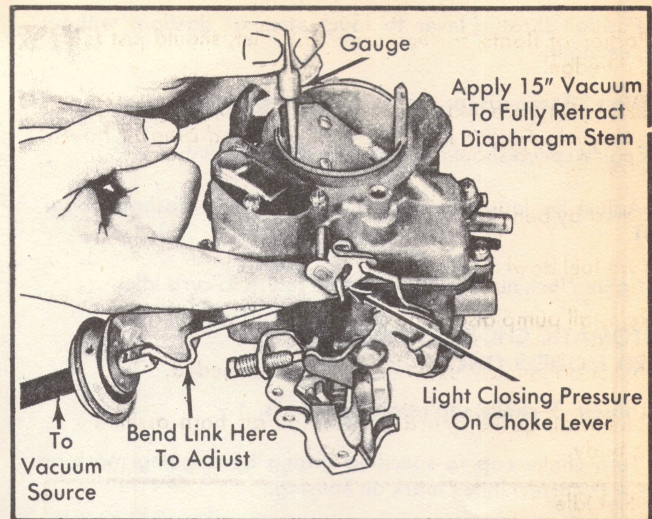


Fig. 6 Choke Vacuum Kick Adjustment Procedure
(Chrysler Corp. Model Shown)

CHOKE PULLDOWN ADJUSTMENT

- Ford Motor Co. —** 1) Remove air cleaner.
- 2) Place fast idle screw on HIGH step of fast idle cam.
- 3) Cool choke housing until bi-metal closes choke valve lightly in air horn.
- 4) Record position of choke cap for ease of resetting.
- 5) Loosen choke cap screws.
- 6) Rotate cap 90° in closing (RICH) direction. Tighten screws to hold cap.
- 7) Apply vacuum to vacuum tube to activate choke pulldown diaphragm.
- 8) Ensure pulldown stem is fully retracted by pushing on small metal plate in bottom of linkage slot on pulldown stem.
- NOTE** — Do not press on linkage or shaft itself. This would actuate modulator spring.
- 9) If diaphragm does not fully retract with vacuum, diaphragm may be leaking. Replace as necessary.
- 10) Insert proper size gauge between upper edge of choke valve and air horn wall.
- 11) If adjustment is needed, bend pulldown linkage until correct gap is obtained.

DASHPOT ADJUSTMENT CHRYSLER MAN. TRANS. MODELS ONLY

- 1) Ensure curb idle is properly set.
- 2) Maintain all ignition and EGR control signals from carburetor. Connect tachometer to engine.
- 3) Engage parking brake and place transmission in NEUTRAL.
- 4) Start engine.

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- 5) Position throttle lever to touch stem of dashpot without depressing it.
- 6) Wait 30 seconds for engine speed to stabilize.
- 7) Engine speed should smooth out at 2500 RPM.
- 8) Adjust by loosening lock nut and turning dashpot IN or OUT.
- 9) Tighten lock nut. Recheck throttle return to curb idle.

AUTOMATIC CHOKE ADJUSTMENT FORD MODELS ONLY

- 1) Loosen 3 choke cap retaining screws.
- 2) Turn choke cap to specified setting by aligning mark on cap with correct index mark on housing.
- 3) Tighten screws.

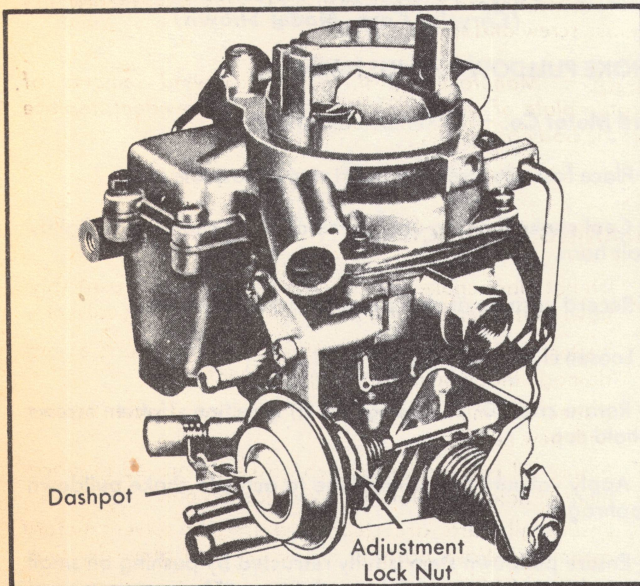


Fig. 7 View Of Carburetor Showing Dashpot Adjustment (Chrysler Man. Trans. Models Only)

BOWL VENT VALVE ADJUSTMENT

Chrysler Corp. — 1) Remove air cleaner.

- 2) Remove vent valve cover plate and spring.
- 3) Place throttle at curb idle position.
- 4) Measure distance (with "T" scale) from cover support surface down to flat on plastic bowl vent lever.
- 5) Measurement should be $\frac{1}{16}$ ".
- 6) Adjust by turning bowl vent lever adjusting screw.
- 7) Replace spring and cover plate.

NOTE — If Pump Piston Stroke Adjustment has been changed, reset this adjustment also.

Ford Motor Co. — 1) Remove air cleaner.

- 2) Disconnect canister vent hose from bowl vent tube on air horn.
- 3) Attach auxiliary vacuum source to bowl vent tube. Use $\frac{3}{8}$ " adaptor.
- 4) Remove bowl vent cover, gasket and spring (3 screws).
- 5) Turn adjusting screw on nylon vent arm CLOCKWISE until no more than $\frac{1}{8}$ " of screw threads is visible above vent arm.
- 6) Operate vacuum pump while slowly turning screw COUNTERCLOCKWISE $\frac{1}{8}$ turn at a time.
- 7) Turn until vacuum gauge indicates valve is closed.
- 8) Release vacuum.
- 9) Turn adjusting screw $\frac{1}{2}$ turn CLOCKWISE.
- 10) Disconnect vacuum source and adaptor.
- 11) Install spring, gasket and cover plate (3 screws).
- 12) Reconnect canister vent hose and install air cleaner.

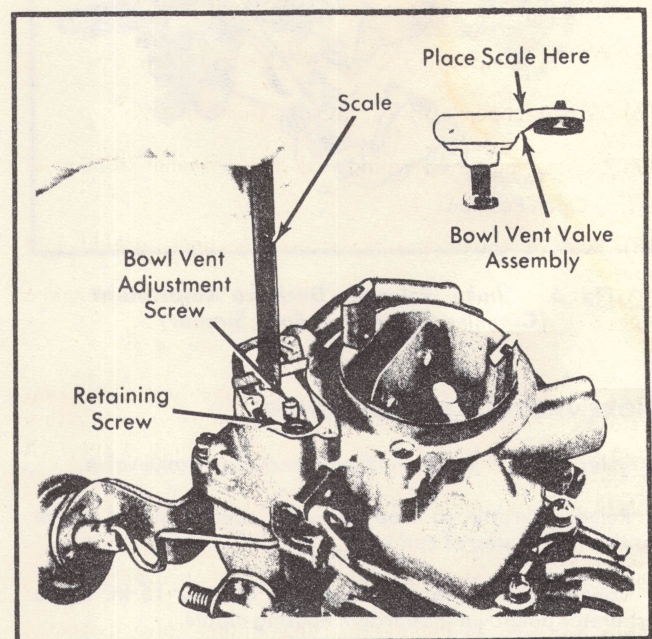


Fig. 8 Bowl Vent Valve Measurement Using "T" Scale (Chrysler Corp.)

OVERHAUL

DISASSEMBLY

- Air Horn** — 1) Place carburetor on suitable repair stand to prevent damage to throttle valves and linkage.
- 2) Remove choke cover assembly (Ford).
 - 3) Remove pulldown diaphragm and linkage assembly.

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- 4) Remove bowl vent cover, gasket and spring assembly.
- 5) Remove bowl vent from its seat.
- 6) Remove fast idle cam and link. Remove choke control lever screw.
- 7) Remove dashpot if equipped (Chrysler).
- 8) Release throttle return spring tension.
- 9) Remove return spring and bracket.
- 10) Note which slot pump link is in, and remove pump link and rocker arm assembly.
- 11) Remove 7 air horn screws and remove air horn from main body. Do not pry air horn loose.
NOTE — Use care when removing to avoid damaging parts extending beneath air horn.
- 12) Place air horn upside-down on bench.
- 13) Remove gasket. Do not scrape with metal scraper. Use suitable cleaner or nylon scraper to prevent damage to gasket surface of casting.
- 14) Remove pump operating rod screw and clamp.
- 15) Remove pump spring retaining plate and screw.
- 16) Disconnect pump drive spring and pump assembly.
- 17) Remove pump operating rod and grommet from bowl cover.
- 18) Remove choke housing screws, retainer, gasket and housing (Ford).
NOTE — Manufacturer does not recommend removal of choke valve and shaft unless replacement is required.

19) On Chrysler models, power piston assembly retaining ring is staked in place. Remove staking; then remove vacuum piston from air horn by depressing piston and letting it snap up against ring.

NOTE — Do not remove this assembly on Ford models.

CAUTION — Do not try to remove main well tube. Blow out with compressed air from inside and outside of cover.

Main Body — 1) Remove fuel inlet fitting valve assembly. Remove and discard old gaskets.

- 2) Remove float shaft retainer, shaft and float assembly.
- 3) Turn main body upside-down and catch pump discharge weight and ball as they FALL OUT.
- 4) Remove main metering jet with suitable wrench.
- 5) Remove power (enrichment) valve needle with $\frac{3}{8}$ " wide screwdriver.
NOTE — Screwdriver should be modified by cutting a $\frac{1}{16}$ " wide and $\frac{3}{8}$ " deep slot in center of blade. This provides clearance for valve stem.

6) On Ford models, remove hot idle compensator cover, HIC valve and gaskets from main body.

7) Remove 3 main body-to-throttle body screws and separate assemblies. Remove and discard gasket. (All models).

8) On Ford models, remove low idle speed (TSP OFF) adjusting screw and spring, and remove solenoid.

Throttle Body — 1) Remove curb idle speed screw.

2) On Chrysler models, remove idle limiter cap, mixture screw and spring from throttle body.

3) On Ford models, turn mixture screw CLOCKWISE to its leanest position and remove limiter cap. Do not bend screw when removing cap.

NOTE — Record position of mixture screw before removal.

4) On Ford models, turn mixture screw CLOCKWISE until it gently seats. Record number of turns it takes to seat screw and remove screw and spring.

NOTE — Manufacturers do not recommend removal of throttle plate or shaft. If damage or wear is evident, replace throttle body assembly.

CLEANING & INSPECTION

- Do not place choke cover, pulldown diaphragm assembly, bowl vent assembly or pump plunger in cleaning solvent.
- Inspect all gasket mating surfaces for nicks, burrs or any damage that would prevent gasket sealing.
- Inspect idle mixture screw tip. If grooved or worn, replace with new needle.
- Ensure all new gaskets match gaskets removed in placement of holes and slots. Use new gaskets only.
- Ensure all parts are clean and free of solvent before assembly. Wash parts in hot water and blow dry with compressed air.

REASSEMBLY

Throttle Body — 1) Install idle mixture screw and spring in throttle body (Chrysler).

2) On Ford models, install fast idle screw (round head) and curb idle screw (hex head) and springs into throttle shaft and lever assembly.

3) On Chrysler models, turn mixture screw gently against its seat and back out ONE turn as a starting point.

NOTE — Adjust idle mixture as presented in Tune-Up Section.

4) On Ford models, install idle mixture screw and spring, and lightly seat with fingers. Back screw out same number of turns recorded at disassembly.

NOTE — Final adjustment must be made on vehicle. Refer to appropriate article in Tune-Up Section.

5) On all models, install throttle body on main body using new gasket. Tighten 3 screws securely.

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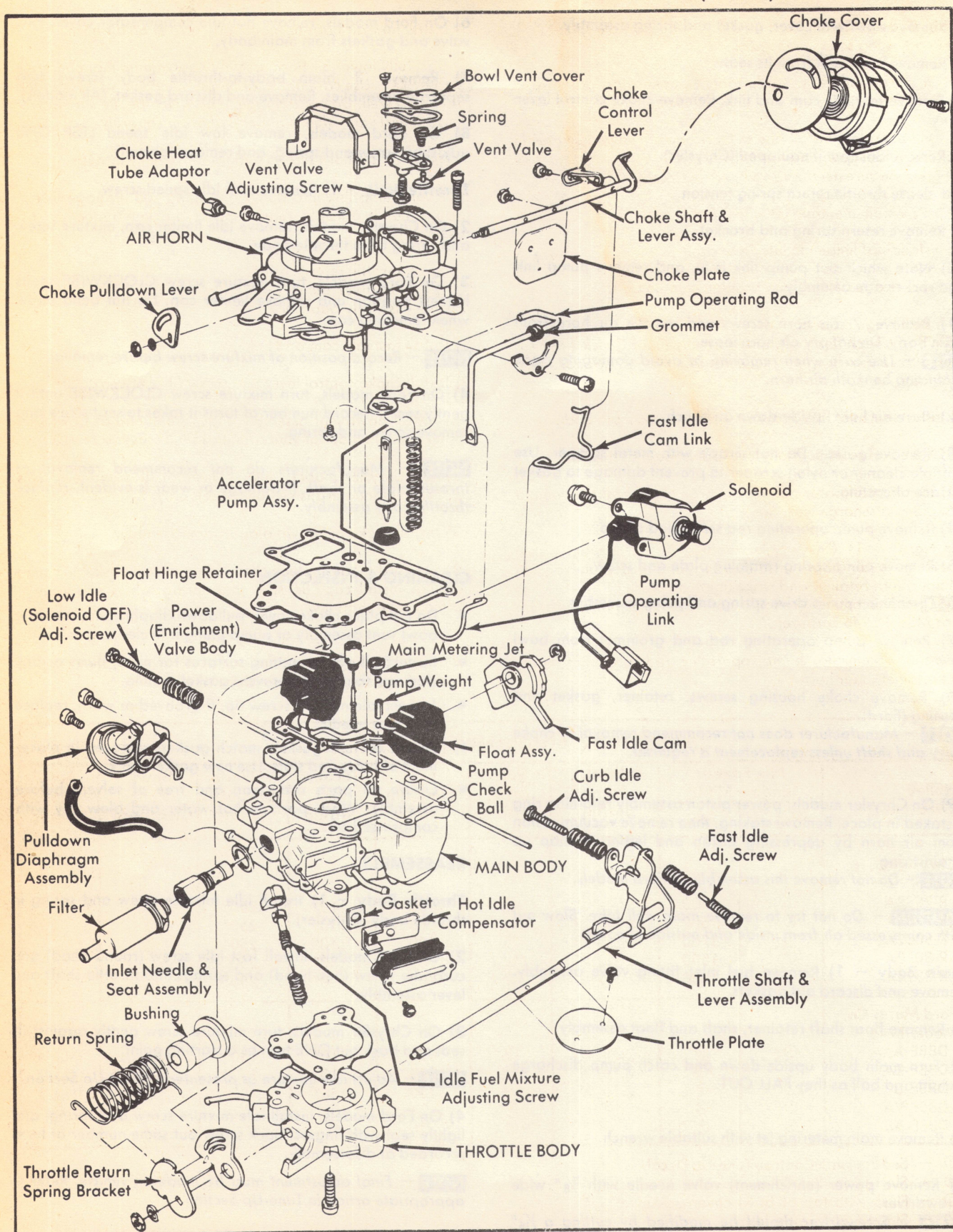


Fig. 9 Exploded View Of Holley Model 1946 Single Barrel Carburetor Showing Parts Relationships
(Ford Motor Co. Pictured - Chrysler Similar)

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Main Body — 1) On Ford models, install low idle speed (TSP OFF) adjusting screw and spring.

2) On Ford models, install hot idle compensator, gasket and cover (2 screws).

3) On all models, install power (enrichment) valve assembly in bottom of fuel bowl and tighten.

NOTE — Be sure needle valve operates freely.

4) Install main metering jet with suitable tool.

5) Install float hinge pin into float arm.

6) Place float assembly into position in main body.

7) Install hinge retainer.

NOTE — Check float alignment at this time. Check float for fuel absorption by gently squeezing. If float appears wet, replace.

8) Install fuel inlet fitting and new gasket into main body.

9) Check and reset dry float level adjustment at this time.

10) Install accelerator pump discharge check ball and weight into pump discharge well. See Fig. 9.

Air Horn — 1) On Chrysler models, install vacuum piston assembly in air horn. Install spring and piston in vacuum cylinder, seat retainer and stake lightly in place.

NOTE — This assembly should not have been removed from Ford Model 1946 carburetors.

2) Install accelerator pump, operating rod, grommet (Ford) and retainer in air horn.

3) Install new air horn-to-main body gasket on air horn.

4) Carefully lower air horn assembly down onto main body.

CAUTION — Use care not to damage pump cup as it is guided into pump well. Do not damage main well tube. Be sure power (enrichment) valve stem contacts valve pin squarely.

5) Install 7 air horn screws and tighten evenly in steps.

6) Hook pump link into pump operating rod. Engage link in proper slot in throttle return spring bracket (noted at disassembly).

7) Install throttle return spring.

NOTE — Depress pump operating rod against its spring to provide assembly clearance.

8) Install fast idle cam and link.

9) Install choke control lever and screw (if removed).

10) Install bowl vent assembly. Place small end of bowl vent spring over shoulder of vent arm. Install 3 cover screws.

11) On Chrysler models, install dashpot (if equipped). This applies to manual transmission models only.

12) Install choke pulldown diaphragm assembly.

13) On Ford models, place choke bimetal cap gasket in choke housing. Install cap. Be sure that spring tab is engaged in slotted choke shaft lever.

14) Install choke cap retainer and 3 screws. Set choke cap to specified setting (Ford) and tighten screws.

CARBURETOR ADJUSTMENT SPECIFICATIONS

| Holley Carb. No. | Idle Speed (Engine RPM) | | Accel. Pump Setting | Float Level Setting | Fast Idle Cam Setting | Vacuum Kick Setting | Unloader (Dechoke) Setting | Bowl Vent Clearance | Auto. Choke Setting |
|-------------------------------------|-------------------------|------|------------------------------------|---------------------|-----------------------|---------------------|----------------------------|----------------------------------|---------------------|
| | Hot | Fast | | | | | | | |
| Chrysler Corp. Model 1945 | | | | | | | | | |
| R-7988A | ① | 1400 | 2 ⁷ / ₃₂ "② | ③ | .080" | .110" | .250" | 1 ¹ / ₁₆ " | |
| R-7989A | ① | 1600 | 2 ²¹ / ₆₄ "④ | ③ | .080" | .110" | .250" | 1 ¹ / ₁₆ " | |
| R-8008A | ① | 1700 | 2 ²¹ / ₆₄ "④ | ③ | .080" | .110" | .250" | 1 ¹ / ₁₆ " | |
| R-8010A | ① | 1500 | 2 ²¹ / ₆₄ "④ | ③ | .080" | .130" | .250" | 1 ¹ / ₁₆ " | |
| R-8394A | ① | 1700 | 2 ²¹ / ₆₄ "④ | ③ | .080" | .110" | .250" | 1 ¹ / ₁₆ " | |
| Ford Motor Co. Model 1946 | | | | | | | | | |
| D8BE-AAA | ① | ① | 2.15"② | ③ | .090" | .110" | .150" | ⑥ | INDEX |
| D8BE-RA | ① | ① | 2.15"② | ③ | .090" | .110" | .150" | ⑥ | INDEX |
| D8BE-UC | ① | ① | 2.15"② | ③ | .130" | .150" | .150" | ⑥ | INDEX |
| D8BE-VA | ① | ① | ⑤ | ⑤ | ⑤ | ⑤ | ⑤ | ⑤ | ⑤ |
| D8BE-AB | ① | ① | ⑤ | ⑤ | ⑤ | ⑤ | ⑤ | ⑤ | ⑤ |

① — See Emission Control/Tune-Up Decal.

② — Slot #2 in throttle lever.

③ — Flush with top of bowl cover gasket $\pm 1/32$ ".

④ — Slot #3 in throttle lever.

⑤ — Information not available.

⑥ — 1/2 turn CLOCKWISE. See procedure.